



KONICA MINOLTA

SERVICE MANUAL

bizhub PRO **1200/1200P/1051**

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KONICA MINOLTA BUSINESS TECHNOLOGIES, INC.

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1	D00006669 73	C.11.2 Functions	4	Correction of error in writing	2011/11/14
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10	D00006290 82	I.5.4.14 Auto Dot Diameter Adj. (Drum Peculiarity Adjustment)	2	Correction of error in writing	2011/11/14
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13	D00006315 56	K.2.3 Malfunction code list	3	Correction of error in writing	2012/06/11

A SAFETY AND IMPORTANT WARNING ITEMS

Read carefully the safety and important warning items described below to understand them before doing service work.

1. IMPORTANT NOTICE




- Because of possible hazards to an inexperienced person servicing this product as well as the risk of damage to the product, KONICA MINOLTA BUSINESS TECHNOLOGIES, INC. (hereafter called KMBT) strongly recommends that all servicing be performed only by KMBT-trained service technicians.
- Changes may have been made to this product to improve its performance after this Service Manual was printed. Accordingly, KMBT does not warrant, either explicitly or implicitly, that the information contained in this service manual is complete and accurate.
- The user of this service manual must assume all risks of personal injury and/or damage to the product while servicing the product for which this service manual is intended. Therefore, this service manual must be carefully read before doing service work both in the course of technical training and even after that, for performing maintenance and control of the product properly.
- Keep this service manual also for future service.

2. DESCRIPTION ITEMS FOR DANGER, WARNING AND CAUTION

2.1 Description items in this Service Manual













In this Service Manual, each of three expressions “⚠DANGER”, “⚠WARNING”, and “⚠CAUTION” are defined as follows.

When servicing the product, the relevant works (disassembling, reassembling, adjustment, repair, maintenance, etc.) need to be conducted with utmost care.

 DANGER	: Action having a high possibility of suffering death or serious injury
 WARNING	: Action having a possibility of suffering death or serious injury
 CAUTION	: Action having a possibility of suffering a slight wound and property damage

2.2 Description items for safety and important warning items

Symbols used for safety and important warning items are defined as follows:

 : Precaution when servicing the product.	 General precaution	 Electric hazard	 High temperature
 : Prohibition when servicing the product.	 General prohibition	 Do not touch with wet hand	 Do not disassemble
 : Direction when servicing the product.	 General instruction	 Unplug	 Ground/Earth

Illustrations representing the power plug and wall outlet used in the following descriptions are only typical. Their shapes differ depending on the country or region.

3. SAFETY WARNINGS

3.1 MODIFICATIONS NOT AUTHORIZED BY KONICA MINOLTA BUSINESS TECHNOLOGIES, INC.

KONICA MINOLTA brand products are renowned for their high reliability. This reliability is achieved through high-quality design and a solid service network.

Product design is a highly complicated and delicate process where numerous mechanical, physical, and electrical aspects have to be taken into consideration, with the aim of arriving at proper tolerances and safety factors. For this reason, unauthorized modifications involve a high risk of degradation in performance and safety. Such modifications are therefore strictly prohibited. The points listed below are not exhaustive, but they illustrate the reasoning behind this policy.

3.1.1 Actions requiring special attention

WARNING



- Do not make any modifications to the product unless otherwise instructed by KMBT.



- Do not use any part not specified by KMBT.

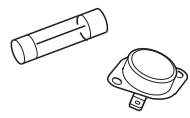


- Do not use any power cord or power plug not specified by KMBT.



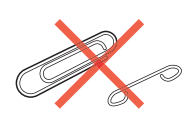
- Use only the protective fuses specified by KMBT.

Use of any type of fuse or related part not specified by KMBT makes safety devices inoperative which may result in a fire from high heat.



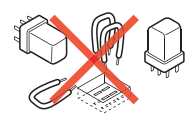
- Do not disable fuse functions or use a wire, metal clip, solder, or other conductor in place of the fuse.

Fire may result from high heat.



- Do not disable relay functions (for example, inserting a piece of paper between relay contacts to hamper circuit action.)

Fire may result from high heat.

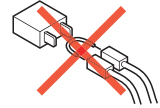


WARNING

- Do not disable safety functions (for example, interlocks and safety circuits).



Safety devices become inoperative, resulting in fire from high heat, electric shock, or injury.



3.2 POWER PLUG SELECTION

In some countries or areas, the power plug provided with the product may not fit the wall outlet used in the area. In that case, it is the obligation of the customer engineer (hereafter called the CE) to attach the appropriate power plug or power cord set in order to connect the product to the supply.

3.2.1 Power Cord Set or Power Plug

WARNING

- Use a power supply cord set which meets the following criteria:
 - provided with a plug having configuration intended for the connection to wall outlet appropriate for the product's rated voltage and current, and
 - the plug has pin/terminal(s) for grounding, and
 - provided with three-conductor cable having enough current capacity, and
 - the cord set meets regulatory requirements for the area.



Use of inadequate cord set leads to fire or electric shock.




WARNING

- Attach power plug which meets the following criteria:
 - having configuration intended for the connection to wall outlet appropriate for the product's rated voltage and current, and
 - the plug has pin/terminal(s) for grounding, and
 - meets regulatory requirements for the area.

Use of inadequate cord set leads to the product connecting to inadequate power supply (voltage, current capacity, grounding), and may result in fire or electric shock.

- The wires in the power supply cord shall be connected to the terminals of the plug in accordance with the following:

Color of the wire		Terminal of the plug
Brown	Black	Marked with "L", "A" or "W" or colored RED
Light Blue	White	Marked with "N" or colored BLACK
Green-and-Yellow		Marked with "E", "PE" or "  " or colored GREEN or GREEN-AND-YELLOW

- Wrong connection may cancel safeguards within the product, and results in fire or electric shock.

3.3 CHECKPOINTS WHEN PERFORMING ON-SITE SERVICE

KONICA MINOLTA brand products are extensively tested before shipping, to ensure that all applicable safety standards are met, in order to protect the customer and customer engineer (hereafter called the CE) from the risk of injury. However, in daily use, any electrical equipment may be subject to parts wear and eventual failure. In order to maintain safety and reliability, the CE must perform regular safety checks.

3.3.1 Power Supply

(1) Connection to Power Supply

WARNING

- The power outlet should have a capacity of at least the maximum power consumption and be dedicated only to the product.

The current that can be passed through the outlet is limited and any current exceeding the limit could result in fire.

- If the wall outlet has two or more receptacles and the product and another electrical appliance are plugged into this wall outlet, make sure that the total load does not exceed the rating of the wall outlet. The current that can be passed through the outlet is limited and any current exceeding the limit could result in a fire.



- Do not use any conversion plug adapter even if the power plug shape does not match your wall outlet.

The shapes of the power plug and the wall outlet are set according to the voltage and allowable current. Use of a conversion plug adapter could result in an abnormal voltage or insufficient current capacity, leading to a fire. It may also result in an electric shock due to a grounding failure.

If the plug shape does not match the wall outlet, request the user to perform power source installation work.

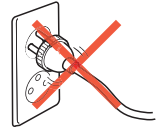


WARNING

- Make sure the power cord is plugged into the wall outlet securely.



If the power plug is left loose in the wall outlet, contact failure may occur, leading to abnormal heating of the power plug and a risk of fire.



(2) Ground Connection

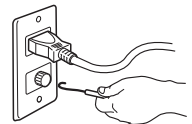
WARNING

- Check whether the product is grounded properly.



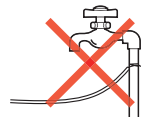
If current leakage occurs in an ungrounded product, you may suffer electric shock while operating the product.

Connect power plug to grounded wall outlet.



- Make sure of correct ground connection.
If the grounding wire is connected to an inappropriate part, there is a risk of explosion or electric shock. Do not connect the grounding wire to any of the following parts:

- a. Gas pipe: Gas explosion or fire may result.
- b. Lightning rod: Risk of electric shock or fire during lightning.
- c. Grounding wire for telephone line: Risk of electric shock or fire during lightning.
- d. Water pipe and faucet: These parts do not serve as a ground connection because of a plastic part that is very often installed midway within the water pipe.



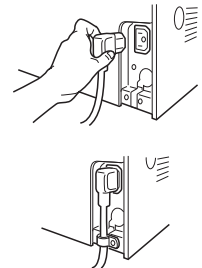
(3) Power Plug and Cord

WARNING

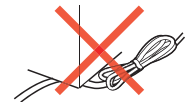
- When using the power cord set (inlet type) that came with this product, make sure the connector is securely inserted in the inlet of the product.



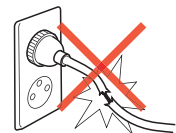
When a securing measure is provided, secure the cord with the fixture properly. If the power cord (inlet type) is not connected to the product securely, a contact problem may lead to increased resistance, overheating, and risk of fire.



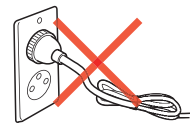
- Do not allow the power cord to be stepped on or pinched. Overheating may occur there, leading to a risk of fire.



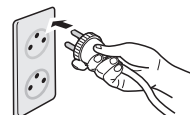
- Check whether the power cord is damaged. Check whether the sheath is damaged. If the power plug, cord, or sheath is damaged, replace with a new power cord (with plug and connector on each end) specified by KMBT. Using the damaged power cord may result in fire or electric shock.



- Do not bundle or tie the power cord. Overheating may occur there, leading to a risk of fire.



- Check whether dust is collected around the power plug and wall outlet. Using the power plug and wall outlet without removing dust may result in fire.

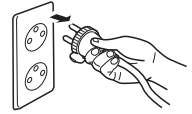


- Do not insert the power plug into the wall outlet with a wet hand. The risk of electric shock exists.

WARNING



- When unplugging the power cord, grasp the plug, not the cable.
The cable may be broken, leading to a risk of fire and electric shock.

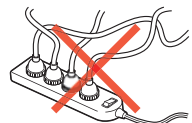


(4) Wiring

WARNING



- Never use multi-plug adapters to plug multiple power cords in the same outlet.
If used, the risk of fire exists.



- When an extension cord is required, use one that meets the rated current, rated voltage, and the relevant safety standards of the country.

Current that can be passed through the extension cable is limited and fire may result from the use of an inappropriate type of an extension cable.

Do not use an extension cable reel with the cable taken up. Fire may result.



3.3.2 Installation Requirements

(1) Prohibited Installation Places

WARNING



- Do not place the product near flammable materials or volatile materials that may catch fire.

A risk of fire exists.



- Do not place the product in a place exposed to water such as rain.

A risk of fire and electric shock exists.



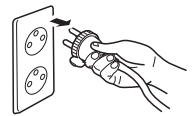
(2) When not Using the Product for a long time

WARNING



- When the product is not to be used for an extended period of time (for holidays, for example), instruct the user to turn OFF the power switch and unplug the power cord from the power outlet.

Dust collected around the power plug and outlet may cause fire.



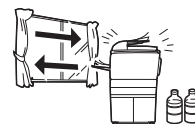
(3) Ventilation

CAUTION

- The product generates ozone gas during operation.

If the smell of ozone is present in the following cases, ventilate the room.

- a. When the product is used in a poorly ventilated room
- b. When making a lot of copies
- c. When using multiple products at the same time



(4) Stability

CAUTION

- Be sure to lock the caster stoppers.
In the case of an earthquake, the product may slide, leading to an injury.

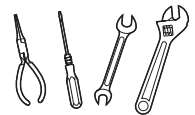


3.3.3 After Service

(1) Inspection before Servicing

WARNING

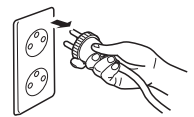
- Before conducting an inspection, read all relevant documentation (service manual, technical notices, etc.) and proceed with the inspection following the prescribed procedure using the recommended personal safety equipment and using only the prescribed tools.



Do not make any adjustment not described in the documentation.

If the prescribed procedure or tool is not used, the product may break and a risk of injury or fire exists.

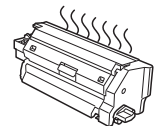
- Before conducting an inspection, be sure to disconnect the power plugs from the Main Body and Accessories (Options).



When the power plug is inserted into the wall outlet, some units are still powered even if the POWER switch is turned OFF. A risk of electric shock exists.

CAUTION

- The area around the fixing unit is hot. You may get burned.



CAUTION



- Do not leave the machine unattended during transportation, installation, and/or inspection.
If the machine is left unattended, face protrusions toward the wall or take other necessary precautions to prevent a user or other person in the area from stumbling over a protrusion of the machine or being caught by a cable, possibly causing a fall to the floor or other personal injury.

(2) Work Performed with the Product Powered On

WARNING



- Take every care when making adjustments or performing an operation check with the product powered.
If you make adjustments or perform an operation check with the external cover detached, you may touch live or high-voltage parts or you may be caught in moving gears or the timing belt, leading to a risk of injury.



- Take every care when servicing with the external cover detached.
High-voltage exists around the drum unit. A risk of electric shock exists.



- If it is absolutely necessary to service the machine with the door open or external covers removed, always be attentive to the motion of the internal parts.
A normally protected part may cause unexpected hazards.

CAUTION



- Do not keep gazing at a lamp light during the service procedure with the product powered ON.

Eyestrain may result.

(3) Safety Checkpoints

WARNING



- When a product fault is reported from a user, check parts and repair the fault appropriately with safety in mind.

A damaged product, personal injury, or fire may result.



- Whenever mounting an option on the machine, be attentive to the motion of the other workers performing the task.

Another worker may be injured by a pinch point between the machine and the option.



- When mounting an option on the machine, be careful about the clearance between the machine and the option.

You may be injured with your finger or hand pinched between the machine and the option.



- When removing a part that secures a motor, gear, or other moving part, disassembling a unit, or reinstalling any of such parts and units, be careful about moving parts and use care not to drop any part or unit. During the service procedure, give sufficient support for any heavy unit.

You may be injured by a falling part or unit.

WARNING



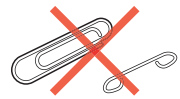
- Check the external covers and frame for possible sharp edges, burrs, and damage.
They can be a cause of injury during use or servicing.



- When accessing a hard-to-view or narrow spot, be careful about sharp edges and burrs on the frame and parts.
They may injure your hands or fingers.



- Do not allow any metal parts such as clips, staples, and screws to fall into the product.
They can short internal circuits and cause electric shock or spark bursting into flame.



- Check wiring for pinched and any other damage.
Current can leak, leading to a risk of electric shock or fire.



- Check high-voltage cables and sheaths for any damage.
Damage may lead to product failure and/or the risk of fire.



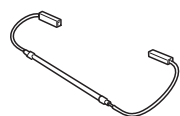
- Do not disassemble or adjust the write unit (PH unit) incorporating a laser.
The laser light can enter your eye, leading to a risk of loss of eyesight.



- Do not supply power with the write unit (PH unit) shifted from the specified mounting position.
The laser light can enter your eye, leading to a risk of loss of eyesight.



- After replacing a part to which AC voltage is applied (e.g., optical lamp and fixing lamp), be sure to check the installation state.
A risk of fire exists.

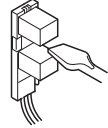


WARNING

- Check the interlock switch and actuator for loosening and check whether the interlock functions properly.



If the interlock does not function, you may receive an electric shock or be injured when you insert your hand in the product (e.g., for clearing paper jam).



- Make sure the wiring cannot come into contact with sharp edges, burrs, or other pointed parts.



Damage may lead to the risk of electric shock or fire.



- Make sure that all screws, components, wiring, connectors, etc. that were removed for safety check and maintenance have been reinstalled in the original location. (Pay special attention to forgotten connectors, pinched cables, forgotten screws, etc.)



A risk of product trouble, personal injury, electric shock, and fire exists.



- Never use any flammable or combustible spray, fluid, gas, or similar substance in and around the product.



Do not use any flammable or combustible dust spray, in particular, to clean the interior of the product.

Fire or explosion may result.



CAUTION

- Carefully remove all toner remnants and dust from electrical parts and electrode units such as a charging corona unit.



Toner remnants and dust may lead to product failure and/or the risk of fire.

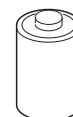
CAUTION



- Check electrode units such as a charging corona unit for deterioration and signs of leakage.
Damage may lead to product failure and/or the risk of fire.



- When replacing a battery, replace it with a new one as specified.
Dispose of the used battery as instructed on its packaging or by local ordinance.
There is a risk of explosion if the battery is replaced with an incorrect type.



(4) Handling of Consumables

WARNING



- For handling of consumables (toner, developer, photoconductor, etc.) and their storage precautions, see MSDS.

(5) Handling of Service Materials

CAUTION



- Handle with care according to MSDS.
Use of solvent may involve explosion, fire, or personal injury.



3.4 FUSE

CAUTION

Double pole / neutral fusing

ATTENTION

Double pôle / fusible sur le neutre.

3.5 Used Batteries Precautions

3.5.1 ALL Areas

CAUTION

Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type recommended by the manufacturer.
Dispose of used batteries according to the manufacturer's instructions.

3.5.2 Germany

VORSICHT!

Explosionsgefahr bei unsachgemäßem Austausch der Batterie.
Ersatz nur durch denselben oder einen vom Hersteller empfohlenen gleichwertigen Typ.
Entsorgung gebrauchter Batterien nach Angaben des Herstellers.

3.5.3 France

ATTENTION

Il y a danger d'explosion s'il y a remplacement incorrect de la batterie.
Remplacer uniquement avec une batterie du même type ou d'un type équivalent recommandé par le constructeur.
Mettre au rebut les batteries usagées conformément aux instructions du fabricant.

3.5.4 Denmark

ADVARSEL!

Lithiumbatteri - Eksplosionsfare ved fejlagtig håndtering.
Udskiftning må kun ske med batteri af samme fabrikat og type.
Levér det brugte batteri tilbage til leverandøren.

3.5.5 Finland, Sweden

VAROITUS

Paristo voi räjähtää, jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suosittelemaan tyyppiin.
Hävitä käytetty paristo valmistajan ohjeiden mukaisesti.

VARNING

Explosionsfara vid felaktigt batteribyte.
Använd samma batterityp eller en ekvivalent typ som rekommenderas av apparattillverkaren.
Kassera använt batteri enligt fabrikantens instruktion.

3.5.6 Norway

ADVARSEL

Ekspløsjonsfare ved feilaktig skifte av batteri.
Benytt samme batteritype eller en tilsvarende type anbefalt av apparatfabrikanten.
Brukte batterier kasseres i henhold til fabrikantens instruksjoner.

4. WARNING INDICATIONS ON THE MACHINE

Caution labels shown are attached in some areas on/in the machine.

When accessing these areas for maintenance, repair, or adjustment, special care should be taken to avoid burns and electric shock.

4.1 Warning indications inside the machine

(Entrance of the reversal output unit)



(Right side of the fixing unit)



(Top surface of the fixing unit)



CAUTION

DO NOT put your hand between the main body and developing fixing unit; otherwise you may be injured.



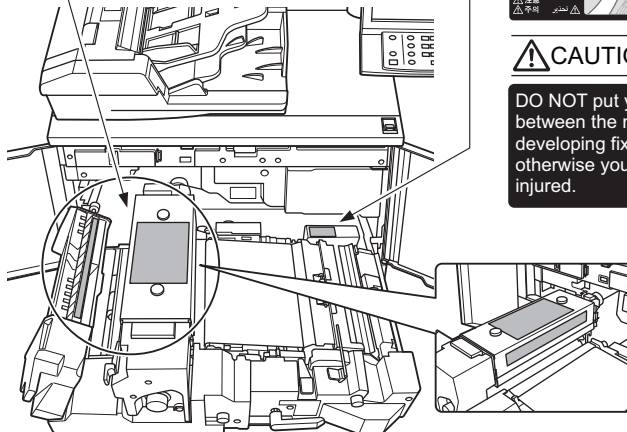
CAUTION

The fixing unit is very hot.
To avoid getting burned DO NOT TOUCH.



CAUTION

DO NOT put your hand between the main body and developing fixing unit; otherwise you may be injured.



a0g6m0e001ca

⚠ CAUTION

⚠ ATTENTION

⚠ VORSICHT

⚠ PRECAUCIÓN


⚠ ATTENZIONE

⚠ CUIDADO

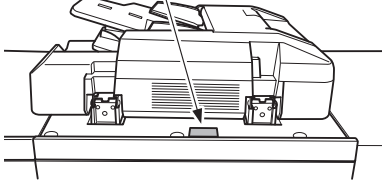
⚠ 注意

⚠ 주의

⚠ تحذير



DO NOT INSERT your finger into the two ADF hinge portions; otherwise you may be injured.



⚠ WARNING

⚠ AVISO

⚠ WARNUNG

⚠ AVISO

⚠ ATENCION

⚠ ATTENTION

⚠ 警告

⚠ 경고

⚠ تحذير



DO NOT throw the toner recovery box into a fire. If it is thrown into a fire, the toner may ignite and cause a dangerous situation.



a0g6m0e002ca

⚠ CAUTION High temperature!

⚠ VORSICHT Heiße Oberfläche!

⚠ 注意 高温!

⚠ 注意 高温!

⚠ ATTENTION Température élevée!

⚠ PRECAUCIÓN ,Temperatura alta!

⚠ ATTENZIONE Alta temperatura!

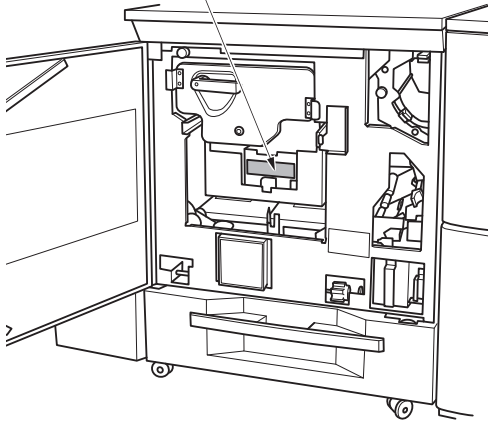
⚠ CUIDADO Alta Temperatura!

⚠ 주의 고온!

⚠ تحذير حرارة عالية!

⚠ CAUTION

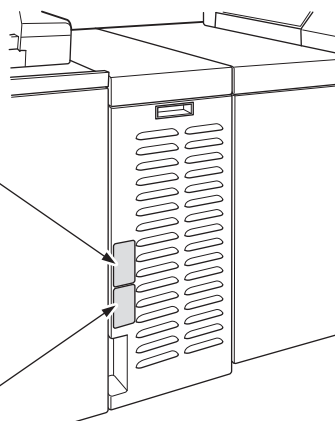
The paste tank unit is very hot. To avoid getting burned DO NOT TOUCH.



a0g6m0e003ca

⚠ WARNING

This safety message you could get an electrical shock because disconnecting power from this section does not cut off power from adjacent sections of the machine.



<p>⚠ ATTENTION</p> <p>Risque de secousse électrique. Ne pas ouvrir. Pas de pièces réparables par l'utilisateur. Entretien par personnel qualifié.</p> <p></p>	<p>⚠ WARNING</p> <p>Electrical shock hazard. Do not open. No user serviceable parts inside. Repairing to qualified service personnel.</p> <p></p>
<p>⚠ WARUNGUNG</p> <p>Spannungsführende Teile. Nicht öffnen. Entfernen keine vom Endverbraucher zu wartende Teile. Für Service bitte an qualifiziertes Servicepersonal wenden.</p>	<p>⚠ MUCHO CUIDADO</p> <p>Riesgo de choque eléctrico. No abra. Advertir que hay piezas reparables para el usuario. Mantenimiento solamente para personal calificado.</p>
<p>⚠ WAARSCHUWING</p> <p>Kans op elektrische schok. Niet openen. Bevat geen door gebruikers te repareren onderdelen. Door bevoegd servicepersoneel laten repareren.</p>	<p>⚠ ATTENZIONE</p> <p>Pericolo di scarica elettrica. Non Nnessuna parte riparabile dall'utente. Chiamare un servizio di riparazioni qualificato.</p>

⚠ WARNING

This safety message means that you might get seriously hurt or killed if you open the product and expose yourself to hazardous voltage. NEVER remove the screwed on covers. ALWAYS refer service requirements to qualified service personnel.

a0g6m0e004ca

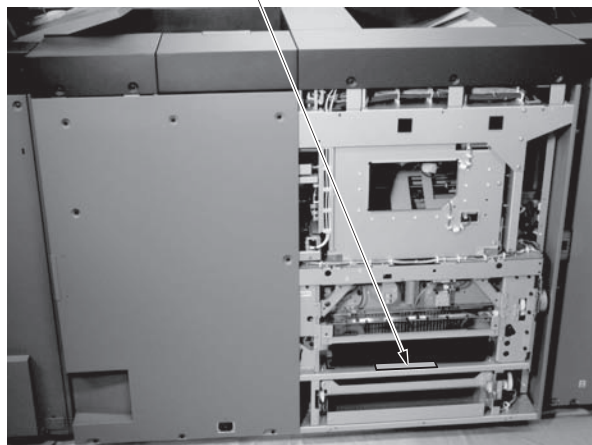
(SD-506)

WARNING
WARNUNG
警告



⚠ WARNING

Do not touch the edge of the trimmer blade.
You get injured.



⚠ CAUTION

- **You may be burned or injured if you touch any area that you are advised not to touch by any caution label. Do not remove caution labels. If any caution label has come off or soiled and therefore the caution cannot be read, contact our service office.**

5. MEASURES TO TAKE IN CASE OF AN ACCIDENT

1. If an accident has occurred, the distributor who has been notified first must immediately take emergency measures to provide relief to affected persons and to prevent further damage.
2. If a report of a serious accident has been received from a customer, an on-site evaluation must be carried out quickly and KMBT must be notified.
3. To determine the cause of the accident, conditions and materials must be recorded through direct on-site checks, in accordance with instructions issued by KMBT.
4. For reports and measures concerning serious accidents, follow the regulations specified by every distributor.

B NOTATION OF THE CONTENTS

1. PRECAUTION ON HANDLING THIS MANUAL

Be sure to maintain the confidentiality of this manual.

Mishandling of this manual may make you face punishment according to the laws.

2. PRODUCT NAME

In this manual, each product is indicated as following names.

- | | |
|---------------------------------|------------------------------|
| (1) bizhub PRO 1200/1200P/1051: | Copier or Main body |
| (2) Microsoft Windows 95: | Windows 95 |
| Microsoft Windows 98: | Windows 98 |
| Microsoft Windows Me: | Windows Me |
| Microsoft Windows NT 4.0: | Windows NT 4.0 or Windows NT |
| Microsoft Windows 2000: | Windows 2000 |
| Microsoft Windows XP: | Windows XP |
| Microsoft Windows Vista: | Windows Vista |
| Microsoft Windows 7 : | Windows 7 |
| Microsoft Windows Server 2003: | Windows Server 2003 |
| Microsoft Windows Server 2008: | Windows Server 2008 |
| The combination of above OS: | Windows 95/98/Me |
| | Windows NT 4.0/2000 |
| | Windows NT/2000/XP |
| | Windows 95/98/Me/ NT/2000/XP |

3. TRADEMARK

3.1 TRADEMARKS OF OTHER COMPANIES

The indicated company and product names are the trademarks or registered trademarks of each company.

3.2 OWN TRADEMARKS

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bizhub and bizhub PRESS are the registered trademarks of KONICA MINOLTA BUSINESS TECHNOLOGIES, INC..

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4. ELECTRICAL PARTS AND SIGNALS

Those listed by way of example below are not exhaustive, but only some instances among many.

Classification	Load symbol	Ex. of signal name	Description
Sensor	PS	IN	Sensor detection signal
		PS	
		Door PS1	
		SIG	
		102 PS	
Solenoid	SD	24V	Power to drive the solenoid
		DRV	Drive signal
		SOL	
Clutch	CL	24V	Power to drive the clutch
		DRV	Drive signal
		SOL	
Motor	M	24V	Power to drive the motor
		CONT	Drive signal
		DRV1	Drive signals of two kinds
		DRV2	
		D1	
		D2	
		_U	Drive signals (control signals) of three kinds
		_V	
		_W	
		DRV1	
		DRV2	
		DRV3	
		D1	Drive signals (control signals) of four kinds Motor, phases A and B control signals
		D2	
		D3	
		D4	
		DRV A	
		DRV \overline{A}	
		DRV B	
		DRV \overline{B}	
		A	
		/A	
		B	
		/B	
		AB	
		BB	
		CLK, PLL	PLL control signal
		LCK, Lock, LD	PLL lock signal
		FR	Forward/reverse rotation signal
		EM, Lock, LCK, LD	Motor lock abnormality
		BLK	Drive brake signal
		P/S	Power/stop
		S/S	Operating load start/stop signal
		SS	
		CW/CCW, F/R	Rotational direction switching signal
		ENB	Effective signal
		TEMP_ER	Motor temperature abnormality detection signal
Fan	FM	24V	Power to drive the fan motor
		CONT, DRIVE	Drive signal
		HL	Speed control signal (2 speeds)
		EM, Lock, LCK, FEM	Detection signal
Others		TH1.S, ANG	Analog signal
Ground		SG, S_GND, S_GND	Signal ground

Serial communication		PG, P.GND	Power ground
		DCD	Data carrier detection
		SIN	Serial input
		SOUT	Serial output
		DTR	Data terminal operation available
		GND	Signal ground (earth)
		DSR, DSET	Data set ready
		RTS	Transmission request signal
		CTS	Consent transmission signal
		RI	Ring indicator
		TXD	Serial transmission data
		RXD	Serial reception data

5. PAPER FEED DIRECTION

When the direction in which paper is fed is in parallel with the longer side of paper, the paper feed direction like this is referred to as the longitudinal feed.

And the paper feed direction that is perpendicular to the longitudinal feed is referred to as the transverse feed.

When specifying the longitudinal feed, "S (abbreviation for Short Edge Feeding)" is added to the paper size. For the transverse feed, no specific notation is employed.

However, when only the longitudinal feed is specified for one and the same paper size with no specification made for the transverse feed, "S" is not added even when being fed longitudinally.

<Example>

Paper size	Feed direction	Notation
A4	Transverse feed	A4
	Longitudinal feed	A4S
A3	Longitudinal feed	A3

C PRODUCT SPECIFICATIONS

1. bizhub PRO 1200/1200P/1051

1.1 Type

Type	Console type (floor-mounted type)
Copying method	Indirect electrostatic method
Original stand	Fixed
Original alignment	Left rear standard
Photo conductor	OPC
Sensitizing method	LED print head (LPH) exposure method
Paper feed trays	2 trays (1,600 sheets x 2, 80g/m ²) PF-702 (2,000 sheets x 3, 80g/m ²) *1 PF-703 (1,850 sheets x 2, 1,300 sheets x 1, 80g/m ²) *1

*1 PF-702 and PF-703 are optional.

1.2 Functions

Original	Sheet, book, solid object	
Max. original size	A3 or 11 x 17	
Paper size	Trays 1, 2	SRA3, A3, JISB4 *1, ISOB4 *2, SRA4S, A4, A4S, JISB5*1, ISOB5 *1, B5S, A5, 12 x 18, 11 x 17, 9 x 11, 8 ¹ / ₂ x 14, 8 ¹ / ₂ x 11, 8 ¹ / ₂ x 11S, 5 ¹ / ₂ x 8 ¹ / ₂ , 8 ¹ / ₂ x 13, 8 ¹ / ₄ x 13, 8 ¹ / ₈ x 13 ¹ / ₄ , 8 x 13, 8K *3, 16K *3, 16KS*3 Wide paper (A3W, B4W, A4W, A4SW, B5W, B5SW, A5W, 12 x 18W, 11 x 17W, 8 ¹ / ₂ x 11W, 8 ¹ / ₂ x 11SW, 5 ¹ / ₂ x 8 ¹ / ₂ W, Maximum 324mm x 463mm) Custom size paper (Maximum 324mm x 463mm, Minimum 182mm x 139mm) *4 Index paper (A3, B4, A4, A4S, B5, B5S, 11 x 17, 8 ¹ / ₂ x 11, 8 ¹ / ₂ x 11S, 5 ¹ / ₂ x 8 ¹ / ₂ , Maximum 324mm x 463mm) *1 Default for North America *2 Default for Europe *3 For China/Taiwan only *4 When using as the cover in perfect binding mode (Maximum 307mm x 463mm)
	Duplex section	SRA3, A3, JISB4, ISOB4, SRA4S, A4, A4S, JISB5, ISOB5, B5S, A5, 12 x 18, 11 x 17, 9 x 11, 8 ¹ / ₂ x 14, 8 ¹ / ₂ x 11, 8 ¹ / ₂ x 11S, 5 ¹ / ₂ x 8 ¹ / ₂ , 8 ¹ / ₂ x 13, 8 ¹ / ₄ x 13, 8 ¹ / ₈ x 13 ¹ / ₄ , 8 x 13, 8K, 16K, 16KS Wide paper (A3W, B4W, A4W, A4SW, B5W, B5SW, A5W, 12 x 18W, 11 x 17W, 8 ¹ / ₂ x 11W, 8 ¹ / ₂ x 11SW, 5 ¹ / ₂ x 8 ¹ / ₂ W, Maximum 324mm x 463mm) Custom size paper (Maximum 324mm x 463mm, Minimum 95mm x 133mm)
Paper weight	Trays 1, 2	40g/m ² to 244g/m
	PF-702/PF-703	40g/m ² to 350 g/m ²
	Duplex	40g/m ² to 244g/m ²
Magnification	Fixed magnification	Metric: x 1.000, x 2.000, x 1.414, x 1.189, x 0.840, x 0.707, x 0.500 Inch: x 1.000, x 2.000, x 1.545, x 1.294, x 1.214, x 0.785, x 0.772, x 0.647, x 0.500
	Preset zoom setting	3 types
	Zoom magnification	x 0.250 to x 4.000 (at the step of 0.1%)
	Vertical magnification	x 0.250 to x 4.000 (at the step of 0.1%)
	Horizontal magnification	x 0.250 to x 4.000 (at the step of 0.1%)
Warm-up time	8 min. or less	
First copy out time	PRO1200/1200P	2.8 sec. or less
	PRO1051	3.0 sec. or less
Continuous copy speed	PRO1200/1200P	120 sheets/min. (for A4, 8 ¹ / ₂ x 11)
	PRO1051	105 sheets/min. (for A4, 8 ¹ / ₂ x 11)
Continuous copy count	Up to 9,999 sheets	
Original density selection	Auto density selection, manual (9 steps), user density registration (2 types of settings can be registered)	

Resolution	Scan	600dpi x 600dpi
	Write	1200dpi x 1200dpi
DRAM	768MB	
HDD (160GB) *1 *2	40GB	RawHDD
	120GB	For Box storage
Interface section	RJ45 Ethernet x 2, Serial port (RS232-C) x 2, Serial port (USB TypeA x 4, TypeB x 1)	
Number of originals to be stored	10,000 sheets or more	
	Under the following conditions	Original : FAX#4CHART/A4 Density : Manual 5 Mode : Text/photo

*1 Removable when using RH-101 (optional).

*2 1 for standard equipment.

1.3 Type of paper

Type of paper	Main tray	PF-702	PF-703
Coat	○	○	○
PrePrinted	×	○ *1	○
Fine	○	○	○
Plain paper	○	○	○
Book/News	○	○	○
Embossed	○	○	○
Label Paper	○	○	○
OHP Film	×	○ *2	○ *2
Tab paper	○	○	○

*1 When using PP-701

*2 Only the middle stage tray can feed paper. (It is not possible to select on the operation panel.)

1.4 Available types of paper and ranges of paper weight

1. Inch

Paper type	Product name
Normal Paper	Domtar Microprint Laser (90g/m ²) Domtar Microprint Color Copy (105g/m ²) Hammermill Tidal MP (20lb) Hammermill Fore MP (20lb) Hammermill Fore MP - colors (30% post-consumer fiber) (20lb)
Recycled paper	Hammermill Great White Copy (30% Post-Consumer Fiber) (75g/m ²)
Gloss	Smart Kromekote Laser High Gloss C2S - Ultra Gloss Cast Coat (234g/m ²) Smart Kromekote Laser High Gloss C1S 12pt Smart Knightkote Matte Digital Color Imaging press C2S Text (118g/m ²) Wausau Exact Gloss Coated (C1S) (215g/m ²) Carolina Digital C2S Cover (234g/m ²) Carolina Digital C1S Cover (195g/m ² , 234g/m ²) Stora Enso Futura laser (32lb) Stora Enso Futura laser Gloss (Text) (115g/m ²) Stora Enso Futura laser Dull (Text) (115g/m ²)
Cover	Domtar Microprint Color Copy Cover (163g/m ² , 216g/m ²) Domtar Microprint Coated laser Matte Cover (216g/m ²) Hammermill Color Copy Cover Photo White (80lb) Xerox cover (65lb) Weyerhaeuser Cougar Opaque Cover (65lb)
Bristol	Springhill Digital Vellum Bristol Cover (150g/m ²)
Index	Xerox Premium Multipurpose 4024 Index stock (90lb) Springhill Digital Index (Formerly known as Index Plus) White (90lb, 110lb)

2. Metric

Paper type	Product name
Business	Clairefontaine Clairalfa Whilte (80g/m ²) Konica Minolta Original (80g/m ²) Konica Minolta Profi (80g/m ²) Mondi BIO TOPs 3 extra (80g/m ²) Mondi Color Copy 80 (80g/m ²)

	Clairefontaine Clairmail (60g/m ²) Konica Minolta Color + (90g/m ²) Mondi Color Copy (200g/m ²) Mondi MAESTRO supreme (60g/m ²) Stora Enso 4CC (220g/m ²) Stora Enso 4CC Sheets (100g/m ²) Xerox Digital Colortech+ (280g/m ²)
Eco-friendly	Mondi MAESTRO TRIOTEC TCF (80g/m ²)
Recycled	Mondi UTILUS SuperWhite (80g/m ²)

1.5 Materials

Parts name	Useful life	Type name
Toner bottle	119,300 prints *1	TN011
Drum	1,000,000 prints or 180 hours *2 1,000,000 prints or 220 hours *3	DR011
Developer	1,000,000 prints or 180 hours *2 1,000,000 prints or 220 hours *3	DV011
Toner collect box	750,000 prints *1	-

*1 A4 original at 6% coverage.

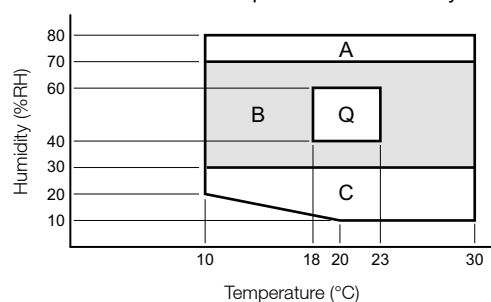
*2 1200/1200P

*3 1051

1.6 Maintenance

MAINTENANCE Cycle	Every 750,000 prints			
Ave. number of prints	300,000 to 500,000 per month			
Max. number of prints	PRO1200/1200P	Q zone *1	3,000,000 per month	100,000 per day
		B, C zone *1	2,400,000 per month	80,000 per day
		A zone *1	600,000 per month	20,000 per day
	PRO1051	Q zone *1	2,000,000 per month	67,000 per day
		B, C zone *1	1,600,000 per month	54,000 per day
		A zone *1	600,000 per month	20,000 per day

*1 The zones mean the temperature and humidity range indicated in the following graph.



1.7 Machine data

Power source	Inch: AC 208V to 240V -10% to +10%, 24A, 60 Hz Metric: AC 230V -14% to +10.6%, 25A, 50Hz	
Maximum power consumption	5,000W or less (full option)	
Weight	PRO1200/1051: Approx. 375kg (including DF)	
Dimensions	PRO1200+ PF-702+ RU-506+ FD-503+ FS-521	3091 (W) x 780 (D) x 1,464 (H ^{*1}) mm
	PRO1200+ PF-703+ RU-506+ FD-503+ SD-506+ FS-521	4,326 (W) x 780 (D) x 1,464 (H ^{*1}) mm
	PRO1200+ PF-702+ RU-506+ LS-505+ LS-505	3,717 (W) x 780 (D) x 1,464 (H ^{*1}) mm

*1 The height from the bottom to the top of the operation panel.

1.8 Operating environment

Temperature	10°C to 30°C
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Humidity	10% to 80%RH (with no condensation)
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1.9 Note regarding the specifications

Note

- The information herein may be subject to change for improvement without notice.

2. DF-615

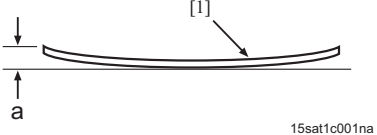
2.1 Type

Type	Sheet-through type automatic document feeder
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2.2 Functions

Paper size	A3, B4, ISOB4, A4, A4S, B5, ISOB5, B5S, A5 11 x 17, 8 ¹ / ₂ x 14, 8 ¹ / ₂ x 11, 8 ¹ / ₂ x 11S, 8 ¹ / ₂ x 5 ¹ / ₂ , 8 ¹ / ₂ x 13, 8 ¹ / ₄ x 13, 8 ¹ / ₈ x 13 ¹ / ₄ , 8 x 13, 8K* ¹ , 16K* ¹ , 16KS* ¹ Maximum original size: 297mm x 431.8mm Minimum original size: 128mm x 139.7mm * ¹ For China/Taiwan only
Original stacking capacity	100 sheets, max. (80g/m ²)
Original read speed (A4 size)	Single sided copy mode: 105 sheets/min. Double sided copy mode: 65 sheets/min.
Original feed layout	Set with the front side up, at center as standard
Original image read position	Dedicated slit glass section
Resolution	600dpi

2.3 Type of paper

Type of paper	Fine paper of 50g/m ² to 130g/m ² In the case of the single sided copy mode, however, fine paper of 131g/m ² to 200g/m ² is also available in the single feed mode.
Paper curl amount	Up to 10mm with 5 originals overlapped one another  a Curing: 10 mm or less [1] Original

2.4 Originals other than the paper feed and throughput can be guaranteed

With the following originals, no severe problems are found such as frequent jams and major damage to the originals, although it is not possible to obtain a numeric value indicating reliability that can be specified in product guarantee terms

Recycled paper, straw paper, heat-sensitive paper, originals fed in the mixing of perforated original mode, high-quality paper of 35g/m² to 50g/m², irregular-sized originals (such as CF originals), coated paper, originals with a rough surface (such as letterhead), folded originals (Z-Folded or folded in 2)

2.5 Originals not allowed to be fed

The following originals can not be used

OHP film, blueprint master, label paper, offset master, bonded original, fine paper of 35g/m² to 201g/m²

2.6 Combination of mixed originals

Combinations of the same and different size originals is available. The following table shows the available combination of mixed originals.

Metric: Europe

Other originals	Reference originals (original with a maximum width)						
	A3	A4	B4	B5	A4S	A5	B5S
A3	□	○	—	—	—	—	—
A4	○	□	—	—	—	—	—
B4	⊗	⊗	□	○	—	—	—
B5	⊗	⊗	○	□	—	—	—
A4S	⊗	⊗	⊗	⊗	□	—	—
A5	⊗	⊗	⊗	⊗	○	—	—
B5S	✕	✕	⊗	⊗	⊗	⊗	□

Inch

Other originals	Reference originals (original with a maximum width)				
	11 x 17	8 1/2 x 11	8 1/2 x 14	8 1/2 x 11S	8 1/2 x 5 1/2
11 x 17	□	○	—	—	—
8 1/2 x 11	○	□	—	—	—
8 1/2 x 14	⊗	⊗	□	○	○
8 1/2 x 11S	⊗	⊗	○	□	○
8 1/2 x 5 1/2	⊗	⊗	○	○	□

Taiwanese

Other originals	Reference originals (original with a maximum width)						
	A3	A4	8K	16K	A4S	A5	16KS
A3	□	○	—	—	—	—	—
A4	○	□	—	—	—	—	—
8K	⊗	⊗	□	○	—	—	—
16K	⊗	⊗	○	□	—	—	—
A4S	⊗	⊗	⊗	⊗	□	○	—
A5	⊗	⊗	⊗	⊗	○	□	—
16KS	✕	✕	⊗	⊗	⊗	⊗	□

□ : same size, ○ : same series, ⊗ : different series, ◆ : different series (out of guaranteed paper through performance), ✕ : no mixed loading, — : not supported

2.7 Maintenance

MAINTENANCE	Same as the main body.
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2.8 Machine data

Power source	24/5.1VDC±10% (supplied from the main body)
Maximum power consumption	210W or less
Dimensions	650 (W) x 570 (D) x 170 (H) mm
Weight	Approx. 22kg

2.9 Operating environment

Temperature	10°C to 30°C
Humidity	10% to 80%RH (with no condensation)

2.10 Note regarding the specifications

Note

- The information herein may be subject to change for improvement without notice.

3. PF-702

3.1 Type

Type	Front loading type 3-tray paper feeder
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3.2 Functions

Number of trays	3 trays (All trays universal)
Maximum tray capacity	6,000 sheets (80g/m ² standard paper) = 2,000 sheets x 3 trays

3.3 Type of paper

Paper size	SRA3, A3, JISB4* ¹ , ISOB4* ² , SRA4S, A4, A4S, JISB5* ¹ , ISOB5* ² , B5S, ISOB5S, A5, 8K* ³ , 16K* ³ , 16KS* ³ , 12 x 18, 11 x 17, 9 x 11, 8 ¹ / ₂ x 14, 8 ¹ / ₂ x 11, 8 ¹ / ₂ x 11S, 5 ¹ / ₂ x 8 ¹ / ₂ , 8 ¹ / ₂ x 13, 8 ¹ / ₄ x 13, 8 ¹ / ₈ x 13 ¹ / ₄ , 8 x 13 Wide paper (A3W, B4W, A4W, A4SW, B5W, B5SW, A5W, 12 x 18W, 11 x 17W, 8 ¹ / ₂ x 11W, 8 ¹ / ₂ x 11SW, 5 ¹ / ₂ x 8 ¹ / ₂ W, Max. 324mm x 463mm) Custom size paper (Max. 324mm x 463mm, Min. 182mm x 139mm)* ⁴ Tab paper (A3, B4, A4, A4S, B5, B5S, 11 x 17, 8 ¹ / ₂ x 11, 8 ¹ / ₂ x 11S, 5 ¹ / ₂ x 8 ¹ / ₂) * ¹ Default for North America * ² Default for Europe * ³ For China/Taiwan only * ⁴ When using small size guide : Min. 95mm x 139mm	
Applicable paper	Plain, Fine, Coat* ⁶ , recycled paper, PrePrinted, Book/News, Embossed, Blank Insert * ⁶ Available with environmental humidity 60% or less	
Paper weight	Tray 1, 3	40g/m ² to 300g/m ²
	Tray 2	40g/m ² to 350 g/m ²

*¹ Paper feed available only from tray /5

3.4 Maintenance

Maintenance	Same as the main body.
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3.5 Machine data

Power source	36/24/12/5VDC, 24.5VAC (supplied both from the main body or PF703)
Maximum power consumption	110W or less
Weight	150kg
Dimensions	809 (W) x 780 (D) x 1038 (H) mm

3.6 Operating environment

Temperature	10°C to 30°C
Humidity	10% to 80%RH (with no condensation)

3.7 Note regarding the specifications

Note

- The information herein may be subject to change for improvement without notice.

4. PP-701

4.1 Type

Type	Overlay printing enhancement kit for PF-702
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4.2 Maintenance

Machine service life	Same as the main body.
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4.3 Machine data

Power source	24VDC (supplied from PF)
Maximum power consumption	19W or less
Dimensions	125 (W) x 90 (D) x 175 (H) mm
Weight	2kg

4.4 Operating environment

Temperature	10°C to 30°C
Humidity	10% to 80%RH (with no condensation)

4.5 Note regarding the specifications

Note

- The information herein may be subject to change for improvement without notice.

5. PF-703

5.1 Type

Type	Front loading type suction method 3-tray paper feeder
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5.2 Functions

Number of trays	3 trays (All trays universal)
Maximum tray capacity	5,000 sheets (80g/m ² standard paper) Tray /1 : 1,300 sheets Tray /2, /3 : 1,850 sheets

5.3 Type of paper

Paper size	SRA3, A3, JISB4* ¹ , ISOB4* ² , SRA4S, A4, A4S, JISB5* ¹ , ISOB5* ² , B5S, ISOB5S, A5, 8K* ³ , 16K* ³ , 16KS* ³ , 12 x 18, 11 x 17, 9 x 11, 8 ¹ / ₂ x 14, 8 ¹ / ₂ x 11, 8 ¹ / ₂ x 11S, 5 ¹ / ₂ x 8 ¹ / ₂ , 8 ¹ / ₂ x 13, 8 ¹ / ₄ x 13, 8 ¹ / ₈ x 13 ¹ / ₄ , 8 x 13 Wide paper (A3W, B4W, A4W, A4SW, B5W, B5SW, A5W, 12 x 18W, 11 x 17W, 8 ¹ / ₂ x 11W, 8 ¹ / ₂ x 11SW, 5 ¹ / ₂ x 8 ¹ / ₂ W, Max. 324mm x 463mm) Custom size paper (Max. 324mm x 463mm, min. 140mm x 133mm)* ⁴ Tab paper (A3, B4, A4, A4S, B5, B5S, 11 x 17, 8 ¹ / ₂ x 11, 8 ¹ / ₂ x 11S, 5 ¹ / ₂ x 8 ¹ / ₂)* ⁵	
Applicable paper	Plain, Fine, Coat, recycled paper, PrePrinted, Book/News, Embossed, Blank Insert	
Paper weight	Tray 1, 3	40 to 300g/m ²
	Tray 2	40 to 350g/m ²

*1 Default for North America

*2 Default for Europe

*3 For China/Taiwan only

*4 When using small size guide : Min. 95mm x 133mm

*5 Tab paper is unavailable for PI-PFU.

5.4 Maintenance

Maintenance	Same as the main body.
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5.5 Machine data

Power source	36/24/12/5VDC, 200VAC (supplied both from the main body)
Maximum power consumption* ¹	DC : 90W or less AC : 100W or less
Weight	186kg
Dimensions	871.5 (W) x 780 (D) x 1038 (H) mm

*1 Excluding the power consumption of HT-505. (Power consumption AC of HT-505: 580W or less)

5.6 Operating environment

Temperature	10°C to 30°C
Humidity	10% to 80%RH (with no condensation)

5.7 Note regarding the specifications

Note

- The information herein may be subject to change for improvement without notice.

6. HT-505

6.1 Type

Type	Fan heater type dehumidifier for PF-703
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6.2 Machine data

Power source	24/5VDC, 200V to 240VAC (supplied from PF)
Maximum power consumption	DC: 6W or less, AC: 580W or less
Dimensions	Dehumidifier fan heater unit: 197 (W) x 82 (D) x 293 (H) mm Power source unit: 121 (W) x 80 (D) x 160 (H) mm
Weight	Dehumidifier fan heater unit: 1.5kg (per unit) Power supply unit: 0.9 kg

6.3 Operating environment

Temperature	10°C to 30°C
Humidity	10% to 80%RH (with no condensation)

6.4 Note regarding the specifications

Note

- The information herein may be subject to change for improvement without notice.

7. FA-501

7.1 Type

Type	Paper conveyance unit for PI with multi-feed detection for PF-703
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7.2 Type of paper

Paper size	Maximum 324mm x 463mm, minimum 95mm x 133mm
Applicable paper	Plain, Fine, Coat, recycled paper, PrePrinted, Book/News, Embossed, Blank Insert
Paper weight	40 to 350g/m ²

7.3 Machine data

Power source	Same as the PF.
Maximum power consumption	36W or less
Dimensions	Conveyance section 150 (W) x 580 (D) x 200 (H) mm External parts 575mm x 608mm, 575mm x 375mm
Weight	9kg

7.4 Operating environment

Temperature	10°C to 30°C
Humidity	10% to 80%RH (with no condensation)

7.5 Note regarding the specifications

Note

- The information herein may be subject to change for improvement without notice.

8. RH-101

8.1 Type

Type	Removable HDD kit
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8.2 Functions

Functions	When the main power is OFF, the inner case and the hard disk can be removed/inserted from RH-101.
	When RH-101 is used, do NOT use the security mode of the main body.

8.3 Machine data

Power source	12/5VDC (supplied from the main body)
Maximum power consumption	5W or less (built-in HDD power: 70W or more)
Weight	2.4kg
Dimensions	150 (W) x 260 (D) x 110 (H) mm

8.4 Operating environment

Temperature	10°C to 30°C
Humidity	10% to 80%RH (with no condensation)

8.5 Note regarding the specifications

Note

- The information herein may be subject to change for improvement without notice.

9. HD-511

9.1 Type

Type	Inner HDD kit
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9.2 Functions

Functions	Inner HDD kit of the removable HDD kit (RH-101)
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9.3 Machine data

Power source	12/5VDC (supplied from the main body)
Power consumption	70W or less
Weight	0.85kg
Dimensions	192 (W) x 125 (D) x 42 (H) mm

9.4 Operating environment

Temperature	10 to 30 °C
Humidity	10 to 80%RH (with no condensation)

9.5 Note regarding the specifications

Note

- The information herein may be subject to change for improvement without notice.

10. RU-506

10.1 Type

Type	Paper conveyance unit with paper overlap and reverse functions
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10.2 Functions

Double sheets reverse/exit conveyance mode ^{*1}	Reverses 2 sheets of paper exited from the main body, PI-PFU ^{*2} or GP-501 and conveys to finishing unit.
Single sheet reverse/exit conveyance mode	Reverses a single sheet of paper exited from the main body, PI-PFU ^{*2} or GP-501 and conveys to finishing unit.
Straight conveyance mode	Conveys papers exited from the main body, PI-PFU ^{*2} or GP-501 to finishing unit without any process.

^{*1} 1200/1200P only

^{*2} 1200/1200P/1051 only

10.3 Paper type

Paper size	SRA3, A3, JISB4 ^{*1} , ISOB4 ^{*2*3*4*9} , SRA4, SRA4S, A4, A4S, JISB5 ^{*1} , ISOB5 ^{*2*3*4*9} , JISB5S ^{*1} , ISOB5S ^{*2*3*4*9} , A5, A5S ^{*4*5*9} , JISB6S ^{*1*4*5*9} , ISOB6S ^{*2*4*9} , A6S ^{*4*5*9} , 13 x 19 ^{*4*5*9} , 12 x 18, 11 x 17, 9 x 11 ^{*3*4*9} , 8 ¹ / ₂ x 14, 8 ¹ / ₂ x 11, 8 ¹ / ₂ x 11S, 5 ¹ / ₂ x 8 ¹ / ₂ ^{*3*4} , 5 ¹ / ₂ x 8 ¹ / ₂ S ^{*4*5*9} , 8 ¹ / ₂ x 13, 8 ¹ / ₄ x 13, 8 ¹ / ₈ x 13 ¹ / ₄ , 8 x 13, 8K ^{*4*5*6*9} , 16K ^{*4*5*6*9} , 16KS ^{*4*5*6*9} Wide paper ^{*3} (A3W, B4W, A4W, A4SW, B5W, B5SW, A5W, 12 x 18W, 11 x 17W, 8 ¹ / ₂ x 11W, 8 ¹ / ₂ x 11SW, 5 ¹ / ₂ x 8 ¹ / ₂ W, Max. 324mm x 463mm) Custom size paper (Max. 324mm x 463mm ^{*3} , Max. 324mm x 487mm ^{*5} , Max. 330mm x 487mm ^{*4*9} , Min. 95mm x 133mm) Tab paper ^{*7} (A3, B4, A4, A4S, B5, B5S, 11 x 17, 8 ¹ / ₂ x 11, 8 ¹ / ₂ x 11S, 5 ¹ / ₂ x 8 ¹ / ₂ , Max. 324mm x 463mm ^{*3} , Max. 324mm x 487mm ^{*5})	
Paper type	Plain, Fine, Coat, recycled paper: same as the main body.	
Paper weight	40g/ m ² to 350g/ m ² ^{*3} , 64g/ m ² to 300g/ m ² ^{*5*9}	
	2 pages reverse/exit conveyance mode ^{*8}	40g/ m ² to 216g/ m ²

^{*1} Default for North America (C8000/1200/1200P/1051/C7000/C7000P/C70hc/C6000 only)

^{*2} Default for Europe

^{*3} 1200/1200P/1051 only

^{*4} C8000/C7000/C7000P/C70hc/C6000 only

^{*5} C6501/C6501P/C65hc only

^{*6} For China/Taiwan only (C6501/C6501P/C65hc/1200/1200P/1051/C7000/C7000P/C70hc/C6000 only)

^{*7} C8000 is A4, 8¹/₂ x 11 only

^{*8} 1200/1200P only

^{*9} C7000/C7000P/C70hc/C6000 only

10.4 Machine data

Power source	24/5V DC (supplied from the main body)
Maximum power consumption	63VA or less
Dimensions	350 (W) x 775 (D) x 1020 (H) mm
Weight	Approx. 45 kg

10.5 Operating environment

Temperature	10°C to 30°C
Humidity	10% to 80%RH (with no condensation)

10.6 Note regarding the specifications

Note

- The information herein may be subject to change for improvement without notice.

11. FS-521

11.1 Type

Type	Staple-cut type multi-staple device
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11.2 Functions

(1) Function

Straight mode	Exited into the main tray with no processing made.
Shift mode	Exited into the main tray after being shifted.
Sub tray mode	Exits paper to the sub tray without any process.
Staple mode	Exited into the main tray after being flat-stapled.
Subset staple mode	Bundles of flat-stapled sheets of paper and single sheets of paper being exited at random into the main tray.

(2) Number of staple sheets

The maximum number of staple sheets is decided according to either conditions which is met first, the combination condition of the paper type/the paper length/the number of sheets for every range of paper weight, or the combination condition of the booklet length/the booklet thickness.

- Combination condition of the paper weight/the paper type/the paper length and the number of sheets for every range of paper weight

Paper weight (g/m ²)	Number of staple sheets			
	Paper not coated		Coated paper/color paper	
	Less than 400mm	400mm or more	Less than 400mm	400mm or more
50 to 71	100	50	35	35
72 to 81	100	50	35	35
82 to 91	100	50	35	35
92 to 130	50	50	30	30
131 to 161	40	40	25	25
162 to 216	25	25	20	20
217 to 244	25	25	15	15

- Combination condition of the booklet length/the booklet thickness

Length (mm)	Booklet thickness (mm)
219 or less	23 or less
220 or more	20 or less

(3) Staple position

Staple position	1 in the back (45 degrees), 1 in the front, 2 in center
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(4) Maximum tray capacity of the main tray

Straight/Shift mode (Paper weight 40g/m ² to 350g/m ² *1, 64g/m ² to 300g/m ² *2*11, 64g/m ² to 350g/m ² *3)	Capacity for folding:	Z-Fold 50 sheets (80g/m ²), Half-Fold 50 sheets (80g/m ²)		
	Large size:	A3, JISB4*4, ISOB4*1 *3 *5 *11, 12 x 18, 11 x 17, 8 ¹ / ₂ x 14, SRA3, SRA4, SRA4S, 13 x 19 *2*3*6*11, 8 ¹ / ₂ x 13, 8 ¹ / ₄ x 13, 8 ¹ / ₈ x 13 ¹ / ₄ , 8 x 13, 8K *2*3 *7 *11 Wide paper *1 (Max. 324mm x 463mm)		
	Small size:	A4, A4S, JISB5*4, ISOB5*1 *3 *5 *11, JISB5S*4, ISOB5S*3 *5 *11, 9 x 11*1*3*11, 8 ¹ / ₂ x 11, 8 ¹ / ₂ x 11S, 16K*2*3 *7 *11 16KS*2*3 *7 *11		
	Minimum size:	A5, A5S*2*3*11, 5 ¹ / ₂ x 8 ¹ / ₂ S*2*3*6*11		
	Others:	Tab paper *8 *9 (A3, B4, A4, A4S, B5, B5S, 11 x 17, 8 ¹ / ₂ x 11, 8 ¹ / ₂ x 11S, 5 ¹ / ₂ x 8 ¹ / ₂ , Max. 324mm x 463mm)		
Custom size paper*12		<ul style="list-style-type: none"> 1200/1200P/1051 Minimum 148 (128)mm x 139mm, Maximum 324mm x 463mm C6501/C6501P/C65hc Minimum 148 (128)mm x 148mm, Maximum 324 (330)mm x 463 (483)mm C8000 Minimum 148 (128)mm x 140mm, Maximum 324 (330)mm x 463 (483)mm C7000/C7000P/C70hc/C6000 Minimum 148 (128)mm x 148mm, Maximum 324 (330)mm x 463 (483)mm 		
	Paper weight (g/m ²)	Tray capacity (sheets)		
		Large size	Small size	Minimum size
40 to 71		500	750	100

	72 to 81	1500	3000 (1500) *10	750
	82 to 91	1000	2000 (1500) *10	500
	92 to 130	750	1500	400
	131 to 161			350
	162 to 216	500	1000	250
	217 to 300	375	750	200
	301 to 350	250	500	100
Staple mode (Paper weight 50g/m ² to 244g/m ² *1, 64g/m ² to 244g/m ² *2 *3*11)	Number of sets of staple sheet	Number of sets		
	2 to 9	150 (paper length: 182mm to 364mm) 75 (paper length: other than 182mm to 364mm)		
	10 to 20	50		
	21 to 30	30		
	31 to 40	25		
	41 to 50	20		
	51 to 60	15		
	61 to 100	10		

*1 1200/1200P/1051 only

*2 C6501/C6501P/C65hc only

*3 C8000 only

*4 Default for North America (C8000/1200/1200P/1051/C7000/C7000P/C70hc/C6000 only)

*5 Default for Europe

*6 Straight mode only

*7 For China/Taiwan only (C6501/C6501P/C65hc/1200/1200P/1051/C7000/C7000P/C70hc/C6000 only)

*8 Operation of paper exit with tab area at the trail edge side is not warranty.

*9 For C8000/C7000/C7000P/C70hc/C6000, A4, 8¹/₂ x 11 only

*10 () when shifted

*11 C7000/C7000P/C70hc/C6000 only

*12 () when in straight mode

(5) Maximum tray capacity of the sub tray

Maximum tray capacity (Paper weight 40g/m ² to 350g/m ² *1*3, 64g/m ² to 300g/m ² *2*11, 64g/m ² to 350g/m ² *4)	200 sheets (20 sheets for Z-Folding/40 sheets for center folding)
SRA3, A3, JISB4 *5, ISOB4 *1 *4 *6 *11, SRA4, SRA4S, A4, A4S, JISB5 *5, ISOB5 *1 *4 *6 *11, JISB5S *5, ISOB5S *4 *6 *11, A5, A5S *2 *4 *11, JISB6S *2 *4 *5 *11, ISOB6S *4 *6 *11, A6S *2*4*11, 13 x 19 *2*4*11, 12 x 18, 11 x 17, 9 x 11 *1*4*11, 8 ¹ / ₂ x 14, 8 ¹ / ₂ x 11, 8 ¹ / ₂ x 11S, 5 ¹ / ₂ x 8 ¹ / ₂ *1*4, 5 ¹ / ₂ x 8 ¹ / ₂ *2*4*11, 8 ¹ / ₂ x 13, 8 ¹ / ₄ x 13, 8 ¹ / ₈ x 13 ¹ / ₄ , 8 x 13, 8K *2*4 *7 *11, 16K *2*4 *7 *11, 16KS *2*4 *7 *11, Post card Wide paper *1 (A3W, B4W, A4W, A4SW, B5W, B5SW, A5W, 12 x 18W, 11 x 17W, 8 ¹ / ₂ x 11W, 8 ¹ / ₂ x 11SW, 5 ¹ / ₂ x 8 ¹ / ₂ W, Max. 324mm x 463mm) Tab paper *8 *9 (A3, B4, A4, A4S, B5, B5S, 11 x 17, 8 ¹ / ₂ x 11, 8 ¹ / ₂ x 11S, 5 ¹ / ₂ x 8 ¹ / ₂ , Max. 324mm x 463mm) Custom size paper <ul style="list-style-type: none"> • 1200/1200P/1051 Minimum 95mm x 139mm *10, Maximum 324mm x 463mm • C6501/C6501P/C65hc Minimum 100mm x 148mm, Maximum 330mm x 487mm • C8000 Minimum 100mm x 140mm, Maximum 330mm x 487mm • C7000/C7000P/C70hc/C6000 Minimum 100mm x 148mm, Maximum 330mm x 487mm 	

*1 1200/1200P/1051 only

*2 C6501/C6501P/C65hc only

*3 Loading paper weight 49g/m² or less is not warranty

*4 C8000 only

*5 Default for North America (C8000/1200/1200P/1051/C7000/C7000P/C70hc/C6000 only)

*6 Default for Europe

*7 For China/Taiwan only (C6501/C6501P/C65hc/1200/1200P/1051/C7000/C7000P/C70hc/C6000 only)

*8 Operation of paper exit with tab area at the trail edge side is not warranty.

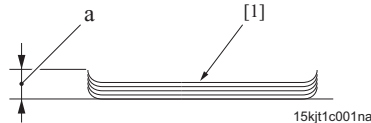
*9 C8000 is A4, 8¹/₂ x 11 only

*10 95mm x 133mm when post processing with FS only

*11 C7000/C7000P/C70hc/C6000 only

11.3 Type of paper

(1) Staple

Paper size	SRA3, A3, JISB4 ^{*1} , ISOB4 ^{*2} 3 ^{*5} 9, SRA4, SRA4S, A4, A4S, JISB5 ^{*1} , ISOB5 ^{*2} 3 ^{*5} 9, A5, 8K ^{*4} 5 ^{*6} 9, 16K ^{*4} 5 ^{*6} 9 12 x 18, 11 x 17, 9 x 11 ^{*3} 5 ^{*9} , 8 ¹ / ₂ x 14, 8 ¹ / ₂ x 11, 8 ¹ / ₂ x 11S, 5 ¹ / ₂ x 8 ¹ / ₂ ^{*3} 5 ^{*5} , 8 ¹ / ₂ x 13, 8 ¹ / ₄ x 13, 8 ¹ / ₈ x 13 ¹ / ₄ , 8 x 13 Wide paper ^{*3} (A3W, B4W, A4W, A4SW, B5W, B5SW, A5W, 12 x 18W, 11 x 17W, 8 ¹ / ₂ x 11W, 8 ¹ / ₂ x 11SW, 5 ¹ / ₂ x 8 ¹ / ₂ W, Max. 324mm x 463mm) Tab paper ^{*7} 8 (A3, B4, A4, A4S, B5, 11 x 17, 8 ¹ / ₂ x 11, 8 ¹ / ₂ x 11S, 5 ¹ / ₂ x 8 ¹ / ₂ , Maximum 324mm x 463mm) Custom size paper <ul style="list-style-type: none"> 1200/1200P/1051 Minimum 203mm x 139mm, Maximum 324mm x 463mm C6501/C6501P/C65hc Minimum 203mm x 148mm, Maximum 324mm x 463mm C8000 Minimum 203mm x 140mm, Maximum 324mm x 463mm C7000/C7000P/C70hc/C6000 Minimum 203mm x 148mm, Maximum 324mm x 463mm 	
Applicable paper	Same as the main body.	
Paper weight	Main tray	50g/m ² to 244g/m ² ^{*3} , 64g/m ² to 244g/m ² ^{*4} 5 ^{*9}
Paper curl amount	 <p>a Curl amount: 20mm or less (50g/m² to 90g/m²), 10mm or less (91g/m² to 300g/m²) [1] 5 sheets</p>	

^{*1} Default for North America (C8000/1200/1200P/1051/C7000/C7000P/C70hc/C6000 only)

^{*2} Default for Europe

^{*3} 1200/1200P/1051 only

^{*4} C6501/C6501P/C65hc only

^{*5} C8000 only

^{*6} For China/Taiwan only (C6501/C6501P/C65hc/1200/1200P/1051/C7000/C7000P/C70hc/C6000 only)

^{*7} Operation of paper exit with tab area at the trail edge side is not warranty.

^{*8} For C8000/C7000/C7000P/C70hc/C6000, A4, 8¹/₂ x 11 only

^{*9} C7000/C7000P/C70hc/C6000 only

11.4 Machine data

Power source	24/5VDC (supplied from the main body)
Maximum power consumption	110VA
Weight	Approx. 80kg
Dimensions	When the main tray is pulled out: 915 (W) x 723 (D) x 1020 (H) mm When the main tray is set in: 798 (W) x 723 (D) x 1020 (H) mm When the main tray is removed: 544 (W) x 723 (D) x 1020 (H) mm

11.5 Operating environment

Temperature	10°C to 30°C
Humidity	10% to 80%RH (with no condensation)

11.6 Note regarding the specifications

Note

- The information herein may be subject to change for improvement without notice.

12. LS-505

12.1 Type

Type	Grip conveyance type horizontal stacker	
Conveyance method	Entrance conveyance	Roller conveyance method
	Stacker tray conveyance	Grip conveyance method
	Sub tray conveyance	Roller conveyance method
	Coupling conveyance	Roller conveyance
Alignment method	Movable alignment lever (stacker tray only)	
Method of stacking	Horizontal stacking	Mixed stacking is unavailable (stacker tray only)
Shifting method	Conveyance direction shift	Shift amount: 20mm (stacker tray only) *1

*1 The use of the shift is unavailable with tab paper.

12.2 Functions

(1) Function

Stacker tray non-sort mode	Exited into the stacker tray with no processing made.
Sub tray mode	Exits paper to the sub tray without any process.
Stacker tray sort mode	Executes shifting operation (20mm) and exits paper to the stacker tray *1
Coupling mode	Conveys paper to the succeeding device without any process.

*1 The use of the shift is unavailable with tab paper.

(2) Maximum tray capacity

Maximum tray capacity (Paper weight 80g/m ²)	Stacker tray	<ul style="list-style-type: none"> 5,000 sheets SRA3, A3, JISB4 *1, ISOB4 *2 *3 *4 *6, SRA4 *4 *5 *6, SRA4S, A4, A4S 13 x 19 *3 *4 *5, 12 x 18, 11 x 17, 9 x 11 *3 *4 *6, 8 1/2 x 14, 8 1/2 x 11, 8 1/2 x 11S 8 1/2 x 13, 8 1/4 x 13, 8 1/8 x 13 1/4, 8 x 13 8K *4 *5 *6 *7, 16K *4 *5 *6 *7 3,000 sheets Coated paper (Sub-scan direction is 380mm or longer) 2,000 sheets JISB5 *1, ISOB5 *2 *3 *4 *6, A5, 5 1/2 x 8 1/2 *3 *4 *5
	Sub tray	Straight paper exit: 200 sheets Z-Folding paper: 20 sheets Half-folding paper: 40 sheets

*1 Default for North America (C8000/1200/1200P/1051/C7000/C7000P/C70hc/C6000 only)

*2 Default for Europe

*3 1200/1200P/1051/1250/1250P/1052 only

*4 C8000 only

*5 C6501/C6501P/C65hc only

*6 C7000/C7000P/C70hc/C6000 only

*7 For China/Taiwan only (C6501/C6501P/C65hc/1200/1200P/1051/C7000/C7000P/C70hc/C6000 only)

12.3 Type of paper

Paper size	Stacker tray	SRA3, A3, JISB4 *1, ISOB4 *2 *3 *5 *11, SRA4 *4 *5 *11, SRA4S, A4, A4S, JISB5 *1, ISOB5 *2 *3 *5 *11, JISB5S *1, ISOB5S *3 *5 *11, A5 13 x 19 *4 *5 *11, 12 x 18, 11 x 17, 9 x 11 *3 *5 *11, 8 1/2 x 14, 8 1/2 x 11, 8 1/2 x 11S, 5 1/2 x 8 1/2 *3 *5, 8 1/2 x 13, 8 1/4 x 13, 8 1/8 x 13 1/4, 8 x 13, 8K *4 *5 *11, 16K *4 *5 *11 Wide paper *3 (A3W, B4W, A4W, A4SW, B5W, B5SW, A5W, 12 x 18W, 11 x 17W, 8 1/2 x 11W, 8 1/2 x 11SW, 5 1/2 x 8 1/2W, Max. 324mm x 463mm) Tab paper *7 *8 (A3, B4, A4, A4S, B5, B5S, 11 x 17, 8 1/2 x 11, 8 1/2 x 11S, Max. 324mm x 463mm) Custom size paper Max. 324mm x 463mm, Min. 210mm x 148mm *3 Max. 483mm x 210mm, Min. 148mm x 2mm *4 *5 *11
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	Sub tray	<p>SRA3, A3, JISB4^{*1}, ISOB4^{*2} *3 *5 *11, SRA4^{*4} *5 *11, SRA4S, A4, A4S, JISB5^{*1}, ISOB5^{*2} *3 *5 *11, JISB5S^{*1}, ISOB5S^{*2} *3 *5 *11, A5, A5S^{*4} *5 *11, JISB6S^{*1} *4 *5 *11, ISOB6S^{*2} *5 *11, A6S^{*4} *5 *11 13 x 19^{*4} *5 *11, 12 x 18, 11 x 17, 9 x 11^{*3} *5 *11, 8¹/₂ x 14, 8¹/₂ x 11, 8¹/₂ x 11S, 5¹/₂ x 8¹/₂ *3 *5, 5¹/₂ x 8¹/₂S^{*4} *5 *11, 8¹/₂ x 13, 8¹/₄ x 13, 8¹/₈ x 13¹/₄, 8 x 13, 8K^{*4} *5 *6 *11, 16K^{*4} *5 *6 *11, 16KS^{*4} *5 *6 *11</p> <p>Wide paper^{*3} (A3W, B4W, A4W, A4SW, B5W, B5SW, A5W, 12 x 18W, 11 x 17W, 8¹/₂ x 11W, 8¹/₂ x 11SW, 5¹/₂ x 8¹/₂W, Max. 324mm x 463mm)</p> <p>Tab paper^{*8} *9 (A3, B4, A4, A4S, B5, B5S, 11 x 17, 8¹/₂ x 11, 8¹/₂ x 11S, 5¹/₂ x 8¹/₂, Max. 324mm x 463mm)</p> <p>Postcard</p> <p>Custom size paper</p> <p>Max. 324mm x 463mm, Min. 95mm x 133mm^{*3}</p> <p>Max. 330mm x 487mm, Min. 100mm x 148mm^{*4} *11</p> <p>Max. 330mm x 487mm, Min. 100mm x 140mm^{*5}</p>
Paper weight	Stacker tray	<p>50g/m² to 244g/m² *3</p> <p>64g/m² to 256g/m² *4 *5 *11</p>
	Sub tray	<p>40g/m² to 350g/m² *3 *10</p> <p>64g/m² to 300g/m² *4 *11</p> <p>64g/m² to 350g/m² *5</p>

*1 Default for North America (C8000/1200/1200P/1051/C7000/C7000P/C70hc/C6000 only)

*2 Default for Europe

*3 1200/1200P/1051/1250/1250P/1052 only

*4 C6501/C6501P/C65hc only

*5 C8000 only

*6 For China/Taiwan only (C6501/C6501P/C65hc/1200/1200P/1051/C7000/C7000P/C70hc/C6000 only)

*7 1 to 15 tab (4 tab and 10 tab are unavailable.) The use of the shift is unavailable with tab paper.

*8 C8000/C7000/C7000P/C70hc/C6000 is A4 and 8¹/₂ x 11 only

*9 Operation of paper exit with tab area at the trail edge side is not warranty.

*10 Loading paper weight 49g/m² or less is not warranty

*11 C7000/C7000P/C70hc/C6000 only

12.4 Machine data

Power source	100VAC to 240VAC, 5VDC (supplied from the main body) *1
Maximum power consumption	143W or less
Weight	Approx. 110kg
Dimensions	785 (W) x 723 (D) x 1,020 (H) mm

*1 C8000/C6501/C6501P/C65hc/C7000/C7000P/C70hc/C6000: Only 5VDC is supplied from the main body

12.5 Operating environment

Temperature	10°C to 30°C
Humidity	10% to 80%RH (with no condensation)

12.6 Note regarding the specifications

Note

- The information herein may be subject to change for improvement without notice.


13. FD-503

13.1 Type

Type	Multi-folding device with punch and PI functions
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13.2 Functions

(1) Function

Normal paper exit function	Transfer paper exited from the main body is exited into the main tray/sub tray.
Punching function	Transfer paper that is exited by the main body or fed to the PI is punched for each sheet of paper and exited into the main tray.
Punch hole accuracy	<p>The accuracy is measured with 10 punched papers being overlapped.</p>  <p>a (a diameter of an inscribed circle of a punched hole): 5.0mm or more (2 punched holes), 6.5mm or more (3 punched holes)</p>
Folding functions	Transfer paper that is exited from the main body or fed to the PI is handled for folding (either one of the following: Z-Fold, Letter fold-out, Letter fold-in, Double parallel fold, Gate fold, and folding) for each sheet of paper, and exited into the sub tray/main tray (The Z-Fold exit to the main tray while in the FS connection is limited only to B4, A3, 8 1/2 x 14, 11 x 17, 12 x 18 and 8K.)
PI insertion function	PI tray paper is inserted in the transfer paper exited from the main body.
Manual mode	PI tray paper is punched, folded and stapled, and then exited into the sub tray/main tray. (The stapling function is available only when the staple unit is connected to the downstream of the FD.)

(2) Maximum tray capacity

<p>Main tray</p> <p>(Paper weight 40g/m² to 350g/m² *1,</p> <p>64g/m² to 300g/m² *2 *11,</p> <p>64g/m² to 350g/m² *3)</p>	<p>2500 sheets:</p> <p>A4, A4S, JISB5*4, ISOB5*1 *3 *5 *11, JISB5S*4, ISOB5S*3 *5 *11 9 x 11*1 *3 *11, 8 1/2 x 11, 8 1/2 x 11S 16K*2 *3 *6 *11, 16KS*2 *3 *6 *11</p> <p>1500 sheets:</p> <p>SRA3, A3, JISB4*4, ISOB4*1 *3 *5 *11, SRA4 *2 *3 *11, SRA4S 13 x 19*2 *3 *11, 12 x 18, 11 x 17, 8 1/2 x 14 8 1/2 x 13, 8 1/4 x 13, 8 1/8 x 13 1/4, 8 x 13 8K*2*3 *6 *11</p> <p>500 sheets:</p> <p>A5, A5S*2*3 *11, JISB6S*2 *3 *4 *11, ISOB6S*3 *5 *11, 5 1/2 x 8 1/2 *1*3, 5 1/2 x 8 1/2S*2*3 *11</p> <p>Others:</p> <p>Tab paper *7*8 (A3, B4, A4, A4S, B5, B5S, 11 x 17, 8 1/2 x 11, 8 1/2 x 11S, 5 1/2 x 8 1/2, Max. 324mm x 463mm)</p> <p>Wide paper *1(A3W, B4W, A4W, A4SW, B5W, B5SW, A5W, 12 x 18W, 11 x 17W, 8 1/2 x 11W, 8 1/2 x 11SW, 5 1/2 x 8 1/2W, Max. 324mm x 463mm)</p> <p>Custom size paper</p> <p>Minimum 95mm x 139mm, Maximum 324mm x 463mm*1 Minimum 100mm x 148mm, Maximum 330mm x 483mm*2 *11 Minimum 100mm x 140mm, Maximum 330mm x 483mm*3</p>
<p>Sub tray</p> <p>(with folder tray)</p>	<p>Folding type:</p> <p>Tri-Fold-in, Tri-Fold-out, Double parallel, Gate</p> <p>Paper size:</p> <p>A3, B4, ISOB4*1 *3 *11, A4S, SRA4S, 12 x 18, 11 x 17, 8 1/2 x 14, 8 1/2 x 11S, 8K*2 *3 *6 *11 Custom size paper (Maximum 305mm x 458mm, Minimum 210mm x 279mm)</p> <p>Paper weight:</p> <p>Letter fold-in, Letter fold-out 50g/m² to 130g/m² *1, 64g/m² to 130g/m² *2 *3 *11 Double parallel, Gate 50g/m² to 91g/m² *1, 64g/m² to 91g/m² *2 *3 *11</p> <p>Tray capacity of folding paper</p> <p>30 sets or more (for all types of folding with 80g/m² paper)*9</p>
<p>Sub tray</p> <p>(without folder tray)</p> <p>(Paper weight 40g/m² to 350g/m² *1*10,</p>	<p>Tray capacity: 200 sheets</p> <p>SRA3, A3, JISB4*4, ISOB4*1 *3 *5 *11, SRA4S, A4, A4S, JISB5*4, ISOB5*1*3 *5*11, JISB5S*4, ISOB5S *3 *5 *11, A5, A5S*2 *3 *11, JISB6S*2 *3 *4 *5 *11, ISOB6S *3 *11, A6S*2 *3 *11</p>

64g/m ² to 300g/m ² *2 *11, 64g/m ² to 350g/m ² *3)	13 x 19 ^{*2} *3*11, 12 x 18, 11 x 17, 9 x 11 ^{*1} *3*11, 8 ¹ / ₂ x 14, 8 ¹ / ₂ x 11, 8 ¹ / ₂ x 11S, 5 ¹ / ₂ x 8 ¹ / ₂ *1 *3, 5 ¹ / ₂ x 8 ¹ / ₂ S *2 *3*11 8 ¹ / ₂ x 13, 8 ¹ / ₄ x 13, 8 ¹ / ₈ x 13 ¹ / ₄ , 8 x 13 Tab paper *7 *8 (A3, B4, A4, A4S, B5, B5S, 11 x 17, 8 ¹ / ₂ x 11, 8 ¹ / ₂ x 11S, 5 ¹ / ₂ x 8 ¹ / ₂) Wide paper *1 (A3W, B4W, A4W, A4SW, B5W, B5SW, A5W, 12 x 18W, 11 x 17W, 8 ¹ / ₂ x 11W, 8 ¹ / ₂ x 11SW, 5 ¹ / ₂ x 8 ¹ / ₂ W, Max. 324mm x 463mm) Postcard Custom size paper	Minimum 95mm x 139mm, Maximum 324mm x 463mm *1 Minimum 100mm x 148mm, Maximum 330mm x 483mm *2 *11 Minimum 100mm x 140mm, Maximum 330mm x 487mm *3
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*1 1200/1200P/1051/1250/1250P/1052 only

*2 C6501/C6501P/C65hc only

*3 C8000 only

*4 Default for North America (C8000/1200/1200P/1051/C7000/C7000P/C70hc/C6000 only)

*5 Default for Europe

*6 For China/Taiwan only (C6501/C6501P/C65hc/1200/1200P/1051/C7000/C7000P/C70hc/C6000 only)

*7 Operation of paper exit with tab area at the trail edge side is not warranty.

*8 C8000 is A4, 8¹/₂ x 11 only

*9 Paper is stacked in the exiting sequence.

*10 Loading paper weight 49g/m² or less is not warranty

*11 C7000/C7000P/C70hc/C6000 only

13.3 Type of paper

(1) Punching function

Paper size	2-hole: SRA3, A3, JISB4*1, ISOB4*2 *3 *4 *9, SRA4S, A4, A4S, JISB5*1, ISOB5*2 *3 *4 *9, JISB5S*1, ISOB5S *2 *3 *4 *9, A5, A5S *4 *5 *9 12 x 18, 11 x 17, 9 x 11 ^{*3} *4 *9, 8 ¹ / ₂ x 14, 8 ¹ / ₂ x 11, 8 ¹ / ₂ x 11S, 5 ¹ / ₂ x 8 ¹ / ₂ *3 *4 8 ¹ / ₂ x 13, 8 ¹ / ₄ x 13, 8 ¹ / ₈ x 13 ¹ / ₄ , 8 x 13 8K*4*5 *6 *9, 16K*4*5 *6 *9, 16KS*4*5 *6 *9 Tab paper *7 (A3, B4, A4, A4S, B5, B5S, 11 x 17, 8 ¹ / ₂ x 11, 8 ¹ / ₂ x 11S, 5 ¹ / ₂ x 8 ¹ / ₂ , Max. 324mm x 463mm) 3/4-hole: SRA3, A3, JISB4*1, ISOB4*2 *3 *4 *9 *10, A4, JISB5*1, ISOB5*2 *3 *4 *9 *10, 12 x 18, 11 x 17, 9 x 11 ^{*3} *4 *9, 8 ¹ / ₂ x 11, 8K*4 *5 *6 *9, 16K*4 *5 *6 *9 Tab paper *7 (A3, A4, B4, B5, 11 x 17, 8 ¹ / ₂ x 11S, Max. 324mm x 463mm)
Applicable paper	Plain paper, tab paper
Paper weight	50g/m ² to 216g/m ² (2 sheets overlap mode: 50g/m ² to 91g/m ²) *3, 64g/m ² to 216g/m ² *4 *5 *9

(2) Folding functions

Paper size	A3, JISB4*1, ISOB4*2 *3 *4 *9, SRA4S, A4S 12 x 18, 11 x 17, 8 ¹ / ₂ x 14, 8 ¹ / ₂ x 11S 8K*4*5 *6 *9 Custom size paper (Maximum 305mm x 458mm, Minimum 210mm x 279mm)
Applicable paper	Plain paper
Paper weight	Half-Fold, Tri-Fold-in, Tri-Fold-out, Z-Fold 50g/m ² to 130g/m ² *3, 64g/m ² to 130g/m ² *4 *5 *9 Double parallel, Gate 50g/m ² to 91g/m ² *3, 64g/m ² to 91g/m ² *4 *5 *9

(3) PI functions

Paper size	SRA3, A3, JISB4*1, ISOB4*2 *3 *4, SRA4*4*5*9, SRA4S, A4, A4S, JISB5*1, ISOB5S*2*3*4, JISB5S*1, A5 13 x 19 ^{*4} *5 *9, 12 x 18, 11 x 17, 9 x 11 ^{*3} *4 *9, 8 ¹ / ₂ x 14, 8 ¹ / ₂ x 11, 8 ¹ / ₂ x 11S, 5 ¹ / ₂ x 8 ¹ / ₂ *3 *4, 8 ¹ / ₂ x 13, 8 ¹ / ₄ x 13, 8 ¹ / ₈ x 13 ¹ / ₄ , 8 x 13
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	8K*4*5 *6 *9, 16K*4*5 *6 *9, 16KS*4*5 *6 *9 Custom size paper *8 <ul style="list-style-type: none"> • 1200/1200P/1051/1250/1250P/1052 Minimum 182mm x 139mm, Maximum 324mm x 463mm • C6501/C6501P/C65hc/C7000/C7000P/C70hc/C6000 Minimum 182mm x 148mm, Maximum 330mm x 483mm • C8000 Minimum 182mm x 140mm, Maximum 330mm x 483mm
Applicable paper	Plain, Recycle, Fine, Special
Paper weight	50g/m ² to 300g/m ²
Maximum tray capacity	500 sheets (80g/m ²) x 2 trays

*1 Default for North America (C8000/1200/1200P/1051/C7000/C7000P/C70hc/C6000 only)

*2 Default for Europe

*3 1200/1200P/1051/1250/1250P/1052 only

*4 C8000 only

*5 C6501/C6501P/C65hc only

*6 For China/Taiwan only (C6501/C6501P/C65hc/1200/1200P/1051/C7000/C7000P/C70hc/C6000 only)

*7 For C8000/C7000/C7000P/C70hc/C6000, A4, 8¹/₂ x 11 only

*8 When using as the cover in perfect binding mode (Minimum 182mm x 279mm, Maximum 307mm x 483mm)

*9 C7000/C7000P/C70hc/C6000 only

*10 3 holes only

13.4 Machine data

Power source	100VAC to 240VAC, 5VDC (supplied from the main body) *1
Maximum power consumption	180VA or less
Dimensions	400 (W) x 723 (D) x 1231 (H)mm (The main tray is not included in the width)
Weight	Approx. 130kg

*1 C8000 /C6501 /C6501P /C65hc /C7000 /C7000P/C70hc/C6000 : Only 5VDC is supplied from the main body

13.5 Operating environment

Temperature	10°C to 30°C
Humidity	10% to 80%RH (with no condensation)

13.6 Note regarding the specifications

Note

- The information herein may be subject to change for improvement without notice.

14. SD-506

14.1 Type

Type	Saddle stitching unit with fore-edge trimming and multi-folding function
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14.2 Functions

(1) Function

Sub tray paper exit mode	Exit paper to the sub tray without any process.
Coupling paper exit mode	Convey paper to the succeeding device without any process.
Saddle stitching mode	Exit paper to the bundle exit tray after the center folding/saddle stitching operation.
Saddle stitching trimming mode	Exit paper to the bundle exit tray after the center folding/saddle stitching/trimming operation.
Multi-center folding mode	Exit paper to the bundle exit tray after the center folding on 1 or more sheets of paper.
Multi-center folding trimming mode	Exit paper to the bundle exit tray after the center folding and the trimming operation on 1 or more sheets of paper.
Overlap tri-folding mode	Exit paper to the tri-folding tray after the letter folding operation on 1 or more sheets of paper.

(2) Maximum tray capacity

Sub tray (Paper weight 80g/m ²)	200 sheets		
	Z-Folding	20 sheets	
	Center folding	40 sheets	
Bundle exit tray	Folding & Stapling/trimming Mode	Stitching sheets	Set
		2 to 10	50 or more
		11 to 20	30 or more
		21 to 40	20 or more
		41 to 50	15 or more
	Multi-center folding mode	30 sets	
Tri-folding paper exit tray	Overlap tri-folding mode	20 sets	

14.3 Type of paper

(1) Straight/sub tray mode

Paper size	SRA3, A3, JISB4 ^{*1} , ISOB4 ^{*2} *3 *4 *10, SRA4 ^{*4} *5 *10, SRA4S, A4, A4S, JISB5 ^{*1} , ISOB5 ^{*2} *3 *4 *10, JISB5S ^{*1} , ISOB5S ^{*2} *4 *10, A5, A5S ^{*4} *5 *10, B6S ^{*4} *5 *10, ISOB56 ^{*4} *10, A6S ^{*4} *5 *10 13 x 19 ^{*4} *5 *10, 12 x 18, 11 x 17, 9 x 11 ^{*3} *4 *10, 8 ¹ / ₂ x 14, 8 ¹ / ₂ x 11, 8 ¹ / ₂ x 11S, 5 ¹ / ₂ x 8 ¹ / ₂ *3 *4, 5 ¹ / ₂ x 8 ¹ / ₂ S ^{*4} *5 *10 8 ¹ / ₂ x 13, 8 ¹ / ₄ x 13, 8 ¹ / ₈ x 13 ¹ / ₄ , 8 x 13 8K ^{*4} *5 *6 *10, 16K ^{*4} *5 *6 *10, 16KS ^{*4} *5 *6 *10 Wide paper ^{*3} (A3W, B4W, A4W, A4SW, B5W, B5SW, A5W, 12 x 18W, 11 x 17W, 8 ¹ / ₂ x 11W, 8 ¹ / ₂ x 11SW, 5 ¹ / ₂ x 8 ¹ / ₂ W, Max. 324mm x 463mm) Tab paper ^{*7} *8 (A3, B4, A4, A4S, B5, B5S, 11 x 17, 8 ¹ / ₂ x 11, 8 ¹ / ₂ x 11S, 5 ¹ / ₂ x 8 ¹ / ₂ , Max. 324mm x 463mm) Postcard Custom size paper		
		Minimum 95mm x 139mm, Maximum 324mm x 463mm ^{*3}	
		Minimum 100mm x 148mm, Maximum 330mm x 483mm ^{*5} *10	
		Minimum 100mm x 140mm, Maximum 330mm x 487mm ^{*4}	
Paper weight	40g/m ² to 350g/m ² *3 *9 64g/m ² to 300g/m ² *5 *10 64g/m ² to 350g/m ² *4		

*1 Default for North America (C8000/1200/1200P/1051/C7000/C7000P/C70hc/C6000 only)

*2 Default for Europe

*3 1200/1200P/1051/1250/1250P/1052 only

*4 C8000 only

*5 C6501/C6501P/C65hc only

*6 For China/Taiwan only (C6501/C6501P/C65hc/1200/1200P/1051/C7000/C7000P/C70hc/C6000 only)

*7 Operation of paper exit with tab area at the trail edge side is not warranty.

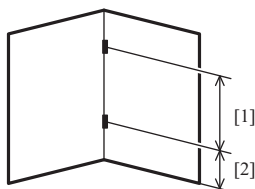

*8 C8000/C7000/C7000P/C70hc/C6000 is A4, 8¹/₂ x 11 only

*9 Loading paper weight 49g/m² or less is not warranty

*10 C7000/C7000P/C70hc/C6000 only

(2) Saddle stitching mode

Paper size	SRA3, A3, JISB4 ^{*1} , ISOB4 ^{*2} *3 *4 *8, SRA4S, A4S, B5S
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	12 x 18, 11 x 17, 8 ¹ / ₂ x 14, 8 ¹ / ₂ x 11S 8 ¹ / ₂ x 13, 8 ¹ / ₄ x 13, 8 ¹ / ₈ x 13 ¹ / ₄ , 8 x 13 8K *4 *5 *6 *8, 16KS *4 *5 *6 *8 Wide paper *3(A3W, B4W, A4W, A4SW, B5W, B5SW, A5W, 12 x 18W, 11 x 17W, 8 ¹ / ₂ x 11W, 8 ¹ / ₂ x 11SW, 5 ¹ / ₂ x 8 ¹ / ₂ W, Max. 324mm x 463mm) Custom size paper (Maximum 324mm x 463mm, Minimum 182mm x 257mm)				
Paper weight	50g/m ² to 244g/m ² *3, 64g/m ² to 244g/m ² *4 *5 *8				
Maximum saddle stitching sheets	Plain, coated, color specific	Paper weight	Sheet		
			Plain paper	Coated Color specific *4 *5 *8	
		50g/m ² to 81g/m ²	50 *7	30 *7	
		82g/m ² to 91g/m ²	30 *7	15 *7	
		92g/m ² to 130g/m ²	20 *7	10 *7	
		131g/m ² to 161g/m ²	15 *7	5 *7	
		162g/m ² to 209g/m ²	10	-	
		210g/m ² to 244g/m ²	5	-	
	Fine	Paper brand	55kg (64g/m ²)	70kg (81.4g/m ²)	
		KIMMARI V	50 sheets	50 sheets	
		RAICHO FINE			
		KANABISHI			
		OK PRINCE	-		
		NEW NPi	50 sheets	30 sheets	
		POD PRINCE FINE			
		SHIRAOI			
Staple position	Automatically adjusted according to the paper size (90mm to 165mm)  15ant1c006na [1] = [Paper Size] / 2 ± 2mm [2] = [Paper Size] / 4 ± 2mm				
Folding height	 15ant1c011na				
	Stitching sheets	[1] Folding height			
	A3 12 x 18 11 x 17 (401mm or more)	B4 8 ¹ / ₂ x 14 (301mm to 400mm)	A4S 8 ¹ / ₂ x 11S (261mm to 300mm)	B5S (260mm or less)	
	2 to 5	35mm or less	40mm or less	45mm or less	Not defined
	6 to 15	45mm or less	50mm or less	Not defined	
	16 to 30	50mm or less	55mm or less		
	31 to 50	60mm or less	65mm or less		
	(The above information is applied when paper weight is 64g/m ² and no thick cover is not used.)				

*1 Default for North America (C8000/1200/1200P/1051/C7000/C7000P/C70hc/C6000 only)

- *2 Default for Europe
 *3 1200/1200P/1051/1250/1250P/1052 only
 *4 C8000 only
 *5 C6501/C6501P/C65hc only
 *6 For China/Taiwan only (C6501/C6501P/C65hc/1200/1200P/1051/C7000/C7000P/C70hc/C6000 only)
 *7 1 sheet can be switched to thick paper (200g/m²)
 *8 C7000/C7000P/C70hc/C6000 only

(3) Trimming mode

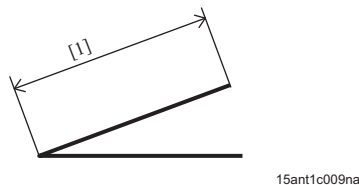
Paper size	SRA3, A3, JISB4 ^{*1} , ISOB4 ^{*2} *3 *4 *7, SRA4S, A4S, B5S 12 x 18, 11 x 17, 8 ¹ / ₂ x 14, 8 ¹ / ₂ x 11S 8 ¹ / ₂ x 13, 8 ¹ / ₄ x 13, 8 ¹ / ₈ x 13 ¹ / ₄ , 8 x 13 8K *4 *5 *6 *7, 16KS *4 *5 *6 *7 Wide paper ^{*3} (A3W, B4W, A4SW, B5SW, 12 x 18W, 11 x 17W, 8 ¹ / ₂ x 11SW, Max. 324mm x 463mm) Custom size paper (Maximum 324mm x 463mm, Minimum 182mm x 257mm)
Paper weight	50g/m ² to 244g/m ² *3 64g/m ² to 244g/m ² *4 *5 *7
Maximum trimming sheets	50 sheets (80g/m ²) or 49 sheets (80g/m ²) + 1 sheet (200g/m ²) (The above is the number of the printed paper before folding. The number of fore-edge (after folding) is double.)

- *1 Default for North America (C8000/1200/1200P/1051/C7000/C7000P/C70hc/C6000 only)
 *2 Default for Europe
 *3 1200/1200P/1051/1250/1250P/1052 only
 *4 C8000 only
 *5 C6501/C6501P/C65hc only
 *6 For China/Taiwan only (C6501/C6501P/C65hc/1200/1200P/1051/C7000/C7000P/C70hc/C6000 only)
 *7 C7000/C7000 /C70hc/C6000 only

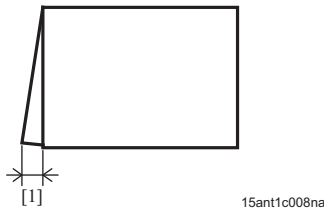
(4) Multi-center folding mode

Paper size	SRA3, A3, JISB4 ^{*1} , ISOB4 ^{*2} *3 *4 *7, SRA4S, A4S, B5S 12 x 18, 11 x 17, 8 ¹ / ₂ x 14, 8 ¹ / ₂ x 11S 8 ¹ / ₂ x 13, 8 ¹ / ₄ x 13, 8 ¹ / ₈ x 13 ¹ / ₄ , 8 x 13 8K *4 *5 *6 *7, 16KS *4 *5 *6 *7 Wide paper ^{*3} (A3W, B4W, A4SW, B5SW, 12 x 18W, 11 x 17W, 8 ¹ / ₂ x 11SW, Max. 324mm x 463mm) Custom size paper (Maximum 324mm x 463mm, Minimum 182mm x 257mm)	
Paper weight	50g/m ² to 244g/m ² *3, 64g/m ² to 244g/m ² *4 *5 *7	
Maximum overlap folding sheets	Paper weight	Sheet
	50g/m ² to 81g/m ²	5 sheets
	82g/m ² to 130g/m ²	3 sheets
	131g/m ² to 244g/m ²	2 sheets

Folding precision (for 1 sheet)



$$[1] = [\text{Paper Size}] / 2 \pm 1.5\text{mm}$$

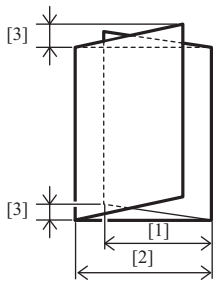


$$[1] = 1.5\text{mm or less}$$

- *1 Default for North America (C8000/1200/1200P/1051/C7000/C7000P/C70hc/C6000 only)
 *2 Default for Europe
 *3 1200/1200P/1051/1250/1250P/1052 only
 *4 C8000 only
 *5 C6501/C6501P/C65hc only
 *6 For China/Taiwan only (C6501/C6501P/C65hc/1200/1200P/1051/C7000/C7000P/C70hc/C6000 only)

*7 C7000/C7000P/C70hc/C6000 only

(5) Overlap tri-folding mode

Paper size	A4S, 8 ¹ / ₂ x 11S			
Paper weight	50g/m ² to 91g/m ² *1, 64g/m ² to 91g/m ² *2 *3 *4			
Maximum overlap folding sheets	Paper weight	Sheet		
	50g/m ² to 81g/m ²	5 sheets		
	82g/m ² to 91g/m ²	3 sheets		
Folding precision (for 1 sheet)	Paper size	[1]	[2]	[3]
	A4S	97.5 ± 4mm	102.0 ± 4mm	1.5mm or less
	8 ¹ / ₂ x 11S	91.6 ± 4mm	96.1 ± 4mm	
	<div></div> <div>15ant1c010na</div>			

*1 1200/1200P/1051/1250/1250P/1052 only

*2 C6501/C6501P/C65hc only

*3 C8000 only

*4 C7000/C7000 /C70hc/C6000 only

14.4 Machine data

Power source	100VAC to 240VAC, 5VDC (supplied from the main body) *1
Maximum power consumption	270W
Weight	280kg
Dimensions	When the bundle output tray is stored: 1,170 (W) x 775 (D) x 1,020 (H) mm When the bundle output tray is pulled out 1,170 (W) x 1,441 (D) x 1,020 (H) mm

*1 C8000/C6501/C6501P/C65hc/C7000/C7000P/C70hc/C6000: Only 5VDC is supplied from the main body.

14.5 Operating environment

Temperature	10°C to 30°C
Humidity	10% to 80%RH (with no condensation)

14.6 Note regarding the specifications

Note

- The information herein may be subject to change for improvement without notice.

15. PB-502

15.1 Type

Type	Simplified perfect binding machine (Consoled hot-melt type)
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15.2 Functions

(1) Functions

Perfect binding mode	Automatically binds and stocks in a book stock section.
Sub tray mode	Exits paper to the sub tray without any process

(2) Binding sheets

Binding sheets	Min. thickness	10 sheets		
	Max. thickness	Plain paper: 300 sheets or 30mm Fine, color paper, Coat: 150 sheets or 15mm		
Binding sheets with Z-Fold sheets*1	Single-sided print	Number of Z-Fold sheets	Max. number of unfold sheets	Total
		1 sheet	200 sheets	201 sheets
		2 sheets	150 sheets	152 sheets
	Double-sided print	Number of Z-Fold sheets	Max. number of unfold sheets	Total
		1 sheet	200 sheets	201 sheets
		2 sheets	150 sheets	152 sheets
		3 sheets	100 sheets	103 sheets
		4 sheets	50 sheets	54 sheets
	Simplex/duplex mixed print (printer function)	When 1 or more unfold sheets is single-sided, the specification is the same as the simplex print.		
		When the z-folded sheet is single-sided, the specification is the same as the duplex print.		

*1 The limit of the total number of sheets can be released by switching DIPSW37-2 from 0 (default) to 1.

(3) Maximum tray capacity

Book stock section	Maximum 11 books *1 x 2 rows *2 (book thickness: 30mm)	
	10 sheets to 30 sheets book	50 books
	31 sheets to 150 sheets book	35 books or until the upper limit is detected.
	151 sheets to 300 sheets book	Until the upper limit is detected
PB cover paper tray*3	1000 sheets (82g/m ²) 500 sheets (216g/m ²)	
Sub tray	200 sheets (80g/m ²)	

*1 The available number of books may decrease due to curls of papers.

*2 When books have been stacked up to the limit at the first row, the first stack is automatically moved to the second row on the cart, and piling books at the first row continues.

*3 Cover paper supply is selectable from PB cover paper tray, main body tray, PI or PI-PFU (1200/1200P/1051 only).

(4) Others

Warm-up time	Approx. 20 minutes
Cover trimming	Selectable from Trim/Not trim.

15.3 Type of paper

(1) Paper size

Perfect binding mode	<p>Inside paper:</p> <p>A4, B5, ISOB5*1, A5, A5S*2, 8¹/₂ x 11, 5¹/₂ x 8¹/₂*1, 5¹/₂ x 8¹/₂S*2, 16K*3</p> <p>Custom size paper (Max. 307 (W) x 221 (L) mm)</p> <p>Only for Z-Fold: 11 x 17, A3, B4, ISOB4*1, A4S, 8¹/₂ x 11S, 8K*3</p> <p>Cover paper :</p> <p>Max. 307 (W) x 472 (L) mm</p> <p>Vertical (main scan direction) Same as the inside paper size.</p> <p>Horizontal (sub scan direction) Wide size L</p> <p>L = book size in the sub scan direction x 2 + book thickness + 3mm (for trimming)</p>
Sub tray mode	<p>SRA3, A3, JISB4*4, ISOB4*1*5, SRA4, SRA4S, A4, A4S, JISB5*4, ISOB5*1*5, B5S, A5, A5S*2, B6S*2</p> <p>13 x 19, 12 x 18, 11 x 17, 9 x 11, 8¹/₂ x 14, 8¹/₂ x 11, 8¹/₂ x 11S, 8¹/₄ x 13, 8¹/₈ x 13¹/₄, 8 x 13, 7¹/₄ x 10¹/₂, 5¹/₂ x 8¹/₂*1, 5¹/₂ x 8¹/₂S*2, 8¹/₂ x 13, 8¹/₄ x 13, 8¹/₈ x 13¹/₄, 8 x 13</p>

Wide paper* ¹ (A3W, B4W, A4W, A4SW, B5W, B5SW, A5W, 12 x 18W, 11 x 17W, 8 ¹ / ₂ x 11W, 8 ¹ / ₂ x 11SW, 5 ¹ / ₂ x 8 ¹ / ₂ W, Max. 324mm x 463mm) Custom size paper (Max. 324 x 463mm, Min. 100 x 139mm) Tab paper* ⁶ (A3, B4, A4, A4S, B5, B5S, 11 x 17, 8 ¹ / ₂ x 11, 8 ¹ / ₂ x 11S, 5 ¹ / ₂ x 8 ¹ / ₂ , Max. 324mm x 463mm)
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(2) Paper weight

Perfect binding mode	Inside paper: 64g/m ² to 91g/m ² * ¹ 64g/m ² to 105g/m ² * ² Cover: 82g/m ² to 161g/m ² * ¹ 82g/m ² to 161g/m ² * ²
Sub tray mode	50g/m ² to 300g/m ² * ¹ 64g/m ² to 300g/m ² * ²

*¹ 1200/1200P/1051 only

*² C6501/C6501P/C65hc only

*³ For China/Taiwan only

*⁴ Default for North America (1200/1200P/1051 only)

*⁵ Default for Europe

*⁶ Operation of paper exit with tab area at the trail edge side is not warranty.

15.4 Maintenance

Maintenance	Same as the main body.
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15.5 Machine data

Power source	Common to AC100V 50/60Hz DC5V (supplied from the main body)
Power consumption	1000W or less
Dimensions	1,303 (W) x 1,223 (H) x 775 (D) mm Binding section 740 (W) x 1,223 (H) x 775 (D) mm Book stock section : 563 (W) x 740 (H) x 685 (D) mm
Weight	Approx. 210kg

15.6 Operating environment

Temperature	10°C to 30°C
Humidity	10% to 80%RH (with no condensation)

15.7 Note regarding the specifications

Note

- The information herein may be subject to change for improvement without notice.

16. PB-503

16.1 Type

Type	Simplified perfect binding machine (Consoled hot-melt type)
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16.2 Functions

(1) Function

Perfect binding mode	Automatically binds and stocks in a book stock section.
Sub tray mode	Exits paper to the sub tray without any process
Relay conveyance mode	Exits paper to the option (FS-521/FS-532) on the subsequent stage without any process

(2) Binding sheets

Binding sheets	Min. thickness	10 sheets		
	Max. thickness	Plain: 300 sheets or 30mm Color/Coated: 150 sheets or 15mm		
Binding sheets with Z-Fold sheets*1 Binding sheets*1	Simplex printing	Number of Z-Fold sheets	Max. number of unfold sheets	Total
		Number of Inserted sheets	Max. number of sheets	
		1 sheet	200 sheets	201 sheets
	Duplex printing	2 sheets	150 sheets	152 sheets
		Number of Z-Fold sheets	Max. number of unfold sheets	Total
		Number of Inserted sheets	Max. number of sheets	
		1 sheet	200 sheets	201 sheets
		2 sheets	150 sheets	152 sheets
		3 sheets	100 sheets	103 sheets
		4 sheets	50 sheets	54 sheets
	Simplex/duplex mixed printing (printer function)	When 1 or more unfold sheets is single-sided, the specification is the same as the simplex print. When the z-folded sheet is single-sided, the specification is the same as the duplex print.		

*1 C8000/C7000/C7000P/C70hc/C6000: The limit of the total number of sheets can be released by switching DIPSW30-5 from 0 (default) to 1.

1250/1250P/1052/1200/1200P/1051: The limit of the total number of sheets can be released by switching DIPSW37-2 from 0 (default) to 1.

(3) Maximum tray capacity

Book stock section	Maximum 11 books *1 x 2 rows *2 (book thickness: 30mm)	
	10 sheets to 30 sheets book	50 sets
	31 sheets to 150 sheets book	35 books or until the upper limit is detected.
	151 sheets to 300 sheets book	Until the upper limit is detected
PB cover paper tray*3	1000 sheets (82g/m ²) 500 sheets (216g/m ²)	
Sub tray	200 sheets (80g/m ²)	

*1 The available number of books may decrease due to curls of papers.

*2 When books have been stacked up to the limit at the first row, the first stack is automatically moved to the second row on the cart, and piling books at the first row continues.

*3 Cover paper supply is selectable from PB cover paper tray, main body tray, PI or PI-PFU (1200/1200P/1051/1250/1250P/1052 only).

(4) Others

Warm-up time	Approx. 20 minutes
Cover trimming	Selectable from Trim/Not trim.

16.3 Type of paper

(1) Paper size

Perfect binding mode	Inside paper: A4, JISB5*1, ISOB5*2*3*5*9, A5, A5S*3*9, 8 ¹ / ₂ x 11, 5 ¹ / ₂ x 8 ¹ / ₂ *3*9, 5 ¹ / ₂ x 8 ¹ / ₂ S*3*9, 16K*3*4*9 Custom size paper (Maximum 307 (W) x 221 (L) mm, Minimum 139 (W) x 210 (L) mm)
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	<p>Z-fold size (A3, JISB4^{*1}, ISOB4^{*2*3*5*9}, A4S, 11 x 17, 8¹/₂ x 11S, 8K^{*3*4*9})</p> <p>Cover:</p> <p>Maximum 307mm x 472mm, Minimum 139mm x 279mm</p> <p>Vertical (main scan direction) Same size as the inside paper.</p> <p>Horizontal (sub scan direction) Wide size L mm</p> <p>L = book size in the sub scan direction x 2 + book thickness (book spine) + 5mm (for trimming)</p>
Sub tray mode	<p>SRA3, A3, JISB4^{*1}, ISOB4^{*2*3*5*9}, SRA4^{*3*9}, SRA4S, A4, A4S, JISB5^{*1}, ISOB5^{*2*3*5*9}, JISB5S^{*1}, ISOB5S^{*2*3*9}, A5, A5S^{*3*9}, B6S^{*3*9}, ISOB6S^{*3*9}, A6S^{*3*9}, 8K^{*3*4*9}, 16K^{*3*4*9}, 16KS^{*3*4*9}</p> <p>13 x 19^{*3*9}, 12 x 18, 11 x 17, 9 x 11, 8¹/₂ x 14, 8¹/₂ x 11, 8¹/₂ x 11S,</p> <p>5¹/₂ x 8¹/₂^{*3*5}, 5¹/₂ x 8¹/₂S^{*3*9}</p> <p>8¹/₂ x 13, 8¹/₄ x 13, 8¹/₈ x 13¹/₄, 8 x 13</p> <p>Wide paper ^{*5} (A3W, B4W, A4W, A4SW, B5W, B5SW, A5W, 12 x 18W, 11 x 17W, 8¹/₂ x 11W, 8¹/₂ x 11SW, 5¹/₂ x 8¹/₂W, Max. 324mm x 460mm)</p> <p>Custom size: Maximum 330mm x 487mm^{*3*9}, 324mm x 463mm^{*5}</p> <p>Minimum 100mm x 140mm^{*3}, 100mm x 148mm^{*9}, 95mm x 139mm^{*5}</p> <p>Finite tab paper ^{*6*7}: A3, B4, A4, A4S, B5, B5S, 11 x 17, 8¹/₂ x 11, 8¹/₂ x 11S, 5¹/₂ x 8¹/₂</p> <p>Postcard</p>
Relay conveyance mode ^{*8}	<p>Paper which can be used by the subsequent option (FS-521/FS-532)</p> <ul style="list-style-type: none"> • Large size: <p>SRA3, A3, JISB4^{*1}, ISOB4^{*2*3*5*9}, SRA4^{*3*9}, SRA4S</p> <p>12 x 18, 11 x 17, 8¹/₂ x 14, 13 x 19^{*3*9}, 8K^{*3*4*9}</p> <p>8¹/₂ x 13, 8¹/₄ x 13, 8¹/₈ x 13¹/₄, 8 x 13</p> <p>Wide paper ^{*5} (Max. 324mm x 460mm)</p> • Small size: <p>A4, A4S, JISB5^{*1}, ISOB5^{*2*3*5*9}, JISB5S^{*1}, ISOB5S^{*2*3*9},</p> <p>16K^{*3*4*9}, 16KS^{*3*9}</p> <p>9 x 11, 8¹/₂ x 11, 8¹/₂ x 11S</p> • Minimum size: <p>A5, A5S^{*3*9}, JISB6S^{*1*3*9}, ISOB6S^{*2*3*9}, 5¹/₂ x 8¹/₂^{*3*5}, 5¹/₂ x 8¹/₂S^{*3*9}</p> • Others: <p>Finite tab paper ^{*6*7}: A3, B4, A4, A4S, B5, B5S, 11 x 17, 8¹/₂ x 11, 8¹/₂ x 11S, 5¹/₂ x 8¹/₂</p> <p>Custom size paper:</p> <p>Maximum 330mm x 487mm^{*3*9}, 324mm x 463mm^{*5}</p> <p>Minimum 100mm x 140mm^{*3}, 100mm x 148mm^{*9}, 95mm x 139mm^{*5}</p>

(2) Paper weight

Perfect binding mode	<p>Inside paper:</p> <p>64g/m² to 91g/m² ^{*2}</p> <p>64g/m² to 105g/m² ^{*1*6}</p> <p>Cover:</p> <p>82g/m² to 216g/m² ^{*2}</p> <p>81g/m² to 209g/m² ^{*1*6}</p>
Sub tray mode	<p>40g/m² to 350g/m² ^{*2}</p> <p>64g/m² to 350g/m² ^{*1}</p> <p>64g/m² to 300g/m² ^{*6}</p>
Relay conveyance mode	<p>40g/m² to 350g/m² ^{*2}</p> <p>64g/m² to 350g/m² ^{*1}</p> <p>64g/m² to 300g/m² ^{*6}</p>

^{*1} Default for North America (C8000/1200/1200P/1051/C7000/C7000P/C70hc/C6000 only)

^{*2} Default for Europe

^{*3} C8000 only

^{*4} For China/Taiwan only (C6501/C6501P/C65hc/1200/1200P/1051/C7000/C7000P/C70hc/C6000 only)

^{*5} 1200/1200P/1051/1250/1250P/1052 only

^{*6} Operation of paper exit with tab area at the trail edge side is not warranty.

^{*7} For C8000/C7000/C7000P/C70hc/C6000, A4, 8¹/₂ x 11 only

^{*8} Paper can be fed only when the FS-521/FS-532 is connected as the subsequent stage of the PB-503

^{*9} C7000/C7000P/C70hc/C6000 only

(3) Applicable paper in each mode

	Body	Cover	-
--	------	-------	---

					Binding mode (1250/1250 P/ 1052/1200/ 1200P/ 1051)	Binding mode (C8000/ C7000/ C7000P/ C70hc/ C6000)	PB tray	Main tray	Sub tray
Plain	Japan	J paper	64g/m ²		○	○	-	-	○
	North America	Tidal MP	20lb (75g/m ²)		○	○	-	-	○
	Europe	Konica Minolta Original	80g/m ²		○	-	-	-	○
		Konica Minolta Profi	80g/m ²		-	-	-	-	○
Recycled paper	Japan	NR-A80	64g/m ²		-	○	-	-	○
		NR-A100	64g/m ²		○	○			○
	North America	Hammermill Great White	20lb (75g/m ²)		○	-	-	-	○
		Recycle Eclips	20lb (75g/m ²)		-	-	-	-	○
	Europe	Nautilus	80g/m ²		○	-	-	-	○
		Classic White	80g/m ²		○	-	-	-	○
Color	Japan	Konicaminolta CF paper	80g/m ²		-	○	-	-	○
	North America	Hammermill Color Copy Photo White	28lb (105g/m ²)		-	○	-	-	○
		Domtor Microprint Color Copy	28lb (105g/m ²)		-	○	-	-	○
		Gilbert Neutech Color Copy	28lb (105g/m ²)		-	○	-	-	○
	Europe	Color copy (mondi)	90g/m ²	-	○	-	-	○	
			100g/m ²	-	○	-	-	○	
Fine	-	-	Body	Cover	-	-	-	-	-
	Japan	Kinmari V	64g/m2 to 91g/m ²	82g/m2 to 216g/m ²	-	-	○	Δ	○
		NEW NPi FINE	64g/m2 to 91g/m ²		-	-	○	Δ	○
			105g/m ²		-	○	-	-	○
		POD prince high quality	64g/m2 to 91g/m ²		○	-	○	○	○
		OK PRINCE FINE	81.4g/m ²		-	-	○	Δ	○
			105g/m ²		-	○	-	-	○
		shiraoi	64g/m2 to 91g/m ²		-	-	○	Δ	○
		High quality	64g/m2 to 91g/m ²		-	-	○	Δ	○
		KANABISHI	64g/m2 to 91g/m ²		-	-	○	Δ	○
Coated *1	Japan	JD	98g/m ²		-	○	-	-	○
		NEW AGE	81.4g/m ²		-	○	-	-	○
		NEW AGE BLANC	81.4g/m ²		-	○	-	-	○
		POD GLOSS COAT	64g/m2 to 81g/m ²		-	-	-	-	○
	North America	Kromekote Laser	82g/m2 to 130g/m ²		-	-	○	Δ	○
		HIGH GLOSS	131g/m2 to 161g/m ²		-	-	○	Δ	○
		Futura Laser	162g/m2 to 216g/m ²		-	-	○	Δ	○

Δ: Available for a paper curled less than 10mm

*1 Regarding Coated, the matt coated paper is only available for the body.

16.4 Machine data

Power source	100VAC 50/60Hz common 5VDC (supplied from the main body)	
Power consumption	1000W or less	
Weight	Approx. 270kg	
Dimensions	1,360 (W) x 1,223 (H) x 775 (D) mm	
	Binding section	740 (W) x 1,223 (H) x 775 (D) mm
	Book stock section	620 (W) x 1,020 (H) x 753 (D) mm
	Relay conveyance section	

16.5 Operating environment

Temperature	10°C to 30°C
Humidity	10% to 80%RH (with no condensation)

16.6 Note regarding the specifications

Note

- The information herein may be subject to change for improvement without notice.

17. IC Unit

17.1 Type

Type	Built-in box type for the KONICA MINOLTA main body
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17.2 Functions

Resolution:	Printing : 600 x 600dpi, 1200 x 1200dpi Scanning Resolution: 200dpi / 300dpi/ 400dpi / 600dpi / 1200dpi
Gradation:	Binary
Printable Area:	Standard-size paper: exclude margin area 3.2mm (left, right, top and bottom without variation) Custom size paper: Width: 95-314mm Length: 133-463mm
Number of Print:	1 to 9999
Continuous Print Speed:	bizhub PRO 1200/1200P: 120ppm (A4, 8.5 x 11) (For the 2nd and succeeding sets) bizhub PRO 1051: 105ppm (A4, 8.5 x 11) (For the 2nd and succeeding sets)
Printer Description Language:	PCL5e/6, Postscript3
Printer Driver	PCL6 (KONICA MINOLTA) There is no driver for PCL5e <ul style="list-style-type: none"> • Windows 2000 Professional (SP3 or later) /Server • Windows XP Home Edition/Professional (SP2 or later) • Windows Server 2003 Standard • Windows Vista (any version) • Windows Server 2008 (XP(Professional)/Server 2003/Vista/Server 2008 include x64) Postscript3 Plug-in Driver <ul style="list-style-type: none"> • Windows 2000 Professional (SP3 or later) /Server • Windows XP Home Edition/Professional (SP2 or later) • Windows Server 2003 Standard • Windows Vista (any version) • Windows Server 2008 • Mac OS 10.3/10.4/10.5 (including Intel Mac 10.4/10.5) (XP (Professional)/Server 2003/Vista/Server 2008 include x64) Postscript PPD Driver <ul style="list-style-type: none"> • Windows 2000 Professional (SP3 or later) /Server • Windows XP Home Edition/Professional (SP2 or later) • Windows Server 2003 Standard • Windows Vista (any version) • Windows Server 2008 • Mac OS 10.3/10.4/10.5 (including Intel Mac 10.4/10.5) (XP (Professional)/Server 2003/Vista/Server 2008 include x64)
Network Functions	
Printing Method:	Pserver (IPX/SPX), LPD/LPR (TCP/IP), IPP (TCP/IP), AppleTalk (Ether Talk), Bonjour (TCP/IP), Web service printing (TCP/IP), NPrinter/RPrinter (IPX/SPX), Raw Port (TCP/IP)
Compliant Web Browser:	Microsoft Internet Explorer Ver. 6 or later is recommended* (JavaScript ON), Microsoft Internet Explorer Ver. 1.0 or later is recommended* (JavaScript ON), Netscape Navigator Ver. 7.02 or later (JavaScript ON, cookie ON), Flash Player Ver. 7.0 or later (when viewing in Flash) * When using Internet Explorer Ver. 5.5, it is necessary to install Microsoft XML Parser (MSXML) 3.x

17.3 Paper

Paper size	Same as the main body.
Applicable paper	Same as the main body.
Paper weight	Same as the main body.

17.4 Maintenance

Maintenance	Same as the main body.
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17.5 Machine data

CPU:	Pentium M 2.0GHz
Memory:	2GB
Host Interface:	Ethernet, USB
Power source:	Supplied from the main body

Network Functions	
Network Interface:	Ethernet (1000BASE-T / 100Base-TX/10Base-T)
Frame Type:	IEEE 802.2 / 802.3 / Ethernet II / IEEE 802.3 SNMP
Connector	RJ-45
LED:	10BASE-T: LED1 OFF, LED2 Green 100BASE-TX: LED1 Green, LED2 Yellow 1000BASE-T: LED1 Orange, LED2 Yellow

17.6 Operating environment

Temperature	Same as the main body.
Humidity	Same as the main body.

17.7 Note regarding the specifications

Note

- The information herein may be subject to change for improvement without notice.

18. GP-501

18.1 Type

Type	Multi-hole punch unit for ring binding
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18.2 Modes of Operation

Bypass mode	The paper moves straight from the printer to the finisher without passing through the punch module. In this mode the paper is not punched.
Punch mode with Punch	The paper moves from printer to the punch module where it gets punched and then is routed to the finisher.

18.3 Machine data

Punch unit size	12" (305mm) W x 40" (1016mm) H x 30.5" (775mm) D
Weight	170 lbs (80kg) unpackaged, 270 lbs (123kg) packaged (Pallet, Carton, PKG Inserts)
Color	Top Cover . Orca Black, Lower covers . Cuttle Gray
AC Power Supply to GP-501	External power cord according to market destination.
DC 5V Supply to GP-501	Supplied by system to PCB contained within GP-501
System Power Supply Lines	GP-501 Internal Lead-Through <ul style="list-style-type: none"> On upstream side: Wiring with connectors through cover-recess. On downstream side: Lock-style connector panel on left side cover.

18.4 Software

Communication method	i) Start-stop synchronization style, full duplex. ii) 1 Start Bit, 8bit Data length, 1 Parity Bit, 1 Stop bit. Max Frame Length: 128 byte iii) Hard flow control (CTS/RTS). iv) Baud rate: [Standard] 19200 bps [ISW=Log file Transmissions] 78000 bps
Communication Content	According Interface Specification (See also Appendix B)

18.5 Electronic

Required signals to UP & Downstream connected units	RXD, RTS, CTS, TXD
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18.6 Inputs

(1) Media Input from Printer

Alignment/ skew variance at pick up	Center justified \pm 4mm
Line speed	290 to 1250 mm/s (Fixed speeds within this range)
Speed variance at pick up	\pm 2%
Sheet frequency	120 ppm maximum

(a) For Punching

Paper weight	20lb bond - 80lb cover Plain Paper: 75gsm - 216gsm Other Paper: 120gsm - 216gsm Exception ProClick: LTR & A4 Limited to 200gsm	
Paper type	See appendix C	
Maximum Sheet size	Letter configuration	279 x 216mm
	A4 configuration	297 x 210mm

(b) For Bypass

Paper weight	16lb bond - 93lb cover 64gsm - 350gsm	
Paper type	Coated, Pre-printed, High Quality, Plain, Book, Color, Rough, Post Card, Label, OHP, Index	
Transparency weight	5 -10 mil (0.127mm to 0.254mm)	
Maximum bypass sheet size	13" x 24.8" (330 x 630mm)	
Minimum bypass sheet size	3.74" x 5.47" (95 x 139mm)	

(2) Power

Supply	GP-501 individual power supply and power cord required.				
Configurations by market	See table below.				
Machine	Market	Voltage (V)	Current (A)	Frequency (Hz)	Paper size
1	US, Canada	115 +10/-15 %	3	60	8 ¹ / ₂ x 11
2	Europe, Australia	220-240 +10/-15 %	1.8	50	A4

18.7 Outputs

Alignment/ skew at delivery	± 2mm or less for the pick up position
Speed variance at delivery	± 1% compared to speed variance at pick up
Chip tray capacity	2500 cycles (based on punched sheet count)

18.8 Performance

Punch accuracy	Hole size	± 2%
	Alignment	±0.5mm
	Back gauge depth	±0.3mm

(1) Reliability

MCBJ: Punch	1 in 15,000 (20lb bond)
MCBJ: Bypass	1 in 65,000 (20lb bond)

18.9 Operation Environment, Storage, Transport

Normal Operation Temperature	10 deg C – 30 deg C
Normal Operation Humidity	10% - 80%
Storage Temperature	-10 deg C – 40 deg C
Storage Humidity	10% - 80%

18.10 Safety /Regulatory

Noise emissions (measured to ISO7779)	Punch	Maximum of 78dBA (punching 216gsm cover)
	Bypass	Maximum of 70dBA

(1) Safety Compliance

UL & CSA standards	CAN/USA-C22.2 No. 60950-01 UL60950-1 First Edition
TUV standards	IEC 60950-1:2001 EN60950-1:2001

(2) Electromagnetic Compliance

EMC standards	EN55024:1998 Amendments A1:2001 & A2:2003 EN61000-3-2:2000 EN61000-3-3:1995 Amendment A1:2001 EN55022:1998 Amendments A1:2000 & A2:2003 EN61000-4-2, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-11
FCC standards	Class B Part 15, Subpart B, Section A 15.107A & 15.109a

18.11 Appendix A

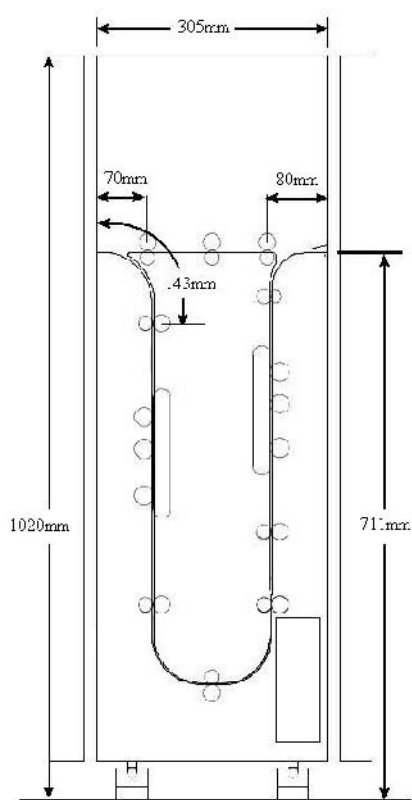


Figure 1.1 Front

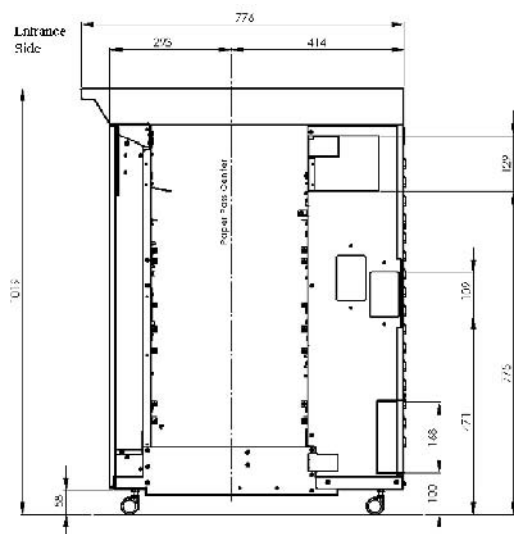


Figure 1.2 Entrance

18.12 Appendix B

No.	Model	Die set type	# Pins	Pinshape	Hole size (WxH or D)	Paper size	Label artwork
1	DS-501	Ring Binder 3Hole	3	Round	8mm (0.316")	8 ¹ / ₂ x 11	
2	DS-502	Plastic Bind Cerlox	19	Rect.	8mm x 2.9mm (0.313" x 0.116")	8 ¹ / ₂ x 11	
3	DS-503	WireBind -3:1 Square	32	Square	4mm x 4mm (0.156" x 0.156")	8 ¹ / ₂ x 11	
4	DS-504	WireBind -2:1 Rectangular	21	Rect.	6.4mm x 5.4mm (0.250" x 0.214")	8 ¹ / ₂ x 11	
5	DS-505	Color Coil	44	Round	4.4mm (0.174")	8 ¹ / ₂ x 11	

6	DS-506	VeloBind	11	Round	3.2mm (0.125")	8 ¹ / ₂ x 11	
7	DS-507	ProClick	32	Rect.	5mm x 5.5mm (0.197" x 0.217")	8 ¹ / ₂ x 11	
8	DS-508	Ring Binder 4 Hole	4	Round	8mm (0.316")	A4	
9	DS-509	Plastic Bind Cerlox	21	Rect.	8mm x 2.9mm (0.313" x 0.116")	A4	
10	DS-510	WireBind –3:1 Round	34	Round	4.4mm (0.174")	A4	
11	DS-511	WireBind –2:1 Round	23	Round	6.38mm (0.251")	A4	
12	DS-512	Color Coil	47	Round	4.4mm (0.174")	A4	
13	DS-513	VeloBind	12	Round	3.2mm (0.125")	A4	
14	DS-514	ProClick	34	Rect.	5mm x 5.5mm (0.197" x 0.217")	A4	
15	DS-515	Ring Binder 2 Hole	2	Round	8mm (0.316")	A4	
16	DS-516	Plastic Bind Cerlox	20	Rect.	8mm x 2.9mm (0.313" x 0.116")	A4	
17	DS-517	WireBind –2:1 Rectangular (Australia)	23	Rect.	6.4mm x 5.4mm (0.250" x 0.214")	A4	
18	DS-518	WireBind –3:1 Square (Australia)	34	Square	4mm x 4mm (0.156" x 0.156")	A4	

18.13 Appendix C

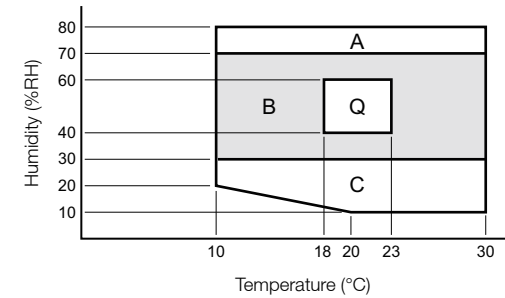
Paper Type for Punching			
Destination	Paper Name	Weight (g/m ²)	Punch *2
(1) US	Hammermill Color Copy Paper - Photo White	120	Q-Zone
	Hammermill Tidal MP	75	All
	Hammermill Fore MP	75	All
	Color Copy (Mondi) *1	120	Q-Zone
	Wausau Exact Gloss Coated (C1S) *1	215	Q-Zone
	Hammermill Color Copy Cover *1	163	Q-Zone
		216	Q-Zone
	Color Copy (Mondi) *1	160	Q-Zone
(2) EU	Konica Minolta Original	80	All
	Konica Minolta Profi	80	All
	Mondi BIO TOP 3 extra	80	All
	Mondi Color Copy	200	Q-Zone

*1 For only C6501/C6501P/C65hc

*2 Q-Zone: Guaranteed only in Q-zone

All: Guaranteed in all environments

*Refer to the below graph



18.14 Glossary of Terms

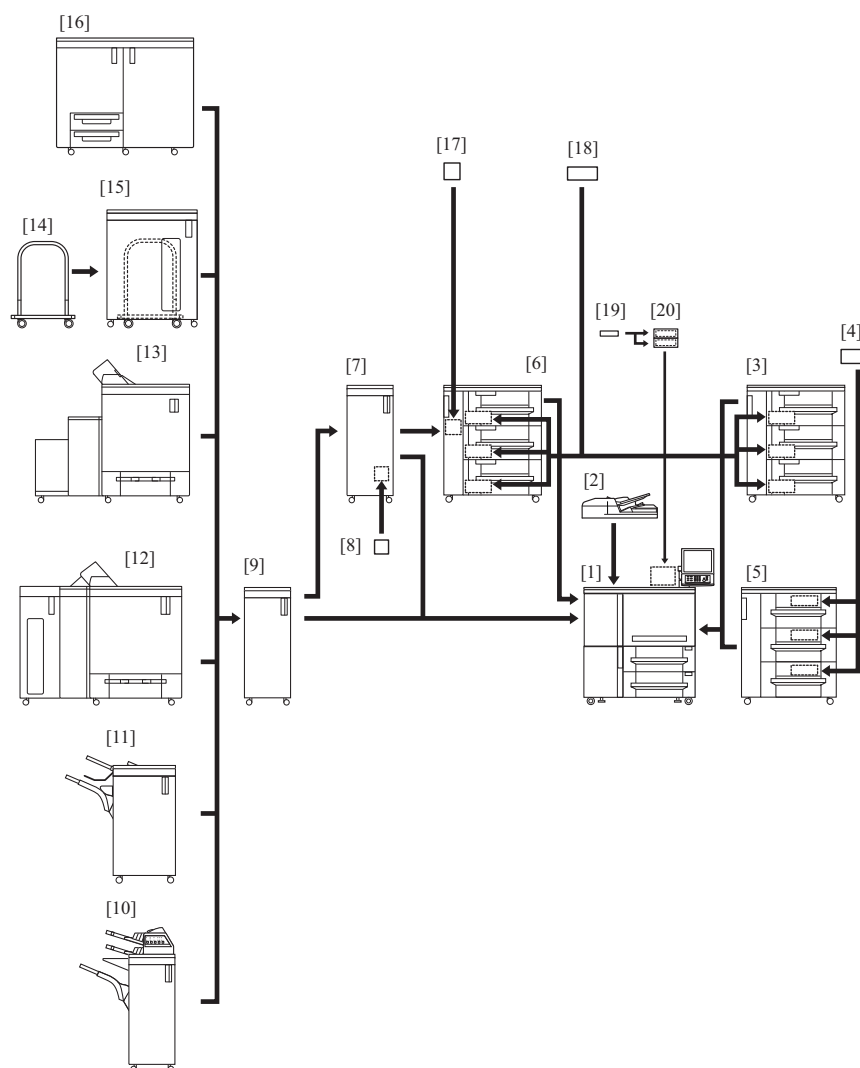
These terms are common to the punch and bindery industry.

Cerlox	The trade name GBC uses for its Plastic Binding
Color coil	A plastic coil that looks like a spring which is threaded through round holes punched in the document then the ends are cut off and crimped. The holes are either 4:1 or 5:1 (4 holes per inch or 5 holes per inch). This type of bind lays flat and even folds around for easy handling of the document.
Flush-cut covers	Covers stock that is the same size as the paper contents and has round corners.
Plastic binding	The name used to describe GBC's most common binding method. The 19 and 21 rectangular hole, Plastic Comb type.
ProClick	A plastic element that snaps together. This style requires holes that appear to be the same as Twin Loop but are actually slightly larger. The larger holes enable correct operation of the ProClick Pronto finishing devise.
Tabbing (hanging chad)	Tabbing or hanging chad is when a hole is not punched cleanly through the material leaving a piece of paper hanging from the edge. This condition occurs when a die set is worn and will usually result in miss-feeds.
Twin loop	Looped wire element that is feed into square or round holes in the document in a similar fashion to Plastic Binding. The holes are either 2:1 or 3:1 (2 holes per inch or 3 holes per inch). It is then squeezed together or crimped to create an attractive bind that lays flat.
Velobind	A heat seal plastic bind that is best known for it's security and it's attractive look. The one draw-back for VeloBind is that it is not a layflat bind style. It is most often used in the Legal market for it's security feature.

D OVERALL COMPOSITION

1. SYSTEM CONFIGURATION

1.1 System configuration



a0g6t1e500cb

[1]	Main body	[2]	Reverse automatic document feeder (DF-615) *1
[3]	Large capacity paper feed unit with suction (PF-703)	[4]	Pre-printed paper feeding kit (PP-701)
[5]	Large capacity paper feed unit (PF-702)	[6]	Post inserter (PI-PFU:PF-703 + FA-501)
[7]	Multi punch unit (GP-501)	[8]	Die set (DS-5##) *3
[9]	Relay unit (RU-506)	[10]	Folding unit (FD-503)
[11]	Finisher (Flat staple type) (FS-521)	[12]	Perfect binder (PB-503)
[13]	Perfect binder (PB-502)	[14]	Large capacity stacker handcart (LC-501)
[15]	Large capacity stacker (LS-505)	[16]	Saddle stitch unit (SD-506)
[17]	PI-PFU kit (FA-501)	[18]	Dehumidification heater (HT-505)*2
[19]	Removable HDD case kit (HD-511)	[20]	Removable HDD kit (RH-101)

*1 In the case of the 1200P, no scanner/DF function is provided.

*2 Used exclusively for PF-703. 2 units can be installed to one PF-703 at the maximum. 4 units can be installed to the system in total when 2 or more PF-703 are used in the system (including the use of the post inserter).

*3 Selectable arbitrarily in accordance with the number and shape of pins.

Model	Paper size	The number of pins	Shape of pin
DS-501	8 ¹ / ₂ x 11	3	Round
DS-502	8 ¹ / ₂ x 11	19	Rectangle
DS-503	8 ¹ / ₂ x 11	32	Square
DS-504	8 ¹ / ₂ x 11	21	Rectangle
DS-505	8 ¹ / ₂ x 11	44	Round

DS-506	8 ¹ / ₂ x 11	11	Round
DS-507	To be determined		
DS-508	A4	4	Round
DS-509	A4	21	Rectangle
DS-510	A4	34	Round
DS-511	A4	23	Round
DS-512	A4	47	Round
DS-513	A4	12	Round
DS-514	To be determined		
DS-515	A4	2	Round
DS-516	A4	20	Rectangle
DS-517	A4	23	Square
DS-518	A4	34	Square

1.2 Option coupling formation

Note

- The options can be connected each other. However, be sure to take note of the AC connection mode.
- Depending on the combination of the main body and the finishing options, it is possible not to connect PI-PFU.
- When PI-PFU and/or GP is connected, the connection of RU-506 is necessary.
- For 1200/1200P, RU-506 is essential.
- For 1051, the connection of RU-506 is not needed except for when PI-PFU is connected.
- Any combination other than those listed below is not available.

1.2.1 Coupling combination of the main body and the paper feed option

Coupling combination of the main body and the paper feed option				AC power to be connected to
1	PF-702		Main body	-
2	PF-703		Main body	-
3	PF-702	PF-703	Main body	-
4	PF-703	PF-703	Main body	-

1.2.2 Coupling combination of the main body and the finisher option

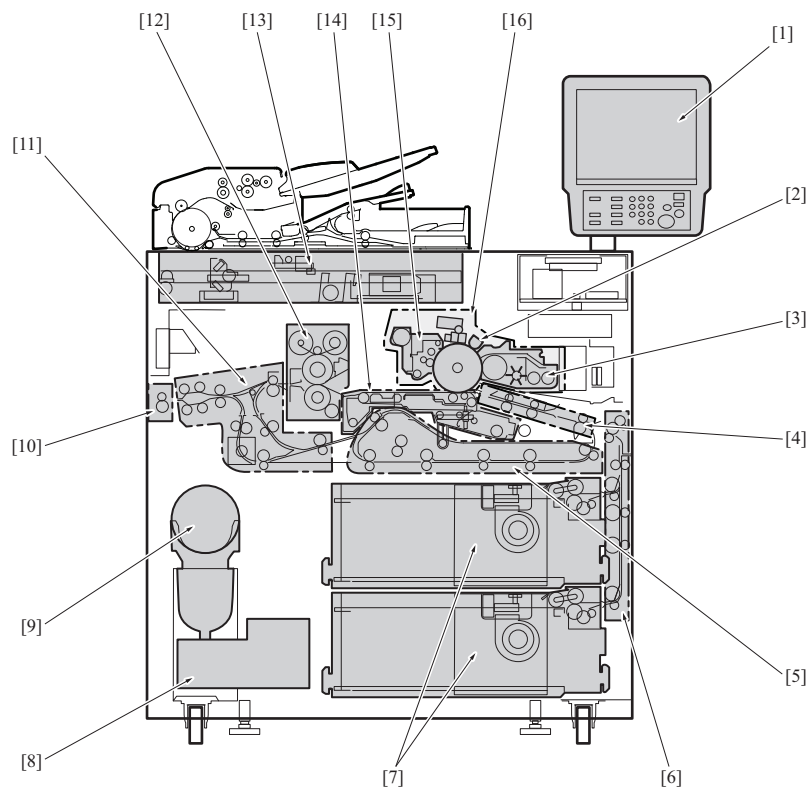
Coupling combination of the main body and the finisher option							AC power to be connected to
1	Main body	PI-PFU	RU-506	FD-503	LS-505		-
2-A	Main body*1	RU-506		FD-503	LS-505	FS-521	-
2-B	Main body*2	FD-503			LS-505	FS-521	-
2-C	Main body	PI-PFU	RU-506	FD-503	LS-505	FS-521	-
3	Main body	PI-PFU	RU-506	FD-503		SD-506	-
4	Main body	PI-PFU	RU-506	FD-503		SD-506 PB-502	-
5	Main body	PI-PFU	RU-506	FD-503		SD-506 FS-521	-
6	Main body	PI-PFU	RU-506	FD-503		PB-502	External (PB-502)
7	Main body	PI-PFU	RU-506	FD-503		FS-521	-
8	Main body	PI-PFU	RU-506	FD-503			-
9	Main body	PI-PFU	RU-506	LS-505		LS-505	-
10	Main body	PI-PFU	RU-506	LS-505		LS-505 FS-521	-
11	Main body	PI-PFU	RU-506	LS-505		SD-506	-
12	Main body	PI-PFU	RU-506	LS-505		PB-502	External (PB-502)
13	Main body	PI-PFU	RU-506	LS-505		FS-521	-
14	Main body	PI-PFU	RU-506	LS-505			-
15	Main body	PI-PFU	RU-506	SD-506		PB-502	-
16	Main body	PI-PFU	RU-506	SD-506		FS-521	-
17	Main body	PI-PFU	RU-506	SD-506			-
18	Main body	PI-PFU	RU-506	PB-502			External (PB-502)
19	Main body	PI-PFU	RU-506	FS-521			-
20	Main body	PI-PFU	RU-506	LS-505		SD-506 PB-502	-
21	Main body	PI-PFU	RU-506	FD-503	LS-505	SD-506	-
22	Main body	PI-PFU	RU-506	FD-503	LS-505	PB-502	External (PB-502)
23	Main body	PI-PFU	RU-506	FD-503	LS-505	LS-505	-
24	Main body	PI-PFU	RU-506	LS-505		LS-505 PB-502	External (PB-502)
25	Main body	PI-PFU	RU-506	LS-505		LS-505 SD-506	External (GP-501)

26	Main body	PI-PFU	RU-506	LS-505	SD-506	FS-521	-
27	Main body	PI-PFU	GP-501	RU-506	FS-521		External (GP-501)
28	Main body	PI-PFU	GP-501	RU-506	FD-503	FS-521	External (GP-501)
29	Main body	PI-PFU	GP-501	RU-506	SD-506	FS-521	External (GP-501)
30	Main body	PI-PFU	GP-501	RU-506	LS-505	FS-521	External (GP-501)
31	Main body	PI-PFU	GP-501	RU-506	LS-505	PB-502	External (PB-502, GP-501)
32	Main body	PI-PFU	RU-506	PB-503			External (PB-503)
33	Main body	PI-PFU	RU-506	FD-503	PB-503		External (PB-503)
34	Main body	PI-PFU	RU-506	LS-505	PB-503		External (PB-503)
35	Main body	PI-PFU	RU-506	SD-506	PB-503		External (PB-503)
36	Main body	PI-PFU	RU-506	LS-505	LS-505	PB-503	External (PB-503)
37	Main body	PI-PFU	RU-506	FD-503	SD-506	PB-503	External (PB-503)
38	Main body	PI-PFU	RU-506	FD-503	LS-505	PB-503	External (PB-503)
39	Main body	PI-PFU	RU-506	LS-505	SD-506	PB-503	External (PB-503)
40	Main body	PI-PFU	GP-501	RU-506	LS-505	PB-503	External (PB-503, GP-501)
41	Main body	PI-PFU	RU-506	FD-503	SD-506	PB-503	External (PB-503)
42	Main body	PI-PFU	RU-506	PB-503		FS-521	External (PB-503)
43	Main body	PI-PFU	RU-506	FD-503	PB-503	FS-521	External (PB-503)
44	Main body	PI-PFU	RU-506	LS-505	PB-503	FS-521	External (PB-503)
45	Main body	PI-PFU	RU-506	SD-506	PB-503	FS-521	External (PB-503)
46	Main body	PI-PFU	GP-501	RU-506	PB-503	FS-521	External (PB-503, GP-501)

*1 Only for 1200, 1200P.

*2 Only for 1051.

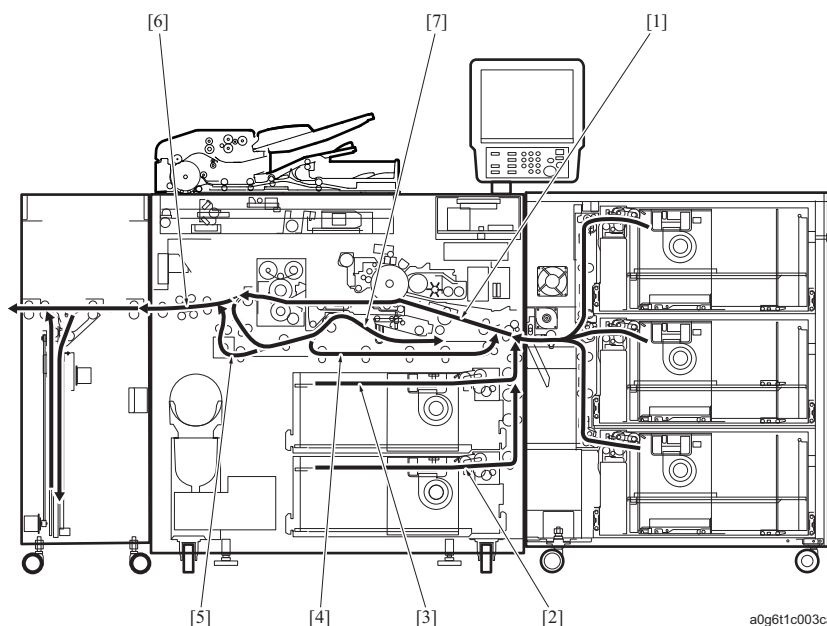
2. MAIN BODY UNIT CONFIGURATION



[1]	Operation panel section	[2]	Write section
[3]	Developing section	[4]	Registration section
[5]	Duplex section	[6]	Vertical conveyance section
[7]	Paper feed section	[8]	Toner collect box
[9]	Toner supply section	[10]	Paper exit section
[11]	Reverse/exit section	[12]	Fusing section
[13]	Scanner section	[14]	Transferring section
[15]	Cleaning section	[16]	Photo conductor section

3. PAPER PATH

3.1 PAPER PATH



[1]	Registration conveyance	[2]	Tray /2 paper feed
[3]	Tray /1 paper feed	[4]	ADU paper feed
[5]	Reverse paper exit	[6]	Straight paper exit
[7]	ADU reverse conveyance		

3.2 Paper exit path pattern

The paper exit path differs between face up and face down according to the difference of the line speed and whether RU-506 is provided or not. Each of the straight paper exit path and the reverse paper exit path is provided in the main body and RU-506. RU-506 has 2 types of reverse paper exit forms; the double sheets reverse paper exit and single sheet reverse paper exit. The combination of the paper exit path patterns is shown in the following table.

Note

- Installing RU-506 is essential for PRO1200/1200P and it enables the continuous copy speed 120 sheets/min. (A4).
- For PRO1051, RU-506 is not needed since it does not include GP-501 and/or PI-PFU (PF-703 + FA-501) in the system configuration.

RU-506	Line Speed (mm/s)	Continuous copy speed (sheets/min.) A4	Face up		Face down	
			Main body	RU-506	Main body	RU-506
Provided	570	120	Reverse paper exit	Double sheets reverse paper exit	Straight paper exit	Double sheets reverse paper exit
	490	105	Straight paper exit	Straight paper exit	Straight paper exit	Single sheet reverse paper exit
	330	70	Straight paper exit	Straight paper exit	Straight paper exit	Single sheet reverse paper exit
Not provided	490	105	Straight paper exit	-	Reverse paper exit	-
	330	70	Straight paper exit	-	Reverse paper exit	-

3.3 Paper exit process of RU-506 according to the difference of the finisher option and the weight

The reverse paper exit process of RU-506 switches the double sheets conveyance, the single sheet conveyance and the straight conveyance according to the connected finisher option and the paper weight.

The combination of the process patterns of RU-506 is shown in the following list.

3.3.1 In case of 1200/1200P

⊙ : Double sheets reverse conveyance △ : Single sheet straight conveyance
 ○ : Single sheet reverse conveyance — : Out of specification

Option	function			weight (g/m ²)								
				40 to 49	50 to 61	62 to 71	72 to 91	92 to 130	131 to 161	162 to 216	217 to 244	245 to 350
FS	Straight	Simplex	FaceUp	⊙ ^{*1}	⊙ ^{*1}	⊙ ^{*1}	⊙ ^{*1}	⊙ ^{*1}	⊙ ^{*1}	⊙ ^{*1}	△	△
			FaceDown	⊙ ^{*1}	⊙ ^{*1}	⊙ ^{*1}	⊙ ^{*1}	⊙ ^{*1}	⊙ ^{*1}	⊙ ^{*1}	○	—
		Duplex		△	△	△	△	△	△	△	△	—
	Shift	Simplex	FaceUp	⊙ ^{*1}	⊙ ^{*1}	⊙ ^{*1}	⊙ ^{*1}	⊙ ^{*1}	⊙ ^{*1}	⊙ ^{*1}	△	△
			FaceDown	⊙ ^{*1}	⊙ ^{*1}	⊙ ^{*1}	⊙ ^{*1}	⊙ ^{*1}	⊙ ^{*1}	⊙ ^{*1}	○	—
		Duplex		△	△	△	△	△	△	△	△	—
	Staple	Simplex	FaceUp	—	—	—	—	—	—	—	—	—
			FaceDown	—	⊙ ^{*2}	⊙ ^{*2}	⊙ ^{*2}	⊙ ^{*2}	⊙ ^{*2}	⊙ ^{*2}	○	—
		Duplex		—	△	△	△	△	△	△	△	—
	Sub tray	Simplex	FaceUp	⊙	⊙	⊙	⊙	⊙	⊙	⊙	△	△
			FaceDown	⊙	⊙	⊙	⊙	⊙	⊙	⊙	○	—
		Duplex		△	△	△	△	△	△	△	△	—
GP	Multi punch	Simplex	FaceUp	—	—	—	—	—	—	—	—	—
			FaceDown	—	—	—	⊙	⊙	⊙	⊙	—	—
		Duplex		—	—	—	⊙	⊙	⊙	⊙	—	—
	Bypass	Simplex	FaceUp	—	—	⊙	⊙	⊙	⊙	⊙	△	△
			FaceDown	—	—	⊙	⊙	⊙	⊙	⊙	○	—
		Duplex		—	—	△	△	△	△	△	△	—
FD	Punch	Simplex	FaceUp	—	—	—	—	—	—	—	—	—
			FaceDown	—	⊙	⊙	⊙	○	○	○	—	—
		Duplex		—	△	△	△	△	△	△	—	—
	Half Fold/Z Fold/ Tri-Fold-in/ Tri Fold out	Simplex	FaceUp	—	○	○	○	○	—	—	—	—
			FaceDown	—	○	○	○	○	—	—	—	—
		Duplex		—	△	△	△	△	—	—	—	—
	Double Parallel / Gate	Simplex	FaceUp	—	○	○	○	—	—	—	—	—
			FaceDown	—	○	○	○	—	—	—	—	—
		Duplex		—	△	△	△	—	—	—	—	—
LS	Stacker	Simplex	FaceUp	—	⊙	⊙	⊙	⊙	⊙	⊙	△	—
			FaceDown	—	⊙	⊙	⊙	⊙	⊙	⊙	○	—
		Duplex		—	△	△	△	△	△	△	△	—
	Sub Tray	Simplex	FaceUp	⊙	⊙	⊙	⊙	⊙	⊙	⊙	△	△
			FaceDown	⊙	⊙	⊙	⊙	⊙	⊙	⊙	○	—
		Duplex		△	△	△	△	△	△	△	△	—
SD	Sub Tray	Simplex	FaceUp	⊙	⊙	⊙	⊙	⊙	⊙	⊙	△	△
			FaceDown	⊙	⊙	⊙	⊙	⊙	⊙	⊙	○	—
		Duplex		△	△	△	△	△	△	△	△	—
	Fold & Staple Multi Half	Simplex	FaceUp	—	—	—	—	—	—	—	—	—
			FaceDown	—	○	○	○	○	○	○	○	—
		Duplex		—	△	△	△	△	△	△	△	—
	Multi 3-Fold	Simplex	FaceUp	—	○	○	○	—	—	—	—	—
			FaceDown	—	○	○	○	—	—	—	—	—
		Duplex		—	△	△	△	—	—	—	—	—
PB	Sub Tray	Simplex	FaceUp	⊙	⊙	⊙	⊙	⊙	⊙	⊙	△	△ ^{*3}
			FaceDown	⊙	⊙	⊙	⊙	⊙	⊙	⊙	○	—
		Duplex		△	△	△	△	△	△	△	△	—
	Perfect binding	Simplex	FaceUp	—	—	—	—	—	—	—	—	—
			FaceDown	—	—	○	○	—	—	—	—	—
		Duplex		—	—	△	△	—	—	—	—	—

*1 In case of paper which is 309mm or shorter in sub scan direction, it is single sheet reverse conveyance for the 3rd sheet. The pattern is 2 → 1 → 2 → 2 ...

*2 In case of bypass gate control, it is single sheet reverse conveyance for the 3rd sheet. The pattern is 2 → 1 → 2 → 2 ...

*3 Less than 300g/m²

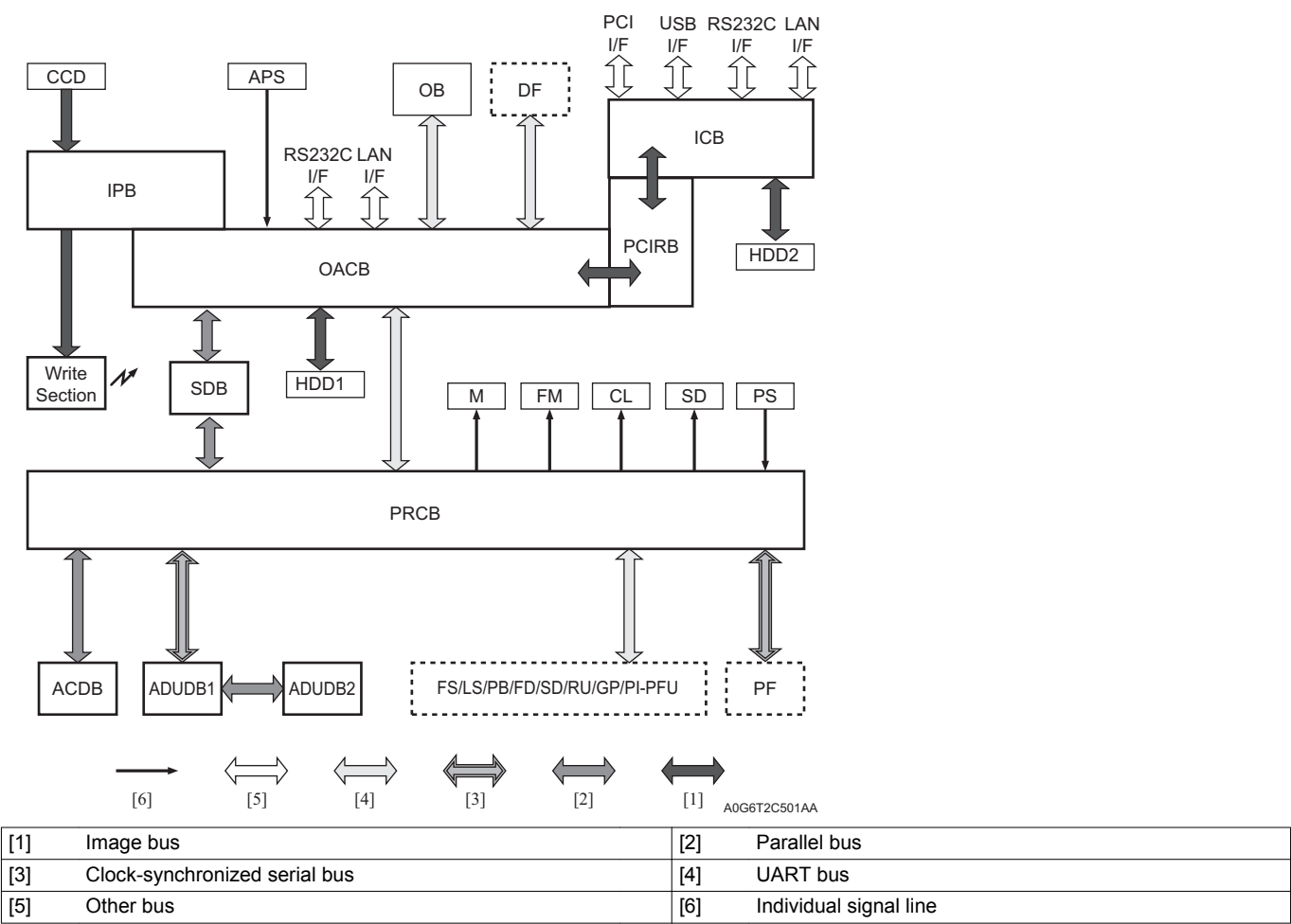
3.3.2 In case of 1051

○ : Single sheet reverse conveyance — : Out of specification
 △ : Single sheet straight conveyance

Option	function			weight (g/m ²)								
				40 to 49	50 to 61	62 to 71	72 to 91	92 to 130	131 to 161	162 to 216	217 to 244	245 to 350
FS	Straight	Simplex	FaceUp	○	○	○	○	○	○	○	○	○
			FaceDown	△	△	△	△	△	△	△	△	—
		Duplex		○	○	○	○	○	○	○	○	—
	Shift	Simplex	FaceUp	○	○	○	○	○	○	○	○	○
			FaceDown	△	△	△	△	△	△	△	△	—
		Duplex		○	○	○	○	○	○	○	○	—
	Staple	Simplex	FaceUp	—	—	—	—	—	—	—	—	—
			FaceDown	—	△	△	△	△	△	△	△	—
		Duplex		—	○	○	○	○	○	○	○	—
	Sub tray	Simplex	FaceUp	○	○	○	○	○	○	○	○	○
			FaceDown	△	△	△	△	△	△	△	△	—
		Duplex		○	○	○	○	○	○	○	○	—
GP	Multi punch	Simplex	FaceUp	—	—	—	—	—	—	—	—	—
			FaceDown	—	—	—	△	△	△	△	—	—
		Duplex		—	—	—	△	△	△	△	—	—
	Bypass	Simplex	FaceUp	—	—	○	○	○	○	○	○	○
			FaceDown	—	—	△	△	△	△	△	△	—
		Duplex		—	—	○	○	○	○	○	○	—
FD	Punch	Simplex	FaceUp	—	—	—	—	—	—	—	—	—
			FaceDown	—	△	△	△	△	△	△	—	—
		Duplex		—	○	○	○	○	○	○	—	—
	Half Fold/Z Fold/ Tri-Fold-in/ Tri Fold out	Simplex	FaceUp	—	○	○	○	—	—	—	—	—
			FaceDown	—	△	△	△	△	—	—	—	—
		Duplex		—	○	○	○	○	—	—	—	—
	Double Parallel / Gate	Simplex	FaceUp	—	○	○	○	—	—	—	—	—
			FaceDown	—	△	△	△	—	—	—	—	—
		Duplex		—	○	○	○	—	—	—	—	—
LS	Stacker	Simplex	FaceUp	—	○	○	○	○	○	○	○	—
			FaceDown	—	△	△	△	△	△	△	△	—
		Duplex		—	○	○	○	○	○	○	○	—
	Sub Tray	Simplex	FaceUp	○	○	○	○	○	○	○	○	○
			FaceDown	△	△	△	△	△	△	△	△	—
		Duplex		○	○	○	○	○	○	○	○	—
SD	Sub Tray	Simplex	FaceUp	○	○	○	○	○	○	○	○	○
			FaceDown	△	△	△	△	△	△	△	△	—
		Duplex		○	○	○	○	○	○	○	○	—
	Fold & Staple Multi Half	Simplex	FaceUp	—	—	—	—	—	—	—	—	—
			FaceDown	—	△	△	△	△	△	△	△	—
		Duplex		—	○	○	○	○	○	○	○	—
	Multi 3-Fold	Simplex	FaceUp	—	○	○	○	—	—	—	—	—
			FaceDown	—	△	△	△	—	—	—	—	—
		Duplex		—	○	○	○	—	—	—	—	—
PB	Sub Tray	Simplex	FaceUp	○	○	○	○	○	○	○	○	△ ^{*1}
			FaceDown	△	△	△	△	△	△	△	△	—
		Duplex		○	○	○	○	○	○	○	○	—
	Perfect binding	Simplex	FaceUp	—	—	—	—	—	—	—	—	—
			FaceDown	—	—	△	△	—	—	—	—	—
		Duplex		—	—	○	○	—	—	—	—	—

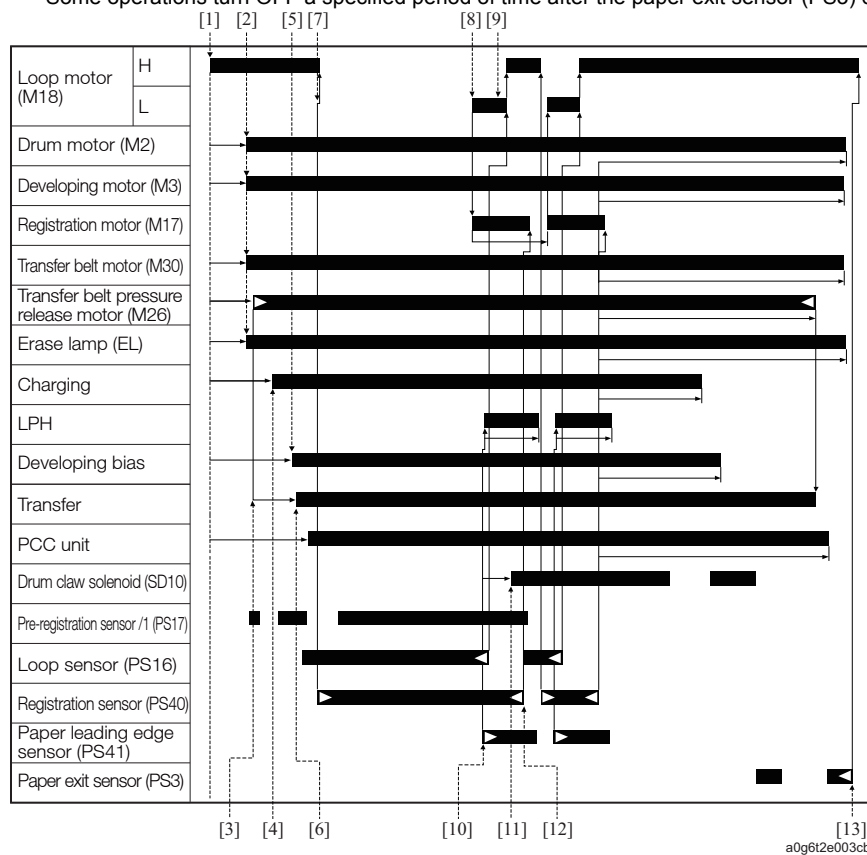
*1 Less than 300g/m²

4. Control block diagram



5. Image creation control

- When detecting that a print start signal turns ON [1], the loop motor (M18) and other motors provided for paper feed and conveyance processes turn ON to start the paper feed operation.
- When a prescribed time elapses after receiving this signal, the drum motor (M2), the developing motor (M3) and the transfer belt motor (M30) turn ON [2] with each of the units around the photo conductor section brought into an operating condition.
- The erase lamp (EL) turns ON to start neutralizing the drum.
- When another prescribed time elapses, the transfer belt pressure release motor (M26) turns ON [3] to apply pressure on the transfer belt against the drum.
- After pressing the transfer belt to the drum, the following operations are performed in the following order; charging [4], high voltage impression to developing bias [5] and high voltage impression to the transfer belt [6].
- A specified period of time after the loop creation [7] on the supplied paper is completed in the registration roller section, the registration motor (M17) turns on [8] and starts the conveyance of the first piece of paper which creates the loop.
- At this time, M18 which drives the loop roller switches the line speed to low to conduct the loop assist [9].
- During this conveyance operation, the paper leading edge sensor (PS41) detects the paper edge and turns ON [10]. A specified period of time after it, the LPH turns ON to form the image on the drum with LED light.
- The drum claw solenoid (SD10) also turns ON [11] after the PS41 turns ON.
- Paper goes through the drum in time and the image which have been created on the drum is transferred to paper and the paper gets separated from the drum at that time.
- The paper separated from the drum is transferred to the fusing section by the transfer belt.
- The continuous paper conveyance enables the operations above and each operations turn OFF a specified period of time after the registration sensor (PS40) detects the paper edge and turns OFF [12].
- Some operations turn OFF a specified period of time after the paper exit sensor (PS3) detects the last piece of paper and turns OFF [13].



[1]	Print start signal	[2]	M2, M3, M30, EL ON
[3]	Transfer belt pressure	[4]	Charger high voltage impression
[5]	Developing bias impression	[6]	Transfer high voltage impression
[7]	Loop creation	[8]	Registration
[9]	Loop assist	[10]	Paper leading edge detection
[11]	Drum claw drive	[12]	Trailing edge of paper detected
[13]	Trailing edge of paper detected		

6. Process speed

According to the paper type which is selected in the paper setting in the setup menu or the environmental decision, it controls process speed switchover.

6.1 PRO1200/1200P (at normal temperature)

Process speed	Paper weight	
570mm/s	Coat	40g/m ² to 216g/m ²
	Fine	40g/m ² to 216g/m ²
	Plain paper	40g/m ² to 216g/m ²
	Book/News	40g/m ² to 61g/m ²
	Embossed	40g/m ² to 61g/m ²
490mm/s	Coat	217g/m ² to 300g/m ²
	Fine	217g/m ² to 244g/m ²
	Plain paper	-
	Book/News	62g/m ² to 91g/m ²
	Embossed	62g/m ² to 71g/m ²
330mm/s	Coat	301g/m ² to 350g/m ²
	Fine	245g/m ² to 350g/m ²
	Plain paper	217g/m ² to 350g/m ²
	Book/News	92g/m ² to 216g/m ²
	Embossed	72g/m ² to 216g/m ²

6.2 PRO1051 (at normal temperature)









Process speed	Paper weight	
490mm/s	Coat	40g/m ² to 300g/m ²
	Fine	40g/m ² to 244g/m ²
	Plain paper	40g/m ² to 216g/m ²
	Book/News	40g/m ² to 91g/m ²
	Embossed	40g/m ² to 71g/m ²
330mm/s	Coat	301g/m ² to 350g/m ²
	Fine	245g/m ² to 350g/m ²
	Plain paper	217g/m ² to 350g/m ²
	Book/News	92g/m ² to 216g/m ²
	Embossed	72g/m ² to 216g/m ²

E SERVICE TOOL

1. bizhub PRO 1200/1200P/1051



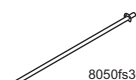


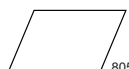
1.1 Service material list





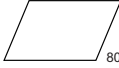

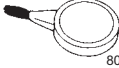



1.1.1 Service material list

Parts Number	Name	Shape	Remark
-	Isopropyl alcohol	 50gaf2c142na	
-	Acetone	 50gaf2c142na	
000V-19-##	Setting powder	 50gaf2c143na	25g
000V-18-##	Cleaning pad	 50gaf2c144na	10pcs/1 pack
00GR0026##	Multemp FF-RM (Fluotribo MH)	 50gaf2c145na	25g
00GR0002##	Plas guard No.2	 50gaf2c145na	25g
00GR0022##	Molykote EM-30L	 50gaf2c145na	25g
A0N9PP67##	Magnalube-G Teflon Grease		0.75 oz

1.2 Jig list

1.2.1 Jig list

Parts Number	Name	Shape	Remark
55VAJG03##	Thermostat positioning jig /A (for fusing roller /Up)		Quantity: 1
55VAJG04##	Thermostat positioning jig /B (for fusing heating roller)		Quantity: 1
7050K002##	Optics unit positioning jig	 8050fs3011	Quantity: 2
00M6-2-##	Door switch jig	 8050fs3012	Quantity: 1
4040PJP1##	Test chart (A3)	 8050fs3005	Quantity: 1 Black and white
4040PJP2##	Test chart (11 x 17)	 8050fs3005	Quantity: 1 Black and white

Parts Number	Name	Shape	Remark
120A9711##	Adjustment chart	 8050fs3005	Quantity: 1 For DF
120AJG02##	Adjustment chart	 8050fs3005	Quantity: 1 For DF
120A971##	White chart	 8050fs3005	Quantity: 1pc/set For DF adjustment
120AJG03##	White chart	 8050fs3005	Quantity: 1pc/set For DF adjustment
65AA995##	Fusing adjustment paper (16 sheets/A3)	 8050fs3005	Quantity: 1 For multi feed detection
00VC-2-0##	Drum cover	 8050fs3017	Quantity: 4
00VD-100##	Blower brush	 8050fs3018	Quantity: 1
56UAPJG0##	Multimeter	 8050fs3019	Quantity: 1
120A1052##	Positioning shaft	 8050fs3019	Quantity: 2pc/set For DF adjustment
A0H2RX00##	Trimmer unit support board	 8050fs3019	Quantity: 1 For SD

1.3 Mail remote notification system

1.3.1 Outline

"Mail remote notification system" is a system that allows you to obtain a list print which can be output by the main body using the Internet mail (E-mail).

Using this system dispenses not only with printing the list on paper but also visiting the users. Send an E-mail with a simple keyword to the main body to receive the list prints from the main body by E-mail.

1.3.2 Operating environment

In order to use the functions of "Mail remote notification system", the following conditions must be met. The operation of the functions is available while in jams, SC, and a low power mode. Under the condition that the main body is not operating, an E-mail sent to the main body does not get lost but is handled when the main body is activated again.

1. The main body has a server that can receive an E-mail using POP3 or IMAP protocol.
2. The copier has a mail server that can send an E-mail using SMTP protocol.
3. In the following 4 cases, "Mail remote notification system" does not operate in the main body.
 - When the main power switch (SW1) is OFF
 - When the sub power switch (SW2) is ON
 - The copier is in the auto shut-off mode.
 - When the security enhanced mode is set to ON (the use of the main body NIC is not allowed.)

1.3.3 Major functions

Sending a mail with a simple keyword allows you to use the following functions.

1. The list print information of the main body you want to obtain can be received by E-mail.

List prints that can be obtained are the following 11 lists.

- Mode Memory List
- User setting list
- Font pattern list
- Machine Management List
- Adjustment Data List

- Parameter List
 - User setting list
 - Counter list
 - Coverage data list
 - Communication Log List
 - Audit Log Report
2. The counter list can be checked by cell phone.
 3. A password used for certification of mail can be changed.
 4. Directions for use of "Mail remote notification system" can be received by e-mail.
To use the preceding functions, send a mail with a simple keyword (command).
For details of the command, refer to ["E.1.3.5 Operating instructions of the mail remote notification system."](#)

1.3.4 Initialization

To use "Mail remote notification system", register the network parameter on the main body and the account on the mail server.

(1) Setting from the operation panel

Set the IP address of the copier from the operation panel to connect the copier to the network. When this setting has been already made, proceed to ["E.1.3.4.\(2\) Setting from the Web Utilities."](#)

(a) Procedure

1. Press [Utility/Counter] on the operation panel.
2. Press [06 Administrator Setting].
3. Press [04 Network Setting].
4. Press [01 Machine NIC Setting].
5. Press [01 TCP/IP Setting].
6. Enter "IP Address," "Subnet Mask," and "Gateway Address."
7. Restart the main body.

Note

- The system administrator normally assigns the IP address of the copier. For details, contact the system administrator.

(2) Setting from the Web Utilities

Enter the setting of the mail server from the Web browser. To use the Web browser, make preparations of a PC that can be connected to the network.

Note

- No space is available in all items to be set. The following characters cannot be used for setting an E-mail address.

() < > ; : " ' []

When an improper entry or setting is made on the Web browser, be sure to make corrections following the error message. When not correcting the error, program download error occurs.

(a) Procedure

1. Start up the Web browser.
When the proxy is set on the Web browser, it becomes unavailable to access the main body Web. For particulars, contact the network administrator. For Web browser, Internet Explorer 6.02 or Firefox 1.0 is recommended. However, be sure to avoid setting from 2 or more browsers at a time.
2. Specify the IP address of the copier main body that is entered thorough "A. Setting from the operation panel".
When you access the Web Utilities of the copier main body, "Main page" is displayed.

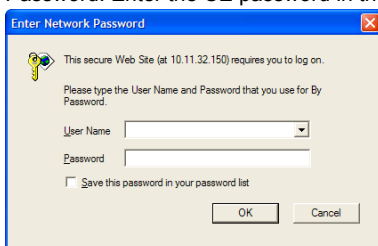
Web Utilities

- [Remote Panel](#)
- [Remote Monitor](#)
- [Multi Monitor](#)

- [Machine Manager Setting](#)
- [Extension for maintenance](#)



3. "Main page screen"
Click [Extension for maintenance].
4. Enter the user name or the CE password in "Extension for maintenance" and press "OK."
User name: ce (small letter, cannot be changed)
Password: Enter the CE password in the Service Mode (Default:"9279272")



5. "Extension for maintenance screen"
Click [E-mail Initial Setting].

Extension for maintenance

- E-Mail Initial Setting
- CSRC Job Setting
- Internet ISW
- Remote Panel
- Panel Log
- Machine setting data Import
- Mail Log

Main Page

6. "E-mail Initial Setting screen"

E-Mail Initial Setting

(E-Mail Notification)

Enable E-Mail notification	<input type="radio"/> Yes <input type="radio"/> No
Time difference	900 (Minimum: -1200, Maximum: 1200)
Sending mail (SMTP) server	0.0.0.0 (Maximum: 128 Characters)
SMTP port number	25 (Default: 25, Minimum: 1, Maximum: 99999)
Sending mail (SMTP) server/Time out	5 minute 0 second (Minimum: 30 seconds, Maximum: 5 minutes)
Interval between fetching mails	0 minute 0 second (Minimum: 1 minute, Maximum: 60 minutes)
Receiving mail server	0.0.0.0 (Maximum: 128 Characters)
Kind of mail spool	<input type="radio"/> POP3 <input type="radio"/> IMAP
POP3/IMAP port number	<input type="radio"/> Enable default (POP3: 110, IMAP: 143) <input type="radio"/> Custom (Minimum: 1, Maximum: 99999)

Setting item	Details
Enable E-mail notification	When using the mail remote notification system, select "Use." Default is "Not use."
Time difference	The time at which a mail was sent out is calculated based on this value. For time difference setting, enter the difference from the standard time UTC in the range from -1200 (- 12 hour 00 minute) to +1200 (-12 hour 00 minute). When no value is entered, +0000 (UTC) is set. (Example: In the case of Japan, enter + 900.)
Sending mail (SMTP) server	Set the IP address of the SMTP server.
SMTP port number	Set the port Number of the SMTP server. For default, 25 is set.
Sending mail (SMTP) server time out	Set the time-out of the SMTP connection. Default is for 5 minutes.
Interval between fetching mails	The interval of the main body checking the receiving mail server to see if a mail is newly received. (An interval can be specified in the range from 1 minute to 60 minutes.) Taking into consideration the load on the network, this is set at the interval of 10 minutes.
Receiving mail server	Set the IP address of the incoming mail server.
Type of mail spool	Select either of POP3 and IMAP. For default, [POP3] is selected.
Port Number	Select "Enable default" when using 110 for POP3, and 143 for IMAP. When using other than the default, select "Custom" and enter a port number to use.
User name on the server	Enter an account name assigned to the main body by the receiving mail server.
Password	Enter a password to the account name above.
E-mail address of this copy machine	Enter the mail address of the main body its own. The address is normally "mail account name@incoming mail server name."
Nickname	Enter a nickname that is added to the title (subject) of a mail sent from the main body. No entry causes no problem.
CE password	Enter a password that is added to the title (subject) of a mail sent to the main body. The main body uses this password for security check.
Also Notice to the administrator	<ul style="list-style-type: none"> • Not transfer: Default • only illegal mail: When a mail received by the main body does not match with the password above, or when the mail size is in excess of a fixed size (10k bytes), transfer the mail. • all mails: Transfer all mails that use "Mail remote notification system."
Administrator E-mail address	When "only illegal mail" or "all mails" is selected, enter an E-mail address for transfer.
Announce delay time in replay mail	Choose whether to indicate in the mail the interval (the amount of time required) from the time when a mail is sent to the main body to the time when the main body receives it. Default is "Not use."
Enable POP (IMAP) before SMTP	After authentication is made by the mail receiving server, a selection is made to decide whether to send out the mail or not. For default, "Send" is selected.
Retry polling when the machine is busy	POP poling option in machine busy state. For default, "Send" is selected.
Enable SMTP Authentication	Input the User name and the password when using it. Default is "Not use."

7. After completion of entry, click [Apply].

8. Conduct the mail sending/receiving test.

- Click "Test" and a sending test and a receiving test are conducted collectively to check to see if a test mail sent is correctly received.

When a test failed, recheck the set items following the error message.

Sending test	A mail sending test is made on the SMTP server. A test mail is sent to "E-mail Address for Machine" set in Step6.
--------------	---

Receiving test	A receiving test is made on the incoming mail server. A test mail is received from "E-mail Address for Machine" set in Step6.
----------------	---

9. Restart the main body.

1.3.5 Operating instructions of the mail remote notification system

For commands for communications with the main body and the details of options, refer to the following table.

Command	Option	Description	Minimum input
GETLOG		Send back a mail with the information specified in the option.	G
	ModeMemory	Send back [Mode memory list] by mail.	M
	UserSetting	Send back [User management list] by mail.	U
	FontPattern	Send back [Font pattern list] by mail.	F
	Management	Send back [Machine management list] by mail.	Ma
	Adjustment	Sent back [Adjustment data list] by mail.	A
	Parameter	Send back [Parameter list] by mail.	P
	UserManagement	Send back [Use management list] by mail.	UseM
	Counter	Send back [Counter list] by mail.	C
	Pixel Ratio	Send back [Coverage data list] by mail.	PI
	CommunicationLog	Send back [Communication log list] by mail.	Co
	Audit Log	Send back [Audit log list] by mail.	Au
	ALL	Send back all preceding items by mail.	AL
	Not specified	Edit the [Counter list] to display it on cell phone and send back.	
CHPASS	[OldPasswd] [NewPasswd]	Change a password to be used for certification of a mail.	C
	[OldPasswd]	Specify a password that is currently used.	
	[NewPasswd]	Specify a new password.	
HELP	Not specified	Send a help mail that describes the operating instructions of the not specified commands above.	H

1.3.6 Mail sending

A command (option) printed on the mail is not case sensitive and can be identified from the minimum input listed on the preceding table.

Note

- Mail software can be used without discrimination by OS and a hand-held device or a free mail using browser.
- Use the mail software in the text mode. The HTML mail is not available.
- For the mail software, as a condition for reception, 128 characters or more are recommended as the maximum number of characters displayed in a line.
- One or more spaces or TAB are required between a command and an option that are written in the mail. The line break is not available.
- Enter all the commands that are written in the mail in one-byte alphanumeric characters (ASCII characters). When any other characters are used, an error message "No command found" is sent back.
- Start a command written in the mail from the line head with not space. When there is a space or TAB found at the line head, the line is ignored.
- The maximum number of commands available in a mail is 10. Commands exceeding 10 are ignored.
- Avoid attaching a file to a mail to send to the main body. When the attached file size is large, the main body handles that mail as a nuisance mail.
- Avoid adding a signature to a mail to send to the main body. The copier handles a signature on a mail as a command and send back an error mail.
- In the case the power is shut off while the main body is sending a mail or the main body is printing the list print, the same mail can be sent back twice.
- The main body can receive up to 5 mails from the mail server at the same time. The main body can receive up to mails from the mail server at the same time.

1.4 Machine setting data Import/Export screen

1.4.1 OUTLINE

Back up various types of data such as adjustment data and the setting data stored in the NVRAM board (NRB) from the PC to the PC via the Web browser. When the data in NRB corrupts, write that backup data onto the NRB to minimize the length of time for the re-adjustment of the main body.

Note

- The setting data to be written is same as the setting data which can be written in [1.5.13 Setting data](#).
- The counter related data is not written onto the NRB.
- The backup data of alternate main body (with another serial number) is not available.
- When replacing the NRB, contact the service manager of the authorized distributor to confirm its handling.

(1) Data export

(a) Procedure

1. Enter the Service mode.

Note

- Enter the service mode to use this function.

2. Access the extension for maintenance in Web Utilities of the main body.

Extension for maintenance

- [E-Mail Initial Setting](#)
- [CSRC http Setting](#)
- [Internet ISW](#)
- [Remote Panel](#)
- [Machine setting data Import/Export](#)
- [Mail Log](#)

Main Page

3. "Extension for maintenance screen"
Click [Machine setting data Import/Export].

Machine setting data Import/Export

Import

Select nvram backup file, and push submit button.

Import datatype change
Nvram [NVRAM](#)
Web setting [A](#) [B](#) [C](#) [D](#) [E](#) [F](#) [G](#) [H](#) [I](#) [J](#)

Export

Novram all data (BASE64)

4. Click [Export] and [Save] in the file download screen, and decide the location to save the backup data.

(2) Data import

Note

- When the NVRAM board (NRB) is replaced, be sure to set the Serial number (refer to [I.5.5.4 M/C Serial Number Setting](#)) and the IP address (refer to [E.1.3.4 Initialization](#)).

(a) Procedure

- Enter the Service mode.

Note

- Enter the service mode to use this function.

- Access the extension for maintenance in Web Utilities of the main body, and enter the [Machine setting data Import/Export] mode.
- "Machine setting data Import/Export screen"
- Click NVRAM of [Import Data Type Change] - [Non-volatile]. Click [Browse] of import and select the folder in which the backup data is stored and press [Import].

Machine setting data Import/Export

Import

Select nvram backup file, and push submit button.

Browse...

Submit...

Import datatype change
Nvram NVRAM
Web setting A B C D E F G H I J

Export

Novram all data (BASE64) ▼

Submit...

- Confirm that the data is written on normally and turn off and on again the main power switch (SW1).

Machine setting data Import/Export

SUCCESS. Data were written to the machine.

Novram write succeed. Please OFF/ON the machine

[Back](#)

1.5 Job history list

1.5.1 Outline

"Job History List" is the function to refer to the output history of the copier by using Web browser. The job history displayed on the operation panel is stored in the memory and deleted when the SW2 is turned OFF. However, with this function, the job history is stored in the optional hard disk unit (HD-514) so that the users can refer it even after the SW2 is turned OFF.

1.5.2 Major functions

The job history list allows you to use the following functions.

- Displaying and downloading of job history by 100 data.
- Saving of the job history up to 1 million (The number of histories to save is selectable from 100,000, 500,000 or 1 million. Select 0 to turn OFF the job history utility.)
- Up to 10 types (A to J) of setting files can be imported from the CE page.
- The contents displayed can be changed for each of the 10 setting files (A to J).

Note

- The history data displayed on the output history list of the main body when the job is completed is stored in HDD1. Therefore the data is not stored in case the job is stopped, proof is output or jam is caused.
- Sending history of the scanned information (Scan to E-mail, Scan to FTP, Scan to SMB, for example) is not saved.

1.5.3 Setting method

When using the Job history list in the initialization, the 4 items of job history are displayed. However by importing the customized setting file, other items can be displayed. For the information about getting this setting file and the editor commands, contact the Support section of the authorized distributor.

The following are the display items of job history in the initialization.

- No
- Job Number
- Mode
- Date

Job History List

1 - 0 (Total 0)

No.	JobId	Mode	Date
-----	-------	------	------

(1) Setting from the touch panel

Set the IP address of the copier from the touch panel to connect the copier to the network.

When this setting has been already made, proceed to "[E.1.5.3.\(2\) Setting from the Web Utilities](#)".

(a) Procedure

1. Select [Utility/Counter] button on the touch panel.
2. Press [06 Administrator Setting].
3. Press [04 Network Setting].
4. Press [01 Machine NIC Setting].
5. Press [01 TCP/IP Setting].
6. Enter "IP Address," "Subnet Mask," and "Gateway Address."
7. Restart the main body.

Note

- The system administrator normally assigns the IP address of the copier. For details, contact the system administrator.

(2) Setting from the Web Utilities

Input the setting on the web browser to import the setting file to the copier. In order to use the Web browser, make preparations of the PC that can be introduced into the network.

(a) Procedure

1. Start up the Web browser.

- When the proxy is set on the Web browser, it becomes unavailable to access the main body Web. For particulars, contact the network administrator. For Web browser, Internet Explorer is recommended. However, be sure to avoid setting from 2 or more browsers at a time.

- Specify the IP address of the copier main body that is entered thorough "E.1.5.3.(1) Setting from the touch panel". When you access the Web Utilities of the copier main body, "Main page" is displayed.

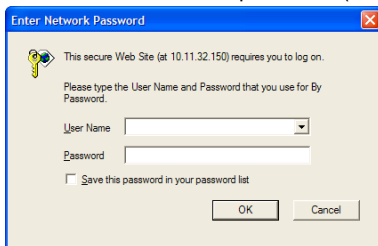
Web Utilities

- [Remote Panel](#)
- [Remote Monitor](#)
- [Multi Monitor](#)

- [Machine Manager Setting](#)
- [Extension for maintenance](#)



- "Main page screen"
Click [Extension for maintenance].
- Enter the user name or the CE password in "Extension for maintenance" and press "OK."
User name: ce (small letter, cannot be changed)
Password: CE Enter the password. (Default:"9279272")



- Enter the service mode.

Note

- When the copier is not in service mode, the setting of [Machine setting data Import/Export] is unavailable.

- "Extension for maintenance screen"
Click [Machine setting data Import/Export].

Extension for maintenance

- [E-Mail Initial Setting](#)
- [CSRC Impo Setting](#)
- [Internet ISW](#)
- [Remote Panel](#)
- [Panel Log](#)
- [Machine setting data Import](#)
- [Mail Log](#)



- "Machine setting data Import/Export screen"
Click each symbol (A to J) displayed on [Import datatype change] -[Web setting].
[Machine setting data Import/Export](#)

Select joblog setting file [joblogA.html] and push submit button.



Note

- The setting file imported to A is displayed on "Administrator Setting screen" in initial setting, therefore selecting A is recommended.

- "Machine setting data Import/Export screen"
When the preparation of the setting file is completed, the following message is displayed. Click [Browse] key, and specify the setting file.

Machine setting data Import/Export

Select joblog setting file [joblogA.html] and push submit button.



Note

- The setting file does not need to be named [joblogA.html]. The settings are saved in the main body with names of joblogA.html to joblogJ.html.

- "Machine setting data Import/Export screen"
Click [OK].



10. "Machine setting data Import/Export screen"

When the import is completed correctly, the following message is displayed. Turn on and off the power switch (SW2) of the main body.

SUCCESS. Data were written to the machine.

File save succeed.

Note

- To enable the setting data, turn the SW2 OFF and ON again and initialize the HDD1.
- Access the Web Utility after the initialization of main body/options is completed. The imported setting files may not take effect when accessing the Web Utility soon after the OFF/ON of SW2.

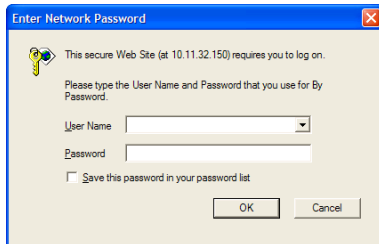
11. "Main page screen"

Click [Administrator Setting].

12. Enter the user name and the administrator password on "Administrator Setting Log in" page, and click "OK".

User name: admin (small letter, cannot be changed)

Password: Enter the administrator password of the main body (Default is "00000000").



Note

- They differ from the login user name and the password for the Extension for maintenance.

13. "Administrator Setting screen"

Click [Job History List].

14. "Job History List screen"

Change the URL in the address bar to the letter from A to J that has imported the customized file to update the page.

Example

Before: <http://X.X.X.X/goform/joblog.cgi?viw=A>

After: <http://X.X.X.X/goform/joblog.cgi?viw=B>

Note

- In case the customized file is imported to "B".

15. "Job History List screen"

Click [JobHistory list].

Note

- This operation sets the customized item number in order.
- The address bar displays "<http://X.X.X.X/goform/joblog.cgi>" after the click.

(b) In case the writing of the setting file fails

When the writing of the setting file fails, the following message is displayed. In this case, conduct the following procedure to see if the hard disk HD-514 has malfunction and requires the replacement or not.

FAILURE. Data were't written to the machine.

File save error!

1. Conduct the step 1 to step10 of the procedure (a) to see if the import of the setting file is normally completed. When the import of the setting file fails after conducting these processes, conduct the step4 and the following steps.
2. Enter the service mode.
"Service Mode menu screen"
Press [05 State Confirmation].
Press [01 I/O Check Mode].
3. [I/O Check Mode screen]
Enter "99" with the numeric keys. Confirm that "99-00" is displayed on the message display area.
4. Press the Access button.
5. Enter "03" with the numeric keys. Confirm that "99-03" is displayed on the message display area.
6. Press the start button.
When "NG" is displayed, press the Start button to perform the HDD1 bad sectors check and recovery again.
When "OK" appears, conduct the step1 to step10 of the procedure (1) to see if the import of the setting file is normally completed. If the writing of the setting file fails after conducting these processes, the HDD1 has trouble. Replace it with new one.

1.6 Acquisition of the controller log

1.6.1 Outline

When there occurs an abnormal condition with respect to the image controller, acquisition of the controller log allows you to expect a location where an error has occurred.

USB memory is used for this acquisition. There are the following two procedures for log acquisition: "Controller defective log" and "Controller capture."

(1) Acquisition of the controller defective log

It is possible to collect log data in the USB memory just before a defective condition occurs.

Used when no defective condition recurs or it occurs less frequently.

Note

- The acquisition of print data is restricted only to 10 jobs just before the USB memory is inserted with [Spool setting] set to [ON].

(2) Acquisition of the controller capture

Jobs can be collected after the USB memory is connected. This is used when a defective condition can be reproduced easily.

1.6.2 Preparation

(1) USB memory

- USB memory with a form (thin) that can be connected to the service port (Serial TypeA) provided on the IC system control board (SCB), or USB memory provided with an extension cable when a direct connection is not available due to its form.
- USB memory that has been formatted in FAT or FAT 32 form.
- USB memory with a capacity larger than 64 Mbyte, when used for the acquisition of defective log.
- When used for capture acquisition, the larger the capacity of the USB memory, the greater the number of data that can be obtained. (The number of data that can be obtained depends on the print size of the original and the capacity of the USB memory.)

(2) Key files for log acquisition

- Key file for acquisition of the defective log of the controller: showallog
- Key file for acquisition of the controller capture: getcapture

Note

- Obtain a key file from KMBT.
- Be sure to store only one of "a" or "b" key file in the USB memory. If both of the key files are stored in the USB memory, the defective log/capture is not acquired properly.

(3) Setting of the controller

Make settings of [MACHINE]-[Controller]-[Spool setting]--> "ON" on the operation panel of the main body. When the spool setting is changed, be sure to turn off and on the main power switch (SW1).

1.6.3 Procedure for acquisition

(1) Procedure of acquisition of the controller defective log

1. Store the key file for acquisition of the controller defective log (showallog) in the USB memory with empty space.

Note

- A key file cannot be created. So, be sure to obtain one from KMBT.

2. Connect the USB memory to the USB port provided on the IC board (ICB).
3. Wait until the "Data" lamp on the operation panel of the main body stops flashing.
Also, wait until the access lamp of the USB memory stops flashing.
The data acquisition normally completes in about 15 seconds after the lamp stops flashing.

Note

- The "Data" lamp on the operation panel normally flashes while the defective log is being collected. However, the lamp does not flash when there occurs a communication error between the controller and the main body.
- When there occurs a communication error, check the access lamp of the USB memory.

4. Check to see if the name of a log file obtained is shown in the upper left section of the screen when the following buttons are pressed down on the operation panel: [Service Mode]-[Controller Setting]-[99 log file]. (IPLog_YYYYMMDD_hhmmss.log)

Note

- Check to see if the name of a log file obtained is shown in the upper left section of the screen when the following buttons are pressed down on the operation panel: [MACHINE]-[Controller]-[98 log file]. (IPLog_YYYYMMDD_hhmmss.log)

5. Remove the USB memory from the USB port provided on the IC board (ICB).
6. Check to see if there is an IPLog_YYYYMMDDhhmmss.log file obtained on the day in the USB memory, and then copy all the files stored to the PC.

Files to be obtained

IPLog_YYYYMMDDhhmmss.log: Controller log

XXXXX.spl: Print data

Note

- Several files other than the above are stored depending on the condition.
- Be sure to turn the main power switch (SW1) OFF and ON after removing the USB memory from the service port.
If it is not turned OFF and ON, there will be no guarantee for its proper operation after the log acquisition is completed.

7. Compress the files copied to the PC to send to KMBT.

(2) Procedure of acquisition of the controller capture

1. Obtain a key file for acquisition of controller capture from KMBT.
Create a key file in the other way. (A key file can be created from a Notepad.)
*Key file format: The <> section is edited.

HDDorUSB,<type>	<type>=USB: Saved in the USB memory inserted.
-----------------	---

MIO, <switch>, <count>	<switch>=ON: Obtained <switch>=OFF: Not obtained <count>=1 to ∞: Number of files obtained (Overwritten with a number specified and deleted in the order of the older files when out of memory.)
NET, <switch>, <count>	Same as above
RIP, <switch>, <count>	Same as above
PDL, <switch>, <count>	Same as above
TIF, <switch>, <count>	Same as above

*MIO: Data received from the network

*NET: Data analyzed with PrintJobAnalyzer

*RIP: Data stored in RIPBuffer

*PDL: Data analyzed with PJLParser

*TIF: TIFF image data output by interpreter

Example:

HDDorUSB, USB

MIO, ON, 30 (In the case of collecting 30)

2. Copy a key file for acquisition of an edited controller capture (getcapture) in the USB memory with empty space.
3. Connect the USB memory to the USB port provided on the IC board (ICB).
4. About after waiting for 20 seconds, check to see if the access lamp of the USB memory stops flashing.
5. Continue printing until there occurs any problems you want to obtain.

Note

- Print speed gets slower than usual according to the contents of acquisition (or the contents of the key file).

6. Check to see if the access lamp of the USB memory stops flashing, and then remove the USB memory from the USB port provided on the IC board (ICB).
7. Check to see if there are files obtained on the day in the USB memory, and then copy all the files stored to the PC.
Files to be obtained with switch=ON
 - MIO_YYYYMMDD_hhmmss.txt
 - NET_YYYYMMDD_hhmmss.txt
 - RIP_YYYYMMDD_hhmmss.txt
 - PDL_YYYYMMDD_hhmmss.txt
 - TIF_YYYYMMDD_hhmmss.tif
8. Compress the files copied to the PC to send to KMBT.

1.7 Counter list obtaining with USB memory

1.7.1 Outline

By connecting a USB memory to the service port, the counter list information can be saved in the USB memory in text file format.

1.7.2 List that can be obtained

1. Counter list
2. Mode memory list
3. User setting list
4. Use management list
5. Audit log report
6. Management list
7. Adjustment list
8. Coverage Data list
9. Communication log list
10. Parameter list

Note

- If you set DIPSW30-1 0 to 1, the communication log list and after are outputted to the file.

1.7.3 Obtaining method

(1) Preparation

Connect a USB memory to the Connecting Port.

(2) Procedure

1. Press the [Utility Menu/Counter] key in the user mode.
2. Press [Details].
3. "Detail Counter List screen"
Press the keys in the following order : [Help] - [Utility Menu/Counter] - [Mode Check].
4. After the following message appears, remove the USB memory.

**Note**

- Do not remove the USB memory before the message disappears. The data is being output to the file while the message is displayed.
- If the USB memory is removed while the message is displayed, the file cannot be saved properly.

(3) File saving destination

The list print data file is saved to the root directory in the USB memory.

(4) File name

The file name is defined as follows. When the same file name exists, it is overwritten with new data.

listprint + Machine type + Destination code + Serial No._Year_Date_Time.txt

e.g.) listprintA0G60021000285_2010_0118_1749.txt

F PERIODICAL MAINTENANCE

1. Maintenance Item

1.1 bizhub PRO 1200/1200P/1051

1.1.1 Replacing procedure of the periodical replacement parts

Note

- For cleaning of the tools used, be sure to use a vacuum cleaner appropriate for cleaning toner.

1.1.2 Periodic maintenance 1 (Every 750,000 prints)

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleaning	Check	Lubrication	Replacement	
1	Preparation	Image check			•			
		Charger/cleaner/developing unit/ LPH/drum removing						
		Drum stand inside cleaning (including the front side of the drum fixing coupling)		•				Vacuum cleaner
2	Scanner section	Exterior removing						
		Cleaning of the glass/the mirror		•				Alcohol/cleaning pad
		Exterior installing						
3	Write section	Cleaning of the LPH lens		•				isopropyl alcohol/cotton swab
4	Charging corona	Charger control plate/discharge wire/ both ends cover removing						
		Cleaning section removing						
		Charging cleaning unit A0G6R701##	2				•	
		Cleaning of the back plate		•				Cleaning pad/blower brush
		Charger control plate A0G6R7D2##	1				•	
		Charging wire 56UA2509##	2				•	
		Charger rubber vibration isolator 55VA2527##	2				•	
		C-clip 45AA2040##	2				•	
5	Cleaning section	Discharge wire A0G64708	1				•	
		Cleaning blade A0G65320##	2				•	Cleaning pad/blower brush
		Cleaning of the receiving mylar		•				
		Cleaning of the inside of the cleaning unit		•				Vacuum cleaner
		Waste toner box A0G6R728##					•	
		Drum scraper Assy A0G6R7E7##	1				•	
		Scatter preventive filter Assy A0G6R7E8##	1				•	
6	Developing section	Developing unit removing						
		Cleaning of the developing unit		•				Vacuum cleaner
		Installing to the drum stand						
7	Toner supply	Cleaning of the toner cartridge insertion opening		•				Vacuum cleaner
8	Transfer belt section	Removing/reinstalling of the interior/ the exterior						Alcohol/cleaning pad/blower brush
		Cleaning of the belt cleaning unit		•				
9	Fusing section	Cleaning of the Fusing claws /Up and /Lw/the entrance guide plate		•				Roller cleaner/cleaning pad
		Fixing cleaning web A0G67314##	1				•	
10	Paper feed section	Cleaning of each sensor		•				Cleaning pad/blower brush
		Cleaning of the paper dust removing brush for vertical conveyance section		•				Vacuum cleaner/blower brush

		Cleaning of the vertical conveyance sensor		•				Cleaning pad/blower brush
11	DUPLEX SECTION	Cleaning of the paper dust removing brush		•				Vacuum cleaner/blower brush
		Cleaning of the registration sensor section		•				Cleaning pad/blower brush
		Cleaning of other sensors		•				
		Cleaning of the pre-transfer roller		•				Alcohol/cleaning pad
		Cleaning of the loop roller		•				
		ADU Transport roller cleaning (4 positions)		•				
		Cleaning of the ADU reverse/exit roller		•				
		Transport roller cleaning (2 positions)		•				
		Cleaning of the ADU acceleration roller		•				
		Cleaning of the ADU exit roller		•				
		Cleaning of the ADU reverse roller		•				
		Cleaning of entire conveyance section/installing of the cover						
12	De-curler section	Cleaning of the de-curler entrance roller		•				Alcohol/cleaning pad
		Transport roller cleaning (2 positions)		•				
13	Each unit installing	Drum installing						
		Sensor/stay installing						
		Developing unit/suction filter						
		Installing of the cleaning unit						
		Charger installing						
		Installing the drum stand (drum fixing screws)						
14	Final check	Checking W.U.T			•			
		Check of the image and the paper through (including each adjustment)			•			
		PM counter reset (in service mode)			•			

1.1.3 Periodic maintenance 2 (Every 1,000,000 prints)

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleaning	Check	Lubrication	Replace	
1	Preparation	Image check			•			
2	Photosensitive material section	Drum · Sensitive drum counter reset (in service mode)	1				•	Replace it once for every 1,000,000 prints or the following running time (whichever is earlier) 1200/1200P: 180h 1051: 220h
		Cleaning of the photo conductor section		•				Alcohol/cleaning pad /Vacuum cleaner
		Drum claw 57GA2919##	3				•	
		Drum claw unit cleaning		•				Vacuum cleaner /cleaning pad
		Drum fixing spring 55FU2014##	1				•	
		Drum positioning collar 25SA2015##	1				•	
3	Developing section	Cleaning of the developing section		•				Cleaning pad/vacuum cleaner
		Developer · Developer counter reset (in service mode)					•	Replace it once for every 1,000,000 prints or the following running time 1200/1200P: 180h 1051: 220h (whichever is earlier)

4	Main body	Cleaning of the cover/machine internal		•				Alcohol/cleaning pad
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1.1.4 Periodic maintenance 3 (Every 1,500,000 prints)

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleaning	Check	Lubrication	Replacement	
1	Cleaning section	Cleaning of the cleaning unit		•				Vacuum cleaner /cleaning pad
		Toner guide brush assy A0G6R730##	1				•	
		Scattering prevention felt 55VA5568##	1				•	
		Seal plate /Fr A0G6R737##	1				•	
		Seal plate /Rr A0G6R738##	1				•	
		Guide plate assy A0G6R729##	1				•	
2	Developing section	Suction filter /Lw A0G63908##	1				•	
		Suction filter /Up A0G63909##	1				•	
3	Toner supply section	Agitator plate assy /1 A0G6R702##	1				•	
		Agitator plate assy /2 56UAR773##	1				•	
4	Transfer belt section	Cleaning of the belt cleaning unit		•				
		Regulation plate assy A0G6R7D4##	2				•	
		Cleaning brush A0G65106##	2				•	
5	Fusing section	Fusing roller /Up A0G67304##	1				•	
		Heat insulating sleeve 45405339##	2				•	
		Fusing bearing /Up A0G67346##	2				•	
		Fusing roller /Lw assy A0G6R703##	1				•	
		Fusing claw /Up 56UA5453##	6				•	
		Fusing claw /Lw 25AA5329##	2				•	
		Fusing cleaning sheet assy 56UAR7C1##	1				•	
		Cleaning of the fusing heating roller		•				Cleaning pad/blower brush
		Lubrication to pressure worm assy				•		Multemp FF-RM (or Fluotribo MH)

1.1.5 Periodic maintenance 4 (Every 2,250,000 prints)

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleaning	Check	Lubrication	Replacement	
1	Paper feed section	Pick-up roller 55VAR750##	2				•	Actual replacement cycle: 500,000 feeds
		Paper feed roller 55VAR749##	2				•	
		Separation roller 55VAR749##	2				•	

1.1.6 Periodic maintenance 5 (Every 3,000,000 prints)

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleaning	Check	Lubrication	Replacement	

1	Photosensitive material section	Drum temperature sensor (TH5) A0G6R731##	1				•	
2	Cleaning section	Toner seal board 56UA-568##	1				•	
3	Toner supply section	Toner supply sleeve /1 55VAR730##	1				•	
		Toner supply sleeve /2 55VAR731##	1				•	
4	Transfer belt section	Transfer belt A0G65001##	1				•	
		Transfer roller A0G65006##	1				•	
		Bearing /H A0G65039##	2				•	
		Transfer contact /Rr A0G6R707##	2				•	
		Transfer contact /Fr A0G6R706##	1				•	
		Power supply parts 65AA2689 ##	2				•	
5	Registration section	Registration motor shaft gear					•	Plas guard No.2
6	Fusing section	Fusing heater lamp /1 (L1) A0G6M330##	1				•	
		Fusing heater lamp /2 (L2) A0G6M330##	1				•	
		Fusing heater lamp /3 (L3) 55VB8304	1				•	
		Fusing heating roller 56UA5307#	1				•	
		Heat roller bearing 56UA7507##	2				•	
		Heat insulating sleeve /Lw 26AA5315##	2				•	
		Fusing temperature sensor /2 (TH2) 55VA8804##	1				•	
		Fusing temperature sensor /4 (TH4) 55VA8806##	1				•	
		Fusing idler gear /2 55VA7782##	1				•	
7	Main body	Dust-proof filter A0G61181##	3				•	
8	De-curler section	ADU lock gear 56UA7751##	1				•	

1.1.7 Periodic maintenance 6 (Every 4,500,000 prints)

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleani ng	Check	Lubric ation	Repla ce	
1	Main body	Ozone filter /12 A0G61123##	3				•	
		Conveyance suction filter 56UA1129##	1				•	
		Develop suction filter 56UA1122##	1				•	
		Cleaning of the cover/machine internal		•				Alcohol/cleaning pad

1.1.8 Periodic maintenance 7 (Every 6,000,000 prints)

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleani ng	Check	Lubric ation	Repla ce	
1	Charging corona	Charging corona 56UA-250##	1				•	
2	Cleaning section	Guide shaft A0G65305##	1				•	

		PCC unit A0G6R7D5##	1				•	
3	Developing section	Developing suction seal /2 56UA3103##	1				•	
		Developing suction seal /5 56UA3106##	1				•	
		Stopper pad A0G63943##	1				•	
		Suction pad /H A0G63944##	1				•	
		Suction pad /I A0G63945##	1				•	
		Developing unit A0G6R705##	1				•	
4	Transfer belt section	Cleaning shaft A0G65107 ##	2				•	
5	Registration section	Registration roller /Up A0G67106##	1				•	
		Registration bearing 56UA7602##	2				•	
		Registration gear /Up A0G67142##	1				•	
		Registration gear /Lw A0G67143##	1				•	
6	Fusing section	Fusing gear A0G67260##	1				•	
		Web motor (M24) 56GA8017##	1				•	
7	Vertical conveyance section	Removing/installing of the exterior/ the vertical conveyance unit						
8	Paper exit section	Cleaning of the paper exit sensor		•				Blower brush
		Main body paper exit roller 56UA4557 ##	1				•	
9	De-curler section	Fixing exit roller 56UA4595##	4				•	Actual replacement cycle: 6,000,000 feeds

1.1.9 Periodic maintenance 8 (Every 10,500,000 prints)

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleani ng	Check	Lubric ation	Repla ce	
1	Cleaning section	Cleaning gear /A assy A0G6R708##	1				•	
2	Transfer belt section	Belt cleaning unit A0G6R726##	2				•	
3	Toner supply section	Pump unit /Rt 56UA-780##	1				•	
		Pump unit /Lt 56UA-790##	1				•	
4	Fusing section	Fusing cleaning roller 56UA5353##	1				•	
		Bearing /G 56UA7609##	2				•	
5	Paper feed section	Removing/installing of the handling unit/the rollers						
		Torque limiter /A A03X5656##	2				•	
		Cover A0G65720##	2				•	
		Removing/installing of the handling unit/the guide plate						
6	Duplex section	Cleaning of the ADU paper reverse sensor /1		•				Blower brush
		Cleaning of the ADU reverse sensor /2		•				
		Output convey roller /1 56UA4743##	1				•	Actual replacement cycle: 10,000,000 feeds

		Output convey roller /2 assy 56UAR701##	1				•	
		ADU accelerator roller A0G68171##	1				•	
		Reversal output roller A0G68172##	1				•	
		ADU reversal roller A0G68176##	1				•	
		ADU conveyance roller /1 56UA4744##	1				•	
		ADU conveyance roller /2 56UA4744##	1				•	
		ADU conveyance roller /3 A0G68177##	1				•	
		ADU conveyance roller /4 A0G68177##	1				•	
		ADU exit roller A0G68177##	1				•	
7	De-curler section	Removing/installing of the exterior/ the paper exit section						
		De-curler belt /Up A0G68464##	7				•	Actual replacement cycle: 4,500,000 feeds
		De-curler belt /Lw A0G68464##	7				•	
		De-curler entrance roller A0G68407##	1				•	Actual replacement cycle: 10,000,000 feeds
		Reverse gate 56UA4760##	7				•	
		Guide member /Up A0G68451##	1				•	
		Guide member /Lw A0G68452##	1				•	

1.1.10 Periodic maintenance 9 (Every 15,000,000 prints)

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleani ng	Check	Lubric ation	Repla ce	
1	Paper feed section	Paper feed clutch /1 (CL4) 57GA8201##	1				•	Actual replacement cycle: 3,000,000 feeds
		Paper feed clutch /2 (CL6) 57GA8201##	1				•	
		Separation clutch /1 (CL5) 57GA8201##	1				•	
		Separation clutch /2 (CL7) 57GA8201##	1				•	
2	Vertical conveyance section	Pre-registration clutch /1 (CL1) 57GA8201##	1				•	
		Pre-registration clutch /2 (CL3) 57GA8201##	1				•	
		Vertical conveyance clutch (CL2) 57GA8201##	1				•	
		Paper fur brush 55VAR763##	1				•	

1.1.11 Periodic maintenance 10 (Every 20,250,000 prints)

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleani ng	Check	Lubric ation	Repla ce	
1	Registration section	Removing/installing of the exterior/ the unit						
		Roller gear /Rt 56UA7756##	1				•	
		Paper lift sheet A0G67121##	1				•	
		Loop driven roller 56UA4583##	1				•	

		Pre-transfer driven roller assy A0G6R709##	2				•	
2	Fusing section	Removing/installing of the fusing unit						
		Fusing oscillation cam assy A0G6R732##	1				•	
		Bearing /A 39205336##	2				•	
		Fusing claws installation assy A0G6R7D9##	6				•	
		Web prevention part A0G6R733##	1				•	
		Bearing /G 56UA7609##	1				•	
3	Paper feed section	Removing/installing of the tray unit						
		Bearing /D A00J6179##	2				•	
		Bearing /C A00V2406##	2				•	
		Reverse rotation shaft A0G65708##	2				•	
		Bearing /D A00J6179##	4				•	
		Paper feed input shaft A0G6R739##	2				•	
		Input gear A0G66023##	2				•	Actual replacement cycle: 10,500,000 feeds
4	Vertical conveyance section	Conveyance pulley 55VA7653##	2				•	
		Conveyance belt /A 56UA7809##	1				•	
		Bearing /E A00J6178##	5				•	
		Cleaning gear /B 55VA7921#	1				•	
		Scraper shaft 56UA4417##	1				•	
		Torque limiter 57GA4430#	1				•	Actual replacement cycle: 6,000,000 feeds
		Paper dust removing brush shaft 56UA-478##	1				•	
		Conveyance roller /1 56UA4413##	1				•	
		Conveyance roller /2 A0G67003##	1				•	
		Conveyance roller /3 A0G67002##	1				•	
		Pre-registration roller /1, /2 A0G67001##	2				•	
		Conveyance exit roller 56UA4412##	1				•	
		Pre-registration bearing 56UA7603##	4				•	
5	Duplex section	Removing/installing of the ADU cover /Lt						
		Motor gear /Rt 56UA7757##	1				•	

1.1.12 Periodic maintenance 11 (Every 30,000,000 prints)

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleani ng	Check	Lubric ation	Repla ce	
1	Cleaning section	Cleaning gear /B A0G65327##	2				•	
2	Toner supply section	Air separation motor (M10) A0Y5J040##	1				•	

		Intermediate hopper motor (M11) 13GQ8003##	1				•	
		Toner bottle motor (M6) A0PNM102##	1				•	
		Toner hopper motor (M7) A0PNM102##	1				•	
		Waste toner box swing motor (M19) A011M100##	1				•	
3	Fusing section	Pressure worm assy A0G6R711##	1				•	
		Pressure wheel assy A0G6R710##	1				•	
		Bearing /F 55VA7602##	1				•	
4	Vertical conveyance section	Paper dust guide holder A0G6R700##	1				•	
		Paper feed cleaning gear /B 56UA7716##	1				•	
		Paper feed gear /A 56UA7717##	1				•	
		Paper feed gear /B 56UA7718##	1				•	
		Paper exit input gear 56UA7707##	1				•	
5	De-curler section	Reverse/exit solenoid (SD7) A0G6R736##	1				•	
		De-curler solenoid /Up (SD8) A0G6R734##	1				•	
		De-curler solenoid /Lw (SD5) A0G6R735##	1				•	
		De-curler motor (M32) A0PNM102##	1				•	
6	Duplex section	Removing/installing of the ADU cover /Lt						
		Registration motor (M17) 56UA-386##	1				•	
		Removing/installing of the ADU conveyance motor /2 assy						
		Conveyance motor belt /2 56UA7808##	1				•	
		ADU conveyance motor /2 (M16) A0G6R714##	1				•	
		Removing/installing of the ADU drive belts (common to each belt)						
		ADU reverse motor belt 13GQ7755##	1				•	
		ADU reverse motor (M12) A0G6R712##	1				•	
		Removing/installing of the pressure unit						
		Transfer belt pressure drive motor (M26) A0G6R790##	1				•	
		Reverse/exit motor belt 56UA7806#	1				•	
		Reverse/exit motor (M13) A0G6R712##	1				•	
		ADU accelerate motor belt A0G68194##	1				•	
		ADU paper exit roller belt 55VA7803##	1				•	
		ADU accelerate motor (M14) A0G6R712##	1				•	
		Loop motor (M18) A0G6R713##	1				•	
		Transfer belt motor (M30) A0R5M103##	1				•	

7	Main body rear side	ADU conveyance motor /1 belt 15BA7753##	1				•	
		ADU conveyance motor /1 (M15) A03UM111##	1				•	
		Paper feed motor (M4) A0G6M101##	1				•	
		Paper feed gear 56UA7703##	1				•	
		Vertical conveyance motor (M8) 56AA8011##	1				•	
		Conveyance roller 56UA7706##	1				•	
		Developing screw motor (M21) A0PNM102##	1				•	
		Fusing gear A0G62372##	1				•	
		Transfer belt cleaning motor (M5) A0PNM102##	1				•	
		Paper exit conveyance motor (M31) A0PNM102##	1				•	
		Paper exit motor (M20) A0PNM102##	1				•	
		Fusing motor (M1) A0G6M101##	1				•	
		Drum motor (M2) A0R5M103##	1				•	
		Developing motor (M3) 15AA8005##	1				•	
		Waste toner motor (M9) A011M100##	1				•	
		Belt cleaning gear A0G62506##	1				•	

1.2 DF-615

1.2.1 Periodic maintenance 1 (Every 750,000 prints)

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleani ng	Check	Lubric ation	Repla ce	
1	Preparation	Original through check			•			
		Cover			•			
2	Paper feed section	Pick-up roller		•				Alcohol/cleaning pad
		Paper feed roller		•				
		Paper feed auxiliary roller		•				
		Cleaning pad		•				
		Registration roller		•				
		Pre-handling rubber		•				
		Original count sensor		•				Blower brush
		Size sensor /Lt		•				
		Size sensor /Rt		•				
3	Conveyance section	Original registration sensor /Lt		•				
		Original registration sensor /Rt		•				
4	Read section	Original conveyance sensor		•				
		Original skew sensor /Rr		•				
		Original skew sensor /Fr		•				
		Centering sensor /Rr		•				
		Centering sensor /Fr		•				
		Centering LED sensor /Rr		•				
		Centering LED sensor /Fr		•				
5	Paper exit section	Mirror on the driven roller assy		•				
		Reverse sensor		•				
		Reverse jam sensor		•				
		Original reverse exit sensor		•				
6	Final check	Original through check			•			Alcohol/cleaning pad

		Cleaning of the cover		•			
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1.2.2 Periodic maintenance 2 (Every 2,250,000 prints)

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleaning	Check	Lubrication	Replace	
1	Paper feed section	Separation roller 13GA4606##	1				•	Actual replacement cycle: 400,000 feeds

1.2.3 Periodic maintenance 3 (Every 4,500,000 prints)

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleaning	Check	Lubrication	Replace	
1	Paper feed section	Pick-up roller 13GA4604##	1				•	Actual replacement cycle: 800,000 feeds
		Paper feed roller 15AS4605##	1				•	
		Paper feed auxiliary roller 15AS4601##	1				•	
		Torque limiter 13GAR719##	1				•	

1.3 PF-702

1.3.1 Periodic maintenance 1 (Every 750,000 prints)

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleaning	Check	Lubrication	Replace	
1	Preparation	Original through check			•			
2	Tray section	Cleaning of each sensor		•				Blower brush
3	Conveyance section	Cleaning of each sensor		•				
4	Final check	Original through check			•			
		Cleaning of the cover		•				Alcohol/cleaning pad

1.3.2 Periodic maintenance 2 (Every 2,250,000 prints)

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleaning	Check	Lubrication	Replace	
1	Tray section	Pick-up roller 55VAR750##	3				•	Actual replacement cycle: 500,000 feeds
		Paper feed roller 55VAR749##	3				•	
		Separation roller 55VAR749##	3				•	

1.3.3 Periodic maintenance 3 (Every 10,500,000 prints)

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleaning	Check	Lubrication	Replace	
1	Conveyance section	PF paper exit roller 15BA5011##	1				•	Actual replacement cycle: 6,000,000 feeds
		Bearing /C A00V2406##	1				•	
		Bearing /B 50007501##	1				•	

1.3.4 Periodic maintenance 4 (Every 15,000,000 prints)

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleaning	Check	Lubrication	Replace	
1	Tray section	Paper fur brush 15BY5604##	3				•	Actual replacement cycle: 3,000,000 feeds

		Paper feed clutch /1 (CL6) 57GA8201##	1				•
		Paper feed clutch /2 (CL9) 57GA8201##	1				•
		Paper feed clutch /3 (CL12) 57GA8201##	1				•
		Separation clutch /1 (CL7) 57GA8201##	1				•
		Separation clutch /2 (CL10) 57GA8201##	1				•
		Separation clutch /3 (CL13) 57GA8201##	1				•
		Forced separation clutch /1 (CL8) 57GA8201##	1				•
		Forced separation clutch /2 (CL11) 57GA8201##	1				•
		Forced separation clutch /3 (CL14) 57GA8201##	1				•
2	Conveyance section	Pre-registration clutch /1 (CL1) 57GA8201##	1				•
		Pre-registration clutch /2 (CL3) 57GA8201##	1				•
		Pre-registration clutch /3 (CL5) 57GA8201##	1				•
		Intermediate clutch /Up (CL2) 57GA8201##	1				•
		Intermediate clutch /Lw (CL4) 57GA8201##	1				•

1.3.5 Periodic maintenance 5 (Every 30,000,000 prints)

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleani ng	Check	Lubric ation	Repla ce	
1	Tray section	Paper feed gear 56UA7703##	1				•	
		Removing/installing of the handling unit/the rollers						
		Torque limiter /A A03X5656##	3				•	Actual replacement cycle: 6,000,000 feeds
		Cover A0G65720##	3				•	
		Bearing /D A00J6179##	9				•	
		Bearing /C A00V2406##	3				•	
		Reverse rotation shaft A0GC5708##	3				•	
		Bearing /E A00J6178##	6				•	
		Input shaft A0GC6013##	3				•	
		Idler shaft A0GC5711##	3				•	
		Reverse input shaft A0GC5720##	3				•	
		Bearing /D A00J6179##	3				•	
		Bearing /E A00J6178##	3				•	
		Input gear A0G66023##	3				•	Actual replacement cycle: 10,500,000 feeds
2	Conveyance section	Removing/installing of the exit/upper conveyance section						
		Torque limiter /Up 57GA4430##	1				•	Actual replacement cycle: 6,000,000 feeds

		Removing/installing of the lower conveyance section						
		Torque limiter /Lw 57GA4430##	1				•	Actual replacement cycle: 6,000,000 feeds
		Pre-registration roller A0GC7005##	3				•	
		Pre-registration bearing 56UA7603#	6				•	
		Intermediate conveyance roller A0GC7006##	4				•	
		Bearing /C A00V2406##	8				•	
3	Drive section	Paper feed pulley A0GC2104##	5				•	Actual replacement cycle: 10,500,000 feeds
		Shaft assy /C 15BA-168##	2				•	
		Gear /P 15BA7705##	1				•	
		Idler gear /D 15BA7704##	4				•	
		Gear /C 15BA7703##	2				•	
		Shaft assy /P 15BA-167##	1				•	

1.3.6 Spotted replacement (Every 50,000 prints)

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleani ng	Check	Lubric ation	Repla ce	
1	Tray section (PP-701)	Pick-up rubber A08R5621##	1				•	
		Paper feed roller A08R5622##	1				•	
		Separation roller A08R5622##	1				•	

1.4 PF-703

1.4.1 Periodic maintenance 1 (Every 750,000 prints)

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleani ng	Check	Lubric ation	Repla ce	
1	Preparation	Original through check			•			
2	Tray section	Cleaning of each sensor		•				Blower brush
3	Conveyance section	Cleaning of each sensor		•				
4	Final check	Original through check			•			
		Cleaning of the cover		•				Alcohol/cleaning pad

1.4.2 Periodic maintenance 2 (Every 10,500,000 prints)

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleani ng	Chec k	Lubric ation	Repla ce	
1	Conveyance section	PF paper exit roller 15BA5011##	1				•	Actual replacement cycle: 600,000 feeds
		Bearing /C A00V2406##	1				•	
		Bearing /B 50007501##	1				•	
		Pre-registration clutch /1 (CL1) 57GA8201##	1				•	Actual replacement cycle: 300,000 feeds
		Pre-registration clutch /2 (CL3) 57GA8201##	1				•	
		Pre-registration clutch /3 (CL5) 57GA8201##	1				•	

	Intermediate clutch /1 (CL2) 57GA8201##	1				•
	Intermediate clutch /2 (CL4) 57GA8201##	1				•
	Horizontal conveyance exit clutch (CL6) 57GA8201##	1				•

1.4.3 Periodic maintenance 3 (Every 20,250,000 prints)

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleaning	Check	Lubrication	Replace	
1	Paper feed belt section	Removing/installing of the rear cover						
		Removing/installing of the exterior/ the tray/the paper feed belt unit						
		Paper feed belt A0GDR705##	12				•	Actual replacement cycle: 6,000,000 feeds
		Paper feed clutch /1 (CL7), /2 (CL8), /3 (CL9) 57GA8201##	3				•	
		Torque limiter A03U8157##	3				•	
2	Tray section	Shutter solenoid /Rr1 (SD4), /2 (SD6), /3 (SD8) A0GDR700##	3				•	
		Shutter solenoid /Fr1 (SD5), /2 (SD7), /3 (SD9) A0GDR700##	3				•	
		Paper leading edge shutter solenoid / 1 (SD10), /2 (SD11), /3 (SD12) A0GDR701##	3				•	
3	Tray horizontal conveyance section	Removing/installing of the tray horizontal conveyance/the connector unit						Be sure to replace only the 1st tandem of the coupling. It does not need the replacement when using just 1 PF-703. Actual replacement cycle: 6,000,000 feeds
		Horizontal conveyance roller /A A0GD7121##	2				•	
		Horizontal conveyance roller /B A0GD7122##	3				•	
		Spacer 12QV4065##	10				•	
4	Coupling conveyance section	Connecting the coupling devices/ Removing/reinstalling of the exterior						
		Entrance conveyance roller /Lw A0GD7171##	1				•	
		Spacer 12QV4065##	2				•	
5	Conveyance section	Removing/installing of the exit/upper conveyance section						
		Torque limiter /Up A03U8157##	1				•	Actual replacement cycle: 6,000,000 feeds
		Removing/installing of the lower conveyance section						
		Torque limiter /Lw 57GA4430##	1				•	Actual replacement cycle: 6,000,000 feeds
		Pre-registration roller A0GC7005##	3				•	
		Pre-registration bearing 56UA7603##	6				•	
		Horizontal registration roller A0GC7005#	1				•	
		Horizontal registration bearing 56UA7603#	2				•	
		Intermediate conveyance roller A0GC7006##	3				•	
		Bearing /C A00V2406##	6				•	

1.5 PF-702 (PI-PFU)**1.5.1 Periodic maintenance 1 (Every 750,000 prints)**

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleaning	Check	Lubrication	Replacement	
1	Preparation	Original through check			•			
2	Tray section	Cleaning of each sensor		•				Blower brush
3	Conveyance section	Cleaning of each sensor (except for the multi feed sensor)		•				
4	Final check	Original through check			•			
		Cleaning of the cover		•				Alcohol/cleaning pad

1.5.2 Periodic maintenance 2 (Every 4,500,000 prints)

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleaning	Check	Lubrication	Replacement	
1	Conveyance section	Horizontal conveyance exit clutch (CL6) 57GA8201##	1				•	Actual replacement cycle: 3,000,000 feeds

1.5.3 Periodic maintenance 3 (Every 10,500,000 prints)

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleaning	Check	Lubrication	Replacement	
1	Conveyance section	pre-registration clutch /1 (CL1) 57GA8201##	1				•	Actual replacement cycle: 3,000,000 feeds
		pre-registration clutch /2 (CL3) 57GA8201##	1				•	
		Pre-registration clutch /3 (CL15) 57GA8201##	1				•	
		intermediate clutch /1 (CL2) 57GA8201##	1				•	
		intermediate clutch /2 (CL4) 57GA8201##	1				•	
		Horizontal registration roller A0GC7005##	1				•	Actual replacement cycle: 6,000,000 feeds
		Horizontal registration bearing 56UA7603##	2				•	
		PF paper exit roller 15BA5011##	1				•	
		PF Paper exit roller /2 A0GF7021##	1				•	
		Bearing /C A00V2406##	2				•	
		Bearing /B 50007501##	2				•	
		Cleaning of the multi feed sensor		•				Blower brush
2	Tray horizontal conveyance section	Removing/installing of the tray horizontal conveyance/the connector unit						
		Horizontal conveyance roller /A A0GD7121##	2				•	Actual replacement cycle: 6,000,000 feeds
		Horizontal conveyance roller /B A0GD7122##	3				•	
		Spacer 12QV4065##	10				•	
3	COUPLING CONVEYANCE SECTION	Connecting the coupling devices/ Removing/reinstalling of the exterior						
		Entrance conveyance roller /Up A0GD7172##	1				•	Actual replacement cycle: 6,000,000 feeds
		Spacer 12QV4065##	3				•	

1.5.4 Periodic maintenance 4 (Every 20,250,000 prints)

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleani ng	Check	Lubric ation	Repla ce	
1	Paper feed belt section	Removing/installing of the rear cover						
		Removing/installing of the exterior/ the tray/the paper feed belt unit						
		Paper feed belt A0GDR705##	12				•	Actual replacement cycle: 6,000,000 feeds
		Paper feed clutch /1 (CL7), /2 (CL8), /3 (CL9) 57GA8201##	3				•	
		Torque limiter A03U8157##	3				•	
2	Tray section	Shutter solenoid /Rr1 (SD4), /2 (SD6), /3 (SD8) A0GDR700##	3				•	
		Shutter solenoid /Fr1 (SD5), /2 (SD7), /3 (SD9) A0GDR700##	3				•	
		Paper leading edge shutter solenoid / 1 (SD10), /2 (SD11), /3 (SD12) A0GDR701##	3				•	
3	Conveyance section	Removing/installing of the exit/upper conveyance section						
		Torque limiter /Up A03U8157##	1				•	Actual replacement cycle: 6,000,000 feeds
		Removing/installing of the lower conveyance section						
		Torque limiter /Lw 57GA4430##	1				•	Actual replacement cycle: 6,000,000 feeds
		Pre-registration roller A0GC7005##	3				•	
		Pre-registration bearing 56UA7603##	6				•	
		Intermediate conveyance roller A0GC7006##	3				•	
		Bearing /C A00V2406##	6				•	

1.6 RU-506**1.6.1 Maintenance 1 (Every 750,000 prints)**

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleani ng	Check	Lubric ation	Repla ce	
1	Preparation	Original through check			•			
2	Conveyance section	Cleaning of each sensor		•				Blower brush
3	Final check	Original through check			•			
		Cleaning of the cover		•				Alcohol/cleaning pad

1.6.2 Maintenance 2 (Every 20,250,000 prints)

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleani ng	Check	Lubrica tion	Repla ce	
1	Conveyance section	Entrance roller /1 A0GER706##	1				•	
		Entrance roller /2 A0GER704##	1				•	
		Stacker entrance roller A0GER703##	1				•	
		Stacker entrance roller pressure spring /Fr, /Rr A0GE7091##	2				•	
		Paper re-feed roller A0GER707##	1				•	

	Merging section roller A0GER706##	1				•	
	Exit roller A0GER708##	1				•	
	Stacker entrance conveyance belt A0GE2104##	1				•	
	Entrance conveyance belt A0GE2105##	1				•	
	Paper exit conveyance belt A0GE2106##	1				•	
	Conveyance pulley A0GE2112##	1				•	
	Paper exit conveyance pulley A0GE2113##	1				•	
	Straight gate A0GE7051##	1				•	
	Bearing /K A0GER705##	12			•	•	

1.6.3 Maintenance 3 (Every 30,000,000 prints)

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleani ng	Check	Lubrica tion	Repla ce	
1	Conveyance section	Entrance conveyance motor (M1) A0G6R714##	1				•	
		Paper exit motor (M2) A0G6R714##	1				•	

1.6.4 Spotted replacement (Every 5,000,000 operations)

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleani ng	Check	Lubrica tion	Repla ce	
1	Conveyance section	Straight gate solenoid (SD1) A0GER709##	1				•	
		Straight gate spring 15AG4587##	1				•	
2	Stacker section	Stacker exit shutter solenoid (SD2) A0GER700##	1				•	
		Stack switching solenoid (SD3) A0GER701##	1				•	
		Stacker entrance guide plate solenoid (SD4) A0GER702##	1				•	

1.7 FS-521

1.7.1 Maintenance1 (Every 750,000 prints)

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleani ng	Check	Lubrica tion	Repla ce	
1	Preparation	Original through check			•			
		Removing from the main body						
		Removing the rear cover						
2	Main tray section	Paper exit roller /A 122H4825##	8				•	
		Cleaning of each sensor		•				Blower brush
3	Stacker section	Cleaning of each sensor		•				Blower brush
4	Conveyance section	Cleaning of the paper dust removing brush		•				Vacuum cleaner/blower brush
5	Stapler section	Staple scraps box cleaning		•				
6	Post-process	Installing the rear cover						
		Installing to the main body						
7	Final check	Original through check			•			
		Cleaning of the cover		•				Alcohol/cleaning pad

1.7.2 Maintenance 2 (Every 3,000,000 prints)

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleaning	Check	Lubrication	Replace	
1	Conveyance section	Bypass roller /Lw pressure release cam	1			•		Molykote EM-30L
2	Stacker section	Worm gear, cam	1			•		Molykote EM-30L

1.7.3 Maintenance 3 (Every 5,250,000 prints)

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleaning	Check	Lubrication	Replace	
1	Stacker section	Intermediate roller release solenoid (SD7) 15AAR718##	1				•	
2	Main tray section	Paper exit opening solenoid assy (SD9) A0GYB904##	1				•	

1.7.4 Spotted replacement (Every 500,000 operations)

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleaning	Check	Lubrication	Replace	
1	Stapler section	Stapler unit /Fr A0GYA735##	1				•	Actual replacement cycle: 500,000 feeds
		Stapler unit /Rr A0GYA736##	1				•	

1.8 LS-505**1.8.1 Maintenance 1 (Every 15,000,000 prints)**

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleaning	Check	Lubrication	Replace	
1	Preparation	Original through check			•			
2	Conveyance section	Paper press solenoid /3 (SD8) 15AV8255##	1				•	Actual replacement cycle: 5,000,000 feeds
		Paper press solenoid /1 (SD6) 15AV8252##	1				•	
		Paper press solenoid /2 (SD7) 15AV8251##	1				•	
		Rear stopper solenoid (SD3) 15AV8253##	1				•	
		Stacker tray up down motor (M1) 15AV8003##	1				•	
		Cleaning of each sensor		•				Blower brush
3	Final check	Original through check			•			
		Cleaning of the cover		•				Alcohol/cleaning pad

1.9 FD-503**1.9.1 Maintenance 1 (Every 750,000 prints)**

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleaning	Check	Lubrication	Replace	
1	Preparation	Original through check			•			
		Removing the punch unit						
		Removing from RU						
2	Punch section	Punch shaft and the punch support board		•				Alcohol/cleaning pad
		Punch drive section				•		Molykote EM-30L
3	Post-process	Installing the punch unit						
		Installing to RU						

4	Final check	Original through check			•			
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1.9.2 Maintenance2 (Every 2,250,000 prints)

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleaning	Check	Lubrication	Replace	
1	PI section	Paper feed rubber 50BAR702##	2				•	Actual replacement cycle: 100,000 feeds
		Separation rubber 13QNR704##	2				•	
		Cleaning of each sensor		•				Blower brush
2	Tray up/down section	Cleaning of each sensor		•				
3	Punch section	Cleaning of each sensor		•				
4	Conveyance section	Cleaning of each sensor		•				
5	Final check	Cleaning of the cover		•				Alcohol/cleaning pad

1.9.3 Maintenance 3 (Every 5,250,000 prints)

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleaning	Check	Lubrication	Replace	
1	PI section	Pick-up rubber 50BAR701##	6				•	Actual replacement cycle: 200,000 feeds
2	Final check	Cleaning of the cover		•				Alcohol/cleaning pad

1.9.4 Maintenance 4 (Every 10,500,000 prints)

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleaning	Check	Lubrication	Replace	
1	Punch section	Punch unit A0H0R701## (North America) A0H0R702## (Europe)	1				•	Actual replacement cycle: 5,000,000 feeds
2	Conveyance section	Roller solenoid /1 (SD5) 15AGR723##	1				•	
		Roller solenoid /2 (SD6) 15AGR723##	1				•	
		Roller solenoid /3 (SD7) 15AGR723##	1				•	
		Roller solenoid /4 (SD8) 15AGR723##	1				•	
		2nd folding roller solenoid (SD18) 15AGR761##	1				•	
3	Tray up/down section	Tray up down motor 129U-108##	1				•	

1.10 SD-506

1.10.1 Maintenance1 (Every 750,000 prints)

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleaning	Check	Lubrication	Replace	
1	Preparation	Original through check			•			
		Removing the rear cover						
		Removing the unit						
2	Right angle conveyance section	Right angle conveyance sensor /1		•				Blower brush
		Right angle conveyance sensor /2		•				
		Right angle conveyance roller /1		•				Alcohol/cleaning pad
		Right angle conveyance roller /2		•				
		Right angle conveyance roller /3		•				
		Right angle conveyance roller /4		•				
3	Folding section	Folding main scan alignment home sensor /Fr1		•				Blower brush

		Folding main scan alignment home sensor /Fr2		•				
		Folding entrance roller /1		•				Alcohol/cleaning pad
		Folding entrance roller /2		•				
		Folding entrance roller /3		•				
4	Saddle stitching section	Saddle stitching paper sensor		•				Blower brush
		Bundle sensor /1		•				
5	Bundle processing section	Bundle sensor /2		•				
6	Trimmer section	Trimmer scraps full sensor		•				
		Trimmer board assy A0H2B622##	1				•	Actual replacement cycle: 18,900 cuts
		Actuator A0H26917##	1	•				
7	Post-process	Installing the unit			•			
		Installing the rear cover		•				Alcohol/cleaning pad
8	Final check	Original through check			•			
		Cleaning of the cover		•				Alcohol/cleaning pad

1.10.2 Maintenance 2 (Every 1,500,000 prints)

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleaning	Check	Lubrication	Replace	
1	Trimmer section	Paper holding screw A0H26621##	2	•		•		Molykote EM-30L Actual lubrication cycle:37,500 cuts

1.10.3 Maintenance 3 (Every 20,250,000 prints)

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleaning	Check	Lubrication	Replace	
1	Right angle conveyance section	Roller release solenoid /1 (SD5) 15AN8251##	1				•	Actual replacement cycle: 5,000,000 cuts
		Roller release solenoid /2 (SD6) 15ANR710##	1				•	
		Right angle conveyance gate solenoid (SD2) 15ANR711##	1				•	
2	Saddle stitching section	Stapler assy 15AN-550#	2				•	Actual replacement cycle: 1,000,000 cuts
3	Folding section	Roller release solenoid /3 (SD7) 15AN8251##	1				•	Actual replacement cycle: 5,000,000 cuts
4	Bundle processing section	Bundle press stage gear 15AN7719##	1				•	
5	Trimmer section	Trimmer press motor (M32) A0H2M101##	1				•	
		Drive gear /4 A0H26616##	3			•		Molykote EM-30L Actual lubrication cycle: 500,000 cuts
		Drive belt /1 A0H26610##	1		•			

1.10.4 Maintenance 4 (Every 30,000,000 prints)

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleaning	Check	Lubrication	Replace	
1	Trimmer section	Trimmer blade motor (M31) A0H2M102##	1				•	Actual replacement cycle: 850,000 cuts

1.10.5 Spotted replacement part (Every 2,500,000 sets)

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleaning	Check	Lubrication	Replace	
1	Right angle conveyance section	Saddle stitch unit	1				•	

		A0H2A720##					
		Slope unit 15AN-710##	1			•	
		Bundle press stage unit A0H2A530##	1			•	
	Trimmer section	Trimmer unit A0H2A620##	1			•	

1.11 PB-502

1.11.1 Maintenance 1 (Every 750,000 prints)

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleani ng	Check	Lubric ation	Repla ce	
1	Preparation	Original through check			•			
2	Conveyance section	Entrance sensor		•				Blower brush
		SC entrance sensor		•				
		Sub tray conveyance roller		•				Alcohol/cleaning pad
		Intermediate conveyance roller		•				
		Entrance conveyance roller		•				
		Cover paper conveyance roller		•				
3	Glue tank section	Glue tank		•		•*1		Tweezers, cleaning pad, Multemp FF-RM
		Filter A0753724##	1				•	
4	Cover paper section	Cover paper folding plate		•*2				Tweezers, cleaning pad
		Book spine backing plate		•*2				
		Book exit belt /Rr		•				Alcohol/cleaning pad
		Book exit belt /Fr		•				
		Cover paper conveyance roller /Rt		•				
		Cover paper conveyance roller /Lt		•				
		Cover paper table entrance roller		•				
		Paper dust removing brush		•				Blower brush
		Cover paper alignment plate shaft				•*3		Plas guard No.2
5	Glue supply section	Pellet hopper		•				Blower brush
6	Book stock section	Booklet load limit sensor		•				
		Booklet upper limit LED		•				
		Booklet sensor /1, /2		•				
		Guide shaft /Rt, /Lt				•*4		Plas guard No.2
		Book conveyance belt /Rr		•				Alcohol/cleaning pad
		Book conveyance belt /Fr		•				
		Book movement belt		•				
7	Cover paper tray section	Paper dust removing brush		•				Blower brush
		Paper dust removing roller		•				
		Conveyance roller		•				Alcohol/cleaning pad
8	SC section	Switchback roller 13GQ4519##	1				•	
		Switchback assist roller /Rr		•				
		Switchback assist roller /Fr		•				
		Sub scan alignment plate slide shaft				•		
9	Clamp section	Paper reference plate		•				
		Clamp pressure plate shaft	1			•*5		Plas guard No.2
10	Fan unit section	Pellet supply cooling fan motor (FM4) 27LA8051##					•	
11	Final check	Original through check			•			Alcohol/cleaning pad
		Cleaning of the cover		•				

*1 Lubricate to the glue apply roller motor drive connecting gear.

*2 Cleaning of the cover paper folding plate and the book spine backing plate is an abbreviated cleaning. Remove adhered glue as necessary.

*3 Lubricate to the cover paper alignment plate shaft.

*4 Lubricate to the guide shafts /Rt and /Lt.

*5 Lubricate to the clamp pressing board shaft.

1.11.2 Maintenance 2 (Every 6,000,000 prints)

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleaning	Check	Lubrication	Replace	
1	Cutter section	SSC switchback release motor (M13) A0V9M101##	1				•	

1.11.3 Maintenance 3 (Every 10,500,000 prints)

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleaning	Check	Lubrication	Replace	
1	Cutter section	Roller cutter blade assy A0756230##	1				•	
2	Sub tray section	Sub tray paper exit solenoid (SD4) 15ANR714##	1				•	

1.11.4 Maintenance 4 (Every 12,000,000 prints)

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleaning	Check	Lubrication	Replace	
1	SC section	One-way clutch /A 13GQ7709##	1				•	

1.11.5 Maintenance 5 (Every 20,250,000 prints)

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleaning	Check	Lubrication	Replace	
1	SC section	FD alignment solenoid (SD11) 15AA8251##	1				•	
		SC pressure arm solenoid (SD13) A075B746##	1				•	

1.11.6 Maintenance 6 (Every 30,000,000 prints)

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleaning	Check	Lubrication	Replace	
1	Glue tank section	Glue apply roller drive gear bearing A0753799##	4				•	

1.11.7 Spotted replacement (Every 2000 hours)

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleaning	Check	Lubrication	Replace	
1	Glue tank section	Pick-up roller 15VA-484##	1				•	
		Paper feed roller 15VA-483##	1				•	
		Separation roller 15VA-483##	1				•	

1.11.8 Spotted replacement part (Every 3,000,000 cycle)

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleaning	Check	Lubrication	Replace	
1	Cover paper tray section	Cover paper pick up clutch (MC71) 56AA8201##	1				•	
2		Cover paper separation clutch (MC72) 56AA8201##	1				•	

1.11.9 Spotted replacement part 3 (Every 6,000,000 cycle)

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleani ng	Check	Lubric ation	Repla ce	
1	SC section	One-way clutch /B 13GQ7709##	1				•	

1.12 PB-503**1.12.1 Maintenance 1 (Every 750,000 prints)**

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleani ng	Check	Lubric ation	Repla ce	
1	Preparation	Original through check			•			
2	Conveyance section	Entrance sensor		•				Blower brush
		SC entrance sensor		•				
		Sub tray conveyance roller		•				Alcohol/cleaning pad
		Intermediate conveyance roller		•				
		Entrance conveyance roller		•				
		Cover paper conveyance roller		•				
3	Glue tank section	Glue tank		•		•*1		Tweezers, cleaning pad, Multemp FF-RM
4	Up/down forming section	Cover paper folding plate		•*2				Tweezers, cleaning pad
		Book spine backing plate		•*2				
		Book exit belt /Rr		•				Alcohol/cleaning pad
		Book exit belt /Fr		•				
		Cover paper conveyance roller /Rt		•				
		Cover paper conveyance roller /Ft		•				
		Cover paper table entrance roller		•				
		Paper dust removing brush		•				Blower brush
		Cover paper alignment plate shaft				•*3		Plas guard No.2
5	Glue supply section	Pellet hopper		•				Blower brush
6	Book stock section	Booklet load limit sensor		•				
		Booklet upper limit LED		•				
		Booklet sensor /1, /2		•				
		Guide shaft /Rt, /Lt				•*4		Plas guard No.2
		Book conveyance belt /Rr		•				Alcohol/cleaning pad
		Book conveyance belt /Fr		•				
		Book movement belt		•				
7	Cover paper tray section	Paper dust removing brush		•				Blower brush
		Paper dust removing roller		•				
		Conveyance roller		•				Alcohol/cleaning pad
8	SC section	Switchback roller 13GQ4519##	1				•	
		Switchback assist roller /Rr		•				
		Switchback assist roller /Fr		•				
		Sub scan alignment plate slide shaft				•		
9	Clamp section	Paper reference plate		•				
		Clamp pressure plate shaft	1			•*5		Plas guard No.2
10	Relay conveyance section	Relay conveyance roller /1, /2, /3, / 4, /5		•				Alcohol/cleaning pad
		Relay paper exit roller /1, /2		•				
		Relay conveyance entrance sensor		•				Blower brush
		Relay conveyance intermediate sensor		•				
		Relay conveyance exit sensor		•				
11	Cart section	Book movement belt /2		•				Alcohol/cleaning pad
12	Fan unit section	Pellet supply cooling fan motor (FM4) 27LA8051##					•	Alcohol/cleaning pad
13	Final check	Original through check			•			

		Cleaning of the cover		•				Alcohol/cleaning pad
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*1 Lubricate to the glue apply roller motor drive connecting gear.

*2 Cleaning of the cover paper folding plate and the book spine backing plate is an abbreviated cleaning. Remove adhered glue as necessary.

*3 Lubricate to the cover paper alignment plate shaft.

*4 Lubricate to the guide shafts /Rt and /Lt.

*5 Lubricate to the clamp pressing board shaft.

1.12.2 Maintenance 2 (Every 6,000,000 prints)

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleaning	Check	Lubrication	Replace	
1	Cutter section	SSC switchback release motor (M13) A0V9M101##	1				•	

1.12.3 Maintenance 3 (Every 10,500,000 prints)

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleaning	Check	Lubrication	Replace	
1	Cutter section	Roller cutter blade assy A0756230##	1				•	
2	Sub tray section	Sub tray paper exit solenoid (SD4) 15ANR714##	1				•	

1.12.4 Maintenance 4 (Every 12,000,000 prints)

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleaning	Check	Lubrication	Replace	
1	SC section	One-way clutch /A 13GQ7709##	1				•	

1.12.5 Maintenance 5 (Every 20,250,000 prints)

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleaning	Check	Lubrication	Replace	
1	SC section	FD alignment solenoid (SD11) 15AA8251##	1				•	
		SC pressure arm solenoid (SD13) A075B746##	1				•	

1.12.6 Maintenance 6 (Every 30,000,000 prints)

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleaning	Check	Lubrication	Replace	
1	Glue tank section	Glue apply roller drive gear bearing A0753799##	4				•	

1.12.7 Spotted replacement (Every 2000 hours)

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleaning	Check	Lubrication	Replace	
1	Glue tank section	Pick-up roller 15VA-484##	1				•	
		Paper feed roller 15VA-483##	1				•	
		Separation roller 15VA-483##	1				•	

1.12.8 Spotted replacement part (Every 3,000,000 cycle)

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleaning	Check	Lubrication	Replace	
1	Cover paper tray section	Cover paper pick up clutch (CL71)	1				•	

2	56AA8201##	1					•	
	Cover paper separation clutch (CL72) 56AA8201##							

1.12.9 Spotted replacement part 3 (Every 6,000,000 cycle)

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleaning	Check	Lubrication	Replace	
1	SC section	One-way clutch /B 13GQ7709##	1				•	

1.12.10 Spotted replacement part 4 (Every 120 hours) *1

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleaning	Check	Lubrication	Replace	
1	Deodorant unit	Exhaust filter /A A15x3017##	2				•	

*1 Glue apply roller rotation time

1.12.11 Spotted replacement part 5 (Every 240 hours) *1

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleaning	Check	Lubrication	Replace	
1	Deodorant unit	Exhaust filter /B A15x3018##	1				•	

*1 Glue apply roller rotation time

1.12.12 Spotted replacement part 6 (Every 2,000 hours) *1

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleaning	Check	Lubrication	Replace	
1	Glue tank section	Glue tank assy A15XA36A## (100V) A15XA36E## (120V) A15XA36F## (240V)	4				•	

*1 Glue apply roller rotation time

1.13 GP-501**1.13.1 Maintenance 1 (Every 200,000 prints)**

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleaning	Check	Lubrication	Replace	
1	Punch section	Die Set Pins			•	•		3-IN-ONE (WD-40Company) Actual lubrication count: 60,000 punches This maintenance to be done by user.

1.13.2 Maintenance 2 (Every 800,000 prints)

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleaning	Check	Lubrication	Replace	
1	Punch section	Die Set Shoulder Bolts			•	•		Magnalube-G TeflonGrease Actual lubrication count: 200,000 punches This maintenance to be done by user.

1.13.3 Maintenance 3 (Every 2,000,000 prints)

No.	Unit classification	Description	Quantity	Implementation classification				Materials Tools used
				Cleaning	Check	Lubrication	Replace	

1	Punch section	Die Set			•		•	Actual replacement count: 500,000 punches Replacement is recommended if hanging chips are usually generated.
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1.13.4 Maintenance 4 (Every 3,000,000 prints)

No.	Unit classification	Description	Q u a n t i t y	Implementation classification				Materials Tools used
				Cleaning	Check	Lubrication	Replace	
1	Bypass conveyance section	Paper Path, Bypass		•	•			Alcohol
2	Punch conveyance section	Latching Mechanisms aligner			•			
3		Paper Path, Aligner panels		•	•			Alcohol
4		Aligner Idler Rollers		•	•			
5		Roller energy drive		•	•			
6	Bypass/Punch conveyance section	Optical Sensors		•				Blower brush
7		Timing Belts		•	•			Alcohol
8		Idler Rollers		•	•			
9		Drive Rollers		•	•			
10	Punch section	Back Gauge solenoid		•	•			Blower brush/ vacuum cleaner
11		Die Guide		•				Vacuum cleaner
12		Paper Path, Punch		•	•			Alcohol
13	External section	Base		•				Vacuum cleaner
14		Door Closing Latch			•			
15	Post-process	Front door close, GP connected						

1.13.5 Maintenance 5 (Every 12,000,000 prints)

No.	Unit classification	Description	Quan tity	Implementation classification				Materials Tools used
				Cleani ng	Check	Lubric ation	Repla ce	
1	Punch conveyance section	Aligner Idler Roller Assembly		•				Alcohol
2		Belt Aligner (Green)	1	•				
3	Punch section	Punch drive cams	1			•		Magnalube-G Teflon Grease Actual lubrication count: 3,000,000 punches

1.13.6 Maintenance 6 (Every 16,000,000 prints)

No.	Unit classification	Description	Quan tity	Implementation classification				Materials Tools used
				Cleani ng	Check	Lubric ation	Repla ce	
1	Punch section	Back Gauge mechanism A0N9PP59##	1				•	Actual replacement count: 4,000,000 punches

2. Periodically replaced parts list

2.1 Periodical replacement parts

Note

- For the part number of periodically replaced parts, refer to "Parts guide manual."
- For the replacement procedure of the periodically replaced parts, refer to [F.5 Periodical maintenance procedure bizhub PRO 1200/1200P/1051](#) to [F.20 Periodical maintenance procedure PB-503](#).
- The parts count No. given in the following table represents the number of the special parts count in the service mode.

2.2 bizhub PRO 1200/1200P/1051

2.2.1 Periodically replaced parts list

(1) Main body

No.	Classification	Parts name	Parts No.	Quantity	Actual replacement Cycle	Parts count No.
1	Main body	Dust-proof filter	A0G61181##	3	3,000,000	51
2		Ozone filter /12	A0G61123##	3	4,500,000	48
3		Conveyance suction filter	56UA1129##	1	4,500,000	50
4		Develop suction filter	56UA1122##	1	4,500,000	49
5	Photosensitive material section	Drum	DR011	1	F.4 Life value	
6		Drum claw	A0G63456##	3	1,000,000	8
7		Drum fixing spring	55FU2014##	1	1,000,000	
8		Drum positioning collar	25SA2015##	1	1,000,000	
9		Drum temperature sensor (TH5)	A0G6R731##	1	3,000,000	39
10	Charging corona	Charger control plate	A0G6R7D2##	1	750,000	4
11		Charging wire	56UA2509##	2	750,000	3
12		Charger rubber vibration isolator	55VA2527##	2	750,000	
13		Charging cleaning unit	A0G6R701##	2	750,000	5
14		C-clip	45AA2040##	2	750,000	
15		Charging corona	A0G6R704##	1	6,000,000	52
16	Developing section	Developer	DV011	1	F.4 Life value	
17		Suction filter /Up	A0G63909##	1	1,500,000	7
18		Suction filter /Lw	A0G63908##	1	1,500,000	6
19		Developing suction seal/2	56UA3103##	1	6,000,000	55
20		Developing suction seal/5	56UA3106##	1	6,000,000	55
21		Stopper pad	A0G63943##	1	6,000,000	55
22		Suction pad /H	A0G63944##	1	6,000,000	55
23		Suction pad /I	A0G63945##	1	6,000,000	55
24		Developing unit	A0G6R705##	1	6,000,000	54
25	Toner supply section	Toner supply sleeve /1	55VAR730##	1	3,000,000	67
26		Toner supply sleeve /2	55VAR731##	1	3,000,000	68
27		Stirring plate /1 assy	A0G6R702##	1	1,500,000	22
28		Stirring plate /2 assy	56UAR773##	1	1,500,000	22
29		Pump unit /Rt	56UA-780##	1	10,500,000	69
30		Pump unit /Lt	56UA-790##	1	10,500,000	70
31		Air separation motor (M10)	A0Y5J040##	1	30,000,000	
32		Intermediate hopper motor (M11)	13GQ8003##	1	30,000,000	
33		Toner bottle motor (M6)	A0PNM102##	1	30,000,000	
34		Toner hopper motor (M7)	A0PNM102##	1	30,000,000	
35		Waste toner box swing motor (M19)	A011M100##	1	30,000,000	
36	Cleaning section	Waste toner box	A0G6R728##	1	750,000	
37		Cleaning blade	A0G65350##	2	750,000	2
38		Discharge wire	A0G64708	1	750,000	74
39		Drum scraper assy	A0G6R7E7##	1	750,000	
40		Scatter preventive filter assy	A0G6R7E8##	1	750,000	
41		Toner guide brush assy	A0G6R730##	1	1,500,000	19
42		Scattering prevention felt	55VA5568#	1	1,500,000	
43		Seal plate /Fr	A0G6R737##	1	1,500,000	21
44		Seal plate /Rr	A0G6R738##	1	1,500,000	20
45		Guide plate assy	A0G6R729##	1	1,500,000	26
46		Guide shaft	A0G65305##	1	6,000,000	71

47		PCC unit	A0G6R7D5##	1	6,000,000	73
48		Toner seal board	56UA-568##	1	3,000,000	25
49		Cleaning gear /A assy	A0G6R708##	1	10,500,000	23
50		Cleaning gear /B	A0G65327##	2	30,000,000	24
51	Fusing section	Fixing cleaning web	A0G67314##	1	750,000	1
52		Fusing roller /Up	A0G67304##	1	1,500,000	27
53		Heat insulating sleeve	45405339##	2	1,500,000	31
54		Fusing bearing /Up	A0G67346##	2	1,500,000	
55		Fusing roller /Lw assy	A0G6R703##	1	1,500,000	28
56		Fusing claw /Up	56UA5453##	6	1,500,000	29
57		Fusing claw /Lw	25AA5329##	2	1,500,000	30
58		Fusing cleaning sheet assy	56UAR7C1##	1	1,500,000	33
59		Fusing heater lamp /1 (L1)	A0G6M330##	1	3,000,000	38
60		Fusing heater lamp /2 (L2)	A0G6M330##	1	3,000,000	38
61		Fusing heater lamp /3 (L3)	55VB8304##	1	3,000,000	47
62		Fusing heating roller	56UA5307##	1	3,000,000	44
63		Heat roller bearing	56UA7507##	2	3,000,000	42
64		Heat insulating sleeve /Lw	26AA5315##	2	3,000,000	45
65		Fusing temperature sensor /2 (TH2)	55VA8804##	1	3,000,000	43
66		Fusing temperature sensor /4 (TH4)	55VA8806##	1	3,000,000	46
67		Fusing idler gear /2	55VA7782##	1	3,000,000	
68		Fusing gear	A0G67260##	1	6,000,000	40
69		Web motor (M24)	56GA8017##	1	6,000,000	41
70		Fusing cleaning roller	56UA5353##	1	10,500,000	34
71		Bearing /G	56UA7609##	2	10,500,000	
72		Fusing oscillation cam assy	A0G6R732##	1	20,250,000	
73		Bearing /A	39205336##	2	20,250,000	
74		Fusing claws installation assy	A0G6R7D9##	6	20,250,000	
75		Web prevention part assy	A0G6R733##	1	20,250,000	35
76		Bearing /G	56UA7609##	1	20,250,000	
77		Pressure worm assy	A0G6R711##	1	30,000,000	36
78		Pressure wheel assy	A0G6R710##	1	30,000,000	37
79		Bearing /F	55VA7602##	1	30,000,000	
80	Paper feed section	Pick-up roller	55VAR750##	2	500,000	78,82
81		Paper feed roller	55VAR749##	2	500,000	79,83
82		Separation roller	55VAR749##	2	500,000	79,83
83		Paper feed clutch /1 (CL4)	57GA8201##	1	3,000,000	80
84		Paper feed clutch /2 (CL6)	57GA8201##	1	3,000,000	84
85		Forced separation clutch /1 (CL5)	57GA8201##	1	3,000,000	81
86		Forced separation clutch /2 (CL7)	57GA8201##	1	3,000,000	85
87		Torque limiter /A	A03X5656##	2	10,500,000	
88		Cover	A0G65720##	2	10,500,000	
89		Bearing /D	A00J6179##	6	20,250,000	
90		Reverse rotation shaft	A0G65708##	2	20,250,000	
91		Bearing /C	A00V2406##	2	20,250,000	
92		Paper feed input shaft	A0G6R739##	2	20,250,000	
93		Input gear	A0G66023##	2	10,500,000	
94	Transfer belt section	Regulation plate assy	A0G6R7D4##	2	1,500,000	13
95		Cleaning brush	A0G65106##	2	1,500,000	12
96		Transfer belt	A0G65001##	1	3,000,000	9
97		Transfer roller	A0G65006##	1	3,000,000	10
98		Bearing /H	A0G65039##	2	3,000,000	11
99		Transfer contact /Rr	A0G6R707##	2	3,000,000	15
100		Transfer contact /Fr	A0G6R706##	1	3,000,000	16
101		Power supply parts	65AA2689 ##	2	3,000,000	17
102		Cleaning shaft	A0G65107 ##	2	6,000,000	72
103		Belt cleaning unit	A0G6R726##	1	10,500,000	14
104	Vertical conveyance section	Pre-registration clutch /1 (CL1)	57GA8201##	1	3,000,000	143
105		Pre-registration clutch /2 (CL3)	57GA8201##	1	3,000,000	145

106		Vertical conveyance clutch (CL2)	57GA8201##	1	3,000,000	144
107		Paper fur brush	55VAR763##	1	3,000,000	140
108		Torque limiter	57GA4430#	1	6,000,000	
109		Paper dust removing brush shaft	56UA-478##	1	6,000,000	18
110		Conveyance pulley	55VA7653##	2	20,250,000	
111		Conveyance belt /A	56UA7809##	1	20,250,000	
112		Bearing /E	A00J6178##	5	20,250,000	
113		Scraper shaft	56UA4417##	1	20,250,000	
114		Paper dust guide holder	A0G6R700##	1	30,000,000	142
115		Cleaning gear /B	55VA7921##	1	20,250,000	
116		Paper feed cleaning gear /B	56UA7716##	1	30,000,000	
117		Paper feed gear /A	56UA7717##	1	30,000,000	
118		Paper feed gear /B	56UA7718##	1	30,000,000	
119		Paper exit input gear	56UA7707##	1	30,000,000	
120		Conveyance roller /1	56UA4413##	1	20,250,000	146
121		Conveyance roller /2	A0G67003##	1	20,250,000	147
122		Conveyance roller /3	A0G67002##	1	20,250,000	147
123		Pre-registration roller /1, /2	A0G67001##	2	20,250,000	148,149
124		Conveyance exit roller	56UA4412##	1	20,250,000	141
125		Pre-registration bearing	56UA7603##	4	20,250,000	
126	Registration section	Registration roller /Up	A0G67106##	1	6,000,000	56
127		Registration bearing	56UA7602##	2	6,000,000	56
128		Roller gear /Rt	56UA7756##	1	20,250,000	
129		Registration gear /Up	A0G67142##	1	6,000,000	
130		Registration gear /Lw	A0G67143##	1	6,000,000	
131		Paper lift sheet	A0G67121##	1	20,250,000	
132		Loop driven roller	56UA4583##	1	20,250,000	
133		Pre-transfer driven roller assy	A0G6R709##	2	20,250,000	
134	De-curler section	ADU lock gear	56UA7751##	1	3,000,000	
135		Fixing exit roller	56UA4595##	4	6,000,000	62
136		De-curler belt /Up	A0G68464##	7	4,500,000	64
137		De-curler belt /Lw	A0G68464##	7	4,500,000	65
138		Reverse gate	56UA4760##	7	10,500,000	
139		De-curler entrance roller	A0G68407##	1	10,500,000	63
140		Guide member /Up	A0G68451##	1	10,500,000	
141		Guide member /Lw	A0G68452##	1	10,500,000	
142		Reverse/exit solenoid (SD7)	A0G6R736##	1	30,000,000	
143		De-curler solenoid /Up (SD8)	A0G6R734##	1	30,000,000	
144		De-curler solenoid /Lw (SD5)	A0G6R735##	1	30,000,000	
145		De-curler motor (M32)	A0PNM102##	1	30,000,000	
146	Paper exit section	Main body paper exit roller	56UA4557 ##	1	6,000,000	66
147	Duplex Section	Paper exit conveyance roller /1	56UA4743##	1	10,500,000	60
148		Paper exit conveyance roller /2 assy	56UAR701##	1	10,500,000	60
149		ADU accelerator roller	A0G68171##	1	10,500,000	57
150		Reversal output roller	A0G68172##	1	10,500,000	58
151		ADU reversal roller	A0G68176##	1	10,500,000	59
152		ADU conveyance roller /1	56UA4744##	1	10,500,000	61
153		ADU conveyance roller /2	56UA4744##	1	10,500,000	61
154		ADU conveyance roller /3	A0G68177##	1	10,500,000	61
155		ADU conveyance roller /4	A0G68177##	1	10,500,000	61
156		ADU exit roller	A0G68177##	1	10,500,000	61
157		Motor gear /Rt	56UA7757##	1	20,250,000	
158		Registration motor (M17)	56UA-386##	1	30,000,000	
159		Removing/installing of the ADU conveyance motor belt /2	56UA7808##	1	30,000,000	
160		ADU conveyance motor /2 (M16)	A0G6R714##	1	30,000,000	
161		ADU reverse motor belt	13GQ7755##	1	30,000,000	
162		ADU reverse motor (M12)	A0G6R712##	1	30,000,000	

163		Transfer belt pressure release motor (M26)	A0G6R790##	1	30,000,000	
164		Reverse/exit motor belt	56UA7806##	1	30,000,000	
165		Reverse/exit motor (M13)	A0G6R712##	1	30,000,000	
166		ADU accelerate motor belt	A0G68194##	1	30,000,000	
167		ADU paper exit roller belt	55VA7803##	1	30,000,000	
168		ADU accelerate motor (M14)	A0G6R712##	1	30,000,000	
169		Loop motor (M18)	A0G6R713##	1	30,000,000	
170		Transfer belt motor (M30)	A0R5M103##	1	30,000,000	
171		ADU conveyance motor /1 belt	15BA7753##	1	30,000,000	
172		ADU conveyance motor /1 (M15)	A03UM111##	1	30,000,000	
173	Main body rear side	Paper feed gear	56UA7703##	1	30,000,000	
174		Vertical conveyance motor (M8)	56AA8011##	1	30,000,000	
175		Conveyance roller	56UA7706##	1	30,000,000	
176		Developing screw motor (M21)	A0PNM102##	1	30,000,000	
177		Fusing gear	A0G62372##	1	30,000,000	
178		Transfer belt cleaning motor (M5)	A0PNM102##	1	30,000,000	
179		Paper exit conveyance motor (M31)	A0PNM102##	1	30,000,000	
180		Paper exit motor (M20)	A0PNM102##	1	30,000,000	
181		Paper feed motor (M4)	A0G6M101##	1	30,000,000	
182		Fusing motor (M1)	A0G6M101##	1	30,000,000	
183		Drum motor (M2)	A0R5M103##	1	30,000,000	
184		developing motor (M3)	15AA8005##	1	30,000,000	
185		Waste toner motor (M9)	A011M100##	1	30,000,000	
186		Belt cleaning gear	A0G62506##	1	30,000,000	

*1 Replace the drum once for every 1,000,000 prints or PRO 1200/1200P: 180 h. /PRO 1051: 220h. of driving time, whichever is earlier.

*2 Replace the drum once for every 1,000,000 prints or PRO 1200/1200P: 180 h. /PRO 1051: 220h. of driving time, whichever is earlier.

(2) Option

No.	Classification	Parts name	Parts No.	Quantity	Actual replacement Cycle	Parts count No.
1	DF-615	Separation roller	13GA4606##	1	400,000	191
2		Pick-up roller	13GA4604##	1	800,000	189
3		Paper feed roller	15AS4605##	1	800,000	190
4		Paper feed auxiliary roller	15AS4601##	1	800,000	192
5		Torque limiter	13GAR719##	1	800,000	193
6	PF-702	Pick-up roller	55VAR750##	3	500,000	86,95,104, 113,122,131
7		Paper feed roller	55VAR749##	3	500,000	87,96,105, 114,123,132
8		Separation roller	55VAR749##	3	500,000	87,96,105,11 4,123,132
9		Paper fur brush	15BY5604##	3	3,000,000	
10		Pre-registration clutch /1 (CL1)	57GA8201##	1	3,000,000	157,170
11		Pre-registration clutch /2 (CL3)	57GA8201##	1	3,000,000	158,171
12		Pre-registration clutch /3 (CL5)	57GA8201##	1	3,000,000	159,172
13		Intermediate clutch /Up (CL2)	57GA8201##	1	3,000,000	160,173
14		Intermediate clutch /Lw (CL4)	57GA8201##	1	3,000,000	161,175
15		Torque limiter /Up, /Lw	57GA4430#	2	6,000,000	
16		Pre-registration roller	A0GC7005##	3	6,000,000	150,151,152, 163,164,165
17		Pre-registration bearing	56UA7603##	6	6,000,000	
18		Intermediate conveyance roller	A0GC7006##	4	6,000,000	154,156,167, 169
19		PF paper exit roller	15BA5011##	1	6,000,000	153,166
20		Bearing /C	A00V2406##	9	6,000,000	
21		Bearing /B	50007501##	1	6,000,000	
22		Torque limiter /A	A03X5656##	3	6,000,000	
23		Cover	A0G65720##	3	6,000,000	
24		Paper feed pulley	A0GC2104##	5	10,500,000	
25		Shaft assy /C	15BA-168##	2	10,500,000	

26		Shaft assy /P	15BA-167##	1	10,500,000	
27		Gear /P	15BA7705##	1	10,500,000	
28		Gear /C	15BA7703##	2	10,500,000	
29		Idler gear /D	15BA7704##	4	10,500,000	
30		Paper feed clutch /1 (CL6)	57GA8201##	1	3,000,000	88,115
31		Paper feed clutch /2 (CL9)	57GA8201##	1	3,000,000	97,124
32		Paper feed clutch /3 (CL12)	57GA8201##	1	3,000,000	106,133
33		Forced separation clutch /1 (CL7)	57GA8201##	1	3,000,000	89,116
34		Forced separation clutch /2 (CL10)	57GA8201##	1	3,000,000	98,125
35		Forced separation clutch /3 (CL13)	57GA8201##	1	3,000,000	107,134
36		Forced separation clutch /1 (CL8), /2 (CL11), /3 (CL14)	57GA8201##	3	3,000,000	90,117,99, 108,126,135
37		Bearing /D	A00J6179##	9	30,000,000	99,126
38		Bearing /C	A00V2406##	3	30,000,000	108,135
39		Reverse rotation shaft	A0GC5708##	3	30,000,000	
40		Bearing /E	A00J6178##	6	30,000,000	
41		Input shaft	A0GC6013##	3	30,000,000	
42		Idler shaft	A0GC5711##	3	30,000,000	
43		Reverse input shaft	A0GC5720##	3	30,000,000	
44		Bearing /D	A00J6179##	3	30,000,000	
45		Bearing /E	A00J6178##	3	30,000,000	
46		Paper feed gear	56UA7703##	1	30,000,000	
47		Input gear	A0G66023##	3	10,500,000	
48		Pre-registration clutch /1 (CL1)	57GA8201##	1	3,000,000	157,170
49	PF-703	Pre-registration clutch /2 (CL3)	57GA8201##	1	3,000,000	158,171
50		Pre-registration clutch /3 (CL5)	57GA8201##	1	3,000,000	159,172
51		Intermediate clutch /1 (CL2)	57GA8201##	1	3,000,000	160,173
52		Intermediate clutch /2 (CL4)	57GA8201##	1	3,000,000	162,175
53		Horizontal conveyance exit clutch (CL6)	57GA8201##	1	3,000,000	161,174
54		Torque limiter /Up	A03U8157##	1	6,000,000	
55		Torque limiter /Lw	57GA4430#	1	6,000,000	
56		Pre-registration roller	A0GC7005##	3	6,000,000	150,151,152, 155,163,164, 165,168
57		Pre-registration bearing	56UA7603##	6	6,000,000	
58		Horizontal registration roller	A0GC7005##	1	6,000,000	150,151,152, 155,163,164, 165,168
59		Horizontal registration bearing	56UA7603##	2	6,000,000	
60		Intermediate conveyance roller	A0GC7006##	3	6,000,000	154,156,167, 169
61		PF paper exit roller	15BA5011##	1	6,000,000	153
62		Bearing /C	A00V2406##	7	6,000,000	
63		Bearing /B	50007501##	1	6,000,000	
64		Paper feed belt	A0GDR705##	12	6,000,000	91,100,109, 118,127,136
65		Paper feed clutch	57GA8201##	3	6,000,000	
66		Torque limiter	A03U8157##	3	6,000,000	
67		Shutter solenoid /Rr1 (SD4), /2 (SD6), /3 (SD8)	A0GDR700##	3	6,000,000	93,102,111, 120,129,138
68		Shutter solenoid /Fr1 (SD5), /2 (SD7), /3 (SD9)	A0GDR700##	3	6,000,000	92,101,110, 119,128,137
69		Horizontal conveyance roller /A	A0GD7121##	2	6,000,000	176
70		Horizontal conveyance roller /B	A0GD7122##	3	6,000,000	176
71		Spacer	12QV4065##	10	6,000,000	176
72		Entrance conveyance roller /Lw	A0GD7171##	1	6,000,000	177
73		Spacer	12QV4065##	2	6,000,000	177

74		Paper leading edge shutter solenoid /1 (SD10), /2 (SD11), /3 (SD12)	A0GDR701##	3	6,000,000	94,103,112, 121,130,139
75	PF-703 (PI-PFU)	Pre-registration clutch /1 (CL1)	57GA8201##	1	3,000,000	292
76		Pre-registration clutch /2 (CL3)	57GA8201##	1	3,000,000	293
77		Pre-registration clutch /3 (CL5)	57GA8201##	1	3,000,000	294
78		Intermediate clutch /1 (CL2)	57GA8201##	1	3,000,000	295
79		Intermediate clutch /2 (CL4)	57GA8201##	1	3,000,000	297
80		Horizontal conveyance exit clutch (CL6)	57GA8201##	1	3,000,000	296
81		Torque limiter /Up	A03U8157##	1	6,000,000	
82		Torque limiter /Lw	57GA4430#	1	6,000,000	
83		Pre-registration roller	A0GC7005##	3	6,000,000	285,286,287, 290
84		Pre-registration bearing	56UA7603##	6	6,000,000	
85		Horizontal registration roller	A0GC7005##	1	6,000,000	285,286,287, 290
86		Horizontal registration bearing	56UA7603##	2	6,000,000	
87		Intermediate conveyance roller	A0GC7006##	3	6,000,000	289,291
88		PF paper exit roller	15BA5011##	1	6,000,000	288
89		PF Paper exit roller /2	A0GF7021##	1	6,000,000	
90		Bearing /C	A00V2406##	8	6,000,000	
91		Bearing /B	50007501##	2	6,000,000	
92		Paper feed belt	A0GDR705##	12	6,000,000	271,276,281
93		Paper feed clutch /1 (CL7), /2 (CL8), /3 (CL9)	57GA8201##	3	6,000,000	270,275,280
94		Torque limiter	A03U8157##	3	6,000,000	
95		Shutter solenoid /Rr1 (SD4), /2 (SD6), /3 (SD8)	A0GDR700##	3	6,000,000	273,278,283
96		Shutter solenoid /Fr1 (SD5), /2 (SD7), /3 (SD9)	A0GDR700##	3	6,000,000	272,277,282
97		Horizontal conveyance roller /A	A0GD7121##	2	6,000,000	298
98		Horizontal conveyance roller /B	A0GD7122##	3	6,000,000	298
99		Spacer	12QV4065##	10	6,000,000	298
100		Entrance conveyance roller /Up	A0GD7172##	1	6,000,000	299
101		Spacer	12QV4065##	3	6,000,000	299
102		Paper leading edge shutter solenoid /1 (SD10), /2 (SD11), /3 (SD12)	A0GDR701##	3	6,000,000	274,279,284
103	RU-506	Entrance roller /1	A0GER706##	1	20,250,000	256
104		Entrance roller /2	A0GER704##	1	20,250,000	257
105		Stacker entrance roller	A0GER703##	1	20,250,000	258
106		Stacker entrance roller pressure spring /Fr, /Rr	A0GE7091##	2	20,250,000	258
107		Paper re-feed roller	A0GER707##	1	20,250,000	259
108		Merging section roller	A0GER706##	1	20,250,000	256
109		Exit roller	A0GER708##	1	20,250,000	260
110		Stacker entrance conveyance belt	A0GE2104##	1	20,250,000	262
111		Entrance conveyance belt	A0GE2105##	1	20,250,000	262
112		Paper exit conveyance belt	A0GE2106##	1	20,250,000	262
113		Conveyance pulley	A0GE2112##	4	20,250,000	263
114		Paper exit conveyance pulley	A0GE2113##	1	20,250,000	263
115		Straight gate	A0GE7051##	1	20,250,000	255
116		Bearing /K	A0GER705##	12	20,250,000	261
117		Entrance conveyance motor (M1), Paper exit motor (M2)	A0G6R714##	2	30,000,000	264
118	FD-503	Paper feed rubber	50BAR702##	2	100,000	204,207
119		Separation rubber	13QNR704##	2	100,000	203,206
120		Pick-up rubber	50BAR701##	6	200,000	202,205
121		Roller solenoid /1 (SD5)	15AGR723##	1	5,000,000	209
122		Roller solenoid /2 (SD6)	15AGR723##	1	5,000,000	209
123		Roller solenoid /3 (SD7)	15AGR723##	1	5,000,000	209

124		Roller solenoid /4 (SD8)	15AGR723##	1	5,000,000	209
125		2nd folding roller solenoid (SD18)	15AGR761##	1	5,000,000	210
126		Punch unit	A0H0R700## (Japan) A0H0R701## (US) A0H0R702## (Europe)	1	5,000,000	208
127		Tray up down motor (M11)	129U-108##	1	5,000,000	211
128	FS-521	Paper exit roller /A	122H4825##	8	750,000	
129		Intermediate roller release solenoid (SD7)	15AAR718##	1	5,250,000	200
130		Paper exit opening solenoid assy (SD9)	A0GYB904##	1	5,250,000	201
131	LS-505	Stacker tray up down motor (M1)	15AV8003##	1	5,000,000	216,221
132		Paper press solenoid /1 (SD6)	15AV8252##	1	5,000,000	212,217
133		Paper press solenoid /2 (SD7)	15AV8251##	1	5,000,000	214,219
134		Paper press solenoid /3 (SD8)	15AV8255##	1	5,000,000	215,220
135		Rear stopper solenoid (SD3)	15AV8253##	1	5,000,000	213,218
136	SD-506	Trimmer board assy	A0H2B622##	1	18,900	225
137		Trimmer blade kit	A0H2R901##	1	37,500	224
138		Roller release solenoid /1 (SD5)	15AN8251##	1	5,000,000	226
139		Roller release solenoid /2 (SD6)	15ANR710##	1	5,000,000	227
140		Roller release solenoid /3 (SD7)	15AN8251##	1	5,000,000	226
141		Right angle conveyance gate solenoid (SD2)	15ANR711##	1	5,000,000	228
142		Stapler assy	15AN-550# #	2	1,000,000	222,223
143		Bundle press stage gear	15AN7719##	1	500,000	229
144		Trimmer press motor (M32)	A0H2M101##	1	500,000	230
145		Trimmer blade motor (M31)	A0H2M102##	1	850,000	231
146	PB-502	Filter	A0753724##	1	750,000	245
147		Switchback roller	13GQ4519##	1	600,000	239
148		SC switchback release motor (M13)	A0V9M101##	1	3,000,000	236
149		Sub tray paper exit solenoid (SD4)	15ANR714##	1	3,000,000	235
150		Roller cutter blade assy	A0756230##	1	100,000	244
151		FD alignment solenoid (SD11)	15AA8251##	1	5,000,000	237
152		SC pressure arm solenoid (SD13)	A075B746##	1	5,000,000	238
153		Pellet supply cooling fan (M4)	27LA8051##	1	750,000	
154		One-way clutch /A	13GQ7709##	1	6,000,000	
155		Cover paper glue roller drive gear bearing	A0753799##	4	6,000 hours	
156	PB-503	Switchback roller	13GQ4519##	1	600,000	239
157		SC switchback release motor (M13)	A0V9M101##	1	3,000,000	236
158		Sub tray exit solenoid (SD4)	15ANR714##	1	3,000,000	235
159		Roller cutter blade assy	A0756230##	1	100,000	244
160		FD alignment solenoid (SD11)	15AA8251##	1	5,000,000	237
161		SC pressure arm solenoid (SD13)	A075B746##	1	5,000,000	238
162		Pellet supply cooling fan (FM4)	27LA8051##	1	750,000	
163		One-way clutch /A	13GQ7709##	1	6,000,000	
164		Glue apply roller drive gear bearing	A0753799##	4	6,000 hours	

2.2.2 Spotted replacement parts list

No.	Classification	Parts name	Parts No.	Quantity	Actual replacement Cycle	Parts count No.
1	PP-701	Pick-up rubber	A08R5621##	1	50,000	
2		Paper feed roller	A08R5622##	1	50,000	
3		Separation roller	A08R5622##	1	50,000	
4	FS-521	Stapler assy /Fr	A0GYA735##	1	500,000	198
5		Stapler assy /Rr	A0GYA736##	1	500,000	199
6	PI-502	Paper feed roller	13QNR705##	2	100,000	265,270

7		Separation roller	13QNR704##	2	100,000	266,271
8		Pick-up roller	50BAR701##	2	200,000	264,269
9		Torque limiter	13QN4073##	2	600,000	267,272
10		Paper feed clutch /Up	13QN8201##	1	1,000,000	263
11		Paper feed clutch /Lw	13QN8201##	1	1,000,000	268
12	SD-506	Saddle stitch unit	A0H2A720##	1	2,500,000	
13		Slope unit	15AN-500##	1	2,500,000	
14		Bundle press stage unit	A0H2A530##	1	2,500,000	
15		Trimmer unit	A0H2A620##	1	2,500,000	234
16	RU-506	Straight gate solenoid (SD1)	A0GER709##	1	5,000,000	
17		Stacker exit shutter solenoid (SD2)	A0GER700##	1	5,000,000	253
18		Stack switching solenoid (SD3)	A0GER701##	1	5,000,000	254
19		Stacker entrance guide plate solenoid (SD4)	A0GER702##	1	5,000,000	254
20		Straight gate spring	15AG4587##	1	5,000,000	252
21	PB-502	Pick-up roller	55VAR750##	1	500,000	240
22		Paper feed roller	55VAR749##	1	500,000	241
23		Separation roller	55VAR749##	1	500,000	241
24		One-way clutch /B	13GQ7709##	1	6,000,000	
25		Cover paper feed clutch (MC71)	56AA8201##	1	3,000,000	242
26		Cover paper separation clutch (MC72)	56AA8201##	1	3,000,000	243
27	PB-503	Pick-up roller	55VAR750##	1	500,000	240
28		Paper feed roller	55VAR749##	1	500,000	241
29		Separation roller	55VAR749##	1	500,000	241
30		One-way clutch /B	13GQ7709##	1	6,000,000	
31		Cover paper pick up clutch (CL71)	56AA8201##	1	3,000,000	242
32		Cover paper separation clutch (CL72)	56AA8201##	1	3,000,000	243
33		Exhaust filter /A	A15X3017##	2	120 hours	250
34		Exhaust filter /B	A15X3018##	1	240 hours	251
35		Glue tank assy (100V) (120V) (240V)	A15XA36A## A15XA36E## A15XA36F##	1	2,000 hours	249

3. Life value

3.1 Life value of materials/parts

Item	Print Quantity	Running time	Definition of driving time
Drum	1,000,000	PRO 1200/1200P: 180h PRO 1051: 220h	The time during which the drum is being driven. Idling time* is included in this time period.
Developer	1,000,000	PRO 1200/1200P: 180h PRO 1051: 220h	The time during which the developing roller is being driven. Idling time* is included in this time period.

3.2 Life value determining condition

The life value is a value for the number of prints or a value for the drive time, whichever is earlier.

The relationship between the driving time mentioned above and the actual number of prints has certain conditions. It is decided according to the amount of copy time and also idling time*.

Accordingly, the number of prints can vary substantially for the same amount of rotation time.

Reference: Relationship between the number of prints and the drive time

PRO 1200/1200P: 180hours drive at A4 continuous output of 11 sheets per job is equivalent to 1,000,000 prints.

PRO 1051: 220hours drive at A4 continuous output of 11 sheets per job is equivalent to 1,000,000 prints.

Note

- Only print count or running time generates developer/drum replacement icon. The trigger can be switched between print count and running time by setting of the DIPSW 15-7 in the service mode.

4. PERIODICAL MAINTENANCE PROCEDURE bizhub PRESS 1200/1200P/1051

4.1 Precautions on maintenance

⚠ CAUTION

- Be sure to unplug the power plug from the power outlet.

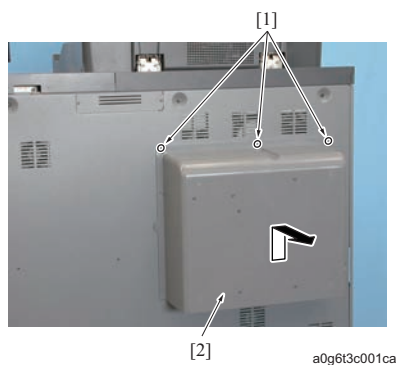
4.2 External section

4.2.1 Replacing the ozone filter /12

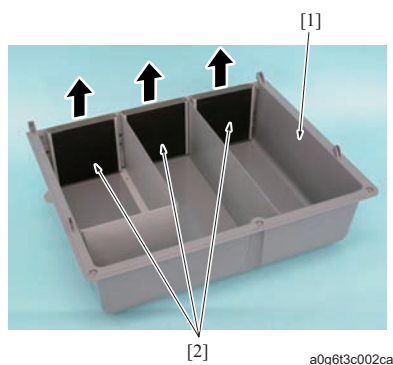
(1) Periodically replaced parts/cycle

- Ozone filter /12
: Every 4,500,000 prints

(2) Procedure



1. Loosen 3 screws [1] and remove the exhaust cover [2].



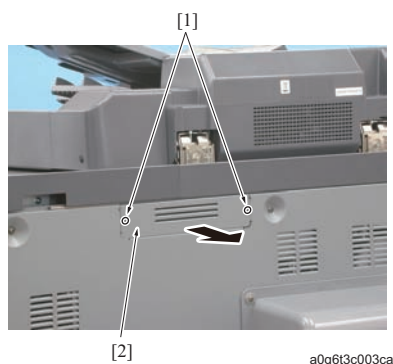
2. Remove 3 ozone filters /12 [2] from the exhaust cover [1].
3. Reinstall the above parts following the removal steps in reverse.
4. After replacing the ozone filters /12, conduct the following steps.
 - Counter reset of the parts counter No.48

4.2.2 Replacing the conveyance suction filter

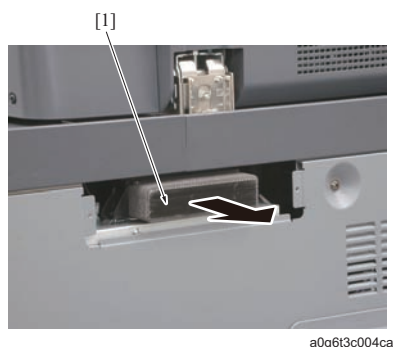
(1) Periodically replaced parts/cycle

- Conveyance suction filter
: Every 4,500,000 prints

(2) Procedure



1. Loosen 2 screws [1] and remove the conveyance suction filter cover [2].



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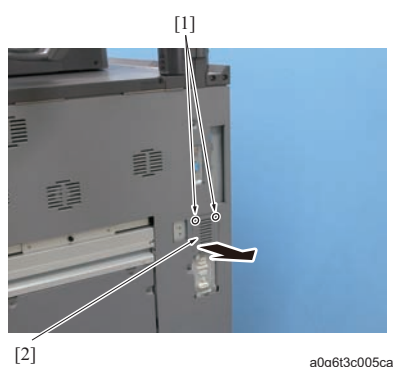
2. Remove the conveyance suction filter [1].
3. Reinstall the above parts following the removal steps in reverse.
4. After replacing the conveyance suction filter, conduct the following steps.
 - Counter reset of the parts counter No.50

4.2.3 Replacing the developing suction filter

(1) Periodically replaced parts/cycle

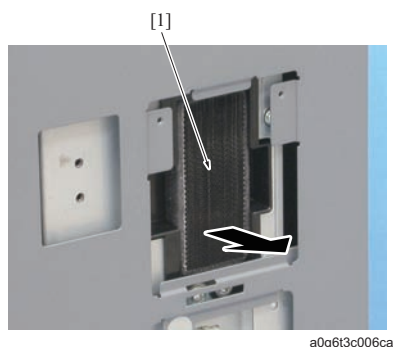
- Develop suction filter
- : Every 4,500,000 prints

(2) Procedure



a0g6t3c005ca

1. Loosen 2 screws [1] and remove the conveyance suction filter cover [2].



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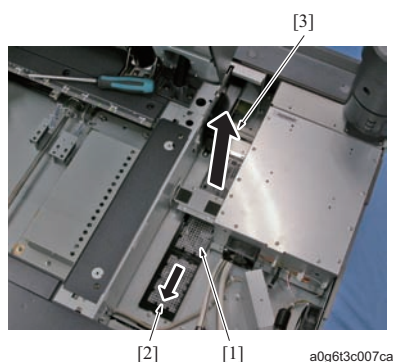
2. Remove the developing suction filter [1].
3. Reinstall the above parts following the removal steps in reverse.
4. After replacing the developing suction filter, conduct the following steps.
 - Counter reset of the parts counter No.49

4.2.4 Replacing the dust-proof filter

(1) Periodically replaced parts/cycle

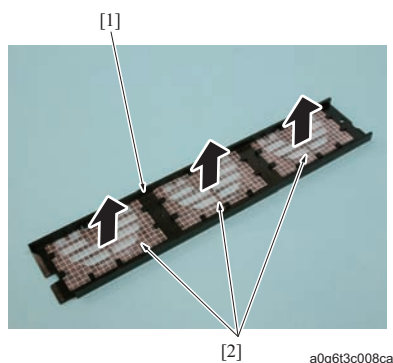
- Dust-proof filter
- : Every 3,000,000 prints

(2) Procedure



a0g6t3c007ca

1. Remove the upper cover /Rt. (Refer to [G.2.2.10 Upper cover /Rt](#))
2. Remove the LPH filter assy [1] by sliding it in the arrow-marked directions [2] and then [3].



3. Remove 3 dust-proof filters [2] from the LPH filter assy [1].
4. Reinstall the above parts following the removal steps in reverse.
5. After replacing the dust-proof filters, conduct the following steps.
 - Counter reset of the parts counter No.51

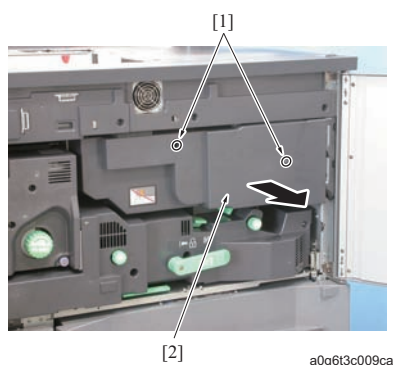
4.3 Photo conductor section

4.3.1 Removing/reinstalling the photo conductor section

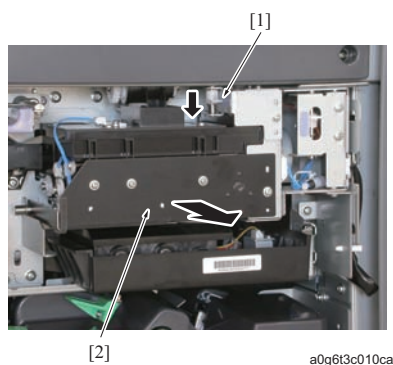
Note

- When the drum section has been removed, be sure to store it in a dark place with the drum cover provided.
- When removing/reinstalling the photo conductor section, be careful not to rotate the drum in any direction other than the specified direction. Rotating it in the opposite direction to the rotational direction while printing damages the cleaning blade.
- When removing the photo conductor section, be sure to clean the coupling.
- When removing/reinstalling the photo conductor section, be sure not to touch the drum claw.
- When replacing the photo conductor, be sure to replace the cleaning blade at the same time.

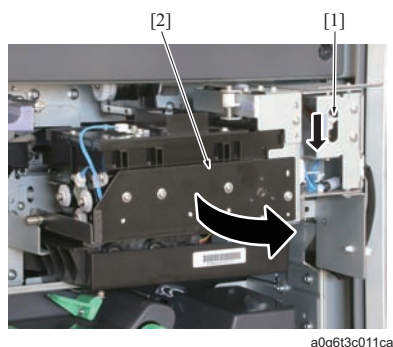
(1) Procedure



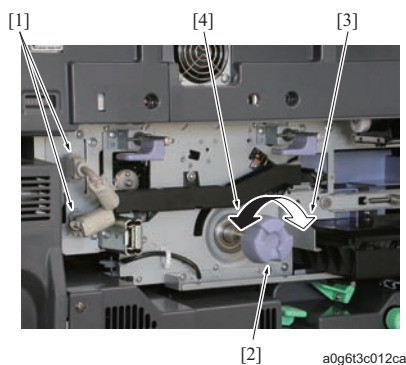
1. Open the front doors /Rt and /Lt.
2. Tilt the lever that pulls out the duplex section. (Refer to [F.4.9.1 Pulling out/reinstalling the duplex section](#))
3. Loosen 2 screws [1] and remove the photo conductor section cover [2].



4. Release the lock lever /1 [1] and pull out the intermediate toner hopper [2].



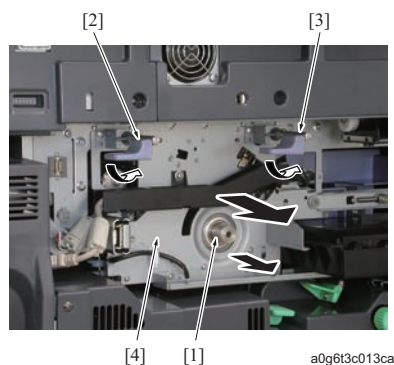
5. Release the lock lever /2 [1] and open the intermediate toner hopper [2].



6. Remove 2 connectors [1].
7. Turn the drum lock knob [2] clockwise [3] to rotate the drum 1 full turn, and turn the knob counterclockwise [4] to remove it.

Note

- When removing the drum lock knob, be sure to rotate the drum 1 full turn clockwise to put the toner on the drum into the cleaner for dirt prevention.



8. Pull out the coupling [1].

Note

- When reinstalling the coupling, be sure to clean the periphery of the coupling with the isopropyl alcohol.

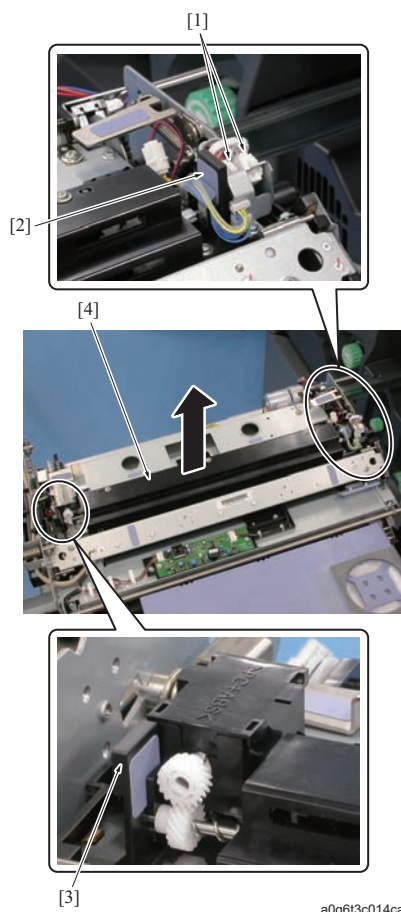
9. Release the photo conductor section lock lever /1 [2] and /2 [3] and pull out the photo conductor section [4] by holding the lock levers / 1 and /2.
10. Reinstall the above parts following the removal steps in reverse.

4.3.2 Replacing the charger unit**Note**

- When removing the charger unit, be careful not to touch the mesh portion of the charger control plate with bare hands.
- When cleaning the charger control plate, blow off dirt with the blower brush.

(1) Periodically replaced parts/cycle

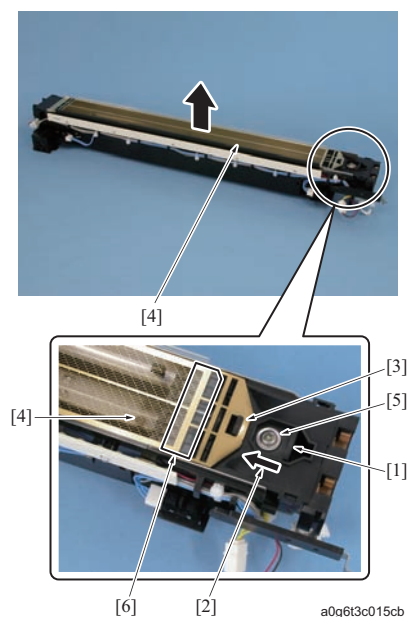
- Charger unit
: Every 6,000,000 prints

(2) Procedure

1. Pull out the photo conductor section from the main body. (Refer to [F.4.3.1 Removing/reinstalling the photo conductor section](#))
2. Remove 2 connectors [1].
3. Hold the portions marked with [2] and [3] and remove the charger unit [4].
4. Reinstall the above parts following the removal steps in reverse.
5. After replacing the charger unit, conduct the following item.
 - Counter reset of the parts counter No.52

4.3.3 Replacing the charger control plate**(1) Periodically replaced parts/cycle**

- Charger control plate
- : Every 750,000 prints

(2) Procedure

1. Remove the charger unit. (Refer to [F.4.3.2 Replacing the charger unit](#))
2. Slide the lever [1] in the arrow-marked direction [2] to release the lock [3] and remove the charger control plate [4].

Note

- Be sure to avoid loosening or removing the screw [5] that fastens the lever.

3. Reinstall the above parts following the removal steps in reverse.

Note

- When reinstalling the charger control plate, make sure that the PET sheet [6] comes to the outside (drum side).
- When reinstalling the charger control plate, make sure that the charger control plate is not bent and the edge is not distended.

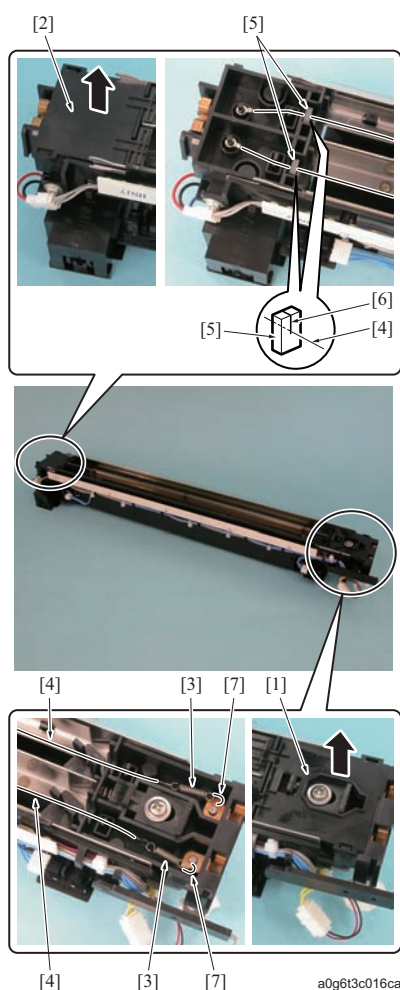
4. After replacing the charger control plate, conduct the following steps.
 - Counter reset of the parts counter No.4

4.3.4 Replacing the charger wire/charger vibration proof rubber**(1) Periodically replaced parts/cycle**

- Charging wire
- : Every 750,000 prints

- Charger vibration proof rubber
: Every 750,000 prints

(2) Procedure



1. Remove the charger unit. (Refer to [F.4.3.2 Replacing the charger unit](#))
2. Remove the charger control plate. (Refer to [F.4.3.3 Replacing the charger control plate](#))
3. Remove the craws, 2 each, and remove the spark arrester plates / Fr [1] and /Rr [2].
4. Remove the springs [3], 1 each, and then remove the charger wires [4] and the charger vibration proof rubber [5], 1 each.

Note

- When removing the charger wire, be careful not to drop off the charger vibration proof rubbers.
- When reinstalling the charger wire, be sure to insert each of the wires into the cut [6] of the charger vibration proof rubber.
- Be sure to reinstall the charger wires so that the hook [7] of each spring turns to the inside.

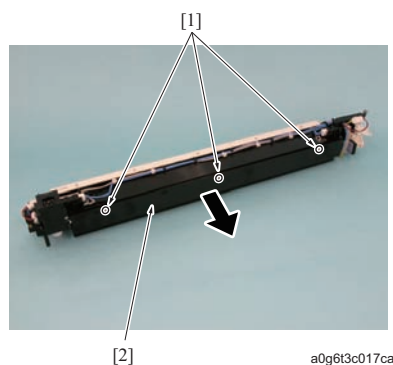
5. Reinstall the above parts following the removal steps in reverse.
6. After replacing the charger wire/charge vibration proof rubber, conduct the following steps.
Counter reset of the parts counter No.3

4.3.5 Replacing the charger cleaning unit/C-clip

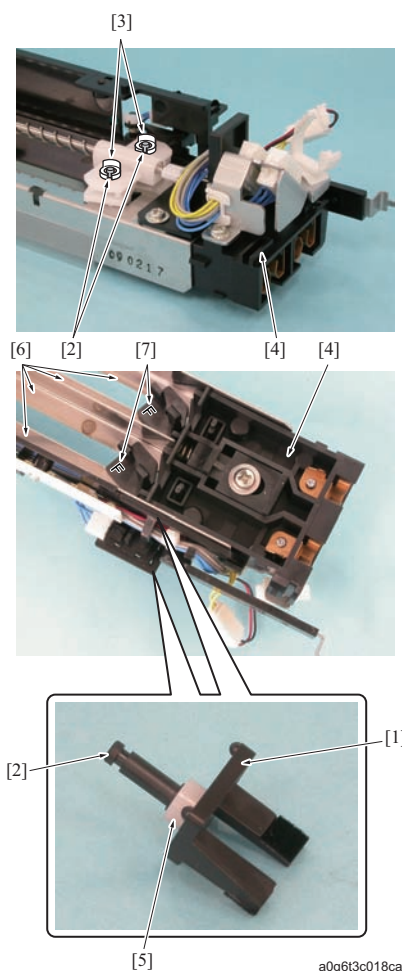
(1) Periodically replaced parts/cycle

- Charging cleaning unit
: Every 750,000 prints
- C-clip
: Every 750,000 prints

(2) Procedure



1. Remove the charger unit. (Refer to [F.4.3.2 Replacing the charger unit](#))
2. Remove the charger control plate. (Refer to [F.4.3.3 Replacing the charger control plate](#))
3. Remove the charger wire. (Refer to [F.4.3.4 Replacing the charger wire/charger vibration proof rubber](#))
4. Remove 3 screws [1] and remove the charger duct [2].



5. Remove the C-clip [3], 1 each, from the shaft [2] of the charger cleaning unit [1].
6. Reverse the charger unit [4] and remove the 2 charger cleaning units.
7. Remove the collar [5] from the shaft of each of the charger cleaning units.
8. When the charger back plate [6] is stained, clean it with drum cleaner and a cleaning pad.

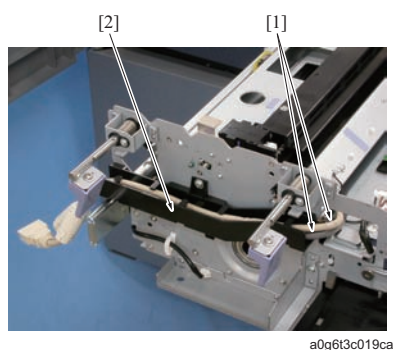
Note

- Be careful that the collar inserted into the shaft of the charger cleaning unit does not drop off.
- Be sure to reinstall the charger cleaning unit so that the marking "F" [7] turns in the same direction as shown in the drawing.

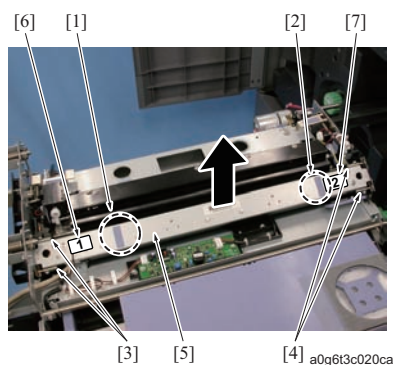
9. Reinstall the above parts following the removal steps in reverse.
10. After replacing the charger cleaning unit/C-clip, conduct the following steps.
Counter reset of the parts counter No.5

4.3.6 Cleaning the LPH lens**(1) Periodically cleaned parts/cycle**

- LPH lens
- : Every 750,000 prints

(2) Procedure

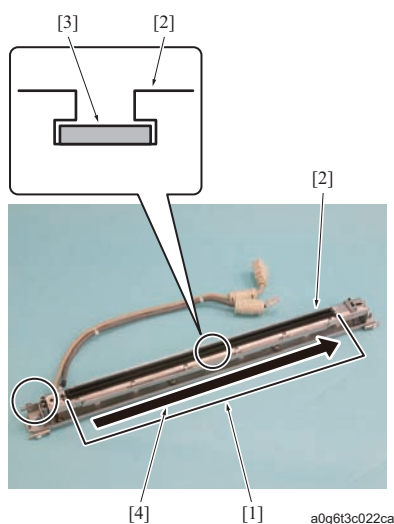
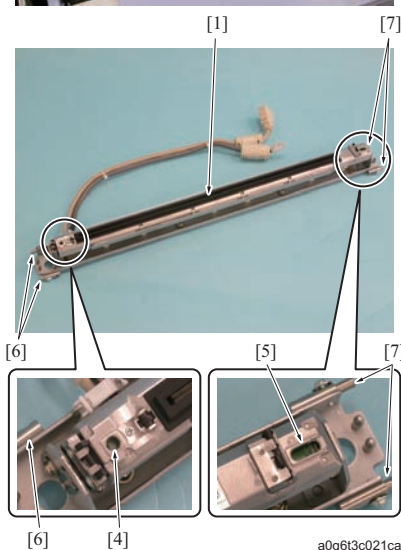
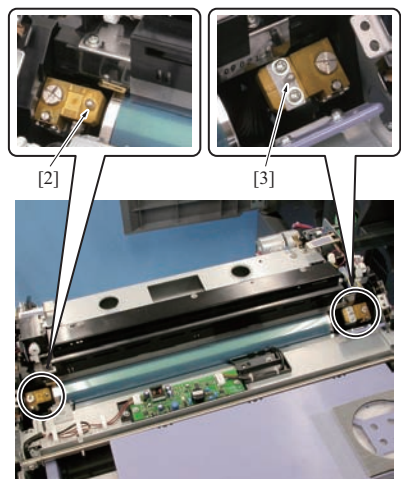
1. Pull out the photo conductor section from the main body. (Refer to [F.4.3.1 Removing/reinstalling the photo conductor section](#))
2. Remove the wiring harness [1] from the wiring harness guide [2].



3. Hold the section A [1] and B [2] with both hands and release the section /Fr [3], and then release the section /Rr [4] to remove the LPH unit [5].

Note

- When removing/reinstalling the LPH, be sure to remove the label 1 [6] side at first and then the label 2 [7] side.

**Note**

- When reinstalling the LPH unit [1], be sure to set each guide pin [2] and [3] to each guide hole [4] and [5] of the unit.
- When reinstalling the LPH unit [1], install the section /Fr [6] before installing the section /Rr [7].

4. Clean the lens section [1] of the LPH unit with a cotton swab soaked in alcohol, and wipe with a dry cotton swab to finish.

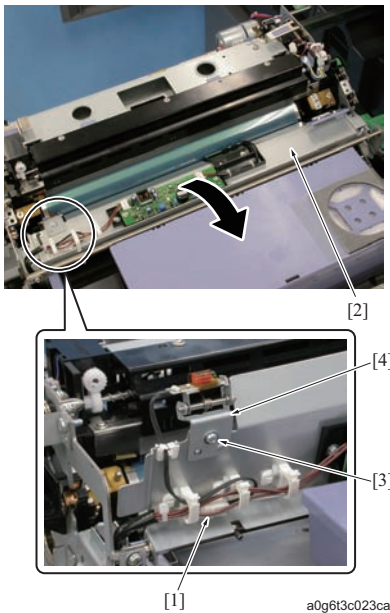
Note

- Insert a cotton swab to the inside of the depression of the lens cover [2] to contact with the lens section [3].
- Be sure to use a cotton swab for one way [4] only once for both of cleaning and finishing. Never use a cotton swab back and forth. Be sure to use a new cotton swab to clean it again in the same direction or clean it in the opposite direction.

5. Reinstall the above parts following the removal steps in reverse.

4.3.7 Replacing the drum temperature sensor**(1) Periodically replaced parts/cycle**

- Drum temperature sensor
: Every 3,000,000 prints

(2) Procedure

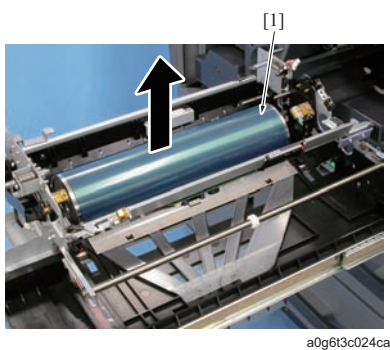
1. Pull out the photo conductor section. (Refer to [F.4.3.1 Removing/reinstalling the photo conductor section](#))
2. Remove the LPH unit. (Refer to [F.4.3.6 Cleaning the LPH lens](#))
3. Disconnect the connector [1].
4. Open the sensor support stay [2].
5. Remove the screw [3] and then remove the drum temperature sensor [4].
6. Reinstall the above parts following the removal steps in reverse.
7. After replacing the drum temperature sensor, conduct the following steps.
 - Counter reset of the parts counter No.39

4.3.8 Replacing the drum/cleaning of the photo conductor section**Note**

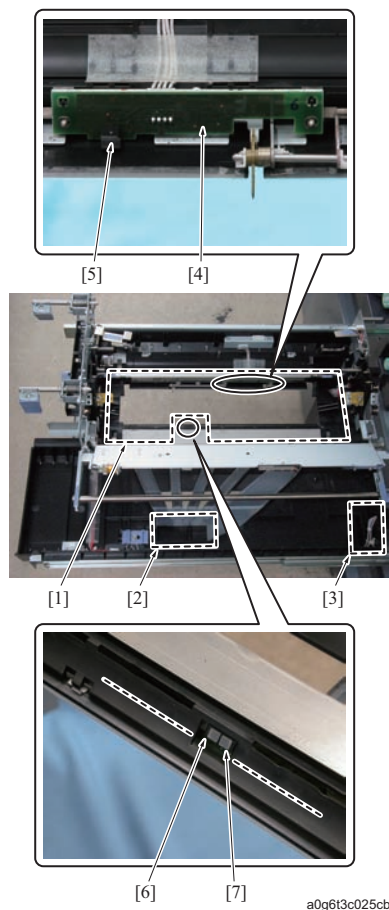
- Be careful not to touch or damage the drum and the cleaning blade with bare hands.
- When storing the drum, be sure to store it in dark place with the drum cover attached.
- When reinstalling the drum, the cleaning blade and the toner guide brush, be sure to apply setting powder all around the drum and the cleaning blade regardless of these parts being new or used ones.
- When the drum is applied with setting powder, be sure conduct the following operations before installing the photo conductor section to the main body:
 1. With the charger, the LPH unit and the developing section removed, rotate the drum 1 full turn. (to prevent splashing of setting powder to the charger and prevent the image from getting blurred)
 2. When installing a new drum, be sure to reset the photo conductor counter in the service mode. Otherwise, image gray background and toner scatter occur. (Refer to [I.5.6.1.\(2\) Counter reset](#))

(1) Periodically replaced parts/cycle

- Drum
 - : 1,000,000 prints or the specified period of drive time (bizhub PRO 1200/1200P: 180 hours drive, bizhub PRO 1051: 220 hours drive), whichever is earlier

(2) Procedure

1. Pull out the photo conductor section. (Refer to [F.4.3.1 Removing/reinstalling the photo conductor section](#))
2. Remove the charger unit. (Refer to [F.4.3.2 Replacing the charger unit](#))
3. Remove the LPH unit. (Refer to [F.4.3.6 Cleaning the LPH lens](#))
4. Remove the developing unit. (Refer to [F.4.4.4 Replacing the developing unit](#))
5. Remove the cleaning section. (Refer to [F.4.6.1 Removing/reinstalling the cleaning section](#))
6. Open the sensor support stay. (Refer to [F.4.3.7 Replacing the drum temperature sensor](#))
7. Remove the drum [1].



8. Clean toner adhered around the drum installation section [1] and the developing suction ducts [2] and [3] with a vacuum cleaner.
9. Clean the JAM sensor [5] on the JAM sensor board (JAMB) [4] with the cleaning pad.
10. Clean the IDC sensor [7] on the toner control board (TCB) [6] with a cotton swab soaked in alcohol.

Note

- Do not use any materials other than a cotton swab soaked in alcohol to clean the IDC sensor. When cleaning the IDC sensor in other ways, the IDC sensor performance is not warranty. Be sure to replace TCB.

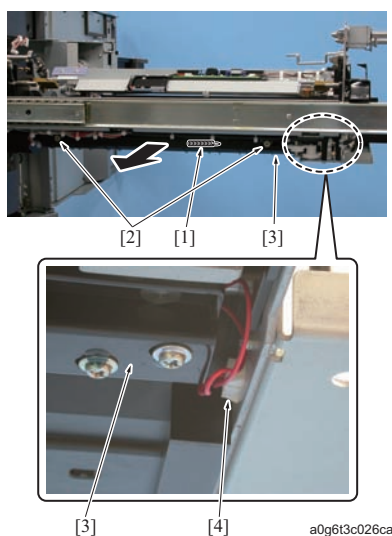
11. Reinstall the above parts following the removal steps in reverse.
12. After replacing the drum/cleaning the photo conductor section, conduct the following steps.
 - Counter reset of photo conductor in the maintenance counter
 - Auto charging potential adjustment
(Refer to [1.5.4.10 Automatic Drum Potential \(Drum Peculiarity Adjustment\)](#))
 - Photo conductor setting mode
(Refer to [1.5.4.12 Sensitive Drum Set Mode \(Drum Peculiarity Adjustment\)](#))
 - Auto maximum density adjustment
(Refer to [1.5.4.13 Auto Maximum Density Adj. \(Drum Peculiarity Adjustment\)](#))
 - Auto dot diameter adjustment
(Refer to [1.5.4.14 Auto Dot Diameter Adj. \(Drum Peculiarity Adjustment\)](#))
 - Cartridge set mode
(Refer to [1.5.4.15 Cartridge Set Mode \(Drum Peculiarity Adjustment\)](#))

4.3.9 Replacing the drum claw**Note**

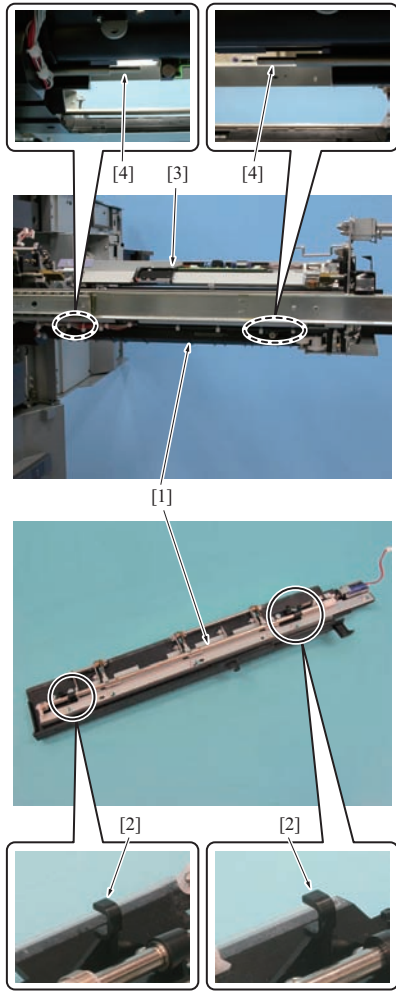
- When reinstalling the drum claw, take note of the direction and position of the claw.

(1) Periodically replaced parts/cycle

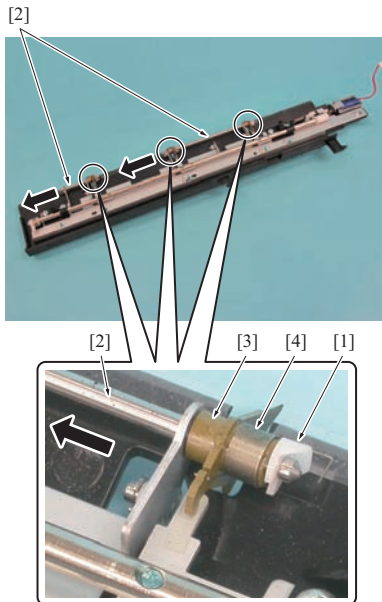
- Drum claw
: Every 1,000,000 prints

(2) Procedure

1. Pull out the photo conductor section. (Refer to [F.4.3.1 Removing/reinstalling the photo conductor section](#))
2. Remove the drum. (Refer to [F.4.3.8 Replacing the drum/cleaning of the photo conductor section](#))
3. Remove the spring [1].
4. Remove 2 screws [2] and then remove the drum claw unit [3].
5. Disconnect the connector [4].



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Note

- When reinstalling the drum claw unit [1], be sure to set the hooks [2] to the shafts [4] of the photo conductor section [3].

6. Remove 4 C-clips [1], and pull out the 2 shaft [2] in the arrow-marked direction to remove the 3 drum claws [3].
7. Remove the springs [4], 1 each, from each of the drum claws.

Note

- When reinstalling the drum claws, be sure to clean the shaft with the isopropyl alcohol and a cleaning pad. Reinstalling the separation claws with toner adhered causes the operation to slow down.
- After reinstalling the drum claws, check to see if they move smoothly.

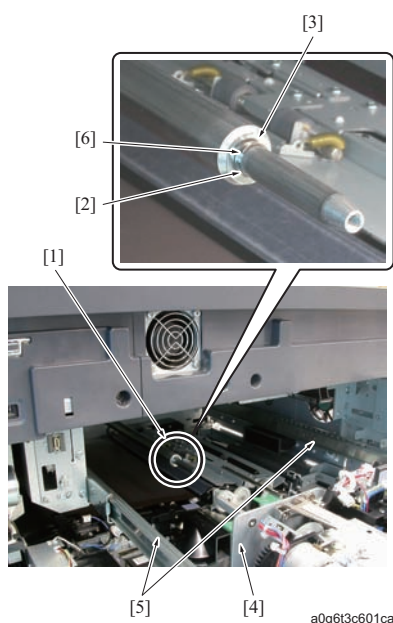
8. Reinstall the above parts following the removal steps in reverse.
9. After replacing the drum claw, conduct the following item.
 - Counter reset of the parts counter No.8

4.3.10 Replacing the drum fixing spring and the drum positioning collar**Note**

- Replace the drum fixing spring and the drum positioning collar at the same time.

(1) Periodically replaced parts/cycle

- Drum fixing spring
: Every 1,000,000 prints
- Drum positioning collar
: Every 1,000,000 prints

(2) Procedure

1. Pull out the photo conductor section. (Refer to [F.4.3.1 Removing/reinstalling the photo conductor section](#))
2. Remove the drum positioning collar [2] from the drum shaft [1] and then remove the drum fixing spring [3].

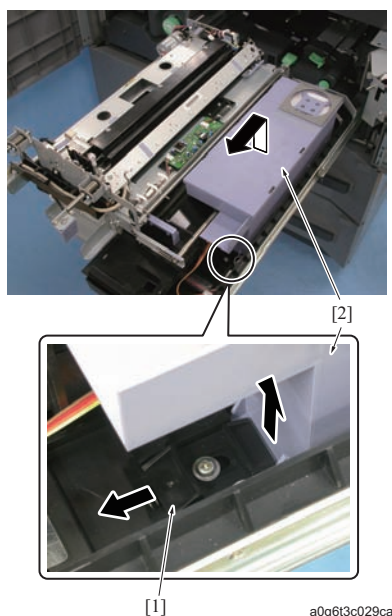
Note

- When replacing the drum positioning collar and the drum fixing spring, be sure not to put weight on the photo conductor section [4], the guide rails [5] and the drum shaft.
- When reinstalling the drum positioning collar, be sure to set it to the slit [6] of the drum shaft.

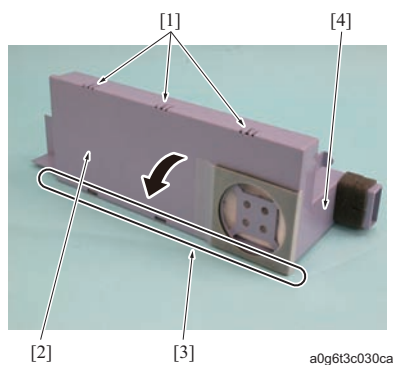
3. Reinstall the above parts following the removal steps in reverse.

4.4 Developing section**4.4.1 Replacing the suction filters /Up and /Lw****(1) Periodically replaced parts/cycle**

- Suction filter /Up
: Every 1,500,000 prints
- Suction filter /Lw
: Every 1,500,000 prints

(2) Procedure

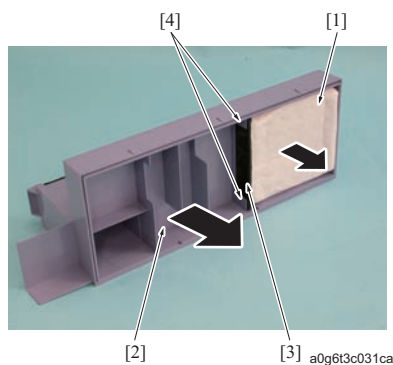
1. Pull out the photo conductor section from the main body. (Refer to [F.4.3.1 Removing/reinstalling the photo conductor section](#))
2. Release the lock [1] and remove the developing suction assy [2].



3. Release 3 claws [1] and remove the cover [2].

Note

- When reinstalling the cover, be sure to check if the opposite side [3] of the claw is not raised from the case [4] of the developing suction assy.

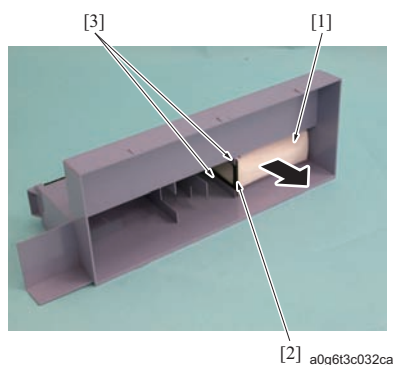


4. Remove the suction filter /Up [1].

5. Remove the inner case [2].

Note

- When reinstalling the suction filter /Up, insert the opening [3] to the ribs [4] of the inner case.
- When reinstalling the suction filter /Up, be sure not to deform the pouched shape.



6. Remove the suction filter /Lw [1].

Note

- When reinstalling the suction filter /Lw, insert the opening [2] to the ribs [3] of the case.
- When reinstalling the suction filter /Lw, be sure not to deform the pouched shape.

7. Reinstall the above parts following the removal steps in reverse.

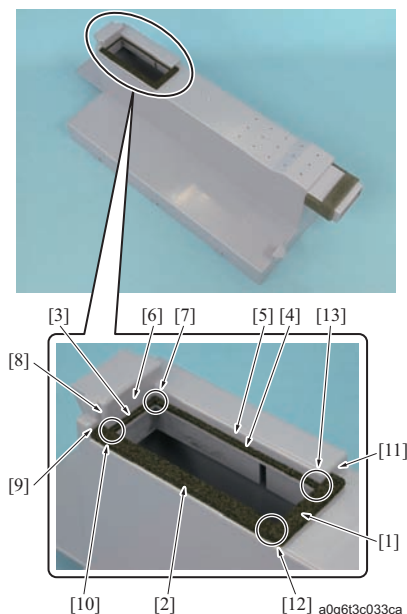
8. After replacing the suction filter /Up and /Lw, conduct the following steps.

- Counter reset of the parts counters No.6 and No.7

4.4.2 Replacing the developing suction seal /2 and /5, the suction pad /H and /I, and the stopper pad

(1) Periodically replaced parts/cycle

- Developing suction seal /2
: Every 6,000,000 prints
- Developing suction seal /5
: Every 6,000,000 prints
- Suction pad /H
: Every 6,000,000 prints
- Suction pad /I
: Every 6,000,000 prints
- Stopper pad
: Every 6,000,000 prints

(2) Procedure

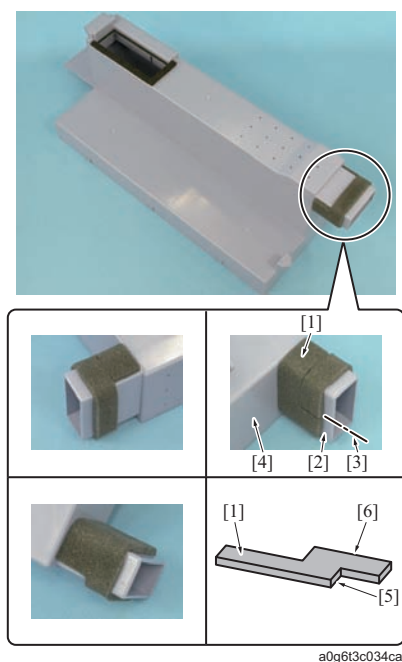
1. Pull out the photo conductor section from the main body. (Refer to [F.4.3.1 Removing/reinstalling the photo conductor section](#))
2. Remove the suction filter /Up and /Lw. (Refer to [F.4.4.1 Replacing the suction filters /Up and /Lw](#))
3. Peel off the developing suction seal /5 [1].
4. Peel off the developing suction seal /2 [2].
5. Peel off the suction pad /H [3].
6. Peel off the suction pad /I [4].

Note

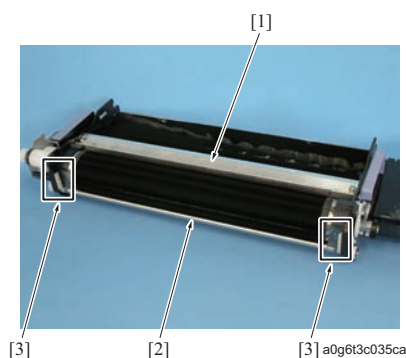
- When reinstalling the suction pad /I, with reference to the A side [5] and the B side [6], place the long side in contact with the A side and the short side in contact with the B side.
 - When reinstalling the suction pad /H, with reference to the long side of the inner side of the suction pad /I and the B side, place the long side in contact with the B side and the short side in contact with the long side of the inner side of the suction pad /I. At this time, make sure there is no gap at the contact portion [7] of the suction pad /H and the suction pad /I.
 - When reinstalling the developing suction seal /2, with reference to the C side [8] and the D side [9], place the long side in contact with the C side and the short side in contact with the D side. At this time, make sure there is no gap at the contact portion [10] of the developing suction seal /2 and the suction pad /H.
 - When reinstalling the developing suction seal /5, with reference to the long side of the outer side of the developing suction seal /2 and the E side [11], place the long side in contact with the E side and the short side to be the same level as the long side of the outer side of the developing suction seal /2. At this time, make sure there is no gap at the contact portion [12] of the developing suction seal /5 and the developing suction seal /2 and at the contact portion [13] of the developing suction seal /5 and the suction pad /I.
7. Peel off the stopper pad [1].

Note

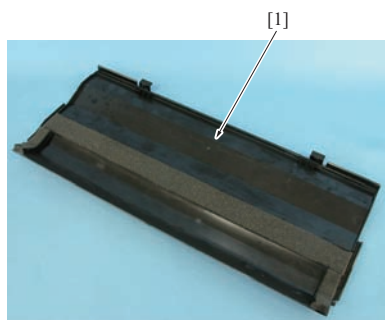
- When reinstalling the stopper pad, with reference to the G side [4] and the center [3] of the F side [2], place the H portion [5] in contact with the center of the F side and the I portion [6] in contact with the G side.
8. Reinstall the above parts following the removal steps in reverse.
 9. After replacing the developing suction seal /2 and /3, the suction pad /H and /I, and the stopper pad, conduct the following steps.
 - Counter reset of the parts counter No.55

**4.4.3 Cleaning of the developing unit****(1) Periodically cleaned parts/cycle**

- Developing unit
 - : Every 750,000 prints

(2) Procedure

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1. Pull out the photo conductor section from the main body. (Refer to [F.4.3.1 Removing/reinstalling the photo conductor section](#))
2. Remove the developing suction assy. (Refer to [F.4.4.1 Replacing the suction filters /Up and /Lw](#))
3. Remove the developing unit. (Refer to [F.4.4.4 Replacing the developing unit](#))
4. Remove the developing unit cover /1. (Refer to [F.4.4.5 Replacing the developer](#))
5. Clean the developer regulation blade [1], the developer regulation shaft [2] and both ends of the developing roller[3] with the cleaning pad and the vacuum cleaner.

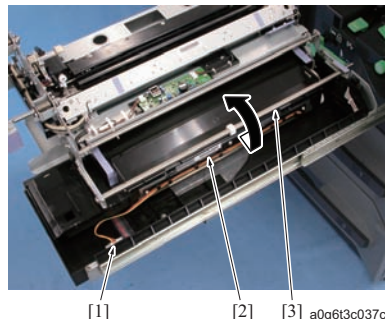
Note

- Be careful not vacuum too much developer necessarily.
Be sure to clean just the stained sections.

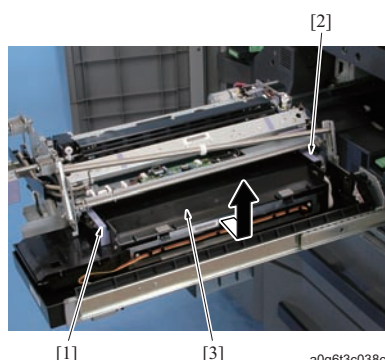
6. Clean up the rear side of the developing unit cover /1 [1] with a vacuum cleaner.
7. Reinstall the above parts following the removal steps in reverse.

4.4.4 Replacing the developing unit**(1) Periodically replaced parts/cycle**

- Developing unit
: Every 6,000,000 prints

(2) Procedure

a0g6t3c037ca



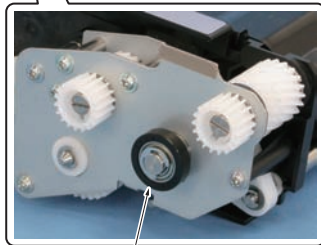
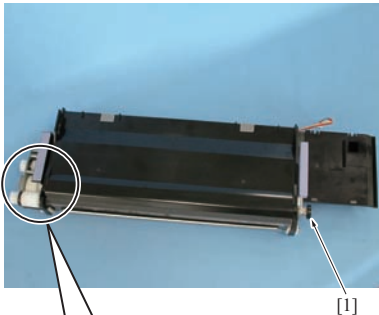
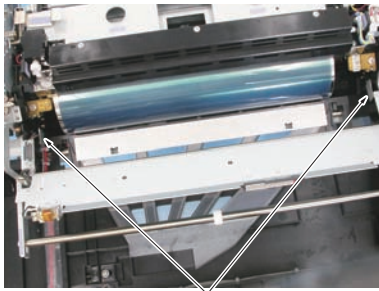
a0g6t3c038ca

1. Pull out the photo conductor section from the main body. (Refer to [F.4.3.1 Removing/reinstalling the photo conductor section](#))
2. Remove the developing suction assy. (Refer to [F.4.4.1 Replacing the suction filters /Up and /Lw](#))
3. Disconnect the connector [1].
4. Release the developing pressure lever [3] while holding down the right side [2] of the developing unit.

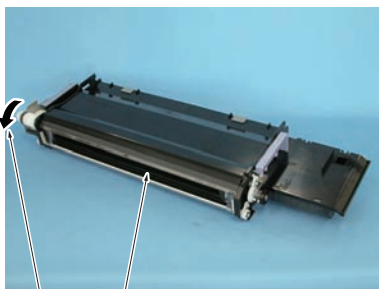
Note

- When releasing the developing pressure lever, be careful not to touch the front panel and the rear panel of the photo conductor section.

5. Hold the sections [1] and [2] with both hands and remove the developing unit [3].



[1] a0g6t3c039ca



[2] [1] a0g6t3c040ca

Note

- When reinstalling the developer unit, make sure that the developing unit stopper roller [1] is in contact with the developing unit stopper plate [2]. (DS secured)
- When the developing unit stopper roller is too easily rotated, remove it once and then reinstall it.
- When installing the developing unit, be sure to insert it slowly in parallel.
- When the developing unit stopper roller has dirt or scratch, rotate and install it so that the part does not contact with the roller.

6. Reinstall the above parts following the removal steps in reverse.

Note

- When reinstalling the developer unit, be careful that the front panel of the photo conductor section does not come into contact with the developing roller [1].
- Never rotate the developing gear to the arrow-marked direction [2].

7. After replacing the developing unit, conduct the following steps.

- Counter reset of the parts counter No.54

Auto charging potential adjustment

(Refer to [1.5.4.10 Automatic Drum Potential \(Drum Peculiarity Adjustment\)](#))

Auto maximum density adjustment

(Refer to [1.5.4.13 Auto Maximum Density Adj. \(Drum Peculiarity Adjustment\)](#))

Auto dot diameter adjustment

(Refer to [1.5.4.14 Auto Dot Diameter Adj. \(Drum Peculiarity Adjustment\)](#))

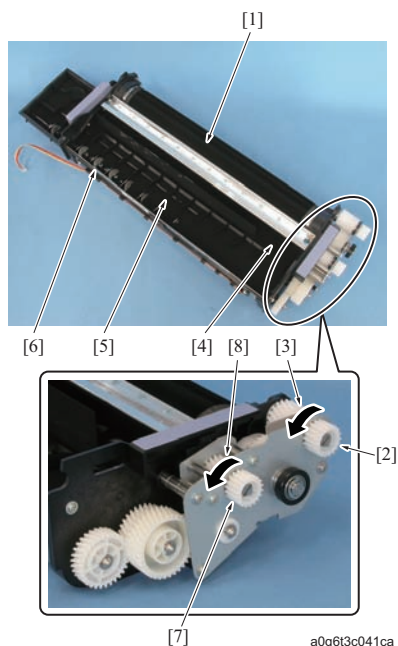
Cartridge set mode

(Refer to [1.5.4.15 Cartridge Set Mode \(Drum Peculiarity Adjustment\)](#))

4.4.5 Replacing the developer

Note

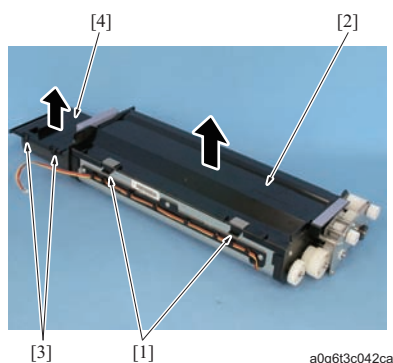
- When replacing the developer, be careful that dirt does not get into it.
- When rotating the developing roller [1], be sure to rotate the developing gear [2] to the arrow-marked direction [3] with the flat blade driver.
- When rotating the agitator screw [4], the conveyance screw [5] and the agitator plate [6], be sure to rotate the agitator gear [7] in the arrow-marked direction [8] with the flat blade driver.
- When putting in new developer, be sure to reset the developer counter in the service mode. If not reset, image fogging, toner splash and so on occur. (Refer to [1.5.6.1.\(2\) Counter reset](#))



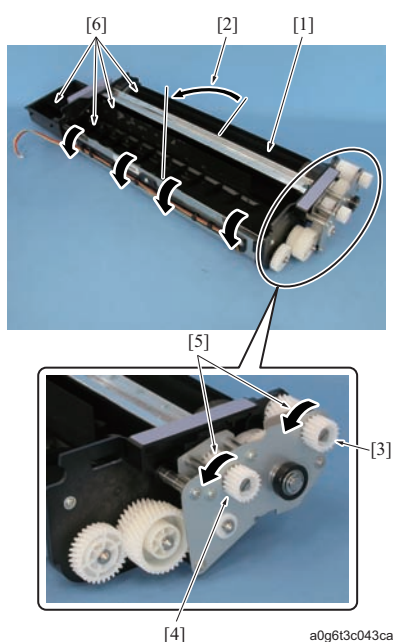
(1) Periodically replaced parts/cycle

- Developer
: 1,000,000 prints or the specified period of drive time (bizhub PRO 1200/1200P: 180 hours drive, bizhub PRO 1051: 220 hours drive), whichever is earlier

(2) Procedure



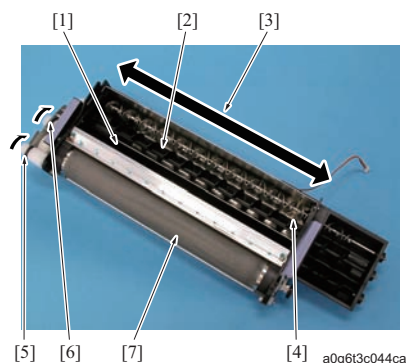
1. Pull out the photo conductor section from the main body. (Refer to [F.4.3.1 Removing/reinstalling the photo conductor section](#))
2. Remove the developing suction assy. (Refer to [F.4.4.1 Replacing the suction filters /Up and /Lw](#))
3. Remove the developing unit. (Refer to [F.4.4.4 Replacing the developing unit](#))
4. Release 2 hooks [1] and remove the developing unit cover /1 [2].
5. Release 2 hooks [3] and remove the developing unit cover /2 [4].



6. With the developing unit [1] tilted to about 90° [2], rotate the developing gear [3] and the agitator gear [4] in the arrow-marked direction [5] with a flat blade screwdriver to discharge the developer [6] in the developing unit thoroughly.
7. Use cleaner to clean the developer adhered to the developing roller.

Note

- Any used developer remaining in the developing roller causes gray background to the image.



8. Pour new developer evenly [3] from above the agitator screw [1] and the conveyance screw [2].
9. Rotate the developing gear [5] and the agitator gear [6] counterclockwise so that the developer gets fully into the developing unit [4].
10. Repeat the steps 8 and 9 to pour the developer completely.
11. Rotate the developing gear counterclockwise and check the height of developer across the entire developing roller [7].
12. Reinstall the above parts following the removal steps in reverse.
13. After replacing the developing unit, conduct the following steps.
 - Counter reset of photo conductor in the maintenance counter (Refer to [1.5.6.1 Maintenance Counter](#))
 - Auto charging potential adjustment (Refer to [1.5.4.10 Automatic Drum Potential \(Drum Peculiarity Adjustment\)](#))
 - Auto maximum density adjustment (Refer to [1.5.4.13 Auto Maximum Density Adj. \(Drum Peculiarity Adjustment\)](#))
 - Auto dot diameter adjustment (Refer to [1.5.4.14 Auto Dot Diameter Adj. \(Drum Peculiarity Adjustment\)](#))
 - Cartridge set mode (Refer to [1.5.4.15 Cartridge Set Mode \(Drum Peculiarity Adjustment\)](#))

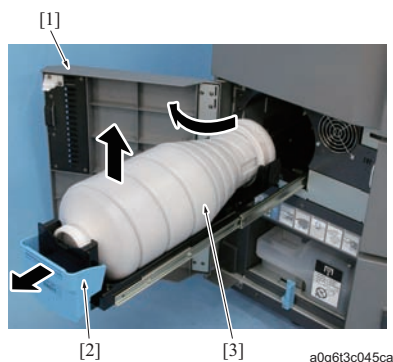
4.5 Toner supply/collection section

4.5.1 Replacing/cleaning of the toner bottle

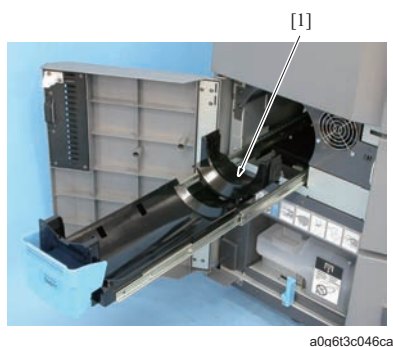
(1) Periodically cleaned parts/cycle

- Toner bottle insertion opening
- : Every 750,000 prints

(2) Procedure



1. Open the toner supply door [1] and pull out the toner supply cover / A assy [2].
2. Remove the toner bottle [3].

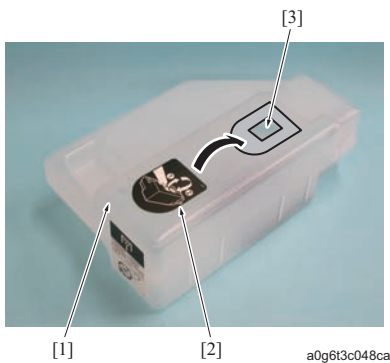
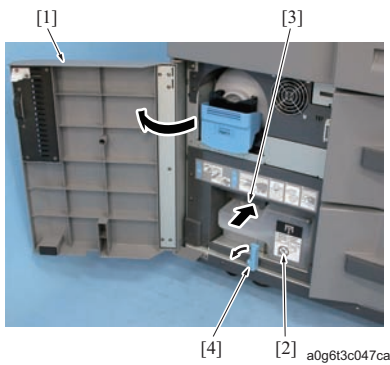


3. Clean around the toner bottle insertion opening [1] with a blower brush and a vacuum cleaner.
4. Reinstall the above parts following the removal steps in reverse.

4.5.2 Replacing the waste toner box

(1) Periodically replaced parts/cycle

- Waste toner box
- : Every 750,000 prints

(2) Procedure

1. Open the toner supply door [1].
2. While pressing the waste toner box [2] in the arrow-marked direction [3], tilt the lock lever [4].
3. Pull out the waste toner box from the main body.

4. Peel off the PET sheet [2] already put on the waste toner box [1] and put it to the toner inlet [3] to cover it.

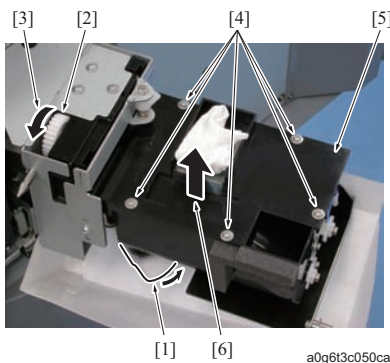
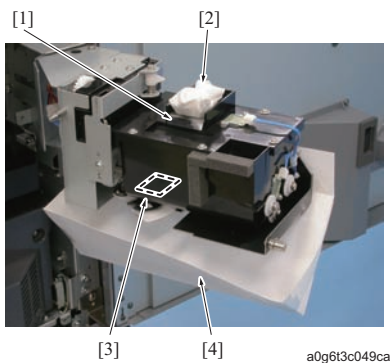
Note

- When disposing the waste toner box, be sure to cover the toner socket with PET sheet to prevent the toner spill while conveying.

5. Reinstall the above parts following the removal steps in reverse.
6. After replacing the waste toner box, conduct the following steps.
 - Counter reset of the parts counter PM (750,000)
 (Refer to [I.5.6.1 Maintenance Counter](#))

4.5.3 Replacing the agitator plate assy**(1) Periodically replaced parts/cycle**

- Agitator plate assy /1
: Every 1,500,000 prints
- Agitator plate assy /2
: Every 1,500,000 prints

(2) Procedure

1. Open the front doors /Rt and /Lt.
2. Tilt the lever that pulls out the duplex section. (Refer to [F.4.9.1 Pulling out/reinstalling the duplex section](#))
3. Remove the cover on the photo conductor section and pull out the intermediate toner hopper to open it. (Refer to [F.4.3.1 Removing/reinstalling the photo conductor section](#))
4. Close up the connection opening [1] of the intermediate toner hopper with a cleaning pad [2].
5. Attach the toner recovery bag [4] beneath the shutter section [3] connected to the developing unit.

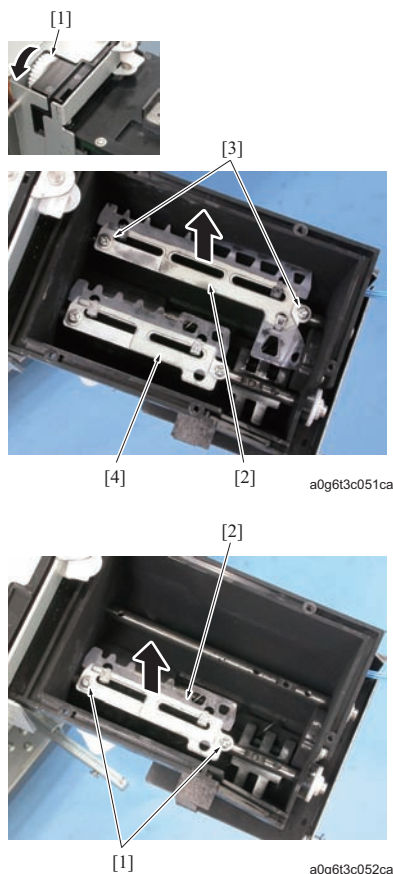
Note

- For the toner recovery bag, use a paper bag made by folding a sheet of paper, or a vinyl bag. Be sure to fix it at an appropriate place so that toner does not spill over. Besides, be sure not to let the bag fall down with the weight of toner.
 - The intermediate toner hopper contains toner about half as much as the volumetric capacity of the hopper. Be sure to set up a bag that accommodates of the entire toner amount.
6. Enter 54-00 in "I/O check mode" in the service mode and press the start button.
 7. Insert the connecting shutter [1] fully deep and open it to discharge toner in the hopper. (This process takes about 5 minutes.)

Note

- While discharging, be sure to rotate the gear [2] several times in the arrow-marked direction [3] once in a while so that toner that is above the agitator plate assy is discharged.
- Once no more toner is discharged by rotating the gear [2], it tells that almost all toner has been recovered.

8. Press the stop button.
9. Remove 5 screws [4] and then remove the intermediate toner hopper cover assy [5] in the arrow-marked direction [6].

**Note**

- The intermediate toner hopper cover assy [5] is also adhered with toner. Be careful that it does not scatter.

10. Rotate the gear [1] in the arrow-marked direction until 2 screws [3] that hold the agitator plate assy /1 [2] turns up.

Note

- At this time, the sheet of the agitator plate assy /1 jumps up. Be sure to cover about half of it with paper so that toner does not scatter.

11. Remove the 2 screw [3] and remove the stirring plate assy /1 [2].

Note

- Be sure not to rotate the gear [1] after removing the agitator plate assy /1. Rotating it causes a phase lag with the agitator plate assy /2 [4] and makes it impossible to detect the remaining amount of toner properly.

12. Remove 2 screw [1] and remove the stirring plate assy /2 [2].

13. Reinstall the above parts following the removal steps in reverse.

Note

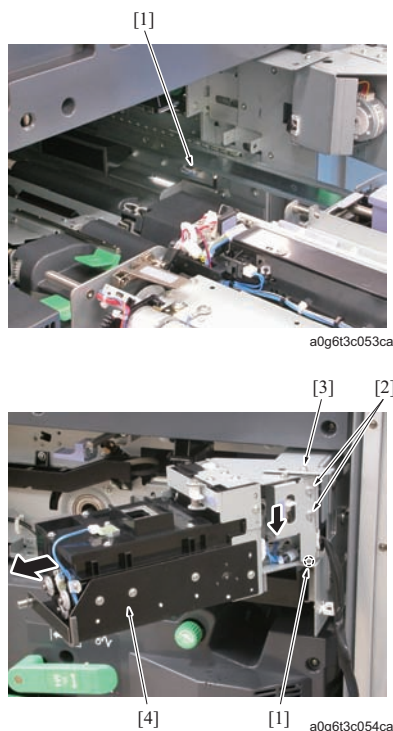
- Some recovered toners have got mixed with impurities. Be sure to dispose it and do not put it back in the intermediate toner hopper.

14. After replacing the agitator plate assys /1 and /2, conduct the following steps.

- Counter reset of the parts counter No.22

4.5.4 Intermediate hopper motor (M11)**(1) Periodically replaced parts/cycle**

- Intermediate hopper motor (M11)
: Every 30,000,000 prints

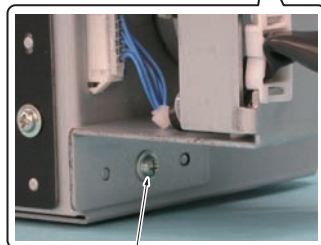
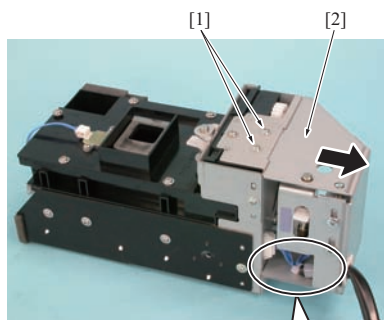
(2) Procedure

1. Open the front doors /Rt and /Lt.
2. Pull out the photo conductor section. (Refer to [F.4.3.1 Removing/reinstalling the photo conductor section](#))
3. Disconnect the connector [1].
4. Replace the photo conductor section.

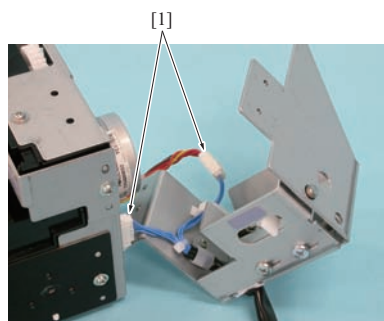
Note

- Be sure to pull out the intermediate toner hopper and keep it open.

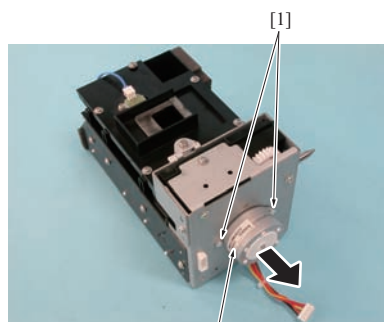
5. Remove the screw [1] from the underneath
6. Loosen 2 screws [2] to release the pin [3], and remove the intermediate toner hopper unit [4].



[1] a0g6t3c055ca



a0g6t3c056ca



[2] a0g6t3c057ca

7. Remove 3 screws [1] and remove the rotation hinge assy [2].

8. Disconnect the connector [1].

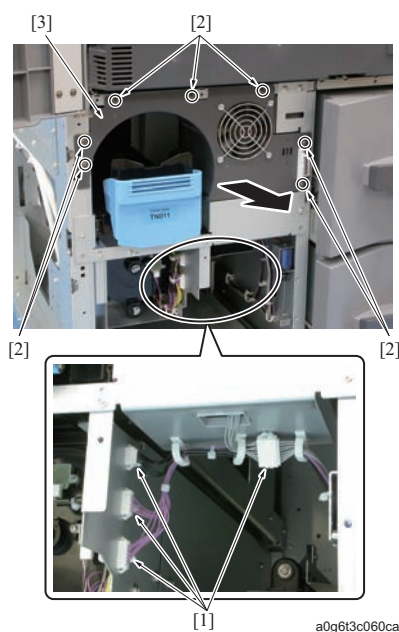
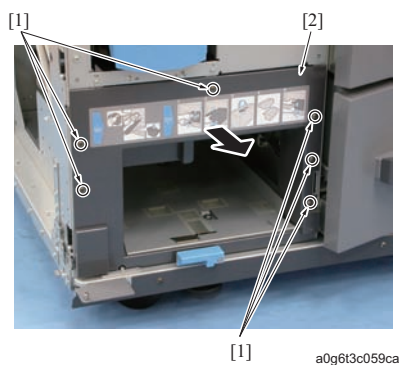
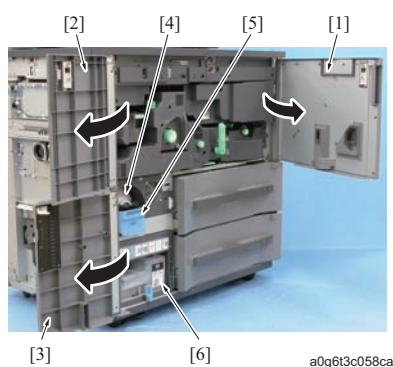
9. Remove 2 screws [1] and remove the toner hopper motor (M11) [2].

10. Reinstall the above parts following the removal steps in reverse.

4.5.5 Replacing the toner supply sleeves /1 and /2

(1) Periodically replaced parts/cycle

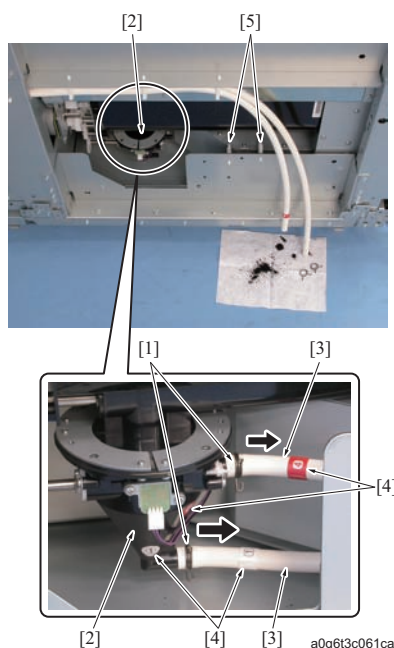
- Toner supply sleeve /1
: Every 3,000,000 prints
- Toner supply sleeve /2
: Every 3,000,000 prints

(2) Procedure

1. Remove the left cover. (Refer to [G.2.2.4 Left cover](#))
2. Open the front doors /Rt [1] and /Lt [2] and the toner supply door [3].
3. Remove the toner bottle [4]. (Refer to [F.4.5.1 Replacing/cleaning of the toner bottle](#))
4. Remove the toner supply door. (Refer to [G.2.2.7 Toner supply door](#))
5. Replace the toner supply cover /A assy [5].
6. Remove the waste toner box [6]. (Refer to [F.4.5.2 Replacing the waste toner box](#))

7. Remove 6 screws [1] and then remove the protective cover [2].

8. Disconnect 4 connectors [1].
9. Remove 7 screws [2] and then remove the toner supply protective assy [3].



10. Release 2 hose clamps [1] and remove 2 hoses [3] from the toner feed case [2].

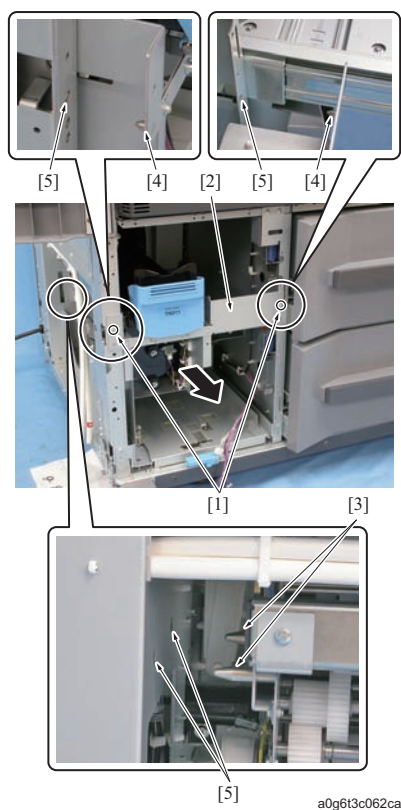
Note

- Keep each of the released hose clamps [1] near the connecting opening of each hose [3].
- When the hose [3] is removed from the toner feed case [2], toner may spill out of each hose. Be careful that the inside of the main body does not get stained with the toner.
- The hose connecting section of the toner feed case [2] and the hose [3] are provided with the toner supply installation label [4] that indicates the respective points to which a connection is made. When installing each hose, be sure to make a connection between the points having the corresponding toner supply installation label [4].

11. Release the cable clamp [5] and pull out the hose [3] to the outside of the main body.

Note

- The hose [3] may be damaged when the toner supply unit [6] is removed. Be sure to pull it out to the outside of the main body.

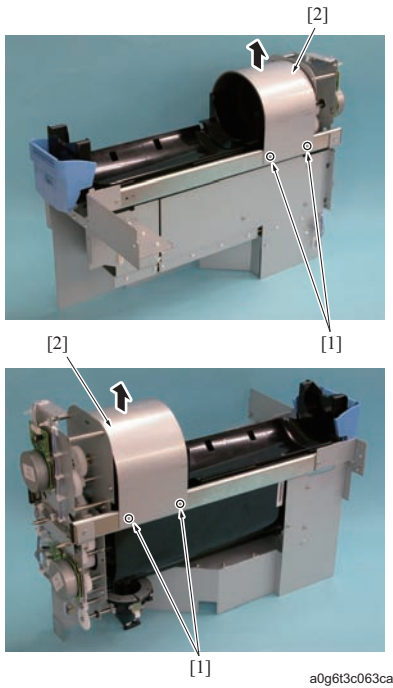


12. Remove 2 screws [1] and pull out the toner supply unit [2].

Note

- When reinstalling the toner supply unit [2], be sure to insert 2 guide pins [3] on the rear side and 2 guide pins [4] on the front side into the respective guide holes [5] of the main body frame.

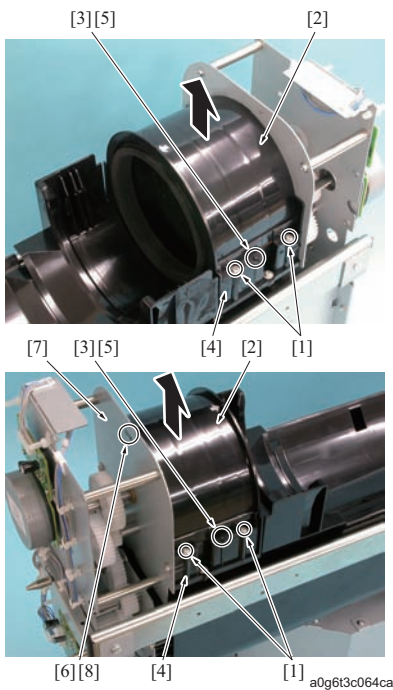
13. Remove 4 screws [1] and then remove the toner supply protective plate [2].



14. Remove 4 screws [1] and then remove the cover /Up [2].

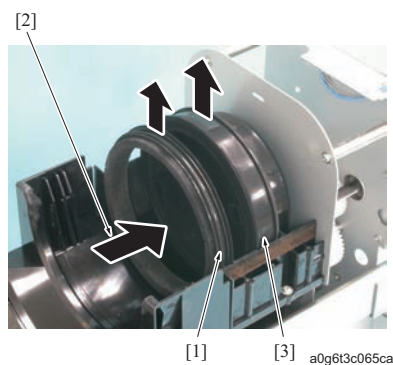
Note

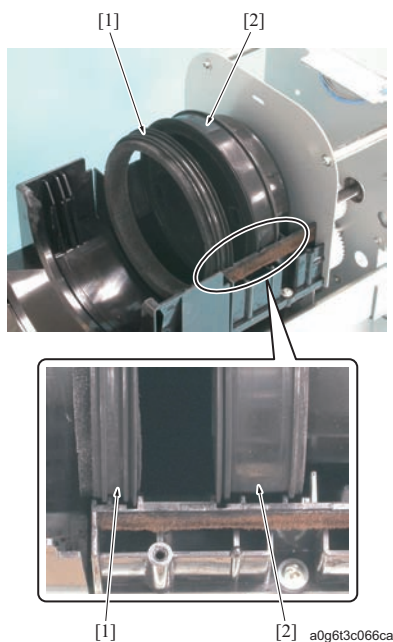
- When reinstalling the cover /Up [2], set the projection [5] of the cover /Lw [4] to the positioning hole [3] of the cover /Up [2] and then insert the projection [6] of the cover /Up [2] into the slit [8] of the drive board [7].



15. Remove the toner supply sleeves /1 [1].

16. Push the coupling in the arrow-marked direction [2] and remove the toner supply sleeve /2 [3].





17. Reinstall the above parts following the removal steps in reverse.

Note

- Be sure to reinstall the toner supply sleeves /1 [1] and /2 [2] in the direction as shown in the drawing.

Note

- After completion of disassembly/assembly of the toner supply unit, be sure to select the code 54-09 (rotation of the toner pump motor (M28) and the air pump motor (M29) in the I/O check mode of the service mode and then press the start button.

When toner drops off into the mixing section due to the vibration of the disassembly/assembly, it may cause the codes SC-2214 and C-2217. (Refer to [I.5.7.8 Removing toner in the toner mixing section](#))

18. After replacing the toner supply sleeves /1 and /2, conduct the following steps.

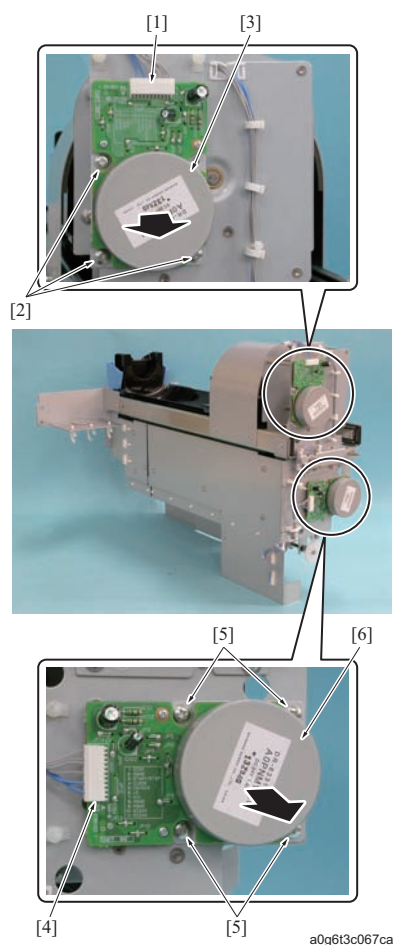
- Counter reset of the parts counters No.67 and No.68

4.5.6 Replacing the toner bottle motor (M6) and the toner hopper motor (M7)

(1) Periodically replaced parts/cycle

- Toner bottle motor (M6)
: Every 30,000,000 prints
- Toner hopper motor (M7)
: Every 30,000,000 prints

(2) Procedure



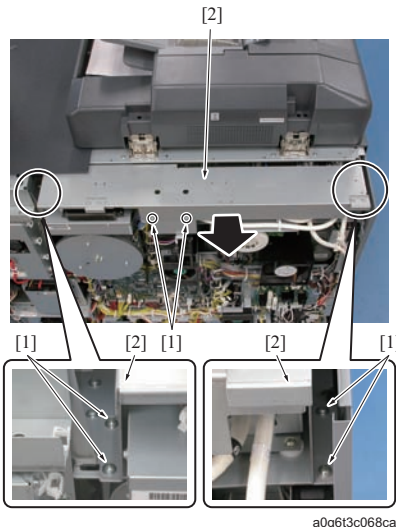
1. Remove the toner supply unit. (Refer to [F.4.5.5 Replacing the toner supply sleeves /1 and /2](#))
2. Disconnect the connector [1].
3. Remove 3 screws [2] and remove the toner bottle motor (M6) [3].
4. Disconnect the connector [4].
5. Remove 4 screws [5] and remove the toner hopper motor (M7) [6].
6. Reinstall the above parts following the removal steps in reverse.

4.5.7 Replacing the pump units /Lt and /Rt

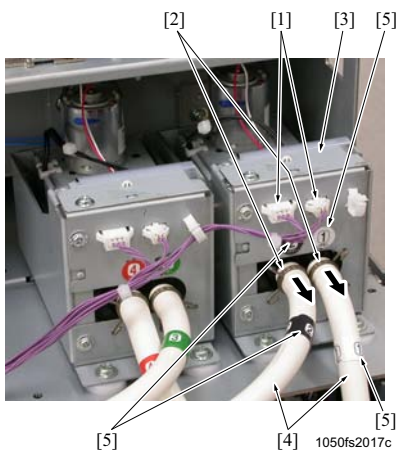
(1) Periodically replaced parts/cycle

- Pump unit /Lt
: Every 10,500,000 prints
- Pump unit /Rt
: Every 10,500,000 prints

(2) Procedure



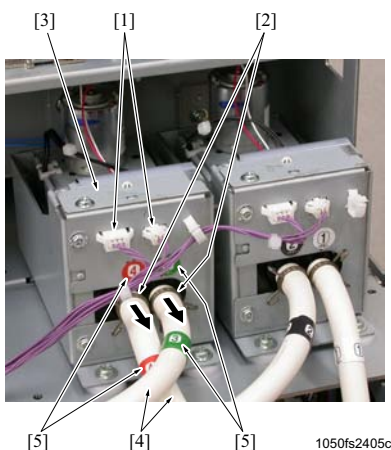
1. Remove the rear cover. (Refer to [G.2.2.2 Rear cover](#))
2. Remove the upper covers /Rr1 and /Rr2. (Refer to [G.2.2.8 Upper cover /Rr1](#) [G.2.2.9 Upper cover /Rr2](#))
3. Remove 6 screws [1] and then remove the exterior mounting plate [2].



4. Disconnect 2 connectors [1].
5. Release 2 hose clamps [2] and remove 2 hoses [4] from the pump unit /Rt [3].

Note

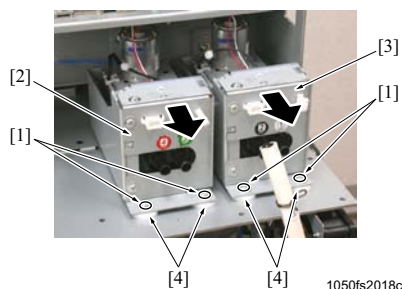
- Keep each of the released hose clamps [2] near the connecting opening of each hose [4].
- When the hose [4] is removed from the pump unit /Rt [3], the toner may spill out of each hose. Be careful that the inside of the main body does not get stained with the toner.
- The hose connecting section of the pump unit /Rt [3] and the hose [4] are provided with the toner supply installation label [5] that indicates the respective points to which a connection is made. When installing each hose, be sure to make a connection between the points having the corresponding toner supply installation label [5].



6. Disconnect 2 connectors [1].
7. Release 2 hose clamps [2] and remove 2 hoses [4] from the pump unit /Lt [3].

Note

- Keep each of the released hose clamps [2] near the connecting opening of each hose [4].
- When the hose [4] is removed from the pump unit /Lt [3], the toner may spill out of each hose. Be careful that the inside of the main body does not get stained with the toner.
- The hose connecting section of the pump unit /Lt [3] and the hose [4] are provided with the toner supply installation label [5] that indicates the respective points to which a connection is made. When installing each hose, be sure to make a connection between the points having the corresponding toner supply installation label [5].



8. Remove the screws [1], 2 each, and remove the pump unit /Lt [2] and the pump unit /Rt [3].

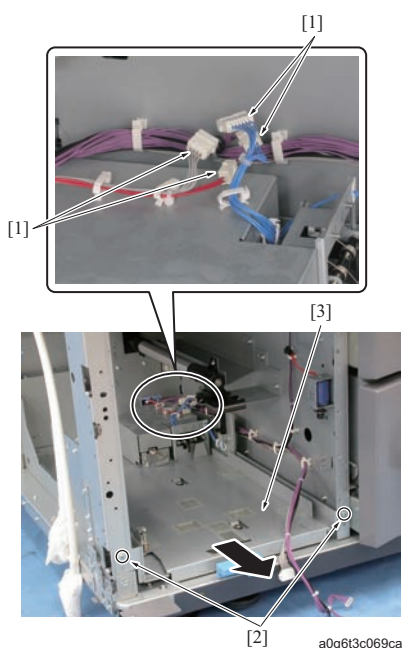
Note

- When reinstalling each pump unit, be sure to insert the toner supply spacer [4] between the attaching surfaces.

9. Reinstall the above parts following the removal steps in reverse.
10. After replacing the pump units /Lt and /Rt, conduct the following steps.
 - Counter reset of the parts counters No.69 and No.70

4.5.8 Replacing the waste toner box swing motor (M19)**(1) Periodically replaced parts/cycle**

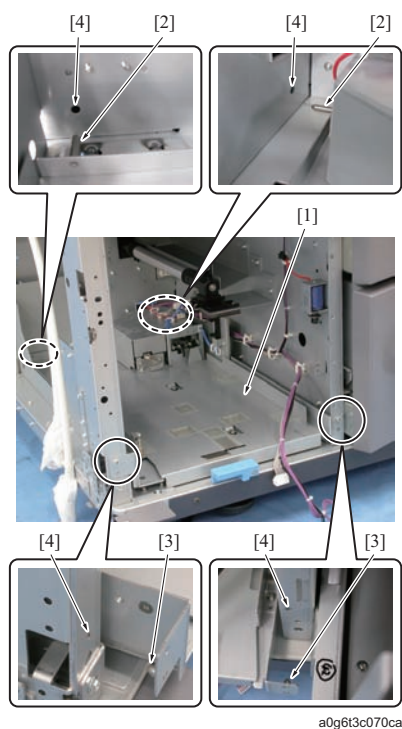
- Waste toner box swing motor (M19)
- : Every 30,000,000 prints

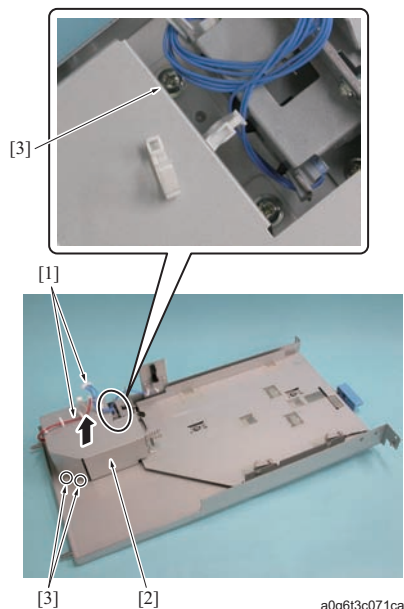
(2) Procedure

1. Remove the toner supply unit. (Refer to [F.4.5.5 Replacing the toner supply sleeves /1 and /2](#))
2. Pull out tray 2. (Refer to [F.4.7.5 Removing/reinstalling the tray](#))
3. Disconnect 4 connectors [1].
4. Remove 2 screws [2] and remove the swing tray unit [3].

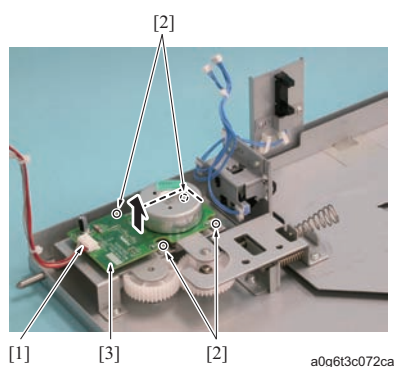
Note

- When reinstalling the swing tray unit [1], be sure to insert 2 guide pins [2] on the rear side and 2 guide pins [3] on the front side into the respective guide holes [4] of the main body frame.





5. Remove the wiring harness [1] from the protective cover /2 [2].
6. Remove 3 screws [3] and then remove the protective cover /2 [2].



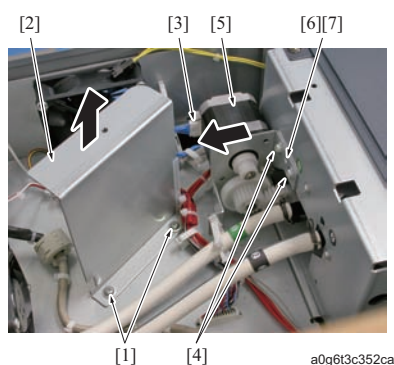
7. Disconnect the connector [1].
8. Remove 4 screws [2] and remove the waste toner box swing motor (M19) [3].
9. Reinstall the above parts following the removal steps in reverse.

4.5.9 Replacing the air separation motor (M10)

(1) Periodically replaced parts/cycle

- Air separation motor (M10)
- : Every 30,000,000 prints

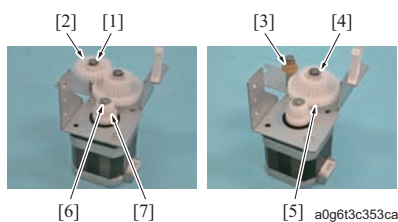
(2) Procedure



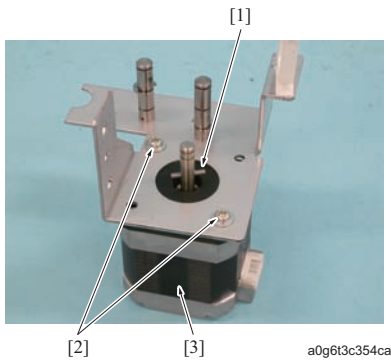
1. Remove the upper cover /Rt. (Refer to [G.2.2.10 Upper cover /Rt](#))
2. Remove 2 screws [1] and remove the exterior reinforcing plate [2].
3. Disconnect the connector [3].
4. Remove 2 screws [4] and remove the air separation motor assy [5].

Note

- When reinstalling the air separation motor assy, be sure to set the projection [7] of the main body to the positioning hole [6].



5. Remove the E-ring [1] and remove the gear [2] and the bearing [3].
6. Remove the E-ring [4] and remove the gear [5].
7. Remove the E-ring [6] and remove the gear [7].



8. Remove the pin [1].
9. Remove 2 screws [2] and remove the air separation motor (M10) [3].
10. Reinstall the above parts following the removal steps in reverse.

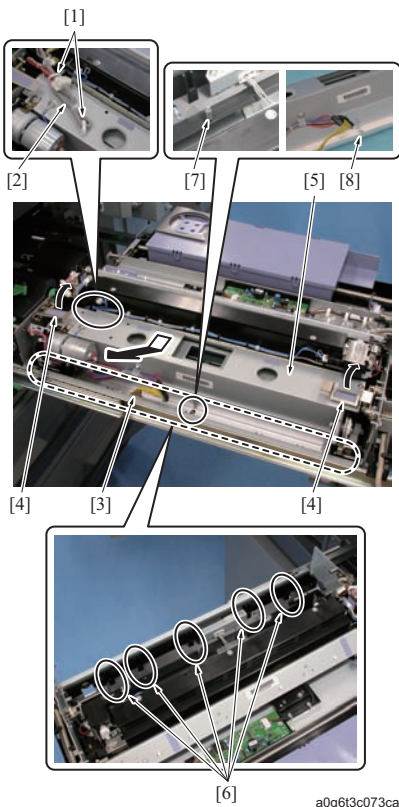
4.6 Cleaning section

4.6.1 Removing/reinstalling the cleaning section

Note

- Be sure to avoid touching the edge of the cleaning blade with bare hands.
- Before reinstalling the cleaning section, be sure to clean the cleaning section with a blower brush and a cleaning pad.
- When reinstalling the cleaning section, be sure to apply setting powder to the entire periphery of the drum and the cleaning blade regardless of these parts being new or used ones.
- When the drum is applied with setting powder, be sure conduct the following operations before installing the photo conductor section to the main body:
 1. To detect an accurate image density, clean setting powder splashed onto the IDC sensor on the toner control board (TCB) with a cotton swab soaked in alcohol. Do not use any materials other than a cotton swab soaked in alcohol to clean the IDC sensor. When cleaning the IDC sensor in other ways, the IDC sensor performance is not warranty. Be sure to replace TCB.
 2. With the charger unit, LPH unit and the developing unit removed, rotate the drum 1 full turn (to prevent splashing of setting powder to the charger and prevent the image from getting blurred).

(1) Procedure



1. Rotate the drum one full turn by hand.

Note

- Be sure to rotate the drum 1 full turn to prevent the toner on the guide brush inside the cleaning section from falling down.

2. Pull out the photo conductor section from the main body. (Refer to [F.4.3.1 Removing/reinstalling the photo conductor section](#))
3. Remove the wiring harness [2] from the clamps [1].
4. Disconnect the connector [3].
5. Release 2 levers [4] that holding the cleaning section and remove the cleaning section [5].

Note

- When removing the cleaning section, be sure to move it along the ribs [6] of the photo conductor section with the opposite side of the drum contacting section slanted to about 15°.
- When reinstalling it, be sure to set the reference pin [7] of the photo conductor section to the notch [8] of the cleaning section.
- When installing the cleaning section, be sure to check that the sheet of the drum scraper assy touches the drum surface evenly.
- If the sheet of the drum scraper assy does not touch the drum surface evenly, replace the drum scraper Assy.

6. Reinstall the above parts following the removal steps in reverse.

4.6.2 Replacing the drum scraper assy/scatter preventive filter assy

Note

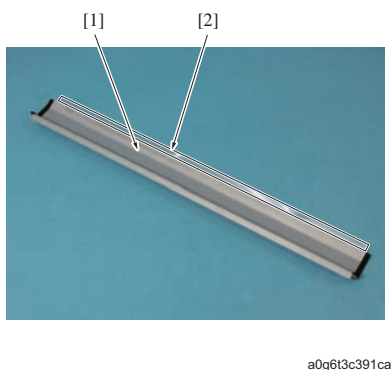
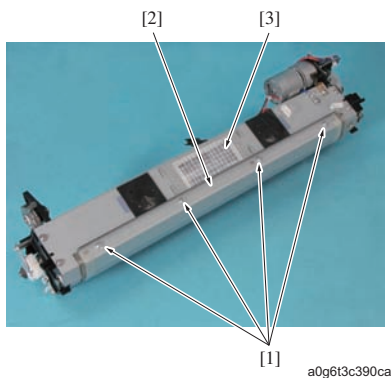
- Be careful not to bend the edge of the drum scraper assy.

(1) Periodically replaced parts/cycle

- Drum scraper assy
: Every 750,000 prints
- Scatter preventive filter assy

: Every 750,000 prints

(2) Procedure



1. Pull out the photo conductor section from the main body. (Refer to [F.4.3.1 Removing/reinstalling the photo conductor section](#))
2. Remove the cleaning section. (Refer to [F.4.6.1 Removing/reinstalling the cleaning section](#))
3. Remove 4 screws [1] and remove the drum scraper assy [2].
4. Remove the scatter preventive filter assy [3].

5. Reinstall the above parts following the removal steps in reverse.

Note

- When installing the drum scraper assy [1], be sure not to touch the edge [2].
- When installing the scatter preventive filter assy, be sure to install it so that the filter side faces outside against the cleaning section.

4.6.3 Replacing the cleaning blade

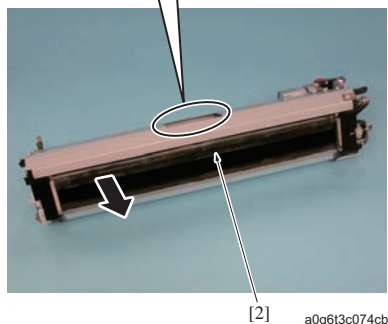
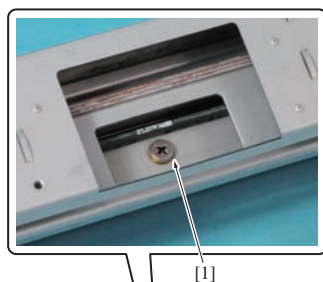
Note

- When replacing the cleaning blades, be sure to replace 2 blades at the same time.
- Be sure to avoid touching the edge of the cleaning blade with bare hands.
- When replacing the cleaning blades, be sure to conduct "Blade Set Mode".

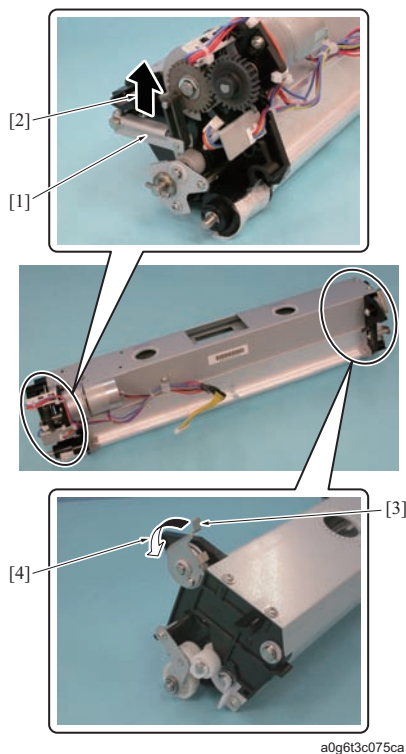
(1) Periodically replaced parts/cycle

- Cleaning blade
: Every 750,000 prints

(2) Procedure



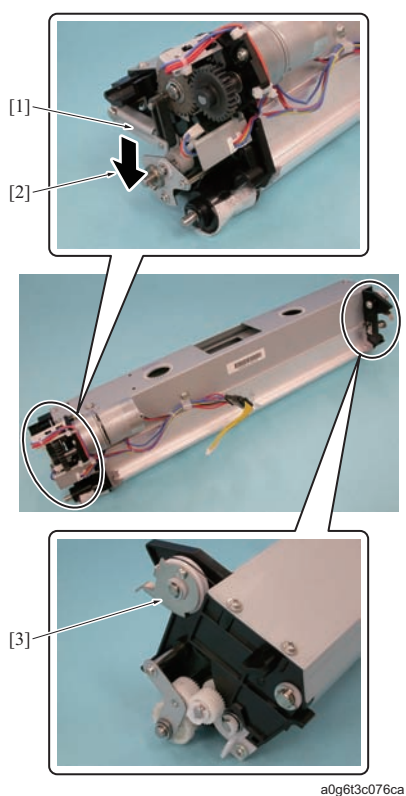
1. Pull out the photo conductor section from the main body. (Refer to [F.4.3.1 Removing/reinstalling the photo conductor section](#))
2. Remove the cleaning section. (Refer to [F.4.6.1 Removing/reinstalling the cleaning section](#))
3. Remove the drum scraper assy and the scatter preventive filter assy. (Refer to [F.4.6.2 Replacing the drum scraper assy/scatter preventive filter assy](#))
4. Remove the screw [1] and remove the cleaning blade /2 [2].
5. Install a new cleaning blade /2.



6. With the blade release arm [1] raised in the arrow-marked direction [2], rotate the blade replacement lever [3] in the arrow-marked direction [4] to turn the cleaning blade /2.

Note

- Be sure to keep the blade release arm raised up, do not let go of it.

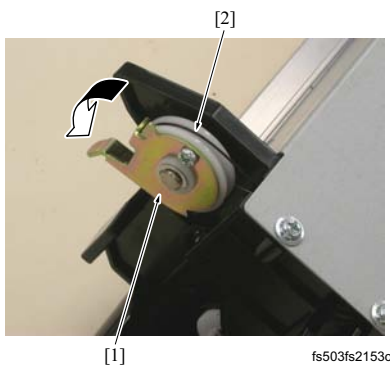
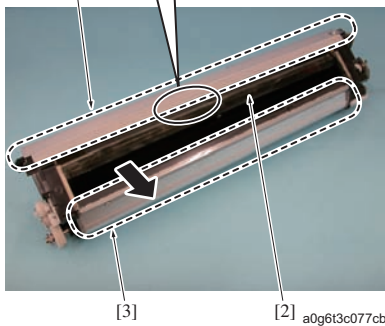
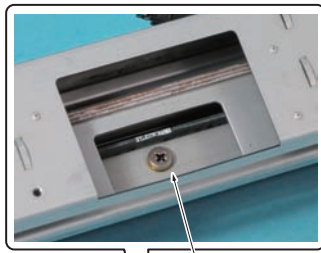


7. Bring down the blade release arm [1] in the arrow-marked direction [2].

Note

- Be sure to keep hold of the blade replacement lever [3] being rotated, do not let go of it.

8. Release the hand that is holding the blade replacement lever.



9. Remove the screw [1] and then remove the cleaning blade /1 [2].
10. Install a new cleaning blade /1.
11. Remove toner adhered to the lower [3] and upper [4] blade sides of the cleaning section with a cleaning pad.
12. Conduct the following items in order.
 - Setting powder application
 - Blade auto replacement spring charge

13. Reinstall the parts after that following the removal steps in reverse.

Note

- After replacing the cleaning blades /1 and /2, be sure to check to see if the blade replacement lever [1] has been pulled.
- After replacing the cleaning blades /1 and /2, be sure to conduct the blade set mode in the service mode to prevent the blade from curling up. (Refer to [1.5.4.9 Blade Setting Mode \(Drum Peculiarity Adjustment\)](#))
- Be sure to avoid using the blade set mode other than when replacing the cleaning blade. Otherwise, the cleaning blade count of the fixed parts count is reset so that the blade is not replaced automatically at the correct timing.

14. After replacing the cleaning blade, conduct the following items in order.
 - Counter reset of the parts counter No.2

4.6.4 Cleaning/replacing the toner seal board**Note**

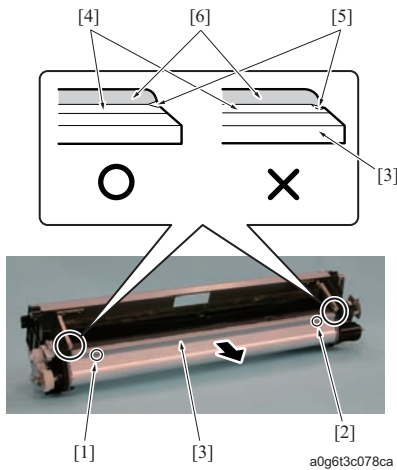
- Be sure to avoid touching the edge of the cleaning blade with bare hands.

(1) Periodic cleaning cycle

- Toner seal board
- : Every 750,000 prints

(2) Periodically replaced parts/cycle

- Toner seal board
- : Every 3,000,000 prints

(3) Procedure

1. Pull out the photo conductor section from the main body. (Refer to [F.4.3.1 Removing/reinstalling the photo conductor section](#))
2. Remove the cleaning section. (Refer to [F.4.6.1 Removing/reinstalling the cleaning section](#))
3. Remove the screws [1] and [2], and then remove the toner seal board [3].
4. Clean the sheet section [4] of the toner seal board with a blower brush and a cleaning pad.

Note

- When reinstalling the toner seal board, be sure to first of all install the screw [1].
- When both sides [5] of the sheet section of the toner seal board get inside of the toner guide brush [6], an overflow toner may occur. On such an occasion, correct the warp so that the warp of the sheet section becomes parallel to the toner guide brush or it turns a little to this side (less than 1mm).

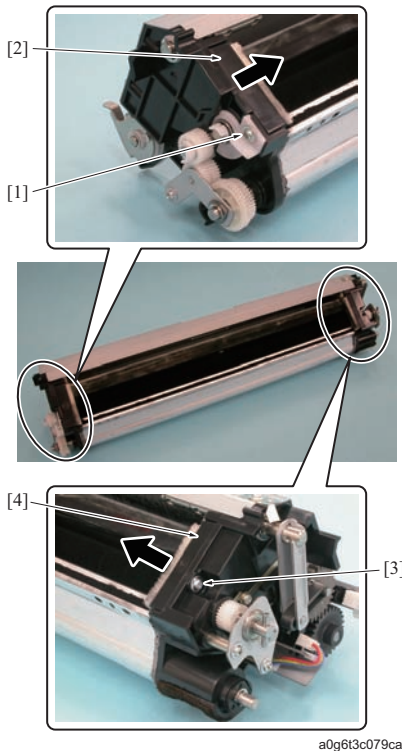
5. Reinstall the above parts following the removal steps in reverse.
6. After replacing the toner seal board, conduct the following item.
 - Counter reset of the parts counter No.25

4.6.5 Replacing the toner guide brush assy/scattering prevention felt/seal plates /Fr and /Rr**Note**

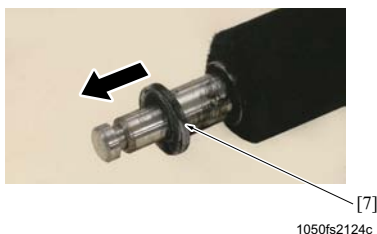
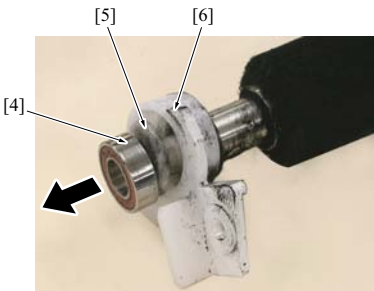
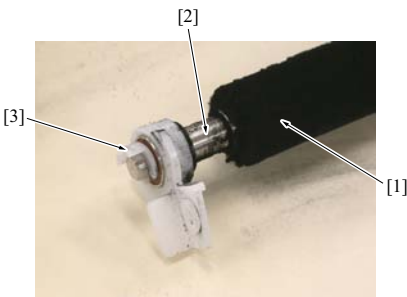
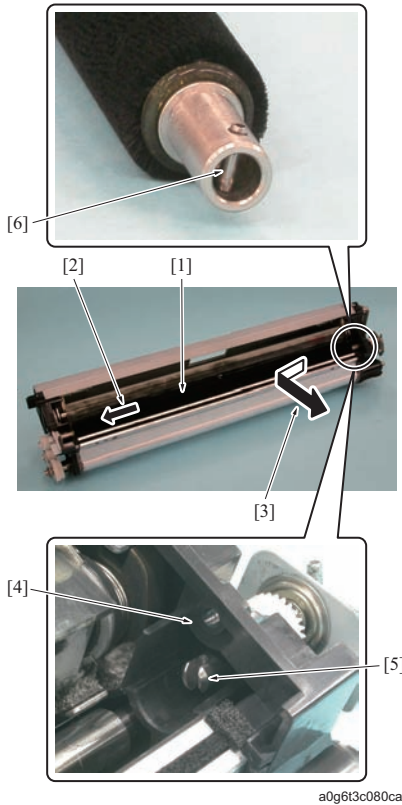
- Be sure to avoid touching the edge of the cleaning blade with bare hands.
- When reinstalling the toner guide brush assy, apply setting powder uniformly with the toner guide brush assy removed.
- Be sure to avoid touching the brush section of the toner guide brush with bare hands. Also, be careful that the brush section does not come in direct contact with other objects.

(1) Periodically replaced parts/cycle

- Toner guide brush assy
: Every 1,500,000 prints
- Scattering prevention felt
: Every 1,500,000 prints
- Seal plate /Fr
: Every 1,500,000 prints
- Seal plate /Rr
: Every 1,500,000 prints

(2) Procedure

1. Pull out the photo conductor section from the main body. (Refer to [F.4.3.1 Removing/reinstalling the photo conductor section](#))
2. Remove the cleaning section. [F.4.6.1 Removing/reinstalling the cleaning section](#)
3. Remove the drum scraper assy and the scatter preventive filter assy. (Refer to [F.4.6.2 Replacing the drum scraper assy/scatter preventive filter assy](#))
4. Remove the cleaning blade. (Refer to [F.4.6.3 Replacing the cleaning blade](#))
5. Remove the toner seal board. (Refer to [F.4.6.4 Cleaning/replacing the toner seal board](#))
6. Remove the screw [1] and then remove the seal plate /Fr [2].
7. Remove the screw [3] and then remove the seal plate /Rr [4].



8. Move the toner guide brush assy [1] in the order of the arrow-marks [2] and then [3] and remove it.

Note

- When reinstalling the toner guide brush assy, be sure to set the pin [6] of the toner guide brush assy to the coupling slit [5] of the cleaning section [4].

9. After removing the toner guide brush assy, clean up the installation section of the seal plates /Fr and /Rr with a vacuum cleaner.

10. Remove the C-clip [3], the bearing [4], the scattering prevention felt [5], the bearing fixing member [6] and the toner prevention collar [7] in this order from the shaft [2] of the toner guide brush assy [1].

Note

- Be careful that the toner prevention collar does not get lost.

11. Reinstall the above parts following the removal steps in reverse.

12. After replacing the toner guide brush assy, the scattering prevention felt and the seal plate /Fr and /Rr, conduct the following steps.

- Setting powder application
- Counter reset of the parts counters No.19, No.20 and No.21

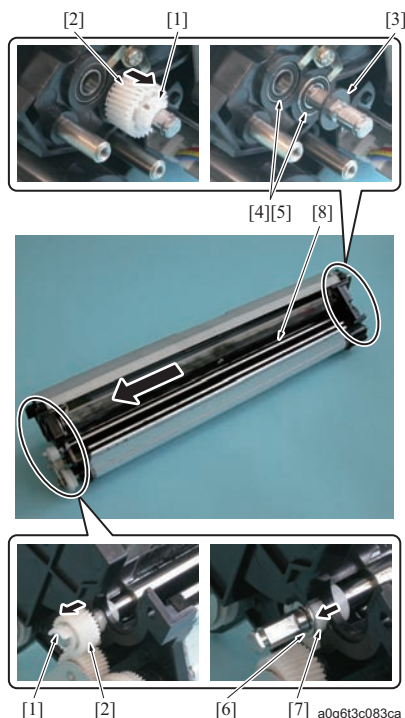
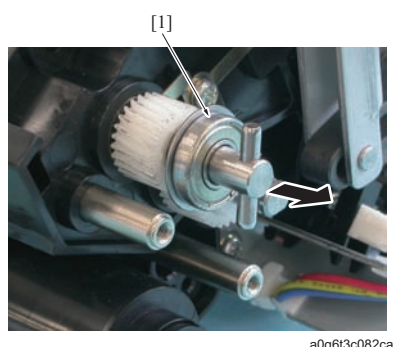
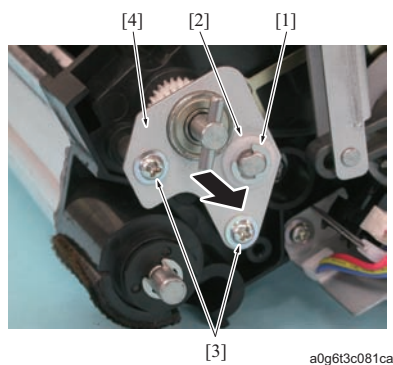
4.6.6 Replacing the guide plate assy

(1) Periodically replaced parts/cycle

- Cleaning gear /A assy
: Every 10,500,000 prints
- Cleaning gear /B
: Every 30,000,000 prints
- Guide plate assy
: Every 1,500,000 prints
- Guide shaft

: Every 6,000,000 prints

(2) Procedure



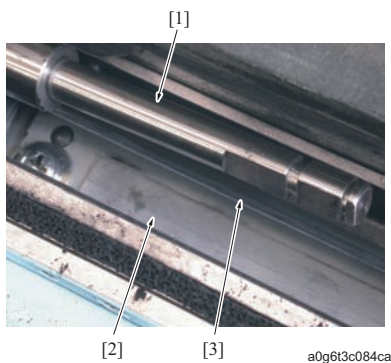
1. Pull out the photo conductor section from the main body. (Refer to [F.4.3.1 Removing/reinstalling the photo conductor section](#))
 2. Remove the cleaning section. (Refer to [F.4.6.1 Removing/reinstalling the cleaning section](#))
 3. Remove the drum scraper assy and the scatter preventive filter assy. (Refer to [F.4.6.2 Replacing the drum scraper assy/scatter preventive filter assy](#))
 4. Remove the cleaning blade. (Refer to [F.4.6.3 Replacing the cleaning blade](#))
 5. Remove the toner seal board. (Refer to [F.4.6.4 Cleaning/replacing the toner seal board](#))
 6. Remove the seal plate and the toner guide brush assy. (Refer to [F.4.6.5 Replacing the toner guide brush assy/scattering prevention felt/seal plates /Fr and /Rr](#))
 7. Remove the E-ring [1] and remove the cleaning mounting lever collar [2].
 8. Remove 2 screws [3] and remove the drive reinforcing plate [4].
- Note**
- When reinstalling the drive reinforcing plate, be sure to tighten the screws [3] in this order after fastening each of the cleaning mounting lever collar with the E-ring.
9. Remove the cleaning gear /A assy [1].

10. Remove the retaining rings [1], 1 each, and remove 2 cleaning gears /B [2].
11. Remove the spacer [3].

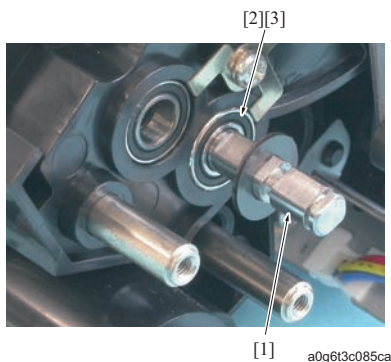
Note

- While removing the cleaning gear /A assy or the cleaning gear /B [2], the bearing [4] and the splash prevention felt [5] may come off. If the felt become detached, make sure to replace it with a new one.

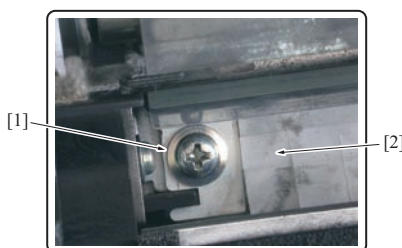
12. Remove the E-ring [6] and remove the cleaner bearing [7].
13. Pull out the guide shaft [8].

**Note**

- When reinstalling the guide shaft [1], be sure to insert it with the edge [3] of the guide plate assy [2] lowered by the scale.

**Note**

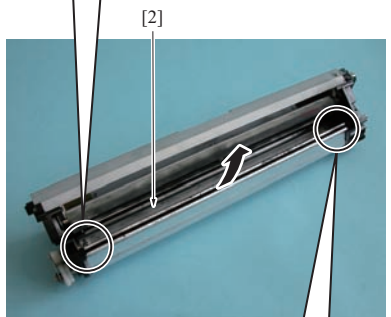
- When reinstalling the guide shaft [1], be sure to insert it while holding it down from the outside so that the bearing [2] does not come off.
- If the bearing and the splash prevention felt [3] come off while inserting the guide shaft, be sure to replace the splash prevention felt with a new one.



14. Remove 2 screws [1] and then remove the guide plate assy [2].

Note

- When reinstalling the toner guide plate assembly, be sure to hit it against the lower side before fixing it.

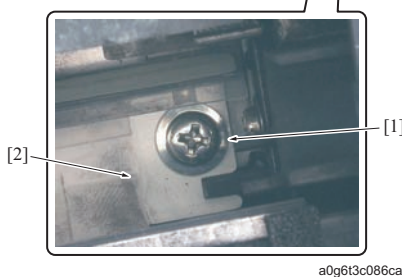


15. Clean up the exterior of the cleaning unit with a cleaning pad and a blower brush.

16. Reinstall the above parts following the removal steps in reverse.

17. After replacing the cleaning gear /A assy and /B, the toner guide plate assy and the guide shaft, conduct the following steps.

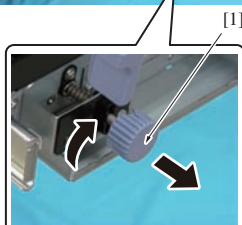
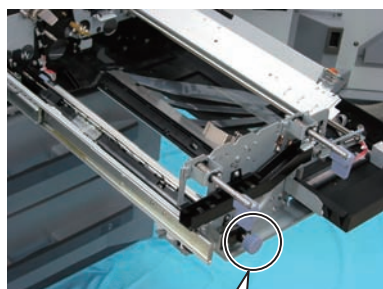
- Setting powder application
- For the cleaning gear /A assy: Counter reset of the parts counter No.23
- For the cleaning gear /B assy: Counter reset of the parts counter No.24
- For the guide plate assy: Counter reset of the parts counter No. 26
- For the guide shaft: Counter reset of the parts counter No.71



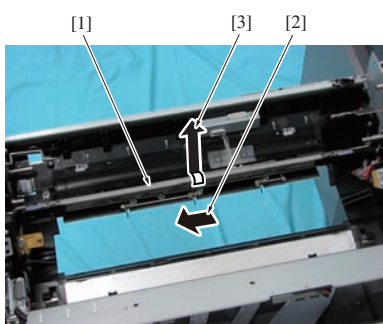
4.6.7 Replacing the discharge wire/PCC unit

(1) Periodically replaced parts/cycle

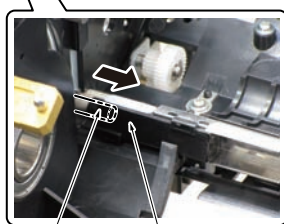
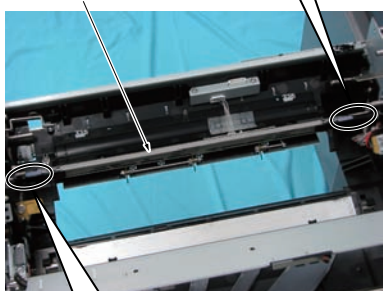
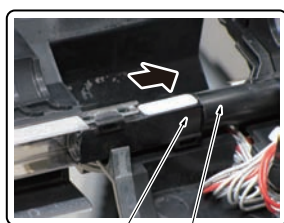
- PCC unit
: Every 6,000,000 prints
- Discharge wire
: Every 750,000 prints

(2) Procedure

a0g6t3c386ca



a0g6t3c387ca



a0g6t3c392ca

1. Remove the drum. (Refer to [F.4.3.8 Replacing the drum/cleaning of the photo conductor section](#))
2. Pull the PCC fixing knob [1] and rotate it 90°.

3. Move the PCC unit [1] in the arrow-marked direction [2]. Lift the PCC unit [1] in the arrow-marked direction [3] to remove it.

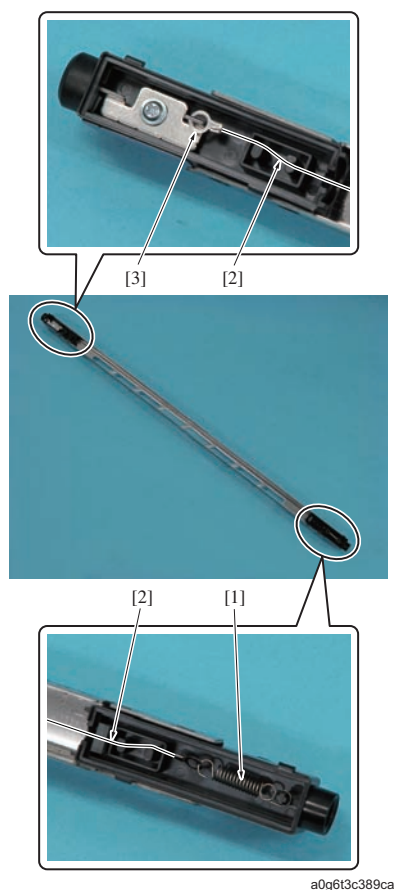
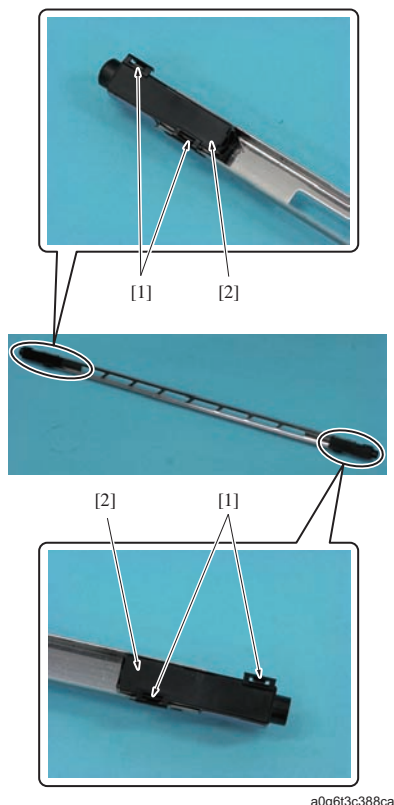
Note

- When removing the PCC unit, be sure to remove the front side first and then remove the rear side. Removing the PCC in reverse order may damage the spring of the power feed section and cause C-2705.

Note

- When reinstalling the PCC unit [1], be sure to reinstall the rear side first and then reinstall the front side.
- When reinstalling the PCC unit [1], be sure to check that the rear side [2] of the PCC unit is contacted with the power feed section [3] of the drum stand and the locking shaft [4] is inserted in the front side [5] of the PCC unit.

4. Remove 4 claws [1] and remove 2 covers [2].



5. Remove the spring [1] and remove the discharge wire [2] from the hook [3].

6. Reinstall the above parts following the removal steps in reverse.

Note

- When reinstalling the discharge wire [2], be sure to install the discharge wire [2] to the hook [3] first and then install the spring [1].
- The path of the discharge wire [2] should be the same as the illustration.

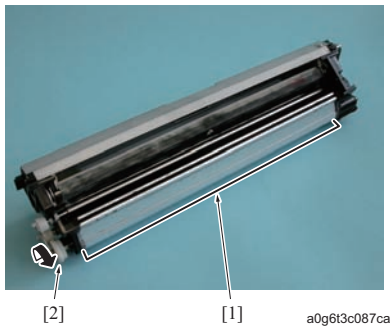
7. After replacing the discharge wire/PCC unit, conduct the following steps.

- For the discharge wire: Counter reset of the parts counter No.74
- For the PCC unit: Counter reset of the parts counter No.73

4.6.8 Cleaning when removing the cleaning unit (when conducting maintenance work)

Note

- When removing the cleaning unit, be sure to clean thoroughly both the inside and the inner wall of the cleaning unit with as little toner left as possible. When cleaning is insufficient, toner spills over the conveyance section.

(1) Procedure

1. Pull out the photo conductor section from the main body. (Refer to [F.4.3.1 Removing/reinstalling the photo conductor section](#))
2. Remove the cleaning section. (Refer to [F.4.6.1 Removing/reinstalling the cleaning section](#))
3. Remove the drum scraper Assy and the scatter preventive filter assy. (Refer to [F.4.6.2 Replacing the drum scraper assy/scatter preventive filter assy](#))
4. Remove the cleaning blade. (Refer to [F.4.6.3 Replacing the cleaning blade](#))
5. Remove the toner seal board. (Refer to [F.4.6.4 Cleaning/replacing the toner seal board](#))
6. Remove the toner guide brush assy and the seal plates /Fr and / Rr. (Refer to [F.4.6.5 Replacing the toner guide brush assy/ scattering prevention felt/seal plates /Fr and /Rr](#))
7. Tap the casing [1] section softly to let the toner adhering to the inner wall drop off.
8. Rotate the gear [2] in the arrow-marked direction to discharge toner to the outside.
9. Repeat the steps 5 and 6 until there is no toner discharged. Then clean the inside with a vacuum cleaner at the last.
10. Clean the cleaning unit mounting place (photo conductor section) with a vacuum cleaner.

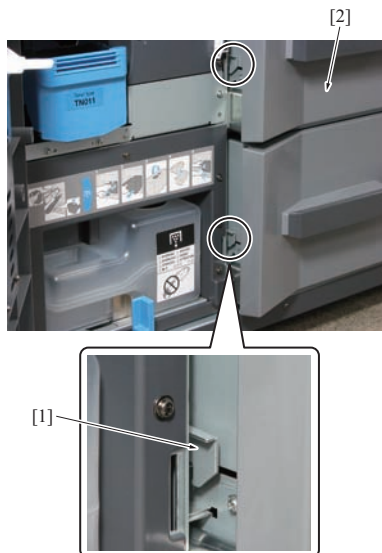
Note

- When cleaning it with a vacuum cleaner, be careful that the vacuum cleaner does not come into contact with drum.

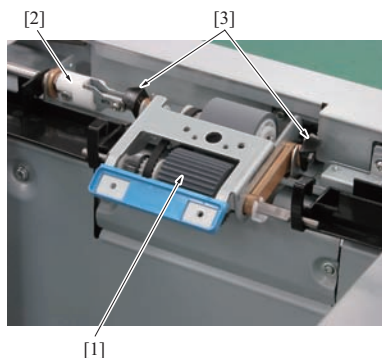
11. Reinstall the above parts following the removal steps in reverse.

4.7 Paper feed section**4.7.1 Removing/reinstalling the pick-up roller assembly/separation roller assy****Note**

- The method for replacing the pick-up roller assy/separation roller assy is common for tray1 and tray2. The explanation here is given for tray /1.
- After completion of the installation, rotate the pick-up roller in the direction of the paper feed (counterclockwise as seen from the front) to check to see if the paper feed roller, the belt and the coupling section rotate smoothly. The rotation of the pick-up roller is restricted only to the direction of the paper feed (counterclockwise as seen from the front) and be sure not to turn it clockwise.
- Be sure to take note that the direction of the pick-up roller is different for the main body and the PF.

(1) Procedure

1. When the power switch is off, open the toner supply door.
2. Raise up the tray lock lever [1] slightly and pull out the tray [2].



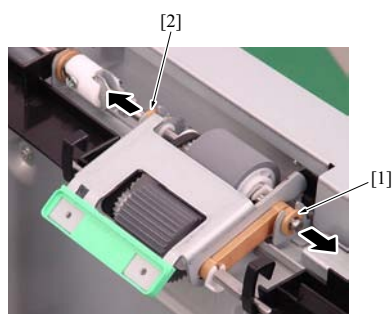
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3. Turn the pick-up roller [1] in the direction of the arrow (counterclockwise as seen from the front side) to make the coupling [2] upright.

Note

- The rotation of the pick-up roller [1] is restricted only to the arrow-marked direction (counterclockwise). It does not rotate in the reverse direction (clockwise). So, be sure not to turn it in this direction forcibly.

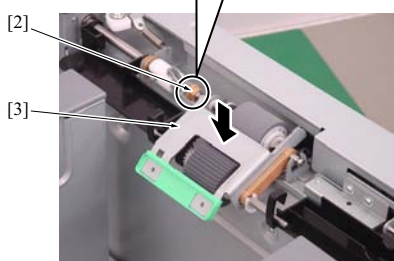
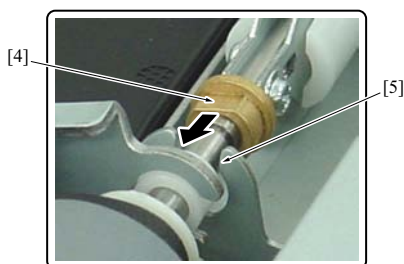
4. Remove 2 C-clips [3].



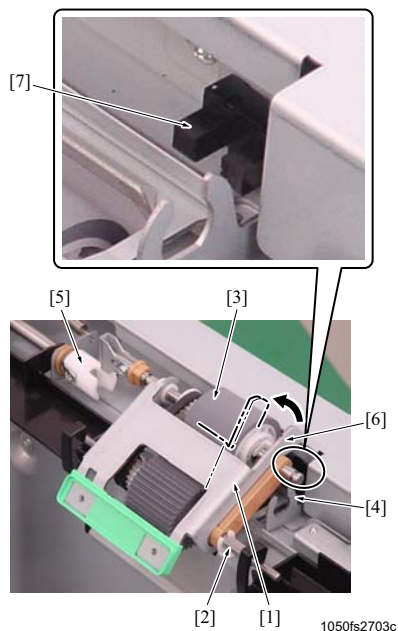
5. Remove the bearing /Fr [1].
6. Slide the bearing /Rr [2] to the rear side.

Note

- When installing the bearing /Fr [1], /Rr [2], insert it in the notch [5] of the metal frame while pressing down a little the metal frame [3] of the pick-up roller assembly to make level the flat portion [4] of the bearing /Rr [2]. Then insert the bearing /Fr [1] in the same manner as with the bearing /Rr.



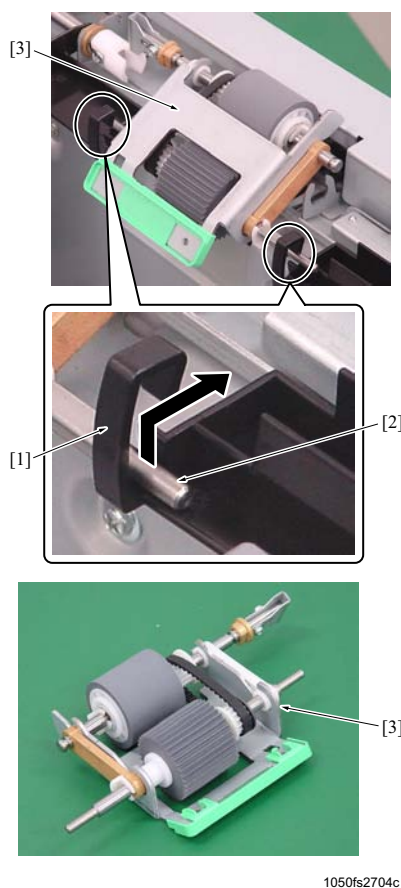
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7. Hold the pick-up roller assy [1] by hand and lift the paper feed roller [3] up to tilt while rotating it around the shaft [2] of the pick-up roller, and then remove it from the notch [4] of the bearing and the coupling [5].

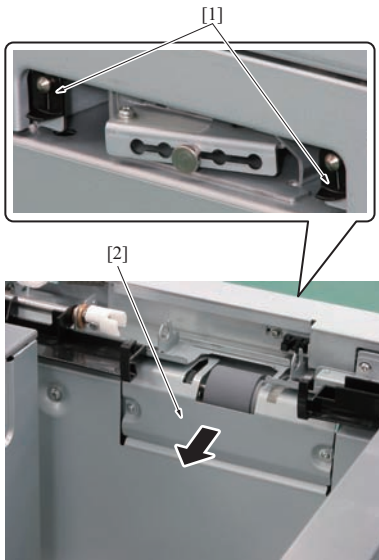
Note

- When removing the pick-up roller assy [1], be careful not to damage the sensor [7] with the metal frame [6].



8. Remove the pick-up roller shaft [2] from the arm [1] of the paper feed guide plate and then remove the pick-up roller assy [3].

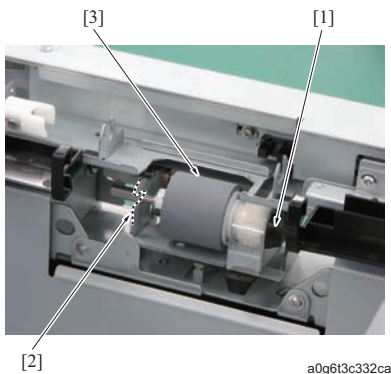
9. Remove 2 C-clips [1] and remove the entrance guide plate [2].



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10. Remove the C-clip [1].

11. Remove the separation roller [3] together with the shaft from the notch [2].



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12. Remove 2 screws [1].

Note

- When reinstalling it, fasten it with the screws while pressing down the separation roller assy [2].

13. After pulling out the front side of the separation roller assy [2], remove the coupling [3] in the rear from the joint [4].

Note

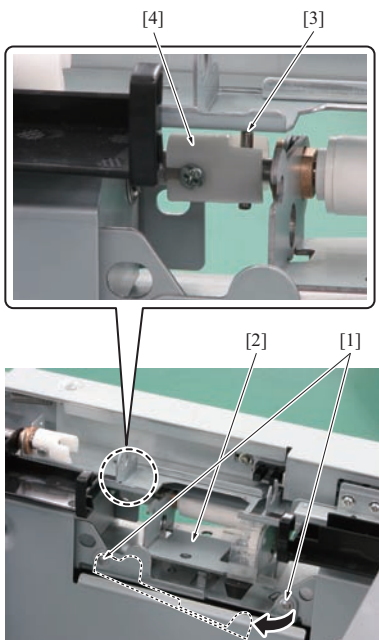
- When reinstalling it, be sure to engage the coupling pin [3] with the joint [4] before installation.

14. Reinstall the above parts following the removal steps in reverse.

Note

- After completion of the installation, hold the pick-up roller slightly and rotate it in the direction of the paper feed (counterclockwise as seen from the front) to check to see if the paper feed roller, the belt and the coupling section rotate smoothly.

(The rotation of the pick-up roller is restricted only to the direction of the paper feed (counterclockwise as seen from the front) and be sure not to turn it clockwise.)



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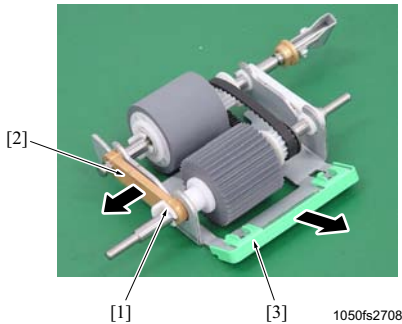
4.7.2 Replacing the pick-up roller/paper feed roller

Note

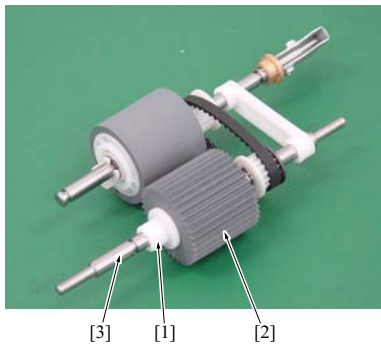
- The outward appearance of the collar is identical for the paper feed roller and the separation roller. However, the collar of the paper feed roller has a one-way mechanism on the inside while the collar of the separation roller does not. Be careful not to confuse one with the other.

(1) Periodically replaced parts/cycle

- Pick-up roller
: Every 2,250,000 prints (Actual replacement cycle: every 500,000 prints)
- Paper feed roller
: Every 2,250,000 prints (Actual replacement cycle: every 500,000 prints)

(2) Procedure

1. Remove the pick-up roller assy.
2. Remove the C-clip [1], remove the coupling bearing [2] and then remove the mounting bracket [3].



3. Pull out the shaft [3] from the collar [1] and remove the pick-up roller [2] from the collar [1].

Note

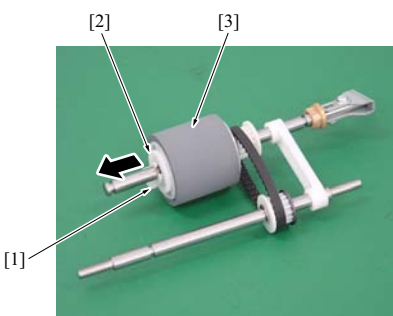
- When reinstalling it, take note of the direction of the pick-up roller. Be sure to insert the collar [1] from the side provided with the groove [4].



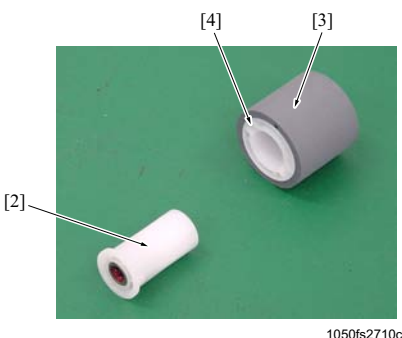
4. Remove the C-clip [1] and pull out the collar [2] and the paper feed roller [3].

Note

- When reinstalling it, take note of the direction of the paper feed roller. Be sure to insert the collar [2] from the side provided with the groove [4].



5. Reinstall the above parts following the removal steps in reverse.
6. After replacing the pick-up roller and paper feed roller, conduct the following items.
 - For the pick up roller of the tray1: Counter reset of the parts counter No.78
 - For the paper feed roller of the tray1: Counter reset of the parts counter No.79
 - For the pick up roller of the tray2: Counter reset of the parts counter No.82
 - For the paper feed roller of the tray2: Counter reset of the parts counter No.83



4.7.3 Replacing the separation roller

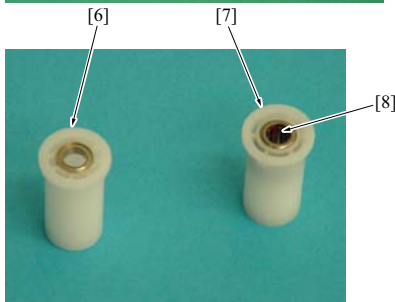
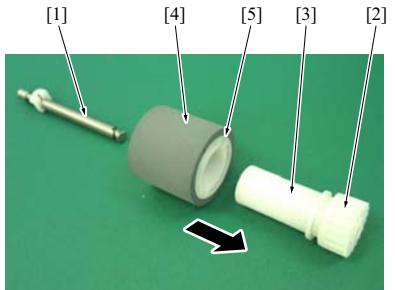
Note

- The outward appearance of the collar is identical for the separation roller and the paper feed roller. However, the collar of the paper feed roller has a one-way mechanism on the inside while the collar of the separation roller does not. Be careful not to confuse one with the other.

(1) Periodically replaced parts/cycle

- Separation roller
: Every 2,250,000 prints (Actual replacement cycle: Every 500,000 prints)

(2) Procedure



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- Remove the separation roller together with the shaft.
- Pull out the gear [2], the collar [3] and the separation roller [4] from the shaft [1] in the arrow-marked direction and remove them.

Note

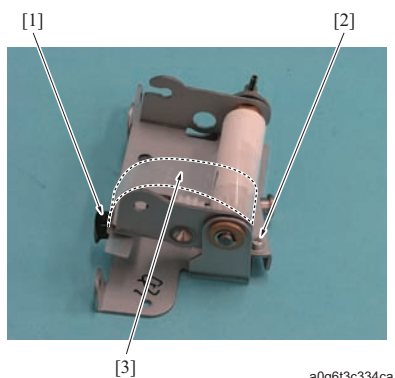
- When reinstalling it, take note of the direction of the separation roller. Be sure to insert it into the shaft [2] from the side provided with the groove [5].
 - The outward appearance is identical for the collar [6] of the separation roller and the collar [7] of the paper feed roller. However, the one-way mechanism is provided on the inside of the collar [7] of the paper feed roller with no mechanism provided for the collar [6] of the separation roller. Be careful not to confuse one with the other.
- Reinstall the above parts following the removal steps in reverse.
 - After replacing the separation roller, conduct the following items.
 - For the paper feed roller of the tray1: Counter reset of the parts counter No.79
 - For the paper feed roller of the tray2: Counter reset of the parts counter No.83

4.7.4 Replacing the torque limiter /A and the cover

(1) Periodically replaced parts/cycle

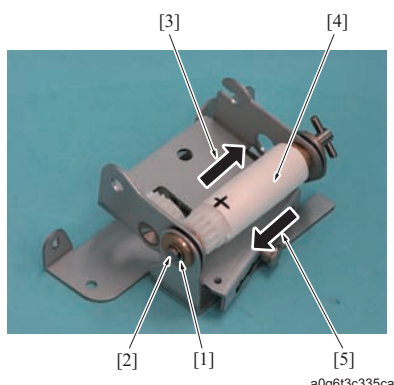
- Torque limiter /A
: Every 10,500,000 prints (Actual replacement cycle: Every 10,500,000 prints)
- Cover
: Every 10,500,000 prints (Actual replacement cycle: Every 10,500,000 prints)

(2) Procedure

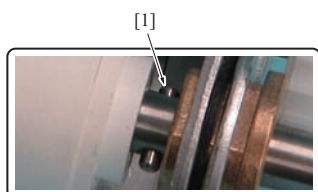


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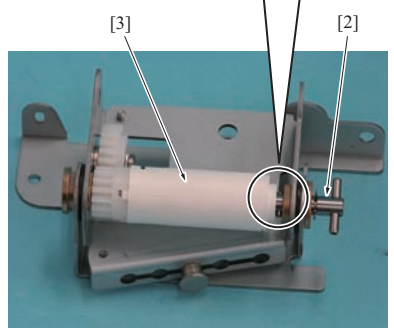
- Remove the pick-up roller assy. (Refer to [F.4.7.1 Removing/reinstalling the pick-up roller assembly/separation roller assy](#))
- Remove the separation roller assy. (Refer to [F.4.7.1 Removing/reinstalling the pick-up roller assembly/separation roller assy](#))
- Remove the separation roller. (Refer to [F.4.7.3 Replacing the separation roller](#))
- Remove the C-clips [1] and the screw [2], and then remove the cover [3].



5. Remove the E-ring [1] and move the shaft [2] in the arrow-marked direction [3].
6. Move the torque limiter /A [4] in the arrow-marked direction [5].



7. Remove the pin [1], and pull out the shaft [2] to remove the torque limiter /A [3].
8. Reinstall the above parts following the removal steps in reverse.



4.7.5 Removing/reinstalling the tray

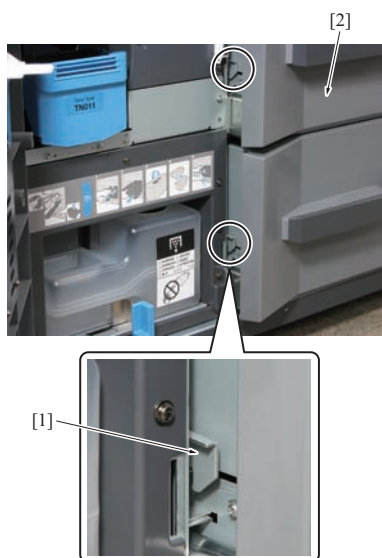
⚠ CAUTION

- Be sure to perform this operation with 2 people because the tray unit is heavy.

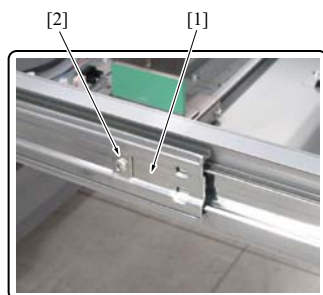
Note

- The procedure for removing/reinstalling the trays /1 to /2 is identical. The explanation here is made of the tray /1.
- When raising up the tray, be sure to hold it at the specified positions. Holding it at positions other than those positions specified damage the tray, thus resulting in a paper feed jam.

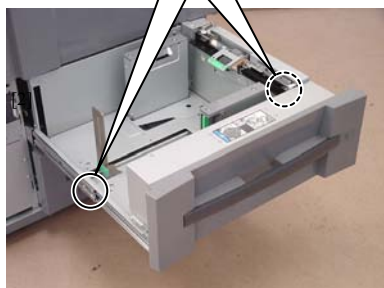
(1) Procedure



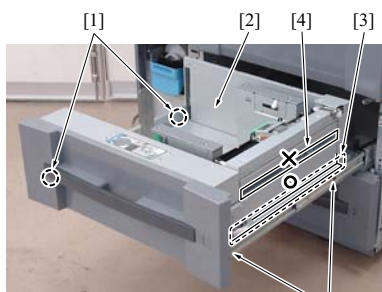
1. Open the toner supply door.
2. Raise up the tray lock lever [1] slightly and pull out the tray [2].
3. If any paper remaining, remove it.



4. Remove the stopper screws [2], 1 each, provided at either side of the rail [1] and pull the tray further out.



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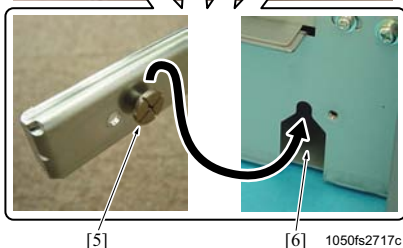
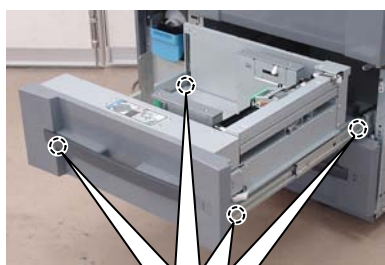
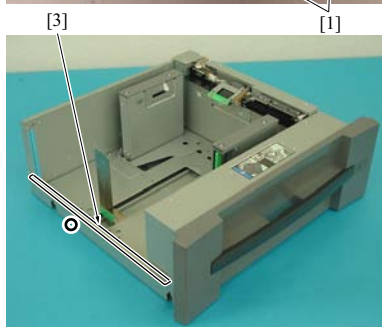


5. Remove the screws [1], 1 each, provided at either side of the rail, hold the tray [2] at the specified positions [3] and raise it up to remove it.

Note

- When raising up the tray, be sure to hold it at the specified positions [3] and raise it up with 2 persons.
- Be sure to avoid holding it at positions [4] that can be easily deformed. This may affect the paper tray, thus resulting in a jam.
- When reinstalling it, be sure to check to see if the knobs [5] provided at the 4 places on the rail are securely in the notches [6] of the tray.

6. Reinstall the above parts following the removal steps in reverse.



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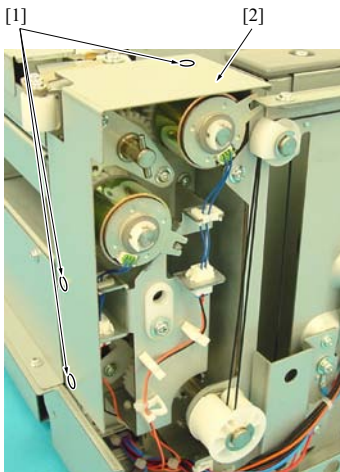
4.7.6 Replacing the paper feed clutch/separation clutch

(1) Periodically replaced parts/cycle

- Paper feed clutch /1 (CL4), /2 (CL6)
: Every 15,000,000 prints (Actual replacement cycle: Every 3,000,000 prints)

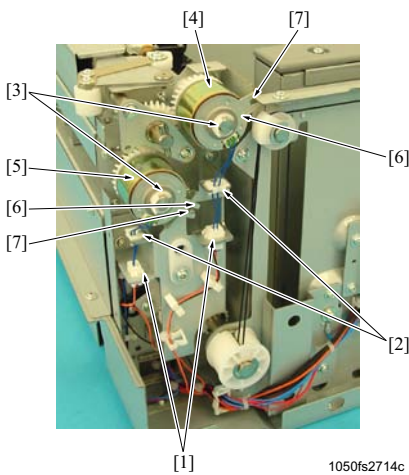
- Forced separation clutch /1 (CL5), /2 (CL7)
: Every 15,000,000 prints (Actual replacement cycle: Every 3,000,000 prints)

(2) Procedure



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1. Remove the rail stopper screw of the tray and pull out the tray.
2. Remove 3 screws [1] and then remove the clutch cover [2].



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3. Disconnect 2 connectors [1] and remove the 2 wire binding bands [2].
4. Remove 2 C-clips [3] and then remove the paper feed clutch [4] and the separation clutch [5].

Note

- When reinstalling it, be sure to engage the stopper [6] of the clutch with the stopper section [7].

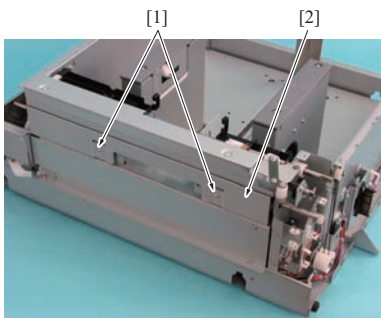
5. Reinstall the above parts following the removal steps in reverse.
6. After replacing the paper feed clutches /1 (CL4) and /2 (CL6) and the separation clutches /1 (CL5) and /2 (CL7), conduct the following steps.
 - For the paper feed clutch /1: Counter reset of the parts counter No.80
 - For the paper feed clutch /2: Counter reset of the parts counter No.84
 - For the paper feed clutch /1: Counter reset of the parts counter No.81
 - For the paper feed clutch /2: Counter reset of the parts counter No.85

4.7.7 Replacement procedure of the parts at the separation section

(1) Periodically replaced parts/cycle

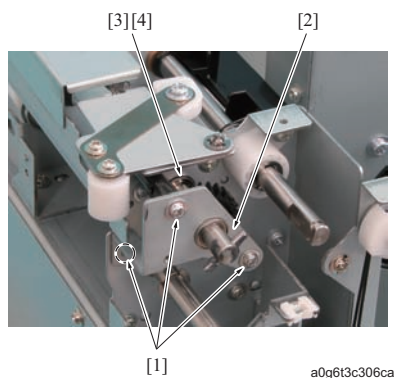
- Paper feed input shaft
: Every 20,250,000 prints
- Bearing /D
: Every 20,250,000 prints
- Reverse rotation shaft
: Every 20,250,000 prints
- Bearing /C
: Every 20,250,000 prints
- Input gear
: Every 20,250,000 prints (Actual replacement cycle: Every 10,500,000 prints)

(2) Procedure

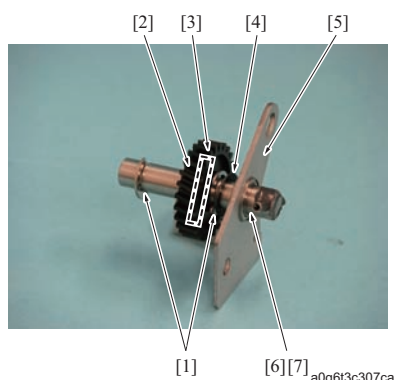


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1. Remove the pick-up roller assy. (Refer to [F.4.7.1 Removing/reinstalling the pick-up roller assembly/separation roller assy](#))
2. Remove the separation roller assy. (Refer to [F.4.7.1 Removing/reinstalling the pick-up roller assembly/separation roller assy](#))
3. Remove the paper feed clutch and the separation clutch. (Refer to [F.4.7.6 Replacing the paper feed clutch/separation clutch](#))
4. Remove 2 screws [1] and remove the separation cover [2].



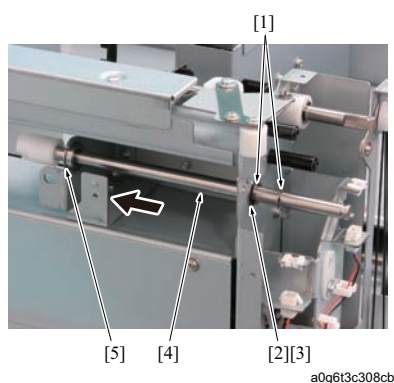
5. Remove 3 screws [1], and then remove the paper feed input assy [2], the bearing /D [3], and the washer[4].



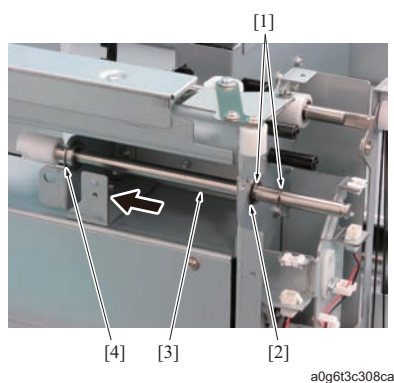
6. Remove 2 E-rings [1], and remove the input gear [2], the pin [3], washer [4], the mounting plate [5], the washer [6], and the bearing /D [7].

Note

- When removing the input gear [2], be careful not to drop the pin [3].



7. Remove 2 E-rings [1], and remove the washer [2] and the bearing / D [3].
8. Move the reverse rotation shaft assy [4] in the arrow-marked direction to remove it from the notch [5].

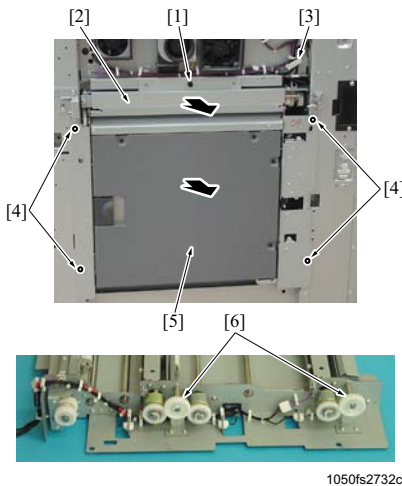


9. Remove the washer [1] and the bearing /C [2].
10. Remove the screw [3] and remove the coupling [4].
11. Remove the E-ring [5] from the reverse rotation shaft [6].
12. Reinstall the above parts following the removal steps in reverse.

4.8 Vertical conveyance section

4.8.1 Removing/reinstalling the vertical conveyance unit

(1) Procedure



1. Remove the right cover.
2. Pull the knob [1] and remove the paper dust guide holder [2].

Note

- The roller get stained with paper dust that has gathered in the paper dust guide holder [2]. Be sure to remove it when removing the vertical conveyance unit.

3. Disconnect the connector [3].
4. Remove 4 screws [4] and then remove the vertical conveyance unit [5].

Note

- When placing the vertical conveyance unit, be sure to place it with the jam open/close door side down. Be sure not to put the roller side down since it damages the gear [6]. When placing it with the roller side down, be sure to remove 2 gears [6].

5. Reinstall the above parts following the removal steps in reverse.

Note

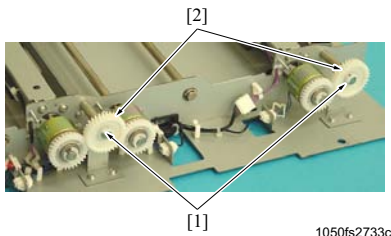
- Pulling out the main body tray with the vertical conveyance unit removed damages the guide roller that brings down forcibly the pick-up roller of the main body tray. Be sure not to pull out the main body tray with the vertical conveyance unit removed.
- When reinstalling it, be sure to move the vertical conveyance unit [5] to the rear side and tighten it up with the screws [4].

4.8.2 Replacing the pre-registration clutch/vertical conveyance clutch

(1) Periodically replaced parts/cycle

- Pre-registration clutch /1 (CL1), /2 (CL3)
: Every 15,000,000 prints (Actual replacement cycle: Every 3,000,000 prints)
- Vertical conveyance clutch (CL2)
: Every 15,000,000 prints (Actual replacement cycle: Every 3,000,000 prints)

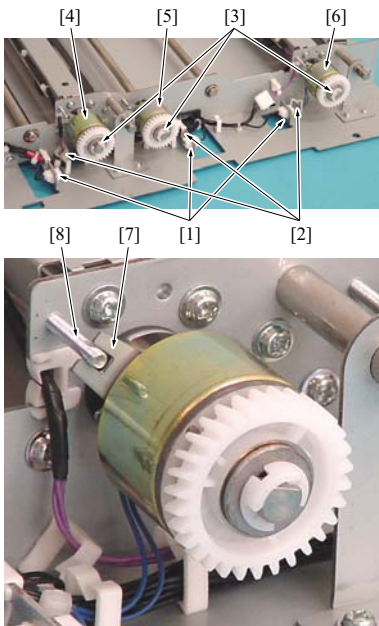
(2) Procedure



1. Remove the right cover.
2. Remove the vertical conveyance unit. (Refer to [F.4.8.1 Removing/reinstalling the vertical conveyance unit](#))
3. Remove 2 C-clips [1] and then remove 2 gears [2].

Note

- When reinstalling it, take note of the direction of the gears.



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4. Disconnect 3 connectors [1] and remove 3 wire binding bands [2].
5. Remove 3 C-clips [3] and then remove the pre-registration clutch / 1 (CL1) [4], the vertical conveyance clutch (CL2) [5], and the pre-registration clutch /2 (CL3) [6].

Note

- When reinstalling it, set the stopper [7] of the clutch to the screw [8].

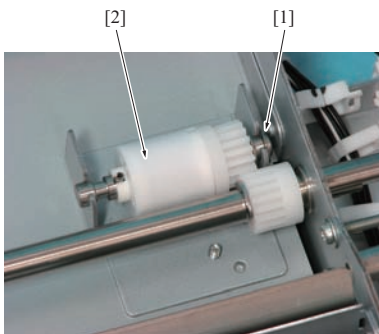
6. Reinstall the above parts following the removal steps in reverse.
7. After replacing the pre-registration clutches /1 (CL1) and /2 (CL3) and the vertical conveyance clutch (CL2), conduct the following steps.
 - For the pre-registration clutch /1: Counter reset of the parts counter No.143.
 - For the pre-registration clutch /2: Counter reset of the parts counter No.145.
 - For the vertical conveyance clutch: Counter reset of the parts counter No.144

4.8.3 Replacing the pre-registration rollers /1 and /2, the pre-registration bearing, the conveyance rollers /2 and /3, and the torque limiter

(1) Periodically replaced parts/cycle

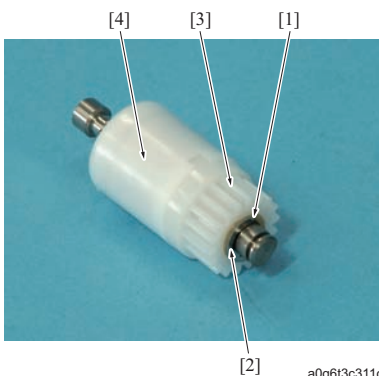
- Pre-registration roller /1 and /2
: Every 20,250,000 prints (Actual replacement cycle: Every 6,000,000 prints)
- Pre-registration bearing
: Every 20,250,000 prints (Actual replacement cycle: Every 6,000,000 prints)
- Conveyance roller /2
: Every 20,250,000 prints (Actual replacement cycle: Every 6,000,000 prints)
- Conveyance roller /3
: Every 20,250,000 prints (Actual replacement cycle: Every 6,000,000 prints)
- Torque limiter
: Every 20,250,000 prints (Actual replacement cycle: Every 6,000,000 prints)

(2) Procedure



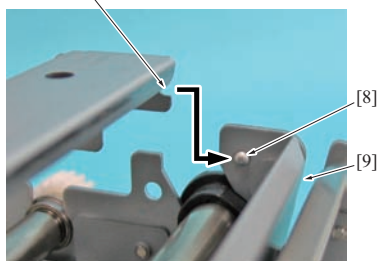
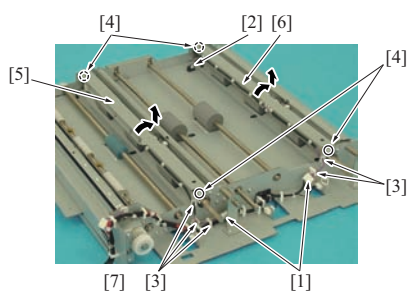
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1. Remove the right cover.
2. Remove the vertical conveyance unit. (Refer to [F.4.8.1 Removing/reinstalling the vertical conveyance unit](#))
3. Remove the pre-registration clutches /1 (CL1) and /2 (CL3) and the vertical conveyance clutch (CL2). (Refer to [F.4.8.2 Replacing the pre-registration clutch/vertical conveyance clutch](#))
4. Remove the E-ring [1] and remove the torque limiter [2] together with the shaft.

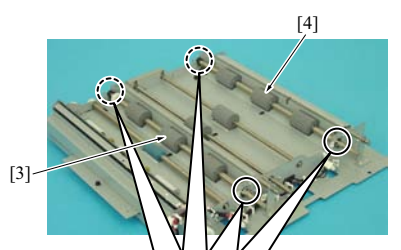


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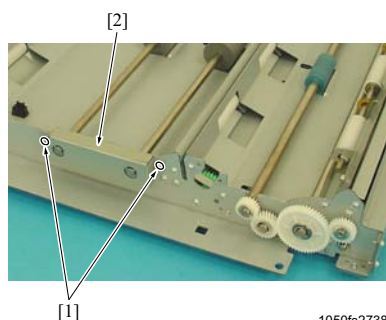
5. Remove the E-ring [1], and then remove the collar [2], the gear [3] and the torque limiter [4].



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6. Disconnect 2 connectors [1] and the connector [2], and remove the wire binding bands [3] at the 5 places.
7. Remove 4 screws [4] (one each at either side of each roller) and then remove the roller covers /1 [5] and /2 [6].

Note

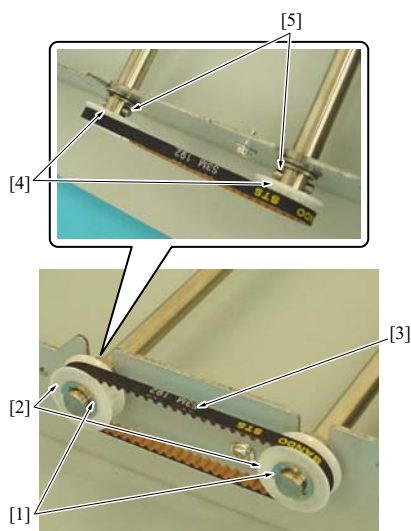
- Be careful not to damage the sensor.
- When removing the roller covers /1 [5] and /2 [6], be sure to pull up the upper side.
- When reinstalling the roller covers /1 [5] and /2 [6], be sure to set the grooves [7] at both sides to the projection [8] and then press it slightly in the direction of the paper through slit [9].

8. Remove the E-rings [1], 1 each for 4 places, the pre-registration bearings [2], 1 each, the pre-registration rollers /1 [3] and /2 [4].

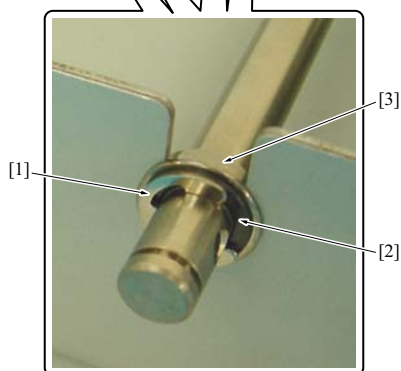
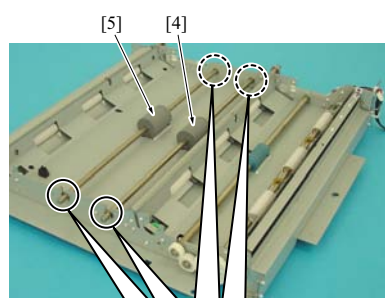
Note

- When removing and reinstalling the pre-registration rollers /1 [3] and /2 [4], be careful not to damage them with the corners of the guide plate.
- When reinstalling the pre-registration bearing [2], raise the conveyance guide plate so that it gets into the jam release condition. In this way, the bearing can be installed easily.

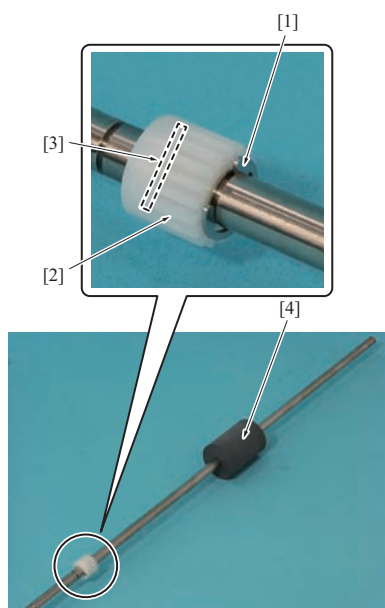
9. Remove 2 screws [1] and remove the cover [2].



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10. Remove 2 E-rings [1], 2 belt stoppers [2], the conveyance belt /A [3], 2 conveyance pulleys [4] and 2 pins [5].

11. Remove the E-rings [1], 1 each for 4 places, and then remove the plastic washers [2], 1 each, the bearings [3], 1 each, the conveyance rollers /2 [4] and /3 [5].

12. Remove the E-ring [1], the gear [2] and the pin [3], and then remove the conveyance roller /2 [4].

13. Reinstall the above parts following the removal steps in reverse.

Note

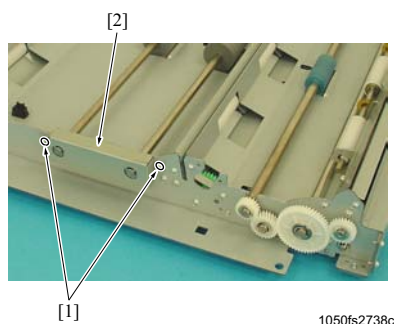
- After completion of the installation, check to see if each roller rotates smoothly.

14. After replacing the pre-registration rollers /1, /2, the conveyance rollers /2 and /3, conduct the following items.

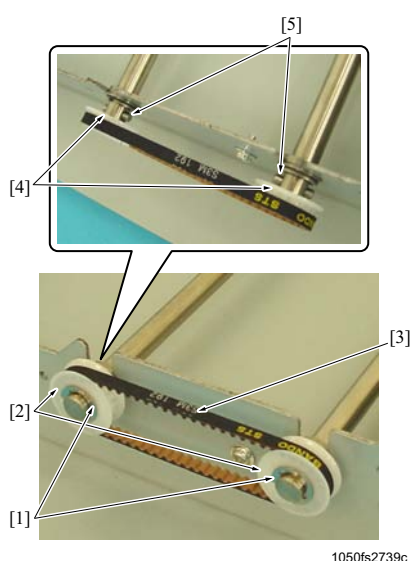
- For the pre-registration roller /1: Counter reset of the parts counter No.148
- For the pre-registration roller /2: Counter reset of the parts counter No.149
- For the conveyance rollers /2 and /3: Counter reset of the parts counter No.147

4.8.4 Replacing the conveyance pulley and the conveyance belt /A**(1) Periodically replaced parts/cycle**

- Conveyance pulley
: Every 20,250,000 prints
- Conveyance belt /A
: Every 20,250,000 prints

(2) Procedure

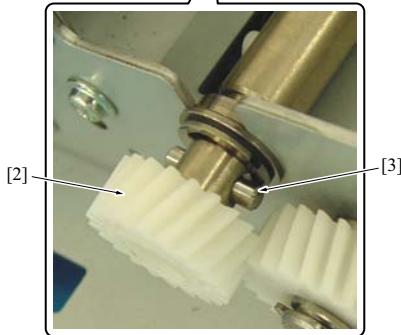
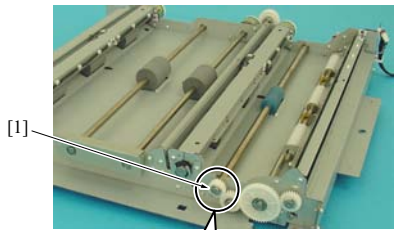
1. Remove the right cover. (Refer to [G.2.2.3 Right cover](#))
2. Remove the vertical conveyance unit. (Refer to [F.4.8.1 Removing/reinstalling the vertical conveyance unit](#))
3. Remove 2 screws [1] and remove the cover [2].



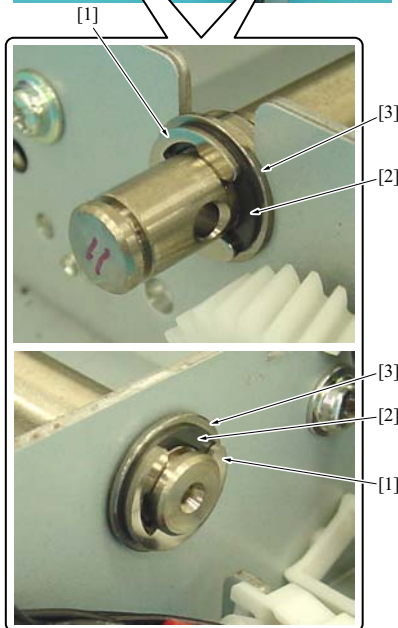
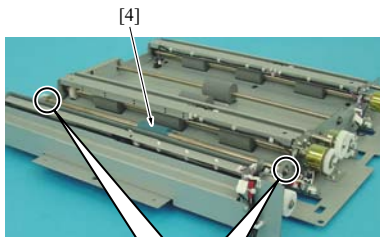
4. Remove 2 E-rings [1], 2 belt stoppers [2], the conveyance belt [3], 2 conveyance pulleys [4] and 2 pins [5].
5. Reinstall the above parts following the removal steps in reverse.

4.8.5 Replacing the conveyance roller /1 and the paper feed gear /B**(1) Periodically replaced parts/cycle**

- Conveyance roller /1
: Every 20,250,000 prints (Actual replacement cycle: Every 6,000,000 prints)
- Paper feed gear /B
: Every 30,000,000 prints

(2) Procedure

1050fs2741c



1050fs2742c

1. Remove the right cover.
2. Remove the vertical conveyance unit. (Refer to [F.4.8.1 Removing/reinstalling the vertical conveyance unit](#))
3. Remove the E-ring [1] and remove the paper feed gear /B [2] and the pin [3].

Note

- When installing the E-ring [1], be careful not to damage the teeth of the paper feed gear /B [2].

4. Remove 2 E-rings [1], and remove 2 washers [2] and 2 bearings [3], and then remove the conveyance roller /1 [4].

Note

- When removing and reinstalling the conveyance roller /1 [4], be careful that it does not get damaged by the corners of the guide plate.
- When reinstalling the bearing [3], raise the conveyance guide plate so that it gets into the jam release condition. In this way, the bearing can be installed easily.

5. Reinstall the above parts following the removal steps in reverse.

Note

- After completion of the installation, check to see if the roller rotates smoothly.

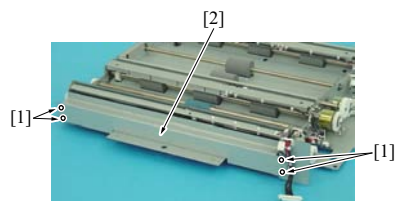
6. After replacing the conveyance roller /1, conduct the following item.
 - For the conveyance roller /1: Counter reset of the parts counter No. 146

4.8.6 Replacing the conveyance exit roller peripheral parts**(1) Periodically replaced parts/cycle**

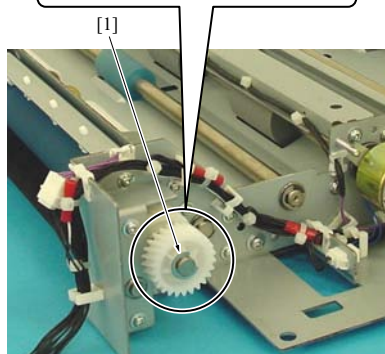
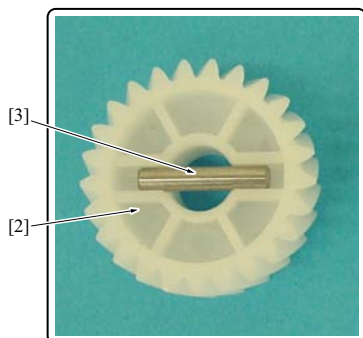
- Conveyance exit roller
 - : Every 20,250,000 prints (Actual replacement cycle: Every 6,000,000 prints)
- Paper dust removing brush shaft
 - : Every 20,250,000 prints (Actual replacement cycle: Every 6,000,000 prints)
- Bearing /E
 - : Every 20,250,000 prints
- Cleaning gear /B
 - : Every 20,250,000 prints
- Scraper shaft
 - : Every 20,250,000 prints
- Paper feed cleaning gear /B

- : Every 30,000,000 prints
- Paper feed gear /A
 - : Every 30,000,000 prints
- Paper exit input gear
 - : Every 30,000,000 prints

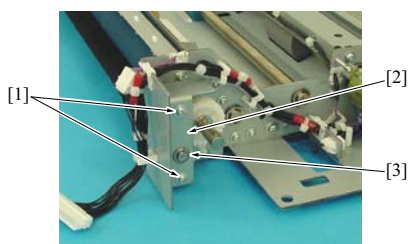
(2) Procedure



1050fs2743c



1050fs2744c



1050fs2745c

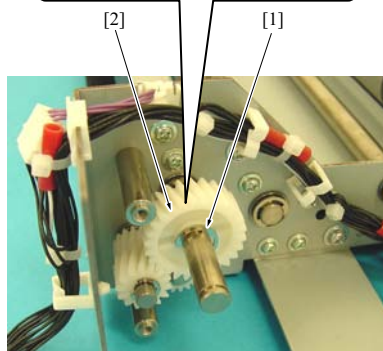
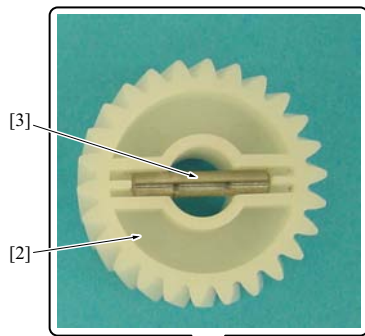
1. Remove the right cover.
2. Remove the vertical conveyance unit. (Refer to [F.4.8.1 Removing/reinstalling the vertical conveyance unit](#))
3. Remove 4 screws [1] and then remove the cover [2].

4. Remove the E-ring [1] and remove the paper exit input gear [2] and the pin [3].

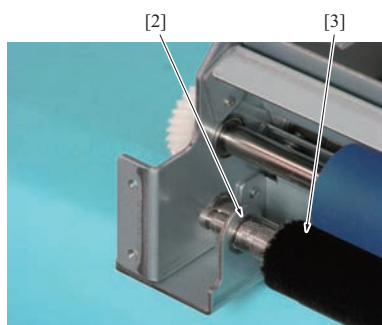
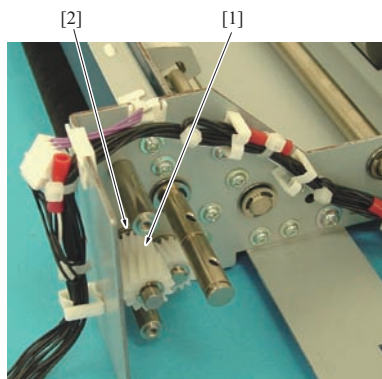
5. Remove 2 screws [1] and remove the gear cover [2] and the bearing /E [3].

Note

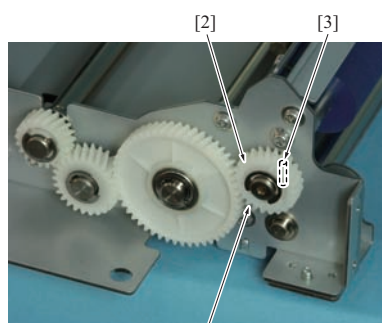
- When installing the bearing /E [3], be sure to install it from the inside to the gear cover [2].



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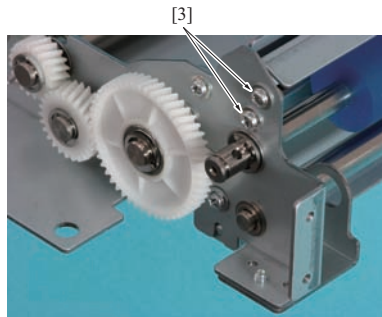
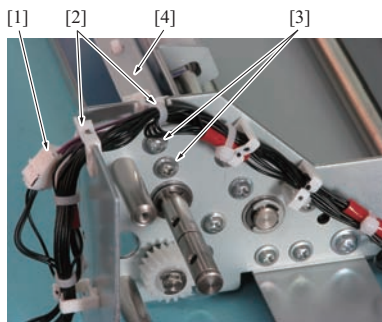
6. Remove the E-ring [1] and remove the paper feed cleaning gear /B [2] and the pin [3].

Note

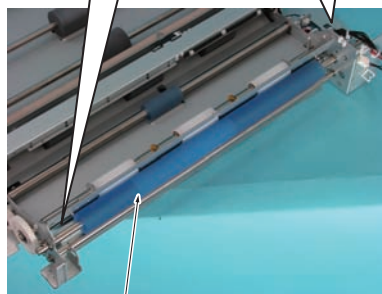
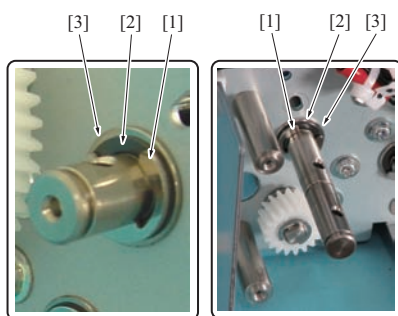
- The gear removed at the step4 is different from the one removed at the step6. Be careful not to confuse one with the other.

7. Remove the paper dust removing brush shaft [1], 2 bearings /E [2] and the paper dust removing brush [3].

8. Remove the E-ring [1] and remove the paper feed gear /A [2] and the pin [3].

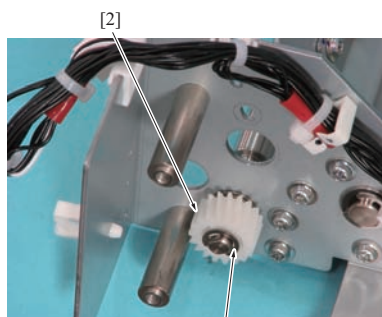


a0g6t3c315ca



[4]

a0g6t3c316ca



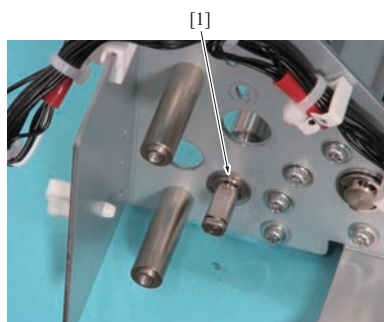
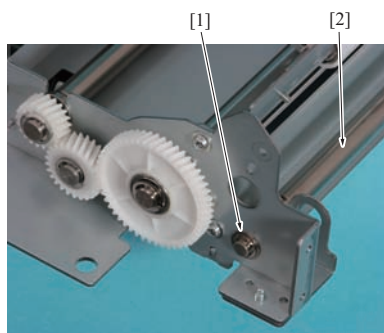
[1]

a0g6t3c317ca

9. Disconnect the connector [1] and remove 2 wire binding bands [2].
10. Remove 4 screws [3] and then remove the sensor mounting plate [4].

11. Remove 2 E-rings [1], 2 washers [2] and 2 bearings /E [3], and remove the conveyance exit roller [4].

12. Remove the E-ring [1] and then remove the Cleaning gear /B [2].



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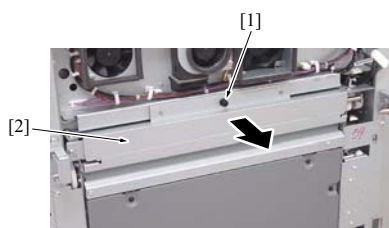
13. Remove 2 E-rings [1] and remove the scraper shaft [2].
14. Reinstall the above parts following the removal steps in reverse.
15. After replacing the conveyance exit roller, the paper dust removing brush and the paper dust removing brush shaft, be sure to conduct the followings.
For the conveyance exit roller: Counter reset of the parts counter No.141
For the paper dust removing brush shaft: Counter reset of the parts counter No.18

4.8.7 Replacing the paper dust removing brush and the paper dust guide holder

(1) Periodically replaced parts/cycle

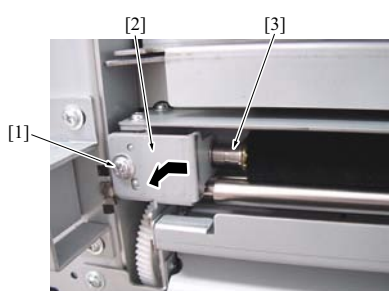
- Paper fur brush
: Every 15,000,000 prints (Actual replacement cycle: Every 3,000,000 prints)
- Paper dust guide holder
: Every 30,000,000 prints

(2) Procedure



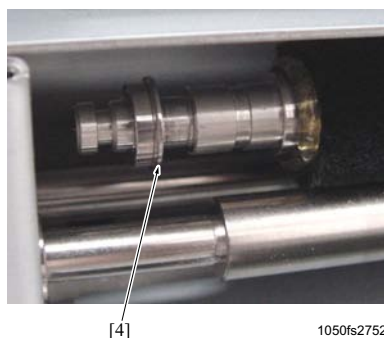
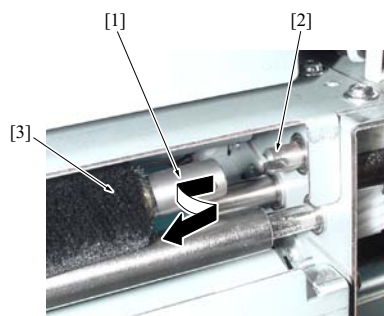
1050fs2750c

1. Pull the knob [1] and remove the paper dust guide holder [2].



1050fs2751c

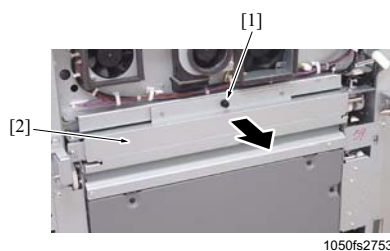
2. Remove the screw [1] and pull out the holder [2] from the paper dust removing brush [3].



3. Remove the paper dust removing brush shaft [1] from the coupling [2], and remove the paper dust removing brush [3], and then remove the bearing /E [4].
4. Reinstall the above parts following the removal steps in reverse.
5. After replacing the paper dust removing brush and the paper dust guide holder, be sure to conduct the followings.
For the paper dust removing brush: Counter reset of the parts counter No.140
For the paper dust guide holder: Counter reset of the parts counter No.142

4.8.8 Cleaning of the paper dust guide holder

(1) Procedure



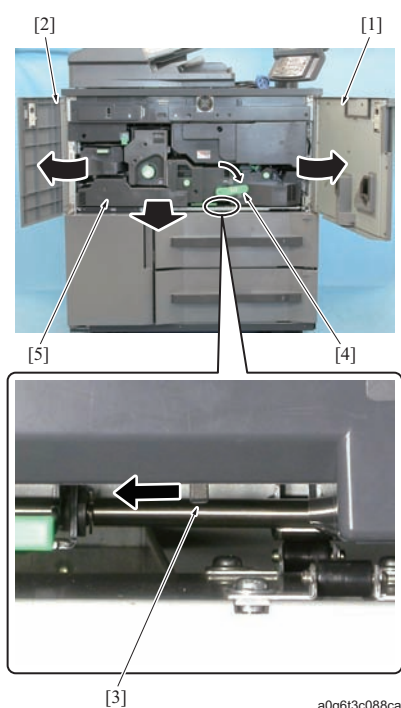
1. Pull the knob [1] and remove the paper dust guide holder [2].
2. Clean the paper dust guide holder [2] with the air brush.
3. Reinstall the above parts following the removal steps in reverse.

4.9 Duplex section

4.9.1 Pulling out/reinstalling the duplex section

⚠ CAUTION

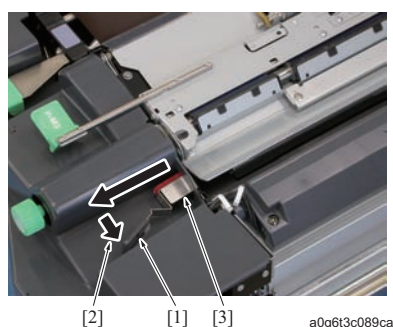
- Be sure to avoid forcibly turning ON the interlock switches /1 (MS1) and /2 (MS2) with the duplex section pulled out. Otherwise, a high voltage unexpectedly develop.

(1) Procedure

1. Open the front door /Rt [1] and the front door /Lt [2].
2. While pressing the lock release lever [3] with a driver in the arrow-marked direction, down the lever [4] that pulls out the duplex section to pull out the duplex section [5].
3. When reinstalling it, push in the duplex section and bring up the lever that pulls out the duplex section.

4.9.2 Cleaning of the paper dust removing brush for the registration roller /Lw**(1) Periodic cleaning cycle**

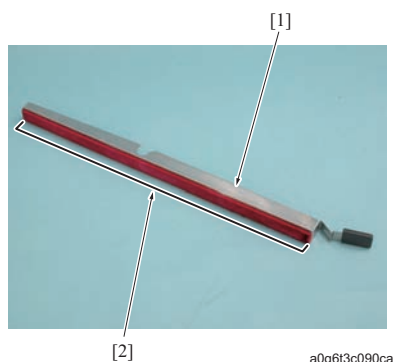
- Paper dust removing brush for the registration roller /Lw
: Every 750,000 prints

(2) Procedure

1. Pull out the duplex section from the main body. (Refer to [F.4.9.1 Pulling out/reinstalling the duplex section](#))
2. After once sliding the paper dust removing lever [1] to the arrow-marked direction [2], pull out and remove the paper dust removing brush [3] for the registration roller /Lw.
(The picture shows the lever that has been pulled out a little.)

Note

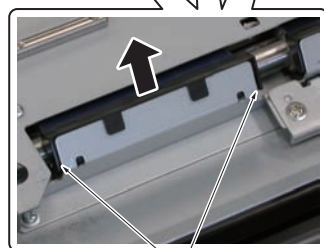
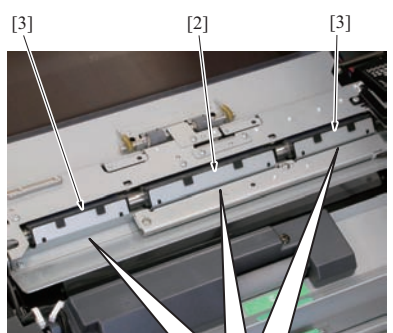
- When reinstalling the paper dust removing brush for the registration roller /Lw, be sure to insert it fully until it hits against the back. When the paper dust removing brush for the registration roller /Lw is not inserted fully, it blocks the light path of detection of the registration sensor (PS40), thus resulting in a jam.



3. Clean the cleaning section [2] of the paper dust removing brush [1] for the registration roller /Lw with the blower brush.
4. Reinstall the above parts following the removal steps in reverse.

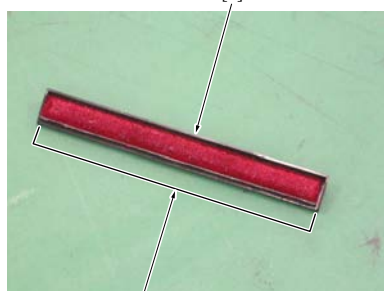
4.9.3 Cleaning of the paper dust removing brush for the registration roller /Up**(1) Periodic cleaning cycle**

- Paper dust removing brush for the registration roller /Up
: Every 750,000 prints

(2) Procedure

[1]

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[2]

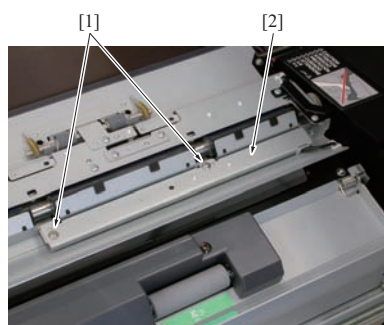
fs503fs2134c

1. Pull out the duplex section from the main body. (Refer to [F.4.9.1 Pulling out/reinstalling the duplex section](#))
2. Press the sides of the paper dust removing brush [1] and remove 2 paper dust removing brushes /1 [2] and /2 [3] provided for the registration roller /Up.

3. Clean each of 2 cleaning sections [2] of the paper dust removing brush [1] for the registration roller /Up.
4. Reinstall the above parts following the removal steps in reverse.

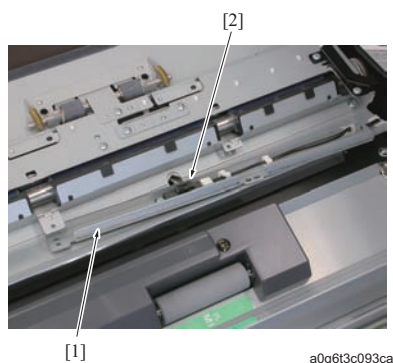
4.9.4 Cleaning of the registration sensor**(1) Periodic cleaning cycle**

- Registration sensor
: Every 750,000 prints

(2) Procedure

a0g6t3c092ca

1. Pull out the duplex section from the main body. (Refer to [F.4.9.1 Pulling out/reinstalling the duplex section](#))
2. Remove 2 screws [1] and release the fixing of the sensor mounting piece [2].



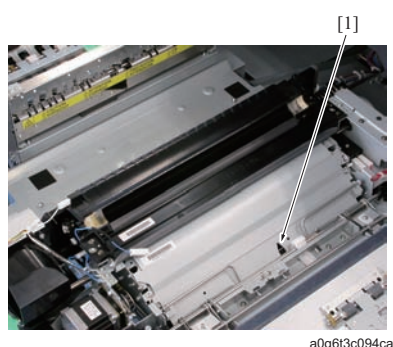
3. Turn over the sensor mounting piece [1] and clean the registration sensor (PS40) [2] with the blower brush.
4. Reinstall the above parts following the removal steps in reverse.

4.9.5 Cleaning of the paper stay sensor

(1) Periodically cleaned parts/cycle

- Paper stay sensor (PS64)
: Every 750,000 prints

(2) Procedure



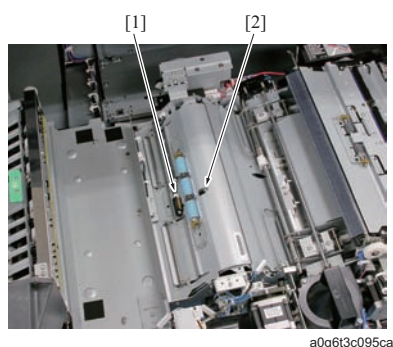
1. Remove the transfer belt unit. (Refer to [F.4.9.7 Removing/reinstalling the transfer belt unit](#))
2. Clean the paper stay sensor (PS64) [1] with the blower brush.
3. Reinstall the above parts following the removal steps in reverse.

4.9.6 Cleaning the ADU paper reverse sensors /1 and /2

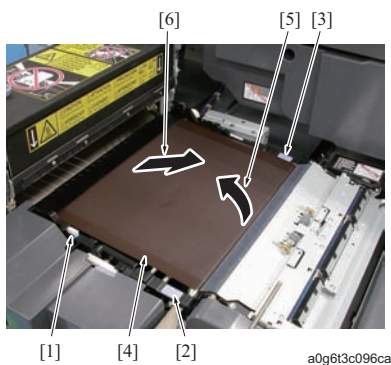
(1) Periodically cleaned parts/cycle

- ADU reverse sensor /1 (PS46)
: Every 750,000 prints
- ADU reverse sensor /2 (PS45)
: Every 750,000 prints

(2) Procedure



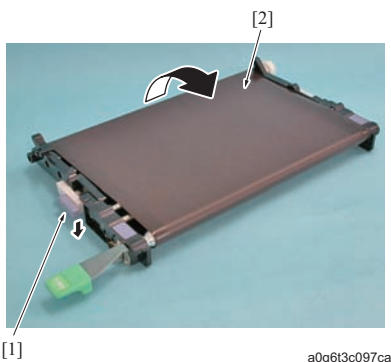
1. Remove the transfer belt unit. (Refer to [F.4.9.7 Removing/reinstalling the transfer belt unit](#))
2. Remove the transfer belt cleaning unit. (Refer to [F.4.9.16 Replacing the belt cleaning unit](#))
3. Clean the ADU paper reverse sensors /1 (PS46) [1] and /2 (PS45) [2] with the blower brush.
4. Reinstall the above parts following the removal steps in reverse.

4.9.7 Removing/reinstalling the transfer belt unit**(1) Procedure**

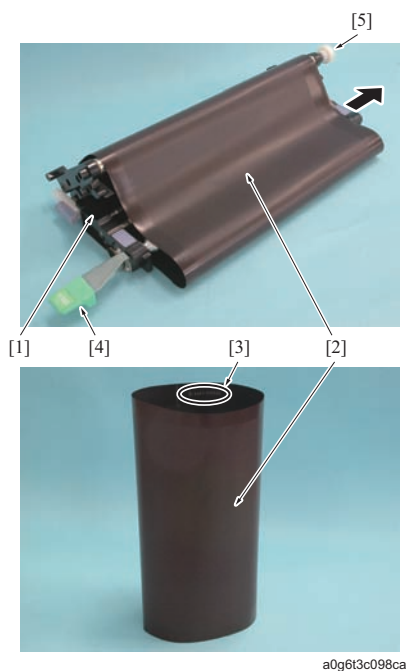
1. Pull out the duplex section from the main body. (Refer to [F.4.9.1 Pulling out/reinstalling the duplex section](#))
2. Remove the fasten [1].
3. Hold the portions marked with [2] and [3] and slant the transfer belt by 45° [5], and pull it out [6].
4. Reinstall the above parts following the removal steps in reverse.

4.9.8 Replacing the transfer belt, the transfer roller, the bearing /H and the transfer contact /Rr**(1) Periodically replaced parts/cycle**

- Transfer belt
: Every 3,000,000 prints
- Transfer roller
: Every 3,000,000 prints
- Bearing /H
: Every 3,000,000 prints
- Transfer contact /Rr
: Every 3,000,000 prints

(2) Procedure

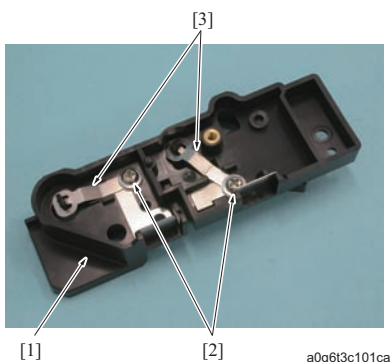
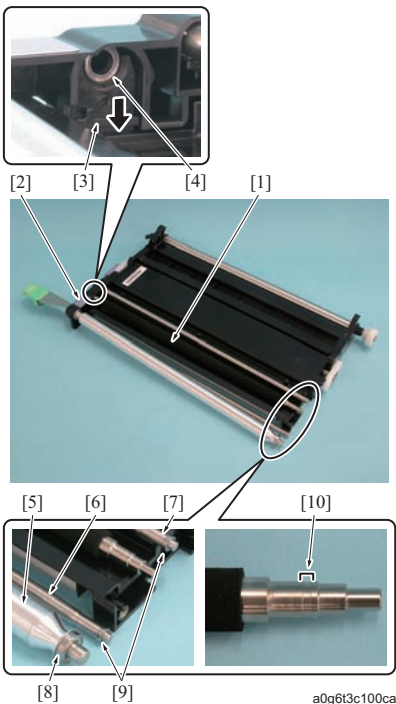
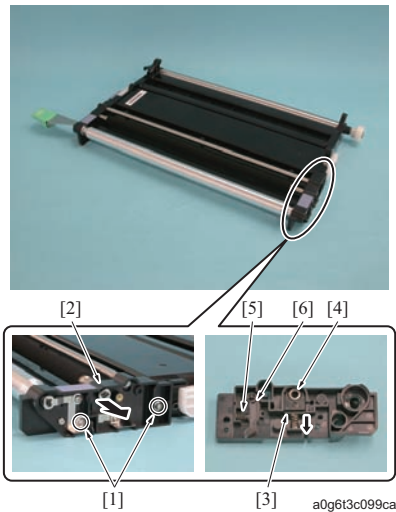
1. Remove the transfer belt unit. (Refer to [F.4.9.7 Removing/reinstalling the transfer belt unit](#))
2. Release the lock lever [1] and fold the transfer belt unit [2].



3. Pull out the transfer belt [2] from the transfer belt unit [1].

Note

- Be careful not to touch the surface of the transfer belt.
- Oil or dirt on the surface of the transfer belt results in the blurred image. Clean it with the cleaning pad.
- When reinstalling the transfer belt, turn the notation of the model number [3] described inside to the jam release lever [4] side.
- After reinstalling the transfer belt, be sure to rotate the gear [5] to see if there is no mis-centering.



4. Remove 2 screws [1] and remove the transfer roller support assy /Rr [2].
5. Release the bearing support member [3] of the transfer roller support assy /Rr, and remove the bearing /H [4].

Note

- When removing the transfer roller support assy /Rr, the spring installed inside [5] and the releasing member [6] drop off at the same time. When reinstalling the transfer roller support assy /Rr, be sure to build them in the transfer roller support assy /Rr.

6. Remove the transfer roller [1].
7. Release the bearing support member [3] of the transfer roller support assy /Fr [2], and remove the bearing /H [4].

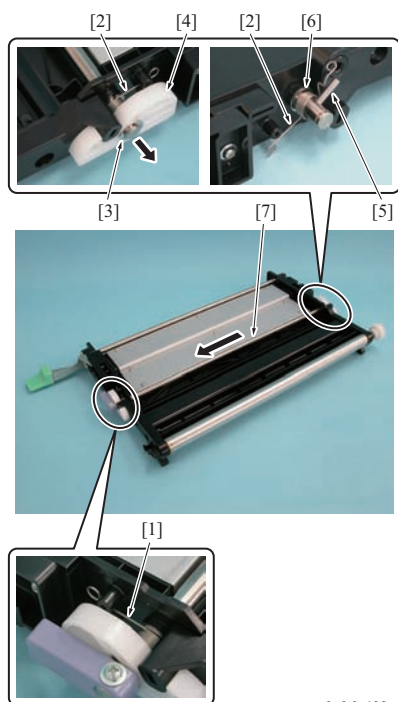
Note

- Be careful not to lose the bearings [8] and [9] installed in the transfer belt driven roller [5] and the nip roller [6] and [7].
- Be sure to locate the shaft with the groove [10] of the transfer roller on the transfer roller support assy /Rr side (the rear side).

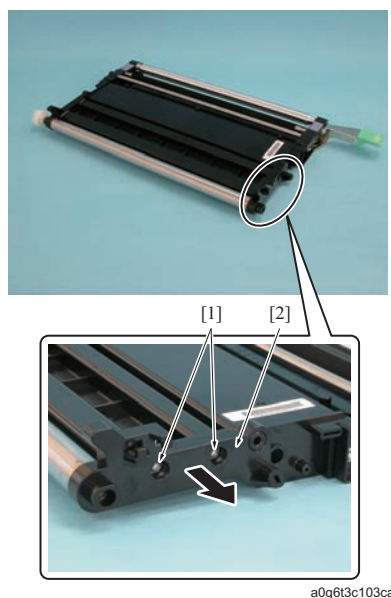
8. Release the springs [2], 1 each, of transfer roller support assy /Rr [1], and then remove 2 transfer contact /Rr [3].
9. Reinstall the above parts following the removal steps in reverse.
10. After replacing the transfer belt, the transfer roller, the bearing /H and the transfer contact /Rr, conduct the following steps.
 - For the transfer belt: Counter reset of the parts counter No.9
 - For the transfer roller: Counter reset of the parts counter No.10
 - For the bearing /H: Counter reset of the parts counter No.11
 - For the transfer contact /Rr: Counter reset of the parts counter No.15

4.9.9 Replacing the transfer contact /Fr**(1) Periodically replaced parts/cycle**

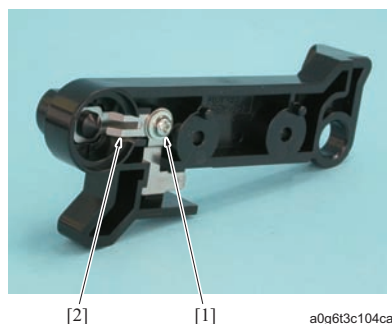
- Transfer contact /Fr
- : Every 3,000,000 prints

(2) Procedure

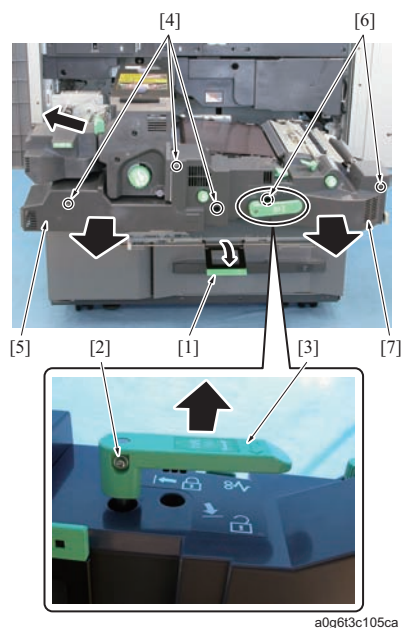
1. Remove the transfer belt unit. (Refer to [F.4.9.7 Removing/reinstalling the transfer belt unit](#))
2. Remove the transfer belt. (Refer to [F.4.9.8 Replacing the transfer belt, the transfer roller, the bearing /H and the transfer contact /Rr](#))
3. Release the lock springs /Fr [1] and /Rr [2].
4. Remove the E-ring [3] and remove the release cam [4].
5. Remove the pin [5] and the lock spring /Rr [2].
6. Remove the E-ring [6].
7. Pull out the release lock lever assy [7].



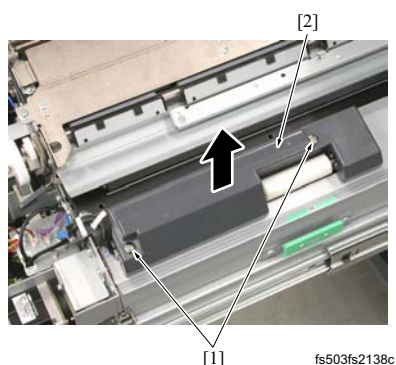
8. Remove 2 screws [1] and remove the drive shaft support member assy [2].



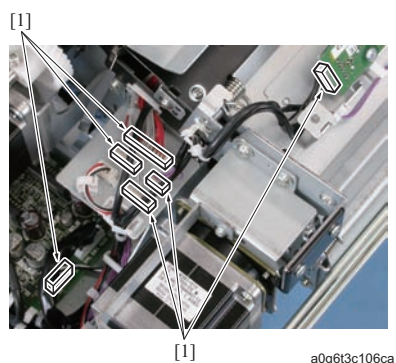
9. Remove the screw [1] and remove the transfer contact /Fr [2].
10. Reinstall the above parts following the removal steps in reverse.
11. After replacing the transfer contact /Fr, conduct the following step.
 - For the transfer contact /Fr: Counter reset of the parts counter No.16

4.9.10 Removing/reinstalling the duplex section cover**(1) Procedure**

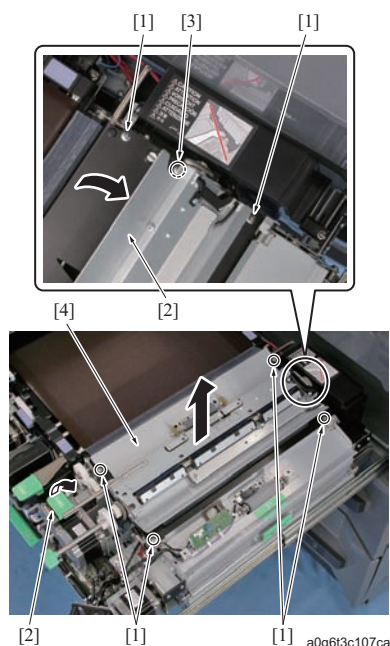
1. Pull out the duplex section from the main body. (Refer to [F.4.9.1 Pulling out/reinstalling the duplex section](#))
2. Open the jam release lever [1].
3. Remove the screw [2], and pull out the duplex section pull out lever [3].
4. Loosen 3 screws [4] and remove the duplex section cover /Lt [5].
5. Loosen 2 screws [6] and remove the duplex section cover /Rt [7].
6. Reinstall the above parts following the removal steps in reverse.

4.9.11 Removing/reinstalling the registration section**(1) Procedure**

1. Pull out the duplex section from the main body. (Refer to [F.4.9.1 Pulling out/reinstalling the duplex section](#))
2. Remove the duplex section cover /Lt and /Rt. (Refer to [F.4.9.10 Removing/reinstalling the duplex section cover](#))
3. Remove 2 screws [1] and then remove the multi feed sensor cover [2] while removing the wire harness from the cord clamp.



4. Disconnect 6 connectors [1].



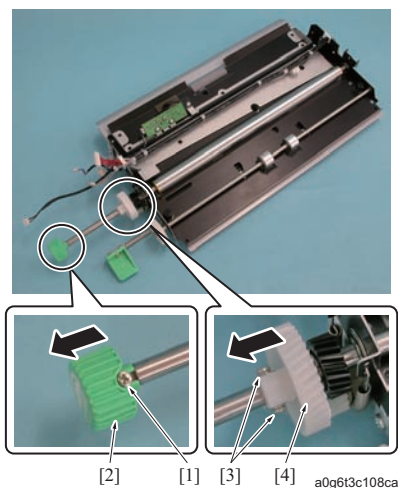
5. Remove 4 screws [1].
6. Open the pre-transfer jam handler [2] and remove the screw [3], and remove the registration unit [4].
7. Reinstall the above parts following the removal steps in reverse.

4.9.12 Replacing the registration roller /Up, the registration bearing, the roller gear /Rt, the registration gears /Up and /Lw

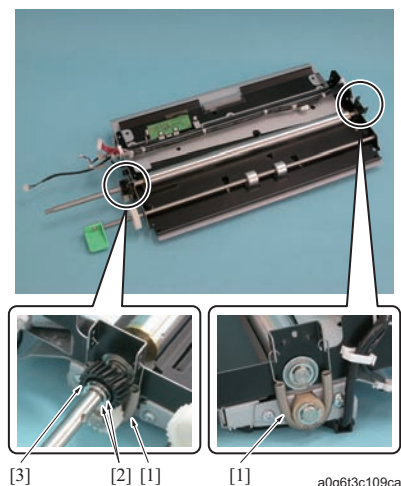
(1) Periodically replaced parts/cycle

- Registration roller /Up
: Every 6,000,000 prints
- Registration bearing
: Every 6,000,000 prints
- Roller gear /Rt
: Every 20,250,000 prints
- Registration gear /Up
: Every 6,000,000 prints
- Registration gear /Lw
: Every 6,000,000 prints

(2) Procedure



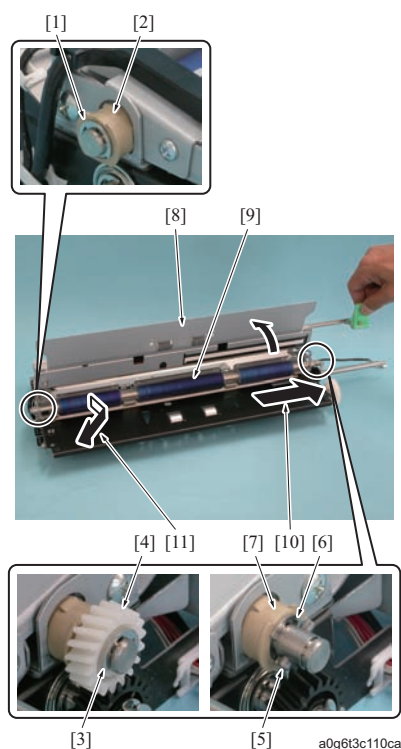
1. Pull out the duplex section from the main body. (Refer to [F.4.9.1 Pulling out/reinstalling the duplex section](#))
2. Remove the paper dust removing brush for the registration roller /Lw. (Refer to [F.4.9.2 Cleaning of the paper dust removing brush for the registration roller /Lw](#))
3. Remove the paper dust removing brush for the registration roller /Up. (Refer to [F.4.9.3 Cleaning of the paper dust removing brush for the registration roller /Up](#))
4. Remove the registration section. (Refer to [F.4.9.11 Removing/reinstalling the registration section](#))
5. Remove the screw [1] and then remove the knob [2].
6. Remove 2 screws [3] and remove the roller gear /Rt [4].



7. Remove 2 springs [1].
8. Remove 2 E-rings [2] and remove the registration gear /Lw [3].

Note

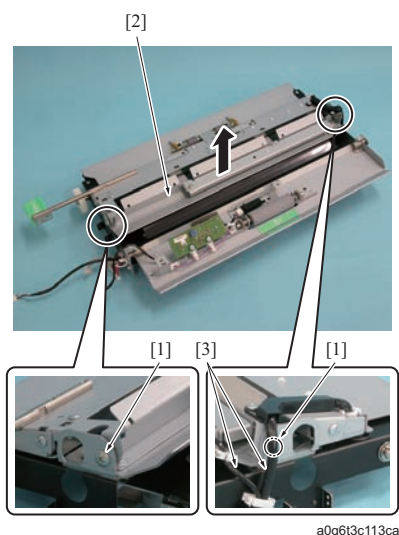
- There is a pin inside the registration gear /Lw. Be careful not to lose it.
- When reinstalling the springs, be sure to reinstall them to the same holes as they were before the dismantling.



9. Remove the E-ring [1] and remove the registration bearing [2].
10. Remove the E-ring [3] and remove the registration gear /Up [4] and the pin [5].
11. Remove the E-ring [6] and then remove the registration bearing [7].
12. Open the pre-transfer jam handler [8] and move and remove the registration roller /Up [9] in the arrow-marked directions [10] and [11] in this order.
13. Reinstall the above parts following the removal steps in reverse.
14. After replacing the registration bearing, conduct the following items.
 - For the registration bearing: Counter reset of the parts counter No.56
 - Regist line speed adjustment
(Refer to [1.5.3.4 Registration Line Speed Adj. \(Magnification Adjustment\)](#))
 - Printer S1 FD-Mag. Adj.
(Refer to [1.5.3.5 Printer S1 FD-Mag. Adj. \(Magnification Adjustment\)](#))
 - Printer restart timing adjustment (Side 1)
(Refer to [1.5.3.11 Printer Restart Timing \(Side1\) \(Timing Adjustment\)](#))

4.9.13 Replacing of the paper lift sheet**(1) Periodically replaced parts/cycle**

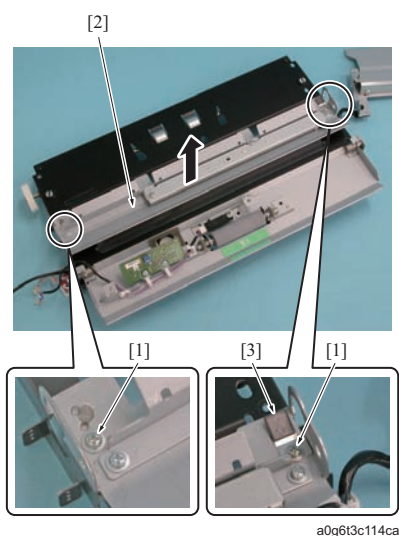
- Paper lift sheet
 - : Every 20,250,000 prints

(2) Procedure

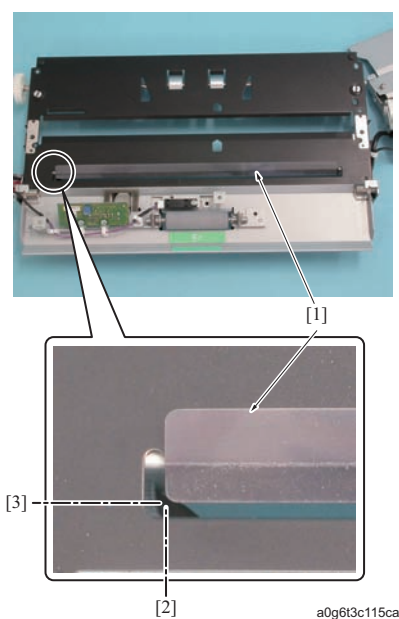
1. Remove the registration section. (Refer to [F.4.9.11 Removing/reinstalling the registration section](#))
2. Remove the registration roller /Up. (Refer to [F.4.9.12 Replacing the registration roller /Up, the registration bearing, the roller gear /Rt, the registration gears /Up and /Lw](#))
3. Remove 2 screws [1] and remove the pre-transfer jam handler [2].

Note

- Be sure not to remove the wiring harness [3].



4. Remove 2 screws [1], and remove the registration entering assy [2] and registration spacer [3].



5. Peel off the paper lift sheet [1].

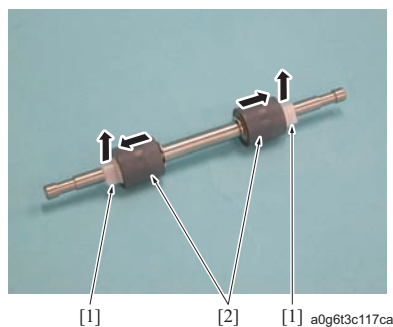
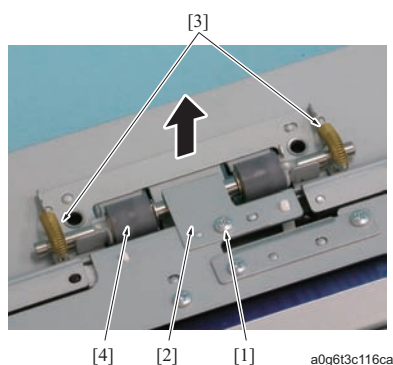
Note

- When reinstalling the paper lift sheet, be sure to paste the sheet based on [2] and [3] of the registration section.

6. Reinstall the above parts following the removal steps in reverse.

4.9.14 Replacing the pre-transfer driven roller assy**(1) Periodically replaced parts/cycle**

- Pre-transfer driven roller assy
: Every 20,250,000 prints

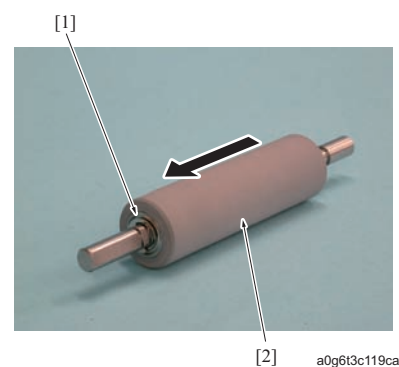
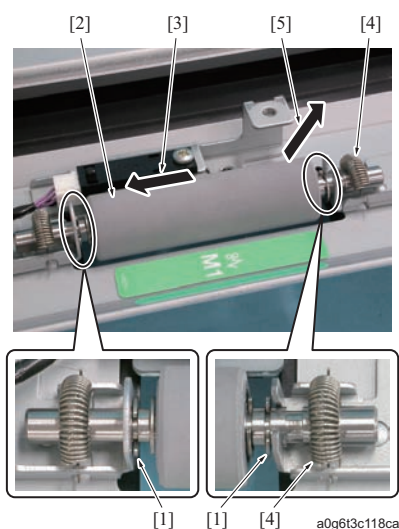
(2) Procedure

1. Remove the registration section. (Refer to [F.4.9.11 Removing/reinstalling the registration section](#))
2. Remove the screw [1] and remove the wiring plate [2].
3. Remove 2 screws [3] and remove the pre-transfer driven roller section [4].

4. Remove 2 bearings [1] and remove 2 pre-transfer driven roller assys [2].
5. Reinstall the above parts following the removal steps in reverse.

4.9.15 Replacing the loop driven roller**(1) Periodically replaced parts/cycle**

- Loop driven roller
: Every 20,250,000 prints

(2) Procedure

1. Remove the registration section. (Refer to [F.4.9.11 Removing/reinstalling the registration section](#))
2. Remove 2 E-rings [1].
3. Slide the loop driven roller assy [2] in the arrow-marked direction [3] to release it from the spring [4], and then pull it out in the arrow-marked direction [5].

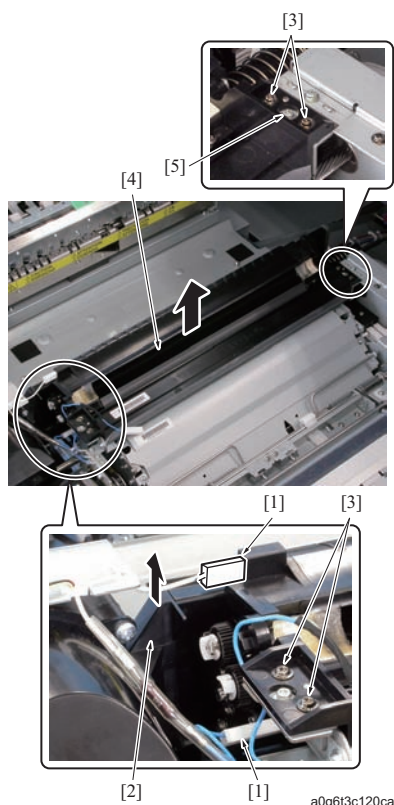
4. Remove the E-ring [1] and remove the loop driven roller [2].
5. Reinstall the above parts following the removal steps in reverse.

4.9.16 Replacing the belt cleaning unit

(1) Periodically replaced parts/cycle

- Belt cleaning unit
- : Every 10,500,000 prints

(2) Procedure



1. Pull out the duplex section from the main body. (Refer to [F.4.9.1 Pulling out/reinstalling the duplex section](#))
2. Remove the fusing section. (Refer to [F.4.10.2 Removing/reinstalling the fusing section](#))
3. Remove the transfer belt unit. (Refer to [F.4.9.7 Removing/reinstalling the transfer belt unit](#))
4. Remove the duplex section cover /Lt and /Rt. (Refer to [F.4.9.10 Removing/reinstalling the duplex section cover](#))
5. Remove 2 fastons [1].
6. Remove the duct cover [2].
7. Remove 4 screws [3] and remove the belt cleaning unit [4].

Note

- Be sure not to touch the screw [5] because it is not allowed to be removed.

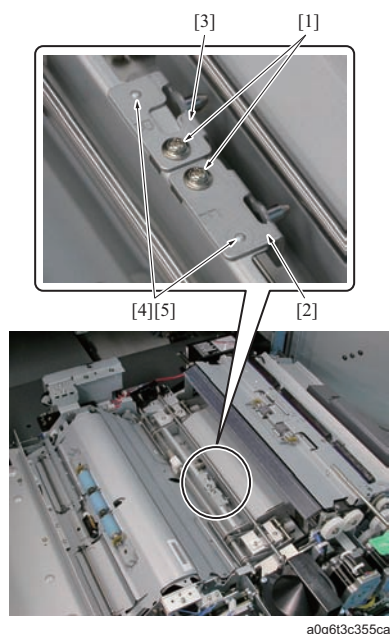
8. Reinstall the above parts following the removal steps in reverse.

Note

- When loosening or removing the screw not allowed to be removed, be sure to reinstall it by following "C. Installation adjustment". (Refer to [F.4.9.16.\(3\) Installation adjustment](#))

9. After replacing the belt cleaning unit, conduct the following step.
For the belt cleaning unit: Counter reset of the parts counter No.14

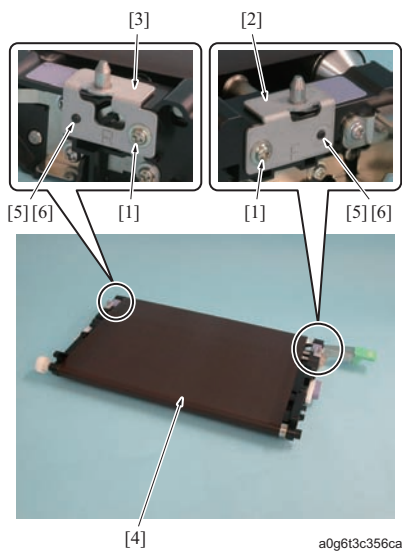
(3) Installation adjustment



1. Remove each 1 of the screws [1] and remove the transfer belt mounting jigs /Fr [2] and /Rr [3].

Note

- When reinstalling the transfer belt mounting jigs /Fr and /Rr, be sure to align the projections [5] of the main body to the positioning holes [4].

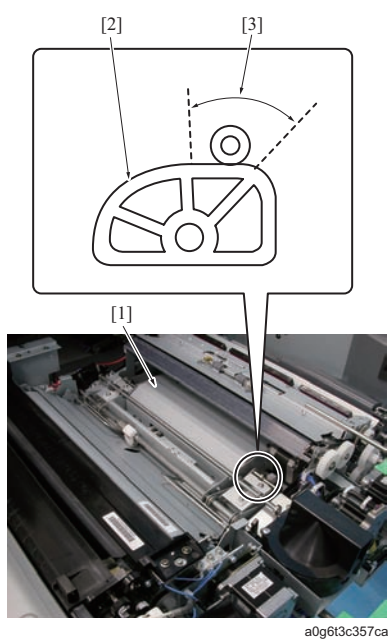


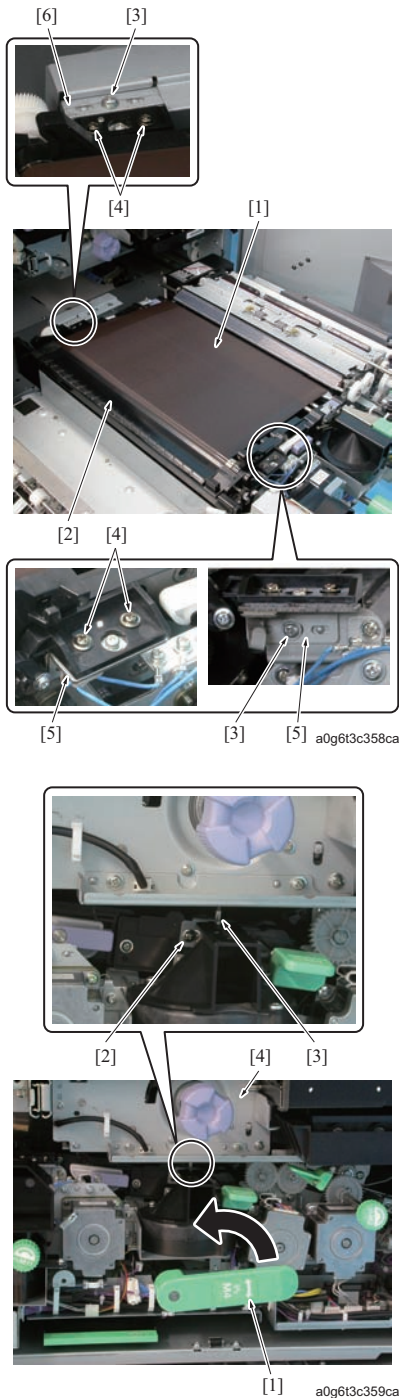
2. Install the transfer belt mounting jigs /Fr [2] and /Rr [3] to the transfer belt unit [4] with each 1 of the screws [1].

Note

- When reinstalling the transfer belt mounting jigs /Fr and /Rr, be sure to align the projections [6] of the transfer belt unit to the positioning holes [5].

3. Rotate the cam [2] of the transfer pressure unit [2] to make it to the position of pressure 1 [3].





4. Set the transfer belt unit [1] to the belt cleaning unit [2].
5. Loosen 2 screws which are not allowed to be removed [3].
6. Fix the belt cleaning unit [2] to the belt cleaning unit mounting brackets /Fr [5] and /Rr [6] with each 2 of the screws [4].

Note

- Be sure to loosen 2 screws which are not allowed to be removed [3].

7. Set the duplex section to the main body and bring up the lever [1] that pulls out the duplex section.
8. Check that the pin [3] of the transfer belt mounting jig /Fr [2] is set to the photo conductor section [4].
9. Release the lock and bring down the pull out lever, and then pull out the duplex section gently. (Refer to [F.4.9.1 Pulling out/reinstalling the duplex section](#))

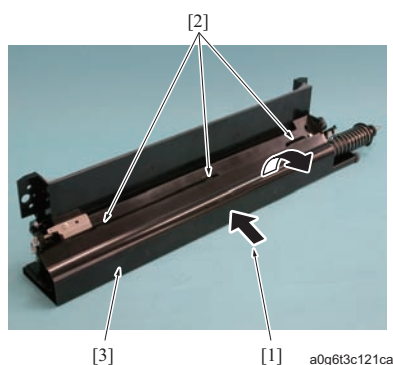
Note

- Be sure to repeat steps 7 and 9 again when the position of the transfer belt unit is out of alignment in pulling out the duplex section.

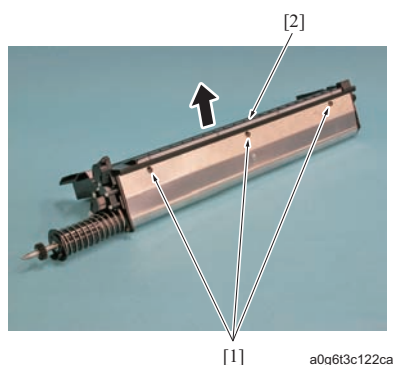
10. Fix the belt cleaning unit mounting brackets /Fr and /Rr with each 1 of the screws which are not allowed to be removed.
11. Be sure that the following reinstallation of the parts follows the removal steps in reverse.

4.9.17 Replacing the cleaning brush, the cleaning shaft, the regulation plate assy and the power supply parts**(1) Periodically replaced parts/cycle**

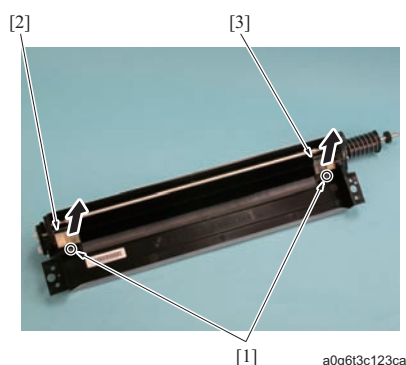
- Cleaning brush
: Every 1,500,000 prints
- Cleaning shaft
: Every 6,000,000 prints
- Regulation plate assy
: Every 1,500,000 prints
- Power supply parts
: Every 3,000,000 prints

(2) Procedure

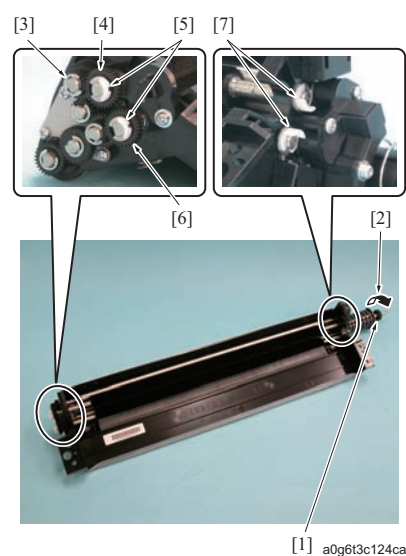
1. Remove the belt cleaning unit. (Refer to [F.4.9.16 Replacing the belt cleaning unit](#))
2. Push the bottom of the cooling duct [1] to release 3 claws [2], and remove the cooling duct assy [3].



3. Remove 3 screws [1] and remove the separation cover assy [2].



4. Remove the screws [1], 1 each, and remove the scatter preventive blocks /Fr [2] and /Rr [3].

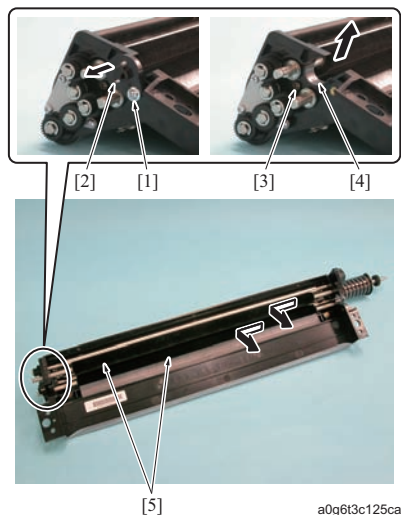


5. Rotate the gear [1] in the arrow-marked direction [2] to turn the notch of the E-ring [3] to the gear [4] side.

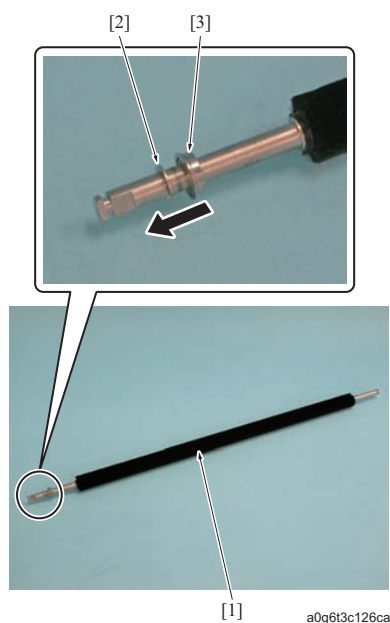
Note

- Be sure to rotate the gear [1] in the arrow-marked direction [2] at all times.
- When removing the gear [4], the E-ring [3] contacts it. be sure to turn the notch of the E-ring to the gear [4] side.

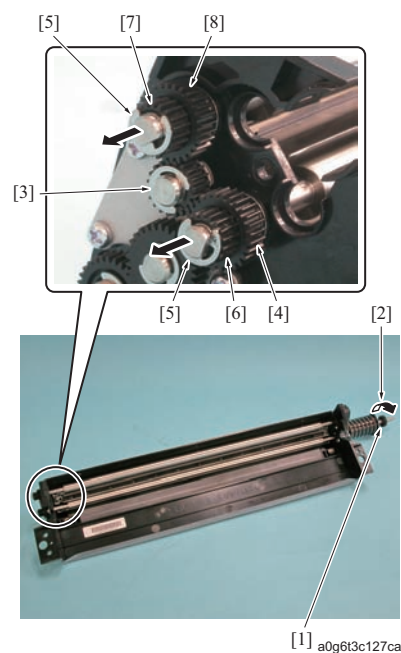
6. Remove 2 retaining rings [5], and remove the gears [4] and [6].
7. Remove 2 retaining rings [7].



a0g6t3c125ca



a0g6t3c126ca



a0g6t3c127ca

8. Remove 2 screws [1] and remove the fixing cover [2].
9. Remove the screw [3] and remove the fixing member [4].
10. Remove 2 cleaning brush assy [5].

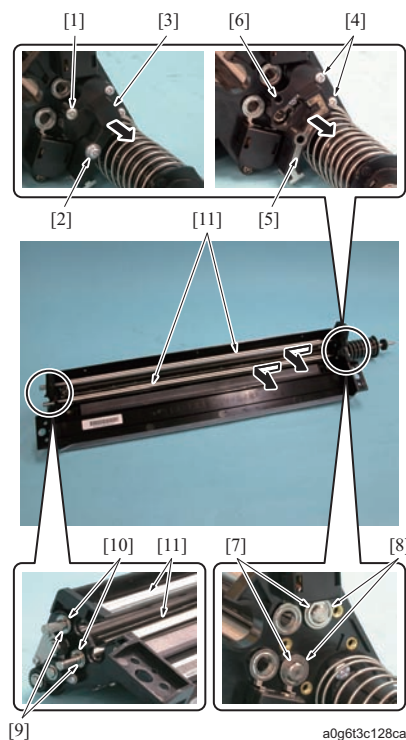
11. Remove the E-ring [2] and the bearing [3] from each cleaning brush assy [1].

12. Rotate the gear [1] in the arrow-marked direction [2] to turn the notch of the E-ring [3] to the gear [4] side.

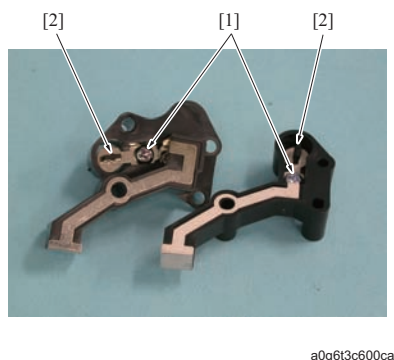
Note

- Be sure to rotate the gear [1] in the arrow-marked direction [2] at all times.
- When removing the gear [4], the E-ring [3] contacts it, be sure to turn the notch of the E-ring to the gear [4] side.

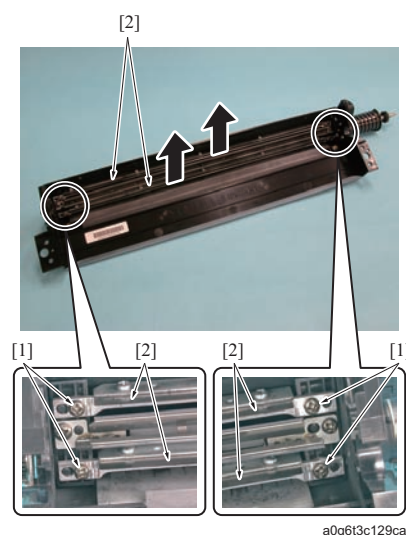
13. Remove 2 E-rings [5] and remove the gears [4], [6], [7] and [8].



14. Remove the screws [1] and [2], and remove the power supply cover [3].
15. Remove 2 screws [4], and remove the power supply blocks /Up [5] and /Lw [6].
16. Remove 2 E-rings [7] and then remove 2 bearings [8].
17. Remove 2 E-rings [9] and 2 bearings [10], and remove 2 cleaning shaft [11].



18. Remove the screws [1], 1 each, and then remove 2 power supply parts [2].

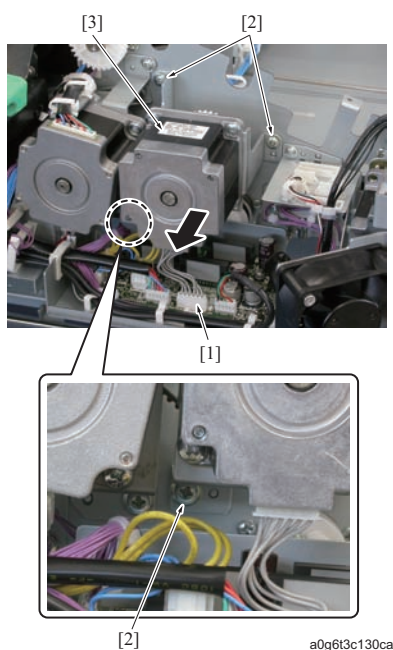


19. Remove the screws [1], 2 each, and remove 2 regulation plate assy [2].
20. Reinstall the above parts following the removal steps in reverse.
21. After replacing the cleaning brush, the cleaning shaft, the regulation plate assy and the power feeding members, conduct the following steps.
For the cleaning brush: Counter reset of the parts counter No.12
For the cleaning shaft: Counter reset of the parts counter No.72
For the registration plate assy: Counter reset of the parts counter No.13
For the power feeding members: Counter reset of the parts counter No.17

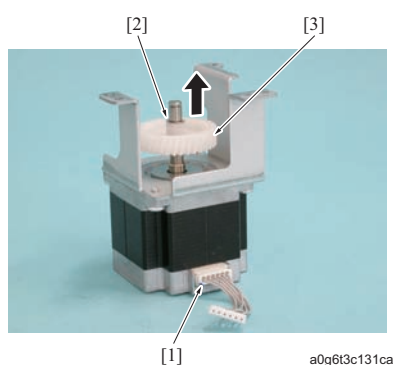
4.9.18 Replacing the registration motor (M17) and the motor gear /Rt

(1) Periodically replaced parts/cycle

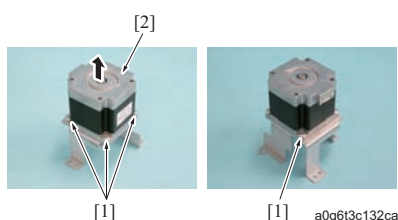
- Registration motor (M17)
: Every 30,000,000 prints
- Motor gear /Rt
: Every 20,250,000 prints

(2) Procedure

1. Remove the registration section. (Refer to [F.4.9.11 Removing/reinstalling the registration section](#))
2. Disconnect the connector [1].
3. Remove 3 screws [2] and then remove the registration motor assy [3].



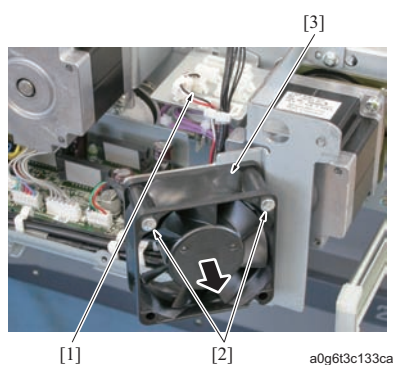
4. Disconnect the connector [1].
5. Remove the E-ring [2] and remove the motor gear /Rt [3].



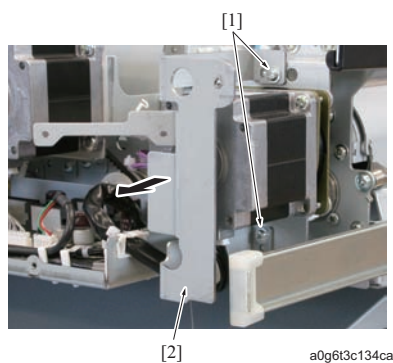
6. Remove 4 screws [1] and remove the registration motor (M17).
7. Reinstall the above parts following the removal steps in reverse.

4.9.19 Replacing the loop motor (M18)**(1) Periodically replaced parts/cycle**

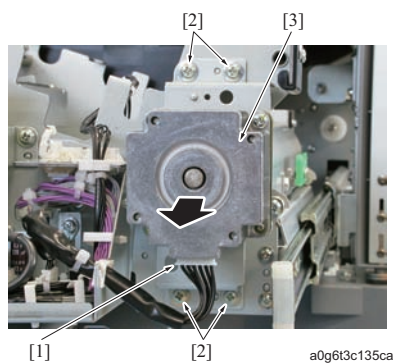
- Loop motor (M18)
- : Every 30,000,000 prints

(2) Procedure

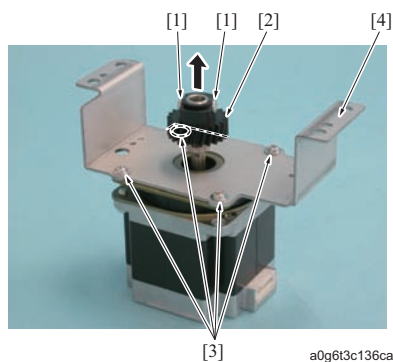
1. Remove the registration section. (Refer to [F.4.9.11 Removing/reinstalling the registration section](#))
2. Disconnect the connector [1].
3. Remove 2 screws [2] and then remove the registration cooling fan (FM17) [3].



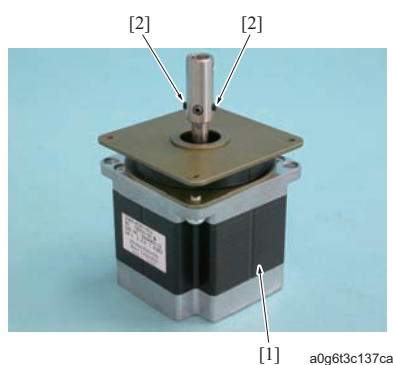
4. Remove 2 screws [1] and remove the fan mounting bracket [2].



5. Disconnect the connector [1].
6. Remove 4 screws [2] and then remove the loop motor assy [3].



7. Remove 2 screws [1] and then remove the gear [2].
8. Remove 4 screws [3] and remove the motor mounting bracket [4].

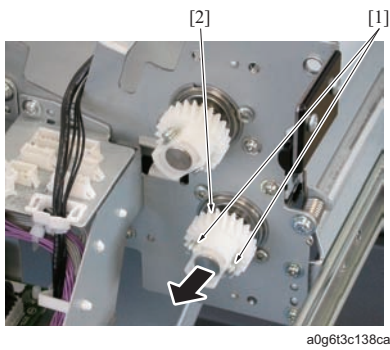


9. Remove 2 screws [2] from the loop motor (M18) [1].
10. Reinstall the above parts following the removal steps in reverse.

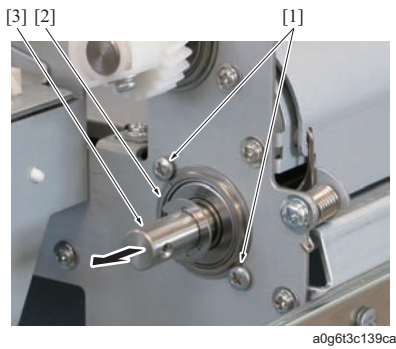
4.9.20 Replacing the ADU exit roller

(1) Periodically replaced parts/cycle

- ADU exit roller
: Every 10,500,000 prints

(2) Procedure

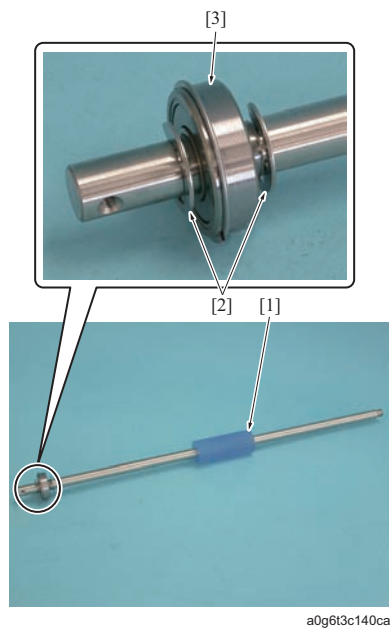
1. Remove the registration section. (Refer to [F.4.9.11 Removing/reinstalling the registration section](#))
2. Remove the loop motor Assy. (Refer to [F.4.9.19 Replacing the loop motor \(M18\)](#))
3. Remove 2 screws [1] and then remove the gear [2].



4. Remove 2 screws [1] to release the fixing of the bearing [2].
5. Pull out the ADU exit roller [3].

Note

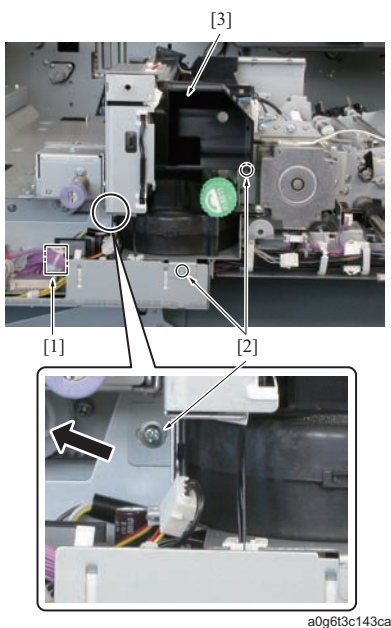
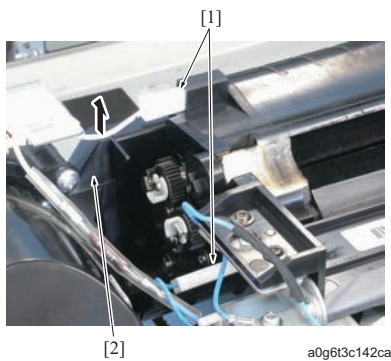
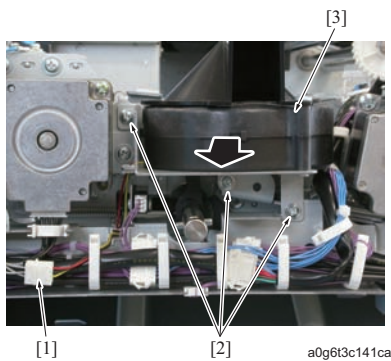
- When reinstalling the bearing, be sure to set the notch of the flange between 2 screws.
- To prevent the notch from opening, be sure to tighten 2 screws in the counterclockwise turn with the notch as a starting point.



6. Remove 2 E-rings [2] and the bearing [3] from the ADU exit roller [1].
7. Reinstall the above parts following the removal steps in reverse.
8. After replacing the ADU exit roller, conduct the following step.
 - For ADU exit roller: Counter reset of the parts counter No.61

4.9.21 Replacing the ADU reverse motor (M12) and the ADU reverse motor belt**(1) Periodically replaced parts/cycle**

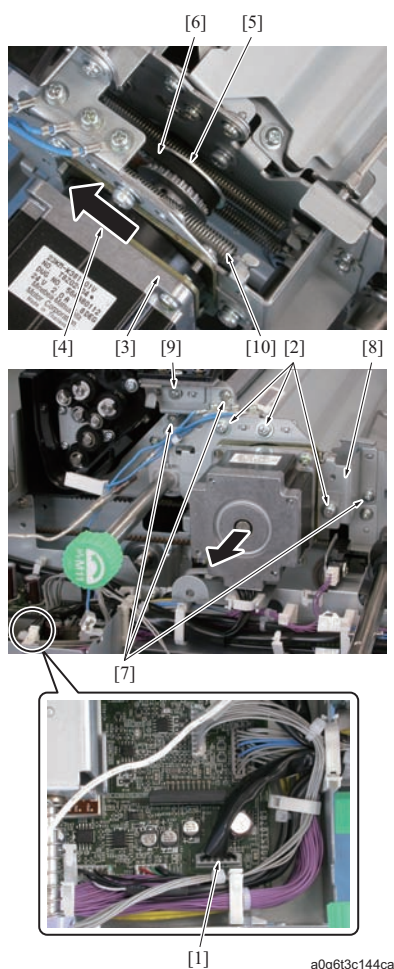
- ADU reverse motor (M12)
: Every 30,000,000 prints
- ADU reverse motor belt
: Every 30,000,000 prints

(2) Procedure

1. Remove the fusing section. (Refer to [F.4.10.2 Removing/reinstalling the fusing section](#))
2. Remove the transfer belt unit. (Refer to [F.4.9.7 Removing/reinstalling the transfer belt unit](#))
3. Remove the registration section. (Refer to [F.4.9.11 Removing/reinstalling the registration section](#))
4. Remove the registration motor Assy. (Refer to [F.4.9.18 Replacing the registration motor \(M17\) and the motor gear /Rt](#))
5. Remove the loop motor Assy. (Refer to [F.4.9.19 Replacing the loop motor \(M18\)](#))
6. Disconnect the connector [1].
7. Remove 3 screws [2] and remove the belt cooling fan Assy [3].

8. Remove 2 fasteners [1] and the duct cover [2].

9. Disconnect the connector [1].
10. Remove 3 screws [2] and remove the fan mounting piece [3].

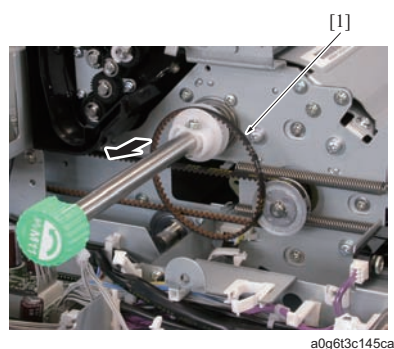


11. Disconnect the connector [1].
12. Loosen 3 screws [2] to slide the ADU reverse motor (M12) [3] in the arrow-marked direction [4], and release ADU reverse motor belt [6] from the pulley [5].
13. Remove 3 screws [7] and then remove the ADU reverse motor assy [8].

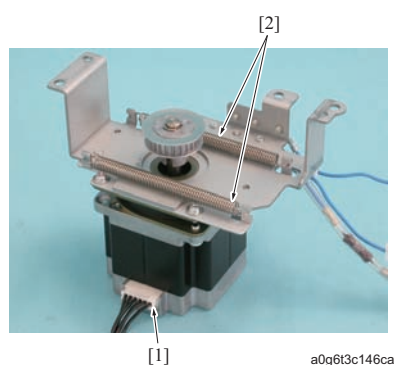
Note

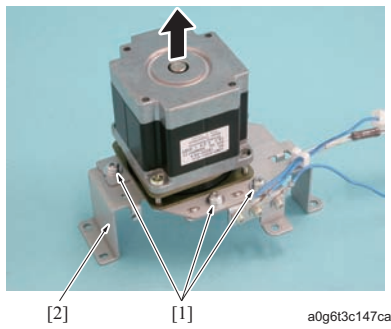
- Be sure not to touch the screw [9] because it is not allowed to be removed.
- When reinstalling the ADU reverse motor belt [6], the tension is automatically adjusted by the spring [10]. be sure to tighten the screw [2] after installing the ADU reverse motor belt.

14. Remove the ADU reverse motor belt [1].

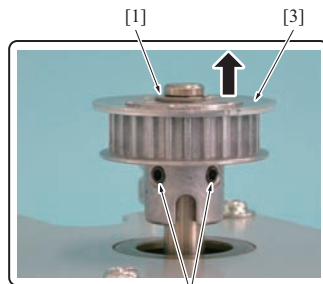


15. Disconnect the connector [1].
16. Remove 2 springs [2].





17. Remove 3 screws [1] and remove the motor mounting plate [2].

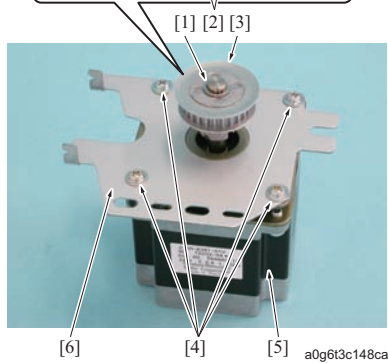


18. Remove the E-ring [1].

19. Remove 2 screws [2] and remove the pulley [3].

20. Remove 4 screws [4], and remove the motor slide plate [6] from the ADU reverse motor (M12) [5].

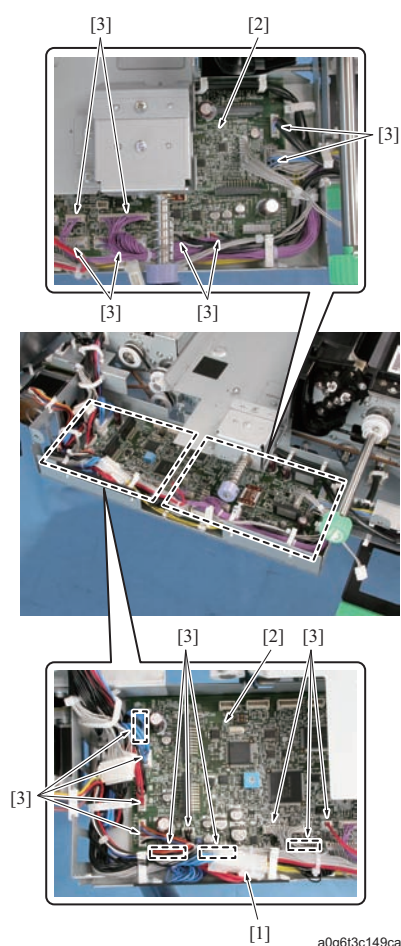
21. Reinstall the above parts following the removal steps in reverse.



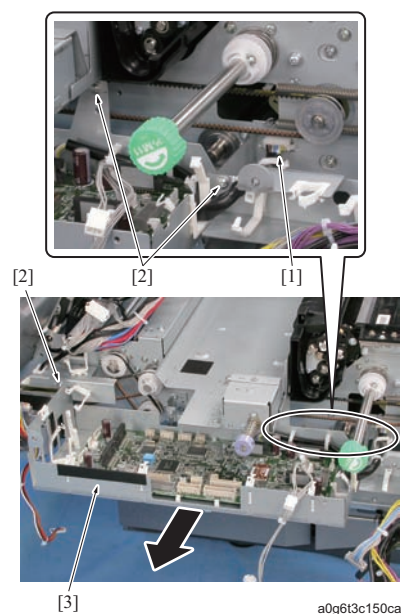
4.9.22 Replacing the ADU conveyance motor /2 (M16) and the ADU conveyance motor belt /2

(1) Periodically replaced parts/cycle

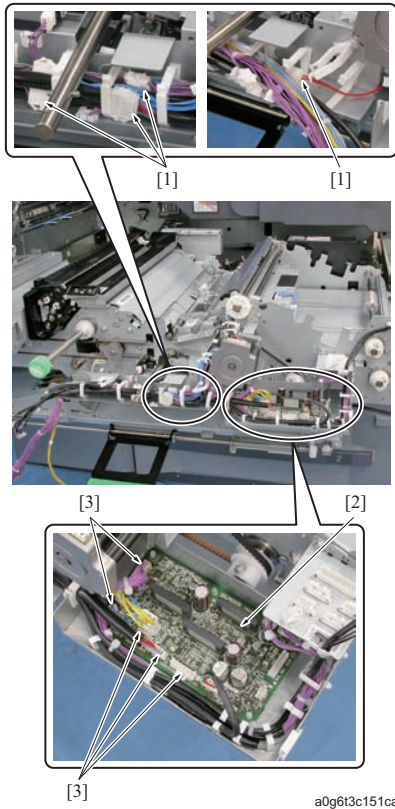
- ADU conveyance motor /2 (M16)
: Every 30,000,000 prints
- ADU conveyance motor belt /2
: Every 30,000,000 prints

(2) Procedure

1. Remove the fusing section. (Refer to [F.4.10.2 Removing/reinstalling the fusing section](#))
2. Remove the transfer belt unit. (Refer to [F.4.9.7 Removing/reinstalling the transfer belt unit](#))
3. Remove the registration section. (Refer to [F.4.9.11 Removing/reinstalling the registration section](#))
4. Remove the registration motor assy. (Refer to [F.4.9.18 Replacing the registration motor \(M17\) and the motor gear /Rt](#))
5. Remove the loop motor assy. (Refer to [F.4.9.19 Replacing the loop motor \(M18\)](#))
6. Remove the ADU reverse motor assy. (Refer to [F.4.9.21 Replacing the ADU reverse motor \(M12\) and the ADU reverse motor belt](#))
7. Disconnect the connector [1].
8. Remove 18 connectors [3] that are connected to the ADU drive board /1 (ADUDB1) [2].

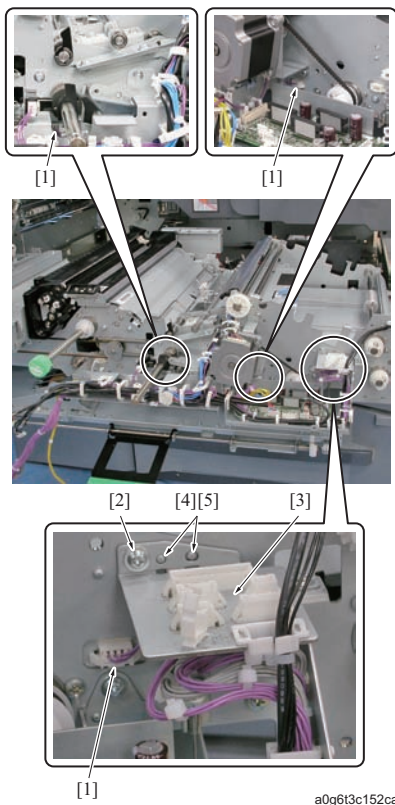


9. Disconnect the connector [1].
10. Remove 3 screws [2] and remove the ADU drive board stay /1 [2].



11. Disconnect 4 connectors [1].

12. Remove 5 connectors [3] that are connected to the ADU drive board /2 (ADUDB2) [2].

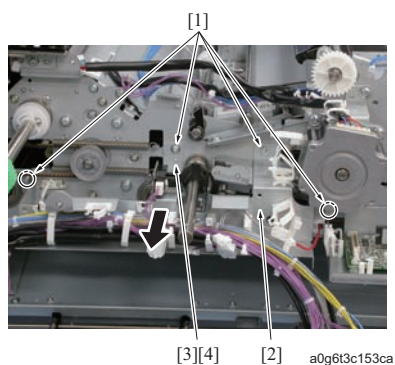


13. Disconnect the 3 connectors [1].

14. Remove the screw [2] and remove the connector mounting bracket [3].

Note

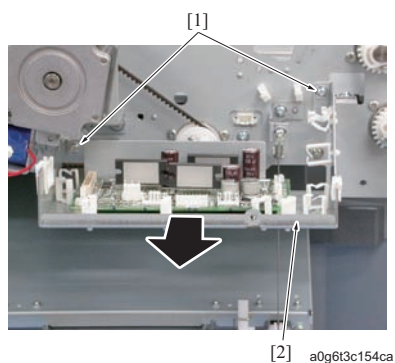
- When reinstalling the connector mounting piece, be sure to set 2 positioning holes [4] to 2 projections [5] of the duplex section.



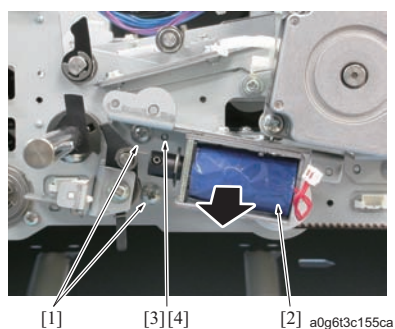
15. Remove 4 screws [1] and remove the wiring harness stay [2].

Note

- When reinstalling the wiring harness stay, be sure to set the positioning hole [3] to the projection of the duplex section [4].



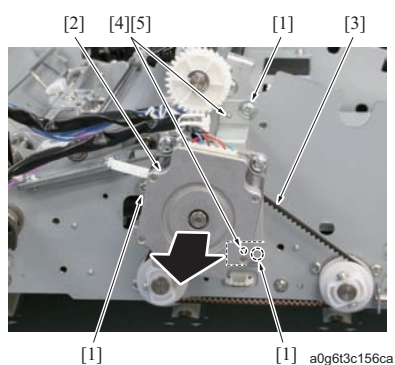
16. Remove 2 screws [1] and remove the ADU drive board stay /2 [2].



17. Remove 2 screws [1] and then remove the ADU lock solenoid assy [2].

Note

- When reinstalling the thick paper assist solenoid assy, be sure to set the projection [4] of the duplex section to the positioning hole [3].

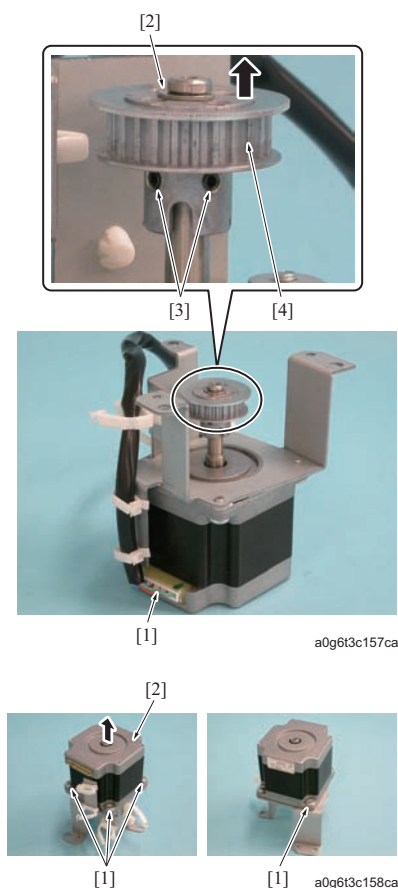


18. Remove 3 screws [1] and remove the ADU conveyance motor /2 assy [2].

19. Remove the ADU conveyance motor belt /2 [3].

Note

- When reinstalling the ADU conveyance motor /2 assy, be sure to set 2 positioning holes [4] to 2 projections [5] of the duplex section.



20. Disconnect the connector [1].
21. Remove the E-ring [2] and 2 screws [3], and remove the pulley [4].

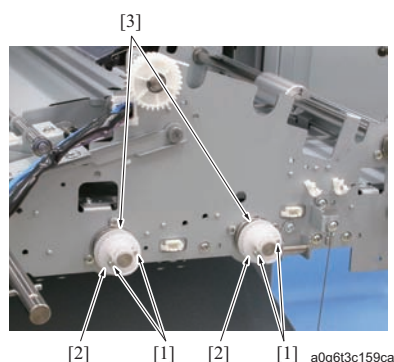
22. Remove 4 screws [1] and remove the ADU conveyance motor /2 (M16) [2].
23. Reinstall the above parts following the removal steps in reverse.

4.9.23 Replacing the ADU conveyance roller /3 and /4

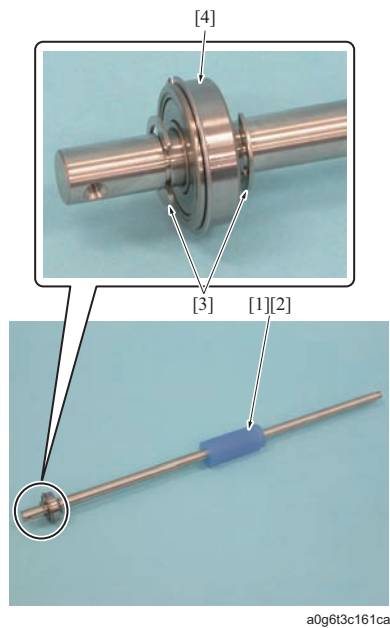
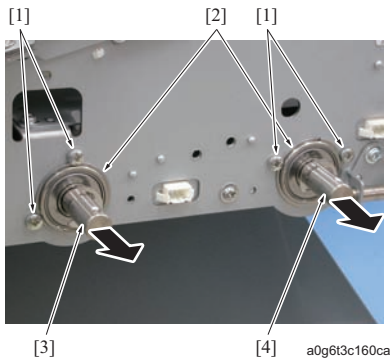
(1) Periodically replaced parts/cycle

- ADU conveyance roller /3
: Every 10,500,000 prints
- ADU conveyance roller /4
: Every 10,500,000 prints

(2) Procedure



1. Remove the fusing section. (Refer to [F.4.10.2 Removing/reinstalling the fusing section](#))
2. Remove the transfer belt unit. (Refer to [F.4.9.7 Removing/reinstalling the transfer belt unit](#))
3. Remove the registration section. (Refer to [F.4.9.11 Removing/reinstalling the registration section](#))
4. Remove the registration motor assy. (Refer to [F.4.9.18 Replacing the registration motor \(M17\) and the motor gear /Rt](#))
5. Remove the loop motor assy. (Refer to [F.4.9.19 Replacing the loop motor \(M18\)](#))
6. Remove the ADU reverse motor assy. (Refer to [F.4.9.21 Replacing the ADU reverse motor \(M12\) and the ADU reverse motor belt](#))
7. Remove the ADU conveyance motor /2 assy. (Refer to [F.4.9.22 Replacing the ADU conveyance motor /2 \(M16\) and the ADU conveyance motor belt /2](#))
8. Remove the screws [1], 2 each, and remove 2 pulleys [2] and 2 spacers [3].



9. Remove 2 screws [1] to release the fixing of 2 bearings [2].
10. Pull out the ADU conveyance rollers /3 [3] and /4 [4].

Note

- When reinstalling the bearing, be sure to set the notch of the flange between 2 screws.
- To prevent the notch from opening, be sure to tighten 2 screws in the counterclockwise turn with the notch as a starting point.

11. Remove E-rings [3], 2 each, and the bearings [4], 1 each, from the ADU conveyance rollers /3 [1] and /4 [2].

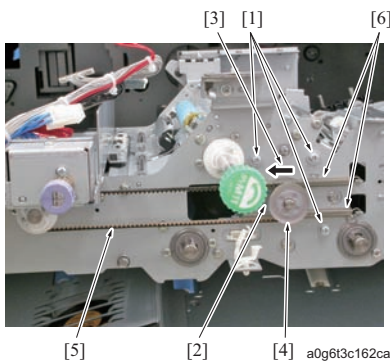
Note

- When reinstalling the bearing, be sure to turn the flange outside.

12. Reinstall the above parts following the removal steps in reverse.
13. After replacing the ADU conveyance roller /3 and /4, conduct the following item.
 - For the ADU conveyance rollers /3 and /4: Counter reset of the parts counter No.61

4.9.24 Replacing the reverse/exit roller and the reverse/exit motor belt**(1) Periodically replaced parts/cycle**

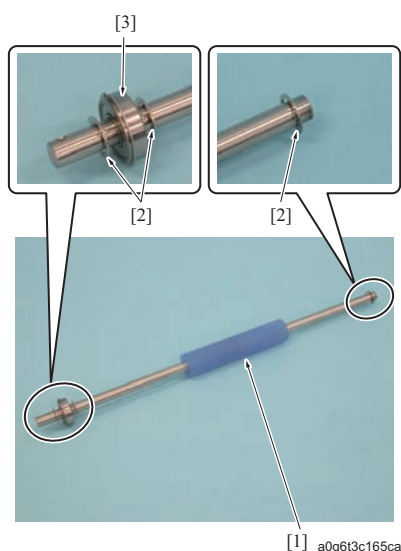
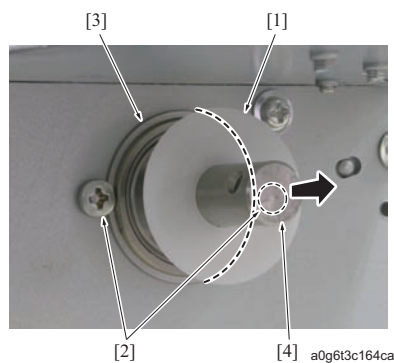
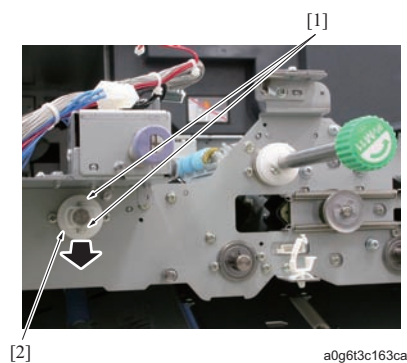
- Reversal output roller
 - : Every 10,500,000 prints
- Reverse/exit motor belt
 - : Every 30,000,000 prints

(2) Procedure

1. Remove the fusing section. (Refer to [F.4.10.2 Removing/reinstalling the fusing section](#))
2. Remove the transfer belt unit. (Refer to [F.4.9.7 Removing/reinstalling the transfer belt unit](#))
3. Remove the registration section. (Refer to [F.4.9.11 Removing/reinstalling the registration section](#))
4. Remove the registration motor assy. (Refer to [F.4.9.18 Replacing the registration motor \(M17\) and the motor gear /Rt](#))
5. Remove the loop motor assy. (Refer to [F.4.9.19 Replacing the loop motor \(M18\)](#))
6. Remove the ADU reverse motor assy. (Refer to [F.4.9.21 Replacing the ADU reverse motor \(M12\) and the ADU reverse motor belt](#))
7. Remove the ADU conveyance motor /2 assy. (Refer to [F.4.9.22 Replacing the ADU conveyance motor /2 \(M16\) and the ADU conveyance motor belt /2](#))
8. Loosen 3 screws [1] to slide the reverse/exit motor (M13) [2] in the arrow-marked direction [3], and release the reverse/exit motor belt [5] from the pulley [4].

Note

- When reinstalling the reverse/exit motor belt [5], the tension is automatically adjusted by the spring [6]. be sure to tighten the screw [1] after installing the reverse/exit motor belt.



9. Remove 2 screws [1] and remove the pulley [2].

10. Remove the spacer [1].

11. Remove 2 screws [2] to release the fixing of the bearing [3].

12. Pull out the reverse/exit roller [4].

Note

- When reinstalling the bearing, be sure to set the notch of the flange between 2 screws.
- To prevent the notch from opening, be sure to tighten 2 screws in the counterclockwise turn with the notch as a starting point.

13. Remove 3 E-rings [2] and the bearing [3] from the reverse/exit roller [1].

Note

- When reinstalling the bearing, be sure to turn the flange outside.

14. Reinstall the above parts following the removal steps in reverse.

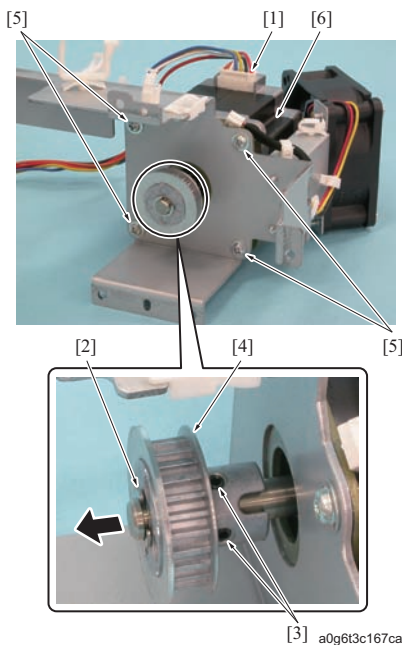
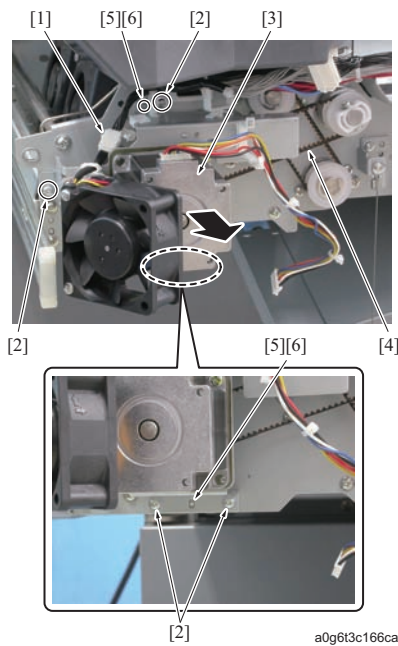
15. After replacing the reverse/exit roller, conduct the followings.

- For the reverse/exit roller: Counter reset of the parts counter No. 58

4.9.25 Replacing the ADU accelerate motor (M14) and the ADU accelerate motor belt

(1) Periodically replaced parts/cycle

- ADU acceleration motor
: Every 30,000,000 prints
- ADU accelerate motor belt
: Every 30,000,000 prints

(2) Procedure

1. Remove the fusing section. (Refer to [F.4.10.2 Removing/reinstalling the fusing section](#))
2. Remove the transfer belt unit. (Refer to [F.4.9.7 Removing/reinstalling the transfer belt unit](#))
3. Remove the registration section. (Refer to [F.4.9.11 Removing/reinstalling the registration section](#))
4. Remove the registration motor assy. (Refer to [F.4.9.18 Replacing the registration motor \(M17\) and the motor gear /Rt](#))
5. Remove the loop motor assy. (Refer to [F.4.9.19 Replacing the loop motor \(M18\)](#))
6. Remove the ADU reverse motor assy. (Refer to [F.4.9.21 Replacing the ADU reverse motor \(M12\) and the ADU reverse motor belt](#))
7. Remove the ADU conveyance motor /2 assy. (Refer to [F.4.9.22 Replacing the ADU conveyance motor /2 \(M16\) and the ADU conveyance motor belt /2](#))
8. Disconnect the connector [1].
9. Remove 4 screws [2] and then remove the ADU acceleration motor assy [3].
10. Remove the ADU accelerate motor belt [4].

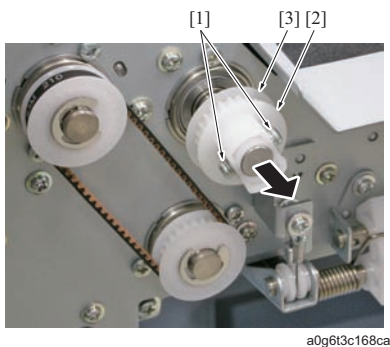
Note

- When reinstalling the ADU accelerate motor assy, be sure to set 2 positioning holes [5] to 2 projections [6] of the duplex section.

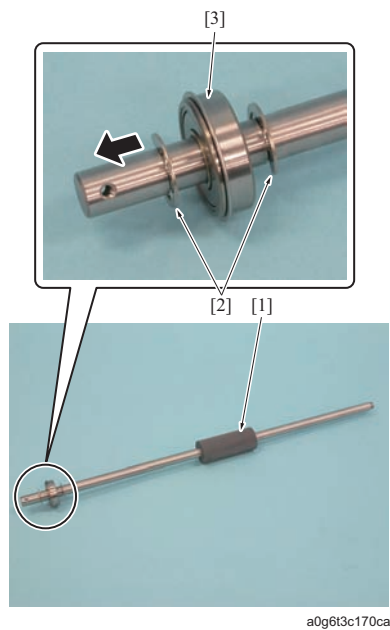
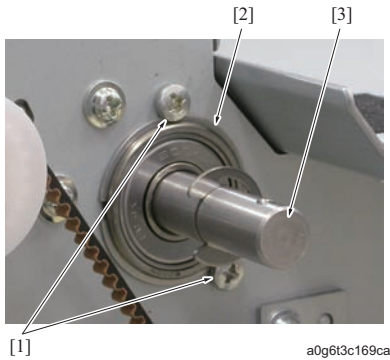
11. Disconnect the connector [1].
12. Remove the E-ring [2] and 2 screws [3], and remove the pulley [4].
13. Remove 4 screws [5] and remove the ADU accelerate motor (M14) [6].
14. Reinstall the above parts following the removal steps in reverse.

4.9.26 Replacing the ADU accelerate roller**(1) Periodically replaced parts/cycle**

- ADU accelerator roller
: Every 10,500,000 prints

(2) Procedure

1. Remove the fusing section. (Refer to [F.4.10.2 Removing/reinstalling the fusing section](#))
2. Remove the transfer belt unit. (Refer to [F.4.9.7 Removing/reinstalling the transfer belt unit](#))
3. Remove the registration section. (Refer to [F.4.9.11 Removing/reinstalling the registration section](#))
4. Remove the registration motor assy. (Refer to [F.4.9.18 Replacing the registration motor \(M17\) and the motor gear /Rt](#))
5. Remove the loop motor assy. (Refer to [F.4.9.19 Replacing the loop motor \(M18\)](#))
6. Remove the ADU reverse motor assy. (Refer to [F.4.9.21 Replacing the ADU reverse motor \(M12\) and the ADU reverse motor belt](#))
7. Remove the ADU conveyance motor /2 assy. (Refer to [F.4.9.22 Replacing the ADU conveyance motor /2 \(M16\) and the ADU conveyance motor belt /2](#))



8. Remove the ADU accelerate motor assy. (Refer to [F.4.9.25 Replacing the ADU accelerate motor \(M14\) and the ADU accelerate motor belt](#))
9. Remove 2 screws [1] and remove the pulley [2] and the spacer [3].
10. Remove 2 screws [1] to release the fixing of the bearing [2].
11. Pull out the ADU accelerate roller [3].

Note

- When reinstalling the bearing, be sure to set the notch of the flange between 2 screws.
- To prevent the notch from opening, be sure to tighten 2 screws in the counterclockwise turn with the notch as a starting point.

12. Remove 2 E-rings [2] and the bearing [3] from the ADU accelerate roller [1].

Note

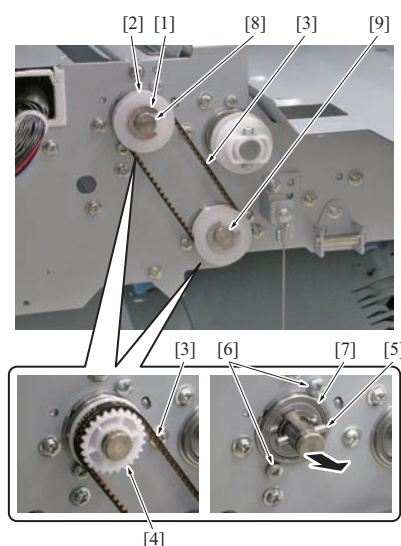
- When reinstalling the bearing, be sure to turn the flange outside.

13. Reinstall the above parts following the removal steps in reverse.
14. After replacing the ADU accelerate roller, conduct the following step.
 - For ADU accelerate roller: Counter reset of the parts counter No. 57

4.9.27 Replacing the paper exit conveyance roller /1 and /2 assy and the ADU paper exit roller belt

(1) Periodically replaced parts/cycle

- Paper exit conveyance roller /1
: Every 10,500,000 prints
- Output convey roller /2 assy
: Every 10,500,000 prints
- ADU paper exit roller belt
: Every 30,000,000 prints

(2) Procedure

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1. Remove the fusing section. (Refer to [F.4.10.2 Removing/reinstalling the fusing section](#))
2. Remove the transfer belt unit. (Refer to [F.4.9.7 Removing/reinstalling the transfer belt unit](#))
3. Remove the registration section. (Refer to [F.4.9.11 Removing/reinstalling the registration section](#))
4. Remove the registration motor assy. (Refer to [F.4.9.18 Replacing the registration motor \(M17\) and the motor gear /Rt](#))
5. Remove the loop motor assy. (Refer to [F.4.9.19 Replacing the loop motor \(M18\)](#))
6. Remove the ADU reverse motor assy. (Refer to [F.4.9.21 Replacing the ADU reverse motor \(M12\) and the ADU reverse motor belt](#))
7. Remove the ADU conveyance motor /2 assy. (Refer to [F.4.9.22 Replacing the ADU conveyance motor /2 \(M16\) and the ADU conveyance motor belt /2](#))
8. Remove the ADU accelerate motor assy. (Refer to [F.4.9.25 Replacing the ADU accelerate motor \(M14\) and the ADU accelerate motor belt](#))
9. Remove the E-ring [1] and then remove the spacer [2].
10. Remove the ADU paper exit roller belt [3].
11. Remove the pulley [4] and remove the pin [5].
12. Remove 2 screws [6] to release the fixing of the bearing [7].
13. Pull out the ADU paper exit conveyance roller /2 assy [8].
14. Following the steps 9 to 13, remove the paper exit conveyance roller /1 [9].

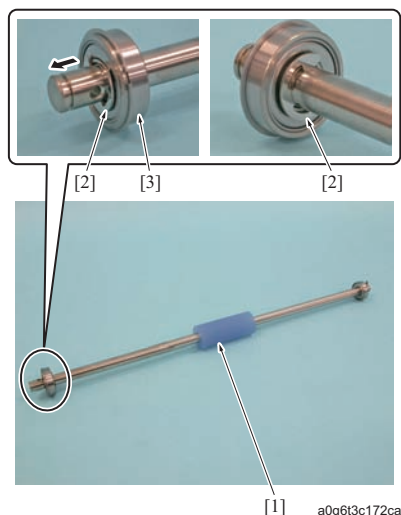
Note

- When reinstalling the bearing, be sure to set the notch of the flange between 2 screws.
- To prevent the notch from opening, be sure to tighten 2 screws in the counterclockwise turn with the notch as a starting point.

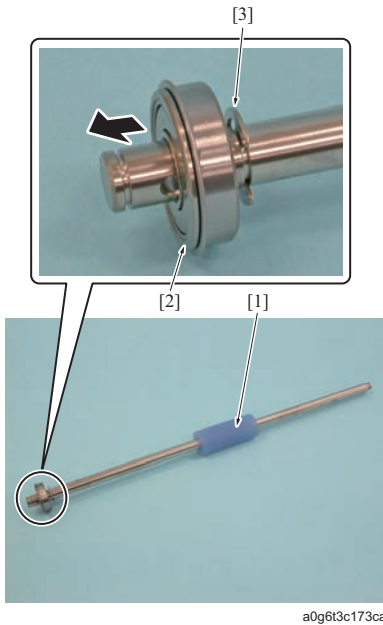
15. Remove 2 E-rings [2] and the bearing [3] from the paper exit roller /2 assy [1].

Note

- When reinstalling the bearing, be sure to turn the flange outside.



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16. Remove the bearing [2] and the E-ring [3] from the paper exit conveyance roller /1 [1].

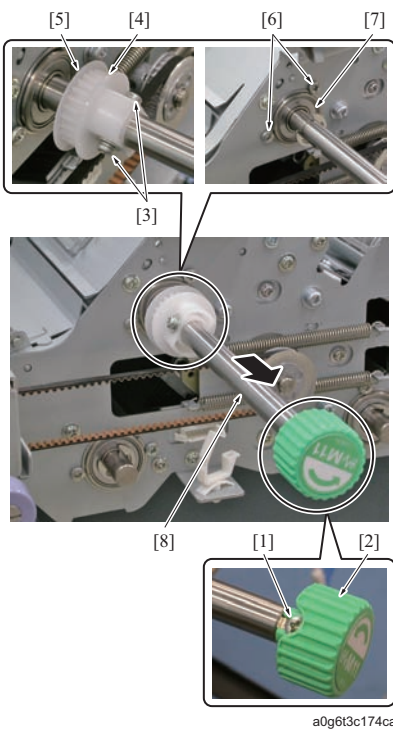
Note

- When reinstalling the bearing, be sure to turn the flange outside.

17. Reinstall the above parts following the removal steps in reverse.
18. After replacing the paper exit conveyance roller /1 and the paper exit conveyance roller /2 assy, conduct the following.
 - For the paper exit conveyance roller /1 and the paper exit conveyance roller /2 assy: Counter reset of the parts counter No. 60

4.9.28 Replacing the ADU reverse roller**(1) Periodically replaced parts/cycle**

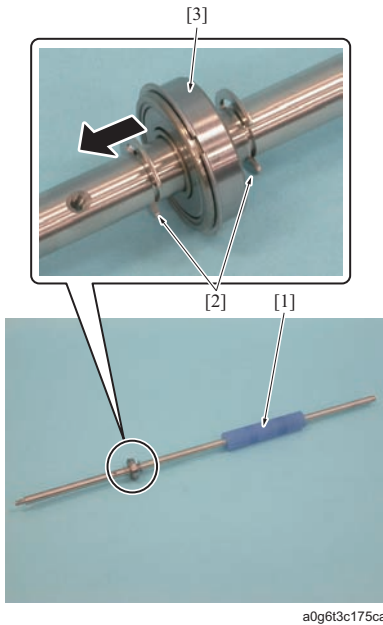
- ADU reversal roller
- : Every 10,500,000 prints

(2) Procedure

1. Remove the fusing section. (Refer to [F.4.10.2 Removing/reinstalling the fusing section](#))
2. Remove the transfer belt unit. (Refer to [F.4.9.7 Removing/reinstalling the transfer belt unit](#))
3. Remove the registration section. (Refer to [F.4.9.11 Removing/reinstalling the registration section](#))
4. Remove the registration motor assy. (Refer to [F.4.9.18 Replacing the registration motor \(M17\) and the motor gear /Rt](#))
5. Remove the loop motor assy. (Refer to [F.4.9.19 Replacing the loop motor \(M18\)](#))
6. Remove the ADU reverse motor assy. (Refer to [F.4.9.21 Replacing the ADU reverse motor \(M12\) and the ADU reverse motor belt](#))
7. Remove the ADU conveyance motor /2 assy. (Refer to [F.4.9.22 Replacing the ADU conveyance motor /2 \(M16\) and the ADU conveyance motor belt /2](#))
8. Remove the ADU accelerate motor assy. (Refer to [F.4.9.25 Replacing the ADU accelerate motor \(M14\) and the ADU accelerate motor belt](#))
9. Remove the screw [1] and then remove the knob [2].
10. Remove 2 screws [3] and remove the pulley [4] and the spacer [5].
11. Remove 2 screws [6] to release the fixing of the bearing [7].
12. Pull out the ADU reverse roller [8].

Note

- When reinstalling the bearing, be sure to set the notch of the flange between 2 screws.
- To prevent the notch from opening, be sure to tighten 2 screws in the counterclockwise turn with the notch as a starting point.



13. Remove 2 E-rings [2] and the bearing [3] from the ADU reverse roller [1].

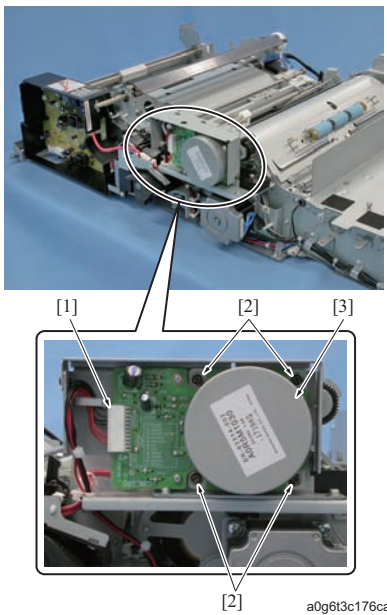
Note

- When reinstalling the bearing, be sure to turn the flange outside.

14. Reinstall the above parts following the removal steps in reverse.
15. After replacing the ADU reversal roller, conduct the following item.
For ADU reverse roller: Counter reset of the parts counter No.59

4.9.29 Replacing the transfer belt motor (M30)**(1) Periodically replaced parts/cycle**

- Transfer belt motor (M30)
: Every 30,000,000 prints

(2) Procedure

1. Remove the fusing section. (Refer to [F.4.10.2 Removing/reinstalling the fusing section](#))
2. Remove the transfer belt unit. (Refer to [F.4.9.7 Removing/reinstalling the transfer belt unit](#))
3. Remove the belt cleaning unit. (Refer to [F.4.9.16 Replacing the belt cleaning unit](#))
4. Remove the registration section. (Refer to [F.4.9.11 Removing/reinstalling the registration section](#))
5. Remove the registration motor assy. (Refer to [F.4.9.18 Replacing the registration motor \(M17\) and the motor gear /Rt](#))
6. Remove the loop motor assy. (Refer to [F.4.9.19 Replacing the loop motor \(M18\)](#))
7. Remove the ADU reverse motor assy. (Refer to [F.4.9.21 Replacing the ADU reverse motor \(M12\) and the ADU reverse motor belt](#))
8. Remove the ADU conveyance motor /2 assy. (Refer to [F.4.9.22 Replacing the ADU conveyance motor /2 \(M16\) and the ADU conveyance motor belt /2](#))
9. Remove the ADU accelerate motor assy. (Refer to [F.4.9.25 Replacing the ADU accelerate motor \(M14\) and the ADU accelerate motor belt](#))
10. Remove the duplex section. (Refer to [G.2.2.22 Duplex section](#))
11. Disconnect the connector [1].
12. Remove 4 screws [2] and remove the transfer belt motor (M30) [3].

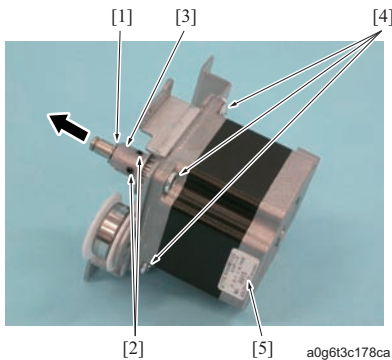
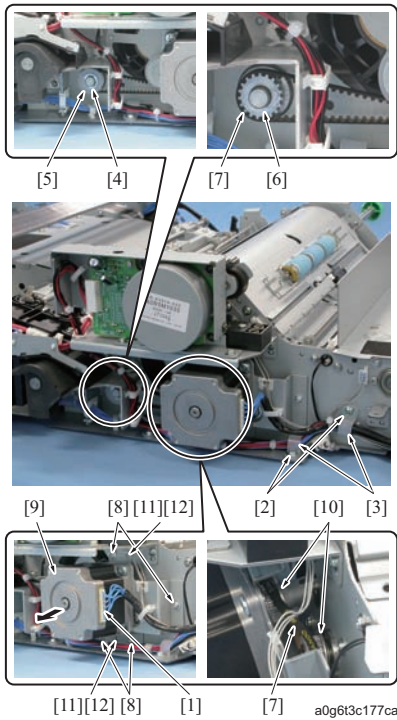
Note

- The position of the transfer belt motor is adjusted as an assy. Be sure to replace directly the motor by itself when replacing one.

13. Reinstall the above parts following the removal steps in reverse.

4.9.30 Replacing the ADU conveyance motor /1 (M15) and the ADU conveyance motor /1 belt**(1) Periodically replaced parts/cycle**

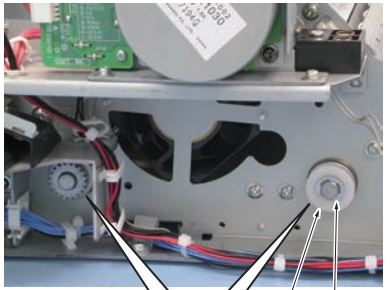
- ADU conveyance motor /1 (M15)
: Every 30,000,000 prints
- ADU conveyance motor /1 belt
: Every 30,000,000 prints

(2) Procedure

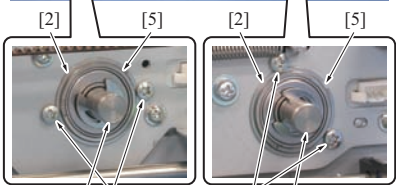
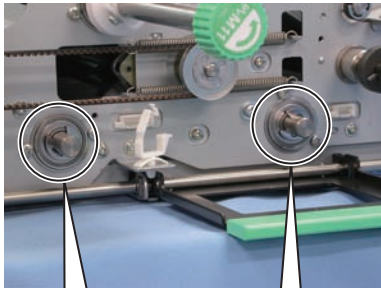
1. Remove the fusing section. (Refer to [F.4.10.2 Removing/reinstalling the fusing section](#))
 2. Remove the transfer belt unit. (Refer to [F.4.9.7 Removing/reinstalling the transfer belt unit](#))
 3. Remove the belt cleaning unit. (Refer to [F.4.9.16 Replacing the belt cleaning unit](#))
 4. Remove the registration section. (Refer to [F.4.9.11 Removing/reinstalling the registration section](#))
 5. Remove the registration motor assy. (Refer to [F.4.9.18 Replacing the registration motor \(M17\) and the motor gear /Rt](#))
 6. Remove the loop motor assy. (Refer to [F.4.9.19 Replacing the loop motor \(M18\)](#))
 7. Remove the ADU reverse motor assy. (Refer to [F.4.9.21 Replacing the ADU reverse motor \(M12\) and the ADU reverse motor belt](#))
 8. Remove the ADU conveyance motor /2 assy. (Refer to [F.4.9.22 Replacing the ADU conveyance motor /2 \(M16\) and the ADU conveyance motor belt /2](#))
 9. Remove the ADU accelerate motor assy. (Refer to [F.4.9.25 Replacing the ADU accelerate motor \(M14\) and the ADU accelerate motor belt](#))
 10. Remove the duplex section. (Refer to [G.2.2.22 Duplex section](#))
 11. Disconnect the connector [1].
 12. Remove the 2 screws [2] and then remove the 2 wiring harness clamps [3].
 13. Remove the E-ring [4] and remove the spacer [5].
 14. Remove the ADU conveyance motor /1 belt [7] from the pulley [6].
 15. Remove 4 screws [8] and remove the ADU conveyance motor /1 assy [9].
 16. Remove the ADU conveyance motor belt /1 [7] from 2 pulleys [10].
- Note**
- Some of the screws [8] is hidden by the wiring harness. remove the wiring harness clamps [3] to move the wiring harness.
 - When reinstalling the ADU conveyance motor /1 assy, be sure to set 2 positioning holes [11] to 2 projections [12] of the duplex section.
17. Remove the E-ring [1] and 2 screws [2], and remove the pulley [3].
 18. Remove 3 screws [4] and remove the ADU conveyance motor /1 (M15) [5].
 19. Reinstall the above parts following the removal steps in reverse.

4.9.31 Replacing the ADU conveyance roller /1 and /2**(1) Periodically replaced parts/cycle**

- ADU conveyance roller /1
: Every 10,500,000 prints
- ADU conveyance roller /2
: Every 10,500,000 prints

(2) Procedure

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1. Remove the fusing section. (Refer to [F.4.10.2 Removing/reinstalling the fusing section](#))
2. Remove the transfer belt unit. (Refer to [F.4.9.7 Removing/reinstalling the transfer belt unit](#))
3. Remove the belt cleaning unit. (Refer to [F.4.9.16 Replacing the belt cleaning unit](#))
4. Remove the registration section. (Refer to [F.4.9.11 Removing/reinstalling the registration section](#))
5. Remove the registration motor assy. (Refer to [F.4.9.18 Replacing the registration motor \(M17\) and the motor gear /Rt](#))
6. Remove the loop motor assy. (Refer to [F.4.9.19 Replacing the loop motor \(M18\)](#))
7. Remove the ADU reverse motor assy. (Refer to [F.4.9.21 Replacing the ADU reverse motor \(M12\) and the ADU reverse motor belt](#))
8. Remove the ADU conveyance motor /2 assy. (Refer to [F.4.9.22 Replacing the ADU conveyance motor /2 \(M16\) and the ADU conveyance motor belt /2](#))
9. Remove the ADU accelerate motor assy. (Refer to [F.4.9.25 Replacing the ADU accelerate motor \(M14\) and the ADU accelerate motor belt](#))
10. Remove the duplex section. (Refer to [G.2.2.22 Duplex section](#))
11. Remove the ADU conveyance motor /1 assy. (Refer to [F.4.9.30 Replacing the ADU conveyance motor /1 \(M15\) and the ADU conveyance motor /1 belt](#))
12. Remove the E-ring [1] and then remove the spacer [2].
13. Remove the pulleys [3], 1 each, and remove the pins [4], 1 each.
14. Set the duplex section temporarily to the main body. (Refer to [G.2.2.22 Duplex section](#))

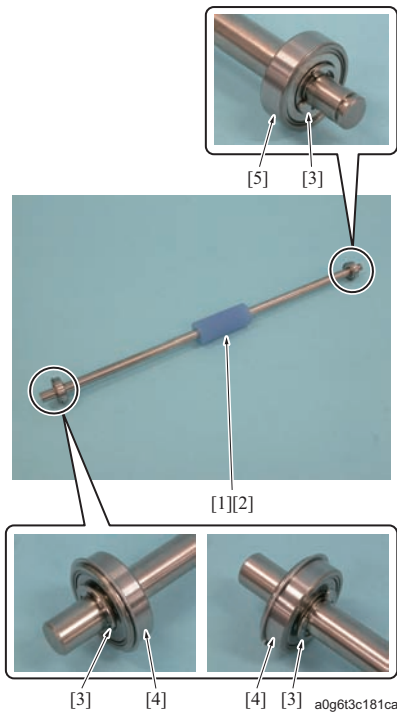
Note

- When the duplex section is on the working table, the ADU conveyance rollers /1 and /2 contact closely with driven roller of each roller and cannot be removed. Be sure to return the duplex section to the main body in advance.

15. Remove the screws [1], 2 each, to release the fixing of the bearings [2], 1 each.
16. Pull out the ADU conveyance rollers /1 [3] and /2 [4].

Note

- When reinstalling the bearings [2], be sure to set the notch to the position [5].
- To prevent the notch [5] from opening, be sure to tighten 2 screws [1] in the counterclockwise turn with the notch [5] as a starting point.



17. Remove 3 E-rings [3] and the bearings [4] and [5] from the ADU conveyance rollers /1 [1] and /2 [2].

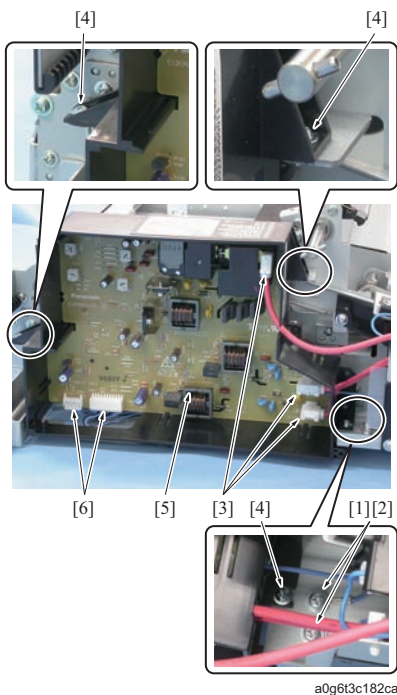
Note

- When reinstalling the bearing [4], be sure to turn the flange outside.

18. Reinstall the above parts following the removal steps in reverse.
19. After replacing the ADU conveyance rollers /1 and /2 conduct the following item.
For the ADU conveyance rollers /1 and /2: Counter reset of the parts counter No.61

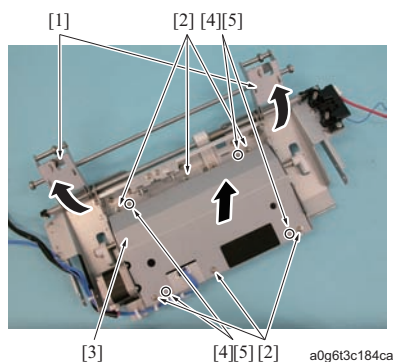
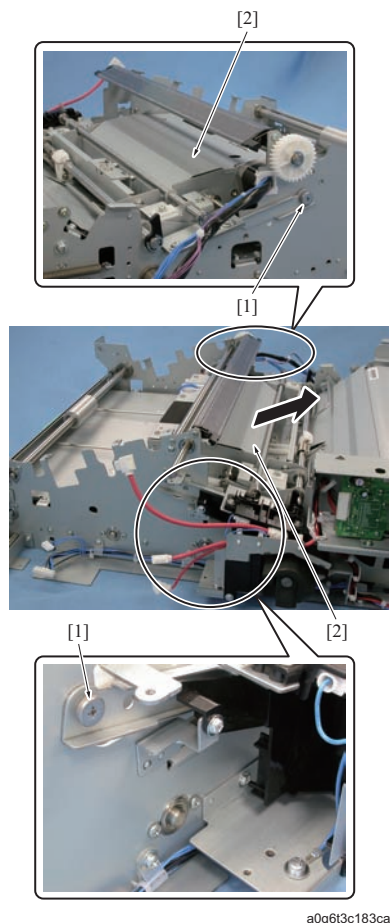
4.9.32 Replacing the transfer belt pressure release motor (M26)**(1) Periodically replaced parts/cycle**

- Transfer belt pressure release motor (M26)
: Every 30,000,000 prints

(2) Procedure

1. Remove the fusing section. (Refer to [F.4.10.2 Removing/ reinstalling the fusing section](#))
2. Remove the transfer belt unit. (Refer to [F.4.9.7 Removing/ reinstalling the transfer belt unit](#))
3. Remove the belt cleaning unit. (Refer to [F.4.9.16 Replacing the belt cleaning unit](#))
4. Remove the registration section. (Refer to [F.4.9.11 Removing/ reinstalling the registration section](#))
5. Remove the registration motor assy. (Refer to [F.4.9.18 Replacing the registration motor \(M17\) and the motor gear /Rt](#))
6. Remove the loop motor assy. (Refer to [F.4.9.19 Replacing the loop motor \(M18\)](#))
7. Remove the ADU reverse motor assy. (Refer to [F.4.9.21 Replacing the ADU reverse motor \(M12\) and the ADU reverse motor belt](#))
8. Remove the ADU conveyance motor /2 assy. (Refer to [F.4.9.22 Replacing the ADU conveyance motor /2 \(M16\) and the ADU conveyance motor belt /2](#))
9. Remove the ADU accelerate motor assy. (Refer to [F.4.9.25 Replacing the ADU accelerate motor \(M14\) and the ADU accelerate motor belt](#))
10. Remove the duplex section. (Refer to [G.2.2.22 Duplex section](#))
11. Remove 2 screws [1], and remove 2 ground terminals [2].
12. Disconnect 6 connectors [2] and remove 3 fastons [3].
13. Remove 2 screws [6] and remove the high voltage unit /2 (HV2) [5].

14. Remove 2 screws [1] and remove the transfer pressure unit [2].

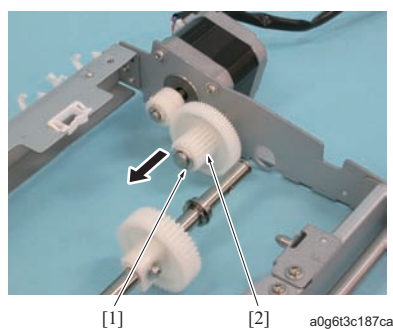
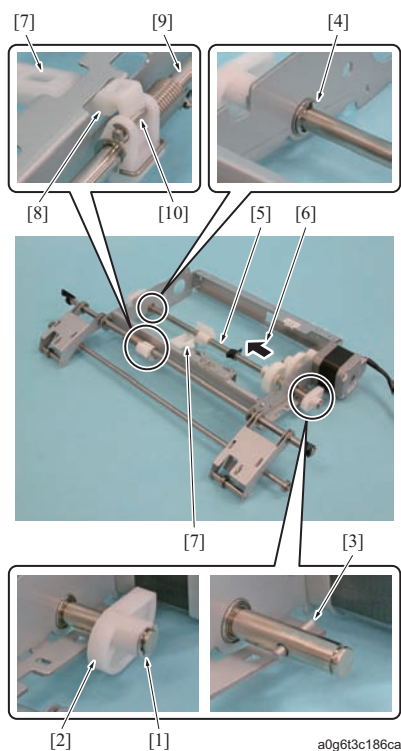
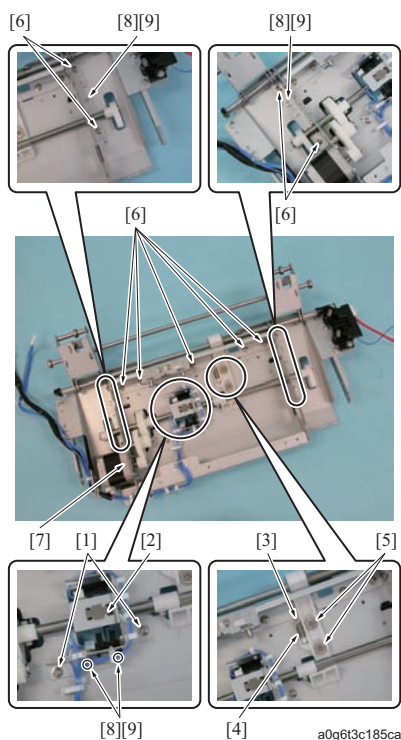


15. Open the pressure arm [1].

16. Remove 6 screws [2] and remove the cover [3].

Note

- When reinstalling the cover, be sure to set 4 positioning holes [4] to 4 projections [5] of the transfer pressure unit.



17. Remove 2 screws [1], and then remove the sensor mounting bracket [2].

Note

- Do not remove the cables of each sensor.

18. Remove the screw [3] and remove the spring [4].

19. Remove 2 screws [5] and 9 screws [6], and remove the pressure mechanism assy [7].

Note

- When reinstalling the sensor mounting bracket [2] and the pressure mechanism assy [7], be sure to set the positioning holes [8] to the projections [9] of transfer pressure unit.

20. Remove the E-ring [1] and remove the pressure cam [2] and the pin [3].

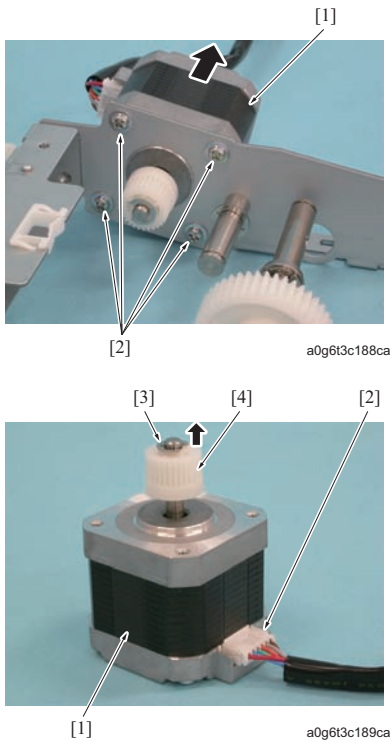
21. Remove the E-ring [4] and slide the cam drive shaft [5] in the arrow-marked direction [6].

22. Remove the slide member [7].

Note

- When reinstalling the slide member [7], be sure to engage the depression [8] to the pin [10] of the pressure shaft [9].

23. Remove the E-ring [1] and the gear [2].



24. Remove 4 screws [1] and remove the transfer belt pressure release motor assy [2].

25. Disconnect the connector [2] from the transfer belt pressure release motor (M26) [1].

26. Remove the E-ring [3] and remove the gear [4].

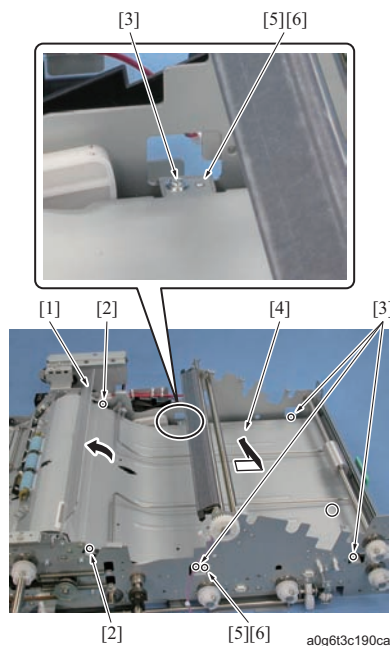
27. Reinstall the above parts following the removal steps in reverse.

4.9.33 Replacing the reverse/exit motor (M13)

(1) Periodically replaced parts/cycle

- Reverse/exit motor (M13)
- : Every 30,000,000 prints

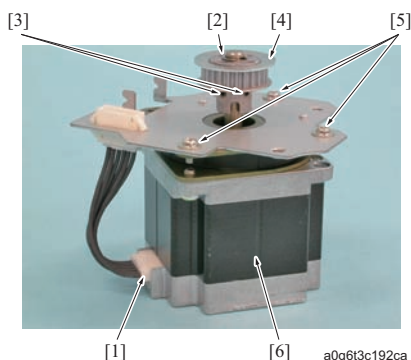
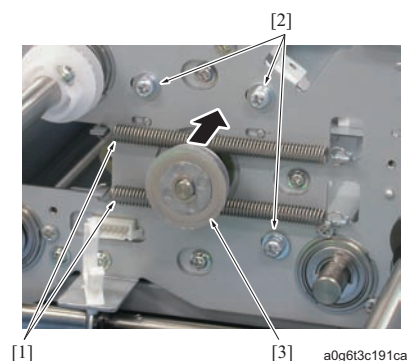
(2) Procedure



1. Remove the fusing section. (Refer to [F.4.10.2 Removing/reinstalling the fusing section](#))
2. Remove the transfer belt unit. (Refer to [F.4.9.7 Removing/reinstalling the transfer belt unit](#))
3. Remove the belt cleaning unit. (Refer to [F.4.9.16 Replacing the belt cleaning unit](#))
4. Remove the registration section. (Refer to [F.4.9.11 Removing/reinstalling the registration section](#))
5. Remove the registration motor assy. (Refer to [F.4.9.18 Replacing the registration motor \(M17\) and the motor gear /Rt](#))
6. Remove the loop motor assy. (Refer to [F.4.9.19 Replacing the loop motor \(M18\)](#))
7. Remove the ADU reverse motor assy. (Refer to [F.4.9.21 Replacing the ADU reverse motor \(M12\) and the ADU reverse motor belt](#))
8. Remove the ADU conveyance motor /2 assy. (Refer to [F.4.9.22 Replacing the ADU conveyance motor /2 \(M16\) and the ADU conveyance motor belt /2](#))
9. Remove the ADU accelerate motor assy. (Refer to [F.4.9.25 Replacing the ADU accelerate motor \(M14\) and the ADU accelerate motor belt](#))
10. Remove the duplex section. (Refer to [G.2.2.22 Duplex section](#))
11. Remove the transfer pressure unit. (Refer to [28.8.32 Replacing the transfer belt pressure release motor \(M: 26\)](#))
12. Open the open/close plate [1] and remove 2 screws [2].
13. Remove 4 screws [3] and remove the ADU fixing plate [4].

Note

- When reinstalling the ADU fixing plate, be sure to set 2 positioning holes [5] to 2 projections [6] of the duplex section.



14. Remove 2 springs [1].

15. Remove 3 screws [2] and remove the reverse/exit motor assy [3].

16. Disconnect the connector [1].

17. Remove the E-ring [2] and 2 screws [3], and remove the pulley [4].

18. Remove 3 screws [5] and remove the reverse/exit motor (M13) [6].

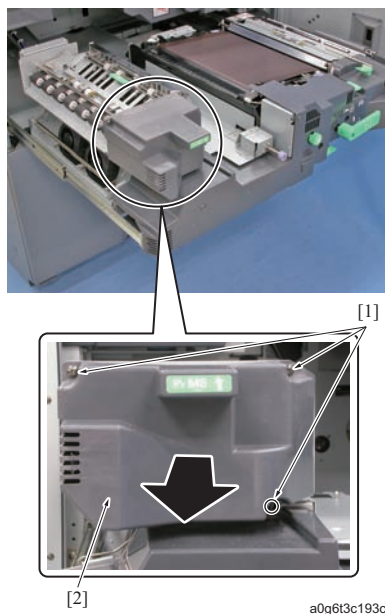
19. Reinstall the above parts following the removal steps in reverse.

4.9.34 Replacing the reverse/exit solenoid (SD7) and the de-curler solenoid /Up (SD8) and /Lw (SD5)

(1) Periodically replaced parts/cycle

- Reverse/exit solenoid (SD7)
: Every 30,000,000 prints
- De-curler solenoid /Up (SD8)
: Every 30,000,000 prints
- De-curler solenoid /Lw (SD5)
: Every 30,000,000 prints

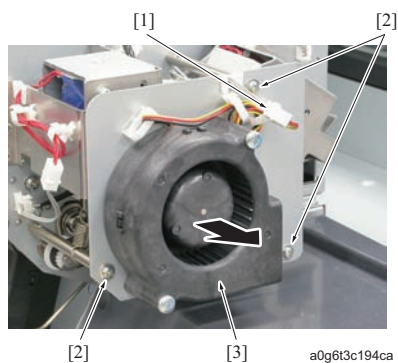
(2) Procedure



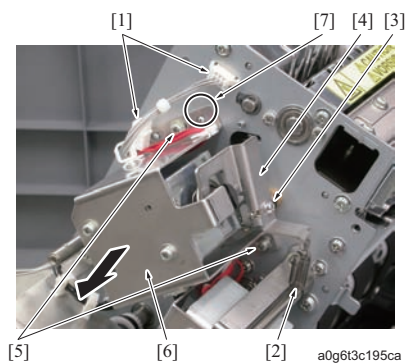
1. Remove the duplex section. (Refer to [G.2.2.22 Duplex section](#))

2. Remove the fusing section. (Refer to [F.4.10.2 Removing/reinstalling the fusing section](#))

3. Loosen 3 screws [1] and remove the reverse section cover [2].



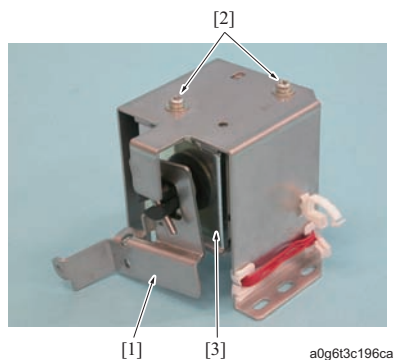
4. Disconnect the connector [1].
5. Remove 3 screws [2] and remove the ADU cooling fan /3 assy [3].



6. Remove 2 connectors [1].
7. Remove the spring [2].
8. Remove the screw [3] and release the fixing of the actuator [4].
9. Remove 2 screws [5] and then remove the reverse/exit solenoid assembly [6].

Note

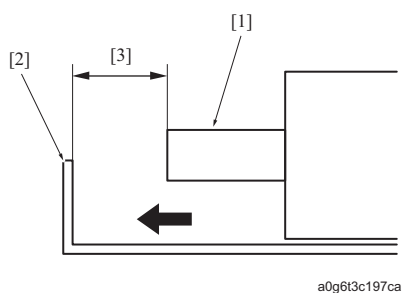
- When reinstalling the reverse/exit solenoid assy, be sure to set it to the same graduation [7] as that used for removal.

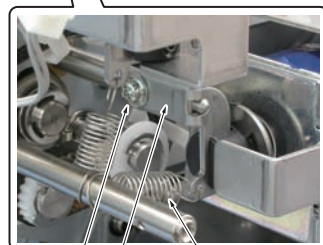
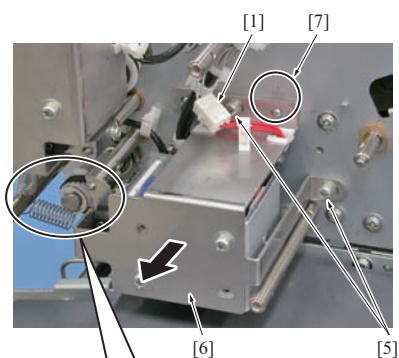


10. Remove the actuator [1].
11. Remove 2 screws [2] and remove the reverse/exit solenoid (SD7) [3].

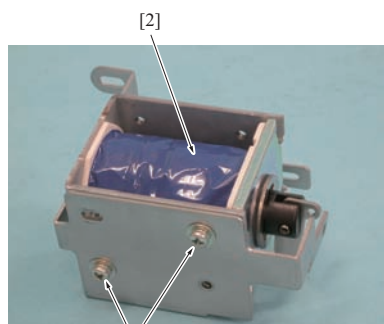
Note

- When reinstalling the reverse/exit solenoid (SD7), be sure to fix it so that the gap [3] between the plunger [1] and the solenoid mounting bracket [2] is within the standard value.
Standard value: 3.8mm to 4.3mm

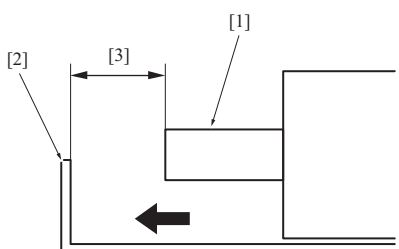




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12. Disconnect the connector [1].
13. Remove the spring [2].
14. Remove the screw [3] and release the fixing of the actuator [4].
15. Remove 2 screws [5] and remove the de-curler solenoid /Lw assy [6].

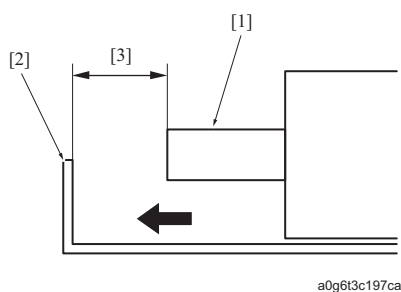
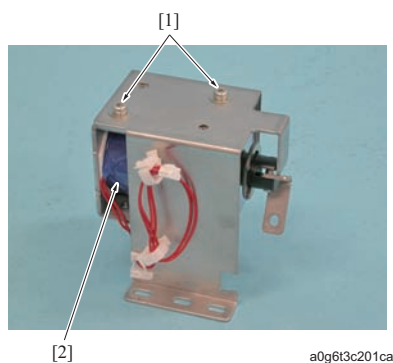
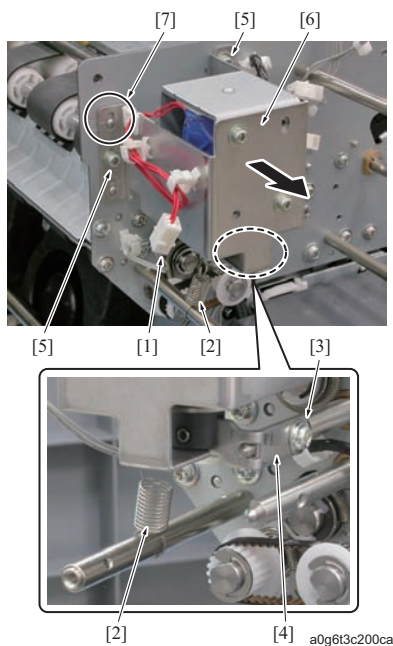
Note

- When reinstalling the de-curler solenoid /Lw assy, be sure to set it to the same graduation [7] as that used for removal.

16. Remove 2 screws [1] and remove the de-curler solenoid /Lw (SD5).

Note

- When reinstalling the de-curler solenoid /Lw (SD5), be sure to fix it so that the gap [3] between the plunger [1] and the solenoid mounting bracket [2] is within the standard value.
Standard value: 3.8mm to 4.3mm



17. Disconnect the connector [1].
18. Remove the spring [2].
19. Remove the screw [3] and release the fixing of the actuator [4].
20. Remove 2 screws [5] and remove the de-curler solenoid /Up assy [6].

Note

- When reinstalling the de-curler solenoid /Up assy, be sure to set it to the same graduation [7] as that used for removal.

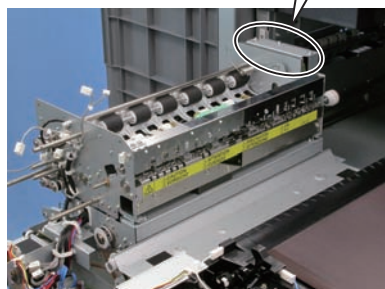
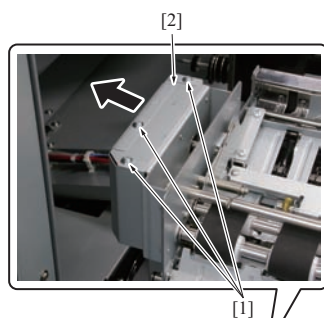
21. Remove 2 screws [1] and remove the de-curler solenoid /Up (SD8).

22. Reinstall the above parts following the removal steps in reverse.

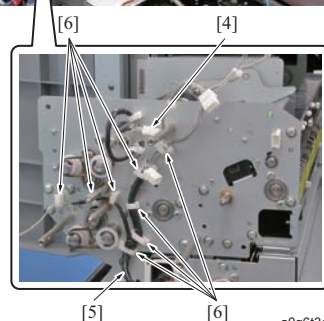
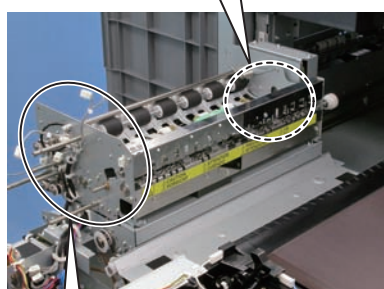
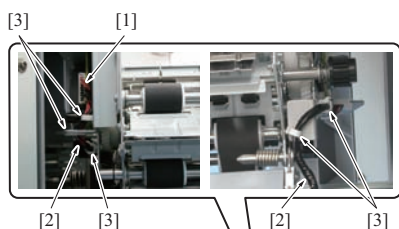
Note

- When reinstalling the de-curler solenoid /Up (SD8), be sure to fix it so that the gap [3] between the plunger [1] and the solenoid mounting bracket [2] is within the standard value.

Standard value: 3.8mm to 4.3mm

4.9.35 Removing/reinstalling the reverse/exit section**(1) Step**

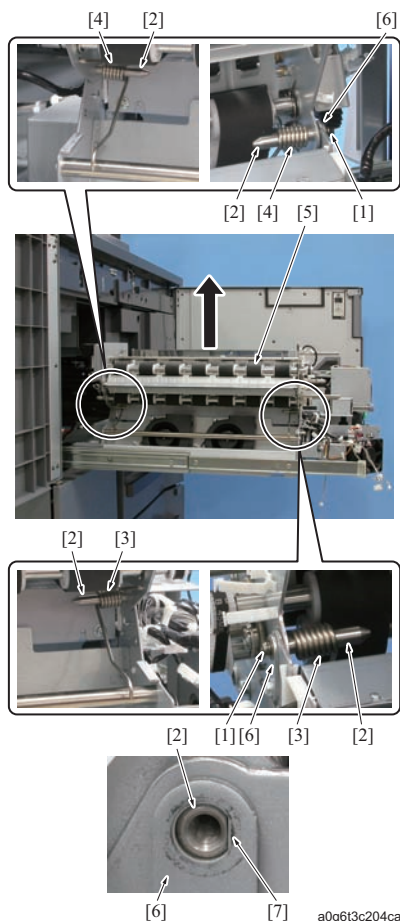
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1. Remove the duplex section. (Refer to [G.2.2.22 Duplex section](#))
2. Remove the fusing section. (Refer to [F.4.10.2 Removing/reinstalling the fusing section](#))
3. Remove the reverse/exit solenoid assy. (Refer to [F.4.9.34 Replacing the reverse/exit solenoid \(SD7\) and the de-curler solenoid /Up \(SD8\) and /Lw \(SD5\)](#))
4. Remove the de-curler solenoid /Lw assy. (Refer to [F.4.9.34 Replacing the reverse/exit solenoid \(SD7\) and the de-curler solenoid /Up \(SD8\) and /Lw \(SD5\)](#))
5. Remove the de-curler solenoid /Up assy. (Refer to [F.4.9.34 Replacing the reverse/exit solenoid \(SD7\) and the de-curler solenoid /Up \(SD8\) and /Lw \(SD5\)](#))
6. Remove the duplex section cover /Lt. (Refer to [28.8.10 Removing/reinstalling the duplex section cover](#))
7. Remove 3 screws [1] and remove the de-curler motor cover [2].

8. Disconnect the connector [1] to release the wiring harness [2] from 5 wiring harness clamps [3].
9. Disconnect the connector [4] to release the wiring harness [5] from 8 wiring harness clamps [6].



10. Remove the screws [1], 1 each, and remove the fulcrum shafts [2], 1 each, and the assist springs /Fr [3] and /Rr [4].
11. Remove the reverse/exit section [5].

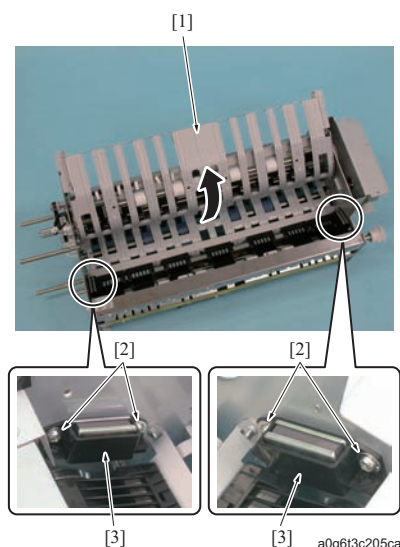
Note

- When reinstalling each fulcrum shaft [2], be sure to set it to the D-cut section [7] of the support plate [6].

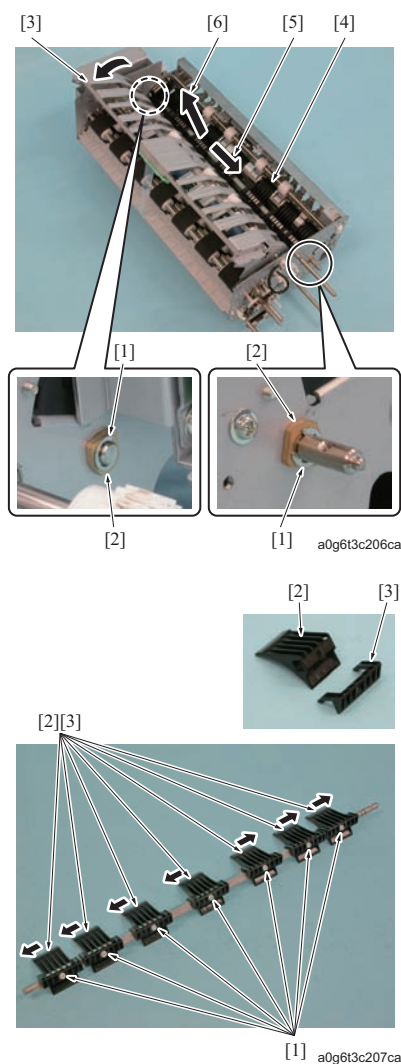
12. Reinstall the above parts following the removal steps in reverse.

4.9.36 Replacing the reverse gate**(1) Periodically replaced parts/cycle**

- Reverse gate
- : Every 10,500,000 prints

(2) Procedure

1. Remove the duplex section. (Refer to [G.2.2.22 Duplex section](#))
2. Remove the fusing section. (Refer to [F.4.10.2 Removing/reinstalling the fusing section](#))
3. Remove the reverse/exit solenoid assy. (Refer to [F.4.9.34 Replacing the reverse/exit solenoid \(SD7\) and the de-curler solenoid /Up \(SD8\) and /Lw \(SD5\)](#))
4. Remove the de-curler solenoid /Lw assy. (Refer to [F.4.9.34 Replacing the reverse/exit solenoid \(SD7\) and the de-curler solenoid /Up \(SD8\) and /Lw \(SD5\)](#))
5. Remove the de-curler solenoid /Up assy. (Refer to [F.4.9.34 Replacing the reverse/exit solenoid \(SD7\) and the de-curler solenoid /Up \(SD8\) and /Lw \(SD5\)](#))
6. Remove the reverse/exit section. (Refer to [F.4.9.35 Removing/reinstalling the reverse/exit section](#))
7. Open the reverse door [1] and remove the screws [2], 2 each, and then remove 2 magnet assys [3].



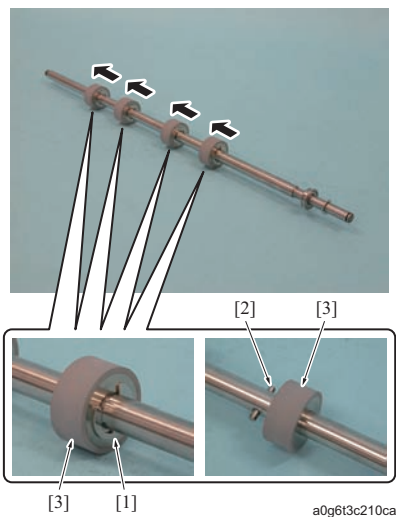
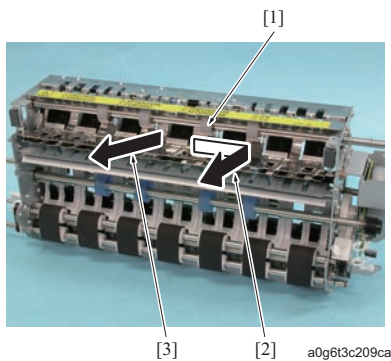
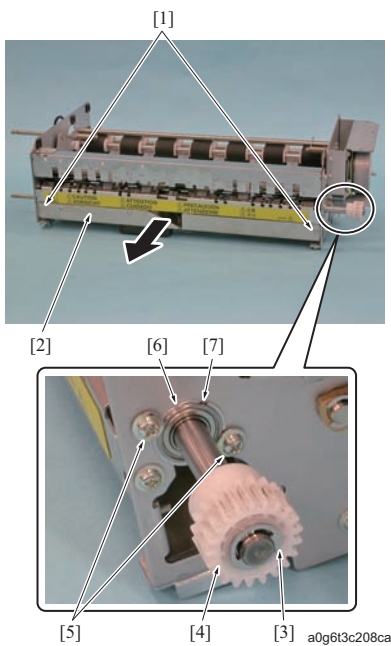
8. Remove the E-rings [1], 1 each, and remove 2 bearings [2].
9. Open the reverse door [3] and remove the reverse gate assy [4] while sliding it to the arrow-marked directions [5] and [6] in this order.

10. Remove the screws [1], 1 each, and remove the reverse gates [2] and the guide member [3], seven each.
11. Reinstall the above parts following the removal steps in reverse.

4.9.37 Replacing the fusing exit roller and the ADU lock gear

(1) Periodically replaced parts/cycle

- Fixing exit roller
: Every 6,000,000 prints
- ADU lock gear
: Every 3,000,000 prints

(2) Procedure

1. Remove the duplex section. (Refer to [G.2.2.22 Duplex section](#))
2. Remove the fusing section. (Refer to [F.4.10.2 Removing/reinstalling the fusing section](#))
3. Remove the reverse/exit solenoid assy. (Refer to [F.4.9.34 Replacing the reverse/exit solenoid \(SD7\) and the de-curler solenoid /Up \(SD8\) and /Lw \(SD5\)](#))
4. Remove the de-curler solenoid /Lw assy. (Refer to [F.4.9.34 Replacing the reverse/exit solenoid \(SD7\) and the de-curler solenoid /Up \(SD8\) and /Lw \(SD5\)](#))
5. Remove the de-curler solenoid /Up assy. (Refer to [F.4.9.34 Replacing the reverse/exit solenoid \(SD7\) and the de-curler solenoid /Up \(SD8\) and /Lw \(SD5\)](#))
6. Remove the reverse/exit section. (Refer to [F.4.9.35 Removing/reinstalling the reverse/exit section](#))
7. Remove 2 screws [1], and then remove the duct assy [2].
8. Remove the E-ring [3] and remove the ADU lock gear [4].
9. Remove 2 screws [5] to release the fixing of the bearing [6].

Note

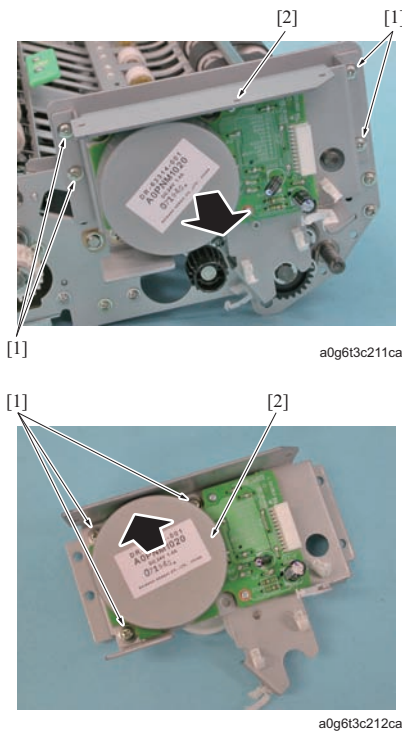
- When reinstalling the bearing [6], be sure to set the notch to the position [7].
- To prevent the notch [7] from opening, be sure to tighten 2 screws [5] in the counterclockwise turn with the notch [7] as a starting point.

10. Remove the fusing exit roller assy [1] while sliding it in the arrow-marked directions [2] and [3] in this order.

11. Remove the E-rings [1], 2 each, and the pins [2], 1 each, and then remove 4 fusing exit rollers [3].
12. Reinstall the above parts following the removal steps in reverse.
13. After replacing the fusing exit roller, conduct the following step.
 - For fusing exit roller: Counter reset of the parts counter No.62

4.9.38 Replacing the de-curler motor (M32)**(1) Periodically replaced parts/cycle**

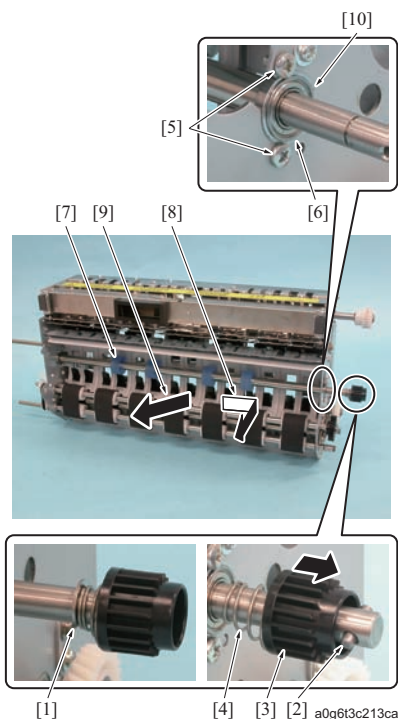
- De-curler motor (M32)
: Every 30,000,000 prints

(2) Procedure

1. Remove the duplex section. (Refer to [G.2.2.22 Duplex section](#))
2. Remove the fusing section. (Refer to [F.4.10.2 Removing/reinstalling the fusing section](#))
3. Remove the reverse/exit solenoid assy. (Refer to [F.4.9.34 Replacing the reverse/exit solenoid \(SD7\) and the de-curler solenoid /Up \(SD8\) and /Lw \(SD5\)](#))
4. Remove the de-curler solenoid /Lw assy. (Refer to [F.4.9.34 Replacing the reverse/exit solenoid \(SD7\) and the de-curler solenoid /Up \(SD8\) and /Lw \(SD5\)](#))
5. Remove the de-curler solenoid /Up assy. (Refer to [F.4.9.34 Replacing the reverse/exit solenoid \(SD7\) and the de-curler solenoid /Up \(SD8\) and /Lw \(SD5\)](#))
6. Remove the reverse/exit section. (Refer to [F.4.9.35 Removing/reinstalling the reverse/exit section](#))
7. Remove 4 screws [1] and remove the de-curler motor assy [2].
8. Remove 3 screws [1] and remove the de-curler motor (M32) [2].
9. Reinstall the above parts following the removal steps in reverse.

4.9.39 Replacing the de-curler entrance roller**(1) Periodically replaced parts/cycle**

- De-curler entrance roller
: Every 10,500,000 prints

(2) Procedure

1. Remove the duplex section. (Refer to [G.2.2.22 Duplex section](#))
2. Remove the fusing section. (Refer to [F.4.10.2 Removing/reinstalling the fusing section](#))
3. Remove the reverse/exit solenoid assy. (Refer to [F.4.9.34 Replacing the reverse/exit solenoid \(SD7\) and the de-curler solenoid /Up \(SD8\) and /Lw \(SD5\)](#))
4. Remove the de-curler solenoid /Lw assy. (Refer to [F.4.9.34 Replacing the reverse/exit solenoid \(SD7\) and the de-curler solenoid /Up \(SD8\) and /Lw \(SD5\)](#))
5. Remove the de-curler solenoid /Up assy. (Refer to [F.4.9.34 Replacing the reverse/exit solenoid \(SD7\) and the de-curler solenoid /Up \(SD8\) and /Lw \(SD5\)](#))
6. Remove the reverse/exit section. (Refer to [F.4.9.35 Removing/reinstalling the reverse/exit section](#))
7. Remove the de-curler motor assy. (Refer to [F.4.9.38 Replacing the de-curler motor \(M32\)](#))
8. Remove the E-ring [1].
9. Remove the pin [2] and remove the coupling [3] and the spring [4].
10. Remove 2 screws [5] and remove the bearing [6].
11. Remove the de-curler entrance roller [7] while sliding it in the arrow-marked directions [8] and [9] in this order.

Note

- When reinstalling the bearing [6], be sure to set the notch to the position [10].
- To prevent the notch [10] from opening, be sure to tighten 2 screws [5] in the counterclockwise turn with the notch [10] as a starting point.

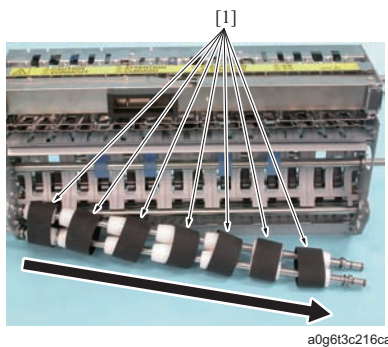
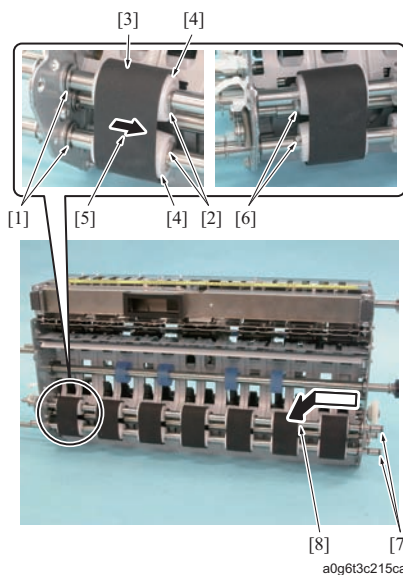
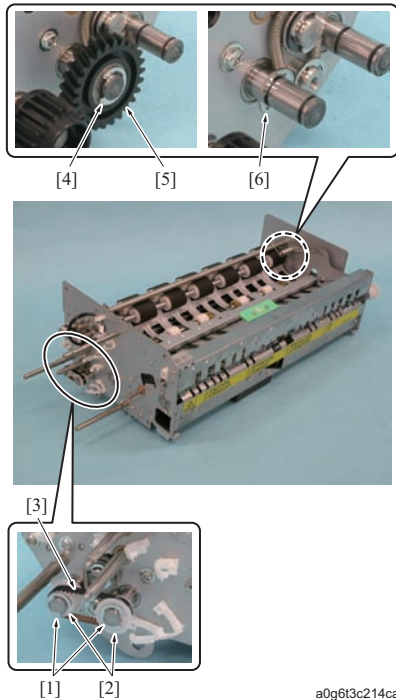
12. Reinstall the above parts following the removal steps in reverse.
13. After replacing the de-curler entrance roller, conduct the following step.
- For fusing entrance roller: Counter reset of the parts counter No. 63

4.9.40 Re placing the de-curler belt /Lw**(1) Periodically replaced parts/cycle**

- De-curler belt /Lw

: Every 10,500,000 prints

(2) Procedure



1. Remove the duplex section. (Refer to [G.2.2.22 Duplex section](#))
2. Remove the fusing section. (Refer to [F.4.10.2 Removing/reinstalling the fusing section](#))
3. Remove the reverse/exit solenoid assy. (Refer to [F.4.9.34 Replacing the reverse/exit solenoid \(SD7\) and the de-curler solenoid /Up \(SD8\) and /Lw \(SD5\)](#))
4. Remove the de-curler solenoid /Lw assy. (Refer to [F.4.9.34 Replacing the reverse/exit solenoid \(SD7\) and the de-curler solenoid /Up \(SD8\) and /Lw \(SD5\)](#))
5. Remove the de-curler solenoid /Up assy. (Refer to [F.4.9.34 Replacing the reverse/exit solenoid \(SD7\) and the de-curler solenoid /Up \(SD8\) and /Lw \(SD5\)](#))
6. Remove the reverse/exit section. (Refer to [F.4.9.35 Removing/reinstalling the reverse/exit section](#))
7. Remove the de-curler motor assy. (Refer to [F.4.9.38 Replacing the de-curler motor \(M32\)](#))
8. Remove 2 E-rings [1] and remove 2 gears [2] and the belt [3].
9. Remove the E-ring [4] and remove the gear [5].
10. Remove the E-ring [6].

Note

- When reinstalling 2 bearings [2], be sure to set the flange of each gear alternately.

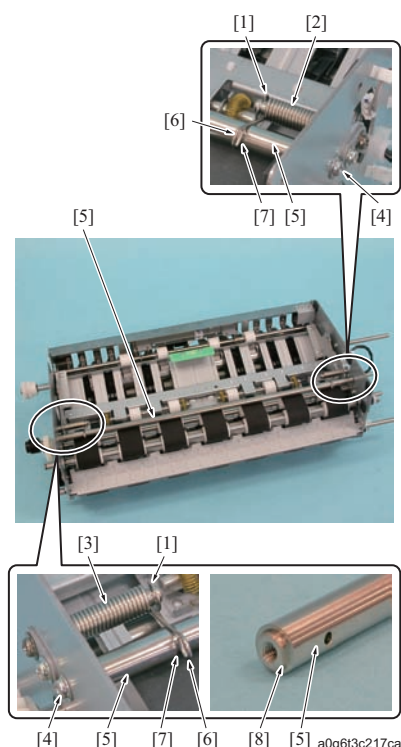
11. Remove 2 E-rings [1].
12. Remove 2 pins [2].
13. Slide 2 rollers [4] with the condition that the de-curler belt /Lw [3] is installed on, in the arrow-marked direction [5], and remove 2 pins [6].
14. Slide 2 regulation roller assys [7] in the arrow-marked direction [8] to release the rear section from the frame of the reverse/exit section.

15. Remove 7 de-curler belt /Lw [1].
16. Reinstall the above parts following the removal steps in reverse.
17. After replacing the de-curler belt /Lw, conduct the following step.
 - For de-curler belt /Lw: Counter reset of the parts counter No.65

4.9.41 Replacing the de-curler belt /Up

(1) Periodically replaced parts/cycle

- De-curler belt /Up
- : Every 10,500,000 prints

(2) Procedure

1. Remove the duplex section. (Refer to [G.2.2.22 Duplex section](#))
2. Remove the fusing section. (Refer to [F.4.10.2 Removing/reinstalling the fusing section](#))
3. Remove the reverse/exit solenoid assy. (Refer to [F.4.9.34 Replacing the reverse/exit solenoid \(SD7\) and the de-curler solenoid /Up \(SD8\) and /Lw \(SD5\)](#))
4. Remove the de-curler solenoid /Lw assy. (Refer to [F.4.9.34 Replacing the reverse/exit solenoid \(SD7\) and the de-curler solenoid /Up \(SD8\) and /Lw \(SD5\)](#))
5. Remove the de-curler solenoid /Up assy. (Refer to [F.4.9.34 Replacing the reverse/exit solenoid \(SD7\) and the de-curler solenoid /Up \(SD8\) and /Lw \(SD5\)](#))
6. Remove the reverse/exit section. (Refer to [F.4.9.35 Removing/reinstalling the reverse/exit section](#))
7. Remove the de-curler motor assy. (Refer to [F.4.9.38 Replacing the de-curler motor \(M32\)](#))
8. Remove the E-rings [1], 1 each, and remove the open/close spring /Fr [2] and /Rr [3].
9. Remove 2 screws [4] and remove the stay [5].

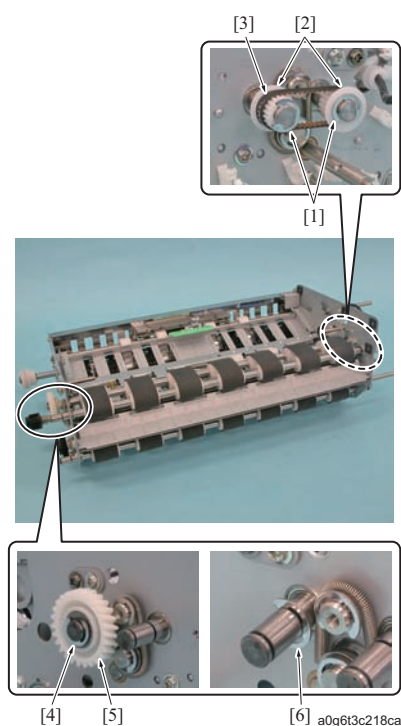
Note

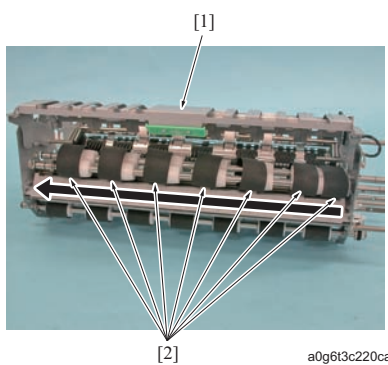
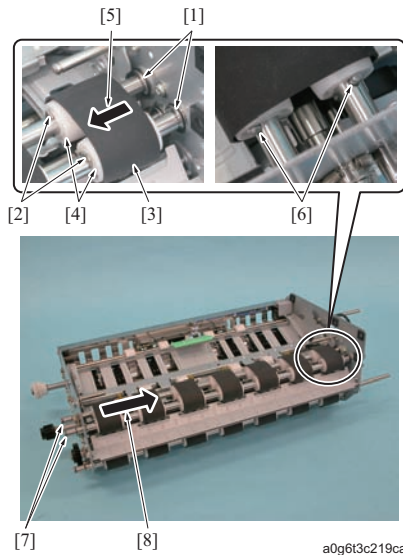
- When reinstalling the open/close spring /Fr [2] and /Rr [3], be sure to hang each hook [6] on the groove [7] of the stay [5].
- Be sure to locate the D-cut side [8] of the stay [5] on the rear side.

10. Remove 2 E-rings [1] and remove 2 gears [2] and the belt [3].
11. Remove the E-ring [4] and remove the gear [5].
12. Remove the E-ring [6].

Note

- When reinstalling 2 bearings [2], be sure to set the flange of each gear alternately.





13. Remove 2 E-ring [1].
14. Remove 2 pins [2].
15. Slide 2 rollers [4] with the condition that the de-curler belt /Up [3] is installed on, in the arrow-marked direction [5], and remove 2 pins [6].
16. Slide 2 regulation roller assys [7] in the arrow-marked direction [8] to release the rear section from the flame of the reverse/exit section.

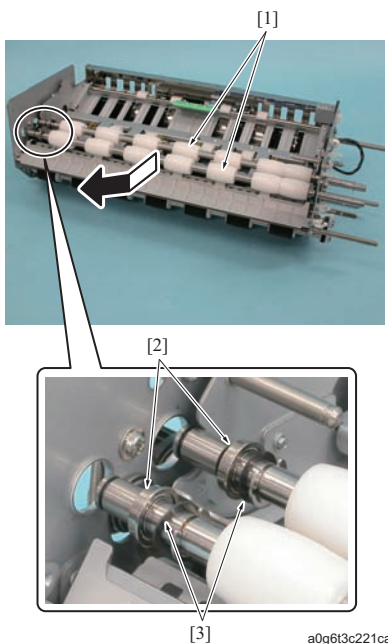
17. Open the reverse door [1] and remove 7 de-curler belt /Up [2].
18. Reinstall the above parts following the removal steps in reverse.
19. After replacing the de-curler belt /Up, conduct the following step.
 - For de-curler belt /Up: Counter reset of the parts counter No.64

4.9.42 Replacing the guide member /Up and /Lw

(1) Periodically replaced parts/cycle

- Guide member /Up
: Every 10,500,000 prints
- Guide member /Lw
: Every 10,500,000 prints

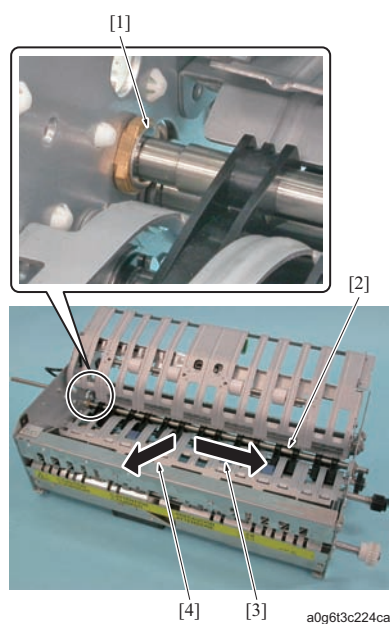
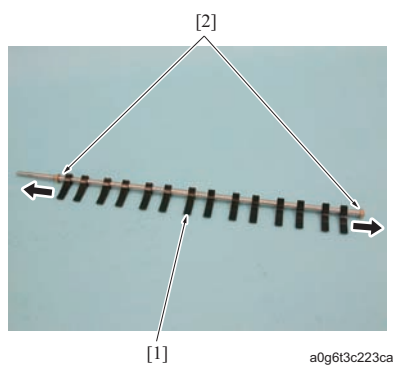
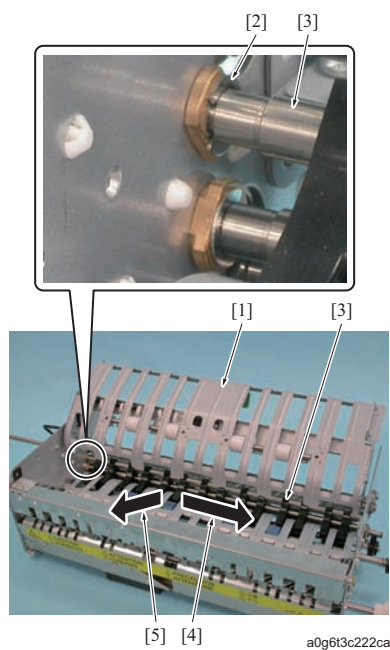
(2) Procedure



1. Remove the duplex section. (Refer to [G.2.2.22 Duplex section](#))
2. Remove the fusing section. (Refer to [F.4.10.2 Removing/reinstalling the fusing section](#))
3. Remove the reverse/exit solenoid assy. (Refer to [F.4.9.34 Replacing the reverse/exit solenoid \(SD7\) and the de-curler solenoid /Up \(SD8\) and /Lw \(SD5\)](#))
4. Remove the de-curler solenoid /Lw assy. (Refer to [F.4.9.34 Replacing the reverse/exit solenoid \(SD7\) and the de-curler solenoid /Up \(SD8\) and /Lw \(SD5\)](#))
5. Remove the de-curler solenoid /Up assy. (Refer to [F.4.9.34 Replacing the reverse/exit solenoid \(SD7\) and the de-curler solenoid /Up \(SD8\) and /Lw \(SD5\)](#))
6. Remove the reverse/exit section. (Refer to [F.4.9.35 Removing/reinstalling the reverse/exit section](#))
7. Remove the de-curler motor assy. (Refer to [F.4.9.38 Replacing the de-curler motor \(M32\)](#))
8. Remove de-curler belt /Up. (Refer to [F.4.9.41 Replacing the de-curler belt /Up](#))
9. Remove 2 regulation roller assy [1].

Note

- Be careful not to lose the bearings [2], 1 each, and the spacers [3], 1 each, installed in the regulation roller assy [1] without fixing.



10. Open the reverse door [1].

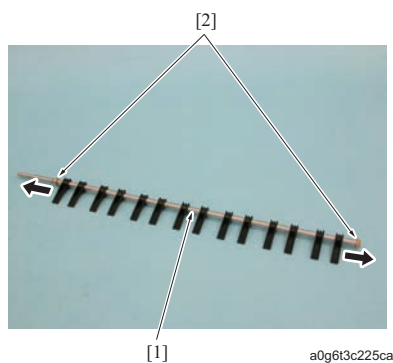
11. Remove the E-ring [2], and slide the guide member /Up [3] in the arrow-marked directions [4] and [5] in this order.

12. Remove 2 bearings [2] from the guide member /Up [1].

Note

- When reinstalling the bearing [2], be sure to turn each flange inside.

13. Remove the E-ring [1], and slide the guide member /Lw [2] in the arrow-marked directions [3] and [4] in this order.



14. Remove 2 bearings [2] from the guide member /Lw [1].

Note

- When reinstalling the bearing [2], be sure to turn each flange inside.

15. Reinstall the above parts following the removal steps in reverse.

4.10 Fusing section

4.10.1 Replacing the fusing cleaning web

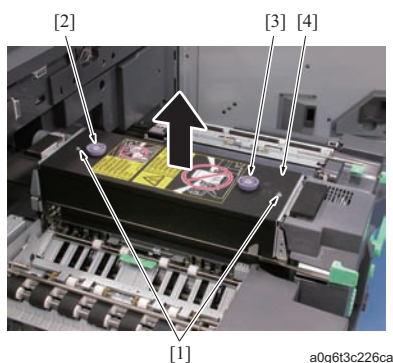
⚠ CAUTION

- Immediately after turning off the main switch (SW1) or the power switch (SW2), the fusing section is very hot and you may get burned. Be sure to start operations when the temperature cools down sufficiently.

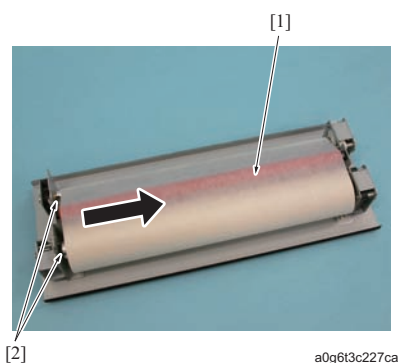
(1) Periodically replaced parts/cycle

- Fusing cleaning web
: Every 750,000 prints

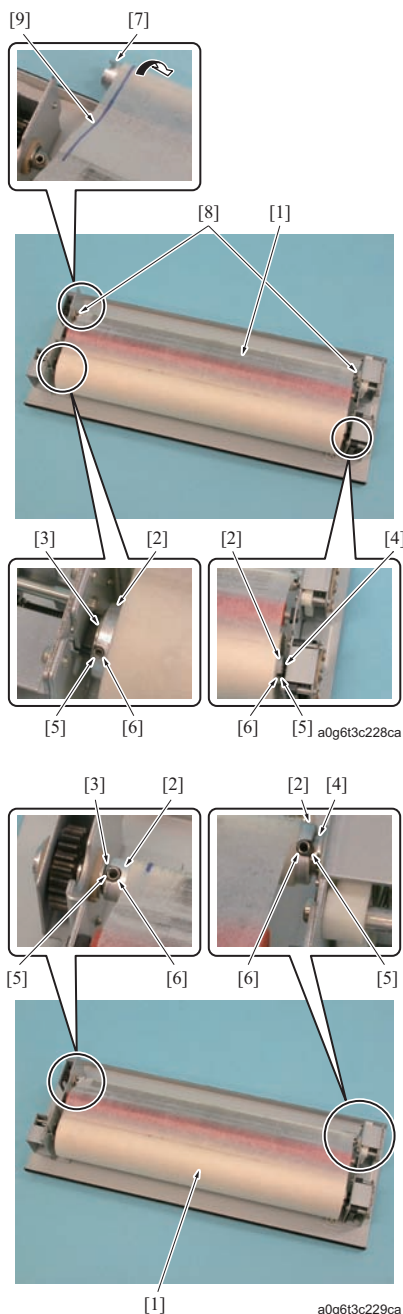
(2) Procedure



1. Pull out the duplex section from the main body. (Refer to [F.4.9.1 Pulling out/reinstalling the duplex section](#))
2. Remove 2 screws [1], and hold [2] and [3] to remove the fusing upper plate assy [4].



3. Slide the old fusing cleaning web [1] in the arrow-marked direction to release it from 2 couplings [2].



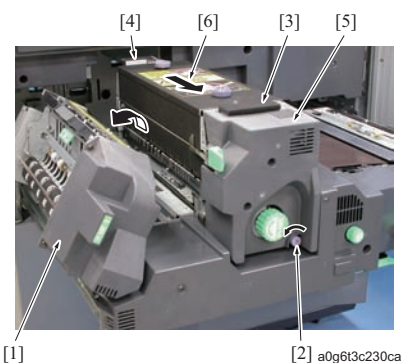
4. Install the shaft [2] on the unused side of the new fusing cleaning web [1] to the driven couplings /Rr [3] and /Fr [4].
Note
 - Be sure to set each detent [5] on the driven couplings to the notch [6] of the shaft on the unused side. When the web is installed in the wrong direction, it does not coincide with the notch.
5. Hold either side [8] of the shaft [7] on the take-up side of the new fusing cleaning web with both hands, and take up the new cleaning web until the blue line [9] disappears.
Note
 - The performance of the new fusing cleaning web is guaranteed from the position in which the blue line disappears. Be sure to take up the cleaning web up to this position.
6. Set the shaft [2] on the take-up side of the new fusing cleaning web [1] to the take-up couplings /Rr [3] and /Fr [4].
Note
 - Be sure to set each detent [5] on the driven coupling to the notch [6] of the shaft on the unused side.
7. Be sure that the following reinstallation of the parts follows the removal steps in reverse.
8. After replacing the fusing cleaning web, conduct the following step.
 - For the fusing cleaning web: Counter reset of the parts counter No.1

4.10.2 Removing/reinstalling the fusing section

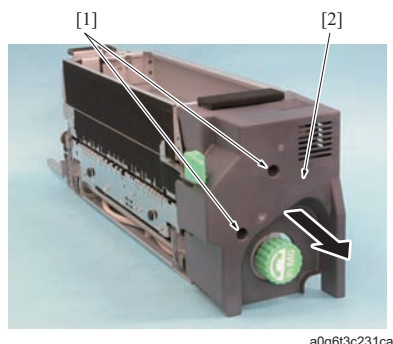
⚠ CAUTION

- Immediately after turning off the main switch (SW1) or the power switch (SW2), the fusing section is very hot and you may get burned. Be sure to start operations when the temperature cools down sufficiently.

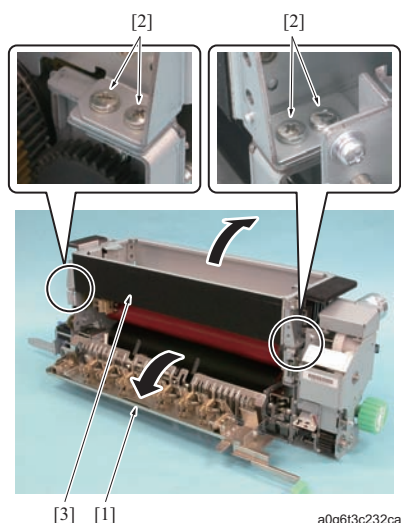
(1) Procedure



1. Pull out the duplex section from the main body. (Refer to [F.4.9.1 Pulling out/reinstalling the duplex section](#))
2. Open the paper reverse/exit section [1].
3. Release the lock [2].
4. Hold the handle /Fr [3] and Rr [4] with both hands, and slide the fusing section [5] in the arrow-marked direction [6], and lift it up to remove it.
Note
 - When reinstalling it, be sure to slide it with setting the fusing section to the reversal section side.
5. Reinstall the above parts following the removal steps in reverse.

4.10.3 Opening/closing of the web section**(1) Procedure**

1. Pull out the duplex section from the main body. (Refer to [F.4.9.1 Pulling out/reinstalling the duplex section](#))
2. Remove the fusing section. (Refer to [F.4.10.2 Removing/reinstalling the fusing section](#))
3. Remove the fusing upper plate assy. (Refer to [F.4.10.1 Replacing the fusing cleaning web](#))
4. Remove 2 screws [1] and then remove the fusing cover [2].



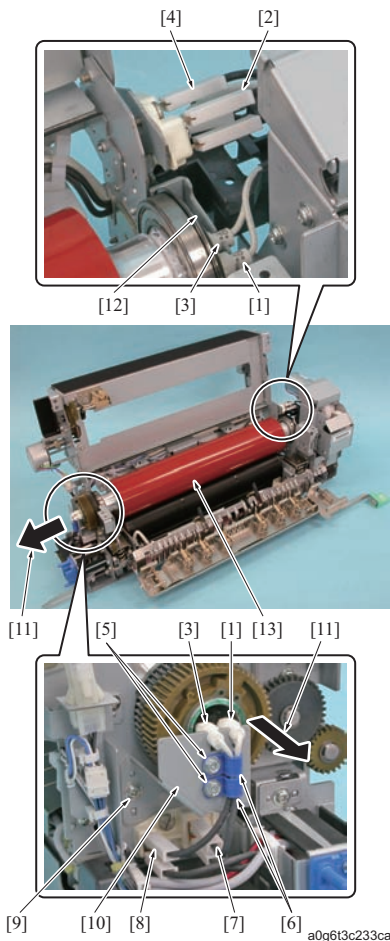
5. Open the fusing paper exit section [1].
6. Remove 4 screws [2] and open the web section [3].
7. Reinstall the above parts following the removal steps in reverse.

4.10.4 Replacing the fusing heater lamps /1 (L1) and /2 (L2)**Note**

- Be sure to avoid touching the lamp section of the fusing heater lamps /1 (L1) and /2 (L2) with bare hands. When touched, be sure to clean it with the isopropyl alcohol.

(1) Periodically replaced parts/cycle

- Fusing heater lamp /1 (L1)
: Every 3,000,000 prints
- Fusing heater lamp /2 (L2)
: Every 3,000,000 prints

(2) Procedure

1. Pull out the duplex section from the main body. (Refer to [F.4.9.1 Pulling out/reinstalling the duplex section](#))
2. Remove the fusing section. (Refer to [F.4.10.2 Removing/reinstalling the fusing section](#))
3. Open the web section. (Refer to [F.4.10.3 Opening/closing of the web section](#))
4. Remove the faston terminal [2] from the fusing heater lamp /1 (L1) [1].
5. Remove the faston terminal [4] from the fusing heater lamp /2 (L2) [3].
6. Remove the screws [5], 1 each, and remove 2 wiring harness clamps [6].

Note

- When reinstalling the wiring harness clamp, be sure to install it in the correct position. When it is installed in a wrong position, the fusing cover cannot be attached.

7. Remove the faston terminal [7] from the fusing heater lamp /1 (L1) [1].
8. Remove the faston terminal [8] from the fusing heater lamp /2 (L2) [3].
9. Remove the screw [9] and remove the lamp fixing plate /Rr [10].
10. Pull out and remove each of the fusing heater lamps in the arrow-marked direction [11].

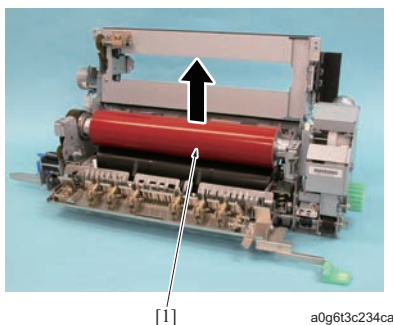
Note

- Be sure to install the fusing heater lamps /1 (L1) and /2 (L2) with the manufacturer mark in this side.
- When reinstalling the fusing heater lamp /1 (L1) and /2 (L2), be sure to insert it securely while taking note of the position in which the faston terminal is installed.
- When reinstalling each the fusing heater lamp, check if either end of each lamp is set in the fitting holes of the lamp fixing plates /Fr [12] and /Rr [10].
- After each fusing heater lamp is installed, check if it is not in touch with the inner face of the fusing roller /Up [13].

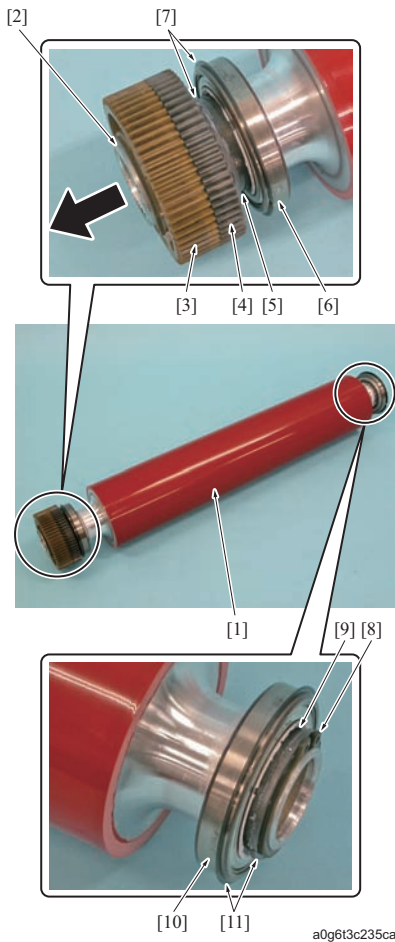
11. Reinstall the above parts following the removal steps in reverse.
12. After replacing the fusing heater lamp /1 (L1) and /2 (L2), conduct the following item.
 - For the fusing heater lamps /1 and /2: Counter reset of the parts counter No.38

4.10.5 Replacing the fusing roller /Up, the heat insulating sleeve, the fusing bearing /Up and the fusing gear**(1) Periodically replaced parts/cycle**

- Fusing roller /Up
: Every 1,500,000 prints
- Heat insulating sleeve
: Every 1,500,000 prints
- Fusing bearing /Up
: Every 1,500,000 prints
- Fusing gear
: Every 6,000,000 prints

(2) Procedure

1. Pull out the duplex section from the main body. (Refer to [F.4.9.1 Pulling out/reinstalling the duplex section](#))
2. Remove the fusing section. (Refer to [F.4.10.2 Removing/reinstalling the fusing section](#))
3. Open the web section. (Refer to [F.4.10.3 Opening/closing of the web section](#))
4. Remove the fusing heater lamps /1 (L1) and /2 (L2). (Refer to [F.4.10.4 Replacing the fusing heater lamps /1 \(L1\) and /2 \(L2\)](#))
5. Remove the fusing roller /Up [1].



6. Remove the C-ring [2], the fusing gear [3], the gear [4] (part not replaced), the heat insulating sleeve [5] and the fusing bearing /Up [6] from the fusing roller /Up [1].

Note

- When reinstalling the heat insulating sleeve and the fusing bearing /Up, make sure that the flange [7] turns outside.
- When reinstalling the heat insulating sleeve, apply Multemp FF-RM (or Fluotribo MH) on the inside and outside surface.

7. Remove the C-ring [8], the heat insulating sleeve [9] and the fusing bearing /Up [10] from the fusing roller /Up [1].

Note

- When reinstalling the heat insulating sleeve and the fusing bearing /Up, make sure that the flange [11] turns outside.

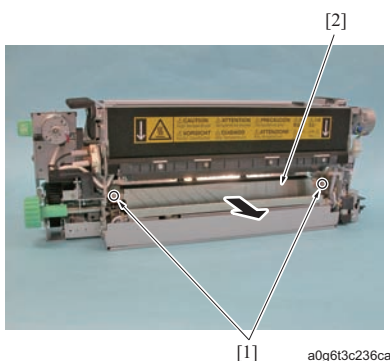
8. Reinstall the above parts following the removal steps in reverse.
9. After replacing the fusing roller /Up, the heat insulating sleeve and the fusing gear, conduct the followings.
For fusing exit roller /Up: Counter reset of the parts counter No.27
For the heat insulating sleeve: Counter reset of the parts counter No.31
For the fusing gear: Counter reset of the parts counter No.40

4.10.6 Replacing the fusing roller /Lw assy / Lubrication to the pressure wheel assy**(1) Periodically replaced parts/cycle**

- Fusing roller /Lw assy
: Every 1,500,000 prints

(2) Periodic lubrication parts/Cycle

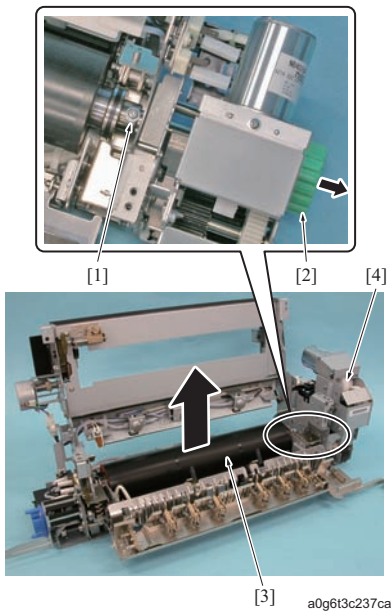
- Pressure wheel assy
: Every 1,500,000 prints

(3) Procedure

1. Pull out the duplex section from the main body. (Refer to [F.4.9.1 Pulling out/reinstalling the duplex section](#))
2. Remove the fusing section. (Refer to [F.4.10.2 Removing/reinstalling the fusing section](#))
3. Open the web section. (Refer to [F.4.10.3 Opening/closing of the web section](#))
4. Remove the fusing heater lamps /1 (L1) and /2 (L2). (Refer to [F.4.10.4 Replacing the fusing heater lamps /1 \(L1\) and /2 \(L2\)](#))
5. Remove the fusing roller /Up. (Refer to [F.4.10.5 Replacing the fusing roller /Up, the heat insulating sleeve, the fusing bearing /Up and the fusing gear](#))
6. Remove 2 screws [1] and remove the guide plate /Lw [2].

Note

- When reinstalling the guide plate /Lw, be sure to fix it while moving it down.



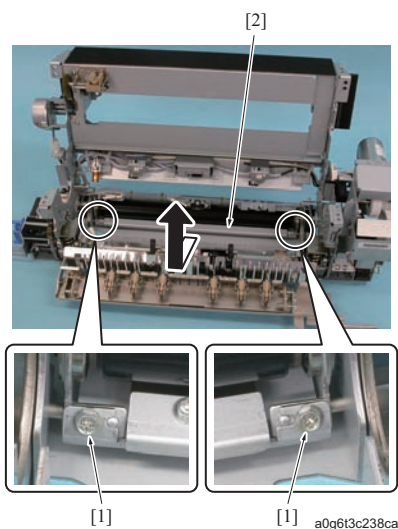
7. Remove the screw [1] and then remove the jam release knob [2].
8. Remove the fusing roller /Lw assembly [3].
9. Lubricate Multemp FF-RM to all around the pressure wheel assy [4].
10. Reinstall the above parts following the removal steps in reverse.
11. After replacing the fusing roller /Lw assy, conduct the following step.
 - For fusing exit roller /Lw assy: Counter reset of the parts counter No.28

4.10.7 Replacing the fusing cleaning sheet assy

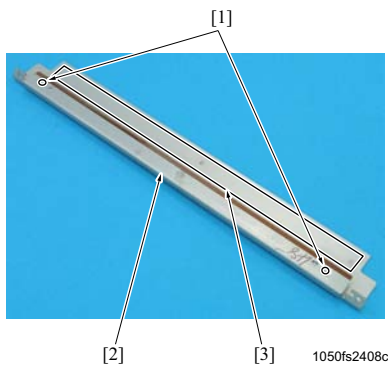
(1) Periodically replaced parts/cycle

- Fusing cleaning sheet assy
- : Every 1,500,000 prints

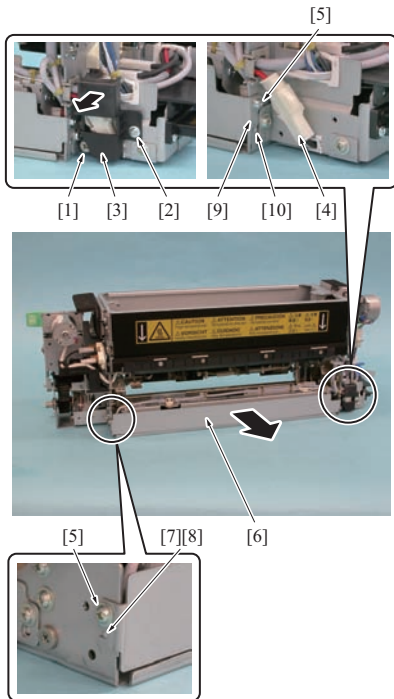
(2) Procedure



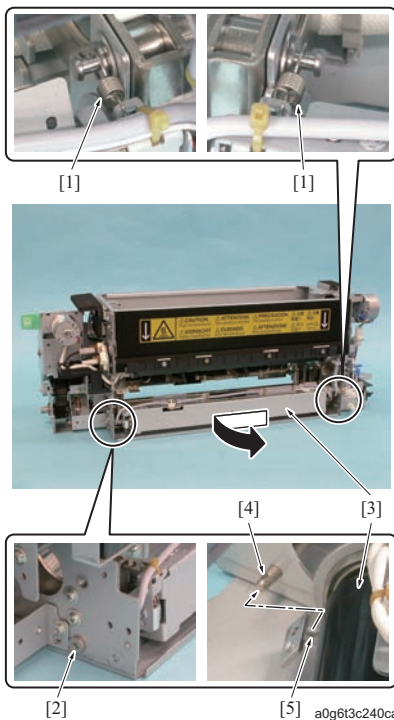
1. Pull out the duplex section from the main body. (Refer to [F.4.9.1 Pulling out/reinstalling the duplex section](#))
2. Remove the fusing section. (Refer to [F.4.10.2 Removing/reinstalling the fusing section](#))
3. Open the web section. (Refer to [F.4.10.3 Opening/closing of the web section](#))
4. Remove the fusing heater lamps /1 (L1) and /2 (L2). (Refer to [F.4.10.4 Replacing the fusing heater lamps /1 \(L1\) and /2 \(L2\)](#))
5. Remove the fusing roller /Up. (Refer to [F.4.10.5 Replacing the fusing roller /Up, the heat insulating sleeve, the fusing bearing /Up and the fusing gear](#))
6. Remove the fusing roller /Lw assy. (Refer to [F.4.10.6 Replacing the fusing roller /Lw assy / Lubrication to the pressure wheel assy](#))
7. Remove 2 screws [1] and then remove the fusing cleaning unit [2].



8. Remove 2 screws [1] and then remove the fusing cleaning sheet assy [2].
9. Remove the paper dust that has gathered in [3] of the fusing cleaning unit.
10. Reinstall the above parts following the removal steps in reverse.
11. After replacing the fusing cleaning sheet assy, conduct the following step.
 - For fusing cleaning roller assy: Counter reset of the parts counter No.33

4.10.8 Removing/reinstalling the fusing heating roller assy**(1) Procedure**

a0g6t3c239ca



a0g6t3c240ca

1. Pull out the duplex section from the main body. (Refer to [F.4.9.1 Pulling out/reinstalling the duplex section](#))
2. Remove the fusing section. (Refer to [F.4.10.2 Removing/reinstalling the fusing section](#))
3. Remove the fusing heater lamps /1 (L1) and /2 (L2). (Refer to [F.4.10.4 Replacing the fusing heater lamps /1 \(L1\) and /2 \(L2\)](#))
4. Remove the fusing roller /Up. (Refer to [F.4.10.5 Replacing the fusing roller /Up, the heat insulating sleeve, the fusing bearing /Up and the fusing gear](#))
5. Remove the fusing roller /Lw assy. (Refer to [F.4.10.6 Replacing the fusing roller /Lw assy / Lubrication to the pressure wheel assy](#))
6. Remove the fusing cleaning unit. (Refer to [F.4.10.7 Replacing the fusing cleaning sheet assy](#))
7. Remove the screws [1] and [2], and remove the connector cover [3].
8. Disconnect the connector [4].
9. Remove 2 screws [5] and then remove the fixing plate [6].

Note

- When reinstalling the fixing plate, be sure to set the positioning hole [7] to the projection [8] of the fusing section.
- Be careful not to insert the projection [10] of the fusing section inside of the fusing section [9] of the rear side of the fixing plate.

10. Remove 2 springs [1].
11. Remove the screw [2] and open the fusing heating roller assy [3].

Note

- When reinstalling the fusing heating roller assy [3], be sure to set the guide hole [5] of the fusing heating roller assy to the guide pin [4] of the fusing section.

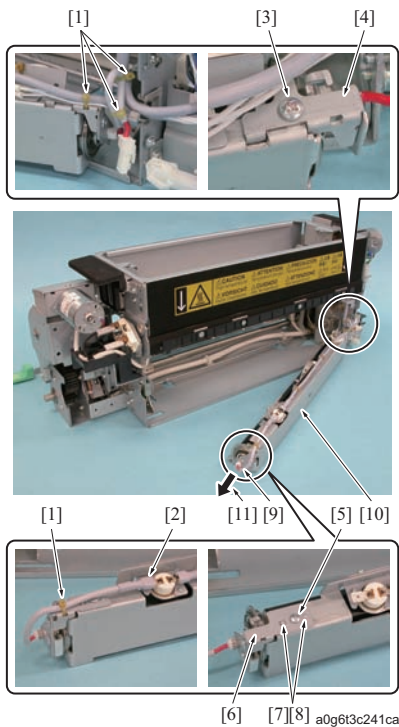
12. Reinstall the above parts following the removal steps in reverse.

4.10.9 Replacing the fusing heater lamp /3 (L3)**Note**

- Be careful not to touch the lamp section of the fusing heater lamp /3 (L3) with bare hands. When touched, be sure to clean it with the isopropyl alcohol.

(1) Periodically replaced parts/cycle

- Fusing heater lamp /3 (L3)
: Every 3,000,000 prints

(2) Procedure

1. Pull out the duplex section from the main body. (Refer to [F.4.9.1 Pulling out/reinstalling the duplex section](#))
2. Remove the fusing section. (Refer to [F.4.10.2 Removing/reinstalling the fusing section](#))
3. Open the fusing heating roller assy. (Refer to [F.4.10.8 Removing/reinstalling the fusing heating roller assy](#))
4. Cut off 4 wiring bands [1].

Note

- When attaching a new wire binding band, be sure to use a heat-resistant one (P/N:V501010014).

5. Remove the faston terminal [2].

Note

- Be sure to install the fusing heater lamp /3 (L3) with the manufacturer mark in this side.
- When reinstalling the faston terminal, be sure to insert it securely.

6. Remove the screw [3] and remove the fixing plate /Rr [4].
7. Remove the screw [5] and remove the fixing plate /Fr [6].

Note

- When reinstalling the fixing plate /Fr, be sure to set the positioning hole [7] to the projection [8] of the fusing heating roller assy.

8. Pull out the fusing heater lamp /3 (L3) [9] from the front side [11] of the fusing heating roller assy [10] and remove it.

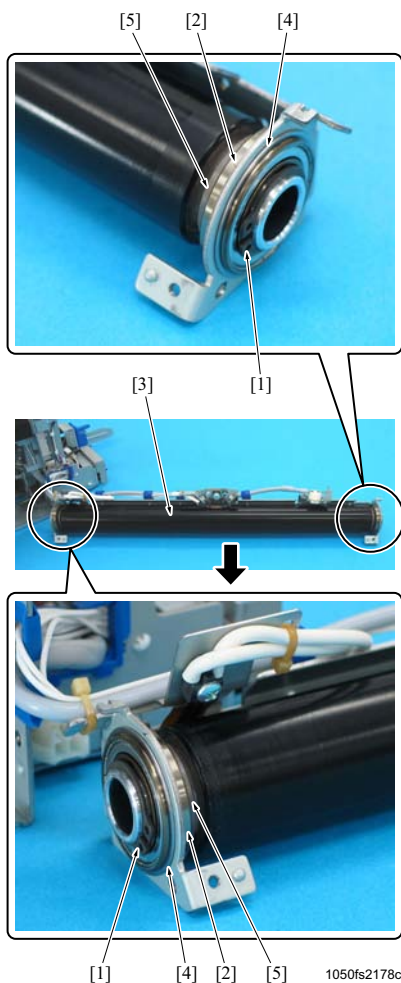
Note

- When reinstalling the fusing heater lamp /3 (L3), be sure to take note of the direction.
- After reinstalling the fusing heater lamp /3 (L3), check if it is not in touch with the inner face of the fusing heating roller.

9. Reinstall the above parts following the removal steps in reverse.
10. After replacing the fusing heater lamp /3 (L3), conduct the following item.
 - For the fusing heater lamp /3: Counter reset of the parts counter No.47

4.10.10 Replacing the fusing heating roller, the heat insulation sleeve /Lw and the heat roller bearing**(1) Periodically replaced parts/cycle**

- Fusing heating roller
 - : Every 3,000,000 prints
- Heat insulating sleeve /Lw
 - : Every 3,000,000 prints
- Heat roller bearing
 - : Every 3,000,000 prints

(2) Procedure

1. Pull out the duplex section from the main body. (Refer to [F.4.9.1 Pulling out/reinstalling the duplex section](#))
2. Remove the fusing section. (Refer to [F.4.10.2 Removing/reinstalling the fusing section](#))
3. Open the fusing heating roller assembly. (Refer to [F.4.10.8 Removing/reinstalling the fusing heating roller assy](#))
4. Remove the fusing heater lamp /3 (L3). (Refer to [F.4.10.9 Replacing the fusing heater lamp /3 \(L3\)](#))
5. Remove the C-rings [1], 1 each, and remove the heat roller bearings [2], 1 each, and then remove the fusing heating roller [3].

Note

- When reinstalling the bearing, be sure to take note of the direction of the flange [4].

6. Remove the heat insulating sleeves /Lw [5], 1 each, from the fusing heating roller.

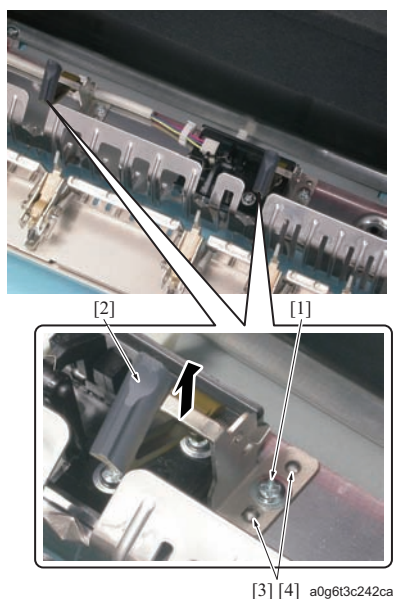
Note

- When reinstalling the heat insulating sleeves /Lw, be sure to turn each flange to the fusing heating roller side.

7. Reinstall the above parts following the removal steps in reverse.
8. After replacing the fusing heater roller, the heat insulating sleeve / Lw and the heat roller bearing, conduct the following steps.
 - For fusing heating roller: Counter reset of the parts counter No.44
 - For the heat insulating sleeve /Lw: Counter reset of the parts counter No.45
 - For fusing heating roller: Counter reset of the parts counter No.42

4.10.11 Replacing the fusing claw /Lw**(1) Periodically replaced parts/cycle**

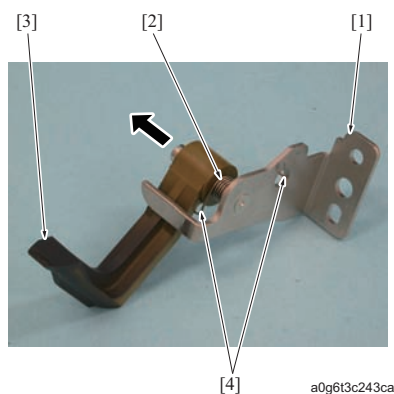
- Fusing claw /Lw
- : Every 1,500,000 prints

(2) Procedure

1. Pull out the duplex section from the main body. (Refer to [F.4.9.1 Pulling out/reinstalling the duplex section](#))
2. Remove the fusing section. (Refer to [F.4.10.2 Removing/reinstalling the fusing section](#))
3. Open the fusing paper exit section. (Refer to [F.4.10.3 Opening/closing of the web section](#))
4. Remove the screws [1], 1 each, and remove 2 fusing claw /Lw assys [2].

Note

- When reinstalling the fusing claw /Lw assys, be sure to set the positioning hole [3] to the projection [4] of the fusing paper exit section.



5. Remove the spring [2] from each fusing claw /Lw Assy [1] and remove the fusing claw /Lw [3].

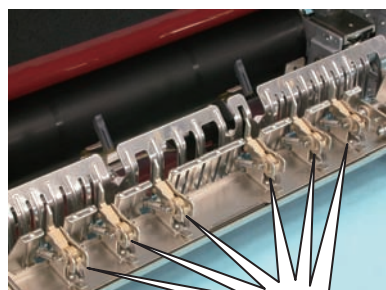
Note

- When reinstalling the fusing claw /Lw, be sure to take note of the position [4] to which the spring is hooked.

6. Reinstall the above parts following the removal steps in reverse.
7. After replacing the fusing claw /Lw, conduct the following item.
For the fusing claw /Lw: Counter reset of the parts counter No.30

4.10.12 Replacing the fusing claw /Up**(1) Periodically replaced parts/cycle**

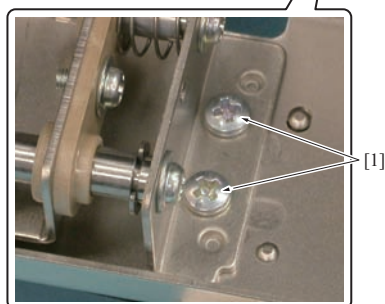
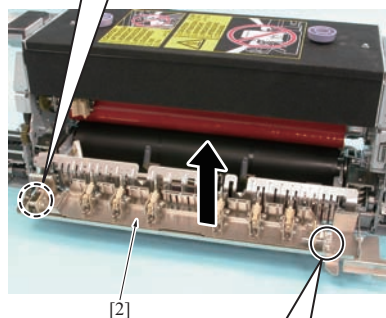
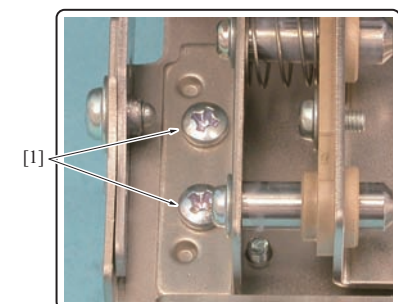
- Fusing claw /Up
: Every 1,500,000 prints

(2) Procedure

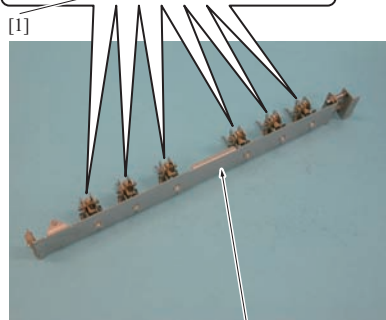
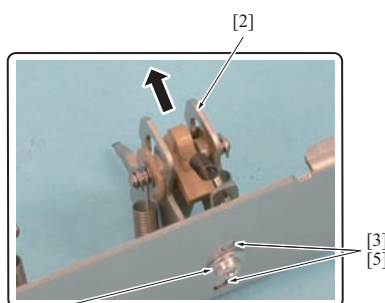
1. Pull out the duplex section from the main body. (Refer to [F.4.9.1 Pulling out/reinstalling the duplex section](#))
2. Remove the fusing section. (Refer to [F.4.10.2 Removing/reinstalling the fusing section](#))
3. Open the fusing paper exit section. (Refer to [F.4.10.3 Opening/closing of the web section](#))
4. Remove the screws [1], 1 each, and remove 6 fusing claws /Up [2].
5. Reinstall the above parts following the removal steps in reverse.
6. After replacing the fusing claw /Up, conduct the following item.
- For the fusing claw /Up: Counter reset of the parts counter No.29

4.10.13 Replacing the fusing claws installation assy**(1) Periodically replaced parts/cycle**

- Fusing claws installation assy
: Every 20,250,000 prints

(2) Procedure

a0g6t3c245ca



[4]

a0g6t3c246ca

1. Pull out the duplex section from the main body. (Refer to [F.4.9.1 Pulling out/reinstalling the duplex section](#))
2. Remove the fusing section. (Refer to [F.4.10.2 Removing/reinstalling the fusing section](#))
3. Open the fusing paper exit section. (Refer to [F.4.10.3 Opening/closing of the web section](#))
4. Remove 4 screws [1] and remove the fusing claw unit /Up [2].

5. Remove the screws [1], 1 each, and remove 6 fusing claw /Lw assys [2].

Note

- When reinstalling the fusing claws installation assy, be sure to set 2 projections [3] to 2 positioning holes [5] of the fusing claw unit /Up [4].

6. Reinstall the above parts following the removal steps in reverse.

4.10.14 Replacing the fusing temperature sensor /2 (TH2)**⚠ CAUTION**

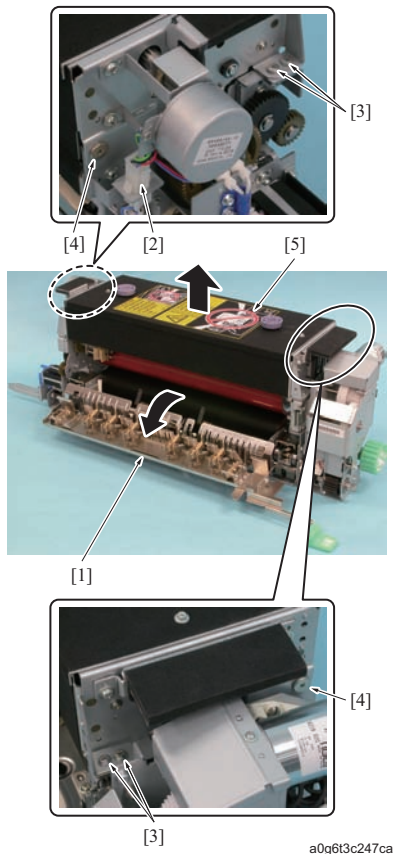
- After reinstalling of the fusing temperature sensor /2 assy, be sure to check if it is in touch with the fusing roller /Up.

(1) Periodically replaced parts/cycle

- Fusing temperature sensor /2 (TH2)

: Every 3,000,000 prints

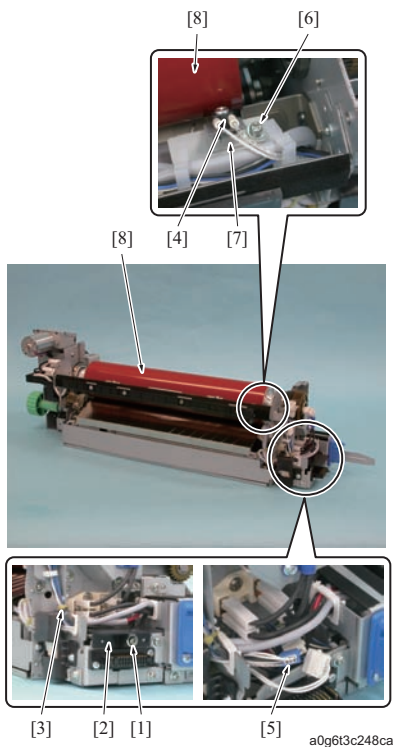
(2) Procedure



1. Open the front doors /Rt and /Lt, and pull out the duplex section from the main body. (Refer to [F.4.9.1 Pulling out/reinstalling the duplex section](#))
2. Remove the fusing section. (Refer to [F.4.10.2 Removing/reinstalling the fusing section](#))
3. Open the fusing paper exit section [1].
4. Disconnect the connector [2].
5. Remove 4 screws [3] and 2 stepped screws [4], and remove the web section [5].

Note

- When attaching the stepped screw [4], make sure that it gets in securely up to the step of the screw.
- Be sure to remove the web section with it closed. If the web is removed with it open, the web section becomes unstable and you get injured.



6. Remove the screw [1] and then remove the connector cover [2].
7. Cut off the wiring band [3].

Note

- When attaching a wire binding band, be sure to use a heat-resistant one (P/N:V501010014).

8. Disconnect the connector [5] of the fusing temperature sensor /2 (TH2) [4].

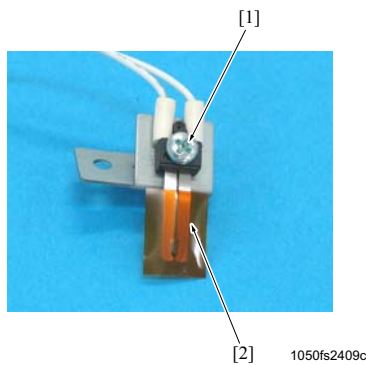
Note

- There are 3 connectors of the fusing temperature sensor in the same place. The number of pins of each connector is different. The connector of the fusing temperature sensor /2 (TH2) is 3 pin connector.

9. Remove the screw [6] and remove the fusing temperature sensor /2 assy [7].

Note

- When reinstalling the fusing temperature sensor /2 assy, be sure to check if it is in touch with the fusing roller /Up [8].



10. Remove the screw [1], and remove the fusing temperature sensor / 2 (TH2) [2].
11. Reinstall the above parts following the removal steps in reverse.
12. After replacing the fusing temperature sensor /2 (TH2), conduct the following item.
For fusing temperature sensor /2: Counter reset of the parts counter No.43

4.10.15 Replacing the fusing temperature sensor /4

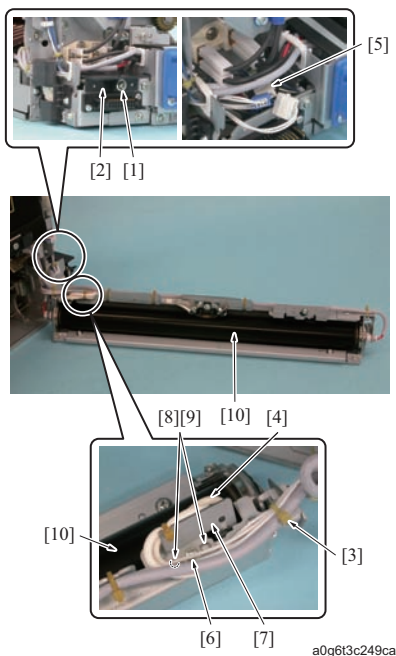
⚠ CAUTION

- After reinstalling of the fusing temperature sensor /4 assy, be sure to check if it is in touch with the fusing heating roller.

(1) Periodically replaced parts/cycle

- Fusing temperature sensor /4
: Every 3,000,000 prints

(2) Procedure



1. Pull out the duplex section from the main body. (Refer to [F.4.9.1 Pulling out/reinstalling the duplex section](#))
2. Remove the fusing section. (Refer to [F.4.10.2 Removing/reinstalling the fusing section](#))
3. Open the fusing heating roller assy. (Refer to [F.4.10.8 Removing/reinstalling the fusing heating roller assy](#))
4. Remove the screw [1] and then remove the connector cover [2].
5. Cut off the wiring band [3].
6. Disconnect the connector [5] of the fusing temperature sensor /4 (TH4) [4].

Note

- There are 3 connectors of the fusing temperature sensor in the same place. The number of pins of each connector is different. The connector of the fusing temperature sensor /4 (TH4) is 5 pin connector.

7. Remove the screw [6] and remove the fusing temperature sensor / 4 assy [7].

Note

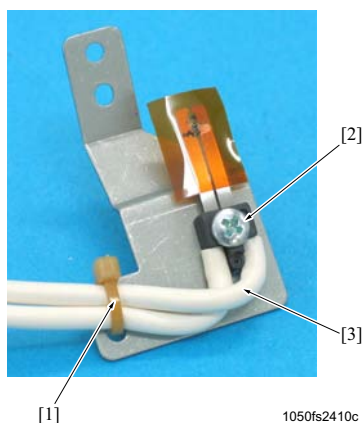
- When reinstalling the fusing temperature sensor 4 assy, be sure to set the positioning hole [8] to the projection [9] of the fusing heating roller assy.
- When reinstalling the fusing temperature sensor /4 assy, be sure to check if it is in touch with the fusing heating roller [10].

8. Cut off the wiring band [1].
9. Remove the screw [2], and remove the fusing temperature sensor / 4 (TH4) [3].

Note

- When attaching a wire binding band, be sure to use a heat-resistant one (P/N:V501010014).

10. Reinstall the above parts following the removal steps in reverse.
11. After replacing the fusing temperature sensor /4 (TH4), conduct the following item.
- For fusing temperature sensor /4: Counter reset of the parts counter No.46



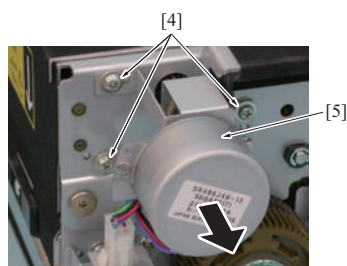
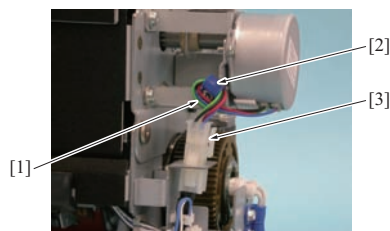
4.10.16 Replacing the web motor (M24) and the bearing /F

(1) Periodically replaced parts/cycle

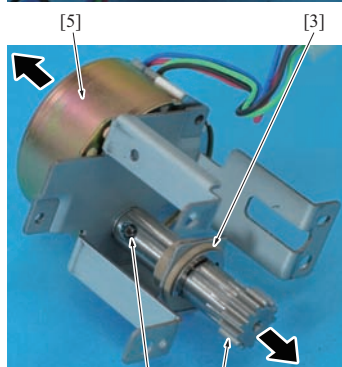
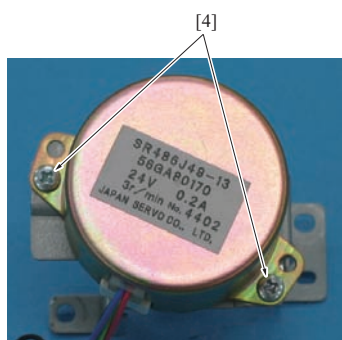
- Web motor (M24)
: Every 6,000,000 prints
- Bearing /F

: Every 30,000,000 prints

(2) Procedure



a0g6t3c250ca



a0g6t3c350ca

1. Pull out the duplex section from the main body. (Refer to [F.4.9.1 Pulling out/reinstalling the duplex section](#))
2. Remove the fusing section. (Refer to [F.4.10.2 Removing/reinstalling the fusing section](#))
3. Remove the screw [1] and then remove the wiring harness clamp [2].
4. Disconnect the connector [3].
5. Remove 3 screws [4] and then remove the web motor unit [5] in the arrow-marked direction.

6. Remove the screw [1] and remove the fusing cleaning gear /1 [2].
7. Remove the bearing /F [3] from the fusing cleaning gear /1.
8. Remove 2 screws [4] and remove the web motor (M24).

Note

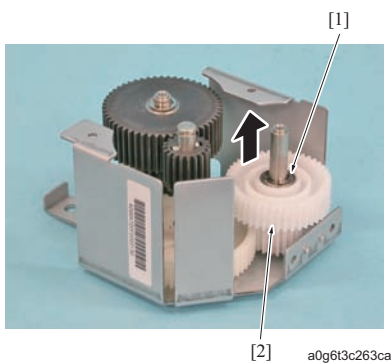
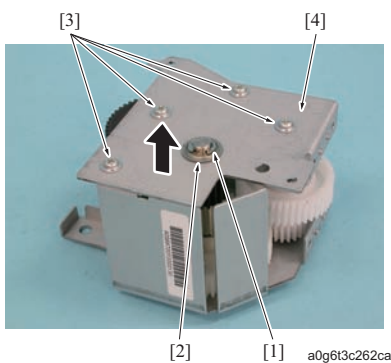
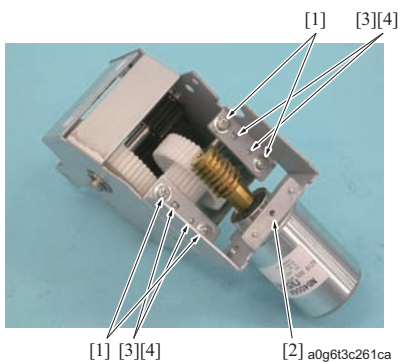
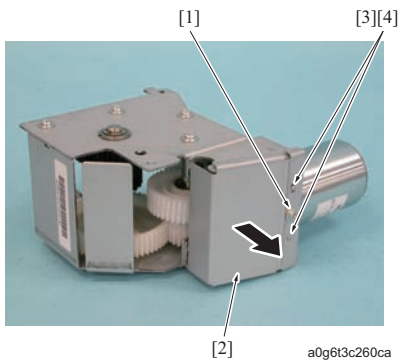
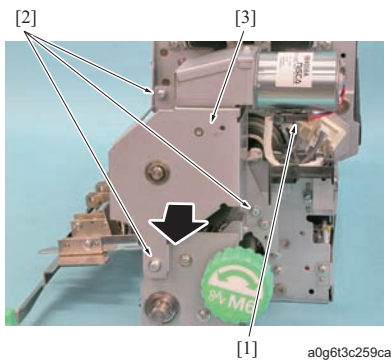
- When reinstalling the web motor, be sure to align the D-cut face of the web motor shaft with the direction of the screw [1].

9. Reinstall the above parts following the removal steps in reverse.

4.10.17 Replacing the pressure worm assy and the pressure wheel assy

(1) Periodically replaced parts/cycle

- Pressure worm assy
: Every 30,000,000 prints
- Pressure wheel assy
: Every 30,000,000 prints

(2) Procedure

1. Pull out the duplex section from the main body. (Refer to [F.4.9.1 Pulling out/reinstalling the duplex section](#))
2. Remove the fusing section. (Refer to [F.4.10.2 Removing/reinstalling the fusing section](#))
3. Remove the fusing cover. (Refer to [F.4.10.3 Opening/closing of the web section](#))
4. Open the fusing paper exit section. (Refer to [F.4.10.3 Opening/closing of the web section](#))
5. Disconnect the connector [1].
6. Remove 3 screws [2] and remove the pressure drive assy [3].

7. Remove the screw [1] and remove the pressure cover /Up [2].

Note

- When reinstalling the pressure cover /Up, be sure to set 2 positioning holes [3] to 2 projections [4] of the pressure drive assy.

8. Remove 4 screws [1] and remove the pressure worm assy [2].

Note

- When reinstalling the pressure worm assy, be sure to set 4 positioning holes [3] to 4 projections [4] of the pressure drive assy.

9. Remove the E-ring [1] and remove the bearing [2].

10. Remove 4 screws [3] and remove the pressure panel /4 [4].

11. Remove the E-ring [1] and remove the pressure wheel assy [2].

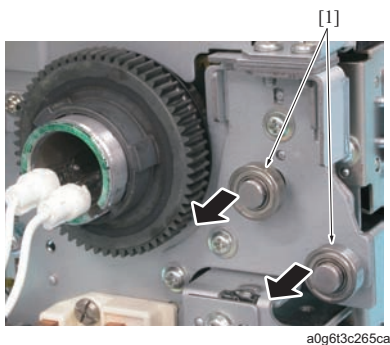
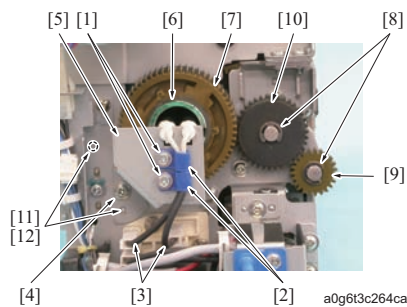
12. Reinstall the above parts following the removal steps in reverse.

13. After replacing the pressure worm assy and the pressure wheel assy, conduct the following steps.

For pressure worm assy: Counter reset of the parts counter No.36
For pressure wheel assy: Counter reset of the parts counter No.37

4.10.18 Replacing the fusing idler gear /2 and the bearing /A**(1) Periodically replaced parts/cycle**

- Fusing idler gear /2
: Every 3,000,000 prints
- Bearing /A
: Every 20,250,000 prints

(2) Procedure

1. Pull out the duplex section from the main body. (Refer to [F.4.9.1 Pulling out/reinstalling the duplex section](#))
2. Remove the fusing section. (Refer to [F.4.10.2 Removing/reinstalling the fusing section](#))
3. Remove 2 screws [1] and then remove the 2 wiring harness clamps [2].
4. Remove 2 faston terminals [3].
5. Remove the screw [4] and remove the fixing plate /Rr [5].
6. Remove the C-ring [6] and remove the fusing gear [7].
7. Remove the E-rings [8], 1 each, and remove the fusing idler gears /2 [9] and /4 [10].

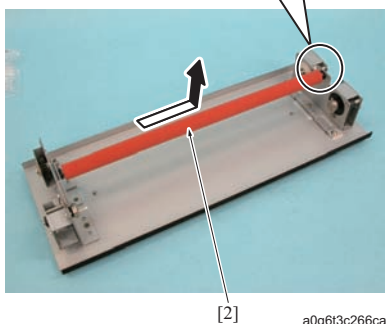
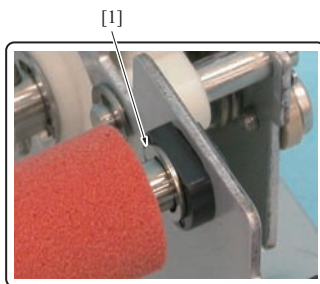
Note

- When reinstalling the fixing plate /Rr, be sure to set 2 positioning holes [11] to 2 projections [12] of the fusing section.

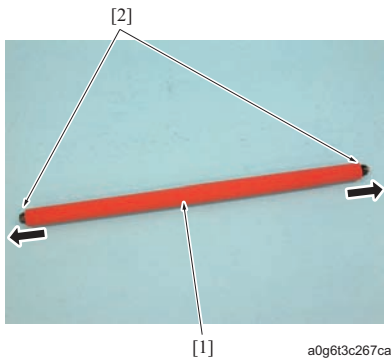
8. Remove 2 bearings /A [1].
9. Reinstall the above parts following the removal steps in reverse.

4.10.19 Replacing the fusing cleaning roller, the bearing /G and the web prevention part assy**(1) Periodically replaced parts/cycle**

- Fusing cleaning roller
: Every 10,500,000 prints
- Bearing /G
: Every 10,500,000 prints
- Web prevention part assy
: Every 20,250,000 prints

(2) Procedure

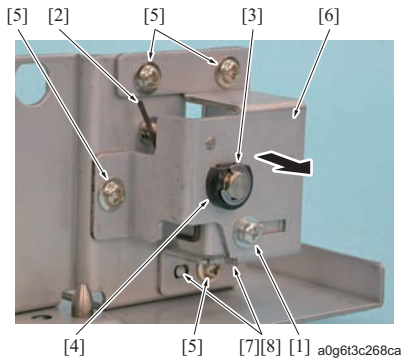
1. Pull out the duplex section from the main body. (Refer to [F.4.9.1 Pulling out/reinstalling the duplex section](#))
2. Remove the fusing upper plate assy. (Refer to [F.4.10.1 Replacing the fusing cleaning web](#))
3. Remove the fusing cleaning web. (Refer to [F.4.10.1 Replacing the fusing cleaning web](#))
4. Remove the E-ring [1] and remove the fusing cleaning roller [2].



5. Remove 2 bearings /G [2] from the fusing cleaning roller [1].

Note

- When reinstalling the bearing /G, be sure to turn each flange inside.



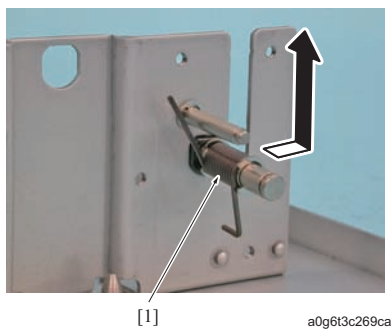
6. Loosen the screw [1] to release the tension of the spring [2].

7. Remove the E-ring [3] and remove the bearing /G [4].

8. Remove 4 screws [5] and remove the drive plate /3 [6].

Note

- When reinstalling the drive plate /3, be sure to set 2 positioning holes [7] to 2 projections [8] of the fusing upper plate assy.



9. Remove the web prevention part assy [1].

10. Reinstall the above parts following the removal steps in reverse.

11. After replacing the fusing cleaning roller and the web prevention part assy, conduct the followings.

- For fusing cleaning roller: Counter reset of the parts counter No. 36

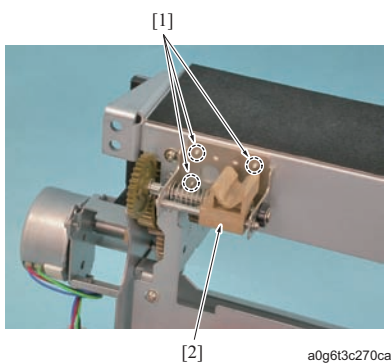
- For the web prevention part assy : Counter reset of the parts counter No.35

4.10.20 Replacing the fusing oscillation cam assy

(1) Periodically replaced parts/cycle

- Fusing oscillation cam assy
- : Every 20,250,000 prints

(2) Procedure

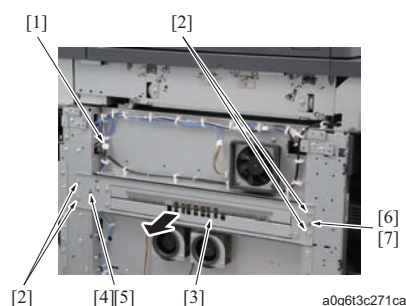


1. Pull out the duplex section from the main body. (Refer to [F.4.9.1 Pulling out/reinstalling the duplex section](#))
2. Remove the fusing section. (Refer to [F.4.10.2 Removing/reinstalling the fusing section](#))
3. Remove the fusing upper plate assy. (Refer to [F.4.10.1 Replacing the fusing cleaning web](#))
4. Open the web section. (Refer to [F.4.10.3 Opening/closing of the web section](#))
5. Remove 3 screws [1] and remove the fusing oscillation cam assy [2].
6. Reinstall the above parts following the removal steps in reverse.

4.11 Paper exit section

4.11.1 Removing/reinstalling the paper exit section

(1) Procedure



1. Remove the left cover. (Refer to [G.2.2.4 Left cover](#))
2. Disconnect the connector [1].
3. Remove 4 screws [2] and then remove the paper exit section [3].

Note

- When reinstalling the paper exit section, be sure to hook the retention hole [4] to the projection [5] of the frame and then set the positioning hole [6] to the positioning pin [7] of the frame.

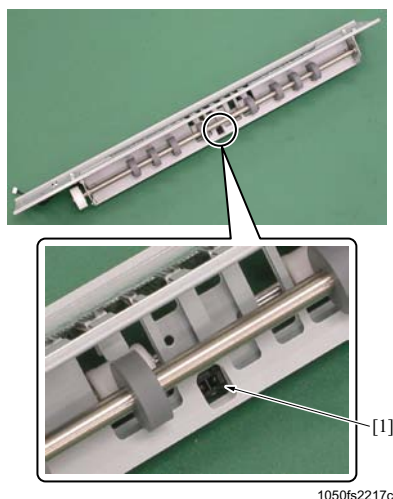
4. Reinstall the above parts following the removal steps in reverse.

4.11.2 Cleaning paper exit sensor (PS3)

(1) Periodic cleaning cycle

- Paper exit sensor (PS3)
: Every 6,000,000 prints

(2) Procedure

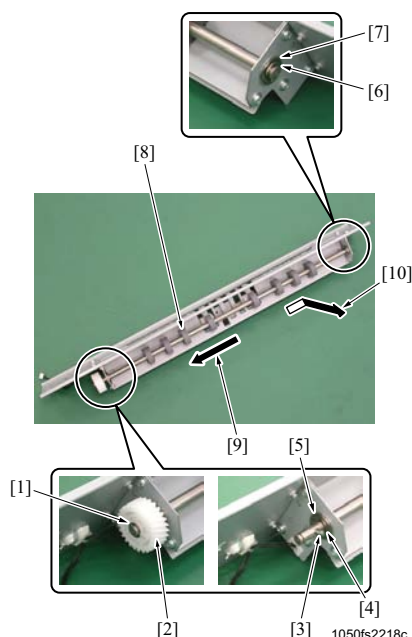


1. Remove the left cover. (Refer to [G.2.2.4 Left cover](#))
2. Remove the paper exit section. (Refer to [F.4.11.1 Removing/reinstalling the paper exit section](#))
3. Clean the paper exit sensor (PS3) [1] with the blower brush.
4. Reinstall the above parts following the removal steps in reverse.

4.11.3 Replacing the main body paper exit roller

(1) Periodically replaced parts/cycle

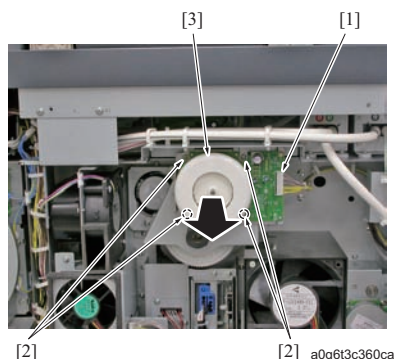
- Main body paper exit roller
: Every 6,000,000 prints

(2) Procedure

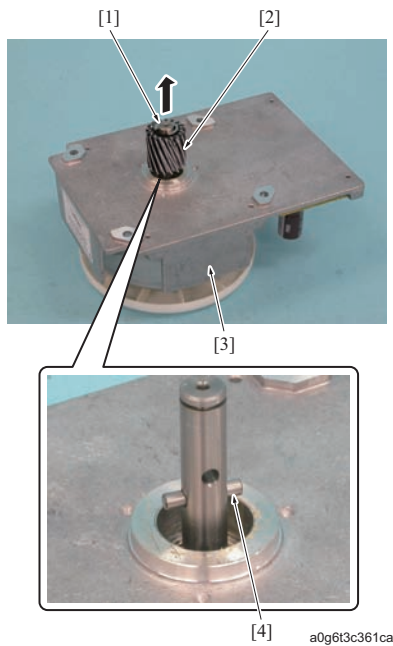
1. Remove the left cover. (Refer to [G.2.2.4 Left cover](#))
2. Remove the paper exit section. (Refer to [F.4.11.1 Removing/reinstalling the paper exit section](#))
3. Remove the E-ring [1] and then remove the gear [2] and the pin [3].
4. Remove the E-ring [4] and remove the bearing [5].
5. Remove the E-ring [6] and then remove the bearing [7].
6. Move the main body paper exit roller [8] in the arrow-marked directions [9] and [10] in this order, and remove it.
7. Reinstall the above parts following the removal steps in reverse.
8. After replacing the main body paper exit roller, conduct the following step.
 - For the paper exit roller of the main body: Counter reset of the parts counter No.66

4.12 Main body rear side**4.12.1 Replacing the fusing motor (M1) and the fusing gear****(1) Periodically replaced parts/cycle**

- Fusing motor (M1)
: Every 30,000,000 prints
- Fusing gear
: Every 6,000,000 prints

(2) Procedure

1. Remove the rear cover. (Refer to [G.2.2.2 Rear cover](#))
2. Disconnect the connector [1].
3. Remove 4 screws [2] and remove the fusing motor assy [3].



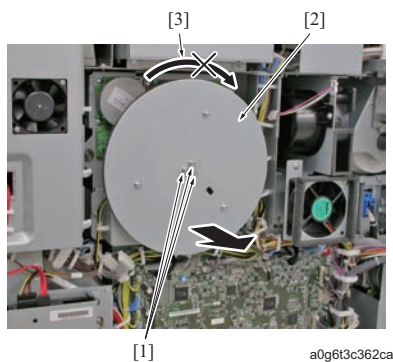
4. Remove the E-ring [1] and remove the fusing gear [2].
5. Remove the pin [4] from the fusing motor (M1) [3].
6. Reinstall the above parts following the removal steps in reverse.

4.12.2 Replacing the drum motor (M2)

(1) Periodically replaced parts/cycle

- Drum motor (M2)
- : Every 30,000,000 prints

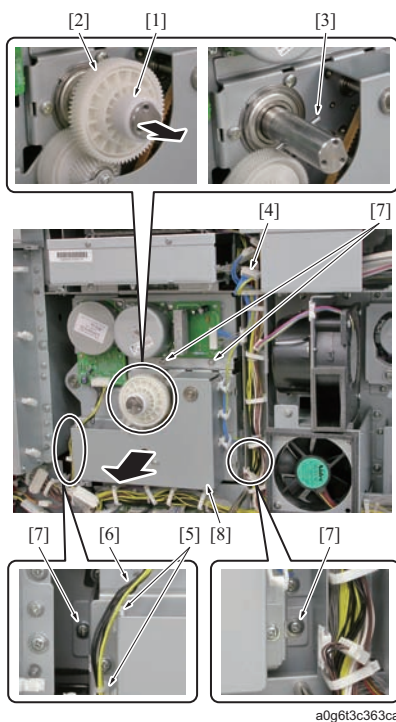
(2) Procedure



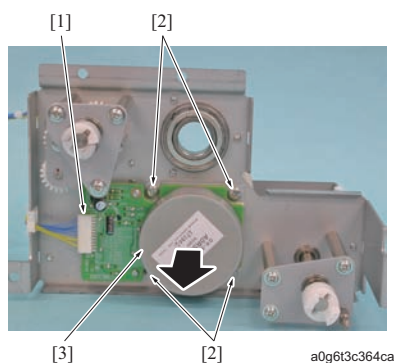
1. Remove the rear cover. (Refer to [G.2.2.2 Rear cover](#))
2. Remove 3 screws [1] and remove the flywheel [2].

Note

- When removing the flywheel [2], be sure not to rotate in the arrow-marked direction [3].



3. Remove the spacer [1] and the gear [2], and then remove the pin [3].
4. Disconnect the connector [4].
5. Release the wiring harness [6] from 2 wiring harness clamps [5].
6. Remove 4 screws [7], and then remove the drum drive assy [8].



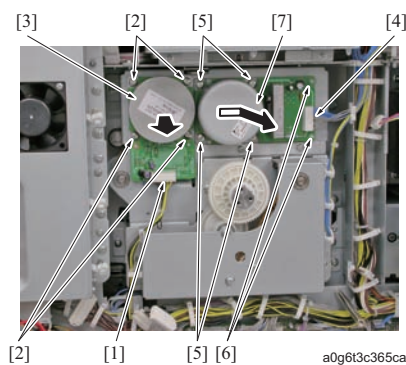
7. Disconnect the connector [1].
8. Remove 4 screws [2] and remove the drum motor (M2).
9. Reinstall the above parts following the removal steps in reverse.

4.12.3 Replacing the developing motor (M3) and the developing screw motor (M21)

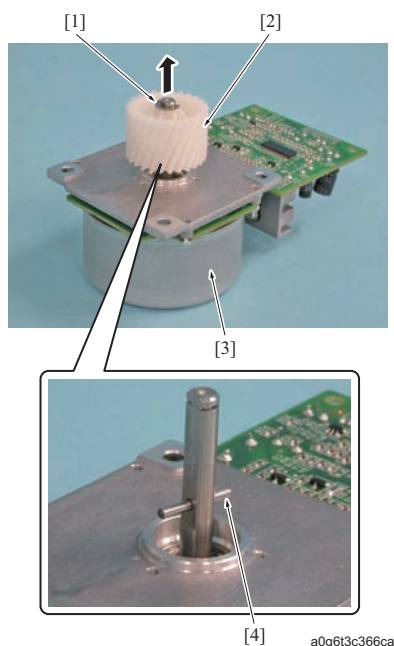
(1) Periodically replaced parts/cycle

- Developing motor (M3)
: Every 30,000,000 prints
- Developing screw motor (M21)
: Every 30,000,000 prints

(2) Procedure



1. Remove the rear cover. (Refer to [G.2.2.2 Rear cover](#))
2. Remove the flywheel. (Refer to [F.4.12.2 Replacing the drum motor \(M2\)](#))
3. Disconnect the connector [1].
4. Remove 4 screws [2] and remove the developing screw motor (M21) [3].
5. Disconnect the connector [4].
6. Remove 4 screws [5] and 2 board supports [6], and then remove the developing motor (M3) [7].



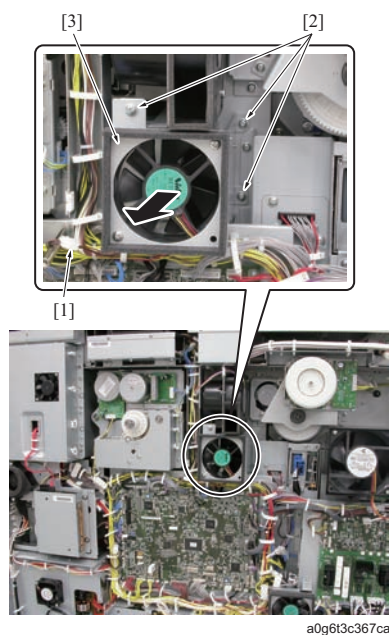
7. Remove the E-ring [1] and the gear [2].
8. Remove the pin [4] from the developing motor (M3) [3].
9. Reinstall the above parts following the removal steps in reverse.

4.12.4 Replacing the transfer belt cleaning motor (M5) and the belt cleaning gear

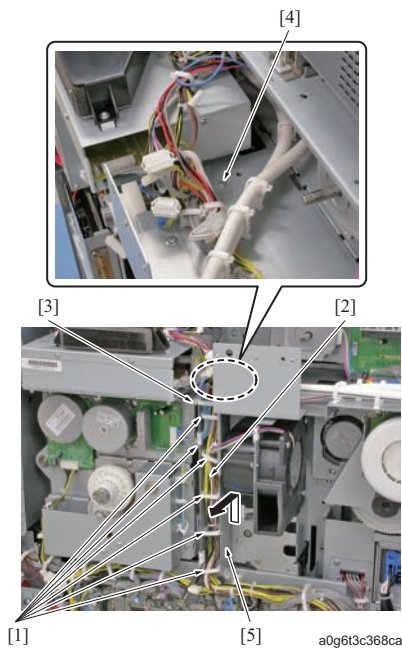
(1) Periodically replaced parts/cycle

- Transfer belt cleaning motor (M5)
: Every 30,000,000 prints
- Belt cleaning gear
: Every 30,000,000 prints

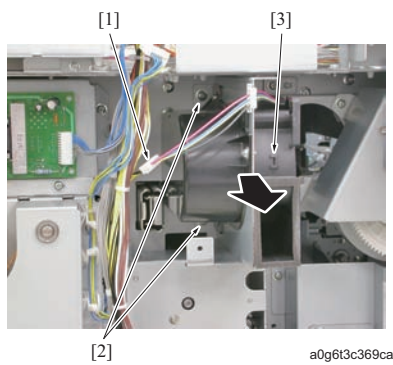
(2) Procedure



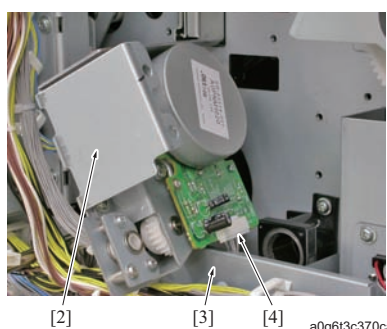
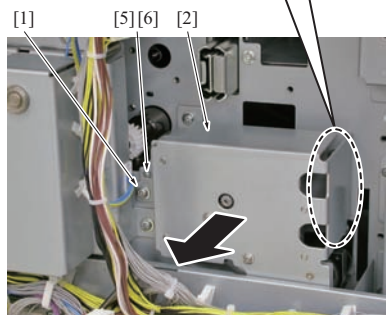
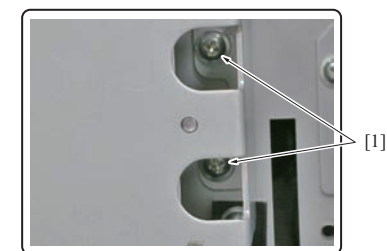
1. Remove the rear cover. (Refer to [G.2.2.2 Rear cover](#))
2. Remove the upper cover /Rr1. (Refer to [G.2.2.8 Upper cover /Rr1](#))
3. Remove the upper cover /Rr2. (Refer to [G.2.2.9 Upper cover /Rr2](#))
4. Remove the exterior mounting plate. (Refer to [F.4.5.7 Replacing the pump units /Lt and /Rt](#))
5. Remove the flywheel. (Refer to [F.4.12.2 Replacing the drum motor \(M2\)](#))
6. Disconnect the connector [1].
7. Remove 3 screws [2] and remove the transfer suction fan assy [3].



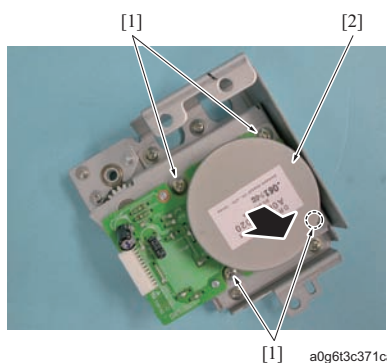
8. Release the wiring harness [2] from 6 wiring harness clamps [1].
9. Remove the wiring harness clamps [3].
10. Remove the screw [4], and remove the stay [5].



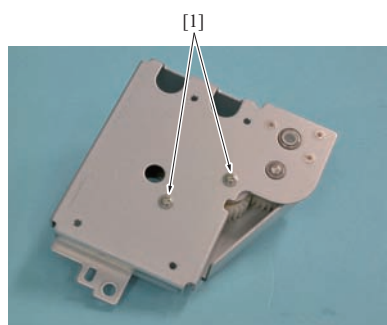
11. Disconnect the connector [1].
12. Remove 2 screws [2] and remove the cooling fan /2 assy [3].



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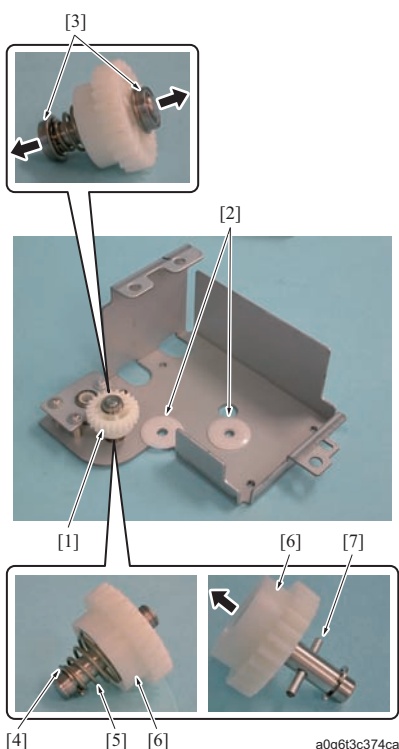
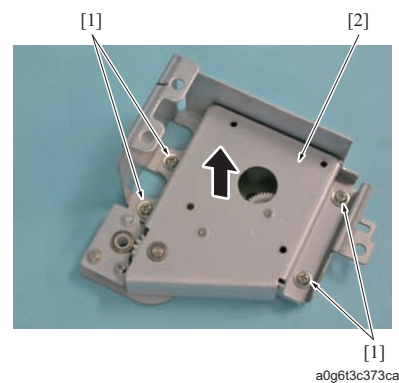
13. Pull out the duplex section. (Refer to [F.4.9.1 Pulling out/reinstalling the duplex section](#))
14. Remove 3 screws [1] and remove the transfer belt motor assy [2], and then put it on the metal frame of the printer control board assy [3].
15. Disconnect the connector [4] and remove the transfer belt cleaning motor assy [2].

Note

- When reinstalling the transfer belt cleaning motor assy, be sure to set the projection [6] of the main body to the positioning hole [5].

16. Remove 4 screws [1] and remove the transfer belt cleaning motor (M5) [2].

17. Remove 2 screws [1].



18. Remove 4 screws [1] and remove the belt CL crimp /2 [2].

19. Remove the belt cleaning gear assy [1].

Note

- Be careful not to lose 2 spacers [2].

20. Remove 2 bearings [3].

21. Remove the E-ring [4] and then remove the spring [5] and the belt cleaning gear [6].

Note

- Be careful not to lose the pin [7].

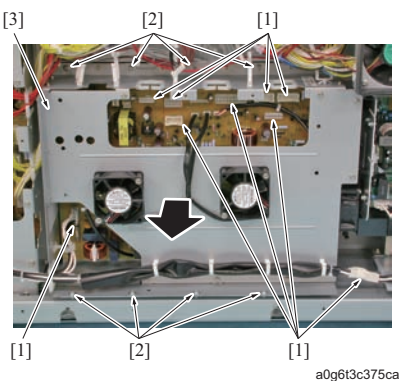
22. Reinstall the above parts following the removal steps in reverse.

4.12.5 Replacing the waste toner motor (M9)

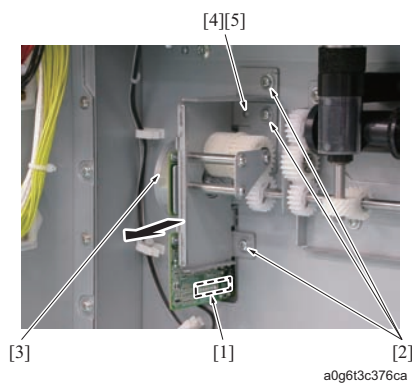
(1) Periodically replaced parts/cycle

- Waste toner motor (M9)
: Every 30,000,000 prints

(2) Procedure



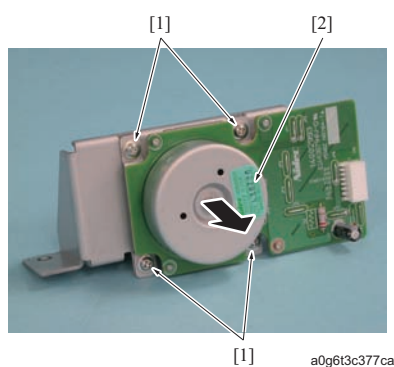
1. Remove the rear cover. (Refer to [G.2.2.2 Rear cover](#))
2. Disconnect 10 connectors [1].
3. Remove 8 screws [2] and remove the DC power supply /2 assy [3].



4. Disconnect the connector [1].
5. Remove 3 screws [2] and remove the waste toner motor assy [3].

Note

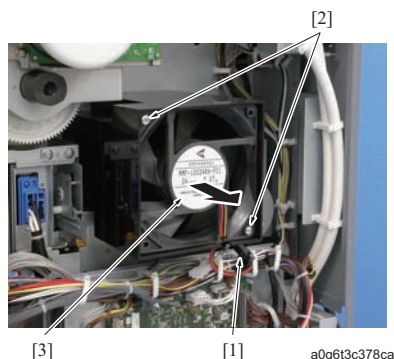
- When reinstalling the waste toner motor assy, be sure to set the projection [5] of the main body to the positioning hole [4].



6. Remove 4 screws [1] and remove the waste toner motor (M9) [2].
7. Reinstall the above parts following the removal steps in reverse.

4.12.6 Replacing the paper exit motor (M20)**(1) Periodically replaced parts/cycle**

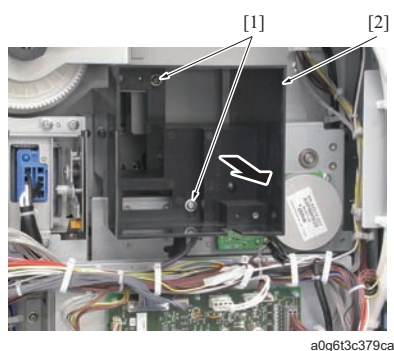
- Paper exit motor (M20)
- : Every 30,000,000 prints

(2) Procedure

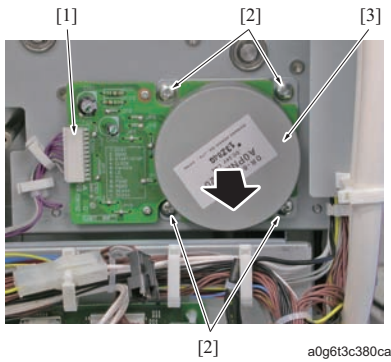
1. Remove the rear cover. (Refer to [G.2.2.2 Rear cover](#))
2. Disconnect the connector [1].
3. Remove 2 screws [2] and remove the cooling fan /1 (FM1) [3].

Note

- When reinstalling the cooling fan /1 (FM1), be careful not to tighten the screws [2] too much. Tightening the screws too much damages the fan. Be sure to tighten lightly.



4. Remove 2 screws [1] and remove the duct [2].



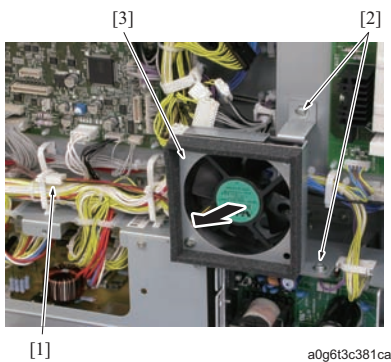
5. Disconnect the connector [1].
6. Remove 4 screws [2] and remove the paper exit motor (M20) [3].
7. Reinstall the above parts following the removal steps in reverse.

4.12.7 Replacing the paper exit conveyance motor (M31)

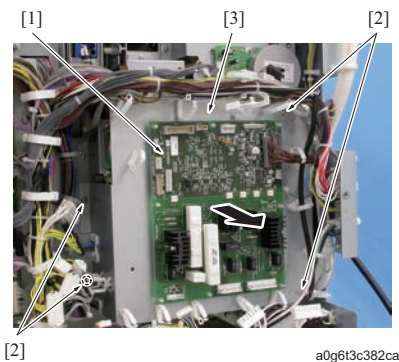
(1) Periodically replaced parts/cycle

- Paper exit conveyance motor (M31)
- : Every 30,000,000 prints

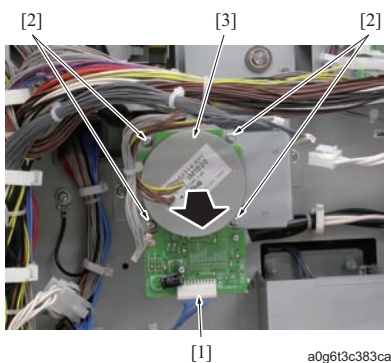
(2) Procedure



1. Remove the rear cover. (Refer to [G.2.2.2 Rear cover](#))
2. Disconnect the connector [1].
3. Remove 2 screws [2] and remove the DC power supply /3 cooling fan assy [3].



4. Disconnect all the connectors which is connected to the AC drive board (ACDB) [1].
5. Remove 4 screws [2] and remove AC drive board assy [3].



6. Disconnect the connector [1].
7. Remove 4 screws [2] and remove the paper exit conveyance motor (M31).
8. Reinstall the above parts following the removal steps in reverse.

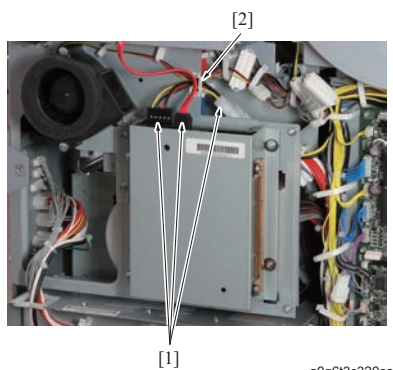
4.12.8 Replacing the paper feed motor (M4), the paper feed gear, the vertical conveyance motor (M8) and the conveyance gear

(1) Periodically replaced parts/cycle

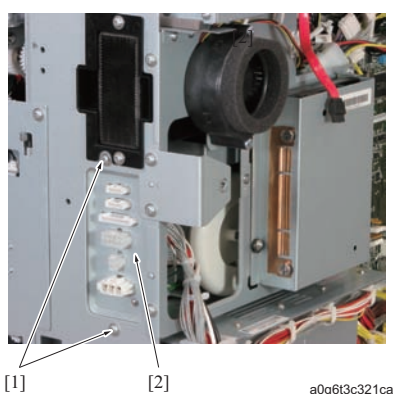
- Paper feed motor (M4)
- : Every 30,000,000 prints
- Paper feed gear
- : Every 30,000,000 prints

- Vertical conveyance motor (M8)
: Every 30,000,000 prints
- Conveyance roller
: Every 30,000,000 prints

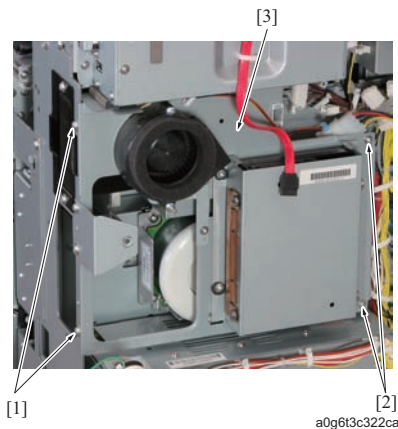
(2) Procedure



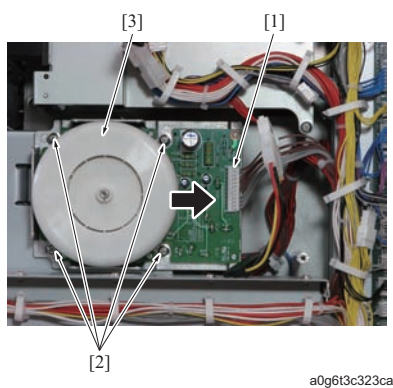
1. Remove the rear cover. (Refer to [G.2.2.2 Rear cover](#))
2. Remove the right cover. (Refer to [G.2.2.3 Right cover](#))
3. Disconnect 3 connectors [1].
4. Remove the wiring harness from the clamp [2].



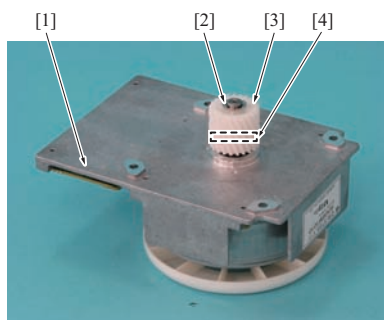
5. Remove 2 screws [1] and remove the connector mounting plate [2].



6. Remove the screws [1] and [2], 2 each, and remove the HDD mounting plate [3].



7. Disconnect the connector [1] and remove 4 screws [2].
8. Move the paper feed motor (M4) [3] in the arrow-marked direction to remove it.

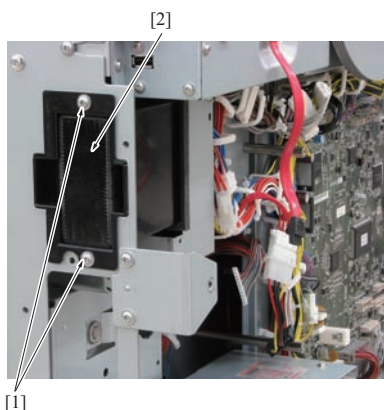


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9. Remove the E-ring [2] from the paper feed motor (M4) [1], and remove the paper feed gear [3] and the pin [4].

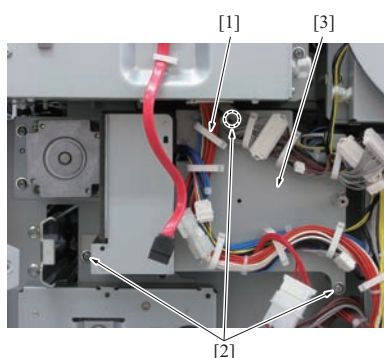
Note

- When removing the paper feed gear [3], be careful not to drop the pin [4].
- When reinstalling the paper feed gear [3], apply the plas guard No.2.



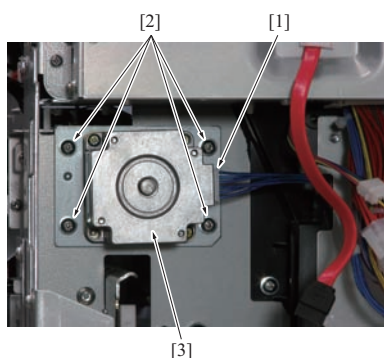
a0g6t3c325ca

10. Remove 2 screws [1] and remove the developing suction filter [2].



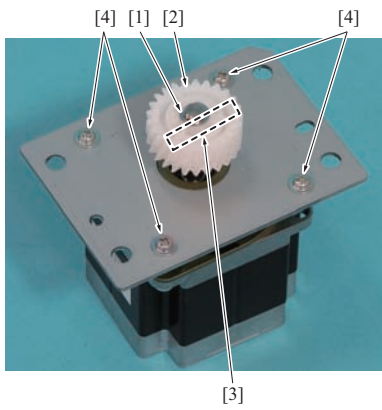
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11. Remove the wiring harness from the clamp [1].
12. Remove 3 screws [2] and remove the developing mounting plate [3].



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13. Disconnect the connector [1] and remove 4 screws [2].
14. Remove the vertical conveyance motor assembly [3].



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15. Remove the E-ring [1], and remove the conveyance gear [2] and the pin [3].

Note

- When removing the conveyance gear [2], be careful not to drop the pin [3].

16. Remove 4 screws [4] and remove the vertical conveyance motor (M8) [5].

17. Reinstall the above parts following the removal steps in reverse.

Note

- When reinstalling the vertical conveyance motor (M8) [5], apply the plas guard No.2.

5. PERIODICAL MAINTENANCE PROCEDURE DF-615

5.1 Precautions on maintenance

⚠ CAUTION

- Be sure to unplug the power plug from the power outlet.

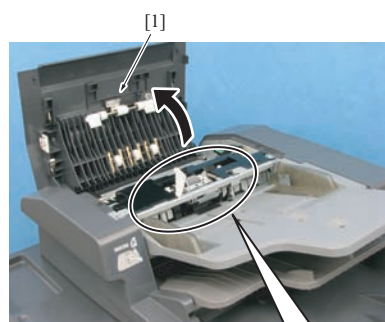
5.2 Paper feed section

5.2.1 Replacing the pick-up roller/paper feed roller/paper feed auxiliary roller

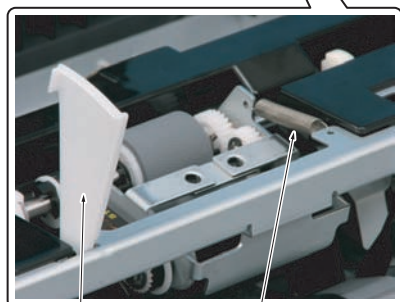
(1) Periodically replaced parts/cycle

- Pick-up roller
: Every 4,500,000 prints (Actual replacement cycle: Every 800,000 feeds)
- Paper feed roller
: Every 4,500,000 prints (Actual replacement cycle: Every 800,000 feeds)
- Paper feed auxiliary roller
: Every 4,500,000 prints (Actual replacement cycle: Every 800,000 feeds)

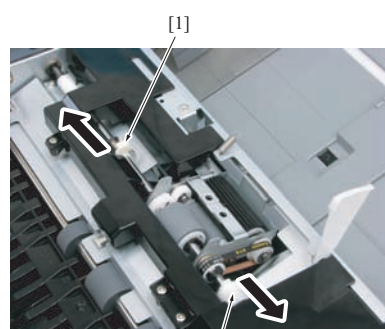
(2) Procedure



1. Open the open/close cover [1].
2. Lift up the stopper [2].
3. Remove the spring [3].

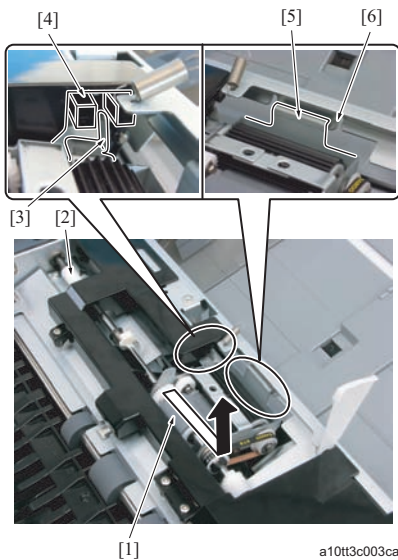


[2] [3] a10tt3c001ca



[2] a10tt3c002ca

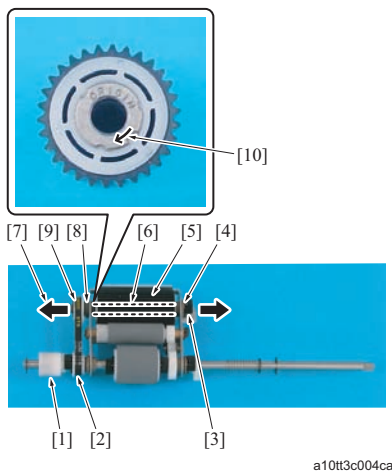
4. Slide each of the bearing [1] and the one-way clutch [2] to the outside.



5. Slide the pick-up roller unit [1] to the front side once to release it from the coupling [2], and remove it upward.

Note

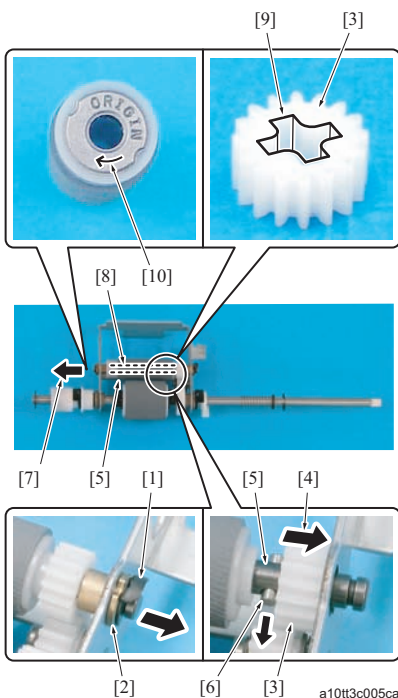
- When reinstalling the pick-up roller unit, be sure to engage the projection [3] of the pick-up roller unit to the original registration sensor [4]. Otherwise, paper is not fed correctly.
- When reinstalling the pick-up roller unit, make sure that the fold [5] of the pick-up roller unit comes above the fold [6] of the stay. If it comes under the fold, paper is not fed correctly.



6. Be sure to place the pick-up roller so that the one-way clutch [1] is at the lower left.
7. Remove the belt [2].
8. Remove the C-clip [3] and remove the bearing [4].
9. Pull out the shaft [6] of the pick-up roller [5] in the arrow-marked direction [7], and remove the pick-up roller.

Note

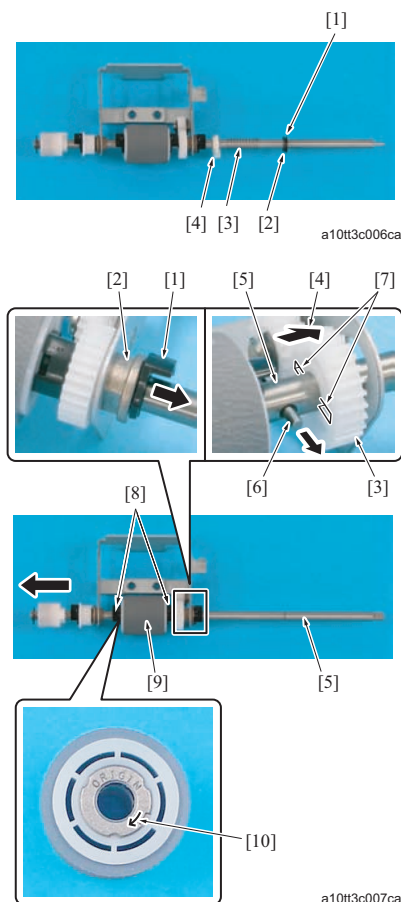
- The washer is inserted between the bearing [8] and the gear [9]. Be careful not to loose it.
- When reinstalling the pick-up roller, be sure to turn the arrow-mark [10] of the pick-up roller to the gear [9] side. Otherwise, paper is not fed correctly.



10. Remove the C-clip [1] and remove the bearing [2].
11. Slide the gear [3] in the arrow-marked direction [4] and remove the pin [6] from the shaft [5].
12. Pull out the shaft [5] in the arrow-marked direction [7] and remove the paper feed auxiliary roller [8].

Note

- Be careful not to lose the pin [6].
- When reinstalling the gear [3], be sure to turn the detent [9] to the paper feed auxiliary roller [8] side.
- When reinstalling the paper feed assist roller [8], be sure to turn the arrow-mark [10] of the paper feed auxiliary roller to the opposite of the gear [3] side. Otherwise, paper is not fed correctly.



13. Remove the E-ring [1], and remove the washer [2], the spring [3], and the bearing [4].

14. Remove the C-clip [1] and remove the bearing [2].

15. Slide the gear [3] in the arrow-marked direction [4] and remove the pin [6] from the shaft [5].

Note

- Be careful not to lose the pin [6].
- When reinstalling the gear [3], be sure to set the pin [6] to the detent hole [7].

16. Remove 2 C-clips [8].

17. Remove the shaft [5] and remove the paper feed roller [9].

Note

- When reinstalling the paper feed roller [9], be sure to turn the arrow-mark [10] of the paper feed assist roller to the opposite of the gear [3] side. Otherwise, paper is not fed correctly.

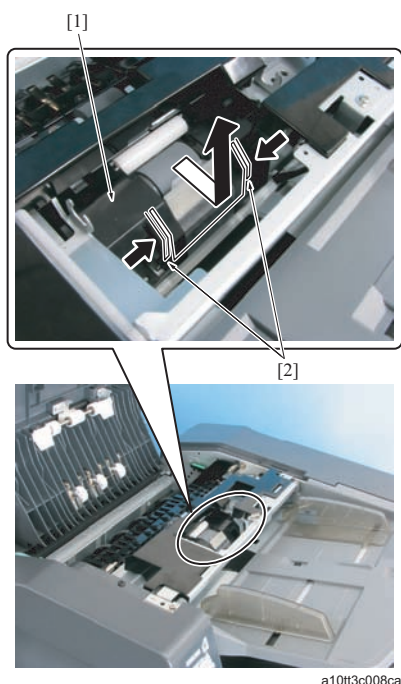
18. Reinstall the above parts following the removal steps in reverse.

5.2.2 Replacing the separation roller/torque limiter

(1) Periodically replaced parts/cycle

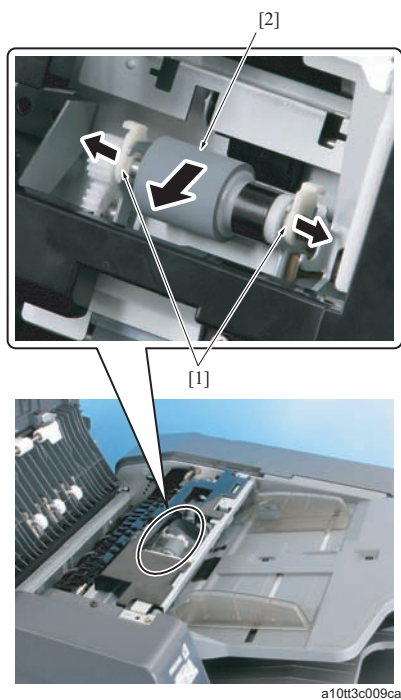
- Separation roller
: Every 2,250,000 prints (Actual replacement cycle: Every 400,000 feeds)
- Torque limiter
: Every 4,500,000 prints (Actual replacement cycle: Every 800,000 feeds)

(2) Procedure

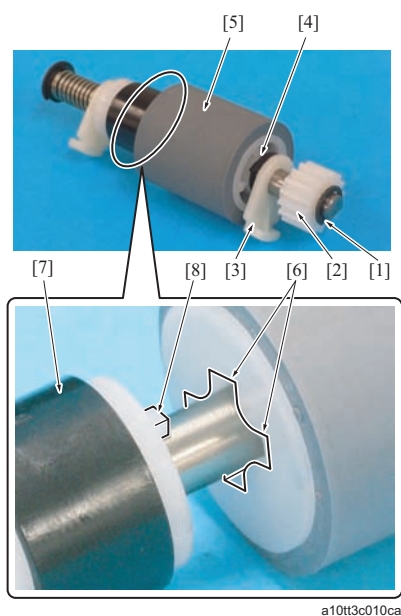


1. Remove the pick-up roller unit. (Refer to [F.5.2.1 Replacing the pick-up roller/paper feed roller/paper feed auxiliary roller](#))
2. Release the hooks [2] of the auxiliary roller assy [1] and remove the auxiliary roller assy [1].

3. Slide 2 bearings [1] and remove the separation roller unit [2].



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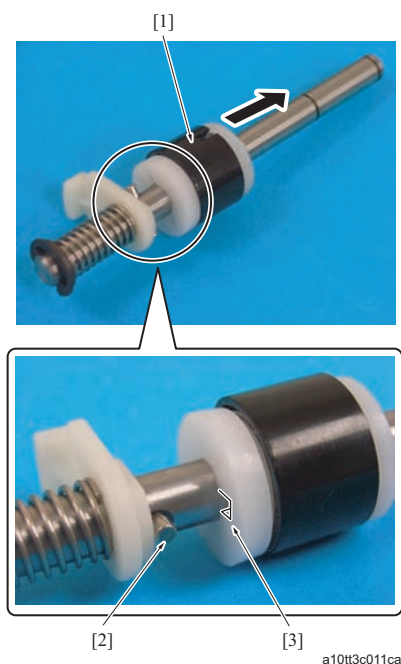


a10tt3c010ca

4. Remove the E-ring [1], and remove the gear [2] and the bearing [3].
5. Remove the C-clip [4] and remove the separation roller [5].

Note

- When reinstalling the separation roller, be sure to set the cross cut [6] to the projection [8] of the torque limiter [7].



6. Remove the torque limiter [1].

Note

- Be careful not to lose the detent pin [2] for the torque limiter.
- When reinstalling the torque limiter, be sure to set the pin to the detent hole [3].

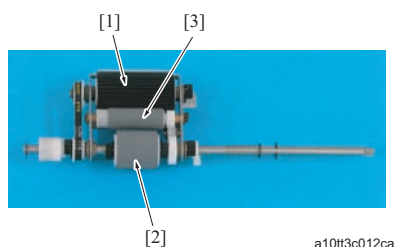
7. Reinstall the above parts following the removal steps in reverse.

5.2.3 Cleaning the pick-up roller unit

(1) Periodic cleaning cycle

- Pick-up roller
: Every 750,000 prints
- Paper feed roller
: Every 750,000 prints
- Paper feed auxiliary roller
: Every 750,000 prints

(2) Procedure

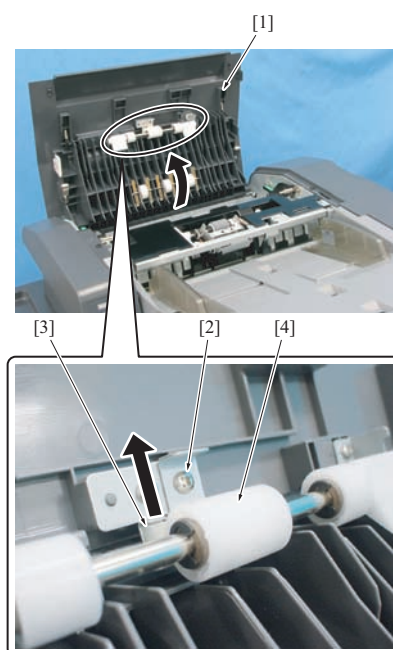


1. Remove the pick-up roller unit. (Refer to [F.5.2.1 Replacing the pick-up roller/paper feed roller/paper feed auxiliary roller](#))
2. Clean the pick-up roller [1], the paper feed roller [2] and the paper feed auxiliary roller [3] with the drum cleaner and the cleaning pad.
3. Reinstall the above parts following the removal steps in reverse.

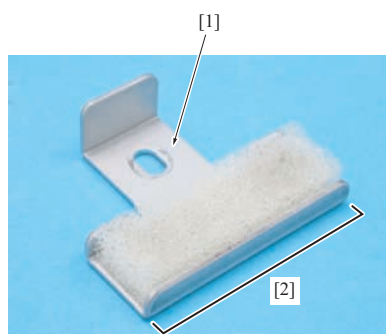
5.2.4 Cleaning the cleaning pad/registration roller

(1) Periodic cleaning cycle

- Cleaning pad
: Every 750,000 prints
- Registration roller
: Every 750,000 prints

(2) Procedure

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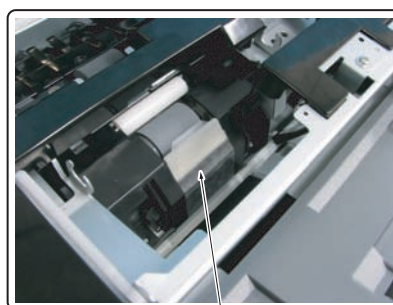
15saf2c018na

1. Open the open/close cover [1].
2. Remove the screw [2] and remove the cleaning pad [3].
3. Clean the registration roller [4] with the isopropyl alcohol and the cleaning pad.

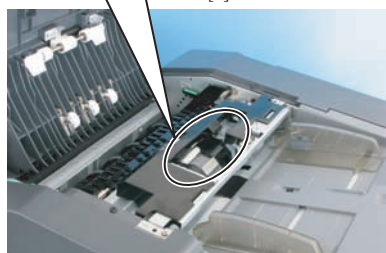
4. Clean the cleaning section [2] of the cleaning pad [1] with the blower brush.
5. Reinstall the above parts following the removal steps in reverse.

5.2.5 Cleaning the pre-handling rubber**(1) Periodic cleaning cycle**

- Pre-handling rubber
- : Every 750,000 prints

(2) Procedure

[1]



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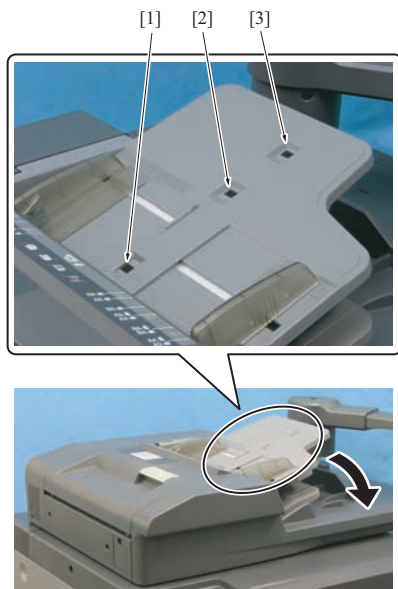
1. Remove the pick-up roller unit. (Refer to [F.5.2.1 Replacing the pick-up roller/paper feed roller/paper feed auxiliary roller](#))
2. Clean the pre-handling rubber [1] with drum cleaner and a cleaning pad.
3. Reinstall the above parts following the removal steps in reverse.

5.2.6 Cleaning the paper feed section sensor

(1) Periodic cleaning cycle

- Original count sensor (PS310)
: Every 750,000 prints
- Size sensor /Lt (PS303)
: Every 750,000 prints
- Size sensor /Rt (PS302)
: Every 750,000 prints

(2) Procedure



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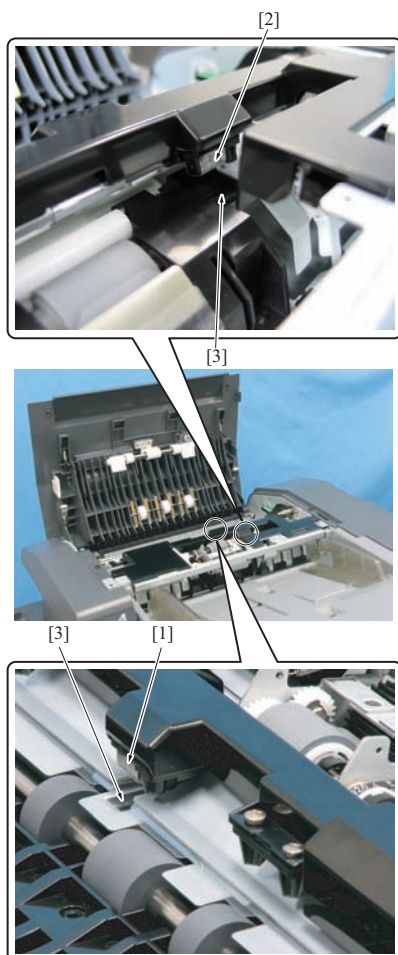
1. Close the DF.
2. Use a blower brush to clean the original count sensor (PS310) [1], the size sensor /Lt (PS303) [2] and the size sensor /Rt (PS302) [3].

5.3 Conveyance section

5.3.1 Cleaning the conveyance section sensor

(1) Periodic cleaning cycle

- Original registration sensor /Lt (PS306)
: Every 750,000 prints
- Original registration sensor /Rt (PS318)
: Every 750,000 prints

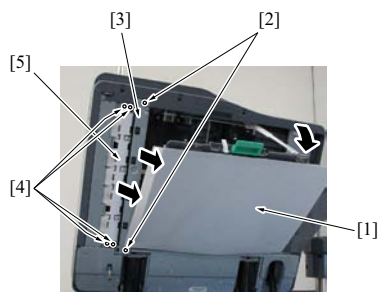
(2) Procedure

a0hgt3c001ca

1. Remove the entrance conveyance roller unit. (Refer to [F.5.2.1 Replacing the pick-up roller/paper feed roller/paper feed auxiliary roller](#))
2. Clean the original registration sensors /Lt (PS306) [1], /Rt (PS318) [2] and the original registration mirror [3] with the blower brush.
3. Reinstall the above parts following the removal steps in reverse.

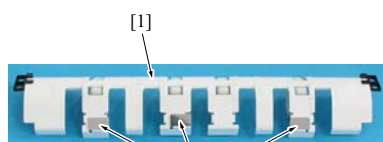
5.4 Read section**5.4.1 Cleaning the read section sensor/mirror for the sensor****(1) Periodic cleaning cycle**

- Original conveyance sensor (PS308)
: Every 750,000 prints
- Original skew sensor /Rr (PS311)
: Every 750,000 prints
- Original skew sensor /Fr (PS312)
: Every 750,000 prints

(2) Procedure

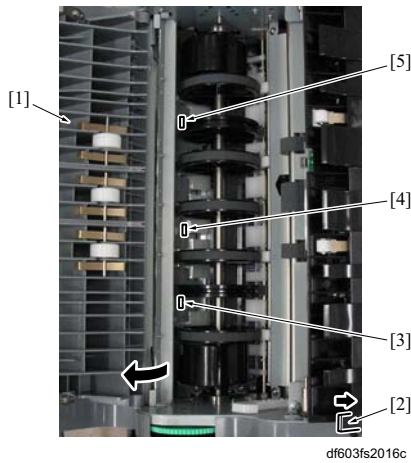
df603fs2014c

1. Open the DF.
2. Open the original glass guide [1].
3. Remove 2 screws [2] and then remove the driven roller assy[3].
4. Remove 4 screws [4] and then remove the conveyance guide [5].



df603fs2015c

5. Use a blower brush to clean 3 mirrors [2] of the conveyance guide [1].



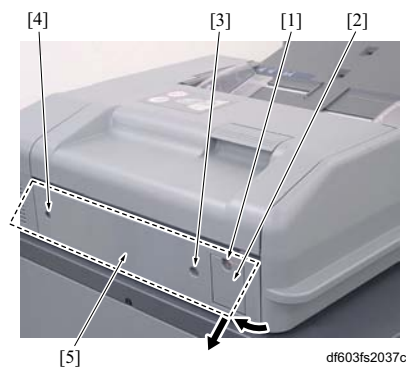
6. Close the original glass guide and then close the DF.
7. Open the open/close cover [1]. (The picture shows the condition after the cover is opened.)
8. Raise up the conveyance guide open/close lever [2]. (The picture shows the condition after the lever is raised up.)
9. Use a blower brush to clean the original skew sensor /Fr (PS312) [3], the original conveyance sensor (PS308) [4] and the original skew sensor /Rr (PS311) [5].
10. Reinstall the above parts following the removal steps in reverse.

5.4.2 Cleaning of the centering sensor

(1) Periodic cleaning cycle

- Centering sensor /Fr (PS320) and /Rr (PS321)
: Every 750,000 prints
- Centering LED sensor /Fr (PS319) and /Rr (PS322)
: Every 750,000 prints

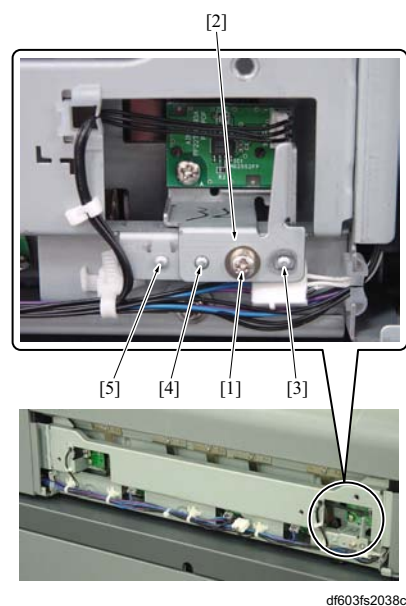
(2) Procedure



1. Remove the screw [1] to remove the sensor cover [2].
2. Remove the screw (stepped screw) [3] and the screw [4]. Pull out the lower section of the DF cover /Lt [5] and remove it while pulling it down.

Note

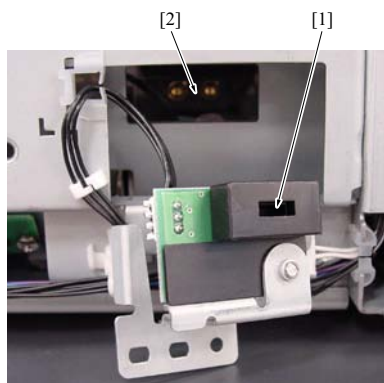
- Be sure to insert the upper section of the DF cover /Lt [5] when reinstalling it.



3. Remove the screw [1] and then remove the sensor mounting plate [2].

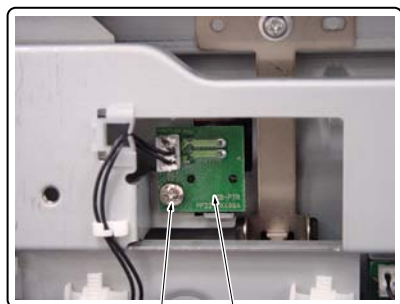
Note

- When reinstalling it, be sure to install the sensor mounting plate [2] to the dowels [3] and [4] for the A4 position and to the dowels [4] and [5] for the LT (8¹/₂ x 11) position. (Refer to [I.10.5 Centering sensor switchover adjustment](#))



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4. Clean the centering sensor /Fr (PS320) [1] and the centering LED sensor /Fr (PS319) [2] with a blower brush.

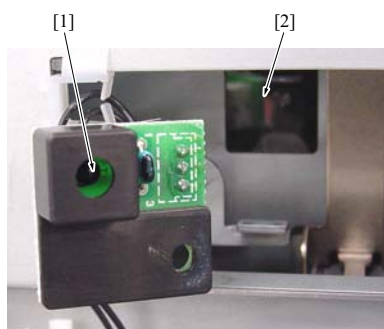


[1] [2]



df603fs2040c

5. Remove the screw [1] and then remove the centering LED sensor /Rr [2].



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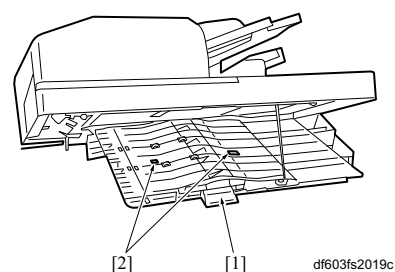
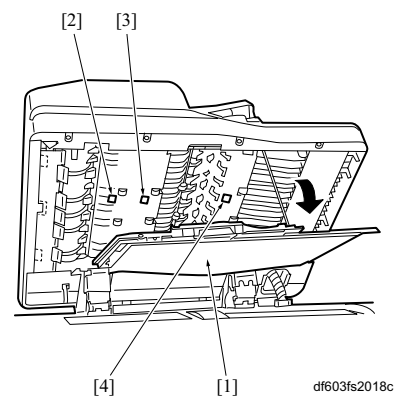
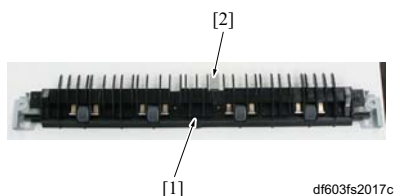
6. Clean the centering sensor /Rr (PS321) [1] and the centering LED sensor /Rr (PS322) [2] with a blower brush.
7. Reinstall the above parts following the removal steps in reverse.

5.5 Paper exit section

5.5.1 Cleaning the mirror on the driven roller assembly/paper exit section sensor/mirror for the sensor

(1) Periodic cleaning cycle

- Mirror on the driven roller assy
: Every 750,000 prints
- Original reverse sensor (PS309)
: Every 750,000 prints
- Reverse jam sensor (PS304)
: Every 750,000 prints
- Original reverse/exit sensor (PS313)
: Every 750,000 prints

(2) Procedure

1. Remove the driven roller assy. (Refer to [F.5.4.1 Cleaning the read section sensor/mirror for the sensor](#))
2. Use a blower brush to clean the mirror [2] on the driven roller assy [1].
3. Open the original glass guide [1].
4. Use a blower brush to clean the reverse sensor (PS309) [2], the reverse jam sensor (PS304) [3] and the original reverse/exit sensor (PS313) [4].
5. Clean 2 mirrors [2] on the back of the original glass guide [1] with the blower brush.
6. Reinstall the above parts following the removal steps in reverse.

6. PERIODICAL MAINTENANCE PROCEDURE PF-702/PP-701

6.1 Precautions on maintenance

⚠ CAUTION

- Be sure to unplug the power plug from the power outlet.

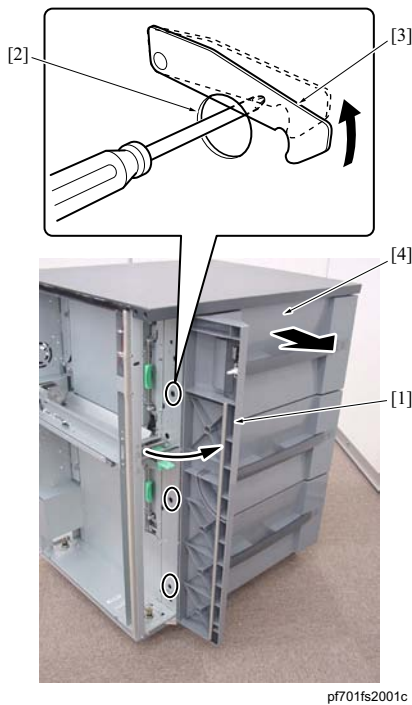
6.2 Tray section

6.2.1 Removing/reinstalling the pick-up roller assy and the separation roller assy

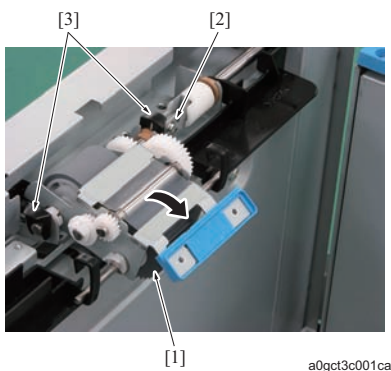
Note

- The removing/reinstalling methods of the pick-up roller assy and the separation roller assy are the same for all of the tray1, 2 and 3. The explanation here is given for tray1.
- After completion of installation, be sure to rotate the pick-up roller in the paper feed direction (clockwise as seen from the front side) to check to see if the paper feed roller and the belt rotate smoothly. The rotation is restricted only in the paper feed direction (clockwise as seen from the front side) and be careful not to rotate the roller counterclockwise.
- Be careful that the pick-up roller assy and the separation roller assy are different in the direction for the main body and for the PF.

(1) Procedure



1. Open the front door [1].
2. Insert a driver into the hole [2] and pull out the tray [4] while lifting up a little the tray lock lever [3].

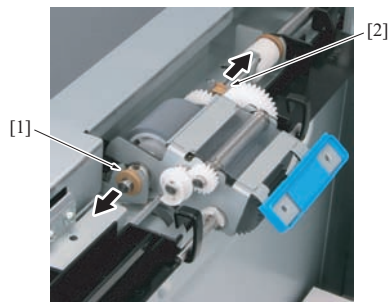


3. Rotate the pick-up roller [1] in the direction of the arrow (clockwise as seen from the front side) and bring the coupling [2] to the lengthwise direction.

Note

- The rotation of the pick-up roller [1] is restricted only to the arrow-marked direction (clockwise). It does not rotate in the reverse direction (counterclockwise). So, be sure not to turn it in this direction forcibly.

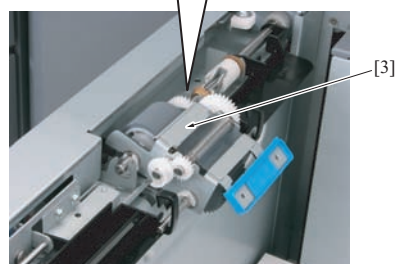
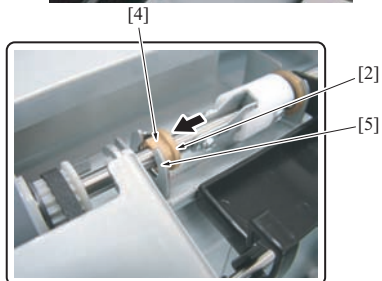
4. Remove 2 C-clips [3].



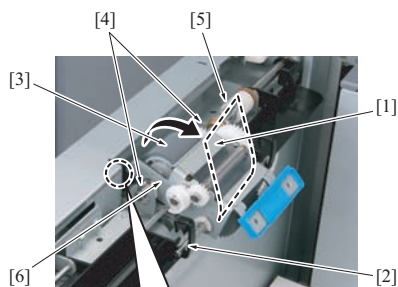
5. Remove the bearing /Fr [1].
6. Move the bearing /Rr [2] to the rear side.

Note

- When installing the bearing, press down a little the metal frame [3] of the pick-up roller assy and insert the flat section [4] of the bearing /Rr [2] into the notched section [5] of the metal frame while the flat section [4] of the bearing being held in a horizontal position. Then insert the bearing /Fr [1] in the same manner.



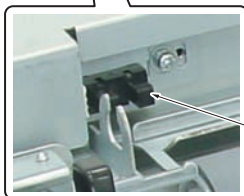
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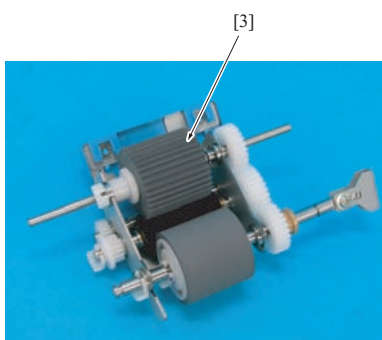
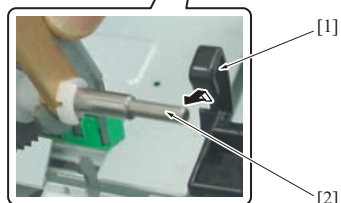
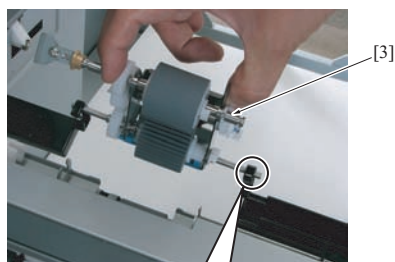
7. Hold the pick-up roller assy [1] by hand and lift and tilt the paper feed roller [3] so that it rotates on the shaft [2] of the pick-up roller to remove it from the notch of the bearing [4] and the coupling [5].

Note

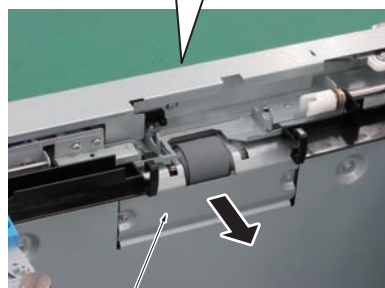
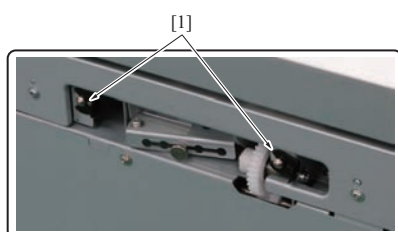
- When removing the pick-up roller [1], be careful not to damage the sensor [7] with the metal frame [6].



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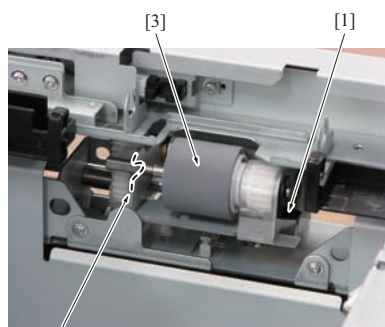


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[2]

a0gct3c002ca



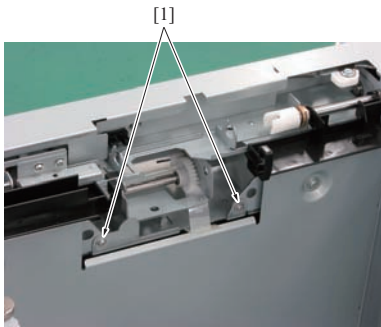
[2]

a0gct3c003ca

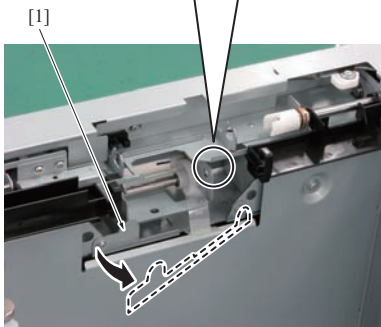
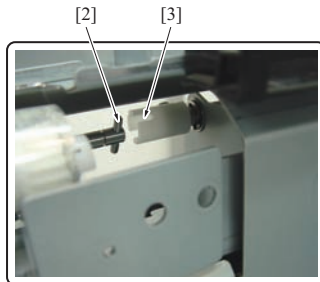
8. Remove the pick-up roller shaft [2] from the arm [1] of the paper feed guide plate and then remove the pick-up roller assy [3].

9. Remove 2 C-clips [1] and remove the entrance guide plate [2].

10. Remove the C-clip [1].
11. Remove the separation roller [3] together with the shaft from the notch [2].



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12. Remove 2 screws [1].

Note

- When replacing only the separation roller, do not conduct this step.

13. Pull out the front side of the separation roller assy [1] in the arrow-marked direction, and then remove the coupling pin [2] in the rear from the joint [3].

Note

- When reinstalling it, be sure to engage the coupling pin [2] with the joint [3].
- When reinstalling it, fasten it with the screws while pressing down the separation roller assy [1].

14. Reinstall the above parts following the removal steps in reverse.

Note

- After completion of installation, be sure to raise the pick-up roller a little and rotate it clockwise as seen from the front side to check to see if the paper feed roller and the belt rotate smoothly (The direction of rotation is available only in the paper feed direction (clockwise as seen from the front side) and be careful not to rotate it counterclockwise.).

6.2.2 Replacing the pick-up roller and the paper feed roller

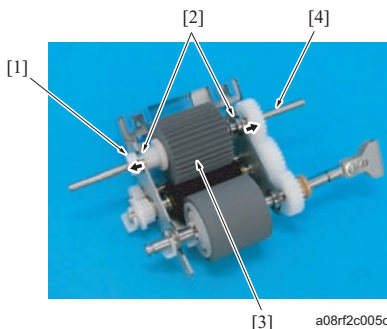
(1) Periodically replaced parts/cycle

- Pick-up roller
: Every 2,250,000 prints (Actual replacement cycle: Every 500,000 prints)
- Paper feed roller
: Every 2,250,000 prints (Actual replacement cycle: Every 500,000 prints)

(2) Procedure

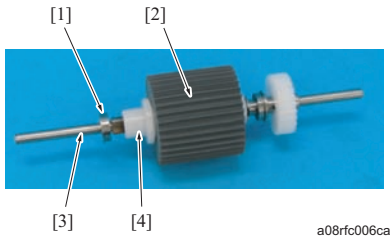
Note

- The outward appearance of the collar is identical for the paper feed roller and the separation roller. However, the collar of the paper feed roller has a one-way mechanism on the inside while the collar of the separation roller does not. Be careful not to confuse one with the other.

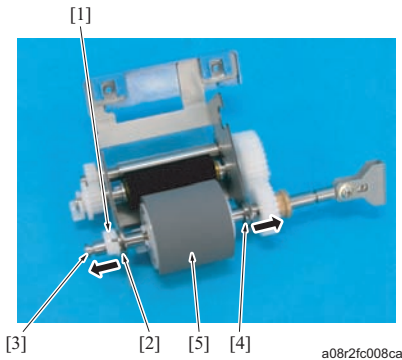


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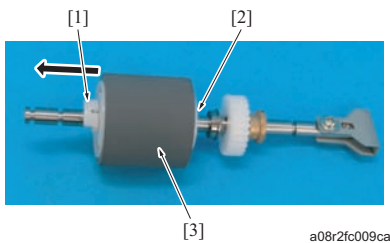
1. Remove the pick-up roller assy. (Refer to [F.6.2.1 Removing/reinstalling the pick-up roller assy and the separation roller assy](#))
2. Remove the C-clip [1] of the pick-up roller assy.
3. Slide 2 bearings [2] and remove the pick-up roller [3] together with the shaft [4].



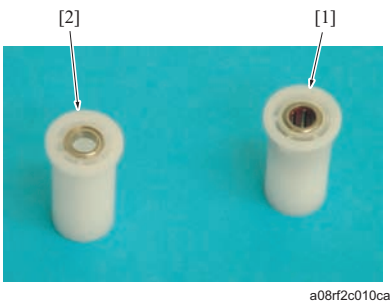
4. Remove the bearing [1] and pull out the pick-up roller [2] from the shaft [3].
5. Remove the pick-up roller from the collar [4].
6. Replace the pick-up roller.



7. Remove the C-clip [1] and pull out the bearing /Fr [2] from the shaft [3].
8. Slide the bearing /Rr [4] and remove the paper feed roller [5] together with the shaft [3].



9. Remove the C-clip [1].
10. Pull out the paper feed roller [3] from the collar [2].
11. Replace the pick-up roller [3].



12. Reinstall the above parts following the removal steps in reverse.

Note

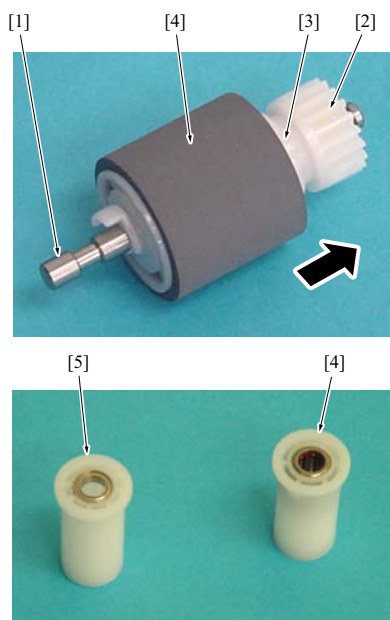
- The external view of the collar is the same for the paper feed roller and the separation roller. However, there is a one-way mechanism provided on the inside of the collar [1] for the paper feed roller while no one-way mechanism is provided for the separation roller collar [2], be careful not to confuse one with the other.

6.2.3 Replacing the separation roller**(1) Periodically cleaned parts/cycle**

- Separation roller
: Every 2,250,000 prints (Actual replacement cycle: Every 500,000 prints)

(2) Procedure**Note**

- The outward appearance of the collar is identical for the paper feed roller and the separation roller. However, the collar of the paper feed roller has a one-way mechanism on the inside while the collar of the separation roller does not. Be careful not to confuse one with the other.



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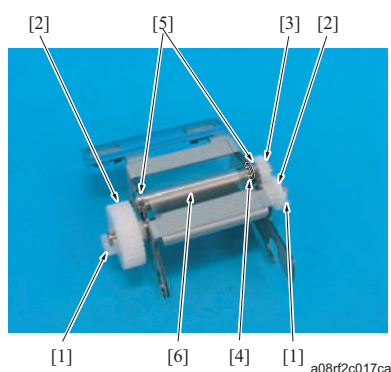
1. Remove the separation roller together with the shaft. (Refer to [F. 6.2.1 Removing/reinstalling the pick-up roller assy and the separation roller assy](#))
2. Pull out the gear [2], the collar [3] and the separation roller [4] from the shaft [1] to the arrow-marked direction, and remove them.
3. Replace the pick-up roller.
4. Reinstall the above parts following the removal steps in reverse.

Note

- The external view of the collar is the same for the paper feed roller and the separation roller. However, there is a one-way mechanism provided on the inside of the collar [6] for the paper feed roller while no one-way mechanism is provided for the separation roller collar [5], be careful not to confuse one with the other.

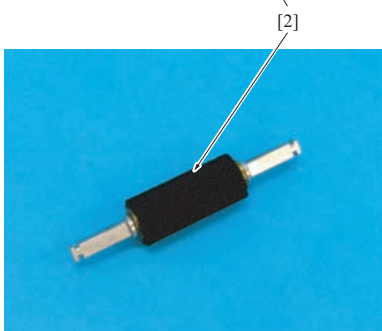
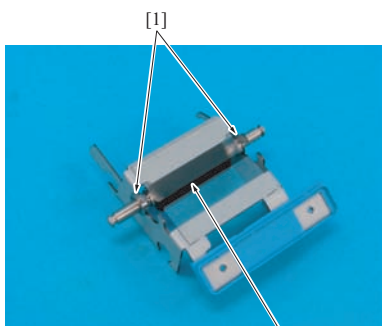
6.2.4 Replacing the paper dust removing brush**(1) Periodically cleaned parts/cycle**

- Paper fur brush
- : Every 15,000,000 prints (Actual replacement cycle: Every 3,000,000 prints)

(2) Procedure

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1. Remove the pick-up roller and paper feed roller from the pick-up roller assy. (Refer to [F.6.2.2 Replacing the pick-up roller and the paper feed roller](#))
2. Remove 2 C-clips [1] and then remove 2 gears [2].
3. Remove the gear [3].
4. Remove the E-ring [4] and move 2 bearings [5] to remove the shaft [6].



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5. Remove 2 bearings [1] and remove the paper fur brush [2].
6. Replace the paper dust removing brush [2].

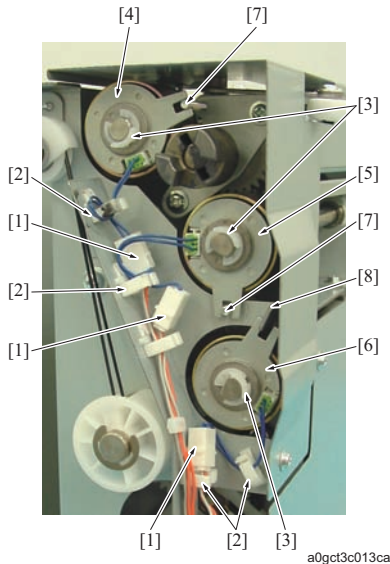
7. Reinstall the above parts following the removal steps in reverse.

6.2.5 Replacing the paper feed clutch, the separation clutch and the forced separation clutch

(1) Periodically replaced parts/cycle

- Paper feed clutch /1 (CL6), /2 (CL9), /3 (CL12)
: Every 15,000,000 prints (Actual replacement cycle: Every 3,000,000 prints)
- Separation clutch /1 (CL7), /2 (CL10), /3 (CL13)
: Every 15,000,000 prints (Actual replacement cycle: Every 3,000,000 prints)
- Forced separation clutch /1 (CL8), /2 (CL11), /3 (CL14)
: Every 15,000,000 prints (Actual replacement cycle: Every 3,000,000 prints)

(2) Procedure



1. Remove the stopper screw of the tray and pull out the tray. (Refer to [G.4.2.6 Tray](#))
2. Disconnect 3 connectors [1] and remove 4 wire binding bands [2].
3. Remove 3 C-clips [3] and then remove the paper feed clutch (CL6/CL9/CL12) [4], the separation clutch (CL7/CL10/CL13) [5] and the forced separation clutch (CL8/CL11/CL14) [6].

Note

- When reinstalling it, be sure to engage the stopper of the clutch to the pin [7] and the projection of the metal frame [8].

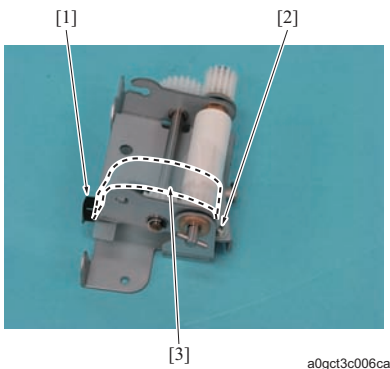
4. Reinstall the above parts following the removal steps in reverse.

6.2.6 Replacing the torque limiter /A and the cover

(1) Periodically replaced parts/cycle

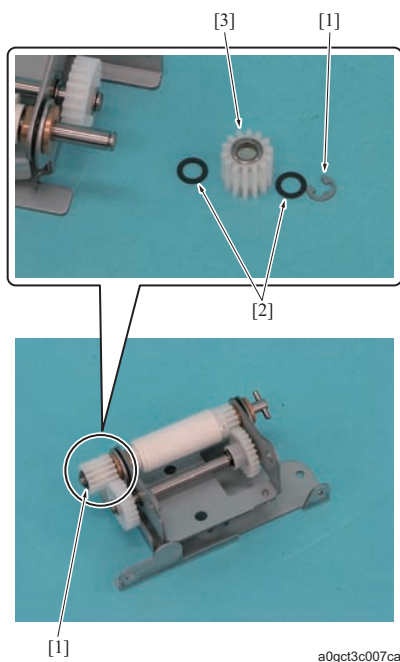
- Torque limiter /A
: Every 30,000,000 prints (Actual replacement cycle: Every 6,000,000 prints)
- Cover
: Every 30,000,000 prints (Actual replacement cycle: Every 6,000,000 prints)

(2) Procedure



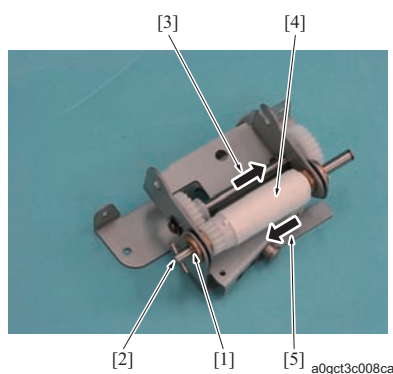
1. Remove the pick-up roller assy. (Refer to [F.6.2.1 Removing/reinstalling the pick-up roller assy and the separation roller assy](#))
2. Remove the separation roller assy. (Refer to [F.6.2.1 Removing/reinstalling the pick-up roller assy and the separation roller assy](#))
3. Remove the separation roller. (Refer to [F.6.2.3 Replacing the separation roller](#))
4. Remove the C-clips [1] and the screw [2], and then remove the cover [3].

5. Remove the E-ring [1], and remove 2 washers [2] and the gear [3].



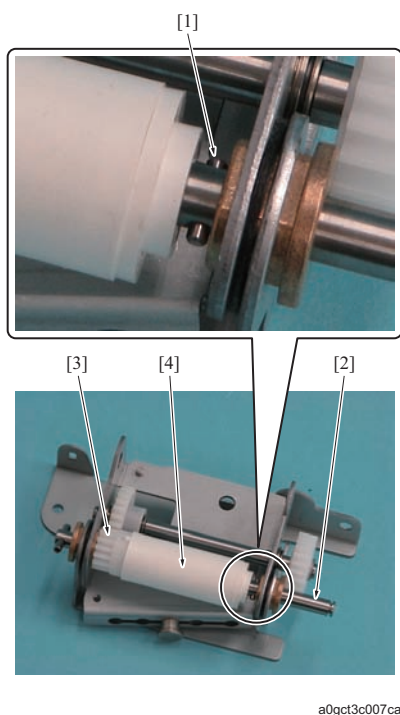
6. Remove the E-ring [1] and move the shaft [2] in the arrow-marked direction [3].

7. Move the torque limiter /A [4] in the arrow-marked direction.



8. Remove the pin [1], and pull out the shaft [2] to remove the gear [3] and torque limiter /A [4].

9. Reinstall the above parts following the removal steps in reverse.



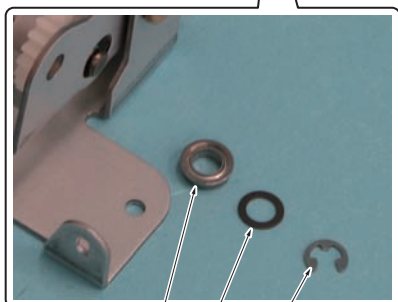
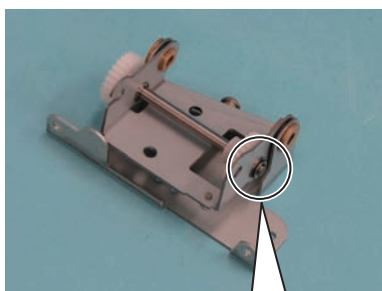
6.2.7 Replacing the idler shaft and the bearing /E

(1) Periodically replaced parts/cycle

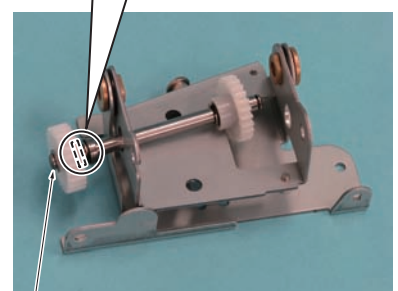
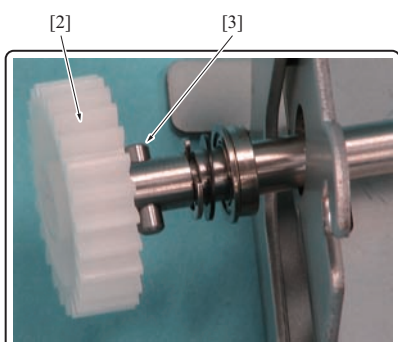
- Idler shaft
- : Every 30,000,000 prints

- Bearing /E
: Every 30,000,000 prints

(2) Procedure



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[1]

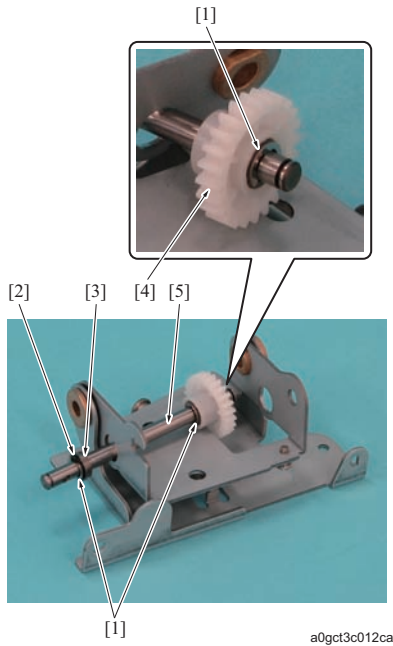
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1. Remove the pick-up roller assy. (Refer to [F.6.2.1 Removing/reinstalling the pick-up roller assy and the separation roller assy](#))
2. Remove the separation roller assy. (Refer to [F.6.2.1 Removing/reinstalling the pick-up roller assy and the separation roller assy](#))
3. Remove the separation roller. (Refer to [F.6.2.3 Replacing the separation roller](#))
4. Remove the torque limiter /A and the cover. (Refer to [F.6.4.2 Replacing the torque limiters /Up and /Lw](#))
5. Remove the E-ring [1] and remove the washer [2] and the bearing /E [3].

6. Remove the E-ring [1] and then remove the gear [2] and the pin [3].

Note

- When removing the gear [2], be careful not to drop the pin [3].



7. Remove 3 E-rings [1], and remove the washer [2], the bearing /E [3] and the gear [4] from the idler shaft [5].
8. Reinstall the above parts following the removal steps in reverse.

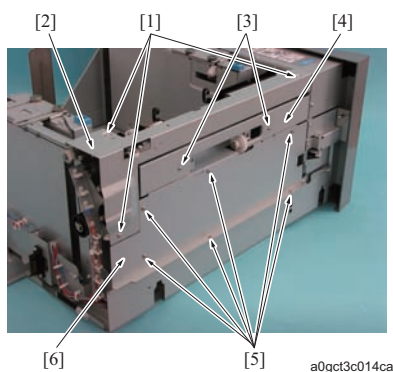
6.3 Separation section

6.3.1 Replacement procedure of the parts at the separation section

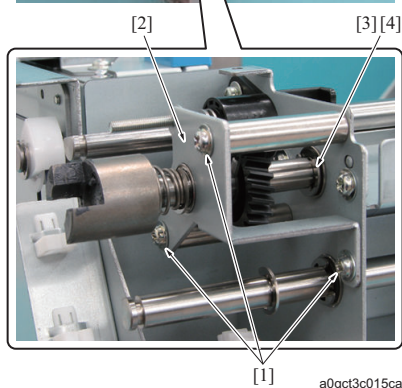
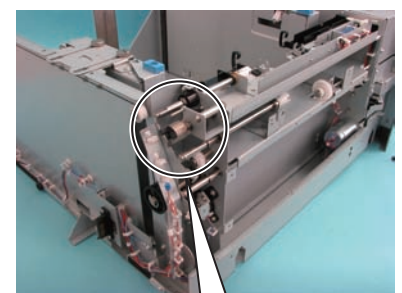
(1) Periodically replaced parts/cycle

- Input shaft
: Every 30,000,000 prints
- Bearing /D
: Every 30,000,000 prints
- Reverse rotation shaft
: Every 30,000,000 prints
- Bearing /C
: Every 30,000,000 prints
- Reverse input shaft
: Every 30,000,000 prints
- Bearing /E
: Every 30,000,000 prints
- Input gear
: Every 30,000,000 prints (Actual replacement cycle: Every 10,500,000 prints)

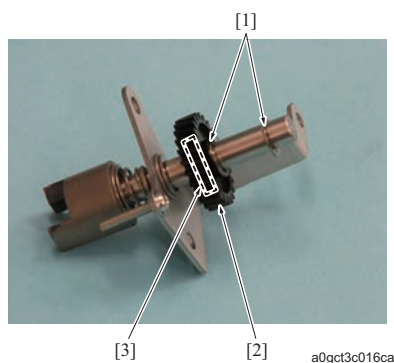
(2) Procedure



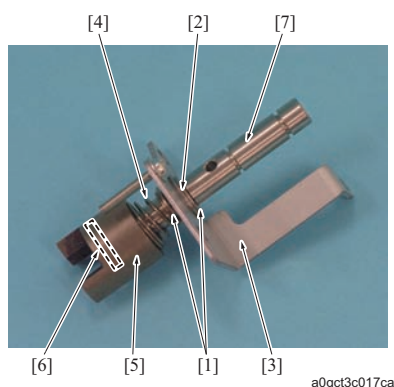
1. Remove the tray. (Refer to [G.4.2.6 Tray](#))
2. Remove the pick-up roller assy. (Refer to [F.6.2.1 Removing/reinstalling the pick-up roller assy and the separation roller assy](#))
3. Remove the separation roller assy. (Refer to [F.6.2.1 Removing/reinstalling the pick-up roller assy and the separation roller assy](#))
4. Remove the paper feed clutch, the separation clutch and the forced separation clutch. (Refer to [F.6.2.5 Replacing the paper feed clutch, the separation clutch and the forced separation clutch](#))
5. Remove 3 screws [1] and remove the paper feed cover [2].
6. Remove 2 screws [3] and remove the separation cover [4].
7. Remove 6 screws [5] and remove the motor cover [6].



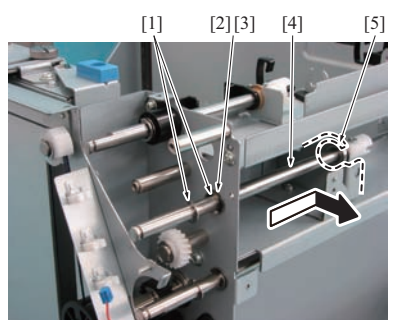
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8. Remove 3 screws [1] and remove the input shaft assy [2], the bearing /D [3] and the washer [4].

9. Remove 2 E-rings [1], and remove the input gear [2] and the pin [3].

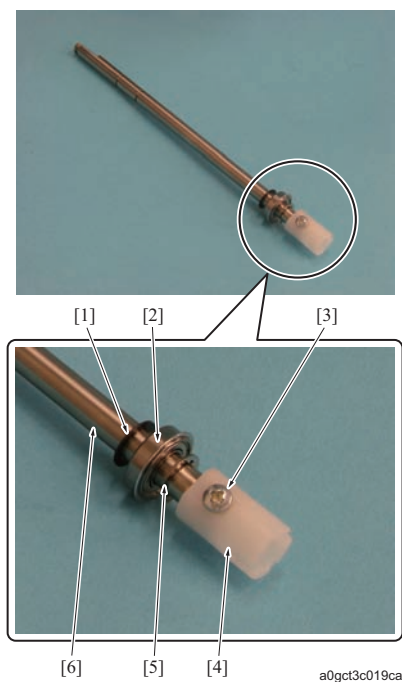
Note

- When removing the input gear [2], be careful not to drop the pin [3].

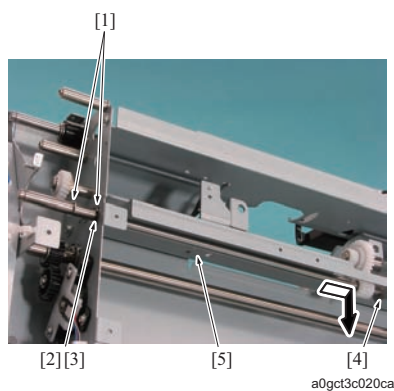
10. Remove 2 E-rings [1], and remove the bearing /D [2], the mounting plate [3], the spring [4], the coupling [5] and the pin [6] from the input shaft [7].

11. Remove 2 E-rings [1], and remove the washer [2] and the bearing /D [3].

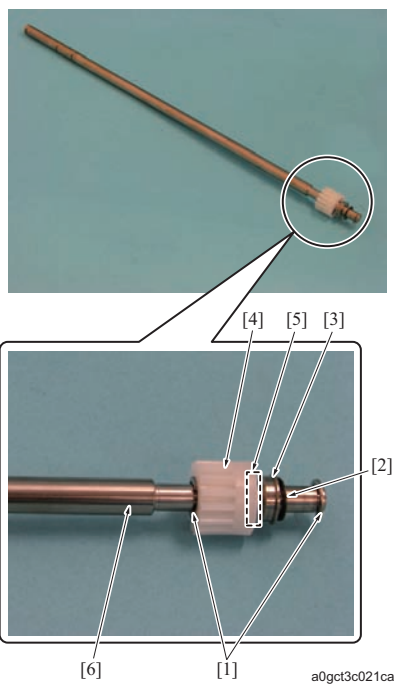
12. Move the reverse rotation shaft assy [4] in the arrow-marked direction to remove it from the notch [5].



13. Remove the washer [1] and the bearing /C [2].
14. Remove the screw [3] and remove the coupling [4].
15. Remove the E-ring [5] from the reverse rotation shaft [6].



16. Remove 2 E-rings [1], and remove the washer [2] and the bearing / D [3].
17. Move the reverse rotation shaft assy /4 [5] in the arrow-marked direction to remove it from the notch [4].



18. Remove 2 E-rings [1], and remove the washer [2], the bearing /E [3], the gear [4] and the pin [5] from the reverse input shaft [6].
- Note**
- When removing the gear [4], be careful not to drop the pin [5].
19. Reinstall the above parts following the removal steps in reverse.

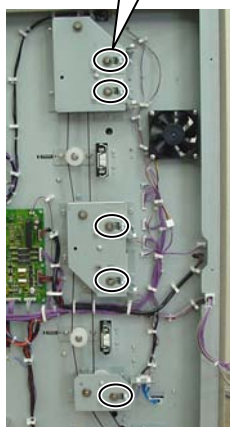
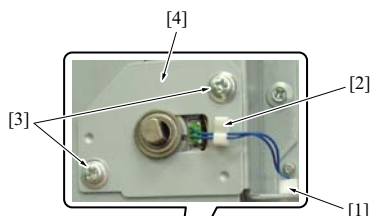
6.4 Conveyance section

6.4.1 Replacing the pre-registration clutches /1 (CL1), /2 (CL3) and /3 (CL5) and the intermediate clutches /Up (CL2) and /Lw (CL4)

(1) Periodically replaced parts/cycle

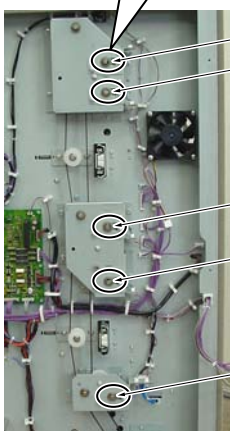
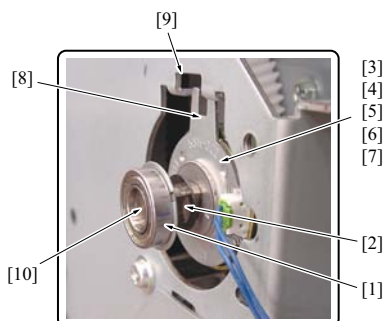
- Pre-registration clutch /1 (CL1), /2 (CL3), /3 (CL5)
: Every 15,000,000 prints (Actual replacement cycle: Every 3,000,000 prints)
- Intermediate clutch /Up (CL2) and /Lw (CL4)
: Every 15,000,000 prints (Actual replacement cycle: Every 3,000,000 prints)

(2) Procedure



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1. Remove the rear cover. (Refer to [G.4.2.3 Rear cover](#))
2. Disconnect the connectors [1], 1 each, and then remove the wiring harness from the wire binding band [2].
3. Remove each of the screws [3], 2 each, and the mounting metal fitting [4], 1 each.



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4. Remove the bearings [1], 1 each, and the washers [2], 1 each. Then remove the pre-registration clutch /1 (CL1) [3], the intermediate clutch /Up (CL2) [4], the pre-registration clutch /2 (CL3) [5], the intermediate clutch /Lw (CL4) [6] and the pre-registration clutch /3 (CL5) [7].

Note

- When removing the bearing [1], the washer [2] may be also removed together. Be careful not to lose it.
- When reinstalling it, be sure to align the stopper [8] of the clutch with the notch [9].
- Do not insert the bearing [1] forcibly. When the bearing is perpendicular to the shaft [10], it can be installed smoothly. When it is slanting, it is not inserted smoothly.

5. Reinstall the above parts following the removal steps in reverse.

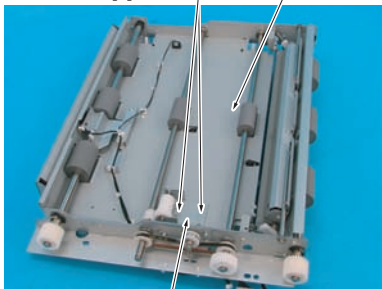
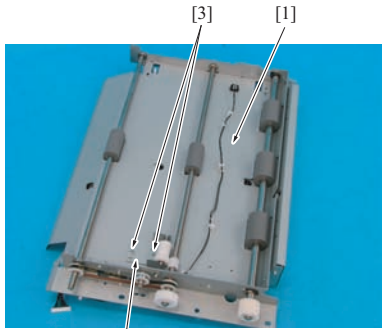
6.4.2 Replacing the torque limiters /Up and /Lw

(1) Periodically replaced parts/cycle

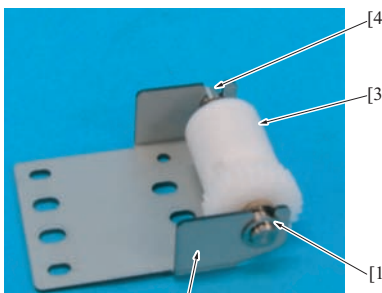
- Torque limiter /Up, /Lw

: Every 30,000,000 prints (Actual replacement cycle: Every 6,000,000 prints)

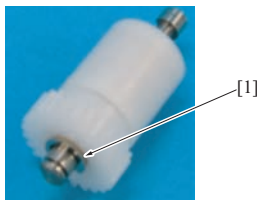
(2) Procedure



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a08rf2c012ca



a08rf2c013ca



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1. Remove the following units.
 - Conveyance exit unit (Refer to [G.4.2.11 Conveyance exit unit](#))
 - Vertical conveyance units /Up and /Lw (Refer to [G.4.2.12 Vertical conveyance units /Up and /Lw](#))
2. Remove the 4 screws, 2 for each of the vertical conveyance unit/ Up [1] and /Lw [2], and remove the torque limiter assy [4] from each unit.

3. Remove the E-ring [1], and then remove the torque limiters /Up and /Lw [3], 1 each, together with the shaft [4] from the mounting bracket [2].

Note

- When attaching the torque limiters /Up and /Lw [3] to the mounting bracket [2], be sure to attach it in the correct orientation since the orientation for the vertical conveyance unit /Up is opposite to the orientation for the vertical conveyance unit /Lw.
- The left picture shows the torque limiter and the mounting bracket of the vertical conveyance unit/Up.

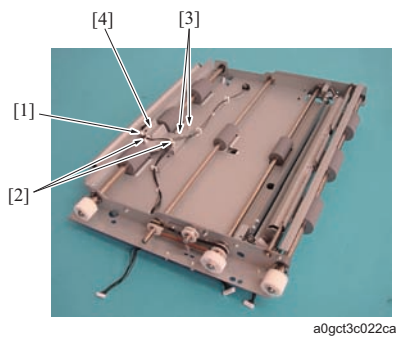
4. Remove the E-ring [1].

5. Pull out the bearing [1] and the gear [2] from the shaft [3] and remove the torque limiters /Up and /Lw [4], 1 each.
6. Replace the torque limiters /Up and /Lw [4], 1 each.
7. Reinstall the above parts following the removal steps in reverse.

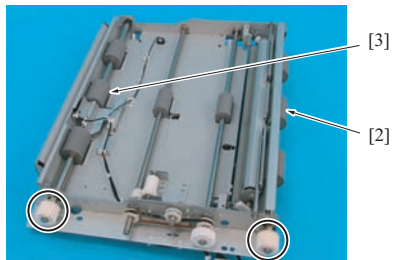
6.4.3 Replacing the pre-registration roller and the registration bearing

(1) Periodically replaced parts/cycle

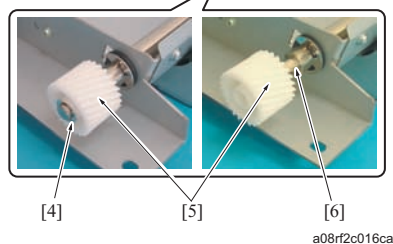
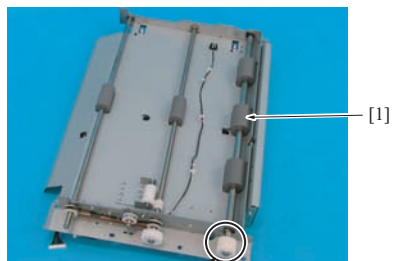
- Pre-registration roller
: Every 30,000,000 prints (Actual replacement cycle: Every 6,000,000 prints)
- Pre-registration bearing
: Every 30,000,000 prints (Actual replacement cycle: Every 6,000,000 prints)

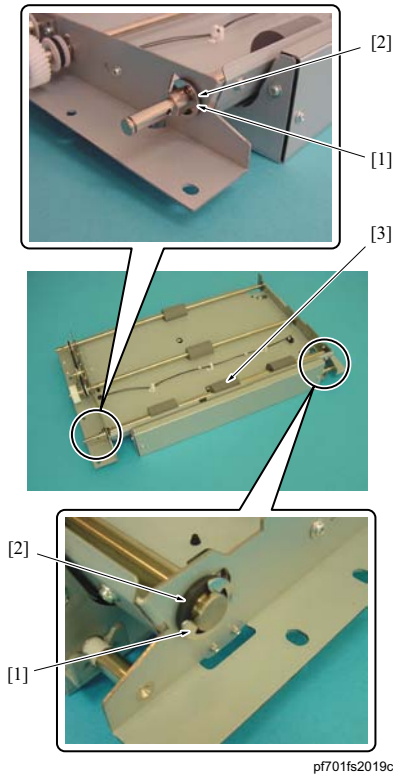
(2) Procedure

1. Remove the following units.
 - Conveyance exit unit (Refer to [G.4.2.11 Conveyance exit unit](#))
 - Vertical conveyance units /Up and /Lw (Refer to [G.4.2.12 Vertical conveyance units /Up and /Lw](#))
2. Disconnect the connector [1], and remove the wiring harness from 2 wire binding bands [2]. Remove 2 screws [3] and remove the pre-registration sensor /3 mounting plate [4].



3. Remove the E-rings [4], 1 each, of the pre-registration rollers /4 [2] and /5 [3] of the vertical conveyance unit /Lw and the pre-registration roller /3 [1] of the vertical conveyance unit /Up respectively, and then remove the gears [5], 1 each, and the pin [6], 1 each.





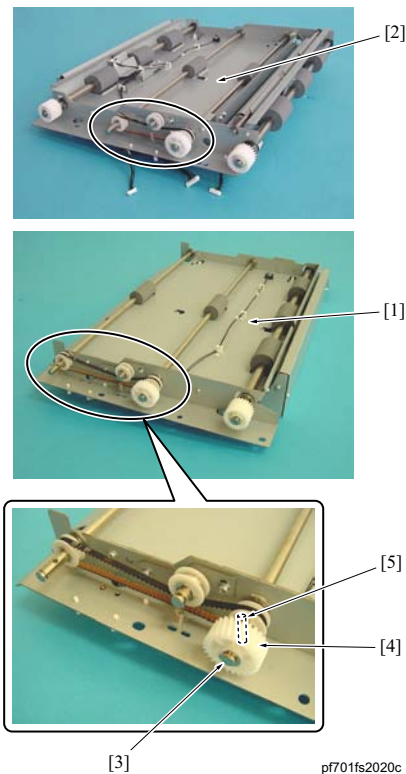
4. Remove the E-rings [1], 2 each, provided on both sides of each pre-registration rollers and then remove the pre-registration bearings [2], 2 each.
5. Remove the pre-registration roller [3].
6. Reinstall the above parts following the removal steps in reverse.

Note

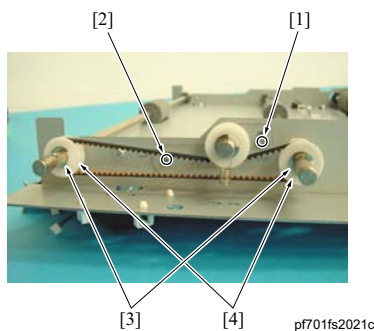
- When reinstalling it, be careful not to damage the pre-registration roller with the corner of the guide plate.

6.4.4 Replacing the intermediate conveyance roller and the bearing /C**(1) Periodically replaced parts/cycle**

- Intermediate conveyance roller
: Every 30,000,000 prints (Actual replacement cycle: Every 6,000,000 prints)
- Bearing /C
: Every 30,000,000 prints (Actual replacement cycle: Every 6,000,000 prints)

(2) Procedure

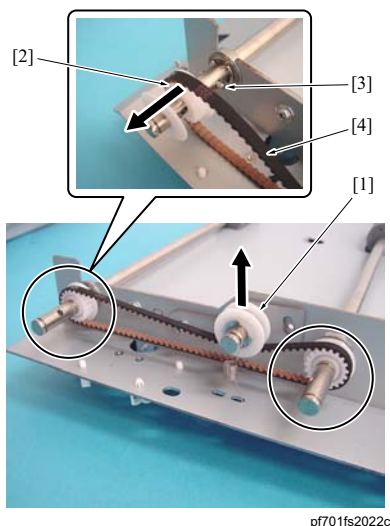
1. Remove the following units.
 - Conveyance exit unit (Refer to [G.4.2.11 Conveyance exit unit](#))
 - Vertical conveyance units /Up and /Lw (Refer to [G.4.2.12 Vertical conveyance units /Up and /Lw](#))
2. Remove the torque limiter assy, 1 each, of the vertical conveyance unit /Up and /Lw. (Refer to [F.6.4.2 Replacing the torque limiters /Up and /Lw](#))
3. Remove the E-rings [3], 1 each, of the vertical conveyance units /Up [1] and /Lw [2] and then remove the gears [4], 1 each, and the pin [5], 1 each.



4. Remove the screw [1].
5. Loosen the screw [2].
6. Remove the E-ring [3], 1 each, of the conveyance rollers /1, /2, /3 and /4, and then remove the collar [4].

Note

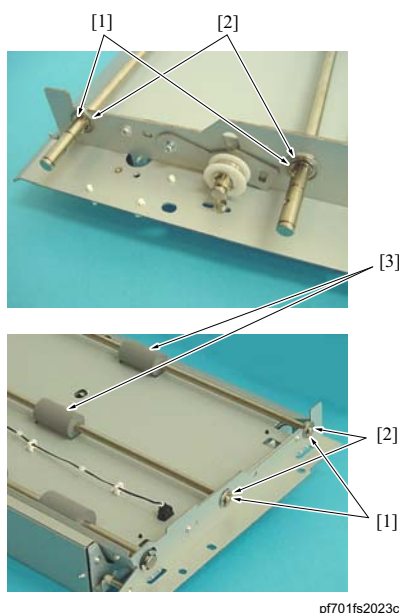
- The collar [4] is distinguished between the front and the rear. Be sure to install it with the stepped side outside.



7. Remove the pulley [2], the pin [3] and the belt [4] while lifting up the tension roller [1].

Note

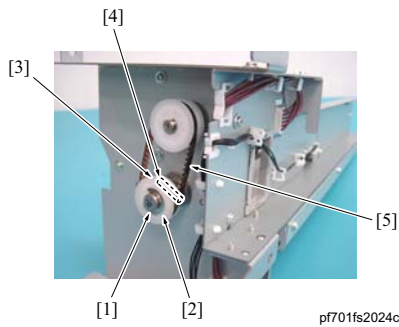
- When installing it, be sure to tighten it depending on the tension of the spring and rotate the conveyance roller to check that the belt rotates smoothly.



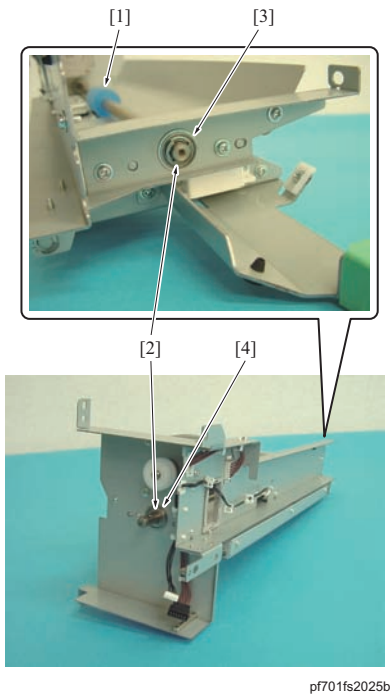
8. Remove the E-rings [1], 2 each, provided on both sides of each of the conveyance rollers, and then remove the bearings /C [2], 2 each, and the intermediate conveyance roller [3].
9. Reinstall the above parts following the removal steps in reverse.

6.4.5 Replacing the PF paper exit roller and the bearings /B and /C**(1) Periodically replaced parts/cycle**

- PF paper exit roller
: Every 10,500,000 prints (Actual replacement cycle: Every 6,000,000 prints)
- Bearing /C
: Every 10,500,000 prints (Actual replacement cycle: Every 6,000,000 prints)
- Bearing /B
: Every 10,500,000 prints (Actual replacement cycle: Every 6,000,000 prints)

(2) Procedure

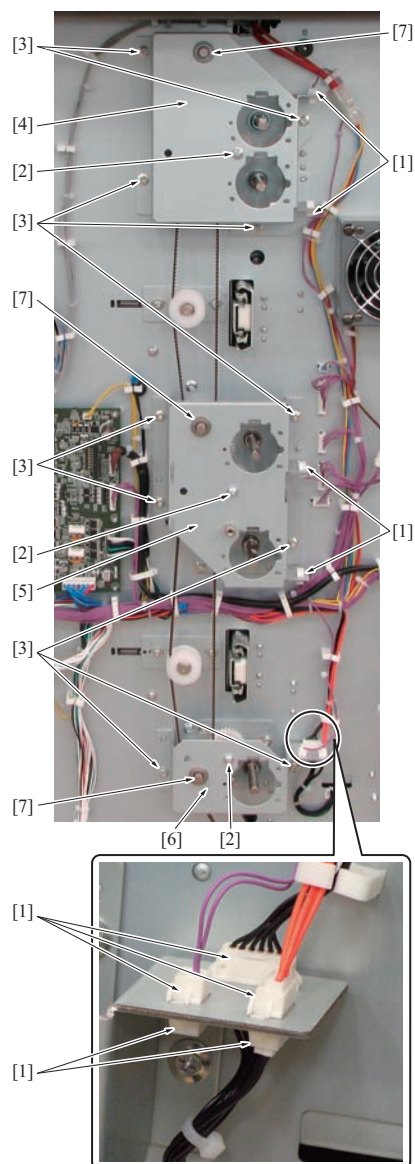
1. Remove the exit conveyance unit. (Refer to [G.4.2.11 Conveyance exit unit](#))
2. Remove the E-ring [1] and then remove the collar [2], the pulley [3], the pin [4] and the belt [5].



3. Remove the E-rings [2], 1 each, provided on both sides of the PF paper exit roller [1], and then remove the bearings /C [3] and /B [4].
4. Remove the PF paper exit roller [1].
5. Reinstall the above parts following the removal steps in reverse.

6.5 Drive section**6.5.1 Parts replacement procedure of the drive section****(1) Periodically replaced parts/cycle**

- Shaft assy /P
: Every 30,000,000 prints (Actual replacement cycle: Every 10,500,000 prints)
- Gear /P
: Every 30,000,000 prints (Actual replacement cycle: Every 10,500,000 prints)
- Shaft assy /C
: Every 30,000,000 prints (Actual replacement cycle: Every 10,500,000 prints)
- Gear /C
: Every 30,000,000 prints (Actual replacement cycle: Every 10,500,000 prints)
- Paper feed pulley
: Every 30,000,000 prints (Actual replacement cycle: Every 10,500,000 prints)
- Idler gear /D
: Every 30,000,000 prints (Actual replacement cycle: Every 10,500,000 prints)

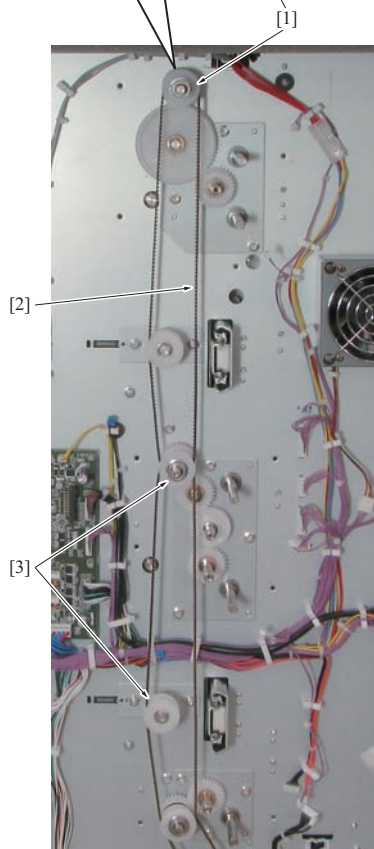
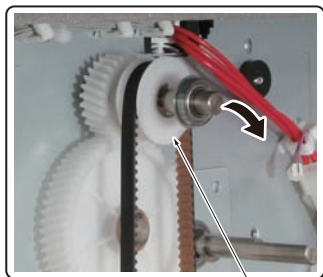
(2) Procedure

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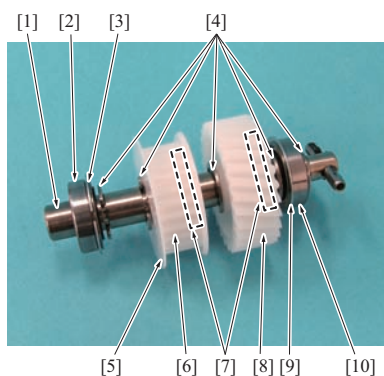
1. Remove the rear cover. (Refer to [G.4.2.3 Rear cover](#))
2. Remove the pre-registration clutches /1 (CL1), /2 (CL3) and /3 (CL4) and the intermediate clutches /Up (CL2) and /Lw (CL5). (Refer to [F.6.2.5 Replacing the paper feed clutch, the separation clutch and the forced separation clutch](#))
3. Disconnect 9 connectors [1].
4. Remove 3 screws [2] and 10 screws [3], and then remove the gear mounting plates /1 [4], /2 [5] and /3 [6].

Note

- When removing the gear mounting plates /1 [4], /2 [5] and /3 [6], be careful not to remove the bearing [7] together and drop it.



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a0gct3c025ca

5. While pulling the shaft assy /P [1] toward you, loosen the belt [2] and remove the shaft assy /P [1] together with the bearing.
6. Remove 2 shaft assys /C [3] in the same manner.

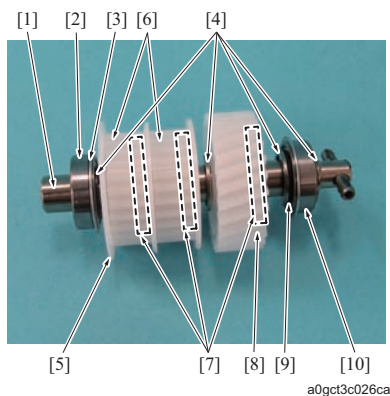
Note

- When removing the shaft assys /P [2] and /C [3], be careful not to drop any part such as bearings.

7. Remove the bearing [2] and the washer [3] from the shaft assy /P [1].
8. Remove 5 E-rings [4], and remove the collar [5], the paper feed pulley [6], 2 pins [7], the gear /P [8], the washer [9] and the bearing [10] from the shaft assy /P [1].

Note

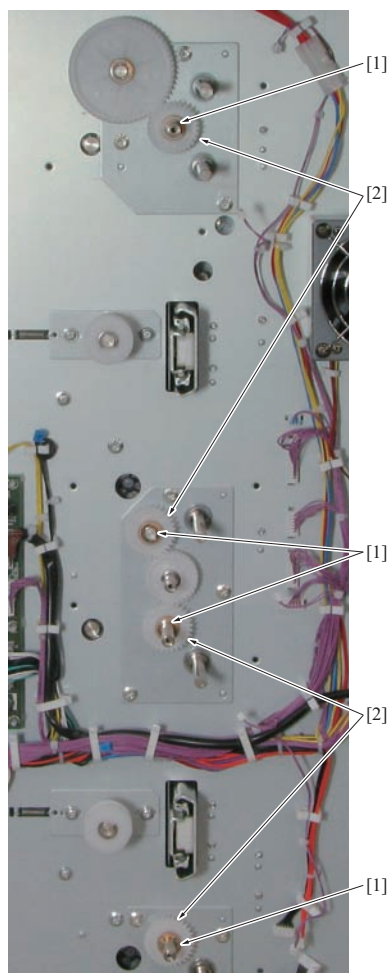
- When removing the paper feed pulley [6] and the gear /P [8], be careful not to drop the pin [7].



9. Remove the bearing [2] and the washer [3] from the shaft assy /C [1].
10. Remove 4 E-rings [4], and remove the collar [5], 2 paper feed pulleys [6], 3 pins [7], the gear /C [8], the washer [9] and the bearing [10] from the shaft assy /C [1].

Note

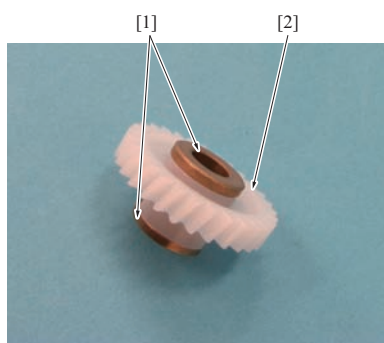
- When removing the paper feed pulley [9] and the gear /C [7], be careful not to drop and lose the pin [8].



11. Remove 4 E-rings [1] and remove 4 idler gears /D [2] together with the bearings.

Note

- Be careful not to drop the washer behind the idler gear assy.



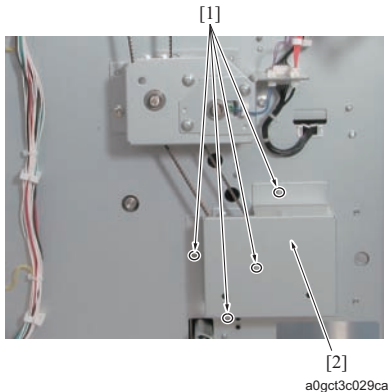
12. Remove 2 bearings [1] and remove the idler gear /D [2].
13. Reinstall the above parts following the removal steps in reverse.

6.5.2 Replacing the paper feed gear

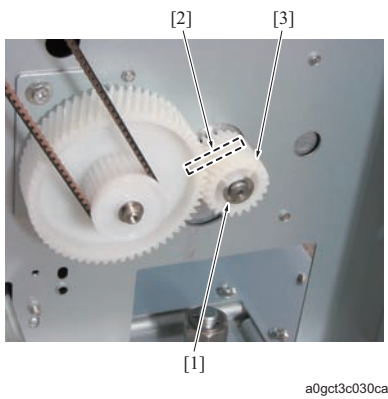
(1) Periodically replaced parts/cycle

- Paper feed gear
: Every 30,000,000 prints

(2) Procedure



1. Remove the rear cover. (Refer to [G.4.2.3 Rear cover](#))
2. Remove 4 screws [1] and remove the gear mounting plate /4 [2].



3. Remove the E-ring [1] and remove the pin [2] and the paper feed gear [3].
4. Reinstall the above parts following the removal steps in reverse.

Note

- When removing the paper feed gear [3], be careful not to drop the pin [2].
- When reinstalling the paper feed gear [3], apply the plas guard No.2.

6.6 PP-701

6.6.1 Replacing the pick-up roller and the paper feed roller

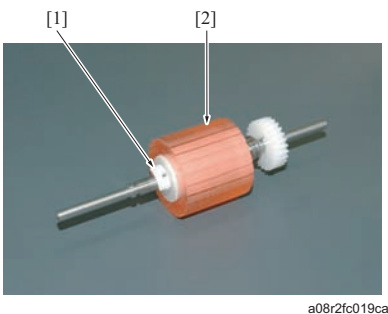
(1) Periodically replaced parts/cycle

- Pick-up roller
: Actual replacement cycle: Every 50,000 prints
- Paper feed roller
: Actual replacement cycle: Every 50,000 prints

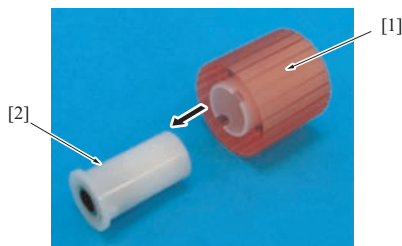
(2) Procedure

Note

- The outward appearance of the collar is identical for the paper feed roller and the separation roller. However, the collar of the paper feed roller has a one-way mechanism on the inside while the collar of the separation roller does not. Be careful not to confuse one with the other.



1. Conduct the steps 1 to 3 in the "[F.6.2.2 Replacing the pick-up roller and the paper feed roller](#)".
2. Remove the C-clip [1] and remove the pick-up roller [2].



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3. Pull out the collar [2] from the pick-up roller [1].
4. Replace the pick-up roller [1].
5. Conduct the steps 7 to 12 in the [“F.6.2.2 Replacing the pick-up roller and the paper feed roller”](#) and replace the paper feed roller.

6.6.2 Replacing the separation roller

(1) Periodically replaced parts/cycle

- Separation roller
: Actual replacement cycle: Every 50,000 prints

(2) Procedure

Note

- The outward appearance of the collar is identical for the paper feed roller and the separation roller. However, the collar of the paper feed roller has a one-way mechanism on the inside while the collar of the separation roller does not. Be careful not to confuse one with the other.

1. Conduct the steps 1 to 4 in the [“F.6.2.3 Replacing the separation roller”](#) and replace the separation roller.

7. PERIODICAL MAINTENANCE PROCEDURE PF-703

7.1 Precautions on maintenance

⚠ CAUTION

- Be sure to unplug the power plug from the power outlet.

7.2 Paper feed tray section

7.2.1 Replacing the paper leading edge shutter solenoid/1 (SD10), /2 (SD11), /3 (SD12)

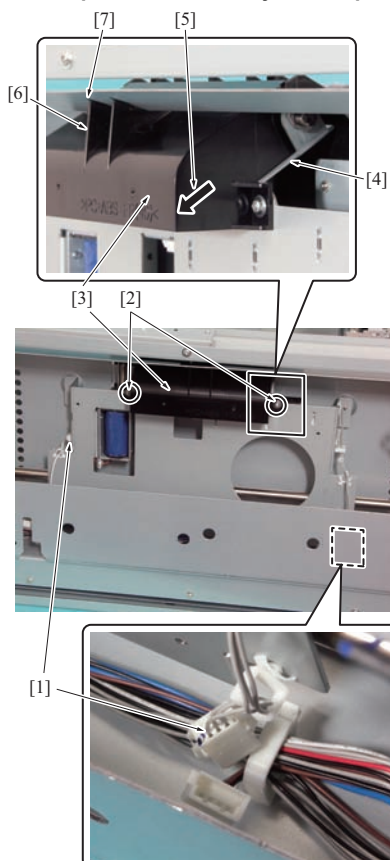
(1) Periodically replaced parts/cycle

- Paper leading edge shutter solenoid
: Every 20,250,000 prints (Actual replacement cycle: Every 6,000,000 prints)

(2) Procedure

Note

- It explains with the tray1 in the picture but the procedure is the same for the trays 2 and 3.

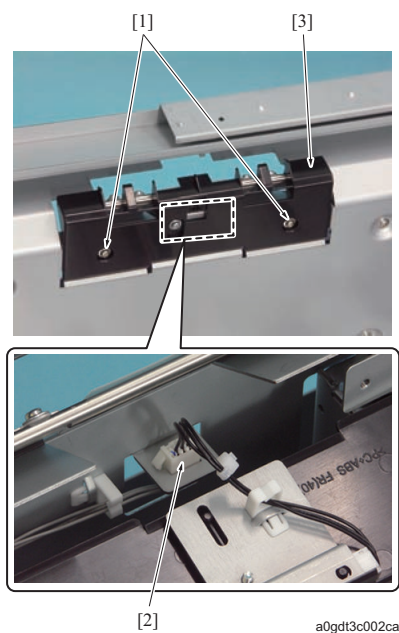


a0gdt3c001ca

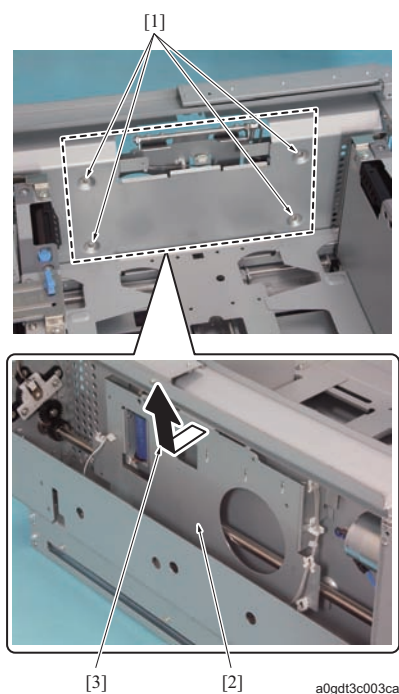
1. Remove the paper leading edge separation fan. (Refer to [G.5.2.9 Paper leading edge separation fan /Fr1 \(FM3\), /Fr2 \(FM7\), /Fr3 \(FM11\), /Rr1 \(FM4\), /Rr2 \(FM8\), /Rr3 \(FM12\)](#))
2. Remove 2 connectors [1].
3. Remove 2 screws [2], and then remove the air duct [3] obliquely downward [5] along the metal plate [4].

Note

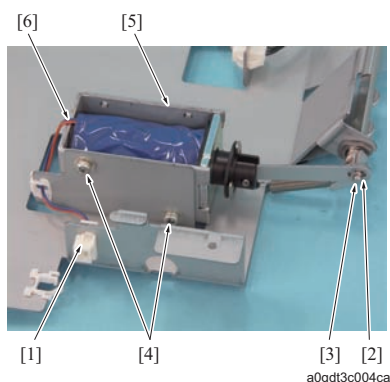
- When reinstalling it, be sure to align 2 fins [6] of the air duct [3] with the notch [7] of the metal plate.



4. Remove 2 screws [1] and the connector [2], and then remove the upper limit sensor mounting plate [3].



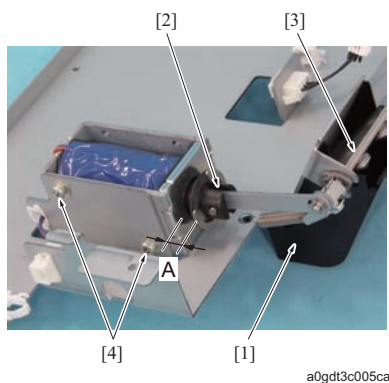
5. Remove 4 screws [1], tilt the fan mounting plate [2], and then remove it in the arrow-marked direction [3].



6. Disconnect the connector [1].
7. Remove the E-ring [2] and then pull out from the shaft [3].
8. Remove 2 screws [4] and then remove the paper leading edge shutter solenoids /1 (SD10), /2 (SD11), and /3 (SD12) [5].

Note

- When reinstalling it, be sure to install so that the wiring harness [6] of the paper leading edge shutter solenoid is in the direction in the picture.



9. Reinstall the above parts following the removal steps in reverse.

Note

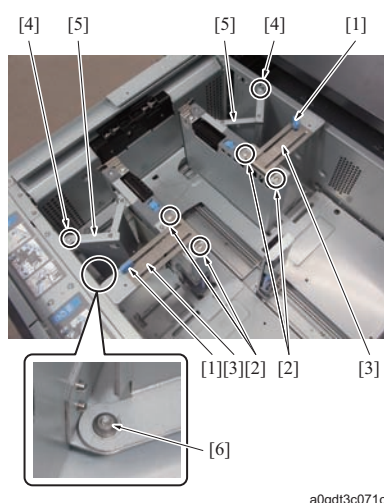
- When reinstalling it, be sure to install the air duct [1] temporary and fix it with the screws [4] so that the gap A of the plunger [2] gets to the standard value at the position with the shutter [3] contacting to the air duct [1] by pulling the plunger.
- Standard value: A = 0.2mm to 0.7mm

7.2.2 Replacing the shutter solenoids /Fr1 (SD4), /Fr2 (SD6), /Fr3 (SD8), /Rr1 (SD5), /Rr2 (SD7) and /Rr3 (SD9)

(1) Periodically replaced parts/cycle

- Shutter solenoid /Fr1 (SD4), /Fr2 (SD6), /Fr3 (SD8), /Rr1 (SD5), /Rr2 (SD7), /Rr3 (SD9)
: Every 20,250,000 prints (Actual replacement cycle: Every 6,000,000 prints)

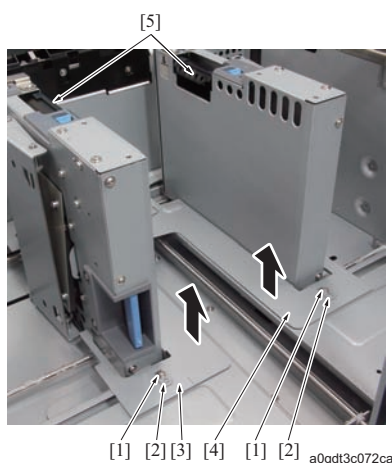
(2) Removing procedure of the side guide assy



1. Pull out the tray at the maximum. (Refer to [G.5.2.6 Tray](#))
2. Loosen 1 each of the screws [1] of the side guides /Fr and /Rr.
3. Remove each of the screws [2], 2 each, and shorten the reinforcing plate [3].
4. Remove the screws [4], 1 each, and remove the reinforcing hinge [5] from the pin [6].

Note

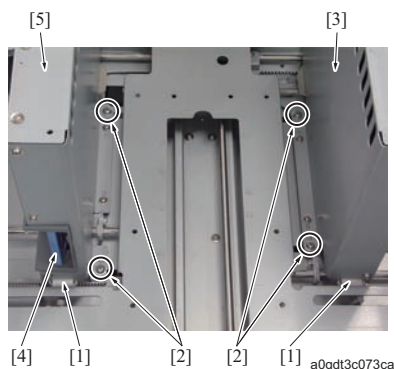
- Be careful that the screw [4] is the stepped screw.



5. Remove 1 each of the screws [1] at 2 positions, and then remove 1 each of the mounting metal fittings [2].
6. Remove the covers /Fr [3] and /Rr [4] by lifting it upward.

Note

- When removing/installing the covers /Fr and /Rr, be sure to push the flap slightly into the side guide and not to damage it.

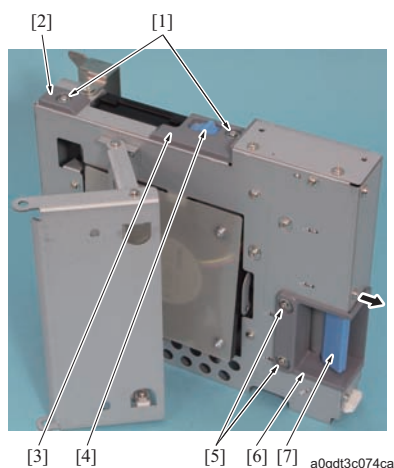


7. Remove 1 each of the connectors [1].
8. Remove 2 each of the screws [2].

Note

- When reinstalling it, tighten the screws temporary and check the parallel between the side guides /Fr and /Rr by using paper, and then tighten the screws fully.

9. Remove the side guide /Rr [3].
10. Remove the side guide /Fr [5] by pressing the side guide lock lever [4].
11. Reinstall the above parts following the removal steps in reverse.

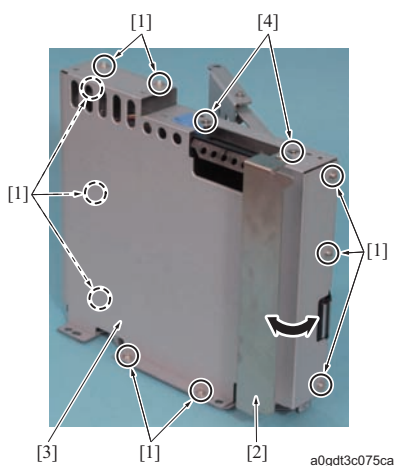
(3) Removing procedures of the shutter solenoids /Fr1 (SD4), /Fr2 (SD6) and /Fr3 (SD8)

1. Remove the side guide assy /Fr. (Refer to [F.7.2.2.\(2\) Removing procedure of the side guide assy](#))
2. Remove 2 screws [1] and remove the cover [2], [3].

Note

- The covers [2], [3] have the projection on the bottom, be sure to put it into the positioning hole on the side guide.
- Be sure to check that the slide knob [4] moves smoothly after installing the cover [3].

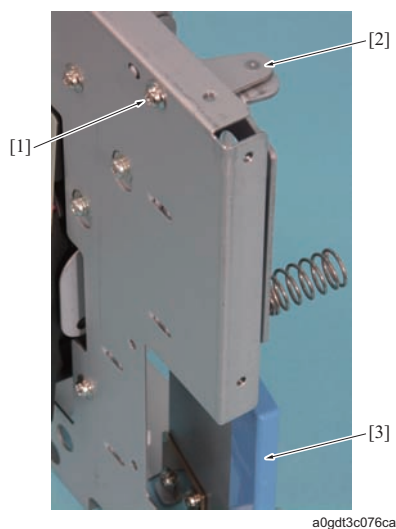
3. Remove 2 screws [5] and then remove the lever cover [6] by pressing the side guide lock lever [7] slightly.



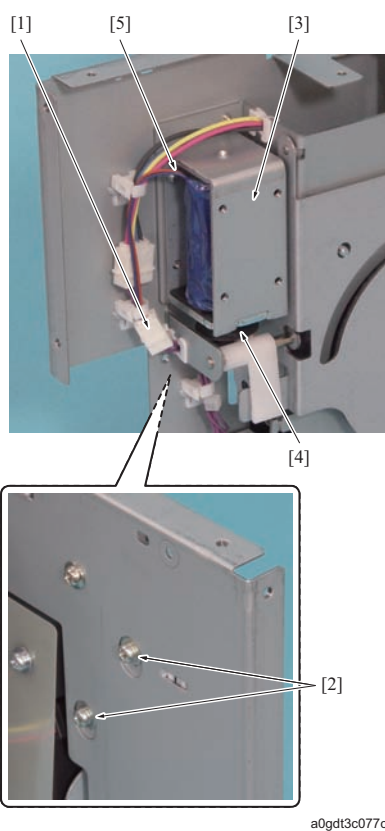
4. After removing 10 screws [1], rotate the small size guide [2], release the magnet, and then remove the cover [3].

Note

- When reinstalling it, be careful that the cover does not press the E-ring [4].



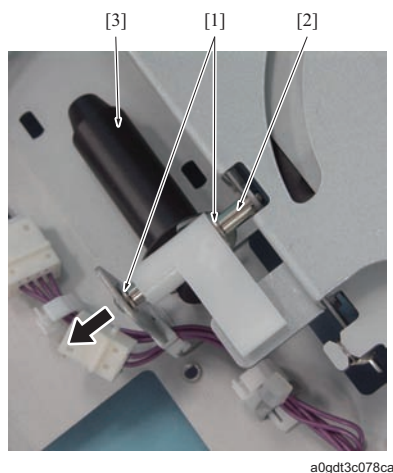
5. Remove the screw [1] and then remove the supporting bracket [2] and the side guide lock lever [3].



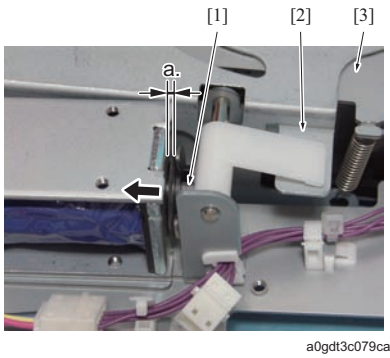
6. Disconnect the connector [1].
7. Remove 2 screws [2] and then pull out the body [3] of the shutter solenoids /Fr1 (SD4), /Fr2 (SD6), and /Fr3 (SD8) from the plunger [4].

Note

- When reinstalling the body [3] of the shutter solenoid /Rr, be sure to install so that the wiring harness [5] is in the direction in the picture.



8. Remove 2 E-rings [1] and then remove the plunger [3] by pulling out the pin [2].



9. Reinstall the above parts following the removal steps in reverse.

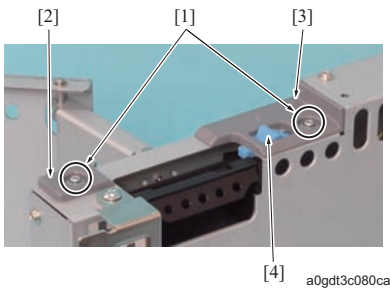
Note

- When reinstalling it, be sure to install so that the gap A is the standard value at the position with the shutter [2] contacting to the metal plate [3] by pulling the plunger [1]. Standard value "a": = 0.2mm to 0.7mm

(4) Replacing procedure of the shutter solenoids /Rr1 (SD5), /Rr2 (SD7), /Rr3 (SD9)

Note

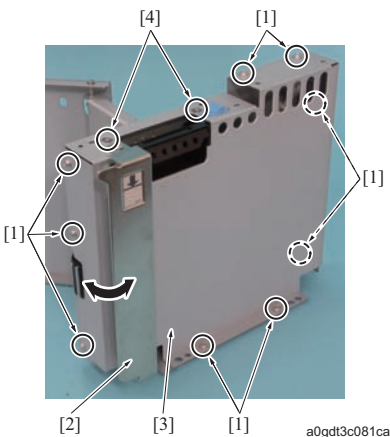
- The removing/installing procedure of the shutter solenoid is common between the trays 1, 2, and 3 but the layout of the wiring harness is different at some part. This section shows the procedure for the tray1 and the different parts are described in the procedure.



1. Remove the side guide assy /Rr. (Refer to [F.7.2.2.\(2\) Removing procedure of the side guide assy](#))
2. Remove 2 screws [1] and remove the cover [2], [3].

Note

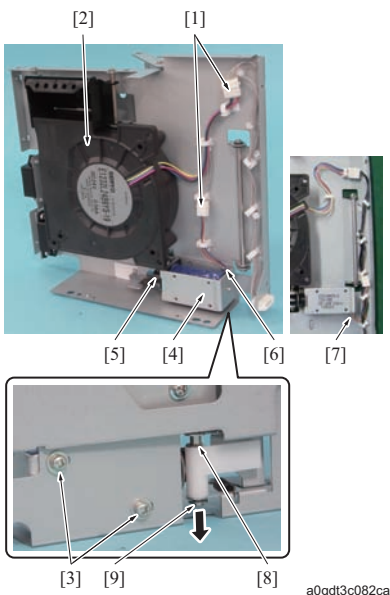
- The covers [2], [3] have the projection on the bottom, be sure to put it into the positioning hole on the side guide.
- Be sure to check that the slide knob [4] moves smoothly after installing the cover [3].



3. After removing 9 screws [1], rotate the small size guide [2], release the magnet, and then remove the cover [3].

Note

- When reinstalling it, be careful that the cover does not press the E-ring [4].



4. Remove 2 connectors [1].

Note

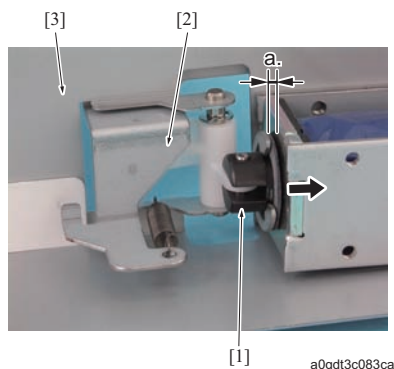
- The picture shows the tray1. Be sure that the layout of the wiring harness is different on the tray2 and 3.

5. Remove the paper feed assist fan /Rr [2].
6. Remove 2 screws [3] and then pull out the body [4] of the shutter solenoids /Rr1 (SD5), /Rr2 (SD7), and /Rr (SD9) from the plunger [5].

Note

- When reinstalling the body [4] of the shutter solenoid /Rr1 on the tray1, be sure to install so that the wiring harness faces upward [6] like in the picture.
- When reinstalling the body [4] of the shutter solenoids /Rr2, /Rr3 on the tray /2, /3, be sure to install so that the wiring harness faces downward [7] like in the picture.

7. Remove E-ring [8] and then remove the plunger [5] by pulling out the pin [9].



8. Reinstall the above parts following the removal steps in reverse.

Note

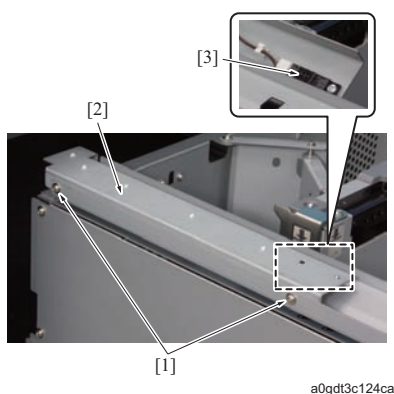
- When reinstalling it, be sure to install so that the gap A is the standard value at the position with the shutter [2] contacting to the metal plate [3] by pulling the plunger [1]. Standard value "a": = 0.2mm to 0.7mm

7.2.3 Cleaning the paper feed sensor /1 (PS2), /2 (PS6), /3 (PS10)

(1) Periodically cleaned parts/cycle

- Paper feed sensor /1 (PS2), /2 (PS6), /3 (PS10)
: Every 750,000 prints

(2) Procedure



1. Pull out the tray at the maximum. (Refer to [G.5.2.6 Tray](#))
2. Remove 2 screws [1].
3. Turn back the sensor mounting plate [2] and clean the paper feed sensor [3].
4. Reinstall the above parts following the removal steps in reverse.

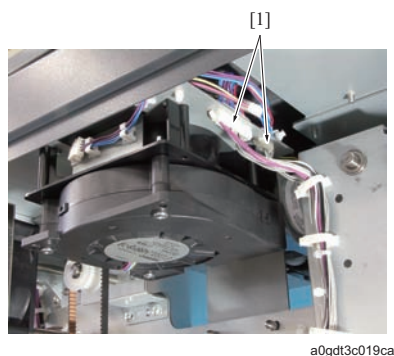
7.3 Paper feed suction section

7.3.1 Replacing the torque limiter

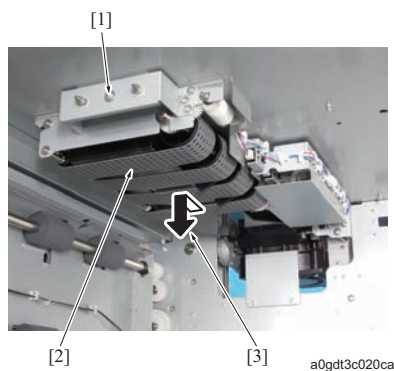
(1) Periodically replaced parts/cycle

- Torque limiter
: Every 20,250,000 prints (Actual replacement cycle: Every 6,000,000 prints)

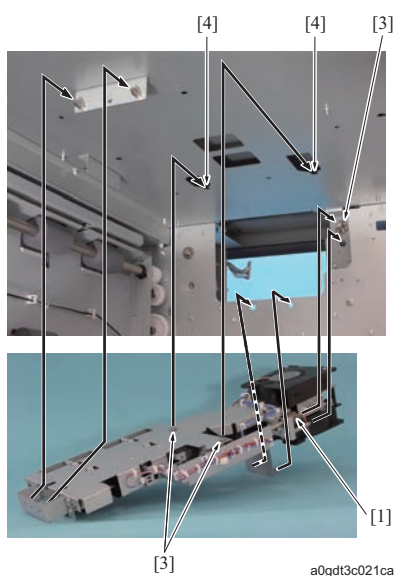
(2) Removing procedure of the paper feed suction unit



1. Remove the tray. (Refer to [G.5.2.6 Tray](#))
2. Remove the rear cover. (Refer to [G.5.2.3 Rear cover](#))
3. Remove 2 connectors [1].



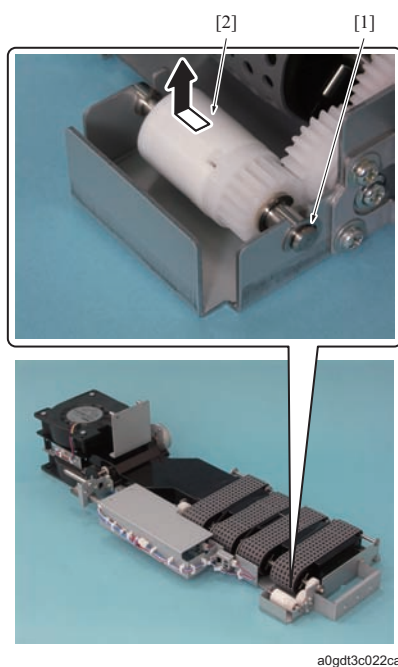
4. Remove the screw [1] and then remove the paper feed suction unit [2] in the arrow-marked direction [3].



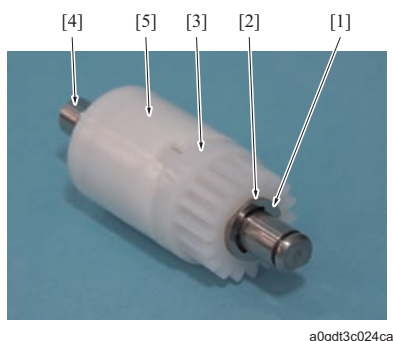
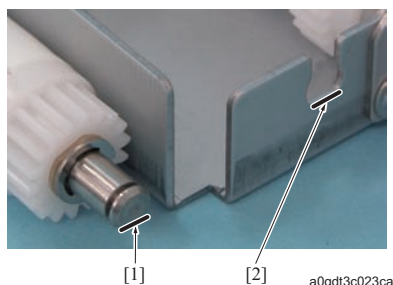
5. Reinstall the above parts following the removal steps in reverse.

Note

- When reinstalling it, be sure to put the coupling [1] to the coupling pin [2], the holder pin [3] to the hole [4], and each positioning pins to the corresponding holes.

(3) Replacing procedure of the torque limiter

1. Remove the paper feed suction unit. (Refer to [F.7.3.1.\(2\) Removing procedure of the paper feed suction unit](#))
2. Remove the E-ring [1] and then remove the torque limiter assy [2].

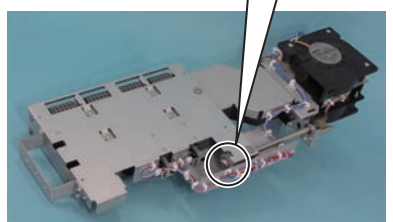
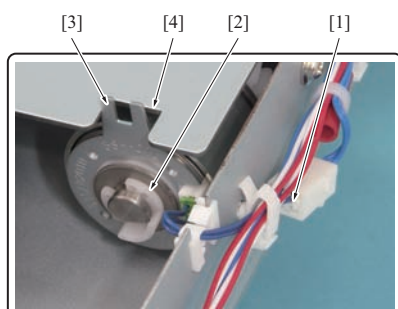
**Note**

- When reinstalling it, be sure to set the D-cut [1] of the shaft to the straight line side [2] of the hole.

3. Remove the E-ring [1], remove the bearing [2] and the gear [3], and then remove the torque limiter [5] from the shaft [4].
4. Reinstall the above parts following the removal steps in reverse.

7.3.2 Replacing the paper feed clutch /1 (CL7), /2 (CL8), /3 (CL9)**(1) Periodically replaced parts/cycle**

- Paper feed clutch /1 (CL7), /2 (CL8), /3 (CL9)
: Every 20,250,000 prints (Actual replacement cycle: Every 6,000,000 prints)

(2) Procedure for removal

1. Remove the paper feed suction unit. (Refer to [F.7.3.1 Replacing the torque limiter](#))
2. Disconnect the connector [1].
3. Remove the C-clip [2] and remove the paper feed clutch/1 (CL7), /2 (CL8) and /3 (CL9).

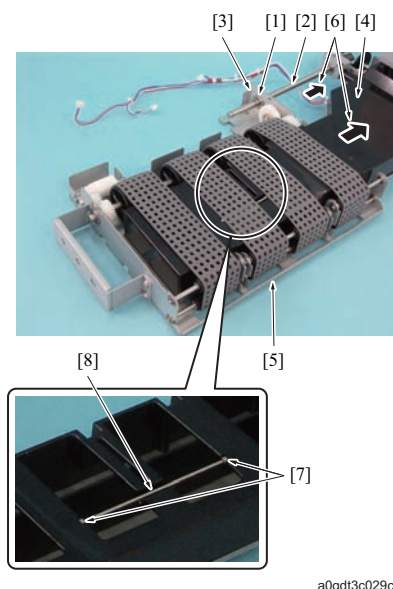
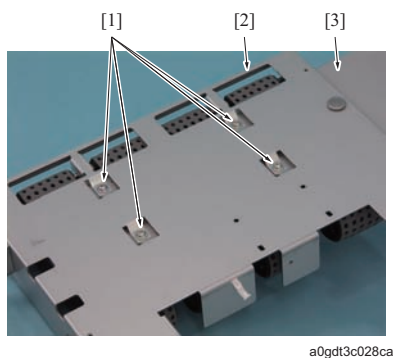
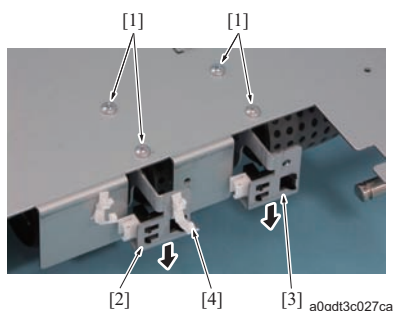
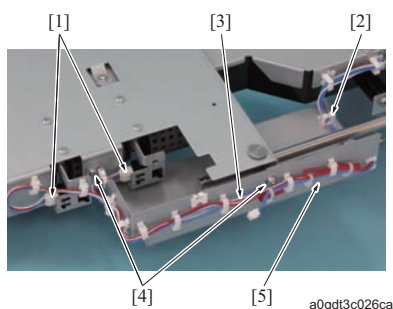
Note

- When reinstalling it, be sure to put the claw [3] to the depression [4] of the metal plate.

4. Reinstall the above parts following the removal steps in reverse.

7.3.3 Replacing the paper feed belt**(1) Periodically replaced parts/cycle**

- Paper feed belt
: Every 20,250,000 prints (Actual replacement cycle: Every 6,000,000 prints)

(2) Procedure for removal

1. Remove the paper feed suction unit. (Refer to [F.7.3.1 Replacing the torque limiter](#))
2. Remove the paper feed clutch. (Refer to [F.7.3.2 Replacing the paper feed clutch /1 \(CL7\), /2 \(CL8\), /3 \(CL9\)](#))
3. Disconnect 2 connectors [1] and remove the wiring harness [3] between the wiring harness clamps [2] from the connector [1].
4. Remove 2 screws [4] and then remove the wiring plate [5].

5. Remove 2 each of screws [1], and remove the sensor assy [2], [3].

Note

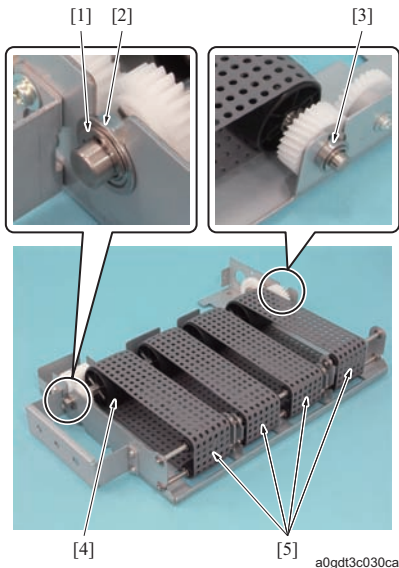
- Be careful that the sensor assy [2] has the wiring harness clamp [4].

6. Remove 4 screws [1] and then turn it back by holding both of the belt unit assy [2] and the suction duct assy [3].

7. Remove the shaft [2] together with the bearing [1] from the metal plate [3], and the suction duct assy [4] from the belt unit assy [5] by pulling out in the arrow-marked direction [6].

Note

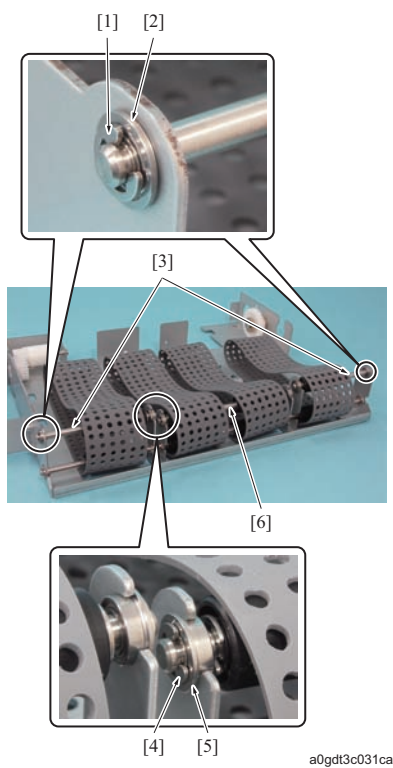
- Since the bearing [7] and the rotating shaft [8] are not secured, be careful not to lose them.



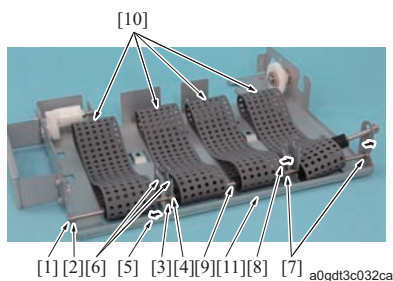
8. Remove the E-ring [1] and then remove the bearing [2].
9. Move the bearing [3] and then pull out the belt drive roller assy [4] from the paper feed belt [5].

Note

- Be sure to check that the paper feed belt is not tilt against the roller and rotates smoothly.



10. Remove 1 each of the E-rings [1] and the bearings [2] and then remove 2 belt driven roller assy /A [3].
11. Remove the E-ring [4] and the bearing [5] and then remove the belt driven roller assy /B [6].



12. Remove the E-ring [1] and remove the bearing [2].
13. Remove the E-ring [3] and move the bearing [4] in the arrow-marked direction [5].

Note

- When removing/installing the E-ring, be sure not to convert the bearing support bracket [6].

14. Move the bearing [8] in the arrow-marked direction and then remove the belt driven roller assy /C [9] and 4 paper feed belts [10] from the belt support plate [11].

Note

- When reinstalling the paper feed belt [10], be sure to install it so that the white line mark comes to the inside.

15. Reinstall the above parts following the removal steps in reverse.

7.4 Vertical conveyance section

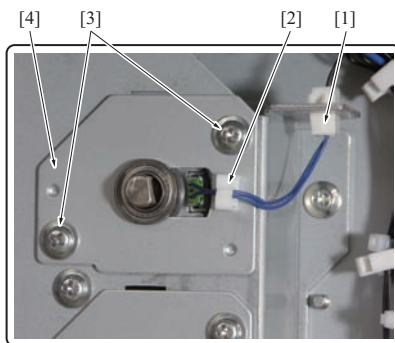
7.4.1 Replacing the pre-registration clutch /1 (CL1), /2 (CL3), /3 (CL5), the intermediate clutch /1 (CL2), /2 (CL4), and the horizontal conveyance exit clutch (CL6)

(1) Periodically replaced parts/cycle

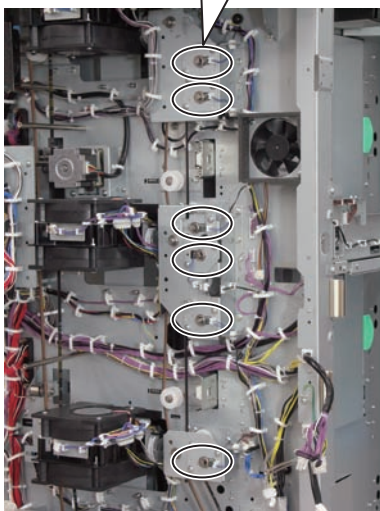
- Pre-registration clutch /1 (CL1), /2 (CL3), and /3 (CL5)
: Every 10,500,000 prints (Actual replacement cycle: Every 3,000,000 prints)

- Intermediate clutch /1 (CL2), /2 (CL4)
: Every 10,500,000 prints (Actual replacement cycle: Every 3,000,000 prints)
- Horizontal conveyance exit clutch (CL6)
: Every 10,500,000 prints (Actual replacement cycle: Every 3,000,000 prints)

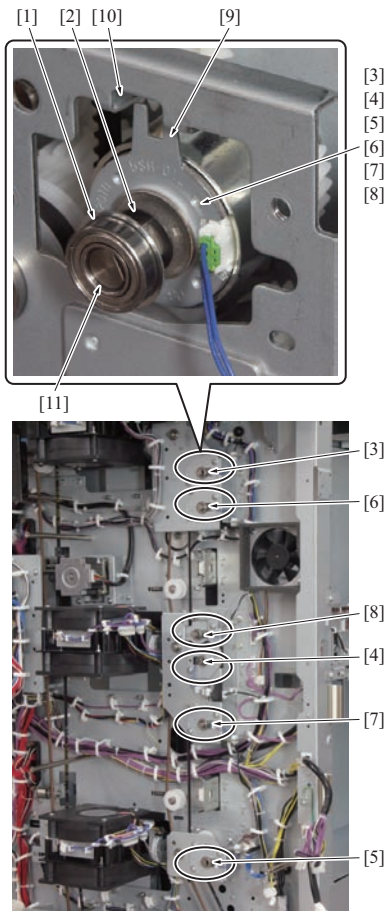
(2) Procedure



1. Remove the rear cover. (Refer to [G.2.2.2 Rear cover](#))
2. Disconnect the connectors [1], 1 each, and then remove the wiring harness from the wire binding band [2].
3. Remove each of the screws [3], 2 each, and the mounting metal fitting [4], 1 each.



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a0gdt3c011ca

4. Remove 1 each of the bearings [1] and the washers [2], and then remove the pre-registration clutches /1 (CL1) [3], /2 (CL3) [4], and /3 (CL5) [5], the intermediate clutches /1 (CL2) [6], /2 (CL4) [7], and the horizontal conveyance exit clutch (CL6) [8].

Note

- When removing the bearing [1], the washer [2] is also removed. Be careful that the washer does not get lost.
- When reinstalling it, be sure to align the stopper [9] of the clutch with the notch [10].
- Do not press in the bearing [1] forcibly. When the bearing is perpendicular to the shaft [11], it can be installed smoothly. When it is slanting, it is not inserted smoothly.

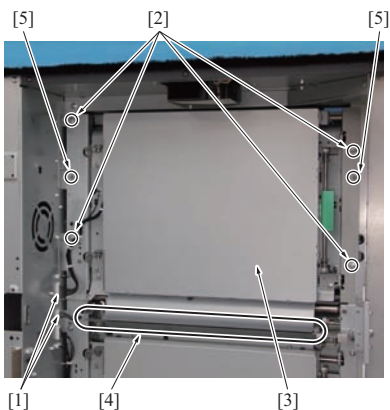
5. Reinstall the above parts following the removal steps in reverse.

7.4.2 Replacing the torque limiters /Up and /Lw

(1) Periodically replaced parts/cycle

- Torque limiter /Up, /Lw
: Every 20,250,000 prints (Actual replacement cycle: Every 6,000,000 prints)

(2) Removing procedure of the vertical conveyance units /Up and /Lw

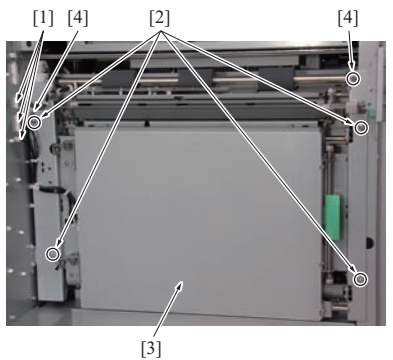


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1. Remove the exit conveyance unit. (Refer to [F.7.5.1 Replacing PF paper exit roller, the bearings /C and /B for PF](#), and [F.7.6.1 Replacing PF paper exit roller /2, the bearings /C and /B for PI-PFU](#))
2. Remove 2 connectors [1].
3. Remove 4 screws [2] and then remove the vertical conveyance unit /Up [3].

Note

- Be sure to avoid holding the vertical conveyance unit /Up at the paper-through section. This may deform the paper-through section and affect the paper through, thus resulting in a jam.
- Be sure to put the vertical conveyance unit /Up not to press the paper-through section [4].
- When reinstalling the vertical conveyance unit, be sure to align it with the positioning pin [5].



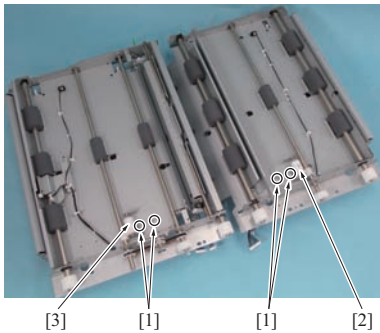
a0gdt3c061ca

4. Disconnect 3 connectors [1].
5. Remove 4 screws [2] and then remove the vertical conveyance unit /Lw [3].

Note

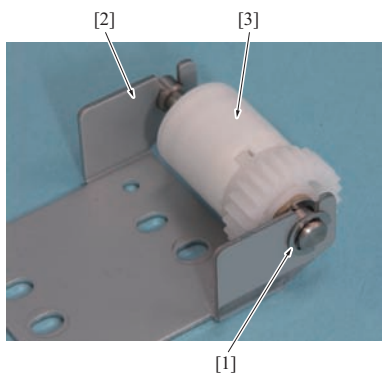
- Be sure to avoid holding the vertical conveyance unit /Lw at the paper-through section. This may deform the paper-through section and affect the paper through, thus resulting in a jam.
- When reinstalling the vertical conveyance unit, be sure to align it with the positioning pin [4].

6. Reinstall the above parts following the removal steps in reverse.

(3) Replacing procedure of the torque limiters /Up and /Lw

a0gdt3c062ca

1. Remove the vertical conveyance units /Up and /Lw. (F.7.4.2.(2) [Removing procedure of the vertical conveyance units /Up and /Lw](#))
2. Remove 2 each of the screws [1] and then remove the torque limiter mounting bracket assy /Up [2] and /Lw [3].

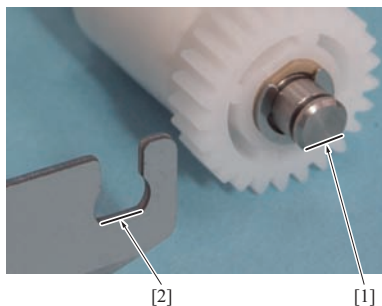


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3. Remove the E-ring [1], and then remove the torque limiter assy / Up and /Lw [3] from the mounting bracket [2].

Note

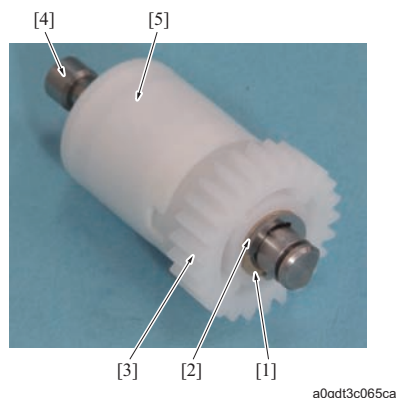
- Be sure that the installation positions to the mounting bracket are left-right reversal between the torque limiter assy /Up and the torque limiter assy /Lw.
- The picture shows the torque limiter assy /Up.
- Be careful not to confuse the torque limiters /Up and /Lw since the parts numbers are different.
Torque limiter /Up: A03U8157##
Torque limiter /Lw: 57GA4430##



a0gdt3c064ca

Note

- When reinstalling it, be sure to align the D-cut [1] to the straight line [2] of the shaft hole on the mounting bracket.



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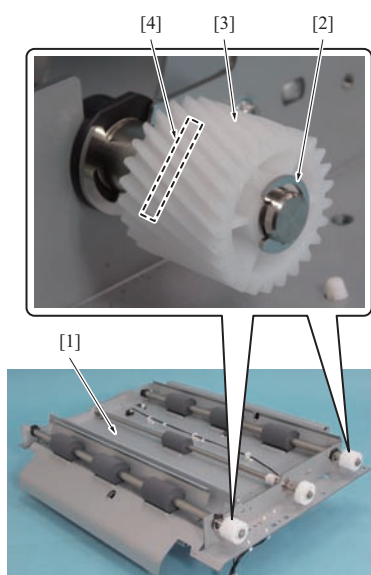
4. Remove the E-ring [1], pull out the bearing [2] and the gear [3] from the shaft [4], and then remove the torque limiters /Up and /Lw [5].
5. Reinstall the above parts following the removal steps in reverse.

7.4.3 Replacing the pre-registration roller, the intermediate conveyance roller, the pre-registration bearing, and the bearing C

(1) Periodically replaced parts/cycle

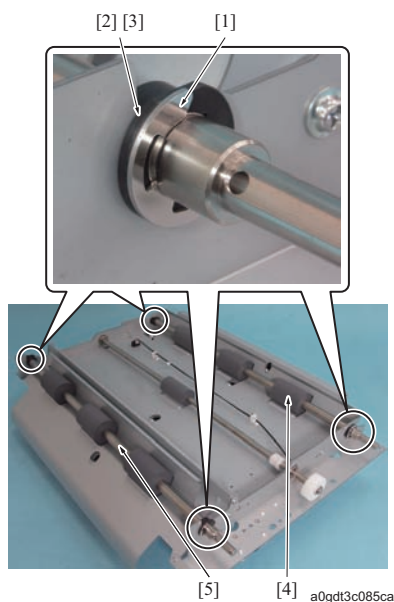
- Pre-registration roller, Intermediate conveyance roller
: Every 20,250,000 prints (Actual replacement cycle: Every 6,000,000 prints)
 - Pre-registration bearing, Bearing C
: Every 20,250,000 prints (Actual replacement cycle: Every 6,000,000 prints)
 - Horizontal registration roller*, Horizontal registration bearing*
: Every 20,250,000 prints (Actual replacement cycle: Every 6,000,000 prints)
- * For PI-PFU: Every 10,500,000 prints (Actual replacement cycle: Every 6,000,000 prints)

(2) Procedure for the vertical conveyance unit /Up



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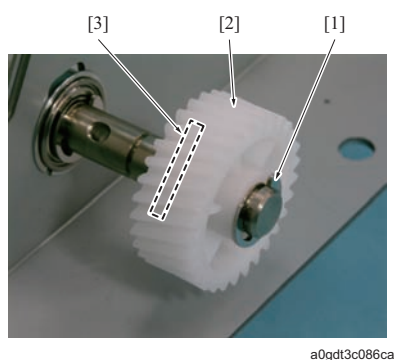
1. Remove the vertical conveyance unit /Up and then remove the torque limiter /Up. (Refer to [F.7.4.2 Replacing the torque limiters /Up and /Lw](#))
2. Remove 1 each of the E-rings [2] on 2 positions of the vertical conveyance units /Up [1] and then remove 1 each of the gears [3] and the pins [4].



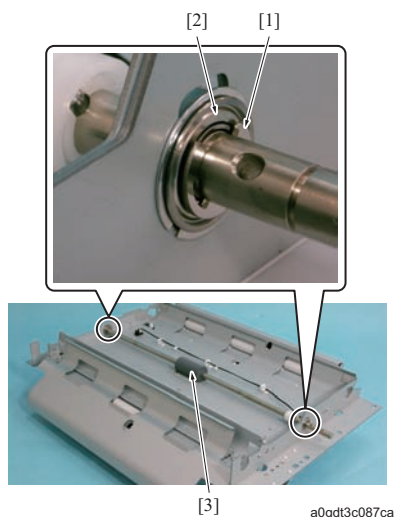
3. Remove E-rings [1], 1 each for 4 places, and then remove the pre-registration bearing [2] and the horizontal registration bearing [3], 1 each, and also remove the pre-registration roller [4] and the horizontal registration roller [5].

Note

- When removing/installing it, be careful not to damage the pre-registration roller with the corner of the guide plate.



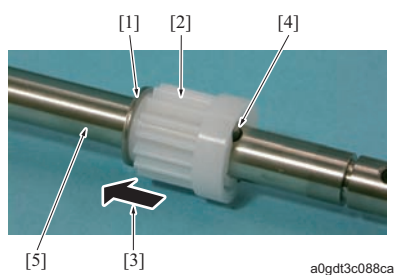
4. Remove the E-ring [1] and then remove the gear [2] and the pin [3].



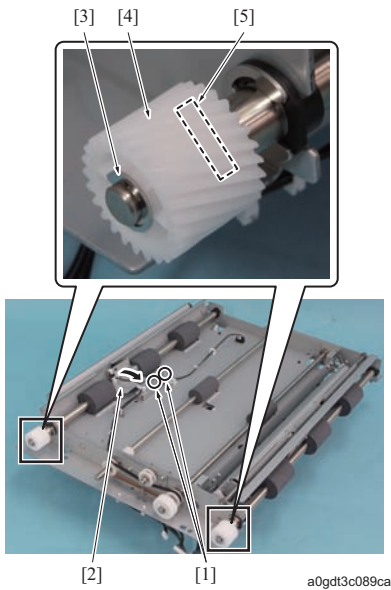
5. Remove 1 each of 2 E-rings [1] and then remove 1 each of the bearing /C [2] and the intermediate conveyance roller [3].

Note

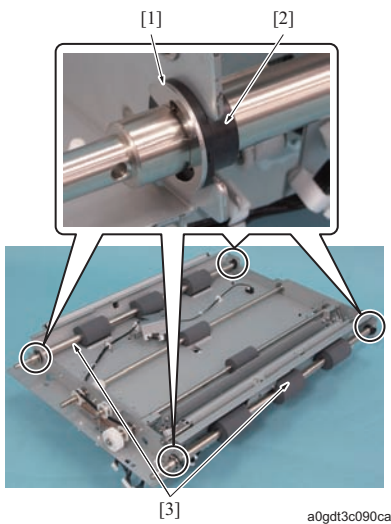
- When removing/installing it, be careful not to damage the intermediate conveyance roller with the corner of the guide plate.



6. Remove the E-ring [1] and remove the pin [4] by moving the gear [2] in the arrow-marked direction [3], and then remove the gear [2] from the intermediate conveyance roller [5].
7. Reinstall the above parts following the removal steps in reverse.

(3) Procedure for the vertical conveyance unit /Lw

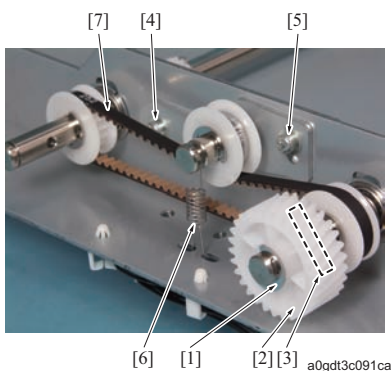
1. Remove the vertical conveyance unit /Lw and then remove the torque limiter /Lw. (Refer to [F.7.4.2 Replacing the torque limiters / Up and /Lw](#))
2. Remove 2 screws [1] and then move the sensor mounting plate [2] after turning it back.
3. Remove 1 each of 2 E-rings [3] and then remove 1 each of the gears [4] and the pins [5].



4. Remove 1 each of 4 E-rings [1] and then remove 1 each of the pre-registration bearing [2] and 2 pre-registration rollers [3].

Note

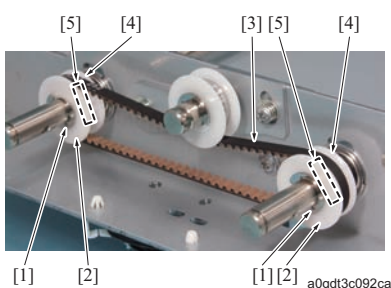
- When removing/installing it, be careful not to damage the pre-registration roller with the corner of the guide plate.



5. Remove the E-ring [1] and then remove the gear [2] and the pin [3].
6. Loosen the screws [4], [5] and then remove the spring [6].

Note

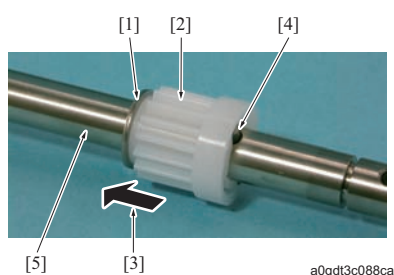
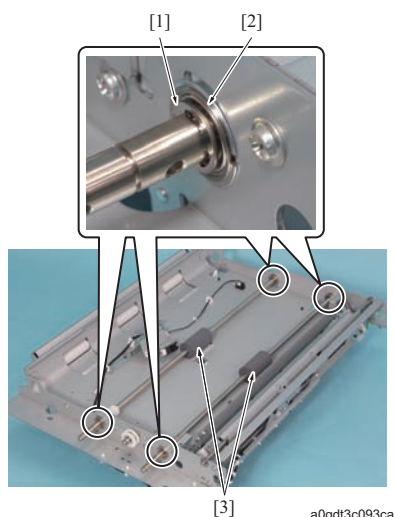
- When reinstalling it, tighten the screw [5] first and then the screw [4] so that the tension of the spring [6] is over the belt [7], and then confirm the belt rotating smoothly.



7. Remove 2 E-rings [1] and then remove 2 collars [2], the belt [3], 2 pulleys [4] and 2 pins [5].

Note

- When reinstalling the collars [2], be sure that the stepped side faces to the E-ring side.



8. Remove E-rings [1], 1 each for 4 places and then remove the bearings /C [2], 1 each, and 2 intermediate conveyance rollers /2 and /3 [3].

Note

- When removing/installing it, be careful not to damage the intermediate conveyance roller with the corner of the guide plate.

9. Remove the E-ring [1] and remove the pin [4] by moving the gear [2] in the arrow-marked direction [3], and then remove the gear [2] from the intermediate conveyance roller /3 [5].
10. Reinstall the above parts following the removal steps in reverse.

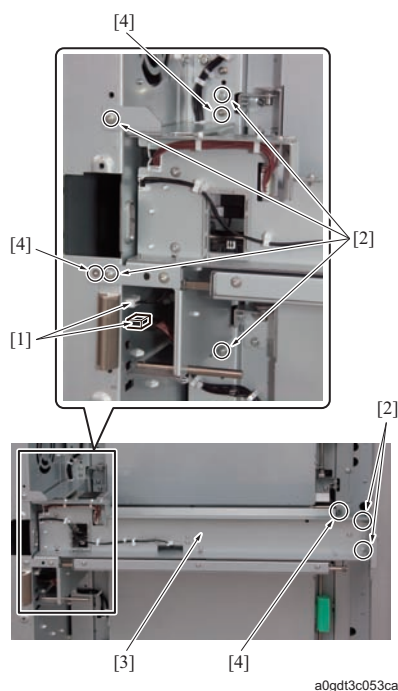
7.5 Exit conveyance section (PF)

7.5.1 Replacing PF paper exit roller, the bearings /C and /B

(1) Periodically replaced parts/cycle

- PF paper exit roller
: Every 10,500,000 prints (Actual replacement cycle: Every 6,000,000 prints)
- Bearings /C and /B
: Every 10,500,000 prints (Actual replacement cycle: Every 6,000,000 prints)

(2) Removing procedure of the PF exit conveyance unit

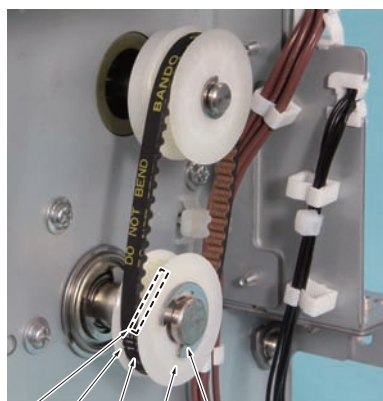


1. Disconnect 2 connectors [1].
2. Remove 6 screws [2] and then remove the PF exit conveyance unit [3].

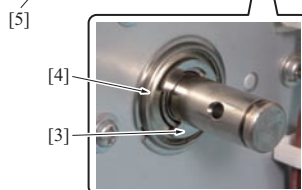
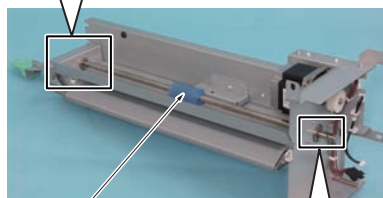
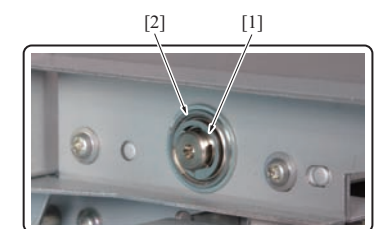
Note

- Be sure to avoid holding the PF exit conveyance unit at the paper-through section. This may deform the paper-through section and affect the paper through, thus resulting in a jam.
- When reinstalling it, be sure to put into 3 positioning pins [4].

3. Reinstall the above parts following the removal steps in reverse.

(3) Replacing procedure of the PF paper exit roller, the bearings /C and /B

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1. Remove the PF exit conveyance unit. (Refer to [F.7.5.1.\(2\) Removing procedure of the PF exit conveyance unit](#))
2. Remove the E-ring [1] and then remove the collar [2], the belt [3], the pulley [4] and the pin [5].

3. Remove the E-ring [1] and remove the bearing /C [2].
4. Remove the E-ring [3] and then remove the bearing /B [4] and the PF paper exit roller [5].
5. Reinstall the above parts following the removal steps in reverse.

7.6 Exit conveyance section (PI-PFU)**7.6.1 Replacing PF paper exit roller /2, the bearings /C and /B****(1) Periodically replaced parts/cycle**

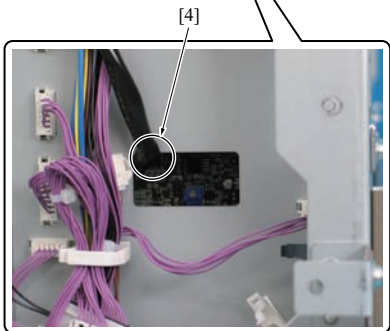
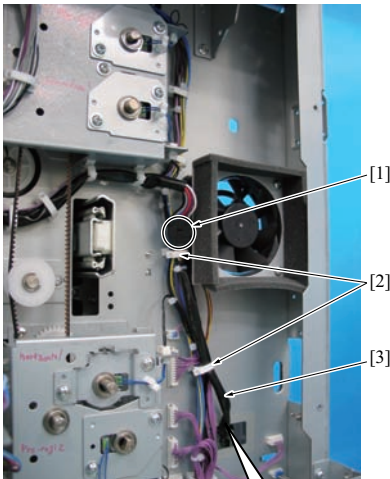
- PF paper exit roller /2
: Every 10,500,000 prints (Actual replacement cycle: Every 6,000,000 prints)
- Bearings /C and /B
: Every 10,500,000 prints (Actual replacement cycle: Every 6,000,000 prints)

(2) Removing procedure of the PI-PFU exit conveyance unit (FA-501)

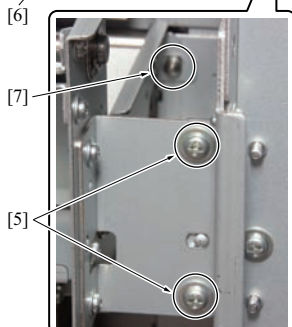
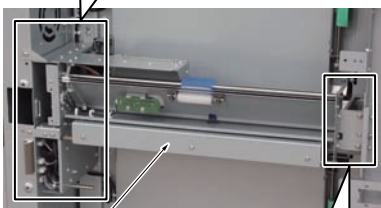
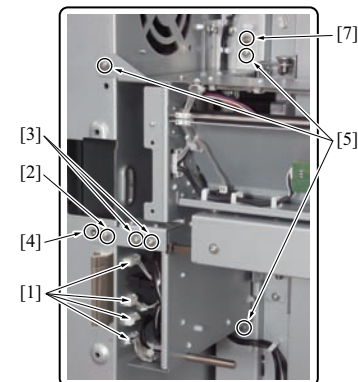
1. Remove the rear cover. (Refer to [G.5.2.3 Rear cover](#))
2. Disconnect the connector [1] and remove the wiring harness [3] from 2 wire saddles [2].

Note

- When reinstalling the wiring harness, be sure to set it with the wiring harness of FA-501 moved to the upper left [4] of the multi feed detection adjustment window.
- Be sure to set the wiring harness so that it does not contact the multi feed detection drive board (MFDDDB). Otherwise the multi feed detection error may occur.



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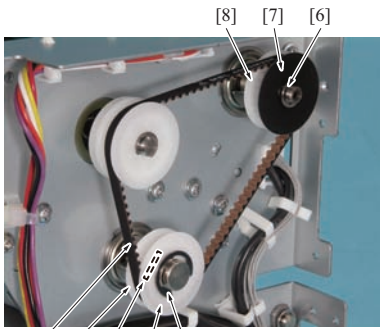
a0gdt3c056ca

3. Remove the left covers /Up and /Lw. (Refer to [G.5.2.13 Left cover / Up, /Lw \(PI-PFU only\)](#))
4. Disconnect 4 connectors [1].
5. Remove the screw [2].
6. Remove 2 screws [3], and then remove the mounting bracket [4].
7. Remove 5 screws [5] and then remove the PI-PFU exit conveyance unit [6].

Note

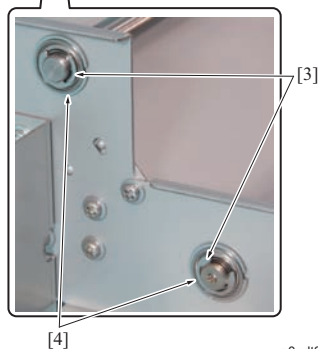
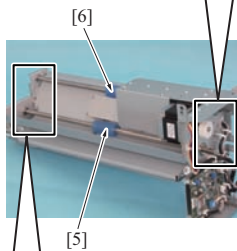
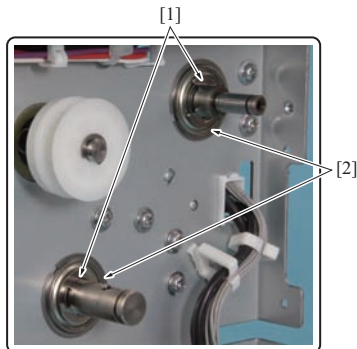
- Be sure to avoid holding the PF exit conveyance unit at the paper-through section. This may deform the paper-through section and affect the paper through, thus resulting in a jam.
- When reinstalling it, be sure to put into 2 positioning pins [7].

8. Reinstall the above parts following the removal steps in reverse.

(3) Replacing procedure of the PF paper exit roller, the bearings /C and /B

a0gdt3c057ca

1. Remove the PF exit conveyance unit. (Refer to [F.7.5.1.\(2\) Removing procedure of the PF exit conveyance unit](#))
2. Remove the E-ring [1] and then remove the collar [2], the belt [3], the pulley [4] and the pin [5].
3. Remove the E-ring [6] and then remove the collar [7] and the pulley [8].



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4. Remove 2 E-rings [1] and remove 2 bearings /B [2].
5. Remove 2 E-rings [3] and then remove 2 bearings /C [4] and the PF paper exit rollers [5] and /2 [6].
6. Reinstall the above parts following the removal steps in reverse.

7.7 Horizontal conveyance section**7.7.1 Replacing the horizontal conveyance rollers /A and /B, the spacer****(1) Periodically replaced parts/cycle**

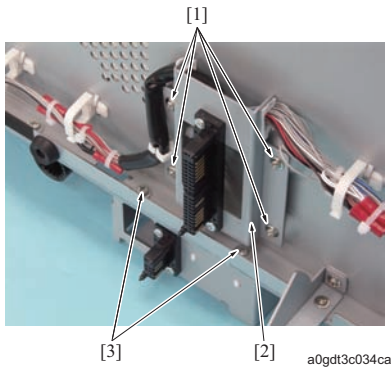
- Horizontal conveyance roller /A*
: Every 20,250,000 prints (Actual replacement cycle: Every 6,000,000 prints)
- Horizontal conveyance roller /B*
: Every 20,250,000 prints (Actual replacement cycle: Every 6,000,000 prints)
- Spacer*
: Every 20,250,000 prints (Actual replacement cycle: Every 6,000,000 prints)

* The Periodically replaced cycle for PI-PFU is as follows.

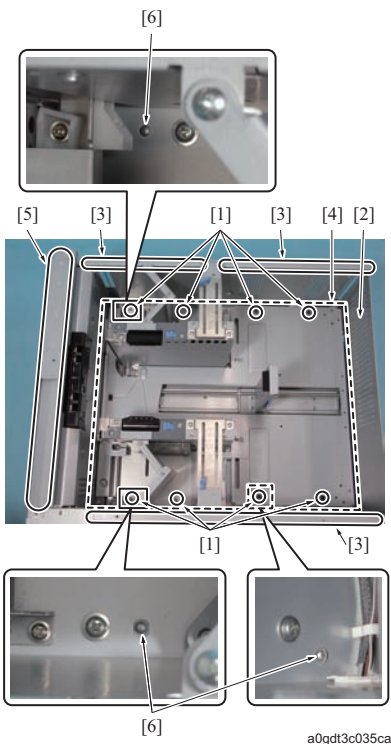
- : Every 10,500,000 prints (Actual replacement cycle: Every 6,000,000 prints)

Note

- Be sure to replace only the 1st tandem of the coupling It does not need the replacement when using just 1 PF-703.

(2) Procedure

1. Remove the tray1. (Refer to [G.5.2.6 Tray](#))
2. Remove the tray front cover. (Refer to [G.5.2.5 Tray front cover](#))
3. Remove 4 screws [1] and then remove the connector mounting bracket [2].
4. Remove 2 screws [3].



5. Remove 8 screws [1] and lift the specified positions [3] of the tray unit [2], and then remove it from the horizontal conveyance unit [4].

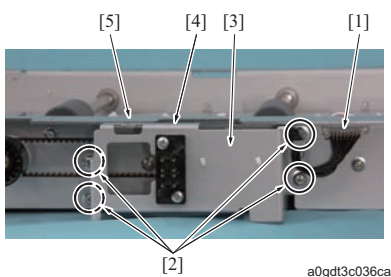
⚠ CAUTION

- Be sure to lift the tray with 2 people.

Note

- Be sure to hold the specified positions [3] and not to hold the positions [5] that can be easily deformed. This may affect the paper tray, thus resulting in a jam.
- When reinstalling the slope, be sure to align 3 positioning projections [6].

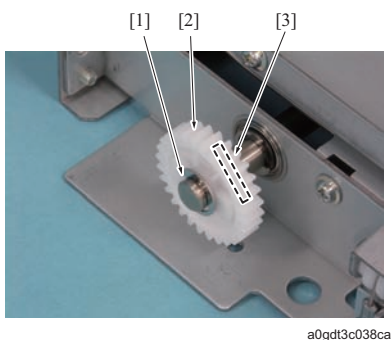
6. Reinstall the above parts following the removal steps in reverse.

(3) Replacing procedure of the horizontal conveyance rollers /A and /B, the spacer

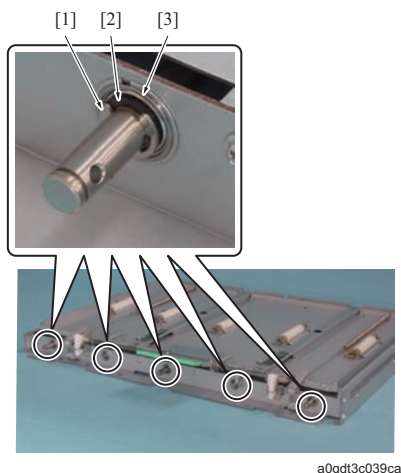
1. Remove the horizontal conveyance unit. (Refer to [F.7.7.1.\(2\) Procedure](#))
2. Disconnect the connector [1].
3. Remove 4 screws [2] and then remove the connector bracket [3].

Note

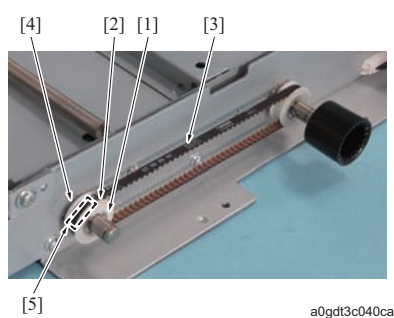
- When reinstalling it, be sure to install so that the top [4] of the connector bracket [3] is at the same height as the top [5] of the horizontal conveyance unit.



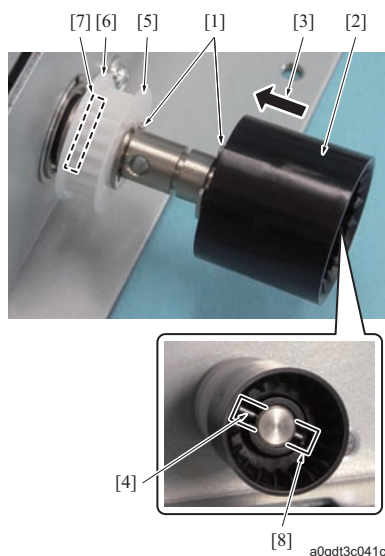
4. Remove the E-ring [1] and then remove the gear [2] and the pin [3].



5. Remove 1 each of 5 E-rings [1] and remove 5 spacers [2] and 5 bearings [3].



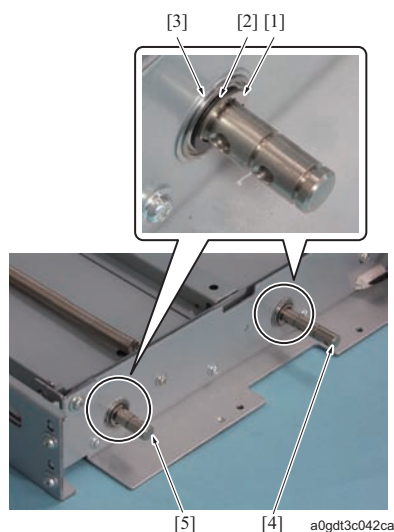
6. Remove the E-ring [1] and then remove the collar [2], the drive belt /1 [3], the pulley [4] and the pin [5].



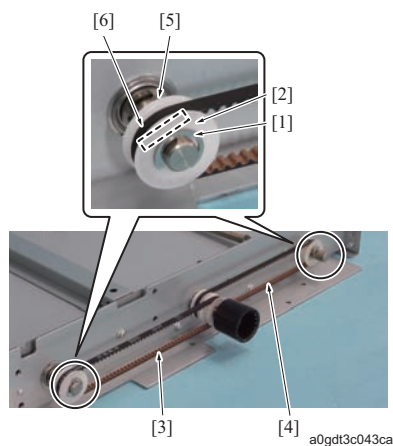
7. Remove 2 E-rings [1] and remove the pin [4] by moving the coupling [2] in the arrow-marked direction [3], and then remove the coupling [2], the collar [5], the pulley [6], and the pin [7].

Note

- Note that the lengths of the pin [4] and [7] are different and the pin [4] is longer.
- When reinstalling the coupling, be sure to align the pin [4] to the groove [8].



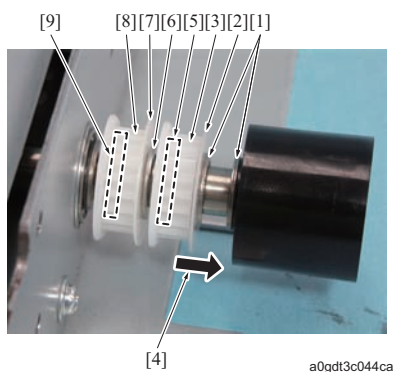
8. Remove 1 each of 2 E-rings [1] and then remove 2 spacers [2], 2 bearings [3], and the horizontal conveyance rollers /A [4] and /B [5].



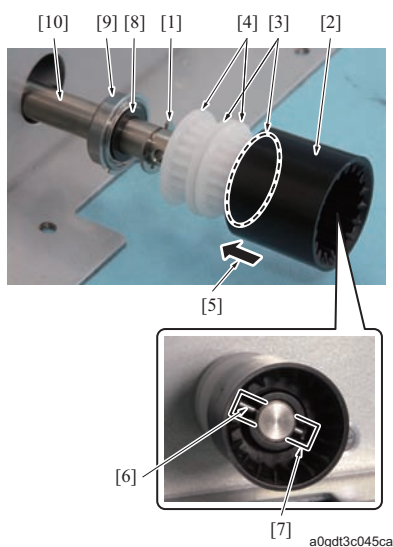
9. Remove 1 each of 2 E-rings [1] and then remove 2 collars [2], the drive belts /1 [3] and /2 [4], 2 pulleys [5], and 2 pins [6].

Note

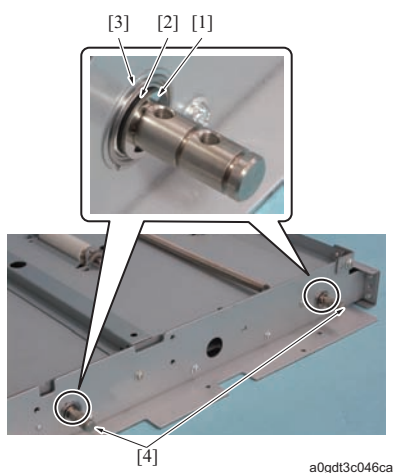
- Be sure that the length of the drive belt /1 [3] and /2 [4] is different and the drive belt /1 [3] is longer.



10. Remove 2 E-rings [1] and then remove the pin [5] by moving the collar [2] and the pulley [3] in the arrow-marked direction [4].
11. Remove the E-ring [6] and then remove the pin [9] by moving the collar [7] and the pulley [8] in the arrow-marked direction [4].



12. Remove the E-ring [1].
 13. Remove the E-ring [2] and then remove the pin [6] by moving 2 collar [3] and 2 pulley [4] in the arrow-marked direction [5].
- Note**
- When reinstalling the coupling, be sure to align the pin [6] to the groove [7].
14. Remove the spacer [8], the bearing [9], and the horizontal conveyance roller /A [10].



15. Remove 1 each of 2 E-rings [1] and then remove 2 spacers [2], 2 bearings [3], and 2 horizontal conveyance rollers /B [4].
16. Reinstall the above parts following the removal steps in reverse.

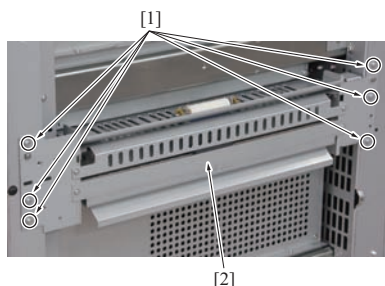
7.8 Entrance conveyance section

7.8.1 Replacing the entrance conveyance roller /Up, the spacer (in the case of PI-PFU)

(1) Periodically replaced parts/cycle

- Entrance conveyance roller /Up, Spacer
- : Every 10,500,000 prints (Actual replacement cycle: Every 6,000,000 prints)

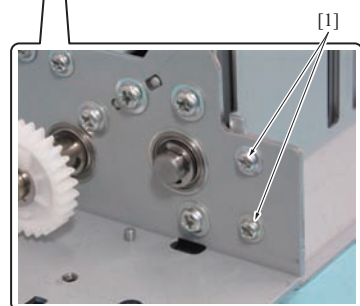
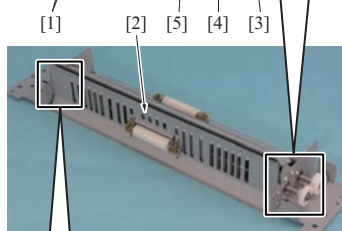
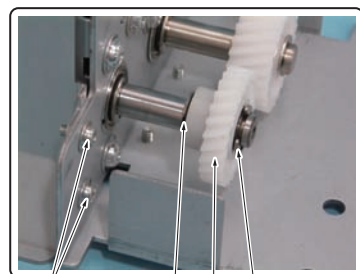
(2) Removing procedure of the entrance conveyance unit



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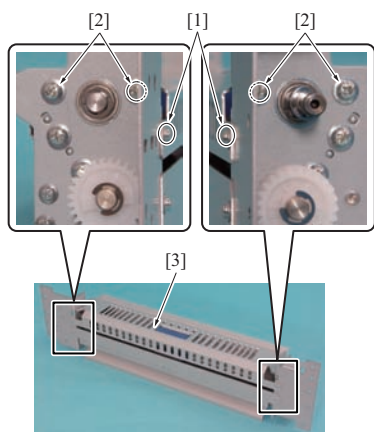
1. Remove the right cover. (Refer to [G.5.2.2 Right cover](#))
2. Remove 6 screws [1] and then remove the entrance conveyance unit.
3. Reinstall the above parts following the removal steps in reverse.

(3) Replacing procedure of the entrance conveyance roller /Up, the spacer



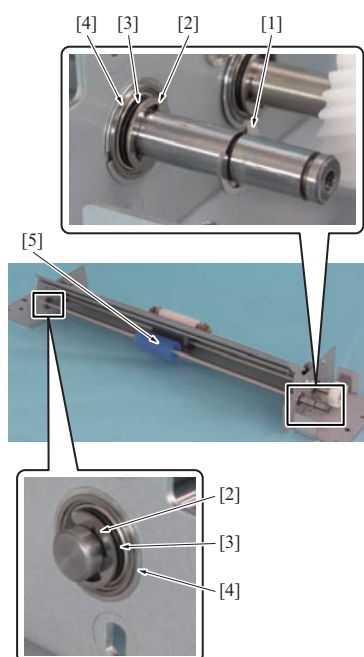
a0gdt3c067ca

1. Remove the entrance conveyance unit. (Refer to [F.7.8.1.\(2\) Removing procedure of the entrance conveyance unit](#))
2. Remove 4 screws [1] and then remove the entrance guide plate /1 [2].
3. Remove the E-ring [3] and then remove the gear [4] and the spacer [5].



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4. Remove 2 screws [1] and remove 4 screws [2], and then remove the entrance guide plate /2 [3].



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5. Remove the E-ring [1].
6. Remove 1 each of 2 E-rings [2] and remove 1 each of the spacers [3] and the bearings [4], and then remove the entrance conveyance roller /Up [5].
7. Reinstall the above parts following the removal steps in reverse.

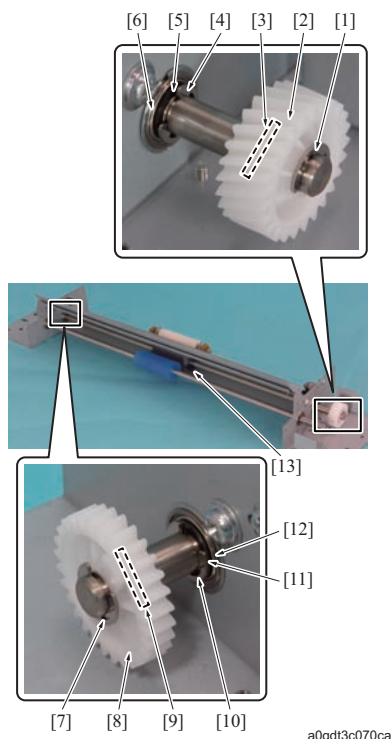
7.8.2 Replacing the entrance conveyance roller /Lw, the spacer (in the case of PF)

(1) Periodically replaced parts/cycle

- Replacing the entrance conveyance roller /Lw, the spacer (in the case of PF)
: Every 20,250,000 prints (Actual replacement cycle: Every 6,000,000 prints)

Note

- Be sure to replace only the 1st tandem of the coupling. It does not need the replacement when using just 1 PF-703.

(2) Procedure

1. Remove the right cover. (Refer to [G.5.2.2 Right cover](#))
2. Remove the entrance conveyance roller unit. (Refer to [F.7.8.1 Replacing the entrance conveyance roller /Up, the spacer \(in the case of PI-PFU\)](#))
3. Remove the entrance guide plates /1 and /2. (Refer to [F.7.8.1 Replacing the entrance conveyance roller /Up, the spacer \(in the case of PI-PFU\)](#))
4. Remove the E-ring [1] and then remove the gear [2] and the pin [3].
5. Remove the E-ring [4] and then remove the spacer [5] and the bearing [6].
6. Remove the E-ring [7] and then remove the gear [8] and the pin [9].
7. Remove the E-ring [10] and then remove the spacer [11], the bearing [12], and the entrance conveyance roller /Lw [13].
8. Reinstall the above parts following the removal steps in reverse.

8. PERIODICAL MAINTENANCE PROCEDURE RU-506

8.1 Precautions on maintenance

⚠ CAUTION

- Be sure to unplug the power plug from the power outlet.

8.2 Conveyance section

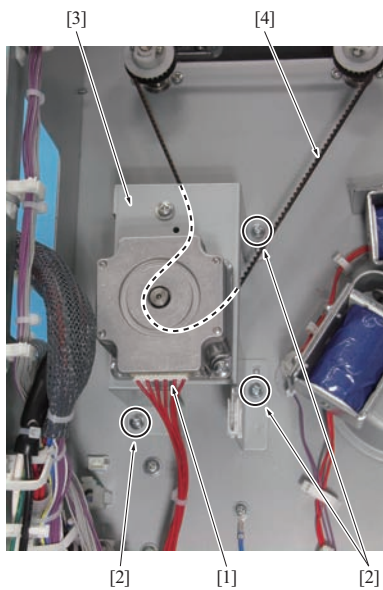
8.2.1 Replacing the entrance conveyance motor (M1), the paper exit motor (M2), the paper exit conveyance belt

(1) Periodically replaced parts/cycle

- Entrance conveyance motor (M1), Paper exit motor (M2)
: Every 30,000,000 prints*1
- Entrance conveyance belt, Paper exit conveyance belt
: Every 20,250,000 prints*1

*1 1200/1200P/1051

(2) Procedure of removing the entrance conveyance motor assy, Procedure of replacing the entrance conveyance belt



a0get3c001ca

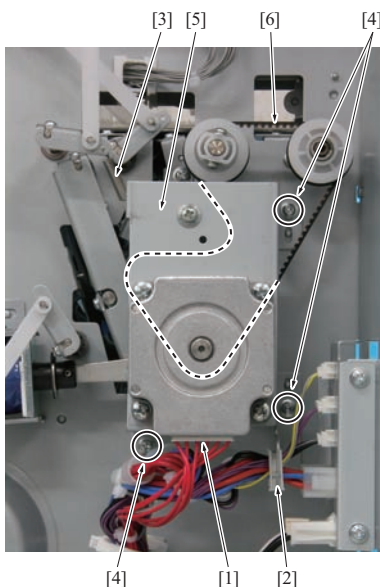
1. Remove the rear cover. (Refer to [G.6.2.3 Rear cover](#))
2. Disconnect the connector [1].
3. Remove 3 screws [2] and then remove the entrance conveyance motor assy [3] and the entrance conveyance belt [4].

Note

- When reinstalling, temporary tighten 3 screws [2] and apply tension to the entrance conveyance belt [4] by own weight of the entrance conveyance motor [3]. Then tighten 3 screws [2].

4. Reinstall the parts by following the removal steps in reverse.

(3) Procedure of removing the paper exit conveyance motor assy and replacing the paper exit conveyance belt



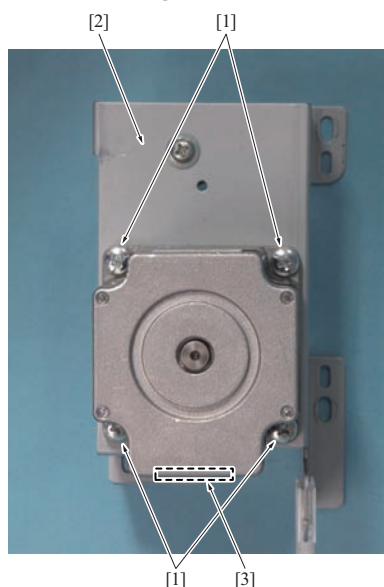
a0get3c002ca

1. Remove the rear cover. [G.6.2.3 Rear cover](#))
2. Disconnect the connector [1] and then remove the wiring harness from the wiring harness clamp.
3. Remove the straight gate spring [3].
4. Remove 3 screws [4] and then remove the paper exit motor assy [5] and the paper exit conveyance belt [6].

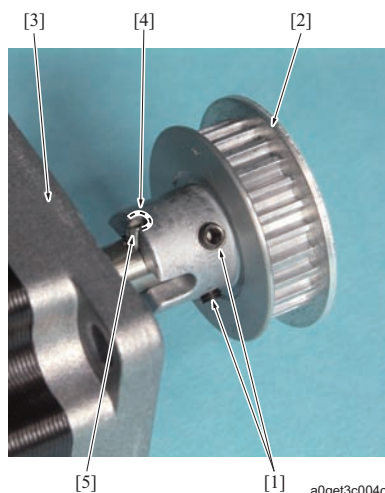
Note

- When reinstalling, temporary tighten 3 screws [4] and apply tension to the paper exit conveyance belt [6] by own weight of the paper exit motor assy. Then tighten 3 screws [4].

5. Reinstall the parts by following the removal steps in reverse.

(4) Replacing procedure of the entrance conveyance motor (M1), the paper exit motor (M2)

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a0get3c004ca

1. Remove the entrance conveyance motor assy and the paper exit motor assy.
2. Remove 4 screws [1], and then remove the mounting bracket [2].

Note

- When reinstalling, be sure to put the connector [3], be sure to install it in the direction shown in the picture.

3. Loosen 2 screws [1] to remove the pulley gear [2]. Then remove the entrance conveyance motor (M1) and the paper exit motor (M2) [3].

Note

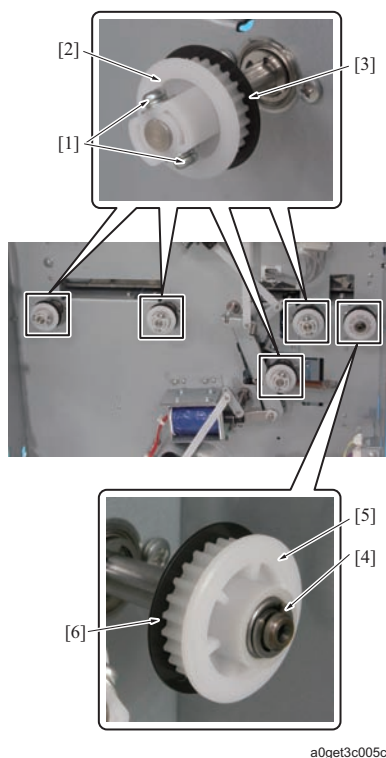
- When reinstalling, insert the pin [5] to the shallower groove [4] until it comes in contact, and then tighten 2 screws [1].

4. Reinstall the parts by following the removal steps in reverse.

8.2.2 Replacing the conveyance pulley, the paper exit conveyance pulley**(1) Periodically replaced parts/cycle**

- Conveyance pulley, Paper exit conveyance pulley
- : Every 20,250,000 prints*1

*1 1200/1200P/1051

(2) Procedure

1. Remove the following parts.
 - Rear cover (Refer to [G.6.2.3 Rear cover](#))
 - Entrance conveyance motor, Entrance conveyance belt, Paper exit motor, Paper exit conveyance belt (Refer to [F.8.2.1 Replacing the entrance conveyance motor \(M1\), the paper exit motor \(M2\), the paper exit conveyance belt](#))
2. Remove the screws [1], 2 for each of 4 places, 4 conveyance pulleys [2], and 4 pulley guides [3].
3. Remove the E-ring [4], the paper exit conveyance pulley [5] and the pulley guide [6].

Note

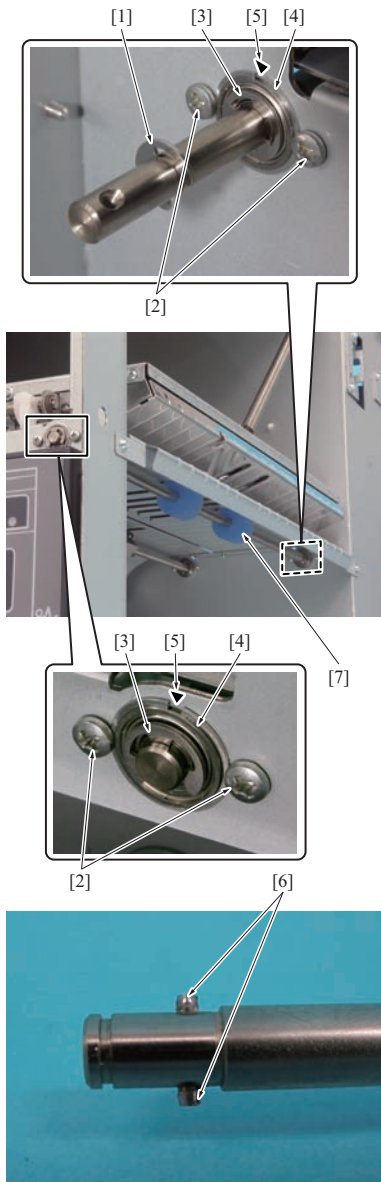
- Reinstall the paper exit conveyance pulley [5] with the gear inside.

4. Reinstall the parts by following the removal steps in reverse.

8.2.3 Replacing the entrance roller /1, the bearing /K**(1) Periodically replaced parts/cycle**

- Entrance roller /1, Bearing /K
- : Every 20,250,000 prints^{*1}

^{*1} 1200/1200P/1051

(2) Procedure

a0get3c006ca

1. Remove the following parts.
 - Rear cover (Refer to [G.6.2.3 Rear cover](#))
 - Entrance conveyance motor, Entrance conveyance belt (Refer to [F.8.2.1 Replacing the entrance conveyance motor \(M1\), the paper exit motor \(M2\), the paper exit conveyance belt](#))
 - Conveyance pulley /1 of the entrance pulley. (Refer to [F.8.2.2 Replacing the conveyance pulley, the paper exit conveyance pulley](#))

2. Remove the E-ring [1].

3. Remove the screws [2], 2 for each position, and then remove the E-rings [3], and the bearings /K [4], 1 for each.

Note

- When reinstalling the bearing /K [4], be sure to set so that the notch of the bearing /K comes in the position [5] as shown in the picture.
- To prevent the notch from opening, when tighten the screws [2], 2 for each, in counterclockwise order.
- When reinstalling the bearing /K [4], be sure to apply the Molykote EM-30L on all over around the spring pins [6] on front and rear of the shaft.

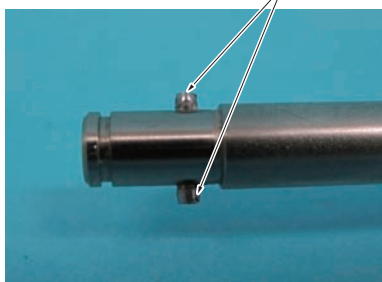
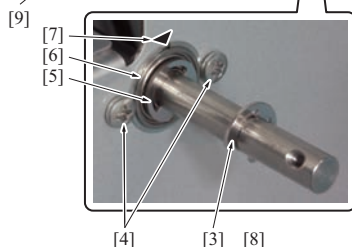
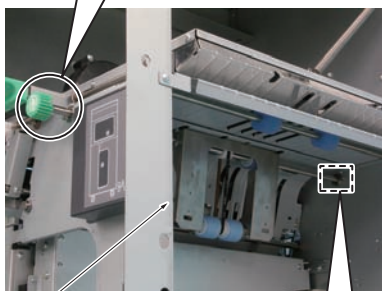
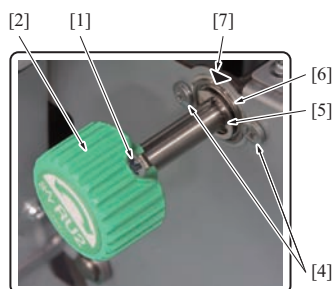
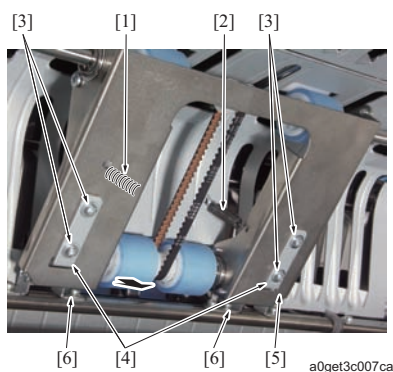
4. Remove the pick-up roller /1 [7].

5. Reinstall the parts by following the removal steps in reverse.

8.2.4 Replacing the entrance roller /2, the stacker entrance roller, the stacker entrance conveyance belt, the stacker entrance roller pressure springs /Fr and /Rr, the bearing /K**(1) Periodically replaced parts/cycle**

- Entrance roller /2, Stacker entrance roller
: Every 20,250,000 prints*¹
- Stacker entrance conveyance belt
: Every 20,250,000 prints*¹
- Stacker entrance roller pressure springs /Fr and /Rr, Bearing /K
: Every 20,250,000 prints*¹

*1 1200/1200P/1051

(2) Procedure

a0get3c008ca

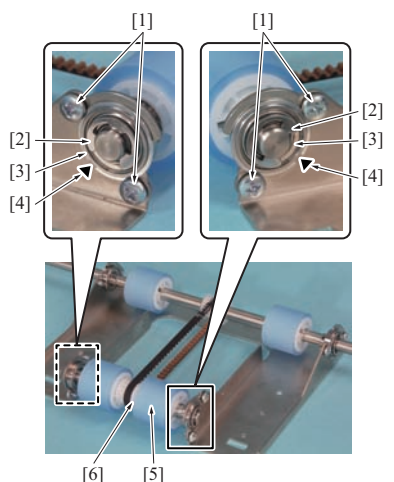
1. Remove the following parts.
 - Rear cover (Refer to [G.6.2.3 Rear cover](#))
 - Entrance conveyance motor/entrance conveyance belt (Refer to [F.8.2.1 Replacing the entrance conveyance motor \(M1\), the paper exit motor \(M2\), the paper exit conveyance belt](#))
 - Conveyance pulley of the entrance roller /2 (Refer to [F.8.2.2 Replacing the conveyance pulley, the paper exit conveyance pulley](#))
2. Remove the stacker entrance roller pressure springs /Fr [1] and /Rr [2].
3. Remove the screws [3], 2 for each position, and then remove 2 coupling brackets [4].

Note

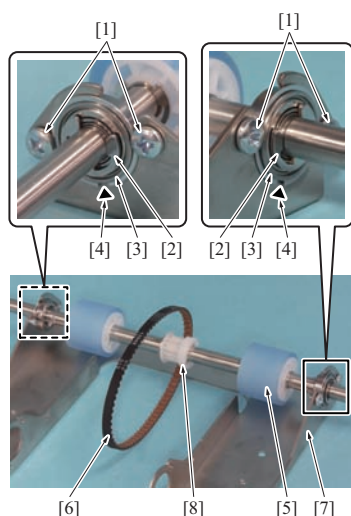
 - When reinstalling, push the stacker entrance roller assy [5] against the coupling receiver bracket [6] and then install the coupling bracket [4].
4. Remove the screw [1], and remove the knob [2].
5. Remove the E-ring [3].
6. Remove the screws [2], 2 for each front and rear sides, and then remove the E-rings [3] and the bearings /K [4], 1 for each.

Note

 - When reinstalling the bearing /K [6], be sure to set so that the notch of the bearing /K comes in the position [7] as shown in the picture.
 - To prevent the notch from opening, when tighten the screws [4], 2 for each, in counterclockwise order.
 - When reinstalling the bearing /K [4], be sure to apply the Molykote EM-30L on all over around the spring pins [8] on front and rear of the shaft.
7. Remove the stacker entrance roller assy [9].



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8. Remove the screws [1], 2 for each position, and then remove the E-rings [2] and the bearings /K [3], 1 for each.

Note

- When reinstalling the bearing /K [3], be sure to set so that the notch of the bearing /K comes in the position [4] as shown in the picture.
- To prevent the notch from opening, when tighten the screws [1], 2 for each, in counterclockwise order.

9. Remove the stacker entrance roller[5].

Note

- When reinstalling, be sure to set so that the flange section [6] of the pulley comes in the direction shown in the picture.

10. Remove the screws [1], 2 for each position, and then remove the E-rings [2], 1 each. Then slide the bearings [3], 1 for each.

Note

- When reinstalling the bearing [3], be sure to set so that the notch of the bearing comes in the position [4] as shown in the picture.
- To prevent the notch from opening, when tighten the screws [1], 2 for each, in counterclockwise order.

11. Remove the entrance roller /2 [5] and the stacker entrance conveyance belt [6] from the bracket [7].

Note

- When reinstalling, be sure to set so that the flange section [8] of the pulley comes in the direction shown in the picture.

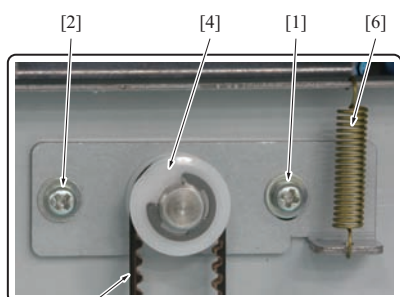
12. Reinstall the parts by following the removal steps in reverse.

8.2.5 Replacing the paper refeed roller, the merging section roller, the paper exit roller, the bearing /K

(1) Periodically replaced parts/cycle

- Paper refeed roller, Merging section roller, Paper exit roller, Bearing /K
: Every 20,250,000 prints*1

*1 1200/1200P/1051

(2) Procedure

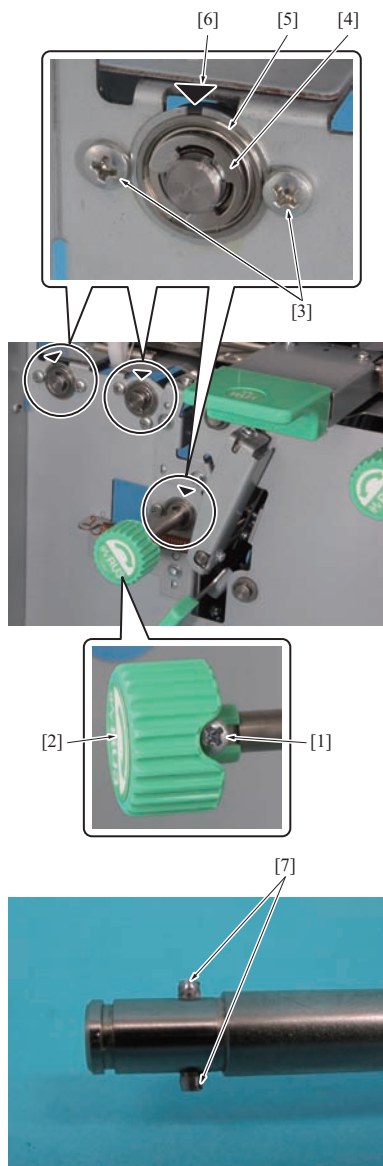
a0get3c011ca

1. Remove the following parts.
 - Front door(Refer to [G.6.2.2 Front cover](#))
 - Rear cover(Refer to [G.6.2.3 Rear cover](#))
 - Left cover(Refer to [G.6.2.4 Left cover](#))
 - Paper exit motor, Paper exit conveyance belt (Refer to [F.8.2.1 Replacing the entrance conveyance motor \(M1\), the paper exit motor \(M2\), the paper exit conveyance belt](#))
 - Conveyance pulleys of the paper refeed roller, the merging section roller and the paper exit roller
2. Loosen the screw [1] and remove the screw [2]. Then remove the FD alignment belt [3] from the pulley [4].

Note

- **When reinstalling the FD alignment belt [3], be sure to insert it to the pulleys [4] and [5], and place it under the tension of the spring [6] and then tighten the screw [1].**

3. Remove 4 screws [7] and the pulley fixing plate [8].

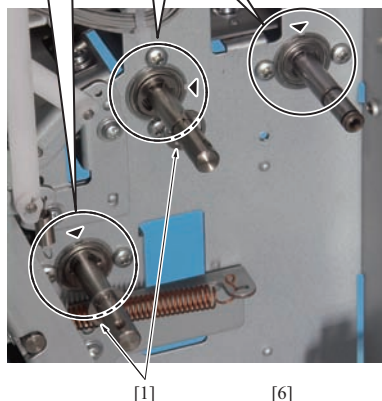
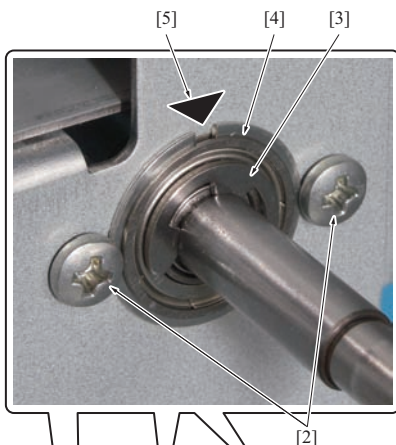


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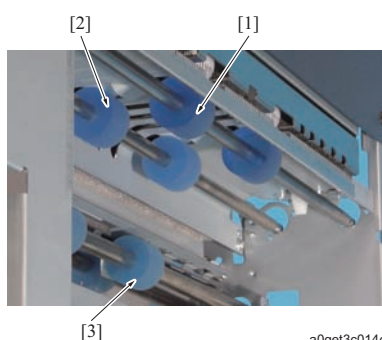
4. Remove the screw [1], and remove the knob [2].
5. Remove the screws [3], 2 for each of 3 positions, and then remove the E-rings [4] and the bearings /K [5], 1 for each.

Note

- When reinstalling the bearing /K [5], be sure to set so that the notch of the bearing /K comes in the position [6] as shown in the picture.
- To prevent the notch from opening, when tighten the screws [3], 2 for each, in counterclockwise order.
- When reinstalling the bearing /K [4], be sure to apply the Molykote EM-30L on all over around the spring pins [7] on front and rear of the shaft.



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a0get3c014ca

6. Remove 2 E-rings [1].
7. Remove the screws [2], 2 for each of 3 positions, and then remove the E-rings [3], and the bearings /K [4], 1 for each.

Note

- When reinstalling the bearing /K [4], be sure to set so that the notch of the bearing /K comes in the position [5] as shown in the picture.
- To prevent the notch from opening, when tighten the screws [2], 2 for each, in counterclockwise order.
- When reinstalling the bearing /K [4], be sure to apply Molykote EM-30L on all over around the spring pins [6] on front and rear of the shaft.

8. Remove the paper exit roller [1], the merging section roller [1] and the paper refeed roller [3].

Note

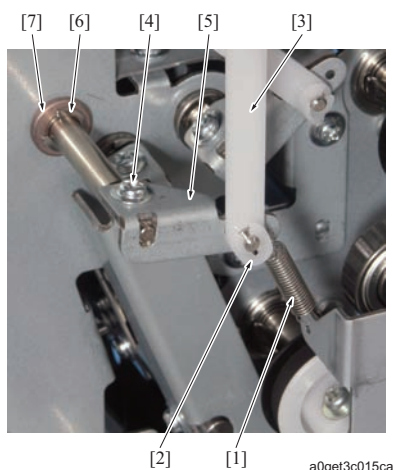
- When reinstalling, be sure to set each roller in the following conditions; the paper exit roller [1] with the side which has a step on the top of the shaft faced rear, the merging section roller [2] with its screw hole faced rear and the paper refeed roller [3] with its D-cut faced front.

9. Reinstall the parts by following the removal steps in reverse.

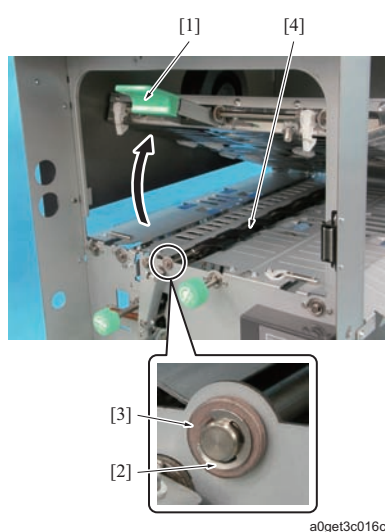
8.2.6 Replacing the straight gate**(1) Periodically replaced parts/cycle**

- Straight gate
- : Every 20,250,000 prints*1

*1 1200/1200P/1051

(2) Procedure

1. Remove the Rear cover(Refer to [G.6.2.3 Rear cover](#))
2. Remove the straight gate spring [1].
3. Remove the C-clip [2] and remove the straight gate solenoid arm [3].
4. Remove the screw [4] and remove the straight gate solenoid arm [5].
5. Remove the E-ring [6] and then remove the bearing [7].



6. Open the straight conveyance guide plate [1].
7. Remove the E-ring [2] and remove the bearing [3] and the straight gate [4].
8. Reinstall the parts by following the removal steps in reverse.

8.2.7 Replacing the straight gate solenoid (SD1) and the straight gate spring**(1) Spotted replaced parts/cycle**

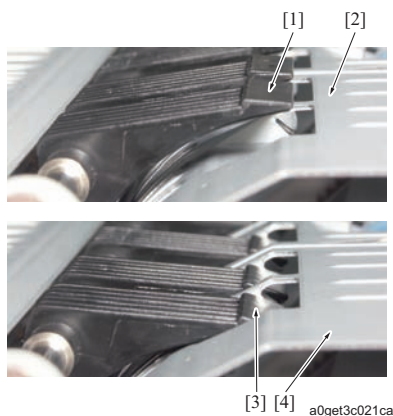
- Replacing the straight gate solenoid (SD1) and the straight gate spring
: Spot replacement (Actual replacement cycle: every 5,000,000 operations)

(2) Procedure

1. Remove the Rear cover(Refer to [G.6.2.3 Rear cover](#))
2. Remove the straight gate spring [1].
3. Remove the C-clip [2] and remove the straight gate solenoid arm [3].
4. Remove the connector [4].
5. Remove 2 screws [5] and then remove the straight gate solenoid assy [6].

Note

- When reinstalling the parts, be sure to fix the straight gate solenoid assy so that the leading edge [1] of the straight gate without pulling the plunger comes to upper than the guide plate [2] and the leading edge [3] of the straight gate with pulling the plunger comes to lower than the guide plate [4] after installing the straight gate spring.

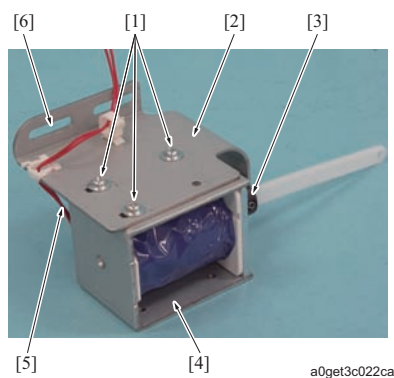


6. Remove 3 screws [1] and remove the mounting bracket [2] and the plunger [3]. Then, remove the straight gate solenoid (SD2) [4].

Note

- When reinstalling this part, be sure to install it so that the wiring harness [5] is on the side of the screw hole [6] of the mounting bracket [2].

7. Reinstall the parts by following the removal steps in reverse.



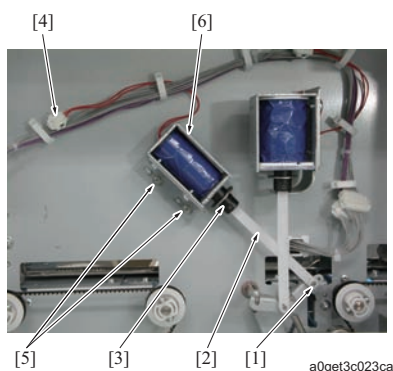
8.3 Stacker section

8.3.1 Replacing the stacker exit shutter solenoid (SD2)

(1) Spotted replaced parts/cycle

- Stacker exit shutter solenoid (SD2)
- : Spot replacement (Actual replacement cycle: Every 5,000,000 operations)

(2) Procedure

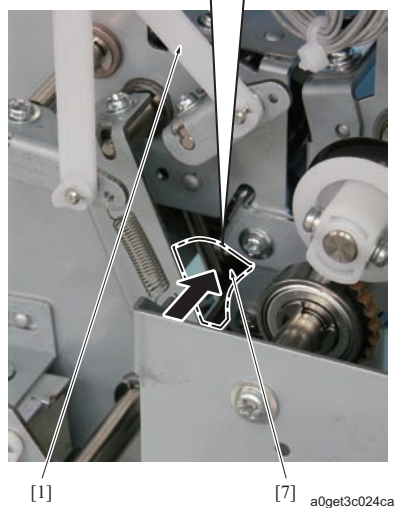
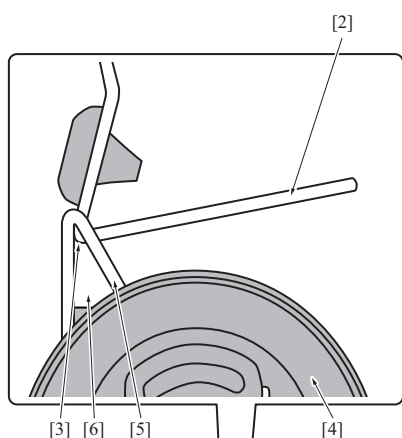


1. Remove the rear cover. (Refer to [G.6.2.3 Rear cover](#))
2. Remove the C-clip [1] and remove the stacker exit shutter arm [2]. Then remove the plunger [3].

Note

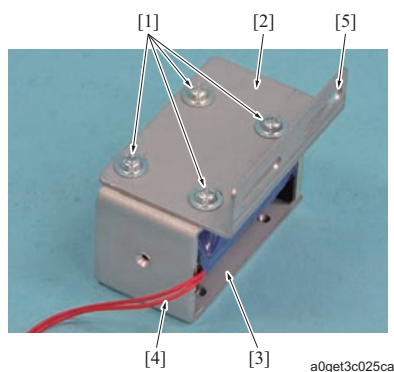
- Be careful that the plunger [3] falls down when removing the C-clip [1].

3. Disconnect the connector [4].
4. Remove 2 screws [5] and then remove the stacker exit shutter solenoid assy [6].



Note

- When reinstalling the parts, be sure to fix the stacker exit shutter solenoid assy so that the leading edge [3] of the stacker exit shutter [2] comes to the inner area [6] of the folding part of the guide plate [5] on the refeed roller [4] when pulling the plunger of the stacker exit shutter solenoid (SD1) to which the stacker exit shutter arm [2] is connected.
- Check it from the opening [7].



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5. Remove 4 screws [1] and then remove the stacker exit shutter solenoid (SD2) [3] from the mounting bracket [2].

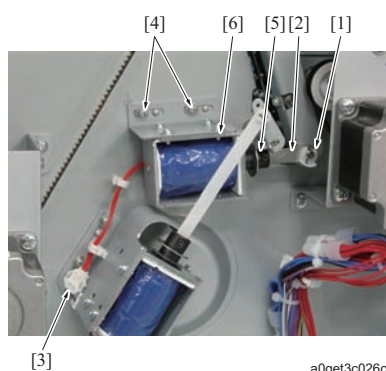
Note

- When reinstalling the parts, be sure to install the wiring harness [4] to the screw hole side [5] of the mounting bracket [2].

6. Reinstall the above parts following the removal steps in reverse.

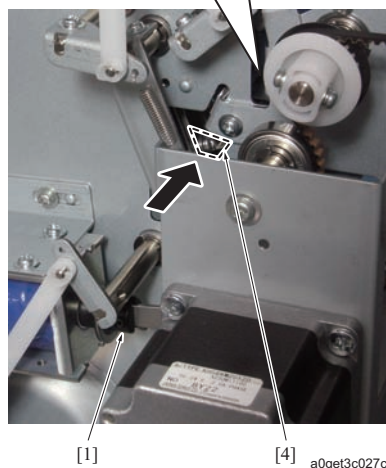
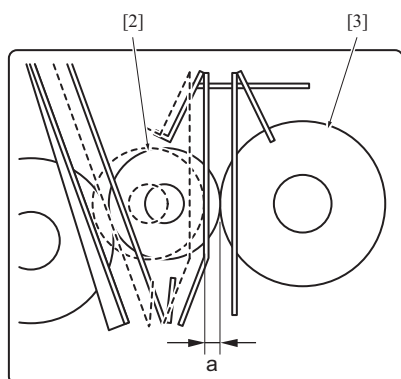
8.3.2 Replacing the stack switching solenoid (SD3)**(1) Spotted replaced parts/cycle**

- Stack switching solenoid (SD3)
- : Spot replacement (Actual replacement cycle: Every 5,000,000 operations)

(2) Procedure

a0get3c026ca

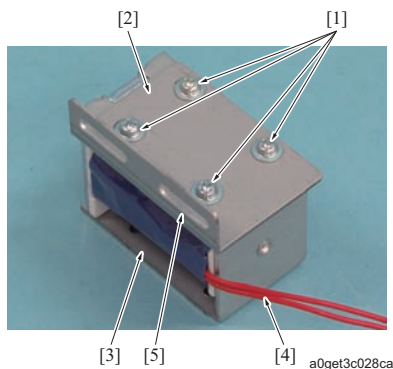
1. Remove the rear cover. (Refer to [G.6.2.3 Rear cover](#))
2. Remove the C-clip [1] and remove the stack switching arm [2].
3. Disconnect the connector [3].
4. Remove 2 screws [4] and then remove the plunger [5] and the stack switching solenoid assy [6].



a0get3c027ca

Note

- When reinstalling the parts, be sure to fix the stack switching solenoid assy so that the driven roller [2] touches with the refeed roller [3] when not pulling the plunger [1] of the stack switching solenoid (SD[3]), and when pulling it, the gap between them is larger than the standard value "a".
- Standard value a: The gap between the driven roller [2] and the re-feed roller [3] is 2mm or more.
- Check it from the opening [4].



5. Remove 4 screws [1] and then remove the stack switching solenoid (SD3) [3] from the mounting bracket [2].

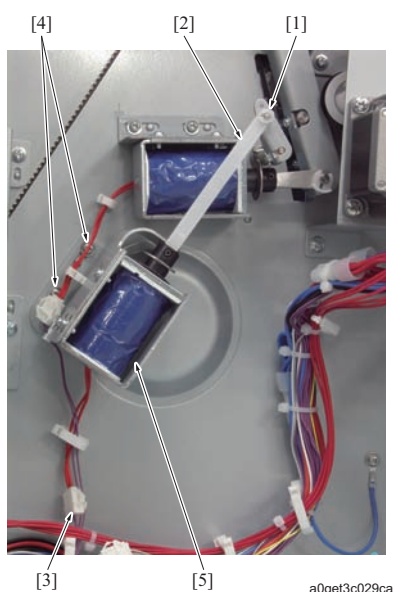
Note

- When reinstalling the parts, be sure to install the wiring harness [4] to the screw hole side [5] of the mounting bracket [2].

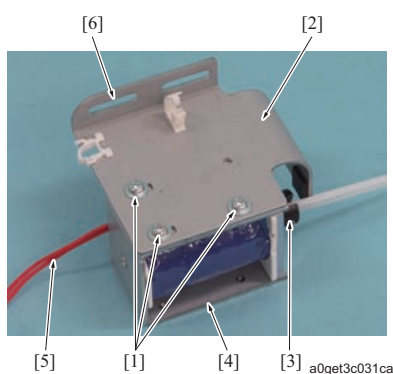
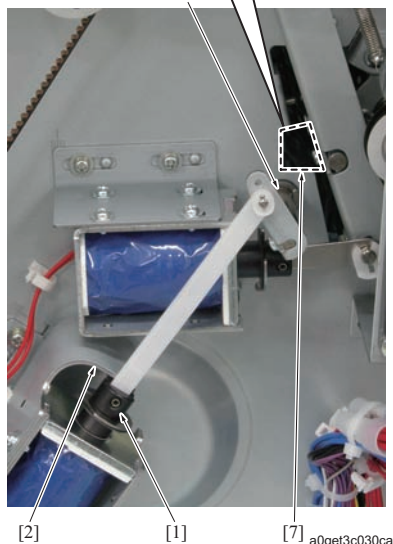
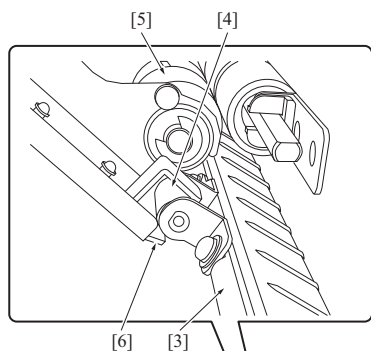
6. Reinstall the above parts following the removal steps in reverse.

8.3.3 Replacing the stacker entrance guide plate solenoid (SD4)**(1) Spotted replaced parts/cycle**

- Stacker entrance guide plate solenoid (SD4)
: Spot replacement (Actual replacement cycle: Every 5,000,000 operations)

(2) Procedure

1. Remove the rear cover. (Refer to [G.6.2.3 Rear cover](#))
2. Remove the C -clip [1] and remove the stacker entrance guide plate arm [2].
3. Disconnect the connector [3].
4. Remove 2 screws [4] and then remove the stacker entrance guide plate solenoid assy [5].

**Note**

- When reinstalling the parts, be sure to fix the stacker entrance guide plate solenoid assy at the position where the roller [4] installed to the drive shaft [3] of the solenoid starts pushing the mounting bracket [6] of the stacker entrance roller [5] with the plunger [1] touching with the mounting bracket [2].
- Check it from the opening [7].

5. Remove 3 screws [1] and remove the mounting bracket [2] and the plunger [3]. Then, remove the stacker entrance guide plate solenoid (SD4) [3].

Note

- When reinstalling the parts, be sure to install the wiring harness [5] to the screw hole side [6] of the mounting bracket [2].

6. Reinstall the above parts following the removal steps in reverse.

9. PERIODICAL MAINTENANCE PROCEDURE FS-521

9.1 Precautions on maintenance

⚠ CAUTION

- Be sure to unplug the power plug from the power outlet.

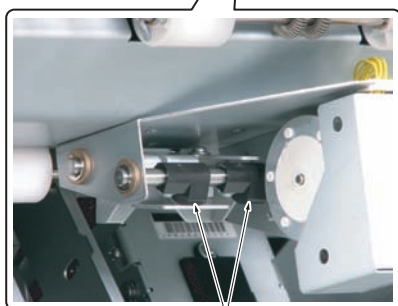
9.2 Conveyance section

9.2.1 Lubrication to bypass roller /Lw pressure release cam

(1) Periodic lubrication parts/Cycle

- Bypass roller /Lw pressure release cam
: Every 3,000,000 prints

(2) Procedure



[1]

a0gyt3c013ca

1. Lubricate to 2 bypass roller /Lw pressure release cams [1].
(Molykote EM-30L)

Note

- Lubricate to the arc of the bypass roller /Lw pressure release cam [1].

9.3 Stacker section

9.3.1 Replacing the intermediate roller release solenoid (SD7)

(1) Periodically replaced parts/Spotted replaced parts/Cycle

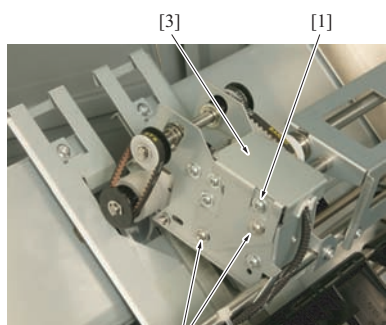
- Intermediate roller release solenoid (SD7)
: Every 5,200,000 prints *1
: Every 5,250,000 prints *2
: Spot replacement (Actual replacement cycle: Every 5,400,000 operations) *3

*1 C6501/C6501P/C65hc

*2 1200/1200P/1051

*3 C8000

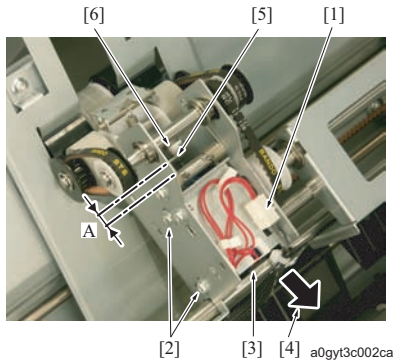
(2) Procedure



[2]

a0gyt3c001ca

1. Open the front door and pull out the stacker unit.
2. Remove the screw [1] and 2 screws [2] and then remove the cover [3].



3. Disconnect the connector [1] and 2 screws [2], and then remove the intermediate roller release solenoid [3] to the allowed direction [4].

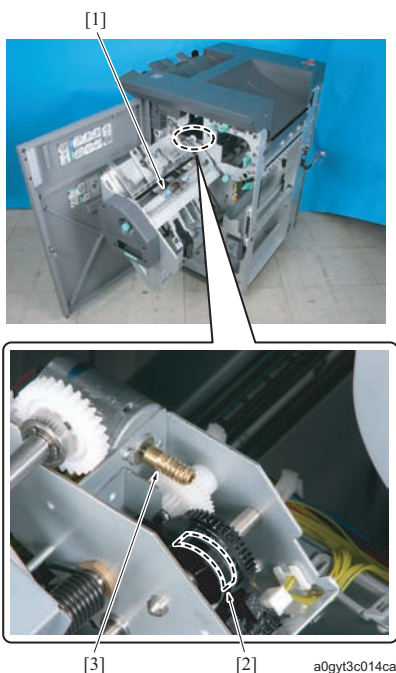
Note

- When installing it, insert the pin of the plunger [5] to the groove [6] on the resin.
- When installing it, install with the screw [2] so that the stroke A of the plunger gets to the standard value.
Standard value: A = 5.0mm to 6.0mm

4. Reinstall the above parts following the removal steps in reverse.

9.3.2 Lubrication to worm gear and cam**(1) Periodic lubrication parts/Cycle**

- Worm gear and cam: Every 3,000,000 prints

(2) Procedure

1. Pull out the stacker unit [1] and lubricate to the cam [2] and all over around the worm gear [3]. (Molykote EM-30L)

9.4 Stapler section**9.4.1 Replacing the stapler assy****(1) Spotted replaced parts/cycle**

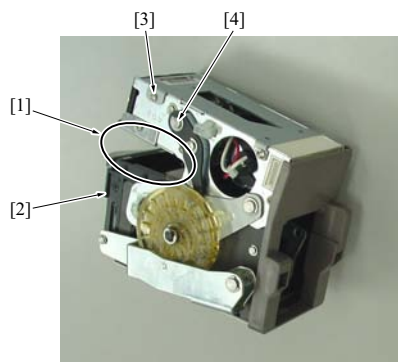
- Stapler assy /Fr
: Spot replacement (Actual replacement cycle: Every 500,000 staples)
- Stapler assy /Rr
: Spot replacement (Actual replacement cycle: Every 500,000 staples)

(2) Pre-arrangement for replacing the stapler assy**⚠ CAUTION**

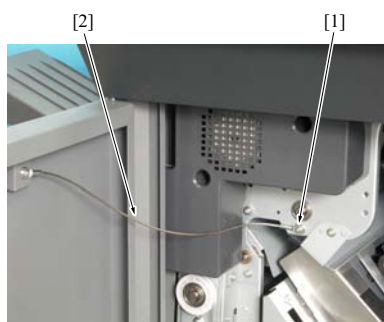
- After moving the stapler, be sure to unplug the power plug from the power outlet.

Note

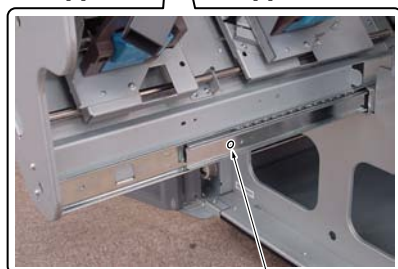
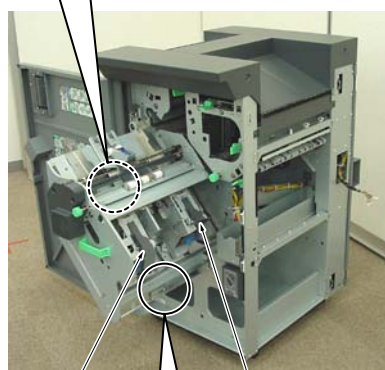
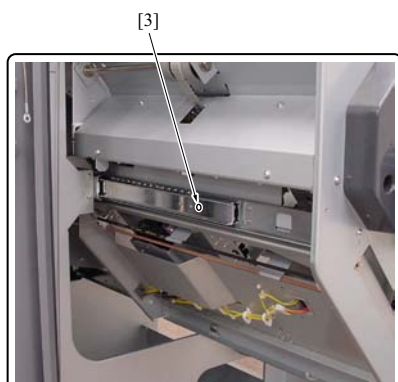
- Be careful not to get your hand caught in the opening [1] of the stapler assy.
- Pressing the staple side [2] and/or the clinch side [3] cause the opening [1] to close unexpectedly. It is very difficult to open the opening by hand once it has closed. So, be careful not to close it.
- When holding the stapler assy, be sure to hold it at both ends of the cam shaft [4].



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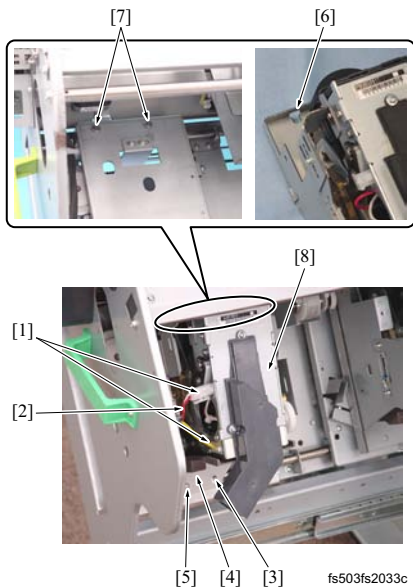
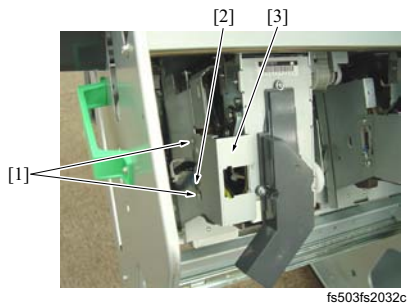
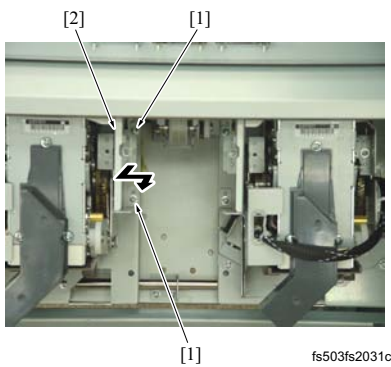
a0gyt3c015ca



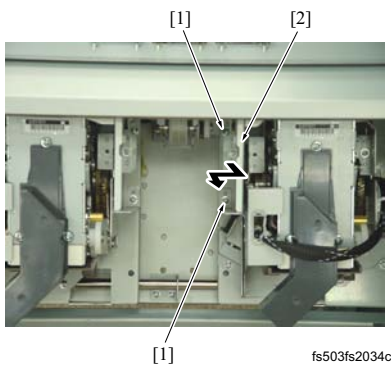
fs503fs2005c

1. Select 2 sheets A4 originals with 1-staple at the upper right corner, make a print and then move the stapler to the stapling position.
2. Turn OFF the power switch (SW2) and the main power switch (SW1) of the main body and unplug the power plug from the power outlet.
3. Open the front door and pull out the stacker unit.
4. Remove the screw [1] of the wire [2].

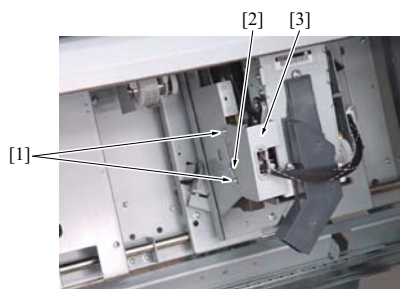
5. Remove the stapler cartridges /Fr [1] and /Rr [2].
6. Remove the screws [3], 1 each, of the stoppers provided in front and rear and pull further out the stacker unit.
7. Reinstall the above parts following the removal steps in reverse.

(3) Stapler assy /Fr

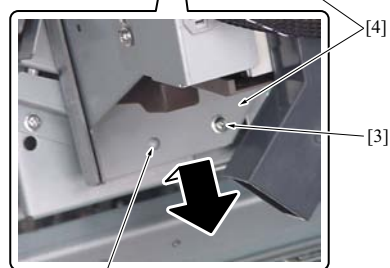
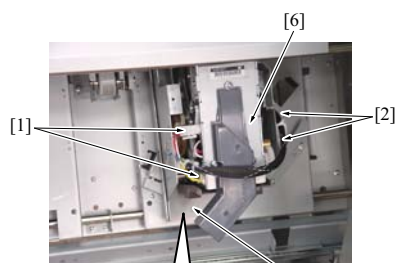
1. Conduct "F.9.4.1.(2) Pre-arrangement for replacing the stapler assy."
2. Remove 2 screws [1] and then remove the stacker entrance roller mounting plate /Fr [2].
3. Remove 2 screws [1] and then remove the ground [2] and the metal fitting [3].
4. Disconnect 2 connectors [1] and remove the wire binding band [2].
5. Remove 1 screw [3] and raise the lower section of the stapler assy mounting plate [4] a little to remove it from the notch [5]. Slide the upper notch [6] to the lower side to release it from the pin [7] and then remove the stapler assy /Fr [8] together with the mounting plate [4].
6. Reinstall the above parts following the removal steps in reverse.
7. After replacing the stapler assy /Fr, conduct the following item.
For fusing roller assy: Counter reset of the parts counter No.193

(4) Stapler assy /Rr

1. Conduct "F.9.4.1.(2) Pre-arrangement for replacing the stapler assy."
Note
 - The following steps are the removal steps using a short driver. When using a driver of a regular length, removal of the stapler assy /Rr is available only when the stapler assy /Fr has been already removed. When using a regular length driver, be sure to remove the stapler assy /Fr in advance by following the steps given in "F.9.4.1.(3) Stapler assy /Fr."
2. Remove 2 screws [1] and then remove the stacker entrance roller mounting plate /Rr [2].



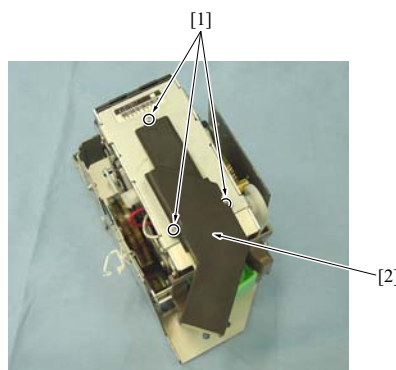
fs503fs2035c



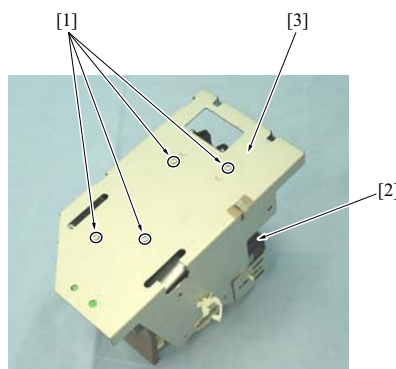
1050fs2036c

3. Remove 2 screws [1] and then remove the ground [2] and the metal fitting [3].
4. Disconnect 2 connectors [1] and remove 2 wire binding bands [2].
5. In the same procedure as the step 5 of the stapler /Fr, remove the screw [3] and raise the lower portion of the stapler mounting plate [4] a little to remove it from the notch [5]. Slide it to the lower side and remove the stapler /Rr [6] together with the mounting plate [4].
6. Reinstall the above parts following the removal steps in reverse.
7. After replacing the stapler assy /Rr, conduct the following item.
For stapler assy /Rr: Counter reset of the parts counter No.194

(5) Replacing the stapler assy



fs503fs2012c



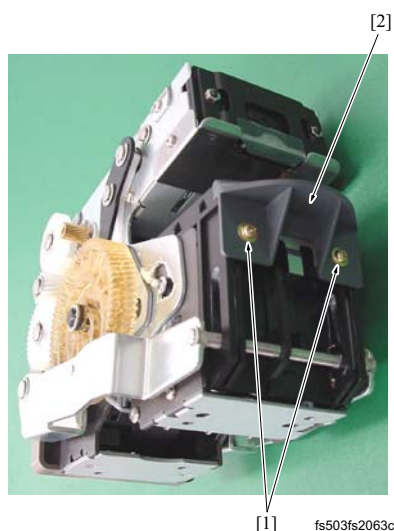
fs503fs2013c

1. Conduct the following operations.
 - [F.9.4.1.\(2\) Pre-arrangement for replacing the stapler assy](#)
 - [F.9.4.1.\(3\) Stapler assy /Fr](#)
 - [F.9.4.1.\(4\) Stapler assy /Rr](#)
2. Remove 3 screws [1] together with the stapler assys /Fr and Rr, and then remove the cut staple duct [2].

3. Remove 4 screws [1] together with the stapler assys /Fr and Rr, and then remove the bracket [3] from the stapler [2].

Note

- Take note that the brackets for the stapler assys /Fr and / Rr are different in the position where the wire binding band is attached.

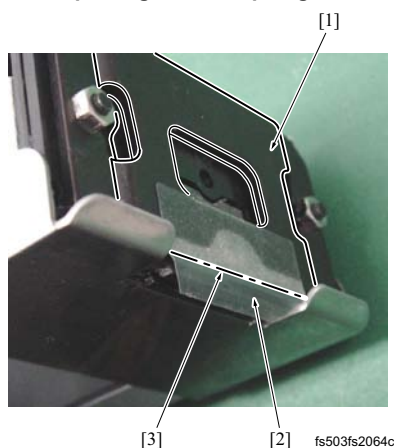


4. Remove 2 screws [1] and then remove the stapler guide block [2].
5. Reinstall the above parts following the removal steps in reverse.

(6) Checking of the stapler guide seal

Note

- The pasting of the stapler guide seal is limited only to the stapler assy /Rr.



1. Conduct the following operations.
 - [F.9.4.1.\(2\) Pre-arrangement for replacing the stapler assy](#)
 - [F.9.4.1.\(4\) Stapler assy /Rr](#)
 - [F.9.4.1.\(5\) Replacing the stapler assy](#)
2. The stapler guide seal [2] must be pasted on the clincher side [1] of the new stapler assy /Rr.

Note

- Be sure to align the end line [3] on the clincher side [1] with the bend line of the stapler guide seal [2] and paste it with no slippage (tolerance: 0.5mm).
- Be sure to check the guide seal to ensure it is not damaged or soiled.

9.4.2 Replacing the staples

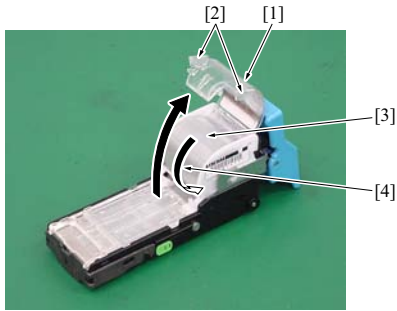
(1) Periodically replaced parts/cycle

- Staple cartridge
- : Every 5,000 staples

(2) Procedure



1. Open the front door and pull out the stacker unit.
2. Pull the stapler cartridge knob [1] in the arrow-marked direction to remove it.

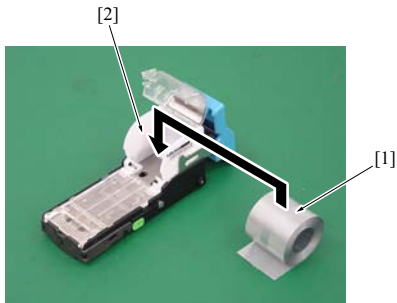


fs503fs2043c

3. Hold the knob [2] of the cover [1] and open it.
4. Rotate and wind up carefully the remaining refill staples [3] to the arrow-marked direction [4] and take it out.

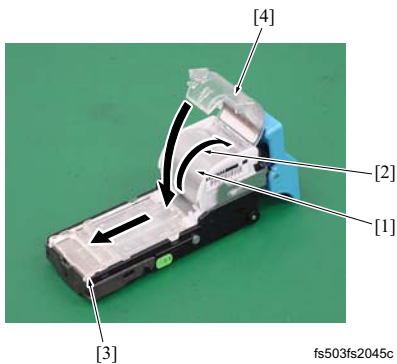
Note

- Be careful when handling the refill staples since they are apt to break away.



fs503fs2044c

5. With the refill staples [1] set as shown in the drawing, place them gently in the pocket [2] of the stapler cartridge.



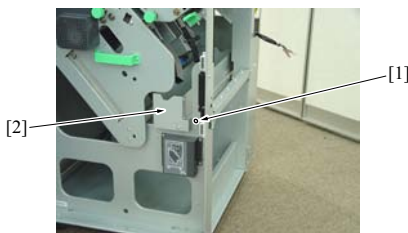
fs503fs2045c

6. Feed the refill staples [1] by hand to the arrow-marked direction [2] and get the tip of the refill staples near to the stapling position [3]. New refill staples are attached with a lead sheet.

Note

- The tip of the refill staples can be pulled up to the stapling position by this lead sheet.

7. Close the cover [4].
8. Reinstall the above parts following the removal steps in reverse.

9.4.3 Cleaning the cut staple box**(1) Procedure**

fs503fs2037c

1. Open the front door.
2. Remove the screw [1] and pull out the cut staple box [2].
3. Reinstall the above parts following the removal steps in reverse.

9.5 Main tray section**9.5.1 Replacing the paper exit roller****(1) Periodically replaced parts/Spotted replaced parts/Cycle**

- Paper exit roller /A (sponge roller)
 - : Every 600,000 prints^{*1}
 - : Every 750,000 prints^{*2}
 - : Spot replacement (Actual replacement cycle: Every 600,000 feeds)^{*3}

^{*1} C6501/C6501P/C65hc

^{*2} 1200/1200P/1051

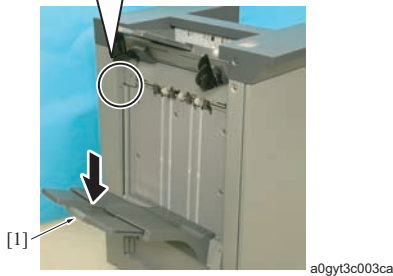
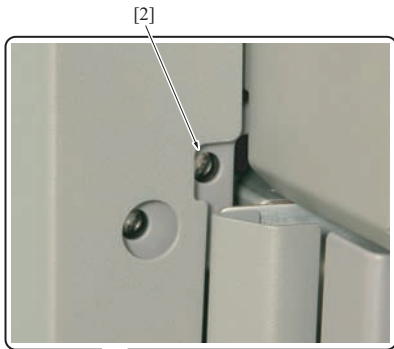
^{*3} C8000/C7000/C7000P/C70hc/C6000

⚠ CAUTION

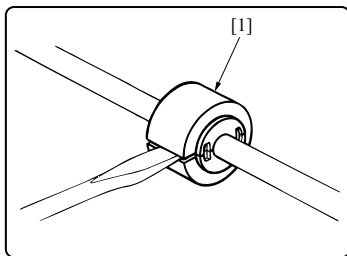
- After having lowered the main tray, be sure to unplug the power plug from the power outlet.

Note

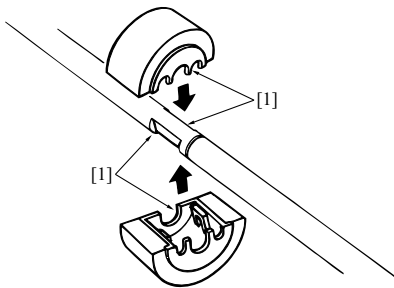
- When replacing the paper exit rollers /A (sponge roller), be sure to replace all 4 pairs of rollers (8 rollers in all).

(2) Procedure

a0gyt3c003ca



fs503fs2003c



fs503fs2004c

1. Turn ON the sub power switch (SW2), lower the main tray [1] blocking the light of the tray upper limit sensor (PS16) [2] during up and down operation of the main tray, and then turn OFF the main power switch (SW1) and the sub power switch (SW2) of the main body.
2. Unplug the power plug of the main body from the power outlet.

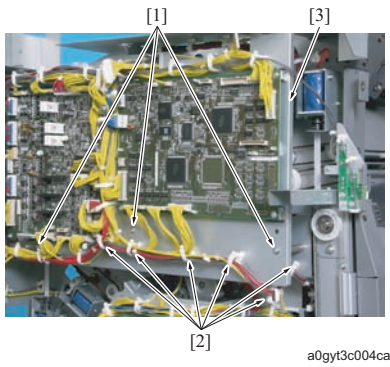
3. Insert a driver into the groove of the sponge roller [1] and remove the sponge roller [1] by prizing it open.

4. With each of the depressions [1] of a new sponge roller and the shaft brought together, press the sponge roller until it clicks to fit it in securely.
5. After replacing the paper exit roller /A (sponge roller), conduct the following item.
Counter reset of the parts counter No.196

9.5.2 Replacing the paper exit opening solenoid assy (SD9)**(1) Periodically replaced parts/Spotted replaced parts/Cycle**

- Paper exit opening solenoid assy (SD9)
 - : Every 5,200,000 prints *¹
 - : Every 5,250,000 prints *²
 - : Spot replacement (Actual replacement cycle: Every 5,400,000 operations) *³

*¹ C6501/C6501P/C65hc*² 1200/1200P/1051*³ C8000

(2) Procedure

1. Remove the upper cover /1/. (Refer to [G.7.2.4 Upper cover /1/](#))
2. Remove the rear cover. (Refer to [G.7.2.7 Rear cover](#))
3. Remove 3 screws [1].
4. Remove the wiring harness from 6 wiring harness guides [2] and slide the board mounting plate [3] backward.

Note

- Be sure not to break the wiring harness when moving the board mounting plate [3].

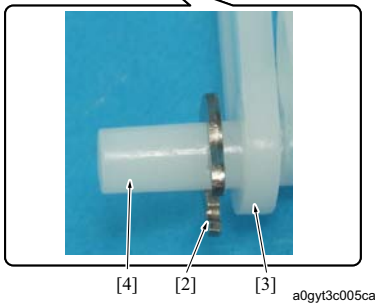


5. Disconnect the connector [1].
6. Remove the G-ring [2] and then remove the arm [3] from the pin [4].

Note

- Be sure to install the G-ring [2] to the position about 2mm away from the arm [3] so that the arm is free to move.
- Since the pin [4] does not have a groove, be sure to check that the G-ring is fixed securely so that it does not come off from the pin.

7. Remove 2 screws [5] and then remove the paper exit opening solenoid assy (SD9) [6] together with the mounting plate [7].

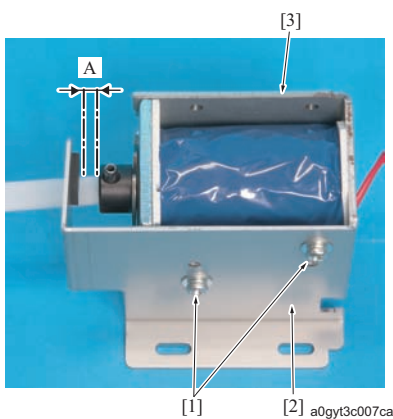


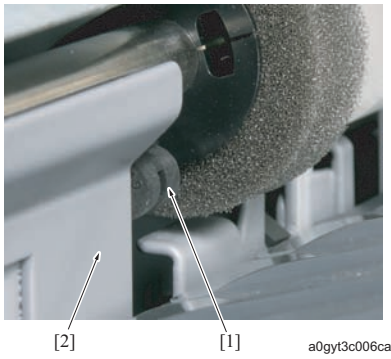
8. Remove 2 screws [1] and then remove the paper exit opening solenoid assy (SD9) [3] from the mounting plate [2].

Note

- Be sure to check that the stroke of the plunger is the standard value A.
Standard value A = 5mm ± 0.5mm

9. Reinstall the above parts following the removal steps in reverse.





10. Standard value when reinstalling the paper exit opening solenoid unit

Note

- Hold the paper exit opening solenoid (SD9) temporarily with screws and lower the mounting plate of the paper exit opening solenoid assy once, then slide it upward to tighten it fully at the position where the paper press arm [1] starts moving and protrudes for the standard value from the paper stopper plate [2].
Standard value A = -0.5mm to +0.5mm

10. PERIODICAL MAINTENANCE PROCEDURE LS-505

10.1 Precautions on maintenance

⚠ CAUTION

- Be sure to unplug the power plug from the power outlet.

10.2 Conveyance section

10.2.1 Replacing the stacker tray up down motor (M1)

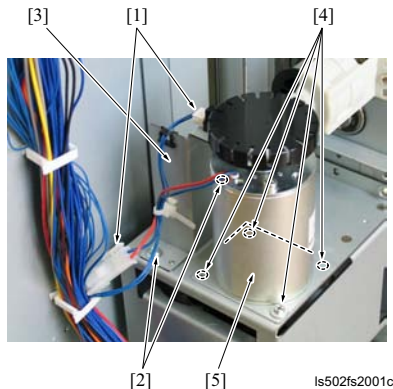
(1) Periodically replaced parts/Spotted replaced parts/Cycle

- Stacker tray up down motor (M1)
: Every 1,500,000 prints *¹ (Actual replacement cycle: Every 5,000,000 feeds *²)

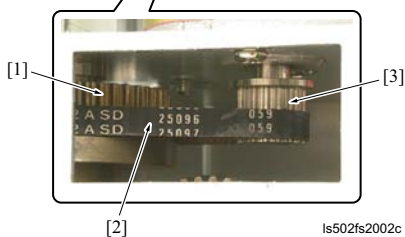
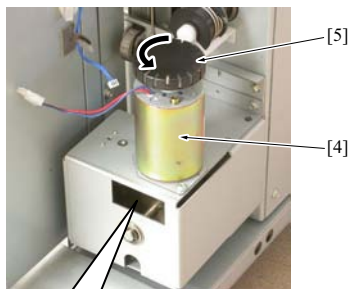
*¹ The periodical replacement is only for 1200/1200P/1051.

*² Actual replacement cycle of 1250/1250P/1052/1200/1200P/1051/C8000

(2) Procedure

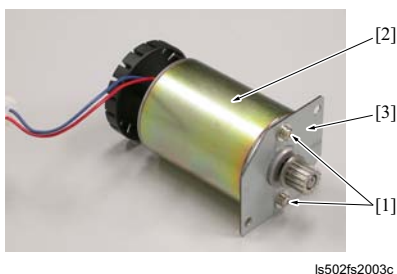


1. Remove the rear cover /Lw. (Refer to [G.8.2.2 Cover](#))
2. Disconnect 2 connectors [1].
3. Remove 2 screws [2] and remove the sensor mounting plate [3].
4. Remove 4 screws [4] and remove the stacker tray up down motor (M1) [5].



5. Check point when reinstalling the stacker tray up down motor (M1)
Note

- When reinstalling the stacker tray up down motor (M1), be sure to check that the belt [2] has been engaged with the gear [1], and then engage it with the gear [3] before fastening the stacker tray up down motor (M1) [4].
- When the belt [2] is not horizontally attached between the gear [1] and the gear [3], make adjustments by rotating the encoder [5] counterclockwise.



6. Remove 2 screws [1] and remove the motor mounting plate [3] from the stacker tray up down motor (M1) [2].
7. Reinstall the preceding parts following the removal steps in reverse.
8. After replacing the part, be sure to reset the parts counter.
 - No.250, No.255 or No.245 (1250/1250P/1052)
 - No.216 or No.221 (1200/1200P/1051)
 - No.219 or No.224 (C8000)

10.2.2 Replacing the paper press solenoid /3 (SD8)

(1) Periodically replaced parts/Spotted replaced parts/Cycle

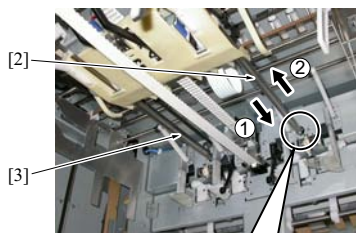
- Paper press solenoid /3 (SD8)
: Every 1,500,000 prints *¹ (Actual replacement cycle: Every 5,000,000 feeds *²)

*¹ The periodical replacement is only for 1200/1200P/1051.

*² Actual replacement cycle of 1250/1250P/1052/1200/1200P/1051/C8000

(2) Procedure**Note**

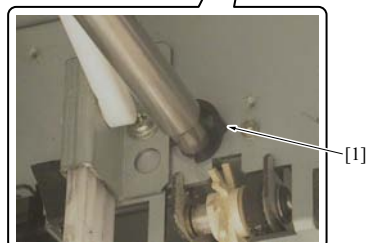
- When conducting this operation, be sure to bring the stacker tray down to the bottom in advance.



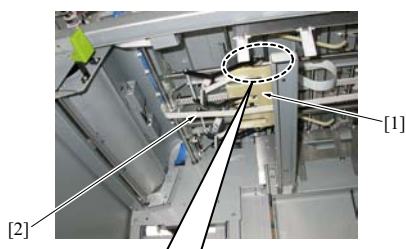
1. Remove the C-clip [1].
2. Slide the guide rail [2] in the arrow-marked direction and release the fixing.

Note

- In this step, be careful not to release the fixing on the rear guide rail [3].



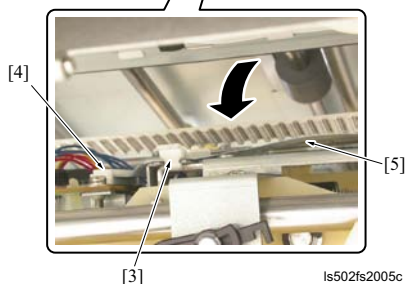
ls502fs2004c



3. Slant the shift unit [1] to the front side so that you can see the upper surface of it.

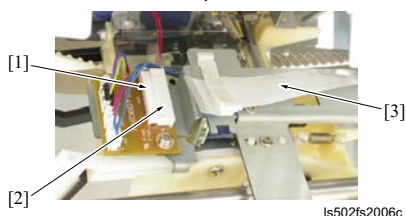
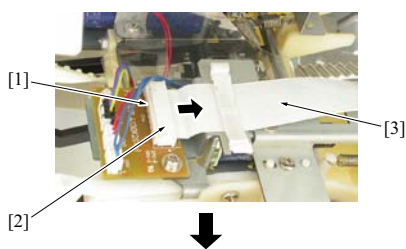
Note

- Be sure to slide the shift unit about 10cm to the right in advance.
- Be careful that the belt [2] does not get pushed down by the bottom of the shift unit.



ls502fs2005c

4. Release the cable stopper [3] and remove the ribbon cable [5] from the connector [4].



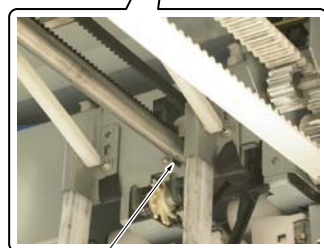
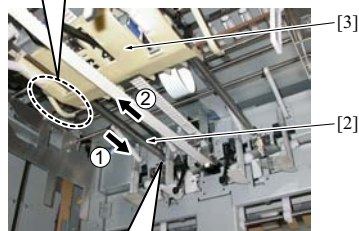
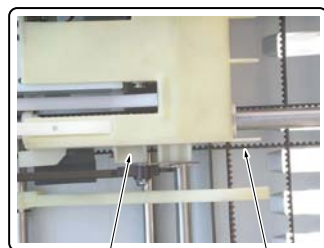
ls502fs2006c

5. How to handle the ribbon cable

Note

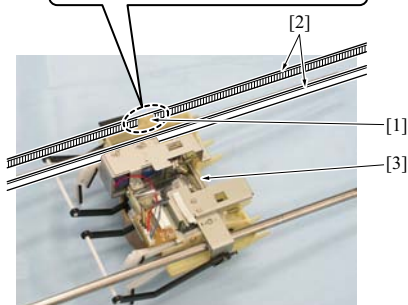
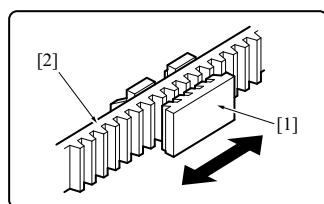
- Slide the lock [2] of the connector [1] for the ribbon cable in the arrow-marked direction and remove the ribbon cable [3].

When reinstalling the ribbon cable, slide the lock in the reverse direction after inserting the cable.



[1] ls502fs2007c

6. Remove the C-clip [1].
7. Slide the guide rail [2] in the arrow-marked direction and release the fixing.
8. Remove the belt [5] from the stopper section [4] of the shift unit [3].

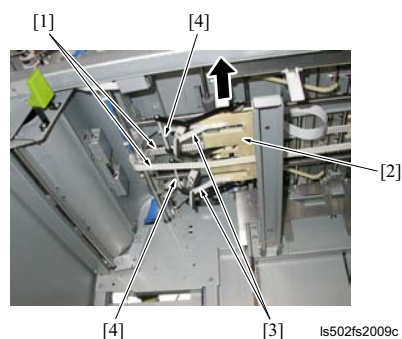


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9. Check point when reinstalling the belt

Note

- When attaching the belt [2] to the stopper section [1], slide the shift unit [3] in the arrow-marked direction and engage the stopper section with the belt.

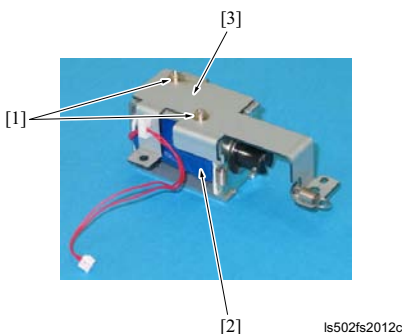
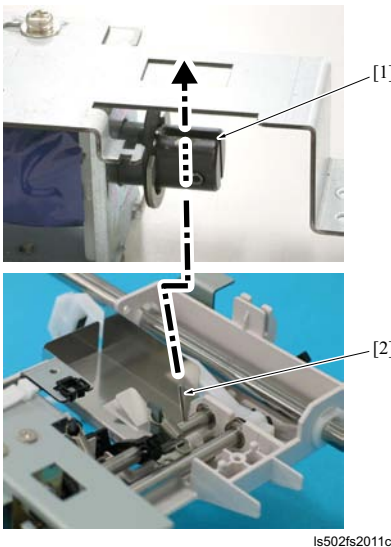
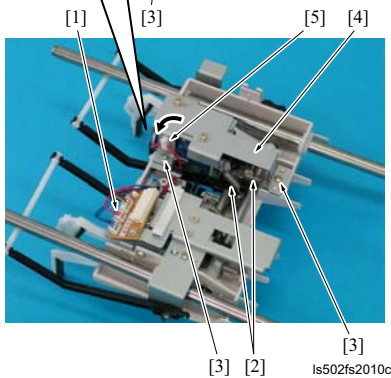
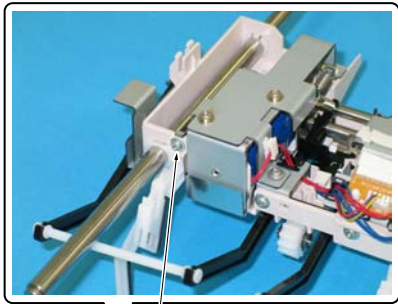


[1] [4] [3] ls502fs2009c

10. Remove the shift unit [2] through the clearance between the belts [1].

Note

- When removing the conveyance unit [2], be careful that the edge stoppers [3] and the paper pressure arms [4] do not contact the belt [1].



11. Disconnect the connector [1].
12. Remove 2 springs [2].
13. Rotate the wire saddle [5] in the arrow-marked direction and remove it.
14. Remove 3 screws [3] and remove the paper press solenoid /3 assy [4].

15. Check point when reinstalling the paper press solenoid /3 assy

Note

- When reinstalling the paper press solenoid /3 assy, be sure to insert the pin [2] of the shaft into the slit section [1] at the tip of the solenoid.

16. Remove 2 screws [1] and remove the solenoid mounting plate [3] from the paper press solenoid /3 (SD8) [2].
17. Reinstall the preceding parts following the removal steps in reverse.
18. After replacing the part, be sure to reset the parts counter.
 - No.249, No.254 or No.259 (1250/1250P/1052)
 - No.215 or No.220 (1200/1200P/1051)
 - No.218 or No.223 (C8000)

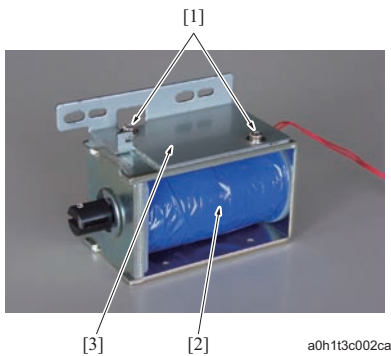
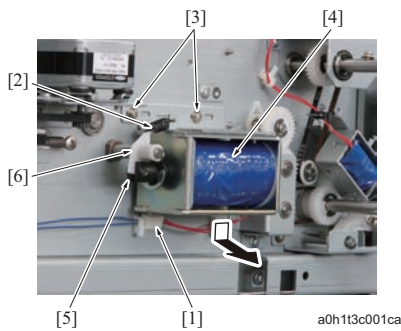
10.2.3 Replacing the paper press solenoid /1 (SD6)

(1) Periodically replaced parts/Spotted replaced parts/Cycle

- Paper press solenoid /1 (SD6)
: Every 1,500,000 prints *1 (Actual replacement cycle: Every 5,000,000 feeds *2)

*1 The periodical replacement is only for 1200/1200P/1051.

*2 Actual replacement cycle of 1250/1250P/1052/1200/1200P/1051/C8000

(2) Procedure

1. Remove the front covers /Up and /Lw. (Refer to [G.8.2.2 Cover](#))
2. Disconnect the connector [1].
3. Remove the spring [2].
4. Remove 2 screws [3] and remove the paper press solenoid /1 assy [4].

Note

- When reinstalling the paper press solenoid /1 assy, be sure to insert the actuator [6] provided at the tip of the shaft into the slit section [5] at the tip of the solenoid.

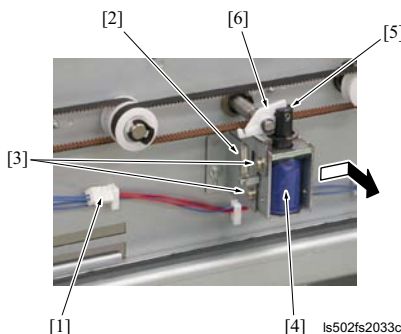
5. Remove 2 screws [1] and remove the solenoid mounting plate [3] from the paper press solenoid /1 (SD6) [2].
6. Reinstall the preceding parts following the removal steps in reverse.
7. After replacing the part, be sure to reset the parts counter.
 - No.246, No.251 or No.256 (1250/1250P/1052)
 - No.218 or No.223 (1200/1200P/1051)
 - No.215 or No.220 (C8000)

10.2.4 Replacing the paper press solenoid /2 (SD7)**(1) Periodically replaced parts/Spotted replaced parts/Cycle**

- Paper press solenoid /2 (SD7)
- : Every 1,500,000 prints ^{*1} (Actual replacement cycle: Every 5,000,000 feeds ^{*2})

^{*1} The periodical replacement is only for 1200/1200P/1051.

^{*2} Actual replacement cycle of 1250/1250P/1052/1200/1200P/1051/C8000

(2) Procedure

1. Remove the front covers /Up and /Lw. (Refer to [G.8.2.2 Cover](#))
2. Disconnect the connector [1].
3. Remove the spring [2].
4. Remove 2 screws [2] and remove the paper press solenoid /2 (SD7) [4].

Note

- When reinstalling the paper press solenoid /2 (SD7), be sure to insert the actuator [6] provided at the tip of the shaft into the slit section [5] at the tip of the solenoid.

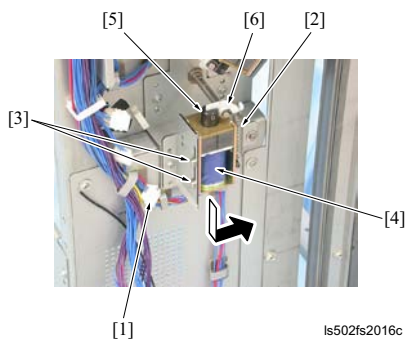
5. Reinstall the preceding parts following the removal steps in reverse.
6. After replacing the part, be sure to reset the parts counter.
 - No.248, No.253 or No.258 (1250/1250P/1052)
 - No.214 or No.219 (1200/1200P/1051)
 - No.217 or No.222 (C8000)

10.2.5 Replacing the rear stopper solenoid (SD3)**(1) Periodically replaced parts/Spotted replaced parts/Cycle**

- Rear stopper solenoid (SD3)
- : Every 1,500,000 prints ^{*1} (Actual replacement cycle: Every 5,000,000 feeds ^{*2})

^{*1} The periodical replacement is only for 1200/1200P/1051.

^{*2} Actual replacement cycle of 1250/1250P/1052/1200/1200P/1051/C8000

(2) Procedure

1. Remove the rear cover /Lw. (Refer to [G.8.2.2 Cover](#))
2. Disconnect the connector [1].
3. Remove the spring [2].
4. Remove 2 screws [3] and remove the rear stopper solenoid (SD3) [4].

Note

- When reinstalling the rear stopper solenoid (SD3), be sure to insert the actuator [6] provided at the tip of the shaft into the slit section [5] at the tip of the solenoid.
5. Reinstall the preceding parts following the removal steps in reverse.
 6. After replacing the part, be sure to reset the parts counter.
 - No.247, No.252 or No.257 (1250/1250P/1052)
 - No.213 or No.218 (1200/1200P/1051)
 - No.216 or No.221 (C8000)

11. PERIODICAL MAINTENANCE PROCEDURE FD-503

11.1 Precautions on maintenance

⚠ CAUTION

- Be sure to unplug the power plug from the power outlet.

11.2 Conveyance section

11.2.1 Replacing roller solenoids /1 (SD5) to /4 (SD8)

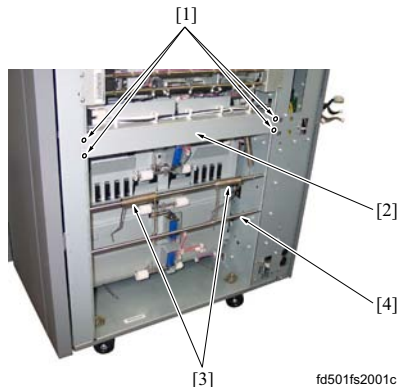
(1) Periodically replaced parts/Spotted replaced parts/Cycle

- Roller solenoid /1 (SD5) to /4 (SD8)
: Every 10,500,000 prints *¹ (Actual replacement cycle: Every 5,000,000 punches *²)

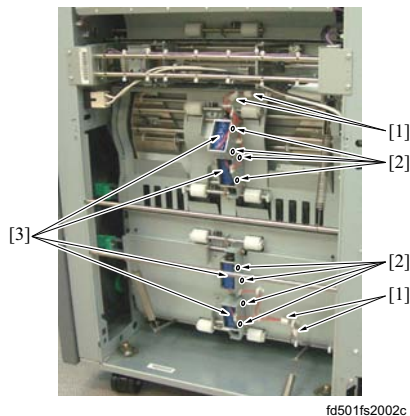
*¹ The periodical replacement is only for 1200/1200P/1051.

*² Actual replacement cycle of 1250/1250P/1052/1200/1200P/1051/C8000

(2) Procedure



1. Remove 4 screws [1] and then remove the cord support board /A [2].
2. Remove the hook of the spring [3] from the shaft [4].



3. Disconnect 4 connectors [1].
4. Remove each of 2 screws [2] and then remove the roller solenoids /1 (SD5) to /4 (SD8) [3].
5. Reinstall the preceding parts following the removal steps in reverse.
6. After replacing the part, be sure to reset the parts counter.
 - No.242 (1250/1250P/1052)
 - No.209 (1200/1200P/1051)
 - No.208 (C8000)
7. Make adjustments of the installation position. (Refer to [I.16.1 Roller solenoids /1 \(SD5\), /2 \(SD6\), /3 \(SD7\) and /4 \(SD8\) position adjustment](#))

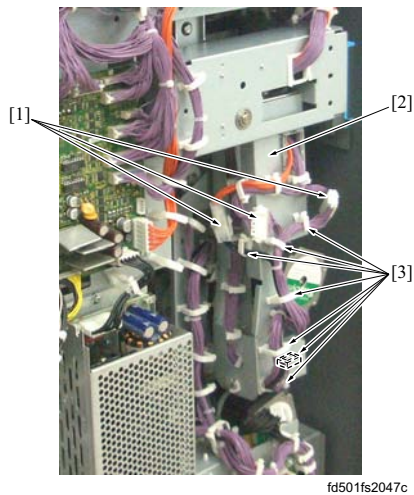
11.2.2 2nd folding roller solenoid (SD18)

(1) Periodically replaced parts/Spotted replaced parts/Cycle

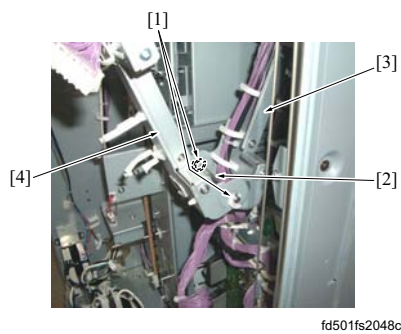
- 2nd folding roller solenoid (SD18)
: Every 10,500,000 prints *¹ (Actual replacement cycle: Every 5,000,000 punches *²)

*¹ The periodical replacement is only for 1200/1200P/1051.

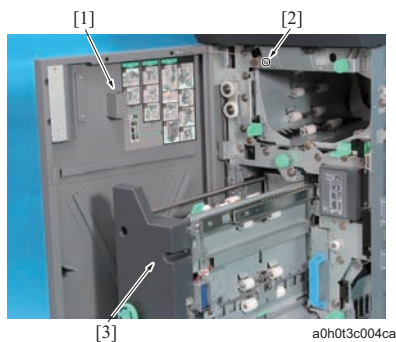
*² Actual replacement cycle of 1250/1250P/1052/1200/1200P/1051/C8000

(2) Procedure

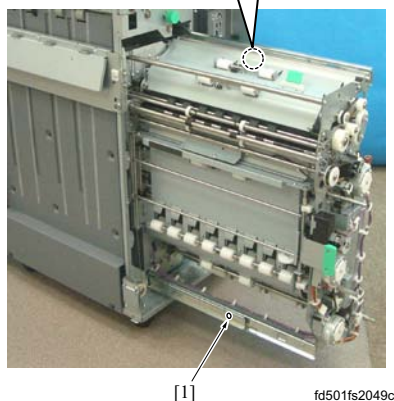
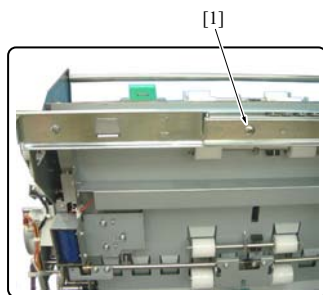
1. Remove the rear cover. (Refer to [G.9.3.4 Rear cover](#))
2. Disconnect 3 connectors [1] and then remove the wiring harnesses from the 7 wiring harness guides [3] of the coupling arm /Rr [2].



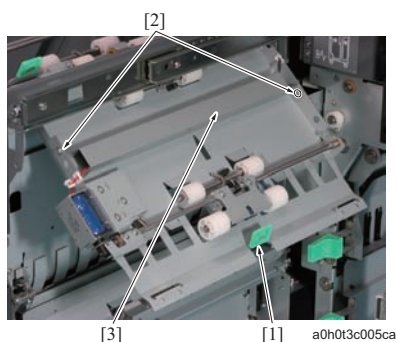
3. Remove 2 C-clips [1].
4. Remove the shaft [2] and separate the coupling arm /Fr [3] and the coupling arm /Rr [4].



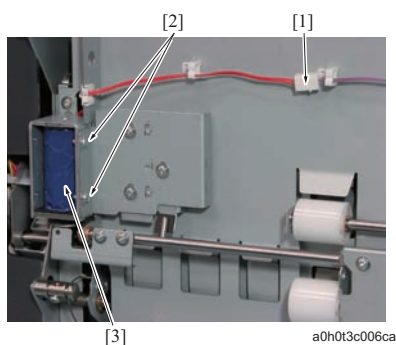
5. Open the front door [1] and then remove the screw [2].
6. Pull out the folding unit [3].



7. Remove the stopper screws [1], 1 each, from the left and right rails and pull further out the folding conveyance section.



8. Open the guide plate [1].
9. Remove 2 screws [2] and then remove the wiring mounting cover [3].



10. Disconnect the connector [1].
11. Remove 2 screws [2] and then remove the 2nd folding roller solenoid (SD18) [3].
12. Reinstall the preceding parts following the removal steps in reverse.
13. After replacing the part, be sure to reset the parts counter.
 - No.243 (1250/1250P/1052)
 - No.210 (1200/1200P/1051)
 - No.209 (C8000)
14. Make adjustments of the installation position. (Refer to [1.16.2 2nd folding roller solenoid \(SD18\) position adjustment](#))

11.3 Punch section

11.3.1 Replacing the punch unit

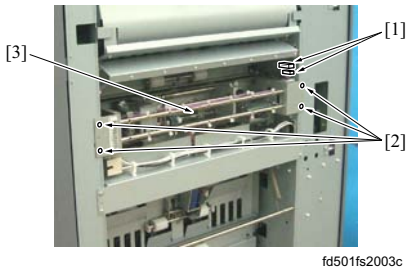
(1) Periodically replaced parts/Spotted replaced parts/Cycle

- Punch unit

: Every 10,500,000 prints ^{*1} (Actual replacement cycle: Every 5,000,000 punches ^{*2})

^{*1} The periodical replacement is only for 1200/1200P/1051.

^{*2} Actual replacement cycle of 1250/1250P/1052/1200/1200P/1051/C8000

(2) Procedure

1. Remove 2 connectors [1].
2. Remove 4 screws [2].
3. Remove the punch unit [3].
4. Reinstall the preceding parts following the removal steps in reverse.
5. After replacing the part, be sure to reset the parts counter.
 - No.241 (1250/1250P/1052)
 - No.208 (1200/1200P/1051)
 - No.207 (C8000)

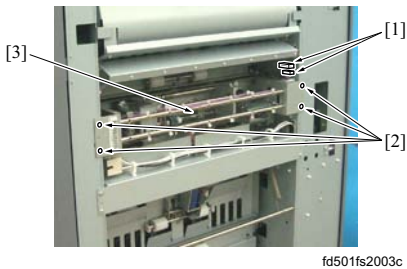
11.3.2 Cleaning the punch shaft and the punch support board**(1) Periodically cleaned parts/cycle**

- Punch shaft
 - : Every 1,400,000 prints (Actual cleaning count: Every 1,000,000 punches) *1
 - : Every 750,000 prints *2
 - : Every 1,500,000 prints *3
- Punch support board
 - : Every 1,400,000 prints (Actual cleaning count: Every 1,000,000 punches) *1
 - : Every 750,000 prints *2
 - : Every 1,500,000 prints *3

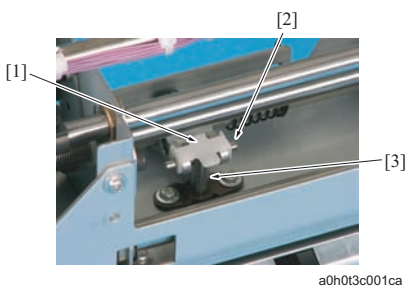
*1 C6501/C6501P/C65hc

*2 1200/1200P/1051

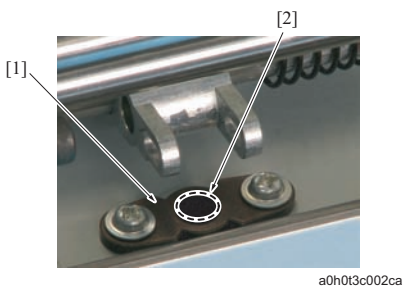
*3 1250/1250P/1052/C8000/C7000/C7000P/C70hc/C6000

(2) Procedure

1. Remove 2 connectors [1].
2. Remove 4 screws [2].
3. Remove the punch unit [3].



4. Remove the plastic stopper [1], and remove the pin [2].
5. Remove the punch shaft [3], and clean the periphery. (Isopropyl alcohol/Cleaning pad)



6. Clean the inner periphery of the hole [2] of the punch support board [1]. (Isopropyl alcohol/Cleaning pad)

11.3.3 Lubricating the punch drive section**(1) Periodically lubricated parts/cycle**

- Punch drive section
 - : Every 1,400,000 prints (Actual lubrication cycle: Every 1,000,000 punches) *1
 - : Every 750,000 prints *2

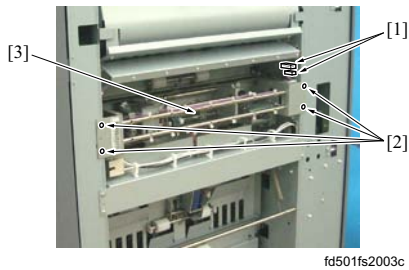
: Every 1,500,000 prints *3

*1 C6501/C6501P/C65hc

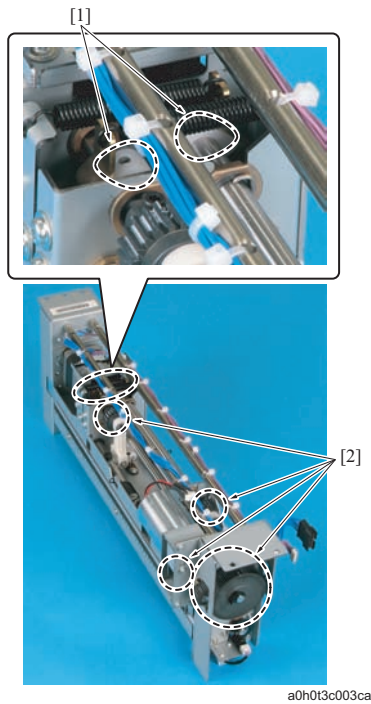
*2 1200/1200P/1051

*3 1250/1250P/1052/C8000/C7000/C7000P/C70hc/C6000

(2) Procedure



1. Remove 2 connectors [1].
2. Remove 4 screws [2].
3. Remove the punch unit [3].



4. Lubricate 2 stopper cams [1] and 8 gears [2]. (Molykote EM-30L)

11.4 Main tray section

11.4.1 Replacing the tray up down motor (M11)

(1) Periodically replaced parts/Spotted replaced parts/Cycle

- Tray up down motor (M11)
 - : Every 5,200,000 prints (Actual replacement cycle: Every 5,000,000 prints) *1
 - : Every 10,500,000 prints (Actual replacement cycle: Every 5,000,000 prints) *2
 - : Spot replacement (Actual replacement cycle: Every 5,000,000 prints) *3

*1 C6501/C6501P/C65hc

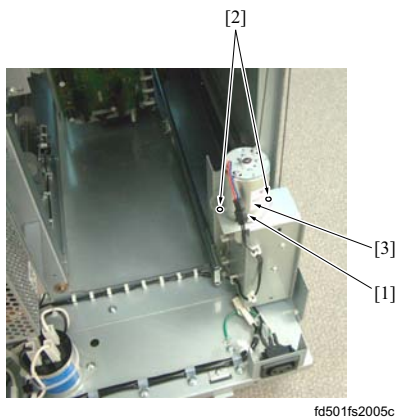
*2 1200/1200P/1051

*3 1250/1250P/1052/C8000

(2) Procedure

Note

- Be sure to remove the tray up down motor (M11) while supporting the up/down stay with your hands.



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1. Remove the rear cover (refer to [G.9.3.4 Rear cover](#)) and the left cover /Rr (refer to [G.9.3.6 Left cover /Rr](#)).
2. Open the front door and pull out the folding unit.
3. Disconnect the connector [1].
4. Remove 2 screws [2] and then remove the tray up down motor (M11) [3].
5. Reinstall the preceding parts following the removal steps in reverse.
6. After replacing the part, be sure to reset the parts counter.
 - No.244 (1250/1250P/1052)
 - No.211 (1200/1200P/1051)
 - No.210 (C8000)
 - No.161 (C6501/C6501P/C65hc)

11.5 PI section

11.5.1 Replacing the pick-up rubber (Upper stage)

(1) Periodically replaced parts/Spotted replaced parts/Cycle

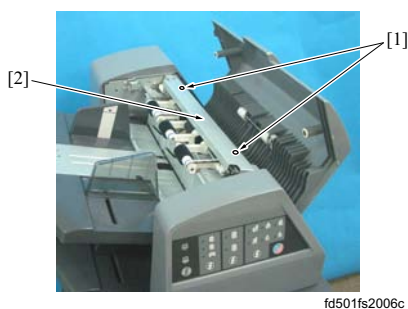
- Pick-up rubber
 - : Every 5,200,000 prints (Actual replacement cycle: Every 200,000 feeds) * 1
 - : Every 5,250,000 prints (Actual replacement cycle: Every 200,000 feeds) * 2
 - : Spot replacement (Actual replacement cycle: Every 200,000 feeds) * 3

* 1 C6501/C6501P/C65hc

* 2 1200/1200P/1051

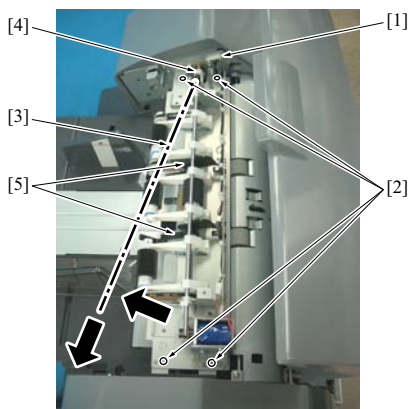
* 3 1250/1250P/1052/C8000/C7000/C7000P/C70hc/C6000

(2) Procedure



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1. Open the upper door.
2. Remove 2 screws [1] and then remove the protective cover [2].

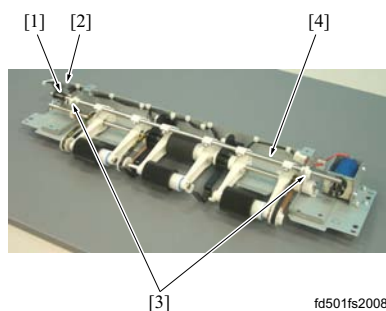


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3. Disconnect the connector [1].
4. Remove 4 screws [2] and then remove the pick-up unit /Up [3].

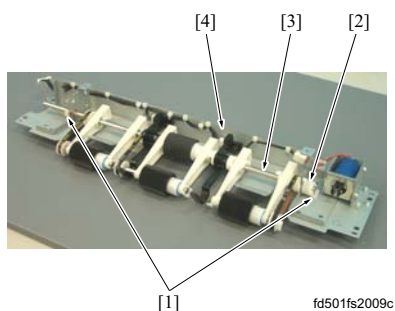
Note

- The rear side of the shaft is inserted into the coupling [4]. Be sure to remove the pick-up unit /Up [3] from the front side.
- Be careful not to damage 2 actuators [5] of the pick-up unit /Up.

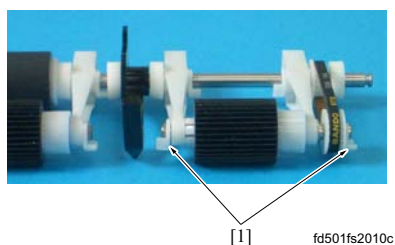


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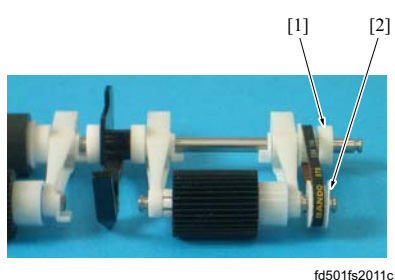
5. Remove the hook of the spring [1] from the mounting plate [2].
6. Remove 2 C-clips [3] and then remove the shaft [4].



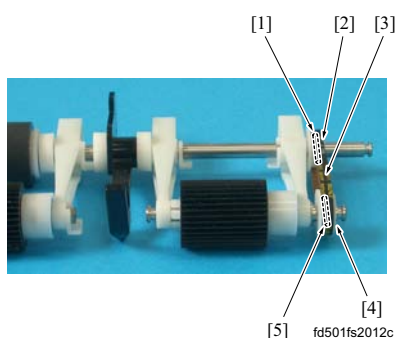
7. Remove 2 C-clips [1].
8. Remove the shaft fixing piece [2], and then remove the shaft [3] from the mounting plate [4].



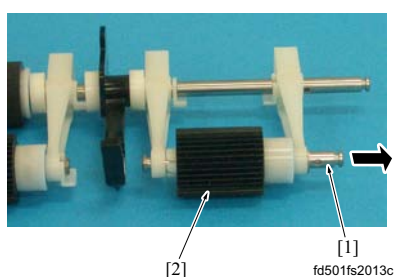
9. Remove 2 C-clips [1].



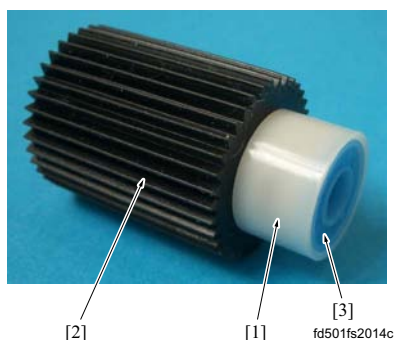
10. Remove the spacer [1] and the belt restriction plate [2].



11. Remove the belt [2] from the gears [2] and [4], and then remove the gears [2] and [4] and the pin [5] from the pick-up roller shaft [4].



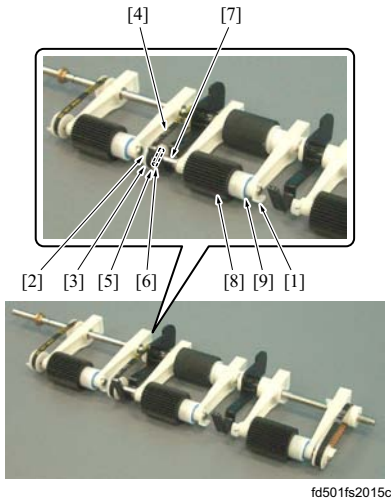
12. Pull out the pick-up roller shaft [1] to the front side, and remove the pick-up roller assy [2].



13. Remove the pick-up roller [1] and replace the pick-up rubber [2].

Note

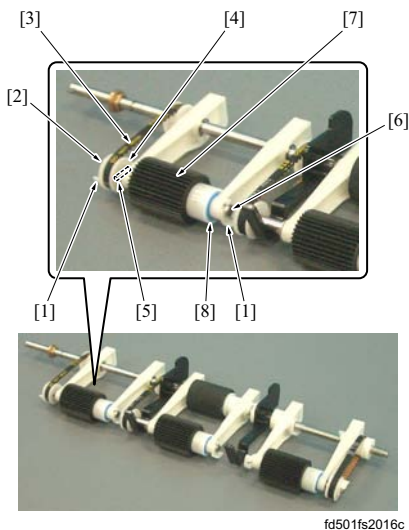
- Be sure to install the pick-up roller so that the one-way clutch [3] (blue) is on the front side.



14. Remove the C-clip [1].
15. Remove the E-ring [2].
16. Remove the belt restriction plate [3].
17. Remove the belt [4] from the gear [5], and then remove the gear [5] and the pin [6] from the pick-up roller shaft [7].
18. Pull out the pick-up roller shaft [7] to the rear side, and remove the pick-up roller assy [8].
19. Remove the pick-up roller and replace the pick-up rubber.

Note

- Be sure to install the pick-up roller so that the one-way clutch [9] (blue) is on the front side.



20. Remove 2 C-clips [1].
21. Remove the belt restriction plate [2].
22. Remove the belt [3] from the gear [4], and then remove the gear [4] and the pin [5] from the pick-up roller shaft [6].
23. Pull out the pick-up roller shaft [6] from the rear side, and remove the pick-up roller assy [7].
24. Remove the pick-up roller and replace the pick-up rubber.

Note

- Be sure to install the pick-up roller so that the one-way clutch [8] (blue) is on the front side.

25. After replacing the part, be sure to reset the parts counter.

- No.235 (1250/1250P/1052)
- No.202 (1200/1200P/1051)
- No.201 (C8000/C7000/C7000P/C70hc/C6000)
- No.152 (C6501/C6501P/C65hc)

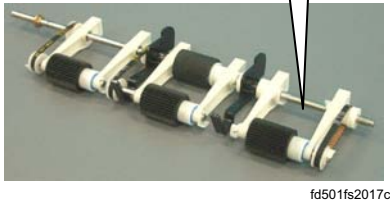
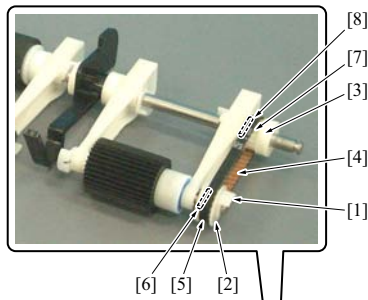
11.5.2 Replacing the paper feed rubber (Upper stage)**(1) Periodically replaced parts/Spotted replaced parts/Cycle**

- Paper feed rubber
 - : Every 2,200,000 prints (Actual replacement cycle: Every 100,000 feeds)* 1
 - : Every 2,250,000 prints (Actual replacement cycle: Every 100,000 feeds)* 2
 - : Spot replacement (Actual replacement cycle: Every 100,000 feeds)* 3

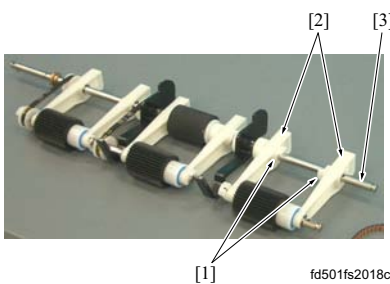
* 1 C6501/C6501P/C65hc

* 2 1200/1200P/1051

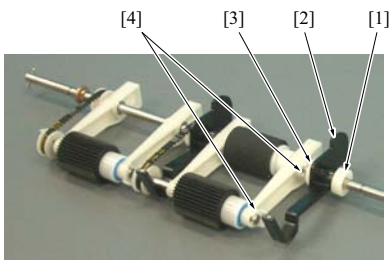
* 3 1250/1250P/1052/C8000/C7000/C7000P/C70hc/C6000

(2) Procedure

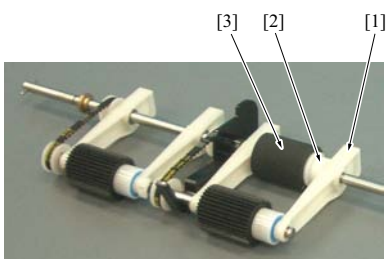
fd501fs2017c



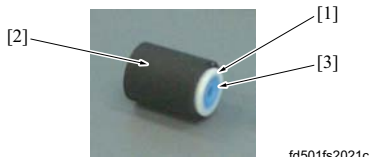
fd501fs2018c



fd501fs2019c



fd501fs2020c



fd501fs2021c

1. Conduct the steps 1 to 8 in "F.11.5.1 Replacing the pick-up rubber (Upper stage)" and remove the pick-up roller unit.
2. Remove the C-clip [1].
3. Remove the belt restriction plate [2].
4. Remove the spacer [3].
5. Remove the belt [4].
6. Remove the gear [5] and the pin [6].
7. Remove the gear [7] and the pin [8].

8. Remove 2 C-clips [1] and then remove the entire paper feed arm [2] from the paper feed shaft [3].

9. Remove the spacer [1].
10. Remove the actuator [2].
11. Remove the spacer [3].
12. Remove 2 C-clips [4].

13. Remove the paper feed arm [1].
14. Remove the spacer [2].
15. Remove the paper feed roller assy [3].

16. Remove the paper feed roller [1] and replace the paper feed rubber [2].
17. Reinstall the preceding parts following the removal steps in reverse.

Note

- Be sure to install the pick-up roller so that the one-way clutch [3] (blue) is on the front side.

18. After replacing the part, be sure to reset the parts counter.
 - No.237 (1250/1250P/1052)
 - No.204 (1200/1200P/1051)
 - No.203 (C8000/C7000/C7000P/C70hc/C6000)
 - No.154 (C6501/C6501P/C65hc)

11.5.3 Replacing the separation rubber (upper stage)**(1) Periodically replaced parts/Spotted replaced parts/Cycle**

- Separation rubber
 - : Every 2,200,000 prints (Actual replacement cycle: Every 100,000 feeds)*1

: Every 2,250,000 prints (Actual replacement cycle: Every 100,000 feeds)*2

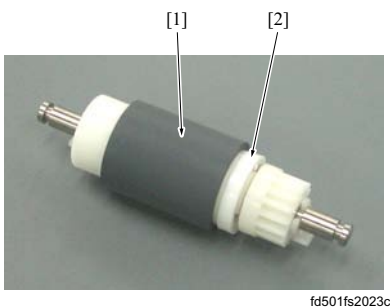
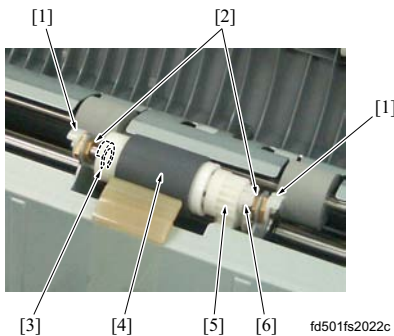
: Spot replacement (Actual replacement cycle: Every 100,000 feeds)*3

*1 C6501/C6501P/C65hc

*2 1200/1200P/1051

*3 1250/1250P/1052/C8000/C7000/C7000P/C70hc/C6000

(2) Procedure



1. Conduct the steps 1 to 4 in "F.11.5.1 Replacing the pick-up rubber (Upper stage)" and remove the pick-up unit /Up.
2. Remove 2 C-clips [1].
3. Remove 2 bearings [2].
4. Remove the C-clip [3] and then remove the entire roller shaft from the mounting plate while pressing the separation roller assy [4] against the front gear [5].

Note

- Pins are employed on the inside of the separation roller assy [4] and the gear [5] respectively. When removing them, be careful that these pins do not get lost. With the C-clip [6] on the front side of the gear left as it is, pressing the roller onto the gear prevents the pins from dropping off.
5. Remove the separation roller rubber [1] from the separation roller [2] and replace it.
 6. Reinstall the preceding parts following the removal steps in reverse.
 7. After replacing the part, be sure to reset the parts counter.
 - No.236 (1250/1250P/1052)
 - No.203 (1200/1200P/1051)
 - No.202 (C8000/C7000/C7000P/C70hc/C6000)
 - No.153 (C6501/C6501P/C65hc)

11.5.4 Replacing the pick-up rubber (Lower stage)

(1) Periodically replaced parts/Spotted replaced parts/Cycle

- Pick-up rubber

: Every 5,200,000 prints (Actual replacement cycle: Every 200,000 feeds)*1

: Every 5,250,000 prints (Actual replacement cycle: Every 200,000 feeds)*2

: Spot replacement (Actual replacement cycle: Every 200,000 feeds)*3

*1 C6501/C6501P/C65hc

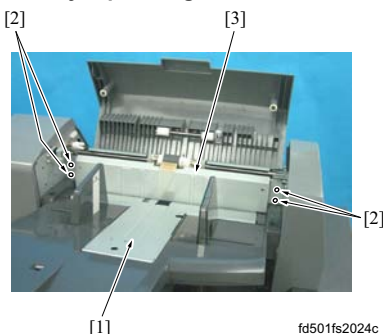
*2 1200/1200P/1051

*3 1250/1250P/1052/C8000/C7000/C7000P/C70hc/C6000

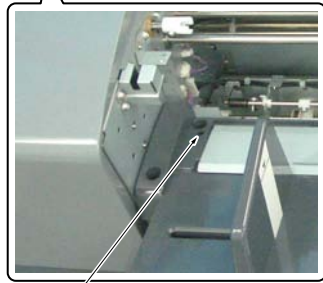
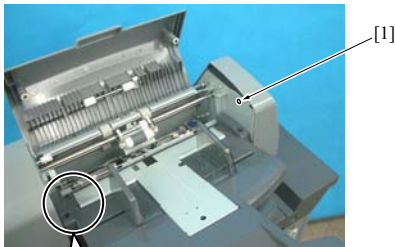
(2) Procedure

Note

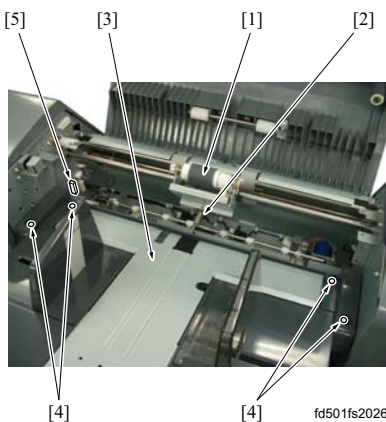
- A shaft fixing screw is inserted when removing the PI tray /Up. Be sure to remove this shaft fixing screw from the PI tray /Up after completion of the replacement of the pick-up roller /Lw. Operating the machine with the shaft fixing screw inserted to the PI tray /Up damage to the PI section.



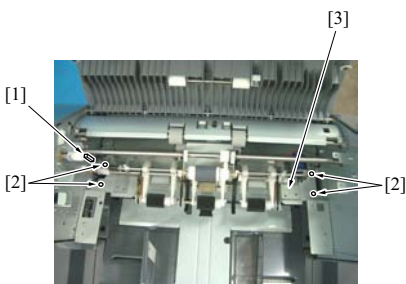
1. Make sure that the PI lift plate /Up [1] has come down fully. If it has not come down completely, conduct the I/O check (output) (PI/Up: 70-11, PI/Lw: 70-13) in the service mode.
2. Conduct the steps 1 to 4 in "F.11.5.1 Replacing the pick-up rubber (Upper stage)" and remove the pick-up unit /Up.
3. Remove 4 screws [2] and then remove the paper feed stopper plate /Up [3].



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4. Remove the shaft fixing screw [1] and insert it in the shaft fixing hole [2].

Note

- Be sure to turn the shaft fixing screw [1] until its stem section disappears completely.
- After completion of the replacement of the pick-up rubber (lower stage), be sure to remove the shaft fixing screw [1] from the position [2] and get it back to the position [1]. Operating the machine with the shaft fixing screw inserted to the position [2] damage to the PI section.

5. Remove the spring [2] hooked between the separation roller unit [1] and the PI tray /Up [3].
6. Disconnect the connector [5].
7. Remove 4 screws [4] and then remove the PI tray /Up [3].

Note

- When removing the PI tray /Up [2], be sure to pull it diagonally up to the left.

8. Disconnect the connector [1].
9. Remove 4 screws [2] and then remove the pick-up unit /Lw [3].
10. For the subsequent operations, conduct the pick-up rubber (upper stage) (steps 4 to 25). (Refer to [F.11.5.1 Replacing the pick-up rubber \(Upper stage\)](#))
11. Replace it with a new pick-up rubber.
12. Reinstall the preceding parts following the removal steps in reverse.

Note

- When installing the PI tray /Up, be sure to remove the shaft fixing screw and get it back to the original position.

13. After replacing the part, be sure to reset the parts counter.
 - No.238 (1250/1250P/1052)
 - No.205 (1200/1200P/1051)
 - No.204 (C8000/C7000/C7000P/C70hc)
 - No.155 (C6501/C6501P/C65hc)

11.5.5 Replacing the paper feed rubber (lower stage)

(1) Periodically replaced parts/Spotted replaced parts/Cycle

- Paper feed rubber
 - : Every 2,200,000 prints (Actual replacement cycle: Every 100,000 feeds)* 1
 - : Every 2,250,000 prints (Actual replacement cycle: Every 100,000 feeds)* 2
 - : Spot replacement (Actual replacement cycle: Every 100,000 feeds)* 3

* 1 C6501/C6501P/C65hc

* 2 1200/1200P/1051

* 3 1250/1250P/1052/C8000/C7000/C7000P/C70hc/C6000

(2) Procedure

1. Conduct the steps 1 to 9 in "[F.11.5.4 Replacing the pick-up rubber \(Lower stage\)](#)".
2. The subsequent operations are the same as the operations for the paper feed rubber (upper stage). (Refer to [F.11.5.2 Replacing the paper feed rubber \(Upper stage\)](#))
3. Reinstall a new paper feed rubber following the removal steps in reverse.
4. After replacing the part, be sure to reset the parts counter.

- No.240 (1250/1250P/1052)
- No.207 (1200/1200P/1051)
- No.206 (C8000/C7000/C7000P/C70hc/C6000)
- No.157 (C6501/C6501P/C65hc)

11.5.6 Replacing the separation rubber (lower stage)

(1) Periodically replaced parts/Spotted replaced parts/Cycle

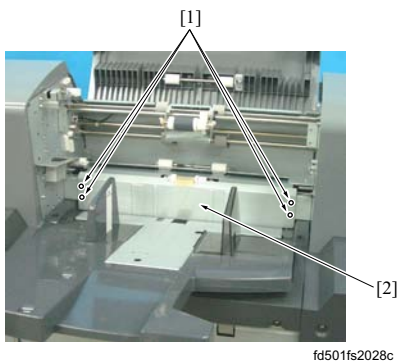
- Separation rubber
 - : Every 2,200,000 prints (Actual replacement cycle: Every 100,000 feeds) * 1
 - : Every 2,250,000 prints (actual replacement cycle: every 100,000 feeds) * 2
 - : Spot replacement (Actual replacement cycle: Every 100,000 feeds) * 3

* 1 C6501/C6501P/C65hc

* 2 1200/1200P/1051

* 3 1250/1250P/1052/C8000/C7000/C7000P/C70hc/C6000

(2) Procedure



1. Conduct the steps 1 to 9 in "F.11.5.4 Replacing the pick-up rubber (Lower stage)"
2. Remove 4 screws [1] and then remove the paper feed stopper plate /2 [2].
3. For the subsequent operations, conduct the separation rubber (upper stage) (steps 2 to 6). (Refer to F.11.5.3 Replacing the separation rubber (upper stage))
4. Replace it with a new separation rubber.
5. Reinstall the preceding parts following the removal steps in reverse.
6. After replacing the part, be sure to reset the parts counter.
 - No.239 (1250/1250P/1052)
 - No.206 (1200/1200P/1051)
 - No.205 (C8000/C7000/C7000P/C70hc)
 - No.156 (C6501/C6501P/C65hc)

12. PERIODICAL MAINTENANCE PROCEDURE SD-506

12.1 Precautions on maintenance

⚠ CAUTION

- Be sure to unplug the power plug from the power outlet.

12.2 Right angle conveyance section

12.2.1 Replacing the roller release solenoid /1 (SD5)

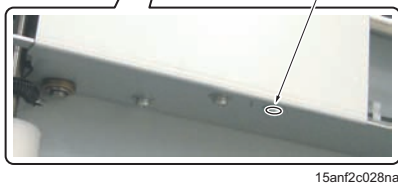
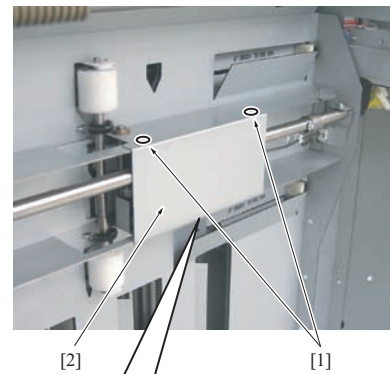
(1) Periodically replaced parts/Spotted replaced parts/Cycle

- Roller release solenoid /1 (SD5)
: Every 20,250,000 prints *1 (actual replacement cycle: every 5,000,000 operations *2)

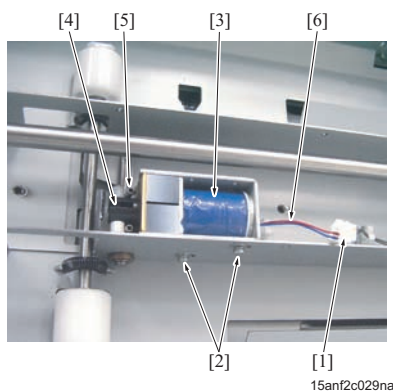
*1 The periodical replacement is only for 1200/1200P/1051.

*2 Actual replacement cycle of 1250/1250P/1052/1200/1200P/1051/C8000

(2) Procedure



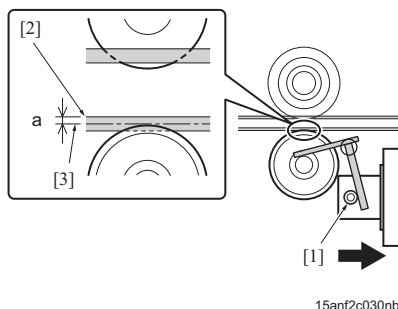
1. Remove SD from the main body.
2. Remove 3 screws [1] and remove the cover [2].



3. Disconnect the connector [1].
4. Remove 2 screws [2] and then remove the roller release solenoid /1 (SD5) [3].

Note

- When installing the solenoid, make sure that the pin [5] is hitched to the plunger [4].
- Install it with the wiring harness [6] located on the guide plate side.



5. With the plunger [1] pulled, temporarily hold the new roller release solenoid /1 and adjust the position so that the clearance "a" between the roller [3] and the guide plate [2] is at a standard value, and then fully tighten the screws.
Standard value "a": 0mm to 0.5mm
6. Reinstall the preceding parts following the removal steps in reverse.
7. After replacing the part, be sure to reset the parts counter.
 - No.264 (1250/1250P/1052)
 - No.226 (1200/1200P/1051)
 - No.239 (C8000)

12.2.2 Replacing the roller release solenoid /2 (SD6)

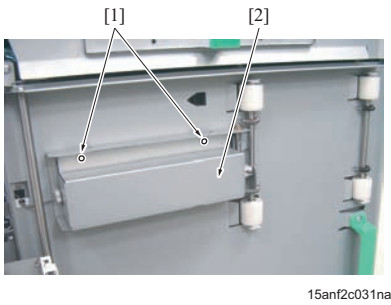
(1) Periodically replaced parts/Spotted replaced parts/Cycle

- Roller release solenoid /2 (SD6)
: Every 20,250,000 prints *1 (Actual replacement cycle: every 5,000,000 operations *2)

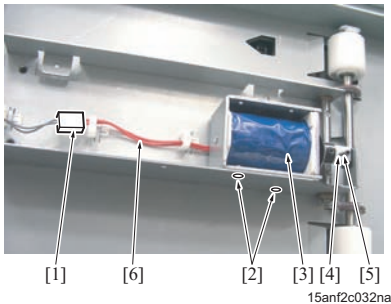
*1 The periodical replacement is only for 1200/1200P/1051.

*2 Actual replacement cycle of 1250/1250P/1052/1200/1200P/1051/C8000

(2) Procedure



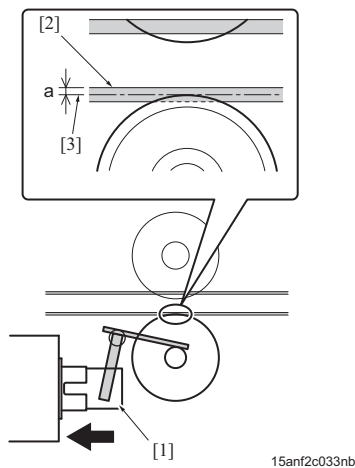
1. Open the front door /Rt.
2. Remove 2 screws [1] and remove the cover [2].



3. Disconnect the connector [1].
4. Remove 2 screws [2] and then remove the roller release solenoid / 2 (SD6) [3].

Note

- When reinstalling it, be sure to check that the pin [5] has been inserted into the hole on the plunger [4].
- Install it with the wiring harness [6] located on the guide plate side.



5. With the plunger [1] pulled, temporarily hold the new roller release solenoid / 2 and adjust the position so that the clearance "a" between the roller [3] and the guide plate [2] is at a standard value, and then fully tighten the screws.
Standard value "a": 0mm to 0.5mm
6. Reinstall the preceding parts following the removal steps in reverse.

12.2.3 Replacing the right angle conveyance gate solenoid (SD2)

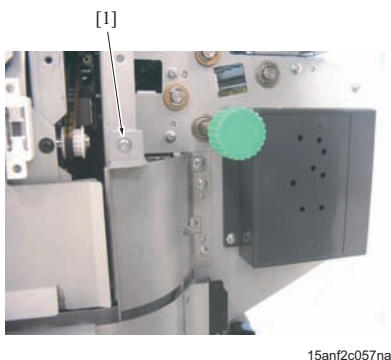
(1) Periodically replaced parts/Spotted replaced parts/Cycle

- Right angle conveyance gate solenoid (SD2)
: Every 20,250,000 prints *1 (actual replacement cycle: every 5,000,000 operations *2)

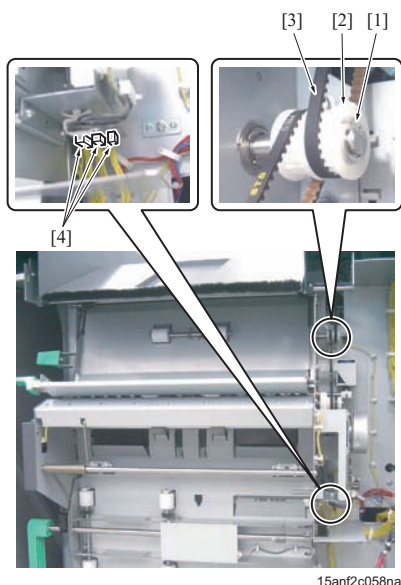
*1 The periodical replacement is only for 1200/1200P/1051.

*2 Actual replacement cycle of 1250/1250P/1052/1200/1200P/1051/C8000

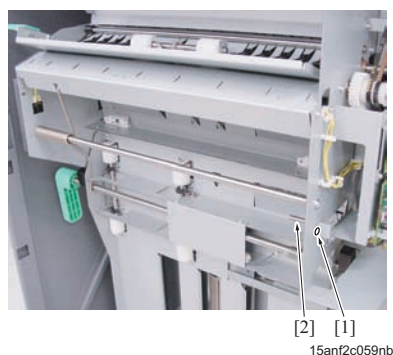
(2) Procedure



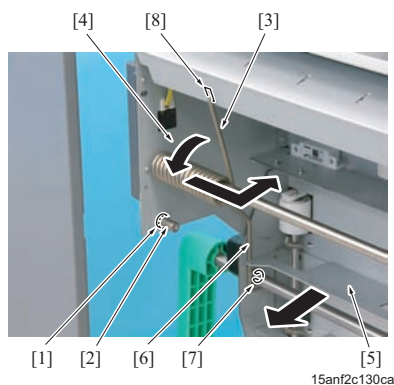
1. Open the front door /Rt and then remove the screw [1].
2. Remove the rear cover /Rt. (Refer to [G.10.3.3 Rear cover /Rt](#))
3. Remove the hex wrench (short, #2.5) from the trimmer section. (Refer to [F.12.4.2 Replacing the trimmer blade kit](#))



4. Remove the E-ring [1] and the pulley [2] and then remove the belt [3].
5. Disconnect 3 connectors [4].



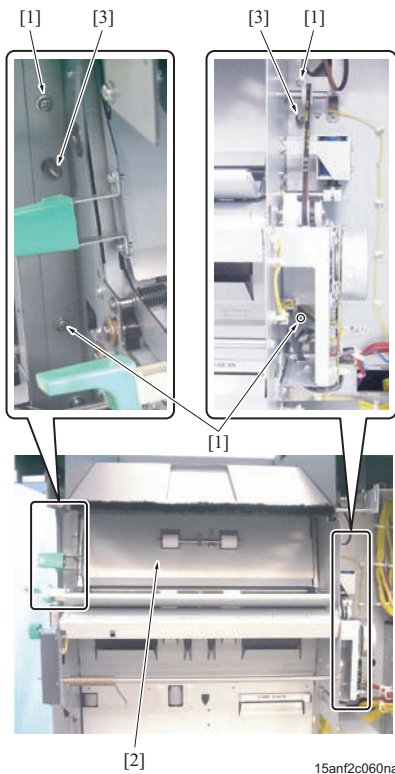
6. Remove the screw [1] and then remove the stopper [2].



7. Remove the screw [1] and then remove the stopper [2].
8. Pull the spring [3] in the arrow-marked direction [4] and release it, and then open the right angle conveyance guide plate [5].

Note

- When reinstalling the spring [3], hook the long arm [6] on the position between the frame and the E-ring [7] of the jam release handle shaft and insert the tip of the short arm [3] into the hole [8].



9. Remove 4 screws [1] and then remove the entrance conveyance unit [2].

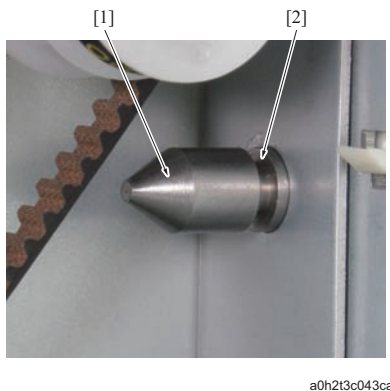
Note

- When reinstalling, press it against 2 positioning pins [3] and then tighten the screw [1].

10. Check point when reinstalling the entrance conveyance unit

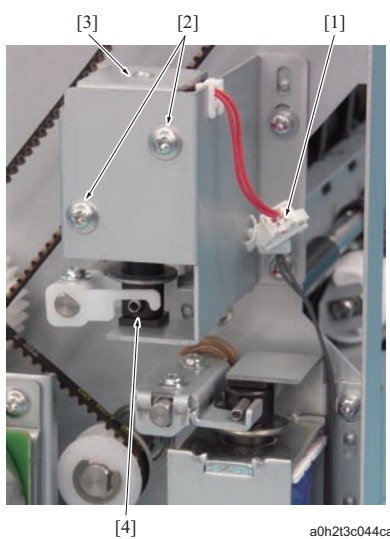
Note

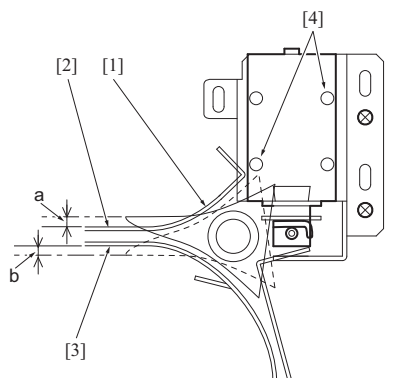
- As the positioning pin [1] has anti-drop grooves, be sure to insert it fully before tightening the screw.



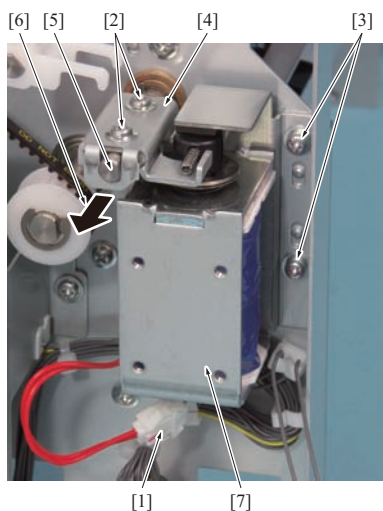
11. Disconnect the connector [1].

12. Remove 2 screws [2] and then remove the entrance gate solenoid [3] and the plunger [4].

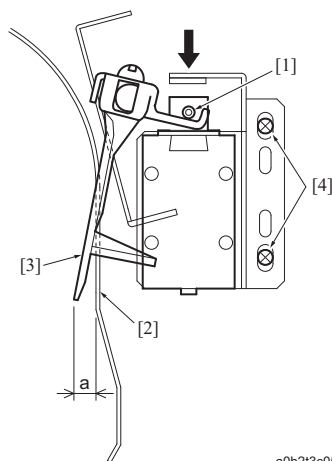




a0h2t3c051ca



a0h2t3c045ca



a0h2t3c052ca

13. Standard value when reinstalling the entrance gate solenoid

Note

- When reinstalling, be sure to set in the following conditions before tightening the screw [4]; with the plunger of the entrance gate solenoid not pulled, the gap between the entrance gate [1] and the guide plate [2] is at a standard value "a", and with the plunger of the entrance gate solenoid pulled, the gap between the entrance gate [1] and the guide plate [3] is at a standard value "b".

Standard valuea: $2.0\text{mm} \pm 0.3\text{mm}$ b: $5.0\text{mm} \pm 0.5\text{mm}$

14. Disconnect the connector [1].

15. Remove 2 screws [2].

16. Remove 2 screws [3] and pull out the arm [4] from the shaft [5] in the arrow-marked direction [6]. Then remove the right angle conveyance gate solenoid assy [7].

Note

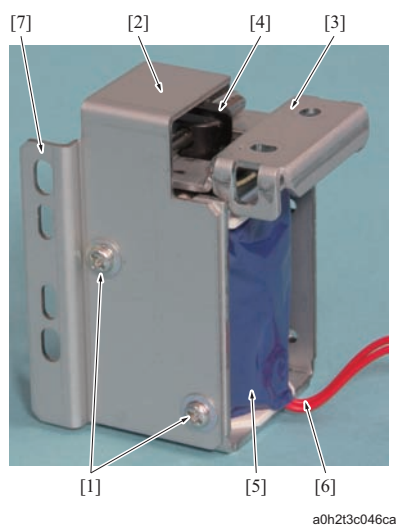
- When reinstalling, press the arm [4] against the D-cut of the shaft [5] and then tighten the screws [2].

17. Standard value when reinstalling the right angle conveyance gate solenoid assy

Note

- With the plunger [1] pulled, adjust the position so that the clearance "a" between the right angle conveyance gate [3] and the guide plate [2] is at a standard value "a", and then fully tighten the screws [4].

Standard value a: $4.8\text{mm} \pm 0.5\text{mm}$



18. Remove 2 screws [1], mounting plate [2], arm [3], plunger [4], and the right angle conveyance gate solenoid (SD2) [5].

Note

- When installing the right angle conveyance gate solenoid, make sure that the wires [6] are located on the other side of the hole [7] in the mounting plate [2].

19. Reinstall the preceding parts following the removal steps in reverse.

12.2.4 Replacing the roller release solenoid /3 (SD7)

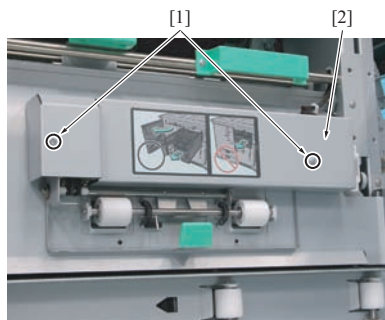
(1) Periodically replaced parts/Spotted replaced parts/Cycle

- Roller release solenoid /3 (SD7)
: Every 20,250,000 prints *¹ (actual replacement cycle: every 5,000,000 operations *²)

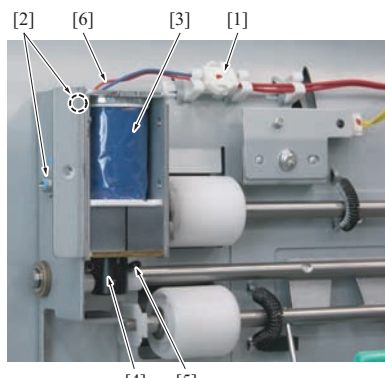
*¹ The periodical replacement is only for 1200/1200P/1051.

*² Actual replacement cycle of 1250/1250P/1052/1200/1200P/1051/C8000

(2) Procedure



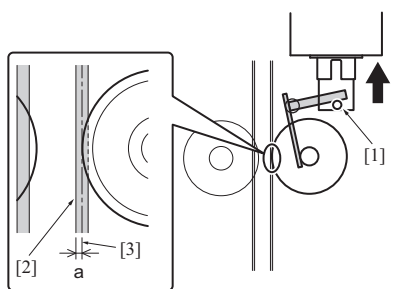
1. Open the front doors /Rt and /Lt.
2. Remove 2 screws [1] and remove the cover [2].



3. Disconnect the connector [1].
4. Remove 2 screws [2] and then remove the roller release solenoid / 3 (SD7) [3].

Note

- When installing the solenoid, make sure that the pin [5] is hitched to the plunger [4].
- Install it with the wiring harness [6] located on the guide plate side.



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5. Slightly tighten the new roller release solenoid/3 with the plunger [1] pulled, adjust the position so that the gap between the paper feed surface [2] of the guide plate and the roller surface [3] falls within the standard value, and secure the roller release solenoid/3. Standard value "a": 1.3mm to 1.8mm
6. Reinstall the preceding parts following the removal steps in reverse.
7. After replacing the part, be sure to reset the parts counter.
 - No.264 (1250/1250P/1052)
 - No.226 (1200/1200P/1051)
 - No.239 (C8000)

12.3 Saddle stitching section

12.3.1 Replacing the stapler assy

(1) Periodically replaced parts/Spotted replaced parts/Cycle

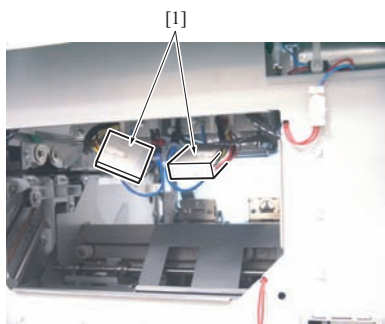
- Stapler assy

: Every 20,250,000 prints *1 (Actual replacement cycle: Every 1,000,000 staples) *2

*1 The periodical replacement is only for 1200/1200P/1051.

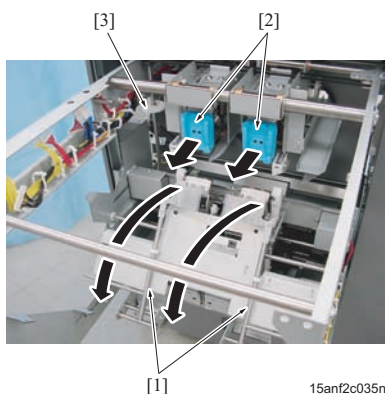
*2 Actual replacement cycle of 1250/1250P/1052/1200/1200P/1051/C6501/C6501P/C65hc/C8000/C7000/C7000P/C70hc/C6000

(2) Procedure



15anf2c034na

1. Remove the front door /Lt. (Refer to [G.10.3.8 Front door /Lt](#))
2. Remove the rear cover /Lt. (Refer to [G.10.3.2 Rear cover /Lt](#))
3. Disconnect 2 connectors [1] from the back side of the stapler, and release the wires on the stapler side from the clamps.

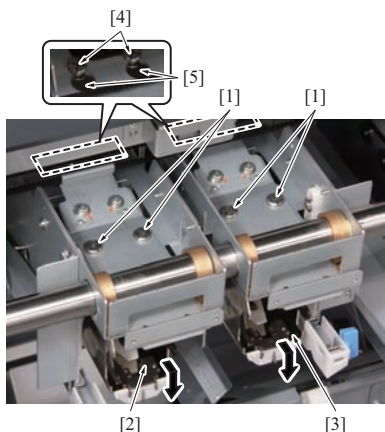


15anf2c035na

4. Pull out the saddle stitching unit. (Refer to [F.12.3.3 Pulling out the saddle stitching unit](#))
5. Tilt the bundle arm [1] to the front.
6. Remove the staple cartridges [2] to the front.

Note

- When moving the stapler assy, be sure to move them by rotating the rotating knob [3] to prevent the belt tooth from skipping. Otherwise, it causes the belt tooth skipping.



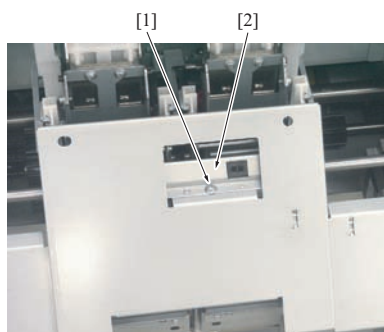
a0h2t3c047ca

7. Remove 2 screws [1] on each stapler.
8. Move the staplers /Lt [2] and /Rt [3] forward, and then remove the pins [4], 2 for each, from each 2 holes [5] on each stapler. Then remove the staplers /Lt and /Rt downward.



[6]

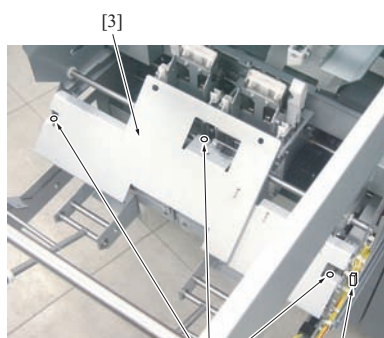
a0h2t3c048ca



[1]

[2]

15anf2c038na

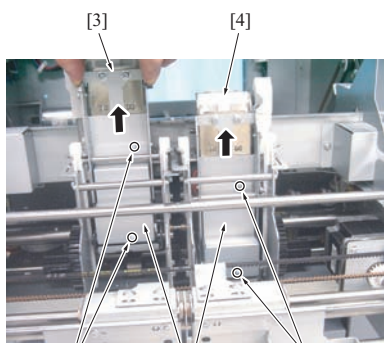


[3]

[2]

[1]

15anf2c039na



[3]

[4]

[1]

[2]

[1]

15anf2c040na

9. Check point when removing/reinstalling the stapler /Lt

Note

- When removing/reinstalling the stapler /Lt, be sure not to bend the guide sheet [6].

10. Remove the screw [1] and remove the sensor cover [2].

11. Disconnect the connector [1].

Note

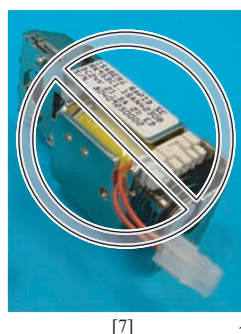
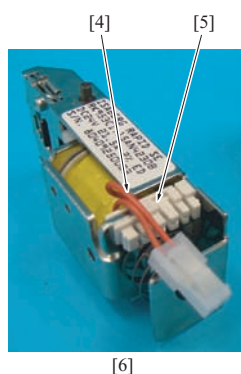
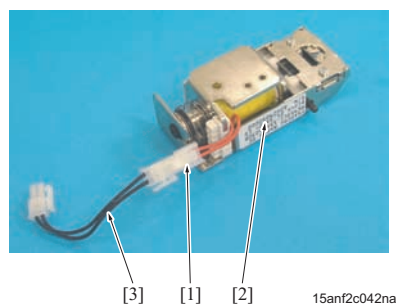
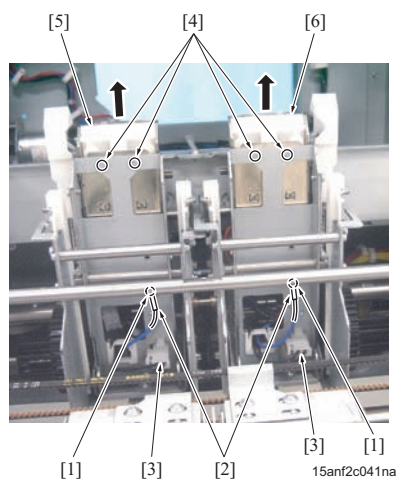
- When reinstalling the saddle stitching unit, be careful not to let the connector [1] make contact with the main body.

12. Remove 3 screws [2], and then remove the saddle stitching guide plate [3].

13. Remove 2 screws [1] each and then remove 2 connector covers [2].

Note

- When removing the connector covers, while lifting up the clinchers /Lt [3] and /Rt [4].



14. Remove each 1 screws [1] and then remove the ground [2].

Note

- When installing the grounds, fasten it with screws letting the wiring harness on the lower side.

15. Remove each of 1 connectors [3].

16. Remove 2 screws [4] each, and then remove the clinchers /Lt [5] and /Rt [6].

Note

- When installing the clinchers, slide them down as far as they go, and secure them with screws.

17. Disconnect the connector [1] and then remove the wiring harness [3] from the clincher [2].

18. Reinstall the preceding parts following the removal steps in reverse.

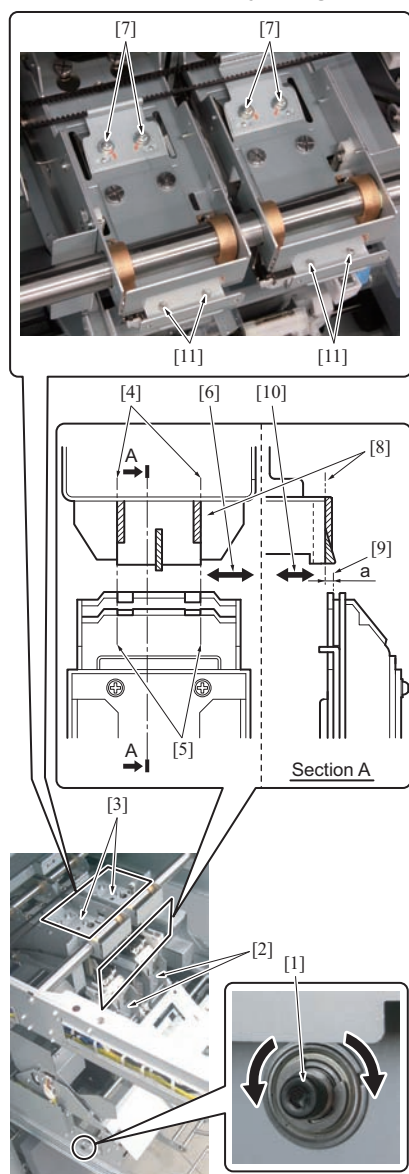
Note

- When reinstalling the wiring harness [4], be sure to wire the wiring harness to the guide (white) side [5] of the clincher.
Do not route the wiring harness to the rear side as shown in the figure [7]. or the wiring harness may break at the clincher operation.

19. Adjust the mounting position of the staplers and the clinchers. (Refer to [F.12.3.1.\(3\) Procedure for adjusting the mounting position](#))

20. After replacing the part, be sure to reset the parts counter.

- No.260, 261 (1250/1250P/1052)
- No.222, No.223 (1200/1200P/1051)
- No.234, 235 (C8000/C7000/C7000P/C70hc/C6000)

(3) Procedure for adjusting the mounting position

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1. Rotate the screw [1] clockwise until clicked to make the clinchers [2] contact with the staplers [3] and lock the clinchers [2], and then check the step edges [4] of the staplers are aligned with the edges [5] of the clincher in the sub scan direction [6].
Standard value: $0 \pm 0.5\text{mm}$
2. When the value is not within the standard value, loosen 2 screws [7] each and move the staplers in the sub scan direction for adjustment while rotating the screw [1] counterclockwise to make the clinchers [2] and the stapler [3] closer, and then tighten the screws [7].
3. Tighten the screw [1] clockwise until it clicks to make the clinchers [2] contact with the stapler [3] and lock it. Make sure that the standard surface of the stapler [8] is located in rear side in main scan direction [10] compared to the inside plate inner surface [9] of the clincher.
Standard value "a": 0.2mm to 0.3mm
4. When the value is not within the standard value, loosen 2 screws [11] each and move the staplers in the main scan direction for adjustment while rotating the screw [1] counterclockwise to make the clinchers [2] and the stapler [3] closer, and then tighten the screws [11].

Note

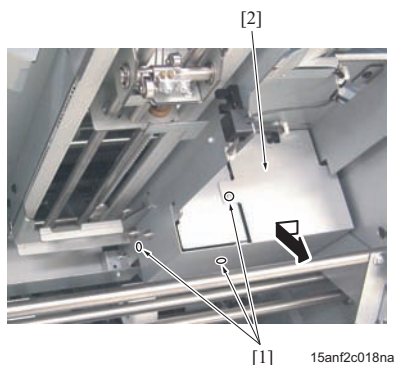
- After the reinstallation, perform the saddle stitching and check that the stapling is performed without problem.
- After the adjustment, be sure to perform the adjustment between the fold line position and the staple position, and tilt/gap adjustment of the clincher.
(Refer to [I.17.4 Staple position adjustment](#)), (Refer to [I.17.6 Tilt/gap adjustment of the clincher](#))

12.3.2 Replacing the slope unit**(1) Spotted replaced parts/cycle**

- Slope unit

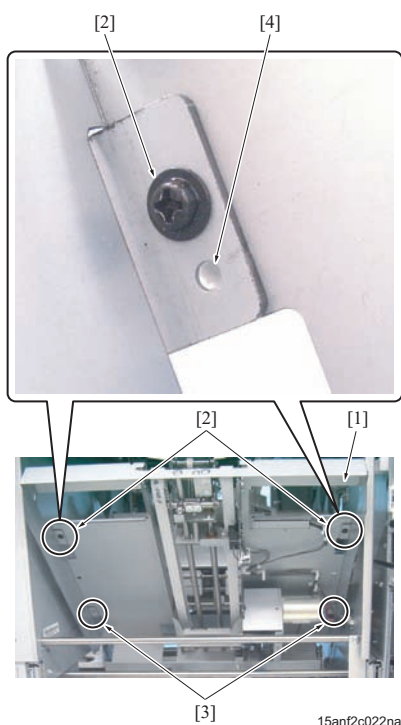
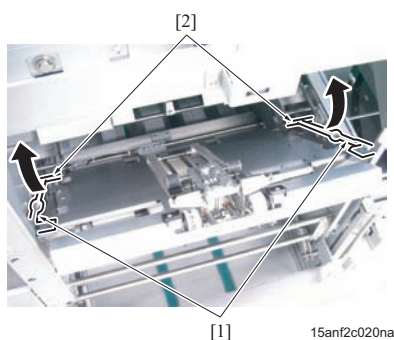
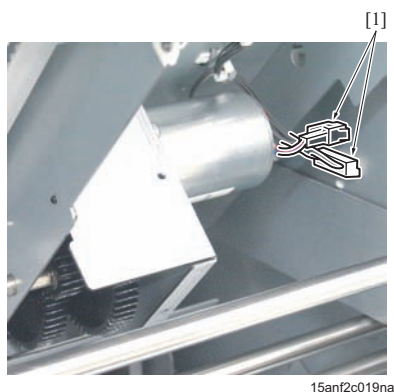
: Spot replacement (Actual replacement cycle: every 2,500,000 copies) *1

*1 1250/1250P/1052/1200/1200P/1051/C8000

(2) Procedure

15anf2c018na

1. Remove 3 screws [1], and then remove the motor cover [2].



2. Disconnect 2 connectors [1].

3. Holding the bundle arms [1] on both sides in the vicinity of the fulcrum shaft [2], push them to the rear simultaneously and move the bundle arms [1] approximately 30mm.

Note

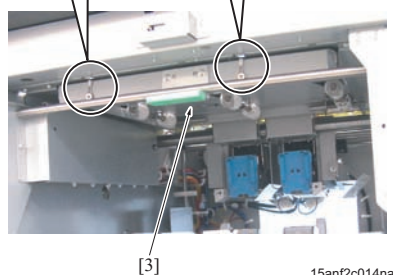
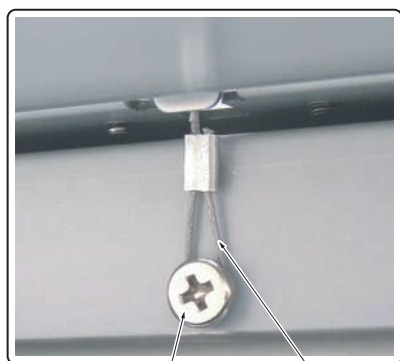
- When rotating the bundle arm [1] manually, be sure to rotate it gently with both hands because the bundle arm is driven simultaneously by the belts on both sides. Otherwise, it causes the belt tooth skipping.
- Never rotate the bundle arm [1] by holding its tip. Be sure to rotate it by holding the bundle arm [1] in the vicinity of the fulcrum shaft [2]. It causes the deformation.

4. Remove 2 screws [2] and 2 screws [3] of the slope unit [1] from the bottom and top respectively, and then remove the slope unit [1].

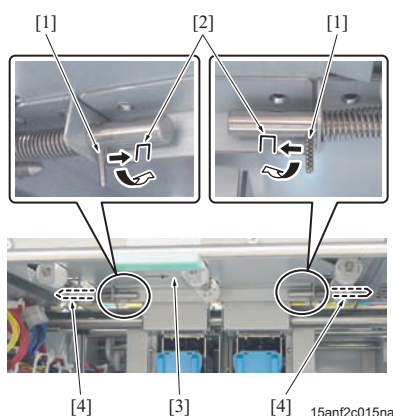
Note

- When reinstalling the slope, be sure to align 2 positioning projections [4].

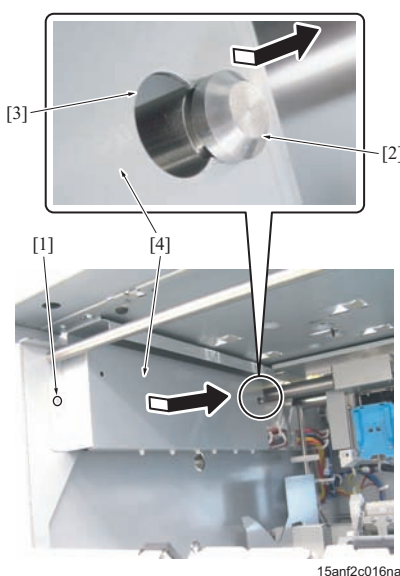
5. Reinstall the preceding parts following the removal steps in reverse.

12.3.3 Pulling out the saddle stitching unit**(1) Procedure**

15anf2c014na



15anf2c015na



15anf2c016na

1. Remove the front door /Lt. (Refer to [G.10.3.8 Front door /Lt](#))
2. Remove the slope unit. (Refer to [F.12.3.2 Replacing the slope unit](#))
3. Remove the wire [1] from the screw [2].

Note

- When remove the 2nd wire [1], support the horizontal conveyance guide plate /Lt [3] with your hand so that it does not fall down.

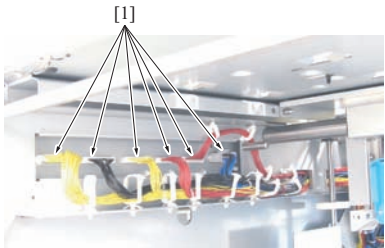
4. Slide 2 pins [1] to the arrow-marked direction and hook into the notches [2] to release the horizontal conveyance guide plate /Lt [3], and then remove the guide plate.

Note

- When reinstalling the horizontal conveyance guide plate / Lt [3], align the positions of the shafts [4], and then displace the pins [1] from the notches.

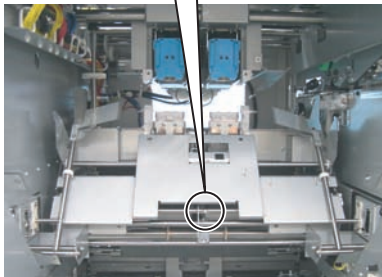
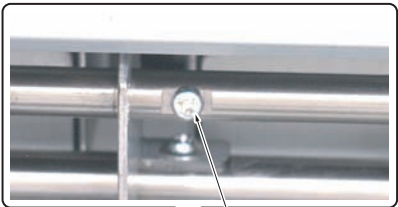
5. Remove the screw [1], move the wiring harness cover [4] to the rear, unplug the pin [2] from the hole [3], and then remove the wiring harness cover [4].

6. Disconnect 6 connectors [1].



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7. Remove the screw [1].



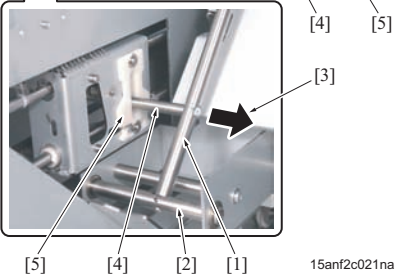
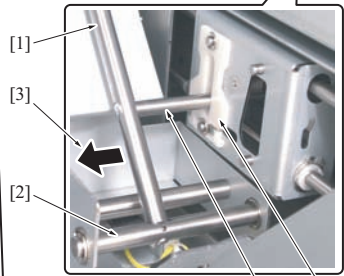
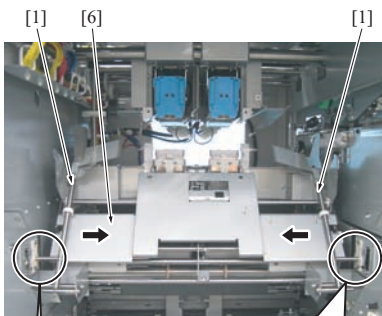
15anf2c069na

8. Holding the bundle arms [1] on both sides in the vicinity of the fulcrum shaft [2], gently move them to the inside [3], and then remove the guide shaft [4] from the hole of the shock absorbing guide [5].

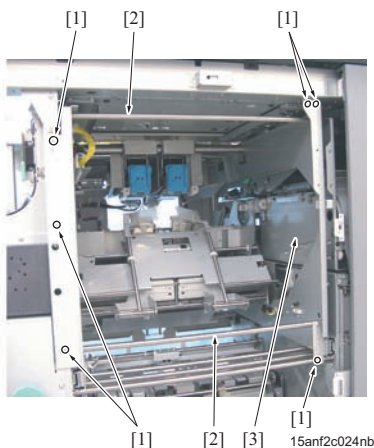
Note

- When narrowing the space between the bundle arms [1], be sure to move them gently and simultaneously.
- When reinstalling them, be sure to check that the guide shaft [4] has been inserted into the shock absorbing hole [5].

9. Rotate the bundle arms [1] to the guide plate [6] on the stapler side.



15anf2c021na



10. Remove the 6 screws (with 1 washer each) [1], and then hold the shafts [2] to pull out the saddle stitching unit [3].

Note

- When pull out the saddle stitching unit, be sure not to snap the wiring harness of the removed connector contact with SD.

11. Reinstall the above parts following the removal steps in reverse.

12.3.4 Replacing the saddle stitching unit

⚠ CAUTION

- Be sure to perform this operation with 2 people because the saddle stitching unit is heavy.

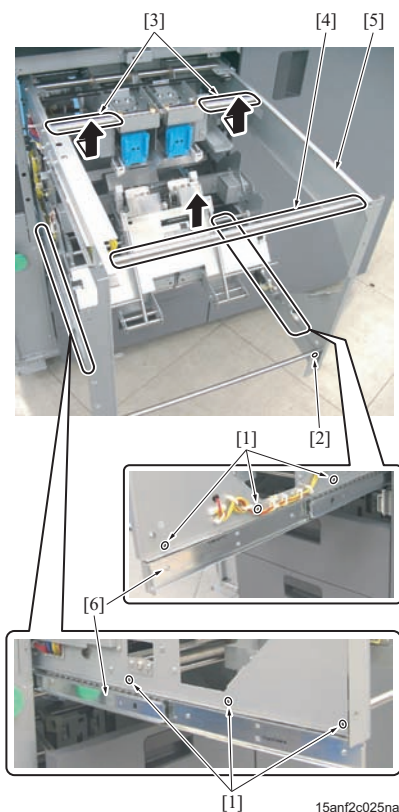
(1) Spotted replaced parts/cycle

- Saddle stitch unit

: Spot replacement (Actual replacement cycle: every 2,500,000 copies) * 1

* 1 1250/1250P/1052/1200/1200P/1051/C8000

(2) Procedure



1. Pull out the saddle stitching unit. (Refer to [F.12.3.3 Pulling out the saddle stitching unit](#))

2. Remove 6 screws [1] and the screw [2], and remove the saddle stitching unit [5] with 2 people by holding the shafts [3] and [4] while lift up the shaft [3] slightly and shift the saddle stitching unit to the front side.

Note

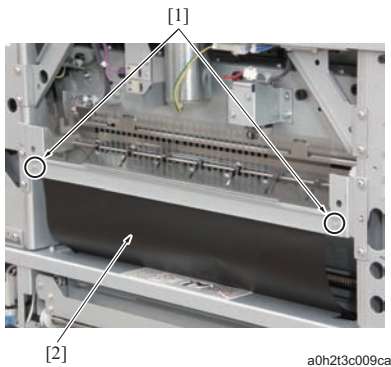
- Be sure to hold the saddle stitching unit at the shafts [3] and [4].
- When reinstalling the saddle stitching unit, check that the unit is surely placed on the rails [6] before releasing the unit.

3. Reinstall the preceding parts following the removal steps in reverse.

12.4 Trimmer section

12.4.1 Removing/installing the trimmer paddle assy

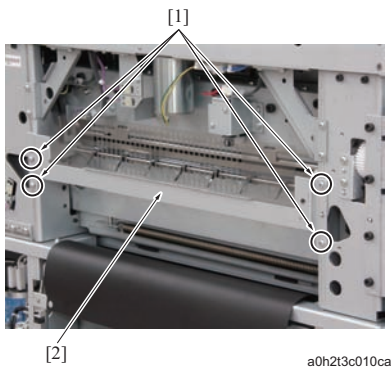
(1) Procedure



1. Remove the following parts.
 - Rear cover /Lt (Refer to [G.10.3.2 Rear cover /Lt](#))
2. Store the trimmer scraps box completely in the SD.
3. Remove 2 screws [1], and remove the trimmer scraps guide [2].

Note

- When installing the trimmer scraps guide, be sure that the trimmer scraps box is stored completely in the SD, and the trimmer scraps guide [2] is fully stretched. If you stretch the trimmer scraps guide with the trimmer scraps box has not stored completely, the trimmer scraps guide gets broken during operation.

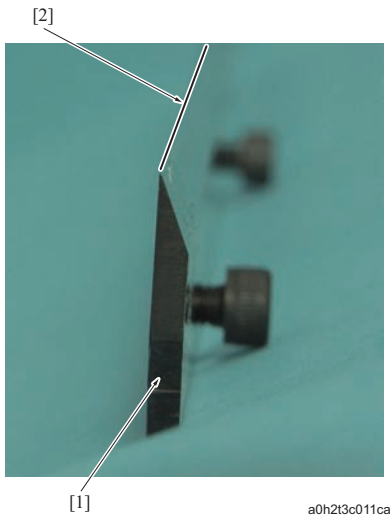


4. Remove 4 screws [1] and remove the trimmer paddle assy [2].
5. Reinstall the above parts following the removal steps in reverse.

12.4.2 Replacing the trimmer blade kit

⚠ WARNING

- Pay extra caution when holding the trimmer blade [1]. Never touch the edge [2] of the blade. You get injured.
- Remove the blade cover only at the replacement. Otherwise, never remove the cover. You get injured.
- Dispose the used trimmer blade as specified by the local authority.



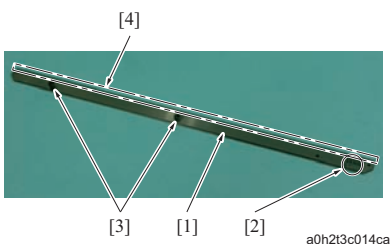
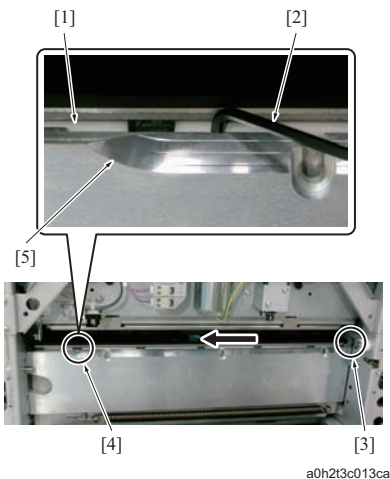
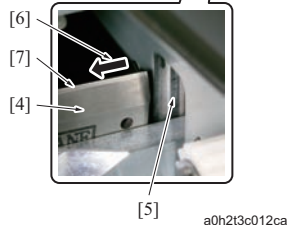
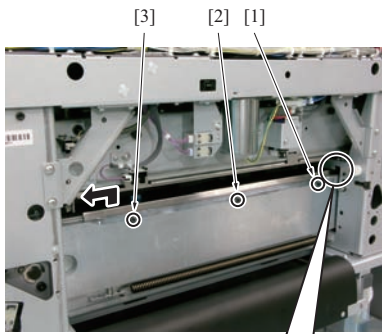
(1) Periodically replaced parts/Spotted replaced parts/Cycle

- Trimmer blade kit
 - : Every 1,400,000 prints (Actual replacement cycle: Every 37,500 cuts) *1
 - : Every 1,500,000 prints (Actual replacement cycle: Every 37,500 cuts) *2
 - : Spot replacement (Actual replacement cycle: every 37,500 cuts) *3

*1 C6501/C6501P/C65hc

*2 1200/1200P/1051

*3 1250/1250P/1052/C8000/C7000/C7000P/C70hc/C6000

(2) Procedure

1. Move the trimmer board to the release position.

Note

- Move the trimmer board to the trimmer press upper limit sensor (PS52) by the output check code ""71-56" in the I/O check mode in the service mode.

2. Turn OFF the sub power switch (SW2) and the main power switch (SW1) of the main body and unplug the power plug from the power outlet.
3. Remove the rear cover /Lt. (Refer to [G.10.3.2 Rear cover /Lt](#))
4. Remove the trimmer paddle assy. (Refer to [F.12.4.1 Removing/ installing the trimmer paddle assy](#))
5. Remove the screw [1].
6. Loosen the screws [2] and [3].

⚠ WARNING

- Do not loosen the screws [2] and [3] too much, or the trimmer blade drops during the operation. Keep the loosening amount of the screws [2] and [3] to a minimum requirement for removing the trimmer blade [4].

7. Hold the screws [2] and [3] and slightly lift the screw [3] side. Then move the trimmer blade [4] in the arrow-marked direction [6] to pull out from the hole [5], and remove it.
8. Put the trimmer blade [4] at a safe place with no fear of falling down.

⚠ WARNING

- Pay extra caution when handling the trimmer blade [4]. Never touch the edge [7] of the blade. You get injured.

9. Insert the #2.5 hex wrench [2] onto the mounting slit [1] of the trimmer blade, and then slide it from right [3] to left [4] (viewed from the operator) to clean the trimmer scraps.

Note

- Conduct the cleaning with the #2.5 hex wrench which is one-step thinner than the hex wrench #3 used for the installation screws of the trimmer blade. Using #3 causes the deformation of the mounting slit.
- To change the direction of the hex wrench, remove the wrench once and reinsert it again.
- The bottom of the slit of the left side [4] (viewed from the operator) is curved in the same manner as the blade [5]. Be sure to scrape the trimmer scraps.

10. Clean the mounting slit [1] of the trimmer blade with the blower brush.

11. Put a new trimmer blade [1] on the floor and insert 2 new screws about half and a bit length of them [3] into the marked side [2].

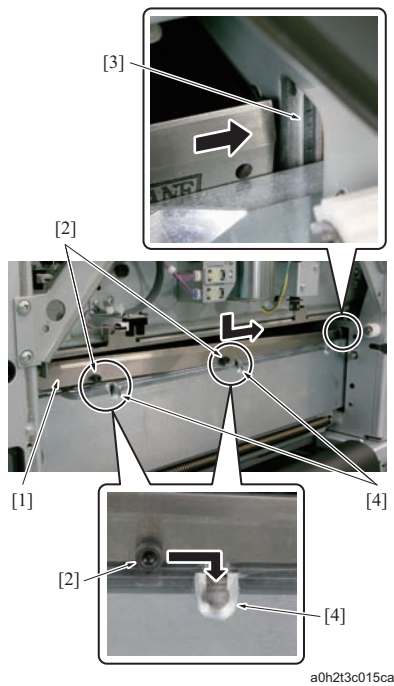
⚠ WARNING

- Be sure to insert the screws [3] enough to hold the trimmer blade, otherwise the trimmer blade falls down during the operation.

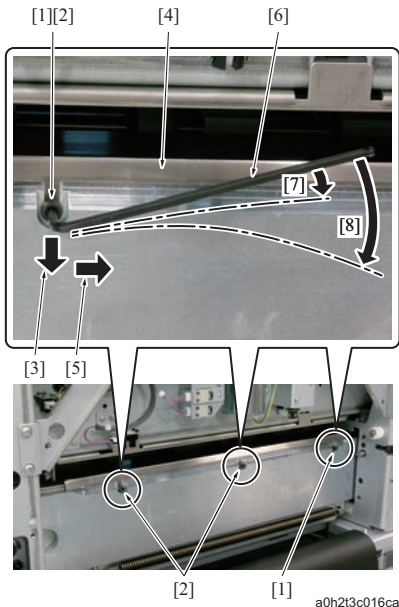
Note

- Install the brand-new screws [3] that are shipped with the trimmer blade kit.

12. Remove the blade cover [4] of the new trimmer blade kit and put that cover on the old trimmer blade.



13. Insert the trimmer blade to the hole [3] by holding 2 screws [2].
Then insert 2 screws [2] to the screw grooves [4].



14. Tighten the new screw [1] temporarily. Then press 2 screws [1] and [2] downward [3] until the trimmer blade [4] contacts the bottom, and then press it to the right side [5] (viewed from the operator).
15. Tighten 2 screws [1] and [2] with the #3 hex wrench [6].

⚠ WARNING

- When tightening 2 screws [1] and [2], tighten them temporarily with the torque that bends the tip of the #3 hex wrench [6] approximately 5° [7], and then fully tighten them with the strong torque that bends it approximately 15° [8].

Note

- Be sure to check and clear the foreign object that obstacles the operation of the trimmer blade.

16. Reinstall the preceding parts following the removal steps in reverse.

Note

- After replacing the trimmer blade, perform the saddle stitch with trimming and check that the trimming is performed without problem.

17. After replacing the part, be sure to reset the parts counter.

- No.262 (1250/1250P/1052)
- No.224 (1200/1200P/1051)
- No.229 (C8000/C7000/C7000P/C70hc/C6000)
- No.178 (C6501/C6501P/C65hc)

12.4.3 Replacing the trimmer board assy

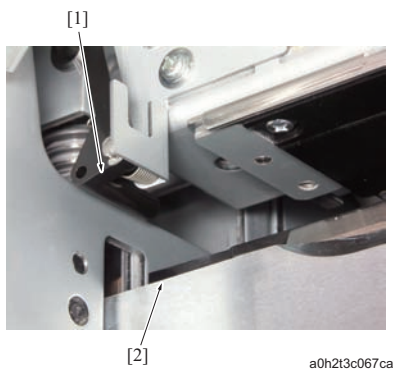
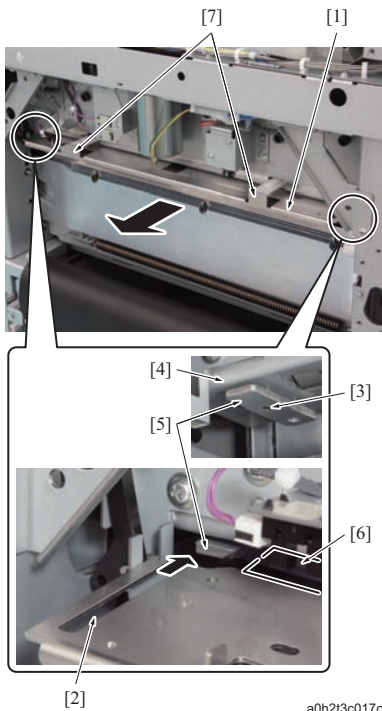
(1) Periodically replaced parts/Spotted replaced parts/Cycle

- Trimmer board assy
 - : Every 600,000 prints (Actual replacement cycle: Every 18,900 cuts) *1
 - : Every 750,000 prints (Actual replacement cycle: Every 18,900 cuts) *2
 - : Spot replacement (Actual replacement cycle: every 18,900 cuts) *3

*1 C6501/C6501P/C65hc

*2 1200/1200P/1051

*3 1250/1250P/1052/C8000/C7000/C7000P/C70hc/C6000

(2) Procedure

1. Move the trimmer board to the release position.

Note

- By the output check code "71-97" in the I/O check mode in the service mode, move the trimmer press board to the position where the trimmer board is released.

2. Turn OFF the sub power switch (SW2) and the main power switch (SW1) of the main body and unplug the power plug from the power outlet.
3. Remove the rear cover /Lt. (Refer to [G.10.3.2 Rear cover /Lt](#))
4. Remove the trimmer paddle assy. (Refer to [F.12.4.1 Removing/installing the trimmer paddle assy](#))
5. Remove the trimmer board assy [1] by pulling it horizontally to the back side.

Note

- When reinstalling it, aligning the slit [2] of the trimmer board assy [1] with the pin [3] and insert it between the trimmer press plate [4] and the hold plate [5].
- When inserting it, be careful not to bend the guide sheet [6].
- When pushing it into the machine, be sure to insert it horizontally by pushing the movement arm receiver [7].

6. Clean the bottom surface of the actuator [1] and the top surface [2] of the trimmer blade retaining plate which contacts to the bottom surface.

Note

- When the trimmer scraps remain or the cleaning is not conducted properly, the trimmer completion timing differs and a trimming fault occurs.

7. Reinstall the preceding parts following the removal steps in reverse.
8. Reset the trimmer board solenoid operation counter.

Note

- Reset the trimmer board solenoid operation counter by the output check code "71-95" of the I/O check mode of the service mode.
- If the counter is not reset, the trimmer board solenoid operating timing after the trimmer board is replaced becomes faster than specified timing (700/500/300 times of trimming). (In the first operation only)
- After replacing the trimmer board, perform the saddle stitch with trimming and check that the trimming is performed without problem.

9. After replacing the part, be sure to reset the parts counter.
 - No.263 (1250/1250P/1052)
 - No.225 (1200/1200P/1051)
 - No.230 (C8000/C7000/C7000P/C70hc/C6000)
 - No.179 (C6501/C6501P/C65hc)

12.4.4 Replacing the trimming unit**⚠ Note:**

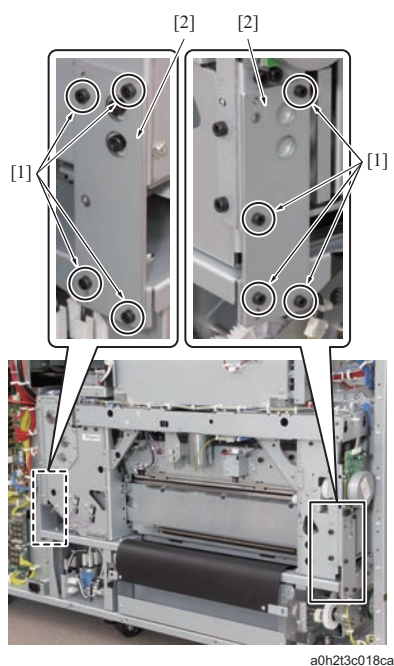
- Be sure to perform this operation with 2 people because the trimmer unit is heavy.

(1) Spotted replaced parts/cycle

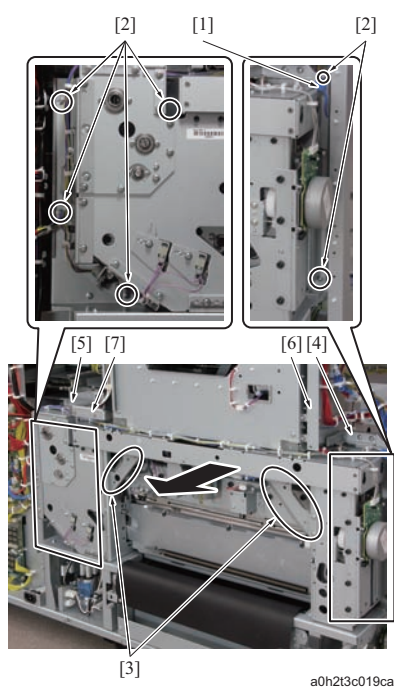
- Trimmer unit

: Spot replacement (actual replacement cycle: every 2,500,000 cuts) * 1

* 1 1250/1250P/1052/1200/1200P/1051/C6501/C6501P/C65hc/C8000

(2) Procedure for pulling out the trimmer unit

- Remove the following parts.
 - Rear cover /Lt (Refer to [G.10.3.2 Rear cover /Lt](#))
 - Rear cover /Rt (Refer to [G.10.3.3 Rear cover /Rt](#))
 - Left cover (Refer to [G.10.3.4 Left cover](#))
 - Trimmer paddle assy (Refer to [F.12.4.1 Removing/installing the trimmer paddle assy](#))
- Remove each 4 of the screws [1] at 2 places, and then remove 2 fixing plates [2].

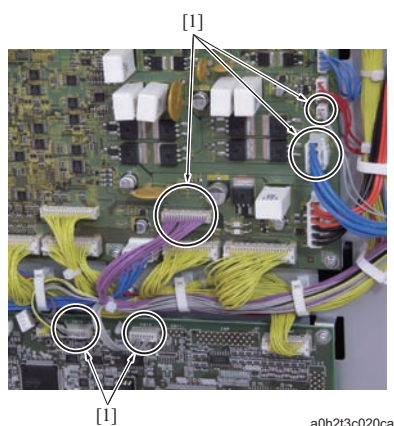


- Disconnect the connector [1].

Note

- When reinstalling it, be careful not to nip the wiring harness with the metal plate.

- Remove 6 screws [2].
- Pull out the trimmer unit to the back side until the stoppers [4] and [5] touch to the anti-drop brackets [6] and [7] by holding the configuration parts [3] of the trimmer unit.
- Reinstall the preceding parts following the removal steps in reverse.

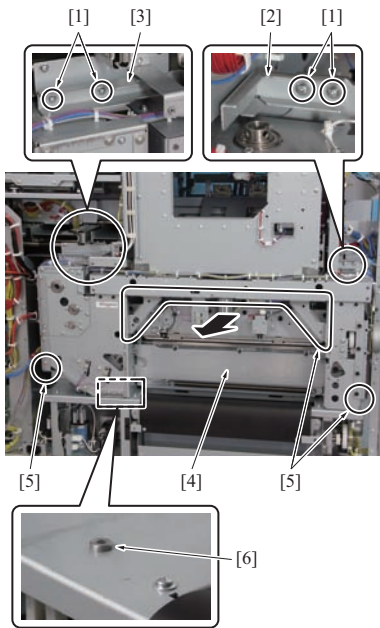
(3) Removing/reinstalling the trimmer unit

- Conduct by the step 4 of the procedure for pulling out the trimmer unit (Refer to [F.12.4.4.\(2\) Procedure for pulling out the trimmer unit](#))

⚠ DANGER:

- Be sure not to pull out the trimmer unit to the back side until the stopper is removed. If the stopper is removed while the trimmer unit is pulled out to the back side, the trimmer unit drops.

- Disconnect 5 connectors [1] and then remove the wiring harness from the wiring harness clamp.



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3. Remove each 2 of the screws [1] at 2 places, and then remove the stoppers /1 [2] and /2 [3].
4. Pull out the trimmer unit [4] to the back side by holding the configuration parts [5].

Note

- Remove or reinstall the trimmer unit [4] by lifting it slightly to avoid the projection for preventing falling off [6] on the trimmer unit plate.
- Be sure not to hold the position that is easily damaged like the electrical parts.

⚠ Note:

- Be sure to perform this operation with 2 people because the trimmer unit is heavy.

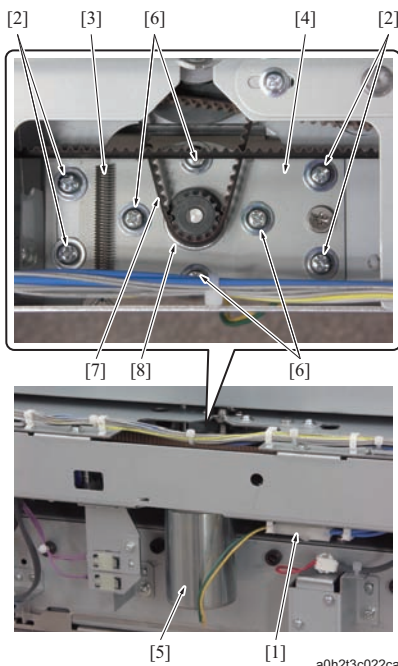
5. Reinstall the preceding parts following the removal steps in reverse.
6. After replacing the part, be sure to reset the parts counter.
 - No.270 (1250/1250P/1052)
 - No.234 (1200/1200P/1051)
 - No.233 (C8000)

12.4.5 Replacing the trimmer press motor (M32)**(1) Periodically replaced parts/Spotted replaced parts/Cycle**

- Trimmer press motor (M32)
- : Every 20,250,000 prints *1 (Actual replacement cycle: Every 500,000 cuts *2)

*1 The periodical replacement is only for 1200/1200P/1051.

*2 Actual replacement cycle of 1250/1250P/1052/1200/1200P/1051/C8000/C7000/C7000P/C70hc/C6000

(2) Procedure

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1. Pull out the trimmer unit. (Refer to [F.12.4.4 Replacing the trimming unit](#))
2. Disconnect the connector [1].
3. Loosen 4 screws [2].

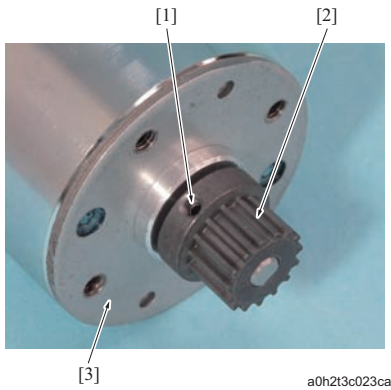
Note

- When reinstalling it, be sure to tighten 4 screws [2] after making the tension of the spring [3] over the mounting plate [4].

4. Remove 4 screws [6] with keeping the trimmer press motor (M32) [5], and then remove it from the belt [7].

Note

- When reinstalling it, be sure to put the trimmer press motor (M32) [5] into the round hole [8].



5. Loosen the screw [1] and then remove the gear [2] from the trimmer press motor (M32) [3].
6. Reinstall the preceding parts following the removal steps in reverse.
7. After replacing the part, be sure to reset the parts counter.
 - No.268 (1250/1250P/1052)
 - No.230 (1200/1200P/1051)
 - No.231 (C8000/C7000/C7000P/C70hc/C6000)

12.4.6 Replacing the trimmer blade motor (M31)

(1) Periodically replaced parts/Spotted replaced parts/Cycle

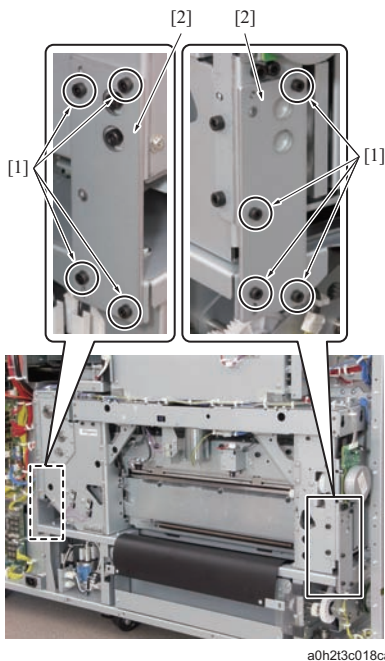
- Trimmer blade motor (M31)
 - : Every 30,000,000 prints *¹ (Actual replacement cycle: Every 850,000 cuts *²)
- Trimmer blade motor (M31)
 - : Spot replacement (Actual replacement cycle: Every 2,500,000 feeds)*³

*¹ The periodical replacement is only for 1200/1200P/1051.

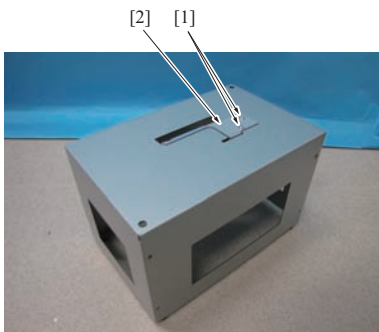
*² Actual replacement cycle of 1200/1200P/1051/C8000/C7000/C7000P/C70hc/C6000

*³ Actual replacement cycle of 1250/1250P/1052

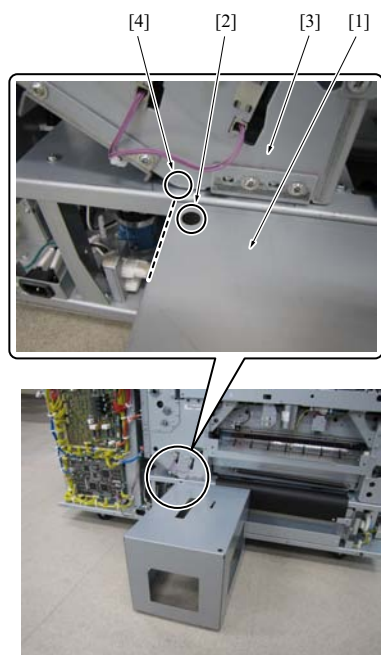
(2) Procedure (previous trimmer unit)



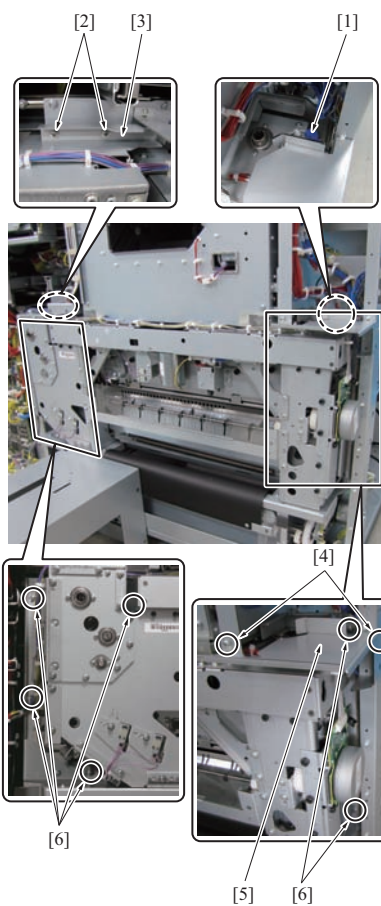
1. Remove the following parts.
 - Rear cover /Lt (Refer to [G.10.3.2 Rear cover /Lt](#))
 - Rear cover /Rt (Refer to [G.10.3.3 Rear cover /Rt](#))
 - Left cover (Refer to [G.10.3.4 Left cover](#))
 - Trimmer scraps guide (Refer to [F.12.4.1 Removing/installing the trimmer paddle assy](#))
2. Remove each 4 of the screws [1] at 2 places, and then remove 2 fixing plates [2].



3. Remove 2 screws [1] of the jig for supporting trimmer unit and then remove the anti-drop bracket [2].



4. Align the edge of the jig for supporting trimmer unit [1] with the corner [4] of the trimmer unit based on the hole [2] of the jig for supporting trimmer unit [1].



5. Disconnect the connector [1].

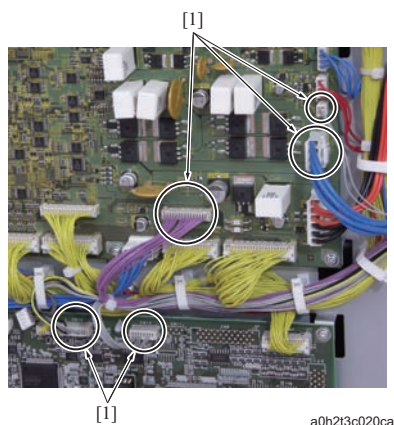
Note

- When reinstalling it, be careful not to nip the wiring harness with the metal plate.

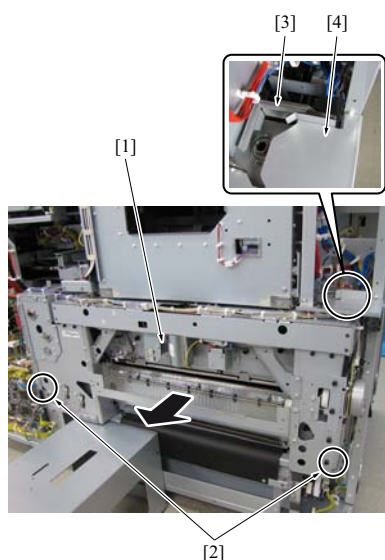
6. Remove 2 screws [2] and then remove the stopper [3].
7. Reinstall the anti-drop bracket [5] with 2 screws [4] which have been removed in step 3.
8. Remove 6 screws [6].

⚠ DANGER:

- Be sure not to pull out the trimmer unit to the back side until the stopper [3] is removed. If the stopper is removed while the trimmer unit is pulled out to the back side, the trimmer unit drops.



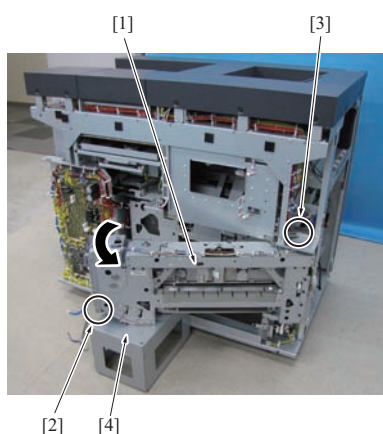
9. Disconnect 5 connectors [1] and then remove the wiring harness from the wiring harness clamp.



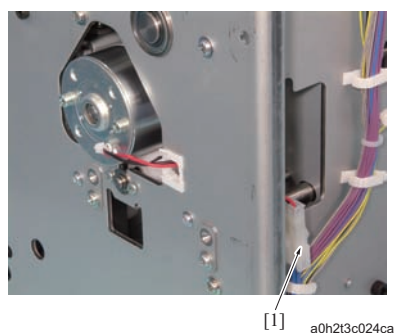
10. Pull out the trimmer unit to the back side until the stoppers [3] touch to the anti-drop brackets [4] by holding the lower edges [2] of the trimmer unit [1].

Note

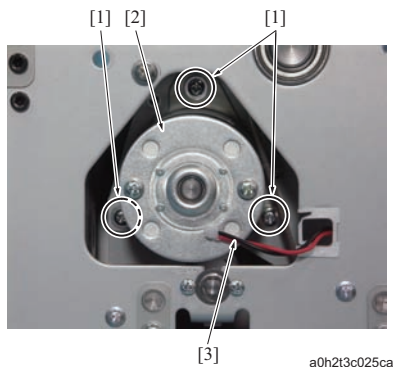
- Be sure not to hold the position that is easily damaged like the electrical parts.



11. Hold the lower right [2] of the trimmer unit [1], turn it around the engaging [3] of the stopper and the anti-drop bracket, and then put the trimmer unit [1] on the jig for supporting trimmer unit [4].



12. Disconnect the connector [1].



13. Remove 3 screws [1] and then remove the trimmer blade motor (M31) [2].

Note

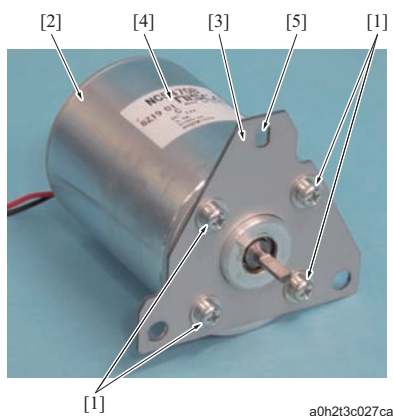
- When reinstalling it, be sure to set so that the wiring harness [3] comes in the position as shown in the picture.



14. Check point when reinstalling the trimmer blade motor (M31)

Note

- When reinstalling it, be sure to insert the D-cut [1] of the shaft on the trimmer blade motor (M31) into the D-cut hole [2] of the planetary gear.



15. Remove 4 screws [1] and then remove the mounting bracket [3] from the trimmer blade motor (M31) [2].

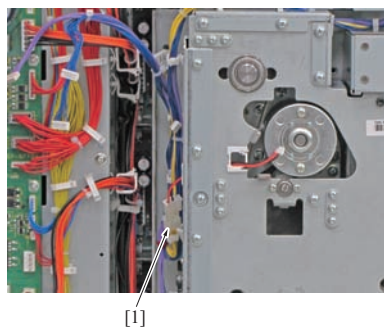
Note

- When reinstalling it, be sure that the label [4] is in the same direction as the slotted hole [5] on the mounting bracket [3].

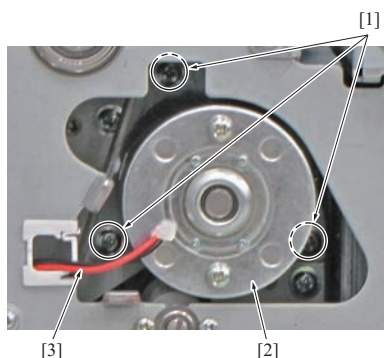
16. Reinstall the preceding parts following the removal steps in reverse.

17. After replacing the part, be sure to reset the parts counter.

- No.269 (1250/1250P/1052)
- No.231 (1200/1200P/1051)
- No.232 (C8000/C7000/C7000P/C70hc/C6000)

(3) Procedure (new trimmer unit)

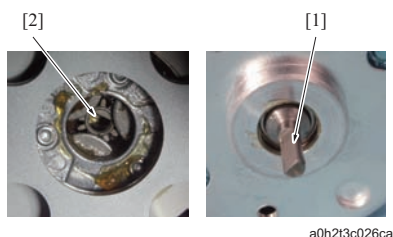
1. Remove the rear cover /Lt. (Refer to [G.10.3.2 Rear cover /Lt](#))
2. Disconnect the connector [1].



3. Loosen 3 screws [1] and then remove the trimmer blade motor (M31) [2].

Note

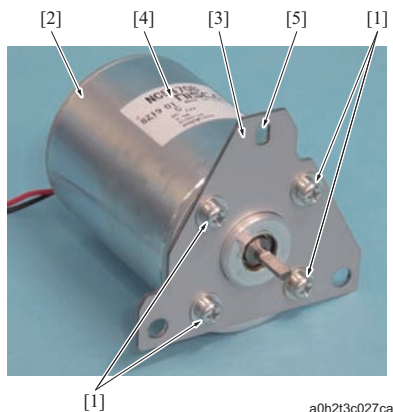
- When reinstalling it, be sure to set so that the wiring harness [3] comes in the position as shown in the picture.



4. Check point when reinstalling the trimmer blade motor (M31)

Note

- When reinstalling it, be sure to insert the D-cut [1] of the shaft on the trimmer blade motor (M31) into the D-cut hole [2] of the planetary gear.



5. Remove 4 screws [1] and then remove the mounting bracket [3] from the trimmer blade motor (M31) [2].

Note

- When reinstalling it, be sure that the label [4] is in the same direction as the slotted hole [5] on the mounting bracket [3].

6. Reinstall the preceding parts following the removal steps in reverse.
7. After replacing the part, be sure to reset the parts counter.
 - No.269 (1250/1250P/1052)
 - No.231 (1200/1200P/1051)
 - No.232 (C8000/C7000/C7000P/C70hc/C6000)

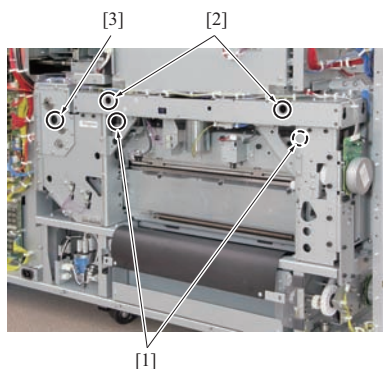
12.4.7 Lubrication to the trimmer unit**(1) Periodic lubrication parts/cycle**

- Paper holding screw
 - : Every 1,400,000 prints (Actual lubrication cycle: Every 37,500 cuts) *1
 - : Every 1,500,000 prints (Actual lubrication cycle: Every 37,500 cuts) *2*3
- Drive gear /3, /4
 - : Every 20,250,000 prints (Actual lubrication cycle: Every 500,000 cuts) *2

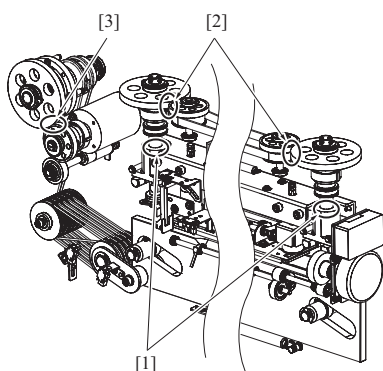
*1 C6501/C6501P/C65hc

*2 1200/1200P/1051

*3 1250/1250P/1052/C8000/C7000/C7000P/C70hc/C6000

(2) Procedure (previous trimmer unit)

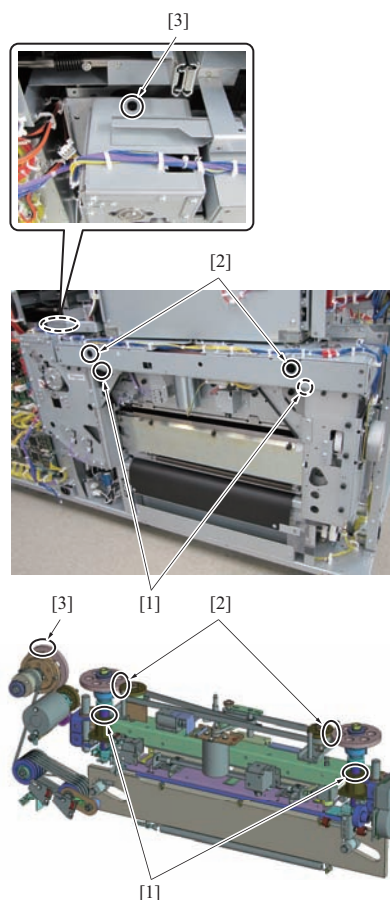
1. Remove the rear cover /Lt. (Refer to [G.10.3.2 Rear cover /Lt](#))
2. Lubricate Molykote EM-30L to the paper holding screw [1].
3. Lubricate Molykote EM-30L to the drive gears /3 [2] and /4 [3].
4. Reinstall the preceding parts following the removal steps in reverse.



a0h2t3c060ca

Note

- When applying the grease, be careful not to spill the grease to other parts.

(3) Procedure (new trimmer unit)

1. Pull out the trimmer unit. (Refer to [F.12.4.4.\(2\) Procedure for pulling out the trimmer unit](#))
2. Lubricate Molykote EM-30L to the paper holding screw [1].
3. Lubricate Molykote EM-30L to the drive gears /3 [2] and /4 [3].
4. Reinstall the preceding parts following the removal steps in reverse.

Note

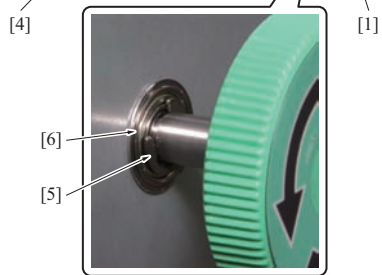
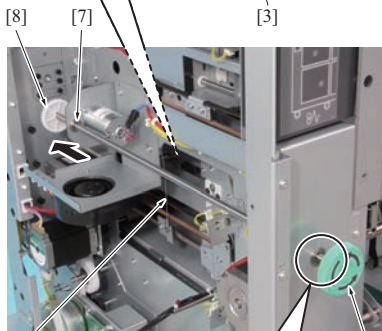
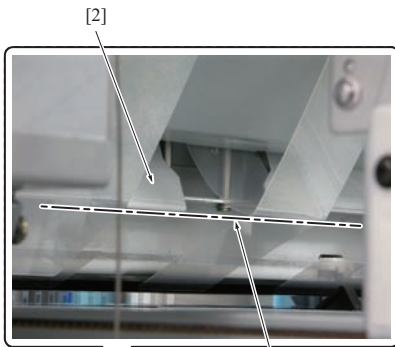
- When applying the grease, be careful not to spill the grease to other parts.

12.5 Bundle processing section**12.5.1 Replacing the bundle press stage gear****(1) Periodically replaced parts/Spotted replaced parts/Cycle**

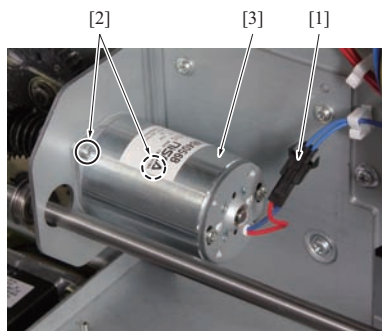
- Bundle press stage gear
: Every 20,250,000 prints *1 (Actual replacement cycle: Every 500,000 set (number of set of sheets exited to the bundle tray) *2)

*1 The periodical replacement is only for 1200/1200P/1051.

*2 1250/1250P/1052/1200/1200P/1051/C6501/C6501P/C65hc/C8000/C7000/C7000P/C70hc/C6000 spotted replaced cycle

(2) Procedure

a0h2t3c028ca



a0h2t3c029ca



a0h2t3c030ca

1. Remove the following parts.
 - Rear cover /Lt (Refer to [G.10.3.2 Rear cover /Lt](#))
 - Left cover (Refer to [G.10.3.4 Left cover](#))
2. Rotate the jam cleaning knob [1] in the arrow-marked direction until it stops.

Note

 - When the jam cleaning knob [1] stops, be sure to check that the bundle registration plate [2] comes to the upper position [3] after the bundle press stage goes down and the tension of the wire [4] is released.
 - Be sure not to rotate the jam cleaning knob too much.
3. Remove the E-ring [5] and move the gear [8] to the back side after moving the bearings [6] and [7].

4. Disconnect the connector [1].
5. Remove 2 screws [2] and then remove the bundle press stage up down motor (M24).

Note

- Be careful not to lose the pin [3] as it drops off when removing the gear [2].

6. Remove the E-ring [1], and then remove the bundle press stage gear [2] and 2 bearings [3] on both sides of the gear.

Note

- After replacing the bundle press stage gear [2], be sure to apply plas guard No.2 to the gear.

7. Reinstall the preceding parts following the removal steps in reverse.
8. After replacing the part, be sure to reset the parts counter.
 - No.267 (1250/1250P/1052)
 - No.229 (1200/1200P/1051)
 - No.242 (C8000/C7000/C7000P/C70hc/C6000)

12.5.2 Replacing the bundle press stage unit

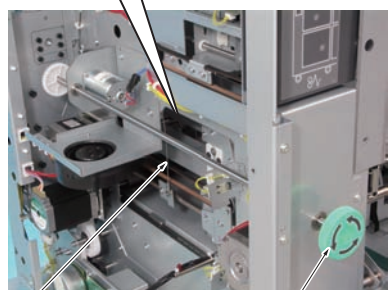
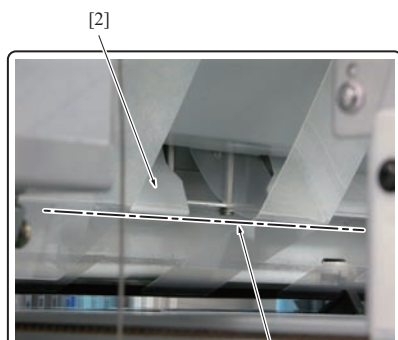
(1) Spotted replaced parts/cycle

- Bundle press stage unit

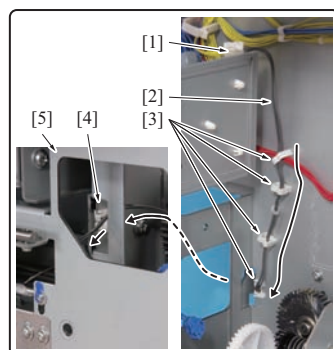
: Spot replacement (Actual replacement cycle: every 2,500,000 copies (number of set of sheets exited to the bundle tray)) *1

*1 1250/1250P/1052/1200/1200P/1051/C8000

(2) Procedure



[4] [1] a0h2t3c031ca



a0h2t3c032ca

1. Remove the following parts.
 - Rear cover /Lt (Refer to [G.10.3.2 Rear cover /Lt](#))
 - Rear cover /Rt (Refer to [G.10.3.3 Rear cover /Rt](#))
 - Left cover (Refer to [G.10.3.4 Left cover](#))
 - Trimmer unit (Refer to [F.12.4.4 Replacing the trimming unit](#))
2. Rotate the jam cleaning knob [1] in the arrow-marked direction until it stops.

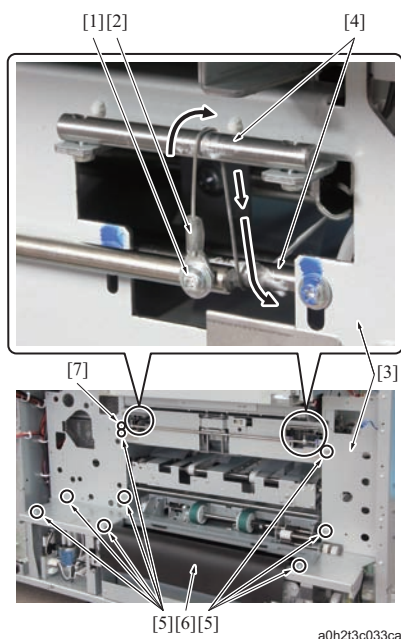
Note

- When the jam cleaning knob [1] stops, be sure to check that the bundle registration plate [2] comes to the upper position [3] after the bundle press stage goes down and the tension of the wire [4] is released.
- Be sure not to rotate the jam cleaning knob too much.

3. Disconnect the connector [1].
4. Remove the wiring harness [2] from the clamp [3], and then pull it out from the hole [4] by following the arrow.

Note

- When reinstalling it, be careful not to nip the wiring harness [2] with the trimmer unit plate [5].



5. Remove 1 each of the screws at 2 places and remove 1 each of the up-down wire [2], and then take it out to the front side of the machine from the trimmer unit plate [3] by following the arrow.

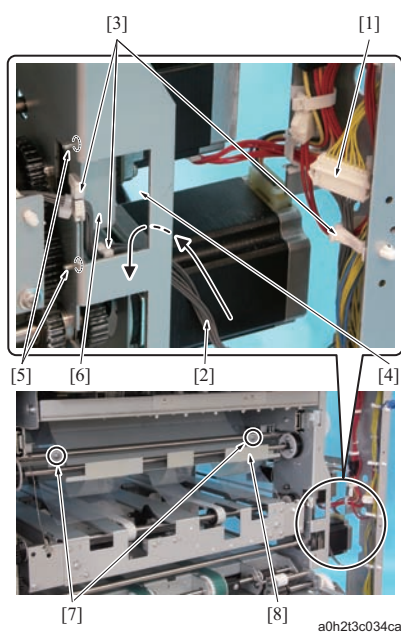
Note

- When reinstalling it, be sure to lubricate Molykote EM-30L to each 2 shafts [4].

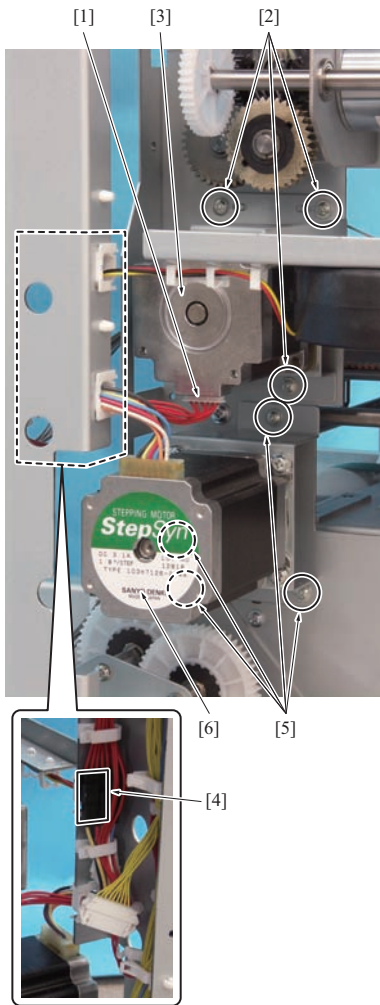
6. Remove 8 screws [5] and then remove the trimmer unit plate [3].

Note

- Be careful not to damage the trimmer scraps guide [6].
- When reinstalling it, be sure to align the projection [7].



7. Disconnect the connector [1] and remove the wiring harness [2] from clamp [3], and then take it out from the hole [4] of the metal plate to the arrow-marked direction.
8. Remove 2 screws [5] and then remove the bracket [6].
9. Remove 2 screws [7] and then remove the guide plate [8].



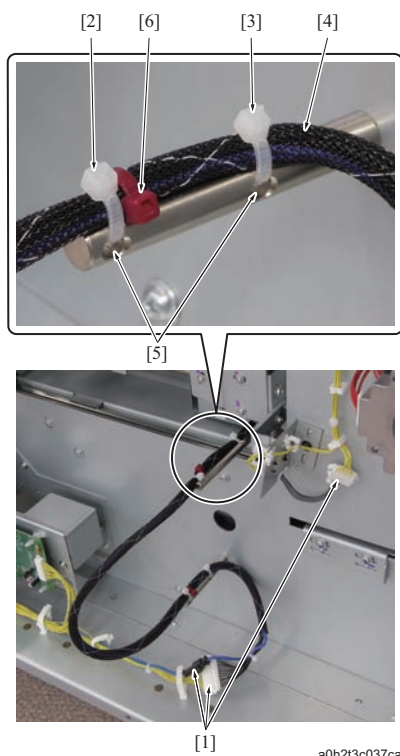
a0h2t3c035ca

10. Disconnect the connector [1].
11. Remove 3 screws [2] and then remove the bundle registration motor (M12) [3].
12. Disconnect the connector [4].
13. Remove 4 screws [5] and then remove the bundle press movement motor (M17) [6].



a0h2t3c036ca

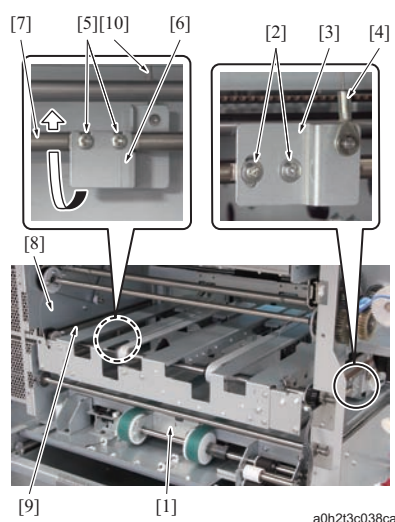
14. Remove the E-ring [1] and then remove the gear [2] and the pin [3].
15. Remove the E-ring [4] and then remove the gear [5] and the pin [6].



16. Disconnect 3 connectors [1].
17. Cut the wire binding bands [2] and [3] and remove the wiring harness [4].

Note

- Be sure to let the wire binding bands [2] and [3] into the shaft hole [5] and install the wire retaining band [6] on the [2] side between the bands [2] and [3].



18. Pull out the bundle paper exit tray [1].
19. Remove 2 screws [2] and then remove the wire mounting plate /Lt [3].

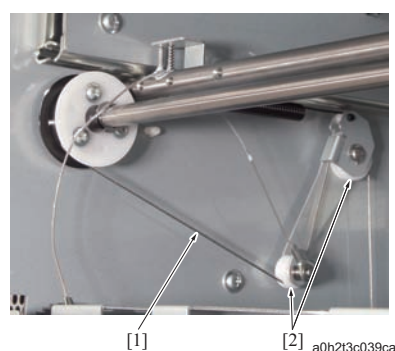
Note

- Since the wire /Lt [4] has the tension of the spring, be sure to remove 2 screws [2] with keeping the wire mounting plate /Lt [3] and lift it up until the tension is released, and then take it off gently.

20. Loosen the screws [5] and pull the wire mounting plate /Rt [6] downward to move it to the opposite side of the shaft [7], and then remove it to the space between the side plate [8] and the timing belt [9].

Note

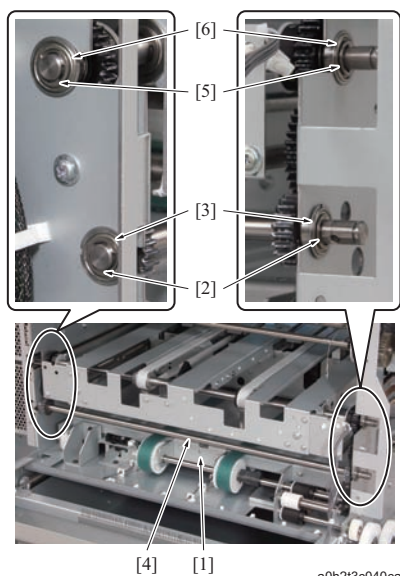
- Since the wire /Rt [10] has the tension of the spring, be sure to lift up the wire mounting plate /Rt [6] until the tension is released, and then take it off gently.



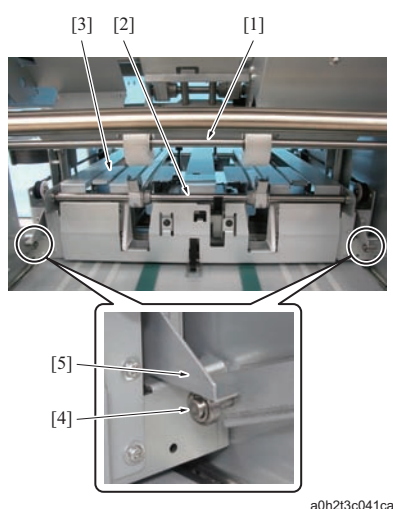
21. Check point when reinstalling the wire

Note

- When reinstalling it, be sure to put the wire [1] on 2 pulleys [2].



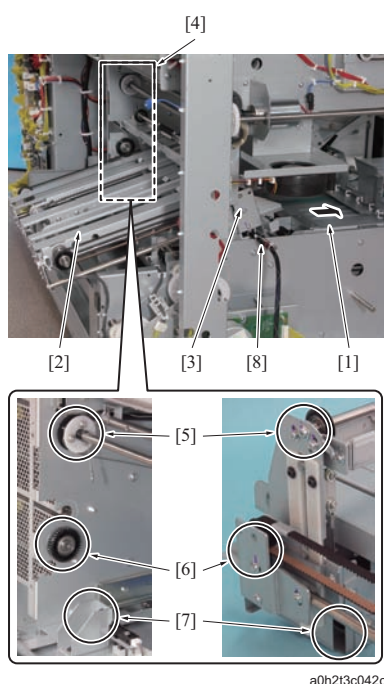
22. Push the bundle paper exit tray [1] fully to the back.
23. Remove 2 E-rings [2] and then remove 2 bearings [3] and the drive shaft [4].
24. Remove 2 E-rings [5] and then remove the bearings [6].



25. While keep holding the bundle paper exit assist roller [1] horizontally, push the bundle press stage unit [3] to the back with holding the shaft [2] to release the roller pin [4] of the bundle paper exit assist roller arm from the regulation bracket [5]. After the release, put down the bundle paper exit assist roller [1] gently.

Note

- Once the roller pin [4] of the bundle paper exit assist roller arm is removed from the regulation bracket [5], the bundle paper exit assist roller drops off. Therefore, be sure to hold with hands.
- When reinstalling, be sure to put the roller pin [4] under the regulation bracket [5].



26. Pull out the bundle paper exit tray [1] to about half.

Note

- If the bundle paper exit tray [1] is pulled out too much, the bundle press stage unit [2] drops off from the tray.

27. Pull out the bundle press stage unit [2] to the position in the picture with holding the bundle press section [3]. Then, pull it out more to the back with paying attention to the contacting places [5], [6], and [7] on the right side, and remove the arm [8].
28. Reinstall the preceding parts following the removal steps in reverse.

Note

- After the installation, be sure to check that the bundle press stage unit goes up and down horizontally by rotating the jam cleaning knob.

13. PERIODICAL MAINTENANCE PROCEDURE PB-502

13.1 Sub compile (SC) section

13.1.1 Precautions on maintenance

⚠ CAUTION

- Make sure to unplug the power cord of the main body from the power outlet when it is connected to the main body.

13.1.2 Replacing the switchback roller

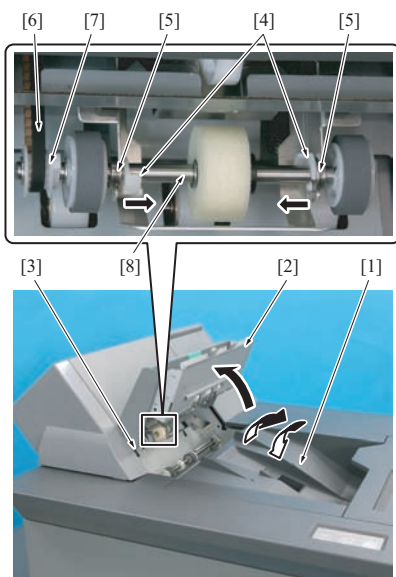
(1) Periodically replaced parts/Spotted replaced parts/Cycle

- Switchback roller
 - : Every 750,000 prints*¹ (Actual replacement cycle: Every 600,000 prints)
 - : Spot replacement (Actual replacement cycle: Every 600,000 prints)*²

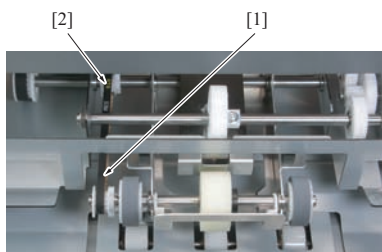
*¹ 1200/1200P/1051

*² C8000/C7000/C7000P/C70hc/C6000

(2) Procedure



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1. Open the upper door [1] to open the SC door [2]. Then close the upper door [1].

Note

- To keep the SC door open, insert a screwdriver into the hole [3]. Be sure to remove the screwdriver when closing the sub clamp door, or the cover gets damaged.

2. Remove the 2 C-clips [4], and slide the 2 bearings [5] into the inside.

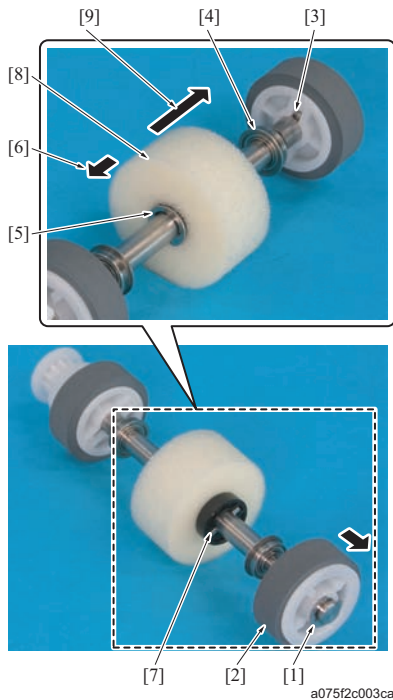
Note

- Before removing the C-clips, be sure to spread a sheet of paper and so on under the switchback roller assy to prevent the C-clips from dropping into inside of the machine.

3. Release the pulley [7] from the belt [6] gently, and remove the switchback roller assy [8].

Note

- After reinstalling the switchback roller assy, use a mirror to check that the belt [1] is properly looped over the pulley [2] without any slackness. If the belt has come off the pulley, remove the SC cover /Up to correct that. (Refer to [G.11.2.11 SC cover /Up](#))



4. Remove the E-ring [1], and remove the roller [2] and the pin [3].
5. Remove the bearing [4].

Note

- Be sure to install the bearing [4] so that its collar faces toward the switchback roller.

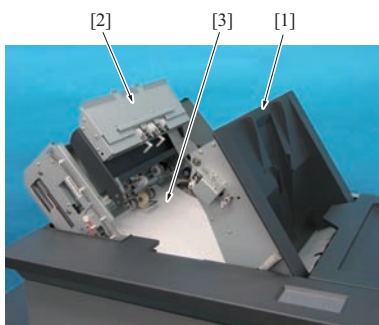
6. Remove the E-ring [5], slide the switchback roller [8] in the direction of the arrow [6] (toward the pulley) and remove the pin [7]. Then remove the switchback roller [8] in the direction of the arrow [9].
7. Reinstall the above parts following the removal steps in reverse.
8. After replacing the parts, be sure to conduct the counter reset of parts counter No.239.

13.1.3 Replacing the SC switchback release motor (M13) and the one-way clutches /A and /B**(1) Periodically replaced parts/Spotted replaced parts/Cycle**

- SC switchback release motor (M13)
 - : Every 6,000,000 prints ^{*1} (Actual replacement cycle: Every 3,000,000 prints ^{*2})
 - : Spot replacement (Actual replacement cycle: Every 750,000 prints ^{*2})
- One-way clutch /B
 - : Every 6,000,000 prints (Actual replacement cycle: Every 6,000,000 prints ^{*2})
- One-way clutch /A
 - : Every 12,000,000 prints ^{*1} (Actual replacement cycle: Every 6,000,000 cuts ^{*2})

^{*1} Periodical replacement only for 1200/1200P/1051. C8000 is not supported.

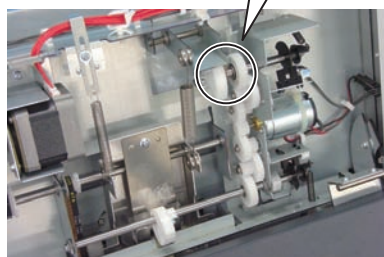
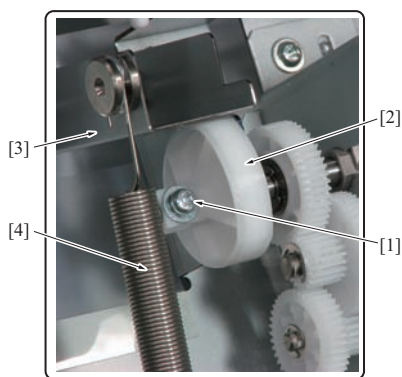
^{*2} Actual replacement cycle of 1200/1200P/1051/C8000.

(2) Procedure

1. Remove the SC cover /Up. (Refer to [G.11.2.11 SC cover /Up](#))
2. Open the upper door [1] to open the SC door [2] and set the paper [3].
3. Close the SC door [2].

Note

- Before removing the C-clips, be sure to spread a sheet of paper under the switchback roller assy to prevent the C-clips from dropping into the machine inside.

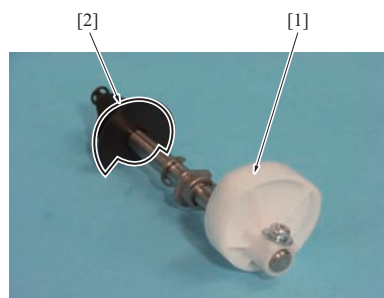


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4. Remove the screw [1] and remove the switchback cam [2].

Note

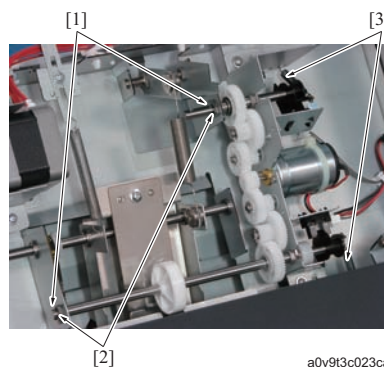
- The switchback cam [2] is tensioned by the spring [4] via the switchback arm [3]. When removing the screw [1], the switchback arm [3] is pulled by the spring [4] and the switchback cam [2] moves. At this time, be careful not to drop the screw [1].



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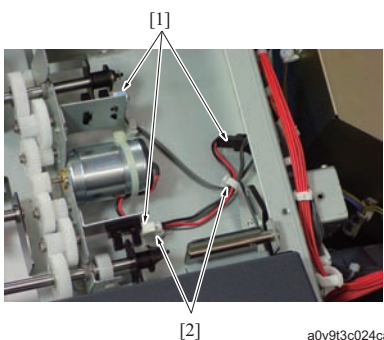
Note

- When reinstalling the switchback cam [2], be sure to install it following the positional relation with the actuator [2] as shown in the picture.



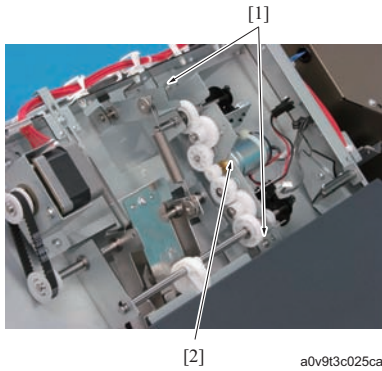
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5. Remove 2 E-rings [1] and remove 2 bearings [2].
6. Remove 2 springs [3].

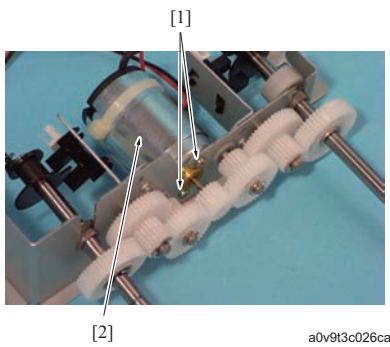


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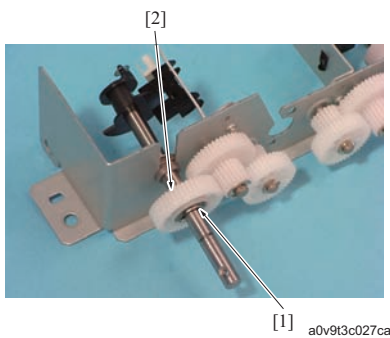
7. Disconnect 3 connectors [1] and remove the wiring harness from 2 wiring harness clamps [2].



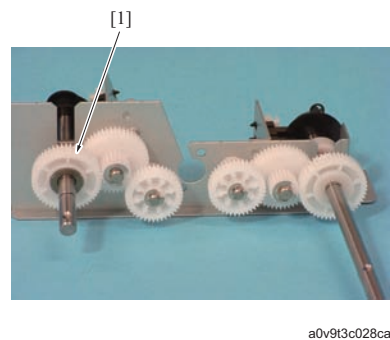
8. Remove 2 screws [1] and remove the SC switchback release motor assy [2].



9. Remove 2 screws [1] and remove the SC switchback release motor [2].

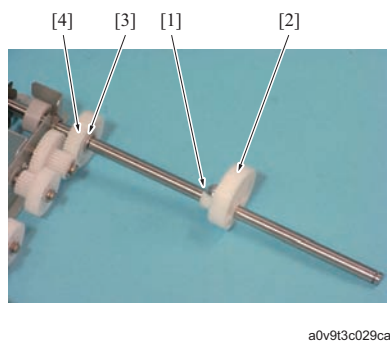


10. Remove the E-ring [1] and remove the one-way clutch /B [2].

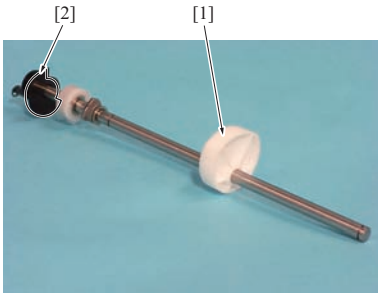


Note

- When reinstalling the one-way clutch /B [1], be sure to install it in the direction shown in the picture.



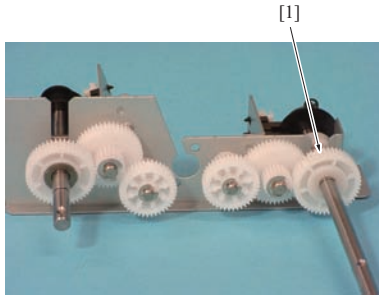
11. Remove the screw [1] and remove the pressure cam [2].
12. Remove the E-ring [3] and remove the one-way clutch /A [4].
13. Reinstall the above parts following the removal steps in reverse.



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Note

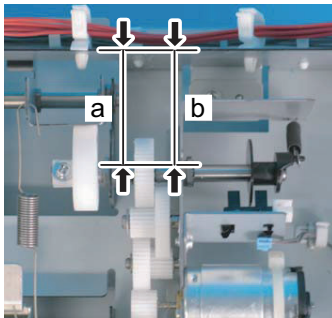
- When reinstalling the pressure cam [1], be sure to install it following the positional relation with the actuator [2] as shown in the picture.



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Note

- When reinstalling the one-way clutch /A [1], be sure to install it in the direction shown in the picture.



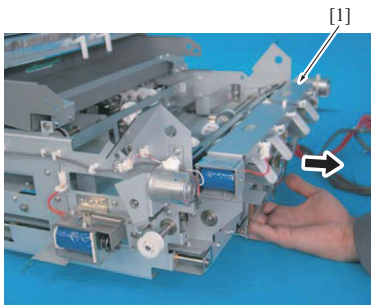
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Note

- When reinstalling the SC switchback release motor assy, be sure to set so that the distances "a" and "b" become same value.
Standard value: The difference of distances "a" and "b" = 0.2mm or less

13.1.4 Replacing the SC pressure arm solenoid (SD13)**(1) Periodically replaced parts/Spotted replaced parts/Cycle**

- SC pressure arm solenoid (SD13)
: Every 20,250,000 prints *1 (Actual replacement cycle: Every 5,000,000 cuts *2)
- *1 The periodical replacement is only for 1200/1200P/1051.
*2 Actual replacement cycle of 1200/1200P/1051/C8000.

(2) Procedure

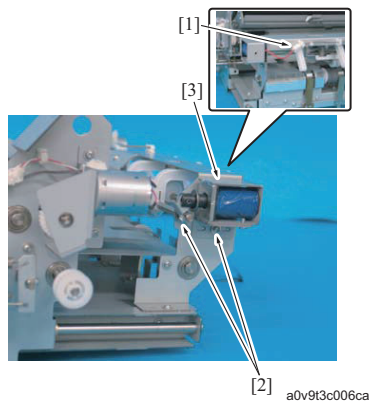
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1. Remove the SC unit. (Refer to [G.11.2.17 SC unit](#))

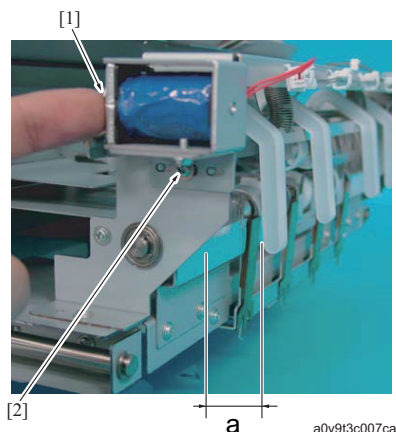
Note

- When putting down the SC unit, be sure not to pin the wiring harness under it.
- Put the SC unit on a table so that the bottom surface of the sub scan alignment unit [1] does not contact the floor.

2. Pull out the sub scan alignment unit [1] in the arrow-marked direction.



3. Disconnect the connector [1].
4. Remove 2 screws [2] and remove the SC pressure arm solenoid (SD13) [3].
5. Reinstall the above parts following the removal steps in reverse.
6. After replacing the parts, be sure to conduct the counter reset of parts counter No.238.

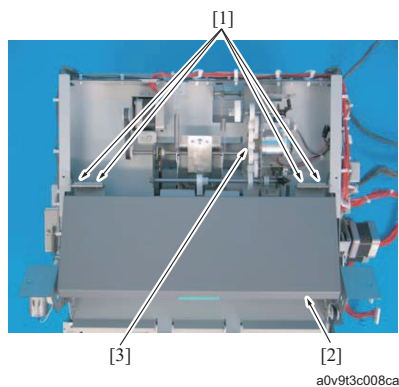
**Note**

- When reinstalling the SC pressure arm solenoid, adjust the position so that the distance "a" obtains a standard value with the plunger [1] pulled, and then fix with the screw [2].

Standard value: $a = 16.4 \pm 1\text{mm}$

13.1.5 Replacing the FD alignment solenoid (SD11)**(1) Periodically replaced parts/Spotted replaced parts/Cycle**

- FD alignment solenoid (SD11)
 - : Every 20,250,000 prints ^{*1} (Actual replacement cycle: Every 5,000,000 cuts ^{*2})
- ^{*1} The periodical replacement is only for 1200/1200P/1051.
^{*2} Actual replacement cycle of 1200/1200P/1051/C8000.

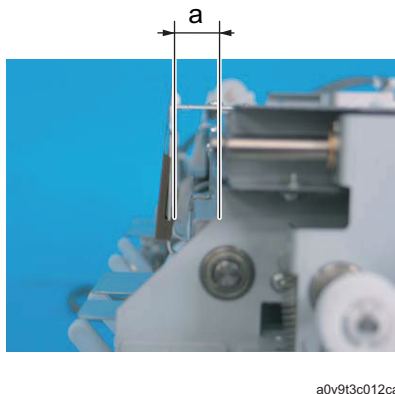
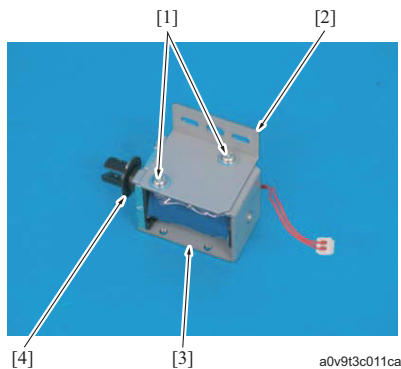
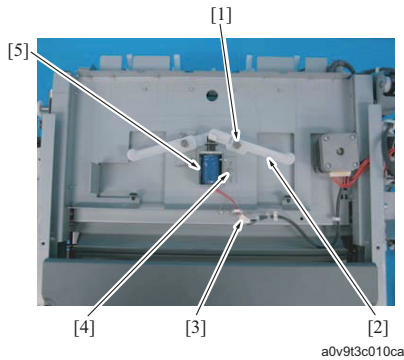
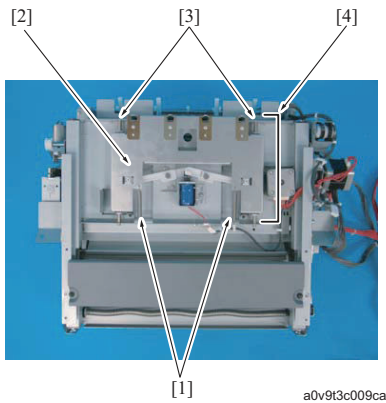
(2) Procedure

1. Remove the SC unit. (Refer to [G.11.2.17 SC unit](#))

Note

- When putting down the SC unit, be sure not to pin the wiring harness under it.
- Put the SC unit on a table so that the bottom surface of the sub scan alignment unit [1] does not contact the floor.

2. Remove 4 screws [1] and remove the SC door [2].



3. Put the SC unit with the FD alignment solenoid assy [4] faced up.

Note

- Put the SC unit on a table so that the SC switchback release motor assy [3] does not contact the floor.

4. Remove 2 springs [1].
5. Remove 2 screws [3] and pull out 2 shafts, and then remove the sub scan alignment plate [2].

6. Remove the E-ring [1] and remove the sub scan alignment arm [2].
7. Disconnect the connector [3] and remove the screw [4], and then remove the FD alignment solenoid assy [5].

Note

- When removing the FD alignment solenoid assy, be careful not to drop the pin.

8. Remove 2 screws [1] to remove the mounting plate [2], and then remove the FD alignment solenoid (SD11) [3].

Note

- When reinstalling the FD alignment solenoid, adjust the position so that the distance "a" obtains a standard value with the plunger [4] pulled.

Standard value: $a = 17.5 \pm 0.5\text{mm}$

9. Reinstall the above parts following the removal steps in reverse.
10. After replacing the parts, be sure to conduct the counter reset of parts counter No.237.

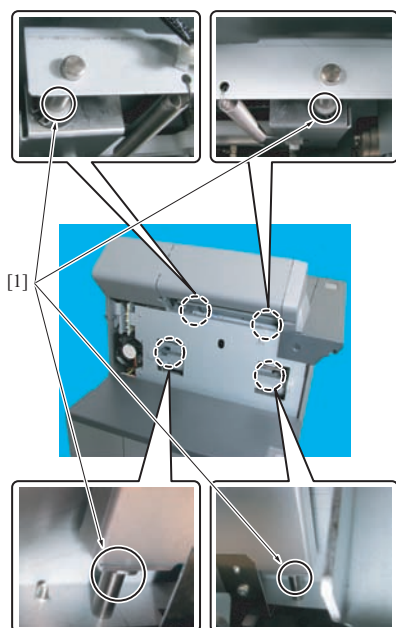
13.1.6 Lubrication to the sub scan alignment plate shaft

(1) Periodic lubrication parts/cycle

- Sub scan alignment plate shaft
: Every 200,000 prints *1
- Sub scan alignment plate shaft
: Every 750,000 prints *2

*1 C6501/C6501P/C65hc

*2 1200/1200P/1051/C8000/C7000/C7000P/C70hc/C6000

(2) Procedure

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1. Remove the upper cover /Lt. (Refer to [G.11.2.5 Upper cover /Lt](#))
2. Remove the left cover. (Refer to [G.11.2.7 Left cover](#))
3. Apply the plas guard No.2 to the 4 positions [1] the sub scan alignment plate shafts.

13.2 Cover paper table section**13.2.1 Precautions on maintenance****⚠ CAUTION**

- Make sure to unplug the power cord of the main body from the power outlet when it is connected to the main body.
- The glue tank unit is extremely hot right after turning OFF the main power switch (SW1) or the sub power switch (SW2) of the main body. To prevent burn injuries, leave the unit until it cools enough before performing the maintenance work.

Note

- Before performing the maintenance work, be sure to carry out the initial operation so that each part/unit is at the home position.

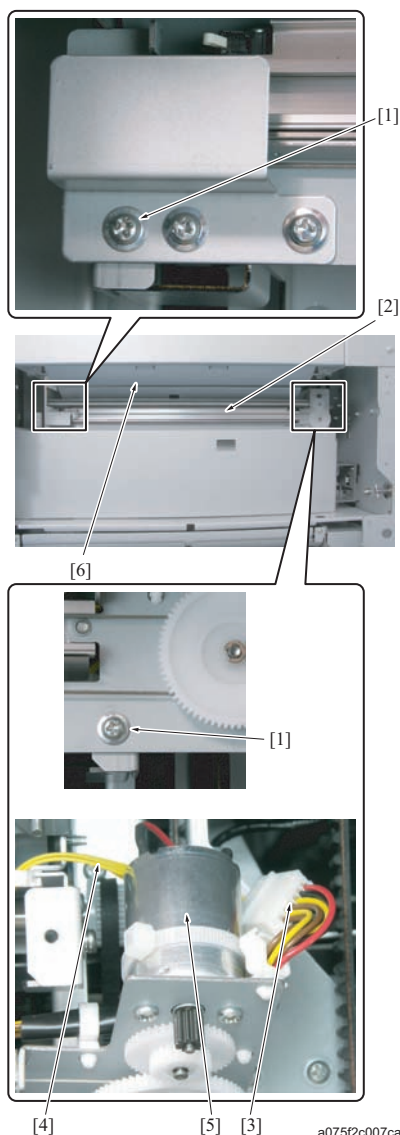
13.2.2 Replacing the roller cutter blade assy**(1) Periodically replaced parts/Spotted replaced parts/Cycle**

- Roller cutter blade assy

: Every 10,500,000 prints *1 (Actual replacement cycle: Every 100,000 cuts *2)

*1 The periodical replacement is only for 1200/1200P/1051.

*2 Actual replacement cycle of 1200/1200P/1051/C8000/C7000/C7000P/C70hc/C6000.

(2) Procedure

1. Remove the PB from the main body.
2. Remove the conveyance unit /Lw. (Refer to [G.11.2.21 Conveyance unit /Lw](#))
3. Remove 2 screws [1] and the roller cutter blade assy [2]. Then disconnect the connector [3].

Note

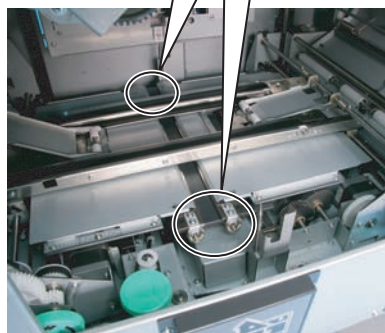
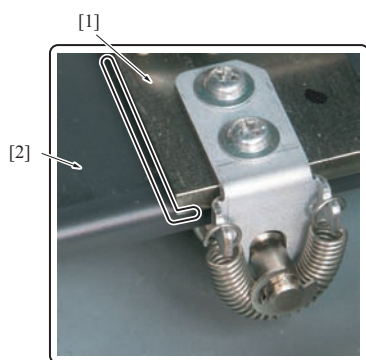
- Pull out the cover paper waste box before removing the roller cutter assy.
- When reinstalling the roller cutter assy, be sure to route the wire binding [4] under the cutter motor (M50) [5].
- Push the roller cutter blade assy [2] against the metal plate [6] to reinstall the assy.

4. Reinstall the above parts following the removal steps in reverse.

13.2.3 Cleaning the cover paper folding plate and the book spine backing plate**(1) Periodically cleaned parts/cycle**

- Cover paper folding plate and the book spine backing plate
: Every 750,000 prints*1

*1 1200/1200P/1051/C8000/C7000/C7000P/C70hc/C6000

(2) Simplified cleaning procedure

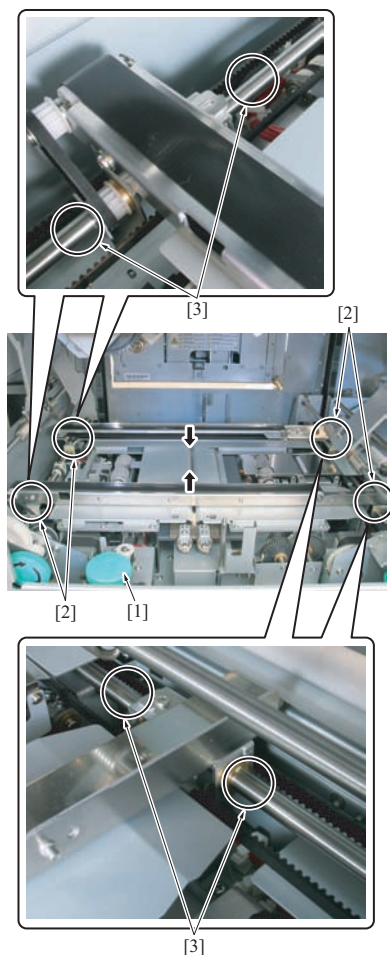
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1. Carry out the I/O check in service mode in the order of following output check code, and turn OFF the sub power switch (SW2) and the main power switch (SW1) with the cover paper folding plate opened.
"77-55", "77-45", "77-58", "77-61"
2. Clean the cover paper folding plate [1] and the book spine backing plate [2].

13.2.4 Lubrication to the cover paper alignment plate shaft**(1) Periodic lubrication parts/cycle**

- Cover paper alignment plate shaft
: Every 750,000 prints*1

*1 1200/1200P/1051/C8000/C7000/C7000P/C70hc/C6000

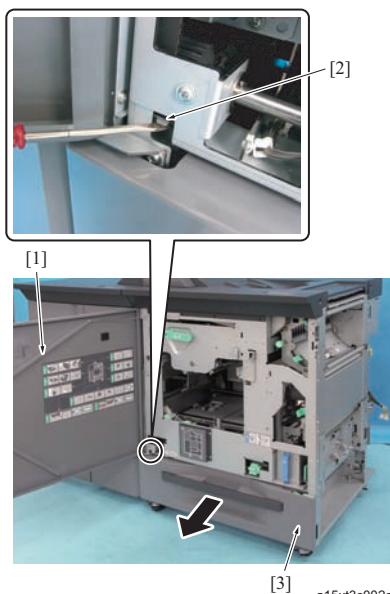
(2) Procedure

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1. Turn the knob [1] to move the cover paper alignment plate inward.
2. Apply plas guard No.2 to the 4 cover paper alignment plate shafts [2].

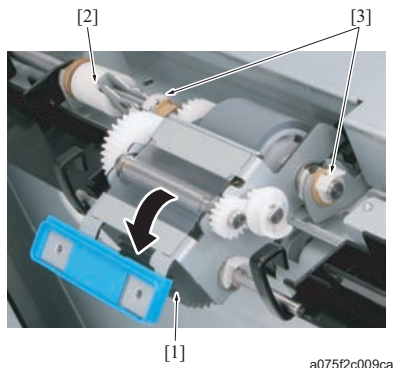
Note

- Apply plas guard No.2 to the outside of the cover paper alignment plate bearing on both sides.

13.3 Cover paper supply section**13.3.1 Removing/reinstalling the pick-up roller assy and the separation roller assy****(1) Procedure**

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1. Open the front door [1].
2. Unlock the cover paper tray [3] by slightly pushing up the cover paper tray lock lever [2] with a screwdriver or a similar tool, and pull out the cover paper tray [3].

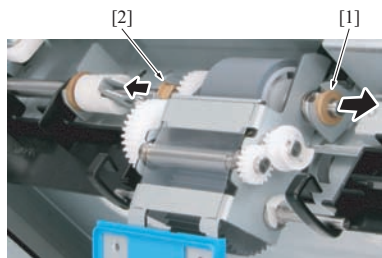


3. Turn the pick-up roller [1] in the direction of the arrow (counterclockwise as seen from the front side) to make the coupling [2] upright.

Note

- Be sure not to rotate the pick-up roller [1] against the direction of the arrow (clockwise) forcibly, as the roller is not designed to rotate in that direction.

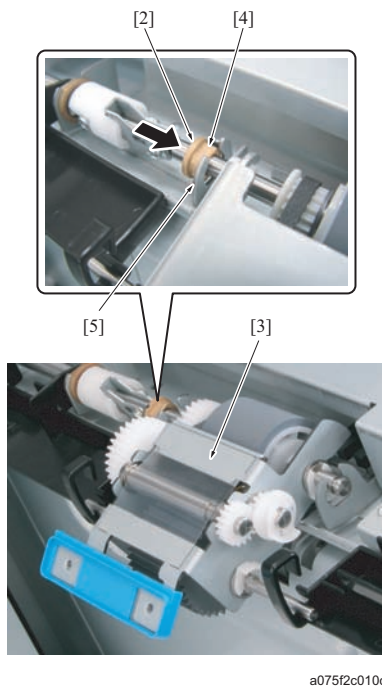
4. Remove 2 C-clips [3].

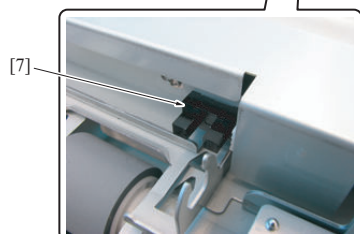
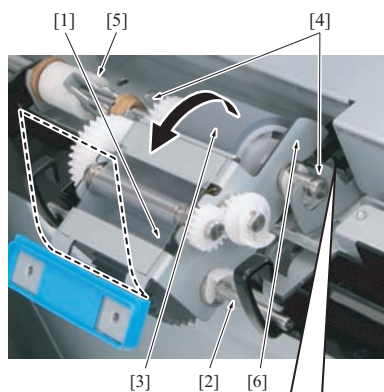


5. Remove the bearing /Fr [1].
6. Move the bearing /Rr [2] to the rear side.

Note

- When reinstalling them, insert the bearing /Rr [2] into the notch [5] on the metal frame while keeping on the level the flat face [4] of the bearing, and slightly pressing down the metal frame [3] of the pick-up roller assy. Then insert the bearing /Fr [1] in the same manner.



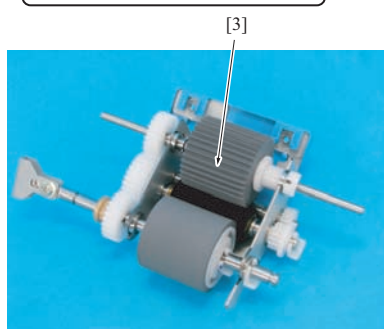
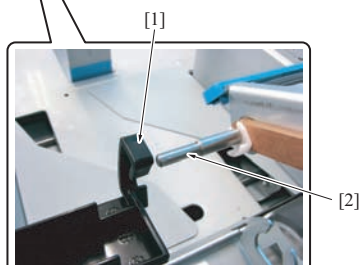
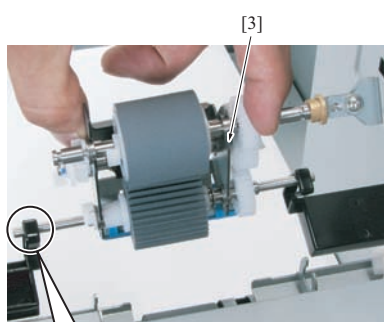


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7. Hold the pick-up roller assy [1] by hand and lift and tilt the paper feed roller [3] so that it rotates on the shaft [2] of the pick-up roller to remove it from the notch of the bearing [4] and the coupling [5].

Note

- When removing the pick-up roller assy [1], be careful not to damage the sensor [7] with the metal frame [6].

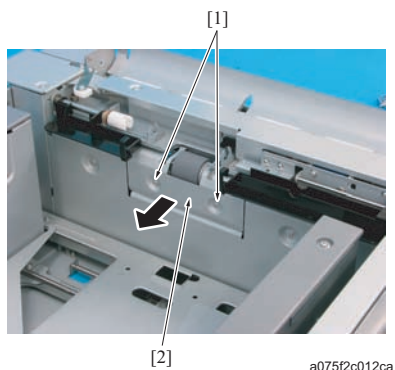


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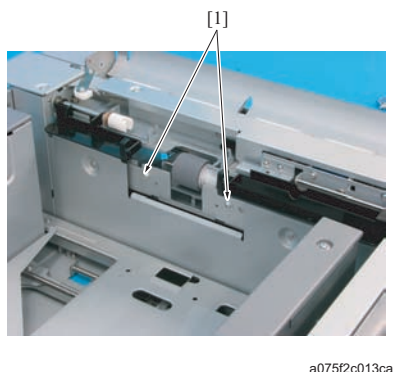
8. Remove the pick-up roller shaft [2] from the arm [1] of the paper feed guide plate and then remove the pick-up roller assembly [3].
9. Reinstall the above parts following the removal steps in reverse.

Note

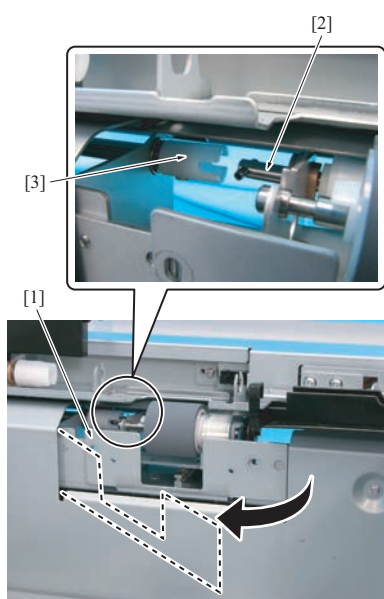
- After installing the pick-up roller assy, rotate the pick-up roller counterclockwise as seen from the front side.
- Make sure the paper feed roller and the belt rotate smoothly.
- The pick-up roller rotates in counterclockwise direction only. Be sure not to rotate it in the opposite direction.



10. Remove 2 screws [1] and then remove the entrance guide plate [2].



11. Remove 2 screws [1].

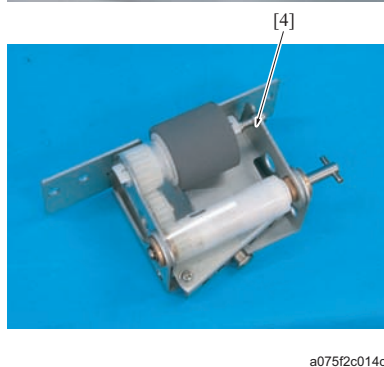


12. Open the frame [1] of the separation roller assy in the direction of the arrow, and remove the coupling pin [2] on the rear side from the joint [3]. Then remove the separation roller assy [4].

Note

- When reinstalling, make sure to engage the coupling pin [2] with the joint [3].
- When reinstalling the separation roller assy [4], fasten it with the screws while pressing it down.

13. Reinstall the above parts following the removal steps in reverse.



13.3.2 Replacing the pick-up roller and the paper feed roller

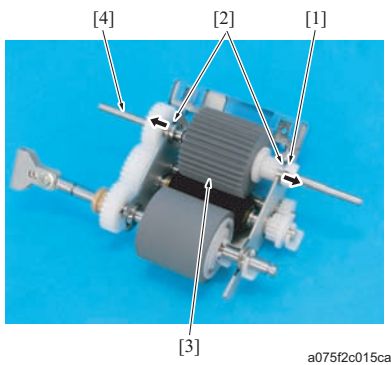
(1) Spotted replaced parts/cycle

- Pick-up roller
 - : Spot replacement (Actual replacement cycle: Every 500,000 feeds)*1
- Paper feed roller
 - : Spot replacement (Actual replacement cycle: Every 500,000 feeds)*1

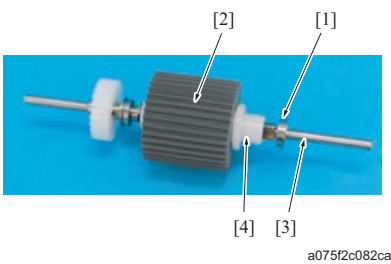
*1 1200/1200P/1051/C8000

(2) Procedure**Note**

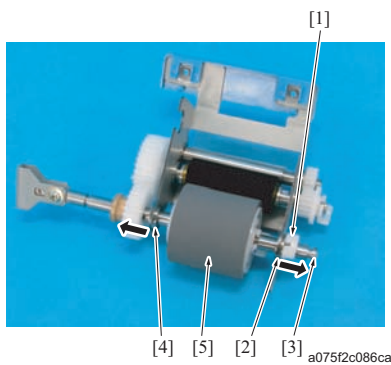
- The outward appearance of the collar is identical for the paper feed roller and the separation roller. However, the collar of the paper feed roller has a one-way mechanism on the inside while the collar of the separation roller does not. Be careful not to confuse one with the other.



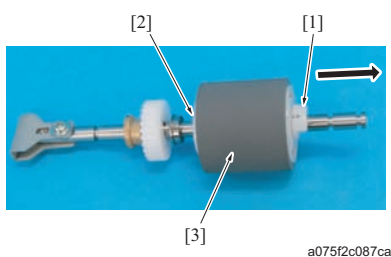
1. Remove the pick-up roller assembly. (Refer to [F.13.3.1 Removing/reinstalling the pick-up roller assy and the separation roller assy](#))
2. Remove the C-clip [1] of the pick-up roller assy.
3. Slide 2 bearings [2] and remove the pick-up roller [3] together with the shaft [4].



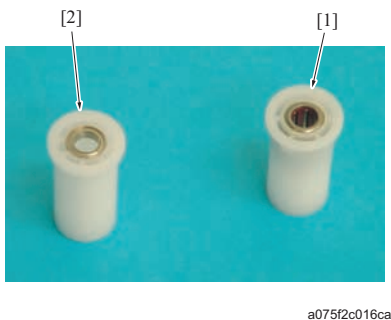
4. Remove the bearing [1] and pull out the pick-up roller [2] from the shaft [3].
5. Remove the pick-up roller [2] from the collar [4].
6. Replace the pick-up roller.



7. Remove the C-clip [1] and pull out the bearing /Fr [2] from the shaft [3].
8. Move the bearing /Rr [4] and remove the paper feed roller [5] together with the shaft [3].



9. Remove the C-clip [1].
10. Pull out the paper feed roller [3] from the collar [2].
11. Replace the pick-up roller [3].
12. Reinstall the above parts following the removal steps in reverse.



13. After replacing the parts, be sure to conduct the counter reset of parts counters No.240 and No. 241.

Note

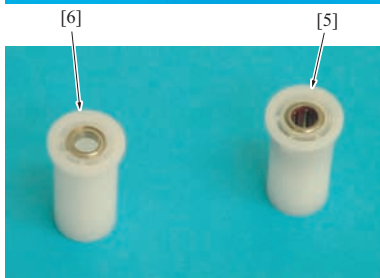
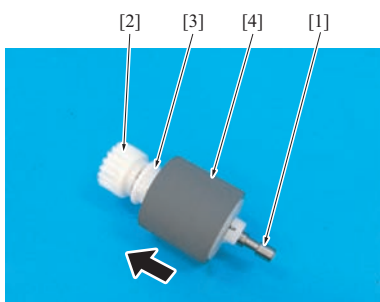
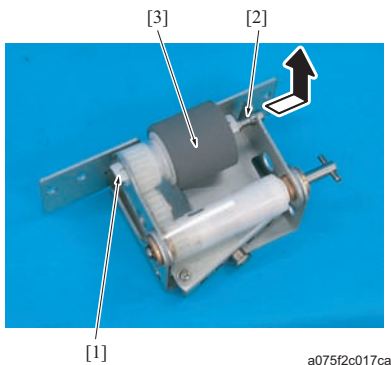
- There is no big difference in appearance between the 2 collars (one for the paper feed roller, and the other one is for the separation roller). However, they are different in the inside. The collar [1] for the paper feed roller has a one-way mechanism in it, and the other one [2] does not. Make sure to attach them correctly.

13.3.3 Replacing the separation roller**(1) Spotted replaced parts/cycle**

- Separation roller

: Spot replacement (Actual replacement cycle: Every 500,000 feeds)*1

*1 1200/1200P/1051/C8000

(2) Procedure

1. Remove the separation roller assy. (Refer to [F.13.3.1 Removing/reinstalling the pick-up roller assy and the separation roller assy](#))
2. Remove the C-clip [1] and remove the separation roller [3] together with the shaft [2].

3. Pull out the gear [2], the collar [3] and the separation roller [4] from the shaft [1] in the direction of the arrow.
4. Replace the separation roller [4].
5. Reinstall the above parts following the removal steps in reverse.

Note

- There is no big difference in appearance between the 2 collars (one for the paper feed roller, and the other one is for the separation roller). However, they are different in the inside. The collar [5] for the paper feed roller has a one-way mechanism in it, and the other one [6] does not. Make sure to attach them correctly.

6. After replacing the parts, be sure to conduct the counter reset of parts counter No.241.

13.3.4 Replacing the cover paper feed clutch (MC71) and the cover paper separation clutch (MC72)**(1) Spotted replaced parts/cycle**

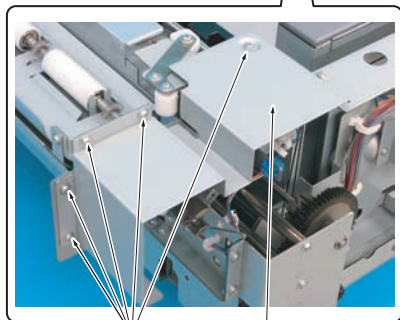
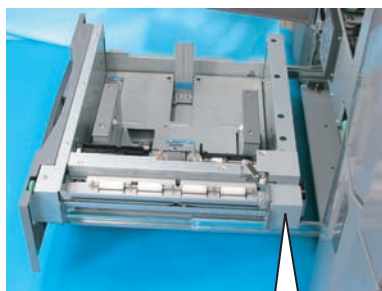
- Cover paper feed clutch (MC71)

: Spot replacement (Actual replacement cycle: Every 3,000,000 feeds)*1

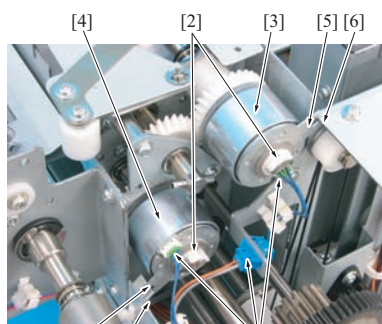
- Cover paper separation clutch (MC72)

: Spot replacement (Actual replacement cycle: Every 3,000,000 feeds)*1

*1 1200/1200P/1051/C8000

(2) Procedure

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1. Remove the stopper screws, 1 each, attached on the right and left rails of the cover paper tray and pull out the tray. (Refer to [G. 11.2.22 Cover paper tray](#))
2. Remove the 5 screws [1] and remove the clutch cover [2].

3. Disconnect the 3 connectors [1].
4. Remove the C-clips [2], 1 each, and remove the cover paper feed clutch (MC71) [3] and the cover paper separation clutch (MC72) [4].

Note

- When reinstalling, be sure to insert the stopper [5] of the clutch over the tab [6] of the metal frame.

5. Reinstall the above parts following the removal steps in reverse.
6. After replacing the parts, be sure to conduct the counter reset of parts counters No.242 and No. 243.

13.4 Conveyance section**13.4.1 Replacing the sub tray exit solenoid (SD4)****(1) Periodically replaced parts/Spotted replaced parts/Cycle**

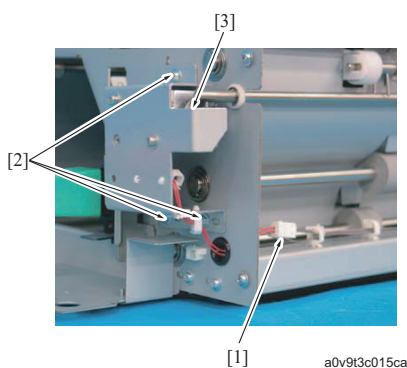
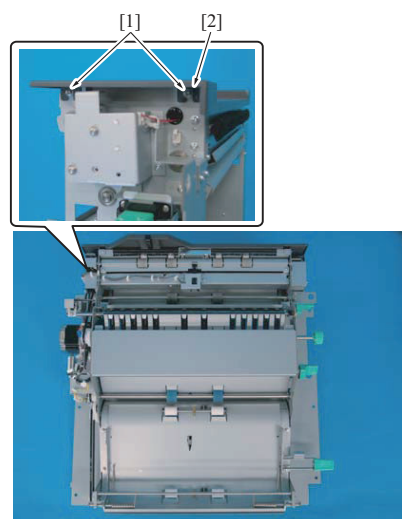
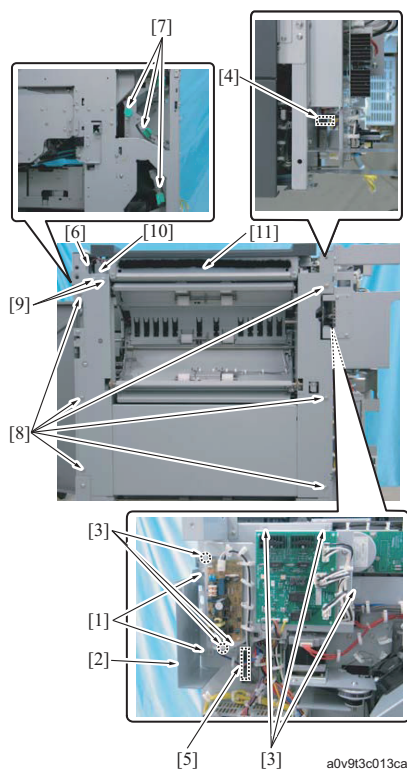
- Sub tray paper exit solenoid (SD4)

: Every 10,500,000 prints *1 (Actual replacement cycle: Every 3,000,000 prints *2)

*1 The periodical replacement is only for 1200/1200P/1051.

*2 Actual replacement cycle of 1200/1200P/1051/C8000/C7000/C7000P/C70hc/C6000.

(2) Procedure



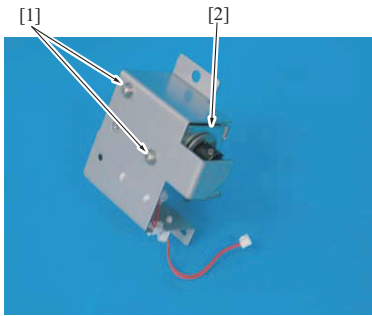
1. Remove the upper cover /Fr. (Refer to [G.11.2.3 Upper cover /Fr](#))
2. Remove the upper cover /Rr. (Refer to [G.11.2.4 Upper cover /Rr](#))
3. Remove the rear cover. (Refer to [G.11.2.6 Rear cover](#))
4. Remove 2 screws [1] and remove the metal frame [2].
5. Remove 6 screws [3] and disconnect the connectors [4] and [5].
6. Disconnect the connector [6].
7. Remove the screws of 3 knobs [7] and remove the knobs.
8. Remove 2 screws [9] and remove the metal frame [10].
9. Remove 6 screws [8] and remove the conveyance unit [11].

Note

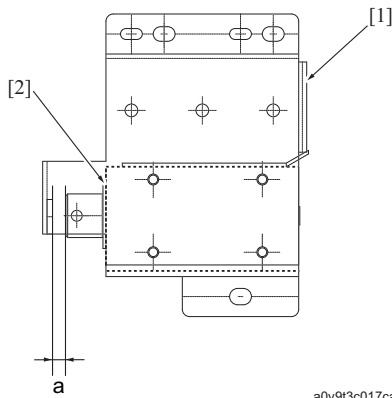
- Put the conveyance unit on a table so that the paper entrance guide does not contact the floor.

10. Loosen the screws [1], 2 each, on the upper cover /Rt, and remove the upper cover /Rt.

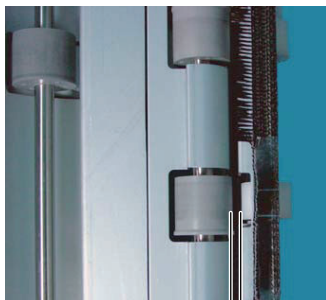
11. Disconnect the connector [1].
12. Remove 3 screws [2] and remove the sub tray exit solenoid assy [3].



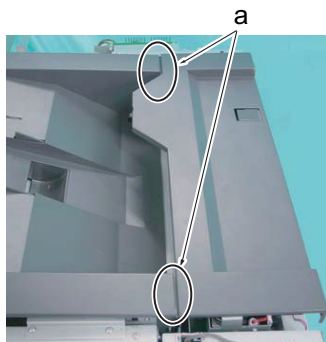
a0v9t3c016ca



a0v9t3c017ca



a0v9t3c018ca



a0v9t3c019ca

13. Remove 2 screws [1] and remove the sub tray exit solenoid assy (SD4) [2].
14. Reinstall the above parts following the removal steps in reverse.
15. After replacing the parts, be sure to conduct the counter reset of parts counter No.235.

Note

- When reinstalling the sub tray exit solenoid, adjust the position so that the distance "a" obtains a standard value with the plunger [2] pulled.
Standard value: $a = 3.7 \pm 0.5\text{mm}$

Note

- While pulling the plunger of the sub tray exit solenoid, adjust the position so that the distance "a" (the distance between the paper exit roller and the paper exit driven roller) obtains a standard value.
Standard value: $a = 0 \pm 1.5\text{mm}$

Note

- After reinstalling the conveyance unit, check the points "a" shown in the picture, to see that the conveyance unit does not contact the upper door. When they are in contact, loosen 4 fixing screws on the upper cover /Rt and adjust the position so that the upper door and the upper cover /Rt does not come in contact.

13.5 Framework section**13.5.1 Precautions on maintenance****⚠ CAUTION**

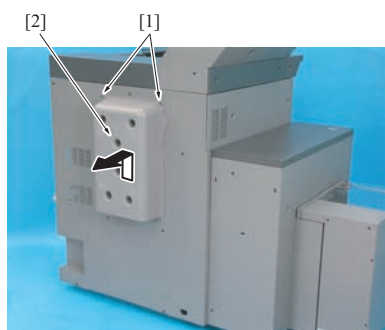
- Make sure to unplug the power code of the main body from the power outlet when it is connected to the main body.

13.5.2 Replacing filter**(1) Periodically replaced parts/cycle**

- Filter
: Every 600,000 prints*1
- Filter
: Every 750,000 prints*2

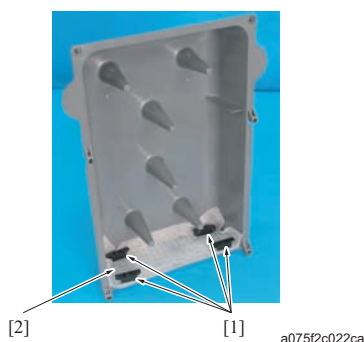
*1 C6501/C6501P/C65hc

*2 1200/1200P/1051/C8000/C7000/C7000P/C70hc/C6000

(2) Procedure

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1. Remove 2 screws [1] and remove the filter cover [2].



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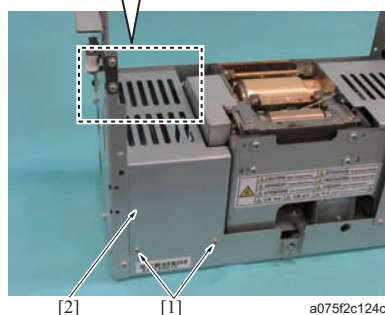
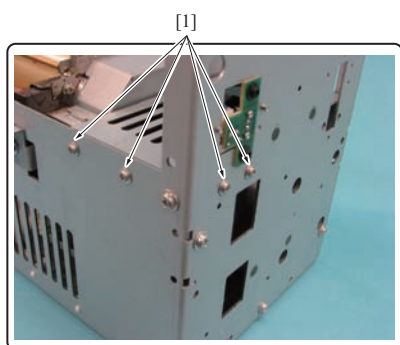
2. Remove the 4 magnets [1] and remove the filter [2].
3. Reinstall the above parts following the removal steps in reverse.
4. After replacing the parts, be sure to conduct the counter reset of parts counter No.245.

13.6 Glue tank section**13.6.1 Replacing the cover paper glue roller drive gear bearing****(1) Periodically replaced parts/cycle**

- Cover paper glue roller drive gear bearing
: Actual replacement cycle: Every 6,000 hours*1
- Cover paper glue roller drive gear bearing
: Every 30,000,000 prints (Actual replacement cycle: Every 6,000 hours) *2

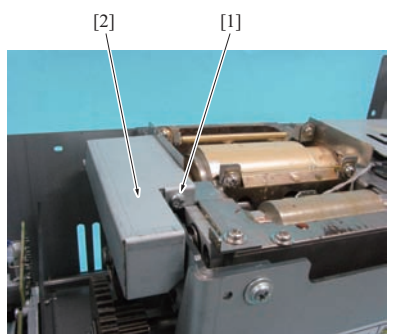
*1 The periodical replacement is only for 1200/1200P/1051.

*2 Actual replacement cycle of 1200/1200P/1051/C8000.

(2) Procedure

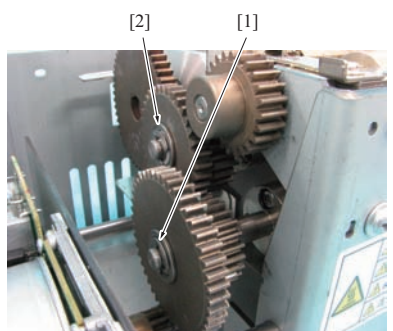
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1. Remove the glue tank unit. (Refer to [G.11.2.16 Glue tank unit](#))
2. Remove 6 screws [1] and remove the gear cover /Lt [2].



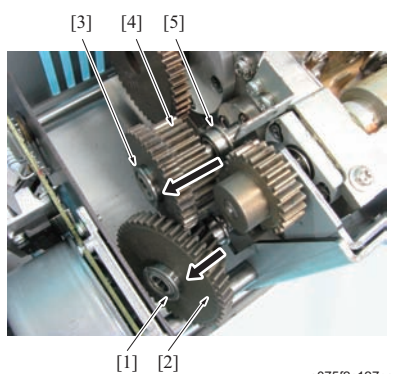
a075f2c125ca

3. Remove the screw [1] and remove the gear cover /Rt[2].



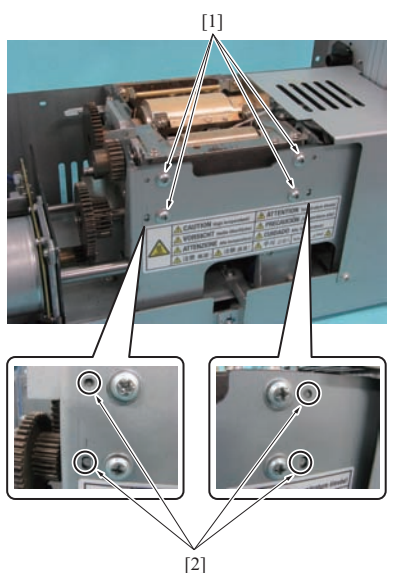
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4. Remove the E-rings [1] and [2] of the cover paper glue roller drive gears /1 and /2.



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5. Remove the bearing [1] of the cover paper glue roller drive gear /1 [2] to move the gear.
6. Remove the bearing [3] of the cover paper glue roller drive gear /2, the cover paper glue roller drive gear /2 [4] and the bearing [5] of the cover paper glue roller drive gear /2.

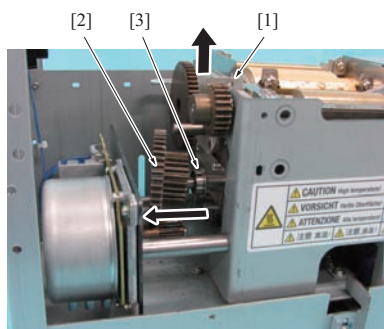


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7. Remove the E-rings [1] and [2] of the cover paper glue roller drive gears /1 and /2.

Note

- When reinstalling the slope, be sure to align 4 positioning projections [2].



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8. While lifting up the glue tank [1], remove the cover paper glue roller drive gear /1 [2] and the bearing [3] of it.
9. Reinstall the above parts following the removal steps in reverse.

13.6.2 Lubrication to the glue apply roller drive gear

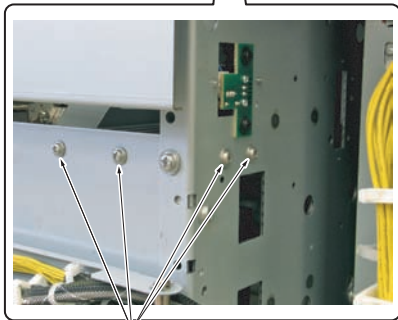
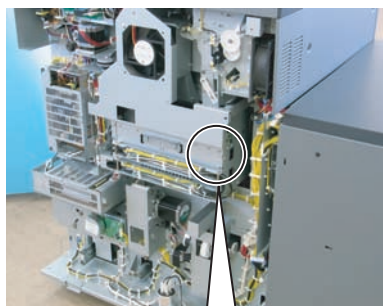
(1) Periodic lubrication parts/Cycle

- Glue apply roller drive gear
: Every 600,000 prints *¹
- Glue apply roller drive gear
: Every 750,000 prints *²

*¹ C6501/C6501P/C65hc

*² 1200/1200P/1051/C8000/C7000/C7000P/C70hc/C6000

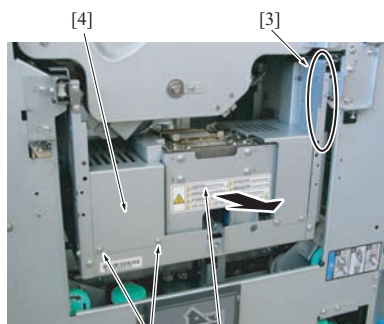
(2) Procedure



[1]

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1. Remove the rear cover. (Refer to [G.11.2.6 Rear cover](#))
2. Remove 4 screws [1].



[2]

[1]

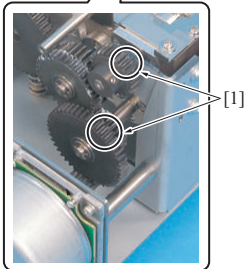
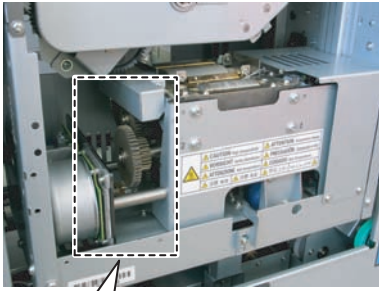
a075f2c092ca

3. Apply the multitemp FF-RM to the Glue apply roller drive gear [2].

Note

- When moving the glue tank unit, be sure to hold it by the metal frame [3] on the right side of the unit.

4. Reinstall the above parts following the removal steps in reverse.



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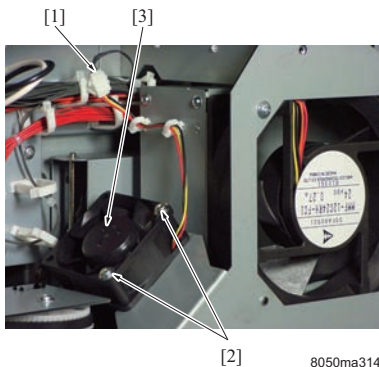
5. Apply the multitemp FF-RM to the glue apply roller motor drive connecting gear [1].
6. Reinstall the above parts following the removal steps in reverse.

13.6.3 Replacing the pellet supply cooling fan (M4)

(1) Periodically replaced parts

- Pellet supply cooling fan (M4)
: Every 750,000 prints (Actual replacement cycle: Every 750,000 prints) *1
- *1 1200/1200P/1051/C8000/C7000/C7000P/C70hc/C6000

(2) Procedure



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1. Remove the rear cover. [G.11.2.6 Rear cover](#)
2. Disconnect the connector [1].
3. Remove 2 screws [2] and remove the pellet supply cooling fan (M4) [3].
4. Reinstall the above parts following the removal steps in reverse.

Note

- When reinstalling the pellet supply cooling fan (M4) [3], be sure to reinstall it to the same direction as shown in the picture.
- Be sure not to nip the wiring harness.

13.7 Clamp section

13.7.1 Lubrication to the clamp pressing board shaft

(1) Periodic lubrication parts/cycle

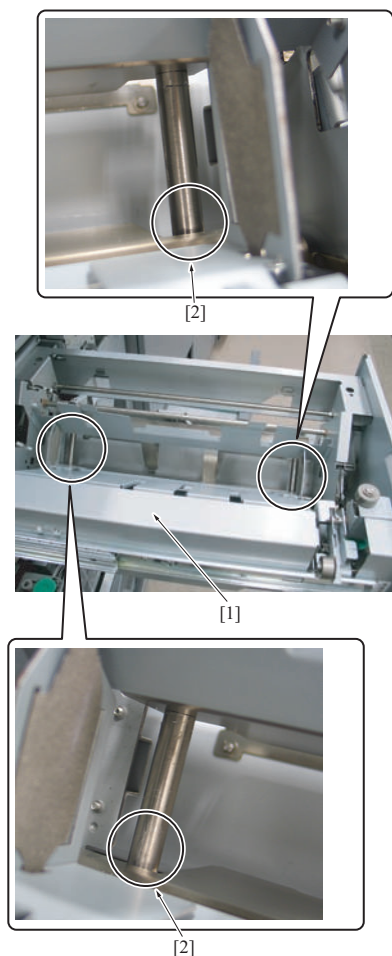
- Clamp pressure plate shaft
: Every 600,000 prints *1
- Clamp pressure plate shaft
: Every 750,000 prints *2

*1 C6501/C6501P/C65hc

*2 1200/1200P/1051/C8000/C7000/C7000P/C70hc/C6000

(2) Procedure

1. Pull out the clamp unit.
2. Apply the plas guard No.2 to 2 positions on the clamp pressing board shaft [2].



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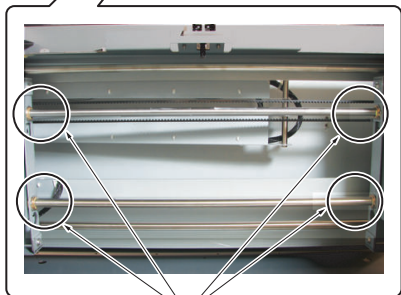
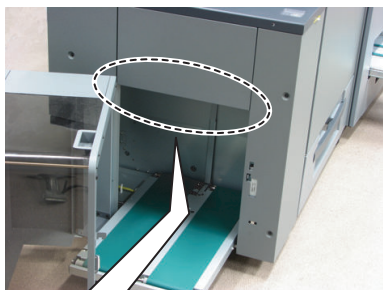
13.8 Book stock section**13.8.1 Lubrication to the guide shafts /Rt and /Lt****(1) Periodic lubrication parts/Cycle**

- Guide shaft /Rt and /Lt
: Every 600,000 prints *¹
- Guide shaft /Rt and /Lt
: Every 750,000 prints *²

*¹ C6501/C6501P/C65hc*² 1200/1200P/1051/C8000/C7000/C7000P/C70hc/C6000

(2) Procedure

1. Apply the plas guard No.2 to 4 positions on 4 positions [1] on the guide shafts /Rt and /Lt.



[1]

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14. PERIODICAL MAINTENANCE PROCEDURE PB-503

14.1 Sub compile (SC) section

14.1.1 Precautions on maintenance

⚠ CAUTION

- Be sure to unplug the power plug of the PB from the power outlet.
- Make sure to unplug the power code of the main body from the power outlet when it is connected to the main body.

14.1.2 Replacing the switchback roller

(1) Periodically replaced parts/Spotted replaced parts/Cycle

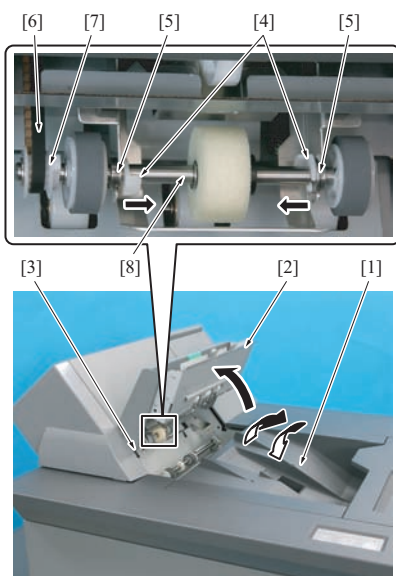
- Switchback roller
 - : Every 750,000 prints ^{*1} (Actual replacement cycle: Every 600,000 cuts)
 - : Spotted replacement (Actual replacement cycle: Every 600,000 prints) ^{*2}
 - : Spotted replacement (Actual replacement cycle: Every 750,000 prints) ^{*3}

^{*1} 1200/1200P/1051

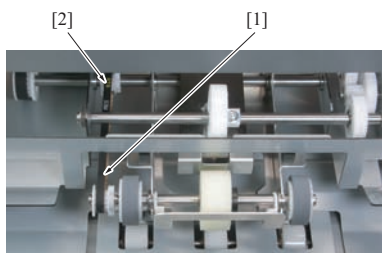
^{*2} C8000/C7000/C7000P/C70hc/C6000

^{*3} 1250/1250P/1052

(2) Procedure



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1. Open the upper door [1] to open the SC door [2]. Then close the upper door [1].

Note

- To keep the SC door open, insert a screwdriver into the hole [3]. Be sure to remove the screwdriver when closing the sub clamp door, or the cover gets damaged.

2. Remove the 2 C-clips [4], and slide the 2 bearings [5] into the inside.

Note

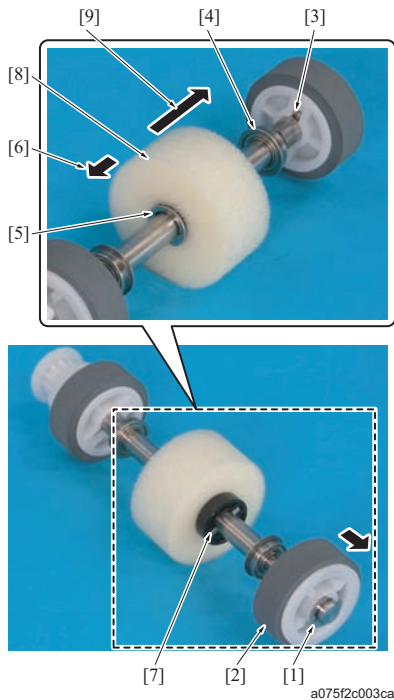
- Before removing the C-clips, be sure to spread a sheet of paper and so on under the switchback roller assy to prevent the C-clips from dropping into inside of the machine.

3. Release the pulley [7] from the belt [6] gently, and remove the switchback roller assy [8].

4. Check point when reinstalling the switchback roller assy

Note

- After reinstalling the switchback roller assy, use a mirror to check that the belt [1] is properly looped over the pulley [2] without any slackness. If the belt has comes off the pulley, remove the SC cover /Up to correct that. (Refer to [G.12.2.12 SC cover /Up](#))



5. Remove the E-ring [1], and remove the roller [2] and the pin [3].
6. Remove the bearing [4].

Note

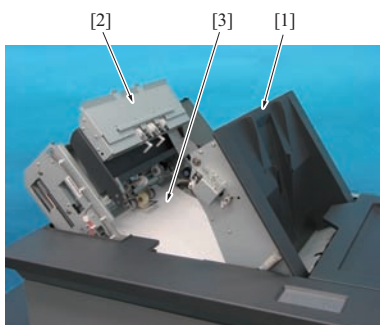
- Be sure to install the bearing [4] so that its collar faces toward the switchback roller.
7. Remove the E-ring [5], slide the switchback roller [8] in the direction of the arrow [6] (toward the pulley) and remove the pin [7]. Then remove the switchback roller [8] in the direction of the arrow [9].
 8. Reinstall the preceding parts following the removal steps in reverse.
 9. After replacing the part, be sure to reset the parts counter.
 - No.275 (1250/1250P/1052)
 - No.239 (1200/1200P/1051)
 - No.299 (C8000/C7000/C7000P/C70hc/C6000)

14.1.3 Replacing the SC switchback release motor (M13) and the one-way clutches /A and /B**(1) Periodically replaced parts/Spotted replaced parts/Cycle**

- SC switchback release motor (M13)
 - : Every 6,000,000 prints *¹ (Actual replacement cycle: Every 3,000,000 prints *²)
 - : Spot replacement (Actual replacement cycle: Every 750,000 prints *²)
- One-way clutch /B
 - : Spot replacement (Actual replacement cycle: Every 6,000,000 prints *²)
- One-way clutch /A
 - : Every 12,000,000 prints *¹ (Actual replacement cycle: Every 6,000,000 cuts *²)

*¹ Periodical replacement only for 1200/1200P/1051. C8000 is not supported.

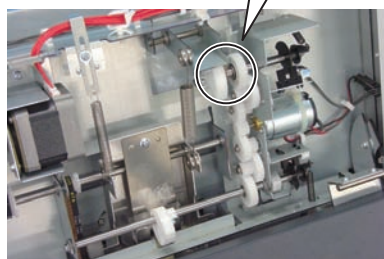
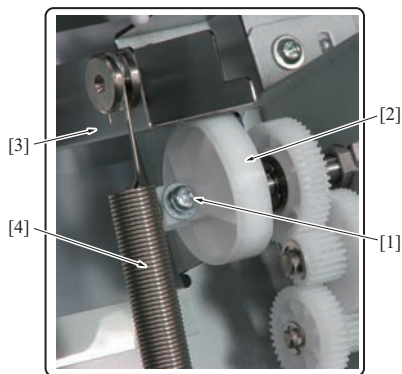
*² Actual replacement cycle of 1250/1250P/1052/1200/1200P/1051/C8000

(2) Procedure

1. Remove the SC cover /Up. (Refer to [G.12.2.12 SC cover /Up](#))
2. Open the upper door [1] to open the SC door [2] and set the paper [3].
3. Close the SC door [2].

Note

- Before removing the C-clips, be sure to spread a sheet of paper under the switchback roller assy to prevent the C-clips from dropping into the machine inside.

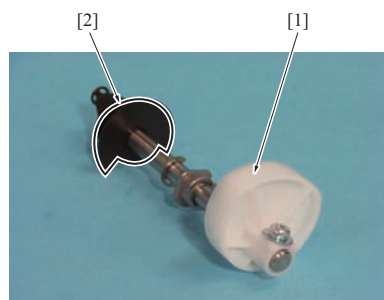


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4. Remove the screw [1] and remove the switchback cam [2].

Note

- The switchback cam [2] is tensioned by the spring [4] via the switchback arm [3]. When removing the screw [1], the switchback arm [3] is pulled by the spring [4] and the switchback cam [2] moves. At this time, be careful not to drop the screw [1].

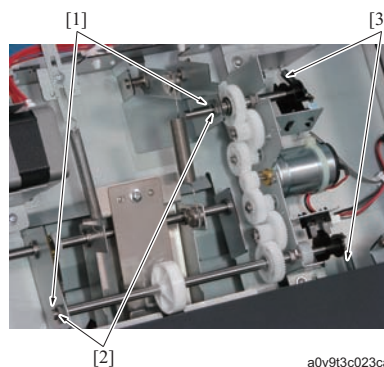


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5. Check point when reinstalling the switchback cam

Note

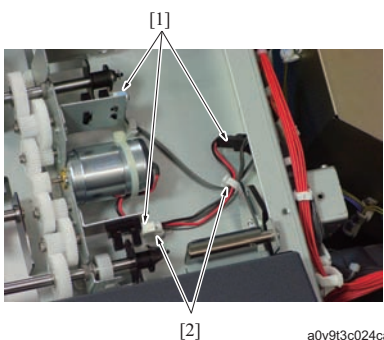
- When reinstalling the switchback cam [2], be sure to install it following the positional relation with the actuator [2] as shown in the picture.



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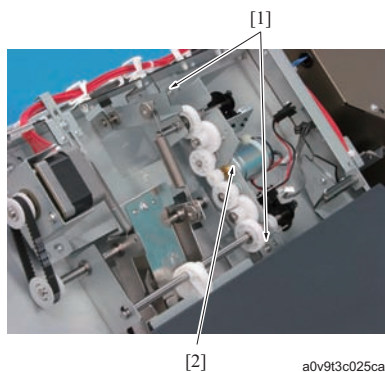
6. Remove 2 E-rings [1] and remove 2 bearings [2].

7. Remove 2 springs [3].

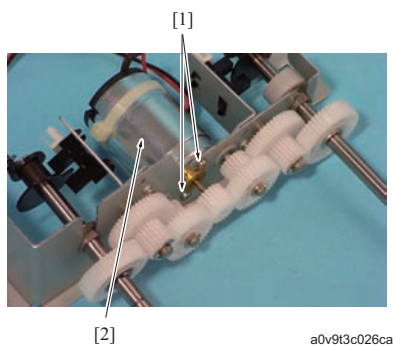


a0v9t3c024ca

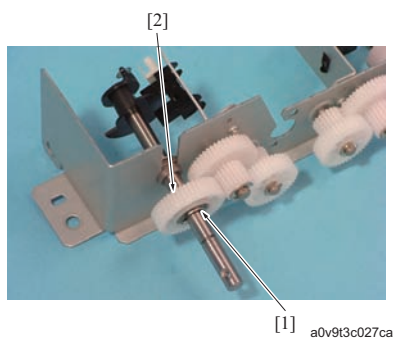
8. Disconnect 3 connectors [1] and remove the wiring harness from 2 wiring harness clamps [2].



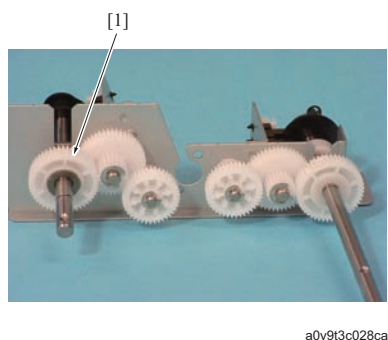
9. Remove 2 screws [1] and remove the SC switchback release motor assy [2].



10. Remove 2 screws [1] and remove the SC switchback release motor [2].



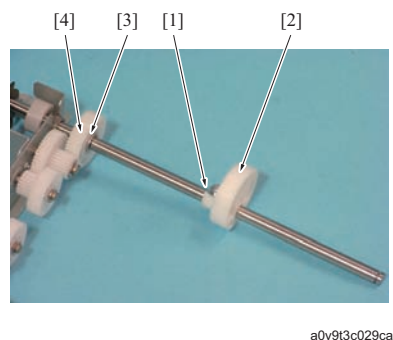
11. Remove the E-ring [1] and remove the one-way clutch /B [2].



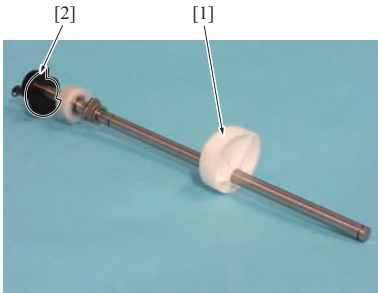
12. Check point when reinstalling the one-way clutch /B

Note

- When reinstalling the one-way clutch /B [1], be sure to install it in the direction shown in the picture.



13. Remove the screw [1] and remove the pressure cam [2].
 14. Remove the E-ring [3] and remove the one-way clutch /A [4].
 15. Reinstall the preceding parts following the removal steps in reverse.
 16. After replacing the part, be sure to reset the parts counter.
- No.272 (1250/1250P/1052)
 - No.236 (1200/1200P/1051)
 - No.296 (C8000)

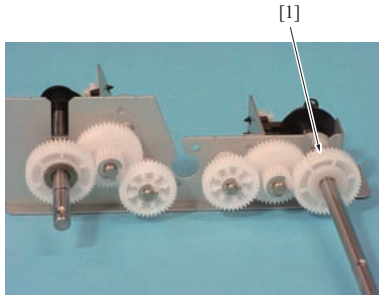


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17. Check point when reinstalling the pressure cam

Note

- When reinstalling the pressure cam [1], be sure to install it following the positional relation with the actuator [2] as shown in the picture.

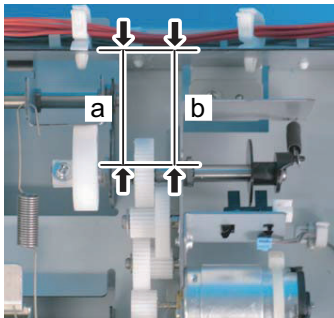


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18. Check point when reinstalling the one-way clutch /A

Note

- When reinstalling the one-way clutch /A [1], be sure to install it in the direction shown in the picture.



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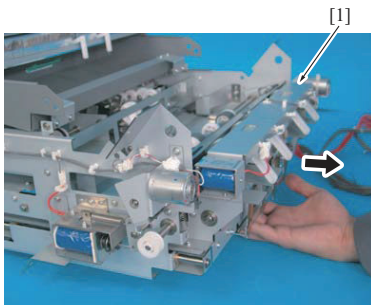
19. Standard value when reinstalling the SC switchback release motor assy

Note

- When reinstalling the SC switchback release motor assy, be sure to set so that the distances "a" and "b" become same value.
Standard value: The difference of distances "a" and "b" = 0.2mm or less

14.1.4 Replacing the SC pressure arm solenoid (SD13)**(1) Periodically replaced parts/Spotted replaced parts/Cycle**

- SC pressure arm solenoid (SD13)
: Every 20,250,000 prints *1 (Actual replacement cycle: Every 5,000,000 cuts *2)
- *1 The periodical replacement is only for 1200/1200P/1051.
*2 Actual replacement cycle of 1250/1250P/1052/1200/1200P/1051/C8000

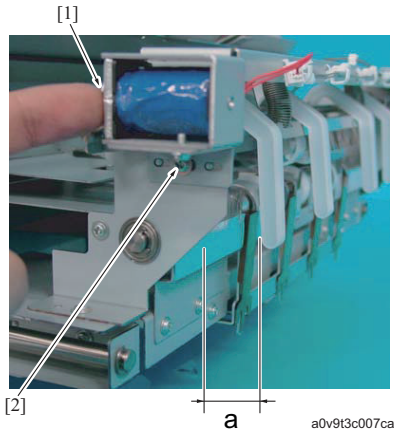
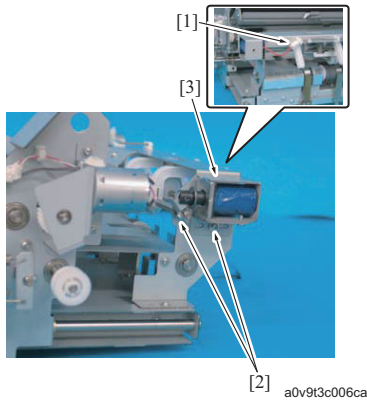
(2) Procedure

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1. Remove the SC unit. (Refer to [G.12.2.21 SC unit](#))**Note**

- When putting down the SC unit, be sure not to pin the wiring harness under it.
- Put the SC unit on a table so that the bottom surface of the sub scan alignment unit [1] does not contact the floor.

2. Pull out the sub scan alignment unit [1] in the arrow-marked direction.



3. Disconnect the connector [1].
4. Remove 2 screws [2] and remove the SC pressure arm solenoid (SD13) [3].
5. Reinstall the preceding parts following the removal steps in reverse.
6. After replacing the part, be sure to reset the parts counter.
 - No.274 (1250/1250P/1052)
 - No.238 (1200/1200P/1051)
 - No.298 (C8000)

7. Standard value when reinstalling the SC pressure arm solenoid (SD13)

Note

- When reinstalling the SC pressure arm solenoid, adjust the position so that the distance "a" obtains a standard value with the plunger [1] pulled, and then fix with the screw [2].

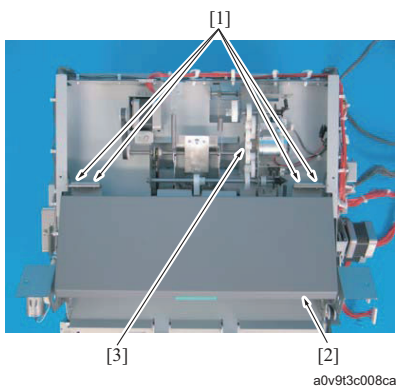
Standard value: $a = 16.4 \pm 1\text{mm}$

14.1.5 Replacing the FD alignment solenoid (SD11)**(1) Periodically replaced parts/Spotted replaced parts/Cycle**

- FD alignment solenoid (SD11)
- : Every 20,250,000 prints ^{*1} (Actual replacement cycle: Every 5,000,000 cuts ^{*2})

^{*1} The periodical replacement is only for 1200/1200P/1051.

^{*2} Actual replacement cycle of 1250/1250P/1052/1200/1200P/1051/C8000

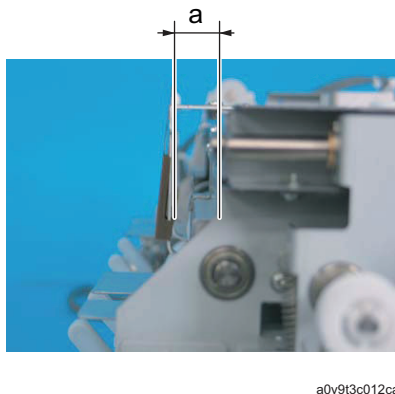
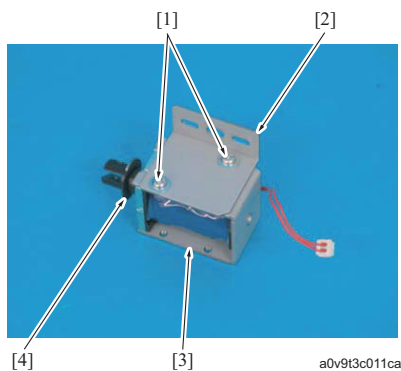
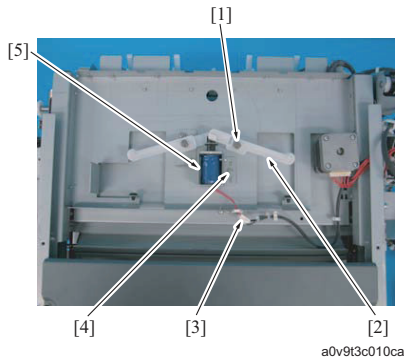
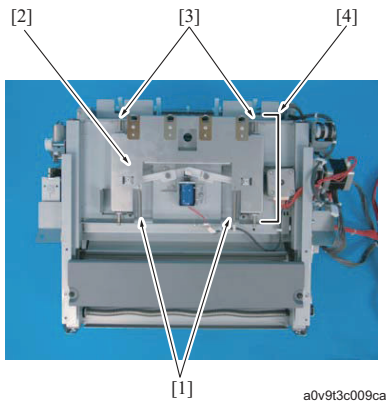
(2) Procedure

1. Remove the SC unit. (Refer to [G.12.2.21 SC unit](#))

Note

- When putting down the SC unit, be sure not to pin the wiring harness under it.
- Put the SC unit on a table so that the bottom surface of the sub scan alignment unit [1] does not contact the floor.

2. Remove 4 screws [1] and remove the SC door [2].



3. Put the SC unit with the FD alignment solenoid assy [4] faced up.

Note

- Put the SC unit on a table so that the SC switchback release motor assy [3] does not contact the floor.

4. Remove 2 springs [1].
5. Remove 2 screws [3] and pull out 2 shafts, and then remove the sub scan alignment plate [2].

6. Remove the E-ring [1] and remove the sub scan alignment arm [2].
7. Disconnect the connector [3] and remove the screw [4], and then remove the FD alignment solenoid assy [5].

Note

- When removing the FD alignment solenoid assy, be careful not to drop the pin.

8. Remove 2 screws [1] to remove the mounting plate [2], and then remove the FD alignment solenoid (SD11) [3].

Note

- When reinstalling the FD alignment solenoid, adjust the position so that the distance "a" obtains a standard value with the plunger [4] pulled.

Standard value: $a = 17.5 \pm 0.5\text{mm}$

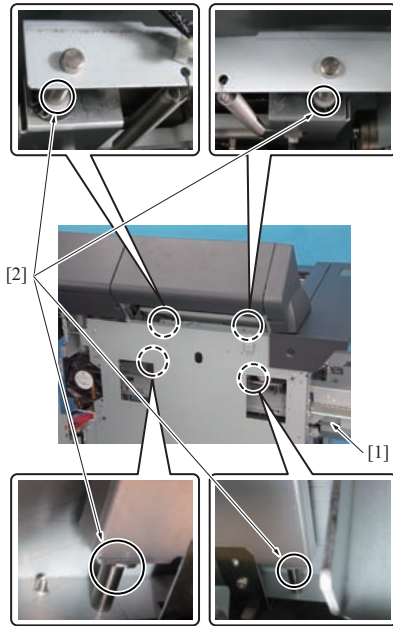
9. Reinstall the preceding parts following the removal steps in reverse.
10. After replacing the part, be sure to reset the parts counter.
 - No.273 (1250/1250P/1052)
 - No.237 (1200/1200P/1051)
 - No.297 (C8000)

14.1.6 Lubrication to the sub scan alignment plate shaft

(1) Periodic lubrication parts/cycle

- Sub scan alignment plate shaft
- : Every 750,000 prints *1

*1 1250/1250P/1052/1200/1200P/1051/C8000/C7000/C7000P/C70hc/C6000

(2) Procedure

a15xt3c001ca

1. Remove the PB left unit. (Refer to [G.12.2.23 PB left unit](#))
2. Remove the upper cover /Md. (Refer to [G.12.2.21 SC unit](#))
3. Pull out the clamp unit [1].
4. Apply plas guard No.2 to the 4 sub scan alignment plate shafts [2].
5. Reinstall the preceding parts following the removal steps in reverse.

14.2 Cover paper table section**14.2.1 Precautions on maintenance****⚠ CAUTION**

- Make sure to unplug the power cord of the main body from the power outlet when it is connected to the main body.
- The glue tank unit is extremely hot right after turning OFF the main power switch (SW1) or the sub power switch (SW2) of the main body. To prevent burn injuries, leave the unit until it cools enough before performing the maintenance work.

Note

- Before performing the maintenance work, be sure to carry out the initial operation so that each part/unit is at the home position.

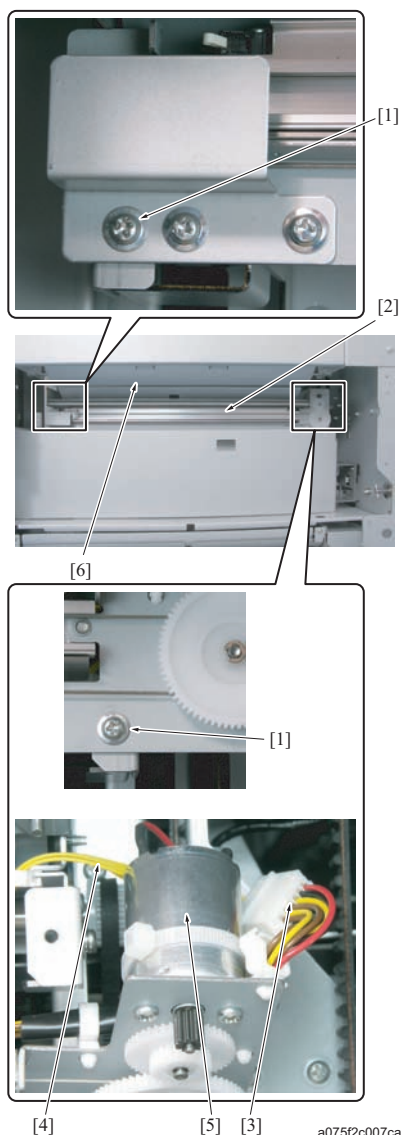
14.2.2 Replacing the roller cutter blade assy**(1) Periodically replaced parts/Spotted replaced parts/Cycle**

- Roller cutter blade assy

: Every 10,500,000 prints *1 (Actual replacement cycle: Every 100,000 cuts *2)

*1 The periodical replacement is only for 1200/1200P/1051.

*2 Actual replacement cycle of 1250/1250P/1052/1200/1200P/1051/C8000/C7000/C7000P/C70hc/C6000

(2) Procedure

1. Remove the PB from the main body.
2. Remove the conveyance unit /Lw. (Refer to [G.12.2.26 Conveyance unit /Lw](#))
3. Remove 2 screws [1] and the roller cutter blade assy [2]. Then disconnect the connector [3].

Note

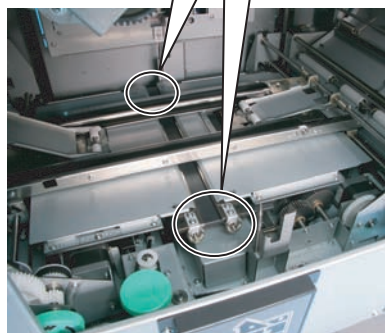
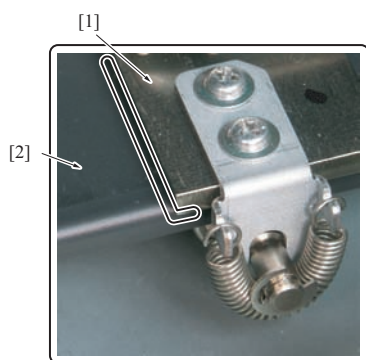
- Pull out the cover paper waste box before removing the roller cutter assy.
- When reinstalling the roller cutter assy, be sure to route the wire binding [4] under the cutter motor (M50) [5].
- Push the roller cutter blade assy [2] against the metal plate [6] to reinstall the assy.

4. Reinstall the preceding parts following the removal steps in reverse.
5. After replacing the part, be sure to reset the parts counter.
 - No.280 (1250/1250P/1052)
 - No.244 (1200/1200P/1051)
 - No.304 (C8000/C7000/C7000P/C70hc/C6000)

14.2.3 Cleaning the cover paper folding plate and the book spine backing plate**(1) Periodically cleaned parts/cycle**

- Cover paper folding plate and the book spine backing plate
- : Every 750,000 prints*1

*1 1250/1250P/1052/1200/1200P/1051/C8000/C7000/C7000P/C70hc/C6000

(2) Simplified cleaning procedure

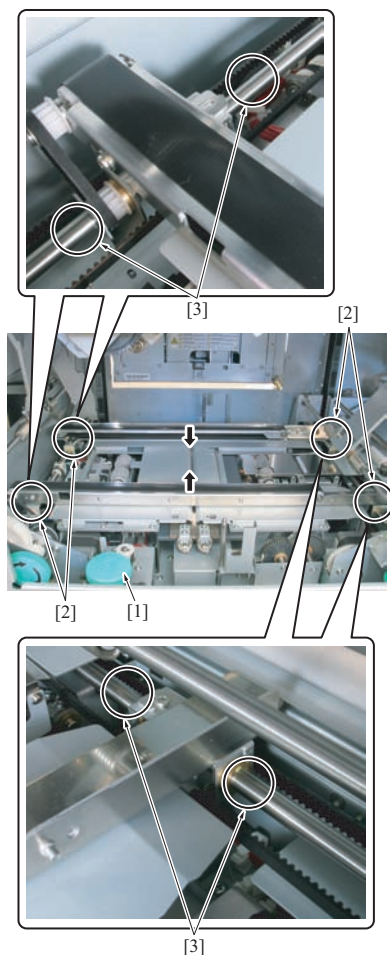
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1. Carry out the I/O check in service mode in the order of following output check code, and turn OFF the sub power switch (SW2) and the main power switch (SW1) with the cover paper folding plate opened.
"77-55", "77-45", "77-58", "77-61"
2. Clean the cover paper folding plate [1] and the book spine backing plate [2].

14.2.4 Lubrication to the cover paper alignment plate shaft**(1) Periodic lubrication parts/cycle**

- Cover paper alignment plate shaft
: Every 750,000 prints *1

*1 1250/1250P/1052/1200/1200P/1051/C8000/C7000/C7000P/C70hc/C6000

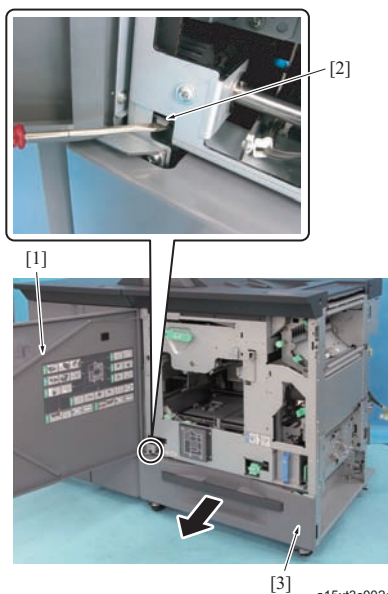
(2) Procedure

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1. Turn the knob [1] to move the cover paper alignment plate inward.
2. Apply plas guard No.2 to the 4 cover paper alignment plate shafts [2].

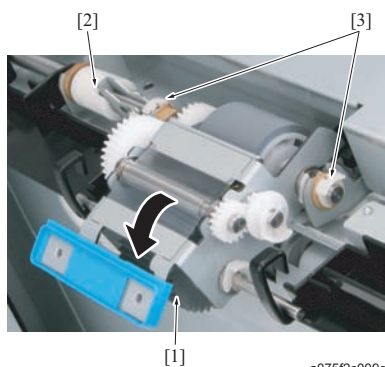
Note

- Apply plas guard No.2 to the outside of the cover paper alignment plate bearing on both sides [3].

14.3 Cover paper supply section**14.3.1 Removing/reinstalling the pick-up roller assy and the separation roller assy****(1) Procedure**

a15xt3c002ca

1. Open the front door [1].
2. Unlock the cover paper tray [3] by slightly pushing up the cover paper tray lock lever [2] with a screwdriver or a similar tool, and pull out the cover paper tray [3].

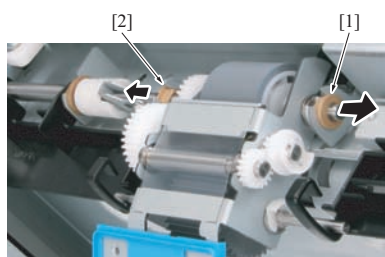


3. Turn the pick-up roller [1] in the direction of the arrow (counterclockwise as seen from the front side) to make the coupling [2] upright.

Note

- Be sure not to rotate the pick-up roller [1] against the direction of the arrow (clockwise) forcibly, as the roller is not designed to rotate in that direction.

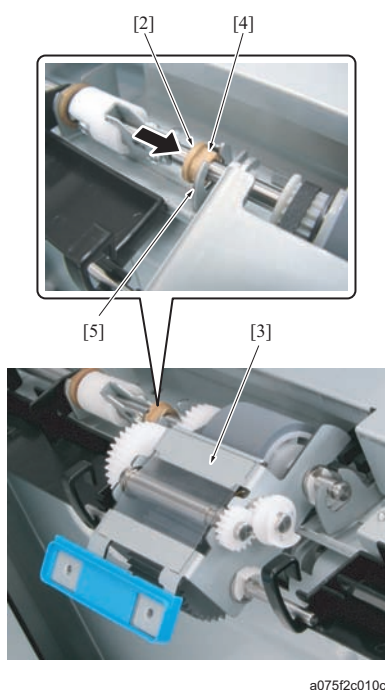
4. Remove 2 C-clips [3].

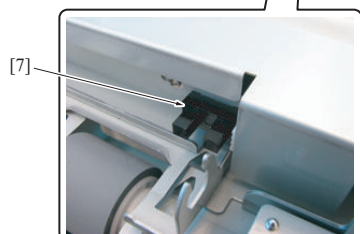
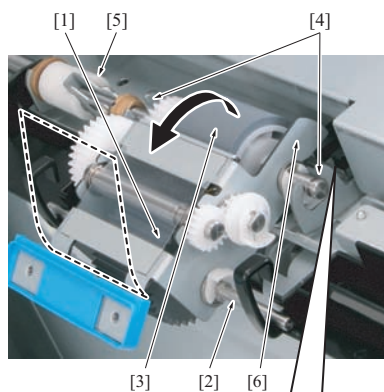


5. Remove the bearing /Fr [1].
6. Move the bearing /Rr [2] to the rear side.

Note

- When reinstalling them, insert the bearing /Rr [2] into the notch [5] on the metal frame while keeping on the level the flat face [4] of the bearing, and slightly pressing down the metal frame [3] of the pick-up roller assy. Then insert the bearing /Fr [1] in the same manner.



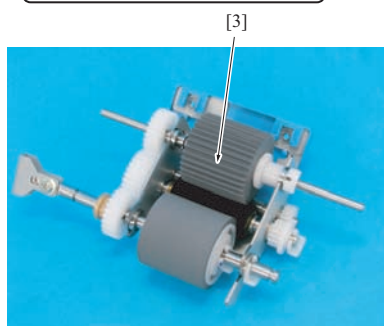
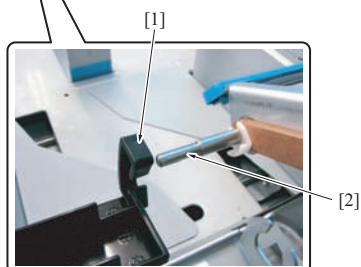
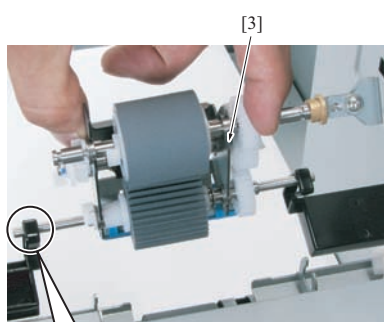


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7. Hold the pick-up roller assy [1] by hand and lift and tilt the paper feed roller [3] so that it rotates on the shaft [2] of the pick-up roller to remove it from the notch of the bearing [4] and the coupling [5].

Note

- When removing the pick-up roller assy [1], be careful not to damage the sensor [7] with the metal frame [6].

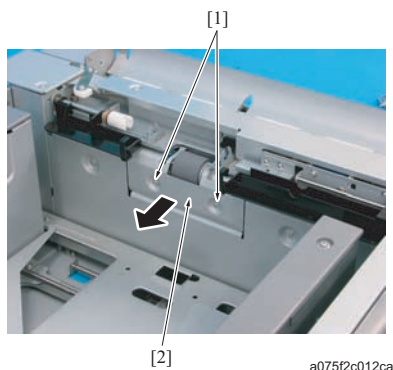


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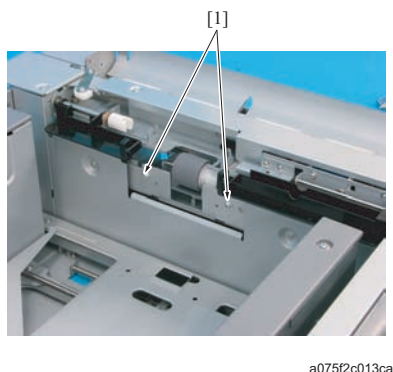
8. Remove the pick-up roller shaft [2] from the arm [1] of the paper feed guide plate and then remove the pick-up roller assembly [3].
9. Reinstall the above parts following the removal steps in reverse.

Note

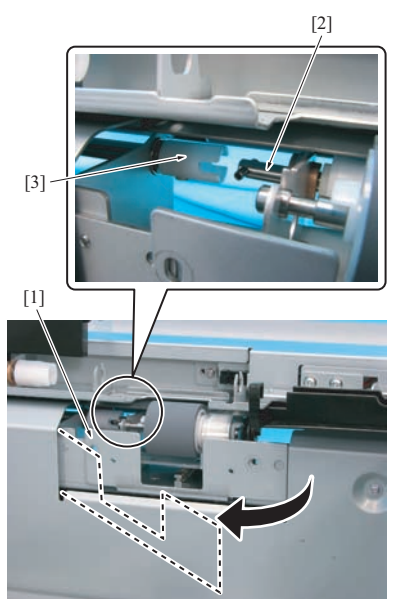
- After installing the pick-up roller assy, rotate the pick-up roller counterclockwise as seen from the front side.
- Make sure the paper feed roller and the belt rotate smoothly.
- The pick-up roller rotates in counterclockwise direction only. Be sure not to rotate it in the opposite direction.



10. Remove 2 screws [1] and then remove the entrance guide plate [2].



11. Remove 2 screws [1].

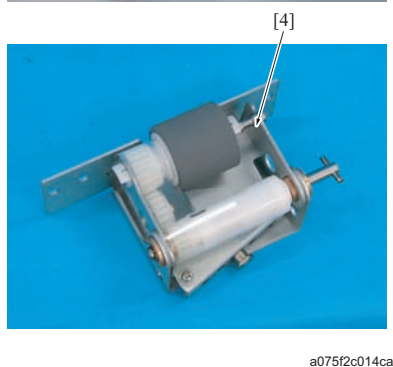


12. Open the frame [1] of the separation roller assy in the direction of the arrow, and remove the coupling pin [2] on the rear side from the joint [3]. Then remove the separation roller assy [4].

Note

- When reinstalling, make sure to engage the coupling pin [2] with the joint [3].
- When reinstalling the separation roller assy [4], fasten it with the screws while pressing it down.

13. Reinstall the above parts following the removal steps in reverse.



14.3.2 Replacing the pick-up roller and the paper feed roller

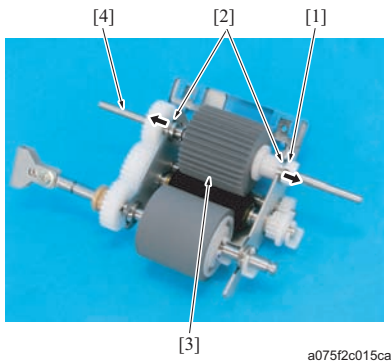
(1) Spotted replaced parts/cycle

- Pick-up roller
 - : Spot replacement (Actual replacement cycle: Every 500,000 feeds)*1
- Paper feed roller
 - : Spot replacement (Actual replacement cycle: Every 500,000 feeds)*1

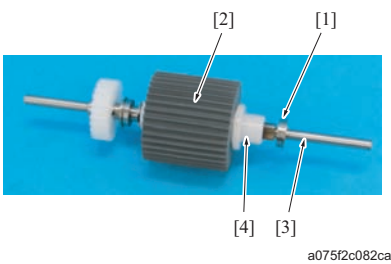
*1 1250/1250P/1052/1200/1200P/1051/C8000

(2) Procedure**Note**

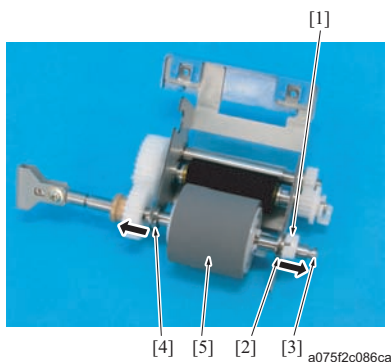
- The outward appearance of the collar is identical for the paper feed roller and the separation roller. However, the collar of the paper feed roller has a one-way mechanism on the inside while the collar of the separation roller does not. Be careful not to confuse one with the other.



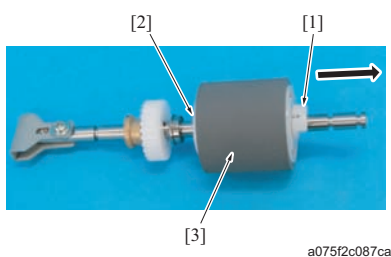
1. Remove the pick-up roller assembly. (Refer to [F.14.3.1 Removing/reinstalling the pick-up roller assy and the separation roller assy](#))
2. Remove the C-clip [1] of the pick-up roller assy.
3. Slide 2 bearings [2] and remove the pick-up roller [3] together with the shaft [4].



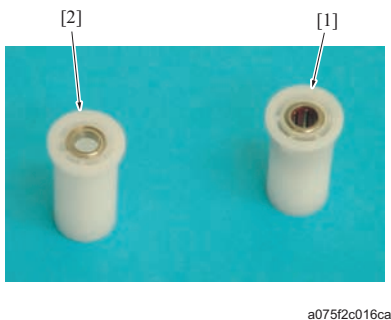
4. Remove the bearing [1] and pull out the pick-up roller [2] from the shaft [3].
5. Remove the pick-up roller [2] from the collar [4].
6. Replace the pick-up roller.



7. Remove the C-clip [1] and pull out the bearing /Fr [2] from the shaft [3].
8. Move the bearing /Rr [4] and remove the paper feed roller [5] together with the shaft [3].



9. Remove the C-clip [1].
10. Pull out the paper feed roller [3] from the collar [2].
11. Replace the pick-up roller [3].



12. Reinstall the preceding parts following the removal steps in reverse.

Note

- There is no big difference in appearance between the 2 collars (one for the paper feed roller, and the other one is for the separation roller). However, they are different in the inside. The collar [1] for the paper feed roller has a one-way mechanism in it, and the other one [2] does not. Make sure to attach them correctly.

13. After replacing the part, be sure to reset the parts counter.
 - No.276, No.277 (1250/1250P/1052)
 - No.240, No.241 (1200/1200P/1051)
 - No.300, No.301 (C8000)

14.3.3 Replacing the separation roller

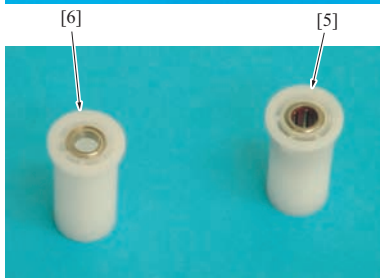
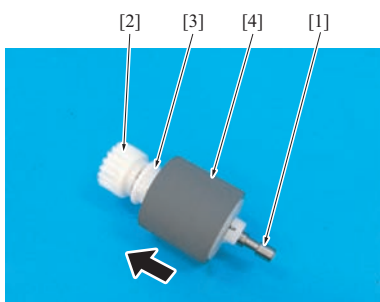
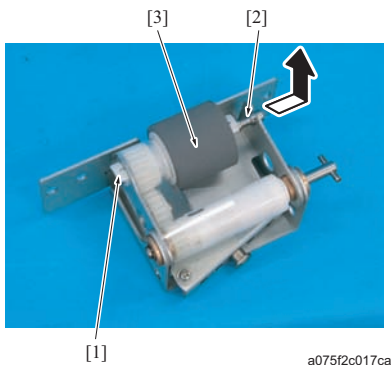
(1) Spotted replaced parts/cycle

- Separation roller

: Spot replacement (Actual replacement cycle: Every 500,000 feeds)*1

*1 1250/1250P/1052/1200/1200P/1051/C8000

(2) Procedure



1. Remove the separation roller assy. (Refer to [F.14.3.1 Removing/reinstalling the pick-up roller assy and the separation roller assy](#))
2. Remove the C-clip [1] and remove the separation roller [3] together with the shaft [2].

3. Pull out the gear [2], the collar [3] and the separation roller [4] from the shaft [1] in the direction of the arrow.
4. Replace the separation roller [4].
5. Reinstall the preceding parts following the removal steps in reverse.

Note

- There is no big difference in appearance between the 2 collars (one for the paper feed roller, and the other one is for the separation roller). However, they are different in the inside. The collar [5] for the paper feed roller has a one-way mechanism in it, and the other one [6] does not. Make sure to attach them correctly.

6. After replacing the part, be sure to reset the parts counter.
 - No.277 (1250/1250P/1052)
 - No.241 (1200/1200P/1051)
 - No.301 (C8000)

14.3.4 Replacing the cover paper feed clutch (CL71) and the cover paper separation clutch (CL72)

(1) Spotted replaced parts/cycle

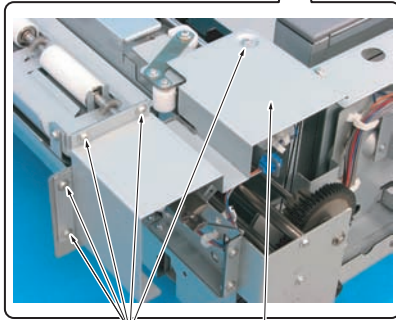
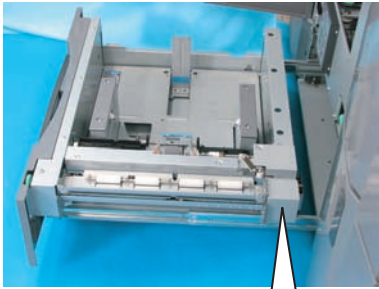
- Cover paper pick up clutch (CL71)

: Spot replacement (Actual replacement cycle: Every 3,000,000 feeds)*1

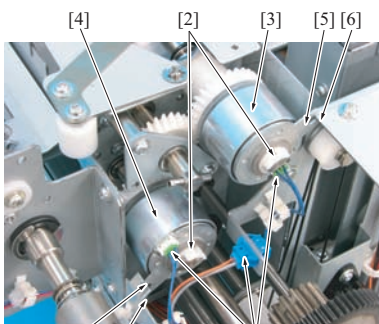
- Cover paper separation clutch (CL72)

: Spot replacement (Actual replacement cycle: Every 3,000,000 feeds)*1

*1 1250/1250P/1052/1200/1200P/1051/C8000

(2) Procedure

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1. Remove the stopper screws, 1 each, attached on the right and left rails of the cover paper tray and pull out the tray. (Refer to [G. 12.2.28 Cover paper tray](#))
2. Remove the 5 screws [1] and remove the clutch cover [2].

3. Disconnect 3 connectors [1].
4. Remove the C-clips [2], 1 each, and remove the cover paper feed clutch (CL71) [3] and the cover paper separation clutch (CL72) [4].

Note

- When reinstalling, be sure to insert the stopper [5] of the clutch over the tab [6] of the metal frame.

5. Reinstall the preceding parts following the removal steps in reverse.
6. After replacing the part, be sure to reset the parts counter.
 - No.278, No.279 (1250/1250P/1052)
 - No.242, No.273 (1200/1200P/1051)
 - No.302, No.303 (C8000)

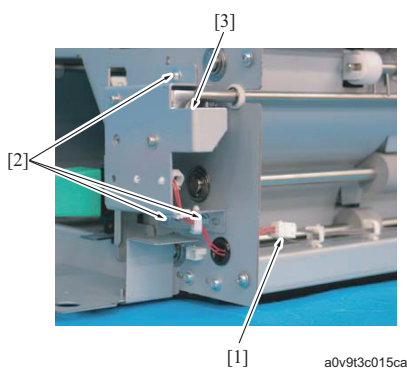
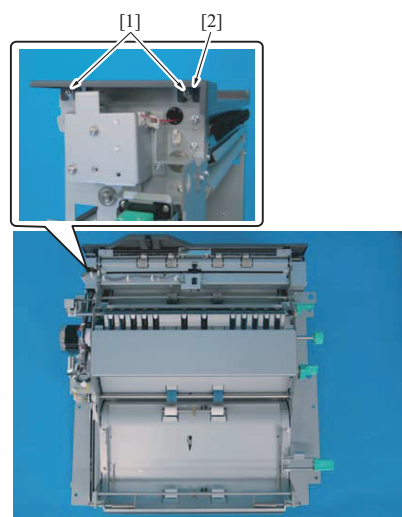
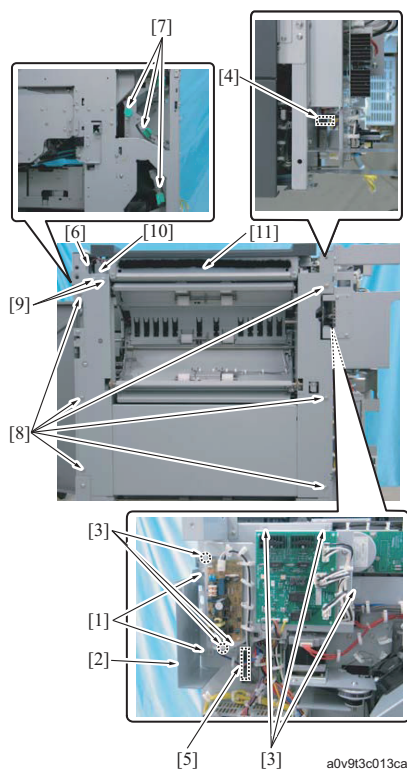
14.4 Conveyance section**14.4.1 Replacing the sub tray exit solenoid (SD4)****(1) Periodically replaced parts/Spotted replaced parts/Cycle**

- Sub tray paper exit solenoid (SD4)

: Every 10,500,000 prints *1 (Actual replacement cycle: Every 3,000,000 prints *2)

*1 The periodical replacement is only for 1200/1200P/1051.

*2 Actual replacement cycle of 1250/1250P/1052/1200/1200P/1051/C8000/C7000/C7000P/C70hc/C6000

(2) Procedure

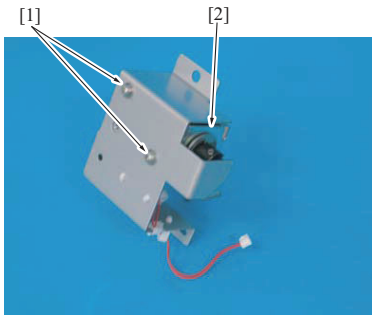
1. Remove the PB from the main body.
2. Remove the PB left unit. (Refer to [G.12.2.23 PB left unit](#))
3. Remove the upper cover /FrRt. (Refer to [G.12.2.13 Upper cover / FrRt](#))
4. Remove the upper cover /RrRt. (Refer to [G.12.2.15 Upper cover / RrRt](#))
5. Remove the rear cover /Rt. (Refer to [G.12.2.5 Rear cover /Rt](#))
6. Remove 2 screws [1] and remove the metal frame [2].
7. Remove 6 screws [3] and disconnect the connectors [4] and [5].
8. Disconnect the connector [6].
9. Remove the screws of 3 knobs [7] and remove the knobs.
10. Remove 2 screws [9] and remove the metal frame [10].
11. Remove 6 screws [8] and remove the conveyance unit [11].

Note

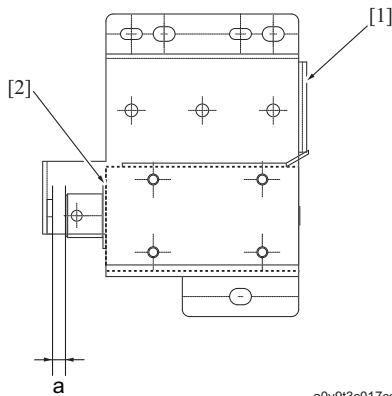
- Put the conveyance unit on a table so that the paper entrance guide does not contact the floor.

12. Loosen the screws [1], 2 each, on the upper cover /Rt, and remove the upper cover /Rt.

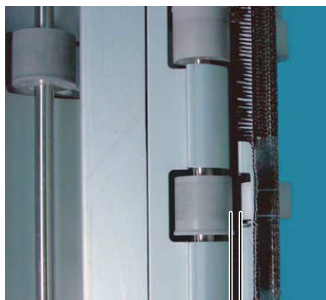
13. Disconnect the connector [1].
14. Remove 3 screws [2] and remove the sub tray exit solenoid assy [3].



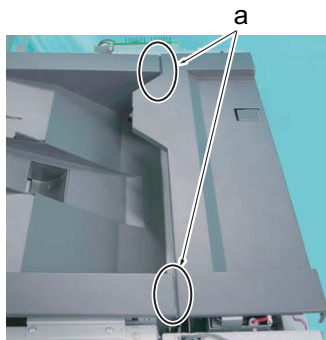
a0v9t3c016ca



a0v9t3c017ca



a0v9t3c018ca



a0v9t3c019ca

15. Remove 2 screws [1] and remove the sub tray exit solenoid assy (SD4) [2].
16. Reinstall the preceding parts following the removal steps in reverse.
17. After replacing the part, be sure to reset the parts counter.
 - No.271 (1250/1250P/1052)
 - No.235 (1200/1200P/1051)
 - No.295 (C8000/C7000/C7000P/C70hc/C6000)

18. Standard 1 value when reinstalling the sub tray exit solenoid assy (SD4)
 - When reinstalling the sub tray exit solenoid [1], adjust the position so that the distance "a" obtains a standard value with the plunger [2] pulled.
Standard value: $a = 3.7 \pm 0.5\text{mm}$

19. Standard 2 value when reinstalling the sub tray exit solenoid assy (SD4)
 - While pulling the plunger of the sub tray exit solenoid, adjust the position so that the distance "a" (the distance between the paper exit roller and the paper exit driven roller) obtains a standard value.
Standard value: $a = 0 \pm 1.5\text{mm}$

20. Check point when reinstalling the conveyance unit
 - After reinstalling the conveyance unit, check the points "a" shown in the picture, to see that the conveyance unit does not contact the upper door. When they are in contact, loosen 4 fixing screws on the upper cover /Rt and adjust the position so that the upper door and the upper cover /Rt does not come in contact.

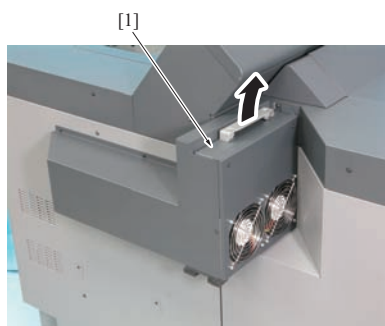
14.5 Framework section

14.5.1 Replacing the exhaust filters /A and /B

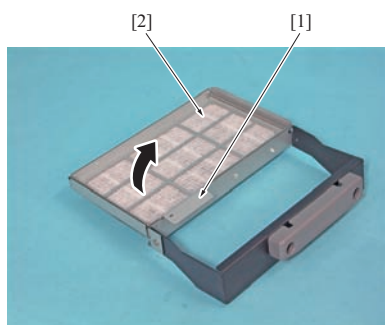
(1) Spotted replaced parts/cycle

- Exhaust filter /A
: Spot replacement (Actual replacement cycle: Every 120 hours of rotation of glue apply roller)*1
- Exhaust filter /B
: Spot replacement (Actual replacement cycle: Every 240 hours of rotation of glue apply roller)*1

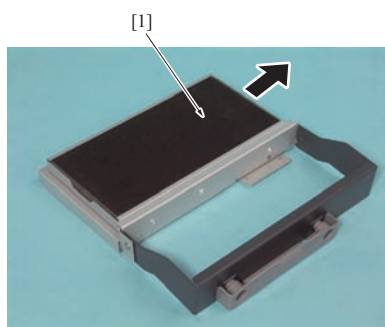
*1 1250/1250P/1052/1200/1200P/1051/C8000/C7000/C7000P/C70hc/C6000

(2) Procedure

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a15xt3c004ca



a15xt3c005ca

1. Remove the exhaust filter assy [1].

2. Pull the filter holding lever [1] in the arrow-marked direction, and then remove 2 exhaust filters /A [2].

3. Reverse the exhaust filter assy and slide the exhaust filter /B [1] in the arrow-marked direction to remove it.

4. Reinstall the preceding parts following the removal steps in reverse.

5. After replacing the part, be sure to reset the parts counter.

- No.283, No.284 (1250/1250P/1052)
- No.250, No.251 (1200/1200P/1051)
- No.305, No.306 (C8000/C7000/C7000P/C70hc/C6000)

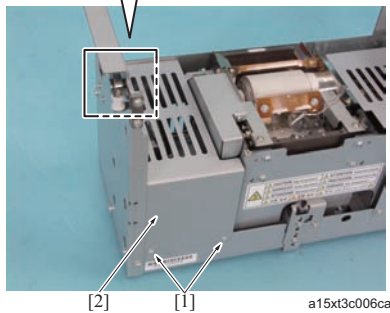
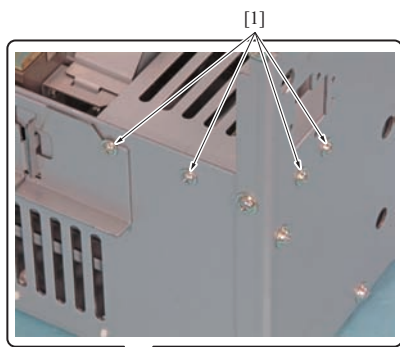
14.6 Glue tank section**14.6.1 Replacing the glue apply roller drive gear bearing****(1) Periodically replaced parts/cycle**

- Glue apply roller drive gear bearing

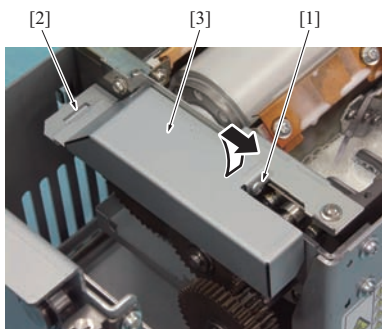
: Every 30,000,000 prints ^{*1} (Actual replacement cycle: Every 6,000 hours) ^{*2}

^{*1} The periodical replacement is only for 1200/1200P/1051.

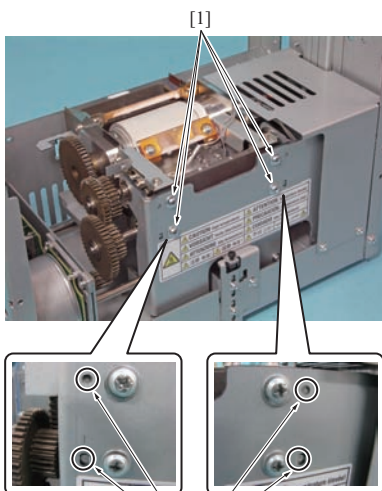
^{*2} Actual replacement cycle of 1250/1250P/1052/1200/1200P/1051/C8000

(2) Procedure

a15xt3c006ca



a15xt3c007ca



a15xt3c008ca

1. Remove the glue tank unit. (Refer to [G.12.2.20 Glue tank unit](#))
2. Remove 6 screws [1] and remove the tank cover /Lt [2].

3. Loosen the screw [1] and remove the gear cover [3] from the notch [2].

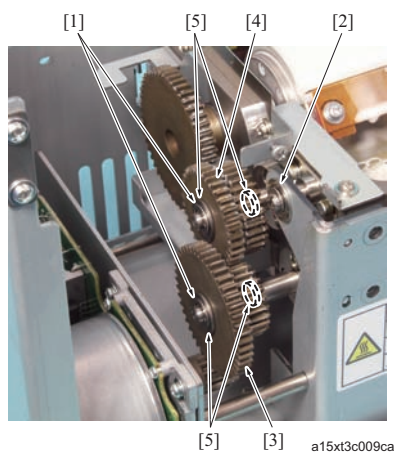
Note

- When reinstalling, be sure to put the gear cover edge [3] into the notch [2].

4. Remove the 4 screws [1].

Note

- When reinstalling the slope, be sure to align 4 positioning projections [2].



5. Remove 2 E-ring [1].
6. Pull up the glue tank assy by holding the shaft [2], and remove the glue apply roller drive gears /1 [3] and /2 [4] and the bearings [5], 2 for each.
7. Reinstall the preceding parts following the removal steps in reverse.

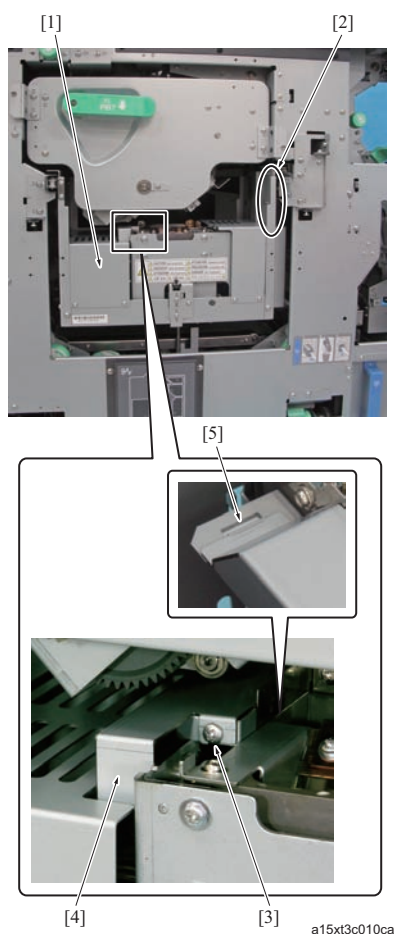
14.6.2 Lubrication to the glue apply roller drive gear

(1) Periodic lubrication parts/Cycle

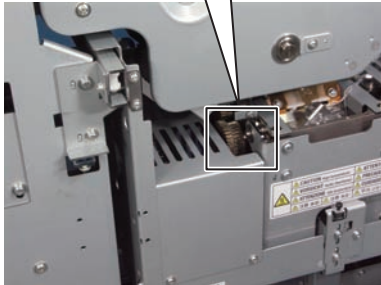
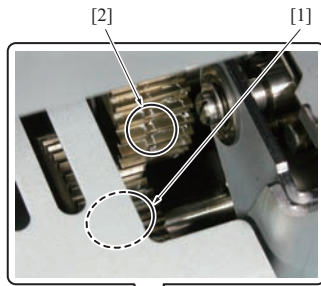
- Glue apply roller drive gear
- : Every 750,000 prints*1

*1 1200/1200P/1051/C8000/C7000/C7000P/C70hc/C6000

(2) Procedure



1. Open the front door and move the glue tank unit [1] frontward.
Note
 - When moving the glue tank unit, be sure to hold it by the metal frame [2] on the right side of the unit.
2. Remove the screw [1] and then remove the gear cover [4].
Note
 - When reinstalling, be sure to put the edge of the gear cover [4] under the notch [5] of the glue tank side.



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3. Apply the multitemp FF-RM to the Glue apply roller drive gear [2].
4. Reinstall the above parts following the removal steps in reverse.

14.6.3 Replacing the pellet supply cooling fan (FM4)

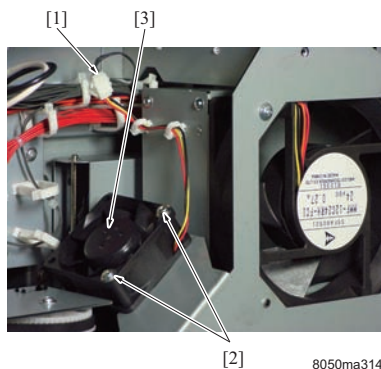
(1) Periodically replaced parts/Spotted replaced parts/Cycle

- Pellet supply cooling fan (FM4)
 - : Every 750,000 prints *1
 - : Spot replacement (Actual replacement cycle: Every 120 hours) *2

*1 1200/1200P/1051

*2 1250/1250P/1052/C8000/C7000/C7000P/C70hc/C6000

(2) Procedure



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1. Remove the rear cover /Rt. (Refer to [G.12.2.5 Rear cover /Rt](#))
2. Disconnect the connector [1].
3. Remove 2 screws [2] and remove the pellet supply cooling fan (M4) [3].
4. Reinstall the preceding parts following the removal steps in reverse.

Note

- When reinstalling the pellet supply cooling fan (FM4) [3], be sure to reinstall it to the same direction as shown in the picture.
- Be sure not to nip the wiring harness.

14.6.4 Replacing the glue tank assy

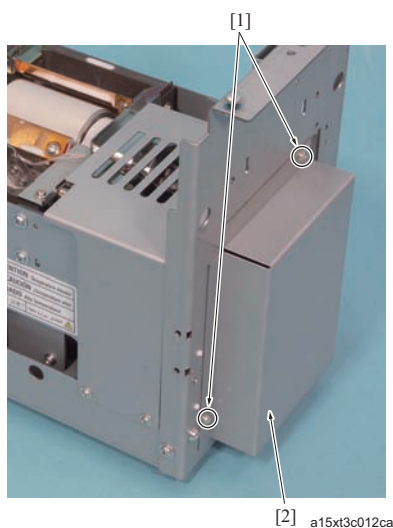
(1) Spotted replaced parts/cycle

- Glue tank assy
 - : Spot replacement (Actual replacement cycle: Every 2,000 hours) *1

*1 1200/1200P/1051/C8000/C7000/C7000P/C70hc/C6000

(2) Procedure

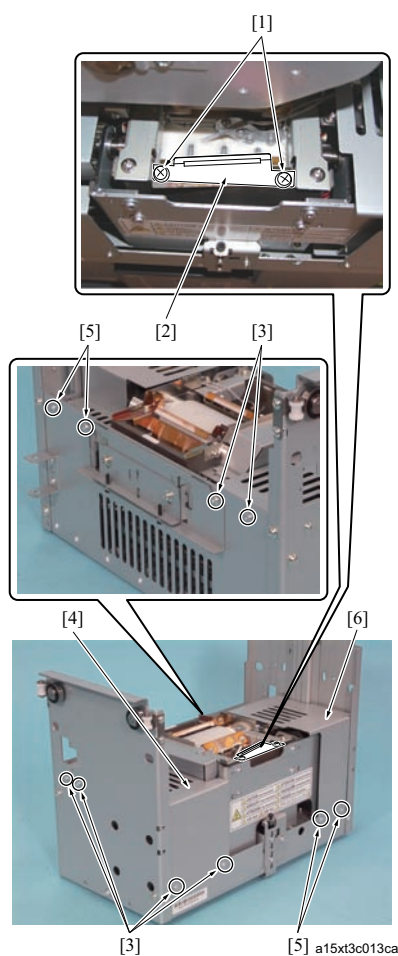
1. Remove the glue tank unit. (Refer to [G.12.2.20 Glue tank unit](#))
2. Remove 2 screws [1] and then remove the wiring mounting cover [2].

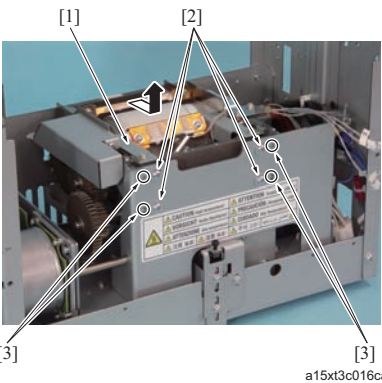
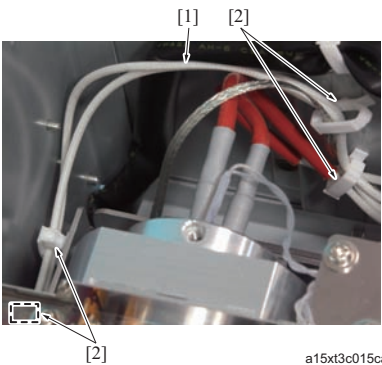
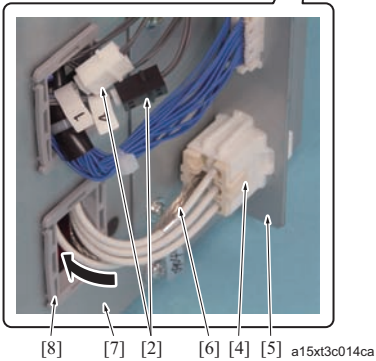
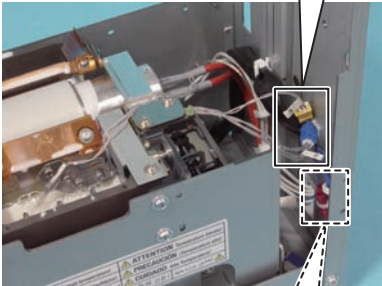
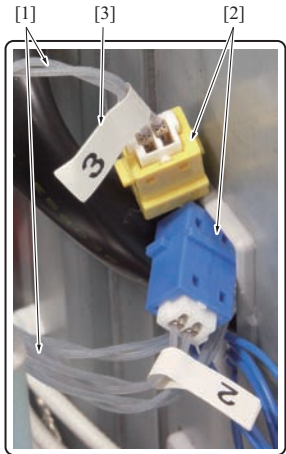


3. Remove 2 screws [1], and then remove the glue thread cut plate [2].
4. Remove 6 screws [3] and remove the tank cover /Lt [4].
5. Remove 4 screws [5] and remove the tank cover /Rt [6].

Note

- When reinstalling it, reinstall it so that the curved part comes top.





6. Disconnect 4 connectors [2] of the translucent wiring harnesses of the temperature sensor.

Note

- When reconnecting the connector, check the color of the connector and the number label [3] on the wiring harness, and connect each connector to the corresponding wiring harness.

Number	Color
1	White
2	Blue
3	Yellow
4	Black

7. Remove the connector [4] from the metal frame [5].

Note

- When reinstalling it, be sure to set the metal wiring harness [6] toward the metal plate side [7].

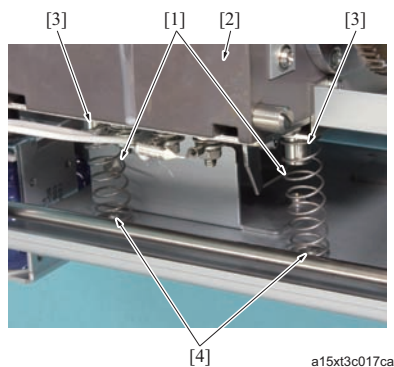
8. Remove the square saddle [8] from the metal frame [7] and put the connector [4] to the inside of the glue tank unit.

9. Remove the wiring harness [1] from the 4 wire saddles [2].

10. Remove 4 screws [2] and remove the glue tank assy [1].

Note

- When reinstalling the slope, be sure to align 4 positioning projections [3].



11. Reinstall the above parts following the removal steps in reverse.

Note

- When reinstalling it, be sure to set it with 2 springs [1] put on the pin [3] on the bottom of the glue tank assy and on the projection [4] of the glue tank unit.
- After replacing the parts, be sure to conduct the glue apply roller gap adjustment. (Refer to [I.18.5 Glue apply roller gap adjustment](#))
- After replacing the parts, be sure to conduct the counter reset of parts counter No.249.

14.7 Clamp section

14.7.1 Lubrication to the clamp pressing board shaft

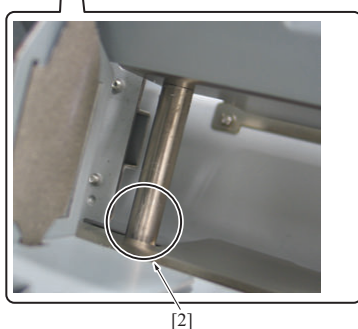
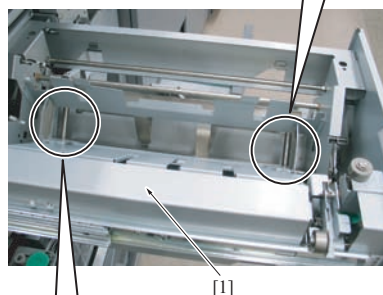
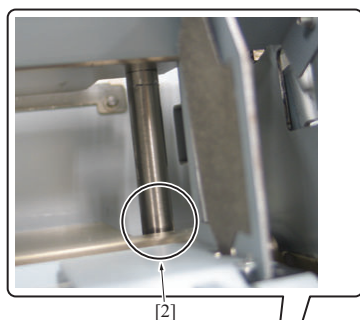
(1) Periodic lubrication parts/cycle

- Clamp pressure plate shaft
: Every 750,000 prints*1

*1 1250/1250P/1052/1200/1200P/1051/C8000/C7000/C7000P/C70hc/C6000

(2) Procedure

1. Pull out the clamp unit [1].
2. Apply the plas guard No.2 to 2 positions on the clamp pressing board shaft [2].



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14.8 Book stock section

14.8.1 Lubrication to the guide shafts /Rt and /Lt

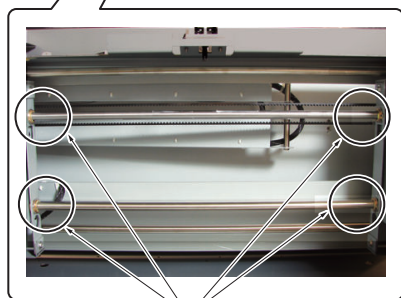
(1) Periodic lubrication parts/Cycle

- Guide shaft /Rt, /Lt
: Every 750,000 prints*1

*1 1250/1250P/1052/1200/1200P/1051/C8000/C7000/C7000P/C70hc/C6000

(2) Procedure

1. Apply the plas guard No.2 to 4 positions on 4 positions [1] on the guide shafts /Rt and /Lt.



[1]





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15. PERIODICAL MAINTENANCE PROCEDURE GP-501

15.1 Caution for maintenance procedure

DESCRIPTION ITEMS FOR SAFTY

These symbols are used in this documentation alert you to danger or important information.

	WARNING:	Indicates a potentially hazardous situation which, if not avoided, could result in death or serious Injury.
	WARNING:	Risk of electrical shock. This warning statement indicates situations where there is a risk of death by electric shock.
	CAUTION:	This notice indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.
		Certain components in this product are susceptible to damage from electrostatic discharge. Observe all ESD procedures to avoid component damage.

This section contains cleaning and maintenance procedures.

CAUTION

- **GP-501 uses screws of inch standard. Therefore, do not mix them with other products (metric standard screws). Otherwise, the screw hole is damaged.**
- **Make sure to unplug the power cord of the main body from the power outlet when it is connected to the main body.**

15.2 DIE SET SERVICE

15.2.1 Die Set Service

The Die Set assembly is not serviceable other than inspection and periodic lubrication. The one exception is the felt pad on the Twin Loop Die Set can be replaced. If a Die Set is at its end of life, it will tend to cause mis-feeds due to hanging chips. This is a result of die plate wear, and not pin wear, which cannot be corrected. When this occurs, the Die Set should be replaced with a new one.

15.2.2 Die Set Life Expectancy

The GP-501 Punch Die Sets have a minimum life expectancy of 500K cycles (sheets of paper punched). With periodic lubrication and optimum paper types, life can exceed this number. Variables that affect life expectancy:

- Failure to follow the lubrication schedule or using the incorrect lubricant.
- Variety and types of paper being punched
- Cover stocks being punched
- Length of the average job
- Other environmental conditions

15.2.3 Die Set Components

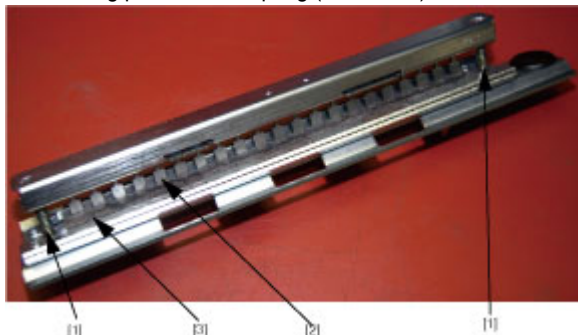
(1) Die Set Types

The GP-501 Punch uses two types of Die Sets.

Type	Description	Bindery Style
Felt Pad Retainer Assembly	Felt oiler pad on one side (with magnet and retaining plate)	DS-501, 503, 504, 506, 508, 510, 511, 513, 515, 517, 518
Encircled Felt Oiler Pad	Felt oiler pad surrounds the punch pins	DS-502, 505, 507, 509, 512, 514, 516

(2) Serviceable Components

- Shoulder bolt and spring [1]
- Punch pins [2]
- Felt pad [3]
- Floating pressure bar spring (not shown).



(3) Felt Pad Retaining Assembly

The twin loop Die Set has a removable felt pad assembly. The felt pad [1] provides lubrication to the punch pins under normal usage and helps keep them clean. The magnet [2] and retainer [3] keeps the felt pad in place during normal handling and operation.

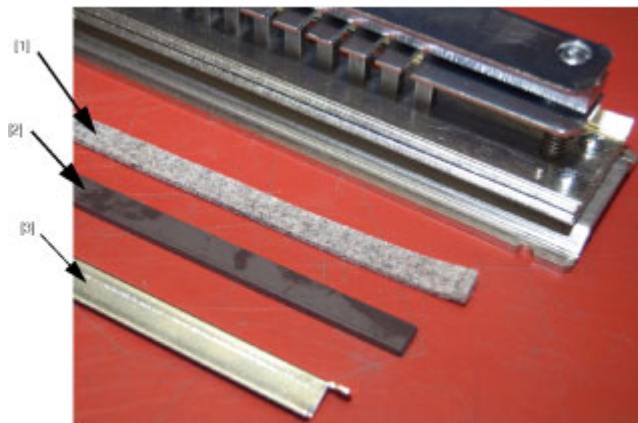


Figure 3.2 Felt Pad Assembly.

Note

- The felt pad assembly on the Twin Loop Die Set is the only assembly that can be replaced.

(4) Reassembling the Felt Pad Assembly

The felt pad assembly consists of the felt pad [1], magnet [2], and retainer [3].

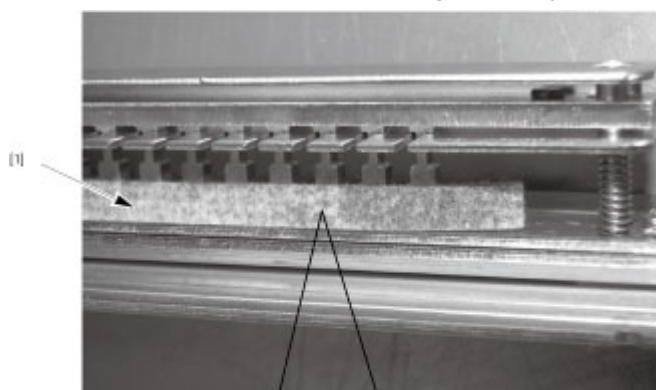
(a) To assemble the felt pad retaining assembly:

Figure 3.3 Placing Felt Oil Pad on Die Set.

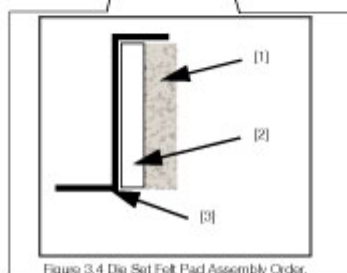
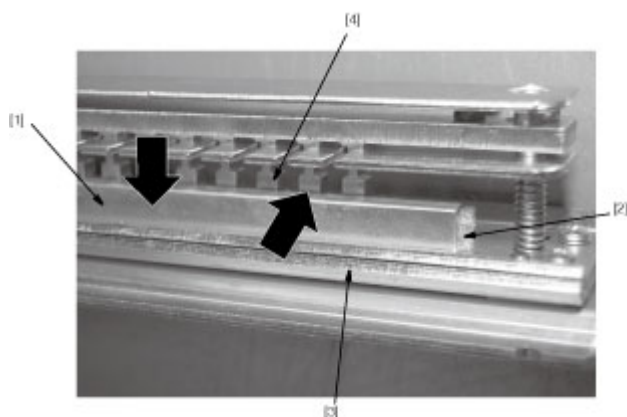
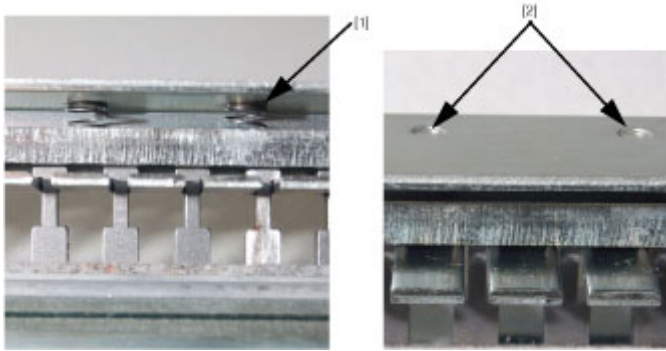


Figure 3.4 Die Set Felt Pad Assembly Order.



1. Lay the die assembly on a table so that the open side of the top bar is facing up.
2. Lay the felt pad [1] along the punch pins so that it spans all pins.
3. If the pad needs oil, apply it along the full length of the pad.
4. Insert the magnet [2] into the retainer [3].

5. Place the magnet and retainer [1] over the pad [2] and lightly press them against the pad and the Die Set base. Make sure the assembly is sitting on the base [3] and that the felt pad is against the punch pins [4].

(5) Floating Pressure Bar Spring Replacement

Some Die Sets use springs to hold the top plate above the pressure bar [1]. Detents in the top plate hold the springs in place [2]. Ensure all springs are in place.

(a) To replace pressure bar springs:

1. Compress the spring and insert between the top bar and pressure bar.
2. Use a flat screwdriver to position the spring so that the detent holds it in place.
3. Compress the top bar to ensure it moves freely and that it returns.

15.2.4 Checking and Replacing the Die Set**(1) Periodically Checked and replaced parts/Spotted Checked and replaced parts/cycle**

- Dieset

: Every 2,000,000 prints ^{*1} (Actual replacement cycle: Every 500,000 punches ^{*2}) ^{*3}

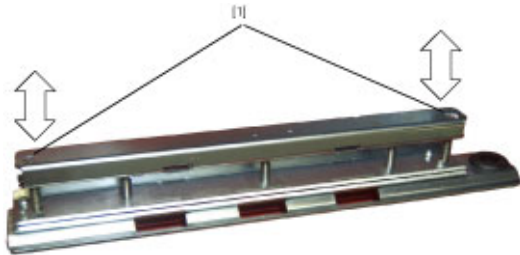
^{*1} The periodical replacement is only for 1200/1200P/1051/C6501/C6501P/C65hc.

^{*2} Actual replacement cycle of 1200/1200P/1051/C6501/C6501P/C65hc/C8000.

^{*3} Replace as needed. Replacement is recommended if hanging chips are usually generated.

(2) Procedure

Set the Die Set on a table and press the top plate straight down at both ends [1] at the same time and look for a smooth operation. The top plate and pins should retract fully when you release.



Reinstall the Die Set into the punch and run several sheets of the customer's paper through the punch. Inspect the holes.

- Holes should be clean and even with no tearing or frayed edges.
- Holes should be punched completely, leaving no chip attached.
- Holes should be straight (no skew) and evenly spaced from the edge of the paper and aligned.

15.2.5 Checking and lubricating the Die Set pins and Die Set shoulder bolts**(1) Periodically Checked and lubricated parts/cycle**

- Die Set pins

: Every 200,000 prints (Actual lubrication cycle: Every 50,000 punches) ^{*1}

: Every 210,000 prints (Actual lubrication cycle: Every 50,000 punches) ^{*2}

- Die Set Shoulder bolts

: Every 800,000 prints (Actual lubrication cycle: Every 200,000 Punches) ^{*1}

: Every 750,000 prints (Actual lubrication cycle: Every 200,000 Punches) ^{*2}

^{*1} 1200/1200P/1051/C6501/C6501P/C65hc

^{*2} C8000

(2) Procedure

Inspect the punch pins for signs of wear or mis-alignment. Periodic lubrication extends the life of the Die Sets. The customer or operator can perform this maintenance between technician inspections.

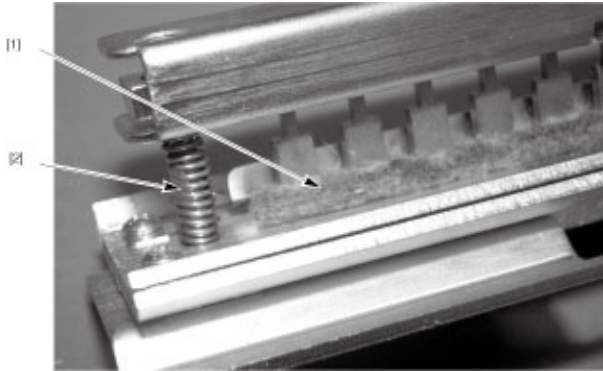


(3) To lubricate Die Set pins:

- Lubricate with 3-IN-ONE oil (high quality machine oil).
 - Apply oil lightly along the length of the pad [1], but do not over saturate.
 - Do not use spray lubricants because they tend to dry up quickly and leave a sticky residue.
- For the felt pad retaining assembly instructions, refer to [F.15.2.3 Die Set Components](#).

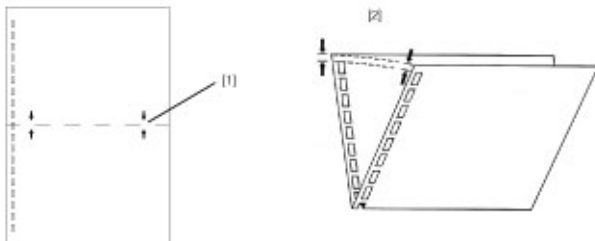
(4) To lubricate shoulder bolts:

- Lubricate the shoulder bolts and springs [2] using a brush to apply Magnalube-G Teflon Grease.
- Make sure the grease coats the bolts.



15.2.6 Hole Alignment inspection

Inspect the hole alignment on the customer's punched paper. Fold the punched sheet of paper in half [1] and the punched holes should be aligned evenly along the edge and centered between the ends [2]. If the punched holes are not aligned, then the Die Set cradle must be adjusted. For adjustment procedures.



15.3 CHECK, CLEANING, AND LUBRICATION

15.3.1 CHECK, CLEANING, AND LUBRICATION

If operating properly, the GP-501 will punch the same types of copy paper and cover materials handled by the copier and run at the same speed. Hole quality will vary between different grades of paper.

The following maintenance should be performed according to the schedule.

(1) Table 3.2 Maintenance Schedule

Description	Qty.	Part Number	Period	Check	Clean	Lubricate	Replace	Materials, Tools Used
Aligner belt (green belt)			12,000K prints		X			a soft cloth and alcohol
Aligner idler roller assembly			12,000K prints		X			a soft cloth and alcohol
Aligner idler rollers			3,000K prints	X	X			a soft cloth and alcohol
Aligner latching mechanisms			3,000K prints	X				-
Back gauge solenoid			3,000K prints	X	X			Blower brush/ vacuum cleaner
Back gauge mechanism	1	A0N9PP59##	4,000K prints				X	-

Base			3,000K prints		X			Vacuum cleaner
Die guide			3,000K prints		X			Vacuum cleaner
Die set			500K prints				Y	-
Punch die (pins)			50K prints	X		Oil		3-IN-ONE (WD-40 Company)
Die set shoulder bolts			200K prints	X		Grease		Magnalube-G Teflon Grease
Door closing latch			3,000K prints	X				-
Drive rollers			3,000K prints	X	X			a so ft cloth and alcohol
Idler rollers			3,000K prints	X	X			a so ft cloth and alcohol
Optical sensors			3,000K prints		X			Blower brush
Paper path, Aligner Panels			3,000K prints	X	X			a so ft cloth and alcohol
Paper path, bypass			3,000K prints	X	X			a so ft cloth and alcohol
Paper path, punch			3,000K prints	X	X			a so ft cloth and alcohol
Punch drive cams			3,000K prints			Grease		Magnalube-G Teflon Grease
Roller energy drive			3,000K prints	X	X			a so ft cloth and alcohol
Timing belts			3,000K prints	X	X			a so ft cloth and alcohol

15.3.2 External Cleaning

The cover may be cleaned with a soft cloth moistened with mild detergent and warm water.

Do not use chemical cleaners or solvents as these may have a harmful effect. Use detergent sparingly to avoid contact with electrical components.

⚠ WARNING:

- **Make sure you disconnect the GP-501 Punch from its power source before cleaning. Failure to observe this warning could result in death or serious injury.**

15.3.3 Internal Cleaning

Occasionally remove the covers and remove paper dust and chips. Paper dust can accumulate throughout the punch including around the motors and other electrical components. Use a vacuum cleaner if possible. A small paintbrush can also be used but extreme care should be used around electrical components.

Non-electrical components may be cleaned with alcohol, an approved cleaner, or a soft cloth moistened with mild detergent and warm water.

Rollers can be cleaned with alcohol.

⚠ WARNING:

- **Make sure you disconnect the GP-501 Punch from its power source before cleaning. Failure to observe this warning could result in death or serious injury.**

15.3.4 Operational Inspection

Make sure the punch operates smoothly and produces the desired holes in the customer's paper.

15.3.5 Internal Inspection

Whenever the cover has been removed for corrective maintenance, visually inspect for defects and problems such as damaged components, loose screws or nuts, abraded wire insulation, loose terminals, etc. Correct any problems before returning the machine to service.

15.3.6 Cleaning the base

(1) Periodically cleaned parts/cycle

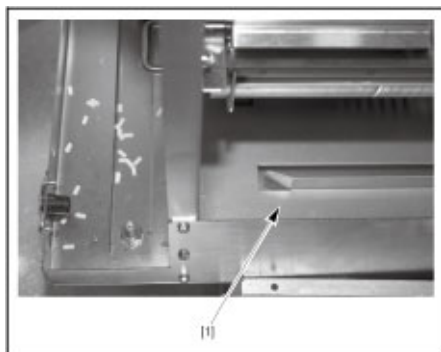
- Base
- Every 3,000,000 prints

(2) Procedure

Chips and paper dust falls to the bottom of the punch. Clean with a vacuum cleaner each time the machine is serviced. The customer can also do this between the technician's visits.

(3) Chip Bin

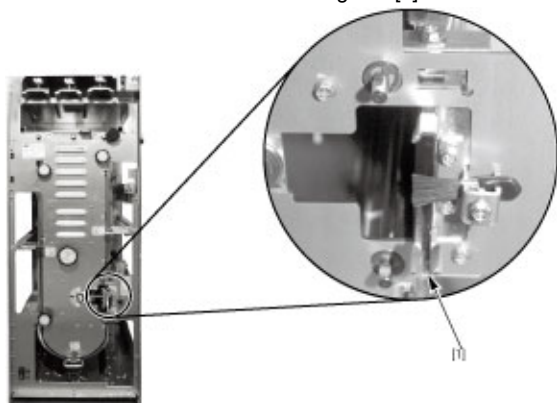
Remove the Chip bin tray and empty. Vacuum out paper chips and dust from the Chip bin [1], especially at the back around the chip tray switch.

**15.3.7 Cleaning the Die guide****(1) Periodically cleaned parts/cycle**

- Die guide
: Every 3,000,000 prints

(2) Procedure

Remove the Die Set and clean the guide [1] with a vacuum cleaner.

**15.3.8 Checking the Door Latch**

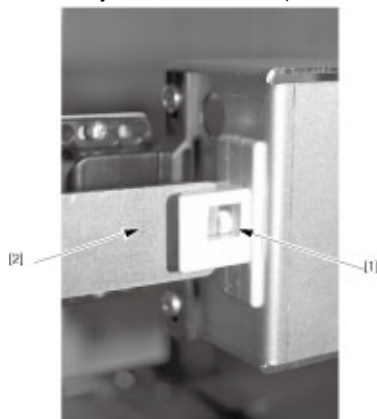
The door latch must hold the door closed and ensure that the switch activation tab is depressing the door switch [1]. The switch tab [2] should press the switch button just so that it is close to bottoming.

(1) Periodically checked parts/cycle

- Door latch
: Every 3,000,000 prints.

(2) Procedure

- Ensure latch holds door closed.
- Ensure switch is activated when the door is closed.
- To adjust the door latch. (Refer to [G.14.2.1 Door latch check](#))

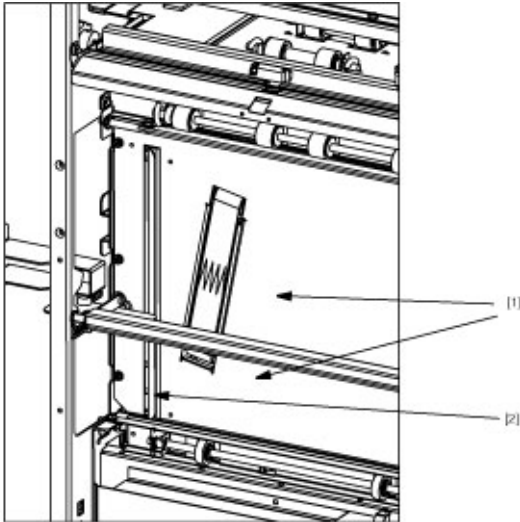


15.3.9 Cleaning and Checking the aligner paper path and panels**(1) Periodically cleaned and checked parts/cycle**

- Aligner paper path and panels
: Every 3,000,000 prints.

(2) Procedure

Inspect for worn or damaged parts. Clean with alcohol, an approved cleaner, or a soft cloth moistened with mild detergent and warm water as needed.

(3) To clean the Aligner Panels:

1. Lift the Aligner latches to open panels.
2. Clean surfaces [1].
3. Clean paper alignment channels [2].

15.3.10 Cleaning and Checking the Aligner Idler Roller**(1) Cleaning and Checking the Aligner Idler Roller**

Aligner idler rollers press the paper against the green drive belts and align the paper for punching and exiting. To replace the idler rollers. (Refer to [F.15.3.25 Aligner Idler Roller Replacement](#))

(a) Periodically cleaned and checked parts/cycle

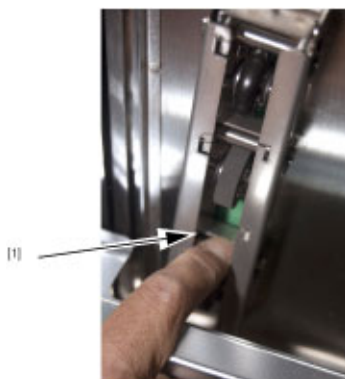
- Aligner Idler Roller
: Every 3,000,000 prints.

(b) Procedure

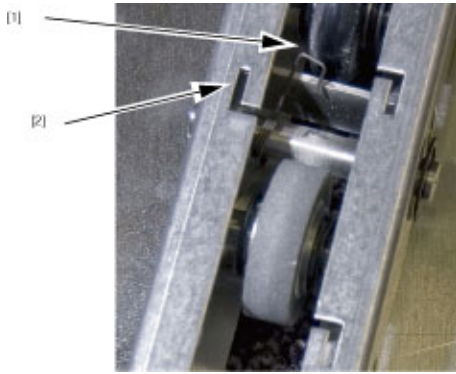
- Make sure the aligner rollers are clean.
- Ensure that the idler rollers maintain pressure against the green drive belt.
- Inspect for bent or damaged parts.

⚠ WARNING:

- **Disconnect the GP-501 Punch from power and retain the power cord in your possession for your safety. Failure to observe this warning could result in death or serious Injury.**

(c) To inspect the aligner idler rollers:

1. Press the top of each roller's bracket [1]. The roller should move away from the green belt drive and then when released, they spring back into place.



2. Ensure the torsion springs [1] are hooked over the bracket [2].

(d) To clean idler rollers:

1. Clean the idler rollers with a soft cloth and alcohol.
2. Inspect the idler rollers for wear patterns or groves. Surface should be evenly textured and clean.

15.3.11 Cleaning the Aligner (Green) Drive Belt

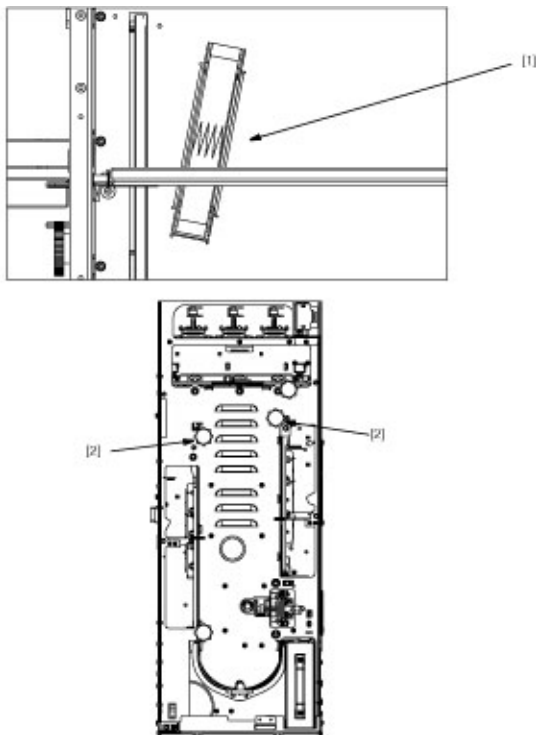
(1) Periodically cleaned parts/cycle

- Aligner (Green) Drive Belt
- : Every 12,000,000 prints. *1
- *1 1200/1200P/1051/C8000

(2) Procedure

- Ensure the Aligner Drive Belts are clean.
- Inspect for frayed edges and wear.

(3) To clean the Aligner Drive Belts:



1. Clean Green Drive Belt [1] with a plastic scouring pad.
 2. Use the drive knob [2] to turn the belt.
- Figure 3.16 Cleaning Green Drive Belt.

To adjust or replace the Aligner Drive Belt. (Refer to [F.15.3.26 Aligner Drive Belt Replacement](#))

15.3.12 Cleaning and Checking the Back Gauge Solenoid

(1) Periodically cleaned and checked parts/cycle

- Back Gauge Solenoid
- : Every 3,000,000 prints.

(2) Procedure

1. Inspect and ensure the Back Gauge solenoid linkage moves freely. Press linkage down and release [1]. Linkage should return.
2. Clean out the solenoid and surrounding area with a vacuum cleaner and canned air [2]. Make sure the solenoid is clean and dry.

Note

- Do not apply lubricants to the solenoid or linkage.

To remove and repair the back gauge. (Refer to [F.15.3.28 Replacing the back gauge mechanism](#), [F.15.3.29 Back Gauge Removal](#))



15.3.13 Cleaning and Checking the Idler Rollers

(1) Periodically cleaned and checked parts/cycle

- Idler rollers
: Every 3,000,000 prints.

(2) Procedure

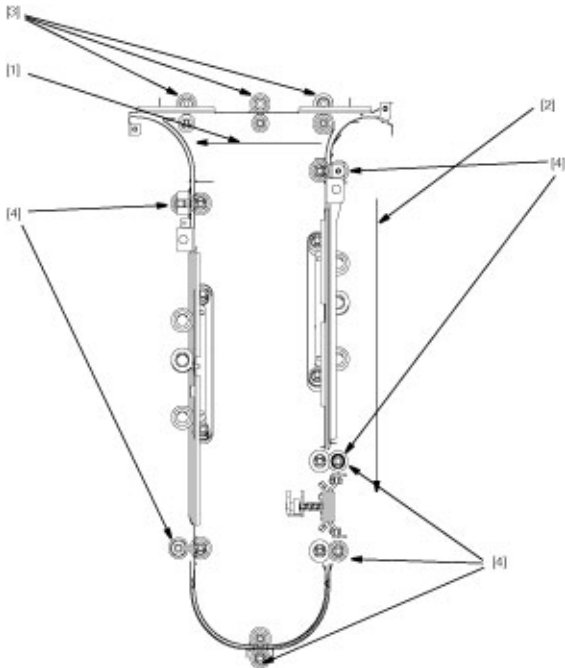
Idler rollers press against the drive rollers and move the paper through the bypass [1] or the punch [2].

Inspect rollers for wear patterns or grooves. The roller surface should be even and have a textured surface. Where practical, remove the roller assembly to clean [3].

Please see the reference page about the maintenance procedure of each roller.

Bypass Idler roller [3].

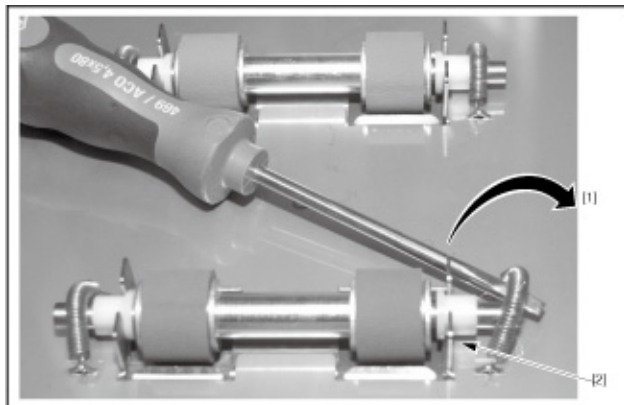
Punch Idler roller [4]. (Refer to [F.15.3.14 Cleaning and Checking the punch idler rollers](#))



(3) Cleaning and Checking the Bypass Idler Rollers

Idler rollers press against the drive rollers and move the paper through the bypass. Rollers can usually be serviced without removing the bypass panel.

1. Separate the punch from the printer.
2. Disconnect the power.
3. Lift the retaining spring over the end of the idler roller shaft. The illustration shows moving the spring [1] on the bypass plate, which has been removed from the machine for clarity.
4. Pull the released shaft end out of the bushing fork [2], releasing the opposite end of the shaft from the other retaining spring.
5. Clean the idler rollers with a soft cloth and alcohol.
6. Ensure the rollers turn freely on the shaft.
7. To install idler roller assemblies reverse the steps.

**Installation Note:**

- Make sure the flat surface of the bushing aligns in the fork.
- Rollers are non-directional so it does not matter which end goes in each fork.
- After the assembly is in place, gently pull the assembly outward and release to ensure it moves freely in the fork.

(4) Cleaning and Checking the punch idler rollers

Idler rollers press against the drive rollers and move the paper through the GP-501 Punch. Most can be serviced without disassembling punch components. Unplug unit and separate from the printer. (Refer to [G.14.3.2 Separating the Punch From the Printer](#)).

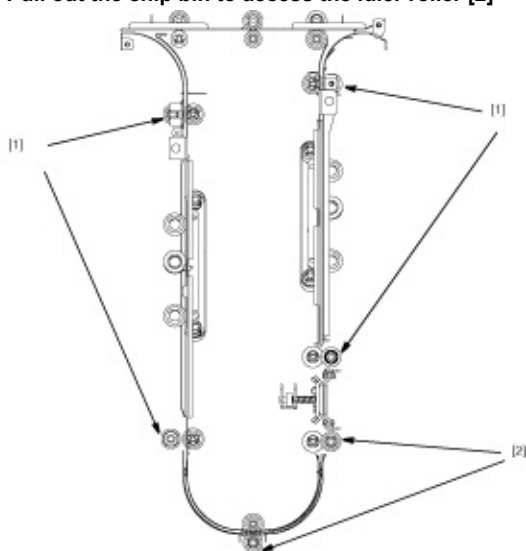
Also remove two side panels as described in [F.15.3.22 Bypass panel Removal](#) and [F.15.3.24 Aligner Panel Removal](#)

(a) Procedure

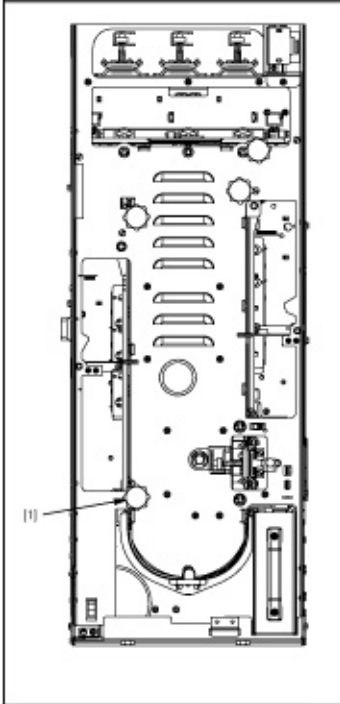
Inspect rollers for wear patterns or groves [1],[2]. The roller surface should be even and have a textured surface. Replace per the maintenance schedule.

Note

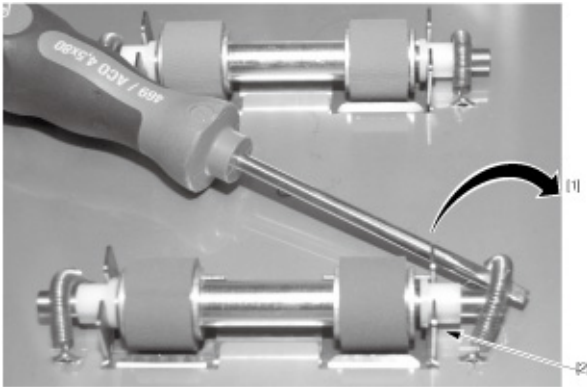
- Pull out the chip bin to access the idler roller [2]



- Use the drive knob [1] to turn the rollers to continue inspection and cleaning.



To remove the Punch Idler rollers:



1. Lift the retaining spring [1] over the end of the idler roller shaft.
2. Pull the released shaft end out of the bushing fork [2], releasing the opposite end of the shaft from the other retaining spring.
3. To install idler roller assemblies reverse the steps.

Installation Note:

- Make sure the flat surface of the bushing aligns in the fork.
- Rollers are non-directional so it does not matter which end goes in each fork.
- After the assembly is in place, gently pull the assembly outward and release to ensure it moves freely in the fork.

15.3.14 Cleaning and Checking the punch idler rollers

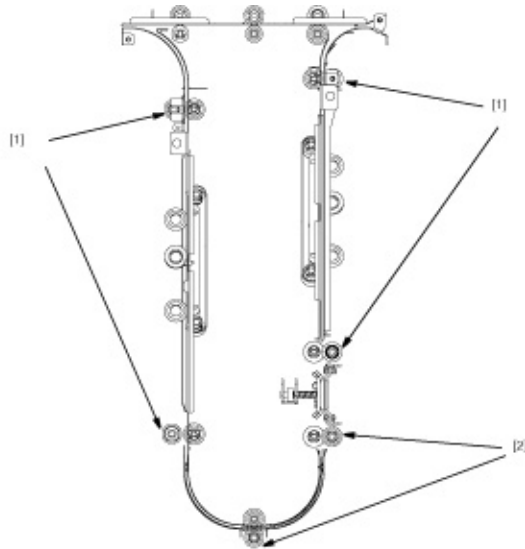
Idler rollers press against the drive rollers and move the paper through the GP-501 Punch. Most can be serviced without disassembling punch components. Unplug unit and separate from the printer. (Refer to [G.14.3.2 Separating the Punch From the Printer](#)). Also remove two side panels as described in [F.15.3.22 Bypass panel Removal](#) and [F.15.3.24 Aligner Panel Removal](#)

(1) Procedure

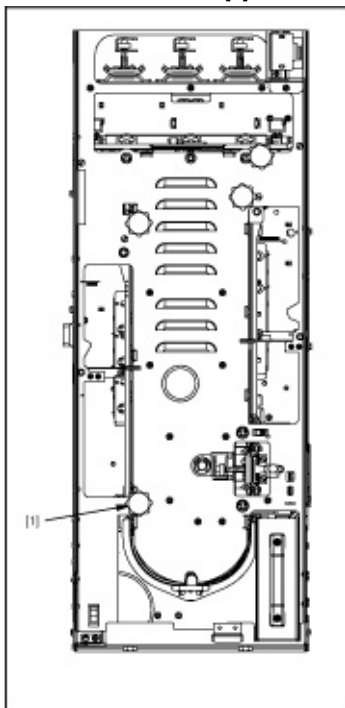
Inspect rollers for wear patterns or groves [1],[2]. The roller surface should be even and have a textured surface. Replace per the maintenance schedule.

Note

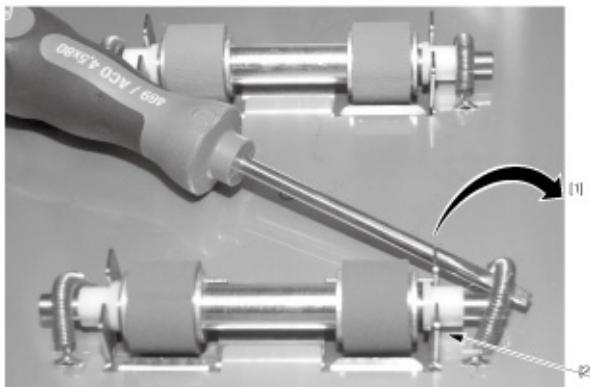
- Pull out the chip bin to access the idler roller [2]



- Use the drive knob [1] to turn the rollers to continue inspection and cleaning.



(2) To remove the Punch Idler rollers:



1. Lift the retaining spring [1] over the end of the idler roller shaft.
2. Pull the released shaft end out of the bushing fork [2], releasing the opposite end of the shaft from the other retaining spring.
3. To install idler roller assemblies reverse the steps.

Installation Note:

- Make sure the flat surface of the bushing aligns in the fork.
- Rollers are non-directional so it does not matter which end goes in each fork.
- After the assembly is in place, gently pull the assembly outward and release to ensure it moves freely in the fork.

15.3.15 Cleaning and Checking the Drive Rollers

Drive rollers are located opposite the idler rollers.

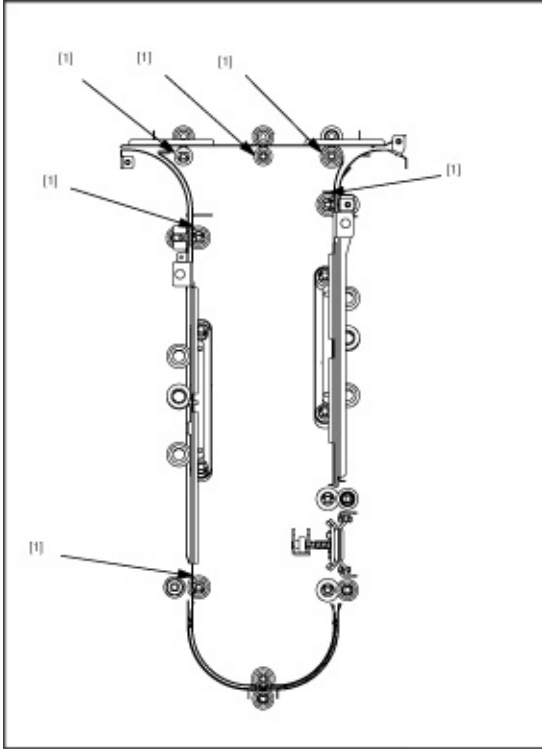
(1) Periodically cleaned and checked parts/cycle

- Drive rollers
: Every 3,000,000 prints

(2) Procedure

Inspect for wear patterns or groves. The roller surface should be even and not glazed.

Some drive rollers are not easily accessible. Those that are [1], should be inspected and cleaned when the idler rollers are removed. Where practical, make sure the rollers are clean. Clean with a soft cloth and alcohol. Refer to also [F.15.3.13 Cleaning and Checking the Idler Rollers](#).



15.3.16 Checking the Aligner Latch

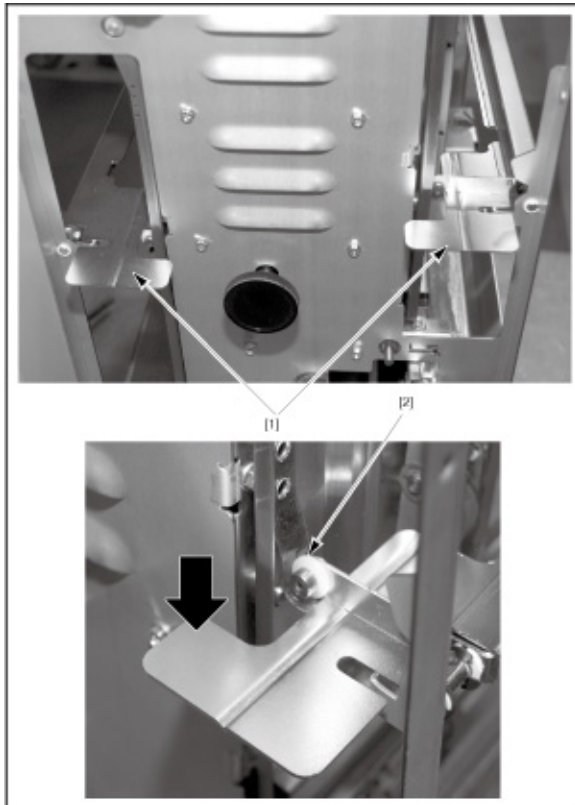
Latches [1] on both sides of the punch hold the Aligner Panels in place, which in turn keeps even pressure on the idler rollers.

(1) Periodically checked parts/cycle

- Aligner Latch
: Every 3,000,000 prints

(2) Procedure

- Inspect the latches for worn or damaged parts.
- Open and close the latches and ensure they lock into place when closed.
- Ensure the nylon wheel [2] turns freely on its bearing and that it aligns with its locking.



15.3.17 Cleaning the Optical Sensors

(1) Periodically checked parts/cycle

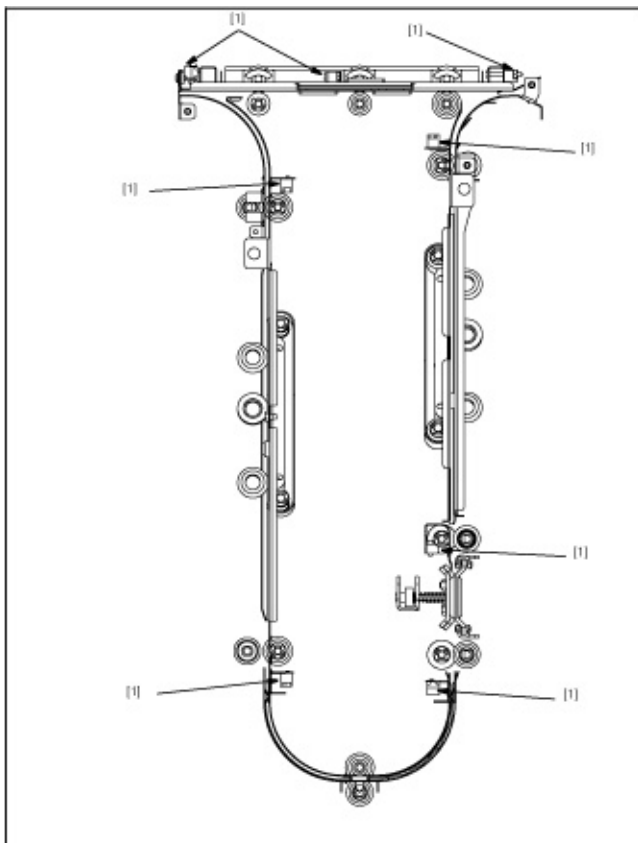
- Optical Sensors
- : Every 3,000,000 prints

(2) Procedure

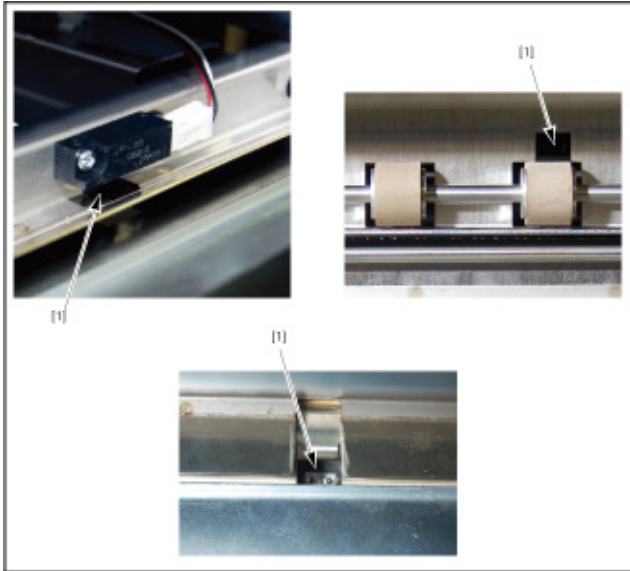
- Inspect and clean Optical Sensors [1] per the maintenance schedule or as needed.

(3) Supplies Needed

Canned air or vacuum cleaner



Use canned air to blow the debris off each sensor. The illustration shows examples of three sensors [1].



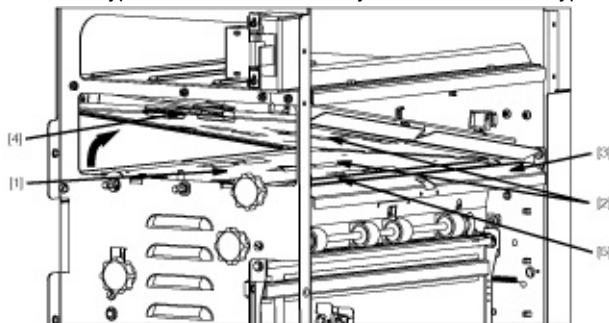
15.3.18 Cleaning and Checking the Bypass Paper Path

(1) Periodically cleaned and checked parts/cycle

- Bypass paper path
- : Every 3,000,000 prints

(2) Procedure

- Inspect the Bypass panel [1], rollers [2], and entrance guide [3] for wear, damage, and obstructions.
- Inspect the rollers for wear patterns or groves. The surface should be rough and even. Make sure the rollers are clean. Clean rollers with a soft cloth and alcohol. (Refer to [F.15.3.13 Cleaning and Checking the Idler Rollers](#), [F.15.3.15 Cleaning and Checking the Drive Rollers](#))
- Raise the panel and ensure the magnet holds it in open [4]. Inspect the path for obstructions. Clean as needed.
- Close the panel and check that it is flat and that paper will pass under it.
- Ensure the bypass diverter moves freely and returns to the bypass position.



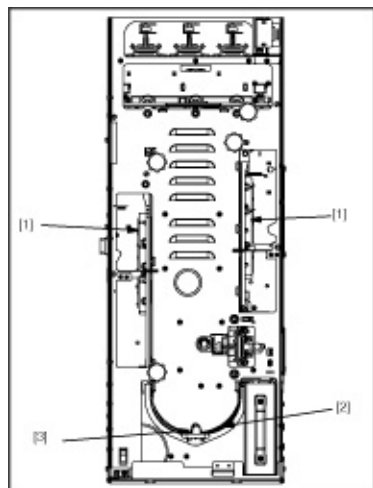
15.3.19 Cleaning and Checking the Punch Paper Path

(1) Periodically cleaned and checked parts/cycle

- Punch Paper path
- : Every 3,000,000 prints

(2) Procedure

- Inspect the entire paper path through the punch. Look for wear, damage, and obstructions.
- Inspect the rollers for wear patterns or groves.
- Open the Aligner Panels [1] and U-channel [2] and make sure there are no obstructions.
- Confirm that the latch [3] holds the U-channel tightly in place. Re-shape it if necessary.
- Clean as needed.



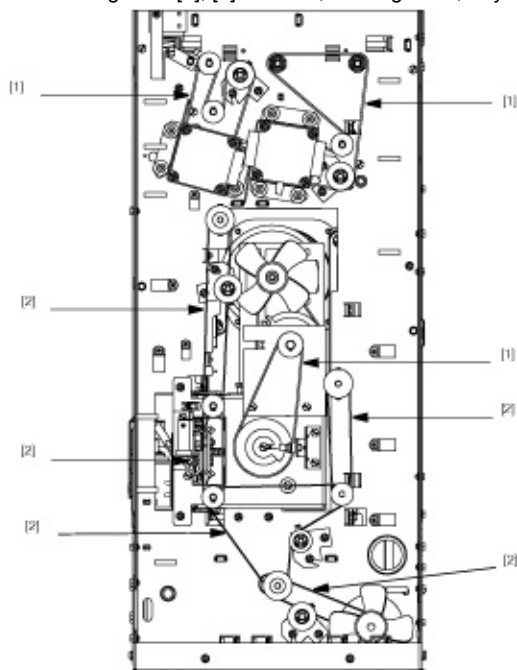
15.3.20 Cleaning and Checking the Timing Belt

(1) Periodically cleaned and checked parts/cycle

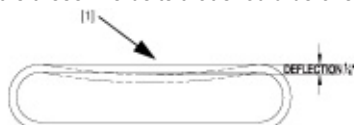
- Timing Belt
- : Every 3,000,000 prints

(2) Procedure

Inspect all timing belts [1], [2] for wear, missing teeth, frayed edges, and cracks. For replacement, refer to [F.15.3.43 Belt replacement](#).



Check for proper deflection of belts. The belts should be slightly loose with approximately 1/4" (6.35mm) deflection [1]. Belts that are too loose will not drive properly and belts that are too tight can wear out prematurely or damage their driven components. Five belts [2] have tensioners, it is these five belts that should be checked.



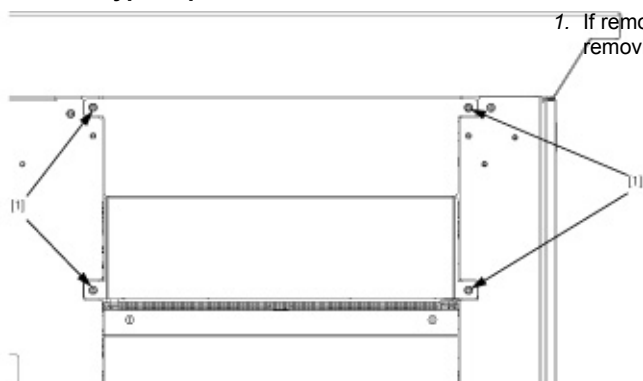
15.3.21 Bypass panel

(1) Tools Needed

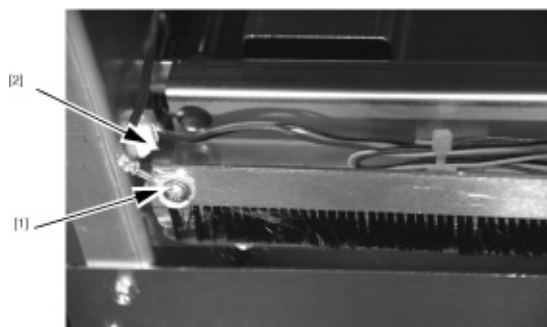
- Phillips screwdriver or 1/4" nut driver
- Flat bladed screwdriver
- Needle nose pliers

(2) Procedure

Separate the punch from the printer and remove the rear cover. (Refer to [G.14.3.2 Separating the Punch From the Printer](#), [G.14.3.3 Removing the Rear Cover](#))

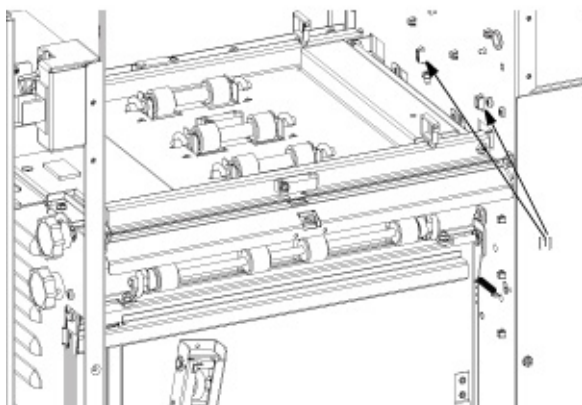
15.3.22 Bypass panel Removal**(1) To remove the Bypass panel:**

1. If removing the Bypass panel, remove the side panel cover by removing the 4 screws [1].

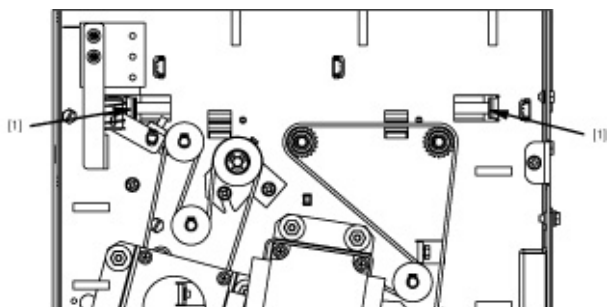


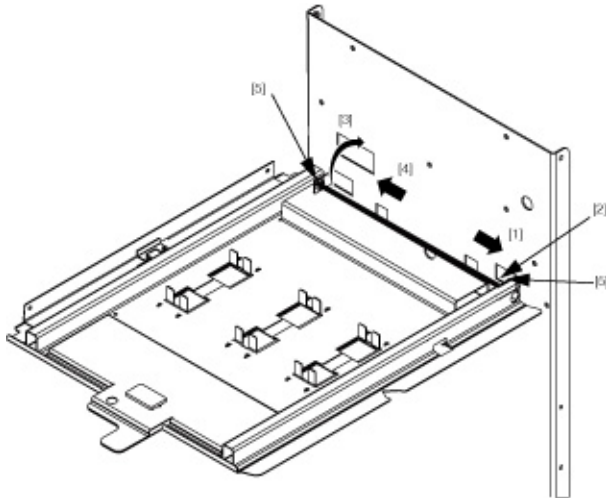
2. Disconnect the grounding strap by removing the screw [1] on the exit side of the bypass.
3. Unplug the exit side connector [2] at the rear frame.

4. Disconnect the connectors [1] of Enter sensor (S1) and Bypass sensor (S8).



5. From the rear of the punch, remove one of the E-rings [1] from the Bypass shaft.

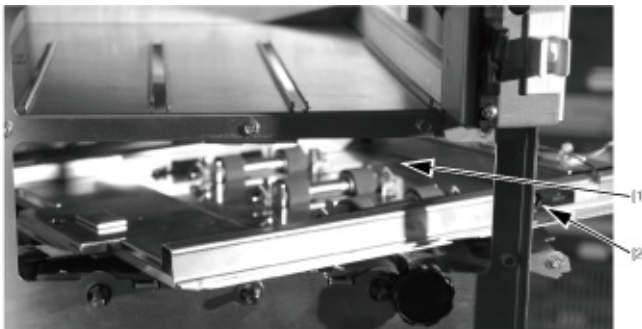




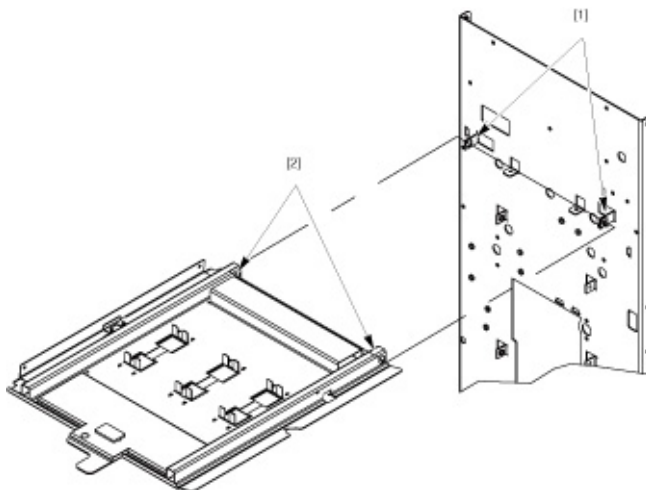
6. From the side of the punch, slide the shaft towards the end of the shaft [1] without the E-Ring [2] until the other end of the shaft clears the nylon bushing and bracket.
7. Lift the opposite end of the shaft [3] and slide it out of the Bypass panel in the opposite direction of the removed E-Ring [4].

Installation Note

- Make sure the nylon bushing is installed so that it protrudes through the mounting bracket of the rear frame into the Bypass panel [5].



8. Rotate the rear of Bypass panel [1] so that it extends past the entrance side of the punch [2].



9. Remove the Bypass panel.
10. To install the Bypass panel, reverse the steps.

Installation Note

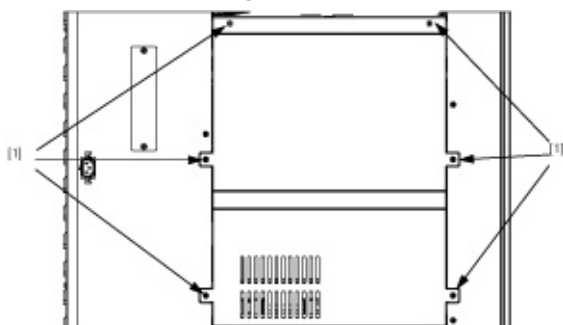
- Position the Bypass panel so that it is outside the shaft mounting brackets. The nylon bushings go through the mounting brackets [1], into the Bypass panel [2].

15.3.23 Aligner panels

The entrance side Aligner panel positions the paper in the Back Gauge for punching. The exit side Aligner panel positions the paper for the finisher. Prior to servicing the Aligner Panels, separate the GP-501 Punch from the printer. (Refer to [G.14.3.2 Separating the Punch From the Printer](#)).

15.3.24 Aligner Panel Removal

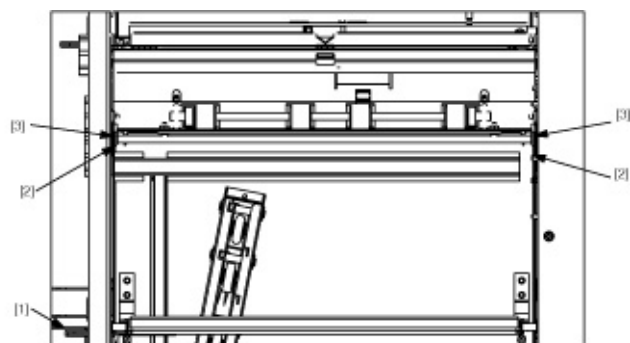
Removing the Aligner panels provides access to the paper path and the Aligner Green Drive Belt. The procedure is the same for the entrance and exit Aligner panels except that the exit side has a docking plate which must be removed first.

(1) To remove the Aligner panel:

1. If removing the exit side Aligner panel, remove the side panel cover by removing the 6 screws [1].

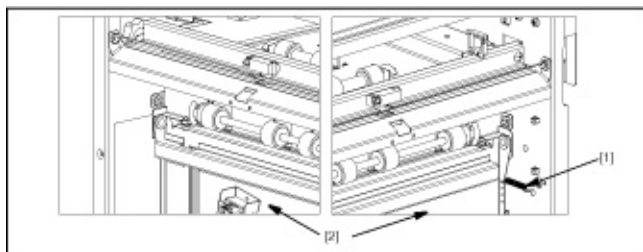
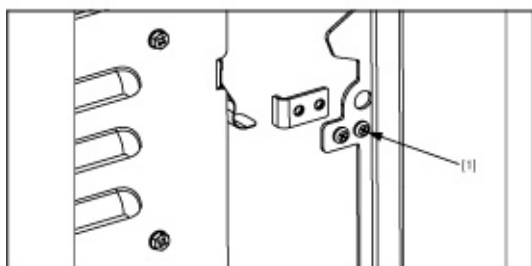
Note

- The rest of the steps are the same for both Aligner panels.



2. Release the Aligner latch [1].
3. Remove the E-clips from both ends of the Aligner shaft [2].
4. Remove the shaft nylon bushings [3]

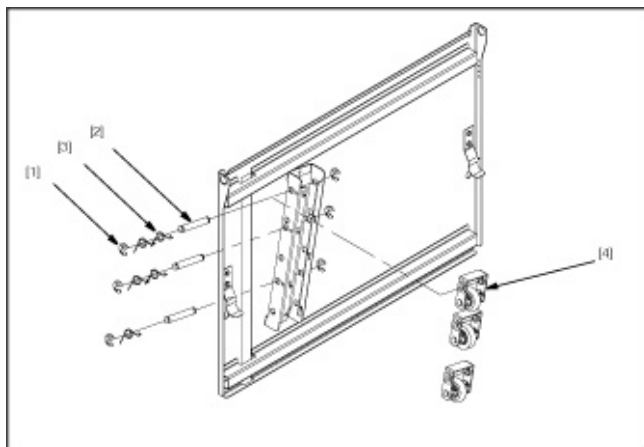
5. Slide the shaft out the front of the punch.
6. Remove aligner latch stop by removing screws [1].



7. Unhook the tension spring from the panel [1].
8. Remove the Aligner panel [2] out the front of the punch.
9. Reverse the steps to install the Aligner panel.

15.3.25 Aligner Idler Roller Replacement**(1) Tools Required**

- Flat head screw driver
- Needle nose pliers

(2) Procedure

1. Pull off E-Clips [1]
2. Remove the pins [2]. During removal of pins hold on to spring with fingers.
3. Completely remove the springs [3] and then slide roller assembly [4] down and then out.

Note

- Aligner rollers must be moved downwards. Hence all the rollers need to be removed.

15.3.26 Aligner Drive Belt Replacement**(1) Procedure**

Before replacing the green drive belts, remove the Aligner panels. (Refer to [F.15.3.24 Aligner Panel Removal](#)) Then follow the procedures below for the entrance side or exit side green drive belt service.

(2) Tools Required

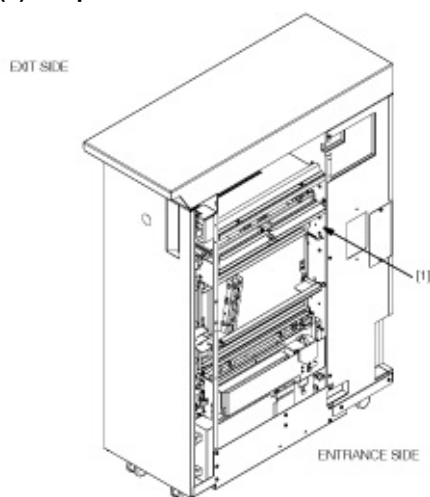
- Phillips screw driver
- Nut drivers, 1/4 and 5/16"
- Hex wrenches, 5/64 and 9/64"
- Snap ring pliers
- E-Ring tool
- Twelve inch metal ruler or similar straight edge

⚠ CAUTION

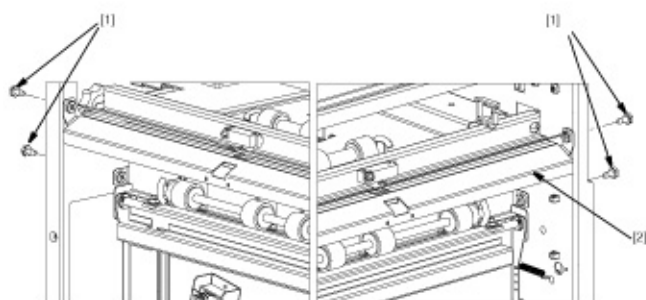
- Disconnect the GP-501 Punch from power and retain the power cord in your possession for your safety. Failure to observe this caution can result in injury.

Note

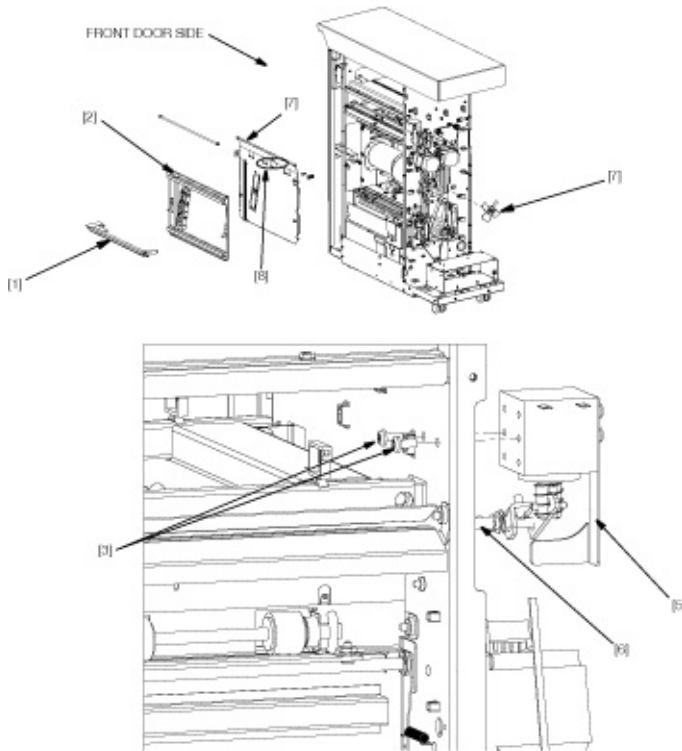
- Empty the paper chip bin and replace it. This makes it easier to find small parts that you may drop into the bin.

(3) Paper Entrance Side Green Drive Belt Replacement

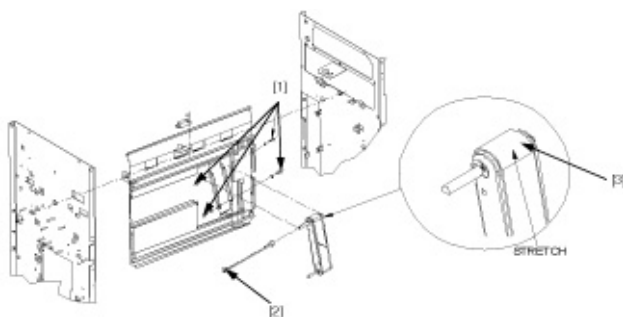
1. Disconnect the enter sensor (S1) wire from the side frame [1].



2. Remove the 4 screws that secure the front paper chute [1] to remove the entrance guide [2].



3. To remove the GP2 aligner latch [1], do the following:
 1. Unhook the spring of the GP2 aligner latch on the right end.
 2. Remove only one (the one closest to the frame) of the E-rings of the GP2 aligner latch on the left end (front Door side).
 3. Push the GP2 aligner latch in toward the front door until it clears the rear frame.
 4. Pull the entire GP2 aligner latch, door latch out and set it aside.
4. To remove Entrance Idler Aligner panel [2] assembly. (Refer to [F. 15.3.24 Aligner Panel Removal](#))
5. Remove the fan [7] that prevents access to the flexible cable. To remove it simply pull it off the shaft.
6. Remove the flexible cable using a hex wrench.
7. Remove the 2 screws [3]
8. Loosen screw from the solenoid link.
9. Remove the solenoid assembly [5] and link from the Diverter Shaft[6], leave it hanging.



10. Remove the 2 E-Rings of the Entrance Diverter assembly, slide the Diverter out and set it aside.
11. To remove the Entrance Drive Aligner assembly [7], which is the large sheet metal assembly that actually contains the green drive belt and Aligner.
 1. Remove the 6 Screws that secure the face of this assembly.
 2. Remove the 2 screws that secure this assembly from the side frame.
 3. Disconnect the sensor connector [8]
 4. Pull and walk the entire sheet metal assembly of the Paper Guide Aligner assembly up and outward. You can grab the assembly at the roller cut out with your fingers.

CAUTION

- As you pull the assembly out, disconnect the sensor harness behind the assembly as soon as you are able to reach it. Failure to observe this notice may damage the wiring.

12. Remove the green drive belt Aligner Roller assembly by removing the 4 screws [1].

CAUTION

- Leave the Flex Shaft [2] attached.

(4) Green Drive Belt Assembly

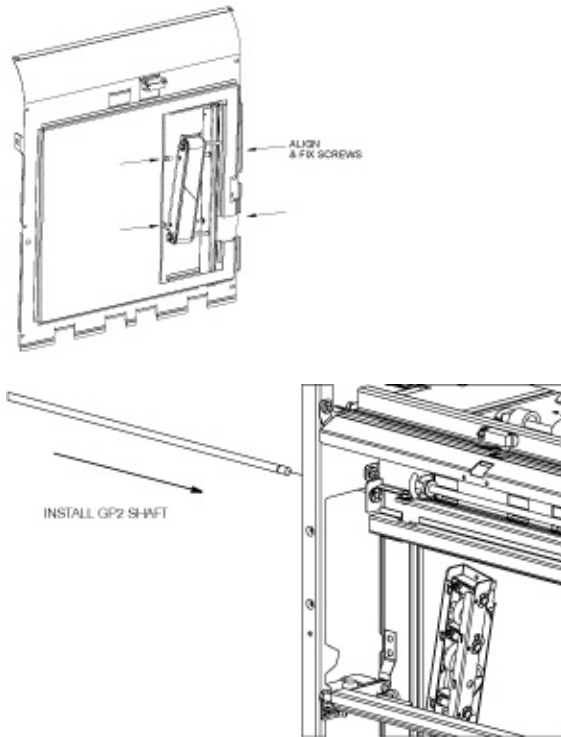
1. Stretch the new Belt [3] onto the Aligner Roller assembly, green side out. Rotate the Flex Shaft [2] to confirm that the belt tracks properly.
2. Slide the Aligner into place, loosely attach the 4 Pan Head Screws with the 4 Lock Washers.
 1. Check that the metal surface of the Aligner Roller assembly is flush with the Sheet Metal surface of the Paper Guide. A 12" metal ruler works well to check this adjustment. Slip the ruler under the green drive belt and press it flat against the two surfaces.
 2. Adjust the Aligner and snug the screws when perfectly flush.

Note

- The green drive belt should look like the drawing shown in Figure 3.35.

3. As a double check, hold the entire Paper Guide assembly up so that you can visually inspect the alignment between the sheet metal surface and the metal surface of the Aligner. The green drive belt should appear to be even or parallel, and just floating above the surface of the sheet metal.

3. To install the Paper Guide assembly into the GP-501 Punch:



1. As you slide the Paper Guide assembly into place,
 - Hook up the Sensor Harness to the Sensor on the back.
 - Lift it up slightly to clear the lower Transition Paper Guide.
 - Be sure to clear the Sensor Bracket at the top left.
 - Be sure that the Flex Coupling Shaft is sticking out of the rear of the GP-501 Punch properly.
2. Visually check all around the mounting area of the Paper Guide assembly and that the Sensor Harness is properly connected.
3. Loosely secure it in place with 3 screws on the left and 3 on the right.
4. Loosely install the 2 top screws.
5. Once all 8 mounting screws have been properly started you have good alignment. You may now go back and tighten the screws until they are snug.
4. Install the Flexible Shaft.
5. Install the curved sheet metal Exit Paper Guide (item 7) with Idler Roller 4 Screws. Start all 4 screws, (2 on front and 2 on back) then tighten.
6. Connect the Sensor Wire Harness at the top rear of the Exit Paper Guide.
7. Install the GP2 Shaft back into place by inserting it first into the front, then the back.

8. Close the GP2 Flipper Latch.
Repeat the test of rotating the pulleys to ensure smooth rotation of the Idler Rollers.
9. Attach the GP2 Shaft Spring.
10. Install the front E-Ring to secure GP2.

(5) Entrance Aligner Panel Installation

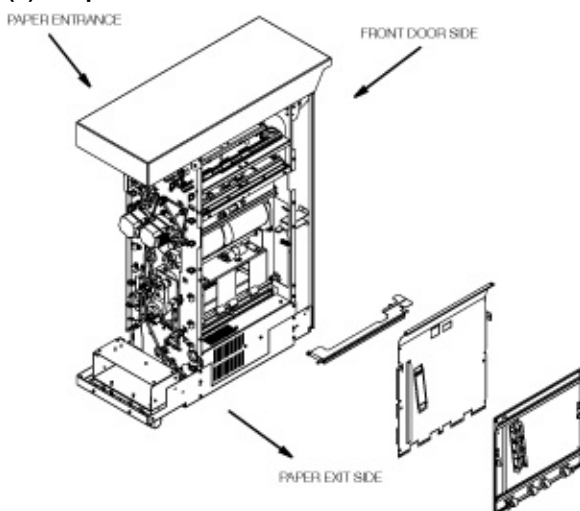
To install the Idler Aligner panel, refer to [F.15.3.24 Aligner Panel Removal](#). Then insert the punch into the printer and finisher and connect the power cord.

1. Test the GP-501 Punch by doing the following:
 1. Run 10 copies in bypass mode.
 2. Run 1 sheet in punch mode.
 3. Run 10 sheets in punch mode.
 4. Run 100 sheets in punch mode.

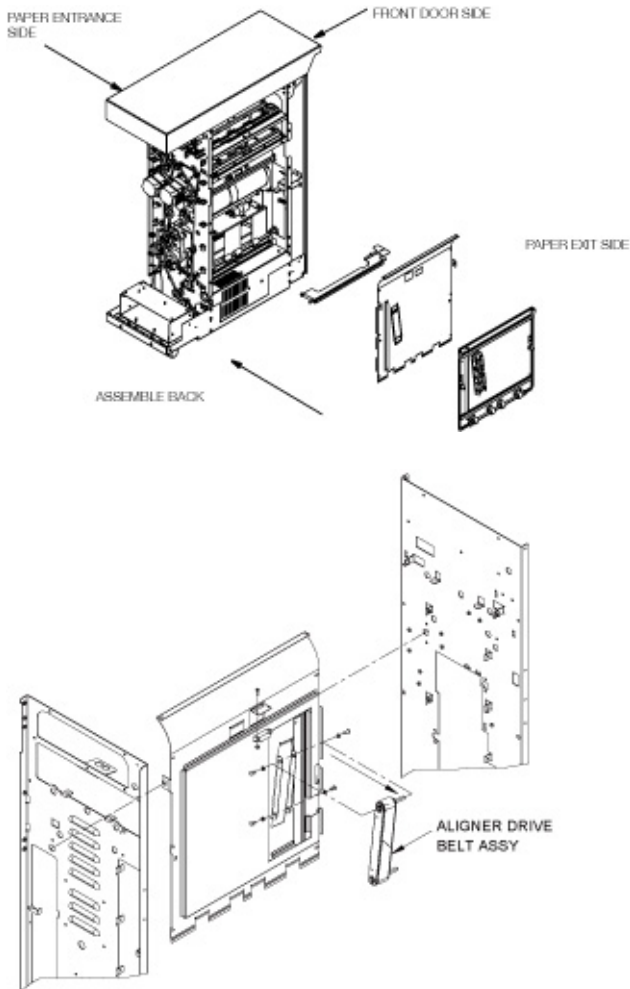
(a) Test the GP-501 Punch by doing the following:

1. Run 10 copies in bypass mode.
2. Run 1 sheet in punch mode.
3. Run 10 sheets in punch mode.
4. Run 100 sheets in punch mode.

(6) Paper Entrance and Exit Side Green Drive Belt Replacement



1. To remove the GP6 Flipper (C), Door Latch:
 1. Remove only one (the one closest to the frame) of the E-Rings of the GP6 Flipper on the right end (front door side).
 2. Push the GP6 Flipper in toward the front door until it clears the rear frame.
 3. Pull the entire GP6 Flipper, door latch out and set it aside.



2. To remove the Rear Aligner, Idler Paper Guide assembly:
 1. Remove 2 E-Rings from the Pivot Shaft.
 2. Slide the Shaft all the way out through the front of the GP-501 Punch.
 3. Remove the 2 nylon bearings.
 4. Remove and set aside the Rear Aligner, Idler Paper Guide assembly.
3. To remove the curved sheet metal Exit Paper Guide assembly:
 1. Remove the 4 screws (2 rear and 2 front) of the curved sheet metal Exit Paper Guide assembly.
 2. Unplug the sensor.
 3. Pull the entire sheet metal Exit Paper Guide assembly out, set aside.
4. To remove the Rear, Drive Side, and Paper Guide Aligner assembly. This is the large sheet metal assembly within the GP-501 Punch that contains the green drive belt Aligner.

CAUTION

- **Walk the Belt off of the Aligner Pulley at the rear.**

1. Remove the 2 screws that hold the block to the frame. The Coupler is loose and the rear panel will come out.
2. Remove the 6 screws that secure the face of this assembly.
3. Remove the 2 screws that secure this assembly from the top.
4. Pull and walk the entire sheet metal assembly of the Paper Guide Aligner up and outward. You can grab the assembly at the roller cut out with your fingers.

CAUTION

- **Handle the helical coupling carefully. It is very delicate.**

Note

- **In order to access these screws, you must first remove the Die Set storage shelf and the cable shield attached to the Die storage shelf at the paper entrance side. Moving the Die Storage shelf aside will enable better access to the 2 screws with a short Phillips screw driver.**

CAUTION

- **As you do this, disconnect the sensor harness behind the assembly as soon as you are able to reach it. Failure to do this can damage the unit.**

5. Remove the green drive belt Aligner Roller assembly by removing the 4 screws (S).

CAUTION

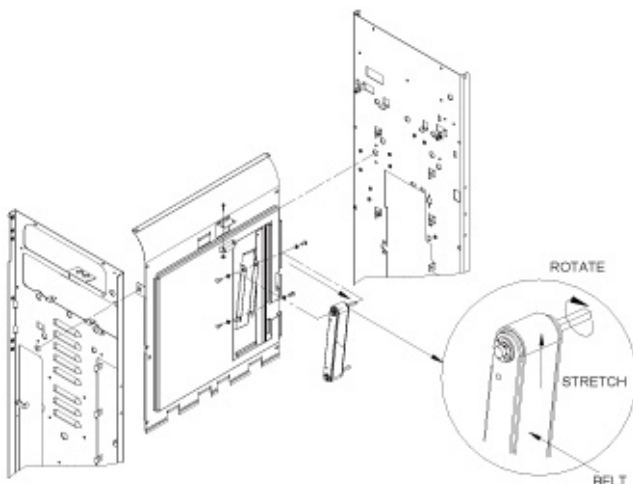
- **Leave the Flex Shaft (FS) attached.**

6. Remove the green drive belt Aligner Roller assembly by removing the 4 screws.

CAUTION

- **Leave the Coupler attached.**

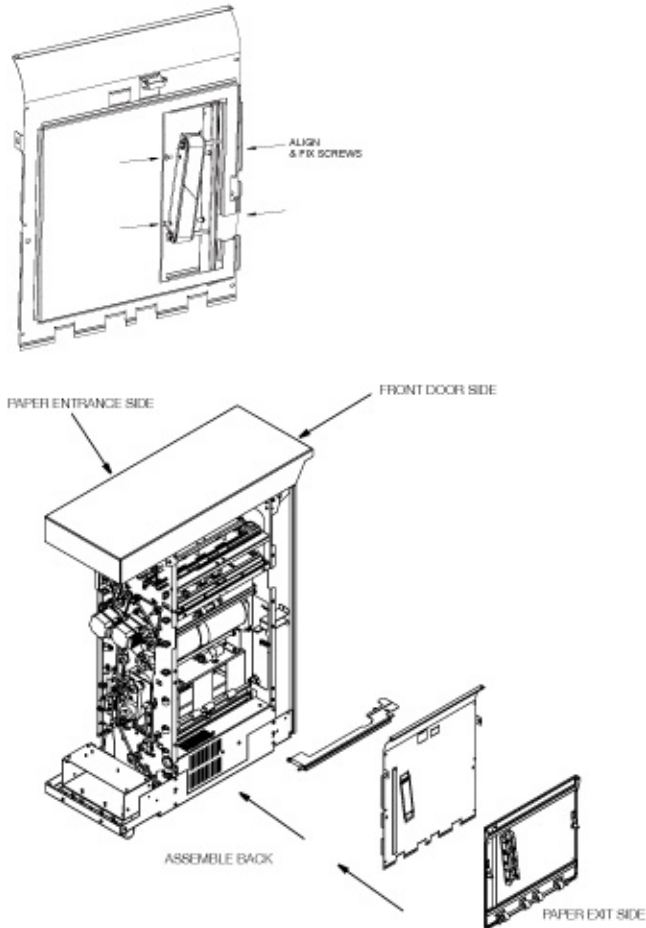
(7) Green Drive Belt Assembly



1. Stretch the new green drive belt onto the Aligner Roller assembly, green side out.
 - Take care when handling the Aligner Roller assembly so as not to damage the Flex Coupling.
 - Rotate the shaft to confirm that the belt tracks properly.
2. Slide the Aligner into place, loosely attach the 4 pan head screws with the 4 lock washers.

Check that the metal surface of the Aligner Roller assembly is flush with the sheet metal surface of the Paper Guide. A 12" metal ruler works well to check this adjustment. Slip the ruler under the green drive belt and press it flat against the two surfaces. Adjust the Aligner and snug the screws when perfectly flush. The green drive belt should look like the drawing shown in Figure 3.41.

To ensure proper assembly, hold the entire Paper Guide assembly up so that you can visually inspect the alignment between the sheet metal surface and the metal surface of the Aligner. The green drive belt should appear to be even and just floating above the surface of the sheet metal.



3. To install the Paper Guide assembly into the GP-501 Punch:
 1. As you slide the Paper Guide assembly into place:
 - Hook up the Sensor Harness to the Sensor on the back.
 - Lift it up slightly to clear the lower Transition Paper Guide.
 - Be sure to clear the sensor bracket at the top left.
 - Be sure that the Flex Coupling shaft is sticking out of the rear of the GP-501 Punch properly.
 2. Visually check all around the mounting area of the Paper Guide assembly and that the sensor harness is properly connected.
 3. Loosely secure it in place with 3 screws on the left and 3 on the right.
 4. Loosely install the 2 top screws.
 5. Once all 8 mounting screws have been properly started go back and tighten the screws until they are snug.
- CAUTION**
- Do not over tighten the 2 screws on top.
4. Install the 2 screws to secure the bearing block for the pulley arrangement at the rear of the GP-501 Punch. Press the block to the top of the punch before tightening.
 5. Install the pulley and belt onto the pulley block. Once properly aligned, check belt and pulley movement. Tighten the set screw.
 6. Install the Die Set storage rack with 3 screws front and 3 screws back. Remember to attach the ground strap at the middle screw on the rear (belt side). Start each screw to achieve proper alignment, then go back over each screw and tighten it.
 7. Install the Cable Guard on top of the Die Set storage rack (2 Screws).
 8. Install the curved sheet metal Exit Paper Guide with Idler Roller 4 screws.
 9. Start all 4 screws, (2 on front and 2 on back) then tighten.
 10. Connect the sensor wire harness at the top rear of the Exit Paper Guide.
 11. To install the Idler Aligner Paper Guide:
 1. Hold it loosely in place.
 2. Press the nylon flange bearings into place, through both pieces of sheet metal, with the flange to the inside.
 3. Slide the shaft through the front of the machine, while holding the nylon flange bearing in place.
 4. Secure with 2 E-rings on the inside of the bearing.
 5. Inspect by pressing in on the bottom area of the sheet metal for:
 - A slight deflection of each Idler Roller as you press.
 - As you press, you can turn the pulleys at the rear of the GP-501 Punch and see the Idler Rollers rotate smoothly.
 12. Bend the small metal tab back into place.
 13. Install the GP6 shaft back into place by inserting it first into the front, then the back.
 14. Close the GP6 Flipper Latch.

Repeat the test of rotating the pulleys to ensure smooth rotation of the Idler Rollers.
 15. Attach the GP6 shaft spring.
 16. Install the front E-Ring to secure GP6.

(8) Aligner Panel Installation

To install the Idler Aligner panel, refer to [F.15.3.24 Aligner Panel Removal](#). Then insert the punch into the main body and finisher and connect the power cord.

(a) Test the GP-501 Punch by doing the following:

1. Run 10 copies in bypass mode.
2. Run 1 sheet in punch mode.

3. Run 10 sheets in punch mode.
4. Run 100 sheets in punch mode.

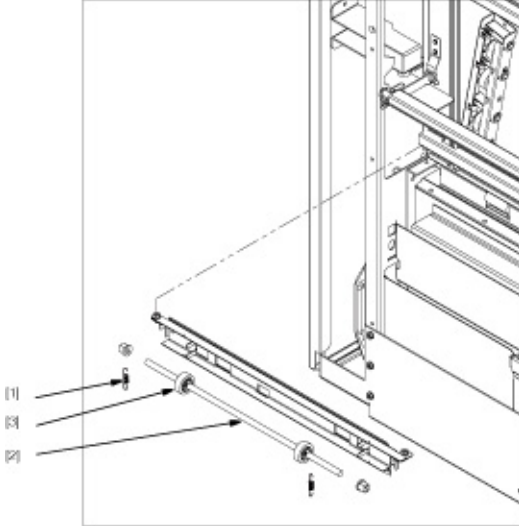
15.3.27 Cleaning and checking the energy drive roller

(1) Periodically cleaned and checked parts/ cycle

- Energy drive rollers
- : 3,000,000 prints

(2) Procedure

Reference Figure 3.44 Energy Roller as you perform this procedure.



1. Without disconnecting either retaining spring [1], roll one of them gently to one side to release the Energy Drive Roller shaft from its mounting bracket.
2. Lift the shaft [2] from the mounting bracket.
3. Using a clean cloth and alcohol, clean the surfaces of the rollers [3] to remove any paper dust or toner that may have accumulated over time.
4. Reverse steps 2 & 1 above to replace the shaft into the holder.
5. Ensure the flats of the bearings are seated properly in the mounting brackets.
6. Ensure the springs are straight on the bearing to apply sufficient force for the rollers to turn when you rotate the knob at the front of the machine.

15.3.28 Replacing the back gauge mechanism

The Back Gauge assembly pauses the paper just as the edge has entered the die set. Working properly, the sheet will pause only long enough for the holes to be punched correctly. The Back Gauge assembly also controls the paper chad falling into the chad bin, significantly reducing the amount of chad that could flow through the paper path. Some chad falls outside the chad bin and should be cleaned up with a vacuum cleaner during each servicing.

⚠ WARNING

- **Disconnect the GP-501 Punch from its power source before removing the Back Gauge assembly.**
Failure to observe this warning can result in severe injury or death and damage the punch.

(1) Periodically replaced parts/Spotted replaced parts/cycle

- Back gauge mechanism
- : Every 16,000,000 prints*¹ (Actual replacement cycle: Every 4,000,000 punches*²)

*¹ The periodical replacement is only for 1200/1200P/1051.

*² Actual replacement cycle of 1200/1200P/1051/C8000.

(2) Procedure

Remove Back Gauge assembly to clean and service the solenoid or to replace the Back Gauge. Also allows the removal of the Punch Module.

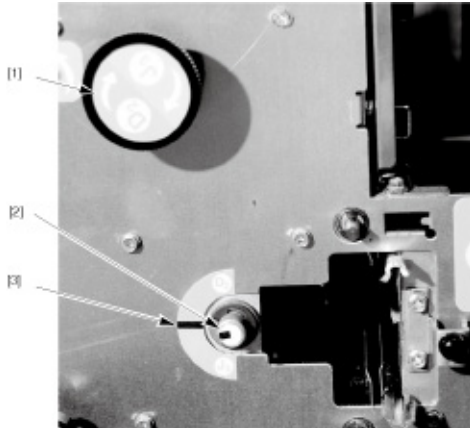
To repair or replace the Back Gauge, separate the GP-501 Punch from the printer and finisher and then remove the rear cover. (Refer to [G. 14.3.1 Preparing the GP-501 punch for service](#))

(3) Tools Required

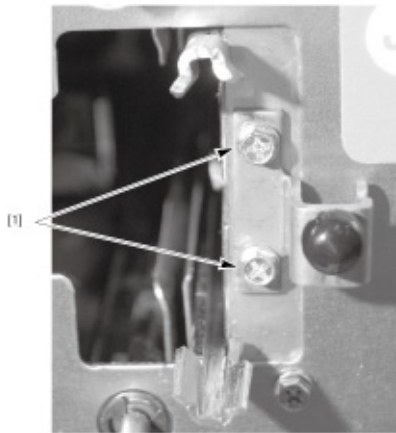
Phillips screw driver or 1/4" nut driver

Note

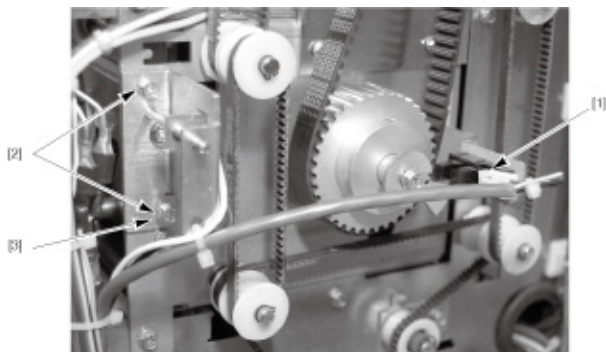
- Empty the paper chip bin and replace it. This makes it easier to find small parts that you may drop into the bin.

15.3.29 Back Gauge Removal**(1) To remove the Back Gauge assembly:**

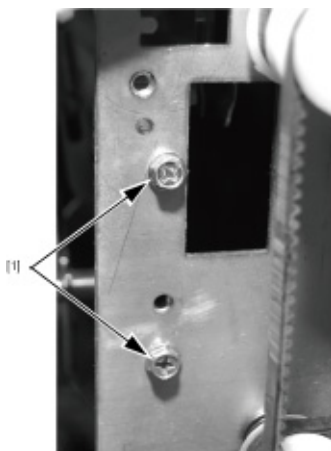
1. Turn the Punch Cycle knob [1] so that the punch drive indicator [2] lines up the position indicator [3].



2. Remove the Die Set and Chip Bin.
3. Remove the two Die Set Chip Brush bracket screws [1].



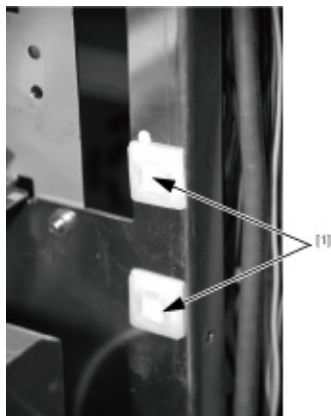
4. On the rear of the punch, unplug the drive punch flag sensor connector [1].
5. Remove the 2 Die Set Adjustment Bracket screws [2] and pull the bracket aside [3].



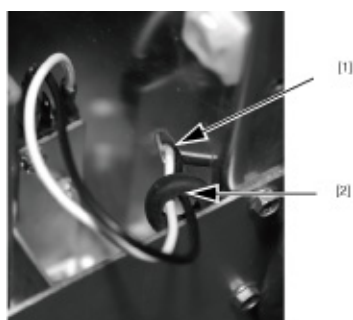
6. Remove the 2 Back Gauge rear mounting screws [1].



7. Disconnect the Back Gauge connector from the Punch Controller PCB [1].



8. Cut wire harness ties as needed to free the solenoid wires.
9. Cut the 2 harness ties on the entrance side of the punch.

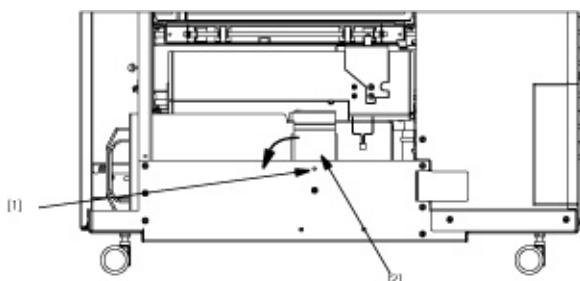


10. Remove the grommet from the frame [1].

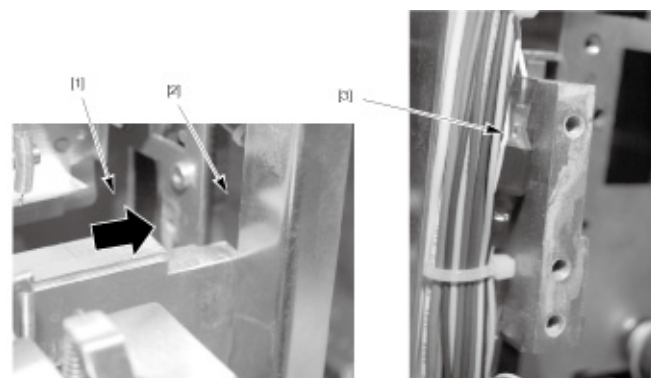
Note

- If you are not replacing the Back Gauge or are removing it for access to the Punch Module, it is not necessary to pull the wire through the hole in the frame. The Back Gauge can be set aside.

11. Feed the connector through the hole in the frame and the grommet separately [2].



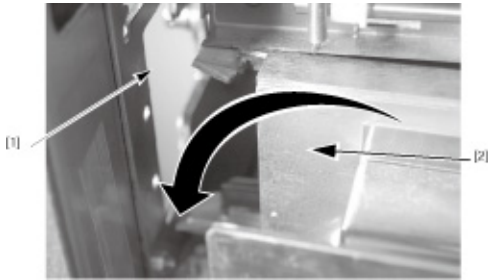
12. Remove one top screw [1] of chip tray full sensor bracket [2] and pivot the bracket down.



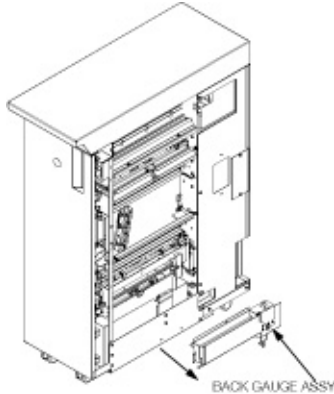
13. Gently slide the Back Gauge assembly to the rear of the punch [1] so that it extends through the slot [2] and clears the wiring harness [3].

CAUTION

- Do not damage the wires in the wiring harness. Failure to observe this precaution may damage the wiring.



14. Make sure the left end of the Back Gauge clears the opening on the front of the punch [1] and pull it out [2] while sliding it to towards the front.



15. Remove the Back Gauge and rail as an assembly.
16. To install the Back Gauge, reverse these steps.
17. After replacing the Back gauge mechanism, conduct the following item.
 - When connecting to C8000/C7000/C7000P/C70hc/C6000
Counter reset of the parts counter number 317
 - When connecting to 1250/1250P/1052
Counter reset of the parts counter number 293
 - When connecting to 951
Counter reset of the parts counter number 175

(2) Testing

(a) To test the Back Gauge:

1. Install a Die Set.
2. Rotate the punch drive knob to ensure the drive and cams turn easily.
3. Test for proper hole alignment to the paper edge by doing the following.
 - a. Run 1 page at a time.
 - b. Run 2 pages at a time.
 - c. Run 5 pages at a time.
 - d. Run 10 pages at a time.
 - e. Run 50 pages at a time.

15.3.30 Solenoid Spring Replacement

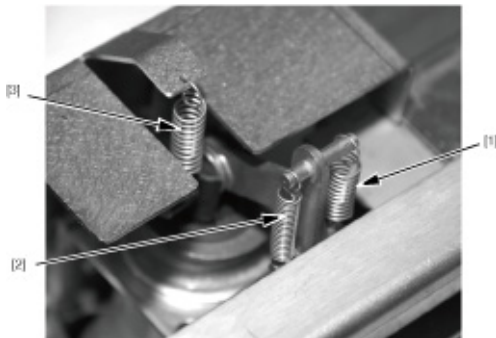
(1) Procedure

Removal of spring [1] and [2] -

Grasp the loop of the spring with needle nose pliers and then pull them off the shaft.

Removal of spring [3] -

Grasp the loop of the spring with needle nose pliers and then pull them off the sheet metal part.

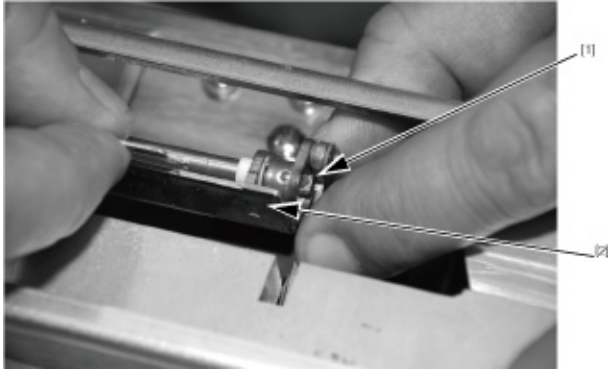


15.3.31 Back Gauge Paddle

(1) Procedure

First remove Back gauge assembly as described in "[F.15.3.29 Back Gauge Removal](#)".

Deep or angled deep punches may be caused by a broken weld on the Paddle shaft [1]. Inspect the Paddle and press down on it while holding the linkage to keep the linkage from moving. If the paddle [2] moves, replace the Back Gauge assembly.



15.3.32 Back Gauge Assembly Adjustment

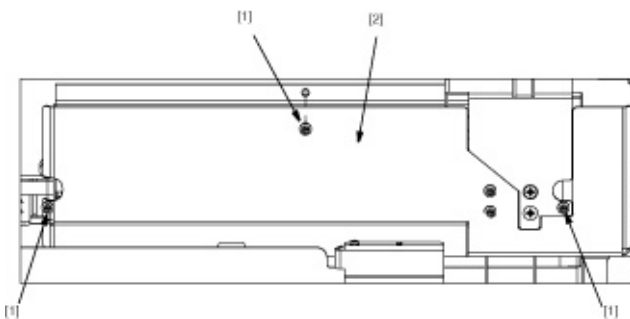
The Back Gauge can be adjusted up and down for optimum operation for specific Die Sets.

The Back Gauge should be at its highest position for VeloBind or PB Die Sets. If it is not, the Back Gauge Paddle may not completely close the paper path gap. This can result in paper (especially with excessive curl) slipping through the gap created by the Paddle and the top plate of the Die Set. This causes a deep punch.

Initially, move the assembly to its highest position and then adjust accordingly after testing each Die Set.

Ensure it is easy to insert and remove three hole Die Sets. If the Die Set is too tight, evenly lower the Back Gauge slightly to achieve the tightness required, while still retaining the PB and VeloBind functionality mentioned above.

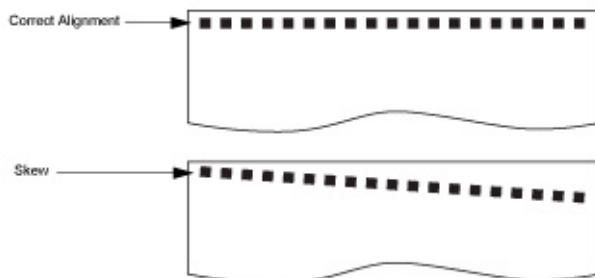
(1) To adjust the Back Gauge:



1. Loosen the 3 phillips head screws [1].
2. Move the entire assembly [2] upward or downward as needed while keeping it even.
3. While holding the assembly up, tighten the 3 screws.

(2) Testing

(a) To test the Back Gauge adjustment:



1. Run a few sheets of paper and check for skew with each Die Set.
2. Adjust the Back Gauge as needed and re-test.
3. Run 200 to 500 sheets of paper and check for mis-feeding, deep punching, and skew.

15.3.33 Punch module

(1) Tools Required

- Phillips screw driver or 1/4" nut driver
- Hex wrench, 5/64"

NOTE

- Empty the paper chip bin and replace it. This makes it easier to find small parts that you may drop into the bin.

(2) Procedure

Remove the module to lubricate the cams, or to service or replace the following components.

- Punch motor
- Drive motor belt
- Punch module brake
- Cams
- Flexible drive coupling
- Punch Module drive rollers

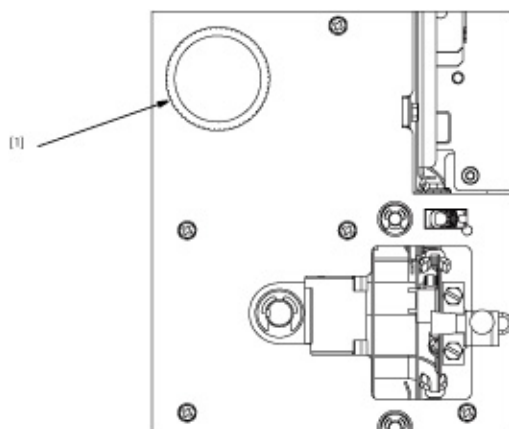
The clutch can be replaced without removing the module. (Refer to [F.15.3.36 Punch Clutch Replacement](#)).

⚠ WARNING

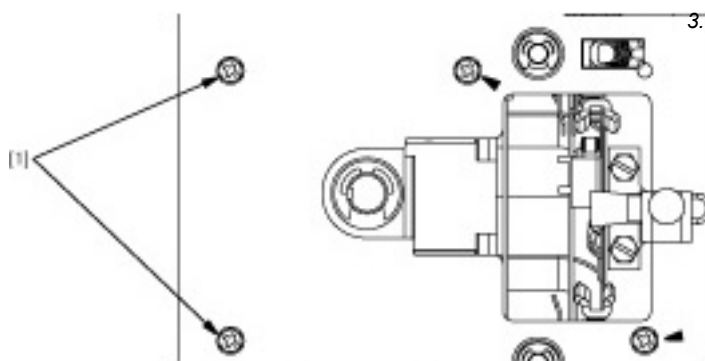
- Disconnect the GP-501 Punch from its power source before removing the Back Gauge assembly. Failure to observe this warning can result in severe injury or death and damage the punch.

15.3.34 Punch Module Removal

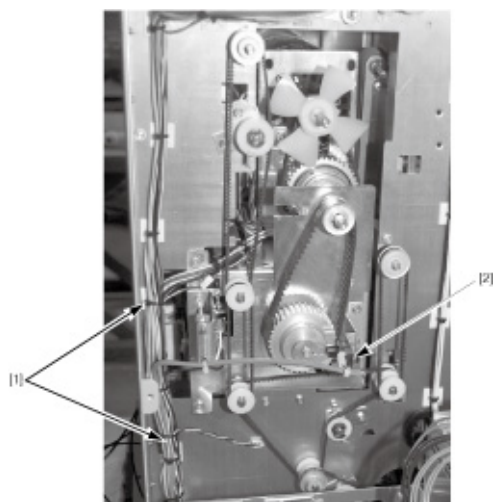
The Back Gauge assembly must be removed before removing the Punch Module. (Refer to [F.15.3.29 Back Gauge Removal](#)).

(1) To remove the Punch Module:

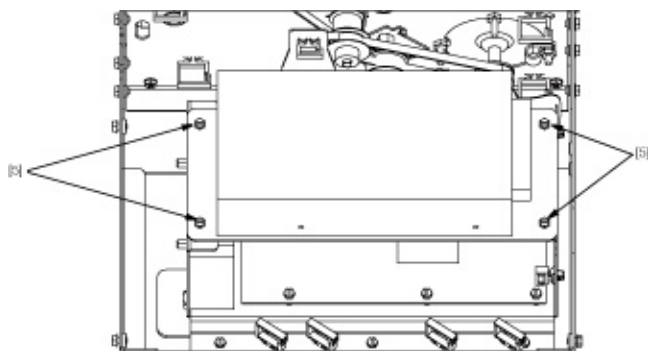
1. Remove the Back Gauge assembly.
2. Use a 5/64" hex wrench to remove the Punch Cycle knob [1].



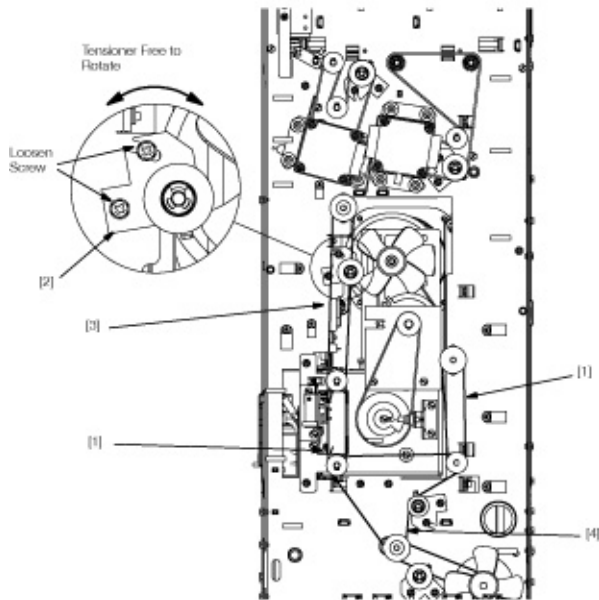
3. Remove the 4 Punch Module retaining screws [1] from the front panel.



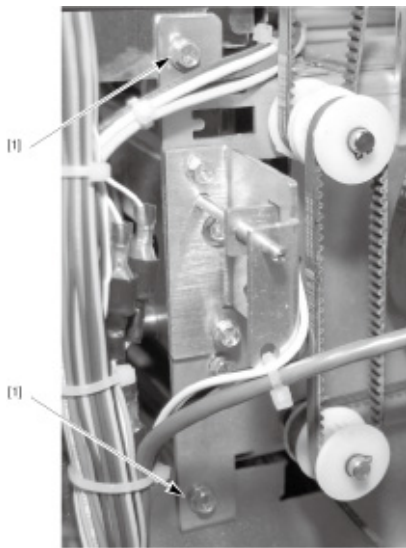
4. Release the cable ties on the left wiring harness [1] to free the Punch Module wiring. Remove the connector from flag sensor [2]. Remove harness from brake and clutch as per image below.



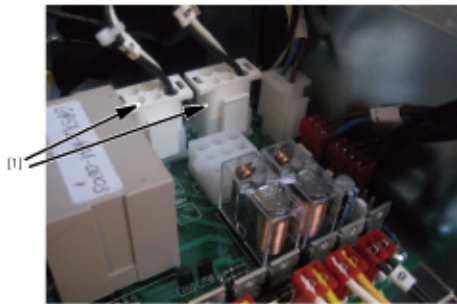
5. Remove the belts in the following order.
 1. Remove the bottom left and right vertical belts [1] by walking the belts over the pulleys.
 2. Remove the 4 power supply screws [5].
 3. Loosen the belt idler rollers [2] and remove the upper vertical belt [3].
 4. Remove the bottom triangular belt [4] after loosening the respective tensioner.

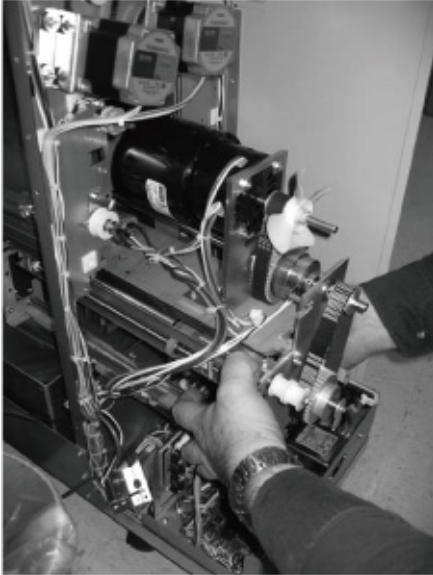


6. Remove the two rear Punch Module screws [1].



7. Cut wire harness ties as needed to release the punch wiring.
8. Unplug the punch connector [1] from the control board.





9. Carefully slide the Punch Module out the back of the punch. Ensure that the wiring harness does not get caught or prevent removal of the module.

15.3.35 Lubricating to the Punch Drive Cams

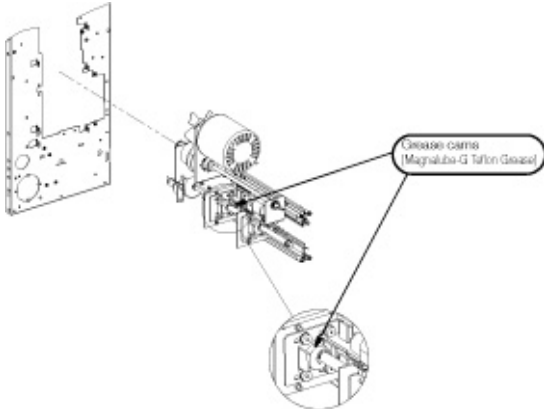
(1) Periodically lubricated parts/cycle

- Punch drive cams
: Every 12,000,000 prints (Actual lubrication cycle: Every 3,000,000 punches)*1

*1 1200/1200P/1051/C8000

(2) Procedure

Back gauge and rail needs to be removed for accessing punch module cams. refer to [F.15.3.29 Back Gauge Removal](#) for removing back gauge. Use brush for reach to cams for further cleaning operation.



Installation Note

- Make sure the wires on the rear of the punch are not obstructing the Die Set or Chip Bin.

15.3.36 Punch Clutch Replacement

(1) Procedure

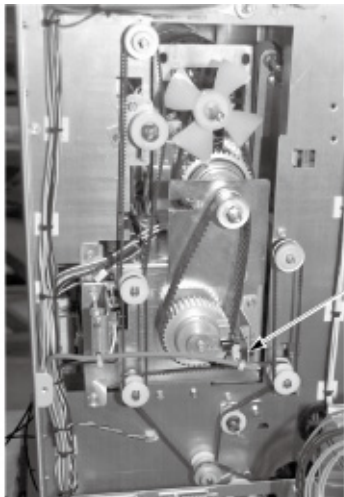
Replace if Punch clutch is malfunctioning.

Note

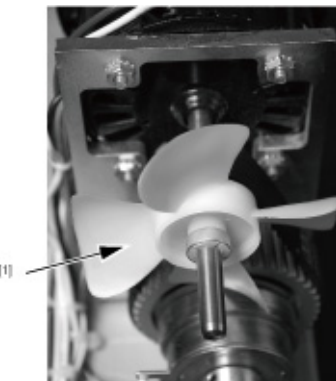
- The Punch clutch can be removed without removing the Punch Module.

(2) Tools Required

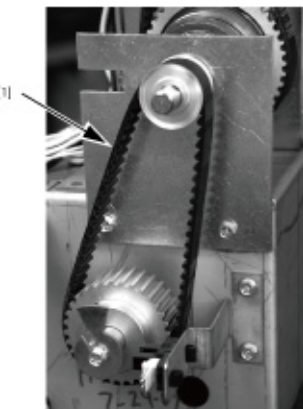
- Phillips screwdriver or 1/4" nut driver
- Hex wrench, 5/64"

(3) To remove the clutch:

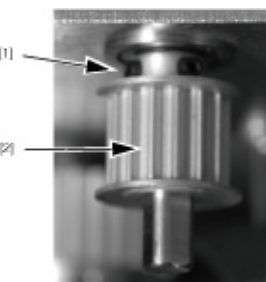
1. Unplug the punch flag sensor (S9) connector [1].



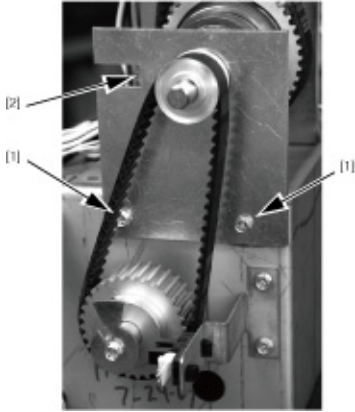
2. Slide the fan [1] off the shaft.



3. Remove the lower drive belt [1].



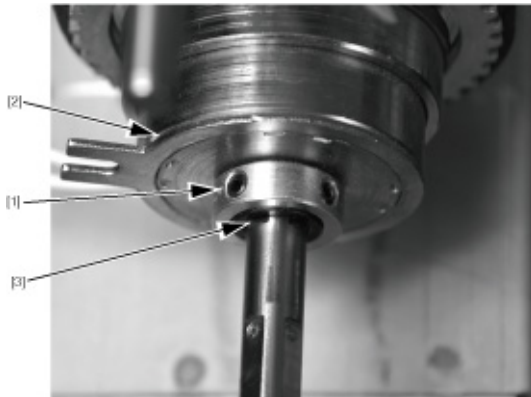
4. Loosen the 2 pulley socket head set screws [1].
5. Remove the pulley and its shaft key [2].



6. Remove the 2 clutch bracket screws [1].

Installation Note

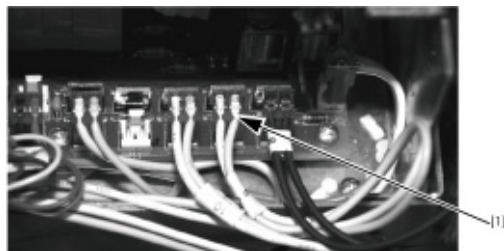
- When installing the clutch bracket, ensure that the fork of the clutch engages the tab on the bracket [2].



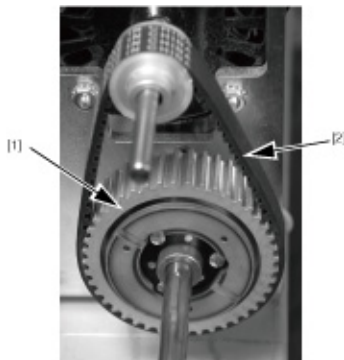
7. Loosen the 2 clutch socket head set screws [1], slide the Punch clutch [2] off the shaft, and remove the shaft key [3].

Installation Note

- When installing the Punch clutch, be sure to install the shaft key. Press the Punch clutch against the drive gear plate. While pressing the clutch against the plate, tighten the 2 set screws. The assembly does not require a gap between the Punch clutch and clutch plate.



8. Cut wire ties as needed and unplug the clutch connector [1] from the Punch Controller PCB.



9. Slide the back portion of the clutch [1] off the shaft.
The motor drive belt [2] can be removed at the same time.
10. To install the clutch, reverse these steps.

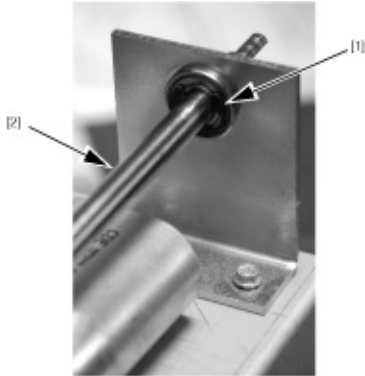
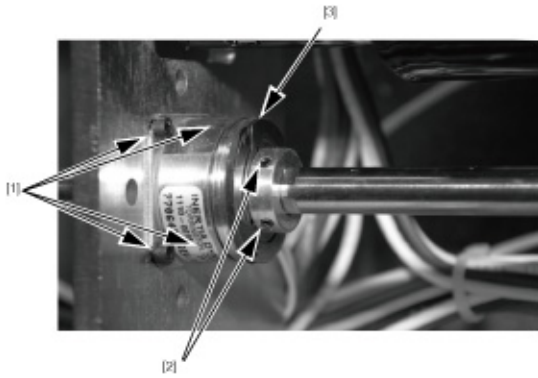
15.3.37 Punch Module Brake Replacement and Adjustment

(1) Procedure

To replace the Punch module brake, first remove the clutch and related drives. (Refer to [F.15.3.36 Punch Clutch Replacement](#)). The Punch module brake must be adjusted while on drive shaft. To adjust the Punch module brake. (Refer to [F.15.3.39 Punch Module Brake Adjustment](#))

(2) Tools Needed

- Feeler gauge, 0.0001" (0.00254 mm)
- Hex wrenches, 0.05" and 3/32"
- Flat blade screwdriver
- Pliers

15.3.38 Punch Module Brake Replacement**(1) To replace the Punch module brake**

1. Remove the 4 socket head set screws [1].
2. Loosen the 2 set screws [2] until the brake pad [3] slides freely on the shaft.

Installation Note

- When installing the Punch module brake, ensure that the 2 set screws engage the flats on the shaft. To adjust the Punch module brake. (Refer to [F.15.3.39 Punch Module Brake Adjustment](#))

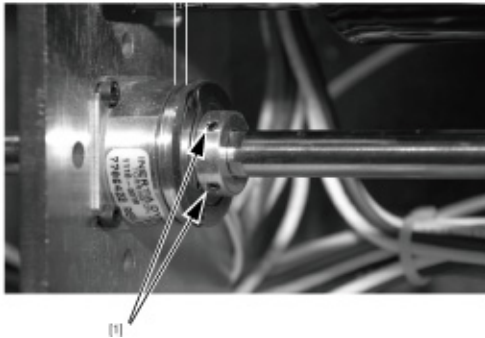
3. Remove the E-Ring at the opposite end of the shaft [1].
4. Slide the shaft [2] out of the bearing bracket, away from the clutch end.
5. Slide the Punch module brake assembly off the shaft.
6. To install the Punch module brake assembly, reverse these steps.

15.3.39 Punch Module Brake Adjustment**(1) Procedure**

The Punch module brake can be adjusted without removing the Punch module brake from the shaft. The gap between the brake and the pad is 0.0001" (0.00254 mm) .

(2) To adjust the Punch module brake

0.0001" (0.00254 mm)

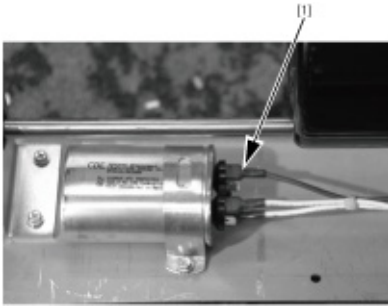


1. Loosen the 2 set screws [1] until the brake pad slides freely on the shaft.

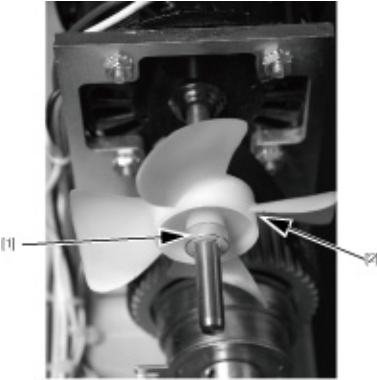
2. Use a 0.0001" (0.00254 mm) feeler gauge to set the gap between the brake and the brake pad.
3. Tighten the 2 set screws and check the gap.

15.3.40 Punch Module Motor Replacement**(1) Procedure**

Replace motor when it malfunctions.

(2) To replace the Punch Module motor:

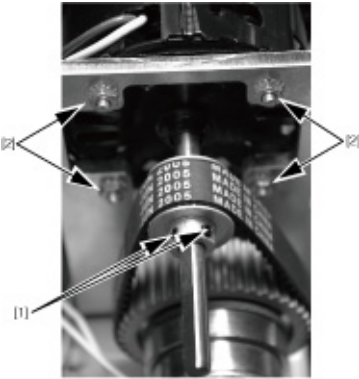
1. Cut any wire ties as necessary to release the motor wires.
2. Unplug motor wire connections from the capacitor [1].



3. Remove the metal spring clip [1] from the fan and slide the fan [2] off the shaft.

Installation Note

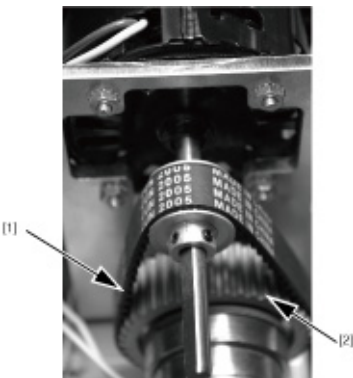
- When installing the fan, be sure to align the flat of the fan hub with the flat on the shaft. Also, make sure the hub and spring clip are facing away from the motor.



4. Loosen the 2 socket head set screws[1] on the pulley and slide the pulley and belt off the shaft.
5. Remove the motor mounting 4 nuts [2].
6. To install the motor, reverse these steps.

15.3.41 Punch Module Motor Drive Belt Replacement**(1) Procedure**

Replace the belt when it is frayed, missing teeth, or worn out.

(2) To replace the Punch Module drive belts:

1. With the fan removed from the shaft, work the belt [1] off the clutch gear [2].
2. Install a new belt by looping it over the motor pulley and then work it onto the clutch gear.
The belt requires no adjustment. It should have slight deflection when pressed.

15.3.42 Punch Module Drive Roller Replacement**(1) Procedure**

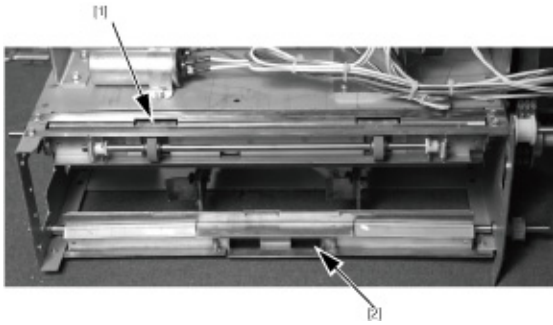
Inspect for wear patterns or grooves. The roller surface should be even and not glazed. Clean with a soft cloth and alcohol.

(2) Tools Required

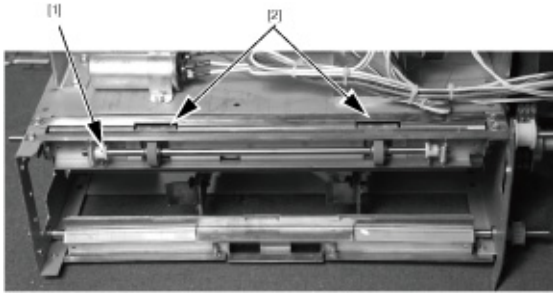
- Phillips screw driver or 1/4" nut driver
- Flat bladed screwdriver

- Needle nose pliers

With the Punch Module out of the machine, the punch entrance side [1] and exit [2] drive rollers can be cleaned or replaced.

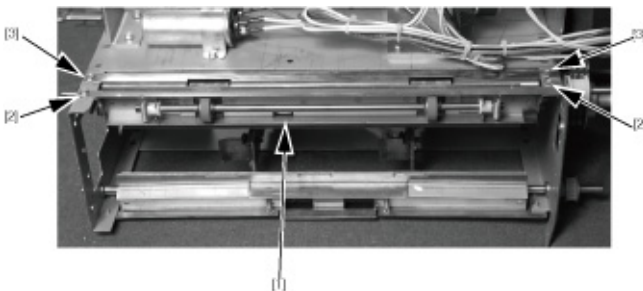


(3) To clean the punch entrance drive rollers:

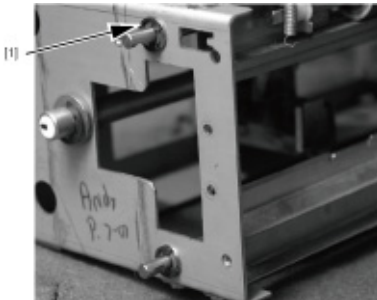


1. Remove the idler roller assembly [1].
2. Rotate and clean the drive rollers [2].

(4) To replace the punch entrance drive rollers:

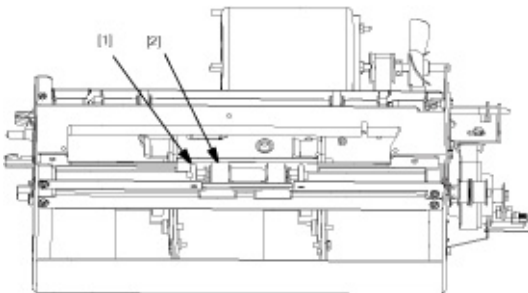


1. Unplug the sensor [1].
2. Remove the 2 screws at the ends of the idler roller assembly [2].
3. Remove the 2 screws at the ends of the drive roller assembly [3].

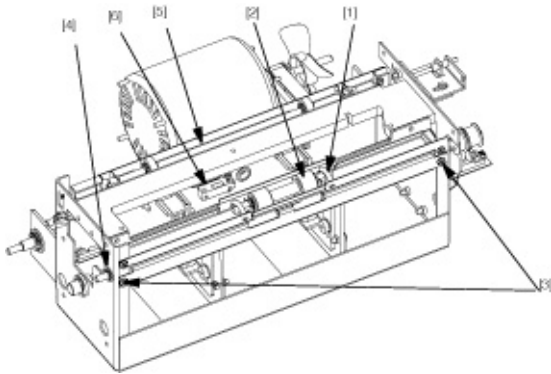


4. Remove the E-Ring at the end of the drive roller shaft [1].
5. Slide the drive roller shaft and bracket towards the opposite end of the Punch Module so that the end of the shaft clears the bearing at the end where you removed the E- Ring [1].
6. Lift the drive roller and bracket out of the Punch Module.

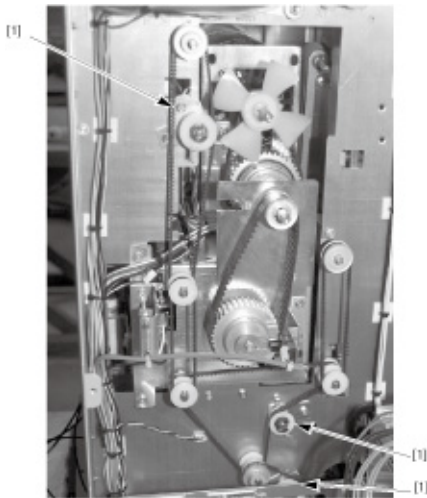
(5) To clean the punch exit drive rollers:



1. Move one retaining spring [1] to the side and then remove the idler roller assembly [2].
2. Rotate and clean the drive rollers [2].

(6) To replace the punch exit drive rollers:

1. Move one retaining spring [1] to the side and then remove the idler roller assembly [2].
2. Remove the 2 screws at each end of the idler roller assembly [3].
3. Remove the E-Ring [4] at the end of the drive roller shaft.
4. Slide the drive roller shaft and bracket towards the opposite end of the Punch Module so that the end of the shaft clears the bearing at the end where you removed the E-Ring [4].
5. Lift the drive roller and bracket out of the Punch Module [5].
6. Remove the sensor [6].
7. To install the drive roller, reverse these steps.

15.3.43 Belt replacement**(1) To replace belts:**

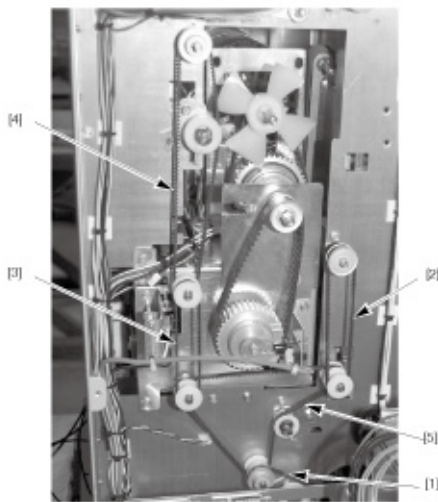
[1]->[2]->[3]->[4]->[5]

1. Loosen the screws of the 3 belt idlers [1].

Installation Note

- When setting the belt tension, adjust the belt idlers so that the belt has approximately 1/4" (6.35mm) of deflection.

2. Remove the belts in order as follows



3. To install and adjust the tension of the belts, reverse these steps.

15.3.44 Tools

Tools (needs to be reviewed by Engineering for current design accuracy)
Tools recommended for service of the GP-501 Punch:

(1) Standard Measure Tools (English as opposed to metric)

- Open end ignition wrench - 1/4" (required only for chad kit installation)
- Phillips screwdriver or 1/4" and 5/16" nut drivers
- Hex wrenches, 3/32", 5/64", and 9/64"

(2) Other Recommended Tools and Supplies

- Needle nose pliers
- Wire cutters

- Screw driver, flat head, small
- Supply of wire tie wraps

G DISASSEMBLING/REASSEMBLING

1. ITEMS NOT ALLOWED TO BE DISASSEMBLED

1.1 Screw-lock applied screw

Note

- The screw-lock is applied as a prevention of screw looseness.
- The screw-lock is applied to the screws which have a risk of loosening with the oscillation and load during using and shipment.
- When loosening or removing the screw which has been applied the screw-lock, be sure to apply the screw-lock again after tightening the screw.

1.2 Prohibition of adjusting the volume of boards

Note

- Do not change the volume of the boards whose adjustment procedures are not indicated.

1.3 Precaution on removing the boards

⚠ CAUTION

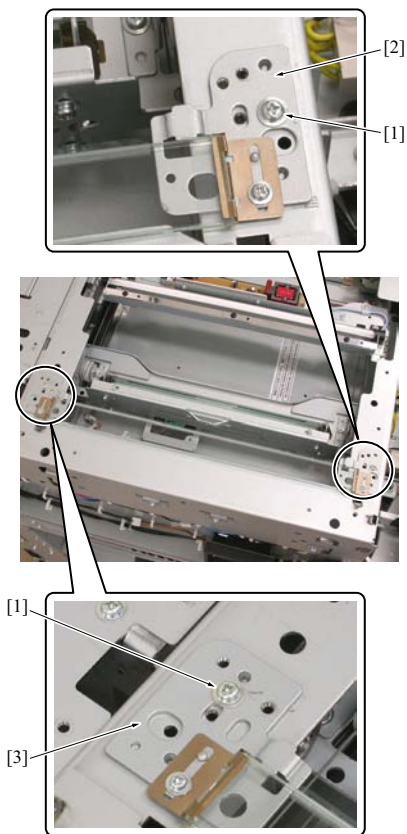
- When removing the boards, check the safety and important warning items and then remove the boards following the removal procedure.
- The removal procedures from the connector and the board support are omitted.
- Be sure to use the body earth when touching the element on the board by necessity.
- For the prevention of electric shock, do not touch the DC power supply /1 of the main body for 50 minutes after turning OFF the power switch.
There is a possibility of electrical shock caused by charging voltage.
- For the prevention of electric shock, do not touch the DC power supply /2 of the main body for 10 minutes after turning OFF the power switch.
There is a possibility of electrical shock caused by charging voltage.
- For the prevention of electric shock, do not touch the DC power supply /3 of the main body for 6 minutes after turning OFF the power switch.
There is a possibility of electrical shock caused by charging voltage.
- For the prevention of electric shock, do not touch the DC power supply /4 of the main body for 4 minutes after turning OFF the power switch.
There is a possibility of electrical shock caused by charging voltage.
- For the prevention of electric shock, do not touch the DC power supply of the RU for 50 minutes after turning OFF the power switch.
There is a possibility of electrical shock caused by charging voltage.

1.4 Scanner section

1.4.1 Read position adjusting plates /Fr and /Rr

(1) Positions from which removing is prohibited

- The skew adjustment by the DF skew adjustment screw [1] is not allowed as a rule.



1050fs2073c

[1]	Screws not allowed to be removed	[2]	Read position adjusting plate /Fr
[3]	Read position adjusting plate /Rr	-	

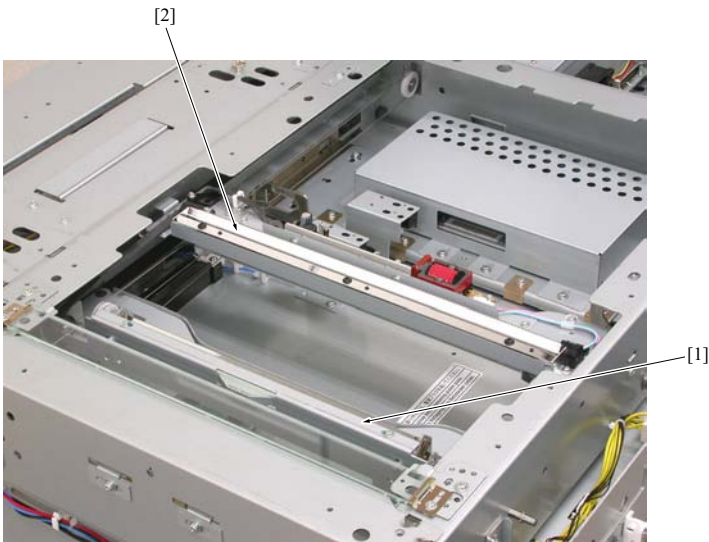
(2) Reason of prohibition

The read position adjusting plates /Fr and /Rr hold in place the slit glass that becomes the read position while in the DF scan. The displacement of the slit glass damages the image read by the DF to be distorted. Accordingly, changing the position of installation is not allowed.

1.4.2 Mirror unit/exposure unit

(1) Position not allowed to be adjusted

- Installation positions of the mirror unit and the exposure unit



1050fs2219c

[1]	Mirror unit	[2]	Exposure unit
-----	-------------	-----	---------------

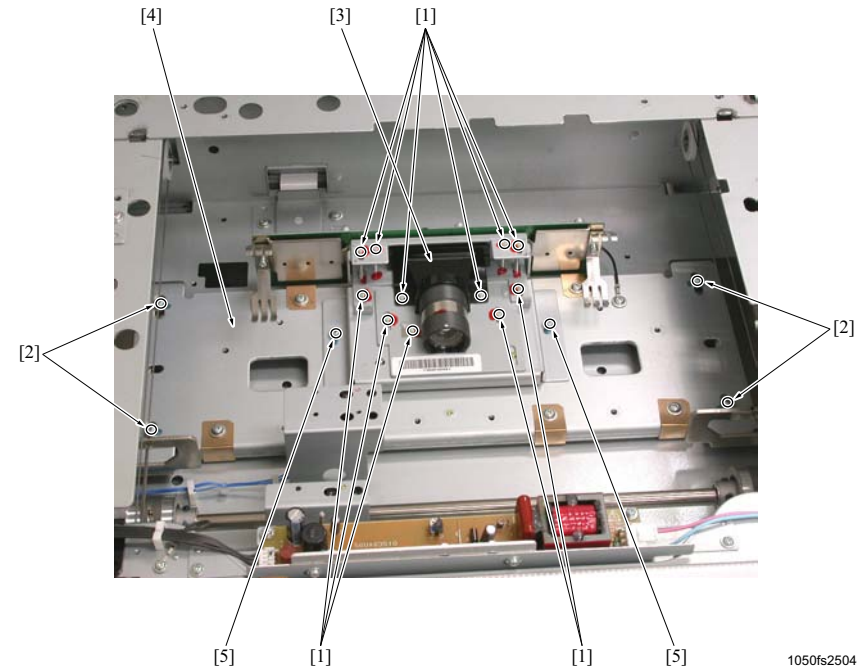
(2) Reason of prohibition

The distance between the mirror unit and the exposure unit affects the magnifications of the original to be read in the sub scan direction. Therefore, adjusting the installation positions of the mirror unit and the exposure unit arbitrarily is not allowed. However, when the exposure unit and the scanner wire have been removed, these parts must be reinstalled using the optics unit positioning jig.

1.5 CCD unit

1.5.1 Positions from which removing is prohibited

- 9 screws used to assemble the CCD unit
- 4 attaching screws of the lens reference plate assy



[1]	Screws not allowed to be removed	[2]	Screws not allowed to be removed
[3]	CCD unit	[4]	Read position adjusting plate /Rr
[5]	Attaching screw of the CCD unit (allowed to be removed when replacing the CCD unit)	-	

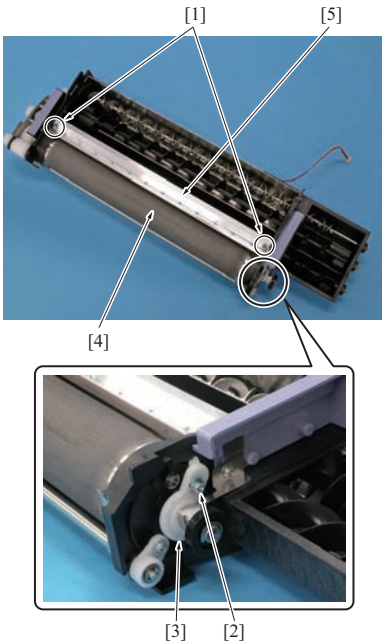
1.5.2 Reason of prohibition

The accuracy of the CCD unit is guaranteed as a unit, and if disassembled, its accuracy is not guaranteed. Accordingly, removing screws that lead up to the disassembly of the CCD unit is not allowed. The lens reference plate assembly acts as the basis for the installation position of the CCD unit. Removing this assembly causes the displacement of the optical axis of the CCD unit. So, be sure not to remove the attaching screws of the lens reference plate assembly.

1.6 Developing unit

1.6.1 Positions from which removing is prohibited

- 2 fixing screws of the developer regulation blade
- 1 fixing screw of the magnet angle adjusting knob



[1]	Screws not allowed to be removed	[2]	Screws not allowed to be removed
[3]	Magnet angle adjusting knob	[4]	Developing roller

[5]	Developer regulation blade	-
-----	----------------------------	---

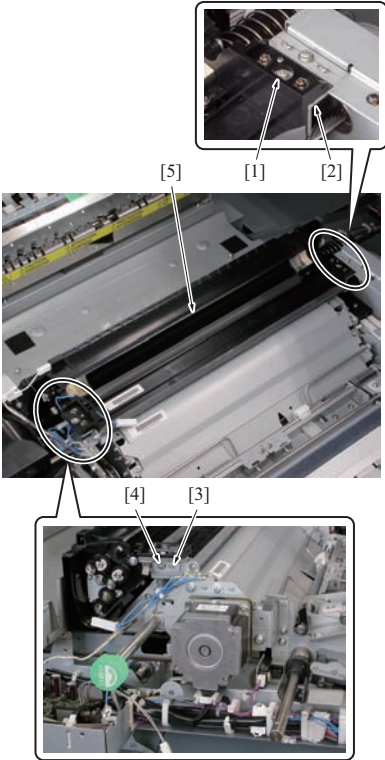
1.6.2 Reason of prohibition

The developer regulation blade and the magnet angle adjusting knob both decide the heights of the developer in the developing roller. They have been adjusted to an appropriate value in advance. Accordingly, removing these fixing screws is not allowed.

1.7 Duplex section

1.7.1 Positions from which removing is prohibited

- 1 fixing screw of the belt cleaning unit mounting bracket /Fr
- 1 fixing screw of the belt cleaning unit mounting bracket /Rr



a0g6t3c273ca

[1]	Screws not allowed to be removed	[2]	Belt cleaning unit mounting bracket /Rr
[3]	Belt cleaning unit mounting bracket /Fr	[4]	Screws not allowed to be removed
[5]	Belt cleaning unit		-

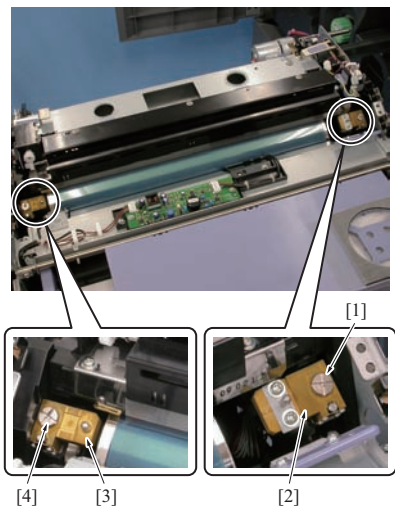
1.7.2 Reason of prohibition

The belt cleaning unit holds in place the transfer belt unit. The positional relation between the transfer belt unit and the drum has been adjusted to an appropriate place in advance by the installation position of the belt cleaning unit mounting bracket /Fr and /Rr. Accordingly, removing the fixing screws of these mounting brackets is not allowed.

1.8 Photo conductor section

1.8.1 Positions from which removing is prohibited

- 1 fixing screw of the LPH mounting bracket /Fr
- 1 fixing screw of the LPH mounting bracket /Rr



a0g6t3c384ca

[1]	Screws not allowed to be removed	[2]	LPH mounting bracket /Rr
[3]	LPH mounting bracket /Fr	[4]	Screws not allowed to be removed

1.8.2 Reason of prohibition

The positions of the LPH and the drum are adjusted beforehand according to the installation position of the LPH mounting brackets /Fr and /Rr. Accordingly, removing the fixing screws of these mounting brackets is not allowed.

2. bizhub PRO 1200/1200P/1051

2.1 List of disassembling and assembling parts

Note

- This list shows the explanation of the disassembly and reassembly of the parts which are considered necessary to replace (other than periodically replaced parts). However, these parts except for the covers do not require to be disassembled while in normal service operations.
- For the replacement procedure of the periodically replaced parts, refer to "[F.5. Periodical maintenance procedure bizhub PRO 1200/1200P/1051.](#)"

No.	Section	Parts name
1	Cover	Rear cover
2		Right cover
3		Left cover
4		Front door /Rt
5		Front door /Lt
6		Toner supply door
7		Upper cover /Rr1
8		Upper cover /Rr2
9		Upper cover /Rt
10		Original glass
11		Upper cover / Lt
12		Upper cover /Fr
13	Scanner section	CCD unit
14		Exposure lamp
15		Exposure unit
16		Scanner wire
17	Paper feed section	Lift wire
18		Paper feed assist fan
19		Paper lift motor
20	Registration section	Multi feed detection board /S
21		Multi feed detection board /R
22	Duplex section	Duplex section
23	Fusing section	Fusing temperature sensor /1
24		Fusing temperature sensor /3
25		Thermostat /1, /2
26		Thermostat /3
27	HDD	Hard disk /1
28		Hard disk /2

2.2 Disassembling and assembling procedures

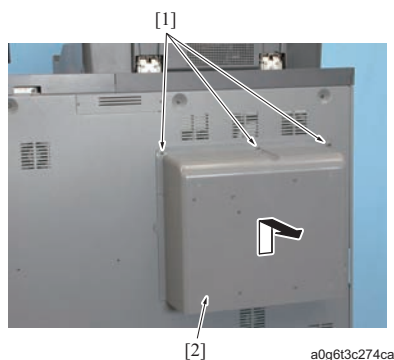
2.2.1 Precautions on disassembling and assembling

⚠ CAUTION

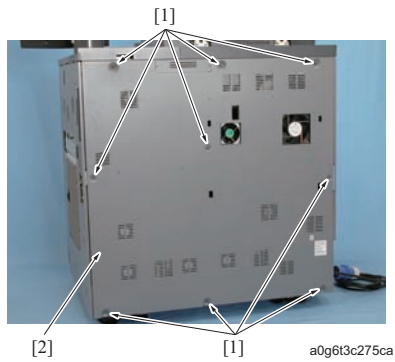
- When disassembling/reassembling the parts, be sure to unplug the power plug of the main body from the power outlet.

2.2.2 Rear cover

(1) Procedure



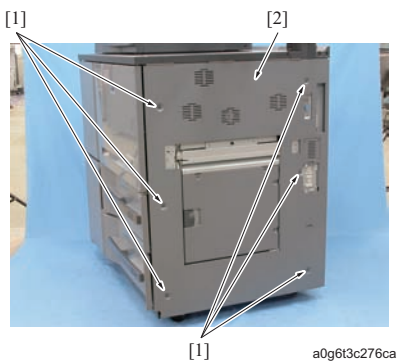
1. Loosen 3 screws [1] and remove the exhaust cover [2].



2. Remove 9 screws [1] and then remove the rear cover [2].
3. Reinstall the above parts following the removal steps in reverse.

2.2.3 Right cover

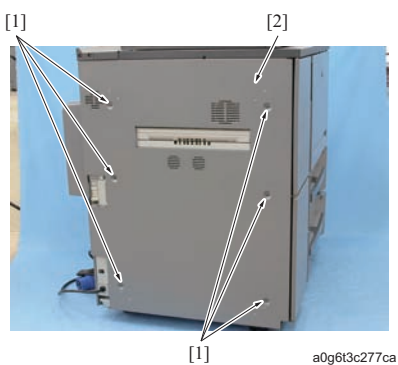
(1) Procedure



1. Remove 6 screws [1] and then remove the right cover [2].
2. Reinstall the above parts following the removal steps in reverse.

2.2.4 Left cover

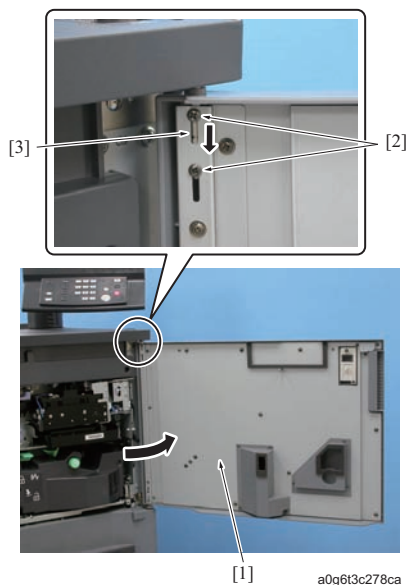
(1) Procedure



1. Remove 6 screws [1] and then remove the left cover [2].
2. Reinstall the above parts following the removal steps in reverse.

2.2.5 Front door /Rt

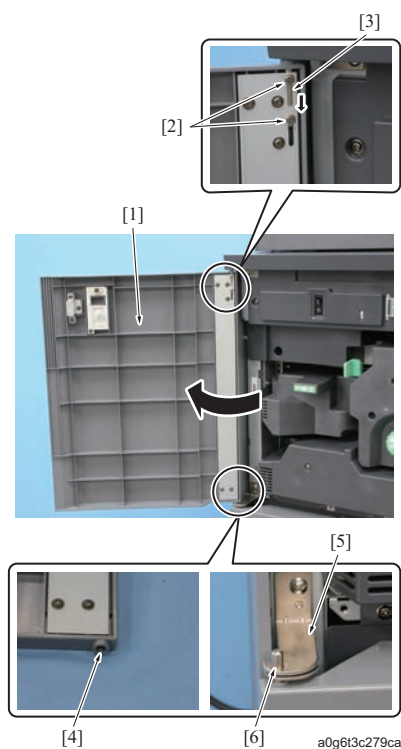
(1) Procedure



1. Open the front door /Rt [1].
2. Loosen 2 screws [2] and bring down the shaft [3].
3. Remove the front door /Rt [1].
4. Reinstall the above parts following the removal steps in reverse.

2.2.6 Front door /Lt

(1) Procedure



1. Open the front door /Lt [1].
2. Loosen 2 screws [2], bring down the shaft [3] and remove the front door /Lt [1].

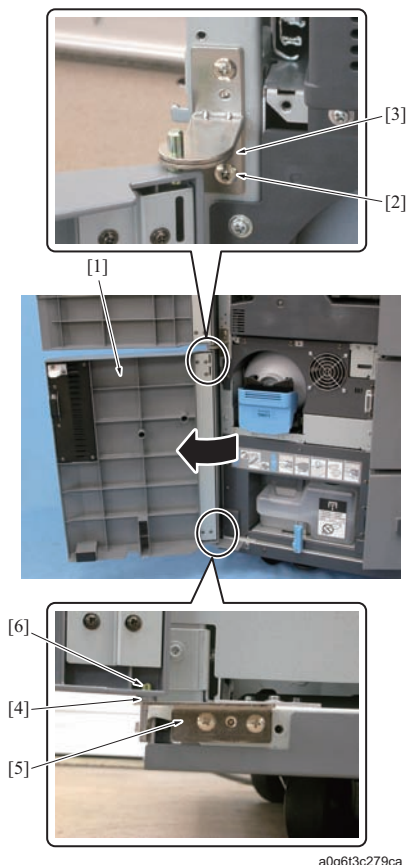
Note

- When reinstalling the front door /Lt [1], be sure to insert the projection [6] of the hinge [5] into the hole [4] provided in the lower section of the front door /Lt.

3. Reinstall the above parts following the removal steps in reverse.

2.2.7 Toner supply door

(1) Procedure



1. Open the toner supply door [1].
2. Remove the screw [2] and then remove the hinge [3] together with the toner supply door [1].

Note

- When reinstalling the toner supply door [1], be sure to insert the projection [6] of the hinge [5] into the hole [4] provided in the lower section of the toner supply door.

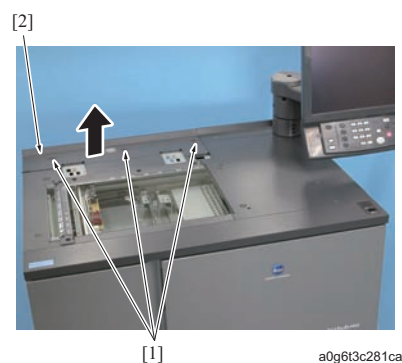
3. Reinstall the above parts following the removal steps in reverse.

2.2.8 Upper cover /Rr1

Note

- The same removal and reinstallation procedure is applicable when the DF-615 is provided.

(1) Procedure

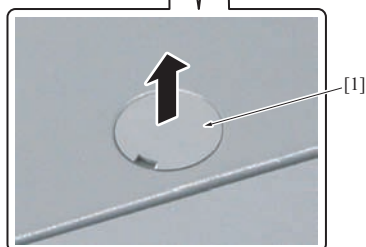
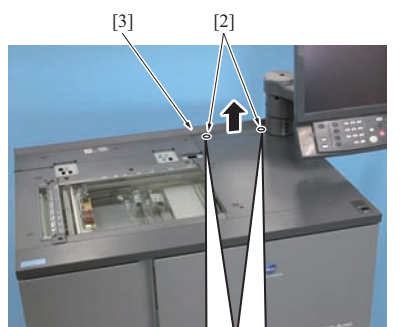


1. Remove 3 screws [1] and then remove the upper cover /Rr [2].
2. Reinstall the above parts following the removal steps in reverse.

2.2.9 Upper cover /Rr2

Note

- The same removal and reinstallation procedure is applicable when the DF-615 is provided.

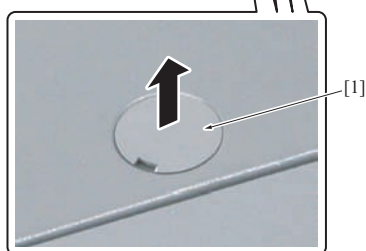
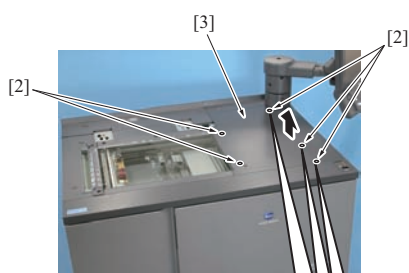
(1) Procedure

a0g6t3c282ca

1. Remove 2 screw caps [1].
2. Remove 2 screws [2] and then remove the upper cover /Rr2 [3].
3. Reinstall the above parts following the removal steps in reverse.

2.2.10 Upper cover /Rt**Note**

- The same removal and reinstallation procedure is applicable when the DF-615 is provided.

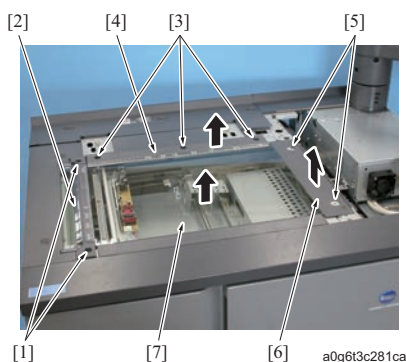
(1) Procedure

a0g6t3c283ca

1. Remove 3 screw caps [1].
2. Remove 5 screws [2] and then remove the upper cover /Rt [3].
3. Reinstall the above parts following the removal steps in reverse.

2.2.11 Original glass**Note**

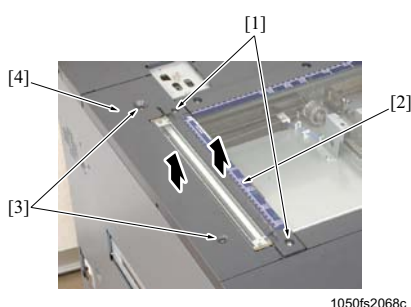
- The same removal and reinstallation procedure is applicable when the DF-615 is provided.
- When reinstalling the original glass, be sure that the shading correction plate (white) is on the upper side of the glass.

(1) Procedure

1. Remove the upper cover /Rt. (Refer to [G.2.2.10 Upper cover /Rt](#))
2. Remove 2 screws [1] and then remove the original stopper plate / Lt [2].
3. Remove 3 screws [3] and then remove the original stopper plate / Rr [4].
4. Remove 2 screws [5] and then remove the original stopper plate / Rt [6].
5. Remove the original glass [7].
6. Reinstall the above parts following the removal steps in reverse.

2.2.12 Upper cover / Lt**Note**

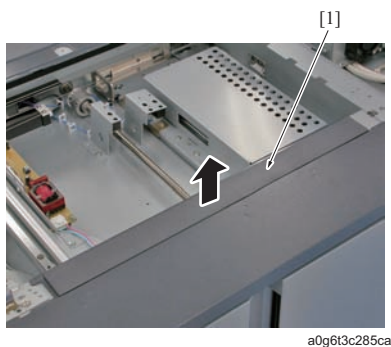
- The same removal and reinstallation procedure is applicable when the DF-615 is provided.

(1) Procedure

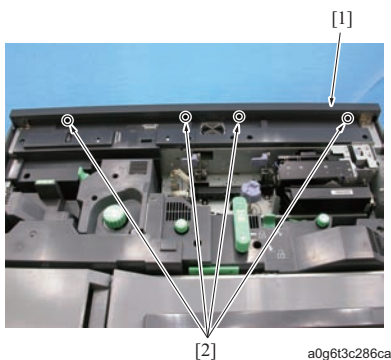
1. Remove 2 screws [1] and then remove the original stopper plate / Lt [2].
2. Remove 2 screws [3] and then remove the upper cover /Lt [4].
3. Reinstall the above parts following the removal steps in reverse.

2.2.13 Upper cover /Fr**Note**

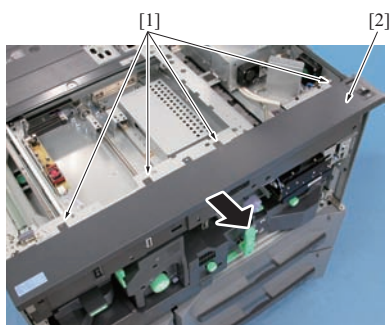
- The same removal and reinstallation procedure is applicable when the DF-615 is provided.

(1) Procedure

1. Remove the upper cover /Rt. (Refer to [G.2.2.10 Upper cover /Rt](#))
2. Remove the original glass. (Refer to [G.2.2.11 Original glass](#))
3. Remove the upper cover /Lt. (Refer to [G.2.2.12 Upper cover / Lt](#))
4. Remove the original glass guide /Fr [1].



5. Remove the front door /Rt. (Refer to [G.2.2.5 Front door /Rt](#))
6. Remove the front door /Lt. (Refer to [G.2.2.6 Front door /Lt](#))
7. Remove 4 screws [2] provided on the bottom of the upper cover / Fr [1].

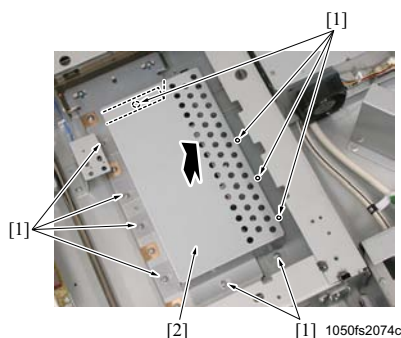


a0g6t3c287ca

8. Remove 4 screws [1] and then remove the upper cover /Fr [2].
9. Reinstall the above parts following the removal steps in reverse.

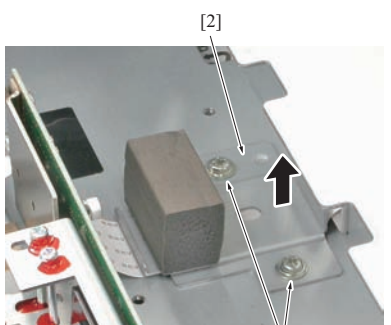
2.2.14 CCD unit

(1) Procedure



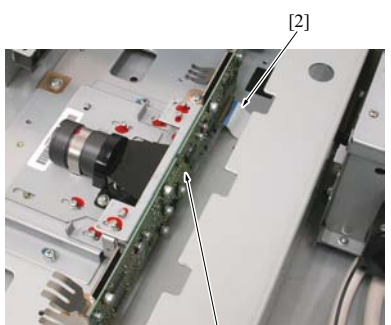
1050fs2074c

1. Remove the upper cover /Rt. (Refer to [G.2.2.10 Upper cover /Rt](#))
2. Remove the original glass. (Refer to [G.2.2.11 Original glass](#))
3. Remove 10 screws [1] and then remove the lens light blocking cover [2].



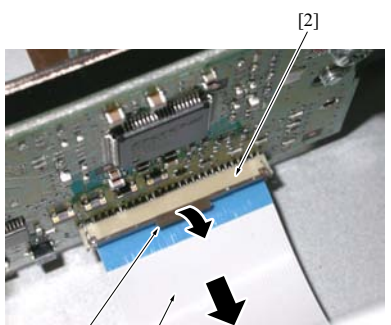
a0g6t3c289ca

4. Remove 2 screws [1] and then remove the cable cover [2].



1050fs2076c

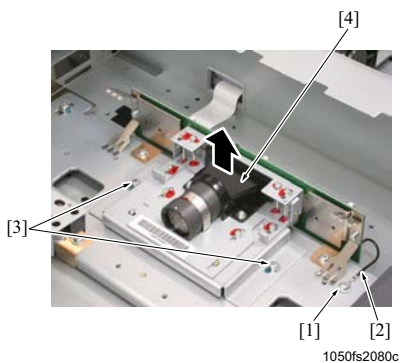
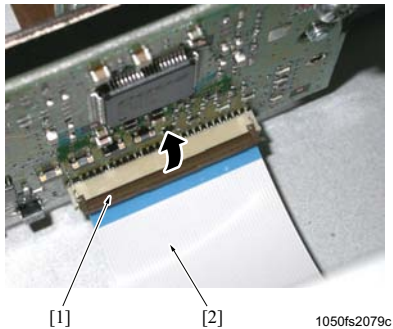
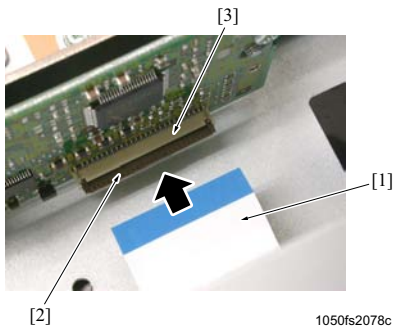
5. Remove the ribbon cable [2] from the CCD board (CCDB) [1].



1050fs2077c

Note

- When removing the ribbon cable [1], bring down the lock lever [3] of the connector [2] in the direction as shown in the drawing to release the lock and pullout the ribbon cable.

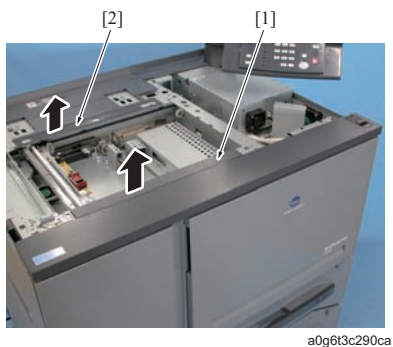
**Note**

- When reinstalling the ribbon cable [1], make sure that the lock lever [2] is released. Then insert the ribbon cable fully into the connector [3] while taking care that the conductor side of the ribbon cable comes to the under side of the lock lever.

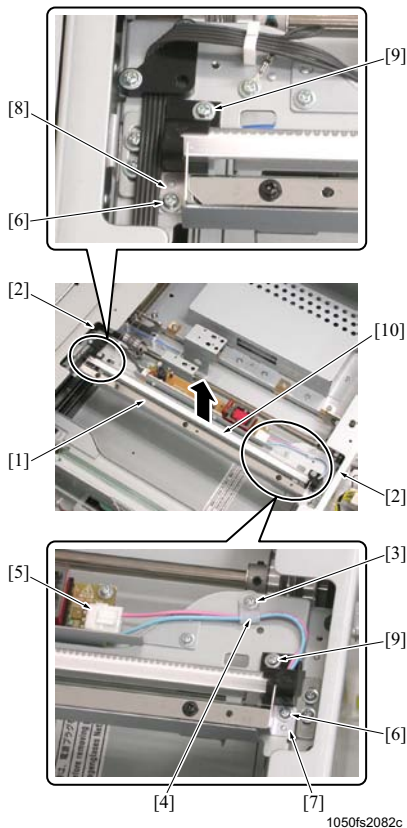
Note

- After that, return the lock lever [1] to its original position and lock the ribbon cable [2].

- Remove the screw [1], and remove the ground terminal [2].
- Remove 2 screws [3] and then remove the CCD unit [4].
- Reinstall the above parts following the removal steps in reverse.
- After reinstalling the CCD unit, conduct the following items in order.
 - Printer FD-Mag. Adj. (Side1)
(Refer to [I.5.3.5 Printer S1 FD-Mag. Adj. \(Magnification Adjustment\)](#))
 - Scanner paper feed direction magnification adjustment
(Refer to [I.5.3.9 Scanner FD-Mag. Adj. \(Magnification Adjustment\)](#))
 - Scanner paper feed direction magnification adjustment
(Refer to [I.5.3.10 ADF FD-Mag. Adjustment \(Magnification Adjustment\)](#))
 - Scanner restart timing adjustment
(Refer to [I.5.3.17 Scanner Restart Timing Adj. \(Timing Adjustment\)](#))
 - Distortion adjustment original glass (main scan direction)
(Refer to [I.5.3.32 Distortion Adjustment](#))
 - Distortion adjustment original glass (sub scan direction)
(Refer to [I.5.3.32 Distortion Adjustment](#))
 - Distortion adjustment ADF (main scan direction)
(Refer to [I.5.3.32 Distortion Adjustment](#))
 - Distortion adjustment ADF (sub scan direction)
(Refer to [I.5.3.32 Distortion Adjustment](#))

2.2.15 Exposure lamp**(1) Procedure**

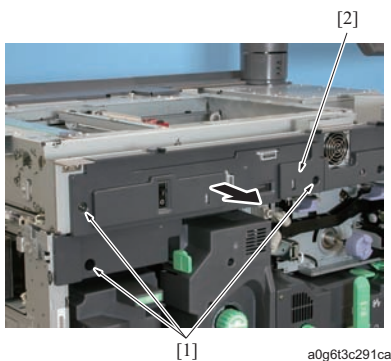
- Remove the upper cover /Rt. (Refer to [G.2.2.10 Upper cover /Rt.](#))
- Remove the original glass. (Refer to [G.2.2.11 Original glass](#))
- Remove the upper cover /Lt. (Refer to [G.2.2.12 Upper cover / Lt.](#))
- Remove the original glass guide /Fr [1].
- Remove the original glass guide /Rr [2].



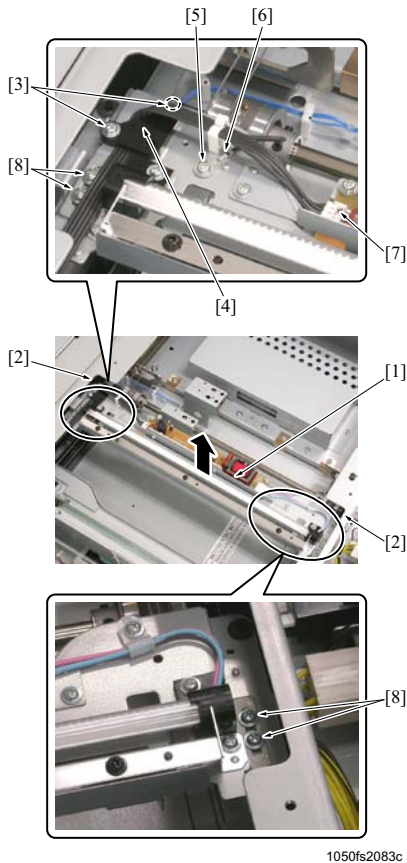
6. Move the exposure unit [1] to the notch position [2] of the main body frame.
7. Remove the screw [3] and then remove the cable clamp [4].
8. Disconnect the connector [5].
9. Remove the screws [6], 1 each, and then remove the lamp presser plates /Fr [7] and /Rr [8].
10. Remove 2 screws [9] and then remove the exposure lamp [10].
11. Reinstall the above parts following the removal steps in reverse.
12. After reinstalling the exposure lamp, conduct the following steps.
 - Scanner restart timing adjustment
(Refer to [I.5.3.17 Scanner Restart Timing Adj. \(Timing Adjustment\)](#))
 - Distortion adjustment original glass (main scan direction)
(Refer to [I.5.3.32 Distortion Adjustment](#))
 - Distortion adjustment original glass (sub scan direction)
(Refer to [I.5.3.32 Distortion Adjustment](#))
 - Distortion adjustment ADF (main scan direction)
(Refer to [I.5.3.32 Distortion Adjustment](#))
 - Distortion adjustment ADF (sub scan direction)
(Refer to [I.5.3.32 Distortion Adjustment](#))

2.2.16 Exposure unit

(1) Procedure for removal



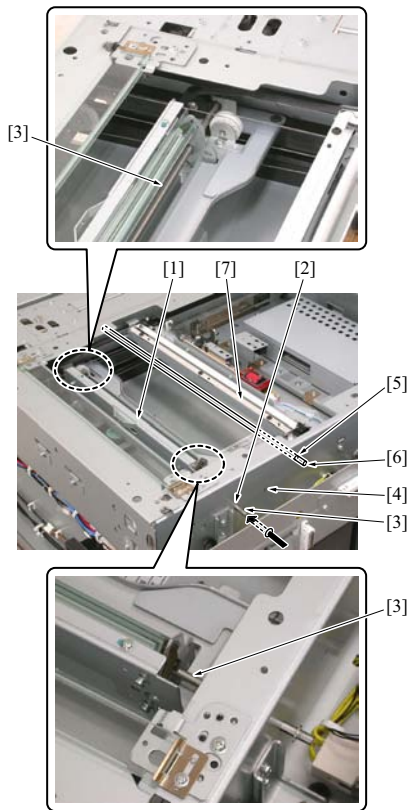
1. Remove the upper cover /Rt. (Refer to [G.2.2.10 Upper cover /Rt](#))
2. Remove the original glass. (Refer to [G.2.2.11 Original glass](#))
3. Remove the upper cover /Lt. (Refer to [G.2.2.12 Upper cover / Lt](#))
4. Remove the upper cover /Fr. (Refer to [G.2.2.13 Upper cover /Fr](#))
5. Remove 3 screws [1] and remove the upper cover /Lt [2].



1050fs2083c

6. Move the exposure unit [1] to the notch position [2] of the main body frame.
7. Remove 2 screws [3] and then remove the cord presser member [4].
8. Remove the screw [5] and then remove the ground terminal [6].
9. Disconnect the connector [7].
10. Remove 4 screws [8] and then remove the exposure unit [1].

(2) Procedure for reinstallation



1050fs2084c

1. Move the V-mirror unit [1] toward the V-mirror positioning hole [2].
2. Insert the optics unit positioning jig [3] into the V-mirror positioning hole [2], and fix the V-mirror unit [1].

Note

- Be sure to insert the optics unit positioning jig [3] from the front side and pass it through the V-mirror unit [1].
- Be care full not to confuse the V-mirror positioning hole [2] with the unused hole [4].

3. Insert the optics unit positioning jig [6] into the exposure unit positioning hole [5].
4. Press the exposure unit [7] against the optics unit positioning unit [2].
5. Reinstall the exposure unit with 4 screws.
6. Remove 2 optics unit positioning jigs.
7. Be sure that the reinstallation of the following parts follows the removal steps in reverse.
8. After reinstalling the exposure unit, conduct the following items in order.
 - Scanner restart timing adjustment
(Refer to [1.5.3.17 Scanner Restart Timing Adj. \(Timing Adjustment\)](#))
 - Distortion adjustment original glass (main scan direction)
(Refer to [1.5.3.32 Distortion Adjustment](#))
 - Distortion adjustment original glass (sub scan direction)
(Refer to [1.5.3.32 Distortion Adjustment](#))
 - Distortion adjustment ADF (main scan direction)
(Refer to [1.5.3.32 Distortion Adjustment](#))
 - Distortion adjustment ADF (sub scan direction)
(Refer to [1.5.3.32 Distortion Adjustment](#))

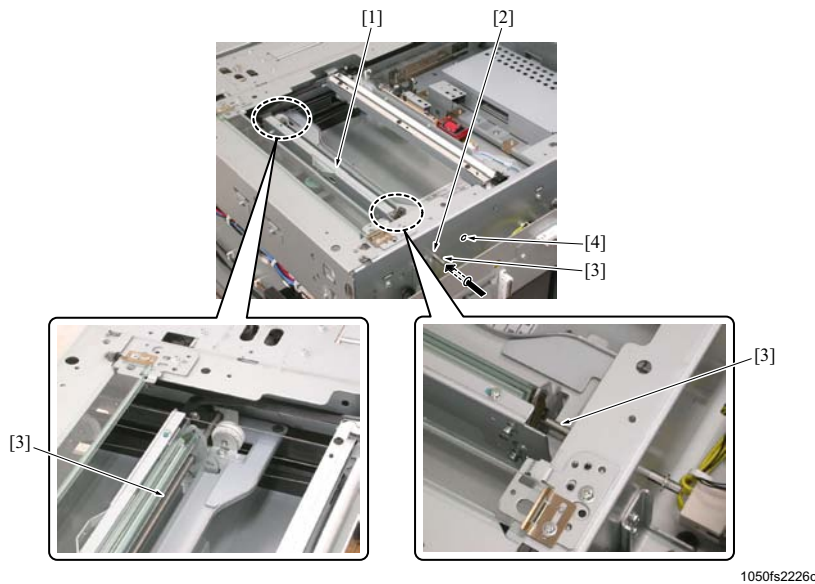
2.2.17 Scanner wire

Note

- Be sure to wind the wire closely without overlapping each other.
- When re-stretching or replacing the scanner wire, be sure to use the optics unit positioning jig.

- When re-stretching or replacing the scanner wire, be sure to conduct the image adjustment in the service mode. (Refer to [I ADJUSTMENT/SETTING](#))

(1) Procedure

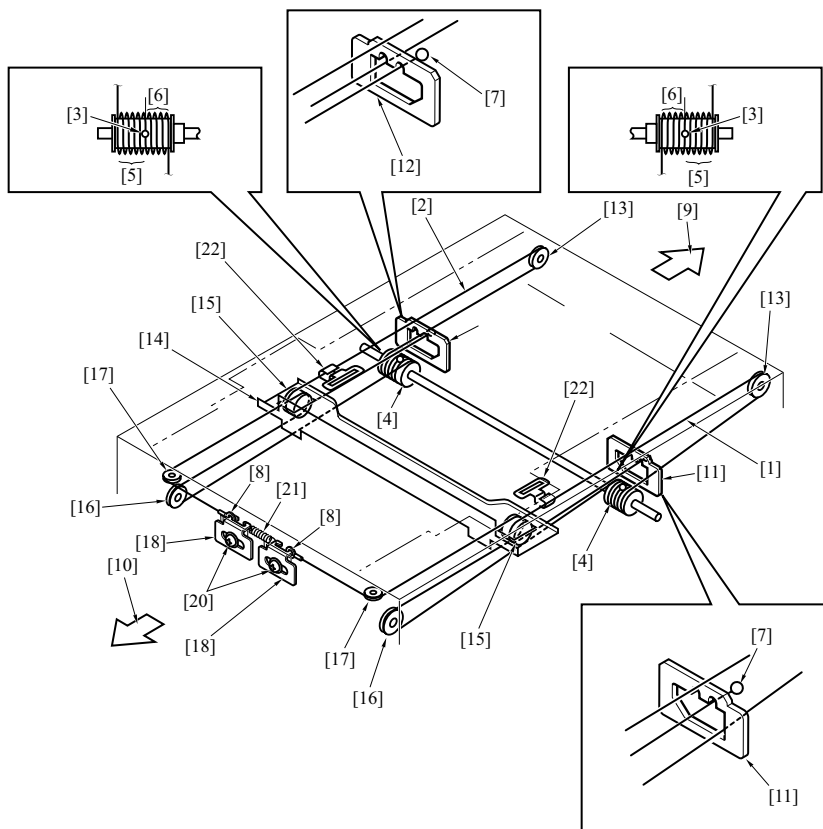


1050fs2226c

1. Remove the upper cover /Rt. (Refer to [G.2.2.10 Upper cover /Rt](#))
2. Remove the original glass. (Refer to [G.2.2.11 Original glass](#))
3. Remove the upper cover /Lt. (Refer to [G.2.2.12 Upper cover / Lt](#))
4. Remove the upper cover /Fr. (Refer to [G.2.2.13 Upper cover /Fr](#))
5. Remove the exposure unit. (Refer to [G.2.2.16 Exposure unit](#))
6. Move the V-mirror unit [1] toward the V-mirror positioning hole [2].
7. Insert the optics unit positioning jig [3] into the V-mirror positioning hole [2], and fix the V-mirror unit [1].

Note

- Be sure to insert the optics unit positioning jig [3] from the front side and pass it through the V-mirror unit [1].
- Be care full not to confuse the V-mirror positioning hole [2] with the unused hole [4].



1050fs2227c

8. Drop the metal ball [3] in between the scanner wire /Fr [1] and /Rr [2] into the installation hole of the drive pulley [4]. With this hole as a starting point, wind the wire 4 turns [5] outwards and 5 turns [6] inwards.

Note

- Be sure to wind the scanner wire with the metal ball [7] at the end outwards and the scanner wire with the wire terminal [8] at the end inwards.

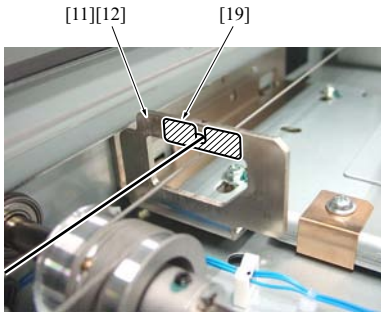
- For both scanner wires, be sure to pull out the one wound outwards in the paper feed direction [9] from above the drive pulley and the one wound inwards in the paper exit direction [10] from above the drive pulley.

- For each scanner wire that has been wound round the drive pulley, fasten it to the respective wire stoppers through the wire stopper /Fr [11] or /Rr [12] pulley /1 [13] and via the outside of the pulley [15] of the V-mirror unit [14].

Note

- Each wire stopper is provided with 2 grooves. Fix the metal ball [7] in the groove on the outside for the wire stopper /Fr [11], and fix it in the groove on the inside for the wire stopper /Rr [12].

- For each scanner wire that has been wound round the drive pulley, after reversing it by the pulley /2 [16], pass it through the inside of the pulley [15] of the V-mirror unit [14] and pulley /3 [17] and hook the wire terminal [8] to the spring fixing plate [18].



- Paste the wire restriction sheet [19] to the wire stoppers /Fr [11] and /Rr [12]. (The sheet is common to both the front and rear stoppers.)

Note

- Be sure to paste it so that the wire restriction sheet comes in contact with the wire.

- Fasten tentatively each of the spring fixing plates with the screw [20].

- Loosen once the screw [20], attach the spring [21] between 2 spring fixing plate [18] and then fix each spring fixing plate with the screw [20].

Note

- After attaching each of the scanner wires, check the respective exposure unit mounting brackets [22] if they turn to the inside.

- Be sure that the reinstallation of the following parts follows the removal steps in reverse.

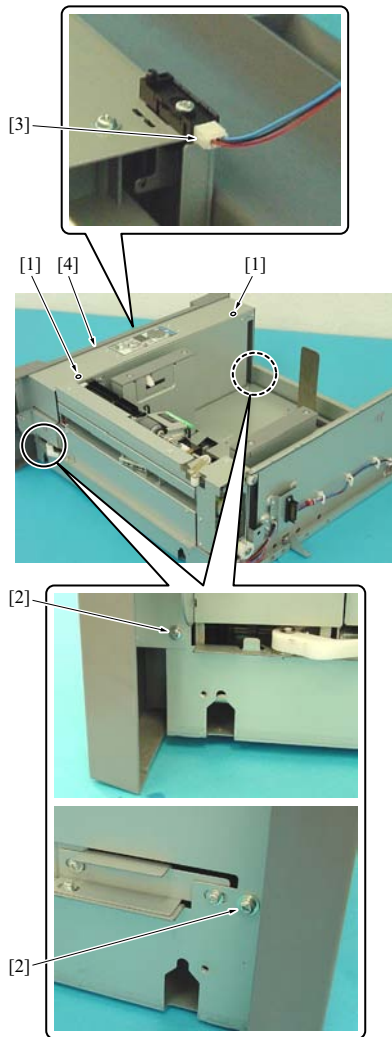
- After reinstalling the scanner wire, conduct the following items in order.

- Mirror unit positioning (require the jigs)
- Scanner restart timing adjustment
(Refer to [I.5.3.17 Scanner Restart Timing Adj. \(Timing Adjustment\)](#))
- Distortion adjustment original glass (main scan direction)
(Refer to [I.5.3.32 Distortion Adjustment](#))
- Distortion adjustment original glass (sub scan direction)
(Refer to [I.5.3.32 Distortion Adjustment](#))
- Distortion adjustment ADF (main scan direction)
(Refer to [I.5.3.32 Distortion Adjustment](#))
- Distortion adjustment ADF (sub scan direction)
(Refer to [I.5.3.32 Distortion Adjustment](#))

2.2.18 Lift wire

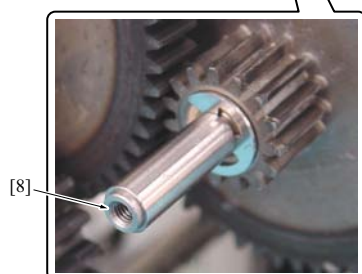
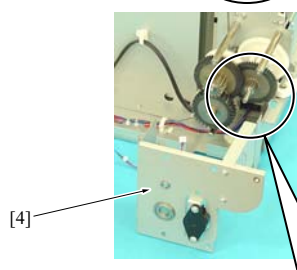
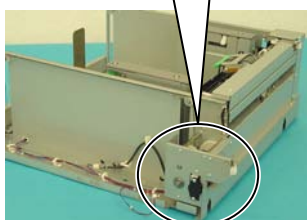
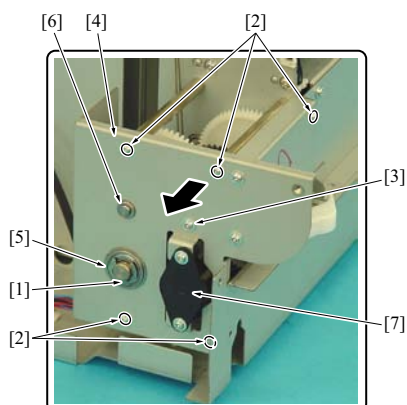
Note

- The same procedure for removing/reinstalling the lift wire is used for both the trays /1 and /2.

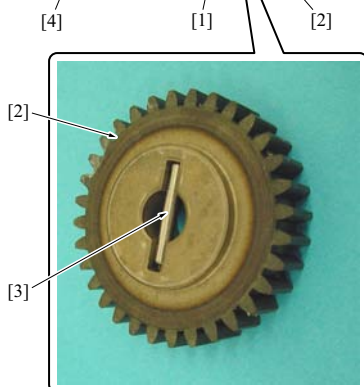
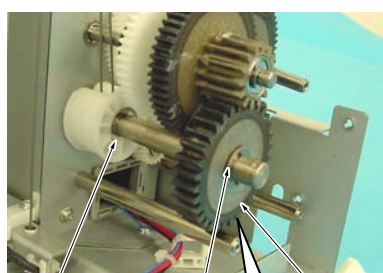
(1) Procedure

1050fs2754c

1. Remove the tray. (Refer to [F.4.7.5 Removing/reinstalling the tray](#))
2. Remove 2 screws [1] and 2 screws [2] with washer.
3. Disconnect the connector [3] and then remove the tray front cover [4].



1050fs2755c



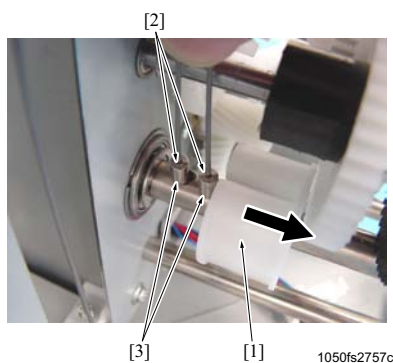
1050fs2756c

4. Remove the E-ring [1].
5. Remove 5 screws [2].
6. Remove the screw [3].
7. Remove the bearings [5] and [6], and the torque restriction gear [7] together with the gear mounting plate [4].

Note

- When removing the gear mounting plate [4], take note that the gear comes off freely.
- When reinstalling it, make sure that the step [8] of each shaft gets in the gear mounting plate [4] securely.
- Be sure to reinstall the bearing (large) [5] from the outside of the gear cover [4] and the bearing (small) [6] from the inside.

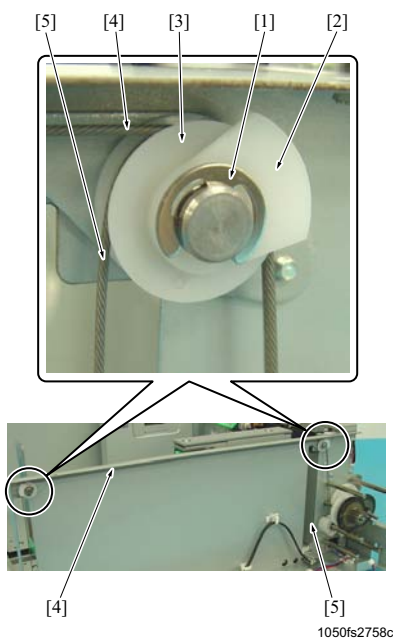
8. Remove the E-ring [1] and then remove the gear [2] and the pin [3].
9. Remove the E-ring [4].



10. Slide the pulley [1] and remove the wire end [2] from the shaft hole [3].

Note

- When reinstalling it, lift up the paper lift plate a little to give slack to the lift wire you want to insert. Then insert the wire ends [2] into the shaft hole [3] one at a time and fix it with the pulley [1].

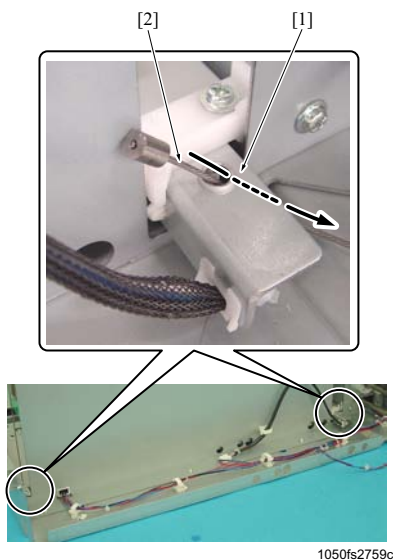


11. Remove the E-rings [1], 1 each provided at the 2 places and then remove the wire covers [2], 1 each.

12. Remove the lift wires /Fr1 [4] and /Fr2 [5] from the pulley [3].

Note

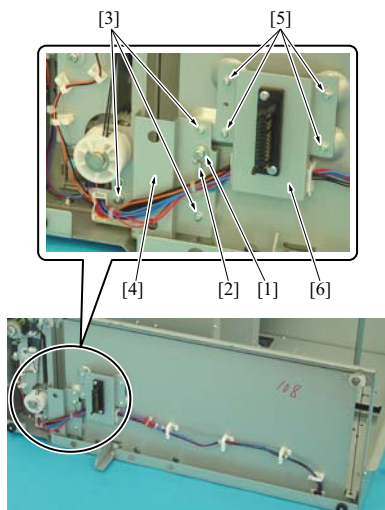
- When reinstalling it, make sure that the lift wires /Fr1 [4] and /Fr2 [5] are contained in the wire cover [2] and they are not crossing each other.



13. Pull out from up to down the lift wires /Fr1 and /Fr2 [2] from the arm [1] of the paper lift plate.

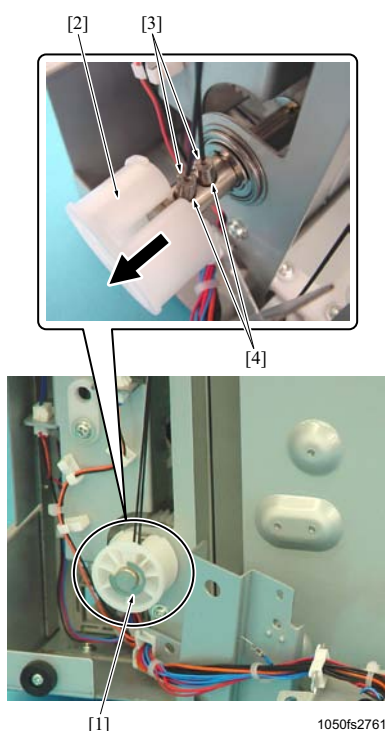
Note

- Be sure to pull out the lift wire gently and take care that the lift wire does not get damaged by the edges of the metal frame.



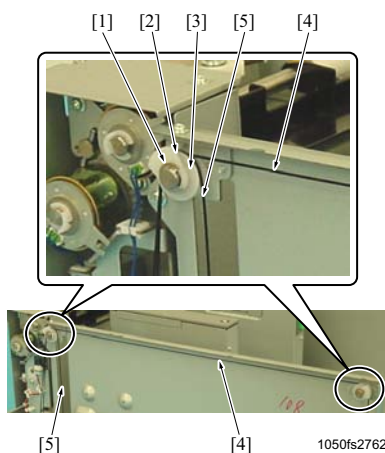
1050fs2760c

14. Remove the screw [1] and then remove the ground [2].
15. Remove 3 screws [3] and then remove the cover [4].
16. Remove 4 screws [5] and then remove the connector mounting plate [6].



1050fs2761c

17. Remove the E-ring [1].
18. Slide the pulley [2] and remove the wire end [3] from the hole [4].

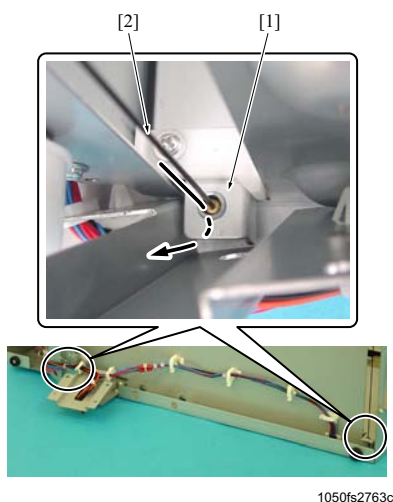


1050fs2762c

19. Remove the E-rings [1], 1 each provided at the 2 places and then remove the wire covers [2], 1 each.
20. Remove the lift wires /Rr1 [4] and /Rr2 [5] from the pulley [3].

Note

- When reinstalling it, make sure that the lift wires /Rr1 [4] and /Rr2 [5] are contained in the wire cover [2] and they are not crossing each other.



21. Pull out from up to down the lift wires /Rr1 and /Rr2 [2] from the arm [1] of the paper lift plate.

Note

- Be sure to pull out the lift wire gently and take care that the lift wire does not get damaged by the edges of the metal frame.

22. Reinstall the above parts following the removal steps in reverse.

Note

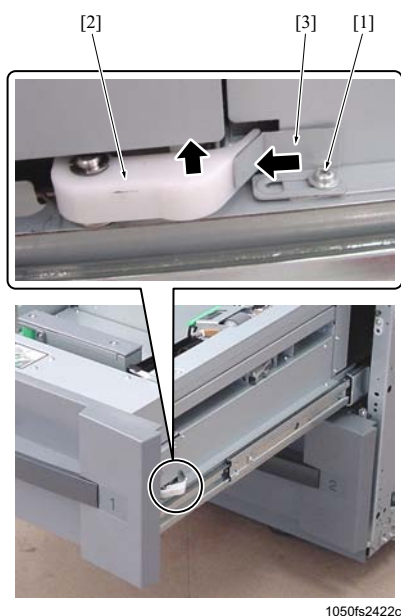
- The lift wire /Fr is gray in color and /Rr black in color.
- Make sure that the lift wires do not cross each other.
- After completion of installation, check the paper lift plate to ensure it is level.

2.2.19 Paper feed assist fan

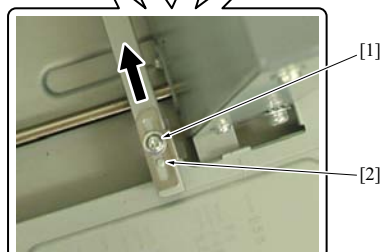
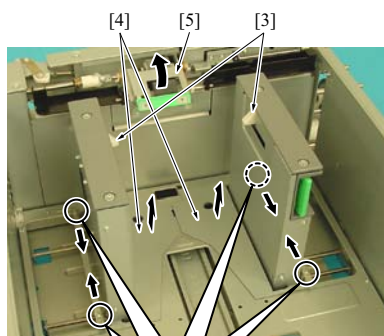
Note

- The same removal and reinstallation procedures of the paper feed assist fans /Fr1 (FM21), /Rr1 (FM20) and /Fr2 (FM23), /Rr2 (FM24) are used for trays1 and 2.

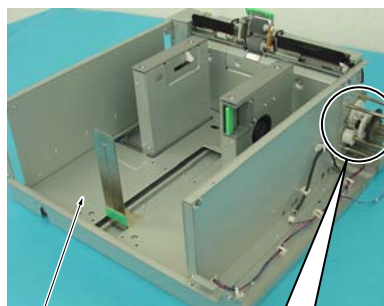
(1) Procedure



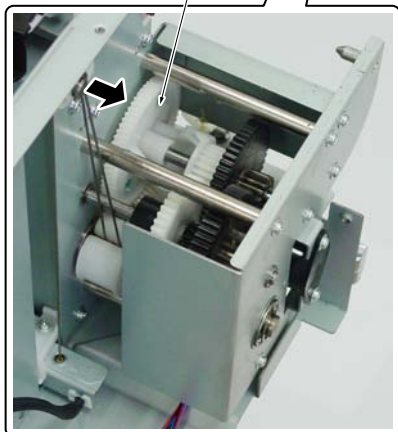
1. Remove the tray. (Refer to [F.4.7.5 Removing/reinstalling the tray](#))
2. Loosen a screw [1].
3. With the release lever [2] placed at its original position, hold the stopper [3] and tighten the screw [1] to fix the stopper.
4. Remove the tray front cover. (Refer to [G.2.2.18 Lift wire](#))



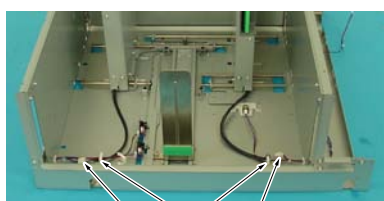
1050fs2764c



[1] [2]



1050fs2765c



[1] [2] [1]

1050fs2767c

5. Loosen each screws provided at the 4 places [1], and slide the bracket [2] to the arrow-marked direction.
6. Hold down the paper stopper [3] and pull out the lift plate cover [4] upward to remove it.

Note

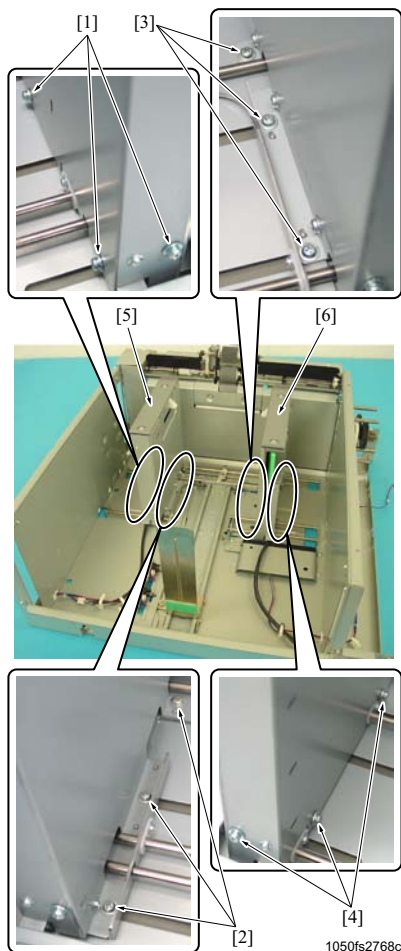
- When removing the lift plate cover [4], raise up the pick-up roller [5] in the arrow-marked direction to move it out of the way.
- When reinstalling the bracket [2], push it slightly in the opposite direction of removal and fix it with screws.

7. Rotate the gear of the drive section by hand and raise the paper lift plate [1] upward. Move the coupling gear [2] in the arrow-marked direction and then fix the lift plate.

8. Disconnect the connectors [1], 1 each, and the wire binding bands [2], 1 each.

Note

- To make it clear, the picture shows the condition in which the lift plate is removed.

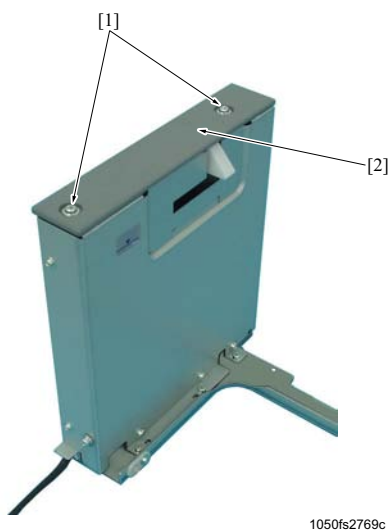


9. Remove the screw [1], the screw [2], the screw [3] and the screws [4], 3 each.

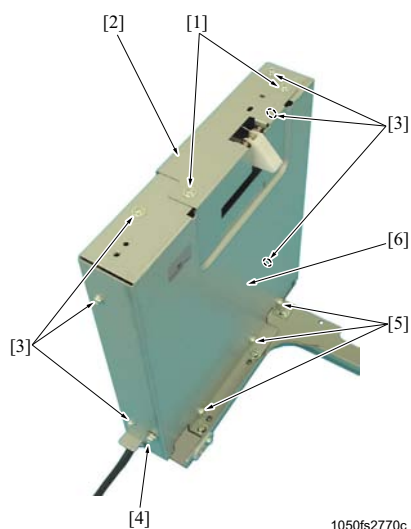
10. Remove the paper guides /Fr [5] and /Rr [6].

Note

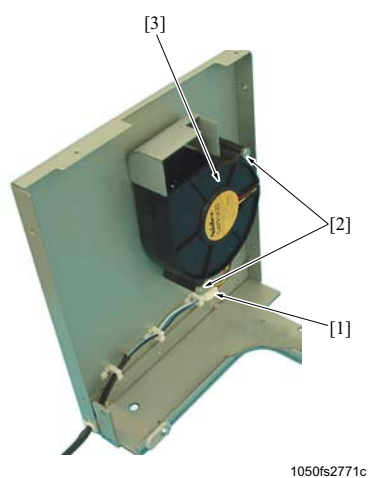
- When reinstalling it, be sure to fasten the paper guides /Fr [5] and /Rr [6] with the screws [2] and the screws [3], 3 each. Then tentatively tighten the screws [1] and the screws [4], 3 each and tighten them up fully after placing the paper guides /Fr and /Rr in a vertical position. To check the verticality of the paper guides, move the guide plate up and down with copy paper placed on the lift plate and check the clearance of the paper guide.



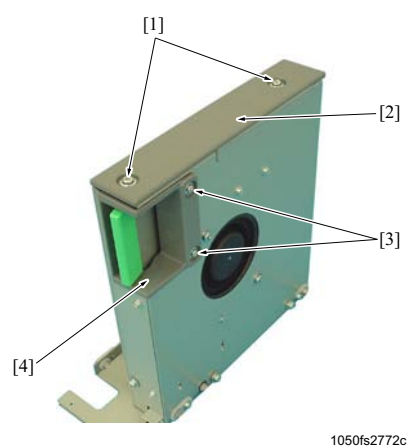
11. Remove the screws [1], 2 each, of the paper guide /Rr and then remove the paper guide cover [2].



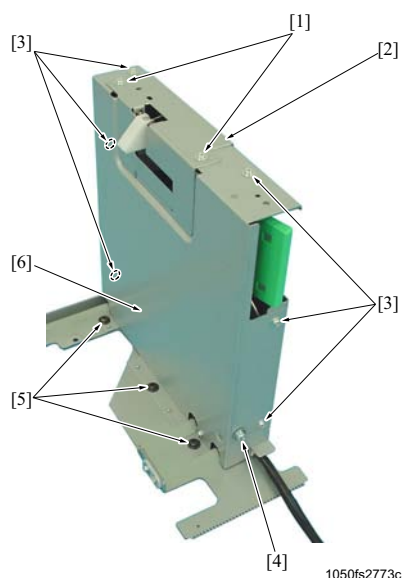
12. Remove the screws [1], 2 each, and then remove the paper stopper mounting plate [2].
13. Remove 6 screws [3], the screw (with a washer and a spring washer) [4] and 3 screws [5], and then remove the fan motor mounting plate [6].



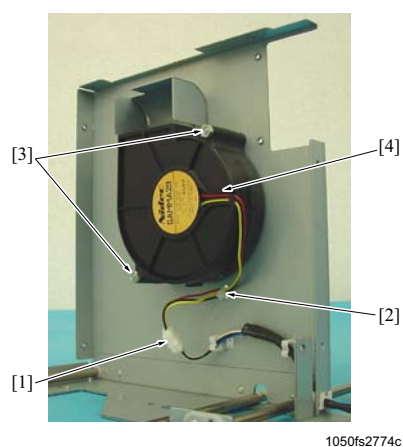
14. Disconnect the connector [1].
15. Remove 2 screws (nuts) [2] and the paper feed assist fans /Rr1 (FM20) and /Rr2 (FM24) [3].



16. Remove the screws [1], 2 each of the paper guide /Fr and then remove the paper guide cover [2].
17. Remove 2 screws [3] and then remove the lever cover [4].



18. Remove 2 screws [1] and then remove the paper stopper mounting plate [2].
19. Remove 6 screws [3], the screw (with a washer and a spring washer) [4] and 3 screws [5], and then remove the fan motor mounting plate [6].



20. Cut off the connector [1] and the wire binding band [2].
21. Remove 2 screws (nuts) [3] and the paper feed assist fans /Fr1 (FM21) and /Fr2 (FM23) [4].

Note

- When reinstalling it, be sure to replace the wire binding band with a new one.

22. Reinstall the above parts following the removal steps in reverse.

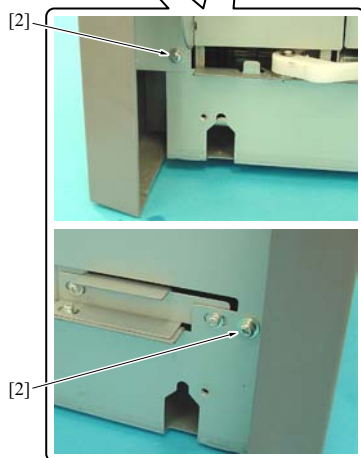
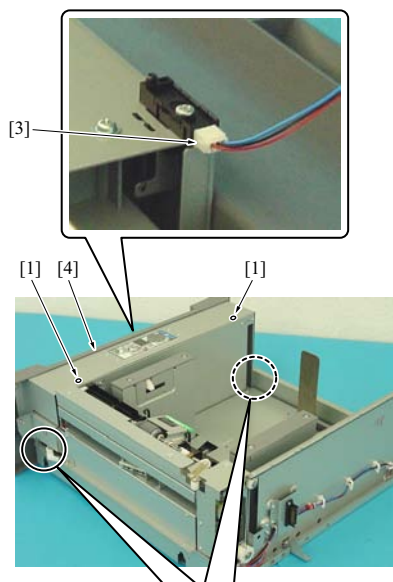
Note

- After completion of reinstallation, be sure to conduct the paper size detection adjustments. (Refer to [I.5.3.1 Tray size adjustment \(Tray adjustment\)](#))

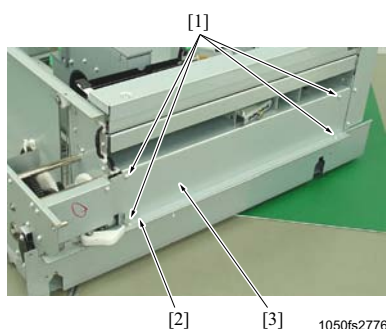
2.2.20 Paper lift motor

Note

- The same removal and reinstallation procedures are employed for the tray lift-up motors /1 (M25) and /2 (M34) of the trays1 and 2.

(1) Procedure

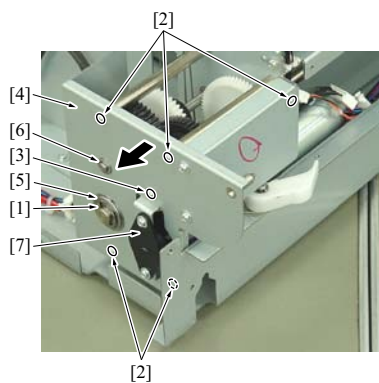
1050fs2775c



1050fs2776c

1. Remove the tray. (Refer to [F.4.7.5 Removing/reinstalling the tray](#))
2. Remove 2 screws [1] and 2 screws [2] with washer.
3. Disconnect the connector [3] and then remove the tray front cover [4].

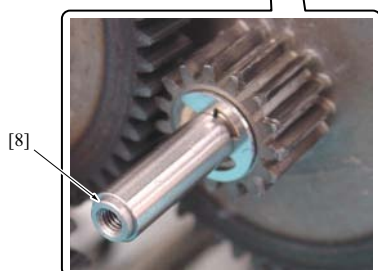
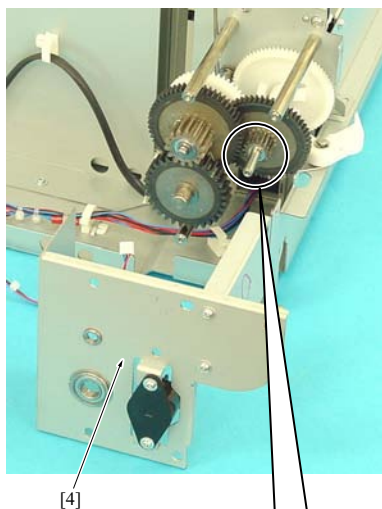
4. Remove 4 screws [1] and then remove the cover [2] and the stopper [3].



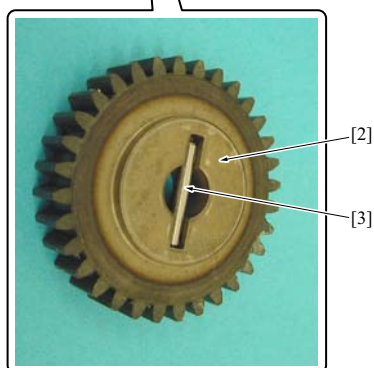
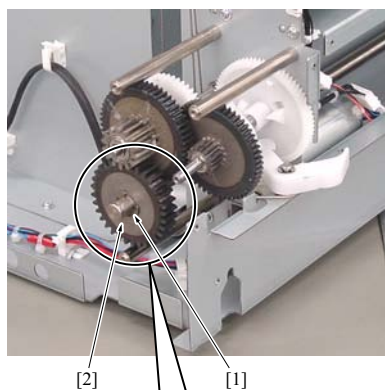
5. Remove the E-ring [1].
6. Remove 5 screws [2].
7. Remove the screw [3].
8. Remove the bearings [5] and [6], and the torque restriction gear [7] together with the gear mounting plate [4].

Note

- When removing the gear mounting plate [4], take note that the gear comes off freely.
- When reinstalling it, make sure that the step [8] of each shaft gets in the gear mounting plate [4] securely.
- Be sure to reinstall the bearing (large) [5] from the outside of the gear cover [4] and the bearing (small) [6] from the inside.

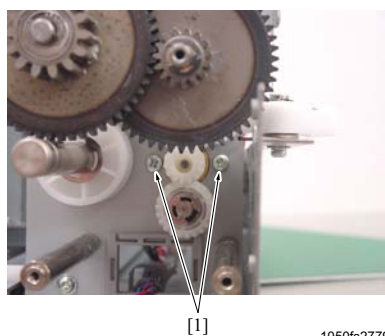


1050fs2777c



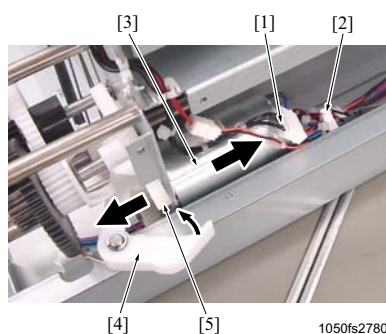
1050fs2778c

9. Remove the E-ring [1] and then remove the gear [2] and the pin [3].



1050fs2779c

10. Remove 2 screws [1].



1050fs2780c

11. Disconnect the connector [1] and the wire binding band [2], and then remove the tray lift-up motors /1 (M25) and /2 (M34) [3].

Note

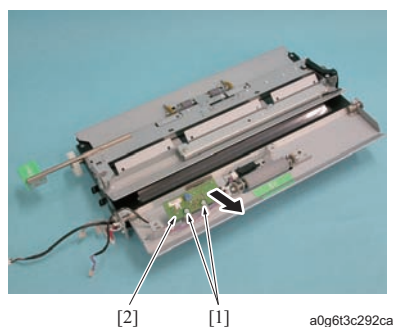
- For ease of the removal and reinstallation operations, press the release lever [4] so that the coupling gear [5] can raise.

12. Reinstall the above parts following the removal steps in reverse.

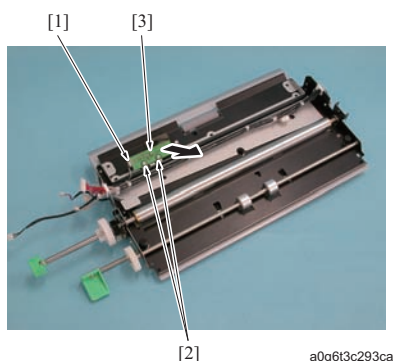
2.2.21 Multi feed detection board

Note

- The multi feed detection board /S and /R are adjusted in the manufacturing process as a pair. Be sure to replace them as a pair.
- When replacing the multi feed detection board /S and /R, be sure to conduct the sensitivity adjustments of the multi feed sensor. (Refer to [1.5.7.5 Adjustment when replacing the multi feed detection board \(main body\)](#))

(1) Procedure

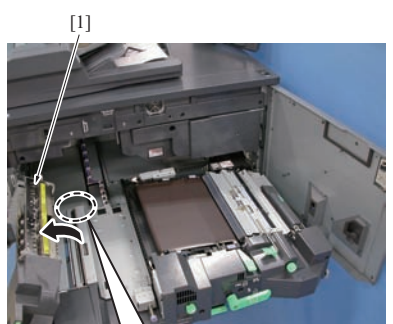
1. Remove the registration section. (Refer to [F.4.9.11 Removing/reinstalling the registration section](#))
2. Remove 2 screws [1] and then remove the multi feed detection board /R (MFDBR) [2].



3. Turn over the registration section and remove the connector [1].
4. Remove 2 screws [2], then remove the multi feed detection board / S (MFDBS) [3].
5. Reinstall the above parts following the removal steps in reverse.

2.2.22 Duplex section**Note**

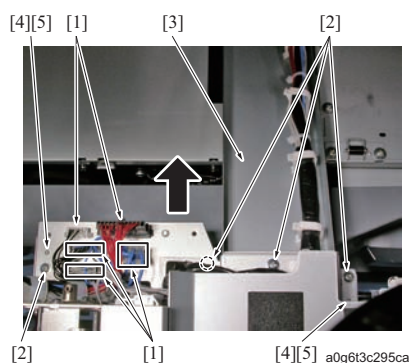
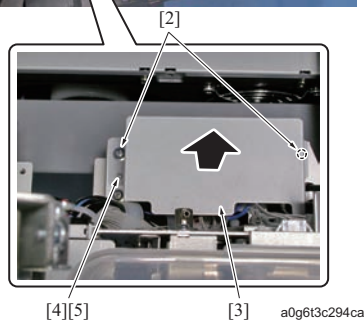
- Be sure to perform this operation with 2 people because the duplex section is heavy.

(1) Procedure

1. Remove the fusing section. (Refer to [F.5.10 transfer section](#))
2. Remove the transfer belt unit. (Refer to [F.4.9.7 Removing/reinstalling the transfer belt unit](#))
3. Remove the registration section. (Refer to [F.4.9.11 Removing/reinstalling the registration section](#))
4. Open the paper reverse/exit section [1].
5. Remove 2 screws [2] and then remove the connector cover [3].

Note

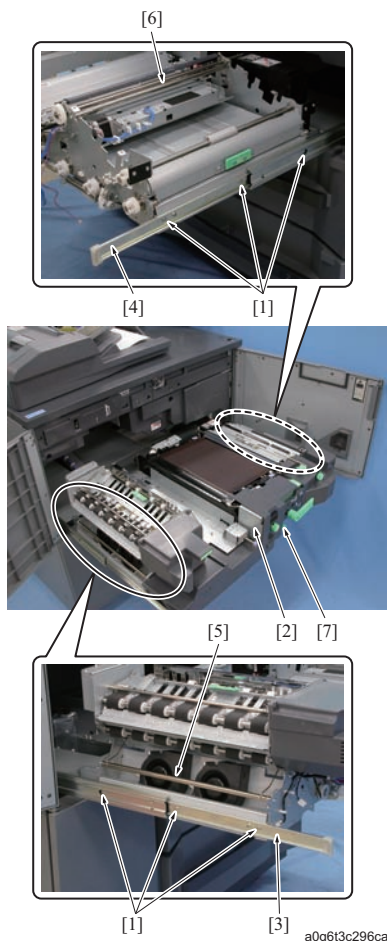
- When reinstalling the connector cover, be sure to set the positioning hole [4] to the projection [5] of the duplex section.



6. Disconnect 5 connectors [1].
7. Remove 4 screws [2] and remove the cable arm [3].

Note

- When reinstalling the cable arm, be sure to set the positioning hole [4] to the projection [5] of the duplex section.



8. Remove the screws [1], 3 each, to release the duplex section [2] from the guide rails /Lt [3] and /Rt [4].

9. Hold the stays /Lt [5] and /Rt [6] with 2 people, and remove the duplex section.

Note

- Be sure place the duplex section in a horizontal place.
- Be sure to avoid placing the duplex section from the front side diagonally since it deforms the open/close door /A [7].

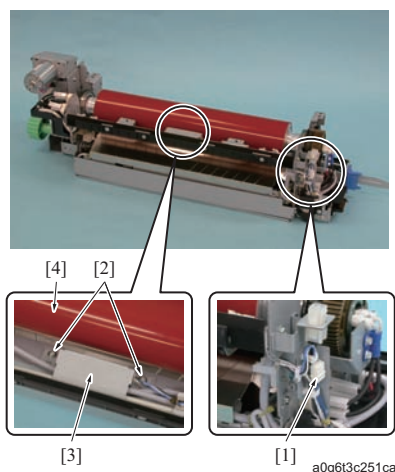
10. Reinstall the above parts following the removal steps in reverse.

2.2.23 Fusing temperature sensor /1 (TH1)

Note

- After reinstalling the fusing temperature sensor /1 (TH1), be sure to check if the wiring harness is not in touch with the fusing roller /Up.

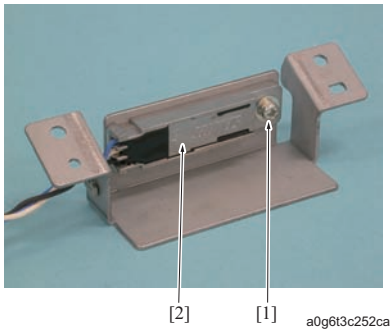
(1) Procedure for removal



1. Pull out the duplex section from the main body. (Refer to [F.5.9 Duplex Section](#))
2. Remove the fusing section. (Refer to [F.4.10.2 Removing/reinstalling the fusing section](#))
3. Remove the web section. (Refer to [F.4.10.14 Replacing the fusing temperature sensor /2 \(TH2\)](#))
4. Disconnect the connector [1].
5. Remove the screw [2] and remove the fusing temperature sensor / 1 assy [3].

Note

- When removing the fusing temperature sensor /1 assy, be careful to avoid the driver from being in touch with the fusing roller /Up [4].



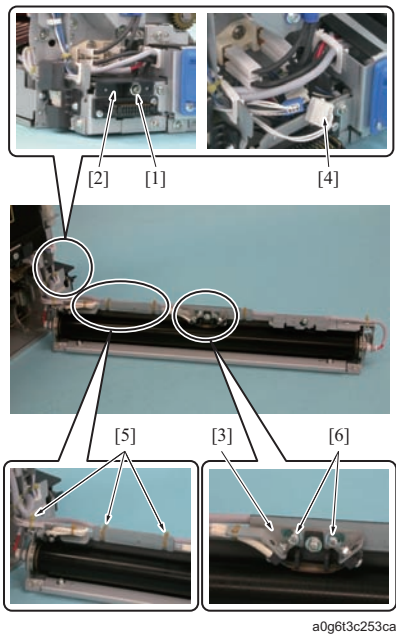
6. Remove the screw [1] and then remove the fusing temperature sensor /1 (TH1) [2].
7. Reinstall the above parts following the removal steps in reverse.

2.2.24 Fusing temperature sensor /3 (TH3)

Note

- Be sure to make the position adjustments when the roller has cooled down.
- When reinstalling the fusing temperature sensor /3 (TH3), adjust it with the temperature sensor positioning jig /B before fixing it. Be sure to apply Screw-lock to the screw that has been fixed.
- After reinstalling the fusing temperature sensor /3 (TH3), be sure to check if the wiring harness is not in touch with the fusing heating roller.

(1) Procedure for removal



1. Pull out the duplex section from the main body. (Refer to [F.5.9 Duplex Section](#))
2. Remove the fusing section. (Refer to [F.4.10.2 Removing/reinstalling the fusing section](#))
3. Open the fusing heating roller assy. (Refer to [F.4.10.8 Removing/reinstalling the fusing heating roller assy](#))
4. Remove the screw [1] and then remove the connector cover [2].
5. Disconnect the connector [4] of the fusing temperature sensor /3 (TH3) [3].

Note

- There are 3 connectors of the fusing temperature sensor in the same place. The number of pins of each connector is different. The connector of the fusing temperature sensor /3 (TH3) is 4 pin connector.

6. Cut off 3 wiring bands [5].

Note

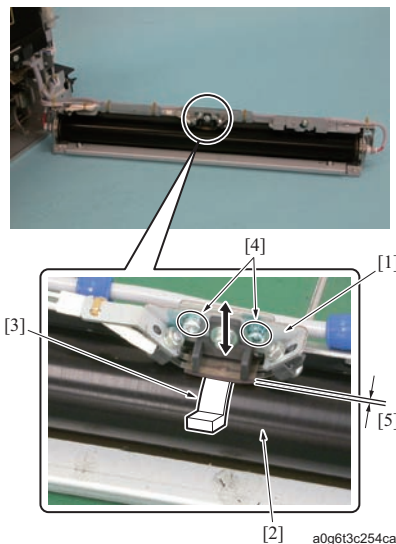
- When attaching a wire binding band, be sure to use a heat-resistant one (P/N:V501010014).

7. Remove the 2 screw [6] and then remove the fusing temperature sensor /3 (TH3) [3].

Note

- For the method for installing the fusing temperature sensor /3 (TH3), refer to "(2) Procedure for reinstallation."

(2) Procedure for reinstallation



1. Insert the temperature sensor positioning jig /B [3] between the fusing temperature sensor /3 (TH3) [1] and the fusing heating roller [2].
2. Adjust the position of the fusing heating sensor /3 (TH3) so that it becomes flush with the temperature sensor positioning jig /B, and then fix it with 2 screws [4].

Note

- Be sure to adjust the distance a [5] between the fusing temperature sensor /3 (TH3) and the fusing heating roller so that it becomes equal to the thickness of the temperature sensor positioning jig /B. Standard value: $a = 0.7 \pm 0.1\text{mm}$
- Be sure to set the fusing temperature sensor /3 (TH3) parallel to the roller.

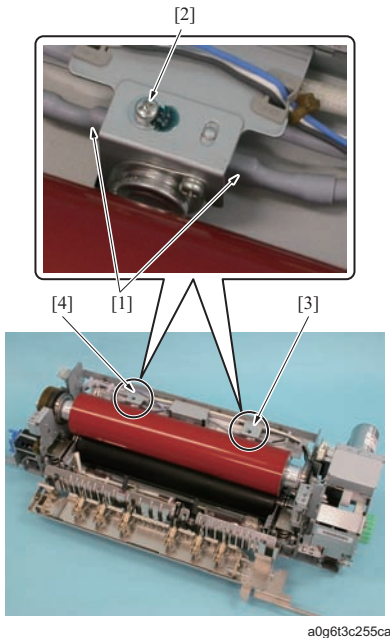
3. Apply Screw-lock to 2 screws [4].
4. Be sure that the reinstallation of the following parts follows the removal steps in reverse.

2.2.25 Thermostat /1 (TS1) and /2 (TS2)

Note

- Be sure to make the position adjustments when the roller has cooled down.
- When reinstalling the thermostat /1 (TS1) and /2 (TS2), adjust it with the thermostat positioning jig /A before fixing it. Be sure to apply Screw-lock to the screw that has been fixed.
- After completion of the reinstalling of the thermostat /1 (TS1) and /2 (TS2), be sure to check the wiring harness to see if it is in touch with the fusing roller /Up.

(1) Procedure for removal

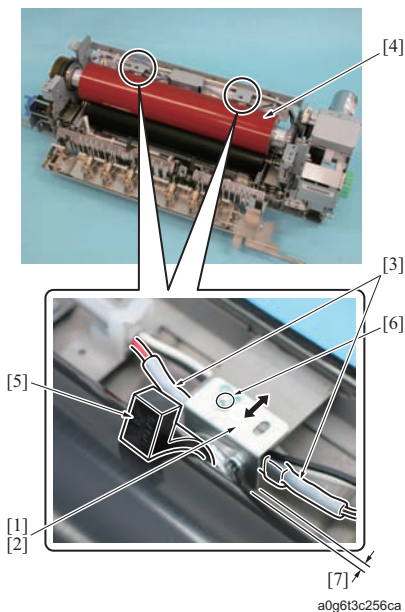


1. Pull out the duplex section from the main body. (Refer to [F.5.9 Duplex Section](#))
2. Remove the fusing section. (Refer to [F.4.10.2 Removing/reinstalling the fusing section](#))
3. Remove the web section. (Refer to [F.4.10.14 Replacing the fusing temperature sensor /2 \(TH2\)](#))
4. Remove the faston terminals [1], 2 each.
5. Remove the screws [2], 1 each, and remove the thermostats /1 (TS1) [3] and /2 (TS2) [4].

Note

- For method for reinstalling the thermostat /1 (TS1) and /2 (TS2), refer to "(2) Procedure for reinstallation."

(2) Procedure for reinstallation



1. Install the faston terminals [3], 2 each, to the thermostats /1 (TS1) [1] and /2 (TS2) [2].
2. Insert the thermostat positioning jig /A [5] between the thermostat /1 (TS1) [1] and the fusing roller /Up [4].
3. Adjust the position of the thermostat /1 (TS1) so that it becomes flush with the thermostat positioning jig /A, and then fix it with the screw [6].
4. Following the steps 2 and 3, install the thermostat /2 (TS2) [2].

Note

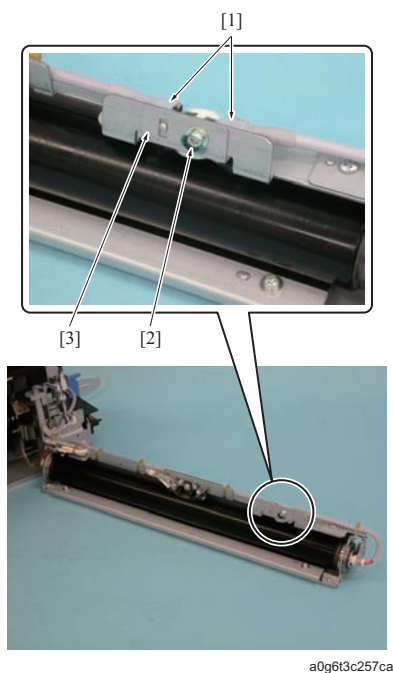
- Be sure to adjust the distance a [6] between each thermostat and the fusing roller /Up so that it becomes equal to the thickness of the thermostat positioning jig /A. Standard value: $a = 3.0 \pm 0.2\text{mm}$

5. Apply Screw-lock to the screw [6].
6. Be sure that the reinstallation of the following parts follows the removal steps in reverse.

2.2.26 Thermostat /3 (TS3)

Note

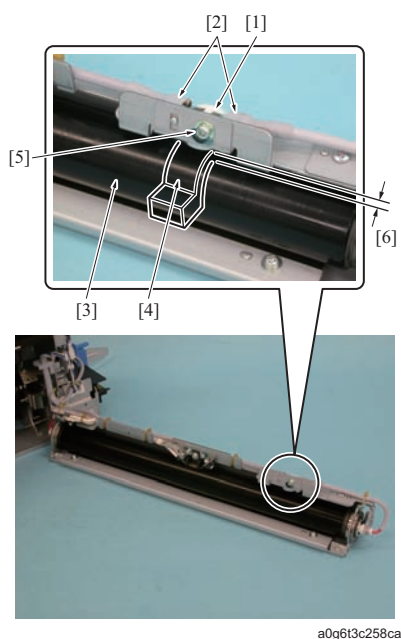
- Be sure to make the position adjustments when the roller has cooled down.
- When reinstalling the thermostat /3 (TS3), adjust it with the thermostat positioning jig /B before fixing it. Be sure to apply Screw-lock to the screw that has been fixed.
- After completion of the reinstalling of the thermostat /3 (TS3), be sure to check the wiring harness to see if it is in touch with the fusing heating roller.

(1) Procedure for removal

1. Pull out the duplex section from the main body. (Refer to [F.5.9 Duplex Section](#))
2. Remove the fusing section. (Refer to [F.4.10.2 Removing/reinstalling the fusing section](#))
3. Open the fusing heating roller assy. (Refer to [F.4.10.8 Removing/reinstalling the fusing heating roller assy](#))
4. Remove 2 faston terminals [1].
5. Remove the screw [2], and then remove the thermostat /3 (TS3) [3].

Note

- For method for reinstalling the thermostat /3 (TS3), refer to "(2) Procedure for reinstallation."

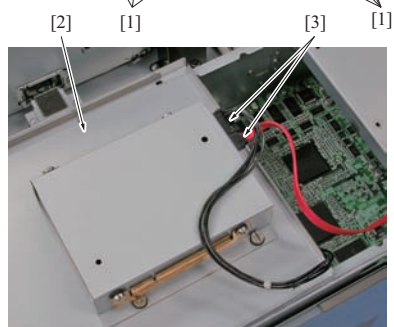
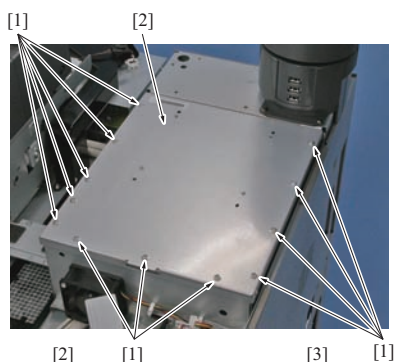
(2) Procedure for reinstallation

1. Install 2 faston terminals [2] to the thermostat /3 (TS3) [1].
2. Insert the thermostat positioning jig /B [4] between the thermostat /3 (TS3) [1] and the fusing heating roller [3].
3. Adjust the position of the thermostat /3 (TS3) so that it becomes flush with the thermostat positioning jig /B, and then fix it with the screw [5].

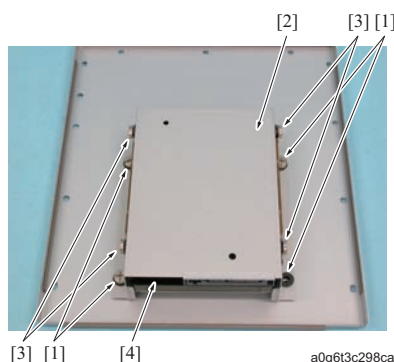
Note

- Be sure to adjust the distance a [6] between the thermostat /3 (TS3) and the fusing heating roller so that it becomes equal to the thickness of the thermostat positioning jig /B.
Standard value: $a = 3.0 \pm 0.2\text{mm}$

4. Apply Screw-lock to the screw [5].
5. Be sure that the reinstallation of the following parts follows the removal steps in reverse.

2.2.27 Hard disk /1**(1) Procedure**

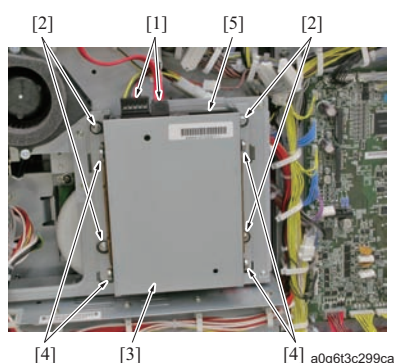
a0g6t3c297ca



a0g6t3c298ca

1. Remove the upper cover /Rt. (Refer to [G.2.2.10 Upper cover /Rt](#))
2. Remove 12 screws [1].
3. Remove and turn over the cover [2], and disconnect 2 connectors [3].

4. Remove 4 screws [1] and then remove the hard disk mounting bracket [2].
5. Remove 4 screws [3] and then remove the hard disk /1 (HDD1) [4].
6. Reinstall the above parts following the removal steps in reverse.

2.2.28 Hard disk /2**(1) Procedure**

a0g6t3c299ca

1. Remove the rear cover. (Refer to [G.2.2.2 Rear cover](#))
2. Remove 2 connectors [1].
3. Remove 4 screws [2] and then remove the hard disk mounting bracket [3].
4. Remove 4 screws [4] and then remove the hard disk /2 (HDD2) [5].
5. Reinstall the above parts following the removal steps in reverse.
6. After reinstalling the hard disk /2 (HDD2), conduct the following item.
- IC HDD format
(Refer to [I.7. IC HDD FORMAT](#))

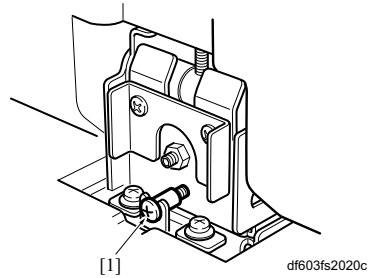
3. DF-615

3.1 Items not allowed to be disassembled/reassembled

3.1.1 DF skew adjustment screw

Note

- The skew adjustment by the DF skew adjustment screw [1] is not allowed as a rule.



3.2 List of disassembling and assembling parts

No.	Section	Parts name
1	ADF	DF main body

3.3 Disassembling and assembling procedures

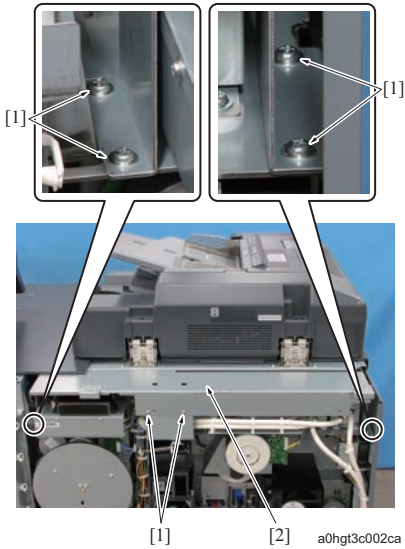
3.3.1 Precautions on disassembling and assembling

⚠ CAUTION

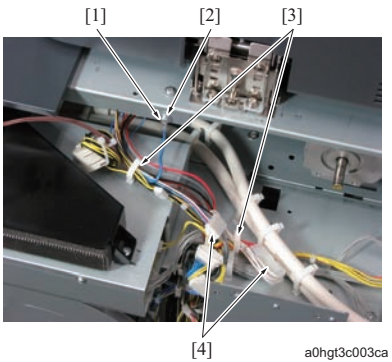
- Be sure to unplug the power plug from the power outlet.

3.3.2 DF

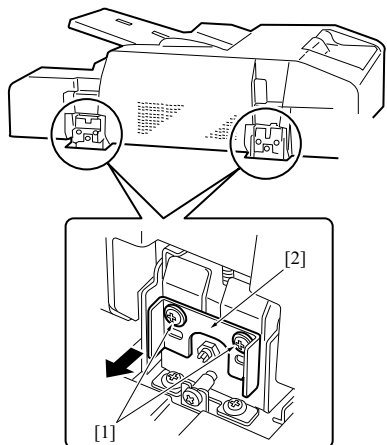
(1) Procedure for removal



1. Remove the main body rear cover. (Refer to [G.2.2.2 Rear cover](#))
2. Remove the upper cover /Rr1 of the main body. (Refer to [G.2.2.8 Upper cover /Rr1](#))
3. Remove the upper cover /Rr2 of the main body. (Refer to [G.2.2.9 Upper cover /Rr2](#))
4. Remove 6 screws [1] and remove the exterior mounting plate [2] of the main body.

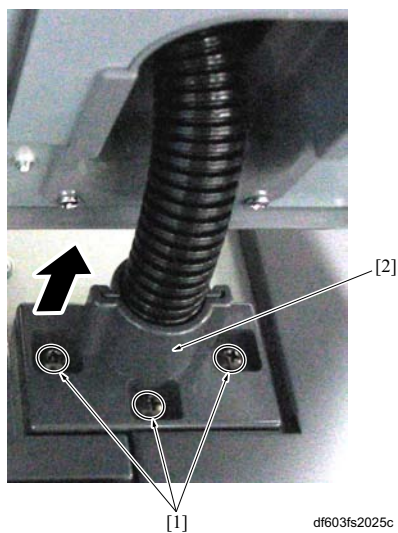


5. Remove the screw [1], and remove the ground terminal [2].
6. Remove 2 clamps [4] and disconnect 2 connectors [4].



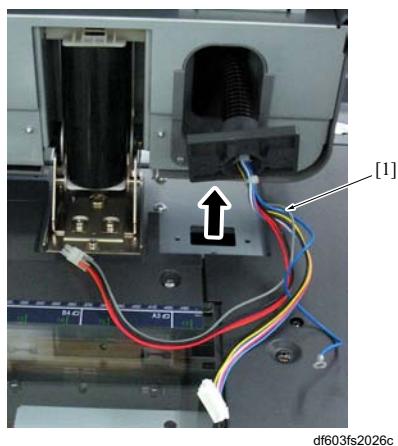
df603fs2023c

7. Remove 2 screws [1] and then remove 2 angle adjustment plates [2].



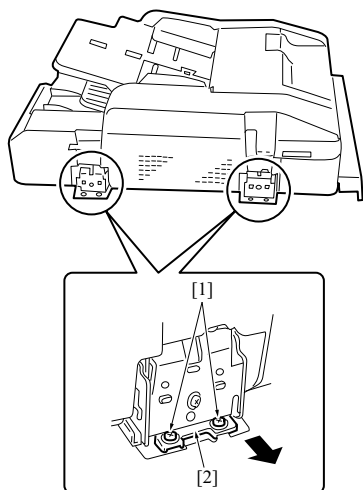
df603fs2025c

8. Open the DF until it is vertical.
9. Remove 3 screws [1] and then remove the cable conduit [2].



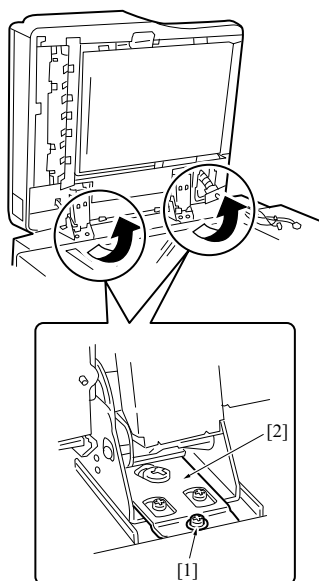
df603fs2026c

10. Pull out the cable [1] to the upper side of the main body.



df603fs2027c

11. Close the DF, remove 2 screws [1] each, and then remove 2 fixing plates /Rr [2].



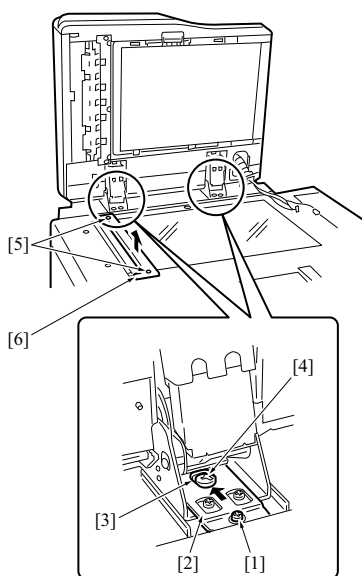
df603fs2028c

12. Open the DF until it is vertical.
13. Remove 1 screw [1] on each plate while supporting the DF, and remove 2 fixing plates /Fr [2].
14. Remove the DF from the main body.

Note

- The DF may fall to the back side when the fixing plate /Fr [2] is removed. Be sure to conduct operations while supporting it.

(2) Procedure for reinstallation



df603fs2029c

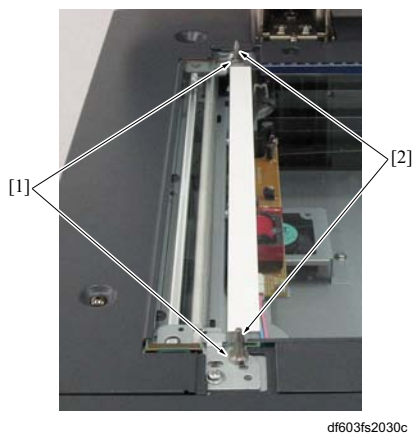
1. With the DF set to the main body, temporarily hold 2 fixing plates / Fr [2] with a screw [1].

Note

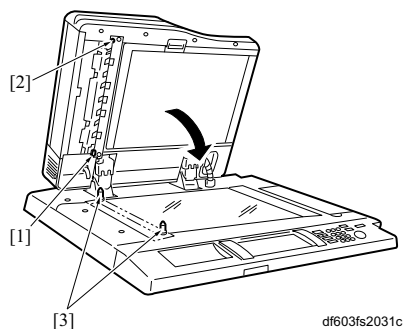
- For the fixing plate /Fr [2], be sure to insert the potbellied hole section [3] under the guide screw [4].

2. Remove 2 screws [5] and remove the original stopper plate /Lt [6].
3. Remove the cable conduit following the removal steps in reverse.
4. Reinstall other parts following the steps 2 to 6 in reverse.

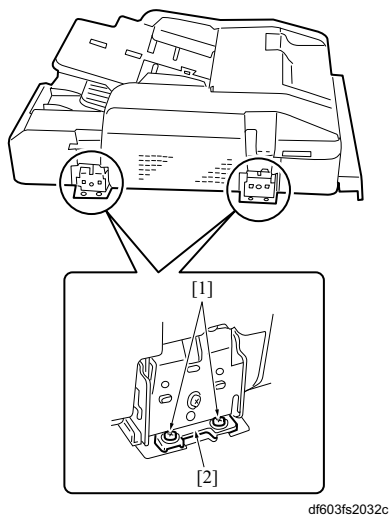
5. Install 2 positioning jigs [2] of the DF in 2 holes [1] provided in the place to which the original stopper plate /Lt is attached.



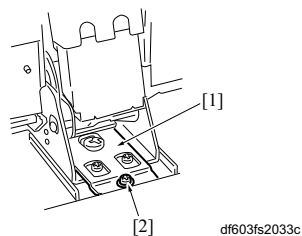
6. Close the DF slowly and set the reference hole (oval) [1] and the reference hole (round) [2] to the DF positioning jigs [3].

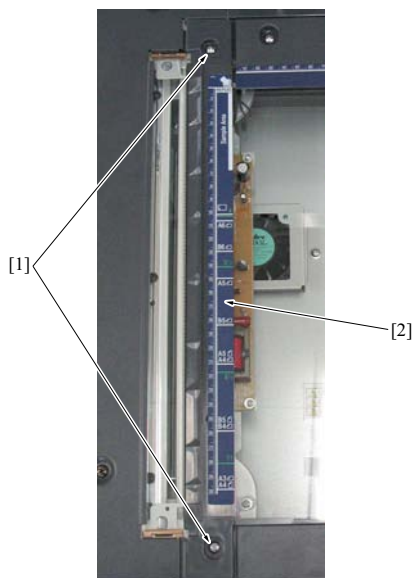


7. With the positions put together, reinstall 2 fixing plates /Rr [2] with 2 screws [1] each.



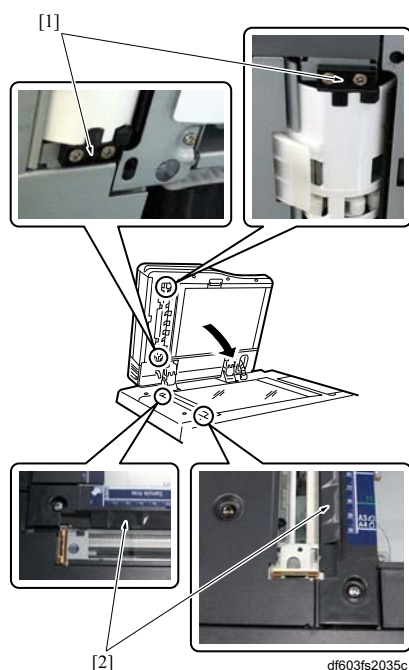
8. Open the DF and tighten the screw [2], 1 for each plate, of the fixing plates /Fr [1].





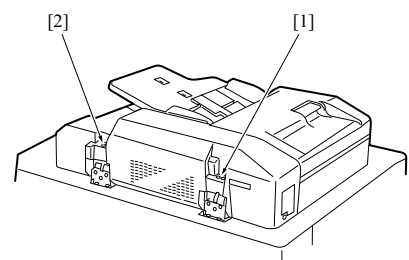
df603fs2034c

9. Remove the DF positioning jig and reinstall the original stopper plate /Lt [2] with 2 screws [1].



df603fs2035c

10. Close the DF and check to see if each of 2 stopper pieces [1] on the DF side comes in touch with the dent [2] in the original stopper plate /Lt on the main body side.



df603fs2036c

11. When the stopper pieces do not get contact with the dent on the original stopper plate /Lt at the same time, make adjustments by turning the adjusting screw A [1].

Note

- When a satisfactory adjustment cannot be obtained with the adjusting screw A [1], make adjustments turning the adjusting screws A [1] and B [2] alternately.

12. Repeat the steps 10 and 11 until each of the stopper pieces get contact with the dent on the original stopper plate /Lt at the same time.
13. Reinstall the angle adjustment plate following the removal step 7 in reverse.
14. Reinstall the main body rear cover.

4. PF-702

4.1 List of disassembling and assembling parts

No.	Section	Parts name
1	Cover	Right cover
2		Rear cover
3		Front door
4		PF drive board (PFUDB)
5	Tray section	Tray
6		Lift wire
7		Paper feed assist fans /Fr and /Rr
8		Lift motor
9		Paper feed sensor
10	Conveyance section	Conveyance exit unit
11		Vertical conveyance units /Up and /Lw

4.2 Disassembling and assembling procedures

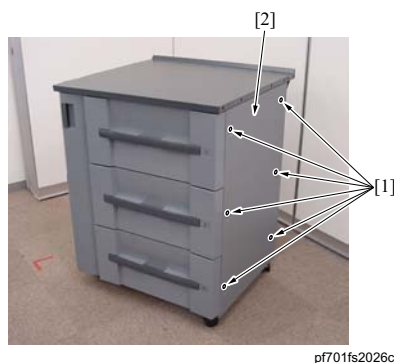
4.2.1 Precautions on disassembling and assembling

⚠ CAUTION

- Be sure to unplug the power plug from the power outlet.

4.2.2 Right cover

(1) Procedure

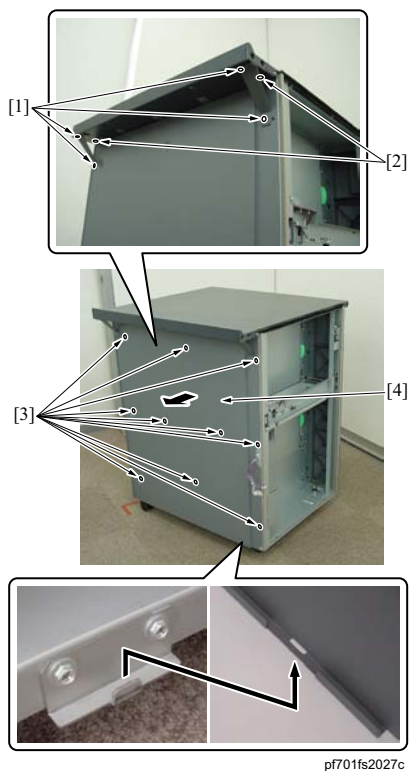


pf701fs2026c

1. Remove 6 screws [1] and then remove the right cover [2].
2. Reinstall the above parts following the removal steps in reverse.

4.2.3 Rear cover

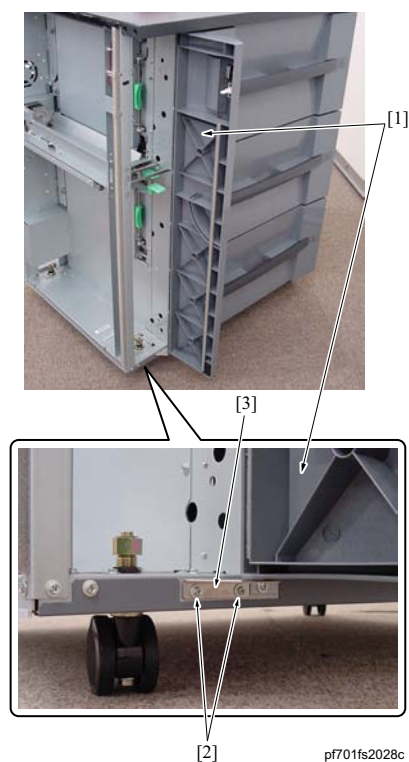
(1) Procedure



1. Remove the screws [1], 2 each, and then remove 2 stays [2].
2. Remove 10 screws [3] and then remove the rear cover [4].
3. Reinstall the above parts following the removal steps in reverse.

4.2.4 Front door

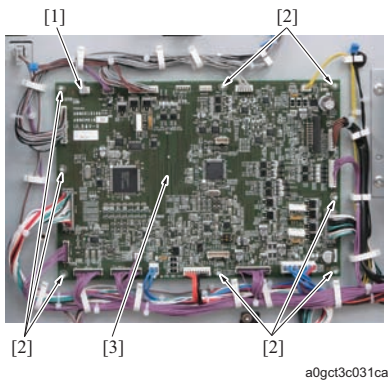
(1) Procedure



1. Open the front door [1].
2. Remove 2 screws [2] and then remove the front door [1] after removing the mounting plate [3].

4.2.5 PF drive board (PFUDB)

(1) Procedure



a0gct3c031ca

1. Remove the rear cover. (Refer to [G.4.2.3 Rear cover](#))
2. Disconnect the connector [1].
3. Remove 8 clamps [2] and then remove the PF drive board (PFUDB).

4.2.6 Tray

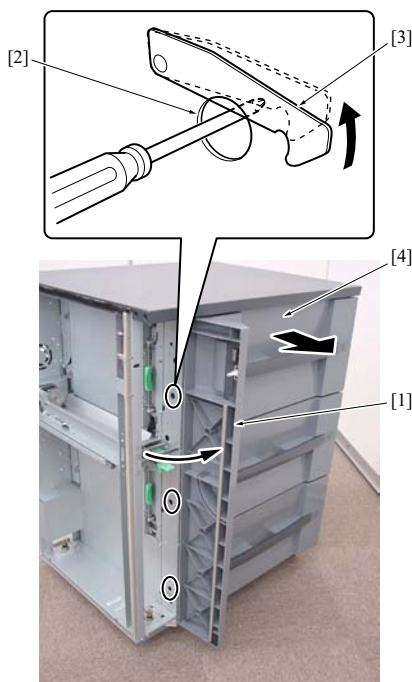
⚠ CAUTION

- Be sure to pull out the trays one at a time. Avoid pulling out more than the 2 trays at once. This may cause the PF to turn over.

Note

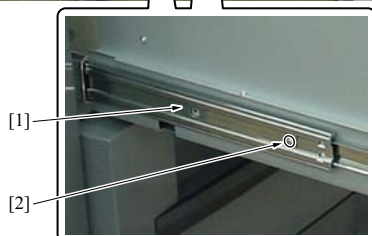
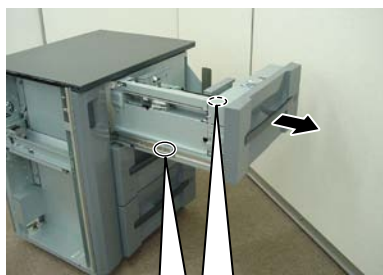
- The removing/reinstallation procedures of the trays are the same for all the trays 1 to 3. The explanation here is of tray1.
- When raising up the tray, be sure to hold it at the specified positions. Holding it at positions other than those positions specified damage the tray, thus resulting in a paper feed jam.

(1) Procedure



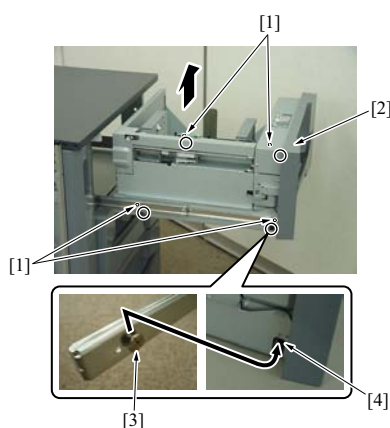
pf701fs2030c

1. Open the front door [1].
2. Insert a driver into the hole [2] and pull out the tray [4] while lifting up a little the tray lock lever [3].
3. If any paper remaining, remove it.



pf701fs2031c

4. Remove the stopper screws [2], 1 each, provided on the right and left rails [1] and further pull out the tray.

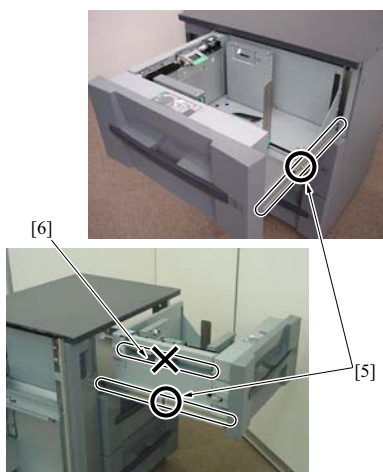


5. Remove the screws [1], 2 each, provided on the right and left rails and lift up the tray [2] at the specified positions to remove it.

Note

- When reinstalling it, be sure to check the knobs [3] provided on 4 rails to ensure they get into the notches [4] of the tray securely.
- When raising up the tray, be sure to hold it at the specified positions [5] and raise it up with 2 persons.
- Do not hold the part indicated with [6] as the part can easily become deformed, which adversely affects paper feed resulting in a paper jam.

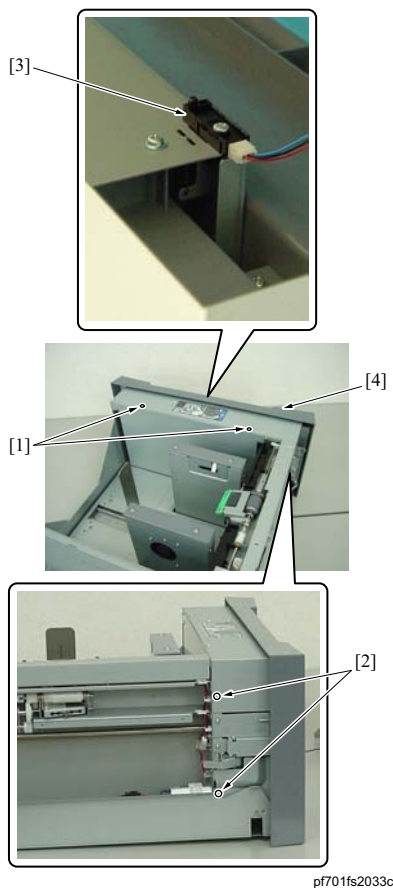
6. Reinstall the above parts following the removal steps in reverse.



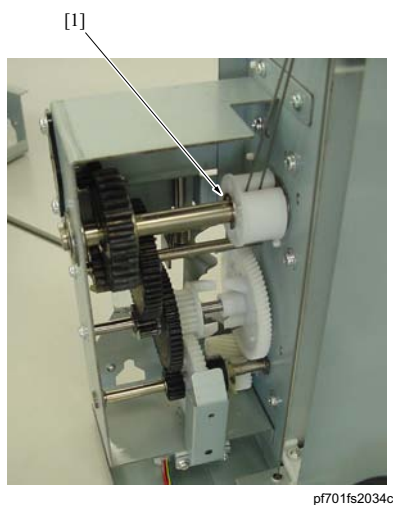
pf701fs2032c

4.2.7 Lift wire**Note**

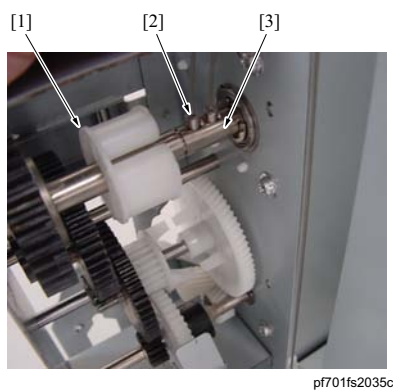
- The removing/reinstalling procedure of the lift wire is the same for trays /1 to /3.

(1) Procedure

1. Remove the tray.
2. Remove 2 screws [1] and then remove the washer and 4 screws [2].
3. Disconnect the connector [3] and remove the front cover [4] of the tray.



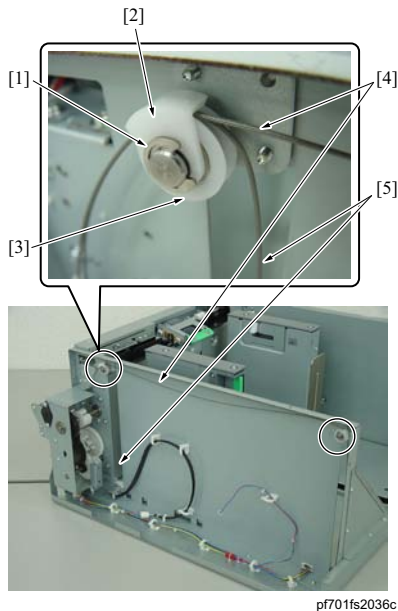
4. Remove the E-ring [1].



5. With the pulley [1] slid, pull out the wire end [2] from the hole of the shaft [3].

Note

- When reinstalling the pulley, be sure to raise the lift plate a little to give slack to the wire you are inserting. Then insert the wire ends [2], one at a time, into the shaft hole and fasten it with the pulley [1]. In this way, the wires can be inserted easily.



pf701fs2036c

6. Remove the E-rings [1], 1 each, and then remove the wire cover [2].
7. Remove the wires /Fr1 [4] and /Fr2 [5] from the pulley [3].

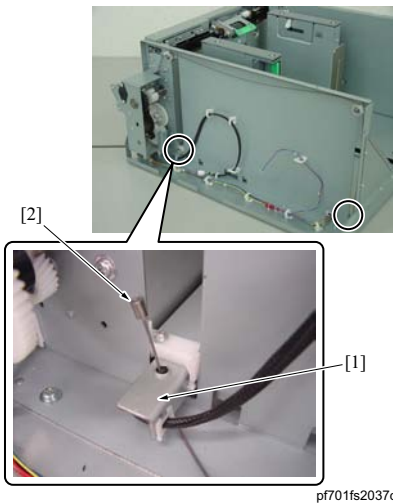
Note

- When installing the wires, be sure to check to see if they are contained in the wire cover [2] and do not cross each other.

8. Pull out the wire /Fr [2] from the lift plate arm [1].

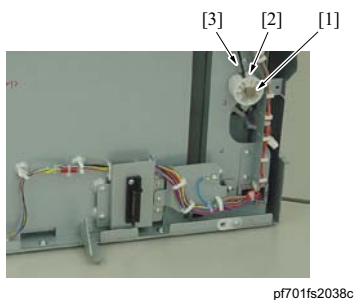
Note

- When pulling out the wire, pull it out gently and be careful not to damage it with the corner of the metal frame.



pf701fs2037c

9. Remove the E-ring [1].
10. Slide the pulley [2] and remove the wire end [3].

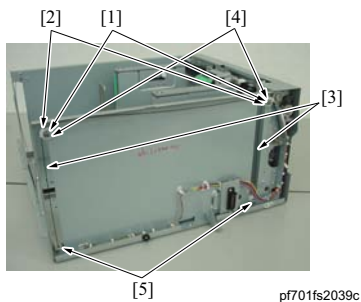


pf701fs2038c

11. Remove the E-ring [1].
12. Remove the pulley cover [2] and then remove the wire /Rr [3] from the pulley [4].
13. Pull out the wire /Rr [3] from the lift plate arm [5].
14. Reinstall the above parts following the removal steps in reverse.

Note

- The wire /Fr is red in color and the wire /Rr is dark blue.
- Be sure to insert each wire into the corresponding shaft hole. The shaft hole on the center side of the tray is used for the shorter wire.
- Check the wires to see if they cross each other.
- After completion of installation, check the lift plate to see if it is horizontal.

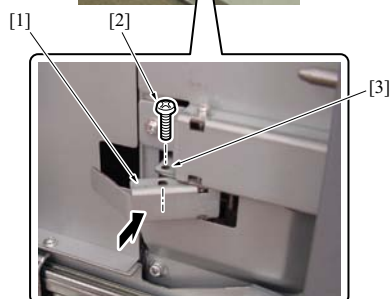


pf701fs2039c

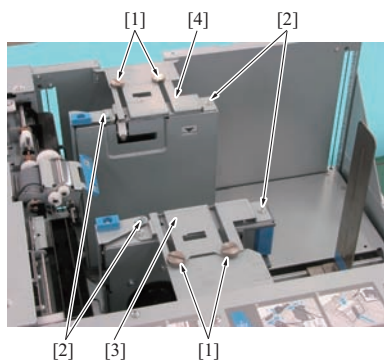
4.2.8 Paper feed assist fan /Fr (FM1/FM3/FM5), /Rr (FM2/FM4/FM6)

Note

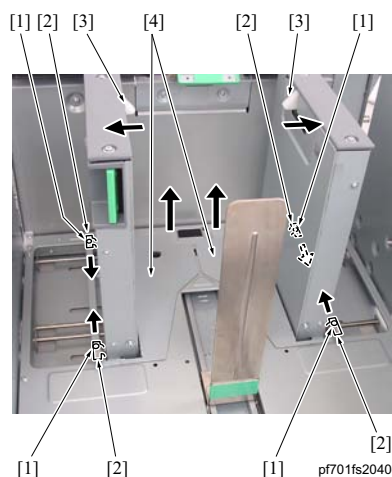
- The removal and reinstallation procedures of the paper feed assist fans are the same for the trays 1 to 3.

(1) Procedure

pf701fs2063c



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pf701fs2040c

1. Remove the tray. (Refer to [G.4.2.6 Tray](#))
2. Push in the release lever [1] and insert the screw [2] into the hole [3] to fasten the release lever [1].
3. Remove the tray front cover. (Refer to [G.4.2.7 Lift wire](#))

4. Remove 4 stepped screws [1] and 4 screws [2], and remove the paper guide support plates /Fr [3] and /Rr [4].

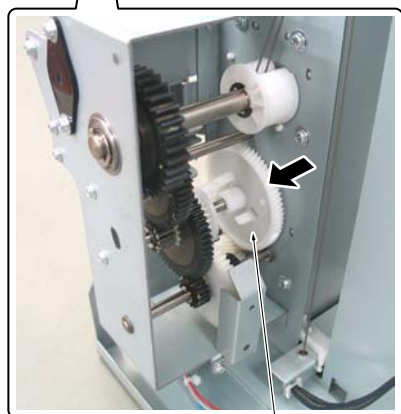
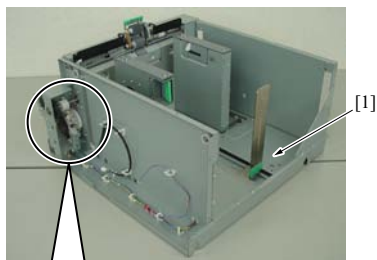
Note

- There is an E-ring on the stepped screw to prevent coming off. Be sure to remove this E-ring together.

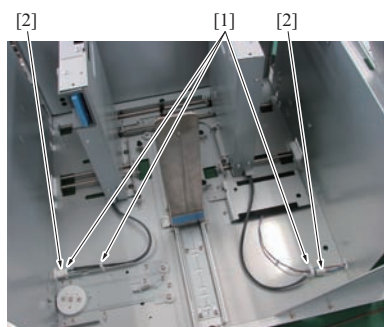
5. Loosen the 2 screws [1] and move the metal fitting [2] in the arrow-marked direction.
6. Hold down the paper stopper [3] and pull out the lift plate cover [4] upward to remove it.

Note

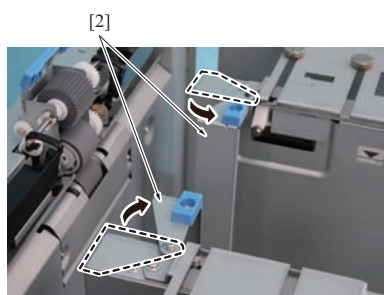
- When removing it, lift up the pick-up roller for evacuation.
- When reinstalling the bracket [2], push it slightly in the opposite direction of removal and fix it with screws.



[2] pf701fs2041c



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a0gct3c034ca

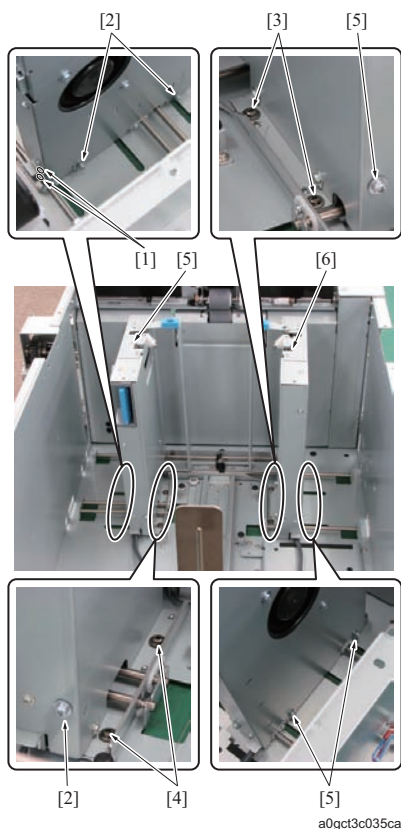
7. Rotate the gear of the drive section by hand to raise up the lift plate [1] upward and move the coupling gear [2] in the arrow-marked direction to fix the lift plate.

8. Remove 3 wire binding bands [1] and disconnect 2 connectors [2].

Note

- To make it clear, the picture shows the condition in which the lift plate is removed.

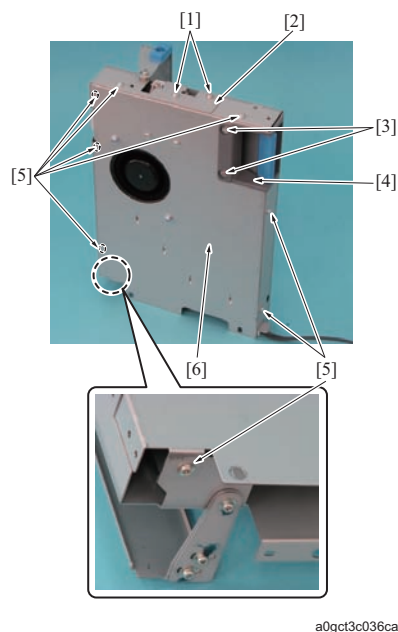
9. Move the 2 small-size guides [1] inward as shown in the picture.



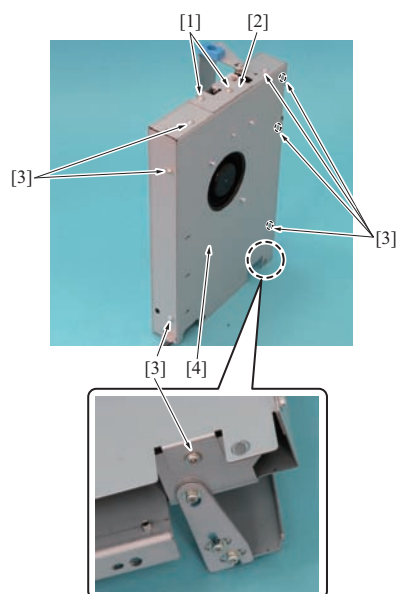
10. Remove 2 screws [1], 3 screws (including the washers) [2], 2 screws [3], 2 screws [4] and 3 screws (including the washers) [5].
11. Remove the paper guides /Fr [6] and /Rr [7].

Note

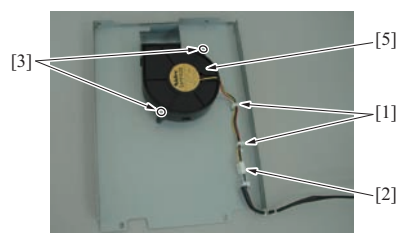
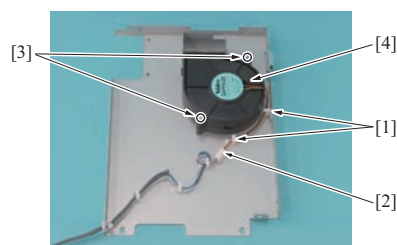
- When reinstalling it, be sure to fasten the paper guides /Fr [6] and /Rr [7] with the screws [3] and the screws [4], 2 each. Then tentatively tighten 2 screws [1], 3 screws [2] and 3 screws [5], tighten them up fully after placing the paper guides /Fr and /Rr in a vertical position.
- To check the verticality of the paper guides, move the guide plate up and down with copy paper placed on the lift plate and check the clearance of the paper guide.



12. Remove 2 screws [1] of the paper guide /Fr and then remove the paper guide mounting plate [2].
13. Remove 2 screws [3] and then remove the lever cover [4].
14. Remove 8 screws [5] and remove the fan motor mounting plate [6].



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a0gct3c038ca

15. Remove 2 screws [1] of the paper guide /Rr and then remove the paper stopper mounting plate [2].
16. Remove 8 screws [3] and then remove the fan motor mounting plate [4].

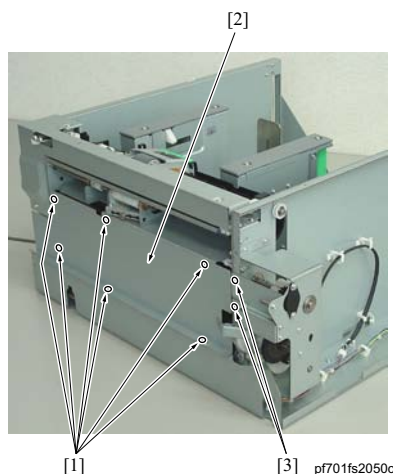
17. Remove the wire binding bands [1], 2 each, and disconnect the connectors [2], 1 each.
18. Remove the screws (nuts) [3], 2 each, and then remove the paper feed assist fans /Fr (FM1/FM3/FM5) [4] and /Rr (FM2/FM4/FM6) [5].
19. Reinstall the above parts following the removal steps in reverse.

Note

- After completion of installation, be sure to conduct the paper size detection adjustments. (Refer to [I.5.3.1 Tray size adjustment \(Tray adjustment\)](#))

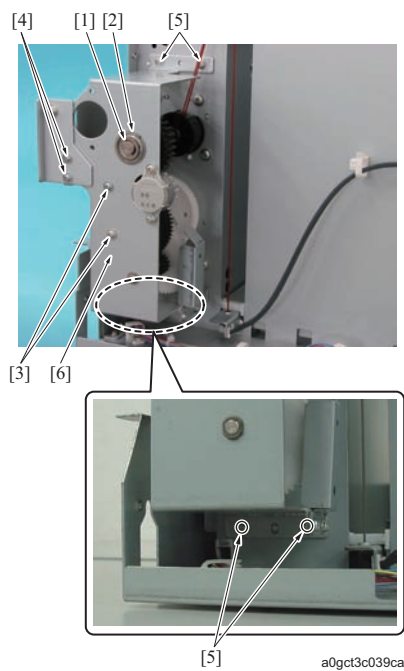
4.2.9 Paper lift motor (M42/M43/M44)**Note**

- The removal and reinstallation procedures of the paper lift motor are the same for the trays 1 to 3.

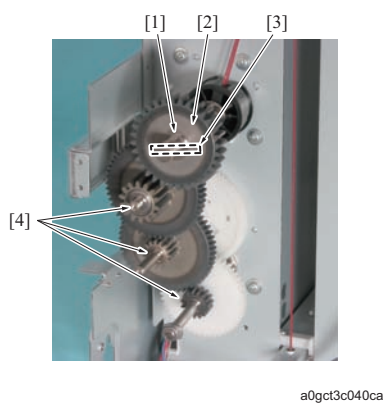
(1) Procedure

pf701fs2050c

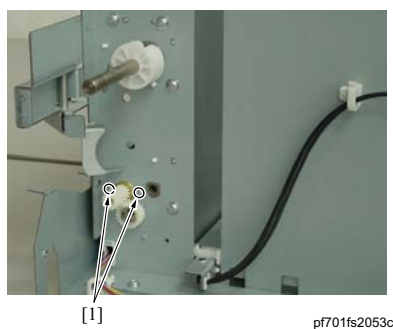
1. Remove the tray. (Refer to [G.4.2.6 Tray](#))
2. Remove the tray front cover. (Refer to [G.4.2.7 Lift wire](#))
3. Remove 6 screws [1], and remove the motor cover [2].
4. Remove 2 screws [3].



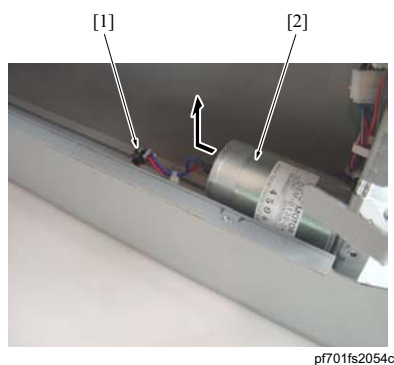
5. Remove the E-ring [1] and remove the bearing [2].
6. Remove 2 screws [3].
7. Remove 2 screws [4].
8. Remove 4 screws [5].
9. Remove the gear mounting plate [6].



10. Remove the E-ring [1] and then remove the gear [2] and the pin [3].
11. Remove 3 gears [4] together with the shaft.



12. Remove 2 screws [1].

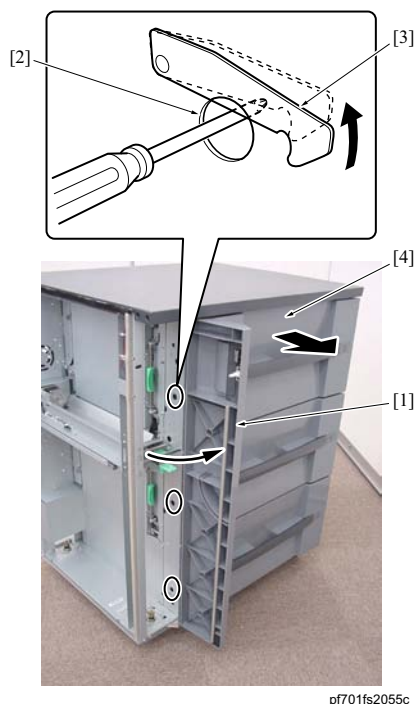


13. Disconnect the connector [1] and remove the paper lift motor (M42/M43/M44) [2].
14. Reinstall the above parts following the removal steps in reverse.

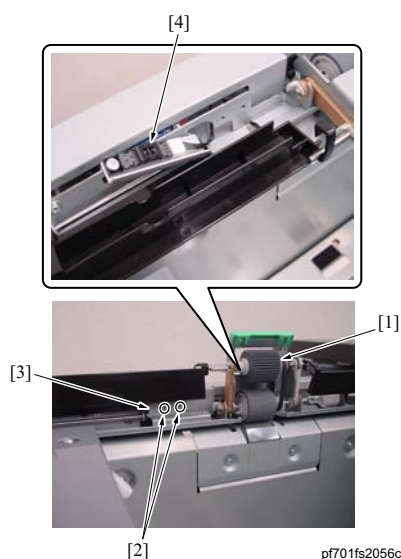
4.2.10 Cleaning the paper feed sensor (PS3/7/11)

(1) Procedure

1. Open the front door [1].
2. Insert a driver into the hole [2] and pull out the tray [4] while lifting up a little the tray lock lever [3].



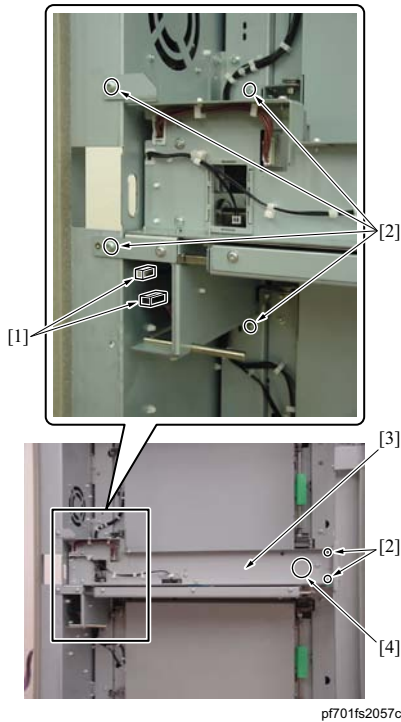
3. Lift up the pick-up roller [1].
4. Remove 2 screws [2] to remove the sensor mounting plate [3], and then turn over the paper feed sensor [4] for cleaning.
5. Reinstall the above parts following the removal steps in reverse.



4.2.11 Conveyance exit unit

Note

- Be sure to avoid holding the conveyance exit unit at the paper-through section. This may deform the paper-through section and affect the paper through, thus resulting in a jam.

(1) Procedure

1. Disconnect 2 connectors [1].
2. Remove 6 screws [2] and then remove the conveyance exit unit [3].

Note

- Be sure to avoid holding the conveyance exit unit at the paper-through section. This may deform the paper-through section and affect the paper through, thus resulting in a jam.

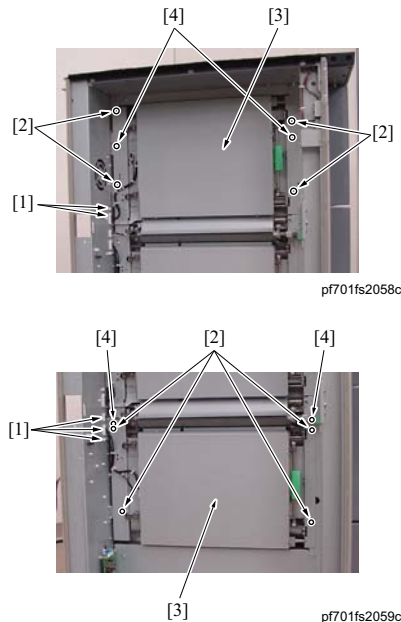
3. Reinstall the above parts following the removal steps in reverse.

Note

- Be sure to reinstall it so that the lever placed at marked with " ! " [4] of the vertical conveyance unit /Lw comes to the upper side.

4.2.12 Vertical conveyance units /Up and /Lw**Note**

- Be sure to avoid holding the vertical conveyance unit at the paper-through section. This may deform the paper-through section and affect the paper through, thus resulting in a jam.

(1) Procedure

1. Remove the exit conveyance unit. (Refer to [G.4.2.11 Conveyance exit unit](#))
2. Disconnect 2 connectors [1].
3. Remove 4 screws [2] and then remove the vertical conveyance unit /Up [3].

Note

- When reinstalling the Vertical conveyance unit, be sure to align it with the positioning pin [4].

4. Disconnect 3 connectors [1].
5. Remove 4 screws [2] and then remove the vertical conveyance unit /Lw [3].

Note

- When reinstalling the Vertical conveyance unit, be sure to align it with the positioning pin [4].

6. Reinstall the above parts following the removal steps in reverse.

5. PF-703

5.1 List of disassembling and assembling parts

No.	Section	Parts name
1	Cover	Right cover
2		Rear cover
3		Front door
4		Tray front cover
5	Paper feed tray section	Tray
6		Lift wire
7		Paper feed assist fan /Fr1 (FM1), /Fr2 (FM5), /Fr3 (FM9), /Rr1 (FM2), /Rr2 (FM6), /Rr3 (FM10)
8		paper leading edge separation fan /Fr1 (FM3), /Fr2 (FM7), /Fr3 (FM11), /Rr1 (FM4), /Rr2 (FM8), Rr3 (FM12)
9		Paper lift motor /1 (M7), /2 (M8), /3 (M9)
10		Paper feed check window
11	Others	PF drive board (PFUDB)
12	Cover	Left cover /Up, /Lw (PI-PFU only)
13	Others	Multi feed detection boards /S (MFDBS) and /R (MFDBR)

5.2 Disassembling and assembling procedures

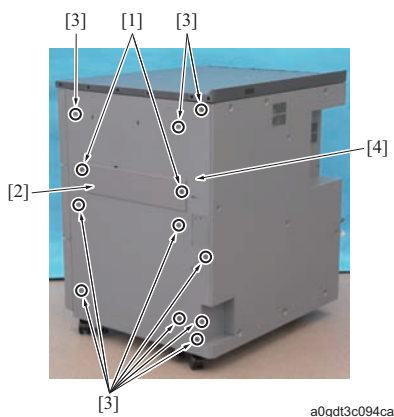
5.2.1 Precautions on disassembling and assembling

⚠ CAUTION

- Be sure to unplug the power plug from the power outlet.

5.2.2 Right cover

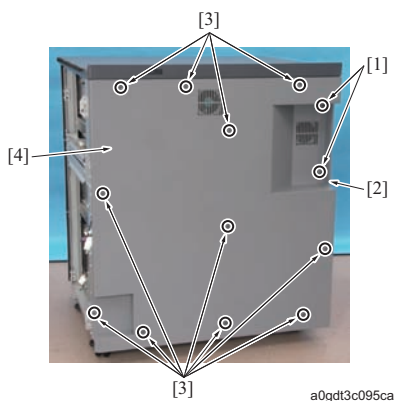
(1) Procedure



- Remove 2 screws [1] and remove the paper feed cover [2].
- Remove 10 screws [3] and then remove the right cover.
- Reinstall the above parts following the removal steps in reverse.

5.2.3 Rear cover

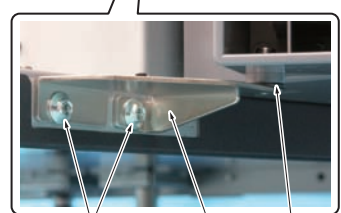
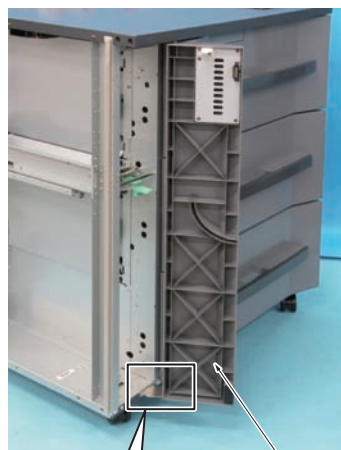
(1) Procedure



- Remove 2 screws [1] and then remove the PI-PFU cover [2] (PI-PFU only).
- Remove 11 screws [3] and then remove the rear cover [4].
- Reinstall the above parts following the removal steps in reverse.

5.2.4 Front door

(1) Procedure

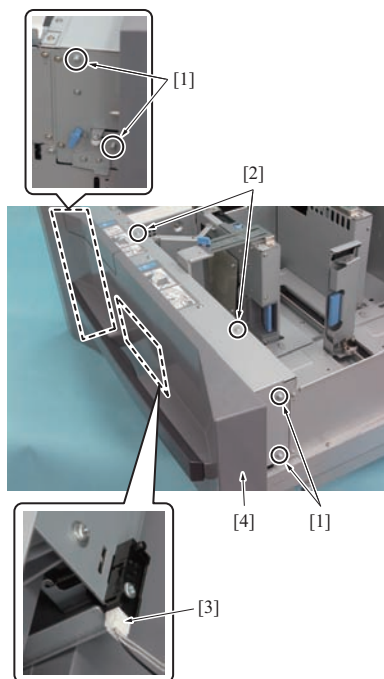


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1. Open the front door [1].
2. Remove 2 screws [2] and remove the mounting plate [3] and the washer [4], and then remove the front door [1].
3. Reinstall the above parts following the removal steps in reverse.

5.2.5 Tray front cover

(1) Procedure

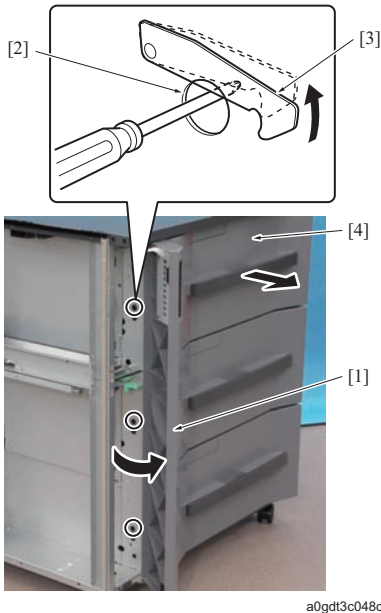


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1. Pull out the paper feed tray. (Refer to [G.5.2.6 Tray](#))
2. Remove 4 screws [1] and 2 screws [2] and disconnect the connector [3], and then remove the tray front cover [4].

5.2.6 Tray

(1) Procedure for pulling out the tray

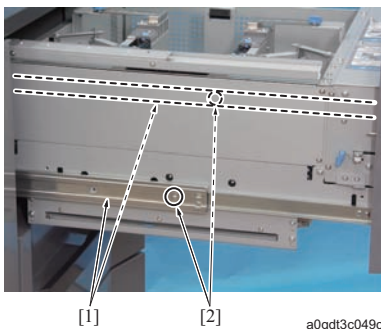


1. Open the front door [1].
2. Insert a driver into the hole [2] and pull out the tray [4] while lifting up a little the tray lock lever [3].

(2) Procedure for pulling out the tray at the maximum

⚠ CAUTION

- Be sure to pull out the trays one at a time. Avoid pulling out more than 2 trays at once. It causes the PF to turn over.



1. Pull out the paper feed tray. (Refer to [G.5.2.6.\(1\) Procedure for pulling out the tray](#))
2. Remove the stopper screws [2], 1 each, provided on the right and left rails [1] and further pull out the tray.
3. Reinstall the above parts following the removal steps in reverse.

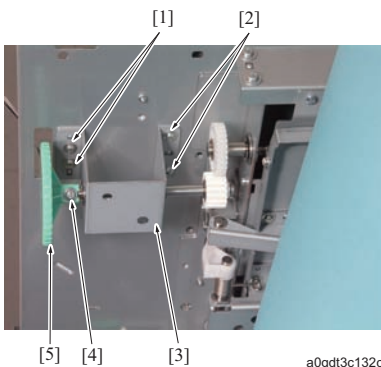
(3) Procedure for removing the tray

⚠ CAUTION

- Be sure to perform this operation with 2 people because the tray unit is heavy.

Note

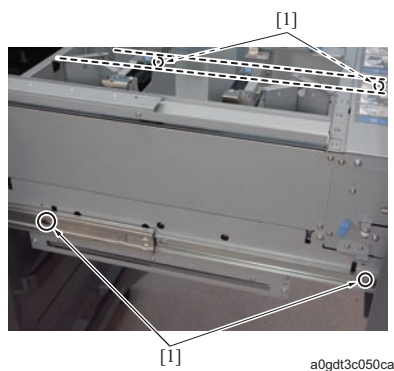
- The removing/installing procedure of the tray is common between the trays1, 2, and 3 but the installation position is different between the tray1 and the trays2 and 3 at some part. This section shows the procedure for the tray 1 and the different parts are described in the procedure.
- Be sure to lift the tray by holding the specified positions. Holding it at positions other than those positions specified damage the tray, thus resulting in a paper feed jam.



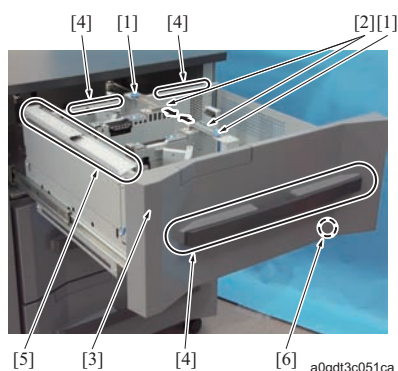
1. Pull out the tray at the maximum. (Refer to [G.5.2.6.\(2\) Procedure for pulling out the tray at the maximum](#))
2. Remove the screws [1] and [2], 2 each, and then remove the jam release gear assy [3]. (Tray1 only)

Note

- Be careful not to let 2 screws [1] oblique when reinstalling it. When it is hard to reinstall, remove the tray front cover (refer to [G.5.2.5 Tray front cover](#)) and loosen the screw [4] to remove the jam release knob [5].



3. Remove screws [1], 2 each, from the left and right rails.



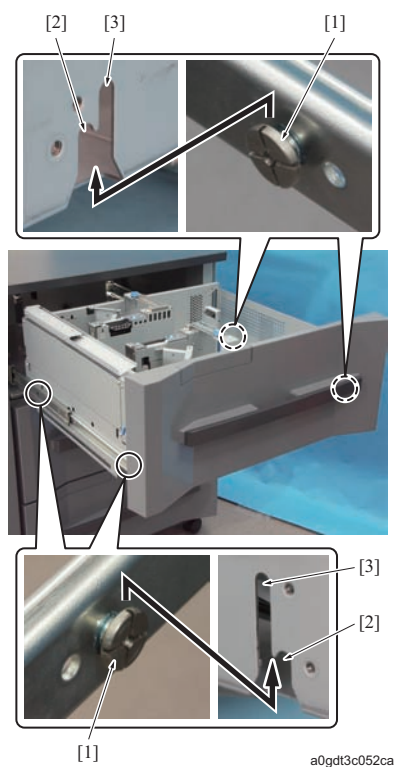
4. Loosen 2 screws [1] and set the side guide [2] to the minimum size.
5. Remove the tray by holding the specified positions [4] of the tray [3] and lifting upward.

CAUTION

- Be sure to lift the tray with 2 people.

Note

- Be sure to hold the specified positions [4] and not to hold the positions [5] that can be easily deformed. This may affect the paper tray, thus resulting in a jam.



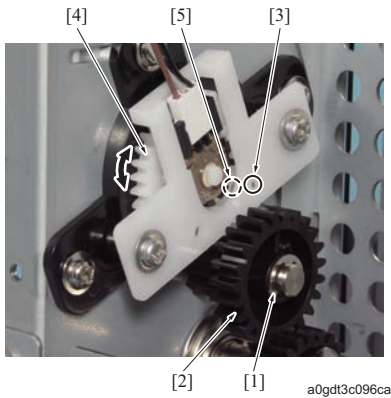
6. Reinstall the above parts following the removal steps in reverse.

Note

- When reinstalling it, be sure to insert the 4 knobs [1] on the rail to the shallow groove [2] in the case of the tray1. In the case of the trays2 and 3, be sure to insert the knobs to the deep groove [3].

5.2.7 Lift wire

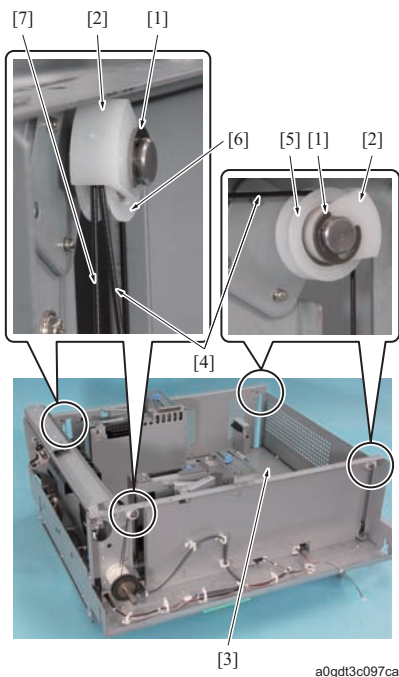
(1) Procedure



1. Remove the tray. (Refer to [G.5.2.6 Tray](#))
2. Remove the tray front cover. (Refer to [G.5.2.5 Tray front cover](#))
3. Remove the paper leading edge separation fan. (Refer to [G.5.2.9 Paper leading edge separation fan /Fr1 \(FM3\), /Fr2 \(FM7\), /Fr3 \(FM11\), /Rr1 \(FM4\), /Rr2 \(FM8\), /Rr3 \(FM12\)](#))
4. Remove the paper lift gear assy. (Refer to [G.5.2.10 Paper lift motor /1 \(M7\), /2 \(M8\), /3 \(M9\)](#))
5. Remove the E-ring [1] and the gear [2].

Note

- When reinstalling it, be sure to reinstall the gear [2] with the aligned position by inserting the screwdriver to the quadrilateral hole [3] and rotating the gear [4] going through the hole [5] of the gear [4].



6. Remove 4 E-rings [1] and then remove 1 each of the pulley covers [2].
7. Lift the paper lift plate [3] horizontally to loosen 1 each of the lift wires /Rt [4] back and forth, and then remove it from the pulleys [5] and [6].
8. Lift the paper lift plate [3] horizontally to loosen 1 each of the lift wires /Lt [7] back and forth, and then remove it from the pulleys [6].

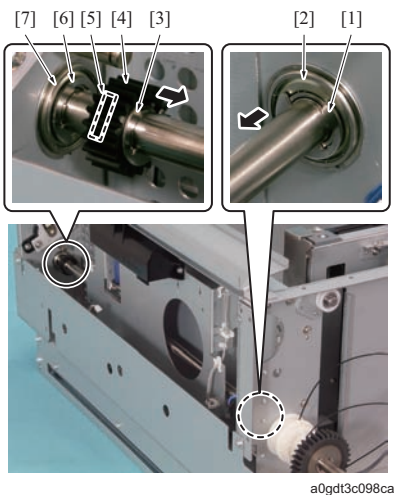
Note

- When hooking the lift wire to the pulley, be sure to hook the shorter lift wire /Lt [7] to the inside and the longer lift wire /Rt [4] to the outside.
- When installing the wires, make sure that the lift wires are properly routed inside the wire covers and are not crossed each other.

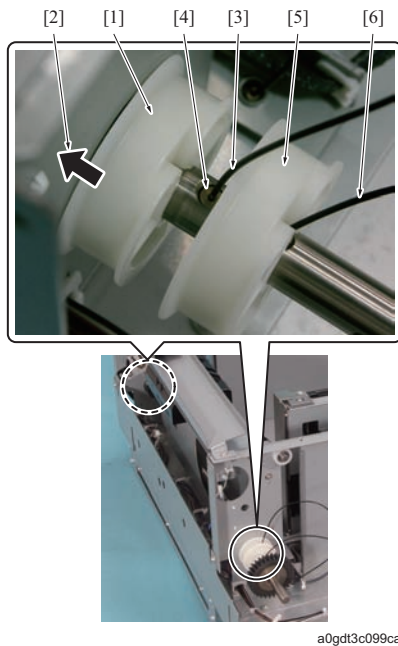
9. Remove the pulleys [5] and [6].

Note

- When reinstalling the pulley, be sure that the metal bearing comes to the outside.



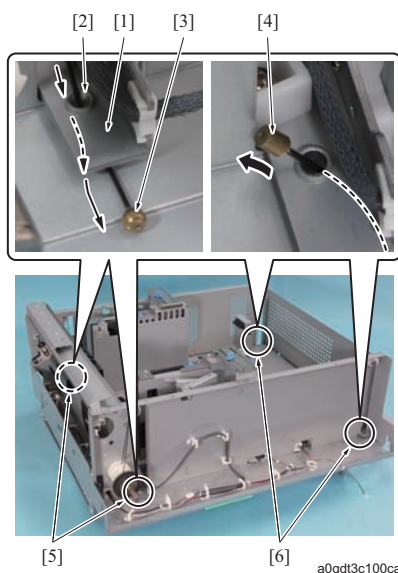
10. Remove the E-ring [1] and move the bearing [2] inward.
11. Remove the E-ring [3] and move the gear [4] inward and then remove the pin [5].
12. Remove the E-ring [6] and move the bearing [7] inward.



13. Remove the lift wire /Lt [3] from the shaft hole [4] by moving the pulley [1] inward [2], and then remove the lift wire /Rt [6] by moving the pulley [5].

Note

- Be sure to put the shorter lift wire /Lt [7] to the inside and the longer lift wire /Rt [4] to the outside.



14. Pull out the lift wires /Rt and /Lt [3] from the hole [2] of the lift plate arm [1] to downward.

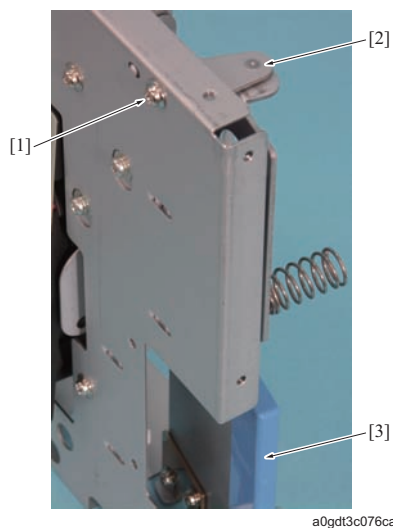
Note

- When reinstalling it, be sure to put the circular cylindrical shape wire end [4] from the downside of the hole [2].
- Be sure to install the shorter lift wire /Lt to the lift plate arm [5] and the longer lift wire /Rt to the lift plate arm [6].
- When pulling/installing it, be sure to pull out carefully and be careful not to damage it with the corner of the metal plate.

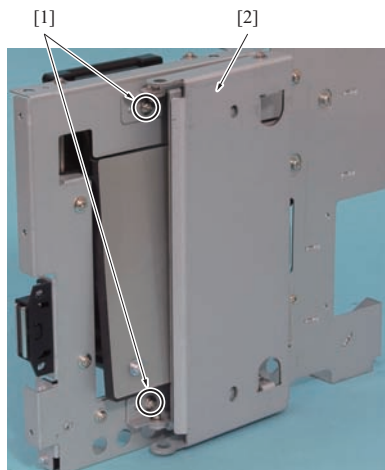
15. Reinstall the above parts following the removal steps in reverse.

5.2.8 Paper feed assist fan /Fr1 (FM1), /Fr2 (FM5), /Fr3 (FM9)

(1) Procedure

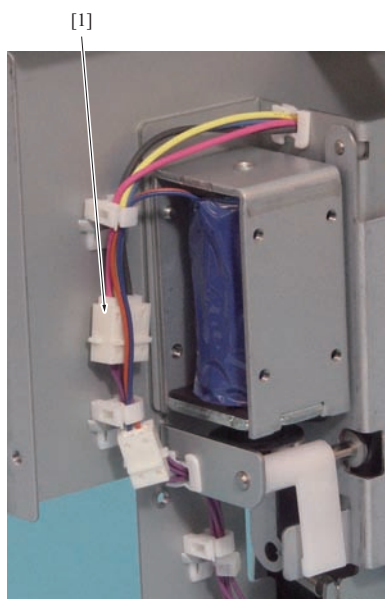


1. Pull out the tray at the maximum. (Refer to [G.5.2.6 Tray](#))
2. Remove the side guide assy /Fr and remove the cover, and then open the side guide assy. (Refer to [F.7.2.2.\(3\) Removing procedures of the shutter solenoids /Fr1 \(SD4\), /Fr2 \(SD6\) and /Fr3 \(SD8\)](#))
3. Remove the screw [1] and then remove the supporting bracket [2] and the side guide lock lever [3].



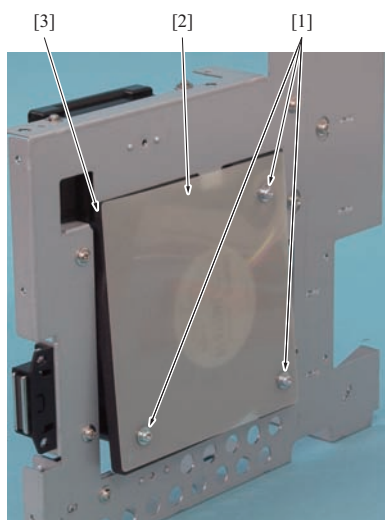
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4. Remove 2 screws [1] and remove the reinforcing hinge [2].



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5. Disconnect the connector [1].



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6. Remove 3 screws [1] and then remove the protecting sheet [2], the paper feed assist fans /Fr1 (FM1), /Fr2 (FM5) and /Fr3 (FM9) [3].

Note

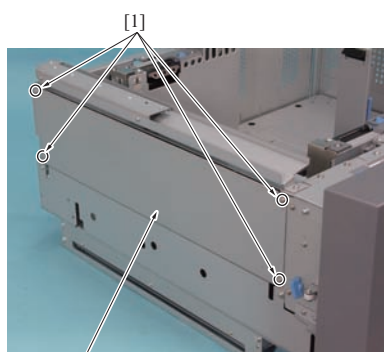
- When reinstalling it, be sure to install so that the wiring harness comes to the position in the picture.
- Be sure to install so that the protecting sheet does not slack.

7. Reinstall the above parts following the removal steps in reverse.

5.2.9 Paper leading edge separation fan /Fr1 (FM3), /Fr2 (FM7), /Fr3 (FM11), /Rr1 (FM4), /Rr2 (FM8), /Rr3 (FM12)

Note

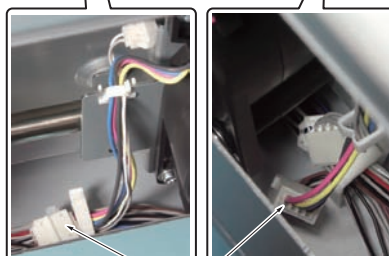
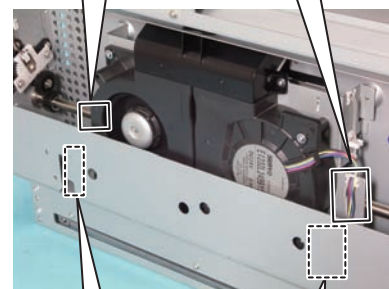
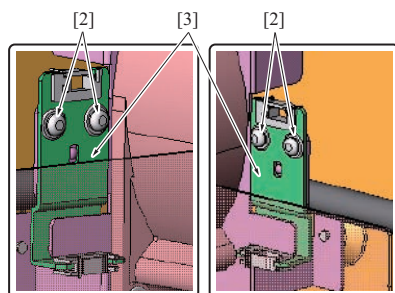
- Since the bottom of the tray 1 has the horizontal conveyance unit, the height inside the tray is different from the height of the trays 2 and 3. Therefore, the tray needs to be removed to remove the paper leading edge separation fan of the tray 1. In the case of the trays 2 and 3, the paper leading edge separation fan can be removed while it is installed to PF.

(1) Procedure

[2]

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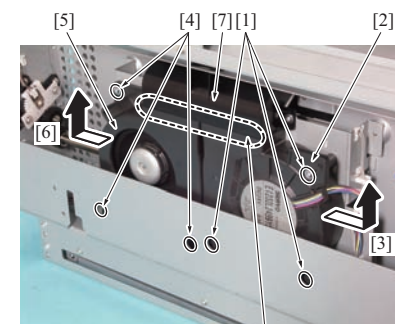
1. Remove the tray. (Refer to [G.5.2.6 Tray](#))
2. Remove 4 screws [1] and then remove the fan cover [2].



[1]

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3. Remove 2 connectors [1].
4. Remove the screw [2] and then remove the 2 wiring harness clamp [3].



[8]

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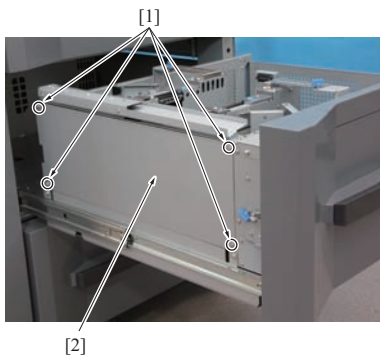
5. Remove 3 screws [1] and remove the paper leading edge separation fan /Fr1 (FM3) [2] by moving it in the arrow-marked direction [3].
6. Remove 3 screws [4] and remove the paper leading edge separation fan /Rr1 (FM4) [5] by moving it in the arrow-marked direction [6].

Note

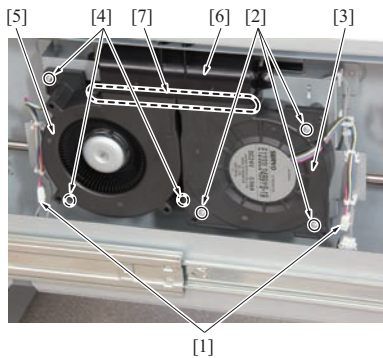
- When reinstalling the paper leading edge separation fans / Fr1 [2] and /Rr1 [5], be sure to press them against the air duct [7] and secure the screws so that there is no space between the contacting section [8].

7. Reinstall the above parts following the removal steps in reverse.

(2) Procedure for the trays 2 and 3



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1. Remove the stopper and pull out the tray at the maximum. (Refer to [G.5.2.6 Tray](#))
2. Remove 4 screws [1] and then remove the fan cover [2].

3. Remove 2 connectors [1].
4. Remove 3 screws [2] and remove the paper leading edge separation fans /Fr2 and /Fr3 [3].
5. Remove 3 screws [4] and remove the paper leading edge separation fans /Rr2 and /Rr3 [5].

Note

- When reinstalling the paper leading edge separation fans /Fr2, /Fr3 [3] and /Rr2, /Rr3 [5], be sure to press them against the air duct [6] and secure the screws so that there is no space between the contacting section [7].

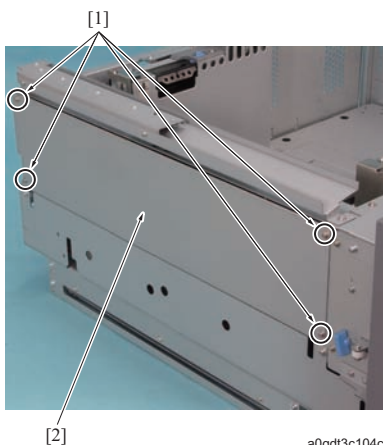
6. Reinstall the above parts following the removal steps in reverse.

5.2.10 Paper lift motor /1 (M7), /2 (M8), /3 (M9)

(1) Removing procedure of the paper lift gear assy

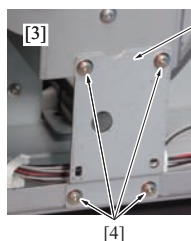
Note

- The removing/installing procedure of the paper lift gear assy is common between the trays 1, 2, and 3 but the installation position is different at some part. This section shows the procedure for the tray 1 and the different parts are described in the procedure.



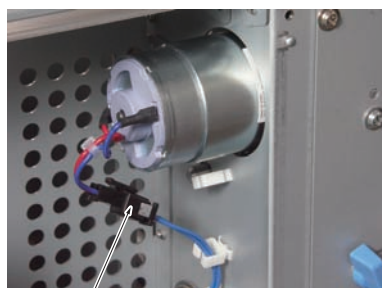
a0gdt3c104ca

1. Remove the tray. (Refer to [G.5.2.6 Tray](#))
2. Remove the tray front cover. (Refer to [G.5.2.5 Tray front cover](#))
3. Remove 4 screws [1] and then remove the fan cover [2].



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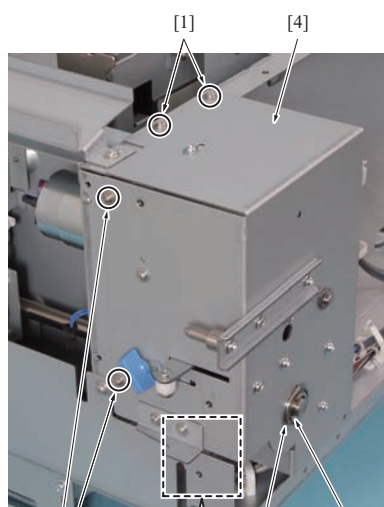
4. Remove 4 screws [2] (in the case of the tray1 [1]) or 4 screws [4] (in the case of the trays2 and 3 [3]) and then remove the reinforcing plate [5].



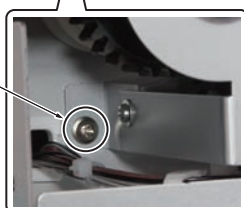
[1]

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5. Disconnect the connector [1].



[1]

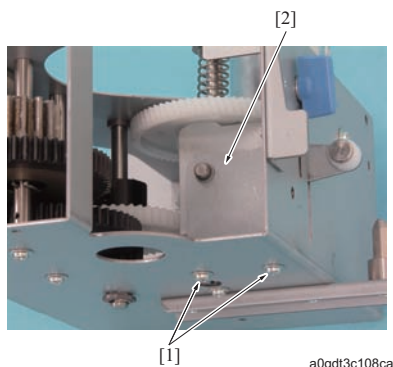


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6. Remove 5 screws [1], the E-ring [2], and the bearing [3] and then remove the paper lift gear assy [4].
7. Reinstall the above parts following the removal steps in reverse.

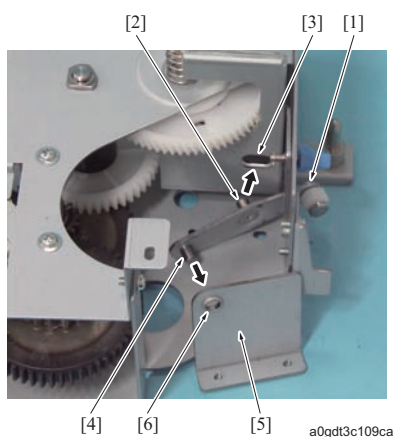
(2) Removing procedure of the paper lift motor

1. Remove the paper lift gear assy. (Refer to [G.5.2.10.\(1\) Removing procedure of the paper lift gear assy](#))
2. Remove 2 screws [1] and then remove the support bracket [2].



Note

- When reinstalling it, be sure to put the pin [2] of the arm [1] into the hole [3] and the pin [4] into the hole [6] of the support bracket [5].

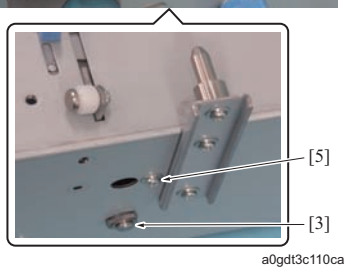
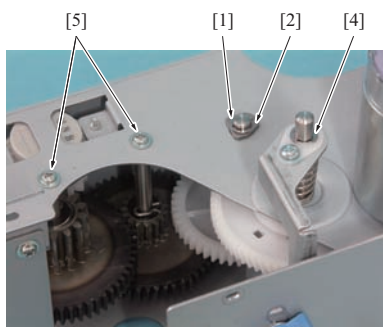


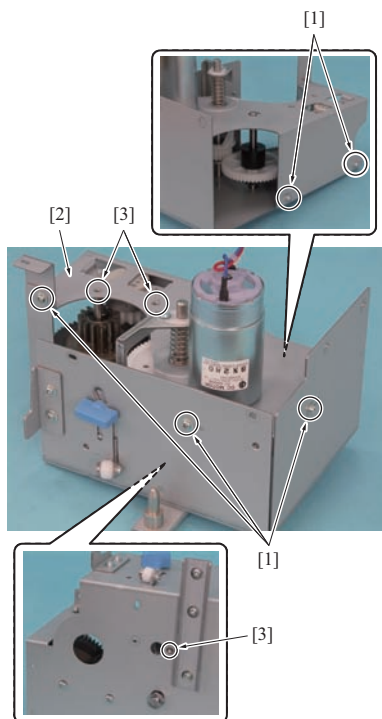
3. Remove the E-ring [1] and remove the bearing [2].

Note

- When reinstalling it, be sure to align the bearing [3] on the opposite side.

4. Remove the E-ring [4].
5. Remove 3 screws [5].



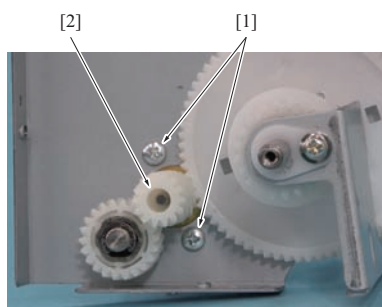


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6. Remove 5 screws [1], and then remove the top of the paper lift gear assy [2].

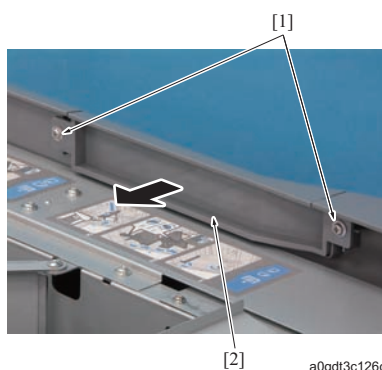
Note

- When reinstalling it, be sure to align 3 D-cut [3] positions of the shaft and then tighten the screw [1].



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7. Remove 2 screws [1], and then remove the paper lift motor [2].
8. Reinstall the above parts following the removal steps in reverse.

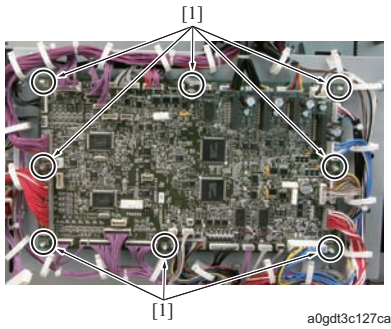
5.2.11 Paper feed check window**(1) Procedure**

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1. Pull out the paper feed tray. (Refer to [G.5.2.6 Tray](#))
2. Remove 2 screws [1] and then remove the paper feed check window [2].
3. Reinstall the above parts following the removal steps in reverse.

5.2.12 PF drive board (PFUDB)

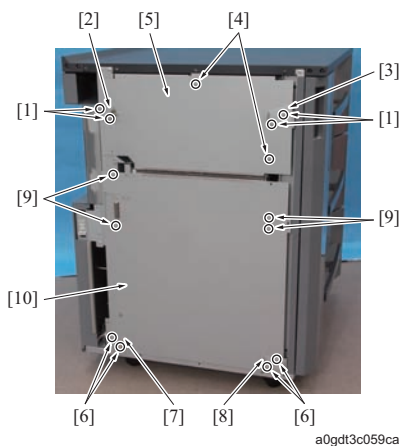
(1) Procedure



1. Remove the rear cover. (Refer to [G.5.2.3 Rear cover](#))
2. Disconnect all connectors.
3. Remove 8 clamps [1] and then remove the PF drive board (PFUDB).
4. Reinstall the above parts following the removal steps in reverse.

5.2.13 Left cover /Up, /Lw (PI-PFU only)

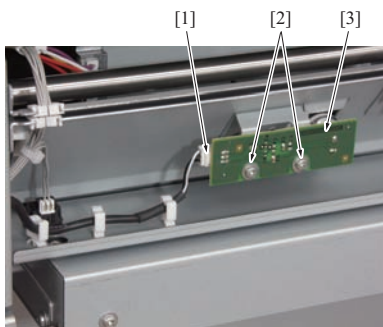
(1) Procedure



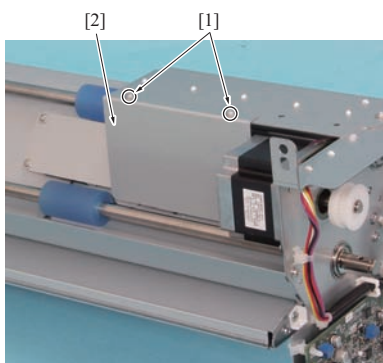
1. Remove 2 screws [1] and remove the mounting brackets [2], [3].
2. Remove 4 screws [2] and then remove the left cover /Up [5].
3. Remove the screws [6], 2 each, and then remove the mounting brackets [7], [8].
4. Remove 9 screws [4] and then remove the left cover /Lw [10].
5. Reinstall the above parts following the removal steps in reverse.

5.2.14 Multi feed detection boards /S (MFDBS) and /R (MFDBR) (PI-PFU only)

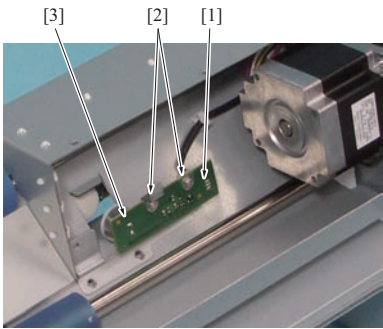
(1) Procedure



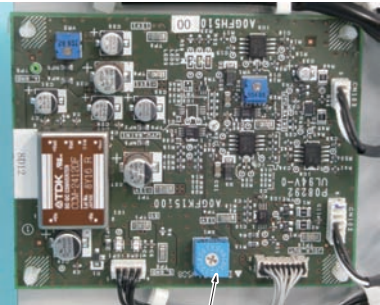
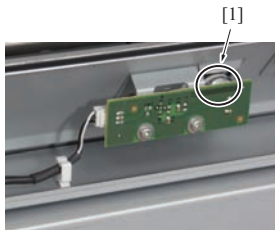
1. Remove the exit conveyance unit (FA-501). (Refer to [F.7.6.1.\(2\) Removing procedure of the PI-PFU exit conveyance unit \(FA-501\)](#))
2. Disconnect the connector [1] and 2 screws [2] and then remove the multi feed detection board /S (MFDBS) [3].



3. Remove 2 screws [1] and remove the cover [2].



a0gdt3c130ca



[2]

a0gdt3c131ca

4. Disconnect the connector [2] and 2 screws [1] and then remove the multi feed detection board /R (MFDBS) [3].

5. Check the stamp letter [1] placed on the multi feed detection board /S and /R, and rotate the rotary switch [2] on the multi feed detection drive board (MFDDDB) as per following table.

Stamp letter	Rotary switch
A	A
B	B
C	C
D	D
F	F

6. Reinstall the above parts following the removal steps in reverse.

Note

- After the installation, be sure to conduct the adjustment which is conducted in replacing the multi feed detection board (PI-PFU). (Refer to [1.5.7.11 Adjustment when replacing the multi feed detection board \(PI-PFU\)](#))

6. RU-506

6.1 List of disassembling and assembling parts

No.	Section	Part name
1	Cover	Front cover
2		Rear cover
3		Left cover

6.2 Disassembling and assembling procedures

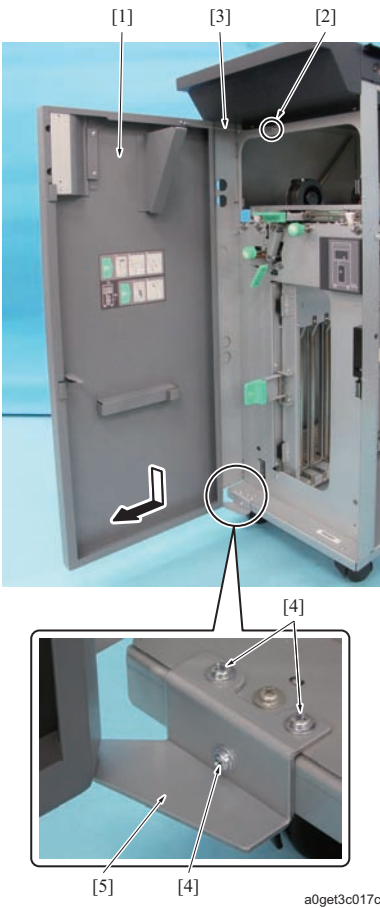
6.2.1 Precautions on disassembling and assembling

CAUTION

- Be sure to unplug the power plug from the power outlet.

6.2.2 Front cover

(1) Procedure



1. Open the front door [1] and remove the screw [2] and release the wire [3].
2. Remove 3 screws [4] and then remove the door support bracket [5] and the front door [1].
Note
 - The front door [1] is heavy. Support it securely when removing it.
3. Reinstall the parts by following the removal steps in reverse.

6.2.3 Rear cover

(1) Procedure



1. Remove 4 screws [1] and then remove the rear cover.
2. Reinstall the parts by following the removal steps in reverse.

6.2.4 Left cover

(1) Procedure



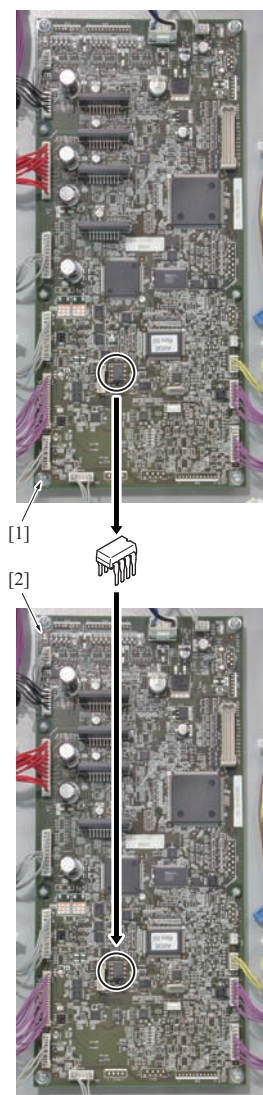
1. Remove 6 screws [1] and then remove the left cover [2].
2. Reinstall the parts by following the removal steps in reverse.

6.2.5 Note to keep in mind when replacing the board

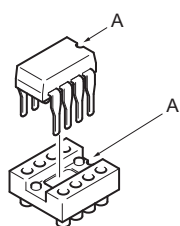
⚠ CAUTION

When the RU control board (RUCB) is replaced, be sure to replace the EEPROM (IC19).

1. Remove the EEPROM (IC19) from the old RU control board [1] and install it into the new RU control board [2].



a0get2c033ca



a04jf2c017ca

Note

- When the RU control board (RUCB) is replaced, be sure to replace the EEPROM (IC19). Install EEPROM (IC19) of the old control board [1] to the new control board [2].

Note

- Be sure to install the "A" sections of EEPROM (IC19) in the same direction.

7. FS-521

7.1 List of disassembling and assembling parts

No.	Section	Parts name
1	Cover	Front door
2		Sub tray
3		Upper cover /1
4		Upper cover /2
5		Left cover /Fr
6		Rear cover
7	Stacker section	Stacker unit
8	Main tray section	Main tray
9		Lift wire
10		Tray up down motor
11	Stapler section	Handling of the clogged stapler 1
12		Handling of the clogged stapler 2

7.2 Disassembling and assembling procedures

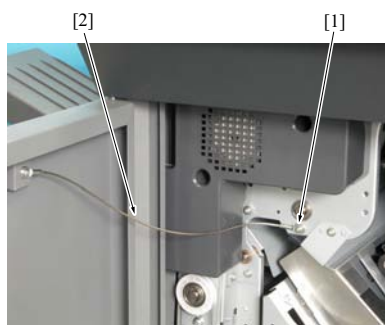
7.2.1 Precautions on disassembling and assembling

⚠ CAUTION

- Be sure to unplug the power plug from the power outlet.

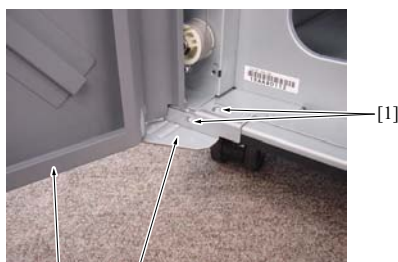
7.2.2 Front door

(1) Procedure



a0gyt3c015ca

1. Open the front door, remove the screw [1] and then remove the wire [2] of the door.



fs503fs2046c

2. Remove 2 screws [1] and then remove the door support bracket [2] and the front door [3].

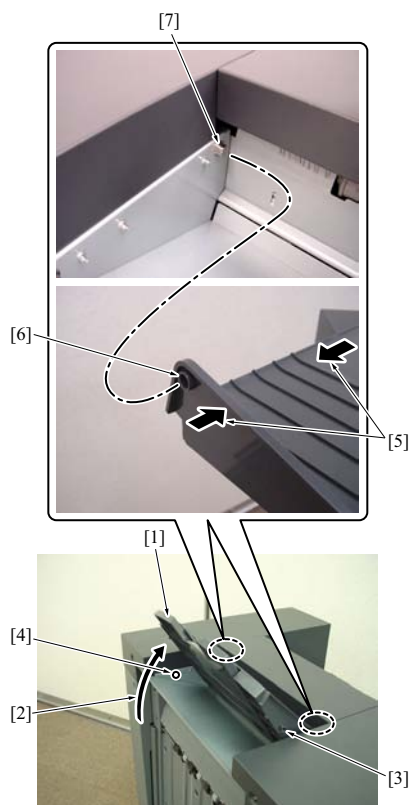
Note

- The front door is heavy. Support it securely when removing it.

3. Reinstall the above parts following the removal steps in reverse.

7.2.3 Sub tray

(1) Procedure

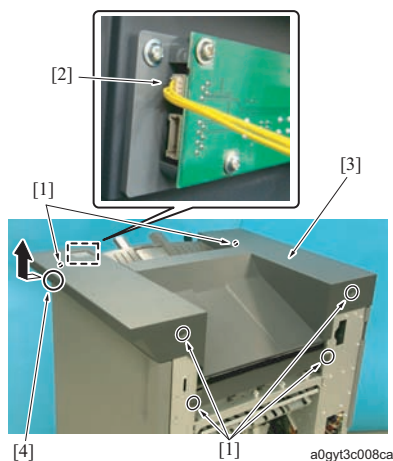


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1. Rotate the sub tray [1] in the arrowed direction [2] and remove the ball catch [3] from the ball [4].
2. Press the front and rear sections of the sub tray [1] in the arrowed direction [5] to make it curve a little, and detach the attaching hole [6] from the pin [7] to remove the sub tray [1].
3. Reinstall the above parts following the removal steps in reverse.

7.2.4 Upper cover /1

(1) Procedure

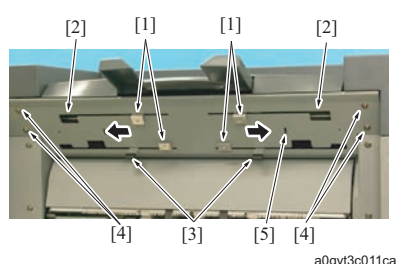
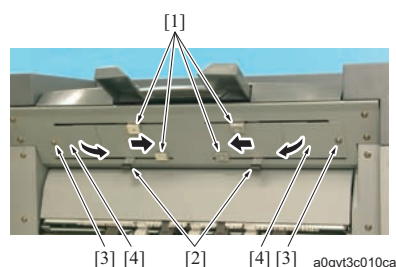
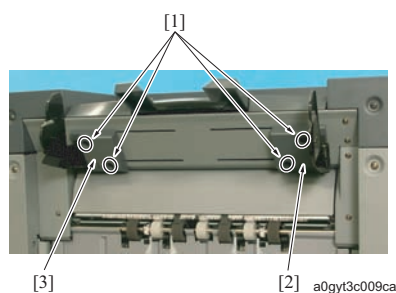
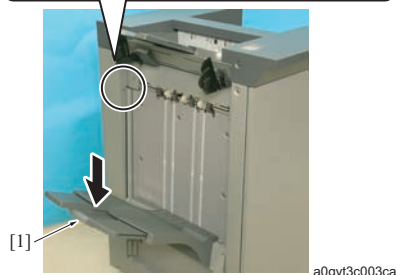
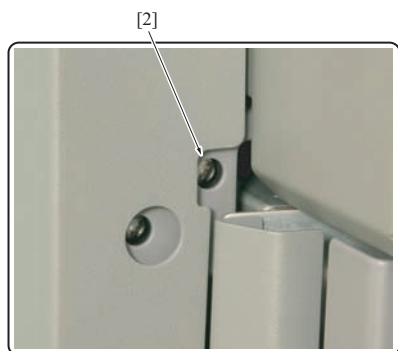


a0gyt3c008ca

1. Remove the sub tray.
 2. Remove 6 screws [1] and the connector [2] and then remove the upper cover /1 [3].
- Note**
- When the front door support section [4] is hard to remove, slide the upper cover /1 [3] a little to the front side and remove it while lifting it up.
3. Reinstall the above parts following the removal steps in reverse.

7.2.5 Upper cover /2

(1) Procedure



1. Turn ON the sub power switch (SW2), lower the main tray [1] blocking the light of the tray upper limit sensor (PS16) [2] during up and down operation of the main tray, and then turn OFF the main power switch (SW1) and the sub power switch (SW2) of the main body.
2. Unplug the power plug of the main body from the power outlet.

3. Remove the screws [1], 2 each, and then remove the paper exit alignment plates /Fr [2] and /Rr [3].

4. Hold the installation section [1] of the paper exit alignment plate and move inward.

Note

- Do not hold the rack [2] to move.

5. Remove each 1 screw [3] and then remove each 1 cover [4].

6. Hold the installation section [1] of the paper exit alignment plate and move outward to fit it to the notch holes [2].

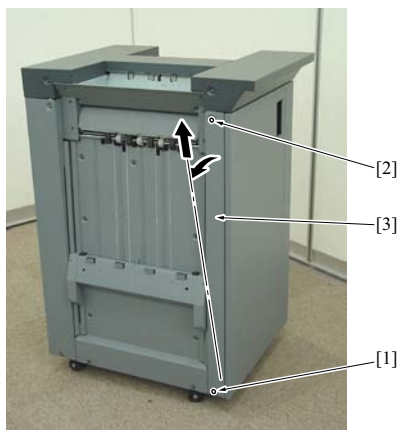
Note

- Do not hold the rack [3] to move.

7. Remove 4 screws [4] and then remove upper cover /2 [5].
8. Reinstall the above parts following the removal steps in reverse.

7.2.6 Left cover /Fr

(1) Procedure

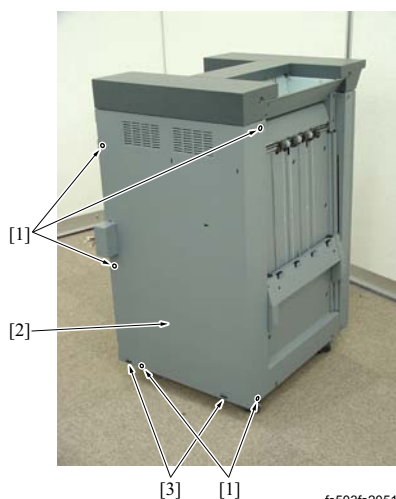


fs503fs2050c

1. Loosen 1 screw [1].
2. Remove 1 screw [2], slant the upper section of the left cover /Fr [3] and remove it while lifting it up.
3. Reinstall the above parts following the removal steps in reverse.

7.2.7 Rear cover

(1) Procedure



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1. Remove 5 screws [1] and remove the rear cover [2].

Note

- When reinstalling it, be sure to hook the rear cover to 2 catches [3] provided at the lower section.

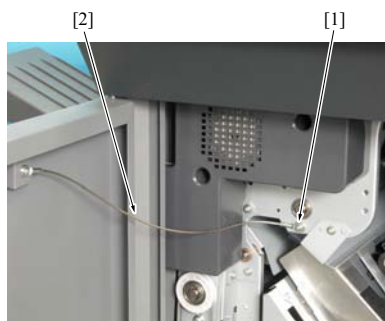
2. Reinstall the above parts following the removal steps in reverse.

7.2.8 Stacker unit

⚠ CAUTION

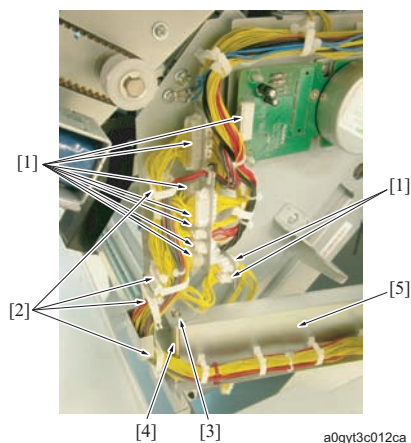
- Be sure to conduct this operation with 2 people.

(1) Procedure

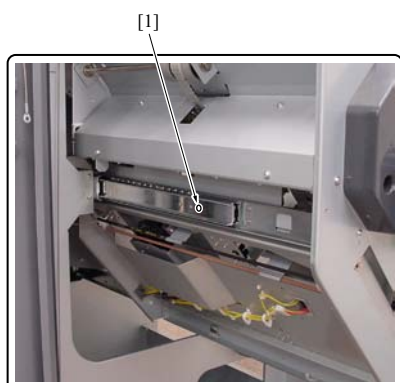


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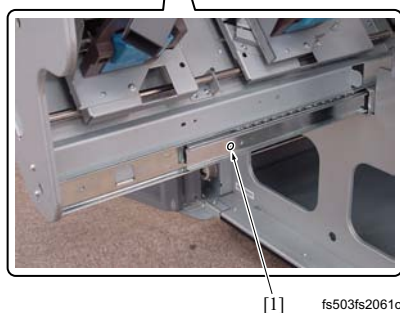
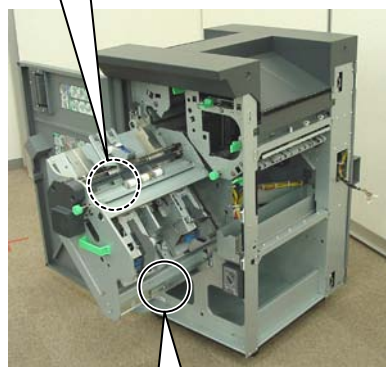
1. Remove the rear cover. (Refer to [G.7.2.7 Rear cover](#))
2. Open the front door, remove the screw [1] and then remove the wire [2] of the door.

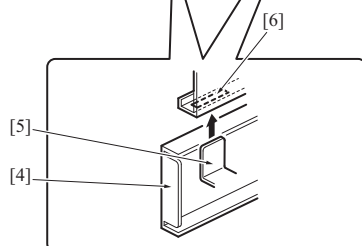
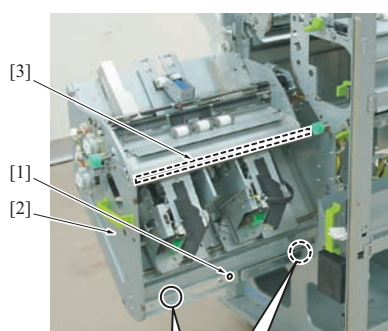
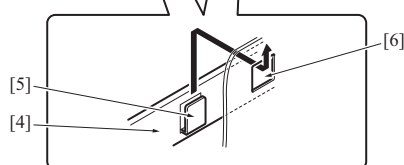
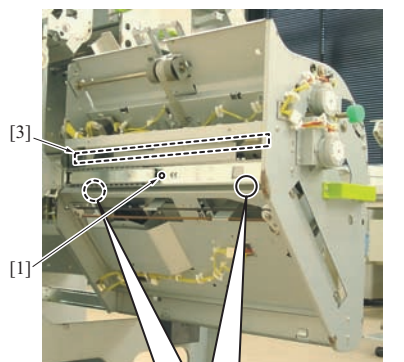


3. Disconnect 9 connectors [1].
4. Remove each cables from 4 wiring harness guides [2].
5. Remove the E-ring [3] and the shaft [4], and cut off the coupling arm [5].



6. Remove the stopper screws [1], 1 each, provided on the rails in front and rear, pull the stacker unit further out.





fs503fs2041c



[1]

[2]

fs503fs2042c

7. Remove the screws [1], 1 each, provided on the rails in front and rear.
8. Lift up the stacker section [2] at the specified positions [3], release the hook of the rail [4] from the hole [6] and remove the stacker section [2].

⚠ CAUTION

- Be careful of your posture when removing it. Be sure to conduct this operation with 2 people so that you do not suffer backache.

Note

- When lifting up the stacker section, be sure to hold it at the specified positions [3]. Holding other positions such as the roller shaft may damage to these positions.

9. Reinstall the above parts following the removal steps in reverse.

Note

- When reinstalling the stacker section to the rail [4], be sure to check that the hooks [5] provided at 2 locations in front and rear, 4 locations in all, get into the attaching holes [6] securely.

10. Check point when reinstalling the stacker section

Note

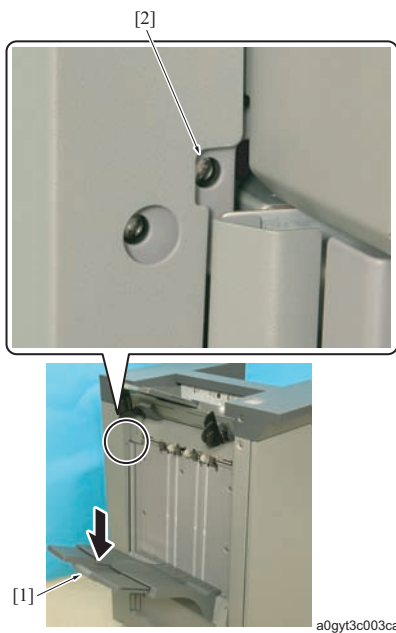
- When reinstalling it, be sure to pull out the rail [1] fully and fasten it with the stopper screw [2] tentatively. Fix the rail in the rear with tape [3] so that the rail does not move and contract. It allows you to conduct the operation smoothly.

7.2.9 Main tray

⚠ CAUTION

- After having lowered the main tray, be sure to unplug the power plug from the power outlet.

(1) Procedure



- Turn ON the sub power switch (SW2), lower the main tray [1] blocking the light of the tray upper limit sensor (PS16) [2] during up and down operation of the main tray, and then turn OFF the main power switch (SW1) and the sub power switch (SW2) of the main body.
- Unplug the power plug of the main body from the power outlet.



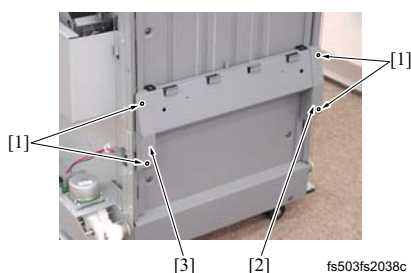
- Remove 2 screws [1].
- Lift up the main tray [2] to unhook the up/down stay [3], and remove the main tray [2].
- Reinstall the above parts following the removal steps in reverse.

7.2.10 Lift wire

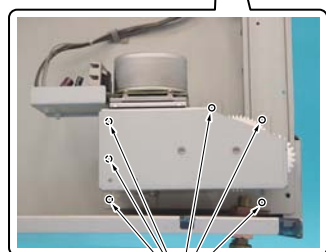
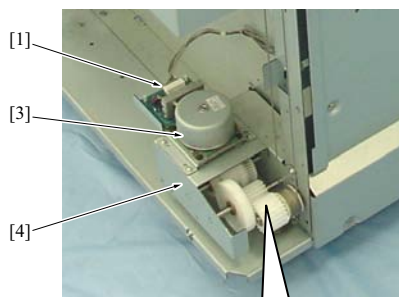
Note

- The following replacement procedure of the lift wire shows the steps taken on the rear side. The figuration and the winding of wires on the front side are symmetrical to those on the rear side.
- The brackets of the lift wire are stamped with "F" on the front side and "R" on the rear side. Be careful not to confuse one with the other.

(1) Procedure



- Bring the main tray down to the bottom. (Refer to [G.7.2.9 Main tray](#))
- Remove the following parts.
Main tray (Refer to [G.7.2.9 Main tray](#))
Rear cover (Refer to [G.7.2.7 Rear cover](#))
Left cover /Fr (Refer to [G.7.2.6 Left cover /Fr](#))
Front door (Refer to [G.7.2.2 Front door](#))
- Remove the screws [1], 2 each, and then remove the tray stay covers /Fr [2] and /Rr [3].



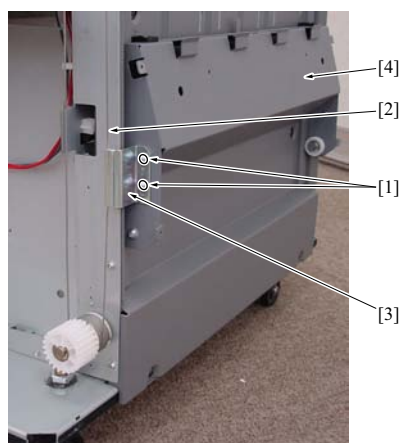
[2]

fs503fs2018c

4. Disconnect the connector [1], remove 6 screws [2], and then remove the gear box [4] together with the tray up down motor [3]. Remove the gear box [4] together with the motor [3].

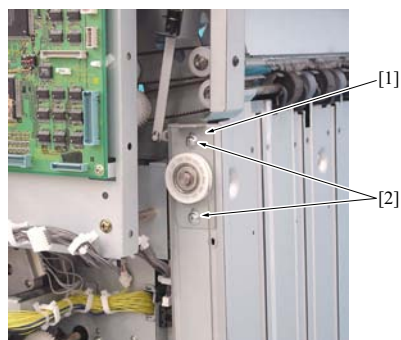
CAUTION

- When the gear box is removed, the main tray falls down. So, be sure to support the tray by hand when removing the gear box.



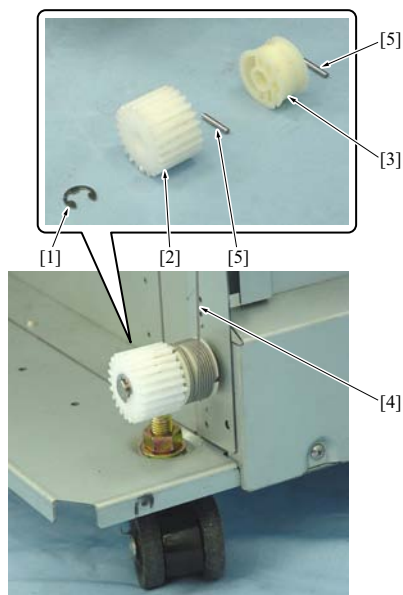
fs503fs2019c

5. Remove 2 screws [1] and then remove the wire mounting plate [3] of the lift wire /Rr [2] from the lift stay [4].



fs503fs2020c

6. Loosen 2 screws [2] of the belt tensioner [1].

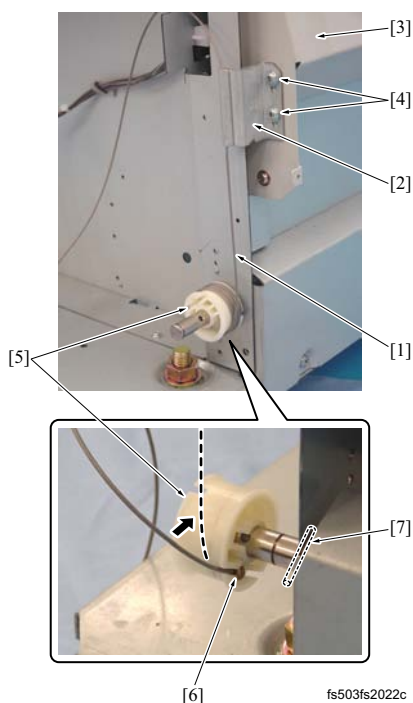


fs503fs2021c

7. Remove the E-ring [1] and then remove the gear [2] and the lift pulley /Lw [3] to remove the lift wire /Rr [4].

Note

- When removing the gear [2] and the lift pulley /Lw [3], be careful not to drop the pin [5].



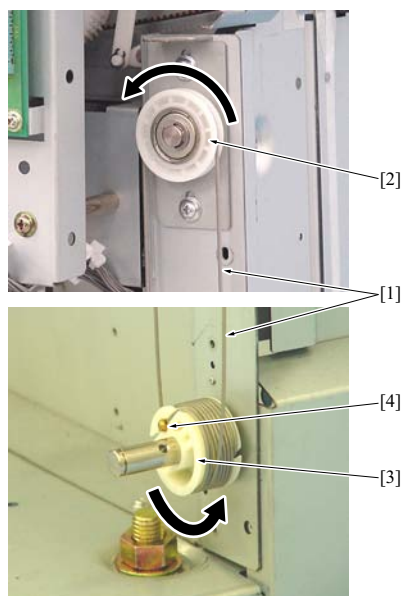
fs503fs2022c

8. Tentatively fasten the wire mounting plate [2] of the new lift wire / Rr [1] to the lift stay [3] with the 2 screws [4].

Note

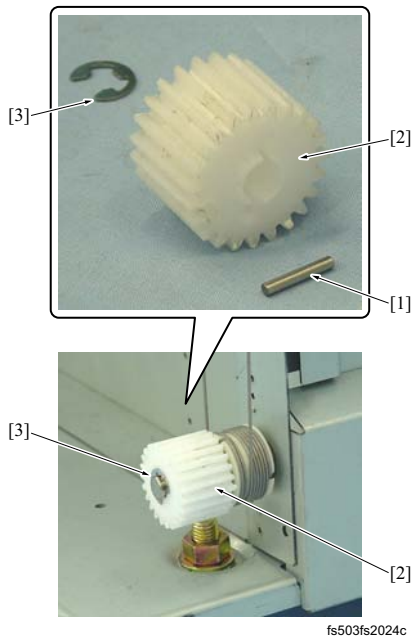
- Be sure to install the lift wires placing the shorter one below the longer one.

9. Fasten the new lift wire /Rr [1] with the wire end [6] of the lift pulley /Lw [5] and insert it into the shaft. Rotate the lift pulley /Lw [5] and wind it 6 turns clockwise from inside to outside around the lift pulley /Lw [5] with no slack, and then insert the lift pulley /Lw [5] fully deep into the shaft so that it coincides with the pin [7].

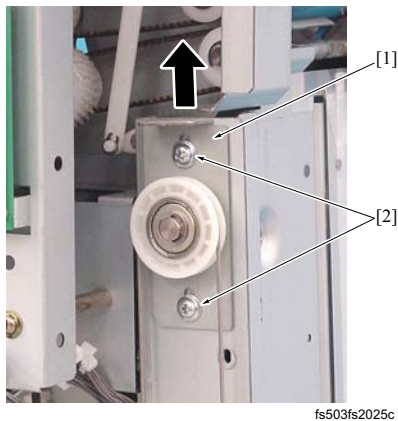


fs503fs2023c

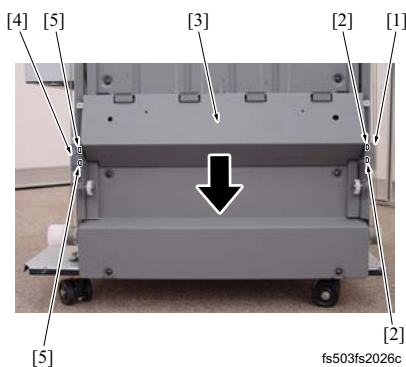
10. With the lift wire /Rr [1] hooked to the lift pulley /Up [2], wind it 2 turns counterclockwise from inside to outside around the lift pulley /Lw [3] with no slack and then fasten it with the wire end [4].



11. Insert the pin [1] and the gear [2] into the shaft, and fasten them with the E-ring [3].



12. Use a tension gauge or a spring balance to pull the belt tensioner [1] with a specified force A and tighten it up 2 screws [2].
Specified value: $A = 2.5\text{kg} \pm 0.1\text{kg}$



13. Loosen 2 screws [2] of the wire mounting plate [1] on the front side, press down the lift stay [3] to bring it to a horizontal position, and tighten up 2 screws [5] of the wire mounting plate [4] on the rear side and 2 screws [2] on the front side, that is, 4 screws in all.

Note

- Check to see if the lift stay [3] is kept in a horizontal position. If it is on the slant, an unnecessary load may be applied onto the gear, thus damaging it.

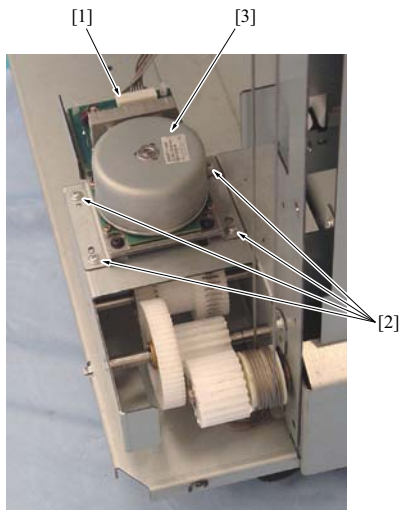
14. Reinstall the above parts following the removal steps in reverse.

Note

- When reinstalling the covers, be sure to rotate the tray up/down motor counterclockwise as seen from above to raise the lift stay about 12cm before installing each cover. Since the lift stay comes down lower than the normal operating range due to the lift gear box being removed, it is inevitably necessary to raise the lift stay to install it without the left cover /Fr and the rear cover hitting against the up/down stay.

7.2.11 Tray up down motor

(1) Procedure

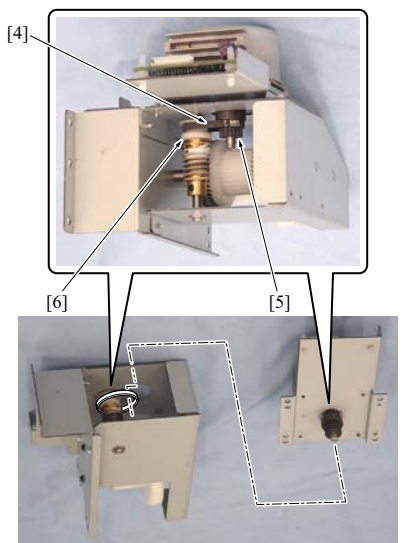


1. Remove the rear cover.
2. Disconnect the connector [1], remove 4 screws [2] and then remove the tray up down motor [3].

Note

- When reinstalling it, make sure that the belt [4] is set correctly to the gears [5] and [6].

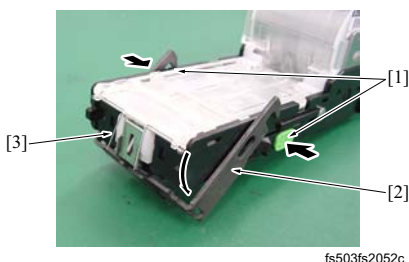
3. Reinstall the above parts following the removal steps in reverse.



fs503fs2027c

7.2.12 Handling of the clogged stapler 1

(1) Procedure



fs503fs2052c

1. Remove the stapler cartridge.

Note

- When the stapler cartridge cannot be removed, conduct the initial operation by turning ON and OFF the sub power switch (SW2) of the main body.
- When the stapler cartridge cannot be removed by the initial operation, conduct "[G.7.2.13 Handling of the clogged stapler 2](#)".

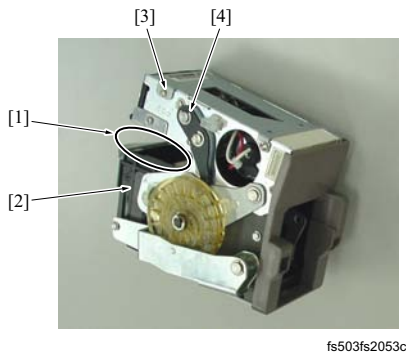
2. Press the release button [1] and open the staple cover [2].
3. Remove the unnecessary staples [3].
4. Close the staple cover [2].
5. Reinstall the above parts following the removal steps in reverse.

7.2.13 Handling of the clogged stapler 2

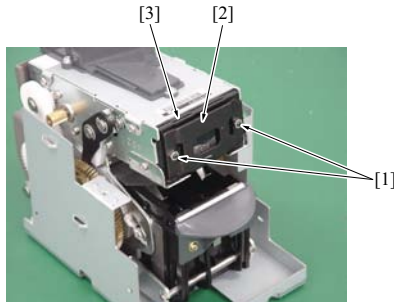
(1) Procedure

⚠ CAUTION

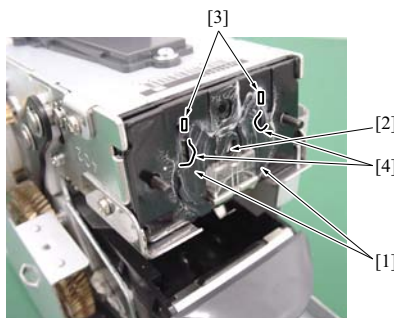
- Be careful not to get your hand caught in the opening [1] of the stapler assy. Pressing the staple side [2] and/or the clinch side [3] cause the opening [1] to close unexpectedly. It is very difficult to open the opening by hand once it has closed. So, be careful not to close it. When holding the stapler assy, be sure to hold it at both ends of the cam shaft [4].
- When conducting the operation, be sure to wear protective gloves.
- When conducting the operation, be careful not to get the glove or your hand caught in the gear.



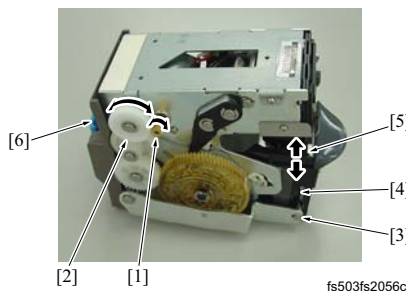
fs503fs2053c



fs503fs2054c



fs503fs2055c



fs503fs2056c

1. Remove the stapler assy. (Refer to [F.9.4.1 Replacing the stapler assy](#))
2. Remove 2 nuts [1] and then remove the clinch protective plates /1 [2] and /2 [3].

3. Remove the clogged staples.

Note

- When reinstalling it, place the holes [2] of 2 clinch metal fittings [1] one upon the other so that the tip [3] of the clinch presser is engaged to the depression [4] of the clinch metal fitting.

4. When the clogged staples cannot be removed, rotate the gear [1] of the stapler motor shaft and the gear [2] that comes into contact the motor gear to open the opening [5] until the pin [3] at the tip of the stapling arm comes to the bottom of the slit [4].

CAUTION

- Considerable force is required to rotate the gear. Be sure to wear gloves not to get injured.

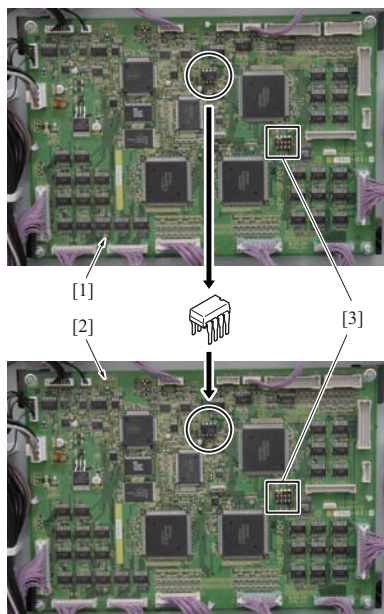
Note

- The gear can be rotated in the easier direction.

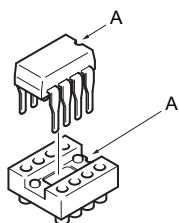
5. Remove the stapler cartridge [6] Remove the unnecessary staples from the stapler cartridge. (Refer to [G.7.2.12 Handling of the clogged stapler 1](#))
6. Reinstall the above parts following the removal steps in reverse.

7.2.14 Note for replacing the board**CAUTION**

- When the FNS control board (FNSCB) is replaced, be sure to replace the EEPROM (IC68).



fd501fs2077c



fd501fs2078c

1. Install EEPROM (IC68) of the old control board [1] to the new control board [2].

Note

- Setting of the SW3 [3] has to be the same as the setting of the old FNSCB. (Refer to [L.2.6.1 FNS control board \(FNSCB\)](#))
- After replacing the FNS control board (FNSCB), conduct rewriting of the firmware. (Refer to [J. Rewriting of firmware](#))

2. Check point when reinstalling the EEPROM (IC68)

Note

- Be sure to install the "A" sections of the EEPROM (IC68) in the same direction.

8. LS-505

8.1 List of disassembling and assembling parts

No.	Section	Parts name
1	Cover	Cover
2	Conveyance section	Stacker tray up/down wire

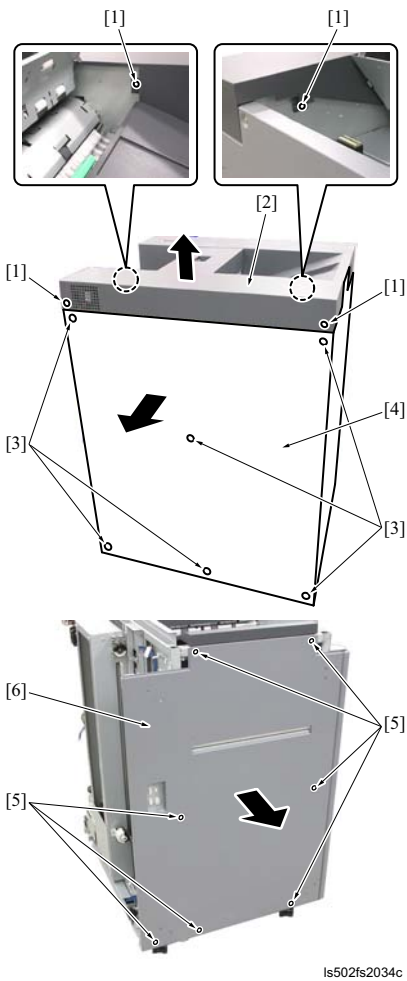
8.2 Disassembling and assembling procedures

8.2.1 Precautions on disassembling and assembling

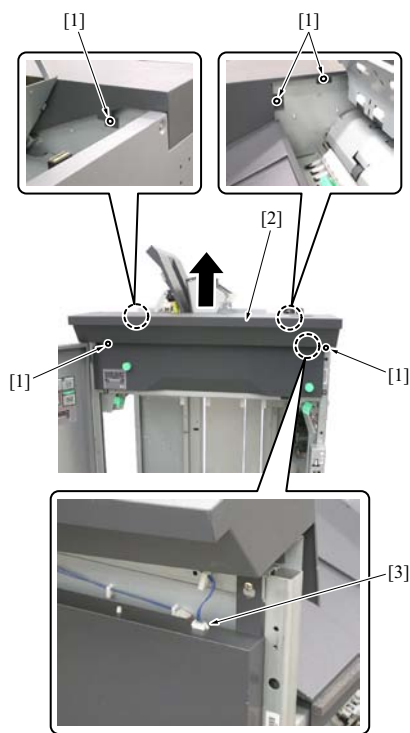
- ⚠ CAUTION
- Be sure to unplug the power plug from the power outlet.

8.2.2 Cover

(1) Procedure

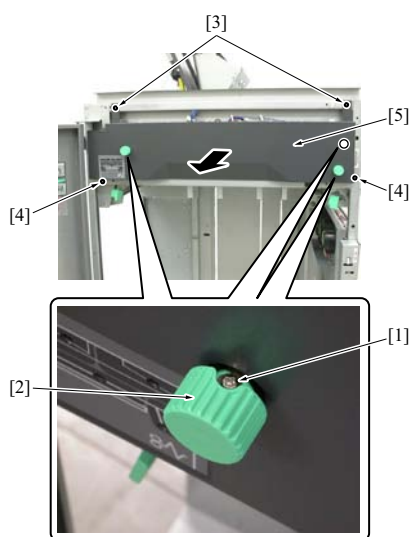


1. Remove 4 screws [1] and then remove the rear cover /Up [2].
2. Remove 6 screws [3] and then remove the rear cover /Lw [4].
3. Remove 7 screws [5] and then remove the left cover [6].



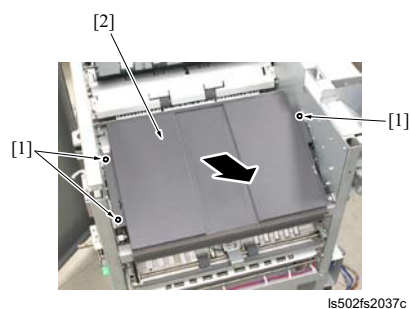
Is502fs2035c

4. Remove 5 screws [1] and move the front cover /Up [2] to the upper side.
5. Disconnect the connector [3] and remove the front cover /Up [2].



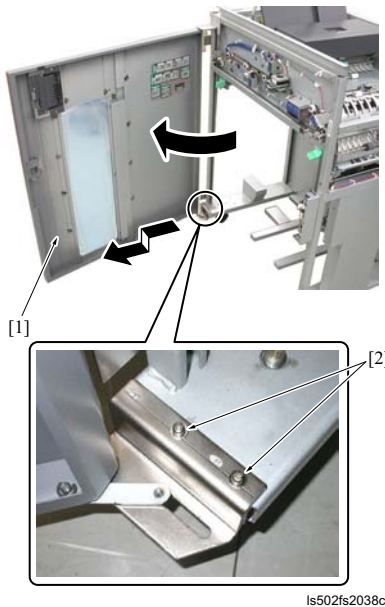
Is502fs2036c

6. Remove the screws [1], 1 each, and then remove 3 knobs [2].
7. Loosen 2 screws [3].
8. Remove 2 screws [4] and then remove the front cover /Lw [5].



Is502fs2037c

9. Remove 3 screws [1] and then remove upper cover [2].



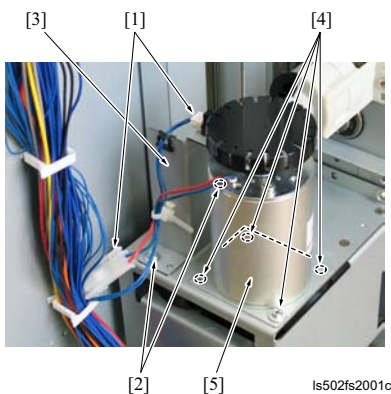
10. Open the front door [1].
11. Remove 2 screws [2] and then remove the front door [1].
12. Reinstall the above parts following the removal steps in reverse.

8.2.3 Replacing the stacker tray up/down wire

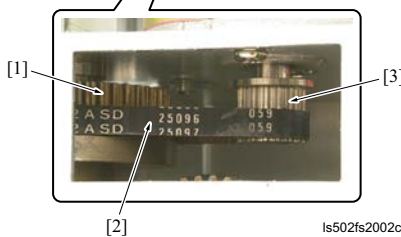
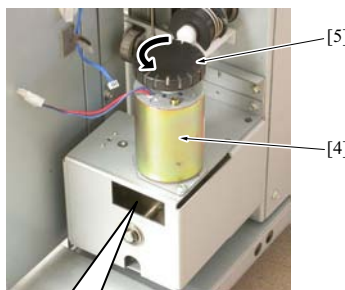
Note

- When conducting this operation, be sure to set the stacker tray at the home position (the upper most position) in advance.

(1) Procedure



1. Remove the rear covers /Up and /Lw. (Refer to [G.8.2.2 Cover](#))
2. Disconnect 2 connectors [1].
3. Remove 2 screws [2] and remove the sensor mounting plate [3].
4. Remove 4 screws [4] and remove the stacker tray up down motor (M1) [5].

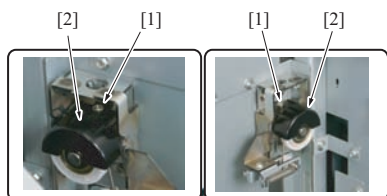


5. Check point when reinstalling the stacker tray up down motor (M1)
- Note**
- When reinstalling the stacker tray up down motor (M1), be sure to check that the belt [2] has been engaged with the gear [1], and then engage it with the gear [3] before fastening the stacker tray up down motor (M1) [4].
 - When the belt [2] is not horizontally attached between the gear [1] and the gear [3], make adjustments by rotating the encoder [5] counterclockwise.

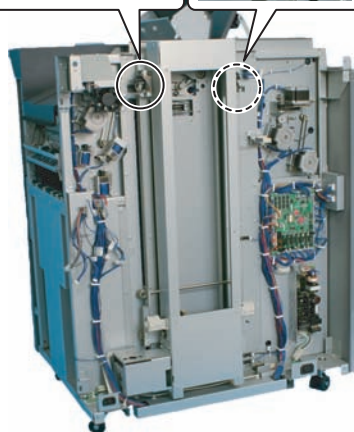


ls502fs2003c

6. Remove 2 screws [1] and remove the motor mounting plate [3] from the stacker tray up down motor (M1) [2].

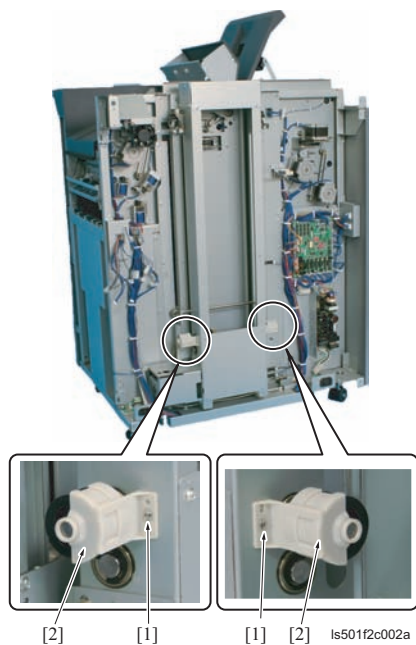


7. Remove the screws [1], 1 each, and remove the pulley covers [2], 1 each.

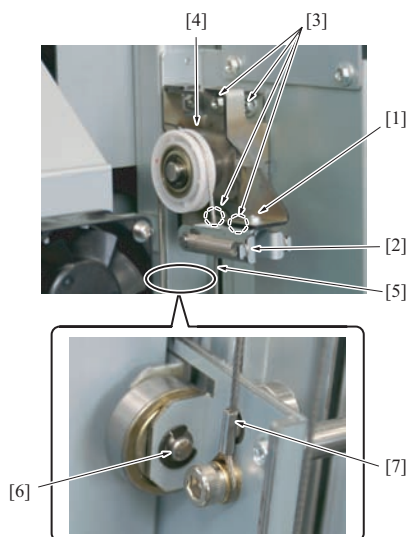


ls501f2c001a

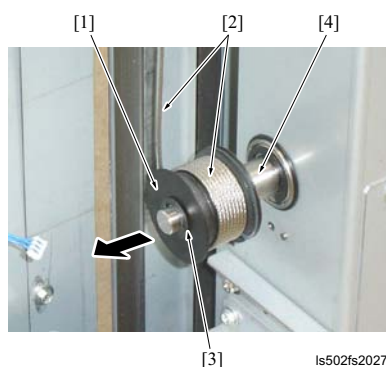
8. Remove the screws [1], 1 each, and remove the pulley covers [2], 1 each.



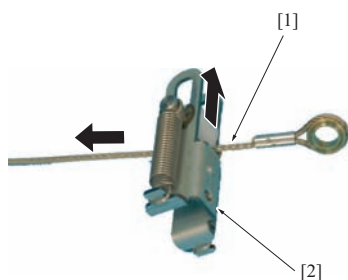
ls501f2c002a



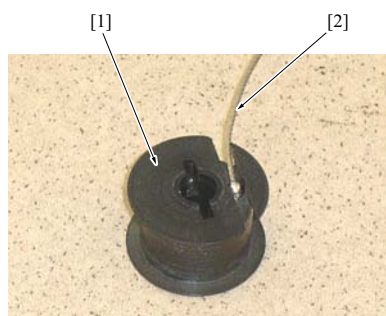
Is501f2c003a



Is502fs2027c



Is501f2c004a



Is502fs2028c

9. Remove the screw [1] and remove the wire retaining bracket [2].
10. Remove 4 screws [3] and remove the pulley assy [4].
11. Remove the hexagon socket screw [6] and remove the tip [7] of the wire /1 [5].

Note

- On the paper exit side, loosen 4 screws [3], bring down the pulley assy [4] and release the tension of the wire /2 [5] before starting the operation.
- When reinstalling it, the positions of the pulley assy on the paper feed side and the paper exit side become important. Be sure to check the marked position in advance of the pulley assy on the paper exit side.

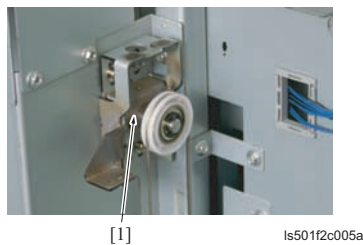
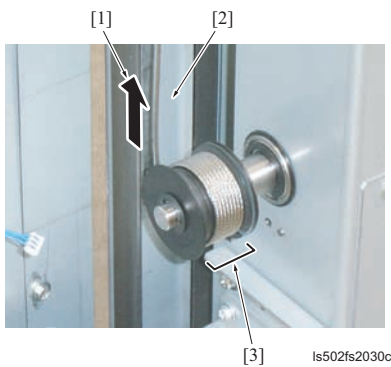
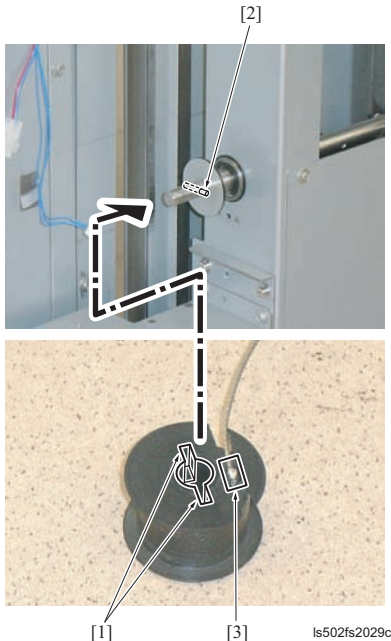
12. Release the winding of the wire /1 [2] from the pulley [1].
13. Remove the E-ring [3] and then remove the pulley [1] from the shaft [4].

14. Remove the wire retaining bracket [2] from the wire /1 [1].

Note

- When installing the wire retaining bracket [2], install it to the wire /1 [1] so that the bracket comes to the rear side.

15. Remove the wire /1 [2] from the pulley [1].
16. Reinstall a new wire /1 following the preceding steps 6 to 12 in reverse.



17. Check point 1 when reinstalling the wire

Note

- When 2 wires at both sides are removed at the same time, the stacker tray comes down. So, be sure to replace the wires one at a time (The remaining wire holds the stacker tray in place.)
- When attaching the pulley to the shaft, be sure to align the groove [1] of the pulley with the pin [2] that has been inserted into the shaft.
- Be sure to set up it with the bead set portion [3].

18. Check point 2 when reinstalling the wire

Note

- When winding the wire around the pulley, be sure to wind it 8 turns [3] so that the direction of drawing-out [1] comes to the rear panel side [2].
- The direction of drawing-out of the wire /1 is symmetrical to that of the wire /2.

19. Check point 3 when reinstalling the wire

Note

- When fixing the pulley assy [1] on the paper exit side, be sure to fix it at the same position as it was removed from.

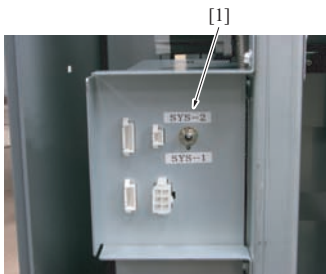
20. Replace the wire /2 with a new one following the preceding steps 6 to 13.

21. Reinstall other parts following the steps 1 to 6 in reverse.

8.2.4 Caution when setting models using toggle SW

⚠ CAUTION

When using C6501/C6501P/C65hc/1200/1200P/1051/C8000/C7000/C7000P/C70hc/C6000, be sure to set the toggle switch on the connector connection of the left side of the LS to SYS2 [1].



9. FD-503

9.1 Items not allowed to be disassembled/reassembled

9.1.1 Precautions on disassembling and assembling

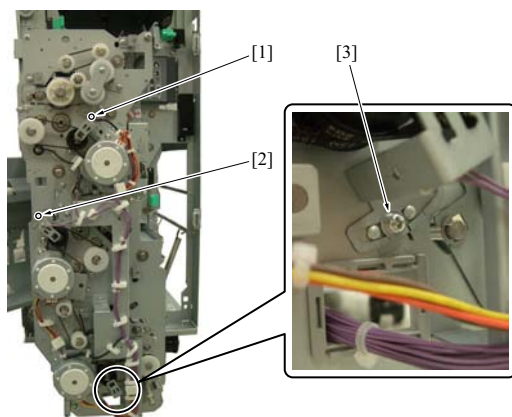
⚠ CAUTION

- Be sure to unplug the power plug from the power outlet.

9.1.2 Folding/conveyance switching position adjustment section

Note

- Be sure to avoid removing or loosening the screws [1], [2], and [3] of the folding/conveyance switching position adjustment section provided on the front of the folding conveyance unit. The adjustment scale marked on the folding conveyance frame are used in the factory.



fd501fs2079c

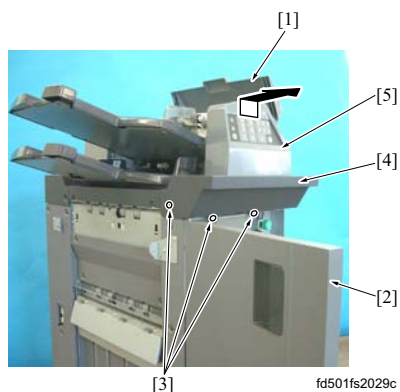
9.2 List of disassembling and assembling parts

No.	Section	Parts name
1	Cover section	Upper cover /Fr + PI cover /Fr
2		Upper cover /Rr + PI cover /Rr
3		Upper door
4		Rear cover
5		Left cover /Fr
6		Left cover /Rr
7		Paper exit stopper cover
8		Right cover
9		Left cover /Up
10		Mount cover
11		Front door
12	Folding conveyance section	2nd folding conveyance sensor (PS53)
13		3rd folding conveyance sensor (PS54)
14		3rd folding roller
15		Folding conveyance section
16	Main tray section	Main tray up/down wire
17	PI section	Way to distinguish between new and old types of the multi feed detection board /1, /2
18		Multi feed detection board /1, /2 (new type)
19		Multi feed detection board /1, /2 (old type)

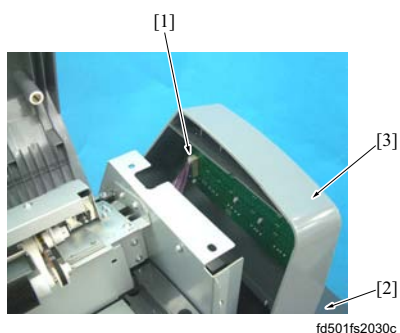
9.3 Disassembling and assembling procedures

9.3.1 Upper cover /Fr + PI cover /Fr

(1) Procedure



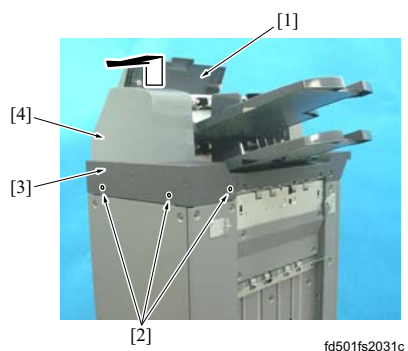
1. Open the upper door [1] and the front door [2].
2. Remove 3 screws [3], pull out the PI cover /Fr [5] to the front side while raising it together with the upper cover /Fr [4].



3. Disconnect the connector [1] and remove the PI cover /Fr [3] together with the upper cover /Fr [2].

9.3.2 Upper cover /Rr + PI cover /Rr

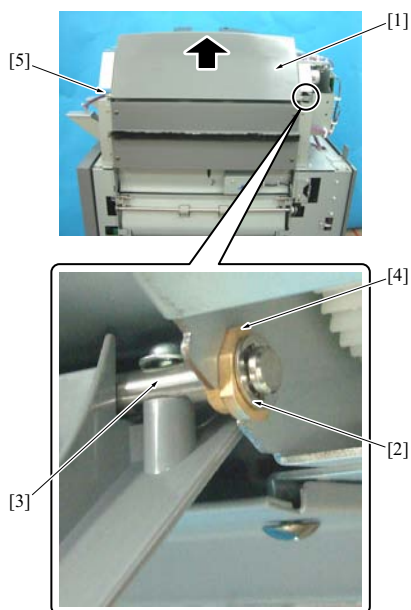
(1) Procedure



1. Open the upper door [1].
2. Remove 3 screws [2] and pull out the PI cover /Rr [4] to the rear side while raising it together with the upper cover /Rr [3].

9.3.3 Upper door

(1) Procedure

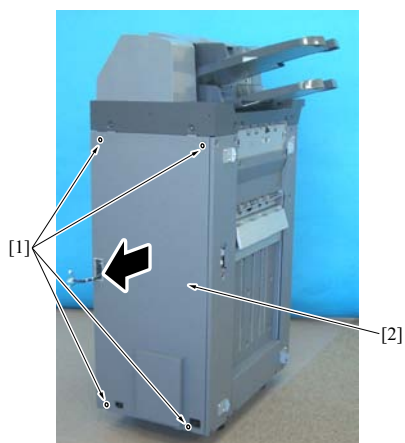


fd501fs2032c

1. Remove the upper cover /Fr, the PI cover /Fr, the upper cover /Rr and the PI cover /Rr.
2. Close the upper door [1].
3. Remove the E-ring [2] and then remove the bearing [4] of the upper door open/close shaft [3].
4. With the bearing [5] shifted to the front side, remove the upper door [1].

9.3.4 Rear cover

(1) Procedure

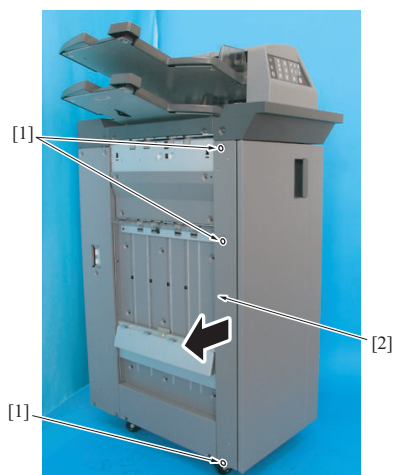


fd501fs2033c

1. Remove 4 screws [1] and then remove the rear cover /Lw [2].

9.3.5 Left cover /Fr

(1) Procedure

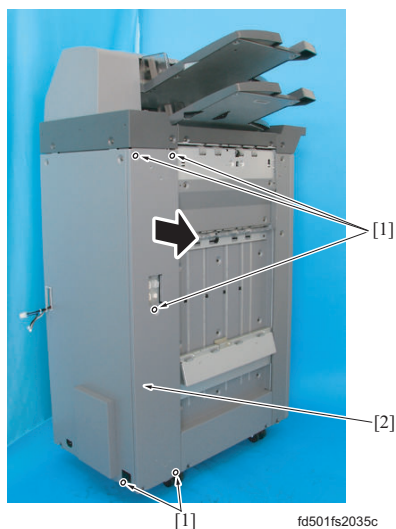


fd501fs2034c

1. Remove 3 screws [1] and then remove the left cover /Fr [2].

9.3.6 Left cover /Rr

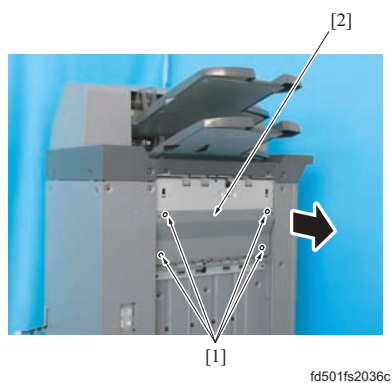
(1) Procedure



1. Remove 5 screws [1] and then remove the left cover /Rr [2].

9.3.7 Paper exit stopper cover

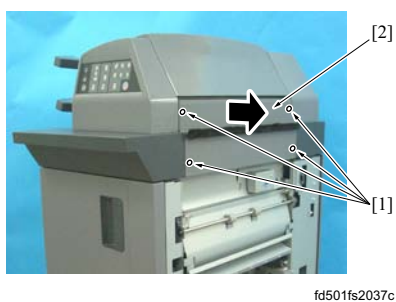
(1) Procedure



1. Remove 4 screws [1] and then remove the paper exit stopper cover [2].

9.3.8 Right cover

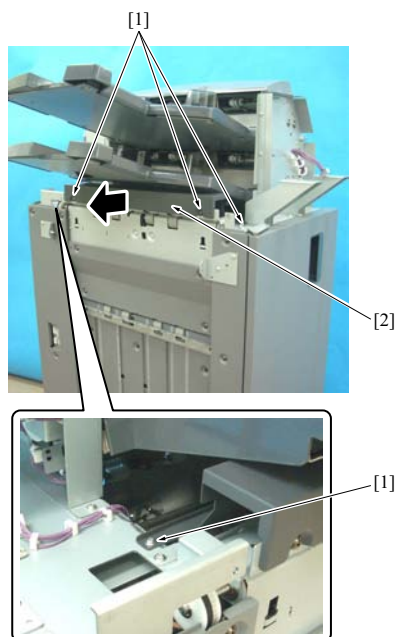
(1) Procedure



1. Remove 4 screws [1] and then remove the right cover [2].

9.3.9 Left cover /Up

(1) Procedure

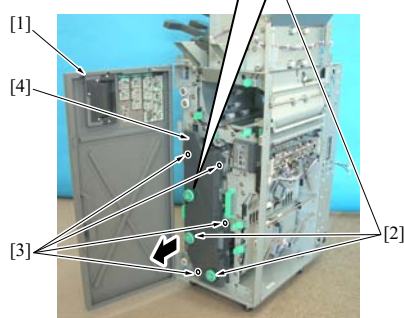
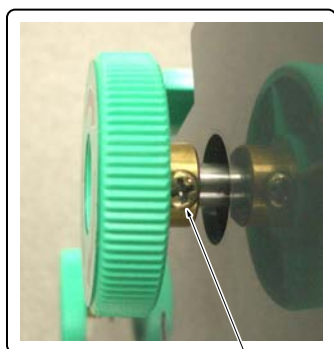


fd501fs2038c

1. Remove the upper cover /Fr, the PI cover /Fr, the upper cover /Rr and the PI cover /Rr.
2. Remove 4 screws [1] and then remove the left cover /Up [2].

9.3.10 Mount cover

(1) Procedure



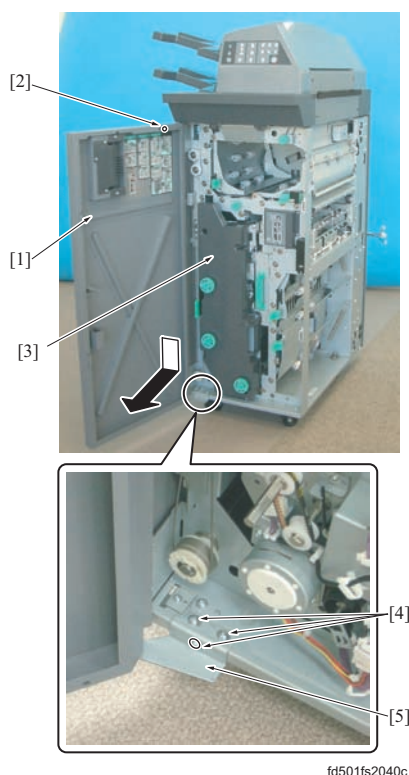
fd501fs2039c

1. Open the front door [1].
2. Remove 3 screws [2] of the handle and then remove the handle.
3. Remove 4 screws [3] and then remove the mount cover [4].

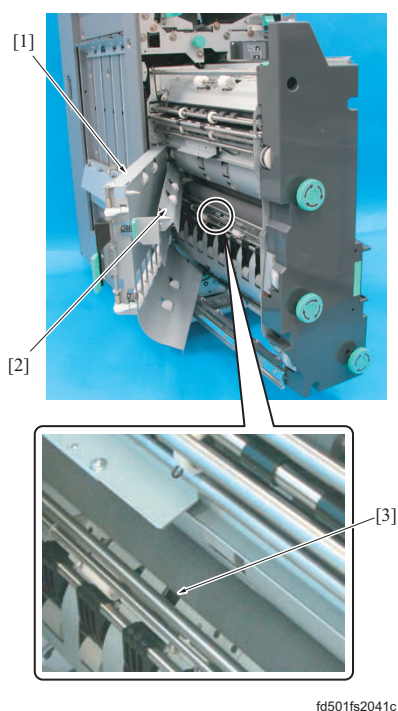
9.3.11 Front door

Note

- When removing the front door, be sure to support it so that it does not fall down.

(1) Procedure

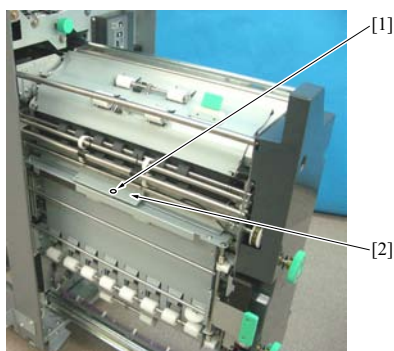
1. Open the front door [1].
2. Remove the screws [2].
3. Remove the mount cover [3].
4. Remove 3 screws [4] while pushing up the front door so that it does not fall down, and then remove the support plate [5].
5. Remove the front door [1].

9.3.12 Cleaning the 2nd folding conveyance sensor (PS53)**(1) Procedure**

1. Remove the front door and pull out the folding unit. (Refer to [G. 9.3.11 Front door](#))
2. Open the guide plates [1] and [2].
3. Clean the 2nd folding conveyance sensor (PS53) [3].

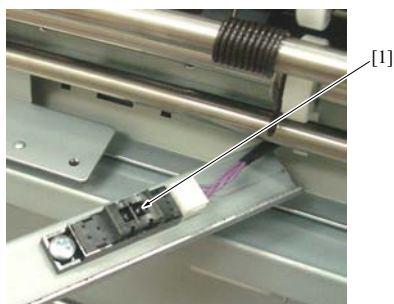
9.3.13 Cleaning the 3rd folding conveyance sensor (PS54)

(1) Procedure



fd501fs2042c

1. Remove the front door and pull out the folding unit. (Refer to [G. 9.3.11 Front door](#))
2. Remove the screw [1] and turn over the sensor mounting plate [2].

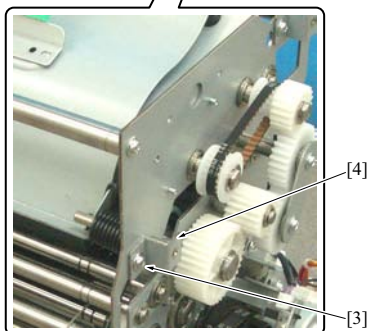
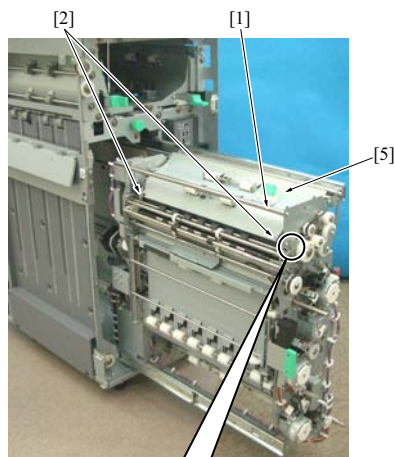


fd501fs2043c

3. Clean the 3rd folding conveyance sensor (PS54) [1].

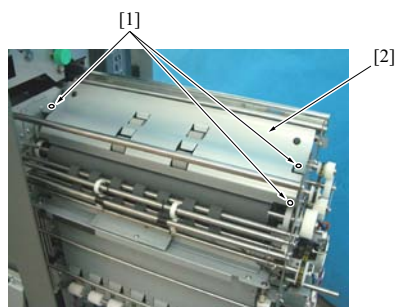
9.3.14 Cleaning the 3rd folding roller

(1) Procedure



fd501fs2044c

1. Open the front door and pull out the folding unit. (Refer to [G.9.3.11 Front door](#))
2. Remove the stand cover. (Refer to [G.9.3.10 Mount cover](#))
3. The 2 springs [2] are hooked to the shaft [1]. Remove them from the shaft [1].
4. Remove the screw [3] and then remove 2 springs [2], the support plate [4] and the guide plate [5].



fd501fs2045c

5. Remove 3 screws [1] and then remove the guide plate [2].



fd501fs2046c

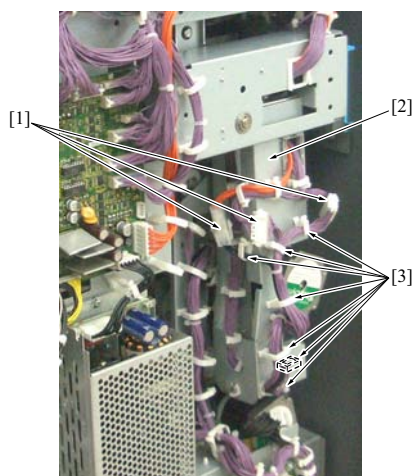
6. Clean the 3rd folding roller [1].

9.3.15 Folding conveyance section

⚠ CAUTION

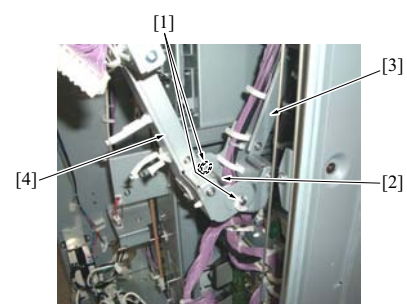
- The folding conveyance section is heavy. Be sure to conduct this operation with 2 people.

(1) Procedure



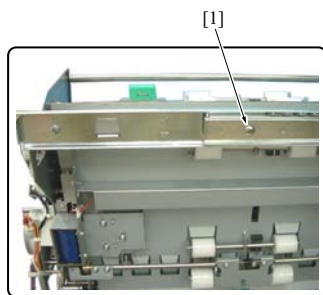
fd501fs2047c

- Remove the front door and the rear cover.
- Disconnect 3 connectors [1] and then remove the wiring harnesses from the 7 wiring harness guides [3] of the coupling arm /Rr [2].

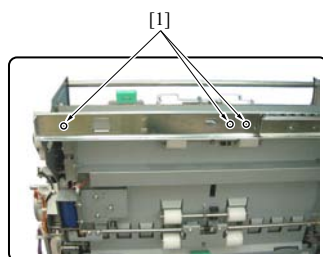
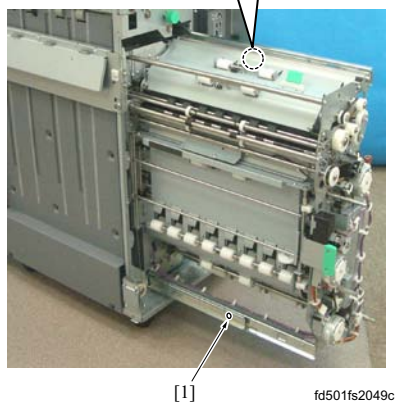


fd501fs2048c

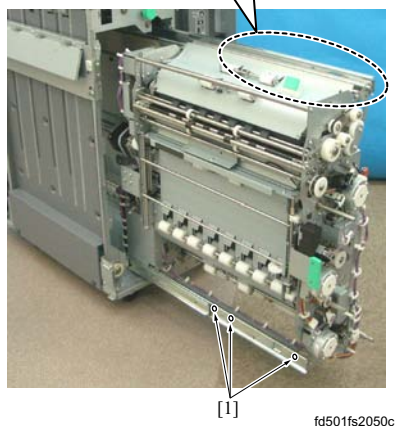
- Remove 2 C-clips [1].
- Remove the shaft [2] and separate the coupling arm /Fr [3] and the coupling arm /Rr [4].

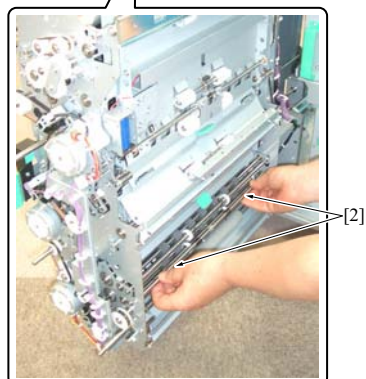
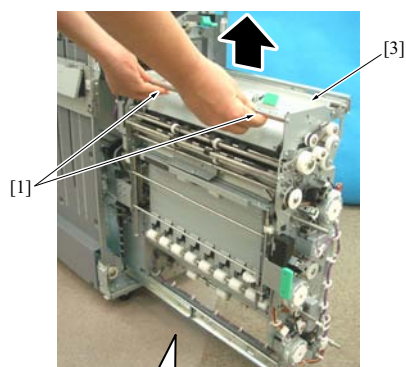


5. Remove the stopper screws [1], 1 each, from the left and right rails and pull further out the folding conveyance section.

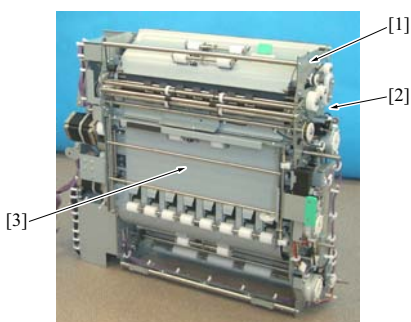


6. Remove screws [1], 3 each, from the left and right rails.

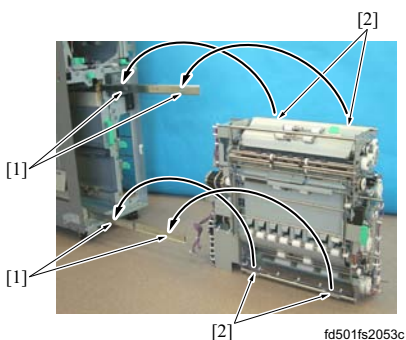




fd501fs2051c



fd501fs2052c



fd501fs2053c

7. Hold the folding conveyance section [3] at the specified places [1] and [2] and remove it while lifting it up.

CAUTION

- Be careful of your posture when removing it. Be sure to conduct this operation with 2 people so that you do not suffer backache.

Note

- When lifting up the folding conveyance section, be sure to hold the shaft at the places [1] and [2]. Holding it at other places such as the roller shaft or the guide plate may cause deformation to these places.

8. Stand the folding conveyance section [1] upright when it has been removed, or lay it down on the right-side [2].

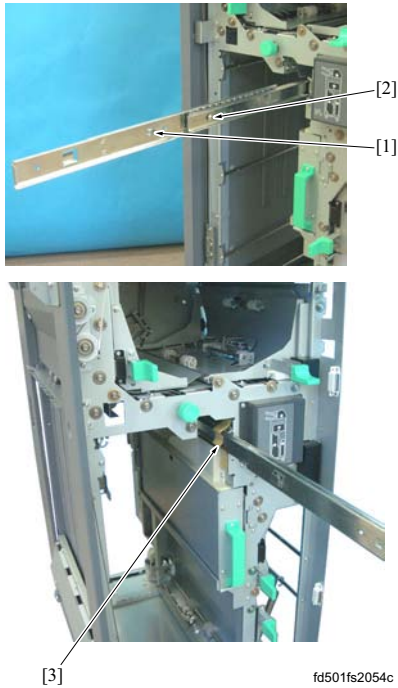
Note

- Be careful not to lay it with the left side [3] down. The guide plate may get deformed.

9. Check point when reinstalling the folding conveyance section

Note

- When installing the folding conveyance section, make sure that all 4 hooks [1] of the rails have engaged the attaching holes [2] of the folding conveyance section.
- The top should be attached by pushing it to the right to engage the upper rail and the bottom pushed to the left to engage the lower rail.



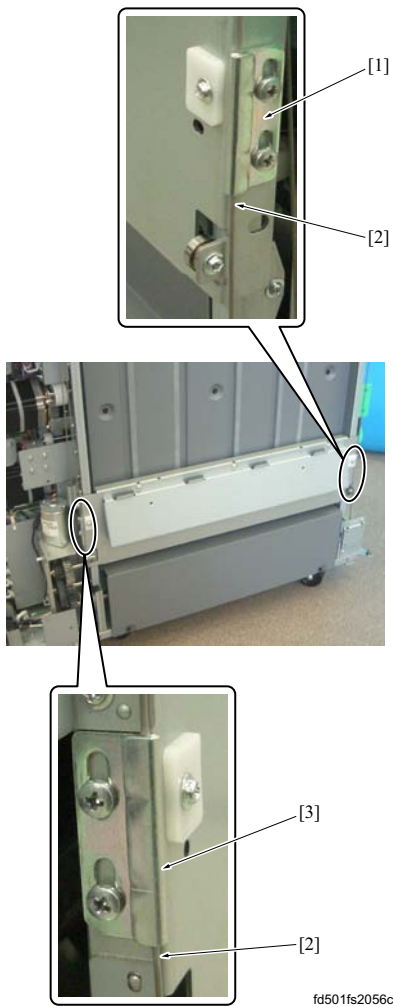
10. Reinstall the above parts following the removal steps in reverse.

Note

- When installing the folding conveyance section, pull out the rail further than the length of the stopper [1]. Use the stopper screw [2] to fasten it tentatively at its fully pulled-out position and fix the rail on the opposite side with tape [3]. It prevents the rail from moving to inside for an easy and smooth operation.

9.3.16 Main tray up/down wire

(1) Procedure



1. Check point when removing/reinstalling the main tray up/down wire.

Note

- The following procedure for replacing the up/down wire shows the examples on the rear side. The figuration and the winding of wires on the front side are symmetrical to those on the rear side.
- There are 2 types of up/down wires provided, one [1] on the front side and the other [3] on the rear side. Be sure to use the wire with the correct wire mounting plate direction when installing it. The direction of the wire mounting plate distinguished between these 2 wires when the shorter wire [2] is placed under the longer wire.

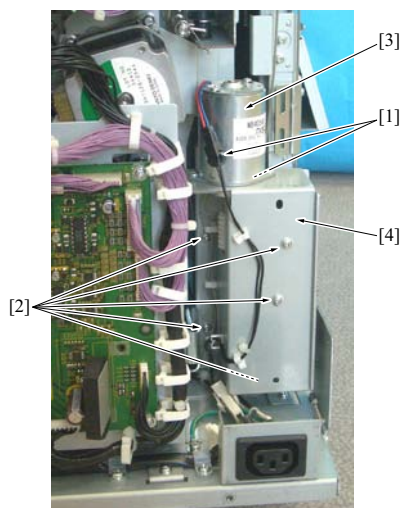
2. Remove the following parts.

Rear cover (Refer to [G.9.3.4 Rear cover](#))

Left cover /Fr (Refer to [G.9.3.5 Left cover /Fr](#))

Left cover /Rr (Refer to [G.9.3.6 Left cover /Rr](#))

Front door (Refer to [G.9.3.11 Front door](#))

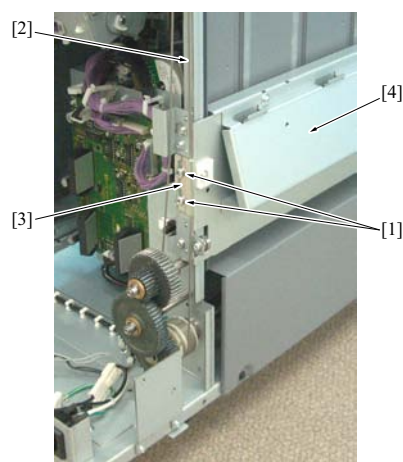


fd501fs2057c

3. Remove 2 connectors [1] and 5 screws [2], and then remove the gear box [4] together with the up/down motor (M11) [3].

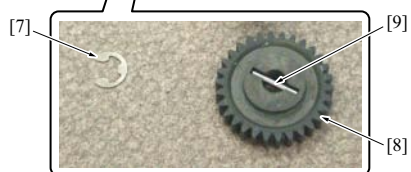
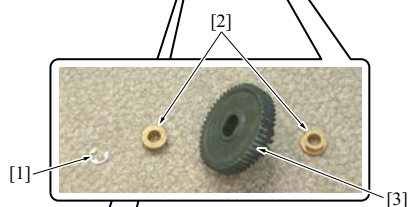
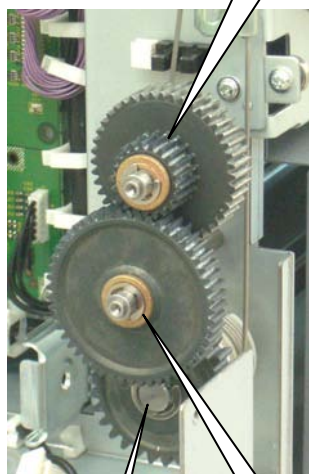
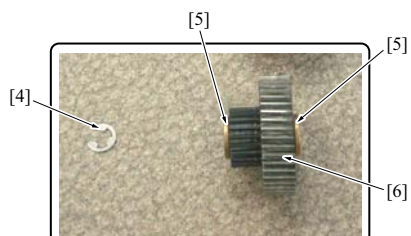
CAUTION

- When the gear box is removed, the up/down stay may fall down. So, when removing the gear box, be sure to support the stay with your hands.



fd501fs2058c

4. Remove 2 screws [1] and then remove the wire mounting plate [3] of the up/down wire /Rr [2] from the up/down stay [4].

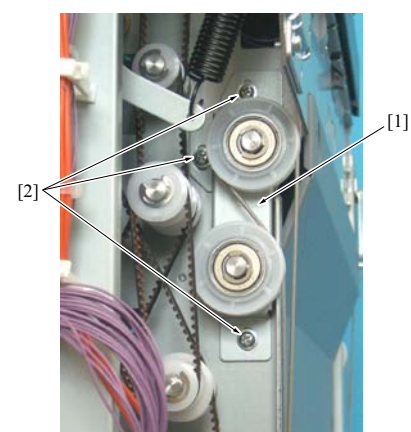


fd501fs2059c

5. Remove the E-ring [1] and then remove the gear [3] together with the 2 bearings [2].
6. Remove the E-ring [4] and then remove the gear [6] together with the 2 bearings [5].
7. Remove the E-ring [7] and then remove the gear [8] and the pin [9].

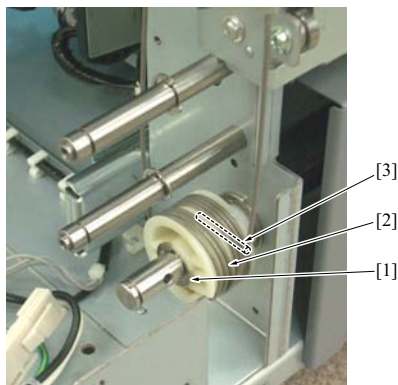
Note

- When removing the gear [8], be careful not to drop the pin [9].



fd501fs2060c

8. Loosen 3 screws [2] of the belt tensioner [1].

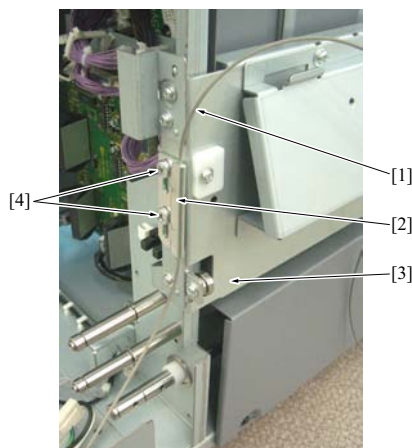


fd501fs2061c

9. Remove the E-ring [1] and then remove the up/down pulley /RrLw [2] and the pin [3].

Note

- When removing the up/down pulley /RrLw [2], be careful not to drop the pin [3].

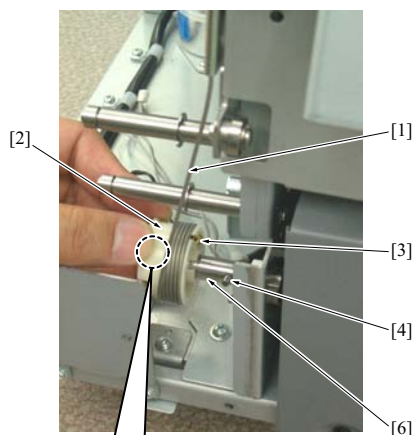


fd501fs2062c

10. Temporarily tighten the wire mounting plate [2] of a new up/down wire /Rr [1] to the up/down stay [3] with 2 screws [4].

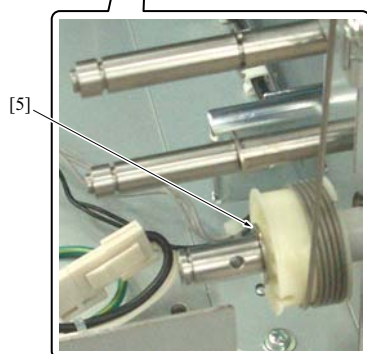
Note

- Install the up/down wires placing the shorter wire below the longer one with the wire supporting part of the mounting plate outside.
- There are 2 types of up/down wires, one for the front side and the other for the rear side, but these 2 wires are different in the direction of the wire mounting plates. Be sure to use a wire that fits in with the direction of a wire mounting plate.



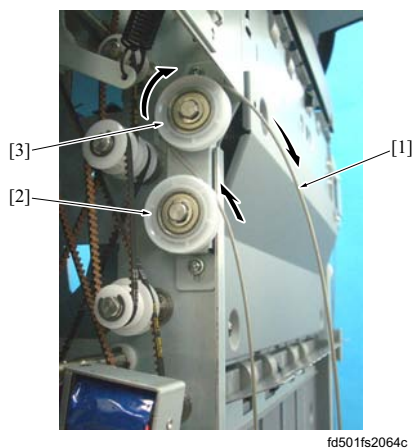
fd501fs2063c

11. Fasten the new up/down wire /Rr [1] with the wire end [3] provided on the inside of the up/down pulley /RrLw [2] and insert it into the shaft [6]. Rotate the up/down pulley /RrLw [2] and wind it 5.5 turns clockwise from inside to outside around the up/down pulley with no slack, and then insert the up/down pulley /RrLw [2] fully onto the shaft so that it coincides with the pin [4] and fasten it with the E-ring [5]. If the angle does not coincide with the pin [4], move up and down the front side of the up/down tray to change the angle of the shaft [6].

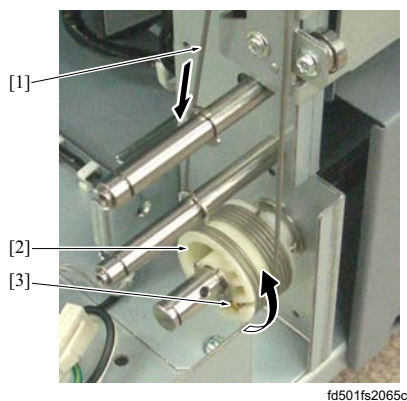


fd501fs2063c

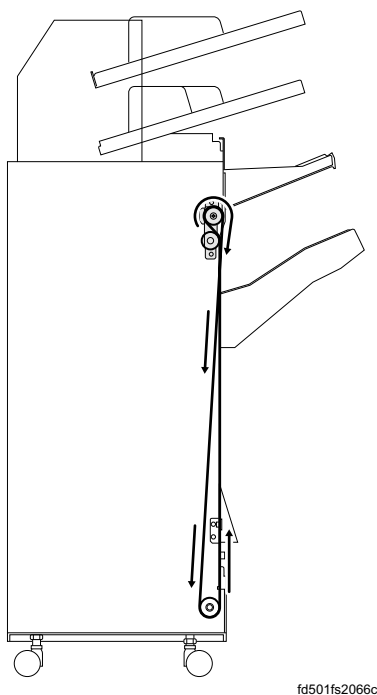
12. Hook up the up/down wire /Rr [1] onto the up/down pulley /RrUp [3] through the relay pulley /Rr [2].

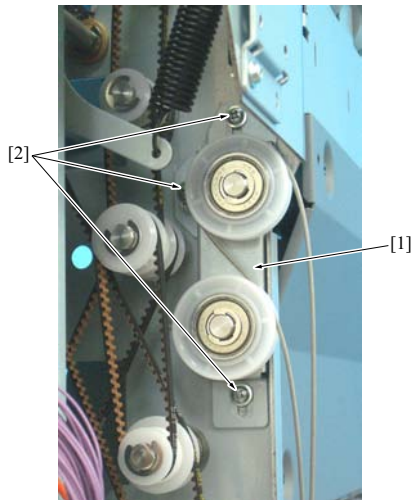


13. Wind the up/down wire /Rr [1] 2 turns counterclockwise from inside to outside around the up/down pulley /RrLw [2] with no slack and fasten it with the wire end [3].



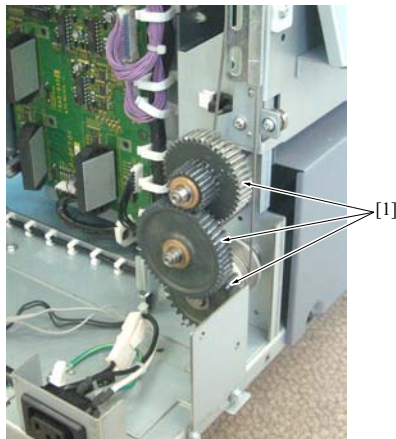
14. The route along which the up/down wire /Rr passes
The route along which the up/down wire /Rr passes is, on the whole, as shown in the drawing left.





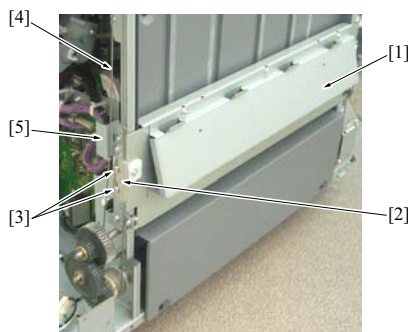
fd501fs2067c

15. Use a tension gauge or spring balance to pull up the wire tensioner [1] upward with a designated force "A," and fasten it with the 3 screws [2].
Specified value: $A = 2.5\text{kg} \pm 0.25\text{kg}$



fd501fs2068c

16. Reinstall the 3 gears [1] following the removal steps in reverse.



fd501fs2069c

17. With the up/down stay [1] held in a horizontal position, tighten the 2 screws [3] of the wire mounting plate [2].

Note

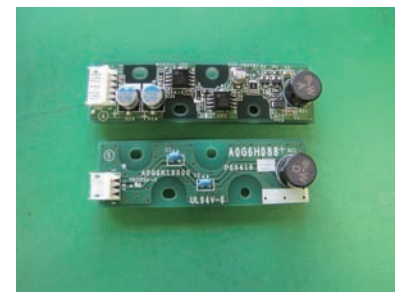
- Move the up/down stay up and down and check to see if it moves smoothly. If it does not move smoothly, adjust it again so that it becomes horizontal.
- Check the up/down wire [4] if it gets behind the actuator plate [5]. If it gets behind the douser, an unnecessary load is applied to the up/down wire [4] when the up/down stay [1] goes up.

18. Reinstall the above parts following the removal steps in reverse.

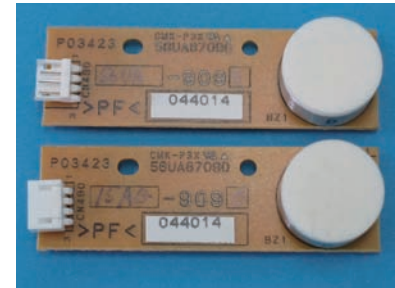
9.3.17 Way to distinguish between new and old types of the multi feed detection board /1 (MFDB/1) and /2 (MFDB/2)

Note

- Both of the multi feed detection boards /1 (MFDB/1) and /2 (MFDB/2) have new type [1] and old type [2].
- Each of the new and old types of the multi feed detection board /1 (MFDB/1) and /2 (MFDB/2) has different mounting metal frames and PI drive boards (PIDB) that correspond to each detection board, and are incompatible.



[1]



[2]

9.3.18 Multi feed detection board /1 (MFDB/1) and /2 (MFDB/2) (new type)

Note

- When the multi feed detection board is replaced, be sure to conduct the adjustment in replacing multi feed detection board (PI). (Refer to [I.5.7.9 Adjustment when replacing the multi feed detection board \(PI\) \(new type\)](#))

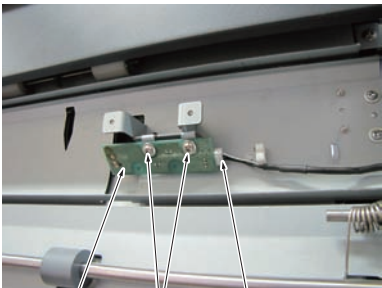
(1) Procedure



[2] [1]

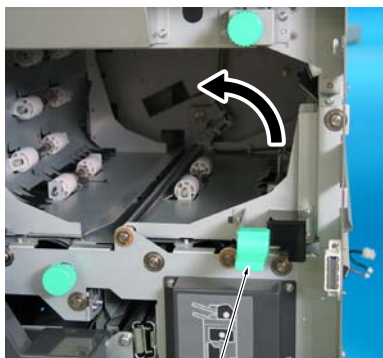
fd501fs2070c

1. Remove 2 screws [1] and then remove the multi feed detection board /1 (MFDB/1) cover [2].



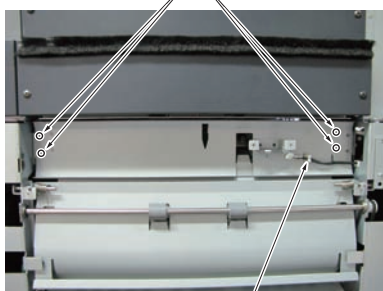
[3] [2] [1]

2. Disconnect the connector [1].
3. Remove 2 screws [2] and then remove the multi feed detection board /1 (MFDB/1) [3].

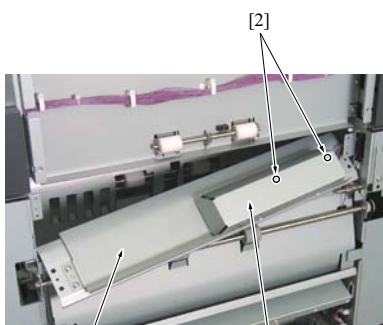


[1]

fd501fs2072c



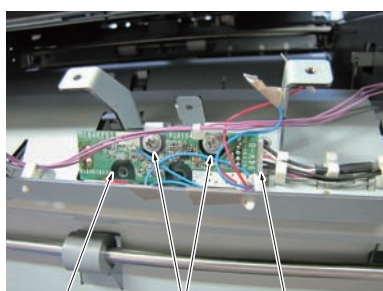
[2]



[1]

[3]

fd501fs2074c



[3]

[2]

[1]

4. Open the front door and then open the conveyance guide plate /2 [1] in the upper right direction.

5. Remove 4 screws [1].
6. Remove the wiring harness of the multi feed detection board /1 (MFDB/1) from the wiring harness guide [2].

7. Turn around the conveyance guide plate /2 assy [1] inside the machine and pull it to the outside.
8. Remove 2 screws [2] and then remove the multi feed detection board /2 cover [3].

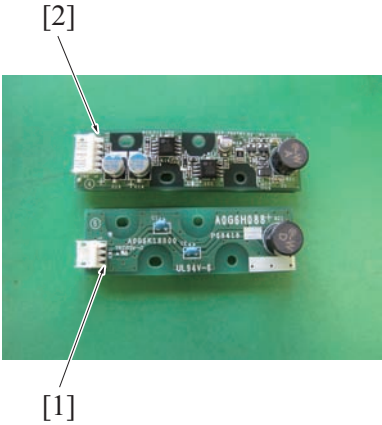
Note

- When turning it around, or when disassembling or reassembling it, be careful not to damage the wiring harness.

9. Disconnect the connector [1].
10. Remove 2 screws [2] and then remove the multi feed detection board /2 (MFDB/2) [3].
11. Reinstall the above parts following the removal steps in reverse.

(2) Note for installing the multi feed detection boards /1 (MFDB/1) and /2 (MFDB/2)

- Multi feed detection board /1 (MFDB/1) [1] and /2 (MFDB/2) [2] are different in shape. When reinstalling them, be sure to set at the proper positions.

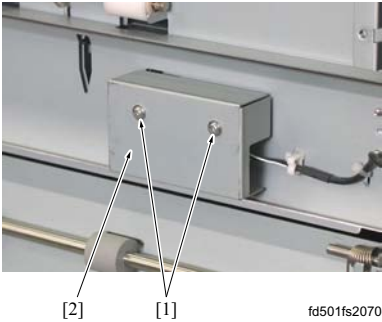


9.3.19 Multi feed detection board /1 (MFDB/1) and /2 (MFDB/2) (old type)

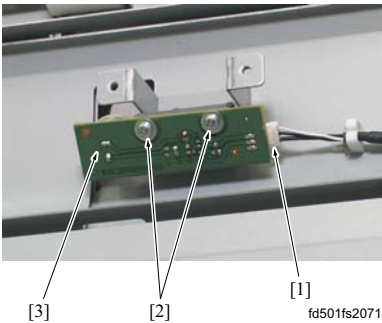
Note

- When replacing the multi-feed detection board /1 (MFDB/1), be sure to replace the multi-feed detection board /2 (MFDB/2) at the same time.
- When the multi-feed detection board is replaced, be sure to conduct the adjustment in replacing multi-feed detection board (PI). (Refer to [I.5.7.10 Adjustment when replacing the multi feed detection board \(PI\) \(old type\)](#))

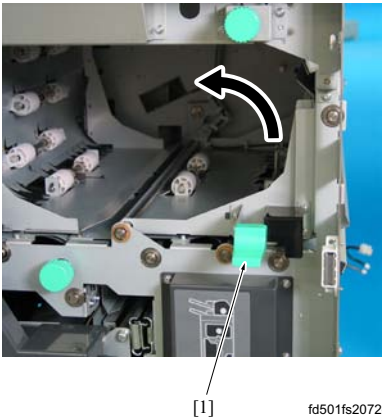
(1) Procedure



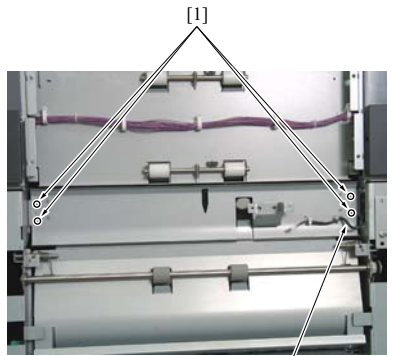
- Remove 2 screws [1] and then remove the multi-feed detection board /1 (MFDB/1) cover [2].



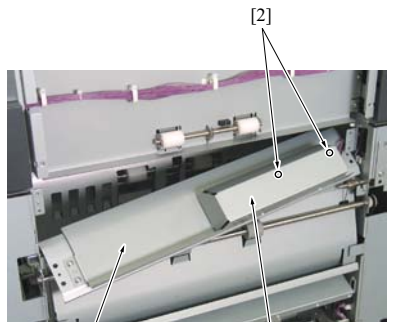
- Disconnect the connector [1].
- Remove 2 screws [2] and then remove the multi-feed detection board /1 (MFDB/1) [3].



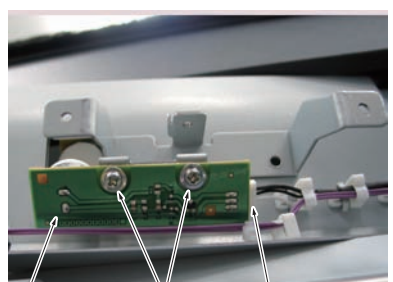
- Open the front door and then open the conveyance guide plate /2 [1] in the upper right direction.



[2] fd501fs2073c



[1] [3] fd501fs2074c



[3] [2] [1] a0h0t3c007ca

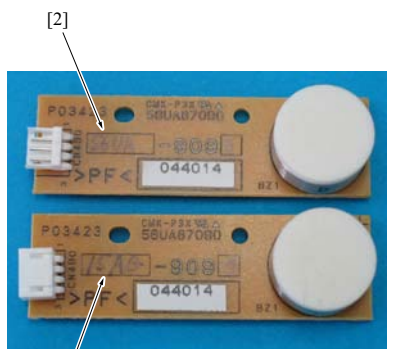
5. Remove 4 screws [1].
6. Remove the wiring harness of the multi-feed detection board /1 (MFDB/1) from the wiring harness guide [2].

7. Turn around the conveyance guide plate /2 assy [1] inside the machine and pull it to the outside.
8. Remove 2 screws [2] and then remove the multi-feed detection board /2 cover [3].

Note

- When turning it around, or when disassembling or reassembling it, be careful not to damage the wiring harness.

9. Disconnect the connector [1].
10. Remove 2 screws [2] and then remove the multi-feed detection board /2 (MFDB/2) [3].
11. Reinstall the above parts following the removal steps in reverse.

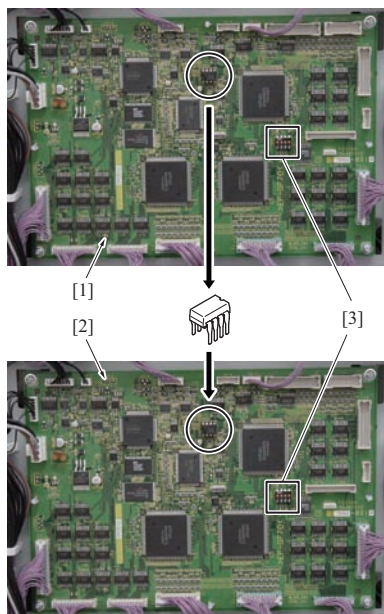
(2) Note for installing the multi-feed detection boards /1 (MFDB/1) and /2 (MFDB/2)

[2] [1] fd501fs2076c

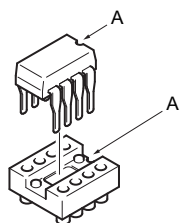
- The multi-feed detection boards /1 (MFDB/1) and /2 (MFDB/2) are installed on the same type board. Be careful not to confuse one with the other when installing them.
- Be sure to confirm the marking on the board when installing it.
Multi-feed detection board /1 (MFDB/1) [1]: 15AG
Multi-feed detection board /2 (MFDB/2) [2]: 56UA
- The connector shape is different for the multi-feed detection boards /1 (MFDB/1) and /2 (MFDB/2). So, even if it is installed, the connector cannot be connected.

9.3.20 Note for replacing the board**Note**

- When the FD control board (FDCB) is replaced, be sure to replace the EEPROM (IC68).



fd501fs2077c



fd501fs2078c

1. Install EEPROM (IC68) of the old control board [1] to the new control board [2].

Note

- Be sure to set the SW3 [3] same as the old FDCB. (Refer to [L.2.8.1 FD control board \(FDCB\)](#))

2. Check point when reinstalling the EEPROM (IC68)

Note

- Be sure to install the "A" sections of the EEPROM (IC68) in the same direction.

After replacing the FD control board (FDCB), conduct rewriting of the firmware.

(Refer to [J. Rewriting of firmware](#))

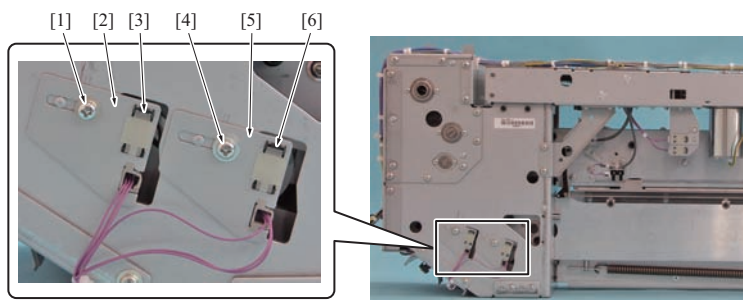
10. SD-506

10.1 Items not allowed to be disassembled/reassembled

10.1.1 Trimmer blade home sensor (PS50), Trimmer blade upper limit sensor (PS51)

(1) Positions from which removing is prohibited

- 1 fixing screw of the mounting plate on each trimmer blade home sensor (PS50) and trimmer blade upper limit sensor (PS51)



a0h2t3c061ca

[1]	Screw not allowed to be adjusted/removed	[2]	Mounting plate
[3]	Trimmer blade upper limit sensor (PS51)	[4]	Screw not allowed to be adjusted/removed
[5]	Mounting plate	[6]	Trimmer blade home sensor (PS50)

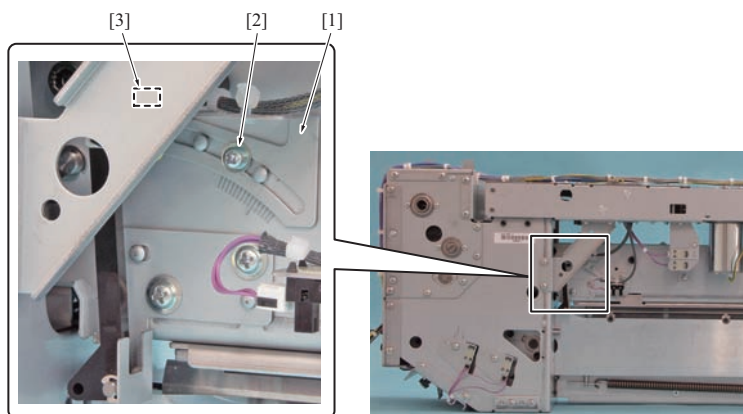
(2) Reason of prohibition

- The trimmer blade home sensor (PS50) detects the home position of the trimmer blade. Once the home position is out of alignment, the trimmer blade gets out from the trimmer press plate. It prevents paper from entering to the trimmer section and causes the trimming error or damages the trimmer blade retaining plate. Therefore, be sure not to change the installation position of PS50.
- The trimmer blade upper limit sensor (PS51) detects the upper limit of the trimmer blade after the completion of the trimming. Once the upper limit detection is out of alignment, the paper fails to be trimmed because the trimmer blade stops before the completion or the trimmer blade and the trimmer board get damaged because the trimmer blade cuts in the trimmer board deeply. Therefore, be sure not to change the installation position of PS51.

10.1.2 Trimmer completion sensor (PS62)

(1) Positions from which removing is prohibited

- 1 fixing screw of the trimmer completion sensor (PS62) mounting plate



a0h2t3c062ca

[1]	Mounting plate	[2]	Screw not allowed to be adjusted/removed
[3]	Trimmer completion sensor (PS62)	-	

(2) Reason of prohibition

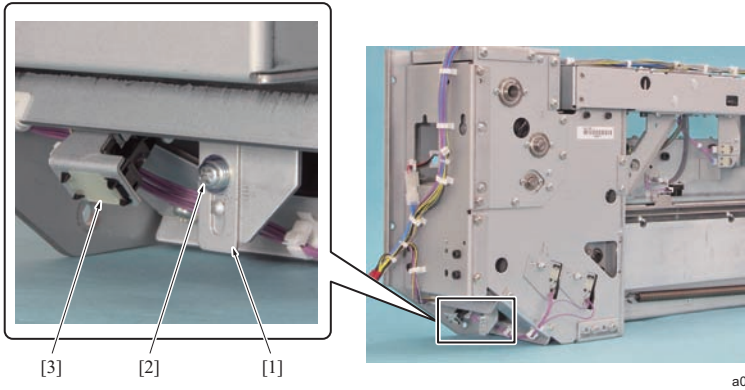
- The trimmer completion sensor (PS62) detects the completion of the trimming. Once the trimmer completion timing is out of alignment, the paper fails to be trimmed or the trimmer blade and the trimmer board get damaged because the trimmer blade cuts in the trimmer board deeply. Therefore, be sure not to change the installation position of PS50.

10.1.3 Wire slack prevention sensor (PS66)

(1) Positions from which removing is prohibited

- 1 fixing screw of the wire slack prevention sensor (PS66) mounting plate

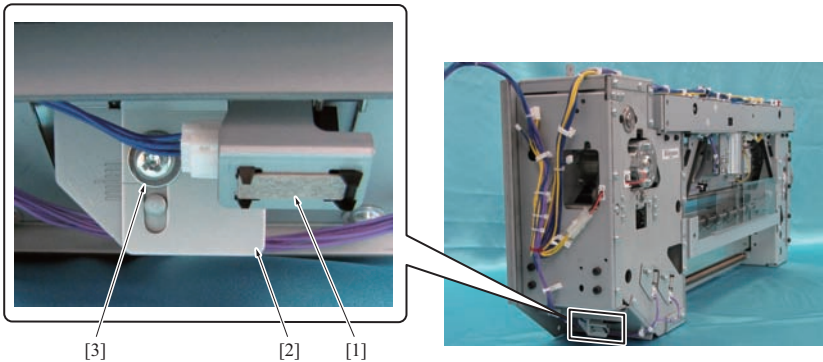
(a) Previous trimmer unit



a0h2t3c063ca

[1]	Mounting plate	[2]	Screw not allowed to be adjusted/removed
[3]	Wire slack prevention sensor (PS66)		-

(b) New trimmer unit



[1]	Wire slack prevention sensor (PS66)	[2]	Mounting plate
[3]	Screw not allowed to be adjusted/removed		-

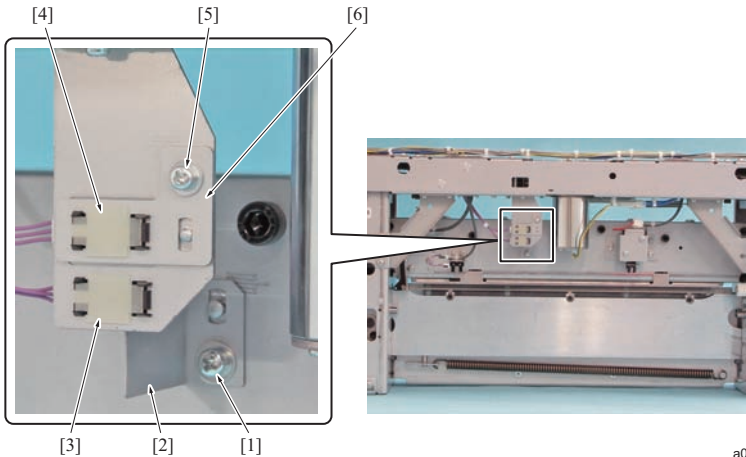
(2) Reason of prohibition

- The wire slack prevention sensor (PS66) detects the slack of the winding wire on the trimmer blade. Once the detection position is out of alignment, the wire is removed from the winding pulley and damages the trimmer unit. Therefore, be sure not to change the installation position of PS66.

10.1.4 Trimmer press upper limit sensor (PS52), Trimmer press home sensor (PS53)

(1) Positions from which removing is prohibited

- 1 fixing screw of the trimmer press upper limit sensor (PS52) mounting plate
- 1 fixing screw of the trimmer press home sensor (PS53) actuator



a0h2t3c064ca

[1]	Screw not allowed to be adjusted/removed	[2]	Actuator
[3]	Trimmer press home sensor (PS53)	[4]	Trimmer press upper limit sensor (PS52)

[5] Screw not allowed to be adjusted/removed	[6] Mounting plate
--	--------------------

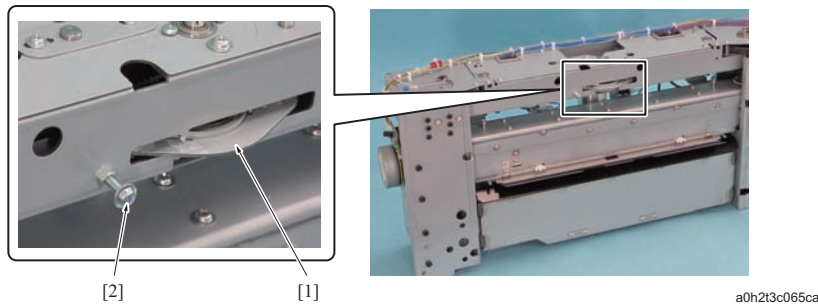
(2) Reason of prohibition

- The trimmer press home sensor (PS53) detects the home position of the trimmer press plate. Once the home position is out of alignment, the opening is not opened enough for the paper. It causes the trimming error by preventing paper from entering to the trimming section. Therefore, be sure not to change the position of the actuator of PS53.
- The trimmer press upper limit sensor (PS52) detects the upper limit of the trimmer press. Once the upper limit position is out of alignment, the opening is not opened enough for the paper. It causes the trimming error by preventing paper from entering to the trimming section, or the opening is not enough for replacing the trimmer blade. Therefore, be sure not to change the installation position of PS52.

10.1.5 Trimmer press brake

(1) Positions from which removing is prohibited

- 1 gap adjusting screw of the trimmer press brake



[1] Trimmer press brake	[2] Screw not allowed to be adjusted/removed
-------------------------	--

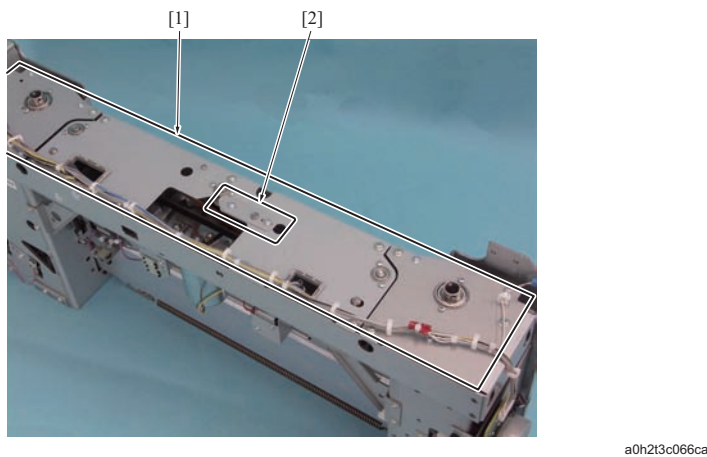
(2) Reason of prohibition

- The trimmer press brake pushes the timing belt and prevents the trimmer press motor (M32) from rotating too much which caused by the inertia of the trimmer press board. Once the gap between the trimmer press brake and the timing belt changes, it damages the timing belt or disables the brake. Therefore, be sure not to adjust the gap adjusting screw of the trimmer press brake.

10.1.6 Fixing screw of the trimmer press timing belt

(1) Positions from which removing is prohibited

- All screws which fix the driving system of the trimmer press



[1] Screws not allowed to be adjusted/removed (all screws shown in the picture)	[2] Screws allowed to be removed
---	----------------------------------

(2) Reason of prohibition

- The paper holding screw on right and left drives the trimmer press plate through the timing belt. Once the part such as gear of the driving system is removed, the parallelism of the trimmer press plate is not guaranteed because of the belt tooth skipping. Therefore, be sure not to remove the attaching screw of the cover which fixes the driving system and the bearing fixing screw.

10.2 List of disassembling and assembling parts

No.	Section	Parts name
1	Cover	Rear cover /Lt
2		Rear cover /Rt
3		Left cover
4		Upper cover /Fr

5		Upper cover /Rr3
6		Sub tray cover
7		Front door /Lt
8		Front door /Rt
9	Folding section	Folding unit

10.3 Disassembling and assembling procedures

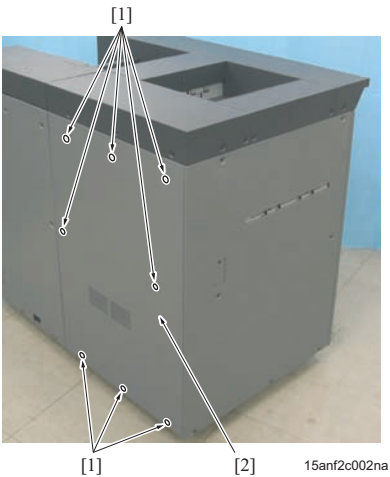
10.3.1 Precautions on disassembling and assembling

⚠ CAUTION

- Be sure to unplug the power plug from the power outlet.

10.3.2 Rear cover /Lt

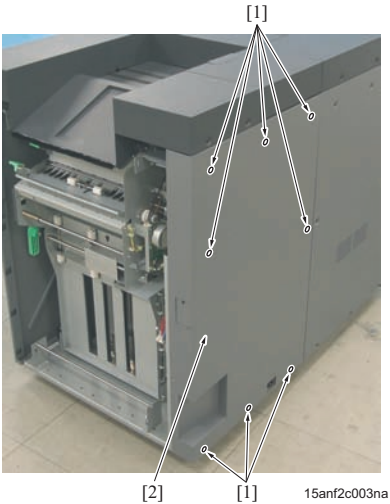
(1) Procedure



1. Remove 8 screws [1], and then remove the rear cover /Lt [2].
2. Reinstall the above parts following the removal steps in reverse.

10.3.3 Rear cover /Rt

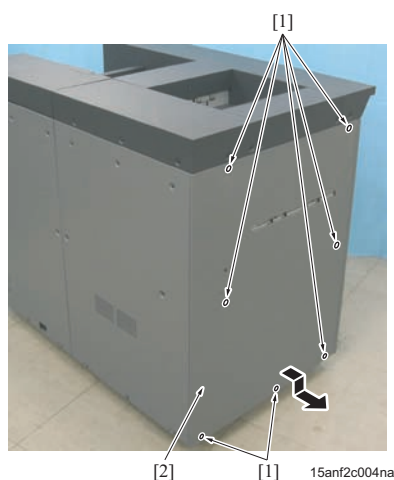
(1) Procedure



1. Remove 8 screws [1], and then remove the rear cover /Rt [2].
2. Reinstall the above parts following the removal steps in reverse.

10.3.4 Left cover

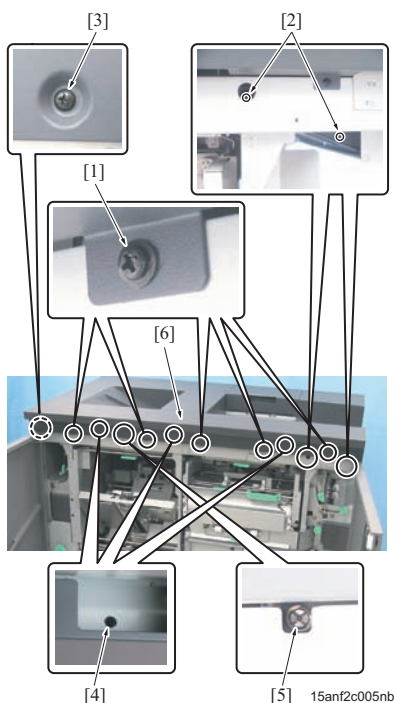
(1) Procedure



1. Remove 7 screws [1], slide the bottom of the left cover [2] to the outside, and remove it to the bottom.
2. Reinstall the above parts following the removal steps in reverse.

10.3.5 Upper cover /Fr

(1) Procedure



1. Open the front doors /Rt and /Lt.
2. Remove the 5 screws [1] on the front, 2 screws [2], 1 screw [3] on the left, and 3 screws [4] under the cover.
3. Loosen a screw [5].
4. Lift up and remove the upper cover /Fr [6].

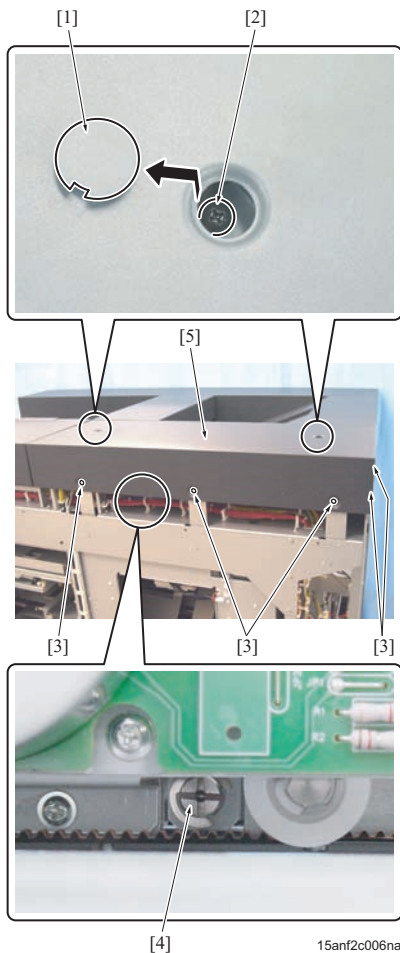
Note

- When removing the upper cover /Fr [6], pull the screw [5] to the front so that the tip of the screw does not catch the upper cover /Fr [6].

5. Reinstall the above parts following the removal steps in reverse.

10.3.6 Upper cover /Rr3

(1) Procedure



1. Remove the rear cover /Lt. (Refer to [G.10.3.2 Rear cover /Lt](#))
2. Remove 2 screw caps [1] and then remove 2 screws [2].
3. Remove 5 screws [3].
4. Loosen the screw [4] and then remove the upper cover /Rr3 [5].

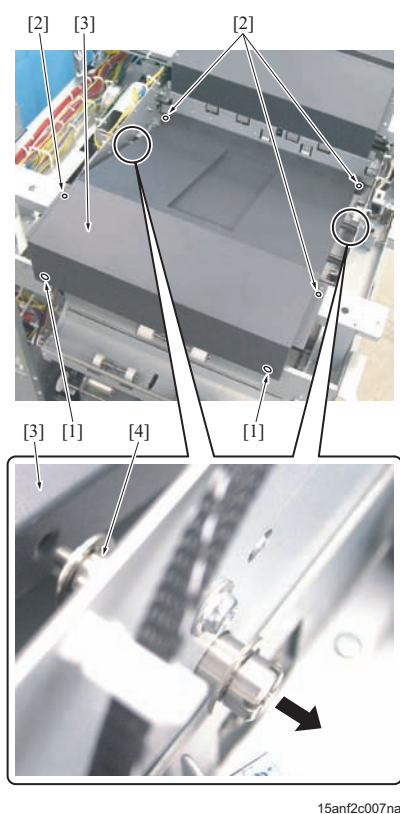
Note

- When removing the upper cover /Rr3 [5], pull the screw [4] to the front so that the tip of the screw does not catch the upper cover /Rr3 [5].

5. Reinstall the above parts following the removal steps in reverse.

10.3.7 Sub tray cover

(1) Procedure



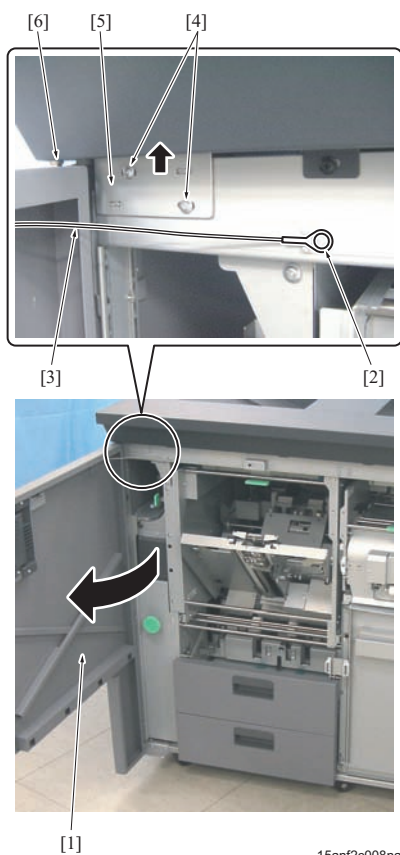
1. Remove the upper cover /Fr. (Refer to [G.10.3.5 Upper cover /Fr](#))
2. Remove the upper cover /Rr3. (Refer to [G.10.3.6 Upper cover /Rr3](#))
3. Remove 2 screws [1] and 4 screws [2], and then remove the sub tray cover [3].
4. Reinstall the above parts following the removal steps in reverse.

Note

- When reinstalling the sub tray cover [3], pull the screw [4] to the outside.

10.3.8 Front door /Lt

(1) Procedure



1. Open the front door /Lt [1].
2. Remove the screw [2], and then remove the front door stopper /Lt [3].
3. Remove 2 screws [4] and remove the fulcrum [6] by sliding the hinge [5] upward, and then remove the front door /Lt [1].

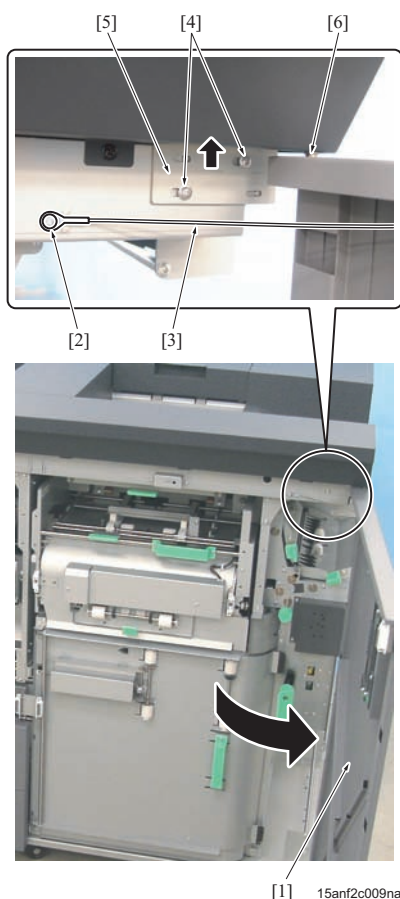
Note

- Support the front door /Lt [1] with your hand so that it does not fall down when removing the screw [4].

4. Reinstall the above parts following the removal steps in reverse.

10.3.9 Front door /Rt

(1) Procedure



1. Open the front door /Rt [1].
2. Remove the screw [2], and then remove the front door stopper /Rt [3].
3. Remove 2 screws [4], remove the fulcrum [6] by sliding the hinge [5] upward, and then remove the front door /Rt [1].

Note

- Support the front door /Rt [1] with your hand so that it does not fall down when removing the screw [4].

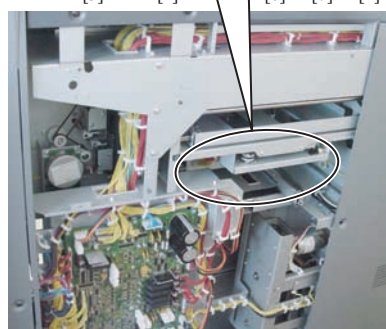
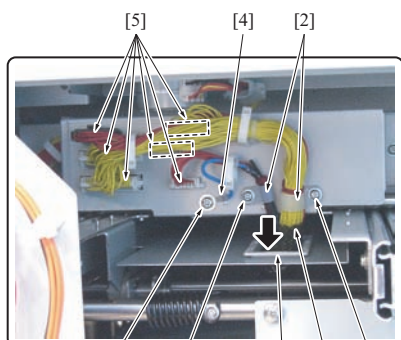
4. Reinstall the above parts following the removal steps in reverse.

10.3.10 Folding unit

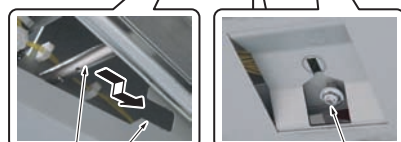
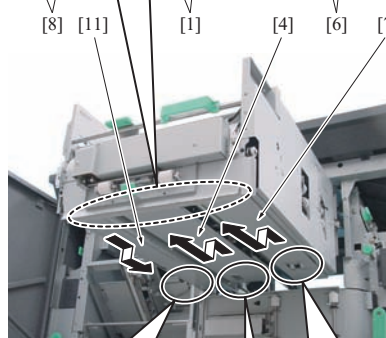
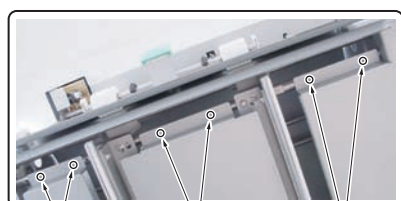
⚠ CAUTION

- Be sure to perform this operation with 2 people because the folding unit is heavy.

(1) Procedure



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15anf2c011na

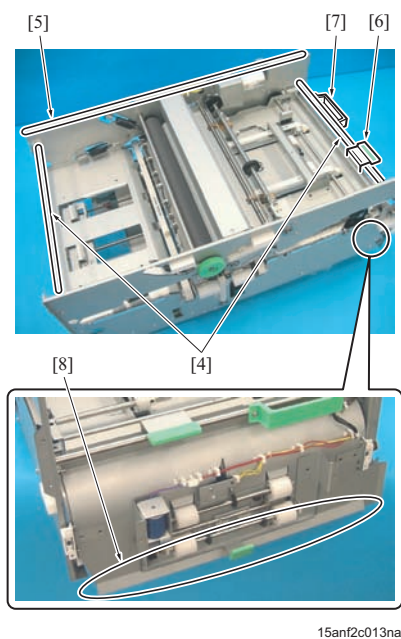
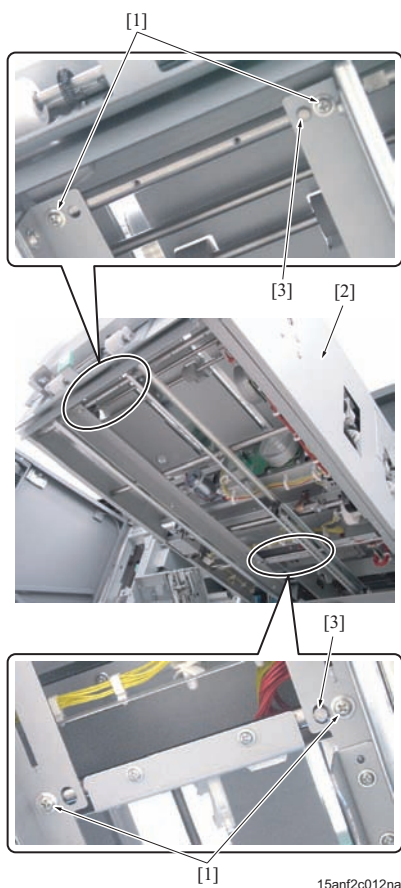
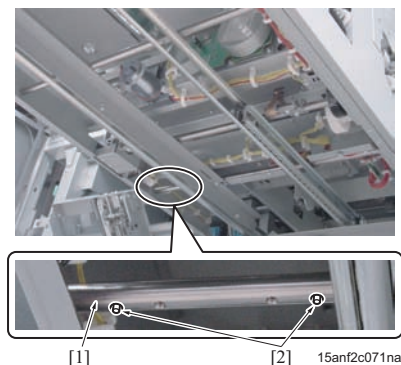
1. Remove the front door /Rt. (Refer to [G.10.3.9 Front door /Rt](#))
2. Remove the rear cover /Rt. (Refer to [G.10.3.3 Rear cover /Rt](#))
3. Remove 2 screws [1] and 2 clamps [2] from the rear of the folding unit.

Note

- Be sure not to let the clamps [2] fall down.

4. Remove the screw [3] and the ground [4].
5. Disconnect 6 connectors [5].
6. Remove the clamp and fall drop the wiring harness [7] from the hole [6] on the wiring harness guide.

7. Pull out the folding unit.
8. Pull out the folding unit. Remove 2 screws [1], separate the notch [2] from the hole [3] and remove the lower cover /2 [4].
9. Loosen the screw [5], remove the 2 screws [6] and remove the lower cover /1 [7].
10. Remove 2 screws [8], separate the notch [10] from the shaft [9] and remove the lower cover /3 [11].



11. Check point when reinstalling the lower cover /3.

Note

- Install the lower cover /3 [11] between 2 pins [2] of the shaft [1]. If it is installed at an improper position, other parts are damaged in storing the folding unit.

12. Remove 4 screws [1], and then lift up and remove the folding unit [2] with 2 people.

Note

- When reinstalling it, be sure to align the positioning pin [3] with the hole.

13. Reinstall the above parts following the removal steps in reverse.

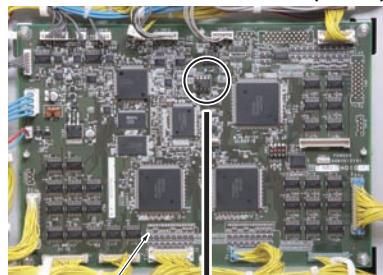
Note

- When holding the folding unit, be sure to hold the shafts [4] at front and rear or the upper top of the side plate [5]. Never hold the jam release lever [6] or the handle [7]. They get damaged.
- When placing the folding unit, place it on the table to avoid the guide plate [8] on the front being contacted with the floor because it is projected from the bottom of the unit.

10.3.11 Note for replacing the board

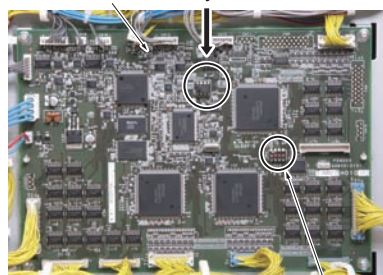
⚠ Note

- When the SD control board (SDCB) is replaced, be sure to replace the EEPROM (IC68).

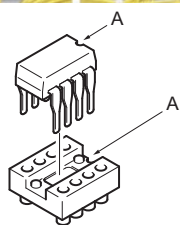


[1]

[2]



[3]



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- Remove the EEPROM (IC68) from the old SD control board (SDCB) [1] and install it into the new SD control board (SDCB) [2].

Note

- Be sure to install the "A" sections of the EEPROM (IC68) in the same direction.
- Be sure to set the SW3 [3] as the same as the settings of the old SDCB. (Refer to [L.2.9.1 SD control board \(SDCB\)](#))
- After replacing the SD control board (SDCB), conduct rewriting of the firmware. (Refer to [J. Rewriting of firmware](#))

11. PB-502

11.1 List of disassembling and assembling parts

No.	Section	Parts name
1	Cover	Front cover
2		Upper cover /Fr
3		Upper cover /Rr
4		Upper cover /Lt
5		Rear cover
6		Left cover
7		Pellet supply cover
8		SC cover /Fr
9		SC cover /Lt
10		SC cover /Up
11		Book stock cover /Up
12		Book stock cover /Fr
13		Book stock cover /Rr
14	Pellet supply section	Pellet supply unit
15	Glue tank section	Glue tank unit
16	SC section	SC unit
17	Clamp section	Clamp unit
18	Book stock section	Book stock unit
19		Book lift wire
20	Conveyance section	Conveyance unit /Lw
21	Cover paper supply section	Cover paper tray
22		Cover paper lift wire

11.2 Removing procedure for disassembly/reassembly parts

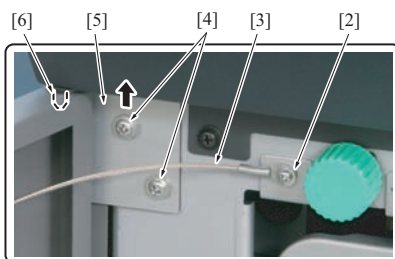
11.2.1 Precautions on disassembling and assembling

⚠ CAUTION

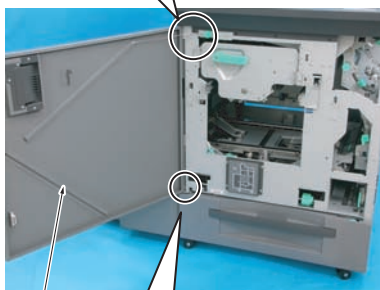
- Make sure to unplug the power cord of the main body from the power outlet when it is connected to the main body.

11.2.2 Front door

(1) Procedure



1. Open the front door [1].
2. Remove the screw [2] and then remove the wire [3].
3. Remove the 2 screws [4] and slide the mounting bracket [5] into the direction of the arrow and remove the pin [6]. Then release the front door [1] from the pin [7].
4. Reinstall the above parts following the removal steps in reverse.



[1]

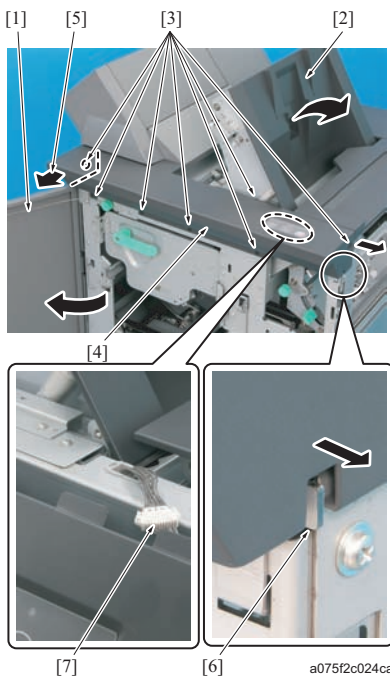


[7]

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Note

- When installing the wire [3], be sure to twist it 1 turn in counter clockwise before securing with a screw to prevent the wire from contacting with the tab.

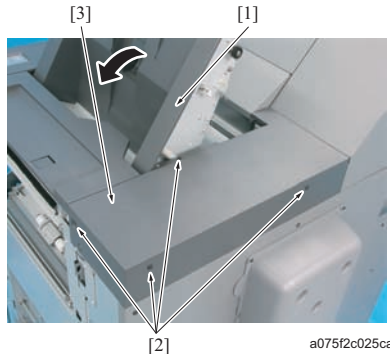
11.2.3 Upper cover /Fr**(1) Procedure**

1. Open the front door [1] and the upper door [2]. (Refer to [G.11.2.19 Book stock unit](#))
2. Remove the 7 screws [3].
3. Pull the left part of the upper cover /Fr [4] in the arrow-marked direction [5]. Then release the cover from the projection [6] and disconnect it from the connector [7].

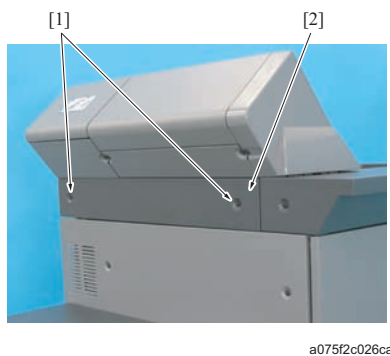
Note

- When reinstalling it, be sure to put the connector [6] under the upper cover /FrRt [3] properly so as not to let the cables get caught between the cover and the frame.

4. Reinstall the above parts following the removal steps in reverse.

11.2.4 Upper cover /Rr**(1) Procedure**

1. Open the upper door [1].
2. Remove 4 screws [2] and then remove the upper cover /Rr [3].
3. Reinstall the above parts following the removal steps in reverse.

11.2.5 Upper cover /Lt**(1) Procedure**

1. Remove the 2 screws [1] and remove the upper cover /Lt [2]. (Refer to [G.11.2.19 Book stock unit](#))
2. Reinstall the above parts following the removal steps in reverse.

11.2.6 Rear cover

(1) Procedure



1. Remove the 8 screws [1] and then remove the rear cover [2].

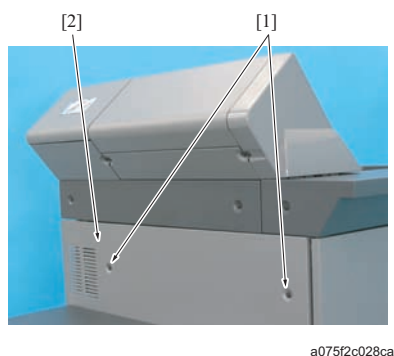
Note

- When installing the rear cover, make sure to attach the metal plates [3] to the bottom of the rear cover.

2. Reinstall the above parts following the removal steps in reverse.

11.2.7 Left cover

(1) Procedure

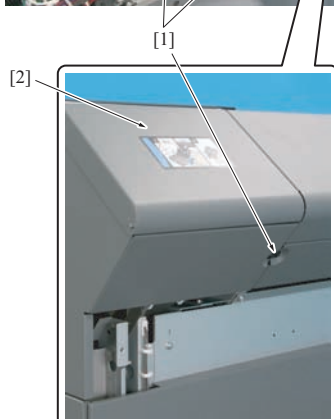
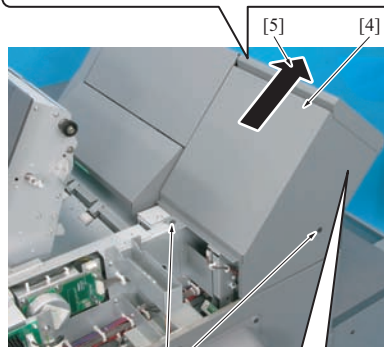
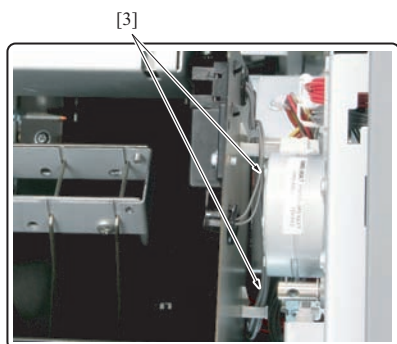


1. Remove 2 screws [1] and then remove the left cover [2].

2. Reinstall the above parts following the removal steps in reverse.

11.2.8 Pellet supply cover

(1) Procedure



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1. Remove the upper cover /Rr. (Refer to [G.11.2.4 Upper cover /Rr](#))
2. Remove the upper cover /Lt. (Refer to [G.11.2.5 Upper cover /Lt](#))
3. Remove 3 screws [1].
4. Open the pellet supply door [2]. Remove the pellet supply cover [4] to the arrowed direction [5] carefully so as not to damage the wire binding [3].

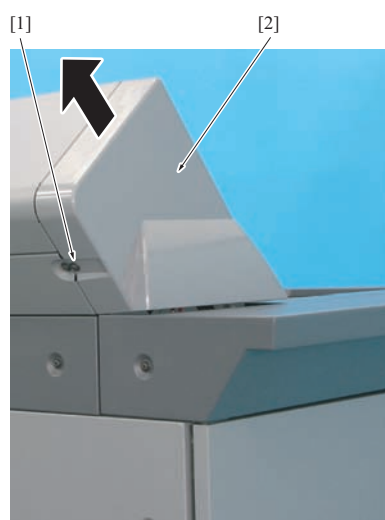
Note

- When removing/installing the glue supply cover, be careful not to cut or damage the wire binding [3].

5. Reinstall the above parts following the removal steps in reverse.

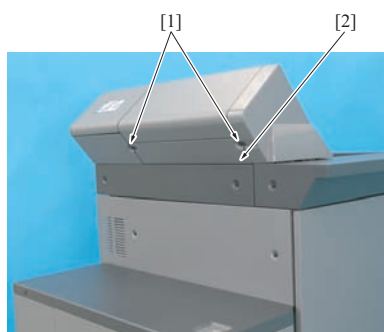
11.2.9 SC cover /Fr

(1) Procedure



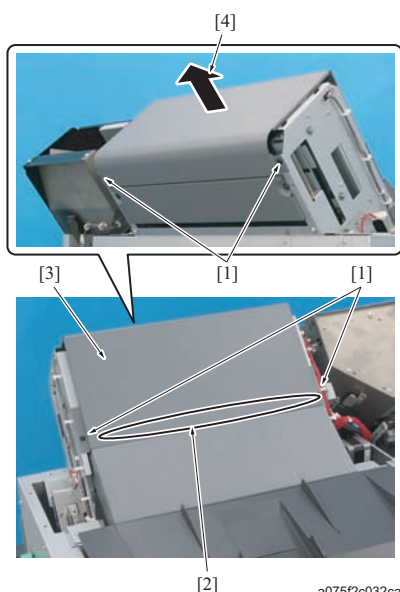
a075f2c030ca

1. Remove the screw [1] and remove the SC cover /Fr [2].
2. Reinstall the above parts following the removal steps in reverse.

11.2.10 SC cover /Lt**(1) Procedure**

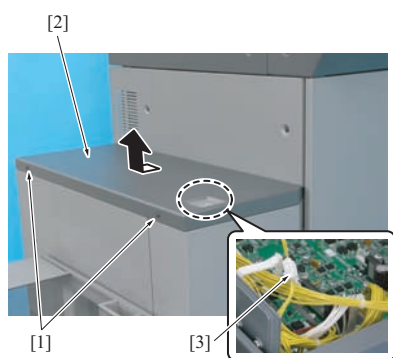
a075f2c031ca

1. Remove the 2 screws [1] and remove the SC cover /Lt [2].
2. Reinstall the above parts following the removal steps in reverse.

11.2.11 SC cover /Up**(1) Procedure**

a075f2c032ca

1. Remove the upper cover /Rr. (Refer to [G.11.2.4 Upper cover /Rr](#))
2. Remove the upper cover /Lt. (Refer to [G.11.2.5 Upper cover /Lt](#))
3. Remove the SC cover /Lt. (Refer to [G.11.2.10 SC cover /Lt](#))
4. Remove the pellet supply cover. (Refer to [G.11.2.8 Pellet supply cover](#))
5. Remove the SC cover /Fr. (Refer to [G.11.2.9 SC cover /Fr](#))
6. Remove 4 screws [1] and remove the SC cover /Up [3] in the direction of the arrow [4] while slightly lifting up the circled part [2].
7. Reinstall the above parts following the removal steps in reverse.

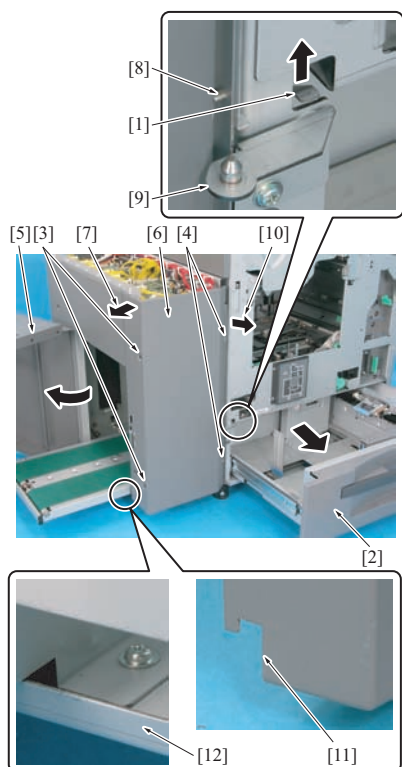
11.2.12 Book stock cover /Up**(1) Procedure**

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1. Remove 2 screws [1].
2. Slightly move the book stock cover /Up [2] to the left and lift it a little. Then disconnect the connector [3] to remove the cover.
3. Reinstall the above parts following the removal steps in reverse.

11.2.13 Book stock cover /Fr

(1) Procedure

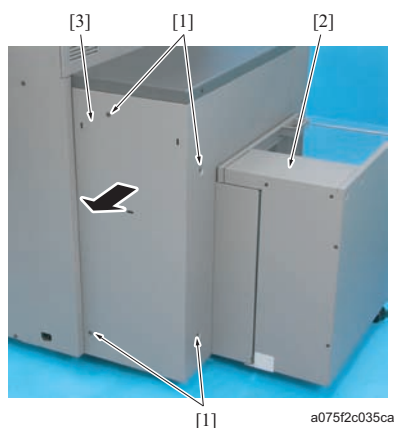


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1. Remove the front door. (Refer to [G.11.2.2 Front door](#))
2. Remove the book stock cover /Up. (Refer to [G.11.2.12 Book stock cover /Up](#))
3. Move the lever [1] up and pull out the cover paper tray [2].
4. Open the stacker door [5].
5. Remove 2 screws [3].
6. Tilt the upper part of the book stock cover /Fr [6] to the left [7], and remove the built-in from the screws [4] avoiding the screw [8] and the arm [9]. Then pull the right edge in the direction of the arrow [10] and remove the book stock cover /Fr [6].

11.2.14 Book stock cover /Rr

(1) Procedure

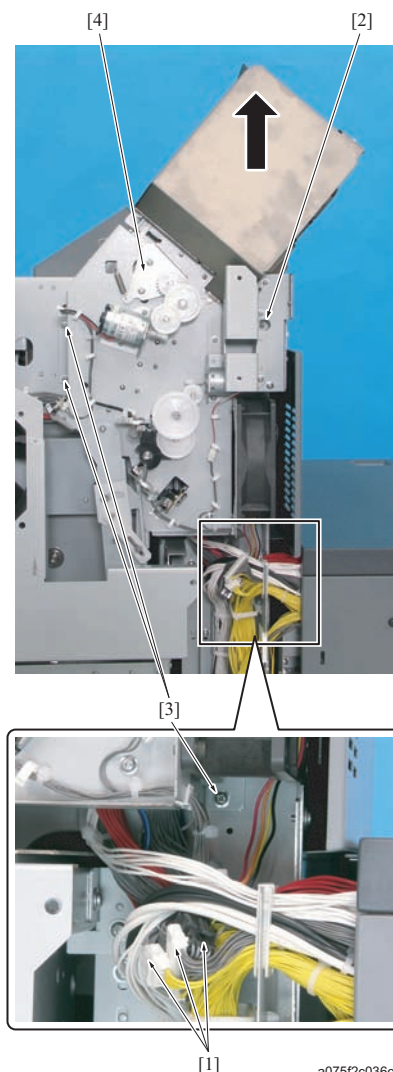


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1. Remove 4 screws [1].
2. Open the stacker door [2] and remove the book stock cover /Rr [3].
3. Reinstall the above parts following the removal steps in reverse.

11.2.15 Pellet supply unit

(1) Procedure



1. Remove the rear cover. (Refer to [G.11.2.6 Rear cover](#))
2. Remove the upper cover /Lt. (Refer to [G.11.2.5 Upper cover /Lt](#))
3. Remove the upper cover /Rr. (Refer to [G.11.2.4 Upper cover /Rr](#))
4. Remove the pellet supply cover. (Refer to [G.11.2.8 Pellet supply cover](#))
5. Disconnect 3 connectors [1].
6. Loosen the screw [2].
7. Remove 3 screws [3] and remove the pellet supply unit [4] upward while releasing it from the screw [2].

Note

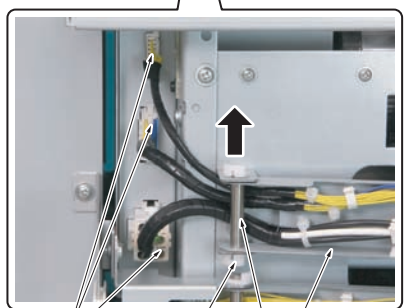
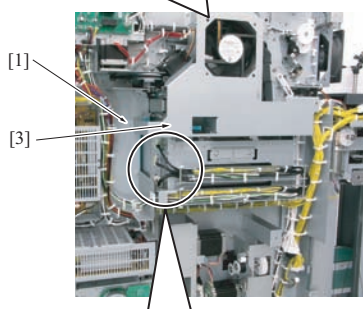
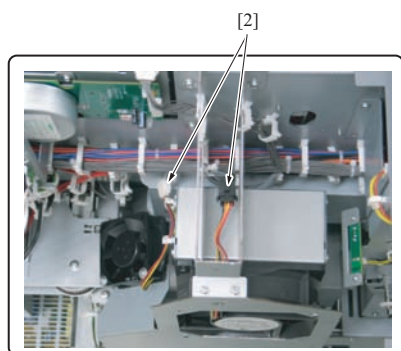
- When removing the unit, be careful not to spill the pellet.

8. Reinstall the above parts following the removal steps in reverse.

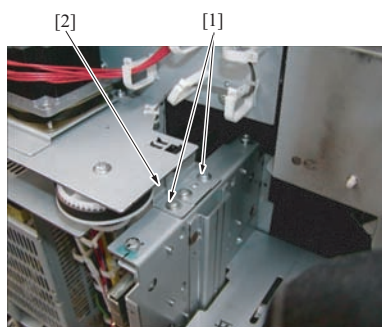
11.2.16 Glue tank unit

⚠ CAUTION

- The glue tank unit is extremely hot right after turning OFF the main power switch (SW1) or the sub power switch (SW2) of the main body. To prevent burn injuries, leave the unit until it cools enough before performing the maintenance work.

(1) Procedure

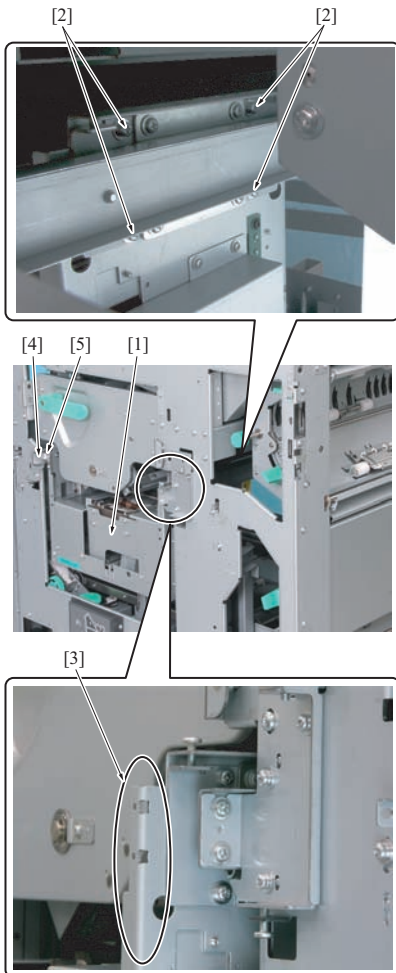
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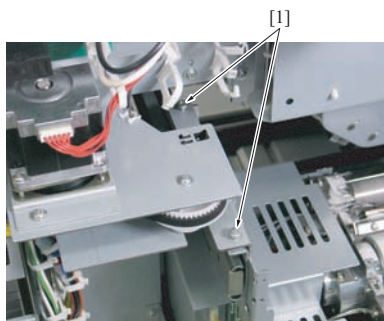
a075f2c119ca

1. Remove the rear cover. (Refer to [G.11.2.6 Rear cover](#))
2. Remove the upper cover /Rr. (Refer to [G.11.2.4 Upper cover /Rr](#))
3. Remove the screw [1] and disconnect 2 connectors [2], and then remove the suction unit [3].
4. Disconnect 3 connectors [4].
5. Remove the C-clip [5] and pull out the pin [6] straight up to release the coupling arm [7].

6. Remove 2 screws [1] and then uncouple the belt coupling bracket [2].



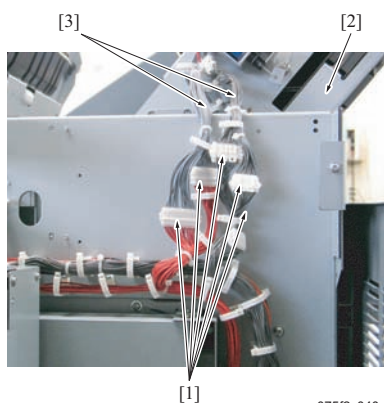
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a075f2c084ca

11.2.17 SC unit

(1) Procedure



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7. Pull out the glue tank unit [1] and remove 4 screws [2].

Note

- When moving the glue tank unit, be sure to hold it by the metal frame [3] on the right side of the unit.
- When removing the screw [2], be careful to avoid injury from sharp metal edges around the screw.

8. Further pull out the glue tank unit [1].

9. Remove the roller [5] from the rail [4] and remove the glue tank unit.

10. Reinstall the above parts following the removal steps in reverse.

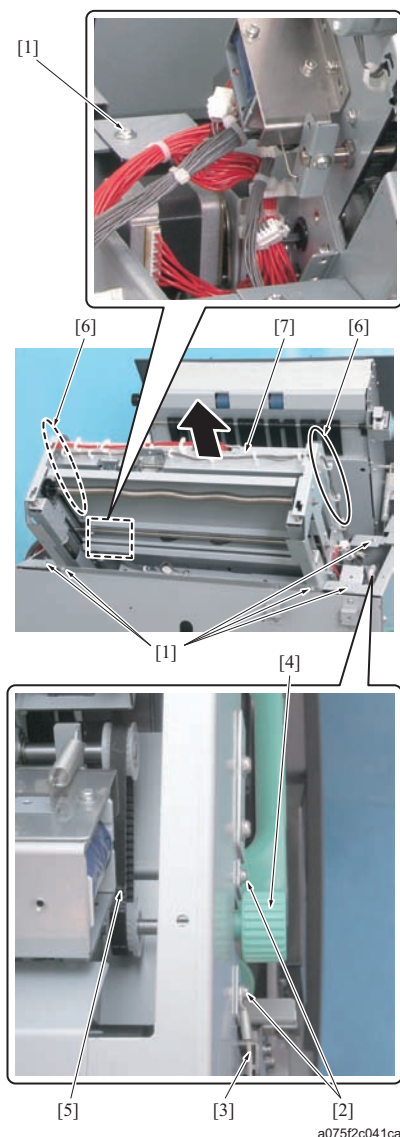
Note

- After installing the glue tank unit, make a test print and binding to check that no glue is squeezed out of the top and bottom edges of the created book and no pages come off the cover when opening the book.

Note

- Never loosen or tighten the 2 screws because they are keeping the levelness and vertical position of the glue tank unit.

1. Remove the upper cover /Fr. (Refer to [G.11.2.3 Upper cover /Fr](#))
2. Remove the upper cover /Rr. (Refer to [G.11.2.4 Upper cover /Rr](#))
3. Remove the upper cover /Lt. (Refer to [G.11.2.5 Upper cover /Lt](#))
4. Remove the rear cover. (Refer to [G.11.2.6 Rear cover](#))
5. Remove the left cover. (Refer to [G.11.2.7 Left cover](#))
6. Remove the pellet supply cover. (Refer to [G.11.2.8 Pellet supply cover](#))
7. Remove the SC cover /Fr. (Refer to [G.11.2.9 SC cover /Fr](#))
8. Remove the SC cover /Lt. (Refer to [G.11.2.10 SC cover /Lt](#))
9. Remove the SC cover /Up. (Refer to [G.11.2.11 SC cover /Up](#))
10. Remove the book stock cover /Up. (Refer to [G.11.2.12 Book stock cover /Up](#))
11. Remove the pellet supply unit. (Refer to [G.11.2.15 Pellet supply unit](#))
12. Disconnect 5 relay connectors [1].
13. Remove the wire binding [3] from the SC unit [2] by releasing the wire binding from the saddles.

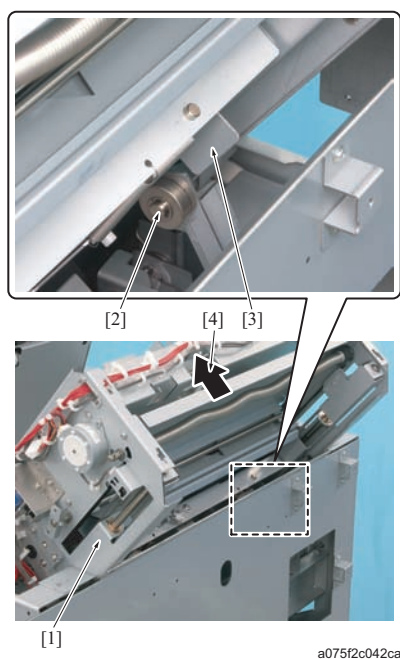


14. Remove 6 screws [1].
15. Remove 2 screws [2] and remove the wire [3] and the knob [4]. Then remove the belt [5].

Note

- After installing the belt [5], check that the lug belt is properly engaging with the pulleys with no slack and turns smoothly when the knob is turned.

16. Hold the metal frames [6] on the rear and front side of the unit, and remove the SC unit [7] to the arrowed direction.



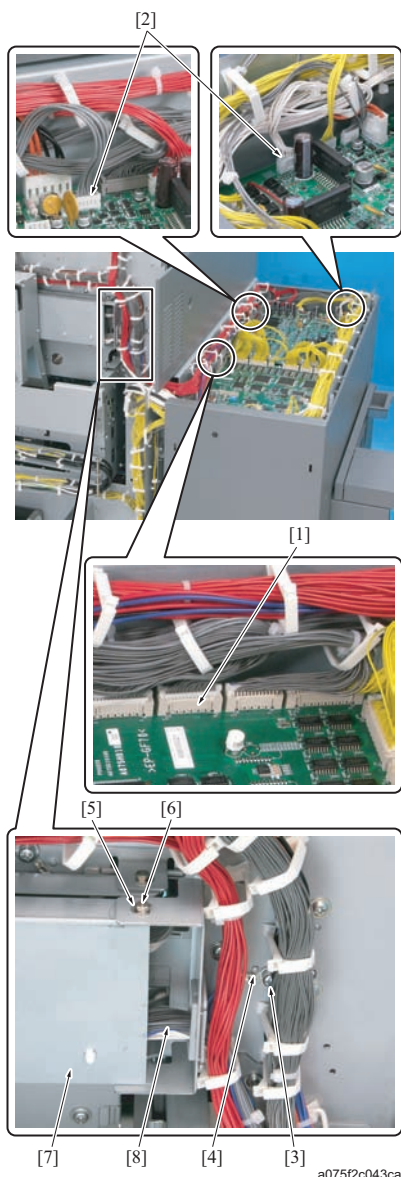
17. Reinstall the above parts following the removal steps in reverse.

Note

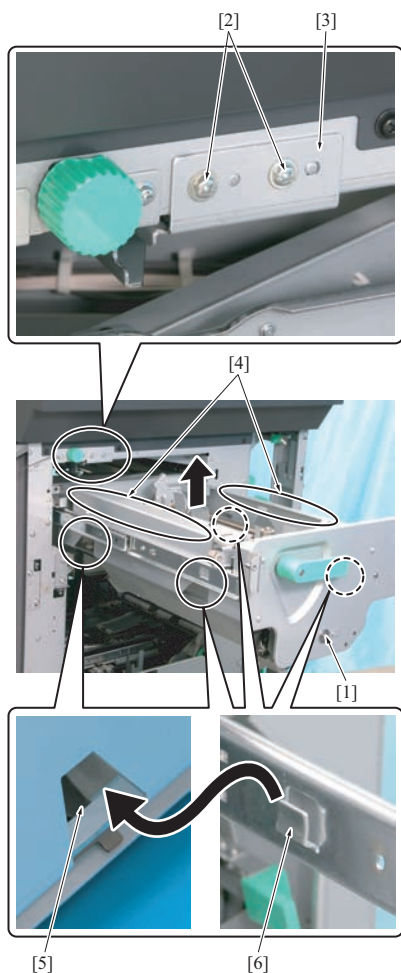
- When the SC unit [1] is removed, the lock arm [2] is released from the stopper [3]. Therefore, when installing the SC unit, be sure to put the lock arm [2] under the stopper [3] while lifting and tilting the unit in the direction of the arrow [4].

11.2.18 Clamp unit

(1) Procedure



1. Remove the rear cover. (Refer to [G.11.2.6 Rear cover](#))
2. Remove the upper cover /Lt. (Refer to [G.11.2.5 Upper cover /Lt](#))
3. Remove the upper cover /Rr. (Refer to [G.11.2.4 Upper cover /Rr](#))
4. Remove the pellet supply cover. (Refer to [G.11.2.8 Pellet supply cover](#))
5. Remove the book stock cover /Up. (Refer to [G.11.2.12 Book stock cover /Up](#))
6. Remove the pellet supply unit. (Refer to [G.11.2.15 Pellet supply unit](#))
7. Disconnect the connector (CN32) [1] and 2 connectors (CN73, and CN82) [2].
8. Remove the screw [3] and the ground [4].
9. Remove the E-ring [5] and pull out the pin [6] downward to release the coupling arm [7].
10. Disengage the saddles to release the wire binding [8] that is heading toward the circuit board.



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11. Pull out the clamp unit [1] carefully watching the wire binding and the coupling arm on the rear of the unit.
12. Remove the 2 screws [2] and then remove the lock bracket [3].
13. While lifting the clamp unit [1] by holding its left and right metal frames [4], release the 4 cutouts [5] from the hooks [6] and remove the clamp unit.

Note

- When reinstalling the clamp unit, make sure that the 4 hooks [6] are properly fitted in the cutouts [5] of the unit.

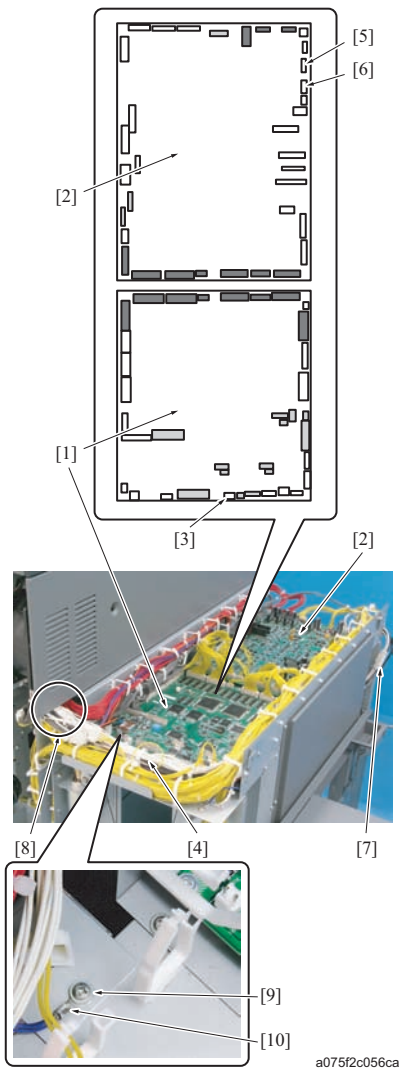
14. Reinstall the above parts following the removal steps in reverse.

Note

- After installing the clamp unit, make a test print and binding to check that the cover and inside papers are neatly aligned without skewing.

11.2.19 Book stock unit

(1) Procedure



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1. Remove the front door. (Refer to [G.11.2.2 Front door](#))
2. Remove the rear cover. (Refer to [G.11.2.6 Rear cover](#))
3. Remove the book stock cover /Up. (Refer to [G.11.2.12 Book stock cover /Up](#))
4. Remove the book stock cover /Fr. (Refer to [G.11.2.13 Book stock cover /Fr](#))
5. Remove the book stock cover /Rr. (Refer to [G.11.2.14 Book stock cover /Rr](#))
6. Disconnect the connectors (illustrated as white boxes) on the PB control board (PBCD) [1] and the PB drive board (PBDB) [2].

Note

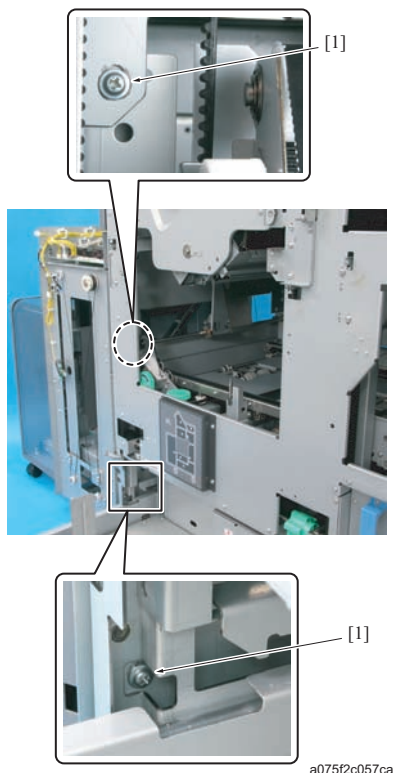
- Do not disconnect the connectors that illustrated as the dark gray boxes on the PBCB [1] and the PBDB [2]. The connectors illustrated as the light gray boxes are reserved.
 - Disconnect the connector [4] from the connector (CN29) [3] when connecting the FD. When the FD is not connected, the short plug is connected to the connector (CN29).
 - Note that both connectors, CN73 (white wire binding) [5] and CN68 (yellow wire binding) [6] have 6 pins.
7. Disconnect the connector [7].
 8. Release the wire binding from the saddles.

Note

- When reinstalling, be sure to secure the wire properly binding with saddles, Especially those routed over the coupling section [8] of the unit so as not to damage the wires with metal frames such as the cover.

9. Remove the screw [9] and the ground [10].

10. Remove 2 screws [1].



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11. Slightly open the front side of the book stock unit [3] to the left side [1] to release the unit from the 2 pins [2] on the far side, and then separate the unit from the main body.

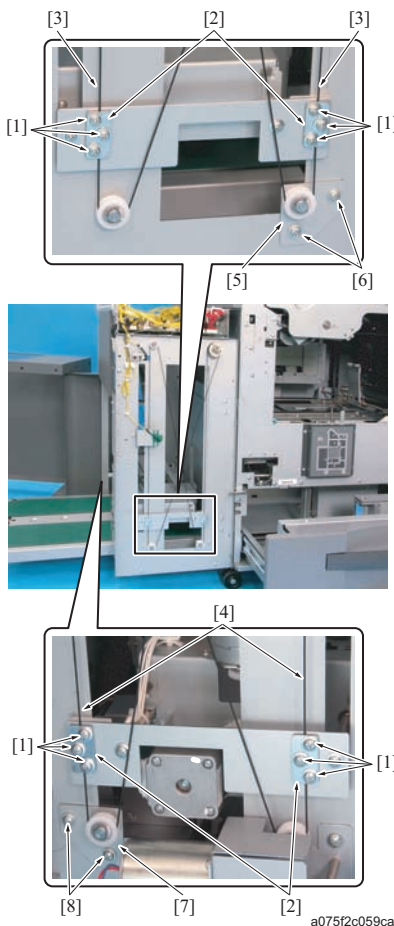
Note

- The casters of the book stock unit [3] are installed at only 2 positions on the left-side of the unit. The main body side of the unit is supported by the 2 metal plates [4] protruded from lower left of the main body. Because of this, be sure to support the unit by hand while separating the unit to avoid the right bottom [5] of the unit falling down. When you release your hand from the unit, be sure to put some support under the right bottom of the unit.
- "When installing the book stock unit, put the right bottom of unit [5] on the metal plates [4] before engaging the 2 pins [2]."

12. Reinstall the above parts following the removal steps in reverse.

11.2.20 Book lift wire

(1) Procedure



1. Carry out the I/O check in service mode in the following order of output check code, and turn off the power switch (SW) and the main power switch (SW) after moving the carriage section to its lowest position.
"77-55", "77-45", "77-58", "77-61"
2. Remove the front door. (Refer to [G.11.2.2 Front door](#))
3. Remove the book stock cover /Up. (Refer to [G.11.2.12 Book stock cover /Up](#))
4. Remove the book stock cover /Fr. (Refer to [G.11.2.13 Book stock cover /Fr](#))
5. Remove the book stock cover /Rr. (Refer to [G.11.2.14 Book stock cover /Rr](#))
6. Remove 3 screws [1] and remove the 4 mounting brackets [2] on the front and rear of the book stock unit.

Note

- When reinstalling, route the book lift wires /Fr [3] and /Rr [4] between 2 screws and 1 screw [1], and secure them with the mounting brackets [2].

7. Loosen the 2 screws [6] of the tension bracket /Fr [5].

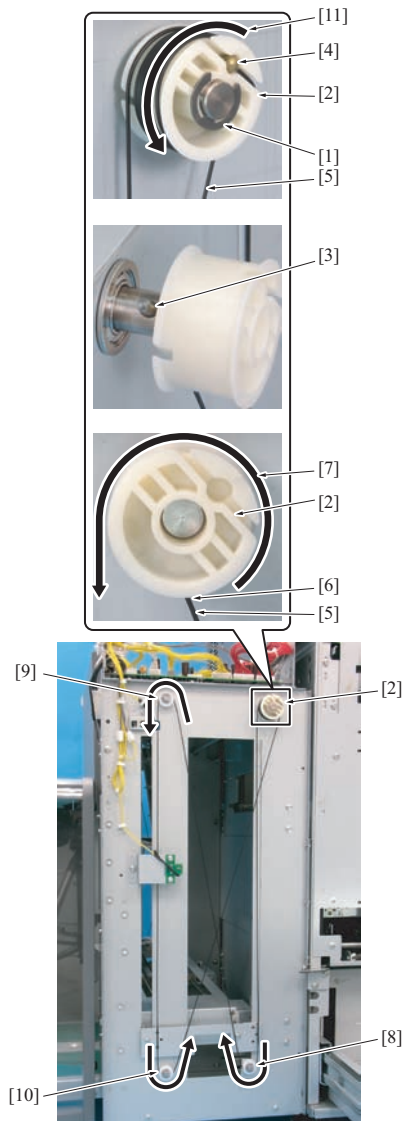
Note

- When installing the tension bracket /Fr [5], be sure to tighten the screws [6] while pulling the bracket downward by the specified tension. Standard value: 5kgf

8. Loosen the 2 screws [8] of the tension bracket /Rr [7].

Note

- When installing the tension bracket /Rr [7], be sure to tighten the screws [8] while pulling the bracket downward by the specified tension. Standard value: 5kgf

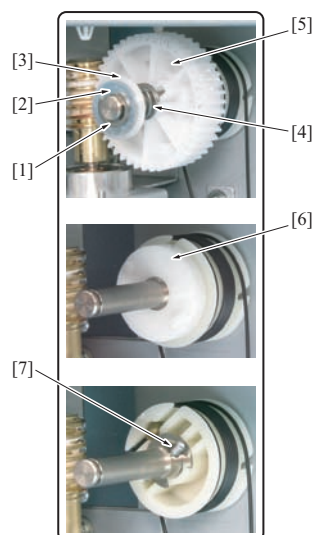


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9. Remove the E-ring [1], pulley [2], pin [3], and the wire end [4].
Then remove the book lift wire/Fr [5].

Note

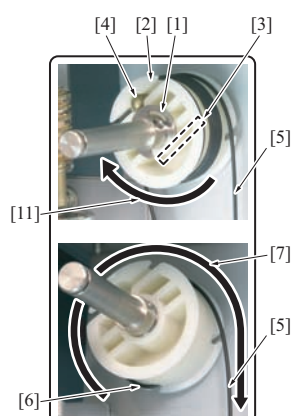
- Install the book lift wire/Fr [5] as following. Route the wire so that it comes out of the lower right [6] of the pulley [2]. Loop the wire over the pulley [7], then loop it over the [8], [9], [10] pulleys in that order. Then wind the wire 6 times counterclockwise [11] over the pulley [2], and put the wire end [4] into the pulley.



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10. Remove the E-ring [1], then remove the washers [2] and [3], spring [4], and gear [5].

11. Remove the coupling [6] and the pin [7].

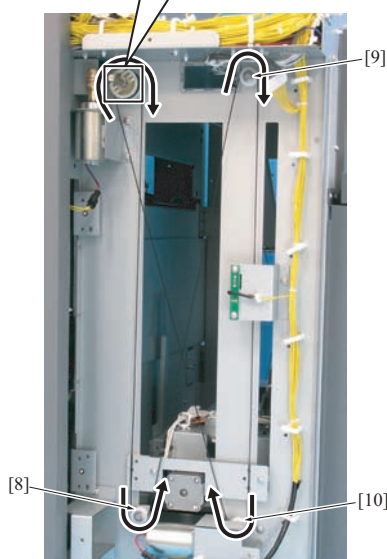


12. Remove the E-ring [1], pulley [2], pin [3], and the wire end [4]. Then remove the book lift wire/Rr [5].

Note

- Install the book lift wire/Rr [5] as following. Route the wire so that it comes out of the lower left [6] of the pulley [2]. Loop the wire over the pulley [7], then loop it over the [8], [9], [10] pulleys in that order. Then wind the wire 6 times counterclockwise [11] over the pulley [2], and put the wire end [4] into the pulley.

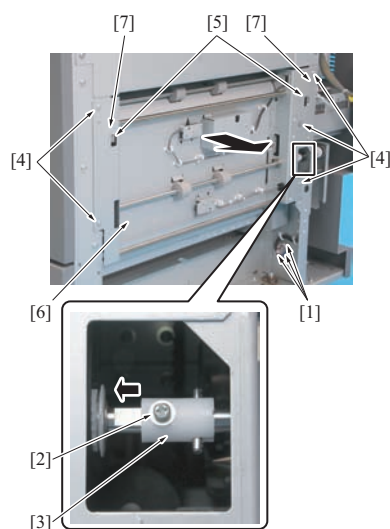
13. Reinstall the above parts following the removal steps in reverse.



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11.2.21 Conveyance unit /Lw

(1) Procedure



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1. Disconnect 3 connectors [1] and release the wire binding from 6 saddles.
2. Remove the screw [2] and slide the coupling [3] into the arrow-marked direction.
3. Remove 5 screws [4].
4. Release the conveyance unit /Lw [6] from the hooks [5] and remove the unit.

Note

- When reinstalling, be sure to align it to the projection [7].

5. Reinstall the above parts following the removal steps in reverse.

11.2.22 Cover paper tray

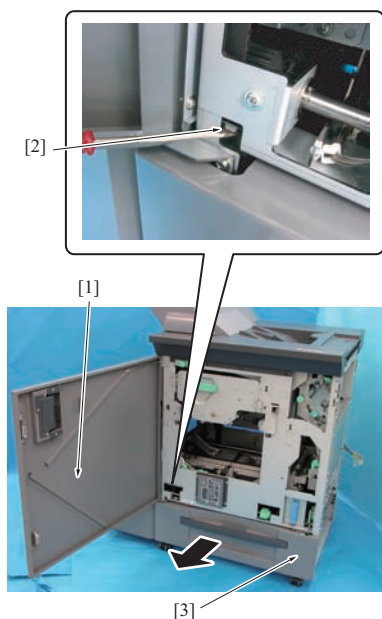
⚠ CAUTION

- As the cover paper tray is heavy, be sure to perform the following work with 2 people.

Note

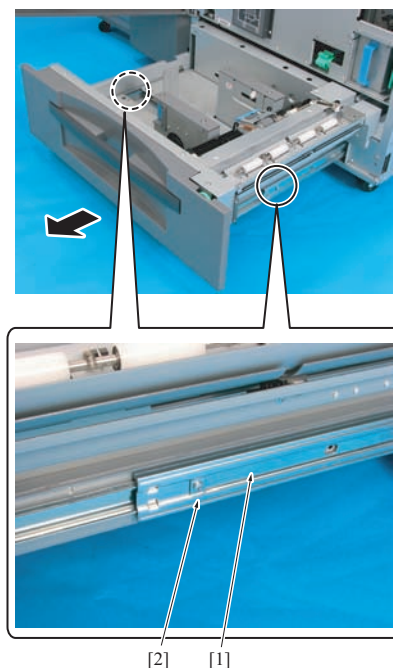
- When lifting the cover paper tray, be sure to hold it by the specified positions. Holding it at positions other than those positions specified damage the tray, thus resulting in a paper feed jam.

(1) Procedure



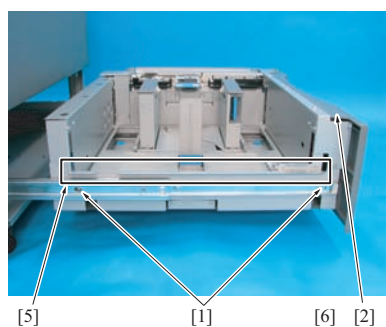
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1. Open the front door [1].
2. Unlock the cover paper tray [3] by slightly pushing up the cover paper tray lock lever [2] with a screwdriver or a similar tool, and pull out the cover paper tray [3].



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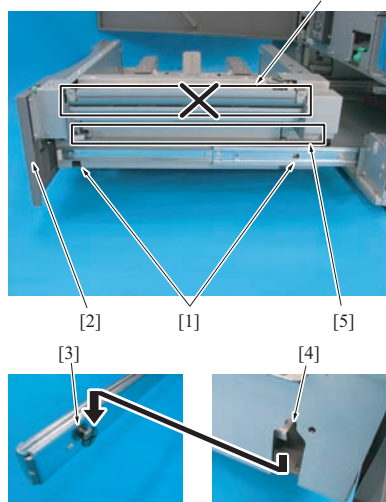
3. Remove the 2 stopper screws [2], 1 for each right and left rail [1] and further pull out the cover paper tray.



4. Remove 4 screws [1], 2 for each left and right rail, hold the cover paper tray [2] by the specified positions [5], and remove it straight up.

Note

- When installing the cover paper tray, make sure that the 4 knobs [3] on the rails are properly fitted in the notches [4] of the cover paper tray.
- When lifting the cover paper tray, be sure to hold the specified positions [5] by 2 people. Do not hold the part indicated with [6] as the part can easily become deformed, which adversely affects paper feed resulting in a paper jam.

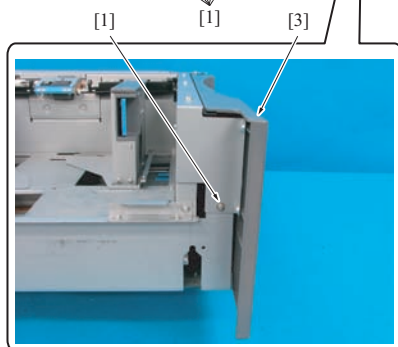
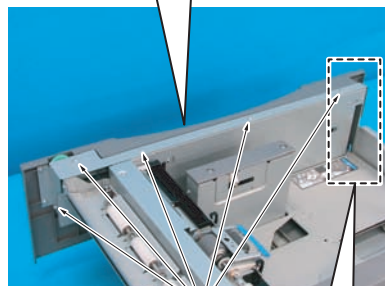
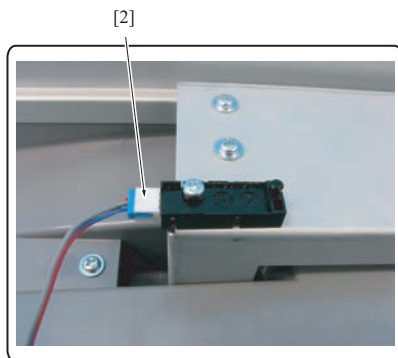


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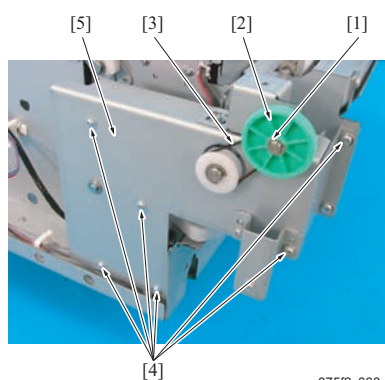
5. Reinstall the above parts following the removal steps in reverse.

11.2.23 Cover paper lift wire

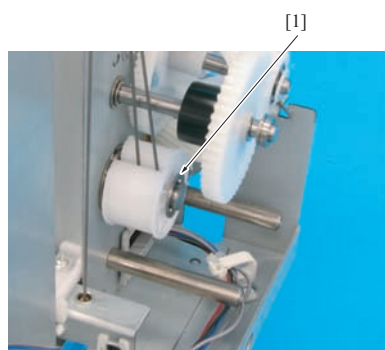
(1) Procedure



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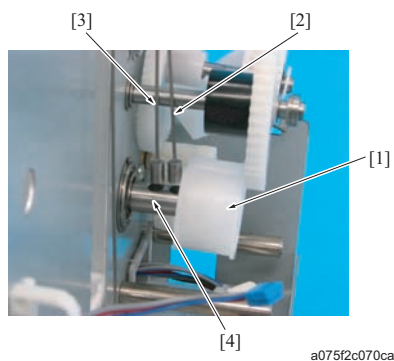


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1. Remove the cover paper tray. (Refer to [G.11.2.22 Cover paper tray](#))
2. Remove 6 screws[1].
3. Disconnect the connector [2], and remove the cover paper tray front cover [3].

4. Remove the E-ring [1], and remove the knob [2] and the belt [3].
5. Remove 6 screws[4] and remove the gear cover [5].

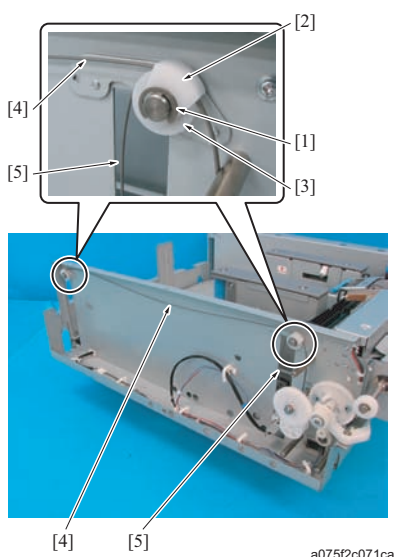
6. Remove the E-ring [1].



7. Slide the pulley [1], and pull out the wire ends of the lift wire /Fr1 [2] and /Fr2 [3] from each hole of the shaft [4].

Note

- The wire end of the shorter wire, lift wire /Fr2 [3], must be inserted into the shaft hole near the frame of the cover paper tray. The wire end of the shorter wire, lift wire/Fr2 [3], must be inserted into the shaft hole near the frame of the cover paper tray.
- When installing the pulley, lift the cover paper lift plate slightly to give slack to the wires and insert the wire ends one by one into the shaft holes. Then secure them with the pulley [1].

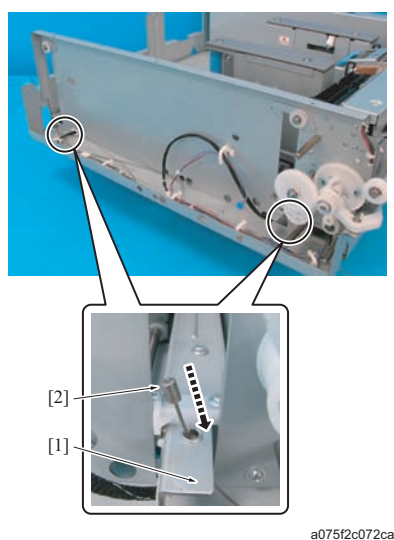


8. Remove the E-rings [1], 1 each, and then remove the wire cover [2].

9. Remove the cover paper lift wires/Fr1 [4] and /Fr2 [5] from each pulley [3].

Note

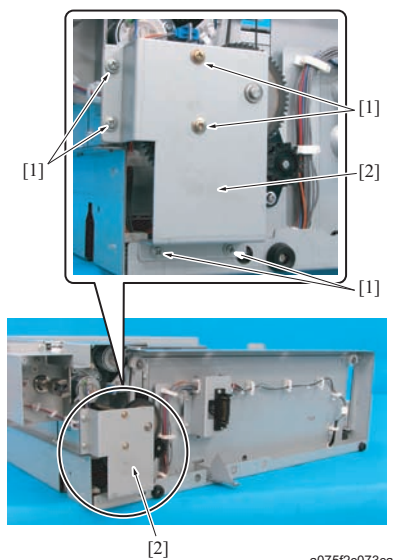
- When installing the wires, make sure that the wires are properly routed inside the wire covers [2] and are not crossed each other.



10. Pull out each wire end [2] through each hole of the cover paper lift plate arm [1].

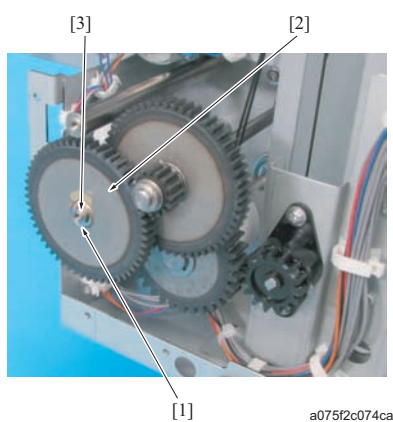
Note

- When pulling out the wire, pull it out carefully so as not to damage it with sharp metal edges.



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11. Remove 6 screws[1] and remove the gear cover [2].

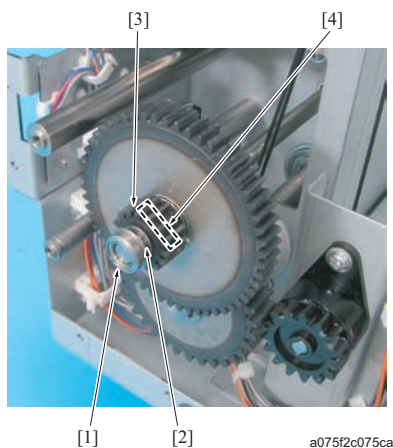


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12. Remove the E-ring [1] and the gear [2].

Note

- When removing the gear [2], be careful not to drop and lose the bearing [3].

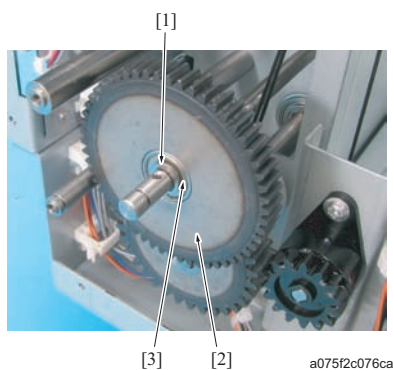


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13. Remove the bearing [1] and the E-ring [2], and then remove the gear [3].

Note

- When removing the gear [3], be careful not to drop the pin[4].

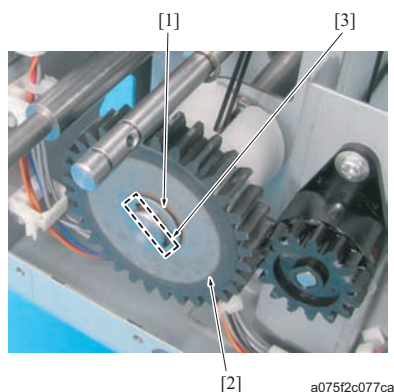


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14. Remove the E-ring [1] and the gear [2].

Note

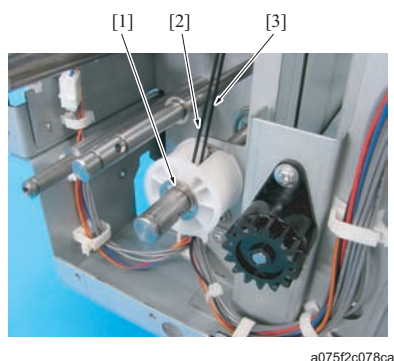
- When removing the gear [2], be careful not to drop the bearing [3].



15. Remove the E-ring [1] and the gear [2].

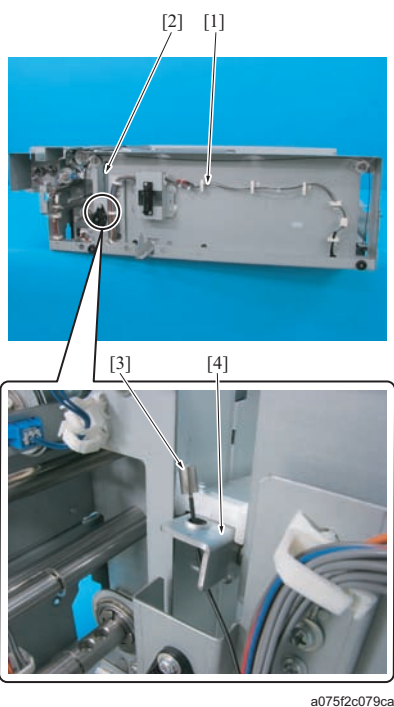
Note

- When removing the gear [2], be careful not to drop and lose the pin [3].



16. Remove the E-ring [1].

17. Pull out the cover paper lift wire/Rr1 [2] and /Rr2 [3] from the shaft holes in the same manner as step7.



18. Remove the cover paper lift wire/Rr1 [1] and /Rr2 [2] in the same manner as step8 to step10.

19. Reinstall the above parts following the removal steps in reverse.

Note

- When pulling out the wire end [3] of the cover paper lift wire /Rr2 [2], lift the cover paper lift plate until the cover paper lift plate arm [4] appears.
- The wire /Fr is gray in color and the wire /Rr is black.
- When the installation is completed, make sure that the lift plate is horizontal.

11.2.24 Binding mode procedure with manual operating function

- When a problem occurs at the clamp section or the cover paper table section, the binding can be checked with the manual operation.

Note

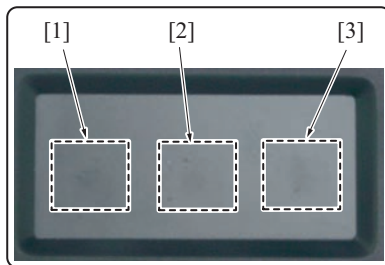
- Disconnect the connector (CN5) on the PB control board (PBCB) after the check. (Manual operation forbidden state)

(1) Procedure

[2]

[1]

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1. Remove the book stock cover /Up. (Refer to [G.11.2.12 Book stock cover /Up](#))
2. Connect the connector (CN5) on the PB control board (PBCB).
3. Install the book stock cover /Up.

4. Press the button /1 [1].
5. Open the front door and pull out the clamp unit.
6. Set the inside paper to the clamp unit.
7. Adjust the clamp alignment plates /Fr and /Rr to the inside paper edge on the shorter side by hand.
8. Press the button /2 [2].
9. Set the clamp unit.

Note

- Set the clamp unit gently. Setting it roundly causes the misalignment of inside papers widening the clamp alignment plate.

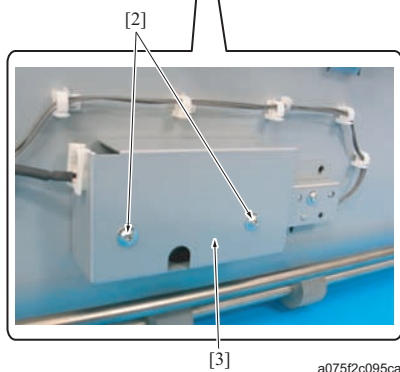
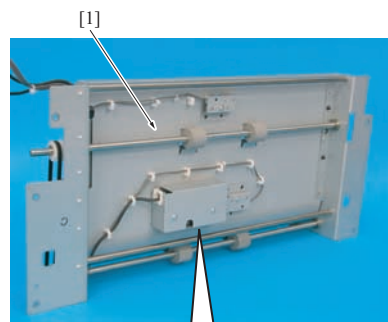
10. Close the front door.
11. Press the button /3 [3].

Note

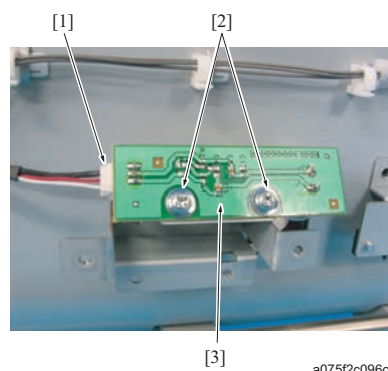
- Disconnect the connector (CN5) on the PB control board (PBCB) after the check.

11.2.25 Multi feed detection boards /S (MFDBS) and /R (MFDBR)**Note**

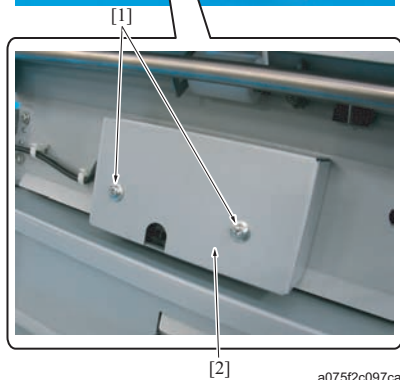
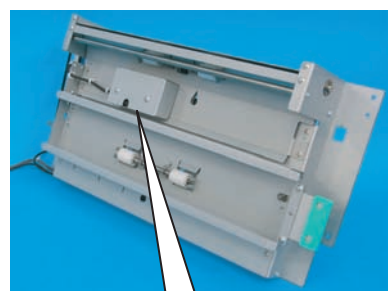
- When replacing the multi feed detection board /1 (MFDTB71), be sure to replace the multi feed detection board /2 (MFDTB72) at the same time.
- When the multi-feed detection board is replaced, be sure to conduct the adjustment in replacing multi-feed detection board. (Refer to [I.5.7.12 Adjustment when replacing the cover paper multi feed detection board \(PB\)](#))

(1) Procedure

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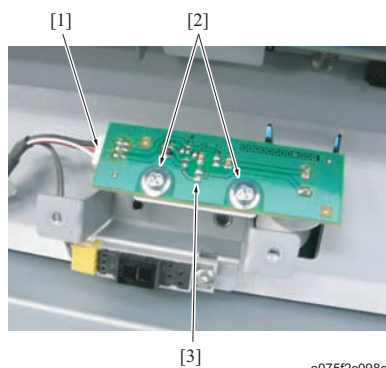


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1. Remove the conveyance unit /Lw [1]. (Refer to [G.11.2.21 Conveyance unit /Lw](#))
2. Remove 2 screws [2] and then remove the cover paper multi feed detection board /1 (MFDTB71) cover [3].

3. Disconnect the connector [1].
4. Remove 2 screws [2] and then remove the cover paper multi feed detection board /1 (MFDTB71) [3].

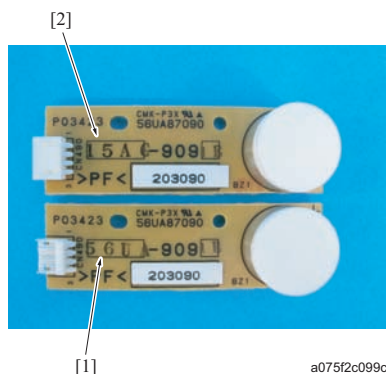
5. Remove 2 screws [1] and then remove the cover paper multi feed detection board /2 (MFDTB72) cover [2].



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6. Disconnect the connector [1].
7. Remove 2 screws [2] and then remove the cover paper multi feed detection board /2 (MFDTB72) [3].
8. Reinstall the above parts following the removal steps in reverse.

(2) Notes to keep in mind when installing the multi feed detection boards /1 (MFDTB71) and /2 (MFDTB72)



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- The multi feed detection boards /1 (MFDTB71) and /2 (MFDTB72) are installed on the same type board. Be careful not to confuse one with the other when installing them.
- Be sure to confirm the marking on the board when installing it.
Multi feed detection board /1 (MFDTB71) [1]: 56UA
Multi feed detection board /2 (MFDTB72) [2]: 15AG
- The connector shape is different for the multi feed detection boards /1 (MFDTB71) and /2 (MFDTB72). So, even if it is installed incorrectly, the connector cannot be connected.

12. PB-503

12.1 List of disassembling and assembling parts

No.	Section	Parts name
1	Cover	Front door
2		Front cover
3		Booklet door
4		Rear cover /Rt
5		Rear cover /Lt
6		Left cover
7		Relay conveyance gear cover /Fr
8		Relay conveyance gear cover /Rr
9		Pellet supply cover
10		SC cover /Fr
11		SC cover /Up
12		Upper cover /FrRt
13		Upper cover /FrLt
14		Upper cover /RrRt
15		Upper cover /RrLt
16		Upper cover /Md
17	Others	Deodorant unit
18	Pellet supply section	Pellet supply unit
19	Glue tank section	Glue tank unit
20	SC section	SC unit
21	Clamp section	Clamp unit
22	Others	PB left unit
23	Book stock section	Book lift wire
24		Cart wire
25	Conveyance section	Conveyance unit /Lw
26	Relay conveyance section	Relay conveyance unit
27	Cover paper supply section	Cover paper tray
28		Cover paper lift wire

12.2 Disassembling and assembling procedures

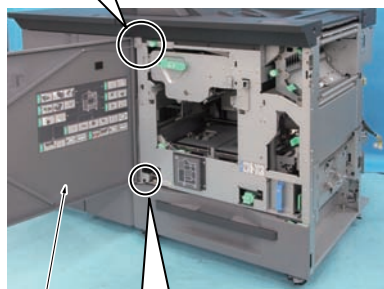
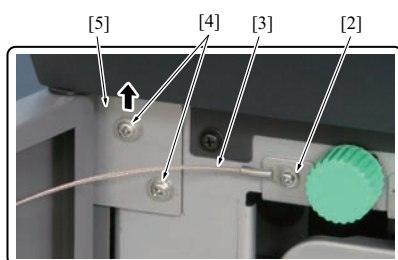
12.2.1 Precautions on disassembling and assembling

CAUTION

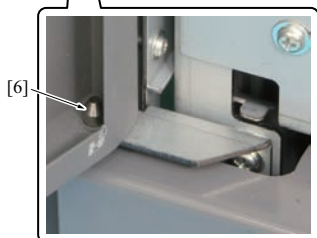
- Make sure to unplug the power cord of the main body from the power outlet when it is connected to the main body.

12.2.2 Front door

(1) Procedure



[1]



[6]

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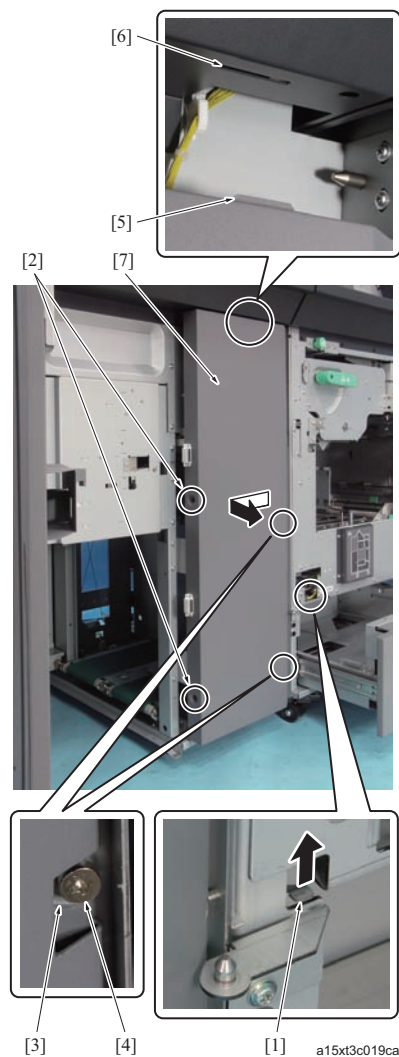
1. Open the front door [1].
2. Remove the screw [2] and then remove the wire [3].
3. Remove 2 screws [4], and then remove the front door [1] from the lower pin [6] with the mounting bracket [5] attaching to the front door [1].
4. Reinstall the above parts following the removal steps in reverse.

Note

- When reinstalling the wire [3], tighten the screw at the position in the picture. (In order to prevent the wire from contacting with the tab.)

12.2.3 Front cover

(1) Procedure



1. Remove the front door. (Refer to [G.12.2.2 Front door](#))
2. Lift the lever [1] and pull out the cover paper tray.
3. Remove 2 screws [2].
4. Release the notches [3] at 2 positions from the screws [4] and pull out the projection [5] from the hole [6], and then remove the front cover [7].
5. Reinstall the above parts following the removal steps in reverse.

12.2.4 Booklet door

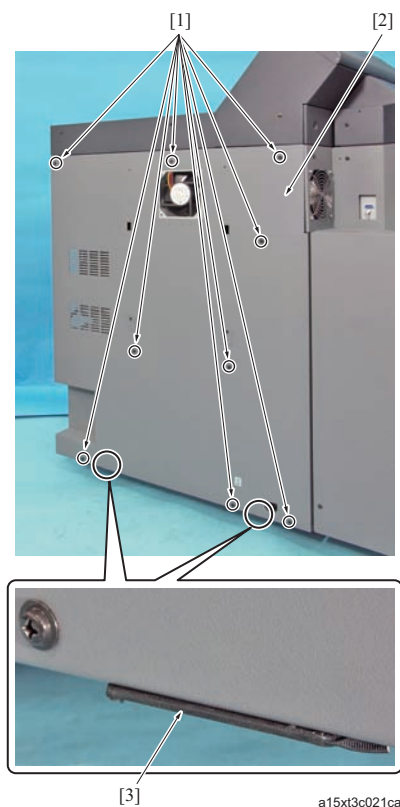
(1) Procedure



1. Open the booklet door [1].
2. Remove the screw [2] and then remove the wire [3].
3. Remove 2 screws [4], and then remove the booklet door [1] from the lower pin [6] with the mounting bracket [5] attaching to the booklet door [1].
4. Remove the mounting bracket [5] from the booklet door [1].
5. Reinstall the above parts following the removal steps in reverse.

12.2.5 Rear cover /Rt

(1) Procedure



1. Remove the deodorant unit. (Refer to [G.12.2.18 Deodorant unit](#))
2. Remove 9 screws [1], and then remove the rear cover /Rt [2].

Note

- When installing the rear cover, make sure to attach the metal plates [3] to the bottom of the rear cover.

3. Reinstall the above parts following the removal steps in reverse.

12.2.6 Rear cover /Lt

(1) Procedure



1. Remove the deodorant unit. (Refer to [G.12.2.18 Deodorant unit](#))
2. Remove 8 screws [1], and then remove the rear cover /Lt [2].

Note

- When reinstalling it, be sure to set it with the projection [3] put into the notch of the upper cover /RrLt [4], and with its bottom [5] put on the metal frame [6].

3. Reinstall the above parts following the removal steps in reverse.

12.2.7 Left cover

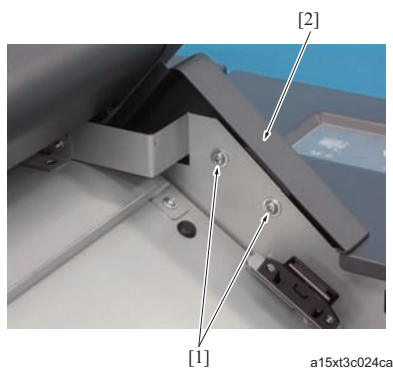
(1) Procedure



1. Loosen 2 screws [1].
2. Remove 5 screws [2] and then remove the left cover [3].
3. Reinstall the above parts following the removal steps in reverse.

12.2.8 Relay conveyance gear cover /Fr

(1) Procedure



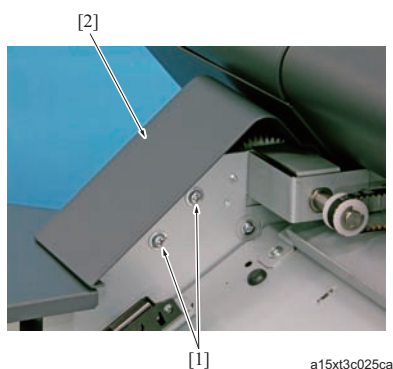
1. Open the relay conveyance door.
2. Remove 2 screws [1] and remove the relay conveyance gear cover /Fr [2].
3. Reinstall the above parts following the removal steps in reverse.

Note

- When reinstalling it, be sure to put the claw of the plate in the hole of the relay conveyance gear cover /Fr.

12.2.9 Relay conveyance gear cover /Rr

(1) Procedure



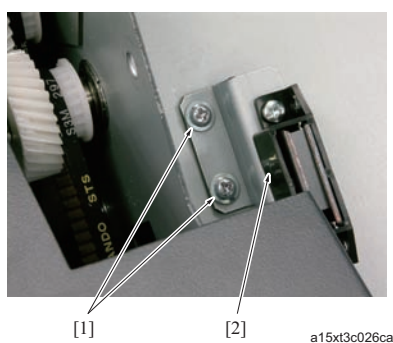
1. Open the relay conveyance door.
2. Remove 2 screws [1] and remove the relay conveyance gear cover /Rr [2].
3. Reinstall the above parts following the removal steps in reverse.

Note

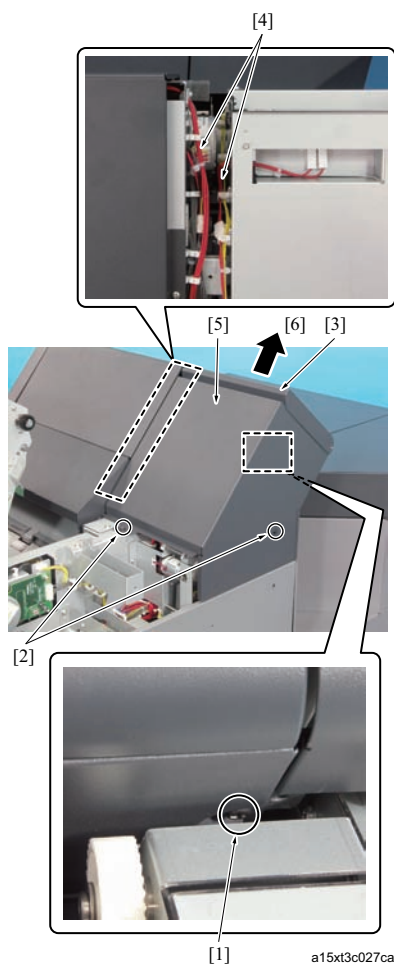
- When reinstalling it, be sure to put it in the hole of the relay conveyance gear cover /Rr.

12.2.10 Pellet supply cover

(1) Procedure



1. Remove the deodorant unit. (Refer to [G.12.2.18 Deodorant unit](#))
2. Remove the upper cover /RrRt. (Refer to [G.12.2.15 Upper cover / RrRt](#))
3. Remove the relay conveyance gear cover /Rr. (Refer to [G.12.2.9 Relay conveyance gear cover /Rr](#))
4. Remove 2 screws [1] and remove the magnet catch /Rr [2].



5. Loosen a screw [1].
6. Remove 2 screws [2].
7. Open the pellet supply door [3]. Remove the pellet supply cover [5] in the arrow-marked direction [6] carefully so as not to damage the wire harness [4].

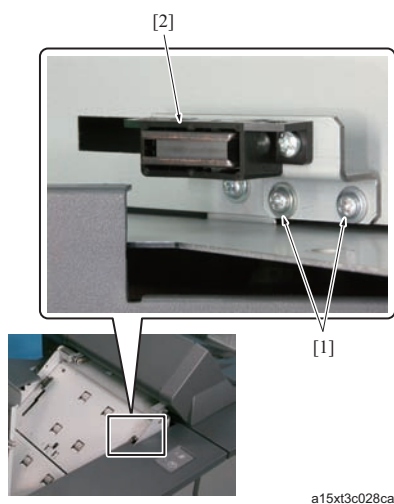
Note

- When removing/installing the glue supply cover, be careful not to cut or damage the wire binding [4].

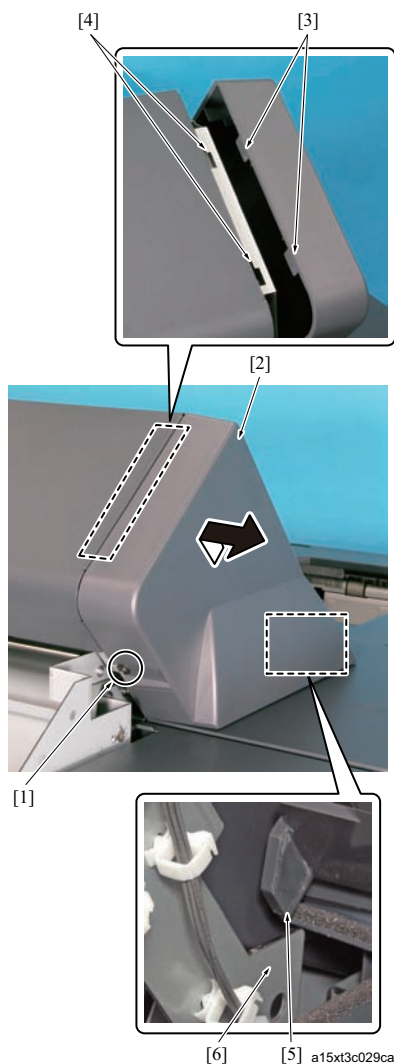
8. Reinstall the above parts following the removal steps in reverse.

12.2.11 SC cover /Fr

(1) Procedure



1. Remove the relay conveyance gear cover /Fr. (Refer to [G.12.2.8 Relay conveyance gear cover /Fr](#))
2. Remove 2 screws [1] and remove the magnet catch /Fr [2].

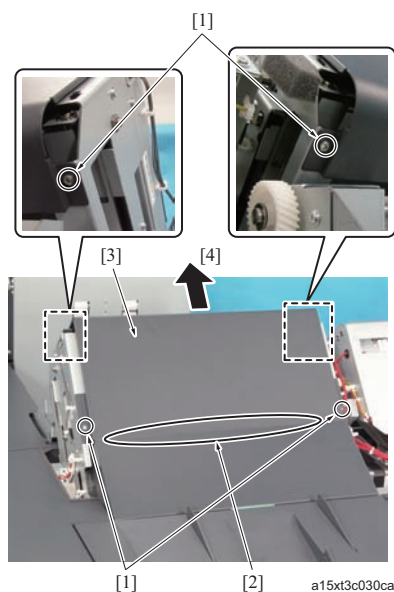


3. Remove the screw [1] and remove the SC cover /Fr [2] to the arrow-marked direction.

Note

- When reinstalling it, be sure to put 2 claws on the upper side [3] into the holes [4], and put the claw on the lower side [5] to the inside of the metal frame.

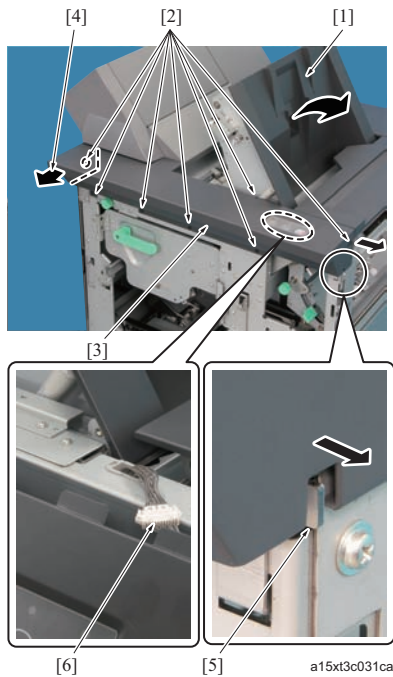
4. Reinstall the above parts following the removal steps in reverse.

12.2.12 SC cover /Up**(1) Procedure**

1. Remove the pellet supply cover. (Refer to [G.12.2.19 Pellet supply unit](#))
2. Remove the SC cover /Fr. (Refer to [G.12.2.11 SC cover /Fr](#))
3. Remove 4 screws [1] and remove the SC cover /Up [3] in the arrow-marked direction [4] while slightly lifting up the circled part [2].
4. Reinstall the above parts following the removal steps in reverse.

12.2.13 Upper cover /FrRt

(1) Procedure



1. Remove the PB left unit. (Refer to [G.12.2.23 PB left unit](#))
2. Open the upper door [1].
3. Remove 7 screws [2].
4. Pull the left part of the upper cover /FrRt [3] in the arrow-marked direction [4]. Then release the cover from the projection [5] and disconnect it from the connector [6].

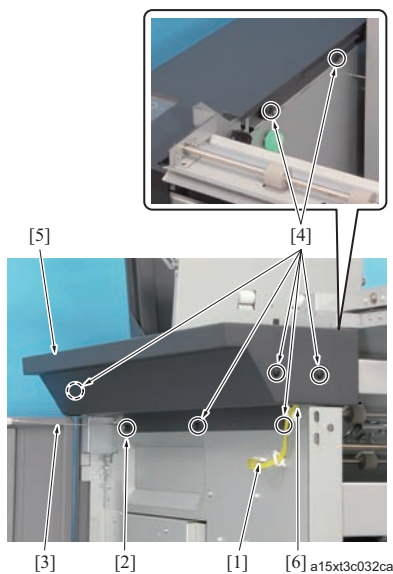
Note

- When reinstalling it, be sure to put the connector [6] under the upper cover /FrRt [3] properly so as not to let the cables get caught between the cover and the frame.

5. Reinstall the above parts following the removal steps in reverse.

12.2.14 Upper cover /FrLt

(1) Procedure



1. Remove the PB left unit. (Refer to [G.12.2.23 PB left unit](#))
2. Remove the relay conveyance gear cover /Fr. (Refer to [G.12.2.8 Relay conveyance gear cover /Fr](#))
3. Disconnect the connector [1].
4. Open the relay conveyance door.
5. Remove the screw [2] and release the wire [3].
6. Remove 7 screws [4] and then remove the upper cover /FrLt [5].

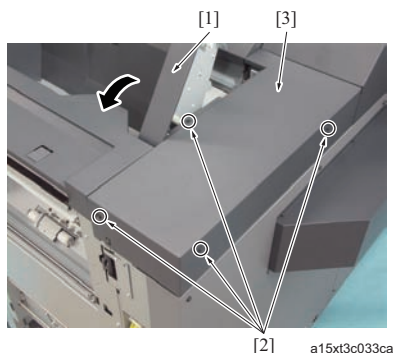
Note

- When reinstalling it, be careful not to nip the wiring harness [6].

7. Reinstall the above parts following the removal steps in reverse.

12.2.15 Upper cover /RrRt

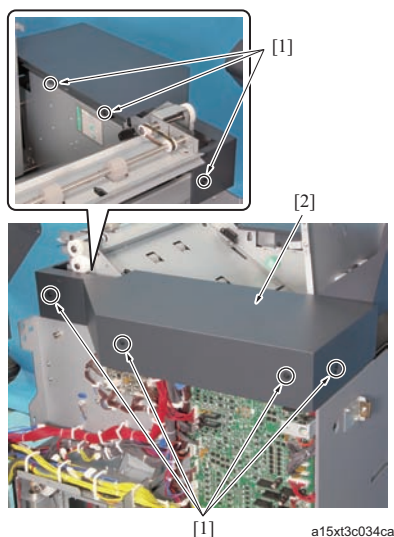
(1) Procedure



1. Open the upper door [1].
2. Remove 4 screws [2] and then remove the upper cover /RrRt [3].
3. Reinstall the above parts following the removal steps in reverse.

12.2.16 Upper cover /RrLt

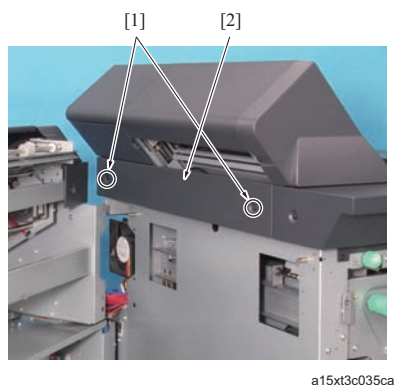
(1) Procedure



1. Remove the PB left unit. (Refer to [G.12.2.23 PB left unit](#))
2. Remove the relay conveyance gear cover /Rr. (Refer to [G.12.2.9 Relay conveyance gear cover /Rr](#))
3. Open the relay conveyance door.
4. Remove 7 screws [1] and then remove the upper cover /RrLt [2].
5. Reinstall the above parts following the removal steps in reverse.

12.2.17 Upper cover /Md

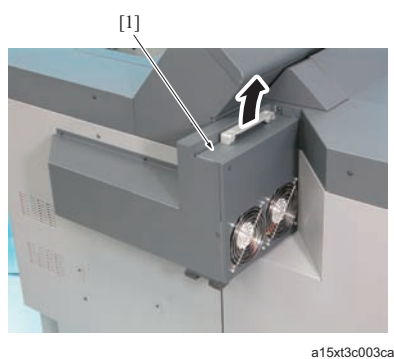
(1) Procedure



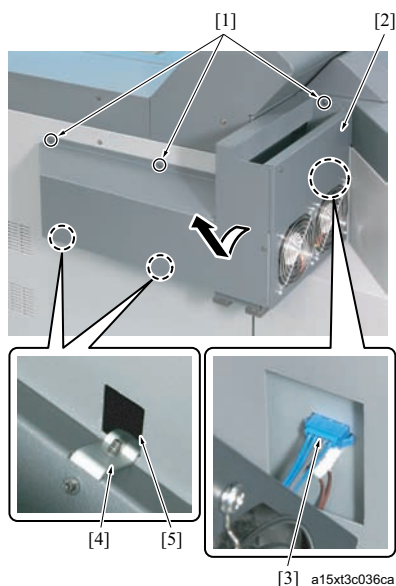
1. Remove the PB left unit. (Refer to [G.12.2.23 PB left unit](#))
2. Remove 2 screws [1] and then remove the upper cover /Md [2].
3. Reinstall the above parts following the removal steps in reverse.

12.2.18 Deodorant unit

(1) Procedure



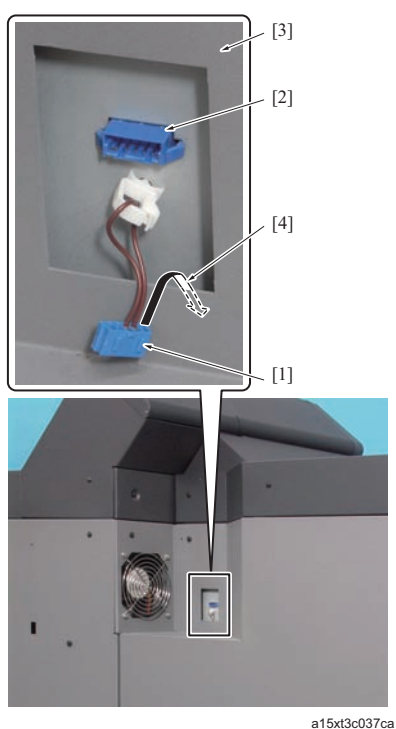
1. Remove the exhaust filter assy [1].



2. Remove 3 screws [1] and lean the deodorant unit [2]. Disconnect the connector [3] and then remove the deodorant unit [2].

Note

- When reinstalling it, be sure to put 2 claws [2] in the holes [5].



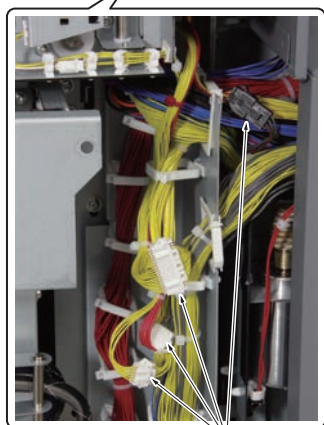
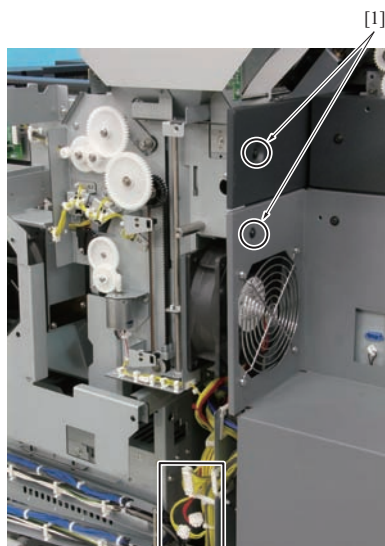
3. Reinstall the above parts following the removal steps in reverse.

Note

- Connecting the loop connector [1] to the connector [2] enables the operational check with no error indication without connecting the deodorant unit. After the operation, be sure to remove the loop connector [1] and put it inside [4] of the rear cover /Lt [3].
- After installing it, be sure to check that the deodorant fans /1 (FM97) and /2 (FM98) of the deodorant unit are rotating.

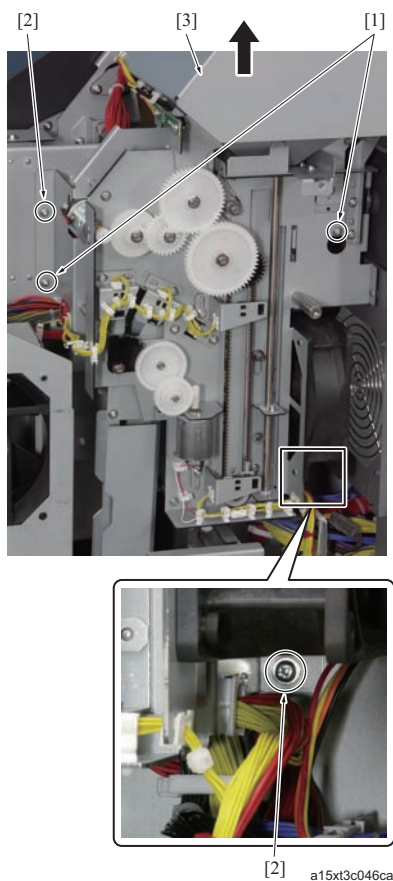
12.2.19 Pellet supply unit

(1) Procedure



[2] a15xt3c045ca

1. Remove the rear cover /Rt. (Refer to [G.12.2.5 Rear cover /Rt](#))
2. Remove the pellet supply cover. (Refer to [G.12.2.10 Pellet supply cover](#))
3. Remove 2 screws [1].
4. Disconnect 4 connectors [2].



5. Loosen 2 screws [1].
6. Remove 2 screws [2] and remove the pellet supply unit [3] upward.

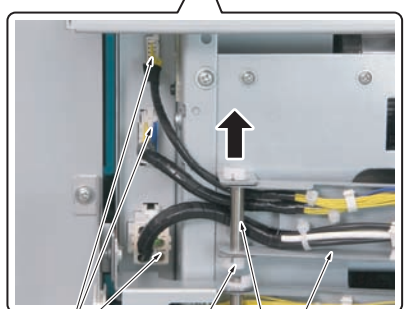
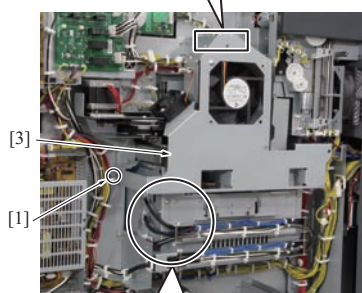
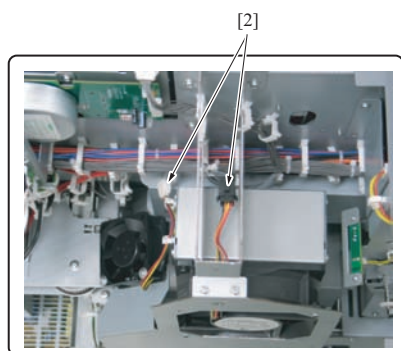
Note

 - When removing the unit, be careful not to spill the pellet.
7. Reinstall the above parts following the removal steps in reverse.

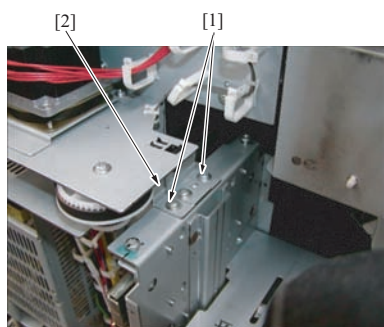
12.2.20 Glue tank unit

⚠ CAUTION

- The glue tank unit is extremely hot right after turning OFF the main power switch (SW1) or the sub power switch (SW2) of the main body. To prevent burn injuries, leave the unit until it cools enough before performing the maintenance work.

(1) Procedure

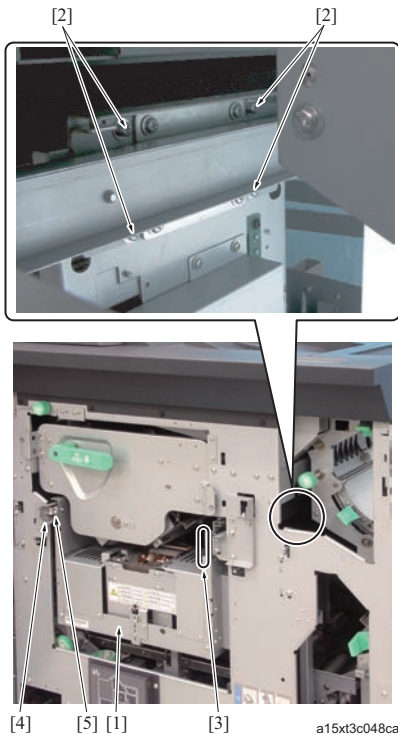
[4] [5] [6] [7] a15xt3c047ca



a075f2c119ca

1. Remove the rear cover /Rt. (Refer to [G.12.2.5 Rear cover /Rt](#))
2. Remove the upper cover /RrRt. (Refer to [G.12.2.15 Upper cover / RrRt](#))
3. Remove the screw [1], disconnect 2 connectors [2], and then remove the suction unit [3].
4. Disconnect 3 connectors [4].
5. Remove the C-clip [5] and pull out the pin [6] straight up to release the coupling arm [7].

6. Remove 2 screws [1] and then uncouple the belt coupling bracket [2].



7. Pull out the glue tank unit [1] and remove 4 screws [2].

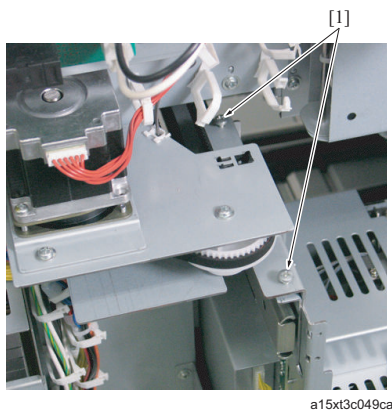
Note

- When moving the glue tank unit, be sure to hold it by the metal frame [3] on the right side of the unit.
- When removing the screw [2], be careful to avoid injury from sharp metal edges around the screw.

8. Further pull out the glue tank unit [1].
9. Remove the roller [5] from the rail [4] and remove the glue tank unit.
10. Reinstall the above parts following the removal steps in reverse.

Note

- After installing the glue tank unit, make a test print and binding to check that no glue is squeezed out of the top and bottom edges of the created book and no pages come off the cover when opening the book.

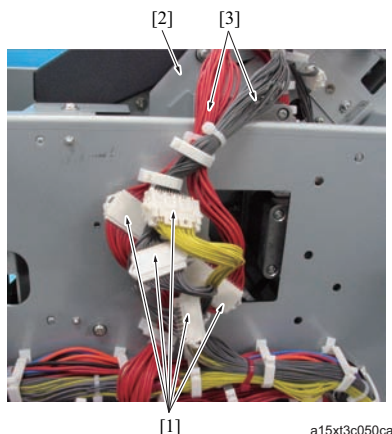


Note

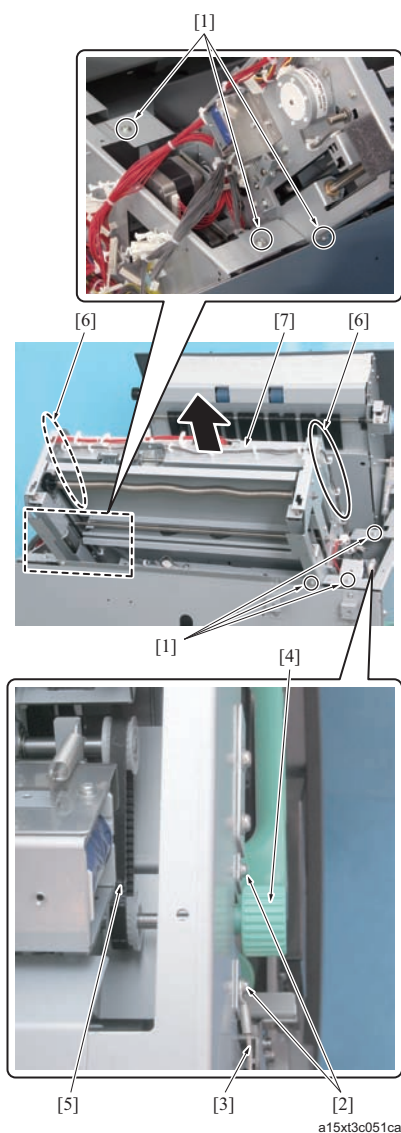
- Never loosen or tighten the 2 screws because they are keeping the levelness and vertical position of the glue tank unit.

12.2.21 SC unit

(1) Procedure



1. Remove the PB left unit. (Refer to [G.12.2.23 PB left unit](#))
2. Remove the upper cover /Md. (Refer to [G.12.2.17 Upper cover / Md](#))
3. Remove the pellet supply unit. (Refer to [G.12.2.19 Pellet supply unit](#))
4. Remove the SC cover /Up. (Refer to [G.12.2.12 SC cover /Up](#))
5. Remove the upper cover /FrRt. (Refer to [G.12.2.13 Upper cover / FrRt](#))
6. Disconnect 5 relay connectors [1].
7. Remove the wire binding [3] from the SC unit [2] by releasing the wire binding from the saddles.

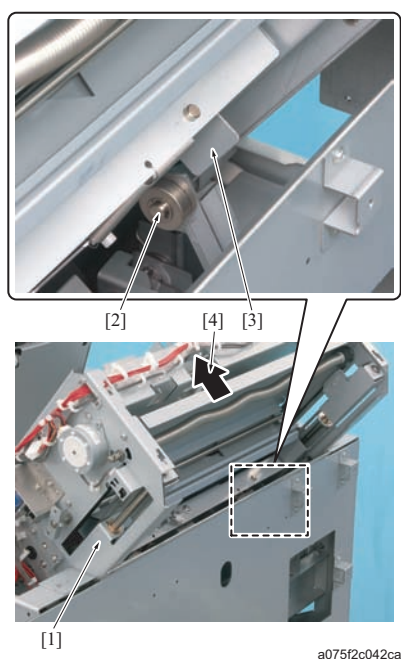


8. Remove 6 screws [1].
9. Remove 2 screws [2] and remove the wire [3] and the knob [4]. Then remove the belt [5].

Note

- After installing the belt [5], check that the lug belt is properly engaging with the pulleys with no slack and turns smoothly when the knob is turned.

10. Hold the metal frames [6] on the rear and front side of the unit, and remove the SC unit [7] to the arrowed direction.



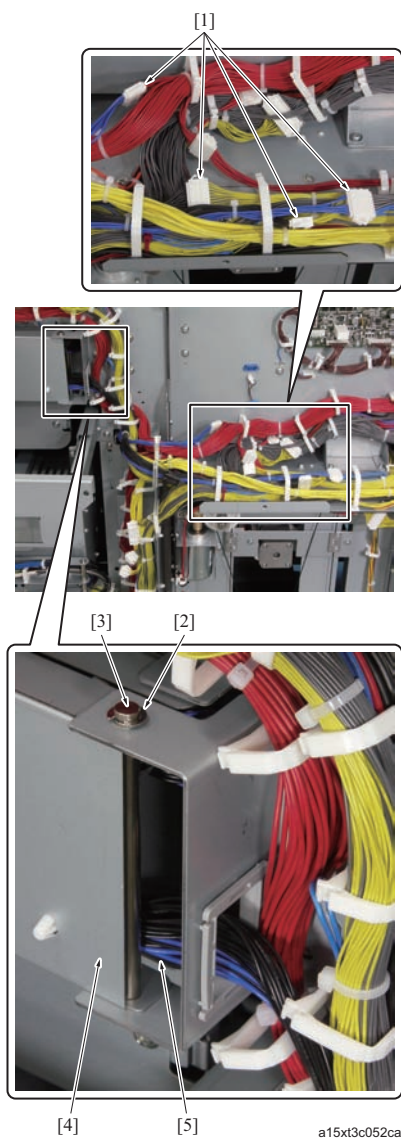
11. Reinstall the above parts following the removal steps in reverse.

Note

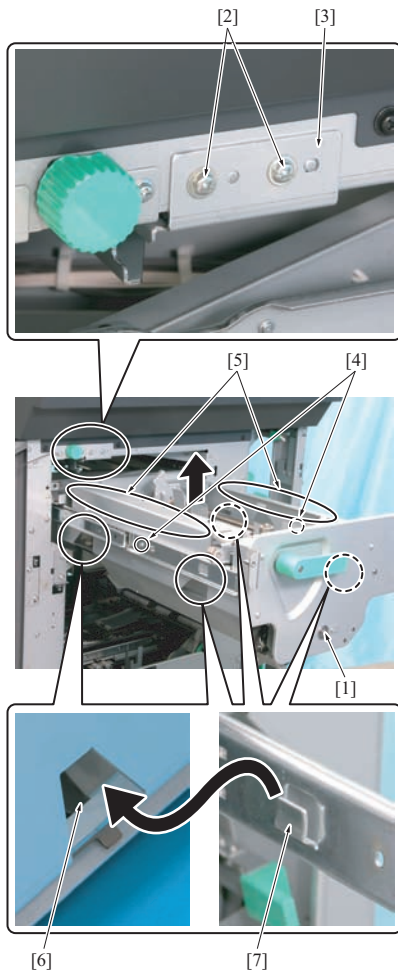
- When the SC unit [1] is removed, the lock arm [2] is released from the stopper [3]. Therefore, when installing the SC unit, be sure to put the lock arm [2] under the stopper [3] while lifting and tilting the unit in the direction of the arrow [4].

12.2.22 Clamp unit

(1) Procedure



1. Remove the rear cover /Lt. (Refer to [G.12.2.6 Rear cover /Lt](#))
2. Remove the pellet supply unit. (Refer to [G.12.2.19 Pellet supply unit](#))
3. Disconnect 4 connectors [1].
4. Remove the E-ring [2] and pull out the pin [3] downward to release the coupling arm [4].
5. Release the wiring harness [5] between the connector [1] and the coupling arm [4] from the saddles.



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6. Pull out the clamp unit [1] carefully watching the wire binding and the coupling arm on the rear of the unit.
7. Remove the 2 screws [2] and then remove the lock bracket [3].
8. Remove 2 screws [4].
9. While lifting the clamp unit [1] by holding its left and right metal frames [5], release the 4 notches [6] from the hooks [7] and remove the clamp unit.

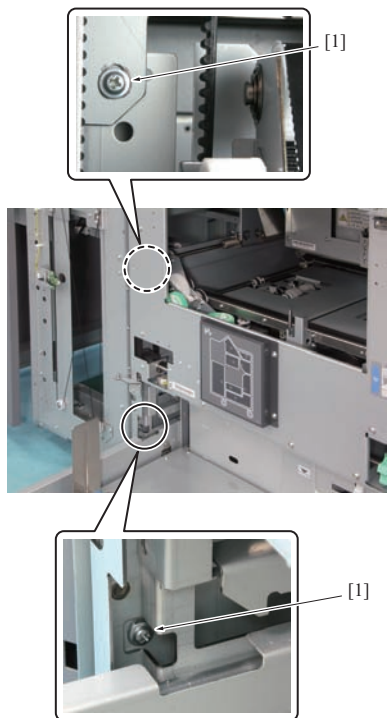
Note

- When reinstalling the clamp unit, make sure that the 4 hooks [7] are properly fitted in the notches [6] of the unit.

10. Reinstall the above parts following the removal steps in reverse.

Note

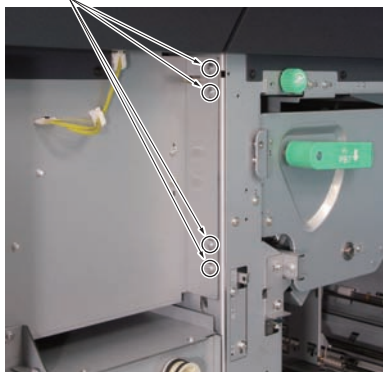
- After installing the clamp unit, make a test print and binding to check that the cover and inside papers are neatly aligned without skewing.

12.2.23 PB left unit**(1) Procedure**

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1. Remove the rear cover /Rt. (Refer to [G.12.2.5 Rear cover /Rt](#))
2. Remove the rear cover /Lt. (Refer to [G.12.2.6 Rear cover /Lt](#))
3. Remove the front door. (Refer to [G.12.2.2 Front door](#))
4. Remove the front cover. (Refer to [G.12.2.3 Front cover](#))
5. Remove 2 screws (with washer) [1].

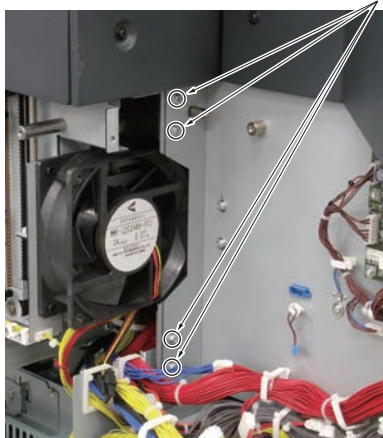
[1]



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6. Remove 4 screws [1].

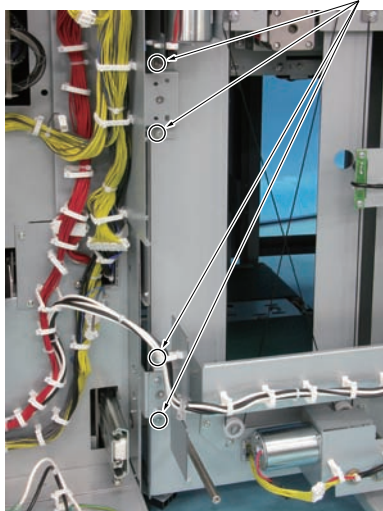
[1]



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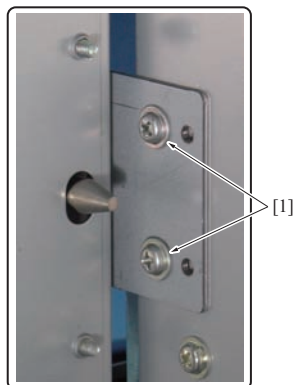
7. Remove 4 screws [1].

[1]



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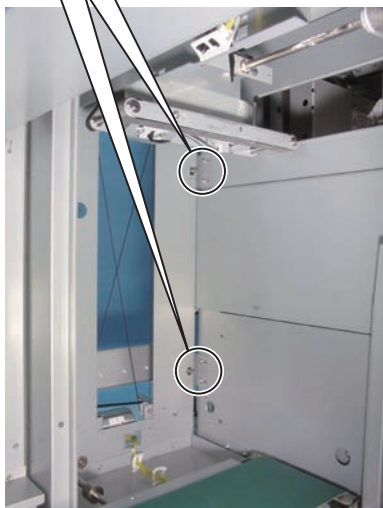
8. Loosen 4 screws [1].



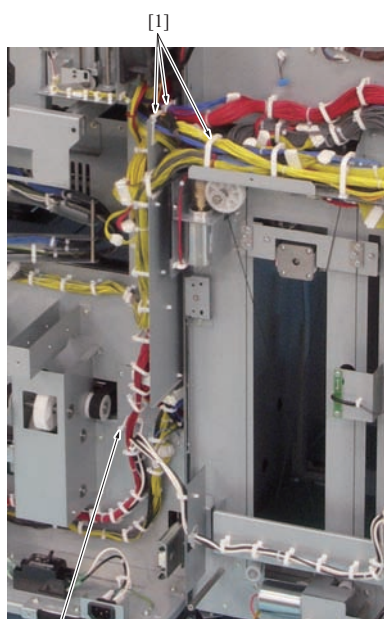
9. Remove the screws [1] at 2 positions, 2 each.

Note

- As the screw [1] is longer than other screws, be careful when reinstalling.



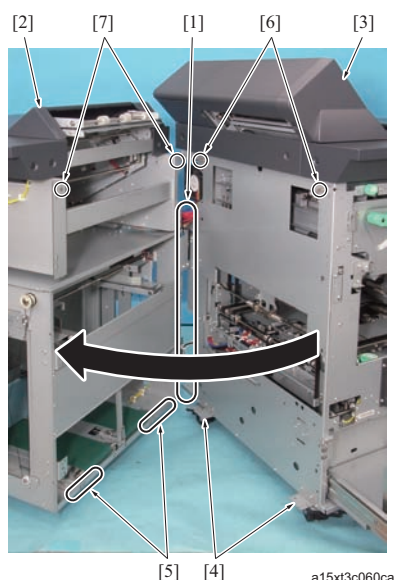
a15xt3c058ca



[1]

a15xt3c059ca

10. Remove the clamps [1] at 4 positions.



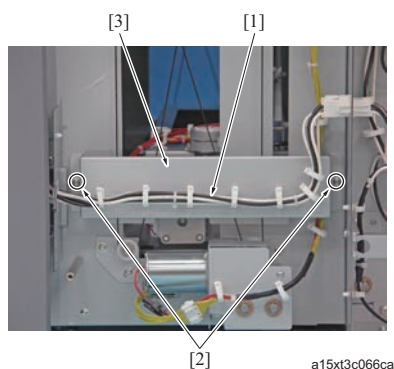
a15xt3c060ca

11. Rotate the PB left unit [2] around the wiring harness section [1] on the rear side to remove it from the PB right unit [3].

Note

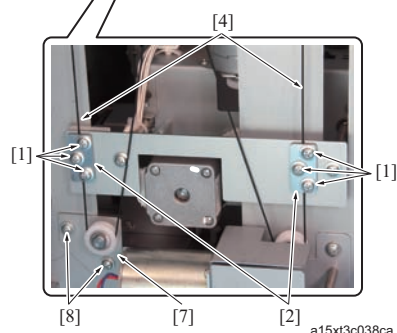
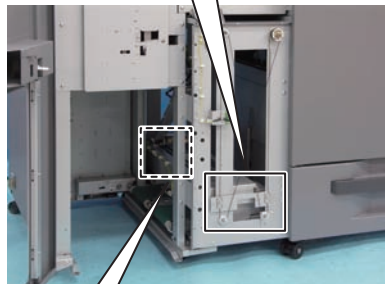
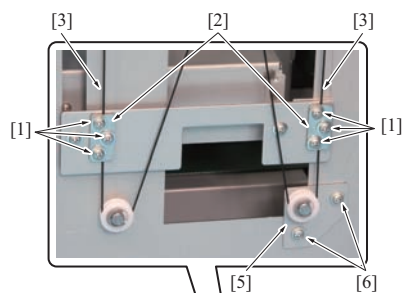
- The PB left unit [2] is rotated up to about 90 degrees.
- When rotating the PB left unit [2], be sure to rotate it around the wiring harness section [1] and be careful not to damage the wiring harness.
- When reinstalling it, put the bottom of the PB left unit [5] on the brackets [4] on the lower side and then put the pins [6] on the upper side into the holes [7].

12. Reinstall the above parts following the removal steps in reverse.

12.2.24 Book lift wire**(1) Procedure**

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1. Carry out the I/O check in service mode in the following order of output check code, and turn OFF the sub power switch (SW2) and the main power switch (SW1) after moving the carriage section to its lowest position.
"77-55", "77-45", "77-58", "77-61"
2. Remove the front cover. (Refer to [G.12.2.3 Front cover](#))
3. Remove the rear cover /Lt. (Refer to [G.12.2.6 Rear cover /Lt](#))
4. Release the wiring harness [1] from the saddles and remove 2 screws [2] and then remove the wiring harness bracket [3].



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5. Remove 3 screws [1] and remove the 4 mounting brackets [2] on the front and rear of the book stock unit.

Note

- When reinstalling, route the book lift wires /Fr [3] and /Rr [4] between 2 screws and 1 screw [1], and secure them with the mounting brackets [2].

6. Loosen the 2 screws [6] of the tension bracket /Fr [5].

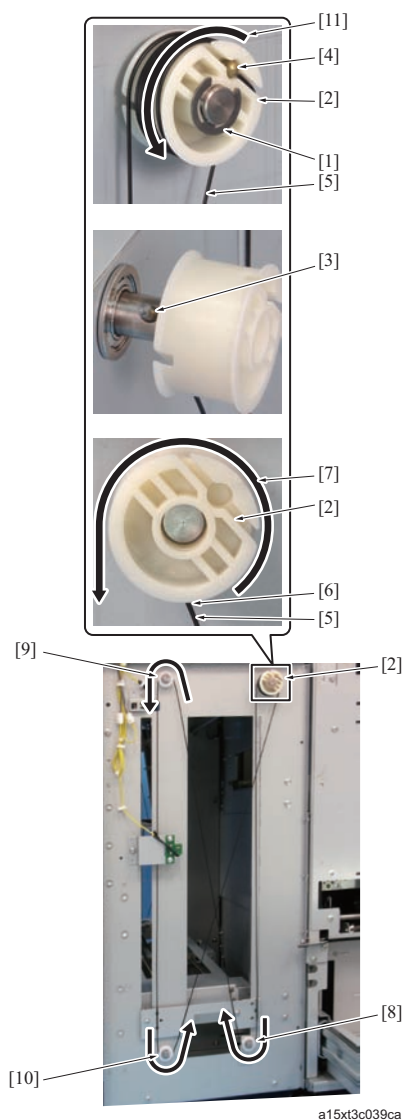
Note

- When installing the tension bracket /Fr [5], be sure to tighten the screws [6] while pulling the bracket downward by the specified tension.
Standard value: 5kgf

7. Loosen the 2 screws [8] of the tension bracket /Rr [7].

Note

- When installing the tension bracket /Rr [7], be sure to tighten the screws [8] while pulling the bracket downward by the specified tension.
Standard value: 5kgf



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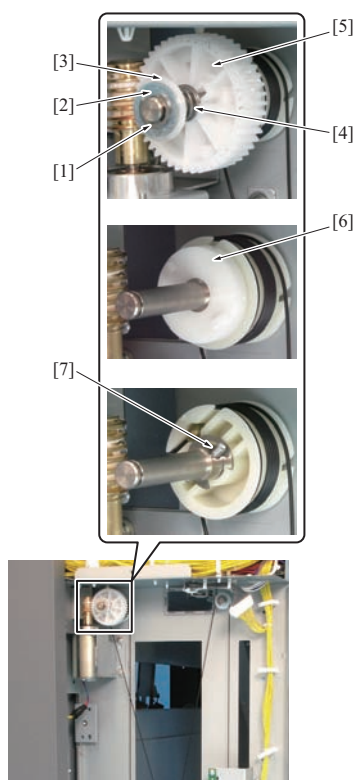
8. Remove the E-ring [1], pulley [2], pin [3], and the wire end [4]. Then remove the book lift wire/Fr [5].

Note

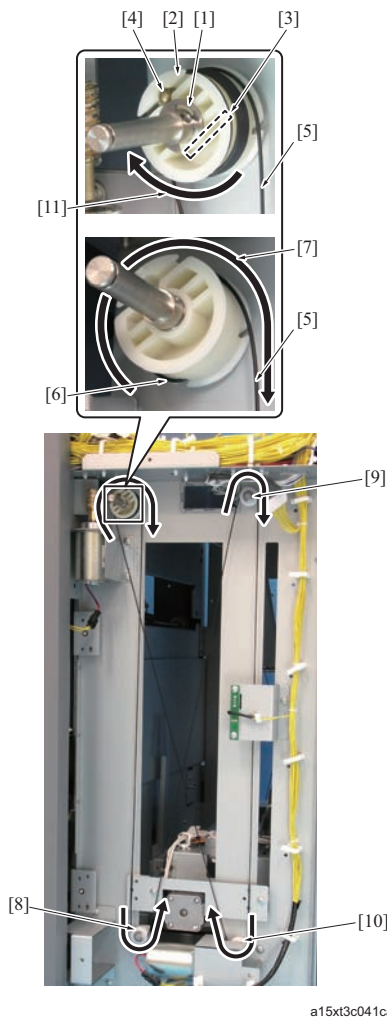
- Install the book lift wire/Fr [5] as following. Route the wire so that it comes out of the lower right [6] of the pulley [2]. Loop the wire over the pulley [7], then loop it over the [8], [9], [10] pulleys in that order. Then wind the wire 6 times counterclockwise [11] over the pulley [2], and put the wire end [4] into the pulley.

9. Remove the E-ring [1], then remove the washers [2] and [3], spring [4], and gear [5].

10. Remove the coupling [6] and the pin [7].



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11. Remove the E-ring [1], pulley [2], pin [3], and the wire end [4]. Then remove the book lift wire/Rr [5].

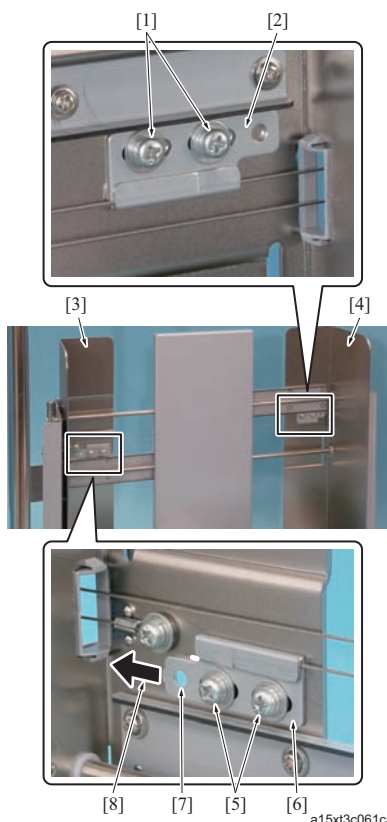
Note

- Install the book lift wire/Rr [5] as following. Route the wire so that it comes out of the lower left [6] of the pulley [2]. Loop the wire over the pulley [7], then loop it over the [8], [9], [10] pulleys in that order. Then wind the wire 6 times counterclockwise [11] over the pulley [2], and put the wire end [4] into the pulley.

12. Reinstall the above parts following the removal steps in reverse.

12.2.25 Cart wire

(1) Procedure



1. Remove 2 screws [1] and then remove the mounting plate /Rr [2].

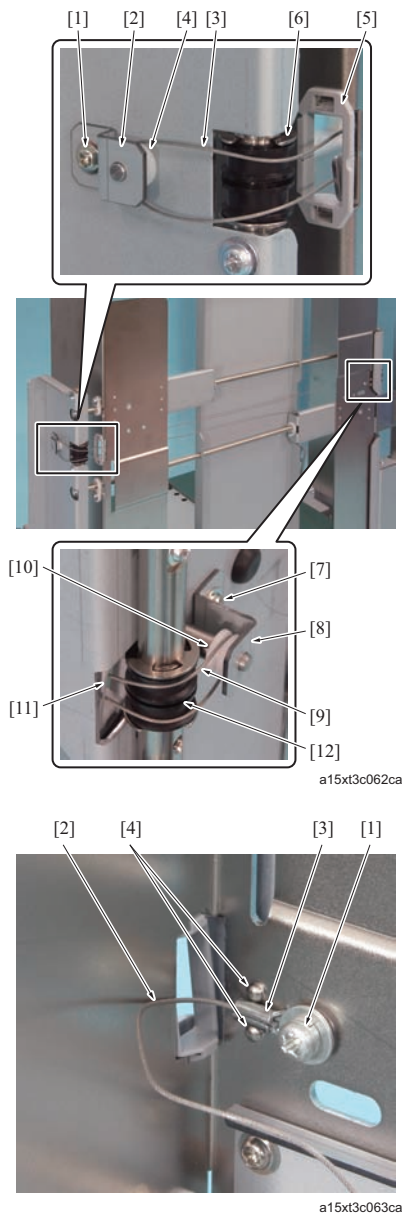
Note

- When reinstalling it, be sure to open the registration plates /Fr [3] and /Rr [4] fully and then install the mounting plate /Rr [2].

2. Remove 2 screws [5] and then remove the mounting plate /Fr [6].

Note

- When reinstalling it, temporarily hold the mounting plate / Fr [6] and hook the tension gauge on the hole [7]. Then pull it in the arrow-marked direction [8] with the standard value and then fully tighten it. Standard value: 1 to 1.5kgf
- Check that the wires are not crossed or they do not contact metal frame.



3. Remove the screw [1] and then remove the mounting metal fitting / Rr [2].
4. Remove the wire [3] from the pulley [4] and release it from the saddles [5].

Note

- When installing the wire [3] on the pulley [4], be sure to hook it on the pulley [6] with the mounting plate /Rr on the upper side.

5. Remove the screw [7] and remove the mounting metal fitting /Fr [8].
6. Remove the wire [9] from the pulley [10] and release it from the saddles [11].

Note

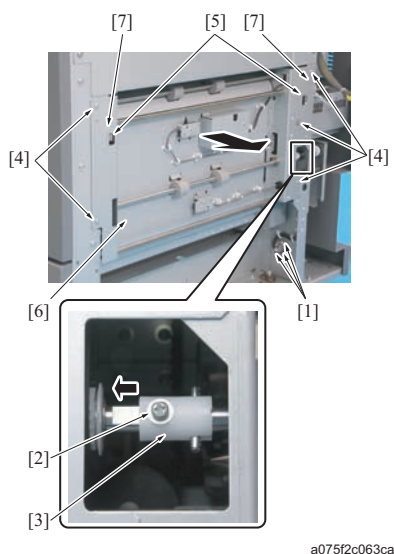
- When installing the wire [9] on the pulley [10], be sure to hook it on the pulley [12] with the mounting plate /Rr on the upper side.

7. Remove the screw [1] and release the wire.

Note

- When reinstalling it, be sure to put the edge part [3] between the projections [4].

8. Reinstall the above parts following the removal steps in reverse.

12.2.26 Conveyance unit /Lw**(1) Procedure**

1. Disconnect 3 connectors [1] and release the wire binding from 6 saddles.
2. Remove the screw [2] and slide the coupling [3] into the arrow-marked direction.
3. Remove 5 screws [4].
4. Release the conveyance unit /Lw [6] from the hooks [5] and remove the unit.

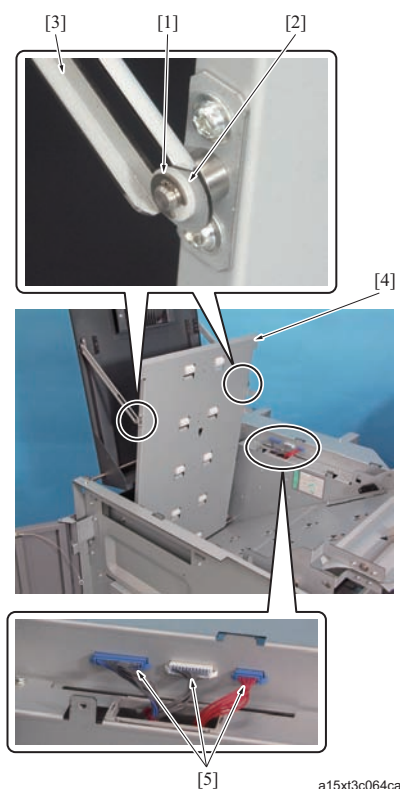
Note

- When reinstalling, be sure to align it to the projection [7].

5. Reinstall the above parts following the removal steps in reverse.

12.2.27 Relay conveyance unit

(1) Procedure

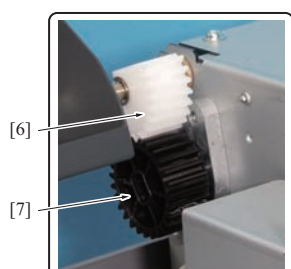


1. Remove the PB left unit. (Refer to [G.12.2.23 PB left unit](#))
2. Remove the upper cover /FrLt. (Refer to [G.12.2.14 Upper cover / FrLt](#))
3. Remove the upper cover /RrLt. (Refer to [G.12.2.16 Upper cover / RrLt](#))
4. Open the relay conveyance door.
5. Remove the E-rings [1] at 2 positions and remove the spacer [2], and then release the arm [3].

Note

- When releasing the arm [3], the conveyance guide plate [4] falls. Hold it by hand during operation.

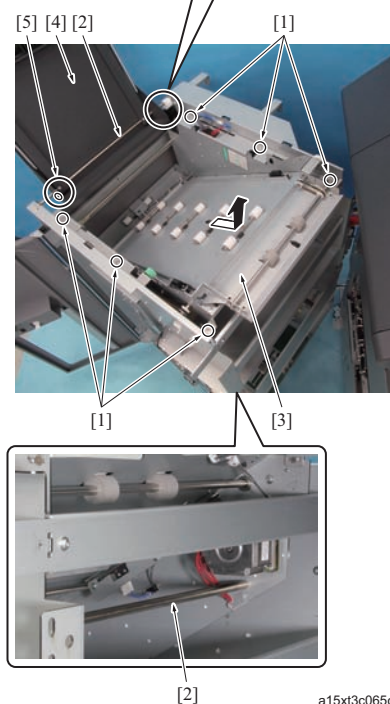
6. Put down the conveyance guide plate [4].
7. Disconnect 3 connectors [5].



8. Remove 6 screws[1].
9. Remove the relay conveyance unit [3] by holding 2 shafts [2].

Note

- When removing the relay conveyance unit [3], insert a thin driver into the hole [5] so that the relay conveyance door [4] does not close. When moving down the relay conveyance door [4] lower than the horizontal position, the gear [6] comes off from the dumper gear [7] and the dumper adjustment is misaligned.



10. Reinstall the above parts following the removal steps in reverse.

12.2.28 Cover paper tray

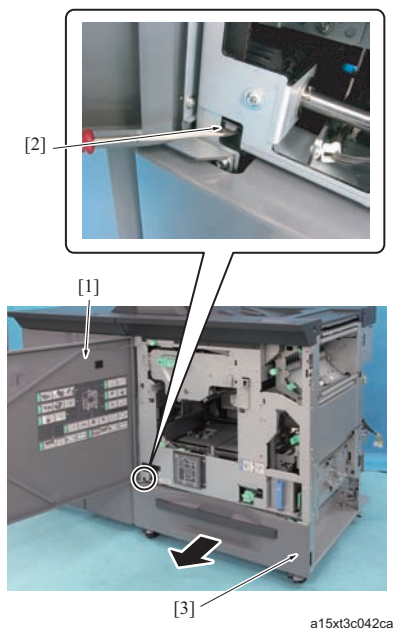
⚠ CAUTION

- As the cover paper tray is heavy, be sure to perform the following work with 2 people.

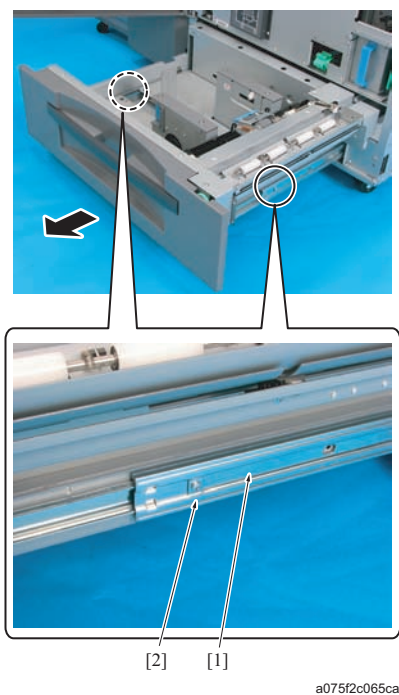
Note

- When lifting the cover paper tray, be sure to hold it by the specified positions. Holding it at positions other than those positions specified damage the tray, thus resulting in a paper feed jam.

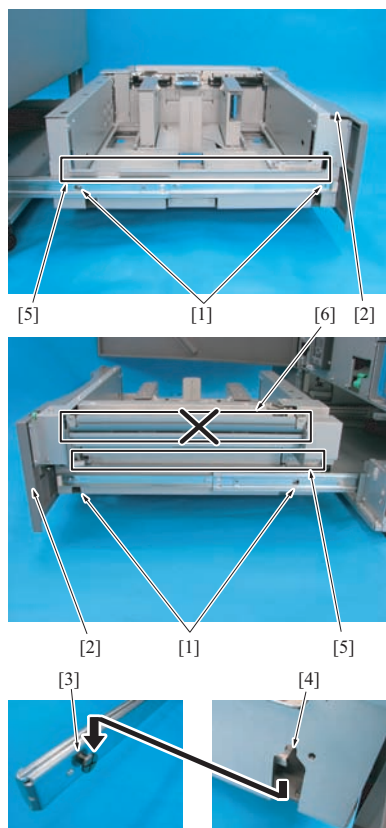
(1) Procedure



- Open the front door [1].
- Unlock the cover paper tray [3] by slightly pushing up the cover paper tray lock lever [2] with a screwdriver or a similar tool, and pull out the cover paper tray [3].



- Remove the 2 stopper screws [2], 1 for each right and left rail [1] and further pull out the cover paper tray.



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4. Remove 4 screws [1], 2 for each left and right rail, hold the cover paper tray [2] by the specified positions [5], and remove it straight up.

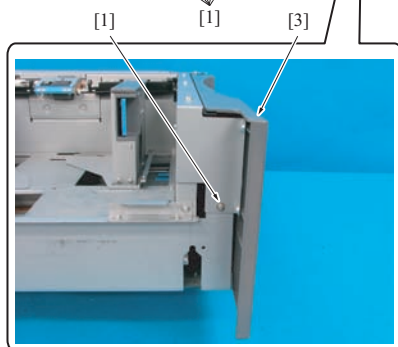
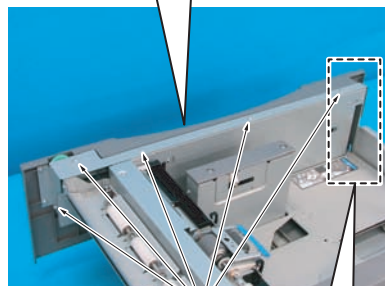
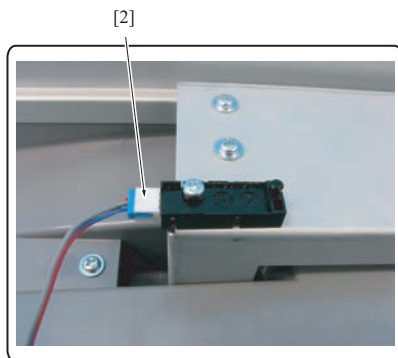
Note

- When installing the cover paper tray, make sure that the 4 knobs [3] on the rails are properly fitted in the notches [4] of the cover paper tray.
- When lifting the cover paper tray, be sure to hold the specified positions [5] by 2 people. Do not hold the part indicated with [6] as the part can easily become deformed, which adversely affects paper feed resulting in a paper jam.

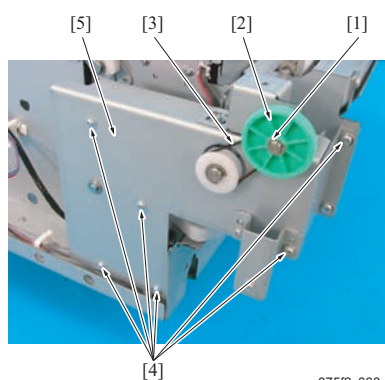
5. Reinstall the above parts following the removal steps in reverse.

12.2.29 Cover paper lift wire

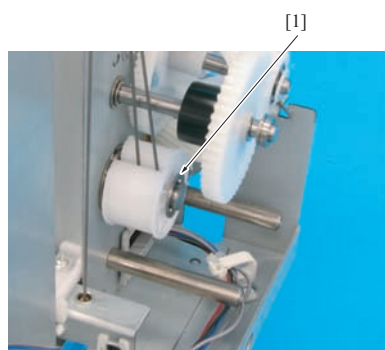
(1) Procedure



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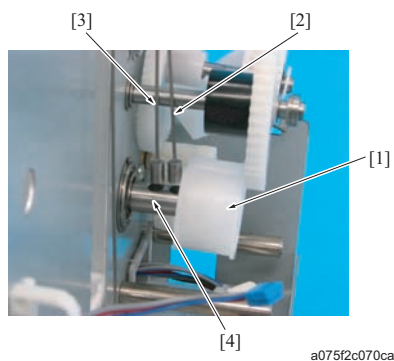


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1. Remove the cover paper tray. (Refer to [G.12.2.28 Cover paper tray](#))
2. Remove 6 screws[1].
3. Disconnect the connector [2], and remove the cover paper tray front cover [3].

4. Remove the E-ring [1], and remove the knob [2] and the belt [3].
5. Remove 6 screws[4] and remove the gear cover [5].

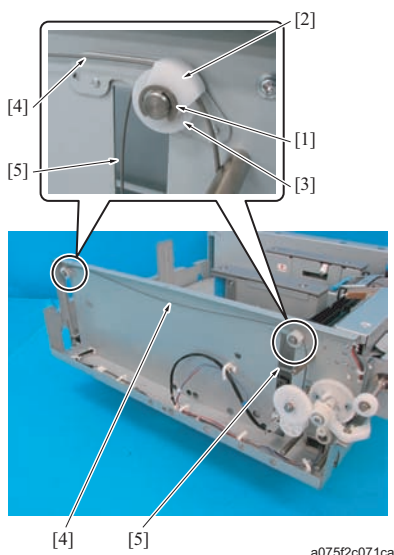
6. Remove the E-ring [1].



7. Slide the pulley [1], and pull out the wire ends of the lift wire /Fr1 [2] and /Fr2 [3] from each hole of the shaft [4].

Note

- The wire end of the shorter wire, lift wire /Fr2 [3], must be inserted into the shaft hole near the frame of the cover paper tray. The wire end of the shorter wire, lift wire/Fr2 [3], must be inserted into the shaft hole near the frame of the cover paper tray.
- When installing the pulley, lift the cover paper lift plate slightly to give slack to the wires and insert the wire ends one by one into the shaft holes. Then secure them with the pulley [1].

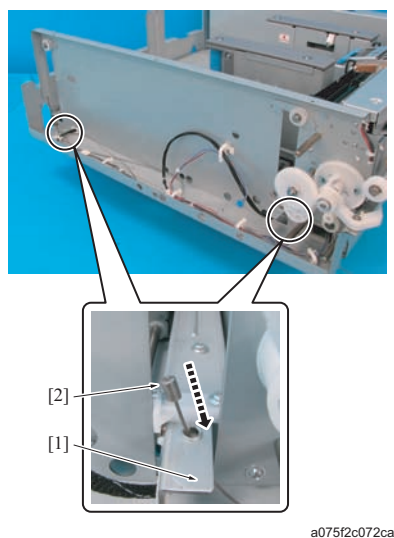


8. Remove the E-rings [1], 1 each, and then remove the wire cover [2].

9. Remove the cover paper lift wires/Fr1 [4] and /Fr2 [5] from each pulley [3].

Note

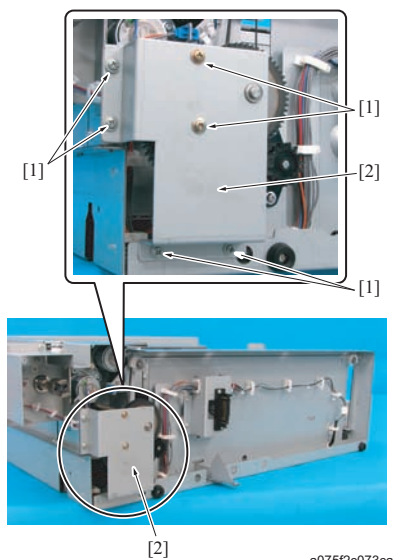
- When installing the wires, make sure that the wires are properly routed inside the wire covers [2] and are not crossed each other.



10. Pull out each wire end [2] through each hole of the cover paper lift plate arm [1].

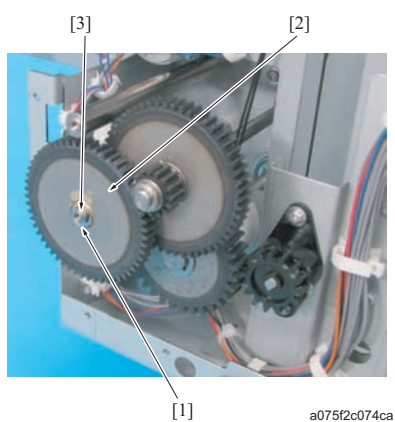
Note

- When pulling out the wire, pull it out carefully so as not to damage it with sharp metal edges.



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11. Remove 6 screws[1] and remove the gear cover [2].

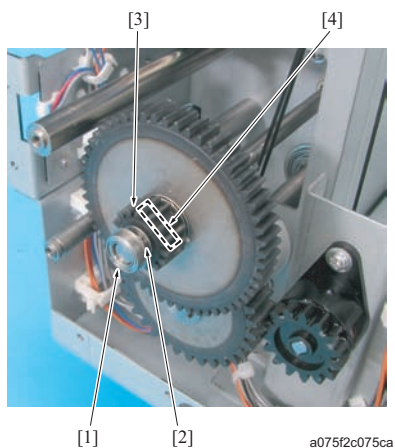


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12. Remove the E-ring [1] and the gear [2].

Note

- When removing the gear [2], be careful not to drop and lose the bearing [3].

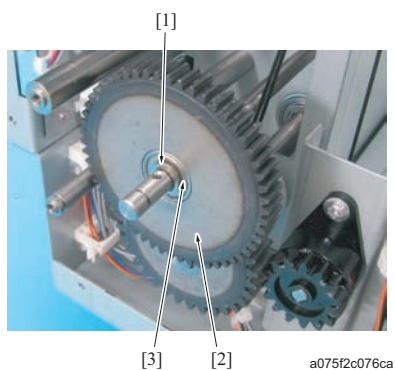


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13. Remove the bearing [1] and the E-ring [2], and then remove the gear [3].

Note

- When removing the gear [3], be careful not to drop the pin[4].

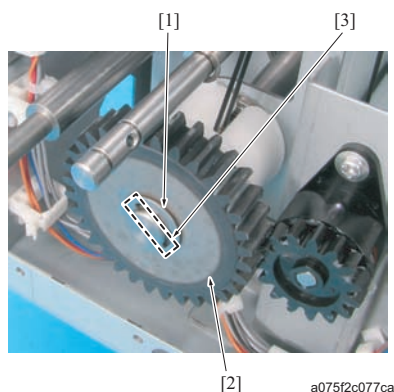


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14. Remove the E-ring [1] and the gear [2].

Note

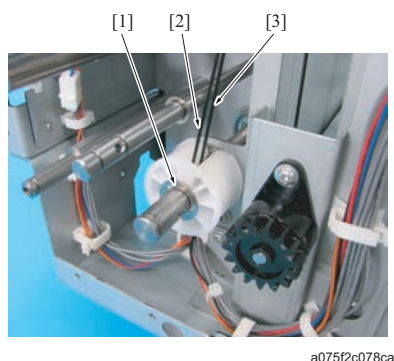
- When removing the gear [2], be careful not to drop the bearing [3].



15. Remove the E-ring [1] and the gear [2].

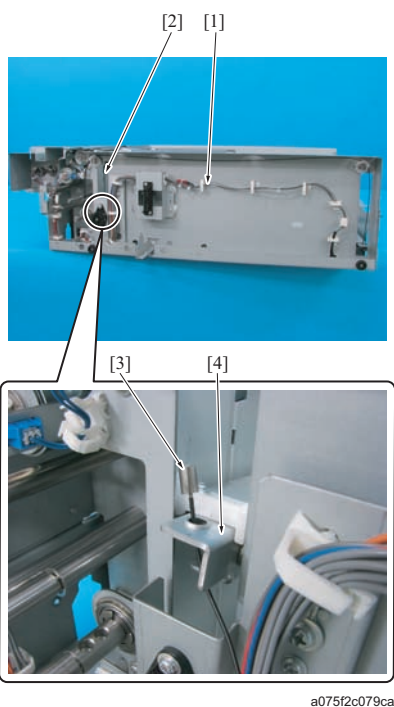
Note

- When removing the gear [2], be careful not to drop and lose the pin [3].



16. Remove the E-ring [1].

17. Pull out the cover paper lift wire/Rr1 [2] and /Rr2 [3] from the shaft holes in the same manner as step7.



18. Remove the cover paper lift wire/Rr1 [1] and /Rr2 [2] in the same manner as step8 to step10.

19. Reinstall the above parts following the removal steps in reverse.

Note

- When pulling out the wire end [3] of the cover paper lift wire /Rr2 [2], lift the cover paper lift plate until the cover paper lift plate arm [4] appears.
- The wire /Fr is gray in color and the wire /Rr is black.
- When the installation is completed, make sure that the lift plate is horizontal.

12.2.30 Binding mode procedure with manual operating function

- When a problem occurs at the clamp section or the cover paper table section, the binding can be checked with the manual operation.

Note

- Disconnect the connector (CN5) on the PB control board (PBCB) after the check. (Manual operation forbidden state)

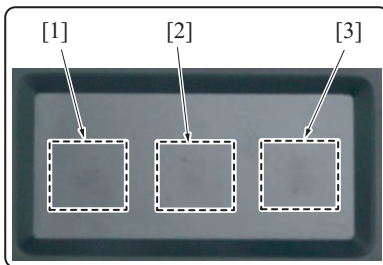
(1) Procedure

[2]

[1]

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1. Remove the rear cover /Lt. (Refer to [G.12.2.6 Rear cover /Lt](#))
2. Connect the connector [2] to the connector (CN5) [1] on the PB control board (PBCB).



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3. Press the button /1 [1].
4. Open the front door and pull out the clamp unit.
5. Set the inside paper to the clamp unit.
6. Adjust the clamp alignment plates /Fr and /Rr to the inside paper edge on the shorter side by hand.
7. Press the button /2 [2].
8. Set the clamp unit.

Note

- Set the clamp unit gently. Setting it roundly causes the misalignment of inside papers widening the clamp alignment plate.

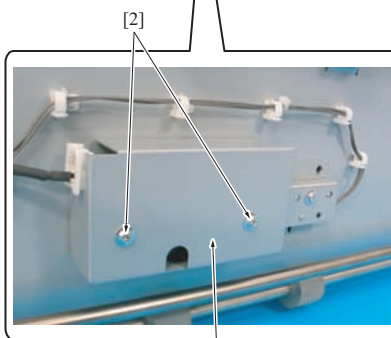
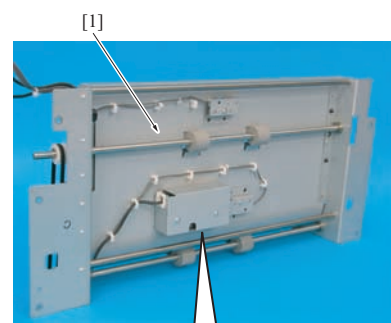
9. Close the front door.
10. Press the button /3 [3].

Note

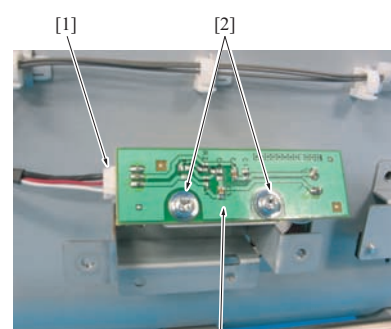
- Disconnect the connector (CN5) on the PB control board (PBCB) after the check.

12.2.31 Multi feed detection boards /S (MFDBS) and /R (MFDBR)**Note**

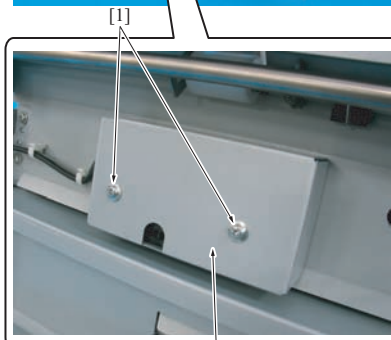
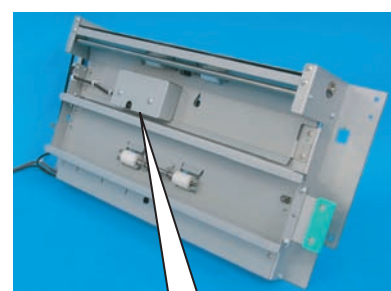
- When replacing the multi-feed detection board /S (MFDBS), be sure to replace the multi-feed detection board /R (MFDBR) at the same time.
- When the multi-feed detection board is replaced, be sure to conduct the adjustment in replacing multi-feed detection board. (Refer to [I.5.7.12 Adjustment when replacing the cover paper multi feed detection board \(PB\)](#))

(1) Procedure

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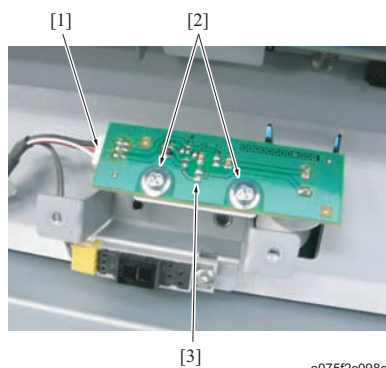


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1. Remove the conveyance unit /Lw [1]. (Refer to [G.12.2.26 Conveyance unit /Lw](#))
2. Remove 2 screws [2] and then remove the cover of the multi-feed detection board /S (MFDBS) [3].

3. Disconnect the connector [1].
4. Remove 2 screws [2], then remove the multi-feed detection board /S (MFDBS) [3].

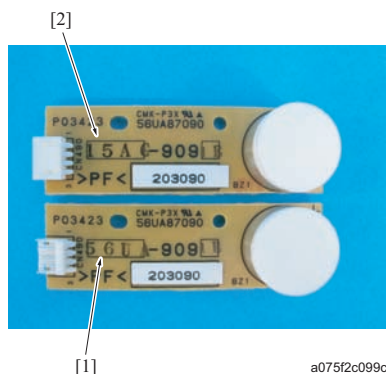
5. Remove 2 screws [2] and then remove the cover of the multi-feed detection board /R (MFDBR) [2].



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6. Disconnect the connector [1].
7. Remove 2 screws [2] and then remove the multi-feed detection board /R (MFDBR) [3].
8. Reinstall the above parts following the removal steps in reverse.

(2) Note for installing the multi-feed detection boards /S (MFDBS) and /R (MFDBR)



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- The multi-feed detection boards /S (MFDBS) and /R (MFDBR) are installed on the same type board. Be careful not to confuse one with the other when installing them.
- Be sure to confirm the marking on the board when installing it.
Multi-feed detection board /S (MFDBS) [1]: 56UA
Multi-feed detection board /R (MFDBR) [2]: 15AG
- The connector shape is different for the multi-feed detection boards /S (MFDBS) and /R (MFDBR). So, even if it is installed, the connector cannot be connected.

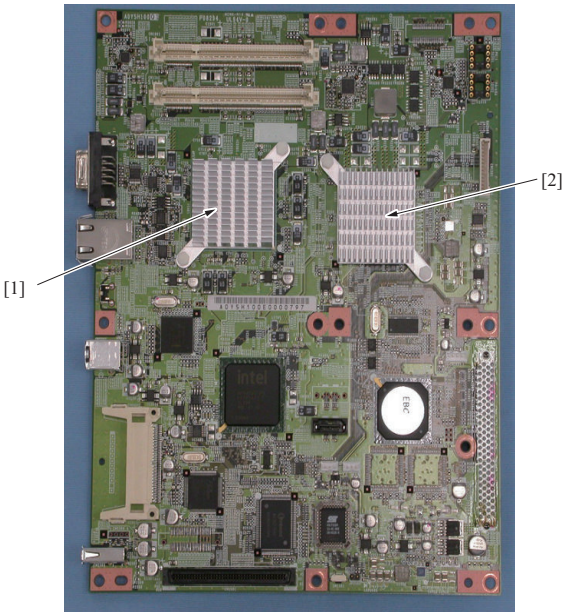
13. IC UNIT

13.1 Items not allowed to be disassembled and adjusted

13.1.1 IC board (ICB)

(1) Positions from which removing is prohibited

- North-Bridge
- CPU



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[1]	North-Bridge	[2]	CPU
-----	--------------	-----	-----

(2) Reason of prohibition

When removing them, the operation is not warranty. Be sure not to remove them.

13.2 List of disassembling and assembling parts

Note

- This list shows the explanation of the disassembly and reassembly of the parts which are considered necessary to replace (other than periodically replaced parts). However, these parts do not require to be disassembled while in normal service operations.

No.	Section	Parts name
1	IC section	Compact flash
2	IC section	IC unit
3	IC section	Memory
4	IC section	IC cooling fan (FM39)
5	IC section	IC board (ICB)
6	HDD section	Hard disk /2 (HDD2)

13.3 Removal procedure of disassembling and assembling parts

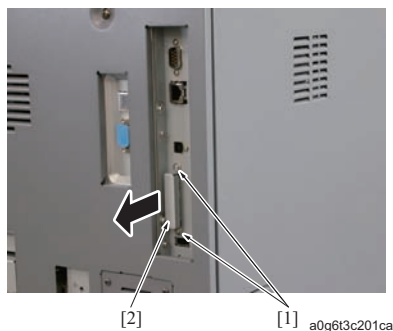
13.3.1 Precautions on disassembling and assembling

⚠ CAUTION

- Be sure to unplug the power plug from the power outlet.

13.3.2 Compact flash

(1) Procedure



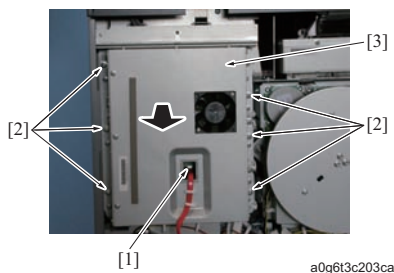
1. Remove 2 screws [1] and remove the cover [2].



2. Pull out the compact flash card [1].
3. Reinstall the above parts following the removal steps in reverse.

13.3.3 IC unit

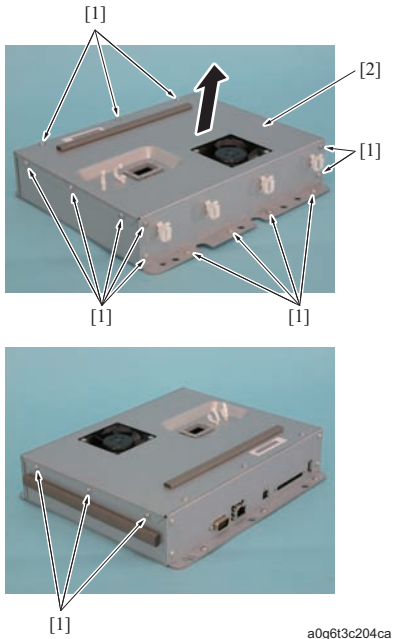
(1) Procedure



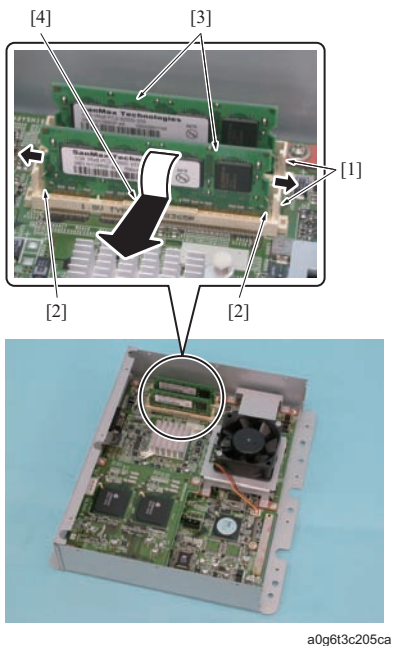
1. Pull out the compact flash card. (Refer to [G.13.3.2 Compact flash](#))
2. Remove the rear cover. (Refer to [G.2.2.2 Rear cover](#))
3. Disconnect the connector [1].
4. Remove 6 screws [2] and remove the IC unit [3].
5. Reinstall the above parts following the removal steps in reverse.

13.3.4 Memory

(1) Procedure



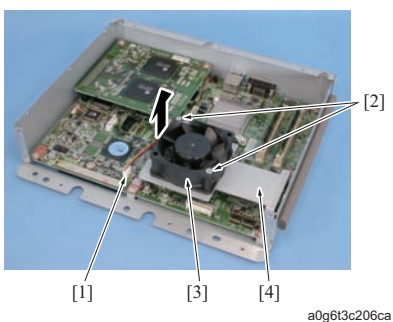
1. Remove the IC unit. (Refer to [G.13.3.3 IC unit](#))
2. Remove 17 screws [1] and remove the IC unit cover [2].



3. Move 2 pins [2] of the memory slot [1] outward with fingers and remove the memory [3] in the arrow-marked direction [4].
4. Reinstall the above parts following the removal steps in reverse.

13.3.5 IC cooling fan (FM39)

(1) Procedure



1. Remove the IC unit. (Refer to [G.13.3.3 IC unit](#))
2. Remove the IC unit cover. (Refer to [G.13.3.4 Memory](#))
3. Disconnect the connector [1].
4. Remove 2 screws [2] and remove the IC cooling fan (FM39) [3].

Note

- For procedure for removal of fan mounting bracket [4], refer to the procedure for removal of IC board. (Refer to [G.13.3.6 IC board \(ICB\)](#))

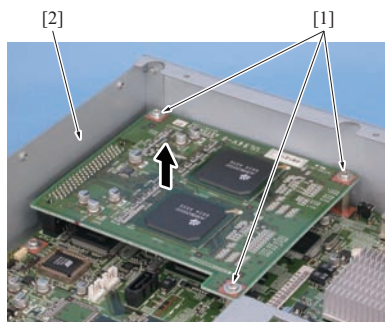
5. Reinstall the above parts following the removal steps in reverse.

Note

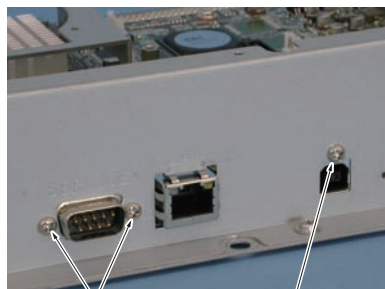
- When reinstalling the fan, check the direction of it (the fan lavel down, and the fan wiring harness outlet in the center of the board) and be sure not to nip the fan wiring harness.

13.3.6 IC board (ICB)

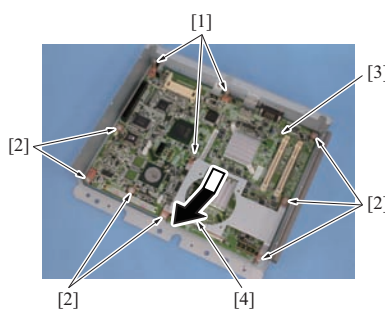
(1) Procedure



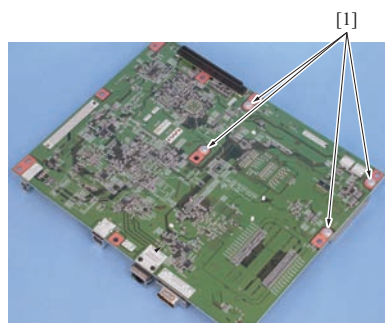
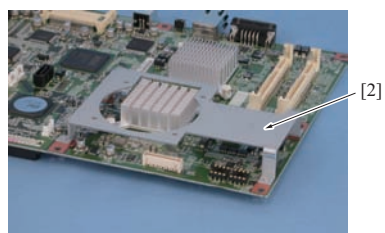
a0g6t3c207ca



a0g6t3c208ca



a0g6t3c209ca



a0g6t3c210ca

1. Remove the IC unit. (Refer to [G.13.3.3 IC unit](#))
2. Remove the IC unit cover. (Refer to [G.13.3.4 Memory](#))
3. Remove the IC cooling fan (FM39).
4. Remove 3 screws [1] and remove the scan accelerator board (SAB) [2].

5. Remove 2 screws [1] and the screw [2].

6. Remove 3 supports [1].
7. Remove 7 screws [2] and remove the IC board (ICB) [3] in the arrow-marked direction [4].

8. Remove 4 screws [1] and remove the fan mounting bracket [2].
9. Reinstall the above parts following the removal steps in reverse.

13.3.7 Hard disk /2 (HDD2)

Note

- When replacing the hard disk/2 (HDD2), be sure to use one that is designated as spark parts for the image controller.
- The use of any other hard disks is not allowed.

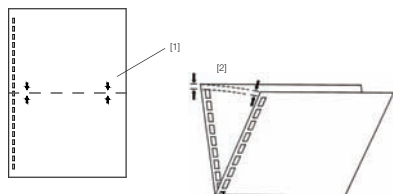
- **Be sure not to change the jumper setting of the hard disk.**

For the method for installing the hard disk /2 (HDD2), refer to the other procedures of the main body. (Refer to Theory of Operation of the main body P.449)

14. GP-501

14.1 Centering punched holes

Die Set Position Cradle Adjustment, The die set position cradle is set in the factory; however, because of the punched-hole spacing on the PB die sets, there is a minimal amount of paper on each edge of the punched paper. The die set position cradle may have to be fine adjusted to center the punched-hole pattern in the paper. Listed below are the step-by-step instructions to adjust the die set to the proper position.

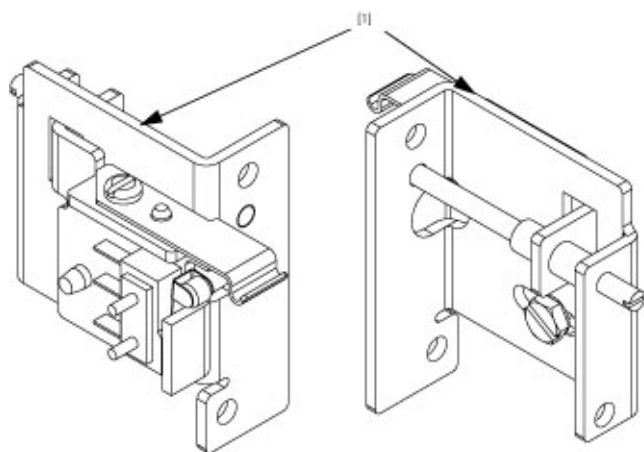
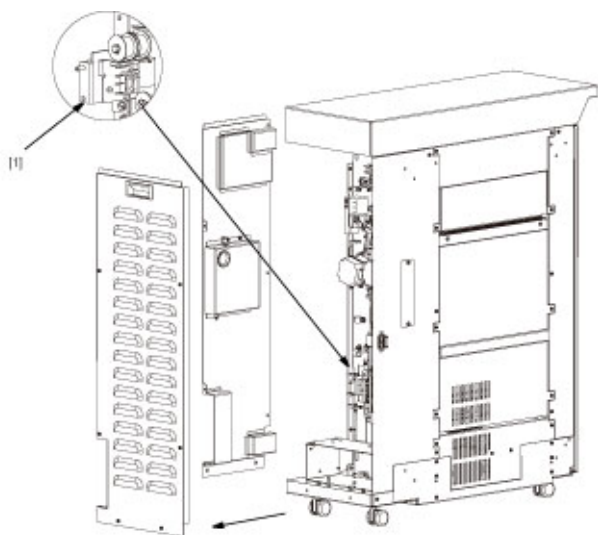


1. The punched-hole alignment must be checked on a piece of punched paper. Fold the punched sheet of paper in half [1] and the punched-holes should be aligned evenly along the edge and centered between the ends [2]. If the punched-holes are not aligned, then the die set cradle must be adjusted to align the punched holes.

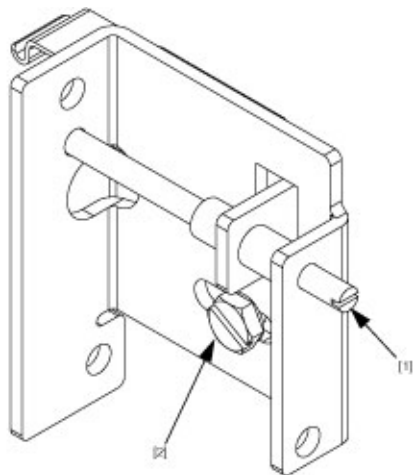
Note

- The paper path is always constant, if the holes are not centered, you must adjust the die set cradle.

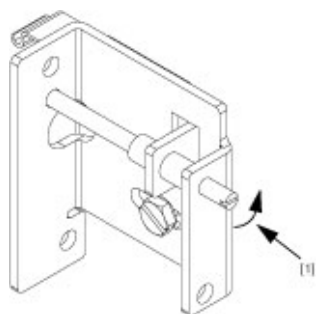
2. The two back covers on the GP-501 Punch must be removed to access the die set position cradle [1]. (Refer to [G.14.3.3 Removing the Rear Cover.](#))



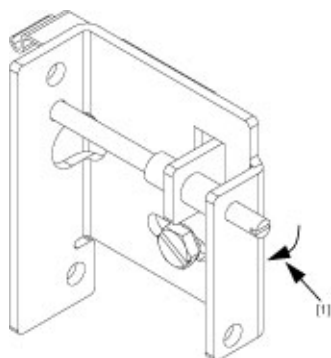
3. Before adjusting the die set position cradle, you must first note what direction the die set cradle [1] must move.



4. Loosen the lock-down screw [1].
5. Using a flat-blade screwdriver, turn the adjustment screw [2] clockwise or counter-clockwise to move the die set position cradle.



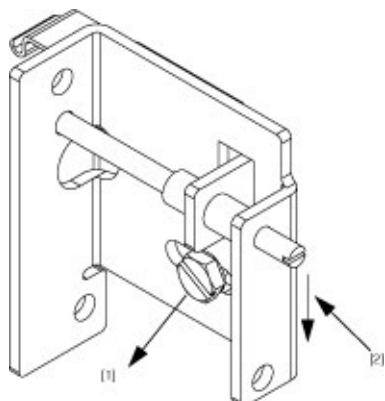
6. Observe the punched paper. If the punched-holes are too close to the rear of the machine, then you must turn the adjustment screw counter-clockwise [1].



7. If the punched-holes are too close to the front of the machine, then you must turn the adjustment screw clockwise [1].

Note

- **Seven full turns of the adjustment screw result in a 1/4" (6.35 mm) change in the punched hole position.**

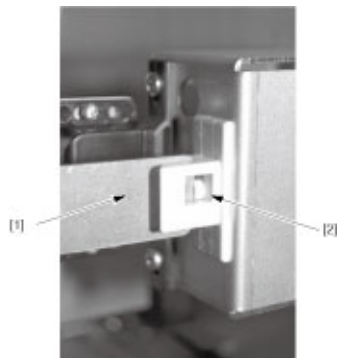


8. Before tightening the lock-down screw [1], tilt or bias the assembly towards the bottom of the machine [2] and tighten the lock-down screw. This will ensure positive engagement between the locking lever and the die set.
9. Run a test sample of punched paper and recheck paper alignment. Re-adjust if necessary.

14.2 Door latch

14.2.1 Door latch check

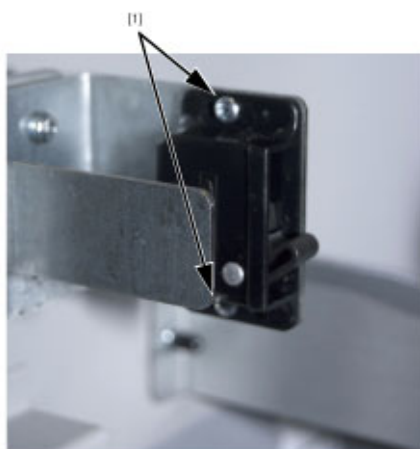
(1) Procedure



1. Ensure the door latch holds the door closed and that the activating bracket tab [1] depresses the door switch [2]. The tab should press the switch button just so that it is close to bottoming out.

14.2.2 Door Latch Adjustment

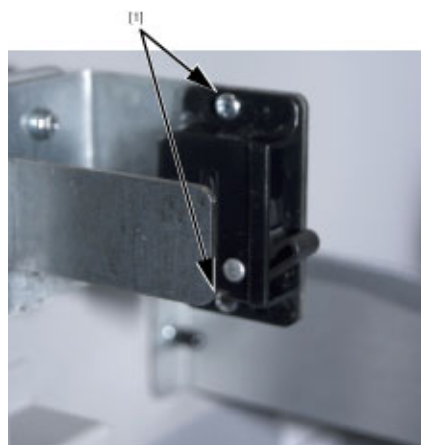
(1) To adjust the door latch:



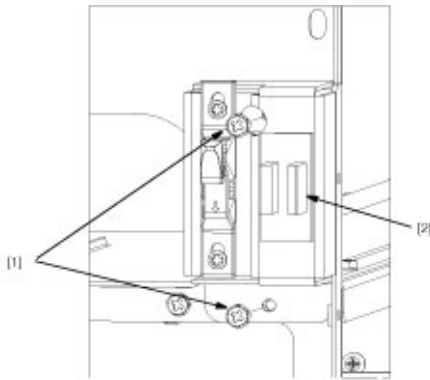
1. Open the front door.
2. Loosen the two adjustment screws [1] on the door latch.
3. Do one of the following.
 - To move the door in, move the latch towards the front of the door.
 - To move the door out, move the latch away from the front of the door.
4. Tighten the 2 screws [1] and close the door.
5. Test its operation.

14.2.3 Door Latch and Switch Replacement

(1) To replace the door latch:



1. Open the front door.
2. Remove the 2 screws [1].

(2) To replace the door switch:

1. Open the front door.
2. Remove the 2 screws [1].
3. Unplug connectors from switch [2].

14.3 Preparing the GP-501 punch for service**14.3.1 Preparing the GP-501 punch for service**

Most service requires that the GP-501 Punch be separated from the printer and finisher and the rear cover be removed.

⚠ WARNING

- Disconnect the unit from power and maintain the cord in your possession. Failure to observe this warning can result in injury or electrical shock.

(1) Procedure

- Unplug the unit from power.
- Disconnect the communication cable
- Empty Chip Bin

14.3.2 Separating the Punch From the Printer

Follow the instructions as described in Installation Manual.

14.3.3 Removing the Rear Cover

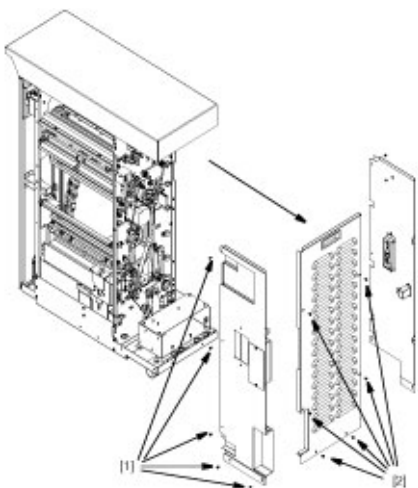
Separate the punch from the printer and finisher first. (Refer to [G.14.3.2 Separating the Punch From the Printer.](#))

Note

- It is not necessary nor recommended that you remove the top cover.

(1) Procedure**(2) Tool Required**

- Phillips screwdriver or 1/4" hex head nut driver

(3) To remove the rear cover:

1. Remove the 5 screws on the entrance side [1] and remove the 6 rear cover screws [2].
2. Slide the cover out from under the top cover. Do not remove the top cover.

14.4 Leveling and aligning to the printer

The punch must be level and in line with the printer and finisher. If the printer and GP-501 Punch are moved or relocated, the system must be re-leveled.

Note

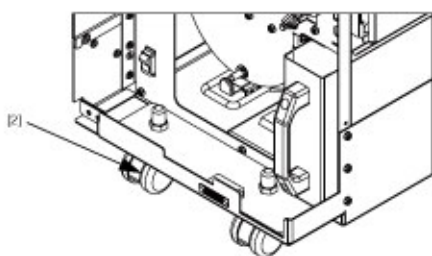
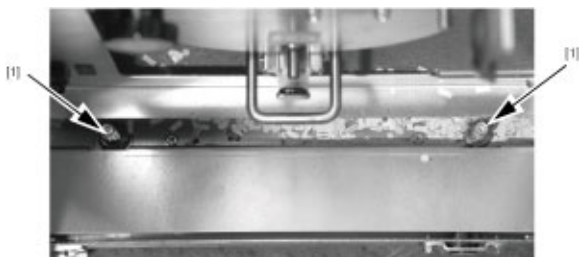
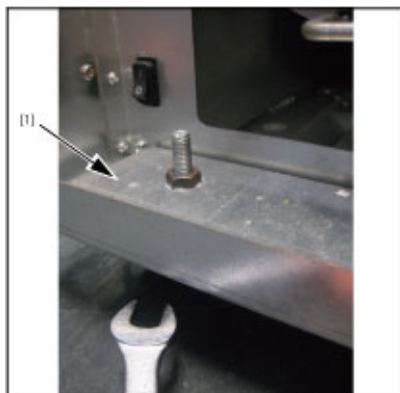
- It is important that the punch is not twisted or skewed. It must be level front to back and side to side.

(1) Procedure

Raise or lower the GP-501 Punch's castors to level it.

(2) Tool Required

- 2 3/8" open ended wrenches
- Level

(3) To level the punch:

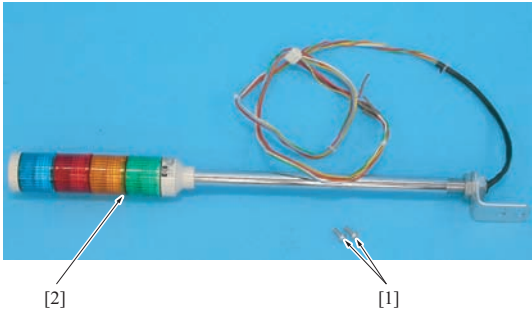
1. Remove the rear cover and put the punch back in line with the printer and finisher.
2. Place the level on a flat surface of the top [1] and determine which castor needs adjustment.

3. Loosen the locking nut [1] of the castor.
4. From below the frame and at the top of the castor [2], adjust the height of the castor as needed.
5. Check the level and adjust as necessary.
6. Tighten the locking nut [1].
7. Ensure punch is level and in line with main body and finisher.
8. Install rear cover.

15. Commercially available parts

15.1 Reinstalling the status indicator light

15.1.1 Configuration

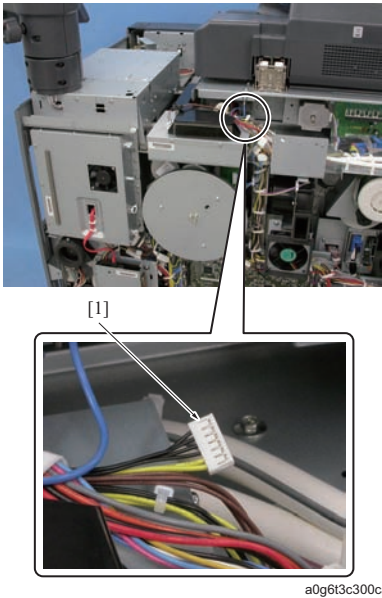


[1]	Screws (2)	[2]	Status indicator light
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15.1.2 Connector

(1) Connecting connector

(a) Connector position



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[1]	CN160	-
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(b) Connector specifications

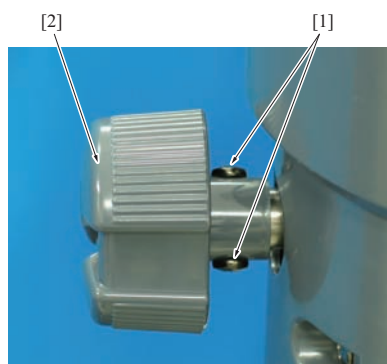
Connector	Pin Number	Signal name	Description	Output timing	Type of signal
160	1	PAT1	Light ON signal	L signal output when the printing available	Open collector
	2	PAT2		L signal output while in the scanning or printing operation	
	3	PAT3		L signal output when an abnormal stop occurs due to jams, error codes, no paper, or no toner	
	4	PAT4		L signal output when the toner supply message is displayed	
	5	24V	24V DC source	At all times	24V, 500mA
	6	P.GND	Power ground	-	-

15.1.3 Procedure

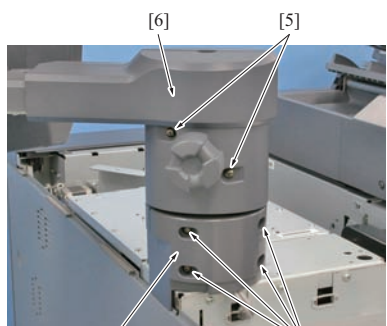
(1) Procedure for reinstallation

(a) Preparation

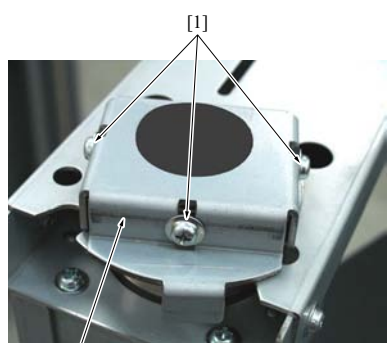
- Be sure to specify the wiring harness pin assignment on the status indicator light side to the CN160 pin assignment on the main body side so that the CN can be connected.

(b) Procedure on the main body side

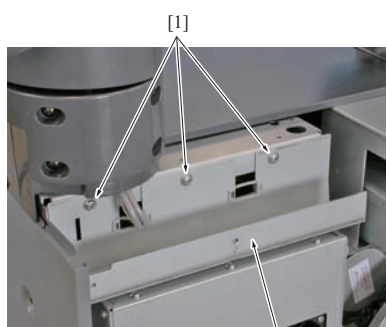
a0g6t3c351ca



a0g6t3c301ca



1050fs2423c



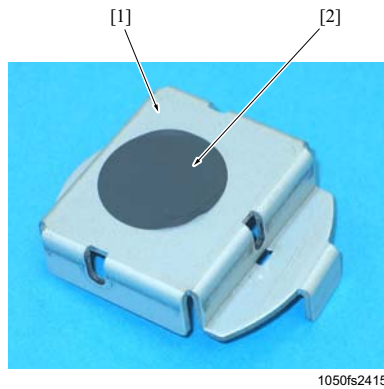
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1. Remove the rear cover. (Refer to [G.2.2.2 Rear cover](#))
2. Remove the upper cover /Rr2. (Refer to [G.2.2.9 Upper cover / Rr2](#))
3. Remove the upper cover /Rt. (Refer to [G.2.2.10 Upper cover /Rt](#))
4. Remove 2 screws [1] and then remove the adjusting knob [2].

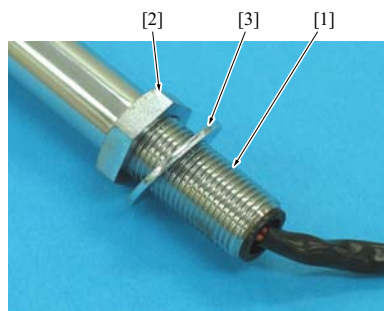
5. Remove 4 screws [1] and then remove the arm cover /3 [2].
6. Remove 2 screws [3] and then remove the arm cover /4 [4].
7. Remove 2 screws [5] and then remove the arm cover /1 [6].
8. Remove 2 screws [7] and then remove the arm cover /2 [8].

9. Remove 3 screws [1] and then remove the arm cover /5 [2].

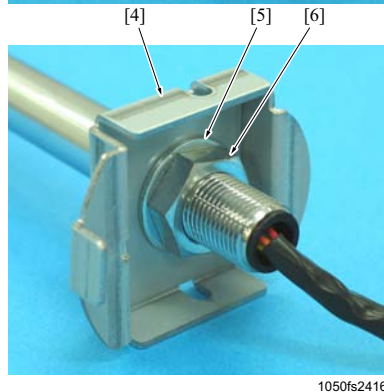
10. Remove 3 screws [1] and then remove the exterior mounting plate /A [2].



11. Peel off the label [2] of the arm cover /5 [1].

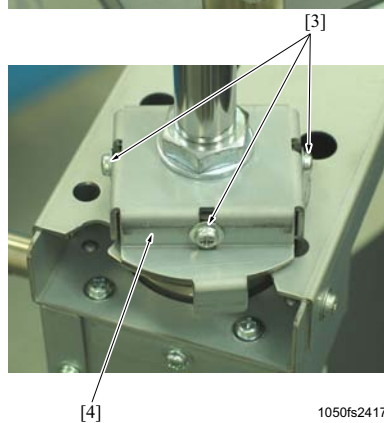
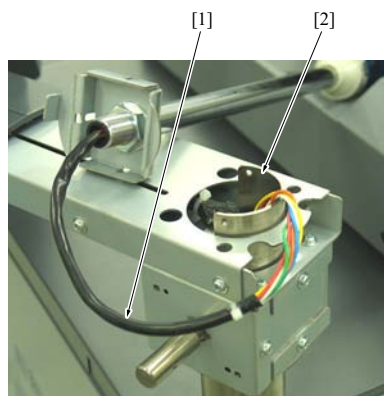


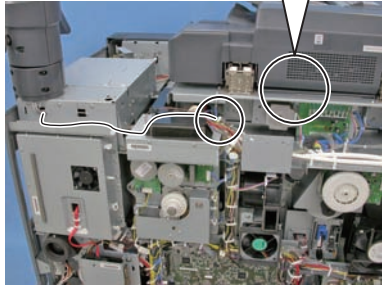
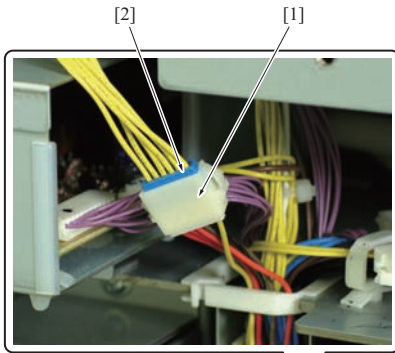
12. With the bolt section [1] of the status indicator light provided with the nut [2] and washer [3], pass the wiring harness of the status indicator light through the arm cover /5 [4], the washer [5] and the nut [6] and tighten up the nut [6].



13. Pass the wiring harness [1] of the status indicator light through the operation unit support member [2] and install the arm cover /5 [4] with 3 screws [3].

14. Reinstall the arm cover /1, /2, /3 and /4 and the adjusting knob following the removal steps in reverse.





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15. Connect the connector [1] of the status indicator light to the connector [2] on the main body for wiring.

Note

- **When wiring, be sure that the wiring harness does not come in contact with the drive section.**

16. Reinstall the upper cover /Rt and /Rt2 and the rear cover following the removal steps in reverse.

16. INDIVIDUAL SUPPORT PARTS

16.1 OUTLINE

Individual support parts set 3 types of items so that the demands expected in the POD market and Product printing market can be met. Providing these parts allows customization adequate to the type of users usage.

16.2 Installing of the cleaning brush

16.2.1 Purpose

A cleaning brush is used while in the overlay printing in which coated paper is used. For coated paper while in offset printing, ink gets dry slowly. Therefore, to prevent the transfer of ink onto the backside of the paper, powder is normally sprinkled. The cleaning brush is used to prevent the occurrence of a no feed condition due to this powder.

However, to maintain the specified performance, the cleaning brush needs to be cleaned every 2,000 sheets of paper through while in overlay printing.

Do not use the cleaning brush for the paper with many paper powders. The paper powder clogs the cleaning brush and reduces the conveyance power.

16.2.2 Characteristics

The cleaning brush can clean the pick-up roller and the paper feed roller.

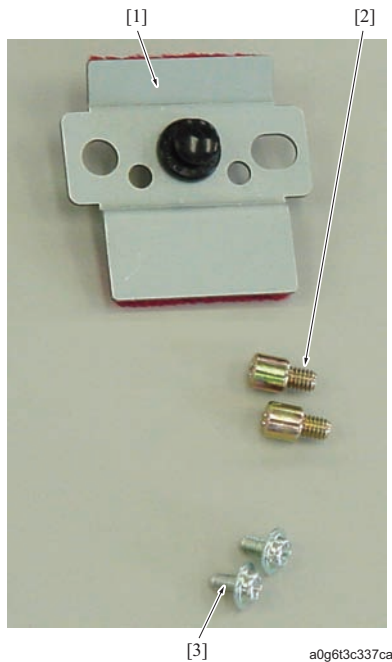
Since it is used for the overlay printing, it can be installed only in the tray4 of PF--702 that is used for the overlay printing.

16.2.3 Configuration

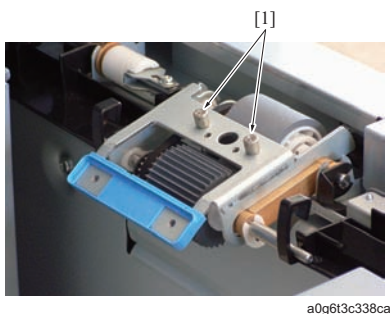
The package contains the following as a set.

- [1] Brush main body: 1 pc.
- [2] Positioning screw: 2 pcs.
- [3] Screw: 2 pcs. (M3 x 6)

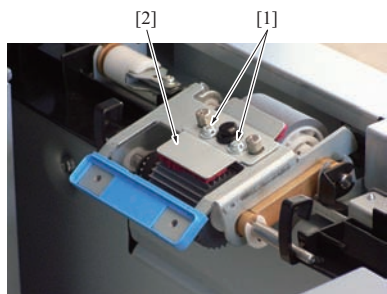
Only 1 brush is packaged with this machine. When required additionally, brushes can be purchased as service parts.



16.2.4 Procedure



1. Pull out the paper feed tray.
2. Install 2 positioning screws [1].



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3. Install the cleaning brush [1] and fix it with 2 screws [2].

16.3 Installation of the paper feed assist plate

16.3.1 Purpose

The paper feed assist plate is used to adjust the pick-up pressure on paper by changing the load on the pick-up roller. Adjustments can be made according to the type of paper to increase the paper feed performance.

Improve a non feed condition that is apt to occur when feeding paper, such as a thick paper, that is hard to convey.

16.3.2 Characteristics

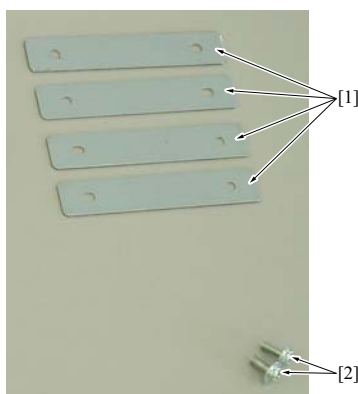
The paper feed assist plate weighs about 10g and the pick-up roller can be equipped with up to 4 plates normally (Refer to [N.13. PAPER SETTING](#)) and 3 plates while in the overlay printing (Refer to [I.8.5 Overlay printing adjustment](#)). Increasing or decreasing the number of plates allows you to adjust the pick-up pressure corresponding to the type of paper.

4 plates only are packaged together with the main body and they can be purchased as service parts when required.

16.3.3 Checking of the contents of the package

The package contains the following as a set.

- [1] Paper feed assist plate: 4 sheets.
- [2] Screw: 2 pcs. (TP3 x 8)



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16.3.4 Procedure

For the main body, refer to "[I.9.3 Pick-up roller load adjustment](#)." (Refer to [I.9.3 Pick-up roller load adjustment](#))

For the PF, refer to "[I.11.2 Pick-up roller height adjustment](#)." (Refer to [I.11.2 Pick-up roller height adjustment](#))

16.4 Replacing the stroking shaft pressure spring

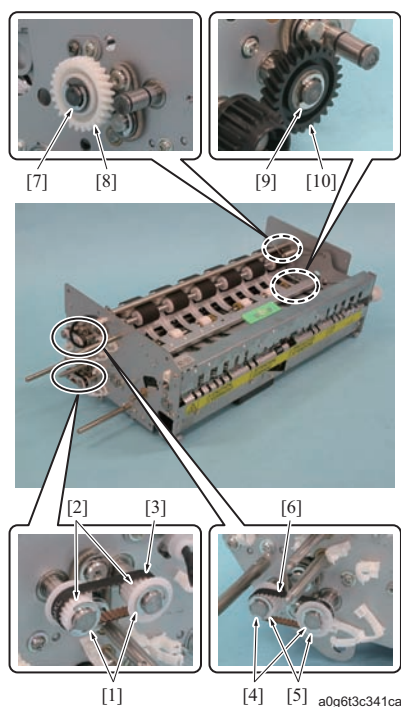
16.4.1 Purpose

The stroking shaft pressure spring is used to strengthen the stroking pressure of the de-curler belts /Up and /Lw.

16.4.2 Characteristics

The stroking shaft pressure spring improves the power of correcting the curl of the thin paper. However, the paper through of the thick paper and the plain paper in the de-curler section may be difficult.

16.4.3 Procedure

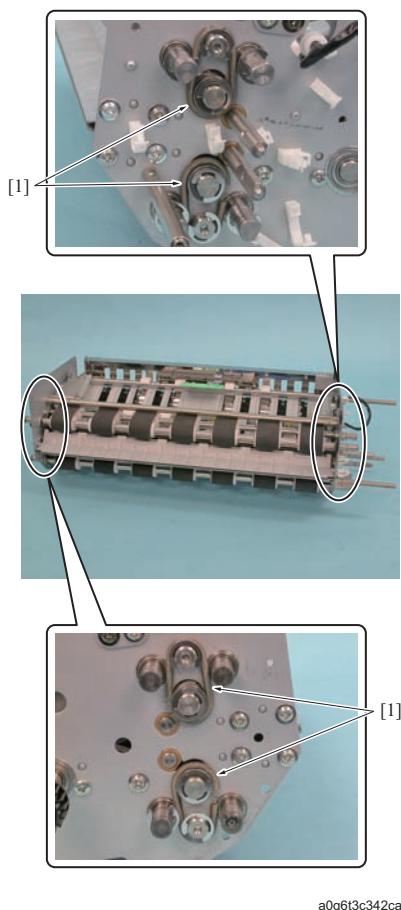


1. Pull out the duplex section.
2. Remove the fusing section.
3. Remove the reverse/exit solenoid assy.
4. Remove the de-curler solenoid /Lw assy.
5. Remove the de-curler solenoid /Up assy.
6. Remove the reverse/exit section.
7. Remove the de-curler motor assy.
8. Remove 2 E-rings [1] and remove 2 gears [2] and the belt [3].
9. Remove 2 E-rings [4] and remove 2 gears [5] and the belt [6].
10. Remove the E-ring [7] and remove the gear [8].
11. Remove the E-ring [9] and remove the gear [10].

Note

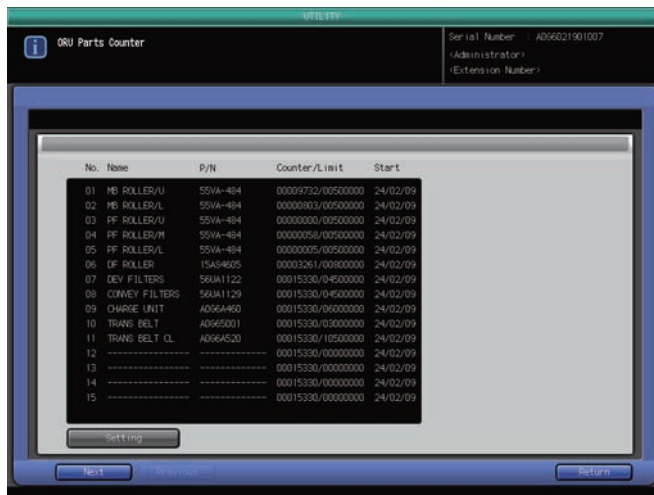
- When reinstalling the gears [2] and [5], 2 each, be sure to set the flange of each gear alternately.

12. Replacing 4 stroking shaft pressure spring [1].
13. Reinstall the above parts following the removal steps in reverse.



17. ORU (OPERATOR REPLACEABLE UNIT)

17.1 ORU corresponding parts counter management



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1. When the user replaces ORU corresponding parts, the counter requires a reset. By changing the ORU corresponding parts counter from DIPSW15-0 to 1, [ORU Parts Counter] is displayed in the utility menu screen.
2. Users can register and reset the parts name/parts number/limit value of [ORU Parts Counter] by themselves.
3. The counting method of the [ORU Parts Counter] is shown in the following table.

Counter Number	Name	Counting Method
01	MB ROLLER/U	1 count for each paper exit from tray 1
02	MB ROLLER/L	1 count for each paper exit from tray 2
03	PF ROLLER/U	1 count for each paper exit from tray 3 or tray 6 (PF-702)
04	PF ROLLER/M	1 count for each paper exit from tray 4 or tray 7 (PF-702)
05	PF ROLLER/L	1 count for each paper exit from tray 5 or tray 8 (PF-702)
06	DF ROLLER	When a document is scanned from the ADF, 1 count for each paper exit.
07	DEV FILTERS	2 counts for each 338mm or longer (in sub scan direction) paper exit in the single side mode, 4 counts for double. *1 Except for those sizes, 1 count for the single and 2 counts for the double.
08	CONVEY FILTERS	
09	CHARGE UNIT	
10	TRANS BELT	
11	TRANS BELT CL	1 count for each paper exit in the single side mode, 2 count in the double side mode
12 to 15	-	
16	PC CL UNIT *2	
	DRUM CL BLADE *3 *4	
17	FUSING WEB*5	1 count for each paper exit in the single side mode, 2 count in the double side mode *2 0 to 2 counts for each paper exit from fusing unit *3 *5 The number of counts changes by the fusing cleaning web counter and print coverage.
18	FUSING UNIT/WEB *5	
19	TRIM BOARD	1 count for each trimming of SD
20 to 30	-	1 count for each paper exit

*1 When DIPSW1-1 is 1, 1 count for each paper exit in the simplex mode, 1 count in the duplex mode.

*2 Old ORU control : When DIPSW 12-5 is 0

*3 New ORU control : When DIPSW 12-5 is 1

*4 The automatic blade replacement is executed when the counter is reset by the new ORU control, and special parts counter No.002 of the service mode is reset. The part name cannot be changed.

*5 When the counter is reset by the new ORU control, special parts counter No.001 of the service mode is reset. The part name cannot be changed.

H CLEANING/LUBRICATION

1. CLEANING/LUBRICATION PROCEDURES

The descriptions of the cleaning and the lubrication are mentioned in the maintenance section of each device.

I ADJUSTMENT/SETTING

1. CHECKING BEFORE STARTING WORK

When conducting claims in the field, it is necessary to check first the following:

1. Are the power supply and voltage secured in accordance with the specifications?
2. Is the power supply properly grounded?
3. Is any equipment that repeatedly consumes a lot of electricity connected to the same power supply? (for example: Electric noise sources such as elevator and air conditioner)
4. Are environmental conditions suitable for the machine?
 - High temperature and high humidity, direct sunlight, air ventilation, and so on.
 - Levelness of the location on which the machine is installed.
5. Does the cause of poor images lie in the original itself?
6. Is density selected properly?
7. Is the original glass stained?
8. Is proper paper used for copy?
9. Are copy consumables replaced with new ones at their life? (for example: Developer, drum, cleaning blade, and so on)
10. Is toner filled?

2. CHECKPOINTS WHEN CONDUCTING ON-SITE SERVICE

When repairing the machine, be sure to pay due attention to the following items.

1. Be sure to unplug the power plug from the power outlet. Also, when operating the machine with the power supplied, be careful of the scan of the exposure unit and be sure not to get caught by the gear.
2. The fusing section is hot. Be careful not to get burned for handling it.
3. The developing unit is magnetized strongly. Be careful not to bring a watch and instrument near to the unit.
4. Be careful not to damage the drum with a tool.
5. Be careful not to touch IC directly with bare hands.

3. Setting menu

3.1 List of utility menus

Note

- For details on the utility menu, refer to "User's guide."

- 01 System Setting
 - 01 Language Setting
 - 02 Unit Setting
 - 03 Buzzer Setting
 - 01 Buzzer ON/OFF, Volume Setting
 - 02 Buzzer for Job Stop Setting
 - 04 1ShotMessage Indication Time
 - 05 Default Screen Setting
 - 06 Auto Reset Setting
 - 07 Key Response Time
 - 08 Change User Password
 - 09 Shortcut Key Register
 - 01 Copy Application Register
 - 02 Copy Output Setting Register
 - 03 Function Key Register
 - 04 Scan Application Register
- 02 Function Setting
 - 01 Feed Tray Setting
 - 01 Feed Tray Auto Selection
 - 02 ATS Permit
 - 03 ATS Setting
 - 04 PFU Preliminary Dry Setting
 - 05 Auto Paper Type
 - 02 Individual Function Change
 - 03 Curl Reform Direction
 - 04 Skew Detection Threshold
 - 05 Lead Edge Image Erase
 - 06 Density Setting
 - 01 Density by Original Type
 - 02 Preset Density Setting
 - 03 Photo Mode Density Selection
 - 04 Image Density Selection
 - 07 Image Density Selection
- 03 Copy Setting
 - 01 Reset Setting
 - 01 Initial Setting
 - 02 Reset Function Setting
 - 03 Initial by Key Counter Insert
 - 02 Individual Function Change
- 04 Scan Setting
 - 01 Default Destination Setting
 - 02 Scan Initial Setting
 - 03 Individual Function Change
- 05 Touch Screen Adjustment
- 06 Administrator Setting
 - 01 System Setting
 - 01 Power Save Setting
 - 02 Time and Date Setting
 - 03 Weekly Timer Setting
 - 01 Weekly Timer ON/OFF Setting
 - 02 Timer Reserve Setting
 - 03 Timer Action ON/OFF Setting
 - 04 Lunch Hour Off Setting
 - 05 Timer Interrupt Password
 - 04 Management List Print
 - 05 Restrict User Access Setting
 - 06 Expert Adjustment
 - 01 Printer Quality Adj.
 - 02 Original Scan Area Setting
 - 03 ADF Frame Erasure Setting
 - 04 Non-Image Area Erase Setting
 - 05 Scan Quality Adjustment
 - 07 Size Setting
 - 08 Annotation Setting
 - 09 Perfect Binding Setting
 - 01 Usable Paper Weight Select
 - 02 Paper Count Limit for P.B.
 - 03 Unfit P.B. Cover Stop Setting
 - 10 Keyboard Type Setting
 - 11 Screen Customize Setting
 - 01 Font Weight Setting
 - 02 Copy Screen Customize Set

- 03 Scan Screen Customize Set
- 04 Store Screen Customize Set
- 02 Admin. Machine Setting
 - 01 Administrator Register
- 03 User Auth. Account Track
 - 01 Authentication Method
 - 01 Authentication Setting
 - 02 Account Track Setting
 - 02 Account Track
 - 03 User Authentication Set
 - 04 Non register/Output Set
- 04 Network Setting
 - 01 Machine NIC Setting
 - 01 TCP/IP Setting
 - 02 http communication setting
 - 03 E-mail initial setting
 - 02 Controller NIC Setting
 - 01 TCP/IP Setting
 - 02 NetWare Setting
 - 03 HTTP Server Setting
 - 04 FTP Setting
 - 05 SNMP Setting
 - 06 SMB Setting
 - 07 AppleTalk Setting
 - 08 Bonjour Setting
 - 09 E-mail Setting
 - 10 TCP Socket Setting
 - 11 CSRC Setting
 - 12 OpenAPI Setting
 - 13 Web Service Setting
 - 14 JSP Setting
 - 15 Detail Setting
- 05 Copy/Printer Setting
 - 01 Offset Setting
 - 01 Job Offset Operating
 - 02 Offset Output Mode Setting
 - 02 Continuation print (Print)
 - 03 Page No. pos. (Booklet)
 - 04 Fixing Prerotation Set
 - 05 Sample Print Setting
 - 06 Proof Print (1st Sheet) Setting
 - 07 Automatic Image Rotation
 - 08 Interruption Suspend
 - 09 Copy Reserve Operation
 - 10 Scan Stop (pull out tray)
 - 11 Continuation Print (Copy)
 - 12 Original Glass SDF Method
 - 13 SDF Auto Setting
- 06 System Connection
 - 01 User Call
- 07 Security Setting
 - 01 Administrator Password
 - 02 HDD Management Setting
 - 01 Folder/User Box List Delete
 - 02 HDD StoredDataDeletePeriodSet
 - 03 Change HDD Lock Password
 - 04 Delete Temporary Data
 - 05 Delete All Data
 - 06 HDD Encryption Setting
 - 03 Security Strengthen Mode
- 08 Scan Destination Register
 - 01 Send Address Edit/Delete

3.2 Start/exit

3.2.1 Start method

1. Be sure that the ordinary operation screen *1 is displayed.
Press [Utility/Counter] button.
 2. "Utility screen"
Utility screen is displayed.
- *1 Default is [Machine Screen].

3.2.2 Exit method

1. "Utility screen"
Press [Exit] to go back to the ordinary operation screen.
2. The new settings become effective.

4. LIST OF ADJUSTMENT ITEMS

4.1 Priority for Adjustment/Setting after replacing parts

Conduct the following adjustment on the items list in this order when replacing the parts on the list. Proper operation/image quality is not guaranteed without conducting those adjustment after the parts replacement.

Note

- When replacing the image-processing board (IPB) due to the IPB being damaged, be sure to use the NVRAM board (NRB) that was installed on the damaged IPB on the new IPB. Contact the service manager of the authorized distributor if it is considered that NRB is also damaged.
- The NVRAM board (NRB) stores various adjustment data, setting data and counter data. Therefore, when replacing the NRB, perform all adjustments and settings, and be sure to replace the parts for control correction (Drum, developer, cleaning blade, cleaning web). For details, contact the service manager of the authorized distributor.
- When replacing a board due to PB control board (PBCB), SD control board (SDCB), FD control board (FDCB), RU control board (RUCB) or FNS control board (FNCSB) being damaged, be sure to use the non-volatile memory (EEPROM) that was installed on the damaged control board on the new control board. Install the new EEPROM and perform all adjustments for the PB, SD, FD, RU or FS if it is considered that the EEPROM is also damaged.

CReplacement parts	Items
After PM Implementation	PM cycle setting counter reset
Drum (Refer to F.4.3.8 Replacing the drum/cleaning of the photo conductor section)	Setting powder application
	Sensitive Drum counter clear
	Automatic Drum Potential
	Sensitive Drum Set Mode
	Auto Maximum Density Adj.
	Auto Dot Diameter Adj.
	Cartridge Set Mode
Developer (Refer to F.4.4.5 Replacing the developer)	Developer counter clear
	Automatic Drum Potential
	TonerDensitySensorInit.Auto
	Auto Maximum Density Adj.
	Auto Dot Diameter Adj.
Cleaning blade (Refer to F.4.6.3 Replacing the cleaning blade)	Setting powder application
	Blade auto replacement spring charge
	Blade Setting Mode
	Cartridge Set Mode
Drum + Developer (Refer to F.4.3.8 Replacing the drum/cleaning of the photo conductor section) F.4.4.5 Replacing the developer	Setting powder application
	Sensitive Drum counter clear
	Developer counter clear
	Automatic Drum Potential
	Sensitive Drum Set Mode
	TonerDensitySensorInit.Auto
	Auto Maximum Density Adj.
	Auto Dot Diameter Adj.
Drum + Cleaning blade (Refer to F.4.3.8 Replacing the drum/cleaning of the photo conductor section) F.4.6.3 Replacing the cleaning blade	Setting powder application
	Blade auto replacement spring charge
	Sensitive Drum counter clear
	Blade Setting Mode
	Automatic Drum Potential
	Sensitive Drum Set Mode
	Auto Maximum Density Adj.
	Auto Dot Diameter Adj.
Developer + Cleaning blade (Refer to F.4.4.5 Replacing the developer) F.4.6.3 Replacing the cleaning blade	Setting powder application
	Blade auto replacement spring charge
	Developer counter clear
	Blade setting mode
	TonerDensitySensorInit.Auto
	Auto Maximum Density Adj.
	Auto Dot Diameter Adj.
	Cartridge Set Mode
Toner guide brush	Setting powder application

(Refer to F.4.6.5 Replacing the toner guide brush assy/scattering prevention felt/seal plates /Fr and /Rr)	
Cleaning web (Refer to F.4.10.1 Replacing the fusing cleaning web)	Fusing cleaning web counter clear
Slit glass	ADF density adjustment
Scanner wire, Exposure/Mirror unit (Refer to G.2.2.17 Scanner wire)	Mirror unit positioning (require the jigs)
	Scanner restart timing adjustment
	Distortion adjustment original glass (main scan direction)
	Distortion adjustment original glass (sub scan direction)
	Distortion adjustment ADF (main scan direction)
	Distortion adjustment ADF (sub scan direction)
CCD unit (Refer to G.2.2.14 CCD unit)	Printer paper feed cross direction magnification adjustment (Side1)
	Scanner paper feed direction magnification adjustment
	Scanner (ADF) paper feed direction magnification adjustment
	Scanner restart timing adjustment
	Distortion adjustment original glass (main scan direction)
	Distortion adjustment original glass (sub scan direction)
	Distortion adjustment ADF (main scan direction)
	Distortion adjustment ADF (sub scan direction)
	CCD Right-Left Quality
LPH unit (Refer to F.4.3.6 Cleaning the LPH lens)	Printer FD-Mag. Adj. <Side1>
	Printer centering adjustment
	Printer restart timing adjustment (Side1)
	Automatic Drum Potential
	Auto Maximum Density Adj.
	Auto Dot Diameter Adj.
	Cartridge Set Mode
Registration roller (Refer to F.4.9.12 Replacing the registration roller /Up, the registration bearing, the roller gear /Rt, the registration gears /Up and /Lw)	Regist line speed adjustment
	Printer S1 FD-Mag. Adj.
	Printer restart timing adjustment (Side1)
Fusing heater lamp /1 (L1) (Refer to F.4.10.4 Replacing the fusing heater lamps /1 (L1) and /2 (L2))	Installing direction of fusing lamp (with maker mark in front)
Fusing heater lamp /2 (L2) (Refer to F.4.10.4 Replacing the fusing heater lamps /1 (L1) and /2 (L2))	Installing direction of fusing lamp (with maker mark in front)
Fusing heater lamp /3 (L3) (Refer to F.4.10.9 Replacing the fusing heater lamp /3 (L3))	Installing direction of fusing lamp (with maker mark in front)
Thermostat /1 (TS1), /2 (TS2) (Refer to G.2.2.25 Thermostat /1 (TS1) and /2 (TS2))	Thermostat positioning (require the jig)
Thermostat /3 (TS3) (Refer to G.2.2.26 Thermostat /3 (TS3))	Thermostat positioning (require the jig)
High voltage unit /1, /2 (HV1, /2)	High voltage auto adjustment
Overall control board (OACB) (Refer to D.4. Control block diagram)	Rewriting of firmware
	NVRAM board (NRB) replacement
Printer control board (PRCB) (Refer to D.4. Control block diagram)	Rewriting of firmware
Operation board /1 (OB1)	Rewriting of firmware
RADF control board (RADFCB)	Rewriting of firmware
	ADF sensor sensitivity adjustment
	ADF centering sensor adjustment
	ADF original size adjustment
	ADF regist loop adjustment

	ADF FD-Mag. Adjustment
	ADF restart timing adjustment
	ADF Centering adjustment
	ADF incline offset adjustment
	Distortion adjustment ADF (main scan direction)
	Distortion adjustment ADF (sub scan direction)
LS control board (LSCB)	Rewriting of firmware
	Grip conveyance home sensor adjustment
	Paper width adjustment
	Paper length adjustment
FD control board (FDCB)	EEPROM replacement
	Rewriting of firmware
FNS control board (FNSCB)	EEPROM replacement
	Rewriting of firmware
Hard disk /2 (HDD2) (Refer to G.2.2.28 Hard disk /2)	IC HDD format
SD control board (SDCB)	EEPROM replacement
	Rewriting of firmware
PB control board (PBCB)	EEPROM replacement
	Rewriting of firmware
Trimmer board assy	Trimmer board solenoid operation counter reset
ADU drive board /1 (ADUDB1)	Multi feed detection board adjustment
PI drive board (PIDB)	Multi feed detection board adjustment
FA-501 multi feed detection board (MFDB)	Multi feed detection board adjustment
RU control board (RUCB)	EEPROM replacement
	Rewriting of firmware

5. Service mode

5.1 Service mode list

This machine is provided with a service mode for various adjustments/settings. Data adjusted/set with this mode is stored in NVRAM board (NRB).

- 01 Machine Adjustment
 - 01 Tray adjustment
 - 01 Tray Size adjustment
 - 02 Tray Amount Detection Adj.
 - 02 Magnification adjustment
 - 01 Transfer Belt Speed Adj.
 - 02 Registration Line Speed Adj.
 - 03 Printer FD-Mag. Adj. (Side1)
 - 04 Printer FD-Mag. Adj. (Side2)
 - 05 Printer CD-Mag. Adj. (Side1)
 - 06 Printer CD-Mag. Adj. (Side2)
 - 07 Scanner FD-Mag. Adj.
 - 08 ADF FD-Mag. Adjustment
 - 03 Timing Adjustment
 - 01 Printer Restart Timing (Side1)
 - 02 Printer Restart Timing (Side2)
 - 03 Printer Registration Loop Adj.
 - 04 Printer Pre-Registration Adj.
 - 05 Printer Lead Edge Margin Adj.
 - 06 Lead Transfer SW Timing Adj.
 - 07 Scanner Restart Timing Adj.
 - 08 ADF Restart Timing Adj.
 - 09 ADF Registration Loop Adj.
 - 04 Centering Adjustment
 - 01 Printer Centering Adjustment
 - 02 Scanner Centering Adjustment
 - 03 ADF Centering Adjustment
 - 05 LPH Adjustment
 - 01 Gap adj. between LPH chips
 - 02 Black Line Restraint Adj.
 - 03 LPH Adj. Pattern Select
 - 06 Skew Detection Adjustment
 - 07 Quality Adjustment
 - 01 Sharpness Offset Adj.
 - 02 Image Distinction Level
 - 03 Density Adjustment
 - 01 AES Adjustment
 - 02 Copy Density Adjustment
 - 03 Background Removal
 - 04 CCD Right-Left Quality
 - 08 Distortion Adjustment
 - 09 Non-Image Area Erase Check
 - 10 ADF Adjustment
 - 01 ADF Density Adjustment
 - 02 ADF Original Size Adj.
 - 03 ADF Sensor Sensitivity Adj.
 - 04 ADF Skew Offset Adj.
 - 05 ADF Centering Sensor Adj.
 - 11 Recall Standard Data
 - 01 Recall standard data: Machine adjustment
- 02 Process adjustment
 - 01 High Voltage adjustment
 - 01 High Voltage Auto Adjustment
 - 02 HV Adjustment (Charge)
 - 03 HV Adj. (Charging grid voltage)
 - 04 HV Adj. (Bias Development)
 - 05 HV Adjustment (Transfer)
 - 06 Trans Belt M-Brush Current
 - 07 Trans Belt S-Brush Current
 - 08 Discharge before cleaning
 - 02 Drum Peculiarity Adjustment
 - 01 Blade Setting Mode
 - 02 Automatic Drum Potential
 - 03 TonerDensitySensorInit.Auto
 - 04 Sensitive Drum Set Mode
 - 05 Auto Maximum Density Adj.
 - 06 Auto Dot Diameter Adj.
 - 07 Cartridge Set Mode
 - 08 Blade Replace Mode
 - 03 Drum Peculiarity Manual
 - 04 Recall Standard Data
- 03 Counter

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- 01 Maintenance Counter
 - 02 Data collection
 - 01 Total Counter/Each Paper Size
 - 02 Copy Counter/Each Paper Size
 - 03 Printer Counter/EachPaperSize
 - 04 Large Size Counter
 - 05 ADF Counter
 - 06 Coverage Data History
 - 07 Coverage Ranking List
 - 08 Time series jam data
 - 09 JAM Counter
 - 10 Counter of Each Copy Mode
 - 11 SC data of time series
 - 12 SC Counter
 - 13 JAM Counter Individual Sec.
 - 14 SC Count Individual Sec.
 - 03 Parts Counter
 - 01 Special Parts Counter
 - 02 Voluntary Part Counter
 - 04 Machine Condition
 - 01 I/O Check Mode
 - 05 List Output
 - 01 List Output
 - 06 Test Mode
 - 01 Test Pattern Output Mode
 - 02 Test Pattern Density
 - 03 Running mode
 - 07 System Setting
 - 01 Software DIPSW Setting
 - 02 Telephone Number Setting
 - 03 M/C Serial Number Setting
 - 04 Setting Date Input
 - 08 Firmware Version
 - 01 Firmware Version
 - 09 CS Remote Care
 - 01 CS Remote Care
 - 01 E-mail
 - 02 Modem
 - 03 http
 - 10 ISW
 - 01 ISW
 - 11 Finisher Adjustment
 - 01 Stapler Position Adj.
 - 01 Stapling center position adjustment
 - 02 Paper Width Adjustment
 - 03 Exit Guide Center pos. Adj.
 - 04 Exit Guide Paper Width Adj.
 - 02 Multi folder (Hole-punch) Adj.
 - 01 Paper Width Adjustment
 - 02 Hole-Punch Vertical Position Adjustment
 - 03 Punch Gap Recovery Adj.
 - 03 Multi Folder(Fold) Adj.
 - 01 Half-Fold Position Adj.
 - 02 Tri-Fold-in Position Adj.
 - 03 Tri-Fold-out Pos. Adj.
 - 04 Double Parallel Pos. Adj.
 - 05 Z-Fold Position Adj.
 - 06 Gate Position Adj.
 - 07 Fold Registration Loop Adj.
 - 04 Stacker Adj.
 - 01 Paper Width Adjustment
 - 02 Paper Length Adjustment
 - 05 Saddle stitcher adjustment
 - 01 Staple Center Position
 - 02 Staple Paper Width Adj.
 - 03 Staple Pitch Adjustment
 - 04 Half-Fold Position Adj.
 - 05 Tri-Fold Position Adj.
 - 06 Fold Paper Width Adj.
 - 07 Trimming Adjustment
 - 08 Trimmer Receiver Adj.
 - 06 Perfect Binder Adjustment
 - 01 Cover Trimming Adj.
 - 02 Cover Lead Edge Adj.
 - 03 Spine Corner Forming Pos.
 - 04 Glue Start Position
 - 05 Glue Finish Position
 - 06 GlueFormationFinishPos.
-

- 07 Temperature Adjustment
- 08 Sub Compile CD Width Adj.
- 09 Clamp CD Width Adjustment
- 10 Cover Up/Down CD Width Adj.
- 11 Clamp FD Position Adj.
- 07 Relay Stacker Adjustment
 - 01 Paper Width Adjustment
 - 02 Paper Length Adjustment
- 08 PI-PFU Adjustment
 - 01 Tray adjustment
 - 01 Tray Amount Detection Adj.
 - 02 Pre-registration Adjustment
- 09 Recall Standard Data
- 12 Machine Manager Setting
 - 01 Manager Authentication
 - 02 Machine Manager Password
- 13 CE Setting
 - 01 CE Authentication Setting
 - 02 CE Password Setting
- 14 IC HDD Format
 - 01 IC HDD Format
- 15 Setting Data
 - 01 Read from external memory
 - 02 Store to External Memory

5.2 Start/exit

5.2.1 Start method

You can access the service mode while the power is both turned ON and OFF.

In either way, the started service mode is the same, but how to exit differs.

NOTE

- **Ensure appropriate security for Service Mode function setting procedures. They should NEVER be shown to any unauthorized person not involved with service jobs.**
- **If you leave the site with the Service Mode setting screen being displayed, unauthorized changes could occur for any set values. When you finish the setting of Service Mode, or if you have to leave the site by necessity when the Service Mode has been set, be sure to press [Exit] to the basic screen.**

(1) Start-up from power ON

1. Be sure that the ordinary operation screen ^{*1} is displayed.
Press [Utility/Counter] button.
2. "Utility screen"
On the Operation panel, press the following buttons.
Stop → 0 → 0 → Stop → 0 → 1
When the CE password has been set, entering the password is required to enter the service mode.
3. "Service Mode Menu screen"
The service mode appears.

*1 Default is [MACHINE] screen.

(2) Start-up from power OFF

1. While pressing [Utility/Counter] button, turn ON the sub power switch (SW2).
When the CE password has been set, entering the password is required to enter the service mode.
2. "Service Mode Menu screen"
The service mode appears.

5.2.2 Exit method

Exit methods differ according to the condition of power switch, ON or OFF.

(1) When the power is ON

1. "Service Mode menu screen"
Press [Exit] to back to "Utility screen".
2. The new settings become effective.

(2) When the power is OFF

1. "Service Mode Menu screen"
Turn OFF the SW2.
2. After the reboot, the new settings become effective.

5.3 Machine adjustment

5.3.1 Tray size adjustment (Tray adjustment)

(1) Functions

It adjusts the paper size that the tray of PF-702 or the main body detects.

(2) Usage

Conduct this adjustment when the paper size detection does not work properly or when removing the paper guide.

(3) Procedure

1. "Service mode menu screen"
Press [01 Machine Adjustment].
2. "Machine adjustment menu"
Press [01 Tray adjustment].
3. "Tray Adjustment screen"
Press [01 Tray Size adjustment].
4. "Tray Size adjustment screen"
Select (1) of the trays you want to adjust since the tray size adjustment has the following items.
[Tray1(1)] / [Tray1(2)] / [Tray2(1)] / [Tray2(2)] / [Tray3(1)] / [Tray3(2)] / [Tray4(1)] / [Tray4(2)] / [Tray5(1)] / [Tray5(2)]

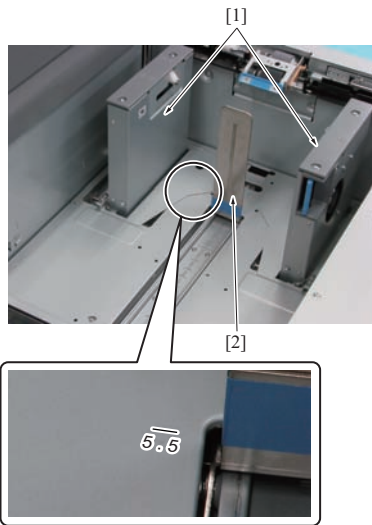
Note

- Be sure to select (1) of the trays you want to adjust.
- The tray size adjustment cannot be done on PF-703. Therefore, the corresponding tray cannot be selected.

5. Pull out the selected tray and extend the paper guide [1] and the rear stopper [2] at maximum.
Adjust the paper guide to the position 250mm (main scan direction).
Adjust the rear stopper to the position 139.7mm (5 1/2 inch: sub scan direction).

Note

- Use a scale for aligning it to 250mm in the main scan direction.



a0g6f3c006ca

6. Set the tray.
7. Press [Start].
The current position of the selected tray is read in. When the adjustment is done, the message "Completed" is displayed.
8. Select (2) of the trays you want to adjust.

Note

- Be sure to select (2) of the trays you want to adjust.

9. Pull out the tray and extend the paper guide and the rear stopper at maximum.
Adjust the paper guide to the position 297mm (main scan direction).
Adjust the rear stopper to the position 457.2mm (18 inch: sub scan direction).
10. Set the tray.
11. Press [Start].
The current position of the selected tray is read in. When the adjustment is done, the message "Completed" is displayed.
12. To adjust other trays, repeat steps 4 to 11.

5.3.2 Tray remaining detection adjustment (Tray adjustment)

(1) Functions

Adjust the paper remaining VR detection of each trays.

(2) Usage

Adjust it when the paper remaining detection of the tray does not work properly.

(3) Procedure

1. "Service mode menu screen"
Press [01 Machine Adjustment].
2. "Machine adjustment menu"
Press [01 Tray adjustment].
3. "Tray Adjustment screen"
Press [02 Tray Amount Detection Adj.].

4. "Tray Amount Detection Adjustment screen"
Select [lower limit] of the trays you want to adjust.
5. Pull out the selected tray and remove all paper.
6. Set the tray.
Note
 - Confirm that the paper lift plate of the tray is in its lower limit position.
7. Press [Start].
After the adjustment, the message "Complete" appears.
8. "Tray Amount Detection Adjustment screen"
Select [upper limit] of the trays you want to adjust.
9. Pull out the selected tray and set 1 piece of paper.
10. Set the tray.
11. Press [Start].
After the adjustment, the message "Complete" appears.
12. To adjust other trays, repeat steps 4 to 11.

5.3.3 Transfer Belt Speed Adj. (Magnification Adjustment)

(1) Functions

Adjust the line speed of the transfer belt to the line speed of the drum.

(2) Usage

- Usually, do not use this adjustment in the field.
- Be sure to conduct "I.5.3.4 Registration Line Speed Adj. (Magnification Adjustment)", "I.5.3.5 Printer S1 FD-Mag. Adj. (Magnification Adjustment)", and "I.5.3.6 Printer S2 FD-Mag. Adj. (Magnification Adjustment)" when conducting the adjustment.
- When a transfer jitter which occurs on each line speed cannot be corrected by Printer S1 FD-Mag. Adj., conduct this adjustment.
- When there is a 60mm pitch unevenness occurs, conduct this adjustment.

(3) Preparation

- Set A3 paper (about 130g/m²) in the tray1 and set the weight setting to [92 to 130g].
- Set A3 paper (64g/m²) in the tray2 and set the weight setting to [62 to 71g]. KONICA MINOLTA J paper 55kg (64g/m²) is recommended.

(4) Procedure

1. "Service mode menu screen"
Press [01 Machine Adjustment].
2. "Machine adjustment menu"
Press [02 Magnification Adjustment].
3. "Magnification Adjustment Menu"
Press [01 Transfer Belt Speed Adj.].
4. "Transfer Belt Speed Adjustment screen"
Select the line speed [570mm/sec] for 1200 or [490mm/sec] for 1051, and then select the test pattern [No.9].
5. "Transfer Belt Speed Adjustment screen"
Press [Print Mode].
6. "PRINT MODE screen"
Select the tray2 and output 3 sheets of the test pattern.
Note
 - Be sure to select the tray2 which has been set in the preparation.
 - Do not use the paper other than A3 size.
7. "PRINT MODE screen"
Press [Close] to go back to "Transfer Belt Speed Adjustment screen".
Check the level of the pitch unevenness about 60mm on the test pattern. In case the level of the pitch unevenness is bad, conduct step 8 and the following steps. in case the level of the pitch unevenness is good, the adjustment completes.
8. "Transfer Belt Speed Adjustment screen"
Set the line speed to 1 step shorter side from current value and select the test pattern [No.9].
 - Adjustment range: -20 to +20
 - 1 Step = 0.05%
9. "Transfer Belt Speed Adjustment screen"
Press [Print Mode].
10. "PRINT MODE screen"
Select the tray2 and output 3 sheets of the test pattern to check the level of about 60mm pitch unevenness.
When the level of the pitch unevenness is good, input that setting value for all the speed lines (570mm/sec., 490mm/sec. and 330mm/sec.).
11. Repeat steps 8 to 10 until the 60mm pitch unevenness is resolved.

5.3.4 Registration Line Speed Adj. (Magnification Adjustment)

(1) Functions

Change the line speed of the registration roller to adjust it to the process speed of the drum transfer belt.

(2) Usage

When a transfer jitter occurs at a position about 160mm from the paper trailing edge, conduct this adjustment.

Note

- Usually, do not use this adjustment in the field. Only when a transfer jitter occurs at a position 160mm from the paper trailing edge, conduct this adjustment.
- This adjustment changes the line speed of the registration roller only. Unless properly adjusted, it causes a transfer jitter at a position 160mm from the paper trailing edge.
- Conduct "I.5.3.5 Printer S1 FD-Mag. Adj. (Magnification Adjustment)" and "I.5.3.6 Printer S2 FD-Mag. Adj. (Magnification Adjustment)" to adjust the magnification in the sub scan direction.
- The density of "I.5.12.6 Test pattern density" is reflected. So, be sure to check the set value of "I.5.12.6 Test pattern density" to ensure it is "255."

(3) Preparation

Set A3 paper (about 130g/m²) in the tray1 and set the weight setting to [92 to 130g].

(4) Procedure

1. "Service mode menu screen"
Press [01 Machine Adjustment].
2. "Machine adjustment menu"
Press [02 Magnification Adjustment].
3. "Magnification Adjustment Menu"
Press [02 Registration Line Speed Adj.].
4. "Registration Line Speed Adjustment screen"
Set "9" to the test pattern and press [Print Mode].
5. "PRINT MODE screen"
Select the tray1 and output 3 sheets of the test pattern.

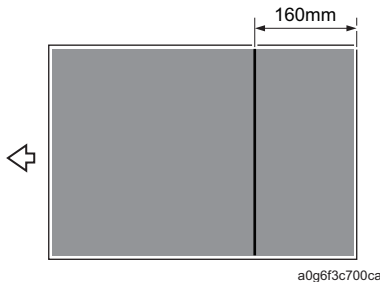
Note

- Be sure to select the tray1 which has been set in the preparation.
- Do not use the paper other than A3 size.

6. "PRINT MODE screen"

Check the transfer jitter at the position 160mm from the paper trailing edge on the test pattern.

Be sure that the density at the position 160mm from the paper trailing edge is the same as the density around.



7. When the transfer jitter occurs, press [Close].
8. "Registration Line Speed Adjustment screen"
Input the number 3 steps minus side from the present setting and press [Print Mode].
 - Adjustment range: -40 to +55
 - 1step: 0.05%

Note

- When the value of [Registration Line Speed] is -6, set -9.
- When inputting the setting data, be sure to input each 3 steps in the minus side at once. Input each 1 step only when the fine adjustment is needed. By the adjustment with each 1 step, it is hard to judge whether the change is caused by the driving system or by the adjustment value input.

9. Repeat the steps 4 to 8 until the transfer jitter is resolved.

5.3.5 Printer S1 FD-Mag. Adj. (Magnification Adjustment)**(1) Functions**

Adjust the magnification in the sub scan direction of the printer system front side only. (Change the line speed of the drum and the registration roller evenly.)

(2) Usage

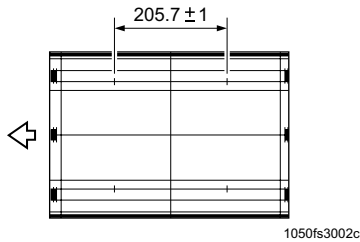
When the transfer jitter occurs at positions about 300mm from the paper leading edge on the front side, about 150mm from the paper leading edge on the 2nd or later sheet or at random positions, conduct this adjustment to reduce the transfer jitter by adjusting the magnification in the sub scan direction to positive side.

Conduct this adjustment when the magnification in the sub scan direction of the printer system front side only is not within the standard value.

(3) Procedure

1. "Service mode menu screen"
Press [01 Machine Adjustment].
2. "Machine adjustment menu"
Press [02 Magnification Adjustment].
3. "Magnification Adjustment Menu"
Press [03 Printer S1 FD-Mag. Adj. <Side1>].

4. "Printer FD-Mag. Adjustment (Side1) screen"
Press [Print Mode].
5. Set the A3 or 11 x 17 paper. Press the start button to output the test pattern.
6. Check the magnification in the sub scan direction.
 - Standard value: $\pm 0.5\%$ or less (When in life-size)
within $205.7 \pm 1\text{mm}$



7. When the value is not within the standard value, press [Close].
8. "Printer FD-Mag. Adjustment (Side1) screen"
Enter a numeric value through the numeric keys and press [Set].
 - Adjustment range: -10 (short) to +10 (long)
 - 1 Step = 0.05%
9. Repeat steps 4 to 8 until the standard value can be obtained.

5.3.6 Printer S2 FD-Mag. Adj. (Magnification Adjustment)

(1) Functions

Adjust the magnification in the sub scan direction of the printer system back side only. (Change the line speed of the drum and the registration roller evenly.)

(2) Usage

Conduct this adjustment when the transfer jitter occurs at the position to reduce the transfer jitter by adjusting the magnification in the sub scan direction.

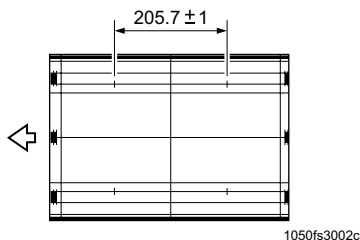
Conduct this adjustment when the magnification in the sub scan direction of the printer system back side only is not within the standard value.

Note

- Be sure " " has been adjusted. [I.5.3.5 Printer S1 FD-Mag. Adj. \(Magnification Adjustment\)](#)

(3) Procedure

1. "Service mode menu screen"
Press [01 Machine Adjustment].
2. "Machine adjustment menu"
Press [02 Magnification Adjustment].
3. "Magnification Adjustment Menu"
Press [04 Printer FD-Mag. Adj. (Side2)].
4. "Printer FD-Mag. Adjustment (Side2) screen"
Press [Print Mode].
5. Set the A3 or 11 x 17 paper. Press the start button to output the test pattern.
6. Check the magnification in the sub scan direction.
 - Standard value: $\pm 0.5\%$ or less (When in life-size)
within $205.7 \pm 1\text{mm}$



7. When the value is not within the standard value, press [Close].
8. "Printer Drum Clock Adjustment (Side 2)"
Enter a numeric value through the numeric keys and press [Set].
 - Adjustment range: -10 (short) to +10 (long)
 - 1 Step = 0.05%
9. Repeat steps 4 to 8 until the standard value can be obtained.

5.3.7 Printer CD-Mag. Adj. (Side1) (Magnification Adjustment)

(1) Functions

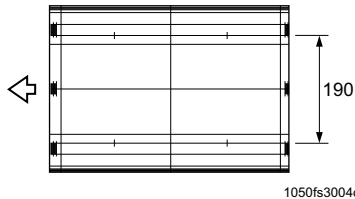
Adjust the magnification in the main scan direction of the printer system front side only. (Change the magnification in image-processing before the exposure.)

(2) Usage

Conduct this adjustment when the magnification in the main scan direction of the printer system front side only is not within the standard value.

(3) Procedure

1. "Service mode menu screen"
Press [01 Machine Adjustment].
2. "Machine adjustment menu"
Press [02 Magnification Adjustment].
3. "Magnification Adjustment Menu"
Press [05 Printer CD-Mag. Adj. (Side1)].
4. "Printer CD-Mag. Adjustment (Side1) screen"
Press [Print Mode].
5. Set the A3 or 11 x 17 paper. Press the Start button to output the test pattern.
6. Check the magnification in the main scan direction.
 - Standard value: $\pm 0.5\%$ or less (When in life-size)
within $190\text{mm} \pm 1\text{mm}$



7. When the value is not within the standard value, press [Close].
8. "Printer CD-Mag. Adjustment (Side1) screen"
Enter a numeric value through the numeric keys and press [Set].
 - Adjustment range: -10 (short) to +10 (long)
 - 1 Step = 0.05%
9. Repeat steps 4 to 8 until the standard value can be obtained.

5.3.8 Printer CD-Mag. Adj. (Side2) (Magnification Adjustment)

(1) Functions

Adjust the magnification in the main scan direction of the printer system back side only. (Change the magnification in image-processing before the exposure.)

(2) Usage

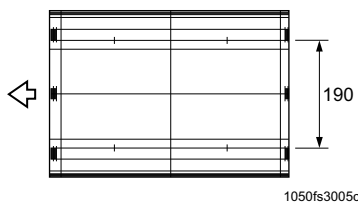
Conduct this adjustment when the magnification in the main scan direction of the printer system back side only is not within the standard value.

Note

- Be sure "[I.5.3.5 Printer S1 FD-Mag. Adj. \(Magnification Adjustment\)](#)" has been adjusted.

(3) Procedure

1. "Service mode menu screen"
Press [01 Machine Adjustment].
2. "Machine adjustment menu"
Press [02 Magnification Adjustment].
3. "Magnification Adjustment Menu"
Press [06 Printer CD-Mag. Adj. <Side2>].
4. "Printer CD-Mag. Adjustment (Side2) screen"
Press [Print Mode].
5. Set the A3 or 11 x 17 paper. Press the Start button to output the test pattern.
6. Measure the magnification of the main scan direction with a scale.
 - Standard value: $\pm 0.5\%$ or less (When in life-size)
within $190\text{mm} \pm 1\text{mm}$



7. When the value is not within the standard value, press [Close].
8. "Printer CD-Mag. Adjustment (Side2) screen"
Enter a numeric value through the numeric keys and press [Set].
 - Adjustment range: -10 (short) to +10 (long)
 - 1 Step = 0.05%
9. Repeat steps 4 to 8 until the standard value can be obtained.

5.3.9 Scanner FD-Mag. Adj. (Magnification Adjustment)

(1) Functions

Adjust the magnification in the sub scan direction of the scanner system (the scanning speed of the exposure unit).

(2) Usage

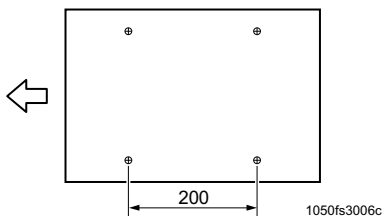
Conduct this adjustment when the magnification in the sub scan direction in scanning is not within the standard value.

Note

- This adjustment is for 1200/1051 (copier version). 1200P (printer version) does not have the adjustment method.
- Be sure the printer FD magnification adjustment has been adjusted.

(3) Procedure

1. "Service mode menu screen"
Press [01 Machine Adjustment].
2. "Machine adjustment menu"
Press [02 Magnification Adjustment].
3. "Magnification Adjustment Menu"
Press [07 Scanner FD-Mag. Adj.].
4. "Scanner FD-Mag. Adjustment screen"
Press [Print Mode].
5. Select A3 or 11 x 17 paper, and set the "test chart" on the original glass. Press the Start button.
6. Measure the magnification in the sub scan direction with a scale.
 - Standard value: $\pm 0.5\%$ or less (When in life-size)
within $200\text{mm} \pm 1\text{mm}$



7. When the value is not within the standard value, press [Close].
8. "Scanner FD-Mag. Adjustment screen"
Enter a numeric value through the numeric keys and press [Set].
 - Adjustment range: -40 (short) to +40 (long)
 - 1 Step = 0.05%
9. Repeat steps 4 to 8 until the standard value can be obtained.

5.3.10 ADF FD-Mag. Adjustment (Magnification Adjustment)

(1) Functions

Adjust the magnification in the sub scan direction of the scanner system (the scanning speed of the DF).

(2) Usage

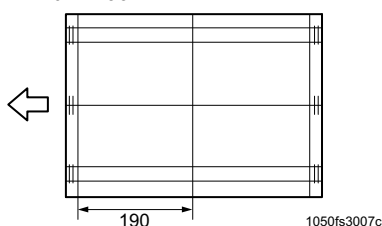
Conduct this adjustment when the magnification in the sub scan direction in scanning is not within the standard value.

Note

- This adjustment is for 1200/1051 (copier version). 1200P (printer version) does not have the adjustment method.
- Be sure the printer FD magnification adjustment has been adjusted.

(3) Procedure

1. "Service mode menu screen"
Press [01 Machine Adjustment].
2. "Machine adjustment menu"
Press [02 Magnification Adjustment].
3. "Magnification Adjustment Menu"
Press [08 ADF FD-Mag. Adjustment.].
4. "ADF FD-Mag. A"
Select the item to be adjusted and press [Print Mode].
5. Select the A3 or 11 x 17 paper, and set the "adjustment chart" on the ADF. Press the Start button.
6. Measure the magnification in the sub scan direction with a scale.
 - Standard value: $\pm 0.5\%$ or less (When in life-size)
within $190\text{mm} \pm 1\text{mm}$



7. When the value is not within the standard value, press [Close].

8. "ADF FD-Mag. Adjustment screen"
Enter a numeric value through the numeric keys and press [Set].
 - Adjustment range: -40 (short) to +40 (long)
 - 1 Step = 0.05%
9. Repeat steps 4 to 8 until the standard value can be obtained.

5.3.11 Printer Restart Timing (Side1) (Timing Adjustment)

(1) Functions

Adjust the leading edge timing of front side by changing the LPH exposure start timing.

(2) Usage

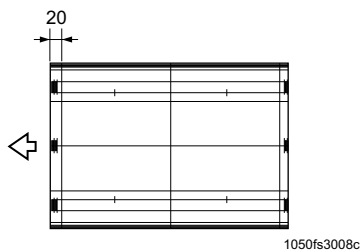
Conduct this adjustment when the leading edge on the front side is lacking or too much in printing.

Note

- Be sure "I.5.3.5 Printer S1 FD-Mag. Adj. (Magnification Adjustment)" has been adjusted.

(3) Procedure

1. "Service mode menu screen"
Press [01 Machine Adjustment].
2. "Machine adjustment menu"
Press [03 Timing Adjustment].
3. "Timing adjustment menu screen"
Press [01 Printer Restart Timing (Side1)].
4. "Printer Restart Timing Adjustment (Side1) screen"
Tray can be adjusted as a whole and by each (tray1 to 8). Select the item to be adjusted and press [Print Mode].
5. Set the A3 or 11 x 17 paper. Press the Start button to output the test pattern.
6. Measure the leading edge timing with a scale.
 - Standard value: $20 \pm 0.5\text{mm}$ (AB)
 - Standard value : 25.4 (1 inch) $\pm 0.5\text{mm}$ (Inch)



7. When the value is not within the standard value, press [Close].
8. "Printer Restart Timing Adjustment (Side1) screen"
Enter a numeric value through the numeric keys and press [Set].
 - Adjustment range: -30 (short) to +30 (long)
 - 1 Step = 0.1mm
9. Repeat steps 4 to 8 until the standard value can be obtained.

5.3.12 Printer back side top margin adjustment (timing adjustment)

(1) Functions

Adjust the leading edge timing of back side by changing the LPH exposure start timing.

(2) Usage

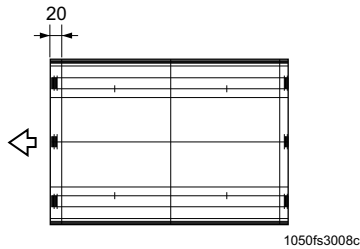
Conduct this adjustment when the leading edge on the back side is lacking or too much in printing.

Note

- Be sure "I.5.3.6 Printer S2 FD-Mag. Adj. (Magnification Adjustment)" has been adjusted.
- Be sure "I.5.3.11 Printer Restart Timing (Side1) (Timing Adjustment)" has been adjusted.

(3) Procedure

1. "Service mode menu screen"
Press [01 Machine Adjustment].
2. "Machine adjustment menu"
Press [03 Timing Adjustment].
3. "Timing adjustment menu screen"
Press [02 Printer Restart Timing (Side2)].
4. "Printer Restart Timing Adjustment (Side2) screen"
Tray can be adjusted by each (tray1 to 8). Select the item to be adjusted and press [Print Mode].
5. Set the A3 or 11 x 17 paper. Press the Start button to output the test pattern.
6. Measure the leading edge timing with a scale.
 - Standard value: $20 \pm 0.5\text{mm}$ (AB)
 - Standard value : 25.4 (1 inch) $\pm 0.5\text{mm}$ (Inch)



7. When the value is not within the standard value, press [Close].
8. "Printer Restart Timing Adjustment (Side2) screen"
Enter a numeric value through the numeric keys and press [Set].
 - Adjustment range: -30 (short) to +30 (long)
 - 1 Step = 0.1mm
9. Repeat steps 4 to 8 until the standard value can be obtained.

5.3.13 Printer Registration Loop Adj. (Timing Adjustment)

(1) Functions

Adjust the paper loop amount in the registration roller section.

(2) Usage

Conduct this adjustment when the paper skew, crease, or jamming occurs in the registration roller section.

(3) Procedure

1. "Service mode menu screen"
Press [01 Machine Adjustment].
2. "Machine adjustment menu"
Press [03 Timing Adjustment].
3. "Timing adjustment menu screen"
Press [03 Printer Registration Loop Adj.].
4. "Printer regist loop adj. screen"
Select the item to be adjusted and press [Print Mode].

Note

- The adjustment values for "Side1" and "Side2" are reflected on the paper weight 40g/m² to 161g/m².
- The adjustment values for "Side1 thick" and "Side2 thick" are reflected on , 162g/m² to 350g/m².

5. Set the copy according to the item that has been adjusted and press the start button to output the test pattern.
6. When the trouble is not solved, press [Close].
7. "Printer regist loop adj. screen"
Enter a numeric value through the numeric keys and press [Set].
 - Adjustment range:
Front side: -7 (small) to +10 (large)
Back side: -10 to +10
Front side thick paper: -3 to +10
Back side thick paper: -10 to +10
 - 1 Step = 1mm
8. Repeat the steps 4 to 7 until an appropriate value is obtained.

5.3.14 Printer Pre-registration Adj. (Timing Adjustment)

(1) Functions

Adjust the paper loop amount in the pre-registration roller section.

(2) Usage

Conduct this adjustment when the paper skew, crease, or jamming occurs in the pre-registration roller section.

(3) Procedure

1. "Service mode menu screen"
Press [01 Machine Adjustment].
2. "Machine adjustment menu"
Press [03 Timing Adjustment].
3. "Timing adjustment menu screen"
Press [04 Printer Pre-registration Adj.].
4. "Printer pre-regist adj. screen"
Tray can be adjusted by each (tray1 to 8). Select the item you adjust, and press [Print Mode].
5. Select A3 or 11 x 17 paper, and press the Start key to output the test pattern.
6. When the trouble is not solved, press [Close].
7. "Printer pre-regist adj. screen"
Enter a numeric value through the numeric keys and press [Set].
 - Range: -10 (small) to +10 (large)
 - 1 Step = 1mm

8. Repeat the steps 4 to 7 until an appropriate value is obtained.

5.3.15 Printer Lead Edge Margin Adj. (Timing Adjustment)

(1) Functions

Adjust the image erasure amount of the leading edge.

(2) Usage

Conduct this adjustment when the image erasure (deleted) amount of the leading edge is not within the standard value.

(3) Procedure

1. "Service mode menu screen"
Press [01 Machine Adjustment].
2. "Machine adjustment menu"
Press [03 Timing Adjustment].
3. "Timing adjustment menu screen"
Press [05 Printer Lead Edge Margin Adj.].
4. "Printer Lead Edge Margin Adjustment screen"
Press [Print Mode].
5. Select A3 or 11 x 17 paper, and press the Start key to output the test pattern.
6. Check the printer lead edge timing.
 - Standard value: within 2mm \pm 1mm
7. When the value is not within the standard value, press [Close].
8. "Printer Lead Edge Margin Adjustment screen"
Enter a numeric value through the numeric keys and press [Set].
 - Range: -20 (small) to +40 (large)
 - 1 Step = 0.1mm
9. Repeat steps 4 to 8 until the standard value can be obtained.

5.3.16 Lead transfer current switch timing

(1) Functions

Adjust the start up timing of the transfer current value switch.

(2) Usage

When the transfer error area on the leading edge of the image is large under the low temperature/humidity environment, conduct this adjustment.

(3) Preparation

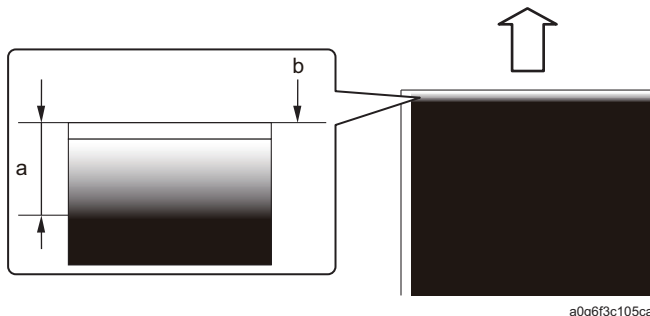
Set A4 paper (80g/m²) in the tray1 and set the weight setting to [72 to 91g].

(4) Procedure

1. "Service mode menu screen"
Press [01 Machine Adjustment].
2. "Machine adjustment menu"
Press [03 Timing Adjustment].
3. "Timing adjustment menu screen"
Press [06 Lead Transfer SW Timing Adj.].
4. "Lead Edge Transfer Switch Timing Adj. screen"
Press [Print Mode].
5. "PRINT MODE screen"
Select the tray1 and output 3 sheets of the test pattern.

Note

 - Be sure to select the tray1 which has been set in the preparation.
6. "PRINT MODE screen"
Press [Close] to return to "Lead Edge Transfer Switch Timing Adj. screen".
Measure the transfer start up timing amount at the leading edge with the output test pattern.



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- a = Transfer start up timing amount
- b = Paper leading edge

Note

- For the measurement of the transfer start up timing amount, select the image whose measured amount is the largest of 3 outputs.
- For the measurement of the transfer start up timing amount, measure the area from the paper leading edge to the shadow part of the image.

7. "Lead Edge Transfer Switch Timing Adj. screen"

Enter a numeric value through the numeric keys and press [Set].

- Standard value: $a = 3.0 \pm 1.0\text{mm}$
- Adjustment range: -3 to +6
- 1step: 1mm/sec = 0.5mm

Note

- Do not adjust it to less than 2.0mm or the separation error occurs.

8. Repeat steps 4 to 7 until the standard value can be obtained.

5.3.17 Scanner Restart Timing Adj. (Timing Adjustment)**(1) Functions**

Adjust image leading edge timing of original scanning from the original glass (the starting position for reading while in the original scanning mode by the exposure unit).

(2) Usage

Conduct this adjustment when the leading edge is lacking or too much in scanning.

Note

- This adjustment is for 1200/1051 (copier version). 1200P (printer version) does not has the adjustment method.
- Be sure the printer Restart Timing adjustment has been adjusted.

(3) Procedure

1. "Service mode menu screen"
Press [01 Machine Adjustment].
2. "Machine adjustment menu"
Press [03 Timing Adjustment].
3. "Timing adjustment menu screen"
Press [06 Scanner Restart Timing Adj.].
4. "Scanner(Orig. Glass) Restart Timing Adj. screen"
Press [Print Mode].
5. Select A3 or 11 x 17 paper, place a "test chart" on the original glass, and press Start key.
6. Press the Start button. Check the leading edge timing.
 - Standard value: within $\pm 1.5\text{mm}$
7. When the value is not within the standard value, press [Close].
8. "Scanner(Orig. Glass) Restart Timing Adj. screen"
Enter a numeric value through the numeric keys and press [Set].
 - Range: -40 (image, fast) to +40 (image, slow)
 - 1 Step = 0.1mm
9. Repeat steps 4 to 8 until the standard value can be obtained.

5.3.18 ADF Restart Timing Adj. (Timing Adjustment)**(1) Functions**

Adjust the image leading edge timing of DF original scanning (the starting position for reading while in the original scanning mode).

(2) Usage

Conduct this adjustment when the leading edge is lacking or too much in scanning DF.

Note

- This adjustment is for 1200/1051 (copier version). 1200P (printer version) does not has the adjustment method.
- Be sure the printer Restart Timing adjustment has been adjusted.

(3) Procedure

1. "Service mode menu screen"
Press [01 Machine Adjustment].
2. "Machine adjustment menu"
Press [03 Timing Adjustment].
3. "Timing adjustment menu screen"
Press [07 ADF Restart Timing Adj.].
4. "ADF restart timing adj. screen"
Select the side of the original to be adjusted and press [Print Mode].
5. Select A3 or 11 x 17 paper, and set the "adjustment chart" on the ADF. Press the Start Key.
6. Check the image leading edge timing.
 - Standard value: $\pm 2\text{mm}$
7. When the value is not within the standard value, press [Close].
8. "ADF restart timing adj. screen"
Enter a numeric value through the numeric keys and press [Set].
 - Range: -50 (image, fast) to +50 (image, slow)
 - 1 Step = 0.1mm

9. Repeat steps 4 to 8 until the standard value can be obtained.

5.3.19 ADF Registration Loop Adj. (Timing Adjustment)

(1) Functions

Adjust the original loop amount in the DF registration roller section.

(2) Usage

Conduct this adjustment when the paper skew, crease, or jamming occurs in the DF registration roller section.

Note

- This adjustment is for 1200/1051 (copier version). 1200P (printer version) does not have the adjustment method.

(3) Procedure

1. "Service mode menu screen"
Press [01 Machine Adjustment].
2. "Machine adjustment menu"
Press [03 Timing Adjustment].
3. "Timing adjustment menu screen"
Press [08 ADF Registration Loop Adj.].
4. "ADF regist loop adj. screen"
Select the side of the original to be adjusted and press [Print Mode].
5. Select A3 or 11 x 17 paper, and set the "adjustment chart" on the ADF. Press the Start Key.
6. When the ADF registration loop amount is not appropriate, press [Close].
7. "ADF regist loop adj. screen"
Enter a numeric value through the numeric keys and press [Set].
 - Range: -10 (small) to +10 (large)
 - 1 Step = 0.5mm
8. Repeat the steps 4 to 7 until an appropriate value is obtained.

5.3.20 Printer Centering Adjustment (Centering Adjustment)

(1) Functions

Adjust the centering of images of the printer main scan direction by changing the LPH writing position.

(2) Usage

Conduct this adjustment when the image mis-centering of the main scan direction occurs while in printing.

Note

- Be sure that "I.5.3.7 Printer CD-Mag. Adj. (Side1) (Magnification Adjustment)" and "I.5.3.8 Printer CD-Mag. Adj. (Side2) (Magnification Adjustment)" have been adjusted.

(3) Procedure

1. "Service mode menu screen"
Press [01 Machine Adjustment].
2. "Machine adjustment menu"
Press [04 Centering Adjustment].
3. "Centering adjustment mode menu screen"
Press [01 Printer Centering Adjustment] and press [Print Mode].
4. Select A3 or 11 x 17 paper, and press the Start key to output the test pattern.
5. Fold the printed paper into 2 along the center in the main scan direction, and measure how much the left and right lines misalign from each other.
 - Standard value: within ± 1.5 mm
6. When the value is not within the standard value, press [Close].
7. "Printer Centering Adjustment screen"
Enter a numeric value through the numeric keys and press [Set].
 - Range: -64 (image in front) to +63 (image in back)
 - 1 Step = 0.1mm
8. Repeat steps 4 to 7 until the standard value can be obtained.

5.3.21 Scanner Centering Adjustment (Centering Adjustment)

(1) Functions

Adjust the centering of images in the main scan direction when scanning from the original glass.

(2) Usage

Conduct this adjustment when the image mis-centering of the main scan direction occurs while in scanning.

Note

- Be sure "I.5.3.20 Printer Centering Adjustment (Centering Adjustment)" has been adjusted.
- This adjustment is for 1200/1051 (copier version). 1200P (printer version) does not have the adjustment method.

(3) Procedure

1. "Service mode menu screen"
Press [01 Machine Adjustment].
2. "Machine adjustment menu"
Press [04 Centering Adjustment].

3. "Centering adjustment mode menu screen"
Press [02 Scanner Centering Adjustment] and press [Print Mode].
4. Select A3 or 11 x 17 paper, place a "test chart" on the original glass, and press Start key.
5. Fold the printed paper into 2 along the center in the main scan direction, and measure how much the left and right lines misalign from each other.
 - Standard value: within $\pm 1.5\text{mm}$
6. When the value is not within the standard value, press [Close].
7. "Scanner (Orig. Glass) centering Adj. screen"
Enter a numeric value through the numeric keys and press [Set].
 - Range: -30 (image in front) to +30 (image in back)
 - 1 Step = 0.1mm
8. Repeat steps 4 to 7 until the standard value can be obtained.

5.3.22 ADF Centering Adjustment (Centering Adjustment)

(1) Functions

Adjust the centering of images when scanning from the DF.

(2) Usage

Conduct this adjustment when the image mis-centering of the main scan direction occurs while in original scanning from DF.

Note

- Be sure "[I.5.3.20 Printer Centering Adjustment \(Centering Adjustment\)](#)" has been adjusted.
- This adjustment is for 1200/1051 (copier version). 1200P (printer version) does not have the adjustment method.

(3) Procedure

1. "Service mode menu screen"
Press [01 Machine Adjustment].
 2. "Machine adjustment menu"
Press [04 Centering Adjustment].
 3. "Centering adjustment mode menu screen"
Press [03 ADF Centering Adjustment].
 4. "ADF centering adjustment screen"
Select the item to be adjusted and press [Print Mode].
- * When the sub power switch is ON, the position of the centering sensor /Fr on ADF is automatically detected and displayed.

Note

- "Small" represents paper which is smaller than 300mm in the sub-scan direction. However, it excludes A4 or 8 1/2 x 11 which is automatically adjusted by the centering sensor.
- "Large" represents paper which is larger than 300mm in the sub-scan direction. However, it excludes A3 or 11 x 17 which is automatically adjusted by the centering sensor.
- When adjusting ADF centering sensor adjustment (SIDE1: 8 1/2 x 11) and (SIDE1: 11 x 17), change the centering sensor /Fr position to "LT" side. Then, turn OFF/ON the sub power switch, and follow the procedure of this adjustment. (Refer to [I.10.5 Centering sensor switchover adjustment](#))

5. Select paper according to the adjusted item. Set the "adjustment chart" on the ADF and press the Start Key.
6. Fold the printed paper into 2 along the center in the main scan direction, and measure how much the left and right lines misalign from each other.
 - Standard value: within $\pm 2\text{mm}$
7. When the value is not within the standard value, press [Close].
8. "ADF centering adjustment screen"
Enter a numeric value through the numeric keys and press [Set].
 - Range: -30 (image in front) to +30 (image in back)
 - 1 Step = 0.1mm
9. Repeat steps 4 to 8 until the standard value can be obtained.

5.3.23 Gap adj. between LPH chips (LPH Adjustment)

(1) Functions

Adjust the light intensity value between chips according to the implementation gap of the LED chip.

(2) Usage

- Check it when replacing the LPH unit.
- When sharp white lines or black lines occur locally in sub scan direction, conduct this adjustment.

Note

- No need to adjust if the white or black line does not appear on the test pattern after replacing the LPH unit.

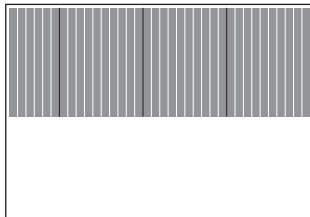
(3) Procedure

1. "Service mode menu screen"
Press [01 Machine Adjustment].
2. "Machine adjustment menu"
Press [05 LPH Adjustment].
3. "LPH Adjustment Menu screen"
Press [01 Gap adj. between LPH chips].
4. "Gap adjustment between LPH chips screen"
Select [Dark Gray] or [Light Gray] in "Test Pattern Select".

Note

- To make the judgment easier, select [Dark Gray] when the white line occurs and select [Light Gray] when the black line occurs.

5. "Gap adjustment between LPH chips screen"
Select [Off] in "Line Draw" and press [Print Mode].
6. "PRINT MODE screen"
Set the A4 or 8 1/2 x 11 paper. Press the Start key to output the test pattern.
7. "Gap adjustment between LPH chips screen"
Select [On] in "Line Draw" and press [Print Mode].
8. "PRINT MODE screen"
Set the A4 or 8 1/2 x 11 paper. Press the Start key to output the test pattern.
 - The white lines and the black lines appear. Each black lines mean 10 unit of gap positions. Check the position which gets the gap adjustment by comparing the test pattern (without lines) output in step 6 to the position of the lines.
Press [Close].



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9. "Gap adjustment between LPH chips screen"
Check if the white line or the black line occurs.
Since the sharp white or black line comes from the LPH, focus on the sharp lines to specify the position of occurrence.
Select the key from [1] to [39] of the LPH chips gap corresponding to the target line position.

Note

- The line which comes from the process is wide and fuzzy.

10. "Gap adjustment between LPH chips screen"
In the case of white line: Adjust to positive side.
In the case of black line: Adjust to negative side.
 - Adjustment range: -8 to + 8
 - 1 Step = 1.0%

Note

- If the adjustment value between chips of LED is too big, it causes the black line. If the adjustment value is too small, it causes the white line.
- Input the value by pressing [+] or [-].
- When adjusting all 39 positions at a time, press [All Offset].

11. Repeat the steps 4 to 10 until an appropriate value is obtained.

5.3.24 Black Line Restraint Adj. (LPH Adjustment)**(1) Functions**

Adjust the 1mm width black line that the optical property of the SELFOC Lens Array (SLA) causes.

(2) Usage

- When the black line (sickly black line) specific to the LPH occurs locally, conduct this adjustment.
- Check it when replacing the LPH unit.

Note

- This adjustment is to adjust the optical property of the SELFOC Lens Array (SLA). The SLA whose adjustment is not needed is gray out and cannot be adjusted. (No need to adjust.)
- No need to adjust if the black line does not appear on the test pattern after replacing the LPH unit.

(3) Procedure

1. "Service mode menu screen"
Press [01 Machine Adjustment].
2. "Machine adjustment menu"
Press [05 LPH Adjustment].
3. "LPH Adjustment Menu screen"
Press [02 Black Line Restraint Adj.].
4. "Black line restraint adjustment screen"
Select [Dark Gray] or [Light Gray] in "Test Pattern Select".

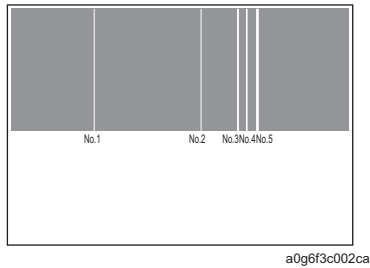
Note

- Since the appearance differs between the black lines, check with 2 types of [Dark Gray] and [Light Gray].

5. "Black line restraint adjustment screen"
Select [On] in "Line Draw" and press [Print Mode].
6. "PRINT MODE screen"
Set the A4 or 8 1/2 x 11 paper. Press the Start key to output the test pattern.

Note

- When the adjustment value is input, the white lines like in the picture appear. The positions of these white lines show the position where the optical property of the SELFOC Lens Array (SLA) is adjusted.
- When the adjustment value is input, the white lines from 1 (No.1) to 5 (No.5) are output in order. The number varies between the LPH unit.



7. "Black line restraint adjustment screen"

Select [Off] in "Line Draw" and press [Print Mode].

8. "PRINT MODE screen"

Set the A4 or 8 1/2 x 11 paper. Press the Start key to output the test pattern.

Compare the test patterns output with [On] and [Off] in "Line Draw" to check the black line adjustment position.

If the position of the black line on the test pattern output with [Off] in "Line Draw" and the position of the white line on the test pattern output with [On] in "Line Draw" are the same, adjust the point.

9. "Black line restraint adjustment screen"

Press [Set value] of the point to be adjusted.

Change the adjustment value by pressing [-] or [+] following below.

- 0: No light intensity adjustment
- 1: Lower the light intensity value 1 (1.0 equivalent)
- 2: Lower the light intensity value 2 (2.0 equivalent)
- 3: Lower the light intensity value 3 (3.0 equivalent)

10. "Black line restraint adjustment screen"

Select [Off] in "Line Draw" and output the test pattern.

Check if the black line occurs.

11. Repeat the steps 4 to 10 until an appropriate value is obtained.

5.3.25 LPH Adj. Pattern Select (LPH Adjustment)**(1) Functions**

Switch the light intensity adjustment pattern which decreases the periodic noise in main scan direction caused by the optical property of the SELFOC Lens Array (SLA).

(2) Usage

- Usually, do not use this adjustment in the field.
- Be sure to select the pattern No.1.

5.3.26 Skew Detection Adjustment**(1) Functions**

Save the standard value of the paper skew detection to NVRAM board (NRB).

(2) Usage

It has been already adjusted at the factory setting, but conduct the procedure to adjust the paper skew detection volume.

(3) Procedure

1. "Service mode menu screen"

Press [01 Machine Adjustment].

2. "Machine adjustment menu"

Press [06 Skew Detection Adjustment].

3. "Skew Detection Adjustment screen"

Press [Print Mode].

4. Select A4 or 8 1/2 x 11 size paper in tray2 and press the start key to output the test pattern.

Note

- Select [72-91g] for the basic weight setting.
- Adjust it on tray2.

5. Check that there is no skew on the output image visually.

Note

- Save the paper skew value of the last copied paper to NVRAM board (NRB).
- Be sure to continue the adjustment until there is no paper skew. The paper skew amount is stored in NRB by going back to the user mode with paper skewed.
- Check the adjustment value on the output code 94-00 of I/O check mode. D. Be sure to refer to the adjustment value confirmation method.

6. When there is a skew, press [Close].

7. Repeat the steps 3 to 6 until the paper skew is resolved.
8. "Utility menu screen"
Press [02 Function Setting].
9. "Function Setting screen"
Press [04 Skew Detection Threshold].
10. "< Skew Detection Threshold Setting > screen"
Set the value from [1.0%], [0.5%], or [NO] and press [OK].

(4) Adjustment value confirmation method

1. "Service mode menu screen"
Press [04. Machine condition]
2. "Machine Condition menu screen"
Press [01. I/O Check Mode].
3. "I/O Check Mode screen"
Enter "94" for the check code with the numeric keys.
4. Press the start button.
Press [Next] to see the current value of [Skew Detection Adjustment].
Check that the gap of the adjustment value between the first time and the second time is within -200 to +200.
Conduct the adjustment again if there is no gap between the adjustment values.

5.3.27 Sharpness Offset Adjustment (Quality Adjustment)

(1) Functions

Adjust midpoint of sharpness in Quality adj. / User mode.

(2) Usage

- Conduct this adjustment to shift the sharpness image in user mode/quality mode to the soft side or the sharp side.
- To reduce the moire, shift it to the soft side. However, it tends to cause the image blurring.

Note

- This adjustment reflects only to the scanned image.
- This adjustment is for 1200/1051 (copier version). 1200P (printer version) does not has the adjustment method.

(3) Procedure

1. "Service mode menu screen"
Press [01 Machine Adjustment].
2. "Machine adjustment menu"
Press [07 Quality Adjustment].
3. "Quality Adjustment Menu screen"
Press [01 Sharpness Offset Adjustment].
4. "Sharpness Offset adjustment screen"
Enter a numeric value through the numeric keys as needed and press [Set].
 - Setting range: -5 (soft* reduce moire) to +5 (sharp* increase moire)
Press [Print Mode].

Note

- Since it is the trade-off between the moire and the image blurring, conduct the adjustment which is suitable for the originals.

5. Select A3 or 11 x 17 paper, place a ""test chart" on the original glass, and press Start key.
6. "PRINT MODE screen"
Check the outputted image.
7. Repeat the steps 4 to 6 until an appropriate value is obtained.

5.3.28 Image Distinction Level (Quality Adjustment)

(1) Functions

Adjust the detection ability for the dot area on the original image.

(2) Usage

Conduct this adjustment to change the center value of the text/photo judging function in Quality adj. / User mode.

Note

- The scanned original is judged to text, picture, or dot by the image processing. The filter to be used is decided according to the result.
- Use this adjustment for raising the judgment precision of the original on which the area is misjudged.
- To widen the judgment area of the picture, adjust it in the user mode.
- This adjustment reflects only to the scanned image.
- This adjustment is for 1200/1051 (copier version). 1200P (printer version) does not has the adjustment method.

(3) Procedure

1. "Service mode menu screen"
Press [01 Machine Adjustment].
2. "Machine adjustment menu"
Press [07 Quality Adjustment].
3. "Quality Adjustment Menu screen"
Press [02 Image Distinction Level].
4. "Image Distinction Level screen"
Press [Print Mode].

5. Select A3 paper, set the original to be adjusted on the original glass, and press the start button.
6. Dot/Text detection pattern is outputted.
This output pattern shows how the original image is judged.
 - Gray part: Judged as dot
 - White part: Judged as picture
 - Black part: Judged as text
7. Press [Close].
8. "Image Distinction Level screen"
Select the mode to be adjusted.
Enter a numeric value through the numeric keys as needed and press [Set].
 - [Dot detect adjustment]: Adjust the detectability of the dot area on the original image
Range: -5 (reduce dot area) to +5 (increase dot area)
 - [Dot/Text area adjustment]: Fine adjust the center position of the dot/text area on the original image
Setting range: -5 (increase the dot area, decrease the text area) to +5 (decrease the dot area, increase the text area)
9. Repeat the steps 4 to 8 until an appropriate value is obtained.

5.3.29 AES Adjustment (Quality adjustment)

(1) Functions

Fine adjust the auto density center position.

(2) Usage

Conduct this adjustment to change the center value selected with the auto copy density function in the user mode.

Note

- This adjustment reflects only to the scanned image.
- This adjustment is for 1200/1051 (copier version). 1200P (printer version) does not has the adjustment method.

(3) Procedure

1. "Service mode menu screen"
Press [01 Machine Adjustment].
2. "Machine adjustment menu"
Press [07 Quality Adjustment].
3. "Quality Adjustment Menu screen"
Press [03 Density Adjustment].
4. "Density Adjustment Menu screen"
Press [01 AES Adjustment].
5. "AES Adjustment screen"
Press [Print Mode].
6. Set the original which auto density to be changed on the original glass and press the start key.
7. Press [Close].
8. "AES Adjustment screen"
Enter a numeric value through the numeric keys as needed and press [Set].
 - Range: -5 (image highlighted) to +5 (background highlighted)
9. Repeat the steps 5 to 8 until an appropriate value is obtained.

5.3.30 Copy Density Adjustment (Quality Adjustment)

(1) Functions

Fine adjust the center position of the scan density for each quality mode.

(2) Usage

Conduct this adjustment to change the center value of the density shift function in user mode.

Note

- This adjustment is for 1200/1051 (copier version). 1200P (printer version) does not has the adjustment method.

(3) Procedure

1. "Service mode menu screen"
Press [01 Machine Adjustment].
2. "Machine adjustment menu"
Press [07 Quality Adjustment].
3. "Quality Adjustment Menu screen"
Press [03 Density Adjustment].
4. "Density Adjustment Menu screen"
Press [02 Copy Density Adjustment].
5. "Copy Density Adjustment screen"
Select the quality mode to be adjusted and press [Print Mode].
6. Set the test chart on the original glass, and press the start button.
7. Press [Close].
8. "Copy Density Adjustment screen"
Enter a numeric value through the numeric keys as needed and press [Set].
 - Range: -5 (lighter) to +5 (darker)
9. Repeat the steps 5 to 8 until an appropriate value is obtained.

5.3.31 BackgroundRemoval (Quality Adjustment)

(1) Functions

Fine adjust the center position of the background for each quality mode.

(2) Usage

Conduct this adjustment to change the intensity of the background adjustment function in user mode.

(3) Procedure

1. "Service mode menu screen"
Press [01 Machine Adjustment].
2. "Machine adjustment menu"
Press [07 Quality Adjustment].
3. "Quality Adjustment Menu screen"
Press [03 Density Adjustment].
4. "Quality Adjustment Menu screen"
Press [03 Background Removal].
5. "BackgroundRemoval screen"
Enter a numeric value through the numeric keys as needed and press [Set].
 - Range: -5 (background highlighted) to +5 (background fogged)

5.3.32 Distortion Adjustment

(1) Functions

Adjust the image distortion in scanning.

(2) Usage

Conduct this adjustment when the image distortion occurs in scanning.

Note

- This adjustment is for 1200/1051 (copier version). 1200P (printer version) does not has the adjustment method.

(3) Procedure

1. "Service mode menu screen"
Press [01 Machine Adjustment].
2. "Distortion Adjustment"
Press [08 Background Removal].
3. "Distortion Adjustment screen"
Select the item to be adjusted and press [Print Mode].
4. Select A3 or 11 x 17 paper. Set the "test chart" at the position (original glass or ADF) according to the adjusted item, and press the Start Key.
5. Measure the image distortion with a scale.
 - Standard value: $\pm 0.5\%$ or less (difference in the diagonals of 200mm square must be 1.4mm or less)
6. When the value is not within the standard value, press [Close].
7. "Distortion Adjustment screen"
Enter a numeric value through the numeric keys and press [Set].
 - Range: -50 (counterclockwise) to +50 (clockwise)
 - 1 Step = 0.05%
8. Repeat steps 3 to 7 until the standard value can be obtained.

5.3.33 CCD Right-Left Quality (Quality Adjustment)

(1) Functions

Adjust the sampling timing of the CCD output to adjust the density gap between backward and forward (in the main scan direction) against the optical axis of lens.

(2) Usage

Because of the variations of parts accuracy of the CCD unit, the image density against the optical axis of lens may differ between backward and forward (in the main scan direction). Therefore, perform this adjustment when there is a density gap between backward and forward at the center of the main scan direction on the copied paper after replacing the CCD unit.

(3) Procedure

1. "Service mode menu screen"
Press [01 Machine Adjustment].
2. "Machine Adjustment menu screen"
Press [07 Quality Adjustment].
3. "Quality Adjustment Menu screen"
Press [04 CCD Right-Left Quality].
4. "CCD Right-Left Quality screen"
Press [Print Mode].
5. Select A3 or 11 x 17 paper. Set the test chart to the original grass and press the start button.
6. Fold the output paper at the center of the main scan direction, and check that there is no density gap between backward and forward.
7. If there is a density gap, press [Close].
8. "CCD Right-Left Quality screen"
Select [Crosswise Dir. (Front)] to equalize the density.

NOTE

- There are 2 types for the adjustment; "Crosswise Dir. (Front)" and "Crosswise Dir. (Back)". Be sure to execute the adjustment with "Crosswise Dir. (Front)".

Enter a value through the numeric keys and press [Set].

Setting range: -16 to +16

9. Repeat the steps 4 to 8 until an appropriate value is obtained.

5.3.34 Non-Image Area Erase Check**(1) Functions**

Check the non-image area erase function and automatically adjust the sensitivity to detect the non-image area.

(2) Usage

Conduct this adjustment when installing the copier, moving its installation location, or when the non-image area erase function does not work satisfactorily.

(3) Preparation

- Open fully the DF.
- Do not put anything on the original glass.
- Clean the original glass.

Note

- This adjustment is for 1200/1051 (copier version). 1200P (printer version) does not have the adjustment method.

(4) Procedure

1. "Service mode menu screen"
Press [01 Machine Adjustment].
2. "Machine adjustment menu"
Press [09 Non-Image Area Erase Check].
3. "Non-Image Area Erase check screen"
Press [Start].
4. Make sure that the following message appears.
NORMAL adjustment selected.
The machine is set to appropriate parameters for Non-image area erase.
If any other message appears, refer to "I.5.3.34.(5) Error message and Handling", and perform the non-image area erase check again.

(5) Error message and Handling

If an error is detected while performing the "Non Image Area Erase Check" mode, the following error message is displayed.

(a) Error message1

Adjust for Extreme Brightness.

Non-Image Area Erase function may not operate correctly with dark (density) original.

Please refer to [ADJUSTMENT/SETTING]-[Machine Adjust] columns of the Service Manual.

Handling 1

If the use of the non-image area erase function or the case of copying originals that have a dark background is not frequently, the copier can be used in the current installation location. However, when copy originals that have a dark background are frequently copied, install the copier in a location where less external light gets in (darker) than the present location, and check the non-image area erase check mode again.

(b) Error message2

Adjust for Extreme Brightness. In many cases, the Non-Image Area Erase function will not operate correctly.

Please refer to [ADJUSTMENT/SETTING]-[Machine Adjust] columns of the Service Manual.

Handling 2

When the non-image area erase function is not used frequently, the copier can be used in the current installation location. However, if the non-image area erase function is frequently used, install the copier in a location where less external light gets in (darker) than the present location, and check the non-image area erase check mode again. At this time, when there is a bright light source such as a fluorescent light installed directly above the machine, reconsider the installation location, or take some measures to shield the light source and check the mode again.

5.3.35 ADF Density Adjustment (ADF Adjustment)**(1) Functions**

Adjust the sensitivity for ADF reading.

(2) Usage

Since the slit glass of the scanning section is coated with electrical conductive material, the way it refracts light from the exposure lamp is different from the way of the original glass. Thus, perform this adjustment when replacing the slit glass.

(3) Preparation

- Clean the slit glass.
- Make sure that the white chart is not dirty. (Partial dirt can be ignored)

Note

- This adjustment is for 1200/1051 (copier version). 1200P (printer version) does not has the adjustment method.

(4) Procedure

1. "Service mode menu screen"
Press [01 Machine Adjustment].
2. "Machine adjustment menu"
Press [10 ADF Adjustment].
3. "ADF adjustment mode menu screen"
Press [01 Density Adjustment].
4. "ADF density adjustment screen"
Set the "white chart" on the DF.
Note
 - Set the "white chart" in the A4-direction.
5. Press [Start].
The white chart is scanned, and density is automatically adjusted.
6. When an error message appears, turn OFF/ON the sub power switch (SW2) of the main body. Repeat steps 1 to 5 until it is completed properly.

5.3.36 ADF Original Size Adj. (ADF adjustment)**(1) Functions**

Adjust the original size in setting the original on ADF.

(2) Usage

Conduct this adjustment when the original size detection does not work properly.

Note

- This adjustment is for 1200/1051 (copier version). 1200P (printer version) does not has the adjustment method.

(3) Procedure

1. "Service mode menu screen"
Press [01 Machine Adjustment].
2. "Machine adjustment menu"
Press [10 ADF Adjustment].
3. "ADF adjustment mode menu screen"
Press [02 ADF Original Size Adj.].
4. "ADF Original Size Adj. screen"
Make sure A4 is selected and set A4 paper on the ADF and press [Start].
5. "ADF original size adjustment screen"
Confirm the message of completion, press [A5S].
6. "ADF original size adjustment screen"
Set A5S paper on the ADF and press [Start].
7. "ADF original size adjustment screen"
Confirm the message of completion, press [Print Mode].
8. Make sure the ADF original size is properly detected.

5.3.37 ADF Sensor Sensitivity Adj. (ADF Adjustment)**(1) Functions**

Adjust the sensor sensitivity of DF.

(2) Usage

Conduct this adjustment when a malfunction (JAM display does not disappear despite no paper JAM) occurs in the reflective type sensors.

(3) Preparation

Clean each of the ADF reflective sensors.

Note

- This adjustment is for 1200/1051 (copier version). 1200P (printer version) does not has the adjustment method.

(4) Procedure

1. "Service mode menu screen"
Press [01 Machine Adjustment].
2. "Machine adjustment menu"
Press [10 ADF Adjustment].
3. "ADF adjustment mode menu screen"
Press [03 ADF Sensor Sensitivity Adj.].
4. "ADF sensor sensitivity adjustment screen"
Press [Start].
The DF sensor sensitivity is automatically adjusted, and the message of completion appears.
5. Press [Print Mode] to check to see if there is any malfunction.
6. When malfunction is found, press [Close] to repeat steps 5 and 6.
7. Press [Return] to return to "ADF Adjustment Menu screen"

5.3.38 ADF Skew Offset Adj. (ADF Adjustment)

(1) Functions

Adjust image skew in the DF scanning mode.

(2) Usage

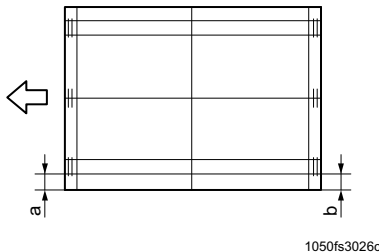
Conduct this adjustment when the image skew occurs in the DF scanning mode.

Note

- This adjustment is reflected on the skew adjustment control in DF scanning mode.
- This adjustment is for 1200/1051 (copier version). 1200P (printer version) does not have the adjustment method.

(3) Procedure

1. "Service mode menu screen"
Press [01 Machine Adjustment].
2. "Machine adjustment menu"
Press [10 ADF Adjustment].
3. "ADF adjustment mode menu screen"
Press [04 ADF Skew Offset Adj.].
4. "ADF Skew Offset Adjustment screen"
Press [Print Mode].
5. Set the "adjustment chart" on the ADF and press the Start Key.
6. Measure the image skew with a scale.
 - Standard value: within $\pm 0.5\%$
The gap between a and b is 2.1mm or less



7. When the value is not within the standard value, press [Close].
8. "ADF Skew Offset Adjustment screen"
Enter a numeric value through the numeric keys and press [Set].
 - Range: -60 (counterclockwise) to +60 (clockwise)
 - 1 Step = 0.05%
9. Repeat steps 4 to 8 until the standard value can be obtained.
10. Press [Return] to return to "ADF Adjustment Menu screen"

5.3.39 ADF Centering Sensor Adj. (ADF Adjustment)

(1) Functions

Adjust sensitivity of the centering sensor /Fr.

(2) Usage

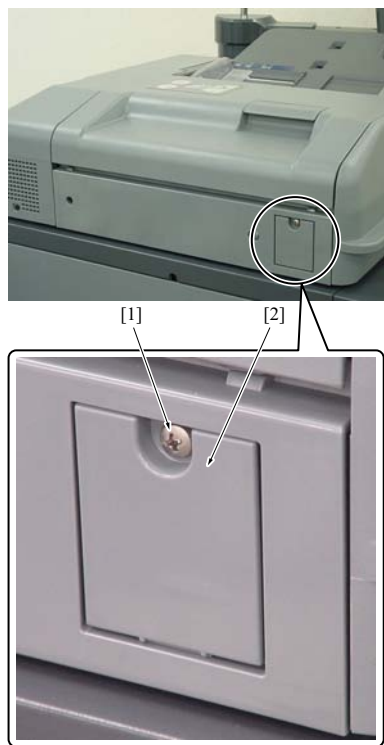
When there is a mis-centering on the scanned image, conduct this adjustment.

Note

- Be sure to conduct adjustment for both A4 and 8 1/2 x 11.
- This adjustment is for 1200/1051 (copier version). 1200P (printer version) does not have the adjustment method.

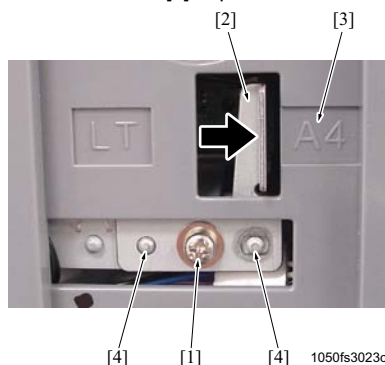
(3) Procedure

1. "Service mode menu screen"
Press [01 Machine Adjustment].
2. "Machine adjustment menu"
Press [10 ADF Adjustment].
3. "ADF adjustment mode menu screen"
Press [05 ADF Centering Sensor Adjustment].
4. "ADF sensor sensitivity adjustment screen"
Select "A4".
5. Remove the screw [1] to remove the sensor cover [2].



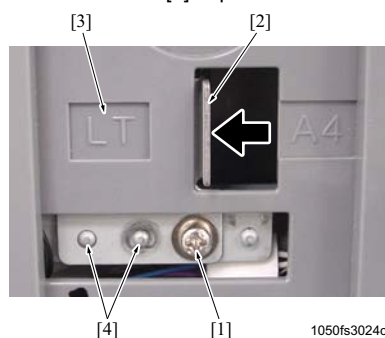
1050fs3022c

6. Remove 1 screw [1] to place the sensor mounting plate [2] to the "A4" side [3] impress, the 2 locating projections [4] to their places.



1050fs3023c

7. "ADF Centering Sensor Adj. screen"
Press [Start]. Sensitivity of the sensor is adjusted, and message of completion is displayed.
8. Select $8\frac{1}{2} \times 11$.
9. Remove 1 screw [1] to place the sensor mounting plate [2] to the "LT" side [3] impress, the 2 locating projections [4] to their places.



1050fs3024c

10. "ADF Centering Sensor Adj. screen"
Press [Start]. Sensitivity of the sensor is adjusted, and message of completion is displayed.
11. Replace the sensor plate to the position of original size ($A4$ or $8\frac{1}{2} \times 11$) that the customer mainly uses.

5.3.40 Recall Standard Data

(1) Functions

Reset the adjustment values of the machine adjustment to the factory initial data or the installation initial data.

(2) Usage

The same adjustment table is changed since some parts of the machine adjustment can be changed by the user. Therefore, conduct this adjustment when the adjustment values cannot be initialized because of the erroneous operation by the user.

(3) Procedure

1. "Service mode menu screen"
Press [01 Machine Adjustment].
2. [Machine adjustment menu]
Press [11 Recall Standard Data].
3. "Recall standard data (Machine adjustment) screen"
Press [Factory Initial Data] or [Installation Initial Data].

Note

- Selecting [Factory Initial Data] recalls the factory initial data.
- Selecting [Installation initial data] recalls the adjustment values stored when code "91" of the I/O check mode was conducted.
- When selecting [Data at shipment] or [Data at installation], the data returns with no display changed on the screen.

5.4 Process adjustment**5.4.1 High Voltage Auto Adjustment (High Voltage Adjustment)****(1) Functions**

Current values and voltage values of a transfer current and developing bias are automatically adjusted respectively.

(2) Usage

Conduct this adjustment when replacing the high voltage unit /1, /2 (HV /1, /2).

(3) Preparation

The photo conductor section must be set.

(4) Procedure

1. "Service mode menu screen"
Press [02 Process Adjustment].
2. "Process Adjustment menu screen"
Press [01 High Voltage Adjustment].
3. "High Voltage Adjustment Menu screen"
Press [01 High Voltage Auto Adjustment].
4. "HV Adjustment (Auto adjustment) screen"
Press [Start]. After the automatic adjustment, the message of completion appears.

Note

- When an error message appears during the adjustment, check to see if the error unit is properly installed and cleaned. Conduct the adjustment again.

5.4.2 HV Adjustment (Charge) (High Voltage Adjustment)

Do not conduct this adjustment in the field.

5.4.3 HV Adj. (Charg grid voltage) (High Voltage Adjustment)

Do not conduct this adjustment in the field.

5.4.4 HV Adj. (Bias Development) (High Voltage Adjustment)

Do not conduct this adjustment in the field.

5.4.5 HV Adjustment (Transfer) (High Voltage Adjustment)

Do not conduct this adjustment in the field.

5.4.6 Trans belt M-Brush Current (High Voltage Adjustment)

Do not conduct this adjustment in the field.

5.4.7 Trans belt S-Brush Current (High Voltage Adjustment)

Do not conduct this adjustment in the field.

5.4.8 Discharge before cleaning (High voltage adjustment)

Do not conduct this adjustment in the field.

5.4.9 Blade Setting Mode (Drum Peculiarity Adjustment)**(1) Functions**

Apply toner to the cleaning blade and drum to prevent the damage.

(2) Usage

Perform this adjustment when changing the cleaning blade.

Note

- **Perform this process only after changing the cleaning blade. Otherwise, the cleaning blade special parts counter is reset, thus making it impossible to implement the auto blade change in the right timing.**
- **Apply setting powder to the cleaning blade and drum.**

(3) Procedure

1. "Service mode menu screen"
Press [02 Process Adjustment].
2. "Process Adjustment menu screen"
Press [02 Drum Peculiarity Adjustment].
3. "Drum peculiarity adjustment mode menu screen"
Press [01 Blade Setting Mode].
4. "Blade setting mode screen"
Press [Start]. With toner applied, the drum is cleaned with the cleaning blade. The message of completion appears.

5.4.10 Automatic Drum Potential (Drum Peculiarity Adjustment)**(1) Functions**

It measures the photo conductor charging potential and automatically adjusts the charging potential, the grid voltage, and the developing bias respectively.

(2) Usage

- Conduct this adjustment when replacing the drum.
- Conduct this adjustment when replacing the high voltage unit /1, /2 (HV /1, /2).

(3) Procedure

1. "Service mode menu screen"
Press [02 Process Adjustment].
2. "Process Adjustment menu screen"
Press [02 Drum Peculiarity Adjustment].
3. "Drum peculiarity adjustment mode menu screen"
Press [02 Automatic Drum Potential].
4. "Automatic Drum Potential screen"
Press [Start]. After the automatic adjustment, the message of completion appears.

Note

- **When the following error messages appear, check to see if the drum potential sensor (DPS) is properly installed and cleaned. Conduct the adjustment again.**
 - 1) **Error 1**
In the 0V check of the DPS, voltage over 100V is detected 5 times or more.
 - 2) **Error 2**
The drum potential after the exposure is detected as over 350V, and it is determined that the control patch detect signal is not output.
 - 3) **Error 3**
Drum potential has been corrected 10 or more times, but it does not converge.

5.4.11 TonerDensitySensorInit.Auto (Drum Peculiarity Adjustment)**(1) Functions**

- Adjust TCR (Vc) with the new developer when replacing the developer.
- TCR sensor (TCRS) measures the developer permeability in the developing unit and it memorizes the value with which the TCR sensor output voltage gets to the standard value into the NVRAM board (NRB).

(2) Usage

Conduct this adjustment when replacing the developer.

Note

- **Be sure not to print without conducting the toner density sensor initial auto adjustment after replacing the developer. Without the adjustment, the developer has to be replaced again since the proper image density cannot be provided.**
- **When conducting the auto toner density sensor initial adjustment, the developer counter in the maintenance counter is reset automatically.**

(3) Procedure

1. "Service mode menu screen"
Press [02 Process Adjustment].
2. "Process Adjustment menu screen"
Press [02 Drum Peculiarity Adjustment].
3. "Drum peculiarity adjustment mode menu screen"
Press [03 TonerDensitySensorInit.Auto].
4. "TonerDensitySensorInit.Auto screen"
Press [Start]. After the automatic adjustment, the message of completion appears.

NOTE

- **When the following error occurs, follow the solution procedure.**
 1. **Error 5**
- **Solution**
 1. **Check the connector connection of the TCR sensor (TCRS).**
 2. **Check that the developer is not imbalanced in the developing unit.**

3. Check the coupling engagement of the developing unit.
4. Check the connector connection between the photo conductor section and the main body.
5. Check the connection between the TCR sensor (TCRS) and the printer control board (PRCB).
6. Replace the TCR sensor (TCRS) or the printer control board (PRCB).

5.4.12 Sensitive Drum Set Mode (Drum Peculiarity Adjustment)

(1) Functions

Put the lubricant to the photo conductor to keep the cleaning ability.

(2) Usage

Conduct this adjustment when replacing the photo conductor.

Note

- When conducting the photo conductor set mode, the photo conductor counter in the maintenance counter is reset automatically.

(3) Procedure

1. "Service mode menu screen"
Press [02 Process Adjustment].
2. "Process Adjustment menu screen"
Press [02 Drum Peculiarity Adjustment].
3. "Drum peculiarity adjustment mode menu screen"
Press [04 Sensitive Drum Set Mode].
4. "Sensitive Drum Set Mode screen"
Press [Start]. After the automatic adjustment, the message of completion appears.

5.4.13 Auto Maximum Density Adj. (Drum Peculiarity Adjustment)

(1) Functions

Automatically adjust the maximum density that is suitable for the drum.

(2) Usage

Conduct this adjustment when replacing the drum, developer, and LPH unit.

(3) Procedure

1. "Service mode menu screen"
Press [02 Process Adjustment].
2. "Process Adjustment menu screen"
Press [02 Drum Peculiarity Adjustment].
3. "Drum peculiarity adjustment mode menu screen"
Press [05 Auto Maximum Density Adj.].
4. "Auto maximum Density Adjustment screen"
Press [Start]. After the automatic adjustment, the message of completion appears.

Note

- When the following error messages appear, check to see if the toner control board (TCB) is properly installed and cleaned. Conduct the adjustment again.
 - 1) Error 1
The maximum density sensor (on the TCB) dirt correction has been corrected or more times, but it does not converge.
 - 2) Error 2
The auto maximum density adjustment is not completed, when the developing roller rotation speed reaches the specified value.
 - 3) Error 3
No signal is outputted from the maximum density sensor. Control patch detect signal is not outputted.

5.4.14 Auto Dot Diameter Adj. (Drum Peculiarity Adjustment)

(1) Functions

Measure the dot image potential and adjust the exposure level according to the drum property.

(2) Usage

Conduct this adjustment when replacing the drum, developer, and LPH unit.

(3) Procedure

1. "Service mode menu screen"
Press [02 Process Adjustment].
2. "Process Adjustment menu screen"
Press [02 Drum Peculiarity Adjustment].
3. "Drum peculiarity adjustment mode menu screen"
Press [06 Auto Dot Diameter Adj.].
4. "Auto dot diameter adjustment screen"
Press [Start]. After the automatic adjustment, the message of completion appears.

Note

- When the following error messages appear, check to see if the toner control board (TCB) is properly installed and cleaned. Conduct the adjustment again.
 - 1) Error 1

The gamma sensor (on the TCB) dirt correction has been corrected or more times, but it does not converge.

2) Error 2

The auto dot diameter adjustment completed with an abnormal value.

5.4.15 Cartridge Set Mode (Drum Peculiarity Adjustment)

(1) Functions

Agitate low charged toner which remains in the developing unit to prevent the toner spilling to the conveyance section.

(2) Usage

Conduct this adjustment when black spots (toner) appear on the print-out after removing/inserting the photo conductor section.

(3) Procedure

1. "Service mode menu screen"
Press [02 Process Adjustment].
2. "Process Adjustment menu screen"
Press [02 um Peculiarity Adjustment].
3. "Drum peculiarity adjustment mode menu screen"
Press [07 Cartridge Set Mode].
4. "Cartridge set mode screen"
Press [Start]. The development unit and the drum rotate for 3minutes to charge low-charge toner.
5. After the rotation stops, press [Print Mode].
6. Select the A3 or 11 x 17 paper. Press the Start button to output 10 blank papers, thus cleaning the drum.
7. When the black spot does not disappear, press [Close] to repeat steps 4 to 6.

5.4.16 Blade Replace Mode

(1) Functions

Automatically replace from the 1st cleaning blade to the 2nd cleaning blade.

(2) Usage

When the image error occurs because of the cleaning blade, conduct this mode to prevent the image error.

Note

- When it has been switched to the 2nd cleaning blade, this mode is not available.
- By conducting this mode, the periodically replaced timing of the cleaning blade gets faster.

(3) Procedure

1. "Service mode menu screen"
Press [02 Process Adjustment].
2. "Process Adjustment menu screen"
Press [02 Drum Peculiarity Adjustment].
3. "Drum peculiarity adjustment mode menu screen"
Press [08 Blade Replace Mode].
4. "Blade Replace Mode screen"
Press [Start].

Note

- When [Start] is disabled, the 2nd cleaning blade is set.
- To enable [Start], execute [Blade Setting Mode] after replacing the 2nd cleaning blade.

5. "Blade Replace Mode screen"
When the mode completes, "Blade replace mode Completed" appears.

5.4.17 Drum Peculiarity Manual

Do not conduct this adjustment in the field.

5.4.18 Recall Standard Data

(1) Functions

Reset the adjustment values of the process adjustment to the factory initial data or the installation initial data.

(2) Usage

Conduct this adjustment when the initialization cannot be done because of the various change by CE.

Note

- In case the data recovery is conducted, the developer needs to be replaced since the value of "TonerDensitySensorInit.Auto" is recovered to the initial value or the installation value.

(3) Procedure

1. "Service mode menu screen"
Press [02 Process Adjustment].
2. "Process Adjustment menu screen"
Press [04 Recall Standard Data].
3. "Recall Standard Data (Process adjustment) screen"
Press [Factory Initial Data] or [Installation Initial Data].

Note

- Selecting [Factory Initial Data] recalls the factory initial data.
- Selecting [Installation Initial Data] recalls the adjustment values stored when code "91-00" of the I/O check mode was conducted.
- When selecting [Data at shipment] or [Data at installation], the data returns with no display changed on the screen.

5.5 System Setting**5.5.1 Software DIPSW setting procedures****(1) OUTLINE**

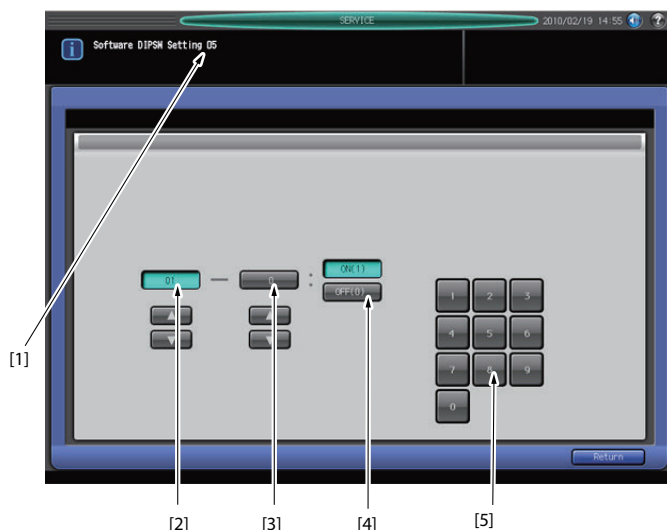
Set the software DIPSW.

Note

- Do not change any switch not described in the service manual.

(2) Procedure

1. "Service Mode menu screen"
Press [03 System Setting].
2. "System Setting Menu screen"
Press [01 Software DIPSW Setting].
3. "Software switch setting mode screen"
Press [▲] / [▼] or numeric buttons after pressing the "DIPSW number" and "Bit number" buttons.
4. Press [On (1)] or [Off (0)] to set the selected bit number ON/OFF.

(3) Software DIPSW setting screen

[1]	DIPSW data (indicates the 8bit values of the selected DIPSW numbers in hexadecimal from 00 to FF.)	[2]	DIPSW number
[3]	Bit number (0 to 7)	[4]	Bit data: 1:ON, 0:OFF
[5]	Numeric buttons	[6]	

5.5.2 Software DIPSW setting list**Note**

- Do not change any bit not described on this table.

DIPSW	Bit	Function	Set value	Default setting		
				Japan	Inch	Metric
1	0	GP punch + 1 position staple	<ul style="list-style-type: none"> • 0: Disabled • 1: Enabled 	0	0	0
	1	Large-size paper count method (special parts and ORU parts counter)	<ul style="list-style-type: none"> • 0: 2 count • 1: 1 count 	0	0	0
	2	-	<ul style="list-style-type: none"> • 0: - • 1: - 	0	0	0
	3			0	0	0
	4	Prohibition of printing when the PM count is reached	<ul style="list-style-type: none"> • 0: Disabled • 1: Enabled 	0	0	0
	5	Print number setting until printing is prohibited after PM is displayed	<ul style="list-style-type: none"> • 1,000Print: 1-7=0, 1-6=0, 1-5=0 • 2,000Print: 1-7=0, 1-6=0, 1-5=1 • 3,000Print: 1-7=0, 1-6=1, 1-5=0 • 4,000Print: 1-7=0, 1-6=1, 1-5=1 • 5,000Print: 1-7=1, 1-6=0, 1-5=0 • 1,000Print: 1-7=1, 1-6=0, 1-5=1 • 1,000Print: 1-7=1, 1-6=1, 1-5=0 • 1,000Print: 1-7=1, 1-6=1, 1-5=1 	0	0	0
	6			0	0	0

DIPSW	Bit	Function	Set value	Default setting		
				Japan	Inch	Metric
	7			0	0	0
2	0	Display of [Fixing Temperature Adj.] on "Adjustment mode menu"	<ul style="list-style-type: none"> 0: Not displayed 1: Displayed 	0	0	0
	1	All charger cleaning cycle (fixing temperature 50°C or less when turning ON)	<ul style="list-style-type: none"> Cleaning every time: 2-3 = 0, 2-2 = 0, 2-1 = 0 At 5,000 prints: 2-3=0, 2-2=0, 2-1=1 At 10,000 prints: 2-3=0, 2-2=1, 2-1=0 At 15,000 prints: 2-3=0, 2-2=1, 2-1=1 At 20,000 prints: 2-3=1, 2-2=0, 2-1=0 At 25,000 prints: 2-3=1, 2-2=0, 2-1=1 At 30,000 prints: 2-3=1, 2-2=1, 2-1=0 No cleaning: 2-3=1, 2-2=1, 2-1=1 	0	0	0
	2			0	0	0
	3			0	0	0
	4	All charger cleaning cycle (after printout)	<ul style="list-style-type: none"> Every 10,000 prints: 2-5=0, 2-4=0 Every 20,000 prints: 2-5=0, 2-4=1 Every 30,000 prints: 2-5=1, 2-4=0 Every 5,000 prints: 2-5=1, 2-4=1 	0	0	0
	5			0	0	0
	6	Blade auto replacement cycle	<ul style="list-style-type: none"> Every 375,000 prints: 2-7=0, 2-6=0 Every 250,000 prints: 2-7=0, 2-6=1 Every 500,000 prints: 2-7=1, 2-6=0 Every 150,000 prints: 2-7=1, 2-6=1 	0	0	0
	7			0	0	0
3	0	Size memory auto recovery mode This setting enables the main body to conduct [MACHINE] - [Adjustment] - [Size Memory Recovery Mode] in the user mode automatically. Only when this item is set to "1" and the prescribed conditions are met, the main body conducts the size memory recovery mode automatically before starting a job.	<ul style="list-style-type: none"> 0: Not restricted 1: Restricted 	0	0	0
	1	SC latch (C-2214, C-2217, C-3501 to C-3504, C-3801, C-3901 to C-3906, C-1540 to C-1562)	<ul style="list-style-type: none"> 0: Unlatched 1: Latched 	0	0	0
	2	Coated/preprinted thick paper line speed setting in normal/high temperature and humidity When printing coated/preprinted thick paper under the environment of normal/high temperature and humidity, image erasure at a few millimeters away from the leading edge of paper may occur. Therefore, set the line speed of the 162g/m ² to 350g/m ² coated/preprinted paper to 300mm/s to prevent the image erasure at the edge. If there is no image at the edge or the image quality at the edge does not matter, the line speed of the 162g/m ² to 350g/m ² coated paper can be faster by changing this setting to productivity priority. Note Under the environment in low temperature and humidity, the line speed is always the same (330mm/s) regardless of DIPSW setting. The fusing pressure amount and the edge transfer current value are also changed by changing the setting.	<ul style="list-style-type: none"> 0: Leading edge image priority 1: Productivity priority 	0	0	0
	3	Charger cleaning function	<ul style="list-style-type: none"> 0: Enabled 1: Disabled 	0	0	0

DIPSW	Bit	Function	Set value	Default setting			
				Japan	Inch	Metric	
	4	Back side density up setting It usually controls the density up on the back side by changing the developing potential. In case the image density on the back side is higher than that on the front side with the smooth surface paper, however, set this DIPSW to "1" to prevent the density gap between both sides.	• 0: Up the back side density • 1: Not up the back side density	0	0	0	
	5	-	• 0: - • 1: -	0	0	0	
	6	I/O check mode output15 memory clear	• 0: Disabled • 1: Enabled	0	0	0	
	7	The maximum stacking capacity selection in small-size (longer side 250mm to 319mm) of FS-521 in shift mode	• 0: Stops at the tray middle position sensor (PS6) (loading 1500 sheets) • 1: Stops at the tray lower limit sensor (PS3) (loading 3000 sheets)	0	0	0	
4	0	RADF auto skew adjustment	• 0: Enabled • 1:Disabled	0	0	0	
	1	-	• 0: - • 1: -	0	0	0	
	2			0	0	0	
	3			0	0	0	
	4			0	1	0	
	5	APS when change magnification	• 0: Enabled • 1:Disabled	0	1	0	
	6	Paper exit switch timing from LS2 to LS1	• 0: Stacker full, break between jobs • 1: Stacker full	0	0	0	
7	Large-size paper count method (other than PM counter)	• 0: Count as 1 • 1: 2 counts	0	1	0		
5	0	-	• 0: - • 1: -	0	0	0	
	1			0	0	0	
	2			0	0	0	
	3			0	0	0	
	4	Blank page print with HDD page select print	• 0: Disabled • 1: Enabled	0	0	0	
	5	Developer toner density switchover	• Standard: 5-7=0, 5-6=0, 5-5=0	0	0	0	
	6	By adjusting the toner density in the developer detected with TCR sensor (TCR sensor), change only the toner density without changing the image density. · Solution for image fogging/overflow toner 1) Set it to 1 step minus side, print 250 sheets of paper with test pattern No.12, and then print 250 sheets of paper with test pattern No.11. 2) Check that there is no image fogging or toner spill. 3) In case the problem is not solved, set it to 1 more step minus side, print 250 sheets of paper with test pattern No.12, and then print 250 sheets of paper with test pattern No.11 again. Repeat the steps. · Solution when the image density is light 1) Check the value of [Maximum density adj.] (developing theta), set it 1 step plus side and print 500 sheets of paper with test pattern No.11 when the value is about 250. When the value is not that large, adjust it with the image density selection (DIPSW27-2/3). 2) Confirm image density. 3) In case the image density is not solved, set this setting 1 step plus side and print 500 sheets of paper with test pattern No.11. Repeat the steps. Note · Be sure to change this setting step by step and check the image density and the overflow toner.	• -0.4%: 5-7=0, 5-6=0, 5-5=1 • -0.7%: 5-7=0, 5-6=1, 5-5=0 • -1.0%: 5-7=0, 5-6=1, 5-5=1 • +0.4%: 5-7=1, 5-6=0, 5-5=0 • +0.7%: 5-7=1, 5-6=0, 5-5=1 • +1.0%: 5-7=1, 5-6=1, 5-5=0 • Restricted: 5-7=1, 5-6=1, 5-5=1	0	0	0	

DIPSW	Bit	Function	Set value	Default setting		
				Japan	Inch	Metric
	7	<ul style="list-style-type: none"> Use this function when the image density is lighter than the standard (about 1.45 in reflected density) and the value of [Maximum density adj.] is about 250 (when it is smaller than 250, make the image darker with "Image Density Selection" (DIPSW27-2/3)), or when the overflow toner occurs. The image density cannot be set darker than the standard with this setting. 		0	0	0
6	0	-	<ul style="list-style-type: none"> 0: - 1: - 	0	0	0
	1	-		1	1	1
	2	Drum claw operation	<ul style="list-style-type: none"> 0: Enabled 1: Disabled 	0	0	0
	3	-	<ul style="list-style-type: none"> 0: - 1: - 	0	0	0
	4	-		0	0	0
	5	Image stabilization control cycle	<ul style="list-style-type: none"> Every 20,000 prints: 6-6=0, 6-5=0 Every 30,000 prints: 6-6=0, 6-5=1 Every 40,000 prints: 6-6=1, 6-5=0 Every 50,000 prints: 6-6=1, 6-5=1 	0	0	0
	6	Changes cycle of the image stabilization control (drum potential, maximum density, gamma auto adjustment).		1	1	1
	7	Drum potential auto adjustment	<ul style="list-style-type: none"> 0: Enabled 1: Disabled 	0	0	0
7	0	Fusing cleaning web feed control	<ul style="list-style-type: none"> Automatic control: 7-1=0, 7-0=0 Fixed to 1/2 feeding amount (low coverage control): 7-1=0, 7-0=1 Normal control (feeding amount 1/1): 7-1=1, 7-0=0 Fixed to twice feeding amount (high coverage control): 7-1=1, 7-0=1 	0	0	0
	1	Under the automatic control, the feeding amount control of the fusing cleaning web is twice as much as the usual in high coverage mode. Therefore, the feeding amount of the fusing cleaning web can be fixed with this setting if the high coverage originals are printed frequently.		0	0	0
	2	Background Density Adjustment	<ul style="list-style-type: none"> Standard: 7-3=0, 7-2=0 Dark (25V down): 7-3=0, 7-2=1 Dark (25V up): 7-3=1, 7-2=0 Lightest (50V up): 7-3=1, 7-2=1 	0	0	0
	3	Change the charging potential and set the image density of the highlight section.		0	0	0
	4	LPH exposure period switchover	<ul style="list-style-type: none"> Standard: 7-5=0, 7-4=0 Line width down: 7-5=0, 7-4=1 Line width up: 7-5=1, 7-4=0 Line width up more1: 7-5=1, 7-4=1 	0	0	0
	5	Adjust the line width by switching the period of LPH exposure time. When the line is wide: Select the line width down. When the line is narrow: Select the line width up. Note <ul style="list-style-type: none"> Be sure to conduct [Auto dot diameter adjustment] after changing this setting. 		0	0	0
	6	-	<ul style="list-style-type: none"> 0: - 1: - 	0	0	0
	7	-		0	0	0
8	0	Fusing initial rotation before print	<ul style="list-style-type: none"> With initial rotation (normal control): 8-1=0, 8-0=0 Standard + 5 sec: 8-1=0, 8-0=1 Standard + 10 sec: 8-1=1, 8-0=0 Standard + 30 sec: 8-1=1, 8-0=1 	0	0	0
	1	In case the fusibility at initial print is not enough, set the period of fusing initial rotation longer than the standard to keep the fusibility. Note <ul style="list-style-type: none"> The period of standard fusing initial rotation gets longer with this setting. However, it does not conduct the initial rotation when the [Fixing Prerotation Set] on [Utility menu] is set [NO]. 		0	0	0
	2	Fusing initial rotation condition In the low temperature environment, fusibility may be insufficient immediately after the power is turned ON. So, rotate the fusing roller while in the warm-up to obtain an even heat distribution of the fusing roller to avoid the insufficient fusing. In this adjustment, determine the environment in which you implement the fusing initial rotation. <ul style="list-style-type: none"> Low temperature: perform the fusing initial rotation in the low temperature environment only. 	<ul style="list-style-type: none"> Low temperature: 8-3=0, 8-2=0 Low/normal temperature: 8-3=0, 8-2=1 Low/normal/high temperature: 8-3=1, 8-2=0 No preparatory rotation: 8-3=1, 8-2=1 	0	0	0

DIPSW	Bit	Function	Set value	Default setting		
				Japan	Inch	Metric
	3	<ul style="list-style-type: none"> Low/normal temperature: perform the fusing initial rotation in the low and normal temperature environment Low/normal/high temperature: perform the fusing initial rotation in all environments. 		1	1	1
	4	Fusing initial rotation time	<ul style="list-style-type: none"> Automatic control: 8-5=0, 8-4=0 300 sec: 8-5=0, 8-4=1 60 sec: 8-5=1, 8-4=0 0 sec: 8-5=1, 8-4=1 	0	0	0
	5			0	0	0
	6	Large-size paper count method (PM counter)	<ul style="list-style-type: none"> 0: Count as 1 1: 2 counts 	0	0	0
	7	Fusing initial rotation control after printing of small-size paper It prevents the thermal offset or crease at edges of the paper which occurs when conducting the solid black printing after feeding the small-size paper (216mm or less in width). However, when this setting is set to "1" and the next job starts within 4 minutes after the previous printing stops, the fusing preparatory rotation time becomes longer.	<ul style="list-style-type: none"> 0: Disabled 1: Enabled 	1	1	1
9	0	-	<ul style="list-style-type: none"> 0: - 1: - 	0	1	1
	1			0	0	0
	2			0	0	0
	3			0	0	0
	4	Copy quantity limit	<ul style="list-style-type: none"> No limit: 9-7=0, 9-6=0, 9-5=0, 9-4=0 1 sheet: 9-7=0, 9-6=0, 9-5=0, 9-4=1 3 sheets: 9-7=0, 9-6=0, 9-5=1, 9-4=0 5 sheets: 9-7=0, 9-6=0, 9-5=1, 9-4=1 9 sheets: 9-7=0, 9-6=1, 9-5=0, 9-4=0 10 sheets: 9-7=0, 9-6=1, 9-5=0, 9-4=1 20 sheets: 9-7=0, 9-6=1, 9-5=1, 9-4=0 30 sheets: 9-7=0, 9-6=1, 9-5=1, 9-4=1 50 sheets: 9-7=1, 9-6=0, 9-5=0, 9-4=0 99 sheets: 9-7=1, 9-6=0, 9-5=0, 9-4=1 No limit: 9-7=1, 9-6=0, 9-5=1, 9-4=0 No limit: 9-7=1, 9-6=0, 9-5=1, 9-4=1 No limit: 9-7=1, 9-6=1, 9-5=0, 9-4=0 No limit: 9-7=1, 9-6=1, 9-5=1, 9-4=0 No limit: 9-7=1, 9-6=1, 9-5=1, 9-4=1 	0	0	0
	5			0	0	0
	6			0	0	0
	7			0	0	0
10	0	Image memory usable area	<ul style="list-style-type: none"> Compression memory 187MB/ Expansion memory 69MB: 10-1=0, 10-0=0 Compression memory 220MB/ Expansion memory 36MB: 10-1=0, 10-0=1 Compression memory 159MB/ Expansion memory 97MB: 10-1=1, 10-0=0 Compression memory 46MB/ Expansion memory 210MB: 10-1=1, 10-0=1 	0	0	0
	1	Changes the usable area of DRAM (768MB) on the image-processing board (IPB). Compression memory is used within the memory area of compressed image data, and expansion memory is used for page memory of expanded image data. There are 2 types of image memory; DRAM on IPB and hard disk/1 (40GB of total 160GB is used). DRAM is used by priority. If hard disk/1 is damaged and memory overflow occurs during scanning or transferring data from PC, increase compression memory. If memory overflow occurs before printing starts, increase expansion memory.		0	0	0
	2	-	<ul style="list-style-type: none"> 0: - 1: - 	0	0	0

DIPSW	Bit	Function	Set value	Default setting		
				Japan	Inch	Metric
	3	Definition change of the large-size paper in counter control Default varies depending on the destination. Refer to I.5.5.6 Definition change of the large-size paper in counter control about the default for each destination.	<ul style="list-style-type: none"> A3, 11 x 17, 12 x 18: 10-4=0, 10-3=0 Small size only: 10-4=0, 10-3=1 A3, 11 x 17, 12 x 18, 8¹/₂ x 14, B4, 8K: 10-4=1, 10-3=0 A3, 11 x 17, 12 x 18, 8¹/₂ x 14, B4, 8K, 8¹/₂ x 13, 8¹/₄ x 13, 8¹/₈ x 13¹/₄, 8 x 13: 10-4=1, 10-3=1 	0	0	0
	4			0	0	0
	5	Number of pages allowed for saddle stitch (paper weight: 92g/m ² to 244g/m ²)	<ul style="list-style-type: none"> +0: 10-7=0, 10-6=0, 10-5=0 +5: 10-7=0, 10-6=0, 10-5=1 +10: 10-7=0, 10-6=1, 10-5=0 +15: 10-7=0, 10-6=1, 10-5=1 +20: 10-7=1, 10-6=0, 10-5=0 +25: 10-7=1, 10-6=0, 10-5=1 +30: 10-7=1, 10-6=1, 10-5=0 -: 10-7=1, 10-6=1, 10-5=1 	0	0	0
	6			0	0	0
	7			0	0	0
11	0	-	<ul style="list-style-type: none"> 0: - 1: - 	0	0	0
	1	Automatic paper supply	<ul style="list-style-type: none"> 0: Disabled 1: Enabled 	0	0	0
	2	-	<ul style="list-style-type: none"> 0: - 1: - 	0	0	0
	3	SC screen switchover	<ul style="list-style-type: none"> 0: F/E code screen switch 1: F code screen only 	0	0	0
	4	Filter for jagged edges on slanting lines	<ul style="list-style-type: none"> 0: Disabled 1: Enabled 	0	0	0
	5	<ul style="list-style-type: none"> Front cover print + Booklet + Group in printer jobs Output setting change of RECALL HDD in printer jobs 	<ul style="list-style-type: none"> 0: Restrict 1: Allow 	0	0	0
	6	-	<ul style="list-style-type: none"> 0: - 1: - 	0	0	0
	7	Jam code display	<ul style="list-style-type: none"> 0: Disabled 1: Enabled 	0	0	0
12	0	-	<ul style="list-style-type: none"> 0: - 1: - 	1	1	1
	1	Screen noise addition in scanner image Conduct this adjustment when the texture pattern occurs on scanned image in picture mode. By changing this setting to "1", it adds noise on the scanned image before the screen process and prevents the texture pattern. However, it tends to cause noise on the image.	<ul style="list-style-type: none"> 0: Not add noise 1: Add noise 	0	0	0
	2	-	<ul style="list-style-type: none"> 0: - 1: - 	0	0	0
	3	Printer auto centering correction	<ul style="list-style-type: none"> 0: Enabled 1: Disabled 	0	0	0
	4	-	<ul style="list-style-type: none"> 0: - 1: - 	0	0	0
	5	New ORU control	<ul style="list-style-type: none"> 0: Disabled 1: Enabled 	1	1	1
	6	Konica Minolta logo when power switch is turned ON	<ul style="list-style-type: none"> 0: Enabled 1: Disabled 	0	0	0
	7	-	<ul style="list-style-type: none"> 0: - 1: - 	0	0	0
13	0	Original size detection switchover 1	<ul style="list-style-type: none"> 0: A5 1: 5¹/₂ x 8¹/₂ 	0	1	0
	1	Original size detection switchover 2	<ul style="list-style-type: none"> 0: A4S 1: 8¹/₂ x 11S 	0	1	0
	2	-	<ul style="list-style-type: none"> 0: - 1: - 	0	0	0
	3			0	0	0
	4			0	0	0
	5			0	0	0
	6	Original size detection switchover 3	<ul style="list-style-type: none"> 8 x 13: 13-7=0, 13-6=0, 13-5=0 	0	0	0

DIPSW	Bit	Function	Set value	Default setting		
				Japan	Inch	Metric
	7		<ul style="list-style-type: none"> • 8¹/₄ x 13: 13-7=0, 13-6=0, 13-5=1 • 8¹/₈ x 13¹/₄: 13-7=0, 13-6=1, 13-5=0 • 8¹/₂ x 13: 13-7=0, 13-6=1, 13-5=1 • 8¹/₂ x 14: 13-7=1, 13-6=0, 13-5=0 • Not used: 13-7=1, 13-6=0, 13-5=1 • Not used: 13-7=1, 13-6=1, 13-5=0 • Not used: 13-7=1, 13-6=1, 13-5=1 	1	1	1
14	0	Original size detection switchover 4	<ul style="list-style-type: none"> • 0: B4, 11 x 17/B5, 8¹/₂ x 11/B5S • 1: 8K/16K/16KS 	0	0	0
	1	Wider-sized paper + punch support in printer mode	<ul style="list-style-type: none"> • 0: Limited • 1: Not limited 	0	0	0
	2	Function to prevent the original on original glass from being left	<ul style="list-style-type: none"> • 0: Enabled • 1: Disabled 	0	0	0
	3	The operation to check the staple limit at the print starting When the DIPSW21-0 Mixed size paper staple is set to "1" (batch output), the staple limit number is checked at printing starts. If the output number is behind the staple limit, the stapling order is canceled and normal printing starts.	<ul style="list-style-type: none"> • 0: Disabled • 1: Enabled 	0	0	0
	4	Postcard support (for North America)		0	0	0
	5	Size standard switchover of B series paper	<ul style="list-style-type: none"> • 0: JIS • 1: ISO 	0	0	1
	6	CRC (Cyclic Redundancy Check) in ISW implementation	<ul style="list-style-type: none"> • 0: Restricted • 1: Not restricted 	0	0	0
	7	-	<ul style="list-style-type: none"> • 0: - • 1: - 	0	0	0
15	0	ORU function switchover	<ul style="list-style-type: none"> • 0: Not use • 1: Use 	0	0	0
	1	Number of "Fine" paper that can be stapled	<ul style="list-style-type: none"> • 100 sheets: 15-2=0, 15-1=0 • 50 sheets: 15-2=0, 15-1=1 • 40 sheets: 15-2=1, 15-1=0 • 30 sheets: 15-2=1, 15-1=1 	0	0	0
	2			0	0	0
	3	Finishing option alarm stop	<ul style="list-style-type: none"> • Stops immediately after detection: 15-4=0, 15-3=0 • Stops at a break between print set after detection: 15-4=0, 15-3=1 • Does not stop while printing: 15-4=1, 15-3=0 • Does not stop while printing: 15-4=1, 15-3=1 	0	0	0
	4	Alarm stop means the following full detection functions. FD/FS/LS tray lower limit, FD/FS/LS/SD number of sheets on the tray, FD punch, FS staple scraps, SD trim scraps.		0	0	0
	5	CS Remote Care recognition	<ul style="list-style-type: none"> • 0: Disabled • 1: Enabled 	0	0	0
	6	-	<ul style="list-style-type: none"> • 0: - • 1: - 	0	0	0
	7	Trigger the display of developer/drum replacement icon	<ul style="list-style-type: none"> • 0: Number of prints • 1: Running time 	0	0	0
16	0	Developer/drum running time display	<ul style="list-style-type: none"> • 0: Displayed • 1: Not displayed 	0	0	0
	1	Copy reservation function	<ul style="list-style-type: none"> • 0: Enabled • 1: Disabled 	0	0	0
	2	-	<ul style="list-style-type: none"> • 0: - • 1: - 	0	0	0
	3			0	0	0
	4	Display of machine install date in Utility menu	<ul style="list-style-type: none"> • 0: Enabled • 1: Disabled 	0	0	0
	5	Non-image area erase mode judge level	<ul style="list-style-type: none"> • Standard: 16-6=0, 16-5=0 	0	0	0

DIPSW	Bit	Function	Set value	Default setting		
				Japan	Inch	Metric
	6		<ul style="list-style-type: none"> Correspond to dark original: 16-6=0, 16-5=1 Correspond to light interference: 16-6=1, 16-5=0 Not used: 16-6=1, 16-5=1 	0	0	0
	7	NIC selection for E-mail CS Remote Care Conditions for setting the security enhance mode to ON Administrator Authentication: ON CE Authentication: ON DIPSW40-0-1 (Carrying over the job for next day: Disabled) DIPSW16-7-0 (NIC of E-Mail CS Remote Care: Use the controller NIC) Removal HDD is not used	<ul style="list-style-type: none"> 0: Controller NIC 1: Main body NIC 	0	0	0
17	0	Summer time setting	<ul style="list-style-type: none"> 0 minute: 17-3=0, 17-2=0, 17-1=0, 17-0=0 10 minutes: 17-3=0, 17-2=0, 17-1=0, 17-0=1 20 minutes: 17-3=0, 17-2=0, 17-1=1, 17-0=0 30 minutes: 17-3=0, 17-2=0, 17-1=1, 17-0=1 40 minutes: 17-3=0, 17-2=1, 17-1=0, 17-0=0 50 minutes: 17-3=0, 17-2=1, 17-1=0, 17-0=1 60 minutes: 17-3=0, 17-2=1, 17-1=1, 17-0=0 70 minutes: 17-3=0, 17-2=1, 17-1=1, 17-0=1 80 minutes: 17-3=1, 17-2=0, 17-1=0, 17-0=0 90 minutes: 17-3=1, 17-2=0, 17-1=0, 17-0=1 100 minutes: 17-3=1, 17-2=0, 17-1=1, 17-0=0 110 minutes: 17-3=1, 17-2=0, 17-1=1, 17-0=1 120 minutes: 17-3=1, 17-2=1, 17-1=0, 17-0=0 130 minutes: 17-3=1, 17-2=1, 17-1=0, 17-0=1 140 minutes: 17-3=1, 17-2=1, 17-1=1, 17-0=0 150 minutes: 17-3=1, 17-2=1, 17-1=1, 17-0=1 	0	0	0
	1			1	1	1
	2			1	1	1
	3			0	0	0
	4	Density selection at scanning tab paper	<ul style="list-style-type: none"> 80: 17-6=0, 17-5=0, 17-4=0 40 (Lightest): 17-6=0, 17-5=0, 17-4=1 60: 17-6=0, 17-5=1, 17-4=0 100: 17-6=0, 17-5=1, 17-4=1 120: 17-6=1, 17-5=0, 17-4=0 160: 17-6=1, 17-5=0, 17-4=1 200: 17-6=1, 17-5=1, 17-4=0 255 (Darkest): 17-6=1, 17-5=1, 17-4=1 	0	0	0
	5			0	0	0
	6			0	0	0
	7	Switching of custom size paper in printer mode	<ul style="list-style-type: none"> 0: Rotate 1: Not rotate 	1	1	1
18	0	Faulty part isolation: Tray /1	<ul style="list-style-type: none"> 0: Normal 1: Unusable 	0	0	0
	1	Faulty part isolation: Tray /2		0	0	0
	2	Faulty part isolation: Tray /3		0	0	0
	3	Faulty part isolation: Tray /4		0	0	0
	4	Faulty part isolation: RADF		0	0	0
	5	Faulty part isolation: Tray /7	<ul style="list-style-type: none"> 0: Normal 1: Unavailable 	0	0	0
	6	Faulty part isolation: Tray /8	<ul style="list-style-type: none"> 0: Normal 1: Unusable 	0	0	0
	7	Faulty part isolation: HDD1		0	0	0
19	0	Fusing temperature setting	<ul style="list-style-type: none"> Standard: 19-3=0, 19-2=0, 19-1=0, 19-0=0 	0	0	0
	1	Temperature up: Decrease insufficient fusing or wrapping jam at fusing.		0	0	0

DIPSW	Bit	Function	Set value	Default setting		
				Japan	Inch	Metric
	2	Temperature down: decrease paper exit curling or waving.	<ul style="list-style-type: none"> Standard + 5°C: 19-3=0, 19-2=0, 19-1=0, 19-0=1 Standard + 10°C: 19-3=0, 19-2=0, 19-1=1, 19-0=0 Standard + 15°C: 19-3=0, 19-2=0, 19-1=1, 19-0=1 Standard - 5°C: 19-3=0, 19-2=1, 19-1=0, 19-0=0 Standard - 10°C: 19-3=0, 19-2=1, 19-1=0, 19-0=1 Standard - 15°C: 19-3=0, 19-2=1, 19-1=1, 19-0=0 Standard - 15°C: 19-3=0, 19-2=1, 19-1=1, 19-0=1 Standard - 15°C: 19-3=1, 19-2=0, 19-1=0, 19-0=0 Standard - 15°C: 19-3=1, 19-2=0, 19-1=0, 19-0=1 Standard - 15°C: 19-3=1, 19-2=0, 19-1=1, 19-0=0 Standard - 15°C: 19-3=1, 19-2=0, 19-1=1, 19-0=1 Standard - 15°C: 19-3=1, 19-2=1, 19-1=0, 19-0=0 Standard - 15°C: 19-3=1, 19-2=1, 19-1=0, 19-0=1 Standard - 15°C: 19-3=1, 19-2=1, 19-1=1, 19-0=0 Standard - 15°C: 19-3=1, 19-2=1, 19-1=1, 19-0=1 	0	0	0
	3	Note · When setting the [Fusing temperature setting] display to the DIPSW2-0 adjustment menu to "1", the setting can be made up to 30°C in [MACHINE] - [Adjustment] - [Fixing temperature adjustment]. However during printing, the temperature is controlled to up to -15°C.		0	0	0
	4	Black band width when the inside temperature is high Black band is not created when "1" is selected for this setting and the drum temperature sensor (TH5) detects temperature above 45°C. Note · The setting of "No black band" does not perform the black band creation control linked to the toner supply. Though, it creates the black band created regularly.	<ul style="list-style-type: none"> 0: Changes in synchronization with toner supply amount 1: No black band 	0	0	0
	5	Fusing pressure control at initial print In case the fusibility is not enough until 100 sheets of paper, after starting print from idling, improve the fusibility by increasing the fusing pressure 1 level for specified time. Note · For 180 seconds after starting print, fusing pressure increases the level for 1. · By setting it to "CHANGE PRESSURE", it increases the level for 1 under all environments.	<ul style="list-style-type: none"> 0: Not change pressure 1: Change pressure 	0	0	0
	6	Maximum black band width of black band creation control (low coverage)	<ul style="list-style-type: none"> 16mm: 19-7=0, 19-6=0 10mm: 19-7=0, 19-6=1 5mm: 19-7=1, 19-6=0 22mm: 19-7=1, 19-6=1 	0	0	0
	7	Sets the maximum width of the black band in black band creation control. When the cleaning fault occurs on the low coverage print after the high coverage print, make the black band creation width narrower. When the overflow toner occurs on the low coverage print, make the black band creation width wider.		0	0	0
	20	0	Display of [Both Sides Adjust] on "MACHINE" screen <ul style="list-style-type: none"> 0: Not displayed 1: Displayed 	0	0	0
	1	Image scanning area with image shift Normal: Compare the original size and the transfer paper size, the smaller one is to be the image area. Original priority: Original size is to be the image area.	<ul style="list-style-type: none"> 0: Normal 1: Original priority 	0	0	0
	2	Total page number standard in stamp mode	<ul style="list-style-type: none"> 0: Based on original 1: Based on transfer paper 	0	0	0

DIPSW	Bit	Function	Set value	Default setting		
				Japan	Inch	Metric
	3	Skip page and skip page number in the program job	<ul style="list-style-type: none"> 0: Skip page only 1: Skip page and skip page number 	0	0	0
	4	Faulty part isolation: Tray /5	<ul style="list-style-type: none"> 0: Normal 1: Unusable 	0	0	0
	5	Faulty part isolation: Tray /6		0	0	0
	6	-	<ul style="list-style-type: none"> 0: - 1: - 	0	0	0
	7			0	0	0
21	0	Mixed size paper staple	<ul style="list-style-type: none"> 0: Allowed (real-time output) 1: Prohibited (batch output) 	0	0	0
	1	Double side print size specification of printer job (This setting prints on the singular paper when the size is different from the front to back side.)	<ul style="list-style-type: none"> 0: Disabled 1: Enabled 	0	0	0
	2	Target settings to judge unmatched paper type in process adjustment value of a job read out from HDD	<ul style="list-style-type: none"> 0: Target settings 1: Not target settings (not overwrites the process adjustment value) 	0	0	0
	3	PB warm up control switchover	<ul style="list-style-type: none"> 0: No warm-up during power ON 1: Warm-up during power ON 	0	0	0
	4	PB heater control switchover	<ul style="list-style-type: none"> 0: Heater turns OFF automatically in 1 minute after finishing perfect binding. 1: Heater does not turn OFF automatically in 1 minute after finishing perfect binding. 	0	0	0
	5	Touch-panel adjustment method	<ul style="list-style-type: none"> 0: Utility/setting button +hard key 1: hard key 	0	0	0
	6	Target settings to judge unmatched paper type in front and back registrations value of a job read out from HDD	<ul style="list-style-type: none"> 0: Target settings 1: Not target settings (not overwrites the front and back registrations value) 	0	0	0
	7	Switchover of scanner screen reset button Decides whether to skip to sending mode selection screen or not when pressing the reset button on the scanner screen.	<ul style="list-style-type: none"> 0: Reset 1: Skip to Reset + Sending mode selection screen 	0	0	0
22	0	Machine NIC/Controller NIC setting	<ul style="list-style-type: none"> 0: Disabled 1: Enabled 	1	1	1
	1	Number of punch holes	<ul style="list-style-type: none"> Not used: 22-2=0, 22-1=0 2 and 3 holes: 22-2=0, 22-1=1 2 and 4 holes: 22-2=1, 22-1=0 Not used: 22-2=1, 22-1=1 	1	1	0
	2			0	0	1
	3	Image position for the custom size original (when using DF)	<ul style="list-style-type: none"> 0: Based on user selection 1: Based on APS at DF 	0	0	0
	4	Function of power save button	<ul style="list-style-type: none"> 0: Enabled 1: Disabled 	0	0	0
	5	SD trimmer board moving timing adjustment	<ul style="list-style-type: none"> 0: Not displayed 1: Displayed 	0	0	0
	6	Operation when staple empty of FNS	<ul style="list-style-type: none"> 0: Staple supply request 1: Selecting between staple supply or staple release 	0	0	0
	7	Jam screen selection	<ul style="list-style-type: none"> 0: Jam position display 1: Described by illustration 	0	0	0
23	0	-	<ul style="list-style-type: none"> 0: - 1: - 	0	0	0
	1			0	0	0
	2			0	0	0
	3			0	0	0
	4			0	0	0
	5			0	0	0
	6	FS-521 rear side staple angle	<ul style="list-style-type: none"> 0: 45 degrees diagonal 1: Parallel 	0	0	0
	7	Custom size image rotation switchover (LEF original → SEF paper) Note · Rotate when DIPSW17-1 is "1".	<ul style="list-style-type: none"> 0: Rotate 1: Not rotate 	0	0	0

DIPSW	Bit	Function	Set value	Default setting		
				Japan	Inch	Metric
24	0	Scanner density switchover in 1200dpi Conduct the image processing on the scanned data to set the image density proper to the usage. Copier (with engine peculiarity gamma): Conduct the image processing based on outputting the scanned data with PRO1200 again, then send the data to IC. The image density outputted from PRO1200 is the same as the copy. Printer (without engine peculiarity gamma): Conduct the image processing based on checking the scanned data on the screen of PC, then send the data to IC. The image density outputted from PRO1200 is darker than the copy.	<ul style="list-style-type: none"> 0: Copier (with engine peculiarity gamma): 1: Printer (without engine peculiarity gamma): 	0	0	0
	1	Display objects in Job History List	<ul style="list-style-type: none"> 0: Output job 1: Output job + Incomplete job 	0	0	0
	2	-	<ul style="list-style-type: none"> 0: - 1: - 	0	0	0
	3	PF-703 heater control	<ul style="list-style-type: none"> 0: Enabled 1: Disabled 	0	0	0
	4	Z-Fold output number limit	<ul style="list-style-type: none"> 50 sheets: 24-5=0, 24-4=0 40 sheets: 24-5=0, 24-4=1 30 sheets: 24-5=1, 24-4=0 20 sheets: 24-5=1, 24-4=1 	0	0	0
	5			0	0	0
	6	Z-Fold + Staple output number limit	<ul style="list-style-type: none"> 5 sheets: 24-7=0, 24-6=0 8 sheets: 24-7=0, 24-6=1 10 sheets: 24-7=1, 24-6=0 3 sheets: 24-7=1, 24-6=1 	0	0	0
	7			0	0	0
25	0	Stop setting when low coverage continues When the cleaning fault occurs on the low coverage print, set this setting to "1" to reduce the cleaning fault by stopping the drum periodically.	<ul style="list-style-type: none"> 0: Not Set 1: Set 	0	0	0
	1	High coverage productivity down Reduce the marks on drum and the cleaning fault by decreasing the productivity and reducing the load of the cleaning blade. I.5.5.7 High coverage productivity down threshold setting shows the relationship between this setting and the setting of "Setting menu" - "Function Setting" - "Individual Function Change". See the list only as a guide.	<ul style="list-style-type: none"> 0: Productivity priority 1: Blade durability priority 	0	0	0
	2	Maximum black band width of black band creation control (high coverage) Specifies Maximum black band width of black band creation control When the cleaning fault occurs on the high coverage print, make the black band width wider. However, the marks on drum tend to occur frequently. When the marks on drum occur on the high coverage print, make the black band width narrower. However, the cleaning fault tends to occur frequently.	<ul style="list-style-type: none"> 12mm: 25-3=0, 25-2=0 24mm: 25-3=0, 25-2=1 6mm: 25-3=1, 25-2=0 No black band: 25-3=1, 25-2=1 	0	0	0
	3			0	0	0
	4	Initialization of [Air Assist] setting when recalling paper profile	<ul style="list-style-type: none"> 0: Disabled 1: Enabled 	0	0	0
	5	Change of sheet insertion tray in printer mode when executing Insert Sheet, Chapters or Booklet + Wait output jobs	<ul style="list-style-type: none"> 0 Change collectively 1: Change separately 	0	0	0
	6	Function to latch the start button (During lifting the FS tray and warm-up after releasing JAM)	<ul style="list-style-type: none"> 0: Disabled 1: Enabled 	0	0	0
	7	-	<ul style="list-style-type: none"> 0: - 1: - 	0	0	0
26	0			0	0	0
	1			0	0	0
	2			0	0	0
	3	Multi feed detection (Main body)	<ul style="list-style-type: none"> 0: Enabled 1: Disabled 	0	0	0
	3	Multi feed detection (PI/PB)		0	0	0

DIPSW	Bit	Function	Set value	Default setting		
				Japan	Inch	Metric
	4	PF forced separation clutch control	<ul style="list-style-type: none"> 0: Operate only in high temp. 1: Operate always 	0	0	0
	5	-	<ul style="list-style-type: none"> 0: - 1: - 	0	0	0
	6	-	<ul style="list-style-type: none"> 0: - 1: - 	0	0	0
	7	Multi feed detection control (DF)	<ul style="list-style-type: none"> 0: Enabled 1: Disabled 	0	0	0
27	0	Paper weight-line speed control switchover	<ul style="list-style-type: none"> 0: For Japan 1: For other than Japan 	0	1	1
	1	-	<ul style="list-style-type: none"> 0: - 1: - 	0	0	0
	2	Image density selection (toner control patch density) This setting changes the developing bias for creating the toner control patch formed on the drum to determine toner density, thus changing the image density. Note · Be sure to conduct [Auto Maximum Density Adjustment] after changing this setting. · There are 2 kinds of functions to change the image density; [Image Density Selection] on "Utility menu", and image density selection (DIPSW27-2/3) For the priority of adjustment, adjust in the following order. 1) [IMAGE DENSITY SELECTION] on "Setting menu" 2) Image Density Selection (DIPSW27-2/3)	<ul style="list-style-type: none"> Standard: 27-3=0, 27-2=0 Increase the image density (about 0.025 in reflected density, the toner consumption increases about 5%): 27-3=0, 27-2=1 Increase the image density more (about 0.05 in reflected density, the toner consumption increases about 10%): 27-3=1, 27-2=0 Decrease the image density (about 0.05 in reflected density, the toner consumption decreases about 10%): 27-3=1, 27-2=1 	0	0	0
	3	Image density selection (toner control patch density) This setting changes the developing bias for creating the toner control patch formed on the drum to determine toner density, thus changing the image density. Note · Be sure to conduct [AUTO MAXIMUM DENSITY ADJUSTMENT] after changing this setting. · There are 2 kinds of functions to change the image density; [Image Density Selection] on "Utility menu", and image density selection (DIPSW27-2/3) For the priority of adjustment, adjust in the following order. 1) [Image Density Selection] on "Utility menu" 2) Image Density Selection (DIPSW27-2/3)		0	0	0
	4	-	<ul style="list-style-type: none"> 0: - 1: - 	0	0	0
	5	-	<ul style="list-style-type: none"> 0: - 1: - 	0	0	0
	6	Dot complement in skew adjustment Set this setting ON when moire occurs on the image in the skew correction during scanning. It is effective for moire occurs at dot area with even density.	<ul style="list-style-type: none"> 0: Disabled 1: Enabled 	0	0	0
	7	Z-fold for 5 1/2 x 11S paper in printer job/mixed original sizes copy mode	<ul style="list-style-type: none"> 0: OFF 1: ON 	0	0	0
	0	Selection of page margin method set on main body for printer job	<ul style="list-style-type: none"> 0: Side1 and side2 collectively 1: Side1 and side2 separately 	0	0	0
	1	telnet & ftp port	<ul style="list-style-type: none"> 0: Enabled 1: Disabled 	0	0	0
28	2	Changing direction of adjusting print start position at back side in fine increments (other than book)	<ul style="list-style-type: none"> 0: Shift to the opposite direction to the front side 1: Shift to the same direction as the front side 	0	0	0
	3	Changing direction of adjusting print start position at back side in fine increments (book)	<ul style="list-style-type: none"> 0: Shift to the same direction as the front side 1: Shift to the opposite direction to the front side 	0	0	0

DIPSW	Bit	Function	Set value	Default setting		
				Japan	Inch	Metric
	4	Image shift when outputting the custom size print job The shift of the image is caused depending on the size of paper when it is sent the custom size image as print Job. (The output is different from the thumbnail displayed image). For particulars, refer to I.5.5.8 Image shift when outputting the custom size print job.	<ul style="list-style-type: none"> 0: Based on paper 1: Based on image 	0	0	0
	5	Layout change when setting "2 in 1+Folding +Outside Print" in FD	<ul style="list-style-type: none"> 0: 1st page on the right, 2nd page on the left 1: 1st page on the left, 2nd page on the right 	0	0	0
	6	Standard of shifting with the shifting direction specified 2 repeats.	<ul style="list-style-type: none"> 0: Based on image 1: Based on paper 	0	0	0
	7	Release SD-506 limitation for multi half-fold	<ul style="list-style-type: none"> 0: Limited 1: Not Limited 	0	0	0
29	0	-	<ul style="list-style-type: none"> 0: - 1: - 	0	0	0
	1	Switchover the limit of loading to LS stacker	<ul style="list-style-type: none"> 0: Limit by weight 1: 5000 sheets uniformly 	0	0	0
	2	-	<ul style="list-style-type: none"> 0: - 1: - 	0	0	0
	3			0	0	0
	4	Operation control switchover of front cooling fan (FM18)	<ul style="list-style-type: none"> 0: Idling OFF 1: ON for 10 minutes after finishing printing (when the drum temperature is 45°C or more) 	0	0	0
	5	-	<ul style="list-style-type: none"> 0: - 1: - 	1	1	1
	6			0	0	0
	7			0	0	0
30	0	Service mode, restriction of data collection display	<ul style="list-style-type: none"> 0: Restricted 1: Not restricted 	0	0	0
	1			0	0	0
	2			0	0	0
	3			1	1	1
	4			0	0	0
	5			0	0	0
	6			0	0	0
31	0	Printer input delay control Prevents the memory overflow by delaying the data input time when it occurs in printer job.	<ul style="list-style-type: none"> Without delay control: 31-3=0, 31-2=0 Delay control from 10% left: 31-3=0, 31-2=1 Delay control from 20% left: 31-3=1, 31-2=0 Delay control from 30% left: 31-3=1, 31-2=1 	0	0	0
	1			0	0	0
	2			1	1	1
	3			1	1	1
	4			0	0	0
	5			0	0	0
	6			0	0	0
32	0	Perfect binding punch operation	<ul style="list-style-type: none"> 0: Disabled 1: Enabled 	0	0	0
	1			0	0	0

DIPSW	Bit	Function	Set value	Default setting		
				Japan	Inch	Metric
	2	Periodical black band creation In the low productivity mode which paper interval is 200mm or longer, create the black band in the narrowest width at every 100mm to prevent the deterioration of toner and the damage on the cleaning blade. Note · Usually do not set this setting to "0". · When setting it to "0" and using the low productivity mode often under the high temperature/high humidity environment, the cleaning fault may occur.	• 0: No black band • 1: Create at every 100mm	1	1	1
	3	-	• 0: - • 1: -	1	1	1
	4	-	-	0	0	0
	5	In platen mode, 180 degrees rotation output	• 0: Enabled • 1: Disabled	0	0	0
	6	-	• 0: - • 1: -	0	0	0
	7	-	-	0	0	0
33	0	Faulty part isolation: FD-fold/punch function	• 0: Normal • 1: Unusable	0	0	0
	1	-	• 0: - • 1: -	0	0	0
	2	Faulty part isolation: FD main tray paper exit	• 0: Normal • 1: Unusable	0	0	0
	3	Faulty part isolation: PI function	-	0	0	0
	4	-	• 0: - • 1: -	0	0	0
	5	-	-	0	0	0
	6	Faulty part isolation: LS main tray (1st)	• 0: Normal • 1: Unusable	0	0	0
34	7	Faulty part isolation: LS main tray (2nd)	-	0	0	0
	0	Faulty part isolation: SD saddle stitch	-	0	0	0
	1	Faulty part isolation: SD multi center fold	-	0	0	0
	2	Faulty part isolation: SD multi tri-fold	-	0	0	0
	3	Faulty part isolation: SD trimming	-	0	0	0
	4	Faulty part isolation: SD-tandem, sub tray paper exit	-	0	0	0
	5	-	• 0: - • 1: -	0	0	0
	6	-	-	0	0	0
35	7	Faulty part isolation: PB-503 relay conveyance section	• 0: Normal • 1: Unusable	0	0	0
	0	Faulty part isolation: FS staple function	-	0	0	0
	1	Faulty part isolation: FS main tray paper exit	-	0	0	0
	2	Faulty part isolation: FS	-	0	0	0
	3	Faulty part isolation: PB cover paper insertion	-	0	0	0
	4	Faulty part isolation: PB binder function	-	0	0	0
	5	Faulty part isolation: PB	-	0	0	0
	6	-	• 0: - • 1: -	0	0	0
36	7	Faulty part isolation: RU	• 0: Normal • 1: Unavailable for 2 sheets (Available in less productivity)	0	0	0
	0	Fusing heat roller temperature control In case the uneven brightness or the blister occurs on coated paper, prevent the problem by lowering the control temperature of the fusing heating roller. However, the fusibility tends to be decreased on the rough surface paper when lowering the temperature. Note · In case the uneven brightness or the blister occurs on coated paper with the default setting, conduct the following steps to change the setting. 1) Set 105°C at all times and check that there is no uneven brightness or blister. 2) In case it is not improved, set the heater OFF.	• Normal control: 36-1=0, 36-0=0 • 175 °C at all times: 36-1=0, 36-0=1 • 105 °C at all times: 36-1=1, 36-0=0 • Heater OFF: 36-1=1, 36-0=1	0	0	0

DIPSW	Bit	Function	Set value	Default setting		
				Japan	Inch	Metric
	1	<ul style="list-style-type: none"> Be sure not to use 175°C setting since 175°C and heater OFF are switched depending on the environment in the normal control. 		0	0	0
	2	Fusibility improvement control at print starting When the printing starts from the idling statement under the environment other than low temperature and the fusibility is not enough on the image printed less than 100 sheets, change this setting to "1". Note <ul style="list-style-type: none"> When changing this setting to "1", FPOT (first printout time) is extended 3 seconds to 7 seconds under every environments until the detection temperature of the fusing roller gets to the specified temperature. 	<ul style="list-style-type: none"> 0: Conducted only under low temperature 1: Create under any environment 	0	0	0
	3	Discharge before cleaning adjustment Switch the function setting of the PCC output, the discharge before cleaning adjustment display, and Dipsw25-2/3 maximum black band width of black band creation control (high coverage).	<ul style="list-style-type: none"> 0: Disabled 1: Enabled 	1	1	1
	4	Switchover of drum preparatory rotation time (morning)	<ul style="list-style-type: none"> Normal control (2.5 minutes): 36-5=0, 36-4=0 Extend the preparatory rotation time under high-humidity condition (5 minutes): 36-5=0, 36-4=1 Extend the preparatory rotation time under normal/high-humidity condition (5 minutes): 36-5=1, 36-4=0 Extend the preparatory rotation time regardless of the condition (5 minutes): 36-5=1, 36-4=1 	0	0	0
	5	When the sub power switch (SW2) is turned OFF for a long period of time and printing immediately after turning it ON, the transfer charge leak trails may occur on the back side of thin paper, due to the decrease of charged potential of the developer. To prevent this problem, set the drum preparatory rotation time in the morning in accordance with each environment.		0	0	0
	6	-	<ul style="list-style-type: none"> 0: - 1: - 	0	0	0
	7	Prohibit 50g/m ² paper for inside in perfect binding/Release limit Inside paper weights 50g/m ² is prohibited for perfect binding. By changing this setting to "1" with the function to be set in the case of using 50g/m ² paper for inside, the following items are released. <ul style="list-style-type: none"> Prohibit 50g/m² paper for inside Limitation to 300 sheets for inside This setting has a risk like jams caused by binding strength or curling.	<ul style="list-style-type: none"> 0: Restricted 1: Allowed 	0	0	0
37	0	Faulty part isolation: PI-PFU Tray2	<ul style="list-style-type: none"> 0: Normal 1: Unusable 	0	0	0
	1	Faulty part isolation: PI-PFU Tray3		0	0	0
	2	PB perfect binding limit (includes Z-Fold)	<ul style="list-style-type: none"> 0: Enabled 1: Disabled 	0	0	0
	3	Upper limit setting for the number of papers to be stapled	<ul style="list-style-type: none"> 0: Limited according to paper size, paper weight, or paper type, whichever is the minimum. 1: Limited according to the paper size 	0	0	0
	4	Upper limit setting for the number of papers to be ejected for stapling or folding	<ul style="list-style-type: none"> 0: Limited by the software 1: Limited by the FS-521 main tray lower limit sensor 	0	0	0
	5	-	<ul style="list-style-type: none"> 0: - 1: - 	0	0	0
	6			1	1	1
	7			0	0	0
38	0	Default folder when selecting box function	<ul style="list-style-type: none"> 0: Private folder 1: Shared folder 	0	0	0
	1	File name overwriting with box function	<ul style="list-style-type: none"> 0: Disabled 1: Enabled 	0	0	0

DIPSW	Bit	Function	Set value	Default setting		
				Japan	Inch	Metric
	2	Print quantity and output page selection for Wait or Proof output for box function	<ul style="list-style-type: none"> • 0: Enabled • 1: Disabled 	0	0	0
	3	APS when starting copier job output Set whether conduct APS when starting a copier job. This setting is enabled when the [ATS Permit] in the utility menu is set to ON.	<ul style="list-style-type: none"> • 0: None • 1: Provided 	0	0	0
	4	Automatic change of tray setting names	<ul style="list-style-type: none"> • 0: Automatically changes the name to the name of selected paper type, when paper type, paper weight, color, and punch settings are changed. • 1: Automatically changes the name to the name of selected paper type, when the name has been set to "paper type". 	0	0	0
	5	Peripheral image erasure of custom size by printer job	<ul style="list-style-type: none"> • 0: Disabled • 1: Enabled 	0	0	0
	6	Buck side trailing edge erasure amount with duplex output	<ul style="list-style-type: none"> • 2mm* (copier) / 0mm (printer): 38-7=0, 38-6=0 • * It becomes 4mm when the paper size is user-defined with the DIPSW38-5 has been set to "1". • 6mm: 38-7=0, 38-6=1 • 8mm: 38-7=1, 38-6=0 • 10mm: 38-7=1, 38-6=1 	0	0	0
	7			0	0	0
39	0	Tray1 paper leading edge buckling prevention control	<ul style="list-style-type: none"> • 0: Disabled • 1: Enabled 	0	0	0
	1	Tray2 paper leading edge buckling prevention control		0	0	0
	2	Tray3 paper leading edge buckling prevention control (PF-702)		0	0	0
	3	Tray4 paper leading edge buckling prevention control (PF-702)		0	0	0
	4	Tray5 paper leading edge buckling prevention control (PF-702)		0	0	0
	5	Tray6 paper leading edge buckling prevention control (PF-702)		0	0	0
	6	Tray7 paper leading edge buckling prevention control (PF-702)		0	0	0
	7	Tray8 paper leading edge buckling prevention control (PF-702)		0	0	0
40	0	Carrying over the job for next day	<ul style="list-style-type: none"> • 0: Enabled • 1: Disabled • * Conditions for setting the security enhance mode to ON • Administrator Authentication: ON • CE Authentication: ON • DIPSW40-0-1 (Carrying over the job for next day: Disabled) • DIPSW16-7-0 (NIC of E-Mail CS Remote Care: Use the controller NIC) • Removal HDD is not used 	0	0	0

DIPSW	Bit	Function	Set value	Default setting		
				Japan	Inch	Metric
	1	Overwrite all HDD data SW allows both a part of the data of the NVRAM board (NRB) and all HDD data to be deleted before the disposal of the machine. Note Setting this mode to "1" and executing the following step completely disable the NVRAM board (NRB). The restoring procedure is not available and the machine cannot be used again. Therefore, do not execute the steps except when throwing the machine away. "Setting menu" - "06 Administrator Setting" - "07 Security Setting" - "02 HDD Management Setting" - "05 Delete All Data" - "Deletion Execute" on "Mode 1" to "Mode 8"	<ul style="list-style-type: none"> • 0: Restrict • 1: Allow 	0	0	0
	2	Cover sheet single fold control with folding&stapling/multi center Enabling this setting improves accuracy of folding cover paper.	<ul style="list-style-type: none"> • Normal control: 40-3=0, 40-2=0 • Enables the control under a certain condition: 40-3=0, 40-2=1 • * Enables the control only when the weight of cover paper fed from the main body is 131g/m² or heavier. • Enables the control all the time: 40-3=1, 40-2=0 • -: 40-3=1, 40-2=1 	0	0	0
	3			0	0	0
	4	SEF/LEF mixed output in printer mode	<ul style="list-style-type: none"> • 0: Restrict the mixed output • 1: Permit the mixed output 	0	0	0
	5	Erasure amount setting of front side trailing edge	<ul style="list-style-type: none"> • 2mm (copier)* / 0mm (printer): 40-6=0, 40-5=0 • *It becomes 4mm when the paper size is user-defined with the DIPSW38-5 has been set to "1". • 6mm: 40-6=0, 40-5=1 • 8mm: 40-6=1, 40-5=0 • 10mm: 40-6=1, 40-5=1 	0	0	0
	6			0	0	0
	7	Original setting direction switchover in mixed original scan mode Switch between disabled/enabled of original setting direction key when scanning mixed originals.	<ul style="list-style-type: none"> • 0: Disabled • 1: Enabled 	0	0	0
41	0	-	<ul style="list-style-type: none"> • 0: - • 1: - 	0	0	0
	1			0	0	0
	2			0	0	0
	3			0	0	0
	4			0	0	0
	5			0	0	0
	6			0	0	0
	7			0	0	0
42	0	TIFF direct print APS target paper size (8 ¹ / ₂ x 13, 8 ¹ / ₄ x 13, 8 ¹ / ₈ x 13 ¹ / ₄ , 8 x 13)	<ul style="list-style-type: none"> • 8 x 13: 42-2=0, 42-1=0 • 8¹/₄ x 13: 42-2=0, 42-1=1 • 8¹/₂ x 13: 42-2=1, 42-1=0 • 8¹/₈ x 13¹/₄: 42-2=1, 42-1=1 	0	0	0
	1			0	0	0
	2			0	0	0
	3			0	0	0
	4			0	0	0
	5			0	0	0
	0	-	<ul style="list-style-type: none"> • 0: - • 1: - 	0	0	0
	1			0	0	0
	0	TIFF direct print resolution change When "TIFF direct print" is used, all TIFF data is printed by 600dpi resolution. For example, when 200dpi resolution of A4 size TIFF data is printed by "direct print", DIPSW (0): The resolution of the TIFF data is converted into 600dpi, it is reduced and printed. DIPSW (1): The TIFF data is not reduced and it is printed correctly.	<ul style="list-style-type: none"> • 0: Resolution priority (Changed 600dpi) • 1: Output size priority 	0	0	0
	1			0	0	0

DIPSW	Bit	Function	Set value	Default setting		
				Japan	Inch	Metric
	6	-	<ul style="list-style-type: none"> • 0: - • 1: - 	0	0	0
	7			0	0	0
43	0	Change of the scanner compression method	<ul style="list-style-type: none"> • 0: MMR • 1: MH 	0	0	0
	1	-	<ul style="list-style-type: none"> • 0: - • 1: - 	0	0	0
	2			0	0	0
	3			0	0	0
	4			0	0	0
	5			0	0	0
	6			0	0	0
	7			0	0	0
44	0			0	0	0
	1			0	0	0
	2			0	0	0
	3			0	0	0
	4			0	0	0
	5			0	0	0
	6			0	0	0
	7			0	0	0
45	0			0	0	0
	1			0	0	0
	2			0	0	0
	3			0	0	0
	4			0	0	0
	5			0	0	0
	6			0	0	0
	7			0	0	0
46	0	Visual Counter Master counter value read-off intervals	<ul style="list-style-type: none"> • Once every 10 minutes: 46-1=0, 46-0=0 • Once every 1 minutes: 46-1=0, 46-0=1 • Not read off: 46-1=1, 46-0=0 • Once every 1 hours: 46-1=1, 46-0=1 	0	0	0
	1			0	0	0
	2	-	<ul style="list-style-type: none"> • 0: - • 1: - 	0	0	0
	3	Font backup data creation button display	<ul style="list-style-type: none"> • 0: Not display • 1: Display 	0	0	0
	4	-	<ul style="list-style-type: none"> • 0: - • 1: - 	0	0	0
	5			0	0	0
	6			0	0	0
	7			0	0	0
47	0			0	0	0
	1			0	0	0
	2			0	0	0
	3			0	0	0
	4			0	0	0
	5			0	0	0
	6			0	0	0
	7			0	0	0
48	0			0	0	0
	1			0	0	0
	2			0	0	0
	3	Hard disk /2 (HDD2) installation position	<ul style="list-style-type: none"> • 0: Built-in IC unit • 1: RH-101 (removable) 	0	0	0
	4	-	<ul style="list-style-type: none"> • 0: - • 1: - 	0	0	0
	5			0	0	0
	6			0	0	0

DIPSW	Bit	Function	Set value	Default setting		
				Japan	Inch	Metric
	7			0	0	0

5.5.3 Service Center TEL/FAX

(1) Usage

Register telephone and fax numbers of a service center that will be displayed in help information or when a malfunction occurs.

(2) Procedure

- "Service Mode menu screen"
Press [03 System Setting].
- "System Setting Menu screen"
Press [02 Service Center TEL/FAX].
- "Service Center TEL/FAX setting screen"
Press either [Service Center TEL (16)] or [Service Center FAX (16)] to be set.
- Enter the telephone number or fax number you register through the numeric buttons.

Note

- When a number is less than 16 digits, be sure to use hyphen (-) to fill up the blanks.

- Press [OK] to register the data.
Press [Cancel] to cancel updating.

5.5.4 M/C Serial Number Setting

(1) Usage

Set and display the serial number of the main body and options.

Note

- The serial number of the main body cannot be changed.

(2) Procedure

- "Service Mode menu screen"
Press [03 System Setting].
- "System Setting Menu screen"
Press [03 M/C Serial Number Setting].
- "Serial Number Setting screen"
Select the option, then a keyboard screen appears. Enter a serial number using the alphanumeric buttons.
- Press [OK] to register the data.
Press [Cancel] to cancel updating.

5.5.5 Setup Date/Business Setting

(1) Usage

Set the starting date of the total counter that is displayed on the utility mode and the type of business of the client that is notified by the CSRC.
When setting the DIPSW 16-4 to 1, the starting date of the total counter is not displayed.

(2) Procedure

- "Service Mode menu screen"
Press [03 System Setting].
- "System Setting Menu screen"
Press [04 Setup Date/Business Setting].
- "Setup Date/Type of Business Setting screen"
Select the type of business. Not to specify the type of business, select [Unknown].
- "Setup Date/Type of Business Setting screen"
Enter an installation date with the numeric buttons. Press [Set] to highlight the Year/Month/Date to be entered.
- Press [OK] to update data.
Press [Cancel] to cancel updating.

5.5.6 Definition change of the large-size paper in counter control

Default varies depending on the destination.

Refer to the following table about the default for each destination.

Destination	Counter	large-size count number			DIPSW initial setting
		Standard-size paper		Custom size paper/ Wide Paper	
		A3 / 11 x 17	B4 / 8 ¹ / ₂ x 14		
Japan	PM counter	1	1	1	DIPSW 8-6: 0
	Total counter	1	1	1	DIPSW 4-7: 0 DIPSW 10-4: 0 DIPSW 10-3: 0
Europe	PM counter	1	1	1	DIPSW 8-6: 0

	Total counter	1	1	1	DIPSW 4-7: 0 DIPSW 10-4: 0 DIPSW 10-3: 0
North America	PM counter	1	1	1	DIPSW 8-6: 0
	Total counter	2	1	2 (391mm or more)	DIPSW 4-7: 1 DIPSW 10-4: 0 DIPSW 10-3: 0
Others	PM counter	1	1	1	DIPSW 8-6: 0
	Total counter	2	2	2 (331mm or more)	DIPSW 4-7: 1 DIPSW 10-4: 1 DIPSW 10-3: 0

5.5.7 High coverage productivity down threshold setting

Reduce the marks on drum and the cleaning fault by decreasing the productivity and reducing the load of the cleaning blade.

The following list shows the relationship between this setting and the setting of "Setting menu" - "Function Setting" - "Individual Function Change". See the list only as a guide.

DIPSW25-1	High coverage control	Productivity
0	Quality	100% productivity for 0 to 30% coverage, 1/2 productivity for 30 to 40%, 1/3 productivity for 40% or more
	Performance	100% productivity for 0 to 35% coverage, 1/2 productivity for 35 to 45%, 1/3 productivity for 45% or more
	Off	Fixed to 100% productivity
1	Quality	100% productivity for 0 to 15% coverage, 1/2 productivity for 15 to 40%, 1/3 productivity for 40% or more
	Performance	100% productivity for 0 to 20% coverage, 1/2 productivity for 20 to 45%, 1/3 productivity for 45% or more
	Off	Fixed to 100% productivity

5.5.8 Image shift when outputting the custom size print job

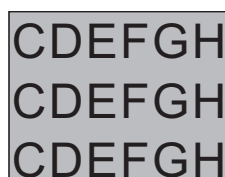
The shift of the image is caused depending on the size of paper when it is sent the custom size image as print Job. (The output is different from the thumbnail displayed image)

Mode	28-4 : 1	28-4 : 0
Paper size > Image	Normal	Normal
Paper size ≤ Image	Normal	Image shift

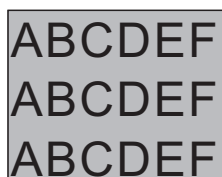
[Image]



[Normal]



[Image Shift]



5.6 Counter

5.6.1 Maintenance Counter

(1) OUTLINE

Configure the reset and cycle of the PM count, developer count and drum count.

Note

- The PM count is different in the count condition depending on the setting of DIPSW8-6.
When set to "0": 1 count for a single side of each large paper exit, and 2 counts for a double side.
When set to "1": 2 counts for a single side of each large paper exit (the definition of large-size paper is set by DIPSW10-3 and 4), and 4 counts for a double side.
For the size other than the large size, the count is same as when set to "0."
- The developer count and the sensitive drum count are made at all times 1 count for a single side and 2 counts for a double side for a small-size paper, 2 counts for a single count and 4 counts for a double count for a large-size paper.

(2) Counter reset

Reset the PM count, developer count and drum count.

Note

- Be sure to reset the PM count after implementing a periodic check (every 750,000 prints). Otherwise, the periodic check alert message and icon do not disappear.

(a) Procedure

1. "Service mode menu screen"
Press [03 Counter].
2. "Counter menu"
Press [01 Maintenance Counter].
3. "Maintenance Counter/Cycle screen"
Press the key for an item you reset, and press [Counter Clear].
4. "Reset confirm screen"
Press [Yes] to reset the counter.
The counter is reset, and the start date is automatically inputted.
Press [No] not to reset the counter. You return to the "Maintenance Counter/Cycle screen".
5. "PM count/cycle screen"
Pressing [OK] validates resetting. Pressing [Cancel] invalidates the count reset.

(3) PM cycle

Configure settings of the PM cycle, developer cycle and drum cycle.

Note

- The PM cycle, developer cycle and drum cycle are already inputted in the initial settings. Usually, do not change these settings.

(a) Procedure

1. "Service mode menu screen"
Press [03 Counter].
2. "Counter menu"
Press [01 Maintenance Counter].
3. "Maintenance Counter/Cycle screen"
Press one of the [PM Cycle], [Developer], and [Sensitive Drum] that you want to set.
4. "Maintenance Counter/Cycle screen"
Enter the high order digits of the cycle value through the numeric key.
[PM Cycle]: Upper 3 digits
[Developer]: Upper 5 digits
[Sensitive Drum]: Upper 5 digits
5. "Maintenance Counter/Cycle screen"
Pressing [OK] returns you to the "Service mode menu screen."
Press [Cancel] to cancel the operation.

5.6.2 Data collection

The following data held in the machine can be displayed on the operation panel.

It is also possible to confirm collected data by the CS Remote Care, list output and the mail remote notification system.

- Total Counter/Each Paper Size
- Copy Counter/Each Paper Size
- Printer Counter/EachPaperSize
- Large Size Counter
- ADF Counter
- Coverage Data History
- Coverage Ranking List
- Time series jam data *1
- JAM Counter *1
- Counter of Each Copy Mode *1
- SC data of time series *1
- SC Counter *1
- JAM Counter Individual Sec. *1
- SC Count Individual Sec. *1

*1 When setting DIPSW 30-1 from "0" to "1", these data can be confirmed.

(1) Procedure

1. "Service mode menu screen"
Press [03 Counter].

2. "Counter menu"
Press [02 Data collection].
3. "Data collection menu screen"
Press the data collection item key you want to confirm.
4. "Individual data confirmation screen"
Press [Next] or [Previous] to scroll the screen.

Note

- [Count Reset] is shown in the individual data confirmation screen of [13 JAM count of each section] and [14 SC count of each section].

When pressing [Count Reset], "Count reset confirmation screen" is shown, and when pressing [Yes], the section data is reset. Pressing [No] returns to "Individual data confirmation screen" with the interval data not reset.

Reset these data while in the PM implementation to confirm the jam or SC occurrence count after it was visited last time.

5.6.3 Paper Size Counter (Total/copy/print)

Confirm the number of printings of each paper size.

Note

- Maximum count: 99,999,999
- 1 count is made for paper of all types regardless of the paper size.

No.	CSRC parameter (P1, P2, P6)	Paper Size	Remark
01	00	Others	
02	01	A3	
03	02	A4	
04	03	A5	
05	04	A6	Not used
06	05	B4	Including ISO-B4
07	06	B5	Including ISO-B5
08	07	B6	Not used
09	08	12 x 18	
10	09	11 x 17	
11	0A	8 ¹ / ₂ x 14	
12	0B	8 ¹ / ₂ x 11	
13	0C	7 ¹ / ₄ x 10 ¹ / ₂	Not used
14	0D	5 ¹ / ₂ x 8 ¹ / ₂	
15	0E	8 ¹ / ₂ x 13, 8 ¹ / ₄ x 13, 8 ¹ / ₈ x 13 ¹ / ₄ , 8 x 13	
16	0F	Postcard	
17	10	4 x 6	Not used
18	11	8K	
19	12	16K	
20	13	Long paper	Not used
21	14	A2	Not used
22	15	SRA3	
23	16	SRA4	
24	17	13 x 19	Not used
25	18	Infinite 1	Sub scan direction: 196mm or less
26	19	Infinite 2	Sub scan direction: 197mm to 250mm
27	1A	Infinite 3	Sub scan direction: 251mm to 330mm
28	1B	Infinite 4	Sub scan direction: 331mm to 390mm
29	1C	Infinite 5	Sub scan direction: 391mm or more

5.6.4 Large Size Counter

Confirm the number of printings of the large-size paper.

Note

- Maximum count: 99,999,999
- Definition of the large size can be changed by DIPSW10-3/ 4 (A3, 11 x 17, 12 x 18 for default).

No.	CSRC command (Parameter)	Item	Remark
01	BI (00)	Large-size printer counter	DIPSW10-3, 4 decides the definition of the large size.
02	BH (00)	Large-size copy counter	
03	F6 (01)	Large-size scan counter	

5.6.5 ADF Counter

Confirm the number of originals fed in each ADF mode.

Note

- **Maximum count: 99,999,999**
- **Number.1, 2 are not counted as Number.3 to 8.**

No.	CSRC parameter (F0)	Item	Remark
1	00	N of originals fed in ADF mode	Simplex mode
2	01	N of originals fed in RADF mode	Duplex mode
3	02	N of originals fed in RDH simplex mode	Not used
4	03	N of originals fed in RDH duplex mode	Not used
5	04	N of originals fed in LDF mode	Not used
6	05	N of originals fed in CFF mode	Not used
7	06	N of 1-sided SDF original fed	Single Feed mode
8	07	N of 1-sided mixed original fed	Mixed original mode
9	08	N of 2-sided mixed original fed	Mixed original mode
10	09	N of originals fed in 2 in 1 mode	Not used
11	0A	N of 1-sided Z-Folded original fed	Z-Folded original mode
12	0B	N of 2-sided Z-Folded original fed	Z-Folded original mode
13	0C	N of 2-sided SDF original fed	Single Feed mode

5.6.6 Coverage Data History

With 5,000 prints as one data, the coverage (original B/W ratio) and the total accumulation are displayed.

Note

- **This coverage is a calculated value based on the colored area and the transfer paper area, and is different from the toner consumption when actually printed.**
- **Up to 30 most recent coverage data are stored and deleted in chronological order.**

No.	CSRC Parameter (V0)	Print count	Coverage (%)
1	00	Total count	(00.0 to 99.9%)
2	01	Print count 1	
3	02	Print count 2	
4	03	Print count 3	
5	04	Print count 4	
6	05	Print count 5	
7	06	Print count 6	
8	07	Print count 7	
9	08	Print count 8	
10	09	Print count 9	
11	0A	Print count 10	
12	0B	Print count 11	
13	0C	Print count 12	
14	0D	Print count 13	
15	0E	Print count 14	
16	0F	Print count 15	
17	10	Print count 16	
18	11	Print count 17	
19	12	Print count 18	
20	13	Print count 19	
21	14	Print count 20	
22	15	Print count 21	
23	16	Print count 22	
24	17	Print count 23	
25	18	Print count 24	
26	19	Print count 25	
27	1A	Print count 26	
28	1B	Print count 27	
29	1C	Print count 28	
30	1D	Print count 29	
31	1E	Print count 30	

5.6.7 Coverage Ranking List

Confirm the data of the 15 higher order jobs in the order of the higher coverage (original B/W ratio).
To exclude faulty operations (skyshot) by a user, display only data for continuous 5 or more print-outs.

Note

- The coverage data is a calculated value based on the colored area and the transfer paper area of the image data. Therefore, it is different from the toner consumption when actually printed.

No.	CSRC Parameter (V1)	Coverage (%)	Print Quantity	Paper size	Mode	Date
01	00	00.0 to 99.9%	Displaying the number of papers		Copier or Printer	
02	01					
03	02					
04	03					
05	04					
06	05					
07	06					
08	07					
09	08					
10	09					
11	0A					
12	0B					
13	0C					
14	0D					
15	0E					

5.6.8 ORU Part Counter

No.	CSRC parameter	Item	Remark
1	G6:00	Counter by parts (1)	Maximum count: 99,999,999
	G7:00	Limit by parts (1)	The maximum limit is 99,999,999
	G9:00	Parts No. (1)	Alphanumeric 13 digits
	GA:00	Parts name (1)	8 characters with two-byte, 16 characters with one-byte
	G8:01	Installation date (1)	6 numbers input (year/month/day)
2	G6:01	Counter by parts (2)	Maximum count: 99,999,999
	G7:01	Limit by parts (2)	The maximum limit is 99,999,999
	G9:01	Parts No. (2)	Alphanumeric 13 digits
	GA:01	Parts name (2)	8 characters with two-byte, 16 characters with one-byte
	G8:01	Installation date (2)	6 numbers input (year/month/day)
.			
.			
.			
.			
.			
30	G6:1D	Counter by parts (30)	Maximum count: 99,999,999
	G7:1D	Limit by parts (30)	The maximum limit is 99,999,999
	G9:1D	Parts No. (30)	Alphanumeric 13 digits
	GA:1D	Parts name (30)	8 characters with two-byte, 16 characters with one-byte
	G8:1D	Installation date (30)	6 numbers input (year/month/day)

5.6.9 Time series jam data

With respect to the latest 100 jam data, it is possible to confirm jam code, total count, date of occurrence, time of occurrence, tray, paper size, and magnification.
(except idling JAM.)

5.6.10 Jam Counter/Jam Counter Individual Sec.

Confirm the JAM occurrence count for each JAM code (except idling JAM)

Note

- Maximum count: 999,999
- The jam code is a code displayed when DIPSW11-7 is set to 1.

No.	CSRC Parameter (J0, J1)	Item Jam code
1	00	11 - 01
2	01	11 - 02
3	02	11 - 03
4	03	11 - 04
5	04	12 - 01
6	05	12 - 02
7	06	12 - 03
8	07	12 - 04
9	08	13 - 01
10	09	13 - 02
11	0A	13 - 03
12	0B	13 - 04
13	0C	13 - 05
14	0D	14 - 01
15	0E	14 - 02
16	0F	14 - 03
17	10	14 - 05
18	11	15 - 01
19	12	15 - 02
20	13	15 - 03
21	14	15 - 04
22	15	15 - 05
23	16	16-11
24	17	16-12
25	18	16-13
26	19	16-14
27	1A	16-15
28	1B	16-21
29	1C	16-22
30	1D	16-23
31	1E	16-25
32	1F	16-31
33	20	16-32
34	21	16-33
35	22	16-34
36	23	16-35
37	24	16-41
38	25	16-42
39	26	16-43
40	27	16-44
41	28	16-45
42	29	16-46
43	2A	16-47
44	2B	16-48
45	2C	17 - 01
46	2D	17 - 02
47	2E	17 - 03
48	2F	17 - 04
49	30	17 - 05
50	31	17 - 06
51	32	17-12
52	33	18 - 01
53	34	18 - 02
54	35	18 - 03
55	36	18 - 04
56	37	18 - 05

No.	CSRC Parameter (J0, J1)	Item Jam code
57	38	18 - 06
58	39	18 - 07
59	3A	18 - 08
60	3B	18-10
61	3C	18-11
62	3D	18-12
63	3E	18-13
64	3F	18-14
65	40	18-15
66	41	19 - 01
67	42	19 - 02
68	43	19 - 03
69	44	19 - 04
70	45	21 - 01
71	46	31 - 01
72	47	31 - 02
73	48	31 - 03
74	49	31-10
75	4A	31-11
76	4B	32 - 01
77	4C	32 - 02
78	4D	32 - 03
79	4E	32 - 04
80	4F	32 - 05
81	50	32 - 06
82	51	32 - 07
83	52	32 - 08
84	53	32-55
85	54	51 - 01
86	55	51 - 02
87	56	61 - 01
88	57	61 - 02
89	58	62 - 01
90	59	62 - 02
91	5A	62 - 03
92	5B	62 - 04
93	5C	62 - 05
94	5D	62 - 06
95	5E	62 - 07
96	5F	62 - 08
97	60	62 - 09
98	61	62-10
99	62	63 - 01
100	63	63 - 02
101	64	63 - 03
102	65	63 - 04
103	66	63 - 05
104	67	63 - 06
105	68	63 - 07
106	69	63 - 08
107	6A	63 - 09
108	6B	63-10
109	6C	63-11
110	6D	71 - 01
111	6E	71 - 03
112	6F	71 - 04

No.	CSRC Parameter (J0, J1)	Item Jam code
113	70	71 - 05
114	71	71 - 06
115	72	71 - 07
116	73	71 - 08
117	74	71 - 09
118	75	72-17
119	76	72-18
120	77	72-19
121	78	72-20
122	79	72-21
123	7A	72-22
124	7B	72-23
125	7C	72 - 24
126	7D	72 - 25
127	7E	74 - 01
128	7F	74 - 02
129	80	74 - 03
130	81	74 - 04
131	82	74 - 05
132	83	74 - 06
133	84	74 - 07
134	85	74 - 08
135	86	74 - 09
136	87	74-10
137	88	74-11
138	89	74-12
139	8A	74-31
140	8B	74-32
141	8C	74-33
142	8D	74-34
143	8E	74-35
144	8F	74-36
145	90	74-37
146	91	74-38
147	92	74-39
148	93	74-40
149	94	74-41
150	95	74-42
151	96	75 - 01
152	97	75 - 02
153	98	75 - 03
154	99	75 - 04
155	9A	75 - 05
156	9B	75 - 06
157	9C	75 - 07
158	9D	75 - 08
159	9E	75 - 09
160	9F	75-10
161	A0	75-11
162	A1	75-12
163	A2	75-13
164	A3	75-14
165	A4	75-15
166	A5	75-16
167	A6	75-17
168	A7	75-18

No.	CSRC Parameter (J0, J1)	Item Jam code
169	A8	75-19
170	A9	75-20
171	AA	75-21
172	AB	75-22
173	AC	75-23
174	AD	75-24
175	AE	75-40
176	AF	75-41
177	B0	75-42
178	B1	75-43
179	B2	75-45
180	B3	75-61
181	B4	75-62
182	B5	75-63
183	B6	75-64
184	B7	75-65
185	B8	75-66
186	B9	75-67
187	BA	75-68
188	BB	75-69
189	BC	75-70
190	BD	75-71
191	BE	75-72
192	BF	75-73
193	C0	75-74
194	C1	75-75
195	C2	75-76
196	C3	75-77
197	C4	75-78
198	C5	75-79
199	C6	75-80
200	C7	75-81
201	C8	75-82
202	C9	75-83
203	CA	75-84
204	CB	75-85
205	CC	75-90
206	CD	75-91
207	CE	75-92
208	CF	75-93
209	D0	75-94
210	D1	75-95
211	D2	75-96
212	D3	75-97
213	D4	76-60
214	D5	76-61
215	D6	76-62
216	D7	76-63
217	D8	76-64
218	D9	76-65
219	DA	76-66
220	DB	76-67
221	DC	76-68
222	DD	76-69
223	DE	76-70
224	DF	76-71

No.	CSRC Parameter (J0, J1)	Item Jam code
225	E0	76-72
226	E1	76-73
227	E2	76-74
228	E3	76-75
229	E4	76-76
230	E5	76-77
231	E6	76-78
232	E7	76-79
233	E8	76-80
234	E9	76-81
235	EA	76-82
236	EB	76-83
237	EC	76-84
238	ED	76-85
239	EE	76-86
240	EF	76-87
241	F0	76-88
242	F1	76-89
243	F 2	76-90
244	F3	76-91
245	F4	76-92
246	F 5	76-93
247	F 6	76-94
248	F7	76-95
249	F8	76-96
250	F9	76-97
251	FA	76-98
252	FB	81 - 01
253	FC	81 - 02
254	FD	81 - 03
255	FE	81 - 04
256	FF	81 - 05
257	00	81 - 06
258	01	81 - 07
259	02	81 - 09
260	03	81-11
261	04	81-12
262	05	81-13
263	06	81-14
264	07	81-15
265	08	81-21
266	09	81-22
267	0A	81-23
268	0B	81-25
269	0C	81-31
270	0D	81-32
271	0E	81-33
272	0F	81-34
273	10	81-35
274	11	81-41
275	12	81-42
276	13	81-43
277	14	81-44
278	15	81-45
279	16	81-46
280	17	81-47

No.	CSRC Parameter (J0, J1)	Item Jam code
281	18	81-48
282	19	81-49
283	1A	92 - 01
284	1B	92 - 02
285	1C	92 - 03
286	1D	93 - 01
287	1E	94 - 01

5.6.11 Counter of Each Copy Mode

Confirm the status of use of each copy mode.

Note

- Maximum count: 99,999,999

No.	CSRC parameter (F1)	Item	Count conditions
1	00	1-1 mode	1 count for 1-Sided exit, 2 counts for 2-Sided exit
2	01	1-2 mode	
3	02	2-1 mode	
4	03	2-2 mode	
5	04	ADF 1-1 mode	
6	05	ADF 1-2 mode	
7	06	Mixed original mode	
8	07	Single Feed mode	
9	08	Z-Folded original mode	
10	09	LEF: Portrait/SEF: Landscape (Reg.)	
11	0A	LEF: Landscape/SEF: Portrait (Reg.)	
12	0B	LEF: Portrait/SEF: Landscape (Rev.)	
13	0C	LEF: Landscape/SEF: Portrait (Rev.)	
14	0D	Text / Photo	
15	0E	Text	
16	0F	Photo	
17	10	Low contrast	
18	11	Custom size	
19	12	Corner Staple (Left Corner)	
20	13	Corner Staple (Corner)	
21	14	2 Position Staple(Left)	
22	15	2 Position Staple(Top)	
23	16	Right & Left	
24	17	2 Position Staple(Right)	
25	18	Upper binding	
26	19	Tab original	
27	1A	Folding & Stapling	
28	1B	Stacker1 5000 sheets full alarm	Times of occurrence
29	1C	Group	1 count for 1-Sided exit, 2 counts for 2-Sided exit
30	1D	Offset Group	
31	1E	Collated	
32	1F	Offset Sort	
33	20	Face down	
34	21	Face up	
35	22	1 to N	
36	23	N to 1	
37	24	Stacker2 5000 sheets full alarm	Times of occurrence
38	25	Cover sheet	1 count for 1-Sided exit, 2 counts for 2-Sided exit
39	26	Trimmer	
40	27	Real size copy	
41	28	Preset magnification E4	
42	29	Preset magnification E3	

No.	CSRC parameter (F1)	Item	Count conditions
43	2A	Preset magnification E2	
44	2B	Preset magnification E1	
45	2C	Preset magnification R4	
46	2D	Preset magnification R3	
47	2E	Preset magnification R2	
48	2F	Preset magnification R1	
49	30	Preset Zoom 1	
50	31	Preset Zoom 2	
51	32	Preset Zoom 3	
52	33	Zoom	
53	34	Vertical/Horizontal ZOOM	
54	35	Maximum ZOOM	
55	36	Minimum ZOOM	
56	37	APS	
57	38	AMS	
58	39	Auto density	
59	3A	-	1 count for 1-Sided exit, 2 counts for 2-Sided exit
60	3B	-	
61	3C	Interrupted copy	
62	3D	Auto image rotation cancellation	
63	3E	Sheet insertion	
64	3F	Chapter control	
65	40	Combine Originals	
66	41	Booklet copy	
67	42	Adhesive Binding	1 count for 1-Sided exit, 2 counts for 2-Sided exit
68	43	-	
69	44	Image insert	
70	45	Book copy	
71	46	Program job	
72	47	Non-Image Area Erase	
73	48	Neg-/Positive reverse	
74	49	Auto repeat	
75	4A	Manual repeat	
76	4B	Standard-size repeat	
77	4C	Frame erasure	
78	4D	Fold erasure	
79	4E	Centering	
80	4F	All-image area	
81	50	Image shift	
82	51	Reduction shift	
83	52	Overlay/Registered Overlay	
84	53	Watermark/Watermark Numbering	
85	54	Stamp	
86	55	Date/Time	
87	56	Page	
88	57	Numbering	Number of JOB
89	58	Set quantity 1	
90	59	Set quantity 2-5	
91	5A	Set quantity 06-10	
92	5B	Set quantity 11 or more	Accumulation of time during which the overall control board/image-processing board is powered (main power switch is ON). (unit: min.)
93	5C	Time while power remote 1 is On	
94	5D	Time while power remote 2 is On	
95	5E	Time while power remote 3 is On	Time during which the power control signal (REM/3) is ON. (unit: min.)

No.	CSRC parameter (F1)	Item	Count conditions
96	5F	Time while power remote 4 is On	Time during which the power control signal (REM/4) is ON. (unit: min.)
97	60	Time during Low Power mode	Time in the LOW-POWER mode. (unit: min.)
98	61	Time during warm up time	Time for warm-up, except print ready time. (unit: min.)
99	62	Time during which the front door is open	Time during which the front door is open. (in seconds)
100	63	Ope.time in 1-side straight exit	Time from the start of print and the end of print. (in seconds) (Down time due to jam omitted)
101	64	Ope.time in 1-side reverse exit	
102	65	Operation time in 2-side print	
103	66	Operation time in ADF mode	Time during which ADF operates. (in seconds)
104	67	Morning correction count	Count 1 per image stabilization control (fixing temperature is 50°C or lower)
105	68	Time during APS sensor On	Time during which the APS sensor is ON. (in seconds)
106	69	-	
107	6A	-	
108	6B	N of folding & stapling used jobs	Number of JOB
109	6C	N of ADF special error 5 occurred	Number of ADF double feed detection
110	6D	N of ADF NF occurred	Number of ADF no feed detection
111	6E	N of ADF special error 1 occurred	Number of wrong detections of original size
112	6F	N of ADF special error 2 occurred	Number of wrong detections of next original information
113	70	N of ADF special error 3 occurred	Number of errors in size for which mixed size mode is not allowed
114	71	N of scanner scanned	Counts 1 for pressing start key in the original glass mode
115	72	N of electrode cleaned	Number of executions
116	73	N of memory overflow	Sum of No.124, 125, 126 plus HDD memory shortage
117	74	N of fixing alarm occurred	Times of occurrence
118	75	N of no toner stop occurred	
119	76	N of AGC retry	
120	77	Multi Tri-fold tray full alarm	Times of occurrence
121	78	N of centering correct error	
122	79	N of ADF distortion adjust error	
123	7A	N of ADF distortion data error	
124	7B	Compression memory overflow	
125	7C	Page Memory Overflow(Scan)	Scanner compression/print compression memory shortage
126	7D	Page Memory Overflow (print)	Shortage in memory for receiving print data
127	7E	Staple Finisher main tray alarm	Decompression page memory shortage
128	7F	Staple Finisher staple alarm	
129	80	Saddle Stitcher trash full alarm	
130	81	N of ADF special error4 occurred	Times of occurrence
131	82	Store for HDD (Sync. with Copying)	Ready timeout error
132	83	Store for HDD (Store Scan → HDD)	Number of JOB (For copier HDD storing, printer print & HDD storing, printer HDD storing only, and JOB that adds HDD storing in wait/proof)
133	84	-	Number of JOB
134	85	Store for FTP/SMB (Store HDD → FTP/SMB)	Number of JOB
135	86	Recall from HDD (Recall HDD)	
136	87	-	
137	88	Saddle Stitcher staple alarm	Times of occurrence
138	89	Wide paper count (A3W or 11 x 17W)	1 count for 1-Sided exit, 2 counts for 2-Sided exit
139	8A	Wide paper count (A4W or 81/2 x 11W)	
140	8B	Wide paper count (A4W or 81/2 x 11RW)	
141	8C	Wide paper count (A5W or 51/2 x 81/2W)	
142	8D	Wide paper count (Others)	

No.	CSRC parameter (F1)	Item	Count conditions
143	8E	Hole-Punch	
144	8F	Z-Folding	
145	90	Multi Folder trash full alarm	
146	91	Mixplex (Simplex)	Times of occurrence
147	92	Mixplex (Duplex)	1 count for each paper exit in the single side mode
148	93	Right/Left binding originals	2 counts for each paper exit in the double side mode
149	94	Upper binding originals	1 count for 1-Sided exit, 2 counts for 2-Sided exit
150	95	Inside print multi tri-fold	
151	96	Outside print multi tri-fold	
152	97	Inside Print Tri-Fold-in	
153	98	Outside Print Tri-Fold-in	
154	99	Inside Print Tri-Fold-out	
155	9A	Outside print tri-fold-out	
156	9B	Inside print double parallel	
157	9C	Outside print double parallel	
158	9D	Inside print gate	
159	9E	Outside print gate	
160	9F	Multi Center	
161	A0	Inside print folding	
162	A1	Outside print folding	
163	A2	Main tray exit	
164	A3	Stacker1 tray output	
165	A4	Stacker2 tray output	
166	A5	Stacker auto setting output	
167	A6	Stacker pile setting permit	
168	A7	Folding & Stapling tray output	
169	A8	Tri-Fold Tray Output	
170	A9	Folding sub tray output	
171	AA	Stacker1 sub tray output	
172	AB	Stacker2 sub tray output	
173	AC	Folding & Stapling sub tray output	
174	AD	Staple Finisher Sub Tray Output	
175	AE	Main tray output Job number	
176	AF	Stacker1 tray output Job number	Number of JOB
177	B0	Stacker2 tray output Job number	
178	B1	Fold & Staple output Job No.	
179	B2	Fold & Staple output Job No.	
180	B3	Folding sub tray Job number	
181	B4	Stacker1 sub tray Job number	
182	B5	Stacker2 sub tray Job number	
183	B6	Fold & Staple sub tray Job number	
184	B7	Staple Finisher Sub Tray Job number	
185	B8	Multi Half Fold Job number	
186	B9	Inside Half Fold Job number	
187	BA	Outside Half Fold Job number	
188	BB	Arbitrary stamp	1 count for 1-Sided exit, 2 counts for 2-Sided exit
189	BC	Perfect Bind(Cover Blank)	Number of JOB
190	BD	Perfect Bind(Cover Print 1-in-1)	
191	BE	Perfect Bind(Cover Print 2-in-1)	
192	BF	Perfect Bind(Cover Print 3-in-1)	
193	C0	Perfect Binder Cover Tray mode	
194	C1	-	
195	C2	Perfect Binding Set (Cover Trim)	Number of books when cover paper trimming is set.
196	C3	Perfect Binding Set (Cover Non-Trim)	Number of books when cover paper trimming is not set.
197	C4	Perfect Binder Sub Tray output	Number of ejected papers
198	C5	Perfect Binder SubCompile output	Number of ejected inside papers

No.	CSRC parameter (F1)	Item	Count conditions
199	C6	Perfect Binder Cover Tray pull-out	Times of pulling out PB cover tray
200	C7	Perfect Binder Front Door open	Times of opening PB front door
201	C8	Stacker Cover of Perfect Binder open	Times of opening PB book stock section cover
202	C9	Total Book Volumes	Number of books created by perfect binder
203	CA	Total Book Volumes (0.0-10.0mm)	
204	CB	Total Book Volumes (10.1-20.0mm)	
205	CC	Total Book Volumes (20.1-30.0mm)	
206	CD	Total Book Volumes	Total number of inside papers of book created by perfect binder
207	CE	Total Thickness	Thickness of book created by perfect binder (value is rounded to the nearest 0.1mm)
208	CF	Perfect Binder Trim Scrap Box Full Alarm	Times of occurrence
209	D0	Perfect Binder Stacker Full Alarm	
210	D1	Perfect Binder Glue Pellet Supply Alarm	
211	D2	Perfect Binder Glue Pellet Stop Up Alarm	
212	D3	Perfect Binder-related Alarm	Times of occurrence of perfect binder alarms other than No.205, No.206, No.207 and No.208
213	D4	Scan to E-mail	Number of JOB Scan To E-mail (scanner mode)
214	D5	Scan to HDD	Number of JOB Scan To E-mail (scanner mode)
215	D6	Scan to FTP	Number of JOB Scan To E-mail (scanner mode)
216	D7	Scan to SMB	Number of JOB Scan To E-mail (scanner mode)
217	D8	Sample Paper Counter	1 count for 1-Sided exit, 2 counts for 2-Sided exit
218	D9	Sample Paper Counter in Printer Job	
219	DA	Sample Paper Counter in Printer Job (L Size)	
220	DB	Copy Protect	
221	DC	PI Paper Counter	PI Paper Counter
222	DD	Output Offset Mode by Designated Job	Number of offset JOB for each designated JOB
223	DE	Output Offset Mode by Set Numbers	Number of offset JOB for each set numbers
224	DF	Output Offset Mode by Set pages	Number of offset JOB for each set pages
225	E0	Output Offset Mode by 1Set+Set Pages	Number of offset JOB for 1Set+Set Pages
226	E1	Continued Job for Next Day	Number of continued JOB for next day in sub power OFF
227	E2	N of Temperature cooling process	Number of temperature cooling process in sub power OFF
228	E3	Count of Suspended JOB	Number of JOB moved to suspended JOB
229	E4	Tab Paper Used Job	Number of JOB exited tab paper
230	E5	Needless Tab Paper Exit Job	Number of JOB exited needless tab paper
231	E6	Ticket Edit Counter	Number of ticket edit process
232	E7	Sample Print Counter	Number of sample print output
233	E8	600dpi Print Counter	1 count for 1-Sided exit, 2 counts for 2-Sided exit
234	E9	Multi Punch	

5.6.12 Time series SC data

With respect to the latest 20 SC, confirm SC code, total count, date of occurrence, time of occurrence and machine condition (00: Idling, 01: Scanner operating, 02: Printer operating, 03: Scanner and printer operating).

5.6.13 Error Counter/Error Counter Individual Sec.

Check the number of occurrence of abnormality for each error code.

Note

- Maximum count: 99,999,999
- When the service mode DIPSW3-1 is 1 (Latched), C-35xx, 38xx, 39xx, 1540 to 1562, 2214 and 2217 are not counted.

No.	CSRC Parameter (E0, E1, E2)	Item (Error code)
1	00	C-0001
2	01	C-0002
3	02	C-0003
4	03	C-0004

No.	CSRC Parameter (E0, E1, E2)	Item (Error code)
5	04	C-0005
6	05	C-0006
7	06	C-0007
8	07	C-0008
9	08	C-0010
10	09	C-0011
11	0A	C-0012
12	0B	C-0020
13	0C	C-0021
14	0D	C-0022
15	0E	C-0023
16	0F	C-0024
17	10	C-0025
18	11	C-0101
19	12	C-0103
20	13	C-0104
21	14	C-0105
22	15	C-0106
23	16	C-0107
24	17	C-0108
25	18	C-0109
26	19	C-0110
27	1A	C-0111
28	1B	C-0113
29	1C	C-0114
30	1D	C-0115
31	1E	C-0116
32	1F	C-0118
33	20	C-0119
34	21	C-0120
35	22	C-0121
36	23	C-0130
37	24	C-0131
38	25	C-0132
39	26	C-0133
40	27	C-0134
41	28	C-0140
42	29	C-0141
43	2A	C-0142
44	2B	C-0143
45	2C	C-0144
46	2D	C-0145
47	2E	C-0201
48	2F	C-0203
49	30	C-0204
50	31	C-0205
51	32	C-0207
52	33	C-0208
53	34	C-0222
54	35	C-0223
55	36	C-0226
56	37	C-0227
57	38	C-0230
58	39	C-0231
59	3A	C-0240

No.	CSRC Parameter (E0, E1, E2)	Item (Error code)
60	3B	C-0241
61	3C	C-0242
62	3D	C-0243
63	3E	C-0244
64	3F	C-0245
65	40	C-0250
66	41	C-0251
67	42	C-0252
68	43	C-0253
69	44	C-0254
70	45	C-0255
71	46	C-0261
72	47	C-0262
73	48	C-0263
74	49	C-0264
75	4A	C-0265
76	4B	C-0266
77	4C	C-0271
78	4D	C-0272
79	4E	C-0273
80	4F	C-0274
81	50	C-0275
82	51	C-0276
83	52	C-0281
84	53	C-0282
85	54	C-0283
86	55	C-0284
87	56	C-0285
88	57	C-0286
89	58	C-0301
90	59	C-0302
91	5A	C-0303
92	5B	C-0304
93	5C	C-0305
94	5D	C-0306
95	5E	C-0307
96	5F	C-0308
97	60	C-0309
98	61	C-0310
99	62	C-0311
100	63	C-0312
101	64	C-0313
102	65	C-0314
103	66	C-0315
104	67	C-0320
105	68	C-0321
106	69	C-0322
107	6A	C-0323
108	6B	C-0324
109	6C	C-0325
110	6D	C-0326
111	6E	C-0327
112	6F	C-0328
113	70	C-0329
114	71	C-0330

No.	CSRC Parameter (E0, E1, E2)	Item (Error code)
115	72	C-0331
116	73	C-0341
117	74	C-0342
118	75	C-0344
119	76	C-0345
120	77	C-0347
121	78	C-0348
122	79	C-0350
123	7A	C-0351
124	7B	C-0353
125	7C	C-0359
126	7D	C-0360
127	7E	C-0357
128	7F	C-0359
129	80	C-0360
130	81	C-0370
131	82	C-0371
132	83	C-0372
133	84	C-0373
134	85	C-0374
135	86	C-0375
136	87	C-0376
137	88	C-0377
138	89	C-0378
139	8A	C-0379
140	8B	C-0380
141	8C	C-0381
142	8D	C-0382
143	8E	C-0383
144	8F	C-0385
145	90	C-0386
146	91	C-0387
147	92	C-0388
148	93	C-0389
149	94	C-0390
150	95	C-0391
151	96	C-0392
152	97	C-0393
153	98	C-0394
154	99	C-0395
155	9A	C-0396
156	9B	C-0397
157	9C	C-0398
158	9D	C-0402
159	9E	C-0403
160	9F	C-0404
161	A0	C-0410
162	A1	C-0411
163	A2	C-0412
164	A3	C-0413
165	A4	C-0420
166	A5	C-0421
167	A6	C-0422
168	A7	C-0423
169	A8	C-0424

No.	CSRC Parameter (E0, E1, E2)	Item (Error code)
170	A9	C-0425
171	AA	C-0501
172	AB	C-0502
173	AC	C-0503
174	AD	C-0504
175	AE	C-0505
176	AF	C-0506
177	B0	C-0507
178	B1	C-0508
179	B2	C-0509
180	B3	C-0510
181	B4	C-0511
182	B5	C-0512
183	B6	C-0513
184	B7	C-0514
185	B8	C-0515
186	B9	C-0516
187	BA	C-0517
188	BB	C-0518
189	BC	C-0519
190	BD	C-0520
191	BE	C-0521
192	BF	C-0522
193	C0	C-0523
194	C1	C-0524
195	C2	C-0525
196	C3	C-0526
197	C4	C-0527
198	C5	C-0528
199	C6	C-0529
200	C7	C-0530
201	C8	C-0531
202	C9	C-0532
203	CA	C-0533
204	CB	C-0534
205	CC	C-0535
206	CD	C-0536
207	CE	C-0537
208	CF	C-0538
209	D0	C-0539
210	D1	C-0540
211	D2	C-0541
212	D3	C-0542
213	D4	C-0543
214	D5	C-0544
215	D6	C-0545
216	D7	C-0546
217	D8	C-0547
218	D9	C-0548
219	DA	C-0561
220	DB	C-0562
221	DC	C-0563
222	DD	C-0564
223	DE	C-0565
224	DF	C-0566

No.	CSRC Parameter (E0, E1, E2)	Item (Error code)
225	E0	C-0567
226	E1	C-0568
227	E2	C-0569
228	E3	C-0570
229	E4	C-0571
230	E5	C-0572
231	E6	C-0573
232	E7	C-0574
233	E8	C-0575
234	E9	C-0576
235	EA	C-0577
236	EB	C-0578
237	EC	C-0579
238	ED	C-0580
239	EE	C-0581
240	EF	C-0582
241	F0	C-0583
242	F1	C-0584
243	F 2	C-0601
244	F3	C-0602
245	F4	C-0603
246	F 5	C-0604
247	F 6	C-0605
248	F7	C-0606
249	F8	C-0611
250	F9	C-0612
251	FA	C-0613
252	FB	C-0614
253	FC	C-0615
254	FD	C-0616
255	FE	C-0621
256	FF	C-0622
257	00	C-0623
258	01	C-0624
259	02	C-0625
260	03	C-0626
261	04	C-0631
262	05	C-0632
263	06	C-0633
264	07	C-0634
265	08	C-0635
266	09	C-0636
267	0A	C-0637
268	0B	C-0638
269	0C	C-0639
270	0D	C-0640
271	0E	C-0641
272	0F	C-0642
273	10	C-0651
274	11	C-0652
275	12	C-0653
276	13	C-0654
277	14	C-0655
278	15	C-0656
279	16	C-0657

No.	CSRC Parameter (E0, E1, E2)	Item (Error code)
280	17	C-0658
281	18	C-0659
282	19	C-0660
283	1A	C-0661
284	1B	C-0662
285	1C	C-0671
286	1D	C-0672
287	1E	C-0673
288	1F	C-0674
289	20	C-0675
290	21	C-0676
291	22	C-0677
292	23	C-0678
293	24	C-0679
294	25	C-0680
295	26	C-0681
296	27	C-0682
297	28	C-1001
298	29	C-1005
299	2A	C-1006
300	2B	C-1007
301	2C	C-1008
302	2D	C-1009
303	2E	C-1010
304	2F	C-1011
305	30	C-1012
306	31	C-1102
307	32	C-1103
308	33	C-1104
309	34	C-1105
310	35	C-1106
311	36	C-1107
312	37	C-1108
313	38	C-1109
314	39	C-1110
315	3A	C-1113
316	3B	C-1140
317	3C	C-1141
318	3D	C-1142
319	3E	C-1143
320	3F	C-1144
321	40	C-1145
322	41	C-1146
323	42	C-1147
324	43	C-1148
325	44	C-1201
326	45	C-1202
327	46	C-1203
328	47	C-1204
329	48	C-1205
330	49	C-1206
331	4A	C-1211
332	4B	C-1212
333	4C	C-1213
334	4D	C-1214

No.	CSRC Parameter (E0, E1, E2)	Item (Error code)
335	4E	C-1215
336	4F	C-1216
337	50	C-1221
338	51	C-1222
339	52	C-1223
340	53	C-1224
341	54	C-1225
342	55	C-1226
343	56	C-1227
344	57	C-1228
345	58	C-1229
346	59	C-1230
347	5A	C-1231
348	5B	C-1232
349	5C	C-1233
350	5D	C-1234
351	5E	C-1235
352	5F	C-1241
353	60	C-1242
354	61	C-1243
355	62	C-1244
356	63	C-1245
357	64	C-1246
358	65	C-1247
359	66	C-1248
360	67	C-1249
361	68	C-1250
362	69	C-1251
363	6A	C-1252
364	6B	C-1253
365	6C	C-1254
366	6D	C-1255
367	6E	C-1256
368	6F	C-1257
369	70	C-1258
370	71	C-1259
371	72	C-1260
372	73	C-1261
373	74	C-1262
374	75	C-1263
375	76	C-1264
376	77	C-1265
377	78	C-1266
378	79	C-1267
379	7A	C-1268
380	7B	C-1269
381	7C	C-1270
382	7D	C-1271
383	7E	C-1272
384	7F	C-1273
385	80	C-1274
386	81	C-1275
387	82	C-1281
388	83	C-1282
389	84	C-1301

No.	CSRC Parameter (E0, E1, E2)	Item (Error code)
390	85	C-1302
391	86	C-1303
392	87	C-1304
393	88	C-1305
394	89	C-1306
395	8A	C-1307
396	8B	C-1308
397	8C	C-1309
398	8D	C-1310
399	8E	C-1311
400	8F	C-1330
401	90	C-1331
402	91	C-1332
403	92	C-1333
404	93	C-1334
405	94	C-1341
406	95	C-1342
407	96	C-1402
408	97	C-1403
409	98	C-1404
410	99	C-1405
411	9A	C-1406
412	9B	C-1411
413	9C	C-1432
414	9D	C-1433
415	9E	C-1434
416	9F	C-1435
417	A0	C-1436
418	A1	C-1437
419	A2	C-1451
420	A3	C-1452
421	A4	C-1453
422	A5	C-1454
423	A6	C-1499
424	A7	C-1501
425	A8	C-1502
426	A9	C-1504
427	AA	C-1505
428	AB	C-1506
429	AC	C-1507
430	AD	C-1508
431	AE	C-1509
432	AF	C-1510
433	B0	C-1511
434	B1	C-1512
435	B2	C-1513
436	B3	C-1514
437	B4	C-1515
438	B5	C-1516
439	B6	C-1517
440	B7	C-1518
441	B8	C-1519
442	B9	C-1520
443	BA	C-1521
444	BB	C-1522

No.	CSRC Parameter (E0, E1, E2)	Item (Error code)
445	BC	C-1523
446	BD	C-1524
447	BE	C-1525
448	BF	C-1526
449	C0	C-1527
450	C1	C-1528
451	C2	C-1530
452	C3	C-1531
453	C4	C-1532
454	C5	C-1534
455	C6	C-1537
456	C7	C-1538
457	C8	C-1540
458	C9	C-1541
459	CA	C-1542
460	CB	C-1543
461	CC	C-1544
462	CD	C-1545
463	CE	C-1546
464	CF	C-1547
465	D0	C-1548
466	D1	C-1549
467	D2	C-1550
468	D3	C-1551
469	D4	C-1552
470	D5	C-1553
471	D6	C-1554
472	D7	C-1555
473	D8	C-1556
474	D9	C-1557
475	DA	C-1558
476	DB	C-1559
477	DC	C-1560
478	DD	C-1561
479	DE	C-1562
480	DF	C-1565
481	E0	C-1566
482	E1	C-1567
483	E2	C-1601
484	E3	C-2101
485	E4	C-2102
486	E5	C-2103
487	E6	C-2201
488	E7	C-2202
489	E8	C-2203
490	E9	C-2204
491	EA	C-2205
492	EB	C-2206
493	EC	C-2207
494	ED	C-2208
495	EE	C-2209
496	EF	C-2210
497	F0	C-2211
498	F1	C-2212
499	F 2	C-2213

No.	CSRC Parameter (E0, E1, E2)	Item (Error code)
500	F3	C-2214
501	F4	C-2215
502	F 5	C-2217
503	F 6	C-2220
504	F7	C-2221
505	F8	C-2222
506	F9	C-2224
507	FA	C-2225
508	FB	C-2226
509	FC	C-2227
510	FD	C-2228
511	FE	C-2229
512	FF	C-2230
513	00	C-2231
514	01	C-2232
515	02	C-2233
516	03	C-2234
517	04	C-2235
518	05	C-2236
519	06	C-2237
520	07	C-2301
521	08	C-2302
522	09	C-2303
523	0A	C-2304
524	0B	C-2305
525	0C	C-2306
526	0D	C-2307
527	0E	C-2308
528	0F	C-2309
529	10	C-2311
530	11	C-2312
531	12	C-2313
532	13	C-2314
533	14	C-2315
534	15	C-2316
535	16	C-2401
536	17	C-2402
537	18	C-2403
538	19	C-2411
539	1A	C-2412
540	1B	C-2413
541	1C	C-2701
542	1D	C-2702
543	1E	C-2704
544	1F	C-2801
545	20	C-2802
546	21	C-2803
547	22	C-2804
548	23	C-2807
549	24	C-2808
550	25	C-2809
551	26	C-2810
552	27	C-2811
553	28	C-2812
554	29	C-2815

No.	CSRC Parameter (E0, E1, E2)	Item (Error code)
555	2A	C-2816
556	2B	C-2821
557	2C	C-2822
558	2D	C-3102
559	2E	C-3103
560	2F	C-3201
561	30	C-3202
562	31	C-3501
563	32	C-3503
564	33	C-3801
565	34	C-3901
566	35	C-3903
567	36	C-3905
568	37	C-4301
569	38	C-4302
570	39	C-4303
571	3A	C-4304
572	3B	C-4305
573	3C	C-4306
574	3D	C-4307
575	3E	C-4308
576	3F	C-4309
577	40	C-4310
578	41	C-4311
579	42	C-4312
580	43	C-4313
581	44	C-4314
582	45	C-4315
583	46	C-4316
584	47	C-4701
585	48	C-4702
586	49	C-4703
587	4A	C-4705
588	4B	C-4706
589	4C	C-4708
590	4D	C-4709
591	4E	C-4720
592	4F	C-4721
593	50	C-4722
594	51	C-4725
595	52	C-4850
596	53	C-5010
597	54	C-5101
598	55	C-5102
599	56	C-5103
600	57	C-5104
601	58	C-5105
602	59	C-5311
603	5A	C-5312
604	5B	C-5313
605	5C	C-5314
606	5D	C-5315
607	5E	C-5316
608	5F	C-5317
609	60	C-5318

No.	CSRC Parameter (E0, E1, E2)	Item (Error code)
610	61	C-5319
611	62	C-5320
612	63	C-5321
613	64	C-5322
614	65	C-5326
615	66	C-5327
616	67	C-5328
617	68	C-5329
618	69	C-5330
619	6A	C-5331
620	6B	C-5332
621	6C	C-5333
622	6D	C-5334
623	6E	C-5335
624	6F	C-5336
625	70	C-5337
626	71	C-5338
627	72	C-5339
628	73	C-5340
629	74	C-5341
630	75	C-5342
631	76	C-5343
632	77	C-5344
633	78	C-5345
634	79	C-5346
635	7A	C-5347
636	7B	C-5348
637	7C	C-5349
638	7D	C-5350
639	7E	C-5351*
640	7F	C-5352*
641	80	C-6101
642	81	C-6102
643	82	C-6103
644	83	C-6301
645	84	C-6302
646	85	C-6303
647	86	C-6701
648	87	C-6702
649	88	C-6703
650	89	C-6704
651	8A	C-6705
652	8B	C-6706
653	8C	C-6707
654	8D	C-6708
655	8E	C-6709
656	8F	C-6710
657	90	C-6717
658	91	C-6719
659	92	C-6721
660	93	C-6801
661	94	C-8001
662	95	C-8002
663	96	C-8003
664	97	C-8201

No.	CSRC Parameter (E0, E1, E2)	Item (Error code)
665	98	C-8301
666	99	C-8401
667	9A	C-8402
668	9B	C-8403
669	9C	C-8404
670	9D	C-8405
671	9E	C-8406
672	9F	C-8407
673	A0	C-8408
674	A1	C-8409
675	A2	C-8410
676	A3	C-8411
677	A4	C-8412
678	A5	C-A001
679	A6	C-A002
680	A7	C-A003
681	A8	C-A004
682	A9	C-A005
683	AA	C-A006
684	AB	C-A007
685	AC	C-A008
686	AD	C-A009
687	AE	C-A101
688	AF	C-C101
689	B0	C-C102
690	B1	C-C103
691	B2	C-C104
692	B3	C-C105
693	B4	C-C106
694	B5	C-C107
695	B6	C-C108
696	B7	C-C109
697	B8	C-C111
698	B9	C-C112
699	BA	C-C113
700	BB	C-C114
701	BC	C-C115
702	BD	C-C116
703	BE	C-C117
704	BF	C-C120
705	C0	C-C125
706	C1	C-C130
707	C2	C-D001
708	C3	C-D002
709	C4	C-D003
710	C5	C-D004
711	C6	C-D010
712	C7	C-D101
713	C8	C-D102
714	C9	C-E001
715	CA	C-E002
716	CB	C-E003
717	CC	C-E004
718	CD	C-E005
719	CE	C-E006

No.	CSRC Parameter (E0, E1, E2)	Item (Error code)
720	CF	C-E007
721	D0	C-2705

5.6.14 Checking, setting and resetting procedure of the Special Parts Counter

When a part is replaced, reset the counter of the part that has been replaced to manage the service history.

(1) Procedure

1. "Service mode menu screen"
Press [03 Counter].
2. "Counter menu"
Press [03 Parts Counter].
3. "Copy count of part menu screen"
Press [01 Special Parts Counter].
4. "Copy Counter of Special Parts screen"
Press [Next] or [Previous] to scroll the screen.
Press [▲] or [▼] to select an item you want to reset.
5. Press [Counter Clear].
6. "Reset confirm screen"
Press [Yes] to reset the counter.
Press [No] not to reset the counter. You return to the "Copy Counter of Special Parts screen."

5.6.15 Special Parts Counter

Note

- Be sure to reset the fixing cleaning web counter (Number.001) after replacing the cleaning web. Otherwise, fuser cleaning trouble occurs.
- Be sure to perform the blade set mode of the service mode after replacing the cleaning blade. This operation automatically resets the cleaning blade counter (No.002). Otherwise, the auto blade replacement cannot be implemented.
- Maximum count: 99,999,999

No.	CSRC Parameter (Z1, Z2)	Parts name	Parts No.	Count conditions
001	00	Fixing cleaning web	A0G67314	0 to 2 counts for each fusing paper exit The count changes depending on the fusing cleaning web counter and the coverage.
002	01	Cleaning blade	A0G65350	2 counts for each 338mm or longer (in sub scan direction) paper exit in the single side mode, 4 counts for the double. *1 Except for those sizes, 1 count for the single and 2 counts for the double.
003	02	Charging wire	56UA2509	
004	03	Charger control plate	56UA2508	
005	04	Charging cleaning unit	A0G6A463	
006	05	Suction filter /Lw	A0G63908	
007	06	Suction filter /Up	A0G63909	
008	07	Drum Separation claws	A0G63456	
009	08	Transfer belt	A0G65001	
010	09	Transfer roller	A0G65006	
011	0A	Power supply bearing	A0G65039	
012	0B	Cleaning brush	A0G65106	
013	0C	Regulation plate assy	A0G6A526	
014	0D	Belt cleaning unit	A0G6A520	
015	0E	Transfer section contact /Rr	A0G6A508	1 count for each paper exit in the single side mode, 2 counts in the double side mode.
016	0F	Transfer section contact /Fr	A0G6A506	
017	10	Power supply parts	65AA2689	
018	11	Paper dust removing brush shaft	56UA-478	1 count for each paper exit.
019	12	Drum cleaning brush	A0G6A549	2 counts for each 338mm or longer (in sub scan direction) paper exit in the single side mode, 4 counts for the double. *1 Except for those sizes, 1 count for the single and 2 counts for the double.
020	13	Drum cleaning side seal R	A0G6A543	
021	14	Drum cleaning side seal F	A0G6A542	
022	15	Agitator plate assy	A0G6A401 56UA-348	1 count for each paper exit in the single side mode, 2 counts in the double side mode.
023	16	Drum cleaning gear /2 assy	A0G6A534	2 counts for each 338mm or longer (in sub scan direction) paper exit in the single side mode, 4 counts for the double. *1
024	17	Drum cleaning gear /3	A0G65327	
025	18	Toner seal board	56UA-568	

No.	CSRC Parameter (Z1, Z2)	Parts name	Parts No.	Count conditions
026	19	Drum cleaning brush	A0G6A548	Except for those sizes, 1 count for the single and 2 counts for the double.
027	1A	Fix. roller (U)	A0G67304	
028	1B	Fix. roller Unit (L)	A0G6A797	
029	1C	Fixing claws upper	56UA5453	
030	1D	Fixing claws lower	25AA5329	
031	1E	Heat sleeve (Upper)	45405339	
032	1F	Upper roller bearing	A0G67346	
033	20	Fixing CL sheet	56UA-547	
034	21	Fusing cleaning roller	56UA5353	
035	22	Web prevention part	A0G6A744	
036	23	Pressure worm assy	A0G6A731	1 count for engine booting up
037	24	Pressure wheel assy	A0G6A730	
038	25	Fusing heater	A0G6M330	2 counts for each 338mm or longer (in sub scan direction) paper exit in the single side mode, 4 counts for the double. *1 Except for those sizes, 1 count for the single and 2 counts for the double.
039	26	Drum temperature sensor	A0G6A341	
040	27	Fixing gear /2	A0G67260	1 count for each paper exit in the single side mode, 2 counts in the double side mode.
041	28	Web Motor	56GA8017	
042	29	Heat roller holder	56UA7507	
043	2A	Thermistor /2	55VA8804	
044	2B	Fusing heating roller	56UA5307	2 counts for each 338mm or longer (in sub scan direction) paper exit in the single side mode, 4 counts for the double. *1 Except for those sizes, 1 count for the single and 2 counts for the double.
045	2C	Heat insulating sleeve /Lw	26AA5315	
046	2D	Thermistor /4	55VA8806	1 count for each paper exit in the single side mode, 2 counts in the double side mode.
047	2E	Fusing heater lamp /3	55VB8304	2 counts for each 338mm or longer (in sub scan direction) paper exit in the single side mode, 4 counts for the double. *1 Except for those sizes, 1 count for the single and 2 counts for the double.
048	2F	Ozone filter /12	56UA1123	
049	30	Develop suction filter	56UA1122	
050	31	Conveyance suction filter	56UA1129	
051	32	Dust-proof filter	A0G61181	
052	33	Charger unit	A0G6A460	
053	34	-	-	-
054	35	Developing unit	A0G6A370	2 counts for each 338mm or longer (in sub scan direction) paper exit in the single side mode, 4 counts for the double. *1 Except for those sizes, 1 count for the single and 2 counts for the double.
055	36	Developing suction seal	A0G63943 A0G63944 A0G63945 56UA3103 56UA3106	
056	37	Regis. feed count	56UA7602 A0G67106	1 count for each paper exit in the single side mode, 2 counts in the double side mode.
057	38	ADU accelerator roller	A0G68171	1 count for each reverse paper exit in main body in the single side mode, 1 count in the double side mode
058	39	Reversal output roller	A0G68172	2 count for each reverse paper exit in main body in the single side mode, 1 count in the double side mode
059	3A	ADU reversal roller	A0G68176	2 count for each reverse paper exit in main body in the single side mode, 1 count in the double side mode
060	3B	Output convey roller	56UA-035 56UA4743	1 count for each reverse paper exit in main body in the single side mode
061	3C	ADU convey roller	56UA4744 A0G68177	0 count for each paper exit in the single side mode, 1 count for double
062	3D	Fixing exit roller	56UA4595 (N=4)	1 count for each paper exit in the single side mode, 2 counts in the double side mode.

No.	CSRC Parameter (Z1, Z2)	Parts name	Parts No.	Count conditions
063	3E	De-curler entrance roller	A0G68407	1 count for each paper exit in the single side mode, 1 count in the double side mode.
064	3F	De-curler belt /Up	A0G68464	1 count for each paper exit using upper de-curler
065	40	De-curler belt /Lw	A0G68464	1 count for each paper exit using upper de-curler
066	41	Output roller	56UA4557	1 count for each paper exit in the single side mode, 1 count in the double side mode.
067	42	Toner supply sleeve /1	55VA-334	1 count for each paper exit in the single side mode, 2 counts in the double side mode.
068	43	Toner supply sleeve /2	55VA-335	
069	44	Pump unit /L	56UA-780	
070	45	Pump unit /R	56UA-790	
071	46	Guide shaft	A0G65305	2 counts for each 338mm or longer (in sub scan direction) paper exit in the single side mode, 4 counts for the double. *1 Except for those sizes, 1 count for the single and 2 counts for the double.
072	47	Cleaning shaft	A0G65107	1 count for each paper exit in the single side mode, 2 counts in the double side mode.
073	48	PCC unit	A0G6R7D5	2 counts for each 338mm or longer (in sub scan direction) paper exit in the single side mode, 4 counts for the double. *1 Except for those sizes, 1 count for the single and 2 counts for the double.
074	49	Discharge wire	A0G64708	
075	4A	Drum scraper unit	A0G6R7E7	
076	4B	Scatter prevent filter unit	A0G6R7E8	
077	4C	-	-	-
078	4D	Tray1 pick-up roller	55VA-484	1 count for each paper exit from tray /1.
079	4E	Tray1 paper feed roller/separation roller	55VA-483	
080	4F	Tray1 feed clutch	57GA8201	
081	50	Tray1 separation clutch	57GA8201	1 count for each paper exit when the clutch is turned ON by paper from Tray1
082	51	Tray2 Pick-up roller	55VA-484	1 count for each paper exit from Tray2
083	52	Tray2 Paper feed roller/Separation roller	55VA-483	
084	53	Tray2 feed clutch	57GA8201	
085	54	Tray2 separation clutch	57GA8201	1 count for each paper exit when the clutch is turned ON by paper from Tray2
086	55	Tray3 Pick-up roller	55VA-484	1 count for each paper exit from Tray3 (PF-702 only)
087	56	Tray3 Paper feed roller/Separation roller	55VA-483	
088	57	Tray3 feed clutch	57GA8201	1 count for each paper exit from Tray3
089	58	Tray3 separation clutch	57GA8201	1 count for each paper exit when the clutch is turned ON by paper from Tray3 (PF-702 only)
090	59	Tray /3 forced separation clutch	57GA8201	
091	5A	Tray3 suction belt	A0GD5213	
092	5B	Tray3 air shutter solenoid /Fr	A0GDA650	
093	5C	Tray3 air shutter solenoid /Rr	A0GDA650	1 count for each paper exit when the clutch is turned ON by paper from Tray3 (PF-703 only)
094	5D	Tray3 air shutter solenoid /Edge	A0GDA640	
095	5E	Tray4 pick-up roller	55VA-484	1 count for each paper exit from Tray3 (PF-702 only)
096	5F	Tray4 Paper feed roller/Separation roller	55VA-483	
097	60	Tray4 feed clutch	57GA8201	1 count for each paper exit from Tray4
098	61	Tray4 separation clutch	57GA8201	1 count for each paper exit when the clutch is turned ON by paper from Tray8 (PF-702 only)
099	62	Tray /4 forced separation clutch	57GA8201	
100	63	Tray4 suction belt	A0GD5213	1 count for each paper exit when the clutch is turned ON by paper from Tray4 (PF-703 only)
101	64	Tray4 air shutter solenoid /Fr	A0GDA650	
102	65	Tray4 air shutter solenoid /Rr	A0GDA650	

No.	CSRC Parameter (Z1, Z2)	Parts name	Parts No.	Count conditions
103	66	Tray4 air shutter solenoid /Edge	A0GDA640	1 count for each paper exit when the clutch is turned ON by paper from Tray4 (PF-703 only)
104	67	Tray5 Pick-up roller	55VA-484	1 count for each paper exit from Tray5 (PF-702 only)
105	68	Tray5 Paper feed roller/Separation roller	55VA-483	
106	69	Tray5 feed clutch	57GA8201	1 count for each paper exit from Tray5
107	6A	Tray5 separation clutch	57GA8201	1 count for each paper exit when the clutch is turned ON by paper from Tray5 (PF-702 only)
108	6B	Tray /5 forced separation clutch	57GA8201	
109	6C	Tray5 suction belt	A0GD5213	1 count for each paper exit when the clutch is turned ON by paper from Tray5 (PF-703 only)
110	6D	Tray5 air shutter solenoid /Fr	A0GDA650	
111	6E	Tray5 air shutter solenoid /Rr	A0GDA650	
112	6F	Tray5 air shutter solenoid /Edge	A0GDA640	
113	70	Tray6 Pick-up roller	55VA-484	1 count for each paper exit from Tray6 (PF-702 only)
114	71	Tray6 Paper feed roller/Separation roller	55VA-483	
115	72	Tray6 feed clutch	57GA8201	1 count for each paper exit from Tray6
116	73	Tray6 separation clutch	57GA8201	1 count for each paper exit when the clutch is turned ON by paper from Tray6 (PF-702 only)
117	74	Tray6 forced separation clutch	57GA8201	
118	75	Tray6 suction belt	A0GD5213	1 count for each paper exit when the clutch is turned ON by paper from Tray6 (PF-703 only)
119	76	Tray6 air shutter solenoid /Fr	A0GDA650	
120	77	Tray6 air shutter solenoid /Rr	A0GDA650	
121	78	Tray6 air shutter solenoid /Edge	A0GDA640	
122	79	Tray7 Pick-up roller	55VA-484	1 count for each paper exit from Tray6 (PF-702 only)
123	7A	Tray7 Paper feed roller/Separation roller	55VA-483	
124	7B	Tray7 feed clutch	57GA8201	1 count for each paper exit from Tray7
125	7C	Tray7 separation clutch	57GA8201	1 count for each paper exit when the clutch is turned ON by paper from Tray7 (PF-702 only)
126	7D	Tray7 forced separation clutch	57GA8201	
127	7E	Tray7 suction belt	A0GD5213	1 count for each paper exit when the clutch is turned ON by paper from Tray7 (PF-703 only)
128	7F	Tray7 air shutter solenoid /Fr	A0GDA650	
129	80	Tray7 air shutter solenoid /Rr	A0GDA650	1 count for each paper exit when the clutch is turned ON by paper from Tray7 (PF-703 only)
130	81	Tray7 air shutter solenoid /Edge	A0GDA640	
131	82	Tray8 Pick-up roller	55VA-484	1 count for each paper exit from Tray8 (PF-702 only)
132	83	Tray8 Paper feed roller/Separation roller	55VA-483	
133	84	Tray8 feed clutch	57GA8201	1 count for each paper exit from Tray8
134	85	Tray8 separation clutch	57GA8201	1 count for each paper exit when the clutch is turned ON by paper from Tray8 (PF-702 only)
135	86	Tray8 forced separation clutch	57GA8201	
136	87	Tray8 suction belt	A0GD5213	1 count for each paper exit when the clutch is turned ON by paper from Tray8 (PF-703 only)
137	88	Tray8 air shutter solenoid /Fr	A0GDA650	
138	89	Tray8 air shutter solenoid /Rr	A0GDA650	
139	8A	Tray8 air shutter solenoid /Edge	A0GDA640	
140	8B	Paper fur brush	55VA-574	1 count for each paper exit.
141	8C	Conveyance exit roller	56UA4412	
142	8D	Cleaning case assy	A0G6A701	
143	8E	Pre-registration clutch /1	57GA8201	1 count for each paper exit from Trays 1 and 2
144	8F	Vertical conveyance clutch (CL2)	57GA8201	1 count for each paper exit from Tray2
145	90	Pre-registration clutch /2	57GA8201	
146	91	V-convey roller /1 (φ20)	56UA4413	1 count for each paper exit.
147	92	V-convey roller 2/3 (φ32)	A0G67002 A0G67003	1 count for each paper exit from Tray2
148	93	Pre-registration roller /1	A0G67001	1 count for each paper exit from Trays 1 and 2

No.	CSRC Parameter (Z1, Z2)	Parts name	Parts No.	Count conditions
149	94	Pre-registration roller /2	A0G67001	1 count for each paper exit from Tray2
150	95	PFU 1 pre-registration roller /T	A0GC7005	1 count for each paper exit from Tray3
151	96	PFU 1 pre-registration roller /M	A0GC7005	1 count for each paper exit from Tray4
152	97	PFU 1 pre-registration roller /L	A0GC7005	1 count for each paper exit from Tray5
153	98	PFU 1 paper exit roller	15BA5011	1 count for each paper exit from Trays 3, 4 and 5
154	99	PFU 1 intermediate conveyance roller /U1	A0GC7006	1 count for each paper exit from Tray3
155	9A	PFU 1 intermediate conveyance roller /U2	A0GC7005	1 count for each paper exit from Tray3, 6, 7, 8 (PF-703 only)
156	9B	PFU 1 intermediate conveyance roller /L	A0GC7006	1 count for each paper exit from Tray5
157	9C	PFU 1 pre-registration clutch /T	57GA8201	1 count for each paper exit from Tray3
158	9D	PFU 1 pre-registration clutch /M	57GA8201	1 count for each paper exit from Tray4
159	9E	PFU 1 pre-registration clutch /L	57GA8201	1 count for each paper exit from Tray5
160	9F	PFU 1 intermediate conveyance clutch /T 1	57GA8201	1 count for each paper exit from Tray3
161	A0	PFU 1 intermediate conveyance clutch /T 2	57GA8201	1 count for each paper exit from Tray3, 6, 7, 8
162	A1	PFU 1 intermediate conveyance clutch /L	57GA8201	1 count for each paper exit from Tray5
163	A2	PFU 2 pre-registration roller /T	A0GC7005	1 count for each paper exit from Tray6
164	A3	PFU 2 pre-registration roller /M	A0GC7005	1 count for each paper exit from Tray7
165	A4	PFU 2 pre-registration roller /L	A0GC7005	1 count for each paper exit from Tray8
166	A5	PFU 2 paper exit roller	15BA5011	1 count for each paper exit from Tray6, 7, 8
167	A6	PFU 2 intermediate conveyance roller /U1	A0GC7006	1 count for each paper exit from Tray6
168	A7	PFU 2 intermediate conveyance roller /U2	A0GC7005	1 count for each paper exit from Tray6 (PF-703 only)
169	A8	PFU 2 intermediate conveyance roller /L	A0GC7006	1 count for each paper exit from Tray8
170	A9	PFU 2 pre-registration clutch /T	57GA8201	1 count for each paper exit from Tray6
171	AA	PFU 2 pre-registration clutch /M	57GA8201	1 count for each paper exit from Tray7
172	AB	PFU 2 pre-registration clutch /L	57GA8201	1 count for each paper exit from Tray8
173	AC	PFU 2 intermediate conveyance clutch /T 1	57GA8201	1 count for each paper exit from Tray6
174	AD	PFU 2 intermediate conveyance clutch /T 2	57GA8201	1 count for each paper exit from Tray6 (PF-703 only)
175	AE	PFU 2 intermediate conveyance clutch /L	57GA8201	1 count for each paper exit from Tray8
176	AF	Multiple horizontal conveyance roller unit	A0GDA710	1 count for each paper exit from Tray6, 7, 8
177	B0	Multiple entrance conveyance roller unit	A0GDA750	1 count for each paper exit from Tray6, 7, 8
178	B1	Tray1 feed counter	A0G6A600	1 count for each paper exit from tray /1.
179	B2	Tray2 feed counter	A0G6A600	1 count for each paper exit from Tray2
180	B3	Tray3 feed counter	A0G6A600 A0GDA620	1 count for each paper exit from Tray3
181	B4	Tray4 feed counter	A0G6A600 A0GDA620	1 count for each paper exit from Tray4
182	B5	Tray5 feed count	A0G6A600 A0GDA620	1 count for each paper exit from Tray5
183	B6	Tray6 feed counter	A0G6A600 A0GDA620	1 count for each paper exit from Tray6
184	B7	Tray7 feed counter	A0G6A600 A0GDA620	1 count for each paper exit from Tray7
185	B8	Tray8 feed counter	A0G6A600 A0GDA620	1 count for each paper exit from Tray8
186	B9	Main Switch	55GA8601	1 count each time the main power switch turns OFF the power.
187	BA	Door Switch	A0G6M03	1 count each time the front door is opened

No.	CSRC Parameter (Z1, Z2)	Parts name	Parts No.	Count conditions
188	BB	Exposure On time	56UA8301	Accumulation of time lamp is on. 1 count per second. Outputted per minute.
189	BC	ADF pick up roller	13GA4604	Original feed count in all modes.
190	BD	ADF feed roller	15AS4605	
191	BE	ADF retard roller	13GA4606	
192	BF	ADF sub pick roller	13GA4601	
193	C0	ADF torque limiter	13GA-135	
194	C1	ADF SDF solenoid	13GA8252	Total original feed count in the single feed mode.
195	C2	ADF LSB solenoid	13GA8251	1 count for each set of the large-size original single side mode. *1
196	C3	ADF press/release SD	13GA8251	1 count for each sheet of the large-size original double side mode.
197	C4	ADF SSB solenoid	13GA8251	1 count for each sheet of the large-size original double side mode.*1
198	C5	FS Staple /front ASSY	A0GYA735	1 count for each sheet of the small-size original double side mode.
199	C6	FS Staple /rear ASSY	A0GYA736	1 count for each paper exit in either of the 1-staple at rear or the 2-staple mode.
200	C7	FS Solenoid/A (intermediate roller SD)	15AA-449	1 count for each paper exit in the non-sort mode and the sort mode.
201	C8	FS tandem solenoid /1 assy	A0GYB904	1 count for each paper exit in the non-sort mode and the sort mode.
202	C9	FD feed roller assy /A (Upper)	50BA-574	Counts the paper feed from PI tray /Up.
203	CA	FD Reverse Rubber/Top	13QN-443	
204	CB	FD feed roller assy /B (Upper)	50BA-575	
205	CC	FD feed roller assy /A (Lower)	50BA-574	Counts the paper feed from PI tray /Lw.
206	CD	FD Reverse Rubber/Low	13QN-443	
207	CE	FD feed roller assy /B (Lower)	50BA-575	
208	CF	FD punch unit	A0H0A91A A0H0A91E A0H0A91F	1 count for each paper exit in the punch mode.
209	D0	FD solenoid /A assy (release/1)	15AG-493	1 count for each paper exit in the punch or folding mode (all size).
210	D1	FD solenoid /A assy (release/2)	15AGR761	1) 1 count for each paper exit in the folding mode (all size) 2) 1 count for each paper exit in the punch mode (paper length 220mm or larger).
211	D2	FD Motor Assy(Up/Down Motor)	129U-108	1 count for each paper exit to the main tray (FD self connection only)
212	D3	LS1 solenoid (Lead edge SD)	15AV8252	1 count for each paper exit in the non-sort and sort mode (all size).
213	D4	LS1 solenoid (Trail edge SD)	15AV8253	1 count for each paper exit in the non-sort and sort mode (all size).
214	D5	LS1 solenoid (Center SD)	15AV8251	1 count for each paper exit in the non-sort and sort mode (Length 295mm or more and Width 226mm or more).
215	D6	LS1 solenoid (Curl SD)	15AV8255	1 count for each paper exit in the non-sort mode.
216	D7	LS1 Up/Down motor	15AV8003	Counts operation number of times of the stacker tray up down motor.
217	D8	LS2 solenoid (Lead edge SD)	15AV8252	1 count for each paper exit in the non-sort and sort mode (all size).
218	D9	LS2 solenoid (Trail edge SD)	15AV8253	
219	DA	LS2 solenoid (Center SD)	15AV8251	1 count for each paper exit in the non-sort and sort mode (Length 295mm or more and Width 226mm or more).
220	DB	LS2 solenoid (Curl SD)	15AV8255	1 count for each paper exit in the non-sort mode.
221	DC	LS2 Up/Down motor	15AV8003	Counts operation number of times of the stacker tray up down motor.
222	DD	SD Staple/Right	15AN-550	1 count for each paper exit in the saddle stitch mode.
223	DE	SD Staple/Left	15AN-550	

No.	CSRC Parameter (Z1, Z2)	Parts name	Parts No.	Count conditions
224	DF	SD trimmer edge	A0H2R901	1 count for each paper exit in the trimming mode.
225	E0	SD trimmer receiver	A0H2B622	
226	E1	SD conveyance tandem solenoid (Release SD)	15AN8251#	1 count for each paper exit to the folding section.
227	E2	SD Solenoid (release SD)	13QE8251	
228	E3	SDFNS solenoid /2 (Overlap gate SD)	12QR8252	1 count for each paper exit to the stacker.
229	E4	SD gear /B	15AN7719	1 count for each book exit in the saddle stitching mode/multi center folding mode
230	E5	SD trimmer press motor	A0H2M101	1 count for each paper exit in the trimming mode.
231	E6	SD trimmer edge drive motor	A0H2M102	
232	E7	-	-	-
233	E8	-	-	-
234	E9	SD trimmer unit	A0H2A620	1 count for each paper exit in the trimming mode.
235	EA	PB sub tray exit solenoid	56QA8251	1 count for each paper exit in PB sub tray
236	EB	PB SB roller release drive motor	13GQ8005	1 count for each paper exit in PB stack section
237	EC	PB SC section FD plate drive solenoid	15AA8251	
238	ED	PB clamp on pressure plate drive solenoid	15AA8251	
239	EE	PB paper exit drive roller /A	13GQ4519	1 count for each paper exit from PB
240	EF	PB tray feed roller	55VA-464	1 count for each book exit in PB tray cover mode.
241	F0	PB tray conveyance roller/reverse roller	55VA-463	
242	F1	PB tray feed clutch	56AA8201	
243	F 2	PB tray handle clutch	56AA8201	1 count for each book exit when PB cover paper trimming is set.
244	F3	PB cutter /ASSY	A0756230	
245	F4	PB filter /1	A0753724	1 count for each paper exit from PB
246	F 5	-	-	-
247	F 6	PB path switch solenoid	56QA8251	1 count for each book exit in other than PB tray cover mode.
248	F7	PB502 melt tank ASSY	A075A36A A075A36E A075A36F	Time during which tank applying roller of PB-502 rotates. 1 count per hour.
249	F8	PB503 melt tank ASSY	A075A36A A075A36E A075A36F	Time during which tank applying roller of PB-503 rotates. 1 count per hour.
250	F9	PB503 exhaust filter /A	A15X3017	Time during which tank applying roller of PB-503 rotates. 1 count per 8 hours.
251	FA	PB503 exhaust filter /B	A15X3018	
252	FB	RU straight switch solenoid/straight switch spring	A0GEA131 15AG4587	1 count for each first paper exit after switching between pause and straight paper exit, or switching between reverse paper exit and straight paper exit
253	FC	RU registration solenoid	A0GEA132	1 count for each reversed paper exit from RU. (1 count for each exit even though overlapped by RU)
254	FD	RU stack switch solenoid/pressure release solenoid	A0GEA133 A0GEA134	1 count for each exit of paper to be reversed by RU from the main body. (Regardless of whether overlapped by RU or not, 1 count for each exit of paper to be reversed by RU from the main body. 2 counts for each overlapped papers exit from RU.)
255	FE	RU straight switch gate	A0GE7051	
256	FF	RU entrance roller/ Merging section roller	A0GEA211	1 count for each paper exit.
257	00	RU pre-separation roller	A0GEA213	
258	01	RU stack roller/stack roller pressure spring	A0GEA214 A0GE7091	
259	02	RU refeed roller	A0GEA212	
260	03	RU exit roller	A0GEA218	

No.	CSRC Parameter (Z1, Z2)	Parts name	Parts No.	Count conditions
261	04	RU pipe bearing	A0GEA210	
262	05	RU conveyance timing belt (stack/entrance/exit)	A0GE2104 A0GE2105 A0GE2106	
263	06	RU conveyance pulley/paper exit pulley	A0GE2112 A0GE2113	
264	07	RU conveyance motor	A0G6B821	
265	08	GP incline roller assy	A0N9PA01	1 count for each paper exit in multi-punch mode.
266	09	GP bypass assy	A0N9PA02	1 count for each paper exit.
267	0A	GP roller drive section	A0N9PA03	1 count for each paper exit in multi-punch mode.
268	0B	GP Belt Aligner (Green)	A0N9PA04	
269	0C	GP back-gauge mechanism	A0N9PA05	
270	0D	PI-PFU 1 feed clutch	57GA8201	1 count for each exit of paper from through PI-PFU1.
271	0E	PI-PFU 1 suction belt	A0GD5213	
272	0F	PI-PFU 1 air shutter solenoid /Fr	A0GDA650	
273	10	PI-PFU 1 air shutter solenoid /Rr	A0GDA650	1 count for each exit of paper from through PI-PFU 1.
274	11	PI-PFU 1 air shutter solenoid /Edge	A0GDA640	1 count for each exit of paper from through PI-PFU 2.
275	12	PI-PFU 2 feed clutch	57GA8201	
276	13	PI-PFU 2 suction belt	A0GD5213	
277	14	PI-PFU 2 air shutter solenoid /Fr	A0GDA650	
278	15	PI-PFU 2 air shutter solenoid /Rr	A0GDA650	
279	16	PI-PFU 2 air shutter solenoid /Edge	A0GDA640	
280	17	PI-PFU 3 feed clutch	57GA8201	1 count for each exit of paper from through PI-PFU 3.
281	18	PI-PFU 3 suction belt	A0GD5213	
282	19	PI-PFU 3 air shutter solenoid /Fr	A0GDA650	
283	1A	PI-PFU 3 air shutter solenoid /Rr	A0GDA650	
284	1B	PI-PFU 3 air shutter solenoid /Edge	A0GDA640	
285	1C	PI-PFU pre-registration roller /T	A0GC7005	1 count for each exit of paper from through PI-PFU 1.
286	1D	PI-PFU pre-registration roller /M	A0GC7005	1 count for each exit of paper from through PI-PFU 2.
287	1E	PI-PFU pre-registration roller /L	A0GC7005	1 count for each exit of paper from through PI-PFU 3.
288	1F	PI-PFU paper exit roller	15BA5011 A0GF7021	1 count for each paper exit from main body
289	20	PI-PFU intermediate conveyance roller /T1	A0GC7006	1 count for each exit of paper from through PI-PFU 1.
290	21	PI-PFU intermediate conveyance roller /T2	A0GC7005	1 count for each exit of paper from main body or PI-PFU 1.
291	22	PI-PFU intermediate conveyance roller /L	A0GC7006	1 count for each exit of paper from through PI-PFU 3.
292	23	PI-PFU pre-registration clutch /T	57GA8201	1 count for each exit of paper from through PI-PFU 1.
293	24	PI-PFU pre-registration clutch /M	57GA8201	1 count for each exit of paper from through PI-PFU 2.
294	25	PI-PFU pre-registration clutch /L	57GA8201	1 count for each exit of paper from through PI-PFU 3.
295	26	PFU 1 intermediate conveyance clutch /T1	57GA8201	1 count for each exit of paper from through PI-PFU 1.
296	27	PI-PFU 2 intermediate conveyance clutch /T2	57GA8201	1 count for each exit of paper from main body or PI-PFU 1.
297	28	PI-PFU intermediate conveyance clutch /L	57GA8201	1 count for each exit of paper from through PI-PFU 3.
298	29	PI-PFU horizontal conveyance roller unit	A0GDA710	1 count for each paper exit from main body
299	2A	PI-PFU entrance conveyance roller unit	A0GDA750	

When DIPSW1-1 is 1, 1 count for each paper exit in the simplex mode, 2 count in the duplex mode.

*2 The large-size original represents all originals in the mixed original mode; A3, B4, A4S, B5S, 8K, 16KS, 11 x 17, 8¹/₂ x 14, 8¹/₂ x 11S, 8 x 13, 8¹/₄ x 13, 8¹/₈ x 13, 8¹/₂ x 13

*3 The main body counts the finisher-related items (No.198 to No.269) as well as the other items.

5.6.16 Voluntary Part Counter (Parts Counter)

Used to control the service history of each part not registered as a special part.

For 30 data from No. 01 up to 30, confirm and reset of the name, P/N (parts number), limit value and print count.

Note

- Take 1 count for each print page of all paper exits with no discrimination made by paper size.
- When the print count is in excess of a limit value, an asterisk "*" is displayed to the left of the limit value and the item which is in excess is displayed in red.

(1) Set/Check procedure

1. "Service mode menu screen"
Press [03 Counter].
2. "Counter menu"
Press [03 Parts Counter].
3. "Copy count of part menu screen"
Press [02 Voluntary Part Counter].
4. "Copy Counter of Each Part screen"
Press [Next] or [Previous] to scroll the screen.
Press [▲] or [▼] to select a data number.
5. Select either [Parts Name Setting], [P/N Setting], or [Limit Setting].
6. Press one of the key you want to set or change, and enter it with the alphanumeric keys.
 - [Name Setting]: Enter a part name (8 digits)
 - [P/N]: Enter the part number. (9 digits)
 - [Limit]: Enter the limit value. (8 digits)
7. Press [OK] to update data.
Press [Cancel] to cancel the update.

(2) Reset procedure

1. "Service mode menu screen"
Press [03 Counter].
2. "Counter menu"
Press [03 Parts Counter].
3. "Copy count of part menu screen"
Press [02 Voluntary Part Counter].
4. "Copy Counter of Each Part screen"
Press [Next] or [Previous] to scroll the screen.
Press [▲] or [▼] to select an item you want to reset.
5. Press [Counter Clear].
6. "Reset confirm screen"
Press [Yes] to reset the counter.
Press [No] not to reset the counter. You return to the "Copy Counter of Each Parts screen."

(3) Relationship between data number and CSRC parameter

No.	Part Name	P/N	COUNT	LIMIT	Installation date
	CSRC parameter (Z4)	CSRC parameter (Z3)	CSRC parameter (G0)	CSRC parameter (H0)	CSRC parameter (H3)
001	00	00	00	00	00
002	01	01	01	01	01
003	02	02	02	02	02
004	03	03	03	03	03
005	04	04	04	04	04
006	05	05	05	05	05
007	06	06	06	06	06
008	07	07	07	07	07
009	08	08	08	08	08
010	09	09	09	09	09
011	0A	0A	0A	0A	0A
012	0B	0B	0B	0B	0B
013	0C	0C	0C	0C	0C
014	0D	0D	0D	0D	0D
015	0E	0E	0E	0E	0E
016	0F	0F	0F	0F	0F
017	10	10	10	10	10
018	11	11	11	11	11
019	12	12	12	12	12

020	13	13	13	13	13
021	14	14	14	14	14
022	15	15	15	15	15
023	16	16	16	16	16
024	17	17	17	17	17
025	18	18	18	18	18
026	19	19	19	19	19
027	1A	1A	1A	1A	1A
028	1B	1B	1B	1B	1B
029	1C	1C	1C	1C	1C
030	1D	1D	1D	1D	1D

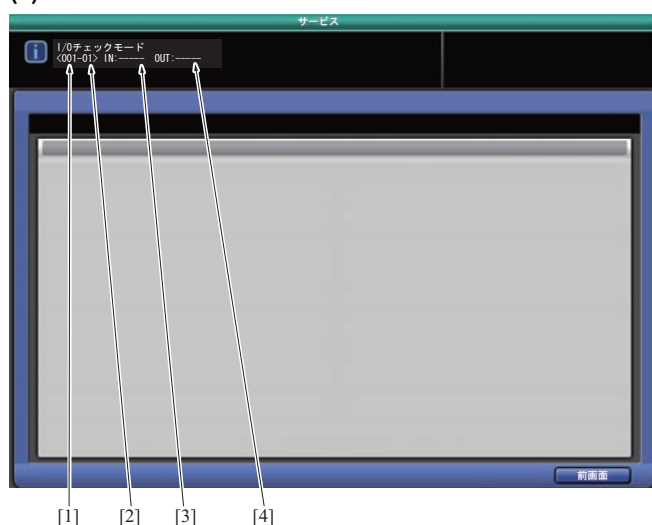
5.7 State Confirmation

5.7.1 I/O Check Mode

(1) OUTLINE

This machine is equipped with the input/output checking function as a self-diagnostic function, which allows the signal check (input check) and the checking and adjustment (output check) of the load behavior.

(2) "I/O Check Mode screen"



[1]	I/O check code	[2]	Multi code
[3]	[3] Input check	[4]	[4] Output check

5.7.2 Input check method

(1) Usage

Input check can check each sensor signal.

(2) Procedure

1. "Service mode menu screen"
Press [04. Machine condition]
2. "Machine Condition menu screen"
Press [01. I/O Check Mode].
3. "I/O Check Mode screen"
Enter the input check code with the numeric keys.
4. To use the multi mode, press the Access button.
5. Enter the multi code with the numeric keys.
6. The input check result (H/L) is shown in the message display column "IN".
7. Repeat steps 3 to 6 to perform the other signal input check.

5.7.3 Output check method

(1) Usage

Output check mode can check the operation of each load.

(2) Procedure

1. "Service mode menu screen"
Press [04. Machine condition]
2. "Machine Condition menu screen"
Press [01. I/O Check Mode].

3. "I/O Check Mode screen"
Enter the output check code with the numeric keys.
4. To use the multi mode, press the Access button.
5. Enter the multi code with the numeric keys.
6. Press the start key.
The load specified operates.
7. Press the stop button.
The operation of the load is completed.
8. Repeat steps 3 to 7 to perform the other load or signal output check.

5.7.4 IO check mode list

Code	Multi	Input check				Output check			
		Classification	Symbol	Name	Display and signal source	Classification	Symbol	Name	Restrictive conditions
0	0					Analog signal	L1, FM19	Exposure lamp + Scanner cooling fan	
1	0						M6	Toner bottle motor	
	1	Analog signal	PS39	Intermediate hopper toner remaining sensor	• 000: Toner • 001: No toner				
	2		PS32	Hopper toner remaining sensor /1	• 000: Toner • 001: No toner				
	3		PS33	Hopper toner remaining sensor /2	• 000: Toner • 001: No toner				
	4		PS34	Cup section toner remaining sensor	• 000: Toner • 001: No toner				
2	0		TH5	Drum temperature	Display of temperature (°C)				
	1		TEM/HUM2	Transfer belt temperature	Display of temperature (°C)				
	2		TEM/HUM1	External temperature of the main body	Display of temperature (°C)				
	3		TEM/HUM1	External humidity of the main body	Display of humidity (%)				
3	0		TH1	Fusing roller /Up center temperature	Display of temperature (°C)				
	1		TH2	Fusing roller /Lw temperature	Display of temperature (°C)				
4	0		TH3	Fusing roller edge temperature	Display of temperature (°C)				
5	0		TEM/HUM2	Humidity sensor signal	Display of humidity (%)				
6	0		TCB	The maximum density monitor signal	0 to 255				
7	0		TCB	The maximum density output signal	0 to 255				
8	0		TCB	Gamma output signal	0 to 255				
9	0		DPSB	Drum potential sensor output signal	0 to 255				
10	0		JAMB	Drum jam sensor output signal	• 000: No paper • 001: Paper				
11	1	Paper feed	PS8	Paper empty sensor /1 (Tray/1)	• 000: No paper • 001: Paper				
	2		PS12	Paper empty sensor /2 (Tray/2)	• 000: No paper • 001: Paper				
	3		PS4	Paper empty sensor /1 (Tray3) (PF-702)	• 000: No paper • 001: Paper				
	3		PS3	Paper empty sensor /1 (Tray3) (PF-703)	• 000: No paper • 001: Paper				
	4		PS8	Paper empty sensor /2 (Tray4) (PF-702)	• 000: No paper • 001: Paper				
	4		PS7	Paper empty sensor /2 (Tray4) (PF-703)	• 000: No paper • 001: Paper				
	5		PS12	Paper empty sensor /3 (Tray5) (PF-702)	• 000: No paper • 001: Paper				
	5		PS11	Paper empty sensor /3 (Tray5) (PF-703)	• 000: No paper • 001: Paper				
	6		PS4	Paper empty sensor /1 (Tray6) (PF-702)	• 000: No paper • 001: Paper				

Co de	Mul ti	Input check				Output check			
		Classific ation	Symb ol	Name	Display and signal source	Classific ation	Symb ol	Name	Restrictive conditions
12	6		PS3	Paper empty sensor /1 (Tray6) (PF-703)	• 000: No paper • 001: Paper				
	7		PS8	Paper empty sensor /2 (Tray7) (PF-702)	• 000: No paper • 001: Paper				
	7		PS7	Paper empty sensor /2 (Tray7) (PF-703)	• 000: No paper • 001: Paper				
	8		PS12	Paper empty sensor /3 (Tray8) (PF-702)	• 000: No paper • 001: Paper				
	8		PS11	Paper empty sensor /3 (Tray8) (PF-703)	• 000: No paper • 001: Paper				
	1		VR1	Remaining paper VR /1 (Tray /1)	Remaining display (0 to 1023%)				
	2		VR4	Remaining paper VR /2 (Tray2)	Remaining display (0 to 1023%)				
	3		VR1	Remaining paper VR /1 (Tray3) (PF-702/703)	Remaining display (0 to 1023%)				
	4		VR4	Remaining paper VR /2 (Tray4) (PF-702/703)	Remaining display (0 to 1023%)				
	5		VR7	Remaining paper VR /3 (Tray5) (PF-702/703)	Remaining display (0 to 1023%)				
	6		VR1	Remaining paper VR /1 (Tray6) (PF-702/703)	Remaining display (0 to 1023)				
	7		VR4	Remaining paper VR /2 (Tray7) (PF-702/703)	Remaining display (0 to 1023)				
	8		VR7	Remaining paper VR /3 (Tray8) (PF-702/703)	Remaining display (0 to 1023)				
13	1		VR2	CD paper size VR/1 (Tray1)	0 to 255				
	2		VR5	CD paper size VR/2 (Tray2)	0 to 255				
	3		VR2	CD paper size VR/1 (Tray3) (PF-702/703)	0 to 255				
	4		VR5	CD paper size VR/2 (Tray4) (PF-702/703)	0 to 255				
	5		VR8	CD paper size VR/3 (Tray5) (PF-702/703)	0 to 255				
	6		VR2	CD paper size VR/1 (Tray6) (PF-702/703)	0 to 255				
	7		VR5	CD paper size VR/2 (Tray7) (PF-702/703)	0 to 255				
	8		VR8	CD paper size VR/3 (Tray8) (PF-702/703)	0 to 255				
14	1		VR3	FD paper size VR/1 (Tray1)	0 to 1023				
	2		VR6	FD paper size VR/2 (Tray2)	0 to 1023				
	3		VR3	FD paper size VR/1 (Tray3) (PF-702/703)	0 to 1023				
	4		VR6	FD paper size VR/2 (Tray4) (PF-702/703)	0 to 1023				
	5		VR9	FD paper size VR/3 (Tray5) (PF-702/703)	0 to 1023				
	6		VR3	FD paper size VR/1 (Tray6) (PF-702/703)	0 to 1023				
	7		VR6	FD paper size VR /2 (Tray7) (PF-702/703)	0 to 1023				

Co de	Mul ti	Input check				Output check			
		Classific ation	Symb ol	Name	Display and signal source	Classific ation	Symb ol	Name	Restrictive conditions
	8		VR9	FD paper size VR /3 (Tray8) (PF-702/703)	0 to 1023				
15	1		-	Paper size signal (Tray1)	0: 11 x 17, 1: A3, 2: B4, 3: 8 1/2 x 14, 4: A4S, 5: 8 1/2 x 11S, 6: A5S, 7: 8 1/2 x 11, 8: 5 1/2 x 8 1/2S, 9: A4, 10: A5S, 11: B5, 12: A5, 13: B6S, 14: 5 1/2 x 8 1/2, 15: B6, 16: Special, 17: 8 1/8 x 13 1/4, 18: 8 x 13, 19: 8 1/4 x 13, 20: 8 1/2 x 13, 21: Postcard	Data clear	-	Data collection count clear	
	2		-	Paper size signal (Tray2)	0: 11 x 17, 1: A3, 2: B4, 3: 8 1/2 x 14, 4: A4S, 5: 8 1/2 x 11S, 6: A5S, 7: 8 1/2 x 11, 8: 5 1/2 x 8 1/2S, 9: A4, 10: A5S, 11: B5, 12: A5, 13: B6S, 14: 5 1/2 x 8 1/2, 15: B6, 16: Special, 17: 8 1/8 x 13 1/4, 18: 8 x 13, 19: 8 1/4 x 13, 20: 8 1/2 x 13, 21: Postcard		-	Mode memory clear	
	3						-	Count clear by copy modes	
	98							CS Remote Care memory initialization	Used in the CS Remote Care mode
16	1	Paper feed	PS6	Upper limit sensor /1 (Tray1)	• 000: Other than upper limit • 001: Upper limit				
	2		PS10	Upper limit sensor /2 (Tray2)	• 000: Other than upper limit • 001: Upper limit				
	3		PS2	Upper limit sensor /1 (Tray3) (PF-702)	• 000: Other than upper limit • 001: Upper limit				

Co de	Mul ti	Input check				Output check			
		Classific ation	Symb ol	Name	Display and signal source	Classific ation	Symb ol	Name	Restrictive conditions
	3		PS5	Upper limit sensor /1 (Tray3) (PF-703)	<ul style="list-style-type: none"> • 000: Other than upper limit • 001: Upper limit 				
	4		PS6	Upper limit sensor /2 (Tray4) (PF-702)	<ul style="list-style-type: none"> • 000: Other than upper limit • 001: Upper limit 				
	4		PS9	Upper limit sensor /2 (Tray4) (PF-703)	<ul style="list-style-type: none"> • 000: Other than upper limit • 001: Upper limit 				
	5		PS10	Upper limit sensor /3 (Tray5) (PF-702)	<ul style="list-style-type: none"> • 000: Other than upper limit • 001: Upper limit 				
	5		PS13	Upper limit sensor /3 (Tray5) (PF-703)	<ul style="list-style-type: none"> • 000: Other than upper limit • 001: Upper limit 				
	6		PS2	Upper limit sensor /1 (Tray6) (PF-702)	<ul style="list-style-type: none"> • 000: Other than upper limit • 001: Upper limit 				
	6		PS5	Upper limit sensor /1 (Tray6) (PF-703)	<ul style="list-style-type: none"> • 000: Other than upper limit • 001: Upper limit 				
	7		PS6	Upper limit sensor /2 (Tray7) (PF-702)	<ul style="list-style-type: none"> • 000: Other than upper limit • 001: Upper limit 				
	7		PS9	Upper limit sensor /2 (Tray7) (PF-703)	<ul style="list-style-type: none"> • 000: Other than upper limit • 001: Upper limit 				
	8		PS10	Upper limit sensor /3 (Tray8) (PF-702)	<ul style="list-style-type: none"> • 000: Other than upper limit • 001: Upper limit 				
	8		PS13	Upper limit sensor /3 (Tray8) (PF-703)	<ul style="list-style-type: none"> • 000: Other than upper limit • 001: Upper limit 				
17	0					-	M22	Cleaning blade packing lock move	Used in repacking
	1	Paper feed	-	Tray1 set signal	<ul style="list-style-type: none"> • 000: Not set • 001: Set 				
	2		-	Tray2 set signal	<ul style="list-style-type: none"> • 000: Not set • 001: Set 				
	3		-	Tray3 set signal	<ul style="list-style-type: none"> • 000: Not set • 001: Set 				
	4		-	Tray4 set signal	<ul style="list-style-type: none"> • 000: Not set • 001: Set 				
	5		-	Tray5 set signal	<ul style="list-style-type: none"> • 000: Not set • 001: Set 				

Co de	Mul ti	Input check				Output check			
		Classific ation	Symb ol	Name	Display and signal source	Classific ation	Symb ol	Name	Restrictive conditions
	6		-	Tray6 set signal	• 000: Not set • 001: Set				
	7		-	Tray7 set signal	• 000: Not set • 001: Set				
	8		-	Tray8 set signal	• 000: Not set • 001: Set				
	9		-	Tray3 trailing edge guide set signal	• 000: Not set • 001: Set				
	10		-	Tray4 trailing edge guide set signal	• 000: Not set • 001: Set				
	11		-	Tray5 trailing edge guide set signal	• 000: Not set • 001: Set				
	12		-	Tray6 trailing edge guide set signal	• 000: Not set • 001: Set				
	13		-	Tray7 trailing edge guide set signal	• 000: Not set • 001: Set				
	14		-	Tray8 trailing edge guide set signal	• 000: Not set • 001: Set				
	15		-	PFU1 horizontal conveyance section set signal	• 000: Not set • 001: Set				
18	1	PS9		Handle release sensor /1 (Tray1)	• 000: OFF • 001: ON	Paper feed	CL8	Forced separation clutch / 1 (Tray3) (PF-702)	
	2	PS13		Handle release sensor /2 (Tray2)	• 000: OFF • 001: ON		CL11	Forced separation clutch / 2 (Tray4) (PF-702)	
	3	PS5		Handle release sensor /1 (Tray3) (PF-702)	• 000: OFF • 001: ON		CL14	Forced separation clutch / 3 (Tray5) (PF-702)	
	3	PS4		Handle release sensor /1 (Tray3) (PF-703)	• 000: OFF • 001: ON		CL14	Forced separation clutch / 3 (Tray5) (PF-702)	
	4	PS9		Handle release sensor /2 (Tray4) (PF-702)	• 000: OFF • 001: ON		CL8	Forced separation clutch / 1 (Tray6) (PF-702)	
	4	PS8		Handle release sensor /2 (Tray4) (PF-703)	• 000: OFF • 001: ON		CL8	Forced separation clutch / 1 (Tray6) (PF-702)	
	5	PS13		Handle release sensor /3 (Tray5) (PF-702)	• 000: OFF • 001: ON		CL11	Forced separation clutch / 2 (Tray7) (PF-702)	
	5	PS12		Handle release sensor /3 (Tray5) (PF-703)	• 000: OFF • 001: ON		CL11	Forced separation clutch / 2 (Tray7) (PF-702)	
	6	PS5		Handle release sensor /1 (Tray6) (PF-702)	• 000: OFF • 001: ON		CL14	Forced separation clutch / 3 (Tray8) (PF-702)	
	6	PS4		Handle release sensor /1 (Tray6) (PF-703)	• 000: OFF • 001: ON		CL14	Forced separation clutch / 3 (Tray8) (PF-702)	
	7	PS9		Handle release sensor /2 (Tray7) (PF-702)	• 000: OFF • 001: ON				
	7	PS8		Handle release sensor /2 (Tray7) (PF-703)	• 000: OFF • 001: ON				
	8	PS13		Handle release sensor /3 (Tray8) (PF-702)	• 000: OFF • 001: ON				
	8	PS12		Handle release sensor /3 (Tray8) (PF-703)	• 000: OFF • 001: ON				
19	1					Paper feed	CL5	Forced separation clutch / 1 (Tray1)	
	2						CL7	Forced separation clutch / 2 (Tray2)	
	3						CL7	Forced separation clutch / 1 (Tray3) (PF-702)	
	4						CL10	Forced separation clutch / 2 (Tray4) (PF-702)	
	5						CL13	Forced separation clutch / 3 (Tray5) (PF-702)	
	6						CL7	Forced separation clutch / 1 (Tray6) (PF-702)	
	7						CL10	Forced separation clutch / 2 (Tray7) (PF-702)	

Co de	Mul ti	Input check				Output check			
		Classific ation	Symb ol	Name	Display and signal source	Classific ation	Symb ol	Name	Restrictive conditions
	8						CL13	Forced separation clutch / 3 (Tray8) (PF-702)	
	6						M4, CL5	Paper feed motor + Separation clutch /1 (Tray1)	
	7						M4, CL7	Paper feed motor + Separation clutch /2 (Tray2)	
	8						M1, CL7	Paper feed motor + Separation clutch /1 (Tray3) (PF-702)	
	9						M1, CL10	Paper feed motor + Separation clutch /2 (Tray4) (PF-702)	
	10						M1, CL13	Paper feed motor + Separation clutch /3 (Tray5) (PF-702)	
	11						M1, CL7	Paper feed motor + Separation clutch /1 (Tray6) (PF-702)	
	12						M1, CL10	Paper feed motor + Separation clutch /2 (Tray7) (PF-702)	
	13						M1, CL13	Paper feed motor + Separation clutch /3 (Tray8) (PF-702)	
20	1	Paper feed, conveya nce	PS7	Paper feed sensor /1 (Tray1)	• 000: No paper • 001: Paper		SD3	Pick-up solenoid /1 (Tray1)	
	2		PS11	Paper feed sensor /2 (Tray2)	• 000: No paper • 001: Paper		SD4	Pick-up solenoid /2 (Tray2)	
	3		PS3	Paper feed sensor /1 (Tray3) (PF-702)	• 000: No paper • 001: Paper		SD4	Pick-up solenoid /1 (Tray3) (PF-702)	
	3		PS2	Paper feed sensor /1 (Tray3) (PF-703)	• 000: No paper • 001: Paper		SD4	Pick-up solenoid /1 (Tray3) (PF-702)	
	4		PS7	Paper feed sensor /2 (Tray4) (PF-702)	• 000: No paper • 001: Paper		SD5	Pick-up solenoid /2 (Tray4) (PF-702)	
	4		PS6	Paper feed sensor /2 (Tray4) (PF-703)	• 000: No paper • 001: Paper		SD5	Pick-up solenoid /2 (Tray4) (PF-702)	
	5		PS11	Paper feed sensor /3 (Tray5) (PF-702)	• 000: No paper • 001: Paper		SD6	Pick-up solenoid /3 (Tray5) (PF-702)	
	5		PS10	Paper feed sensor /3 (Tray5) (PF-703)	• 000: No paper • 001: Paper		SD6	Pick-up solenoid /3 (Tray5) (PF-702)	
	6		PS3	Paper feed sensor /1 (Tray6) (PF-702)	• 000: No paper • 001: Paper		SD4	Pick-up solenoid /1 (Tray6) (PF-702)	
	6		PS2	Paper feed sensor /1 (Tray6) (PF-703)	• 000: No paper • 001: Paper		SD4	Pick-up solenoid /1 (Tray6) (PF-702)	
	7		PS7	Paper feed sensor /2 (Tray7) (PF-702)	• 000: No paper • 001: Paper		SD5	Pick-up solenoid /2 (Tray7) (PF-702)	
	7		PS6	Paper feed sensor /2 (Tray7) (PF-703)	• 000: No paper • 001: Paper		SD5	Pick-up solenoid /2 (Tray7) (PF-702)	
	8		PS11	Paper feed sensor /3 (Tray8) (PF-702)	• 000: No paper • 001: Paper		SD6	Pick-up solenoid /3 (Tray8) (PF-702)	
	8		PS10	Paper feed sensor /3 (Tray8) (PF-703)	• 000: No paper • 001: Paper		SD6	Pick-up solenoid /3 (Tray8) (PF-702)	
	9		PS25	paper suction sensor /Fr1 (Tray3)	• 000: No paper • 001: Paper		SD4, SD5	Shutter solenoid /Fr1 + Shutter solenoid /Rr1 (Tray3) (PF-703)	
	10		PS26	paper suction sensor /Rr1 (Tray3)	• 000: No paper • 001: Paper		SD6, SD7	Shutter solenoid /Fr2 + Shutter solenoid /Rr2 (Tray4) (PF-703)	
	11		PS27	paper suction sensor /Fr2 (Tray4)	• 000: No paper • 001: Paper		SD8, SD9	Shutter solenoid /Fr3 + Shutter solenoid /Rr3 (Tray5) (PF-703)	
	12		PS28	paper suction sensor /Rr2 (Tray4)	• 000: No paper • 001: Paper		SD4, SD5	Shutter solenoid /Fr1 + Shutter solenoid /Rr1 (Tray6) (PF-703)	

Co de	Mul ti	Input check				Output check			
		Classific ation	Symb ol	Name	Display and signal source	Classific ation	Symb ol	Name	Restrictive conditions
	13		PS29	paper suction sensor /Fr3 (Tray5)	• 000: No paper • 001: Paper		SD6, SD7	Shutter solenoid /Fr2 + Shutter solenoid /Rr2 (Tray7) (PF-703)	
	14		PS30	Paper suction sensor /Rr3 (Tray5)	• 000: No paper • 001: Paper		SD8, SD9	Shutter solenoid /Fr3 + Shutter solenoid /Rr3 (Tray8) (PF-703)	
	15		PS25	Paper suction sensor /Fr1 (Tray6)	• 000: No paper • 001: Paper				
	16		PS26	Paper suction sensor /Rr1 (Tray6)	• 000: No paper • 001: Paper				
	17		PS27	Paper suction sensor /Fr2 (Tray7)	• 000: No paper • 001: Paper				
	18		PS28	Paper suction sensor /Rr2 (Tray7)	• 000: No paper • 001: Paper				
	19		PS29	Paper suction sensor /Fr3 (Tray8)	• 000: No paper • 001: Paper				
	20		PS30	Paper suction sensor /Rr3 (Tray8)	• 000: No paper • 001: Paper				
	21		PS37	Shutter home sensor /1 (Tray3)	• 000: OFF • 001: ON				
	22		PS38	Shutter home sensor /2 (Tray4)	• 000: OFF • 001: ON				
	23		PS39	Shutter home sensor /3 (Tray5)	• 000: OFF • 001: ON				
	24		PS37	Shutter home sensor /1 (Tray6)	• 000: OFF • 001: ON				
	25		PS38	Shutter home sensor /2 (Tray7)	• 000: OFF • 001: ON				
	26		PS39	Shutter home sensor /3 (Tray8)	• 000: OFF • 001: ON				
21	1		PS17	Pre-registration sensor /1 (Tray1)	• 000: No paper • 001: Paper	Paper feed	CL4	Paper Feed Clutch /1 (Tray1)	
	2		PS18	Pre-registration sensor /2 (Tray2)	• 000: No paper • 001: Paper		CL6	Paper Feed Clutch /2 (Tray2)	
	3		PS14	Pre-registration sensor /1 (Tray3) (PF-702/703)	• 000: No paper • 001: Paper		CL6	Paper Feed Clutch /1 (Tray3) (PF-702)	
	4		PS18	Pre-registration sensor /2 (Tray4) (PF-702/703)	• 000: No paper • 001: Paper		CL9	Paper Feed Clutch /2 (Tray4) (PF-702)	
	5		PS20	Pre-registration sensor /3 (Tray5) (PF-702/703)	• 000: No paper • 001: Paper		CL12	Paper Feed Clutch /3 (Tray5) (PF-702)	
	6		PS14	Pre-registration sensor /1 (Tray6) (PF-702/703)	• 000: No paper • 001: Paper		CL6	Paper Feed Clutch /1 (Tray6) (PF-702)	
	7		PS18	Pre-registration sensor /2 (Tray7) (PF-702/703)	• 000: No paper • 001: Paper		CL9	Paper Feed Clutch /2 (Tray7) (PF-702)	
	8		PS20	Pre-registration sensor /3 (Tray8) (PF-702/703)	• 000: No paper • 001: Paper		CL12	Paper Feed Clutch /3 (Tray8) (PF-702)	
	9						CL7	Paper Feed Clutch /1 (Tray3) (PF-703)	
	10						CL8	Paper Feed Clutch /2 (Tray4) (PF-703)	
	11						CL9	Paper Feed Clutch /3 (Tray5) (PF-703)	
	12						CL7	Paper Feed Clutch /1 (Tray6) (PF-703)	
	13						CL8	Paper Feed Clutch /2 (Tray7) (PF-703)	
	14						CL9	Paper Feed Clutch /3 (Tray8) (PF-703)	
22	1	Paper feed, convey ance	PS19	Vertical conveyance sensor /1	• 000: No paper • 001: Paper		CL1	Pre-registration clutch /1	
	2		PS21	Vertical conveyance sensor /3	• 000: No paper • 001: Paper		CL3	Pre-registration clutch /3	
	3		PS15	Vertical conveyance sensor /1 (PF-702/703)	• 000: No paper • 001: Paper		CL1	Pre-registration clutch /1 (Tray3) (PF-702/703)	

Co de	Mul ti	Input check				Output check			
		Classific ation	Symb ol	Name	Display and signal source	Classific ation	Symb ol	Name	Restrictive conditions
	4		PS21	Vertical conveyance sensor /2 (PF-702)	• 000: No paper • 001: Paper		CL3	Pre-registration clutch /2 (Tray4) (PF-702/703)	
	4		PS21	Vertical conveyance sensor /3 (PF-703)	• 000: No paper • 001: Paper		CL3	Pre-registration clutch /2 (Tray4) (PF-702/703)	
	5		PS15	Vertical conveyance sensor /1 (PF-702/703)	• 000: No paper • 001: Paper		CL5	Pre-registration clutch /3 (Tray5) (PF-702/703)	
	6		PS21	Vertical conveyance sensor /2 (PF-702)	• 000: No paper • 001: Paper		CL2	Vertical conveyance clutch	
	6		PS21	Vertical conveyance sensor /3 (PF-703)	• 000: No paper • 001: Paper		CL2	Vertical conveyance clutch	
	7		PS20	Vertical conveyance sensor /2	• 000: No paper • 001: Paper		CL2	Intermediate clutch /Up (PF-702)	
	7		PS20	Vertical conveyance sensor /2	• 000: No paper • 001: Paper		CL2	Intermediate clutch /1 (PF-703)	
	8		PS16	Intermediate sensor /Up (PF-702/703)	• 000: No paper • 001: Paper		CL4	Intermediate clutch /Lw (PF-702)	
	8		PS16	Intermediate sensor /Up (PF-702/703)	• 000: No paper • 001: Paper		CL4	Intermediate clutch /2 (PF-703)	
	9		PS22	Intermediate sensor /Lw (PF-702/703)	• 000: No paper • 001: Paper		M8	Vertical conveyance motor (330mm/s)	
	10		PS16	Intermediate sensor /Up (PF-702/703)	• 000: No paper • 001: Paper		M8	Vertical conveyance motor (490mm/s)	
	11		PS22	Intermediate sensor /Lw (PF-702/703)	• 000: No paper • 001: Paper		M8	Vertical conveyance motor (570mm/s)	
	12						M8	Vertical conveyance motor (1250mm/s)	
	13						CL1	Pre-registration clutch /1 (Tray6) (PF-702/703)	
	14						CL3	Pre-registration clutch /2 (Tray7) (PF-702/703)	
	15						CL5	Pre-registration clutch /3 (Tray8) (PF-702/703)	
	16						CL2	Intermediate clutch /Up (PF-702)	
	16						CL2	Intermediate clutch /1 (PF-703)	
	17						CL4	Intermediate clutch /Lw (PF-702)	
	17						CL4	Intermediate clutch /2 (PF-703)	
	18						M4, CL1	Paper feed motor + Pre-registration clutch /1	
	19						M4, CL3	Paper feed motor + Pre-registration clutch /3	
	20						M1, CL1	Paper feed motor + Pre-registration clutch/1 (PF-702/703)	
	21						M1, CL3	Paper feed motor + Pre-registration clutch/2 (PF-702/703)	
	22						M1, CL5	Paper feed motor + Pre-registration clutch/3 (PF-702/703)	
	23						M4, CL2	Paper feed motor + Vertical conveyance clutch	
	24						M1, CL2	Paper feed motor + Intermediate clutch /Up (PF-702)	
	24						M1, CL2	Paper feed motor + Intermediate clutch /1 (PF-703)	
	25						M1, CL4	Paper feed motor + Intermediate clutch /Lw (PF-702)	

Co de	Mul ti	Input check				Output check			
		Classific ation	Symb ol	Name	Display and signal source	Classific ation	Symb ol	Name	Restrictive conditions
	25						M1, CL4	Paper feed motor + Intermediate clutch /2 (PF-703)	
	26						CL6	V-convey clutch mid.	
	27						M1, CL1	Paper feed motor + Pre- registration clutch/1 (PF-702/703)	
	28						M1, CL3	Paper feed motor + Pre- registration clutch/2 (PF-702/703)	
	29						M1, CL5	Paper feed motor + Pre- registration clutch/3 (PF-702/703)	
	30						M1, CL2	Paper feed motor + Intermediate clutch /Up (PF-702)	
	30						M1, CL2	Paper feed motor + Intermediate clutch /1 (PF-703)	
	31						M1, CL4	Paper feed motor + Intermediate clutch /Lw (PF-702)	
	31						M1, CL4	Paper feed motor + Intermediate clutch /2 (PF-703)	
	32						CL6	V-convey clutch mid.	
23	1	Paper feed, conveya nce	PS41	Paper leading edge sensor	• 000: No paper • 001: Paper		M25	Tray lift-up motor /1 (Tray1)	From the tray lowering position to the upper limit
	2		PS16	Loop sensor	• 000: No paper • 001: Paper		M34	Tray lift-up motor /2 (Tray2)	From the tray lowering position to the upper limit
	3		PS40	Registration sensor	• 000: No paper • 001: Paper		M42	Paper lift motor /1 (Tray3) (PF 702)	From the tray lowering position to the upper limit
	3		PS40	Registration sensor	• 000: No paper • 001: Paper		M7	Paper lift motor /1 (Tray3) (PF-703)	From the tray lowering position to the upper limit
	4		PS17	Loop sensor /1 (Tray3) (PF-702/703)	• 000: No paper • 001: Paper		M43	Paper lift motor /2 (Tray4) (PF 702)	From the tray lowering position to the upper limit
	4		PS17	Loop sensor /1(Tray3) (PF-702/703)	• 000: No paper • 001: Paper		M8	Paper lift motor /2 (Tray4) (PF-703)	From the tray lowering position to the upper limit
	5		PS19	Loop sensor /2 (Tray4) (PF-702/703)	• 000: No paper • 001: Paper		M44	Paper lift motor /3 (Tray5) (PF 702)	From the tray lowering position to the upper limit
	5		PS19	Loop sensor /2(Tray4) (PF-702/703)	• 000: No paper • 001: Paper		M9	Paper lift motor /3 (Tray5) (PF-703)	From the tray lowering position to the upper limit
	6		PS23	Loop sensor /3 (Tray5) (PF-702/703)	• 000: No paper • 001: Paper		M42	Paper lift motor /1 (Tray6) (PF 702)	From the tray lowering position to the upper limit
	6		PS23	Loop sensor /3(Tray5) (PF-702/703)	• 000: No paper • 001: Paper		M7	Paper lift motor /1 (Tray6) (PF-703)	From the tray lowering position to the upper limit
	7		PS24	PF exit conveyance sensor (PF-702/703)	• 000: No paper • 001: Paper		M43	Paper lift motor /2 (Tray7) (PF-702)	From the tray lowering position to the upper limit
	7		PS24	PF exit conveyance sensor (PF-702/703)	• 000: No paper • 001: Paper		M8	Paper lift motor /2 (Tray7) (PF-703)	From the tray lowering position to the upper limit
	8		PS17	Loop sensor /1 (Tray6) (PF-702/703)	• 000: No paper • 001: Paper		M44	Paper lift motor /3 (Tray8) (PF-702)	From the tray lowering position to the upper limit

Co de	Mul ti	Input check				Output check			
		Classific ation	Symb ol	Name	Display and signal source	Classific ation	Symb ol	Name	Restrictive conditions
	8		PS17	Loop sensor /1(Tray6) (PF-702/703)	• 000: No paper • 001: Paper		M9	Paper lift motor /3 (Tray8) (PF-703)	From the tray lowering position to the upper limit
	9		PS19	Loop sensor /2(Tray7) (PF-702/703)	• 000: No paper • 001: Paper				
	10		PS23	Loop sensor /3(Tray8) (PF-702/703)	• 000: No paper • 001: Paper				
	11		PS24	PF exit conveyance sensor (PF-702/703)	• 000: No paper • 001: Paper				
	12		PS31	Horizontal conveyance sesor /1 (PF-703)	• 000: No paper • 001: Paper				
	13		PS32	Horizontal conveyance sesor /2 (PF-703)	• 000: No paper • 001: Paper				
	14		PS33	Horizontal conveyance sesor /3 (PF-703)	• 000: No paper • 001: Paper				
	15		PS34	Horizontal conveyance sesor /4 (PF-703)	• 000: No paper • 001: Paper				
	16		PS35	Horizontal conveyance sesor /5 (PF-703)	• 000: No paper • 001: Paper				
24	1		PS22	Fusing exit sensor	• 000: No paper • 001: Paper	Paper feed	SD1	Tray lock solenoid /1 (Tray1)	
	2		PS3	Paper exit sensor	• 000: No paper • 001: Paper		SD2	Tray lock solenoid /2 (Tray2)	
	3		PS48	Reverse sensor /1	• 000: No paper • 001: Paper		SD1	Tray lock solenoid/1 (Tray3) (PF-702/703)	
	4		PS47	Reverse sensor /2	• 000: No paper • 001: Paper		SD2	Tray lock solenoid/2 (Tray4) (PF-702/703)	
	5		PS38	Fusing jam sensor	• 000: No paper • 001: Paper		SD3	Tray lock solenoid/3 (Tray5) (PF-702/703)	
	6		PS50	ADU reverse paper exit sensor	• 000: No paper • 001: Paper		SD1	Tray lock solenoid/1 (Tray6) (PF-702/703)	
	7		PS23	De-curler entrance sensor	• 000: No paper • 001: Paper		SD2	Tray lock solenoid/2 (Tray7) (PF-702/703)	
	8		PS65	Paper skew sensor /Fr	• 000: Paper • 001: No paper		SD3	Tray lock solenoid/3 (Tray8) (PF-702/703)	
	9		PS66	Paper skew sensor /Rr	• 000: Paper • 001: No paper				
25	1		SW4	Door switch /1	• 000: Close • 001: Open	Paper feed	M30	Transfer belt motor (330mm /s)	
	2		PS1	Door open/close sensor /1	• 000: Close • 001: Open		M30	Transfer belt motor (490mm /s)	
	3		PS2	Door open/close sensor /2	• 000: Close • 001: Open		M30	Transfer belt motor (570mm /s)	
	4		MS1, MS2	Interlock switch /1, /2	• 000: Close • 001: Open		M5	Transfer belt cleaning motor	
	5		PS317	APS timing sensor	• 000: Close • 001: Open				
	6		SW5	Door switch /2	• 000: Close • 001: Open				
	7		-	Fusing section set detection signal	• 000: Not set • 001: Set				
	9		PS1	Door open/close sensor (PF-702/703)	• 000: Close • 001: Open				
	10		SW1	Vertical conveyance door switch /Up (PF-702/703)	• 000: OFF • 001: ON				
	11		SW2	Vertical conveyance door switch /Lw (PF-702/703)	• 000: OFF • 001: ON				
	12		MS1	Interlock switch (PF-702/703)	• 000: Close • 001: Open				
	13		SW3	Horizontal conveyance door switch (PF-702/703)	• 000: OFF • 001: ON				
	14		PS1	Door open/close sensor (PF-702/703)	• 000: Close • 001: Open				

Co de	Mul ti	Input check				Output check			
		Classific ation	Symb ol	Name	Display and signal source	Classific ation	Symb ol	Name	Restrictive conditions
	15		SW1	Vertical conveyance door switch /Up (PF-702/703)	• 000: OFF • 001: ON				
	16		SW2	Vertical conveyance door switch /Lw (PF-702/703)	• 000: OFF • 001: ON				
	17		MS1	Interlock switch (PF-702/703)	• 000: Close • 001: Open				
	18		SW3	Horizontal conveyance door switch (PF-702/703)	• 000: OFF • 001: ON				
	19		PS14	Waste toner box set sensor	• 000: OFF • 001: ON				
	20		PS37	Waste toner full sensor /1	• 000: OFF • 001: ON				
	21		-	Heater unit set signal (Tray3)	• 000: OFF • 001: ON				
	22		-	Heater unit set signal (Tray4)	• 000: OFF • 001: ON				
	23		-	Heater unit set signal (Tray5)	• 000: OFF • 001: ON				
	24		-	Heater unit set signal (Tray6)	• 000: OFF • 001: ON				
	25		-	Heater unit set signal (Tray7)	• 000: OFF • 001: ON				
	26		-	Heater unit set signal (Tray8)	• 000: OFF • 001: ON				
	27		PS62	Waste toner full sensor /2	• 000: OFF • 001: ON				
26	1					Paper feed	M18	Loop motor (1250mm/s)	
	2						M18	Loop motor (1000mm/s)	
	3						M18	Loop motor (750mm/s)	
	4						M18	Loop motor (570mm/s)	
	5						M18	Loop motor (490mm/s)	
	6						M18	Loop motor (330mm/s)	
27	1						M20	Paper exit motor /1 (330mm/s)	
	2						M20	Paper exit motor /1 (490mm/s)	
	3						M20	Paper exit motor /1 (570mm/s)	
	4						M20	Paper exit motor /1 (750mm/s)	
	5						M20	Paper exit motor /1 (1000mm/s)	
	6						M20	Paper exit motor /1 (1250mm/s)	
	10						M13	Reverse/exit motor (1250mm/s)	
	11						M13	Reverse/exit motor (1000mm/s)	
	12						M13	Reverse/exit motor (750mm/s)	
28	1						M4	Paper feed motor	
	2						M1	Paper feed motor (PF-702/703)	
	3						M1	Paper feed motor (PF-702/703)	
29	0						SD10	Drum claw solenoid	
30	1	Scanner	PS51	Scanner home sensor	• 000: Other than home position • 001: Home position		M2	PF exit conveyance motor (330mm/s) (PF-702)	

Co de	Mul ti	Input check				Output check			
		Classific ation	Symb ol	Name	Display and signal source	Classific ation	Symb ol	Name	Restrictive conditions
	1		PS51	Scanner home sensor	<ul style="list-style-type: none"> • 000: Other than home position • 001: Home position 		M3	PF exit conveyance motor (330mm/s) (PF-703)	
	2				<ul style="list-style-type: none"> • 		M2	PF exit conveyance motor (1250mm/s) (PF-702)	
	2				<ul style="list-style-type: none"> • 		M3	PF exit conveyance motor (1250mm/s) (PF-703)	
	3						M2	PF exit conveyance motor (570mm/s) (PF-702)	
	3						M3	PF exit conveyance motor (570mm/s) (PF-703)	
	4						M2	PF exit conveyance motor (490mm/s) (PF-702)	
	4						M3	PF exit conveyance motor (490mm/s) (PF-703)	
	5						M2	PF exit conveyance motor (330mm/s) (PF-702)	
	5						M3	PF exit conveyance motor (330mm/s) (PF-703)	
	6						M2	PF exit conveyance motor (1250mm/s) (PF-702)	
	6						M3	PF exit conveyance motor (1250mm/s) (PF-703)	
	7						M2	PF exit conveyance motor (570mm/s) (PF-702)	
	7						M3	PF exit conveyance motor (570mm/s) (PF-703)	
	8						M2	PF exit conveyance motor (490mm/s) (PF-702)	
	8				<ul style="list-style-type: none"> • 		M3	PF exit conveyance motor (490mm/s) (PF-703)	
	9				<ul style="list-style-type: none"> • 		M10	Shutter motor /1 home position move (PF-703)	
	10				<ul style="list-style-type: none"> • 		M10	Move to close position after shutter motor /1 home position move (PF-703)	
	11				<ul style="list-style-type: none"> • 		M11	Shutter motor /2 home position move (PF-703)	
	12				<ul style="list-style-type: none"> • 		M11	Move to close position after shutter motor /2 home position move (PF-703)	
	13						M12	Shutter motor /3 home position move (PF-703)	
	14						M12	Move to close position after shutter motor /3 home position move (PF-703)	
	15						M10	Shutter motor /1 home position move (PF-703)	
	16						M10	Move to close position after shutter motor /1 home position move (PF-703)	
	17						M11	Shutter motor /2 home position move (PF-703)	
	18						M11	Move to close position after shutter motor /2 home position move (PF-703)	
	19						M12	Shutter motor /3 home position move (PF-703)	

Co de	Mul ti	Input check				Output check			
		Classific ation	Symb ol	Name	Display and signal source	Classific ation	Symb ol	Name	Restrictive conditions
	20						M12	Move to close position after shutter motor /3 home position move (PF-703)	
	21						M2	Paper feed belt motor (PF-703)	
	22						M2	Paper feed belt motor (PF-703)	
	23						M4	Coupling conveyance motor /1 (PF-703)	
	24						M5	Coupling conveyance motor /2 (PF-703)	
	25						M6	Coupling conveyance motor /3 (PF-703)	
31	0					Scanner	M27	Home search + Scan	
	1	Scanner	PS52	APS sensor /1	• 000: Paper • 001: No paper				
	2		PS53	APS sensor /2	• 000: Paper • 001: No paper				
	8		PS317	APS timing sensor	• 000: Close • 001: Open				
34	0					Scanner	M27, L1	Shading correction	
35	0						M27	DF scan position move + Scanner cooling fan	
36	0						M27	Scanner packing lock move	Used in repacking
40	0					Main body	M1	Fusing motor	
	1						M1	Fusing motor (330mm/s)	
	2						M1	Fusing motor (490mm/s)	
	3						M1	Fusing motor (570mm/s)	
	4						M32	De-curler motor (330mm/s)	
	5						M32	De-curler motor (490mm/s)	
	6						M32	De-curler motor (570mm/s)	
	7						M32	De-curler motor (750mm/s)	
	8						M32	De-curler motor (1000mm/ s)	
	9						M32	De-curler motor (1250mm/ s)	
41	0						M2, M3	Drum motor + Developing motor	
	1						M2, M3	Drum motor (330mm/s) + Developing motor	
	2						M2 ,M 3	Drum motor (490mm/s) + Developing motor	
	3						M2, M3	Drum motor (570mm/s) + Developing motor	
42	1						FM19	Scanner cooling fan	
	2						FM6	Suction cooling fan /1 (high speed)	
	3						FM6	Suction cooling fan /1 (low speed)	
	4						FM18	Front cooling fan	
	5						FM32	Suction fan	
	6						FM1	Suction cooling fan /1 (high speed)	
	7						FM1	Cooling fan /1 (low speed)	
	8						FM2	Cooling fan /2 (high speed)	
	9						FM2	Cooling fan /2 (low speed)	
	10						FM8	Suction cooling fan /3 (high speed)	

Co de	Mul ti	Input check				Output check			
		Classific ation	Symb ol	Name	Display and signal source	Classific ation	Symb ol	Name	Restrictive conditions
	11						FM8	Suction cooling fan /3 (low speed)	
	12						FM31	Developing cooling fan	
	13						FM7	Suction cooling fan /2	
	14						FM3, FM25, FM26	LPH fan /1, LPH fan /2, LPH fan /3 (high speed)	
	15						FM3, FM25, FM26	LPH fan /1, LPH fan /2, LPH fan /3 (low speed)	
	16						FM4	Paper exit cooling fan /Up (high speed)	
	17						FM4	Paper exit cooling fan /Up (low speed)	
	18						FM20, FM21	Paper feed assist fan / Rr1, /Fr1 (Tray1)	
	19						FM23, FM24	Paper feed assist fan / Rr2, /Fr2 (Tray2)	
	20						FM1, FM2	Paper feed assist fan / Fr1, /Rr3 (Tray3) (PF-702)	
	21						FM3, FM4	Paper feed assist fan / Fr2, /Rr2 (Tray4) (PF-702)	
	22						FM5, FM6	Paper feed assist fan / Fr3, /Rr3 (Tray5) (PF-702)	
	23						FM5	Transfer suction fan	
	24						FM10, FM28	Paper exit cooling fan / Lw1, /Lw2	
	25						FM12	Image processing cooling fan	
	26						FM11	Pump cooling fan	
	27						FM34	Collection pipe cooling fan (high speed)	
	28						FM34	Collection pipe cooling fan (low speed)	
	29						FM9	Developing suction fan /1	
	30						FM22	Developing suction fan /2	
	33						FM27	Transfer belt cleaning fan (high speed)	
	34						FM27	Transfer belt cleaning fan (low speed)	
	35						FM35	Toner bottle cooling fan	
	36						FM1, FM2	Paper feed assist fan / Fr1, /Rr1 (Tray6) (PF-702)	
	37						FM3, FM4	Paper feed assist fan / Fr2, /Rr2 (Tray7) (PF-702)	
	38						FM5, FM6	Paper feed assist fan / Fr3, /Rr3 (Tray8) (PF-702)	
	50						FM13	Paper suction fan /1 (Tray3) (PF-703)	
	51						FM15	Paper suction fan /3 (Tray4) (PF-703)	
	52						FM17	Paper suction fan /5 (Tray5) (PF-703)	
	53						FM3, FM4	Paper leading edge separation fan /Fr1, /Rr1 (Tray3) (PF-703)	
	54						FM7, FM8	Paper leading edge separation fan /Fr2, /Rr2 (Tray4) (PF-703)	
	55						FM11, FM12	Paper leading edge separation fan /Fr3 and / Rr3 (Tray5) (PF-703)	
	56						FM1, FM2	Paper feed assist fan / Fr1, /Rr1 (Tray3) (PF-703)	

Co de	Mul ti	Input check				Output check			
		Classific ation	Symb ol	Name	Display and signal source	Classific ation	Symb ol	Name	Restrictive conditions
	57						FM5, FM6	Paper feed assist fan / Fr2, /Rr2 (Tray4) (PF-703)	
	58						FM9, FM10	Paper feed assist fan / Fr3, /Rr3 (Tray5) (PF-703)	
	59						FM13	Paper suction fan /1 (Tray6) (PF-703)	
	60						FM15	Paper suction fan /3 (Tray7) (PF-703)	
	61						FM17	Paper suction fan /5 (Tray8) (PF-703)	
	62						FM3, FM4	Paper leading edge separation fan /Fr1, /Rr1 (Tray6) (PF-703)	
	63						FM7, FM8	Paper leading edge separation fan /Fr2, /Rr2 (Tray7) (PF-703)	
	64						FM11, FM12	Paper leading edge separation fan /Fr3 and / Rr3 (Tray8) (PF-703)	
	65						FM1, FM2	Paper feed assist fan / Fr1, /Rr1 (Tray6) (PF-703)	
	66						FM5, FM6	Paper feed assist fan / Fr2, /Rr2 (Tray7) (PF-703)	
	67						FM9, FM10	Paper feed assist fan / Fr3, /Rr3 (Tray8) (PF-703)	
	68						FM22, FM23	Dehumidifier fan /Rt1, /Lt1 (Tray3) (PF-703)	
	69						FM24, FM25	Dehumidifier fan /Rt2, /Lt2 (Tray4) (PF-703)	
	70						FM26, FM27	Dehumidifier fan /Rt3, /Lt3 (Tray5) (PF-703)	
	71						FM22, FM23	Dehumidifier fan /Rt1, /Lt1 (Tray6) (PF-703)	
	72						FM24, FM25	Dehumidifier fan /Rt2, /Lt2 (Tray7) (PF-703)	
	73						FM26, FM27	Dehumidifier fan /Rt3, /Lt3 (Tray8) (PF-703)	
	74						FM14	Paper suction fan /2 (Tray3) (PF-703)	
	75						FM16	Paper suction fan /4 (Tray4) (PF-703)	
	76						FM18	Paper suction fan /6 (Tray5) (PF-703)	
	77						FM14	Paper suction fan /2 (Tray6) (PF-703)	
	78						FM16	Paper suction fan /4 (Tray7) (PF-703)	
	79						FM18	Paper suction fan /6 (Tray8) (PF-703)	
	80						FM7	PF cooling fan (PF-702)	
	80						FM19, FM20	PF cooling fan /1, /2 (PF-703)	
	81						FM7	PF cooling fan (PF-702)	
	81						FM19, FM20	PF cooling fan /1, /2 (PF-703)	
	82						FM21	PF cooling fan /3 (PF-703)	
	83						FM21	PF cooling fan /3 (PF-703)	
43	1						CNT1	Total counter	
	2						CNT2	Key counter	
	3						PS4	Centering sensor LED	
	4						PS62	Waste toner full sensor /2 LED	

Co de	Mul ti	Input check				Output check			
		Classific ation	Symb ol	Name	Display and signal source	Classific ation	Symb ol	Name	Restrictive conditions
45	5						M19	Waste toner box swing motor	
	6						M9	Waste toner motor	
	1						L3	Fusing heater lamp /3	
	2						L1, L2	Fusing heater lamp /1, /2	
	3						-	Fusing heating roller	
	6						M24	Web motor	
46	0						M23	Charger cleaning motor (shuttle)	
	1						M23	Charger cleaning motor (to the back)	
	2						M23	Charger cleaning motor (to the front)	
47	1					Peculiar function s	M26	Transfer belt pressure release motor	
	2						M33	Fusing pressure release motor	
48	0						OB2	Illuminate all LEDs	
49	1	Peculiar function s	TEMS /5, /6, /7	Temperature sensor/5, /6, /7 (PF-703)	Display of temperature (°C)		HT-50 5	PFU1 upper heater control	
	2		TEMS /5, /6, /7	Temperature sensor/5, /6, /7 (PF-703)	Display of temperature (°C)		HT-50 5	PFU1 lower heater control	Adjust the temperature when the temperature inside the tray is 40 °C or when the heater is 70 °C.
	3		TEMS /1	Temperature sensor/1 (PF-703)	Display of temperature (°C)		HT-50 5	Heater control when heater is installed to the corresponding page	Adjust the temperature
	4		TEMS /2	Temperature sensor /2 (PF-703)	Display of temperature (°C)		HT-50 5	Heater control when heater is installed to the corresponding page	Adjust the temperature
	5		TEMS /3	Temperature sensor /3 (PF-703)	Display of temperature (°C)		HT-50 5	Heater control when heater is installed to the corresponding page	Adjust the temperature
	6		TEMS /5, /6, /7	Temperature sensor /5, /6, /7 (PF-703)	Display of temperature (°C)		HT-50 5	PFU2 upper heater control	Adjust the temperature when the temperature inside the tray is 40 °C or when the heater is 70 °C.
	7		TEMS /5, /6, /7	Temperature sensor /5, /6, /7 (PF-703)	Display of temperature (°C)		HT-50 5	PFU2 lower heater control	Adjust the temperature when the temperature inside the tray is 40 °C or when the heater is 70 °C.
	8		TEMS /1	Temperature sensor /1 (PF-703)	Display of temperature (°C)		HT-50 5	Heater control when heater is installed to the corresponding page	Adjust the temperature
	9		TEMS /2	Temperature sensor /2 (PF-703)	Display of temperature (°C)		HT-50 5	Heater control when heater is installed to the corresponding page	Adjust the temperature
	10		TEMS /3	Temperature sensor /3 (PF-703)	Display of temperature (°C)		HT-50 5	Heater control when heater is installed to the corresponding page	Adjust the temperature
50	0						M3, M2	Developing motor + Drum motor	
	1						M21	Developing screw motor	

Co de	Mul ti	Input check				Output check			
		Classific ation	Symb ol	Name	Display and signal source	Classific ation	Symb ol	Name	Restrictive conditions
51	0						EL	Erase lamp	
52	0	Peculiar function s	CNT2	Key counter	<ul style="list-style-type: none"> • 000: Not connected • 001: Connected 				
53	1		TEMS	Temperature sensor (PF-702)	Display of temperature (°C)	Peculiar function s	-	Status indicator lamp N PAT1 ON	
	1		TEM/ HUMS	Temperature-humidity sensor (PF-703)	Display of temperature (°C)		-	Status indicator lamp - PAT 1 ON	
	2		TEM/ HUMS	Temperature-humidity sensor (PF-703)	Display of humidity (%)		-	Status indicator lamp N PAT2 ON	
	3						-	Status indicator lamp N PAT3 ON	
	4						-	Status indicator lamp N PAT4 ON	
	9	Peculiar function s	TEMS	Temperature sensor (PF-702)	Display of temperature (°C)				
	9		TEM/ HUMS	Temperature-humidity sensor (PF-703)	Display of temperature (°C)				
	10		TEM/ HUMS	Temperature-humidity sensor (PF-703)	Display of temperature (°C)				
	10								
54	0					Peculiar function s	M11	Intermediate hopper motor	
	1	Peculiar function s	PS26	Charger cleaning home sensor	<ul style="list-style-type: none"> • 000: Other than home position • 001: Home position 				
	2		PS27	Charger cleaning limit sensor	<ul style="list-style-type: none"> • 000: Other than limit position • 001: Limit position 				
	3					Peculiar function s	M7	Toner hopper motor	
	4						M28	Toner pump motor (high speed)	
	5						M28	Toner pump motor (low speed)	
	6						M29	Air pump motor (high speed)	
	7						M29	Air pump motor (low speed)	
	8						M28, M29	Toner pump motor (high speed) + Air pump motor (high speed)	
	9						M28, M29	Toner pump motor (low speed) + Air pump motor (low speed)	Used after moving the machine
	10						M10	Air separation motor	
	11						M9, M19	Toner cleaning mode	It does not operate but displays "FIN" when the waste toner box is not set
	11								
	11								
	11								
	11								
55	0						LCDB	Message test	
	1	Peculiar function s	PS24	Blade sensor /1	<ul style="list-style-type: none"> • 000: OFF • 001: ON 				
	2		PS25	Blade sensor /2	<ul style="list-style-type: none"> • 000: OFF • 001: ON 				
56	0		MFDB S, MFDB R	Multi feed detection board /S, /R	<ul style="list-style-type: none"> • 000: Other than multi feed • 001: Multi feed 				

Co de	Mul ti	Input check				Output check			
		Classific ation	Symb ol	Name	Display and signal source	Classific ation	Symb ol	Name	Restrictive conditions
57	1		PS58	Fusing pressure home sensor	• 000: OFF • 001: ON				
	2		PS59	Fusing pressure position sensor /1	• 000: OFF • 001: ON				
	3		PS60	Fusing pressure position sensor /2	• 000: OFF • 001: ON				
	4		PS61	Fusing pressure position sensor /3	• 000: OFF • 001: ON				
58	1		PS55	Transfer pressure position sensor /1	• 000: OFF • 001: ON				
	2		PS56	Transfer pressure position sensor /2	• 000: OFF • 001: ON				
	3		PS54	Transfer pressure home sensor	• 000: OFF • 001: ON				
60	1	DF	PS303	Size sensor /Lt	• 000: No paper • 001: Paper	DF	M302	Paper feed motor forward rotation	
	2		PS302	Size sensor /Rt	• 000: No paper • 001: Paper		M302	Paper feed motor reverse rotation	
	3		PS306	Original registration sensor /Lt	• 000: No paper • 001: Paper		M301	Conveyance motor forward rotation	
	4		PS308	Original conveyance sensor	• 000: No paper • 001: Paper		M301	Conveyance motor reverse rotation	
	5		PS309	Reverse sensor	• 000: No paper • 001: Paper		M304	Original exit motor /1 forward rotation	
	6		PS307	Original exit sensor /Lt	• 000: No paper • 001: Paper		M304	Original exit motor /1 reverse rotation	
	7		PS313	Original reverse exit sensor	• 000: No paper • 001: Paper		M305	Original exit motor /2 forward rotation	
	8		PS314	Original exit sensor /Rt	• 000: No paper • 001: Paper		M305	Original exit motor /2 reverse rotation	
	9		PS305	No paper sensor	• 000: No paper • 001: Paper		M303	Tray up down motor forward rotation	
	10		PS301	DF open/close sensor	• 000: Close • 001: Open		M303	Tray up down motor reverse rotation	
	11		MS301	Cover open/close sensor	• 000: Close • 001: Open		SD302	Pressure roller release solenoid	
	12		PS318	Original registration sensor /Rt	• 000: No paper • 001: Paper		SD303	Gate solenoid	
	13		PS304	Reverse jam sensor	• 000: No paper • 001: Paper		SD304	Paper exit gate solenoid	
	14		PS311	Original skew sensor /Fr	• 000: No paper • 001: Paper		SD301	SDF switch solenoid	
	15		PS310	Original count sensor	• 000: No paper • 001: Paper		FM301, FM302	Cooling fan /Lt + cooling fan /Rt	
	16		PS312	Original skew sensor /Rr	• 000: No paper • 001: Paper				
70	1	FD	PS1	FD entrance sensor	• 000: Paper • 001: No paper	FD	M1	Entrance conveyance motor	
	2		PS4	PI exit sensor	• 000: No paper • 001: Paper		M2	Punch conveyance motor	
	3		PS5	Punch conveyance sensor	• 000: Paper • 001: No paper		M3	Intermediate conveyance motor	
	4		PS7	Main tray folding paper full sensor	• 000: Full • 001: Other than full		M4	1st folding motor (F rotation)	
	5		PS8	2 holes punch home sensor	• 000: Other than home position • 001: Home position		M4	1st folding motor (R rotation)	

Co de	Mul ti	Input check				Output check			
		Classific ation	Symb ol	Name	Display and signal source	Classific ation	Symb ol	Name	Restrictive conditions
	6		PS9	3 holes/4 holes home sensor	<ul style="list-style-type: none"> • 000: Other than home position • 001: Home position 		M5	2nd folding motor (F rotation)	
	7		PS10	Alignment plate home sensor	<ul style="list-style-type: none"> • 000: Other than home position • 001: Home position 		M5	2nd folding motor (R rotation)	
	8		PS11	Punch registration home sensor	<ul style="list-style-type: none"> • 000: Other than home position • 001: Home position 		M6	3rd folding motor (F rotation)	
	9		PS12	Punch scraps box set sensor	<ul style="list-style-type: none"> • 000: Not set • 001: Set 		M6	3rd folding motor (R rotation)	
	10		PS13	Intermediate conveyance sensor	<ul style="list-style-type: none"> • 000: No paper • 001: Paper 		M7	PI conveyance motor	
	11		PS16	Sub tray exit sensor	<ul style="list-style-type: none"> • 000: No paper • 001: Paper 		M8	Paper lift motor /Up (down)	
	12		PS17	Sub tray paper full sensor	<ul style="list-style-type: none"> • 000: Full • 001: Other than full 		M8	Paper lift motor /Up (up)	
	13		PS18	Main tray paper exit sensor	<ul style="list-style-type: none"> • 000: No paper • 001: Paper 		M9	Paper lift motor /Lw (down)	
	14		PS20	Main tray upper limit sensor	<ul style="list-style-type: none"> • 000: Other than upper limit • 001: Upper limit 		M9	Paper lift motor /Lw (up)	
	15		PS22	Main tray lower limit sensor	<ul style="list-style-type: none"> • 000: Other than lower limit • 001: Lower limit 		M17	Main tray exit motor	
	16		PS23	Main tray empty sensor	<ul style="list-style-type: none"> • 000: Paper • 001: No paper 				
	17		PS26	Punch scraps full sensor	<ul style="list-style-type: none"> • 000: Full • 001: Other than full 				
	21					FD	M10	Punch motor (3 holes)	
	22	FD	PS2	Folding exit sensor	<ul style="list-style-type: none"> • 000: No paper • 001: Paper 		M10	Punch motor (2 holes)	
	23		CN90	Main tray connection recognition (CN90 connection)	<ul style="list-style-type: none"> • 000: Connected • 001: Unconnected 		M11	Tray up down motor (home position search)	
	24		PS51	1st folding conveyance sensor	<ul style="list-style-type: none"> • 000: Paper • 001: No paper 		M12	Alignment motor (home position search)	
	25		PS52	Folding entrance sensor	<ul style="list-style-type: none"> • 000: Paper • 001: No paper 				
	26		PS53	2nd folding conveyance sensor	<ul style="list-style-type: none"> • 000: Paper • 001: No paper 	FD	M13	Punch registration motor	
	27		PS54	3rd folding conveyance sensor	<ul style="list-style-type: none"> • 000: Paper • 001: No paper 		M14	1st folding release motor (conveyance position move)	
	28		PS55	1st folding cam home sensor	<ul style="list-style-type: none"> • 000: Pressure • 001: Release 		M14	1st folding release motor (folding position move)	ON: Folding position OFF: Conveyance position
	29		PS56	2nd folding cam home sensor	<ul style="list-style-type: none"> • 000: Pressure • 001: Release 		M15	2nd folding release motor (conveyance position move)	

Co de	Mul ti	Input check				Output check			
		Classific ation	Symb ol	Name	Display and signal source	Classific ation	Symb ol	Name	Restrictive conditions
	30		PS57	3rd folding cam home sensor	• 000: Pressure • 001: Release		M15	2nd folding release motor (folding position move)	ON: Folding position OFF: Conveyance position
	31		PS58	S size conveyance sensor	• 000: No paper • 001: Paper		M16	3rd folding release motor (conveyance position move)	
	32		PS6	Punch registration sensor	• 000: No paper • 001: Paper		M16	3rd folding release motor (folding position move)	ON: Folding position OFF: Conveyance position
	33		FDOB	Staple selection switch	• 000: ON • 001: OFF				
	34		FDOB	Punch selection switch	• 000: ON • 001: OFF				
	35		FDOB	Folding selection switch	• 000: ON • 001: OFF				
	36		FDOB	Start/Stop switch	• 000: ON • 001: OFF				
	37		FDOB	Multi-feed function select switch	• 000: ON • 001: OFF				
	39		PS46	Sub tray folding paper full sensor	• 000: Other than full • 001: Full				
	40		PS31	PI conveyance sensor /Up	• 000: No paper • 001: Paper				
	41		PS37	PI conveyance sensor /Lw	• 000: No paper • 001: Paper				
	42		PS32	PI upper limit sensor /Up	• 000: Other than upper limit • 001: Upper limit				
	43		PS33	PI paper empty sensor /Up	• 000: Other than full • 001: Full				
	44		PS34	PI lift plate home sensor / Up	• 000: Other than home position • 001: Home position				
	45		PS35	L size sensor /Up	• 000: Paper • 001: No paper				
	46		PS36	S size sensor /Up	• 000: Paper • 001: No paper				
	48		PS38	PI upper limit sensor /Lw	• 000: Other than upper limit • 001: Upper limit				
	49		PS39	PI paper empty sensor /Lw	• 000: Other than full • 001: Full				
	50		PS40	PI lift plate home sensor / Lw	• 000: Other than home position • 001: Home position				
	51		PS41	L size sensor /Lw	• 000: Paper • 001: No paper				
	52		PS42	S size sensor /Lw	• 000: Paper • 001: No paper				
	53		PS43	PI cover open/close sensor	• 000: Open • 001: Close				
	54		PS44	PI paper set sensor /Up	• 000: Paper • 001: No paper				

Co de	Mul ti	Input check				Output check			
		Classific ation	Symb ol	Name	Display and signal source	Classific ation	Symb ol	Name	Restrictive conditions
	55		PS45	PI paper set sensor /Lw	• 000: Paper • 001: No paper				
	61		PS47	PI max paper size sensor / Up	• 000: Paper • 001: No paper	FD	SD1	Entrance gate solenoid	
	62		PS48	PI max paper size sensor / Lw	• 000: Paper • 001: No paper		SD3	S size gate solenoid	
	63						SD4	L size gate solenoid	
	64	FD	-	FD connection detection signal	• 000: Not connected • 001: Connected		SD5	Roller solenoid /1	
	65						SD6	Roller solenoid /2	
	66						SD7	Roller solenoid /3	
	67						SD8	Roller solenoid /4	
	68						SD9	Sub tray gate solenoid	
	69						SD12	Paper exit solenoid	
	70						SD13	PI pick-up solenoid /Up	
	71						SD14	PI pick-up solenoid /Lw	
	72						SD15	Folding gate solenoid	
	74						SD18	2nd folding roller solenoid	
	75						CL1	PI registration clutch /Up	
	76						CL2	PI registration clutch /Lw	
	82						MFDB 1	Multi-feed detection board /1 (CLK output)	
	89						FDOB	FD operation board (lit all LEDs)	
	90						JAMIB	Jam indication board (lit all LEDs)	
71	1	SD-506	PS1	Entrance sensor	• 000: No paper • 001: Paper	SD-506	M1	Entrance conveyance motor	
	2		PS2	Horizontal conveyance sensor /1	• 000: No paper • 001: Paper		M2	Horizontal conveyance motor	
	3		PS3	Horizontal conveyance sensor /2	• 000: No paper • 001: Paper		M3	Folding entrance motor	
	4		PS4	Horizontal conveyance exit sensor	• 000: No paper • 001: Paper		M4	Folding transfer motor (F rotation)	
	5		PS5	Right angle conveyance sensor /1	• 000: Paper • 001: No paper		M4	Folding transfer motor (R rotation)	
	6		PS6	Right angle conveyance sensor /2	• 000: Paper • 001: No paper		M6	Right angle conveyance motor	
	7		PS7	Folding sensor /1	• 000: Paper • 001: No paper		M29	Stapler motor /Rt (1 staple)	
	8		PS8	Folding passage sensor	• 000: No paper • 001: Paper		M30	Stapler motor /Lt (1 staple)	
	9		PS17	Overlap home sensor	• 000: Other than home position • 001: Home position		M5	Bundle exit motor	
	10		PS18	Folding main scan alignment home sensor / Fr1	• 000: Home position • 001: Other than home position		M8	Folding sub scan alignment exit motor	
	11		PS49	Folding main scan alignment home sensor / Fr2	• 000: Home position • 001: Other than home position				
	12		PS20	1st folding blade home sensor /1	• 000: Home position • 001: Other than home position				

Co de	Mul ti	Input check				Output check			
		Classific ation	Symb ol	Name	Display and signal source	Classific ation	Symb ol	Name	Restrictive conditions
	13		PS21	1st folding blade home sensor /2	<ul style="list-style-type: none"> • 000: Other than home position • 001: Home position 				
	14		PS22	2nd folding blade home sensor /1	<ul style="list-style-type: none"> • 000: Home position • 001: Other than home position 				
	15		PS23	2nd folding blade home sensor /2	<ul style="list-style-type: none"> • 000: Other than home position • 001: Home position 				
	16		PS24	Folding exit home sensor	<ul style="list-style-type: none"> • 000: Other than home position • 001: Home position 				
	17		PS9	Tri-folding exit sensor	<ul style="list-style-type: none"> • 000: No paper • 001: Paper 				
	18		PS10	Tri-folding paper full sensor	<ul style="list-style-type: none"> • 000: Full • 001: Other than full 				
	19		PS11	Sub tray exit sensor	<ul style="list-style-type: none"> • 000: No paper • 001: Paper 				
	20		PS12	Sub tray paper full sensor	<ul style="list-style-type: none"> • 000: Full • 001: Other than full 				
	21		PS44	Folding sensor /2	<ul style="list-style-type: none"> • 000: Paper • 001: No paper 	SD-506	M5	Bundle exit motor (home position search)	
	22		PS19	Folding main scan alignment home sensor /Rr	<ul style="list-style-type: none"> • 000: Other than home position • 001: Home position 				
	23		PS46	Guide shaft home sensor	<ul style="list-style-type: none"> • 000: Other than home position • 001: Home position 				
	24		HS2/ HS4	Clincher start sensors /Rt and /Lt	<ul style="list-style-type: none"> • 000: Clinch • 001: No clinch 	SD-506	M7	Folding main scan alignment motor /Fr (home position search)	
	25						M7	Folding main scan alignment motor /Fr (alignment)	Enabled after conducting home position search (71-24)
	27						M8	Folding sub scan alignment motor (home position search)	
	29						M9	Saddle stitching alignment motor /Rt (home position search)	
	30						M9	Saddle stitching alignment motor /Rt (inward movement)	Enabled after conducting home position search (71-29)
	31						M10	Bundle exit motor (home position search)	
	32						M10	Bundle arm motor (inward movement)	Enabled after conducting home position search (71-31)
	33	SD-506	PS13	Saddle stitching paper sensor	<ul style="list-style-type: none"> • 000: Paper • 001: No paper 		M11	Bundle clip motor (home position search)	

Co de	Mul ti	Input check				Output check			
		Classific ation	Symb ol	Name	Display and signal source	Classific ation	Symb ol	Name	Restrictive conditions
	34		PS14	Bundle sensor /1	• 000: Paper • 001: No paper		M12	Bundle registration motor (home position search)	
	35		PS15	Bundle sensor /2	• 000: Paper • 001: No paper		M13	Overlap motor (home position search)	
	36		PS16	Bundle registration plate home sensor	• 000: Home position • 001: Other than home position		M14	Folding main scan alignment motor /Rr (home position search)	
	37		PS25	Stapler movement home sensor	• 000: Other than home position • 001: Home position		M14	Folding main scan alignment motor /Rr (forward movement)	After conducting home position search (71-36)
	38		PS26	Clincher up down home sensor	• 000: Home position • 001: Other than home position				
	39		PS27	Saddle stitching press home sensor	• 000: Other than home position • 001: Home position	SD-506	M15	Stapler movement motor (home position search)	
	40		PS28	Saddle stitching alignment home sensor /Rt	• 000: Other than home position • 001: Home position		M15	Stapler movement motor (staple position movement)	
	41		PS29	Saddle stitching alignment home sensor /Lt	• 000: Other than home position • 001: Home position		M16	Saddle stitching alignment motor /Lt (home position search)	
	42		PS33	Bundle clip upper limit sensor	• 000: Other than upper limit • 001: Upper limit		M16	Saddle stitching alignment motor /Lt (inward movement)	
	43		PS30	Bundle clip lower limit sensor	• 000: Other than lower limit • 001: Lower limit		M17	Bundle press movement motor (home position search)	
	44		PS32	Bundle arm home sensor	• 000: Other than home position • 001: Home position		M18	1st folding blade motor (home position search)	
	45		PS31	Bundle arm rotation home sensor	• 000: Other than home position • 001: Home position		M19	2nd folding blade motor (home position search)	
	46		PS34	Bundle registration home sensor	• 000: Other than home position • 001: Home position		M20	Clincher up down motor (home position search)	
	47		PS35	Bundle press stage up down home sensor	• 000: Other than home position • 001: Home position		M20	Clincher up down motor (stapling)	
	48		PS45	Bundle press stage up down limit sensor	• 000: Other than upper limit • 001: Upper limit		M21	Saddle stitching press motor (home position search)	

Co de	Mul ti	Input check				Output check			
		Classific ation	Symb ol	Name	Display and signal source	Classific ation	Symb ol	Name	Restrictive conditions
	49		PS37	Bundle press home sensor	• 000: Home position • 001: Other than home position		M22	Bundle arm rotation motor (home position search)	
	50		PS47	Bundle press lower limit sensor	• 000: Lower limit • 001: Other than lower limit		M23	Bundle press motor (home position search)	
	51		PS48	Scraps press home sensor	• 000: Home position • 001: Other than home position		M24	Bundle press stage up down motor (home position search)	
	52		PS40	Scraps box set sensor	• 000: Not set • 001: Set		M25	Guide shaft motor (home position search)	
	53		PS41	Trimmer scraps full sensor	• 000: Full • 001: Other than full		M31	Trimmer blade motor (home position search)	
	54		PS36	Bundle press movement home sensor	• 000: Other than home position • 001: Home position		M31	Trimmer blade motor (trimming position)	
	55		PS38	Bundle arm assist home sensor	• 000: Other than home position • 001: Home position		M32	Trimmer press motor (home position search)	
	56		PS39	Bundle arm assist upper limit sensor	• 000: Upper limit • 001: Other than upper limit		M32	Trimmer press motor (upper limit search)	
	57		SW1	Staple empty switch /Rt	• 000: Staple • 001: No staple		M32	Trimmer press motor (pressing)	Enabled after conducting home position search (71-55)
	58		SW2	Staple empty switch /Lt	• 000: Staple • 001: No staple		M32	Trimmer press motor (movement to trimmer board release position)	Enabled after conducting home position search (71-55)
	59		HS1	Stapler home sensor /Rt	• 000: Home position • 001: Other than home position		M10	Bundle arm motor (inward movement)	
	60		HS3	Stapler home sensor /Lt	• 000: Home position • 001: Other than home position		M23	Bundle press motor (pressing)	
	61		PS50	Trimmer blade home sensor	• 000: Other than home position • 001: Home position		M24	Bundle press stage up down motor (up)	
	62		PS51	Trimmer blade upper limit sensor	• 000: Upper limit • 001: Other than upper limit		M24	Bundle press stage up down motor (home position search for the bundle registration plate)	
	63		PS52	Trimmer press upper limit sensor	• 000: Other than upper limit • 001: Upper limit		M26	Bundle arm assist motor (home position search)	

Co de	Mul ti	Input check				Output check			
		Classific ation	Symb ol	Name	Display and signal source	Classific ation	Symb ol	Name	Restrictive conditions
	64		PS53	Trimmer press home sensor	<ul style="list-style-type: none">• 000: Other than lower limit• 001: Lower limit	SD-506			
	65		PS42	Front door sensor /Rt	<ul style="list-style-type: none">• 000: Close• 001: Open		M33	Trimmer paddle motor (forward rotation)	
	66		PS43	Front door sensor /Lt	<ul style="list-style-type: none">• 000: Close• 001: Open		M33	Trimmer paddle motor (reverse rotation)	
	67		PS54	Bundle sensor /4	<ul style="list-style-type: none">• 000: No paper• 001: Paper				
	68		PS55	Trimmer registration sensor	<ul style="list-style-type: none">• 000: Other than registration position• 001: Registration position				
	69		PS56	Folding sub scan alignment home sensor	<ul style="list-style-type: none">• 000: Other than home position• 001: Home position				
	70		PS57	Bundle exit sensor /2	<ul style="list-style-type: none">• 000: Paper• 001: No paper				
	71		PS58	Bundle tray set sensor	<ul style="list-style-type: none">• 000: Set• 001: Not set		SD-506	SD1	Entrance gate solenoid
	72	PS59	Trimmer board replacement sensor	<ul style="list-style-type: none">• 000: Not replace• 001: replace	SD2		Right angle conveyance gate solenoid		
	73				SD3		Horizontal conveyance gate solenoid		
	74				SD4		Roller release solenoid /4		
	75	SD-506	PS61	Bundle tray paper full sensor	<ul style="list-style-type: none">• 000: Other than full• 001: Full	SD5	Roller release solenoid /1 (roller press)		
	76				SD5	Roller release solenoid /1 (roller release)			
	77	SD-506	PS60	Folding entrance sensor	<ul style="list-style-type: none">• 000: Paper• 001: No paper	SD6	Roller release solenoid /2		
	78				SD7	Roller release solenoid /3 (roller press)			
	79				SD7	Roller release solenoid /3 (roller release)			
	80				SD8	Folding unit lock solenoid (lock)			
	81	SD-506	PS62	Trimmer completion sensor	<ul style="list-style-type: none">• 000: Other than complete• 001: Complete	SD8	Folding unit lock solenoid (release)		
	82				SD11	Trimmer board solenoid (ON once)			
	83	SD-506	PS66	Wire slack prevention sensor	<ul style="list-style-type: none">• 000: Without slack• 001: With slack	SD11	Trimmer board solenoid (ON twice)		
	84		-	New trimming unit connection detection	<ul style="list-style-type: none">• 000: Connected• 001: Not connected	SD12	Brake solenoid		
	86				CL1	Tri-folding exit clutch			
	87					FM1	Scraps removal fan motor		
	88	SD-506	-	FNS connection detection signal	<ul style="list-style-type: none">• 000: Not connected• 001: Connected				

Co de	Mul ti	Input check				Output check			
		Classific ation	Symb ol	Name	Display and signal source	Classific ation	Symb ol	Name	Restrictive conditions
	90					SD-506	JAMIB /2	Jam indication board (LED ON)	
	95						-	Trimmer board solenoid operation counter reset	Reset after replace the trimmer board
	96						-	Set of trimming operation	
	97						M32	Trimmer press motor (Move the trimmer board replace position after home position search)	
	98						M32, SD11	Trimmer board forced movement (Turn ON SD11 after the trimmer press motor moves to the trimmer board replacement position)	
72	1	FS-521	PS35	Rear stopper home sensor	<ul style="list-style-type: none"> • 000: Other than home position • 001: Home position 	FS-521	M1	Conveyance motor (1000mm/sec)	
	2		PS33	Intermediate roller home sensor	<ul style="list-style-type: none"> • 000: Other than home position • 001: Home position 				
	3		PS32	Stack assist home sensor	<ul style="list-style-type: none"> • 000: Other than home position • 001: Home position 				
	4		PS14	Stapler rotation home sensor	<ul style="list-style-type: none"> • 000: Home position • 001: Other than home position 				
	5		PS11	Stapler movement home sensor	<ul style="list-style-type: none"> • 000: Other than home position • 001: Home position 				
	6		PS34	Staple scraps box set sensor	<ul style="list-style-type: none"> • 000: Not set • 001: Set 	FS-521	M3	Tray up down motor (home position search)	
	7		PS30	Sub tray paper full sensor	<ul style="list-style-type: none"> • 000: Full • 001: Other than full 		M3	Tray up down motor (lower limit move)	
	8		PS1	Sub tray exit sensor	<ul style="list-style-type: none"> • 000: No paper • 001: Paper 				
	9		PS5	Stacker entrance sensor	<ul style="list-style-type: none"> • 000: No paper • 001: Paper 				
	10		PS4	FNS entrance sensor	<ul style="list-style-type: none"> • 000: Paper • 001: No paper 				
	11		PS15	Counter reset sensor	<ul style="list-style-type: none"> • 000: Other than reset • 001: Reset 	FS-521	M22	Alignment motor /Fr (home position search)	
	12		PS12	Paper exit home sensor	<ul style="list-style-type: none"> • 000: Home position • 001: Other than home position 		M22	Alignment motor /Fr (A4S standby position move)	Available only from the home position
	13		PS10	Main tray paper exit sensor	<ul style="list-style-type: none"> • 000: Paper • 001: No paper 		M22	Alignment motor /Fr (A4S position move)	Available only from A4S position
	14		PS3	Tray lower limit sensor	<ul style="list-style-type: none"> • 000: Other than lower limit • 001: Lower limit 		M22	Alignment motor /Fr (A4S standby position move)	Available only after the alignment operation

Co de	Mul ti	Input check				Output check			
		Classific ation	Symb ol	Name	Display and signal source	Classific ation	Symb ol	Name	Restrictive conditions
	15		PS39	Paper empty sensor	• 000: Paper • 001: No paper				
	16					FS-521	M7	Main tray exit motor (800mm/sec)	
	17						M7	Main tray exit motor (205mm/sec)	
	21	FS-521	PS47	Staple ready sensor /Fr	• 000: Ready • 001: Other than ready		M8	Paper exit opening motor (home position search)	
	22		PS43	Cartridge set sensor /Fr	• 000: Cartridge • 001: No cartridge		M8	Paper exit opening motor (full opening: approx. 55°)	Available only from the home position
	23		PS45	Staple empty sensor /Fr	• 000: Staple • 001: No staple		M8	Paper exit opening motor (half opening: approx. 44°)	Available only from the home position
	24		PS41	Stapler home sensor /Fr	• 000: Home position • 001: Other than home position		M8	Paper exit opening motor (small opening: approx. 27°)	Available only from the home position
	25		PS46	Staple ready sensor /Rr	• 000: Ready • 001: Other than ready				
	26		PS42	Cartridge set sensor /Rr	• 000: Cartridge • 001: No cartridge		M31	Stapler motor /Fr (needles out, empty staple)	
	27		PS44	Staple empty sensor /Rr	• 000: Staple • 001: No staple		M31	Stapler motor /Fr (staple)	Available after initialization
	28		PS40	Stapler home sensor /Rr	• 000: Home position • 001: Other than home position		M30	Stapler motor /Rr (needles out, empty staple)	
	29						M30	Stapler motor /Rr (staple)	Available after initialization
	30	FS-521	PS20	Stacker empty sensor	• 000: Paper • 001: No paper				
	31		PS9	Paper exit arm home sensor	• 000: Home position • 001: Other than home position	FS-521	M4, M11	Stapler rotation motor, Stapler movement motor (home position search)	
	32		MS1	Door switch	• 000: Close • 001: Open		M4, M11	Stapler rotation motor, Stapler movement motor (1 stapling position movement in A4 size)	
	33		PS31	Alignment home sensor /Fr	• 000: Other than home position • 001: Home position		M16	Stacker entrance roller release motor (home position search)	
	34		PS8	Alignment home sensor / Rr	• 000: Other than home position • 001: Home position		M16	Stacker entrance roller release motor (pressing release position move)	
	35		PS6	Tray middle position sensor	• 000: No tray • 001: Tray				
	36		PS13	Bypass roller release home sensor	• 000: Home position • 001: Other than home position	FS-521	M13	Stacker entrance motor (1000mm/sec)	
	37		PS16	Tray upper limit sensor	• 000: Tray • 001: No tray				

Co de	Mul ti	Input check				Output check			
		Classific ation	Symb ol	Name	Display and signal source	Classific ation	Symb ol	Name	Restrictive conditions
	38		PS19	Paper exit alignment plate home sensor /Rr	<ul style="list-style-type: none"> • 000: Other than home position • 001: Home position 				
	39		PS18	Paper exit alignment plate home sensor /Fr	<ul style="list-style-type: none"> • 000: Other than home position • 001: Home position 				
	40		-	FNS connection detection signal	<ul style="list-style-type: none"> • 000: Not connected • 001: Connected 				
	41		OB	Operation board (Pause button)	<ul style="list-style-type: none"> • 000: ON • 001: OFF 	FS-521	M26	Rear stopper motor (home position search)	
	42		PS24	Paper exit alignment plate retraction home sensor	<ul style="list-style-type: none"> • 000: Other than home position • 001: Home position 		M26	Rear stopper motor (stopper release)	Available only from the home position
	43		PS17	Tray quarter position sensor	<ul style="list-style-type: none"> • 000: No tray • 001: Tray 				
	44		PS23	Stacker entrance roller release home sensor	<ul style="list-style-type: none"> • 000: Other than home position • 001: Home position 				
	46					FS-521	SD5	Bypass solenoid	
	47						SD2	Gate solenoid	
	48						SD9	Paper exit opening solenoid (ON/OFF)	
	49						SD7	Intermediate roller release solenoid	
	51						M24	Stack assist guide motor (home position search)	
	52						M24	Stack assist guide motor (assist position move)	Available only from the home position
	56						M25	Intermediate roller open close motor (home position search)	
	57						M25	Intermediate roller open close motor (reserve position move)	Available only from the home position
	61						M23	Paper exit arm motor (home position search)	Available after conducting intermediate roller open/close motor shelter position (72-57)
	62						M23	Paper exit arm motor (800mm/sec)	Available after conducting intermediate roller open/close motor shelter position (72-57)
	63						M23	Paper exit arm motor (400mm/sec)	Available after conducting intermediate roller open/close motor shelter position (72-57)
	66						M6	Sub tray exit motor (1000mm/sec)	
	67						M18	Paper exit alignment plate retraction motor (home position search)	

Co de	Mul ti	Input check				Output check			
		Classific ation	Symb ol	Name	Display and signal source	Classific ation	Symb ol	Name	Restrictive conditions
	68						M18	Paper exit alignment plate retraction motor (Alignment position move)	
	71						M5	Alignment motor /Rr (home position search)	
	72						M5	Alignment motor /Rr (A4S standby position move)	Available only from the home position
	73						M5	Alignment motor /Rr (A4S position move)	Available only from A4S position
	74						M5	Alignment motor /Rr (A4S standby position move)	Available only after the alignment operation
	75						OB	Operation board (LED ON)	
	76						M2	Paddle motor (ON/OFF)	
	77						JAMIB	Jam indication board (illuminate all LEDs)	
	78						M5, M22	Alignment motor /Rr, /Fr (home position search)	
	79						M5, M22	Alignment motor /Rr, /Fr (A4S standby position move)	Available only from the home position
	80						M5, M22	Alignment motor /Rr, /Fr (A4S position move)	Available only from A4S position
	81						M12	Bypass roller release motor (home position search)	
	82						M12	Bypass roller release motor (strong pressing position move)	Available only from the home position
	83						M12	Bypass roller release motor (home position move)	Available only from strong pressing position
	84						M12	Bypass roller release motor (pressing release position move)	Available only from the home position
	85						M12	Bypass roller release motor (home position move)	Available only from pressing release position
	86						M14	Paper exit alignment motor /Rr (home position search)	
	87						M14	Paper exit alignment motor /Rr (A4S standby position move)	
	88						M14	Paper exit alignment motor /Rr (Move from A4S standby position to alignment position)	Available only from A4S standby position
	89						M14	Paper exit alignment motor /Rr (Move from A4S alignment position to standby position)	Available only from A4S alignment position
	90						M15	Paper exit alignment motor /Fr (home position search)	
	91						M15	Paper exit alignment motor /Fr (A4S standby position move)	
	92						M15	Paper exit alignment motor /Fr (Move from A4S standby position to alignment position)	Available only from A4S standby position

Co de	Mul ti	Input check				Output check			
		Classific ation	Symb ol	Name	Display and signal source	Classific ation	Symb ol	Name	Restrictive conditions
	93						M15	Paper exit alignment motor /Fr (Move from A4S alignment position to standby position)	Available only from A4S alignment position
	94						M8	Paper exit opening motor (home position move (close))	
	94						M5	Alignment motor /Rr (home position move)	
	94						M22	Alignment motor /Fr (home position move)	
	94						M14	Paper exit alignment motor /Rr (home position move)	
	94						M15	Paper exit alignment motor /Fr (home position move)	
	94						M18	Paper exit alignment plate retraction motor (home position move)	
	95						M8	Paper exit opening motor (opening big)	
	95						M5	Alignment motor /Rr (A4 straight standby position move)	
	95						M22	Alignment motor /Fr (A4 straight standby position move)	
	95						M14	Paper exit alignment motor /Rr (A4 straight standby position move)	
	95						M15	Paper exit alignment motor /Fr (A4 straight standby position move)	
	95						M18	Paper exit alignment plate retraction motor (Move from home position to alignment position)	
	95						M3	Tray up down motor (paper exit alignment plate avoiding operation (from down to up))	
	95						SD9	Paper exit opening solenoid ON	
	96						M5	Alignment motor /Rr (A4 straight alignment position move)	
	96						M22	Alignment motor /Fr (A4 straight alignment position move)	
	96						M14	Paper exit alignment motor /Rr (A4 straight alignment position move)	
	96						M15	Paper exit alignment motor /Fr (A4 straight alignment position move)	
	98	FS-521	-	FS connection detection	<ul style="list-style-type: none"> • 000: Not connected • 001: Connected 				
73	1	LS (1st tandem)	PS4	Entrance sensor	<ul style="list-style-type: none"> • 000: No paper • 001: Paper 	LS (1st tandem)	M2	Conveyance motor	
	2		PS10	Sub tray exit sensor	<ul style="list-style-type: none"> • 000: No paper • 001: Paper 		M2	Conveyance motor	
	3		PS7	Conveyance sensor /1	<ul style="list-style-type: none"> • 000: No paper • 001: Paper 		M3	Sub tray exit motor	

Co de	Mul ti	Input check				Output check			
		Classific ation	Symb ol	Name	Display and signal source	Classific ation	Symb ol	Name	Restrictive conditions
	4		PS16	Conveyance sensor /2	• 000: No paper • 001: Paper		M3	Sub tray exit motor	
	5		PS17	Conveyance sensor /3	• 000: No paper • 001: Paper		M6	Coupling conveyance motor	
	6		PS18	Coupling exit sensor	• 000: No paper • 001: Paper		M6	Coupling conveyance motor	
	7		PS6	Stacker tray upper limit sensor	• 000: Other than upper limit • 001: Upper limit		M4	Grip conveyance motor	
	8		PS3	Paper empty sensor	• 000: Full • 001: Other than full		M4	Grip conveyance motor	
	9		PS13	2,000 sheets stacked sensor	• 000: OFF • 001: ON		M7	Alignment motor (initial operation)	
	10		PS19	Paper detection sensor	• 000: OFF • 001: ON		M7	Alignment motor	
	11		PS14	5,000 sheets stacked sensor	• 000: OFF • 001: ON		M5	Shift unit motor (home position search)	
	12		PS9	Sub tray full sensor	• 000: Other than full • 001: Full		M5	Shift unit motor	
	13		PS1	Stacker tray set sensor	• 000: Not set • 001: Set		M1	Stacker tray up down motor (down)	
	14		RS1	Hand cart reset switch	• 000: Not set • 001: Set		M1	Stacker tray up down motor (up)	
	15		PS15	Stacker tray arm release sensor	• 000: OFF • 001: ON		SD1	1st gate solenoid	
	16		TOB	Paper exit switch	• 000: OFF • 001: ON		SD10	2nd gate solenoid	
	17		MS1	Front door switch	• 000: Close • 001: Open		SD9	Front stopper solenoid	
	18		RS2	JAM door switch	• 000: Close • 001: Open		SD3	Rear stopper solenoid	
	19		PS8	Sub tray door sensor	• 000: Close • 001: Open		SD8	Paper press arm solenoid / 3	
	20		MS2	Stacker tray upper limit switch	• 000: Other than upper limit • 001: Upper limit		SD6	Paper press arm solenoid / 1	
	21		MS3	Stacker tray lower limit switch	• 000: Other than lower limit • 001: Lower limit		SD4	Front door lock solenoid	
	22		PS12	Alignment home sensor	• 000: Other than home position • 001: Home position		SD11	Tandem conveyance lock solenoid	
	23		PS11	Shift unit home sensor	• 000: Other than home position • 001: Home position		SD2	Job partition solenoid	
	24		PS5	Grip conveyance home sensor	• 000: Other than home position • 001: Home position		SD7	Paper press solenoid /2	
	25						FM1, FM2, FM3, FM6	Paper cooling fan motor / Fr, Paper cooling fan motor /Mi, Paper cooling fan motor /1, /2	

Co de	Mul ti	Input check				Output check			
		Classific ation	Symb ol	Name	Display and signal source	Classific ation	Symb ol	Name	Restrictive conditions
	26						FM5	Paper cooling fan motor / Rr	
	32	LS (1st tandem)	-	FNS connection detection signal	<ul style="list-style-type: none"> • 000: Not connected • 001: Connected 				
74	1					LS (2nd tandem)	M2	Conveyance motor	
	2						M2	Conveyance motor	
	3						M3	Sub tray exit motor	
	4						M3	Sub tray exit motor	
	5						M6	Coupling conveyance motor	
	6						M6	Coupling conveyance motor	
	7						M4	Grip conveyance motor	
	8						M4	Grip conveyance motor	
	9	LS (2nd tandem)	PS13	2,000 sheets stacked sensor	<ul style="list-style-type: none"> • 000: OFF • 001: ON 		M7	Alignment motor (initial operation)	
	10		PS19	Paper detection sensor	<ul style="list-style-type: none"> • 000: OFF • 001: ON 		M7	Alignment motor	
	11		PS14	5,000 sheets stacked sensor	<ul style="list-style-type: none"> • 000: OFF • 001: ON 		M5	Shift unit motor (home position search)	
	12		PS9	Sub tray full sensor	<ul style="list-style-type: none"> • 000: Other than full • 001: Full 		M5	Shift unit motor	
	13		PS1	Stacker tray set sensor	<ul style="list-style-type: none"> • 000: Not set • 001: Set 		M1	Stacker tray up down motor (down)	
	14		RS1	Hand cart reset switch	<ul style="list-style-type: none"> • 000: Not set • 001: Set 		M1	Stacker tray up down motor (up)	
	15		PS15	Stacker tray arm release sensor	<ul style="list-style-type: none"> • 000: OFF • 001: ON 		SD1	1st gate solenoid	
	16		TOB	Paper exit switch	<ul style="list-style-type: none"> • 000: OFF • 001: ON 		SD10	2nd gate solenoid	
	17		MS1	Front door switch	<ul style="list-style-type: none"> • 000: Close • 001: Open 		SD9	Front stopper solenoid	
	18		RS2	JAM door switch	<ul style="list-style-type: none"> • 000: Close • 001: Open 		SD3	Rear stopper solenoid	
	19		PS8	Sub tray door sensor	<ul style="list-style-type: none"> • 000: Close • 001: Open 		SD8	Paper press arm solenoid / 3	
	20		MS2	Stacker tray upper limit switch	<ul style="list-style-type: none"> • 000: Other than upper limit • 001: Upper limit 		SD6	Paper press arm solenoid / 1	
	21		MS3	Stacker tray lower limit switch	<ul style="list-style-type: none"> • 000: Other than lower limit • 001: Lower limit 		SD4	Front door lock solenoid	
	22		PS12	Alignment home sensor	<ul style="list-style-type: none"> • 000: Other than home position • 001: Home position 		SD11	Tandem conveyance lock solenoid	
	23		PS11	Shift unit home sensor	<ul style="list-style-type: none"> • 000: Other than home position • 001: Home position 		SD2	Job partition solenoid	
	24		PS5	Grip conveyance home sensor	<ul style="list-style-type: none"> • 000: Other than home position • 001: Home position 		SD7	Paper press solenoid /2	

Co de	Mul ti	Input check				Output check			
		Classific ation	Symb ol	Name	Display and signal source	Classific ation	Symb ol	Name	Restrictive conditions
75	25						FM1, FM2, FM3, FM6	Paper cooling fan motor / Fr, Paper cooling fan motor /Mi, Paper cooling fan motor /1, /2	
	26						FM5	Paper cooling fan motor / Rr	
	32	LS (2nd tandem)	-	FNS connection detection signal	• 000: Not connected • 001: Connected				
	07	RU -506	PS5	Stacker jam sensor	• 000: Paper • 001: No paper				
	21					RU-506	SD1	Straight gate solenoid	
	22						SD2	Stacker exit shutter solenoid	
	23						SD3	Stack switching solenoid	
	24						SD4	Stacker entrance guide plate solenoid	
	29	RU -506	PS1	Entrance sensor	• 000: Paper • 001: No paper		M1	Entrance conveyance motor	
	40		-	FNS connection detection	• 000: Not connected • 001: Connected				
	42		PS4	CD alignment plate home sensor	• 000: Other than home position • 001: Home position	RU-506	M4	CD alignment motor (home position move)	
	43		PS2	Paper exit sensor	• 000: Paper • 001: No paper		M2	Paper exit motor	
	44		PS6	Entrance jam sensor	• 000: Paper • 001: No paper				
	46		PS3	FD alignment plate home sensor	• 000: Other than home position • 001: Home position	RU-506	M3	FD alignment motor (home position move)	
	47						FM2	Stack assist fan /Rr	
	49	RU -506	MS1	Interlock switch	• 000: ON • 001: OFF				
77	52					RU-506	FM1	Stack assist fan /Fr	
	90						JAMIB	JAM indicator board (lit all LEDs)	
	1	PB	PS1	Entrance sensor	• 000: Paper • 001: No paper	PB	M1	Entrance conveyance motor	
	2		PS2	SC entrance sensor	• 000: Paper • 001: No paper		M2	Intermediate conveyance motor	
	3		PS3	Cover paper entrance sensor	• 000: No paper • 001: Paper		SD1	Entrance gate solenoid	
	4		PS4	Sub tray exit sensor	• 000: No paper • 001: Paper		SD2	Bypass gate solenoid	
	5		PS5	Sub tray full sensor	• 000: Full • 001: Other than full		SD3	Sub tray gate solenoid	
	6						SD4	Sub tray exit solenoid	
	7						M11	SC entrance conveyance motor	
	8	PB	PS12	SC switchback arm pressure detection sensor	• 000: Press • 001: Release		M12	SC switchback conveyance motor (F rotation)	
	9		PS13	SC switchback spring pressure detection sensor	• 000: Release • 001: Press		M12	SC switchback conveyance motor (R rotation)	

Co de	Mul ti	Input check				Output check			
		Classific ation	Symb ol	Name	Display and signal source	Classific ation	Symb ol	Name	Restrictive conditions
	10		PS14	SC alignment HP sensor	<ul style="list-style-type: none"> • 000: Other than home position • 001: Home position 		M13	SC switchback release motor (home position search)	
	11		PS16	SC paper detection sensor	<ul style="list-style-type: none"> • 000: Paper • 001: No paper 		M13	SC switchback release motor (High pressing position move)	
	12		PS17	SC roller release sensor	<ul style="list-style-type: none"> • 000: Release • 001: Press 		M13	SC switchback release motor (Low pressing position move)	
	13		PS18	Clamp entrance movement HP sensor	<ul style="list-style-type: none"> • 000: Other than home position • 001: Home position 		M15	SC alignment motor (home position search)	
	14		PS19	Clamp entrance roller release sensor	<ul style="list-style-type: none"> • 000: Release • 001: Press 		M15	SC alignment motor (A4 standby position move)	77-13 must have been performed in advance.
	15		PS21	Clamp alignment HP sensor	<ul style="list-style-type: none"> • 000: Other than home position • 001: Home position 		M15	SC alignment motor (alignment)	
	16		PS22	Clamp HP sensor	<ul style="list-style-type: none"> • 000: Other than home position • 001: Home position 		M17	SC bundle conveyance motor	
	17		PS23	Clamp pressure sensor	<ul style="list-style-type: none"> • 000: Release • 001: Press 		M18	SC roller release motor (home position search)	
	18		PS24	Clamp rotation HP sensor	<ul style="list-style-type: none"> • 000: Other than home position • 001: Home position 		M18	SC roller release motor (movement to the pressing position)	
	19		PS25	Clamp rotation pressure sensor	<ul style="list-style-type: none"> • 000: Release • 001: Press 		M19	Clamp entrance movement motor (home position search)	
	20		PS26	Cover paper table upper limit sensor /Fr	<ul style="list-style-type: none"> • 000: Other than upper limit • 001: Upper limit 		M19	Clamp entrance movement motor (movement to the entrance position)	The following adjustments must have been made in advance. 1. 77-19 2. 77-29 3. 77-31 4. 77-32
	21		PS27	Cover paper table upper limit sensor /Rr	<ul style="list-style-type: none"> • 000: Other than upper limit • 001: Upper limit 		M20	Clamp entrance roller release motor (home position search)	
	22		PS28	Clamp paper sensor	<ul style="list-style-type: none"> • 000: Paper • 001: No paper 		M20	Clamp entrance roller release motor (pressing position move)	
	23		PS29	Booklet thickness sensor	<ul style="list-style-type: none"> • 000: Not detected • 001: Detected 		SD11	FD alignment solenoid	
	24		PS31	Glue tank movement limit sensor (PB-502)	<ul style="list-style-type: none"> • 000: Other than limit • 001: Upper limit is reached 		SD12	SC stopper solenoid	
	25		PS32	Glue apply position detection sensor (PB-502)	<ul style="list-style-type: none"> • 000: Paper • 001: No paper 		SD13	SC pressure arm solenoid	

Co de	Mul ti	Input check				Output check			
		Classific ation	Symb ol	Name	Display and signal source	Classific ation	Symb ol	Name	Restrictive conditions
	26		PS33	Glue tank HP sensor	<ul style="list-style-type: none"> • 000: Other than home position • 001: Home position 		M21	Clamp alignment motor (home position search)	
	27		PS36	Pellet supply remaining sensor	<ul style="list-style-type: none"> • 000: Pellet • 001: No pellet 		M21	Clamp alignment motor (A4 standby position move)	
	28		PS37	Pellet count sensor (PB-502), Pellet supply passage sensor (PB-503)	<ul style="list-style-type: none"> • 000: Detected • 001: Not detected 		M21	Clamp alignment motor (alignment)	
	29		PS38	Pellet supply arm upper limit sensor	<ul style="list-style-type: none"> • 000: Other than upper limit • 001: Upper limit 		M22	Clamp motor (home position search)	
	30		PS39	Pellet supply arm lower limit sensor (PB-502), Pellet supply arm home sensor (PB-503)	<ul style="list-style-type: none"> • 000: Other than lower limit (Home position) • 001: Lower limit (Home position) 		M22	Clamp motor (movement to the clamp position)	
	31		M32	Glue apply roller motor	<ul style="list-style-type: none"> • 000: Abnormal • 001: Normal 		M23	Clamp rotation motor (home position search)	77-19 must have been performed in advance.
	32		PS3	Paper exit sensor	<ul style="list-style-type: none"> • 000: Paper • 001: No paper 		M23	Clamp rotation motor (movement to the compile position)	77-19 must have been performed in advance.
	33		PS41	Cover paper alignment HP sensor	<ul style="list-style-type: none"> • 000: Other than home position • 001: Home position 		SD91	Straight gate solenoid	
	34		PS42	Cover paper conveyance arm HP sensor /Rt	<ul style="list-style-type: none"> • 000: Other than home position • 001: Home position 		M31	Glue tank movement motor (home position search)	The following adjustments must have been made in advance. 1. 77-55 2. 77-29
	35		PS43	Cover paper conveyance arm HP sensor /Lt	<ul style="list-style-type: none"> • 000: Other than home position • 001: Home position 		M31	Glue tank movement motor (tank forward movement)	The following adjustments must have been made in advance. 1. 77-55 2. 77-29 3. 77-34 4. 77-49 5. 77-51
	36		PS44	Cover paper switchback sensor	<ul style="list-style-type: none"> • 000: Paper • 001: No paper 		M31	Glue tank movement motor (tank backward movement)	The following adjustments must have been made in advance. 1. 77-35 2. 77-55 3. 77-29 4. 77-34 5. 77-49 6. 77-51
	37		PS45	Cover paper sensor /Rt	<ul style="list-style-type: none"> • 000: Paper • 001: No paper 		M32	Glue apply roller motor	Be sure that the warm-up completes.
	38		PS46	Cover paper sensor /Lt	<ul style="list-style-type: none"> • 000: Paper • 001: No paper 		SD31	Glue tank up solenoid /1	

Co de	Mul ti	Input check				Output check			
		Classific ation	Symb ol	Name	Display and signal source	Classific ation	Symb ol	Name	Restrictive conditions
	39		PS47	Cover paper table HP sensor /Fr	<ul style="list-style-type: none"> • 000: Home position • 001: Other than home position 		SD32	Cover paper glue up solenoid	
	40		PS53	Cover paper table HP sensor /Rr	<ul style="list-style-type: none"> • 000: Home position • 001: Other than home position 		H1	Glue tank heater	
	41		PS48	Cover paper folding plate HP sensor /Rt	<ul style="list-style-type: none"> • 000: Other than home position • 001: Home position 		H2	Glue apply roller heater	
	42		PS49	Cover paper folding plate HP sensor /Lt	<ul style="list-style-type: none"> • 000: Other than home position • 001: Home position 		M33	Pellet supply motor (PB-502)	The following adjustments must have been made in advance. 1. 77-55 2. 77-29 3. 77-34 4. 77-44
	43		PS50	Cover paper folding plate encoder sensor	<ul style="list-style-type: none"> • 000: Not detected • 001: Detected 		M34	Pellet supply arm motor (home position search)	
	44		PS51	Cover paper folding plate position sensor	<ul style="list-style-type: none"> • 000: Not at the reference position • 001: At the reference position 		M34	Pellet supply arm motor (movement to the supply position)	The following adjustments must have been made in advance. 1. 77-55 2. 77-29 3. 77-34
	45		PS52	Cover paper folding pressure sensor	<ul style="list-style-type: none"> • 000: Release • 001: Press 		M41	Cover paper alignment motor (home position search)	77-55 must have been performed in advance.
	46		SW41	Cutter home sensor	<ul style="list-style-type: none"> • 000: Home position • 001: Other than home position 		M41	Cover paper alignment motor (A3 standby position move)	The following adjustments must have been made in advance. 1. 77-55 2. 77-45 3. 77-57 4. 77-60
	47		SW42	Cutter home sensor	<ul style="list-style-type: none"> • 000: Home position • 001: Other than home position 		M41	Cover paper alignment motor (alignment)	The following adjustments must have been made in advance. 1. 77-55 2. 77-45 3. 77-57 4. 77-60 5. 77-46
	48		MS2	Front door switch	<ul style="list-style-type: none"> • 000: Open • 001: Close 		M42	Booklet exit motor	77-55 must have been performed in advance.
	49		PS57	Stacker door sensor (PB-502), Booklet door sensor (PB-503)	<ul style="list-style-type: none"> • 000: Open • 001: Close 		M43	Cover paper conveyance arm motor /Rt (home position search)	The following adjustments must have been made in advance. 1. 77-55 2. 77-29 3. 77-34

Co de	Mul ti	Input check				Output check			
		Classific ation	Symb ol	Name	Display and signal source	Classific ation	Symb ol	Name	Restrictive conditions
	50		PS61	Booklet end sensor	<ul style="list-style-type: none"> • 000: Not detected • 001: Detected 		M43	Cover paper conveyance arm motor /Rt (roller pressure)	The following adjustments must have been made in advance. 1. 77-55 2. 77-29 3. 77-34 4. 77-49
	51		PS62	Cover paper conveyance belt movement HP sensor	<ul style="list-style-type: none"> • 000: Other than home position • 001: Home position 		M44	Cover paper conveyance arm motor /Lt (home position search)	The following adjustments must have been made in advance. 1. 77-55 2. 77-29 3. 77-34
	52		PS63	Cover paper belt home sensor	<ul style="list-style-type: none"> • 000: Other than home position • 001: Home position 		M44	Cover paper conveyance arm motor /Lt (roller pressure)	The following adjustments must have been made in advance. 1. 77-55 2. 77-29 3. 77-34 4. 77-51
	53		PS64	Cover paper belt lower limit sensor	<ul style="list-style-type: none"> • 000: Other than lower limit • 001: Lower limit 		M45	Cover paper conveyance motor (F rotation)	77-55 must have been performed in advance.
	54		PS65	Booklet load limit sensor	<ul style="list-style-type: none"> • 000: Upper limit • 001: Other than upper limit 		M45	Cover paper conveyance motor (R rotation)	77-55 must have been performed in advance.
	55		PS66	Booklet sensor /1	<ul style="list-style-type: none"> • 000: Paper • 001: No paper 		M46, M47	Cover paper table up down motor /Fr, /Rr (home position search)	
	56		PS67	Booklet sensor /2	<ul style="list-style-type: none"> • 000: Paper • 001: No paper 		M46, M47	Cover paper table up down motor /Fr, /Rr (book spine corner creation)	The following adjustments must have been made in advance. 1. 77-55 2. 77-29 3. 77-34 4. 77-49 5. 77-50 6. 77-51 7. 77-52 8. 77-19 9. 77-31 10. 77-30 11. 77-32 12. 77-45 13. 77-58 14. 77-61
	57		PS68	Booklet stopper HP sensor	<ul style="list-style-type: none"> • 000: Other than home position • 001: Home position 		M48	Cover paper folding motor /Rt (home position search)	77-55 must have been performed in advance.
	58		PS69	Cart set sensor	<ul style="list-style-type: none"> • 000: Not set • 001: Set 		M48	Cover paper folding motor /Rt (movement to the open position)	The following adjustments must have been made in advance. 1. 77-55 2. 77-45

Co de	Mul ti	Input check				Output check			
		Classific ation	Symb ol	Name	Display and signal source	Classific ation	Symb ol	Name	Restrictive conditions
	59		OB/2	Booklet stock operation board	<ul style="list-style-type: none"> • 000: SW ON • 001: SW OFF 		M48	Cover paper folding motor /Rt (movement to the close position)	The following adjustments must have been made in advance. 1. 77-55 2. 77-45 3. 77-58
	60		-	-			M49	Cover paper folding motor /Lt (home position search)	77-55 must have been performed in advance.
	61		SW1	Upper door switch /1	<ul style="list-style-type: none"> • 000: Close • 001: Open 		M49	Cover paper folding motor /Lt (movement to the open position)	The following adjustments must have been made in advance. 1. 77-55 2. 77-45
	62						M50	Cutter motor (home position search)	77-55 must have been performed in advance.
	63						M50	Cutter motor (cut position movement)	77-55 must have been performed in advance.
	64		PBCB	PB connection detection signal	<ul style="list-style-type: none"> • 000: Not connected • 001: Connected 		SD41	Cover paper lift solenoid	The following adjustments must have been made in advance. 1. 77-55 2. 77-29 3. 77-34 4. 77-49 5. 77-57
	65		-	Cover paper tray set detection signal	<ul style="list-style-type: none"> • 000: Set • 001: Not set 				
	66	PB	PS71	Cover paper empty sensor	<ul style="list-style-type: none"> • 000: Paper • 001: No paper 	PB			
	67		-	power plug connection detection signal	<ul style="list-style-type: none"> • 000: Power detected • 001: 		M61	Cover paper belt motor	
	68		PS74	Cover paper tray upper limit sensor	<ul style="list-style-type: none"> • 000: Other than upper limit • 001: Upper limit 		M62	Cover paper belt movement motor (home position search)	
	69		PS75	Cover paper conveyance sensor /1	<ul style="list-style-type: none"> • 000: Paper • 001: No paper 		M62	Cover paper belt movement motor (A4 standby position move)	77-68 must have been performed in advance.
	70		PS76	Cover paper conveyance sensor /2	<ul style="list-style-type: none"> • 000: Paper • 001: No paper 		M62	Cover paper belt movement motor (book stock alignment)	
	71		PS77	Cover paper conveyance sensor /3	<ul style="list-style-type: none"> • 000: Paper • 001: No paper 		M63	Cover paper belt up down motor (home position search: upper limit)	
	72		PS78	Cover paper conveyance sensor /4	<ul style="list-style-type: none"> • 000: Paper • 001: No paper 		M63	Cover paper belt up down motor (movement to the lower position)	The following adjustments must have been made in advance. 1. 77-68 2. 77-69
	73		PS79	Cover paper conveyance sensor /5	<ul style="list-style-type: none"> • 000: Paper • 001: No paper 		M64	Booklet movement motor	
	74		PS80	Waste box full sensor	<ul style="list-style-type: none"> • 000: Full • 001: Other than full 		M65	Booklet stopper motor (home position search)	

Co de	Mul ti	Input check				Output check			
		Classific ation	Symb ol	Name	Display and signal source	Classific ation	Symb ol	Name	Restrictive conditions
	75		PS81	Waste box set sensor	• 000: Not set • 001: Set		M65	Booklet stopper motor (A4 standby position move)	77-74 must have been performed in advance.
	76						M73	Cover paper tray lift motor	
	77						M74	Cover paper feed motor	
	78						SD71	Cover paper pick up solenoid	
	79						SD72	Cover paper tray solenoid	
	80		PS82	Cover paper tray knob sensor	• 000: Release • 001: Lock		M71	Cover paper tray fan /1	
	81		TH2	Glue tank temperature sensor /Up	0 to 255		M72	Cover paper tray fan /2	
	82		TH3	Glue tank temperature sensor /Md	0 to 255		MC71	Cover paper feed clutch	
	83		TH4	Glue tank temperature sensor /Lw	0 to 255		MC72	Cover paper separation clutch	
	84		TH1	Glue apply roller temperature sensor	0 to 255		SD80	Front door lock solenoid (locked)	
	85		OB1	Manual operation board	• 000: Glue apply SW ON • 001: Glue apply SW OFF		SD80	Front door lock solenoid (released)	
	86		OB1	Manual operation board	• 000: Alignment SW ON • 001: Alignment SW OFF		M80	Exhaust fan /1	
	87		OB1	Manual operation board	• 000: Start SW ON • 001: Start SW OFF		-	Multi-feed clock output signal	
	88		MS1	Pellet supply door switch	• 000: Open • 001: Close		JAMIB /1 JAMIB /2	Jam indication board /1, /2 (all the lights on)	
	89		TH1	Glue apply roller temperature sensor (high temperature abnormality)	• 000: Normal • 001: Abnormal		OB/1	Manual operation board (all the lights on)	
	90		TH1	Glue apply roller temperature sensor (low- temperature abnormality)	• 000: Normal • 001: Abnormal		M4, M81	Exhaust fan /2 Pellet supply cooling fan	
	91		TH2	Glue tank temperature sensor /Up (high temperature abnormality)	• 000: Normal • 001: Abnormal		SD61	Booklet door lock solenoid (lock)	
	92		TH2	Glue tank temperature sensor /Up (low- temperature abnormality)	• 000: Normal • 001: Abnormal		SD61	Booklet door lock solenoid (release)	
	93		TH3	Glue tank temperature sensor /Md (high temperature abnormality)	• 000: Normal • 001: Abnormal				
	94		TH3	Glue tank temperature sensor /Md (low- temperature abnormality)	• 000: Normal • 001: Abnormal				
	95		TH	Glue tank temperature sensor /Lw (high temperature abnormality)	• 000: Normal • 001: Abnormal		M71, M72, M73, M74, SD71, SD72, MC71, MC72	Cover paper feed operation for the adjustment of the multi- feed detection board	77-96 must have been performed in advance.
	96		TH	Glue tank temperature sensor /Lw (low- temperature abnormality)	• 000: Normal • 001: Abnormal		-	All initial operation	
78	01	GP-501	S1	Enter sensor	• 000 : No Paper	GP	-	Entrance stepper motor	

Co de	Mul ti	Input check				Output check			
		Classific ation	Symb ol	Name	Display and signal source	Classific ation	Symb ol	Name	Restrictive conditions
					• 001 : Paper				
	02		S2	Stepper 1 speed sensor	• 000 : No Paper • 001 : Paper		-	Exit stepper motor	
	03		S3	Punch module sensor	• 000 : No Paper • 001 : Paper		-	Transport motor	
	04		S5	Back Gauge sensor	• 000 : No Paper • 001 : Paper		-	Punch motor	
	05		S6	Stepper 2 speed sensor	• 000 : No Paper • 001 : Paper		-	Divert solenoid	
	06		S7	Exit sensor	• 000 : No Paper • 001 : Paper		-	Backstop solenoid	
	07	GP-501	S8	Bypass sensor	• 000 : No Paper • 001 : Paper		-	Punch brake	
	08	GP-501	S9	Punch flag sensor	• 000 : Home position • 001 : Punch operation		-	Punch clutch	
	09		-	Chip tray switch	• 000 : Set • 001 : Not set		-	Punch stepper motor punch operation	
	10		-	Die set swtich	• 000 : Set • 001 : Not set				
	11		-	Door switch	• 000 : Close • 001 : Open				
	13		S4	U-channel sensor	• 000 : No paper • 001 : Paper				
	16		-	GP connection detected	• 000 : Not connected • 001 : Connected				
79	1	PB	PS91	Relay conveyance intermediate sensor	• 000: Paper • 001: No paper	PB	M92	Relay conveyance motor (1000mm/s)	
	2		PS92	Relay conveyance door sensor	• 000: Open • 001: Close		M91	Relay conveyance exit motor (1000mm/s)	
	3		PS93	Relay conveyance entrance sensor	• 000: Paper • 001: No paper		OB2	Booklet stock operation board (JAM display LED ON)	
	4		PS94	Relay conveyance exit sensor	• 000: Paper • 001: No paper		M33	Pellet supply pipe motor (home position search)	
	5						M33	Pellet supply pipe motor (upper limit position move)	The following adjustments must have been made in advance. 1. 77-55 2. 77-29 3. 77-34 4. 77-44 5. 79-05
	6		PS96	Pellet supply pipe home sensor	• 000: Other than home position • 001: Home position				
	7		PS95	Pellet supply pipe upper limit sensor	• 000: Not detected • 001: Detected				
80	1	ADU	PS35	ADU conveyance sensor / 1	• 000: No paper • 001: Paper	ADU	SD7	Reverse/exit solenoid	
	2		PS43	ADU exit sensor ADU	• 000: No paper • 001: Paper		SD6	ADU lock solenoid	

Co de	Mul ti	Input check				Output check			
		Classific ation	Symb ol	Name	Display and signal source	Classific ation	Symb ol	Name	Restrictive conditions
	3		PS49	ADU accelerate sensor	• 000: No paper • 001: Paper		SD10	Drum claw solenoid	
	4		PS42	ADU deceleration sensor			SD8	De-curler solenoid /Up	
	5		PS44	ADU handle release sensor			SD5	De-curler solenoid /Lw	
	6		PS46	ADU reverse sensor /1					
	7		PS45	ADU reverse sensor /2					
	8		PS36	ADU conveyance sensor / 2					
	9		PS64	Paper stay sensor					
83	1					ADU	M17	Registration motor (570mm/s)	
	2						M17	Registration motor (330mm/s)	
	3						M17	Registration motor (490mm/s)	
84	1						M12	ADU reverse motor (F rotation: 1250mm/s)	
	2						M12	ADU reverse motor (F rotation: 570mm/s)	
	3						M12	ADU reverse motor (F rotation: 1250mm/s)	
	4						M12	ADU reverse motor (F rotation: 750mm/s)	
	5						M12	ADU reverse motor (F rotation: 330mm/s)	
	6						M12	ADU reverse motor (F rotation: 750mm/s)	
	7						M12	ADU reverse motor (F rotation: 1000mm/s)	
	8						M12	ADU reverse motor (F rotation: 490mm/s)	
	9						M12	ADU reverse motor (R rotation: 1000mm/s)	
85	1						M15	ADU conveyance motor /1 (1250mm/s)	
	2						M15	ADU conveyance motor /1 (570mm/s)	
	3						M15	ADU conveyance motor /1 (750mm/s)	
	4						M15	ADU conveyance motor /1 (330mm/s)	
	5						M15	ADU conveyance motor /1 (1000mm/s)	
	6						M15	ADU conveyance motor /1 (490mm/s)	
	7						M16	ADU conveyance motor /2 (1250mm/s)	
	8						M16	ADU conveyance motor /2 (570mm/s)	
	9						M16	ADU conveyance motor /2 (750mm/s)	
	10						M16	ADU conveyance motor /2 (330mm/s)	
	11						M16	ADU conveyance motor /2 (1000mm/s)	
	12						M16	ADU conveyance motor /2 (490mm/s)	
86	1						M13	Reverse paper exit motor (F rotation: 1250mm/s)	
	2						M13	Reverse paper exit motor (F rotation: 570mm/s)	

Co de	Mul ti	Input check				Output check			
		Classific ation	Symb ol	Name	Display and signal source	Classific ation	Symb ol	Name	Restrictive conditions
	3						M13	Reverse paper exit motor (R rotation: 1250mm/s)	
	4						M13	Reverse paper exit motor (F rotation: 750mm/s)	
	5						M13	Reverse paper exit motor (F rotation: 330mm/s)	
	6						M13	Reverse paper exit motor (R rotation: 750mm/s)	
	7						M13	Reverse paper exit motor (F rotation: 1000mm/s)	
	8						M13	Reverse paper exit motor (F rotation: 490mm/s)	
	9						M13	Reverse paper exit motor (R rotation: 1000mm/s)	
87	1						FM14 FM17	ADU cooling fan /1 Registration cooling fan	
	2						FM13 FM15	ADU cooling fan /3 ADU cooling fan /2	
88	1						M14	ADU accelerate motor (1250mm/s)	
	2						M14	ADU accelerate motor (570mm/s)	
	3						M14	ADU accelerate motor (750mm/s)	
	4						M14	ADU accelerate motor (330mm/s)	
	5						M14	ADU accelerate motor (1000mm/s)	
	6						M14	ADU accelerate motor (490mm/s)	
89	1	PI-PFU	PS3	Paper empty sensor /1 (Tray1) (PF-703)	• 000: No paper • 001: Paper	PI-PFU	CL7	Paper feed clutch /1	
	2		PS7	Paper empty sensor /2 (Tray2) (PF-703)	• 000: No paper • 001: Paper		CL8	Paper feed clutch /2	
	3		PS11	Paper empty sensor /3 (Tray3) (PF-703)	• 000: No paper • 001: Paper		CL9	Paper feed clutch /3	
	4		VR1	Remaining paper VR /1 (Tray1) (PF-703)	Remaining display (0 to 1023)		SD4, SD5	Shutter solenoids /Fr1, / Rr1	
	5		VR4	Remaining paper VR /2 (Tray2) (PF-703)	Remaining display (0 to 1023)		SD6, SD7	Shutter solenoids /Fr2, / Rr2	
	6		VR7	Remaining paper VR /3 (Tray3) (PF-703)	Remaining display (0 to 1023)		SD8, SD9	Shutter solenoids /Fr3, / Rr3	
	7		VR2	CD paper size VR /1 (Tray1) (PF-703)	0 to 255		SD10	Paper leading edge shutter solenoid /1	
	8		VR5	CD paper size VR /2 (Tray2) (PF-703)	0 to 255		SD11	Paper leading edge shutter solenoid /2	
	9		VR8	CD paper size VR /3 (Tray3) (PF-703)	0 to 255		SD12	Paper leading edge shutter solenoid /3	
	10		VR3	FD paper size VR /1 (Tray1) (PF-703)	0 to 1023		CL1	Pre-registration clutch /1	
	11		VR6	FD paper size VR /2 (Tray2) (PF-703)	0 to 1023		CL3	Pre-registration clutch /2	
	12		VR9	FD paper size VR /3 (Tray3) (PF-703)	0 to 1023		CL5	Pre-registration clutch /3	
	13		PS5	Upper limit sensor /1 (Tray1) (PF-703)	• 000: Other than upper limit • 001: Upper limit		CL1, M1	Pre-registration clutch /1 + Paper feed motor	

Co de	Mul ti	Input check				Output check			
		Classific ation	Symb ol	Name	Display and signal source	Classific ation	Symb ol	Name	Restrictive conditions
	14		PS9	Upper limit sensor /2 (Tray2) (PF-703)	• 000: Other than upper limit • 001: Upper limit		CL3, M1	Pre-registration clutch /2 + Paper feed motor	
	15		PS13	Upper limit sensor /3 (Tray3) (PF-703)	• 000: Other than upper limit • 001: Upper limit		CL5, M1	Pre-registration clutch /3 + Paper feed motor	
	16		-	Tray1 set signal	• 000: Not set • 001: Set		CL2, M1	Intermediate clutch /1 + Paper feed motor	
	17		-	Tray2 set signal	• 000: Not set • 001: Set		CL4, M1	Intermediate clutch /2 + Paper feed motor	
	18		-	Tray3 set signal	• 000: Not set • 001: Set		CL6, M1	Horizontal conveyance exit clutch + Paper feed motor	
	19		-	Tray1 trailing edge guide set signal	• 000: Not set • 001: Set		M7	Paper lift motor /1	
	20		-	Tray2 trailing edge guide set signal	• 000: Not set • 001: Set		M8	Paper lift motor /2	
	21		-	Tray3 trailing edge guide set signal	• 000: Not set • 001: Set		M9	Paper lift motor /3	
	22		-	PFU1 horizontal conveyance section set	• 000: Not set • 001: Set		SD1	Tray lock solenoid /1	
	23		PS4	Handle release sensor /1 (Tray1) (PF-703)	• 000: OFF • 001: ON		SD2	Tray lock solenoid /2	
	24		PS8	Handle release sensor /2 (Tray2) (PF-703)	• 000: OFF • 001: ON		SD3	Tray lock solenoid /3	
	25		PS12	Handle release sensor /3 (Tray3) (PF-703)	• 000: OFF • 001: ON		M1	Paper feed motor	
	26		PS2	Paper feed sensor /1 (Tray1) (PF-703)	• 000: No paper • 001: Paper		M3	PF exit conveyance motor (330mm/s)	
	27		PS6	Paper feed sensor /2 (Tray2) (PF-703)	• 000: No paper • 001: Paper		M3	PF exit conveyance motor (1250mm/s)	
	28		PS10	Paper feed sensor /3 (Tray3) (PF-703)	• 000: No paper • 001: Paper		M3	PF exit conveyance motor (570mm/s)	
	29		PS25	Paper suction sensor /Fr1	• 000: No paper • 001: Paper		M3	PF exit conveyance motor (490mm/s)	
	30		PS26	Paper suction sensor /Rr1	• 000: No paper • 001: Paper		M3	PF exit conveyance motor (1000mm/s)	
	31		PS27	Paper suction sensor /Fr2	• 000: No paper • 001: Paper		M10	Shutter motor /1 home position move (PF-703)	
	32		PS28	Paper suction sensor /Rr2	• 000: No paper • 001: Paper		M10	Move to close position after shutter motor /1 home position move (PF-703)	
	33		PS29	Paper suction sensor /Fr3	• 000: No paper • 001: Paper		M11	Shutter motor /2 home position move (PF-703)	
	34		PS30	Paper suction sensor /Rr3	• 000: No paper • 001: Paper		M11	Move to close position after shutter motor /2 home position move (PF-703)	
	35		PS37	Shutter home sensor /1	• 000: No paper • 001: Paper		M12	Shutter motor /3 home position move (PF-703)	
	36		PS38	Shutter home sensor /2	• 000: No paper • 001: Paper		M12	Move to close position after shutter motor /3 home position move (PF-703)	
	37		PS39	Shutter home sensor /3	• 000: No paper • 001: Paper		M2	Paper feed belt motor (PF-703)	
	38		PS14	Pre-registration sensor /1 (Tray1) (PF-703)	• 000: No paper • 001: Paper		M4	Coupling conveyance motor /1 (PF-703) (330mm/s)	
	39		PS18	Pre-registration sensor /2 (Tray2) (PF-703)	• 000: No paper • 001: Paper		M4	Coupling conveyance motor /1 (PF-703) (490mm/s)	

Co de	Mul ti	Input check				Output check			
		Classific ation	Symb ol	Name	Display and signal source	Classific ation	Symb ol	Name	Restrictive conditions
	40		PS20	Pre-registration sensor /3 (Tray3) (PF-703)	• 000: No paper • 001: Paper		M4	Coupling conveyance motor /1 (PF-703) (570mm/s)	
	41		PS15	Vertical conveyance sensor /1 (PF-703)	• 000: No paper • 001: Paper		M4	Coupling conveyance motor /1 (PF-703) (1000mm/s)	
	42		PS21	Vertical conveyance sensor /3 (PF-703)	• 000: No paper • 001: Paper		M4	Coupling conveyance motor /1 (PF-703) (1250mm/s)	
	43		PS16	Intermediate sensor /Up (PF-703)	• 000: No paper • 001: Paper		M5	Coupling conveyance motor /2 (PF-703) (330mm/s)	
	44		PS22	Intermediate sensor /Lw (PF-703)	• 000: No paper • 001: Paper		M5	Coupling conveyance motor /2 (PF-703) (490mm/s)	
	45		PS17	Loop sensor /1 (Tray6) (PF-703)	• 000: No paper • 001: Paper		M5	Coupling conveyance motor /2 (PF-703) (570mm/s)	
	46		PS19	Loop sensor /2 (Tray7) (PF-703)	• 000: No paper • 001: Paper		M5	Coupling conveyance motor /2 (PF-703) (1000mm/s)	
	47		PS23	Loop sensor /3 (Tray8) (PF-703)	• 000: No paper • 001: Paper		M5	Coupling conveyance motor /2 (PF-703) (1250mm/s)	
	48		PS24	PF exit conveyance sensor /1 (PF-703)	• 000: No paper • 001: Paper		M6	Coupling conveyance motor /3 (PF-703) (330mm/s)	
	49		PS36	PF exit conveyance sensor /2 (PF-703)	• 000: No paper • 001: Paper		M6	Coupling conveyance motor /3 (PF-703) (490mm/s)	
	50		PS31	Horizontal conveyance sensor /1 (PF-703)	• 000: No paper • 001: Paper		M6	Coupling conveyance motor /3 (PF-703) (570mm/s)	
	51		PS32	Horizontal conveyance sensor /2 (PF-703)	• 000: No paper • 001: Paper		M6	Coupling conveyance motor /3 (PF-703) (1000mm/s)	
	52		PS33	Horizontal conveyance sensor /3 (PF-703)	• 000: No paper • 001: Paper		M6	Coupling conveyance motor /3 (PF-703) (1250mm/s)	
	53		PS34	Horizontal conveyance sensor /4 (PF-703)	• 000: No paper • 001: Paper		FM13	Paper suction fan /1	
	54		PS35	Horizontal conveyance sensor /5 (PF-703)	• 000: No paper • 001: Paper		FM14	Paper suction fan /2	
	55		PS1	Door open/close sensor (PF-703)	• 000: Close • 001: Open		FM15	Paper suction fan /3	
	56		SW1	Vertical conveyance door switch /Up (PF-703)	• 000: OFF • 001: ON		FM16	Paper suction fan /4	
	57		SW2	Vertical conveyance door switch /Lw (PF-703)	• 000: OFF • 001: ON		FM17	Paper suction fan /5	
	58		MS1	Interlock switch (PF-703)	• 000: Close • 001: Open		FM18	Paper suction fan /6	
	59		SW3	Horizontal conveyance door switch (PF-703)	• 000: OFF • 001: ON		FM3, FM4	Paper leading edge separation fan /Fr1, /Rr1 (Tray1) (PI-PFU)	
	60		-	Heater unit set signal (Tray1)	• 000: OFF • 001: ON		FM7, FM8	Paper leading edge separation fan /Fr2, /Rr2 (Tray2) (PI-PFU)	
	61		-	Heater unit set signal (Tray2)	• 000: OFF • 001: ON		FM11, FM12	Paper leading edge separation fan /Fr3, /Rr3 (Tray3) (PI-PFU)	
	62		-	Heater unit set signal (Tray3)	• 000: OFF • 001: ON		FM1, FM2	Paper feed assist fan /Fr1, /Rr1 (Tray1) (PI-PFU)	
	63	TEM/ HUMS		Temperature-humidity sensor (PF-703)	Display of temperature (°C)		FM5, FM6	Paper feed assist fan /Fr2, /Rr2 (Tray2) (PI-PFU)	
	64	TEM/ HUMS		Temperature-humidity sensor (PF-703)	Display of temperature (°C)		FM9, FM10	Paper feed assist fan /Fr3, /Rr3 (Tray3) (PI-PFU)	

Co de	Mul ti	Input check				Output check			
		Classific ation	Symb ol	Name	Display and signal source	Classific ation	Symb ol	Name	Restrictive conditions
	65						FM22, FM23	Dehumidifier fan /Rt1, /Lt1 (Tray1) (PI-PFU)	
	66						FM24, FM25	Dehumidifier fan /Rt2, /Lt2 (Tray2) (PI-PFU)	
	67						FM26, FM27	dehumidifier fan /Rt3, /Lt3 (Tray3) (PI-PFU)	
	68						FM19, FM20	PF cooling fan /1, /2	
	69						HT-50 5	PFU tray upper heater	
	70						HT-50 5	PFU tray lower heater	
	71	PI-PFU	MFDB S/ MFDB R	Multi feed detection board /S, /R	• 000: OFF • 001: ON		MFDB S/ MFDB R	Multi feed detection board /S, /R	
	72		-	Multi feed detection unit set signal	• 000: OFF • 001: ON		FM21	PF cooling fan /3	
	75		TEMS /5, /6, / 7	temperature sensor/5, /6, / 7 (PF-703)	Display of temperature (°C)		HT-50 5	PI-PFU tray upper heater control	Adjust the temperature when the temperature inside the tray is 40 °C or when the heater is 70 °C.
	76		TEMS /5, /6, / 7	temperature sensor/5, /6, / 7 (PF-703)	Display of temperature (°C)		HT-50 5	PI-PFU tray lower heater control	Adjust the temperature when the temperature inside the tray is 40 °C or when the heater is 70 °C.
	77		TEMS /5	temperature sensor/1 (PF-703)	Display of temperature (°C)		HT-50 5	Heater control when heater is installed to the corresponding page	
	78		TEMS /6	temperature sensor/2 (PF-703)	Display of temperature (°C)		HT-50 5	Heater control when heater is installed to the corresponding page	
	79		TEMS /7	temperature sensor/3 (PF-703)	Display of temperature (°C)		HT-50 5	Heater control when heater is installed to the corresponding page	
90	00					Others	-	Finishing OP adjustment data EEPROM storage (installation data)	Perform after installation adjustment
91	00						-	Main body adjustment data NVRAM board storage (Installation Initial Data)	Perform after installation adjustment
92	00						-	NVRAM board data reset	Cannot adjust in the field
93	00						-	Finishing OP adjustment data each EEPROM storage	Cannot adjust in the field
94	00						-	Adjustment data display	
96	00						-	Main body adjustment data NVRAM board storage (Installation Initial Data)	Cannot adjust in the field
97	00						-	Image memory (DRAM) capacity check	
98	00						-	Image memory (DRAM) check	
99	01						HDD1	HDD1 total capacity	
	02						HDD1	HDD1 remaining capacity check	

Co de	Mul ti	Input check				Output check			
		Classific ation	Symb ol	Name	Display and signal source	Classific ation	Symb ol	Name	Restrictive conditions
	03						HDD1	HDD1 bad sectors check and recovery	

5.7.5 Adjustment when replacing the multi feed detection board (main body)

(1) Usage

When the multi feed detection board of the main body or the ADU drive board /1 (ADUDB1) is replaced, conduct this adjustment. Adjust it when multi feed is not detected properly due to specific types of paper (such as thin paper, coated paper with less stiffness, and thick paper).

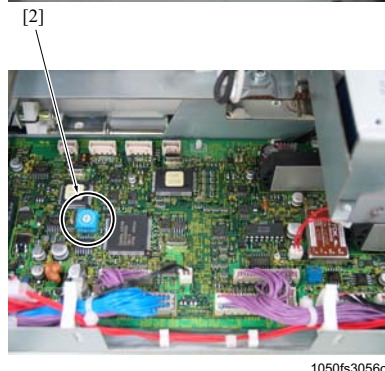
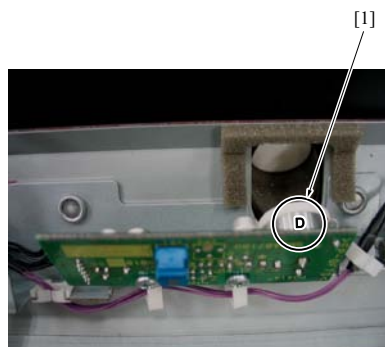
Note

- The multi feed detection board /S and /R are adjusted in the manufacturing process as a pair of upper and lower. Be sure to replace them as a pair.
- Adjustment error occurs because of the temperature of the sensor surface. Make the adjustment at a temperature close to the condition in which the copier is actually used (20°C to 30°C). (In the case you brought a new part from outdoors, make the adjustment after the temperature of the sensor surface and the room temperature become the same)

(2) Procedure

1. Replace the multi feed detection board /S and /R. (Refer to [G.2.2.21 Multi feed detection board](#))
2. Check the stamp letter [1] placed on the multi feed detection boards /S and /R, and rotate the rotary switch [2] on the ADU drive board (ADUDB1) as shown in the following table.

Stamp letter	Rotary switch
A	0
B	1
C	2
D	3
E	4
F	5



3. Select the input check code "56-00" of the I/O check mode in the service mode.
4. Insert 1 sheet of the paper (P/N 65AA9950#) between the multi feed detection board /S and /R (200g/m² to 300g/m² paper can also be used). Be sure that the paper does not trail down.

Note

- If the paper trails down, the angle of paper insertion is different from the angle of paper passage, thus making it impossible to make an accurate adjustment.

5. Connect the tester (voltmeter) to the following positions of the ADUDB1.

+terminal: test pin Number TP60 (white) [1]

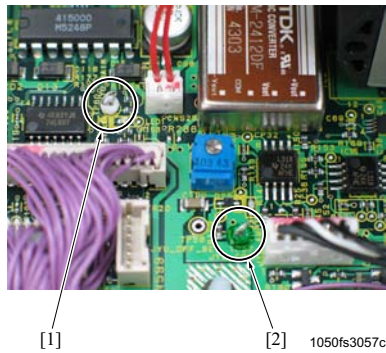
- terminal: test pin Number TP57 (green) [2]

Range: DC 20V

Note

- Because the duplex section is powered, do not drop any metal material on the board, or do not connect the tester pin to an irrelevant terminal.

It causes the board to short circuit and be damaged.



6. In the multi feed detection board /R volume, set power voltage to the standard value.
Standard value: $8.0 \pm 0.2V$
7. Pull out the paper inserted in step4.
8. Insert one sheet of paper that customer mainly use (paper weight $62g/m^2$ to $209g/m^2$), that customer mainly use and confirm that "L" is displayed on the input check display
"L": no multi feed (0 or 1 sheet of paper)
"H": multi feed (2 sheets of paper)
Note
 - When "H" is once detected, the guide plate to which the multi feed detection board is installed must be opened and closed to return to "L".
9. Insert another sheet of paper (2 sheets in all), that customer mainly use and confirm that "H" is displayed on the input check display.
10. If there is a detection error, return to step4 to conduct the adjustment again. In step6, set power voltage to the value 1.0V lower than the previous adjustment.
11. Repeat the steps 8 to 10 until detection error is resolved.
12. Pull out the inserted papers, and install the parts you removed.

5.7.6 Cleaning blade transportation lock

(1) Usage

This lock separates the cleaning blade from the drum, thus preventing any damage on the cleaning blade while moving the machine or during a long-term storage.

Use this lock when packing the machine while moving an installation location.

Note

- While conducting this mode, the blade is automatically replaced. In case the first cleaning blade was used before packing, be sure to perform a spring charge for the auto blade replacement as you reinstall the machine.

(2) Procedure

1. Check whether the currently used cleaning blade is the first one or the second one.
2. Enter the I/O check mode.
3. Enter "17" with the numeric keys. Confirm that "17-00" is displayed on the message display area.
4. Open the front door /Rt.

Note

- If the front door /Rt is not open, the blade motor (M22) does not rotate.

5. Press the start key.
6. The blade motor (M22) starts rotating, and the cleaning blade moves from the drum to the transportation lock position.

5.7.7 Scanner transportation lock

(1) Usage

Move the scanner mirror to the transportation lock position, thus making it easy to fix the mirror with screws.

Use this lock when packing the machine while moving an installation location.

(2) Procedure

1. Enter the I/O check mode.
2. Enter "36" with the numeric keys. Confirm that "36-00" is displayed on the message display area.
3. Press the start key.
4. The scanner motor (M27) starts rotating, and the mirror moves to the left.
5. Fix the mirror with the lock screws of the scanner mirror you removed when unpacking the machine.

5.7.8 Removing toner in the toner mixing section

(1) Usage

After moving the installation location of the machine, remove the toner which have dropped into the mixing section of the toner supply section.

(2) Procedure

1. Enter the I/O check mode.
2. Enter "54" with the numeric button. Confirm that "54-00" is displayed in the message display area.

3. Press the Access button.
4. Enter "09" with the numeric keys. Confirm that "54-09" is displayed in the message display area.
5. Press the start button.
6. The toner pump motor (M28) and the air pump motor (M29) start rotating. Press the STOP button to stop them after about 1minute.

5.7.9 Adjustment when replacing the multi feed detection board (PI) (new type)

(1) Usage

When the multi feed detection board (MFDB) of PI or PI drive board (PIDB) is replaced, conduct this adjustment.

Also, perform this adjustment when multi feed of special paper (thin paper, coated paper with less stiffness, thick paper) cannot be detected properly.

Note

- **Adjustment error occurs because of the temperature of the sensor surface. Make the adjustment at a temperature close to the environment in which the copier is actually used (20 °C to 30 °C).**
(In the case you brought a new part from outdoors, make the adjustment after the temperature of the sensor surface and the room temperature become the same)

(2) Procedure

1. Replace the multi feed detection board /1, /2. (Refer to chapter II "Maintenance4.3.5 Registration section") (Refer to [G.9.3.18 Multi feed detection board /1 \(MFDB/1\) and /2 \(MFDB/2\) \(new type\)](#))
2. Enter the I/O check mode.
3. Enter "70" with the numeric keys. Confirm that "70-00" is displayed on the message display area.
4. Press the Access button.
5. Enter "82" with the numeric keys. Confirm that "70-82" is displayed on the message display area.
6. Open the FD upper door and front door to turn the jam clearing knob [1]. Insert 1 sheet of paper [2] (P/N 65AA-991#, fusing adjustment paper, 16 sheets/A3) between the multi feed detection boards /1 and /2 [3] (200g/m² to 300g/m² paper can also be used).

Note

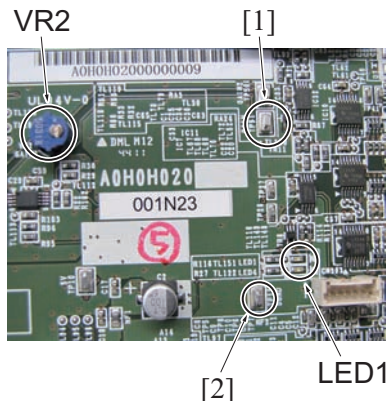
- **Turn the jam clearing knob until the paper hits the roller [4], thus confirming that the paper is between the multi feed detection board /1 and /2.**



7. Press the Start key to activate the output check mode. Connect the tester (voltmeter) to the following positions of the PIDB.
+ terminal: test pin Number TP51 (GAIN) [1]
- terminal: test pin Number TP11 (SGND) [2]
Range: DC 20V

Note

- **Because the FD is powered, do not drop any metal material on the board, or do not connect the tester pin to an irrelevant terminal.**
It causes the board to short circuit and be damaged.



8. In the PIDB volume (VR2), set power voltage to the standard value.
Standard value: 9.0 ± 0.1V

9. Press the Stop key and pull out the paper inserted in step 6.
10. Insert 1 sheet of paper that customer mainly uses (paper weight 50g/m² to 300g/m²), and confirm that the LED of PIDB (LED1) turns ON.
LED ON: No multi feed (0 or 1 sheet of paper)
LED OFF: Multi feed (2 sheets of paper)
11. Insert another sheet of paper (2 sheets in all), that customer mainly uses, and check that the LED turns OFF.
12. If there is a detection error, return to step 6 to conduct the adjustment again. In step8, set power voltage to the value 1.0V lower than the previous adjustment.
13. Repeat the steps 9 to 12 until detection error is resolved.
14. Pull out the inserted papers, and install the parts you removed.

5.7.10 Adjustment when replacing the multi feed detection board (PI) (old type)

(1) Usage

When the multi-feed detection board (MFDB) of PI or PI drive board is replaced, conduct this adjustment.

Also, perform this adjustment when multi feed of special paper (thin paper, coated paper with less stiffness, thick paper) cannot be detected properly.

Note

- The multi-feed detection board /1 and /2 are adjusted in the manufacturing process as a pair of upper and lower. Be sure to replace them as a pair.
- Adjustment error occurs because of the temperature of the sensor surface. Make the adjustment at a temperature close to the environment in which the copier is actually used (20 °C to 30 °C).
(In the case you brought a new part from outdoors, make the adjustment after the temperature of the sensor surface and the room temperature become the same)

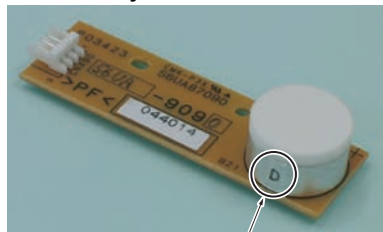
(2) Procedure

1. Replace the multi-feed detection board /1, /2. (Refer to [G.9.3.19 Multi feed detection board /1 \(MFDB/1\) and /2 \(MFDB/2\) \(old type\)](#))
2. Check the stamp letter [1] placed on the multi-feed detection boards /1 and /2, and rotate the rotary switch [2] on the PI drive board (PIDB) as shown in the following table.

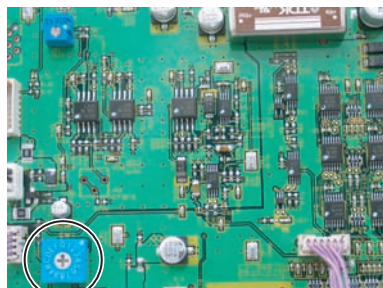
Stamp letter	Rotary switch
A	1
B	2
C	3
D	4
E	6
F	7

Note

- The rotary switch5 is not used.



[1]



[2]

a03uf3c027ca

3. Enter the I/O check mode.
4. Enter "70" with the numeric keys. Confirm that "70-00" is displayed on the message display area.
5. Press the Access button.
6. Enter "82" with the numeric keys. Confirm that "70-82" is displayed on the message display area.
7. Open the FD upper door and front door to turn the jam clearing knob [1]. Insert 1 sheet of paper [2] (P/N 65AA-991#, fusing adjustment paper, 16 sheets/A3) between the multi-feed detection boards /1 and /2 [3] (200g/m² to 300g/m² paper can also be used).

Note

- Turn the jam clearing knob until the paper hits the roller [4], thus confirming that the paper is between the multi-feed detection board /1 and /2.



8. Press the Start key to activate the output check mode. Connect the tester (voltmeter) to the following positions of the PIDB.

+ terminal: test pin Number TP51 (GAIN) [1]

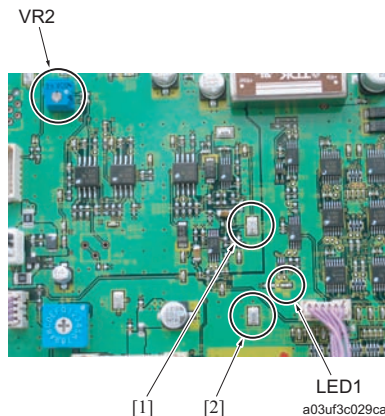
- terminal: test pin Number TP11 (SGND) [2]

Range: DC 20V

Note

- Because the FD is powered, do not drop any metal material on the board, or do not connect the tester pin to an irrelevant terminal.

It causes the board to short circuit and be damaged.



9. In the PIDB volume (VR2), set power voltage to the standard value.
Standard value: $8.0 \pm 0.2V$
10. Press the Stop key and pull out the paper inserted in step 4.
11. Insert 1 sheet of paper that customer mainly uses (paper weight 50g/m² to 300g/m²), and confirm that the LED of PIDB (LED1) turns ON.
LED ON: No multi-feed (0 or 1 sheet of paper)
LED OFF: Multi-feed (2 sheets of paper)
12. Insert another sheet of paper (2 sheets in all), that customer mainly uses, and check that the LED turns OFF.
13. If there is a detection error, return to step7 to conduct the adjustment again. In step9, set power voltage to the value 1.0V lower than the previous adjustment.
14. Repeat the steps 10 to 13 until detection error is resolved.
15. Pull out the inserted papers, and install the parts removed.

5.7.11 Adjustment when replacing the multi feed detection board (PI-PFU)

(1) Usage

When the multi feed detection board (MFDBS/MFDBR) or the multi feed detection drive board (MFDDDB) of PI-PFU is replaced, conduct this adjustment.

Also, perform this adjustment when multi feed of special paper (thin paper, coated paper with less stiffness, thick paper) cannot be detected properly.

Note

- The multi feed detection board /S and /R are adjusted in the manufacturing process as a pair of upper and lower. Be sure to replace them as a pair.
- Adjustment error occurs because of the temperature of the sensor surface. Make the adjustment at a temperature close to the condition in which the copier is actually used (20°C to 30°C). (In the case you brought a new part from outdoors, make the adjustment after the temperature of the sensor surface and the room temperature become the same)

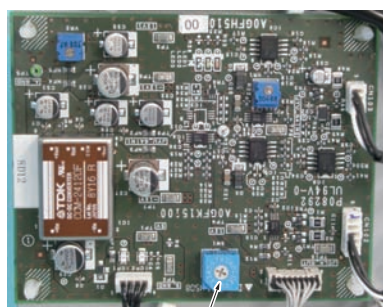
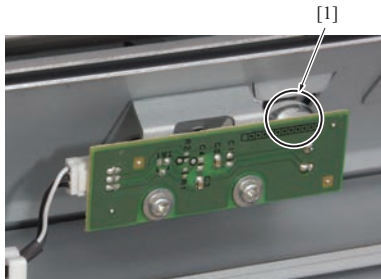
(2) Procedure

- Replace the multi feed detection board /S and /R. (Refer to [G.5.2.14 Multi feed detection boards /S \(MFDBS\) and /R \(MFDBR\) \(PI-PFU only\)](#))
- Check the stamp letter [1] placed on the multi feed detection board /S, /R, and rotate the rotary switch [2] on the multi feed detection drive board (MFDDDB) as per following table.

Stamp letter	Rotary switch
A	A
B	B
C	C
D	D
E	E
F	F

Note

- Be sure to set this setting before installing the exit conveyance unit (FA) to PI-PFU since the adjusting point is inaccessible when the exit conveyance unit is installed to PI-PFU.



[2]

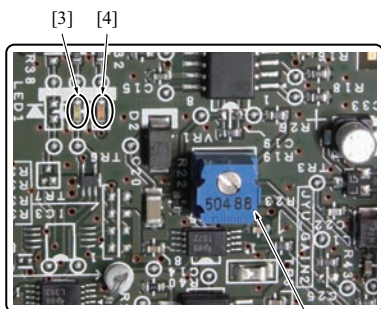
a0g6f3c050ca

- Select the output check code "89-71" of the I/O check mode in the service mode.
- Put 1 sheet of paper (P/N 65AA9950#) [1] into the paper path [2] and insert it between the multi feed detection board /S and /R [3] (200g/m² to 300g/m² paper can also be used).

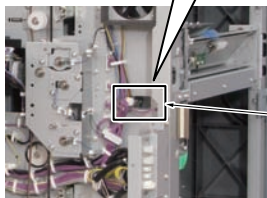
Note

- Turn the jam clearing knob until the paper hits the PF exit conveyance sensor /1 (PS24) [4], thus confirming that the paper is between the multi feed detection board /S and /R.

- Press the Start key to activate the output check mode. Rotate the volume (VR1) [2] of MFDDB [1] to the right to turn OFF LED2 [3].



[2]



[1]

a0g6f3c052ca

- Rotate VR1 to the left and stop it at the position where LED2 (green) is stably ON.

Note

- Be sure to rotate VR1 to the left after rotating it to the right to turn OFF LED2. Be sure to stop at the position where it changes to be stably ON after rotating it to the left and passing through OFF to flashing. When the volume is rotated to the left too much from the stable lighting, LED1 [4] (red) turns ON. In this condition, the voltage gets higher than the standard and it misjudges the multi feed conveyance as 1 sheet conveyance.
- Conduct the adjustment while the LED2 (green) is ON and LED1 (red) is OFF.

7. Pull out the paper inserted in step4.
8. Insert one sheet of paper that customer mainly use (paper weight 50g/m² to 300g/m²), and confirm that the MFDDB's LED2 can be turned on.
LED2 ON: no multi feed (Judged as 0 or 1 sheet of paper)
9. Fold in half by the longer side of the paper that customer mainly uses (A3 or 11 x 7) and set it onto the PI-PFU tray (A4 or 81/2 x 11). Feed the paper using the inter-sheet function in the application function, and check that whether it detects multi feed or not.

Note

- Be sure to set the folded paper with the fold line toward the feed direction.
- Multi feed detection JAM code 81-07

10. If there is a detection error, return to step4 and adjust with the paper which the customer mainly uses.
11. Repeat steps 4 to 10 until detection error is resolved.
12. Pull out the inserted papers, and install the parts you removed.

5.7.12 Adjustment when replacing the cover paper multi feed detection board (PB)**(1) Usage**

When the cover paper multi feed detection board of PB or the PB control board (PBCB) is replaced, conduct this adjustment. Also, perform this adjustment when multi-feed of special paper (thin paper, coated paper with less stiffness, thick paper) cannot be detected properly.

Note

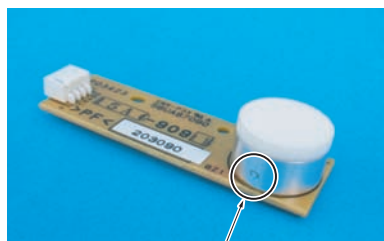
- The multi-feed detection board /S and /R are adjusted in the manufacturing process as a pair. Be sure to replace them as a pair.
- Adjustment error occurs because of the temperature of the sensor surface. Make the adjustment at a temperature close to the environment in which the copier is actually used (20 °C to 30 °C).

(In the case you brought a new part from outdoors, make the adjustment after the temperature of the sensor surface and the room temperature become the same)

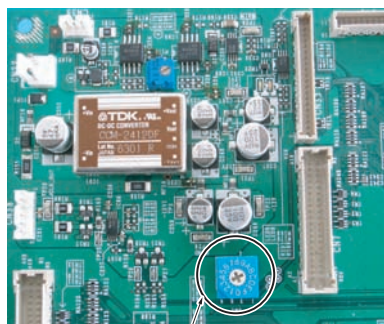
(2) Procedure

1. Replace the multi-feed detection boards /S and /R. (Refer to [G.12.2.31 Multi feed detection boards /S \(MFDBS\) and /R \(MFDBR\)](#))
2. Check the stamp letter [1] placed on the cover paper multi-feed detection boards /S and /R, and rotate the rotary switch [2] on the PBCB as shown in the following table.

Stamp letter	Rotary switch
A	1
B	2
C	3
D	4
E	5



[1]



[2]

564Af3c001.cb

3. Insert 1 sheet of paper (P/N 65AA-9910, fusing adjustment paper, 16 sheets/A3) in the cover paper tray of the PB.
(200 to 300g/m² paper can also be used.)
4. Select the output check code "77-96" of the I/O check mode in the service mode.
5. Press the Start key.
Perform the all initializing operation.
6. After the operations, press the Stop key.
7. Select the output check code "77-95" of the I/O check mode in the service mode.
8. Press the Start key.
The paper is fed from the cover paper tray and stops at the conveyance section.

Note

- Confirm that the paper is between the multi-feed detection boards /1 and /2.

9. After the operations, press the Stop key.

10. Connect the tester (voltmeter) to the following positions of the PBCB.

+ terminal: test pin Number TP28 (GAIN) [1]

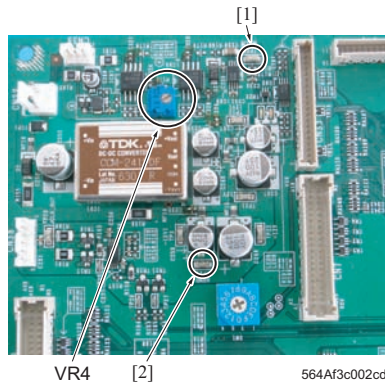
- terminal: test pin Number TP24 (AGND) [2]

Range: DC 20V

Note

- Because the PB is powered, do not drop any metal material on the board, or do not connect the tester pin to an irrelevant terminal.

It causes the board to short circuit and be damaged.



11. In the PBCB volume (VR4), set power voltage to the standard value.

Standard value: $8.0 \pm 0.1V$

12. Pull out the paper inserted in step 8.

13. Insert 1 sheet of paper that customer mainly uses (paper weight $50g/m^2$ to $300g/m^2$), and confirm that the LED of PBCB (LED1) turns ON.

LED ON: No multi-feed (0 or 1 sheet of paper)

LED OFF: Multi-feed (2 sheets of paper)

14. Insert another sheet of paper (2 sheets in all), that customer mainly uses, and check that the LED turns OFF.

15. If there is a detection error, return to step 3 to conduct the adjustment again. In step11, set power voltage to the value 1.0V lower than the previous adjustment.

16. Repeat steps 3 to 14 until detection error is resolved.

17. Pull out the inserted papers, and install the parts removed.

5.7.13 FD, SD, FS and PB data EEPROM storage

(1) Usage

Adjustment data of FD, SD, FS and PB which are adjusted in the field are backed up to the nonvolatile memory (EEPROM) of FD control board (FDCB), SD control board (SDCB), FNSCB (FNS control board) and PB control board (PBCB). When necessary, it can be recalled by selecting [Installation Initial Data] in Recall Standard Data (Finisher adjustment data) in the Service Mode.

Note

- Only 1 type of data can be backed up. When backed up again, data is overwritten.
- When several units of FS, SD, FD and PB are connected, the data is backed up to all EEPROMs.
To back up the data of 1 option respectively, connect only the target option to the main body.

(2) Procedure

1. Enter the I/O check mode.
2. Enter "90" with the numeric keys.
Confirm that "90-00" is displayed on the message display area.
3. Press the Start key.
4. "NOW" is displayed while in the back-up. When completed, "FIN" is displayed and the current finisher adjustment data is backed up in the EEPROM.

5.7.14 Main body adjustment data NVRAM board storage (installation data)

(1) Usage

Adjustment data of the main body which are adjusted in the field are backed up to the NVRAM board (NRB). When necessary, it can be recalled with installation data of Recall Standard Data (Machine adjustment data, Process adjustment data) in the service mode.

Note

- Only 1 type of data can be backed up. When backed up again, data is overwritten.

(2) Procedure

1. Enter the I/O check mode.
2. Enter "91" with the numeric keys.
Confirm that "91-00" is displayed on the message display area.
3. Press the start key.
4. "NOW" is displayed while in the back-up. Then when it completes, "FIN" is displayed and the current machine adjustment data and the process adjustment data are backed up in the NRB.

5.7.15 Hard disk check

(1) Usage

Perform this operation if you want to check hard disk /1 (HDD1) total capacity of the copier, the remaining capacity, and the malfunction code (C-D001 to D004) related to the hard disk.

(2) Procedure

1. Enter the I/O check mode.
2. Enter "99" with the numeric keys.
Confirm that "99-00" is displayed on the message display area.
3. Press the Access button.
4. Enter one of the followings with the numeric keys.
Check that "99-##" (## represent multi code number) is displayed in the message display area.
01: HDD1 total capacity check
02: HDD1 remaining capacity check
03: HDD1 bad sectors check and recovery
5. Press the start button.
 - HDD1 total capacity check: The total capacity is displayed
 - HDD1 remaining capacity check: Remaining capacity is displayed
 - HDD1 bad sectors check and recovery:
During the operation-"NOW" is displayed
The operation succeeded - "OK" is displayed
The operation failed - "NG" is displayed
Press the start key to perform the HDD1 bad sectors check and recovery again when "NG" is displayed.

Note

- The operation cannot be canceled during the HDD1 bad sectors check and recovery. (The stop button or [Return] are disabled.)
- Replace the HDD1 in case performing the HDD1 bad sectors check and recovery do not prevent the malfunction code.

5.8 Finisher adjustment

5.8.1 Staple Center Position (Staple Finisher Position Adjustment)

(1) Function

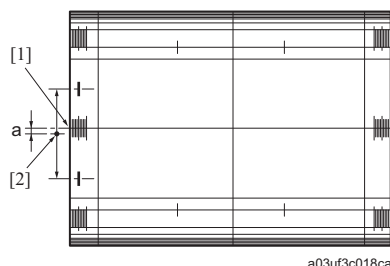
Adjust the center position of the staple while in stapling by FS.

(2) Usage

Conduct this adjustment when the center position of the staple is not within the standard value by FS.

(3) Procedure

1. "Service Mode menu screen"
Press [11 Finisher Adjustment].
2. "Finisher Adjustment menu screen"
Press [01 Staple Finisher Position Adjustment].
3. "Staple Finisher Adjustment menu screen"
Press [01 Staple Center Position].
4. "Stapling Center Position Adjustment screen"
Press [Print Mode].
5. Set the A3 or 11 x 17 paper and press the Start key to output the test pattern.
6. Fold the output page in half in main-scanning direction, and measure the gap "a" between the center line of the print and the staple center.
Standard value: $a = \pm 3\text{mm}$



a03uf3c018ca

[1] Paper center	[2] Staple center
------------------	-------------------

7. When the value is not within the standard value, press [Close].
8. "Stapling Center Position Adjustment screen"
Enter a value through the numeric buttons and press [SET].
Setting range: -20 (in front) to +20 (in back)
1 step = 0.1mm
9. Repeat steps 4 to 8 until the standard value can be obtained.

5.8.2 Paper Width Adj.(Staple) (Staple Finisher Position Adjustment)

(1) Function

Adjust the position of the stacker plate while in alignment.

(2) Usage

Conduct this adjustment when there is an uneven binding in a bundle of paper in staple mode by the FS-521.

(3) Procedure

1. "Service Mode menu screen"
Press [11 Finisher Adjustment].
2. "Finisher Adjustment menu screen"
Press [01 Staple Finisher Position Adjustment].
3. "Staple Finisher Adjustment menu screen"
Press [02 Paper Width Adj.].
4. "Paper Width Adj. screen"
Press [Staple Mode].
5. Press [Print Mode].
6. Set paper in size to be adjusted on the tray and press the Start key to output test pattern.
7. Open the front door of the FS and pull out the stacker.

Note

- If the length of the paper is longer than 239mm in sub-scanning direction, the paper edge comes out from the stacker. In that case, remove the paper through the paper opening section before pulling out the stacker, and reload the paper in the stacker.

8. Measure the gap between the paper in the stacker and the alignment plate.
Standard value: $0 \pm 0.5\text{mm}$
9. When the value is not within the standard value, close the front door and press [Close].
10. "Paper Width Adj. screen"
Enter a value through the numeric buttons and press [<<SET].
Setting range: -20 (wider) to +20 (narrower)
1 step = 0.1mm
11. Repeat steps 5 to 10 until the standard value can be obtained.

5.8.3 Paper Width Adj.(Straight) (Staple Finisher Position Adjustment)**(1) Function**

Adjust the interval between the stacker plates while in alignment.

(2) Usage

Adjust an uneven paper stack (main scanning direction) on the main tray in non-staple mode by the FS-521.

(3) Procedure

1. "Service Mode menu screen"
Press [11 Finisher Adjustment].
2. "Finisher Adjustment menu screen"
Press [01 Staple Finisher Position Adjustment].
3. "Staple Finisher Adjustment menu screen"
Press [02 Paper Width Adj.].
4. "Paper Width adjustment screen"
Press [Straight Mode].
Press [▼] or [▲] to select the paper size to be adjusted.
5. Press [Print Mode].
6. Set paper in size to be adjusted on the tray and press the Start key to output test pattern.
7. Open the front door of the FS and pull out the stacker.

Note

- If the length of the paper is longer than 239mm in sub-scanning direction, the paper edge comes out from the stacker. In that case, remove the paper through the paper opening section before pulling out the stacker, and reload the paper in the stacker.

8. Measure the gap between the paper in the stacker and the alignment plate.
Standard value: 0.1mm to 1mm
9. When the value is not within the standard value, close the front door and press [Close].
10. "Paper Width adjustment screen"
Enter a value through the numeric buttons and press [<<SET].
Setting range: -20 (wider) to +20 (narrower)
1 step = 0.1mm
11. Repeat steps 5 to 10 until the standard value can be obtained.

5.8.4 Exit Guide Center Pos. Adj. (Staple Finisher Position Adjustment)**(1) Function**

Adjust the center position of the paper exit alignment plate while in paper exit alignment.

(2) Usage

Adjust an uneven paper stack (main scanning direction) on the main tray in non-staple mode by the FS-521.

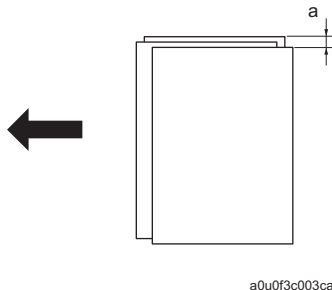
Note

- This adjustment is effective only for paper more than 182mm width (B5S) in the main scan direction in straight exit, or paper more than 210mm width (A4) in shift exit. This adjustment is invalid for paper of minimum size (A5S, B6S, $5\frac{1}{2} \times 8\frac{1}{2}\text{S}$) since it does not operate the paper exit alignment.

- **"Paper Width Adjustment (Straight) (Staple Finisher Position Adj.)"** must have been done in advance.
- **Adjust in conjunction with "Exit Guide Paper Width Adj. (Staple Finisher Position Adj.)"** since the misalignment of the paper width causes uneven paper stack.

(3) Procedure

1. "Service Mode menu screen"
Press [11 Finisher Adjustment].
 2. "Finisher Adjustment menu screen"
Press [01 Staple Finisher Position Adjustment].
 3. "Staple Finisher Adjustment menu screen"
Press [03 Exit Guide Center Pos. Adj.].
 4. "Exit Guide Unit Center Position Adj. screen"
Select the item to be adjusted of small-size or large-size.
The following items are selectable for each small-size and large-size.
 - Straight: Adjust the center position of the paper exit alignment plate in straight mode.
 - Shift in front: Adjust the center position of the paper exit alignment plate in shifting in front.
 - Shift in back: Adjust the center position of the paper exit alignment plate in shifting in back.
- Note**
- **Large size: Sub scan direction of paper is more than 298mm.**
 - **Small size: Sub scan direction of paper is less than 297mm.**
5. Press [Print Mode].
 6. Select the paper size according to the item to be adjusted and press the Start key to output some test pattern.
 7. Check the misalignment "a" of the stacked paper.



Note

- Check the misalignment between exit paper and the exit alignment plate under the operation as a reference for the adjustment.
- With too much adjustment, paper gets touch with the exit alignment plate in exiting paper, so be sure to check the alignment operation.
- Be sure to adjust in the position where the fixed side of alignment plate has no improper gap and no stress in the case of the shift adjustment.

8. To adjust the center position of the exit adjustment plate, press [Close].
9. "Exit Guide Unit Center Position Adj. screen"
Enter a value through the numeric buttons and press [<<SET].
Setting range: -50 (to front) to +50 (to back)
1 step = 0.1mm

Note

- Enter the same value to both large size and small size for straight adjustment.
- The input value of the straight does not reflect the value of the shift.

10. Repeat the steps 4 to 9 until an appropriate value is obtained.

5.8.5 Exit Guide Paper Width Adj. (Staple Finisher Position Adjustment)

(1) Function

Adjust the interval between the exit alignment plates (front and back) while in paper exit alignment.

(2) Usage

Adjust an uneven paper stack (main scanning direction) on the main tray in non-staple mode by the FS-521.

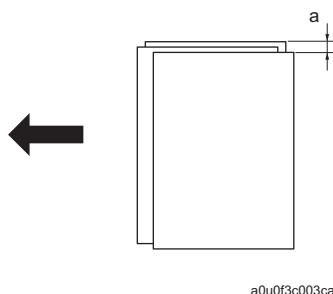
Note

- This adjustment is effective only for paper more than 182mm width (B5S) in the main scan direction in straight exit, or paper more than 210mm width (A4) in shift exit. This adjustment is invalid for paper of minimum size (A5S, B6S, 5 1/2 x 8 1/2S) since it does not operate the paper exit alignment.
- **"Paper Width Adjustment (Straight) (Staple Finisher Position Adj.)"** must have been done in advance.
- **Adjust in conjunction with "Exit Guide Paper Width (Stapler Position Adj.)"** since the center misalignment of the exit alignment plate causes uneven paper stack.

(3) Procedure

1. "Service Mode menu screen"
Press [11 Finisher Adjustment].
2. "Finisher Adjustment menu screen"

- Press [01 Staple Finisher Position Adjustment].
- "Staple Finisher Adjustment menu screen"
Press [05 Exit Guide Paper Width Adj.].
 - "Exit Guide Unit Paper Width Adjustment screen"
Press [▼] or [▲] to select the paper size to be adjusted.
 - Press [Print Mode].
 - Select the paper size according to the item to be adjusted and press the Start key to output some test pattern.
 - Check the misalignment "a" of the stacked paper.

**Note**

- Check the misalignment between exit paper and the exit alignment plate under the operation as a reference for the adjustment.
 - Too narrow adjustment causes uneven paper exit in the sub scan direction.
- To adjust the position of the exit adjustment plate, press [Close].
 - "Exit Guide Unit Paper Width Adjustment screen"
Enter a value through the numeric buttons and press [<<SET].
Setting range: -50 (wider) to +50 (narrower)
1 step = 0.1mm
Adjustment standard value (at the alignment operation): Paper width 0mm to +1mm
 - Repeat the steps 4 to 9 until an appropriate value is obtained.

5.8.6 Paper Width Adjustment (Multi Folder(Punch) Adj.)**(1) Function**

Adjusts the position of the alignment plate while in alignment.

(2) Usage

Adjust the misalignment of punch holes for punching by FD.

(3) Procedure

- "Service Mode menu screen"
Press [11 Finisher Adjustment].
- "Finisher Adjustment menu screen"
Press [02 Multi Folder(Punch) Adj.].
- "Multi Folder(Punch) Adj. menu screen"
Press [01 Paper Width Adjustment].
- "Paper Width Adjustment screen"
Press [Print Mode].

Note

- Large size:** Sub scan direction of paper is more than 298mm.
 - Small size:** Sub scan direction of paper is less than 297mm.
- Set paper you want to adjust in the tray, the number of copies is set to 10 and press the Start key.
 - Check the diameter of the through-hole when the ejected paper is stacked.

Holes	Standard value (mm)
2-Holes	φ5.0 or larger
3-Holes	φ6.5 or larger

- When the value is not within the standard value, press [Close].
- "Paper Width Adjustment screen"
Press [▼] or [▲] to select the paper size to be adjusted.
- Enter a value through the numeric buttons and press [<<SET].
Setting range: -20 (narrower) to +20 (wider)
1 step = 0.1mm

Note

- When the alignment plate is wider than an appropriate position, the punch centering is displaced, and when too narrow, the punch holes are apt to disperse.
- Repeat the steps 4 to 9 until an appropriate value is obtained.

5.8.7 Punch Vertical Position Adj. (Multi Folder(Punch) Adj.)

(1) Function

Adjusts the position of the alignment plate while in alignment.

(2) Usage

Adjust the position of the punch holes made by the FD in sub scanning direction.

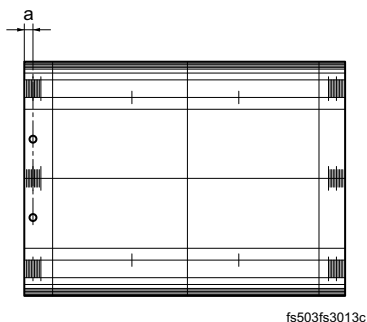
2-hole or 3-hole is selectable.

Adjust in conjunction with "Center Adjustment (Staple Finisher Position Adj.)".

(3) Procedure

- "Service Mode menu screen"
Press [11 Finisher Adjustment].
- "Finisher Adjustment menu screen"
Press [02 Multi Folder(Punch) Adj.].
- "Multi Folder(Punch) Adj. menu screen"
Press [02 Punch Vertical Position Adj.].
- "Punch hole select menu screen"
Select [01 2-Hole Punch] or [02 3-Hole Punch].
- "Punch Vertical Position Adj. screen"
Press [Print Mode].
- Set paper in size to be adjusted on the tray and press the Start key to output test pattern.
- Check the distance "a" from the outputted paper leading edge to the punch holes center position.

Holes	Standard value "a" (mm)
2-Holes	10.5 ± 4.0
3-Holes	9.5 ± 4



- When the value is not within the standard value, press [Close].
- "Punch Vertical Position Adj. screen"
Press [▼] or [▲] to select the paper size to be adjusted.
- Enter a value through the numeric buttons and press [<<SET].
Setting range: -40 (wider) to +40 (narrower)
1 step = 0.1mm
- Repeat steps 5 to 10 until the standard value can be obtained.
- To configure other punch hole/paper size, repeat steps 4 to 11.

5.8.8 Punch Gap Recovery Adj. (Multi Folder (Hole-Punch) Adj.)

(1) Function

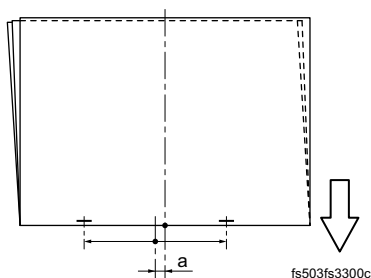
Adjust the position of the alignment plate while in alignment.

(2) Usage

Adjust the center position of the staple on the saddle stitching mode by the SD.

(3) Procedure

- "Service Mode menu screen"
Press [11 Finisher Adjustment].
- [Finisher adjustment menu screen]
Press [05 Saddle Stitcher Adjustment].
- "Saddle Stitcher Adjustment Menu screen"
Press [01 Staple Center Position Adj.].
- "Stapling Center Position Adjustment screen"
Press [Print Mode].
- Set the A3 or 11 x 17 paper and press the Start key to output the test pattern.
- Check the misalignment between the staple center [1] and the paper center [2].
Standard value "a": $\pm 2\text{mm}$



7. When the value is not within the standard value, press [Close].
8. "Stapling Center Position Adjustment screen"
Enter a value through the numeric buttons and press [SET].
Range: -20 (right) to +20 (left), 1step = 0.1mm
9. Repeat steps 4 to 8 until the standard value can be obtained.

5.8.9 Half Fold Position Adjustment (Multi Folder (Fold) Adj.)

(1) Function

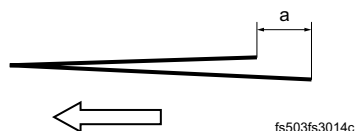
Adjust the paper stop position when folding paper.

(2) Usage

Adjust the fold position on the half fold mode by the FD.

(3) Procedure

1. "Service Mode menu screen"
Press [11 Finisher Adjustment].
2. "Finisher Adjustment menu screen"
Press [03 Multi Folder(Fold) Adj.].
3. "Multi Folder (Fold) adj. menu screen"
Press [01 Half-Fold Position Adj.].
4. "Half-Fold Position Adj. screen"
Press [Print Mode].
5. Set paper in size to be adjusted on the tray and press the Start key to output test pattern.
6. Check the misalignment "a" on the edge of the outputted paper.
Standard value "a": = $\pm 1.5\text{mm}$



7. When the value is not within the standard value, press [Close].
8. "Half-Fold Position Adj. screen"
Press [\blacktriangledown] or [\blacktriangle] to select the paper size to be adjusted.
9. Enter a value through the numeric buttons and press [<<SET].
Setting range: -50 to +50
1 step = 0.1mm
 - If there is the misalignment given in the step 6, enter a set value on the positive side.
10. Repeat steps 4 to 9 until the standard value can be obtained.

5.8.10 Tri-Fold-in Pos. Adj. (Multi Folder (Fold) Adj.)

(1) Function

Adjust the paper stop position when folding paper.

(2) Usage

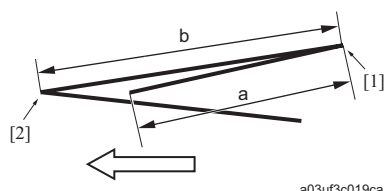
Adjust the fold positions on the tri-fold-in mode by the FD.

(3) Procedure

1. "Service Mode menu screen"
Press [11 Finisher Adjustment].
2. "Finisher Adjustment menu screen"
Press [03 Multi Folder(Fold) Adj.].
3. "Multi Folder (Fold) adj. menu screen"
Press [02 Tri-Fold-in Pos. Adj.].
4. "Tri-Fold-in Pos. Adj. screen"
Press [Print Mode].
5. Set paper in size to be adjusted on the tray and press the Start key to output test pattern.
6. Check "a" and "b" on the outputted paper.

Paper size	Standard value (mm)	
	a ± 1.5	b ± 1.5

A3	139.0	142.0
B4	120.3	123.3
A4S	98.0	101.0
SRA4S	105.7	108.7
12 x 18	151.4	154.4
11 x 17	142.9	145.9
8 ¹ / ₂ x 14	117.5	120.5
8 ¹ / ₂ x 11S	92.1	95.1
8K	129.0	132.0



[1]	First fold	[2]	Double fold
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7. When the value is not within the standard value, press [Close].
8. "Tri-Fold-in Pos. Adj. screen"
Press [▼] or [▲] to select the paper size to be adjusted.
9. Press [Single Fold].
10. Enter a value through the numeric buttons and press [<<SET].
Setting range: -50 (shorter) to +50 (longer)
1 step = 0.1mm
 - The dimension "a" in the step 6 gets larger when the set value is moved to the positive side and gets smaller when moved to the negative side.
11. Press [Double Fold].
12. Enter a value through the numeric buttons and press [<<SET].
Setting range: -50 (shorter) to +50 (longer)
1 step = 0.1mm
 - The dimension "b" in the step 6 gets larger when the set value is moved to the positive side and gets smaller when moved to the negative side.
13. Repeat steps 4 to 12 until the standard value can be obtained.

5.8.11 Tri-Fold-out Pos. Adj. (Multi Folder (Fold) Adj.)

(1) Function

Adjust the paper stop position when folding paper.

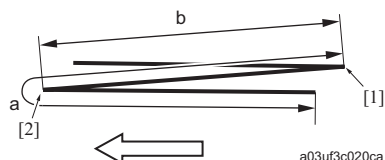
(2) Usage

Adjust the fold positions on the tri-fold-out mode by the FD.

(3) Procedure

1. "Service Mode menu screen"
Press [11 Finisher Adjustment].
2. "Finisher Adjustment menu screen"
Press [03 Multi Folder(Fold) Adj.].
3. "Multi Folder (Fold) adj. menu screen"
Press [03 Tri-Fold-out Pos. Adj.].
4. "Tri-Fold-out Pos. Adj. screen"
Press [Print Mode].
5. Set paper in size to be adjusted on the tray and press the Start key to output test pattern.
6. Check "a" and "b" on the outputted paper.

Paper size	Standard value (mm)	
	a ± 1.5	b ± 1.5
A3	282.0	144.0
B4	243.7	123.3
A4S	199.0	101.0
SRA4S	214.3	108.7
12 x 18	306.8	156.4
11 x 17	289.9	147.9
8 ¹ / ₂ x 14	238.1	120.5
8 ¹ / ₂ x 11S	187.3	95.1
8K	262.0	134.0



[1] First fold	[2] Double fold
----------------	-----------------

7. When the value is not within the standard value, press [Close].
8. "Tri-Fold-out Pos. Adj. screen"
Press [▼] or [▲] to select the paper size to be adjusted.
9. Press [Single Fold].
10. Enter a value through the numeric buttons and press [<<SET].
Setting range: -50 (shorter) to +50 (longer)
1 step = 0.1mm
 - The dimension "a" in the step 6 gets larger when the set value is moved to the positive side and gets smaller when moved to the negative side.
11. Press [Double Fold].
12. Enter a value through the numeric buttons and press [<<SET].
Setting range: -50 (shorter) to +50 (longer)
1 step = 0.1mm
 - The dimension "b" in the step 6 gets larger when the set value is moved to the positive side and gets smaller when moved to the negative side.
13. Repeat steps 4 to 12 until the standard value can be obtained.
14. To configure other paper size, repeat steps 4 to 13.

5.8.12 Double Parallel Pos. Adj. (Multi Folder (Fold) Adj.)

(1) Function

Adjust the paper stop position when folding paper.

(2) Usage

Adjust the fold positions on the double parallel mode by the FD.

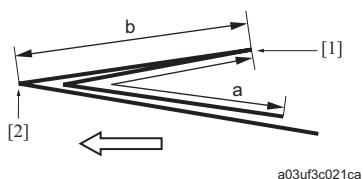
Note

- When adjusting both the single fold and the double fold, be sure to start with the single fold.

(3) Procedure

1. "Service Mode menu screen"
Press [11 Finisher Adjustment].
2. "Finisher Adjustment menu screen"
Press [03 Multi Folder(Fold) Adj.].
3. "Multi Folder (Fold) adj. menu screen"
Press [04 Double Parallel Pos. Adj.].
4. "Double Parallel Pos. Adj. screen"
Press [Print Mode].
5. Set paper in size to be adjusted on the tray and press the Start key to output test pattern.
6. Check "a" and "b" on the outputted paper.

Paper size	Standard value (mm)	
	a ± 1.5	b ± 1.5
A3	208.5	103.8
B4	180.5	89.8
A4S	147.0	73.0
SRA4S	158.5	78.8
12 x 18	227.1	113.1
11 x 17	214.4	106.7
8 1/2 x 14	176.3	87.7
8 1/2 x 11S	138.2	68.6
8K	193.5	96.3



[1] First fold	[2] Double fold
----------------	-----------------

7. When the value is not within the standard value, press [Close].

8. "Double Parallel Pos. Adj. screen"
Press [▼] or [▲] to select the paper size to be adjusted.
9. Press [Single Fold].
10. Enter a value through the numeric buttons and press [<<SET].
Setting range: -50 (shorter) to +50 (longer)
1 step = 0.1mm
 - The dimension "a" in the step 6 gets larger when the set value is moved to the positive side and gets smaller when moved to the negative side.
11. Press [Double Fold].
12. Enter a value through the numeric buttons and press [<<SET].
Setting range: -50 (shorter) to +50 (longer)
1 step = 0.1mm
 - The dimension "b" in the step 6 gets larger when the set value is moved to the positive side and gets smaller when moved to the negative side.
13. Repeat steps 4 to 12 until the standard value can be obtained.

5.8.13 Z-Fold Position Adj. (Multi Folder (Fold) Adj.)

(1) Function

Adjust the paper stop position when folding paper.

(2) Usage

Adjust the fold positions on the z-fold mode by the FD.

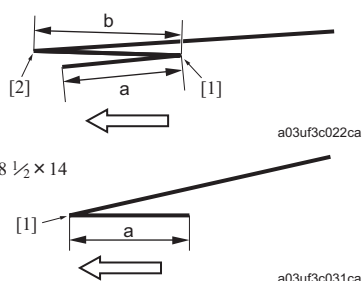
Note

- When adjusting both the single fold and the double fold, be sure to start with the single fold.

(3) Procedure

- "Service Mode menu screen"
Press [11 Finisher Adjustment].
- "Finisher Adjustment menu screen"
Press [03 Multi Folder(Fold) Adj.].
- "Multi Folder (Fold) adj. menu screen"
Press [05 Z-Fold Position Adj.].
- "Z-Fold Position Adjustment screen"
Press [Print Mode].
- Set paper in size to be adjusted on the tray and press the Start key to output test pattern.
- Check "a" and "b" on the outputted paper.

Paper size	Standard value (mm)	
	a ± 1.5	b ± 1.5
A3	105.5	108.5
B4	91.5	94.5
A4S	74.8	77.8
SRA4S	80.5	83.5
12 x 18	114.8	117.8
11 x 17	108.5	111.5
8 1/2 x 14	94.0	-
8 1/2 x 11S	70.4	73.4
8K	98.0	101.0



[1] First fold	[2] Double fold
----------------	-----------------

- When the value is not within the standard value, press [Close].
- "Z-Fold Position Adjustment screen"
Press [▼] or [▲] to select the paper size to be adjusted.
- Press [Single Fold].
- Enter a value through the numeric buttons and press [<<SET].
Setting range: -50 (shorter) to +50 (longer)
1 step = 0.1mm
 - The dimension "a" in the step 6 gets larger when the set value is moved to the positive side and gets smaller when moved to the negative side.
- Press [Double Fold].

12. Enter a value through the numeric buttons and press [<<SET].
Setting range: -50 (shorter) to +50 (longer)
1 step = 0.1mm
 - The dimension "b" in the step 6 gets larger when the set value is moved to the positive side and gets smaller when moved to the negative side.
13. Repeat steps 4 to 12 until the standard value can be obtained.

5.8.14 Gate Position Adj. (Multi Folder (Fold) Adj.)

(1) Function

Adjust the paper stop position when folding paper.

(2) Usage

Adjusts the fold position on the gate fold mode by the FD.

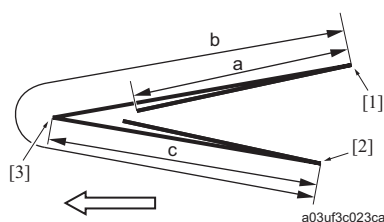
Note

- When adjusting the single fold, the double fold and the triple fold, be sure to conduct the single fold, the double fold and the triple fold in this order.

(3) Procedure

1. "Service Mode menu screen"
Press [11 Finisher Adjustment].
2. "Finisher Adjustment menu screen"
Press [03 Multi Folder(Fold) Adj.].
3. "Multi Folder (Fold) adj. menu screen"
Press [06 Gate Position Adj.].
4. "Gate Position Adj. screen"
Press [Print Mode].
5. Set paper in size to be adjusted on the tray and press the Start key to output test pattern.
6. Check the length of 2 places indicated with "a", "b" and "c".

Paper size	Standard value (mm)		
	a ± 1.5	b ± 1.5	c ± 1.5
A3	103.5	213.0	106.5
B4	89.5	185.0	92.5
A4S	72.8	151.5	75.8
SRA4S	78.5	163.0	81.5
12 x 18	112.8	231.6	115.8
11 x 17	106.5	218.9	109.5
8 1/2 x 14	87.4	180.8	90.4
8 1/2 x 11S	68.4	142.7	71.4
8K	96.0	198.0	99.0



[1] First fold	[3] Triple Fold
[2] Double fold	

7. When the value is not within the standard value, press [Close].
8. "Gate Position Adj. screen"
Press [▼] or [▲] to select the paper size to be adjusted.
9. Press [Single Fold].
10. Enter a value through the numeric buttons and press [<<SET].
Setting range: -50 (shorter) to +50 (longer)
1 step = 0.1mm
 - The dimension "a" in the step 6 gets larger when the set value is moved to the positive side and gets smaller when moved to the negative side.
11. Press [Double Fold].
12. Enter a value through the numeric buttons and press [<<SET].
Setting range: -50 (shorter) to +50 (longer)
1 step = 0.1mm
 - The dimension "b" in the step 6 gets larger when the set value is moved to the positive side and gets smaller when moved to the negative side.
13. Press [Triple Fold].
14. Enter a value through the numeric buttons and press [<<SET].
Setting range: -50 (shorter) to +50 (longer)
1 step = 0.1mm

- The dimension "c" in the step 6 gets larger when the set value is moved to the positive side and gets smaller when moved to the negative side.

15. Repeat steps 4 to 14 until the standard value can be obtained.

5.8.15 Fold Registration Loop Adj. (Multi Folder (Fold) Adj.)

(1) Function

Adjust the fold registration loop amount.

(2) Usage

Adjust paper loop amount at the FD registration roller to correct paper skew, wrinkle, or paper jam at the roller.

(3) Procedure

1. "Service Mode menu screen"
Press [11 Finisher Adjustment].
2. "Finisher Adjustment menu screen"
Press [03 Multi Folder(Fold) Adj.].
3. "Multi Folder(Punch) Adj. menu screen"
Press [07 Fold Registration Loop Adj.].
4. "Fold Registration Loop Adj. screen"
Press [Print Mode].
5. Set the A3 or 11 x 17 paper. Press the Start key to output the test pattern.
6. If the problem is not solved, press [Close].
7. "Fold Registration Loop Adj. screen"
Enter a value through the numeric buttons and press [<<SET].
Setting range: -50 (smaller) to +50 (larger)
1 step = 0.1mm
8. Repeat the steps 5 to 8 until an appropriate value is obtained.

5.8.16 Paper Width Adjustment (Stacker Adjustment)

(1) Function

Adjusts the position of the alignment plate while in alignment.

(2) Usage

Conduct this adjustment when a paper exit mis-alignment occurs in the main scan direction of the LS stacker tray.

(3) Procedure

1. "Service Mode menu screen"
Press [11 Finisher Adjustment].
2. "Finisher Adjustment menu screen"
Press [04 Stacker Adjustment].
3. "Stacker Adjustment menu screen"
Press [01 Paper Width Adjustment].
4. "Paper Width Adjustment screen"
Select either [Stacker No.1] or [Stacker No.2].
5. Set the A3 or 11 x 17 paper and press the Start key to output the test pattern.
6. If there are any uneven paper stack, press [Close].
7. Enter a value through the numeric buttons and press [<<SET].
Setting range: -20 (narrower) to +20 (wider)
1 step = 0.1mm
8. Repeat the steps 5 to 8 until an appropriate value is obtained.

5.8.17 Paper Length Adjustment (Stacker Adjustment)

(1) Function

Adjust the lead edge stopper position.

(2) Usage

Conduct this adjustment when a paper exit mis-alignment occurs in the sub scan direction of the LS stacker tray.

(3) Procedure

1. "Service Mode menu screen"
Press [11 Finisher Adjustment].
2. "Finisher Adjustment menu screen"
Press [04 Stacker Adjustment].
3. "Stacker Adjustment menu screen"
Press [02 Paper Length Adjustment].
4. "Paper Width Adjustment screen"
Select either [Stacker No.1] or [Stacker No.2].
5. Set the A3 or 11 x 17 paper and press the Start key to output the test pattern.
6. If there are any uneven paper stack, press [Close].
7. Enter a value through the numeric buttons and press [<<SET].
Setting range: -20 (narrower) to +20 (wider)

1 step = 0.1mm

8. Repeat the steps 5 to 8 until an appropriate value is obtained.

5.8.18 Staple Center Position (Saddle Stitcher Pos. Adj.)

(1) Function

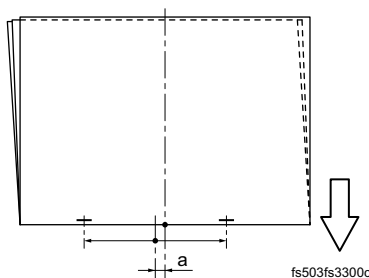
Adjust the position of the alignment plate while in alignment.

(2) Usage

Adjust the staple center position for the saddle stitch mode by the SD.

(3) Procedure

- "Service Mode menu screen"
Press [11 Finisher Adjustment].
- "Finisher Adjustment menu screen"
Press [06 Saddle Stitcher Pos. Adj.].
- "Saddle Stitcher Pos. Adj. menu screen"
Press [01 Staple Center Position].
- "Stapling Center Position Adjustment screen"
Press [Print Mode].
- Set the A3 or 11 x 17 paper and press the Start key to output the test pattern.
- Check the misalignment between the staplecenter and the paper center.
Standard value "a": = ± 2 mm



- When the value is not within the standard value, press [Close].
- "Stapling Center Position Adjustment screen"
Enter a value through the numeric buttons and press [<<SET].
Setting range: -20 (right) to +20 (left)
1 step = 0.1mm
- Repeat steps 4 to 8 until the standard value can be obtained.

5.8.19 Staple Paper Width Adj. (Saddle Stitcher Pos. Adj.)

(1) Function

Adjust the position of the saddle stitching alignment plate while in alignment.

(2) Usage

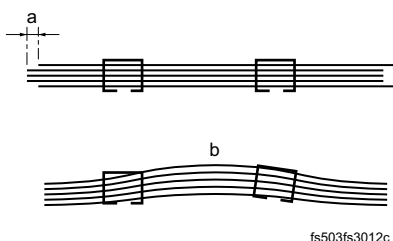
Adjust an uneven binding in a bundle of paper in saddle stitch mode by the SD.

Note

- Make sure that the folding skew adjustment of the mechanical adjustment has been completed.

(3) Procedure

- "Service Mode menu screen"
Press [11 Finisher Adjustment].
- "Finisher Adjustment menu screen"
Press [06 Saddle Stitcher Pos. Adj.].
- "Saddle Stitcher Pos. Adj. menu screen"
Press [02 Staple Paper Width Adj.].
- "Staple Paper Width Adj. screen"
Press [Print Mode].
- Set paper in size to be adjusted on the tray and press the Start key to output test pattern.
- Check to see if the bundle of papers is misaligned (a: a misalignment occurs when the paper width setting is larger than the paper width) and if the bundle is curved (b: the curve occurs when the paper width setting is smaller than the paper width).
Standard value "a": 1.0mm or less



7. When the value is not within the standard value, press [Close].
8. "Staple Paper Width Adj. screen"
Press [▼] or [▲] to select the paper size to be adjusted.
9. Enter a value through the numeric buttons and press [<<SET].
Setting range: -20 (narrower) to +20 (wider)
1 step = 0.1mm
10. Repeat steps 4 to 9 until the standard value can be obtained.

5.8.20 Staple Pitch Adjustment (Saddle Stitcher Pos. Adj.)

(1) Function

Adjust the staple intervals for the saddle stitch mode by the SD.

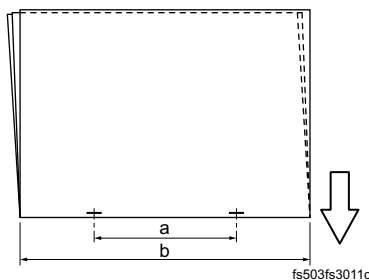
(2) Usage

Conduct this adjustment when the staple intervals of the saddle stitching by SD are not within the standard value.

(3) Procedure

1. "Service Mode menu screen"
Press [11 Finisher Adjustment].
2. "Finisher Adjustment menu screen"
Press [06 Saddle Stitcher Pos. Adj.].
3. "Saddle Stitcher Pos. Adj. menu screen"
Press [03 Staple Pitch Adjustment].
4. "Staple Pitch Adjustment screen"
Press [Print Mode].
5. Set paper in size to be adjusted on the tray and press the Start key to output test pattern.
6. Check the interval "a" between the staples against the paper size "b."

Standard value: $a = b/2 \pm 2\text{mm}$



7. When the value is not within the standard value, press [Close].
8. "Staple Pitch Adjustment screen"
Press [▼] or [▲] to select the paper size to be adjusted.
9. "Staple Pitch Adjustment screen"
Enter a value through the numeric buttons and press [<<SET].
Setting range: -20 (narrower) to +20 (wider)
1 step = 1.0mm
 - There are restrictions of setting range for each size of paper. Minimum value is determined based on the stapler movable range and the maximum value is determined so that the saddle stitching alignment plate and stapler do not interfere with each other.
10. Repeat steps 4 to 9 until the standard value can be obtained.

B5S: Setting is not possible (fixed to 91 mm)

B4: -20 to +20 mm (108.5 to 148.5 mm)

A4S: -14 to +14 mm (91 to 119 mm)

A3: -20 to +16.5 mm (128.5 to 165 mm)

5.8.21 Half-Fold Position Adj. (Saddle Stitcher Pos. Adj.)

(1) Function

Adjust the fold position on the multi-half fold mode by the SD.

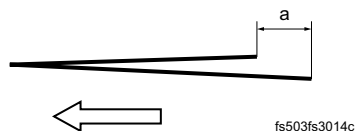
(2) Usage

Conduct this adjustment when the folding position of half folding by SD is not within the standard value.

(3) Procedure

1. "Service Mode menu screen"
Press [11 Finisher Adjustment].
2. "Finisher Adjustment menu screen"
Press [06 Saddle Stitcher Pos. Adj.].
3. "Saddle Stitcher Pos. Adj. menu screen"
Press [04 Half-Fold Position Adj.].
4. "Half-Fold Position Adj. screen"
Press [Print Mode].
5. Set paper in size to be adjusted on the tray and press the Start key to output test pattern.
6. Check the misalignment "a" on the edge of the outputted paper.

Standard value "a": 1.5mm or less



7. When the value is not within the standard value, press [Close].
8. "Half-Fold Position Adj. screen"
Press [▼] or [▲] to select the paper size to be adjusted.
9. "Half-Fold Position Adj. screen"
Enter a value through the numeric buttons and press [<<SET].
Setting range: -50 (shorter) to +50 (longer)
1 step = 0.1mm
 - If there is the misalignment given in the step 6, enter a set value on the positive side.
10. Repeat steps 4 to 9 until the standard value can be obtained.

5.8.22 Tri-Fold Position Adj. (Saddle Stitcher Pos. Adj.)

(1) Function

Adjust the fold positions on the multi-tri-fold-in mode by the SD.

(2) Usage

Conduct this adjustment when the folding position of multi-tri-folding by SD is not within the standard value.

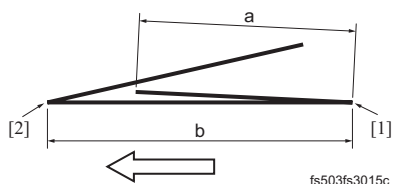
Note

- When adjusting both the single fold and the double fold, be sure to start with the double fold.
- The position of the single fold is based on the leading edge of paper and the position of the double fold is based on the position of the single fold. So, the dimension "b" in the step 7 varies when either position of the single fold and the double fold is changed.

(3) Procedure

1. "Service Mode menu screen"
Press [11 Finisher Adjustment].
2. "Finisher Adjustment menu screen"
Press [06 Saddle Stitcher Pos. Adj.].
3. "Saddle Stitcher Pos. Adj. menu screen"
Press [05 Tri-Fold Position Adj.].
4. "Tri-Fold Position Adjustment screen"
Press [Print Mode].
5. Set paper in size to be adjusted on the tray and press the Start key to output test pattern.
6. Check "a" and "b" on the outputted paper.

Paper size	Standard value (mm)	
	a	b
A4S	97.5 ± 2.0	102.0 ± 2.
8 ¹ / ₂ x 11S	91.6 ± 2.0	96.1 ± 2.0



[1] First fold	[2] Double fold
----------------	-----------------

7. When the value is not within the standard value, press [Close].
8. "Tri-Fold Position Adjustment screen"
Select the size of paper to be adjusted.
9. Press [Double Fold].
10. Enter a value through the numeric buttons and press [<<SET].
Setting range: -50 (shorter) to +50 (longer)
1 step = 0.1mm
 - The dimension "b" in the step 6 gets larger when the set value is moved to the positive side and gets smaller when moved to the negative side.
11. Press [Single Fold].
12. Enter a value through the numeric buttons and press [<<SET].
Setting range: -50 (shorter) to +50 (longer)
1 step = 0.1mm
 - The dimension "a" in the step 6 gets smaller when the set value is moved to the positive side and gets larger when moved to the negative side.
13. Repeat steps 4 to 12 until the standard value can be obtained.

5.8.23 Fold Paper Width Adj. (Saddle Stitcher Pos. Adj.)

(1) Function

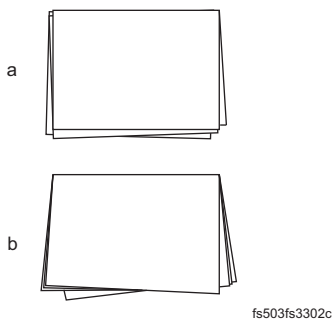
Adjust the alignment width while in alignment (sub scan direction).

(2) Usage

When there is an uneven edge found with the bundle paper at the folding or multi-tri-folding mode by SD, conduct this adjustment.

(3) Procedure

- "Service Mode menu screen"
Press [11 Finisher Adjustment].
- "Finisher Adjustment menu screen"
Press [06 Saddle Stitcher Pos. Adj.].
- "Saddle Stitcher Pos. Adj. menu screen"
Press [06 Fold Paper Width Adj.].
- "Fold Paper Width Adj. screen"
Press [Print Mode].
- Set the paper of the paper size to be adjusted. Press the Start key to output the test pattern.
- Check the printed pages for misalignment.
 - When the paper width setting is set to wider than the actual paper width, misalignment occurs randomly.
 - When the paper width setting is set to narrower than the actual paper width, misalignment occurs in 1 direction.



- When the value is not within the standard value, press [Close].
- "Fold Paper Width Adj. screen"
Press [▼] or [▲] to select the paper size to be adjusted.
- "Fold Paper Width Adj. screen"
Enter a value through the numeric buttons and press [<<SET].
Setting range: -50 (narrower) to +50 (wider)
1 step = 0.1mm
- Repeat steps 4 to 9 until the standard value can be obtained.

5.8.24 Trimming Adjustment (Saddle Stitcher Pos. Adj.)

(1) Function

Change the registration position of the book for trimming.

(2) Usage

Adjust the misalignment in the trimmed fore-edge or the excess trimming by the SD.

(3) Procedure

- "Service Mode menu screen"
Press [11 Finisher Adjustment].
- "Finisher Adjustment menu screen"
Press [06 Saddle Stitcher Pos. Adj.].
- "Saddle Stitcher Pos. Adj. menu screen"
Press [07 Trimming Adjustment].
- "Trimming Adjustment screen"
Press [Print Mode].
- Set paper in size to be adjusted on the tray and press the Start key to output test pattern.
- Check the trimming distance "a" on the cover paper.
Standard value "a": 2mm or more

Note

- Trimming distance less than 2mm causes trimming fault.



- When the value is not within the standard value, press [Close].
- "Trimming Adjustment screen"
Press [▼] or [▲] to select the paper size to be adjusted.

9. "Trimming Adjustment screen"

Enter a value through the numeric buttons and press [<<SET].

Setting range: -400 (smaller) to +400 (larger)

1 step = 0.1mm

NOTE

- Since the minimum dimension (from the spine to the fore edge) after the trimming is limited to 122mm, the set value up to +400 fails to be reflected depending on the size of the paper.

10. Repeat steps 4 to 9 until the standard value can be obtained.

5.8.25 Trimmer Receiver Adj. (Saddle Stitcher Pos. Adj.)**(1) Function**

Adjust the shift interval and the move pitch of the trimmer board.

(2) Usage

Adjust the poor trimming (for example, fluff on the cut end) in the trimming by the SD.

(3) Procedure

1. "Service Mode menu screen"

Press [11 Finisher Adjustment].

2. "Finisher Adjustment menu screen"

Press [06 Saddle Stitcher Pos. Adj.].

3. "Saddle Stitcher Pos. Adj. menu screen"

Press [08 Trimmer Receiver Adj.].

4. "Trimmer Receiver Adjustment Menu screen"

Select the options for "Trimmer Count" (number of cuts counted until the trimmer board moves) and "Move Pitch" (travel distance of the trimmer board when it moves).

5. Press [Execute Compulsive Movement] to move the trimmer board manually.

5.8.26 Cover Trimming Adj. (Perfect Binder Adjustment)**(1) Function**

Adjusts the trimming position of the right-side edge of the cover paper.

(2) Usage

Conduct this adjustment when the trimming position on the leading edge of the right cover does not fit to the leading edge of the left cover.

Note

- In order to align the leading edges on the left and right covers, perform [I.5.8.27 Cover Lead Edge Adj. \(Perfect Binder Adjustment\)](#) first.

(3) Procedure

1. "Service Mode menu screen"

Press [11 Finisher Adjustment].

2. [Finisher Adjustment menu screen]

Press [06 Perfect Binder Adjustment].

3. "Perfect Binder Adjustment menu screen"

Press [01 Cover Trimming Adj.].

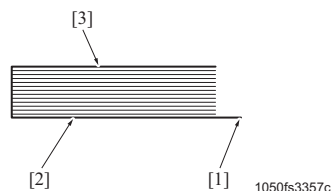
4. "Cover Trimming Adjustment screen"

Press [PB Tray] or [Main Body Tray], and select the tray that needs to be adjusted.

5. Press [Print Mode].

6. Select the paper type and press the start button to make test prints and carry out perfect binding.

7. Check the cover of the created book if its right-side edge and left-side edge align with each other.



[1]	Trimming position	[3]	Left cover paper
[2]	Right cover paper		

8. To adjust the position of the trimming position of the right cover paper, press [Close].

9. "Cover Trimming Adjustment screen"

Enter a value through the numeric buttons and press [<<SET].

Setting range: -128 (reduces the trimming amount) to +127 (enlarges the trimming amount)

1 step = 0.1mm

10. Repeat the steps 4 to 9 until an appropriate value is obtained.

5.8.27 Cover Lead Edge Adj. (Perfect Binder Adjustment)

(1) Function

Sets the length that the left side of cover paper exceeds the length (width) of inside pages.

(2) Usage

Conduct this adjustment when the length that the left side of cover paper exceeds the length (width) of inside pages is not adequate.

(3) Procedure

- "Service Mode menu screen"
Press [11 Finisher Adjustment].
- [Finisher Adjustment menu screen]
Press [06 Perfect Binder Adjustment].
- "Perfect Binder Adjustment menu screen"
Press [02 Cover Lead Edge Adj.].
- "Cover Lead Edge Adj. screen"
Press [PB Tray] or [Except PB Tray] to select the tray to be adjusted.
- Press [▼] or [▲] to select the paper size of cover paper.
Select the size of paper from the following options.

Total

A4

B5

A5

8¹/₂ x 11

16K

A5S

5¹/₂ x 8¹/₂S

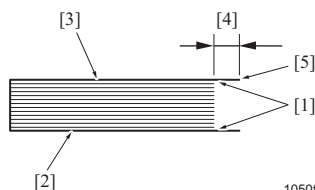
Custom (220mm to 379mm)

Custom (148mm to 219mm)

Note

- Above paper sizes are book (the inside pages) finished sizes.

- Press [Print Mode].
- Select the paper type and press the start button to make test prints and carry out perfect binding.
- Check that the width of the left cover paper is longer than the width of the inside pages by specified amount.



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[1]	Body	[4]	Length differential
[2]	Right cover paper	[5]	Edge of the left cover paper
[3]	Left cover paper		

- To change the width of the left cover paper, press [Close].
- "Cover Lead Edge Adj. screen"
Enter a value through the numeric buttons and press [<<SET].
Setting range: -128 (shorter) to +127 (longer)
1 step = 0.1mm
- Repeat the steps 4 to 10 until an appropriate value is obtained.

5.8.28 Spine Corner form Pos. (Perfect Binder Adjustment)

(1) Function

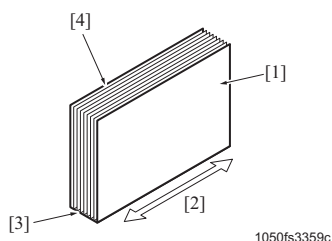
Adjusts the corner folding position of the cover paper.

(2) Usage

Adjust when the spine corner form position is not adequate.

(3) Procedure

- "Service Mode menu screen"
Press [11 Finisher Adjustment].
- [Finisher Adjustment menu screen]
Press [06 Perfect Binder Adjustment].
- "Perfect Binder Adjustment menu screen"
Press [03 Spine Corner Forming Pos.].
- "Spine Corner Forming Pos. screen"
Press [Print Mode].
- Select the paper type and press the start button to make test prints and carry out perfect binding.
- Check that the corner edges of the cover paper are created uniformly in the main scan direction.



[1]	Right cover paper	[3]	Cover paper
[2]	Main scan direction	[4]	Left cover paper

7. When the corner edges of the cover paper are not created uniformly, press [Close].
8. "Spine Corner Forming Pos. screen"
Select [Forward Adj.] or [Rear Adj.].
Enter a value through the numeric buttons and press [<<SET].
Setting range: -128 (down) to +127 (up)
1 step = 0.1mm
9. Repeat the steps 4 to 9 until an appropriate value is obtained.

5.8.29 Glue Start Position (Perfect Binder Adjustment)

(1) Function

Adjusts the start position for applying glue to inside pages.

(2) Usage

Adjust when the start position for applying glue to inside pages is not adequate.

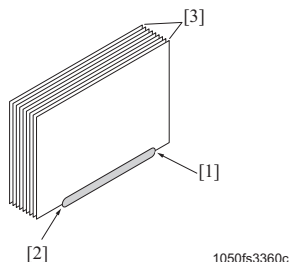
(3) Procedure

1. "Service Mode menu screen"
Press [11 Finisher Adjustment].
2. [Finisher Adjustment menu screen]
Press [06 Perfect Binder Adjustment].
3. "Perfect Binder Adjustment menu screen"
Press [04 Glue Start Position].
4. "Glue Start Position screen"
Press [Ahead] or [Back] to select which start position, for applying during forward movement or backward movement, to be adjusted.
5. Press [▼] or [▲] to select the paper size of cover paper.
Select the size of paper from the following options.
Total
A4
B5
A5
8¹/₂ x 11
16K
A5S
5¹/₂ x 8¹/₂S
Custom (220mm to 379mm)
Custom (148mm to 219mm)

Note

- Above paper sizes are book (the inside pages) finished sizes.

6. Press [Print Mode].
7. Select the paper type and press the start button to make test prints and carry out perfect binding.
8. Check that the glue applying start position to the inside pages is appropriate.



[1]	Start position for frontward applying	[3]	Body
[2]	Start position for backward applying	[4]	

9. To adjust the start position, press [Close].
10. "Glue Start Position screen"
Enter a value through the numeric buttons and press [<<SET].
Setting range: -128 (earlier) to +127 (later)

1 step = 0.1mm

11. Repeat the steps 4 to 10 until an appropriate value is obtained.

5.8.30 Glue Finish Position (Perfect Binder Adjustment)

(1) Function

Adjusts the position to finish applying glue.

(2) Usage

Adjust when the completion position for applying glue to inside pages is not adequate.

(3) Procedure

- "Service Mode menu screen"
Press [11 Finisher Adjustment].
- [Finisher Adjustment menu screen]
Press [06 Perfect Binder Adjustment].
- "Perfect Binder Adjustment menu screen"
Press [05 Glue Finish Position].
- "Glue Finish Position screen"
Press [Ahead] or [Back] to select which finish position, for applying during forward movement or backward movement, to be adjusted.
- Press [▼] or [▲] to select the paper size of cover paper.
Select the size of paper from the following options.

Total

A4

B5

A5

8¹/₂ x 11

16K

A5S

5¹/₂ x 8¹/₂S

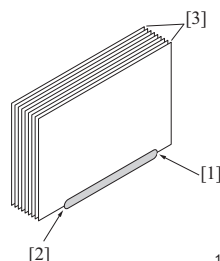
Custom (220mm to 379mm)

Custom (148mm to 219mm)

Note

- Above paper sizes are book (the inside pages) finished sizes.

- Press [Print Mode].
- Select the paper type and press the start button to make test prints and carry out perfect binding.
- Check that the glue applying start position to the inside pages is appropriate.



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[1]	Finish position for backward applying	[3]	Body
[2]	Finish position for frontward applying	[4]	

- To adjust the finish position, press [Close].
- "Glue Finish Position screen"
Enter a value through the numeric buttons and press [<<SET].
Setting range: -128 (earlier) to +127 (later)
1 step = 0.1mm
- Repeat the steps 4 to 10 until an appropriate value is obtained.

5.8.31 Glue Form Finish Pos. Adj. (Perfect Binder Adjustment)

(1) Function

Adjusts the finish position of the process to make a uniform layer of glue applied on the inside pages spine.

(2) Usage

Adjust when the finish position of the process to make a uniform layer of glue applied on the inside pages spine is not adequate.

NOTE

- This adjustment works for the PB-502 and does not work for the PB-503.

(3) Procedure

- "Service Mode menu screen"
Press [11 Finisher Adjustment].
- [Finisher adjustment menu screen]
Press [06 Perfect Binder Adjustment].

3. "Perfect Binder adjustment mode menu screen"
Press [06 Glue Form Finish Pos. Adj.].
4. "Paste Formation Finish Adj. screen"
Press [▼] or [▲] to select the paper size.
Select the size of paper from the following options.
All Size
A4, A4W, B5, B5W, A5, A5W
 $8\frac{1}{2} \times 11$, $8\frac{1}{2} \times 11W$, $5\frac{1}{2} \times 8\frac{1}{2}$, $5\frac{1}{2} \times 8\frac{1}{2}W$
16K
Custom
Note
 - Above paper sizes are book (the inside pages) finished sizes.
5. Press [Print Mode].
6. Select the paper type and press the start button to make test prints and carry out perfect binding.
7. Check that the finish position of the process to make a uniform layer of glue on the inside pages spine is appropriate.
8. When adjusting the finish position of the process to make a uniform layer of glue, press [Close].
9. "Paste Formation Finish Adj. screen"
Enter a value through the numeric buttons and press [SET].
Range: -128 (sooner) to +127 (later), 1step = 0.1mm
10. Repeat the steps 4 to 9 until an appropriate value is obtained.

5.8.32 Temperature Adjustment (Perfect Binder Adjustment)

(1) Function

Sets the temperatures to be detected by the glue apply roller temperature sensor (TH1), the glue tank temperature sensor/Up (TH2), the glue tank temperature sensor/Md (TH3), and the glue tank temperature sensor/Lw (TH4) provided in the glue tank.

(2) Usage

Adjust it when the applied glue does not harden or when the cover paper easily comes unglued.

(3) Procedure

1. "Service Mode menu screen"
Press [11 Finisher Adjustment].
2. [Finisher Adjustment menu screen]
Press [06 Perfect Binder Adjustment].
3. "Perfect Binder Adjustment menu screen"
Press [04 Temperature Adjustment].
4. "Temperature Adjustment screen"
Press [Print Mode].
5. Select the paper type and press the start button to make test prints and carry out perfect binding.
6. Check that the glue applied has dried appropriately.
7. To adjust the dryness of the glue, press [Close].
8. "Temperature Adjustment screen"
Select the option of which the temperature is set.
The following options are provided.
 - Metal tank - Top
 - Metal tank - Mid
 - Metal tank - Low
 - Glue apply roller
9. Enter a value through the numeric buttons and press [<<SET].
 - Metal tank - Top
Setting range: 128 °C to 136 °C
Default: 132 °C
 - Metal tank - Mid
Setting range: 140 °C to +145 °C
Default: 145 °C
 - Metal tank - Low
Setting range: 180 °C to +190 °C
Default: 185 °C
 - Glue apply roller
Setting range: 160 °C to +170 °C
Default: 165 °C
10. Repeat the steps 4 to 9 until an appropriate value is obtained.

5.8.33 Sub Compile CD Width Adj. (Perfect Binder Adjustment)

(1) Function

Adjusts the alignment width of the inside pages when aligning in the main scan direction.

(2) Usage

Adjust when the alignment width of the inside pages in the main scan direction is not adequate.

(3) Procedure

1. "Service Mode menu screen"

Press [11 Finisher Adjustment].

2. [Finisher Adjustment menu screen]

Press [06 Perfect Binder Adjustment].

3. "Perfect Binder Adjustment menu screen"

Press [08 Sub Compile CD Width Adj.].

4. "Sub Compile CD Width Adj. screen"

Press [▼] or [▲] to select the paper size.

Select the size of paper from the following options.

Total

A4

B5

A5

8¹/₂ x 11

16K

A5S

5¹/₂ x 8¹/₂S

Custom (220mm to 379mm)

Custom (148mm to 219mm)

Note

- Above paper sizes are book (the inside pages) finished sizes.

5. "Sub Compile CD Width Adj. screen"

Enter a value through the numeric buttons and press [<<SET].

Setting range: -20 (wider) to +20 (narrower)

1 step = 0.1mm

6. Create multiple books in normal copy mode, and check the alignment of the second and later book.

Change set value set in Step5 until a properly aligned book is created.

5.8.34 Clamp CD Width Adjustment (Perfect Binder Adjustment)

(1) Function

Adjusts the alignment width of the inside pages when aligning in the main scan direction.

(2) Usage

Adjust when the alignment width of the inside pages in the main scan direction is not adequate.

(3) Procedure

1. "Service Mode menu screen"

Press [11 Finisher Adjustment].

2. [Finisher Adjustment menu screen]

Press [06 Perfect Binder Adjustment].

3. "Perfect Binder Adjustment menu screen"

Press [09 Clamp CD Width Adjustment].

4. "Clamp CD Width Adjustment screen"

Press [▼] or [▲] to select the paper size.

Select the size of paper from the following options.

Total

A4

B5

A5

8¹/₂ x 11

16K

A5S

5¹/₂ x 8¹/₂S

Custom (220mm to 379mm)

Custom (148mm to 219mm)

Note

- Above paper sizes are book (the inside pages) finished sizes.

5. "Clamp CD Width Adjustment screen"

Enter a value through the numeric buttons and press [<<SET].

Setting range: -20 (wider) to +20 (narrower)

1 step = 0.1mm

6. Create multiple books in normal copy mode, and check the alignment of the second and later book.

Change set value set in Step5 until a properly aligned book is created.

5.8.35 Cover Up/Down CD Width Adj. (Perfect Binder Adjustment)

(1) Function

Adjusts the positional relation in the main scan direction between the cover paper and the inside pages.

(2) Usage

Adjust when the positional relation in the main scan direction between the cover paper and the inside pages is not adequate.

(3) Procedure

1. "Service Mode menu screen"
Press [11 Finisher Adjustment].
2. [Finisher Adjustment menu screen]
Press [06 Perfect Binder Adjustment].
3. "Perfect Binder Adjustment menu screen"
Press [10 Cover Up/Down CD Width Adj.].
4. "Cover Up/Down CD Width Adjustment screen"
Press [PB Tray] or [Main Body Tray], and select the tray that needs to be adjusted.
5. Press [Print Mode].
6. Select the paper type and press the start button to make test prints and carry out perfect binding.
7. Check if the relation between the main scan position of the cover and that of the inside pages are appropriate.
8. To adjust the relation of their main-scanning positions, press [Close].
9. "Cover Up/Down CD Width Adjustment screen"
Enter a value through the numeric buttons and press [<<SET].
Setting range: -20 (wider) to +20 (narrower)
1 step = 0.1mm
10. Repeat the steps 4 to 9 until an appropriate value is obtained.

5.8.36 Clamp FD Position Adj. (Perfect Binder Adjustment)**(1) Function**

Adjusts the alignment width of the inside pages when aligning in the sub scan direction.

(2) Usage

Adjust when the alignment width of the inside pages in the sub scan direction is not adequate.

(3) Procedure

1. "Service Mode menu screen"
Press [11 Finisher Adjustment].
2. [Finisher Adjustment menu screen]
Press [06 Perfect Binder Adjustment].
3. "Perfect Binder Adjustment menu screen"
Press [11 Clamp FD Position Adj.].
4. "Clamp FD Position Adjustment screen"
Press [▼] or [▲] to select the paper size.
Select the size of paper from the following options.
Total
A4
B5
A5
8¹/₂ x 11
16K
A5S
5¹/₂ x 8¹/₂S
Custom (220mm to 379mm)
Custom (148mm to 219mm)
5. Press [Print Mode].
6. Select the paper type and press the start button to make test prints and carry out perfect binding.
7. Check if the sub scan direction of all the inside pages are properly aligned.
8. To adjust the alignment width in sub-scanning direction of the inside pages, press [Close].
9. "Clamp FD Position Adjustment screen"
Enter a value through the numeric buttons and press [<<SET].
Setting range: -20 (wider) to +20 (narrower)
1 step = 0.1mm
10. Repeat the steps 4 to 9 until an appropriate value is obtained.

Note

- Above paper sizes are book (the inside pages) finished sizes.
- If the setting is too wide, pages are misplaced in sub scan direction.
- If the setting is too narrow, mark of the FD alignment plate appears.

5.8.37 Paper Width Adjustment (Relay Stacker Adjustment)**(1) Functions**

Adjust the position of the alignment plate operates in the main scan direction on the relay stacker (RU).

(2) Usage

Adjust it when the punch holes are misarranged in the main scan direction.

(3) Procedure

1. "Service mode menu screen"
Press [11 Finisher Adjustment].

2. [Finisher adjustment menu screen]
Press [07 Relay Stacker Adjustment].
3. "Relay Stacker Adjustment Menu screen"
Press [01 Paper Width Adjustment].
4. "Paper Width Adjustment screen"
Press [▼] or [▲] to select the paper size.
Select the size of paper from the following options.
All Size
SRA3, A3, A3W, B4, B4W, SRA4, A4, A4S, A4W, A4WS, B5, B5W, A5, A5W
12 x 18, 12 x 18W, 11 x 17, 11 x 17W, 9 x 11, 8¹/₂ x 14, 8¹/₂ x 11, 8¹/₂ x 11S, 8¹/₂ x 11W, 8¹/₂ x 11WS,
5¹/₂ x 8¹/₂, 5¹/₂ x 8¹/₂W, 8 x 13, 8¹/₈ x 13¹/₄, 8¹/₄ x 13, 8¹/₂ x 13
8K, 16K, 16KS
Custom
5. Press [Print Mode].
6. Set 10 sheets of paper with a size to be adjusted.
Set the setting to "10" to set the punch.
Press the start button.
7. Check the diameter of the through-hole when the ejected paper is stacked.

Holes	Standard value (mm)
2/4-Holes	φ5.0 or larger
3-Holes	φ6.5 or larger

8. When the value is not within the standard value, press [Close].
9. "Paper Width Adjustment screen"
Enter a value through the numeric buttons and press [SET].
Adjustment range: -20 (narrow) to + 20 (wide), 1 step = 0.1mm

Note

- For adjusting it, be sure to find the alignment point where the punch holes are not misarranged by setting the value to the maximum (wide) first and then changing it to narrower.

10. Repeat the steps 4 to 9 until an appropriate value is obtained.

5.8.38 Paper Width Adjustment (Relay Stacker Adjustment)**(1) Functions**

Adjust the position of the alignment plate operates in the sub scan direction on the relay stacker (RU).

(2) Usage

Adjust it when the punch holes are misarranged in the paper path direction.

(3) Procedure

1. "Service mode menu screen"
Press [11 Finisher Adjustment].
2. [Finisher adjustment menu screen]
Press [07 Relay Stacker Adjustment].
3. "Relay Stacker Adjustment Menu screen"
Press [02 Paper Length Adjustment].
4. "Paper Width Adjustment screen"
Press [▼] or [▲] to select the paper size.
Select the size of paper from the following options.
All Size
SRA3, A3, A3W, B4, B4W, SRA4, A4, A4S, A4W, A4WS, B5, B5W, A5, A5W
12 x 18, 12 x 18W, 11 x 17, 11 x 17W, 9 x 11, 8¹/₂ x 14, 8¹/₂ x 11, 8¹/₂ x 11S, 8¹/₂ x 11W, 8¹/₂ x 11WS,
5¹/₂ x 8¹/₂, 5¹/₂ x 8¹/₂W, 8 x 13, 8¹/₈ x 13¹/₄, 8¹/₄ x 13, 8¹/₂ x 13
8K, 16K, 16KS
Custom
5. Press [Print Mode].
6. Set 10 sheets of paper with a size to be adjusted.
Set the setting to "10" to set the punch.
Press the start button.
7. Check the diameter of the through-hole when the ejected paper is stacked.

Holes	Standard value (mm)
2/4-Holes	φ5.0 or larger
3-Holes	φ6.5 or larger

8. When the value is not within the standard value, press [Close].
9. "Paper Length Adjustment screen"
Enter a value through the numeric buttons and press [SET].
Adjustment range: -50 (narrow) to + 50 (wide), 1 step = 0.1mm

Note

- For adjusting it, be sure to find the alignment point where the punch holes are not misarranged by setting the value to the maximum (wide) first and then changing it to narrower.

10. Repeat the steps 4 to 9 until an appropriate value is obtained.

5.8.39 Tray Adjustment (PI-PFU Adjustment)

(1) Functions

Adjust the paper remaining VR detection of PI-PFU each trays.

(2) Usage

Adjust it when the paper remaining detection of the PI-PFU each tray does not work properly.

(3) Procedure

1. "Service mode menu screen"
Press [11 Finisher Adjustment].
2. [Finisher adjustment menu screen]
Press [08 PI-PFU Adjustment]
3. "PI-PFU Adjustment Menu screen"
Press [01 Tray adjustment].
4. "Tray Adjustment screen"
Press [01 Tray Amount Detection Adj.].
5. "Tray Amount Detection Adjustment screen"
Select [LOW] of the trays you want to adjust.
6. Pull out the selected tray and remove all paper.
7. Set the tray.
8. Press [Start].
After the adjustment, the message "Complete" appears.
9. "Tray Amount Detection Adjustment screen"
Select [UP] of the trays you want to adjust.
10. Pull out the selected tray and set 1 piece of paper.
11. Set the tray.
12. Press [Start].
After the adjustment, the message "Complete" appears.
13. To adjust the other trays, repeat steps 4 to 12.

5.8.40 Pre-registration Adjustment (PI-PFU Adjustment)

(1) Functions

Adjust the paper loop amount in the registration roller section of the PI-PFU.

(2) Usage

Adjust when the paper skew or crease occurs.

(3) Procedure

1. "Service mode menu screen"
Press [11 Finisher Adjustment].
2. [Finisher adjustment menu screen]
Press [08 PI-PFU Adjustment]
3. "PI-PFU Adjustment Menu screen"
Press [02 Pre-registration Adjustment].
4. "Pre-registration Adjustment screen"
Select the item you adjust since the tray is adjusted by each (PI-PFU 1 to 3).
5. "Pre-registration Adjustment screen"
Enter a numeric value through the numeric keys and press [Set].
Setting range: -10 (small) to +10 (large)
1 step = 1msec
6. Check the skew or crease on paper in the normal mode.

Note

- Since the test print cannot be done from the service mode, check it in the normal mode which uses PI-PFU.

7. Repeat the steps 4 to 6 until an appropriate value is obtained.

5.8.41 Recall Standard Data

(1) Functions

Reset various setting values of the finisher adjustment to the factory initial data or the installation initial data.

(2) Usage

Conduct this adjustment when the initialization cannot be done because of the various change in the finisher adjustment items by CE.

Note

- Adjustment data of "Stacker Adjustment (LS)", "Trimmer Receiver Adj. (SD)", "Paper Edge Detect Sensor Adj. (PK)", "Post Inserter Tray Size (PI)", and "Output Quantity Limit (FS-531/FS-612)" are not restored.

(3) Procedure

1. "Service Mode menu screen"

- Press [11 Finisher Adjustment].
- 2. [Finisher Adjustment menu screen]
Press [09/08 Recall Standard Data].
- 3. "Recall Standard Data screen"
Press [Factory Initial Data] or [Installation Initial Data].

Note

- Selecting [Factory Initial Data] recalls the factory initial data.
- Selecting [Installation initial data] recalls the adjustment values stored when code "90-00" of the I/O check mode was conducted.

5.9 Firmware Version

(1) Usage

Display the firmware version of the main body and options.

Note

- [Image control] that is displayed on the screen represents the firmware version of the overall control board (OACB).

(2) Procedure

1. "Service mode menu screen"
Press [08 Firmware Version].
2. "Firmware Version menu screen"
Press [01 Firmware Version].
3. "Indication of Firmware Version screen"
Each firmware version is displayed.

5.10 CS Remote Care

5.10.1 Outline

The CS Remote Care is a system that manages the main body by sending and receiving various kinds of the management data of the main body between the main body and the CS Remote Care center computer through the phone line, E-mail, or WebDAV server.

It enables the main body to call the center computer, and the center computer to inquire regularly the main body for various data.

The data handled by the CS Remote Care can be classified into the 3 following groups.

- a. Data that allow you to grasp the use conditions of the main body, such as the total count and the PM count.
- b. Data that give us the general information of when and how often an abnormality occurred with the main body.
- c. All sorts of adjustment data

Note

- When the security enhanced mode is set to ON, the use of the main body NIC is not allowed.

5.10.2 Setup procedure of the CS Remote Care (When using E-mail)

Note

- Select one of main body NIC or IC-601 controller NIC to use. CSRC cannot be used for the IC-306/IC-307/413 controller NIC. Pay attention to the mail account and the DIPSW setting when selecting NIC to be used or using E-mail CS Remote Care and the mail remote notification system at the same time. For the detail, refer to ["I.5.10.5 List of combinations of E-mail CS Remote Care and Mail remote notification system."](#)
- Conduct the settings of the mail address and the mail server to be used for E-mail system of CS Remote Care beforehand. The setting methods differ depending on the used NIC as follows.
 - Main body NIC: Set from [E-Mail Initial setting] on Extension for maintenance of Web Utilities. (Refer to [I.5.10.6 Mail initial setting \(In the case of the main body NIC\)](#))
 - Controller NIC: [Utility/Counter] --> [Administrator Setting] --> [Network Setting] --> [Controller NIC Setting] --> [CSRC Setting] (Refer to [I.5.10.7 E-mail Initial Setting \(In the case of controller NIC\)](#))
- Conduct RAM clear for CS Remote Care first and then setup again when conducting the setup again for the main body that has been done CS Remote Care setup once. (Refer to [I.5.10.14 Initialization of RAM for CS Remote Care](#))

(1) When using E-mail (Duplex)

1. Device registration on CS Remote Care center
Conduct the preregistration of the device at the center side. (This step can be skipped when sending the initial connection mail from the machine to the center. After the initial connection, in this case, register the device at the center side.)
2. I/O check mode, data collection clear valid
Set [03-6] to "On (1)" from [Service Mode] → [System Setting] → [Software DIPSW Setting].
3. CS Remote Care memory initialization
 1. Press [Service Mode] → [Machine Condition] → [I/O Check Mode].
 2. Enter "15" with numeric keys and confirm that "015-00" appears on the screen.
 3. Press the [Access] button.
 4. Enter "98" with numeric keys and confirm that "015-98" appears on the screen.
 5. Press [Start] button and confirm that the output check display switches to "FIN".
4. CS Remote Care function ON
Set [15-5] to "On (1)" from [Service Mode] → [System Setting] → [Software DIPSW Setting].
5. Select the NIC that is used for CSRC
 1. 1. Press [Service mode] --> [System Setting] --> [Software DIPSW Setting] and enter [16-7].
 2. Specify the NIC that is used.
 - On (1): Main body NIC
 - Off (0): Controller NIC
6. Mail initial setting
Set the mail address and the mail server.

- Controller NIC: [Utility Menu] --> [Administrator Setting] --> [Network Setting] --> [Machine NIC Setting] --> [E-mail initial setting]. Or set from [E-Mail initial setting] on [Extension for maintenance] of Web Utilities. (Refer to [I.5.10.7 E-mail Initial Setting \(In the case of controller NIC\)](#))
 - Controller NIC: Set [Utility Menu] --> [Administrator Setting] --> [Network Setting] --> [Controller NIC Setting] --> [CSRC Setting]. (Refer to [I.5.10.7 E-mail Initial Setting \(In the case of controller NIC\)](#))
7. CS Remote Care system selection
Press [Service Mode] → [CS Remote Care] → [CS Remote Care] and then [E-mail].
 8. Communication method selection
Press [Duplex] on [CS Remote Care setting] screen.
 9. ID code entry
 1. Press [ID code].
 2. Enter the 7-digit serviceman ID with numeric keys and press [ID code] again.
 10. Press [Detail Setting] to display [E-mail (Duplex) Setting Menu] screen.
 11. Basic setting
 1. Press [Basic Setting] on the [E-mail (Duplex) Setting menu] screen.
 2. Press [Center ID] and enter the center ID (5 digits).
 - The serial number that is input from [Service Mode] → [System Setting] → [Serial Number Setting] appears on [Device ID].
 3. Press [Cryptogram] to make a selection to decide whether it is encrypted or not. (Default: Use Cryptogram).
 4. Press [OK].
 12. Date and time setting for the CS Remote Care
 1. Press [Date and Time Setting] on the [E-mail (Duplex) Setting menu] screen.
 2. Press [Setting Time] to enter the year, month, day, and time.
 - Press [Set] to move the cursor among the year/month/day/hour/minute fields.
 3. Press [Time Zone] to enter the time zone.
 - Press [+/-] to switch plus/minus of the time zone.
 4. Press [OK].
 13. Response Timeout Setting
 1. Press [Response Timeout Setting] on the [E-mail (Duplex) Setting menu] screen.
 2. Enter the response timeout (10 minute to 1440 minutes, default: 30 minutes).
 3. Press [OK].
 14. Turn on and off the power switch (SW2) of the main body.
 15. Initial connection
Conduct the initial connection in one of the following steps.
 - Initial connection from the center side
Send the initial connection mail from the center side to the mail address of the machine. The initial connection completes when the machine receives the initial connection mail.
 - Initial connection from the machine
Send the initial connection mail from the machine to the center. In this case, set the E-mail address of the center on the [E-mail (Duplex) Setting Menu] → [Basic Setting] → [E-mail] and press [First Call]. In case the device pre-registration at the center side is skipped, it turns to be the temporary registered status by center receiving the initial connection mail. The initial connection is completed when the device is registered at the center side.

Note

- **When the CS Remote Care related window is opened while receiving the initial connection mail from the center, the information being created is destroyed and the CS Remote Care setting screen is displayed.**
- **For the method of sending the initial connection mail from the center side, refer to the user's guide on CS Remote Care center application.**
- **Mail transmission is possible only between the center and the main body that the initial connection has been established.**
- **After when the initial registration is done, the center mail address is displayed on [Service Mode] → [CS Remote Care] → [CS Remote Care] → [Detail Setting] → [Basic Setting] → [E-mail].**
- **When the transmission error occurs against the center, check the error code that appears. (Refer to [I.5.10.15 CS Remote Care error code list](#))**

(2) When using E-mail (Simplex (from machine to center))

1. Device registration on CS Remote Care center
Conduct the preregistration of the device at the center side.
(The preregistration of the device at the center side can be skipped. After the initial connection, in this case, register the device at the center side.)
2. I/O check mode, data collection clear valid
Set [03-6] to "On (1)" from [Service Mode] → [System Setting] → [Software DIPSW Setting].
3. CS Remote Care memory initialization
 1. Press [Service Mode] → [Machine Condition] → [I/O Check Mode].
 2. Enter "15" with numeric keys and confirm that "015-00" appears on the screen.
 3. Press the [Access] button.
 4. Enter "98" with numeric keys and confirm that "015-98" appears on the screen.
 5. Press [Start] button and confirm that the output check display switches to "FIN".
4. CS Remote Care function ON
Set [15-5] to "On (1)" from [Service Mode] → [System Setting] → [Software DIPSW Setting].
5. Select the NIC that is used for CSRC
 1. Press [Service mode] --> [System Setting] --> [Software DIPSW Setting] and enter [16-7].
 2. Specify the NIC that is used.
 - On (1): Main body NIC
 - Off (0): Controller NIC
6. Mail initial setting
Set the mail address and the mail server.
 - Controller NIC: [Utility Menu] --> [Administrator Setting] --> [Network Setting] --> [Machine NIC Setting] --> [E-mail initial setting]. Or set from [E-Mail initial setting] on [Extension for maintenance] of Web Utilities. (Refer to [I.5.10.7 E-mail Initial Setting \(In the case of controller NIC\)](#))

- Controller NIC: Set [Utility Menu] --> [Administrator Setting] --> [Network Setting] --> [Controller NIC Setting] --> [CSRC Setting].
(Refer to [I.5.10.7 E-mail Initial Setting \(In the case of controller NIC\)](#))
- 7. CS Remote Care system selection
Press [Service Mode] → [CS Remote Care] → [CS Remote Care] and then [E-mail].
- 8. Communication method selection
Press [Simplex] on [CS Remote Care setting] screen.
- 9. ID code entry
 1. Press [ID code].
 2. Enter the 7-digit serviceman ID with numeric keys and press [ID code] again.
- 10. Press [Detail Setting] to display [E-mail (Simplex) Setting Menu] screen.
- 11. Basic setting
 1. Press [Basic Setting] on the [E-mail (Simplex) Setting menu] screen.
 2. Press [Center ID] and enter the center ID (5 digits).
 - The serial number that is input from [Service Mode] → [System Setting] → [Serial Number Setting] appears on [Device ID].
 3. Press [E-mail] and enter the mail address of the center.
 4. Press [Cryptogram] to make a selection to decide whether it is encrypted or not. (Default: Use Cryptogram).
 5. Press [OK].
- 12. Date and time setting for the CS Remote Care
 1. Press [Date and Time Setting] on the [E-mail (Simplex) Setting menu] screen.
 2. Press [Setting Time] to enter the year, month, day, and time.
 - Press [Set] to move the cursor among the year/month/day/hour/minute fields.
 3. Press [Time Zone] to enter the time zone.
 - Press [+/-] to switch plus/minus of the time zone.
 4. Press [OK].
- 13. Regular send setting
 1. Press [Periodical Transmission Setting] on the [E-mail (Simplex) Setting menu] screen.
 2. Set the regular send schedule to the center.
 - Every month: Send it regularly to the center on the same date. Sent date is set at the end of the month by [End of Month].
 - Every week: Send it regularly to the center on the same time and the same day of the week.
 - Every day: Send it regularly to the center on the same time everyday.
 3. Press [OK].
- 14. Data collecting setting
 1. Press [Collecting Data Setting] on the [E-mail (Simplex) Setting menu] screen.
 2. Select data to be collected.
 - Basic data
 - Account track data
 - Machine adjustment data
 - Coverage data
 3. Press [OK].
- 15. Turn on and off the power switch (SW2) of the main body.
- 16. Initial connection
 1. Press [Service Mode] → [CS Remote Care] → [CS Remote Care] → [Detail Setting] → [Basic Setting].
 2. Press [First Call] to send the initial connection mail to the center.
 3. Once the mail sending completes normally, CS Remote Care setting screen appears.
 - Once the mail sending to the SMTP server normally, the registration on the machine completes.
 4. The initial connection completes when the center receives the initial connection mail. In case the device pre-registration at the center side is skipped, it turns to be the temporary registered status by center receiving the initial connection mail. The initial connection is completed when the device is registered at the center side.

Note

- **When the transmission error occurs against the center, check the error code that appears. (Refer to [I.5.10.15 CS Remote Care error code list](#))**
- **In case the device pre-registration at the center side is skipped, it turns to be the temporary registered status by center receiving the initial connection mail. The initial connection is completed when the device is registered at the center side.**

5.10.3 Setup procedure of the CS Remote Care (When using phone line modem)

Conduct the following procedure to set up when using phone line modem as CR Remote Care system.

Note

- **Conduct RAM clear for CS Remote Care first and then setup again when conducting the setup again for the main body that has been done CS Remote Care setup once.**
- **Use the Data modem of ITU-T V.34/V.32 bis/V.32 compliance, AT command compliance.**

(1) When using the phone line modem

1. Device registration on CS Remote Care center
Conduct the preregistration of the device at the center side. (The preregistration of the device at the center side can be skipped. After the initial connection, in this case, register the device at the center side.)
2. Modem connection
Turn off the power of the modem, connect the main body and the modem with a modem cable, and the modem and the wall outlet with a modular cable.
 - For the connection of a modular cable, refer to the instructions of the modem to be used.
3. I/O check mode, data collection clear valid
Set [03-6] to "On (1)" from [Service Mode] → [System Setting] → [Software DIPSW Setting].
4. CS Remote Care memory initialization
 1. Press [Service Mode] → [Machine Condition] → [I/O Check Mode].
 2. Enter "15" with numeric keys and confirm that "015-00" appears on the screen.
 3. Press the [Access] button.
 4. Enter "98" with numeric keys and confirm that "015-98" appears on the screen.
 5. Press [Start] button and confirm that the output check display switches to "FIN".

5. CS Remote Care function ON
Set [15-5] to "On (1)" from [Service Mode] → [System Setting] → [Software DIPSW Setting].
6. CS Remote Care system selection
Press [Service mode] → [CS Remote Care] → [CS Remote Care] and then [Modem].
7. ID code entry
 1. Press [ID code].
 2. Enter the 7-digit serviceman ID with numeric keys and press [ID code] again.
8. Press [Detail Setting] to display the [Modem Setting Menu] screen.
9. Basic setting
 1. Press [Basic Setting] on the [Modem Setting Menu] screen.
 2. Press [Center ID] and enter the center ID (5 digits).
 - The serial number that is input from [Service Mode] → [System Setting] → [Serial Number Setting] appears on [Device ID].
 3. Press [Center Telephone Number] to enter the center phone number.
 - Use [P], [T], [W], [-] as needed.
 4. Press [Machine Phone Number] to enter the machine phone number.
 - Use [P], [T], [W], [-] as needed.
 5. Press [OK].
10. Date and time setting for the CS Remote Care
 1. Press [Date/Time Setting] on the [Modem Setting Menu] screen.
 2. Press [Setting Time] to enter the year, month, day, and time.
 - Press [Set] to move the cursor among the year/month/day/hour/minute fields.
 3. Press [Time Zone] to enter the time zone.
 - Press [+/-] to switch plus/minus of the time zone.
 4. Press [OK].
11. Modem initialization AT command entry

Note

 - **Change the initialization AT command of the modem as needed. (Normally no need to change.)**
 - **For the detail of AT command, refer to the instruction of the modem used.**
 1. Press [AT command] on the [Modem Setting Menu] screen.
 2. Press [Initial command] to enter AT command.
 3. Press [OK].
12. DIPSW setting for the CS Remote Care

Note

 - **Normally no need to change the setting, but conduct the setting as needed according to the connection environment.**
 1. Press [DIP-SW Setting] on the [Modem Setting Menu] screen.
 2. Specify DIP-SW as needed. (Refer to [I.5.10.9 Software DIPSW setting for CS Remote Care](#))
13. Turn on and off the power switch (SW2) of the main body.
14. First call execution
 1. Press [Basic Setting] on the [Modem Setting Menu] screen.
 2. Press [First Call] to start the initial transmission.
 - When the connection to the center completes successfully, the CS Remote Care setting screen appears.
 - When the transmission error occurs against the center, check the error code that appears. (Refer to [I.5.10.15 CS Remote Care error code list](#))
 - In case the device pre-registration at the center side is skipped, it turns to be the temporary registered status by center receiving the initial call. The initial connection is completed when the device is registered at the center side.

5.10.4 Setup procedure of the CS Remote Care (When using WebDAV server)

Conduct the following procedure to set up when using http communication as CR Remote Care system.

Note

- **Only the machine NIC can use the system. The controller NIC cannot use the http system of CS Remote Care.**
- **Conduct RAM clear for CS Remote Care first and then setup again when conducting the setup again for the main body that has been done CS Remote Care setup once. (Refer to [I.5.10.14 Initialization of RAM for CS Remote Care](#))**
- **When using the http proxy server, be sure to set with [CSRC http setting] on the CE extension function of Web Utilities. (Refer to [I.5.10.7 E-mail Initial Setting \(In the case of controller NIC\)](#))**

(1) When using http (Duplex)

1. Device registration on CS Remote Care center
Conduct the preregistration of the device at the center side.
(The preregistration of the device at the center side can be skipped. After the initial connection, in this case, register the device at the center side.)
For the device registration method at the center side, refer to the user's guide on CS
2. I/O check mode, data collection clear valid
Set [03-6] to "On (1)" from [Service Mode] → [System Setting] → [Software DIPSW Setting].
3. CS Remote Care memory initialization
 1. Press [Service Mode] → [Machine Condition] → [I/O Check Mode].
 2. Enter "15" with numeric keys and confirm that "015-00" appears on the screen.
 3. Press the [Access] button.
 4. Enter "98" with numeric keys and confirm that "015-98" appears on the screen.
 5. Press [Start] button and confirm that the output check display switches to "FIN".
4. CS Remote Care function ON
Set [15-5] to "On (1)" from [Service Mode] → [System Setting] → [Software DIPSW Setting].
5. Set machine NIC as the NIC to be used
Set [16-7] to "On (1)" from [Service mode] → [System Setting] → [Software DIPSW Setting].
6. http communication setting (Arbitrary setting)
When using the http proxy server, set from [Administrator Setting] → [Network Setting] → [Machine NIC Setting] → [http communication setting]. Or set from [CSRC http setting] on [Extension for maintenance] of Web Utilities. (Refer to [I.5.10.7 E-mail Initial Setting \(In the case of controller NIC\)](#))

7. CS Remote Care system selection
Press [Service mode] → [CS Remote Care] → [CS Remote Care] and then [http].
 8. Communication method selection
Press [Duplex] on [CS Remote Care setting] screen.
 9. ID code entry
 1. Press [ID code].
 2. Enter the 7-digit serviceman ID with numeric keys and press [ID code] again.
 10. Press [Detail Setting] to display [http (Duplex) Setting Menu] screen.
 11. Basic setting
 1. Press [Basic Setting] on the [http (Duplex) Setting menu] screen.
 2. Press [Center ID] and enter the center ID (5 digits).
 - The serial number that is input from [Service Mode] → [System Setting] → [Serial Number Setting] appears on [Device ID].
 3. Press [Web Server] and enter the URL of the Web server (Less than 255 one-byte characters)
 4. Press [Cryptogram] to make a selection to decide whether it is encrypted or not. (Default: Use Cryptogram).
 12. Heart Beat setting ^{*1}
 1. Press [Heart Beat Setting] on the [http (Duplex) Setting menu] screen.
 2. Press [Heart Beat Setting] to make a selection to decide whether the Heart Beat function is made valid or invalid. (Default: Enable)
 3. Press [Heart Beat Interval] to enter the transmission interval of the Heart Beats (1 minute to 256 minutes, default: 30 minutes).
 4. Press [Heart Beat Send] to make a selection to decide whether the fixed time transmission of the Heart Beat is made valid or invalid. (Default: Enable)
 5. Press [Heart Beat Fix Send Time] to enter the time for the Heart Beat transmission at the fixed time.
 13. Date and time setting for the CS Remote Care
 1. Press [Date/Time Setting] on the [http (Duplex) Setting menu] screen.
 2. Press [Setting Time] to enter the year, month, day, and time.
 - Press [Set] to move the cursor among the year/month/day/hour/minute fields.
 3. Press [Time Zone] to enter the time zone.
 - Press [+/-] to switch plus/minus of the time zone.
 4. Press [OK].
 14. Turn on and off the sub power switch (SW2) of the main body.
 15. First call execution
 1. Press [Basic Setting] on the [http (Duplex) Setting menu] screen.
 2. Press [First Call] to start the initial transmission.
 3. Once the initial call completes normally, CS Remote Care setting screen appears.
 - Once the initial connection file is stored in the Web server normally, the registration on the machine completes.
- Note**
- **When the transmission error occurs against the center, check the error code that appears. (Refer to I.5.10.15 CS Remote Care error code list)**
 - **In case the device pre-registration at the center side is skipped, it turns to be the temporary registered status. The initial connection is completed when the device is registered at the center side.**
16. Turn OFF/ON the sub power switch of the main body (SW2). ^{*2}
 - ^{*1} Heart Beat function is a function to notify that the machine being active by uploading the Heart Beat file to the registered Web server periodically. Heart Beat file contains the information of the total counter and the status.
 - ^{*2} The Heart Beat function does not work when SW2 of the main body is not turned OFF/ON after the First Call finishes.

(2) When using http (Simplex (from machine to center))

1. Device registration on CS Remote Care center
Conduct the preregistration of the device at the center side.
(The preregistration of the device at the center side can be skipped. After the initial connection, in this case, register the device at the center side.)
For the device registration method at the center side, refer to the user's guide on CS
2. I/O check mode, data collection clear valid
Set [03-6] to "On (1)" from [Service Mode] → [System Setting] → [Software DIPSW Setting].
3. CS Remote Care memory initialization
 1. Press [Service Mode] → [Machine Condition] → [I/O Check Mode].
 2. Enter "15" with numeric keys and confirm that "015-00" appears on the screen.
 3. Press the [Access] button.
 4. Enter "98" with numeric keys and confirm that "015-98" appears on the screen.
 5. Press [Start] button and confirm that the output check display switches to "FIN".
4. CS Remote Care function ON
Set [15-5] to "On (1)" from [Service Mode] → [System Setting] → [Software DIPSW Setting].
5. Set machine NIC as the NIC to be used
Set [16-7] to "On (1)" from [Service mode] → [System Setting] → [Software DIPSW Setting].
6. http communication setting (Arbitrary setting)
When using the http proxy server, set from [Administrator Setting] → [Network Setting] → [Machine NIC Setting] → [http communication setting]. Or set from [CSRC http setting] on [Extension for maintenance] of Web Utilities. (Refer to I.5.10.7 E-mail Initial Setting (In the case of controller NIC))
7. CS Remote Care system selection
Press [Service mode] → [CS Remote Care] → [CS Remote Care] and then [http].
8. Communication method selection
Press [Simplex] on [CS Remote Care setting] screen.
9. ID code entry
 1. Press [ID code].
 2. Enter the 7-digit serviceman ID with numeric keys and press [ID code] again.
10. Press [Detail Setting] to display [http (Simplex) Setting Menu] screen.
11. Basic setting

1. Press [Basic Setting] on the [http (Simplex) Setting menu] screen.
 2. Press [Center ID] and enter the center ID (5 digits).
 - The serial number that is input from [Service Mode] → [System Setting] → [Serial Number Setting] appears on [Device ID].
 3. Press [Web Server] and enter the URL of the Web server (Less than 255 one-byte characters)
 4. Press [Cryptogram] to make a selection to decide whether it is encrypted or not. (Default: Use Cryptogram).
 5. Press [OK].
12. Heart Beat setting *1
1. Press [Heart Beat Setting] on the [http (Duplex) Setting menu] screen.
 2. Press [Heart Beat Setting] to make a selection to decide whether the Heart Beat function is made valid or invalid. (Default: Enable)
 3. Press [Heart Beat Interval] to enter the transmission interval of the Heart Beats (1 minute to 256 minutes, default: 30 minutes).
 4. Press [Heart Beat Send] to make a selection to decide whether the fixed time transmission of the Heart Beat is made valid or invalid. (Default: Enable)
 5. Press [Heart Beat Fix Send Time] to enter the time for the Heart Beat transmission at the fixed time.
13. Date and time setting for the CS Remote Care
1. Press [Date/Time Setting] on the [http (Simplex) Setting menu] screen.
 2. Press [Setting Time] to enter the year, month, day, and time.
 - Press [Set] to move the cursor among the year/month/day/hour/minute fields.
 3. Press [Time Zone] to enter the time zone.
 - Press [+/-] to switch plus/minus of the time zone.
 4. Press [OK].
14. Regular send setting
1. Press [Periodical Transmission Setting] on the [http (Simplex) Setting menu] screen.
 2. Set the regular send schedule to the center.
 - Every month: Send it regularly to the center on the same date. Sent date is set at the end of the month by [End of Month].
 - Every week: Send it regularly to the center on the same time and the same day of the week.
 - Every day: Send it regularly to the center on the same time everyday.
 3. Press [OK].
15. Data collecting setting
1. Press [Collecting Data Setting] on the [http (Simplex) Setting menu] screen.
 2. Select data to be collected.
 - Basic data
 - Account track data
 - Machine adjustment data
 - Coverage data
 3. Press [OK].
16. Turn on and off the sub power switch (SW2) of the main body.
17. First call execution
1. Press [Basic Setting] on the [http (Simplex) Setting menu] screen.
 2. Press [First Call] to start the initial transmission.
 3. Once the initial call completes normally, CS Remote Care setting screen appears.
 - Once the initial connection file is stored in the Web server normally, the registration on the machine completes.
- Note**
- When the transmission error occurs against the center, check the error code that appears. (Refer to [I.5.10.15 CS Remote Care error code list](#))
 - In case the device pre-registration at the center side is skipped, it turns to be the temporary registered status. The initial connection is completed when the device is registered at the center side.
18. Turn OFF/ON the sub power switch of the main body (SW2). *2
- *1 Heart Beat function is a function to notify that the machine being active by uploading the Heart Beat file to the registered Web server periodically. Heart Beat file contains the information of the total counter and the status.
 - *2 The Heart Beat function does not work when SW2 of the main body is not turned OFF/ON after the First Call finishes.

5.10.5 List of combinations of E-mail CS Remote Care and Mail remote notification system

To change a combination of E-mail CS Remote Care and Mail remote notification system, refer to this table to configure the DIPSW setting or the mail account setting.

Case	Mail remote notification system	E-mail CS Remote Care using the machine NIC	E-mail CS Remote Care using the controller NIC	Setting item	Value	Remark
1	○	○	-	"Use the mail remote notification system" of the main body NIC Web utility	Yes	(*3)
				"Service Mode - Software DIPSW": 15-5 (*1)	1	
				"Service Mode - Software DIPSW": 16-7 (*2)	1	
2	○	-	○	"Use the mail remote notification system" of the main body NIC Web utility	Yes	(*4)
				"Service Mode - Software DIPSW": 15-5 (*1)	1	

				"Service Mode - Software DIPSW": 16-7 (*2)	0	
3	○	-	-	"Use the mail remote notification system" of the main body NIC Web utility	Yes	-
				"Service Mode - Software DIPSW": 15-5 (*1)	0	
				"Service Mode - Software DIPSW": 16-7 (*2)	0	
4	-	○	-	"Use the mail remote notification system" of the main body NIC Web utility	Yes (*5)	-
				"Service Mode - Software DIPSW": 15-5 (*1)	1	
				"Service Mode - Software DIPSW": 16-7 (*2)	1	
5	-	-	○	"Use the mail remote notification system" of the main body NIC Web utility	No	-
				"Service Mode - Software DIPSW": 15-5 (*1)	1	
				"Service Mode - Software DIPSW": 16-7 (*2)	0	

*1 Service Mode - Software DIPSW: 15-5 (CS Remote Care function ON, 0=OFF, 1=ON)

*2 Service Mode - Software DIPSW: 14-7 (NIC selection of E-mail CS Remote Care, 0=controller NIC, 1=main body NIC)

*3 Mail remote notification system and CS Remote Care using the main body NIC share the same mail account.

*4 Mail remote notification system and CS Remote Care using the controller NIC use separate mail accounts.

*5 Even when the mail remote notification system is not used, set it to "Yes" and conduct the mail initial setting.

5.10.6 Mail initial setting (In the case of the main body NIC)

Set the mail address and the mail server for the machine NIC.

Note

- E-mail initial setting can be set in the [Extension for maintenance] of Web Utilities. For the detail of Web Utilities, refer to [E.1.3.4 Initialization](#).

1. Press the [Utility/Counter].
2. Press [Administrator Setting] → [Network Setting] → [E-mail Initial Setting].
3. Conduct the following settings.
 - [Use E-mail System]: Select [ON].
 - [Time Zone]: Set the time zone.
 - [Trans (SMTP) mail server]: Set the host name of the SMTP server or IP address. When inputting the host name, set the DNS server.
 - [SMTP port number]: Set the port number of the SMTP server.
 - [Trans Mail Server Timeout]: Set the timeout period (sec).
 - [New-arrival check interval]: set the interval for checking the new-arrivals (min.).
 - [Receive mail server]: Set the IP address of the receiving mail server. When inputting the host name, set the DNS server.
 - [Receive Mail Server Type]: Set the type of the receive mail server (POP3/IMAP).
 - [POP3/IMAP Port Number]: Set the port number of the receive mail server.
 - User name on the server: Set the account name.
 - Password: Set the account password.
 - [E-Mail Address for machine]: Set the E-mail address for machine.
 - [POP (IMAP) before SMTP Auth.]: Make a setting to decide whether the POP (IMAP) before SMTP Auth. is used.
4. Press [Test] and press [Yes] on the confirmation screen to conduct the sending and receiving test.
5. Press [OK].

5.10.7 E-mail Initial Setting (In the case of controller NIC)

Set the controller mail address and the mail server.

1. Press the [Utility/Counter].
2. Press [Administrator Setting] → [Network Setting] → [Controller NIC Setting] → [CSRC Setting].
3. Conduct the following settings.
 - [CSRC Send Setting]: Select [Enable].
 - [SMTP server address]: Select the address specifying method (IPv4/IPv6/host name) and press [SMTP server address] to set the server address.
 - [Port number]: Set the port number of the SMTP server.
 - [Admin. From Address]: Set the mail address of the controller that is used for CSRC.
 - [Connection time out]: Set the time-out period.
 - [Authentication setting]: Set the enable/disable of POP Before SMTP or SMTP Auth.
4. Press [Next] to conduct the following settings.
 - [POP Before SMTP time]: Set the POP Before SMTP time.
 - [SMTP Authentication Setting]: Set the user ID, password, and realm.
5. Press [Next] to conduct the following settings.
 - [CSRC Receive Setting]: When using E-mail duplex, select [Enable].

- [POP server address]: Select the address specifying method (IPv4/IPv6/host name) and press [POP server address] to set the server address.
 - [Login name]: Set the account name.
 - [Password]: Set the account password.
 - [APOP authentication]: Select the Enable/Disable.
 - [Port number]: Set the port number of the POP server.
 - [Connection time out]: Set the time-out period.
6. Press [Next] to conduct the following settings.
 - [Auto Receive Check]: Select [Enable] normally. Select [Disable] to stop the auto receive check temporarily such as when the POP server is down. When [Disable] is selected, the mail cannot be received manually.
 - [Polling interval]: Set the polling interval.
 - [CSRC Communication Test]: Make a transmission/reception test.
 7. Press [OK].

5.10.8 http communication setting

Set the following settings when using http proxy server.

Note

- **http communication setting can be set in the [Extension for maintenance] of Web Utilities. For the detail of Web Utilities, refer to [E. 1.3.4 Initialization](#).**

1. Press the [Utility/Counter].
2. Press [Administrator Setting] → [Network Setting] → [Machine NIC Setting] → [http communication setting].
3. Conduct the following settings.
 - [Enable Proxy Server]: Select [ON].
 - [Proxy Server Address Set]: Set the host name of the proxy server or IP address. When inputting the host name, set the DNS server.
 - Proxy Server Port: Set the port number of the proxy server.
 - [Enable SSL]: Set whether to use SLL or not.
 - [Enable Authentication]: Set whether to use the Web server authentication or not.
 - [Authentication User Name]: Set the user name of the Web Server authentication.
 - [Authentication Password]: Set the password of the Web Server authentication.
4. Press [OK].

5.10.9 Software DIPSW setting for CS Remote Care

Note

- **DIPSW bits data are written into the NVRAM board (NRB) every time a change is made. In case you changed bit data by accident, be sure to restore the previous state.**

(1) Input procedure

Input procedure

1. Enter the service mode.
2. "Service mode menu screen"
Press [CS Remote Care].
3. "Sub menu screen"
Press [CS Remote Care].
4. "CS Remote Care setting screen"
Press [ID code] to enter 7-digit ID code.
5. Press [ID code].
6. Press [Detail setting].
7. "Setting menu screen"
Press [DIP-SW Setting].
8. "Software SW Setting screen"
Select the DIPSW number.
Use the left arrow key or the numeric keys.
9. Select the DIPSW bit number.
Use the right arrow key or the numeric keys.
10. Select DIPSW On (1), Off (0).
Use [On (1)], [Off (0)].
11. Press [Return] to return to the "Setting menu screen."

Note

- **About functions of each switch, refer to [I.5.10.9 Software DIPSW setting for CS Remote Care](#).**

(2) List of software DIPSW for CS Remote Care

Note

- **Do not change any bit not described on this table.**

DIPSW	Bit	Function	Set value	Default setting		
				Japan	Inch	Metric
1	0	Dial mode	<ul style="list-style-type: none"> • 0: Pulse dial • 1: Tone dial 	1	1	1
	1	Modem reception	<ul style="list-style-type: none"> • 0: Receive (Issue ATA by RING delivery) • 1: Not receive (Not issue ATA by RING delivery) 	0	0	0
	2	Reservation	<ul style="list-style-type: none"> • 0: - • 1: - 	0	0	0
	3			0	0	0

DIPSW	Bit	Function	Set value	Default setting		
				Japan	Inch	Metric
	4	Baud rate	<ul style="list-style-type: none"> 1200bps: 01-7=0, 01-6=0, 01-5=1, 01-4=1 2400bps: 01-7=0, 01-6=1, 01-5=0, 01-4=0 4800bps: 01-7=0, 01-6=1, 01-5=0, 01-4=1 9600bps: 01-7=0, 01-6=1, 01-5=1, 01-4=0 19200bps: 01-7=0, 01-6=1, 01-5=1, 01-4=1 38400bps: 01-7=1, 01-6=0, 01-5=0, 01-4=0 57600bps: 01-7=1, 01-6=0, 01-5=0, 01-4=1 	0	0	0
	5			0	0	0
	6			0	0	0
	7			1	1	1
2	0	Auto call on SC occurrence	<ul style="list-style-type: none"> 0: OFF 1: ON 	1	1	1
	1	Auto call on date specification		1	1	1
	2	Auto call on the part replacement		1	1	1
	3	Auto call on the drum replacement		1	1	1
	4	Auto call on the periodic maintenance (PM)		1	1	1
	5	ORU-M start/finish notification	<ul style="list-style-type: none"> 0: - 1: - 	1	1	1
	6	Reservation		0	0	0
3	7	Automatic calling when reset fixed replacement parts	<ul style="list-style-type: none"> 0: OFF 1: ON 	0	0	0
	0	Reservation	<ul style="list-style-type: none"> 0: - 1: - 	0	0	0
	1	Auto call on the toner supply		1	1	1
	2	Auto call on frequent JAM occurrence		1	1	1
	3	Notification of waste toner box full		1	1	1
	4	Call on fusing cleaning web count over		1	1	1
	5	Call on Toner collection filter count over		1	1	1
	6	Call on fusing external heating count over		1	1	1
4	7	Reservation	<ul style="list-style-type: none"> 0: - 1: - 	0	0	0
	0	CS Remote Care communication mode	<ul style="list-style-type: none"> Data modem: 04-1=0, 04-0=0 FAX (not used): 04-1=0, 04-0=1 E-mail: 04-1=1, 04-0=0 http: 04-1=1, 04-0=1 	0	0	0
	1			1	1	1
	2	Reservation	<ul style="list-style-type: none"> 0: - 1: - 	0	0	0
	3			0	0	0
	4			0	0	0
	5			0	0	0
	6			0	0	0
	7			0	0	0
5	0	Modem redial interval	<ul style="list-style-type: none"> 1 minute: 05-3=0, 05-2=0, 05-1=0, 05-0=1 2 minutes: 05-3=0, 05-2=0, 05-1=1, 05-0=0 3 minutes: 05-3=0, 05-2=0, 05-1=1, 05-0=1 4 minutes: 05-3=0, 05-2=1, 05-1=0, 05-0=0 5 minutes: 05-3=0, 05-2=1, 05-1=0, 05-0=1 6 minutes: 05-3=0, 05-2=1, 05-1=1, 05-0=0 7 minutes: 05-3=0, 05-2=1, 05-1=1, 05-0=1 8 minutes: 05-3=1, 05-2=0, 05-1=0, 05-0=0 9 minutes: 05-3=1, 05-2=0, 05-1=0, 05-0=1 10 minutes: 05-3=1, 05-2=0, 05-1=1, 05-0=0 	1	1	1
	1			1	1	1
	2			0	0	0
	3			0	0	0
	4	Reservation	<ul style="list-style-type: none"> 0: - 1: - 	0	0	0
	5			0	0	0

DIPSW	Bit	Function	Set value	Default setting		
				Japan	Inch	Metric
6	6	Modem redial times	<ul style="list-style-type: none"> • 0 to 9: 000 0000 to 000 1001 • 10: 000 1010 • 11 to 99: 000 1011 to 110 0011 	0	0	0
	7			0	0	0
	0			0	0	0
	1			1	1	1
	2			0	0	0
	3			1	1	1
	4			0	0	0
	5			0	0	0
	6			0	0	0
	7	Reservation	<ul style="list-style-type: none"> • 0: - • 1: - 	0	0	0
7	0	Redial for response time out	<ul style="list-style-type: none"> • 0: Not redial • 1: Redial 	1	1	1
	1	Reservation	<ul style="list-style-type: none"> • 0: - • 1: - 	0	0	0
	2			0	0	0
	3			0	0	0
	4			0	0	0
	5			0	0	0
	6			0	0	0
	7			0	0	0
8	0	Retransmission interval on E-mail delivery error	<ul style="list-style-type: none"> • 0 minute: 08-3=0, 08-2=0, 08-1=0, 08-0=0 • 10 minutes: 08-3=0, 08-2=0, 08-1=0, 08-0=1 • 20 minutes: 08-3=0, 08-2=0, 08-1=1, 08-0=0 • 30 minutes: 08-3=0, 08-2=0, 08-1=1, 08-0=1 • 40 minutes: 08-3=0, 08-2=1, 08-1=0, 08-0=0 • 50 minutes: 08-3=0, 08-2=1, 08-1=0, 08-0=1 • 60 minutes: 08-3=0, 08-2=1, 08-1=1, 08-0=0 • 70 minutes: 08-3=0, 08-2=1, 08-1=1, 08-0=1 • 80 minutes: 08-3=1, 08-2=0, 08-1=0, 08-0=0 • 90 minutes: 08-3=1, 08-2=0, 08-1=0, 08-0=1 • 100 minutes: 08-3=1, 08-2=0, 08-1=1, 08-0=0 • 110 minutes: 08-3=1, 08-2=0, 08-1=1, 08-0=1 • 120 minutes: 08-3=1, 08-2=1, 08-1=0, 08-0=0 	0	0	0
	1			1	1	1
	2			1	1	1
	3			0	0	0
	4			0	0	0
	6			0	0	0
	7			0	0	0
	4	Reservation	<ul style="list-style-type: none"> • 0: - • 1: - 	0	0	0
	6			0	0	0
	7			0	0	0
9	0	Retransmission times on E-mail delivery error	<ul style="list-style-type: none"> • 0 to 9: 000 0000 to 000 1001 • 10: 000 1010 • 11 to 99: 000 1011 to 110 0011 	0	0	0
	1			1	1	1
	2			0	0	0
	3			1	1	1
	4			0	0	0
	5			0	0	0
	6			0	0	0
	7	Reservation	<ul style="list-style-type: none"> • 0: - • 1: - 	0	0	0
10	0	Time zone setting	<ul style="list-style-type: none"> • -12 to -1: 1111 0100 to 1111 1111 • 0: 0000 0000 • 1 to 12: 0000 0001 to 0001100 	0	0	0
	1			0	0	0
	2			0	0	0
	3			0	0	0
	4			0	0	0
	4			0	0	0

DIPSW	Bit	Function	Set value	Default setting		
				Japan	Inch	Metric
	6			0	0	0
	7			0	0	0
11	0	Timer 1 RING receive → CONNECT receive	<ul style="list-style-type: none"> 0 to 31sec: 0000 0000 to 0001 1111 32sec: 0010 0000 33 to 255sec: 0010 0001 to 1111 1111 	0	0	0
	1			0	0	0
	2			0	0	0
	3			0	0	0
	4			0	0	0
	5			1	1	1
	6			0	0	0
	7			0	0	0
12	0	Timer 2 Dial calling complete → CONNECT receive	<ul style="list-style-type: none"> 0 to 63sec: 0000 0000 to 0011 1111 64sec: 0100 0000 65 to 255sec: 0100 0001 to 1111 1111 	0	0	0
	1			0	0	0
	2			0	0	0
	3			0	0	0
	4			0	0	0
	5			0	0	0
	6			1	1	1
	7			0	0	0
13	0	Timer 3 Not used	<ul style="list-style-type: none"> 0: - 1: - 	0	0	0
	1			1	1	1
	2			0	0	0
	3			1	1	1
	4			0	0	0
	5			0	0	0
	6			0	0	0
	7			0	0	0
14	0	Timer 4 Connection → Start request telegram delivery	<ul style="list-style-type: none"> 0 to 31 (x 100msec): 0000 0000 to 0001 1111 32 (x 100msec): 0010 0000 33 to 255 (x 100msec): 0010 0001 to 1111 1111 	0	0	0
	1			0	0	0
	2			0	0	0
	3			0	0	0
	4			0	0	0
	5			1	1	1
	6			0	0	0
	7			0	0	0
15	0	Timer 5 Wait time for the response from other side	<ul style="list-style-type: none"> 0 to 29sec: 0000 0000 to 0001 1101 30sec: 0001 1110 31 to 255sec: 0001 1111 to 1111 1111 	0	0	0
	1			1	1	1
	2			1	1	1
	3			1	1	1
	4			1	1	1
	5			0	0	0
	6			0	0	0
	7			0	0	0
16	0	Retry data, timer 6 Initialization OK → Dial request	<ul style="list-style-type: none"> 0 to 254 (x 5msec): 0000 0000 to 1111 1110 255 (x 5msec): 1111 1111 	1	1	1
	1			1	1	1
	2			1	1	1
	3			1	1	1
	4			1	1	1
	5			1	1	1
	6			1	1	1
	7			1	1	1
17	0	Call on frequent JAM occurrence (main body) Number of enabled copy	<ul style="list-style-type: none"> 3000 copies: 17-1=0, 17-0=0 6000 copies: 17-1=0, 17-0=1 9000 copies: 17-1=1, 17-0=0 12000 copies: 17-1=1, 17-0=1 	1	1	1
	1			0	0	0
	2	Call on frequent JAM occurrence (ADF) Number of enabled original feed	<ul style="list-style-type: none"> 600 copies: 17-3=0, 17-2=0 1200 copies: 17-3=0, 17-2=1 1800 copies: 17-3=1, 17-2=0 2400 copies: 17-3=1, 17-2=1 	1	1	1
	3			0	0	0

DIPSW	Bit	Function	Set value	Default setting			
				Japan	Inch	Metric	
	4	Call on frequent JAM occurrence (main body) MCBJ setting	• 500: 17-5=0, 17-4=0 • 1000: 17-5=0, 17-4=1 • 2000: 17-5=1, 17-4=0 • 3000: 17-5=1, 17-4=1	1	1	1	
	5			0	0	0	
	6	Call on frequent JAM occurrence (ADF) MOBJ setting	• 100: 17-7=0, 17-6=0 • 200: 17-7=0, 17-6=1 • 400: 17-7=1, 17-6=0 • 600: 17-7=1, 17-6=1	1	1	1	
	7			0	0	0	
18	0	Attention display	• 0: OFF • 1: ON	1	1	1	
	1	Reservation	• 0: - • 1: -	0	0	0	
	2			0	0	0	
	3			0	0	0	
	4			0	0	0	
	5			0	0	0	
	6			0	0	0	
	7			0	0	0	
19	0	E-mail/http communication mode	• 0: Duplex • 1: Simplex	0	0	0	
	1	Reservation	• 0: - • 1: -	0	0	0	
	2			0	0	0	
	3			0	0	0	
	4			0	0	0	
	5			0	0	0	
	6			0	0	0	
	7			0	0	0	
20	0	http Heart Beat function	• 0: ON • 1: OFF	0	0	0	
	1	http Heart Beat Fix send	• 0: Off • 1: ON	1	1	1	
	2	Reservation	• 0: - • 1: -	0	0	0	
	3			0	0	0	
	4			0	0	0	
	5	Auto sending of the JAM history when call on frequent JAM occurrence occurs	• 0: OFF • 1: ON	1	1	1	
	6	Sending frequent paper JAM alert		1	1	1	
	7	Sending frequent original JAM alert		1	1	1	
21	0	Threshold of sending frequent paper JAM alert	• 00000001: Once • 00000010: Twice • 00000011: 3 times • 00000100: 4 times • 00000101: 5 times • 00000110: 6 times • 00000111: 7 times • 00001000: 8 times • 00001001: 9 times • 00001010: 10 times • 00001011: 11 times • 00001100: 12 times • 00001101: 13 times • 00001110: 14 times • 00001111: 15 times • Other: Invalid (regarded as 5 times)	0	0	0	
	1			0	0	0	
	2			0	0	0	
	3			0	0	0	
	4			0	0	0	
	5			1	1	1	
	6			0	0	0	
	7			1	1	1	
22	0	Threshold of sending frequent original JAM alert		• 00000001: Once • 00000010: Twice • 00000011: 3 times • 00000100: 4 times • 00000101: 5 times • 00000110: 6 times • 00000111: 7 times • 00001000: 8 times • 00001001: 9 times • 00001010: 10 times • 00001011: 11 times • 00001100: 12 times • 00001101: 13 times • 00001110: 14 times • 00001111: 15 times • Other: Invalid (regarded as 5 times)	0	0	0
	1				0	0	0
	2				0	0	0
	3				0	0	0
	4				0	0	0
	5				1	1	1
	6				0	0	0
	7				1	1	1
23	0	Reservation	• 0: - • 1: -		0	0	0
	1				0	0	0
	2				0	0	0
	3				0	0	0
	4				0	0	0
	5				0	0	0
	6				0	0	0
							0

DIPSW	Bit	Function	Set value	Default setting		
				Japan	Inch	Metric
24	7			0	0	0
	0			0	0	0
	1			0	0	0
	2			0	0	0
	3			0	0	0
	4			0	0	0
	5			0	0	0
	6			0	0	0
	7			0	0	0
25	0			0	0	0
	1			0	0	0
	2			0	0	0
	3			0	0	0
	4			0	0	0
	5			0	0	0
	6			0	0	0
	7			0	0	0
26	0			0	0	0
	1			0	0	0
	2			0	0	0
	3			0	0	0
	4			0	0	0
	5			0	0	0
	6			0	0	0
	7			0	0	0
27	0			0	0	0
	1			0	0	0
	2			0	0	0
	3			0	0	0
	4			0	0	0
	5			0	0	0
	6			0	0	0
	7			0	0	0
28	0			0	0	0
	1			0	0	0
	2			0	0	0
	3			0	0	0
	4			0	0	0
	5			0	0	0
	6			0	0	0
	7			0	0	0
29	0			0	0	0
	1			0	0	0
	2			0	0	0
	3			0	0	0
	4			0	0	0
	5			0	0	0
	6			0	0	0
	7			0	0	0
30	0			0	0	0
	1			0	0	0
	2			0	0	0
	3			0	0	0
	4			0	0	0
	5			0	0	0
	6			0	0	0
	7			0	0	0

DIPSW	Bit	Function	Set value	Default setting		
				Japan	Inch	Metric
31	0			0	0	0
	1			0	0	0
	2			0	0	0
	3			0	0	0
	4			0	0	0
	5			0	0	0
	6			0	0	0
	7			0	0	0
32	0			0	0	0
	1			0	0	0
	2			0	0	0
	3			0	0	0
	4			0	0	0
	5			0	0	0
	6			0	0	0
	7			0	0	0
33	0			0	0	0
	1			0	0	0
	2			0	0	0
	3			0	0	0
	4			0	0	0
	5			0	0	0
	6			0	0	0
	7			0	0	0
34	0			0	0	0
	1			0	0	0
	2			0	0	0
	3			0	0	0
	4			0	0	0
	5			0	0	0
	6			0	0	0
	7			0	0	0
35	0			0	0	0
	1			0	0	0
	2			0	0	0
	3			0	0	0
	4			0	0	0
	5			0	0	0
	6			0	0	0
	7			0	0	0
36	0			0	0	0
	1			0	0	0
	2			0	0	0
	3			0	0	0
	4			0	0	0
	5			0	0	0
	6			0	0	0
	7			0	0	0
37	0			0	0	0
	1			0	0	0
	2			0	0	0
	3			0	0	0
	4			0	0	0
	5			0	0	0
	6			0	0	0
	7			0	0	0
38	0			0	0	0

DIPSW	Bit	Function	Set value	Default setting		
				Japan	Inch	Metric
	1			0	0	0
	2			0	0	0
	3			0	0	0
	4			0	0	0
	5			0	0	0
	6			0	0	0
	7			0	0	0
39	0			0	0	0
	1			0	0	0
	2			0	0	0
	3			0	0	0
	4			0	0	0
	5			0	0	0
	6			0	0	0
	7			0	0	0
40	0			0	0	0
	1			0	0	0
	2			0	0	0
	3			0	0	0
	4			0	0	0
	5			0	0	0
	6			0	0	0
	7			0	0	0

5.10.10 Setup confirmation

1. Enter the service mode.
2. "Service mode menu screen"
Press [CS Remote Care].
3. "Sub menu screen"
Press [CS Remote Care].
4. "CS Remote Care setting screen"
Make sure that only selected item "E-Mail", "Modem", or "http" is displayed.

5.10.11 Maintenance call

As the CE starts the maintenance, enter the ID code of CE (7-digit number with which each CE is identified, managed by a distributor.) to notify the center the start of maintenance. After the maintenance, pressing the maintenance completion key notifies the center the completion of maintenance.

At the start of maintenance

1. Enter the service mode.
2. "Service mode menu screen"
Press [CS Remote Care].
3. "Sub menu screen"
Press [CS Remote Care].
4. "CS Remote Care setting screen"
Press [ID code] to enter 7-digit ID code.
5. Press [ID code].

* During the maintenance, [Start] button blinks until the completion of the maintenance.

At the end of maintenance

1. Enter the service mode.
2. "Service mode menu screen"
Press [CS Remote Care].
3. "Sub menu screen"
Press [CS Remote Care].
4. "CS Remote Care setting screen"
Press [Maintenance comp].

5.10.12 Center call from administrator

If the setup of CS Remote Care is completed, the manager can call the center of CS Remote Care.

1. Press [Utility/Counter] button.
2. "Setting menu screen"
Press [Machine Manager Setting].
3. "Machine manager setting menu screen"
Press [System Connection].

4. "Sub menu screen"

Press [User Call].

5. "User Call screen"

Press [Start].

If the setup is not completed, or if other call is made, [Start] is grayed out, disabling to make a call.

About how to call the center and send various data of the main body on the specified date and time, refer to the manual of CS Remote Care center.

5.10.13 Confirm communication log

You can output and confirm the communication log.

1. Enter the service mode.

2. "Service mode menu screen"

Press [List Output].

3. [Sub Menu screen]

Press [List Output].

4. "Sub menu screen"

Press [List Output].

5. Press [COPY].

6. Press start button to output the selected list.

For details of the logs, refer to "I.5.11 List Output."

5.10.14 Initialization of RAM for CS Remote Care

Initializing the RAM for CS Remote Care enables you to perform the setup again.

1. Enter the service mode.

2. "Service mode menu screen"

Press [CS Remote Care].

3. "Sub menu screen"

Press [CS Remote Care].

4. "CS Remote Care setting screen"

Press [ID code] to enter 7-digit ID code.

5. Press [ID code].

6. Press [Detail setting].

7. "Setting menu screen"

Press [RAM Clear].

8. "RAM Clear setting screen" Press [OK].

9. The confirmation screen is displayed.

Press [OK].

10. The RAM is cleared, and the "CS Remote Care setting screen" is displayed.

11. Perform the setup again if necessary.

5.10.15 CS Remote Care error code list

Classification	Error Code	Description	Troubleshooting procedure
Connection via modem	K-0000	Connection NG (Cannot connect from the modem, timed out).	Redial.
	K-0001	Error code that may occur when a transmission is made from the main body to the center. No response (After connection, no start telegram from the center detected).	Redial and wait for re-reception.
	K-0002	Copying. Could not be written in non-volatile memory, and line disconnected.	
	K-0003	Error code that may occur when a transmission is made from the main body to the center. Center ID mismatch.	Confirm the center ID.
	K-0004	Serial number mismatch.	Confirm the serial number.
	K-0005	Error code that may occur when a transmission is made from the main body to the center. Syntax error (when receiving undefined commands or parameters)	Redial.
	K-0006	Received a write order for an unwritable item.	
	K-0007	Unread item error.	
	K-0008	Error code that may occur when a transmission is made from the main body to the center. Signal reception time out after a response detection (after the start telegram shuttled).	Redial.

Classification	Error Code	Description	Troubleshooting procedure
	K-0009	Error code that may occur when a transmission is made from the main body to the center. Already registered serial number.	Redial.
	K-0010	Error code that may occur when a transmission is made from the main body to the center. Communication error occurred because of the carrier OFF (NO CARRIER detected in the modem).	
	K-0011	Error code that may occur when a transmission is made from the main body to the center. Dial tone (NO DIALTONE) detected in the modem.	
	K-0012	Error code that may occur when a transmission is made from the main body to the center. Busy signal (BUSY) detected in the modem.	
	K-0013	Error code that may occur when a transmission is made from the main body to the center. NO ANSWER detected in the modem.	
	K-0014	Error code that may occur when a transmission is made from the main body to the center. Telegram error (irregular telegram received in response to the telegram you sent).	Retry standard times, and redial.
	K-0015	Serial number not registered in the center (4 x 40 telegrams received).	Redial.
	K-0016	Error code that may occur when a transmission is made from the main body to the center. Errors not defined in K-0000 to 0015.	
	K-0017	Error code that may occur when a transmission is made from the main body to the center. Telephone number you must call was not registered.	
	K-0100	Error code that may occur when a transmission is made from the main body to the center. DSR turned OFF or remains turned OFF.	
	K-0101	Error on creating a message queue.	
	K-0102	Error on generating a task.	
	K-0103	Error code that may occur when a transmission is made from the main body to the center. Error on sending a message.	
	K-0104	Error code that may occur when a transmission is made from the main body to the center. Error on receiving a message.	
	K-0105	Error code that may occur when a transmission is made from the main body to the center. Received an error (NG) from the timer task.	
	K-0201	Error code that may occur when a transmission is made from the main body to the center. Modem initialization NG.	
	K-0300	Error code that may occur when a transmission is made from the main body to the center. Center call evacuation buffer is full. Cannot evacuate any more.	

Classification	Error Code	Description	Troubleshooting procedure
Connection via E-mail/http	K-0590	Because of (E-mail/http) memory shortage, unable to secure enough area for sending a mail.	
	K-0592	(E-mail/http) Controller in operation: unable to send a mail because the controller is in operation.	In the manual transmission, retry when the controller is idling. In the auto transmission, an automatic retry is performed after 1minute.
	K-0593	Sending error: (E-mail) Error comes back from the mail server. (http) Storing mail to Web server fails.	In the auto transmission, an automatic retry is performed after the specified time. Check if there is no fault in the network environment and the network settings.
	K-0594	(E-mail/http) Machine in operation: unable to send a mail because the machine is in operation.	In the manual transmission, retry when the machine is idling. In the auto transmission, an automatic retry is performed after 1minute.
	K-0595	(E-mail/http) Controller not connected: unable to send a mail because the controller is not connected.	Check the connection between the controller and the main body.
	K-0596	(E-mail/http) Controller-driven SC: unable to send a mail because of a controller-driven SC (49-xx).	If there is the controller-driven SC, a mail cannot be sent through the controller. Use a telephone. This error does not occur with the main body NIC.
	K-0597	(E-mail/http) No reply from controller	
	K-0600	(http) Fails to make the directory on Web server	

5.10.16 TROUBLESHOOTING

Check the followings when the main body does not receive the initial connection mail or does not return a response.

1. The center ID or the machine ID are not set in the main body.
2. The center ID or the machine ID are different (A machine ID error is not returned at the initial connection).
3. CS Remote Care function is disabled, or the phone line is selected in the CS Remote Care function selection.
4. Communication between the main body and the mail server is not proper (Check it with a transmission test).

5.11 List Output

(1) Usage

Output various lists.

(2) Procedure

1. "Service Mode menu screen"
Press [10 List Output].
2. "List output mode menu screen"
Press [01 List Output].
3. "List Output screen"
The list output mode menu includes the following items.
 - Machine Management List
 - Adjustment Data List
 - Coverage data list
 - Parameter List
 - Font Pattern
 - Communication Log List *1
 - Memory Dump List

Note

- If you set DIPSW30-1 0 to 1, the parameter list and after are displayed.
- Do not use the parameter list and the memory dump list in the field because they are for development.

4. Select the item to be outputted and press [Print Mode].
5. Press the start button to output the selected list.
6. Press [Close].
7. "List output mode menu screen"
To output other lists, repeat steps 4 to 7.

*1 Prints out the latest 30 items of the sending and receiving history of the CS Remote Care. The start time of communications, the time period of communications (modem only), the communication modes, the results of communications, and the senders (mail only) are printed. The communication modes and the results of communications are displayed in the numbers of 4 digit number. For the meaning of them, refer to the following table.

	Communication mode	Results of communication
0000	-	Transmitted successfully
0001	Initial transmission	Connection time out when transmitting
0002	Emergency transmission	-
0004	Emergency recovery transmission	Received successfully
0005	-	Reception failed

0008	Transmission for warning	-
0010	Warning recovery transmission	-
0020	Maintenance start transmission	-
0040	Maintenance completion transmission	-
0080	Administrator transmission	-
0100	Fixed date transmission	-
0200	Response transmission	-
0***	-	Transmission failed
1000	Enquiry	-
2000	Data rewrite	-
4000	Response reception	-
6000	ISW complete notification	-
8000	Test mail	-

The SMTP reply codes (200 to 554) prescribed in the RFC1846, 2554 and 2821 are displayed in this place of ***.

Note

- When multiple communications are caused at the same time, these codes are added and displayed.

Example: When the communication mode "0066" appears, it means the set of Emergency transmission (0002), Emergency recovery transmission (0004), Maintenance start transmission (0020), and Maintenance completion transmission (0040). These events do not happen at the same time, however, it conducts the communication with all together later on in some cases when the machine adjustment or the others prevent the communication.

5.12 Test Mode

5.12.1 Test Pattern Output Mode

(1) Usage

Output various test patterns to use them for troubleshooting.

Note

- Do not use any test pattern number not described in the service manual.

(2) Procedure

1. "Service mode menu screen"
Press [06 Test Mode].
2. "Test Mode menu screen"
Press [01 Test Pattern Output Mode].
3. "Test Pattern Output Mode screen"
Enter the test pattern No. you want to output through the numeric keys and press [Set] and then press [Print Mode].
4. Select A3 or 11 x 17 paper, and press the Start button to output the test pattern.
5. Press [Close].
6. To output other test patterns, repeat steps 3 to 5.

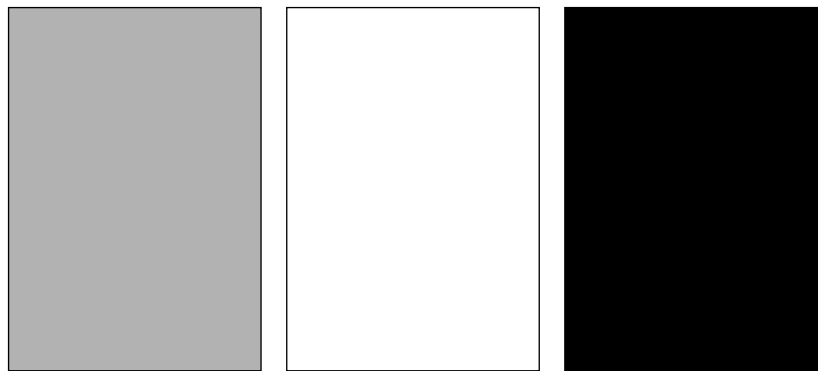
5.12.2 Test pattern No.1 Overall halftone (1-bit error diffusion output)

(1) [Check item]

- When density is set to 70 (halftone)
If there are white stripes, black stripes, determine whether the fault is with the scanner system or the process system.
[Recommended checkpoints]: Developing unit, cleaning unit, charger unit, transfer/separation charger unit, scanner mirrors, slit glass, original glass
- When the density is set to 0 (white)
If the test pattern is gray background image, determine whether the fault is with the process.
Recommended checkpoints]: Charging corona and high voltage contact.
- When density is set to 255 (black)
If the density is light, determine whether the fault is with the process.
[Recommended checkpoints]: LPH unit

* For information about setting the density, refer to [.I.5.12.6 Test pattern density](#)

(2) Test pattern



1050fs3011c

[1]	When the density is set to 70	[2]	When the density is set to 0
[3]	When the density is set to 255		-

5.12.3 Test pattern No.9 Line screen halftone (1-bit error diffusion output)

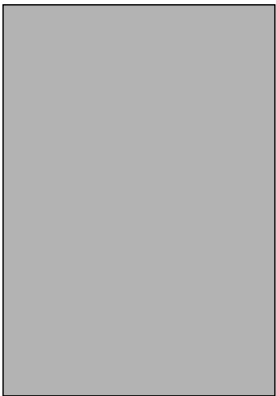
(1) [Check item]

- Check if there is any uneven density or transfer jitter.
[Recommended checkpoints]: Moisture absorption of paper, developing unit, charger, transfer jitter adjustment
For the transfer jitter adjustment, refer to [l.8.4 Transfer jitter adjustment](#)

Note

- The density of halftone changes according to the test pattern density adjustment.

(2) Test pattern



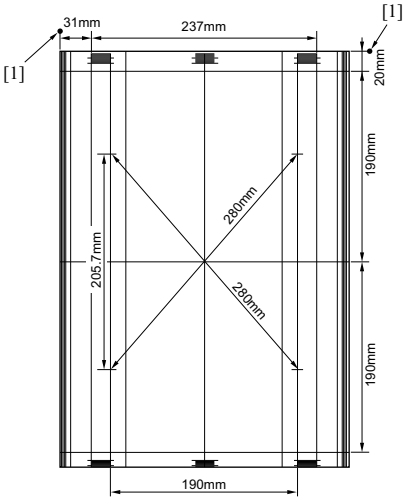
1050fs3055c

5.12.4 Test pattern No.16 Linearity evaluation pattern (1-bit error diffusion output)

(1) [Check item]

Judge from this test pattern whether the scanner system or the printer system is abnormal.
Items that can be checked include main scan magnification, sub scan magnification, image skew, and leading edge timing of the printer system. If the copy image is defective despite no abnormality being visible on the test pattern, the scanner system is defective.

(2) Test pattern



1050fs3014c

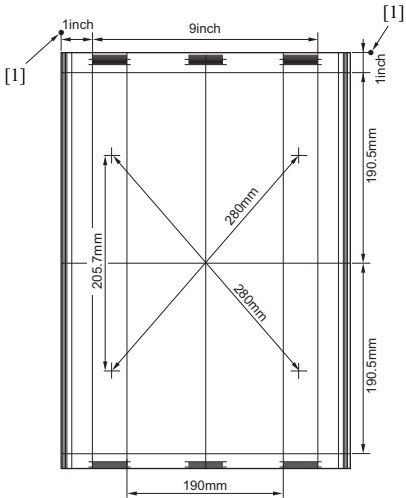
[1]	Edge of pager	-
-----	---------------	---

5.12.5 Test pattern No.33 Linearity evaluation pattern (1-bit error diffusion output)

(1) [Check item]

Judge from this test pattern whether the scanner system or the printer system is abnormal.
Items that can be checked include main scan magnification, sub scan magnification, image skew, and leading edge timing of the printer system. If the copy image is defective despite no abnormality being visible on the test pattern, the scanner system is defective.

(2) Test pattern



a0y5f3c015ca

[1]	Edge of pager	-
-----	---------------	---

5.12.6 Test pattern density

Set the density of test pattern.

(1) Procedure

1. "Service mode menu screen"
Press [06 Test Mode].
2. "Test Mode menu screen"
Press [02 Test Pattern Density Setting].
3. "Test Pattern Density setting screen"
Enter a numeric value through the numeric keys and press [Set] and then press [Print Mode].
Setting range: 0 (light) to 255 (dark).
4. Set the A3 or 11 x 17 paper. Press the Start button to output the test pattern.

5.12.7 Running mode

Conduct a test while in the continuous print operation.

In this mode, the following items can be selected:

- Intermittent copy
After completion of the printing operation for the set print count, the machine changes into the ready state and waits for 0.5sec. before resuming the same operation.
- Paperless running mode
Without feeding paper and detecting paper or jam, the printing operation is made nearly at the same timing as the normal operation.

In the same manner as the intermittent copy, after completion of the printing operation for the set print count, the machine changes into the ready state and waits for 0.5sec. before resuming the same operation.

- Paperless Mode

In the same manner as the paperless mode, without detecting paper or jam, the printing operation is made nearly at the same timing as the normal operation.

- Paperless endless mode

The machine operates with the print count infinitely set automatically. In the same manner as the paperless mode, without feeding paper and detecting paper or jam, the printing operation is made nearly at the same timing as the normal operation.

- Running Mode

The printing operation is made in the paperless endless mode plus the scanning operation and the auto paper feed tray switching.

(1) Procedure

1. "Service mode menu screen"
Press [06 Test Mode].
2. "Test Mode menu screen"
Press [03 Running Mode].
3. "Test Mode menu screen"
Select the mode to be adjusted and press [Print Mode].
4. Press the Start button to start the running test.
5. Press the STOP button to stop the running test.

5.13 Setting data

5.13.1 Outline

This function stores each setting information stored in NVRAM board (NRB) from the machine to the USB memory and writes it from the USB memory to the machine. However, the setting data cannot be edited since it is encrypted.

(1) Setting information which is able to store/write

Data items	Data content
Paper setting data	Tray setting
	Paper Setting Reg./Del
	Custom Register/Delete
Setting menu data	Utility menu
Software DIPSW setting data	Software DIPSW
CSRC Setting Data	CSRC Setting (Utility Menu)
	http communication setting (Utility Menu)
	E-mail initial setting (Utility Menu)
	CS Remote Care (Service mode)

5.13.2 Read from external memory

Read the setting data stored in the USB memory to NRB.

(1) Preparation:

Connect the USB memory to the main body connection port.

(2) Procedure

1. "Service mode menu screen"
Press [16 Setting data].
2. "Service mode menu screen"
Press [01 Read from external memory].
Note
 - If the USB memory is not connected to the connection port, the error message appears not to go on to the file selection screen.
3. "Setting Data Scan File Selection screen"
Press [Next] or [Back] to select the file to be read and press [OK].
Note
 - By pressing [Limit], only the file corresponded to the serial number of the machine appears.
4. "Setting Data READ ITEM SELECT screen"
Select the data to be read from [Paper Setting Data]/[Setting Menu Data]/[Software DIPSW Setting Data]/[CSRC Setting Data] and press [Start Reading].
5. "Pop-up screen"
Press [Yes] to start reading the setting data.

**Note**

- Be sure not to turn OFF the main power switch (SW1) until the reading file completes.

6. "Setting Data <Read from external memory> screen"

To read another setting data, press [Yes]. To finish the procedure, press [No].

Note

- By pressing [No], the machine restarts automatically.

5.13.3 Store to external memory

Store the setting data from NRB to the USB memory.

(1) Preparation:

Connect the USB memory to the main body connection port.

(2) Procedure

1. "Service mode menu screen"
Press [16 Setting data].
2. "Setting data menu screen"
Press [02 Store to external memory].
3. "Setting Data <Store to external memory> screen"
Press [Start Storing].

Note

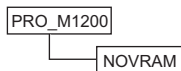
- Be sure not to turn OFF the main power switch (SW1) until the storing file completes.

4. "Setting Data Store COMPLETE screen"

Press [OK], to go back to "Setting Data <Store to external memory> screen".

(3) Folder structure of USB memory

When storing data to the USB memory and the folder is not created, it creates the next folder automatically. PRO1200, PRO1200P and PRO1051 share this folder.


**(4) Error list**

If the error occurs for reading from the external memory or for storing to the external memory, the error message appears. Confirm that " is displayed in the message display area.

Message	Cause of occurrence
Connection of an external memory device cannot be recognized.	1) The initialization of the USB device is not completed. 2) The USB memory is not connected to the connection port.
It cannot store to the external memory device.	3) Prohibit to write to the USB memory 4) Capacity shortage of the USB memory 5) Unable to execute the compression from the binary data to the ZLIB compressed data. 6) Unable to encrypt AES.
It cannot read from the external memory device.	7) Data error on the header (2nd line) 8) Checksum abnormality 9) Unable to execute the replacement from the BASE64 data to the AES encrypt data. 10) Unable to execute the compounding of AES. 11) Unable to execute the extension from the ZLIB compressed data to the binary data.

6. CE SETTING

6.1 Precautions on CE setting

 **Important: Conditions for setting the security enhance mode to ON**

- Administrator Authentication: ON
- CE Authentication: ON
- DIPSW40-0-1 (Carrying over the job for next day: Disabled)
- DIPSW16-7-0 (NIC of E-Mail CS Remote Care: Use the controller NIC)
- Removal HDD is not used.

6.2 CE Authentication

(1) Functions

To strengthen security of the service mode, configure the setting so that a password is required to enter the service mode.

(2) Usage

Conduct this setting for the common security administration.

(3) Procedure

1. "Service mode menu screen"
Press [13 CE Setting].
2. "CE Setting menu screen"
Press [01 CE Authentication Setting].
3. "CE Authentication Setting screen"
Press [Authentication On] and press [OK] to confirm.
4. To disable the authentication setting, press [Cancel] or [Authentication Off].

6.3 CE password setting

(1) Functions

Configure a password to enter the service mode.

(2) Usage

Conduct this setting for improving the security in the service mode.

Note

- The selection of the [CE Password Setting] key is limited only when the CE authentication setting is set to "Authentication On."
- Do not use anything easily guessed by others such as your name, birthday.
- CE should not inform other people of the password.

(3) Procedure

1. "Service mode menu screen"
Press [13 CE Setting].
2. "CE Setting menu screen"
Press [02 CE Password Setting].
3. "CE Password Setting screen"
Enter an 8-digit password with alphanumeric keys.
Default is "92729272."
4. Press [OK] to register data.
Press [Cancel] to cancel the setting you entered.

7. IC HDD FORMAT

Format the hard disk /2 (HDD2) on the print controller.
Formatting enables you to secure space/delete internal data.

7.1 Procedure

1. "Service mode menu screen"
Press [14 IC HDD Format].
2. "IC HDD Format menu screen"
Press [01 IC HDD Format].
3. "IC HDD Format screen"
HDD format includes the following 5 items.
[All]
[Document]
[Parameter]
[Font]
[Spool]
4. Press the item you want to format.
5. "Format confirmation screen"
The message "Execute Format Yes/No?" is displayed.
Press [Yes].

7.2 Purpose of each item

- [All]
Formats all areas of the hard disk.
This operation is equal to performing the following 4 operations at once. Conduct this operation on such occasions as replacing the hard disk /2 (HDD2).
- [Document]
Formats the document storage area. Conduct this operation when deleting the Scan to HDD job.
- [Parameter]
Formats the storage area for the controller setting information.
Conduct this operation when deleting the whole setting information on the print controller (such as the network setting and default settings of each port).
Note
 - **Be sure to output the settings information list before formatting parameters.**
- [Font]
Formats the font data storage area.
Conduct this operation when deleting downloaded external font data.
Note
 - **By formatting, all downloaded external fonts are deleted.**
- [Spool]
Formats the spool area.
There is no need to format this area alone.

8. ADJUSTMENT FOR POD

8.1 OUTLINE

This section describes the methods of adjustments to improve image quality (the front and back registration, image density, transfer jitter) and paper feeding in response to customers (especially POD customers) who demand even higher quality of image and feeding than the factory settings.

8.2 The front and back registration

8.2.1 OUTLINE

Align image printing position on the front side and back side.
Misalignment of image printing position occurs for the following reasons.

- The image leading edge on the front and back side are different. Thus, in case leading edge timings are misaligned, image positions on the front and back side are misaligned.
- Even the standard-size papers are not cut off according to the standard size.
- A paper that passes the fusing section becomes smaller because of moisture evaporation of the paper due to heat. In duplex printing, the front side passes the fusing section twice and the back side passes once, thus image on the front side becomes smaller than the back side.
- The shrinkage ratio in passing the fusing section is different depending on the paper type, paper brand, temperature/humidity of a paper storage location. To adjust misalignment due to these factors, use the front and back adjustment in the user mode, selecting [MACHINE] - [Register Type/Weight]. To adjust misalignment due to individual difference of each tray, select the tray you want to adjust in the user mode, selecting [MACHINE] - [Tray Setting]. Then, select [Change Set] - [Both Sides Adj.] in the [Change individualSet] to make an adjustment.

8.2.2 The front and back registration (printer)

(1) Procedure

1. Adjust the paper skew on both side.
With the registration roller paper skew adjustment in the mechanical adjustment, adjust the skew of the sub scan direction on both side to be parallel to each other.

1050fs3350c

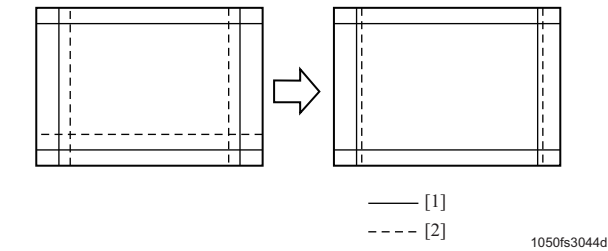
[1]	Front	[2]	Back
-----	-------	-----	------

2. Use the service mode to adjust various image timing in the front side of printer system.
Note
 - With the [Printer Centering Adjustment] in the service mode, there is no adjustment for individual tray. In case you must adjust individual tray, select the user mode, selecting [MACHINE] - [Tray Setting]. Then, select [Change Set] - [Both Sides Adj.] in the [Change individualSet] to make adjustment with the Image Shift function.
3. Adjust the leading edge timing of the back side.
Use [Printer Restart Timing Adjustment SIDE2] in the service mode. Use the cross on the figure A to align the leading edge timing of the back side to the timing of the front side.

1050fs3043c

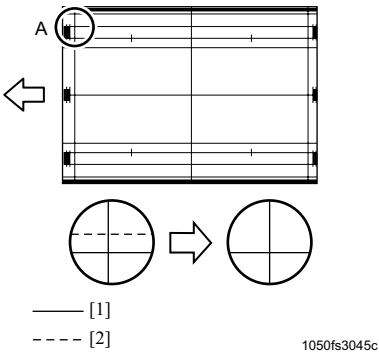
[1] Front	[2] Back
-----------	----------

4. Align the magnification on the back side to the magnification on the front side.
Use [Printer FD-Mag. Adj. (Side2)] and [Printer CD-Mag. Adj. (Side2)] to align magnification of the back side to the front side.



[1] Front	[2] Back
-----------	----------

5. Adjust the centering of the back side.
At the user mode, select the tray you want to adjust from [MACHINE] - [Tray Setting]. Then, select [Change Set] - [Both Sides Adj.] in the [Change individualSet] to make adjustment. Use the Image Shift function to align the centering of the back side on the figure A to the front side.
- Note
 - With the [Printer Centering Adjustment] in the service mode, there is no adjustment for individual tray.
 - Since a test pattern cannot be output in the user mode, output an image from a PC to confirm the image centering or use [Test Pattern Output Mode] in Service mode.
 - The [Tray Setting] you set in step4 is an individual adjustment, in which the updated settings are not applied to the registered paper type. Thus, to change the registered paper type, select the paper name key you want to adjust in [MACHINE] - [Paper Setting Reg./Del.]. Make the adjustment with the Image Shift function of [Both Sides Adj.].



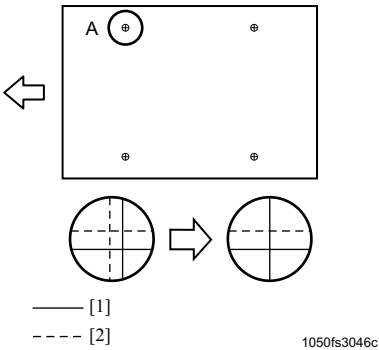
[1] Front	[2] Back
-----------	----------

8.2.3 The front and back registration (scanner)

- Note
 - Be sure that the following adjustments are done.
(I.5.3.9 Scanner FD-Mag. Adj. (Magnification Adjustment))
(I.5.3.32 Distortion Adjustment)
 - This adjustment is for 1200/1051 (copier version). 1200P (printer version) does not has the adjustment method.

(1) Procedure

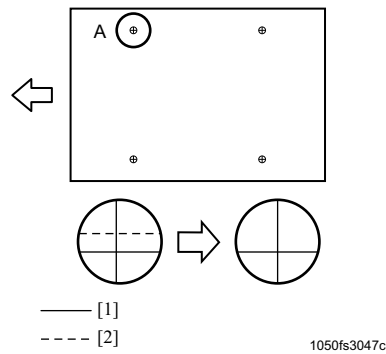
1. Align the leading edge timing of both sides.
Use [Scanner Restart Timing Adjustment] in the service mode. Use the cross on the figure A to align the leading edge timing of both sides.



[1] Front	[2] Back
-----------	----------

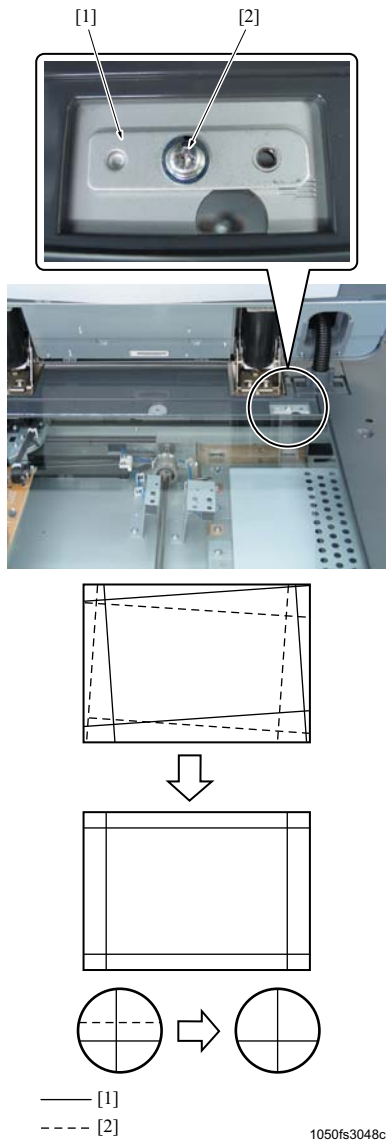
2. Align the centering and the magnification of both sides.

Use Image Shift in the [Both Sides Adj.] to align the centering of both sides on the figure A.



[1] Front	[2] Back
-----------	----------

3. Adjust the original skew.
- Remove the original stopper plate /Rr, and mark the current position of the adjustment plate [1] with something like a pencil. Loosen the screw [2] to move the adjustment plate [1] up and down, thus adjusting the mounting position of the original stopper plate /Rr.



[1] Front	[2] Back
-----------	----------

4. Perform steps 1 and 2 to adjust the misalignments of timing and centering caused by the original skew adjustment and the magnification adjustment.

8.2.4 The front and back registration (ADF)

Note

- Be sure that the following adjustments are done.
"I.5.3.9 Scanner FD-Mag. Adj. (Magnification Adjustment)"
"I.5.3.18 ADF Restart Timing Adj. (Timing Adjustment)"

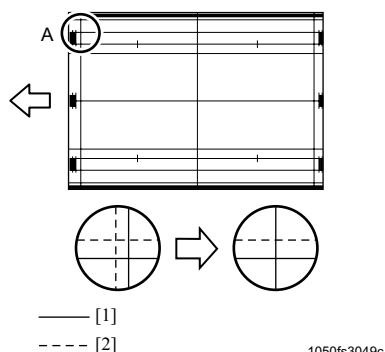
"I.5.3.22 ADF Centering Adjustment (Centering Adjustment)"**"I.5.3.32 Distortion Adjustment"**

- This adjustment is for 1200/1051 (copier version). 1200P (printer version) does not has the adjustment method.

(1) Procedure

1. Align the leading edge timing of both sides.

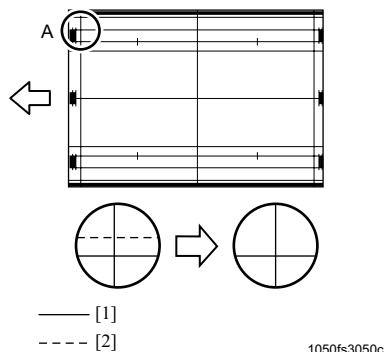
Use [ADF Restart Timing Adj. (SIDE2)] in the service mode. Use the cross on the figure A to align the leading edge timing of the back side to the front side.



[1] Front	[2] Back
-----------	----------

2. Align the centering of both sides.

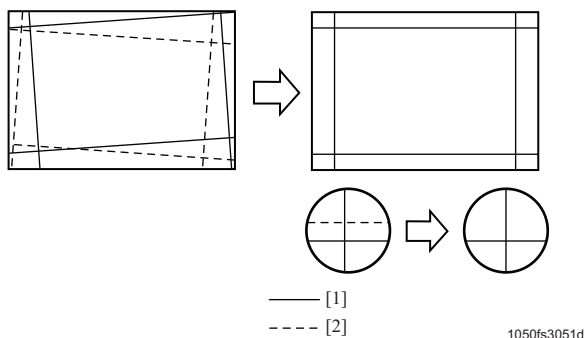
Use [ADF centering adj.(SIDE2)] in the service mode to align the centering of the back side on the figure A to the front side.



[1] Front	[2] Back
-----------	----------

3. Adjust the ADF paper skew.

With the ADF paper skew adjustment in the mechanical adjustment, adjust the skew on the front and back side.



[1] Front	[2] Back
-----------	----------

4. Perform steps 1 and 2 to adjust the misalignments of timing and centering caused by the ADF paper skew adjustment.

8.2.5 The front and back registration by user (by paper brand)

Even when conducting the front and back registration in [I.8.2.2 The front and back registration \(printer\)](#) to [I.8.2.4 The front and back registration \(ADF\)](#), an adjustment is required depending on the type and brand of paper to be used.

Note

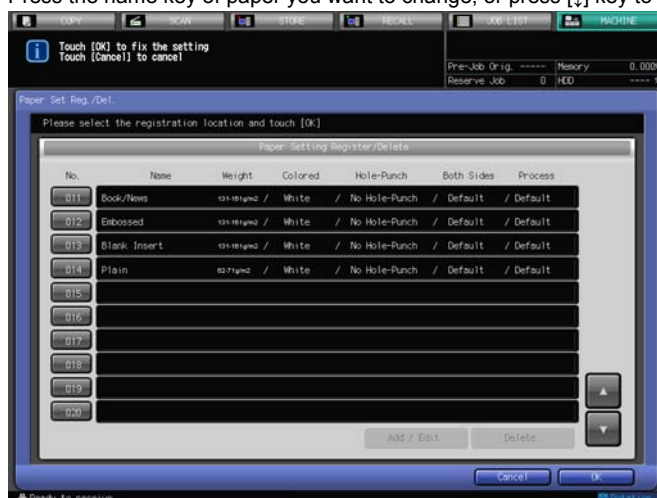
- Check to see if the front and back registrations in [I.8.2.2 The front and back registration \(printer\)](#) to [I.8.2.4 The front and back registration \(ADF\)](#) are completed.

(1) Procedure

1. From "MACHINE" in the user mode, press [Custom Register/Delete].



- Press the name key of paper you want to change, or press [↵] key to select the registered paper.



- Press [Add / Edit] to input the paper type, paper name, weight, colored paper and punch hole. For the type of paper and the weight, refer to [N.13. PAPER SETTING](#).



- Press [Both Sides Adj.], and adjust the front and back registration.



8.2.6 The front and back registration by user (for fine adjustments)

Even when conducting the adjustments for brand of paper as described in [I.8.2.5 The front and back registration by user \(by paper brand\)](#), an adjustment is required depending on the number of trays in which paper is fed, the storage condition (temperature and humidity) of paper and the temperature and humidity in the room, and so on.

This adjustment describes the method for fine adjustment of each tray to the front and back adjustment of the paper brand setting described in [I.8.2.5 The front and back registration by user \(by paper brand\)](#).

Note

- Check to see if the front and back registrations in [I.8.2.2 The front and back registration \(printer\)](#) to [I.8.2.5 The front and back registration by user \(by paper brand\)](#) are completed.

(1) Procedure

- From "MACHINE" in the user mode, press [Tray Setting].



- Press the tray key you want to adjust, and then press [Change].



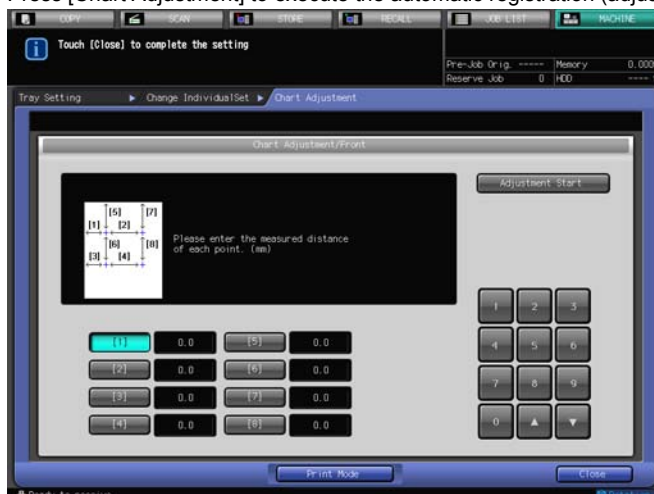
- Press [Both Sides Adj.].



4. Register the front and back of the paper.
There are 2 modes for the registration, automatic (adjustment) and manual (adjustment).
 - Manual registration (adjustment)



- Automatic registration (adjustment)
Press [Chart Adjustment] to execute the automatic registration (adjustment).



5. When adjusting another tray, repeat the steps 2 to 4.

8.3 Image Density Adjustment

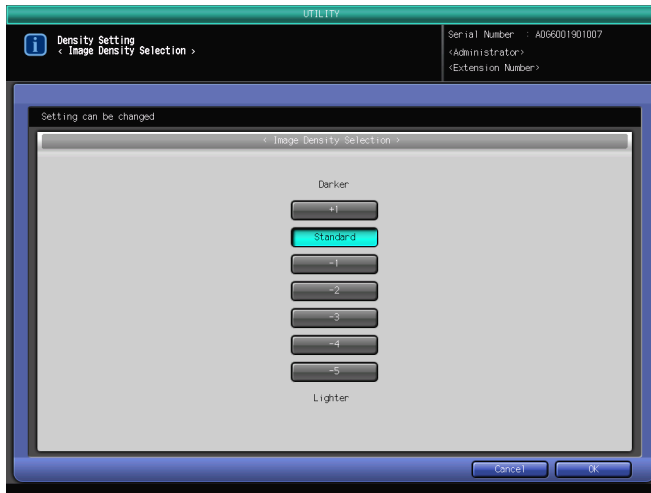
8.3.1 Darken image density

Print industry customers sometimes demand image settings with dark image density in the shadow area such as the offset printing.

This section describes how to adjust the shadow area (max. density) to make its image density darker.

If the adjustment to make image density darker is not performed properly, toner spillage or image background occurs. By this procedure, the density can be adjusted more safely, minimizing occurrences of these problems. However, perform this adjustment only when necessary. Related adjustments are as follows.

- Setting menu mode
 1. Image Density Selection
This setting changes the charger voltage and the developing bias.



- Service mode

1. DIPSW5-5/6/7 developer toner density switchover

This setting adds the adjustment to the output value of TCR sensor, thus changing the toner density of developer without changing image density which changes the toner density.

2. DIPSW27-2/3 image density selection (toner control patch density)

This setting changes the developing bias for creating the toner control patch formed on the drum to determine toner density, thus changing the image density.

(1) Procedure

1. With the image density selection of the density setting in the setting menu mode, set Darker [+1].
2. Output the test pattern No.11 in the test pattern output mode.
3. Confirm image density.
4. When image density is insufficient, set the image density selection "approx. 0.5% up" in the DIPSW27-2/3.
5. Press [Auto Maximum Density Adj.].
6. Confirm image density.
7. When image density is insufficient, set the image density selection "approx. 1.0% up" in the DIPSW27-2/3.
8. Press [Auto Maximum Density Adj.].
9. Confirm image density.
10. Check the value of [MAX DENSITY MANUAL ADJUSTMENT] (developing theta) and set it "+0.4%" with DIPSW5-5/6/7 developer toner density switch when the value is about 250.
11. Output 500 prints of the test pattern No.11.
12. Check the image density and adjust it to the plus side 1 step by step with DIPSW5-5/6/7 developer toner density switch until an appropriate value is obtained.

Note

- Be sure to adjust it 1 step by step since this setting change the toner density directly.
- Be sure not to adjust it too much by checking toner spillage or image background after changing the setting.

8.3.2 Lighten image density

Such printing materials as books use lighter letters to reduce eyestrain of readers. Thus, some print industry customers demand light image settings.

This section describes how to lighten image density of the shadow section (max. density) without changing image density of the highlight section.

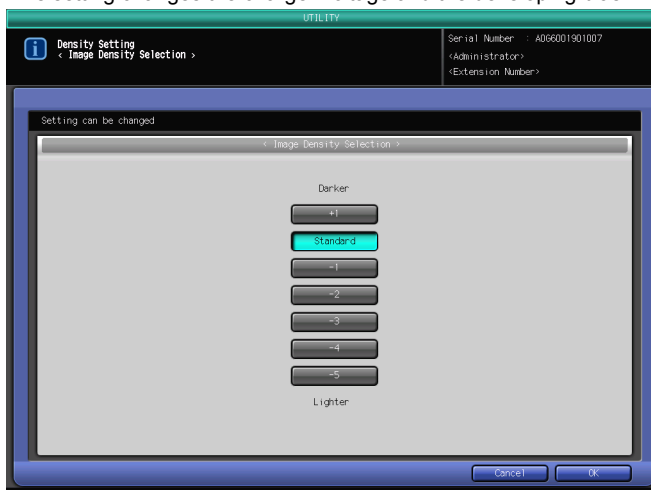
If the adjustment to make image density lighter is not performed properly, white spots in the shadow section occur. By this procedure, the density can be adjusted more safely, minimizing occurrences of problems. However, perform this adjustment only when necessary.

Related adjustments are as follows.

- Setting menu mode

1. Image Density Selection

This setting changes the charger voltage and the developing bias.



- Service mode
 1. DIPSW27-2/3 image density selection (toner control patch density).

(1) Procedure

1. With the image density selection of the density setting in the setting menu mode, set Lighter [-1].
2. Output the test pattern No.11 in the test pattern output mode.
3. Confirm image density.
4. When image density is insufficient, repeat steps 1 and 2 until "-5."
5. When image density is insufficient, set the image density selection "approx. 0.5% down" in the DIPSW27-2/3.
6. Press [Auto Maximum Density Adj.].
7. Output test pattern No.11 in the test pattern output mode to confirm image density.

8.4 Transfer jitter adjustment

Describes how to adjust transfer jitter.

8.4.1 Preparation

Adjustments differ depending on the position at which transfer jitter occurs. Thus, locate the position where transfer jitter occurs. Measure with a scale.

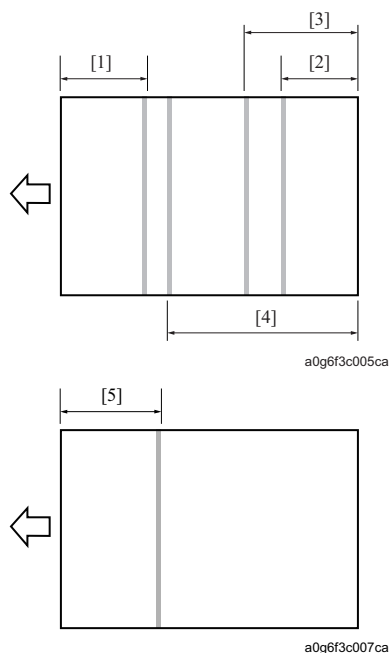
(1) Procedure

1. Output No.9 of the "test pattern output mode" with A3 paper.

Note

- Check to ensure that the test pattern density is set to 255.

2. Confirm the position where transfer jitter occurs.



[1]	Approx. 124mm from the leading edge	[2]	Approx. 120mm from the trailing edge
[3]	Approx. 160mm from the trailing edge	[4]	Approx. 265mm from the trailing edge
[5]	Approx. 150mm from the trailing edge of the 2nd sheet	[6]	Random occurrence

Note

- The position where transfer jitter occurs differs depending on the paper type, paper weight or paper conveyance behavior.

8.4.2 Cause and tendency of occurrence

The following shows the cause and tendency of occurrence for each transfer jitter occurrence position.

- [1] Approx. 124mm from the leading edge
Transferring the shock which caused when paper enters the transfer/separation section to LPH is the cause.
It occurs on the 300g/m² or more paper and appears sharply.
- [2] Approx. 120mm from the trailing edge (300mm from the leading edge)
Transfer jitter which occurs when the paper enters the fusing section. It occurs when the transfer belt speed is slower than the fusing.
- [3] Approx. 160mm from the trailing edge
The speed change which caused when the trailing edge passes through the nip of the registration roller is the cause.
- [4] Approx. 265mm from the trailing edge
The speed change which caused when the trailing edge passes through the loop roller is the cause.
- [5] Approx. 150mm from the trailing edge of the 2nd sheet
It occurs when the transfer belt speed changes when the 1st sheet enters the fusing section and separate from the transfer belt.
- [6] Random occurrence

The writing jitter which occurs when the transfer jitter due to the speed difference between the transfer belt and the fusing occurs and that condition causes the drum speed change.

8.4.3 Measure taken

The following shows the measures to take for each transfer jitter occurrence position.

Transfer jitter occurrence position No.	Priority for adjustment		
	Transfer Belt Speed Adj. (Refer to I.5.3.3 Transfer Belt Speed Adj. (Magnification Adjustment))	Register line speed adjustment (Refer to I.5.3.4 Registration Line Speed Adj. (Magnification Adjustment))	Printer FD-Mag. Adj. (Side1) (Refer to I.5.3.5 Printer S1 FD-Mag. Adj. (Magnification Adjustment))
[1]	-	(1) Adjust to negative side	-
[2]	(2) Conduct when a transfer jitter cannot be corrected by Printer S1 FD-Mag. Adj.	((3)) When adjusting Transfer Belt Speed Adj., be sure to check	(1) Adjust to positive side Check the FD magnification image
[3]	-	(1) Adjust either positive or negative side	-
[4]	-	(1) Adjust either positive or negative side	-
[5]	(2) Conduct when a transfer jitter cannot be corrected by Printer S1 FD-Mag. Adj.	((3)) When adjusting Transfer Belt Speed Adj., be sure to check	(1) Adjust to positive side Check the FD magnification image
[6]	(2) Conduct when a transfer jitter cannot be corrected by Printer S1 FD-Mag. Adj.	((3)) When adjusting Transfer Belt Speed Adj., be sure to check	(1) Adjust to positive side Check the FD magnification image

8.5 Overlay printing adjustment

Overlay printing is to reprint the company name, the address, the logo, and so on, on offset printed paper.

When performing overlay printing, take notice the following description.

Reference:

- The surface of coated paper is applied with a coating agent and so it takes more time for the ink of offset printing to dry. Therefore, to prevent blocking (back transfer), the entire surface of paper is applied with powder.
The powder drastically reduces the conveyance forces of the pick-up roller and the paper feed roller, and this instance is apt to cause a no feed jam or a double feed jam.

Note

- Before overlay printing, be sure to take note of following.**
 - In the case of PF-702, be sure to install the PP-701 (urethane roller).
 - We recommend use of PF-703 for the overlay printing.
 - Apply as little powder as possible when offset printing.
 - Get paper loosened sufficiently before setting it in the tray.
 - Adjust paper condition with the same environments (temperature and humidity) as the environments for the main body. When left in a high humidity environment, paper strongly adheres to each other making them unable to feed.
- A paper centering error is likely to occur due to contamination of the centering sensor (PS4) with powder. Clean the sensor if the error occurs or before starting overlay printing.
- Registration of paper must be checked every 30,000 prints.

8.5.1 Preparation

1. Conduct the following settings to the tray in the user mode.

- Set paper on which overlay printing has been made.
- Set the type of paper to [PrePrinted].
- Set the air-blow setting to [ON].

Note

- Registration of back and front sides must be checked every day before starting printing.**

2. Make the following settings in the service mode.

- Set software DIPSW26-4 to 1. (Sets forced separation clutch control ON at all times.)
- Set the DIPSW2-4/5 to "1". (sets the cleaning cycle of the charging corona to every 5,000 prints)
- When using paper other than coated paper for overlay printing, make the paper type setting to other than preprinted paper and set the software DIPSW corresponds to the selected paper tray to "1".

Tray1: DIPSW39-0

Tray2: DIPSW39-1

Tray3: DIPSW39-2

Tray4: DIPSW39-3

Tray5: DIPSW39-4

Tray6: DIPSW39-5

Tray7: DIPSW39-6

Tray8: DIPSW39-7

Note

- By setting above mentioned DIPSW to "1", paper feed control turns to be the same as that of [Preprinted paper] to keep the endurance of the urethane roller. However, it tends to cause the double feed.
- The above mentioned DIPSW does not work when [Coated paper] or [Paper weight 92g/m²] or more is selected for the paper setting.

3. Install the paper feed assist plate. (Refer to [I.9.3 Pick-up roller load adjustment](#))

Note

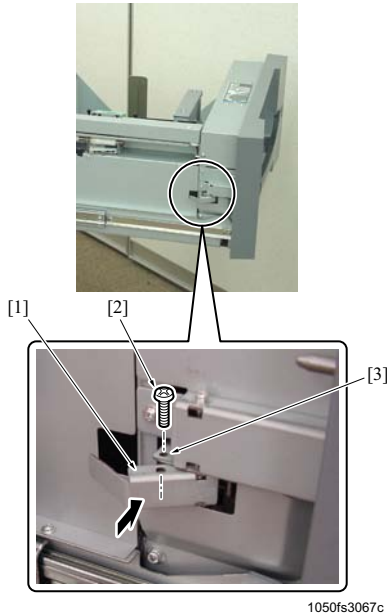
- The number of paper feed assist plates varies according to the paper weight.
 130g/m² or less → None
 130g/m² or more → 4 pcs.

8.5.2 Air assist adjustment

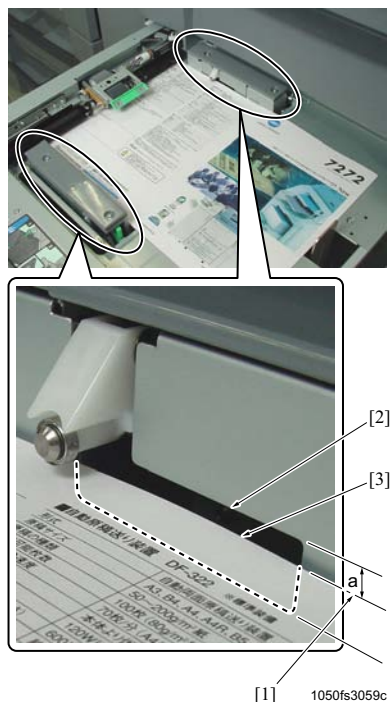
Check to see if the height of the air supply opening of the paper feed assist fan and the upper surface of paper are appropriate. Otherwise air assist is not conducted properly and a jam occurs.

(1) Procedure

1. Pull out the tray and set about 10 sheets of coated paper that have been printed in offset.
2. Push in the release lever [1], insert the screw [2] into the hole [3] to fix the release lever, and then set the tray.



3. After stop sound of the paper lift motor operation (when the paper lift plate gets to the upper limit position), pull out tray again.
4. Check the measurement "a" between the center position [1] (The center is 4.5mm from the upper edge [2].) of the air supply openings of the paper feed assist fan /Fr and /Rr and the upper surface of paper [3].
 Standard value "a": within 4.5 ± 2.5mm
 When the value is not within the standard, conduct step7 and succeeding steps.



5. Release the release lever that was fixed at step2 and bring down the paper lift plate.
6. Pull out the tray and load it fully with coated paper that has been printed, and perform steps 2 to 5.
7. Conduct the following adjustments according to the curling condition of paper.
 1. When there is no paper curling with no paper slant.
Conduct "Pick-up roller height adjustment." (Refer to [I.9.4 Pick-up roller height adjustment](#))
 2. If there is slant found due to paper curling:

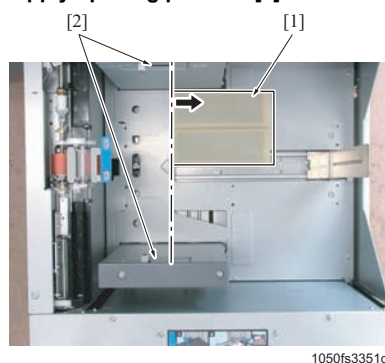


1050fs3060c

Put the underlays (included in the PP package) [1] under the lower side of the stacked paper.

Note

- To prevent air from blowing upon the pad when the remaining paper gets low, place the pad to the right side of the air supply opening position [2].



1050fs3351c

3. When there is a convex curling found with paper:

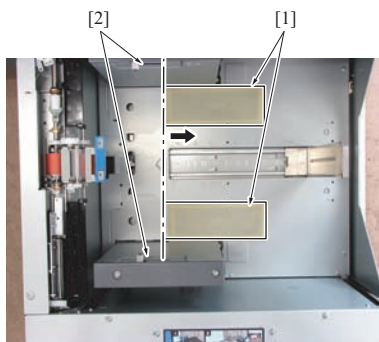


1050fs3062c

Put the underlays (included in the PP package) [1] under both sides of the stacked paper.

Note

- To prevent air from blowing upon the pad when the remaining paper gets low, place the pad to the right side of the air supply opening position [2].



1050fs3352c

4. When there is a concave curling found with paper:

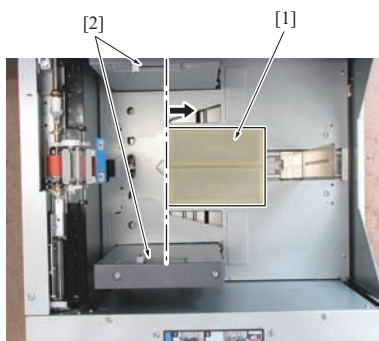


1050fs3064c

Put the underlays (included in the PP package) [1] under the center part of the stacked paper.

Note

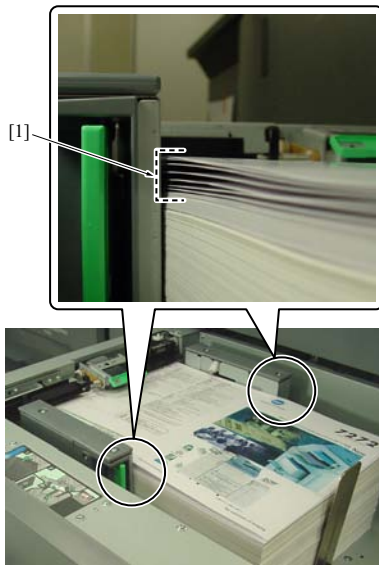
- To prevent air from blowing upon the pad when the remaining paper gets low, place the pad to the right side of the air supply opening position [2].
If there is a concave curling, it is normally possible to adjust curling by placing a pad at the center position 40mm away from the front and rear paper guides.



1050fs3353c

8. After adjustment, repeat step1 to step6 to check again the paper height at the air supply opening section.
9. Remove the PF right cover.
(PF-702: refer to [G.4.2.2 Right cover](#)), (PF-703: refer to [G.5.2.2 Right cover](#))
10. Select the code of the tray adjusted with code 42-** of the service mode - I/O check and press the start button to operate the paper feed assist fan.
11. After checking the paper separation condition [1] from the right side of the PF, press the Stop button to complete the I/O check.

12. Conduct the respective operations depending on the condition of separation.
 - a. Air is blown upon more than 10 sheets of paper and separate a sheet each.
 - b. Paper separation is not made for 1 sheet each, but 10 or more sheets of paper are being floated by air.
 - c. The number of sheets of paper that are being floated by air is less than 4 or 5.
 - d. No paper is floated



1050fs3066c

In the cases of "a" and "b," conduct step12 and succeeding steps.

In the cases of "c" and "d," repeat step1 to step11.

13. Conduct a test print to check to see if a jam occurs.
When a jam occurs, conduct "C. Paper feed pressure adjustment."
14. Reinstall the above parts following the removal steps in reverse.

Note

- Be sure to release the release lever that has been fixed at the step2.

8.5.3 Paper feed pressure adjustment

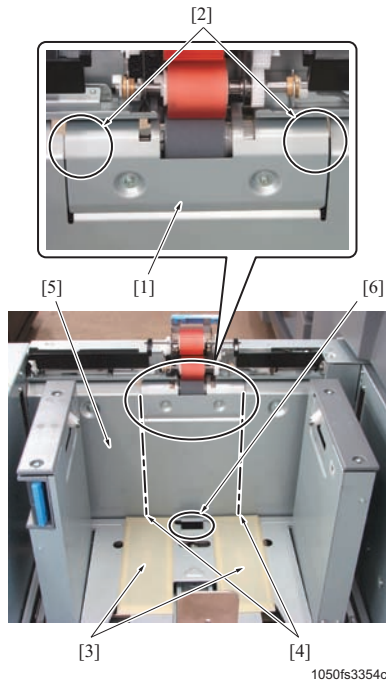
Despite the paper separation being made correctly by air from the paper feed assist fan, when a paper jam occurs, conduct the following adjustments.

(1) Procedure

1. Conduct the respective operations depending on the condition of jam.
 - J14-01 (Paper is not conveyed to the separation roller due to slipping of pick-up roller.) Add paper feed assist plates to raise pressure on the pick-up roller. (Refer to [I.9.3 Pick-up roller load adjustment](#))

Note

- 4 sheets of paper feed assist plate are normally used. However, when a no feed condition recurs, it is possible to use up to 8 sheets.
- J14-01 (paper bumps against both sides [2] of the entrance guide plate [1] and cannot go over the entrance guide plate [1].) Put the underlays (included in the PP package) [3] on the bottom of the tray locating them directory underneath [4] both edges [2] of the entrance guide plate [1].
- Be sure to set the underlays [3] so that those top edges are not contacted with the surface [5] of the tray, otherwise they interfere with the paper lift plate operation.
- Put the underlays [3] avoiding the paper empty sensor [6].



- J14-01 with thick paper (Paper is not conveyed to the separation roller due to paper being unable to get over the entrance guide plate.)
Up the pick-up roller height. (Down the sensor position. 2mm as a tentative) (Refer to [I.9.4 Pick-up roller height adjustment](#))
- J14-01 (Jam with a crushed leading edge of paper)
Increase the separation pressure. (Refer to [I.9.2 Separation pressure adjustment](#))
- J14-02 (No feed occurs before the pre-registration roller.)
Increase the separation pressure. (Refer to [I.9.2 Separation pressure adjustment](#))
- J17-12 (Double feed)
Down the pick-up roller height. (Down the sensor position. 2mm as a tentative) (Refer to [I.9.4 Pick-up roller height adjustment](#))

8.6 PF-703 air-blow adjustment

8.6.1 OUTLINE

When the paper feed jam occurs from PF-703 tray according to the type of paper or the weight, set "Air Assist" in "Tray setting" to "On" to prevent the paper feed jam by adjusting the air volume of the lead air and the side air.

⚠ CAUTION

- Since the machine operates without the paper feed check window in this adjustment, be sure not to put your hand there.

(1) Prerequisite

The following items have to be done for conducting this adjustment.

- Remove the paper feed check window of the PF-703 tray and check the paper movement.
- Check the default value of the paper type/weight of the selected tray from the air-blow setting table.

Note

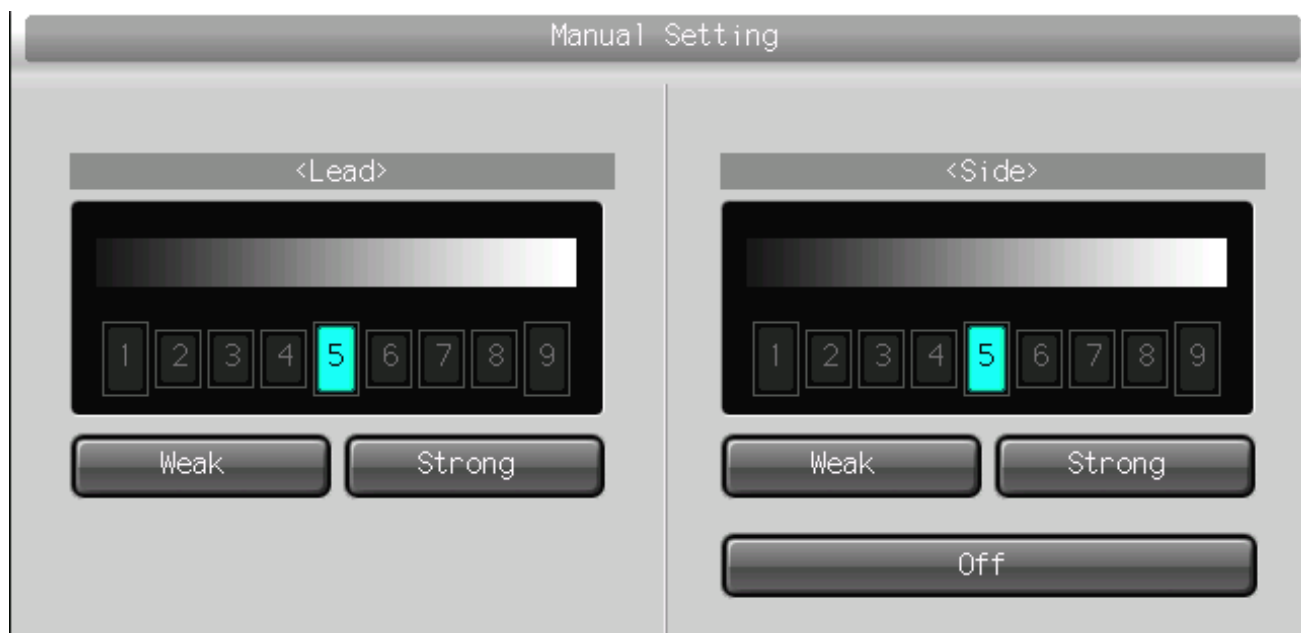
- When the jam occurs, check the setting position of paper and conduct this adjustment. Be sure to check the paper setting position since the bad setting position causes the jam.

(2) Preparation:

- Remove the paper feed check window of the tray to be adjusted. (Refer to [G.5.2.11 Paper feed check window](#))

(3) Procedure

1. Remove the paper feed check window. (Refer to [G.5.2.11 Paper feed check window](#))
2. Set [Tray Setting] and [Air Assist] on [MACHINE] tab in the user mode to [On].
3. Check the paper setting of the tray on which the jam occurs and [D. Air-assist setting table by paper type] to set the air volume of <Edge> and <Side>.

**Note**

- When [Air Assist] is set to [On], level [5] appears regardless of the weight/paper type.
- Level [5] is not the air volume which corresponds to the paper/weight set to the tray to be adjusted.

4. Print out with paper on which the jam occurs to check the paper movement from the front of the tray.

Note

- To check the paper movement inside the tray, use the light.

5. Refer to "E. Adjustment method by paper movement" to adjust the air-blow level of <Lead> and <Side>.

(4) Air-assist setting table by paper type**(a) Paper length: less than 160mm**

Type of paper	Air-assist setting	Weight (g/m ²)									
		40 to 49	50 to 61	62 to 71	72 to 91	92 to 130	131 to 161	162 to 216	217 to 244	245 to 300	301 to 350
Coat	Lead	6	6	4	7	9	9	9	9	9	9
	Side	0	0	4	4	4	7	9	9	9	9
PrePrinted	Lead	6	6	4	4	7	9	9	9	9	9
	Side	0	0	4	4	4	7	7	9	9	9
Fine/Plane paper	Lead	6	6	4	4	7	9	9	9	9	9
	Side	0	0	4	4	4	7	7	9	9	9
Book/News / Embossed	Lead	6	6	4	4	7	9	9	Unable to select		
	Side	0	0	4	4	4	7	7			

(b) Paper length: 160mm or longer, B5 (182mm) or shorter

Type of paper	Air-assist setting	Weight (g/m ²)									
		40 to 49	50 to 61	62 to 71	72 to 91	92 to 130	131 to 161	162 to 216	217 to 244	245 to 300	301 to 350
Coat	Lead	1	2	4	7	9	9	9	9	9	9
	Side	2	2	4	4	4	7	9	9	9	9
PrePrinted	Lead	1	2	4	4	7	9	9	9	9	9
	Side	2	2	4	4	4	7	7	9	9	9
Fine/Plane paper	Lead	1	2	4	4	7	9	9	9	9	9
	Side	2	2	4	4	4	7	7	9	9	9
Book/News / Embossed	Lead	1	2	4	4	7	9	9	Unable to select		
	Side	2	2	4	4	4	7	7			

(c) Paper length: B5 (182mm) or longer, A4S (297mm) or shorter

Type of paper	Air-assist setting	Weight (g/m ²)
---------------	--------------------	----------------------------

		40 to 49	50 to 61	62 to 71	72 to 91	92 to 130	131 to 161	162 to 216	217 to 244	245 to 300	301 to 350
Coat	Lead	1	2	4	7	9	9	9	9	9	9
	Side	2	2	4	4	4	7	9	9	9	9
PrePrinted	Lead	1	1	2	4	7	9	9	9	9	9
	Side	2	2	2	4	4	7	7	9	9	9
Fine/Plane paper	Lead	1	1	2	7	7	9	9	9	9	9
	Side	2	2	2	2	4	7	7	9	9	9
Book/News / Embossed	Lead	1	1	2	7	7	9	9	Unable to select		
	Side	2	2	2	2	4	7	7			

(d) Paper length: longer than A4S (297mm)

Type of paper	Air-assist setting	Weight (g/m ²)									
		40 to 49	50 to 61	62 to 71	72 to 91	92 to 130	131 to 161	162 to 216	217 to 244	245 to 300	301 to 350
Coat	Lead	1	2	4	7	9	9	9	9	9	9
	Side	2	2	4	4	4	7	9	9	9	9
PrePrinted	Lead	1	1	2	4	7	9	9	9	9	9
	Side	2	2	2	4	4	7	7	9	9	9
Fine/Plane paper	Lead	1	1	2	4	6	9	9	9	9	9
	Side	2	2	2	2	4	7	7	9	9	9
Book/News / Embossed	Lead	1	1	2	4	6	9	9	Unable to select		
	Side	2	2	2	2	4	7	7			

(e) Paper wide 138mm or less (use small guide)

Type of paper	Air-assist setting	Weight (g/m ²)									
		40 to 49	50 to 61	62 to 71	72 to 91	92 to 130	131 to 161	162 to 216	217 to 244	245 to 300	301 to 350
Coat	Lead	1	2	4	4	7	9	9	9	9	9
	Side	2	2	4	4	4	7	9	9	9	9
PrePrinted	Lead	1	1	2	4	7	9	9	9	9	9
	Side	2	2	2	2	2	7	7	9	9	9
Fine/Plane paper	Lead	1	1	2	4	7	9	9	9	9	9
	Side	2	2	2	2	2	7	7	9	9	9
Book/News / Embossed	Lead	1	1	2	4	7	9	9	Unable to select		
	Side	2	2	2	2	2	7	7			

(f) Paper wide 138mm or less (use small guide) and paper length less than 160mm

Type of paper	Air-assist setting	Weight (g/m ²)									
		40 to 49	50 to 61	62 to 71	72 to 91	92 to 130	131 to 161	162 to 216	217 to 244	245 to 300	301 to 350
Coat	Lead	6	6	6	4	7	9	9	9	9	9
	Side	0	0	0	4	4	7	9	9	9	9
PrePrinted	Lead	6	6	6	4	7	9	9	9	9	9
	Side	0	0	0	2	2	7	7	9	9	9
Fine/Plane paper	Lead	6	6	6	4	7	9	9	9	9	9
	Side	0	0	0	2	2	7	7	9	9	9
Book/News / Embossed	Lead	6	6	6	4	7	9	9	Unable to select		
	Side	0	0	0	2	2	7	7			

(5) Adjustment method by paper movement**Case1****(1) Paper movement**

- Since the lead air is too strong, paper after 2nd sheet moves back to the opposite side of the paper feed direction and crosses over the trailing edge guide.
- Paper after the 2nd sheet gets into the gap between the stacked paper and the trailing edge guide.

(2) Jam condition

- Double feed

(3) Paper on which jam tends to occur

- Paper weight 100g/m² or less
- Paper length 210mm or longer
- Convexly curled paper

(4) Air-assist adjustment

- Weaken the lead

(5) Measure of adjustment

- Stabilize the paper movement at the paper separation point

(6) Related jam code

- Multi feed detection
J-1712
- PF703 - 1st tandem
J-1304/J-1404/J-1504
- PF703 - 2nd tandem
J-1614/J-1623/J-1634
- PI-PFU Multi feed detection
J-8107
- PI-PFU
J-8114/J-8123/J-8134

Case2**(1) Paper movement**

- Since the side air is too strong, the paper movement around the paper feed belt gets unstable.
- Paper after the second sheet floats too much to the paper feed belt side.
- Paper after the second sheet is sent a little to the paper feed direction.

(2) Jam condition

- Double feed

(3) Paper on which jam tends to occur

- Paper length 210mm or shorter

(4) Air-assist adjustment

- Strengthen the lead
- Weaken the side

(5) Measure of adjustment

- Stabilize the paper movement around the paper feed belt
- Adjust it not to float in bundle.
- Adjust it so that paper after the second sheet is not sent to the paper feed direction. (Increase the separation pressure)

(6) Related jam code

- Multi feed detection
J-1712
- PF703 - 1st tandem
J-1304/J-1404/J-1504
- PF703 - 2nd tandem
J-1614/J-1623/J-1634
- PI-PFU Multi feed detection
J-8107
- PI-PFU
J-8114/J-8123/J-8134

Case3**(1) Paper movement**

- Paper gets late to float and the separation with the lead air is not enough.
- Time for separating is not enough and 2 sheets are sent right after the floating.

(2) Jam condition

- Double feed

(3) Paper on which jam tends to occur

- Paper weight 200g/m² or less

(4) Air-assist adjustment

- Strengthen the side

(5) Measure of adjustment

- Keep the air volume to float paper.
- Adjust it to keep the time to separate.

(6) Related jam code

- Multi feed detection
J-1712
- PF703 - 1st tandem
J-1304/J-1404/J-1504
- PF703 - 2nd tandem
J-1614/J-1623/J-1634
- PI-PFU Multi feed detection
J-8107
- PI-PFU
J-8114/J-8123/J-8134

Case4**(1) Paper movement**

- Since the side air is too weak, the timing for paper sticking to the paper feed belt gets late.

(2) Jam condition

- Not stick to the paper feed belt

(3) Paper on which jam tends to occur

- Paper weight 200g/m² or less

(4) Air-assist adjustment

- Strengthen the side

(5) Measure of adjustment

- Keep the air volume to float paper.
- Adjust it to keep the time to separate.

(6) Related jam code

- PF703 - 1st tandem
J-1305/J-1405/J-1505
- PF703 - 2nd tandem
J-1615/J-1625/J-1635

Case5**(1) Paper movement**

- Since the lead air is too strong, the corner of the paper leading edge is pressed down.

(2) Jam condition

- No feed

(3) Paper on which jam tends to occur

- Paper wide 210mm or less

(4) Air-assist adjustment

- Weaken the lead

(5) Measure of adjustment

- Adjust it so that the paper leading edge sticks to the paper feed belt.

(6) Related jam code

- PF703 - 1st tandem
J-1301/J-1302/J-1401/J-1402/J-1501/J-1502
- PF703 - 2nd tandem
J-1611/J-1612/J-1621/J-1622/J-1631/J-1632
- PI-PFU
J-8111/J-8112/J-8121/J-8122/J-8131/J-8132

Case6**(1) Paper movement**

- Sticking of the paper leading edge is not enough

(2) Jam condition

- No feed

(3) Paper on which jam tends to occur

- Paper wide 210mm or less

(4) Air-assist adjustment

- Strengthen the side

(5) Measure of adjustment

- Adjust it to float paper.

(6) Related jam code

- PF703 - 1st tandem
J-1301/J-1302/J-1401/J-1402/J-1501/J-1502
- PF703 - 2nd tandem
J-1611/J-1612/J-1621/J-1622/J-1631/J-1632
- PI-PFU
J-8111/J-8112/J-8121/J-8122/J-8131/J-8132

8.7 Fusibility adjustment

This section describes the adjustment procedure for the case when the fusibility gets short according to the environment or paper type. The following items are the reason of the shortage of the fusibility.

- Print right after the sub power switch (SW2) turns ON from being OFF for long period
- Print right after starting from the idling (initial print)
- Print right after changing the paper weight or the paper type
- Setting environment of the machine is at low temperature
- Image pattern
- Specified paper

Note

- The productivity tends to lower since the fusing initial rotation time gets longer by the adjustment to improve the fusibility.

(1) Preparation

- Check that [Tray Setting] - [Pressure Power Setting] is [Default Pressure Power].
- Check that [Setting Menu] - [Copy/Printer Setting] - [Fixing Pre-rotation Set] is [Rotation On].

In case the above 2 items are set differently, be sure to check the fusibility again after setting to [Default Pressure Power] and [Rotation On].

(2) Procedure

1. Refer to [N.13. PAPER SETTING](#) to check the pressure level. This level is automatically selected when [Tray Setting] - [Pressure Power Setting] is [Default Pressure Power].
2. Set the level 1 level stronger than the pressure level which was checked in step 1.

Note

- When the pressure level checked in step 1 is "Strong Pressure Power", conduct the adjustment from step 3 since it cannot be stronger more than that level.

3. Print out the image and check the fusibility. When the fusibility is not enough, judge steps 4 to 6 depending on the situation.
4. In the case of the initial print (100 sheets or less after print start)/print right after changing the paper weight or the paper type:
 - 1) Change to "CONDUCT IN ALL ENVIRONMENT" in DIPSW36-2 fusibility improvement control at print starting
 - 2) Set it to "Change pressure" on DIPSW 19-5 fusing pressure control at initial print.
5. When the setting of the print/machine right after turning ON the sub power switch (SW2) is under the low temperature:
 - 1) Set DIPSW 8-4/5 fusing initial rotation time to 300 seconds.
6. When the fusibility is not enough depending on the image pattern or the paper type:
 - 1) Refer to [N.13. PAPER SETTING](#) to set the paper weight/paper type to 1 to 2 rank higher.
 - 2) DIPSW19-0/1/2/3 fusing temperature setting

Note

- Since this setting changes the control temperature against all paper, the too much adjustment tends to cause the trouble like paper curling or paper waving.

8.8 User setting of each paper brand

For the user setting method for paper which is commonly used in the POD market by paper brand, refer to [N.13. PAPER SETTING](#).

This document shows the optimum set values for paper brands tested by KMBT. However, it does not assure the same image quality and paper feed ability as the paper specified by KMBT. Only the basic performance under usual environment (temperature and humidity) has been tested and confirmed. Information on other brand of paper will be also provided when the test is finished, by updating the document.

8.9 Settings for feeding carbonless paper

When using carbonless paper (thin paper), take the following measures.

Note

- **When feeding carbonless paper, take the following countermeasures.**
When printing on carbonless middle sheets on the machine tray/PF-702, 50mm width of the sheet leading edge reacts by the pressure and changes in color.
If this color cannot be allowed, use middle sheets 60mm longer in main scan direction, and 20mm longer in sub scan direction to trim off the discolored portion.
 - b) Set carbonless paper in SEF position (the narrower side of paper comes to the paper feed roller side).
 - c) Set the paper so that the paper curls convexly in the conveyance section.
 - d) Allowable curl amount is less than 3mm.When using paper curled more than 3mm, use the overlays included in the PP-701 package to correct the curl.
 - e) Only [Simplex mode] is acceptable for carbonless paper.

(1) Preparation

1. Configure the following settings in user mode.
 - Set the type of paper to [Plain].
 - Set the air-blow setting to [ON].
 - Set the output setting to [Face-down].
 - Be sure to conduct the de-curler adjustment referring to [N.13. PAPER SETTING](#).
2. Carry out the following mechanical adjustment.
 - Weaken the separation pressure of the paper feed section for 1 step. (Refer to [I.9.2 Separation pressure adjustment](#))

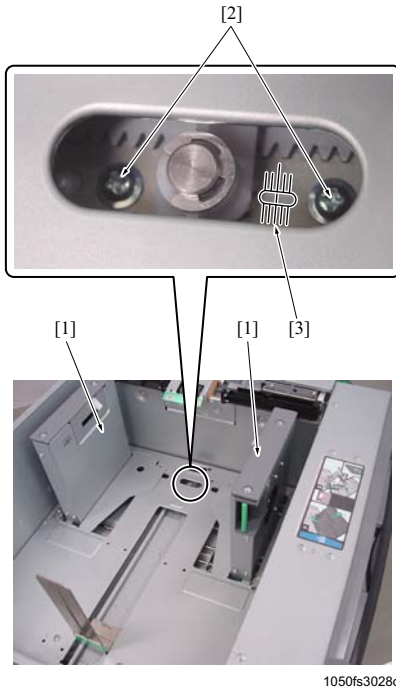
9. MECHANICAL ADJUSTMENT bizhub PRO 1200/1200P/1051

9.1 Tray Centering Adjustment

(1) Usage

This adjustment is made when the centering of paper varies each paper supplied from the trays 1 and 2. The centering is automatically adjusted in the image-processing unit, and this adjustment is made only when a centering exceeding the range of auto correction (± 5 mm) occurs.

(2) Procedure



1050fs3028c

1. Make the software DIPSW12-3 "Printer centering adjustment" disable (data = 1). (Refer to [1.5.5.1 Software DIPSW setting procedures](#))
2. Perform copying/printing without automatic correction to check the centering of image.
3. Pull out the paper feed tray.
4. If any paper remaining, remove it.
5. If the paper guide [1] is at the small-size position, stretch the guide.
6. Loosen 2 screws [2].
7. Move the paper guide [1]. According to the centering you checked in step2, adjust the center position using the marking line [3].
8. Tighten 2 screws [2].
9. Insert a paper and set the tray.
10. Make a copy/print and check to see if the centering is within the standard value (± 2 mm).
11. When not up to the standard value, repeat the steps 3 to 10.
12. Make the software DIPSW12-3 "Printer centering adjustment" disable (data = 0).

9.2 Separation pressure adjustment

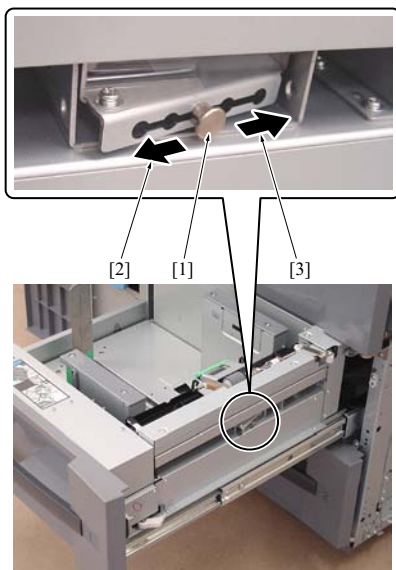
(1) Usage

Perform the separation pressure adjustment when the no feed (a paper is conveyed to the paper feed roller section but stops there) or the double feed occurs at the paper feed.

Note

- The no-feed or multi-feed error is most likely to occur due to paper type or operating environment. No feed tends to occur in low temperature environment, whereas high temperature environment results in a higher rate of multi-feed.
- Excess adjustment may reverse the symptom.

(2) Procedure



1050fs3029c

1. Pull out the paper feed tray.
2. Change the position of the spring adjustment lever [1].

Note

- The separation pressure is strengthened when the lever moves to the direction [2] and is weakened when the lever moves to the direction [3].

Weak: a double feed jam is improved.

Strong: a no feed jam is improved.

Reference:

- The spring load changes 10% as the spring is moved 1 step.

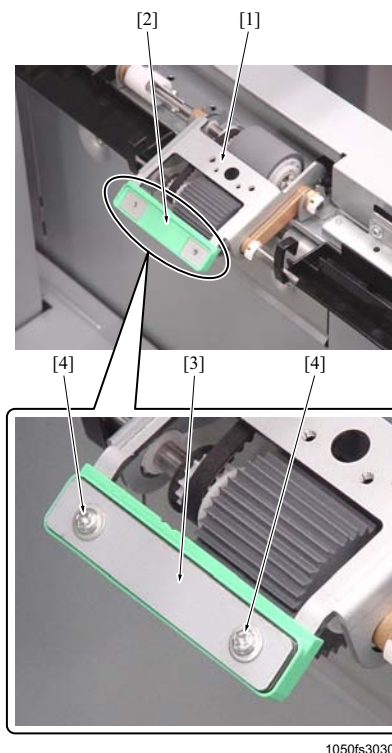
3. Set the tray to perform copying/printing. Check whether the no feed or the double feed occurs or not.
4. In case either jam occurs, repeat steps 1 to 3.

9.3 Pick-up roller load adjustment

(1) Usage

In case a no feed jam occurs frequently, perform the pick-up roller load adjustment.

(2) Procedure



1. Pull out the paper feed tray.
2. In the pick-up roller assy [1], put paper feed assist plate [3] on the paper feed assist plate holder [2], and fix them with accompanying screw (M3 x 8mm) [4].
3. Set the tray.
4. Perform copying/printing to check whether the no feed or the double feed occurs or not.

Note

- The maximum number of the paper feed assist plates that can be attached is 4 plates.
For the number of plates to be attached, refer to [N.13. PAPER SETTING](#)
- The paper feed assist plate is approx. 10g each.

9.4 Pick-up roller height adjustment

(1) Usage

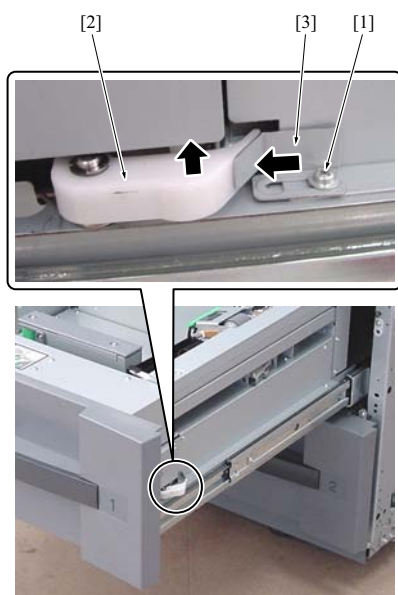
Perform this adjustment when the following situations occurred.

- A no feed jam is not improved by the pick-up roller load adjustment
- A no feed jam in which a thick paper is stuck on the entrance guide (a metallic guide plate near the separation roller)
- A double feed jam is not improved by the separation pressure adjustment

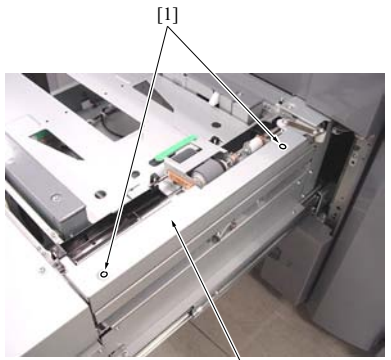
Note

- On performing the pick-up roller height adjustment, the paper feed pick-up amount is changed. Be sure to confirm the paper feed pick-up amount in the paper feed pick-up amount adjustment. (Refer to [I.9.5 Paper feed pick-up amount adjustment](#))

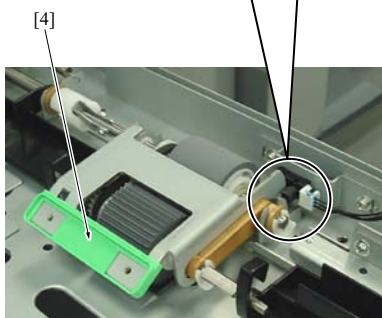
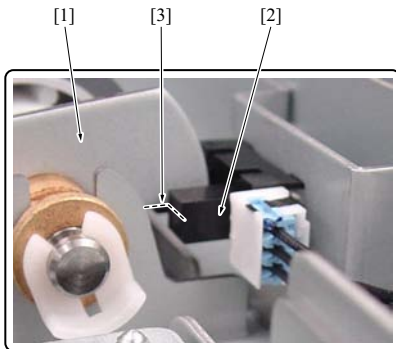
(2) Procedure



1. Pull out the paper feed tray.
2. If any paper remaining, remove it.
3. Loosen a screw [1].
4. With the release lever [2] placed at its original position, hold the stopper [3] and tighten the screw [1] to fix the stopper.

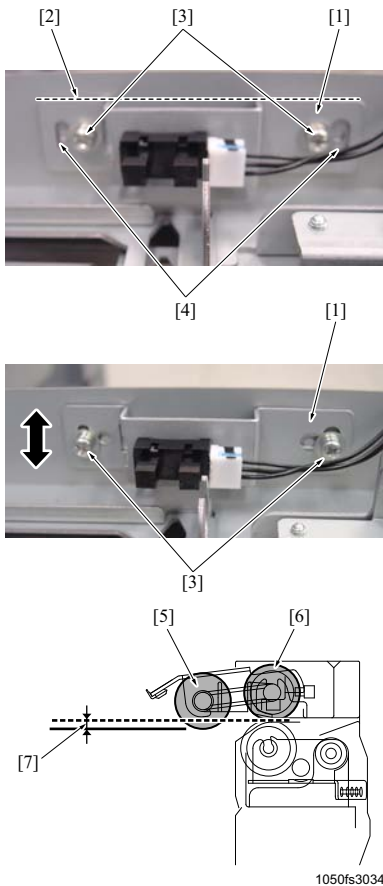


1050fs3032c



1050fs3033c

5. Set the tray. Confirm that the paper lift finished its elevation to the top by hearing the sound of the paper lift motor. Pull out the tray again.
6. Pull out the tray again. Remove 2 screws [1] to remove the paper feed cover [2].
7. Check if the actuator [1] of the pick-up roller assy meets the center [3] of the upper limit sensor/1 (PS6) and /2 (PS12) [2].
8. Remove the pick-up roller section [4]. (Refer to [F.4.7.1 Removing/reinstalling the pick-up roller assembly/separation roller assy](#))



9. Record a mark for the height of the sensor placing plate [1].
10. Remove 2 screws [3], and place them temporarily in the slotted hole [4] on the upper limit sensor placing plate [1].
11. Adjust the height of the sensor placing plate [1], and fix it with the screws [3].

Note

- **Place the upper limit sensor placing plate [1] horizontally.**

Adjustment standard

- Lifting the upper limit sensor position lowers the height of the pick-up roller [5]. (It increases the vertical gap [7] between the paper feed roller [6] and the pick-up roller [5].)
- Lowering the position of the upper limit sensor brings up the pick-up roller [5] (resulting in the reduced difference [7] of elevation between the paper feed roller [6] and the pick-up roller [5].)
- In case a no feed occurred, lower the upper limit sensor.
- In case a double feed occurred, lift the upper limit sensor.

12. Place the pick-up roller section, and replace the stopper of step 4 to the original position.

Note

- **If you set the tray without placing the pick-up roller, the paper lift does not stop at the upper limit, thus damaging the tray. Be sure to place the roller.**

13. Insert a paper, and set the tray.
14. Perform copying/printing to confirm that the no feed or jam do not occur. In case they are not improved, repeat steps 7 to 14.
15. Check the paper feed pick-up amount. (Refer to [1.9.5 Paper feed pick-up amount adjustment](#))
16. Reinstall the above parts following the removal steps in reverse.

Note

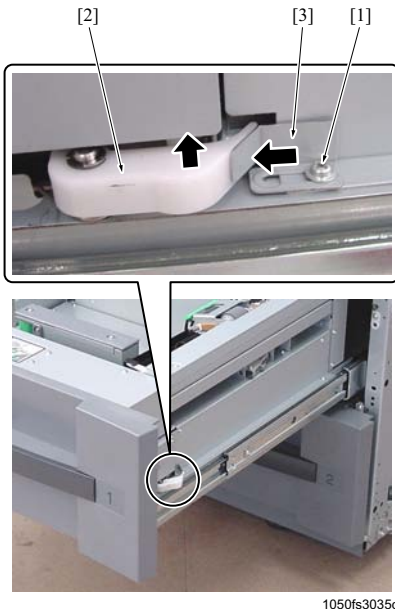
- **After the adjustment, be sure to replace the stopper of the release lever to the original position.**

9.5 Paper feed pick-up amount adjustment

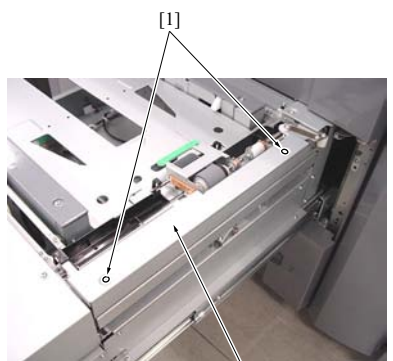
(1) Usage

Perform the paper feed pick-up amount adjustment as you have done the pick-up roller height adjustment.

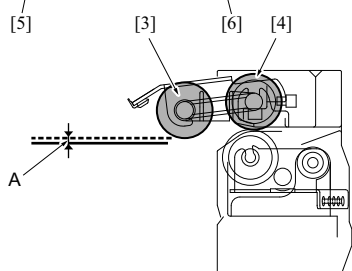
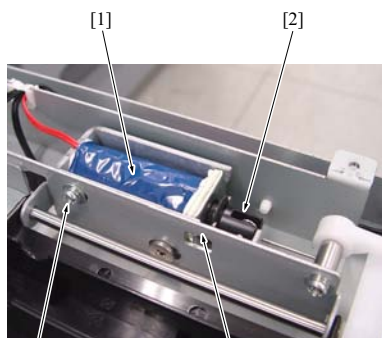
(2) Procedure



1. Pull out the paper feed tray.
2. If any paper remaining, remove it.
3. Loosen a screw [1].
4. With the release lever [2] placed at its original position, hold the stopper [3] and tighten the screw [1] to fix the stopper.



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1050fs3037c

5. Set the tray. Confirm that the paper lift finished its elevation to the top by hearing the sound of the paper lift motor.
6. Pull out the tray again. Remove 2 screws [1] to remove the paper feed cover [2].

7. Pull the plunger [2] of the pick-up solenoid [1] to measure the gap "A" between the pick-up roller [3] and the paper lift plate [4] with the gap gauge.
Standard value A = 0.1mm to 1.5mm
If it is not within the standard value, follow step8 and after.
8. Loosen a screw [5].

Note

- Before loosening the screw [5], record the position of the pick-up solenoid [1] with the marking line [6].

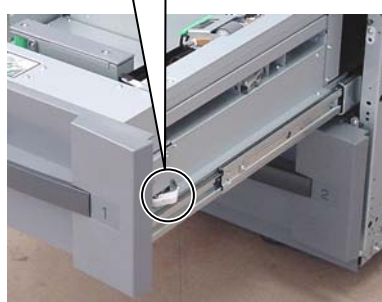
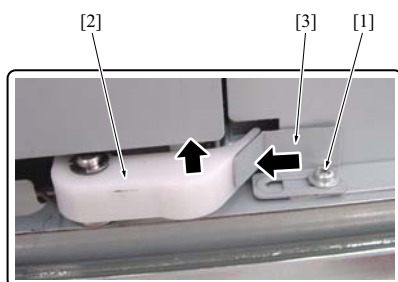
9. With the plunger [2] pulled, adjust the position of the pick-up solenoid [1] so that the standard value can be obtained for the gap A between the pick-up roller [3] and the paper lift plate [4].
10. Tighten the screw [5] to fix the pick-up solenoid [1].
11. Replace the stopper of step4 to the original position.
12. Insert a paper, and set the tray.
13. Perform copying/printing to confirm that the no feed does not occur.
14. Reinstall the above parts following the removal steps in reverse.

Note

- After the adjustment, be sure to replace the stopper of the release lever to the original position.

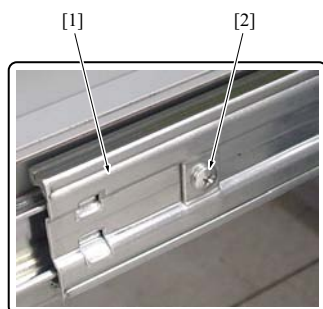
9.6 Paper lift plate skew adjustment**(1) Usage**

Perform the paper lift plate skew adjustment after replacing a lift wire or when the paper lift plate is skewed.

(2) Procedure

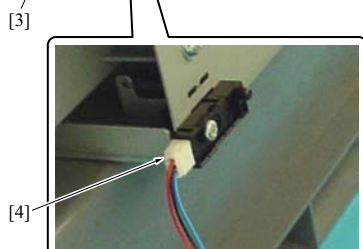
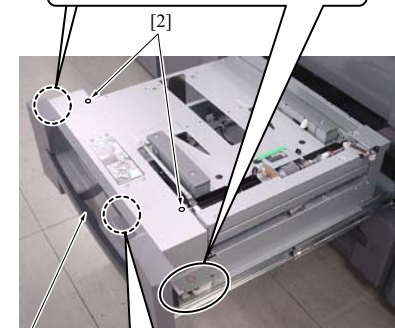
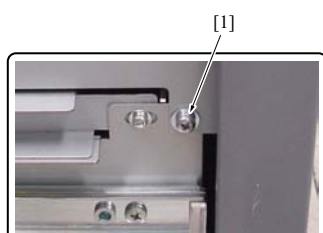
1050fs3038c

1. Pull out the paper feed tray.
2. If any paper remaining, remove it.
3. Loosen a screw [1].
4. With the release lever [2] placed at its original position, hold the stopper [3] and tighten the screw [1] to fix the stopper.



1050fs3039c

5. Set the tray. Confirm that the paper lift finished its elevation to the top by hearing the sound of the paper lift motor.
6. Pull out the tray again. Remove 2 screws [2] of the stopper of the rails [1] on the right and left side. Pull out the tray.



1050fs3040c

7. Remove 2 screws (with washers) on the right and left side [1] and 2 screws on the upper side [2].

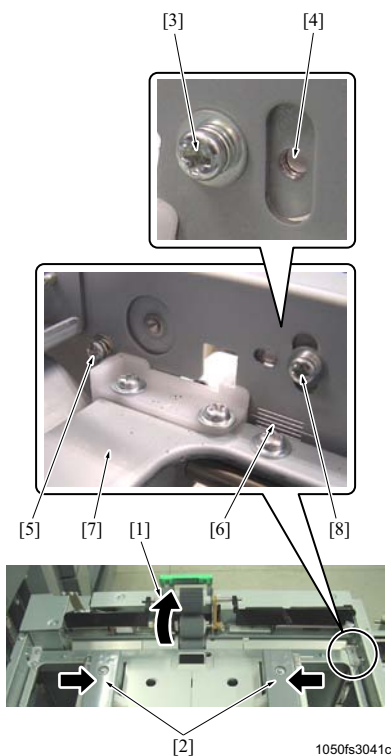
Note

- Removing the screws [1] and [2] causes the tray front cover [3] to fall. Support the cover not to drop.

8. Disconnect the connector [4] to remove the tray front cover [3].

Note

- Be sure to connect the connector as you place it. Otherwise, all trays in the main body become unable to be pulled out.



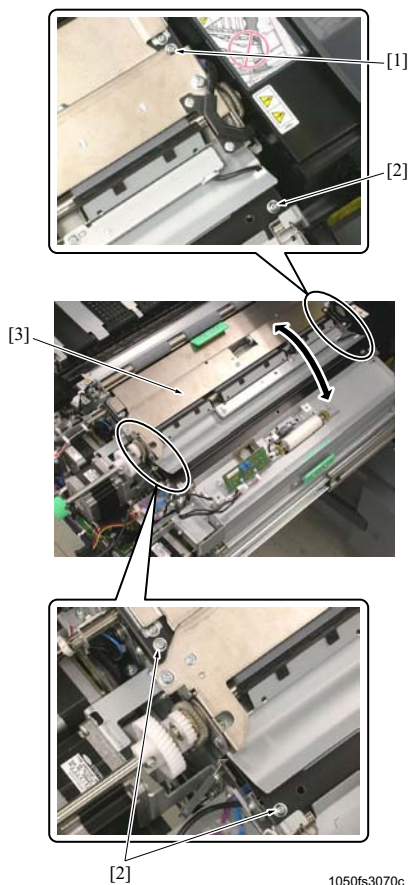
9. Lift up the pick-up roller [1].
10. In case the paper guide [2] is open, close it to the smallest-size position.
11. Remove the screw [3], and place them temporarily in the slotted screw hole [4].
12. While holding the pulley placing plate being placed with the screw [5], loosen the screw [5] to adjust the skewed paper lift plate [7] with the marking line [6].
13. Confirm that the paper lift plate is horizontal, and fix the screw [5] and [8].
14. Pull down the pick-up roller [1].
15. Place the tray front cover.
16. Insert a paper, and set the tray.
17. Perform copying/printing to confirm that the no jam occurs, and that papers are properly fed.
18. Reinstall the above parts following the removal steps in reverse.

Note

- After the adjustment, be sure to replace the stopper of the release lever to the original position.

9.7 Registration roller paper skew adjustment**(1) Usage**

Perform this adjustment when there is skew in the registration section.

(2) Procedure

1. Remove the screw [1] and then make sure the graduation of the screw [1].
2. Loosen 3 screws [2].
3. Move the registration section [3] to the arrow on the basis of the graduation.
4. Tighten the screw [1] and screws [2].
5. Perform copy/printing to check the paper skew.
6. In case it is not improved, repeat steps 1 to 5.

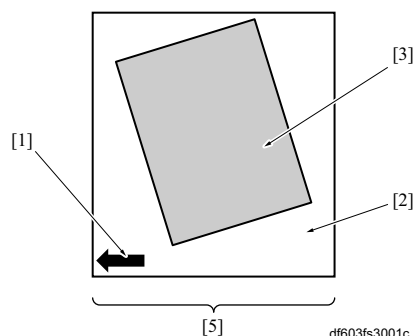
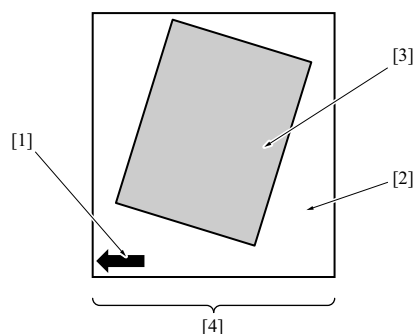
10. MECHANICAL ADJUSTMENT DF-615

10.1 Paper skew adjustment

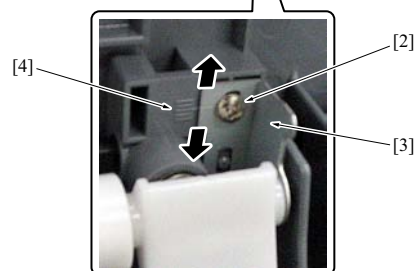
(1) Usage

Perform this adjustment when the image skew occurs

(2) Procedure



df603fs3001c



df603fs3002c

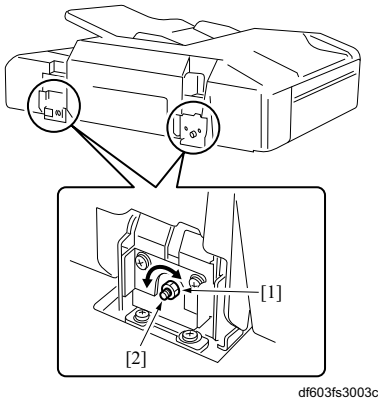
1. Make a copy in the single-sided original - single-sided copy mode, and check the original skew pattern (pattern A [4] or pattern B [5]) of the image [3] on the copy paper [2] to the copy paper feed direction [1].

2. Open the open/close cover [1].
3. Loosen 1 screw [2] and release the fixing of the registration roller bracket [3].
4. According to the original skew pattern, move the registration roller bracket [3] by 1 division [4] in the following direction.
In the pattern A: Move the registration roller bracket [3] to the lower side (direction down towards original feed flow).
In the pattern B: Move the registration roller bracket [3] to the upper side (direction up towards original feed flow).
5. Repeat the steps 2 to 4 until the original skew is within the specification (0.5% or less).
Specification: Paper skew $\pm 0.5\%$ or less (paper skew against the side parallel to the paper feed direction)

10.2 Hinge pressure adjustment

(1) Usage

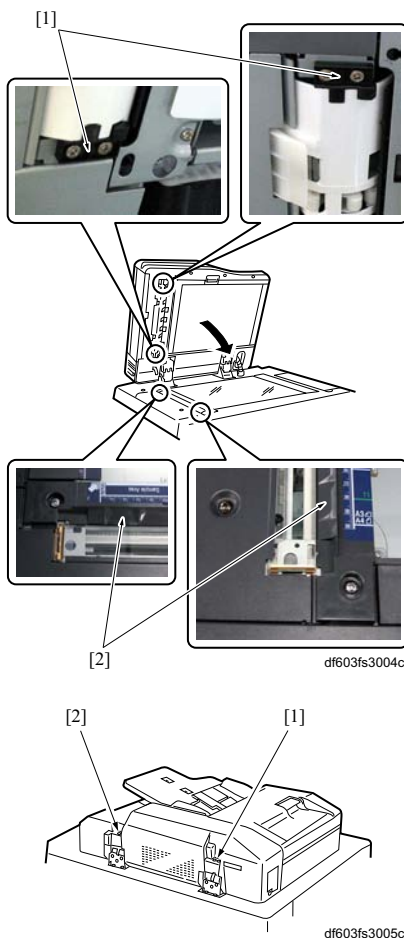
In this adjustment, the spring pressure when the DF is opened and closed is adjusted.

(2) Procedure

1. Close the DF.
2. Loosen the nuts [1], 1 each provided on both sides.
3. Open the DF.
4. Rotate the adjusting screw [2] to adjust the spring pressure of the hinge.
Tighten (clockwise): Spring pressure decreased.
Loosen (counterclockwise): Spring pressure increased.
5. Close the DF.
6. Tighten securely the nuts [1], 1 each provided on both sides.

10.3 Height adjustment**(1) Usage**

This adjusts the DF height.

(2) Procedure

1. Close the DF.
2. Close the DF and check to see if each of 2 stopper pieces [1] on the DF side comes in touch with the dent [2] in the original stopper plate /Lt on the main body side.

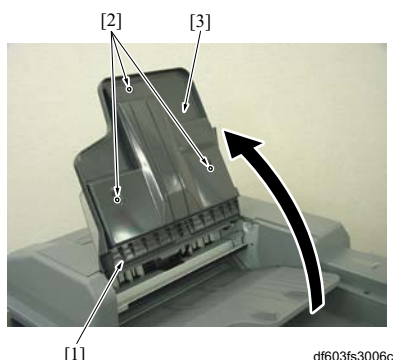
3. When the stopper pieces do not get contact with the dent on the original stopper plate /Lt at the same time, make adjustments by turning the adjusting screw A [1].

Note

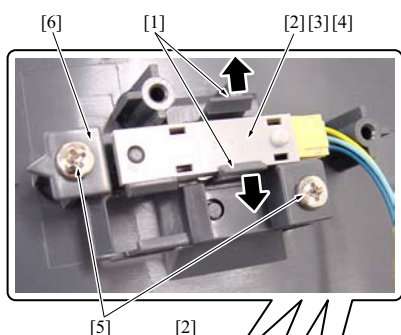
- For the adjustment of the DF height, be sure to make adjustments by turning the adjusting screw A [1] as a rule. When a satisfactory adjustment cannot be obtained with the adjusting screw A [1], make adjustments turning the adjusting screws A [1] and B [2] alternately.

10.4 Adjustment to prevent false detection by the original detection sensor**(1) Usage**

When the original count sensor (PS310) and the original size sensors /Lt (PS303 and /Rt (PS302) above the original feed tray make false detection due to the angle of incident of external light such as a fluorescent light, change the installation angle of the sensor.

(2) Procedure

df603fs3006c



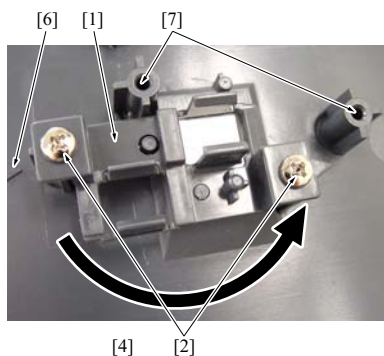
[5]

[2]

[3]

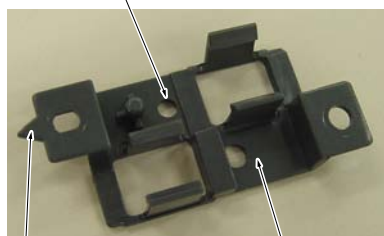
[4]

df603fs3007c



[4]

[2]



[3]

[5]

df603fs3008c

1. Raise the original feed tray [1].
2. Remove 3 screws [2] and then remove the original feed tray cover /Lw [3].

3. Expand the claw [1] a little wider and remove the original size sensors /Rt (PS302) [2] and /Lt (PS303) [3] and the original count sensor (PS310) [4].

Note

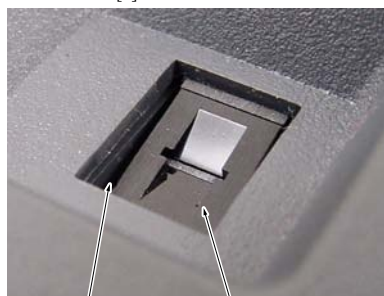
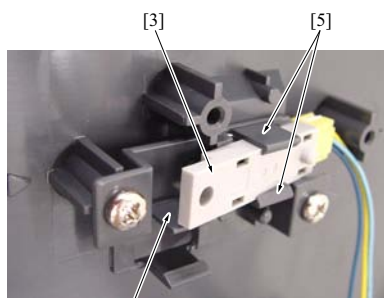
- Be careful not to spread the claw [1] too wide. Otherwise, it may break off.

4. Remove 2 screws [5] and then remove the sensor holder [6].

5. Rotate the sensor holder [1] up to 180DEGREE from side to side and fasten it with 2 screws [2].

Note

- When tilting the sensor at 10° forward or backward to the upright:
Install the sensor holder to the attaching hole [2] with the projection [3] placed on the side opposite to the triangular mark (▲) [6]. In this way, the sensor can be tilted to 10° forward. Installing the sensor holder to the attaching hole [7] with the projection [3] placed on the triangular mark (▲) [6] side allows the sensor to be tilted 10° backwards. In either case, install the sensor on the side [5] with no projection [3].
- When installing the sensor turned directly upward:
With the projection [3] put on the triangular mark (▲) [6] side, install the sensor holder [1] to the attaching hole [2]. Install the sensor on the side [4] provided with the projection [3].



[2] [1] df603fs3009c

6. Install the sensor [3] to the sensor holder [4] so that the sensor face [1] gets into the sensor window [2] as seen from above the original feed tray.

Note

- Be sure to check to see if the sensor [3] is securely held by the claw [5].
- Be careful that the sensor face [1] does not get damaged, and also be careful not to soil it with grimy hands.

7. Reinstall the above parts following the removal steps in reverse.

10.5 Centering sensor switchover adjustment

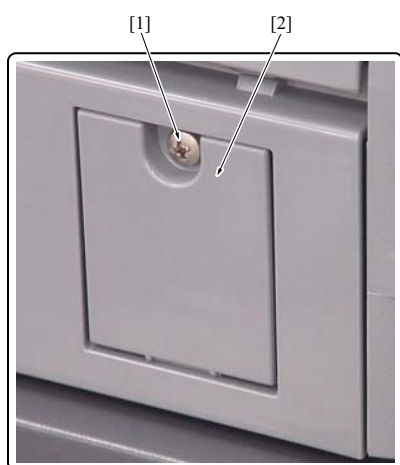
(1) Usage

Adjust the installation position of the centering sensor /Fr according to the original sizes (A4, A3/8 1/2 x 11, 11 x 17) mainly used by the user.

Note

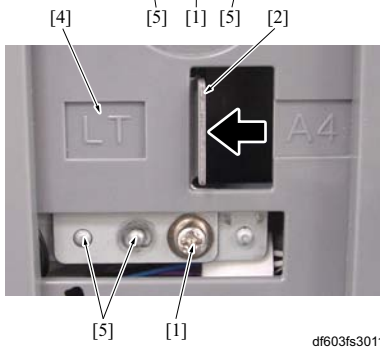
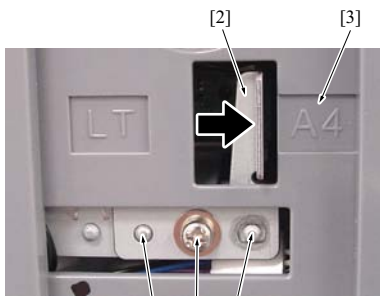
- Be sure to conduct in advance "ADF centering sensor sensitivity adjustment." (Refer to [I.5.3.39 ADF Centering Sensor Adj. \(ADF Adjustment\)](#))

(2) Procedure



df603fs3010c

1. Remove the screw [1] to remove the sensor cover [2].



2. Remove the screw [1] and install the sensor mounting plate [2] with the projection [5] set to the side stamped with "A4" [3] or to the "LT (8 1/2 x 11)" side [4].
 3. Reinstall the above parts following the removal steps in reverse.
- Reference:
- Turning OFF/ON the power switch (SW2) automatically recognizes the A4 position or the LT position.

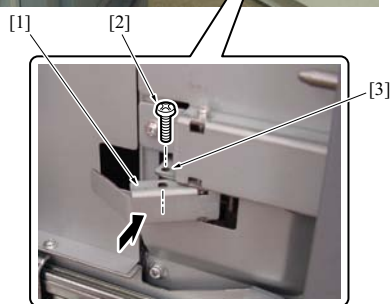
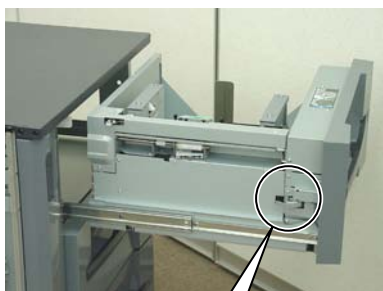
11. MECHANICAL ADJUSTMENT PF-702

11.1 Paper feed pick-up amount adjustment

(1) Usage

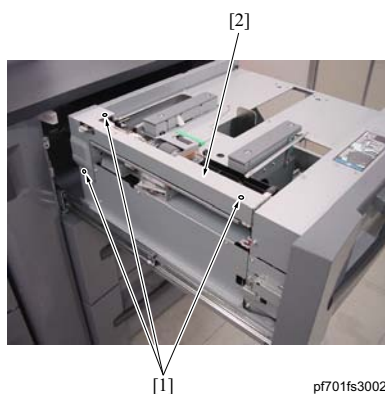
When a no feed condition occurs repeatedly while feeding paper, conduct the paper feed pick-up amount adjustment.

(2) Procedure



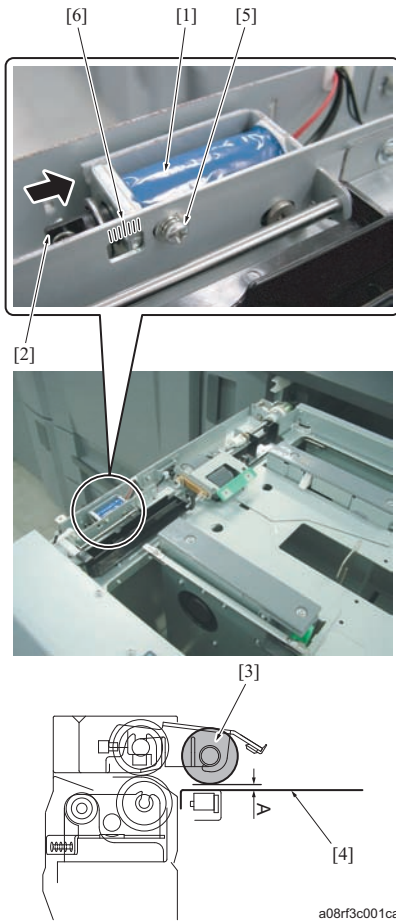
pf701fs3001c

1. Pull out the paper feed tray.
2. If any paper remaining, remove it.
3. Push in the release lever [1] and insert the screw [2] into the hole [3] to fasten the release lever [1].
4. Set the tray. Confirm that the paper lift finished its elevation to the top by hearing the sound of the paper lift motor. Pull out the tray again.
5. Remove the stopper screws, 1 each, attached on the right and left rails and pull the tray further out.



pf701fs3002c

6. Remove 3 screws [1] and remove the paper feed cover [2].



a08rf3c001ca

7. Pull the plunger [2] of the pick-up solenoid [1] and measure the clearance between the pick-up roller [3] and the lift plate [4] with a feeler gauge.
Standard value A = 0.1mm to 1.5mm
If it is not within the standard value, follow step8 and after.
8. Loosen a screw [5].

Note

- Before loosening the screw [5], record the position of the pick-up solenoid [1] with the marking line [6].

9. With the plunger [2] pulled, adjust the position of the pick-up solenoid [1] so that the clearance between the pick-up roller [3] and the lift plate [4] gets to the specified value.
10. Tighten the screw [5] to fix the pick-up solenoid [1].
11. Insert a paper, and set the tray.

Note

- When setting the tray, be sure to bring down the pick-up solenoid (in normal condition). Setting the tray with the paper feed cover removed and the pick-up roller brought up may cause damage to the pick-up roller.

12. Perform copying/printing to confirm that the no feed does not occur.
13. Reinstall the above parts following the removal steps in reverse.

Note

- After completion of adjustment, be sure to remove the screw of the release lever.

11.2 Pick-up roller height adjustment

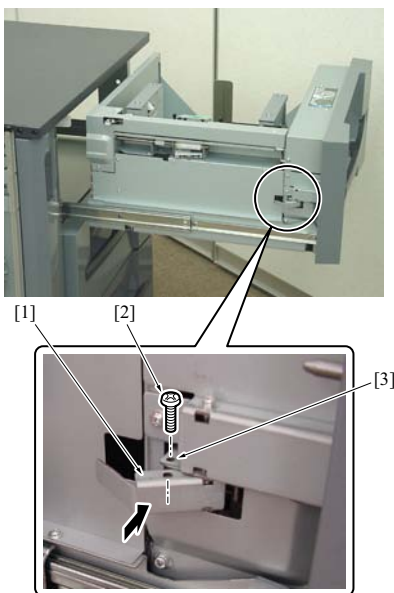
(1) Usage

Conduct the pick-up roller height adjustment when a no feed condition, paper edge folding, or jams occur repeatedly during feeding paper, or in case of feeding paper with a large amount of curl.
According to the pick-up roller height adjustment, the height of the upper most paper and the paper through height of the paper feed roller are decided.

Note

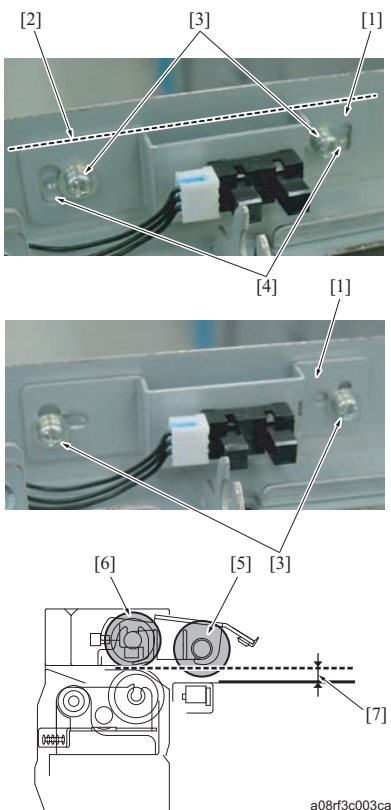
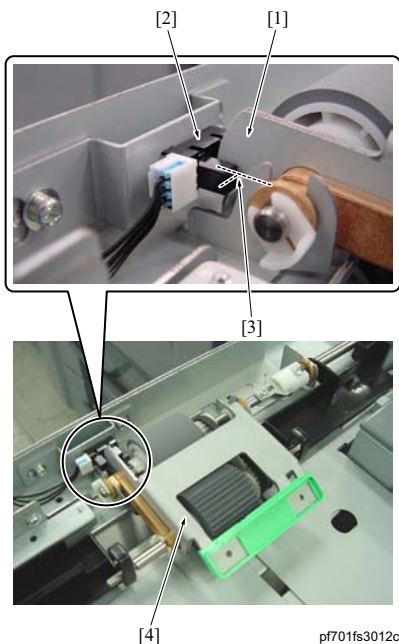
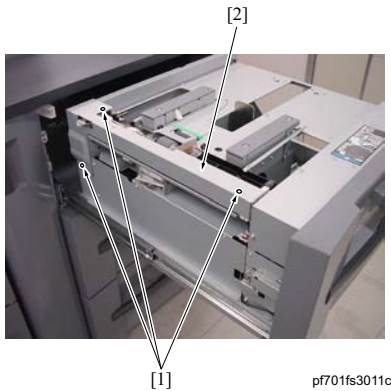
- On performing the pick-up roller height adjustment, the paper feed pick-up amount is changed. Be sure to confirm the paper feed pick-up amount in the paper feed pick-up amount adjustment.

(2) Procedure



pf701fs3010c

1. Pull out the paper feed tray.
2. If any paper remaining, remove it.
3. Push in the release lever [1] and insert the screw [2] into the hole [3] to fasten the release lever [1].
4. Set the tray. Confirm that the paper lift finished its elevation to the top by hearing the sound of the paper lift motor. Pull out the tray again.
Remove the stopper screw of the tray rail and further pull out the tray.



5. Remove 3 screws [1] and remove the paper feed cover [2].

6. Check if the actuator [1] of the pick-up roller assy meets the center [3] of the upper limit sensor/1 (PS2), /2 (PS6), /3 (PS10) [2]
7. Remove the pick-up roller section [4]. (Refer to [F.6.2.1 Removing/reinstalling the pick-up roller assy and the separation roller assy](#))

8. Make a mark [2] of the height of the upper limit sensor mounting plate [1].
9. Remove 2 screws [3], attach and fasten it temporarily on the slotted hole side [4] of the upper limit sensor mounting plate [1].
10. Make vertical adjustments of the upper limit sensor mounting plate [1] and fasten it with the screws [3].

Note

- Be sure to install the upper limit sensor mounting plate [1] so that it becomes level.

Reference:

- Raising the position of the upper limit sensor brings down the pick-up roller [5] (resulting in the increased difference [7] of elevation between the paper feed roller [6] and the pick-up roller [5]).
- Lowering the position of the upper limit sensor brings up the pick-up roller [5] (resulting in the reduced difference [7] of elevation between the paper feed roller [6] and the pick-up roller [5]).
- When the printed page is folded, when paper jam occurs frequently, or when feeding paper with a large amount of curl, raise the upper limit sensor mounting plate.
- When feeding convexly curled paper, lower the upper limit sensor mounting plate.

11. Reinstall the pick-up roller assembly.

Note

- When specifying the tray with the pick-up roller not installed, the paper lift plate does not stop at the upper limit, thus damaging the tray. Be sure to install the pick-up roller.

12. Insert a paper, and set the tray.
13. Perform copying/printing to confirm that the no feed or jam do not occur. In case they are not improved, repeat steps 7 to 14.
14. Check the paper feed pick-up amount. (Refer to [1.11.1 Paper feed pick-up amount adjustment](#))

15. Reinstall the above parts following the removal steps in reverse.

Note

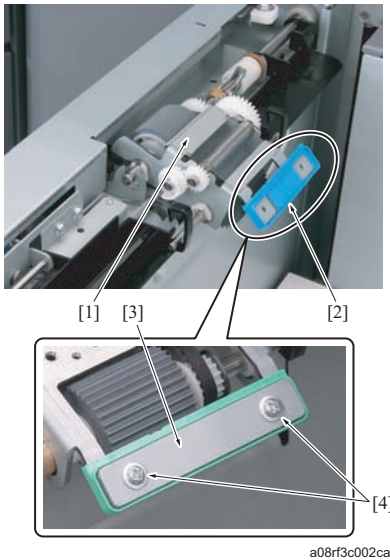
- After completion of adjustment, be sure to remove the screw of the release lever.

11.3 Pick-up roller load adjustment

(1) Usage

In case a no feed jam occurs frequently, perform the pick-up roller load adjustment.

(2) Procedure



1. Pull out the paper feed tray.
2. In the pick-up roller assy [1], put paper feed assist plate [3] on the paper feed assist plate holder [2], and fix them with accompanying screw (M3 x 8mm) [4].

Note

- Up to 8 paper feed assist plates can be attached.
For the number of plates to be attached, refer to "1.8.5 Overlay printing adjustment" and N.13. PAPER SETTING.
- The paper feed assist plate is approx. 10g each.

3. Set the tray.
4. Perform copying/printing to check whether the no feed or the double feed occurs or not.

Note

- When a no feed condition recurs, increase the number of the paper feed assist plates. When a double feed condition occurs, decrease the number of the paper feed assist plates.

5. In case either of no feed or double feed occurs, repeat steps 2 to 4.

11.4 Separation pressure adjustment

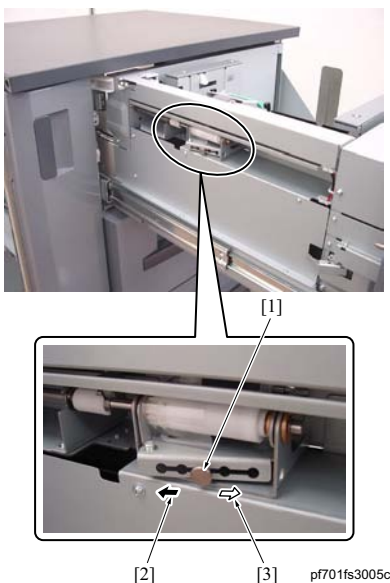
(1) Usage

When a no feed or double feed condition occurs repeatedly, conduct the separation pressure adjustments.

Note

- The no-feed or multi-feed error is most likely to occur due to paper type or operating environment. No feed tends to occur in low temperature environment, whereas high temperature environment results in a higher rate of multi-feed.
- Excess adjustment may reverse the symptom.

(2) Procedure



1. Pull out the paper feed tray.
2. Change the position of the spring adjustment lever [1].
The separation pressure is strengthened when the lever moves to the direction [2] and is weakened when the lever moves to the direction [3].

Weak: a double feed jam is improved.

Strong: a no feed jam is improved.

Reference:

- The pressure applied to the spring increases/decreases by about 10% increment.

3. Make a copy/print with the tray set, and check to see if a no feed or double feed condition occurs.
4. In case either of no feed or double feed occurs, repeat steps 2 to 3.

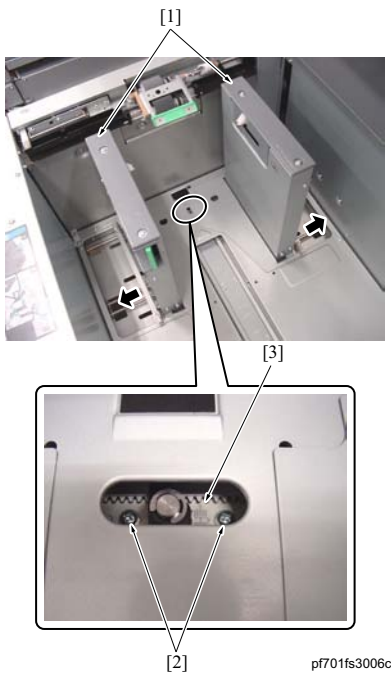
11.5 Centering adjustment (for each tray)

(1) Usage

This adjustment is made when the centering of paper varies each paper supplied from the trays 1, 2 and 3. The centering is automatically adjusted in the image-processing unit, and this adjustment is made only when a centering exceeding the range of auto correction (+/- 5mm) occurs.

Note

- When a mis-centering of the same kind occurs in all of the fed paper from the trays /1 to /3, be sure to conduct "[I.11.6 Centering Adjustment \(PF\)](#)."

(2) Procedure

pf701fs3006c

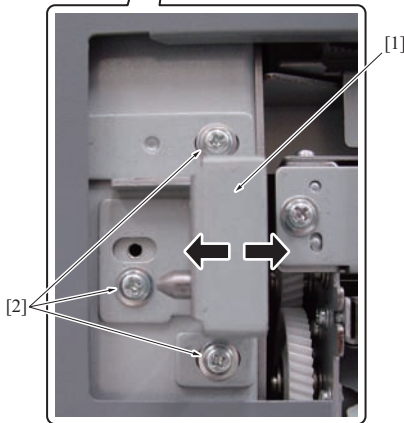
1. Make the software DIPSW12-3 "Printer centering adjustment" disable (data = 1). (Refer to [I.5.5.1 Software DIPSW setting procedures](#))
2. Perform copying/printing without automatic correction to check the centering of image.
3. Pull out the paper feed tray.
4. If any paper remaining, remove it.
5. If the paper guide [1] is at the small-size position, stretch the guide.
6. Loosen 2 screws [2].
7. Move the paper guide [1]. According to the centering you checked in step2, adjust the center position using the marking line [3].
8. Tighten 2 screws [2].
9. Insert a paper, and set the tray.
10. Make a copy/print and check to see if the centering is within the standard value (+/- 2mm).
11. When not up to the standard value, repeat the steps 3 to 10.
12. Make the software DIPSW12-3 "Printer centering adjustment" disable (data = 0).

11.6 Centering Adjustment (PF)**(1) Usage**

Conduct this adjustment when a mis-centering of the same kind occurs in all the fed paper from the PF trays 1, 2 and 3. The centering is automatically adjusted in the image-processing unit, and this adjustment is made only when a centering exceeding the range of auto correction (+/- 5mm) occurs.

Note

- When mis-centering of paper is different for each of the trays 1 to 3, be sure to conduct "[I.11.5 Centering adjustment \(for each tray\)](#)".

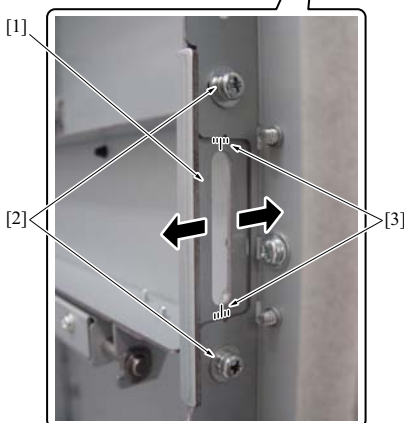
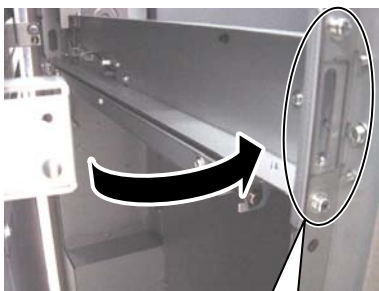
(2) Procedure

pf701fs3007d

1. Make the software DIPSW12-3 "Printer centering adjustment" disable (data = 1). (Refer to [1.5.5.1 Software DIPSW setting procedures](#))
2. Make a copy/print for each of the trays 1 to 3, and make sure of the mis-centering of image with no automatic adjustment made.
3. Turn OFF the sub power switch (SW2) and the main power switch (SW1) of the main body and unplug the power plug from the power outlet.
4. Detach the PF from the main body. (Refer to "Installation manual.")
5. Loosen 3 screws [2] of the PF positioning bracket /Fr [1] on the main body side.
6. Move the PF positioning bracket /Fr [1] back and forth, and adjust the center position referring to the amount of discrepancy found in the step2.
7. Tighten 3 screws [2].
8. Connect the PF to the main body.
9. Connect the power plug of the main body to the power outlet and turn on the main power switch (SW1) and the power switch (SW2) of the main body.
10. Make a copy/print for each tray1 to tray3 to check the mis-centering to see if it is within the standard value ($\pm 2\text{mm}$).
11. When not up to the standard value, repeat the steps 3 to 10.
12. Make the software DIPSW12-3 "Printer centering adjustment" disable (data = 0).

11.7 Tilt adjustment**(1) Usage**

Conduct this adjustment when the copy/print image tilt is found in all of the fed paper from the PF trays /1, /2 and /3.

(2) Procedure

pf701fs3008c

1. Turn OFF the sub power switch (SW2) and the main power switch (SW1) of the main body and unplug the power plug from the power outlet.
2. Detach the front side of the PF from the main body. (Refer to "Installation manual.")
3. Loosen 2 screws [2] of the positioning mounting metal fitting /Fr [1] on the PF side.
4. Move the positioning mounting metal fitting /Fr [1] back and forth, and adjust the tilt referring to the marking-off line [3].
5. Tighten 2 screws [2].
6. Connect the power plug of the main body to the power outlet and turn on the main power switch (SW1) and the power switch (SW2) of the main body.
7. Make a copy/print for each of the trays /1 to /3 and check to see if the tilt of the image has been adjusted.
8. When it has not been adjusted, repeat the steps 1 to 7.

11.8 Horizontal adjustment

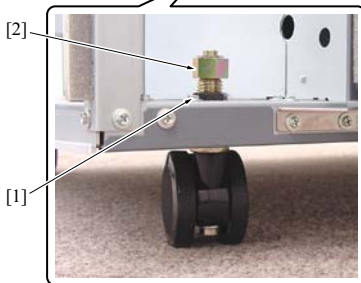
(1) Usage

Conduct this adjustment when the device cannot be placed in a horizontal position or when any discrepancy in height and/or tilt is found between the device and the main body.

Note

- Conducting horizontal adjustments may cause slipping-off of the position relative to the main body. So, after completion of adjustments, be sure to make a test copy/print to check to see if the paper feed is properly made from the PF.

(2) Procedure



pf701fs3009c

1. Turn OFF the sub power switch (SW2) and the main power switch (SW1) of the main body and unplug the power plug from the power outlet.
2. Detach the PF from the main body. (Refer to "Installation manual.")
3. Loosen the caster nuts [1] provided at the 2 places.
4. Use a wrench to rotate the caster nuts [2] provided at the 2 places and make horizontal adjustments of the device.

Note

- Be sure to take into account the height against the main body when making adjustments.

5. Rotate slightly by hand the caster nuts [2] at the 2 places to check to see if there is any caster being raised.

Note

- When any caster is found raised, use a wrench to rotate the nut [2] to extend the caster until you get a feel for secure contact.

6. Fasten the nut [2] with a wrench and tighten up the nut [1].

Note

- Be careful that when the nut [1] is tightened up with the nut [2] being not fastened, the nut [2] also rotates together with the nut [1], thus resulting in an incorrect position adjustment.

12. MECHANICAL ADJUSTMENT PF-703

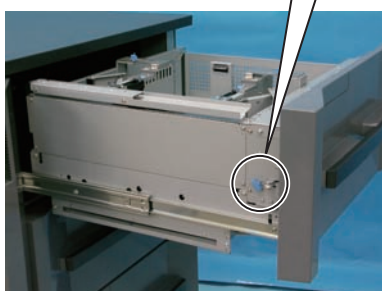
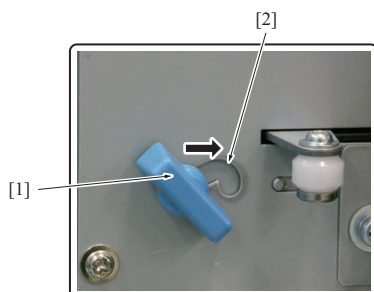
12.1 Paper height adjustment

(1) Usage

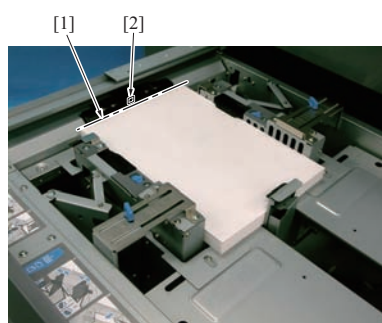
Conduct the paper height adjustment when a no feed condition, paper edge folding, or jams occur repeatedly during feeding paper, or in the case of feeding paper with a large amount of curl.

The gap between the height of the paper top and the height of the paper path on the paper feed belt is decided with the paper height adjustment.

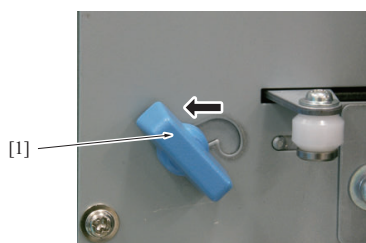
(2) Procedure



a0g6f3c100ca



a0g6f3c101ca

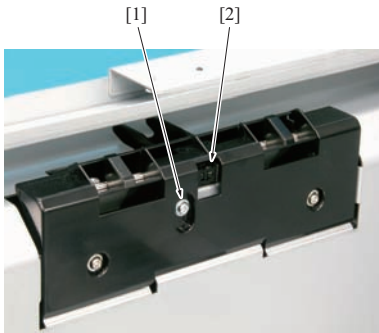


a0g6f3c102ca

1. Pull out the paper feed tray.
2. Loosen the screw [1] and move to [2].
3. Put the paper and set the tray. Confirm that the paper lift finished its elevation to the top by hearing the sound of the paper lift motor. Pull out the tray again.

4. Check the heights of the paper top [1] and the upper limit sensors / 1 (PS5), /2 (PS6), and /3 (PS10) [2].

5. Loosen the screw [1] and move back to the original position, and then lower the paper lift plate.



a0g6f3c103ca

6. Loosen the screw [1] and adjust the height of the upper limit sensors /1 (PS5), /2 (PS6), and /3 (PS10) [2].

Note

- The shift amount of the upper limit sensors /1 (PS5), /2 (PS6), and /3 (PS10) [2] is the shift amount of the paper height.

7. Perform copying/printing to confirm that the no feed or jam do not occur. In case they are not improved, repeat steps 1 to 6.

12.2 Centering adjustment (for each tray)

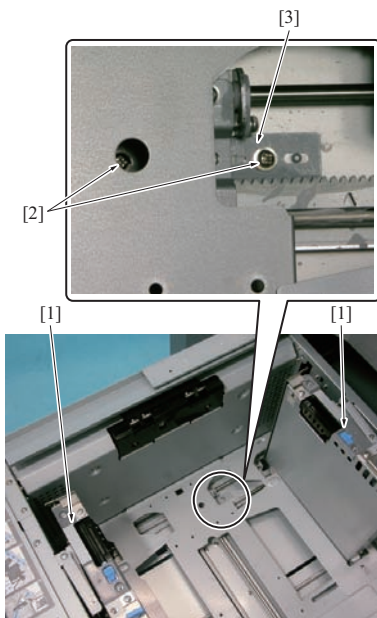
(1) Usage

This adjustment is made when the centering of paper varies each paper supplied from the trays 1, 2 and 3. The centering is automatically adjusted in the image-processing unit, and this adjustment is made only when a centering exceeding the range of auto correction (+/- 5mm) occurs.

Note

- When a mis-centering of the same kind occurs in all of the fed paper from the trays /1 to /3, be sure to conduct "[I.11.6 Centering Adjustment \(PF\)](#)."

(2) Procedure



a0g6f3c104ca

1. Make the software DIPSW12-3 "Printer centering adjustment" disable (data = 1). (Refer to [I.5.5.1 Software DIPSW setting procedures](#))
2. Perform copying/printing without automatic correction to check the centering of image.
3. Pull out the paper feed tray.
4. If any paper remaining, remove it.
5. If the paper guide [1] is at the small-size position, stretch the guide.
6. Loosen 2 screws [2].
7. Move the paper guide [1]. According to the centering you checked in step2, adjust the center position using the marking line [3].
8. Tighten 2 screws [2].
9. Insert a paper, and set the tray.
10. Make a copy/print and check to see if the centering is within the standard value (+/- 2mm).
11. When not up to the standard value, repeat the steps 3 to 10.
12. Make the software DIPSW12-3 "Printer centering adjustment" disable (data = 0).

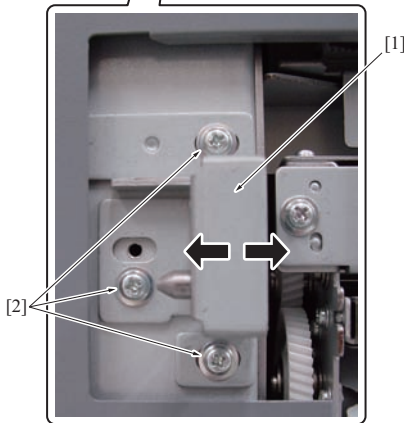
12.3 Centering Adjustment (PF)

(1) Usage

Conduct this adjustment when a mis-centering of the same kind occurs in all the fed paper from the PF trays 1, 2 and 3. The centering is automatically adjusted in the image-processing unit, and this adjustment is made only when a centering exceeding the range of auto correction (+/- 5mm) occurs.

Note

- When mis-centering of paper is different for each of the trays1 to 3, be sure to conduct "[I.11.5 Centering adjustment \(for each tray\)](#)".

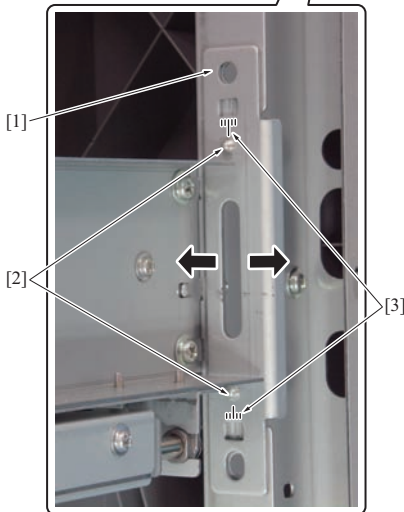
(2) Procedure

pf701fs3007d

1. Make the software DIPSW12-3 "Printer centering adjustment" disable (data = 1). (Refer to [1.5.5.1 Software DIPSW setting procedures](#))
2. Make a copy/print for each of the trays 1 to 3, and make sure of the mis-centering of image with no automatic adjustment made.
3. Turn OFF the sub power switch (SW2) and the main power switch (SW1) of the main body and unplug the power plug from the power outlet.
4. Detach the PF from the main body. (Refer to "Installation manual.")
5. Loosen 3 screws [2] of the PF positioning bracket /Fr [1] on the main body side.
6. Move the PF positioning bracket /Fr [1] back and forth, and adjust the center position referring to the amount of discrepancy found in the step2.
7. Tighten 3 screws [2].
8. Connect the PF to the main body.
9. Connect the power plug of the main body to the power outlet and turn on the main power switch (SW1) and the power switch (SW2) of the main body.
10. Make a copy/print for each of the trays 1 to 3 to check the mis-centering to see if it is within the standard value ($\pm 2\text{mm}$).
11. When not up to the standard value, repeat the steps 3 to 10.
12. Make the software DIPSW12-3 "Printer centering adjustment" disable (data = 0).

12.4 Tilt adjustment**(1) Usage**

Conduct this adjustment when the copy/print image tilt is found in all of the fed paper from the PF trays 1, 2 and 3.

(2) Procedure

pf701fs3008d

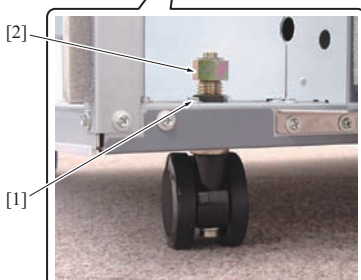
1. Turn OFF the sub power switch (SW2) and the main power switch (SW1) of the main body and unplug the power plug from the power outlet.
2. Detach the front side of the PF from the main body. (Refer to "Installation manual.")
3. Loosen 2 screws [2] of the positioning mounting metal fitting /Fr [1] on the PF side.
4. Move the positioning mounting metal fitting /Fr [1] back and forth, and adjust the tilt referring to the marking-off line [3].
5. Tighten 2 screws [2].
6. Connect the power plug of the main body to the power outlet and turn on the main power switch (SW1) and the power switch (SW2) of the main body.
7. Make a copy/print for each of the trays 1 to 3 and check to see if the tilt of the image has been adjusted.
8. When it has not been adjusted, repeat the steps 1 to 7.

12.5 Horizontal adjustment**(1) Usage**

Conduct this adjustment when the device cannot be placed in a horizontal position or when any discrepancy in height and/or tilt is found between the device and the main body.

Note

- Conducting horizontal adjustments may cause slipping-off of the position relative to the main body. So, after completion of adjustments, be sure to make a test copy/print to check to see if the paper feed is properly made from the PF.

(2) Procedure

pf701fs3009d

1. Turn OFF the sub power switch (SW2) and the main power switch (SW1) of the main body and unplug the power plug from the power outlet.
2. Detach the PF from the main body. (Refer to "Installation manual.")
3. Loosen the caster nuts [1] provided at the 2 places.
4. Use a wrench to rotate the caster nuts [2] provided at the 2 places and make horizontal adjustments of the device.

Note

- Be sure to take into account the height against the main body when making adjustments.

5. Rotate slightly by hand the caster nuts [2] at the 2 places to check to see if there is any caster being raised.

Note

- When any caster is found raised, use a wrench to rotate the nut [2] to extend the caster until you get a feel for secure contact.

6. Fasten the nut [2] with a wrench and tighten up the nut [1].

Note

- Be careful that when the nut [1] is tightened up with the nut [2] being not fastened, the nut [2] also rotates together with the nut [1], thus resulting in an incorrect position adjustment.

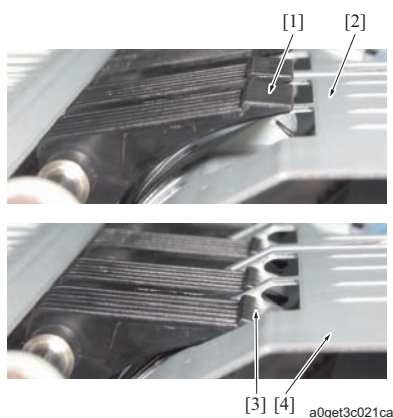
13. MECHANICAL ADJUSTMENT RU-506

13.1 Straight gate solenoid (SD1) position adjustment

(1) Usage

Conduct this adjustment when replacing the straight gate solenoid (SD1).

(2) Procedure



1. Turn OFF the straight gate solenoid (SD1) manually and check that its edge [1] is above the guide plate [2]. At the same time turn ON the plunger and check the edge [3] of the straight is below the guide plate [4].

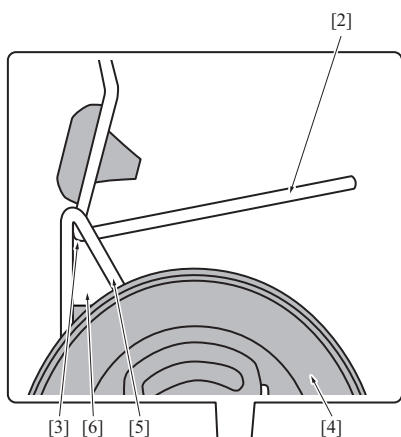


2. When it is not within the adjustment range, loosen 2 fixing screws [2] and slide upward/downward the SD1 [1] to adjust the position.

13.2 Position adjustment of the stacker exit shutter solenoid (SD2)

(1) Usage

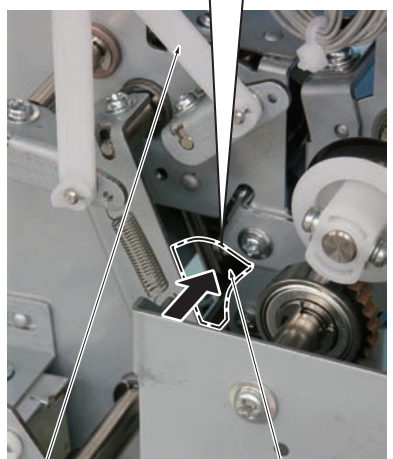
Conduct this adjustment when replacing the stacker exit shutter solenoid (SD2).

(2) Procedure

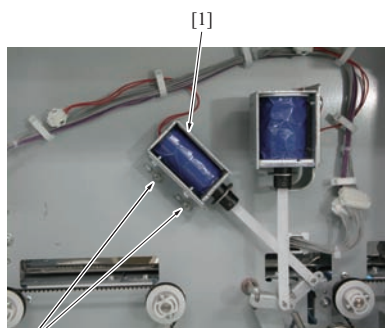
1. Turn ON the stacker exit shutter solenoid (SD2) [2] manually and check that its edge [3] is inside the folded area [6] of the guide plate [5] of the paper re-feed roller [4].

Note

- Check it from the opening [7].



[1] [7] a0gef3c024ca

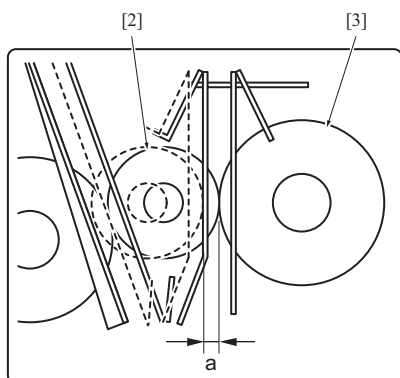


[1] [2] a0gef3c002ca

2. When it is not within the adjustment range, loosen 2 fixing screws [2] and slide SD2 [1] to left/right to adjust the position.

13.3 Position adjustment of the stack switching solenoid (SD3)**(1) Usage**

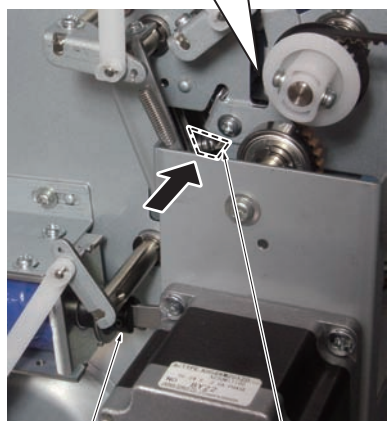
Conduct this adjustment when replacing the stack switching solenoid (SD3).

(2) Procedure

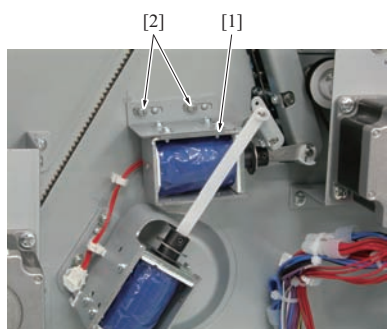
1. Turn OFF the plunger [1] of the stack switching solenoid (SD3) manually and check that the driven roller [2] is in contact with the paper re-feed roller [3]. Then turn ON to check that the gap between them is same as or larger than the standard value "a". Standard value "a": The gap between the driven roller [2] and the re-feed roller [3] is 2mm or more.

Note

- Check it from the opening [4].



a0gef3c027ca

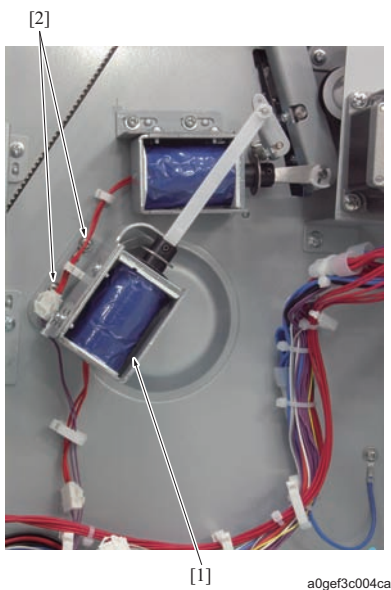
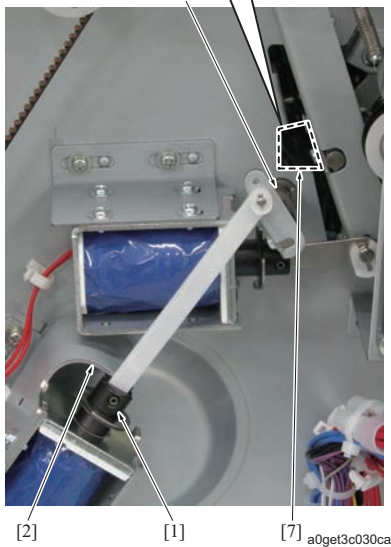
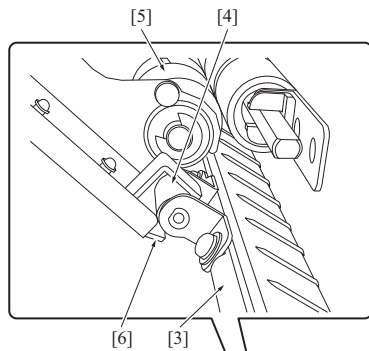


a0gef3c003ca

2. When it is not within the adjustment range, loosen 2 fixing screws [2] and slide SD3 [1] to left/right to adjust the position.

13.4 Position adjustment of the stacker entrance guide plate solenoid (SD4)**(1) Usage**

Conduct this adjustment when replacing the stacker entrance guide plate solenoid.

(2) Procedure

1. Be sure to fix the stacker entrance guide plate solenoid assy at the position where the roller [4] installed to the drive shaft [3] of the solenoid starts pushing the mounting bracket [6] of the stacker entrance roller [5] with the plunger [1] touching with the mounting bracket [2].

Note

- Check it from the opening [7].

2. When it is not within the adjustment range, loosen 2 fixing screws [2] and slide upward/downward the SD4 [1] to adjust the position.

14. MECHANICAL ADJUSTMENT FS-521

14.1 Adjusting the flat-stapling stopper position

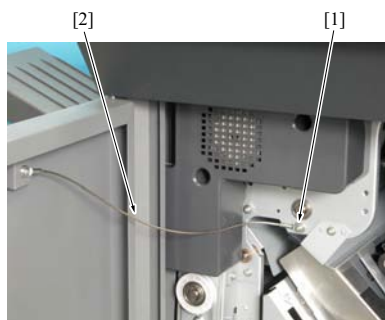
(1) Usage

In the flat-stapling mode, adjustments are made when the distance from the edge of paper to the stapling position is not within the standard value, or when it is on a slant.

Note

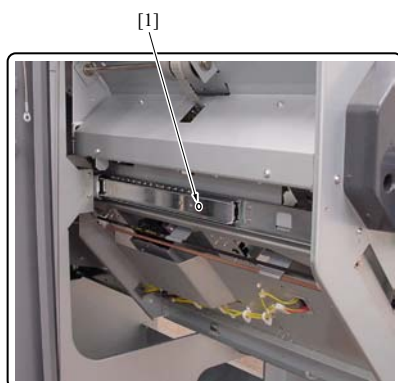
- When making adjustments, be sure not to move the stapler by hand. (It causes the teeth of the belt and the gear to jump.)

(2) Procedure

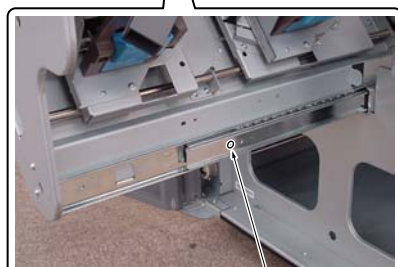
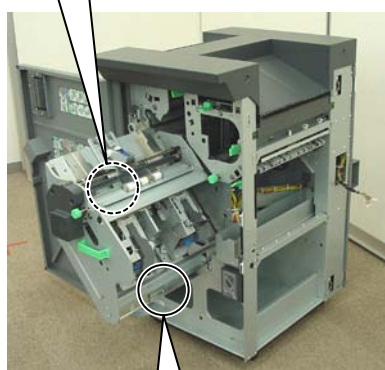


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- Conduct the following in the output check of the I/O check mode in the service mode.
 - 72-31 (Stapler movement motor home position search)
 - 72-78 (Alignment motors /Fr and /Rr home position search)
 - 72-42 (Rear stopper motor stopper release)
- Turn OFF the power switch (SW2) and the main power switch (SW1) of the main body and unplug the power plug from the power outlet.
- Open the front door and remove the screw [1] of the wire [2].

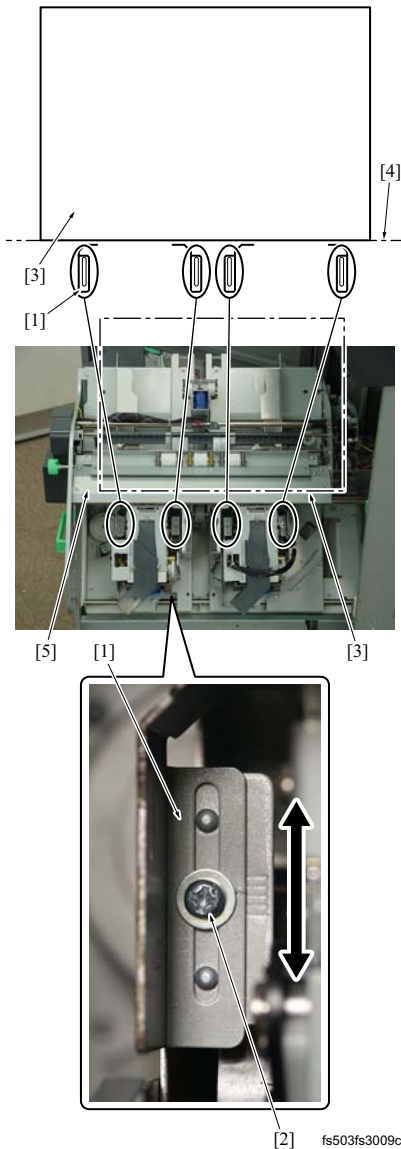


- Pull out the stacker unit, remove the rail stopper screws [1], 1 each, in front and rear and pull the stacker unit further out.



[1]

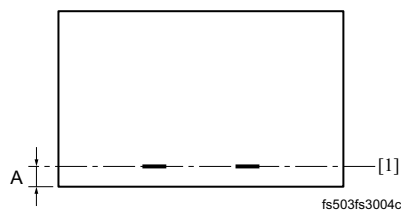
fs503fs3002c



5. Loosen the screws [2], 1 each, of 4 flat-stapling stopper [1] and make adjustments of the positions of the 4 flat-stapling stoppers.

Note

- With the paper [3] inserted, be sure to check to see if the paper is on a slant and that all of 4 flat-stapling stoppers are in contact with the edge [4] of paper.
- When the stopper is not seen clearly, be sure to adjust it after removing the guide plate assembly [5].



6. Conduct flat-stapling to check to see if it is within the standard value.
- Standard value: $a = 9.5 \pm 2\text{mm}$
 - The line [1] connecting 2 staples is parallel to the edge of paper.
 - When the value is not within the standard value or the line is not parallel to the edge of paper, repeat the above steps 1 to 6.
7. Reinstall the above parts following the removal steps in reverse.

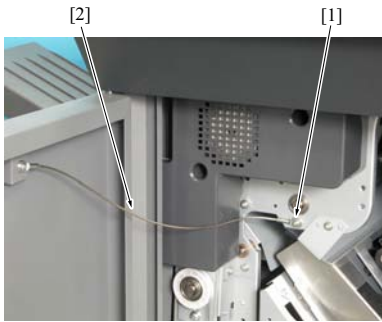
14.2 Adjusting the alignment plate position

(1) Usage

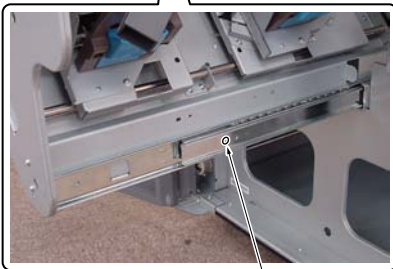
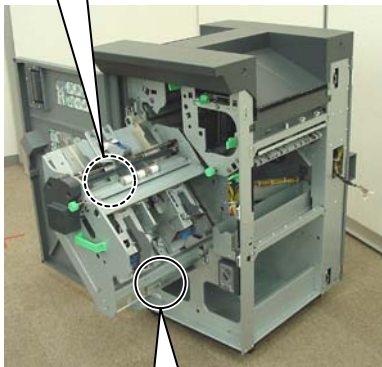
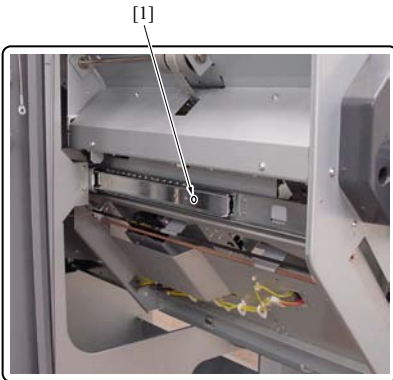
Conduct this adjustment operation when the slippage in the bundle of paper while in stapling and the uneven paper exit while in non-stapling cannot be adjusted by conducting "Staple Center Position", "Paper Width Adj.(Staple)" and "Paper Width Adj.(Straight)" in the service mode.

Note

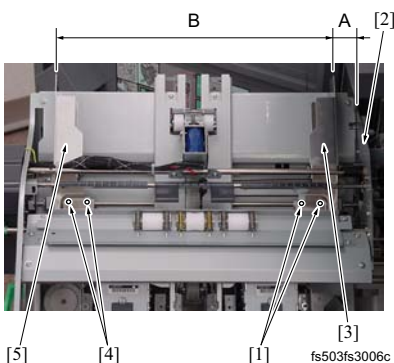
- After conducting this adjustment, be sure to conduct "[I.5.8.1 Staple Center Position \(Staple Finisher Position Adjustment\)](#)", "[I.5.8.2 Paper Width Adj.\(Staple\) \(Staple Finisher Position Adjustment\)](#)" and "[I.5.8.3 Paper Width Adj.\(Straight\) \(Staple Finisher Position Adjustment\)](#)" again.

(2) Procedure

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1. Reset the setting values of "Staple Center Position", "Paper Width Adj.(Staple)" and "Paper Width Adj.(Straight)" to "0".
2. Conduct the alignment motors /Fr and /Rr home position movement in the output check 72-78 of the I/O check mode in the service mode.
3. Turn OFF the main power switch (SW1) of the main body, and unplug the power plug of the main body from the power outlet.
4. Open the front door and remove the screw [1] of the wire [2].

5. Pull out the stacker unit, remove the rail stopper screws [1], 1 each, in front and rear and pull the stacker unit further out.

6. Loosen 2 screws [1] and check to see if the distance from the front side of the side plate [2] in the rear to the paper side of the alignment plate /Rr [3] is within the standard value A, and then tighten the screws [1].
Standard value A = $17.9 + 1.0 / - 0.0\text{mm}$
7. Check the alignment plate /Rr to see if it is on a slant. Loosen 2 screws [4] and check to see if the distance between the alignment plate /Rr [3] and the inner face on the paper side of the alignment plate /Fr [5] is within the standard value B, and then tighten the screws [4].
Standard value: B = $376\text{mm} + 0 / - 0.5\text{mm}$
8. Move the staple home position using I/O check mode 72-31 in service mode, insert a thick paper or similar sheet, and check the angle of the rear end stopper and the alignment plate.

Note

- Move the alignment plates with your hand until the paper width space is created between them, and make sure

there is no improper gap at the upper and lower side of the alignment plates.

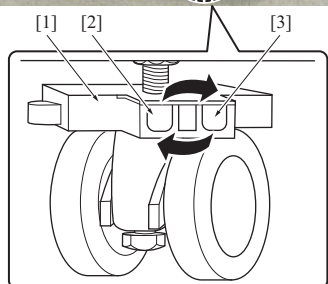
9. Reinstall the above parts following the removal steps in reverse.

14.3 Horizontal adjustment

(1) Usage

Adjustments are made when there is any discrepancy in height and slant found between the main body and other optional devices.

(2) Procedure



a0gyf3c001ca

1. Conduct the horizontal adjustment by inserting the driver to the holes [2] and [3] on each of 4 ratchet material [1] and moving it back and forth. It goes up with the hole [2] and goes down with the hole [3].

Note

- Be sure to make adjustments while considering the height between the main body and other optional devices.
- Be sure not to go it up too much, otherwise the bolt comes off. (max. $\pm 5\text{mm}$)
- Be sure that the caster is contacting installation surface, otherwise the ratchet does not work. In this case, adjust the casters which are on the ground first to get the casters spinning to be on the ground.

15. MECHANICAL ADJUSTMENT LS-505

15.1 Adjusting the paper press solenoid /1 (SD6)

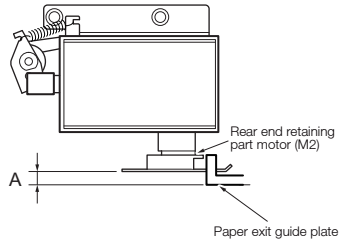
(1) Usage

Conduct this adjustment when uneven stack occurs.

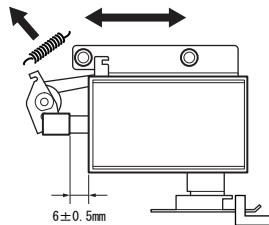
Note

- Before starting this operation, be sure to bring the stacker tray down to the bottom in advance.

(2) Procedure



- With the paper press solenoid /1 (SD6) turned on by hand, check to see if the A section in the drawing left is 1.5mm to 3mm.



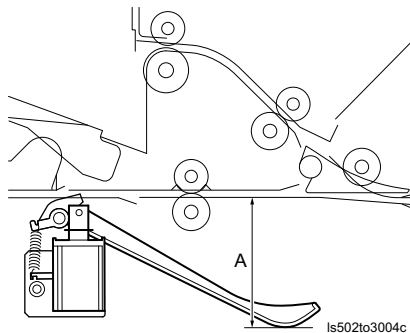
- When not in the range of adjustment, remove the spring, loosen the fixing screw of the paper press solenoid /1 (SD6), and make adjustment by moving it from side to side so that the range of the SD stroke becomes $6 \pm 0.5\text{mm}$.

15.2 Adjusting the paper press solenoid /2 (SD7)

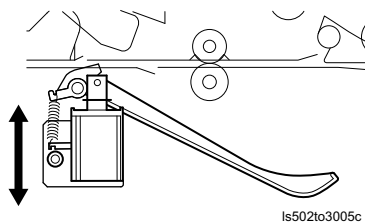
(1) Usage

Conduct this adjustment when uneven stack occurs with the B4 or larger paper.

(2) Procedure



- With the paper press solenoid /2 (SD7) turned OFF by hand, check to see if the A section in the drawing left is $66 \pm 2\text{mm}$.

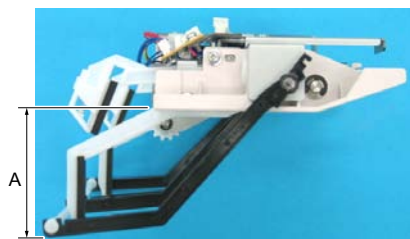


- When not in the range of adjustment, loosen the fixing screw of the paper press solenoid /2 (SD7) and make adjustments by sliding it up and down.

15.3 Adjusting the paper press solenoid /3 (SD8)

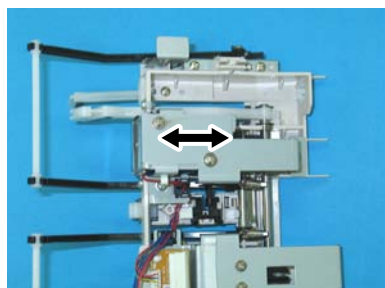
(1) Usage

Conduct this adjustment when uneven stack occurs.

(2) Procedure

ls502fs3006c

1. With the paper press solenoid /3 (SD8) turned OFF by hand, check to see if the A section in the drawing left is $50.1 \pm 1\text{mm}$.

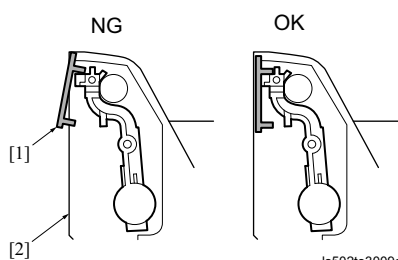


ls502fs3007c

2. When not in the range of adjustment, loosen the fixing screw of the paper press solenoid /3 (SD8) and make adjustments by sliding it from side to side.

15.4 Adjusting the job partition solenoid (SD2)**(1) Usage**

Conduct this adjustment when uneven stack occurs with the shift paper and non-shift paper in the sort mode.

(2) Procedure

ls502to3009c

1. With the job partition solenoid (SD2) turned ON by hand, check to see if the job partition blade [1] in the drawing left does not protrude from the metal frame [2].

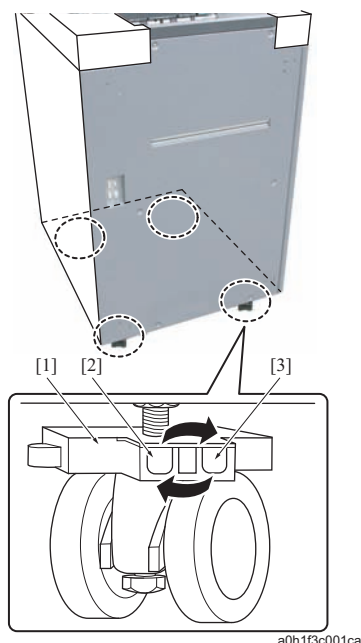


ls502fs3008c

2. When not in the range of adjustment, loosen the fixing screw of the job partition solenoid (SD2) and make adjustments by sliding it from side to side.

15.5 Horizontal adjustment**(1) Usage**

Adjustments are made when there is any discrepancy in height and slant found between the main body and other optional devices.

(2) Procedure

1. Conduct the horizontal adjustment by inserting the driver to the holes [2] and [3] on each of 4 ratchet material [1] and moving it back and forth. It goes up with the hole [2] and goes down with the hole [3].

Note

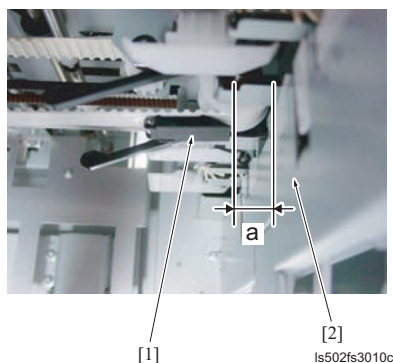
- Be sure to make adjustments while considering the height between the main body and other optional devices.
- Be sure not to go it up too much, otherwise the bolt comes off. (max. $\pm 5\text{mm}$)
- Be sure that the caster is contacting installation surface, otherwise the ratchet does not work. In this case, adjust the casters which are on the ground first to get the casters spinning to be on the ground.

15.6 Grip conveyance home sensor adjustment**(1) Usage**

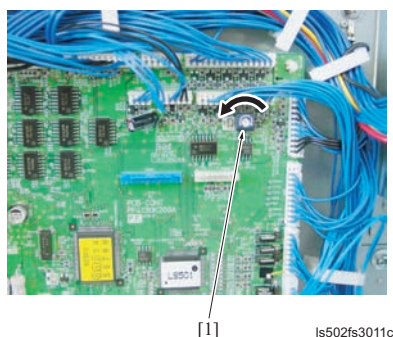
Conduct this adjustment when the grip standby position on the grip belt is improper to receive the paper or when the shift unit drive abnormality occurs.

Note

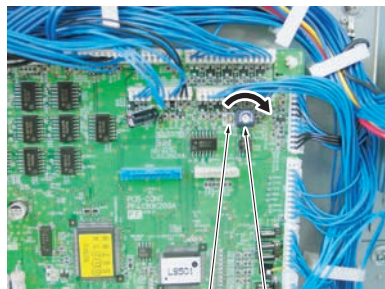
- When the shift unit drive abnormality (C-1204: 1st tandem, C-1214: 2nd tandem) occurs after replacing the LS control board (LSCB), conduct the following adjustment.

(2) Procedure

1. Turn ON the power of the main body.
2. Move the grip belt by hand and stop it at the position in which the leading edge of the grip [1] is about 4mm from the stack exit guide plate [2].
a: approx. 4mm



3. Rotate VR1 [1] on the LS control board (LSCB) fully to the left.



[2]

[1]

ls502fs3012c

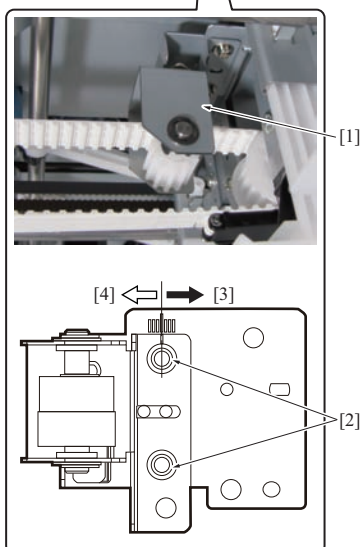
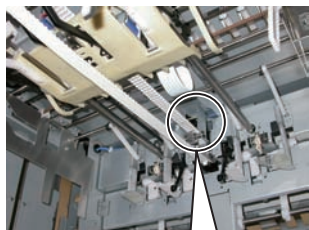
4. Rotate VR1 [1] to the right and stop it at the position in which LED2 [2] turns ON from flashing.

Note

- When LED2 is rotated too much from the turn-on position to the flashing position, repeat the procedure starting at Step2.

5. After completion of adjustment, turn off and on the power of the main body and check if the interval "a" between the edge of the grip and the stack exit guide plate is $8 \pm 2\text{mm}$.

6. When the interval is not within the standard value, change the position of the sensor mounting plate [1]. Loosen 2 screws [2] and slide the sensor mounting plate to the right [3] to widen the interval "a". Slide the plate to the left [4] to narrow the interval.



16. MECHANICAL ADJUSTMENT FD-503

16.1 Roller solenoids /1 (SD5), /2 (SD6), /3 (SD7) and /4 (SD8) position adjustment

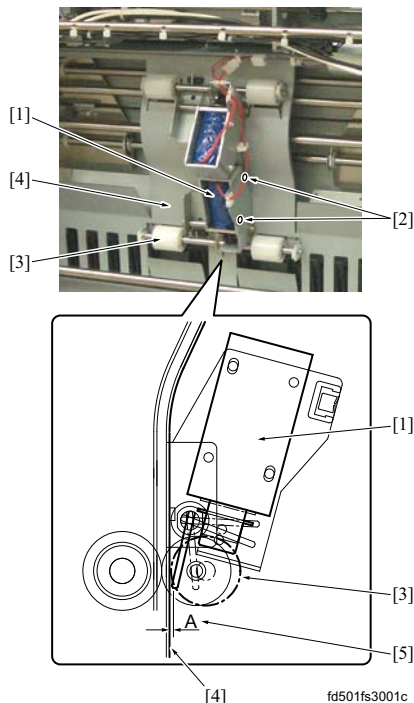
(1) Usage

When the roller solenoids /1 (SD5), /2 (SD6), /3 (SD7), /4 (SD8) are changed, be sure to conduct this adjustment.

Note

- The following adjustment steps show the steps for the roller solenoid /2 (SD6). The steps for the roller solenoids /1 (SD5), /3 (SD7) and /4 (SD8), are the same as the steps for the roller solenoid /2.

(2) Procedure

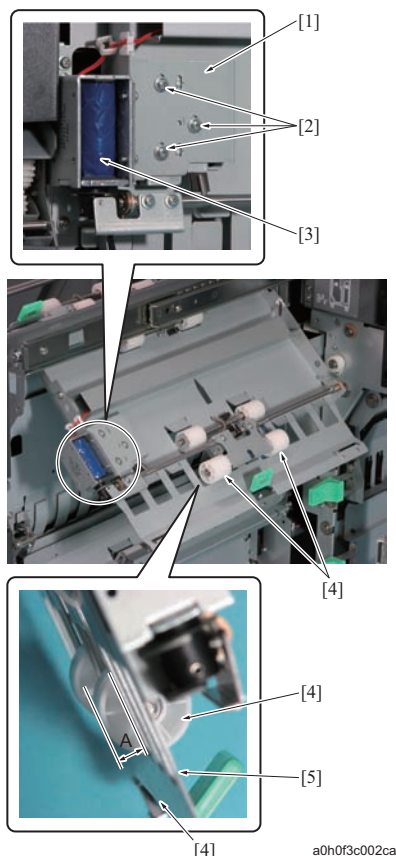


- Loosen 2 screws [2] of the roller solenoid /2 (SD6) [1].
- Measure the distance A [5] between the end face of the vertical conveyance roller /Lt [3] and the right side (the opposite of the paper through side) of the guide plate [4] when the roller solenoid /2 (SD6) [1] is turned ON, and then tighten the screw [2] after adjusting the distance so that it becomes the standard value. Standard value: A = 0mm to 1.5mm

16.2 2nd folding roller solenoid (SD18) position adjustment

(1) Usage

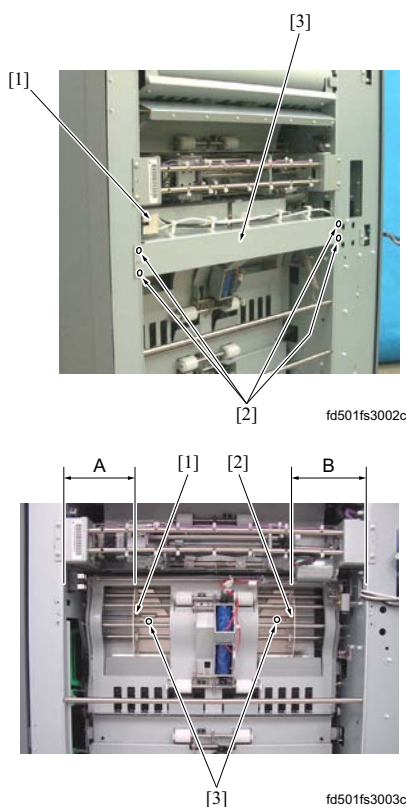
Conduct this adjustment when replacing the 2nd folding roller solenoid (SD18).

(2) Procedure

1. Loosen 3 screws [2] on the 2nd folding roller solenoid mounting plate [1].
2. Measure the gap A which the vertical conveyance roller /Lt [4] is out from the guide plate [5] when the 2nd folding roller solenoid (SD18) [3] is ON.
3. Adjust the mounting position so that the gap A is within the standard value shown in the following table, and then loosen 3 screws [2].
Standard value: A = 4mm to 5mm

16.3 Punch Centering Adjustment**(1) Usage**

When the front to rear position of the punch holes cannot be adjusted up to the specification in the paper width adjustment, be sure to conduct this adjustment. (Refer to [1.5.8.6 Paper Width Adjustment \(Multi Folder\(Punch\) Adj.\)](#))

(2) Procedure

1. Disconnect the connector [1] and 4 screws [2], and then remove the cord support board /A [3].

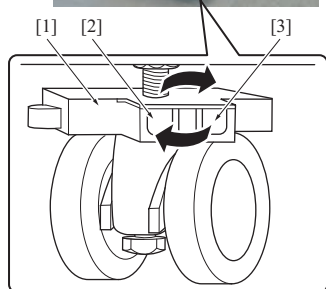
2. With the alignment plate /Fr [1] and the alignment plate /Rr [2] moved to the center, loosen the 2 screws [3].
3. Measure the distances A and B using a ruler and adjust the positions of the alignment plate /Fr [1] and the alignment plate /Rr [2] so that the distances A and B become equal, and then tighten 2 screws [3].
4. Reinstall the above parts following the removal steps in reverse.

16.4 Horizontal adjustment

(1) Usage

Conduct this adjustment when there is any discrepancy in height and slant found between the main body and other optional devices.

(2) Procedure



a0h0f3c001ca

1. Conduct the horizontal adjustment by inserting the driver to the holes [2] and [3] on each of 4 ratchet material [1] and moving it back and forth. It goes up with the hole [2] and goes down with the hole [3].

Note

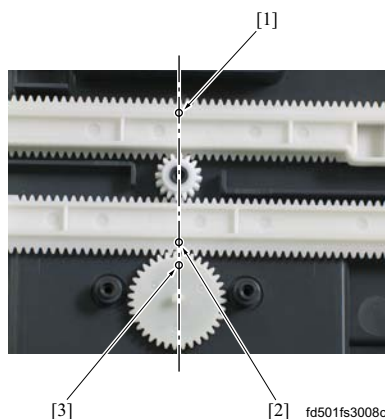
- Be sure to make adjustments while considering the height between the main body and other optional devices.
- Be sure not to go it up too much, otherwise the bolt comes off. (max. $\pm 5\text{mm}$)
- Be sure that the caster is contacting installation surface, otherwise the ratchet does not work. In this case, adjust the casters which are on the ground first to get the casters spinning to be on the ground.

16.5 Paper feed control gear position adjustment (PI tray)

(1) Usage

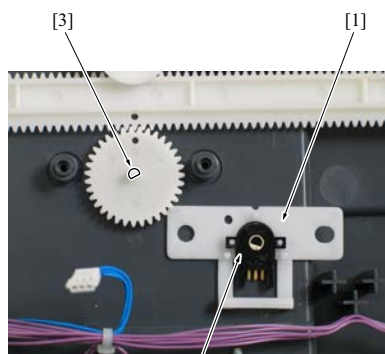
Conduct this adjustment when the paper size detection of PI does not work properly.

(2) Procedure

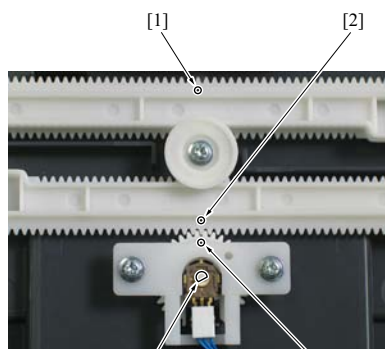


fd501fs3008c

1. Install the regulation plate rack A [1] and the regulation rack B [2] so that they are aligned with the reference hole of the detection gear [3].



fd501fs3009c



fd501fs3010c

2. Check the paper size VR [2] to ensure it is held by the 2 bosses on the paper size VR mounting plate [1].
3. Install the paper size VR [2] so that the notch of its center hole is set to the notch of the detection gear [3].

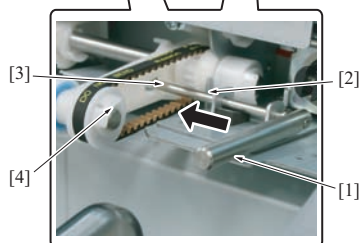
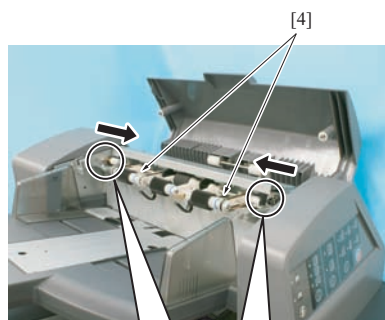
4. Check to see if the regulation plate rack A [1], the regulation plate rack B [2], the hole position of the detection gear [3] and the notch position of the paper size VR [4] are in the correct position respectively.

16.6 Paper feed pick-up volume adjustment (PI tray)

(1) Usage

Perform this adjustment when multi-feed or paper jam occurs when feeding paper from the PI.

(2) Procedure



fd501fs3011c

1. Slide 2 papers feed arm fixing levers [1] to inside, and insert the shafts [2] into the holes [3] in the paper feed arm to secure the paper feed arm [4].

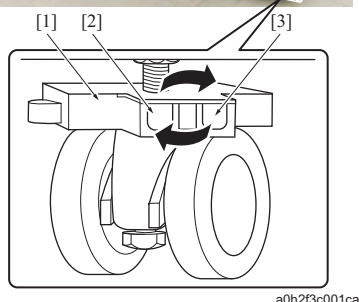
17. MECHANICAL ADJUSTMENT SD-506

17.1 Horizontal adjustment

(1) Usage

Conduct this adjustment when SD is not in a horizontal position.

(2) Procedure



1. Conduct the horizontal adjustment by inserting the driver to the holes [2] and [3] on each of 6 ratchet material [1] and moving it back and forth. It goes up with the hole [2] and goes down with the hole [3].

Note

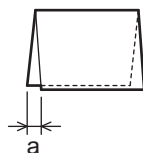
- Be sure to make adjustments while considering the height between the main body and other optional devices.
- Be sure not to go it up too much, otherwise the bolt comes off. (max. $\pm 5\text{mm}$)
- Be sure that the caster is contacting installation surface, otherwise the ratchet does not work. In this case, adjust the casters which are on the ground first to get the casters spinning to be on the ground.

17.2 Folding skew adjustment

(1) Usage

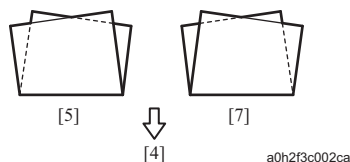
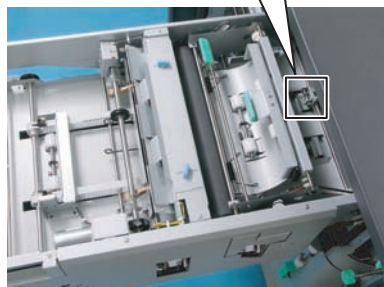
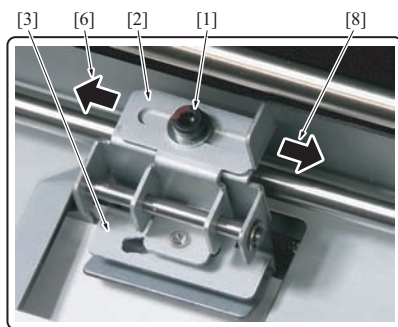
Adjust the skew in the center folding.

(2) Procedure



15anf3c002na

1. Perform the center folding operation for 5 sheets of A3 or 11 x 17 paper and check their skew "a".
Standard value $a = \pm 1.5\text{mm}$
When the value is not within the standard value, perform the following procedure.



2. Open the front door /Rt and pull out the folding unit.
3. Loosen the screw [1], adjust the alignment stopper /Rr2 [3] back and forth by sliding the adjusting bracket [2] to right and left, and tighten the screw [1].

Note

- If the folding pattern on paper exited to the direction of bundle exit tray front side [4] is [5], slide the adjusting bracket [2] in the arrowed direction [6].
- If the folding pattern is [7], slide the adjusting bracket [2] in the arrowed direction [8].
- By sliding the adjusting bracket [2] to 1mm right and left, the alignment stopper /Rr2 [3] moves 1/3mm back and forth.

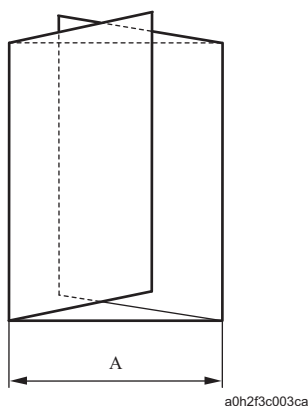
4. Return the folding unit to the original position and repeat the steps 1 through 3 until the standard value can be obtained.

17.3 Second folding position stabilization adjustment**(1) Usage**

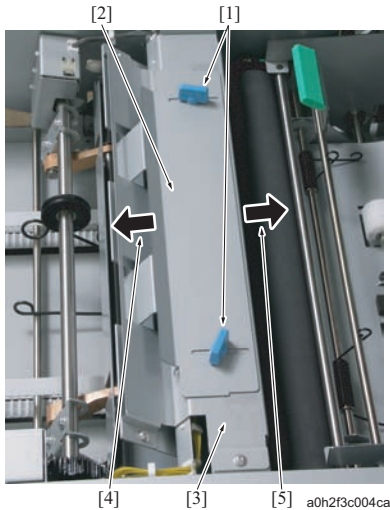
This adjustment is for adjusting the misalignment of the second folding position in tri-folding.

Note

- This adjustment is to adjust the variation per each folding. Adjust the second folding position by following "[1.5.8.22 Tri-Fold Position Adj. \(Saddle Stitcher Pos. Adj.\)](#)".
- Be sure that the adjusting position is vary from the number of folding sheets.

(2) Procedure

1. Conduct the tri-folding with A4S or 8 1/2 x 11S, and check if the interval "A" between the first folding and the second folding is within the standard value.
Standard value A = 102.0mm ± 3mm (A4S)
Standard value A = 96.1mm ± 3mm (8 1/2 x 11S)
When the value is not within the standard value, perform the following procedure.



2. Open the front door /Rt and pull out the folding unit.
3. Loosen 2 screws [1] and move the stopper [2] in parallel back and forth referring to the mark [3].

Note

- Moving to the front side [4] makes the length between the foldings longer.
- Moving to the back side [5] makes the length between the foldings shorter.

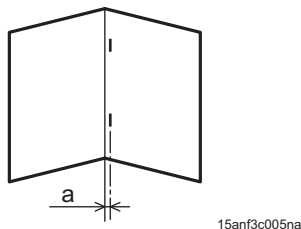
4. Repeat steps 1 to 3 until the standard value is obtained.

17.4 Staple position adjustment

(1) Usage

Adjust the misalignment between the staple position and the folding position.

(2) Procedure



1. Perform the saddle stitching operation for 25 to 30 sheets of A3 or 11 x 17 paper and check the misalignment "a" between the staple position and the folding position.

Standard value $a = \pm 1\text{mm}$

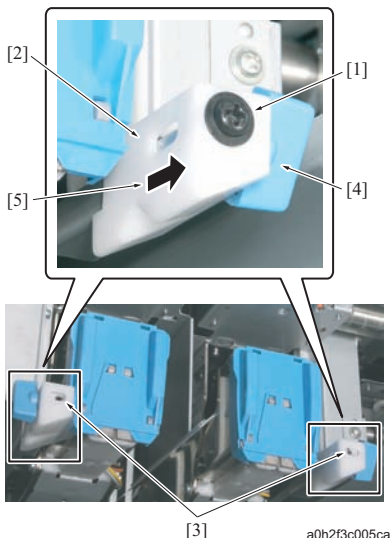
When the value is not within the standard value, conduct "(2).

Adjustment Procedure /1" then "(3). Adjustment Procedure /2" in this order.

(3) Adjustment Procedure /1

Note

- Be sure not to adjust over the allowable value since only the saddle stitching hold /Up is adjusted but the saddle stitching hold /Lw is not.
- When it cannot be adjusted by this simple adjustment (fine adjustment), be sure to conduct "(3). Adjustment Procedure /2".



1. Open the front door /Lt.
2. Install the M4 screw [1] obtained from the exterior and so on into the adjustment screw hole [3] of the saddle stitching hold /Up [2] with your fingers and tighten it slightly until it is contacted.

Note

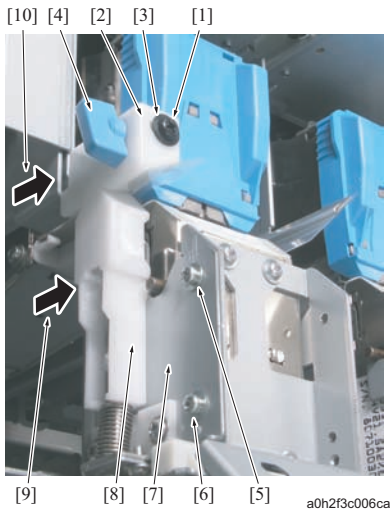
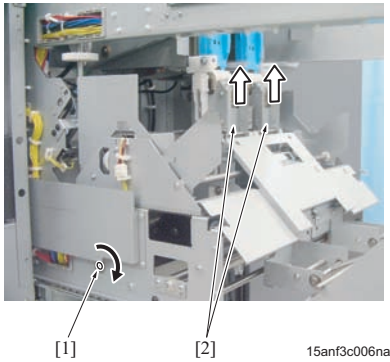
- Do not tighten the screw [1] too tight. Stop tightening when it is contacted.

3. Loosen the screw [4].
4. Rotate the screw [1] to move the position of the saddle stitching hold /Up [2] on both of the stapler /Rt and /Lt for the length of the misalignment "a".

Note

- Rotating the screw [1] 1 revolution moves the saddle stitching hold /Up 0.7mm (same width with staple).
- When the screw [1] is tightened, the staple position moves forward. When the screw [1] is loosened, the staple position moves backward.

5. While pushing the saddle stitching hold /Up [2] to the allowed direction [5] and contacting it to the screw [1], tighten the screw [4].
6. Remove the screw [1] and return it to the original position.
7. Conduct a test print in procedure A, and repeat steps 2 to 6 until the standard value is obtained.

(4) Adjustment Procedure /2

1. Pull out the saddle stitching unit.
(Refer to [F.12.3.3 Pulling out the saddle stitching unit](#))
2. Rotate the screw [1] clockwise until clicked to make the clinchers [2] contact with the staplers and lock the clinchers [2].

3. Install the M4 screw [1] obtained from the exterior and so on into the adjustment screw hole [3] of the saddle stitching hold /Up [2] with your fingers and tighten it slightly until it is contacted.

Note

- Do not tighten the screw [1] too tight. Stop tightening when it is contacted.

4. Loosen the screws [4], [5] and [6].
5. Rotate the screw [1] to move the position of the saddle stitching hold /Up [2] for the length of the misalignment "a".

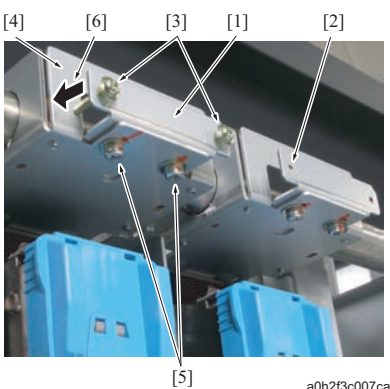
Note

- Rotating the screw [1] 1 revolution moves the saddle stitching hold /Up 0.7mm (same width with staple).
- When the screw [1] is tightened, the staple position moves forward. When the screw [1] is loosened, the staple position moves backward.

6. While pushing the mounting plate [7] to the arrow-marked direction [9] and contacting the saddle stitching hold /Up [2] to the screw [1], tighten the screws [5].
7. While pushing the saddle stitching hold /Up [2] to the arrow-marked direction [10] and contacting the saddle stitching hold /Up to the screw [1], tighten the screw [4], and then tighten the screw [6].
8. Remove the screw [1] and return it to the original position.
9. Return the saddle stitching unit, and then repeat steps 2 to 8 until the standard value can be obtained.

17.5 Stapler position adjustment**(1) Usage**

Conduct this adjustment when a broken staple, a bent staple, or a defective staple occurs in stapling.
This adjustment adjusts the phase lag with the clincher at front and rear.

(2) Procedure

1. Carry out stapling operation to check that the broken staple, the bent staple, or the defective staple does not occur. If the defective occurs, conduct the following procedure.
2. Open the front door /Lt.
3. Install the M3 screw about 20mm long [3] into the adjustment screw hole [2] of the stapler mounting bracket [1] with fingers and tighten it slightly until it is contacted to the supporting bracket [4].

Note

- Do not tighten the screw [3] too tight. Stop tightening when it is contacted.

4. Loosen a screw [5].
5. Rotate the screw [3] and move the anteroposterior position of the stapler to adjust the phase lag with the clincher.

Note

- Rotating the screw [3] 1 revolution moves the stapler 0.5mm.
- When the screw [3] is tightened, the staple position moves forward. When the screw [3] is loosened, the staple position moves backward.

6. While pushing the stapler mounting bracket [1] to the back side [6] and contacting the screw [3] to the supporting bracket [4], tighten the screw [5].
7. Remove the screw [3].

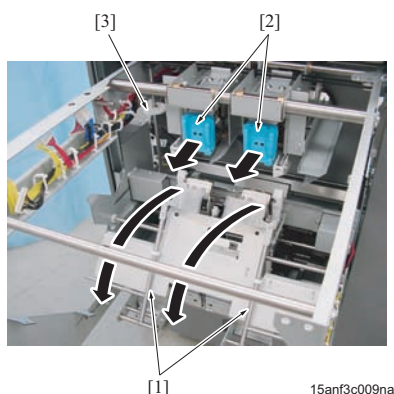
8. Repeat steps 1 to 7 until the defective staple does not occur.

17.6 Tilt/gap adjustment of the clincher

(1) Usage

Perform this adjustment when the staple break through the paper by stapling a few pages of booklet.

(2) Procedure

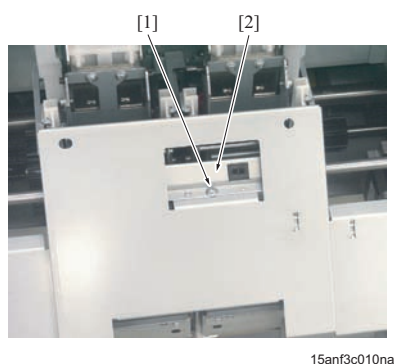


1. Carry out stapling operation with 2 sheets of papers, and check if the staple break through the paper. If the paper is broken through, perform the following steps.
2. Pull out the saddle stitching unit.
(Refer to [F.12.3.3 Pulling out the saddle stitching unit](#))
3. Tilt the bundle arm [1] to the front.
4. Remove the staple cartridges [2] to the front.
5. Rotate the stapler move gear [3] to move the stapler assy inward, then move them outward by approx. 30mm (the interval between the stapler becomes approx. 60mm).

Note

- Rotate the stapler move gear [3] to move the stapler assy inward, then move them outward by approx. 30mm (the interval between the stapler becomes approx. 60mm).

6. Remove the screw [1] and remove the sensor cover [2].

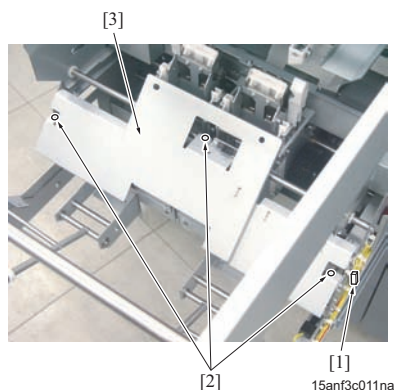


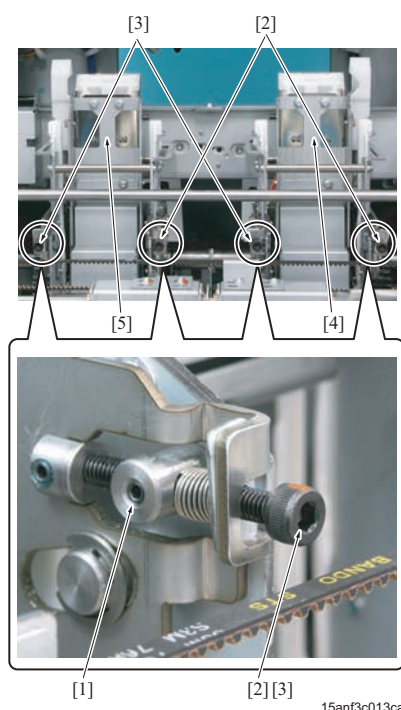
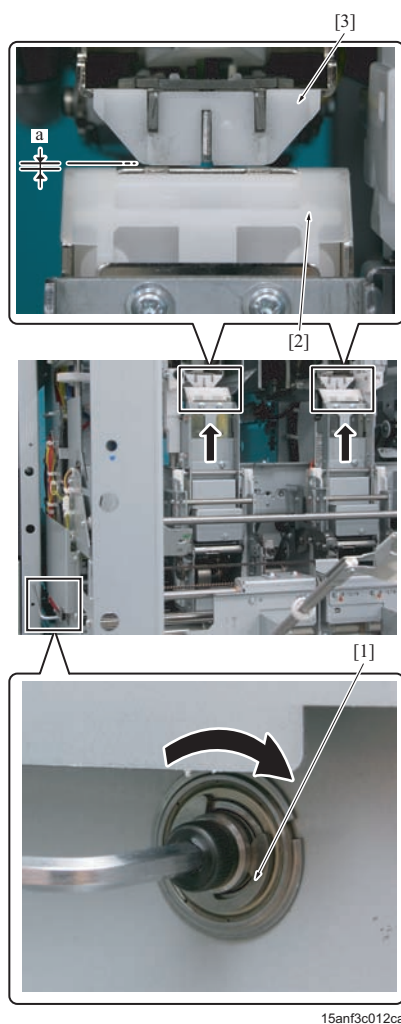
7. Disconnect the connector [1].

Note

- When reinstalling the saddle stitching unit, be careful not to let the connector [1] make contact with the main body.

8. Remove 3 screws [2], and then remove the saddle stitching guide plate [3].





9. Rotate the screw [1] clockwise until clicked to make the clinchers [2] contact with the staplers [3] and lock the clinchers [2]. At the moment the clinchers are locked, check if the clinchers do not roll from side to side and the gap between the staplers and the clinchers equals to the standard value.

Standard value "a": $0.3 \pm 0.1\text{mm}$ (2 sheets of 64g/m^2 papers can pass through the gap while 3 sheets cannot.)

10. When the gap is out of the standard value, loosen the screw [1] counterclockwise and lower the clinchers once. Then perform the adjustment the following procedure.

11. Loose the 4 screws [1].
12. Adjust the gap between the staplers and the clinchers so that the gap equals the standard value while loosening (gap becomes narrower) /tightening (gap becomes wider) the adjusting screw/Rt [2] and /Lt [3] in the same manner.

Note

- Be sure to perform the adjustment for both left and right side of each clincher/Rt [4] and /Lt [5] so that the stapler and the clinchers are parallel to each other.
- When the adjustment is completed, be sure to tighten the fixing screws [1].

13. Put the saddle stitching unit back. Then carry out stapling operation with 2 sheets of papers, and check if the staple does not break through the paper.

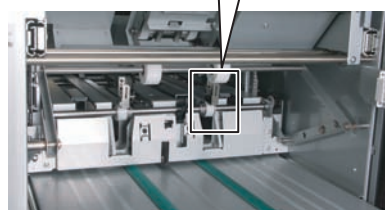
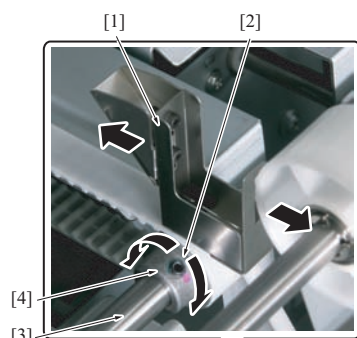
17.7 Roller cutter skew adjustment

(1) Usage

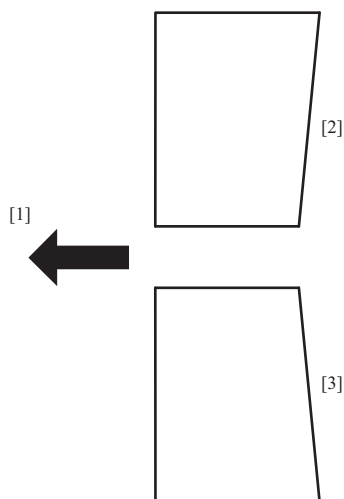
Adjust the skew when it occurs at trimming.

(2) Procedure

a0h2f3c008ca



a0h2f3c009ca



a0h2f3c010ca

1. Check the trimming parallelism by trimming center folded or senter stitched paper if it is within the standard value.
Standard value:
"a" = 1.0mm or less (2 to 15 sheets)
"a" = 1.5mm or less (16 to 50 sheets)
When the value is not within the standard value, perform the following procedure.

Note

- Remove the staple to check it for 2 sheets to 15 sheets.

2. Open the front door /Lt.
3. Loosen the screw [2] of the registration claw.
4. Turn the gear flange [4] with holding the shaft [3], adjust the registration claw /Rt [1] back and forth, and then tighten the screw [2].

5. Check point for the adjustment

Note

- Move the registration claw /Rt to the front side in case the skew is [2] to the paper exit direction [1], or move the claw to the rear side in case the skew is [3].

6. Repeat steps 1 to 5 until the standard value is obtained.

17.8 Trimming adjustment**(1) Usage**

Adjust the gap when a large gap occurs at trimming thick books.

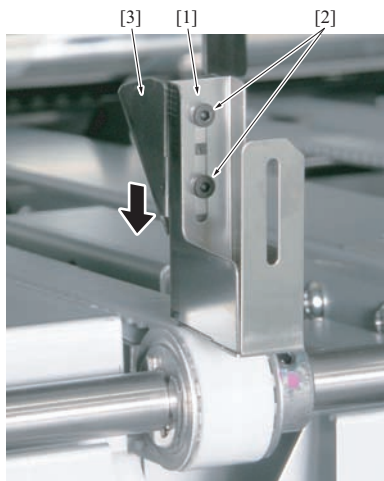
Note

- This adjustment is effective for the thick book more than 30 pages.

(2) Procedure



a0h2f3c011ca



a0h2f3c012ca

1. Check the trimming gap "a" by trimming the center folded or senter stitched book which has 31 pages or more. Conduct the following steps if the gap is large.

Note

- There is no standard value of trimming gap for 31 pages or more. Refer to the standard value for 16 pages to 30 pages, which is 1.5mm.

2. Open the front door /Lt.
3. Remove the slope unit. (Refer to [F.12.3.2 Replacing the slope unit](#))
4. Loosen the 2 screws [2] each of the registration claw /Rt and /Lt [1], move the fold retaining bracket [3] down to the bottom, and then tighten the screws [2].
5. Repeat steps 1 to 4 until the allowable value can be obtained.

18. MECHANICAL ADJUSTMENT PB-502/PB-503

18.1 Clamp sub scan direction alignment adjustment

(1) Usage

Carry out the adjustment when the following conditions occur.

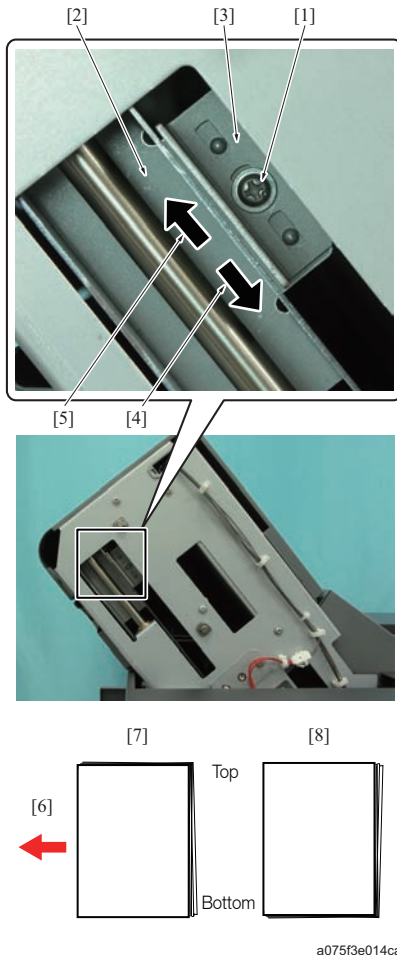
The fore edges near the top or the bottom of the book do not line up perfectly.

The pages come off from the cover paper near the top or the bottom of the book due to insufficient gluing to the spine of inside papers.

An improper gap between the reference plate and the sub scan alignment plate causes misalignment of the pages in the sub scan direction.

To correct the misalignment, perform "[I.5.8.36 Clamp FD Position Adj. \(Perfect Binder Adjustment\)](#)" from Service Mode → Finisher Adjustment → Perfect Binder Adjustment.

(2) Procedure



1. Remove the SC cover /Fr. (Refer to [G.12.2.11 SC cover /Fr](#))
2. Loosen the screw [1].
3. Adjust the position of the sub scan alignment plate by moving the clamp entrance assy [2] in the direction of the arrow [4] or [5] to change the installation position of the clamp entrance assy against the coupling bracket [3].

Note

- Be sure to hold down the coupling bracket [3] when moving the clamp entrance assy, as the assy is heavy and hard to move.
 - [6] shows the book exit direction;
 - a. To correct the misalignment near the bottom side [7] (front side when inside papers alignment is performed): Move the clamp entrance assy [2] in the direction of the arrow [4] to make the gap at the front side narrower.
 - b. To correct the misalignment near the top side [8] (rear side when inside papers alignment is performed): Move the clamp entrance assy [2] in the direction of the arrow [5] to make the gap at the front side wider.
 - When moving the clamp entrance assy [2] in the direction of the arrow [5], the misalignment of the inside papers occurs at both the top and bottom sides. To correct the misalignment, perform "[I.5.8.36 Clamp FD Position Adj. \(Perfect Binder Adjustment\)](#)" from Service Mode → Finisher Adjustment → Perfect Binder Adjustment after this adjustment.
4. After performing the adjustment, make a test print and binding to check that the inside papers are perfectly lined up in the sub scan direction.
 5. Reinstall the above parts following the removal steps in reverse.

18.2 Clamp main scan direction alignment adjustment

(1) Usage

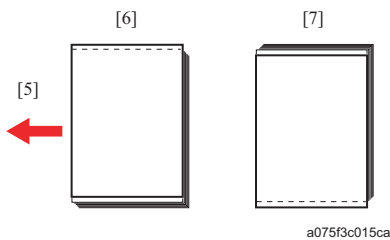
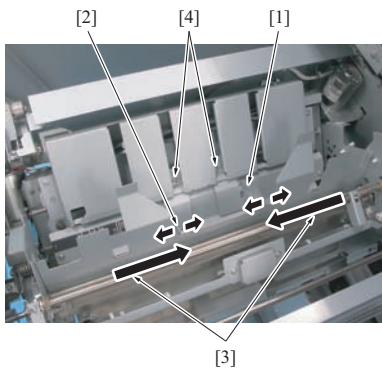
Carry out the adjustment when the following conditions occur.

The top and bottom edges of inside papers do not line up and it cannot be corrected even after performing "Clamp section CD alignment width adjustment" and "SC section CD alignment width adjustment" in the service mode.

The cover and the inside papers are not aligned.

Note

- The misalignment of cover and inside papers can also be adjusted in "[I.18.11 Cover paper alignment plate adjustment](#)" and "[I.18.13 Cover paper table positioning](#)"

(2) Procedure

1. Pull out the clamp unit.
2. Move the clamp alignment plates /Fr [1] and /Rr [2] inward as far as they go [3].
Note
 - Be sure to hold both clamp alignment plates/Fr [1] and /Rr [2], and move them slowly to maintain the proper engagement of the belt and the pulleys.
3. Loosen 2 screws [4] and adjust the position of the clamp alignment plates/Fr [1] and /Rr [2] by moving them back and forth.
Note
 - [5] shows the book exit direction;
 - a. When top edge of cover paper runs off that of inside papers [6]: Move the clamp alignment plates/Fr [1] and /Rr [2] backward by the same distance.
 - b. When bottom edge of cover paper runs off that of inside papers [7]: Move the clamp alignment plates/Fr [1] and /Rr [2] forward by the same distance.
 - When moving 2 clamp alignment plates in the same direction, always move them by the same distance.
4. After performing the adjustment, make a test print and binding to check that the top and bottom edges of inside papers are perfectly lined up and the cover edges neatly align with edges of inside papers.
5. Reinstall the above parts following the removal steps in reverse.

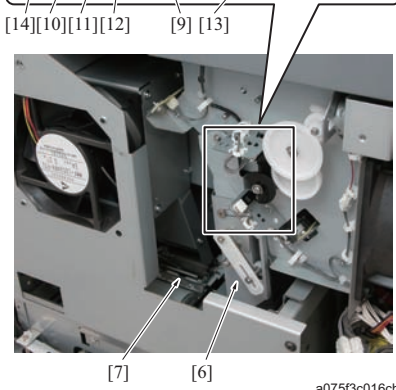
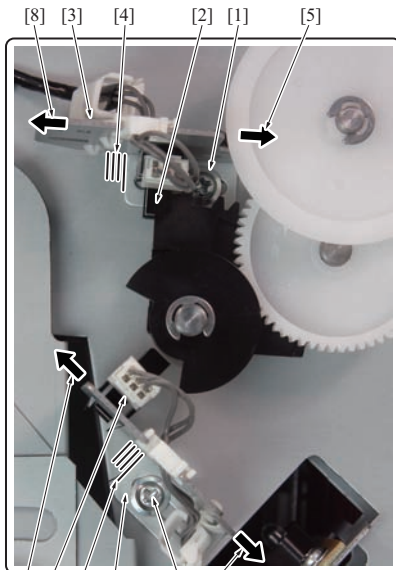
18.3 Pellet supply arm angle adjustment (PB-502)**(1) Usage**

Carry out the adjustment when the following conditions occur.

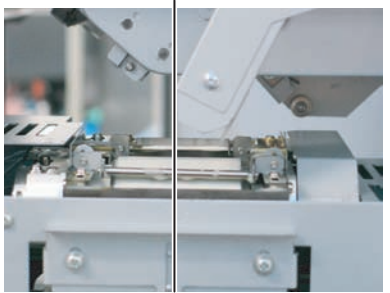
- The pellet is supplied to the tank improperly and it spills out of the tank.
- The pellet supply arm contacts with the other parts when the arm is in its home position.

Note

- Be sure to turn Off the power switch (SW2) and the main power switch (SW1) of the main body in advance.

(2) Procedure

1. Remove the rear cover.
(Refer to [G.11.2.6 Rear cover](#))
2. Loosen a screw [1].
3. Adjust the home position of the pellet supply arm by moving the mounting plate [3] of the pellet supply arm home sensor (PS39) [2] referring to the engraved lines [4] on the mounting plate [3].
 - a. Move the mounting plate in the direction of the arrow [5] to make the pellet supply arm [6] home position become closer to the glue tank [7].
 - b. Move the mounting plate in the direction of the arrow [8] to make the pellet supply arm [6] home position become further from the glue tank [7].
- Note**
 - Adjust the position of the pellet supply arm so that the distance between the arm and the edge of the metal frame is 10mm ± 2mm: B when the arm comes to the home position.
 - Do not move the mounting plate excessively or it contacts with the other parts.
4. Loosen a screw [9].
5. Adjust the pellet supply position by moving the mounting plate [11] of the pellet supply arm upper limit sensor (PS38) [10] referring to the engraved lines [12] on the mounting plate.
 - a. Move the mounting plate in the direction of the arrow [13] to make the angle range of the pellet supply arm [6] become narrower.
 - b. Move the mounting plate in the direction of the arrow [14] to make the angle range of the pellet supply arm [6] become wider.
- Note**
 - Adjust the position of the pellet supply arm so that it stops in the center of the glue tank: A when the arm comes to the supply position.
 - Do not move the mounting plate excessively or it contacts with the other parts.
6. Turn on the main power switch (SW1) and the power switch (SW2).



A

a075f2c089ca

B = 10 ± 0.2mm



a075f2c090ca

7. Carry out the output check "77-43" of I/O check in the service mode to detect the home position of the pellet supply arm and check if the home position is appropriate.
8. Move the pellet supply arm to the pellet supply position using the output check "77-44" of I/O check in the service mode and check if the pellet supply position is appropriate.

Note

- For restrictions or cautions of the output check "77-44", refer to the I/O check mode.

9. When the test result is not good, turn off the sub power switch (SW2) and the main power switch (SW1) and repeat steps 2 to 8.
10. Reinstall the above parts following the removal steps in reverse.

18.4 Pellet supply arm angle adjustment

(1) Usage

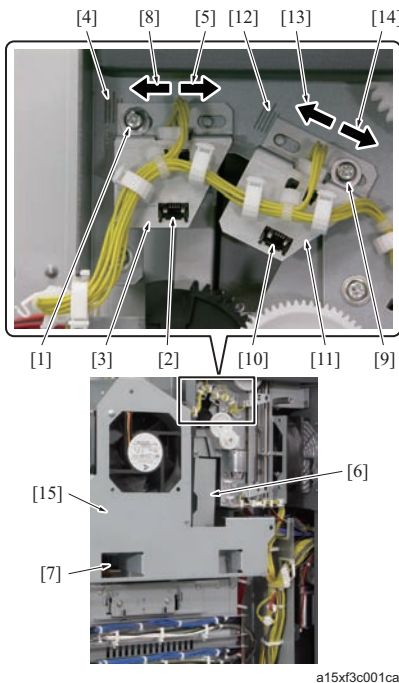
Carry out the adjustment when the following conditions occur.

- The pellet is supplied to the tank improperly and it spills out of the tank.
- The pellet supply arm contacts with the other parts when the arm is in its home position.

Note

- Be sure to turn Off the power switch (SW2) and the main power switch (SW1) of the main body in advance.

(2) Procedure



a15xf3c001ca

1. Remove the rear cover /Rt.
(Refer to [G.12.2.5 Rear cover /Rt](#))
2. Loosen a screw [1].
3. Adjust the home position of the pellet supply arm by moving the mounting plate [3] of the pellet supply arm home sensor (PS39) [2] referring to the engraved lines [4] on the mounting plate [3].
 - a. Move the mounting plate in the direction of the arrow [5] to make the pellet supply arm [6] home position become closer to the glue tank [7].
 - b. Move the mounting plate in the direction of the arrow [8] to make the pellet supply arm [6] home position become further from the glue tank [7].

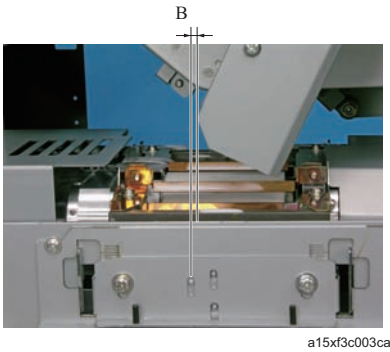
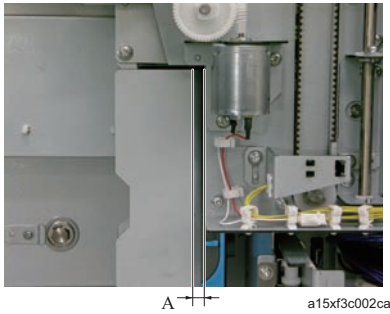
Note

- Adjust the position of the pellet supply arm so that the distance between the arm and the edge of the metal frame is 0mm to 3mm: A when the arm comes to the home position.
- Do not move the mounting plate excessively or it contacts with the other parts.

4. Loosen a screw [9].
5. Adjust the pellet supply position by moving the mounting plate [11] of the pellet supply arm upper limit sensor (PS38) [10] referring to the engraved lines [12] on the mounting plate.
 - a. Move the mounting plate in the direction of the arrow [13] to make the angle range of the pellet supply arm [6] become narrower.
 - b. Move the mounting plate in the direction of the arrow [14] to make the angle range of the pellet supply arm [6] become wider.

Note

- Adjust the position of the pellet supply arm so that the distance between the arm and the edge of the metal frame is +2mm to -4mm: B when the arm comes to the home position.
- Do not move the mounting plate excessively or it contacts with the other parts.



6. Turn on the main power switch (SW1) and the power switch (SW2).
7. Carry out the output check "77-43" of I/O check in the service mode to detect the home position of the pellet supply arm and check if the home position is appropriate.
8. Move the pellet supply arm to the pellet supply position using the output check "77-44" of I/O check in the service mode and check if the pellet supply position is appropriate.

Note

- For restrictions or cautions of the output check "77-44", refer to the I/O check mode.
- When it is hard to check the supply position, turn OFF the sub power switch (SW) and the main power switch (SW1) and remove the suction unit [15]. (Refer to [G.12.2.20 Glue tank unit](#))

9. When the test result is not good, turn off the sub power switch (SW2) and the main power switch (SW1) and repeat steps 2 to 8.
10. Reinstall the above parts following the removal steps in reverse.

18.5 Glue apply roller gap adjustment

(1) Usage

This adjusts the gap between the metal surface of the glue apply roller and the spine of inside papers. Changing the gap allows you to adjust the amount of glue applied to the spine.

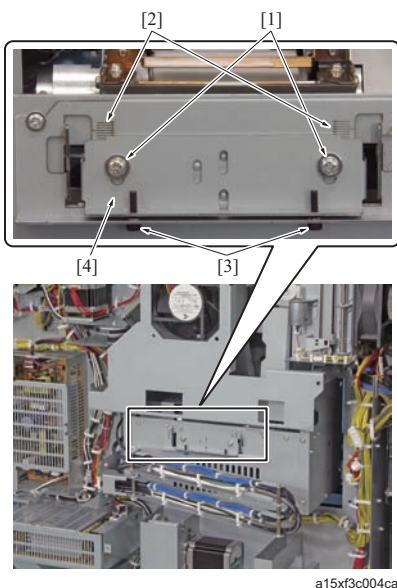
Note

- **Reference values:** The thickness of glue layer formed on the roller of PB-502 is about 1.5mm with the gap of 1mm.
- **Reference values:** The thickness of glue layer formed on the roller is about 2mm with the gap of 1.8mm.

CAUTION

- The glue tank unit is extremely hot immediately after turning off the main power switch (SW1) or the power switch (SW2) of the main body.
- To prevent burn injuries, make sure to leave the unit until it cools enough before performing the adjustment.

(2) Procedure



1. Remove the rear cover (PB-502), the rear cover /Rt (PB-503). (Refer to [G.11.2.6 Rear cover](#) and [G.12.2.5 Rear cover /Rt](#))
2. Loosen 2 screws [1].
3. Adjust the stopper [4] position by moving it up and down with 2 screws [3] referring to the engraved lines [2], then tighten the screws [1].

Note

- The stopper [4] moves down 0.5mm by tightening the screws [3] for 1 rotation and it moves up by loosening the screws.
- Raising the stopper brings the glue apply roller upward making the gap become smaller, which decreases the amount of glue applied.
- Lowering the stopper brings the glue apply roller down making the gap become larger, which increases the amount of glue applied.
- Do not lower the stopper excessively. Too much gap causes the glue application to fail.
- When raising or lowering the stopper, be sure to adjust 2 screws [3] for the same amount and maintain the horizontal state of the stopper.

4. After performing the adjustment, make a test print and binding to check that the amount of glue applied to the book spine is appropriate.
5. Reinstall the above parts following the removal steps in reverse.

18.6 Cover paper glue gap adjustment

(1) Usage

This adjustment is to adjust the gap between the cover paper glue part (the metallic surface of the cover paper glue roller for PB-502 or the scraper /Fr for PB-503) and the spine of inside paper.

Adjust the glue amount applied to the book spine by changing the gap.

There are 2 types of gap, one is for the thick coat mode and the other is for the thin coat mode. *1

Note

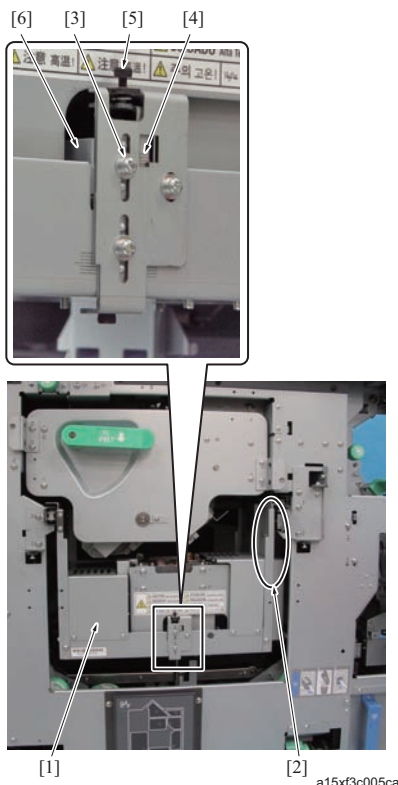
- The gap (standard) of PB-502 between the cover paper glue roller and the spine is 1.5mm.
- The gap of PB-503 between the scraper /Fr and the spine is 1.5mm in the thin coat mode and 2.5mm in the thick coat mode. *1
- When the gap in the thick coat mode is adjusted, the gap in the thin coat mode is changed. Therefore, be sure to adjust the gap in the thin coat mode also after adjusting the gap in the thick coat mode.

*1 The thick coat mode is not used for 1200/1200P/1051.

CAUTION

- The glue tank unit is extremely hot immediately after turning off the main power switch (SW1) or the power switch (SW2) of the main body.
- To prevent burn injuries, make sure to leave the unit until it cools enough before performing the adjustment.

(2) Gap adjustment procedure in thin coat mode



1. Open the front door and move the glue tank unit [1] frontward.

Note

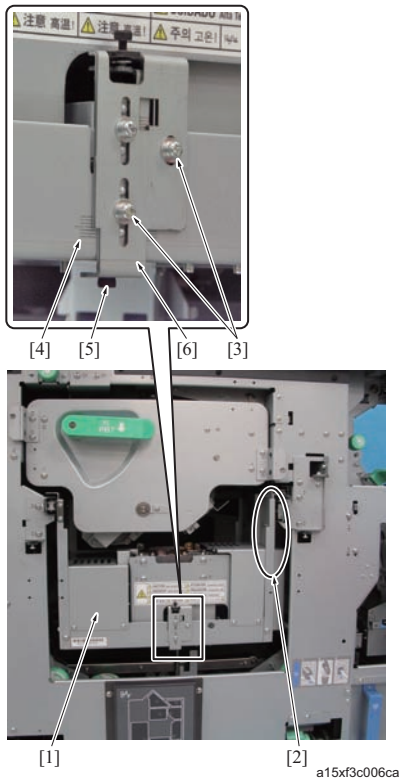
- Be sure to hold the right arm [2] of the glue tank unit to move it.

2. Loosen 1 screw [3] and adjust the stopper [4] position by moving it up and down referring to the engraved lines [5].
3. Adjust the thin coat stopper [6] position by moving it up and down with the screw [5] referring to the engraved line [4], then tighten the screw [3] hitting it against the screw [5].

Note

- The thin coat stopper has a scale marked at 1mm interval.
- The thin coat stopper [6] moves down 0.5mm by tightening the screw [5] for 1 rotation and it moves up by loosening the screw.
- Raising the thin coat stopper brings the cover paper glue part closer to the book spine and it makes the scraped-off glue amount larger, which reduces the glue amount applied to the book spine.
- If the applied glue is thin and the cover does not stick to the book body, lowering the thin coat stopper (increasing the gap between the cover paper glue part and the book spine) increases the amount of glue applied to the book spine.
- If the applied glue is thick and the glue comes out too much, lifting the thin coat stopper (decreasing the gap between the cover paper glue part and the book spine) reduces the amount of glue applied to the book spine.

4. After performing the adjustment, make a test print and binding to check that the glue amount applied to the book spine is appropriate.

(3) Gap adjustment procedure in thick coat mode

1. Open the front door and move the glue tank unit [1] forward.

Note

- Be sure to hold the right arm [2] of the glue tank unit to move it.

2. Loosen 1 screw [3].

3. Adjust the thick coat stopper [6] position by moving it up and down with 2 screws [5] referring to the engraved line [4], then tighten the screw [3] hitting it against the screw [5].

Note

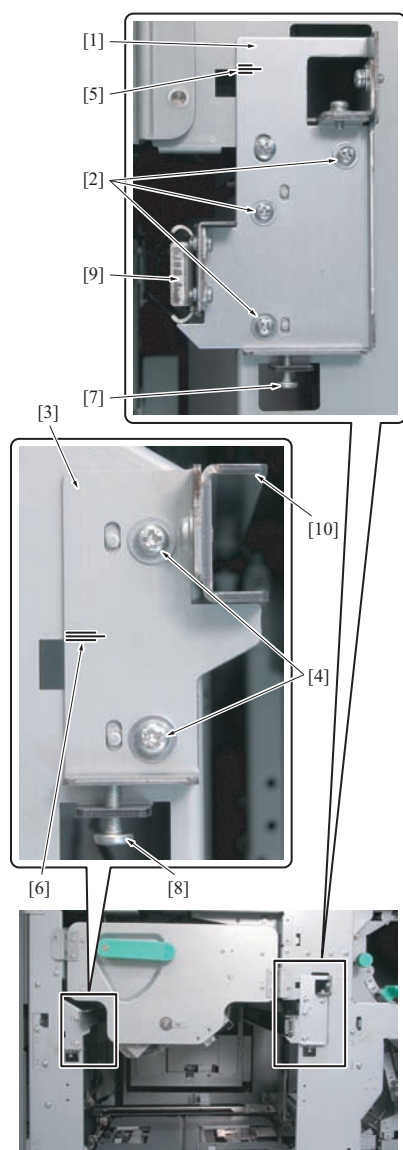
- The thick coat stopper [6] moves down 0.5mm by tightening the screws [5] for 1 rotation and it moves up by loosening the screws.
- The thick coat stopper has a scale marked at 1mm interval. The right and left scales shift 0.5mm vertically. When adjusting it, be sure to move it by 1mm and check the position.
- When raising or lowering the thick coat stopper, be sure to maintain its horizontal state.
- Raising the thick coat stopper brings the cover paper glue part closer to the book spine and it makes the scraped-off glue amount larger, which reduces the glue amount applied to the book spine.
- If the applied glue is thin and the cover does not stick to the book body, lowering the thick coat stopper (increasing the gap between the cover paper glue part and the book spine) increases the amount of glue applied to the book spine.
- If the applied glue is thick and the glue comes out too much, lifting the thick coat stopper (decreasing the gap between the cover paper glue part and the book spine) reduces the amount of glue applied to the book spine.

4. After performing the adjustment, make a test print and binding to check that the glue amount applied to the book spine is appropriate.
5. Conduct the gap adjustment in the thin coat mode.

18.7 Glue tank movement rail tilt adjustment**(1) Usage**

This adjusts the parallelism between the glue tank movement rail and the spine of inside papers.

Perform this when glue is not applied uniformly on the spine, especially when amount of glue applied is different between the top and bottom side of the book.

(2) Procedure

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1. Loosen 3 screws [2] of the bracket /Rt [1].
2. Loosen 2 screws [4] of the bracket /Lt [3].
3. Move the brackets /Rt [1] and /Lt [3] up and down by turning the screws [7] and [8] to adjust the height of the glue tank movement rails/Rt [9] and /Lt [10] referring to the engraved lines [5] and [6] on the brackets /Rt and /Lt.

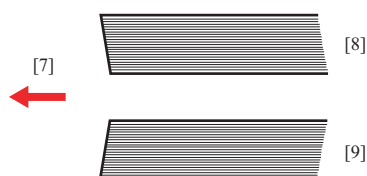
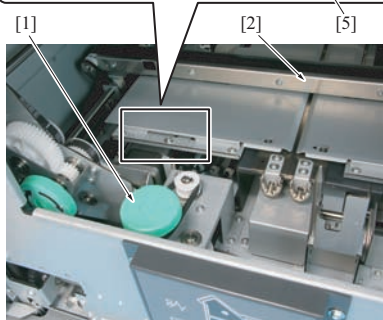
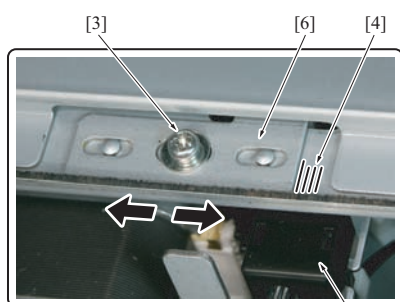
Note

- Be sure to turn the screws [7] and [8] by the same amount so that the brackets/Rt [1] and /Lt [2] move the same amount.
 - When the glue applied to the spine gets lower toward the bottom side, lower the brackets/Rt [1] and /Lt [2].
4. After performing the adjustment, make a test print and binding to check that the glue is applied to the book spine uniformly.

18.8 Cover paper folding plate nipping adjustment**(1) Usage**

This adjusts the position of the cover paper folding plate/Lt to apply pressure to the cover paper.

Perform this adjustment when the cover paper is not folded at the right angle (when the book spine inclines).

(2) Procedure

a075f3c021ca

1. Turn the knob [1] to move the cover paper alignment plate/Fr [2] backward.
2. Loosen the screw [3] and adjust the actuator [6] position of the cover paper folding plate HP sensor /Lt (PS49) [5] by moving the actuator right and left referring to the engraved lines [4].

Note

- [7] shows the book exit direction;
 - a. When the book spine inclines as [8]: Move the actuator [6] to the left.
 - b. When the book spine inclines as [9]: Move the actuator [6] to the right.

3. After performing the adjustment, make a test print and binding to check that the book spine ends form right angle and no inside papers come off from the cover paper.

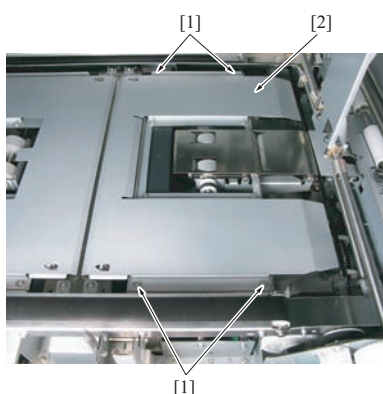
Note

- At the test print, print more than 50 sheets, or you cannot check the book spine.

18.9 Cover paper folding plate parallel adjustment**(1) Usage**

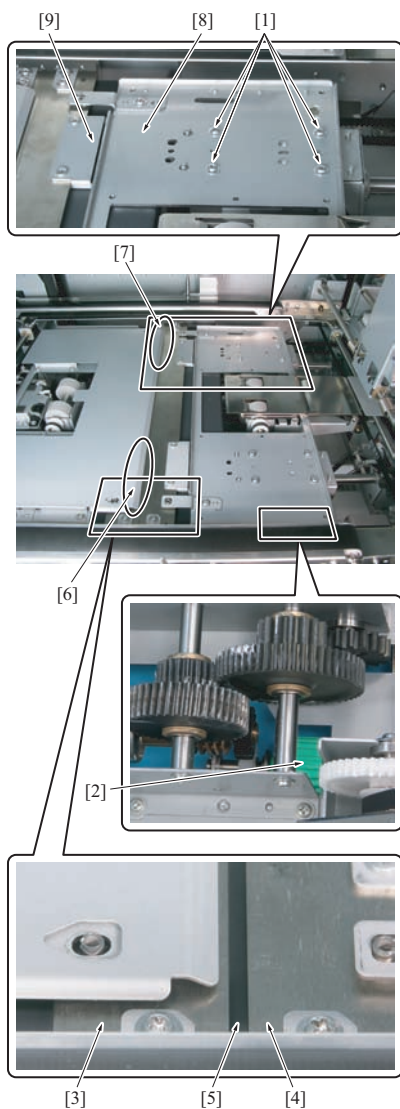
This adjusts the parallelism between the cover paper folding plate/Rt and /Lt.

Perform the adjustment when the book spine corners are not uniformly formed from the top and the bottom.

(2) Procedure

a075f3c022ca

1. Remove the cover paper tray. (Refer to [G.12.2.28 Cover paper tray](#))
2. Remove 4 screws [1] and remove the cover /Rt [2].



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3. Loosen 4 screws [1].
4. Put a hand from under the cover paper tray section and turn the knob [2] to move the cover paper folding plate /Rt [3] and /Lt [4] so that the gap between them becomes a few millimeters [5].
5. Slowly turn the knob [2] in reverse until the cover paper folding plate/Rt [3] and /Lt [4] contact each other without any gap at both front side [6] and rear side [7].

Note

- Make sure that the pressure drive plate/Rt [8] does not run on the pressure assist plate [9].
- Do not turn the knob [2] too much. Doing so brings the plates into pressure-applying state making the position adjustment impossible.

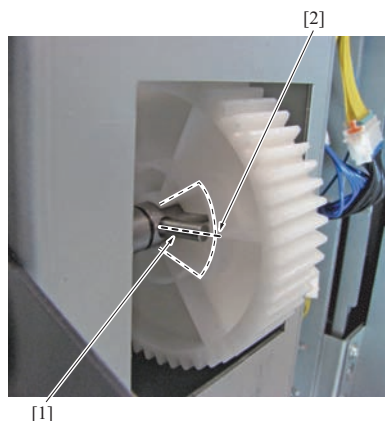
6. Tighten 4 screws [1].
7. After performing the adjustment, make a test print and binding to check that the book spine ends are forming right angle from the top and the bottom.
8. Reinstall the above parts following the removal steps in reverse.

18.10 Cover paper table up down belt adjustment**(1) Usage**

Perform the adjustment when the following conditions occur.

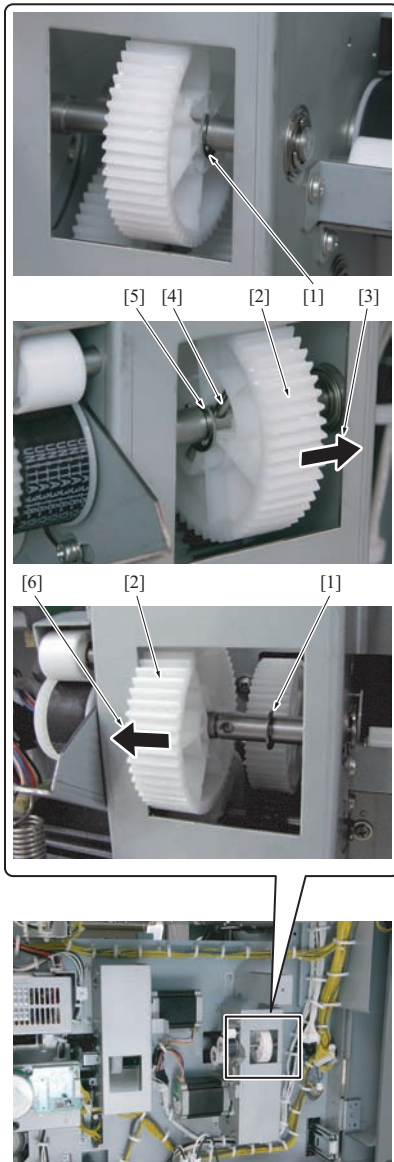
The cover paper table up down drive system does not synchronize successfully.

The front and rear cover paper table belts do not synchronize smoothly.

(2) Check point

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1. Check that the pin [1] is placed on the center of the central sector of the gear [2].
When the pin is out of the center, perform the following adjustment.

(3) Procedure

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1. Remove the rear cover (PB-502), the rear cover /Rt (PB-503).
(Refer to [G.11.2.6 Rear cover](#) and [G.12.2.5 Rear cover /Rt](#))
2. Remove the E-ring [1].
3. Move the gear [2] to the right [3] and remove the pin [4].
4. Remove the E-ring [5].
5. Move the gear [2] to the left [6] and install the E-ring [1].
6. Turn ON the main power switch (SW1) and the sub power switch (SW2) to let the system perform the initial operation.
7. Insert the pin [4], adjust the gear [2] so that it aligns with the gear inside, and slide the gear [2] to the right.
8. Install the E-ring [5] Install the rear cover
9. Install the rear cover.

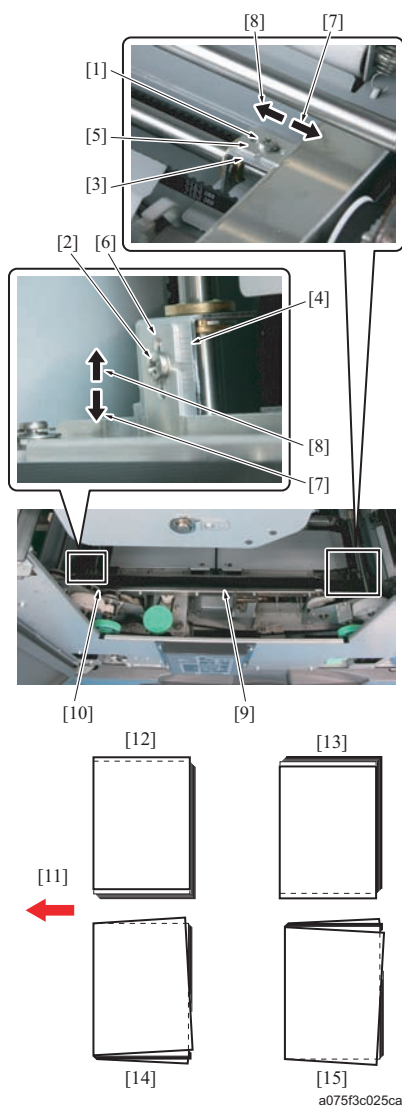
18.11 Cover paper alignment plate adjustment**(1) Usage**

This adjusts the position of the cover paper alignment plate/Fr in the main scan direction and its perpendicularity against the main scan direction.

Perform the adjustment when the cover paper and the inside papers are vertically or relatively misaligned.

Note

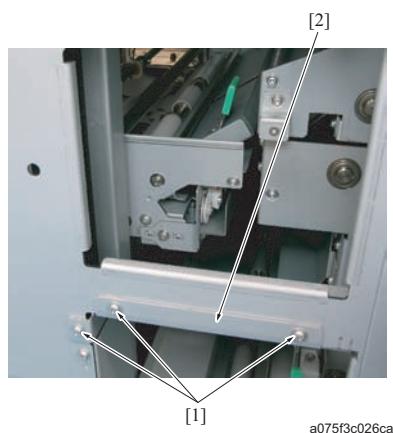
- The misalignment of cover and inside paper can also be adjusted in "[I.18.2 Clamp main scan direction alignment adjustment](#)" and "[I.18.13 Cover paper table positioning](#)".

(2) Procedure

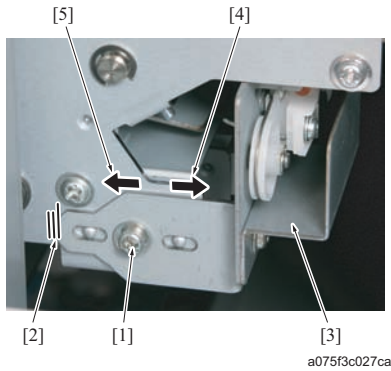
1. Loosen the screw [1] and [2].
 2. Adjust the position and angle of the cover paper alignment plate / Fr [9] by moving the mounting brackets /Rt [5] and /Lt [6] to the front [7] and to the back [8] referring to the engraved lines [3] and [4].
- Note**
- Do not move the mounting bracket /Lt [6] excessively, or the plate contacts with the gear [10].
 - [11] shows the book exit direction;
 - a. When the cover paper runs off the top edge of inside paper [12]: Move the mounting brackets /Rt [5] and /Lt [6] forward [7] by the same distance.
 - b. When the cover paper runs off the bottom edge of inside paper [13]: Move the mounting brackets /Rt [5] and /Lt [6] backward [8] by the same distance.
 - c. When 3 edges of cover paper misalign with the edges of inside paper [14]: Move the mounting bracket /Rt [5] backward [8] and move the mounting bracket /Lt [6] forward [7].
 - d. When 3 edges of cover paper misalign with the edges of inside paper [15]: Move the mounting bracket /Rt [5] forward [7] and move the mounting bracket /Lt [6] backward [8].
3. After performing the adjustment, make a test print and binding to check that the cover paper is neatly aligned with the inside papers.

18.12 Cover paper cutting skew adjustment**(1) Usage**

Perform the adjustment when the roller cutter trims the cover paper askew.

(2) Procedure

1. Remove the cover paper waste box.
2. Remove 3 screws [1] and remove the metal frame [2].



- Loosen the screw [1] and adjust the position of the roller cutter assy [3] by moving it to the right [4] and the left [5] referring to the engraved lines [2].

Note

- When the length of the back cover is shorter than the length of the front cover at the bottom side:
Move the roller cutter assy [3] to the right side [4].
- When the length of the back cover is longer than the length of the front cover at the bottom side:
Move the roller cutter assy [3] to the left side [5].

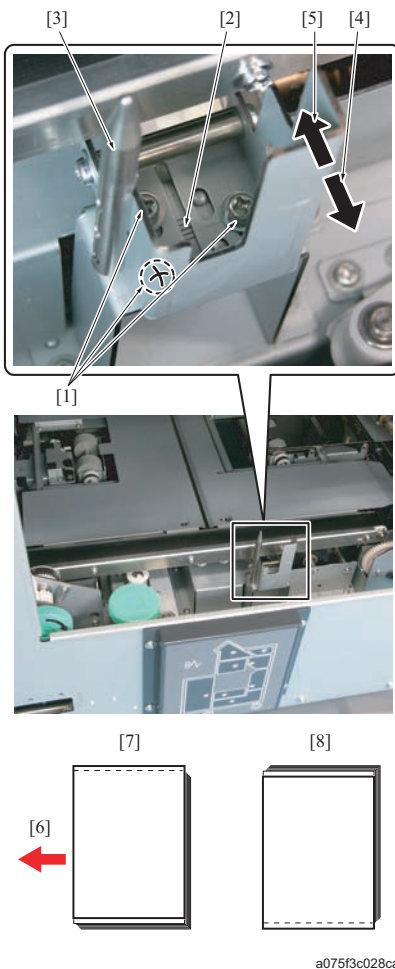
- After performing the adjustment, make a test print and binding to check that the cover paper is trimmed correctly.
- Reinstall the above parts following the removal steps in reverse.

18.13 Cover paper table positioning**(1) Usage**

This adjusts the relative position between the clamp unit and the cover table unit in the main scan direction. Perform the adjustment when the cover paper is vertically misaligned with the inside papers.

Note

- The misalignment of cover and inside paper can also be adjusted in "[I.18.2 Clamp main scan direction alignment adjustment](#)" and "[I.18.11 Cover paper alignment plate adjustment](#)."

(2) Procedure

- Loosen 3 screws [1].
- Adjust the position of the positioning pin/Fr [3] by moving it forward [4] and backward [5] referring to the engraved lines [2].

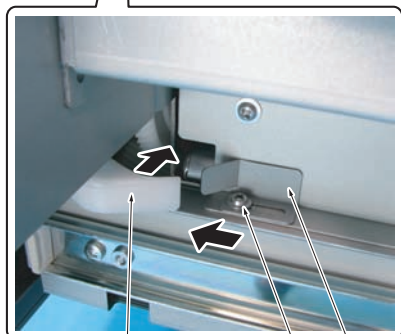
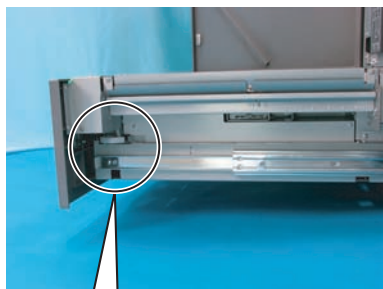
Note

- [6] shows the book exit direction;
 - When the cover paper runs off the top edge of inside paper [7]: Move the positioning pin /Fr [3] to the back [5].
 - When the cover paper runs off the bottom edge of inside paper [8]: Move the positioning pin /Fr [3] to the front [4].

- After performing the adjustment, make a test print and binding to check that the cover paper is neatly aligned with the inside paper.

18.14 Cover paper tray pick-up adjustment**(1) Usage**

Perform the adjustment when no feed from the cover paper tray occurs frequently.

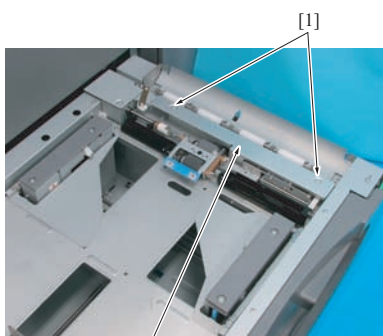
(2) Procedure

[2]

[1]

[3]

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[2]

a075f3c002ca

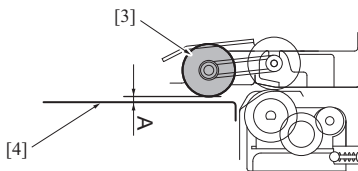
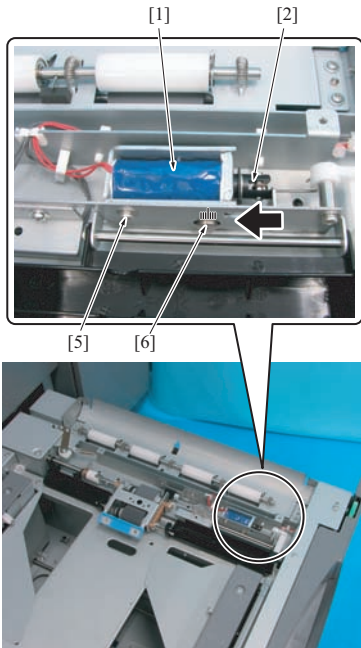
1. Pull out the cover paper tray.
2. Remove all remaining cover papers from the cover paper tray.
3. Loosen a screw [1].
4. Push the stopper [3] in the direction of the arrow with the release lever [2] retracted, and secure the stopper [3] with the screw [1].

Note

- After performing the adjustment, loosen the screw [1] and retighten it after releasing the stopper [3].

5. Install the cover paper tray, and pull out the tray again after the cover paper lift plate has lifted to the upper limit, which can be judged by the operating sound of the cover paper lift motor.
6. Remove the stopper screws, 1 each, attached on the right and left rails and pull the cover paper tray further out. (Refer to [G.12.2.28 Cover paper tray](#))

7. Pull out the tray again. Remove 2 screws [1] to remove the paper feed cover [2].



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8. Pull the plunger [2] of the pick-up solenoid [1] and measure the gap between the pick-up roller [3] and the cover paper lift plate [4] with a thickness gauge.
Measured value A = 0.1mm to 1.5mm
If it is not within the standard value, follow step 9 and after.
9. Loosen a screw [5].

Note

- Before loosening the screw, be sure to mark off the position of the pick-up solenoid [1] by drawing a line [6].

10. With the plunger [2] pulled, adjust the position of the pick-up solenoid [1] so that the gap between the pick-up roller [3] and the cover paper lift plate [4] falls into the specified range.
11. Tighten the screw [5] to fix the pick-up solenoid [1].
12. Load cover paper on the cover paper tray and close the tray.
13. Make a test print and binding selecting the perfect binding as the binding method and the PB cover paper tray as the cover feeder. Check that the no feed error does not occur.
14. Reinstall the above parts following the removal steps in reverse.

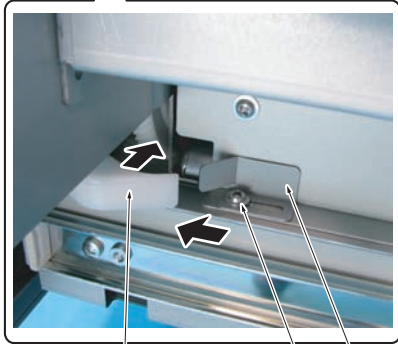
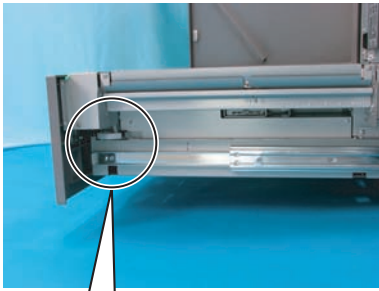
18.15 Cover paper tray pick-up roller height adjustment**(1) Usage**

Perform this adjustment when no-feed, crimp of leading edge, or paper jam occurs frequently when feeding the cover papers from the cover paper tray, or when curled cover papers need to be used.

This adjusts the vertical position of the cover paper pick-up roller. Changing the roller position changes the vertical gap between the top paper surface on the tray and the bottom surface of the cover paper feed roller.

Note

- With this adjustment, cover paper pick-up ability changes accordingly. When the adjustment is completed, make sure to perform the cover paper feed pick-up amount adjustment to check the pick-up amount.

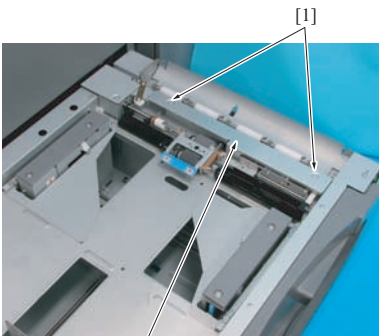
(2) Procedure

[2]

[1]

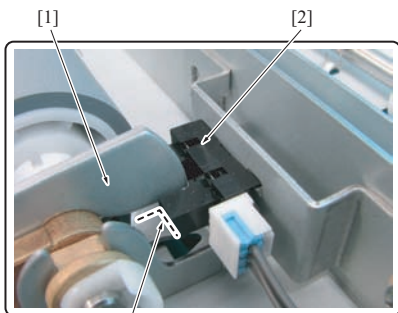
[3]

a075f3c004ca

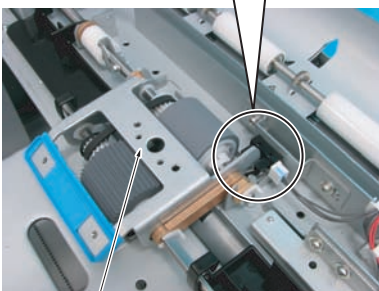


[2]

a075f3c005ca



[3]



[4]

a075f3c006ca

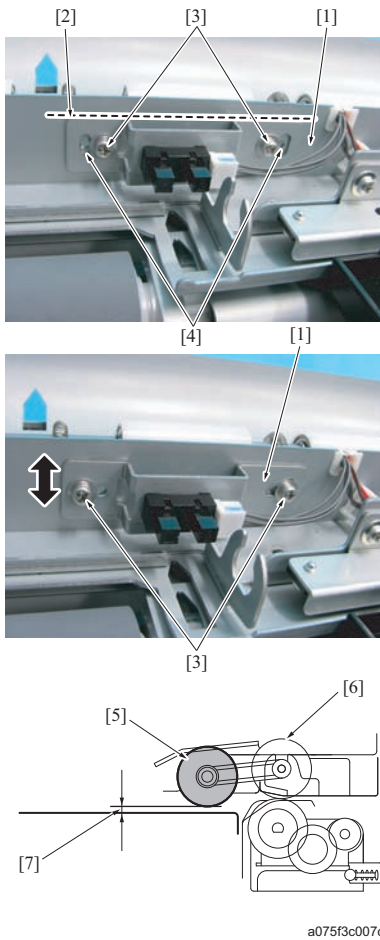
1. Pull out the cover paper tray.
2. Remove all remaining cover papers from the cover paper tray.
3. Loosen a screw [1].
4. Push the stopper [3] in the direction of the arrow with the release lever [2] retracted, and secure the stopper [3] with the screw [1].

Note

- After performing the adjustment, loosen the screw [1] and retighten it after releasing the stopper [3].

5. Install the cover paper tray, and pull out the tray again after the cover paper lift plate has lifted to the upper limit, which can be judged by the operating sound of the cover paper lift motor.
6. Remove the stopper screws, 1 each, attached on the right and left rails and pull the cover paper tray further out. (Refer to [G.11.2.22 Cover paper tray](#))
7. Pull out the tray again. Remove 2 screws [1] to remove the paper feed cover [2].

8. Check that the actuator [1] of the pick-up roller assy is aligned with the center [3] of the cover paper tray upper limit sensor (PS74) [2].
9. Remove the pick-up roller section [4]. (Refer to [F.13.3.1 Removing/reinstalling the pick-up roller assy and the separation roller assy](#))



10. Mark off the position of the cover paper tray upper limit sensor mounting plate [1] by drawing a line [2].
11. Remove 2 screws [3] and temporarily install the cover paper upper limit sensor mounting plate [1] with the screws through the elongated screw holes [4].
12. Make vertical adjustments of the cover paper upper limit sensor mounting plate [1] and fasten it with the screws [3].

Note

- Be sure to install the cover paper tray upper limit sensor mounting plate [1] so that it keeps in a horizontal position.

Reference:

- Raising the position of the cover paper tray upper limit sensor brings the pick-up roller [5] down (It increases the vertical gap [7] between the paper feed roller [6] and the pick-up roller [5].)
- Lowering the position of the cover paper tray upper limit sensor brings up the pick-up roller [5] (reduces the vertical gap [7] between the cover paper feed roller [6] and the pick-up roller [5]).
- When crimp of leading edge or paper jam occurs, or when curled cover paper (concave curl) need to be used, raise the cover paper tray upper limit sensor mounting plate.
- When feeding warped cover paper (convex curl), lower the cover paper tray upper limit sensor mounting plate.

13. Reinstall the pick-up roller assembly.

Note

- Be sure to install the cover paper tray upper limit sensor mounting plate [1] so that it keeps in a horizontal position.

14. Load cover paper on the cover paper tray and close the tray.
15. Make a test print and binding selecting the perfect binding as the binding method and PB cover paper tray as the cover feeder. Check that the errors do not occur. If the errors still occur, repeat steps 9 to 15.
16. Check the cover paper tray paper feed pick-up adjustment. (Refer to [I.18.14 Cover paper tray pick-up adjustment](#))
17. Reinstall the above parts following the removal steps in reverse.

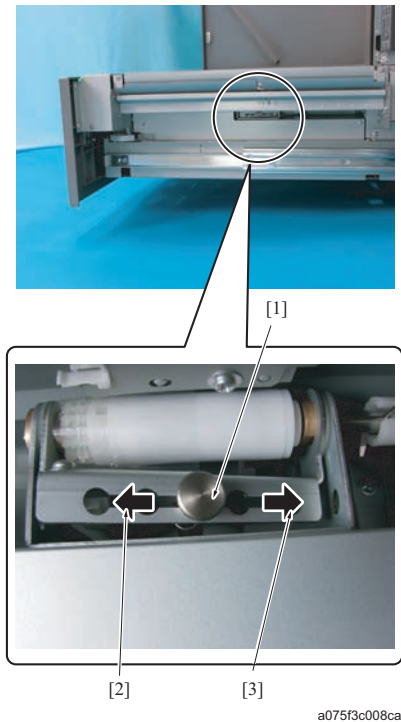
18.16 Cover paper tray separation pressure adjustment

(1) Usage

Perform this adjustment when no-feed or multi-feed from the cover paper tray occurs frequently.

Note

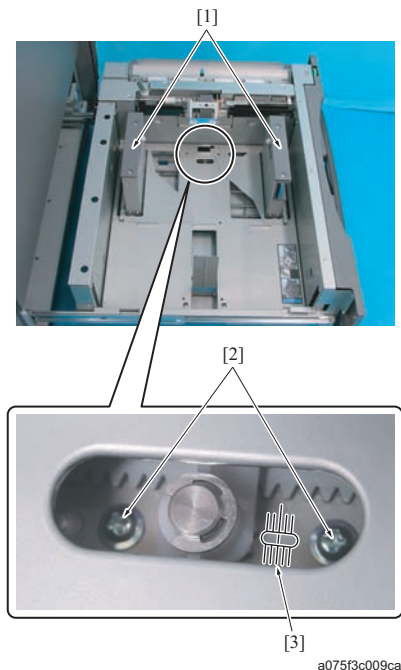
- A no-feed error tends to occur in low temperature environment, while a multi-feed error does in high temperature environment. Perform this adjustment with this in mind.
- Excess adjustment may reverse the symptom.

(2) Procedure

1. Pull out the cover paper tray.
2. Change the position of the spring adjustment lever [1]. The separation pressure is strengthened when the lever moves to the direction [2] and is weakened when the lever moves to the direction [3].
Weak: A double feed jam is improved.
Strong: A no feed jam is improved.
Reference:
 - The spring load changes in increments of about 10%.
3. Set the cover paper tray.
4. Make a test print and binding selecting the perfect binding as the binding method and PB cover paper tray as the cover feeder.
Check that no-feed errors or multi-feed errors do not occur.
5. If the errors still occur, repeat steps 1 to 4.

18.17 Cover paper tray Centering Adjustment**(1) Usage**

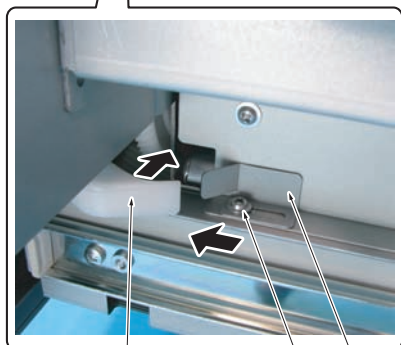
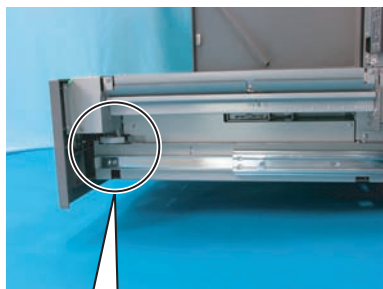
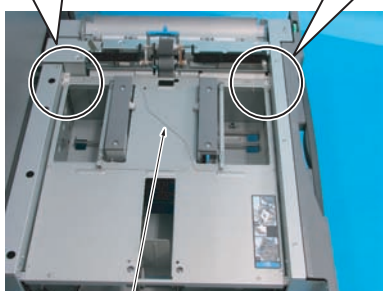
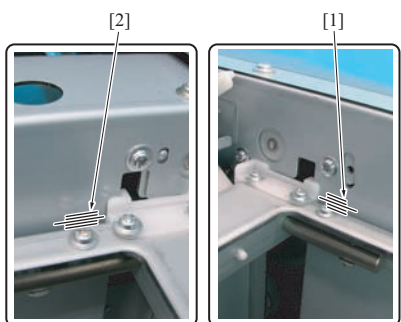
Perform this adjustment when the deviation between the cover paper and the inside papers is out of spec.
Standard value: $0 \pm 1\text{mm}$ or less (aligned edges), $0 \pm 1.5\text{mm}$ or less (trimmed edges)

(2) Procedure

1. Make a test print and binding selecting the perfect binding as the binding method and PB cover paper tray as the cover feeder.
Check how much the cover paper misaligns with the inside papers.
2. Pull out the cover paper tray.
3. Remove all remaining cover papers from the cover paper tray.
4. When the cover paper guides [1] are set at the small-size position, extend them.
5. Loosen 2 screws [2].
6. Move the cover paper guides [1] and adjust the center position based on the misalignment amount checked at step1, referring to the marking-off line [3].
7. Tighten 2 screws [2].
8. Load cover paper on the cover paper tray and close the tray.
9. Make a test print and binding selecting the perfect binding as the binding method and PB cover paper tray as the cover feeder.
Check that the misalignment amount falls into the specified range.
Standard value:
 $0 \pm 1\text{mm}$ or less (aligned edges)
 $0 \pm 1.5\text{mm}$ or less (trimmed edges)
10. If the value falls outside the range, repeat the steps 2 to 9.

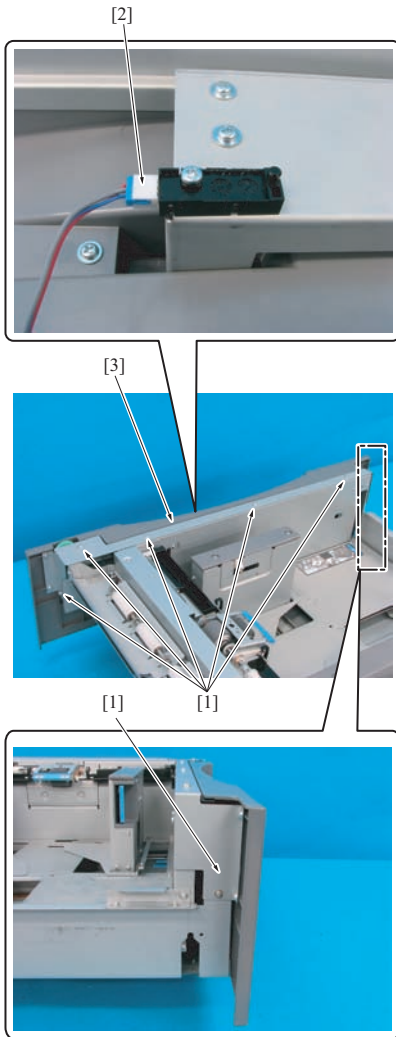
18.18 Cover paper tray lift plate horizontal adjustment**(1) Usage**

Conduct this adjustment when the jam, no feed, or the folded paper occurs in the cover paper tray.

(2) Procedure[2] [1] [3]
a075f3c010ca[3]
a075f3c011ca

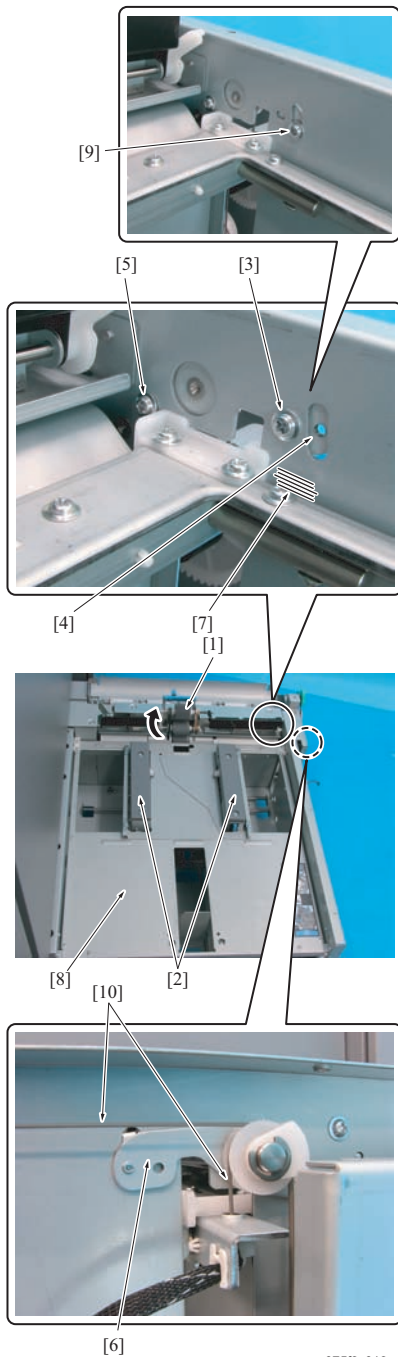
1. Pull out the cover paper tray.
 2. Remove all remaining cover papers from the cover paper tray.
 3. Loosen a screw [1].
 4. Push the stopper [3] in the direction of the arrow with the release lever [2] retracted, and secure the stopper [3] with the screw [1].
- Note**
- After performing the adjustment, loosen the screw [1] and retighten it after releasing the stopper [3].
5. Install the cover paper tray, and pull out the tray again after the cover paper lift plate has lifted to the upper limit, which can be judged by the operating sound of the cover paper lift motor.

6. Check if the cover paper lift plate [3] is placed horizontally using the engraved lines on the near side [1] and the far side [2] of the tray. If the plate is not horizontal, perform step7 and the steps that follow.



a075f3c012ca

7. Remove 6 screws [1] of the cover paper tray front cover [3].
8. Disconnect the connector [2], and remove the cover paper tray front cover [3].



a075f3c013ca

9. Lift up the pick-up roller [1].
10. Move the cover paper guides [2] to the positions for the smallest paper size.
11. Remove the screw [3] and tighten it through the elongated screw hole [4] temporarily.
12. Loosen the screw [5] while supporting the pulley mounting plate [6] by hand, and correct the tilt of the cover paper lift plate [8] referring to the engraved lines [7].
13. Check that the cover paper lift plate [8] is placed horizontally, and secure the plate with the screw [5] and [9].

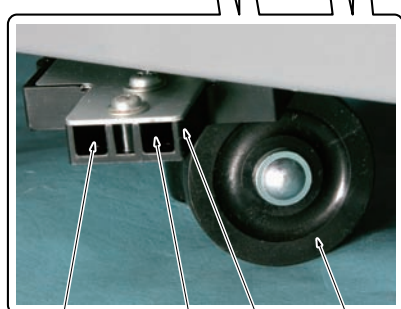
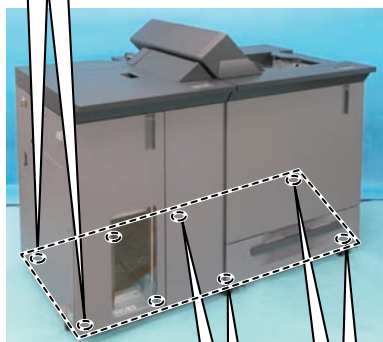
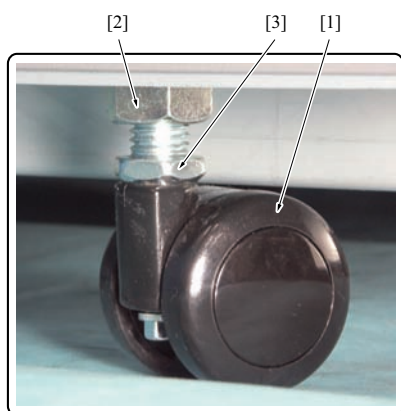
Note

- When tightening the screws [5] and [9], check that the wire [10] has not come off the pulley or not crossed.

14. Pull down the pick-up roller [1].
15. Load cover paper on the cover paper tray and close the tray.
16. Make a test and binding selecting the perfect binding as the binding method and PB cover paper tray as the cover feeder.
Check that cover papers are fed normally without any jam.
17. Reinstall the above parts following the removal steps in reverse.

18.19 Height adjustment (PB-503)**(1) Usage**

Conduct this adjustment when the PB is not in a horizontal position or when the height of PB is not equal to the main body and the other options.

(2) Procedure

[6] [7] [5] [4]
a15xf3c007ca

1. Loosen the nut [2] of the caster /B [1] at 2 places.
2. Rotate the screw [3] at 2 places for adjusting the height of the PB left side.
3. Conduct the height adjustment by inserting the driver to the holes [6] and [7] on each of 4 ratchet section [5] of the casters /A [4] and moving it back and forth. It goes up with the hole [6] and goes down with the hole [7].

Note

- Be sure to make adjustments while considerate the height between the main body and other optional devices.
- Be sure not to go it up too much, otherwise the bolt comes off.
- When the caster /A [4] is not on the ground, fix the caster so that the ratchet does not spin out.
- Be sure to adjust so that every casters /A and /B are on the ground.

4. Secure the screw [3] of the caster /B [1] at 2 places and tighten the nut [2].

J Rewriting of firmware

1. PRECAUTIONS ON REWRITING THE FIRMWARE

1.1 Check items

When rewriting the firmware, be sure to check the type (G00, G80) of current firmware and execute ISW with the same type of firmware. Since the type of firmware differs depending on the board, an error code or malfunction code is displayed by executing ISW with wrong firmware.

Note

- Depending on the board, there are 2 types of firmware; G00-xxxx, G80-xxxx.
- When the rewrite is executed with the type that does not match the current firmware type, the rewrite does not complete normally and an error code or malfunction code occurs.
- Contact the service manager of the authorized distributor for the method to identify the board.

1.2 Target board

Control board that has different types

- FS-521: FNS control board (FNSCB)

2. COMBINATION OF FIRMWARE AND BOARD

2.1 Table of combination (FS-521: FNS control board)

		Types of board	
		Regular board A0GYH010	Substitute board A0GYH810
Types of FW	G00-xxxx	OK	NG-A ISW error is displayed during executing ISW. "ISW system error <E2>"
	G80-xxxx	NG-B After ISW completed normally, a malfunction code (C-C109) occurs at the reboot	OK

2.1.1 NG-A screen display

"ISW system error <E2>"

2.1.2 Recovery procedure

1. ISW error is displayed during executing ISW. "ISW system error <E2>"
2. Turn OFF the sub power switch (SW2).
3. While pressing the "Utility/Counter" button, turn ON the SW2 to enter the service mode.
4. Execute ISW with a proper firmware.

Note

- A malfunction code C-C109 is displayed by turning OFF/ON the sub power switch (SW2).
- Be sure to turn OFF the sub power switch (SW2) once, and then turn ON the SW2 again while pressing the "Utility/Counter" button to enter the service mode.

2.1.3 NG-B screen display

After ISW completed normally, a malfunction code (C-C109) occurs at the reboot

2.1.4 Recovery procedure

1. After ISW completed normally, a malfunction code (C-C109) occurs at the reboot
2. Turn OFF the sub power switch (SW2).
3. While pressing the "Utility/Counter" button, turn ON the SW2 to enter the service mode.
4. Execute ISW with a proper firmware.

Note

- Be sure to turn OFF the sub power switch (SW2) once, and then turn ON the SW2 again while pressing the "Utility/Counter" button to enter the service mode.

3. ISW

3.1 OUTLINE

(1) ISW (In-System Writer)

This is an operation in which a control program stored in the flush ROM that is built in each control board in the copier is rewritten with the board built in the copier main body. Conducting the ISW allows the version up of control program without changing the board and the installation of the up to date program when replacing the board. As a tool to execute ISW, there are ISWTrns (PC software). This tool can rewrite directly a control program in the flush ROM built in the copier main body.

(2) ISWTrns

This is a software for Windows to rewrite the copier flush ROM and is used for rewriting programs (data transfer) with the copier main body and the PC connected with a parallel cable or the USB cable.

Note

- When this machine uses the USB to conduct the ISW, it is necessary to install the USB driver of the ISWTrns. For procedure for installation, refer to "[J.3.4.1 Installation of the USB driver \(Windows2000/XP\)](#)"
- When using the USB, be sure to turn on the radio button of the USB on the ISWTrns [Setting (S)] - [Communications setting (C)], and then press the OK button.

3.2 Specifications

3.2.1 ISWTrns (PC software)

(1) Operating environment of the software

- OS: Windows95/98/98SE/Me/NT4.0/2000/XP/Vista
- CPU: Pentium 75MHz or above
- Memory: 16MB or more for abroad/ 32MB or more for domestic
- Free space in hard disk: 100MB or more
- PC provided with USB interface

(2) Idling time

- Varies according to each PC

(3) Parts required to conduct the ISW

- Personal computer (PC): 1
- IBM-compatible PC/AT, Provided with USB interface
- ISWTrns setup program
- USB cable: 1

Item	Specifications	
Board to be rewritten	Overall control board, Printer control board, RADF control board, FD control board, LS control board, IC control board, SD control board, PB control board, RU control board, FS control board, GP controller PCB	
Method for rewriting program	1. Local ISW from the PC 2. Web Utilities directional type ISW by using the Internet 3. Operation panel directional type ISW by using the Internet	
Protocol	FTP, HTTP	
Network connection	Using machine NIC Setting	
Rewritable program	Image control	I1 to I5 collectively, I1- I5
	Printer control	C1 to C2 collectively, C1, C2
	ADF	F
	FD, FS, LS, SD, PB, RU, GP	H, B, N, S-1, S-2, J, R, G
	IC controller	P
Conditions	Main body power turned on and program server provided	

Note

- To execute the ISW, check surely to see if the power source of the main body has been turned on in advance.
- For rewritable programs, it is not possible to rewrite plural programs at a time.
- When using the Internet ISW, it is required for it to be connected to the network environment by using the main body NIC. As a network environment, programs must be down-loadable from the program server on the Internet by using an ftp or http protocol.

3.3 Installation of the ISWTrns

Install the ISWTrns program to the PC.

(1) Procedure

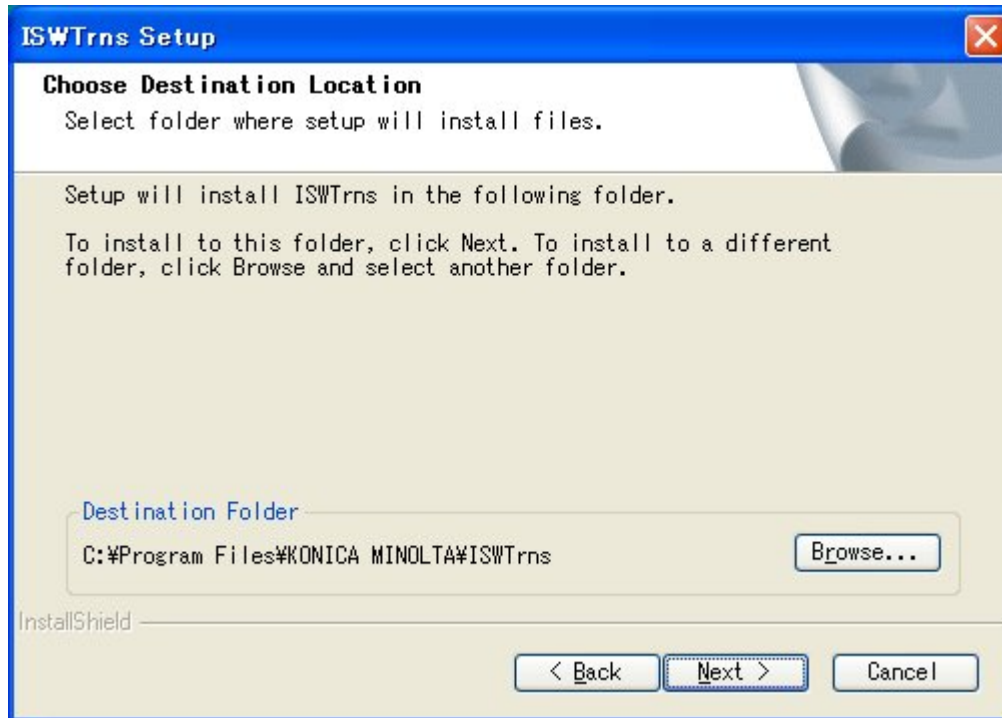
1. Start the PC.
2. Copy the setup files to the PC and double click the [Setup.exe] icon to start the install program.

Note

- When there remains the ISWTrns.exe of the old version, uninstall the old version first, and then install the new version.

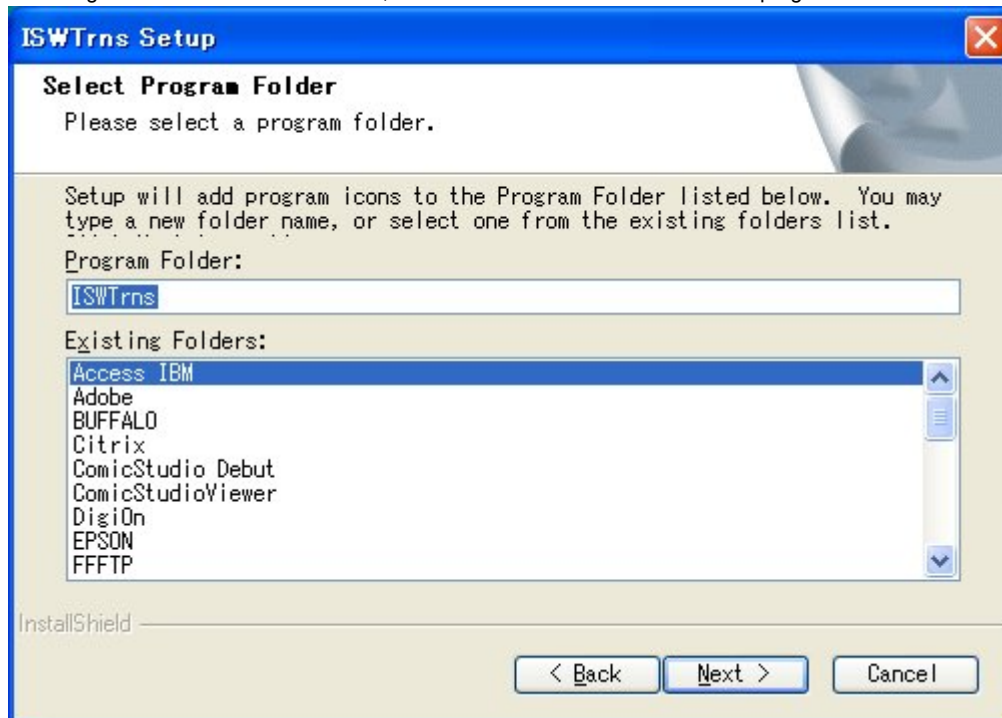
3. "ISWTrns setup screen"

Following the instructions on the screen, check the folder to which an installation is made, and then click [Next].

**Note**

- "C:\Program Files\KONICA MINOLTA\ISWTrns" has been set as a folder to be installed in default.
- When changing the folder to which an installation is made, click [Reference] and specify one as you please.

- Following the instructions on the screen, check the folder to which the ISWTrns program is stored and then click [Next].

**Note**

- For default, "ISWTrns" is set as a folder to which an installation is made.
- When changing the folder to which an installation is made, enter a folder name directly, or select one from the existing folder displayed.

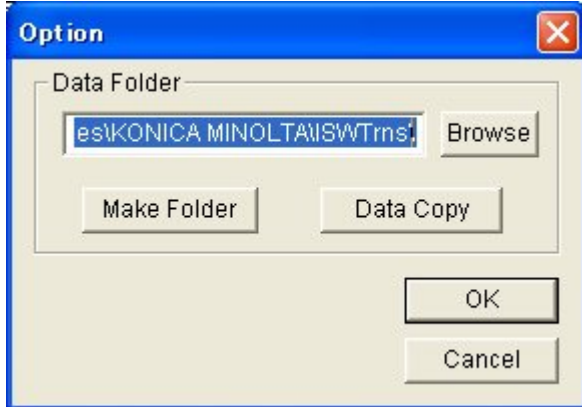
- "Setup completion screen"
Following the instructions on the screen, click [Completed].
- The installation of the ISWTrns program is automatically completed.
- Select "ISWTrns" from the start menu or double click the "ISWTrns" icon on the desk top to start up the "ISWTrns program."
- "ISWTrns dialog screen"
Click [OK] to set the storage folder of the firmware.

**Note**

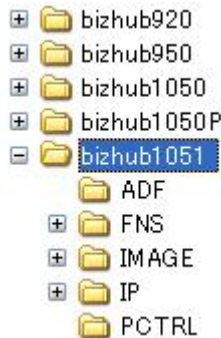
- This screen is shown only when the program is started for the first time after installing the ISWTrns.

9. "Option screen"

Click [Make Folder]

**Note**

- A folder (C:\Program Files\KONICA MINOLTA\ISWTrns) on which the ISWTrns program is installed has been set as a storage folder in default.
- When changing a stored folder, click [Browse] and specify any one as you please, or make an entry directly in the editor box in full path.
- Clicking [Make Folder] creates hierarchical folders with the storage folder set above as a route.



10. "Option screen"

Click [OK].

Note

- This operation stores the data folder created in the step9 into the INI file of the ISWTrns program.

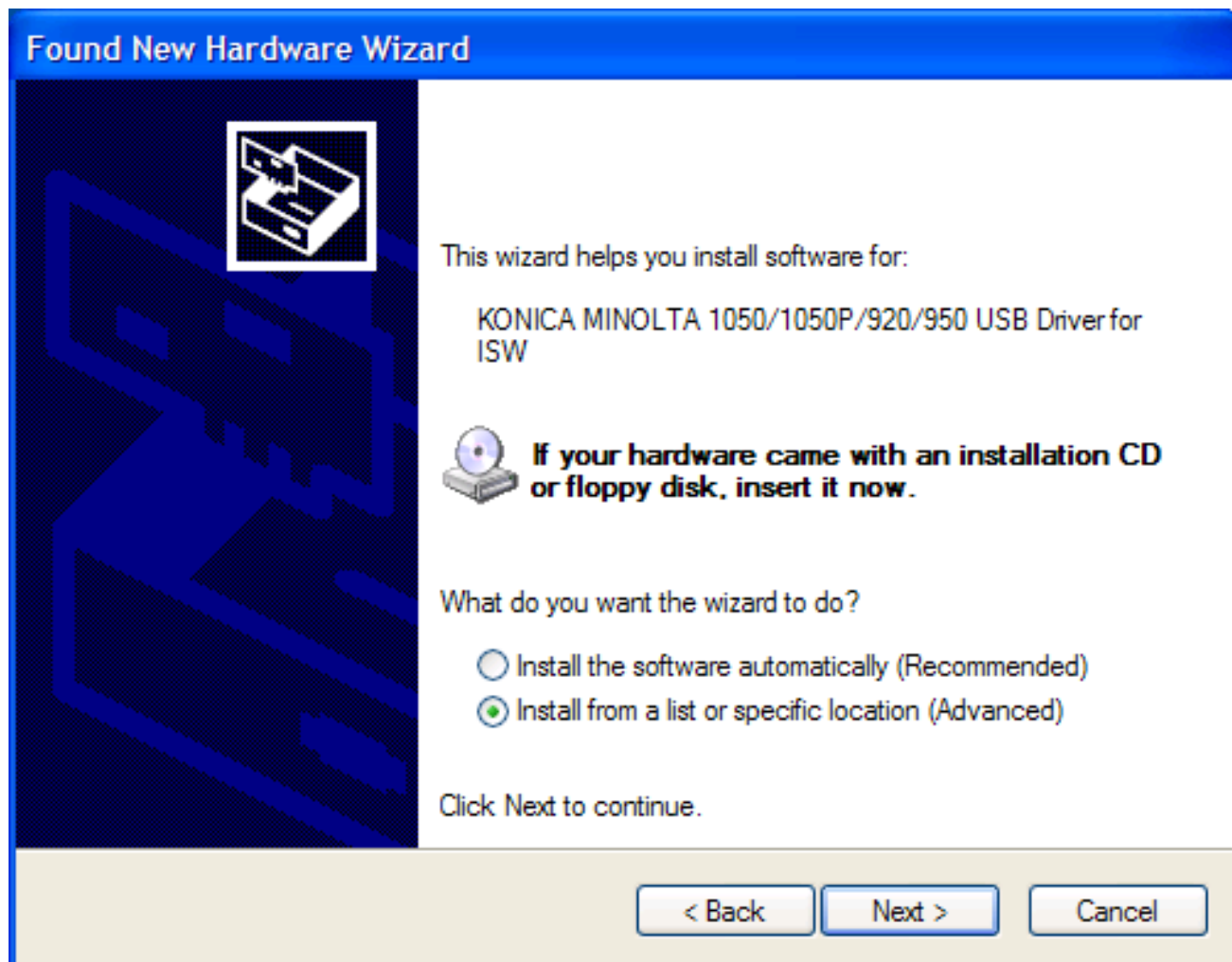
3.4 Usage of the ISWTrns

3.4.1 Installation of the USB driver (Windows2000/XP)

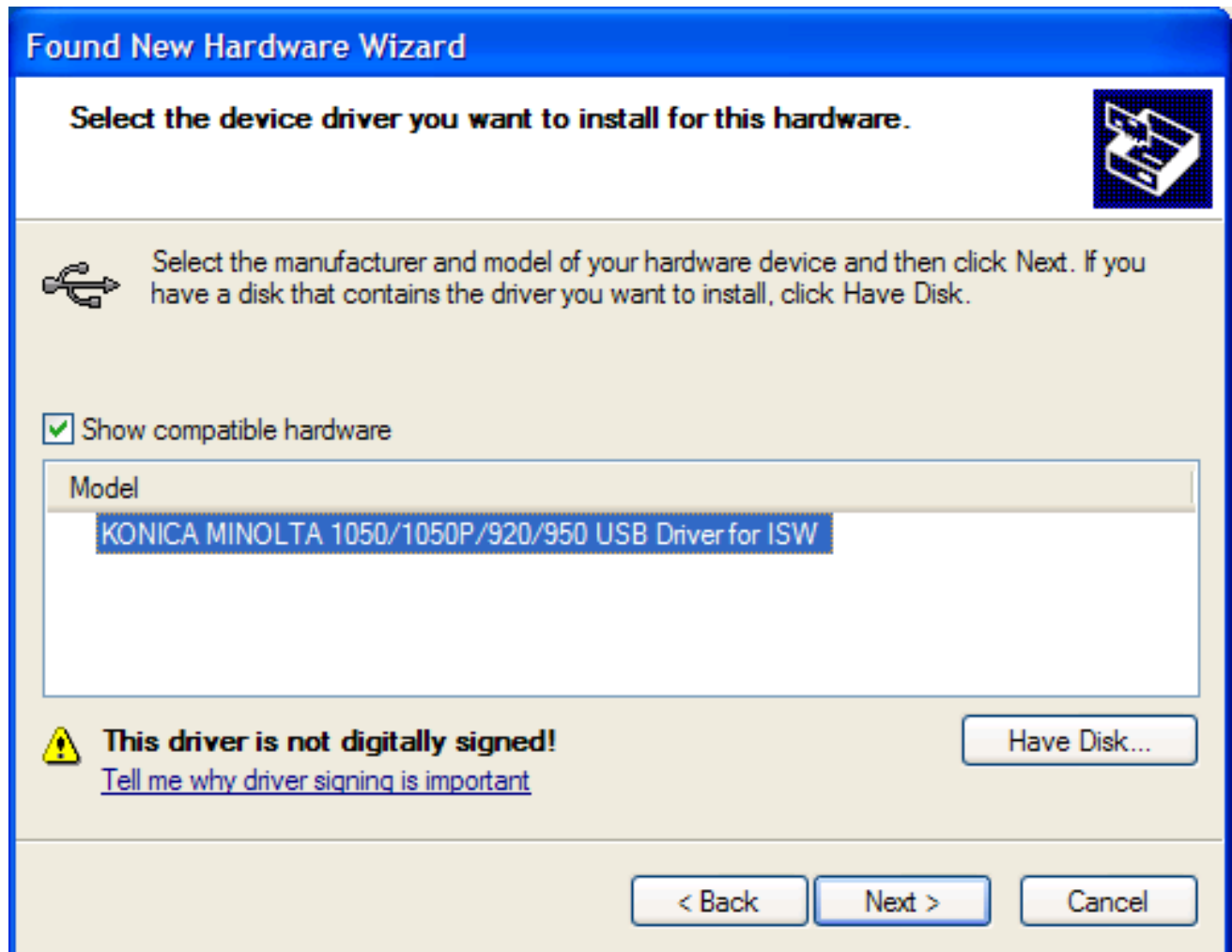
When a connection is made between the PC and the main body with a USB cable, the installation of the USB driver automatically starts by the plug-and-play. However, it has a possibility of the installation of the Windows USB driver (USBPRINT.SYS) and be sure to set the USB driver by following the following steps.

(1) Procedure

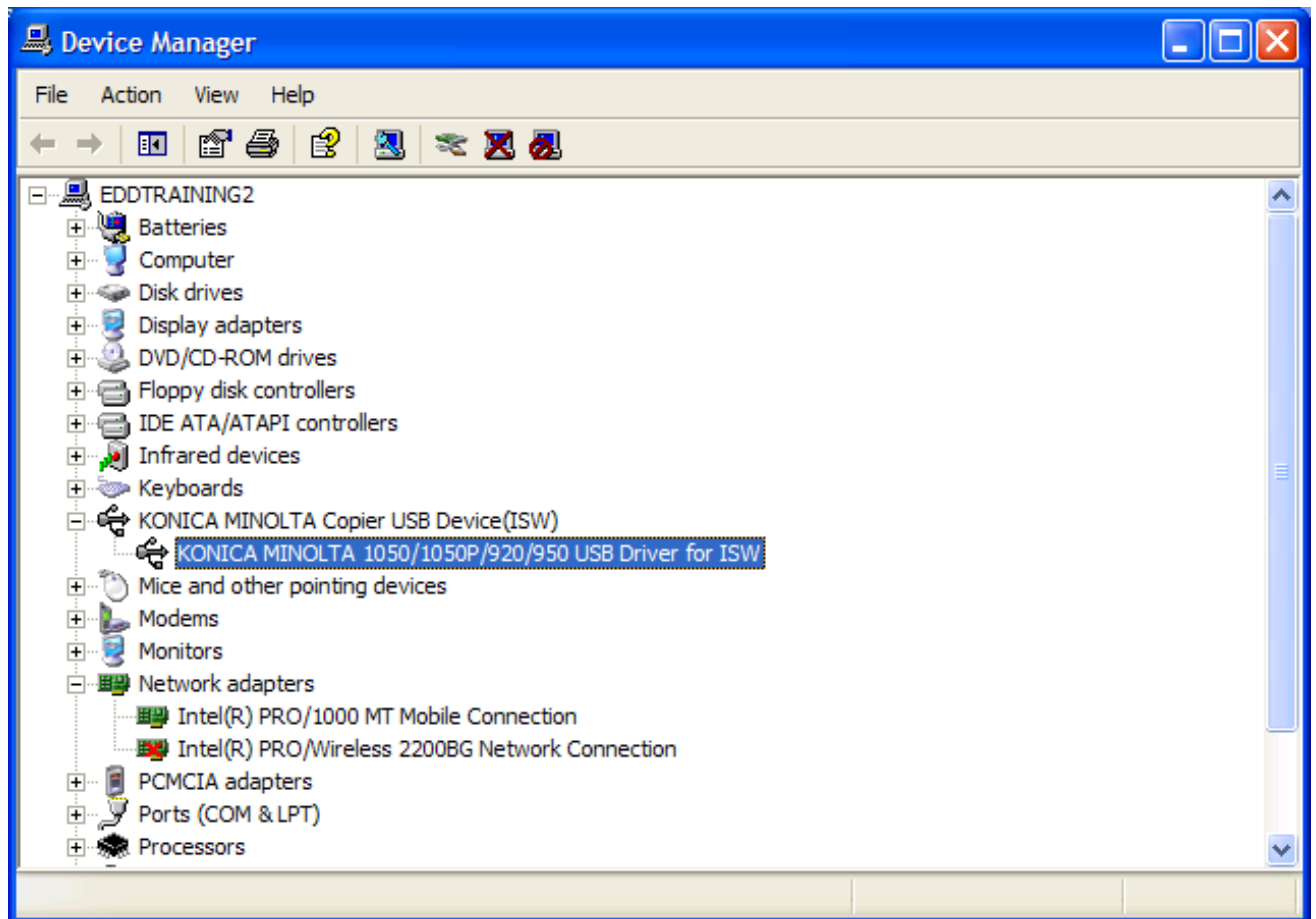
1. In the following screen, select "Install from the list or the specified location," and then click [Next].



2. In the "Please choose your search and installation options" select "Don't search. I will choose the driver to install," and then click [Next].
3. Select the UBS driver in the driver selection screen and click "Next" to start installation.
Driver name: KONICA MINOLTA 1050/1050P/920/950 USB Driver for ISW



4. Check the "Device manager screen" to see if the USB driver has been correctly installed.
5. Check the "Device manager screen" to see if the USB driver has been correctly installed.
Driver name: KONICA MINOLTA 1050/1050P/920/950 USB Driver for ISW

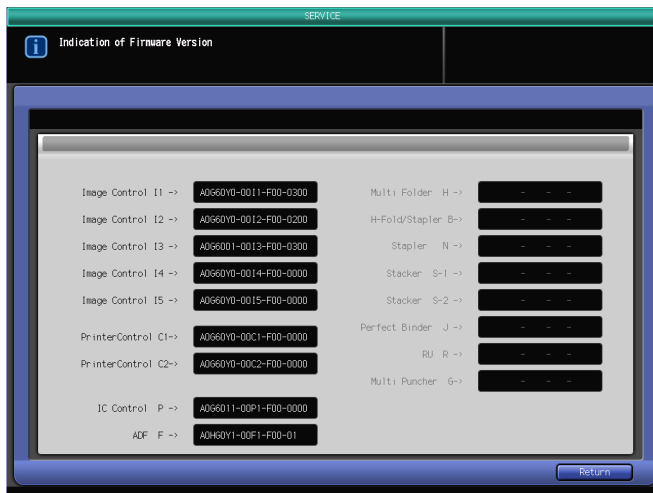


(2) Preparation for transfer of the main body

(a) Checking the firmware version

Before rewriting firmware, be sure to check the current firmware version following the procedure as follows.

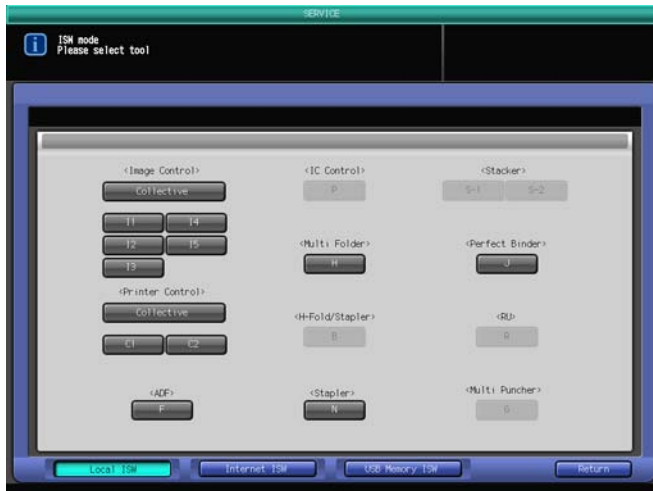
1. Press [08 Firmware Version] in [Service mode screen].
2. Press [01 Firmware Version] in the sub menu shown to the right of the screen.
3. "Indication of Firmware Version screen"



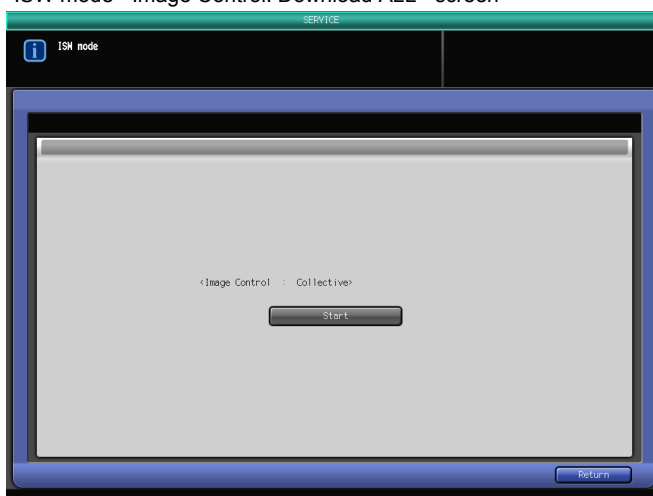
(b) Standby for the ISW transfer

Open the service mode of the main body and get into the standby of the ISW transmission.

1. Press [10 ISW] in [Service mode screen].
2. Press [01 ISW] in the sub menu shown to the right of the screen.
3. "ISW mode screen"



4. Press the key corresponding to the firmware to rewrite.
Example: <Image Control> Download ALL
"ISW mode <Image Control: Download ALL> screen"

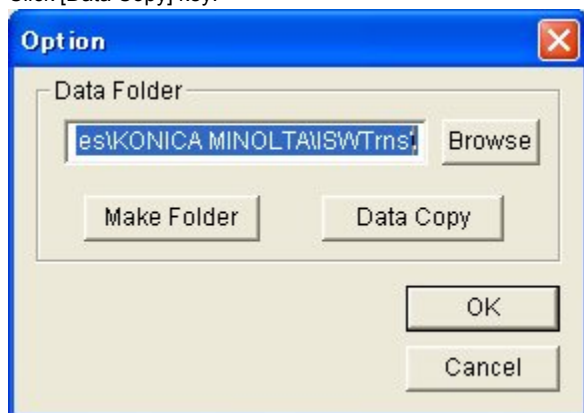


3.4.2 Firmware copy

By using the ISWTrns, firmware that transfers it to the main body is copied into the specified folder.

(1) Procedure

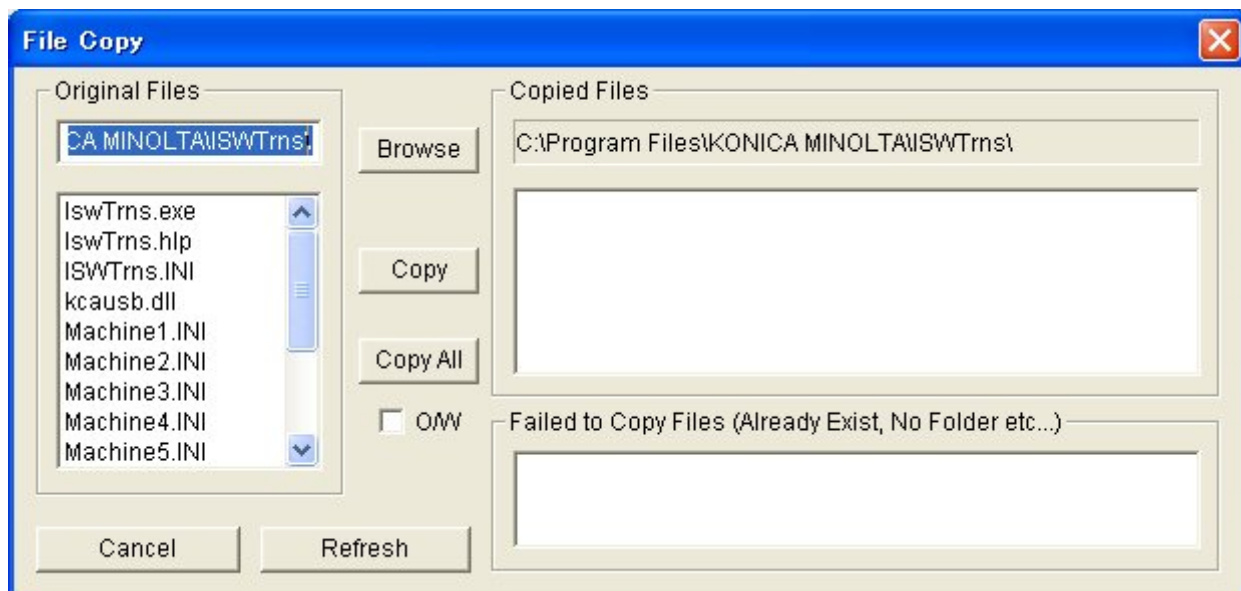
1. Start the PC.
2. Select "ISWTrns" from the start menu or double click the "ISWTrns" icon on the desk top to start up the "ISWTrns program."
3. Click [Option (O)] from the menu and then click [Option (O)].
4. "Option screen"
Click [Data Copy] key.



5. "File copy screen"
Click [Browse] key.
Select the folder into which firmware is stored as a copied file.

Note

- The folder selected is shown in the upper display section of the "Original Files".
- In the lower display section of the "Original Files," the firmware related files stored in the folder are shown.



6. Select a file you want to copy from the lower display section of the "Original Files".

Note

- The plural transferred files (rewritten data) can be selected.
- When copying all the files that are displayed, skip this step and proceed to the step 7.

7. Click [Copy] automatically copies the selected file into the specified folder created by installing the ISWTrns.

Note

- When copying all the files that are displayed in the lower display section of the "Original Files", click [Copy All] instead of [Copy].
- In the upper display section of the "Copied Files", a folder name created at the setup of the ISWTrns is displayed.
- In the list shown in the lower display section of the "Copied Files," files the copy of which has been successfully completed are listed in full path. In the "Failed to Copy Files", files the copy of which have been failed are listed. As the causes of failure, following are considered.
 - A. There exists a file of the same name and "O/W" is not checked.
 - B. A folder into which a file is stored is not found.
 - C. Overwriting is made on an overwrite-prohibited file.
- When changing a file that is currently stored into a new data, click the overwrite check box to make a check mark.

8. After completion of copy, click [Refresh].

9. Click [Cancel] to get back to "option screen".

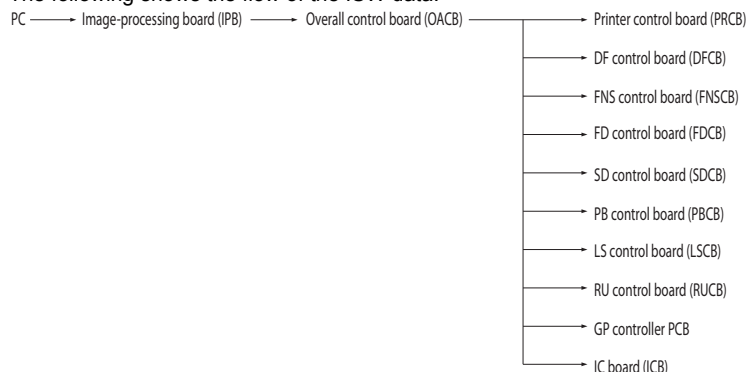
10. "Option screen"

Click [OK].

3.4.3 Firmware

(1) Firmware data flow

The following shows the flow of the ISW data.



When conducting the ISW in the entire system, be sure to conduct it in the following order.

Step	Type of programs
1 *1	FD (H), FS (N), SD (B), PB (J), LS (S-1, S-2) *2, RU (R), GP (G)
2	ADF (F), IC (P), Printer control (C1 to C2 collectively, C1, C2)
3	Image control (I1 to I5 collectively, I2, I3, I4, I5)

*1 Be sure to conduct the low end first out of those set in the sequence.

Example) When the composition is made up of "LS-505 (1st tandem) + LS-505 (2nd tandem) + FS-521"

FS-521 (N) → LS-505 (S-2) → LS-505 (S-1)

*2 When the LS is the coupling of 1 set, the 1st tandem (main body side) is S-1, and the 2nd tandem is S-2.

Note

- When the overall control board is replaced, be sure to conduct first of all the ISW of the image control program. When the image control program is not contained in the overall control board, other programs cannot be written.
- Programs are not stored in the image-processing board. So, when the board is replaced, the ISW is not required.
- When the FNCSB (FS-521), the FDCB, the SDCB, the LSCB or the PBCB is replaced, be sure to conduct the machine setting of the main body by the DIPSW (FD, FS, SD or PB) on the control board (refer to [L.2.8.1 FD control board \(FDCB\)](#), [L.2.9.1 SD control board \(SDCB\)](#), [L.2.7.1 LS control board \(LSCB\)](#), [L.2.11.1 PB control board \(PBCB\)](#)) or by the LS toggle SW (refer to [G.8.2.4 Caution when setting models using toggle SW](#)). After that setting, conduct the ISW.

Be sure to connect the jumper connector to the post-processing option by following the table below.

Connecting short connector when rewriting firmware

PRO1200/1200P

	GP-501	RU-506	LS-505	FD-503	SD-506	PB-502 / 503	FS-521
When the option is connected to the upstream (PIPFU/RU-506 is connected right after the main body.)	Not required	When using GP-501+RU-506, remove the connector B (CN6) and connect the blue connector to the board.	Not required				

PRO1051

	GP-501	RU-506	LS-505	FD-503	SD-506	PB-502 / 503	FS-521
When the option is not connected to the upstream (right after the main body)	Not required	When using GP-501+RU-506, remove the connector B (CN6) and connect the blue connector to the board.	Not required	Connect the short connector to CN-19 of the board			
When the option is connected to the upstream (PIPFU/RU-506 is connected right after the main body.)	Not required	When using GP-501+RU-506, remove the connector B (CN6) and connect the blue connector to the board.	Not required				

(2) Types of the transfer mode

There are 2 types of the ISW transfer mode on the machine side as following.

(a) When writing a new program (when replacing a board or when failed in writing a program)

	Displayed normally when starting up	Method for ISW transmission
Overall control board	Power save LED flashing	Power ON mode
	No display on operation panel	
Others	Error code display	Service mode

When there is an abnormality found with the image-processing program of the image-processing board, or an error is found with date displayed on the operation panel, a startup is normally unavailable. Under this condition, when the power switch is turned on, the system gets into the ISW standby status.

Once an abnormality occurs in rewriting the image-processing program and damages the contents of the memory, the system gets into the ISW standby status with flashing the power save LED when the power is turned on again.

When the image-processing program is in the normal condition and there is an abnormality found with other programs, an SC error is normally display on the touch panel while in the startup.

(b) When in the version up of the program

	Displayed normally when starting up	Method for ISW transmission
Overall control board	Normal	Service mode
Others	Normal	Service mode

(3) Use of each transmission mode

- Power ON mode
This mode is used when there is no program installed in the overall control board (OACB) of the copier main body, or when an error code is displayed.
When the image control program of the OACB is not installed, the OACB can be written with the power switch ON.
- Service mode
This mode is used when the image control program of the OACB has been already installed.

3.4.4 Connection to the main body

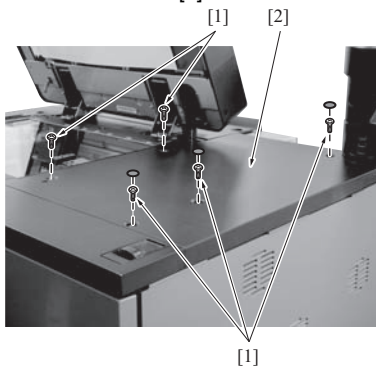
(1) When using the USB cables

Preparations are made of the following when a connection is made.

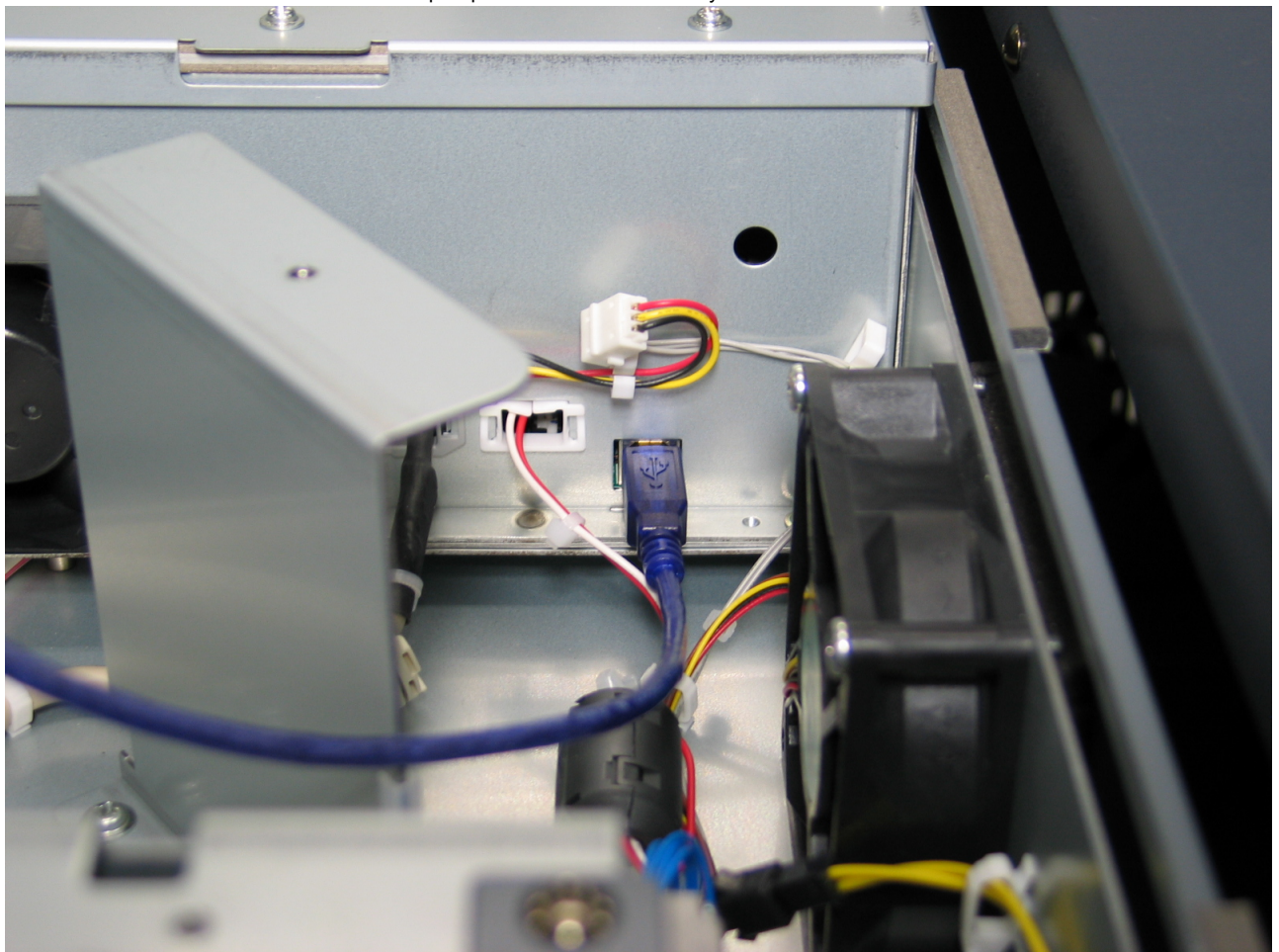
- PC into which transferred files (rewritten data) have been copied.
- UBS cables

(a) Procedure

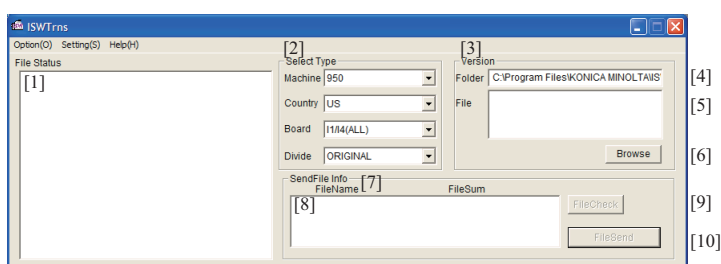
1. Turn OFF the power of the copier.
2. Turn OFF the power of the PC.
3. Remove 5 screws [1] and then remove the upper right cover [2].



4. Connect the USB port and the PC with the cables.
5. Connect the USB cable of the PC to the ISW port provided on the main body.

**3.4.5 Rewriting of firmware****(1) Relationship between the ISW and the display on the operation panel**

When the ISWTrns program starts up, the main screen of the ISWTrns is displayed. In the main screen, the transmission file (firmware) is selected, the information is displayed, the checksum and the transmission file are sent out. For detailed information of the functions, refer to the following.



[1] File detailed information list

View detailed information about the version file when select firmware.

[2] Condition selection frame

Select condition for a transfer file. When selecting all the 4 types of the combo boxes, a folder [4] is set from the information set in the ISWTrns.INI file. The contents of the combo box selected is stored in the ISWTrns.INI file by "Transmission," and initialized and displayed when being started next time.

[3] Version selection frame

When there are more than one version of firmware in a folder, select the version to transmit from this frame.

[4] Version storage folder edit box

When the select type frame of [2] is decided, a folder name is displayed in full path from the information of the data folder set in the option window and the INI file. When the firmware is in a folder other than the specified data folder, click [Browse] [6] to specify the file location or entering directly the file location. A firmware corresponding to the INI file conditions in the folder shown here is displayed in the list box of [5].

[5] Version file selection list box

Displays files that is in the folder selected at [4]. When more than one version files are stored in the same folder, all versions are displayed in this list box. When more than one version files are stored in the same folder, all versions are displayed in this list box. Changing the selected item decides a firmware version to be transmitted.

[6] Version file [Browse]

This key is used when the firmware is in a folder other than the specified data folder. Display the folder selection screen to select the folder of [4].

[7] Send file information frame

Display the list of firmware to be transmitted based on the information selected in the frames [2] and [3], and click [FileCheck] [9] to display the checksum of the file and the consistency (OK, NG, ??) of the checksum.

[8] Transferred file information display list

Display a list of files that are transferred when the version file is selected at [5]. The number of files actually transmitted is described in the checksum attached to the firmware.

Click [FileCheck] at [9] to calculate the checksum of the entire displayed files. Compare the obtained value with the checksum value stored in the checksum file (*.sum) attached to the firmware to display the result.

[9] [FileCheck]

With a transmission file displayed in "SendFile info" of [8], press this key to calculate the file checksum (checksum of the entire file) of the displayed transmission file and show a result beside the transmission file. Also, compare the result of the checksum with the checksum file attached to the firmware and display the obtained result in the following form.

"OK" : Accord

"NG" : Not accord

"??": Checksum file (*.sum) not found

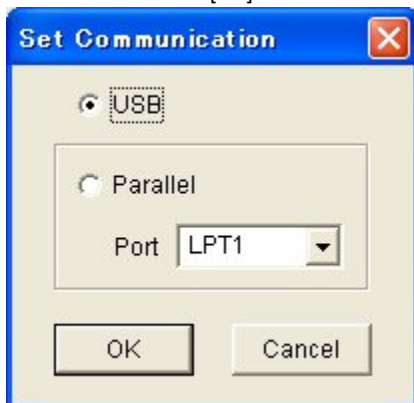
[10] [FileSend]

The transmission of the transferred files is started.

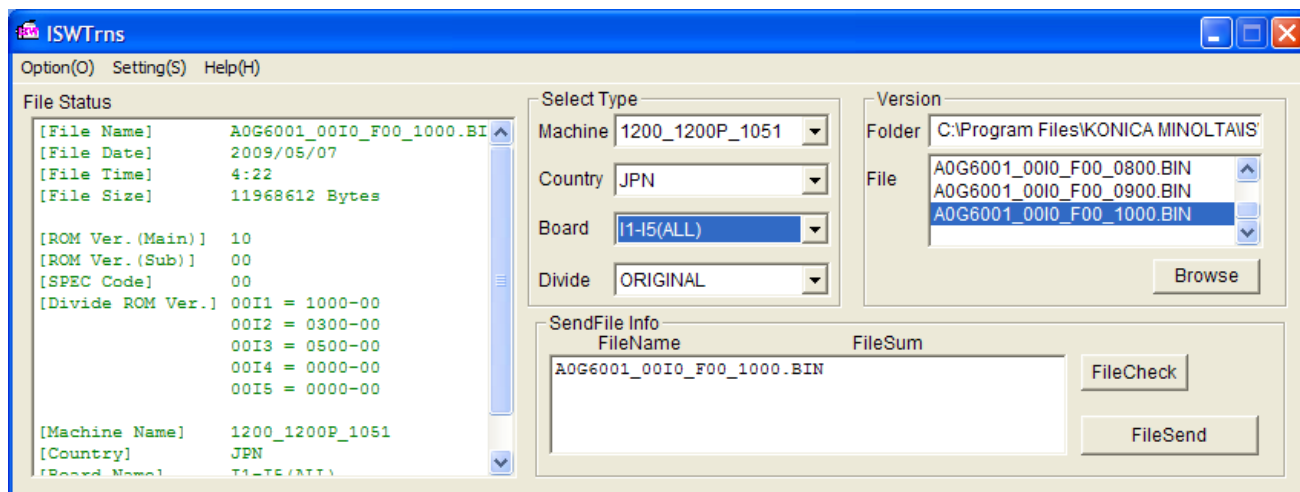
(2) Procedure

Example: When the overall control program (ALL) is written.

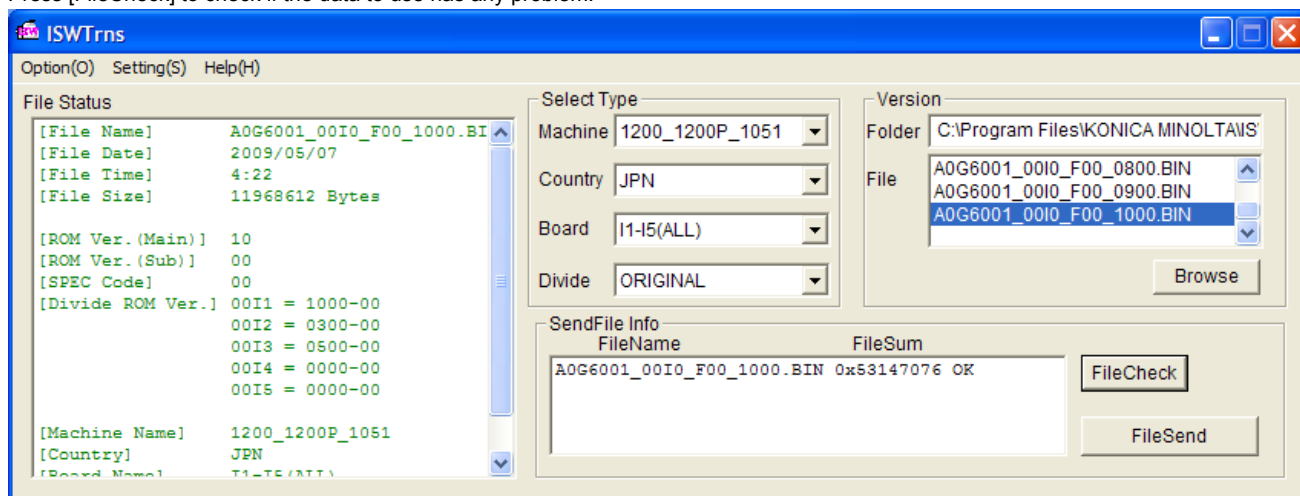
1. Start the ISWTrns program.
2. Click [Set-up (S)] from the menu and then click [Communication setting (C)].
3. "Set Communication screen"
Select USB and click [OK].



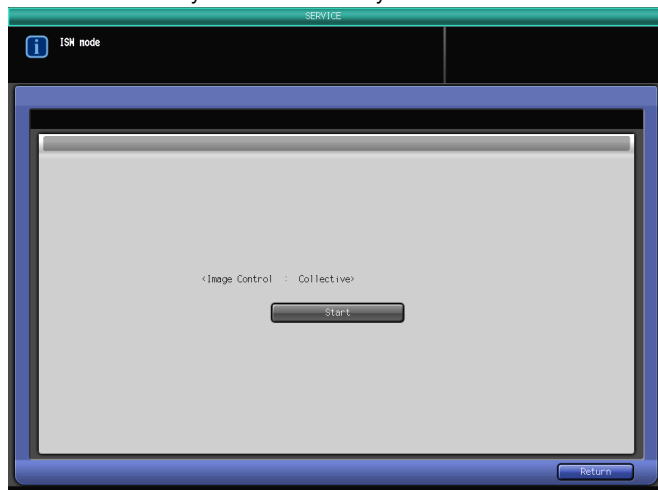
4. Select the machine type, the destination and the board types.
 - Machine type: 1200_1200P_1051, Country: EU, Board type: I1 to I5 collectively



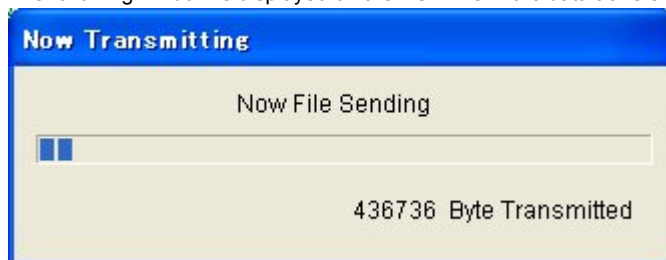
5. The data to be used is displayed in the version file selection box and the transmitted file information frame.
6. Press [FileCheck] to check if the data to use has any problem.



7. Place the main body in the ISW standby condition.



8. Press first [Start] on the operation panel and then click [FileSend] of the ISWTrns.
9. The following window is displayed on the PC while in the data transfer.

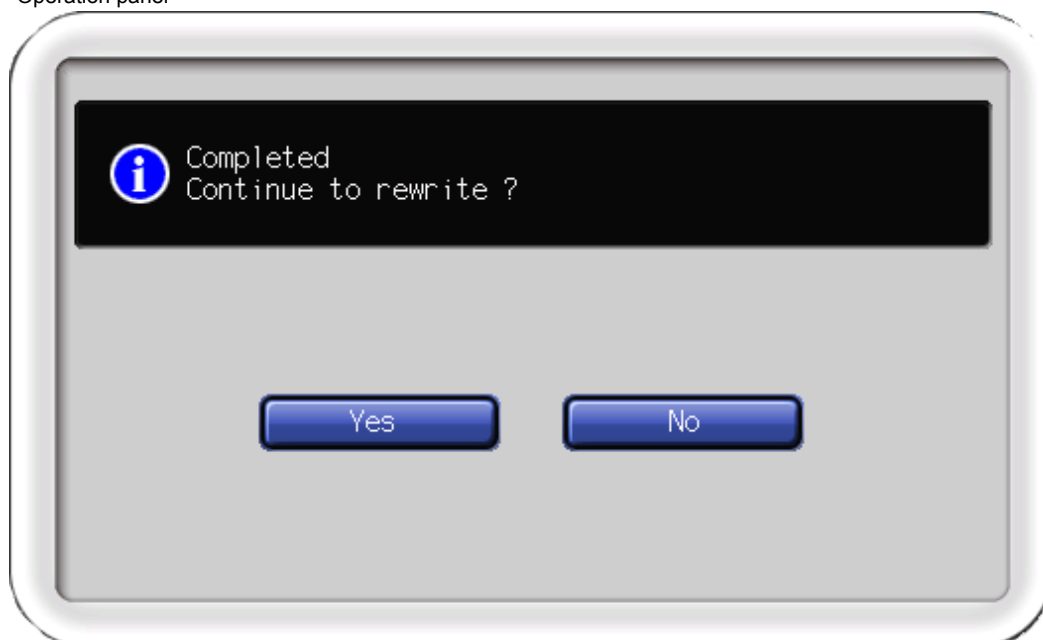


10. When the data transfer is completed, the following window is displayed.

"ISWTrns"



"Operation panel"



11. "ISWTrns"

Click [OK].

"Operation panel"

When sending data in succession, press the [Yes].

When terminating the rewrite, press the [No].

By pressing [No], the machine restarts automatically.

12. After reboot of the main body, check "Firmware version screen" in the service mode to see if the firmware is normally updated.

3.5 Error list

Detection function

- When the copier main body detects an abnormal condition after turning on the power, the copier does not display it on the main body touch panel, but inform you of it by lighting or flashing the LED (with the ISW placed in the standby condition). For the LED display, refer to the following table.

No.	Transaction	Power save LED status
1	CPU in initialization when the power is turned on	OFF
2	Flush memory in checking	OFF
3	When an error is detected while in memory check (ISW standby status)	Flashing in orange
4	Erasing flash memory	Lighting in green
5	ISW processing (data being received from the PC and flush memory being written)	Flashing in green
6	When an abnormality is detected while in data transmission	Flashing alternately in red and green
7	When an error is detected while in writing flush memory	Flashing in red
8	Memory check successfully completed: while in rebooting	OFF

(1) ISWTrns error list

The ISWTrns displays messages when an error is shown or the transaction is completed. The following table shows the contents of the message and the status of the ISWTrns.

Message	Status of the ISWTrns
The opening of the file the checksum of which is to be taken is not available.	The opening of the checksum file failed. The file is in use or damaged.
The opening of the file the checksum of which is to be taken cannot be read.	The reading of the checksum file failed. The memory is insufficient or the OS is in trouble.

The file cannot be opened.	The opening of the transferred file is unavailable. The file is in use or damage.
Communication port setting acquisition error	The access to GetCommState failed.
Communication port setting error	The access to GetCommState failed.
The transferred file cannot be opened.	The opening of the transferred file is unavailable. The file is in use or damage.
The Term Test file cannot be transmitted.	The transmission of the communication test block failed. 1.The copier side is not in the receiving condition. 2.The cable is disconnected. 3.The transferred file is wrong.
Transmission of the file failed.	The transmission of the transferred file failed. Communication troubles such as a disconnected cable.
The folder name is illegal.	The name of the input folder is illegal. Be sure that the input starts from the drive name such as "C:".
The generation of the thread failed.	The generation of the thread failed.
The transferred file is not found.	A file that copies a file is not selected or does not exist in the folder.
Some files cannot be copied.	1.When the folder into which files are stored is not found. 2.When a file is copied into the folder in which a file of the same name is contained with "Overwrite check box" not checked. 3.When overwriting is made on an overwrite prohibited file. 4.Another application is using the file. OS trouble.
The transferred file is not found, or a file with an illegal name is found in the folder. Make sure of it.	The number of divisions of the transferred file written in the checksum file does not correspond with the number of files that actually exist. 1.When a file with an illegal name is in the data folder, or a file name that seems to be illegal is displayed in the folder list. 2.The number of divided files is insufficient. Check the insufficient number of files in the folder list and copy them again. 3.When the checksum file is damaged, copy it again to the folder.

(2) Main body error list

The following table shows error codes.

Error code	Description	Program applicable	Trans action
02	The internal work space cannot be secured.	P	1
04	The DIMM space cannot be secured.		
05	The DIMM space cannot be opened.		
06	Data transmission to the DIMM failed.		
21	The DIMM space on the controller side cannot be secured.	Common	2
41	The format of the input data is abnormal.		
42	The type name of input data is abnormal.		
43	The board name of input data is abnormal.	F	2
64	Rewritten address error		
81	Input device such as input time out is abnormal.		
C1	The erasing of the flush ROM failed.	I	4
C2	The writing of the flush ROM failed.		
C3	The ROM checksum is abnormal.		
C4	Output device such as output time out is abnormal.	Common	6
E1	Program SUM check error.	F	5
	Controller I/F writing error.	P	
	Erase error.	C/H/B/N/S/J/R	
E2	Writing error.	C/H/B/N/S/J/R	5
	Controller I/F verify error.	P	
E3	Blanc check error.	F	6
	Communication error.	C/H/B/N/S/J/R	7
E4	Switching the ISW mode of the FNS control board fails.	C/H/B/N/S/J/R	8
44	CRC code check error	Common	9
100	Network connection error, USB memory connection error	Common	10
101	Error of the file which is downloaded from the network or the USB memory	Common	2
4xx	When the connection to the network is made with the communication protocol set by HTTP, a server error is returned from the server.	Common	11
5xx	When the connection to the network is made with the communication protocol set by FTP, a server error is returned from the server.	Common	11

Note

- For rewriting the IC firmware, the execution of the ISW is inhibited in case the initialization of the IC has not completed.

- When any one of the errors shown above occurs, an error code is not displayed, but the message "Now initializing Controller" is shown in the touch panel section.

(3) Troubleshooting procedure for the main body error

Troubleshooting No.	Troubleshooting procedure
1	The program is not running properly. Turn OFF/ON the main power switch (SW1) and the sub power switch (SW2) and execute ISW again. If the error still occurs after some repetitions, the trouble of the image processing board (IPB) is conceivable.
2	Check the ISW transfer data file and execute ISW again.
3	Check the communication cable between the PC for transferring the program and IPB or the condition of the PC, and then execute ISW again.
4	The flash ROM abnormality of IPB is conceivable. If the same error still occurs continuously after executing ISW again, replace IPB.
5	The checksum result after writing the program and the checksum data displayed on the ISW transfer data file do not match. If the same error still occurs continuously after executing ISW again, it is conceivable that the ISW transfer data is not generated properly. Copy the program to PC again.
6	It detects an abnormality on the target ISW board. Check the target board of ISW.
7	Check the I/F between IPB and the printer control board (PRCB). Turn OFF/ON the SW1 and SW2 of the main body, and execute ISW again.
8	The communication between IPB, the printer control board (PRCB), and the FNS control board (FNSCB) is not conducted normally. Turn OFF/ON the SW1 and SW2 of the main body, and execute ISW again.
9	The CRC code result after transferring the program and the CRC code data displayed on the ISW transfer data file do not match. If the same error still occurs continuously after executing ISW again, replace the PC for transferring the ISW data and then execute ISW.
10	Check the network connection setting or the connecting status of the USB memory, and then execute ISW again.
11	Check the network setting of FTP/HTTP, and then execute ISW again.

3.6 Troubleshooting

When an error occurs while in the execution of the ISWTrns program, take the measures shown in the following table.

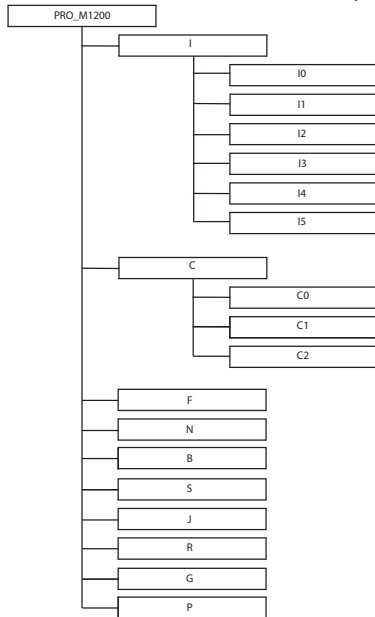
	Condition	Cause	Measure taken
1	The ISWTrns does not start up.	The ISWTrns file is damaged	Set it up again.
		The setup disk itself is damaged.	Check the setup disk and set it up again.
2	The screen is displayed in English.	The Japanese DLL[RCJP.DLL] is damaged.	Set it up again.
		The INI file is set incorrectly. (The INI file in English version is used.)	Check the ISWTrns.INI file.
3	When an item in the combo box is selected, the transferred file is not displayed.	The transferred file is not stored in the relevant folder.	Check to see if the relevant file is stored in the folder displayed in the "Folder" text box of "Select version." When a folder into which a file is stored is not found, use the "File copy" function.
		The data folder in the option screen is set incorrectly.	Check the setting of the data folder. When a folder into which a file is stored is not found, use the "File copy" function.
		The file name is illegal (or has been changed.)	The file name must be used with no change made. When the file name is changed, the display or selection of the file becomes unavailable. When the file name is changed, return it to former state.
		The folder name is illegal (or has been changed.)	When the folder name created by the "Create folder" button in the option screen has been changed, it cannot be found. Return it to former state and check it again.
4	"NG" is displayed while in the file check.	The transferred file is damaged.	Copy the file and check it again. When "NG" still recurs, contact the supplier of the file.
5	"???" is displayed while in the file checksum.	When the transferred file was copied to the PC, the copying of the checksum file (*.SUM) was forgotten.	Copy the checksum file to the folder same as the transferred file at the same time. (If you use the "Copy a file" function, a copy is made automatically.)
6	The transfer of the file failed.		
	An error "The file cannot be opened" is displayed.	Another program or system is using the file.	Exit another program. The error still recurs, reboot Windows.
	An error "Cannot send a Term Test file" is displayed.	The connection of the cable is loosened.	Check the cable to see if it is connected securely or if there is any problem found with the cable itself.
		The main body is not in the receiving condition.	Check the main body to see if it is in the receiving condition.

4. USB MEMORY ISW

4.1 Usage of the USB memory ISW

(1) Procedure

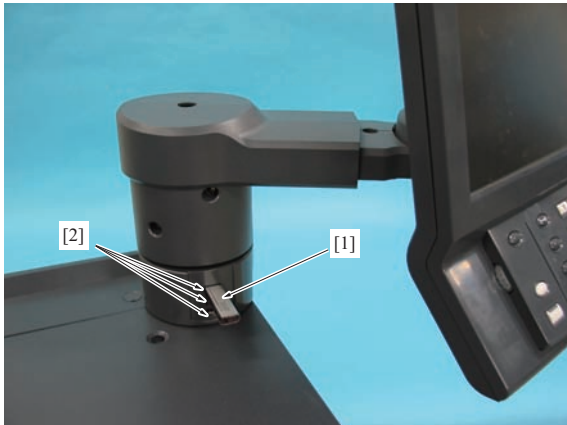
1. Save the firmware to the USB memory in the following folder structure.



Note

- Create the PRO_M1200 folder directly under the USB memory route.
- Several firmware can be saved to a folder. However 24 files is the maximum it can display on the touch panel. Also, 2 byte font cannot be displayed.
- Maximum 40 letters for a file name.
- The folder structure is common to 1200P/1051.

2. Connect the USB memory [1] to the main body connection port [2].



3. Enter the service mode.
4. "Service mode menu screen"
Press [12 ISW].
5. "ISW Menu screen"
Press [01 ISW].
6. "Board Type Selection screen"
Press [USB Memory ISW] and confirm that the message "Connection of a USB memory has been recognized." is displayed, then press the button that corresponds to the firmware to be rewritten.



7. Example: <Image Control> Collective (I0)

The file in the USB memory applicable folder is displayed. (Maximum 24 files)
Select the version of the file to be rewritten, and press [OK].

Note

- From the file name, the file availability is judged and the result is shown by text color.
 White: File effective as ISW.
 Yellow: Special ROM file.
 Red: File other than ISW or file for different destination.
- Press [Limit] to display only the effective files. Press [File Name], [Date] or [Size (byte)] to sort the files by that order.

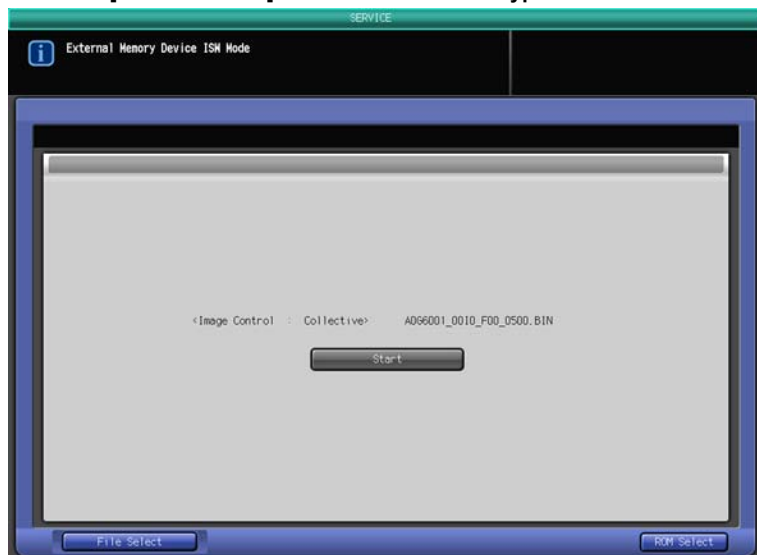


8. "External Memory Device ISW Mode" screen

Check the type and name of file to conduct ISW, and press [Start].

Note

- Press [File Select] to return to the file name selection screen.
- Press [ROM Selection] to return to the board type selection screen.



9. The following screen is displayed when ISW is completed.



10. Press [Continue] when conducting the ISW successively.
To end the ISW, pull out the USB memory from the connection port, then press [End].
By pressing [No], the machine restarts automatically.
11. Check the firmware version in the service mode to see if the ISW is completed successfully.

4.2 Main body error list

When an error occurs during USB memory ISW operation, the malfunction code is displayed on the touch panel. (Refer to [J.3.5.\(2\) Main body error list](#))

5. INTERNET ISW

5.1 Outline

"Internet ISW" is a system to operate the ISW by the main body automatically receiving firmware from the program server, using Web browser, main body operation panel, or Internet mail (E-mail) to direct the ISW. ISW can be operated at the customer facility without carrying the program by using the Internet ISW from the main body operation panel or Web browser.

5.2 Operating environment

To use the Internet ISW function, the following conditions must to be met.

- The main body must be connected to the network environment that allows the download of firmware from the Internet by using ftp or http protocol.

In the following 9 cases, the "Internet ISW" does not operate on the main body.

- When the main power switch (SW1) is off
- When the sub power switch (SW2) is off
- The copier is in the auto shut-off mode.
- When the "Security Strengthen Set" is set to ON (The main body NIC other than the CS Remote Care cannot be used)
- During print operation, or various JOB (including reserve JOB) exists, or suspended JOB exists during main body idling.
- Using modes other than normal mode.
- Paper JAM has occurred.
- Image file exists in the image memory.
- Program type, board do not match.

5.3 Initial setting

To make use of the Internet ISW, it is necessary to set in advance the network parameter, program server address, the fire wall address and so on, of the main body.

(1) Setting from the operation panel

To introduce the copier main body into the network, set the IP address of the copier from the operation panel.

When this setting has been already made, proceed to "[J.5.3.\(2\) Setting from the Web browser.](#)"

(a) Procedure

1. Press [Utility/Counter] on the operation panel.
2. Press [03 Administrator Setting].
3. Press [05 Network Setting].
4. Press [01 Machine NIC Setting].
5. Enter "IP Address," "Subnet Mask," and "Gateway Address."
6. Turn OFF and ON the sub power switch (SW2) to restart the main body.

Note

- The system administrator normally assigns the IP address of the copier. For details, contact the system administrator.

(2) Setting from the Web browser

Enter the setting of the program server from the Web browser. At this time, in order to use the Web browser, make preparations of the PC that can be introduced into the network.

Note

- No "space" is allowed in all set items.
- When an incorrect setting is made on the Web browser, be sure to correct it following the error message. When no correction of input error is made, program download error occurs.

(a) Procedure

1. Start up the Web browser.
When the proxy is set on the Web browser, it becomes unavailable to access the main body Web.
For particulars, contact the network administrator. Be sure to avoid setting from 2 or more browsers at a time.
2. Specify the IP address of the copier main body that is entered thorough "[J.5.3.\(1\) Setting from the operation panel](#)".
Access the Web Utilities of the main body to display the "Main page screen".

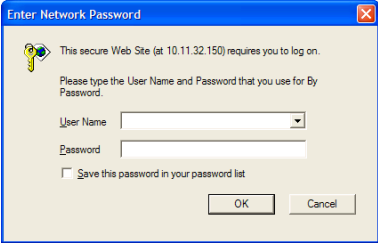
Web Utilities

- [Remote Panel](#)
- [Remote Monitor](#)
- [Multi Monitor](#)

- [Machine Manager Setting](#)
- [Extension for maintenance](#)



3. "Main page screen"
Click [Extension for maintenance].
4. Enter the user name and the CE password in the "Extension for maintenance" and then press [OK].
User name: ce (small letter, cannot be changed)
Password: Enter the CE password. (Default: "92729272")



5. "Extension for maintenance screen"

Click [Internet ISW].

Extension for maintenance

- E-Mail Initial Setting
- CSRC Imp Setting
- Internet ISW
- Remote Panel
- Panel Log
- Machine setting data Import
- Mail Log

Main Page

6. "Internet ISW screen"

Click [Initial Setting].

Internet ISW

Setting

Initial Setting

Setting proxy server and program server

Test

7. "Proxy Server Setting screen"

Set the proxy server.

When using no proxy server (fire wall), proceed to the step 9.

Proxy Server Setting

Enable Proxy	Use ftp proxy
Proxy Server Type	USER user@host
Proxy Server IP Address	0 0 0 0
Port Number	0 (Minimum: 1,Maximum: 99999 ex. ftp:21,http:80)
User name on the proxy server	(Maximum: 10 Characters)
Password for the proxy server	(Maximum: 10 Characters)

Next

Enable Proxy	When using no proxy: "Connect to the program server." When using ftp proxy: "Use ftp proxy." When using ftp proxy: "Use ftp proxy." Select one of the above.
Proxy Server Type	When selecting "Use ftp proxy" in "Enable Proxy", select the Proxy Server Type from the followings. Type1: "User user@host name" Type2: "OPEN host name" Type 3: FW user => FW password => SITE host name Type 4: "FW user name => FW password => User user@host" Note Types 2, 3 and 4 are unsupported. For authentication of proxy server,J.5.7 Authentication of the proxy server in Internet ISW".
Proxy Server IP Address	When using the proxy server, set the IP address of the proxy server.
Port Number	When using the proxy server, set the number of the port that uses the proxy server.
User name on the proxy server	When selecting the type1 or type2 in "Type of proxy server" shown above, set the account of the proxy server.
Password for the proxy server	When selecting the type 1 or type 2 in "Type of proxy server" above set the password of the proxy server.

8. After completion of entry, click [Next] and then after checking the set items in the setting check screen, click [Next]. However, if there is an input error, follow the message shown in red and click [Back] to re-set the item.

9. "Program Server Setting screen"

Set the program server. (When using the proxy)

Program Server Setting

Program Server Address	Set the address of the server into which the program to download is stored. Select the protocol to be used from the pull-down menu on the left and enter the following address in the text box on the right. In the case of ftp, it is a relative path from the home directory.
User name on the program server	Enter the account name of the program server.
Password for the program server	Enter the password of the program server.
Receiving time out	Set the receiving time-out of the program. When the time is out, the download of the program forcibly comes to an end, and the system returns to the normal mode without conducting the ISW.

10. After completion of entry, click [Next]. Then after checking the set items in the setting check screen, click [Complete].

However, if there is an input error, follow the message shown in red and click [Back] to re-set the item.

11. Set the program server. (When not using the proxy)

Protocol	Select the protocol that receives the program.
Program Server IP Address	Set the IP address of the server into which the program to be down loaded is stored.
Target directory	In the case of http, set the path after the host domain. In the case of ftp, set the relative path from the home directory.
User name on the program server	Enter the account name of the program server.
Password for the program server	Enter the password of the program server.
Receiving time out	Set the receiving time-out of the program. When the time is out, the download of the firmware forcibly comes to an end, and the system returns to the normal mode without conducting the ISW.

12. After completion of entry, click [Next]. Then after checking the set items in the setting check screen, click [Complete]. However, if there is an input error, follow the message shown in red and click [Back] to re-set the item.

13. Conduct the Download test.

- In the down load test, "test.dat" is down loaded from the program server set in the initialization to check the settings. When the download test failed, recheck the set items following the error message.
- When the download test is successfully completed, the communication speed and the expected download time are displayed as following. Refer to this information to set the "Receiving time out".

Download test

No Problem was found while downloading

Estimated line speed 6501584(bps)

Receiving data size	Estimated receiving time
1M byte	0minute 1second
3M byte	0minute 3second
5M byte	0minute 6second
7M byte	0minute 8second

[Back]

- When the download test failed, the response error code from the server is display as following. Since it may be because of a setting error, recheck the initialization.

Download test

Can't download from program server
Response Error Code from server [530]

Please change the initial setting accordingly

[Initial Setting]

[Back]

5.4 Internet ISW using the Web Utilities

Using the Web Utilities of the main body allows, by just making a click from the browser, to download the programs from the program server automatically for rewriting.

(1) Procedure

1. Proceed to "Internet ISW" on the Web Utilities.

"Internet ISW screen"

The firmware version of the present board is displayed beside each of the board types.

ISW

Please select board type

Image Control	Collective	11 AIRFOYO-0011-F00-0600	12 AIRFOYO-0012-F00-0600	13 AIRFOYO-0013-F00-0600
Tonic		14 AIRFOYO-0014-F00-0100	15 AIRFOYO-0015-F00-0000	
Print Control		16 AIRFOYO-0016-F00-0000		
ADF		17 AIRFOYO-00C1-F00-0400		
Stapler		18 AIRFOYO-00F1-G00-01		
Multi Folder				
H-Fold Stapler				
Stacker				
RU				
Wrap Bookbinder				
Multi Puncher				

File name: (Maximum: 25 Characters)

ISW

2. Select one ISW intended board at the item of "ISW". When specifying a firmware file name to be download, enter it in the [File name] text box.

ISW

Please select board type

Image Control	Collective	11 AIRFOYO-0011-F00-0600	12 AIRFOYO-0012-F00-0600	13 AIRFOYO-0013-F00-0600
Tonic		14 AIRFOYO-0014-F00-0100	15 AIRFOYO-0015-F00-0000	
Print Control		16 AIRFOYO-0016-F00-0000		
ADF		17 AIRFOYO-00C1-F00-0400		
Stapler		18 AIRFOYO-00F1-G00-01		
Multi Folder				
H-Fold Stapler				
Stacker				
RU				
Wrap Bookbinder				
Multi Puncher				

File name: (Maximum: 25 Characters)

ISW

When specifying no firmware name, the following files stored in the program server are rewritten.

I0	bootI0.bin
I1	bootI1.bin
I2	bootI2.bin
I3	bootI3.bin
I4	bootI4.bin
I5	bootI5.bin
T	bootT1.bin
C1	bootC1.bin
F1	bootF1.bin
H1	bootH1.bin
N1	bootN1.bin
N2	bootN2.bin
B1	bootB1.bin
S1	bootS1.bin
S2	bootS2.bin
R1	bootR1.bin
R2	(Not used)
J1	bootJ1.bin
G1	(Not used)

Note

- **bootN1.bin is for FS-521 and bootN2.bin is for FS-612.**
- **bootS1.bin is for LS (1st tandem) and bootS2.bin is for LS (2nd tandem).**

- After completion of entry, click the [ISW].
- If there is an input error, follow the message shown in red and click [Back] to enter the item again.
- Checking of the ISW conditions.

The power save LED lights in green during downloading the program. From the Web screen, check the current processing condition to see if there is any error.

 - "ISW in communication"
 - "ISW in rewriting" "Completed successfully":
 - "Completed normally": Be sure to avoid pressing the "Read again" key of the browser to reboot after successful completion.
 - "Aborted due to a communication error."
 - "Aborted due to a communication time error."
 - "Aborted due to a writing error."
- When ISW is completed normally, the main body automatically restarts and completes ISW.
- After restart of the main body, check the firmware version in "Internet ISW main screen" to see if it is being updated successfully.

5.5 Usage precautions

5.5.1 Notice to administrator

When conducting the Internet ISW, be sure to notify the administrator of it and get approval from administrator in advance. Be sure to execute ISW with the main body not used. However, when the main body is in use (jobs present), the Internet ISW does not operate.

5.5.2 Power cut during writing

While in the ISW rewrite, the operation panel and the power switch (SW2) are locked. However, when the main power source is turned off due to power cut etc., the main body cannot start up.

However, this is a problem encountered while in the overall control board (OACB) rewrite. As for other errors while in the ISW, they can be rewritten by the Internet ISW again.

Should the main body be not able to start due to the reason above, go to the actual place and use Boot USB memory ISW to conduct the rewrite of the program.

5.6 Internet ISW using the operation panel

(1) Procedure

Example: When rewrite the overall control board (OACB) firmware (ALL).

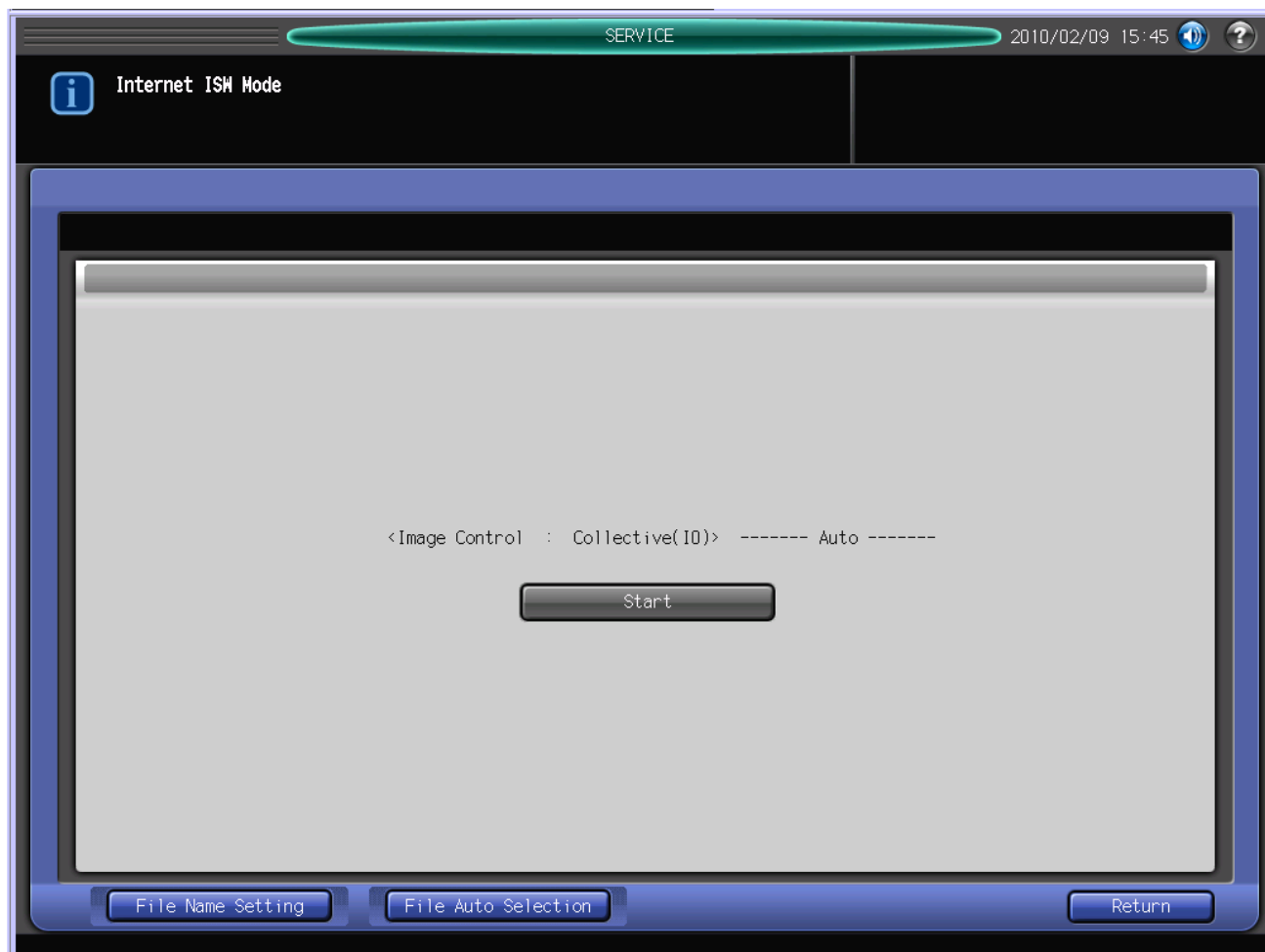
1. Display "ISW mode screen".



2. Press the [Internet ISW] on the screen and then press the [Collective(I0)] of <Image Control>.



3. Press the [Start] and download the latest firmware to start the rewrite.



In a case in which the download of an old version firmware is required, press the [File Name Input] and enter the file name manually.



4. The following screen is displayed when ISW is completed.



5. Press [Continue] when conducting the ISW successively.
To end the ISW, press [End].
The main body automatically restarts when [End] is pressed.
6. Check the firmware version in the service mode to see if the ISW is completed successfully.

(2) Main body error list

When an error occurs while in the execution of the Internet ISW, an error code is displayed on the operation panel. (Refer to [J.3.5 Error list](#))

5.7 Authentication of the proxy server in Internet ISW

(1) Proxy server

Proxy server which is provided on the inside of the fire wall is the generic name of a mail server that serves the proxy of a client who receives an access demand (HTTP and FTP) from the client.

(2) Authentication of the proxy server

There are 4 types of authentication methods for the proxy server.
The Internet ISW is corresponding to these 4 types.

(3) Authentication type of the proxy server and the command list

(a) Type1: User user name@host name

When accessing the outside through the proxy, authentication to the proxy server is not required.

When accessing the outside through the proxy server, or when the entry of the user name and password of the proxy server is not required, this proxy authentication is likely to be used.

Command

Command	Parameter	Reply Code	Description
USER	User name@host name	331	Transmit the user name of the program server and the program server address
PASS	Password	230	Transmit the password for the user name above

(b) Type2: OPEN host name

This process is almost the same as the type1, except for the exchange of commands while in authentication.

When all the settings are made correctly and no communication is available with type 1 authentication, apply this type.

Command

Command	Parameter	Reply Code	Description
OPEN	Host name	ftp expanded function, defined for each server	Transmit the user name of the program server
USER	User name	331	Transmit the user name of the program server
PASS	Password	230	Transmit the password for the user name above

(c) Type 3: FW user => FW password => SITE host name

This is a type that requires the authentication to the proxy server itself when accessing the outside.

The information of the server you want to access, the user name and password of the proxy server (F/W) are necessary. In the case of the user name and the password of the proxy server are required when accessing the outside through the proxy server, this proxy authentication is likely to be used.

Command

Command	Parameter	Reply Code	Description
USER	FW user	331	Transmit the user name of the proxy server
PASS	FW password	230	Transmit the password for the user name above
SITE	Host name	ftp expanded function, defined for each server	Transmit the user name of the program server
USER	User name	331	Transmit the user name of the program server
PASS	Password	230	Transmit the password for the user name above

(d) Type 4: FW user => FW password => USER user@host

This process is almost the same as the type3, except for the exchange of commands while in authentication.

When all the settings are made correctly and no communication is available with type 3 authentication, apply this type.

Command

Command	Parameter	Reply Code	Description
USER	FW user name	331	Transmit the user name of the proxy server
PASS	FW password	230	Transmit the password for the user name above
USER	User name@host name	331	Transmit the user name of the program server and the program server address
PASS	Password	230	Transmit the password for the user name above

(4) Remark

For fwt2.1 (for Unix) and Black Jumbo Dog (for Windows), the type1 authentication is used. For most of the proxy servers, the type 1 authentication is used. When the authentication type of the proxy server is not known, you are recommended to make settings in type1 authentication as a temporary measure.

K TROUBLESHOOTING

1. JAM INDICATION

1.1 Jam code list

Classification	JAM Code	Cause	Resulting operation	Correction
Tray1	J-1101	During operation: The paper feed sensor /1 (PS7) does not turn ON within a specified period of time after the paper feed clutch /1 (CL4) turns ON.	If there is a sheet of paper being printed when a jam occurs, the main body completes the paper exit before stopping operations.	Pull out tray1 and remove jammed paper if any.
	J-1102	The pre-registration sensor /1 (PS17) does not turn ON within a specified period of time after the paper feed clutch /1 (CL4) turns ON.		Open tray /1 and the main body vertical conveyance door, and remove jammed paper if any.
	J-1103	During operation: The vertical conveyance sensor /1 (PS19) does not turn ON within a specified period of time after the pre-registration sensor (PS17) turns ON.		Open tray /1 and the main body vertical conveyance door, and remove jammed paper if any.
	J-1104	During operation: When the trailing edge of paper is passing through the vertical conveyance sensor /1 (PS19), the pre-registration sensor /1 (PS17) is turned ON by the succeeding paper.	After completion of the exit of the preceding paper, the main body stops operations.	Open tray /1 and the main body vertical conveyance door, and remove jammed paper if any.
	J-1151	When idling: The vertical conveyance sensor /1 (PS19) turns ON while in idling.	-	Open the main body vertical conveyance door and remove jammed paper if any.
	J-1152	When idling: The pre-registration sensor /1 (PS17) turns ON while in idling.		Pull out tray /1 and remove jammed paper if any.
Tray2	J-1201	During operation: The paper feed sensor /2 (PS11) does not turn ON within a specified period of time after the paper feed clutch /2 (CL6) turns ON.	If there is a sheet of paper being printed when a jam occurs, the main body completes the paper exit before stopping operations.	Pull out tray /2 and remove jammed paper if any.
	J-1202	During operation: The pre-registration sensor /2 (PS18) does not turn ON within a specified period of time after the paper feed clutch /2 (CL6) turns ON.		Open tray2 and the main body vertical conveyance door, and remove jammed paper if any.
	J-1203	During operation: The pre-registration sensor /3 (PS21) does not turn ON within a specified period of time after the paper feed clutch /2 (PS18) turns ON.		Open tray2 and the main body vertical conveyance door, and remove jammed paper if any.
	J-1204	During operation: When the trailing edge of paper is passing through the vertical conveyance sensor /3 (PS21), the pre-registration sensor /2 (PS18) is turned ON by the succeeding paper.	After completion of the exit of the preceding paper, the main body stops operations.	Open tray2 and the main body vertical conveyance door, and remove jammed paper if any.
	J-1251	When idling: The vertical conveyance sensor /3 (PS21) turns ON while in idling.	-	Open the main body vertical conveyance door and remove jammed paper if any.
	J-1252	When idling: The pre-registration sensor /2 (PS18) turns ON while in idling.		Pull out tray /2 and remove jammed paper if any.
Tray3 (PFU1)	J-1301	During operation: (PF-702) The paper feed sensor /1 (PS3) does not turn ON within a specified period of time after the paper feed clutch /1 (CL6) turns ON. (PF-703) The paper feed sensor /1 (PS2) does not turn ON within a specified period of time after the paper feed clutch /1 (CL7) turns ON.	If there is a sheet of paper being printed when a jam occurs, the main body completes the paper exit before stopping operations.	Pull out tray3 and remove jammed paper if any.
	J-1302	During operation: (PF-702) The pre-registration sensor /1 (PS14) does not turn ON within a specified period of time after the paper feed clutch /1 (CL6) turns ON. (PF-703) The pre-registration sensor /1 (PS14) does not turn ON within a specified period of time after the paper feed clutch /1 (CL7) turns ON.		Open tray /3, the PF front door and the vertical conveyance door /Up, and remove jammed paper if any.

Classification	JAM Code	Cause	Resulting operation	Correction
	J-1303	During operation: (PF-702/703) The vertical conveyance sensor /1 (PS15) does not turn ON within a specified period of time after the pre-registration sensor /1 (PS14) turns ON.		Open tray /3, the PF front door and the vertical conveyance door /Up, and remove jammed paper if any.
	J-1304	During operation: (PF-702/703) When the trailing edge of paper is passing through the vertical conveyance sensor /1 (PS15), the pre-registration sensor /1 (PS14) is turned ON by the succeeding paper.	After completion of the exit of the preceding paper, the main body stops operations.	Open tray /3, the PF front door and the vertical conveyance door /Up, and remove jammed paper if any.
	J-1305	During operation: (PF-703) The paper suction sensor /Fr1 (PS25) and the paper suction sensor /Rr1 (PS26) do not turn ON within a specified period of time from the rotation stabilization standby (3sec) after the paper suction fan /1 (FM13) and the paper suction fan /2 (FM14) turn ON.	If there is a sheet of paper being printed when a jam occurs, the main body completes the paper exit before stopping operations.	Pull out tray /3 and remove jammed paper if any.
	J-1351	When idling: (PF-702/703) The pre-registration sensor /1 (PS14) turns ON while in idling.	-	Pull out tray /3 and remove jammed paper if any.
	J-1352	When idling: (PF-702/703) The vertical conveyance sensor /1 (PS15) turns ON while in idling.		Open the PF front door and the vertical conveyance door /Up and remove jammed paper if any.
Tray4 (PFU1)	J-1401	During operation: (PF-702) The paper feed sensor /2 (PS7) does not turn ON within a specified period of time after the paper feed clutch /2 (CL9) turns ON. (PF-703) The paper feed sensor /2 (PS6) does not turn ON within a specified period of time after the paper feed clutch /2 (CL8) turns ON.	If there is a sheet of paper being printed when a jam occurs, the main body completes the paper exit before stopping operations.	Pull out tray /4 and remove jammed paper if any.
	J-1402	During operation: (PF-702) The pre-registration sensor /2 (PS18) does not turn ON within a specified period of time after the paper feed clutch /2 (CL9) turns ON. (PF-703) The pre-registration sensor /2 (PS18) does not turn ON within a specified period of time after the paper feed clutch /2 (CL8) turns ON.		Open tray /4, the PF front door and the horizontal conveyance jam release lever and remove jammed paper if any.
	J-1403	During operation: (PF-702/703) When the trailing edge of paper is passing through the loop sensor /2 (PS19), the pre-registration sensor /2 (PS18) is turned ON by the succeeding paper.		Open tray /4, the PF front door and the horizontal conveyance jam release lever and remove jammed paper if any.
	J-1405	During operation: (PF-703) The paper suction sensor /Fr2 (PS27) and the paper suction sensor /Rr2 (PS28) do not turn ON within a specified period of time from the rotation stabilization standby (3sec) after the paper suction fan /3 (FM15) and the paper suction fan /4 (FM16) turn ON.		Pull out tray /4 and remove jammed paper if any.
	J-1451	When idling: (PF-702/703) The pre-registration sensor /2 (PS18) turns ON while in idling.	-	Pull out tray /4 and remove jammed paper if any.
Tray5 (PFU1)	J-1501	During operation: (PF-702) The paper feed sensor /3 (PS11) does not turn ON within a specified period of time after the paper feed clutch /3 (CL12) turns ON. (PF-703)	If there is a sheet of paper being printed when a jam occurs, the main body completes the paper exit before stopping operations.	Pull out tray5 and remove jammed paper if any.

Classification	JAM Code	Cause	Resulting operation	Correction
		The paper feed sensor /3 (PS10) does not turn ON within a specified period of time after the paper feed clutch /3 (CL9) turns ON.		
	J-1502	During operation: (PF-702) The pre-registration sensor /3 (PS20) does not turn ON within a specified period of time after the paper feed clutch /3 (CL12) turns ON. (PF-703) The pre-registration sensor /3 (PS20) does not turn ON within a specified period of time after the paper feed clutch /3 (CL9) turns ON.		Open tray /5, the PF front door and the vertical conveyance door /Lw, and remove jammed paper if any.
	J-1503	During operation: (PF-702) The vertical conveyance sensor /2 (PS21) does not turn ON within a specified period of time after the pre-registration sensor /3 (PS20) turns ON. (PF-703) The vertical conveyance sensor /3 (PS21) does not turn ON within a specified period of time after the pre-registration sensor /3 (PS20) turns ON.		Open tray /5, the PF front door and the vertical conveyance door /Lw, and remove jammed paper if any.
	J-1504	During operation: (PF-702) When the trailing edge of paper is passing through the vertical conveyance sensor /2 (PS21), the pre-registration sensor /3 (PS20) is turned ON by the succeeding paper. (PF-703) When the trailing edge of paper is passing through the vertical conveyance sensor /3 (PS21), the pre-registration sensor /3 (PS20) is turned ON by the succeeding paper.	After completion of the exit of the preceding paper, the main body stops operations.	Open tray /5, the PF front door and the vertical conveyance door /Lw, and remove jammed paper if any.
	J-1505	During operation: (PF-703) The paper suction sensor /Fr3 (PS29) and the paper suction sensor /Rr3 (PS30) do not turn ON within a specified period of time from the rotation stabilization standby (3sec) after the paper suction fan /5 (FM17) and the paper suction fan /6 (FM18) turn ON.	If there is a sheet of paper being printed when a jam occurs, the main body completes the paper exit before stopping operations.	Pull out tray /5 and remove jammed paper if any.
	J-1551	When idling: (PF-702/703) The pre-registration sensor /3 (PS20) turns ON while in idling.	-	Pull out tray5 and remove jammed paper if any.
	J-1552	When idling: (PF-702) The vertical conveyance sensor /2 (PS21) turns ON while in idling. (PF-703) The vertical conveyance sensor /3 (PS21) turns ON while in idling.		Open the PF front door and the vertical conveyance door /Lw and remove jammed paper if any.
Tray6 (PFU2)	J-1611	During operation: (PF-702) The paper feed sensor /1 (PS3) does not turn ON within a specified period of time after the paper feed clutch /1 (CL6) turns ON. (PF-703) The paper feed sensor /1 (PS2) does not turn ON within a specified period of time after the paper feed clutch /1 (CL7) turns ON.	If there is a sheet of paper being printed when a jam occurs, the main body completes the paper exit before stopping operations.	Pull out tray6 and remove jammed paper if any.
	J-1612	During operation: (PF-702) The pre-registration sensor /1 (PS14) does not turn ON within a specified period of time after the paper feed clutch /1 (CL6) turns ON. (PF-703) The pre-registration sensor /1 (PS14) does not turn ON within a specified period of time after the paper feed clutch /1 (CL7) turns ON.		Open tray /6, the PF front door and the vertical conveyance door /Up, and remove jammed paper if any.

Classification	JAM Code	Cause	Resulting operation	Correction
	J-1613	During operation: (PF-702/703) The vertical conveyance sensor /1 (PS15) does not turn ON within a specified period of time after the pre-registration sensor /1 (PS14) turns ON.		Open tray /6, the PF front door and the vertical conveyance door /Up, and remove jammed paper if any.
	J-1614	During operation: (PF-702/703) When the trailing edge of paper is passing through the vertical conveyance sensor /1 (PS15), the pre-registration sensor /1 (PS14) is turned ON by the succeeding paper.	After completion of the exit of the preceding paper, the main body stops operations.	Open tray /6, the PF front door and the vertical conveyance door /Up, and remove jammed paper if any.
	J-1615	During operation: (PF-703) The paper suction sensor /Fr1 (PS25) and the paper suction sensor /Rr1 (PS26) do not turn ON within a specified period of time from the rotation stabilization standby (3sec) after the paper suction fan /1 (FM13) and the paper suction fan /2 (FM14) turn ON.	If there is a sheet of paper being printed when a jam occurs, the main body completes the paper exit before stopping operations.	Pull out tray /6 and remove jammed paper if any.
Tray7 (PFU2)	J-1621	During operation: (PF-702) The paper feed sensor /2 (PS7) does not turn ON within a specified period of time after the paper feed clutch /2 (CL9) turns ON. (PF-703) The paper feed sensor /2 (PS6) does not turn ON within a specified period of time after the paper feed clutch /2 (CL8) turns ON.		Pull out tray /7 and remove jammed paper if any.
	J-1622	During operation: (PF-702) The pre-registration sensor /2 (PS18) does not turn ON within a specified period of time after the paper feed clutch /2 (CL9) turns ON. (PF-703) The pre-registration sensor /2 (PS18) does not turn ON within a specified period of time after the paper feed clutch /2 (CL8) turns ON.		Open tray /7, the PF front door and the horizontal conveyance jam release lever and remove jammed paper if any.
	J-1623	During operation: (PF-702/703) When the trailing edge of paper is passing through the loop sensor /2 (PS19), the pre-registration sensor /2 (PS18) is turned ON by the succeeding paper.		Open tray /7, the PF front door and the horizontal conveyance jam release lever and remove jammed paper if any.
	J-1625	During operation: PF-703 The paper suction sensor /Fr2 (PS27) and the paper suction sensor /Rr2 (PS28) do not turn ON within a specified period of time from the rotation stabilization standby (3sec) after the paper suction fan /3 (FM15) and the paper suction fan /4 (FM16) turn ON.		Pull out tray /7 and remove jammed paper if any.
Tray8 (PFU2)	J-1631	During operation: PF-702 The paper feed sensor /3 (PS11) does not turn ON within a specified period of time after the paper feed clutch /3 (CL12) turns ON. PF-703 The paper feed sensor /3 (PS10) does not turn ON within a specified period of time after the paper feed clutch /3 (CL9) turns ON.		Pull out tray /8 and remove jammed paper if any.
	J-1632	During operation: PF-702 The pre-registration sensor /3 (PS20) does not turn ON within a specified period of time after the paper feed clutch /3 (CL12) turns ON. PF-703 The pre-registration sensor /3 (PS20) does not turn ON within a specified period of time after the paper feed clutch /3 (CL9) turns ON.		Open tray /8, the PF front door and the vertical conveyance door /Lw, and remove jammed paper if any.

Classification	JAM Code	Cause	Resulting operation	Correction
Paper feed conveyance (PFU2)	J-1633	During operation: PF-702 The vertical conveyance sensor /2 (PS21) does not turn ON within a specified period of time after the pre-registration sensor /3 (PS20) turns ON. PF-703 The vertical conveyance sensor /3 (PS21) does not turn ON within a specified period of time after the pre-registration sensor /3 (PS20) turns ON.		Open tray /8, the PF front door and the vertical conveyance door /Lw, and remove jammed paper if any.
	J-1634	During operation: PF-702 When the trailing edge of paper is passing through the vertical conveyance sensor /2 (PS21), the pre-registration sensor /3 (PS20) is turned ON by the succeeding paper. PF-703 When the trailing edge of paper is passing through the vertical conveyance sensor /3 (PS21), the pre-registration sensor /3 (PS20) is turned ON by the succeeding paper.	After completion of the exit of the preceding paper, the main body stops operations.	Open tray /8, the PF front door and the vertical conveyance door /Lw, and remove jammed paper if any.
	J-1635	During operation: PF-703 The paper suction sensor /Fr3 (PS29) and the paper suction sensor /Rr3 (PS30) do not turn ON within a specified period of time from the rotation stabilization standby (3sec) after the paper suction fan /5 (FM17) and the paper suction fan /6 (FM18) turn ON.	If there is a sheet of paper being printed when a jam occurs, the main body completes the paper exit before stopping operations.	Pull out tray /8 and remove jammed paper if any.
	J-1641	During operation: (PF-702/703) The intermediate sensor /Up (PS16) does not turn ON within a specified period of time after the vertical conveyance sensor /1 (PS15) turns ON.		Open the PF front door and the PF vertical conveyance door /Up, and remove jammed paper if any.
	J-1642	During operation: (PF-702/703) The loop sensor /1 (PS17) does not turn ON within a specified period of time after the intermediate sensor /Up (PS16) turns ON.		Open the PF front door and the PF vertical conveyance door /Up, and remove jammed paper if any.
	J-1643	During operation: (PF-702/703) The loop sensor /2 (PS19) does not turn ON within a specified period of time after the pre-registration sensor /2 (PS18) turns ON.		Open the PF front door and the horizontal conveyance jam release lever, and remove jammed paper if any.
	J-1644	During operation: PF-702 The intermediate sensor /Lw (PS22) does not turn ON within a specified period of time after the vertical conveyance sensor /2 (PS21) turns ON. PF-703 The intermediate sensor /Lw (PS22) does not turn ON within a specified period of time after the vertical conveyance sensor /3 (PS21) turns ON.		Open the PF front door and the PF vertical conveyance door /Lw, and remove jammed paper if any.
	J-1645	During operation: (PF-702/703) The loop sensor /3 (PS23) does not turn ON within a specified period of time after the intermediate sensor /Lw (PS22) turns ON.		Open the PF front door and the PF vertical conveyance door /Lw, and remove jammed paper if any.
	J-1646	During operation: (PF-702/703) The PF exit sensor (PS24) does not turn ON within a specified period of time after the loop sensor /1 (PS17) turns ON.		Open the PF front door, the PF vertical conveyance door /Up and the horizontal conveyance jam release lever, and remove jammed paper if any.
	J-1647	During operation: (PF-702/703) The PF exit sensor (PS24) does not turn ON within a specified period of time after the loop sensor /2 (PS19) turns ON.		Open the PF front door and the PF horizontal conveyance jam release lever, and remove jammed paper if any.

Classification	JAM Code	Cause	Resulting operation	Correction
	J-1648	During operation: (PF-702/703) The PF exit sensor (PS24) does not turn ON within a specified period of time after the loop sensor /3 (PS23) turns ON.		Open the PF front door, the PF vertical conveyance door /Lw and the horizontal conveyance jam release lever, and remove jammed paper if any.
Tray6 (PFU2)	J-1651	When idling: (PF-702/703) The pre-registration sensor /1 (PS14) turns ON while in idling.	-	Pull out tray3 and remove jammed paper if any.
	J-1652	When idling: (PF-702/703) The vertical conveyance sensor /1 (PS15) turns ON while in idling.		Open the PF front door and the vertical conveyance door /Up and remove jammed paper if any.
Tray7 (PFU2)	J-1661	When idling: (PF-702/703) The pre-registration sensor /2 (PS18) turns ON while in idling.		Pull out tray /7 and remove jammed paper if any.
Tray8 (PFU2)	J-1671	When idling: (PF-702/703) The pre-registration sensor /3 (PS20) turns ON while in idling.		Pull out tray /5 and remove jammed paper if any.
	J-1672	When idling: PF-702 The vertical conveyance sensor /2 (PS21) turns ON while in idling. PF-703 The vertical conveyance sensor /3 (PS21) turns ON while in idling.		Open the PF front door and the vertical conveyance door /Lw and remove jammed paper if any.
Tray6 (PFU2)	J-1681	When idling: (PF-702/703) The intermediate sensor /Up (PS16) turns ON while in idling.		Open the PF front door and the vertical conveyance door /Up and remove jammed paper if any.
	J-1682	When idling: (PF-702/703) The loop sensor /1 (PS17) turns ON while in idling.		Open the PF front door and the vertical conveyance door /Up and remove jammed paper if any.
Tray7 (PFU2)	J-1683	When idling: (PF-702/703) The loop sensor /2 (PS19) turns ON while in idling.		Open the PF front door and the vertical conveyance door /Lw and remove jammed paper if any.
Tray8 (PFU2)	J-1684	When idling: (PF-702/703) The intermediate sensor /Lw (PS22) turns ON while in idling.		Open the PF front door and the vertical conveyance door /Lw and remove jammed paper if any.
	J-1685	When idling: (PF-702/703) The loop sensor /3 (PS23) turns ON while in idling.		Open the PF front door and the vertical conveyance door /Lw and remove jammed paper if any.
Paper feed conveyance (PFU2)	J-1686	When idling: (PF-702/703) The PF exit conveyance sensor (PS24) turns ON while in idling.		Open the PF front door and the horizontal conveyance jam release lever, and remove jammed paper if any.
Paper feed conveyance (common to each tray)	J-1701	During operation: The ADU pre-registration sensor (PS40) does not turn ON within a specified period of time after the ADU conveyance sensor (PS42) turns ON.	If there is a sheet of paper being printed when a jam occurs, the main body completes the paper exit before stopping operations.	Open the main body front doors / R and /L, pull out the ADU section and remove jammed paper if any.
	J-1702	During operation: The ADU pre-registration sensor (PS42) does not turn ON within a specified period of time after the ADU conveyance sensor (PS16) turns ON.		Open the main body front doors / R and /L, pull out the ADU section and remove jammed paper if any.
Paper feed conveyance (Tray/1, /2)	J-1703	During operation: The vertical conveyance sensor (PS16) does not turn ON within a specified period of time after the vertical conveyance sensor /1 (PS19) turns ON.	After completion of the exit of the preceding paper, the main body stops operations.	Open the main body vertical conveyance door and remove jammed paper if any.
Paper feed conveyance (Tray2)	J-1704	During operation: The vertical conveyance sensor /2 (PS20) does not turn ON within a specified period of time after the vertical conveyance sensor /3 (PS21) turns ON.		Open the main body vertical conveyance door and remove jammed paper if any.

Classification	JAM Code	Cause	Resulting operation	Correction
Paper feed conveyance (PFU)	J-1705	During operation: The vertical conveyance sensor /1 (PS19) does not turn ON within a specified period of time after the vertical conveyance sensor /2 (PS20) turns ON.		Open the main body vertical conveyance door and remove jammed paper if any.
	J-1706	During operation: (PF-702/703) The loop sensor (PS16) of the main body does not turn ON within a specified period of time after the PF exit conveyance sensor (PS24) turns ON.		Open the PF front door and the horizontal conveyance jam release lever, and remove jammed paper if any.
Paper feed conveyance	J-1712	During operation: The multi feed detection board /S (MFDBS) or /R (MFDBR) detects the double feed.	If there is a sheet of paper being printed when a jam occurs, the main body completes the paper exit before stopping operations.	Open the main body front doors / R and /L, pull out the ADU section and remove jammed paper if any.
	J-1751	When idling: The vertical conveyance sensor (PS41) turns ON while in idling.	-	Open the main body front doors / R and /L, pull out the ADU section and remove jammed paper if any.
	J-1752	When idling: The pre-registration sensor (PS40) turns ON while in idling.		Open the main body front doors / R and /L, pull out the ADU section and remove jammed paper if any.
	J-1753	When idling: The pre-registration sensor (PS42) turns ON while in idling.		Open the main body front doors / R and /L, pull out the ADU section and remove jammed paper if any.
	J-1754	When idling: The pre-registration sensor (PS16) turns ON while in idling.		Open the main body front doors / R and /L, pull out the ADU section and remove jammed paper if any.
	J-1755	When idling: The vertical conveyance sensor /2 (PS20) turns ON while in idling.		Open the main body front doors / R and /L, pull out the ADU section and remove jammed paper if any.
Paper feed conveyance (PFU1)	J-1801	During operation: (PF-702/703) The intermediate sensor /Up (PS16) does not turn ON within a specified period of time after the vertical conveyance sensor /1 (PS15) turns ON.	If there is a sheet of paper being printed when a jam occurs, the main body completes the paper exit before stopping operations.	Open the PF front door and the PF vertical conveyance door /Up, and remove jammed paper if any.
	J-1802	During operation: (PF-702/703) The loop sensor /1 (PS17) does not turn ON within a specified period of time after the intermediate sensor /Up (PS16) turns ON.		Open the PF front door and the PF vertical conveyance door /Up, and remove jammed paper if any.
	J-1803	During operation: (PF-702/703) The loop sensor /2 (PS19) does not turn ON within a specified period of time after the pre-registration sensor /2 (PS18) turns ON.		Open the PF front door and the horizontal conveyance jam release lever, and remove jammed paper if any.
	J-1804	During operation: (PF-702) The intermediate sensor /Lw (PS22) does not turn ON within a specified period of time after the vertical conveyance sensor /2 (PS21) turns ON. (PF-703) The intermediate sensor /Lw (PS22) does not turn ON within a specified period of time after the vertical conveyance sensor /3 (PS21) turns ON.		Open the PF front door and the PF vertical conveyance door /Lw, and remove jammed paper if any.
	J-1805	During operation: (PF-702/703) The loop sensor /3 (PS23) does not turn ON within a specified period of time after the intermediate sensor /Lw (PS22) turns ON.		Open the PF front door and the PF vertical conveyance door /Lw, and remove jammed paper if any.
	J-1806	During operation: (PF-702/703) The PF exit sensor (PS24) does not turn ON within a specified period of time after the loop sensor /1 (PS17) turns ON.		Open the PF front door, the PF vertical conveyance door /Up and the horizontal conveyance jam release lever, and remove jammed paper if any.

Classification	JAM Code	Cause	Resulting operation	Correction
Horizontal conveyance (PFU1)	J-1807	During operation: (PF-702/703) The PF exit sensor (PS24) does not turn ON within a specified period of time after the loop sensor /2 (PS19) turns ON.		Open the PF front door and the PF horizontal conveyance jam release lever, and remove jammed paper if any.
	J-1808	During operation: (PF-702/703) The PF exit sensor (PS24) does not turn ON within a specified period of time after the loop sensor /3 (PS23) turns ON.		Open the PF front door, the PF vertical conveyance door /Lw and the horizontal conveyance jam release lever, and remove jammed paper if any.
	J-1810	During operation: (PF-703) The horizontal conveyance sensor /1 (PS31) does not turn ON within a specified period of time after the PF exit conveyance sensor (PS24) turns ON.		Open tray /3, the PF front door and the horizontal conveyance jam release lever and remove jammed paper if any.
	J-1811	During operation: (PF-703) The horizontal conveyance sensor /2 (PS32) does not turn ON within a specified period of time after the horizontal conveyance sensor /1 (PS31) turns ON.		Open tray /3, the PF front door and the horizontal conveyance jam release lever and remove jammed paper if any.
	J-1812	During operation: (PF-703) The horizontal conveyance sensor /3 (PS33) does not turn ON within a specified period of time after the horizontal conveyance sensor /2 (PS32) turns ON.		Open tray /3, the PF front door and the horizontal conveyance jam release lever and remove jammed paper if any.
	J-1813	During operation: (PF-703) The horizontal conveyance sensor /4 (PS34) does not turn ON within a specified period of time after the horizontal conveyance sensor /3 (PS33) turns ON.		Open tray /3, the PF front door and the horizontal conveyance jam release lever and remove jammed paper if any.
	J-1814	During operation: (PF-703) The horizontal conveyance sensor /5 (PS35) does not turn ON within a specified period of time after the horizontal conveyance sensor /4 (PS34) turns ON.		Open tray /3, the PF front door and the horizontal conveyance jam release lever and remove jammed paper if any.
	J-1815	During operation: (PF-703) The horizontal conveyance sensor /1 (PS17) does not turn ON within a specified period of time after the horizontal conveyance sensor /5 (PS35) turns ON.		Open tray /3, the PF front door and the horizontal conveyance jam release lever and remove jammed paper if any.
	J-1851	When idling: (PF-702/703) The intermediate sensor /Up (PS16) turns ON while in idling.		Open the PF front door and the PF vertical conveyance door /Up, and remove jammed paper if any.
	J-1852	When idling: (PF-702/703) The loop sensor /1 (PS17) turns ON while in idling.		Open the PF front door and the PF vertical conveyance door /Up, and remove jammed paper if any.
Paper feed conveyance (PFU1)	J-1853	When idling: (PF-702/703) The loop sensor /2 (PS19) turns ON while in idling.		Open the PF front door and the horizontal conveyance jam release lever, and remove jammed paper if any.
	J-1854	When idling: (PF-702/703) The intermediate sensor /Lw (PS22) turns ON while in idling.		Open the PF front door and the PF vertical conveyance door /Lw, and remove jammed paper if any.
	J-1855	When idling: (PF-702/703) The loop sensor /3 (PS23) turns ON while in idling.		Open the PF front door and the PF vertical conveyance door /Lw, and remove jammed paper if any.
	J-1856	When idling: (PF-702/703) The PF exit conveyance sensor (PS24) turns ON while in idling.		Open the PF front door and the horizontal conveyance jam release lever, and remove jammed paper if any.

Classification	JAM Code	Cause	Resulting operation	Correction
Horizontal conveyance (PFU1)	J-1860	When idling: (PF-703) The horizontal conveyance sensor /1 (PS31) turns ON while in idling.		Open tray /3, the PF front door and the horizontal conveyance jam release lever and remove jammed paper if any.
	J-1861	When idling: (PF-703) The horizontal conveyance sensor /2 (PS32) turns ON while in idling.		Open tray /3, the PF front door and the horizontal conveyance jam release lever and remove jammed paper if any.
	J-1862	When idling: (PF-703) The horizontal conveyance sensor /3 (PS33) turns ON while in idling.		Open tray /3, the PF front door and the horizontal conveyance jam release lever and remove jammed paper if any.
	J-1863	When idling: (PF-703) The horizontal conveyance sensor /4 (PS34) turns ON while in idling.		Open tray /3, the PF front door and the horizontal conveyance jam release lever and remove jammed paper if any.
	J-1864	When idling: (PF-703) The horizontal conveyance sensor /5 (PS35) turns ON while in idling.		Open tray /3, the PF front door and the horizontal conveyance jam release lever and remove jammed paper if any.
Conveyance	J-1901	During operation: The main body vertical conveyance door is opened while in printing.	The main body stops immediately.	Close the vertical conveyance door.
PF	J-1902	During operation: The PFU1 front door is opened while in printing.	The main body/PF stops immediately.	Close the PF front door.
	J-1903	During operation: The PFU2 front door is opened while in printing.		Close the PF front door.
	J-1904	During operation: The PI-PFU front door is opened while in printing.		Close the PF front door.
Fusing/ paper exit	J-2101	During operation: While in the print sequence, the JAM sensor board (JAMB) detects paper at a prescribed timing.	If there is a sheet of paper being printed when a jam occurs, the main body completes the paper exit before stopping operations.	Open the main body front doors / R and /L, pull out the duplex section and remove jammed paper if any.
	J-2151	When idling: While in idling, the JAM sensor board (JAMB) detects paper at a prescribed timing.	-	Open the main body front doors / R and /L, pull out the duplex section and remove jammed paper if any.
	J-3101	During operation: The paper leading edge sensor (PS41) does not turn ON within a specified period of time after the registration motor (M17) turns ON.	If there is a sheet of paper being printed when a jam occurs, the main body completes the paper exit before stopping operations.	Open the main body front doors / R and /L, pull out the duplex section and remove jammed paper if any.
	J-3102	During operation: The fusing exit sensor (PS22) does not turn ON within a specified period of time after the paper leading edge sensor (PS41) turns ON.		Open the main body front doors / R and /L, pull out the duplex section and remove jammed paper if any.
	J-3103	During operation: PS41 does not turn OFF even after 1.1 times of the conveyance time of the transfer paper length elapses after the paper leading edge sensor (PS41) turns ON.		Open the main body front doors / R and /L, pull out the duplex section and remove jammed paper if any.
	J-3110	During operation: Printer control abnormality	The main body stops immediately.	Open the main body front doors / R and /L, pull out the duplex section and remove jammed paper if any.
	J-3111	During operation: 1.0% or 0.5% of the skew is detected by the paper skew sensor /Fr (PS65), the paper skew sensor /Rr (PS66).	If there is a sheet of paper being printed when a jam occurs, the main body completes the paper exit before stopping operations.	Open the main body front doors / R and /L, pull out the duplex section and remove jammed paper if any.
	J-3201	During operation: The de-curler entrance solenoid (PS23) does not turn ON within a specified period of time after the fusing exit sensor (PS22) turns ON.		Open the main body front doors / R and /L, pull out the duplex section and remove jammed paper if any.
	J-3202	During operation: While in the straight paper exit, the paper exit sensor (PS3) does not turn ON within a specified period of time after the de-curler entrance solenoid (PS23) turns ON.		Open the main body front doors / R and /L, pull out the duplex section and remove jammed paper if any.

Classification	JAM Code	Cause	Resulting operation	Correction
	J-3203	During operation: ADU accelerate sensor (PS49) does not turn ON within a specified period of time after the fusing exit sensor (PS22) turns ON.	The main body stops immediately.	Open the main body front doors / R and /L, pull out the duplex section and remove jammed paper if any.
	J-3204	During operation: The reverse sensor /1 (PS48) does not turn ON within a specified period of time after the ADU accelerate sensor (PS49) turns ON.		Open the main body front doors / R and /L, pull out the duplex section and remove jammed paper if any.
	J-3205	During operation: The PS48 does not turn ON again within a specified period of time after the reverse sensor /1 (PS48) turns ON.		Open the main body front doors / R and /L, pull out the duplex section and remove jammed paper if any.
	J-3206	During operation: The de-curler entrance solenoid (PS23) does not turn ON within a specified period of time after the reverse sensor /1 (PS48) turns ON.		Open the main body front doors / R and /L, pull out the duplex section and remove jammed paper if any.
	J-3207	During operation: While in the reverse paper exit, the paper exit sensor (PS3) does not turn ON within a specified period of time after the de-curler entrance solenoid (PS23) turns ON.		Open the main body front doors / R and /L, pull out the duplex section and remove jammed paper if any.
	J-3208	During operation: The PS3 does not turn OFF again within a specified period of time after the paper exit sensor (PS3) turns ON.		Open the main body front doors / R and /L, pull out the duplex section and remove jammed paper if any.
	J-3251	When idling: The fusing exit sensor (PS22) turns ON while in idling.		Open the main body front doors / R and /L, pull out the duplex section and remove jammed paper if any.
	J-3252	When idling: The paper exit sensor (PS3) turns ON while in idling.		Open the main body front doors / R and /L, pull out the duplex section and remove jammed paper if any.
	J-3253	When idling: The ADU accelerate sensor (PS49) turns ON while in idling.		Open the main body front doors / R and /L, pull out the duplex section and remove jammed paper if any.
	J-3254	When idling: The ADU reverse paper exit sensor (PS50) turns ON while in idling.		Open the main body front doors / R and /L, pull out the duplex section and remove jammed paper if any.
	J-3255	When idling: The fusing jam sensor (PS38) turns ON while in idling.		Open the main body front doors / R and /L, pull out the duplex section and remove jammed paper if any.
	J-3256	When idling: The reverse sensor /1 (PS48) turns ON while in idling.		Open the main body front doors / R and /L, pull out the duplex section and remove jammed paper if any.
	J-3257	When idling: The reverse sensor /2 (PS47) turns ON while in idling.		Open the main body front doors / R and /L, pull out the duplex section and remove jammed paper if any.
	J-3258	When idling: The de-curler entrance sensor (PS23) turns ON while in idling.		Open the main body front doors / R and /L, pull out the duplex section and remove jammed paper if any.
External	J-5101	During operation: The front door/R, /L of the main body was opened while printing.		Close main body front doors /Rt and /Lt.
	J-5102	During operation: The waste toner BOX got into the unset status while in the print.		Set the waste toner box.
DF	J-6101	During operation: The DF open/close sensor (PS301) turns OFF while in operation.	The DF stops immediately. If there is paper being transferred or having been transferred, the main body completes the paper exit before stopping operations.	Open the DF open/close cover and remove jammed paper if any.
	J-6102	During operation: The cover open/close switch (MS301) turns OFF while in operation.		Open the DF open/close cover and remove jammed paper if any.
	J-6201	During operation: The original registration sensor /Rt (PS318) does not turn OFF within a specified period of time after the pre-feed start.		Open the DF open/close cover and remove jammed paper if any.

Classification	JAM Code	Cause	Resulting operation	Correction
	J-6202	During operation: The original conveyance sensor (PS308) does not turn ON within a specified period of time after the pre-feed start of the front side of the double-sided original (including the single-sided original).		Open the DF open/close cover and remove jammed paper if any.
	J-6203	During operation: The original conveyance sensor (PS308) does not turn ON within a specified period of time after the pre-feed start of the back side of the double-sided original.		Open the DF open/close cover and remove jammed paper if any.
	J-6204	During operation: While in the forward rotation of the original conveyance motor (M301), the original conveyance sensor (PS308) does not turn OFF within a specified period of time after it turns ON.		Open the DF open/close cover and remove jammed paper if any.
	J-6205	During operation: While in the reverse rotation of the original conveyance motor (M301), the original conveyance sensor (PS308) does not turn OFF within a specified period of time after it turns ON.		Open the DF open/close cover and remove jammed paper if any.
	J-6206	During operation: When entering a large-size double-sided original in the reverse section, the original reverse sensor (PS309) does not turn ON within a specified period of time after the original conveyance sensor (PS308) turns ON.		Open the DF open/close cover and remove jammed paper if any.
	J-6207	During operation: When exiting a large-size single-sided original, the original exit sensor /Lt (PS307) does not turn ON within a specified period of time after the original conveyance sensor (PS308) turns ON.		Open the DF open/close cover and remove jammed paper if any.
	J-6208	During operation: When exiting a large-size double-sided original, the original exit sensor /Lt (PS307) does not turn ON within a specified period of time after the original reverse sensor (PS309) turns ON.		Open the DF open/close cover and remove jammed paper if any.
	J-6209	During operation: When exiting a large-size single-sided original, the original exit sensor /Lt (PS307) does not turn OFF within a specified period of time after it turns ON.		Open the DF open/close cover and remove jammed paper if any.
	J-6210	During operation: When exiting a large-size double-sided original, the original exit sensor /Lt (PS307) does not turn OFF within a specified period of time after it turns ON.		Open the DF open/close cover and remove jammed paper if any.
	J-6301	During operation: When outputting a large-size double-sided original from the reverse section, the reverse sensor (PS309) does not turn ON.		Open the DF open/close cover and remove jammed paper if any.
	J-6302	During operation: When entering a large-size double-sided original into the reverse section, the original reverse sensor (PS309) does not turn OFF within a specified period of time after it turns ON.		Open the DF open/close cover and remove jammed paper if any.
	J-6303	During operation: When outputting a large-size double-sided original from the reverse section, the original reverse sensor (PS309) does not turn OFF within a specified period of time after it turns ON.		Open the DF open/close cover and remove jammed paper if any.
	J-6304	During operation: When exiting a small-size single-sided original, the original exit sensor /Rt (PS314) does not turn OFF within a specified period of time after the reverse sensor (PS309) turns ON.		Open the DF open/close cover and remove jammed paper if any.
	J-6305	During operation: When exiting a small-size double-sided original, the original exit sensor /Rt (PS314) does not turn OFF within a specified period of time after the original reverse/exit sensor (PS313) turns ON.		Open the DF open/close cover and remove jammed paper if any.
	J-6306	During operation: When exiting a small-size single-sided original, the original exit sensor /Rt (PS314) does not turn OFF within a specified period of time after it turns ON.		Open the DF open/close cover and remove jammed paper if any.

Classification	JAM Code	Cause	Resulting operation	Correction
	J-6307	During operation: When exiting a small-size double-sided original, the original exit sensor /Rt (PS314) does not turn OFF within a specified period of time after it turns ON.		Open the DF open/close cover and remove jammed paper if any.
	J-6308	During operation: When entering a small-size double-sided original in the reverse section, the original reverse sensor (PS309) does not turn ON within a specified period of time after the original conveyance sensor (PS308) turns ON.		Open the DF open/close cover and remove jammed paper if any.
	J-6309	During operation: When outputting a small-size double-sided original from the reverse section, the original reverse sensor (PS309) does not turn ON within a specified period of time after original conveyance sensor (PS308) turns ON.		Open the DF open/close cover and remove jammed paper if any.
	J-6310	During operation: When entering a small-size double-sided original into the reverse section, the original reverse sensor (PS309) does not turn OFF within a specified period of time after it turns ON.		Open the DF open/close cover and remove jammed paper if any.
	J-6311	During operation: When outputting a small-size double-sided original from the reverse section, the original reverse sensor (PS309) does not turn OFF within a specified period of time after it turns ON.		Open the DF open/close cover and remove jammed paper if any.
	J-6501	During operation: The original registration sensor/Rt (PS318) turns ON while in idling.		Open the DF open/close cover and remove jammed paper if any.
	J-6502	During operation: The original conveyance sensor (PS308) turns ON while in idling.		Open the DF open/close cover and remove jammed paper if any.
	J-6504	During operation: The original reverse sensor (PS309) turns ON while in idling.		Open the DF open/close cover and remove jammed paper if any.
	J-6508	During operation: The original exit sensor /Lt (PS307) turns ON while in idling.		Open the DF open/close cover and remove jammed paper if any.
	J-6510	During operation: The original reverse/exit sensor (PS313) turns ON while in idling.		Open the DF open/close cover and remove jammed paper if any.
	J-6520	During operation: The original exit sensor /Rt (PS314) turns ON while in idling.		Open the DF open/close cover and remove jammed paper if any.
	J-6540	During operation: The fusing jam sensor (PS304) turns ON while in idling.		Open the DF open/close cover and remove jammed paper if any.
	J-6580	During operation: The original registration sensor /Lt (PS306) turns ON while in idling.		Open the DF open/close cover and remove jammed paper if any.
FS	J-7101	During operation: The FS front door open jam. The door switch (MS1) turns OFF while in printing.	The FS and the main body stop immediately.	Remove jammed paper if any from the FS/main body.
LS (1st tandem)	J-7103	During operation: The LS front door open jam. The door switch (MS1) turns OFF while in printing.	The LS and the main body stop immediately.	Remove jammed paper if any from the LS/main body.
LS (2nd tandem)	J-7104	During operation: The LS front door open jam. The door switch (MS1) turns OFF while in printing.		Remove jammed paper if any from the LS/main body.
FD	J-7105	During operation: The FD front door open jam. The front door switch (MS1) turns OFF while in the print.	The FD and the main body stop immediately.	Remove jammed paper if any from the FD/main body.
RU	J-7106	During operation: (RU-506) The RU front door open jam. The interlock switch (MS1) turns OFF while in the print.	The RU and the main body stop immediately.	Remove jammed paper if any from the RU/main body.
SD-506	J-7107	During operation: The SD front door/Rt open jam or the SD front door/Lt open jam. During printing, either the SD front door switch /Rt (MS1) or /Lt (MS2) turns OFF.	The SD and the main body stop immediately.	Remove jammed paper if any from the SD/main body.
PB	J-7108	PB-502: The PB front door open jam. The front door switch (MS2), the upper door switch (MS3) and the stacker door switch (MS4) became OFF during printing. PB-503: The PB front door open jam. The front door switch (SW2), the booklet door switch (SW3), the upper door switch /2 (SW4) and the relay conveyance door switch (MS3) became OFF during printing.	The PB and the main body stop immediately.	Remove jammed paper if any from the PB/main body.

Classification	JAM Code	Cause	Resulting operation	Correction
GP-501	J-7109	During operation: The GP front door open jam. The door switch turns OFF while in the print.	The GP and the main body stop immediately.	Remove jammed paper if any from the GP/main body.
FS	J-7217	During operation: The main tray exit sensor (PS10) does not turn OFF within a specified period of time after the stacker entrance sensor (PS5) turns OFF.	The FS and the main body stop immediately.	Remove jammed paper if any from the FS/main body.
	J-7218	During operation: The stacker entrance sensor (PS5) does not turn ON within a specified period of time after the paper exit sensor turns ON.		Remove jammed paper if any from the FS/main body.
	J-7219	During operation: While in stapling, the stacker entrance sensor (PS5) does not turn OFF within a specified period of time after the stacker entrance motor (M13) turns ON. While in any other operations than stapling, the PS5 does not turn OFF within a specified period of time after it turns ON.		Remove jammed paper if any from the FS/main body.
	J-7220	During operation: While in stapling a small-size paper, the main tray paper exit sensor (PS10) does not turn ON or the stacker empty sensor (PS20) does not turn ON within a specified period of time after the paper exit arm motor (M23) turns ON.		Remove jammed paper if any from the FS/main body.
	J-7221	During operation: While in stapling a large-size paper, the main tray exit sensor (PS10) does not turn OFF within a specified period of time after the paper exit arm motor (M23) turns ON.		Remove jammed paper if any from the FS/main body.
	J-7222	During operation: While in exiting paper in the sub tray, the sub tray paper exit sensor (PS1) does not turn ON within a specified period of time after the paper exit sensor of the previous option turns ON.		Remove jammed paper if any from the FS/main body.
	J-7223	During operation: While in exiting paper in the sub tray, the sub tray paper exit sensor (PS1) does not turn OFF within a specified period of time after the PS1 turns ON.		Remove jammed paper if any from the FS/main body.
	J-7228	During operation: While in the straight/shift of the small-size paper, the main tray paper exit sensor (PS10) does not turn OFF within a specified period of time after the PS10 turns ON.		Remove jammed paper if any from the FS/main body.
	J-7230	During operation: While in stapling a small-size paper, the main tray paper exit sensor (PS10) does not turn OFF within a specified period of time after the PS10 turns ON.		Remove jammed paper if any from the FS/main body.
	J-7301	When idling: The main tray paper exit sensor (PS10) turns ON while in idling.	-	Open the FS front door and the jam release lever, and remove jammed paper, if any.
	J-7302	When idling: The stacker entrance sensor (PS5) turns ON while in idling.		Open the FS front door and the jam release lever, and remove jammed paper if any.
	J-7305	When idling : The FNS entrance sensor (PS4) turns ON while in idling.		Open the FS front door and the jam release lever, and remove jammed paper if any.
	J-7307	When idling: The sub tray paper exit sensor (PS1) turns ON while in idling.		Open the FS front door and the jam release lever, and remove jammed paper if any.
RU	J-7340	When idling: (RU-506) The entrance jam sensor (PS6) turns ON while in idling.		Open the front door and remove jammed paper, if any.
	J-7341	When idling: (RU-506) The stacker jam sensor (PS5) turns ON while in idling.		Open the front door and remove jammed paper, if any.
	J-7342	When idling: (RU-506) The paper exit sensor (PS2) turns ON while in idling.		Open the front door and remove jammed paper, if any.

Classification	JAM Code	Cause	Resulting operation	Correction
LS (1st tandem)	J-7350	During operation: The entrance sensor (PS4) turns ON while in idling.		Open the LS front door, open then entrance conveyance jam release lever and remove jammed paper, if any.
	J-7351	When idling: The sub tray paper exit sensor (PS10) turns ON while in idling.		Open the LS sub tray cover, and remove jammed paper, if any.
	J-7352	When idling: Either of the conveyance sensor /1 (PS7), /2 (PS16), or /3 (PS17) turns ON while in idling.		Open the LS jam door, and remove jammed paper, if any
	J-7353	When idling: The coupling exit sensor (PS18) turns ON while in idling.		Open the LS front door, open then the coupling exit jam release lever and remove jammed paper, if any.
LS (2nd tandem)	J-7354	During operation: The entrance sensor (PS4) turns ON while in idling.		Open the LS front door, open then entrance conveyance jam release lever and remove jammed paper, if any.
	J-7355	When idling: The sub tray paper exit sensor (PS10) turns ON while in idling.		Open the LS sub tray cover, and remove jammed paper, if any.
	J-7356	When idling: Either of the conveyance sensor /1 (PS7), /2 (PS16), or /3 (PS17) turns ON while in idling.		Open the LS jam door, and remove jammed paper, if any
	J-7357	When idling: The coupling exit sensor (PS18) turns ON while in idling.		Open the LS front door, open then the coupling exit jam release lever and remove jammed paper, if any.
FD	J-7358	When idling: Either of the FD entrance sensor (PS1), the punch conveyance sensor (PS5), or the punch registration sensor (PS6) turns ON while in idling.		Open the FD front door, open then the entrance conveyance jam release levers /1 and /2 and the punch conveyance jam release levers /1 and /2, and then remove jammed paper, if any.
	J-7359	When idling: Either of the intermediate conveyance sensor (PS13), the sub tray paper exit sensor (PS16), or the main tray paper exit sensor (PS18) turns ON while in idling.		Open the FD front door and the intermediate conveyance jam lever, and remove the jammed paper, if any.
	J-7360	When idling: Either of the 1st folding conveyance sensor (PS51), the 2nd folding conveyance sensor (PS53), the 3rd folding conveyance sensor (PS54), the S size conveyance sensor (PS58), the folding entrance sensor (PS52), or the folding exit sensor (PS2) turns ON while in idling.		Open the FD front door, pull out the folding conveyance section, open the folding conveyance jam release levers /1 to /5, and remove jammed paper, if any.
	J-7361	When idling: Either of the PI conveyance sensor /Up (PS31), the PI conveyance sensor / Lw (PS37), or the PI exit sensor (PS4) turns ON while in idling.		Open the FD upper door and remove jammed paper, if any. When jammed paper gets in the PI exit, open the entrance conveyance jam release lever /1 and remove the jammed paper.
RU	J-7362	When idling: The entrance jam sensor (PS6) turns ON while in idling.		Open the front door, and remove jammed paper, if any.
	J-7363	When idling: The stacker jam sensor (PS5) turns ON any while in idling.		Open the front door, and remove jammed paper, if any.
	J-7364	When idling: The paper exit sensor (PS2) turns ON while in idling.		Open the front door, and remove jammed paper, if any.
SD-506	J-7368	When idling: The entrance sensor (PS1) turns ON while in idling.		Open the SD front door /Rt and remove jammed paper, if any.
	J-7369	When idling: Either of the horizontal conveyance sensor /1 (PS2), the horizontal conveyance sensor /2 (PS3), or the sub tray exit sensor (PS11) turns ON while in idling.		Open the SD front door /Rt and remove jammed paper, if any.
	J-7370	When idling: The horizontal conveyance exit sensor (PS4) turns ON while in idling.		Open the SD front door /Lt and remove jammed paper, if any.
	J-7371	When idling: Either of the right angle conveyance sensor /1 (PS5) or the right angle conveyance sensor /2 (PS6) turns ON while in idling.		Open the SD front door /Rt and remove jammed paper, if any.
	J-7372	When idling: Either of the folding sensor /1 (PS7), the folding passage sensor (PS8), the tri-folding exit sensor (PS9), or the folding sensor / 2 (PS44) turns ON while in idling.		Open the SD front door /Lt and remove jammed paper, if any.

Classification	JAM Code	Cause	Resulting operation	Correction
	J-7373	When idling: The saddle stitching paper sensor (PS13) turns ON while in idling.		Open the SD front door /Lt and remove jammed paper, if any.
	J-7374	When idling: Either of the bundle sensor /1 (PS14), /2 (PS15), /4 (PS54), or the bundle exit sensor /2 (PS57) turns ON while in idling.		Open the SD front door /Lt and remove jammed paper, if any.
PB	J-7380	When idling: Either of the entrance sensor (PS1), the SC entrance sensor (PS2), the cover paper entrance sensor (PS3), or the subtray sensor (PS4) turns ON while in idling.		Open the PB front door or the upper door, and remove jammed paper, if any.
	J-7381	When idling: The SC paper detection sensor (PS16) turns ON while in idling.		Open the PB upper door, and remove jammed paper, if any.
	J-7382	When idling: The clamp paper sensor (PS28) turns ON while in idling.		Open the PB front door, pull out the clamp section, and remove jammed paper, if any.
	J-7383	When idling: Either of the cover paper switchback sensor (PS44), the cover paper sensor /Rt (PS45), or the cover paper sensor /Lt (PS46) turns ON while in idling.		Open the PB front door, and remove jammed paper, if any.
	J-7384	When idling: The book end sensor (PS61) turns ON while in idling.		Open the PB stacker door, and remove jammed paper, if any.
	J-7385	When idling: The cover paper conveyance sensors /1 (PS75), /2 (PS76), /3 (PS77), /4 (PS78), and /5 (PS79) turn ON while in idling.		Pull out the paper feed tray, and remove jammed paper, if any.
	J-7386	When idling: The relay conveyance entrance sensor (PS93), the relay conveyance intermediate sensor (PS91) and the relay conveyance exit sensor (PS94) turn ON during idling.		Open the PB relay conveyance door and remove jammed paper if any.
GP-501	J-7390	When idling: The enter sensor (S1) turns ON while in idling.		Open the GP front door, the bypass panel cover, and remove the jammed paper, if any.
	J-7391	When idling: The stepper 1 speed sensor (S2) turns ON while in idling.		Open the GP front door, the entrance aligner panel, and remove the jammed paper, if any.
	J-7392	When idling: The bypass sensor (S8) turns ON while in idling.		Open the GP front door, the bypass panel cover, and remove the jammed paper, if any.
	J-7393	When idling: The exit sensor (S7) turns ON while in idling.		Open the GP front door, the bypass panel cover, and remove the jammed paper, if any.
	J-7394	When idling: The punch flag sensor (S9) turns ON while in idling.		Open the GP front door, the entrance aligner panel, the bottom U-channel, and remove the jammed paper, if any.
	J-7395	When idling: The u-channel sensor (S4) turns ON while in idling.		Open the GP front door, the bottom U-channel, and remove the jammed paper, if any.
	J-7396	When idling: The backstop sensor (S5) turns ON while in idling.		Open the GP front door, the bottom U-channel, and remove the jammed paper, if any.
	J-7397	When idling: The stepper 2 speed sensor (S6) turns ON while in idling.		Open the GP front door, the exit aligner panel, and remove the jammed paper, if any.
	J-7590	During operation: The enter sensor (S1) does not turn OFF within a specified period of time after it turns ON.		Remove jammed paper if any from the GP/main body.
	J-7591	During operation: The stepper 1 speed sensor (S2) does not turn OFF within a specified period of time after it turns ON.		Remove jammed paper if any from the GP/main body.
	J-7592	During operation: The bypass sensor (S8) does not turn OFF within a specified period of time after it turns ON.		Remove jammed paper if any from the GP/main body.
	J-7593	During operation: The exit sensor (S7) does not turn OFF within a specified period of time after it turns ON.		Remove jammed paper if any from the GP/main body.
	J-7594	During operation: The punch flag sensor (S9) does not turn OFF within a specified period of time after it turns ON.		Remove jammed paper if any from the GP/main body.

Classification	JAM Code	Cause	Resulting operation	Correction
	J-7595	During operation: The u-channel sensor (S4) does not turn OFF within a specified period of time after it turns ON.		Remove jammed paper if any from the GP/main body.
	J-7596	During operation: The backstop sensor (S5) does not turn OFF within a specified period of time after it turns ON.		Remove jammed paper if any from the GP/main body.
	J-7597	During operation: The stepper 2 speed sensor (S6) does not turn OFF within a specified period of time after it turns ON.		Remove jammed paper if any from the GP/main body.
LS (1st tandem)	J-7401	During operation: The entrance sensor (PS4) does not turn ON within a specified period of time after the main body paper exit sensor (PS3) turns ON.	The LS and the main body stop immediately.	Remove jammed paper if any from the LS/main body.
	J-7402	During operation: The entrance sensor (PS4) does not turn OFF within a specified period of time after it turns ON.		Remove jammed paper if any from the LS/main body.
	J-7403	During operation: The sub tray exit sensor (PS10) does not turn ON within a specified period of time after the entrance sensor (PS4) turns ON.		Remove jammed paper if any from the LS/main body.
	J-7404	During operation: The sub tray paper exit sensor (PS10) does not turn OFF within a specified period of time after it turns ON.		Remove jammed paper if any from the LS/main body.
	J-7405	During operation: The conveyance sensor /1 (PS7) does not turn ON within a specified period of time after the entrance sensor (PS4) turns ON.		Remove jammed paper if any from the LS/main body.
	J-7406	During operation: The conveyance sensor /1 (PS7) does not turn OFF within a specified period of time after it turns ON.		Remove jammed paper if any from the LS/main body.
	J-7407	During operation: The conveyance sensor /2 (PS16) does not turn ON within a specified period of time after the conveyance sensor /1 (PS7) turns ON.		Remove jammed paper if any from the LS/main body.
	J-7408	During operation: The conveyance sensor /2 (PS16) does not turn OFF within a specified period of time after it turns ON.		Remove jammed paper if any from the LS/main body.
	J-7409	During operation: The conveyance sensor /3 (PS17) does not turn ON within a specified period of time after the conveyance sensor /2 (PS16) turns ON.		Remove jammed paper if any from the LS/main body.
	J-7410	During operation: The conveyance sensor /3 (PS17) does not turn OFF within a specified period of time after it turns ON.		Remove jammed paper if any from the LS/main body.
	J-7411	During operation: The coupling exit sensor (PS18) does not turn ON within a specified period of time after the conveyance sensor /3 (PS17) turns ON.		Remove jammed paper if any from the LS/main body.
	J-7412	During operation: The coupling exit sensor (PS18) does not turn OFF within a specified period of time after it turns ON.		Remove jammed paper if any from the LS/main body.
LS (2nd tandem)	J-7431	During operation: The entrance sensor (PS4) does not turn ON within a specified period of time after the main body paper exit sensor (PS3) turns ON.		Remove jammed paper if any from the LS/main body.
	J-7432	During operation: The entrance sensor (PS4) does not turn OFF within a specified period of time after it turns ON.		Remove jammed paper if any from the LS/main body.
	J-7433	During operation: The sub tray exit sensor (PS10) does not turn ON within a specified period of time after the entrance sensor (PS4) turns ON.		Remove jammed paper if any from the LS/main body.
	J-7434	During operation: The sub tray paper exit sensor (PS10) does not turn OFF within a specified period of time after it turns ON.		Remove jammed paper if any from the LS/main body.
	J-7435	During operation: The conveyance sensor /1 (PS7) does not turn ON within a specified period of time after the entrance sensor (PS4) turns ON.		Remove jammed paper if any from the LS/main body.

Classification	JAM Code	Cause	Resulting operation	Correction
	J-7436	During operation: The conveyance sensor /1 (PS7) does not turn OFF within a specified period of time after it turns ON.		Remove jammed paper if any from the LS/main body.
	J-7437	During operation: The conveyance sensor /2 (PS16) does not turn ON within a specified period of time after the conveyance sensor /1 (PS7) turns ON.		Remove jammed paper if any from the LS/main body.
	J-7438	During operation: The conveyance sensor /2 (PS16) does not turn OFF within a specified period of time after it turns ON.		Remove jammed paper if any from the LS/main body.
	J-7439	During operation: The conveyance sensor /3 (PS17) does not turn ON within a specified period of time after the conveyance sensor /2 (PS16) turns ON.		Remove jammed paper if any from the LS/main body.
	J-7440	During operation: The conveyance sensor /3 (PS17) does not turn OFF within a specified period of time after it turns ON.		Remove jammed paper if any from the LS/main body.
	J-7441	During operation: The coupling exit sensor (PS18) does not turn ON within a specified period of time after the conveyance sensor /3 (PS17) turns ON.		Remove jammed paper if any from the LS/main body.
	J-7442	During operation: The coupling exit sensor (PS18) does not turn OFF within a specified period of time after it turns ON.		Remove jammed paper if any from the LS/main body.
FD	J-7501	During operation: The FD entrance sensor (PS1) does not turn ON within a specified period of time after the main body paper exit sensor (PS3) turns ON.	The FD and the main body stop immediately.	Remove jammed paper if any from the FD/main body.
	J-7502	During operation: The intermediate conveyance sensor (PS13) does not turn ON within a specified period of time after the FD entrance sensor (PS1) turns ON.		Remove jammed paper if any from the FD/main body.
	J-7503	During operation: The main tray exit sensor (PS18) does not turn ON within a specified period of time after the intermediate conveyance sensor (PS13) turns ON.		Remove jammed paper if any from the FD/main body.
	J-7504	During operation: The main tray exit sensor (PS18) does not turn OFF within a specified period of time after it turns ON.		Remove jammed paper if any from the FD/main body.
	J-7505	During operation: The sub tray paper exit sensor (PS16) does not turn ON within a specified period of time after the intermediate conveyance sensor (PS13) turns ON.		Remove jammed paper if any from the FD/main body.
	J-7506	During operation: The sub tray paper exit sensor (PS16) does not turn OFF within a specified period of time after it turns ON.		Remove jammed paper if any from the FD/main body.
	J-7507	During operation: The punch conveyance sensor (PS5) does not turn ON within a specified period of time after the FD entrance sensor (PS1) turns ON.		Remove jammed paper if any from the FD/main body.
	J-7508	During operation: The 3rd folding conveyance sensor (PS54) does not turn ON within a specified period of time after the punch conveyance sensor (PS5) turns ON.		Remove jammed paper if any from the FD/main body.
	J-7509	During operation: The punch registration sensor (PS6) does not turn ON within a specified period of time after the punch conveyance sensor (PS5) turns ON.		Remove jammed paper if any from the FD/main body.
	J-7510	During operation: The 1st folding conveyance sensor (PS51) does not turn ON within a specified period of time after the punch registration sensor (PS6) turns ON.		Remove jammed paper if any from the FD/main body.
	J-7511	During operation: The 3rd folding conveyance sensor (PS54) does not turn ON within a specified period of time after the 1st folding conveyance sensor (PS51) turns ON.		Remove jammed paper if any from the FD/main body.

Classification	JAM Code	Cause	Resulting operation	Correction
	J-7512	During operation: The intermediate conveyance sensor (PS13) does not turn ON within a specified period of time after the 3rd folding conveyance sensor (PS54) turns ON.		Remove jammed paper if any from the FD/main body.
	J-7513	During operation: While in the folding operation, the 2nd folding conveyance sensor (PS53) does not turn ON within a specified period of time after the 1st folding motor (M4) starts to accelerate.		Remove jammed paper if any from the FD/main body.
	J-7514	During operation: While in the folding operation, the 3rd folding conveyance sensor (PS54) does not turn ON within a specified period of time after the 1st folding motor (M4) starts to accelerate.		Remove jammed paper if any from the FD/main body.
	J-7515	During operation: While in the folding operation, the 3rd folding conveyance sensor (PS54) does not turn ON within a specified period of time after the 2nd folding motor (M5) starts to accelerate.		Remove jammed paper if any from the FD/main body.
	J-7516	During operation: While in the folding operation, the intermediate conveyance sensor (PS13) does not turn ON within a specified period of time after the 3rd folding motor (M6) starts to accelerate.		Remove jammed paper if any from the FD/main body.
	J-7517	During operation: While in the folding operation, the 3rd folding conveyance sensor (PS54) does not turn ON within a specified period of time after the 2nd folding conveyance sensor (PS53) turns ON.		Remove jammed paper if any from the FD/main body.
	J-7518	During operation: While in the folding operation, the intermediate conveyance sensor (PS13) does not turn ON within a specified period of time after the 3rd folding conveyance sensor (PS54) turns ON.		Remove jammed paper if any from the FD/main body.
	J-7519	During operation: The PI conveyance sensor / Up (PS31) does not turn ON within a specified period of time after the PI pick-up solenoid /Up (SD13) turns ON.		Remove jammed paper if any from the FD/main body.
	J-7520	During operation: The PI exit sensor (PS4) does not turn ON within a specified period of time after the PI conveyance sensor /Up (PS31) turns ON.		Remove jammed paper if any from the FD/main body.
	J-7521	During operation: The PI conveyance sensor / Lw (PS37) does not turn ON within a specified period of time after the PI pick-up solenoid /Lw (SD14) turns ON.		Remove jammed paper if any from the FD/main body.
	J-7522	During operation: The PI exit sensor (PS4) does not turn ON within a specified period of time after the PI conveyance sensor /Lw (PS37) turns ON.		Remove jammed paper if any from the FD/main body.
	J-7523	During operation: The FD entrance sensor (PS1) does not turn ON within a specified period of time after the PI exit sensor (PS4) turns ON.		Remove jammed paper if any from the FD/main body.
	J-7524	During operation: The PI multi feed is detected.		Remove jammed paper if any from the FD/main body.
RU	J-7540	During operation: (RU-506) The entrance sensor (PS1) does not turn ON within a specified period of time after the main body paper exit sensor (PS3) turns ON.	The RU and the main body stop immediately.	Remove jammed paper if any from the RU/main body.
	J-7541	During operation: (RU-506) While in the straight pass, the paper exit sensor (PS2) does not turn ON within a specified period of time after the entrance sensor (PS1) turns ON.		Remove jammed paper if any from the RU/main body.
	J-7542	During operation: (RU-506) The entrance sensor (PS1) does not turn OFF within a specified period of time after it turns ON.		Remove jammed paper if any from the RU/main body.

Classification	JAM Code	Cause	Resulting operation	Correction
	J-7543	During operation: (RU-506) While in the reverse pass, the paper exit sensor (PS2) does not turn ON within a specified period of time after the entrance sensor (PS1) turns ON.		Remove jammed paper if any from the RU/main body.
	J-7545	During operation: (RU-506) The paper exit sensor (PS2) does not turn OFF within a specified period of time after it turns ON.		Remove jammed paper if any from the RU/main body.
SD-506	J-7561	During operation: The entrance sensor (PS1) does not turn ON within a specified period of time after the main body paper exit sensor (PS3) turns ON.	The SD and the main body stop immediately.	Remove jammed paper if any from the SD/main body.
	J-7562	During operation: The horizontal conveyance sensor /1 (PS2) does not turn ON within a specified period of time after the entrance sensor (PS1) turns ON.		Remove jammed paper if any from the SD/main body.
	J-7563	During operation: The horizontal conveyance sensor /2 (PS3) does not turn ON within a specified period of time after the horizontal conveyance sensor /1 (PS2) turns ON.		Remove jammed paper if any from the SD/main body.
	J-7564	During operation: The horizontal conveyance exit sensor (PS4) does not turn ON within a specified period of time after the horizontal conveyance sensor /2 (PS3) turns ON.		Remove jammed paper if any from the SD/main body.
	J-7565	During operation: The horizontal conveyance exit sensor (PS4) does not turn OFF within a specified period of time after it turns ON.		Remove jammed paper if any from the SD/main body.
	J-7566	During operation: The sub tray paper exit sensor (PS11) does not turn ON within a specified period of time after the horizontal conveyance sensor /1 (PS2) turns ON.		Remove jammed paper if any from the SD/main body.
	J-7567	During operation: The sub tray paper exit sensor (PS11) does not turn OFF within a specified period of time after it turns ON.		Remove jammed paper if any from the SD/main body.
	J-7568	During operation: The right angle conveyance sensor /2 (PS6) does not turn ON within a specified period of time after the right angle conveyance motor (M6) turns ON.		Remove jammed paper if any from the SD/main body.
	J-7569	During operation: The folding sensor /1 (PS7) does not turn ON within a specified period of time after the folding entrance motor (M3) turns ON.		Remove jammed paper if any from the SD/main body.
	J-7570	During operation: The saddle stitching paper sensor (PS13) does not turn ON within a specified period of time after the folding sub scan alignment exit motor (M8) turns ON.		Remove jammed paper if any from the SD/main body.
	J-7571	During operation: The bundle sensor /1 (PS14) does not turn ON within a specified period of time after the bundle arm rotation motor (M22) turns ON.		Remove jammed paper if any from the SD/main body.
	J-7572	During operation: The bundle sensor /2 (PS15) does not turn ON within a specified period of time after the bundle clip motor (M11) turns ON.		Remove jammed paper if any from the SD/main body.
	J-7573	During operation: The bundle sensor /4 (PS54) does not turn ON within a specified period of time after the bundle sensor /2 (PS15) turns ON.		Remove jammed paper if any from the SD/main body.
	J-7574	During operation: The entrance sensor (PS1) does not turn OFF within a specified period of time after it turns ON.		Remove jammed paper if any from the SD/main body.
	J-7575	During operation: The right angle conveyance sensor /2 (PS6) does not turn OFF within a specified period of time after it turns ON. Or the folding entrance sensor (PS60) does not turn OFF within a specified period of time after it turns ON.		Remove jammed paper if any from the SD/main body.
	J-7576	During operation: The folding sensor /2 (PS44) does not turn OFF within a specified period of time after it turns ON.		Remove jammed paper if any from the SD/main body.

Classification	JAM Code	Cause	Resulting operation	Correction
	J-7577	During operation: The bundle sensor /1 (PS14) does not turn OFF within a specified period of time after it turns ON.		Remove jammed paper if any from the SD/main body.
	J-7578	During operation: The bundle sensor /2 (PS15) does not turn OFF within a specified period of time after it turns ON.		Remove jammed paper if any from the SD/main body.
	J-7579	During operation: The folding passage sensor (PS8) does not turn ON within a specified period of time after the folding transfer motor (M4) turns ON.		Remove jammed paper if any from the SD/main body.
	J-7580	During operation: The tri-folding exit sensor (PS9) does not turn ON within a specified period of time after the folding transfer motor (M4) turns ON.		Remove jammed paper if any from the SD/main body.
	J-7581	During operation: The folding sub scan alignment exit motor (M8) does not turn OFF within a specified period of time after it turns ON.		Remove jammed paper if any from the SD/main body.
	J-7582	During operation: The folding passage sensor (PS8) does not turn OFF within a specified period of time after it turns ON.		Remove jammed paper if any from the SD/main body.
	J-7583	During operation: The tri-folding paper exit sensor (PS9) does not turn OFF within a specified period of time after it turns ON.		Remove jammed paper if any from the SD/main body.
	J-7584	During operation: The trimming registration sensor (PS55) does not turn ON within a specified period of time after the bundle press movement motor (M17) turns ON.		Remove jammed paper if any from the SD/main body.
	J-7585	During operation: The trimming registration sensor (PS55) does not turn OFF within a specified period of time after the bundle registration motor (M12) turns ON.		Remove jammed paper if any from the SD/main body.
PB	J-7660	During operation: The entrance sensor (PS1) does not turn ON within a specified period of time after the main body paper exit sensor (PS3) turns ON.	The PB and the main body stop immediately.	Remove jammed paper if any from the PB/main body.
	J-7661	During operation: The SC entrance sensor (PS2) does not turn ON within a specified period of time after the entrance sensor (PS1) turns ON.		Remove jammed paper if any from the PB/main body.
	J-7662	During operation: The SC entrance sensor (PS2) does not turn OFF within a specified period of time after it turns ON.		Remove jammed paper if any from the PB/main body.
	J-7663	During operation: The cover paper entrance sensor (PS3) does not turn ON within a specified period of time after the main body paper exit sensor (PS3) turns ON.		Remove jammed paper if any from the PB/main body.
	J-7664	During operation: The sub tray paper exit sensor (PS4) does not turn ON within a specified period of time after the entrance sensor (PS1) turns ON.		Remove jammed paper if any from the PB/main body.
	J-7665	During operation: The sub tray paper exit sensor (PS4) does not turn OFF within a specified period of time after it turns ON.		Remove jammed paper if any from the PB/main body.
	J-7666	During operation: The SC paper detection sensor (PS16) does not turn ON within a specified period of time after the SC entrance sensor (PS2) turns ON.		Remove jammed paper if any from the PB/main body.
	J-7667	During operation: The SC paper detection sensor (PS16) does not turn OFF within a specified period of time after it turns ON.		Remove jammed paper if any from the PB/main body.
	J-7668	During operation: When conveying 2 sheets at a time, the SC paper detection sensor (PS16) does not turn ON within a specified period of time after the operation starts.		Remove jammed paper if any from the PB/main body.
	J-7669	During operation: When conveying 2 sheets at a time, the SC paper detection sensor (PS16) does not turn OFF within a specified period of time after it turns ON.		Remove jammed paper if any from the PB/main body.

Classification	JAM Code	Cause	Resulting operation	Correction
	J-7670	During operation: The SC paper detection sensor (PS16) does not turn OFF within a specified period of time after the SC bundle conveyance motor (M17) turns ON.		Remove jammed paper if any from the PB/main body.
	J-7671	During operation: The clamp paper sensor (PS28) does not turn OFF within a specified period of time after the clamp motor (M22) turns OFF.		Remove jammed paper if any from the PB/main body.
	J-7672	During operation: The glue apply position detection sensor (PS32) does not turn ON within a specified period of time after reversal of glue tank movement motor (M31) (the tank moves back) turns ON. (PB-502)		Remove jammed paper if any from the PB/main body.
	J-7673	During operation: The glue apply position detection sensor (PS32) does not turn OFF within a specified period of time after it turns ON. (PB-502)		Remove jammed paper if any from the PB/main body.
	J-7674	During operation: The cover paper sensor /Rt (PS45) does not turn ON within a specified period of time after the cover paper feed clutch (CL71) turns ON.		Remove jammed paper if any from the PB/main body.
	J-7675	During operation: The relay conveyance entrance sensor (PS93) does not turn ON within a specified period of time after the SC entrance sensor (PS2) turns ON.		Remove jammed paper if any from the PB/main body.
	J-7676	During operation: When starting trimming of the cover paper fed from the PB, the cover paper switchback sensor (PS44) does not turn ON within a specified time period after the cover paper conveyance motor (M45) turns ON.		Remove jammed paper if any from the PB/main body.
	J-7677	During operation: When trimming of the cover paper fed from the PB is complete, the cover paper switchback sensor (PS44) does not turn OFF within a specified time period after the cover paper conveyance motor (M45) turns ON.		Remove jammed paper if any from the PB/main body.
	J-7678	During operation: When positioning the leading edge of the cover paper fed from the PB, the cover paper sensor/Lt (PS46) does not turn OFF within a specified time period after the cover paper conveyance motor (M45) turns ON.		Remove jammed paper if any from the PB/main body.
	J-7679	During operation: When positioning the leading edge of the cover paper fed from the PB, the cover paper sensor/Lt (PS46) does not turn ON within a specified time period after the cover paper conveyance motor (M45) turns forward rotation ON.		Remove jammed paper if any from the PB/main body.
	J-7680	During operation: When cover paper is fed from the main body, the cover paper sensor/Rt (PS45) does not turn ON within a specified time period after the cover paper entrance sensor (PS3) turns ON.		Remove jammed paper if any from the PB/main body.
	J-7681	During operation: The relay conveyance entrance sensor (PS93) does not turn ON within a specified period of time after the relay conveyance motor (M92) turns ON.		Remove jammed paper if any from the PB/main body.
	J-7682	During operation: When starting trimming of the cover paper fed from the main body, the cover paper switchback sensor (PS44) does not turn ON within a specified time period after the cover paper conveyance motor (M45) turns ON.		Remove jammed paper if any from the PB/main body.
	J-7683	During operation: When finishing trimming of the cover paper fed from the main body, the cover paper switchback sensor (PS44) does not turn OFF within a specified time period after the cover paper conveyance motor (M45) turns ON.		Remove jammed paper if any from the PB/main body.
	J-7684	During operation: When positioning the leading edge of the cover paper fed from the main body, the cover paper sensor/Lt (PS46) does not turn OFF within a specified time period after the cover paper conveyance motor (M45) turns ON.		Remove jammed paper if any from the PB/main body.

Classification	JAM Code	Cause	Resulting operation	Correction
	J-7685	During operation: When positioning the leading edge of the cover paper fed from the main body, the cover paper sensor/Lt (PS46) does not turn ON within a specified time period after the cover paper conveyance motor (M45) turns ON.		Remove jammed paper if any from the PB/main body.
	J-7686	During operation: The booklet end sensor (PS61) does not turn ON within a specified period of time after the booklet conveyance belt motor (M61) turns ON.		Remove jammed paper if any from the PB/main body.
	J-7687	During operation: When loading first book, the booklet sensor /1 (PS66) does not turn ON within a specified period of time after the booklet conveyance belt up down motor (M63) turns ON.		Remove jammed paper if any from the PB/main body.
	J-7688	During operation: When first row of book moves, the booklet sensor /2 (PS67) does not turn ON within a specified period of time after the booklet movement motor (M64) turns ON.		Remove jammed paper if any from the PB/main body.
	J-7689	During operation: When feeding paper, the cover paper conveyance sensor /1 (PS75) does not turn ON within a specified period of time after the cover paper pick up clutch (MC71: PB-502, CL71: PB-503) turns ON.		Remove jammed paper if any from the PB/main body.
	J-7690	During operation: The cover paper conveyance sensor /2 (PS76) does not turn ON within a specified period of time after the cover paper conveyance sensor /1 (PS75) turns ON.		Remove jammed paper if any from the PB/main body.
	J-7691	During operation: When refeeding paper, the cover paper conveyance sensor /3 (PS77) does not turn ON within a specified period of time after the cover paper pick up clutch (MC71: PB-502, CL71: PB-503) turns ON.		Remove jammed paper if any from the PB/main body.
	J-7692	During operation: The cover paper conveyance sensor /4 (PS78) does not turn ON within a specified period of time after the cover paper conveyance sensor /3 (PS77) turns ON.		Remove jammed paper if any from the PB/main body.
	J-7693	During operation: The multi feed detection board /2 (MFDBR) turns OFF.		Remove jammed paper if any from the PB/main body.
	J-7694	During operation: The relay conveyance intermediate sensor (PS91) does not turn ON within a specified period of time after the relay paper exit motor (M92) turns ON.		Remove jammed paper if any from the PB/main body.
	J-7695	During operation: The relay conveyance exit sensor (PS94) does not turn OFF within a specified period of time after it turns ON.		Remove jammed paper if any from the PB/main body.
	J-7696	During operation: The cover paper switchback sensor (PS44) does not turn ON within a specified period of time after the cover paper feed motor (M74) turns ON.		Remove jammed paper if any from the PB/main body.
	J-7697	During operation: No paper is detected (paper has been removed) when restarting the job after recovery.		Remove jammed paper if any from the PB/main body.
	J-7698	During operation: A cover paper has not been conveyed to the cover paper table section when clamping of inside pages is finished.		Remove jammed paper if any from the PB/main body.
Horizontal conveyance (PI-PFU)	J-8101	During operation: (PF-703) The horizontal conveyance sensor /1 (PS31) does not turn ON within a specified period of time after the main body paper exit sensor (PS3) turns ON.	If there is a sheet of paper being printed when a jam occurs, the main body completes the paper exit before stopping operations.	Open tray /1, the PI-PFU front door and the horizontal conveyance jam release lever and remove jammed paper if any.
	J-8102	During operation: PF-703 The horizontal conveyance sensor /2 (PS32) does not turn ON within a specified period of time after the horizontal conveyance sensor /1 (PS31) turns ON.		Open tray /1, the PI-PFU front door and the horizontal conveyance jam release lever and remove jammed paper if any.

Classification	JAM Code	Cause	Resulting operation	Correction
	J-8103	During operation: PF-703 The horizontal conveyance sensor /3 (PS33) does not turn ON within a specified period of time after the horizontal conveyance sensor /2 (PS32) turns ON.		Open tray /1, the PI-PFU front door and the horizontal conveyance jam release lever and remove jammed paper if any.
	J-8104	During operation: PF-703 The horizontal conveyance sensor /4 (PS34) does not turn ON within a specified period of time after the horizontal conveyance sensor /3 (PS33) turns ON.		Open tray /1, the PI-PFU front door and the horizontal conveyance jam release lever and remove jammed paper if any.
	J-8105	During operation: PF-703 The horizontal conveyance sensor /5 (PS35) does not turn ON within a specified period of time after the horizontal conveyance sensor /4 (PS34) turns ON.		Open tray /1, the PI-PFU front door and the horizontal conveyance jam release lever and remove jammed paper if any.
	J-8106	During operation: (PF-703) The loop sensor /1 (PS17) does not turn ON within a specified period of time after the horizontal conveyance sensor /5 (PS35) turns ON.		Open tray /1, the PI-PFU front door and the horizontal conveyance jam release lever and remove jammed paper if any.
Paper feed conveyance (PI-PFU)	J-8107	During operation: PF-703 The multi feed detection boards and (MFDB and) detect a double feed.		Open tray /1, the PI-PFU front door and the horizontal conveyance jam release lever and remove jammed paper if any.
Horizontal conveyance (PI-PFU)	J-8109	During operation: PF-703 The PF exit conveyance sensor /2 (PS36) does not turn OFF within a specified period of time after it turns ON.	-	Open the PF front door and the PF vertical conveyance door /Up, and remove jammed paper if any.
Tray1 (PI-PFU)	J-8111	During operation: PF-703 The paper feed sensor /1 (PS2) does not turn ON within a specified period of time after the paper feed clutch /1 (CL7) turns ON.	If there is a sheet of paper being printed when a jam occurs, the main body completes the paper exit before stopping operations.	Pull out tray /1 and remove jammed paper if any.
	J-8112	During operation: PF-703 The pre-registration sensor /1 (PS14) does not turn ON within a specified period of time after the paper feed clutch /1 (CL7) turns ON.		Open tray1, the PF front door and the vertical conveyance door /Up, and remove jammed paper if any.
	J-8113	During operation: PF-703 The vertical conveyance sensor /1 (PS15) does not turn ON within a specified period of time after the pre-registration sensor /1 (PS14) turns ON.		Open tray1, the PF front door and the vertical conveyance door /Up, and remove jammed paper if any.
	J-8114	During operation: PF-703 When the trailing edge of paper is passing through the vertical conveyance sensor /1 (PS15), the pre-registration sensor /1 (PS14) is turned ON by the succeeding paper.	After completion of the exit of the preceding paper, the main body stops operations.	Open tray1, the PF front door and the vertical conveyance door /Up, and remove jammed paper if any.
	J-8115	During operation: PF-703 The paper suction sensor Fr/1 (PS25) and the paper suction sensor /Rr1(PS26) do not turn ON within a specified period of time from the rotation stabilization standby (3sec) after the paper suction fan /1 (FM13) and the paper suction fan /2 (FM14) turn ON.	If there is a sheet of paper being printed when a jam occurs, the main body completes the paper exit before stopping operations.	Pull out tray /1 and remove jammed paper if any.
Tray2 (PI-PFU)	J-8121	During operation: PF-703 The paper feed sensor /2 (PS6) does not turn ON within a specified period of time after the paper feed clutch /2 (CL8) turns ON.		Pull out tray /2 and remove jammed paper if any.

Classification	JAM Code	Cause	Resulting operation	Correction
	J-8122	During operation: PF-703 The pre-registration sensor /2 (PS18) does not turn ON within a specified period of time after the paper feed clutch /2 (CL8) turns ON.		Open tray2, the PF front door and the horizontal conveyance jam release lever and remove jammed paper if any.
	J-8123	During operation: PF-703 When the trailing edge of paper is passing through the loop sensor /2 (PS19), the pre-registration sensor /2 (PS18) is turned ON by the succeeding paper.		Open tray2, the PF front door and the horizontal conveyance jam release lever and remove jammed paper if any.
	J-8125	During operation: PF-703 The paper suction sensor Fr/3 (PS27) and the paper suction sensor /Rr2(PS28) do not turn ON within a specified period of time from the rotation stabilization standby (3sec) after the paper suction fan /3 (FM15) and the paper suction fan /4 (FM16) turn ON.		Pull out tray /2 and remove jammed paper if any.
Tray3 (PI-PFU)	J-8131	During operation: PF-703 The paper feed sensor /3 (PS10) does not turn ON within a specified period of time after the paper feed clutch /3 (CL9) turns ON.		Pull out tray /3 and remove jammed paper if any.
	J-8132	During operation: PF-703 The pre-registration sensor /3 (PS20) does not turn ON within a specified period of time after the paper feed clutch /3 (CL9) turns ON.		Open tray3, the PF front door and the vertical conveyance door /Lw, and remove jammed paper if any.
	J-8133	During operation: PF-703 The vertical conveyance sensor /3 (PS21) does not turn ON within a specified period of time after the pre-registration sensor /3 (PS20) turns ON.		Open tray3, the PF front door and the vertical conveyance door /Lw, and remove jammed paper if any.
	J-8134	During operation: PF-703 When the trailing edge of paper is passing through the vertical conveyance sensor /3 (PS21), the pre-registration sensor /3 (PS20) is turned ON by the succeeding paper.		Open tray3, the PF front door and the vertical conveyance door /Lw, and remove jammed paper if any.
	J-8135	During operation: PF-703 The paper suction sensor Fr/3 (PS29) and the paper suction sensor Rr3(PS30) do not turn ON within a specified period of time from the rotation stabilization standby (3sec) after the paper suction fan /5 (FM17) and the paper suction fan /6 (FM18) turn ON.		Pull out tray /3 and remove jammed paper if any.
Paper feed conveyance (PI-PFU)	J-8141	During operation: PF-703 The intermediate sensor /Up (PS16) does not turn ON within a specified period of time after the vertical conveyance sensor /1 (PS15) turns ON.		Open the PF front door and the PF vertical conveyance door /Up, and remove jammed paper if any.
	J-8142	During operation: PF-703 The loop sensor /1 (PS17) does not turn ON within a specified period of time after the intermediate sensor /Up (PS16) turns ON.		Open the PF front door and the PF vertical conveyance door /Up, and remove jammed paper if any.
	J-8143	During operation: PF-703 The loop sensor /2 (PS19) does not turn ON within a specified period of time after the pre-registration sensor /2 (PS18) turns ON.		Open the PF front door and the horizontal conveyance jam release lever, and remove jammed paper if any.
	J-8144	During operation: PF-703 The intermediate sensor /Lw (PS22) does not turn ON within a specified period of time after the vertical conveyance sensor /3 (PS21) turns ON.		Open the PF front door and the PF vertical conveyance door /Lw, and remove jammed paper if any.

Classification	JAM Code	Cause	Resulting operation	Correction
	J-8145	During operation: PF-703 The loop sensor /3 (PS23) does not turn ON within a specified period of time after the intermediate sensor /Lw (PS22) turns ON.		Open the PF front door and the PF vertical conveyance door /Lw, and remove jammed paper if any.
	J-8146	During operation: PF-703 The PF exit sensor /1 (PS24) does not turn ON within a specified period of time after the loop sensor /1 (PS17) turns ON.		Open the PF front door, the PF vertical conveyance door /Up and the horizontal conveyance jam release lever, and remove jammed paper if any.
	J-8147	During operation: PF-703 The PF exit sensor /1 (PS24) does not turn ON within a specified period of time after the loop sensor /2 (PS19) turns ON.		Open the PF front door and the PF horizontal conveyance jam release lever, and remove jammed paper if any.
	J-8148	During operation: PF-703 The PF exit sensor /1 (PS24) does not turn ON within a specified period of time after the loop sensor /3 (PS23) turns ON.		Open the PF front door and the PF horizontal conveyance jam release lever, and remove jammed paper if any.
	J-8149	During operation: PF-703 The PF exit conveyance sensor /2 (PS36) does not turn ON within a specified period of time after the PF exit conveyance sensor /1 (PS24) turns ON.		Open the PF front door, the PF vertical conveyance door /Lw and the horizontal conveyance jam release lever, and remove jammed paper if any.
Tray1 (PI-PFU)	J-8151	When idling: PF-703 The pre-registration sensor /1 (PS14) turns ON while in idling.	-	Pull out tray /1 and remove jammed paper if any.
	J-8152	When idling: PF-703 The vertical conveyance sensor /1 (PS15) turns ON while in idling.		Open the PF front door and the vertical conveyance door /Up and remove jammed paper if any.
Tray2 (PI-PFU)	J-8161	When idling: PF-703 The pre-registration sensor /2 (PS18) turns ON while in idling.		Pull out tray /2 and remove jammed paper if any.
Tray3 (PI-PFU)	J-8171	When idling: PF-703 The pre-registration sensor /3 (PS20) turns ON while in idling.		Pull out tray /3 and remove jammed paper if any.
	J-8172	When idling: PF-703 The vertical conveyance sensor /3 (PS21) turns ON while in idling.		Open the PF front door and the vertical conveyance door /Lw and remove jammed paper if any.
Paper feed conveyance (PI-PFU)	J-8181	When idling: PF-703 The intermediate sensor /Up (PS16) turns ON while in idling.		Open the PF front door and the PF vertical conveyance door /Up, and remove jammed paper if any.
	J-8182	When idling: PF-703 The loop sensor /1 (PS17) turns ON while in idling.		Open the PF front door and the PF vertical conveyance door /Up, and remove jammed paper if any.
	J-8183	When idling: PF-703 The loop sensor /2 (PS19) turns ON while in idling.		Open the PF front door and the horizontal conveyance jam release lever, and remove jammed paper if any.
	J-8184	When idling: PF-703 The intermediate sensor /Lw (PS22) turns ON while in idling.		Open the PF front door and the PF vertical conveyance door /Lw, and remove jammed paper if any.
	J-8185	When idling: PF-703 The loop sensor /3 (PS23) turns ON while in idling.		Open the PF front door and the PF vertical conveyance door /Lw, and remove jammed paper if any.
	J-8186	When idling: PF-703 The PF exit conveyance sensor /1 (PS24) turns ON while in idling.		Open the PF front door and the horizontal conveyance jam release lever, and remove jammed paper if any.

Classification	JAM Code	Cause	Resulting operation	Correction
Horizontal conveyance (PI-PFU)	J-8187	When idling: PF-703 The PF exit conveyance sensor /2 (PS36) turns ON while in idling.		Open the PF front door and the horizontal conveyance jam release lever, and remove jammed paper if any.
	J-8191	When idling: PF-703 The horizontal conveyance sensor /1 (PS31) turns ON while in idling.		Open the PF front door and the PF vertical conveyance door /Up, and remove jammed paper if any.
	J-8192	When idling: PF-703 The horizontal conveyance sensor /2 (PS32) turns ON while in idling.		Open the PF front door and the PF vertical conveyance door /Up, and remove jammed paper if any.
	J-8193	When idling: PF-703 The horizontal conveyance sensor /3 (PS33) turns ON while in idling.		Open tray /1, the PI-PFU front door and the horizontal conveyance jam release lever and remove jammed paper if any.
	J-8194	When idling: PF-703 The horizontal conveyance sensor /4 (PS34) turns ON while in idling.		Open the PF front door and the PF vertical conveyance door /Lw, and remove jammed paper if any.
	J-8195	When idling: PF-703 The horizontal conveyance sensor /5 (PS35) turns ON while in idling.		Open the PF front door and the PF vertical conveyance door /Lw, and remove jammed paper if any.
ADU	J-9201	During operation: The ADU reverse sensor /1 (PS46) does not turn ON within a specified period of time after the reverse sensor /1 (PS48) turns ON.	If there is a sheet of paper being printed when a jam occurs, the main body completes the paper exit before stopping operations.	Open the main body front doors / R and /L, pull out the duplex section and remove jammed paper if any.
	J-9202	During operation: While in drawing, the ADU reverse sensor /1 (PS46) does not turn OFF within a specified period of time after it turns ON.		Open the main body front doors / R and /L, pull out the duplex section and remove jammed paper if any.
	J-9203	During operation: After the start from the 1st stopping position, the ADU reverse sensor /1 (PS46) does not turn ON within a specified period of time.		Open the main body front doors / R and /L, pull out the duplex section and remove jammed paper if any.
	J-9251	When idling: The ADU reverse sensor /1 (PS46) turns ON while in idling.	-	Open the main body front doors / R and /L, pull out the duplex section and remove jammed paper if any.
	J-9252	When idling: The ADU reverse sensor /2 (PS45) turns ON while in idling.		Open the main body front doors / R and /L, pull out the duplex section and remove jammed paper if any.
	J-9253	When idling: The ADU paper stay sensor turns ON while in idling.		Open the main body front doors / R and /L, pull out the duplex section and remove jammed paper if any.
	J-9301	During operation: The ADU exit sensor (PS43) does not turn ON within a specified period of time after the ADU reverse sensor /1 (PS46) turns ON.	If there is a sheet of paper being printed when a jam occurs, the main body completes the paper exit before stopping operations.	Open the main body front doors / R and /L, pull out the duplex section and remove jammed paper if any.
	J-9351	When idling: The ADU reverse sensor /1 (PS35) turns ON while in idling.	-	Open the main body front doors / R and /L, pull out the duplex section and remove jammed paper if any.
	J-9352	When idling: The ADU reverse sensor /2 (PS36) turns ON while in idling.		Open the main body front doors / R and /L, pull out the duplex section and remove jammed paper if any.
	J-9401	During operation: After the start from the 2nd stopping position, the ADU deceleration sensor (PS42) does not turn ON within a specified period of time.	If there is a sheet of paper being printed when a jam occurs, the main body completes the paper exit before stopping operations.	Open the main body front doors / R and /L, pull out the duplex section and remove jammed paper if any.

Classification	JAM Code	Cause	Resulting operation	Correction
	J-9451	When idling: ADU exit sensor (PS43) turns ON while in idling.	-	Open the main body front doors / R and /L, pull out the duplex section and remove jammed paper if any.

2. MALFUNCTION CODE

2.1 Trouble reset method

Turn OFF/ON the power switch (SW2) of the main body when releasing an abnormal condition.

2.2 Function to detach defective sections

When the abnormality occurs on the part for which the faulty part isolation function is available, the defective units can be detached temporarily to use other control unit manually.

While detached, an error detection is not carried out on these detached units.

There are 2 methods of setting for limited use.

(1) User operation

When a malfunction code occurs, press the HELP key following the message on the operation panel and then turn the sub power switch (SW2) OFF and ON. This operation allows you to use it temporarily until the SW2 is OFF and ON (including an OFF/ON operation by the weekly timer) next time.

(2) DIPSW setting

Turning the sub power switch (SW2) OFF and ON after setting the specified software DIPSW bit allows you to make a limited use of it until the bit setting is released next time (it requires the OFF/ON operation of the SW2).

2.3 Malfunction code list

⚠ WARNING

- When any malfunction of C1540 to 1562; PB glue tank temperature abnormality or C-2214 to 2217, 3501, 3906; fusing temperature abnormality occurs, be sure to repair defective parts then set the software DIPSW3-1 of service mode to 0. If DIPSW3-1 is set to 0 before defective parts are fixed, it may cause fire.

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
Main body: Drive abnormality	C-0001	Main body drive serial input abnormality 1. Within a specified period of time after the power ON, a serial data is not received between the printer control board (PRCB) and the main body drive board.	The main body and option stop immediately to turn OFF the RL1 (the main relay) .	Printer control board (PRCB)		
	C-0002	Main body drive serial input abnormality 2. Within a specified period of time after the power ON, a serial data is not received between the printer control board (PRCB) and the main body drive board.		Printer control board (PRCB)		
	C-0003	Main body drive serial input abnormality 3. Within a specified period of time after the power ON, a serial data is not received between the printer control board (PRCB) and the main body drive board.		Printer control board (PRCB)		
	C-0004	Main body drive serial input abnormality 4. Within a specified period of time after the power ON, a serial data is not received between the printer control board (PRCB) and the main body drive board.		Printer control board (PRCB)		
Main body: Communication error	C-0005	Drive communication reception error detection abnormality 3.	The main body and option stop immediately to turn OFF the RL1 (the main relay).	<ul style="list-style-type: none"> Printer control board (PRCB) ADU drive board (ADUDB) 		
	C-0006	Drive communication reception error detection abnormality 4.		Printer control board (PRCB)		
	C-0007	Drive communication reception error detection abnormality 5.		Printer control board (PRCB)		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-0008	Drive communication reception error detection abnormality 6.		Printer control board (PRCB)		
	C-0010	Drive communication reception error detection abnormality 2.		<ul style="list-style-type: none"> Printer control board (PRCB: main body) PF drive board (PFUDB: PF-702/703) 		
	C-0011	Drive communication reception error detection abnormality 8.		<ul style="list-style-type: none"> Printer control board (PRCB: main body) PF drive board (PFUDB: PF-702/703) 		
	C-0012	Drive communication reception error detection abnormality 9.		<ul style="list-style-type: none"> Printer control board (PRCB: main body) PF drive board (PFUDB: PF-702/703) 		
	C-0020	ADU drive serial input abnormality 1. In the initial communication check between the printer control board (PRCB) and the ADU drive board (ADUDB) after the power ON, a serial data is not received.		<ul style="list-style-type: none"> Printer control board (PRCB) ADU drive board (ADUDB) 		
	C-0021	ADU drive serial input abnormality 2. In the initial communication check between the printer control board (PRCB) and the ADU drive board (ADUDB) after the power ON, a serial data is not received.		<ul style="list-style-type: none"> Printer control board (PRCB) ADU drive board (ADUDB) 		
	C-0022	ADU drive serial input abnormality 3. In the initial communication check between the printer control board (PRCB) and the ADU drive board (ADUDB) after the power ON, a serial data is not received.		<ul style="list-style-type: none"> Printer control board (PRCB) ADU drive board (ADUDB) 		
	C-0023	Drive communication reception error detection abnormality 0.		<ul style="list-style-type: none"> Printer control board (PRCB) ADU drive board (ADUDB) 		
	C-0024	Drive communication reception error detection abnormality 7.		<ul style="list-style-type: none"> Printer control board (PRCB) ADU drive board (ADUDB) 		
	C-0025	Drive communication reception error detection abnormality 11.		<ul style="list-style-type: none"> Printer control board (PRCB) ADU drive board (ADUDB) 		
Main body: Drive abnormality	C-0101	Paper feed motor (M4) speed abnormality. An error detection signal is detected twice in succession within a specified period of time after M4 was turned ON.	The main body and option stop immediately to turn OFF the RL1 (the main relay) .	<ul style="list-style-type: none"> Paper feed motor (M4) Printer control board (PRCB) 		
PF: Drive	C-0103	1st tandem PF-702/703 paper feed motor (M1) speed abnormality. An error detection signal is detected twice in succession within a specified period of time after M1 was turned ON.		<ul style="list-style-type: none"> Paper feed motor (M1: PF-702/703) PF drive board (PFUDB: PF-702/703) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
Main body: Power abnormality	C-0104	Abnormality of the vertical conveyance motor (M8) power in the printer control board (PRCB). An error detection signal (blowout of ICP) of M8 is detected when M8 is turned ON.	The main body and option stop immediately to turn OFF the RL1 (the main relay).	<ul style="list-style-type: none"> Vertical conveyance motor (M8) Printer control board (PRCB) 		
PF: Power abnormality	C-0105	Abnormality of the PF conveyance motor (M2) power in the PF drive board (PFUDB) of the 1st tandem PF-702. An error detection signal (blowout of ICP) of M2 is detected when M2 is turned ON.		<ul style="list-style-type: none"> PF exit conveyance motor (M2: PF-702) PF drive board (PFUDB: PF-702) 		
PF: Drive	C-0106	2nd tandem PF-702/703 paper feed motor (M) speed abnormality. An error detection signal is detected twice in succession within a specified period of time after M1 was turned ON.		<ul style="list-style-type: none"> Paper feed motor (M1: PF-702/703) PF drive board (PFUDB: PF-702/703) 		
PF: Power abnormality	C-0107	Abnormality of the PF conveyance motor (M2) power in the PF drive board (PFUDB) of the 2nd tandem PF-702. An error detection signal (blowout of ICP) of M2 is detected when M2 is turned ON.		<ul style="list-style-type: none"> PF exit conveyance motor (M2: PF-702) PF drive board (PFUDB: PF-702) 		
	C-0108	Abnormality of the PF conveyance motor (M3) power in the PF drive board (PFUDB) of the 1st tandem PF-703. An error detection signal (blowout of ICP) of M3 is detected when M3 is turned ON.		<ul style="list-style-type: none"> PF exit conveyance motor (M3: PF-703) PF drive board (PFUDB: PF-703) 		
	C-0109	Abnormality of the PF conveyance motor (M3) power in the PF drive board (PFUDB) of the 2nd tandem PF-703. An error detection signal (blowout of ICP) of M3 is detected when M3 is turned ON.		<ul style="list-style-type: none"> PF exit conveyance motor (M3: PF-703) PF drive board (PFUDB: PF-703) 		
Main body: Power abnormality	C-0110	Abnormality of the registration section motor power in the ADU drive board (ADUDB). The error detection signals (blowout of ICP) of the ADU conveyance motor /2 (M16), the registration motor (M17) and the loop motor (M18) are detected after the print is started.		<ul style="list-style-type: none"> ADU conveyance motor /2 (M16) Registration motor (M17) Loop motor (M18) ADU drive board /2 (ADUDB2) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-0111	Abnormality of the duplex section motor power in the ADU drive board (ADUDB). The error detection signals (blowout of ICP) of the ADU reverse motor (M12), the reverse/exit motor (M13), the ADU accelerate motor (M14) and the ADU conveyance motor /1 (M15) are detected after the print is started.		<ul style="list-style-type: none"> • ADU reverse motor (M12) • Reverse/exit motor (M13) • ADU acceleration motor (M14) • ADU conveyance motor /1 (M15) • ADU drive board /1 (ADUDB1) 		
	C-0113	Abnormality 1 of the SD/CL_24V power for the printer control board (PRCB) tray. At the start, the error detection signals of the PRCB tray solenoid/clutch ICP blowout and 24V cut off are detected.		<ul style="list-style-type: none"> • DC power supply /2 (DCPS/2) • Printer control board (PRCB) 		
	C-0114	Abnormality 2 of the SD/CL_24V power for the printer control board (PRCB) tray. When the error detection signal of the PRCB tray solenoid/clutch ICP blowout is detected but no 24V cut off is detected at the start.		<ul style="list-style-type: none"> • Paper feed clutch /1 (CL4) • Separation clutch /1 (CL5) • Paper feed clutch /2 (CL6) • Separation clutch /2 (CL7) • Pick-up solenoid /1 (SD3) • Pick-up solenoid /2 (SD4) • Printer control board (PRCB) 		
	C-0115	Abnormality 1 of the SD/CL_24V power for the printer control board (PRCB) vertical conveyance. At the start, the error detection signals of the PRCB vertical conveyance solenoid/clutch ICP blowout and 24V cut off are detected.		<ul style="list-style-type: none"> • DC power supply /2 (DCPS/2) • Printer control board (PRCB) 		
	C-0116	Abnormality 2 of the SD/CL_24V power for the printer control board (PRCB) tray. When the error detection signal of the PRCB tray solenoid/clutch ICP blowout is detected but no 24V cut off is detected at the start.		<ul style="list-style-type: none"> • Pre-registration clutch /1 (CL1) • Vertical conveyance clutch (CL2) • Pre-registration clutch /2 (CL3) • Erase lamp (EL) • Tray lock solenoid /1 (SD1) • Tray lock solenoid /2 (SD2) • Drum claw solenoid (SD10) • Printer control board (PRCB) 		
PF: Power abnormality	C-0118	Abnormality of the power for the PF drive board (PFUDB) SD/CL of the PF-702/703. At the start, the error detection signal of the PFUDB solenoid/clutch ICP blowout is detected.		PF drive board (PFUDB: PF-702/703)		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
Main body: Drive	C-0119	The transfer belt cleaning motor (M5) speed abnormality. The M5EM error detection signal is detected twice in succession within a specified period of time after M5 was turned ON.		<ul style="list-style-type: none"> Transfer belt cleaning motor (M5) Printer control board (PRCB) 		
	C-0120	Paper exit conveyance motor (M31) speed abnormality. The M31EM error detection signal is detected twice in succession within a specified period of time after M31 was turned ON.		<ul style="list-style-type: none"> Paper exit conveyance motor (M31) Printer control board (PRCB) 		
	C-0121	Paper feed motor (M20) speed abnormality. The M20EM error detection signal is detected twice in succession within a specified period of time after M20 was turned ON.		<ul style="list-style-type: none"> Paper exit motor (M20) Printer control board (PRCB) 		
PF: Power abnormality	C-0130	PF-703 coupling conveyance motor /1 (M4) power abnormality. An error detection signal (blowout of ICP) of M4 is detected when M4 is turned ON.		<ul style="list-style-type: none"> Coupling conveyance motor /1 (M4: PF-703) PF drive board (PFUDB: PF-703) 		
	C-0131	PF-703 coupling conveyance motor /2 and /3 (M5 and M6) power abnormality. An error detection signal (blowout of ICP) of M5 and M6 is detected when M5 and M6 are turned ON.		<ul style="list-style-type: none"> Coupling conveyance motor /2 (M5: PF-703) Coupling conveyance motor /3 (M6: PF-703) PF drive board (PFUDB: PF-703) 		
	C-0132	Abnormality of the power for the PF drive board (PFUDB) SD/CL of the 2nd tandem PF-702/703. At the start, the error detection signal of the PFUDB solenoid/clutch ICP blowout is detected.		PF drive board (PFUDB: PF-702/703)		
PF: Drive	C-0133	1st tandem PF-703 paper feed belt motor (M2) speed abnormality. An error detection signal is detected twice in succession within a specified period of time after M2 was turned ON.		<ul style="list-style-type: none"> Paper feed belt motor (M2: PF-703) PF drive board (PFUDB: PF-703) 		
	C-0134	2nd tandem PF-703 paper feed belt motor (M2) speed abnormality. An error detection signal is detected twice in succession within a specified period of time after M2 was turned ON.		<ul style="list-style-type: none"> Paper feed belt motor (M2: PF-703) PF drive board (PFUDB: PF-703) 		
PI-PFU: Drive	C-0140	Paper feed motor speed abnormality of PI-PFU (PF-703) tandem PF. An error detection signal is detected twice in succession within a specified period of time after M1 was turned ON.		<ul style="list-style-type: none"> Paper feed motor (M1: PF-702/703) PF drive board (PFUDB: PF-702/703) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
PI-PFU: Power abnormality	C-0141	PI-PFU (PF-703) PF exit conveyance motor (M3) power abnormality. An error detection signal (blowout of ICP) of M3 is detected when M3 is turned ON.		<ul style="list-style-type: none"> PF exit conveyance motor (M3: PF-703) PF drive board (PFUDB: PF-703) 		
	C-0142	PI-PFU (PF-703) coupling conveyance motor /1 (M4) power abnormality. An error detection signal (blowout of ICP) of M4 is detected when M4 is turned ON.		<ul style="list-style-type: none"> Coupling conveyance motor /1 (M4: PF-703) PF drive board (PFUDB: PF-703) 		
	C-0143	PI-PFU (PF-703) coupling conveyance motor /2 and /3 (M5 and M6) power abnormality. An error detection signal (blowout of ICP) of M5 and M6 is detected when M5 and M6 are turned ON.		<ul style="list-style-type: none"> Coupling conveyance motor /2 (M5: PF-703) Coupling conveyance motor /3 (M6: PF-703) PF drive board (PFUDB: PF-703) 		
	C-0144	PI-PFU (PF-703) SD/CL power abnormality. At the start, the error detection signal of the PFUDB solenoid/clutch ICP blowout is detected.		PF drive board (PFUDB: PF-702/703)		
PI-PFU: Drive	C-0145	PI-PFU (PF-703) paper feed belt motor (M2) speed abnormality. An error detection signal is detected twice in succession within a specified period of time after M2 was turned ON.		<ul style="list-style-type: none"> Paper feed belt motor (M2: PF-703) PF drive board (PFUDB: PF-703) 		
Main body: Tray1	C-0201	Tray1: up abnormality When the upper limit sensor /1 (PS6) is OFF, PS6 does not turn ON within 20 seconds after the tray lift-up motor /1 (M25) turns ON for lifting operation. At this time, an error detection signal (24V cut off) is detected.	Error code is not displayed on the operation panel, but displayed only on the data collection, the list output and CSRC. Since the lifting operation of the tray is not completed, "Set paper in the tray x" is displayed on the operation panel.	<ul style="list-style-type: none"> Upper limit sensor /1 (PS6) Tray lift-up motor /1 (M25) Printer control board (PRCB) DC power supply /2 (DCPS/2) 	DIPSW18-0	Paper feed in tray1 is unavailable (The operation panel is displayed in hatching)
	C-0203	Tray1 up abnormality 2. When the upper limit sensor /1 (PS6) is OFF, PS6 does not turn ON within 20 seconds after the tray lift-up motor /1 (M25) turns ON for lifting operation. At this time, an error detection signal is not detected.		<ul style="list-style-type: none"> Upper limit sensor /1 (PS6) Tray lift-up motor /1 (M25) Printer control board (PRCB) DC power supply /2 (DCPS/2) 	DIPSW18-0	Paper feed in tray1 is unavailable (The operation panel is displayed in hatching)
	C-0204	The locking of the tray lift-up motor /1 (M25) is detected. An error detection signal of M25 is detected while M25 is ON.		<ul style="list-style-type: none"> Tray lift-up motor /1 (M25) Printer control board (PRCB) 	DIPSW 18-0	Paper feed in tray1 is unavailable (The operation panel is displayed in hatching)

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
Main body: Tray2	C-0205	Tray2 up abnormality 1. When the upper limit sensor /2 (PS10) is OFF, PS10 does not turn ON within 20 seconds after the tray lift-up motor /2 (M34) turns ON for lifting operation. At this time, an error detection signal (24V cut off) is detected.		<ul style="list-style-type: none"> Upper limit sensor /2 (PS10) Tray lift-up motor /2 (M34) Printer control board (PRCB) DC power supply /2 (DCPS/2) 	DIPSW 18-1	Paper feed in tray2 is unavailable (The operation panel is displayed in hatching)
	C-0207	Tray /2 up abnormality 2. When the upper limit sensor /2 (PS10) is OFF, PS10 does not turn ON within 20 seconds after the tray lift-up motor /2 (M34) turns ON for lifting operation. At this time, an error detection signal is not detected.		<ul style="list-style-type: none"> Upper limit sensor /2 (PS10) Tray lift-up motor /2 (M34) Printer control board (PRCB) DC power supply /2 (DCPS/2) 	DIPSW 18-1	Paper feed in tray /2 is unavailable (The operation panel is displayed in hatching)
	C-0208	The locking of the tray lift-up motor /2 (M34) is detected. When M34 is ON, an error detection signal of the M34 is detected.		<ul style="list-style-type: none"> Tray lift-up motor /2 (M34) Printer control board (PRCB) 	DIPSW 18-1	Paper feed in tray2 is unavailable (The operation panel is displayed in hatching)
PF: Tray3	C-0222	1st tandem PF-702/703 upper tray up abnormality. PF-702: When the upper limit sensor /1 (PS2) is OFF, PS2 does not turn ON within 20 seconds after the paper lift motor /1 (M42) turns ON for lifting operation. PF-703: When the upper limit sensor /1 (PS5) is OFF, PS5 does not turn ON within 20 seconds after the paper lift motor /1 (M7) turns ON for lifting operation. Or, the paper suction sensor /Fr1 and /Rr1 (PS25 and PS26) turn ON before PS5 turns ON while in tray lifting.		<ul style="list-style-type: none"> Upper limit sensor /1 (PS2: PF-702) Upper limit sensor /1 (PS5: PF-703) Paper lift motor /1 (M42: PF-702) Paper lift motor /1 (M7: PF-703) PF drive board (PFUDB: PF-702/703) 	DIPSW 18-2	Paper feed in tray /3, /6, /7 and /8 is unavailable (The operation panel is displayed in hatching)
	C-0223	The locking of the paper lift motor /1 of the 1st tandem PF-702/703 upper tray (M42: PF-702, M7: PF-703) is detected. When M42 and M7 are ON, error detection signals of the M42 and M7 are detected.		<ul style="list-style-type: none"> Paper lift motor /1 (M42: PF-702) Paper lift motor /1 (M7: PF-703) PF drive board (PFUDB: PF-702/703) 	DIPSW 18-2	Paper feed in tray /3, /6, /7 and /8 is unavailable (The operation panel is displayed in hatching)

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
PF: Tray4	C-0226	1st tandem PF-702/703 middle tray up abnormality. PF-702: When the upper limit sensor /2 (PS6) is OFF, PS6 does not turn ON within 20 seconds after the paper lift motor /2 (M43) turns ON for lifting operation. PF-703: When the upper limit sensor /2 (PS9) is OFF, PS9 does not turn ON within 20 seconds after the paper lift motor /2 (M8) turns ON for lifting operation. Or, the paper suction sensor /Fr2 and /Rr2 (PS27 and PS28) turn ON before PS9 turns ON while in tray lifting.		<ul style="list-style-type: none"> Upper limit sensor /2 (PS6: PF-702) Upper limit sensor /2 (PS9: PF-703) Paper lift motor /2 (M43: PF-702) Paper lift motor /2 (M8: PF-703) PF drive board (PFUDB: PF-702/703) 	DIPSW 18-3	Paper feed in tray /4 is unavailable (The operation panel is displayed in hatching)
	C-0227	The locking of the paper lift motor /2 of the 1st tandem PF-702/703 middle tray (M43: PF-702, M8: PF-703) is detected. When M43 and M8 are ON, error detection signals of the M43 and M8 are detected.		<ul style="list-style-type: none"> Paper lift motor /2 (M43: PF-702) Paper lift motor /2 (M8: PF-703) PF drive board (PFUDB: PF-702/703) 	DIPSW 18-3	Paper feed in tray /4 is unavailable (The operation panel is displayed in hatching)
PF: Tray5	C-0230	1st tandem PF-702/703 lower tray up abnormality. PF-702: When the upper limit sensor /3 (PS10) is OFF, PS10 does not turn ON within 20 seconds after the paper lift motor /3 (M44) turns ON for lifting operation. PF-703: When the upper limit sensor /3 (PS13) is OFF, PS13 does not turn ON within 20 seconds after the paper lift motor /3 (M9) turns ON for lifting operation. Or, the paper suction sensor /Fr3 and /Rr3 (PS29 and PS30) turn ON before PS13 turns ON while in tray lifting.		<ul style="list-style-type: none"> Upper limit sensor /3 (PS10: PF-702) Upper limit sensor /3 (PS13: PF-703) Paper lift motor /3 (M44: PF-702) Paper lift motor /3 (M9: PF-703) PF drive board (PFUDB: PF-702/703) 	DIPSW 20-4	Paper feed in tray /5 is unavailable (The operation panel is displayed in hatching)
	C-0231	The locking of the paper lift motor /3 of the 1st tandem PF-702/703 middle tray (M44: PF-702, M9: PF-703) is detected. When M44 and M9 are ON, error detection signals of the M44 and M9 are detected.		<ul style="list-style-type: none"> Paper lift motor /3 (M44: PF-702) Paper lift motor /3 (M9: PF-703) PF drive board (PFUDB: PF-702/703) 	DIPSW 20-4	Paper feed in tray /5 is unavailable (The operation panel is displayed in hatching)

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
PF: Tray6	C-0240	2nd tandem PF-702/703 upper tray up abnormality. PF-702: When the upper limit sensor /1 (PS2) is OFF, PS2 does not turn ON within 20 seconds after the paper lift motor /1 (M42) turns ON for lifting operation. PF-703: When the upper limit sensor /1 (PS5) is OFF, PS5 does not turn ON within 20 seconds after the paper lift motor /1 (M7) turns ON for lifting operation. Or, the paper suction sensor /Fr1 and /Rr1 (PS25 and PS26) turn ON before PS5 turns ON while in tray lifting.		<ul style="list-style-type: none"> Upper limit sensor /1 (PS2: PF-702) Upper limit sensor /1 (PS5: PF-703) Paper lift motor /1 (M42: PF-702) Paper lift motor /1 (M7: PF-703) PF drive board (PFUDB: PF-702/703) 	DIPSW 20-5	Paper feed in tray /6 is unavailable (The operation panel is displayed in hatching)
	C-0241	The locking of the paper lift motor /1 of the 2nd tandem PF-702/703 upper tray (M42: PF-702, M7: PF-703) is detected. When M42 and M7 are ON, error detection signals of the M42 and M7 are detected.		<ul style="list-style-type: none"> Paper lift motor /1 (M42: PF-702) Paper lift motor /1 (M7: PF-703) PF drive board (PFUDB: PF-702/703) 	DIPSW 20-5	Paper feed in tray /6 is unavailable (The operation panel is displayed in hatching)
PF: Tray7	C-0242	2nd tandem PF-702/703 middle tray up abnormality. PF-702: When the upper limit sensor /2 (PS6) is OFF, PS6 does not turn ON within 20 seconds after the paper lift motor /2 (M43) turns ON for lifting operation. PF-703: When the upper limit sensor /2 (PS9) is OFF, PS9 does not turn ON within 20 seconds after the paper lift motor /2 (M8) turns ON for lifting operation. Or, the paper suction sensor /Fr2 and /Rr2 (PS27 and PS28) turn ON before PS9 turns ON while in tray lifting.		<ul style="list-style-type: none"> Upper limit sensor /2 (PS6: PF-702) Upper limit sensor /2 (PS9: PF-703) Paper lift motor /2 (M43: PF-702) Paper lift motor /2 (M8: PF-703) PF drive board (PFUDB: PF-702/703) 	DIPSW 18-5	Paper feed in tray /7 is unavailable (The operation panel is displayed in hatching)
	C-0243	The locking of the paper lift motor /2 of the 2nd tandem PF-702/703 middle tray (M43: PF-702, M8: PF-703) is detected. When M43 and M8 are ON, error detection signals of the M43 and M8 are detected.		<ul style="list-style-type: none"> Paper lift motor /2 (M43: PF-702) Paper lift motor /2 (M8: PF-703) PF drive board (PFUDB: PF-702/703) 	DIPSW 18-5	Paper feed in tray /7 is unavailable (The operation panel is displayed in hatching)

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
PF: Tray8	C-0244	2nd tandem PF-702/703 lower tray up abnormality. PF-702: When the upper limit sensor /3 (PS10) is OFF, PS10 does not turn ON within 20 seconds after the paper lift motor /3 (M44) turns ON for lifting operation. PF-703: When the upper limit sensor /3 (PS13) is OFF, PS13 does not turn ON within 20 seconds after the paper lift motor /3 (M9) turns ON for lifting operation. Or, the paper suction sensor /Fr3 and /Rr3 (PS29 and PS30) turn ON before PS13 turns ON while in tray lifting.		<ul style="list-style-type: none"> Upper limit sensor /3 (PS10: PF-702) Upper limit sensor /3 (PS13: PF-703) Paper lift motor /3 (M44: PF-702) Paper lift motor /3 (M9: PF-703) PF drive board (PFUDB: PF-702/703) 	DIPSW 18-6	Paper feed in tray /8 is unavailable (The operation panel is displayed in hatching)
	C-0245	The locking of the paper lift motor /3 of the 2nd tandem PF-702/703 middle tray (M44: PF-702, M9: PF-703) is detected. When M44 and M9 are ON, error detection signals of the M44 and M9 are detected.		<ul style="list-style-type: none"> Paper lift motor /3 (M44: PF-702) Paper lift motor /3 (M9: PF-703) PF drive board (PFUDB: PF-702/703) 	DIPSW 18-6	Paper feed in tray /8 is unavailable (The operation panel is displayed in hatching)
PI-PFU: PI Tray1	C-0250	PI-PFU (PF-703) upper tray up abnormality. When the upper limit sensor /1 (PS5) is OFF, PS5 does not turn ON within 20 seconds after the paper lift motor /1 (M7) turns ON for lifting operation. Or, the paper suction sensor /Fr1 and /Rr1 (PS25 and PS26) turn ON before PS5 turns ON while in tray lifting.		<ul style="list-style-type: none"> Upper limit sensor /1 (PS2: PF-702) Upper limit sensor /1 (PS5: PF-703) Paper lift motor /1 (M42: PF-702) Paper lift motor /1 (M7: PF-703) PF drive board (PFUDB: PF-702/703) 		
	C-0251	The locking of the upper tray paper lift motor /1 (M7) is detected. When M7 is ON, an error detection signal of the M7 is detected.		<ul style="list-style-type: none"> Paper lift motor /1 (M42: PF-702) Paper lift motor /1 (M7: PF-703) PF drive board (PFUDB: PF-702/703) 		
PI-PFU: PI Tray2	C-0252	PI-PFU (PF-703) middle tray up abnormality. When the upper limit sensor /2 (PS9) is OFF, PS9 does not turn ON within 20 seconds after the paper lift motor /2 (M8) turns ON for lifting operation. Or, the paper suction sensor /Fr2 and /Rr2 (PS27 and PS28) turn ON before PS9 turns ON while in tray lifting.		<ul style="list-style-type: none"> Upper limit sensor /2 (PS6: PF-702) Upper limit sensor /2 (PS9: PF-703) Paper lift motor /2 (M43: PF-702) Paper lift motor /2 (M8: PF-703) PF drive board (PFUDB: PF-702/703) 	DIPSW 37-0	Paper feed in tray /2 is unavailable (The operation panel is displayed in hatching)
	C-0253	The locking of the upper tray paper lift motor /2 (M8) is detected. When M8 is ON, an error detection signal of the M8 is detected.		<ul style="list-style-type: none"> Paper lift motor /2 (M43: PF-702) Paper lift motor /2 (M8: PF-703) PF drive board (PFUDB: PF-702/703) 	DIPSW 37-0	Paper feed in tray /2 is unavailable (The operation panel is displayed in hatching)

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
PI-PFU: PI Tray3	C-0254	PI-PFU (PF-703) lower tray up abnormality. When the upper limit sensor /3 (PS13) is OFF, PS13 does not turn ON within 20 seconds after the paper lift motor /3 (M9) turns ON for lifting operation. Or, the paper suction sensor /Fr3 and /Rr3 (PS29 and PS30) turn ON before PS13 turns ON while in tray lifting.		<ul style="list-style-type: none"> Upper limit sensor /3 (PS10: PF-702) Upper limit sensor /3 (PS13: PF-703) Paper lift motor /3 (M44: PF-702) Paper lift motor /3 (M9: PF-703) PF drive board (PFUDB: PF-702/703) 	DIPSW 37-1	Paper feed in tray /3 is unavailable (The operation panel is displayed in hatching)
	C-0255	The locking of the upper tray paper lift motor /3 (M9) is detected. When M9 is ON, an error detection signal of the M9 is detected.		<ul style="list-style-type: none"> Paper lift motor /3 (M44: PF-702) Paper lift motor /3 (M9: PF-703) PF drive board (PFUDB: PF-702/703) 	DIPSW 37-1	Paper feed in tray /3 is unavailable (The operation panel is displayed in hatching)
PF: Tray3	C-0261	1st tandem PF-703 shutter motor /1 (M10) operation time abnormality 1. The M10EM error detection signal is detected twice in succession within a specified period of time after M10 was turned ON. At this time, an error detection signal (blowout of fan ICP) is not detected.	The main body and option stop immediately to turn OFF the RL1 (the main relay).	<ul style="list-style-type: none"> Shutter motor /1 (M10: PF-703) PF drive board (PFUDB: PF-703) 	DIPSW 18-2	Paper feed in tray /3, /6, /7 and /8 is unavailable (The operation panel is displayed in hatching)
	C-0262	1st tandem PF-703 shutter motor /1 (M10) operation time abnormality 2. The M10EM error detection signal is detected twice in succession within a specified period of time after M10 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> Shutter motor /1 (M10: PF-703) PF drive board (PFUDB: PF-703) 	DIPSW 18-2	Paper feed in tray /3, /6, /7 and /8 is unavailable (The operation panel is displayed in hatching)
PF: Tray4	C-0263	1st tandem PF-703 shutter motor /2 (M11) operation time abnormality 1. The M11EM error detection signal is detected twice in succession within a specified period of time after M11 was turned ON. At this time, an error detection signal (blowout of fan ICP) is not detected.		<ul style="list-style-type: none"> Shutter motor /2 (M11: PF-703) PF drive board (PFUDB: PF-703) 	DIPSW 18-3	Paper feed in tray /4 is unavailable (The operation panel is displayed in hatching)
	C-0264	1st tandem PF-703 shutter motor /2 (M11) operation time abnormality 2. The M11EM error detection signal is detected twice in succession within a specified period of time after M11 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> Shutter motor /2 (M11: PF-703) PF drive board (PFUDB: PF-703) 	DIPSW 18-3	Paper feed in tray /4 is unavailable (The operation panel is displayed in hatching)

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
PF: Tray5	C-0265	1st tandem PF-703 shutter motor /3 (M12) operation time abnormality 1. The M12EM error detection signal is detected twice in succession within a specified period of time after M12 was turned ON. At this time, an error detection signal (blowout of fan ICP) is not detected.		<ul style="list-style-type: none"> Shutter motor /3 (M12: PF-703) PF drive board (PFUDB: PF-703) 	DIPSW 20-4	Paper feed in tray /5 is unavailable (The operation panel is displayed in hatching)
	C-0266	1st tandem PF-703 shutter motor /3 (M12) operation time abnormality 2. The M12EM error detection signal is detected twice in succession within a specified period of time after M12 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> Shutter motor /3 (M12: PF-703) PF drive board (PFUDB: PF-703) 	DIPSW 20-4	Paper feed in tray /5 is unavailable (The operation panel is displayed in hatching)
PF: Tray6	C-0271	2nd tandem PF-703 shutter motor /1 (M10) operation time abnormality 1. The M10EM error detection signal is detected twice in succession within a specified period of time after M10 was turned ON. At this time, an error detection signal (blowout of fan ICP) is not detected.		<ul style="list-style-type: none"> Shutter motor /1 (M10: PF-703) PF drive board (PFUDB: PF-703) 	DIPSW 20-5	Paper feed in tray /6 is unavailable (The operation panel is displayed in hatching)
	C-0272	2nd tandem PF-703 shutter motor /1 (M10) operation time abnormality 2. The M10EM error detection signal is detected twice in succession within a specified period of time after M10 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> Shutter motor /1 (M10: PF-703) PF drive board (PFUDB: PF-703) 	DIPSW 20-5	Paper feed in tray /6 is unavailable (The operation panel is displayed in hatching)
PF: Tray7	C-0273	2nd tandem PF-703 shutter motor /2 (M11) operation time abnormality 1. The M11EM error detection signal is detected twice in succession within a specified period of time after M11 was turned ON. At this time, an error detection signal (blowout of fan ICP) is not detected.		<ul style="list-style-type: none"> Shutter motor /2 (M11: PF-703) PF drive board (PFUDB: PF-703) 	DIPSW 18-5	Paper feed in tray /7 is unavailable (The operation panel is displayed in hatching)

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-0274	2nd tandem PF-703 shutter motor /2 (M11) operation time abnormality 2. The M11EM error detection signal is detected twice in succession within a specified period of time after M11 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> Shutter motor /2 (M11: PF-703) PF drive board (PFUDB: PF-703) 	DIPSW 18-5	Paper feed in tray /7 is unavailable (The operation panel is displayed in hatching)
PF: Tray8	C-0275	2nd tandem PF-703 shutter motor /3 (M12) operation time abnormality 1. The M12EM error detection signal is detected twice in succession within a specified period of time after M12 was turned ON. At this time, an error detection signal (blowout of fan ICP) is not detected.		<ul style="list-style-type: none"> Shutter motor /3 (M12: PF-703) PF drive board (PFUDB: PF-703) 	DIPSW 18-6	Paper feed in tray /8 is unavailable (The operation panel is displayed in hatching)
	C-0276	2nd tandem PF-703 shutter motor /3 (M12) operation time abnormality 2. The M12EM error detection signal is detected twice in succession within a specified period of time after M12 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> Shutter motor /3 (M12: PF-703) PF drive board (PFUDB: PF-703) 	DIPSW 18-6	Paper feed in tray /8 is unavailable (The operation panel is displayed in hatching)
PI-PFU: PI Tray1	C-0281	PI-PFU (PF-703) shutter motor /1 (M10) operation time abnormality 1. The M10EM error detection signal is detected twice in succession within a specified period of time after M10 was turned ON. At this time, an error detection signal (blowout of fan ICP) is not detected.		<ul style="list-style-type: none"> Shutter motor /1 (M10: PF-703) PF drive board (PFUDB: PF-703) 		
	C-0282	PI-PFU (PF-703) shutter motor /1 (M10) operation time abnormality 2. The M10EM error detection signal is detected twice in succession within a specified period of time after M10 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> Shutter motor /1 (M10: PF-703) PF drive board (PFUDB: PF-703) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
PI-PFU: PI Tray2	C-0283	PI-PFU (PF-703) shutter motor /2 (M11) operation time abnormality 1. The M11EM error detection signal is detected twice in succession within a specified period of time after M11 was turned ON. At this time, an error detection signal (blowout of fan ICP) is not detected.		<ul style="list-style-type: none"> Shutter motor /2 (M11: PF-703) PF drive board (PFUDB: PF-703) 	DIPSW 37-0	Paper feed in tray /2 is unavailable (The operation panel is displayed in hatching)
	C-0284	PI-PFU (PF-703) shutter motor /2 (M11) operation time abnormality 2. The M11EM error detection signal is detected twice in succession within a specified period of time after M11 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> Shutter motor /2 (M11: PF-703) PF drive board (PFUDB: PF-703) 	DIPSW 37-0	Paper feed in tray /2 is unavailable (The operation panel is displayed in hatching)
PI-PFU: PI Tray3	C-0285	PI-PFU (PF-703) shutter motor /3 (M12) operation time abnormality 1. The M12EM error detection signal is detected twice in succession within a specified period of time after M12 was turned ON. At this time, an error detection signal (blowout of fan ICP) is not detected.		<ul style="list-style-type: none"> Shutter motor /3 (M12: PF-703) PF drive board (PFUDB: PF-703) 	DIPSW 37-1	Paper feed in tray /3 is unavailable (The operation panel is displayed in hatching)
	C-0286	PI-PFU (PF-703) shutter motor /3 (M12) operation time abnormality 2. The M12EM error detection signal is detected twice in succession within a specified period of time after M12 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> Shutter motor /3 (M12: PF-703) PF drive board (PFUDB: PF-703) 	DIPSW 37-1	Paper feed in tray /3 is unavailable (The operation panel is displayed in hatching)
Main body: Fan abnormality	C-0301	Transfer suction fan (FM5) rotation abnormality + 24V power abnormality. The FM5EM error detection signal is detected twice in succession within a specified period of time after FM5 was turned ON. At this time, an error detection signal (24V cut off) is detected.	The main body and option stop immediately to turn OFF the RL1 (the main relay) .	<ul style="list-style-type: none"> DC power supply /2 (DCPS/2) AC drive board (ACDB) 		
	C-0302	Transfer suction fan (FM5) power abnormality. The FM5EM error detection signal is detected twice in succession within a specified period of time after FM5 was turned ON. At this time, 24V is normal, but an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> Transfer suction fan (FM5) AC drive board (ACDB) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-0303	Transfer suction fan (FM5) rotation abnormality. The FM5EM error detection signal is detected twice in succession within a specified period of time after FM5 was turned ON. However, error detection signals (24V cut off/ blowout of ICP) are not detected.		<ul style="list-style-type: none"> Transfer suction fan (FM5) Printer control board (PRCB) AC drive board (ACDB) 		
	C-0304	Paper exit cooling fan /Up (FM4) rotation abnormality + 24V power abnormality. The FM4EM error detection signal is detected twice in succession within a specified period of time after FM4 was turned ON. At this time, an error detection signal (24V cut off) is detected.		<ul style="list-style-type: none"> DC power supply /2 (DCPS/2) AC drive board (ACDB) 		
	C-0305	Paper exit cooling fan /Up (FM4) power abnormality. The FM4EM error detection signal is detected twice in succession within a specified period of time after FM4 was turned ON. At this time, 24V is normal, but an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> Paper exit cooling fan / Up (FM4) AC drive board (ACDB) 		
	C-0306	Paper exit cooling fan /Up (FM4) rotation abnormality. The FM4EM error detection signal is detected twice in succession within a specified period of time after FM4 was turned ON. However, error detection signals (24V cut off/ blowout of ICP) are not detected.		<ul style="list-style-type: none"> Paper exit cooling fan / Up (FM4) Printer control board (PRCB) AC drive board (ACDB) 		
	C-0307	Paper exit cooling fan /Lw1 (FM10) rotation abnormality + 24V power abnormality. The FM10EM error detection signal is detected twice in succession within a specified period of time after FM10 was turned ON. At this time, an error detection signal (24V cut off) is detected.		<ul style="list-style-type: none"> DC power supply /2 (DCPS/2) AC drive board (ACDB) 		
	C-0308	Paper exit cooling fan /Lw1 (FM10) power abnormality. The FM10EM error detection signal is detected twice in succession within a specified period of time after FM10 was turned ON. In addition, 24V is normal, and an error detection signal (fuse blowout) is detected.		<ul style="list-style-type: none"> Paper exit cooling fan / Lw1 (FM10) AC drive board (ACDB) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-0309	Paper exit cooling fan /Lw1 (FM10) rotation abnormality. The FM10EM error detection signal is detected twice in succession within a specified period of time after FM10 was turned ON. In addition, an error detection signal (24V cut off/blowout of a fuse) is not detected.		<ul style="list-style-type: none"> Paper exit cooling fan / Lw1 (FM10) Printer control board (PRCB) AC drive board (ACDB) 		
	C-0310	Paper exit cooling fan /Lw2 (FM28) rotation abnormality + 24V power abnormality. The FM28EM error detection signal is detected twice in succession within a specified period of time after FM28 was turned ON. At this time, an error detection signal (24V cut off) is detected.	The main body and option stop immediately to turn OFF the RL1 (the main relay).	<ul style="list-style-type: none"> DC power supply /2 (DCPS/2) AC drive board (ACDB) 		
	C-0311	Paper exit cooling fan /Lw2 (FM28) power abnormality. The FM28EM error detection signal is detected twice in succession within a specified period of time after FM28 was turned ON. At this time, 24V is normal, but an error detection signal (blowout of ICP) is detected.	The main body and option stop immediately to turn OFF the RL1 (the main relay) .	<ul style="list-style-type: none"> Paper exit cooling fan / Lw2 (FM28) AC drive board (ACDB) 		
	C-0312	Paper exit cooling fan /Lw2 (FM28) rotation abnormality. The FM28EM error detection signal is detected twice in succession within a specified period of time after FM28 was turned ON. However, error detection signals (24V cut off/blowout of ICP) are not detected.		<ul style="list-style-type: none"> Paper exit cooling fan / Lw2 (FM28) Printer control board (PRCB) AC drive board (ACDB) 		
	C-0320	Paper feed assist fan /Fr1 (FM21) rotation abnormality + 24V power abnormality. The FM21EM error detection signal is detected twice in succession within a specified period of time after FM21 was turned ON. At this time, an error detection signal (24V cut off) is detected.		<ul style="list-style-type: none"> DC power supply /2 (DCPS/2) Printer control board (PRCB) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-0321	Paper feed assist fan /Fr1 (FM21) power abnormality. The FM20EM error detection signal is detected twice in succession within a specified period of time after FM20 was turned ON. At this time, 24V is normal, but an error detection signal (blowout of ICP) is detected.	The main body and option stop immediately to turn OFF the RL1 (the main relay).	<ul style="list-style-type: none"> Paper feed assist fan / Fr1 (FM21) Paper feed assist fan / Rr1 (FM20) Paper feed assist fan / Fr2 (FM23) Paper feed assist fan / Rr2 (FM24) Printer control board (PRCB) 		
	C-0322	Paper feed assist fan /Fr1 (FM21) rotation abnormality. The FM21EM error detection signal is detected twice in succession within a specified period of time after FM21 was turned ON. However, error detection signals (24V cut off/blowout of ICP) are not detected.		<ul style="list-style-type: none"> Paper feed assist fan / Fr1 (FM21) Paper feed assist fan / Rr1 (FM20) Paper feed assist fan / Fr2 (FM23) Paper feed assist fan / Rr2 (FM24) Printer control board (PRCB) 		
	C-0323	Paper feed assist fan /Fr1 (FM20) rotation abnormality + 24V power abnormality. The FM20EM error detection signal is detected twice in succession within a specified period of time after FM20 was turned ON. At this time, an error detection signal (24V cut off) is detected.		<ul style="list-style-type: none"> DC power supply /2 (DCPS/2) Printer control board (PRCB) 		
	C-0324	Paper feed assist fan /Rr1 (FM20) power abnormality. The FM20EM error detection signal is detected twice in succession within a specified period of time after FM20 was turned ON. At this time, 24V is normal, but an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> Paper feed assist fan / Fr1 (FM21) Paper feed assist fan / Rr1 (FM20) Paper feed assist fan / Fr2 (FM23) Paper feed assist fan / Rr2 (FM24) Printer control board (PRCB) 		
	C-0325	Paper feed assist fan /Rr1 (FM20) rotation abnormality. The FM20EM error detection signal is detected twice in succession within a specified period of time after FM20 was turned ON. However, error detection signals (24V cut off/blowout of ICP) are not detected.		<ul style="list-style-type: none"> Paper feed assist fan / Fr1 (FM21) Paper feed assist fan / Rr1 (FM20) Paper feed assist fan / Fr2 (FM23) Paper feed assist fan / Rr2 (FM24) Printer control board (PRCB) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-0326	Paper feed assist fan /Fr2 (FM23) rotation abnormality + 24V power abnormality. The FM23EM error detection signal is detected twice in succession within a specified period of time after FM23 was turned ON. At this time, an error detection signal (24V cut off) is detected.		<ul style="list-style-type: none"> • DC power supply /2 (DCPS/2) • Printer control board (PRCB) 		
	C-0327	Paper feed assist fan /Fr2 (FM23) power abnormality. The FM23EM error detection signal is detected twice in succession within a specified period of time after FM23 was turned ON. At this time, 24V is normal, but an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> • Paper feed assist fan / Fr1 (FM21) • Paper feed assist fan / Rr1 (FM20) • Paper feed assist fan / Fr2 (FM23) • Paper feed assist fan / Rr2 (FM24) • Printer control board (PRCB) 		
	C-0328	Paper feed assist fan /Fr2 (FM23) rotation abnormality. The FM23EM error detection signal is detected twice in succession within a specified period of time after FM23 was turned ON. However, error detection signals (24V cut off/blowout of ICP) are not detected.		<ul style="list-style-type: none"> • Paper feed assist fan / Fr1 (FM21) • Paper feed assist fan / Rr1 (FM20) • Paper feed assist fan / Fr2 (FM23) • Paper feed assist fan / Rr2 (FM24) • Printer control board (PRCB) 		
	C-0329	Paper feed assist fan /Fr2 (FM24) rotation abnormality + 24V power abnormality. The FM24EM error detection signal is detected twice in succession within a specified period of time after FM24 was turned ON. At this time, an error detection signal (24V cut off) is detected.		<ul style="list-style-type: none"> • DC power supply /2 (DCPS/2) • Printer control board (PRCB) 		
	C-0330	Paper feed assist fan /Rr2 (FM24) power abnormality. The FM24EM error detection signal is detected twice in succession within a specified period of time after FM24 was turned ON. At this time, 24V is normal, but an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> • Paper feed assist fan / Fr1 (FM21) • Paper feed assist fan / Rr1 (FM20) • Paper feed assist fan / Fr2 (FM23) • Paper feed assist fan / Rr2 (FM24) • Printer control board (PRCB) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-0331	Paper feed assist fan /Rr2 (FM24) rotation abnormality. The FM24EM error detection signal is detected twice in succession within a specified period of time after FM24 was turned ON. However, error detection signals (24V cut off/blowout of ICP) are not detected.		<ul style="list-style-type: none"> Paper feed assist fan / Fr1 (FM21) Paper feed assist fan / Rr1 (FM20) Paper feed assist fan / Fr2 (FM23) Paper feed assist fan / Rr2 (FM24) Printer control board (PRCB) 		
PF: fan abnormality	C-0341	1st tandem PF-702/703 paper feed assist fan /Fr1 (FM1) power abnormality. The EM error detection signal of FM1 is detected twice in succession within a specified period of time after FM1 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.	The main body and option stop immediately to turn OFF the RL1 (the main relay) .	<ul style="list-style-type: none"> Paper feed assist fan / Fr1 (FM1:PF-702/703) PF drive board (PFUDB) 		
	C-0342	1st tandem PF-702/703 paper feed assist fan /Fr1 (FM1) rotation abnormality. The EM error detection signal is detected twice in succession within a specified period of time after FM1 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> Paper feed assist fan / Fr1 (FM1:PF-702/703) PF drive board (PFUDB) 		
	C-0344	1st tandem PF-702/703 paper feed assist fan /Rr1 (FM2) power abnormality. The EM error detection signal of FM2 is detected twice in succession within a specified period of time after FM2 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.	The main body and option stop immediately to turn OFF the RL1 (the main relay).	<ul style="list-style-type: none"> Paper feed assist fan / Fr1 (FM2: PF-703) printer control board (PFUDB) 		
	C-0345	1st tandem PF-702/703 paper feed assist fan /Rr1 (FM2) rotation abnormality. The FM2EM error detection signal is detected twice in succession within a specified period of time after FM2 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> Paper feed assist fan / Fr1 (FM2: PF-703) PF drive board (PFUDB) 		
	C-0347	1st tandem PF-702/703 paper feed assist fan /Fr2 (FM3: PF-702, FM5: PF-703) power abnormality. The FM3EM and FM5EM error detection signals are detected twice in succession within a specified period of time after FM3 and FM5 were turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> Paper feed assist fan / Fr2 (FM3: PF-702) Paper feed assist fan / Fr2 (FM5: PF-703) PF drive board (PFUDB) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-0348	1st tandem PF-702/703 paper feed assist fan /Fr2 (FM3: PF-702, FM5: PF-703) rotation abnormality. The FM3EM and FM5EM error detection signals are detected twice in succession within a specified period of time after FM3 and FM5 were turned ON. However, an error detection signal (blowout of ICP) is not detected.	The main body and option stop immediately to turn OFF the RL1 (the main relay) .	<ul style="list-style-type: none"> • paper feed assist fan / Fr2 (FM3: PF-702) • paper feed assist fan / Fr2 (FM5: PF-703) • PF drive board (PFUDB) 		
	C-0350	1st tandem PF-702/703 paper feed assist fan /Rr2 (FM4: PF-702, FM6: PF-703) power abnormality. The FM4EM and FM6EM error detection signals are detected twice in succession within a specified period of time after FM4 and FM6 were turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> • paper feed assist fan / Rr2 (FM4: PF-702) • paper feed assist fan / Rr2 (FM6: PF-703) • PF drive board (PFUDB) 		
	C-0351	1st tandem PF-702/703 paper feed assist fan /Fr2 (FM4: PF-702, FM6: PF-703) rotation abnormality. The FM4EM and FM6EM error detection signals are detected twice in succession within a specified period of time after FM4 and FM6 were turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> • paper feed assist fan / Rr2 (FM4: PF-702) • paper feed assist fan / Rr2 (FM6: PF-703) • PF drive board (PFUDB) 		
	C-0353	1st tandem PF-702/703 paper feed assist fan /Fr3 (FM5: PF-702, FM9: PF-703) power abnormality. The FM5EM and FM9EM error detection signals are detected twice in succession within a specified period of time after FM5 and FM9 were turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> • paper feed assist fan / Fr3 (FM5: PF-702) • paper feed assist fan / Fr3 (FM9: PF-703) • PF drive board (PFUDB) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
PF: Fan abnormality	C-0354	1st tandem PF-702/703 paper feed assist fan /Fr3 (FM5: PF-702, FM9: PF-703) rotation abnormality. The FM5EM and FM9EM error detection signals are detected twice in succession within a specified period of time after FM5 and FM9 were turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> • paper feed assist fan / Fr3 (FM5: PF-702) • paper feed assist fan / Fr3 (FM9: PF-703) • PF drive board (PFUDB) 		
	C-0356	1st tandem PF-702/703 paper feed assist fan /Rr3 (FM6: PF-702, FM10: PF-703) power abnormality. The FM6EM and FM10EM error detection signals are detected twice in succession within a specified period of time after FM6 and FM10 were turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> • paper feed assist fan / Rr3 (FM6: PF-702) • paper feed assist fan / Rr3 (FM10: PF-703) • PF drive board (PFUDB) 		
	C-0357	1st tandem PF-702/703 paper feed assist fan /Rr3 (FM6: PF-702, FM10: PF-703) rotation abnormality. The FM6EM and FM10EM error detection signals are detected twice in succession within a specified period of time after FM6 and FM10 were turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> • paper feed assist fan / Rr3 (FM6: PF-702) • paper feed assist fan / Rr3 (FM10: PF-703) • PF drive board (PFUDB) 		
	C-0359	1st tandem PF-702/703 cooling fan power abnormality. PF-702: The FM7EM error detection signal is detected twice in succession within a specified period of time after the PF cooling fan (FM7) was turned ON. At this time, an error detection signal (blowout of ICP) is detected. PF-703: The FM19EM and FM20EM error detection signals are detected twice in succession within a specified period of time after the PF cooling fan /1 and /2 (FM19 and FM20) were turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> • PF cooling fan (FM7: PF-702) • PF cooling fan /1 (FM19: PF-703) • PF cooling fan /2 (FM20: PF-703) • PF drive board (PFUDB) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-0360	1st tandem PF-702/703 cooling fan rotation abnormality 1. PF-702: The FM20EM error detection signal is detected twice in succession within a specified period of time after the PF cooling fan (FM7) was turned ON. However, an error detection signal (blowout of ICP) is not detected. PF-703: The FM19EM and FM20EM error detection signals are detected twice in succession within a specified period of time after the PF cooling fan /1 and /2 (FM19 and FM20) were turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> PF cooling fan (FM7: PF-702) PF cooling fan /1 (FM19: PF-703) PF cooling fan /2 (FM20: PF-703) PF drive board (PFUDB: PF-702/703) 		
	C-0361	1st tandem PF-703 cooling fan rotation abnormality 2. The FM21EM error detection signal is detected twice in succession within a specified period of time after the PF cooling fan /3 (FM21) was turned ON with the front door closed. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> PF cooling fan /3 (FM21: PF-703) PF drive board (PFUDB) 		
PF: fan abnormality	C-0370	2nd tandem PF-702/703 paper feed assist fan /Fr1 (FM1) power abnormality. The EM error detection signal of FM1 is detected twice in succession within a specified period of time after FM1 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> Paper feed assist fan / Fr1 (FM1:PF-702/703) PF drive board (PFUDB) 		
	C-0371	2nd tandem PF-702/703 paper feed assist fan /Fr1 (FM1) rotation abnormality. The FM1EM error detection signal is detected twice in succession within a specified period of time after FM1 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> Paper feed assist fan / Fr1 (FM1: PF-702/703) PF drive board (PFUDB) 		
	C-0372	2nd tandem PF-702/703 paper feed assist fan /Rr1 (FM2) power abnormality. The EM error detection signal of FM2 is detected twice in succession within a specified period of time after FM2 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> Paper feed assist fan / Rr1 (FM2: PF-703) printer control board (PFUDB) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-0373	2nd tandem PF-702/703 paper feed assist fan /Rr1 (FM2) rotation abnormality. The FM2EM error detection signal is detected twice in succession within a specified period of time after FM2 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> Paper feed assist fan / Rr1 (FM2: PF-703) PF drive board (PFUDB) 		
	C-0374	2nd tandem PF-702/703 paper feed assist fan /Fr2 (FM3: PF-702, FM5: PF-703) power abnormality. The FM3EM and FM5EM error detection signals are detected twice in succession within a specified period of time after FM3 and FM5 were turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> Paper feed assist fan / Fr2 (FM3: PF-702) Paper feed assist fan / Fr2 (FM5: PF-703) PF drive board (PFUDB) 		
	C-0375	2nd tandem PF-702/703 paper feed assist fan /Fr2 (FM3: PF-702, FM5: PF-703) rotation abnormality. The FM3EM and FM5EM error detection signals are detected twice in succession within a specified period of time after FM3 and FM5 were turned ON. However, an error detection signal (blowout of ICP) is not detected.	The main body and option stop immediately to turn OFF the RL1 (the main relay) .	<ul style="list-style-type: none"> paper feed assist fan / Fr2 (FM3: PF-702) paper feed assist fan / Fr2 (FM5: PF-703) PF drive board (PFUDB) 		
	C-0376	2nd tandem PF-702/703 paper feed assist fan /Rr2 (FM4: PF-702, FM6: PF-703) power abnormality. The FM4EM and FM6EM error detection signals are detected twice in succession within a specified period of time after FM4 and FM6 were turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> paper feed assist fan / Rr2 (FM4: PF-702) paper feed assist fan / Rr2 (FM6: PF-703) PF drive board (PFUDB) 		
	C-0377	2nd tandem PF-702/703 paper feed assist fan /Rr2 (FM4: PF-702, FM6: PF-703) rotation abnormality. The FM4EM and FM6EM error detection signals are detected twice in succession within a specified period of time after FM4 and FM6 were turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> paper feed assist fan / Rr2 (FM4: PF-702) paper feed assist fan / Rr2 (FM6: PF-703) PF drive board (PFUDB) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-0378	2nd tandem PF-702/703 paper feed assist fan /Fr3 (FM5: PF-702, FM9: PF-703) power abnormality. The FM5EM and FM9EM error detection signals are detected twice in succession within a specified period of time after FM5 and FM9 were turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> • paper feed assist fan / Fr3 (FM5: PF-702) • paper feed assist fan / Fr3 (FM9: PF-703) • PF drive board (PFUDB) 		
	C-0379	2nd tandem PF-702/703 paper feed assist fan /Fr3 (FM5: PF-702, FM9: PF-703) rotation abnormality. The FM5EM and FM9EM error detection signals are detected twice in succession within a specified period of time after FM5 and FM9 were turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> • paper feed assist fan / Fr3 (FM5: PF-702) • paper feed assist fan / Fr3 (FM9: PF-703) • PF drive board (PFUDB) 		
	C-0380	2nd tandem PF-702/703 paper feed assist fan /Rr3 (FM6: PF-702, FM10: PF-703) power abnormality. The FM6EM and FM10EM error detection signals are detected twice in succession within a specified period of time after FM6 and FM10 were turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> • paper feed assist fan / Rr3 (FM6: PF-702) • paper feed assist fan / Rr3 (FM10: PF-703) • PF drive board (PFUDB) 		
	C-0381	2nd tandem PF-702/703 paper feed assist fan /Rr3 (FM6: PF-702, FM10: PF-703) rotation abnormality. The FM6EM and FM10EM error detection signals are detected twice in succession within a specified period of time after FM6 and FM10 were turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> • paper feed assist fan / Rr3 (FM6: PF-702) • paper feed assist fan / Rr3 (FM10: PF-703) • PF drive board (PFUDB) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
PF: Fan abnormality	C-0382	2nd tandem PF-702/703 cooling fan power abnormality. PF-702: The FM7EM error detection signal is detected twice in succession within a specified period of time after the PF cooling fan (FM7) was turned ON. At this time, an error detection signal (blowout of ICP) is detected. PF-703: The FM19EM and FM20EM error detection signals are detected twice in succession within a specified period of time after the PF cooling fan /1 and /2 (FM19 and FM20) were turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> PF cooling fan (FM7: PF-702) PF cooling fan /1 (FM19: PF-703) PF cooling fan /2 (FM20: PF-703) PF drive board (PFUDB) 		
	C-0383	2nd tandem PF-702/703 cooling fan rotation abnormality 1. PF-702: The FM20EM error detection signal is detected twice in succession within a specified period of time after the PF cooling fan (FM7) was turned ON. However, an error detection signal (blowout of ICP) is not detected. PF-703: The FM19EM and FM20EM error detection signals are detected twice in succession within a specified period of time after the PF cooling fan /1 and /2 (FM19 and FM20) were turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> PF cooling fan (FM7: PF-702) PF cooling fan /1 (FM19: PF-703) PF cooling fan /2 (FM20: PF-703) PF drive board (PFUDB: PF-702/703) 		
PF : fan abnormality	C-0384	2nd tandem PF-703 cooling fan rotation abnormality 2. The FM21EM error detection signal is detected twice in succession within a specified period of time after the PF cooling fan /3 (FM21) was turned ON with the front door closed. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> PF cooling fan /3 (FM21: PF-703) PF drive board (PFUDB) 		
PF: PF fan abnormality	C-0385	PI-PFU (PF-703) paper feed assist fan /Fr1 (FM1) power abnormality. The EM error detection signal of FM2 is detected twice in succession within a specified period of time after FM2 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> Paper feed assist fan / Fr1 (FM1: PF-702/703) PF drive board (PFUDB) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
PI-PFU: fan abnormality	C-0386	PI-PFU (PF-703) paper feed assist fan /Fr1 (FM1) rotation abnormality. The FM1EM error detection signal is detected twice in succession within a specified period of time after FM1 was turned ON. However, an error detection signal (blowout of ICP) is not detected.	The main body and option stop immediately to turn OFF the RL1 (the main relay).	<ul style="list-style-type: none"> Paper feed assist fan / Fr1 (FM1: PF-702/703) PF drive board (PFUDB) 		
PI-PFU: Fan abnormality	C-0387	PI-PFU (PF-703) paper feed assist fan /Rr1 (FM2) power abnormality. The EM error detection signal of FM2 is detected twice in succession within a specified period of time after FM2 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> Paper feed assist fan / Fr1 (FM2: PF-703) printer control board (PFUDB) 		
	C-0388	PI-PFU (PF-703) paper feed assist fan /Rr1 (FM2) rotation abnormality. The FM2EM error detection signal is detected twice in succession within a specified period of time after FM2 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> Paper feed assist fan / Rr1 (FM2: PF-703) PF drive board (PFUDB) 		
	C-0389	PI-PFU (PF-703) paper feed assist fan /Fr2 (FM5) power abnormality. The FM5EM error detection signal is detected twice in succession within a specified period of time after FM5 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> Paper feed assist fan / Fr2 (FM3: PF-702) Paper feed assist fan / Fr2 (FM5: PF-703) PF drive board (PFUDB) 		
PI-PFU: fan abnormality	C-0390	PI-PFU (PF-703) paper feed assist fan /Fr2 (FM5) rotation abnormality. The FM5EM error detection signal is detected twice in succession within a specified period of time after FM5 was turned ON. However, an error detection signal (blowout of ICP) is not detected.	The main body and option stop immediately to turn OFF the RL1 (the main relay) .	<ul style="list-style-type: none"> paper feed assist fan / Fr2 (FM3: PF-702) paper feed assist fan / Fr2 (FM5: PF-703) PF drive board (PFUDB) 		
	C-0391	PI-PFU (PF-703) paper feed assist fan /Rr2 (FM6) power abnormality. The FM6EM error detection signal is detected twice in succession within a specified period of time after FM6 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> paper feed assist fan / Rr2 (FM4: PF-702) paper feed assist fan / Rr2 (FM6: PF-703) PF drive board (PFUDB) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-0392	PI-PFU (PF-703) paper feed assist fan /Rr2 (FM6) rotation abnormality. The FM6EM error detection signal is detected twice in succession within a specified period of time after FM6 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> • paper feed assist fan / Rr2 (FM4: PF-702) • paper feed assist fan / Rr2 (FM6: PF-703) • PF drive board (PFUDB) 		
	C-0393	PI-PFU (PF-703) paper feed assist fan /Fr3 (FM9) power abnormality. The FM9EM error detection signal is detected twice in succession within a specified period of time after FM9 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> • paper feed assist fan / Fr3 (FM5: PF-702) • paper feed assist fan / Fr3 (FM9: PF-703) • PF drive board (PFUDB) 		
	C-0394	PI-PFU (PF-703) paper feed assist fan /Fr3 (FM9) rotation abnormality. The FM9EM error detection signal is detected twice in succession within a specified period of time after FM9 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> • paper feed assist fan / Fr3 (FM5: PF-702) • paper feed assist fan / Fr3 (FM9: PF-703) • PF drive board (PFUDB) 		
	C-0395	PI-PFU (PF-703) paper feed assist fan /Rr3 (FM10) power abnormality. The EM error detection signal of FM10 is detected twice in succession within a specified period of time after FM10 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> • paper feed assist fan / Rr3 (FM6: PF-702) • paper feed assist fan / Rr3 (FM10: PF-703) • PF drive board (PFUDB) 		
	C-0396	PI-PFU (PF-703) paper feed assist fan /Rr3 (FM10) rotation abnormality. The FM10EM error detection signal is detected twice in succession within a specified period of time after FM10 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> • paper feed assist fan / Rr3 (FM6: PF-702) • paper feed assist fan / Rr3 (FM10: PF-703) • PF drive board (PFUDB) 		
PI-PFU: Fan abnormality	C-0397	PI-PFU (PF-703) cooling fan power abnormality. The FM19EM and FM20EM error detection signals are detected twice in succession within a specified period of time after the PF cooling fan /1 and /2 (FM19 and FM20) were turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> • PF cooling fan (FM7: PF-702) • PF cooling fan /1 (FM19: PF-703) • PF cooling fan /2 (FM20: PF-703) • PF drive board (PFUDB) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-0398	PI-PFU (PF-703) cooling fan rotation abnormality 1. The FM19EM and FM20EM error detection signals are detected twice in succession within a specified period of time after the PF cooling fan /1 and /2 (FM19 and FM20) were turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> PF cooling fan (FM7: PF-702) PF cooling fan /1 (FM19: PF-703) PF cooling fan /2 (FM20: PF-703) PF drive board (PFUDB: PF-702/703) 		
PI-PFU : Fan abnormality	C-0399	PI-PFU (PF-703) cooling fan rotation abnormality 2. The FM21EM error detection signal is detected twice in succession within a specified period of time after the PF cooling fan /3 (FM21) was turned ON with the front door closed. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> PF cooling fan /3 (FM21: PF-703) PF drive board (PFUDB) 		
Main body :V power abnormality	C-0402	AC drive board (ACDB) 5V power abnormality. In the serial initial communication, a signal of the blowout of a 5VICP (AC drive) is detected.		<ul style="list-style-type: none"> AC drive board (ACDB) DC power supply /2 (DCPS/2) 		
	C-0403	12V power abnormality in the printer control board (PRCB). An error detection signal of the 12V in PFDB (blowout of ICP) is detected.		<ul style="list-style-type: none"> Printer control board (PRCB) DC power supply /2 (DCPS/2) 		
Main body: Power abnormality	C-0404	5V power abnormality in the printer control board (PRCB). An error detection signal of the 5V in PRCB (blowout of ICP) is detected.		<ul style="list-style-type: none"> Printer control board (PRCB) DC power supply /2 (DCPS/2) 		
Main body :V power abnormality	C-0410	12V power abnormality in the ADU drive board (ADUDB). An error detection signal of the ADUDB (blowout of ICP) is detected.		<ul style="list-style-type: none"> ADU drive board /1 (ADUDB1) DC power supply /2 (DCPS/2) 		
	C-0411	ADU drive board (ADUDB) power abnormality 1. An error detection signal (blowout of ICP) of the transfer paper correction sensor (PS4), transfer exposure lamp (L4) or SD is detected. At this time, an error detection signal (24V cut off) is detected.		<ul style="list-style-type: none"> ADU drive board /1 (ADUDB1) DC power supply /1 (DCPS/1) 		
	C-0412	ADU drive board (ADUDB) power abnormality 2. An error detection signal (blowout of ICP) of the transfer paper correction sensor (PS4), transfer exposure lamp (L4) or SD is detected. However, an error detection signal (24V cut off) is not detected.		<ul style="list-style-type: none"> ADU lock solenoid (SD6) Reverse/exit solenoid (SD7) De-curler solenoid /Up (SD8) De-curler solenoid /Lw (SD5) Centering sensor(PS4) ADU drive board /1 (ADUDB1) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-0413	Interlock power abnormality of the ADU drive board (ADUDB). An error signal of the 24V interlock power is detected in the door detection closed status.		<ul style="list-style-type: none"> • ADU drive board /1 (ADUDB1) • DC power supply /3 (DCPS/3) 		
PF: Power source abnormality	C-0420	Abnormality of the 12V power for the PF drive board (PFUDB) of the 1st tandem PF-702/703. An error detection signal of the PFUDB (blowout of 12V ICP) is detected.		PF drive board (PFUDB: PF-702/703)		
	C-0421	Abnormality of the 24V power for the PF drive board (PFUDB) of the 2nd tandem PF-702/703. An error detection signal of the PFUDB (blowout of 12V ICP) is detected.		PF drive board (PFUDB: PF-702/703)		
	C-0422	Abnormality of the 24V power for the PF drive board (PFUDB) of the 1st tandem PF-702/703. While in printing, an error detection signal (24V power DOWN) of the PFUDB is detected.		PF drive board (PFUDB: PF-702/703)		
	C-0423	Abnormality of the 24V power for the PF drive board (PFUDB) of the 2nd tandem PF-702/703. While in printing, an error detection signal (24V power DOWN) of the PFUDB is detected.		PF drive board (PFUDB: PF-702/703)		
PI-PFU: Power abnormality	C-0424	Abnormality of the 12V power for the PF drive board (PFUDB) of PI-PFU (PF-703). An error detection signal of the PFUDB (blowout of 12V ICP) is detected.		PF drive board (PFUDB: PF-702/703)		
	C-0425	Abnormality of the 24V power for the PF drive board (PFUDB) of PI-PFU (PF-703). While in printing, an error detection signal (24V power DOWN) of the PFUDB is detected.		PF drive board (PFUDB: PF-702/703)		
PF: Power source abnormality	C-0501	1st tandem PF-703 paper leading edge separation fan /Fr1 (FM3) power abnormality. The FM3EM error detection signal is detected twice in succession within a specified period of time after FM3 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> • Paper leading edge separation fan /Fr1 (FM3: PF-703) • PF drive board (PFUDB: PF-703) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-0502	1st tandem PF-703 paper leading edge separation fan /Fr1 (FM3) rotation abnormality. The FM3EM error detection signal is detected twice in succession within a specified period of time after FM3 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> Paper leading edge separation fan /Fr1 (FM3: PF-703) PF drive board (PFUDB: PF-703) 		
	C-0503	1st tandem PF-703 paper leading edge separation fan /Fr2 (FM7) power abnormality. The FM7EM error detection signal is detected twice in succession within a specified period of time after FM7 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> Paper leading edge separation fan /Fr2 (FM7: PF-703) PF drive board (PFUDB: PF-703) 		
	C-0504	1st tandem PF-703 paper leading edge separation fan /Fr2 (FM7) rotation abnormality. The FM7EM error detection signal is detected twice in succession within a specified period of time after FM7 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> Paper leading edge separation fan /Fr2 (FM7: PF-703) PF drive board (PFUDB: PF-703) 		
	C-0505	1st tandem PF-703 paper leading edge separation fan /Fr3 (FM11) power abnormality. The FM11EM error detection signal is detected twice in succession within a specified period of time after FM11 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> Paper leading edge separation fan /Fr3 (FM11: PF-703) PF drive board (PFUDB: PF-703) 		
	C-0506	1st tandem PF-703 paper leading edge separation fan /Fr3 (FM11) rotation abnormality. The FM11EM error detection signal is detected twice in succession within a specified period of time after FM11 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> Paper leading edge separation fan /Fr3 (FM11: PF-703) PF drive board (PFUDB: PF-703) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
PF: PF power source abnormality	C-0507	1st tandem PF-703 paper leading edge separation fan /Rr1 (FM4) power abnormality. The FM4EM error detection signal is detected twice in succession within a specified period of time after FM4 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> Paper leading edge separation fan /Rr1 (FM4: PF-703) PF drive board (PFUDB: PF-703) 		
	C-0508	1st tandem PF-703 paper leading edge separation fan /Rr1 (FM4) rotation abnormality. The FM4EM error detection signal is detected twice in succession within a specified period of time after FM4 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> Paper leading edge separation fan /Rr1 (FM4: PF-703) PF drive board (PFUDB: PF-703) 		
	C-0509	1st tandem PF-703 paper leading edge separation fan /Rr2 (FM8) power abnormality. The FM8EM error detection signal is detected twice in succession within a specified period of time after FM8 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> Paper leading edge separation fan /Rr2 (FM8: PF-703) PF drive board (PFUDB: PF-703) 		
	C-0510	1st tandem PF-703 paper leading edge separation fan /Rr2 (FM8) rotation abnormality. The FM8EM error detection signal is detected twice in succession within a specified period of time after FM8 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> Paper leading edge separation fan /Rr2 (FM8: PF-703) PF drive board (PFUDB: PF-703) 		
	C-0511	1st tandem PF-703 paper leading edge separation fan /Rr3 (FM12) power abnormality. The FM12EM error detection signal is detected twice in succession within a specified period of time after FM12 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> Paper leading edge separation fan /Rr3 (FM12: PF-703) PF drive board (PFUDB: PF-703) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-0512	1st tandem PF-703 paper leading edge separation fan /Rr3 (FM12) rotation abnormality. The FM12EM error detection signal is detected twice in succession within a specified period of time after FM12 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> Paper leading edge separation fan /Rr3 (FM12: PF-703) PF drive board (PFUDB: PF-703) 		
	C-0513	1st tandem PF-703 paper suction fan /1 (FM13) power abnormality. The FM13EM error detection signal is detected twice in succession within a specified period of time after FM13 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> paper suction fan /1 (FM13: PF-703) PF drive board (PFUDB: PF-703) 		
	C-0514	1st tandem PF-703 paper suction fan /1 (FM13) rotation abnormality. The FM13EM error detection signal is detected twice in succession within a specified period of time after FM13 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> paper suction fan /1 (FM13: PF-703) PF drive board (PFUDB: PF-703) 		
	C-0515	1st tandem PF-703 paper suction fan /3 (FM15) power abnormality. The FM15EM error detection signal is detected twice in succession within a specified period of time after FM15 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> paper suction fan /3 (FM15: PF-703) PF drive board (PFUDB: PF-703) 		
	C-0516	1st tandem PF-703 paper suction fan /3 (FM15) rotation abnormality. The FM15EM error detection signal is detected twice in succession within a specified period of time after FM15 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> paper suction fan /3 (FM15: PF-703) PF drive board (PFUDB: PF-703) 		
	C-0517	1st tandem PF-703 paper suction fan /5 (FM17) power abnormality. The FM17EM error detection signal is detected twice in succession within a specified period of time after FM17 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> Paper suction fan /5 (FM17: PF-703) PF drive board (PFUDB: PF-703) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-0518	1st tandem PF-703 paper suction fan /5 (FM17) rotation abnormality. The FM17EM error detection signal is detected twice in succession within a specified period of time after FM17 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> Paper suction fan /5 (FM17: PF-703) PF drive board (PFUDB: PF-703) 		
	C-0519	1st tandem PF-703 paper suction fan /1 (FM14) power abnormality. The EM error detection signal of FM14 is detected twice in succession within a specified period of time after FM14 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> paper suction fan /2 (FM14: PF-703) PF drive board (PFUDB: PF-703) 		
	C-0520	1st tandem PF-703 paper suction fan /1 (FM14) rotation abnormality. The FM14EM error detection signal is detected twice in succession within a specified period of time after FM14 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> paper suction fan /2 (FM14: PF-703) PF drive board (PFUDB: PF-703) 		
	C-0521	1st tandem PF-703 paper suction fan /3 (FM16) power abnormality. The FM16EM error detection of FM16 is detected twice in succession within a specified period of time after FM16 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> paper suction fan /4 (FM16: PF-703) PF drive board (PFUDB: PF-703) 		
	C-0522	1st tandem PF-703 paper suction fan /3 (FM16) rotation abnormality. The FM16EM error detection signal is detected twice in succession within a specified period of time after FM16 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> paper suction fan /4 (FM16: PF-703) PF drive board (PFUDB: PF-703) 		
	C-0523	1st tandem PF-703 paper suction fan /5 (FM18) power abnormality. The FM18EM error detection signal is detected twice in succession within a specified period of time after FM18 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> paper suction fan /6 (FM18: PF-703) PF drive board (PFUDB: PF-703) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
PF: Power source abnormality	C-0524	1st tandem PF-703 paper suction fan /5 (FM18) rotation abnormality. The FM18EM error detection signal is detected twice in succession within a specified period of time after FM18 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> • paper suction fan /6 (FM18: PF-703) • PF drive board (PFUDB: PF-703) 		
	C-0525	2nd tandem PF-703 paper leading edge separation fan /Fr1 (FM3) power abnormality. The FM3EM error detection signal is detected twice in succession within a specified period of time after FM3 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> • Paper leading edge separation fan /Fr1 (FM3: PF-703) • PF drive board (PFUDB: PF-703) 		
	C-0526	2nd tandem PF-703 paper leading edge separation fan /Fr1 (FM3) rotation abnormality. The FM3EM error detection signal is detected twice in succession within a specified period of time after FM3 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> • Paper leading edge separation fan /Fr1 (FM3: PF-703) • PF drive board (PFUDB: PF-703) 		
	C-0527	2nd tandem PF-703 paper leading edge separation fan /Fr2 (FM7) power abnormality. The FM7EM error detection signal is detected twice in succession within a specified period of time after FM7 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> • Paper leading edge separation fan /Fr2 (FM7: PF-703) • PF drive board (PFUDB: PF-703) 		
	C-0528	2nd tandem PF-703 paper leading edge separation fan /Fr2 (FM7) rotation abnormality. The FM7EM error detection signal is detected twice in succession within a specified period of time after FM7 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> • Paper leading edge separation fan /Fr2 (FM7: PF-703) • PF drive board (PFUDB: PF-703) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-0529	2nd tandem PF-703 paper leading edge separation fan /Fr3 (FM11) power abnormality. The FM11EM error detection signal is detected twice in succession within a specified period of time after FM11 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> Paper leading edge separation fan /Fr3 (FM11: PF-703) PF drive board (PFUDB: PF-703) 		
	C-0530	2nd tandem PF-703 paper leading edge separation fan /Fr3 (FM11) rotation abnormality. The FM11EM error detection signal is detected twice in succession within a specified period of time after FM11 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> Paper leading edge separation fan /Fr3 (FM11: PF-703) PF drive board (PFUDB: PF-703) 		
	C-0531	2nd tandem PF-703 paper leading edge separation fan /Rr1 (FM4) power abnormality. The FM4EM error detection signal is detected twice in succession within a specified period of time after FM4 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> Paper leading edge separation fan /Rr1 (FM4: PF-703) PF drive board (PFUDB: PF-703) 		
	C-0532	2nd tandem PF-703 paper leading edge separation fan /Rr1 (FM4) rotation abnormality. The FM4EM error detection signal is detected twice in succession within a specified period of time after FM4 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> Paper leading edge separation fan /Rr1 (FM4: PF-703) PF drive board (PFUDB: PF-703) 		
PF: PF power source abnormality	C-0533	2nd tandem PF-703 paper leading edge separation fan /Rr2 (FM8) power abnormality. The FM8EM error detection signal is detected twice in succession within a specified period of time after FM8 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> Paper leading edge separation fan /Rr2 (FM8: PF-703) PF drive board (PFUDB: PF-703) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-0534	2nd tandem PF-703 paper leading edge separation fan /Rr2 (FM8) rotation abnormality. The FM8EM error detection signal is detected twice in succession within a specified period of time after FM8 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> Paper leading edge separation fan /Rr2 (FM8: PF-703) PF drive board (PFUDB: PF-703) 		
	C-0535	2nd tandem PF-703 paper leading edge separation fan /Rr3 (FM12) power abnormality. The FM12EM error detection signal is detected twice in succession within a specified period of time after FM12 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> Paper leading edge separation fan /Rr3 (FM12: PF-703) PF drive board (PFUDB: PF-703) 		
	C-0536	2nd tandem PF-703 paper leading edge separation fan /Rr3 (FM12) rotation abnormality. The FM12EM error detection signal is detected twice in succession within a specified period of time after FM12 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> Paper leading edge separation fan /Rr3 (FM12: PF-703) PF drive board (PFUDB: PF-703) 		
	C-0537	2nd tandem PF-703 paper suction fan /1 (FM13) power abnormality. The FM13EM error detection signal is detected twice in succession within a specified period of time after FM13 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> paper suction fan /1 (FM13: PF-703) PF drive board (PFUDB: PF-703) 		
	C-0538	2nd tandem PF-703 paper suction fan /1 (FM13) rotation abnormality. The FM13EM error detection signal is detected twice in succession within a specified period of time after FM13 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> paper suction fan /1 (FM13: PF-703) PF drive board (PFUDB: PF-703) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-0539	2nd tandem PF-703 paper suction fan /3 (FM15) power abnormality. The FM15EM error detection signal is detected twice in succession within a specified period of time after FM15 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> • paper suction fan /3 (FM15: PF-703) • PF drive board (PFUDB: PF-703) 		
	C-0540	2nd tandem PF-703 paper suction fan /3 (FM15) rotation abnormality. The FM15EM error detection signal is detected twice in succession within a specified period of time after FM15 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> • paper suction fan /3 (FM15: PF-703) • PF drive board (PFUDB: PF-703) 		
	C-0541	2nd tandem PF-703 paper suction fan /5 (FM17) power abnormality. The FM17EM error detection signal is detected twice in succession within a specified period of time after FM17 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> • Paper suction fan /5 (FM17: PF-703) • PF drive board (PFUDB: PF-703) 		
	C-0542	2nd tandem PF-703 paper suction fan /5 (FM17) rotation abnormality. The FM17EM error detection signal is detected twice in succession within a specified period of time after FM17 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> • Paper suction fan /5 (FM17: PF-703) • PF drive board (PFUDB: PF-703) 		
	C-0543	2nd tandem PF-703 paper suction fan /1 (FM14) power abnormality. The FM14EM error detection signal is detected twice in succession within a specified period of time after FM14 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> • paper suction fan /2 (FM14: PF-703) • PF drive board (PFUDB: PF-703) 		
	C-0544	2nd tandem PF-703 paper suction fan /1 (FM14) rotation abnormality. The FM14EM error detection signal is detected twice in succession within a specified period of time after FM14 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> • paper suction fan /2 (FM14: PF-703) • PF drive board (PFUDB: PF-703) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-0545	2nd tandem PF-703 paper suction fan /3 (FM16) power abnormality. The FM16EM error detection of FM16 is detected twice in succession within a specified period of time after FM16 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> • paper suction fan /4 (FM16: PF-703) • PF drive board (PFUDB: PF-703) 		
	C-0546	2nd tandem PF-703 paper suction fan /3 (FM16) rotation abnormality. The FM16EM error detection signal is detected twice in succession within a specified period of time after FM16 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> • paper suction fan /4 (FM16: PF-703) • PF drive board (PFUDB: PF-703) 		
	C-0547	2nd tandem PF-703 paper suction fan /5 (FM18) power abnormality. The FM18EM error detection signal is detected twice in succession within a specified period of time after FM18 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> • paper suction fan /6 (FM18: PF-703) • PF drive board (PFUDB: PF-703) 		
	C-0548	2nd tandem PF-703 paper suction fan /5 (FM18) rotation abnormality. The FM18EM error detection signal is detected twice in succession within a specified period of time after FM18 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> • paper suction fan /6 (FM18: PF-703) • PF drive board (PFUDB: PF-703) 		
PF: Power source abnormality	C-0561	PI-PFU (PF-703) paper leading edge separation fan /Fr1 (FM3) power abnormality. The FM3EM error detection signal is detected twice in succession within a specified period of time after FM3 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> • Paper leading edge separation fan /Fr1 (FM3: PF-703) • PF drive board (PFUDB: PF-703) 		
	C-0562	PI-PFU (PF-703) paper leading edge separation fan /Fr1 (FM3) rotation abnormality. The FM3EM error detection signal is detected twice in succession within a specified period of time after FM3 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> • Paper leading edge separation fan /Fr1 (FM3: PF-703) • PF drive board (PFUDB: PF-703) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-0563	PI-PFU (PF-703) paper leading edge separation fan /Fr2 (FM7) power abnormality. The FM7EM error detection signal is detected twice in succession within a specified period of time after FM7 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> Paper leading edge separation fan /Fr2 (FM7: PF-703) PF drive board (PFUDB: PF-703) 		
	C-0564	PI-PFU (PF-703) paper leading edge separation fan /Fr2 (FM7) rotation abnormality. The FM7EM error detection signal is detected twice in succession within a specified period of time after FM7 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> Paper leading edge separation fan /Fr2 (FM7: PF-703) PF drive board (PFUDB: PF-703) 		
	C-0565	PI-PFU (PF-703) paper leading edge separation fan /Fr3 (FM11) power abnormality. The FM11EM error detection signal is detected twice in succession within a specified period of time after FM11 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> Paper leading edge separation fan /Fr3 (FM11: PF-703) PF drive board (PFUDB: PF-703) 		
	C-0566	PI-PFU (PF-703) paper leading edge separation fan /Fr3 (FM11) rotation abnormality. The FM11EM error detection signal is detected twice in succession within a specified period of time after FM11 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> Paper leading edge separation fan /Fr3 (FM11: PF-703) PF drive board (PFUDB: PF-703) 		
	C-0567	PI-PFU (PF-703) paper leading edge separation fan /Rr1 (FM4) power abnormality. The FM4EM error detection signal is detected twice in succession within a specified period of time after FM4 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> Paper leading edge separation fan /Rr1 (FM4: PF-703) PF drive board (PFUDB: PF-703) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-0568	PI-PFU (PF-703) paper leading edge separation fan /Rr1 (FM4) rotation abnormality. The FM4EM error detection signal is detected twice in succession within a specified period of time after FM4 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> Paper leading edge separation fan /Rr1 (FM4: PF-703) PF drive board (PFUDB: PF-703) 		
PF: PF power source abnormality	C-0569	PI-PFU (PF-703) paper leading edge separation fan /Rr2 (FM8) power abnormality. The FM8EM error detection signal is detected twice in succession within a specified period of time after FM8 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> Paper leading edge separation fan /Rr2 (FM8: PF-703) PF drive board (PFUDB: PF-703) 		
	C-0570	PI-PFU (PF-703) paper leading edge separation fan /Rr2 (FM8) rotation abnormality. The FM8EM error detection signal is detected twice in succession within a specified period of time after FM8 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> Paper leading edge separation fan /Rr2 (FM8: PF-703) PF drive board (PFUDB: PF-703) 		
	C-0571	PI-PFU (PF-703) paper leading edge separation fan /Rr3 (FM12) power abnormality. The FM12EM error detection signal is detected twice in succession within a specified period of time after FM12 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> Paper leading edge separation fan /Rr3 (FM12: PF-703) PF drive board (PFUDB: PF-703) 		
	C-0572	PI-PFU (PF-703) paper leading edge separation fan /Rr3 (FM12) rotation abnormality. The FM12EM error detection signal is detected twice in succession within a specified period of time after FM12 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> Paper leading edge separation fan /Rr3 (FM12: PF-703) PF drive board (PFUDB: PF-703) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-0573	PI-PFU (PF-703) paper suction fan /1 (FM13) power abnormality. The FM13EM error detection signal is detected twice in succession within a specified period of time after FM13 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> • paper suction fan /1 (FM13: PF-703) • PF drive board (PFUDB: PF-703) 		
	C-0574	PI-PFU (PF-703) paper suction fan /1 (FM13) rotation abnormality. The FM13EM error detection signal is detected twice in succession within a specified period of time after FM13 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> • paper suction fan /1 (FM13: PF-703) • PF drive board (PFUDB: PF-703) 		
	C-0575	PI-PFU (PF-703) paper suction fan /3 (FM15) power abnormality. The FM15EM error detection signal is detected twice in succession within a specified period of time after FM15 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> • paper suction fan /3 (FM15: PF-703) • PF drive board (PFUDB: PF-703) 		
	C-0576	PI-PFU (PF-703) paper suction fan /3 (FM15) rotation abnormality. The FM15EM error detection signal is detected twice in succession within a specified period of time after FM15 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> • paper suction fan /3 (FM15: PF-703) • PF drive board (PFUDB: PF-703) 		
	C-0577	PI-PFU (PF-703) paper suction fan /5 (FM17) power abnormality. The FM17EM error detection signal is detected twice in succession within a specified period of time after FM17 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> • Paper suction fan /5 (FM17: PF-703) • PF drive board (PFUDB: PF-703) 		
	C-0578	PI-PFU (PF-703) paper suction fan /5 (FM17) rotation abnormality. The FM17EM error detection signal is detected twice in succession within a specified period of time after FM17 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> • Paper suction fan /5 (FM17: PF-703) • PF drive board (PFUDB: PF-703) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-0579	PI-PFU (PF-703) paper suction fan /1 (FM14) power abnormality. The FM14EM error detection signal is detected twice in succession within a specified period of time after FM14 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> paper suction fan /2 (FM14: PF-703) PF drive board (PFUDB: PF-703) 		
	C-0580	PI-PFU (PF-703) paper suction fan /1 (FM14) rotation abnormality. The FM14EM error detection signal is detected twice in succession within a specified period of time after FM14 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> paper suction fan /2 (FM14: PF-703) PF drive board (PFUDB: PF-703) 		
	C-0581	PI-PFU (PF-703) paper suction fan /3 (FM16) power abnormality. The FM16EM error detection of FM16 is detected twice in succession within a specified period of time after FM16 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> paper suction fan /4 (FM16: PF-703) PF drive board (PFUDB: PF-703) 		
	C-0582	PI-PFU (PF-703) paper suction fan /3 (FM16) rotation abnormality. The FM16EM error detection signal is detected twice in succession within a specified period of time after FM16 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> paper suction fan /4 (FM16: PF-703) PF drive board (PFUDB: PF-703) 		
	C-0583	PI-PFU (PF-703) paper suction fan /5 (FM18) power abnormality. The FM18EM error detection signal is detected twice in succession within a specified period of time after FM18 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> paper suction fan /6 (FM18: PF-703) PF drive board (PFUDB: PF-703) 		
	C-0584	PI-PFU (PF-703) paper suction fan /5 (FM18) rotation abnormality. The FM18EM error detection signal is detected twice in succession within a specified period of time after FM18 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> paper suction fan /6 (FM18: PF-703) PF drive board (PFUDB: PF-703) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-0601	1st tandem PF-703 dehumidifier fan /Rt1 (FM22) rotation abnormality. The FM22EM error detection signal is detected twice in succession within a specified period of time after FM22 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> Dehumidifier fan /Rt1 (FM22: HT-505) PF drive board (PFUDB: PF-703) 		
	C-0602	PI-PFU (PF-703) dehumidifier fan /Lt1 (FM23) rotation abnormality. The FM23EM error detection signal is detected twice in succession within a specified period of time after FM23 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> Dehumidifier fan /Lt1 (FM23: HT-505) PF drive board (PFUDB: PF-703) 		
	C-0603	1st tandem PF-703 dehumidifier fan /Rt2 (FM24) rotation abnormality. The FM24EM error detection signal is detected twice in succession within a specified period of time after FM24 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> Dehumidifier fan /Rt2 (FM24: HT-505) PF drive board (PFUDB: PF-703) 		
	C-0604	1st tandem PF-703 dehumidifier fan /Lt2 (FM25) rotation abnormality. The FM25EM error detection signal is detected twice in succession within a specified period of time after FM25 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> Dehumidifier fan /Lt2 (FM25: HT-505) PF drive board (PFUDB: PF-703) 		
	C-0605	1st tandem PF-703 dehumidifier fan /Rt3 (FM26) rotation abnormality. The FM26EM error detection signal is detected twice in succession within a specified period of time after FM26 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> Dehumidifier fan /Rt3 (FM26: HT-505) PF drive board (PFUDB: PF-703) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-0606	1st tandem PF-703 dehumidifier fan /Lt3 (FM27) rotation abnormality. The FM27EM error detection signal is detected twice in succession within a specified period of time after FM27 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> Dehumidifier fan /Lt3 (FM27: HT-505) PF drive board (PFUDB: PF-703) 		
	C-0611	2nd tandem PF-703 dehumidifier fan /Rt1 (FM22) rotation abnormality. The FM22EM error detection signal is detected twice in succession within a specified period of time after FM22 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> Dehumidifier fan /Rt1 (FM22: HT-505) PF drive board (PFUDB: PF-703) 		
	C-0612	2nd tandem PF-703 dehumidifier fan /Lt1 (FM23) rotation abnormality. The FM23EM error detection signal is detected twice in succession within a specified period of time after FM23 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> Dehumidifier fan /Lt1 (FM23: HT-505) PF drive board (PFUDB: PF-703) 		
	C-0613	2nd tandem PF-703 dehumidifier fan /Rt2 (FM24) rotation abnormality. The FM24EM error detection signal is detected twice in succession within a specified period of time after FM24 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> Dehumidifier fan /Rt2 (FM24: HT-505) PF drive board (PFUDB: PF-703) 		
	C-0614	2nd tandem PF-703 dehumidifier fan /Lt2 (FM25) rotation abnormality. The FM25EM error detection signal is detected twice in succession within a specified period of time after FM25 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> Dehumidifier fan /Lt2 (FM25: HT-505) PF drive board (PFUDB: PF-703) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-0615	2nd tandem PF-703 dehumidifier fan /Rt3 (FM26) rotation abnormality. The FM26EM error detection signal is detected twice in succession within a specified period of time after FM26 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> Dehumidifier fan /Rt3 (FM26: HT-505) PF drive board (PFUDB: PF-703) 		
	C-0616	2nd tandem PF-703 dehumidifier fan /Lt3 (FM27) rotation abnormality. The FM27EM error detection signal is detected twice in succession within a specified period of time after FM27 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> Dehumidifier fan /Lt3 (FM27: HT-505) PF drive board (PFUDB: PF-703) 		
	C-0621	PI-PFU (PF-703) dehumidifier fan /Rt1 (FM22) rotation abnormality. The FM22EM error detection signal is detected twice in succession within a specified period of time after FM22 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> Dehumidifier fan /Rt1 (FM22: HT-505) PF drive board (PFUDB: PF-703) 		
	C-0622	PI-PFU (PF-703) dehumidifier fan /Lt1 (FM23) rotation abnormality. The FM23EM error detection signal is detected twice in succession within a specified period of time after FM23 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> Dehumidifier fan /Lt1 (FM23: HT-505) PF drive board (PFUDB: PF-703) 		
	C-0623	PI-PFU (PF-703) dehumidifier fan /Rt2 (FM24) rotation abnormality. The FM24EM error detection signal is detected twice in succession within a specified period of time after FM24 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> Dehumidifier fan /Rt2 (FM24: HT-505) PF drive board (PFUDB: PF-703) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-0624	PI-PFU (PF-703) dehumidifier fan /Lt2 (FM25) rotation abnormality. The FM25EM error detection signal is detected twice in succession within a specified period of time after FM25 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> Dehumidifier fan /Lt2 (FM25: HT-505) PF drive board (PFUDB: PF-703) 		
	C-0625	PI-PFU (PF-703) dehumidifier fan /Rt3 (FM26) rotation abnormality. The FM26EM error detection signal is detected twice in succession within a specified period of time after FM26 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> Dehumidifier fan /Rt3 (FM26: HT-505) PF drive board (PFUDB: PF-703) 		
	C-0626	PI-PFU (PF-703) dehumidifier fan /Lt3 (FM27) rotation abnormality. The FM27EM error detection signal is detected twice in succession within a specified period of time after FM27 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> Dehumidifier fan /Lt3 (FM27: HT-505) PF drive board (PFUDB: PF-703) 		
PF: Heater high temperature abnormality	C-0631	1st tandem PF-703 dehumidification heater /1 (HTR1) high temperature hardware abnormality. After turned ON, the temperature sensor /5 (TEMS/5) detects a heater abnormality signal.		<ul style="list-style-type: none"> Upper tray fan heater (HT-505) AC drive board /2 (ACDB/2: HT-505) PF drive board (PFUDB: PF-703) 		
	C-0632	1st tandem PF-703 dehumidification heater /2 (HTR2) high temperature hardware abnormality. After turned ON, the temperature sensor /6 (TEMS/6) detects a heater abnormality signal.		<ul style="list-style-type: none"> Middle tray fan heater (HT-505) AC drive board /2 (ACDB/2: HT-505) PF drive board (PFUDB: PF-703) 		
	C-0633	1st tandem PF-703 dehumidification heater /3 (HTR3) high temperature hardware abnormality. After turned ON, the temperature sensor /7 (TEMS/7) detects a heater abnormality signal.		<ul style="list-style-type: none"> Lower tray fan heater (HT-505) AC drive board /2 (ACDB/2: HT-505) PF drive board (PFUDB: PF-703) 		
	C-0634	1st tandem PF-703 dehumidification heater /1 (HTR1) high temperature hardware abnormality. After turned ON, the temperature sensor /5 (TEMS/5) detects the heater temperature exceeding 105°C.		<ul style="list-style-type: none"> Upper tray fan heater (HT-505) AC drive board /2 (ACDB/2: HT-505) PF drive board (PFUDB: PF-703) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
PF: Heater low temperature abnormality	C-0635	1st tandem PF-703 dehumidification heater /2 (HTR2) high temperature software abnormality. After turned ON, the temperature sensor /6 (TEMS/6) detects the heater temperature exceeding 105°C.		<ul style="list-style-type: none"> • Middle tray fan heater (HT-505) • AC drive board /2 (ACDB/2: HT-505) • PF drive board (PFUDB: PF-703) 		
	C-0636	1st tandem PF-703 dehumidification heater /3 (HTR3) high temperature software abnormality. After turned ON, the temperature sensor /7 (TEMS/7) detects the heater temperature exceeding 105°C.		<ul style="list-style-type: none"> • Lower tray fan heater (HT-505) • AC drive board /2 (ACDB/2: HT-505) • PF drive board (PFUDB: PF-703) 		
	C-0637	1st tandem PF-703 dehumidification heater /1 (HTR1) high temperature hardware abnormality. The temperature sensor /5 (TEMS/5) detects the heater temperature lower than 0°C a specified period of time after the heater is turned ON.		<ul style="list-style-type: none"> • Upper tray fan heater (HT-505) • AC drive board /2 (ACDB/2: HT-505) • PF drive board (PFUDB: PF-703) 		
	C-0638	1st tandem PF-703 dehumidification heater /2 (HTR2) low temperature software abnormality. The temperature sensor /6 (TEMS/6) detects the heater temperature lower than 0°C a specified period of time after the heater is turned ON.		<ul style="list-style-type: none"> • Middle tray fan heater (HT-505) • AC drive board /2 (ACDB/2: HT-505) • PF drive board (PFUDB: PF-703) 		
PF: Heater temperature rise abnormality	C-0639	1st tandem PF-703 dehumidification heater /3 (HTR3) low temperature software abnormality. The temperature sensor /7 (TEMS/7) detects the heater temperature lower than 0°C a specified period of time after the heater is turned ON.		<ul style="list-style-type: none"> • Lower tray fan heater (HT-505) • AC drive board /2 (ACDB/2: HT-505) • PF drive board (PFUDB: PF-703) 		
	C-0640	1st tandem PF-703 dehumidification heater /1 (HTR1) temperature rise abnormality. The temperature sensor /5 (TEMS/5) detects the heater temperature lower than 40°C a specified period of time after the heater is turned ON.		<ul style="list-style-type: none"> • Upper tray fan heater (HT-505) • AC drive board /2 (ACDB/2: HT-505) • PF drive board (PFUDB: PF-703) 		
	C-0641	1st tandem PF-703 dehumidification heater /2 (HTR2) temperature rise abnormality. The temperature sensor /6 (TEMS/6) detects the heater temperature lower than 40°C a specified period of time after the heater is turned ON.		<ul style="list-style-type: none"> • Middle tray fan heater (HT-505) • AC drive board /2 (ACDB/2: HT-505) • PF drive board (PFUDB: PF-703) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
PF: Heater high temperature abnormality	C-0642	1st tandem PF-703 dehumidification heater /3 (HTR3) temperature rise abnormality. The temperature sensor /7 (TEMS/7) detects the heater temperature lower than 40°C a specified period of time after the heater is turned ON.		<ul style="list-style-type: none"> Lower tray fan heater (HT-505) AC drive board /2 (ACDB/2: HT-505) PF drive board (PFUDB: PF-703) 		
	C-0651	2nd tandem PF-703 dehumidification heater /1 (HTR1) high temperature hardware abnormality. After turned ON, the temperature sensor /5 (TEMS/5) detects a heater abnormality signal.		<ul style="list-style-type: none"> Upper tray fan heater (HT-505) AC drive board /2 (ACDB/2: HT-505) PF drive board (PFUDB: PF-703) 		
	C-0652	2nd tandem PF-703 dehumidification heater /2 (HTR2) high temperature hardware abnormality. After turned ON, the temperature sensor /6 (TEMS/6) detects a heater abnormality signal.		<ul style="list-style-type: none"> Middle tray fan heater (HT-505) AC drive board /2 (ACDB/2: HT-505) PF drive board (PFUDB: PF-703) 		
	C-0653	2nd tandem PF-703 dehumidification heater /3 (HTR3) high temperature hardware abnormality. After turned ON, the temperature sensor /7 (TEMS/7) detects a heater abnormality signal.		<ul style="list-style-type: none"> Lower tray fan heater (HT-505) AC drive board /2 (ACDB/2: HT-505) PF drive board (PFUDB: PF-703) 		
	C-0654	2nd tandem PF-703 dehumidification heater /1 (HTR1) high temperature hardware abnormality. After turned ON, the temperature sensor /5 (TEMS/5) detects the heater temperature exceeding 105°C.		<ul style="list-style-type: none"> Upper tray fan heater (HT-505) AC drive board /2 (ACDB/2: HT-505) PF drive board (PFUDB: PF-703) 		
	C-0655	2nd tandem PF-703 dehumidification heater /2 (HTR2) high temperature software abnormality. After turned ON, the temperature sensor /6 (TEMS/6) detects the heater temperature exceeding 105°C.		<ul style="list-style-type: none"> Middle tray fan heater (HT-505) AC drive board /2 (ACDB/2: HT-505) PF drive board (PFUDB: PF-703) 		
	C-0656	2nd tandem PF-703 dehumidification heater /3 (HTR3) high temperature software abnormality. After turned ON, the temperature sensor /7 (TEMS/7) detects the heater temperature exceeding 105°C.		<ul style="list-style-type: none"> Lower tray fan heater (HT-505) AC drive board /2 (ACDB/2: HT-505) PF drive board (PFUDB: PF-703) 		
PF: Heater low temperature abnormality	C-0657	2nd tandem PF-703 dehumidification heater /1 (HTR1) low temperature hardware abnormality. The temperature sensor /5 (TEMS/5) detects the heater temperature lower than 0°C a specified period of time after the heater is turned ON.		<ul style="list-style-type: none"> Upper tray fan heater (HT-505) AC drive board /2 (ACDB/2: HT-505) PF drive board (PFUDB: PF-703) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-0658	2nd tandem PF-703 dehumidification heater /2 (HTR2) low temperature software abnormality. The temperature sensor /6 (TEMS/6) detects the heater temperature lower than 0°C a specified period of time after the heater is turned ON.		<ul style="list-style-type: none"> • Middle tray fan heater (HT-505) • AC drive board /2 (ACDB/2: HT-505) • PF drive board (PFUDB: PF-703) 		
	C-0659	2nd tandem PF-703 dehumidification heater /3 (HTR3) low temperature software abnormality. The temperature sensor /7 (TEMS/7) detects the heater temperature lower than 0°C a specified period of time after the heater is turned ON.		<ul style="list-style-type: none"> • Lower tray fan heater (HT-505) • AC drive board /2 (ACDB/2: HT-505) • PF drive board (PFUDB: PF-703) 		
PF: Heater temperature rise abnormality	C-0660	2nd tandem PF-703 dehumidification heater /1 (HTR1) temperature rise abnormality. The temperature sensor /5 (TEMS/5) detects the heater temperature lower than 40°C a specified period of time after the heater is turned ON.		<ul style="list-style-type: none"> • Upper tray fan heater (HT-505) • AC drive board /2 (ACDB/2: HT-505) • PF drive board (PFUDB: PF-703) 		
	C-0661	2nd tandem PF-703 dehumidification heater /2 (HTR2) temperature rise abnormality. The temperature sensor /6 (TEMS/6) detects the heater temperature lower than 40°C a specified period of time after the heater is turned ON.		<ul style="list-style-type: none"> • Middle tray fan heater (HT-505) • AC drive board /2 (ACDB/2: HT-505) • PF drive board (PFUDB: PF-703) 		
	C-0662	2nd tandem PF-703 dehumidification heater /3 (HTR3) temperature rise abnormality. The temperature sensor /7 (TEMS/7) detects the heater temperature lower than 40°C a specified period of time after the heater is turned ON.		<ul style="list-style-type: none"> • Lower tray fan heater (HT-505) • AC drive board /2 (ACDB/2: HT-505) • PF drive board (PFUDB: PF-703) 		
PF: Heater high temperature abnormality	C-0671	PI-PFU (PF-703) dehumidification heater /1 (HTR) high temperature hardware abnormality. After turned ON, the temperature sensor /5 (TEMS/5) detects a heater abnormality signal.		<ul style="list-style-type: none"> • Upper tray fan heater (HT-505) • AC drive board /2 (ACDB/2: HT-505) • PF drive board (PFUDB: PF-703) 		
	C-0672	PI-PFU (PF-703) dehumidification heater /2 (HTR2) high temperature hardware abnormality. After turned ON, the temperature sensor /6 (TEMS/6) detects a heater abnormality signal.		<ul style="list-style-type: none"> • Middle tray fan heater (HT-505) • AC drive board /2 (ACDB/2: HT-505) • PF drive board (PFUDB: PF-703) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-0673	PI-PFU (PF-703) dehumidification heater /3 (HTR3) high temperature hardware abnormality. After turned ON, the temperature sensor /7 (TEMS/7) detects a heater abnormality signal.		<ul style="list-style-type: none"> Lower tray fan heater (HT-505) AC drive board /2 (ACDB/2: HT-505) PF drive board (PFUDB: PF-703) 		
	C-0674	PI-PFU (PF-703) dehumidification heater /1 (HTR) high temperature software abnormality. After turned ON, the temperature sensor /5 (TEMS/5) detects the heater temperature exceeding 105°C.		<ul style="list-style-type: none"> Upper tray fan heater (HT-505) AC drive board /2 (ACDB/2: HT-505) PF drive board (PFUDB: PF-703) 		
	C-0675	PI-PFU (PF-703) dehumidification heater /2 (HTR2) high temperature software abnormality. After turned ON, the temperature sensor /6 (TEMS/6) detects the heater temperature exceeding 105°C.		<ul style="list-style-type: none"> Middle tray fan heater (HT-505) AC drive board /2 (ACDB/2: HT-505) PF drive board (PFUDB: PF-703) 		
	C-0676	PI-PFU (PF-703) dehumidification heater /3 (HTR3) high temperature software abnormality. After turned ON, the temperature sensor /7 (TEMS/7) detects the heater temperature exceeding 105°C.		<ul style="list-style-type: none"> Lower tray fan heater (HT-505) AC drive board /2 (ACDB/2: HT-505) PF drive board (PFUDB: PF-703) 		
PF: Heater low temperature abnormality	C-0677	PI-PFU (PF-703) dehumidification heater /1 (HTR1) low temperature software abnormality. The temperature sensor /5 (TEMS/5) detects the heater temperature lower than 0°C a specified period of time after the heater is turned ON.		<ul style="list-style-type: none"> Upper tray fan heater (HT-505) AC drive board /2 (ACDB/2: HT-505) PF drive board (PFUDB: PF-703) 		
	C-0678	PI-PFU (PF-703) dehumidification heater /2 (HTR2) low temperature software abnormality. The temperature sensor /6 (TEMS/6) detects the heater temperature lower than 0°C a specified period of time after the heater is turned ON.		<ul style="list-style-type: none"> Middle tray fan heater (HT-505) AC drive board /2 (ACDB/2: HT-505) PF drive board (PFUDB: PF-703) 		
	C-0679	PI-PFU (PF-703) dehumidification heater /3 (HTR3) low temperature software abnormality. The temperature sensor /7 (TEMS/7) detects the heater temperature lower than 0°C a specified period of time after the heater is turned ON.		<ul style="list-style-type: none"> Lower tray fan heater (HT-505) AC drive board /2 (ACDB/2: HT-505) PF drive board (PFUDB: PF-703) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
PF: Heater temperature rise abnormality	C-0680	PI-PFU (PF-703) dehumidification heater /1 (HTR1) temperature rise abnormality. The temperature sensor /5 (TEMS/5) detects the heater temperature lower than 40°C a specified period of time after the heater is turned ON.		<ul style="list-style-type: none"> Upper tray fan heater (HT-505) AC drive board /2 (ACDB/2: HT-505) PF drive board (PFUDB: PF-703) 		
	C-0681	PI-PFU (PF-703) dehumidification heater /2 (HTR2) temperature rise abnormality. The temperature sensor /6 (TEMS/6) detects the heater temperature lower than 40°C a specified period of time after the heater is turned ON.		<ul style="list-style-type: none"> Middle tray fan heater (HT-505) AC drive board /2 (ACDB/2: HT-505) PF drive board (PFUDB: PF-703) 		
	C-0682	PI-PFU (PF-703) dehumidification heater /3 (HTR3) temperature rise abnormality. The temperature sensor /7 (TEMS/7) detects the heater temperature lower than 40°C a specified period of time after the heater is turned ON.		<ul style="list-style-type: none"> Lower tray fan heater (HT-505) AC drive board /2 (ACDB/2: HT-505) PF drive board (PFUDB: PF-703) 		
Finishing: Communication error	C-1001	Serial communication error between the main body and the finishing option.				
FS: FS abnormality	C-1005	Communication error.	The main body and the FS stop immediately to turn OFF the main relay (RL1).	<ul style="list-style-type: none"> Printer control board (PRCB) FNS control board (FNSCB) 		
FD: FD abnormality	C-1006	Communication error.	The main body and the FD stop immediately to turn OFF the main relay (RL1).	<ul style="list-style-type: none"> Printer control board (PRCB) FD control board (FDCB) 		
SD: SD-506 abnormality	C-1007	Communication error.	The main body and the SD stop immediately to turn OFF the main relay (RL1).	<ul style="list-style-type: none"> Printer control board (PRCB) SD control board (SDCB) 		
RU: RU-506 abnormality	C-1008	Communication error between the main body and RU.	The main body and the RU stop immediately to turn OFF the main relay (RL1).	<ul style="list-style-type: none"> Printer control board (PRCB) RU control board (RUCB) 		
PB: PB abnormality	C-1009	Communication error between Main CPU in the PB control board (PBCB) and Sub CPU1.	The main body and the PB stop immediately to turn OFF the main relay (RL1).	<ul style="list-style-type: none"> PB control board (PBCB) Control program 		
	C-1010	Communication error between Main CPU in the PB control board (PBCB) and Sub CPU2.		<ul style="list-style-type: none"> PB control board (PBCB) Control program 		
PB control board (PBCB)	C-1011	Paper feed error between the main body and PB.		<ul style="list-style-type: none"> PB control board (PBCB) Control program 		
GP: Communication error	C-1012*	Communication error between the main body and GP.	The main body and the GP stop immediately to			

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
			turn OFF the main relay (RL1).			
FS: FS-521 abnormality	C-1102 (FS-521)	The tray up down motor (M3) does not turn OFF even when a specified period of time elapses after it starts operations. Or, it operates for more than the allowed time at a speed out of the specified one.	The main body and the FS stop immediately to turn OFF the main relay (RL1).	<ul style="list-style-type: none"> FNS control board (FNSCB) FNS drive board (FNSDB) Main tray up down motor (M3) Main tray upper limit sensor (PS2) Main tray lower limit sensor (PS3) 	DIPSW6-4	FS main tray and stapling are not available
	C-1103 (FS-521)	The alignment home sensors /Rr (PS8) and /Fr (PS31) do not turn ON within a specified period of time after the home position search operation of the alignment motors / Rr (M5) and /Fr (M22) starts.		<ul style="list-style-type: none"> FNS control board (FNSCB) FNS drive board (FNSDB) Alignment motor /Rr (M5) Alignment motor /Fr (M22) Alignment home sensor /Rr (PS8) Alignment home sensor /Fr (PS31) 	DIPSW6-4	FS main tray and stapling are not available
	C-1104 (FS-521)	The main tray paper exit motor (M7) operates for more than the allowed time at a speed out of the specified one.		<ul style="list-style-type: none"> FNS control board (FNSCB) FNS drive board (FNSDB) Main tray exit motor (M7) 	DIPSW6-4	FS main tray and stapling are not available
	C-1105 (FS-521)	The paper exit opening unit does not get to the specified opening position within a specified period of time after the paper exit opening motor (M8) starts operations.		<ul style="list-style-type: none"> FNS control board (FNSCB) Paper exit opening motor (M8) Paper exit opening home sensor (PS12) 	DIPSW6-4	FS main tray and stapling are not available
	C-1106 (FS-521)	The stapler movement home sensor (PS11) does not turn ON within a specified period of time after the home position search operation of the stapler movement motor (M11) starts.		<ul style="list-style-type: none"> FNS control board (FNSCB) FNS drive board (FNSDB) Stapler movement motor (M11) Stapler movement home sensor (PS11) 	DIPSW6-3	The use of staple is unavailable
FS: FS-521 abnormality (skew rotation)	C-1107 (FS-521)	The stapler rotation home sensor (PS14) does not turn ON within a specified period of time after the home position search operation of the stapler rotation motor (M4) starts.		<ul style="list-style-type: none"> FNS control board (FNSCB) FNS drive board (FNSDB) Stapler rotation motor (M4) Stapler rotation home sensor (PS14) 	DIPSW6-3	The use of staple is unavailable
FS: FS-521 abnormality (vertical rotation)	C-1108 (FS-521)	The stapler rotation home sensor (PS14) does not turn ON within a specified period of time after the home position search operation of the stapler rotation motor (M4) starts.		<ul style="list-style-type: none"> FNS control board (FNSCB) FNS drive board (FNSDB) Stapler rotation motor (M4) Stapler rotation home sensor (PS14) 	DIPSW6-3	The use of staple is unavailable
FS: FS-521 abnormality	C-1109 (FS-521)	After the stapler motor /Fr (M31) starts operations, it does not complete operations within a specified period of time, and the stapler home sensor /Fr (PS41) does not turn ON.		<ul style="list-style-type: none"> FNS control board (FNSCB) FNS drive board (FNSDB) Stapler board (SB) Stapler motor /Fr (M31) Stapler home sensor /Fr (PS41) 	DIPSW6-3	The use of staple is unavailable

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-1110 (FS-521)	After the stapler motor /Rr (M30) starts operations, it does not complete operations within a specified period of time, and the stapler home sensor /Rr (PS40) does not turn ON.		<ul style="list-style-type: none"> FNS control board (FNSCB) FNS drive board (FNSDB) Stapler board (SB) Stapler motor /Rr (M30) Stapler home sensor /Rr (PS40) 	DIPSW6-3	The use of staple is unavailable
	C-1113 (FS-521)	After the home position search operation of the rear stopper motor (M26) starts, the rear stopper home sensor (PS35) does not turn ON within a specified period of time.		<ul style="list-style-type: none"> FNS control board (FNSCB) FNS drive board (FNSDB) Rear stopper motor (M26) Rear stopper home sensor (PS35) 	DIPSW6-4	FS main tray and stapling are not available
PI: PI abnormality	C-1124	The tray upper limit sensor /Lw (PS209) or the tray lower limit sensor /Lw (PS210) does not turn ON within a specified period of time after the Tray lift motor /Lw (M202) turns ON.		<ul style="list-style-type: none"> FNS control board (FNSCB) PI drive board (PIDB) Tray lift motor /Lw (M202) Tray upper limit sensor /Lw (PS209) Tray lower limit sensor /Lw (PS210) 	DIPSW18-6	PI unusable (PI not connected)
	C-1125	The tray upper limit sensor /Up (PS205) or the tray lower limit sensor /Up (PS204) does not turn ON within a specified period of time after the tray lift motor /Up (M201) turns ON.		<ul style="list-style-type: none"> FNS control board (FNSCB) PI drive board (PIDB) Tray lift motor /Up (M201) Tray upper limit sensor /Up (PS205) Tray lower limit sensor /Up (PS204) 	DIPSW18-6	PI unusable (PI not connected)
	C-1126	A prescribed speed is not obtained within a specified period of time after the conveyance motor (M203) turns ON.		<ul style="list-style-type: none"> FNS control board (FNSCB) PI drive board (PIDB) Conveyance motor (M203) 	DIPSW18-6	PI unusable (PI not connected)
	C-1127	The punch shift home sensor (PS303) does not turn ON within a specified period of time after the punch shift motor (M302) turns ON.		<ul style="list-style-type: none"> FNS control board (FNSCB) Punch drive board (PDB) Punch shift motor (M302) Punch shift home sensor (PS303) 	DIPSW19-5	PK unusable (PK not connected)
PK: PK abnormality	C-1132	The punch home sensor (PS301) does not turn ON within a specified period of time after the punch motor (M301) turns ON.		<ul style="list-style-type: none"> FNS control board (FNSCB) Punch drive board (PDB) Punch motor (M301) Punch home sensor (PS301) 	DIPSW19-5	PK unusable (PK not connected)
	C-1140 (FS-521)	After the paper exit arm motor /Fr (M23) starts operations, it does not complete operations within a specified period of time, and the paper exit arm home sensor /Fr (PS9) does not turn ON. Or, it operates for more than the allowed time at a speed out of the specified one.		<ul style="list-style-type: none"> FNS control board (FNSCB) FNS drive board (FNSDB) Paper exit arm motor (M23) Paper exit arm home sensor (PS9) 	DIPSW6-4	FS main tray and stapling are not available
FS: FS-521 abnormality	C-1141 (FS-521)	The stack assist home sensor (PS32) does not turn ON within a specified period of time after the home position search operation of the stack assist motor (M24) starts.		<ul style="list-style-type: none"> FNS control board (FNSCB) FNS drive board (FNSDB) Stack assist guide motor (M24) Stack assist home sensor (PS32) 	DIPSW6-4	FS main tray and stapling are not available

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-1142 (FS-521)	The intermediate roller home sensor (PS33) does not turn ON even after a specified period of time after the intermediate roller open/close motor (M25) starts the home position search operation.		<ul style="list-style-type: none"> • FNS control board (FNSCB) • FNS drive board (FNSDB) • Alignment motor /Fr (M22) • Alignment motor /Rr (M5) • Intermediate roller release solenoid (SD7) 	DIPSW6-4	FS main tray and stapling are not available
	C-1143 (FS-521)	The conveyance motor (M1) does not turn ON when the start button is turned ON. Or the conveyance motor (M1) does not shift the speed for each processing.		<ul style="list-style-type: none"> • FNS control board (FNSCB) • Conveyance motor (M1) • Paper exit sensor (PS37) • FNS entrance sensor (PS4) 	DIPSW6-5	FS unusable (FS not connected)
	C-1144 (FS-521)	The paper exit alignment plate home sensor /Fr (PS18) does not turn ON within a specified period of time after the paper exit alignment motor /Fr (M15) starts the home position search operation. Or, even after a specified period of time after M15 starts the operation, it does not stop.		<ul style="list-style-type: none"> • FNS control board (FNSCB) • FNS drive board (FNSDB) • Paper exit alignment motor /Fr (M15) • Paper exit alignment plate home sensor /Fr (PS18) 	DIPSW6-4	FS main tray and stapling are not available
	C-1145 (FS-521)	The paper exit alignment plate home sensor /Rr (PS19) does not turn ON within a specified period of time after the paper exit alignment motor /Rr (M14) starts the home position search operation. Or, even after a specified period of time after M14 starts the operation, it does not stop.		<ul style="list-style-type: none"> • FNS control board (FNSCB) • FNS drive board (FNSDB) • Paper exit alignment motor /Rr (M14) • Paper exit alignment plate home sensor /Rr (PS19) 	DIPSW6-4	FS main tray and stapling are not available
	C-1146 (FS-521)	The bypass roller release home sensor (PS13) does not turn ON within a specified period of time after the bypass roller release motor (M12) starts the home position search operation. Or, even after a specified period of time after M12 starts the operation, it does not stop.		<ul style="list-style-type: none"> • FNS control board (FNSCB) • FNS drive board (FNSDB) • Bypass roller release motor (M12) • Bypass roller release home sensor (PS13) 	DIPSW6-4	FS main tray and stapling are not available
	C-1147 (FS-521)	The paper exit alignment plate retraction home sensor (PS24) does not turn ON within a specified period of time after the paper exit alignment plate retraction home motor (M18) starts the home position search operation. Or, even after a specified period of time after M18 starts the operation, it does not stop.		<ul style="list-style-type: none"> • FNS control board (FNSCB) • FNS drive board (FNSDB) • Paper exit alignment plate retraction motor (M18) • Paper exit alignment plate retraction home sensor (PS24) 	DIPSW6-4	FS main tray and stapling are not available

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-1148 (FS-521)	The stacker entrance roller release home sensor (PS23) does not turn ON within a specified period of time after the stacker entrance roller release motor (M16) starts the home position search operation. Or, even after a specified period of time after M16 starts the operation, it does not stop.		<ul style="list-style-type: none"> FNS control board (FNSCB) FNS drive board (FNADB) Stacker entrance roller release motor (M16) Stacker entrance roller release home sensor (PS23) 	DIPSW6-4	FS main tray and stapling are not available
LS (1st tandem): LS abnormality	C-1201	The stacker tray encoder sensor (PS2) does not turn ON within a specified period of time after the stacker tray up down motor (M1) turns ON. Or, the initial operation or the stacker tray down operation is not completed within a specified period of time.	The main body and the LS stop immediately to turn OFF the main relay (RL1).	<ul style="list-style-type: none"> Stacker tray up down motor (M1) LS control board (LSCB) 	DIPSW6-6	LS (1st tandem) unusable
	C-1202	The shift unit home sensor (PS11) does not turn ON within a specified period of time after the shift unit motor (M5) turns ON. Or, PS11 does not turn ON within a specified period of time.		<ul style="list-style-type: none"> Shift unit motor (M5) LS control board (LSCB) 	DIPSW6-6	LS (1st tandem) unusable
	C-1203	The alignment plate home sensor (PS12) does not turn ON within a specified period of time after the alignment motor (M7) turns ON. Or, PS12 does not turn ON within a specified period of time.		<ul style="list-style-type: none"> Alignment motor (M7) LS control board (LSCB) 	DIPSW6-6	LS (1st tandem) unusable
	C-1204	The grip conveyance home sensor (PS5) does not turn ON within a specified period of time after the grip conveyance motor (M4) turns ON.		Grip conveyance motor (M4)	DIPSW6-6	LS (1st tandem) unusable
	C-1205	The stacker tray upper limit switch (MS2) is ON when the stacker tray up down motor (M1) is in the up operation.		<ul style="list-style-type: none"> Stacker tray up down motor (M1) Stacker tray upper limit switch (MS2) 	DIPSW6-6	LS (1st tandem) unusable
	C-1206	The stacker tray lower limit switch (MS3) is ON when the stacker tray up down motor (M1) is in the down operation.		<ul style="list-style-type: none"> Stacker tray up down motor (M1) Stacker tray lower limit switch (MS3) 	DIPSW6-6	LS (1st tandem) unusable
LS (2nd tandem): LS abnormality	C-1211	The stacker tray encoder sensor (PS2) does not turn ON within a specified period of time after the stacker tray up down motor (M1) turns ON. Or, the initial operation or the stacker tray down operation is not completed within a specified period of time.		<ul style="list-style-type: none"> Stacker tray up down motor (M1) LS control board (LSCB) 	DIPSW6-6	LS (1st tandem) unusable

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-1212	The shift unit home sensor (PS11) does not turn ON within a specified period of time after the shift unit motor (M5) turns ON. Or, PS11 does not turn ON within a specified period of time.		<ul style="list-style-type: none"> Shift unit motor (M5) LS control board (LSCB) 	DIPSW6-6	LS (1st tandem) unusable
	C-1213	The alignment plate home sensor (PS12) does not turn ON within a specified period of time after the alignment motor (M7) turns ON. Or, PS12 does not turn ON within a specified period of time.		<ul style="list-style-type: none"> Alignment motor (M7) LS control board (LSCB) 	DIPSW6-6	LS (1st tandem) unusable
	C-1214	The grip conveyance home sensor (PS5) does not turn ON within a specified period of time after the grip conveyance motor (M4) turns ON.		Grip conveyance motor (M4)	DIPSW6-6	LS (1st tandem) unusable
	C-1215	The stacker tray upper limit switch (MS2) is ON when the stacker tray up down motor (M1) is in the up operation.		<ul style="list-style-type: none"> Stacker tray up down motor (M1) Stacker tray upper limit switch (MS2) 	DIPSW6-6	LS (1st tandem) unusable
	C-1216	The stacker tray lower limit switch (MS3) is ON when the stacker tray up down motor (M1) is in the down operation.		<ul style="list-style-type: none"> Stacker tray up down motor (M1) Stacker tray lower limit switch (MS3) 	DIPSW6-6	LS (1st tandem) unusable
FD: FD abnormality	C-1221	The 1st folding cam home sensor (PS55) does not turn ON within a specified period of time after the 1st folding release motor (M14) turns ON.	The main body and the FD stop immediately to turn OFF the main relay (RL1).	<ul style="list-style-type: none"> 1st folding release motor (M14) Folding drive board (FDB) 1st folding cam home sensor (PS55) 	DIPSW6-0	The use of the folding function and the punch section is unavailable
	C-1222	The 2nd folding cam home sensor (PS56) does not turn ON within a specified period of time after the 2nd folding release motor (M15) turns ON.		<ul style="list-style-type: none"> 2nd folding release motor (M15) Folding drive board (FDB) 2nd folding cam home sensor (PS56) 	DIPSW6-0	The use of the folding function and the punch section is unavailable
	C-1223	The 3rd folding cam home sensor (PS57) does not turn ON within a specified period of time after the 3rd folding release motor (M16) turns ON.		<ul style="list-style-type: none"> 3rd folding release motor (M16) Folding drive board (FDB) 3rd folding cam home sensor (PS57) 	DIPSW6-0	The use of the folding function and the punch section is unavailable
	C-1224	The 2 holes punch home sensor (PS8) does not turn OFF within a specified period of time after the 2-holes punch home position return operation starts. Or, after the punch motor (M10) turns ON, the 2 holes punch home sensor (PS8) does not turn OFF.		<ul style="list-style-type: none"> Punch motor (M10) Punch drive board (PDB) 2 holes punch home sensor (PS8) 	DIPSW6-0	The use of the folding function and the punch section is unavailable
	C-1225	The 3 holes/4 holes punch home sensor (PS9) does not turn OFF within a specified period of time after the 3 holes/4 holes punch home position return operation starts. Or, after the punch motor (M10) turns ON, the 3 holes/4 holes punch home sensor (PS9) does not turn OFF.		<ul style="list-style-type: none"> Punch motor (M10) Punch drive board (PDB) 3 holes/4 holes home sensor (PS9) 	DIPSW6-0	The use of the folding function and the punch section is unavailable

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-1226	The alignment plate home sensor (PS10) does not turn ON within a specified period of time after the alignment plate home position return operation starts. Or, after the alignment motor (M12) turns ON, the alignment plate home sensor (PS10) does not turn OFF.		<ul style="list-style-type: none"> Alignment motor (M12) Punch drive board (PDB) Alignment plate home sensor (PS10) 	DIPSW6-0	The use of the folding function and the punch section is unavailable
	C-1227	The punch registration home sensor (PS11) does not turn ON within a specified period of time after the punch registration claw home position return operation starts. Or, after the punch registration motor (M13) turns ON, the punch registration home sensor (PS11) does not turn OFF.		<ul style="list-style-type: none"> Punch registration motor (M13) Punch drive board (PDB) Punch registration home sensor (PS11) 	DIPSW6-0	The use of the folding function and the punch section is unavailable
	C-1228	The main tray upper limit sensor (PS20) does not turn ON within a specified period of time after the main tray home position search starts. Or, after the tray up down motor (M11) turns ON, the main tray upper limit sensor (PS20) does not turn OFF.		<ul style="list-style-type: none"> Tray up down motor (M11) Main tray upper limit sensor (PS20) Punch drive board (PDB) 	DIPSW6-1	Main tray unusable
	C-1229	The main tray lower limit sensor (PS22) does not turn ON within a specified period of time after the tray up down motor (M11) is in the down operation.		<ul style="list-style-type: none"> Tray up down motor (M11) Punch drive board (PDB) Main tray lower limit sensor (PS22) 	DIPSW6-1	Main tray unusable
	C-1230	After the FD paper lift motor /Up (M8) is in the down operation, the PI lift plate home sensor /Up (PS34) does not turn ON within a specified period of time. Or, after the paper lift motor /Up (M8) is in the up operation, the PI tray upper limit sensor /Up (PS32) does not turn ON.		<ul style="list-style-type: none"> Paper lift motor /Up (M8) PI drive board (PIDB) PI lift plate home sensor /Up (PS34) PI upper limit sensor /Up (PS32) 	DIPSW6-2	The use of the PI section unavailable
	C-1231	After the FD paper lift motor /Lw (M9) is in the down operation, the PI lift plate home sensor /Lw (PS40) does not turn ON within a specified period of time. Or, after the paper lift motor /Lw (M9) is in the up operation, the PI upper limit sensor /Lw (PS38) does not turn ON.		<ul style="list-style-type: none"> Paper lift motor /Lw (M9) PI drive board (PIDB) PI lift plate home sensor /Lw (PS40) PI upper limit sensor /Lw (PS38) 	DIPSW6-2	The use of the PI section unavailable
	C-1232	An error detection signal is detected continuously for a specified period of time while the entrance conveyance motor (M1) is ON.		<ul style="list-style-type: none"> Paper lift motor /Lw (M9) PI drive board (PIDB) PI lift plate home sensor /Lw (PS40) PI upper limit sensor /Lw (PS38) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-1233	An error detection signal of M3 is detected continuously for a specified period of time while the intermediate conveyance motor (M3) is ON.		<ul style="list-style-type: none"> Intermediate conveyance motor (M3) Punch drive board (PDB) 		
	C-1234	An error detection signal of M7 is detected continuously for a specified period of time while the PI conveyance motor (M7) is ON.		<ul style="list-style-type: none"> PI conveyance motor (M7) PI drive board (PIDB) 	DIPSW6-2	The use of the PI section unavailable
	C-1235	An error detection signal of M17 is detected continuously for a specified period of time while the main tray exit motor (M17) is ON.		<ul style="list-style-type: none"> Main tray exit motor (M17) Punch drive board (PDB) 		
SD: SD-506 abnormality	C-1241	The scraps press home sensor (PS48) does not turn ON within a specified period of time after the bundle exit motor (M5) starts the home position search operation.	The main body and the SD stop immediately to turn OFF the main relay (RL1).	<ul style="list-style-type: none"> Bundle exit motor (M5) Scraps press home sensor (PS48) SD control board (SDCB) SD drive board (SDDB) 	DIPSW7-0	The use of the saddle stitching, multi-center folding and trimmer unavailable
	C-1242	The folding main scan alignment home sensor / Fr1 (PS18) does not turn ON within a specified period of time after the folding main scan alignment motor /Fr (M7) starts the home position search operation. Or, even after a specified period of time after M7 starts the operation, it does not stop.		<ul style="list-style-type: none"> Folding main scan alignment motor /Fr (M7) Folding main scan alignment home sensor / Fr1 (PS18) SD control board (SDCB) SD drive board (SDDB) 	DIPSW7-0	The use of the saddle stitching, multi-center folding, multi tri-folding and trimmer unavailable
	C-1243	The folding exit home sensor (PS24) does not turn ON within a specified period of time after the folding sub scan alignment exit motor (M8) starts the home position search operation. Or, even after a specified period of time after M8 starts to decelerate, it does not stop.		<ul style="list-style-type: none"> Folding sub scan alignment exit motor (M8) Folding exit home sensor (PS24) SD control board (SDCB) SD drive board (SDDB) 	DIPSW7-0	The use of the saddle stitching, multi-center folding, multi-tri-folding and trimmer unavailable
	C-1244	The saddle stitching alignment home sensor /Rt (PS28) does not turn ON within a specified period of time after the saddle stitching alignment motor / Rt (M9) starts the home position search operation. Or, even after a specified period of time after M9 starts the operation, it does not stop.		<ul style="list-style-type: none"> Saddle stitching alignment motor /Rt (M9) Saddle stitching alignment home sensor / Rt (PS28) SD control board (SDCB) SD drive board (SDDB) 	DIPSW7-0	The use of the saddle stitching, multi-center folding and trimmer unavailable
	C-1245	The bundle arm home sensor (PS32) does not turn ON within a specified period of time after the bundle arm motor (M10) starts the home position search operation. Or, even after a specified period of time after M10 starts the operation, it does not stop.		<ul style="list-style-type: none"> Bundle arm motor (M10) Bundle arm home sensor (PS32) SD control board (SDCB) SD drive board (SDDB) 	DIPSW7-0	The use of the saddle stitching, multi-center folding and trimmer unavailable

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-1246	The bundle clip upper limit sensor (PS33) does not turn ON within a specified period of time after the bundle clip motor (M11) starts the home position search operation. Or, even after a specified period of time after M11 starts the operation, it does not stop.		<ul style="list-style-type: none"> Bundle clip motor (M11) Bundle clip upper limit sensor (PS33) Bundle clip lower limit sensor (PS30) SD control board (SDCB) SD drive board (SDDB) 	DIPSW7-0	The use of the saddle stitching, multi-center folding and trimmer unavailable
	C-1247	The bundle registration home sensor (PS34) does not turn ON within a specified period of time after the bundle registration motor (M12) starts the home position search operation. Or, even after a specified period of time after M12 starts the operation, it does not stop.		<ul style="list-style-type: none"> Bundle registration motor (M12) Bundle registration home sensor (PS34) SD control board (SDCB) SD drive board (SDDB) 	DIPSW7-0	The use of the saddle stitching, multi-center folding and trimmer unavailable
	C-1248	The overlap home sensor (PS17) does not turn ON within a specified period of time after the overlap motor (M13) starts the home position search operation. Or, even after a specified period of time after M13 starts the operation, it does not stop.		<ul style="list-style-type: none"> Overlap motor (M13) Overlap home sensor (PS17) SD control board (SDCB) SD drive board (SDDB) 	DIPSW7-0	The use of the saddle stitching, multi-center folding, multi-tri-folding and trimmer unavailable
	C-1249	The folding main scan alignment home sensor /Rr (PS19) does not turn ON within a specified period of time after the folding main scan alignment motor /Rr (M14) starts the home position search operation. Or, even after a specified period of time after M14 starts the operation, it does not stop.		<ul style="list-style-type: none"> Folding main scan alignment motor /Rr (M14) Folding main scan alignment home sensor / Rr (PS19) SD control board (SDCB) SD drive board (SDDB) 	DIPSW7-0	The use of the saddle stitching, multi-center folding, multi-tri-folding and trimmer unavailable
	C-1250	The stapler movement home sensor (PS25) does not turn ON within a specified period of time after the home position search operation of the stapler movement motor (M15) starts. Or, even after a specified period of time after M15 starts the operation, it does not stop.		<ul style="list-style-type: none"> Stapler movement motor (M15) Stapler movement home sensor (PS25) SD control board (SDCB) SD drive board (SDDB) 	DIPSW7-0	The use of the saddle stitching, multi-center folding and trimmer unavailable
	C-1251	The saddle stitching alignment home sensor /Lt (PS29) does not turn ON within a specified period of time after the saddle stitching alignment motor / Lt (M16) starts the home position search operation. Or, even after a specified period of time after M16 starts the operation, it does not stop.		<ul style="list-style-type: none"> Saddle stitching alignment motor /Lt (M16) Saddle stitching alignment home sensor / Lt (PS29) SD control board (SDCB) SD drive board (SDDB) 	DIPSW7-0	The use of the saddle stitching, multi-center folding and trimmer unavailable

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-1252	The bundle press movement home sensor (PS36) does not turn ON within a specified period of time after the bundle press movement motor (M17) starts the home position search operation. Or, even after a specified period of time after M17 starts the operation, it does not stop.		<ul style="list-style-type: none"> Bundle press movement motor (M17) Bundle press movement home sensor (PS36) SD control board (SDCB) SD drive board (SDDB) 	DIPSW7-0	The use of the saddle stitching, multi-center folding and trimmer unavailable
	C-1253	The 1st folding blade home sensor (PS21) does not turn ON within a specified period of time after the 1st folding blade motor (M18) starts the home position search operation. Or 1st folding blade home sensor /1 (PS20) does not turned ON within a specified period of time after M18 starts the operation.		<ul style="list-style-type: none"> 1st folding blade motor (M18) 1st folding blade home sensor /1 (PS20), /2 (PS21) SD control board (SDCB) SD drive board (SDDB) 	DIPSW7-0	The use of the saddle stitching, multi-center folding, multi-tri-folding and trimmer unavailable
	C-1254	The 2nd folding blade home sensor /2 (PS23) does not turn ON within a specified period of time after the 2nd folding blade motor (M19) starts the home position search operation. Or the 2nd folding blade home sensor /1 (PS22) does not turned ON within a specified period of time after M19 starts the operation.		<ul style="list-style-type: none"> 2nd folding blade motor (M19) 2nd folding blade home sensor /1 (PS22), /2 (PS23) SD control board (SDCB) SD drive board (SDDB) 	DIPSW7-2	The use of the multi-tri-folding unavailable
	C-1255	The clincher up down home sensor (PS26) does not turn ON even after a specified period of time after the clincher up down motor (M20) starts the home position search. Or, even after a specified period of time after M20 starts the operation, it does not stop.		<ul style="list-style-type: none"> Clincher up down motor (M20) Clincher up down home sensor (PS26) SD control board (SDCB) SD drive board (SDDB) 	DIPSW7-0	The use of the saddle stitching, multi-center folding and trimmer unavailable
	C-1256	The saddle stitching press home sensor (PS27) does not turn ON within a specified period of time after the saddle stitching press motor (M21) starts the home position search operation. Or, even after a specified period of time after M21 starts the operation, it does not stop.		<ul style="list-style-type: none"> Saddle stitching press motor (M21) Saddle stitching press home sensor (PS27) SD control board (SDCB) SD drive board (SDDB) 	DIPSW7-0	The use of the saddle stitching, multi-center folding and trimmer unavailable
	C-1257	The bundle arm rotation home sensor (PS31) does not turn ON within a specified period of time after the bundle arm rotation motor (M22) starts the home position search operation. Or, even after a specified period of time after M22 starts the operation, it does not stop.		<ul style="list-style-type: none"> Bundle arm rotation motor (M22) Bundle arm rotation home sensor (PS31) SD control board (SDCB) SD drive board (SDDB) 	DIPSW7-0	The use of the saddle stitching, multi-center folding and trimmer unavailable

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-1258	The bundle press home sensor (PS37) does not turn ON within a specified period of time after the bundle press motor (M23) starts the home position search operation. Or, even after a specified period of time after M23 starts the operation, it does not stop.		<ul style="list-style-type: none"> Bundle press motor (M23) Bundle press home sensor (PS37) Bundle press lower limit sensor (PS47) SD control board (SDCB) SD drive board (SDDB) 	DIPSW7-0	The use of the saddle stitching, multi-center folding and trimmer unavailable
	C-1259	The bundle press home sensor (PS35) does not turn ON within a specified period of time after the bundle press stage up down motor (M24) starts the home position search operation. Or PS35 or the bundle press stage up down upper limit sensor (PS45) does not turned ON after a specified period of time M24 starts the operation.		<ul style="list-style-type: none"> Bundle press stage up down motor (M24) Bundle press stage up down home sensor (PS35) Bundle press stage up down limit sensor (PS45) SD control board (SDCB) SD drive board (SDDB) 	DIPSW7-0	The use of the saddle stitching, multi-center folding and trimmer unavailable
	C-1260	The guide shaft home sensor (PS46) does not turn ON even after a specified period of time after the guide shaft motor (M25) starts the home position search operation. Or, even after a specified period of time after M25 starts the operation, it does not stop.		<ul style="list-style-type: none"> Guide shaft motor (M25) Guide shaft home sensor (PS46) SD control board (SDCB) SD drive board (SDDB) 	DIPSW7-0, DIPSW7-1, DIPSW7-3	The use of the saddle stitching, multi-center folding and trimmer unavailable
	C-1261	The stapler home sensor / Rt (HS1) or the clincher start sensor /Rt (HS2) does not turn ON even after a specified period of time after the stapler motor /Rt (M29) starts the operation.		<ul style="list-style-type: none"> Stapler assembly /Rt SD control board (SDCB) SD drive board (SDDB) 	DIPSW7-0, DIPSW7-3	The use of the saddle stitching and trimmer unavailable
	C-1262	The stapler home sensor / Lt (HS3) or the clincher start sensor /Lt (HS4) does not turn ON even after a specified period of time after the stapler motor /Lt (M30) starts the operation.		<ul style="list-style-type: none"> Stapler assembly /Lt SD control board (SDCB) SD drive board (SDDB) 	DIPSW7-0, DIPSW7-3	The use of the saddle stitching and trimmer unavailable
	C-1263	It does not stop even after a specified period of time after the trimmer blade motor (M31) starts the operation.		<ul style="list-style-type: none"> Trimmer blade motor (M31) Trimmer blade home sensor (PS50) Trimmer blade upper limit sensor (PS51) SD control board (SDCB) SD drive board (SDDB) 	DIPSW7-3	The use of the trimmer unavailable
	C-1264	It does not stop even after a specified period of time after the trimmer press motor (M32) starts the operation.		<ul style="list-style-type: none"> Trimmer press motor (M32) Trimmer press home sensor (PS53) Trimmer press upper limit sensor (PS52) SD control board (SDCB) SD drive board (SDDB) 	DIPSW7-0, DIPSW7-1, DIPSW7-3	The use of the saddle stitching, multi-center folding and trimmer unavailable

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-1265	It does not stop even after a specified period of time after the bundle arm assist motor (M26) starts the operation.		<ul style="list-style-type: none"> Bundle arm assist motor (M26) Bundle arm assist home sensor (PS38) Bundle arm assist upper limit sensor (PS39) SD control board (SDCB) SD drive board (SDDB) 	DIPSW7-0, DIPSW7-1, DIPSW7-3	The use of the saddle stitching, multi-center folding and trimmer unavailable
	C-1266	Rotation abnormality is detected for a specified period of time in succession while the entrance conveyance motor (M1) is driving.		<ul style="list-style-type: none"> Entrance conveyance motor (M1) SD control board (SDCB) SD drive board (SDDB) 		
	C-1267	Rotation abnormality is detected for a specified period of time in succession while the horizontal conveyance motor (M2) is driving.		<ul style="list-style-type: none"> Horizontal conveyance motor (M2) SD control board (SDCB) SD drive board (SDDB) 	DIPSW7-4	Sub tray, paper exit to subsequent stage and FS unavailable
	C-1268	Rotation abnormality is detected for a specified period of time in succession while the folding entrance motor (M3) is driving.		<ul style="list-style-type: none"> Folding entrance motor (M3) SD control board (SDCB) SD drive board (SDDB) 	DIPSW7-0, DIPSW7-1, DIPSW7-2, DIPSW7-3	The use of the saddle stitching, multi-center folding, multi-tri-folding and trimmer unavailable
	C-1269	Rotation abnormality is detected for a specified period of time in succession while the folding transfer motor (M4) is driving.		<ul style="list-style-type: none"> Folding transfer motor (M4) SD control board (SDCB) SD drive board (SDDB) 	DIPSW7-0, DIPSW7-1, DIPSW7-2, DIPSW7-3	The use of the saddle stitching, multi-center folding, multi-tri-folding and trimmer unavailable
	C-1270	Rotation abnormality is detected for a specified period of time in succession while the bundle exit motor (M5) is driving.		<ul style="list-style-type: none"> Bundle exit motor (M5) SD control board (SDCB) SD drive board (SDDB) 	DIPSW7-0, DIPSW7-1, DIPSW7-3	The use of the saddle stitching, multi-center folding and trimmer unavailable
	C-1271	Rotation abnormality is detected for a specified period of time in succession while the folding sub scan alignment exit motor (M8) is driving.		<ul style="list-style-type: none"> Folding sub scan alignment exit motor (M8) SD control board (SDCB) SD drive board (SDDB) 	DIPSW7-0, DIPSW7-1, DIPSW7-2, DIPSW7-3	The use of the saddle stitching, multi-center folding, multi-tri-folding and trimmer unavailable
	C-1272	Rotation abnormality is detected for a specified period of time in succession while the trimmer paddle motor (M33) is driving.		<ul style="list-style-type: none"> Trimmer paddle motor (M33) SD control board (SDCB) SD drive board (SDDB) 	DIPSW7-3	The use of the trimmer unavailable
	C-1273	The trimmer completion sensor (PS62) does not turn ON even after a specified period of time after the trimmer blade motor (M31) is in the up operation.		<ul style="list-style-type: none"> Trimmer blade motor (M31) Trimmer completion sensor (PS62) SD control board (SDCB) SD drive board (SDDB) 	DIPSW7-3	The use of the trimmer unavailable

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-1275	The wire slack sensor (PS66) detected the slack of the trimmer edge drive wire.		<ul style="list-style-type: none"> Wire slack prevention sensor (PS66) SD control board (SDCB) SD drive board (SDDB) 		
RU: RU-506 abnormality	C-1281	FD alignment motor (M3) drive abnormality. The CD alignment home sensor (PS3) does not turn ON even after a specified period of time after M3 starts the home position search operation. Or, even after a specified period of time after M3 starts the operation, it does not stop.	The main body and the RU stop immediately to turn OFF the main relay (RL1).	<ul style="list-style-type: none"> FD alignment home sensor: (PS3: RU-506) FD alignment motor (M3: RU-506) RU control board (RUCB: RU-506) 		
	C-1282	CD alignment motor (M4): drive abnormality. The CD alignment home sensor (PS4) does not turn ON even after a specified period of time after M4 starts the home position search operation. Or, even after a specified period of time after M4 starts the operation, it does not stop.		<ul style="list-style-type: none"> CD alignment home sensor: (PS4: RU-506) CD alignment motor (M4: RU-506) RU control board (RUCB: RU-506) 		
LS (1st tandem): LS abnormality	C-1301	An error detection signal is detected continuously for a specified period of time while the paper cooling fan motor /Fr (FM1) is ON.	The main body and the LS stop immediately to turn OFF the main relay (RL1).	<ul style="list-style-type: none"> Paper cooling fan motor /Fr (FM1) LS control board (LSCB) 		
	C-1302	An error detection signal is detected continuously for a specified period of time while the paper cooling fan motor /1 (FM2) is ON.		<ul style="list-style-type: none"> Paper cooling fan motor /1 (FM2) LS control board (LSCB) 		
	C-1303	An error detection signal is detected continuously for a specified period of time while the paper cooling fan motor/Mi (FM3) is ON.		<ul style="list-style-type: none"> Paper cooling fan motor /Mi (FM3) LS control board (LSCB) 		
	C-1304	An error detection signal of FM4 is detected continuously for a specified period of time while the motor cooling fan motor (FM4) is ON.		<ul style="list-style-type: none"> Motor cooling fan motor (FM4) LS control board (LSCB) 		
	C-1305	An error detection signal of FM5 is detected continuously for a specified period of time while the paper cooling fan motor /Rr (FM5) is ON.		<ul style="list-style-type: none"> Paper cooling fan motor /Rr (FM5) LS control board (LSCB) 		
LS (2nd tandem): LS abnormality	C-1306	An error detection signal is detected continuously for a specified period of time while the paper cooling fan motor /Fr (FM1) is ON.		<ul style="list-style-type: none"> Paper cooling fan motor /Fr (FM1) LS control board (LSCB) 		
	C-1307	An error detection signal is detected continuously for a specified period of time while the paper cooling fan motor/1 (FM2) is ON.		<ul style="list-style-type: none"> Paper cooling fan motor /1 (FM2) LS control board (LSCB) 		
	C-1308	An error detection signal is detected continuously for a specified period of time while the paper cooling fan motor /Mi (FM3) is ON.		<ul style="list-style-type: none"> Paper cooling fan motor /Mi (FM3) LS control board (LSCB) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-1309	An error detection signal of FM4 is detected continuously for a specified period of time while the motor cooling fan motor (FM4) is ON.		<ul style="list-style-type: none"> Motor cooling fan motor LS control board (LSCB) 		
	C-1310	An error detection signal of FM5 is detected continuously for a specified period of time while the paper cooling fan motor /Rr (FM5) is ON.		<ul style="list-style-type: none"> Paper cooling fan motor /Rr (FM5) LS control board (LSCB) 		
SD: SD-506 abnormality	C-1311	A rotation error detection signal is detected continuously for specified period of time while the scraps removal fan motor (FM1) is started or driving.	The main body and the SD stop immediately to turn OFF the main relay (RL1).	<ul style="list-style-type: none"> Scraps removal fan motor (FM1) SD control board (SDCB) SD drive board (SDDB) 	DIPSW7-3	The use of the trimmer unavailable
PB: PB abnormality	C-1330	Cover paper tray fan /1 (M71: PB-502, FM71: PB-503) drive abnormality. An error detection signal is detected continuously for specified time period while M71 is started or driving.	The main body and the PB stop immediately to turn OFF the main relay (RL1).	<ul style="list-style-type: none"> PB drive board (PBDB: PB-502) PB drive board /1 (PBDB1: PB-503) Cover paper tray fan /1 (M71: PB-502, FM71: PB-503) 	DIPSW7-5	Paper feed from the PB is unavailable.
	C-1331	Cover paper tray fan /2 (M72: PB-502, FM72: PB-503) drive abnormality. An error detection signal is detected continuously for specified time period while M72 is started or driving.		<ul style="list-style-type: none"> Cover paper tray fan /2 (M72: PB-502, FM72: PB-503) Exhaust fan /1 (M80: PB-502, FM80: PB-503) PB drive board (PBDB: PB-502) PB drive board /1 (PBDB1: PB-503) 	DIPSW7-5	Paper feed from the PB is unavailable.
	C-1332	Exhaust fan /1 (M80: PB-502, FM80: PB-503), deodorant fan /1 (FM97: PB-503) and deodorant fan /2 (FM98: PB-503) drive abnormality. An error detection signal is detected continuously for specified time period while M80, M97 and M98 is started or driving.		<ul style="list-style-type: none"> Exhaust fan /1 (M80: PB-502, FM80: PB-503) Deodorant fan /1 (FM97: PB-503) Deodorant fan /2 (FM98: PB-503) PB drive board (PBDB: PB-502) PB drive board /1 (PBDB1: PB-503) PB drive board /3 (PBDB3: PB-503) 	DIPSW7-6	Ejecting onto the sub tray is possible.
	C-1333	Exhaust fan /2 (M81: PB-502, FM81: PB-503) drive abnormality. An error detection signal is detected continuously for specified time period while M81 is started or driving.		<ul style="list-style-type: none"> Exhaust fan /2 (M81: PB-502, FM81: PB-503) PB drive board (PBDB: PB-502) PB drive board /1 (PBDB1: PB-503) 	DIPSW7-6	Ejecting onto the sub tray is possible.
	C-1334	Pellet supply cooling fan motor (M4: PB-502, FM4: PB-503) rotation abnormality. An error detection signal is detected continuously for specified time period while M4 is started or driving.		<ul style="list-style-type: none"> Pellet supply cooling fan motor (M4: PB-502, FM4: PB-503) PB drive board (PBDB: PB-502) PB drive board /1 (PBDB1: PB-503) 	DIPSW7-6	Ejecting onto the sub tray is possible.
RU: RU-506 abnormality	C-1341	Stack assist fan /Fr (FM1) rotation abnormality. Rotation abnormality detected continuously for the specified time during FM1 operation.	The main body and option stop immediately to turn OFF the RL1 (the main relay) .	<ul style="list-style-type: none"> Stack assist fan /Fr (FM1: RU-506) RU control board (RUCB: RU-506) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-1342	Stack assist fan /Rr (FM2) rotation abnormality. Rotation abnormality detected continuously for the specified time during FM2 operation.		<ul style="list-style-type: none"> Stack assist fan /Rr (FM2: RU-506) RU control board (RUCB: RU-506) 		
FS: FS abnormality	C-1402	Non-volatile memory abnormality.	The main body and the FS stop immediately to turn OFF the main relay (RL1).	<ul style="list-style-type: none"> FS control board (LSCB) FNS control board (FNSCB) 		
FD: FD abnormality	C-1403	Non-volatile memory abnormality.	The main body and the FD stop immediately to turn OFF the main relay (RL1).	FD control board (FDCB)		
SD: SD-506 abnormality	C-1404	Non-volatile memory abnormality.	The main body and the SD stop immediately to turn OFF the main relay (RL1).	SD control board (SDCB)		
RU: RU-506 abnormality	C-1405	Non-volatile memory abnormality.	The main body and option stop immediately to turn OFF the RL1 (the main relay) .	RU control board (RUCB: RU-506)		
PB: PB abnormality	C-1406	Non-volatile memory abnormality in the PB control board (PBCB)	The main body and the PB stop immediately to turn OFF the main relay (RL1).	<ul style="list-style-type: none"> PB control board (PBCB) Control program 		
SD: SD-506 abnormality	C-1411	5V power abnormality in the SD drive board (SDDB)	The main body and the SD stop immediately to turn OFF the main relay (RL1).	SD drive board (SDDB)		
FS: FS abnormality	C-1431	Communication error in FS	The main body and the FS stop immediately to turn OFF the main relay (RL1).	Software bug		
FD: FD abnormality	C-1432	Communication error in FD	The main body and the FD stop immediately to turn OFF the main relay (RL1).	Software bug		
SD: SD-506 abnormality	C-1433	Communication error in SD	The main body and the SD stop immediately to turn OFF the main relay (RL1).	Software bug		
RU: RU-506 abnormality	C-1434	Communication error in RU	The main body and option stop immediately to turn OFF the RL1 (the main relay) .	RU control board (RUCB: RU-506)		
PB: PB abnormality	C-1435	Message queue full or the control abnormality of Sub CPU1 in the PB control board (PBCB)	The main body and the PB stop immediately to turn OFF the main relay (RL1).	<ul style="list-style-type: none"> PB control board (PBCB) Control program 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-1436	Message queue full or the control abnormality of Sub CPU2 in the PB control board (PBCB)		<ul style="list-style-type: none"> • PB control board (PBCB) • Control program 		
	C-1437	Message queue of the communication among tasks in the PB is full.		Control program		
FD: FD abnormality	C-1451	When the FD is unready, a signal to start operations is received from the main body.	The main body and the FD stop immediately to turn OFF the main relay (RL1).	Software bug		
SD: SD-506 abnormality	C-1452	When the SD is unready, a signal to start operations is received from the main body.	The main body and the SD stop immediately to turn OFF the main relay (RL1).	Software bug		
RU: RU-506 abnormality	C-1453	RU operation prohibition abnormality When RU is unready, a signal to start operations is received from the main body.	The main body and option stop immediately to turn OFF the RL1 (the main relay) .	RU control board (RUCB: RU-506)		
PB: PB abnormality	C-1454	PB operation prohibition abnormality. PB received operation start signal from the main body when the PB is unready.	The main body and the PB stop immediately to turn OFF the main relay (RL1).	Control program		
	C-1501	The entrance conveyance has not been completed within a specified period of time after the entrance conveyance motor (M1) turns ON.		<ul style="list-style-type: none"> • PB control board (PBCB) • PB drive board (PBDB) • Entrance conveyance motor (M1) 	DIPSW7-7	The use of the PB is unavailable
	C-1502	A rotation error detection signal is detected for a specified period of time in succession while the intermediate conveyance motor (M2) is driving.		<ul style="list-style-type: none"> • PB control board (PBCB) • PB drive board (PBDB) • Intermediate conveyance motor (M2) 	DIPSW7-6	Ejecting onto the sub tray is possible.
	C-1504	The SC entrance conveyance has not been completed within a specified period of time after the SC entrance conveyance motor (M11) turns ON.		<ul style="list-style-type: none"> • PB control board (PBCB) • PB drive board (PBDB) • SC entrance conveyance motor (M11) 	DIPSW7-6	Ejecting onto the sub tray is possible.
	C-1505	The switchback conveyance has not been completed within a specified period of time after the SC switchback conveyance motor (M12) turns ON.		<ul style="list-style-type: none"> • PB control board (PBCB) • PB drive board (PBDB) • SC switchback conveyance motor (M12) 	DIPSW7-6	Ejecting onto the sub tray is possible.
	C-1506	The switchback roller release operation has not been completed within a specified period of time after the SC switchback release motor (M13) turns ON.		<ul style="list-style-type: none"> • PB control board (PBCB) • PB drive board (PBDB) • SC switchback release motor (M13) 	DIPSW7-6	Ejecting onto the sub tray is possible.
	C-1507	The SC alignment has not been completed within a specified period of time after SC alignment motor (M15) turns ON.		<ul style="list-style-type: none"> • PB control board (PBCB) • PB drive board (PBDB) • SC alignment motor (M15) 	DIPSW7-6	Ejecting onto the sub tray is possible.

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-1508	The SC paper bundle conveyance has not been completed within a specified period of time after the SC bundle conveyance motor (M17) turns ON.		<ul style="list-style-type: none"> • PB control board (PBCB) • PB drive board (PBDB) • SC bundle conveyance motor (M17) 	DIPSW7-6	Ejecting onto the sub tray is possible.
	C-1509	The SC roller release operation has not been completed within a specified period of time after the SC roller release motor (M18) turns ON.		<ul style="list-style-type: none"> • PB control board (PBCB) • PB drive board (PBDB) • SC roller release motor (M18) 	DIPSW7-6	Ejecting onto the sub tray is possible.
	C-1510	The SC entrance movement operation has not been completed within a specified period of time after the clamp entrance movement motor (M19) turns ON.		<ul style="list-style-type: none"> • PB control board (PBCB) • PB drive board (PBDB) • Clamp entrance movement motor (M19) 	DIPSW7-6	Ejecting onto the sub tray is possible.
	C-1511	The clamp entrance roller release operation has not been completed within a specified period of time after the clamp entrance roller release motor (M20) turns ON.		<ul style="list-style-type: none"> • PB control board (PBCB) • PB drive board (PBDB) • Clamp entrance roller release motor (M20) 	DIPSW7-6	Ejecting onto the sub tray is possible.
	C-1512	The clamp alignment has not been completed within a specified period of time after clamp alignment motor (M21) turns ON.		<ul style="list-style-type: none"> • PB control board (PBCB) • PB drive board (PBDB) • Clamp alignment motor (M21) 	DIPSW7-6	Ejecting onto the sub tray is possible.
	C-1513	The clamp section open/close operation has not been completed within a specified period of time after the clamp motor (M22) turns ON.		<ul style="list-style-type: none"> • PB control board (PBCB) • PB drive board (PBDB) • Clamp motor (M22) 	DIPSW7-6	Ejecting onto the sub tray is possible.
	C-1514	The clamp rotation operation has not been completed within a specified period of time after the clamp rotation motor (M23) turns ON.		<ul style="list-style-type: none"> • PB control board (PBCB) • PB drive board (PBDB) • Clamp rotation motor (M23) 	DIPSW7-6	Ejecting onto the sub tray is possible.
	C-1515	The glue tank movement operation has not been completed within a specified period of time after the glue tank movement motor (M31) turns ON.		<ul style="list-style-type: none"> • PB control board (PBCB) • PB drive board (PBDB) • Glue tank movement motor (M31) 	DIPSW7-6	Ejecting onto the sub tray is possible.
	C-1516	A rotation error detection signal is detected for a specified period of time in succession while the glue apply roller motor (M32) is driving.		<ul style="list-style-type: none"> • PB control board (PBCB) • PB drive board (PBDB) • Glue apply roller motor (M32) 	DIPSW7-6	Ejecting onto the sub tray is possible.

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-1517	PB-502: Abnormality of the glue supply. The count of a specified number of pellets, which is counted by the pellet count sensor (PS37), has not been reached after the pellet supply motor (M33) turns ON. The status was detected by a specified number of times in succession. PB-503: Abnormality of the glue supply. The supply operation which the pellet supply passage sensor (PS37) does not turn ON is detected twice in succession after turning ON the pellet supply pipe motor (M33).		<ul style="list-style-type: none"> Pellet supply motor (M33: PB-502) PB drive board (PBDB: PB-502) PB drive board /1 (PBDB1: PB-503) PB control board (PBCB: PB-502, PB-503) 	DIPSW7-6	Ejecting onto the sub tray is possible.
	C-1518	The operation of the pellet supply arm has not been completed within a specified period of time after the pellet supply arm motor (M34) turns ON.		<ul style="list-style-type: none"> PB control board (PBCB) PB drive board (PBDB) Pellet supply arm motor (M34) 	DIPSW7-6	Ejecting onto the sub tray is possible.
	C-1519	The alignment in the cover paper table up/down section has not been completed within a specified period of time after the cover paper alignment motor (M41) turns ON.		<ul style="list-style-type: none"> PB control board (PBCB) PB drive board (PBDB) Cover paper alignment motor (M41) 	DIPSW7-6	Ejecting onto the sub tray is possible.
	C-1520	The booklet exit has not been completed within a specified period of time after the booklet exit motor (M42) turns ON.		<ul style="list-style-type: none"> PB control board (PBCB) PB drive board (PBDB) Booklet exit motor (M42) 	DIPSW7-6	Ejecting onto the sub tray is possible.
	C-1521	The driven arm /Rt swing operation start has not been completed within a specified period of time after the cover paper conveyance arm motor /Rt (M43) turns ON		<ul style="list-style-type: none"> PB control board (PBCB) PB drive board (PBDB) Cover paper conveyance arm motor / Rt (M43) 	DIPSW7-6	Ejecting onto the sub tray is possible.
	C-1522	The driven arm /Lt swing operation start has not been completed within a specified period of time after the cover paper conveyance arm motor /Lt (M44) turns ON		<ul style="list-style-type: none"> PB control board (PBCB) PB drive board (PBDB) Cover paper conveyance arm motor / Lt (M44) 	DIPSW7-6	Ejecting onto the sub tray is possible.
	C-1523	The cover paper conveyance start has not been completed within a specified period of time after cover paper conveyance motor (M45) turns ON.		<ul style="list-style-type: none"> PB control board (PBCB) PB drive board (PBDB) Cover paper conveyance motor (M45) 	DIPSW7-6	Ejecting onto the sub tray is possible.
	C-1524	The cover paper table up or down movement has not been completed within a specified period of time after the cover paper table up down motor /Fr (M46) turns ON.		<ul style="list-style-type: none"> PB control board (PBCB) PB drive board (PBDB) Cover paper table up down motor /Fr (M46) 	DIPSW7-6	Ejecting onto the sub tray is possible.

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-1525	The cover paper table up or down movement has not been completed within a specified period of time after the cover paper table up down motor /Rr (M47) turns ON.		<ul style="list-style-type: none"> • PB control board (PBCB) • PB drive board (PBDB) • Cover paper table up down motor /Rr (M47) 	DIPSW7-6	Ejecting onto the sub tray is possible.
	C-1526	The movement of the cover paper folding plate / Rt has not been completed within a specified period of time after the cover paper folding motor /Rt (M48) turns ON.		<ul style="list-style-type: none"> • PB control board (PBCB) • PB drive board (PBDB) • Cover paper folding motor /Rt (M48) 	DIPSW7-6	Ejecting onto the sub tray is possible.
	C-1527	The movement of the cover paper folding plate / Lt has not been completed within a specified period of time after the cover paper folding motor /Lt (M49) turns ON.		<ul style="list-style-type: none"> • PB control board (PBCB) • PB drive board (PBDB) • Cover paper folding motor /Lt (M49) 	DIPSW7-6	Ejecting onto the sub tray is possible.
	C-1528	The trimming of the cover paper has not been completed within a specified period of time after the cutter motor (M50) turns ON.		<ul style="list-style-type: none"> • PB control board (PBCB) • PB drive board (PBDB) • Cutter motor (M50) 	DIPSW7-6	Ejecting onto the sub tray is possible.
	C-1530	The booklet movement of the booklet conveyance section has not been completed within a specified period of time after the booklet conveyance belt motor (M61) turns ON.		<ul style="list-style-type: none"> • PB control board (PBCB) • PB drive board (PBDB) • Booklet conveyance belt motor (M61) 	DIPSW7-6	Ejecting onto the sub tray is possible.
	C-1531	The size changing operation of the carriage section has not been completed within a specified period of time after the booklet conveyance belt movement motor (M62) turns ON.		<ul style="list-style-type: none"> • PB control board (PBCB) • PB drive board (PBDB) • Booklet conveyance belt movement motor (M62) 	DIPSW7-6	Ejecting onto the sub tray is possible.
	C-1532	The up/down movement operation of the carriage section has not been completed within a specified period of time after the booklet conveyance belt up down motor (M63) turns ON.		<ul style="list-style-type: none"> • PB control board (PBCB) • PB drive board (PBDB) • Booklet conveyance belt up down motor (M63) 	DIPSW7-6	Ejecting onto the sub tray is possible.
	C-1534	The booklet rear edge pressing process has not been completed within a specified period of time after the booklet stopper motor (M65) turns ON.		<ul style="list-style-type: none"> • PB control board (PBCB) • PB drive board (PBDB) • Booklet stopper motor (M65) 	DIPSW7-6	Ejecting onto the sub tray is possible.
	C-1537	The tray moving up process has not been completed within a specified period of time after the cover paper tray lift motor (M73) turns ON.		<ul style="list-style-type: none"> • PB control board (PBCB) • PB drive board (PBDB) • Cover paper tray lift motor (M73) 	DIPSW7-5	Paper feed from the PB is unavailable.
	C-1538	The cover paper feed has not been completed within a specified period of time after the cover paper feed motor (M74) turns ON.		<ul style="list-style-type: none"> • PB control board (PBCB) • PB drive board (PBDB) • Cover paper feed motor (M74) 	DIPSW7-5	Paper feed from the PB is unavailable.

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-1540	After the warm-up is started, temperature detected by the glue tank temperature sensor /Md (TH3) has not risen to a prescribed level within a specified time period.		<ul style="list-style-type: none"> • AC drive board (ACDB) • Glue tank heater (H1) • Glue apply roller heater (H2) • PB control board (PBCB) • PB drive board (PBDB) • Glue apply roller motor (M32) • Glue tank temperature sensor /Md (TH3) 	DIPSW7-7	The use of the PB is unavailable
	C-1541	After the warm-up is started, temperature detected by the glue tank temperature sensor /Lw (TH4) has not risen to a prescribed level within a specified time period.		<ul style="list-style-type: none"> • AC drive board (ACDB) • Glue tank heater (H1) • Glue apply roller heater (H2) • PB control board (PBCB) • PB drive board (PBDB) • Glue apply roller motor (M32) • Glue tank temperature sensor /Lw (TH4) 	DIPSW7-7	The use of the PB is unavailable
	C-1542	After the warm-up is started, temperature detected by the glue apply roller temperature sensor (TH1) has not risen to a prescribed level within a specified time period.		<ul style="list-style-type: none"> • AC drive board (ACDB) • Glue tank heater (H1) • Glue apply roller heater (H2) • PB control board (PBCB) • PB drive board (PBDB) • Glue apply roller motor (M32) • Glue apply roller temperature sensor (TH1) 	DIPSW7-7	The use of the PB is unavailable
	C-1543	After the pellet supply, temperature detected by the glue tank temperature sensor /Up (TH2) has not risen to a prescribed level within a specified period of time.		<ul style="list-style-type: none"> • AC drive board (ACDB) • Glue tank heater (H1) • Glue apply roller heater (H2) • PB control board (PBCB) • PB drive board (PBDB) • Glue apply roller motor (M32) • Glue tank temperature sensor /Up (TH2) 	DIPSW7-7	The use of the PB is unavailable
	C-1544	During standby, after the glue tank heater (H1) is turned ON, temperature detected by the glue tank temperature sensor /Md (TH3) has not risen to a prescribed level within a specified time period.		<ul style="list-style-type: none"> • AC drive board (ACDB) • Glue tank heater (H1) • Glue apply roller heater (H2) • PB control board (PBCB) • PB drive board (PBDB) • Glue apply roller motor (M32) • Glue tank temperature sensor /Md (TH3) 	DIPSW7-7	The use of the PB is unavailable
	C-1545	When the prescribed temperature is obtained and after the glue tank heater (H1) is turned ON, temperature detected by the glue tank temperature sensor /Lw (TH4) has not risen to a prescribed level within a specified time period.		<ul style="list-style-type: none"> • AC drive board (ACDB) • Glue tank heater (H1) • Glue apply roller heater (H2) • PB control board (PBCB) • PB drive board (PBDB) • Glue apply roller motor (M32) • Glue tank temperature sensor /Lw (TH4) 	DIPSW7-7	The use of the PB is unavailable

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-1546	When the prescribed temperature is obtained and after the glue tank heater (H1) is turned ON, temperature detected by the glue apply roller temperature sensor (TH1) has not risen to a prescribed level within a specified time period.		<ul style="list-style-type: none"> • AC drive board (ACDB) • Glue tank heater (H1) • Glue apply roller heater (H2) • PB control board (PBCB) • PB drive board (PBDB) • Glue apply roller motor (M32) • Glue apply roller temperature sensor (TH1) 	DIPSW7-7	The use of the PB is unavailable
	C-1547	The glue apply roller temperature sensor (TH1) detects an abnormal high temperature.		<ul style="list-style-type: none"> • AC drive board (ACDB) • Glue tank heater (H1) • Glue apply roller heater (H2) • PB control board (PBCB) • PB drive board (PBDB) • Glue apply roller motor (M32) • Glue apply roller temperature sensor (TH1) 	DIPSW7-7	The use of the PB is unavailable
	C-1548	The glue tank temperature sensor /Up (TH2) detects an abnormal high temperature.		<ul style="list-style-type: none"> • AC drive board (ACDB) • Glue tank heater (H1) • Glue apply roller heater (H2) • PB control board (PBCB) • PB drive board (PBDB) • Glue apply roller motor (M32) • Glue tank temperature sensor /Up (TH2) 	DIPSW7-7	The use of the PB is unavailable
	C-1549	The glue tank temperature sensor /Md (TH3) detects an abnormal high temperature.		<ul style="list-style-type: none"> • AC drive board (ACDB) • Glue tank heater (H1) • Glue apply roller heater (H2) • PB control board (PBCB) • PB drive board (PBDB) • Glue apply roller motor (M32) • Glue tank temperature sensor /Md (TH3) 	DIPSW7-7	The use of the PB is unavailable
	C-1550	The glue tank temperature sensor /Lw (TH4) detects an abnormal high temperature.		<ul style="list-style-type: none"> • AC drive board (ACDB) • Glue tank heater (H1) • Glue apply roller heater (H2) • PB control board (PBCB) • PB drive board (PBDB) • Glue apply roller motor (M32) • Glue tank temperature sensor /Lw (TH4) 	DIPSW7-7	The use of the PB is unavailable
	C-1551	The glue apply roller temperature sensor (TH1) detects an abnormal high temperature (hardware) TH1 detects an abnormal high temperature of the glue apply roller.		<ul style="list-style-type: none"> • AC drive board (ACDB) • Glue tank heater (H1) • Glue apply roller heater (H2) • PB control board (PBCB) • PB drive board (PBDB) • Glue apply roller motor (M32) • Glue apply roller temperature sensor (TH1) 	DIPSW7-7	The use of the PB is unavailable

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-1552	The glue tank temperature sensor /Up (TH2) detects an abnormal high temperature (hardware). TH2 detects an abnormal high temperature of the glue tank.		<ul style="list-style-type: none"> AC drive board (ACDB) Glue tank heater (H1) Glue apply roller heater (H2) PB control board (PBCB) PB drive board (PBDB) Glue apply roller motor (M32) Glue tank temperature sensor /Up (TH2) 	DIPSW7-7	The use of the PB is unavailable
	C-1553	The glue tank temperature sensor /Md (TH3) detects an abnormal high temperature (hardware). TH3 detects an abnormal high temperature of the glue tank.		<ul style="list-style-type: none"> AC drive board (ACDB) Glue tank heater (H1) Glue apply roller heater (H2) PB control board (PBCB) PB drive board (PBDB) Glue apply roller motor (M32) Glue tank temperature sensor /Md (TH3) 	DIPSW7-7	The use of the PB is unavailable
	C-1554	The glue tank temperature sensor /Lw (TH4) detects an abnormal high temperature (hardware). TH4 detects an abnormal high temperature of the glue tank.		<ul style="list-style-type: none"> AC drive board (ACDB) Glue tank heater (H1) Glue apply roller heater (H2) PB control board (PBCB) PB drive board (PBDB) Glue apply roller motor (M32) Glue tank temperature sensor /Lw (TH4) 	DIPSW7-7	The use of the PB is unavailable
	C-1555	After warming-up is completed, the glue apply roller temperature sensor (TH1) detects an abnormal low temperature.		<ul style="list-style-type: none"> AC drive board (ACDB) Glue tank heater (H1) Glue apply roller heater (H2) PB control board (PBCB) PB drive board (PBDB) Glue apply roller motor (M32) Glue apply roller temperature sensor (TH1) 	DIPSW7-7	The use of the PB is unavailable
	C-1556	When glue supply control temperature is reached, the glue tank temperature sensor /Up (TH2) detects an abnormal low temperature.		<ul style="list-style-type: none"> AC drive board (ACDB) Glue tank heater (H1) Glue apply roller heater (H2) PB control board (PBCB) PB drive board (PBDB) Glue apply roller motor (M32) Glue tank temperature sensor /Up (TH2) 	DIPSW7-7	The use of the PB is unavailable
	C-1557	After warming-up is completed, the glue tank temperature sensor /Md (TH3) detects an abnormal low temperature.		<ul style="list-style-type: none"> AC drive board (ACDB) Glue tank heater (H1) Glue apply roller heater (H2) PB control board (PBCB) PB drive board (PBDB) Glue apply roller motor (M32) Glue tank temperature sensor /Md (TH3) 	DIPSW7-7	The use of the PB is unavailable

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-1558	After warming-up is completed, the glue tank temperature sensor /Lw (TH4) detects an abnormal low temperature.		<ul style="list-style-type: none"> • AC drive board (ACDB) • Glue tank heater (H1) • Glue apply roller heater (H2) • PB control board (PBCB) • PB drive board (PBDB) • Glue apply roller motor (M32) • Glue tank temperature sensor /Lw (TH4) 	DIPSW7-7	The use of the PB is unavailable
	C-1559	The glue apply roller temperature sensor (TH1) detects an abnormal low temperature (hardware). After warming-up is completed, TH1 detects the glue apply roller error signal of abnormal low temperature.	The main body stops immediately to turn OFF the main relay (RL1).	<ul style="list-style-type: none"> • AC drive board (ACDB) • Glue tank heater (H1) • Glue apply roller heater (H2) • PB control board (PBCB) • PB drive board (PBDB) • Glue apply roller motor (M32) • Glue apply roller temperature sensor (TH1) 	DIPSW7-7	The use of the PB is unavailable
	C-1560	The glue tank temperature sensor /Up (TH2) detects an abnormal low temperature (hardware). After glue supply control temperature is reached, TH2 detects the glue tank error signal of abnormal low temperature.	The main body and the PB stop immediately to turn OFF the main relay (RL1).	<ul style="list-style-type: none"> • AC drive board (ACDB) • Glue tank heater (H1) • Glue apply roller heater (H2) • PB control board (PBCB) • PB drive board (PBDB) • Glue apply roller motor (M32) • Glue tank temperature sensor /Up (TH2) 	DIPSW7-7	The use of the PB is unavailable
	C-1561	The glue tank temperature sensor /Md (TH3) detects an abnormal low temperature (hardware). After warming-up is completed, TH3 detects the glue tank error signal of abnormal low temperature.		<ul style="list-style-type: none"> • AC drive board (ACDB) • Glue tank heater (H1) • Glue apply roller heater (H2) • PB control board (PBCB) • PB drive board (PBDB) • Glue apply roller motor (M32) • Glue tank temperature sensor /Md (TH3) 	DIPSW7-7	The use of the PB is unavailable
	C-1562	The glue tank temperature sensor /Lw (TH4) detects an abnormal low temperature (hardware). After warming-up is completed, TH4 detects the glue tank error signal of abnormal low temperature.		<ul style="list-style-type: none"> • AC drive board (ACDB) • Glue tank heater (H1) • Glue apply roller heater (H2) • PB control board (PBCB) • PB drive board (PBDB) • Glue apply roller motor (M32) • Glue tank temperature sensor /Lw (TH4) 	DIPSW7-7	The use of the PB is unavailable
	C-1565	PB-503: Operation abnormality of the relay conveyance motor (M92) The relay conveyance does not start within the specified period of time after M92 turns ON.	The main body and the PB stop immediately to turn OFF the main relay (RL1). The relay conveyance does not start within the specified period of time after M92 turns ON.	<ul style="list-style-type: none"> • Intermediate conveyance motor (M92: PB-503) • PB drive board /2 (PBDB2: PB-503) • PB control board (PBCB: PB-503) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-1566	PB-503: Operation abnormality of the relay conveyance exit motor (M91) An error detection signal is detected continuously while the M91 is driving.	The main body and the PB stop immediately to turn OFF the main relay (RL1).	<ul style="list-style-type: none"> Relay conveyance exit motor (M91: PB-503) PB control board (PBCB: PB-503) PB drive board /1 (PBDB1: PB-503) PB drive board /2 (PBDB2: PB-503) 		
	C-1567	Pellet supply pipe motor drive abnormality The pellet supply pipe has not completed the operations within a specified period of time after the pellet supply pipe motor (M33) turns ON.		<ul style="list-style-type: none"> Pellet supply pipe motor (M33: PB-503) PB drive board /1 (PBDB1: PB-503) PB control board (PBCB: PB-503) 		
Main body: Wire cleaning abnormality	C-2101	Charger cleaning motor (M23) operation time abnormality.	The main body and option stop immediately to turn OFF the RL1 (the main relay) .	<ul style="list-style-type: none"> Charger cleaning limit sensor (PS26) Charger cleaning limit sensor (PS27) Charger cleaning motor (M23) Printer control board (PRCB) 		
Main body : Wire cleaning abnormality	C-2102	Charger cleaning motor (M23) power abnormality.		<ul style="list-style-type: none"> Charger cleaning motor (M23) Printer control board (PRCB) 		
Main body: Wire cleaning abnormality	C-2103	Charger cleaning motor (M23) drive abnormality.		<ul style="list-style-type: none"> Charger cleaning motor (M23) Printer control board (PRCB) 		
Main body: Motor abnormality	C-2201	Toner bottle motor (M6) speed abnormality. An error detection signal is detected twice in succession within a specified period of time after M6 was turned ON.		<ul style="list-style-type: none"> Toner bottle motor (M6) Printer control board (PRCB) 		
	C-2202	Developing motor (M3) speed abnormality. Since an error detection signal is detected a second after M3 turns ON, turn OFF M3 for 0.5 seconds. Then, an error detection signal is detected again a second after it is turned ON again.		<ul style="list-style-type: none"> developing motor (M3) Printer control board (PRCB) 		
	C-2203	The locking of the blade motor (M22) is detected. The error detection signal (over current) of M22 is detected.		<ul style="list-style-type: none"> Trimmer blade motor (M22) Printer control board (PRCB) 		
	C-2204	Drum motor (M2) drive abnormality + 24V power abnormality. The drum READY1 signal (READY condition) cannot be detected within a specified period of time after the drum motor (M2) turns ON. Or, the drum READY1 signal (READY release condition) cannot be detected within a specified period of time after M2 turns OFF. At this time, an error detection signal (24V cut off) is detected.		<ul style="list-style-type: none"> Printer control board (PRCB) DC power supply /1 (DCPS/1) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-2205	Drum motor (M2) power abnormality. The drum READY1 signal (READY condition) cannot be detected within a specified period of time after the drum motor (M2) turns ON. Or, the drum READY1 signal (READY release condition) cannot be detected within a specified period of time after M2 turns OFF. At this time, an error detection signal (blowout of ICP) of the blade motor (M22) is detected.		<ul style="list-style-type: none"> • Drum motor (M2) • Printer control board (PRCB) 		
	C-2206	Drum motor (M2) drive abnormality.	The main body and option stop immediately to turn OFF the RL1 (the main relay).	<ul style="list-style-type: none"> • blade sensor /1 (PS24) • blade sensor /2 (PS25) • Drum motor (M2) • Printer control board (PRCB) 		
	C-2207	Drum motor (M22) drive abnormality + 24V power abnormality. The blade READY signal (READY condition) cannot be detected within a specified period of time after the blade replacement signal turns ON. Or, the blade READY signal (READY release condition) cannot be detected within a specified period of time after the blade replacement signal turns OFF. At this time, an error detection signal (24V cut off) is detected.		<ul style="list-style-type: none"> • DC power supply /2 (DCPS/2) • Printer control board (PRCB) 		
	C-2208	Blade motor (M22) power abnormality. The blade READY signal (READY condition) cannot be detected within a specified period of time after the blade replacement signal turns ON. Or, the blade READY signal (READY release condition) cannot be detected within a specified period of time after the blade replacement signal turns OFF. At this time, an error detection signal (blowout of ICP) of the blade motor (M22) is detected.		<ul style="list-style-type: none"> • Trimmer blade motor (M22) • Printer control board (PRCB) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-2209	It is checked that the movement of the blade motor (M22) is not completed. The blade READY signal (READY condition) cannot be detected within a specified period of time after the blade replacement signal turns ON. Or, the blade READY signal (READY release condition) cannot be detected within a specified period of time after the blade replacement signal turns OFF. At this time, an error detection signal is not detected.		<ul style="list-style-type: none"> • Trimmer blade motor (M22) • Printer control board (PRCB) 		
	C-2210	The drum motor (M2) does not start. The drum READY2 signal (READY signal) is not detected within a specified period of time after M2 turns ON.		<ul style="list-style-type: none"> • Drum motor (M2) • Printer control board (PRCB) 		
	C-2211	Intermediate hopper motor (M11) power abnormality. An error detection signal (blowout of ICP) is detected when M11 turns ON.		<ul style="list-style-type: none"> • Intermediate hopper motor (M11) • Printer control board (PRCB) 		
	C-2212	Air separation motor (M10) power abnormality. An error detection signal (blowout of ICP) is detected when M10 turns ON.		<ul style="list-style-type: none"> • Air separation motor (M10) • Printer control board (PRCB) 		
	C-2213	Air separation motor (M10) rotation abnormality. Since an error is detected when M10 turns ON, turn it OFF. An error is still detected when turn it ON again.		<ul style="list-style-type: none"> • Air separation motor (M10) • Printer control board (PRCB) 		
	C-2214	The toner conveyance abnormality is detected. When executing the toner supply operation for 8 minutes, the intermediate hopper toner remaining sensor (PS39) does not turn ON and the hopper toner remaining sensor /2 (PS33) detects ON in succession for 15 seconds.		<ul style="list-style-type: none"> • Intermediate hopper toner remaining sensor (PS39) • Hopper toner remaining sensor /2 (PS33) • Printer control board (PRCB) 		
	C-2215	Hopper toner remaining sensor /2 (PS33) abnormality. When the toner is supplied for 8minutes, it is found that the toner remaining sensor /1 (PS32) does not turn ON and the toner remaining sensor /2 (PS33) turns OFF for the last 15 seconds in succession.		<ul style="list-style-type: none"> • Hopper toner remaining sensor /1 (PS32) • Hopper toner remaining sensor /2 (PS33) • Printer control board (PRCB) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-2217	Leakage at the mixing section is detected. When the toner pump motor (M28) is operating, the cup section toner remaining sensor (PS34) detects the toner being provided in succession for seconds.		<ul style="list-style-type: none"> Cup section toner remaining sensor (PS34) Toner pump motor (M28) Printer control board (PRCB) 		
	C-2220	Toner pump motor (M28) rotation abnormality + 24V power abnormality. While M28 is rotating, an error detection signal (abnormal rotation/24V cut off) is detected for more than 1second.	The main body and option stop immediately to turn OFF the RL1 (the main relay) .	<ul style="list-style-type: none"> DC power supply /2 (DCPS/2) Printer control board (PRCB) 		
	C-2221	Toner pump motor (M28) power abnormality. While M28 is rotating, an error detection signal (abnormal rotation) is detected for more than 1second. At this time, an abnormality signal (blowout of ICP) is detected, but no abnormality signal (24V cut off) is detected.		<ul style="list-style-type: none"> Toner pump motor (M28) Printer control board (PRCB) 		
	C-2222	Toner pump motor (M28) rotation abnormality. While M28 is rotating, an error detection signal (abnormal rotation) is detected for more than 1second. At this time, an error detection signal (blowout of ICP/24V cut off) is not detected.		<ul style="list-style-type: none"> Toner pump motor (M28) Printer control board (PRCB) 		
	C-2224	Air pump motor (M29) rotation abnormality + 24V power abnormality. While M29 is rotating, an error detection signal (abnormal rotation) is detected for more than 1second. At this time, an error signal (24V cut off) is detected.		<ul style="list-style-type: none"> DC power supply /2 (DCPS/2) Printer control board (PRCB) 		
	C-2225	Air pump motor (M29) power abnormality. While M29 is rotating, an error detection signal (abnormal rotation) is detected for more than 1second. At this time, an abnormality signal (blowout of ICP) is detected, but no abnormality signal (24V cut off) is detected.		<ul style="list-style-type: none"> Air pump motor (M29) Printer control board (PRCB) 		
	C-2226	Air pump motor (M29) rotation abnormality. While M29 is rotating, an error detection signal (abnormal rotation) is detected for more than 1second. At this time, an error detection signal (blowout of a fuse/24V cut off) is not detected.		<ul style="list-style-type: none"> Air pump motor (M29) Printer control board (PRCB) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-2227	Developing screw motor (M21) rotation abnormality. The M21EM error detection signal is detected twice in succession within a specified period of time after M21 was turned ON. However, an error detection signal (blowout of ICP) is not detected.	The main body and option stop immediately to turn OFF the RL1 (the main relay) .	<ul style="list-style-type: none"> Developing screw motor (M21) Printer control board (PRCB) 		
	C-2228	The transfer belt motor (M30) rotation abnormality. The M30EM error detection signal is detected twice in succession within a specified period of time after M30 was turned ON. However, an error detection signal (blowout of ICP) is not detected.		<ul style="list-style-type: none"> Transfer belt motor (M30) ADU drive board (ADUDB) Printer control board (PRCB) 		
	C-2229	The transfer belt motor (M30) power abnormality. While M30 is rotating, the M30EM error detection signal is detected. At this time, an error detection signal (blowout of ICP) is detected, and the main door detection is Close		<ul style="list-style-type: none"> Transfer belt motor (M30) ADU drive board (ADUDB) 		
	C-2230	Waste toner box swing motor (M19) drive abnormality. The waste toner box swing sensor (PS15) ON or OFF is not detected twice in succession within a specified period of time after M19 turns ON.		<ul style="list-style-type: none"> Waste toner box swing sensor (PS15) Waste toner box swing motor (M19) Printer control board (PRCB) 		
	C-2231	De-curler motor (M32) rotation abnormality. The M32EM error detection signal is detected twice in succession within a specified period of time after M32 was turned ON, and the main door detection is Close.		<ul style="list-style-type: none"> De-curler motor (M32) ADU drive board (ADUDB) Printer control board (PRCB) 		
	C-2232	De-curler motor (M32) power abnormality. While M32 is rotating, the M32EM error detection signal is detected. At this time, an error detection signal (blowout of ICP) is detected, and the main door detection is Close.		<ul style="list-style-type: none"> De-curler motor (M32) ADU drive board (ADUDB) 		
	C-2233	Waste toner box swing motor (M19) rotation abnormality. The M19EM error detection signal is not detected twice in succession within a specified period of time after M19 was turned ON.		<ul style="list-style-type: none"> Waste toner box swing motor (M19) Printer control board (PRCB) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-2234	Transfer belt pressure release motor (M26) operation time abnormality 1. When M26 moves from the HP position to the pressure position, the transfer pressure position sensor /1 or /2 (PS55 or PS56) does not turn ON within a specified period of time. At this time, the main door detection is Close.		<ul style="list-style-type: none"> Transfer pressure position sensor /1 (PS55) Transfer pressure position sensor /2 (PS56) Transfer belt pressure release motor (M26) ADU drive board (ADUDB) 		
	C-2235	Transfer belt pressure release motor (M26) operation time abnormality 2.	The main body and option stop immediately to turn OFF the RL1 (the main relay).	<ul style="list-style-type: none"> Transfer pressure position sensor (PS54) Transfer belt pressure release motor (M26) ADU drive board (ADUDB) 		
	C-2236	Transfer belt pressure release motor (M26) power abnormality. While M26 is rotating, the M26EM error detection signal is detected. At this time, an error detection signal (blowout of ICP) is detected, and the main door detection is Close		<ul style="list-style-type: none"> Transfer belt pressure release motor (M26) ADU drive board (ADUDB) 		
	C-2237	Waste toner motor (M9) rotation abnormality. The M9EM error detection signal is detected twice in succession within a specified period of time after M9 was turned ON.		<ul style="list-style-type: none"> Waste toner motor (M9) Printer control board (PRCB) 		
Main body: Fan abnormality	C-2301	Developing suction fan /1 (FM9) rotation abnormality + 24V power abnormality. The FM9EM error detection signal is detected twice in succession within a specified period of time after FM9 was turned ON. At this time, an error detection signal (24V cut off) is detected.	The main body and option stop immediately to turn OFF the RL1 (the main relay) .	<ul style="list-style-type: none"> DC power supply /2 (DCPS/2) Printer control board (PRCB) 		
	C-2302	Developing suction fan /1 (FM9) power abnormality. The FM9EM error detection signal is detected twice in succession within a specified period of time after FM9 was turned ON. In addition, 24V is normal, and an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> Developing suction fan / 1 (FM9) Printer control board (PRCB) 		
	C-2303	Developing suction fan /1 (FM9) rotation abnormality. The FM9EM error detection signal is detected twice in succession within a specified period of time after FM9 was turned ON. However, error detection signals (24V cut off/ blowout of ICP) are not detected.		<ul style="list-style-type: none"> Developing suction fan / 1 (FM9) Printer control board (PRCB) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-2304	Transfer suction fan (FM5) rotation abnormality + 24V power abnormality. The FM5EM error detection signal is detected twice in succession within a specified period of time after FM5 was turned ON. At this time, an error detection signal (24V cut off) is detected.		<ul style="list-style-type: none"> DC power supply /2 (DCPS/2) Printer control board (PRCB) 		
	C-2305	Transfer suction fan (FM5) power abnormality. The FM5EM error detection signal is detected twice in succession within a specified period of time after FM5 was turned ON. In addition, 24V is normal, and an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> Transfer suction fan (FM5) Printer control board (PRCB) 		
	C-2306	Transfer suction fan (FM5) rotation abnormality. The FM5EM error detection signal is detected twice in succession within a specified period of time after FM5 was turned ON. However, error detection signals (24V cut off/ blowout of ICP) are not detected.		<ul style="list-style-type: none"> Transfer suction fan (FM5) Printer control board (PRCB) 		
	C-2307	Developing cooling fan /Up (FM31) rotation abnormality + 24V power abnormality. The FM31EM error detection signal is detected twice in succession within a specified period of time after FM31 was turned ON. At this time, an error detection signal (24V cut off) is detected.	The main body and option stop immediately to turn OFF the RL1 (the main relay).	<ul style="list-style-type: none"> DC power supply /2 (DCPS/2) Printer control board (PRCB) 		
	C-2308	Developing cooling fan (FM31) power abnormality. The FM31EM error detection signal is detected twice in succession within a specified period of time after FM31 was turned ON. In addition, 24V is normal, and an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> Developing cooling fan (FM31) Printer control board (PRCB) 		
	C-2309	Developing cooling fan (FM31) rotation abnormality. The FMxEM error detection signal is detected twice in succession within a specified period of time after FMx was turned ON. However, error detection signals (24V cut off/ICP blowout) are not detected.		<ul style="list-style-type: none"> Developing cooling fan (FM31) Printer control board (PRCB) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-2311	Developing cooling fan (FM11) rotation abnormality + 24V power abnormality. The FM11EM error detection signal is detected twice in succession within a specified period of time after FM11 was turned ON. At this time, an error detection signal (24V cut off) is detected.		<ul style="list-style-type: none"> DC power supply /2 (DCPS/2) AC drive board (ACDB) 		
	C-2312	Pump cooling fan (FM11) power abnormality. The FM11EM error detection signal is detected twice in succession within a specified period of time after FM11 was turned ON. However, error detection signals (24V cut off/blowout of ICP) are not detected.		<ul style="list-style-type: none"> Pump cooling fan (FM11) AC drive board (ACDB) 		
	C-2313	Pump cooling fan (FM11) rotation abnormality. The FM11EM error detection signal is detected twice in succession within a specified period of time after FM11 was turned ON. However, error detection signals (24V cut off/blowout of ICP) are not detected.		<ul style="list-style-type: none"> Pump cooling fan (FM11) Printer control board (PRCB) AC drive board (ACDB) 		
	C-2314	Suction fan (FM32) rotation abnormality + 24V power abnormality. The FM32EM error detection signal is detected twice in succession within a specified period of time after FM32 was turned ON. At this time, an error detection signal (24V cut off) is detected.		<ul style="list-style-type: none"> DC power supply /2 (DCPS/2) Printer control board (PRCB) 		
	C-2315	Suction fan (FM32) power abnormality. The FM32EM error detection signal is detected twice in succession within a specified period of time after FM32 was turned ON. At this time, 24V is normal, but an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> Suction fan (FM32) Printer control board (PRCB) 		
	C-2316	Suction fan (FM32) rotation abnormality. The FM32EM error detection signal is detected twice in succession within a specified period of time after FM32 was turned ON. However, error detection signals (24V cut off/blowout of ICP) are not detected.		<ul style="list-style-type: none"> Suction fan (FM32) Printer control board (PRCB) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
Main body :V power abnormality	C-2401	The fall-off of the erase lamp (EL) CN is detected. When turning ON the power, an error detection signal (fall-off) is detected a specified period of time after the fall-off detection control signal of the EL CN turns ON.	The main body and option stop immediately to turn OFF the RL1 (the main relay) .	<ul style="list-style-type: none"> Erase lamp (EL) Printer control board (PRCB) 		
Main body: Drum	C-2402	Drum temperature sensor wiring harness breakage. When the change in temperature of the drum temperature sensor (TH5) is less than -2°C a specified period of time after the main power switch (SW1) turns ON to start the control of the dehumidification heater /1 (HTR1) and the drum temperature is below 10°C after 1minute.		<ul style="list-style-type: none"> Drum temperature sensor (TH5) Printer control board (PRCB) 		
	C-2403	Drum temperature sensor wiring harness breakage. When the main power switch (SW1) turns ON with the fusing temperature below 50°C, the detected temperature of the drum temperature sensor (TH5) is more than 52°C, and when the detected temperature is above 52°C after a specified period of time.	The main body and option stop immediately to turn OFF the RL1 (the main relay).	<ul style="list-style-type: none"> Drum temperature sensor (TH5) Printer control board (PRCB) 		
	C-2411	TCR sensor (TCRS) output abnormality 1. The TCRS output is detected more than 3.0V (153step) in printing.	The main body and option stop immediately to turn OFF the RL1 (the main relay) .	<ul style="list-style-type: none"> TCR sensor (TCRS) Printer control board (PRCB) 		
	C-2412	TCR sensor (TCRS) output abnormality 2. The TCRS output is detected more than 0.5V (25step) in printing.	The main body and option stop immediately to turn OFF the RL1 (the main relay).	<ul style="list-style-type: none"> TCR sensor (TCRS) Printer control board (PRCB) 		
	C-2413	TCR sensor (TCRS) output abnormality 3.		<ul style="list-style-type: none"> TCR sensor (TCRS) Printer control board (PRCB) 		
Main body: High voltage power source abnormality	C-2701	A charge leak is detected. After a charge EM signal abnormality is detected while in the charge ON, up to 5 charge ON/OFF operations occur in succession while in 10 prints.	The main body and option stop immediately to turn OFF the RL1 (the main relay) .	<ul style="list-style-type: none"> Charging corona High voltage unit /1 (HV1) 		
	C-2702	A transfer leak is detected. After a transfer EM signal abnormality is detected while in the charge ON, up to 5 transfer ON/OFF operations occur in succession while in 10 prints.	The main body and option stop immediately to turn OFF the RL1 (the main relay).	<ul style="list-style-type: none"> Transfer roller High voltage unit /2 (HV2) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
Main body: Process abnormality	C-2704	High voltage power/multi feed detection 24V power abnormality. A high voltage power 24V or multi feed detection 24V error detection signal (blowout of ICP) is detected. At this time, the main door detection and the PFU door detection are Close.		<ul style="list-style-type: none"> Multi feed detection board /S (MFDBS) Multi feed detection board /R (MFDBR) High voltage unit /2 (HV2) ADU drive board (ADUDB) 		
	C-2705	PCC leak is detected. After a PCC EM signal abnormality is detected while in the PCC ON, up to 5 transfer ON/OFF operations occur in succession while in 10 prints.		<ul style="list-style-type: none"> PCC unit High voltage unit /3 (HV3) 		
	C-2801	IDC sensor (TCB) dirt correction abnormality. While in the maximum density correction (Dmax), the IDC sensor (TCB) dirt correction abnormality is detected 10 times in succession.	Error code is not displayed on the operation panel, but displayed only on the data collection, the list output and CSRC.	<ul style="list-style-type: none"> Toner control board (TCB) Printer control board (PRCB) 		
	C-2802	The maximum density correction (Dmax) is not completed. While in Dmax, the number of rotations of the developing sleeve gets to the maximum.		<ul style="list-style-type: none"> developing motor (M3) Toner control board (TCB) Printer control board (PRCB) 		
	C-2803	The IDC sensor (TCB) output abnormality. While in the maximum density correction (Dmax), a patch for control is not output. (No output is made from the gamma sensor.)		<ul style="list-style-type: none"> Toner control board (TCB) LPH board (KPHB) Overall control board (OACB) Image processing board (IPB) 		
	C-2804	The dirt correction of the IDC sensor is not completed.		<ul style="list-style-type: none"> Toner control board (TCB) Printer control board (PRCB) 		
	C-2807	Drum potential sensor (DPS) output abnormality 1. The DPS detects the value less than the potential specified value of the unexposed part 5 times in succession.	The main body and option stop immediately to turn OFF the RL1 (the main relay).	<ul style="list-style-type: none"> Drum potential sensor (DPS) Drum potential sensor board (DPSB) Printer control board (PRCB) 		
	C-2808	Dot diameter correction abnormality. While in the dot diameter correction, the correction is terminated with an abnormal value.	Error code is not displayed on the operation panel, but displayed only on the data collection, the list output and CSRC.	<ul style="list-style-type: none"> Drum potential sensor (DPS) Drum potential sensor board (DPSB) Image processing board (IPB) Printer control board (PRCB) Overall control board (OACB) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-2809	Drum potential sensor (DPS) output abnormality 2. While in the 0V check of the DPS, more than 100V of the drum surface potential is detected more than 5 times. When this condition is detected 5 times in succession, the error code is displayed.	The main body and option stop immediately to turn OFF the RL1 (the main relay).	<ul style="list-style-type: none"> • Drum potential sensor (DPS) • Drum potential sensor board (DPSB) • Printer control board (PRCB) 		
	C-2810	Drum potential sensor (DPS) output abnormality 3. While in the drum potential correction, a patch for control is not output with the V1 getting to more than 350V. When this condition is detected 5 times in succession, the error code is displayed.		<ul style="list-style-type: none"> • Drum potential sensor (DPS) • Drum potential sensor board (DPSB) • Printer control board (PRCB) 		
	C-2811	Drum potential sensor (DPS) data abnormality. While in the drum potential correction, no convergence is obtained even after correction is made more than 10 times. When this condition is detected 5 times in succession, the error code is displayed.		<ul style="list-style-type: none"> • Drum potential sensor (DPS) • Drum potential sensor board (DPSB) • Printer control board (PRCB) 		
	C-2812	Transfer current auto adjustment abnormality. The auto adjustment of the transfer current has not completed.	Error code is not displayed on the operation panel, but displayed only on the data collection, the list output and CSRC.	<ul style="list-style-type: none"> • Transfer roller • High voltage unit /2 (HV2) 		
	C-2815	Developing bias auto adjustment abnormality. The auto adjustment of the developing bias has not completed.		<ul style="list-style-type: none"> • Developer • High voltage unit /1 (HV1) 		
	C-2816	Drum charger capacity deterioration. When the charger grid/developing bias is in excess of the limit of correction, lower the developing potential/fogging margin potential in steps of 50V. As a result, less than 50V of the difference with the target charger potential is detected 10 times in succession.	The main body and option stop immediately to turn OFF the RL1 (the main relay).	<ul style="list-style-type: none"> • Drum potential sensor (DPS) • Drum potential sensor board (DPSB) • Charging corona • High voltage unit /1 (HV1) 		
	C-2821	The toner supply prohibition status is not released 1. Even though the TCR sensor (TCRS) output increases, the number of the toner supply prohibition status continuity is detected 30 times, and more than 2.5V of the TCRS output value is detected.		<ul style="list-style-type: none"> • Developing unit • TCR sensor (TCRS) • Printer control board (PRCB) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-2822	The toner supply prohibition status is not released 2. The number of the toner supply prohibition status continuity becomes 100 times.		<ul style="list-style-type: none"> Developing unit TCR sensor (TCRS) Printer control board (PRCB) 		
Main body: Motor abnormality	C-3102	Fusing pressure release motor (M33) operation time abnormality 1. When M33 moves from the release position to the pressure position, the fusing pressure home sensor (PS58) does not turn ON within a specified period of time.		<ul style="list-style-type: none"> Fusing pressure position sensor (PS58) Fusing pressure release motor (M33) Printer control board (PRCB) 		
	C-3103	Fusing pressure release motor (M33) operation time abnormality 2. The fusing pressure home sensor (PS58) ON is not detected within a specified period of time after the main power turns ON. When M33 moves from the pressure position to the release position, PS58 does not turn ON within a specified period of time.		<ul style="list-style-type: none"> Fusing pressure position sensor (PS58) Fusing pressure release motor (M33) Printer control board (PRCB) 		
	C-3201	Drum motor (M24) power abnormality + 24V power abnormality. When M24 turns ON, error detection signals (blowout of ICP and the 24V cut off) are detected.		<ul style="list-style-type: none"> DC power supply /2 (DCPS /2) AC drive board (ACDB) 		
	C-3202	Web motor (M24) power abnormality. An error detection signal (blowout of ICP) is detected when M24 turns ON. At this time, an error detection signal (24V cut off) is not detected.		<ul style="list-style-type: none"> Web motor (M24) AC drive board (ACDB) 		
Main body: Fusing high temperature abnormality	C-3501	Thermistor /1 (TH1) high temperature abnormality (software). TH1 detects a temperature of 244°C or above 10 times in a period of 0.5second.		<ul style="list-style-type: none"> Fusing temperature sensor /1 (TH1) Fusing heater lamp /1 (L1) Fusing heater lamp /2 (L2) Printer control board (PRCB) AC drive board (ACDB) 		
	C-3502	Thermistor /3 (TH3) high temperature abnormality (software). TH3 detects a temperature of 230°C or above 5 times in a period of 1second.		<ul style="list-style-type: none"> Fusing temperature sensor /3 (TH3) Fusing heater lamp /3 (L3) Printer control board (PRCB) AC drive board (ACDB) 		
	C-3503	Thermistor /1 (TH1) high temperature abnormality (hardware). TH1 detects the fusing abnormality detection 1.		<ul style="list-style-type: none"> Fusing temperature sensor /1 (TH1) Fusing heater lamp /1 (L1) Fusing heater lamp /2 (L2) Printer control board (PRCB) AC drive board (ACDB) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-3504	Thermistor /3 (TH3) high temperature abnormality (hardware). TH3 detects the fusing abnormality detection 4.		<ul style="list-style-type: none"> Fusing temperature sensor /3 (TH3) Fusing heater lamp /3 (L3) Printer control board (PRCB) AC drive board (ACDB) 		
Main body: Fusing low temperature abnormality	C-3801	Thermistor /1 (TH1) low temperature abnormality (software). TH1 does not get to 50°C when a specified period of time has elapsed after the main power switch (SW1) turns ON for the fusing ON control.		<ul style="list-style-type: none"> Fusing temperature sensor /1 (TH1) Fusing heater lamp /1 (L1) Fusing heater lamp /2 (L2) Printer control board (PRCB) AC drive board (ACDB) 		
	C-3802	Thermistor /3 (TH3) low temperature abnormality (software). TH3 does not get to 50°C when a specified period of time has elapsed after the main power switch (SW1) turns ON for the fusing ON control.		<ul style="list-style-type: none"> Fusing temperature sensor /3 (TH3) Fusing heater lamp /3 (L3) Printer control board (PRCB) AC drive board (ACDB) 		
Main body: Fusing sensor abnormality	C-3901	Thermistor /1 (TH1) high temperature abnormality (long time/software). TH1 detects a temperature of 240°C or above 60 times in a period of 0.5second.		<ul style="list-style-type: none"> Fusing temperature sensor /1 (TH1) Fusing heater lamp /1 (L1) Fusing heater lamp /2 (L2) Printer control board (PRCB) AC drive board (ACDB) 		
	C-3902	Thermistor /3 (TH3) high temperature abnormality (long time/software). TH3 detects a temperature of 220°C or above 30 times in a period of 1second.		<ul style="list-style-type: none"> Fusing temperature sensor /3 (TH3) Fusing heater lamp /3 (L3) Printer control board (PRCB) AC drive board (ACDB) 		
	C-3903	Thermistor /1 (TH1) low temperature abnormality 1 (hardware). TH1 detects the fusing abnormality detection signal 2.		<ul style="list-style-type: none"> Fusing temperature sensor /1 (TH1) Fusing heater lamp /1 (L1) Fusing heater lamp /2 (L2) Printer control board (PRCB) AC drive board (ACDB) 		
	C-3904	Thermistor /3 (TH3) high temperature abnormality (hardware). TH3 detects the fusing abnormality detection 5.		<ul style="list-style-type: none"> Fusing temperature sensor /3 (TH3) Fusing heater lamp /3 (L3) Printer control board (PRCB) AC drive board (ACDB) 		
	C-3905	Thermistor /1 (TH1) low temperature abnormality 1 (hardware). TH1 detects the fusing abnormality detection signal 3.		<ul style="list-style-type: none"> Fusing temperature sensor /1 (TH1) Fusing heater lamp /1 (L1) Fusing heater lamp /2 (L2) Printer control board (PRCB) AC drive board (ACDB) 		
	C-3906	Thermistor /3 (TH3) high temperature abnormality (hardware). TH3 detects the fusing abnormality detection 6.		<ul style="list-style-type: none"> Fusing temperature sensor /3 (TH3) Fusing heater lamp /3 (L3) Printer control board (PRCB) AC drive board (ACDB) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
Main body: Fan abnormality	C-4301	Image processing cooling fan (FM12) rotation abnormality + 24V power abnormality. The abnormal status is detected twice in succession after FM12 was turned ON. At this time, an error detection signal (24V cut off) is detected.	A: The main body and option stop immediately to turn OFF the RL1 (the main relay) .	<ul style="list-style-type: none"> DC power supply /2 (DCPS/2) AC drive board (ACDB) 		
	C-4302	Image processing cooling fan (FM12) power abnormality. The FM12EM error detection signal is detected twice in succession within a specified period of time after FM12 was turned ON. At this time, 24V is normal, but an error detection signal (blowout of ICP) is detected.	The main body and option stop immediately to turn OFF the RL1 (the main relay).	<ul style="list-style-type: none"> Image processing cooling fan (FM12) AC drive board (ACDB) 		
	C-4303	Image processing cooling fan (FM12) rotation abnormality 1. The FM12EM error detection signal is detected twice in succession within a specified period of time after FM12 was turned ON. However, error detection signals (24V cut off/blowout of ICP) are not detected.		<ul style="list-style-type: none"> Image processing cooling fan (FM12) Printer control board (PRCB) AC drive board (ACDB) 		
	C-4304	Image processing cooling fan (FM12) rotation abnormality 2. When the print is started, the EM signal of FM12 turns ON.	Error code is not displayed on the operation panel, but displayed only on the data collection, the list output and CSRC.	<ul style="list-style-type: none"> Image processing cooling fan (FM12) Printer control board (PRCB) AC drive board (ACDB) 		
	C-4305	LPH fan /1 (FM3) rotation abnormality + 24V power abnormality. The abnormal status is detected twice in succession after FM3 was turned ON. At this time, an error detection signal (24V cut off) is detected.	The main body and option stop immediately to turn OFF the RL1 (the main relay).	<ul style="list-style-type: none"> DC power supply /2 (DCPS/2) AC drive board (ACDB) 		
	C-4306	LPH fan /1 (FM3) power abnormality. The FM3EM error detection signal is detected twice in succession within a specified period of time after FM3 was turned ON. At this time, 24V is normal, but an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> LPH fan /1 (FM3) AC drive board (ACDB) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-4307	LPH fan /1 (FM3) rotation abnormality 1. The FM3EM error detection signal is detected twice in succession within a specified period of time after FM3 was turned ON. However, error detection signals (24V cut off/ blowout of ICP) are not detected.		<ul style="list-style-type: none"> LPH fan /1 (FM3) Printer control board (PRCB) AC drive board (ACDB) 		
	C-4308	LPH fan /2 (FM25) rotation abnormality + 24V power abnormality. The abnormal status is detected twice in succession after FM25 was turned ON. At this time, an error detection signal (24V cut off) is detected.		<ul style="list-style-type: none"> DC power supply /2 (DCPS/2) AC drive board (ACDB) 		
	C-4309	LPH fan /2 (FM25) power abnormality. The FM3EM error detection signal is detected twice in succession within a specified period of time after FM25 was turned ON. At this time, 24V is normal, but an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> LPH fan /2 (FM25) AC drive board (ACDB) 		
	C-4310	LPH fan /2 (FM25) rotation abnormality 2. The FM3EM error detection signal is detected twice in succession within a specified period of time after FM25 was turned ON. However, error detection signals (24V cut off/blowout of ICP) are not detected.		<ul style="list-style-type: none"> LPH fan /2 (FM25) Printer control board (PRCB) AC drive board (ACDB) 		
	C-4311	LPH fan /3 (FM26) rotation abnormality + 24V power abnormality. The abnormal status is detected twice in succession after FM26 was turned ON. At this time, an error detection signal (24V cut off) is detected.		<ul style="list-style-type: none"> DC power supply /2 (DCPS/2) AC drive board (ACDB) 		
	C-4312	LPH fan /3 (FM26) power abnormality. The FM26EM error detection signal is detected twice in succession within a specified period of time after FM26 was turned ON. At this time, 24V is normal, but an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> LPH fan /3 (FM26) AC drive board (ACDB) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-4313	LPH fan /3 (FM26) rotation abnormality 3. The FM26EM error detection signal is detected twice in succession within a specified period of time after FM26 was turned ON. However, error detection signals (24V cut off/blowout of ICP) are not detected.		<ul style="list-style-type: none"> LPH fan /3 (FM26) Printer control board (PRCB) AC drive board (ACDB) 		
	C-4314	Front cooling fan (FM18) rotation abnormality + 24V power abnormality. The abnormal status is detected twice in succession after FM18 was turned ON. At this time, an error detection signal (24V cut off) is detected.		<ul style="list-style-type: none"> DC power supply /2 (DCPS/2) AC drive board (ACDB) 		
	C-4315	Front cooling fan (FM18) power abnormality. The FM18EM error detection signal is detected twice in succession within a specified period of time after FM18 was turned ON. At this time, 24V is normal, but an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> Front cooling fan (FM18) AC drive board (ACDB) 		
	C-4316	Front cooling fan (FM18) rotation abnormality. The FM26EM error detection signal is detected twice in succession within a specified period of time after FM18 was turned ON. However, error detection signals (24V cut off/blowout of ICP) are not detected.		<ul style="list-style-type: none"> Front cooling fan (FM18) Printer control board (PRCB) AC drive board (ACDB) 		
Main body: Image processing abnormality	C-4701	FIFO address abnormality for the printer. While in the image write, the expansion processing of image data that is read in is not correctly terminated.	If there is a sheet of paper being printed, the main body completes the paper exit before stopping operations and turning OFF the RL1 (the main relay).	Image processing board (IPB)		
	C-4702	Compression input FIFO abnormality. An error interrupt occurs with the compression/expansion chip FIFO.		Image processing board (IPB)		
	C-4703	Elongation abnormality. Due to the elongation of data the compression of which is not completed, the destruction of the compressed data and the abnormal length of data, an elongation abnormality is detected.		<ul style="list-style-type: none"> Image processing board (IPB) 		
	C-4705	Printer time out.		<ul style="list-style-type: none"> Printer control board (PRCB) Image processing board (IPB) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-4706	Expansion device access abnormality. While in the image write, despite of no resource provided, an inappropriate processing such as accessing to the elongation device is made.		Image processing board (IPB)		
	C-4708	Expansion device access abnormality. When accessing to the memory device, a defective software is detected.		Image processing board (IPB)		
	C-4709	Memory time out.		<ul style="list-style-type: none"> • Overall control board (OACB) • Printer control board (PRCB) • Image processing board (IPB) 		
	C-4720	Shift amount abnormality while in the repeat. When the shift amount (used for cutting margin, etc.) while in the repeat is negative (-).	Error code is not displayed on the operation panel, but displayed only on the data collection, the list output and CSRC.	Image processing board (IPB)		
	C-4721	The Centering Adjustment is too late. The print operation starts before the paper centering adjustment is terminated. (The Centering Adjustment is too late)		<ul style="list-style-type: none"> • Paper skew sensor /Fr (PS65) • Paper skew sensor /Rr (PS66) • Printer control board (PRCB) • ADU drive board (ADUDB) 		
	C-4722	The creation of the PWM gamma curve failed. A PWM gamma curve is not created properly.		<ul style="list-style-type: none"> • Toner control board (TCB) • Printer control board (PRCB) 		
	C-4725	LPH drive board (LPHB) connection abnormality. Due to the disconnection of the LPHB connector, no connection is available with the overall control board.	The main body and option stop immediately to turn OFF the RL1 (the main relay) .	<ul style="list-style-type: none"> • LPH drive board (LPHB) • Relay board /A (RBA) • Image processing board (IPB) 		
	C-4850	Segmentation abnormality. The overall control software accesses an illegal address.		Image processing board (IPB)		
	C-5010	Communication error between the overall control board (OACB) and the printer control board (PRCB). Any of the following error is detected during data reception between OACB and PRCB.	The main body and option stop immediately to turn OFF the RL1 (the main relay).	<ul style="list-style-type: none"> • Printer control board (PRCB) • Overall control board (OACB) 		
	C-5101	Fusing motor (M1) speed abnormality. An error detection signal is detected twice in succession within a specified period of time after M1 was turned ON.		<ul style="list-style-type: none"> • Fusing motor (M1) • Printer control board (PRCB) 		
	C-5102	Toner counter (CNT1) power abnormality 1. When CNT1 is turned ON from OFF, an error detection signal (blowout of ICP/24V cut off) is detected.		<ul style="list-style-type: none"> • DC power supply /2 (DCPS/2) • AC drive board (ACDB) 		
Main body: Power abnormality						

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
Main body: Fan abnormality	C-5103	Toner counter (CNT1) power abnormality 2. When CNT1 is turned ON from OFF, an error detection signal (blowout of ICP) is detected. At this time, an error detection signal (24V cut off) is not detected.		<ul style="list-style-type: none"> • Total counter (CNT1) • AC drive board (ACDB) 		
	C-5104	Key counter (CNT2) power abnormality 1. When CNT2 is turned ON from OFF, an error detection signal (blowout of ICP/24V cut off) is detected.		<ul style="list-style-type: none"> • DC power supply /2 (DCPS/2) • AC drive board (ACDB) 		
	C-5105	Key counter (CNT2) power abnormality 2. When CNT2 is turned ON from OFF, an error detection signal (blowout of ICP) is detected. At this time, an error detection signal (24V cut off) is not detected.		<ul style="list-style-type: none"> • Key counter (CNT2) • AC drive board (ACDB) 		
	C-5311	Suction cooling fan /1 (FM6) rotation abnormality + 24V power abnormality. The FM6EM error detection signal is detected twice in succession within a specified period of time after FM6 was turned ON. At this time, an error detection signal (24V cut off) is detected.		<ul style="list-style-type: none"> • DC power supply /2 (DCPS/2) • AC drive board (ACDB) 		
	C-5312	Suction cooling fan /1 (FM6) power abnormality. The FM6EM error detection signal is detected twice in succession within a specified period of time after FM6 was turned ON. At this time, 24V is normal, but an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> • Suction cooling fan /1 (FM6) • AC drive board (ACDB) 		
	C-5313	Suction cooling fan /1 (FM6) rotation abnormality 1. The FM6EM error detection signal is detected twice in succession within a specified period of time after FM6 was turned ON. However, error detection signals (24V cut off/ blowout of ICP) are not detected.		<ul style="list-style-type: none"> • Suction cooling fan /1 (FM6) • Printer control board (PRCB) • AC drive board (ACDB) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-5314	Suction cooling fan /3 (FM8) rotation abnormality + 24V power abnormality. The FM8EM error detection signal is detected twice in succession within a specified period of time after FM8 was turned ON. At this time, an error detection signal (24V cut off) is detected.		<ul style="list-style-type: none"> DC power supply /2 (DCPS/2) AC drive board (ACDB) 		
	C-5315	Suction cooling fan /3 (FM8) power abnormality. The FM8EM error detection signal is detected twice in succession within a specified period of time after FM8 was turned ON. At this time, 24V is normal, but an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> Suction cooling fan /3 (FM8) AC drive board (ACDB) 		
	C-5316	Suction cooling fan /3 (FM6) rotation abnormality 1. The FM8EM error detection signal is detected twice in succession within a specified period of time after FM8 was turned ON. However, error detection signals (24V cut off/ blowout of ICP) are not detected.		<ul style="list-style-type: none"> Suction cooling fan /3 (FM8) Printer control board (PRCB) AC drive board (ACDB) 		
	C-5317	Cooling fan /1 (FM1) rotation abnormality + 24V power abnormality. The FM1EM error detection signal is detected twice in succession within a specified period of time after FM1 was turned ON. At this time, an error detection signal (24V cut off) is detected.		<ul style="list-style-type: none"> DC power supply /2 (DCPS/2) AC drive board (ACDB) 		
	C-5318	Cooling fan /1 (FM1) power abnormality. The FM1EM error detection signal is detected twice in succession within a specified period of time after FM1 was turned ON. At this time, 24V is normal, but an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> Cooling fan /1 (FM1) AC drive board (ACDB) 		
	C-5319	Cooling fan /1 (FM1) rotation abnormality 1. The FM1EM error detection signal is detected twice in succession within a specified period of time after FM1 was turned ON. However, error detection signals (24V cut off/ blowout of ICP) are not detected.		<ul style="list-style-type: none"> Cooling fan /1 (FM1) Printer control board (PRCB) AC drive board (ACDB) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-5320	Cooling fan /2 (FM2) rotation abnormality + 24V power abnormality. The FM2EM error detection signal is detected twice in succession within a specified period of time after FM2 was turned ON. At this time, an error detection signal (24V cut off) is detected.		<ul style="list-style-type: none"> DC power supply /2 (DCPS/2) AC drive board (ACDB) 		
	C-5321	Cooling fan /2 (FM2) power abnormality. The FM2EM error detection signal is detected twice in succession within a specified period of time after FM2 was turned ON. At this time, 24V is normal, but an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> Cooling fan /2 (FM2) AC drive board (ACDB) 		
	C-5322	Cooling fan /1 (FM1) rotation abnormality 1. The FM2EM error detection signal is detected twice in succession within a specified period of time after FM2 was turned ON. However, error detection signals (24V cut off/ blowout of ICP) are not detected.		<ul style="list-style-type: none"> Cooling fan /2 (FM2) Printer control board (PRCB) AC drive board (ACDB) 		
	C-5326	Cooling fan /1 (FM1) rotation abnormality 2. When the print is started, the EM signal of FM1 turns ON.	Error code is not displayed on the operation panel, but displayed only on the data collection, the list output and CSRC.	<ul style="list-style-type: none"> Cooling fan /1 (FM1) Printer control board (PRCB) AC drive board (ACDB) 		
	C-5327	Cooling fan /1 (FM1) rotation abnormality 2. When the print is started, the EM signal of FM2 turns ON.		<ul style="list-style-type: none"> Cooling fan /2 (FM2) Printer control board (PRCB) AC drive board (ACDB) 		
	C-5328	Suction cooling fan /1 (FM6) rotation abnormality 2. When the print is started, the EM signal of FM6 turns ON.		<ul style="list-style-type: none"> Suction cooling fan /1 (FM6) Printer control board (PRCB) AC drive board (ACDB) 		
	C-5329	Abnormality of the fan connected to ADU drive board. The EM error detection signal is detected twice in succession within a specified period of time after ADU cooling fan /1 (FM14), /2 (FM15), /3 (FM13), sensor cooling fan /1 (FM16) and registration cooling fan (FM17) connected to ADU drive board was turned ON. At this time, the door close detection of the door open/close sensor /1 (PS1), /2 (PS2) and PF door open/close sensor (PS70) is detected 10 times in succession.	The main body and option stop immediately to turn OFF the RL1 (the main relay) .	<ul style="list-style-type: none"> Cooling fan /1 (FM14) Cooling fan /2 (FM15) Cooling fan /3 (FM13) Sensor cooling fan (FM16) Registration cooling fan (FM17) ADU drive board (ADUDB) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-5330	Suction cooling fan /2 (FM7) rotation abnormality + 24V power abnormality. The FM7EM error detection signal is detected twice in succession within a specified period of time after FM7 was turned ON. At this time, an error detection signal (24V cut off) is detected.		<ul style="list-style-type: none"> DC power supply /2 (DCPS/2) AC drive board (ACDB) 		
	C-5331	Suction cooling fan /2 (FM7) power abnormality. The FM7EM error detection signal is detected twice in succession within a specified period of time after FM7 was turned ON. At this time, 24V is normal, but an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> Suction cooling fan /2 (FM7) AC drive board (ACDB) 		
	C-5332	Suction cooling fan /2 (FM6) rotation abnormality. The FM7EM error detection signal is detected twice in succession within a specified period of time after FM7 was turned ON. However, error detection signals (24V cut off/ blowout of ICP) are not detected.		<ul style="list-style-type: none"> Suction cooling fan /2 (FM7) Printer control board (PRCB) AC drive board (ACDB) 		
	C-5333	Suction cooling fan /3 (FM8) rotation abnormality. When the print is started, the EM signal of FM8 turns ON.	Error code is not displayed on the operation panel, but displayed only on the data collection, the list output and CSRC.	<ul style="list-style-type: none"> Suction cooling fan /3 (FM8) Printer control board (PRCB) AC drive board (ACDB) 		
	C-5334	LPH fan /1 (FM3) rotation abnormality. When the print is started, the EM signal of FM3 turns ON.		<ul style="list-style-type: none"> LPH fan /1 (FM3) Printer control board (PRCB) AC drive board (ACDB) 		
	C-5335	LPH fan /2 (FM25) rotation abnormality. When the print is started, the EM signal of FM25 turns ON.		<ul style="list-style-type: none"> LPH fan /2 (FM25) Printer control board (PRCB) AC drive board (ACDB) 		
	C-5336	LPH fan /2 (FM25) rotation abnormality. When the print is started, the EM signal of FM25 turns ON.		<ul style="list-style-type: none"> LPH fan /3 (FM26) Printer control board (PRCB) AC drive board (ACDB) 		
	C-5337	De-curler fan /1 (FM29) rotation abnormality. The FM29EM error detection signal is detected twice in succession within a specified period of time after FM29 was turned ON. At this time, the door close is detected.	The main body and option stop immediately to turn OFF the RL1 (the main relay) .	<ul style="list-style-type: none"> De-curler fan /1 (FM29) ADU drive board (ADUDB) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-5338	De-curler fan /2 (FM30) rotation abnormality. The FM30EM error detection signal is detected twice in succession within a specified period of time after FM30 was turned ON. At this time, the door close is detected.		<ul style="list-style-type: none"> De-curler fan /2 (FM30) ADU drive board (ADUDB) 		
	C-5339	Transfer belt cleaning fan (FM27) rotation abnormality. When the print is started, the EM signal of FM27 turns ON.		<ul style="list-style-type: none"> Transfer belt cleaning fan (FM27) ADU drive board (ADUDB) 		
	C-5340	Rotation abnormality of fans equipped in ADU. The EM error signal is detected twice in succession within a specified period of time after ADU cooling fan /2 (FM15), belt cooling fan (FM37) and reverse cooling fan (FM38) was turned ON. At this time, the door close is detected.		<ul style="list-style-type: none"> Cooling fan /2 (FM15) Belt cooling fan (FM37) Reverse cooling fan (FM38) ADU drive board (ADUDB) 		
	C-5341	Collection pipe cooling fan (FM34) rotation abnormality + 24V power abnormality. The FM34EM error detection signal is detected twice in succession within a specified period of time after FM34 was turned ON. At this time, an error detection signal (24V cut off) is detected.		<ul style="list-style-type: none"> DC power supply /2 (DCPS/2) Printer control board (PRCB) 		
	C-5342	Collection pipe cooling fan (FM34) power abnormality. The FM34EM error detection signal is detected twice in succession within a specified period of time after FM34 was turned ON. At this time, 24V is normal, but an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> Collection pipe cooling fan (FM34) Printer control board (PRCB) 		
	C-5343	Collection pipe cooling fan (FM34) rotation abnormality 1. The FM34EM error detection signal is detected twice in succession within a specified period of time after FM34 was turned ON. However, error detection signals (24V cut off/blowout of ICP) are not detected.		<ul style="list-style-type: none"> Collection pipe cooling fan (FM34) Printer control board (PRCB) 		
	C-5344	Collection pipe cooling fan (FM34) rotation abnormality 2. When the print is started, the EM signal of FM34 turns ON.		<ul style="list-style-type: none"> Collection pipe cooling fan (FM34) Printer control board (PRCB) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-5345	Toner bottle cooling fan (FM35) rotation abnormality + 24V power abnormality. The FM35EM error detection signal is detected twice in succession within a specified period of time after FM35 was turned ON. At this time, an error detection signal (24V cut off) is detected.		<ul style="list-style-type: none"> DC power supply /2 (DCPS/2) AC drive board (ACDB) 		
	C-5346	Toner bottle cooling fan (FM35) power abnormality. The FM35EM error detection signal is detected twice in succession within a specified period of time after FM35 was turned ON. At this time, 24V is normal, but an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> Toner bottle cooling fan (FM35) AC drive board (ACDB) 		
	C-5347	Toner bottle cooling fan (FM35) rotation abnormality 1. The FM35EM error detection signal is detected twice in succession within a specified period of time after FM35 was turned ON. However, error detection signals (24V cut off/blowout of ICP) are not detected.		<ul style="list-style-type: none"> Toner bottle cooling fan (FM35) Printer control board (PRCB) 		
	C-5348	Toner bottle cooling fan (FM35) rotation abnormality 2. When the print is started, the EM signal of FM35 turns ON.		<ul style="list-style-type: none"> Toner bottle cooling fan (FM35) Printer control board (PRCB) 		
	C-5349	DC power supply /3 cooling fan (FM36) rotation abnormality + 24V power abnormality The FM36EM error detection signal is detected twice in succession within a specified period of time after FM36 was turned ON. At this time, an error detection signal (24V cut off) is detected.		<ul style="list-style-type: none"> DC power supply /2 (DCPS/2) AC drive board (ACDB) 		
	C-5350	DC power supply /3 cooling fan (FM36) power abnormality. The FM36EM error detection signal is detected twice in succession within a specified period of time after FM36 was turned ON. At this time, 24V is normal, but an error detection signal (blowout of ICP) is detected.		<ul style="list-style-type: none"> DC power supply /3 cooling fan (FM36) AC drive board (ACDB) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-5351*	DC power supply /3 cooling fan (FM36) rotation abnormality 1. The FM36EM error detection signal is detected twice in succession within a specified period of time after FM36 was turned ON. However, error detection signals (24V cut off/blowout of ICP) are not detected.		<ul style="list-style-type: none"> DC power supply /3 cooling fan (FM36) Printer control board (PRCB) 		
	C-5352*	DC power supply /3 cooling fan (FM36) rotation abnormality 2. When the print is started, the EM signal of FM36 turns ON.		<ul style="list-style-type: none"> DC power supply /3 cooling fan (FM36) Printer control board (PRCB) 		
Main body: Scanner abnormality	C-6101	Scanner motor (M27) movement time abnormality + 24V power abnormality. The scanner home sensor (PS51) or the APS sensor /1 (PS52) does not turn ON within a specified period of time after the home position search is started. At this time, an error detection signal (24V cut off) of M27 is detected.		<ul style="list-style-type: none"> DC power supply /1 (DCPS/1) Scanner drive board (SCDB) 		
	C-6102	Scanner motor (M27) power abnormality. The scanner home sensor (PS51) or the APS sensor /1 (PS52) does not turn ON within a specified period of time after the home position search is started. At this time, 24V is normal, but an error detection signal (blowout of a fuse) is detected.		<ul style="list-style-type: none"> Scanner motor (M27) Scanner drive board (SCDB) 		
	C-6103	Scanner motor (M27) movement time abnormality. The scanner home sensor (PS51) or the APS sensor /1 (PS52) does not turn ON within a specified period of time after the home position search is started. At this time, an error detection signal (blowout of a fuse/24V cut off) of M27 is not detected.		<ul style="list-style-type: none"> Scanner home sensor (PS51) APS sensor /1 (PS52) Scanner motor (M27) Scanner drive board (SCDB) 		
Main body: Fan abnormality	C-6301	Scanner cooling fan (FM19) rotation abnormality + 24V power abnormality. The FM19EM error detection signal is detected twice in succession within a specified period of time after FM19 was turned ON. At this time, an error detection signal (24V cut off) is detected.		<ul style="list-style-type: none"> DC power supply /2 (DCPS/2) Scanner drive board (SCDB) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-6302	Scanner cooling fan (FM19) power abnormality. The FM19EM error detection signal is detected twice in succession within a specified period of time after FM19 was turned ON. At this time, 24V is normal, but an error detection signal (blowout of a fuse) is detected.		<ul style="list-style-type: none"> Scanner cooling fan (FM19) Scanner drive board (SCDB) 		
	C-6303	Scanner cooling fan (FM19) rotation abnormality. The FM19EM error detection signal is detected twice in succession within a specified period of time after FM19 was turned ON. At this time, an error detection signal (blowout of a fuse/24V cut off) is not detected.		<ul style="list-style-type: none"> Scanner cooling fan (FM19) Scanner drive board (SCDB) Printer control board (PRCB) 		
Main body: Image processing abnormality	C-6701	Filter coefficient abnormality. When processing images, a filter coefficient cannot be created normally.	If there is a sheet of paper being printed, the main body completes the paper exit before stopping operations and turning OFF the RL1 (the main relay).	Image processing board (IPB)		
	C-6702	Scanner FIFO abnormality. FIFO address abnormality for compression is indicated.		Image processing board (IPB)		
	C-6703	SVV length abnormality. After negation of SVV, the compression of images that are read in and their development into the page memory are not terminated within a specified period of time.		Image processing board (IPB)		
	C-6704	Scanner time out.		<ul style="list-style-type: none"> Image processing board (IPB) Overall control board (OACB) Printer control board (PRCB) 		
	C-6705	Compression device access abnormality. When writing images, in spite of no resource provided, an inappropriate processing such as an access to the compression device is made.		Image processing board (IPB)		
	C-6706	SVV OFF abnormality. While in the image read, SVV does not turn OFF within a specified period of time and the preparation for scanning the next page cannot be started.		Image processing board (IPB)		
	C-6707	Shading correction abnormality (GA abnormality)		Image processing board (IPB)		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-6708	AOC/AGC adjustment level abnormality. AOC/AGC adjustment error occurs due to the abnormality related to the exposure lamp or the trouble of the read section.		<ul style="list-style-type: none"> Exposure lamp (L4) L4 inverter (L4_INVB) Scanner drive board (SCDB) CCD board (CCDB) 		
	C-6709	Abnormality of the adjustment data by resolutions. The adjustment data evacuated by resolutions is not available.	Error code is not displayed on the operation panel, but displayed only on the data collection, the list output and CSRC.	Image processing board (IPB)		
	C-6710	Density conversion gamma curve creation abnormality. A density conversion gamma curve cannot be created normally.		Image processing board (IPB)		
	C-6717	N-in-1 page area abnormality. Due to an image area abnormality of the memory, images cannot be developed on the memory.	If there is a sheet of paper being printed, the main body completes the paper exit before stopping operations and turning OFF the RL1 (the main relay).	Image processing board (IPB)		
	C-6719	The original skew adjustment is too late. The scan operation starts before the original skew adjustment is terminated.	The main body and option stop immediately to turn OFF the RL1 (the main relay) .	<ul style="list-style-type: none"> Original skew sensor /Fr (PS312: DF-615) Original skew sensor /Rr (PS311: DF-615) DF control board (DFCB: DF-615) Overall control board (OACB: main body) 		
	C-6721	AGC retry. The AGC is retried due to the decreased light volume of the exposure lamp. However, no error occurs.	Error code is not displayed on the operation panel, but displayed only on the data collection, the list output and CSRC.	<ul style="list-style-type: none"> Exposure lamp (L4) L4 inverter (L4_INVB) Scanner drive board (SCDB) CCD board (CCDB) 		
	C-6801	Initial communication error between the image processing board (OACB) and the operation board /1 (OB1). An initial communication from the main body to the operation panel is not sent within 30 seconds after the power is turned ON.	The main body and option stop immediately to turn OFF the RL1 (the main relay) .	<ul style="list-style-type: none"> Operation board /1 (OB1) Overall control board (OACB) 		
DF: DF abnormality	C-8001	Sending error between the main body and DF. Although the main body sent out data according to the data transmission request by the DF, the same request is received again.	If there is a sheet of paper being printed, the main body completes the paper exit before stopping operations and turning OFF the RL1 (the main relay).	<ul style="list-style-type: none"> DF control board (DFCB: DF-615) Overall control board (OACB: main body) 	DIPSW18-4	DF mode unavailable (DF connection not recognized)

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-8002	Reception error between the main body and DF. Checksum error or SRGA reception error is detected twice in succession while in the reception in serial communication.	B: If there is a sheet of paper being printed, the main body completes the paper exit before stopping operations and turning OFF the RL1 (the main relay).	<ul style="list-style-type: none"> DF control board (DFCB: DF-615) Overall control board (OACB: main body) 	DIPSW18-4	DF mode unavailable (DF connection not recognized)
	C-8003	Initial communication error between the main body and DF. When the main power switch (SW1) is ON, there is no response to the initial communication request from the main body to the DF even after a specified period of time elapses.		<ul style="list-style-type: none"> DF control board (DFCB: DF-615) Overall control board (OACB: main body) 	DIPSW18-4	DF mode unavailable (DF connection not recognized)
	C-8201	Tray up/down motor (M303) abnormality.		<ul style="list-style-type: none"> Tray up down motor (M303: DF-615) DF control board (DFCB: DF-615) 	DIPSW18-4	DF mode unavailable (DF connection not recognized)
	C-8301	Cooling fan /Lt (FM301) abnormality.		<ul style="list-style-type: none"> Cooling fan /Lt (FM301: DF-615) Cooling fan /Rt (FM302: DF-615) DF control board (DFCB: DF-615) 	DIPSW18-4	DF mode unavailable (DF connection not recognized)
	C-8401	Original registration sensor /Rt (PS318) abnormality.		<ul style="list-style-type: none"> Original registration sensor /Lt (PS306: DF-615) Original registration sensor /Rt (PS318: DF-615) DF control board (DFCB: DF-615) 	DIPSW18-4	DF mode unavailable (DF connection not recognized)
	C-8402	Original conveyance sensor (PS308) abnormality.		<ul style="list-style-type: none"> Original conveyance sensor (PS308: DF-615) DF control board (DFCB: DF-615) 	DIPSW18-4	DF mode unavailable (DF connection not recognized)
	C-8403	Reverse sensor (PS309) abnormality		<ul style="list-style-type: none"> Original reverse sensor (PS309: DF-615) DF control board (DFCB: DF-615) 	DIPSW18-4	DF mode unavailable (DF connection not recognized)
	C-8404	Non-volatile memory error		DF control board (DFCB: DF-615)	DIPSW18-4	DF mode unavailable (DF connection not recognized)
	C-8405	Reverse jam sensor (PS304) abnormality.		<ul style="list-style-type: none"> Reverse jam sensor (PS304: DF-615) DF control board (DFCB: DF-615) 	DIPSW18-4	DF mode unavailable (DF connection not recognized)
	C-8406	Original reverse/exit sensor (PS313) abnormality.		<ul style="list-style-type: none"> Original reverse/exit sensor (PS313: DF-615) DF control board (DFCB: DF-615) 	DIPSW18-4	DF mode unavailable (DF connection not recognized)

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-8407	Original skew sensor /Fr (PS312) abnormality.		<ul style="list-style-type: none"> Original skew sensor /Fr (PS312: DF-615) DF control board (DFCB: DF-615) 	DIPSW18-4	DF mode unavailable (DF connection not recognized)
	C-8408	Original skew sensor /Rr (PS311) abnormality.		<ul style="list-style-type: none"> Original skew sensor /Rr (PS311: DF-615) DF control board (DFCB: DF-615) 	DIPSW18-4	DF mode unavailable (DF connection not recognized)
	C-8409	Original registration sensor /Lt (PS306) abnormality.		<ul style="list-style-type: none"> Original registration sensor /Lt (PS306: DF-615) DF control board (DFCB: DF-615) 	DIPSW18-4	DF mode unavailable (DF connection not recognized)
	C-8410	Centering sensor /Fr (PS320) abnormality.		<ul style="list-style-type: none"> Centering LED sensor / Fr (PS319: DF-615) Centering sensor /Fr (PS320: DF-615) DF control board (DFCB: DF-615) 	DIPSW18-4	DF mode unavailable (DF connection not recognized)
	C-8411	Centering sensor /Rr (PS321) abnormality.		<ul style="list-style-type: none"> Centering LED sensor / Rr (PS322: DF-615) Centering sensor /Rr (PS321: DF-615) DF control board (DFCB: DF-615) 	DIPSW18-4	DF mode unavailable (DF connection not recognized)
	C-8412	Multi feed detection sensor (MFDBS, MFDBR) abnormality.		<ul style="list-style-type: none"> Multi feed detection boards /S (MFDBS: DF-615) Multi feed detection boards /R (MFDBS: DF-615) DF control board (DFCB: DF-615) 	DIPSW18-4	DF mode unavailable (DF connection not recognized)
Main Body: IC Controller abnormality	C-A001	Transfer error to the main body image memory	The main body and option stop immediately to turn OFF the RL1 (the main relay) .	<ul style="list-style-type: none"> IC board (ICB) PCI relay board (PCIRB) Overall control board (OACB) 		
	C-A002	Hard disk /2 (HDD2) abnormality.		<ul style="list-style-type: none"> IC board (ICB) PCI relay board (PCIRB) Hard disk /2 (HDD2) 		
	C-A003	IC cooling fan (FM24) lock abnormality		<ul style="list-style-type: none"> IC cooling fan (FM39) IC board (ICB) 		
	C-A004	Unregulations IC error occurs.		<ul style="list-style-type: none"> IC board (ICB) PCI relay board (PCIRB) Overall control board (OACB) 		
	C-A005	Version abnormality between CF and hard disk /2 (HDD2). The CF version is different from the version information in HDD2.		<ul style="list-style-type: none"> IC board (ICB) Hard disk /2 (HDD2) CF (CF) 		
	C-A006	Hard disc /2 (HDD2) abnormality 1 while in the security ON. While in the security ON, the unlocking of the HDD results in a failure due to the mismatched password of the hard disk /2 (HDD2).		Hard disk /2 (HDD2)		
	C-A007	Hard disc /2 (HDD2) abnormality 2 while in the security ON. Unlocked HDD2 is detected while in the security ON.		Hard disk /2 (HDD2)		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
Main body: Communication error	C-A008	Hard disk /2 (HDD2) is unformatted. An unformatted HDD2 is detected.		Hard disk /2 (HDD2)		
	C-A009	Controller memory abnormality.		<ul style="list-style-type: none"> DIMM (DIMM) IC board (ICB) 		
	C-A101	Controller initial communication abnormality.		<ul style="list-style-type: none"> IC board (ICB) PCI relay board (PCIRB) Overall control board (OACB) 		
	C-C101	Initial communication error between the overall control board (OACB) and the printer control board (PRCB). No response is returned from PRCB even after a specified period of time after the main power switch (SW1) and the sub power switch (SW2) turn ON. Or ISW information is not written on PRCB.		<ul style="list-style-type: none"> Printer control board (PRCB) Overall control board (OACB) 		
	C-C102	Initial communication error between the overall control board (OACB) and the printer control board (PRCB). Communication error from PRCB is detected. Or transmission is not completed.		<ul style="list-style-type: none"> Printer control board (PRCB) Overall control board (OACB) 		
	C-C103	Communication error between the overall control board (OACB) and the operation board (OB1). Communication error from OB1 is detected. Or transmission is not completed.		<ul style="list-style-type: none"> Operation board /1 (OB1) Overall control board (OACB) 		
	C-C104*	ISW write abnormality 1 of the printer control board.		<ul style="list-style-type: none"> Image processing board (IPB) Printer control board (PRCB) Overall control board (OACB) 		
	C-C105	ISW write abnormality 2 of the printer control board.		<ul style="list-style-type: none"> Image processing board (IPB) Printer control board (PRCB) Overall control board (OACB) 		
	C-C106	ISW time out error. No normal header is transmitted within a specified period of time after ISW is started.		<ul style="list-style-type: none"> Image processing board (IPB) Overall control board (OACB) 		
	C-C107	ISW download abnormality. An error is detected while downloading ISW.		<ul style="list-style-type: none"> Image processing board (IPB) Overall control board (OACB) 		
	C-C108	ISW write abnormality on the overall control board. An error is detected because ISW data cannot be written on the overall control board (OACB).		<ul style="list-style-type: none"> Image processing board (IPB) Overall control board (OACB) 		
	C-C109	When the sub power switch (SW2) turns ON, ISW unwritten area is detected in the FS firmware.		<ul style="list-style-type: none"> FNSCB firmware FNS control board (FNSCB) 		
FS: FS ISW unwritten	C-C109	When the sub power switch (SW2) turns ON, ISW unwritten area is detected in the FS firmware.	The main body stops immediately to turn OFF the	<ul style="list-style-type: none"> FNSCB firmware FNS control board (FNSCB) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
LS: LS ISW unwritten	C-C111	When the sub power switch (SW2) turns ON, ISW unwritten area is detected in the LS firmware (1st tandem).	main relay (RL1).	<ul style="list-style-type: none"> • LSCB firmware • LS control board (LSCB) 		
	C-C112	When the sub power switch (SW2) turns ON, ISW unwritten area is detected in the LS firmware (2nd tandem).		<ul style="list-style-type: none"> • LSCB firmware • LS control board (LSCB) 		
FD: FD ISW unwritten	C-C113	When the sub power switch (SW2) turns ON, ISW unwritten area is detected in the FD firmware.		<ul style="list-style-type: none"> • FDCB firmware • FD control board (FDCB) 		
SD: SD-506 ISW unwritten	C-C114	When the sub power switch (SW2) turns ON, ISW unwritten area is detected in the SD firmware.		<ul style="list-style-type: none"> • SDCB firmware • SD control board (SDCB) 		
RU: Communication error	C-C115	ISW write abnormality on RU. The firmware is not written on RU, or an error is detected during the ROM check.	The main body and option stop immediately to turn OFF the RL1 (the main relay) .	<ul style="list-style-type: none"> • Image processing board (IPB) • Overall control board (OACB) 		
PB: PB ISW unwritten	C-C116	When the sub power switch (SW2) turns ON, ISW unwritten area is detected in the PB firmware.		<ul style="list-style-type: none"> • PB firmware • PB control board (PBCB) 		
GP: Communication error	C-C117	GPIS Write abnormality The firmware is not written on GP, or an error is detected during the ROM check.		<ul style="list-style-type: none"> • Image processing board (IPB) • Overall control board (OACB) 		
DF: Communication error	C-C120	ISW write abnormality on DF. When the main power switch (SW1) is ON, unwritten area by the ISW is detected in the DF control program.		<ul style="list-style-type: none"> • DF control board (DFCB) • Overall control board (OACB) 		
IC: Communication error	C-C125	ISW write abnormality of controller. The firmware is not written on ICB or an error is detected during the ROM check.		IC board (ICB)		
	C-C130	Wrong firmware. A firmware for different type is installed.				
HDD: Communication error	C-D001	Hard disk /1 (HDD1) initialization abnormality. HDD1 is defective, or the connector is poorly connected.		<ul style="list-style-type: none"> • Hard disk /1 (HDD1) • Overall control board (OACB) 		
	C-D002	JOB_RAM storage abnormality. The JOB information cannot be stored on the hard disk /1 (HDD1).		<ul style="list-style-type: none"> • Hard disk /1 (HDD1) • Overall control board (OACB) 		
	C-D003	Hard disk /1 (HDD1) periodic cleaning abnormality. While in a periodical cleaning, opening the rote to hard disk is not succeeded.		<ul style="list-style-type: none"> • Hard disk /1 (HDD1) • Overall control board (OACB) 		

Classification	Malfunction code	Cause	Resulting operation	Estimated abnormal parts	Faulty part isolation DIPSW	Control when
	C-D004	HDD/1 (HDD1) access defective. HDD1 is defective, or the connector is poorly connected.		<ul style="list-style-type: none"> Hard disk /1 (HDD1) Overall control board (OACB) 		
	C-D010	Hard disk /1 (HDD1) overwrite erase execution. HDD1 overwrite erase is executed.		Hard disk /1 (HDD1)		
	C-E001	Message queue error. The message queue is insufficient or destroyed.	B: If there is a sheet of paper being printed, the main body completes the paper exit before stopping operations and turning OFF the RL1 (the main relay).	Overall control board (OACB)		
	C-E002	Message parameter value error. The parameter value is in excess of the permissible limits.		Overall control board (OACB)		
	C-E003	Source task error. The ID of the task that sends the message queue is undefined.		Overall control board (OACB)		
	C-E004	Receiving event error. The receiving event of the message is undefined.		Overall control board (OACB)		
	C-E005	Memory access abnormality.		Overall control board (OACB)		
	C-E006	Header readout address abnormality.		Overall control board (OACB)		
	C-E007	DRAM memory abnormality. An error is detected in the DRAM memory check at the start.		Overall control board (OACB)		

2.4 Solution 1 (C-0001_0300)

2.4.1 C-0001

Code

C-0001

Classification

Main body: Drive abnormality

Cause

Main body drive serial input abnormality 1.

Within a specified period of time after the power ON, a serial data is not received between the printer control board (PRCB) and the main body drive board.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please turn on power again" is displayed on the touch panel.

Solution

- After turning OFF the sub power switch, turn OFF the main power switch and unplug the power plug. Restart the main body after 10 seconds.
- Check the connection status of PRCB connector, and repair it if any abnormality.
- Replace PRCB.

Faulty part isolation DIPSW

Control while detached

2.4.2 C-0002

Code

C-0002

Classification

Main body: Drive abnormality

Cause

Main body drive serial input abnormality 2.

Within a specified period of time after the power ON, a serial data is not received between the printer control board (PRCB) and the main body drive board.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please turn on power again" is displayed on the touch panel.

Solution

1. After turning OFF the sub power switch, turn OFF the main power switch and unplug the power plug. Restart the main body after 10 seconds.
2. Check the connection status of PRCB connector, and repair it if any abnormality.
3. Replace PRCB.

Faulty part isolation DIPSW

Control while detached

2.4.3 C-0003

Code

C-0003

Classification

Main body: Drive abnormality

Cause

Main body drive serial input abnormality 3.

Within a specified period of time after the power ON, a serial data is not received between the printer control board (PRCB) and the main body drive board.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please turn on power again" is displayed on the touch panel.

Solution

1. After turning OFF the sub power switch, turn OFF the main power switch and unplug the power plug. Restart the main body after 10 seconds.
2. Check the connection status of PRCB connector, and repair it if any abnormality.
3. Replace PRCB.

Faulty part isolation DIPSW

Control while detached

2.4.4 C-0004

Code

C-0004

Classification

Main body: Drive abnormality

Cause

Main body drive serial input abnormality4.

Within a specified period of time after the power ON, a serial data is not received between the printer control board (PRCB) and the main body drive board.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please turn on power again" is displayed on the touch panel.

Solution

1. Turn OFF the sub power switch and unplug the power plug. Restart the main body after 10 seconds
2. Check the connection status of PRCB connector, and repair it if any abnormality.
3. Replace PRCB

Faulty part isolation DIPSW

Control while detached

2.4.5 C-0005

Code

C-0005

Classification

Main body: Communication error

Cause

Drive communication reception error detection abnormality 3.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Printer control board (PRCB)
- ADU drive board (ADUDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please turn on power again" is displayed on the touch panel.

Solution

1. Turn OFF the sub power switch and unplug the power plug. Restart the main body after 10 seconds
2. Check the connector connection and the wiring between PRCB and ADUDB, and repair it if any abnormality
3. Check the connector connection on PRCB and ADUDB, and repair it if any abnormality
4. Replace ADUDB
5. Replace PRCB

Faulty part isolation DIPSW**Control while detached****2.4.6 C-0006****Code**

C-0006

Classification

Main body: Communication error

Cause

Drive communication reception error detection abnormality 4.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please turn on power again" is displayed on the touch panel.

Solution

1. Turn OFF the sub power switch and unplug the power plug. Restart the main body after 10 seconds
2. Check the connector connection status on PRCB, and repair it if any abnormality.
3. Replace PRCB

Faulty part isolation DIPSW**Control while detached****2.4.7 C-0007****Code**

C-0007

Classification

Main body: Communication error

Cause

Drive communication reception error detection abnormality 5.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please turn on power again" is displayed on the touch panel.

Solution

1. Turn OFF the sub power switch and unplug the power plug. Restart the main body after 10 seconds
2. Check the connector connection status on PRCB, and repair it if any abnormality.
3. Replace PRCB

Faulty part isolation DIPSW**Control while detached****2.4.8 C-0008****Code**

C-0008

Classification

Main body: Communication error

Cause

Drive communication reception error detection abnormality 6.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please turn on power again" is displayed on the touch panel.

Solution

1. Turn OFF the sub power switch and unplug the power plug. Restart the main body after 10 seconds
2. Check the connector connection status on PRCB, and repair it if any abnormality.
3. Replace PRCB

Faulty part isolation DIPSW**Control while detached****2.4.9 C-0010****Code**

C-0010

Classification

Main body: Communication error

Cause

Drive communication reception error detection abnormality 2.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Printer control board (PRCB: main body)
- PF drive board (PFUDB: PF-702/703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please turn on power again" is displayed on the touch panel.

Solution

1. Turn OFF the sub power switch and unplug the power plug. Restart the main body after 10 seconds
2. Check the connector connection and the wiring between PRCB and PFUDB, and repair it if any abnormality.
3. Check the connector connection on PRCB and PFUDB, and repair it if any abnormality.
4. Replace PFUDB.
5. Replace PRCB

Faulty part isolation DIPSW**Control while detached****2.4.10 C-0011****Code**

C-0011

Classification

Main body: Communication error

Cause

Drive communication reception error detection abnormality 8.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Printer control board (PRCB: main body)
- PF drive board (PFUDB: PF-702/703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please turn on power again" is displayed on the touch panel.

Solution

1. Turn OFF the sub power switch and unplug the power plug. Restart the main body after 10 seconds
2. Check the connector connection and the wiring between PRCB and PFUDB, and repair it if any abnormality.
3. Check the connector connection on PRCB and PFUDB, and repair it if any abnormality.
4. Replace PFUDB.
5. Replace PRCB

Faulty part isolation DIPSW**Control while detached****2.4.11 C-0012****Code**

C-0012

Classification

Main body: Communication error

Cause

Drive communication reception error detection abnormality 9.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Printer control board (PRCB: main body)
- PF drive board (PFUDB: PF-702/703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please turn on power again" is displayed on the touch panel.

Solution

1. Turn OFF the sub power switch and unplug the power plug. Restart the main body after 10 seconds
2. Check the connector connection and the wiring between PRCB and PFUDB, and repair it if any abnormality.
3. Check the connector connection on PRCB and PFUDB, and repair it if any abnormality.
4. Replace PFUDB.
5. Replace PRCB

Faulty part isolation DIPSW**Control while detached****2.4.12 C-0020****Code**

C-0020

Classification

Main body: Communication error

Cause

ADU drive serial input abnormality 1.

In the initial communication check between the printer control board (PRCB) and the ADU drive board (ADUDB) after the power ON, a serial data is not received.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Printer control board (PRCB)
- ADU drive board (ADUDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please turn on power again" is displayed on the touch panel.

Solution

1. Turn OFF the sub power switch and unplug the power plug. Restart the main body after 10 seconds
2. Check the connector connection and the wiring between PRCB and ADUDB, and repair it if any abnormality
3. Check the connector connection on PRCB and ADUDB, and repair it if any abnormality
4. Replace ADUDB
5. Replace PRCB

Faulty part isolation DIPSW**Control while detached****2.4.13 C-0021****Code**

C-0021

Classification

Main body: Communication error

Cause

ADU drive serial input abnormality 2.

In the initial communication check between the printer control board (PRCB) and the ADU drive board (ADUDB) after the power ON, a serial data is not received.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Printer control board (PRCB)
- ADU drive board (ADUDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please turn on power again" is displayed on the touch panel.

Solution

1. Turn OFF the sub power switch and unplug the power plug. Restart the main body after 10 seconds
2. Check the connector connection and the wiring between PRCB and ADUDB, and repair it if any abnormality
3. Check the connector connection on PRCB and ADUDB, and repair it if any abnormality
4. Replace ADUDB
5. Replace PRCB

Faulty part isolation DIPSW**Control while detached****2.4.14 C-0022****Code**

C-0022

Classification

Main body: Communication error

Cause

ADU drive serial input abnormality 3.

In the initial communication check between the printer control board (PRCB) and the ADU drive board (ADUDB) after the power ON, a serial data is not received.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Printer control board (PRCB)
- ADU drive board (ADUDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please turn on power again" is displayed on the touch panel.

Solution

1. Turn OFF the sub power switch and unplug the power plug. Restart the main body after 10 seconds
2. Check the connector connection and the wiring between PRCB and ADUDB, and repair it if any abnormality
3. Check the connector connection on PRCB and ADUDB, and repair it if any abnormality
4. Replace ADUDB
5. Replace PRCB

Faulty part isolation DIPSW

Control while detached

2.4.15 C-0023

Code

C-0023

Classification

Main body: Communication error

Cause

Drive communication reception error detection abnormality 0.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Printer control board (PRCB)
- ADU drive board (ADUDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please turn on power again" is displayed on the touch panel.

Solution

1. Turn OFF the sub power switch and unplug the power plug. Restart the main body after 10 seconds
2. Check the connector connection and the wiring between PRCB and ADUDB, and repair it if any abnormality
3. Check the connector connection on PRCB and ADUDB, and repair it if any abnormality
4. Replace ADUDB
5. Replace PRCB

Faulty part isolation DIPSW

Control while detached

2.4.16 C-0024

Code

C-0024

Classification

Main body: Communication error

Cause

Drive communication reception error detection abnormality 7.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Printer control board (PRCB)
- ADU drive board (ADUDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please turn on power again" is displayed on the touch panel.

Solution

1. Turn OFF the sub power switch and unplug the power plug. Restart the main body after 10 seconds
2. Check the connector connection and the wiring between PRCB and ADUDB, and repair it if any abnormality
3. Check the connector connection on PRCB and ADUDB, and repair it if any abnormality
4. Replace ADUDB
5. Replace PRCB

Faulty part isolation DIPSW

Control while detached

2.4.17 C-0025

Code

C-0025

Classification

Main body: Communication error

Cause

Drive communication reception error detection abnormality 11.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Printer control board (PRCB)
- ADU drive board (ADUDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please turn on power again" is displayed on the touch panel.

Solution

1. Turn OFF the sub power switch and unplug the power plug. Restart the main body after 10 seconds
2. Check the connector connection and the wiring between PRCB and ADUDB, and repair it if any abnormality
3. Check the connector connection on PRCB and ADUDB, and repair it if any abnormality
4. Replace ADUDB
5. Replace PRCB

Faulty part isolation DIPSW**Control while detached****2.4.18 C-0101****Code**

C-0101

Classification

Main body: Drive abnormality

Cause

Paper feed motor (M4) speed abnormality.

An error detection signal is detected twice in succession within a specified period of time after M4 was turned ON.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Paper feed motor (M4)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- "Please call service" is displayed.

Solution

1. Check the connector connection and the wiring between PRCB and the motor, and repair it if any abnormality.
2. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: Main body: 20-K)
3. Replace M4.
4. Replace PRCB.

Faulty part isolation DIPSW**Control while detached****2.4.19 C-0103****Code**

C-0103

Classification

PF: Drive

Cause

1st tandem PF-702/703 paper feed motor (M1) speed abnormality.

An error detection signal is detected twice in succession within a specified period of time after M1 was turned ON.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Paper feed motor (M1: PF-702/703)
- PF drive board (PFUDB: PF-702/703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the motor, and repair it if any abnormality.
2. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: Main body: 17-K)
3. Replace M1.
4. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached**

2.4.20 C-0104**Code**

C-0104

Classification

Main body: Power abnormality

Cause

Abnormality of the vertical conveyance motor (M8) power in the printer control board (PRCB).
 An error detection signal (blowout of ICP) of M8 is detected when M8 is turned ON.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Vertical conveyance motor (M8)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and the motor, and repair it if any abnormality.
2. Check the I/O drive of the motor and the coupling of the gear, repair/replace it if any abnormality, and then replace the PRCB (Wiring diagram: Main body: 11-F).
3. Replace M8 and PRCB at a time.

Faulty part isolation DIPSW**Control while detached****2.4.21 C-0105****Code**

C-0105

Classification

PF: Power abnormality

Cause

Abnormality of the PF conveyance motor (M2) power in the PF drive board (PFUDB) of the 1st tandem PF-702.
 An error detection signal (blowout of ICP) of M2 is detected when M2 is turned ON.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- PF exit conveyance motor (M2: PF-702)
- PF drive board (PFUDB: PF-702)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the motor, and repair it if any abnormality
2. Check the I/O drive of the motor and the coupling of the gear, repair/replace it if any abnormality, and then replace the PFUDB (Wiring diagram: Main body: 20-K)
3. Replace M2 and PFUDB

Faulty part isolation DIPSW**Control while detached****2.4.22 C-0106****Code**

C-0106

Classification

PF: Drive

Cause

2nd tandem PF-702/703 paper feed motor (M) speed abnormality.
 An error detection signal is detected twice in succession within a specified period of time after M1 was turned ON.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Paper feed motor (M1: PF-702/703)
- PF drive board (PFUDB: PF-702/703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the motor, and repair it if any abnormality
2. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality (Wiring diagram: Main body: 17-K)
3. Replace M1
4. Replace PFUDB

Faulty part isolation DIPSW Control while detached

2.4.23 C-0107

Code

C-0107

Classification

PF: Power abnormality

Cause

Abnormality of the PF conveyance motor (M2) power in the PF drive board (PFUDB) of the 2nd tandem PF-702.
An error detection signal (blowout of ICP) of M2 is detected when M2 is turned ON.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- PF exit conveyance motor (M2: PF-702)
- PF drive board (PFUDB: PF-702)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the motor, and repair it if any abnormality
2. Check the I/O drive of the motor and the coupling of the gear, repair/replace it if any abnormality, and then replace the PFUDB (Wiring diagram: Main body: 20-K)
3. Replace M2 and PFUDB

Faulty part isolation DIPSW

Control while detached

2.4.24 C-0108

Code

C-0108

Classification

PF: Power abnormality

Cause

Abnormality of the PF conveyance motor (M3) power in the PF drive board (PFUDB) of the 1st tandem PF-703.
An error detection signal (blowout of ICP) of M3 is detected when M3 is turned ON.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- PF exit conveyance motor (M3: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the motor, and repair it if any abnormality
2. Check the I/O drive of the motor and the coupling of the gear, repair/replace it if any abnormality, and then replace the PFUDB (Wiring diagram: PF-703: 8-L)
3. Replace M3 and PFUDB at a time

Faulty part isolation DIPSW

Control while detached

2.4.25 C-0109

Code

C-0109

Classification

PF: Power abnormality

Cause

Abnormality of the PF conveyance motor (M3) power in the PF drive board (PFUDB) of the 2nd tandem PF-703.
An error detection signal (blowout of ICP) of M3 is detected when M3 is turned ON.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- PF exit conveyance motor (M3: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the motor, and repair it if any abnormality

2. Check the I/O drive of the motor and the coupling of the gear, repair/replace it if any abnormality, and then replace the PFUDB (Wiring diagram: PF-703: 8-L)
3. Replace M3 and PFUDB at a time

Faulty part isolation DIPSW**Control while detached****2.4.26 C-0110****Code**

C-0110

Classification

Main body: Power abnormality

Cause

Abnormality of the registration section motor power in the ADU drive board (ADUDB).

The error detection signals (blowout of ICP) of the ADU conveyance motor /2 (M16), the registration motor (M17) and the loop motor (M18) are detected after the print is started.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- ADU conveyance motor /2 (M16)
- Registration motor (M17)
- Loop motor (M18)
- ADU drive board /2 (ADUDB2)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between ADUDB and the motor, and repair it if any abnormality
2. Check the I/O drive of the motor and the coupling of the gear, repair/replace it if any abnormality, and then replace the ADUDB2 (Wiring diagram: Main body: 23-L, 24-L)
3. Replace ADUDB2
4. Replace M16, M17, M18 and ADUDB2 at a time

Faulty part isolation DIPSW**Control while detached****2.4.27 C-0111****Code**

C-0111

Classification

Main body: Power abnormality

Cause

Abnormality of the duplex section motor power in the ADU drive board (ADUDB).

The error detection signals (blowout of ICP) of the ADU reverse motor (M12), the reverse/exit motor (M13), the ADU accelerate motor (M14) and the ADU conveyance motor /1 (M15) are detected after the print is started.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- ADU reverse motor (M12)
- Reverse/exit motor (M13)
- ADU acceleration motor (M14)
- ADU conveyance motor /1 (M15)
- ADU drive board /1 (ADUDB1)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between ADUDB and the motor, and repair it if any abnormality
2. Check the I/O drive of the motor and the coupling of the gear, repair/replace it if any abnormality, and then replace the ADUDB1 (Wiring diagram: Main body: 21-L, 22-L)
3. Replace ADUDB1
4. Replace M12, M13, M14, M15 and ADUDB1 at a time

Faulty part isolation DIPSW**Control while detached****2.4.28 C-0113****Code**

C-0113

Classification

Main body: Power abnormality

Cause

Abnormality 1 of the SD/CL_24V power for the printer control board (PRCB) tray.

At the start, the error detection signals of the PRCB tray solenoid/clutch ICP blowout and 24V cut off are detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- DC power supply /2 (DCPS/2)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring related to DC24V between PRCB and DCPS /2, and repair it if any abnormality
2. Replace DCPS /2
3. Replace PRCB

Faulty part isolation DIPSW

Control while detached

2.4.29 C-0114

Code

C-0114

Classification

Main body: Power abnormality

Cause

Abnormality 2 of the SD/CL_24V power for the printer control board (PRCB) tray.

When the error detection signal of the PRCB tray solenoid/clutch ICP blowout is detected but no 24V cut off is detected at the start.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Paper feed clutch /1 (CL4)
- Separation clutch /1 (CL5)
- Paper feed clutch /2 (CL6)
- Separation clutch /2 (CL7)
- Pick-up solenoid /1 (SD3)
- Pick-up solenoid /2 (SD4)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring related to DC24V between PRCB and clutch/solenoid, and repair it if any abnormality
2. Check the drive and the coupling of the clutch and the solenoid, repair it if any abnormality, and then replace PRCB (Wiring diagram: Main body: 5-F, 8-F)
3. Replace PRCB
4. Replace the clutch, the solenoid and PRCB at a time

Faulty part isolation DIPSW

Control while detached

2.4.30 C-0115

Code

C-0115

Classification

Main body: Power abnormality

Cause

Abnormality 1 of the SD/CL_24V power for the printer control board (PRCB) vertical conveyance.

At the start, the error detection signals of the PRCB vertical conveyance solenoid/clutch ICP blowout and 24V cut off are detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- DC power supply /2 (DCPS/2)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring related to DC24V between PRCB and DCPS /2, and repair it if any abnormality
2. Replace DCPS /2
3. Replace PRCB

Faulty part isolation DIPSW

Control while detached

2.4.31 C-0116

Code

C-0116

Classification

Main body: Power abnormality

Cause

Abnormality 2 of the SD/CL_24V power for the printer control board (PRCB) tray.

When the error detection signal of the PRCB tray solenoid/clutch ICP blowout is detected but no 24V cut off is detected at the start.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Pre-registration clutch /1 (CL1)
- Vertical conveyance clutch (CL2)
- Pre-registration clutch /2 (CL3)
- Erase lamp (EL)
- Tray lock solenoid /1 (SD1)
- Tray lock solenoid /2 (SD2)
- Drum claw solenoid (SD10)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring related to DC24V between PRCB and clutch/solenoid/EL, and repair it if any abnormality
2. Check the drive and the coupling of the clutch and the solenoid, repair it if any abnormality, and then replace PRCB (Wiring diagram: Main body: 10-F, 5-M)
3. Replace PRCB
4. Replace the clutch, the solenoid, EL and PRCB at a time

Faulty part isolation DIPSW**Control while detached****2.4.32 C-0118****Code**

C-0118

Classification

PF: Power abnormality

Cause

Abnormality of the power for the PF drive board (PFUDB) SD/CL of the PF-702/703.

At the start, the error detection signal of the PFUDB solenoid/clutch ICP blowout is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- PF drive board (PFUDB: PF-702/703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring on PFUDB, and repair it if any abnormality
2. Check the drive and the coupling of the solenoid and the clutch connected to PFUDB, repair/replace it if any abnormality, and then replace PFUDB
3. Replace PFUDB.
4. If the same error cord occurs even after replacing PFUDB, replace the connected solenoid, the clutch and PFUDB at a time

Faulty part isolation DIPSW**Control while detached****2.4.33 C-0119****Code**

C-0119

Classification

Main body: Drive

Cause

The transfer belt cleaning motor (M5) speed abnormality.

The M5EM error detection signal is detected twice in succession within a specified period of time after M5 was turned ON.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Transfer belt cleaning motor (M5)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and the motor, and repair it if any abnormality

2. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality (Wiring diagram: Main body: 19-K)
3. Replace M5
4. Replace PRCB

Faulty part isolation DIPSW
Control while detached

2.4.34 C-0120

Code

C-0120

Classification

Main body: Drive

Cause

Paper exit conveyance motor (M31) speed abnormality.

The M31EM error detection signal is detected twice in succession within a specified period of time after M31 was turned ON.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Paper exit conveyance motor (M31)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and the motor, and repair it if any abnormality
2. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality (Wiring diagram: Main body: 22-K)
3. Replace M31
4. Replace PRCB

Faulty part isolation DIPSW
Control while detached

2.4.35 C-0121

Code

C-0121

Classification

Main body: Drive

Cause

Paper feed motor (M20) speed abnormality.

The M20EM error detection signal is detected twice in succession within a specified period of time after M20 was turned ON.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Paper exit motor (M20)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and the motor, and repair it if any abnormality
2. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality (Wiring diagram: Main body: 21-K)
3. Replace M20
4. Replace PRCB

Faulty part isolation DIPSW
Control while detached

2.4.36 C-0130

Code

C-0130

Classification

PF: Power abnormality

Cause

PF-703 coupling conveyance motor /1 (M4) power abnormality.

An error detection signal (blowout of ICP) of M4 is detected when M4 is turned ON.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Coupling conveyance motor /1 (M4: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the motor, and repair it if any abnormality
2. Check the I/O drive of the motor and the coupling of the gear, repair/replace it if any abnormality, and then replace the PFUDB (Wiring diagram: PF-703: 20-L)
3. Replace M4 and PFUDB at a time

Faulty part isolation DIPSW**Control while detached****2.4.37 C-0131****Code**

C-0131

Classification

PF: Power abnormality

Cause

PF-703 coupling conveyance motor /2 and /3 (M5 and M6) power abnormality.
An error detection signal (blowout of ICP) of M5 and M6 is detected when M5 and M6 are turned ON.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Coupling conveyance motor /2 (M5: PF-703)
- Coupling conveyance motor /3 (M6: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the motor, and repair it if any abnormality
2. Check the I/O drive of the motor and the coupling of the gear, repair/replace it if any abnormality, and then replace the PFUDB (Wiring diagram: PF-703: 21-L)
3. Replace PFUDB.
4. Replace M5, M6 and PFUDB at a time

Faulty part isolation DIPSW**Control while detached****2.4.38 C-0132****Code**

C-0132

Classification

PF: Power abnormality

Cause

Abnormality of the power for the PF drive board (PFUDB) SD/CL of the 2nd tandem PF-702/703.
At the start, the error detection signal of the PFUDB solenoid/clutch ICP blowout is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- PF drive board (PFUDB: PF-702/703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring on PFUDB, and repair it if any abnormality
2. Check the drive and the coupling of the solenoid and the clutch connected to PFUDB, repair/replace it if any abnormality, and then replace PFUDB
3. Replace PFUDB.
4. If the same error cord occurs even after replacing PFUDB, replace the connected solenoid, the clutch and PFUDB at a time

Faulty part isolation DIPSW**Control while detached****2.4.39 C-0133****Code**

C-0133

Classification

PF: Drive

Cause

1st tandem PF-703 paper feed belt motor (M2) speed abnormality.
An error detection signal is detected twice in succession within a specified period of time after M2 was turned ON.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Paper feed belt motor (M2: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the motor, and repair it if any abnormality.
2. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: PF-703: 5-L)
3. Replace M2
4. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached****2.4.40 C-0134****Code**

C-0134

Classification

PF: Drive

Cause

2nd tandem PF-703 paper feed belt motor (M2) speed abnormality.

An error detection signal is detected twice in succession within a specified period of time after M2 was turned ON.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Paper feed belt motor (M2: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the motor, and repair it if any abnormality.
2. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: PF-703: 5-L)
3. Replace M2
4. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached****2.4.41 C-0140****Code**

C-0140

Classification

PI-PFU: Drive

Cause

Paper feed motor speed abnormality of PI-PFU (PF-703) tandem PF.

An error detection signal is detected twice in succession within a specified period of time after M1 was turned ON.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Paper feed motor (M1: PF-702/703)
- PF drive board (PFUDB: PF-702/703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the motor, and repair it if any abnormality
2. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality (Wiring diagram: Main body: 17-K)
3. Replace M1
4. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached****2.4.42 C-0141****Code**

C-0141

Classification

PI-PFU: Power abnormality

Cause

PI-PFU (PF-703) PF exit conveyance motor (M3) power abnormality.

An error detection signal (blowout of ICP) of M3 is detected when M3 is turned ON.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- PF exit conveyance motor (M3: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the motor, and repair it if any abnormality
2. Check the I/O drive of the motor and the coupling of the gear, repair/replace it if any abnormality, and then replace the PFUDB (Wiring diagram: PF-703: 8-L)
3. Replace M3 and PFUDB at a time

Faulty part isolation DIPSW**Control while detached****2.4.43 C-0142****Code**

C-0142

Classification

PI-PFU: Power abnormality

Cause

PI-PFU (PF-703) coupling conveyance motor /1 (M4) power abnormality.

An error detection signal (blowout of ICP) of M4 is detected when M4 is turned ON.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Coupling conveyance motor /1 (M4: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the motor, and repair it if any abnormality
2. Check the I/O drive of the motor and the coupling of the gear, repair/replace it if any abnormality, and then replace the PFUDB (Wiring diagram: PF-703: 20-L)
3. Replace M4 and PFUDB at a time

Faulty part isolation DIPSW**Control while detached****2.4.44 C-0143****Code**

C-0143

Classification

PI-PFU: Power abnormality

Cause

PI-PFU (PF-703) coupling conveyance motor /2 and /3 (M5 and M6) power abnormality.

An error detection signal (blowout of ICP) of M5 and M6 is detected when M5 and M6 are turned ON.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Coupling conveyance motor /2 (M5: PF-703)
- Coupling conveyance motor /3 (M6: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the motor, and repair it if any abnormality
2. Check the I/O drive of the motor and the coupling of the gear, repair/replace it if any abnormality, and then replace the PFUDB (Wiring diagram: PF-703: 21-L)
3. Replace PFUDB.
4. Replace M5, M6 and PFUDB at a time

Faulty part isolation DIPSW**Control while detached****2.4.45 C-0144****Code**

C-0144

Classification

PI-PFU: Power abnormality

Cause

PI-PFU (PF-703) SD/CL power abnormality.

At the start, the error detection signal of the PFUDB solenoid/clutch ICP blowout is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- PF drive board (PFUDB: PF-702/703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring on PFUDB, and repair it if any abnormality
2. Check the drive and the coupling of the solenoid and the clutch connected to PFUDB, repair/replace it if any abnormality, and then replace PFUDB
3. Replace PFUDB.
4. If the same error cord occurs even after replacing PFUDB, replace the connected solenoid, the clutch and PFUDB at a time

Faulty part isolation DIPSW

Control while detached

2.4.46 C-0145

Code

C-0145

Classification

PI-PFU: Drive

Cause

PI-PFU (PF-703) paper feed belt motor (M2) speed abnormality.

An error detection signal is detected twice in succession within a specified period of time after M2 was turned ON.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Paper feed belt motor (M2: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the motor, and repair it if any abnormality.
2. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: PF-703: 5-L)
3. Replace M2
4. Replace PFUDB.

Faulty part isolation DIPSW

Control while detached

2.4.47 C-0201

Code

C-0201

Classification

Main body: Tray1

Cause

Tray1: up abnormality

When the upper limit sensor /1 (PS6) is OFF, PS6 does not turn ON within 20 seconds after the tray lift-up motor /1 (M25) turns ON for lifting operation. At this time, an error detection signal (24V cut off) is detected.

Measures to take when alert occurs

Error code is not displayed on the operation panel, but displayed only on the data collection, the list output and CSRC. Since the lifting operation of the tray is not completed, "Set paper in the tray x" is displayed on the operation panel.

Estimated abnormal parts

- Upper limit sensor /1 (PS6)
- Tray lift-up motor /1 (M25)
- Printer control board (PRCB)
- DC power supply /2 (DCPS/2)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the paper loaded condition and the rear end restriction plate condition of the tray1, and repair it if any abnormality.
2. Check the connector connection and the wiring between PRCB and motor/sensor, and repair it if any abnormality.
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: Main body: 5-F)
4. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: Main body: 3-G)
5. Replace PS6.
6. Replace M25.

7. Replace PRCB.
8. Replace DCPS /2.

Faulty part isolation DIPSW

DIPSW18-0

Control while detached

Paper feed in tray1 is unavailable (The operation panel is displayed in hatching)

2.4.48 C-0203**Code**

C-0203

Classification

Main body: Tray1

Cause

Tray1 up abnormality 2.

When the upper limit sensor /1 (PS6) is OFF, PS6 does not turn ON within 20 seconds after the tray lift-up motor /1 (M25) turns ON for lifting operation. At this time, an error detection signal is not detected.

Measures to take when alert occurs

Error code is not displayed on the operation panel, but displayed only on the data collection, the list output and CSRC. Since the lifting operation of the tray is not completed, "Set paper in the tray x" is displayed on the operation panel.

Estimated abnormal parts

- Upper limit sensor /1 (PS6)
- Tray lift-up motor /1 (M25)
- Printer control board (PRCB)
- DC power supply /2 (DCPS/2)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the paper loaded condition and the rear end restriction plate condition of the tray1, and repair it if any abnormality
2. Check the connector connection and the wiring between PRCB and motor/sensor, and repair it if any abnormality
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: Main body: 5-F)
4. Check I/O and the operation of the sensor, and repair/replace it if any abnormality (Wiring diagram: Main body: 3-G)
5. Replace PS6
6. Replace M25
7. Replace PRCB
8. Replace DCPS /2

Faulty part isolation DIPSW

DIPSW18-0

Control while detached

Paper feed in tray1 is unavailable (The operation panel is displayed in hatching)

2.4.49 C-0204**Code**

C-0204

Classification

Main body: Tray1

Cause

The locking of the tray lift-up motor /1 (M25) is detected.

An error detection signal of M25 is detected while M25 is ON.

Measures to take when alert occurs

Error code is not displayed on the operation panel, but displayed only on the data collection, the list output and CSRC. Since the lifting operation of the tray is not completed, "Set paper in the tray x" is displayed on the operation panel.

Estimated abnormal parts

- Tray lift-up motor /1 (M25)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and the motor, and repair it if any abnormality.
2. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: LU: 5-F)
3. Replace M25.
4. Replace PRCB.

Faulty part isolation DIPSW

DIPSW 18-0

Control while detached

Paper feed in tray1 is unavailable (The operation panel is displayed in hatching)

2.4.50 C-0205**Code**

C-0205

Classification

Main body: Tray2

Cause

Tray2 up abnormality 1.

When the upper limit sensor /2 (PS10) is OFF, PS10 does not turn ON within 20 seconds after the tray lift-up motor /2 (M34) turns ON for lifting operation. At this time, an error detection signal (24V cut off) is detected.

Measures to take when alert occurs

Error code is not displayed on the operation panel, but displayed only on the data collection, the list output and CSRC. Since the lifting operation of the tray is not completed, "Set paper in the tray x" is displayed on the operation panel.

Estimated abnormal parts

- Upper limit sensor /2 (PS10)
- Tray lift-up motor /2 (M34)
- Printer control board (PRCB)
- DC power supply /2 (DCPS/2)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the paper loaded condition and the rear end restriction plate condition of the tray2, and repair it if any abnormality.
2. Check the connector connection and the wiring between PRCB and motor/sensor, and repair it if any abnormality.
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: Main body: 8-F)
4. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: Main body: 6-G)
5. Replace PS10.
6. Replace M34.
7. Replace PRCB.
8. Replace DCPS /2.

Faulty part isolation DIPSW

DIPSW 18-1

Control while detached

Paper feed in tray2 is unavailable (The operation panel is displayed in hatching)

2.4.51 C-0207

Code

C-0207

Classification

Main body: Tray2

Cause

Tray /2 up abnormality 2.

When the upper limit sensor /2 (PS10) is OFF, PS10 does not turn ON within 20 seconds after the tray lift-up motor /2 (M34) turns ON for lifting operation. At this time, an error detection signal is not detected.

Measures to take when alert occurs

Error code is not displayed on the operation panel, but displayed only on the data collection, the list output and CSRC. Since the lifting operation of the tray is not completed, "Set paper in the tray x" is displayed on the operation panel.

Estimated abnormal parts

- Upper limit sensor /2 (PS10)
- Tray lift-up motor /2 (M34)
- Printer control board (PRCB)
- DC power supply /2 (DCPS/2)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the paper loaded condition and the rear end restriction plate condition of the tray2, and repair it if any abnormality
2. Check the connector connection and the wiring between PRCB and motor/sensor, and repair it if any abnormality
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality (Wiring diagram: Main body: 8-F)
4. Check I/O and the operation of the sensor, and repair/replace it if any abnormality (Wiring diagram: Main body: 6-G)
5. Replace PS10
6. Replace M34
7. Replace PRCB
8. Replace DCPS /2

Faulty part isolation DIPSW

DIPSW 18-1

Control while detached

Paper feed in tray /2 is unavailable (The operation panel is displayed in hatching)

2.4.52 C-0208

Code

C-0208

Classification

Main body: Tray2

Cause

The locking of the tray lift-up motor /2 (M34) is detected.

When M34 is ON, an error detection signal of the M34 is detected.

Measures to take when alert occurs

Error code is not displayed on the operation panel, but displayed only on the data collection, the list output and CSRC. Since the lifting operation of the tray is not completed, "Set paper in the tray x" is displayed on the operation panel.

Estimated abnormal parts

- Tray lift-up motor /2 (M34)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and the motor, and repair it if any abnormality.
2. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: Main body: 8-F)
3. Replace M34.
4. Replace PRCB.

Faulty part isolation DIPSW

DIPSW 18-1

Control while detached

Paper feed in tray2 is unavailable (The operation panel is displayed in hatching)

2.4.53 C-0222

Code

C-0222

Classification

PF: Tray3

Cause

1st tandem PF-702/703 upper tray up abnormality.

PF-702: When the upper limit sensor /1 (PS2) is OFF, PS2 does not turn ON within 20 seconds after the paper lift motor /1 (M42) turns ON for lifting operation.

PF-703: When the upper limit sensor /1 (PS5) is OFF, PS5 does not turn ON within 20 seconds after the paper lift motor /1 (M7) turns ON for lifting operation. Or, the paper suction sensor /Fr1 and /Rr1 (PS25 and PS26) turn ON before PS5 turns ON while in tray lifting.

Measures to take when alert occurs

Error code is not displayed on the operation panel, but displayed only on the data collection, the list output and CSRC. Since the lifting operation of the tray is not completed, "Set paper in the tray x" is displayed on the operation panel.

Estimated abnormal parts

- Upper limit sensor /1 (PS2: PF-702)
- Upper limit sensor /1 (PS5: PF-703)
- Paper lift motor /1 (M42: PF-702)
- Paper lift motor /1 (M7: PF-703)
- PF drive board (PFUDB: PF-702/703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the paper loaded condition and the rear end restriction plate misaligned of the upper tray, and repair it if any abnormality
2. Check the connector connection and the wiring between PFUDB and motor/sensor, and repair it if any abnormality
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality (Wiring diagram: PF-702: 5-C, PF-703: 6-F)
4. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: PF-702: 3-C, PF-703: 3-F)
5. Replace PS2: PF-702 or PS5: PF-703
6. Replace M42: PF-702 or M7: PF-703
7. Replace PFUDB.

Faulty part isolation DIPSW

DIPSW 18-2

Control while detached

Paper feed in tray /3, /6, /7 and /8 is unavailable (The operation panel is displayed in hatching)

2.4.54 C-0223

Code

C-0223

Classification

PF: Tray3

Cause

The locking of the paper lift motor /1 of the 1st tandem PF-702/703 upper tray (M42: PF-702, M7: PF-703) is detected.

When M42 and M7 are ON, error detection signals of the M42 and M7 are detected.

Measures to take when alert occurs

Error code is not displayed on the operation panel, but displayed only on the data collection, the list output and CSRC. Since the lifting operation of the tray is not completed, "Set paper in the tray x" is displayed on the operation panel.

Estimated abnormal parts

- Paper lift motor /1 (M42: PF-702)
- Paper lift motor /1 (M7: PF-703)
- PF drive board (PFUDB: PF-702/703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the motor, and repair it if any abnormality
2. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality (Wiring diagram: PF-702: 5-C, PF-703: 6-F)
3. Replace M42: PF-702 or M7: PF-703
4. Replace PFUDB.

Faulty part isolation DIPSW

DIPSW 18-2

Control while detached

Paper feed in tray /3, /6, /7 and /8 is unavailable (The operation panel is displayed in hatching)

2.4.55 C-0226**Code**

C-0226

Classification

PF: Tray4

Cause

1st tandem PF-702/703 middle tray up abnormality.

PF-702: When the upper limit sensor /2 (PS6) is OFF, PS6 does not turn ON within 20 seconds after the paper lift motor /2 (M43) turns ON for lifting operation.

PF-703: When the upper limit sensor /2 (PS9) is OFF, PS9 does not turn ON within 20 seconds after the paper lift motor /2 (M8) turns ON for lifting operation. Or, the paper suction sensor /Fr2 and /Rr2 (PS27 and PS28) turn ON before PS9 turns ON while in tray lifting.

Measures to take when alert occurs

Error code is not displayed on the operation panel, but displayed only on the data collection, the list output and CSRC. Since the lifting operation of the tray is not completed, "Set paper in the tray x" is displayed on the operation panel.

Estimated abnormal parts

- Upper limit sensor /2 (PS6: PF-702)
- Upper limit sensor /2 (PS9: PF-703)
- Paper lift motor /2 (M43: PF-702)
- Paper lift motor /2 (M8: PF-703)
- PF drive board (PFUDB: PF-702/703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the paper loaded condition and the rear end restriction plate misaligned of the middle tray, and repair it if any abnormality
2. Check the connector connection and the wiring between PFUDB and motor/sensor, and repair it if any abnormality
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality (Wiring diagram: PF-702: 7-C, PF-703: 12-F)
4. Check I/O and the operation of the sensor, and repair/replace it if any abnormality (Wiring diagram: PF-702: 5-C, PF-703: 9-F)
5. Replace PS6: PF-702 or PS9: PF-703
6. Replace M43: PF -702 or M8: PF-703
7. Replace PFUDB.

Faulty part isolation DIPSW

DIPSW 18-3

Control while detached

Paper feed in tray /4 is unavailable (The operation panel is displayed in hatching)

2.4.56 C-0227**Code**

C-0227

Classification

PF: Tray4

Cause

The locking of the paper lift motor /2 of the 1st tandem PF-702/703 middle tray (M43: PF-702, M8: PF-703) is detected.

When M43 and M8 are ON, error detection signals of the M43 and M8 are detected.

Measures to take when alert occurs

Error code is not displayed on the operation panel, but displayed only on the data collection, the list output and CSRC. Since the lifting operation of the tray is not completed, "Set paper in the tray x" is displayed on the operation panel.

Estimated abnormal parts

- Paper lift motor /2 (M43: PF-702)
- Paper lift motor /2 (M8: PF-703)
- PF drive board (PFUDB: PF-702/703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the motor, and repair it if any abnormality
2. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality (Wiring diagram: PF-702: 7-C, PF-703: 12-F)

3. Replace M43: PF -702 or M8: PF-703

4. Replace PFUDB.

Faulty part isolation DIPSW

DIPSW 18-3

Control while detached

Paper feed in tray /4 is unavailable (The operation panel is displayed in hatching)

2.4.57 C-0230

Code

C-0230

Classification

PF: Tray5

Cause

1st tandem PF-702/703 lower tray up abnormality.

PF-702: When the upper limit sensor /3 (PS10) is OFF, PS10 does not turn ON within 20 seconds after the paper lift motor /3 (M44) turns ON for lifting operation.

PF-703: When the upper limit sensor /3 (PS13) is OFF, PS13 does not turn ON within 20 seconds after the paper lift motor /3 (M9) turns ON for lifting operation. Or, the paper suction sensor /Fr3 and /Rr3 (PS29 and PS30) turn ON before PS13 turns ON while in tray lifting.

Measures to take when alert occurs

Error code is not displayed on the operation panel, but displayed only on the data collection, the list output and CSRC. Since the lifting operation of the tray is not completed, "Set paper in the tray x" is displayed on the operation panel.

Estimated abnormal parts

- Upper limit sensor /3 (PS10: PF-702)
- Upper limit sensor /3 (PS13: PF-703)
- Paper lift motor /3 (M44: PF-702)
- Paper lift motor /3 (M9: PF-703)
- PF drive board (PFUDB: PF-702/703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the paper loaded condition and the rear end restriction plate misaligned of the lower tray, and repair it if any abnormality
2. Check the connector connection and the wiring between PFUDB and motor/sensor, and repair it if any abnormality
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality (Wiring diagram: PF-702: 9-C, PF-703: 19-F)
4. Check I/O and the operation of the sensor, and repair/replace it if any abnormality (Wiring diagram: PF-702: 7-C, PF-703: 16-F)
5. Replace PS10: PF-702 or PS13: PF-703
6. Replace M44: PF -702 or M9: PF-703
7. Replace PFUDB.

Faulty part isolation DIPSW

DIPSW 20-4

Control while detached

Paper feed in tray /5 is unavailable (The operation panel is displayed in hatching)

2.4.58 C-0231

Code

C-0231

Classification

PF: Tray5

Cause

The locking of the paper lift motor /3 of the 1st tandem PF-702/703 middle tray (M44: PF-702, M9: PF-703) is detected.

When M44 and M9 are ON, error detection signals of the M44 and M9 are detected.

Measures to take when alert occurs

Error code is not displayed on the operation panel, but displayed only on the data collection, the list output and CSRC. Since the lifting operation of the tray is not completed, "Set paper in the tray x" is displayed on the operation panel.

Estimated abnormal parts

- Paper lift motor /3 (M44: PF-702)
- Paper lift motor /3 (M9: PF-703)
- PF drive board (PFUDB: PF-702/703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the motor, and repair it if any abnormality
2. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality (Wiring diagram: PF-702: 9-C, PF-703: 19-F)
3. Replace M44: PF-702 or M9: PF-703
4. Replace PFUDB.

Faulty part isolation DIPSW

DIPSW 20-4

Control while detached

Paper feed in tray /5 is unavailable (The operation panel is displayed in hatching)

2.4.59 C-0240**Code**

C-0240

Classification

PF: Tray6

Cause

2nd tandem PF-702/703 upper tray up abnormality.

PF-702: When the upper limit sensor /1 (PS2) is OFF, PS2 does not turn ON within 20 seconds after the paper lift motor /1 (M42) turns ON for lifting operation.

PF-703: When the upper limit sensor /1 (PS5) is OFF, PS5 does not turn ON within 20 seconds after the paper lift motor /1 (M7) turns ON for lifting operation. Or, the paper suction sensor /Fr1 and /Rr1 (PS25 and PS26) turn ON before PS5 turns ON while in tray lifting.

Measures to take when alert occurs

Error code is not displayed on the operation panel, but displayed only on the data collection, the list output and CSRC. Since the lifting operation of the tray is not completed, "Set paper in the tray x" is displayed on the operation panel.

Estimated abnormal parts

- Upper limit sensor /1 (PS2: PF-702)
- Upper limit sensor /1 (PS5: PF-703)
- Paper lift motor /1 (M42: PF-702)
- Paper lift motor /1 (M7: PF-703)
- PF drive board (PFUDB: PF-702/703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the paper loaded condition and the rear end restriction plate misaligned of the upper tray, and repair it if any abnormality
2. Check the connector connection and the wiring between PFUDB and motor/sensor, and repair it if any abnormality
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality (Wiring diagram: PF-702: 5-C, PF-703: 6-F)
4. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: PF-702: 3-C, PF-703: 3-F)
5. Replace PS2: PF-702 or PS5: PF-703
6. Replace M42: PF-702 or M7: PF-703
7. Replace PFUDB.

Faulty part isolation DIPSW

DIPSW 20-5

Control while detached

Paper feed in tray /6 is unavailable (The operation panel is displayed in hatching)

2.4.60 C-0241**Code**

C-0241

Classification

PF: Tray6

Cause

The locking of the paper lift motor /1 of the 2nd tandem PF-702/703 upper tray (M42: PF-702, M7: PF-703) is detected.

When M42 and M7 are ON, error detection signals of the M42 and M7 are detected.

Measures to take when alert occurs

Error code is not displayed on the operation panel, but displayed only on the data collection, the list output and CSRC. Since the lifting operation of the tray is not completed, "Set paper in the tray x" is displayed on the operation panel.

Estimated abnormal parts

- Paper lift motor /1 (M42: PF-702)
- Paper lift motor /1 (M7: PF-703)
- PF drive board (PFUDB: PF-702/703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the motor, and repair it if any abnormality
2. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality (Wiring diagram: PF-702: 5-C, PF-703: 6-F)
3. Replace M42: PF-702 or M7: PF-703
4. Replace PFUDB.

Faulty part isolation DIPSW

DIPSW 20-5

Control while detached

Paper feed in tray /6 is unavailable (The operation panel is displayed in hatching)

2.4.61 C-0242**Code**

C-0242

Classification

PF: Tray7

Cause

2nd tandem PF-702/703 middle tray up abnormality.

PF-702: When the upper limit sensor /2 (PS6) is OFF, PS6 does not turn ON within 20 seconds after the paper lift motor /2 (M43) turns ON for lifting operation.

PF-703: When the upper limit sensor /2 (PS9) is OFF, PS9 does not turn ON within 20 seconds after the paper lift motor /2 (M8) turns ON for lifting operation. Or, the paper suction sensor /Fr2 and /Rr2 (PS27 and PS28) turn ON before PS9 turns ON while in tray lifting.

Measures to take when alert occurs

Error code is not displayed on the operation panel, but displayed only on the data collection, the list output and CSRC. Since the lifting operation of the tray is not completed, "Set paper in the tray x" is displayed on the operation panel.

Estimated abnormal parts

- Upper limit sensor /2 (PS6: PF-702)
- Upper limit sensor /2 (PS9: PF-703)
- Paper lift motor /2 (M43: PF-702)
- Paper lift motor /2 (M8: PF-703)
- PF drive board (PFUDB: PF-702/703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the paper loaded condition and the rear end restriction plate misaligned of the middle tray, and repair it if any abnormality
2. Check the connector connection and the wiring between PFUDB and motor/sensor, and repair it if any abnormality
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality (Wiring diagram: PF-702: 7-C, PF-703: 12-F)
4. Check I/O and the operation of the sensor, and repair/replace it if any abnormality (Wiring diagram: PF-702: 5-C, PF-703: 9-F)
5. Replace PS6: PF-702 or PS9: PF-703
6. Replace M43: PF-702 or M8: PF-703
7. Replace PFUDB.

Faulty part isolation DIPSW

DIPSW 18-5

Control while detached

Paper feed in tray /7 is unavailable (The operation panel is displayed in hatching)

2.4.62 C-0243

Code

C-0243

Classification

PF: Tray7

Cause

The locking of the paper lift motor /2 of the 2nd tandem PF-702/703 middle tray (M43: PF-702, M8: PF-703) is detected.

When M43 and M8 are ON, error detection signals of the M43 and M8 are detected.

Measures to take when alert occurs

Error code is not displayed on the operation panel, but displayed only on the data collection, the list output and CSRC. Since the lifting operation of the tray is not completed, "Set paper in the tray x" is displayed on the operation panel.

Estimated abnormal parts

- Paper lift motor /2 (M43: PF-702)
- Paper lift motor /2 (M8: PF-703)
- PF drive board (PFUDB: PF-702/703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the motor, and repair it if any abnormality
2. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality (Wiring diagram: PF-702: 7-C, PF-703: 12-F)
3. Replace M43: PF-702 or M8: PF-703
4. Replace PFUDB.

Faulty part isolation DIPSW

DIPSW 18-5

Control while detached

Paper feed in tray /7 is unavailable (The operation panel is displayed in hatching)

2.4.63 C-0244

Code

C-0244

Classification

PF: Tray8

Cause

2nd tandem PF-702/703 lower tray up abnormality.

PF-702: When the upper limit sensor /3 (PS10) is OFF, PS10 does not turn ON within 20 seconds after the paper lift motor /3 (M44) turns ON for lifting operation.

PF-703: When the upper limit sensor /3 (PS13) is OFF, PS13 does not turn ON within 20 seconds after the paper lift motor /3 (M9) turns ON for lifting operation. Or, the paper suction sensor /Fr3 and /Rr3 (PS29 and PS30) turn ON before PS13 turns ON while in tray lifting.

Measures to take when alert occurs

Error code is not displayed on the operation panel, but displayed only on the data collection, the list output and CSRC. Since the lifting operation of the tray is not completed, "Set paper in the tray x" is displayed on the operation panel.

Estimated abnormal parts

- Upper limit sensor /3 (PS10: PF-702)
- Upper limit sensor /3 (PS13: PF-703)
- Paper lift motor /3 (M44: PF-702)
- Paper lift motor /3 (M9: PF-703)
- PF drive board (PFUDB: PF-702/703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the paper loaded condition and the rear end restriction plate misaligned of the lower tray, and repair it if any abnormality
2. Check the connector connection and the wiring between PFUDB and motor/sensor, and repair it if any abnormality
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality (Wiring diagram: PF-702: 9-C, PF-703: 19-F)
4. Check I/O and the operation of the sensor, and repair/replace it if any abnormality (Wiring diagram: PF-702: 7-C, PF-703: 16-F)
5. Replace PS10: PF-702 or PS13: PF-703
6. Replace M44: PF-702 or M9: PF-703
7. Replace PFUDB.

Faulty part isolation DIPSW

DIPSW 18-6

Control while detached

Paper feed in tray /8 is unavailable (The operation panel is displayed in hatching)

2.4.64 C-0245

Code

C-0245

Classification

PF: Tray8

Cause

The locking of the paper lift motor /3 of the 2nd tandem PF-702/703 middle tray (M44: PF-702, M9: PF-703) is detected. When M44 and M9 are ON, error detection signals of the M44 and M9 are detected.

Measures to take when alert occurs

Error code is not displayed on the operation panel, but displayed only on the data collection, the list output and CSRC. Since the lifting operation of the tray is not completed, "Set paper in the tray x" is displayed on the operation panel.

Estimated abnormal parts

- Paper lift motor /3 (M44: PF-702)
- Paper lift motor /3 (M9: PF-703)
- PF drive board (PFUDB: PF-702/703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the motor, and repair it if any abnormality
2. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality (Wiring diagram: PF-702: 9-C, PF-703: 19-F)
3. Replace M44: PF -702 or M9: PF-703
4. Replace PFUDB.

Faulty part isolation DIPSW

DIPSW 18-6

Control while detached

Paper feed in tray /8 is unavailable (The operation panel is displayed in hatching)

2.4.65 C-0250

Code

C-0250

Classification

PI-PFU: PI Tray1

Cause

PI-PFU (PF-703) upper tray up abnormality.

When the upper limit sensor /1 (PS5) is OFF, PS5 does not turn ON within 20 seconds after the paper lift motor /1 (M7) turns ON for lifting operation. Or, the paper suction sensor /Fr1 and /Rr1 (PS25 and PS26) turn ON before PS5 turns ON while in tray lifting.

Measures to take when alert occurs

Error code is not displayed on the operation panel, but displayed only on the data collection, the list output and CSRC. Since the lifting operation of the tray is not completed, "Set paper in the tray x" is displayed on the operation panel.

Estimated abnormal parts

- Upper limit sensor /1 (PS2: PF-702)
- Upper limit sensor /1 (PS5: PF-703)
- Paper lift motor /1 (M42: PF-702)
- Paper lift motor /1 (M7: PF-703)
- PF drive board (PFUDB: PF-702/703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the paper loaded condition and the rear end restriction plate misaligned of the upper tray, and repair it if any abnormality
2. Check the connector connection and the wiring between PFUDB and motor/sensor, and repair it if any abnormality
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality (Wiring diagram: PF-702: 5-C, PF-703: 6-F)
4. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: PF-702: 3-C, PF-703: 3-F)
5. Replace PS2: PF-702 or PS5: PF-703
6. Replace M42: PF-702 or M7: PF-703
7. Replace PFUDB.

Faulty part isolation DIPSW

Control while detached

2.4.66 C-0251

Code

C-0251

Classification

PI-PFU: PI Tray1

Cause

The locking of the upper tray paper lift motor /1 (M7) is detected.
When M7 is ON, an error detection signal of the M7 is detected.

Measures to take when alert occurs

Error code is not displayed on the operation panel, but displayed only on the data collection, the list output and CSRC. Since the lifting operation of the tray is not completed, "Set paper in the tray x" is displayed on the operation panel.

Estimated abnormal parts

- Paper lift motor /1 (M42: PF-702)
- Paper lift motor /1 (M7: PF-703)
- PF drive board (PFUDB: PF-702/703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the motor, and repair it if any abnormality
2. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality (Wiring diagram: PF-702: 5-C, PF-703: 6-F)
3. Replace M42: PF-702 or M7: PF-703
4. Replace PFUDB.

Faulty part isolation DIPSW

Control while detached

2.4.67 C-0252

Code

C-0252

Classification

PI-PFU: PI Tray2

Cause

PI-PFU (PF-703) middle tray up abnormality.

When the upper limit sensor /2 (PS9) is OFF, PS9 does not turn ON within 20 seconds after the paper lift motor /2 (M8) turns ON for lifting operation. Or, the paper suction sensor /Fr2 and /Rr2 (PS27 and PS28) turn ON before PS9 turns ON while in tray lifting.

Measures to take when alert occurs

Error code is not displayed on the operation panel, but displayed only on the data collection, the list output and CSRC. Since the lifting operation of the tray is not completed, "Set paper in the tray x" is displayed on the operation panel.

Estimated abnormal parts

- Upper limit sensor /2 (PS6: PF-702)
- Upper limit sensor /2 (PS9: PF-703)
- Paper lift motor /2 (M43: PF-702)
- Paper lift motor /2 (M8: PF-703)
- PF drive board (PFUDB: PF-702/703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the paper loaded condition and the rear end restriction plate misaligned of the middle tray, and repair it if any abnormality
2. Check the connector connection and the wiring between PFUDB and motor/sensor, and repair it if any abnormality
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality (Wiring diagram: PF-702: 7-C, PF-703: 12-F)
4. Check I/O and the operation of the sensor, and repair/replace it if any abnormality (Wiring diagram: PF-702: 5-C, PF-703: 9-F)
5. Replace PS6: PF-702 or PS9: PF-703
6. Replace M43: PF-702 or M8: PF-703
7. Replace PFUDB.

Faulty part isolation DIPSW

DIPSW 37-0

Control while detached

Paper feed in tray /2 is unavailable (The operation panel is displayed in hatching)

2.4.68 C-0253**Code**

C-0253

Classification

PI-PFU: PI Tray2

Cause

The locking of the upper tray paper lift motor /2 (M8) is detected.
When M8 is ON, an error detection signal of the M8 is detected.

Measures to take when alert occurs

Error code is not displayed on the operation panel, but displayed only on the data collection, the list output and CSRC. Since the lifting operation of the tray is not completed, "Set paper in the tray x" is displayed on the operation panel.

Estimated abnormal parts

- Paper lift motor /2 (M43: PF-702)
- Paper lift motor /2 (M8: PF-703)
- PF drive board (PFUDB: PF-702/703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the motor, and repair it if any abnormality
2. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality (Wiring diagram: PF-702: 7-C, PF-703: 12-F)
3. Replace M43: PF -702 or M8: PF-703
4. Replace PFUDB.

Faulty part isolation DIPSW

DIPSW 37-0

Control while detached

Paper feed in tray /2 is unavailable (The operation panel is displayed in hatching)

2.4.69 C-0254**Code**

C-0254

Classification

PI-PFU: PI Tray3

Cause

PI-PFU (PF-703) lower tray up abnormality.

When the upper limit sensor /3 (PS13) is OFF, PS13 does not turn ON within 20 seconds after the paper lift motor /3 (M9) turns ON for lifting operation. Or, the paper suction sensor /Fr3 and /Rr3 (PS29 and PS30) turn ON before PS13 turns ON while in tray lifting.

Measures to take when alert occurs

Error code is not displayed on the operation panel, but displayed only on the data collection, the list output and CSRC. Since the lifting operation of the tray is not completed, "Set paper in the tray x" is displayed on the operation panel.

Estimated abnormal parts

- Upper limit sensor /3 (PS10: PF-702)
- Upper limit sensor /3 (PS13: PF-703)
- Paper lift motor /3 (M44: PF-702)
- Paper lift motor /3 (M9: PF-703)
- PF drive board (PFUDB: PF-702/703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the paper loaded condition and the rear end restriction plate misaligned of the lower tray, and repair it if any abnormality
2. Check the connector connection and the wiring between PFUDB and motor/sensor, and repair it if any abnormality
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality (Wiring diagram: PF-702: 9-C, PF-703: 19-F)
4. Check I/O and the operation of the sensor, and repair/replace it if any abnormality (Wiring diagram: PF-702: 7-C, PF-703: 16-F)
5. Replace PS10: PF-702 or PS13: PF-703
6. Replace M44: PF-702 or M9: PF-703
7. Replace PFUDB.

Faulty part isolation DIPSW

DIPSW 37-1

Control while detached

Paper feed in tray /3 is unavailable (The operation panel is displayed in hatching)

2.4.70 C-0255**Code**

C-0255

Classification

PI-PFU: PI Tray3

Cause

The locking of the upper tray paper lift motor /3 (M9) is detected.
When M9 is ON, an error detection signal of the M9 is detected.

Measures to take when alert occurs

Error code is not displayed on the operation panel, but displayed only on the data collection, the list output and CSRC. Since the lifting operation of the tray is not completed, "Set paper in the tray x" is displayed on the operation panel.

Estimated abnormal parts

- Paper lift motor /3 (M44: PF-702)
- Paper lift motor /3 (M9: PF-703)
- PF drive board (PFUDB: PF-702/703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the motor, and repair it if any abnormality
2. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality (Wiring diagram: PF-702: 9-C, PF-703: 19-F)
3. Replace M44: PF -702 or M9: PF-703
4. Replace PFUDB.

Faulty part isolation DIPSW

DIPSW 37-1

Control while detached

Paper feed in tray /3 is unavailable (The operation panel is displayed in hatching)

2.4.71 C-0261**Code**

C-0261

Classification

PF: Tray3

Cause

1st tandem PF-703 shutter motor /1 (M10) operation time abnormality 1.
The M10EM error detection signal is detected twice in succession within a specified period of time after M10 was turned ON. At this time, an error detection signal (blowout of fan ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Shutter motor /1 (M10: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the motor, and repair it if any abnormality
2. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality (Wiring diagram: PF-703: 15-L)
3. Replace M10
4. Replace PFUDB.

Faulty part isolation DIPSW

DIPSW 18-2

Control while detached

Paper feed in tray /3, /6, /7 and /8 is unavailable (The operation panel is displayed in hatching)

2.4.72 C-0262**Code**

C-0262

Classification

PF: Tray3

Cause

1st tandem PF-703 shutter motor /1 (M10) operation time abnormality 2.
The M10EM error detection signal is detected twice in succession within a specified period of time after M10 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Shutter motor /1 (M10: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the motor, and repair it if any abnormality
2. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality (Wiring diagram: PF-703: 15-L)
3. Replace M10 and PFUDB at a time

Faulty part isolation DIPSW

DIPSW 18-2

Control while detached

Paper feed in tray /3, /6, /7 and /8 is unavailable (The operation panel is displayed in hatching)

2.4.73 C-0263**Code**

C-0263

Classification

PF: Tray4

Cause

1st tandem PF-703 shutter motor /2 (M11) operation time abnormality 1.

The M11EM error detection signal is detected twice in succession within a specified period of time after M11 was turned ON. At this time, an error detection signal (blowout of fan ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Shutter motor /2 (M11: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the motor, and repair it if any abnormality
2. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality (Wiring diagram: PF-703: 17-L)
3. Replace M11.
4. Replace PFUDB.

Faulty part isolation DIPSW

DIPSW 18-3

Control while detached

Paper feed in tray /4 is unavailable (The operation panel is displayed in hatching)

2.4.74 C-0264**Code**

C-0264

Classification

PF: Tray4

Cause

1st tandem PF-703 shutter motor /2 (M11) operation time abnormality 2.

The M11EM error detection signal is detected twice in succession within a specified period of time after M11 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Shutter motor /2 (M11: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the motor, and repair it if any abnormality
2. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality (Wiring diagram: PF-703: 17-L)
3. Replace M11 and PFUDB at a time.

Faulty part isolation DIPSW

DIPSW 18-3

Control while detached

Paper feed in tray /4 is unavailable (The operation panel is displayed in hatching)

2.4.75 C-0265**Code**

C-0265

Classification

PF: Tray5

Cause

1st tandem PF-703 shutter motor /3 (M12) operation time abnormality 1.

The M12EM error detection signal is detected twice in succession within a specified period of time after M12 was turned ON. At this time, an error detection signal (blowout of fan ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Shutter motor /3 (M12: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the motor, and repair it if any abnormality
2. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality (Wiring diagram: PF-703: 19-L)
3. Replace M12.
4. Replace PFUDB.

Faulty part isolation DIPSW

DIPSW 20-4

Control while detached

Paper feed in tray /5 is unavailable (The operation panel is displayed in hatching)

2.4.76 C-0266**Code**

C-0266

Classification

PF: Tray5

Cause

1st tandem PF-703 shutter motor /3 (M12) operation time abnormality 2.

The M12EM error detection signal is detected twice in succession within a specified period of time after M12 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Shutter motor /3 (M12: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the motor, and repair it if any abnormality
2. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality (Wiring diagram: PF-703: 19-L)
3. Replace M12 and PFUDB at a time.

Faulty part isolation DIPSW

DIPSW 20-4

Control while detached

Paper feed in tray /5 is unavailable (The operation panel is displayed in hatching)

2.4.77 C-0271**Code**

C-0271

Classification

PF: Tray6

Cause

2nd tandem PF-703 shutter motor /1 (M10) operation time abnormality 1.

The M10EM error detection signal is detected twice in succession within a specified period of time after M10 was turned ON. At this time, an error detection signal (blowout of fan ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Shutter motor /1 (M10: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the motor, and repair it if any abnormality
2. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality (Wiring diagram: PF-703: 15-L)
3. Replace M10
4. Replace PFUDB.

Faulty part isolation DIPSW

DIPSW 20-5

Control while detached

Paper feed in tray /6 is unavailable (The operation panel is displayed in hatching)

2.4.78 C-0272**Code**

C-0272

Classification

PF: Tray6

Cause

2nd tandem PF-703 shutter motor /1 (M10) operation time abnormality 2.

The M10EM error detection signal is detected twice in succession within a specified period of time after M10 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Shutter motor /1 (M10: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the motor, and repair it if any abnormality
2. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality (Wiring diagram: PF-703: 15-L)
3. Replace M10 and PFUDB at a time

Faulty part isolation DIPSW

DIPSW 20-5

Control while detached

Paper feed in tray /6 is unavailable (The operation panel is displayed in hatching)

2.4.79 C-0273**Code**

C-0273

Classification

PF: Tray7

Cause

2nd tandem PF-703 shutter motor /2 (M11) operation time abnormality 1.

The M11EM error detection signal is detected twice in succession within a specified period of time after M11 was turned ON. At this time, an error detection signal (blowout of fan ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Shutter motor /2 (M11: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the motor, and repair it if any abnormality
2. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality (Wiring diagram: PF-703: 17-L)
3. Replace M11.
4. Replace PFUDB.

Faulty part isolation DIPSW

DIPSW 18-5

Control while detached

Paper feed in tray /7 is unavailable (The operation panel is displayed in hatching)

2.4.80 C-0274**Code**

C-0274

Classification

PF: Tray7

Cause

2nd tandem PF-703 shutter motor /2 (M11) operation time abnormality 2.

The M11EM error detection signal is detected twice in succession within a specified period of time after M11 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Shutter motor /2 (M11: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the motor, and repair it if any abnormality
2. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality (Wiring diagram: PF-703: 17-L)
3. Replace M11 and PFUDB at a time.

Faulty part isolation DIPSW

DIPSW 18-5

Control while detached

Paper feed in tray /7 is unavailable (The operation panel is displayed in hatching)

2.4.81 C-0275**Code**

C-0275

Classification

PF: Tray8

Cause

2nd tandem PF-703 shutter motor /3 (M12) operation time abnormality 1.

The M12EM error detection signal is detected twice in succession within a specified period of time after M12 was turned ON. At this time, an error detection signal (blowout of fan ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Shutter motor /3 (M12: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the motor, and repair it if any abnormality
2. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality (Wiring diagram: PF-703: 19-L)
3. Replace M12.
4. Replace PFUDB.

Faulty part isolation DIPSW

DIPSW 18-6

Control while detached

Paper feed in tray /8 is unavailable (The operation panel is displayed in hatching)

2.4.82 C-0276**Code**

C-0276

Classification

PF: Tray8

Cause

2nd tandem PF-703 shutter motor /3 (M12) operation time abnormality 2.

The M12EM error detection signal is detected twice in succession within a specified period of time after M12 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Shutter motor /3 (M12: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the motor, and repair it if any abnormality
2. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality (Wiring diagram: PF-703: 19-L)
3. Replace M12 and PFUDB at a time.

Faulty part isolation DIPSW

DIPSW 18-6

Control while detached

Paper feed in tray /8 is unavailable (The operation panel is displayed in hatching)

2.4.83 C-0281**Code**

C-0281

Classification

PI-PFU: PI Tray1

Cause

PI-PFU (PF-703) shutter motor /1 (M10) operation time abnormality 1.

The M10EM error detection signal is detected twice in succession within a specified period of time after M10 was turned ON. At this time, an error detection signal (blowout of fan ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Shutter motor /1 (M10: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the motor, and repair it if any abnormality
2. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality (Wiring diagram: PF-703: 15-L)
3. Replace M10
4. Replace PFUDB.

Faulty part isolation DIPSW

Control while detached

2.4.84 C-0282

Code

C-0282

Classification

PI-PFU: PI Tray1

Cause

PI-PFU (PF-703)shutter motor /1 (M10) operation time abnormality 2.

The M10EM error detection signal is detected twice in succession within a specified period of time after M10 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Shutter motor /1 (M10: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the motor, and repair it if any abnormality
2. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality (Wiring diagram: PF-703: 15-L)
3. Replace M10 and PFUDB at a time

Faulty part isolation DIPSW

Control while detached

2.4.85 C-0283

Code

C-0283

Classification

PI-PFU: PI Tray2

Cause

PI-PFU (PF-703)shutter motor /2 (M11) operation time abnormality 1.

The M11EM error detection signal is detected twice in succession within a specified period of time after M11 was turned ON. At this time, an error detection signal (blowout of fan ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Shutter motor /2 (M11: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the motor, and repair it if any abnormality
2. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality (Wiring diagram: PF-703: 17-L)
3. Replace M11.
4. Replace PFUDB.

Faulty part isolation DIPSW

DIPSW 37-0

Control while detached

Paper feed in tray /2 is unavailable (The operation panel is displayed in hatching)

2.4.86 C-0284

Code

C-0284

Classification

PI-PFU: PI Tray2

Cause

PI-PFU (PF-703) shutter motor /2 (M11) operation time abnormality 2.

The M11EM error detection signal is detected twice in succession within a specified period of time after M11 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Shutter motor /2 (M11: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the motor, and repair it if any abnormality
2. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality (Wiring diagram: PF-703: 17-L)
3. Replace M11 and PFUDB at a time.

Faulty part isolation DIPSW

DIPSW 37-0

Control while detached

Paper feed in tray /2 is unavailable (The operation panel is displayed in hatching)

2.4.87 C-0285

Code

C-0285

Classification

PI-PFU: PI Tray3

Cause

PI-PFU (PF-703) shutter motor /3 (M12) operation time abnormality 1.

The M12EM error detection signal is detected twice in succession within a specified period of time after M12 was turned ON. At this time, an error detection signal (blowout of fan ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Shutter motor /3 (M12: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the motor, and repair it if any abnormality
2. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality (Wiring diagram: PF-703: 19-L)
3. Replace M12.
4. Replace PFUDB.

Faulty part isolation DIPSW

DIPSW 37-1

Control while detached

Paper feed in tray /3 is unavailable (The operation panel is displayed in hatching)

2.4.88 C-0286

Code

C-0286

Classification

PI-PFU: PI Tray3

Cause

PI-PFU (PF-703) shutter motor /3 (M12) operation time abnormality 2.

The M12EM error detection signal is detected twice in succession within a specified period of time after M12 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Shutter motor /3 (M12: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the motor, and repair it if any abnormality
2. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality (Wiring diagram: PF-703: 19-L)
3. Replace M12 and PFUDB at a time.

Faulty part isolation DIPSW

DIPSW 37-1

Control while detached

Paper feed in tray /3 is unavailable (The operation panel is displayed in hatching)

2.5 Solution 2 (C-0301_0400)**2.5.1 C-0301****Code**

C-0301

Classification

Main body: Fan abnormality

Cause

Transfer suction fan (FM5) rotation abnormality + 24V power abnormality.

The FM5EM error detection signal is detected twice in succession within a specified period of time after FM5 was turned ON. At this time, an error detection signal (24V cut off) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- DC power supply /2 (DCPS/2)
- AC drive board (ACDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between ACDB and DCPS /2, and repair it if any abnormality.
2. Replace DCPS /2.
3. Replace ACDB.

Faulty part isolation DIPSW**Control while detached****2.5.2 C-0302****Code**

C-0302

Classification

Main body: Fan abnormality

Cause

Transfer suction fan (FM5) power abnormality.

The FM5EM error detection signal is detected twice in succession within a specified period of time after FM5 was turned ON. At this time, 24V is normal, but an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Transfer suction fan (FM5)
- AC drive board (ACDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between ACDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: Main body: 3-L)
3. Replace FM5 and ACDB at a time.

Faulty part isolation DIPSW**Control while detached****2.5.3 C-0303****Code**

C-0303

Classification

Main body: Fan abnormality

Cause

Transfer suction fan (FM5) rotation abnormality.

The FM5EM error detection signal is detected twice in succession within a specified period of time after FM5 was turned ON. However, error detection signals (24V cut off/blowout of ICP) are not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Transfer suction fan (FM5)
- Printer control board (PRCB)
- AC drive board (ACDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and the fan, and repair it if any abnormality.
2. Check the connector connection and the wiring between ACDB and the fan, and repair it if any abnormality. (Wiring diagram: Main body: 3-L).
3. Rotate the fan or I/O by hand, and repair it if any abnormality.
4. Replace FM5.
5. Replace PRCB.
6. Replace ACDB.

Faulty part isolation DIPSW**Control while detached****2.5.4 C-0304****Code**

C-0304

Classification

Main body: Fan abnormality

Cause

Paper exit cooling fan /Up (FM4) rotation abnormality + 24V power abnormality.

The FM4EM error detection signal is detected twice in succession within a specified period of time after FM4 was turned ON. At this time, an error detection signal (24V cut off) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- DC power supply /2 (DCPS/2)
- AC drive board (ACDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between ACDB and DCPS /2, and repair it if any abnormality.
2. Replace DCPS /2.
3. Replace ACDB.

Faulty part isolation DIPSW**Control while detached****2.5.5 C-0305****Code**

C-0305

Classification

Main body: Fan abnormality

Cause

Paper exit cooling fan /Up (FM4) power abnormality.

The FM4EM error detection signal is detected twice in succession within a specified period of time after FM4 was turned ON. At this time, 24V is normal, but an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Paper exit cooling fan /Up (FM4)
- AC drive board (ACDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between ACDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: Main body: 4-L)
3. Replace FM4 and ACDB at a time.

Faulty part isolation DIPSW**Control while detached****2.5.6 C-0306****Code**

C-0306

Classification

Main body: Fan abnormality

Cause

Paper exit cooling fan /Up (FM4) rotation abnormality.

The FM4EM error detection signal is detected twice in succession within a specified period of time after FM4 was turned ON. However, error detection signals (24V cut off/blowout of ICP) are not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Paper exit cooling fan /Up (FM4)
- Printer control board (PRCB)
- AC drive board (ACDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and the fan, and repair it if any abnormality.
2. Check the connector connection and the wiring between ACDB and the fan, and repair it if any abnormality.
3. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: Main body: 4-L)
4. Replace FM4
5. Replace PRCB.
6. Replace ACDB.

Faulty part isolation DIPSW Control while detached

2.5.7 C-0307

Code

C-0307

Classification

Main body: Fan abnormality

Cause

Paper exit cooling fan /Lw1 (FM10) rotation abnormality + 24V power abnormality.

The FM10EM error detection signal is detected twice in succession within a specified period of time after FM10 was turned ON. At this time, an error detection signal (24V cut off) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- DC power supply /2 (DCPS/2)
- AC drive board (ACDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between ACDB and DCPS /2, and repair it if any abnormality.
2. Replace DCPS /2.
3. Replace ACDB.

Faulty part isolation DIPSW Control while detached

2.5.8 C-0308

Code

C-0308

Classification

Main body: Fan abnormality

Cause

Paper exit cooling fan /Lw1 (FM10) power abnormality.

The FM10EM error detection signal is detected twice in succession within a specified period of time after FM10 was turned ON. In addition, 24V is normal, and an error detection signal (fuse blowout) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Paper exit cooling fan /Lw1 (FM10)
- AC drive board (ACDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between ACDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: Main body: 5-L)
3. Replace FM10 and ACDB at a time.

Faulty part isolation DIPSW Control while detached

2.5.9 C-0309

Code

C-0309

Classification

Main body: Fan abnormality

Cause

Paper exit cooling fan /Lw1 (FM10) rotation abnormality.

The FM10EM error detection signal is detected twice in succession within a specified period of time after FM10 was turned ON. In addition, an error detection signal (24V cut off/blowout of a fuse) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Paper exit cooling fan /Lw1 (FM10)
- Printer control board (PRCB)
- AC drive board (ACDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and the fan, and repair it if any abnormality.
2. Check the connector connection and the wiring between ACDB and the fan, and repair it if any abnormality.
3. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: Main body: 5-L)
4. Replace FM10.
5. Replace PRCB.
6. Replace ACDB.

Faulty part isolation DIPSW

Control while detached

2.5.10 C-0310

Code

C-0310

Classification

Main body: Fan abnormality

Cause

Paper exit cooling fan /Lw2 (FM28) rotation abnormality + 24V power abnormality.

The FM28EM error detection signal is detected twice in succession within a specified period of time after FM28 was turned ON. At this time, an error detection signal (24V cut off) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- DC power supply /2 (DCPS/2)
- AC drive board (ACDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between ACDB and DCPS /2, and repair it if any abnormality.
2. Replace DCPS /2
3. Replace ACDB.

Faulty part isolation DIPSW

Control while detached

2.5.11 C-0311

Code

C-0311

Classification

Main body: Fan abnormality

Cause

Paper exit cooling fan /Lw2 (FM28) power abnormality.

The FM28EM error detection signal is detected twice in succession within a specified period of time after FM28 was turned ON. At this time, 24V is normal, but an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Paper exit cooling fan /Lw2 (FM28)
- AC drive board (ACDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between ACDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: Main body: 4-L)
3. Replace FM28 and ACDB at a time.

Faulty part isolation DIPSW

Control while detached

2.5.12 C-0312**Code**

C-0312

Classification

Main body: Fan abnormality

Cause

Paper exit cooling fan /Lw2 (FM28) rotation abnormality.

The FM28EM error detection signal is detected twice in succession within a specified period of time after FM28 was turned ON. However, error detection signals (24V cut off/blowout of ICP) are not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Paper exit cooling fan /Lw2 (FM28)
- Printer control board (PRCB)
- AC drive board (ACDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and the fan, and repair it if any abnormality.
2. Check the connector connection and the wiring between ACDB and the fan, and repair it if any abnormality.
3. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: Main body: 4-L)
4. Replace FM28.
5. Replace PRCB.
6. Replace ACDB.

Faulty part isolation DIPSW**Control while detached****2.5.13 C-0320****Code**

C-0320

Classification

Main body: Fan abnormality

Cause

Paper feed assist fan /Fr1 (FM21) rotation abnormality + 24V power abnormality.

The FM21EM error detection signal is detected twice in succession within a specified period of time after FM21 was turned ON. At this time, an error detection signal (24V cut off) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- DC power supply /2 (DCPS/2)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and DCPS /2, and repair it if any abnormality.
2. Replace DCPS /2.
3. Replace PRCB.

Faulty part isolation DIPSW**Control while detached****2.5.14 C-0321****Code**

C-0321

Classification

Main body: Fan abnormality

Cause

Paper feed assist fan /Fr1 (FM21) power abnormality.

The FM20EM error detection signal is detected twice in succession within a specified period of time after FM20 was turned ON. At this time, 24V is normal, but an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Paper feed assist fan /Fr1 (FM21)
- Paper feed assist fan /Rr1 (FM20)
- Paper feed assist fan /Fr2 (FM23)
- Paper feed assist fan /Rr2 (FM24)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: Main body :5-F,8-F)
3. Replace FM21 and PRCB at a time.

Faulty part isolation DIPSW**Control while detached****2.5.15 C-0322****Code**

C-0322

Classification

Main body: Fan abnormality

Cause

Paper feed assist fan /Fr1 (FM21) rotation abnormality.

The FM21EM error detection signal is detected twice in succession within a specified period of time after FM21 was turned ON. However, error detection signals (24V cut off/blowout of ICP) are not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Paper feed assist fan /Fr1 (FM21)
- Paper feed assist fan /Rr1 (FM20)
- Paper feed assist fan /Fr2 (FM23)
- Paper feed assist fan /Rr2 (FM24)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: Main body :5-F,8-F)
3. Replace FM21.
4. Replace PRCB

Faulty part isolation DIPSW**Control while detached****2.5.16 C-0323****Code**

C-0323

Classification

Main body: Fan abnormality

Cause

Paper feed assist fan /Fr1 (FM20) rotation abnormality + 24V power abnormality.

The FM20EM error detection signal is detected twice in succession within a specified period of time after FM20 was turned ON. At this time, an error detection signal (24V cut off) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- DC power supply /2 (DCPS/2)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and DCPS /2, and repair it if any abnormality.
2. Replace DCPS /2
3. Replace PRCB

Faulty part isolation DIPSW**Control while detached****2.5.17 C-0324****Code**

C-0324

Classification

Main body: Fan abnormality

Cause

Paper feed assist fan /Rr1 (FM20) power abnormality.

The FM20EM error detection signal is detected twice in succession within a specified period of time after FM20 was turned ON. At this time, 24V is normal, but an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Paper feed assist fan /Fr1 (FM21)
- Paper feed assist fan /Rr1 (FM20)
- Paper feed assist fan /Fr2 (FM23)
- Paper feed assist fan /Rr2 (FM24)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: Main body :5-F,8-F)
3. Replace FM20 and PRCB at a time.

Faulty part isolation DIPSW

Control while detached

2.5.18 C-0325

Code

C-0325

Classification

Main body: Fan abnormality

Cause

Paper feed assist fan /Rr1 (FM20) rotation abnormality.

The FM20EM error detection signal is detected twice in succession within a specified period of time after FM20 was turned ON. However, error detection signals (24V cut off/blowout of ICP) are not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Paper feed assist fan /Fr1 (FM21)
- Paper feed assist fan /Rr1 (FM20)
- Paper feed assist fan /Fr2 (FM23)
- Paper feed assist fan /Rr2 (FM24)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: Main body :5-F,8-F)
3. Replace FM20.
4. Replace PRCB

Faulty part isolation DIPSW

Control while detached

2.5.19 C-0326

Code

C-0326

Classification

Main body: Fan abnormality

Cause

Paper feed assist fan /Fr2 (FM23) rotation abnormality + 24V power abnormality.

The FM23EM error detection signal is detected twice in succession within a specified period of time after FM23 was turned ON. At this time, an error detection signal (24V cut off) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- DC power supply /2 (DCPS/2)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and DCPS /2, and repair it if any abnormality.
2. Replace DCPS /2
3. Replace PRCB

Faulty part isolation DIPSW

Control while detached

2.5.20 C-0327**Code**

C-0327

Classification

Main body: Fan abnormality

Cause

Paper feed assist fan /Fr2 (FM23) power abnormality.

The FM23EM error detection signal is detected twice in succession within a specified period of time after FM23 was turned ON. At this time, 24V is normal, but an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Paper feed assist fan /Fr1 (FM21)
- Paper feed assist fan /Rr1 (FM20)
- Paper feed assist fan /Fr2 (FM23)
- Paper feed assist fan /Rr2 (FM24)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: Main body :5-F,8-F)
3. Replace FM23 and PRCB at a time.

Faulty part isolation DIPSW**Control while detached****2.5.21 C-0328****Code**

C-0328

Classification

Main body: Fan abnormality

Cause

Paper feed assist fan /Fr2 (FM23) rotation abnormality.

The FM23EM error detection signal is detected twice in succession within a specified period of time after FM23 was turned ON. However, error detection signals (24V cut off/blowout of ICP) are not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Paper feed assist fan /Fr1 (FM21)
- Paper feed assist fan /Rr1 (FM20)
- Paper feed assist fan /Fr2 (FM23)
- Paper feed assist fan /Rr2 (FM24)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: Main body :5-F,8-F)
3. Replace FM23
4. Replace PRCB

Faulty part isolation DIPSW**Control while detached****2.5.22 C-0329****Code**

C-0329

Classification

Main body: Fan abnormality

Cause

Paper feed assist fan /Fr2 (FM24) rotation abnormality + 24V power abnormality.

The FM24EM error detection signal is detected twice in succession within a specified period of time after FM24 was turned ON. At this time, an error detection signal (24V cut off) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- DC power supply /2 (DCPS/2)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and DCPS /2, and repair it if any abnormality.
2. Replace DCPS /2
3. Replace PRCB

Faulty part isolation DIPSW**Control while detached****2.5.23 C-0330****Code**

C-0330

Classification

Main body: Fan abnormality

Cause

Paper feed assist fan /Rr2 (FM24) power abnormality.

The FM24EM error detection signal is detected twice in succession within a specified period of time after FM24 was turned ON. At this time, 24V is normal, but an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Paper feed assist fan /Fr1 (FM21)
- Paper feed assist fan /Rr1 (FM20)
- Paper feed assist fan /Fr2 (FM23)
- Paper feed assist fan /Rr2 (FM24)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: Main body :5-F,8-F)
3. Replace FM24 and PRCB at a time.

Faulty part isolation DIPSW**Control while detached****2.5.24 C-0331****Code**

C-0331

Classification

Main body: Fan abnormality

Cause

Paper feed assist fan /Rr2 (FM24) rotation abnormality.

The FM24EM error detection signal is detected twice in succession within a specified period of time after FM24 was turned ON. However, error detection signals (24V cut off/blowout of ICP) are not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Paper feed assist fan /Fr1 (FM21)
- Paper feed assist fan /Rr1 (FM20)
- Paper feed assist fan /Fr2 (FM23)
- Paper feed assist fan /Rr2 (FM24)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: Main body :5-F,8-F)
3. Replace FM24.
4. Replace PRCB

Faulty part isolation DIPSW**Control while detached****2.5.25 C-0341****Code**

C-0341

Classification

PF: fan abnormality

Cause

1st tandem PF-702/703 paper feed assist fan /Fr1 (FM1) power abnormality.

The EM error detection signal of FM1 is detected twice in succession within a specified period of time after FM1 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Paper feed assist fan /Fr1 (FM1:PF-702/703)
- PF drive board (PFUDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-702: 4-C, PF-703: 6-F)
3. Replace FM1 and PFUDB.

Faulty part isolation DIPSW

Control while detached

2.5.26 C-0342

Code

C-0342

Classification

PF: fan abnormality

Cause

1st tandem PF-702/703 paper feed assist fan /Fr1 (FM1) rotation abnormality.

The EM error detection signal is detected twice in succession within a specified period of time after FM1 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Paper feed assist fan /Fr1 (FM1:PF-702/703)
- PF drive board (PFUDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and FM1, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-702: 4-C, PF-703: 6-F)
3. Replace FM1.
4. Replace PFUDB.

Faulty part isolation DIPSW

Control while detached

2.5.27 C-0344

Code

C-0344

Classification

PF: fan abnormality

Cause

1st tandem PF-702/703 paper feed assist fan /Rr1 (FM2) power abnormality.

The EM error detection signal of FM2 is detected twice in succession within a specified period of time after FM2 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Paper feed assist fan /Fr1 (FM2: PF-703)
- printer control board (PFUDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 6-F)
3. Replace FM2 and PFUDB.

Faulty part isolation DIPSW

Control while detached

2.5.28 C-0345

Code

C-0345

Classification

PF: fan abnormality

Cause

1st tandem PF-702/703 paper feed assist fan /Fr1 (FM2) rotation abnormality.

The FM2EM error detection signal is detected twice in succession within a specified period of time after FM2 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Paper feed assist fan /Fr1 (FM2: PF-703)
- PF drive board (PFUDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 6-F)
3. Replace FM2.
4. Replace PFUDB.

Faulty part isolation DIPSW

Control while detached

2.5.29 C-0347

Code

C-0347

Classification

PF: fan abnormality

Cause

1st tandem PF-702/703 paper feed assist fan /Fr2 (FM3: PF-702, FM5: PF-703) power abnormality.

The FM3EM and FM5EM error detection signals are detected twice in succession within a specified period of time after FM3 and FM5 were turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Paper feed assist fan /Fr2 (FM3: PF-702)
- Paper feed assist fan /Fr2 (FM5: PF-703)
- PF drive board (PFUDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-702: 7-C, PF-703: 10-F)
3. Replace FM3 and PFUDB at a time: PF-702
Replace FM5 and PFUDB at a time: PF-703

Faulty part isolation DIPSW

Control while detached

2.5.30 C-0348

Code

C-0348

Classification

PF: fan abnormality

Cause

1st tandem PF-702/703 paper feed assist fan /Fr2 (FM3: PF-702, FM5: PF-703) rotation abnormality.

The FM3EM and FM5EM error detection signals are detected twice in succession within a specified period of time after FM3 and FM5 were turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- paper feed assist fan /Fr2 (FM3: PF-702)
- paper feed assist fan /Fr2 (FM5: PF-703)
- PF drive board (PFUDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-702: 7-C, PF-703: 10-F)
3. Replace FM3: PF-702
Replace FM5: PF-703
4. Replace PFUDB.

Faulty part isolation DIPSW Control while detached

2.5.31 C-0350

Code

C-0350

Classification

PF: fan abnormality

Cause

1st tandem PF-702/703 paper feed assist fan /Rr2 (FM4: PF-702, FM6: PF-703) power abnormality.
The FM4EM and FM6EM error detection signals are detected twice in succession within a specified period of time after FM4 and FM6 were turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- paper feed assist fan /Rr2 (FM4: PF-702)
- paper feed assist fan /Rr2 (FM6: PF-703)
- PF drive board (PFUDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-702: 7-C, PF-703: 11-F)
3. Replace FM4 and PFUDB at a time: PF-702
Replace FM6 and PFUDB at a time: PF-703
4. Replace PFUDB.

Faulty part isolation DIPSW Control while detached

2.5.32 C-0351

Code

C-0351

Classification

PF: fan abnormality

Cause

1st tandem PF-702/703 paper feed assist fan /Fr2 (FM4: PF-702, FM6: PF-703) rotation abnormality.
The FM4EM and FM6EM error detection signals are detected twice in succession within a specified period of time after FM4 and FM6 were turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- paper feed assist fan /Rr2 (FM4: PF-702)
- paper feed assist fan /Rr2 (FM6: PF-703)
- PF drive board (PFUDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-702: 7-C, PF-703: 11-F)
3. Replace FM4: PF-702
Replace FM6: PF-703
4. Replace PFUDB.

Faulty part isolation DIPSW Control while detached

2.5.33 C-0353

Code

C-0353

Classification

PF: fan abnormality

Cause

1st tandem PF-702/703 paper feed assist fan /Fr3 (FM5: PF-702, FM9: PF-703) power abnormality.
The FM5EM and FM9EM error detection signals are detected twice in succession within a specified period of time after FM5 and FM9 were turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- paper feed assist fan /Fr3 (FM5: PF-702)
- paper feed assist fan /Fr3 (FM9: PF-703)
- PF drive board (PFUDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-702: 9-C, PF-703: 18-F)
3. Replace FM5 and PFUDB at a time: PF-702
Replace FM9 and PFUDB at a time: PF-703

Faulty part isolation DIPSW**Control while detached****2.5.34 C-0354****Code**

C-0354

Classification

PF: fan abnormality

Cause

1st tandem PF-702/703 paper feed assist fan /Fr3 (FM5: PF-702, FM9: PF-703) rotation abnormality.

The FM5EM and FM9EM error detection signals are detected twice in succession within a specified period of time after FM5 and FM9 were turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- paper feed assist fan /Fr3 (FM5: PF-702)
- paper feed assist fan /Fr3 (FM9: PF-703)
- PF drive board (PFUDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-702: 9-C, PF-703: 18-F)
3. Replace FM5: PF-702
Replace FM9: PF-703
4. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached****2.5.35 C-0356****Code**

C-0356

Classification

PF: fan abnormality

Cause

1st tandem PF-702/703 paper feed assist fan /Rr3 (FM6: PF-702, FM10: PF-703) power abnormality.

The FM6EM and FM10EM error detection signals are detected twice in succession within a specified period of time after FM6 and FM10 were turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- paper feed assist fan /Rr3 (FM6: PF-702)
- paper feed assist fan /Rr3 (FM10: PF-703)
- PF drive board (PFUDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-702: 9-C, PF-703: 19-F)
3. Replace FM6 and PFUDB at a time: PF-702
Replace FM10 and PFUDB at a time: PF-703

Faulty part isolation DIPSW**Control while detached****2.5.36 C-0357****Code**

C-0357

Classification

PF: fan abnormality

Cause

1st tandem PF-702/703 paper feed assist fan /Rr3 (FM6: PF-702, FM10: PF-703) rotation abnormality.

The FM6EM and FM10EM error detection signals are detected twice in succession within a specified period of time after FM6 and FM10 were turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- paper feed assist fan /Rr3 (FM6: PF-702)
- paper feed assist fan /Rr3 (FM10: PF-703)
- PF drive board (PFUDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-702: 9-C, PF-703: 19-F)
3. Replace FM6: PF-702
Replace FM10: PF-703
4. Replace PFUDB.

Faulty part isolation DIPSW

Control while detached

2.5.37 C-0359

Code

C-0359

Classification

PF: Fan abnormality

Cause

1st tandem PF-702/703 cooling fan power abnormality.

PF-702: The FM7EM error detection signal is detected twice in succession within a specified period of time after the PF cooling fan (FM7) was turned ON. At this time, an error detection signal (blowout of ICP) is detected.

PF-703: The FM19EM and FM20EM error detection signals are detected twice in succession within a specified period of time after the PF cooling fan /1 and /2 (FM19 and FM20) were turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- PF cooling fan (FM7: PF-702)
- PF cooling fan /1 (FM19: PF-703)
- PF cooling fan /2 (FM20: PF-703)
- PF drive board (PFUDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair or replace it if any abnormality. (Wiring diagram: PF-702: 8-H, PF-703: 22-F, 23-F)
3. Replace FM7 and PFUDB at a time: PF-702
Replace FM19, FM20 and PFUDB at a time: PF-703

Faulty part isolation DIPSW

Control while detached

2.5.38 C-0360

Code

C-0360

Classification

PF: Fan abnormality

Cause

1st tandem PF-702/703 cooling fan rotation abnormality 1.

PF-702: The FM20EM error detection signal is detected twice in succession within a specified period of time after the PF cooling fan (FM7) was turned ON. However, an error detection signal (blowout of ICP) is not detected.

PF-703: The FM19EM and FM20EM error detection signals are detected twice in succession within a specified period of time after the PF cooling fan /1 and /2 (FM19 and FM20) were turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- PF cooling fan (FM7: PF-702)
- PF cooling fan /1 (FM19: PF-703)
- PF cooling fan /2 (FM20: PF-703)
- PF drive board (PFUDB: PF-702/703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair or replace it if any abnormality. (Wiring diagram: PF-702: 8-H, PF-703: 22-F, 23-F)
3. Replace FM7: PF-702
Replace FM19 and FM20: PF-703
4. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached****2.5.39 C-0361****Code**

C-0361

Classification

PF: Fan abnormality

Cause

1st tandem PF-703 cooling fan rotation abnormality 2.

The FM21EM error detection signal is detected twice in succession within a specified period of time after the PF cooling fan /3 (FM21) was turned ON with the front door closed. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- PF cooling fan /3 (FM21: PF-703)
- PF drive board (PFUDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 23-F)
3. Replace FM21 and PFUDB.

Faulty part isolation DIPSW**Control while detached****2.5.40 C-0370****Code**

C-0370

Classification

PF: fan abnormality

Cause

2nd tandem PF-702/703 paper feed assist fan /Fr1 (FM1) power abnormality.

The EM error detection signal of FM1 is detected twice in succession within a specified period of time after FM1 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Paper feed assist fan /Fr1 (FM1:PF-702/703)
- PF drive board (PFUDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-702: 4-C, PF-703: 6-F)
3. Replace FM1 and PFUDB.

Faulty part isolation DIPSW**Control while detached****2.5.41 C-0371****Code**

C-0371

Classification

PF: fan abnormality

Cause

2nd tandem PF-702/703 paper feed assist fan /Fr1 (FM1) rotation abnormality.

The FM1EM error detection signal is detected twice in succession within a specified period of time after FM1 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Paper feed assist fan /Fr1 (FM1: PF-702/703)
- PF drive board (PFUDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and FM1, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-702: 4-C, PF-703: 6-F)
3. Replace FM1.
4. Replace PFUDB.

Faulty part isolation DIPSW

Control while detached

2.5.42 C-0372

Code

C-0372

Classification

PF: fan abnormality

Cause

2nd tandem PF-702/703 paper feed assist fan /Rr1 (FM2) power abnormality.

The EM error detection signal of FM2 is detected twice in succession within a specified period of time after FM2 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Paper feed assist fan /Rr1 (FM2: PF-703)
- printer control board (PFUDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 6-F)
3. Replace FM2 and PFUDB.

Faulty part isolation DIPSW

Control while detached

2.5.43 C-0373

Code

C-0373

Classification

PF: fan abnormality

Cause

2nd tandem PF-702/703 paper feed assist fan /Rr1 (FM2) rotation abnormality.

The FM2EM error detection signal is detected twice in succession within a specified period of time after FM2 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Paper feed assist fan /Rr1 (FM2: PF-703)
- PF drive board (PFUDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 6-F)
3. Replace FM2.
4. Replace PFUDB.

Faulty part isolation DIPSW

Control while detached

2.5.44 C-0374

Code

C-0374

Classification

PF: fan abnormality

Cause

2nd tandem PF-702/703 paper feed assist fan /Fr2 (FM3: PF-702, FM5: PF-703) power abnormality.

The FM3EM and FM5EM error detection signals are detected twice in succession within a specified period of time after FM3 and FM5 were turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Paper feed assist fan /Fr2 (FM3: PF-702)
- Paper feed assist fan /Fr2 (FM5: PF-703)
- PF drive board (PFUDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-702: 7-C, PF-703: 10-F)
3. Replace FM3 and PFUDB at a time: PF-702
Replace FM5 and PFUDB at a time: PF-703

Faulty part isolation DIPSW**Control while detached****2.5.45 C-0375****Code**

C-0375

Classification

PF: fan abnormality

Cause

2nd tandem PF-702/703 paper feed assist fan /Fr2 (FM3: PF-702, FM5: PF-703) rotation abnormality.

The FM3EM and FM5EM error detection signals are detected twice in succession within a specified period of time after FM3 and FM5 were turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- paper feed assist fan /Fr2 (FM3: PF-702)
- paper feed assist fan /Fr2 (FM5: PF-703)
- PF drive board (PFUDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-702: 7-C, PF-703: 10-F)
3. Replace FM3: PF-702
Replace FM5: PF-703
4. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached****2.5.46 C-0376****Code**

C-0376

Classification

PF: fan abnormality

Cause

2nd tandem PF-702/703 paper feed assist fan /Rr2 (FM4: PF-702, FM6: PF-703) power abnormality.

The FM4EM and FM6EM error detection signals are detected twice in succession within a specified period of time after FM4 and FM6 were turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- paper feed assist fan /Rr2 (FM4: PF-702)
- paper feed assist fan /Rr2 (FM6: PF-703)
- PF drive board (PFUDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-702: 7-C, PF-703: 11-F)
3. Replace FM4 and PFUDB at a time: PF-702
Replace FM6 and PFUDB at a time: PF-703
4. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached**

2.5.47 C-0377**Code**

C-0377

Classification

PF: fan abnormality

Cause

2nd tandem PF-702/703 paper feed assist fan /Rr2 (FM4: PF-702, FM6: PF-703) rotation abnormality.

The FM4EM and FM6EM error detection signals are detected twice in succession within a specified period of time after FM4 and FM6 were turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- paper feed assist fan /Rr2 (FM4: PF-702)
- paper feed assist fan /Rr2 (FM6: PF-703)
- PF drive board (PFUDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-702: 7-C, PF-703: 11-F)
3. Replace FM4: PF-702
Replace FM6: PF-703
4. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached****2.5.48 C-0378****Code**

C-0378

Classification

PF: fan abnormality

Cause

2nd tandem PF-702/703 paper feed assist fan /Fr3 (FM5: PF-702, FM9: PF-703) power abnormality.

The FM5EM and FM9EM error detection signals are detected twice in succession within a specified period of time after FM5 and FM9 were turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- paper feed assist fan /Fr3 (FM5: PF-702)
- paper feed assist fan /Fr3 (FM9: PF-703)
- PF drive board (PFUDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-702: 9-C, PF-703: 18-F)
3. Replace FM5 and PFUDB at a time: PF-702
Replace FM9 and PFUDB at a time: PF-703

Faulty part isolation DIPSW**Control while detached****2.5.49 C-0379****Code**

C-0379

Classification

PF: fan abnormality

Cause

2nd tandem PF-702/703 paper feed assist fan /Fr3 (FM5: PF-702, FM9: PF-703) rotation abnormality.

The FM5EM and FM9EM error detection signals are detected twice in succession within a specified period of time after FM5 and FM9 were turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- paper feed assist fan /Fr3 (FM5: PF-702)
- paper feed assist fan /Fr3 (FM9: PF-703)
- PF drive board (PFUDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-702: 9-C, PF-703: 18-F)
3. Replace FM5: PF-702
Replace FM9: PF-703
4. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached****2.5.50 C-0380****Code**

C-0380

Classification

PF: fan abnormality

Cause

2nd tandem PF-702/703 paper feed assist fan /Rr3 (FM6: PF-702, FM10: PF-703) power abnormality.

The FM6EM and FM10EM error detection signals are detected twice in succession within a specified period of time after FM6 and FM10 were turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- paper feed assist fan /Rr3 (FM6: PF-702)
- paper feed assist fan /Rr3 (FM10: PF-703)
- PF drive board (PFUDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-702: 9-C, PF-703: 19-F)
3. Replace FM6 and PFUDB at a time: PF-702
Replace FM10 and PFUDB at a time: PF-703

Faulty part isolation DIPSW**Control while detached****2.5.51 C-0381****Code**

C-0381

Classification

PF: fan abnormality

Cause

2nd tandem PF-702/703 paper feed assist fan /Rr3 (FM6: PF-702, FM10: PF-703) rotation abnormality.

The FM6EM and FM10EM error detection signals are detected twice in succession within a specified period of time after FM6 and FM10 were turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- paper feed assist fan /Rr3 (FM6: PF-702)
- paper feed assist fan /Rr3 (FM10: PF-703)
- PF drive board (PFUDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-702: 9-C, PF-703: 19-F)
3. Replace FM6: PF-702
Replace FM10: PF-703
4. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached****2.5.52 C-0382****Code**

C-0382

Classification

PF: Fan abnormality

Cause

2nd tandem PF-702/703 cooling fan power abnormality.

PF-702: The FM7EM error detection signal is detected twice in succession within a specified period of time after the PF cooling fan (FM7) was turned ON. At this time, an error detection signal (blowout of ICP) is detected.

PF-703: The FM19EM and FM20EM error detection signals are detected twice in succession within a specified period of time after the PF cooling fan /1 and /2 (FM19 and FM20) were turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- PF cooling fan (FM7: PF-702)
- PF cooling fan /1 (FM19: PF-703)
- PF cooling fan /2 (FM20: PF-703)
- PF drive board (PFUDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair or replace it if any abnormality. (Wiring diagram: PF-702: 8-H, PF-703: 22-F, 23-F)
3. Replace FM7 and PFUDB at a time: PF-702
Replace FM19, FM20 and PFUDB at a time: PF-703

Faulty part isolation DIPSW

Control while detached

2.5.53 C-0383

Code

C-0383

Classification

PF: Fan abnormality

Cause

2nd tandem PF-702/703 cooling fan rotation abnormality 1.

PF-702: The FM20EM error detection signal is detected twice in succession within a specified period of time after the PF cooling fan (FM7) was turned ON. However, an error detection signal (blowout of ICP) is not detected.

PF-703: The FM19EM and FM20EM error detection signals are detected twice in succession within a specified period of time after the PF cooling fan /1 and /2 (FM19 and FM20) were turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- PF cooling fan (FM7: PF-702)
- PF cooling fan /1 (FM19: PF-703)
- PF cooling fan /2 (FM20: PF-703)
- PF drive board (PFUDB: PF-702/703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair or replace it if any abnormality. (Wiring diagram: PF-702: 8-H, PF-703: 22-F, 23-F)
3. Replace FM7: PF-702
Replace FM19 and FM20: PF-703
4. Replace PFUDB.

Faulty part isolation DIPSW

Control while detached

2.5.54 C-0384

Code

C-0384

Classification

PF : fan abnormality

Cause

2nd tandem PF-703 cooling fan rotation abnormality 2.

The FM21EM error detection signal is detected twice in succession within a specified period of time after the PF cooling fan /3 (FM21) was turned ON with the front door closed. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- PF cooling fan /3 (FM21: PF-703)
- PF drive board (PFUDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 23-F)
3. Replace FM21 and PFUDB.

Faulty part isolation DIPSW Control while detached

2.5.55 C-0385

Code

C-0385

Classification

PF: PF fan abnormality

Cause

PI-PFU (PF-703) paper feed assist fan /Fr1 (FM1) power abnormality.

The EM error detection signal of FM2 is detected twice in succession within a specified period of time after FM2 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Paper feed assist fan /Fr1 (FM1: PF-702/703)
- PF drive board (PFUDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-702: 4-C, PF-703: 6-F)
3. Replace FM1 and PFUDB.

Faulty part isolation DIPSW Control while detached

2.5.56 C-0386

Code

C-0386

Classification

PI-PFU: fan abnormality

Cause

PI-PFU (PF-703) paper feed assist fan /Fr1 (FM1) rotation abnormality.

The FM1EM error detection signal is detected twice in succession within a specified period of time after FM1 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Paper feed assist fan /Fr1 (FM1: PF-702/703)
- PF drive board (PFUDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and FM1, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-702: 4-C, PF-703: 6-F)
3. Replace FM1.
4. Replace PFUDB.

Faulty part isolation DIPSW Control while detached

2.5.57 C-0387

Code

C-0387

Classification

PI-PFU: Fan abnormality

Cause

PI-PFU (PF-703) paper feed assist fan /Rr1 (FM2) power abnormality.

The EM error detection signal of FM2 is detected twice in succession within a specified period of time after FM2 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Paper feed assist fan /Fr1 (FM2: PF-703)
- printer control board (PFUDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 6-F)
3. Replace FM2 and PFUDB.

Faulty part isolation DIPSW
Control while detached

2.5.58 C-0388

Code

C-0388

Classification

PI-PFU: Fan abnormality

Cause

PI-PFU (PF-703) paper feed assist fan /Rr1 (FM2) rotation abnormality.

The FM2EM error detection signal is detected twice in succession within a specified period of time after FM2 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Paper feed assist fan /Rr1 (FM2: PF-703)
- PF drive board (PFUDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 6-F)
3. Replace FM2.
4. Replace PFUDB.

Faulty part isolation DIPSW
Control while detached

2.5.59 C-0389

Code

C-0389

Classification

PI-PFU: Fan abnormality

Cause

PI-PFU (PF-703) paper feed assist fan /Fr2 (FM5) power abnormality.

The FM5EM error detection signal is detected twice in succession within a specified period of time after FM5 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Paper feed assist fan /Fr2 (FM3: PF-702)
- Paper feed assist fan /Fr2 (FM5: PF-703)
- PF drive board (PFUDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-702: 7-C, PF-703: 10-F)
3. Replace FM3 and PFUDB at a time: PF-702
 Replace FM5 and PFUDB at a time: PF-703

Faulty part isolation DIPSW
Control while detached

2.5.60 C-0390

Code

C-0390

Classification

PI-PFU: fan abnormality

Cause

PI-PFU (PF-703) paper feed assist fan /Fr2 (FM5) rotation abnormality.

The FM5EM error detection signal is detected twice in succession within a specified period of time after FM5 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- paper feed assist fan /Fr2 (FM3: PF-702)
- paper feed assist fan /Fr2 (FM5: PF-703)
- PF drive board (PFUDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-702: 7-C, PF-703: 10-F)
3. Replace FM3: PF-702
Replace FM5: PF-703
4. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached****2.5.61 C-0391****Code**

C-0391

Classification

PI-PFU: fan abnormality

Cause

PI-PFU (PF-703) paper feed assist fan /Rr2 (FM6) power abnormality.

The FM6EM error detection signal is detected twice in succession within a specified period of time after FM6 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- paper feed assist fan /Rr2 (FM4: PF-702)
- paper feed assist fan /Rr2 (FM6: PF-703)
- PF drive board (PFUDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-702: 7-C, PF-703: 11-F)
3. Replace FM4 and PFUDB at a time: PF-702
Replace FM6 and PFUDB at a time: PF-703
4. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached****2.5.62 C-0392****Code**

C-0392

Classification

PI-PFU: fan abnormality

Cause

PI-PFU (PF-703) paper feed assist fan /Rr2 (FM6) rotation abnormality.

The FM6EM error detection signal is detected twice in succession within a specified period of time after FM6 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- paper feed assist fan /Rr2 (FM4: PF-702)
- paper feed assist fan /Rr2 (FM6: PF-703)
- PF drive board (PFUDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-702: 7-C, PF-703: 11-F)
3. Replace FM4: PF-702
Replace FM6: PF-703
4. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached****2.5.63 C-0393****Code**

C-0393

Classification

PI-PFU: fan abnormality

Cause

PI-PFU (PF-703) paper feed assist fan /Fr3 (FM9) power abnormality.

The FM9EM error detection signal is detected twice in succession within a specified period of time after FM9 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- paper feed assist fan /Fr3 (FM5: PF-702)
- paper feed assist fan /Fr3 (FM9: PF-703)
- PF drive board (PFUDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-702: 9-C, PF-703: 18-F)
3. Replace FM5 and PFUDB at a time: PF-702
Replace FM9 and PFUDB at a time: PF-703

Faulty part isolation DIPSW

Control while detached

2.5.64 C-0394

Code

C-0394

Classification

PI-PFU: fan abnormality

Cause

PI-PFU (PF-703) paper feed assist fan /Fr3 (FM9) rotation abnormality.

The FM9EM error detection signal is detected twice in succession within a specified period of time after FM9 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- paper feed assist fan /Fr3 (FM5: PF-702)
- paper feed assist fan /Fr3 (FM9: PF-703)
- PF drive board (PFUDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-702: 9-C, PF-703: 18-F)
3. Replace FM5: PF-702
Replace FM9: PF-703
4. Replace PFUDB.

Faulty part isolation DIPSW

Control while detached

2.5.65 C-0395

Code

C-0395

Classification

PI-PFU: fan abnormality

Cause

PI-PFU (PF-703) paper feed assist fan /Rr3 (FM10) power abnormality.

The EM error detection signal of FM10 is detected twice in succession within a specified period of time after FM10 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- paper feed assist fan /Rr3 (FM6: PF-702)
- paper feed assist fan /Rr3 (FM10: PF-703)
- PF drive board (PFUDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-702: 9-C, PF-703: 19-F)
3. Replace FM6 and PFUDB at a time: PF-702

Replace FM10 and PFUDB at a time: PF-703

Faulty part isolation DIPSW
Control while detached

2.5.66 C-0396

Code

C-0396

Classification

PI-PFU: fan abnormality

Cause

PI-PFU (PF-703) paper feed assist fan /Rr3 (FM10) rotation abnormality.

The FM10EM error detection signal is detected twice in succession within a specified period of time after FM10 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- paper feed assist fan /Rr3 (FM6: PF-702)
- paper feed assist fan /Rr3 (FM10: PF-703)
- PF drive board (PFUDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-702: 9-C, PF-703: 19-F)
3. Replace FM6: PF-702
Replace FM10: PF-703
4. Replace PFUDB.

Faulty part isolation DIPSW
Control while detached

2.5.67 C-0397

Code

C-0397

Classification

PI-PFU: Fan abnormality

Cause

PI-PFU (PF-703) cooling fan power abnormality.

The FM19EM and FM20EM error detection signals are detected twice in succession within a specified period of time after the PF cooling fan /1 and /2 (FM19 and FM20) were turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- PF cooling fan (FM7: PF-702)
- PF cooling fan /1 (FM19: PF-703)
- PF cooling fan /2 (FM20: PF-703)
- PF drive board (PFUDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair or replace it if any abnormality. (Wiring diagram: PF-702: 8-H, PF-703: 22-F, 23-F)
3. Replace FM7 and PFUDB at a time: PF-702
Replace FM19, FM20 and PFUDB at a time: PF-703

Faulty part isolation DIPSW
Control while detached

2.5.68 C-0398

Code

C-0398

Classification

PI-PFU: Fan abnormality

Cause

PI-PFU (PF-703) cooling fan rotation abnormality 1.

The FM19EM and FM20EM error detection signals are detected twice in succession within a specified period of time after the PF cooling fan /1 and /2 (FM19 and FM20) were turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- PF cooling fan (FM7: PF-702)
- PF cooling fan /1 (FM19: PF-703)

- PF cooling fan /2 (FM20: PF-703)
- PF drive board (PFUDB: PF-702/703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair or replace it if any abnormality. (Wiring diagram: PF-702: 8-H, PF-703: 22-F, 23-F)
3. Replace FM7: PF-702
Replace FM19 and FM20: PF-703
4. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached****2.5.69 C-0399****Code**

C-0399

Classification

PI-PFU : Fan abnormality

Cause

PI-PFU (PF-703) cooling fan rotation abnormality 2.

The FM21EM error detection signal is detected twice in succession within a specified period of time after the PF cooling fan /3 (FM21) was turned ON with the front door closed. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- PF cooling fan /3 (FM21: PF-703)
- PF drive board (PFUDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 23-F)
3. Replace FM21 and PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6 Solution 3 (C-0401_0700)****2.6.1 C-0402****Code**

C-0402

Classification

Main body :V power abnormality

Cause

AC drive board (ACDB) 5V power abnormality.

In the serial initial communication, a signal of the blowout of a 5VICP (AC drive) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- AC drive board (ACDB)
- DC power supply /2 (DCPS/2)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring on PRCB, and repair it if any abnormality.
2. Replace PRCB.
3. Replace DCPS /2.

Faulty part isolation DIPSW**Control while detached****2.6.2 C-0403****Code**

C-0403

Classification

Main body :V power abnormality

Cause

12V power abnormality in the printer control board (PRCB).

An error detection signal of the 12V in PFDB (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Printer control board (PRCB)
- DC power supply /2 (DCPS/2)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring on PRCB, and repair it if any abnormality.
2. Replace PRCB.
3. Replace DCPS /2.

Faulty part isolation DIPSW

Control while detached

2.6.3 C-0404

Code

C-0404

Classification

Main body: Power abnormality

Cause

5V power abnormality in the printer control board (PRCB).

An error detection signal of the 5V in PRCB (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Printer control board (PRCB)
- DC power supply /2 (DCPS/2)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring on PRCB, and repair it if any abnormality.
2. Replace PRCB.
3. Replace DCPS /2.

Faulty part isolation DIPSW

Control while detached

2.6.4 C-0410

Code

C-0410

Classification

Main body :V power abnormality

Cause

12V power abnormality in the ADU drive board (ADUDB).

An error detection signal of the ADUDB (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- ADU drive board /1 (ADUDB1)
- DC power supply /2 (DCPS/2)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring on ADUDB1, and repair it if any abnormality.
2. Replace ADUDB1.
3. Replace DCPS /2.

Faulty part isolation DIPSW

Control while detached

2.6.5 C-0411

Code

C-0411

Classification

Main body :V power abnormality

Cause

ADU drive board (ADUDB) power abnormality 1.

An error detection signal (blowout of ICP) of the transfer paper correction sensor (PS4), transfer exposure lamp (L4) or SD is detected. At this time, an error detection signal (24V cut off) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- ADU drive board /1 (ADUDB1)
- DC power supply /1 (DCPS/1)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring on ADUDB1, and repair it if any abnormality.
2. Check the connector connection and the wiring between ADUDB1 and DCPS /1, and repair it if any abnormality.
3. Replace ADUDB1.
4. Replace DCPS /1.

Faulty part isolation DIPSW

Control while detached

2.6.6 C-0412

Code

C-0412

Classification

Main body :V power abnormality

Cause

ADU drive board (ADUDB) power abnormality 2.

An error detection signal (blowout of ICP) of the transfer paper correction sensor (PS4), transfer exposure lamp (L4) or SD is detected. However, an error detection signal (24V cut off) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- ADU lock solenoid (SD6)
- Reverse/exit solenoid (SD7)
- De-curler solenoid /Up (SD8)
- De-curler solenoid /Lw (SD5)
- Centering sensor(PS4)
- ADU drive board /1 (ADUDB1)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring on ADUDB1, and repair it if any abnormality.
2. Check the connector connection and the wiring between ADUDB1 and sensor/solenoid/TSL, and repair it if any abnormality. (Wiring diagram: Main body: 17-L, 18-O).
3. Check the drive and the coupling of the sensor and the solenoid, and repair it if any abnormality.
4. Replace ADUDB1.

Faulty part isolation DIPSW

Control while detached

2.6.7 C-0413

Code

C-0413

Classification

Main body :V power abnormality

Cause

Interlock power abnormality of the ADU drive board (ADUDB).

An error signal of the 24V interlock power is detected in the door detection closed status.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- ADU drive board /1 (ADUDB1)
- DC power supply /3 (DCPS/3)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring on ADUDB1, and repair it if any abnormality.
2. Check the connector connection and the wiring between ADUDB1 and DCPS /3, and repair it if any abnormality.
3. Replace ADUDB1.
4. Replace DCPS /3.

Faulty part isolation DIPSW

Control while detached

2.6.8 C-0420**Code**

C-0420

Classification

PF: Power source abnormality

Cause

Abnormality of the 12V power for the PF drive board (PFUDB) of the 1st tandem PF-702/703.
An error detection signal of the PFUDB (blowout of 12V ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- PF drive board (PFUDB: PF-702/703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring on PFUDB, and repair it if any abnormality.
2. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.9 C-0421****Code**

C-0421

Classification

PF: Power source abnormality

Cause

Abnormality of the 24V power for the PF drive board (PFUDB) of the 2nd tandem PF-702/703.
An error detection signal of the PFUDB (blowout of 12V ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- PF drive board (PFUDB: PF-702/703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring on PFUDB, and repair it if any abnormality.
2. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.10 C-0422****Code**

C-0422

Classification

PF: Power source abnormality

Cause

Abnormality of the 24V power for the PF drive board (PFUDB) of the 1st tandem PF-702/703.
While in printing, an error detection signal (24V power DOWN) of the PFUDB is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- PF drive board (PFUDB: PF-702/703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring on PFUDB, and repair it if any abnormality.
2. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.11 C-0423****Code**

C-0423

Classification

PF: Power source abnormality

Cause

Abnormality of the 24V power for the PF drive board (PFUDB) of the 2nd tandem PF-702/703.
While in printing, an error detection signal (24V power DOWN) of the PFUDB is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- PF drive board (PFUDB: PF-702/703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring on PFUDB, and repair it if any abnormality.
2. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.12 C-0424****Code**

C-0424

Classification

PI-PFU: Power abnormality

Cause

Abnormality of the 12V power for the PF drive board (PFUDB) of PI-PFU (PF-703).
An error detection signal of the PFUDB (blowout of 12V ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- PF drive board (PFUDB: PF-702/703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring on PFUDB, and repair it if any abnormality.
2. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.13 C-0425****Code**

C-0425

Classification

PI-PFU: Power abnormality

Cause

Abnormality of the 24V power for the PF drive board (PFUDB) of PI-PFU (PF-703).
While in printing, an error detection signal (24V power DOWN) of the PFUDB is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- PF drive board (PFUDB: PF-702/703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring on PFUDB, and repair it if any abnormality.
2. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.14 C-0501****Code**

C-0501

Classification

PF: Power source abnormality

Cause

1st tandem PF-703 paper leading edge separation fan /Fr1 (FM3) power abnormality.
The FM3EM error detection signal is detected twice in succession within a specified period of time after FM3 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Paper leading edge separation fan /Fr1 (FM3: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 6-F)
3. Replace FM3 and PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.15 C-0502****Code**

C-0502

Classification

PF: Power source abnormality

Cause

1st tandem PF-703 paper leading edge separation fan /Fr1 (FM3) rotation abnormality.

The FM3EM error detection signal is detected twice in succession within a specified period of time after FM3 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Paper leading edge separation fan /Fr1 (FM3: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 6-F)
3. Replace FM3
4. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.16 C-0503****Code**

C-0503

Classification

PF: Power source abnormality

Cause

1st tandem PF-703 paper leading edge separation fan /Fr2 (FM7) power abnormality.

The FM7EM error detection signal is detected twice in succession within a specified period of time after FM7 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Paper leading edge separation fan /Fr2 (FM7: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 11-F)
3. Replace FM7 and PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.17 C-0504****Code**

C-0504

Classification

PF: Power source abnormality

Cause

1st tandem PF-703 paper leading edge separation fan /Fr2 (FM7) rotation abnormality.

The FM7EM error detection signal is detected twice in succession within a specified period of time after FM7 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Paper leading edge separation fan /Fr2 (FM7: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 11-F)
3. Replace FM7.
4. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.18 C-0505****Code**

C-0505

Classification

PF: Power source abnormality

Cause

1st tandem PF-703 paper leading edge separation fan /Fr3 (FM11) power abnormality.

The FM11EM error detection signal is detected twice in succession within a specified period of time after FM11 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Paper leading edge separation fan /Fr3 (FM11: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 19-F)
3. Replace FM11 and PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.19 C-0506****Code**

C-0506

Classification

PF: Power source abnormality

Cause

1st tandem PF-703 paper leading edge separation fan /Fr3 (FM11) rotation abnormality.

The FM11EM error detection signal is detected twice in succession within a specified period of time after FM11 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Paper leading edge separation fan /Fr3 (FM11: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 19-F)
3. Replace FM11.
4. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.20 C-0507****Code**

C-0507

Classification

PF: Power source abnormality

Cause

1st tandem PF-703 paper leading edge separation fan /Rr1 (FM4) power abnormality.

The FM4EM error detection signal is detected twice in succession within a specified period of time after FM4 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Paper leading edge separation fan /Rr1 (FM4: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 6-F)
3. Replace FM4 and PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.21 C-0508****Code**

C-0508

Classification

PF: Power source abnormality

Cause

1st tandem PF-703 paper leading edge separation fan /Rr1 (FM4) rotation abnormality.

The FM4EM error detection signal is detected twice in succession within a specified period of time after FM4 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Paper leading edge separation fan /Rr1 (FM4: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 6-F)
3. Replace FM4
4. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.22 C-0509****Code**

C-0509

Classification

PF: Power source abnormality

Cause

1st tandem PF-703 paper leading edge separation fan /Rr2 (FM8) power abnormality.

The FM8EM error detection signal is detected twice in succession within a specified period of time after FM8 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Paper leading edge separation fan /Rr2 (FM8: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 11-F)
3. Replace FM8 and PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.23 C-0510****Code**

C-0510

Classification

PF: PF power source abnormality

Cause

1st tandem PF-703 paper leading edge separation fan /Rr2 (FM8) rotation abnormality.

The FM8EM error detection signal is detected twice in succession within a specified period of time after FM8 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Paper leading edge separation fan /Rr2 (FM8: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 11-F)
3. Replace FM8.
4. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.24 C-0511****Code**

C-0511

Classification

PF: PF power source abnormality

Cause

1st tandem PF-703 paper leading edge separation fan /Rr3 (FM12) power abnormality.

The FM12EM error detection signal is detected twice in succession within a specified period of time after FM12 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Paper leading edge separation fan /Rr3 (FM12: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 19-F)
3. Replace FM12 and PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.25 C-0512****Code**

C-0512

Classification

PF: PF power source abnormality

Cause

1st tandem PF-703 paper leading edge separation fan /Rr3 (FM12) rotation abnormality.

The FM12EM error detection signal is detected twice in succession within a specified period of time after FM12 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Paper leading edge separation fan /Rr3 (FM12: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 19-F)
3. Replace FM12.
4. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached**

2.6.26 C-0513**Code**

C-0513

Classification

PF: PF power source abnormality

Cause

1st tandem PF-703 paper suction fan /1 (FM13) power abnormality.

The FM13EM error detection signal is detected twice in succession within a specified period of time after FM13 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- paper suction fan /1 (FM13: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 14-F)
3. Replace FM13 and PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.27 C-0514****Code**

C-0514

Classification

PF: PF power source abnormality

Cause

1st tandem PF-703 paper suction fan /1 (FM13) rotation abnormality.

The FM13EM error detection signal is detected twice in succession within a specified period of time after FM13 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- paper suction fan /1 (FM13: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 14-F)
3. Replace FM13.
4. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.28 C-0515****Code**

C-0515

Classification

PF: PF power source abnormality

Cause

1st tandem PF-703 paper suction fan /3 (FM15) power abnormality.

The FM15EM error detection signal is detected twice in succession within a specified period of time after FM15 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- paper suction fan /3 (FM15: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 16-L)

3. Replace FM15 and PFUDB.

Faulty part isolation DIPSW
Control while detached

2.6.29 C-0516

Code

C-0516

Classification

PF: PF power source abnormality

Cause

1st tandem PF-703 paper suction fan /3 (FM15) rotation abnormality.

The FM15EM error detection signal is detected twice in succession within a specified period of time after FM15 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- paper suction fan /3 (FM15: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 16-L)
3. Replace FM15.
4. Replace PFUDB.

Faulty part isolation DIPSW
Control while detached

2.6.30 C-0517

Code

C-0517

Classification

PF: PF power source abnormality

Cause

1st tandem PF-703 paper suction fan /5 (FM17) power abnormality.

The FM17EM error detection signal is detected twice in succession within a specified period of time after FM17 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Paper suction fan /5 (FM17: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 19-L)
3. Replace FM17 and PFUDB.

Faulty part isolation DIPSW
Control while detached

2.6.31 C-0518

Code

C-0518

Classification

PF: PF power source abnormality

Cause

1st tandem PF-703 paper suction fan /5 (FM17) rotation abnormality.

The FM17EM error detection signal is detected twice in succession within a specified period of time after FM17 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Paper suction fan /5 (FM17: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 19-L)
3. Replace FM17.
4. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.32 C-0519****Code**

C-0519

Classification

PF: PF power source abnormality

Cause

1st tandem PF-703 paper suction fan /1 (FM14) power abnormality.

The EM error detection signal of FM14 is detected twice in succession within a specified period of time after FM14 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- paper suction fan /2 (FM14: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 14-L)
3. Replace FM14 and PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.33 C-0520****Code**

C-0520

Classification

PF: PF power source abnormality

Cause

1st tandem PF-703 paper suction fan /1 (FM14) rotation abnormality.

The FM14EM error detection signal is detected twice in succession within a specified period of time after FM14 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- paper suction fan /2 (FM14: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 14-L)
3. Replace FM14.
4. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.34 C-0521****Code**

C-0521

Classification

PF: PF power source abnormality

Cause

1st tandem PF-703 paper suction fan /3 (FM16) power abnormality.

The FM16EM error detection of FM16 is detected twice in succession within a specified period of time after FM16 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- paper suction fan /4 (FM16: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 16-L)
3. Replace FM16 and PFUDB.

Faulty part isolation DIPSW

Control while detached

2.6.35 C-0522

Code

C-0522

Classification

PF: PF power source abnormality

Cause

1st tandem PF-703 paper suction fan /3 (FM16) rotation abnormality.

The FM16EM error detection signal is detected twice in succession within a specified period of time after FM16 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- paper suction fan /4 (FM16: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 16-L)
3. Replace FM16.
4. Replace PFUDB.

Faulty part isolation DIPSW

Control while detached

2.6.36 C-0523

Code

C-0523

Classification

PF: PF power source abnormality

Cause

1st tandem PF-703 paper suction fan /5 (FM18) power abnormality.

The FM18EM error detection signal is detected twice in succession within a specified period of time after FM18 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- paper suction fan /6 (FM18: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 19-L)
3. Replace FM18 and PFUDB.

Faulty part isolation DIPSW

Control while detached

2.6.37 C-0524

Code

C-0524

Classification

PF: PF power source abnormality

Cause

1st tandem PF-703 paper suction fan /5 (FM18) rotation abnormality.

The FM18EM error detection signal is detected twice in succession within a specified period of time after FM18 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- paper suction fan /6 (FM18: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 19-L)
3. Replace FM18.
4. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.38 C-0525****Code**

C-0525

Classification

PF: Power source abnormality

Cause

2nd tandem PF-703 paper leading edge separation fan /Fr1 (FM3) power abnormality.

The FM3EM error detection signal is detected twice in succession within a specified period of time after FM3 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Paper leading edge separation fan /Fr1 (FM3: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 6-F)
3. Replace FM3 and PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.39 C-0526****Code**

C-0526

Classification

PF: Power source abnormality

Cause

2nd tandem PF-703 paper leading edge separation fan /Fr1 (FM3) rotation abnormality.

The FM3EM error detection signal is detected twice in succession within a specified period of time after FM3 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Paper leading edge separation fan /Fr1 (FM3: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 6-F)
3. Replace FM3
4. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.40 C-0527****Code**

C-0527

Classification

PF: Power source abnormality

Cause

2nd tandem PF-703 paper leading edge separation fan /Fr2 (FM7) power abnormality.

The FM7EM error detection signal is detected twice in succession within a specified period of time after FM7 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Paper leading edge separation fan /Fr2 (FM7: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 11-F)
3. Replace FM7 and PFUDB.

Faulty part isolation DIPSW

Control while detached

2.6.41 C-0528

Code

C-0528

Classification

PF: Power source abnormality

Cause

2nd tandem PF-703 paper leading edge separation fan /Fr2 (FM7) rotation abnormality.

The FM7EM error detection signal is detected twice in succession within a specified period of time after FM7 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Paper leading edge separation fan /Fr2 (FM7: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 11-F)
3. Replace FM7.
4. Replace PFUDB.

Faulty part isolation DIPSW

Control while detached

2.6.42 C-0529

Code

C-0529

Classification

PF: Power source abnormality

Cause

2nd tandem PF-703 paper leading edge separation fan /Fr3 (FM11) power abnormality.

The FM11EM error detection signal is detected twice in succession within a specified period of time after FM11 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Paper leading edge separation fan /Fr3 (FM11: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 19-F)
3. Replace FM11 and PFUDB.

Faulty part isolation DIPSW

Control while detached

2.6.43 C-0530

Code

C-0530

Classification

PF: Power source abnormality

Cause

2nd tandem PF-703 paper leading edge separation fan /Fr3 (FM11) rotation abnormality.

The FM11EM error detection signal is detected twice in succession within a specified period of time after FM11 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Paper leading edge separation fan /Fr3 (FM11: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 19-F)
3. Replace FM11.
4. Replace PFUDB.

Faulty part isolation DIPSW

Control while detached

2.6.44 C-0531

Code

C-0531

Classification

PF: Power source abnormality

Cause

2nd tandem PF-703 paper leading edge separation fan /Rr1 (FM4) power abnormality.

The FM4EM error detection signal is detected twice in succession within a specified period of time after FM4 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Paper leading edge separation fan /Rr1 (FM4: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 6-F)
3. Replace FM4 and PFUDB.

Faulty part isolation DIPSW

Control while detached

2.6.45 C-0532

Code

C-0532

Classification

PF: Power source abnormality

Cause

2nd tandem PF-703 paper leading edge separation fan /Rr1 (FM4) rotation abnormality.

The FM4EM error detection signal is detected twice in succession within a specified period of time after FM4 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Paper leading edge separation fan /Rr1 (FM4: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 6-F)
3. Replace FM4
4. Replace PFUDB.

Faulty part isolation DIPSW

Control while detached

2.6.46 C-0533**Code**

C-0533

Classification

PF: PF power source abnormality

Cause

2nd tandem PF-703 paper leading edge separation fan /Rr2 (FM8) power abnormality.

The FM8EM error detection signal is detected twice in succession within a specified period of time after FM8 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Paper leading edge separation fan /Rr2 (FM8: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- **The message "Please call service" is displayed on the panel.**

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 11-F)
3. Replace FM8 and PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.47 C-0534****Code**

C-0534

Classification

PF: PF power source abnormality

Cause

2nd tandem PF-703 paper leading edge separation fan /Rr2 (FM8) rotation abnormality.

The FM8EM error detection signal is detected twice in succession within a specified period of time after FM8 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Paper leading edge separation fan /Rr2 (FM8: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- **The message "Please call service" is displayed on the panel.**

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 11-F)
3. Replace FM8.
4. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.48 C-0535****Code**

C-0535

Classification

PF: PF power source abnormality

Cause

2nd tandem PF-703 paper leading edge separation fan /Rr3 (FM12) power abnormality.

The FM12EM error detection signal is detected twice in succession within a specified period of time after FM12 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Paper leading edge separation fan /Rr3 (FM12: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- **The message "Please call service" is displayed on the panel.**

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 19-F)
3. Replace FM12 and PFUDB.

Faulty part isolation DIPSW

Control while detached

2.6.49 C-0536

Code

C-0536

Classification

PF: PF power source abnormality

Cause

2nd tandem PF-703 paper leading edge separation fan /Rr3 (FM12) rotation abnormality.

The FM12EM error detection signal is detected twice in succession within a specified period of time after FM12 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Paper leading edge separation fan /Rr3 (FM12: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 19-F)
3. Replace FM12.
4. Replace PFUDB.

Faulty part isolation DIPSW

Control while detached

2.6.50 C-0537

Code

C-0537

Classification

PF: PF power source abnormality

Cause

2nd tandem PF-703 paper suction fan /1 (FM13) power abnormality.

The FM13EM error detection signal is detected twice in succession within a specified period of time after FM13 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- paper suction fan /1 (FM13: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 14-F)
3. Replace FM13 and PFUDB.

Faulty part isolation DIPSW

Control while detached

2.6.51 C-0538

Code

C-0538

Classification

PF: PF power source abnormality

Cause

2nd tandem PF-703 paper suction fan /1 (FM13) rotation abnormality.

The FM13EM error detection signal is detected twice in succession within a specified period of time after FM13 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- paper suction fan /1 (FM13: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 14-F)
3. Replace FM13.
4. Replace PFUDB.

Faulty part isolation DIPSW
Control while detached

2.6.52 C-0539

Code

C-0539

Classification

PF: PF power source abnormality

Cause

2nd tandem PF-703 paper suction fan /3 (FM15) power abnormality.

The FM15EM error detection signal is detected twice in succession within a specified period of time after FM15 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- paper suction fan /3 (FM15: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 16-L)
3. Replace FM15 and PFUDB.

Faulty part isolation DIPSW
Control while detached

2.6.53 C-0540

Code

C-0540

Classification

PF: PF power source abnormality

Cause

2nd tandem PF-703 paper suction fan /3 (FM15) rotation abnormality.

The FM15EM error detection signal is detected twice in succession within a specified period of time after FM15 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- paper suction fan /3 (FM15: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 16-L)
3. Replace FM15.
4. Replace PFUDB.

Faulty part isolation DIPSW
Control while detached

2.6.54 C-0541

Code

C-0541

Classification

PF: PF power source abnormality

Cause

2nd tandem PF-703 paper suction fan /5 (FM17) power abnormality.

The FM17EM error detection signal is detected twice in succession within a specified period of time after FM17 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Paper suction fan /5 (FM17: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 19-L)
3. Replace FM17 and PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.55 C-0542****Code**

C-0542

Classification

PF: PF power source abnormality

Cause

2nd tandem PF-703 paper suction fan /5 (FM17) rotation abnormality.

The FM17EM error detection signal is detected twice in succession within a specified period of time after FM17 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Paper suction fan /5 (FM17: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 19-L)
3. Replace FM17.
4. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.56 C-0543****Code**

C-0543

Classification

PF: PF power source abnormality

Cause

2nd tandem PF-703 paper suction fan /1 (FM14) power abnormality.

The FM14EM error detection signal is detected twice in succession within a specified period of time after FM14 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- paper suction fan /2 (FM14: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 14-L)
3. Replace FM14 and PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.57 C-0544****Code**

C-0544

Classification

PF: PF power source abnormality

Cause

2nd tandem PF-703 paper suction fan /1 (FM14) rotation abnormality.

The FM14EM error detection signal is detected twice in succession within a specified period of time after FM14 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- paper suction fan /2 (FM14: PF-703)

- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 14-L)
3. Replace FM14.
4. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.58 C-0545****Code**

C-0545

Classification

PF: PF power source abnormality

Cause

2nd tandem PF-703 paper suction fan /3 (FM16) power abnormality.

The FM16EM error detection of FM16 is detected twice in succession within a specified period of time after FM16 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- paper suction fan /4 (FM16: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 16-L)
3. Replace FM16 and PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.59 C-0546****Code**

C-0546

Classification

PF: PF power source abnormality

Cause

2nd tandem PF-703 paper suction fan /3 (FM16) rotation abnormality.

The FM16EM error detection signal is detected twice in succession within a specified period of time after FM16 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- paper suction fan /4 (FM16: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 16-L)
3. Replace FM16.
4. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.60 C-0547****Code**

C-0547

Classification

PF: PF power source abnormality

Cause

2nd tandem PF-703 paper suction fan /5 (FM18) power abnormality.

The FM18EM error detection signal is detected twice in succession within a specified period of time after FM18 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- paper suction fan /6 (FM18: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 19-L)
3. Replace FM18 and PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.61 C-0548****Code**

C-0548

Classification

PF: PF power source abnormality

Cause

2nd tandem PF-703 paper suction fan /5 (FM18) rotation abnormality.

The FM18EM error detection signal is detected twice in succession within a specified period of time after FM18 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- paper suction fan /6 (FM18: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 19-L)
3. Replace FM18.
4. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.62 C-0561****Code**

C-0561

Classification

PF: Power source abnormality

Cause

PI-PFU (PF-703) paper leading edge separation fan /Fr1 (FM3) power abnormality.

The FM3EM error detection signal is detected twice in succession within a specified period of time after FM3 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Paper leading edge separation fan /Fr1 (FM3: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 6-F)
3. Replace FM3 and PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.63 C-0562****Code**

C-0562

Classification

PF: Power source abnormality

Cause

PI-PFU (PF-703) paper leading edge separation fan /Fr1 (FM3) rotation abnormality.

The FM3EM error detection signal is detected twice in succession within a specified period of time after FM3 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Paper leading edge separation fan /Fr1 (FM3: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 6-F)
3. Replace FM3
4. Replace PFUDB.

Faulty part isolation DIPSW

Control while detached

2.6.64 C-0563

Code

C-0563

Classification

PF: Power source abnormality

Cause

PI-PFU (PF-703) paper leading edge separation fan /Fr2 (FM7) power abnormality.

The FM7EM error detection signal is detected twice in succession within a specified period of time after FM7 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Paper leading edge separation fan /Fr2 (FM7: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 11-F)
3. Replace FM7 and PFUDB.

Faulty part isolation DIPSW

Control while detached

2.6.65 C-0564

Code

C-0564

Classification

PF: Power source abnormality

Cause

PI-PFU (PF-703) paper leading edge separation fan /Fr2 (FM7) rotation abnormality.

The FM7EM error detection signal is detected twice in succession within a specified period of time after FM7 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Paper leading edge separation fan /Fr2 (FM7: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 11-F)
3. Replace FM7.
4. Replace PFUDB.

Faulty part isolation DIPSW

Control while detached

2.6.66 C-0565

Code

C-0565

Classification

PF: Power source abnormality

Cause

PI-PFU (PF-703) paper leading edge separation fan /Fr3 (FM11) power abnormality.

The FM11EM error detection signal is detected twice in succession within a specified period of time after FM11 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Paper leading edge separation fan /Fr3 (FM11: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 19-F)
3. Replace FM11 and PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.67 C-0566****Code**

C-0566

Classification

PF: Power source abnormality

Cause

PI-PFU (PF-703) paper leading edge separation fan /Fr3 (FM11) rotation abnormality.

The FM11EM error detection signal is detected twice in succession within a specified period of time after FM11 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Paper leading edge separation fan /Fr3 (FM11: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 19-F)
3. Replace FM11.
4. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.68 C-0567****Code**

C-0567

Classification

PF: Power source abnormality

Cause

PI-PFU (PF-703) paper leading edge separation fan /Rr1 (FM4) power abnormality.

The FM4EM error detection signal is detected twice in succession within a specified period of time after FM4 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Paper leading edge separation fan /Rr1 (FM4: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 6-F)
3. Replace FM4 and PFUDB.

Faulty part isolation DIPSW**Control while detached**

2.6.69 C-0568**Code**

C-0568

Classification

PF: Power source abnormality

Cause

PI-PFU (PF-703) paper leading edge separation fan /Rr1 (FM4) rotation abnormality.

The FM4EM error detection signal is detected twice in succession within a specified period of time after FM4 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Paper leading edge separation fan /Rr1 (FM4: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 6-F)
3. Replace FM4
4. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.70 C-0569****Code**

C-0569

Classification

PF: PF power source abnormality

Cause

PI-PFU (PF-703) paper leading edge separation fan /Rr2 (FM8) power abnormality.

The FM8EM error detection signal is detected twice in succession within a specified period of time after FM8 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Paper leading edge separation fan /Rr2 (FM8: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 11-F)
3. Replace FM8 and PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.71 C-0570****Code**

C-0570

Classification

PF: PF power source abnormality

Cause

PI-PFU (PF-703) paper leading edge separation fan /Rr2 (FM8) rotation abnormality.

The FM8EM error detection signal is detected twice in succession within a specified period of time after FM8 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Paper leading edge separation fan /Rr2 (FM8: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 11-F)
3. Replace FM8.

4. Replace PFUDB.

Faulty part isolation DIPSW
Control while detached

2.6.72 C-0571

Code

C-0571

Classification

PF: PF power source abnormality

Cause

PI-PFU (PF-703) paper leading edge separation fan /Rr3 (FM12) power abnormality.

The FM12EM error detection signal is detected twice in succession within a specified period of time after FM12 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Paper leading edge separation fan /Rr3 (FM12: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 19-F)
3. Replace FM12 and PFUDB.

Faulty part isolation DIPSW
Control while detached

2.6.73 C-0572

Code

C-0572

Classification

PF: PF power source abnormality

Cause

PI-PFU (PF-703) paper leading edge separation fan /Rr3 (FM12) rotation abnormality.

The FM12EM error detection signal is detected twice in succession within a specified period of time after FM12 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Paper leading edge separation fan /Rr3 (FM12: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 19-F)
3. Replace FM12.
4. Replace PFUDB.

Faulty part isolation DIPSW
Control while detached

2.6.74 C-0573

Code

C-0573

Classification

PF: PF power source abnormality

Cause

PI-PFU (PF-703) paper suction fan /1 (FM13) power abnormality.

The FM13EM error detection signal is detected twice in succession within a specified period of time after FM13 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- paper suction fan /1 (FM13: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 14-F)
3. Replace FM13 and PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.75 C-0574****Code**

C-0574

Classification

PF: PF power source abnormality

Cause

PI-PFU (PF-703) paper suction fan /1 (FM13) rotation abnormality.

The FM13EM error detection signal is detected twice in succession within a specified period of time after FM13 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- paper suction fan /1 (FM13: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 14-F)
3. Replace FM13.
4. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.76 C-0575****Code**

C-0575

Classification

PF: PF power source abnormality

Cause

PI-PFU (PF-703) paper suction fan /3 (FM15) power abnormality.

The FM15EM error detection signal is detected twice in succession within a specified period of time after FM15 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- paper suction fan /3 (FM15: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 16-L)
3. Replace FM15 and PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.77 C-0576****Code**

C-0576

Classification

PF: PF power source abnormality

Cause

PI-PFU (PF-703) paper suction fan /3 (FM15) rotation abnormality.

The FM15EM error detection signal is detected twice in succession within a specified period of time after FM15 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- paper suction fan /3 (FM15: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 16-L)
3. Replace FM15.
4. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.78 C-0577****Code**

C-0577

Classification

PF: PF power source abnormality

Cause

PI-PFU (PF-703) paper suction fan /5 (FM17) power abnormality.

The FM17EM error detection signal is detected twice in succession within a specified period of time after FM17 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Paper suction fan /5 (FM17: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 19-L)
3. Replace FM17 and PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.79 C-0578****Code**

C-0578

Classification

PF: PF power source abnormality

Cause

PI-PFU (PF-703) paper suction fan /5 (FM17) rotation abnormality.

The FM17EM error detection signal is detected twice in succession within a specified period of time after FM17 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Paper suction fan /5 (FM17: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 19-L)
3. Replace FM17.
4. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.80 C-0579****Code**

C-0579

Classification

PF: PF power source abnormality

Cause

PI-PFU (PF-703) paper suction fan /1 (FM14) power abnormality.

The FM14EM error detection signal is detected twice in succession within a specified period of time after FM14 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- paper suction fan /2 (FM14: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 14-L)
3. Replace FM14 and PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.81 C-0580****Code**

C-0580

Classification

PF: PF power source abnormality

Cause

PI-PFU (PF-703) paper suction fan /1 (FM14) rotation abnormality.

The FM14EM error detection signal is detected twice in succession within a specified period of time after FM14 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- paper suction fan /2 (FM14: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 14-L)
3. Replace FM14.
4. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.82 C-0581****Code**

C-0581

Classification

PF: PF power source abnormality

Cause

PI-PFU (PF-703) paper suction fan /3 (FM16) power abnormality.

The FM16EM error detection of FM16 is detected twice in succession within a specified period of time after FM16 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- paper suction fan /4 (FM16: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 16-L)
3. Replace FM16 and PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.83 C-0582****Code**

C-0582

Classification

PF: PF power source abnormality

Cause

PI-PFU (PF-703) paper suction fan /3 (FM16) rotation abnormality.

The FM16EM error detection signal is detected twice in succession within a specified period of time after FM16 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- paper suction fan /4 (FM16: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 16-L)
3. Replace FM16.
4. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.84 C-0583****Code**

C-0583

Classification

PF: PF power source abnormality

Cause

PI-PFU (PF-703) paper suction fan /5 (FM18) power abnormality.

The FM18EM error detection signal is detected twice in succession within a specified period of time after FM18 was turned ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- paper suction fan /6 (FM18: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 19-L)
3. Replace FM18 and PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.85 C-0584****Code**

C-0584

Classification

PF: PF power source abnormality

Cause

PI-PFU (PF-703) paper suction fan /5 (FM18) rotation abnormality.

The FM18EM error detection signal is detected twice in succession within a specified period of time after FM18 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- paper suction fan /6 (FM18: PF-703)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 19-L)
3. Replace FM18.
4. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.86 C-0601****Code**

C-0601

Classification

PF: PF power source abnormality

Cause

1st tandem PF-703 dehumidifier fan /Rt1 (FM22) rotation abnormality.

The FM22EM error detection signal is detected twice in succession within a specified period of time after FM22 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Dehumidifier fan /Rt1 (FM22: HT-505)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan heater, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 9-B)
3. Replace the fan heater (FM22).
4. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.87 C-0602****Code**

C-0602

Classification

PF: PF power source abnormality

Cause

PI-PFU (PF-703) dehumidifier fan /Lt1 (FM23) rotation abnormality.

The FM23EM error detection signal is detected twice in succession within a specified period of time after FM23 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Dehumidifier fan /Lt1 (FM23: HT-505)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan heater, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 10-C)
3. Replace the fan heater (FM23).
4. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.88 C-0603****Code**

C-0603

Classification

PF: PF power source abnormality

Cause

1st tandem PF-703 dehumidifier fan /Rt2 (FM24) rotation abnormality.

The FM24EM error detection signal is detected twice in succession within a specified period of time after FM24 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Dehumidifier fan /Rt2 (FM24: HT-505)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan heater, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 10-C)
3. Replace the fan heater (FM24).
4. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached**

2.6.89 C-0604**Code**

C-0604

Classification

PF: PF power source abnormality

Cause

1st tandem PF-703 dehumidifier fan /Lt2 (FM25) rotation abnormality.

The FM25EM error detection signal is detected twice in succession within a specified period of time after FM25 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Dehumidifier fan /Lt2 (FM25: HT-505)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan heater, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 11-C)
3. Replace the fan heater (FM25).
4. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.90 C-0605****Code**

C-0605

Classification

PF: PF power source abnormality

Cause

1st tandem PF-703 dehumidifier fan /Rt3 (FM26) rotation abnormality.

The FM26EM error detection signal is detected twice in succession within a specified period of time after FM26 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Dehumidifier fan /Rt3 (FM26: HT-505)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan heater, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 11-D)
3. Replace the fan heater (FM26).
4. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.91 C-0606****Code**

C-0606

Classification

PF: PF power source abnormality

Cause

1st tandem PF-703 dehumidifier fan /Lt3 (FM27) rotation abnormality.

The FM27EM error detection signal is detected twice in succession within a specified period of time after FM27 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Dehumidifier fan /Lt3 (FM27: HT-505)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan heater, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 12-D)

3. Replace the fan heater (FM27).
4. Replace PFUDB.

Faulty part isolation DIPSW
Control while detached

2.6.92 C-0611

Code

C-0611

Classification

PF: PF power source abnormality

Cause

2nd tandem PF-703 dehumidifier fan /Rt1 (FM22) rotation abnormality.

The FM22EM error detection signal is detected twice in succession within a specified period of time after FM22 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Dehumidifier fan /Rt1 (FM22: HT-505)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan heater, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 9-B)
3. Replace the fan heater (FM22).
4. Replace PFUDB.

Faulty part isolation DIPSW
Control while detached

2.6.93 C-0612

Code

C-0612

Classification

PF: PF power source abnormality

Cause

2nd tandem PF-703 dehumidifier fan /Lt1 (FM23) rotation abnormality.

The FM23EM error detection signal is detected twice in succession within a specified period of time after FM23 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Dehumidifier fan /Lt1 (FM23: HT-505)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan heater, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 10-C)
3. Replace the fan heater (FM23).
4. Replace PFUDB.

Faulty part isolation DIPSW
Control while detached

2.6.94 C-0613

Code

C-0613

Classification

PF: PF power source abnormality

Cause

2nd tandem PF-703 dehumidifier fan /Rt2 (FM24) rotation abnormality.

The FM24EM error detection signal is detected twice in succession within a specified period of time after FM24 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Dehumidifier fan /Rt2 (FM24: HT-505)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan heater, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 10-C)
3. Replace the fan heater (FM24).
4. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.95 C-0614****Code**

C-0614

Classification

PF: PF power source abnormality

Cause

2nd tandem PF-703 dehumidifier fan /Lt2 (FM25) rotation abnormality.

The FM25EM error detection signal is detected twice in succession within a specified period of time after FM25 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Dehumidifier fan /Lt2 (FM25: HT-505)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan heater, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 11-C)
3. Replace the fan heater (FM25).
4. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.96 C-0615****Code**

C-0615

Classification

PF: PF power source abnormality

Cause

2nd tandem PF-703 dehumidifier fan /Rt3 (FM26) rotation abnormality.

The FM26EM error detection signal is detected twice in succession within a specified period of time after FM26 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Dehumidifier fan /Rt3 (FM26: HT-505)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan heater, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 11-D)
3. Replace the fan heater (FM26).
4. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.97 C-0616****Code**

C-0616

Classification

PF: PF power source abnormality

Cause

2nd tandem PF-703 dehumidifier fan /Lt3 (FM27) rotation abnormality.

The FM27EM error detection signal is detected twice in succession within a specified period of time after FM27 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Dehumidifier fan /Lt3 (FM27: HT-505)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan heater, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 12-D)
3. Replace the fan heater (FM27).
4. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.98 C-0621****Code**

C-0621

Classification

PF: PF power source abnormality

Cause

PI-PFU (PF-703) dehumidifier fan /Rt1 (FM22) rotation abnormality.

The FM22EM error detection signal is detected twice in succession within a specified period of time after FM22 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Dehumidifier fan /Rt1 (FM22: HT-505)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan heater, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 9-B)
3. Replace the fan heater (FM22).
4. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.99 C-0622****Code**

C-0622

Classification

PF: PF power source abnormality

Cause

PI-PFU (PF-703) dehumidifier fan /Lt1 (FM23) rotation abnormality.

The FM23EM error detection signal is detected twice in succession within a specified period of time after FM23 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Dehumidifier fan /Lt1 (FM23: HT-505)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan heater, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 10-C)
3. Replace the fan heater (FM23).
4. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.100 C-0623****Code**

C-0623

Classification

PF: PF power source abnormality

Cause

PI-PFU (PF-703) dehumidifier fan /Rt2 (FM24) rotation abnormality.

The FM24EM error detection signal is detected twice in succession within a specified period of time after FM24 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Dehumidifier fan /Rt2 (FM24: HT-505)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan heater, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 10-C)
3. Replace the fan heater (FM24).
4. Replace PFUDB.

Faulty part isolation DIPSW

Control while detached

2.6.101 C-0624

Code

C-0624

Classification

PF: PF power source abnormality

Cause

PI-PFU (PF-703) dehumidifier fan /Lt2 (FM25) rotation abnormality.

The FM25EM error detection signal is detected twice in succession within a specified period of time after FM25 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Dehumidifier fan /Lt2 (FM25: HT-505)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan heater, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 11-C)
3. Replace the fan heater (FM25).
4. Replace PFUDB.

Faulty part isolation DIPSW

Control while detached

2.6.102 C-0625

Code

C-0625

Classification

PF: PF power source abnormality

Cause

PI-PFU (PF-703) dehumidifier fan /Rt3 (FM26) rotation abnormality.

The FM26EM error detection signal is detected twice in succession within a specified period of time after FM26 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Dehumidifier fan /Rt3 (FM26: HT-505)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan heater, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 11-D)
3. Replace the fan heater (FM26).
4. Replace PFUDB.

Faulty part isolation DIPSW

Control while detached

2.6.103 C-0626**Code**

C-0626

Classification

PF: PF power source abnormality

Cause

PI-PFU (PF-703) dehumidifier fan /Lt3 (FM27) rotation abnormality.

The FM27EM error detection signal is detected twice in succession within a specified period of time after FM27 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Dehumidifier fan /Lt3 (FM27: HT-505)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan heater, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PF-703: 12-D)
3. Replace the fan heater (FM27).
4. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.104 C-0631****Code**

C-0631

Classification

PF: Heater high temperature abnormality

Cause

1st tandem PF-703 dehumidification heater /1 (HTR1) high temperature hardware abnormality.

After turned ON, the temperature sensor /5 (TEMS/5) detects a heater abnormality signal.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Upper tray fan heater (HT-505)
- AC drive board /2 (ACDB/2: HT-505)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan heater, and repair it if any abnormality.
2. Check the connector connection and the wiring between PFUDB and ACDB /2, and repair it if any abnormality.
3. Check the temperature and the installation of the fan heater, and repair it if any abnormality.
4. Replace the fan heater.
5. Replace ACDB/2.
6. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.105 C-0632****Code**

C-0632

Classification

PF: Heater high temperature abnormality

Cause

1st tandem PF-703 dehumidification heater /2 (HTR2) high temperature hardware abnormality.

After turned ON, the temperature sensor /6 (TEMS/6) detects a heater abnormality signal.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Middle tray fan heater (HT-505)
- AC drive board /2 (ACDB/2: HT-505)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan heater, and repair it if any abnormality.
2. Check the connector connection and the wiring between PFUDB and ACDB /2, and repair it if any abnormality.
3. Check the temperature and the installation of the fan heater, and repair it if any abnormality.
4. Replace the fan heater.
5. Replace ACDB/2.
6. Replace PFUDB.

Faulty part isolation DIPSW
Control while detached

2.6.106 C-0633

Code

C-0633

Classification

PF: Heater high temperature abnormality

Cause

1st tandem PF-703 dehumidification heater /3 (HTR3) high temperature hardware abnormality.
 After turned ON, the temperature sensor /7 (TEMS/7) detects a heater abnormality signal.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Lower tray fan heater (HT-505)
- AC drive board /2 (ACDB/2: HT-505)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan heater, and repair it if any abnormality.
2. Check the connector connection and the wiring between PFUDB and ACDB /2, and repair it if any abnormality.
3. Check the temperature and the installation of the fan heater, and repair it if any abnormality.
4. Replace the fan heater.
5. Replace ACDB/2.
6. Replace PFUDB.

Faulty part isolation DIPSW
Control while detached

2.6.107 C-0634

Code

C-0634

Classification

PF: Heater high temperature abnormality

Cause

1st tandem PF-703 dehumidification heater /1 (HTR1) high temperature hardware abnormality.
 After turned ON, the temperature sensor /5 (TEMS/5) detects the heater temperature exceeding 105°C.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Upper tray fan heater (HT-505)
- AC drive board /2 (ACDB/2: HT-505)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan heater, and repair it if any abnormality.
2. Check the connector connection and the wiring between PFUDB and ACDB /2, and repair it if any abnormality.
3. Check the temperature and the installation of the fan heater, and repair it if any abnormality.
4. Replace the fan heater.
5. Replace ACDB/2.
6. Replace PFUDB.

Faulty part isolation DIPSW
Control while detached

2.6.108 C-0635

Code

C-0635

Classification

PF: Heater high temperature abnormality

Cause

1st tandem PF-703 dehumidification heater /2 (HTR2) high temperature software abnormality.
 After turned ON, the temperature sensor /6 (TEMS/6) detects the heater temperature exceeding 105°C.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Middle tray fan heater (HT-505)
- AC drive board /2 (ACDB/2: HT-505)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan heater, and repair it if any abnormality.
2. Check the connector connection and the wiring between PFUDB and ACDB /2, and repair it if any abnormality.
3. Check the temperature and the installation of the fan heater, and repair it if any abnormality.
4. Replace the fan heater.
5. Replace ACDB/2.
6. Replace PFUDB.

Faulty part isolation DIPSW

Control while detached

2.6.109 C-0636

Code

C-0636

Classification

PF: Heater high temperature abnormality

Cause

1st tandem PF-703 dehumidification heater /3 (HTR3) high temperature software abnormality.

After turned ON, the temperature sensor /7 (TEMS/7) detects the heater temperature exceeding 105°C.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Lower tray fan heater (HT-505)
- AC drive board /2 (ACDB/2: HT-505)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan heater, and repair it if any abnormality.
2. Check the connector connection and the wiring between PFUDB and ACDB /2, and repair it if any abnormality.
3. Check the temperature and the installation of the fan heater, and repair it if any abnormality.
4. Replace the fan heater.
5. Replace ACDB/2.
6. Replace PFUDB.

Faulty part isolation DIPSW

Control while detached

2.6.110 C-0637

Code

C-0637

Classification

PF: Heater low temperature abnormality

Cause

1st tandem PF-703 dehumidification heater /1 (HTR1) high temperature hardware abnormality.

The temperature sensor /5 (TEMS/5) detects the heater temperature lower than 0°C a specified period of time after the heater is turned ON.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Upper tray fan heater (HT-505)
- AC drive board /2 (ACDB/2: HT-505)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connection between ACDB/2 and the noise filter of PF-703.
2. Check the connector connection and the wiring between ACDB /2 and the fan heater, and repair it if any abnormality.
3. Check the connector connection and the wiring between PFUDB and the fan heater, and repair it if any abnormality.
4. Check the connector connection and the wiring between PFUDB and ACDB /2, and repair it if any abnormality.
5. Check the temperature and the installation of the fan heater, and repair it if any abnormality.
6. Replace the fan heater.
7. Replace ACDB/2.

8. Replace PFUDB.

Faulty part isolation DIPSW
Control while detached

2.6.111 C-0638

Code

C-0638

Classification

PF: Heater low temperature abnormality

Cause

1st tandem PF-703 dehumidification heater /2 (HTR2) low temperature software abnormality.

The temperature sensor /6 (TEMS/6) detects the heater temperature lower than 0°C a specified period of time after the heater is turned ON.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Middle tray fan heater (HT-505)
- AC drive board /2 (ACDB/2: HT-505)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connection between ACDB/2 and the noise filter of PF-703.
2. Check the connector connection and the wiring between ACDB /2 and the fan heater, and repair it if any abnormality.
3. Check the connector connection and the wiring between PFUDB and the fan heater, and repair it if any abnormality.
4. Check the connector connection and the wiring between PFUDB and ACDB /2, and repair it if any abnormality.
5. Check the temperature and the installation of the fan heater, and repair it if any abnormality.
6. Replace the fan heater.
7. Replace ACDB/2.
8. Replace PFUDB.

Faulty part isolation DIPSW
Control while detached

2.6.112 C-0639

Code

C-0639

Classification

PF: Heater low temperature abnormality

Cause

1st tandem PF-703 dehumidification heater /3 (HTR3) low temperature software abnormality.

The temperature sensor /7 (TEMS/7) detects the heater temperature lower than 0°C a specified period of time after the heater is turned ON.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Lower tray fan heater (HT-505)
- AC drive board /2 (ACDB/2: HT-505)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connection between ACDB/2 and the noise filter of PF-703.
2. Check the connector connection and the wiring between ACDB /2 and the fan heater, and repair it if any abnormality.
3. Check the connector connection and the wiring between PFUDB and the fan heater, and repair it if any abnormality.
4. Check the connector connection and the wiring between PFUDB and ACDB /2, and repair it if any abnormality.
5. Check the temperature and the installation of the fan heater, and repair it if any abnormality.
6. Replace the fan heater.
7. Replace ACDB/2.
8. Replace PFUDB.

Faulty part isolation DIPSW
Control while detached

2.6.113 C-0640

Code

C-0640

Classification

PF: Heater temperature rise abnormality

Cause

1st tandem PF-703 dehumidification heater /1 (HTR1) temperature rise abnormality.

The temperature sensor /5 (TEMS/5) detects the heater temperature lower than 40°C a specified period of time after the heater is turned ON.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Upper tray fan heater (HT-505)
- AC drive board /2 (ACDB/2: HT-505)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connection between ACDB/2 and the noise filter of PF-703.
2. Check the connector connection and the wiring between ACDB /2 and the fan heater, and repair it if any abnormality.
3. Check the connector connection and the wiring between PFUDB and the fan heater, and repair it if any abnormality.
4. Check the connector connection and the wiring between PFUDB and ACDB /2, and repair it if any abnormality.
5. Check the temperature and the installation of the fan heater, and repair it if any abnormality.
6. Replace the fan heater.
7. Replace ACDB/2.
8. Replace PFUDB.

Faulty part isolation DIPSW

Control while detached

2.6.114 C-0641

Code

C-0641

Classification

PF: Heater temperature rise abnormality

Cause

1st tandem PF-703 dehumidification heater /2 (HTR2) temperature rise abnormality.

The temperature sensor /6 (TEMS/6) detects the heater temperature lower than 40°C a specified period of time after the heater is turned ON.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Middle tray fan heater (HT-505)
- AC drive board /2 (ACDB/2: HT-505)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connection between ACDB/2 and the noise filter of PF-703.
2. Check the connector connection and the wiring between ACDB /2 and the fan heater, and repair it if any abnormality.
3. Check the connector connection and the wiring between PFUDB and the fan heater, and repair it if any abnormality.
4. Check the connector connection and the wiring between PFUDB and ACDB /2, and repair it if any abnormality.
5. Check the temperature and the installation of the fan heater, and repair it if any abnormality.
6. Replace the fan heater.
7. Replace ACDB/2.
8. Replace PFUDB.

Faulty part isolation DIPSW

Control while detached

2.6.115 C-0642

Code

C-0642

Classification

PF: Heater temperature rise abnormality

Cause

1st tandem PF-703 dehumidification heater /3 (HTR3) temperature rise abnormality.

The temperature sensor /7 (TEMS/7) detects the heater temperature lower than 40°C a specified period of time after the heater is turned ON.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Lower tray fan heater (HT-505)
- AC drive board /2 (ACDB/2: HT-505)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connection between ACDB/2 and the noise filter of PF-703.
2. Check the connector connection and the wiring between ACDB /2 and the fan heater, and repair it if any abnormality.
3. Check the connector connection and the wiring between PFUDB and the fan heater, and repair it if any abnormality.
4. Check the connector connection and the wiring between PFUDB and ACDB /2, and repair it if any abnormality.
5. Check the temperature and the installation of the fan heater, and repair it if any abnormality.
6. Replace the fan heater.
7. Replace ACDB/2.
8. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.116 C-0651****Code**

C-0651

Classification

PF: Heater high temperature abnormality

Cause

2nd tandem PF-703 dehumidification heater /1 (HTR1) high temperature hardware abnormality.
 After turned ON, the temperature sensor /5 (TEMS/5) detects a heater abnormality signal.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Upper tray fan heater (HT-505)
- AC drive board /2 (ACDB/2: HT-505)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan heater, and repair it if any abnormality.
2. Check the connector connection and the wiring between PFUDB and ACDB /2, and repair it if any abnormality.
3. Check the temperature and the installation of the fan heater, and repair it if any abnormality.
4. Replace the fan heater.
5. Replace ACDB/2.
6. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.117 C-0652****Code**

C-0652

Classification

PF: Heater high temperature abnormality

Cause

2nd tandem PF-703 dehumidification heater /2 (HTR2) high temperature hardware abnormality.
 After turned ON, the temperature sensor /6 (TEMS/6) detects a heater abnormality signal.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Middle tray fan heater (HT-505)
- AC drive board /2 (ACDB/2: HT-505)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan heater, and repair it if any abnormality.
2. Check the connector connection and the wiring between PFUDB and ACDB /2, and repair it if any abnormality.
3. Check the temperature and the installation of the fan heater, and repair it if any abnormality.
4. Replace the fan heater.
5. Replace ACDB/2.
6. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.118 C-0653****Code**

C-0653

Classification

PF: Heater high temperature abnormality

Cause

2nd tandem PF-703 dehumidification heater /3 (HTR3) high temperature hardware abnormality.

After turned ON, the temperature sensor /7 (TEMS/7) detects a heater abnormality signal.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Lower tray fan heater (HT-505)
- AC drive board /2 (ACDB/2: HT-505)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan heater, and repair it if any abnormality.
2. Check the connector connection and the wiring between PFUDB and ACDB /2, and repair it if any abnormality.
3. Check the temperature and the installation of the fan heater, and repair it if any abnormality.
4. Replace the fan heater.
5. Replace ACDB/2.
6. Replace PFUDB.

Faulty part isolation DIPSW

Control while detached

2.6.119 C-0654

Code

C-0654

Classification

PF: Heater high temperature abnormality

Cause

2nd tandem PF-703 dehumidification heater /1 (HTR1) high temperature hardware abnormality.

After turned ON, the temperature sensor /5 (TEMS/5) detects the heater temperature exceeding 105°C.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Upper tray fan heater (HT-505)
- AC drive board /2 (ACDB/2: HT-505)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan heater, and repair it if any abnormality.
2. Check the connector connection and the wiring between PFUDB and ACDB /2, and repair it if any abnormality.
3. Check the temperature and the installation of the fan heater, and repair it if any abnormality.
4. Replace the fan heater.
5. Replace ACDB/2.
6. Replace PFUDB.

Faulty part isolation DIPSW

Control while detached

2.6.120 C-0655

Code

C-0655

Classification

PF: Heater high temperature abnormality

Cause

2nd tandem PF-703 dehumidification heater /2 (HTR2) high temperature software abnormality.

After turned ON, the temperature sensor /6 (TEMS/6) detects the heater temperature exceeding 105°C.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Middle tray fan heater (HT-505)
- AC drive board /2 (ACDB/2: HT-505)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan heater, and repair it if any abnormality.
2. Check the connector connection and the wiring between PFUDB and ACDB /2, and repair it if any abnormality.
3. Check the temperature and the installation of the fan heater, and repair it if any abnormality.
4. Replace the fan heater.
5. Replace ACDB/2.

6. Replace PFUDB.

Faulty part isolation DIPSW
Control while detached

2.6.121 C-0656

Code

C-0656

Classification

PF: Heater high temperature abnormality

Cause

2nd tandem PF-703 dehumidification heater /3 (HTR3) high temperature software abnormality.

After turned ON, the temperature sensor /7 (TEMS/7) detects the heater temperature exceeding 105°C.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Lower tray fan heater (HT-505)
- AC drive board /2 (ACDB/2: HT-505)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan heater, and repair it if any abnormality.
2. Check the connector connection and the wiring between PFUDB and ACDB /2, and repair it if any abnormality.
3. Check the temperature and the installation of the fan heater, and repair it if any abnormality.
4. Replace the fan heater.
5. Replace ACDB/2.
6. Replace PFUDB.

Faulty part isolation DIPSW
Control while detached

2.6.122 C-0657

Code

C-0657

Classification

PF: Heater low temperature abnormality

Cause

2nd tandem PF-703 dehumidification heater /1 (HTR1) low temperature hardware abnormality.

The temperature sensor /5 (TEMS/5) detects the heater temperature lower than 0°C a specified period of time after the heater is turned ON.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Upper tray fan heater (HT-505)
- AC drive board /2 (ACDB/2: HT-505)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connection between ACDB/2 and the noise filter of PF-703.
2. Check the connector connection and the wiring between PFUDB /2 and the fan heater, and repair it if any abnormality.
3. Check the connector connection and the wiring between PFUDB and the fan heater, and repair it if any abnormality.
4. Check the connector connection and the wiring between PFUDB and ACDB /2, and repair it if any abnormality.
5. Check the temperature and the installation of the fan heater, and repair it if any abnormality.
6. Replace the fan heater.
7. Replace ACDB/2.
8. Replace PFUDB.

Faulty part isolation DIPSW
Control while detached

2.6.123 C-0658

Code

C-0658

Classification

PF: Heater low temperature abnormality

Cause

2nd tandem PF-703 dehumidification heater /2 (HTR2) low temperature software abnormality.

The temperature sensor /6 (TEMS/6) detects the heater temperature lower than 0°C a specified period of time after the heater is turned ON.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Middle tray fan heater (HT-505)
- AC drive board /2 (ACDB/2: HT-505)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connection between ACDB/2 and the noise filter of PF-703.
2. Check the connector connection and the wiring between ACDB /2 and the fan heater, and repair it if any abnormality.
3. Check the connector connection and the wiring between PFUDB and the fan heater, and repair it if any abnormality.
4. Check the connector connection and the wiring between PFUDB and ACDB /2, and repair it if any abnormality.
5. Check the temperature and the installation of the fan heater, and repair it if any abnormality.
6. Replace the fan heater.
7. Replace ACDB/2.
8. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.124 C-0659****Code**

C-0659

Classification

PF: Heater low temperature abnormality

Cause

2nd tandem PF-703 dehumidification heater /3 (HTR3) low temperature software abnormality.

The temperature sensor /7 (TEMS/7) detects the heater temperature lower than 0°C a specified period of time after the heater is turned ON.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Lower tray fan heater (HT-505)
- AC drive board /2 (ACDB/2: HT-505)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connection between ACDB/2 and the noise filter of PF-703.
2. Check the connector connection and the wiring between ACDB /2 and the fan heater, and repair it if any abnormality.
3. Check the connector connection and the wiring between PFUDB and the fan heater, and repair it if any abnormality.
4. Check the connector connection and the wiring between PFUDB and ACDB /2, and repair it if any abnormality.
5. Check the temperature and the installation of the fan heater, and repair it if any abnormality.
6. Replace the fan heater.
7. Replace ACDB/2.
8. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.125 C-0660****Code**

C-0660

Classification

PF: Heater temperature rise abnormality

Cause

2nd tandem PF-703 dehumidification heater /1 (HTR1) temperature rise abnormality.

The temperature sensor /5 (TEMS/5) detects the heater temperature lower than 40°C a specified period of time after the heater is turned ON.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Upper tray fan heater (HT-505)
- AC drive board /2 (ACDB/2: HT-505)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connection between ACDB/2 and the noise filter of PF-703.
2. Check the connector connection and the wiring between ACDB /2 and the fan heater, and repair it if any abnormality.
3. Check the connector connection and the wiring between PFUDB and the fan heater, and repair it if any abnormality.

4. Check the connector connection and the wiring between PFUDB and ACDB /2, and repair it if any abnormality.
5. Check the temperature and the installation of the fan heater, and repair it if any abnormality.
6. Replace the fan heater.
7. Replace ACDB/2.
8. Replace PFUDB.

Faulty part isolation DIPSW
Control while detached

2.6.126 C-0661

Code

C-0661

Classification

PF: Heater temperature rise abnormality

Cause

2nd tandem PF-703 dehumidification heater /2 (HTR2) temperature rise abnormality.

The temperature sensor /6 (TEMS/6) detects the heater temperature lower than 40°C a specified period of time after the heater is turned ON.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Middle tray fan heater (HT-505)
- AC drive board /2 (ACDB/2: HT-505)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connection between ACDB/2 and the noise filter of PF-703.
2. Check the connector connection and the wiring between ACDB /2 and the fan heater, and repair it if any abnormality.
3. Check the connector connection and the wiring between PFUDB and the fan heater, and repair it if any abnormality.
4. Check the connector connection and the wiring between PFUDB and ACDB /2, and repair it if any abnormality.
5. Check the temperature and the installation of the fan heater, and repair it if any abnormality.
6. Replace the fan heater.
7. Replace ACDB/2.
8. Replace PFUDB.

Faulty part isolation DIPSW
Control while detached

2.6.127 C-0662

Code

C-0662

Classification

PF: Heater temperature rise abnormality

Cause

2nd tandem PF-703 dehumidification heater /3 (HTR3) temperature rise abnormality.

The temperature sensor /7 (TEMS/7) detects the heater temperature lower than 40°C a specified period of time after the heater is turned ON.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Lower tray fan heater (HT-505)
- AC drive board /2 (ACDB/2: HT-505)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connection between ACDB/2 and the noise filter of PF-703.
2. Check the connector connection and the wiring between ACDB /2 and the fan heater, and repair it if any abnormality.
3. Check the connector connection and the wiring between PFUDB and the fan heater, and repair it if any abnormality.
4. Check the connector connection and the wiring between PFUDB and ACDB /2, and repair it if any abnormality.
5. Check the temperature and the installation of the fan heater, and repair it if any abnormality.
6. Replace the fan heater.
7. Replace ACDB/2.
8. Replace PFUDB.

Faulty part isolation DIPSW
Control while detached

2.6.128 C-0671

Code

C-0671

Classification

PF: Heater high temperature abnormality

Cause

PI-PFU (PF-703) dehumidification heater /1 (HTR) high temperature hardware abnormality.
After turned ON, the temperature sensor /5 (TEMS/5) detects a heater abnormality signal.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Upper tray fan heater (HT-505)
- AC drive board /2 (ACDB/2: HT-505)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan heater, and repair it if any abnormality.
2. Check the connector connection and the wiring between PFUDB and ACDB /2, and repair it if any abnormality.
3. Check the temperature and the installation of the fan heater, and repair it if any abnormality.
4. Replace the fan heater.
5. Replace ACDB/2.
6. Replace PFUDB.

Faulty part isolation DIPSW

Control while detached

2.6.129 C-0672

Code

C-0672

Classification

PF: Heater high temperature abnormality

Cause

PI-PFU (PF-703) dehumidification heater /2 (HTR2) high temperature hardware abnormality.
After turned ON, the temperature sensor /6 (TEMS/6) detects a heater abnormality signal.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Middle tray fan heater (HT-505)
- AC drive board /2 (ACDB/2: HT-505)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan heater, and repair it if any abnormality.
2. Check the connector connection and the wiring between PFUDB and ACDB /2, and repair it if any abnormality.
3. Check the temperature and the installation of the fan heater, and repair it if any abnormality.
4. Replace the fan heater.
5. Replace ACDB/2.
6. Replace PFUDB.

Faulty part isolation DIPSW

Control while detached

2.6.130 C-0673

Code

C-0673

Classification

PF: Heater high temperature abnormality

Cause

PI-PFU (PF-703) dehumidification heater /3 (HTR3) high temperature hardware abnormality.
After turned ON, the temperature sensor /7 (TEMS/7) detects a heater abnormality signal.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Lower tray fan heater (HT-505)
- AC drive board /2 (ACDB/2: HT-505)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan heater, and repair it if any abnormality.
2. Check the connector connection and the wiring between PFUDB and ACDB /2, and repair it if any abnormality.
3. Check the temperature and the installation of the fan heater, and repair it if any abnormality.

4. Replace the fan heater.
5. Replace ACDB/2.
6. Replace PFUDB.

Faulty part isolation DIPSW
Control while detached

2.6.131 C-0674

Code

C-0674

Classification

PF: Heater high temperature abnormality

Cause

PI-PFU (PF-703) dehumidification heater /1 (HTR) high temperature software abnormality.

After turned ON, the temperature sensor /5 (TEMS/5) detects the heater temperature exceeding 105°C.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Upper tray fan heater (HT-505)
- AC drive board /2 (ACDB/2: HT-505)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan heater, and repair it if any abnormality.
2. Check the connector connection and the wiring between PFUDB and ACDB /2, and repair it if any abnormality.
3. Check the temperature and the installation of the fan heater, and repair it if any abnormality.
4. Replace the fan heater.
5. Replace ACDB/2.
6. Replace PFUDB.

Faulty part isolation DIPSW
Control while detached

2.6.132 C-0675

Code

C-0675

Classification

PF: Heater high temperature abnormality

Cause

PI-PFU (PF-703) dehumidification heater /2 (HTR2) high temperature software abnormality.

After turned ON, the temperature sensor /6 (TEMS/6) detects the heater temperature exceeding 105°C.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Middle tray fan heater (HT-505)
- AC drive board /2 (ACDB/2: HT-505)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan heater, and repair it if any abnormality.
2. Check the connector connection and the wiring between PFUDB and ACDB /2, and repair it if any abnormality.
3. Check the temperature and the installation of the fan heater, and repair it if any abnormality.
4. Replace the fan heater.
5. Replace ACDB/2.
6. Replace PFUDB.

Faulty part isolation DIPSW
Control while detached

2.6.133 C-0676

Code

C-0676

Classification

PF: Heater high temperature abnormality

Cause

PI-PFU (PF-703) dehumidification heater /3 (HTR3) high temperature software abnormality.

After turned ON, the temperature sensor /7 (TEMS/7) detects the heater temperature exceeding 105°C.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Lower tray fan heater (HT-505)

- AC drive board /2 (ACDB/2: HT-505)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PFUDB and the fan heater, and repair it if any abnormality.
2. Check the connector connection and the wiring between PFUDB and ACDB /2, and repair it if any abnormality.
3. Check the temperature and the installation of the fan heater, and repair it if any abnormality.
4. Replace the fan heater.
5. Replace ACDB/2.
6. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.134 C-0677****Code**

C-0677

Classification

PF: Heater low temperature abnormality

Cause

PI-PFU (PF-703) dehumidification heater /1 (HTR1) low temperature software abnormality.

The temperature sensor /5 (TEMS/5) detects the heater temperature lower than 0°C a specified period of time after the heater is turned ON.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Upper tray fan heater (HT-505)
- AC drive board /2 (ACDB/2: HT-505)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connection between ACDB/2 and the noise filter of PF-703.
2. Check the connector connection and the wiring between ACDB /2 and the fan heater, and repair it if any abnormality.
3. Check the connector connection and the wiring between PFUDB and the fan heater, and repair it if any abnormality.
4. Check the connector connection and the wiring between PFUDB and ACDB /2, and repair it if any abnormality.
5. Check the temperature and the installation of the fan heater, and repair it if any abnormality.
6. Replace the fan heater.
7. Replace ACDB/2.
8. Replace PFUDB.

Faulty part isolation DIPSW**Control while detached****2.6.135 C-0678****Code**

C-0678

Classification

PF: Heater low temperature abnormality

Cause

PI-PFU (PF-703) dehumidification heater /2 (HTR2) low temperature software abnormality.

The temperature sensor /6 (TEMS/6) detects the heater temperature lower than 0°C a specified period of time after the heater is turned ON.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Middle tray fan heater (HT-505)
- AC drive board /2 (ACDB/2: HT-505)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connection between ACDB/2 and the noise filter of PF-703.
2. Check the connector connection and the wiring between ACDB /2 and the fan heater, and repair it if any abnormality.
3. Check the connector connection and the wiring between PFUDB and the fan heater, and repair it if any abnormality.
4. Check the connector connection and the wiring between PFUDB and ACDB /2, and repair it if any abnormality.
5. Check the temperature and the installation of the fan heater, and repair it if any abnormality.
6. Replace the fan heater.
7. Replace ACDB/2.

8. Replace PFUDB.

Faulty part isolation DIPSW
Control while detached

2.6.136 C-0679

Code

C-0679

Classification

PF: Heater low temperature abnormality

Cause

PI-PFU (PF-703) dehumidification heater /3 (HTR3) low temperature software abnormality.

The temperature sensor /7 (TEMS/7) detects the heater temperature lower than 0°C a specified period of time after the heater is turned ON.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Lower tray fan heater (HT-505)
- AC drive board /2 (ACDB/2: HT-505)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connection between ACDB/2 and the noise filter of PF-703.
2. Check the connector connection and the wiring between ACDB /2 and the fan heater, and repair it if any abnormality.
3. Check the connector connection and the wiring between PFUDB and the fan heater, and repair it if any abnormality.
4. Check the connector connection and the wiring between PFUDB and ACDB /2, and repair it if any abnormality.
5. Check the temperature and the installation of the fan heater, and repair it if any abnormality.
6. Replace the fan heater.
7. Replace ACDB/2.
8. Replace PFUDB.

Faulty part isolation DIPSW
Control while detached

2.6.137 C-0680

Code

C-0680

Classification

PF: Heater temperature rise abnormality

Cause

PI-PFU (PF-703) dehumidification heater /1 (HTR1) temperature rise abnormality.

The temperature sensor /5 (TEMS/5) detects the heater temperature lower than 40°C a specified period of time after the heater is turned ON.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Upper tray fan heater (HT-505)
- AC drive board /2 (ACDB/2: HT-505)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connection between ACDB/2 and the noise filter of PF-703.
2. Check the connector connection and the wiring between ACDB /2 and the fan heater, and repair it if any abnormality.
3. Check the connector connection and the wiring between PFUDB and the fan heater, and repair it if any abnormality.
4. Check the connector connection and the wiring between PFUDB and ACDB /2, and repair it if any abnormality.
5. Check the temperature and the installation of the fan heater, and repair it if any abnormality.
6. Replace the fan heater.
7. Replace ACDB/2.
8. Replace PFUDB.

Faulty part isolation DIPSW
Control while detached

2.6.138 C-0681

Code

C-0681

Classification

PF: Heater temperature rise abnormality

Cause

PI-PFU (PF-703) dehumidification heater /2 (HTR2) temperature rise abnormality.

The temperature sensor /6 (TEMS/6) detects the heater temperature lower than 40°C a specified period of time after the heater is turned ON.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Middle tray fan heater (HT-505)
- AC drive board /2 (ACDB/2: HT-505)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connection between ACDB/2 and the noise filter of PF-703.
2. Check the connector connection and the wiring between ACDB /2 and the fan heater, and repair it if any abnormality.
3. Check the connector connection and the wiring between PFUDB and the fan heater, and repair it if any abnormality.
4. Check the connector connection and the wiring between PFUDB and ACDB /2, and repair it if any abnormality.
5. Check the temperature and the installation of the fan heater, and repair it if any abnormality.
6. Replace the fan heater.
7. Replace ACDB/2.
8. Replace PFUDB.

Faulty part isolation DIPSW

Control while detached

2.6.139 C-0682

Code

C-0682

Classification

PF: Heater temperature rise abnormality

Cause

PI-PFU (PF-703) dehumidification heater /3 (HTR3) temperature rise abnormality.

The temperature sensor /7 (TEMS/7) detects the heater temperature lower than 40°C a specified period of time after the heater is turned ON.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Lower tray fan heater (HT-505)
- AC drive board /2 (ACDB/2: HT-505)
- PF drive board (PFUDB: PF-703)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connection between ACDB/2 and the noise filter of PF-703.
2. Check the connector connection and the wiring between ACDB /2 and the fan heater, and repair it if any abnormality.
3. Check the connector connection and the wiring between PFUDB and the fan heater, and repair it if any abnormality.
4. Check the connector connection and the wiring between PFUDB and ACDB /2, and repair it if any abnormality.
5. Check the temperature and the installation of the fan heater, and repair it if any abnormality.
6. Replace the fan heater.
7. Replace ACDB/2.
8. Replace PFUDB.

Faulty part isolation DIPSW

Control while detached

2.7 Solution 4 (C-1001_1148)

2.7.1 C-1001

Code

C-1001

Classification

Finishing: Communication error

Cause

Serial communication error between the main body and the finishing option.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

-

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Turn OFF the sub power switch, and then turn OFF the main power switch. Then unplug all the power plug. Restart the main body after 10 seconds.
2. Check the connector connection and the wiring between the main body and each option, and repair it if any abnormality.
3. Check the connector connection of the control board and the drive board in each option, and repair it if any abnormality.
4. Rewrite the firmware of the option.
5. Replace the control board of the option corresponds to the malfunction code.

Faulty part isolation DIPSW
Control while detached

2.7.2 C-1005

Code

C-1005

Classification

FS: FS abnormality

Cause

Communication error.

Measures to take when alert occurs

The main body and the FS stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Printer control board (PRCB)
- FNS control board (FNSCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Turn OFF the sub power switch, and then turn OFF the main power switch. Then unplug all the power plug. Restart the main body after 10 seconds.
2. Check the connector connection and the wiring between the main body and each option, and repair it if any abnormality.
3. Check the connector connection of the control board and the drive board in each option, and repair it if any abnormality.
4. Rewrite the firmware of the option.
5. Replace the control board of the option corresponds to the malfunction code.

Faulty part isolation DIPSW
Control while detached

2.7.3 C-1006

Code

C-1006

Classification

FD: FD abnormality

Cause

Communication error.

Measures to take when alert occurs

The main body and the FD stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Printer control board (PRCB)
- FD control board (FDCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Turn OFF the sub power switch, and then turn OFF the main power switch. Then unplug all the power plug. Restart the main body after 10 seconds.
2. Check the connector connection and the wiring between the main body and each option, and repair it if any abnormality.
3. Check the connector connection of the control board and the drive board in each option, and repair it if any abnormality.
4. Rewrite the firmware of the option.
5. Replace the control board of the option corresponds to the malfunction code.

Faulty part isolation DIPSW
Control while detached

2.7.4 C-1007

Code

C-1007

Classification

SD: SD-506 abnormality

Cause

Communication error.

Measures to take when alert occurs

The main body and the SD stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Printer control board (PRCB)
- SD control board (SDCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Turn OFF the sub power switch, and then turn OFF the main power switch. Then unplug all the power plug. Restart the main body after 10 seconds.
2. Check the connector connection and the wiring between the main body and each option, and repair it if any abnormality.
3. Check the connector connection of the control board and the drive board in each option, and repair it if any abnormality.
4. Rewrite the firmware of the option.
5. Replace the control board of the option corresponds to the malfunction code.

Faulty part isolation DIPSW

Control while detached

2.7.5 C-1008

Code

C-1008

Classification

RU: RU-506 abnormality

Cause

Communication error between the main body and RU.

Measures to take when alert occurs

The main body and the RU stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Printer control board (PRCB)
- RU control board (RUCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Turn OFF the sub power switch, and then turn OFF the main power switch. Then unplug all the power plug. Restart the main body after 10 seconds.
2. Check the connector connection and the wiring between the main body and each option, and repair it if any abnormality.
3. Check the connector connection of the control board and the drive board in each option, and repair it if any abnormality.
4. Rewrite the firmware of the option.
5. Replace the control board of the option corresponds to the malfunction code.

Faulty part isolation DIPSW

Control while detached

2.7.6 C-1009

Code

C-1009

Classification

PB: PB abnormality

Cause

Communication error between Main CPU in the PB control board (PBCB) and Sub CPU1.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- PB control board (PBCB)
- Control program

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Turn OFF the sub power switch and then turn OFF the main power switch. Then unplug all the power plug. Restart the main body after 10 seconds.
2. Check the connector connection of the control board and the drive board in PB, and repair it if any abnormality.
3. Rewrite the firmware of PB.
4. Replace PBCB.

Faulty part isolation DIPSW

Control while detached

2.7.7 C-1010

Code

C-1010

Classification

PB: PB abnormality

Cause

Communication error between Main CPU in the PB control board (PBCB) and Sub CPU2.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- PB control board (PBCB)
- Control program

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- **The message "Please call service" is displayed on the panel.**

Solution

1. After turning OFF the sub power switch, turn OFF the main power switch and unplug the power plug. Restart the main body after 10 seconds.
2. Check the connector connection of the control board and the drive board in PB, and repair it if any abnormality.
3. Rewrite the firmware of PB.
4. Replace PBCB.

Faulty part isolation DIPSW**Control while detached****2.7.8 C-1011****Code**

C-1011

Classification

PB control board (PBCB)

Cause

Paper feed error between the main body and PB.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- PB control board (PBCB)
- Control program

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- **The message "Please call service" is displayed on the panel.**

Solution

1. After turning OFF the sub power switch, turn OFF the main power switch and unplug the power plug. Restart the main body after 10 seconds.
2. Check the connector connection and the wiring between the main body and each option, and repair it if any abnormality.
3. Check the connector connection of the control board and the drive board in each option, and repair it if any abnormality.
4. Rewrite the firmware of the option.
5. Replace the control board of the option corresponds to the malfunction code.

Faulty part isolation DIPSW**Control while detached****2.7.9 C-1012****Code**

C-1012*

Classification

GP: Communication error

Cause

Communication error between the main body and GP.

Measures to take when alert occurs

The main body and the GP stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

-

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- **The message "Please call service" is displayed on the panel.**

Solution

1. Turn OFF the sub power switch, and then turn OFF the main power switch. Then unplug all the power plug. Restart the main body after 10 seconds.
2. Check the connector connection and the wiring between the main body and each option, and repair it if any abnormality.
3. Check the connector connection of the control board and the drive board in each option, and repair it if any abnormality.
4. Rewrite the firmware of the option.
5. Replace the control board of the option corresponds to the malfunction code.

Faulty part isolation DIPSW**Control while detached****2.7.10 C-1102 (FS-521)****Code**

C-1102 (FS-521)

Classification

FS: FS-521 abnormality

Cause

The tray up down motor (M3) does not turn OFF even when a specified period of time elapses after it starts operations. Or, it operates for more than the allowed time at a speed out of the specified one.

Measures to take when alert occurs

The main body and the FS stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- FNS control board (FNSCB)
- FNS drive board (FNSDB)
- Main tray up down motor (M3)
- Main tray upper limit sensor (PS2)
- Main tray lower limit sensor (PS3)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the tray up/down section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between FNSDB and motor/sensor, and repair it if any abnormality.
3. Check the connector connection and the wiring between FNSDB and FNSCB, and repair it if any abnormality.
4. Check the sensor operation, LED emission and light-receiving path, and repair/replace it if any abnormality. (Wiring diagram: FS-521: 2-B, 4-B)
5. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: FS-521: 1-B)
6. Replace PS3.
7. Replace LED1 and PS16.
8. Replace M3.
9. Replace FNSDB.
10. Replace FNSCB.

Faulty part isolation DIPSW

DIPSW6-4

Control while detached

FS main tray and stapling are not available

2.7.11 C-1103 (FS-521)

Code

C-1103 (FS-521)

Classification

FS: FS-521 abnormality

Cause

The alignment home sensors /Rr (PS8) and /Fr (PS31) do not turn ON within a specified period of time after the home position search operation of the alignment motors /Rr (M5) and /Fr (M22) starts.

Measures to take when alert occurs

The main body and the FS stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- FNS control board (FNSCB)
- FNS drive board (FNSDB)
- Alignment motor /Rr (M5)
- Alignment motor /Fr (M22)
- Alignment home sensor /Rr (PS8)
- Alignment home sensor /Fr (PS31)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the alignment section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between FNSDB and motor/sensor, and repair it if any abnormality.
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: FS-521:4-G)
4. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: FS-521:3-G, 4-G)
5. Check the connector connection and the wiring between FNSDB and FNSCB, and repair it if any abnormality.
6. Replace PS8 or PS31.
7. Replace M5.
8. Replace M22.
9. Replace FNSDB.
10. Replace FNSCB.

Faulty part isolation DIPSW

DIPSW6-4

Control while detached

FS main tray and stapling are not available

2.7.12 C-1104 (FS-521)

Code

C-1104 (FS-521)

Classification

FS: FS-521 abnormality

Cause

The main tray paper exit motor (M7) operates for more than the allowed time at a speed out of the specified one.

Measures to take when alert occurs

The main body and the FS stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- FNS control board (FNSCB)
- FNS drive board (FNSDB)
- Main tray exit motor (M7)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between FNSDB and the motor, and repair it if any abnormality.
2. Check the connector connection and the wiring between FNSDB and FNSCB, and repair it if any abnormality.
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: FS-521: 2-B)
4. Replace M7.
5. Replace FNSDB.
6. Replace FNSCB.

Faulty part isolation DIPSW

DIPSW6-4

Control while detached

FS main tray and stapling are not available

2.7.13 C-1105 (FS-521)**Code**

C-1105 (FS-521)

Classification

FS: FS-521 abnormality

Cause

The paper exit opening unit does not get to the specified opening position within a specified period of time after the paper exit opening motor (M8) starts operations.

Measures to take when alert occurs

The main body and the FS stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- FNS control board (FNSCB)
- Paper exit opening motor (M8)
- Paper exit opening home sensor (PS12)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the paper exit opening section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between FNSDB and motor/sensor, and repair it if any abnormality.
3. Check the connector connection and the wiring between FNSDB and FNSCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: FS-521:2-C)
5. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram:FS-521:3-B)
6. Replace PS12.
7. Replace M8.
8. Replace FNSDB.
9. Replace FNSCB.

Faulty part isolation DIPSW

DIPSW6-4

Control while detached

FS main tray and stapling are not available

2.7.14 C-1106 (FS-521)**Code**

C-1106 (FS-521)

Classification

FS: FS-521 abnormality

Cause

The stapler movement home sensor (PS11) does not turn ON within a specified period of time after the home position search operation of the stapler movement motor (M11) starts.

Measures to take when alert occurs

The main body and the FS stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- FNS control board (FNSCB)
- FNS drive board (FNSDB)
- Stapler movement motor (M11)
- Stapler movement home sensor (PS11)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the stapler movement section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between FNSDB and motor/sensor, and repair it if any abnormality.
3. Check the connector connection and the wiring between FNSDB and FNCSB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: FS-521: 5-G)
5. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: FS-521: 2-G)
6. Replace PS11.
7. Replace M11.
8. Replace FNSDB.
9. Replace FNCSB.

Faulty part isolation DIPSW

DIPSW6-3

Control while detached

The use of staple is unavailable

2.7.15 C-1107 (FS-521)**Code**

C-1107 (FS-521)

Classification

FS: FS-521 abnormality (skew rotation)

Cause

The stapler rotation home sensor (PS14) does not turn ON within a specified period of time after the home position search operation of the stapler rotation motor (M4) starts.

Measures to take when alert occurs

The main body and the FS stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- FNS control board (FNCSB)
- FNS drive board (FNSDB)
- Stapler rotation motor (M4)
- Stapler rotation home sensor (PS14)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the stapler rotation section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between FNSDB and motor/sensor, and repair it if any abnormality.
3. Check the connector connection and the wiring between FNSDB and FNCSB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: FS-521: 5-G)
5. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: FS-521: 2-G)
6. Replace PS14.
7. Replace M4.
8. Replace FNSDB.
9. Replace FNCSB.

Faulty part isolation DIPSW

DIPSW6-3

Control while detached

The use of staple is unavailable

2.7.16 C-1108 (FS-521)**Code**

C-1108 (FS-521)

Classification

FS: FS-521 abnormality (vertical rotation)

Cause

The stapler rotation home sensor (PS14) does not turn ON within a specified period of time after the home position search operation of the stapler rotation motor (M4) starts.

Measures to take when alert occurs

The main body and the FS stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- FNS control board (FNCSB)
- FNS drive board (FNSDB)
- Stapler rotation motor (M4)
- Stapler rotation home sensor (PS14)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the stapler rotation section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between FNSDB and motor/sensor, and repair it if any abnormality.
3. Check the connector connection and the wiring between FNSDB and FNCSB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: FS-521: 5-G)
5. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: FS-521: 2-G)
6. Replace PS14.

7. Replace M4.
8. Replace FNSDB.
9. Replace FNSCB.

Faulty part isolation DIPSW

DIPSW6-3

Control while detached

The use of staple is unavailable

2.7.17 C-1109 (FS-521)**Code**

C-1109 (FS-521)

Classification

FS: FS-521 abnormality

Cause

After the stapler motor /Fr (M31) starts operations, it does not complete operations within a specified period of time, and the stapler home sensor /Fr (PS41) does not turn ON.

Measures to take when alert occurs

The main body and the FS stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- FNS control board (FNSCB)
- FNS drive board (FNSDB)
- Stapler board (SB)
- Stapler motor /Fr (M31)
- Stapler home sensor /Fr (PS41)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between FNSDB and the stapler, and repair it if any abnormality.
2. Check the connector connection and the wiring between FNSDB and FNSCB, and repair it if any abnormality.
3. Replacing the stapler assy
4. Replace FNSDB.
5. Replace FNSCB.

Faulty part isolation DIPSW

DIPSW6-3

Control while detached

The use of staple is unavailable

2.7.18 C-1110 (FS-521)**Code**

C-1110 (FS-521)

Classification

FS: FS-521 abnormality

Cause

After the stapler motor /Rr (M30) starts operations, it does not complete operations within a specified period of time, and the stapler home sensor /Rr (PS40) does not turn ON.

Measures to take when alert occurs

The main body and the FS stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- FNS control board (FNSCB)
- FNS drive board (FNSDB)
- Stapler board (SB)
- Stapler motor /Rr (M30)
- Stapler home sensor /Rr (PS40)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between FNSDB and the stapler, and repair it if any abnormality.
2. Check the connector connection and the wiring between FNSDB and FNSCB, and repair it if any abnormality.
3. Replacing the stapler assy
4. Replace FNSDB.
5. Replace FNSCB.

Faulty part isolation DIPSW

DIPSW6-3

Control while detached

The use of staple is unavailable

2.7.19 C-1113 (FS-521)**Code**

C-1113 (FS-521)

Classification

FS: FS-521 abnormality

Cause

After the home position search operation of the rear stopper motor (M26) starts, the rear stopper home sensor (PS35) does not turn ON within a specified period of time.

Measures to take when alert occurs

The main body and the FS stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- FNS control board (FNSCB)
- FNS drive board (FNSDB)
- Rear stopper motor (M26)
- Rear stopper home sensor (PS35)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the stapler rotation section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between FNSDB and motor/sensor, and repair it if any abnormality.
3. Check the connector connection and the wiring between FNSDB and FNSCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: FS-521: 4-G)
5. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: FS-521: 2-G)
6. Replace PS14.
7. Replace M26.
8. Replace FNSDB.
9. Replace FNSCB.

Faulty part isolation DIPSW

DIPSW6-4

Control while detached

FS main tray and stapling are not available

2.7.20 C-1124

Code

C-1124

Classification

PI: PI abnormality

Cause

The tray upper limit sensor /Lw (PS209) or the tray lower limit sensor /Lw (PS210) does not turn ON within a specified period of time after the Tray lift motor /Lw (M202) turns ON.

Measures to take when alert occurs

The main body and the FS stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- FNS control board (FNSCB)
- PI drive board (PIDB)
- Tray lift motor /Lw (M202)
- Tray upper limit sensor /Lw (PS209)
- Tray lower limit sensor /Lw (PS210)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the PI lower tray section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PIDB and motor/sensor, and repair it if any abnormality.
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram:PI: 5-B)
4. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: PI: 6-B)
5. Replace M202.
6. Replace PS209.
7. Replace PS210.
8. Replace PIDB.

Faulty part isolation DIPSW

DIPSW18-6

Control while detached

PI unusable

(PI not connected)

2.7.21 C-1125

Code

C-1125

Classification

PI: PI abnormality

Cause

The tray upper limit sensor /Up (PS205) or the tray lower limit sensor /Up (PS204) does not turn ON within a specified period of time after the tray lift motor /Up (M201) turns ON.

Measures to take when alert occurs

The main body and the FS stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- FNS control board (FNSCB)
- PI drive board (PIDB)
- Tray lift motor /Up (M201)
- Tray upper limit sensor /Up (PS205)
- Tray lower limit sensor /Up (PS204)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the PI lower tray section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PIDB and motor/sensor, and repair it if any abnormality.
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: PI: 4-B)
4. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: PI: 4-B)
5. Replace M201.
6. Replace PS204.
7. Replace PS205.
8. Replace PIDB.

Faulty part isolation DIPSW

DIPSW18-6

Control while detached

PI unusable

(PI not connected)

2.7.22 C-1126**Code**

C-1126

Classification

PI: PI abnormality

Cause

A prescribed speed is not obtained within a specified period of time after the conveyance motor (M203) turns ON.

Measures to take when alert occurs

The main body and the FS stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- FNS control board (FNSCB)
- PI drive board (PIDB)
- Conveyance motor (M203)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the conveyance section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PIDB and the motor, and repair it if any abnormality.
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: FS-612: 4-B)
4. Replace M203.
5. Replace PIDB.

Faulty part isolation DIPSW

DIPSW18-6

Control while detached

PI unusable

(PI not connected)

2.7.23 C-1127**Code**

C-1127

Classification

PK: PK abnormality

Cause

The punch shift home sensor (PS303) does not turn ON within a specified period of time after the punch shift motor (M302) turns ON.

Measures to take when alert occurs

The main body and the FS stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- FNS control board (FNSCB)
- Punch drive board (PDB)
- Punch shift motor (M302)
- Punch shift home sensor (PS303)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the punch kit, and clean/repair it if any abnormality.

2. Check the connector connection and the wiring between PDB and motor/sensor, and repair it if any abnormality.
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: PK:7-C)
4. Check I/O and the operation of the sensor, and repair/replace it if any abnormality.
5. Replace M302.
6. Replace PS303.
7. Replace PDB.

Faulty part isolation DIPSW

DIPSW19-5

Control while detached

PK unusable

(PK not connected)

2.7.24 C-1132**Code**

C-1132

Classification

PK: PK abnormality

Cause

The punch home sensor (PS301) does not turn ON within a specified period of time after the punch motor (M301) turns ON.

Measures to take when alert occurs

The main body and the FS stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- FNS control board (FNSCB)
- Punch drive board (PDB)
- Punch motor (M301)
- Punch home sensor (PS301)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the punch kit, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PDB and motor/sensor, and repair it if any abnormality.
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: PK: 4-C)
4. Check I/O and the operation of the sensor, and repair/replace it if any abnormality.
5. Replace M301.
6. Replace PS301.
7. Replace PDB.

Faulty part isolation DIPSW

DIPSW19-5

Control while detached

PK unusable

(PK not connected)

2.7.25 C-1140 (FS-521)**Code**

C-1140 (FS-521)

Classification

FS: FS-521 abnormality

Cause

After the paper exit arm motor /Fr (M23) starts operations, it does not complete operations within a specified period of time, and the paper exit arm home sensor /Fr (PS9) does not turn ON. Or, it operates for more than the allowed time at a speed out of the specified one.

Measures to take when alert occurs

The main body and the FS stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- FNS control board (FNSCB)
- FNS drive board (FNSDB)
- Paper exit arm motor (M23)
- Paper exit arm home sensor (PS9)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the paper exit arm section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between FNSDB and motor/sensor, and repair it if any abnormality.
3. Check the connector connection and the wiring between FNSDB and FNSCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: FS-521: 6-G)
5. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: FS-521: 3-G)
6. Replace PS9.
7. Replace M23.
8. Replace FNSDB.
9. Replace FNSCB.

Faulty part isolation DIPSW

DIPSW6-4

Control while detached

FS main tray and stapling are not available

2.7.26 C-1141 (FS-521)**Code**

C-1141 (FS-521)

Classification

FS: FS-521 abnormality

Cause

The stack assist home sensor (PS32) does not turn ON within a specified period of time after the home position search operation of the stack assist motor (M24) starts.

Measures to take when alert occurs

The main body and the FS stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- FNS control board (FNSCB)
- FNS drive board (FNSDB)
- Stack assist guide motor (M24)
- Stack assist home sensor (PS32)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the stapler rotation section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between FNSDB and motor/sensor, and repair it if any abnormality.
3. Check the connector connection and the wiring between FNSDB and FNSCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram:FS-521:5-G)
5. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram:FS-521:3-B)
6. Replace PS32.
7. Replace M24.
8. Replace FNSDB.
9. Replace FNSCB.

Faulty part isolation DIPSW

DIPSW6-4

Control while detached

FS main tray and stapling are not available

2.7.27 C-1142 (FS-521)**Code**

C-1142 (FS-521)

Classification

FS: FS-521 abnormality

Cause

The intermediate roller home sensor (PS33) does not turn ON even after a specified period of time after the intermediate roller open/close motor (M25) starts the home position search operation.

Measures to take when alert occurs

The main body and the FS stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- FNS control board (FNSCB)
- FNS drive board (FNSDB)
- Alignment motor /Fr (M22)
- Alignment motor /Rr (M5)
- Intermediate roller release solenoid (SD7)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the intermediate roller open close section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between FNSDB and motor/sensor, and repair it if any abnormality.
3. Check the connector connection and the wiring between FNSDB and FNSCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: FS-521: 4-G)
5. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: FS-521: 3-G)
6. Replace PS33.
7. Replace M25.
8. Replace FNSDB.
9. Replace FNSCB.

Faulty part isolation DIPSW

DIPSW6-4

Control while detached

FS main tray and stapling are not available

2.7.28 C-1143 (FS-521)**Code**

C-1143 (FS-521)

Classification

FS: FS-521 abnormality

Cause

The conveyance motor (M1) does not turn ON when the start button is turned ON. Or the conveyance motor (M1) does not shift the speed for each processing.

Measures to take when alert occurs

The main body and the FS stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- FNS control board (FNSCB)
- Conveyance motor (M1)
- Paper exit sensor (PS37)
- FNS entrance sensor (PS4)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the conveyance section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between FNSDB and the motor, and repair it if any abnormality.
3. Check the connector connection and the wiring between FNSDB and FNSCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: FS-521: 1-B)
5. Replace M1.
6. Replace FNSDB.
7. Replace FNSCB.

Faulty part isolation DIPSW

DIPSW6-5

Control while detached

FS unusable
(FS not connected)

2.7.29 C-1144 (FS-521)**Code**

C-1144 (FS-521)

Classification

FS: FS-521 abnormality

Cause

The paper exit alignment plate home sensor /Fr (PS18) does not turn ON within a specified period of time after the paper exit alignment motor /Fr (M15) starts the home position search operation. Or, even after a specified period of time after M15 starts the operation, it does not stop.

Measures to take when alert occurs

The main body and the FS stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- FNS control board (FNSCB)
- FNS drive board (FNSDB)
- Paper exit alignment motor /Fr (M15)
- Paper exit alignment plate home sensor /Fr (PS18)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the front side of the paper exit alignment section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between FNSDB and motor/sensor, and repair it if any abnormality.
3. Check the connector connection and the wiring between FNSDB and FNSCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: FS-521: 8-G)
5. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: FS-521: 7-G)
6. Replace PS18.
7. Replace M15.
8. Replace FNSDB.
9. Replace FNSCB.

Faulty part isolation DIPSW

DIPSW6-4

Control while detached

FS main tray and stapling are not available

2.7.30 C-1145 (FS-521)**Code**

C-1145 (FS-521)

Classification

FS: FS-521 abnormality

Cause

The paper exit alignment plate home sensor /Rr (PS19) does not turn ON within a specified period of time after the paper exit alignment motor /Rr (M14) starts the home position search operation. Or, even after a specified period of time after M14 starts the operation, it does not stop.

Measures to take when alert occurs

The main body and the FS stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- FNS control board (FNSCB)
- FNS drive board (FNSDB)
- Paper exit alignment motor /Rr (M14)
- Paper exit alignment plate home sensor /Rr (PS19)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the rear side of the paper exit alignment section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between FNSDB and motor/sensor, and repair it if any abnormality.
3. Check the connector connection and the wiring between FNSDB and FNSCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: FS-521: 7-G)
5. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: FS-521: 7-G)
6. Replace PS19.
7. Replace M14.
8. Replace FNSDB.
9. Replace FNSCB.

Faulty part isolation DIPSW

DIPSW6-4

Control while detached

FS main tray and stapling are not available

2.7.31 C-1146 (FS-521)**Code**

C-1146 (FS-521)

Classification

FS: FS-521 abnormality

Cause

The bypass roller release home sensor (PS13) does not turn ON within a specified period of time after the bypass roller release motor (M12) starts the home position search operation. Or, even after a specified period of time after M12 starts the operation, it does not stop.

Measures to take when alert occurs

The main body and the FS stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- FNS control board (FNSCB)
- FNS drive board (FNSDB)
- Bypass roller release motor (M12)
- Bypass roller release home sensor (PS13)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the bypass roller section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between FNSDB and motor/sensor, and repair it if any abnormality.
3. Check the connector connection and the wiring between FNSDB and FNSCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram:FS-521:5-C)
5. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram:FS-521:4-B)
6. Replace PS13.
7. Replace M12.
8. Replace FNSDB.
9. Replace FNSCB.

Faulty part isolation DIPSW

DIPSW6-4

Control while detached

FS main tray and stapling are not available

2.7.32 C-1147 (FS-521)**Code**

C-1147 (FS-521)

Classification

FS: FS-521 abnormality

Cause

The paper exit alignment plate retraction home sensor (PS24) does not turn ON within a specified period of time after the paper exit alignment plate retraction home motor (M18) starts the home position search operation. Or, even after a specified period of time after M18 starts the operation, it does not stop.

Measures to take when alert occurs

The main body and the FS stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- FNS control board (FNSCB)
- FNS drive board (FNSDB)
- Paper exit alignment plate retraction motor (M18)

- Paper exit alignment plate retraction home sensor (PS24)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the paper exit alignment retraction section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between FNSDB and motor/sensor, and repair it if any abnormality.
3. Check the connector connection and the wiring between FNSDB and FNSCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: FS-521: 7-M)
5. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: FS-521: 4-G)
6. Replace PS24.
7. Replace M18.
8. Replace FNSDB.
9. Replace FNSCB.

Faulty part isolation DIPSW

DIPSW6-4

Control while detached

FS main tray and stapling are not available

2.7.33 C-1148 (FS-521)**Code**

C-1148 (FS-521)

Classification

FS: FS-521 abnormality

Cause

The stacker entrance roller release home sensor (PS23) does not turn ON within a specified period of time after the stacker entrance roller release motor (M16) starts the home position search operation. Or, even after a specified period of time after M16 starts the operation, it does not stop.

Measures to take when alert occurs

The main body and the FS stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- FNS control board (FNSCB)
- FNS drive board (FNSDB)
- Stacker entrance roller release motor (M16)
- Stacker entrance roller release home sensor (PS23)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the stacker entrance roller release section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between FNSDB and motor/sensor, and repair it if any abnormality.
3. Check the connector connection and the wiring between FNSDB and FNSCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: FS-521: 6-G)
5. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: FS-521: 6-G)
6. Replace PS23.
7. Replace M16.
8. Replace FNSDB.
9. Replace FNSCB.

Faulty part isolation DIPSW

DIPSW6-4

Control while detached

FS main tray and stapling are not available

2.8 Solution 5 (C-1201_1216)**2.8.1 C-1201****Code**

C-1201

Classification

LS (1st tandem): LS abnormality

Cause

The stacker tray encoder sensor (PS2) does not turn ON within a specified period of time after the stacker tray up down motor (M1) turns ON. Or, the initial operation or the stacker tray down operation is not completed within a specified period of time.

Measures to take when alert occurs

The main body and the LS stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Stacker tray up down motor (M1)
- LS control board (LSCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the stacker tray up down section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between LSCB and motor/sensor, and repair it if any abnormality.
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram:LS-505:5-A)
4. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram:LS-505:5-A)
5. Replace PS2.
6. Replace M1.
7. Replace LSCB.

Faulty part isolation DIPSW

DIPSW6-6

Control while detached

LS (1st tandem) unusable

2.8.2 C-1202**Code**

C-1202

Classification

LS (1st tandem): LS abnormality

Cause

The shift unit home sensor (PS11) does not turn ON within a specified period of time after the shift unit motor (M5) turns ON. Or, PS11 does not turn ON within a specified period of time.

Measures to take when alert occurs

The main body and the LS stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Shift unit motor (M5)
- LS control board (LSCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the shift unit section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between LSCB and motor/sensor, and repair it if any abnormality.
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: LS-505: 6-A)
4. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: LS-505: 5-H)
5. Replace PS11.
6. Replace M5.
7. Replace LSCB.

Faulty part isolation DIPSW

DIPSW6-6

Control while detached

LS (1st tandem) unusable

2.8.3 C-1203**Code**

C-1203

Classification

LS (1st tandem): LS abnormality

Cause

The alignment plate home sensor (PS12) does not turn ON within a specified period of time after the alignment motor (M7) turns ON. Or, PS12 does not turn ON within a specified period of time.

Measures to take when alert occurs

The main body and the LS stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Alignment motor (M7)
- LS control board (LSCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the alignment section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between LSCB and motor/sensor, and repair it if any abnormality.
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: LS-505: 7-A)
4. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: LS-505: 5-H)
5. Replace PS12.
6. Replace M7.
7. Replace LSCB.

Faulty part isolation DIPSW

DIPSW6-6

Control while detached

LS (1st tandem) unusable

2.8.4 C-1204**Code**

C-1204

Classification

LS (1st tandem): LS abnormality

Cause

The grip conveyance home sensor (PS5) does not turn ON within a specified period of time after the grip conveyance motor (M4) turns ON.

Measures to take when alert occurs

The main body and the LS stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Grip conveyance motor (M4)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the grip conveyance section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between LSCB and motor/sensor, and repair it if any abnormality.
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: LS-505: 6-A)
4. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: LS-505: 2-H)
5. Replace PS5.
6. Replace M4.
7. Replace LSCB.

Faulty part isolation DIPSW

DIPSW6-6

Control while detached

LS (1st tandem) unusable

2.8.5 C-1205**Code**

C-1205

Classification

LS (1st tandem): LS abnormality

Cause

The stacker tray upper limit switch (MS2) is ON when the stacker tray up down motor (M1) is in the up operation.

Measures to take when alert occurs

The main body and the LS stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Stacker tray up down motor (M1)
- Stacker tray upper limit switch (MS2)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the stacker tray up down section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between LSCB and motor/switch, and repair it if any abnormality.
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: LS-505:5-A)
4. Check the operation of the switch, and repair/replace it if any abnormality. (Wiring diagram: LS-505: 7-A)
5. Replace MS2.
6. Replace M1.
7. Replace LSCB.

Faulty part isolation DIPSW

DIPSW6-6

Control while detached

LS (1st tandem) unusable

2.8.6 C-1206**Code**

C-1206

Classification

LS (1st tandem): LS abnormality

Cause

The stacker tray lower limit switch (MS3) is ON when the stacker tray up down motor (M1) is in the down operation.

Measures to take when alert occurs

The main body and the LS stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Stacker tray up down motor (M1)
- Stacker tray lower limit switch (MS3)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the stacker tray up down section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between LSCB and motor/switch, and repair it if any abnormality.
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram:LS-505:5-A)
4. Check the operation of the switch, and repair/replace it if any abnormality. (Wiring diagram: LS-505: 7-A)
5. Replace MS3.
6. Replace M1.
7. Replace LSCB.

Faulty part isolation DIPSW

DIPSW6-6

Control while detached

LS (1st tandem) unusable

2.8.7 C-1211**Code**

C-1211

Classification

LS (2nd tandem): LS abnormality

Cause

The stacker tray encoder sensor (PS2) does not turn ON within a specified period of time after the stacker tray up down motor (M1) turns ON. Or, the initial operation or the stacker tray down operation is not completed within a specified period of time.

Measures to take when alert occurs

The main body and the LS stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Stacker tray up down motor (M1)
- LS control board (LSCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the stacker tray up down section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between LSCB and motor/sensor, and repair it if any abnormality.
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram:LS-505:5-A)
4. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram:LS-505:5-A)
5. Replace PS2.
6. Replace M1.
7. Replace LSCB.

Faulty part isolation DIPSW

DIPSW6-6

Control while detached

LS (1st tandem) unusable

2.8.8 C-1212**Code**

C-1212

Classification

LS (2nd tandem): LS abnormality

Cause

The shift unit home sensor (PS11) does not turn ON within a specified period of time after the shift unit motor (M5) turns ON. Or, PS11 does not turn ON within a specified period of time.

Measures to take when alert occurs

The main body and the LS stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Shift unit motor (M5)
- LS control board (LSCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the shift unit section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between LSCB and motor/sensor, and repair it if any abnormality.
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: LS-505: 6-A)
4. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: LS-505: 5-H)
5. Replace PS11.
6. Replace M5.
7. Replace LSCB.

Faulty part isolation DIPSW

DIPSW6-6

Control while detached

LS (1st tandem) unusable

2.8.9 C-1213**Code**

C-1213

Classification

LS (2nd tandem): LS abnormality

Cause

The alignment plate home sensor (PS12) does not turn ON within a specified period of time after the alignment motor (M7) turns ON. Or, PS12 does not turn ON within a specified period of time.

Measures to take when alert occurs

The main body and the LS stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Alignment motor (M7)
- LS control board (LSCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the alignment section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between LSCB and motor/sensor, and repair it if any abnormality.
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: LS-505: 7-A)
4. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: LS-505: 5-H)
5. Replace PS12.
6. Replace M7.
7. Replace LSCB.

Faulty part isolation DIPSW

DIPSW6-6

Control while detached

LS (1st tandem) unusable

2.8.10 C-1214**Code**

C-1214

Classification

LS (2nd tandem): LS abnormality

Cause

The grip conveyance home sensor (PS5) does not turn ON within a specified period of time after the grip conveyance motor (M4) turns ON.

Measures to take when alert occurs

The main body and the LS stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Grip conveyance motor (M4)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the grip conveyance section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between LSCB and motor/sensor, and repair it if any abnormality.
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: LS-505: 6-A)
4. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: LS-505: 2-H)
5. Replace PS5.
6. Replace M4.
7. Replace LSCB.

Faulty part isolation DIPSW

DIPSW6-6

Control while detached

LS (1st tandem) unusable

2.8.11 C-1215**Code**

C-1215

Classification

LS (2nd tandem): LS abnormality

Cause

The stacker tray upper limit switch (MS2) is ON when the stacker tray up down motor (M1) is in the up operation.

Measures to take when alert occurs

The main body and the LS stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Stacker tray up down motor (M1)
- Stacker tray upper limit switch (MS2)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the stacker tray up down section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between LSCB and motor/switch, and repair it if any abnormality.
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram:LS-505:5-A)
4. Check the operation of the switch, and repair/replace it if any abnormality. (Wiring diagram: LS-505: 7-A)
5. Replace MS2.
6. Replace M1.
7. Replace LSCB.

Faulty part isolation DIPSW

DIPSW6-6

Control while detached

LS (1st tandem) unusable

2.8.12 C-1216**Code**

C-1216

Classification

LS (2nd tandem): LS abnormality

Cause

The stacker tray lower limit switch (MS3) is ON when the stacker tray up down motor (M1) is in the down operation.

Measures to take when alert occurs

The main body and the LS stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Stacker tray up down motor (M1)
- Stacker tray lower limit switch (MS3)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the stacker tray up down section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between LSCB and motor/switch, and repair it if any abnormality.
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram:LS-505:5-A)
4. Check the operation of the switch, and repair/replace it if any abnormality. (Wiring diagram: LS-505: 7-A)
5. Replace MS3.
6. Replace M1.
7. Replace LSCB.

Faulty part isolation DIPSW

DIPSW6-6

Control while detached

LS (1st tandem) unusable

2.9 Solution 6 (C-1221_1235)**2.9.1 C-1221****Code**

C-1221

Classification

FD: FD abnormality

Cause

The 1st folding cam home sensor (PS55) does not turn ON within a specified period of time after the 1st folding release motor (M14) turns ON.

Measures to take when alert occurs

The main body and the FD stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- 1st folding release motor (M14)
- Folding drive board (FDB)
- 1st folding cam home sensor (PS55)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the 1st folding section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between FDB and motor/sensor, and repair it if any abnormality.
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: FD-503: 1-B)
4. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: FD-503: 2-B)
5. Replace PS55.
6. Replace M14.
7. Replace FDB.

Faulty part isolation DIPSW

DIPSW6-0

Control while detached

The use of the folding function and the punch section is unavailable

2.9.2 C-1222**Code**

C-1222

Classification

FD: FD abnormality

Cause

The 2nd folding cam home sensor (PS56) does not turn ON within a specified period of time after the 2nd folding release motor (M15) turns ON.

Measures to take when alert occurs

The main body and the FD stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- 2nd folding release motor (M15)
- Folding drive board (FDB)
- 2nd folding cam home sensor (PS56)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the 2nd folding section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between FDB and motor/sensor, and repair it if any abnormality.
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: FD-503: 1-B)
4. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: FD-503: 2-B)
5. Replace PS56.
6. Replace M15.
7. Replace FDB.

Faulty part isolation DIPSW

DIPSW6-0

Control while detached

The use of the folding function and the punch section is unavailable

2.9.3 C-1223**Code**

C-1223

Classification

FD: FD abnormality

Cause

The 3rd folding cam home sensor (PS57) does not turn ON within a specified period of time after the 3rd folding release motor (M16) turns ON.

Measures to take when alert occurs

The main body and the FD stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- 3rd folding release motor (M16)
- Folding drive board (FDB)
- 3rd folding cam home sensor (PS57)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the 3rd folding section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between FDB and motor/sensor, and repair it if any abnormality.
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: FD-503: 1-B)
4. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: FD-503: 2-B)
5. Replace PS57.
6. Replace M16.
7. Replace FDB.

Faulty part isolation DIPSW

DIPSW6-0

Control while detached

The use of the folding function and the punch section is unavailable

2.9.4 C-1224**Code**

C-1224

Classification

FD: FD abnormality

Cause

The 2 holes punch home sensor (PS8) does not turn OFF within a specified period of time after the 2-holes punch home position return operation starts. Or, after the punch motor (M10) turns ON, the 2 holes punch home sensor (PS8) does not turn OFF.

Measures to take when alert occurs

The main body and the FD stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Punch motor (M10)
- Punch drive board (PDB)
- 2 holes punch home sensor (PS8)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the 2-hole punch section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between FDB and motor/sensor, and repair it if any abnormality.
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram:FD-503:5-F)
4. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: FD-503: 5-E)
5. Replace PS8.
6. Replace M10.
7. Replace PDB.

Faulty part isolation DIPSW

DIPSW6-0

Control while detached

The use of the folding function and the punch section is unavailable

2.9.5 C-1225

Code

C-1225

Classification

FD: FD abnormality

Cause

The 3 holes/4 holes punch home sensor (PS9) does not turn OFF within a specified period of time after the 3 holes/4 holes punch home position return operation starts. Or, after the punch motor (M10) turns ON, the 3 holes/4 holes punch home sensor (PS9) does not turn OFF.

Measures to take when alert occurs

The main body and the FD stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Punch motor (M10)
- Punch drive board (PDB)
- 3 holes/4 holes home sensor (PS9)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the 3-hole/4-hole punch section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between FDB and motor/sensor, and repair it if any abnormality.
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram:FD-503:5-F)
4. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram:FD-503:5-E)
5. Replace PS9.
6. Replace M10.
7. Replace PDB.

Faulty part isolation DIPSW

DIPSW6-0

Control while detached

The use of the folding function and the punch section is unavailable

2.9.6 C-1226

Code

C-1226

Classification

FD: FD abnormality

Cause

The alignment plate home sensor (PS10) does not turn ON within a specified period of time after the alignment plate home position return operation starts. Or, after the alignment motor (M12) turns ON, the alignment plate home sensor (PS10) does not turn OFF.

Measures to take when alert occurs

The main body and the FD stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Alignment motor (M12)
- Punch drive board (PDB)
- Alignment plate home sensor (PS10)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the punch alignment section, and clean/repair it if any abnormality.

2. Check the connector connection and the wiring between FDB and motor/sensor, and repair it if any abnormality.
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram:FD-503:3-D)
4. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram:FD-503:5-D)
5. Replace PS10.
6. Replace M12.
7. Replace PDB.

Faulty part isolation DIPSW

DIPSW6-0

Control while detached

The use of the folding function and the punch section is unavailable

2.9.7 C-1227**Code**

C-1227

Classification

FD: FD abnormality

Cause

The punch registration home sensor (PS11) does not turn ON within a specified period of time after the punch registration claw home position return operation starts. Or, after the punch registration motor (M13) turns ON, the punch registration home sensor (PS11) does not turn OFF.

Measures to take when alert occurs

The main body and the FD stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Punch registration motor (M13)
- Punch drive board (PDB)
- Punch registration home sensor (PS11)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the punch alignment section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between FDB and motor/sensor, and repair it if any abnormality.
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram:FD-503:5-F)
4. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: FD-503: 5-E)
5. Replace PS11.
6. Replace M13.
7. Replace PDB.

Faulty part isolation DIPSW

DIPSW6-0

Control while detached

The use of the folding function and the punch section is unavailable

2.9.8 C-1228**Code**

C-1228

Classification

FD: FD abnormality

Cause

The main tray upper limit sensor (PS20) does not turn ON within a specified period of time after the main tray home position search starts. Or, after the tray up down motor (M11) turns ON, the main tray upper limit sensor (PS20) does not turn OFF.

Measures to take when alert occurs

The main body and the FD stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Tray up down motor (M11)
- Main tray upper limit sensor (PS20)
- Punch drive board (PDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the punch alignment section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between FDB and motor/sensor, and repair it if any abnormality.
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: FD-503: 3-D)
4. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: FD-503: 6-D)
5. Replace PS20.
6. Replace M11.
7. Replace PDB.

Faulty part isolation DIPSW

DIPSW6-1

Control while detached

Main tray unusable

2.9.9 C-1229**Code**

C-1229

Classification

FD: FD abnormality

Cause

The main tray lower limit sensor (PS22) does not turn ON within a specified period of time after the tray up down motor (M11) is in the down operation.

Measures to take when alert occurs

The main body and the FD stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Tray up down motor (M11)
- Punch drive board (PDB)
- Main tray lower limit sensor (PS22)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the punch alignment section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between FDB and motor/sensor, and repair it if any abnormality.
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: FD-503: 3-D)
4. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: FD-503: 3-D)
5. Replace PS22.
6. Replace M11.
7. Replace PDB.

Faulty part isolation DIPSW

DIPSW6-1

Control while detached

Main tray unusable

2.9.10 C-1230**Code**

C-1230

Classification

FD: FD abnormality

Cause

After the FD paper lift motor /Up (M8) is in the down operation, the PI lift plate home sensor /Up (PS34) does not turn ON within a specified period of time. Or, after the paper lift motor /Up (M8) is in the up operation, the PI tray upper limit sensor /Up (PS32) does not turn ON.

Measures to take when alert occurs

The main body and the FD stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Paper lift motor /Up (M8)
- PI drive board (PIDB)
- PI lift plate home sensor /Up (PS34)
- PI upper limit sensor /Up (PS32)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the PI upper tray section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PIDB and motor/sensor, and repair it if any abnormality.
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram:FD-503:9-A)
4. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram:FD-503:8-A, 9-A)
5. Replace PS32 or PS34.
6. Replace M8.
7. Replace PIDB.

Faulty part isolation DIPSW

DIPSW6-2

Control while detached

The use of the PI section unavailable

2.9.11 C-1231**Code**

C-1231

Classification

FD: FD abnormality

Cause

After the FD paper lift motor /Lw (M9) is in the down operation, the PI lift plate home sensor /Lw (PS40) does not turn ON within a specified period of time. Or, after the paper lift motor /Lw (M9) is in the up operation, the PI upper limit sensor /Lw (PS38) does not turn ON.

Measures to take when alert occurs

The main body and the FD stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Paper lift motor /Lw (M9)
- PI drive board (PIDB)
- PI lift plate home sensor /Lw (PS40)
- PI upper limit sensor /Lw (PS38)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the PI lower tray section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PIDB and motor/sensor, and repair it if any abnormality.
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: FD-503: 9-A)
4. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: FD-503: 7-A, 8-A)
5. Replace PS38 or PS40.
6. Replace M9.
7. Replace PIDB.

Faulty part isolation DIPSW

DIPSW6-2

Control while detached

The use of the PI section unavailable

2.9.12 C-1232

Code

C-1232

Classification

FD: FD abnormality

Cause

An error detection signal is detected continuously for a specified period of time while the entrance conveyance motor (M1) is ON.

Measures to take when alert occurs

The main body and the FD stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Paper lift motor /Lw (M9)
- PI drive board (PIDB)
- PI lift plate home sensor /Lw (PS40)
- PI upper limit sensor /Lw (PS38)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the entrance conveyance section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PDB and the motor, and repair it if any abnormality.
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: FD-503: 3-D)
4. Replace M1.
5. Replace PDB.

Faulty part isolation DIPSW

Control while detached

2.9.13 C-1233

Code

C-1233

Classification

FD: FD abnormality

Cause

An error detection signal of M3 is detected continuously for a specified period of time while the intermediate conveyance motor (M3) is ON.

Measures to take when alert occurs

The main body and the FD stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Intermediate conveyance motor (M3)
- Punch drive board (PDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the intermediate conveyance section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PDB and the motor, and repair it if any abnormality.
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: FD-503: 4-D)
4. Replace M3.
5. Replace PDB.

Faulty part isolation DIPSW

Control while detached

2.9.14 C-1234**Code**

C-1234

Classification

FD: FD abnormality

Cause

An error detection signal of M7 is detected continuously for a specified period of time while the PI conveyance motor (M7) is ON.

Measures to take when alert occurs

The main body and the FD stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- PI conveyance motor (M7)
- PI drive board (PIDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the PI conveyance section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PIDB and the motor, and repair it if any abnormality.
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: FD-503: 9-A)
4. Replace M7.
5. Replace PIDB.

Faulty part isolation DIPSW

DIPSW6-2

Control while detached

The use of the PI section unavailable

2.9.15 C-1235**Code**

C-1235

Classification

FD: FD abnormality

Cause

An error detection signal of M17 is detected continuously for a specified period of time while the main tray exit motor (M17) is ON.

Measures to take when alert occurs

The main body and the FD stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Main tray exit motor (M17)
- Punch drive board (PDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the main tray exit section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PDB and the motor, and repair it if any abnormality.
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: FD-503: 4-D)
4. Replace M17.
5. Replace PDB.

Faulty part isolation DIPSW**Control while detached****2.10 Solution 7 (C-1241_1275)****2.10.1 C-1241****Code**

C-1241

Classification

SD: SD-506 abnormality

Cause

The scraps press home sensor (PS48) does not turn ON within a specified period of time after the bundle exit motor (M5) starts the home position search operation.

Measures to take when alert occurs

The main body and the SD stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Bundle exit motor (M5)
- Scraps press home sensor (PS48)
- SD control board (SDCB)
- SD drive board (SDDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the bundle exit section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between SDDB and motor/sensor, and repair it if any abnormality.
3. Check the connector connection and the wiring between SDDB and SDCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: SD-506: 22-D)
5. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: SD-506: 24-D)
6. Replace PS48.
7. Replace M5.
8. Replace SDDB.
9. Replace SDCB.

Faulty part isolation DIPSW

DIPSW7-0

DIPSW7-1

DIPSW7-3

Control while detached

The use of the saddle stitching, multi-center folding and trimmer unavailable

2.10.2 C-1242**Code**

C-1242

Classification

SD: SD-506 abnormality

Cause

The folding main scan alignment home sensor /Fr1 (PS18) does not turn ON within a specified period of time after the folding main scan alignment motor /Fr (M7) starts the home position search operation. Or, even after a specified period of time after M7 starts the operation, it does not stop.

Measures to take when alert occurs

The main body and the SD stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Folding main scan alignment motor /Fr (M7)
- Folding main scan alignment home sensor /Fr1 (PS18)
- SD control board (SDCB)
- SD drive board (SDDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the folding main scan alignment section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between SDDB and motor/sensor, and repair it if any abnormality.
3. Check the connector connection and the wiring between SDDB and SDCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: SD-506: 8-D)
5. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: SD-506: 13-D)
6. Replace PS18.
7. Replace M7.
8. Replace SDDB.
9. Replace SDCB.

Faulty part isolation DIPSW

DIPSW7-0

DIPSW7-1

DIPSW7-2

DIPSW7-3

Control while detached

The use of the saddle stitching, multi-center folding, multi tri-folding and trimmer unavailable

2.10.3 C-1243**Code**

C-1243

Classification

SD: SD-506 abnormality

Cause

The folding exit home sensor (PS24) does not turn ON within a specified period of time after the folding sub scan alignment exit motor (M8) starts the home position search operation. Or, even after a specified period of time after M8 starts to decelerate, it does not stop.

Measures to take when alert occurs

The main body and the SD stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Folding sub scan alignment exit motor (M8)
- Folding exit home sensor (PS24)
- SD control board (SDCB)
- SD drive board (SDDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the folding sub scan alignment section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between SDDB and motor/sensor, and repair it if any abnormality.
3. Check the connector connection and the wiring between SDDB and SDCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: SD-506: 10-D)
5. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: SD-506: 14-D)
6. Replace PS24.
7. Replace M8.
8. Replace SDDB.
9. Replace SDCB.

Faulty part isolation DIPSW

DIPSW7-0
DIPSW7-1
DIPSW7-2
DIPSW7-3

Control while detached

The use of the saddle stitching, multi-center folding, multi-tri-folding and trimmer unavailable

2.10.4 C-1244**Code**

C-1244

Classification

SD: SD-506 abnormality

Cause

The saddle stitching alignment home sensor /Rt (PS28) does not turn ON within a specified period of time after the saddle stitching alignment motor /Rt (M9) starts the home position search operation. Or, even after a specified period of time after M9 starts the operation, it does not stop.

Measures to take when alert occurs

The main body and the SD stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Saddle stitching alignment motor /Rt (M9)
- Saddle stitching alignment home sensor /Rt (PS28)
- SD control board (SDCB)
- SD drive board (SDDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the saddle stitching alignment section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between SDDB and motor/sensor, and repair it if any abnormality.
3. Check the connector connection and the wiring between SDDB and SDCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: SD-506: 19-D)
5. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: SD-506: 17-D)
6. Replace PS28.
7. Replace M9.
8. Replace SDDB.
9. Replace SDCB.

Faulty part isolation DIPSW

DIPSW7-0
DIPSW7-1
DIPSW7-3

Control while detached

The use of the saddle stitching, multi-center folding and trimmer unavailable

2.10.5 C-1245**Code**

C-1245

Classification

SD: SD-506 abnormality

Cause

The bundle arm home sensor (PS32) does not turn ON within a specified period of time after the bundle arm motor (M10) starts the home position search operation. Or, even after a specified period of time after M10 starts the operation, it does not stop.

Measures to take when alert occurs

The main body and the SD stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Bundle arm motor (M10)
- Bundle arm home sensor (PS32)
- SD control board (SDCB)
- SD drive board (SDDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the bundle arm section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between SDDB and motor/sensor, and repair it if any abnormality.
3. Check the connector connection and the wiring between SDDB and SDCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: SD-506: 19-D)
5. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: SD-506: 17-D)
6. Replace PS32.
7. Replace M10.
8. Replace SDDB.
9. Replace SDCB.

Faulty part isolation DIPSW

DIPSW7-0
DIPSW7-1
DIPSW7-3

Control while detached

The use of the saddle stitching, multi-center folding and trimmer unavailable

2.10.6 C-1246**Code**

C-1246

Classification

SD: SD-506 abnormality

Cause

The bundle clip upper limit sensor (PS33) does not turn ON within a specified period of time after the bundle clip motor (M11) starts the home position search operation. Or, even after a specified period of time after M11 starts the operation, it does not stop.

Measures to take when alert occurs

The main body and the SD stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Bundle clip motor (M11)
- Bundle clip upper limit sensor (PS33)
- Bundle clip lower limit sensor (PS30)
- SD control board (SDCB)
- SD drive board (SDDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the bundle clip section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between SDDB and motor/sensor, and repair it if any abnormality.
3. Check the connector connection and the wiring between SDDB and SDCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram:SD-506:16-D)
5. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram:SD-506:19-D)
6. Replace PS33.
7. Replace M11.
8. Replace SDDB.
9. Replace SDCB.

Faulty part isolation DIPSW

DIPSW7-0
DIPSW7-1
DIPSW7-3

Control while detached

The use of the saddle stitching, multi-center folding and trimmer unavailable

2.10.7 C-1247**Code**

C-1247

Classification

SD: SD-506 abnormality

Cause

The bundle registration home sensor (PS34) does not turn ON within a specified period of time after the bundle registration motor (M12) starts the home position search operation. Or, even after a specified period of time after M12 starts the operation, it does not stop.

Measures to take when alert occurs

The main body and the SD stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Bundle registration motor (M12)
- Bundle registration home sensor (PS34)
- SD control board (SDCB)
- SD drive board (SDDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the bundle registration section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between SDDB and motor/sensor, and repair it if any abnormality.

3. Check the connector connection and the wiring between SDDB and SDCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: SD-506: 27-D)
5. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: SD-506: 21-D)
6. Replace PS34.
7. Replace M12.
8. Replace SDDB.
9. Replace SDCB.

Faulty part isolation DIPSW

DIPSW7-0

DIPSW7-1

DIPSW7-3

Control while detached

The use of the saddle stitching, multi-center folding and trimmer unavailable

2.10.8 C-1248**Code**

C-1248

Classification

SD: SD-506 abnormality

Cause

The overlap home sensor (PS17) does not turn ON within a specified period of time after the overlap motor (M13) starts the home position search operation. Or, even after a specified period of time after M13 starts the operation, it does not stop.

Measures to take when alert occurs

The main body and the SD stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Overlap motor (M13)
- Overlap home sensor (PS17)
- SD control board (SDCB)
- SD drive board (SDDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the overlap section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between SDDB and motor/sensor, and repair it if any abnormality.
3. Check the connector connection and the wiring between SDDB and SDCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: SD-506: 2-D)
5. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: SD-506: 2-D)
6. Replace PS17.
7. Replace M13.
8. Replace SDDB.
9. Replace SDCB.

Faulty part isolation DIPSW

DIPSW7-0

DIPSW7-1

DIPSW7-2

DIPSW7-3

Control while detached

The use of the saddle stitching, multi-center folding, multi-tri-folding and trimmer unavailable

2.10.9 C-1249**Code**

C-1249

Classification

SD: SD-506 abnormality

Cause

The folding main scan alignment home sensor /Rr (PS19) does not turn ON within a specified period of time after the folding main scan alignment motor /Rr (M14) starts the home position search operation. Or, even after a specified period of time after M14 starts the operation, it does not stop.

Measures to take when alert occurs

The main body and the SD stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Folding main scan alignment motor /Rr (M14)
- Folding main scan alignment home sensor /Rr (PS19)
- SD control board (SDCB)
- SD drive board (SDDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the folding main scan alignment section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between SDDB and motor/sensor, and repair it if any abnormality.
3. Check the connector connection and the wiring between SDDB and SDCB, and repair it if any abnormality.

4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: SD-506: 11-D)
5. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: SD-506: 12-D)
6. Replace PS19.
7. Replace M14.
8. Replace SDDDB.
9. Replace SDCB.

Faulty part isolation DIPSW

DIPSW7-0

DIPSW7-1

DIPSW7-2

DIPSW7-3

Control while detached

The use of the saddle stitching, multi-center folding, multi-tri-folding and trimmer unavailable

2.10.10 C-1250**Code**

C-1250

Classification

SD: SD-506 abnormality

Cause

The stapler movement home sensor (PS25) does not turn ON within a specified period of time after the home position search operation of the stapler movement motor (M15) starts. Or, even after a specified period of time after M15 starts the operation, it does not stop.

Measures to take when alert occurs

The main body and the SD stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Stapler movement motor (M15)
- Stapler movement home sensor (PS25)
- SD control board (SDCB)
- SD drive board (SDDDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the stapler movement section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between SDDDB and motor/sensor, and repair it if any abnormality.
3. Check the connector connection and the wiring between SDDDB and SDCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: SD-506: 15-D)
5. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: SD-506: 18-D)
6. Replace PS25.
7. Replace M15.
8. Replace SDDDB.
9. Replace SDCB.

Faulty part isolation DIPSW

DIPSW7-0

DIPSW7-1

DIPSW7-3

Control while detached

The use of the saddle stitching, multi-center folding and trimmer unavailable

2.10.11 C-1251**Code**

C-1251

Classification

SD: SD-506 abnormality

Cause

The saddle stitching alignment home sensor /Lt (PS29) does not turn ON within a specified period of time after the saddle stitching alignment motor /Lt (M16) starts the home position search operation. Or, even after a specified period of time after M16 starts the operation, it does not stop.

Measures to take when alert occurs

The main body and the SD stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Saddle stitching alignment motor /Lt (M16)
- Saddle stitching alignment home sensor /Lt (PS29)
- SD control board (SDCB)
- SD drive board (SDDDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the saddle stitching alignment section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between SDDDB and motor/sensor, and repair it if any abnormality.
3. Check the connector connection and the wiring between SDDDB and SDCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: SD-506: 15-D)

5. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: SD-506: 17-D)
6. Replace PS29.
7. Replace M16.
8. Replace SDDDB.
9. Replace SDCB.

Faulty part isolation DIPSW

DIPSW7-0
DIPSW7-1
DIPSW7-3

Control while detached

The use of the saddle stitching, multi-center folding and trimmer unavailable

2.10.12 C-1252**Code**

C-1252

Classification

SD: SD-506 abnormality

Cause

The bundle press movement home sensor (PS36) does not turn ON within a specified period of time after the bundle press movement motor (M17) starts the home position search operation. Or, even after a specified period of time after M17 starts the operation, it does not stop.

Measures to take when alert occurs

The main body and the SD stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Bundle press movement motor (M17)
- Bundle press movement home sensor (PS36)
- SD control board (SDCB)
- SD drive board (SDDDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the bundle press movement section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between SDDDB and motor/sensor, and repair it if any abnormality.
3. Check the connector connection and the wiring between SDDDB and SDCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram:SD-506:26-D)
5. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram:SD-506:22-D)
6. Replace PS36.
7. Replace M17.
8. Replace SDDDB.
9. Replace SDCB.

Faulty part isolation DIPSW

DIPSW7-0
DIPSW7-1
DIPSW7-3

Control while detached

The use of the saddle stitching, multi-center folding and trimmer unavailable

2.10.13 C-1253**Code**

C-1253

Classification

SD: SD-506 abnormality

Cause

The 1st folding blade home sensor (PS21) does not turn ON within a specified period of time after the 1st folding blade motor (M18) starts the home position search operation. Or 1st folding blade home sensor /1 (PS20) does not turned ON within a specified period of time after M18 starts the operation.

Measures to take when alert occurs

The main body and the SD stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- 1st folding blade motor (M18)
- 1st folding blade home sensor /1 (PS20), /2 (PS21)
- SD control board (SDCB)
- SD drive board (SDDDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the 1st folding section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between SDDDB and motor/sensor, and repair it if any abnormality.
3. Check the connector connection and the wiring between SDDDB and SDCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: SD-506: 11-D)
5. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: SD-506: 12-D)

6. Replace PS20.
7. Replace M18.
8. Replace SDDDB.
9. Replace SDCB.

Faulty part isolation DIPSW

DIPSW7-0
DIPSW7-1
DIPSW7-2
DIPSW7-3

Control while detached

The use of the saddle stitching, multi-center folding, multi-tri-folding and trimmer unavailable

2.10.14 C-1254**Code**

C-1254

Classification

SD: SD-506 abnormality

Cause

The 2nd folding blade home sensor /2 (PS23) does not turn ON within a specified period of time after the 2nd folding blade motor (M19) starts the home position search operation. Or the 2nd folding blade home sensor /1 (PS22) does not turned ON within a specified period of time after M19 starts the operation.

Measures to take when alert occurs

The main body and the SD stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- 2nd folding blade motor (M19)
- 2nd folding blade home sensor /1 (PS22), /2 (PS23)
- SD control board (SDCB)
- SD drive board (SDDDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the 2nd folding section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between SDDDB and motor/sensor, and repair it if any abnormality.
3. Check the connector connection and the wiring between SDDDB and SDCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram:SD-506:11-D)
5. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram:SD-506:12-D, 13-D)
6. Replace PS22.
7. Replace M19.
8. Replace SDDDB.
9. Replace SDCB.

Faulty part isolation DIPSW

DIPSW7-2

Control while detached

The use of the multi-tri-folding unavailable

2.10.15 C-1255**Code**

C-1255

Classification

SD: SD-506 abnormality

Cause

The clincher up down home sensor (PS26) does not turn ON even after a specified period of time after the clincher up down motor (M20) starts the home position search. Or, even after a specified period of time after M20 starts the operation, it does not stop.

Measures to take when alert occurs

The main body and the SD stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Clincher up down motor (M20)
- Clincher up down home sensor (PS26)
- SD control board (SDCB)
- SD drive board (SDDDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the clincher up down section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between SDDDB and motor/sensor, and repair it if any abnormality.
3. Check the connector connection and the wiring between SDDDB and SDCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: SD-506: 16-D)
5. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: SD-506: 18-D)
6. Replace PS26.
7. Replace M20.
8. Replace SDDDB.

9. Replace SDCB.

Faulty part isolation DIPSW

DIPSW7-0
DIPSW7-1
DIPSW7-3

Control while detached

The use of the saddle stitching, multi-center folding and trimmer unavailable

2.10.16 C-1256

Code

C-1256

Classification

SD: SD-506 abnormality

Cause

The saddle stitching press home sensor (PS27) does not turn ON within a specified period of time after the saddle stitching press motor (M21) starts the home position search operation. Or, even after a specified period of time after M21 starts the operation, it does not stop.

Measures to take when alert occurs

The main body and the SD stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Saddle stitching press motor (M21)
- Saddle stitching press home sensor (PS27)
- SD control board (SDCB)
- SD drive board (SDDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the saddle stitching press section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between SDDB and motor/sensor, and repair it if any abnormality.
3. Check the connector connection and the wiring between SDDB and SDCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: SD-506: 16-D)
5. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: SD-506: 16-D)
6. Replace PS27.
7. Replace M21.
8. Replace SDDB.
9. Replace SDCB.

Faulty part isolation DIPSW

DIPSW7-0
DIPSW7-1
DIPSW7-3

Control while detached

The use of the saddle stitching, multi-center folding and trimmer unavailable

2.10.17 C-1257

Code

C-1257

Classification

SD: SD-506 abnormality

Cause

The bundle arm rotation home sensor (PS31) does not turn ON within a specified period of time after the bundle arm rotation motor (M22) starts the home position search operation. Or, even after a specified period of time after M22 starts the operation, it does not stop.

Measures to take when alert occurs

The main body and the SD stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Bundle arm rotation motor (M22)
- Bundle arm rotation home sensor (PS31)
- SD control board (SDCB)
- SD drive board (SDDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the bundle arm rotation section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between SDDB and motor/sensor, and repair it if any abnormality.
3. Check the connector connection and the wiring between SDDB and SDCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: SD-506: 27-D)
5. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: SD-506: 24-D)
6. Replace PS31.
7. Replace M22.
8. Replace SDDB.
9. Replace SDCB.

Faulty part isolation DIPSW

DIPSW7-0

DIPSW7-1
DIPSW7-3

Control while detached

The use of the saddle stitching, multi-center folding and trimmer unavailable

2.10.18 C-1258**Code**

C-1258

Classification

SD: SD-506 abnormality

Cause

The bundle press home sensor (PS37) does not turn ON within a specified period of time after the bundle press motor (M23) starts the home position search operation. Or, even after a specified period of time after M23 starts the operation, it does not stop.

Measures to take when alert occurs

The main body and the SD stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Bundle press motor (M23)
- Bundle press home sensor (PS37)
- Bundle press lower limit sensor (PS47)
- SD control board (SDCB)
- SD drive board (SDDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the bundle press section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between SDDB and motor/sensor, and repair it if any abnormality.
3. Check the connector connection and the wiring between SDDB and SDCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: SD-506: 20-D)
5. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: SD-506: 23-D)
6. Replace PS37 or PS47.
7. Replace M23.
8. Replace SDDB.
9. Replace SDCB.

Faulty part isolation DIPSW

DIPSW7-0
DIPSW7-1
DIPSW7-3

Control while detached

The use of the saddle stitching, multi-center folding and trimmer unavailable

2.10.19 C-1259**Code**

C-1259

Classification

SD: SD-506 abnormality

Cause

The bundle press home sensor (PS35) does not turn ON within a specified period of time after the bundle press stage up down motor (M24) starts the home position search operation. Or PS35 or the bundle press stage up down upper limit sensor (PS45) does not turned ON after a specified period of time M24 starts the operation.

Measures to take when alert occurs

The main body and the SD stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Bundle press stage up down motor (M24)
- Bundle press stage up down home sensor (PS35)
- Bundle press stage up down limit sensor (PS45)
- SD control board (SDCB)
- SD drive board (SDDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the bundle press stage up down section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between SDDB and motor/sensor, and repair it if any abnormality.
3. Check the connector connection and the wiring between SDDB and SDCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: SD-506: 21-D)
5. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: SD-506: 24-D, 25-D)
6. Replace PS35 or PS45.
7. Replace M24.
8. Replace SDDB.
9. Replace SDCB.

Faulty part isolation DIPSW

DIPSW7-0

DIPSW7-1
DIPSW7-3

Control while detached

The use of the saddle stitching, multi-center folding and trimmer unavailable

2.10.20 C-1260**Code**

C-1260

Classification

SD: SD-506 abnormality

Cause

The guide shaft home sensor (PS46) does not turn ON even after a specified period of time after the guide shaft motor (M25) starts the home position search operation. Or, even after a specified period of time after M25 starts the operation, it does not stop.

Measures to take when alert occurs

The main body and the SD stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Guide shaft motor (M25)
- Guide shaft home sensor (PS46)
- SD control board (SDCB)
- SD drive board (SDDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the guide shaft, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between SDDB and motor/sensor, and repair it if any abnormality.
3. Check the connector connection and the wiring between SDDB and SDCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram:SD-506:11-D)
5. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram:SD-506:15-D)
6. Replace PS46.
7. Replace M25.
8. Replace SDDB.
9. Replace SDCB.

Faulty part isolation DIPSW

DIPSW7-0, DIPSW7-1, DIPSW7-3

Control while detached

The use of the saddle stitching, multi-center folding and trimmer unavailable

2.10.21 C-1261**Code**

C-1261

Classification

SD: SD-506 abnormality

Cause

The stapler home sensor /Rt (HS1) or the clincher start sensor /Rt (HS2) does not turn ON even after a specified period of time after the stapler motor /Rt (M29) starts the operation.

Measures to take when alert occurs

The main body and the SD stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Stapler assembly /Rt
- SD control board (SDCB)
- SD drive board (SDDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the stapler unit /Rt, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between SDDB and the stapler unit /Rt, and repair it if any abnormality.
3. Replacing the stapler assy /Rt
4. Replace SDDB.
5. Replace SDCB.

Faulty part isolation DIPSW

DIPSW7-0, DIPSW7-3

Control while detached

The use of the saddle stitching and trimmer unavailable

2.10.22 C-1262**Code**

C-1262

Classification

SD: SD-506 abnormality

Cause

The stapler home sensor /Lt (HS3) or the clincher start sensor /Lt (HS4) does not turn ON even after a specified period of time after the stapler motor /Lt (M30) starts the operation.

Measures to take when alert occurs

The main body and the SD stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Stapler assembly /Lt
- SD control board (SDCB)
- SD drive board (SDDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the stapler unit /Rt, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between SDDB and the stapler unit /Rt, and repair it if any abnormality.
3. Replacing the stapler assy /Rt
4. Replace SDDB.
5. Replace SDCB.

Faulty part isolation DIPSW

DIPSW7-0, DIPSW7-3

Control while detached

The use of the saddle stitching and trimmer unavailable

2.10.23 C-1263

Code

C-1263

Classification

SD: SD-506 abnormality

Cause

It does not stop even after a specified period of time after the trimmer blade motor (M31) starts the operation.

Measures to take when alert occurs

The main body and the SD stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Trimmer blade motor (M31)
- Trimmer blade home sensor (PS50)
- Trimmer blade upper limit sensor (PS51)
- SD control board (SDCB)
- SD drive board (SDDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the trimmer blade, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between SDDB and motor/sensor, and repair it if any abnormality.
3. Check the connector connection and the wiring between SDDB and SDCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram:SD-506:22-R)
5. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: SD-506: 23-R)
6. Replace PS50 or PS51.
7. Replace M31.
8. Replace SDDB.
9. Replace SDCB.

Faulty part isolation DIPSW

DIPSW7-3

Control while detached

The use of the trimmer unavailable

2.10.24 C-1264

Code

C-1264

Classification

SD: SD-506 abnormality

Cause

It does not stop even after a specified period of time after the trimmer press motor (M32) starts the operation.

Measures to take when alert occurs

The main body and the SD stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Trimmer press motor (M32)
- Trimmer press home sensor (PS53)
- Trimmer press upper limit sensor (PS52)
- SD control board (SDCB)
- SD drive board (SDDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the trimmer press section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between SDDB and motor/sensor, and repair it if any abnormality.
3. Check the connector connection and the wiring between SDDB and SDCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram:SD-506:22-R)
5. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram:SD-506:23-R)
6. Replace PS52 or PS53.
7. Replace M32.
8. Replace SDDB.
9. Replace SDCB.

Faulty part isolation DIPSW

DIPSW7-0, DIPSW7-1, DIPSW7-3

Control while detached

The use of the saddle stitching, multi-center folding and trimmer unavailable

2.10.25 C-1265**Code**

C-1265

Classification

SD: SD-506 abnormality

Cause

It does not stop even after a specified period of time after the bundle arm assist motor (M26) starts the operation.

Measures to take when alert occurs

The main body and the SD stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Bundle arm assist motor (M26)
- Bundle arm assist home sensor (PS38)
- Bundle arm assist upper limit sensor (PS39)
- SD control board (SDCB)
- SD drive board (SDDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the bundle arm assist section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between SDDB and motor/sensor, and repair it if any abnormality.
3. Check the connector connection and the wiring between SDDB and SDCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: SD-506: 16-D)
5. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: SD-506: 17-D)
6. Replace PS38 or PS39.
7. Replace M26.
8. Replace SDDB.
9. Replace SDCB.

Faulty part isolation DIPSW

DIPSW7-0, DIPSW7-1, DIPSW7-3

Control while detached

The use of the saddle stitching, multi-center folding and trimmer unavailable

2.10.26 C-1266**Code**

C-1266

Classification

SD: SD-506 abnormality

Cause

Rotation abnormality is detected for a specified period of time in succession while the entrance conveyance motor (M1) is driving.

Measures to take when alert occurs

The main body and the SD stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Entrance conveyance motor (M1)
- SD control board (SDCB)
- SD drive board (SDDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the entrance conveyance section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between SDDB and the motor, and repair it if any abnormality.
3. Check the connector connection and the wiring between SDDB and SDCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram:SD-506:2-D)
5. Replace M1.

- 6. Replace SDDB.
- 7. Replace SDCB.

Faulty part isolation DIPSW
Control while detached

2.10.27 C-1267

Code

C-1267

Classification

SD: SD-506 abnormality

Cause

Rotation abnormality is detected for a specified period of time in succession while the horizontal conveyance motor (M2) is driving.

Measures to take when alert occurs

The main body and the SD stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Horizontal conveyance motor (M2)
- SD control board (SDCB)
- SD drive board (SDDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the horizontal conveyance section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between SDDB and the motor, and repair it if any abnormality.
3. Check the connector connection and the wiring between SDDB and SDCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: SD-506: 7-D)
5. Replace M2.
6. Replace SDDB.
7. Replace SDCB.

Faulty part isolation DIPSW

DIPSW7-4

Control while detached

Sub tray, paper exit to subsequent stage and FS unavailable

2.10.28 C-1268

Code

C-1268

Classification

SD: SD-506 abnormality

Cause

Rotation abnormality is detected for a specified period of time in succession while the folding entrance motor (M3) is driving.

Measures to take when alert occurs

The main body and the SD stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Folding entrance motor (M3)
- SD control board (SDCB)
- SD drive board (SDDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the folding entrance section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between SDDB and the motor, and repair it if any abnormality.
3. Check the connector connection and the wiring between SDDB and SDCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: SD-506: 9-D)
5. Replace M3.
6. Replace SDDB.
7. Replace SDCB.

Faulty part isolation DIPSW

DIPSW7-0, DIPSW7-1, DIPSW7-2, DIPSW7-3

Control while detached

The use of the saddle stitching, multi-center folding, multi-tri-folding and trimmer unavailable

2.10.29 C-1269

Code

C-1269

Classification

SD: SD-506 abnormality

Cause

Rotation abnormality is detected for a specified period of time in succession while the folding transfer motor (M4) is driving.

Measures to take when alert occurs

The main body and the SD stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Folding transfer motor (M4)
- SD control board (SDCB)
- SD drive board (SDDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the folding conveyance section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between SDDB and the motor, and repair it if any abnormality.
3. Check the connector connection and the wiring between SDDB and SDCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: SD-506: 9-D)
5. Replace M4.
6. Replace SDDB.
7. Replace SDCB.

Faulty part isolation DIPSW

DIPSW7-0, DIPSW7-1, DIPSW7-2, DIPSW7-3

Control while detached

The use of the saddle stitching, multi-center folding, multi-tri-folding and trimmer unavailable

2.10.30 C-1270**Code**

C-1270

Classification

SD: SD-506 abnormality

Cause

Rotation abnormality is detected for a specified period of time in succession while the bundle exit motor (M5) is driving.

Measures to take when alert occurs

The main body and the SD stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Bundle exit motor (M5)
- SD control board (SDCB)
- SD drive board (SDDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the bundle exit section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between SDDB and the motor, and repair it if any abnormality.
3. Check the connector connection and the wiring between SDDB and SDCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: SD-506: 22-D)
5. Replace M5.
6. Replace SDDB.
7. Replace SDCB.

Faulty part isolation DIPSW

DIPSW7-0, DIPSW7-1, DIPSW7-3

Control while detached

The use of the saddle stitching, multi-center folding and trimmer unavailable

2.10.31 C-1271**Code**

C-1271

Classification

SD: SD-506 abnormality

Cause

Rotation abnormality is detected for a specified period of time in succession while the folding sub scan alignment exit motor (M8) is driving.

Measures to take when alert occurs

The main body and the SD stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Folding sub scan alignment exit motor (M8)
- SD control board (SDCB)
- SD drive board (SDDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the folding sub scan alignment exit section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between SDDB and the motor, and repair it if any abnormality.
3. Check the connector connection and the wiring between SDDB and SDCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: SD-506: 10-D)
5. Replace M8.

6. Replace SDDB.
7. Replace SDCB.

Faulty part isolation DIPSW

DIPSW7-0, DIPSW7-1, DIPSW7-2, DIPSW7-3

Control while detached

The use of the saddle stitching, multi-center folding, multi-tri-folding and trimmer unavailable

2.10.32 C-1272**Code**

C-1272

Classification

SD: SD-506 abnormality

Cause

Rotation abnormality is detected for a specified period of time in succession while the trimmer paddle motor (M33) is driving.

Measures to take when alert occurs

The main body and the SD stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Trimmer paddle motor (M33)
- SD control board (SDCB)
- SD drive board (SDDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the trimmer paddle, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between SDDB and the motor, and repair it if any abnormality.
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: SD-506: 11-W)
4. Replace M33.
5. Replace SDCB.

Faulty part isolation DIPSW

DIPSW7-3

Control while detached

The use of the trimmer unavailable

2.10.33 C-1273**Code**

C-1273

Classification

SD: SD-506 abnormality

Cause

The trimmer completion sensor (PS62) does not turn ON even after a specified period of time after the trimmer blade motor (M31) is in the up operation.

Measures to take when alert occurs

The main body and the SD stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Trimmer blade motor (M31)
- Trimmer completion sensor (PS62)
- SD control board (SDCB)
- SD drive board (SDDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the trimmer blade upper limit, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between SDDB and motor/sensor, and repair it if any abnormality.
3. Check the connector connection and the wiring between SDDB and SDCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: SD-506: 22-R)
5. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: SD-506: 10-U)
6. Replace PS62.
7. Replace M31.
8. Replace SDDB.
9. Replace SDCB.

Faulty part isolation DIPSW

DIPSW7-3

Control while detached

The use of the trimmer unavailable

2.10.34 C-1275**Code**

C-1275

Classification

SD: SD-506 abnormality

Cause

The wire slack sensor (PS66) detected the slack of the trimmer edge drive wire.

Measures to take when alert occurs

The main body and the SD stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Wire slack prevention sensor (PS66)
- SD control board (SDCB)
- SD drive board (SDDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the wire slack, and repair the trimmer blade if any abnormality.
2. Check the connector connection and the wiring between SDCB and the sensor, and repair it if any abnormality.
3. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: SD-506: 10-U)
4. Replace PS66.
5. Replace SDCB.

Faulty part isolation DIPSW**Control while detached****2.11 Solution 8 (C-1281_1299)****2.11.1 C-1281****Code**

C-1281

Classification

RU: RU-506 abnormality

Cause

FD alignment motor (M3) drive abnormality.

The CD alignment home sensor (PS3) does not turn ON even after a specified period of time after M3 starts the home position search operation. Or, even after a specified period of time after M3 starts the operation, it does not stop.

Measures to take when alert occurs

The main body and the RU stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- FD alignment home sensor: (PS3: RU-506)
- FD alignment motor (M3: RU-506)
- RU control board (RUCB: RU-506)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the FD alignment section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between RUCB and motor/sensor, and repair it if any abnormality.
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: RU-506: 1-B)
4. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: RU-506: 1-B)
5. Replace PS3.
6. Replace M3.
7. Replace RUCB

Faulty part isolation DIPSW**Control while detached****2.11.2 C-1282****Code**

C-1282

Classification

RU: RU-506 abnormality

Cause

CD alignment motor (M4): drive abnormality.

The CD alignment home sensor (PS4) does not turn ON even after a specified period of time after M4 starts the home position search operation. Or, even after a specified period of time after M4 starts the operation, it does not stop.

Measures to take when alert occurs

The main body and the RU stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- CD alignment home sensor: (PS4: RU-506)
- CD alignment motor (M4: RU-506)
- RU control board (RUCB: RU-506)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the alignment section, and clean/repair it if any abnormality.

2. Check the connector connection and the wiring between RUCB and motor/sensor, and repair it if any abnormality.
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: RU-506: 2-B)
4. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: RU-506: 5-B)
5. Replace PS4.
6. Replace M4.
7. Replace RUCB

Faulty part isolation DIPSW
Control while detached

2.12 Solution 9 (C-1301_1334)

2.12.1 C-1301

Code

C-1301

Classification

LS (1st tandem): LS abnormality

Cause

An error detection signal is detected continuously for a specified period of time while the paper cooling fan motor /Fr (FM1) is ON.

Measures to take when alert occurs

The main body and the LS stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Paper cooling fan motor /Fr (FM1)
- LS control board (LSCB)

Correction

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between LSCB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: LS-505: 4-A)
3. Replace FM1.
4. Replace LSCB.

Faulty part isolation DIPSW
Control while detached

2.12.2 C-1302

Code

C-1302

Classification

LS (1st tandem): LS abnormality

Cause

An error detection signal is detected continuously for a specified period of time while the paper cooling fan motor /1 (FM2) is ON.

Measures to take when alert occurs

The main body and the LS stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Paper cooling fan motor /1 (FM2)
- LS control board (LSCB)

Correction

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between LSCB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: LS-505: 6-H)
3. Replace FM2 or FM6.
4. Replace LSCB.

Faulty part isolation DIPSW
Control while detached

2.12.3 C-1303

Code

C-1303

Classification

LS (1st tandem): LS abnormality

Cause

An error detection signal is detected continuously for a specified period of time while the paper cooling fan motor/Mi (FM3) is ON.

Measures to take when alert occurs

The main body and the LS stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Paper cooling fan motor /Mi (FM3)
- LS control board (LSCB)

Correction

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between LSCB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: LS-505: 5-A)
3. Replace FM3
4. Replace LSCB.

Faulty part isolation DIPSW**Control while detached****2.12.4 C-1304****Code**

C-1304

Classification

LS (1st tandem): LS abnormality

Cause

An error detection signal of FM4 is detected continuously for a specified period of time while the motor cooling fan motor (FM4) is ON.

Measures to take when alert occurs

The main body and the LS stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Motor cooling fan motor (FM4)
- LS control board (LSCB)

Correction**Note**

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between LSCB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: LS-505: 7-H)
3. Replace FM4
4. Replace LSCB.

Faulty part isolation DIPSW**Control while detached****2.12.5 C-1305****Code**

C-1305

Classification

LS (1st tandem): LS abnormality

Cause

An error detection signal of FM5 is detected continuously for a specified period of time while the paper cooling fan motor /Rr (FM5) is ON.

Measures to take when alert occurs

The main body and the LS stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Paper cooling fan motor /Rr (FM5)
- LS control board (LSCB)

Correction**Note**

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between LSCB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: LS-505: 5-A)
3. Replace FM5.
4. Replace LSCB.

Faulty part isolation DIPSW**Control while detached****2.12.6 C-1306****Code**

C-1306

Classification

LS (2nd tandem): LS abnormality

Cause

An error detection signal is detected continuously for a specified period of time while the paper cooling fan motor /Fr (FM1) is ON.

Measures to take when alert occurs

The main body and the LS stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Paper cooling fan motor /Fr (FM1)
- LS control board (LSCB)

Correction**Note**

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between LSCB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: LS-505: 4-A)
3. Replace FM1.
4. Replace LSCB.

Faulty part isolation DIPSW Control while detached

2.12.7 C-1307

Code

C-1307

Classification

LS (2nd tandem): LS abnormality

Cause

An error detection signal is detected continuously for a specified period of time while the paper cooling fan motor/1 (FM2) is ON.

Measures to take when alert occurs

The main body and the LS stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Paper cooling fan motor /1 (FM2)
- LS control board (LSCB)

Correction

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between LSCB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: LS-505: 6-H)
3. Replace FM2 or FM6.
4. Replace LSCB.

Faulty part isolation DIPSW Control while detached

2.12.8 C-1308

Code

C-1308

Classification

LS (2nd tandem): LS abnormality

Cause

An error detection signal is detected continuously for a specified period of time while the paper cooling fan motor /Mi (FM3) is ON.

Measures to take when alert occurs

The main body and the LS stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Paper cooling fan motor /Mi (FM3)
- LS control board (LSCB)

Correction

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between LSCB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: LS-505: 5-A)
3. Replace FM3
4. Replace LSCB.

Faulty part isolation DIPSW Control while detached

2.12.9 C-1309

Code

C-1309

Classification

LS (2nd tandem): LS abnormality

Cause

An error detection signal of FM4 is detected continuously for a specified period of time while the motor cooling fan motor (FM4) is ON.

Measures to take when alert occurs

The main body and the LS stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Motor cooling fan motor
- LS control board (LSCB)

Correction

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between LSCB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: LS-505: 7-H)
3. Replace FM4
4. Replace LSCB.

Faulty part isolation DIPSW Control while detached

2.12.10 C-1310**Code**

C-1310

Classification

LS (2nd tandem): LS abnormality

Cause

An error detection signal of FM5 is detected continuously for a specified period of time while the paper cooling fan motor /Rr (FM5) is ON.

Measures to take when alert occurs

The main body and the LS stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Paper cooling fan motor /Rr (FM5)
- LS control board (LSCB)

Correction**Note**

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between LSCB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: LS-505: 5-A)
3. Replace FM5.
4. Replace LSCB.

Faulty part isolation DIPSW**Control while detached****2.12.11 C-1311****Code**

C-1311

Classification

SD: SD-506 abnormality

Cause

A rotation error detection signal is detected continuously for specified period of time while the scraps removal fan motor (FM1) is started or driving.

Measures to take when alert occurs

The main body and the SD stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Scraps removal fan motor (FM1)
- SD control board (SDCB)
- SD drive board (SDDB)

Correction**Note**

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between SDDB and the fan, and repair it if any abnormality.
2. Check the connector connection and the wiring between SDDB and SDCB, and repair it if any abnormality.
3. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: SD-506: 26-D)
4. Replace FM1.
5. Replace SDDB.
6. Replace SDCB.

Faulty part isolation DIPSW

DIPSW7-3

Control while detached

The use of the trimmer unavailable

2.12.12 C-1330**Code**

C-1330

Classification

PB: PB abnormality

Cause

Cover paper tray fan /1 (M71: PB-502, FM71: PB-503) drive abnormality.

An error detection signal is detected continuously for specified time period while M71 is started or driving.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- PB drive board (PBDB: PB-502)
- PB drive board /1 (PBDB1: PB-503)
- Cover paper tray fan /1 (M71: PB-502, FM71: PB-503)

Correction**Note**

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PBDB/PBDB1 and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PB-502: 21-D, PB-503: 21-D)
3. Replace M71 (PB-502), FM71 (PB-503).

4. Replace PBDB (PB-502), PBDB1 (PB-503).

Faulty part isolation DIPSW

DIPSW7-5

Control while detached

Paper feed from the PB is unavailable.

2.12.13 C-1331**Code**

C-1331

Classification

PB: PB abnormality

Cause

Cover paper tray fan /2 (M72: PB-502, FM72: PB-503) drive abnormality.

An error detection signal is detected continuously for specified time period while M72 is started or driving.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Cover paper tray fan /2 (M72: PB-502, FM72: PB-503) Exhaust fan /1 (M80: PB-502, FM80: PB-503)
- PB drive board (PBDB: PB-502)
- PB drive board /1 (PBDB1: PB-503)

Correction**Note**

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PBDB/PBDB1 and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PB-502: 21-D, PB-503: 21-D)
3. Replace M72 (PB-502), FM72 (PB-503).
4. Replace PBDB (PB-502), PBDB1 (PB-503).

Faulty part isolation DIPSW

DIPSW7-5

Control while detached

Paper feed from the PB is unavailable.

2.12.14 C-1332**Code**

C-1332

Classification

PB: PB abnormality

Cause

Exhaust fan /1 (M80: PB-502, FM80: PB-503), deodorant fan /1 (FM97: PB-503) and deodorant fan /2 (FM98: PB-503) drive abnormality.

An error detection signal is detected continuously for specified time period while M80, M97 and M98 is started or driving.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

1. Exhaust fan /1 (M80: PB-502, FM80: PB-503)
2. Deodorant fan /1 (FM97: PB-503)
3. Deodorant fan /2 (FM98: PB-503)
4. PB drive board (PBDB: PB-502)
5. PB drive board /1 (PBDB1: PB-503)
6. PB drive board /3 (PBDB3: PB-503)

Correction**Note**

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PBDB/PBDB1 and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PB-502: 3-D, PB-503: 3-D, 19-U)
3. Replace M80 (PB-502), FM80 (PB-503), FM97 (PB-503), FM98 (PB-503).
4. Replace PBDB (PB-502), PBDB1 (PB-503), PBDB3 (PB-503).

Faulty part isolation DIPSW

DIPSW7-6

Control while detached

Ejecting onto the sub tray is possible.

2.12.15 C-1333**Code**

C-1333

Classification

PB: PB abnormality

Cause

Exhaust fan /2 (M81: PB-502, FM81: PB-503) drive abnormality.

An error detection signal is detected continuously for specified time period while M81 is started or driving.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Exhaust fan /2 (M81: PB-502, FM81: PB-503)
- PB drive board (PBDB: PB-502)
- PB drive board /1 (PBDB1: PB-503)

Correction**Note**

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PBDB/PBDB1 and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PB-502: 3-D, PB-503: 3-D)
3. Replace M81 (PB-502), FM81 (PB-503).
4. Replace PBDB (PB-502), PBDB1 (PB-503).

Faulty part isolation DIPSW

DIPSW7-6

Control while detached

Ejecting onto the sub tray is possible.

2.12.16 C-1334**Code**

C-1334

Classification

PB: PB abnormality

Cause

Pellet supply cooling fan motor (M4: PB-502, FM4: PB-503) rotation abnormality.

An error detection signal is detected continuously for specified time period while M4 is started or driving.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Pellet supply cooling fan motor (M4: PB-502, FM4: PB-503)
- PB drive board (PBDB: PB-502)
- PB drive board /1 (PBDB1: PB-503)

Correction**Note**

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PBDB/PBDB1 and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: PB-502: 4-D, PB-503: 4-D)
3. Replace M4 (PB-502), FM4 (PB-503).
4. Replace PBDB (PB-502), PBDB1 (PB-503).

Faulty part isolation DIPSW

DIPSW7-6

Control while detached

Ejecting onto the sub tray is possible.

2.13 Solution 10 (C-1341_1364)**2.13.1 C-1341****Code**

C-1341

Classification

RU: RU-506 abnormality

Cause

Stack assist fan /Fr (FM1) rotation abnormality.

Rotation abnormality detected continuously for the specified time during FM1 operation.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Stack assist fan /Fr (FM1: RU-506)
- RU control board (RUCB: RU-506)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between RUCB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: RU-506: 9-F, 3-B)
3. Replace FM1.
4. Replace RUCB

Faulty part isolation DIPSW**Control while detached****2.13.2 C-1342****Code**

C-1342

Classification

RU: RU-506 abnormality

Cause

Stack assist fan /Rr (FM2) rotation abnormality.

Rotation abnormality detected continuously for the specified time during FM2 operation.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Stack assist fan /Rr (FM2: RU-506)
- RU control board (RUCB: RU-506)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between RUCB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: RU-506: 9-F, 3-B)
3. Replace FM2.
4. Replace RUCB

Faulty part isolation DIPSW**Control while detached****2.14 Solution 11 (C-1402_1455)****2.14.1 C-1402****Code**

C-1402

Classification

FS: FS abnormality

Cause

Non-volatile memory abnormality.

Measures to take when alert occurs

The main body and the FS stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- FS control board (LSCB)
- FNS control board (FNSCB)

Correction**Note**

- The message "Please call service" is displayed on the panel.

Solution

1. After turning OFF the sub power switch, turn OFF the main power switch and unplug the power plug. Restart the main body after 10 seconds.
2. Check the connector connection and the wiring of FNSCB, and repair it if any abnormality.
3. Reinstalling FS firmware
4. Replace FNSCB.

Faulty part isolation DIPSW**Control while detached****2.14.2 C-1403****Code**

C-1403

Classification

FD: FD abnormality

Cause

Non-volatile memory abnormality.

Measures to take when alert occurs

The main body and the FD stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- FD control board (FDCB)

Correction**Note**

- The message "Please call service" is displayed on the panel.

Solution

1. After turning OFF the sub power switch, turn OFF the main power switch and unplug the power plug. Restart the main body after 10 seconds.
2. Check the connector connection and the wiring of FDCB, and repair it if any abnormality.
3. Reinstalling FD firmware
4. Replace FDCB.

Faulty part isolation DIPSW**Control while detached****2.14.3 C-1404****Code**

C-1404

Classification

SD: SD-506 abnormality

Cause

Non-volatile memory abnormality.

Measures to take when alert occurs

The main body and the SD stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- SD control board (SDCB)

Correction**Note**

- The message "Please call service" is displayed on the panel.

Solution

1. After turning OFF the sub power switch, turn OFF the main power switch and unplug the power plug. Restart the main body after 10 seconds.
2. Check the connector connection and the wiring of SDCB, and repair it if any abnormality.
3. Reinstalling SD firmware
4. Replace SDCB.

Faulty part isolation DIPSW**Control while detached****2.14.4 C-1405****Code**

C-1405

Classification

RU: RU-506 abnormality

Cause

Non-volatile memory abnormality.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- RU control board (RUCB: RU-506)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. After turning OFF the sub power switch, turn OFF the main power switch and unplug the power plug. Restart the main body after 10 seconds.
2. Check the connector connection and the wiring of RUCB, and repair it if any abnormality.
3. Reinstall the RU firmware.
4. Replace RUCB

Faulty part isolation DIPSW**Control while detached****2.14.5 C-1406****Code**

C-1406

Classification

PB: PB abnormality

Cause

Non-volatile memory abnormality in the PB control board (PBCB)

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- PB control board (PBCB)
- Control program

Correction**Note**

- The message "Please call service" is displayed on the panel.

Solution

1. After turning OFF the sub power switch, turn OFF the main power switch and unplug the power plug. Restart the main body after 10 seconds.
2. Check the connector connection and the wiring of PBCB, and repair it if any abnormality.
3. Reinstalling PB firmware
4. Replace PBCB.

Faulty part isolation DIPSW**Control while detached****2.14.6 C-1411****Code**

C-1411

Classification

SD: SD-506 abnormality

Cause

5V power abnormality in the SD drive board (SDDB)

Measures to take when alert occurs

The main body and the SD stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- SD drive board (SDDB)

Correction

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring of SDDB, and repair it if any abnormality.
2. Check the connector connection and the wiring between SDDB and SDCB, and repair it if any abnormality.
3. Replace SDDB.
4. Replace SDCB.

Faulty part isolation DIPSW

Control while detached

2.14.7 C-1431

Code

C-1431

Classification

FS: FS abnormality

Cause

Communication error in FS

Measures to take when alert occurs

The main body and the FS stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Software bug

Correction

Note

- The message "Please call service" is displayed on the panel.

Solution

1. After turning OFF the sub power switch, turn OFF the main power switch and unplug the power plug. Restart the main body after 10 seconds.
2. Check the connector connection and the wiring of FNCSB, and repair it if any abnormality.
3. Reinstall FS-612 firmware
4. Replace FNCSB.

Faulty part isolation DIPSW

Control while detached

2.14.8 C-1432

Code

C-1432

Classification

FD: FD abnormality

Cause

Communication error in FD

Measures to take when alert occurs

The main body and the FD stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Software bug

Correction

Note

- The message "Please call service" is displayed on the panel.

Solution

1. After turning OFF the sub power switch, turn OFF the main power switch and unplug the power plug. Restart the main body after 10 seconds.
2. Check the connector connection and the wiring of FDCB, and repair it if any abnormality.
3. Reinstalling FD firmware
4. Replace FDCB.

Faulty part isolation DIPSW

Control while detached

2.14.9 C-1433

Code

C-1433

Classification

SD: SD-506 abnormality

Cause

Communication error in SD

Measures to take when alert occurs

The main body and the SD stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Software bug

Correction**Note**

- The message "Please call service" is displayed on the panel.

Solution

1. After turning OFF the sub power switch, turn OFF the main power switch and unplug the power plug. Restart the main body after 10 seconds.
2. Check the connector connection and the wiring of SDCB, and repair it if any abnormality.
3. Reinstalling SD firmware
4. Replace SDCB.

Faulty part isolation DIPSW**Control while detached****2.14.10 C-1434****Code**

C-1434

Classification

RU: RU-506 abnormality

Cause

Communication error in RU

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- RU control board (RUCB: RU-506)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. After turning OFF the sub power switch, turn OFF the main power switch and unplug the power plug. Restart the main body after 10 seconds.
2. Check the connector connection and the wiring of RUCB, and repair it if any abnormality.
3. Reinstall the RU firmware.
4. Replace RUCB

Faulty part isolation DIPSW**Control while detached****2.14.11 C-1435****Code**

C-1435

Classification

PB: PB abnormality

Cause

Message queue full or the control abnormality of Sub CPU1 in the PB control board (PBCB)

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- PB control board (PBCB)
- Control program

Correction**Note**

- The message "Please call service" is displayed on the panel.

Solution

1. After turning OFF the sub power switch, turn OFF the main power switch and unplug the power plug. Restart the main body after 10 seconds.
2. Check the connector connection and the wiring of PBCB, and repair it if any abnormality.
3. Reinstalling PB firmware
4. Replace PBCB.

Faulty part isolation DIPSW**Control while detached****2.14.12 C-1436****Code**

C-1436

Classification

PB: PB abnormality

Cause

Message queue full or the control abnormality of Sub CPU2 in the PB control board (PBCB)

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- PB control board (PBCB)

- Control program

Correction**Note**

- The message "Please call service" is displayed on the panel.

Solution

1. After turning OFF the sub power switch, turn OFF the main power switch and unplug the power plug. Restart the main body after 10 seconds.
2. Check the connector connection and the wiring of PBCB, and repair it if any abnormality.
3. Reinstalling PB firmware
4. Replace PBCB.

Faulty part isolation DIPSW**Control while detached****2.14.13 C-1437****Code**

C-1437

Classification

PB: PB abnormality

Cause

Message queue of the communication among tasks in the PB is full.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Control program

Correction**Note**

- The message "Please call service" is displayed on the panel.

Solution

1. After turning OFF the sub power switch, turn OFF the main power switch and unplug the power plug. Restart the main body after 10 seconds.
2. Check the connector connection and the wiring of PBCB, and repair it if any abnormality.
3. Reinstalling PB firmware
4. Replace PBCB.

Faulty part isolation DIPSW**Control while detached****2.14.14 C-1451****Code**

C-1451

Classification

FD: FD abnormality

Cause

When the FD is unready, a signal to start operations is received from the main body.

Measures to take when alert occurs

The main body and the FD stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Software bug

Correction**Note**

- The message "Please call service" is displayed on the panel.

Solution

1. After turning OFF the sub power switch, turn OFF the main power switch and unplug the power plug. Restart the main body after 10 seconds.
2. Check the connector connection and the wiring of FDCB, and repair it if any abnormality.
3. Reinstalling FD firmware
4. Replace FDCB.

Faulty part isolation DIPSW**Control while detached****2.14.15 C-1452****Code**

C-1452

Classification

SD: SD-506 abnormality

Cause

When the SD is unready, a signal to start operations is received from the main body.

Measures to take when alert occurs

The main body and the SD stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Software bug

Correction**Note**

- The message "Please call service" is displayed on the panel.

Solution

1. After turning OFF the sub power switch, turn OFF the main power switch and unplug the power plug. Restart the main body after 10 seconds.
2. Check the connector connection and the wiring of SDCB, and repair it if any abnormality.
3. Reinstalling SD firmware
4. Replace SDCB.

Faulty part isolation DIPSW**Control while detached****2.14.16 C-1453****Code**

C-1453

Classification

RU: RU-506 abnormality

Cause

RU operation prohibition abnormality

When RU is unready, a signal to start operations is received from the main body.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- RU control board (RUCB: RU-506)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. After turning OFF the sub power switch, turn OFF the main power switch and unplug the power plug. Restart the main body after 10 seconds.
2. Check the connector connection and the wiring of RUCB, and repair it if any abnormality.
3. Reinstall the RU firmware.
4. Replace RUCB

Faulty part isolation DIPSW**Control while detached****2.14.17 C-1454****Code**

C-1454

Classification

PB: PB abnormality

Cause

PB operation prohibition abnormality.

PB received operation start signal from the main body when the PB is unready.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Control program

Correction**Note**

- The message "Please call service" is displayed on the panel.

Solution

1. After turning OFF the sub power switch, turn OFF the main power switch and unplug the power plug. Restart the main body after 10 seconds.
2. Check the connector connection and the wiring of PBCB, and repair it if any abnormality.
3. Reinstalling PB firmware
4. Replace PBCB.

Faulty part isolation DIPSW**Control while detached****2.15 Solution 12 (C-1501_1567)****2.15.1 C-1501****Code**

C-1501

Classification

PB: PB abnormality

Cause

The entrance conveyance has not been completed within a specified period of time after the entrance conveyance motor (M1) turns ON.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- PB control board (PBCB)
- PB drive board (PBDB)
- Entrance conveyance motor (M1)

Correction**Note**

- The message "Please call service" is displayed on the panel.

Solution

1. Check the entrance conveyance section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PBDB/PBDB1 and the motor, and repair it if any abnormality.
3. Check the connector connection and the wiring between PBDB/PBDB1 and PBCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: PB-503: 1-D)
5. Replace M1.
6. Replace PBDB1.
7. Replace PBCB.

Faulty part isolation DIPSW

DIPSW7-7

Control while detached

The use of the PB is unavailable

2.15.2 C-1502**Code**

C-1502

Classification

PB: PB abnormality

Cause

A rotation error detection signal is detected for a specified period of time in succession while the intermediate conveyance motor (M2) is driving.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- PB control board (PBCB)
- PB drive board (PBDB)
- Intermediate conveyance motor (M2)

Correction**Note**

- The message "Please call service" is displayed on the panel.

Solution

1. Check the intermediate conveyance section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PBDB/PBDB1 and the motor, and repair it if any abnormality.
3. Check the connector connection and the wiring between PBDB/PBDB1 and PBCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: PB-503:2-D)
5. Replace M2.
6. Replace PBDB1.
7. Replace PBCB.

Faulty part isolation DIPSW

DIPSW7-6

Control while detached

Ejecting onto the sub tray is possible.

2.15.3 C-1504**Code**

C-1504

Classification

PB: PB abnormality

Cause

The SC entrance conveyance has not been completed within a specified period of time after the SC entrance conveyance motor (M11) turns ON.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- PB control board (PBCB)
- PB drive board (PBDB)
- SC entrance conveyance motor (M11)

Correction**Note**

- The message "Please call service" is displayed on the panel.

Solution

1. Check the SC entrance conveyance section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PBDB/PBDB1 and the motor, and repair it if any abnormality.
3. Check the connector connection and the wiring between PBDB/PBDB1 and PBCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: PB-503: 4-D)
5. Replace M11.
6. Replace PBDB1.
7. Replace PBCB.

Faulty part isolation DIPSW

DIPSW7-6

Control while detached

Ejecting onto the sub tray is possible.

2.15.4 C-1505

Code

C-1505

Classification

PB: PB abnormality

Cause

The switchback conveyance has not been completed within a specified period of time after the SC switchback conveyance motor (M12) turns ON.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- PB control board (PBCB)
- PB drive board (PBDB)
- SC switchback conveyance motor (M12)

Correction

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the SC switchback conveyance section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PBDB/PBDB1 and the motor, and repair it if any abnormality.
3. Check the connector connection and the wiring between PBDB/PBDB1 and PBCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: PB-503: 4-D)
5. Replace M12.
6. Replace PBDB1.
7. Replace PBCB.

Faulty part isolation DIPSW

DIPSW7-6

Control while detached

Ejecting onto the sub tray is possible.

2.15.5 C-1506

Code

C-1506

Classification

PB: PB abnormality

Cause

The switchback roller release operation has not been completed within a specified period of time after the SC switchback release motor (M13) turns ON.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- PB control board (PBCB)
- PB drive board (PBDB)
- SC switchback release motor (M13)

Correction

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the SC switchback release section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PBDB/PBDB1 and the motor, and repair it if any abnormality.
3. Check the connector connection and the wiring between PBDB/PBDB1 and PBCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: PB-503: 6-D)
5. Replace M13.
6. Replace PBDB1.
7. Replace PBCB.

Faulty part isolation DIPSW

DIPSW7-6

Control while detached

Ejecting onto the sub tray is possible.

2.15.6 C-1507

Code

C-1507

Classification

PB: PB abnormality

Cause

The SC alignment has not been completed within a specified period of time after SC alignment motor (M15) turns ON.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- PB control board (PBCB)
- PB drive board (PBDB)

- SC alignment motor (M15)

Correction**Note**

- The message "Please call service" is displayed on the panel.

Solution

1. Check the SC alignment section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PBDB/PBDB1 and the motor, and repair it if any abnormality.
3. Check the connector connection and the wiring between PBDB/PBDB1 and PBCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram:PB-503:5-D)
5. Replace M15.
6. Replace PBDB1.
7. Replace PBCB.

Faulty part isolation DIPSW

DIPSW7-6

Control while detached

Ejecting onto the sub tray is possible.

2.15.7 C-1508**Code**

C-1508

Classification

PB: PB abnormality

Cause

The SC paper bundle conveyance has not been completed within a specified period of time after the SC bundle conveyance motor (M17) turns ON.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- PB control board (PBCB)
- PB drive board (PBDB)
- SC bundle conveyance motor (M17)

Correction**Note**

- The message "Please call service" is displayed on the panel.

Solution

1. Check the SC bundle conveyance section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PBDB/PBDB1 and the motor, and repair it if any abnormality.
3. Check the connector connection and the wiring between PBDB/PBDB1 and PBCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram:PB-503:5-D)
5. Replace M17.
6. Replace PBDB1.
7. Replace PBCB.

Faulty part isolation DIPSW

DIPSW7-6

Control while detached

Ejecting onto the sub tray is possible.

2.15.8 C-1509**Code**

C-1509

Classification

PB: PB abnormality

Cause

The SC roller release operation has not been completed within a specified period of time after the SC roller release motor (M18) turns ON.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- PB control board (PBCB)
- PB drive board (PBDB)
- SC roller release motor (M18)

Correction**Note**

- The message "Please call service" is displayed on the panel.

Solution

1. Check the SC roller release section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PBDB/PBDB1 and the motor, and repair it if any abnormality.
3. Check the connector connection and the wiring between PBDB/PBDB1 and PBCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: PB-503: 6-D)
5. Replace M18.
6. Replace PBDB1.
7. Replace PBCB.

Faulty part isolation DIPSW

DIPSW7-6

Control while detached

Ejecting onto the sub tray is possible.

2.15.9 C-1510

Code

C-1510

Classification

PB: PB abnormality

Cause

The SC entrance movement operation has not been completed within a specified period of time after the clamp entrance movement motor (M19) turns ON.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- PB control board (PBCB)
- PB drive board (PBDB)
- Clamp entrance movement motor (M19)

Correction

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the clamp entrance section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PBDB/PBDB1 and the motor, and repair it if any abnormality.
3. Check the connector connection and the wiring between PBDB/PBDB1 and PBCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: PB-503: 5-D)
5. Replace M19.
6. Replace PBDB1.
7. Replace PBCB.

Faulty part isolation DIPSW

DIPSW7-6

Control while detached

Ejecting onto the sub tray is possible.

2.15.10 C-1511

Code

C-1511

Classification

PB: PB abnormality

Cause

The clamp entrance roller release operation has not been completed within a specified period of time after the clamp entrance roller release motor (M20) turns ON.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- PB control board (PBCB)
- PB drive board (PBDB)
- Clamp entrance roller release motor (M20)

Correction

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the clamp entrance section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PBDB/PBDB1 and the motor, and repair it if any abnormality.
3. Check the connector connection and the wiring between PBDB/PBDB1 and PBCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: PB-503: 7-D)
5. Replace M20.
6. Replace PBDB1.
7. Replace PBCB.

Faulty part isolation DIPSW

DIPSW7-6

Control while detached

Ejecting onto the sub tray is possible.

2.15.11 C-1512

Code

C-1512

Classification

PB: PB abnormality

Cause

The clamp alignment has not been completed within a specified period of time after clamp alignment motor (M21) turns ON.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- PB control board (PBCB)
- PB drive board (PBDB)

- Clamp alignment motor (M21)

Correction**Note**

- The message "Please call service" is displayed on the panel.

Solution

1. Check the clamp alignment section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PBDB/PBDB1 and the motor, and repair it if any abnormality.
3. Check the connector connection and the wiring between PBDB/PBDB1 and PBCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: PB-503: 7-D)
5. Replace M21.
6. Replace PBDB1.
7. Replace PBCB.

Faulty part isolation DIPSW

DIPSW7-6

Control while detached

Ejecting onto the sub tray is possible.

2.15.12 C-1513**Code**

C-1513

Classification

PB: PB abnormality

Cause

The clamp section open/close operation has not been completed within a specified period of time after the clamp motor (M22) turns ON.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- PB control board (PBCB)
- PB drive board (PBDB)
- Clamp motor (M22)

Correction**Note**

- The message "Please call service" is displayed on the panel.

Solution

1. Check the clamp section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PBDB/PBDB1 and the motor, and repair it if any abnormality.
3. Check the connector connection and the wiring between PBDB/PBDB1 and PBCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: PB-503: 8-D)
5. Replace M22.
6. Replace PBDB1.
7. Replace PBCB.

Faulty part isolation DIPSW

DIPSW7-6

Control while detached

Ejecting onto the sub tray is possible.

2.15.13 C-1514**Code**

C-1514

Classification

PB: PB abnormality

Cause

The clamp rotation operation has not been completed within a specified period of time after the clamp rotation motor (M23) turns ON.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- PB control board (PBCB)
- PB drive board (PBDB)
- Clamp rotation motor (M23)

Correction**Note**

- The message "Please call service" is displayed on the panel.

Solution

1. Check the clamp section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PBDB/PBDB1 and the motor, and repair it if any abnormality.
3. Check the connector connection and the wiring between PBDB/PBDB1 and PBCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: PB-503: 8-D)
5. Replace M23.
6. Replace PBDB1.
7. Replace PBCB.

Faulty part isolation DIPSW

DIPSW7-6

Control while detached

Ejecting onto the sub tray is possible.

2.15.14 C-1515

Code

C-1515

Classification

PB: PB abnormality

Cause

The glue tank movement operation has not been completed within a specified period of time after the glue tank movement motor (M31) turns ON.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- PB control board (PBCB)
- PB drive board (PBDB)
- Glue tank movement motor (M31)

Correction

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the glue tank movement section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PBDB/PBDB1 and the motor, and repair it if any abnormality.
3. Check the connector connection and the wiring between PBDB/PBDB1 and PBCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: PB-503: 8-D)
5. Replace M31.
6. Replace PBDB1.
7. Replace PBCB.

Faulty part isolation DIPSW

DIPSW7-6

Control while detached

Ejecting onto the sub tray is possible.

2.15.15 C-1516

Code

C-1516

Classification

PB: PB abnormality

Cause

A rotation error detection signal is detected for a specified period of time in succession while the glue apply roller motor (M32) is driving.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- PB control board (PBCB)
- PB drive board (PBDB)
- Glue apply roller motor (M32)

Correction

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the glue apply section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PBDB/PBDB1 and the motor, and repair it if any abnormality.
3. Check the connector connection and the wiring between PBDB/PBDB1 and PBCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: PB-503: 9-D)
5. Replace M32.
6. Replace PBDB1.
7. Replace PBCB.

Faulty part isolation DIPSW

DIPSW7-6

Control while detached

Ejecting onto the sub tray is possible.

2.15.16 C-1517

Code

C-1517

Classification

PB: PB abnormality

Cause

PB-502: Abnormality of the glue supply.

The count of a specified number of pellets, which is counted by the pellet count sensor (PS37), has not been reached after the pellet supply motor (M33) turns ON. The status was detected by a specified number of times in succession.

PB-503: Abnormality of the glue supply.

The supply operation which the pellet supply passage sensor (PS37) does not turn ON is detected twice in succession after turning ON the pellet supply pipe motor (M33).

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Pellet supply motor (M33: PB-502)
- PB drive board (PBDB: PB-502)
- PB drive board /1 (PBDB1: PB-503)
- PB control board (PBCB: PB-502, PB-503)

Correction

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the pellet supply section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PBDB/PBDB1 and the motor, and repair it if any abnormality.
3. Check the connector connection and the wiring between PBDB/PBDB1 and PBCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: PB-502: 10-D, PB-503: 10-D)
5. Replace M33.
6. Replace PBDB (PB-502), PBDB1 (PB-503).
7. Replace PBCB.

Faulty part isolation DIPSW

DIPSW7-6

Control while detached

Ejecting onto the sub tray is possible.

2.15.17 C-1518

Code

C-1518

Classification

PB: PB abnormality

Cause

The operation of the pellet supply arm has not been completed within a specified period of time after the pellet supply arm motor (M34) turns ON.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- PB control board (PBCB)
- PB drive board (PBDB)
- Pellet supply arm motor (M34)

Correction

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the pellet supply section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PBDB/PBDB1 and the motor, and repair it if any abnormality.
3. Check the connector connection and the wiring between PBDB/PBDB1 and PBCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: PB-503: 10-D)
5. Replace M34.
6. Replace PBDB1.
7. Replace PBCB.

Faulty part isolation DIPSW

DIPSW7-6

Control while detached

Ejecting onto the sub tray is possible.

2.15.18 C-1519

Code

C-1519

Classification

PB: PB abnormality

Cause

The alignment in the cover paper table up/down section has not been completed within a specified period of time after the cover paper alignment motor (M41) turns ON.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- PB control board (PBCB)
- PB drive board (PBDB)
- Cover paper alignment motor (M41)

Correction

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the cover paper alignment section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PBDB/PBDB1 and the motor, and repair it if any abnormality.
3. Check the connector connection and the wiring between PBDB/PBDB1 and PBCB, and repair it if any abnormality.

4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram:PB-503:12-D)
5. Replace M41.
6. Replace PBDB1.
7. Replace PBCB.

Faulty part isolation DIPSW

DIPSW7-6

Control while detached

Ejecting onto the sub tray is possible.

2.15.19 C-1520**Code**

C-1520

Classification

PB: PB abnormality

Cause

The booklet exit has not been completed within a specified period of time after the booklet exit motor (M42) turns ON.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- PB control board (PBCB)
- PB drive board (PBDB)
- Booklet exit motor (M42)

Correction**Note**

- The message "Please call service" is displayed on the panel.

Solution

1. Check the booklet exit section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PBDB/PBDB1 and the motor, and repair it if any abnormality.
3. Check the connector connection and the wiring between PBDB/PBDB1 and PBCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: PB-503: 12-D)
5. Replace M42.
6. Replace PBDB1.
7. Replace PBCB.

Faulty part isolation DIPSW

DIPSW7-6

Control while detached

Ejecting onto the sub tray is possible.

2.15.20 C-1521**Code**

C-1521

Classification

PB: PB abnormality

Cause

The driven arm /Rt swing operation start has not been completed within a specified period of time after the cover paper conveyance arm motor /Rt (M43) turns ON

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- PB control board (PBCB)
- PB drive board (PBDB)
- Cover paper conveyance arm motor /Rt (M43)

Correction**Note**

- The message "Please call service" is displayed on the panel.

Solution

1. Check the cover paper conveyance section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PBDB/PBDB1 and the motor, and repair it if any abnormality.
3. Check the connector connection and the wiring between PBDB/PBDB1 and PBCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram:PB-503:12-D)
5. Replace M43.
6. Replace PBDB1.
7. Replace PBCB.

Faulty part isolation DIPSW

DIPSW7-6

Control while detached

Ejecting onto the sub tray is possible.

2.15.21 C-1522**Code**

C-1522

Classification

PB: PB abnormality

Cause

The driven arm /Lt swing operation start has not been completed within a specified period of time after the cover paper conveyance arm motor /Lt (M44) turns ON

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- PB control board (PBCB)
- PB drive board (PBDB)
- Cover paper conveyance arm motor /Lt (M44)

Correction

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the cover paper conveyance section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PBDB/PBDB1 and the motor, and repair it if any abnormality.
3. Check the connector connection and the wiring between PBDB/PBDB1 and PBCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: PB-503: 13-D)
5. Replace M44.
6. Replace PBDB1.
7. Replace PBCB.

Faulty part isolation DIPSW

DIPSW7-6

Control while detached

Ejecting onto the sub tray is possible.

2.15.22 C-1523

Code

C-1523

Classification

PB: PB abnormality

Cause

The cover paper conveyance start has not been completed within a specified period of time after cover paper conveyance motor (M45) turns ON.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- PB control board (PBCB)
- PB drive board (PBDB)
- Cover paper conveyance motor (M45)

Correction

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the cover paper conveyance section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PBDB/PBDB1 and the motor, and repair it if any abnormality.
3. Check the connector connection and the wiring between PBDB/PBDB1 and PBCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: PB-503: 13-D)
5. Replace M45.
6. Replace PBDB1.
7. Replace PBCB.

Faulty part isolation DIPSW

DIPSW7-6

Control while detached

Ejecting onto the sub tray is possible.

2.15.23 C-1524

Code

C-1524

Classification

PB: PB abnormality

Cause

The cover paper table up or down movement has not been completed within a specified period of time after the cover paper table up down motor /Fr (M46) turns ON.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- PB control board (PBCB)
- PB drive board (PBDB)
- Cover paper table up down motor /Fr (M46)

Correction

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the cover paper table up down section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PBDB/PBDB1 and the motor, and repair it if any abnormality.

3. Check the connector connection and the wiring between PBDB/PBDB1 and PBCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram:PB-503: 11-D)
5. Replace M46.
6. Replace PBDB1.
7. Replace PBCB.

Faulty part isolation DIPSW

DIPSW7-6

Control while detached

Ejecting onto the sub tray is possible.

2.15.24 C-1525**Code**

C-1525

Classification

PB: PB abnormality

Cause

The cover paper table up or down movement has not been completed within a specified period of time after the cover paper table up down motor /Rr (M47) turns ON.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- PB control board (PBCB)
- PB drive board (PBDB)
- Cover paper table up down motor /Rr (M47)

Correction**Note**

- The message "Please call service" is displayed on the panel.

Solution

1. Check the cover paper table up down section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PBDB/PBDB1 and the motor, and repair it if any abnormality.
3. Check the connector connection and the wiring between PBDB/PBDB1 and PBCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram:PB-503: 11-D)
5. Replace M47.
6. Replace PBDB1.
7. Replace PBCB.

Faulty part isolation DIPSW

DIPSW7-6

Control while detached

Ejecting onto the sub tray is possible.

2.15.25 C-1526**Code**

C-1526

Classification

PB: PB abnormality

Cause

The movement of the cover paper folding plate /Rt has not been completed within a specified period of time after the cover paper folding motor /Rt (M48) turns ON.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- PB control board (PBCB)
- PB drive board (PBDB)
- Cover paper folding motor /Rt (M48)

Correction**Note**

- The message "Please call service" is displayed on the panel.

Solution

1. Check the cover paper folding section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PBDB/PBDB1 and the motor, and repair it if any abnormality.
3. Check the connector connection and the wiring between PBDB/PBDB1 and PBCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram:PB-503: 14-D)
5. Replace M48.
6. Replace PBDB1.
7. Replace PBCB.

Faulty part isolation DIPSW

DIPSW7-6

Control while detached

Ejecting onto the sub tray is possible.

2.15.26 C-1527**Code**

C-1527

Classification

PB: PB abnormality

Cause

The movement of the cover paper folding plate /Lt has not been completed within a specified period of time after the cover paper folding motor /Lt (M49) turns ON.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- PB control board (PBCB)
- PB drive board (PBDB)
- Cover paper folding motor /Lt (M49)

Correction

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the cover paper folding section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PBDB/PBDB1 and the motor, and repair it if any abnormality.
3. Check the connector connection and the wiring between PBDB/PBDB1 and PBCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram:PB-503: 14-D)
5. Replace M49.
6. Replace PBDB1.
7. Replace PBCB.

Faulty part isolation DIPSW

DIPSW7-6

Control while detached

Ejecting onto the sub tray is possible.

2.15.27 C-1528

Code

C-1528

Classification

PB: PB abnormality

Cause

The trimming of the cover paper has not been completed within a specified period of time after the cutter motor (M50) turns ON.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- PB control board (PBCB)
- PB drive board (PBDB)
- Cutter motor (M50)

Correction

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the trimmer section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PBDB/PBDB1 and the motor, and repair it if any abnormality.
3. Check the connector connection and the wiring between PBDB/PBDB1 and PBCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram:PB-503: 14-D)
5. Replace M50.
6. Replace PBDB1.
7. Replace PBCB.

Faulty part isolation DIPSW

DIPSW7-6

Control while detached

Ejecting onto the sub tray is possible.

2.15.28 C-1530

Code

C-1530

Classification

PB: PB abnormality

Cause

The booklet movement of the booklet conveyance section has not been completed within a specified period of time after the booklet conveyance belt motor (M61) turns ON.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- PB control board (PBCB)
- PB drive board (PBDB)
- Booklet conveyance belt motor (M61)

Correction

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the booklet conveyance section, and clean/repair it if any abnormality.

2. Check the connector connection and the wiring between PBDB/PBDB1 and the motor, and repair it if any abnormality.
3. Check the connector connection and the wiring between PBDB/PBDB1 and PBCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram:PB-503: 15-D)
5. Replace M61.
6. Replace PBDB1.
7. Replace PBCB.

Faulty part isolation DIPSW

DIPSW7-6

Control while detached

Ejecting onto the sub tray is possible.

2.15.29 C-1531**Code**

C-1531

Classification

PB: PB abnormality

Cause

The size changing operation of the carriage section has not been completed within a specified period of time after the booklet conveyance belt movement motor (M62) turns ON.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- PB control board (PBCB)
- PB drive board (PBDB)
- Booklet conveyance belt movement motor (M62)

Correction**Note**

- The message "Please call service" is displayed on the panel.

Solution

1. Check the booklet conveyance section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PBDB/PBDB1 and the motor, and repair it if any abnormality.
3. Check the connector connection and the wiring between PBDB/PBDB1 and PBCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram:PB-503: 15-D)
5. Replace M62.
6. Replace PBDB1.
7. Replace PBCB.

Faulty part isolation DIPSW

DIPSW7-6

Control while detached

Ejecting onto the sub tray is possible.

2.15.30 C-1532**Code**

C-1532

Classification

PB: PB abnormality

Cause

The up/down movement operation of the carriage section has not been completed within a specified period of time after the booklet conveyance belt up down motor (M63) turns ON.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- PB control board (PBCB)
- PB drive board (PBDB)
- Booklet conveyance belt up down motor (M63)

Correction**Note**

- The message "Please call service" is displayed on the panel.

Solution

1. Check the booklet conveyance section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PBDB/PBDB1 and the motor, and repair it if any abnormality.
3. Check the connector connection and the wiring between PBDB/PBDB1 and PBCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram:PB-503: 16-D)
5. Replace M63.
6. Replace PBDB1.
7. Replace PBCB.

Faulty part isolation DIPSW

DIPSW7-6

Control while detached

Ejecting onto the sub tray is possible.

2.15.31 C-1534**Code**

C-1534

Classification

PB: PB abnormality

Cause

The booklet rear edge pressing process has not been completed within a specified period of time after the booklet stopper motor (M65) turns ON.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- PB control board (PBCB)
- PB drive board (PBDB)
- Booklet stopper motor (M65)

Correction**Note**

- The message "Please call service" is displayed on the panel.

Solution

1. Check the booklet conveyance section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PBDB/PBDB1 and the motor, and repair it if any abnormality.
3. Check the connector connection and the wiring between PBDB/PBDB1 and PBCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: PB-503: 16-D)
5. Replace M65.
6. Replace PBDB1.
7. Replace PBCB.

Faulty part isolation DIPSW

DIPSW7-6

Control while detached

Ejecting onto the sub tray is possible.

2.15.32 C-1537**Code**

C-1537

Classification

PB: PB abnormality

Cause

The tray moving up process has not been completed within a specified period of time after the cover paper tray lift motor (M73) turns ON.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- PB control board (PBCB)
- PB drive board (PBDB)
- Cover paper tray lift motor (M73)

Correction**Note**

- The message "Please call service" is displayed on the panel.

Solution

1. Check the cover paper tray section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PBDB/PBDB1 and the motor, and repair it if any abnormality.
3. Check the connector connection and the wiring between PBDB/PBDB1 and PBCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: PB-503: 19-D)
5. Replace M73.
6. Replace PBDB1.
7. Replace PBCB.

Faulty part isolation DIPSW

DIPSW7-5

Control while detached

Paper feed from the PB is unavailable.

2.15.33 C-1538**Code**

C-1538

Classification

PB: PB abnormality

Cause

The cover paper feed has not been completed within a specified period of time after the cover paper feed motor (M74) turns ON.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- PB control board (PBCB)
- PB drive board (PBDB)
- Cover paper feed motor (M74)

Correction**Note**

- The message "Please call service" is displayed on the panel.

Solution

1. Check the cover paper feed section, and clean/repair it if any abnormality.

2. Check the connector connection and the wiring between PBDB/PBDB1 and the motor, and repair it if any abnormality.
3. Check the connector connection and the wiring between PBDB/PBDB1 and PBCB, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: PB-503: 17-D)
5. Replace M74.
6. Replace PBDB1.
7. Replace PBCB.

Faulty part isolation DIPSW

DIPSW7-5

Control while detached

Paper feed from the PB is unavailable.

2.15.34 C-1540**Code**

C-1540

Classification

PB: PB abnormality

Cause

After the warm-up is started, temperature detected by the glue tank temperature sensor /Md (TH3) has not risen to a prescribed level within a specified time period.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- AC drive board (ACDB)
- Glue tank heater (H1)
- Glue apply roller heater (H2)
- PB control board (PBCB)
- PB drive board (PBDB)
- Glue apply roller motor (M32)
- Glue tank temperature sensor /Md (TH3)

Correction

Be sure to change the software DIPSW3-1 from 1 to 0 and turn OFF/ON the sub power switch (SW2) of the main body after fixing the defective parts.

WARNING

- If DIPSW3-1 is set to 0 before defective parts are fixed, it may cause fire.

Solution

1. Check the glue tank heater, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PBCB and the temperature sensor, and repair it if any abnormality.
3. Check the connector connection and the wiring between ACDB and the heater, and repair it if any abnormality.
4. Check the installation conditions of the heater and the temperature sensor, and repair/replace it if any abnormality. (Wiring diagram: PB-503: 27-Q, 10-U)
5. Replace TH3.
6. Replace H1.
7. Replace ACDB.
8. Replace PBCB.

Faulty part isolation DIPSW

DIPSW7-7

Control while detached

The use of the PB is unavailable

2.15.35 C-1541**Code**

C-1541

Classification

PB: PB abnormality

Cause

After the warm-up is started, temperature detected by the glue tank temperature sensor /Lw (TH4) has not risen to a prescribed level within a specified time period.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- AC drive board (ACDB)
- Glue tank heater (H1)
- Glue apply roller heater (H2)
- PB control board (PBCB)
- PB drive board (PBDB)
- Glue apply roller motor (M32)
- Glue tank temperature sensor /Lw (TH4)

Correction

Be sure to change the software DIPSW3-1 from 1 to 0 and turn OFF/ON the sub power switch (SW2) of the main body after fixing the defective parts.

WARNING

- If DipSW3-1 is set to 0 before defective parts are fixed, it causes fire.

Solution

1. Check the glue tank heater, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PBCB and the temperature sensor, and repair it if any abnormality.

3. Check the connector connection and the wiring between ACDB and the heater, and repair it if any abnormality.
4. Check the installation conditions of the heater and the temperature sensor, and repair/replace it if any abnormality. (Wiring diagram: PB-503: 27-Q, 10-U)
5. Replace TH4.
6. Replace H1.
7. Replace ACDB.
8. Replace PBCB.

Faulty part isolation DIPSW

DIPSW7-7

Control while detached

The use of the PB is unavailable

2.15.36 C-1542**Code**

C-1542

Classification

PB: PB abnormality

Cause

After the warm-up is started, temperature detected by the glue apply roller temperature sensor (TH1) has not risen to a prescribed level within a specified time period.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- AC drive board (ACDB)
- Glue tank heater (H1)
- Glue apply roller heater (H2)
- PB control board (PBCB)
- PB drive board (PBDB)
- Glue apply roller motor (M32)
- Glue apply roller temperature sensor (TH1)

Correction

Be sure to change the software DIPSW3-1 from 1 to 0 and turn OFF/ON the sub power switch (SW2) of the main body after fixing the defective parts.

WARNING

- If DipSW3-1 is set to 0 before defective parts are fixed, it causes fire.

Solution

1. Check the glue apply heater, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PBCB and the temperature sensor, and repair it if any abnormality.
3. Check the connector connection and the wiring between ACDB and the heater, and repair it if any abnormality.
4. Check the installation conditions of the heater and the temperature sensor, and repair/replace it if any abnormality. (Wiring diagram: PB-503: 27-Q, 9-U)
5. Replace TH1.
6. Replace H2.
7. Replace ACDB.
8. Replace PBCB.

Faulty part isolation DIPSW

DIPSW7-7

Control while detached

The use of the PB is unavailable

2.15.37 C-1543**Code**

C-1543

Classification

PB: PB abnormality

Cause

After the pellet supply, temperature detected by the glue tank temperature sensor /Up (TH2) has not risen to a prescribed level within a specified period of time.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- AC drive board (ACDB)
- Glue tank heater (H1)
- Glue apply roller heater (H2)
- PB control board (PBCB)
- PB drive board (PBDB)
- Glue apply roller motor (M32)
- Glue tank temperature sensor /Up (TH2)

Correction

Be sure to change the software DIPSW3-1 from 1 to 0 and turn OFF/ON the sub power switch (SW2) of the main body after fixing the defective parts.

WARNING

- If DipSW3-1 is set to 0 before defective parts are fixed, it causes fire.

Solution

1. Check the glue tank heater, and clean/repair it if any abnormality.

2. Check the connector connection and the wiring between PBCB and the temperature sensor, and repair it if any abnormality.
3. Check the connector connection and the wiring between ACDB and the heater, and repair it if any abnormality.
4. Check the installation conditions of the heater and the temperature sensor, and repair/replace it if any abnormality. (Wiring diagram: PB-503: 27-Q, 9-U)
5. Replace TH2.
6. Replace H1.
7. Replace ACDB.
8. Replace PBCB.

Faulty part isolation DIPSW

DIPSW7-7

Control while detached

The use of the PB is unavailable

2.15.38 C-1544**Code**

C-1544

Classification

PB: PB abnormality

Cause

During standby, after the glue tank heater (H1) is turned ON, temperature detected by the glue tank temperature sensor /Md (TH3) has not risen to a prescribed level within a specified time period.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- AC drive board (ACDB)
- Glue tank heater (H1)
- Glue apply roller heater (H2)
- PB control board (PBCB)
- PB drive board (PBDB)
- Glue apply roller motor (M32)
- Glue tank temperature sensor /Md (TH3)

Correction

Be sure to change the software DIPSW3-1 from 1 to 0 and turn OFF/ON the sub power switch (SW2) of the main body after fixing the defective parts.

WARNING

- If DipSW3-1 is set to 0 before defective parts are fixed, it causes fire.

Solution

1. Check the glue tank heater, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PBCB and the temperature sensor, and repair it if any abnormality.
3. Check the connector connection and the wiring between ACDB and the heater, and repair it if any abnormality.
4. Check the installation conditions of the heater and the temperature sensor, and repair/replace it if any abnormality. (Wiring diagram: PB-503: 27-Q, 10-U)
5. Replace TH3.
6. Replace H1.
7. Replace ACDB.
8. Replace PBCB.

Faulty part isolation DIPSW

DIPSW7-7

Control while detached

The use of the PB is unavailable

2.15.39 C-1545**Code**

C-1545

Classification

PB: PB abnormality

Cause

When the prescribed temperature is obtained and after the glue tank heater (H1) is turned ON, temperature detected by the glue tank temperature sensor /Lw (TH4) has not risen to a prescribed level within a specified time period.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- AC drive board (ACDB)
- Glue tank heater (H1)
- Glue apply roller heater (H2)
- PB control board (PBCB)
- PB drive board (PBDB)
- Glue apply roller motor (M32)
- Glue tank temperature sensor /Lw (TH4)

Correction

Be sure to change the software DIPSW3-1 from 1 to 0 and turn OFF/ON the sub power switch (SW2) of the main body after fixing the defective parts.

WARNING

- If DipSW3-1 is set to 0 before defective parts are fixed, it causes fire.

Solution

1. Check the glue tank heater, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PBCB and the temperature sensor, and repair it if any abnormality.
3. Check the connector connection and the wiring between ACDB and the heater, and repair it if any abnormality.
4. Check the installation conditions of the heater and the temperature sensor, and repair/replace it if any abnormality. (Wiring diagram: PB-503: 27-Q, 10-U)
5. Replace TH4.
6. Replace H1.
7. Replace ACDB.
8. Replace PBCB.

Faulty part isolation DIPSW

DIPSW7-7

Control while detached

The use of the PB is unavailable

2.15.40 C-1546**Code**

C-1546

Classification

PB: PB abnormality

Cause

When the prescribed temperature is obtained and after the glue tank heater (H1) is turned ON, temperature detected by the glue apply roller temperature sensor (TH1) has not risen to a prescribed level within a specified time period.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- AC drive board (ACDB)
- Glue tank heater (H1)
- Glue apply roller heater (H2)
- PB control board (PBCB)
- PB drive board (PBDB)
- Glue apply roller motor (M32)
- Glue apply roller temperature sensor (TH1)

Correction

Be sure to change the software DIPSW3-1 from 1 to 0 and turn OFF/ON the sub power switch (SW2) of the main body after fixing the defective parts.

WARNING

- If DipSW3-1 is set to 0 before defective parts are fixed, it causes fire.

Solution

1. Check the glue apply heater, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PBCB and the temperature sensor, and repair it if any abnormality.
3. Check the connector connection and the wiring between ACDB and the heater, and repair it if any abnormality.
4. Check the installation conditions of the heater and the temperature sensor, and repair/replace it if any abnormality. (Wiring diagram: PB-503: 27-Q, 9-U)
5. Replace TH1.
6. Replace H2.
7. Replace ACDB.
8. Replace PBCB.

Faulty part isolation DIPSW

DIPSW7-7

Control while detached

The use of the PB is unavailable

2.15.41 C-1547**Code**

C-1547

Classification

PB: PB abnormality

Cause

The glue apply roller temperature sensor (TH1) detects an abnormal high temperature.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- AC drive board (ACDB)
- Glue tank heater (H1)
- Glue apply roller heater (H2)
- PB control board (PBCB)
- PB drive board (PBDB)
- Glue apply roller motor (M32)
- Glue apply roller temperature sensor (TH1)

Correction

Be sure to change the software DIPSW3-1 from 1 to 0 and turn OFF/ON the sub power switch (SW2) of the main body after fixing the defective parts.

WARNING

- If DipSW3-1 is set to 0 before defective parts are fixed, it causes fire.

Solution

1. Check the glue apply heater, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PBCB and the temperature sensor, and repair it if any abnormality.
3. Check the connector connection and the wiring between ACDB and the heater, and repair it if any abnormality.
4. Check the installation conditions of the heater and the temperature sensor, and repair/replace it if any abnormality. (Wiring diagram: PB-503: 27-Q, 9-U)
5. Replace TH1.
6. Replace H2.
7. Replace ACDB.
8. Replace PBCB.

Faulty part isolation DIPSW

DIPSW7-7

Control while detached

The use of the PB is unavailable

2.15.42 C-1548**Code**

C-1548

Classification

PB: PB abnormality

Cause

The glue tank temperature sensor /Up (TH2) detects an abnormal high temperature.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- AC drive board (ACDB)
- Glue tank heater (H1)
- Glue apply roller heater (H2)
- PB control board (PBCB)
- PB drive board (PBDB)
- Glue apply roller motor (M32)
- Glue tank temperature sensor /Up (TH2)

Correction

Be sure to change the software DIPSW3-1 from 1 to 0 and turn OFF/ON the sub power switch (SW2) of the main body after fixing the defective parts.

WARNING

- If DipSW3-1 is set to 0 before defective parts are fixed, it causes fire.

Solution

1. Check the glue tank heater, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PBCB and the temperature sensor, and repair it if any abnormality.
3. Check the connector connection and the wiring between ACDB and the heater, and repair it if any abnormality.
4. Check the installation conditions of the heater and the temperature sensor, and repair/replace it if any abnormality. (Wiring diagram: PB-503: 27-Q, 9-U)
5. Replace TH2.
6. Replace H1.
7. Replace ACDB.
8. Replace PBCB.

Faulty part isolation DIPSW

DIPSW7-7

Control while detached

The use of the PB is unavailable

2.15.43 C-1549**Code**

C-1549

Classification

PB: PB abnormality

Cause

The glue tank temperature sensor /Md (TH3) detects an abnormal high temperature.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- AC drive board (ACDB)
- Glue tank heater (H1)
- Glue apply roller heater (H2)
- PB control board (PBCB)
- PB drive board (PBDB)
- Glue apply roller motor (M32)
- Glue tank temperature sensor /Md (TH3)

Correction

Be sure to change the software DIPSW3-1 from 1 to 0 and turn OFF/ON the sub power switch (SW2) of the main body after fixing the defective parts.

WARNING

- If DipSW3-1 is set to 0 before defective parts are fixed, it causes fire.

Solution

1. Check the glue tank heater, and clean/repair it if any abnormality.

2. Check the connector connection and the wiring between PBCB and the temperature sensor, and repair it if any abnormality.
3. Check the connector connection and the wiring between ACDB and the heater, and repair it if any abnormality.
4. Check the installation conditions of the heater and the temperature sensor, and repair/replace it if any abnormality. (Wiring diagram: PB-503: 27-Q, 10-U)
5. Replace TH3.
6. Replace H1.
7. Replace ACDB.
8. Replace PBCB.

Faulty part isolation DIPSW

DIPSW7-7

Control while detached

The use of the PB is unavailable

2.15.44 C-1550**Code**

C-1550

Classification

PB: PB abnormality

Cause

The glue tank temperature sensor /Lw (TH4) detects an abnormal high temperature.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- AC drive board (ACDB)
- Glue tank heater (H1)
- Glue apply roller heater (H2)
- PB control board (PBCB)
- PB drive board (PBDB)
- Glue apply roller motor (M32)
- Glue tank temperature sensor /Lw (TH4)

Correction

Be sure to change the software DIPSW3-1 from 1 to 0 and turn OFF/ON the sub power switch (SW2) of the main body after fixing the defective parts.

WARNING

- If DipSW3-1 is set to 0 before defective parts are fixed, it causes fire.

Solution

1. Check the glue tank heater, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PBCB and the temperature sensor, and repair it if any abnormality.
3. Check the connector connection and the wiring between ACDB and the heater, and repair it if any abnormality.
4. Check the installation conditions of the heater and the temperature sensor, and repair/replace it if any abnormality. (Wiring diagram: PB-503: 27-Q, 10-U)
5. Replace TH4.
6. Replace H1.
7. Replace ACDB.
8. Replace PBCB.

Faulty part isolation DIPSW

DIPSW7-7

Control while detached

The use of the PB is unavailable

2.15.45 C-1551**Code**

C-1551

Classification

PB: PB abnormality

Cause

The glue apply roller temperature sensor (TH1) detects an abnormal high temperature (hardware) TH1 detects an abnormal high temperature of the glue apply roller.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- AC drive board (ACDB)
- Glue tank heater (H1)
- Glue apply roller heater (H2)
- PB control board (PBCB)
- PB drive board (PBDB)
- Glue apply roller motor (M32)
- Glue apply roller temperature sensor (TH1)

Correction

Be sure to change the software DIPSW3-1 from 1 to 0 and turn OFF/ON the sub power switch (SW2) of the main body after fixing the defective parts.

WARNING

- If DipSW3-1 is set to 0 before defective parts are fixed, it causes fire.

Solution

1. Check the glue apply heater, and clean/repair it if any abnormality.

2. Check the connector connection and the wiring between PBCB and the temperature sensor, and repair it if any abnormality.
3. Check the connector connection and the wiring between ACDB and the heater, and repair it if any abnormality.
4. Check the installation conditions of the heater and the temperature sensor, and repair/replace it if any abnormality. (Wiring diagram: PB-503: 27-Q, 9-U)
5. Replace TH1.
6. Replace H2.
7. Replace ACDB.
8. Replace PBCB.

Faulty part isolation DIPSW

DIPSW7-7

Control while detached

The use of the PB is unavailable

2.15.46 C-1552**Code**

C-1552

Classification

PB: PB abnormality

Cause

The glue tank temperature sensor /Up (TH2) detects an abnormal high temperature (hardware). TH2 detects an abnormal high temperature of the glue tank.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- AC drive board (ACDB)
- Glue tank heater (H1)
- Glue apply roller heater (H2)
- PB control board (PBCB)
- PB drive board (PBDB)
- Glue apply roller motor (M32)
- Glue tank temperature sensor /Up (TH2)

Correction

Be sure to change the software DIPSW3-1 from 1 to 0 and turn OFF/ON the sub power switch (SW2) of the main body after fixing the defective parts.

WARNING

- If DipSW3-1 is set to 0 before defective parts are fixed, it causes fire.

Solution

1. Check the glue tank heater, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PBCB and the temperature sensor, and repair it if any abnormality.
3. Check the connector connection and the wiring between ACDB and the heater, and repair it if any abnormality.
4. Check the installation conditions of the heater and the temperature sensor, and repair/replace it if any abnormality. (Wiring diagram: PB-503: 27-Q, 9-U)
5. Replace TH2.
6. Replace H1.
7. Replace ACDB.
8. Replace PBCB.

Faulty part isolation DIPSW

DIPSW7-7

Control while detached

The use of the PB is unavailable

2.15.47 C-1553**Code**

C-1553

Classification

PB: PB abnormality

Cause

The glue tank temperature sensor /Md (TH3) detects an abnormal high temperature (hardware). TH3 detects an abnormal high temperature of the glue tank.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- AC drive board (ACDB)
- Glue tank heater (H1)
- Glue apply roller heater (H2)
- PB control board (PBCB)
- PB drive board (PBDB)
- Glue apply roller motor (M32)
- Glue tank temperature sensor /Md (TH3)

Correction

Be sure to change the software DIPSW3-1 from 1 to 0 and turn OFF/ON the sub power switch (SW2) of the main body after fixing the defective parts.

WARNING

- If DipSW3-1 is set to 0 before defective parts are fixed, it causes fire.

Solution

1. Check the glue tank heater, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PBCB and the temperature sensor, and repair it if any abnormality.
3. Check the connector connection and the wiring between ACDB and the heater, and repair it if any abnormality.
4. Check the installation conditions of the heater and the temperature sensor, and repair/replace it if any abnormality. (Wiring diagram: PB-503: 27-Q, 10-U)
5. Replace TH3.
6. Replace H1.
7. Replace ACDB.
8. Replace PBCB.

Faulty part isolation DIPSW

DIPSW7-7

Control while detached

The use of the PB is unavailable

2.15.48 C-1554**Code**

C-1554

Classification

PB: PB abnormality

Cause

The glue tank temperature sensor /Lw (TH4) detects an abnormal high temperature (hardware). TH4 detects an abnormal high temperature of the glue tank.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- AC drive board (ACDB)
- Glue tank heater (H1)
- Glue apply roller heater (H2)
- PB control board (PBCB)
- PB drive board (PBDB)
- Glue apply roller motor (M32)
- Glue tank temperature sensor /Lw (TH4)

Correction

Be sure to change the software DIPSW3-1 from 1 to 0 and turn OFF/ON the sub power switch (SW2) of the main body after fixing the defective parts.

WARNING

- If DipSW3-1 is set to 0 before defective parts are fixed, it causes fire.

Solution

1. Check the glue tank heater, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PBCB and the temperature sensor, and repair it if any abnormality.
3. Check the connector connection and the wiring between ACDB and the heater, and repair it if any abnormality.
4. Check the installation conditions of the heater and the temperature sensor, and repair/replace it if any abnormality. (Wiring diagram: PB-503: 27-Q, 10-U)
5. Replace TH4.
6. Replace H1.
7. Replace ACDB.
8. Replace PBCB.

Faulty part isolation DIPSW

DIPSW7-7

Control while detached

The use of the PB is unavailable

2.15.49 C-1555**Code**

C-1555

Classification

PB: PB abnormality

Cause

After warming-up is completed, the glue apply roller temperature sensor (TH1) detects an abnormal low temperature.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- AC drive board (ACDB)
- Glue tank heater (H1)
- Glue apply roller heater (H2)
- PB control board (PBCB)
- PB drive board (PBDB)
- Glue apply roller motor (M32)
- Glue apply roller temperature sensor (TH1)

Correction

Be sure to change the software DIPSW3-1 from 1 to 0 and turn OFF/ON the sub power switch (SW2) of the main body after fixing the defective parts.

WARNING

- If DipSW3-1 is set to 0 before defective parts are fixed, it causes fire.

Solution

1. Check the glue apply heater, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PBCB and the temperature sensor, and repair it if any abnormality.
3. Check the connector connection and the wiring between ACDB and the heater, and repair it if any abnormality.
4. Check the installation conditions of the heater and the temperature sensor, and repair/replace it if any abnormality. (Wiring diagram: PB-503: 27-Q, 9-U)
5. Replace TH1.
6. Replace H2.
7. Replace ACDB.
8. Replace PBCB.

Faulty part isolation DIPSW

DIPSW7-7

Control while detached

The use of the PB is unavailable

2.15.50 C-1556**Code**

C-1556

Classification

PB: PB abnormality

Cause

When glue supply control temperature is reached, the glue tank temperature sensor /Up (TH2) detects an abnormal low temperature.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- AC drive board (ACDB)
- Glue tank heater (H1)
- Glue apply roller heater (H2)
- PB control board (PBCB)
- PB drive board (PBDB)
- Glue apply roller motor (M32)
- Glue tank temperature sensor /Up (TH2)

Correction

Be sure to change the software DIPSW3-1 from 1 to 0 and turn OFF/ON the sub power switch (SW2) of the main body after fixing the defective parts.

WARNING

- If DipSW3-1 is set to 0 before defective parts are fixed, it causes fire.

Solution

1. Check the glue tank heater, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PBCB and the temperature sensor, and repair it if any abnormality.
3. Check the connector connection and the wiring between ACDB and the heater, and repair it if any abnormality.
4. Check the installation conditions of the heater and the temperature sensor, and repair/replace it if any abnormality. (Wiring diagram: PB-503: 27-Q, 9-U)
5. Replace TH2.
6. Replace H1.
7. Replace ACDB.
8. Replace PBCB.

Faulty part isolation DIPSW

DIPSW7-7

Control while detached

The use of the PB is unavailable

2.15.51 C-1557**Code**

C-1557

Classification

PB: PB abnormality

Cause

After warming-up is completed, the glue tank temperature sensor /Md (TH3) detects an abnormal low temperature.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- AC drive board (ACDB)
- Glue tank heater (H1)
- Glue apply roller heater (H2)
- PB control board (PBCB)
- PB drive board (PBDB)
- Glue apply roller motor (M32)
- Glue tank temperature sensor /Md (TH3)

Correction

Be sure to change the software DIPSW3-1 from 1 to 0 and turn OFF/ON the sub power switch (SW2) of the main body after fixing the defective parts.

WARNING

- If DipSW3-1 is set to 0 before defective parts are fixed, it causes fire.

Solution

1. Check the glue tank heater, and clean/repair it if any abnormality.

2. Check the connector connection and the wiring between PBCB and the temperature sensor, and repair it if any abnormality.
3. Check the connector connection and the wiring between ACDB and the heater, and repair it if any abnormality.
4. Check the installation conditions of the heater and the temperature sensor, and repair/replace it if any abnormality. (Wiring diagram: PB-503: 27-Q, 10-U)
5. Replace TH3.
6. Replace H1.
7. Replace ACDB.
8. Replace PBCB.

Faulty part isolation DIPSW

DIPSW7-7

Control while detached

The use of the PB is unavailable

2.15.52 C-1558**Code**

C-1558

Classification

PB: PB abnormality

Cause

After warming-up is completed, the glue tank temperature sensor /Lw (TH4) detects an abnormal low temperature.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- AC drive board (ACDB)
- Glue tank heater (H1)
- Glue apply roller heater (H2)
- PB control board (PBCB)
- PB drive board (PBDB)
- Glue apply roller motor (M32)
- Glue tank temperature sensor /Lw (TH4)

Correction

Be sure to change the software DIPSW3-1 from 1 to 0 and turn OFF/ON the sub power switch (SW2) of the main body after fixing the defective parts.

WARNING

- If DipSW3-1 is set to 0 before defective parts are fixed, it causes fire.

Solution

1. Check the glue tank heater, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PBCB and the temperature sensor, and repair it if any abnormality.
3. Check the connector connection and the wiring between ACDB and the heater, and repair it if any abnormality.
4. Check the installation conditions of the heater and the temperature sensor, and repair/replace it if any abnormality. (Wiring diagram: PB-503: 27-Q, 10-U)
5. Replace TH4.
6. Replace H1.
7. Replace ACDB.
8. Replace PBCB.

Faulty part isolation DIPSW

DIPSW7-7

Control while detached

The use of the PB is unavailable

2.15.53 C-1559**Code**

C-1559

Classification

PB: PB abnormality

Cause

The glue apply roller temperature sensor (TH1) detects an abnormal low temperature (hardware). After warming-up is completed, TH1 detects the glue apply roller error signal of abnormal low temperature.

Measures to take when alert occurs

The main body stops immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- AC drive board (ACDB)
- Glue tank heater (H1)
- Glue apply roller heater (H2)
- PB control board (PBCB)
- PB drive board (PBDB)
- Glue apply roller motor (M32)
- Glue apply roller temperature sensor (TH1)

Correction

Be sure to change the software DIPSW3-1 from 1 to 0 and turn OFF/ON the sub power switch (SW2) of the main body after fixing the defective parts.

WARNING

- If DipSW3-1 is set to 0 before defective parts are fixed, it causes fire.

Solution

1. Check the glue apply heater, and clean/repair it if any abnormality.

2. Check the connector connection and the wiring between PBCB and the temperature sensor, and repair it if any abnormality.
3. Check the connector connection and the wiring between ACDB and the heater, and repair it if any abnormality.
4. Check the installation conditions of the heater and the temperature sensor, and repair/replace it if any abnormality. (Wiring diagram: PB-503: 27-Q, 9-U)
5. Replace TH1.
6. Replace H2.
7. Replace ACDB.
8. Replace PBCB.

Faulty part isolation DIPSW

DIPSW7-7

Control while detached

The use of the PB is unavailable

2.15.54 C-1560**Code**

C-1560

Classification

PB: PB abnormality

Cause

The glue tank temperature sensor /Up (TH2) detects an abnormal low temperature (hardware). After glue supply control temperature is reached, TH2 detects the glue tank error signal of abnormal low temperature.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- AC drive board (ACDB)
- Glue tank heater (H1)
- Glue apply roller heater (H2)
- PB control board (PBCB)
- PB drive board (PBDB)
- Glue apply roller motor (M32)
- Glue tank temperature sensor /Up (TH2)

Correction

Be sure to change the software DIPSW3-1 from 1 to 0 and turn OFF/ON the sub power switch (SW2) of the main body after fixing the defective parts.

WARNING

- If DipSW3-1 is set to 0 before defective parts are fixed, it causes fire.

Solution

1. Check the glue tank heater, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PBCB and the temperature sensor, and repair it if any abnormality.
3. Check the connector connection and the wiring between ACDB and the heater, and repair it if any abnormality.
4. Check the installation conditions of the heater and the temperature sensor, and repair/replace it if any abnormality. (Wiring diagram: PB-503: 27-Q, 9-U)
5. Replace TH2.
6. Replace H1.
7. Replace ACDB.
8. Replace PBCB.

Faulty part isolation DIPSW

DIPSW7-7

Control while detached

The use of the PB is unavailable

2.15.55 C-1561**Code**

C-1561

Classification

PB: PB abnormality

Cause

The glue tank temperature sensor /Md (TH3) detects an abnormal low temperature (hardware). After warming-up is completed, TH3 detects the glue tank error signal of abnormal low temperature.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- AC drive board (ACDB)
- Glue tank heater (H1)
- Glue apply roller heater (H2)
- PB control board (PBCB)
- PB drive board (PBDB)
- Glue apply roller motor (M32)
- Glue tank temperature sensor /Md (TH3)

Correction

Be sure to change the software DIPSW3-1 from 1 to 0 and turn OFF/ON the sub power switch (SW2) of the main body after fixing the defective parts.

WARNING

- If DipSW3-1 is set to 0 before defective parts are fixed, it causes fire.

Solution

1. Check the glue tank heater, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PBCB and the temperature sensor, and repair it if any abnormality.
3. Check the connector connection and the wiring between ACDB and the heater, and repair it if any abnormality.
4. Check the installation conditions of the heater and the temperature sensor, and repair/replace it if any abnormality. (Wiring diagram: PB-503: 27-Q, 10-U)
5. Replace TH3.
6. Replace H1.
7. Replace ACDB.
8. Replace PBCB.

Faulty part isolation DIPSW

DIPSW7-7

Control while detached

The use of the PB is unavailable

2.15.56 C-1562**Code**

C-1562

Classification

PB: PB abnormality

Cause

The glue tank temperature sensor /Lw (TH4) detects an abnormal low temperature (hardware). After warming-up is completed, TH4 detects the glue tank error signal of abnormal low temperature.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- AC drive board (ACDB)
- Glue tank heater (H1)
- Glue apply roller heater (H2)
- PB control board (PBCB)
- PB drive board (PBDB)
- Glue apply roller motor (M32)
- Glue tank temperature sensor /Lw (TH4)

Correction

Be sure to change the software DIPSW3-1 from 1 to 0 and turn OFF/ON the sub power switch (SW2) of the main body after fixing the defective parts.

WARNING

- If DipSW3-1 is set to 0 before defective parts are fixed, it causes fire.

Solution

1. Check the glue tank heater, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PBCB and the temperature sensor, and repair it if any abnormality.
3. Check the connector connection and the wiring between ACDB and the heater, and repair it if any abnormality.
4. Check the installation conditions of the heater and the temperature sensor, and repair/replace it if any abnormality. (Wiring diagram: PB-503: 27-Q, 10-U)
5. Replace TH4.
6. Replace H1.
7. Replace ACDB.
8. Replace PBCB.

Faulty part isolation DIPSW

DIPSW7-7

Control while detached

The use of the PB is unavailable

2.15.57 C-1565**Code**

C-1565

Classification

PB: PB abnormality

Cause

PB-503: Operation abnormality of the relay conveyance motor (M92)

The relay conveyance does not start within the specified period of time after M92 turns ON.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

The relay conveyance does not start within the specified period of time after M92 turns ON.

Estimated abnormal parts

- Intermediate conveyance motor (M92: PB-503)
- PB drive board /2 (PBDB2: PB-503)
- PB control board (PBCB: PB-503)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Solution

1. Check the relay conveyance section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PBDB2 and the motor, and repair it if any abnormality.
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: PB-503: 23-V)
4. Replace M92.
5. Replace PBDB2.
6. Replace PBCB.

Faulty part isolation DIPSW Control while detached

2.15.58 C-1566

Code

C-1566

Classification

PB: PB abnormality

Cause

PB-503: Operation abnormality of the relay conveyance exit motor (M91)
An error detection signal is detected continuously while the M91 is driving.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Relay conveyance exit motor (M91: PB-503)
- PB control board (PBCB: PB-503)
- PB drive board /1 (PBDB1: PB-503)
- PB drive board /2 (PBDB2: PB-503)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Solution

1. Check the relay conveyance paper exit section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PBDB1 and the motor, and repair it if any abnormality.
3. Check the connector connection and the wiring between PBDB2 and the motor, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: PB-503: 26-W)
5. Replace M91.
6. Replace PBDB2.
7. Replace PBDB1.
8. Replace PBCB.

Faulty part isolation DIPSW Control while detached

2.15.59 C-1567

Code

C-1567

Classification

PB: PB abnormality

Cause

Pellet supply pipe motor drive abnormality
The pellet supply pipe has not completed the operations within a specified period of time after the pellet supply pipe motor (M33) turns ON.

Measures to take when alert occurs

The main body and the PB stop immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- Pellet supply pipe motor (M33: PB-503)
- PB drive board /1 (PBDB1: PB-503)
- PB control board (PBCB: PB-503)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Solution

1. Check the pellet supply section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PBDB1 and the motor, and repair it if any abnormality.
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: PB-503: 10-D)
4. Replace M33.
5. Replace PBDB1.
6. Replace PBCB.

Faulty part isolation DIPSW Control while detached

2.16 Solution 13 (C-2101_2300)

2.16.1 C-2101

Code

C-2101

Classification

Main body: Wire cleaning abnormality

Cause

- Charger cleaning motor (M23) operation time abnormality.
- When the charger cleaning home sensor (PS26) is OFF with the main power switch (SW1) ON, PS26 does not turn ON within 35 seconds after the M23 turns ON for home position research operation (return operation). At this time, an error detection signal (blowout of ICP) is not detected.
 - PS26 does not turn OFF within 15 seconds after the reverse operation (return operation) is started. At this time, an error detection signal (blowout of ICP) is not detected.
 - The charge cleaning limit sensor (PS27) does not turn ON within a specified period of time after the reverse operation (return operation) is started for detection of PS26 being OFF. Or, PS26 does not turn ON within a specified period of time after PS27 turns ON. At this time, an error detection signal (blowout of ICP) is not detected.
 - When PS26 and PS27 are ON at the start of cleaning operation

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Charger cleaning limit sensor (PS26)
- Charger cleaning limit sensor (PS27)
- Charger cleaning motor (M23)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and motor/sensor, and repair it if any abnormality.
2. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: Main body: 16-F)
3. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: Main body: 16-F)
4. Replace PS26 or PS27.
5. Replace M23.
6. Replace PRCB.

Faulty part isolation DIPSW**Control while detached****2.16.2 C-2102****Code**

C-2102

Classification

Main body : Wire cleaning abnormality

Cause

Charger cleaning motor (M23) power abnormality.

- When the charger cleaning home sensor (PS26) is OFF with the main power switch (SW1) ON, PS26 does not turn ON within 35 seconds after the M23 turns ON for home position research operation (return operation). And at this time, an error detection signal (blowout of ICP) is detected.
- PS26 does not turn OFF within 15 seconds after the reverse operation (return operation) is started. And at this time, an error detection signal (blowout of ICP) is detected.
- The charge cleaning limit sensor (PS27) does not turn ON within a specified period of time after the reverse operation (return operation) is started for detection of PS26 being OFF. Or, PS26 does not turn ON within a specified period of time after PS26 turns ON. At this time, an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Charger cleaning motor (M23)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and the motor, and repair it if any abnormality.
2. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: Main body: 16-F)
3. Replace M23 and PRCB.

Faulty part isolation DIPSW**Control while detached****2.16.3 C-2103****Code**

C-2103

Classification

Main body: Wire cleaning abnormality

Cause

Charger cleaning motor (M23) drive abnormality.

A motor lock signal is detected while moving from the charge cleaning limit sensor (PS27) side to the charge cleaning home sensor (PS26) side, and after a retry operation, a fifth motor lock signal is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Charger cleaning motor (M23)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and the motor, and repair it if any abnormality.

2. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: Main body: 16-F)
3. Replace M23.
4. Replace PRCB.

Faulty part isolation DIPSW
Control while detached

2.16.4 C-2201

Code

C-2201

Classification

Main body: Motor abnormality

Cause

Toner bottle motor (M6) speed abnormality.

An error detection signal is detected twice in succession within a specified period of time after M6 was turned ON.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Toner bottle motor (M6)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the toner bottle installation section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PRCB and the motor, and repair it if any abnormality.
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: Main body: 3-M)
4. Replace M6.
5. Replace PRCB.

Faulty part isolation DIPSW
Control while detached

2.16.5 C-2202

Code

C-2202

Classification

Main body: Motor abnormality

Cause

Developing motor (M3) speed abnormality.

Since an error detection signal is detected a second after M3 turns ON, turn OFF M3 for 0.5 seconds. Then, an error detection signal is detected again a second after it is turned ON again.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- developing motor (M3)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the developing sleeve, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PRCB and the motor, and repair it if any abnormality.
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: Main body (3/3): 19-O)
4. Replace M3.
5. Replace PRCB.

Faulty part isolation DIPSW
Control while detached

2.16.6 C-2203

Code

C-2203

Classification

Main body: Motor abnormality

Cause

The locking of the blade motor (M22) is detected.

The error detection signal (over current) of M22 is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Trimmer blade motor (M22)

- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the trimmer blade operation, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PRCB and the motor, and repair it if any abnormality.
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: Main body: 15-F)
4. Replace M22.
5. Replace PRCB.

Faulty part isolation DIPSW

Control while detached

2.16.7 C-2204**Code**

C-2204

Classification

Main body: Motor abnormality

Cause

Drum motor (M2) drive abnormality + 24V power abnormality.

The drum READY1 signal (READY condition) cannot be detected within a specified period of time after the drum motor (M2) turns ON. Or, the drum READY1 signal (READY release condition) cannot be detected within a specified period of time after M2 turns OFF. At this time, an error detection signal (24V cut off) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Printer control board (PRCB)
- DC power supply /1 (DCPS/1)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and DCPS /1, and repair it if any abnormality.
2. Replace PRCB.
3. Replace DCPS /1.

Faulty part isolation DIPSW

Control while detached

2.16.8 C-2205**Code**

C-2205

Classification

Main body: Motor abnormality

Cause

Drum motor (M2) power abnormality.

The drum READY1 signal (READY condition) cannot be detected within a specified period of time after the drum motor (M2) turns ON. Or, the drum READY1 signal (READY release condition) cannot be detected within a specified period of time after M2 turns OFF. At this time, an error detection signal (blowout of ICP) of the blade motor (M22) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Drum motor (M2)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and the motor, and repair it if any abnormality.
2. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: Main body: 20-K)
3. Replace M2.
4. Replace PRCB.

Faulty part isolation DIPSW

Control while detached

2.16.9 C-2206**Code**

C-2206

Classification

Main body: Motor abnormality

Cause

Drum motor (M2) drive abnormality.

- The drum READY1 signal (READY condition) cannot be detected within a specified period of time after the drum motor (M2) turns ON. Or, the drum READY1 signal (READY release condition) cannot be detected within a specified period of time after M2 turns OFF. At this time, an error detection signal is not detected.
- The blade sensors /1 (PS24) and /2 (PS25) detect the condition of pressure or replacement position before the blade pressure signal turns ON.
- The blade sensors /1 (PS24) and /2 (PS25) detect the condition of replacement position when the blade pressure signal turns READY.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- blade sensor /1 (PS24)
- blade sensor /2 (PS25)
- Drum motor (M2)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and the motor, and repair it if any abnormality.
2. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: Main body: 16-F)
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: Main body: 20-K)
4. Replace PS24 or PS25.
5. Replace M2.
6. Replace PRCB.

Faulty part isolation DIPSW

Control while detached

2.16.10 C-2207

Code

C-2207

Classification

Main body: Motor abnormality

Cause

Drum motor (M22) drive abnormality + 24V power abnormality.

The blade READY signal (READY condition) cannot be detected within a specified period of time after the blade replacement signal turns ON. Or, the blade READY signal (READY release condition) cannot be detected within a specified period of time after the blade replacement signal turns OFF. At this time, an error detection signal (24V cut off) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- DC power supply /2 (DCPS/2)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and DCPS /2, and repair it if any abnormality.
2. Replace PRCB.
3. Replace DCPS /2.

Faulty part isolation DIPSW

Control while detached

2.16.11 C-2208

Code

C-2208

Classification

Main body: Motor abnormality

Cause

Blade motor (M22) power abnormality.

The blade READY signal (READY condition) cannot be detected within a specified period of time after the blade replacement signal turns ON. Or, the blade READY signal (READY release condition) cannot be detected within a specified period of time after the blade replacement signal turns OFF. At this time, an error detection signal (blowout of ICP) of the blade motor (M22) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Trimmer blade motor (M22)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and the motor, and repair it if any abnormality.
2. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality.(Wiring diagram: Main body: 15-F)
3. Replace M22 and PRCB at a time.

Faulty part isolation DIPSW**Control while detached****2.16.12 C-2209****Code**

C-2209

Classification

Main body: Motor abnormality

Cause

It is checked that the movement of the blade motor (M22) is not completed.

The blade READY signal (READY condition) cannot be detected within a specified period of time after the blade replacement signal turns ON. Or, the blade READY signal (READY release condition) cannot be detected within a specified period of time after the blade replacement signal turns OFF. At this time, an error detection signal is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Trimmer blade motor (M22)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the trimmer blade operation, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PRCB and the motor, and repair it if any abnormality.
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality.(Wiring diagram: Main body: 15-F)
4. Replace M22.
5. Replace PRCB.

Faulty part isolation DIPSW**Control while detached****2.16.13 C-2210****Code**

C-2210

Classification

Main body: Motor abnormality

Cause

The drum motor (M2) does not start.

The drum READY2 signal (READY signal) is not detected within a specified period of time after M2 turns ON.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Drum motor (M2)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and the motor, and repair it if any abnormality.
2. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality.(Wiring diagram: Main body: 20-K)
3. Replace M2.
4. Replace PRCB.

Faulty part isolation DIPSW**Control while detached****2.16.14 C-2211****Code**

C-2211

Classification

Main body: Motor abnormality

Cause

Intermediate hopper motor (M11) power abnormality.

An error detection signal (blowout of ICP) is detected when M11 turns ON.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Intermediate hopper motor (M11)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and the motor, and repair it if any abnormality.
2. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality.(Wiring diagram: Main body: 6-M)
3. Replace M11 and PRCB at a time.

Faulty part isolation DIPSW**Control while detached****2.16.15 C-2212****Code**

C-2212

Classification

Main body: Motor abnormality

Cause

Air separation motor (M10) power abnormality.

An error detection signal (blowout of ICP) is detected when M10 turns ON.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Air separation motor (M10)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and the motor, and repair it if any abnormality.
2. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality.(Wiring diagram: Main body: 5-M)
3. Replace M10 and PRCB at a time.

Faulty part isolation DIPSW**Control while detached****2.16.16 C-2213****Code**

C-2213

Classification

Main body: Motor abnormality

Cause

Air separation motor (M10) rotation abnormality.

Since an error is detected when M10 turns ON, turn it OFF. An error is still detected when turn it ON again.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Air separation motor (M10)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the air separation section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PRCB and the motor, and repair it if any abnormality.
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality.(Wiring diagram: Main body: 5-M)
4. Replace M10.
5. Replace PRCB.

Faulty part isolation DIPSW**Control while detached****2.16.17 C-2214****Code**

C-2214

Classification

Main body: Motor abnormality

Cause

The toner conveyance abnormality is detected.

When executing the toner supply operation for 8 minutes, the intermediate hopper toner remaining sensor (PS39) does not turn ON and the hopper toner remaining sensor /2 (PS33) detects ON in succession for 15 seconds.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Intermediate hopper toner remaining sensor (PS39)
- Hopper toner remaining sensor /2 (PS33)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the hopper section and the intermediate hopper section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PRCB and the sensor, and repair it if any abnormality.
3. Check the sensor, and repair/replace it if any abnormality.(Wiring diagram: Main body: 4-M, 6-M)
4. Replace PS39.
5. Replace PS33.
6. Replace PRCB.

Faulty part isolation DIPSW

Control while detached

2.16.18 C-2215

Code

C-2215

Classification

Main body: Motor abnormality

Cause

Hopper toner remaining sensor /2 (PS33) abnormality.

When the toner is supplied for 8minutes, it is found that the toner remaining sensor /1 (PS32) does not turn ON and the toner remaining sensor /2 (PS33) turns OFF for the last 15 seconds in succession.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Hopper toner remaining sensor /1 (PS32)
- Hopper toner remaining sensor /2 (PS33)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the hopper section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PRCB and the sensor, and repair it if any abnormality.
3. Check the sensor, and repair/replace it if any abnormality.(Wiring diagram: Main body: 4-M)
4. Replace PS32.
5. Replace PS33.
6. Replace PRCB.

Faulty part isolation DIPSW

Control while detached

2.16.19 C-2217

Code

C-2217

Classification

Main body: Motor abnormality

Cause

Leakage at the mixing section is detected.

When the toner pump motor (M28) is operating, the cup section toner remaining sensor (PS34) detects the toner being provided in succession for seconds.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Cup section toner remaining sensor (PS34)
- Toner pump motor (M28)
- Printer control board (PRCB)

Correction

Be sure to change the software DIPSW3-1 from 1 to 0 and turn OFF/ON the sub power switch (SW2) of the main body after fixing the defective parts.

Note

- If DIPSW3-1 is set to 0 before defective parts are fixed, it may cause fire.

Solution

1. Check the toner mixing section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PRCB and motor/sensor, and repair it if any abnormality.

3. Check the sensor, and repair/replace it if any abnormality. (Wiring diagram: Main body: 4-M)
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: Main body: 6-M)
5. Replace PS34.
6. Replace M28.
7. Replace PRCB.

Faulty part isolation DIPSW
Control while detached

2.16.20 C-2220

Code

C-2220

Classification

Main body: Motor abnormality

Cause

Toner pump motor (M28) rotation abnormality + 24V power abnormality.

While M28 is rotating, an error detection signal (abnormal rotation/24V cut off) is detected for more than 1second.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- DC power supply /2 (DCPS/2)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and DCPS /2, and repair it if any abnormality.
2. Check the connector connection and the wiring between PRCB and the motor, and repair it if any abnormality.
3. Replace DCPS /2.
4. Replace PRCB.

Faulty part isolation DIPSW
Control while detached

2.16.21 C-2221

Code

C-2221

Classification

Main body: Motor abnormality

Cause

Toner pump motor (M28) power abnormality.

While M28 is rotating, an error detection signal (abnormal rotation) is detected for more than 1second. At this time, an abnormality signal (blowout of ICP) is detected, but no abnormality signal (24V cut off) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Toner pump motor (M28)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and the motor, and repair it if any abnormality.
2. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: Main body: 6-M)
3. Replace M28 and PRCB at a time.

Faulty part isolation DIPSW
Control while detached

2.16.22 C-2222

Code

C-2222

Classification

Main body: Motor abnormality

Cause

Toner pump motor (M28) rotation abnormality.

While M28 is rotating, an error detection signal (abnormal rotation) is detected for more than 1second. At this time, an error detection signal (blowout of ICP/24V cut off) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Toner pump motor (M28)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the toner pump section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PRCB and the motor, and repair it if any abnormality.
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: Main body: 6-M)
4. Replace M28.
5. Replace PRCB.

Faulty part isolation DIPSW

Control while detached

2.16.23 C-2224

Code

C-2224

Classification

Main body: Motor abnormality

Cause

Air pump motor (M29) rotation abnormality + 24V power abnormality.

While M29 is rotating, an error detection signal (abnormal rotation) is detected for more than 1second. At this time, an error signal (24V cut off) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- DC power supply /2 (DCPS/2)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and DCPS /2, and repair it if any abnormality.
2. Check the connector connection and the wiring between PRCB and the motor, and repair it if any abnormality.
3. Replace DCPS /2.
4. Replace PRCB.

Faulty part isolation DIPSW

Control while detached

2.16.24 C-2225

Code

C-2225

Classification

Main body: Motor abnormality

Cause

Air pump motor (M29) power abnormality.

While M29 is rotating, an error detection signal (abnormal rotation) is detected for more than 1second. At this time, an abnormality signal (blowout of ICP) is detected, but no abnormality signal (24V cut off) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Air pump motor (M29)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and the motor, and repair it if any abnormality.
2. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality.(Wiring diagram: Main body: 6-M)
3. Replace M29 and PRCB at a time.

Faulty part isolation DIPSW

Control while detached

2.16.25 C-2226

Code

C-2226

Classification

Main body: Motor abnormality

Cause

Air pump motor (M29) rotation abnormality.

While M29 is rotating, an error detection signal (abnormal rotation) is detected for more than 1second. At this time, an error detection signal (blowout of a fuse/24V cut off) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Air pump motor (M29)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the air pump section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PRCB and the motor, and repair it if any abnormality.
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: Main body: 6-M)
4. Replace M29.
5. Replace PRCB.

Faulty part isolation DIPSW**Control while detached****2.16.26 C-2227****Code**

C-2227

Classification

Main body: Motor abnormality

Cause

Developing screw motor (M21) rotation abnormality.

The M21EM error detection signal is detected twice in succession within a specified period of time after M21 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Developing screw motor (M21)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the developing screw section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PRCB and the motor, and repair it if any abnormality.
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: Main body: 18-K)
4. Replace M21.
5. Replace PRCB.

Faulty part isolation DIPSW**Control while detached****2.16.27 C-2228****Code**

C-2228

Classification

Main body: Motor abnormality

Cause

The transfer belt motor (M30) rotation abnormality.

The M30EM error detection signal is detected twice in succession within a specified period of time after M30 was turned ON. However, an error detection signal (blowout of ICP) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Transfer belt motor (M30)
- ADU drive board (ADUDB)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the transfer belt, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PRCB and the motor, and repair it if any abnormality.
3. Check the connector connection and the wiring between ADUDB and the motor, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: Main body 15:-O)
5. Replace M30.
6. Replace PRCB.
7. Replace ADUDB.

Faulty part isolation DIPSW Control while detached

2.16.28 C-2229

Code

C-2229

Classification

Main body: Motor abnormality

Cause

The transfer belt motor (M30) power abnormality.

While M30 is rotating, the M30EM error detection signal is detected. At this time, an error detection signal (blowout of ICP) is detected, and the main door detection is Close

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Transfer belt motor (M30)
- ADU drive board (ADUDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between ADUDB and the motor, and repair it if any abnormality.
2. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: Main body 15:-O)
3. Replace M30 and ADUDB at a time.

Faulty part isolation DIPSW Control while detached

2.16.29 C-2230

Code

C-2230

Classification

Main body: Motor abnormality

Cause

Waste toner box swing motor (M19) drive abnormality.

The waste toner box swing sensor (PS15) ON or OFF is not detected twice in succession within a specified period of time after M19 turns ON.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Waste toner box swing sensor (PS15)
- Waste toner box swing motor (M19)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the waste toner box swing section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PRCB and motor/sensor, and repair it if any abnormality.
3. Check the I/O and drive of the sensor, and repair/replace it if any abnormality (Wiring diagram: Main body: 2-M)
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: Main body: 2-M)
5. Replace PS15.
6. Replace M19.
7. Replace PRCB.

Faulty part isolation DIPSW Control while detached

2.16.30 C-2231

Code

C-2231

Classification

Main body: Motor abnormality

Cause

De-curler motor (M32) rotation abnormality.

The M32EM error detection signal is detected twice in succession within a specified period of time after M32 was turned ON, and the main door detection is Close.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- De-curler motor (M32)
- ADU drive board (ADUDB)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the de-curler section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PRCB and the motor, and repair it if any abnormality.
3. Check the connector connection and the wiring between ADUDB and the motor, and repair it if any abnormality.
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: Main body: 15-O)
5. Replace M32.
6. Replace PRCB.

Faulty part isolation DIPSW**Control while detached****2.16.31 C-2232****Code**

C-2232

Classification

Main body: Motor abnormality

Cause

De-curler motor (M32) power abnormality.

While M32 is rotating, the M32EM error detection signal is detected. At this time, an error detection signal (blowout of ICP) is detected, and the main door detection is Close.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- De-curler motor (M32)
- ADU drive board (ADUDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between ADUDB and the motor, and repair it if any abnormality.
2. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: Main body: 15-O)
3. Replace M32 and ADUDB at a time.

Faulty part isolation DIPSW**Control while detached****2.16.32 C-2233****Code**

C-2233

Classification

Main body: Motor abnormality

Cause

Waste toner box swing motor (M19) rotation abnormality.

The M19EM error detection signal is not detected twice in succession within a specified period of time after M19 was turned ON.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Waste toner box swing motor (M19)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the waste toner box swing section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PRCB and the motor, and repair it if any abnormality.
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: Main body: 2-M)
4. Replace M19.
5. Replace PRCB.

Faulty part isolation DIPSW**Control while detached****2.16.33 C-2234****Code**

C-2234

Classification

Main body: Motor abnormality

Cause

Transfer belt pressure release motor (M26) operation time abnormality 1.

When M26 moves from the HP position to the pressure position, the transfer pressure position sensor /1 or /2 (PS55 or PS56) does not turn ON within a specified period of time. At this time, the main door detection is Close.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Transfer pressure position sensor /1 (PS55)
- Transfer pressure position sensor /2 (PS56)
- Transfer belt pressure release motor (M26)
- ADU drive board (ADUDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the transfer belt pressure release section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between ADUDB and motor/sensor, and repair it if any abnormality.
3. Check the I/O and drive of the sensor, and repair/replace it if any abnormality (Wiring diagram: Main body: 19-L)
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: Main body: 21-L)
5. Replace PS55 or PS56.
6. Replace M26.
7. Replace ADUDB.

Faulty part isolation DIPSW**Control while detached****2.16.34 C-2235****Code**

C-2235

Classification

Main body: Motor abnormality

Cause

Transfer belt pressure release motor (M26) operation time abnormality 2.

- The transfer pressure home sensor (PS54) ON is not detected within a specified period of time after the main power turns ON. At this time, the main door detection is Close.
- When M26 moves from the pressure position to the HP position, PS54 does not turn ON within a specified period of time. At this time, the main door detection is Close.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Transfer pressure position sensor (PS54)
- Transfer belt pressure release motor (M26)
- ADU drive board (ADUDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the transfer belt pressure release section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between ADUDB and motor/sensor, and repair it if any abnormality.
3. Check the I/O and drive of the sensor, and repair/replace it if any abnormality (Wiring diagram: Main body: 19-L)
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: Main body 21:-L)
5. Replace PS54.
6. Replace M26.
7. Replace PRCB.

Faulty part isolation DIPSW**Control while detached****2.16.35 C-2236****Code**

C-2236

Classification

Main body: Motor abnormality

Cause

Transfer belt pressure release motor (M26) power abnormality.

While M26 is rotating, the M26EM error detection signal is detected. At this time, an error detection signal (blowout of ICP) is detected, and the main door detection is Close

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Transfer belt pressure release motor (M26)
- ADU drive board (ADUDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between ADUDB and the motor, and repair it if any abnormality.
2. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: Main body 21:- L)
3. Replace M26 and ADUDB at a time.

Faulty part isolation DIPSW

Control while detached

2.16.36 C-2237

Code

C-2237

Classification

Main body: Motor abnormality

Cause

Waste toner motor (M9) rotation abnormality.

The M9EM error detection signal is detected twice in succession within a specified period of time after M9 was turned ON.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Waste toner motor (M9)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the waste toner section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PRCB and the motor, and repair it if any abnormality.
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: Main body: 1-M)
4. Replace M9.
5. Replace PRCB.

Faulty part isolation DIPSW

Control while detached

2.17 Solution 14 (C-2301_3999)

2.17.1 C-2301

Code

C-2301

Classification

Main body: Fan abnormality

Cause

Developing suction fan /1 (FM9) rotation abnormality + 24V power abnormality.

The FM9EM error detection signal is detected twice in succession within a specified period of time after FM9 was turned ON. At this time, an error detection signal (24V cut off) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- DC power supply /2 (DCPS/2)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and DCPS /2, and repair it if any abnormality.
2. Replace DCPS /2.
3. Replace PRCB.

Faulty part isolation DIPSW

Control while detached

2.17.2 C-2302

Code

C-2302

Classification

Main body: Fan abnormality

Cause

Developing suction fan /1 (FM9) power abnormality.

The FM9EM error detection signal is detected twice in succession within a specified period of time after FM9 was turned ON. In addition, 24V is normal, and an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Developing suction fan /1 (FM9)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: Main body: 5-L)
3. Replace FM9 and PRCB at a time.

Faulty part isolation DIPSW**Control while detached****2.17.3 C-2303****Code**

C-2303

Classification

Main body: Fan abnormality

Cause

Developing suction fan /1 (FM9) rotation abnormality.

The FM9EM error detection signal is detected twice in succession within a specified period of time after FM9 was turned ON. However, error detection signals (24V cut off/blowout of ICP) are not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Developing suction fan /1 (FM9)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality.
3. Replace FM9.
4. Replace PRCB.

Faulty part isolation DIPSW**Control while detached****2.17.4 C-2304****Code**

C-2304

Classification

Main body: Fan abnormality

Cause

Transfer suction fan (FM5) rotation abnormality + 24V power abnormality.

The FM5EM error detection signal is detected twice in succession within a specified period of time after FM5 was turned ON. At this time, an error detection signal (24V cut off) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- DC power supply /2 (DCPS/2)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and DCPS /2, and repair it if any abnormality.
2. Replace DCPS /2.
3. Replace PRCB.

Faulty part isolation DIPSW**Control while detached****2.17.5 C-2305****Code**

C-2305

Classification

Main body: Fan abnormality

Cause

Transfer suction fan (FM5) power abnormality.

The FM5EM error detection signal is detected twice in succession within a specified period of time after FM5 was turned ON. In addition, 24V is normal, and an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Transfer suction fan (FM5)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: Main body: 3-L)
3. Replace FM5 and PRCB at a time.

Faulty part isolation DIPSW

Control while detached

2.17.6 C-2306

Code

C-2306

Classification

Main body: Fan abnormality

Cause

Transfer suction fan (FM5) rotation abnormality.

The FM5EM error detection signal is detected twice in succession within a specified period of time after FM5 was turned ON. However, error detection signals (24V cut off/blowout of ICP) are not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Transfer suction fan (FM5)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: Main body: 3-L)
3. Replace FM5.
4. Replace PRCB.

Faulty part isolation DIPSW

Control while detached

2.17.7 C-2307

Code

C-2307

Classification

Main body: Fan abnormality

Cause

Developing cooling fan /Up (FM31) rotation abnormality + 24V power abnormality.

The FM31EM error detection signal is detected twice in succession within a specified period of time after FM31 was turned ON. At this time, an error detection signal (24V cut off) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- DC power supply /2 (DCPS/2)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and DCPS /2, and repair it if any abnormality.
2. Replace DCPS /2.
3. Replace PRCB.

Faulty part isolation DIPSW

Control while detached

2.17.8 C-2308

Code

C-2308

Classification

Main body: Fan abnormality

Cause

Developing cooling fan (FM31) power abnormality.

The FM31EM error detection signal is detected twice in succession within a specified period of time after FM31 was turned ON. In addition, 24V is normal, and an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Developing cooling fan (FM31)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: Main body:5-L)
3. Replace FM31 and PRCB at a time.

Faulty part isolation DIPSW**Control while detached****2.17.9 C-2309****Code**

C-2309

Classification

Main body: Fan abnormality

Cause

Developing cooling fan (FM31) rotation abnormality.

The FMxEM error detection signal is detected twice in succession within a specified period of time after FMx was turned ON. However, error detection signals (24V cut off/ICP blowout) are not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Developing cooling fan (FM31)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: Main body:5-L)
3. Replace FM31.
4. Replace PRCB.

Faulty part isolation DIPSW**Control while detached****2.17.10 C-2311****Code**

C-2311

Classification

Main body: Fan abnormality

Cause

Developing cooling fan (FM11) rotation abnormality + 24V power abnormality.

The FM11EM error detection signal is detected twice in succession within a specified period of time after FM11 was turned ON. At this time, an error detection signal (24V cut off) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- DC power supply /2 (DCPS/2)
- AC drive board (ACDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between ACDB and DCPS /2, and repair it if any abnormality.
2. Replace DCPS /2.
3. Replace ACDB.

Faulty part isolation DIPSW**Control while detached**

2.17.11 C-2312**Code**

C-2312

Classification

Main body: Fan abnormality

Cause

Pump cooling fan (FM11) power abnormality.

The FM11EM error detection signal is detected twice in succession within a specified period of time after FM11 was turned ON. However, error detection signals (24V cut off/blowout of ICP) are not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Pump cooling fan (FM11)
- AC drive board (ACDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- **The message "Please call service" is displayed on the panel.**

Solution

1. Check the connector connection and the wiring between ACDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: Main body: 3-L)
3. Replace FM11 and ACDB at a time.

Faulty part isolation DIPSW**Control while detached****2.17.12 C-2313****Code**

C-2313

Classification

Main body: Fan abnormality

Cause

Pump cooling fan (FM11) rotation abnormality.

The FM11EM error detection signal is detected twice in succession within a specified period of time after FM11 was turned ON. However, error detection signals (24V cut off/blowout of ICP) are not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Pump cooling fan (FM11)
- Printer control board (PRCB)
- AC drive board (ACDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- **The message "Please call service" is displayed on the panel.**

Solution

1. Check the connector connection and the wiring between PRCB and the fan, and repair it if any abnormality.
2. Check the connector connection and the wiring between ACDB and the fan, and repair it if any abnormality.
3. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: Main body: 3-L)
4. Replace FM11.
5. Replace PRCB.
6. Replace ACDB.

Faulty part isolation DIPSW**Control while detached****2.17.13 C-2314****Code**

C-2314

Classification

Main body: Fan abnormality

Cause

Suction fan (FM32) rotation abnormality + 24V power abnormality.

The FM32EM error detection signal is detected twice in succession within a specified period of time after FM32 was turned ON. At this time, an error detection signal (24V cut off) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- DC power supply /2 (DCPS/2)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- **The message "Please call service" is displayed on the panel.**

Solution

1. Check the connector connection and the wiring between PRCB and DCPS /2, and repair it if any abnormality.
2. Replace DCPS /2.
3. Replace PRCB.

Faulty part isolation DIPSW
Control while detached

2.17.14 C-2315

Code

C-2315

Classification

Main body: Fan abnormality

Cause

Suction fan (FM32) power abnormality.

The FM32EM error detection signal is detected twice in succession within a specified period of time after FM32 was turned ON. At this time, 24V is normal, but an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Suction fan (FM32)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: Main body: 3-L)
3. Replace FM32 and PRCB at a time.

Faulty part isolation DIPSW
Control while detached

2.17.15 C-2316

Code

C-2316

Classification

Main body: Fan abnormality

Cause

Suction fan (FM32) rotation abnormality.

The FM32EM error detection signal is detected twice in succession within a specified period of time after FM32 was turned ON. However, error detection signals (24V cut off/blowout of ICP) are not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Suction fan (FM32)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: Main body: 3-L)
3. Replace FM32.
4. Replace PRCB.

Faulty part isolation DIPSW
Control while detached

2.17.16 C-2401

Code

C-2401

Classification

Main body :V power abnormality

Cause

The fall-off of the erase lamp (EL) CN is detected.

When turning ON the power, an error detection signal (fall-off) is detected a specified period of time after the fall-off detection control signal of the EL CN turns ON.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Erase lamp (EL)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the EL section, and clean/repair it if any abnormality. (Wiring diagram: Main body: 16-G)
2. Check the connector connection and the wiring between PRCB and EL, and repair it if any abnormality.
3. Replace EL.
4. Replace PRCB.

Faulty part isolation DIPSW**Control while detached****2.17.17 C-2402****Code**

C-2402

Classification

Main body: Drum

Cause

Drum temperature sensor wiring harness breakage.

When the change in temperature of the drum temperature sensor (TH5) is less than -2°C a specified period of time after the main power switch (SW1) turns ON to start the control of the dehumidification heater /1 (HTR1) and the drum temperature is below 10°C after 1 minute.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Drum temperature sensor (TH5)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and TH5, and repair it if any abnormality.
2. Check TH5, and repair/replace it if any abnormality. (Wiring diagram: Main body: 17- F)
3. Replace TH5.
4. Replace PRCB.

Faulty part isolation DIPSW**Control while detached****2.17.18 C-2403****Code**

C-2403

Classification

Main body: Drum

Cause

Drum temperature sensor wiring harness breakage.

When the main power switch (SW1) turns ON with the fusing temperature below 50°C, the detected temperature of the drum temperature sensor (TH5) is more than 52°C, and when the detected temperature is above 52°C after a specified period of time.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Drum temperature sensor (TH5)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and TH5, and repair it if any abnormality.
2. Check TH5, and repair/replace it if any abnormality. (Wiring diagram: Main body: 17- F)
3. Replace TH5.
4. Replace PRCB.

Faulty part isolation DIPSW**Control while detached****2.17.19 C-2411****Code**

C-2411

Classification

Main body: Drum

Cause

TCR sensor (TCRS) output abnormality 1.

The TCRS output is detected more than 3.0V (153step) in printing.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- TCR sensor (TCRS)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the TCRS, and clean/replace it if any abnormality or dirt on sensor(Wiring diagram: Main body: 18-F)
2. Check the developing section, and clean/repair it if there is sensor dirt or any abnormality.
3. Check the connector connection and the wiring between PRCB and TCRS, and repair it if any abnormality.
4. Replace TCRS.
5. Replace PRCB.

Faulty part isolation DIPSW**Control while detached****2.17.20 C-2412****Code**

C-2412

Classification

Main body: Drum

Cause

TCR sensor (TCRS) output abnormality 2.
The TCRS output is detected more than 0.5V (25step) in printing.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- TCR sensor (TCRS)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the TCRS, and clean/replace it if any abnormality or dirt on sensor(Wiring diagram: Main body: 18-F)
2. Check the developing section, and clean/repair it if there is sensor dirt or any abnormality.
3. Check the connector connection and the wiring between PRCB and TCRS, and repair it if any abnormality.
4. Replace TCRS.
5. Replace PRCB.

Faulty part isolation DIPSW**Control while detached****2.17.21 C-2413****Code**

C-2413

Classification

Main body: Drum

Cause

TCR sensor (TCRS) output abnormality 3.

- The mode does not return from the toner supply mode to the normal mode within a specified period of time after the toner automatic supply is executed in printing.
- The TCRS output is detected more than 2.6V (132ndep).

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- TCR sensor (TCRS)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the TCRS, and clean/replace it if any abnormality or dirt on sensor(Wiring diagram: Main body: 18-F)
2. Check the developing section, and clean/repair it if there is sensor dirt or any abnormality.
3. Check the connector connection and the wiring between PRCB and TCRS, and repair it if any abnormality.
4. Replace TCRS.
5. Replace PRCB.

Faulty part isolation DIPSW**Control while detached****2.17.22 C-2701****Code**

C-2701

Classification

Main body: High voltage power source abnormality

Cause

A charge leak is detected.

After a charge EM signal abnormality is detected while in the charge ON, up to 5 charge ON/OFF operations occur in succession while in 10 prints.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Charging corona
- High voltage unit /1 (HV1)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Clean the power feed section for the charger.
2. Check the charger (charging wire and the grid), and clean/repair it if there is any dirt or abnormality.
3. Check the connector connection and the wiring between HV1 and the charger, and repair it if any abnormality. (Wiring diagram: Main body: 18-G).
4. Replace HV1.

Faulty part isolation DIPSW

Control while detached

2.17.23 C-2702

Code

C-2702

Classification

Main body: High voltage power source abnormality

Cause

A transfer leak is detected.

After a transfer EM signal abnormality is detected while in the charge ON, up to 5 transfer ON/OFF operations occur in succession while in 10 prints.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Transfer roller
- High voltage unit /2 (HV2)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the transfer roller section, and clean/repair it if there is sensor dirt or any abnormality.
2. Clean the power feed section for the transfer roller.
3. Check the transfer roller pressure section, and clean/repair it if there is sensor dirt or any abnormality.
4. Check the connector connection and the wiring between HV2 and the power feed section, and repair it if any abnormality. (Wiring diagram: Main body : 13-O)
5. Replace HV2.

Faulty part isolation DIPSW

Control while detached

2.17.24 C-2704

Code

C-2704

Classification

Main body: High voltage power source abnormality

Cause

High voltage power/multi feed detection 24V power abnormality.

A high voltage power 24V or multi feed detection 24V error detection signal (blowout of ICP) is detected. At this time, the main door detection and the PFU door detection are Close.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Multi feed detection board /S (MFDBS)
- Multi feed detection board /R (MFDBR)
- High voltage unit /2 (HV2)
- ADU drive board (ADUDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between ADUDB and MFDBS and MFDBR, and repair/replace it if any abnormality.
2. Check the connector connection and the wiring between ADUDB and HV2, and repair/replace it if any abnormality.

3. Replace ADUDB and HV2 at a time.

Faulty part isolation DIPSW
Control while detached

2.17.25 C-2705

Code

C-2705

Classification

Main body: High voltage power source abnormality

Cause

PCC leak is detected.

After a PCC EM signal abnormality is detected while in the PCC ON, up to 5 transfer ON/OFF operations occur in succession while in 10 prints.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- PCC unit
- High voltage unit /3 (HV3)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the discharging wire of the PCC unit and replace it if the wire is cut
2. Check the installation condition of the PCC unit and install it again if any abnormality.
3. Check the connector connection and the wiring between HV3 and the power feed section, and repair/replace it if any abnormality.
(Wiring diagram: Main body: 18-F)
4. Replace HV3.

Faulty part isolation DIPSW
Control while detached

2.17.26 C-2801

Code

C-2801

Classification

Main body: Process abnormality

Cause

IDC sensor (TCB) dirt correction abnormality.

While in the maximum density correction (Dmax), the IDC sensor (TCB) dirt correction abnormality is detected 10 times in succession.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Toner control board (TCB)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check TCB, and clean it with alcohol if there is IDC sensor dirt or any abnormality. (Wiring diagram: Main body: 17- F)
Be sure to clean TCB with alcohol, otherwise replacement of TCB is required.
2. Check the developing section, and clean/repair it if there is sensor dirt or any abnormality.
3. Check the connector connection and the wiring between PRCB and TCB, and repair it if any abnormality.
4. Replace TCB.
5. Replace PRCB.

Faulty part isolation DIPSW
Control while detached

2.17.27 C-2802

Code

C-2802

Classification

Main body: Process abnormality

Cause

The maximum density correction (Dmax) is not completed.

While in Dmax, the number of rotations of the developing sleeve gets to the maximum.

Measures to take when alert occurs

Error code is not displayed on the operation panel, but displayed only on the data collection, the list output and CSRC.

Estimated abnormal parts

- developing motor (M3)
- Toner control board (TCB)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check TCB, and clean it with alcohol if there is IDC sensor dirt or any abnormality. (Wiring diagram: Main body: 17- F)
Be sure to clean TCB with alcohol, otherwise replacement of TCB is required.
2. Check the connector connection and the wiring between PRCB and TCB, and repair it if any abnormality.
3. Check the I/O drive of the motor and the coupling of the gear, and clean/repair/replace it if any abnormality. (Wiring diagram: Main body: 18-K)
4. Replace TCB.
5. Replace M3.
6. Replace PRCB.

Faulty part isolation DIPSW
Control while detached
2.17.28 C-2803**Code**

C-2803

Classification

Main body: Process abnormality

Cause

The IDC sensor (TCB) output abnormality.

While in the maximum density correction (Dmax), a patch for control is not output. (No output is made from the gamma sensor.)

Measures to take when alert occurs

Error code is not displayed on the operation panel, but displayed only on the data collection, the list output and CSRC.

Estimated abnormal parts

- Toner control board (TCB)
- LPH board (KPHB)
- Overall control board (OACB)
- Image processing board (IPB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check TCB, and clean it with alcohol if there is IDC sensor dirt or any abnormality. (Wiring diagram: Main body: 17- F)
Be sure to clean TCB with alcohol, otherwise replacement of TCB is required.
2. Check the LPH section, and clean/repair it if any dirt or abnormality. (Wiring diagram: Main body: 18-C)
3. Check the connector connection and the wiring between OACB and IPB, and repair it if any abnormality.
4. Check the connector connection and the wiring between LPHB and IPB, and repair it if any abnormality.
5. Replace LPHB.
6. Replace IPB.
7. Replace OACB.

Faulty part isolation DIPSW
Control while detached
2.17.29 C-2804**Code**

C-2804

Classification

Main body: Process abnormality

Cause

The dirt correction of the IDC sensor is not completed.

Measures to take when alert occurs

Error code is not displayed on the operation panel, but displayed only on the data collection, the list output and CSRC.

Estimated abnormal parts

- Toner control board (TCB)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check TCB, and clean it with alcohol if there is IDC sensor dirt or any abnormality. (Wiring diagram: Main body: 17- F)
Be sure to clean TCB with alcohol, otherwise replacement of TCB is required.
2. Check the developing section, and clean/repair it if there is any dirt or abnormality.
3. Check the connector connection and the wiring between PRCB and TCB, and repair it if any abnormality.
4. Replace TCB.
5. Replace PRCB.

Faulty part isolation DIPSW
Control while detached
2.17.30 C-2807**Code**

C-2807

Classification

Main body: Process abnormality

Cause

Drum potential sensor (DPS) output abnormality 1.

The DPS detects the value less than the potential specified value of the unexposed part 5 times in succession.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Drum potential sensor (DPS)
- Drum potential sensor board (DPSB)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the TCRS, and clean/replace it if any abnormality or dirt on sensor (Wiring diagram: Main body: 17- F)
2. Check the connector connection and the wiring between PRCB and DPS, and repair it if any abnormality.
3. Replace DPS.
4. Replace DPSB.
5. Replace PRCB.

Faulty part isolation DIPSW**Control while detached****2.17.31 C-2808****Code**

C-2808

Classification

Main body: Process abnormality

Cause

Dot diameter correction abnormality.

While in the dot diameter correction, the correction is terminated with an abnormal value.

Measures to take when alert occurs

Error code is not displayed on the operation panel, but displayed only on the data collection, the list output and CSRC.

Estimated abnormal parts

- Drum potential sensor (DPS)
- Drum potential sensor board (DPSB)
- Image processing board (IPB)
- Printer control board (PRCB)
- Overall control board (OACB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the TDPS, and clean/replace it if any abnormality or dirt on sensor (Wiring diagram: Main body: 17- F)
2. Check the connector connection and the wiring between PRCB and OACB, and repair it if any abnormality.
3. Check the connector connection and the wiring between OACB and IPB, and repair it if any abnormality.
4. Replace DPS.
5. Replace DPSB.
6. Replace IPB.
7. Replace PRCB.

Faulty part isolation DIPSW**Control while detached****2.17.32 C-2809****Code**

C-2809

Classification

Main body: Process abnormality

Cause

Drum potential sensor (DPS) output abnormality 2.

While in the 0V check of the DPS, more than 100V of the drum surface potential is detected more than 5 times. When this condition is detected 5 times in succession, the error code is displayed.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Drum potential sensor (DPS)
- Drum potential sensor board (DPSB)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the TCRS, and clean/replace it if any abnormality or dirt on sensor (Wiring diagram: Main body: 17- F)
2. Check the connector connection and the wiring between PRCB and DPS, and repair it if any abnormality.
3. Replace DPS.
4. Replace DPSB.
5. Replace PRCB.

Faulty part isolation DIPSW**Control while detached****2.17.33 C-2810****Code**

C-2810

Classification

Main body: Process abnormality

Cause

Drum potential sensor (DPS) output abnormality 3.

While in the drum potential correction, a patch for control is not output with the V1 getting to more than 350V. When this condition is detected 5 times in succession, the error code is displayed.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Drum potential sensor (DPS)
- Drum potential sensor board (DPSB)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the TCRS, and clean/replace it if any abnormality or dirt on sensor (Wiring diagram: Main body: 17- F)
2. Check the connector connection and the wiring between PRCB and DPS, and repair it if any abnormality.
3. Replace DPS.
4. Replace DPSB.
5. Replace PRCB.

Faulty part isolation DIPSW**Control while detached****2.17.34 C-2811****Code**

C-2811

Classification

Main body: Process abnormality

Cause

Drum potential sensor (DPS) data abnormality.

While in the drum potential correction, no convergence is obtained even after correction is made more than 10 times. When this condition is detected 5 times in succession, the error code is displayed.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Drum potential sensor (DPS)
- Drum potential sensor board (DPSB)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the TCRS, and clean/replace it if any abnormality or dirt on sensor (Wiring diagram: Main body: 17- F)
2. Check the connector connection and the wiring between PRCB and DPS, and repair it if any abnormality.
3. Replace DPS.
4. Replace DPSB.
5. Replace PRCB.

Faulty part isolation DIPSW**Control while detached****2.17.35 C-2812****Code**

C-2812

Classification

Main body: Process abnormality

Cause

Transfer current auto adjustment abnormality.

The auto adjustment of the transfer current has not completed.

Measures to take when alert occurs

Error code is not displayed on the operation panel, but displayed only on the data collection, the list output and CSRC.

Estimated abnormal parts

- Transfer roller
- High voltage unit /2 (HV2)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the transfer roller section, and clean/repair it if there is sensor dirt or any abnormality.
2. Clean the power feed section for the transfer roller.
3. Check the connector connection and the wiring between HV2 and the power feed section, and repair/replace it if any abnormality.
(Wiring diagram: Main body : 17-F)
4. Replace HV2.

Faulty part isolation DIPSW**Control while detached****2.17.36 C-2815****Code**

C-2815

Classification

Main body: Process abnormality

Cause

Developing bias auto adjustment abnormality.
The auto adjustment of the developing bias has not completed.

Measures to take when alert occurs

Error code is not displayed on the operation panel, but displayed only on the data collection, the list output and CSRC.

Estimated abnormal parts

- Developer
- High voltage unit /1 (HV1)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Clean the power feed section for the developing sleeve.
2. Check the developer, and clean/repair it if there is any adhesion or abnormality.
3. Check the connector connection and the wiring between HV1 and the developing sleeve, and repair it if any abnormality. (Wiring diagram: Main body: 18-P).
4. Replace HV1.

Faulty part isolation DIPSW**Control while detached****2.17.37 C-2816****Code**

C-2816

Classification

Main body: Process abnormality

Cause

Drum charger capacity deterioration.

When the charger grid/developing bias is in excess of the limit of correction, lower the developing potential/fogging margin potential in steps of 50V. As a result, less than 50V of the difference with the target charger potential is detected 10 times in succession.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Drum potential sensor (DPS)
- Drum potential sensor board (DPSB)
- Charging corona
- High voltage unit /1 (HV1)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Clean the power feed section for the charger.
2. Check the TCRS, and clean/replace it if any abnormality or dirt on sensor (Wiring diagram: Main body: 17- F)
3. Check the charger (charging wire and the grid), and clean/repair it if there is any dirt or abnormality.
4. Check the drum, and clean/repair it if there is any dirt or abnormality.
5. Check the connector connection and the wiring between HV1 and the charger, and repair it if any abnormality (Wiring diagram: Main body: 18-G).
6. Replace DPS.
7. Replace DPSB.
8. Replace the drum.

9. Replace HV1.

Faulty part isolation DIPSW
Control while detached

2.17.38 C-2821

Code

C-2821

Classification

Main body: Process abnormality

Cause

The toner supply prohibition status is not released 1.

Even though the TCR sensor (TCRS) output increases, the number of the toner supply prohibition status continuity is detected 30 times, and more than 2.5V of the TCRS output value is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Developing unit
- TCR sensor (TCRS)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the developing section, and clean/repair it if there is any dirt or abnormality.
2. Check the connector connection and the wiring between PRCB and TCRS, and repair it if any abnormality.
3. Replacing the developing unit
4. Replace PRCB.

Faulty part isolation DIPSW
Control while detached

2.17.39 C-2822

Code

C-2822

Classification

Main body: Process abnormality

Cause

The toner supply prohibition status is not released 2.

The number of the toner supply prohibition status continuity becomes 100 times.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Developing unit
- TCR sensor (TCRS)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the developing section, and clean/repair it if there is any dirt or abnormality.
2. Check the connector connection and the wiring between PRCB and TCRS, and repair it if any abnormality.
3. Replacing the developing unit
4. Replace PRCB.

Faulty part isolation DIPSW
Control while detached

2.17.40 C-3102

Code

C-3102

Classification

Main body: Motor abnormality

Cause

Fusing pressure release motor (M33) operation time abnormality 1.

When M33 moves from the release position to the pressure position, the fusing pressure home sensor (PS58) does not turn ON within a specified period of time.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Fusing pressure position sensor (PS58)
- Fusing pressure release motor (M33)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the fusing pressure release section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PRCB and motor/sensor, and repair it if any abnormality.
3. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: Main body: 13-F)
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: Main body: 15-F)
5. Replace PS58.
6. Replace M33.
7. Replace PRCB.

Faulty part isolation DIPSW
Control while detached
2.17.41 C-3103**Code**

C-3103

Classification

Main body: Motor abnormality

Cause

Fusing pressure release motor (M33) operation time abnormality 2.

The fusing pressure home sensor (PS58) ON is not detected within a specified period of time after the main power turns ON. When M33 moves from the pressure position to the release position, PS58 does not turn ON within a specified period of time.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Fusing pressure position sensor (PS58)
- Fusing pressure release motor (M33)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the fusing pressure release section, and clean/repair it if any abnormality.
2. Check the connector connection and the wiring between PRCB and motor/sensor, and repair it if any abnormality.
3. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: Main body: 13-F)
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: Main body: 15-F)
5. Replace PS58.
6. Replace M33.
7. Replace PRCB.

Faulty part isolation DIPSW
Control while detached
2.17.42 C-3201**Code**

C-3201

Classification

Main body: Motor abnormality

Cause

Drum motor (M24) power abnormality + 24V power abnormality.

When M24 turns ON, error detection signals (blowout of ICP and the 24V cut off) are detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- DC power supply /2 (DCPS /2)
- AC drive board (ACDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between ACDB and DCPS /2, and repair it if any abnormality.
2. Replace DCPS /2.
3. Replace ACDB.

Faulty part isolation DIPSW
Control while detached
2.17.43 C-3202**Code**

C-3202

Classification

Main body: Motor abnormality

Cause

Web motor (M24) power abnormality.

An error detection signal (blowout of ICP) is detected when M24 turns ON. At this time, an error detection signal (24V cut off) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Web motor (M24)
- AC drive board (ACDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between ACDB and the motor, and repair it if any abnormality.
2. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: Main body: 13-F)
3. Replace M24 and ACDB at a time.

Faulty part isolation DIPSW

Control while detached

2.17.44 C-3501

Code

C-3501

Classification

Main body: Fusing high temperature abnormality

Cause

Thermistor /1 (TH1) high temperature abnormality (software).

TH1 detects a temperature of 244°C or above 10 times in a period of 0.5second.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Fusing temperature sensor /1 (TH1)
- Fusing heater lamp /1 (L1)
- Fusing heater lamp /2 (L2)
- Printer control board (PRCB)
- AC drive board (ACDB)

Correction

Be sure to change the software DIPSW3-1 from 1 to 0 and turn OFF/ON the sub power switch (SW2) of the main body after fixing the defective parts.

Note

- If DIPSW3-1 is set to 0 before defective parts are fixed, it may cause fire.

Solution

1. Check the fusing rollers /Up (L1 and L2), and clean/repair them if any abnormality. (Wiring diagram: Main body: 10-N)
2. Check the connector connection and the wiring between PRCB and TH1, and repair it if any abnormality.
3. Check the connector connection and the wiring between ACDB and L1/L2, and repair it if any abnormality.
4. Check TH1 to see the installed position or distance to the fusing roller /Up, and adjust/replace it if any abnormality. (Wiring diagram: Main body: 14-F)
5. Replace TH1.
6. Replace L1 and L2.
7. Replace PRCB.
8. Replace ACDB.

Faulty part isolation DIPSW

Control while detached

2.17.45 C-3502

Code

C-3502

Classification

Main body: Fusing high temperature abnormality

Cause

Thermistor /3 (TH3) high temperature abnormality (software).

TH3 detects a temperature of 230°C or above 5 times in a period of 1second.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Fusing temperature sensor /3 (TH3)
- Fusing heater lamp /3 (L3)
- Printer control board (PRCB)
- AC drive board (ACDB)

Correction

Be sure to change the software DIPSW3-1 from 1 to 0 and turn OFF/ON the sub power switch (SW2) of the main body after fixing the defective parts.

Note

- If DIPSW3-1 is set to 0 before defective parts are fixed, it may cause fire.

Solution

1. Check the fusing heating rollers (L3), and clean/repair them if any abnormality. (Wiring diagram: Main body: 10-N)
2. Check the connector connection and the wiring between PRCB and TH1, and repair it if any abnormality.
3. Check the connector connection and the wiring between ACDB and L3, and repair it if any abnormality.
4. Check TH3 to see the installed position or distance to the fusing roller /Up, and adjust/replace it if any abnormality. (Wiring diagram: Main body: 13-F)
5. Replace TH3.
6. Replace L3.
7. Replace PRCB.
8. Replace ACDB.

Faulty part isolation DIPSW**Control while detached****2.17.46 C-3503****Code**

C-3503

Classification

Main body: Fusing high temperature abnormality

Cause

Thermistor /1 (TH1) high temperature abnormality (hardware).
TH1 detects the fusing abnormality detection 1.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Fusing temperature sensor /1 (TH1)
- Fusing heater lamp /1 (L1)
- Fusing heater lamp /2 (L2)
- Printer control board (PRCB)
- AC drive board (ACDB)

Correction

Be sure to change the software DIPSW3-1 from 1 to 0 and turn OFF/ON the sub power switch (SW2) of the main body after fixing the defective parts.

Note

- If DIPSW3-1 is set to 0 before defective parts are fixed, it may cause fire.

Solution

1. Check the fusing rollers /Up (L1 and L2), and clean/repair them if any abnormality. (Wiring diagram: Main body: 10-N)
2. Check the connector connection and the wiring between PRCB and TH1, and repair it if any abnormality.
3. Check the connector connection and the wiring between ACDB and L1/L2, and repair it if any abnormality.
4. Check TH1 to see the installed position or distance to the fusing roller /Up, and adjust/replace it if any abnormality. (Wiring diagram: Main body: 14-F)
5. Replace TH1.
6. Replace L1 and L2.
7. Replace PRCB.
8. Replace ACDB.

Faulty part isolation DIPSW**Control while detached****2.17.47 C-3504****Code**

C-3504

Classification

Main body: Fusing high temperature abnormality

Cause

Thermistor /3 (TH3) high temperature abnormality (hardware).
TH3 detects the fusing abnormality detection 4.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Fusing temperature sensor /3 (TH3)
- Fusing heater lamp /3 (L3)
- Printer control board (PRCB)
- AC drive board (ACDB)

Correction

Be sure to change the software DIPSW3-1 from 1 to 0 and turn OFF/ON the sub power switch (SW2) of the main body after fixing the defective parts.

Note

- If DIPSW3-1 is set to 0 before defective parts are fixed, it may cause fire.

Solution

1. Check the fusing heating rollers (L3), and clean/repair them if any abnormality. (Wiring diagram: Main body: 10-N)
2. Check the connector connection and the wiring between PRCB and TH1, and repair it if any abnormality.
3. Check the connector connection and the wiring between ACDB and L3, and repair it if any abnormality.

4. Check TH3 to see the installed position or distance to the fusing roller /Up, and adjust/replace it if any abnormality. (Wiring diagram: Main body: 13-F)
5. Replace TH3.
6. Replace L3.
7. Replace PRCB.
8. Replace ACDB.

Faulty part isolation DIPSW
Control while detached

2.17.48 C-3801

Code

C-3801

Classification

Main body: Fusing low temperature abnormality

Cause

Thermistor /1 (TH1) low temperature abnormality (software).

TH1 does not get to 50°C when a specified period of time has elapsed after the main power switch (SW1) turns ON for the fusing ON control.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Fusing temperature sensor /1 (TH1)
- Fusing heater lamp /1 (L1)
- Fusing heater lamp /2 (L2)
- Printer control board (PRCB)
- AC drive board (ACDB)

Correction

Be sure to change the software DIPSW3-1 from 1 to 0 and turn OFF/ON the sub power switch (SW2) of the main body after fixing the defective parts.

Note

- If DIPSW3-1 is set to 0 before defective parts are fixed, it may cause fire.

Solution

1. Check the fusing rollers /Up (L1 and L2), and clean/repair them if any abnormality. (Wiring diagram: Main body: 10-N)
2. Check the connector connection and the wiring between PRCB and TH1, and repair it if any abnormality.
3. Check the connector connection and the wiring between ACDB and L1/L2, and repair it if any abnormality.
4. Check TH1 to see the installed position or distance to the fusing roller /Up, and adjust/replace it if any abnormality. (Wiring diagram: Main body: 14-F)
5. Replace TH1.
6. Replace L1 and L2.
7. Replace PRCB.
8. Replace ACDB.

Faulty part isolation DIPSW
Control while detached

2.17.49 C-3802

Code

C-3802

Classification

Main body: Fusing low temperature abnormality

Cause

Thermistor /3 (TH3) low temperature abnormality (software).

TH3 does not get to 50°C when a specified period of time has elapsed after the main power switch (SW1) turns ON for the fusing ON control.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Fusing temperature sensor /3 (TH3)
- Fusing heater lamp /3 (L3)
- Printer control board (PRCB)
- AC drive board (ACDB)

Correction

Be sure to change the software DIPSW3-1 from 1 to 0 and turn OFF/ON the sub power switch (SW2) of the main body after fixing the defective parts.

Note

- If DIPSW3-1 is set to 0 before defective parts are fixed, it may cause fire.

Solution

1. Check the fusing heating rollers (L3), and clean/repair them if any abnormality. (Wiring diagram: Main body: 10-N)
2. Check the connector connection and the wiring between PRCB and TH1, and repair it if any abnormality.
3. Check the connector connection and the wiring between ACDB and L3, and repair it if any abnormality.
4. Check TH3 to see the installed position or distance to the fusing roller /Up, and adjust/replace it if any abnormality. (Wiring diagram: Main body: 13-F)
5. Replace TH3.
6. Replace L3.
7. Replace PRCB.
8. Replace ACDB.

Faulty part isolation DIPSW Control while detached

2.17.50 C-3901

Code

C-3901

Classification

Main body: Fusing sensor abnormality

Cause

Thermistor /1 (TH1) high temperature abnormality (long time/software).
TH1 detects a temperature of 240°C or above 60 times in a period of 0.5second.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Fusing temperature sensor /1 (TH1)
- Fusing heater lamp /1 (L1)
- Fusing heater lamp /2 (L2)
- Printer control board (PRCB)
- AC drive board (ACDB)

Correction

Be sure to change the software DIPSW3-1 from 1 to 0 and turn OFF/ON the sub power switch (SW2) of the main body after fixing the defective parts.

Note

- If DIPSW3-1 is set to 0 before defective parts are fixed, it may cause fire.

Solution

1. Check the fusing rollers /Up (L1 and L2), and clean/repair them if any abnormality. (Wiring diagram: Main body: 10-N)
2. Check the connector connection and the wiring between PRCB and TH1, and repair it if any abnormality.
3. Check the connector connection and the wiring between ACDB and L1/L2, and repair it if any abnormality.
4. Check TH1 to see the installed position or distance to the fusing roller /Up, and adjust/replace it if any abnormality. (Wiring diagram: Main body: 14-F)
5. Replace TH1.
6. Replace L1 and L2.
7. Replace PRCB.
8. Replace ACDB.

Faulty part isolation DIPSW Control while detached

2.17.51 C-3902

Code

C-3902

Classification

Main body: Fusing sensor abnormality

Cause

Thermistor /3 (TH3) high temperature abnormality (long time/software).
TH3 detects a temperature of 220°C or above 30 times in a period of 1second.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Fusing temperature sensor /3 (TH3)
- Fusing heater lamp /3 (L3)
- Printer control board (PRCB)
- AC drive board (ACDB)

Correction

Be sure to change the software DIPSW3-1 from 1 to 0 and turn OFF/ON the sub power switch (SW2) of the main body after fixing the defective parts.

Note

- If DIPSW3-1 is set to 0 before defective parts are fixed, it may cause fire.

Solution

1. Check the fusing heating rollers (L3), and clean/repair them if any abnormality. (Wiring diagram: Main body: 10-N)
2. Check the connector connection and the wiring between PRCB and TH1, and repair it if any abnormality.
3. Check the connector connection and the wiring between ACDB and L3, and repair it if any abnormality.
4. Check TH3 to see the installed position or distance to the fusing roller /Up, and adjust/replace it if any abnormality. (Wiring diagram: Main body: 13-F)
5. Replace TH3.
6. Replace L3.
7. Replace PRCB.
8. Replace ACDB.

Faulty part isolation DIPSW Control while detached

2.17.52 C-3903

Code

C-3903

Classification

Main body: Fusing sensor abnormality

Cause

Thermistor /1 (TH1) low temperature abnormality 1 (hardware).
TH1 detects the fusing abnormality detection signal 2.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Fusing temperature sensor /1 (TH1)
- Fusing heater lamp /1 (L1)
- Fusing heater lamp /2 (L2)
- Printer control board (PRCB)
- AC drive board (ACDB)

Correction

Be sure to change the software DIPSW3-1 from 1 to 0 and turn OFF/ON the sub power switch (SW2) of the main body after fixing the defective parts.

Note

- If DIPSW3-1 is set to 0 before defective parts are fixed, it may cause fire.

Solution

1. Check the fusing rollers /Up (L1 and L2), and clean/repair them if any abnormality. (Wiring diagram: Main body: 10-N)
2. Check the connector connection and the wiring between PRCB and TH1, and repair it if any abnormality.
3. Check the connector connection and the wiring between ACDB and L1/L2, and repair it if any abnormality.
4. Check TH1 to see the installed position or distance to the fusing roller /Up, and adjust/replace it if any abnormality. (Wiring diagram: Main body: 14-F)
5. Replace TH1.
6. Replace L1 and L2.
7. Replace PRCB.
8. Replace ACDB.

Faulty part isolation DIPSW

Control while detached

2.17.53 C-3904

Code

C-3904

Classification

Main body: Fusing sensor abnormality

Cause

Thermistor /3 (TH3) high temperature abnormality (hardware).
TH3 detects the fusing abnormality detection 5.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Fusing temperature sensor /3 (TH3)
- Fusing heater lamp /3 (L3)
- Printer control board (PRCB)
- AC drive board (ACDB)

Correction

Be sure to change the software DIPSW3-1 from 1 to 0 and turn OFF/ON the sub power switch (SW2) of the main body after fixing the defective parts.

Note

- If DIPSW3-1 is set to 0 before defective parts are fixed, it may cause fire.

Solution

1. Check the fusing heating rollers (L3), and clean/repair them if any abnormality. (Wiring diagram: Main body: 10-N)
2. Check the connector connection and the wiring between PRCB and TH1, and repair it if any abnormality.
3. Check the connector connection and the wiring between ACDB and L3, and repair it if any abnormality.
4. Check TH3 to see the installed position or distance to the fusing roller /Up, and adjust/replace it if any abnormality. (Wiring diagram: Main body: 13-F)
5. Replace TH3.
6. Replace L3.
7. Replace PRCB.
8. Replace ACDB.

Faulty part isolation DIPSW

Control while detached

2.17.54 C-3905

Code

C-3905

Classification

Main body: Fusing sensor abnormality

Cause

Thermistor /1 (TH1) low temperature abnormality 1 (hardware).
TH1 detects the fusing abnormality detection signal 3.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Fusing temperature sensor /1 (TH1)

- Fusing heater lamp /1 (L1)
- Fusing heater lamp /2 (L2)
- Printer control board (PRCB)
- AC drive board (ACDB)

Correction

Be sure to change the software DIPSW3-1 from 1 to 0 and turn OFF/ON the sub power switch (SW2) of the main body after fixing the defective parts.

Note

- If DIPSW3-1 is set to 0 before defective parts are fixed, it may cause fire.

Solution

1. Check the fusing rollers /Up (L1 and L2), and clean/repair them if any abnormality. (Wiring diagram: Main body: 10-N)
2. Check the connector connection and the wiring between PRCB and TH1, and repair it if any abnormality.
3. Check the connector connection and the wiring between ACDB and L1/L2, and repair it if any abnormality.
4. Check TH1 to see the installed position or distance to the fusing roller /Up, and adjust/replace it if any abnormality. (Wiring diagram: Main body: 14-F)
5. Replace TH1.
6. Replace L1 and L2.
7. Replace PRCB.
8. Replace ACDB.

Faulty part isolation DIPSW**Control while detached****2.17.55 C-3906****Code**

C-3906

Classification

Main body: Fusing sensor abnormality

Cause

Thermistor /3 (TH3) high temperature abnormality (hardware).
TH3 detects the fusing abnormality detection 6.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Fusing temperature sensor /3 (TH3)
- Fusing heater lamp /3 (L3)
- Printer control board (PRCB)
- AC drive board (ACDB)

Correction

Be sure to change the software DIPSW3-1 from 1 to 0 and turn OFF/ON the sub power switch (SW2) of the main body after fixing the defective parts.

Note

- If DIPSW3-1 is set to 0 before defective parts are fixed, it may cause fire.

Solution

1. Check the fusing heating rollers (L3), and clean/repair them if any abnormality. (Wiring diagram: Main body: 10-N)
2. Check the connector connection and the wiring between PRCB and TH1, and repair it if any abnormality.
3. Check the connector connection and the wiring between ACDB and L3, and repair it if any abnormality.
4. Check TH3 to see the installed position or distance to the fusing roller /Up, and adjust/replace it if any abnormality. (Wiring diagram: Main body: 13-F)
5. Replace TH3.
6. Replace L3.
7. Replace PRCB.
8. Replace ACDB.

Faulty part isolation DIPSW**Control while detached****2.18 Solution 15 (C-4000_6801)****2.18.1 C-4301****Code**

C-4301

Classification

Main body: Fan abnormality

Cause

Image processing cooling fan (FM12) rotation abnormality + 24V power abnormality.

The abnormal status is detected twice in succession after FM12 was turned ON. At this time, an error detection signal (24V cut off) is detected.

Measures to take when alert occurs

A: The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- DC power supply /2 (DCPS/2)
- AC drive board (ACDB)

Correction

Turn OFF/ON the power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between ACDB and DCPS /2, and repair it if any abnormality.
2. Replace DCPS /2.
3. Replace ACDB.

Faulty part isolation DIPSW**Control while detached****2.18.2 C-4302****Code**

C-4302

Classification

Main body: Fan abnormality

Cause

Image processing cooling fan (FM12) power abnormality.

The FM12EM error detection signal is detected twice in succession within a specified period of time after FM12 was turned ON. At this time, 24V is normal, but an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Image processing cooling fan (FM12)
- AC drive board (ACDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between ACDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: Main body: 7-L)
3. Replace FM12 and ACDB at a time.

Faulty part isolation DIPSW**Control while detached****2.18.3 C-4303****Code**

C-4303

Classification

Main body: Fan abnormality

Cause

Image processing cooling fan (FM12) rotation abnormality 1.

The FM12EM error detection signal is detected twice in succession within a specified period of time after FM12 was turned ON. However, error detection signals (24V cut off/blowout of ICP) are not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Image processing cooling fan (FM12)
- Printer control board (PRCB)
- AC drive board (ACDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and the fan, and repair it if any abnormality.
2. Check the connector connection and the wiring between ACDB and the fan, and repair it if any abnormality.
3. Rotate the fan or I/O by hand, and repair/replace it if any abnormality. (Wiring diagram: Main body: 7-L)
4. Replace FM12.
5. Replace PRCB.
6. Replace ACDB.

Faulty part isolation DIPSW**Control while detached****2.18.4 C-4304****Code**

C-4304

Classification

Main body: Fan abnormality

Cause

Image processing cooling fan (FM12) rotation abnormality 2.

When the print is started, the EM signal of FM12 turns ON.

Measures to take when alert occurs

Error code is not displayed on the operation panel, but displayed only on the data collection, the list output and CSRC.

Estimated abnormal parts

- Image processing cooling fan (FM12)

- Printer control board (PRCB)
- AC drive board (ACDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and the fan, and repair it if any abnormality.
2. Check the connector connection and the wiring between ACDB and the fan, and repair it if any abnormality.
3. Rotate the fan or I/O by hand, and repair/replace it if any abnormality. (Wiring diagram: Main body:7-L)
4. Replace FM12.
5. Replace PRCB.
6. Replace ACDB.

Faulty part isolation DIPSW**Control while detached****2.18.5 C-4305****Code**

C-4305

Classification

Main body: Fan abnormality

Cause

LPH fan /1 (FM3) rotation abnormality + 24V power abnormality.

The abnormal status is detected twice in succession after FM3 was turned ON. At this time, an error detection signal (24V cut off) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- DC power supply /2 (DCPS/2)
- AC drive board (ACDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between ACDB and DCPS /2, and repair it if any abnormality.
2. Replace DCPS /2.
3. Replace ACDB.

Faulty part isolation DIPSW**Control while detached****2.18.6 C-4306****Code**

C-4306

Classification

Main body: Fan abnormality

Cause

LPH fan /1 (FM3) power abnormality.

The FM3EM error detection signal is detected twice in succession within a specified period of time after FM3 was turned ON. At this time, 24V is normal, but an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- LPH fan /1 (FM3)
- AC drive board (ACDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between ACDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: Main body: 5-L)
3. Replace FM3 and ACDB at a time.

Faulty part isolation DIPSW**Control while detached****2.18.7 C-4307****Code**

C-4307

Classification

Main body: Fan abnormality

Cause

LPH fan /1 (FM3) rotation abnormality 1.

The FM3EM error detection signal is detected twice in succession within a specified period of time after FM3 was turned ON. However, error detection signals (24V cut off/blowout of ICP) are not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- LPH fan /1 (FM3)
- Printer control board (PRCB)
- AC drive board (ACDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and the fan, and repair it if any abnormality.
2. Check the connector connection and the wiring between ACDB and the fan, and repair it if any abnormality.
3. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: Main body: 5-L)
4. Replace FM3
5. Replace PRCB.
6. Replace ACDB.

Faulty part isolation DIPSW

Control while detached

2.18.8 C-4308

Code

C-4308

Classification

Main body: Fan abnormality

Cause

LPH fan /2 (FM25) rotation abnormality + 24V power abnormality.

The abnormal status is detected twice in succession after FM25 was turned ON. At this time, an error detection signal (24V cut off) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- DC power supply /2 (DCPS/2)
- AC drive board (ACDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between ACDB and DCPS /2, and repair it if any abnormality.
2. Replace DCPS /2.
3. Replace ACDB.

Faulty part isolation DIPSW

Control while detached

2.18.9 C-4309

Code

C-4309

Classification

Main body: Fan abnormality

Cause

LPH fan /2 (FM25) power abnormality.

The FM3EM error detection signal is detected twice in succession within a specified period of time after FM25 was turned ON. At this time, 24V is normal, but an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- LPH fan /2 (FM25)
- AC drive board (ACDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between ACDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair/replace it if any abnormality. (Wiring diagram: Main body: 6-L)
3. Replace FM25 and ACDB.

Faulty part isolation DIPSW

Control while detached

2.18.10 C-4310**Code**

C-4310

Classification

Main body: Fan abnormality

Cause

LPH fan /2 (FM25) rotation abnormality 2.

The FM3EM error detection signal is detected twice in succession within a specified period of time after FM25 was turned ON. However, error detection signals (24V cut off/blowout of ICP) are not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- LPH fan /2 (FM25)
- Printer control board (PRCB)
- AC drive board (ACDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and the fan, and repair it if any abnormality.
2. Check the connector connection and the wiring between ACDB and the fan, and repair it if any abnormality.
3. Rotate the fan or I/O by hand, and repair/replace it if any abnormality. (Wiring diagram: Main body: 6-L)
4. Replace FM25.
5. Replace PRCB.
6. Replace ACDB.

Faulty part isolation DIPSW**Control while detached****2.18.11 C-4311****Code**

C-4311

Classification

Main body: Fan abnormality

Cause

LPH fan /3 (FM26) rotation abnormality + 24V power abnormality.

The abnormal status is detected twice in succession after FM26 was turned ON. At this time, an error detection signal (24V cut off) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- DC power supply /2 (DCPS/2)
- AC drive board (ACDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between ACDB and DCPS /2, and repair it if any abnormality.
2. Replace DCPS /2.
3. Replace ACDB.

Faulty part isolation DIPSW**Control while detached****2.18.12 C-4312****Code**

C-4312

Classification

Main body: Fan abnormality

Cause

LPH fan /3 (FM26) power abnormality.

The FM26EM error detection signal is detected twice in succession within a specified period of time after FM26 was turned ON. At this time, 24V is normal, but an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- LPH fan /3 (FM26)
- AC drive board (ACDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between ACDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair/replace it if any abnormality. (Wiring diagram: Main body: 6-L)
3. Replace FM26 and ACDB.

Faulty part isolation DIPSW
Control while detached

2.18.13 C-4313

Code

C-4313

Classification

Main body: Fan abnormality

Cause

LPH fan /3 (FM26) rotation abnormality 3.

The FM26EM error detection signal is detected twice in succession within a specified period of time after FM26 was turned ON. However, error detection signals (24V cut off/blowout of ICP) are not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- LPH fan /3 (FM26)
- Printer control board (PRCB)
- AC drive board (ACDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and the fan, and repair it if any abnormality.
2. Check the connector connection and the wiring between ACDB and the fan, and repair it if any abnormality.
3. Rotate the fan or I/O by hand, and repair/replace it if any abnormality. (Wiring diagram: Main body: 6-L)
4. Replace FM26.
5. Replace PRCB.
6. Replace ACDB.

Faulty part isolation DIPSW
Control while detached

2.18.14 C-4314

Code

C-4314

Classification

Main body: Fan abnormality

Cause

Front cooling fan (FM18) rotation abnormality + 24V power abnormality.

The abnormal status is detected twice in succession after FM18 was turned ON. At this time, an error detection signal (24V cut off) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- DC power supply /2 (DCPS/2)
- AC drive board (ACDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between ACDB and DCPS /2, and repair it if any abnormality.
2. Replace DCPS /2.
3. Replace ACDB.

Faulty part isolation DIPSW
Control while detached

2.18.15 C-4315

Code

C-4315

Classification

Main body: Fan abnormality

Cause

Front cooling fan (FM18) power abnormality.

The FM18EM error detection signal is detected twice in succession within a specified period of time after FM18 was turned ON. At this time, 24V is normal, but an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Front cooling fan (FM18)
- AC drive board (ACDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between ACDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: Main body: 7-L)
3. Replace FM18 and ACDB.

Faulty part isolation DIPSW**Control while detached****2.18.16 C-4316****Code**

C-4316

Classification

Main body: Fan abnormality

Cause

Front cooling fan (FM18) rotation abnormality.

The FM26EM error detection signal is detected twice in succession within a specified period of time after FM18 was turned ON. However, error detection signals (24V cut off/blowout of ICP) are not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Front cooling fan (FM18)
- Printer control board (PRCB)
- AC drive board (ACDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and the fan, and repair it if any abnormality.
2. Check the connector connection and the wiring between ACDB and the fan, and repair it if any abnormality.
3. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: Main body: 7-L)
4. Replace FM18.
5. Replace PRCB.
6. Replace ACDB.

Faulty part isolation DIPSW**Control while detached****2.18.17 C-4701****Code**

C-4701

Classification

Main body: Image processing abnormality

Cause

FIFO address abnormality for the printer.

While in the image write, the expansion processing of image data that is read in is not correctly terminated.

Measures to take when alert occurs

If there is a sheet of paper being printed, the main body completes the paper exit before stopping operations and turning OFF the RL1 (the main relay).

Estimated abnormal parts

- Image processing board (IPB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please turn on power again" is displayed on the touch panel.

Solution

1. Check the connector connection and the wiring on IPB, and repair it if any abnormality.
2. Replace IPB.

Faulty part isolation DIPSW**Control while detached****2.18.18 C-4702****Code**

C-4702

Classification

Main body: Image processing abnormality

Cause

Compression input FIFO abnormality.

An error interrupt occurs with the compression/expansion chip FIFO.

Measures to take when alert occurs

If there is a sheet of paper being printed, the main body completes the paper exit before stopping operations and turning OFF the RL1 (the main relay).

Estimated abnormal parts

- Image processing board (IPB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please turn on power again" is displayed on the touch panel.

Solution

1. Check the connector connection and the wiring on IPB, and repair it if any abnormality.
2. Replace IPB.

Faulty part isolation DIPSW

Control while detached

2.18.19 C-4703

Code

C-4703

Classification

Main body: Image processing abnormality

Cause

Elongation abnormality.

Due to the elongation of data the compression of which is not completed, the destruction of the compressed data and the abnormal length of data, an elongation abnormality is detected.

Measures to take when alert occurs

If there is a sheet of paper being printed, the main body completes the paper exit before stopping operations and turning OFF the RL1 (the main relay).

Estimated abnormal parts

- Image processing board (IPB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please turn on power again" is displayed on the touch panel.

Solution

1. Check the connector connection and the wiring on IPB, and repair it if any abnormality.
2. Replace IPB.

Faulty part isolation DIPSW

Control while detached

2.18.20 C-4705

Code

C-4705

Classification

Main body: Image processing abnormality

Cause

Printer time out.

- While in the image write, the expansion processing from the memory to the printer does not terminate within a specified period of time.
- The output from the page memory to the printer does not terminate within a specified period of time.
- The PVV is not detected within a specified period of time.

Measures to take when alert occurs

If there is a sheet of paper being printed, the main body completes the paper exit before stopping operations and turning OFF the RL1 (the main relay).

Estimated abnormal parts

- Printer control board (PRCB)
- Image processing board (IPB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please turn on power again" is displayed on the touch panel.

Solution

1. Check the connector connection and the wiring on IPB, and repair it if any abnormality.
2. Check the connector connection and the wiring on PRCB, and repair it if any abnormality.
3. Check the connector connection and the wiring between IPB and PRCB, and repair it if any abnormality.
4. Replace IPB.
5. Replace PRCB.

Faulty part isolation DIPSW

Control while detached

2.18.21 C-4706

Code

C-4706

Classification

Main body: Image processing abnormality

Cause

Expansion device access abnormality.

While in the image write, despite of no resource provided, an inappropriate processing such as accessing to the elongation device is made.

Measures to take when alert occurs

If there is a sheet of paper being printed, the main body completes the paper exit before stopping operations and turning OFF the RL1 (the main relay).

Estimated abnormal parts

- Image processing board (IPB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please turn on power again" is displayed on the touch panel.

Solution

1. Check the connector connection and the wiring on IPB, and repair it if any abnormality.
2. Rewrite the firmware for image control.
3. Replace IPB.

Faulty part isolation DIPSW

Control while detached

2.18.22 C-4708

Code

C-4708

Classification

Main body: Image processing abnormality

Cause

Expansion device access abnormality.

When accessing to the memory device, a defective software is detected.

Measures to take when alert occurs

If there is a sheet of paper being printed, the main body completes the paper exit before stopping operations and turning OFF the RL1 (the main relay).

Estimated abnormal parts

- Image processing board (IPB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please turn on power again" is displayed on the touch panel.

Solution

1. Check the connector connection and the wiring on IPB, and repair it if any abnormality.
2. Rewrite the firmware for image control.
3. Replace IPB.

Faulty part isolation DIPSW

Control while detached

2.18.23 C-4709

Code

C-4709

Classification

Main body: Image processing abnormality

Cause

Memory time out.

- The expansion processing from the memory to the page memory does not terminate.
- The compression processing from the page memory to the memory does not terminate.
- The development from the memory to the page memory does not terminate.
- The transmission of the compressed data from memory to memory does not terminated.

Measures to take when alert occurs

If there is a sheet of paper being printed, the main body completes the paper exit before stopping operations and turning OFF the RL1 (the main relay).

Estimated abnormal parts

- Overall control board (OACB)
- Printer control board (PRCB)
- Image processing board (IPB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please turn on power again" is displayed on the touch panel.

Solution

1. Check the connector connection and the wiring on IPB and OACB, and repair it if any abnormality.
2. Check the connector connection and the wiring on PRCB, and repair it if any abnormality.
3. Check the connector connection and the wiring between IPB and OACB/between OACB and PRCB, and repair it if any abnormality.
4. Rewrite the firmware for image control.
5. Replace IPB.
6. Replace OACB.
7. Replace PRCB.

Faulty part isolation DIPSW

Control while detached**2.18.24 C-4720****Code**

C-4720

Classification

Main body: Image processing abnormality

Cause

Shift amount abnormality while in the repeat.

When the shift amount (used for cutting margin, etc.) while in the repeat is negative (-).

Measures to take when alert occurs

Error code is not displayed on the operation panel, but displayed only on the data collection, the list output and CSRC.

Estimated abnormal parts

- Image processing board (IPB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring on IPB, and repair it if any abnormality.
2. Rewrite the firmware for image control.
3. Replace IPB.

Faulty part isolation DIPSW**Control while detached****2.18.25 C-4721****Code**

C-4721

Classification

Main body: Image processing abnormality

Cause

The Centering Adjustment is too late.

The print operation starts before the paper centering adjustment is terminated. (The Centering Adjustment is too late)

Measures to take when alert occurs

Error code is not displayed on the operation panel, but displayed only on the data collection, the list output and CSRC.

Estimated abnormal parts

- Paper skew sensor /Fr (PS65)
- Paper skew sensor /Rr (PS66)
- Printer control board (PRCB)
- ADU drive board (ADUDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring on IPB and PECB, and repair it if any abnormality.
2. Check the connector connection and the wiring between ADUCB and the sensor, and repair it if any abnormality.
3. Check the I/O and drive of the sensor, and repair/replace it if any abnormality (Wiring diagram: Main body: 18-L)
4. Replace PS65 or PS66.
5. Replace PRCB.
6. Replace ADUDB.

Faulty part isolation DIPSW**Control while detached****2.18.26 C-4722****Code**

C-4722

Classification

Main body: Image processing abnormality

Cause

The creation of the PWM gamma curve failed.

A PWM gamma curve is not created properly.

Measures to take when alert occurs

Error code is not displayed on the operation panel, but displayed only on the data collection, the list output and CSRC.

Estimated abnormal parts

- Toner control board (TCB)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check TCB, and clean it with alcohol if there is IDC sensor dirt or any abnormality.

- * Be sure to clean TCB with alcohol, otherwise replacement of TCB is required.
- 2. Check the developing section, and clean/repair it if there is sensor dirt or any abnormality.
- 3. Check the connector connection and the wiring between PRCB and TCB, and repair it if any abnormality.
- 4. Replace TCB.
- 5. Replace PRCB.

Faulty part isolation DIPSW
Control while detached

2.18.27 C-4725

Code

C-4725

Classification

Main body: Image processing abnormality

Cause

LPH drive board (LPHB) connection abnormality.
 Due to the disconnection of the LPHB connector, no connection is available with the overall control board.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- LPH drive board (LPHB)
- Relay board /A (RBA)
- Image processing board (IPB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between LPHB and RBA, and repair it if any abnormality.
2. Check the connector connection and the wiring between IPB and RBA, and repair it if any abnormality.
3. Check LPHB, and repair/replace it if any abnormality. (Wiring diagram: Main body: 18-C)
4. Rewrite the firmware for image control.
5. Replace LPHB.
6. Replace RBA.
7. Replace IPB.

Faulty part isolation DIPSW
Control while detached

2.18.28 C-4850

Code

C-4850

Classification

Main body: Image processing abnormality

Cause

Segmentation abnormality.
 The overall control software accesses an illegal address.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Image processing board (IPB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring on IPB, and repair it if any abnormality.
2. Rewrite the firmware for image control.
3. Replace IPB.

Faulty part isolation DIPSW
Control while detached

2.18.29 C-5010

Code

C-5010

Classification

Main body: Image processing abnormality

Cause

Communication error between the overall control board (OACB) and the printer control board (PRCB).
 Any of the following error is detected during data reception between OACB and PRCB.

- Data head error
- Data checksum error
- Undefined command reception error
- Occurrence of communication GA error vector

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Printer control board (PRCB)
- Overall control board (OACB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. After turning OFF the sub power switch, turn OFF the main power switch and unplug the power plug. Restart the main body after 10 seconds.
2. Check the connector connection and the wiring on OACB, and repair it if any abnormality.
3. Check the connector connection and the wiring on PRCB, and repair it if any abnormality.
4. Check the connector connection and the wiring between OACB and PRCB, and repair it if any abnormality.
5. Replace OACB.
6. Replace PRCB.

Faulty part isolation DIPSW**Control while detached****2.18.30 C-5101****Code**

C-5101

Classification

Main body: Power abnormality

Cause

Fusing motor (M1) speed abnormality.

An error detection signal is detected twice in succession within a specified period of time after M1 was turned ON.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Fusing motor (M1)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the fusing drive section, and repair it if any abnormality.
2. Check the connector connection and the wiring between PRCB and the motor, and repair it if any abnormality.
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: Main body: 17-K)
4. Replace M1.
5. Replace PRCB.

Faulty part isolation DIPSW**Control while detached****2.18.31 C-5102****Code**

C-5102

Classification

Main body: Power abnormality

Cause

Toner counter (CNT1) power abnormality 1.

When CNT1 is turned ON from OFF, an error detection signal (blowout of ICP/24V cut off) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- DC power supply /2 (DCPS/2)
- AC drive board (ACDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between ACDB and DCPS /2, and repair it if any abnormality.
2. Replace DCPS /2.
3. Replace ACDB.

Faulty part isolation DIPSW**Control while detached****2.18.32 C-5103****Code**

C-5103

Classification

Main body: Power abnormality

Cause

Toner counter (CNT1) power abnormality 2.

When CNT1 is turned ON from OFF, an error detection signal (blowout of ICP) is detected. At this time, an error detection signal (24V cut off) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Total counter (CNT1)
- AC drive board (ACDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between ACDB and CNT1, and repair it if any abnormality.
2. Check CNT1, and repair/replace it if any abnormality. (Wiring diagram: Main body: 10- K)
3. Replace CNT1 and ACDB at a time.

Faulty part isolation DIPSW

Control while detached

2.18.33 C-5104

Code

C-5104

Classification

Main body: Power abnormality

Cause

Key counter (CNT2) power abnormality 1.

When CNT2 is turned ON from OFF, an error detection signal (blowout of ICP/24V cut off) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- DC power supply /2 (DCPS/2)
- AC drive board (ACDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between ACDB and DCPS /2, and repair it if any abnormality.
2. Replace DCPS /2.
3. Replace ACDB.

Faulty part isolation DIPSW

Control while detached

2.18.34 C-5105

Code

C-5105

Classification

Main body: Power abnormality

Cause

Key counter (CNT2) power abnormality 2.

When CNT2 is turned ON from OFF, an error detection signal (blowout of ICP) is detected. At this time, an error detection signal (24V cut off) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Key counter (CNT2)
- AC drive board (ACDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between ACDB and CNT2, and repair it if any abnormality.
2. Check CNT2, and repair/replace it if any abnormality. (Wiring diagram: Main body: 9- N)
3. Replace CNT2 and ACDB at a time.

Faulty part isolation DIPSW

Control while detached

2.18.35 C-5311

Code

C-5311

Classification

Main body: Fan abnormality

Cause

Suction cooling fan /1 (FM6) rotation abnormality + 24V power abnormality.

The FM6EM error detection signal is detected twice in succession within a specified period of time after FM6 was turned ON. At this time, an error detection signal (24V cut off) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- DC power supply /2 (DCPS/2)
- AC drive board (ACDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between ACDB and DCPS /2, and repair it if any abnormality.
2. Replace DCPS /2.
3. Replace ACDB.

Faulty part isolation DIPSW**Control while detached****2.18.36 C-5312****Code**

C-5312

Classification

Main body: Fan abnormality

Cause

Suction cooling fan /1 (FM6) power abnormality.

The FM6EM error detection signal is detected twice in succession within a specified period of time after FM6 was turned ON. At this time, 24V is normal, but an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay).

Estimated abnormal parts

- Suction cooling fan /1 (FM6)
- AC drive board (ACDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between ACDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair/replace it if any abnormality. (Wiring diagram: Main body: 6-L)
3. Replace FM6 and ACDB at a time.

Faulty part isolation DIPSW**Control while detached****2.18.37 C-5313****Code**

C-5313

Classification

Main body: Fan abnormality

Cause

Suction cooling fan /1 (FM6) rotation abnormality 1.

The FM6EM error detection signal is detected twice in succession within a specified period of time after FM6 was turned ON. However, error detection signals (24V cut off/blowout of ICP) are not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Suction cooling fan /1 (FM6)
- Printer control board (PRCB)
- AC drive board (ACDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and the fan, and repair it if any abnormality.
2. Check the connector connection and the wiring between ACDB and the fan, and repair it if any abnormality.
3. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: Main body: 6-L)
4. Replace FM6.
5. Replace PRCB.
6. Replace ACDB.

Faulty part isolation DIPSW

Control while detached**2.18.38 C-5314****Code**

C-5314

Classification

Main body: Fan abnormality

Cause

Suction cooling fan /3 (FM8) rotation abnormality + 24V power abnormality.

The FM8EM error detection signal is detected twice in succession within a specified period of time after FM8 was turned ON. At this time, an error detection signal (24V cut off) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- DC power supply /2 (DCPS/2)
- AC drive board (ACDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between ACDB and DCPS /2, and repair it if any abnormality.
2. Replace DCPS /2.
3. Replace ACDB.

Faulty part isolation DIPSW**Control while detached****2.18.39 C-5315****Code**

C-5315

Classification

Main body: Fan abnormality

Cause

Suction cooling fan /3 (FM8) power abnormality.

The FM8EM error detection signal is detected twice in succession within a specified period of time after FM8 was turned ON. At this time, 24V is normal, but an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Suction cooling fan /3 (FM8)
- AC drive board (ACDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between ACDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: Main body: 6-L)
3. Replace FM8 and ACDB at a time.

Faulty part isolation DIPSW**Control while detached****2.18.40 C-5316****Code**

C-5316

Classification

Main body: Fan abnormality

Cause

Suction cooling fan /3 (FM6) rotation abnormality 1.

The FM8EM error detection signal is detected twice in succession within a specified period of time after FM8 was turned ON. However, error detection signals (24V cut off/blowout of ICP) are not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Suction cooling fan /3 (FM8)
- Printer control board (PRCB)
- AC drive board (ACDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and the fan, and repair it if any abnormality.

2. Check the connector connection and the wiring between ACDB and the fan, and repair it if any abnormality.
3. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: Main body: 6-L)
4. Replace FM8.
5. Replace PRCB.
6. Replace ACDB.

Faulty part isolation DIPSW
Control while detached

2.18.41 C-5317

Code

C-5317

Classification

Main body: Fan abnormality

Cause

Cooling fan /1 (FM1) rotation abnormality + 24V power abnormality.

The FM1EM error detection signal is detected twice in succession within a specified period of time after FM1 was turned ON. At this time, an error detection signal (24V cut off) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- DC power supply /2 (DCPS/2)
- AC drive board (ACDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between ACDB and DCPS /2, and repair it if any abnormality.
2. Replace DCPS /2.
3. Replace ACDB.

Faulty part isolation DIPSW
Control while detached

2.18.42 C-5318

Code

C-5318

Classification

Main body: Fan abnormality

Cause

Cooling fan /1 (FM1) power abnormality.

The FM1EM error detection signal is detected twice in succession within a specified period of time after FM1 was turned ON. At this time, 24V is normal, but an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Cooling fan /1 (FM1)
- AC drive board (ACDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between ACDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: Main body : 4-L)
3. Replace FM1 and ACDB at a time.

Faulty part isolation DIPSW
Control while detached

2.18.43 C-5319

Code

C-5319

Classification

Main body: Fan abnormality

Cause

Cooling fan /1 (FM1) rotation abnormality 1.

The FM1EM error detection signal is detected twice in succession within a specified period of time after FM1 was turned ON. However, error detection signals (24V cut off/blowout of ICP) are not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Cooling fan /1 (FM1)
- Printer control board (PRCB)
- AC drive board (ACDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and the fan, and repair it if any abnormality.
2. Check the connector connection and the wiring between ACDB and the fan, and repair it if any abnormality.
3. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: Main body : 4-L)
4. Replace FM1.
5. Replace PRCB.
6. Replace ACDB.

Faulty part isolation DIPSW

Control while detached

2.18.44 C-5320

Code

C-5320

Classification

Main body: Fan abnormality

Cause

Cooling fan /2 (FM2) rotation abnormality + 24V power abnormality.

The FM2EM error detection signal is detected twice in succession within a specified period of time after FM2 was turned ON. At this time, an error detection signal (24V cut off) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- DC power supply /2 (DCPS/2)
- AC drive board (ACDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between ACDB and DCPS /2, and repair it if any abnormality.
2. Replace DCPS /2.
3. Replace ACDB.

Faulty part isolation DIPSW

Control while detached

2.18.45 C-5321

Code

C-5321

Classification

Main body: Fan abnormality

Cause

Cooling fan /2 (FM2) power abnormality.

The FM2EM error detection signal is detected twice in succession within a specified period of time after FM2 was turned ON. At this time, 24V is normal, but an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Cooling fan /2 (FM2)
- AC drive board (ACDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between ACDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: Main body: 1-L)
3. Replace FM2 and ACDB at a time.

Faulty part isolation DIPSW

Control while detached

2.18.46 C-5322

Code

C-5322

Classification

Main body: Fan abnormality

Cause

Cooling fan /1 (FM1) rotation abnormality 1.

The FM2EM error detection signal is detected twice in succession within a specified period of time after FM2 was turned ON. However, error detection signals (24V cut off/blowout of ICP) are not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Cooling fan /2 (FM2)
- Printer control board (PRCB)
- AC drive board (ACDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and the fan, and repair it if any abnormality.
2. Check the connector connection and the wiring between ACDB and the fan, and repair it if any abnormality.
3. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: Main body: 1-L)
4. Replace FM2.
5. Replace PRCB.
6. Replace ACDB.

Faulty part isolation DIPSW

Control while detached

2.18.47 C-5326

Code

C-5326

Classification

Main body: Fan abnormality

Cause

Cooling fan /1 (FM1) rotation abnormality 2.

When the print is started, the EM signal of FM1 turns ON.

Measures to take when alert occurs

Error code is not displayed on the operation panel, but displayed only on the data collection, the list output and CSRC.

Estimated abnormal parts

- Cooling fan /1 (FM1)
- Printer control board (PRCB)
- AC drive board (ACDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and the fan, and repair it if any abnormality.
2. Check the connector connection and the wiring between ACDB and the fan, and repair it if any abnormality.
3. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: Main body : 4-L)
4. Replace FM1.
5. Replace PRCB.
6. Replace ACDB.

Faulty part isolation DIPSW

Control while detached

2.18.48 C-5327

Code

C-5327

Classification

Main body: Fan abnormality

Cause

Cooling fan /1 (FM1) rotation abnormality 2.

When the print is started, the EM signal of FM2 turns ON.

Measures to take when alert occurs

Error code is not displayed on the operation panel, but displayed only on the data collection, the list output and CSRC.

Estimated abnormal parts

- Cooling fan /2 (FM2)
- Printer control board (PRCB)
- AC drive board (ACDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and the fan, and repair it if any abnormality.
2. Check the connector connection and the wiring between ACDB and the fan, and repair it if any abnormality.
3. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: Main body: 1-L)
4. Replace FM2.
5. Replace PRCB.
6. Replace ACDB.

Faulty part isolation DIPSW

Control while detached

2.18.49 C-5328**Code**

C-5328

Classification

Main body: Fan abnormality

Cause

Suction cooling fan /1 (FM6) rotation abnormality 2.
When the print is started, the EM signal of FM6 turns ON.

Measures to take when alert occurs

Error code is not displayed on the operation panel, but displayed only on the data collection, the list output and CSRC.

Estimated abnormal parts

- Suction cooling fan /1 (FM6)
- Printer control board (PRCB)
- AC drive board (ACDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and the fan, and repair it if any abnormality.
2. Check the connector connection and the wiring between ACDB and the fan, and repair it if any abnormality.
3. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: Main body: 6-L)
4. Replace FM6.
5. Replace PRCB.
6. Replace ACDB.

Faulty part isolation DIPSW**Control while detached****2.18.50 C-5329****Code**

C-5329

Classification

Main body: Fan abnormality

Cause

Abnormality of the fan connected to ADU drive board.
The EM error detection signal is detected twice in succession within a specified period of time after ADU cooling fan /1 (FM14), /2 (FM15), /3 (FM13), sensor cooling fan /1 (FM16) and registration cooling fan (FM17) connected to ADU drive board was turned ON. At this time, the door close detection of the door open/close sensor /1 (PS1), /2 (PS2) and PF door open/close sensor (PS70) is detected 10 times in succession.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Cooling fan /1 (FM14)
- Cooling fan /2 (FM15)
- Cooling fan /3 (FM13)
- Sensor cooling fan (FM16)
- Registration cooling fan (FM17)
- ADU drive board (ADUDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between ADUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality.
3. Replace the fan.
4. Replace ADUDB.

Faulty part isolation DIPSW**Control while detached****2.18.51 C-5330****Code**

C-5330

Classification

Main body: Fan abnormality

Cause

Suction cooling fan /2 (FM7) rotation abnormality + 24V power abnormality.
The FM7EM error detection signal is detected twice in succession within a specified period of time after FM7 was turned ON. At this time, an error detection signal (24V cut off) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- DC power supply /2 (DCPS/2)

- AC drive board (ACDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between ACDB and DCPS /2, and repair it if any abnormality.
2. Replace DCPS /2.
3. Replace ACDB.

Faulty part isolation DIPSW**Control while detached****2.18.52 C-5331****Code**

C-5331

Classification

Main body: Fan abnormality

Cause

Suction cooling fan /2 (FM7) power abnormality.

The FM7EM error detection signal is detected twice in succession within a specified period of time after FM7 was turned ON. At this time, 24V is normal, but an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Suction cooling fan /2 (FM7)
- AC drive board (ACDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between ACDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: Main body: 7-L)
3. Replace FM7 and ACDB at a time.

Faulty part isolation DIPSW**Control while detached****2.18.53 C-5332****Code**

C-5332

Classification

Main body: Fan abnormality

Cause

Suction cooling fan /2 (FM6) rotation abnormality.

The FM7EM error detection signal is detected twice in succession within a specified period of time after FM7 was turned ON. However, error detection signals (24V cut off/blowout of ICP) are not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Suction cooling fan /2 (FM7)
- Printer control board (PRCB)
- AC drive board (ACDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and the fan, and repair it if any abnormality.
2. Check the connector connection and the wiring between ACDB and the fan, and repair it if any abnormality.
3. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: Main body: 7-L)
4. Replace FM7.
5. Replace PRCB.
6. Replace ACDB.

Faulty part isolation DIPSW**Control while detached****2.18.54 C-5333****Code**

C-5333

Classification

Main body: Fan abnormality

Cause

Suction cooling fan /3 (FM8) rotation abnormality.

When the print is started, the EM signal of FM8 turns ON.

Measures to take when alert occurs

Error code is not displayed on the operation panel, but displayed only on the data collection, the list output and CSRC.

Estimated abnormal parts

- Suction cooling fan /3 (FM8)
- Printer control board (PRCB)
- AC drive board (ACDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and the fan, and repair it if any abnormality.
2. Check the connector connection and the wiring between ACDB and the fan, and repair it if any abnormality.
3. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: Main body: 6-L)
4. Replace FM8.
5. Replace PRCB.
6. Replace ACDB.

Faulty part isolation DIPSW

Control while detached

2.18.55 C-5334

Code

C-5334

Classification

Main body: Fan abnormality

Cause

LPH fan /1 (FM3) rotation abnormality.

When the print is started, the EM signal of FM3 turns ON.

Measures to take when alert occurs

Error code is not displayed on the operation panel, but displayed only on the data collection, the list output and CSRC.

Estimated abnormal parts

- LPH fan /1 (FM3)
- Printer control board (PRCB)
- AC drive board (ACDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and the fan, and repair it if any abnormality.
2. Check the connector connection and the wiring between ACDB and the fan, and repair it if any abnormality.
3. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: Main body: 5-L)
4. Replace FM3
5. Replace PRCB.
6. Replace ACDB.

Faulty part isolation DIPSW

Control while detached

2.18.56 C-5335

Code

C-5335

Classification

Main body: Fan abnormality

Cause

LPH fan /2 (FM25) rotation abnormality.

When the print is started, the EM signal of FM25 turns ON.

Measures to take when alert occurs

Error code is not displayed on the operation panel, but displayed only on the data collection, the list output and CSRC.

Estimated abnormal parts

- LPH fan /2 (FM25)
- Printer control board (PRCB)
- AC drive board (ACDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and the fan, and repair it if any abnormality.
2. Check the connector connection and the wiring between ACDB and the fan, and repair it if any abnormality.
3. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: Main body: 6-L)
4. Replace FM25.
5. Replace PRCB.
6. Replace ACDB.

Faulty part isolation DIPSW Control while detached

2.18.57 C-5336

Code

C-5336

Classification

Main body: Fan abnormality

Cause

LPH fan /2 (FM25) rotation abnormality.
When the print is started, the EM signal of FM25 turns ON.

Measures to take when alert occurs

Error code is not displayed on the operation panel, but displayed only on the data collection, the list output and CSRC.

Estimated abnormal parts

- LPH fan /3 (FM26)
- Printer control board (PRCB)
- AC drive board (ACDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and the fan, and repair it if any abnormality.
2. Check the connector connection and the wiring between ACDB and the fan, and repair it if any abnormality.
3. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: Main body: 6-L)
4. Replace FM26.
5. Replace PRCB.
6. Replace ACDB.

Faulty part isolation DIPSW Control while detached

2.18.58 C-5337

Code

C-5337

Classification

Main body: Fan abnormality

Cause

De-curler fan /1 (FM29) rotation abnormality.
The FM29EM error detection signal is detected twice in succession within a specified period of time after FM29 was turned ON. At this time, the door close is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- De-curler fan /1 (FM29)
- ADU drive board (ADUDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between ADUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: Main body: 17-O)
3. Replace FM29.
4. Replace ADUDB.

Faulty part isolation DIPSW Control while detached

2.18.59 C-5338

Code

C-5338

Classification

Main body: Fan abnormality

Cause

De-curler fan /2 (FM30) rotation abnormality.
The FM30EM error detection signal is detected twice in succession within a specified period of time after FM30 was turned ON. At this time, the door close is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- De-curler fan /2 (FM30)
- ADU drive board (ADUDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between ADUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: Main body: 18-O)
3. Replace FM30.
4. Replace ADUDB.

Faulty part isolation DIPSW
Control while detached
2.18.60 C-5339**Code**

C-5339

Classification

Main body: Fan abnormality

Cause

Transfer belt cleaning fan (FM27) rotation abnormality.
 When the print is started, the EM signal of FM27 turns ON.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Transfer belt cleaning fan (FM27)
- ADU drive board (ADUDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between ADUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality.
3. Replace FM27.
4. Replace ADUDB.

Faulty part isolation DIPSW
Control while detached
2.18.61 C-5340**Code**

C-5340

Classification

Main body: Fan abnormality

Cause

Rotation abnormality of fans equipped in ADU.
 The EM error signal is detected twice in succession within a specified period of time after ADU cooling fan /2 (FM15), belt cooling fan (FM37) and reverse cooling fan (FM38) was turned ON. At this time, the door close is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Cooling fan /2 (FM15)
- Belt cooling fan (FM37)
- Reverse cooling fan (FM38)
- ADU drive board (ADUDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between ADUDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: Main body: 17-O, 20-O, 21-O)
3. Replace FM15.
4. Replace FM37.
5. Replace FM38.
6. Replace ADUDB.

Faulty part isolation DIPSW
Control while detached
2.18.62 C-5341**Code**

C-5341

Classification

Main body: Fan abnormality

Cause

Collection pipe cooling fan (FM34) rotation abnormality + 24V power abnormality.

The FM34EM error detection signal is detected twice in succession within a specified period of time after FM34 was turned ON. At this time, an error detection signal (24V cut off) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- DC power supply /2 (DCPS/2)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and DCPS /2, and repair it if any abnormality.
2. Replace DCPS /2.
3. Replace PRCB.

Faulty part isolation DIPSW

Control while detached

2.18.63 C-5342

Code

C-5342

Classification

Main body: Fan abnormality

Cause

Collection pipe cooling fan (FM34) power abnormality.

The FM34EM error detection signal is detected twice in succession within a specified period of time after FM34 was turned ON. At this time, 24V is normal, but an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Collection pipe cooling fan (FM34)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: Main body: 1-L)
3. Replace FM34 and PRCB at a time.

Faulty part isolation DIPSW

Control while detached

2.18.64 C-5343

Code

C-5343

Classification

Main body: Fan abnormality

Cause

Collection pipe cooling fan (FM34) rotation abnormality 1.

The FM34EM error detection signal is detected twice in succession within a specified period of time after FM34 was turned ON. However, error detection signals (24V cut off/blowout of ICP) are not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Collection pipe cooling fan (FM34)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between ACDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: Main body: 1-L)
3. Replace FM34.
4. Replace PRCB.

Faulty part isolation DIPSW

Control while detached

2.18.65 C-5344

Code

C-5344

Classification

Main body: Fan abnormality

Cause

Collection pipe cooling fan (FM34) rotation abnormality 2.
When the print is started, the EM signal of FM34 turns ON.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Collection pipe cooling fan (FM34)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between ACDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: Main body: 1-L)
3. Replace FM34.
4. Replace PRCB.

Faulty part isolation DIPSW

Control while detached

2.18.66 C-5345

Code

C-5345

Classification

Main body: Fan abnormality

Cause

Toner bottle cooling fan (FM35) rotation abnormality + 24V power abnormality.

The FM35EM error detection signal is detected twice in succession within a specified period of time after FM35 was turned ON. At this time, an error detection signal (24V cut off) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- DC power supply /2 (DCPS/2)
- AC drive board (ACDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between ACDB and DCPS /2, and repair it if any abnormality.
2. Replace DCPS /2.
3. Replace ACDB.

Faulty part isolation DIPSW

Control while detached

2.18.67 C-5346

Code

C-5346

Classification

Main body: Fan abnormality

Cause

Toner bottle cooling fan (FM35) power abnormality.

The FM35EM error detection signal is detected twice in succession within a specified period of time after FM35 was turned ON. At this time, 24V is normal, but an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Toner bottle cooling fan (FM35)
- AC drive board (ACDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between ACDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: Main body: 2-L)
3. Replace FM35 and ACDB at a time.

Faulty part isolation DIPSW

Control while detached

2.18.68 C-5347

Code

C-5347

Classification

Main body: Fan abnormality

Cause

Toner bottle cooling fan (FM35) rotation abnormality 1.

The FM35EM error detection signal is detected twice in succession within a specified period of time after FM35 was turned ON. However, error detection signals (24V cut off/blowout of ICP) are not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Toner bottle cooling fan (FM35)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: Main body: 2-L)
3. Replace FM35.
4. Replace PRCB.

Faulty part isolation DIPSW**Control while detached****2.18.69 C-5348****Code**

C-5348

Classification

Main body: Fan abnormality

Cause

Toner bottle cooling fan (FM35) rotation abnormality 2.

When the print is started, the EM signal of FM35 turns ON.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Toner bottle cooling fan (FM35)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: Main body: 2-L)
3. Replace FM35.
4. Replace PRCB.

Faulty part isolation DIPSW**Control while detached****2.18.70 C-5349****Code**

C-5349

Classification

Main body: Fan abnormality

Cause

DC power supply /3 cooling fan (FM36) rotation abnormality + 24V power abnormality

The FM36EM error detection signal is detected twice in succession within a specified period of time after FM36 was turned ON. At this time, an error detection signal (24V cut off) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- DC power supply /2 (DCPS/2)
- AC drive board (ACDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between ACDB and DCPS /2, and repair it if any abnormality.
2. Replace DCPS /2.
3. Replace ACDB.

Faulty part isolation DIPSW**Control while detached**

2.18.71 C-5350**Code**

C-5350

Classification

Main body: Fan abnormality

Cause

DC power supply /3 cooling fan (FM36) power abnormality.

The FM36EM error detection signal is detected twice in succession within a specified period of time after FM36 was turned ON. At this time, 24V is normal, but an error detection signal (blowout of ICP) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- DC power supply /3 cooling fan (FM36)
- AC drive board (ACDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between ACDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: Main body: 2-L)
3. Replace FM36 and ACDB at a time.

Faulty part isolation DIPSW**Control while detached****2.18.72 C-5351*****Code**

C-5351*

Classification

Main body: Fan abnormality

Cause

DC power supply /3 cooling fan (FM36) rotation abnormality 1.

The FM36EM error detection signal is detected twice in succession within a specified period of time after FM36 was turned ON. However, error detection signals (24V cut off/blowout of ICP) are not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- DC power supply /3 cooling fan (FM36)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: Main body: 2-L)
3. Replace FM36.
4. Replace PRCB.

Faulty part isolation DIPSW**Control while detached****2.18.73 C-5352*****Code**

C-5352*

Classification

Main body: Fan abnormality

Cause

DC power supply /3 cooling fan (FM36) rotation abnormality 2.

When the print is started, the EM signal of FM36 turns ON.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- DC power supply /3 cooling fan (FM36)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between PRCB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: Main body: 2-L)
3. Replace FM36.
4. Replace PRCB.

Faulty part isolation DIPSW

Control while detached

2.18.74 C-6101

Code

C-6101

Classification

Main body: Scanner abnormality

Cause

Scanner motor (M27) movement time abnormality + 24V power abnormality.

The scanner home sensor (PS51) or the APS sensor /1 (PS52) does not turn ON within a specified period of time after the home position search is started. At this time, an error detection signal (24V cut off) of M27 is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- DC power supply /1 (DCPS/1)
- Scanner drive board (SCDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between SDB and DCPS /1, and repair it if any abnormality.
2. Replace DCPS /1.
3. Replace SDB.

Faulty part isolation DIPSW

Control while detached

2.18.75 C-6102

Code

C-6102

Classification

Main body: Scanner abnormality

Cause

Scanner motor (M27) power abnormality.

The scanner home sensor (PS51) or the APS sensor /1 (PS52) does not turn ON within a specified period of time after the home position search is started. At this time, 24V is normal, but an error detection signal (blowout of a fuse) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Scanner motor (M27)
- Scanner drive board (SCDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between SDB and the motor, and repair it if any abnormality.
2. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: Main body: 1-F)
3. Replace M27 and SDB at a time.

Faulty part isolation DIPSW

Control while detached

2.18.76 C-6103

Code

C-6103

Classification

Main body: Scanner abnormality

Cause

Scanner motor (M27) movement time abnormality.

The scanner home sensor (PS51) or the APS sensor /1 (PS52) does not turn ON within a specified period of time after the home position search is started. At this time, an error detection signal (blowout of a fuse/24V cut off) of M27 is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Scanner home sensor (PS51)
- APS sensor /1 (PS52)
- Scanner motor (M27)
- Scanner drive board (SCDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the scanner drive section, and repair it if any abnormality.
2. Check the connector connection and the wiring between SDB and motor/sensor, and repair it if any abnormality.
3. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: Main body: 2-F)
4. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: Main body: 1-F)
5. Replace PS51 and PS52.
6. Replace M27.
7. Replace SDB.

Faulty part isolation DIPSW**Control while detached****2.18.77 C-6301****Code**

C-6301

Classification

Main body: Fan abnormality

Cause

Scanner cooling fan (FM19) rotation abnormality + 24V power abnormality.

The FM19EM error detection signal is detected twice in succession within a specified period of time after FM19 was turned ON. At this time, an error detection signal (24V cut off) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- DC power supply /2 (DCPS/2)
- Scanner drive board (SCDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between SDB and DCPS /2, and repair it if any abnormality.
2. Replace DCPS /2.
3. Replace SDB.

Faulty part isolation DIPSW**Control while detached****2.18.78 C-6302****Code**

C-6302

Classification

Main body: Fan abnormality

Cause

Scanner cooling fan (FM19) power abnormality.

The FM19EM error detection signal is detected twice in succession within a specified period of time after FM19 was turned ON. At this time, 24V is normal, but an error detection signal (blowout of a fuse) is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Scanner cooling fan (FM19)
- Scanner drive board (SCDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between SDB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: Main body (2):-F)
3. Replace FM19 and SDB.

Faulty part isolation DIPSW**Control while detached****2.18.79 C-6303****Code**

C-6303

Classification

Main body: Fan abnormality

Cause

Scanner cooling fan (FM19) rotation abnormality.

The FM19EM error detection signal is detected twice in succession within a specified period of time after FM19 was turned ON. At this time, an error detection signal (blowout of a fuse/24V cut off) is not detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Scanner cooling fan (FM19)

- Scanner drive board (SCDB)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between SDB and the fan, and repair it if any abnormality.
2. Check the connector connection and the wiring between SDB and PRCB, and repair it if any abnormality.
3. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: Main body (2):-F)
4. Replace FM19.
5. Replace SDB.
6. Replace PRCB.

Faulty part isolation DIPSW**Control while detached****2.18.80 C-6701****Code**

C-6701

Classification

Main body: Image processing abnormality

Cause

Filter coefficient abnormality.

When processing images, a filter coefficient cannot be created normally.

Measures to take when alert occurs

If there is a sheet of paper being printed, the main body completes the paper exit before stopping operations and turning OFF the RL1 (the main relay).

Estimated abnormal parts

- Image processing board (IPB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please turn on power again" is displayed on the touch panel.

Solution

1. After turning OFF the sub power switch, turn OFF the main power switch and unplug the power plug. Restart the main body after 10 seconds.
2. Check the connector connection and the wiring on IPB, and repair it if any abnormality.
3. Rewrite the firmware for image control.
4. Replace IPB.

Faulty part isolation DIPSW**Control while detached****2.18.81 C-6702****Code**

C-6702

Classification

Main body: Image processing abnormality

Cause

Scanner FIFO abnormality.

FIFO address abnormality for compression is indicated.

Measures to take when alert occurs

If there is a sheet of paper being printed, the main body completes the paper exit before stopping operations and turning OFF the RL1 (the main relay).

Estimated abnormal parts

- Image processing board (IPB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please turn on power again" is displayed on the touch panel.

Solution

1. After turning OFF the sub power switch, turn OFF the main power switch and unplug the power plug. Restart the main body after 10 seconds.
2. Check the connector connection and the wiring on IPB, and repair it if any abnormality.
3. Rewrite the firmware for image control.
4. Replace IPB.

Faulty part isolation DIPSW**Control while detached****2.18.82 C-6703****Code**

C-6703

Classification

Main body: Image processing abnormality

Cause

SVV length abnormality.

After negation of SVV, the compression of images that are read in and their development into the page memory are not terminated within a specified period of time.

Measures to take when alert occurs

If there is a sheet of paper being printed, the main body completes the paper exit before stopping operations and turning OFF the RL1 (the main relay).

Estimated abnormal parts

- Image processing board (IPB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please turn on power again" is displayed on the touch panel.

Solution

1. After turning OFF the sub power switch, turn OFF the main power switch and unplug the power plug. Restart the main body after 10 seconds.
2. Check the connector connection and the wiring on IPB, and repair it if any abnormality.
3. Rewrite the firmware for image control.
4. Replace IPB.

Faulty part isolation DIPSW**Control while detached****2.18.83 C-6704****Code**

C-6704

Classification

Main body: Image processing abnormality

Cause

Scanner time out.

- While in the image read, the compression processing from the scanner into the memory does not terminate within a specified period of time.
- The development from the scanner into the page memory does not terminate within a specified period of time.
- The SVV is not detected within a specified period of time.

Measures to take when alert occurs

If there is a sheet of paper being printed, the main body completes the paper exit before stopping operations and turning OFF the RL1 (the main relay).

Estimated abnormal parts

- Image processing board (IPB)
- Overall control board (OACB)
- Printer control board (PRCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please turn on power again" is displayed on the touch panel.

Solution

1. After turning OFF the sub power switch, turn OFF the main power switch and unplug the power plug. Restart the main body after 10 seconds.
2. Check the connector connection and the wiring between IPB and OACB, and repair it if any abnormality.
3. Check the connector connection and the wiring between OACB and PRCB, and repair it if any abnormality.
4. Replace IPB.
5. Replace OACB.
6. Replace PRCB.

Faulty part isolation DIPSW**Control while detached****2.18.84 C-6705****Code**

C-6705

Classification

Main body: Image processing abnormality

Cause

Compression device access abnormality.

When writing images, in spite of no resource provided, an inappropriate processing such as an access to the compression device is made.

Measures to take when alert occurs

If there is a sheet of paper being printed, the main body completes the paper exit before stopping operations and turning OFF the RL1 (the main relay).

Estimated abnormal parts

- Image processing board (IPB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please turn on power again" is displayed on the touch panel.

Solution

1. After turning OFF the sub power switch, turn OFF the main power switch and unplug the power plug. Restart the main body after 10 seconds.
2. Check the connector connection and the wiring on IPB, and repair it if any abnormality.
3. Rewrite the firmware for image control.
4. Replace IPB.

Faulty part isolation DIPSW
Control while detached

2.18.85 C-6706

Code

C-6706

Classification

Main body: Image processing abnormality

Cause

SVV OFF abnormality.

While in the image read, SVV does not turn OFF within a specified period of time and the preparation for scanning the next page cannot be started.

Measures to take when alert occurs

If there is a sheet of paper being printed, the main body completes the paper exit before stopping operations and turning OFF the RL1 (the main relay).

Estimated abnormal parts

- Image processing board (IPB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please turn on power again" is displayed on the touch panel.

Solution

1. After turning OFF the sub power switch, turn OFF the main power switch and unplug the power plug. Restart the main body after 10 seconds.
2. Check the connector connection and the wiring on IPB, and repair it if any abnormality.
3. Rewrite the firmware for image control.
4. Replace IPB.

Faulty part isolation DIPSW
Control while detached

2.18.86 C-6707

Code

C-6707

Classification

Main body: Image processing abnormality

Cause

Shading correction abnormality (GA abnormality)

Measures to take when alert occurs

If there is a sheet of paper being printed, the main body completes the paper exit before stopping operations and turning OFF the RL1 (the main relay).

Estimated abnormal parts

- Image processing board (IPB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please turn on power again" is displayed on the touch panel.

Solution

1. After turning OFF the sub power switch, turn OFF the main power switch and unplug the power plug. Restart the main body after 10 seconds.
2. Check the connector connection and the wiring on IPB, and repair it if any abnormality.
3. Rewrite the firmware for image control.
4. Replace IPB.

Faulty part isolation DIPSW
Control while detached

2.18.87 C-6708

Code

C-6708

Classification

Main body: Image processing abnormality

Cause

AOC/AGC adjustment level abnormality.

AOC/AGC adjustment error occurs due to the abnormality related to the exposure lamp or the trouble of the read section.

Measures to take when alert occurs

If there is a sheet of paper being printed, the main body completes the paper exit before stopping operations and turning OFF the RL1 (the main relay).

Estimated abnormal parts

- Exposure lamp (L4)
- L4 inverter (L4_INVB)

- Scanner drive board (SCDB)
- CCD board (CCDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please turn on power again" is displayed on the touch panel.

Solution

1. When the I-ROM is earlier than ver.40 and the CCD unit is new type, execute ISW to the I-ROM which is ver.40 or later.
2. Check the reading section, and repair it if any abnormality such as cover off.
3. Check the connector connection and the wiring between IPB and CCDB, and repair it if any abnormality.
4. Check the connector connections and the wirings between SDB and L4_INVB, and L4_INVB and L4, and repair it if any abnormality.
(Wiring diagram: Main body: 2-F)
5. When L4 is high-light intensity, low-light intensity or does not light, replace L4.
6. When L4 is high-light intensity, low-light intensity or does not light after replacing L4, replace L4_INVB.
7. Replace CCDB.

Faulty part isolation DIPSW**Control while detached****2.18.88 C-6709****Code**

C-6709

Classification

Main body: Image processing abnormality

Cause

Abnormality of the adjustment data by resolutions.
The adjustment data evacuated by resolutions is not available.

Measures to take when alert occurs

Error code is not displayed on the operation panel, but displayed only on the data collection, the list output and CSRC.

Estimated abnormal parts

- Image processing board (IPB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. After turning OFF the sub power switch, turn OFF the main power switch and unplug the power plug. Restart the main body after 10 seconds.
2. Check the connector connection and the wiring on IPB, and repair it if any abnormality.
3. Rewrite the firmware for image control.
4. Replace IPB.

Faulty part isolation DIPSW**Control while detached****2.18.89 C-6710****Code**

C-6710

Classification

Main body: Image processing abnormality

Cause

Density conversion gamma curve creation abnormality.
A density conversion gamma curve cannot be created normally.

Measures to take when alert occurs

Error code is not displayed on the operation panel, but displayed only on the data collection, the list output and CSRC.

Estimated abnormal parts

- Image processing board (IPB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. After turning OFF the sub power switch, turn OFF the main power switch and unplug the power plug. Restart the main body after 10 seconds.
2. Check the connector connection and the wiring on IPB, and repair it if any abnormality.
3. Rewrite the firmware for image control.
4. Replace IPB.

Faulty part isolation DIPSW**Control while detached****2.18.90 C-6717****Code**

C-6717

Classification

Main body: Image processing abnormality

Cause

N-in-1 page area abnormality.

Due to an image area abnormality of the memory, images cannot be developed on the memory.

Measures to take when alert occurs

If there is a sheet of paper being printed, the main body completes the paper exit before stopping operations and turning OFF the RL1 (the main relay).

Estimated abnormal parts

- Image processing board (IPB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please turn on power again" is displayed on the touch panel.

Solution

1. After turning OFF the sub power switch, turn OFF the main power switch and unplug the power plug. Restart the main body after 10 seconds.
2. Check the connector connection and the wiring on IPB, and repair it if any abnormality.
3. Rewrite the firmware for image control.
4. Replace IPB.

Faulty part isolation DIPSW**Control while detached****2.18.91 C-6719****Code**

C-6719

Classification

Main body: Image processing abnormality

Cause

The original skew adjustment is too late.

The scan operation starts before the original skew adjustment is terminated.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Original skew sensor /Fr (PS312: DF-615)
- Original skew sensor /Rr (PS311: DF-615)
- DF control board (DFCB: DF-615)
- Overall control board (OACB: main body)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the original skew sensor, and repair it if any abnormality. (Wiring diagram: DF-615: 2-G)
2. Check the connector connection and the wiring between DFCB and the sensor, and repair it if any abnormality.
3. Check the connector connection and the wiring between IDFCB and OACB, and repair it if any abnormality.
4. Conduct the DF paper skew adjustment of the mechanical adjustment to correct the original skew.
5. Conduct [Service mode]→[Process adjustment]→[ADF Skew Offset Adj.]
6. Replace PS311 or PS312.
7. Replace DFCB
8. Replace OACB.

Faulty part isolation DIPSW**Control while detached****2.18.92 C-6721****Code**

C-6721

Classification

Main body: Image processing abnormality

Cause

AGC retry.

The AGC is retried due to the decreased light volume of the exposure lamp. However, no error occurs.

Measures to take when alert occurs

Error code is not displayed on the operation panel, but displayed only on the data collection, the list output and CSRC.

Estimated abnormal parts

- Exposure lamp (L4)
- L4 inverter (L4_INVB)
- Scanner drive board (SCDB)
- CCD board (CCDB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. When the I-ROM is earlier than ver.40 and the CCD unit is new type, execute ISW to the I-ROM which is ver.40 or later.
2. Check the reading section, and repair it if any abnormality such as cover off.

3. Check the connector connection and the wiring between IPB and CCDB, and repair it if any abnormality.
4. Check the connector connections and the wirings between SDB and L4_INVB, and L4_INVB and L4, and repair it if any abnormality.
(Wiring diagram: Main body: 2-F)
5. When L4 is high-light intensity, low-light intensity or does not light, replace L4.
6. When L4 is high-light intensity, low-light intensity or does not light after replacing L4, replace L4_INVB.
7. Replace CCDB.

Faulty part isolation DIPSW
Control while detached

2.18.93 C-6801

Code

C-6801

Classification

Main body: Image processing abnormality

Cause

Initial communication error between the image processing board (OACB) and the operation board /1 (OB1).

An initial communication from the main body to the operation panel is not sent within 30 seconds after the power is turned ON.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Operation board /1 (OB1)
- Overall control board (OACB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. After turning OFF the sub power switch, turn OFF the main power switch and unplug the power plug. Restart the main body after 10 seconds.
2. Check the connector connection and the wiring between OB1 and OACB, and repair it if any abnormality.
3. Check the connector connection and the wiring of the operation panel, and repair it if any abnormality.
4. Replace OACB.
5. Replace OB1.

Faulty part isolation DIPSW
Control while detached

2.19 Solution 16 (C-8001_C-C108)

2.19.1 C-8001

Code

C-8001

Classification

DF: DF abnormality

Cause

Sending error between the main body and DF.

Although the main body sent out data according to the data transmission request by the DF, the same request is received again.

Measures to take when alert occurs

If there is a sheet of paper being printed, the main body completes the paper exit before stopping operations and turning OFF the RL1 (the main relay).

Estimated abnormal parts

- DF control board (DFCB: DF-615)
- Overall control board (OACB: main body)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please turn on power again" is displayed on the touch panel.

Solution

1. Check the connector connection and the wiring between IDFCB and OACB, and repair it if any abnormality.
2. Replace DFCB
3. Replace OACB.

Faulty part isolation DIPSW
DIPSW18-4

Control while detached

DF mode unavailable (DF connection not recognized)

2.19.2 C-8002

Code

C-8002

Classification

DF: DF abnormality

Cause

Reception error between the main body and DF.

Checksum error or SRGA reception error is detected twice in succession while in the reception in serial communication.

Measures to take when alert occurs

B: If there is a sheet of paper being printed, the main body completes the paper exit before stopping operations and turning OFF the RL1 (the main relay).

Estimated abnormal parts

- DF control board (DFCB: DF-615)
- Overall control board (OACB: main body)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please turn on power again" is displayed on the touch panel.

Solution

1. Check the connector connection and the wiring between IDFCB and OACB, and repair it if any abnormality.
2. Replace DFCB
3. Replace OACB.

Faulty part isolation DIPSW

DIPSW18-4

Control while detached

DF mode unavailable (DF connection not recognized)

2.19.3 C-8003

Code

C-8003

Classification

DF: DF abnormality

Cause

Initial communication error between the main body and DF.

When the main power switch (SW1) is ON, there is no response to the initial communication request from the main body to the DF even after a specified period of time elapses.

Measures to take when alert occurs

B: If there is a sheet of paper being printed, the main body completes the paper exit before stopping operations and turning OFF the RL1 (the main relay).

Estimated abnormal parts

- DF control board (DFCB: DF-615)
- Overall control board (OACB: main body)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please turn on power again" is displayed on the touch panel.

Solution

1. Check the connector connection and the wiring between IDFCB and OACB, and repair it if any abnormality.
2. Replace DFCB
3. Replace OACB.

Faulty part isolation DIPSW

DIPSW18-4

Control while detached

DF mode unavailable (DF connection not recognized)

2.19.4 C-8201

Code

C-8201

Classification

DF: DF abnormality

Cause

Tray up/down motor (M303) abnormality.

Measures to take when alert occurs

B: If there is a sheet of paper being printed, the main body completes the paper exit before stopping operations and turning OFF the RL1 (the main relay).

Estimated abnormal parts

- Tray up down motor (M303: DF-615)
- DF control board (DFCB: DF-615)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the original tray up/down section, and repair it if any abnormality.
2. Check the connector connection and the wiring between DFCB and the motor, and repair it if any abnormality.
3. Check the I/O drive of the motor and the coupling of the gear, and repair/replace it if any abnormality. (Wiring diagram: DF-615 : 6-E)
4. Replace M303.
5. Replace DFCB

Faulty part isolation DIPSW

DIPSW18-4

Control while detached

DF mode unavailable (DF connection not recognized)

2.19.5 C-8301**Code**

C-8301

Classification

DF: DF abnormality

Cause

Cooling fan /Lt (FM301) abnormality.

Measures to take when alert occurs

B: If there is a sheet of paper being printed, the main body completes the paper exit before stopping operations and turning OFF the RL1 (the main relay).

Estimated abnormal parts

- Cooling fan /Lt (FM301: DF-615)
- Cooling fan /Rt (FM302: DF-615)
- DF control board (DFCB: DF-615)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between DFCB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: DF-615: 7-C, 8-G)
3. Replace FM301 or FM302.
4. Replace DFCB

Faulty part isolation DIPSW

DIPSW18-4

Control while detached

DF mode unavailable (DF connection not recognized)

2.19.6 C-8401**Code**

C-8401

Classification

DF: DF abnormality

Cause

Original registration sensor /Rt (PS318) abnormality.

Measures to take when alert occurs

B: If there is a sheet of paper being printed, the main body completes the paper exit before stopping operations and turning OFF the RL1 (the main relay).

Estimated abnormal parts

- Original registration sensor /Lt (PS306: DF-615)
- Original registration sensor /Rt (PS318: DF-615)
- DF control board (DFCB: DF-615)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between DFCB and the sensor, and repair it if any abnormality.
2. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: DF-615: 2-E, 2-D)
3. Replace PS306 or PS318.
4. Replace DFCB

Faulty part isolation DIPSW

DIPSW18-4

Control while detached

DF mode unavailable (DF connection not recognized)

2.19.7 C-8402**Code**

C-8402

Classification

DF: DF abnormality

Cause

Original conveyance sensor (PS308) abnormality.

Measures to take when alert occurs

B: If there is a sheet of paper being printed, the main body completes the paper exit before stopping operations and turning OFF the RL1 (the main relay).

Estimated abnormal parts

- Original conveyance sensor (PS308: DF-615)
- DF control board (DFCB: DF-615)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between DFCB and the sensor, and repair it if any abnormality.
2. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: DF-615: 2-G)
3. Replace PS308.
4. Replace DFCB

Faulty part isolation DIPSW

DIPSW18-4

Control while detached

DF mode unavailable (DF connection not recognized)

2.19.8 C-8403**Code**

C-8403

Classification

DF: DF abnormality

Cause

Reverse sensor (PS309) abnormality

Measures to take when alert occurs

B: If there is a sheet of paper being printed, the main body completes the paper exit before stopping operations and turning OFF the RL1 (the main relay).

Estimated abnormal parts

- Original reverse sensor (PS309: DF-615)
- DF control board (DFCB: DF-615)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between DFCB and the sensor, and repair it if any abnormality.
2. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: DF-615: 3-F)
3. Replace PS309.
4. Replace DFCB

Faulty part isolation DIPSW

DIPSW18-4

Control while detached

DF mode unavailable (DF connection not recognized)

2.19.9 C-8404**Code**

C-8404

Classification

DF: DF abnormality

Cause

Non-volatile memory error

Measures to take when alert occurs

B: If there is a sheet of paper being printed, the main body completes the paper exit before stopping operations and turning OFF the RL1 (the main relay).

Estimated abnormal parts

- DF control board (DFCB: DF-615)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. After turning OFF the sub power switch, turn OFF the main power switch and unplug the power plug. Restart the main body after 10 seconds.
2. Check the connector connection and the wiring on DFCB, and repair it if any abnormality.
3. Rewrite the firmware of DF-615.
4. Replace DFCB

Faulty part isolation DIPSW

DIPSW18-4

Control while detached

DF mode unavailable (DF connection not recognized)

2.19.10 C-8405**Code**

C-8405

Classification

DF: DF abnormality

Cause

Reverse jam sensor (PS304) abnormality.

Measures to take when alert occurs

B: If there is a sheet of paper being printed, the main body completes the paper exit before stopping operations and turning OFF the RL1 (the main relay).

Estimated abnormal parts

- Reverse jam sensor (PS304: DF-615)
- DF control board (DFCB: DF-615)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between DFCB and the sensor, and repair it if any abnormality.
2. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: DF-615: 3-E)
3. Replace PS304.
4. Replace DFCB

Faulty part isolation DIPSW

DIPSW18-4

Control while detached

DF mode unavailable (DF connection not recognized)

2.19.11 C-8406**Code**

C-8406

Classification

DF: DF abnormality

Cause

Original reverse/exit sensor (PS313) abnormality.

Measures to take when alert occurs

B: If there is a sheet of paper being printed, the main body completes the paper exit before stopping operations and turning OFF the RL1 (the main relay).

Estimated abnormal parts

- Original reverse/exit sensor (PS313: DF-615)
- DF control board (DFCB: DF-615)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between DFCB and the sensor, and repair it if any abnormality.
2. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: DF-615: 4-B)
3. Replace PS313.
4. Replace DFCB

Faulty part isolation DIPSW

DIPSW18-4

Control while detached

DF mode unavailable (DF connection not recognized)

2.19.12 C-8407**Code**

C-8407

Classification

DF: DF abnormality

Cause

Original skew sensor /Fr (PS312) abnormality.

Measures to take when alert occurs

B: If there is a sheet of paper being printed, the main body completes the paper exit before stopping operations and turning OFF the RL1 (the main relay).

Estimated abnormal parts

- Original skew sensor /Fr (PS312: DF-615)
- DF control board (DFCB: DF-615)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between DFCB and the sensor, and repair it if any abnormality.
2. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: DF-615: 2-G)
3. Replace PS312.
4. Replace DFCB

Faulty part isolation DIPSW

DIPSW18-4

Control while detached

DF mode unavailable (DF connection not recognized)

2.19.13 C-8408**Code**

C-8408

Classification

DF: DF abnormality

Cause

Original skew sensor /Rr (PS311) abnormality.

Measures to take when alert occurs

B: If there is a sheet of paper being printed, the main body completes the paper exit before stopping operations and turning OFF the RL1 (the main relay).

Estimated abnormal parts

- Original skew sensor /Rr (PS311: DF-615)
- DF control board (DFCB: DF-615)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between DFCB and the sensor, and repair it if any abnormality.
2. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: DF-615: 2-G)
3. Replace PS311.
4. Replace DFCB

Faulty part isolation DIPSW

DIPSW18-4

Control while detached

DF mode unavailable (DF connection not recognized)

2.19.14 C-8409**Code**

C-8409

Classification

DF: DF abnormality

Cause

Original registration sensor /Lt (PS306) abnormality.

Measures to take when alert occurs

B: If there is a sheet of paper being printed, the main body completes the paper exit before stopping operations and turning OFF the RL1 (the main relay).

Estimated abnormal parts

- Original registration sensor /Lt (PS306: DF-615)
- DF control board (DFCB: DF-615)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between DFCB and the sensor, and repair it if any abnormality.
2. Check I/O and the operation of the sensor, and repair/replace it if any abnormality. (Wiring diagram: DF-615: 2-E)
3. Replace PS306
4. Replace DFCB

Faulty part isolation DIPSW

DIPSW18-4

Control while detached

DF mode unavailable (DF connection not recognized)

2.19.15 C-8410**Code**

C-8410

Classification

DF: DF abnormality

Cause

Centering sensor /Fr (PS320) abnormality.

Measures to take when alert occurs

B: If there is a sheet of paper being printed, the main body completes the paper exit before stopping operations and turning OFF the RL1 (the main relay).

Estimated abnormal parts

- Centering LED sensor /Fr (PS319: DF-615)
- Centering sensor /Fr (PS320: DF-615)
- DF control board (DFCB: DF-615)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between DFCB and the sensor, and repair it if any abnormality.
2. Check the sensor to see LED emission and light-receiving path, and repair/replace it if any abnormality. (Wiring diagram: DF-615: 1-H, 2-H)

3. Replace PS319 and PS320.
4. Replace DFCB

Faulty part isolation DIPSW

DIPSW18-4

Control while detached

DF mode unavailable (DF connection not recognized)

2.19.16 C-8411**Code**

C-8411

Classification

DF: DF abnormality

Cause

Centering sensor /Rr (PS321) abnormality.

Measures to take when alert occurs

B: If there is a sheet of paper being printed, the main body completes the paper exit before stopping operations and turning OFF the RL1 (the main relay).

Estimated abnormal parts

- Centering LED sensor /Rr (PS322: DF-615)
- Centering sensor /Rr (PS321: DF-615)
- DF control board (DFCB: DF-615)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between DFCB and the sensor, and repair it if any abnormality.
2. Check the sensor to see LED emission and light-receiving path, and repair/replace it if any abnormality. (Wiring diagram: DF-615: 2-H, 2-I)
3. Replace PS321 and PS322.
4. Replace DFCB

Faulty part isolation DIPSW

DIPSW18-4

Control while detached

DF mode unavailable (DF connection not recognized)

2.19.17 C-8412**Code**

C-8412

Classification

DF: DF abnormality

Cause

Multi feed detection sensor (MFDBS, MFDBR) abnormality.

Measures to take when alert occurs

B: If there is a sheet of paper being printed, the main body completes the paper exit before stopping operations and turning OFF the RL1 (the main relay).

Estimated abnormal parts

- Multi feed detection boards /S (MFDBS: DF-615)
- Multi feed detection boards /R (MFDBS: DF-615)
- DF control board (DFCB: DF-615)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between DFCB and the multi feed detection board, and repair it if any abnormality.
2. Check the multi feed detection board to see light-emission and light-receiving path, and repair/replace it if any abnormality. (Wiring diagram: DF-615: 3-C, 7-A)
3. Replace MFDBS or MFDBR.
4. Replace DFCB

Faulty part isolation DIPSW

DIPSW18-4

Control while detached

DF mode unavailable (DF connection not recognized)

2.19.18 C-A001**Code**

C-A001

Classification

Main Body: IC Controller abnormality

Cause

Transfer error to the main body image memory

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- IC board (ICB)
- PCI relay board (PCIRB)
- Overall control board (OACB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between ICB and PCIRB/between PCIRB and OACB, and repair it if any abnormality.
2. Replace ICB.
3. Replace PCIRB.
4. Replace OACB.

Faulty part isolation DIPSW**Control while detached****2.19.19 C-A002****Code**

C-A002

Classification

Main Body: IC Controller abnormality

Cause

Hard disk /2 (HDD2) abnormality.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- IC board (ICB)
- PCI relay board (PCIRB)
- Hard disk /2 (HDD2)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between ICB and HDD2/between PCIRB and HDD2, and repair it if any abnormality.
2. Format HDD2.
3. Replace HDD2.
4. Replace PCIRB.
5. Replace ICB.

Faulty part isolation DIPSW**Control while detached****2.19.20 C-A003****Code**

C-A003

Classification

Main Body: IC Controller abnormality

Cause

IC cooling fan (FM24) lock abnormality

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- IC cooling fan (FM39)
- IC board (ICB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between ICB and the fan, and repair it if any abnormality.
2. Rotate the fan or I/O by hand, and repair it if any abnormality. (Wiring diagram: Main body: 22-D)
3. Replace FM24.
4. Replace ICB.

Faulty part isolation DIPSW**Control while detached****2.19.21 C-A004****Code**

C-A004

Classification

Main Body: IC Controller abnormality

Cause

Unregulations IC error occurs.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- IC board (ICB)
- PCI relay board (PCIRB)
- Overall control board (OACB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. After turning OFF the sub power switch, turn OFF the main power switch and unplug the power plug. Restart the main body after 10 seconds.
2. Check the connector connection and the wiring on ICB, and repair it if any abnormality.
3. Check the connector connection and the wiring between ICB and PCIRB/between PCIRB and OACB, and repair it if any abnormality.
4. Replace ICB.

Faulty part isolation DIPSW**Control while detached****2.19.22 C-A005****Code**

C-A005

Classification

Main Body: IC Controller abnormality

Cause

Version abnormality between CF and hard disk /2 (HDD2).

The CF version is different from the version information in HDD2.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- IC board (ICB)
- Hard disk /2 (HDD2)
- CF (CF)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the firmware versions of CF and HDD2 and rewrite if the versions are improper.
2. Replace CF.
3. Replace HDD2.

Faulty part isolation DIPSW**Control while detached****2.19.23 C-A006****Code**

C-A006

Classification

Main Body: IC Controller abnormality

Cause

Hard disc /2 (HDD2) abnormality 1 while in the security ON.

While in the security ON, the unlocking of the HDD results in a failure due to the mismatched password of the hard disk /2 (HDD2).

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Hard disk /2 (HDD2)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check to see that HDD2 password for the security mode is properly set, and repair it if any abnormality.

Faulty part isolation DIPSW**Control while detached****2.19.24 C-A007****Code**

C-A007

Classification

Main Body: IC Controller abnormality

Cause

Hard disc /2 (HDD2) abnormality 2 while in the security ON.

Unlocked HDD2 is detected while in the security ON.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Hard disk /2 (HDD2)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check to see that HDD2 password for the security mode is properly set, and repair it if any abnormality.

Faulty part isolation DIPSW**Control while detached****2.19.25 C-A008****Code**

C-A008

Classification

Main Body: IC Controller abnormality

Cause

Hard disk /2 (HDD2) is unformatted.
An unformatted HDD2 is detected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Hard disk /2 (HDD2)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Format HDD2.
2. Replace HDD2.

Faulty part isolation DIPSW**Control while detached****2.19.26 C-A009****Code**

C-A009

Classification

Main Body: IC Controller abnormality

Cause

Controller memory abnormality.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- DIMM (DIMM)
- IC board (ICB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please turn on power again" is displayed on the touch panel.

Solution

1. Check DIMM on ICB, and reinstall it if any abnormality. (Wiring diagram: Main body: 21-D)
2. Replace DIMM.
3. Replace ICB.

Faulty part isolation DIPSW**Control while detached****2.19.27 C-A101****Code**

C-A101

Classification

Main Body: IC Controller abnormality

Cause

Controller initial communication abnormality.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- IC board (ICB)
- PCI relay board (PCIRB)
- Overall control board (OACB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between ICB and PCIRB/between PCIRB and OACB, and repair it if any abnormality.
2. Replace ICB.
3. Replace PCIRB.
4. Replace OACB.

Faulty part isolation DIPSW**Control while detached****2.19.28 C-C101****Code**

C-C101

Classification

Main body: Communication error

Cause

Initial communication error between the overall control board (OACB) and the printer control board (PRCB).

No response is returned from PRCB even after a specified period of time after the main power switch (SW1) and the sub power switch (SW2) turn ON. Or ISW information is not written on PRCB.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Printer control board (PRCB)
- Overall control board (OACB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. After turning OFF the sub power switch, turn OFF the main power switch and unplug the power plug. Restart the main body after 10 seconds.
2. Check the connector connection and the wiring between PRCB and OACB, and repair it if any abnormality.
3. Replace PRCB.
4. Replace OACB.

Faulty part isolation DIPSW**Control while detached****2.19.29 C-C102****Code**

C-C102

Classification

Main body: Communication error

Cause

Initial communication error between the overall control board (OACB) and the printer control board (PRCB).

Communication error from PRCB is detected. Or transmission is not completed.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Printer control board (PRCB)
- Overall control board (OACB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. After turning OFF the sub power switch, turn OFF the main power switch and unplug the power plug. Restart the main body after 10 seconds.
2. Check the connector connection and the wiring between PRCB and OACB, and repair it if any abnormality.
3. Replace PRCB.
4. Replace OACB.

Faulty part isolation DIPSW**Control while detached****2.19.30 C-C103****Code**

C-C103

Classification

Main body: Communication error

Cause

Communication error between the overall control board (OACB) and the operation board (OB1).

Communication error from OB1 is detected. Or transmission is not completed.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Operation board /1 (OB1)
- Overall control board (OACB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- **The message "Please call service" is displayed on the panel.**

Solution

1. After turning OFF the sub power switch, turn OFF the main power switch and unplug the power plug. Restart the main body after 10 seconds.
2. Check the connector connection and the wiring between OB1 and OACB, and repair it if any abnormality. (Wiring diagram: Main body: 9-C)
3. Check the connector connection and the wiring of the operation panel, and repair it if any abnormality.
4. Replace OB1.
5. Replace OACB.

Faulty part isolation DIPSW**Control while detached****2.19.31 C-C104*****Code**

C-C104*

Classification

Main body: Communication error

Cause

ISW write abnormality 1 of the printer control board.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Image processing board (IPB)
- Printer control board (PRCB)
- Overall control board (OACB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- **The message "Please call service" is displayed on the panel.**

Solution

1. Check the I/F connector connection and the wiring for ISW on IPB, and repair it if any abnormality.
2. Check the connector connection and the wiring between IPB and PRCB, and repair it if any abnormality. (Wiring diagram: Main body: 21-C)
3. Reinstalling firmware
4. Replace PRCB.

Faulty part isolation DIPSW**Control while detached****2.19.32 C-C105****Code**

C-C105

Classification

Main body: Communication error

Cause

ISW write abnormality 2 of the printer control board.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Image processing board (IPB)
- Printer control board (PRCB)
- Overall control board (OACB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- **The message "Please call service" is displayed on the panel.**

Solution

1. Check the I/F connector connection and the wiring for ISW on IPB, and repair it if any abnormality.
2. Check the connector connection and the wiring between IPB and PRCB, and repair it if any abnormality. (Wiring diagram: Main body: 21-C)
3. Reinstalling firmware
4. Replace PRCB.

Faulty part isolation DIPSW**Control while detached****2.19.33 C-C106****Code**

C-C106

Classification

Main body: Communication error

Cause

ISW time out error.

No normal header is transmitted within a specified period of time after ISW is started.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Image processing board (IPB)
- Overall control board (OACB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the I/F connector connection and the wiring for ISW on IPB, and repair it if any abnormality.
2. Check the connector connection and the wiring between IPB and OACB, and repair it if any abnormality. (Wiring diagram: Main body: 21-C)
3. Reinstalling firmware
4. Replace OACB.

Faulty part isolation DIPSW**Control while detached****2.19.34 C-C107****Code**

C-C107

Classification

Main body: Communication error

Cause

ISW download abnormality.

An error is detected while downloading ISW.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Image processing board (IPB)
- Overall control board (OACB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the I/F connector connection and the wiring for ISW on IPB, and repair it if any abnormality.
2. Check the connector connection and the wiring between IPB and OACB, and repair it if any abnormality. (Wiring diagram: Main body: 21-C)
3. Reinstalling firmware
4. Replace OACB.

Faulty part isolation DIPSW**Control while detached****2.19.35 C-C108****Code**

C-C108

Classification

Main body: Communication error

Cause

ISW write abnormality on the overall control board.

An error is detected because ISW data cannot be written on the overall control board (OACB).

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Image processing board (IPB)
- Overall control board (OACB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the I/F connector connection and the wiring for ISW on IPB, and repair it if any abnormality.
2. Check the connector connection and the wiring between IPB and OACB, and repair it if any abnormality. (Wiring diagram: Main body: 21-C)
3. Reinstalling firmware
4. Replace OACB.

Faulty part isolation DIPSW**Control while detached**

2.20 Solution 17 (C-C109_C-C120)

2.20.1 C-C109

Code

C-C109

Classification

FS: FS ISW unwritten

Cause

When the sub power switch (SW2) turns ON, ISW unwritten area is detected in the FS firmware.

Measures to take when alert occurs

The main body stops immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- FNSCB firmware
- FNS control board (FNSCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Reinstall the FNSCB firmware.
2. Check the connector connection and the wiring between the main body and each option, and repair it if any abnormality.
3. Check the I/F connector connection and the wiring for ISW on RBU, and repair it if any abnormality.
4. Check the connector connection and the wiring between RUB and OACB, and repair it if any abnormality.
5. Replace FNSCB.

Faulty part isolation DIPSW

Control while detached

2.20.2 C-C111

Code

C-C111

Classification

LS: LS ISW unwritten

Cause

When the sub power switch (SW2) turns ON, ISW unwritten area is detected in the LS firmware (1st tandem).

Measures to take when alert occurs

The main body stops immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- LSCB firmware
- LS control board (LSCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Reinstall the LSCB firmware.
2. Check the connector connection and the wiring between the main body and each option, and repair it if any abnormality.
3. Check the I/F connector connection and the wiring for ISW on RBU, and repair it if any abnormality.
4. Check the connector connection and the wiring between RUB and OACB, and repair it if any abnormality.
5. Replace LSCB.

Faulty part isolation DIPSW

Control while detached

2.20.3 C-C112

Code

C-C112

Classification

LS: LS ISW unwritten

Cause

When the sub power switch (SW2) turns ON, ISW unwritten area is detected in the LS firmware (2nd tandem).

Measures to take when alert occurs

The main body stops immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- LSCB firmware
- LS control board (LSCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Reinstall the LSCB firmware.
2. Check the connector connection and the wiring between the main body and each option, and repair it if any abnormality.
3. Check the I/F connector connection and the wiring for ISW on RBU, and repair it if any abnormality.

4. Check the connector connection and the wiring between RUB and OACB, and repair it if any abnormality.
5. Replace LSCB.

Faulty part isolation DIPSW**Control while detached****2.20.4 C-C113****Code**

C-C113

Classification

FD: FD ISW unwritten

Cause

When the sub power switch (SW2) turns ON, ISW unwritten area is detected in the FD firmware.

Measures to take when alert occurs

The main body stops immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- FDCB firmware
- FD control board (FDCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Reinstall the FDCB firmware.
2. Check the connector connection and the wiring between the main body and each option, and repair it if any abnormality.
3. Check the I/F connector connection and the wiring for ISW on RBU, and repair it if any abnormality.
4. Check the connector connection and the wiring between RUB and OACB, and repair it if any abnormality.
5. Replace FDCB.

Faulty part isolation DIPSW**Control while detached****2.20.5 C-C114****Code**

C-C114

Classification

SD: SD-506 ISW unwritten

Cause

When the sub power switch (SW2) turns ON, ISW unwritten area is detected in the SD firmware.

Measures to take when alert occurs

The main body stops immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- SDCB firmware
- SD control board (SDCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Reinstalling SDCB firmware
2. Check the connector connection and the wiring between the main body and each option, and repair it if any abnormality.
3. Check the I/F connector connection and the wiring for ISW on RBU, and repair it if any abnormality.
4. Check the connector connection and the wiring between RUB and OACB, and repair it if any abnormality.
5. Replace SDCB.

Faulty part isolation DIPSW**Control while detached****2.20.6 C-C115****Code**

C-C115

Classification

RU: Communication error

Cause

ISW write abnormality on RU.

The firmware is not written on RU, or an error is detected during the ROM check.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Image processing board (IPB)
- Overall control board (OACB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check to see that the jumper connector is properly set in the manner that is explained in FIRMWARE VERSION UP in the MAINTENANCE, and reinstall it if any abnormality.
2. Check the connector connection and the wiring between the main body and each option, and repair it if any abnormality.
3. Check the I/F connector connection and the wiring for ISW on IPB, and repair it if any abnormality. (Wiring diagram: Main body: 21-C)
4. Check the connector connection and the wiring between IPB and OACB, and repair it if any abnormality.
5. Reinstall the firmware of the option corresponds to the malfunction code.
6. Replace OACB.

Faulty part isolation DIPSW
Control while detached

2.20.7 C-C116

Code

C-C116

Classification

PB: PB ISW unwritten

Cause

When the sub power switch (SW2) turns ON, ISW unwritten area is detected in the PB firmware.

Measures to take when alert occurs

The main body stops immediately to turn OFF the main relay (RL1).

Estimated abnormal parts

- PB firmware
- PB control board (PBCB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Reinstalling PBCB firmware
2. Check the connector connection and the wiring between the main body and each option, and repair it if any abnormality.
3. Check the I/F connector connection and the wiring for ISW on RBU, and repair it if any abnormality.
4. Check the connector connection and the wiring between RUB and OACB, and repair it if any abnormality.
5. Replace PBCB.

Faulty part isolation DIPSW
Control while detached

2.20.8 C-C117

Code

C-C117

Classification

GP: Communication error

Cause

GPIS Write abnormality

The firmware is not written on GP, or an error is detected during the ROM check.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Image processing board (IPB)
- Overall control board (OACB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check to see that the jumper connector is properly set in the manner that is explained in FIRMWARE VERSION UP in the MAINTENANCE, and reinstall it if any abnormality.
2. Check the connector connection and the wiring between the main body and each option, and repair it if any abnormality.
3. Check the I/F connector connection and the wiring for ISW on IPB, and repair it if any abnormality. (Wiring diagram: Main body: 21-C)
4. Check the connector connection and the wiring between IPB and OACB, and repair it if any abnormality.
5. Reinstall the firmware of the option corresponds to the malfunction code.
6. Replace OACB.

Faulty part isolation DIPSW
Control while detached

2.20.9 C-C120

Code

C-C120

Classification

DF: Communication error

Cause

ISW write abnormality on DF.

When the main power switch (SW1) is ON, unwritten area by the ISW is detected in the DF control program.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- DF control board (DFCB)
- Overall control board (OACB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between the main body and DF, and repair it if any abnormality.
2. Reinstalling DF firmware
3. Replace DFCB
4. Replace OACB.

Faulty part isolation DIPSW**Control while detached****2.21 Solution 18 (C-C125_E007)****2.21.1 C-C125****Code**

C-C125

Classification

IC: Communication error

Cause

ISW write abnormality of controller.

The firmware is not written on ICB or an error is detected during the ROM check.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- IC board (ICB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the I/F connector connection and the wiring for ISW on ICB, and repair it if any abnormality.
2. Reinstall the firmware related to the controller.
3. Replace ICB.

Faulty part isolation DIPSW**Control while detached****2.21.2 C-C130****Code**

C-C130

Classification

IC: Communication error

Cause

Wrong firmware.

A firmware for different type is installed.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

-

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Reinstall the correct firmware

Faulty part isolation DIPSW**Control while detached****2.21.3 C-D001****Code**

C-D001

Classification

HDD: Communication error

Cause

Hard disk /1 (HDD1) initialization abnormality.

HDD1 is defective, or the connector is poorly connected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Hard disk /1 (HDD1)
- Overall control board (OACB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Check the connector connection and the wiring between OACB and HDD1, and repair it if any abnormality.
2. Execute output check code "99-03" in I/O check mode.
3. Replace HDD1.

Faulty part isolation DIPSW**Control while detached****2.21.4 C-D002****Code**

C-D002

Classification

HDD: Communication error

Cause

JOB_RAM storage abnormality.

The JOB information cannot be stored on the hard disk /1 (HDD1).

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Hard disk /1 (HDD1)
- Overall control board (OACB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. After turning OFF the sub power switch, turn OFF the main power switch and unplug the power plug. Restart the main body after 10 seconds.
2. Check the connector connection and the wiring between OACB and HDD1, and repair it if any abnormality. (Wiring diagram: Main body: 4-D)
3. Reinstall the firmware related to the overall control.
4. Replace HDD1.

Faulty part isolation DIPSW**Control while detached****2.21.5 C-D003****Code**

C-D003

Classification

HDD: Communication error

Cause

Hard disk /1 (HDD1) periodic cleaning abnormality.

While in a periodical cleaning, opening the rote to hard disk is not succeeded.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Hard disk /1 (HDD1)
- Overall control board (OACB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. After turning OFF the sub power switch, turn OFF the main power switch and unplug the power plug. Restart the main body after 10 seconds.
2. Check the connector connection and the wiring between OACB and HDD1, and repair it if any abnormality. (Wiring diagram: Main body: 4-D)
3. Reinstall the firmware related to the overall control.
4. Replace HDD1.

Faulty part isolation DIPSW**Control while detached****2.21.6 C-D004****Code**

C-D004

Classification

HDD: Communication error

Cause

HDD/1 (HDD1) access defective.

HDD1 is defective, or the connector is poorly connected.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Hard disk /1 (HDD1)
- Overall control board (OACB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. After turning OFF the sub power switch, turn OFF the main power switch and unplug the power plug. Restart the main body after 10 seconds.
2. Check the connector connection and the wiring between OACB and HDD1, and repair it if any abnormality. (Wiring diagram: Main body: 4-D)
3. Reinstall the firmware related to the overall control.
4. Replace HDD1.

Faulty part isolation DIPSW**Control while detached****2.21.7 C-D010****Code**

C-D010

Classification

HDD: Communication error

Cause

Hard disk /1 (HDD1) overwrite erase execution.
HDD1 overwrite erase is executed.

Measures to take when alert occurs

The main body and option stop immediately to turn OFF the RL1 (the main relay) .

Estimated abnormal parts

- Hard disk /1 (HDD1)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please call service" is displayed on the panel.

Solution

1. Execute output check code "99-03" in I/O check mode.
2. Replace HDD1.

Faulty part isolation DIPSW**Control while detached****2.21.8 C-E001****Code**

C-E001

Classification

HDD: Communication error

Cause

Message queue error.
The message queue is insufficient or destroyed.

Measures to take when alert occurs

B: If there is a sheet of paper being printed, the main body completes the paper exit before stopping operations and turning OFF the RL1 (the main relay).

Estimated abnormal parts

- Overall control board (OACB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please turn on power again" is displayed on the touch panel.

Solution

1. After turning OFF the sub power switch, turn OFF the main power switch and unplug the power plug. Restart the main body after 10 seconds.
2. Reinstall the firmware related to the overall control.
3. Replace OACB.

Faulty part isolation DIPSW**Control while detached****2.21.9 C-E002****Code**

C-E002

Classification

HDD: Communication error

Cause

Message parameter value error.

The parameter value is in excess of the permissible limits.

Measures to take when alert occurs

B: If there is a sheet of paper being printed, the main body completes the paper exit before stopping operations and turning OFF the RL1 (the main relay).

Estimated abnormal parts

- Overall control board (OACB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please turn on power again" is displayed on the touch panel.

Solution

1. After turning OFF the sub power switch, turn OFF the main power switch and unplug the power plug. Restart the main body after 10 seconds.
2. Reinstall the firmware related to the overall control.
3. Replace OACB.

Faulty part isolation DIPSW

Control while detached

2.21.10 C-E003

Code

C-E003

Classification

HDD: Communication error

Cause

Source task error.

The ID of the task that sends the message queue is undefined.

Measures to take when alert occurs

B: If there is a sheet of paper being printed, the main body completes the paper exit before stopping operations and turning OFF the RL1 (the main relay).

Estimated abnormal parts

- Overall control board (OACB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please turn on power again" is displayed on the touch panel.

Solution

1. After turning OFF the sub power switch, turn OFF the main power switch and unplug the power plug. Restart the main body after 10 seconds.
2. Reinstall the firmware related to the overall control.
3. Replace OACB.

Faulty part isolation DIPSW

Control while detached

2.21.11 C-E004

Code

C-E004

Classification

HDD: Communication error

Cause

Receiving event error.

The receiving event of the message is undefined.

Measures to take when alert occurs

B: If there is a sheet of paper being printed, the main body completes the paper exit before stopping operations and turning OFF the RL1 (the main relay).

Estimated abnormal parts

- Overall control board (OACB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please turn on power again" is displayed on the touch panel.

Solution

1. After turning OFF the sub power switch, turn OFF the main power switch and unplug the power plug. Restart the main body after 10 seconds.
2. Reinstall the firmware related to the overall control.
3. Replace OACB.

Faulty part isolation DIPSW

Control while detached

2.21.12 C-E005

Code

C-E005

Classification

HDD: Communication error

Cause

Memory access abnormality.

Measures to take when alert occurs

B: If there is a sheet of paper being printed, the main body completes the paper exit before stopping operations and turning OFF the RL1 (the main relay).

Estimated abnormal parts

- Overall control board (OACB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please turn on power again" is displayed on the touch panel.

Solution

1. After turning OFF the sub power switch, turn OFF the main power switch and unplug the power plug. Restart the main body after 10 seconds.
2. Reinstall the firmware related to the overall control.
3. Replace OACB.

Faulty part isolation DIPSW**Control while detached****2.21.13 C-E006****Code**

C-E006

Classification

HDD: Communication error

Cause

Header readout address abnormality.

Measures to take when alert occurs

B: If there is a sheet of paper being printed, the main body completes the paper exit before stopping operations and turning OFF the RL1 (the main relay).

Estimated abnormal parts

- Overall control board (OACB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please turn on power again" is displayed on the touch panel.

Solution

1. After turning OFF the sub power switch, turn OFF the main power switch and unplug the power plug. Restart the main body after 10 seconds.
2. Reinstall the firmware related to the overall control.
3. Replace OACB.

Faulty part isolation DIPSW**Control while detached****2.21.14 C-E007****Code**

C-E007

Classification

HDD: Communication error

Cause

DRAM memory abnormality.

An error is detected in the DRAM memory check at the start.

Measures to take when alert occurs

B: If there is a sheet of paper being printed, the main body completes the paper exit before stopping operations and turning OFF the RL1 (the main relay).

Estimated abnormal parts

- Overall control board (OACB)

Correction

Turn OFF/ON the sub power switch (SW2) of the main body when releasing an abnormal condition.

Note

- The message "Please turn on power again" is displayed on the touch panel.

Solution

1. After turning OFF the sub power switch, turn OFF the main power switch and unplug the power plug. Restart the main body after 10 seconds.
2. Reinstall the firmware related to the overall control.
3. Replace OACB.

Faulty part isolation DIPSW**Control while detached**

3. TROUBLES THAT DO NOT DISPLAY THE MALFUNCTION CODE

3.1 The power of main body does not turn ON

3.1.1 Turn ON the main power switch but the power LED of the operation panel does not light up in red.

Target parts for trouble				
Noise filter /2 (NF2) Main power switch (SW1) Circuit breaker (CBR)		DC power supply /1 (DCPS/1) Overall control board (OACB)		
Step	Check item	Location (Electrical parts)	Result	Action
1	Disconnect the plug from the outlet. Ask the administrator on the user side to check the state of the power of the outlet, and the power has no trouble. * Be sure not to overuse the power of the outlet including the other connected machines.	Main body: 1-A	NO	Ask the administrator on the user side for the repair.
2	Wiring from the plug to CBR is connected properly.	Main body: 1-A	NO	Repair the wiring.
3	Wiring from CBR to DCPS/1 is connected properly.	Main body: 2-A	NO	Repair the wiring.
4	After checking that the plug is not connected to the outlet, scale the resistance value on both edge of the plug and it is 0Ω.	Main body: 1-A	YES	Check the cause of the short on the wiring from the plug to the DC power supply board, and repair it.
5	The switch of CBR is OFF.	-	YES	Go on to step 6.
			NO	Go on to step 7.
6	Turn ON the switch of CBR.	-	NO	Replace CBR
7	Connect the plug to the outlet and find that any irregular sound from the machine or the error on the board does not occur.	-	NO	Remove the plug from the outlet, check the cause of the error, and repair it.
8	The fuse of DCPS/1 has the conduction.	-	NO	Replace DCPS/1
9	The voltage of CN77-1 and CN77-2 of DCPS/1 is DC36V.	Main body: 9-B	NO	Replace DCPS/1
10	The voltage of CN74-1 to CN74-12 of DCPS/1 is DC24V.	Main body: 7-B	NO	Replace DCPS/1
11	The voltage of CN73-1 to CN73-4 of DCPS/1 is DC12V.	Main body: 7-B	NO	Replace DCPS/1
12	The voltage of CN72-1 to 3 of DCPS/1 is DC5V.	Main body: 6-B	NO	Replace DCPS/1
13	Wiring from DCPS/1 to OACB is connected properly.	-	NO	Repair the wiring.
14	Wiring from OACB to the operation panel is connected properly.	Main body: 10-E	YES	Replace OACB
			NO	Repair the wiring inside the operation panel. Replace the board inside the operation panel.

3.1.2 Turn ON the main power switch and the sub power switch, but the touch panel does not display anything.

- The power save LED is lighting/blinking, but the main power LED does not light in green (but lights in red).

Target parts for trouble				
Main power switch (SW1)		Overall control board (OACB)		
Step	Check item	Location (Electrical parts)	Result	Action
1	The power save LED blinks in green.	-	YES	Processing ISW Do not turn OFF the main power.
2	The power save LED blinks in orange.	-	YES	Reinstall the firmware because of the firmware writing error of the OACB.
			NO	Check "Turn ON the main power switch but the power LED of the operation panel does not light up in red".

3.1.3 Turn ON the sub power switch but the power LED does not switch from red to green.

Target parts for trouble				
Sub power switch (SW2)		Overall control board (OACB)		
Step	Check item	Location (Electrical parts)	Result	Action
1	The power LED is lighting in red.	-	NO	Refer to the main power switch related trouble
2	The terminal voltage of the red wiring of SW2 changes from DC5V to DC0V by turning ON SW-2 from OFF.	Main Body: 18-C	YES	Replace OACB

			NO	Repair the wiring between OACB and SW2.
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3.2 The power is not supplied to DF-615.

Target parts for trouble				
DC power supply /2 (DCPS/2: main body)		DF control board (DFCB: DF)		
Step	Check item	Location (Electrical parts)	Result	Action
1	The voltage of CN10-2 and 2 of DFCB is DC24V.	DF: 5-F	YES	Trouble in DF Confirmation of DFCB connector Replace DFCB
2	The voltage of CN23-4 of DCPS/2 is DC24V.	Main body: 18-A	YES	Repair the wiring from DCPS/2 to DF.
			NO	Replace DCPS/2

3.3 The power is not supplied to the paper feed option.

3.3.1 PF-702/PF-703

Target parts for trouble				
DC power supply /1 (DCPS/1: main body)		PF drive board (PFUDB: PF)		
DC power supply /2 (DCPS/2: main body)		-		
Step	Check item	Location (Electrical parts)	Result	Action
1	The front door of PF is open.	-	YES	Close the front door.
2	Using the tandem PF.	-	YES	Go on to step 3.
			NO	Go on to step 9.
3	The PF connecting terminal of the 1st tandem has voltage outputs for DC36V, DC24V, DC12V and DC5V.	PF: 2-G	YES	Go on to step 9.
			NO	Go on to step 4.
4	The PF connecting terminal of the main body has voltage outputs for DC24V, DC12V, and DC5V.	Main body: 22-G	YES	Go on to step 5.
			NO	Go on to step 7.
5	The PF connecting terminal of the main body has voltage output for DC36V.	Main body: 22-G	YES	Go on to step 8.
			NO	Go on to step 6.
6	The wiring from DCPS /1 to the PF connecting terminal is connected properly.	Main body: 8-B	YES	Repair the wiring.
			NO	Replace DCPS1
7	The wiring from DCPS /2 to the PF connecting terminal is connected properly.	Main body: 17-B	YES	Repair the wiring.
			NO	Replace DCPS2
8	The wiring from the main body connecting terminal in the 1st PF-703 to the PF connecting terminal in the 2nd PF is connected properly.	PF: 2-B	NO	Repair the wiring.
9	The wiring from PF connecting terminal to PFUDB is connected properly.	PF: 3-I	YES	Repair the wiring.
			NO	Replace PFUDB

3.4 The power is not supplied to the finishing option.

3.4.1 PF-703 + FA-501

Target parts for trouble				
DC power supply /1 (DCPS/1: main body)		PF drive board (PFUDB: PF)		
DC power supply /2 (DCPS/2: main body)		-		
Step	Check item	Location (Electrical parts)	Result	Action
1	The front door of PF is open.	-	YES	Close the front door.
2	The PI-PFU connecting terminal of the main body has voltage outputs for DC24V, DC12V, and DC5V.	Main body: 24-G	YES	Go on to step 3.
			NO	Go on to step 4.
3	The PI-PFU connecting terminal of the main body has voltage outputs for DC36V.	Main body: 24-G	YES	Go on to step 5.
			NO	Go on to step 6.
4	The wiring from DCPS /1 to the PI-PFU connecting terminal is connected properly.	Main body: 24-G	YES	Repair the wiring.
			NO	Replace DCPS1
5	The wiring from DCPS /2 to the PI-PFU connecting terminal is connected properly.	Main body: 24-G	YES	Repair the wiring.
			NO	Replace DCPS2
6	The wiring from the main body connecting terminal to PFUDB is connected properly.	PF: 16-A	YES	Repair the wiring.
			NO	Replace PFUDB

3.4.2 GP-501

Target parts for trouble				
Line filter (GP) Power supply (GP)		Punch controller PCB (GP)		
Step	Check item	Wiring diagram location	Result	Action
1	The front door of GP is open.	GP: 5-F	YES	Close the front door.
2	The voltage between P39-4 and P39-5 of punch controller PCB is DC5V.	GP: 8-E	NO	Repair the wiring between the main body and GP.
3	Disconnect the plug of GP from the outlet. The voltage of the outlet is the power supply voltage. * Be sure not to overuse the power of the outlet including the other connected machines.	-	NO	Ask the administrator on the user side to check the state of the power of the outlet.
4	Wiring from the punch controller PCB to power supply is connected properly.	GP: 4-E	NO	Repair the wiring.
5	After checking that the plug of GP is not connected to the outlet, scale the resistance value on the both edge of the plug and it is 0.	GP: 3-E	YES	Check the cause of the short on the wiring from the plug to punch controller PCB.
6	Connect the plug of GP to the outlet and find that any irregular sound or the error on the board does not occur.	-	NO	Remove the plug from the outlet, check the cause of the error, and repair it.
7	The fuse of power supply has the conduction.	-	NO	Replace power supply.
8	The voltage of P14-1 and P14-3 of punch controller PCB is DC24V.	GP: 5-E	YES	Replace punch controller PCB.
			NO	Replace power supply.

3.4.3 RU-506

Target parts for trouble				
DC power supply /2 (DCPS/2: main body)		RU control board (RUCB: RU)		
Step	Check item	Location (Electrical parts)	Result	Action
1	The front door of RU is open.	-	YES	Close the front door.
2	The voltages of CN7-1 of RUCB are DC24V.	RU: 5-H	YES	Trouble in RU Confirmation of RUCB connector Replace RUCB
3	Wiring from the main body to RU is connected properly.	-	NO	Repair the wiring.
4	The voltage of CN21-2 of DCPS2 is DC24V and the voltage of CN14-2 to 4 of DCPS2 is DC5V.	Main body: 20-G	YES	Repair the wiring from DCPS2 to the finishing option connecting terminal.
			NO	Replace DCPS2

3.4.4 LS-505

Target parts for trouble				
DC power supply (DCPS: LS)		LS control board (LSCB: LS)		
Step	Check item	Wiring diagram location	Result	Action
1	The voltage between CN26-2 and CN26-3 of LSCB is DC5V.	LS: 8-F	NO	Repair the wiring between the main body and LS.
2	The wiring from the LS AC power supply to LS DCPS and the wiring switchover have no trouble.	LS: 9-F	NO	Repair the AC power supply wiring.
3	The switch of CBR is OFF.	-	YES	Go on to step 4.
			NO	Go on to step 5.
4	Turn ON CBR.	-	NO	Replace CBR
5	The fuse of DCPS has the conduction.	-	NO	Replace DCPS
6	Connect the plug of the LS to the outlet and find that any irregular sound inside LS or the error on the board does not occur.	-	NO	Remove the plug from the outlet, check the cause of the error, and repair it.
7	The voltage of CN27-1 and 2 of LSCB is DC24V.	LS: 8-F	YES	Replace LSCB
			NO	Replace DCPS
8	The voltage among the relay board, CN2-1 and CN2-2 is DC5V.	LS-9:-H	NO	Repair the wiring between the board and the relay.

3.4.5 FD-503

Target parts for trouble				
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Circuit breaker /1 (CBR1: FD) Circuit breaker /2 (CBR2: FD)		DC power supply (DCPS: FD) FD control board (FDCB: FD)		
Step	Check item	Wiring diagram location	Result	Action
1	The front door of FD is open.	-	YES	Close the front door.
2	The voltage between CN20-1 and CN20-3 of FDCB is DC5V.	FD: 5-G	NO	Repair the wiring between the main body and FD.
3	The wiring from the FD AC power supply to FD DCPS and the wiring switchover have no trouble.	FD: 1-H	NO	Repair the AC power supply wiring.
4	The switches of CBR1 and CBR2 are OFF.	FD: 2-H	YES	Go on to step 5.
			NO	Go on to step 6.
5	Turn ON the switches of CBR1 and CBR2 from OFF.	-	NO	Replace CBR1 or CBR2
6	The fuse of DCPS has the conduction.	-	NO	Replace DCPS
7	Connect the plug of the FD to the outlet and find that any irregular sound inside FD or the error on the board does not occur.	-	NO	Remove the plug from the outlet, check the cause of the error, and repair it.
8	The voltage of CN2051 and 2 or 3 and 4 of FDCB are DC24V.	FD: 7-F	YES	Replace FDCB
			NO	Replace DCPS

3.4.6 FS-521

Target parts for trouble				
DC power supply /2 (DCPS/2: main body)		FNS drive board (FNSDB: FS-521)		
Step	Check item	Wiring diagram location	Result	Action
1	The front door of FS is open.	-	YES	Close the front door.
2	CN70-1 voltage of FNSDB is DC24V.	FS-521: 5-D	YES	Trouble in FS Confirmation of FNSCB connector Replace FNSCB.
3	Check the wiring between the main body and FS and repair it.	-	YES	Repair the wiring.
4	The voltage of CN74-5 of DCPS/2 is DC24V.	-	YES	Repair the wiring from DCPS/2 to the finishing option connecting terminal.
			NO	Replace DCPS/2

3.4.7 SD-506

Target parts for trouble				
Circuit breaker /1 (CBR1: SD) Circuit breaker /2 (CBR2: SD)		DC power supply /1 (DCPS1: SD) DC power supply /2 (DCPS2: SD) DC power supply /3 (DCPS3: SD) SD control board (SDCB: SD) SD drive board (SDDB: SD)		
Step	Check item	Wiring diagram location	Result	Action
1	The front door of SD is open.	-	YES	Close the front door.
2	The voltage between CN20-1 and CN20-3 of SDCB is DC5V.	SD: 5-D	NO	Repair the wiring between the main body and SD.
3	The wiring from the SD AC power supply to SD DCPS and the wiring switchover have no trouble.	SD: 12-T	NO	Repair the AC power supply wiring.
4	The switches of CBR1 and CBR2 are OFF.	SD: 13-T	YES	Go on to step 5.
			NO	Go on to step 6.
5	Turn ON the switches of CBR1 and CBR2 from OFF.	-	NO	Replace CBR1 or CBR2
6	The fuses of DCPS1, DCPS2 and DCPS3 have the conduction.	-	NO	Replace the DC power supply without conduction of the fuse.
7	Connect the plug of the SD to the outlet and find that any irregular sound inside SD or the error on the board does not occur.	-	NO	Remove the plug from the outlet, check the cause of the error, and repair it.
8	The voltage of CN101-1 to CN101-3 of SDDB is DC24V.	SD: 19-M	NO	Replace DCPS1
9	The voltage of CN162-1 to CN101-3 of SDDB is DC24V.	SD: 20-M	NO	Replace DCPS2
10	The voltage of CN163-1 to CN163-3 of SDDB is DC24V.	SD: 21-M	YES	Replace SDDB
			NO	Replace DCPS3

3.4.8 PB-502

Target parts for trouble				
Circuit breaker (CBR: PB-502) 24V DC power supply /1 (DCPU /1: PB-502) DC power supply unit /2 (DCPU2: PB-502) DC power supply unit (DCPU /3: PB-502)		PB drive board (PBDB: PB-502) PB control board (PBCB: PB-502) AC drive board (ACDB: PB-502)		
Step	Check item	Wiring diagram location	Result	Action
1	The front door of PB is open.	-	YES	Close the front door.
2	The voltage between CN1-1 and CN1-3 of PBCB is DC5V.	PB-502:25-N	NO	Repair the wiring between the main body and PB.
3	Wiring from the plug of PB to CBR is connected properly.	PB-502:24-B	NO	Repair the AC power supply wiring.
4	The switch of CBR is OFF.	PB-502:25-B	YES	Go on to step 5.
			NO	Go on to step 6.
5	Turn ON CBR.	-	NO	Replace CBR
6	The fuses of DCPU/1, DCPU/2 and DCPU/3 have the conduction.	-	NO	Replace the DC power supply without conduction of the fuse.
7	The wiring from PBDB1 to DCPU/1, DCPU/2 and DCPU/3 has no trouble.	PB-502:24-F	NO	Repair the wiring.
8	There is power output of DC 24V for CN45-2 and 3 of PB ACDB.	PB-502:28-M	NO	Check the wiring. Replace ACDB (PB).
9	Connect the plug of the main body to the outlet and find that any irregular sound inside the main body or the error on the board does not occur.	-	NO	Remove the plug from the outlet, check the cause of the error, and repair it.
10	The voltage of CN51-1 and CN51-2 of PBDB1 is DC24V.	PB-502: 25-J	NO	Repair the wiring from DCPU /1 to PBDB. Replace DCPU/1
11	The voltage of CN51-1 to CN52-3 of PBDB1 is DC24V.	PB-502:24-J	NO	Repair the wiring from DCPU /2 to PBDB. Replace DCPU/2
12	The voltage of CN50-1 and CN50-2 of PBDB1 is DC5V.	PB-502:26-J	YES	Replace PBDB
			NO	Repair the wiring from DCPU /3 to PBDB1. Replace DCPU/3

3.4.9 PB-503

Target parts for trouble				
Circuit breaker (CBR: PB-503) DC power supply /1 (DCPU/1: PB-503) DC power supply /2 (DCPU/2: PB-503) DC power supply /3 (DCPU/3: PB-503)		PB drive board /1 (PBDB1: PB-503) PB drive board /2 (PBDB2: PB-503) PB drive board /3 (PBDB3: PB-503) PB control board (PBCB: PB-503) AC drive board (ACDB: PB-503)		
Step	Check item	Wiring diagram location	Result	Action
1	The front door of PB is open.	-	YES	Close the front door.
2	The voltage between CN1-1 and CN1-3 of PBCB is DC5V.	PB:25-N	NO	Repair the wiring between the main body and PB.
3	Wiring from the plug of PB to CBR is connected properly.	PB:24-B	NO	Repair the AC power supply wiring.
4	The switch of CBR is OFF.	PB:25-B	YES	Go on to step 5.
			NO	Go on to step 6.
5	Turn ON CBR.	-	NO	Replace CBR
6	The fuses of DCPU/1, DCPU/2 and DCPU/3 have the conduction.	-	NO	Replace the DC power supply without conduction of the fuse.
7	The wiring from PBDB1 to DCPU/1, DCPU/2 and DCPU/3 has no trouble.	PB:24-F	NO	Repair the wiring.
8	There is power output of DC 24V for CN45-2 and 3 of PB ACDB.	PB:28-M	NO	Check the wiring. Replace ACDB (PB).
9	Connect the plug of the main body to the outlet and find that any irregular sound inside the main body or the error on the board does not occur.	-	NO	Remove the plug from the outlet, check the cause of the error, and repair it.
10	The voltage of CN51-1 and CN51-2 of PBDB1 is DC24V.	PB: 25-J	NO	Repair the wiring from DCPU /1 to PBDB1. Replace DCPU/1

11	The voltage of CN51-1 to CN52-3 of PBDB1 is DC24V.	PB:24-J	NO	Repair the wiring from DCPU /2 to PBDB1. Replace DCPU 2
12	The voltage of CN50-1 and CN50-2 of PBDB1 is DC5V.	PB:26-J	YES	Replace PBDB1
			NO	Repair the wiring from DCPU /3 to PBDB1. Replace DCPU/3

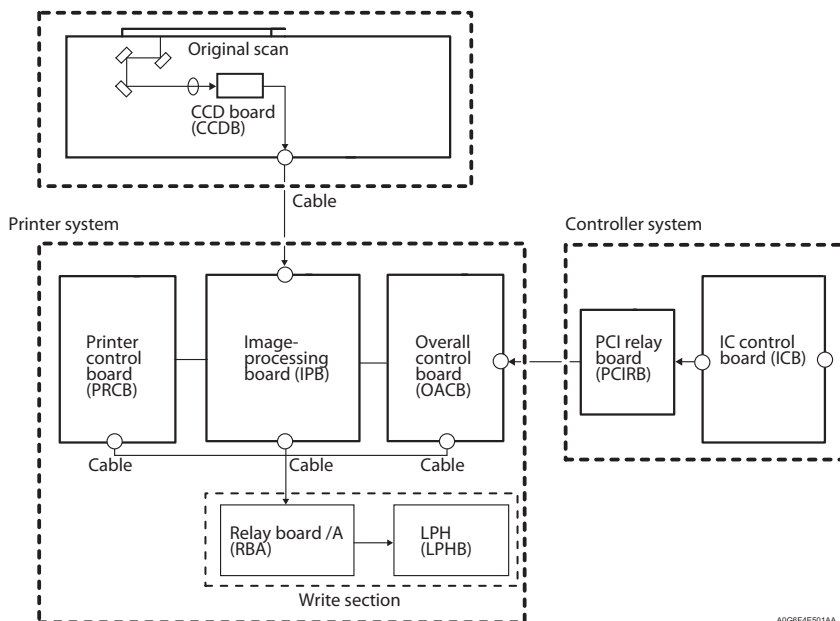
4. IMAGE TROUBLE

4.1 Initial check point

4.1.1 Initial check items

- Judge whether the cause of the image trouble is from the scanner system, the printer system, or the controller system.
- For the troubles of stripe and band, conduct the test print with the half tone image to judge whether it is the scanner system or the printer system.
- For the other image troubles, judge it from the copy from the original glass and the print from PC.

Scanner system



A06GF4E501AA

IMAGE TROUBLE	Action	Judgment	Cause	Next step
Stripe, band	Select [Service Mode] → [Test Mode] → [Test Pattern Output Mode] and enter "1" to print out the half tone with the density setting "60". Then the stripe or the band occurs.	YES	Printer system	Printer system step
		NO	Scanner system	Scanner system step
Others	The image trouble occurs only on the copy from the original glass.	YES	Scanner system	Scanner system step
	The same image trouble occurs on the copy from the original glass and the print from PC.	YES	Printer system	Printer system step
		NO	Controller system	Controller system step

4.2 Printer system step

4.2.1 OUTLINE

When it is judged as the printer system trouble from the initial check items, conduct the image stabilization after checking the printer check items.

Note

- The following sample images on each steps are when printing in A3.

4.2.2 Check the printer

- Check the damage or the dirt on each section parts.

Step	Section	Check item	Result	Action
1	Paper	The paper setting of the machine and the paper to be printed are the same type.	NO	Check the paper type setting of the machine, and fix it.
2	Write section	The surface of LPH has dirt.	YES	Cleaning
3	Photosensitive material section	Drum has dirt on its outward.	YES	Cleaning
4		Drum has the damage or the stripe on the upper side.	YES	Check the touching of the drum claw, clean the parts, and the replace the drum.
5	Developing section	The developing bias contacting terminal surely touches.	NO	Clean the contacting terminal, Check the terminal position
6	Charging section	Charging wire or charging control plate has dirt.	YES	Cleaning
7	Transferring section	Transfer belt has dirt.	YES	Cleaning
8	Cleaning section	Cleaning blade surely touches to the drum.	NO	Check, clean, or replace the cleaning blade

9	Conveyance section, duplex section	Dirt or the foreign material is on the paper conveyance path.	YES	Cleaning
10	Fusing section	Fusing roller has dirt.	YES	Cleaning Check the cleaning web
11	Paper exit section	The paper exit roller and the de-curler roller have dirt.	YES	Cleaning

4.2.3 Image Stabilization

- Conduct the image stabilization to check whether the trouble is solved.

Step	Section	Check item	Result	Action
1	Service mode →Process adjustment→Drum Peculiarity Adjustment→Auto matic Drum Potential	Conduct the auto charging potential adjustment and the problem is solved.	NO	Go on to the next step.
2	Service mode →Process adjustment→Drum Peculiarity Adjustment→Auto Maximum Density Adj.	Conduct the auto maximum density adjustment and the problem is solved.	NO	Go on to the next step.
3	Service mode →Process adjustment→Drum Peculiarity Adjustment→Auto Dot Diameter Adj.	Conduct the auto dot diameter adjustment and the problem is solved.	NO	Go on to the next step.
4	Service mode →Process adjustment→Drum Peculiarity Adjustment→Cartridge set mode	Conduct the cartridge set mode and the problem is solved.	NO	Go on to the next step.

4.2.4 Printer system: White lines in sub scan direction, White bands in sub scan direction, Black lines in sub scan direction, Black bands in sub scan direction

(1) Typical faulty images

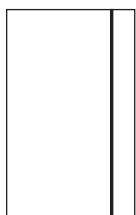
White lines in sub scan direction



White bands in sub scan direction



Black lines in sub scan direction



Black bands in sub scan direction



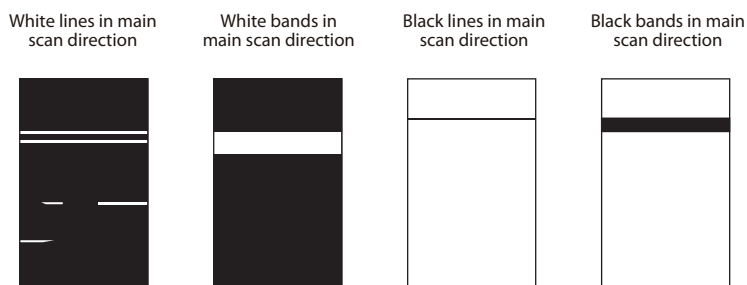
(2) Troubleshooting Step

Step	Section	Check item	Result	Action
1	Paper	It occurs on the particular paper.	YES	Check the setting of the paper type.
2	User mode →MACHINE →Adjustment →Charge Manual Cleaning	"Charge Manual Cleaning" solves the trouble.	YES	Conduct "Charge Manual Cleaning".
3	Write section	The dirt adheres to the surface of LPH.	YES	Clean LPH
4	Charging section	Charger wire and charger control plate have foreign objects.	YES	Cleaning Replace the charger wire.
5	Cleaning section	Some parts on the cleaning blade are left to wipe.	YES	Cleaning Replace the cleaning blade

6	Photosensitive material section	Drum separation claws have dirt.	YES	Cleaning Check the drum separation claws action
7	Fusing section	Fusing separation claws have dirt.	YES	Cleaning Check the fusing separation claws action
8	Check the printer	Check the transferring section, the developing section and the conveyance section.	NO	Clean, Replace
9	Connector, wiring	There is no problem on the image processing board, the overall control board, the write section, and the connector/wiring of the printer control board.	NO	Reconnect the connector Replace the wiring
10	Image Stabilization	The image stabilization solves the trouble.	NO	Go on to the next step.
11	Service mode → Machine Adjustment → LPH Adjustment	Conduct the gap adjustment between LPH chips, conduct the black lines adjustment, and the problem is solved.	NO	Go on to the next step.
12		The problem has been eliminated through the checks of steps up to 11.	NO	Replace LPH → Check or replace the charging section → Replacing of the drum → Check or replace the transferring section → Check or replace the developing section → Replace the image processing board

4.2.5 Printer system: White lines in main scan direction, White bands in main scan direction, Black lines in main scan direction, Black bands in main scan direction

(1) Typical faulty images



(2) Troubleshooting Step

Step	Section	Check item	Result	Action
1	Paper	It occurs on the particular paper.	YES	Check the setting of the paper type, and fix it.
2	Check the printer	Check mainly on the charging section, transferring section, photo conductor section, developing section, and fusing section.	NO	Clean, Replace
3	Connector, wiring	There is no problem on the image processing board, the overall control board, the write section, and the connector/wiring of the printer control board.	NO	Reconnect the connector Replace the wiring
4	Image Stabilization	The image stabilization solves the trouble.	NO	Go on to the next step.
5		The problem has been eliminated through the checks of steps up to 4.	NO	Replace the drum → Check or replace the charging section → Check or replace the transferring section → Check or replace the developing section → Replace the image processing board

4.2.6 Printer system: Uneven density in sub scan direction

(1) Typical faulty images



(2) Troubleshooting Step

Step	Section	Check item	Result	Action
1	Paper	It occurs on the particular paper.	YES	Check the setting of the paper type, and fix it.
2	Setting menu → Function setting → Density setting → Image density selection	Change the setting value of the image density to the plus, and the trouble is solved.	NO	Go on to the next step.
3	Check the printer	Check mainly on the charging section, transferring section, photo conductor section, and the developing section.	NO	Clean, Replace
4	Connector, wiring	There is no problem on the image processing board, the overall control board, the write section, and the connector/wiring of the printer control board.	NO	Reconnect the connector Replace the wiring
5		The problem has been eliminated through the checks of steps up to 4.	NO	Replace the drum → Check or replace the charging section → Replace LPH → Check or replace the transferring section → Check or replace the developing section → Replace the image processing board → Replace the high voltage unit /2

4.2.7 Printer system: Uneven density in main scan direction

(1) Typical faulty images



(2) Troubleshooting Step

Step	Section	Check item	Result	Action
1	Paper	It occurs on the particular paper.	YES	Check the setting of the paper type, and fix it.
2	Setting menu → Function setting → Density setting → Image density selection	Change the setting value of the image density to the plus, and the trouble is solved.	NO	Go on to the next step.
3	Check the printer	Check mainly on the charging section, transferring section, photo conductor section, and the developing section.	NO	Clean, Replace
4	Connector, wiring	There is no problem on the image processing board, the overall control board, the write section, and the connector/wiring of the printer control board.	NO	Reconnect the connector Replace the wiring
5	Image Stabilization	The image stabilization solves the trouble.	NO	Go on to the next step.
6	Tray setting → Process Adjustment Change Set	Conduct the transfer current offset adjustment and the problem is solved.	YES	Select the side and part which abnormal condition occurs, and lower the transfer current offset value every 5 steps.

	→ Process adjustment → Transfer current offset adjustment			
7		The problem has been eliminated through the checks of steps up to 6.	NO	Check or replace the charging section → Replace the drum → Replace LPH → Check or replace the transferring section → Check or replace the developing section → Replace the image processing board → Replace the high voltage unit /1 → Replace the high voltage unit /2

4.2.8 Printer system: Light density (ID lowering)

(1) Typical faulty images



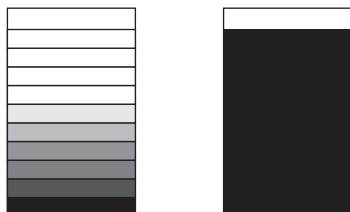
(2) Troubleshooting Step

Step	Section	Check item	Result	Action
1	Paper	It occurs on the particular paper.	YES	Check the setting of the paper type, and fix it.
2	Setting menu → Function setting → Density setting → Image density selection	Change the setting value of the image density to the plus, and the trouble is solved.	NO	Go on to the next step.
3	Counter clear	Counter clear has been conducted when the drum and the developer are replaced.	NO	Conduct the counter clear of the photo conductor and the developer.
4	IDC sensor	IDC sensor has dirt.	YES	Clean the IDC sensor with alcohol.
5	Toner supply section	The setting of toner bottle is appropriate.	NO	Reset
6		Toner is supplied to the intermediate hopper normally.	NO	Clean, Replace
7	Check the printer	Check mainly on the charging section, transferring section, photo conductor section, developing section, and toner supply section.	NO	Clean, Replace
8	Connector, wiring	There is no problem on the image processing board, the overall control board, the write section, and the connector/wiring of the printer control board.	NO	Reconnect the connector Replace the wiring
9	Image Stabilization	The image stabilization solves the trouble.	NO	Go on to the next step.
10	Individual support action adjustment → Image density adjustment	[Darker] on the image density adjustment solves the trouble.	NO	Go on to the next step.

11		The problem has been eliminated through the checks of steps up to 10.	NO	Check or replace the charging section → Replace the drum → Replace LPH → Check or replace the transferring section → Check or replace the developing section → Replace the image processing board → Replace the high voltage unit /1 → Replace the high voltage unit /2
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4.2.9 Printer system: Gradation error

(1) Typical faulty images



(2) Troubleshooting Step

Step	Section	Check item	Result	Action
1	Gradation pattern	Print out the test pattern No.3 or No.5 and the gradation pattern is without any trouble.	YES	Check the other density errors of the printer system.
2	Paper	It occurs on the particular paper.	YES	Check the setting of the paper type, and fix it.
3	Density	It occurs on the particular image (such as picture).	YES	Check Copy Setting → Image Setting (letters, light letters, picture).
4	Setting menu → Function setting → Density setting → Image density selection	The setting value adjustment of the image density solves the trouble. Too light: Change the setting value to the plus. Too dark: Change the setting value to the minus.	NO	Go on to the next step.
5	Check the printer	Check mainly on the charging section, transferring section, photo conductor section, and the developing section.	NO	Clean, Replace
6	Connector, wiring	There is no problem on the image processing board, the overall control board, the write section, and the connector/wiring of the printer control board.	NO	Reconnect the connector Replace the wiring
7	Image Stabilization	The image stabilization solves the trouble.	NO	Go on to the next step.
8		The problem has been eliminated through the checks of steps up to 7.	NO	Check or replace the charging section → Replace the drum → Check or replace the transferring section → Check or replace the developing section → Replace the image processing board → Replace the high voltage unit /2

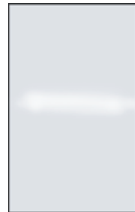
4.2.10 Printer system: Half tone overall diagonal stripe

(1) Typical faulty images

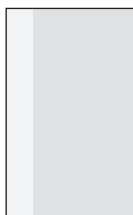


(2) Troubleshooting Step

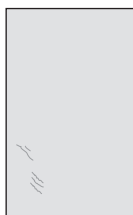
Step	Section	Check item	Result	Action
1	Paper	It occurs on the particular paper.	YES	Check the setting of the paper type.
2	Developer	The developer is new.	YES	Go on to step 3.
		The developer is old.	YES	Go on to step 4.
3	Setting menu → Administrator setting → System Setting → Expert adjustment → Scan quality adjustment → Texture Elimination	When the developer is new, check the setting value of "Texture Elimination", and it is "OFF".	YES	Turn the setting value "ON". Note Because the gradation peculiarity deteriorates with "ON" of "Texture Elimination", be sure to use "ON" only when the developer is new.
4	Check the printer	Check mainly on the charging section, transferring section, photo conductor section, and the developing section.	NO	Clean, Replace
5	Image Stabilization	The image stabilization solves the trouble.	NO	Go on to the next step.
6		The problem has been eliminated through the check of step 5.	NO	Replace developer → Check or replace the developing section

4.2.11 Printer system: Half tone repelling**(1) Typical faulty images****(2) Troubleshooting Step**

Step	Section	Check item	Result	Action
1	Paper	It occurs on the particular paper.	YES	Check the setting of the paper type.
2	Transferring section	Transfer belt or the power feeding section of transfer roller has dirt.	YES	Remove dirt
3	Check the printer	Check mainly on the transferring section, the charging section, photo conductor section, and the developing section.	NO	Clean, Replace
4	Image Stabilization	The image stabilization solves the trouble.	NO	Go on to the next step.
5	Tray setting → Process adjustment change set → Process adjustment → Transfer current offset adjustment	Conduct the transfer current offset adjustment and the problem is solved.	YES	Select the side and part which abnormal condition occurs, and lower the transfer current offset value every 5 steps.
6		The problem has been eliminated through the check of step 5.	NO	Check or replace the transferring section → Replace the drum → Check or replace the charging section → Check or replace the developing section → Replace the high voltage unit /2 → Replace the image processing board

4.2.12 Printer system: Size memory**(1) Typical faulty images****(2) Troubleshooting Step**

Step	Section	Check item	Result	Action
1	Paper	It occurs on the particular paper.	YES	Check the setting of the paper type.
2	Paper usage	The trouble occurs after using small-size paper.	YES	Go on to step 3.
			NO	Go on to step 4.
3	User mode → Adjustment → Size memory recovery mode	Conduct the size memory recovery mode after using small-size paper.	YES	Conduct the size memory recovery mode.
4	Check the printer	Check mainly on the transferring section, photo conductor section, and the charging section.	NO	Clean, Replace
5	Image Stabilization	The image stabilization solves the trouble.	NO	Go on to the next step.
6		The problem has been eliminated through the check of step 5.	NO	Replace the fusing roller → Replace fusing heater lamp

4.2.13 Printer system: Short diagonal lines, wrinkling of paper**(1) Typical faulty images****(2) Troubleshooting Step**

Step	Section	Check item	Result	Action
1	Paper	It occurs on the particular paper.	YES	Check the setting of the paper type.
2	Paper usage	The trouble occurs after using small-size paper.	YES	Go on to step 3.
			NO	Go on to step 4.
3	Service mode → System Setting → Software IPSW_8-7	Setting is "1".	NO	Change the setting value of software DIPSW_8-7 to "1" (with initial rotation).
4	Check the printer	Check mainly on the fusing section.	NO	Clean, Replace
5	Image Stabilization	The image stabilization solves the trouble.	NO	Go on to the next step.
6		The problem has been eliminated through the check of step 5.	NO	Replace the fusing roller → Replace fusing heater lamp

4.2.14 Printer system: Wax unevenness

(1) Typical faulty images

Trails with exit rollers

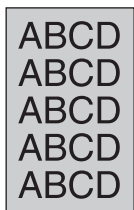


(2) Troubleshooting Step

Step	Section	Check item	Result	Action
1	Paper	It occurs on the particular paper.	YES	Check the setting of the paper type.
2	Output job	Output the job (light density) other than the job which occurs the trouble in first.	YES	Go on to the next step.
3	Fusing section	Check dirt of the paper exit roller.	YES	Remove dirt
4	Check the printer	Check mainly on the fusing section.	NO	Clean, Replace
5	Image Stabilization	The image stabilization solves the trouble.	NO	Go on to the next step.
6	Service mode → System Setting → Software DIPSW_19-0 to 19-3	The wax unevenness is solved by lowering the fusing temperature.	YES	Change the setting of software DIPSW_19-0 to 19-3 to lower the fusing temperature.
7		The problem has been eliminated through the check of step 6.	NO	Check or replace the paper exit roller → Check or replace the fusing roller → Replace the fusing temperature sensor → Replace fusing heater lamp → Replace the overall control board

4.2.15 Printer system: Gray background

(1) Typical faulty images



(2) Troubleshooting Step

Step	Section	Check item	Result	Action
1	Paper	It occurs on the particular paper.	YES	Check the setting of the paper type.
2	Service mode → Process adjustment → Drum Peculiarity Adjustment → Cartridge set mode	Conduct the cartridge set mode and the trouble is solved.	NO	Go on to the next step.
3	Setting menu → Function setting → Density setting	Change the setting value of the image density to the minus, and the trouble is solved.	YES	Change the setting value to the minus.
4	Check the printer	Check mainly on the charging section, transferring section, photo conductor section, developing section, and write section.	NO	Clean, Replace

5	Connector, wiring	There is no problem on the image processing board, the overall control board, the write section, and the connector/wiring of the printer control board.	NO	Reconnect the connector Replace the wiring
6	Image Stabilization	The image stabilization solves the trouble.	NO	Go on to the next step.
7	Service mode → System Setting → Software DIPSW_27-2/3	Lowering the image density selection (toner control patch density) solves the trouble.	NO	Go on to the next step.
8	Service mode → System Setting → Software DIPSW5-5/6/7	Changing the developer toner density lighter solves the trouble.	YES	Change the settings of software DIPSW_5-5/6/7 to lighten the developer toner density.
9		The problem has been eliminated through the checks of steps up to 8.	NO	Check or replace the charging section → Replace the drum → Check or replace the transferring section → Check or replace the developing section → Replace LPH → Replace the image processing board → Replace the high voltage unit /1 → Replace the high voltage unit /2

4.2.16 Printer system: Density decrease of solid black

(1) Typical faulty images

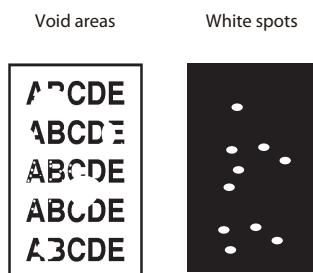


(2) Troubleshooting Step

Step	Section	Check item	Result	Action
1	Paper	It occurs on the particular paper.	YES	Check the setting of the paper type.
2	Transferring section	Check dirt on the transfer belt and power feeding section of the transfer roller.	YES	Remove dirt
3	Image Stabilization	The image stabilization solves the trouble.	NO	Go on to the next step.
4	Tray setting → Process Adjustment Change Set → Process adjustment → Transfer current offset adjustment	Check the offset value of the transfer current offset adjustment.	NO	Select the side and part which abnormal condition occurs, and raise the transfer current offset value every 5 steps.
5	Check the printer	Check mainly on the transferring section, the charging section, photo conductor section, and the developing section.	NO	Clean, Replace
6		The problem has been eliminated through the check of steps up to 5.	NO	Check or replace the transferring section → Replace the drum → Check or replace the charging section → Check or replace the developing section → Replace the image processing board → Replace the high voltage unit /2

4.2.17 Printer system: Void areas, White spots

(1) Typical faulty images



(2) Troubleshooting Step

Step	Section	Check item	Result	Action
1	Paper	It occurs on the particular paper.	YES	Check the setting of the paper type.
2	Developing section	Developing section has the foreign object or the solid toner in it.	YES	Remove foreign object Replace developer
3	Check the printer	Check mainly on the charging section, transferring section, photo conductor section, developing section, and fusing section.	NO	Clean, Replace
4	Connector, wiring	There is no problem on the image processing board, the overall control board, the write section, and the connector/wiring of the printer control board.	NO	Reconnect the connector Replace the wiring
5	Image Stabilization	The image stabilization solves the trouble.	NO	Go on to the next step.
6		The problem has been eliminated through the checks of steps up to 5.	NO	Check or replace the charging section → Replace the drum → Check or replace the transferring section → Check or replace the developing section → Replace LPH → Replace the image processing board → Replace the high voltage unit /1 → Replace the high voltage unit /2

4.2.18 Printer system: Black spots

(1) Typical faulty images



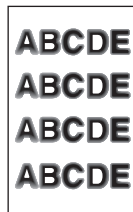
(2) Troubleshooting Step

Step	Section	Check item	Result	Action
1	Paper	It occurs on the particular paper.	YES	Check the setting of the paper type.
2	Photosensitive material section	Conduct the cartridge set mode and the trouble is solved.	NO	Go on to the next step.
3	Check the printer	Check mainly on the charging section, transferring section, photo conductor section, developing section, conveyance section, and fusing section.	NO	Clean, Replace
4	Connector, wiring	There is no problem on the image processing board, the overall control board, the write section, and the connector/wiring of the printer control board.	NO	Reconnect the connector Replace the wiring
5	Image Stabilization	The image stabilization solves the trouble.	NO	Go on to the next step.
6	Service mode	The value of [Maximum density adj.] is smaller than 250.	YES	Go on to step 7.

	→ Process adjustment Drum Peculiarity Manual		NO	Go on to step 8.
7	Service mode → System Setting → Software DIPSW_27-2/3	Changing the image density darker solves the trouble. * In case of DIPSW 27-2 is 3.	YES	Change the settings of software DIPSW_27-2/3 to adjust the image density selection.
8		The problem has been eliminated through the checks of steps up to 7.	NO	Check or replace the charging section → Replace the drum → Check or replace the transferring section → Check or replace the developing section → Replace LPH

4.2.19 Printer system: Image blurring

(1) Typical faulty images



(2) Troubleshooting Step

Step	Section	Check item	Result	Action
1	Paper	It occurs on the particular paper.	YES	Check the setting of the paper type, and fix it.
2	Check the printer	Check mainly on the charging section, transferring section, photo conductor section, developing section, and write section.	NO	Clean, Replace
3	Connector, wiring	There is no problem on the image processing board, the overall control board, the write section, and the connector/wiring of the printer control board.	NO	Reconnect the connector Replace the wiring
4	Image Stabilization	The image stabilization solves the trouble.	NO	Go on to the next step.
5	Write section	The LPH is installed at proper position (inserted fully).	NO	Installation
6		The problem has been eliminated through the checks of steps up to 5.	NO	Check or replace the charging section → Replace the drum → Check or replace the transferring section → Check or replace the developing section → Replace LPH → Replace the image processing board

4.2.20 Printer system: Poor fusing performance, Offset

(1) Typical faulty images

Poor fusing performance



Offset



(2) Troubleshooting Step

Step	Section	Check item	Result	Action
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1	Paper	It occurs on the particular paper.	YES	Check the setting of the paper type, and fix it.
2	Cleaning section (Offset)	Some parts on the cleaning blade are left to wipe.	YES	Cleaning Replace the cleaning blade
3	Fusing section	The fusing temperature sensor is installed properly.	NO	Check the installation position.
4	Check the printer	Check mainly on the cleaning section and the fusing section.	NO	Clean, Replace
5	Connector, wiring	There is no problem on the connector of the printer control board, and the wiring.	NO	Reconnect the connector Replace the wiring
6	Image Stabilization	The image stabilization solves the trouble.	NO	Go on to the next step.
7	Service mode → System setting → Software DIPSW_19-0 to 19-3	Changing the fusing temperature eliminates the poor fusing performance and the offset.	YES	Conduct the fusing temperature adjustment.
8		The problem has been eliminated through the checks of steps up to 7.	NO	Fusing temperature sensor → Replace fusing heater lamp → Replace the printer control board

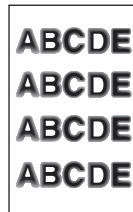
4.2.21 Printer system: Brush effect, Image bleeding

(1) Typical faulty images

Brush effect



Blurred image

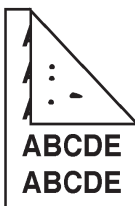


(2) Troubleshooting Step

Step	Section	Check item	Result	Action
1	Paper	Paper is moisturized.	YES	Replace to the paper that has just opened.
2		It occurs on the particular paper.	YES	Check the setting of the paper type, and fix it.
3	Fusing section	Clean the cleaning web properly.	NO	Check the cleaning web Replace the cleaning web
4	Check the printer	Check mainly on the transferring section, fusing section, and conveyance section.	NO	Clean, Replace
5	Connector, wiring	There is no problem on the connector of the printer control board, and the wiring.	NO	Reconnect the connector Replace the wiring
6	Image Stabilization	The image stabilization solves the trouble.	NO	Go on to the next step.
7		The problem has been eliminated through the checks of steps up to 6.	NO	Fusing temperature sensor → Replace fusing heater lamp → Replace the printer control board

4.2.22 Printer system: Inky backside

(1) Typical faulty images



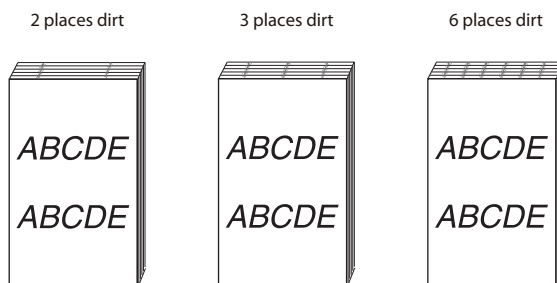
(2) Troubleshooting Step

Step	Section	Check item	Result	Action
1	PAPER PATH	There are foreign objects or dirt on the paper path.	YES	Remove the foreign object or dirt

2	Transferring section	Check dirt on the transferring belt and check the transferring belt cleaning section.	YES	Clean, Replace
3	Fusing section	Fusing guide plate has dirt.	YES	Remove dirt
4		Fusing roller /Lw has the damage or dirt.	YES	Cleaning or replacing the fusing roller /Lw
5	Paper exit section	Exit roller had dirt.	YES	Remove dirt
6	Check the printer	Check mainly on the transferring section, conveyance section, and the fusing section.	NO	Clean, Replace
7	Connector, wiring	There is no problem on the connector of the printer control board, and the wiring.	NO	Reconnect the connector Replace the wiring
8	Image Stabilization	The image stabilization solves the trouble.	NO	Go on to the next step.
9		The problem has been eliminated through the checks of steps up to 8.	NO	Check or replace the transferring section → Check or replace the fusing section → Check or replace the paper exit section → Replace the image processing board

4.2.23 Printer system: Leading edge face dirt in paper feed direction

(1) Typical faulty images



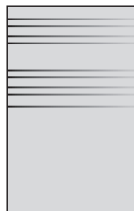
(2) Troubleshooting Step

Step	Section	Check item	Result	Action
1	Paper	It occurs on the particular paper.	YES	Check the setting of the paper type. Change the paper storage direction in the tray when paper is curled or burred.
2	Occurrence location Fusing guide plate	Dirt appears on 2 parts, at the center and 108mm shifted to both sides.	YES	Go on to step 8.
			NO	Go on to step 3.
3	Occurrence location Drum Separation claws	Dirt appears on 3 parts, at the center and 85mm shifted to both sides.	YES	Go on to step 7.
			NO	Go on to step 4.
4	Occurrence location Fusing claws	Dirt appears on 6 parts, at the center and 40mm, 81mm or 119mm shifted to both sides.	YES	Go on to step 5.
			NO	Go on to step 9.
5	Leading edge blank space	Set the leading edge blank space 3mm or more, and the trouble is solved.	YES	Set the leading edge blank space 3mm or more.
6	Fusing section	Check dirt on the fusing separation claws.	YES	Remove dirt
7	Tray setting → Process adjustment setting change → Process adjustment → Transfer current offset adjustment	Check the offset value of the leading edge1 by the transfer current offset adjustment.	NO	1. Raise the leading edge1 offset value of the side which abnormal condition occurs every 5 steps. 2. When the problem is not solved, lower the leading edge1 offset value every 5 steps.
8	Fusing section	Check dirt on the fusing guide plate.	YES	Remove dirt
9	PAPER PATH	Check foreign objects and dirt on the paper path.	YES	Remove the foreign object or dirt
10	Check the printer	Check mainly on the transferring section, conveyance section, and the fusing section.	NO	Clean, Replace

11		The problem has been eliminated through the checks of steps up to 10.	NO	Check or replace the separation claws → Replace the printer control board → Replace the high voltage unit /2
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4.2.24 Printer system: Transfer jitter

(1) Typical faulty images



(2) Troubleshooting Step

Step	Section	Check item	Result	Action
1	Paper	It occurs on the particular paper.	YES	Check the setting of the paper type.
2	Occurrence interval	It occurs at the position 124mm from the leading edge. It occurs at the position 120mm from the trail edge. It occurs at the position 160mm from the trail edge. It occurs at the position 265mm from the trail edge. It randomly occurs at the position 150mm from the leading edge on the 2nd sheet.	YES	Go on to step 3.
		It occurs at intervals other than above mentioned.	YES	Go on to step 5.
3	Service mode → Machine adjustment → Magnification adjustment	Confirm that according to the transfer jitter adjustment. (Refer to 1.8.4 Transfer jitter adjustment)	YES	Conduct one of "Printer CD-Mag. Adj. <Side1>" / "Registration Line Speed Adj." / "Transfer Belt Speed Adj.".
4	Check the printer	Check mainly on the charging section, transferring section, photo conductor section, developing section, write section, and fusing section.	NO	Clean, Replace
5		The problem has been eliminated through the checks of steps up to 4.	NO	Check or replace the charging section → Check or replace the transferring section → Check or replace the developing section → Replace LPH

4.2.25 Printer system: Blank print, Black print

(1) Typical faulty images

Blank print



Black print



(2) Troubleshooting Step

Step	Section	Check item	Result	Action
1	Image check	Blank copy occurs.	YES	Check the connection of the connector in the write section.
2	Check the printer	Check mainly on the charging section, transferring section, photo conductor section, developing section, and write section.	NO	Clean, Replace

3	Connector, wiring	There is no problem on the image processing board, the overall control board, the write section, and the connector/wiring of the printer control board.	NO	Reconnect the connector Replace the wiring
4	Image Stabilization	The image stabilization solves the trouble.	NO	Go on to the next step.
5		The problem has been eliminated through the check of step 4.	NO	Check or replace the charging section → Replace the drum → Check or replace the transferring section → Check or replace the developing section → Replace LPH → Replace the image processing board → Replace the high voltage unit /1 → Replace the high voltage unit /2

4.3 Scanner system step

4.3.1 Outline

When it is judged as the trouble of the scanner system from the initial check items, check the scanner check items.

Note

- The following sample images on each steps are when printing in A3.

4.3.2 Scanner check items

- Check the damage on the parts of the scanner system.

Step	Section	Check item	Result	Action
1	Original	Original has the damage or dirt.	YES	Original change
2	ADF	Original guide cover has dirt.	YES	Cleaning
3	Original glass	Original glass has dirt.	YES	Clean with the soft cloth.
4	Slit glass	Slit scan glass for reading DF has dirt.	YES	Clean with the soft cloth.
5	Shading correction plate	Shading correction plate has dirt.	YES	Clean with the soft cloth.
6	Mirror/Lens/ Exposure lamp/ Reflective mirror	Mirror has dirt.	YES	Cleaning
		Lens has dirt.	YES	Cleaning
		Exposure lamp has dirt.	YES	Cleaning
		Reflective mirror has dirt.	YES	Cleaning

4.3.3 Scanner system: White lines in sub scan direction, White bands in sub scan direction, Black lines in sub scan direction, Black bands in sub scan direction

(1) Typical faulty images

White lines in sub scan direction



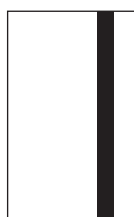
White bands in sub scan direction



Black lines in sub scan direction



Black bands in sub scan direction



(2) Troubleshooting Step

1. When using original glass

Step	Section	Check item	Result	Action
1	Scanner check	There is no problem on scanner check items.	NO	Clean, Replace
2	Service mode → Machine adjustment → Centering adjustment	The adjustment value of [Scanner Centering Adjustment] is within the standard.	NO	Conduct the scanner centering Adjustment.
3		The problem has been eliminated through the checks of steps up to 2.	NO	Replace exposure unit → Replace CCD unit

2. When the DF is in use

Step	Section	Check item	Result	Action
1	Scanner check	There is no problem on scanner check items.	NO	Clean, Replace
2	Service mode → Machine adjustment → Centering adjustment	The adjustment value of [ADF Centering Adjustment] is within the standard.	NO	Conduct ADF centering adjustment.
3	Service mode → Machine adjustment → ADF adjustment	The adjustment value of [ADF Skew Offset Adj.] is within the standard.	NO	Conduct ADF skew offset adjustment.
4	MECHANICAL ADJUSTMENT → DF → Paper skew adjustment	Adjustment position is proper.	NO	Conduct the paper skew adjustment.
5		The problem has been eliminated through the checks of steps up to 4.	NO	Replace exposure unit → Replace CCD unit

4.3.4 Scanner system: White lines in main scan direction, White bands in main scan direction, Black lines in main scan direction, Black bands in main scan direction

(1) Typical faulty images

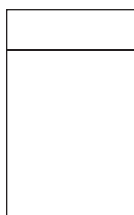
White lines in main scan direction



White bands in main scan direction



Black lines in main scan direction



Black bands in main scan direction



(2) Troubleshooting Step

1. When using original glass

Step	Section	Check item	Result	Action
1	Scanner check	There is no problem on scanner check items.	NO	Clean, Replace
2	Service mode → Machine adjustment → Timing adjustment	The adjustment value of [Scanner Restart Timing Adjustment] is within the standard.	NO	Conduct the scanner restart timing adjustment.
3	Service mode → Machine adjustment → Centering adjustment	The adjustment value of [Scanner Centering Adjustment] is within the standard.	NO	Conduct the scanner Centering Adjustment.
4		The problem has been eliminated through the checks of steps up to 3.	NO	Replace exposure unit → Replace CCD unit

2. When the DF is in use

Step	Section	Check item	Result	Action
1	Scanner check	There is no problem on scanner check items.	NO	Clean, Replace
2	Service mode → Machine adjustment → Timing adjustment	The adjustment value of [ADF Restart Timing Adjustment] is within the standard.	NO	Conduct ADF restart timing adjustment.
3	Service mode → Machine adjustment	The adjustment value of [ADF Centering Adjustment] is within the standard.	NO	Conduct ADF Centering Adjustment.

	→ Centering adjustment			
4	Service mode → Machine adjustment → ADF Adjustment	The adjustment value of [ADF Skew Offset Adj.] is within the standard.	NO	Conduct ADF skew offset adjustment.
5	MECHANICAL ADJUSTMENT → DF → Paper skew adjustment	Adjustment position is proper.	NO	Conduct the paper skew adjustment.
6		The problem has been eliminated through the checks of steps up to 5.	NO	Replace exposure unit → Replace CCD unit

4.3.5 Scanner system: Black spots

(1) Typical faulty images

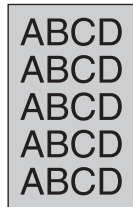


(2) Troubleshooting Step

Step	Section	Check item	Result	Action
1	Scanner check	There is no problem on scanner check items.	NO	Clean, Replace
2		The problem has been eliminated through the check of step 1.	NO	Replace exposure unit → Replace CCD unit

4.3.6 Scanner system: Gray background

(1) Typical faulty images

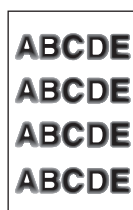


(2) Troubleshooting Step

Step	Section	Check item	Result	Action
1	Scanner check	There is no problem on scanner check items.	NO	Clean, Replace
2	DF unit	DF unit changes the shape or the hinge is damaged.	YES	Replace DF unit
3	Mechanical adjustment → DF → Height adjustment	DF unit is not at proper position.	YES	Conduct DF height adjustment.
4		The problem has been eliminated through the checks of steps up to 3.	NO	Replace exposure unit → Replace CCD unit

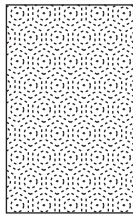
4.3.7 Scanner system: Blurred image, Brush effect

(1) Typical faulty images



(2) Troubleshooting Step

Step	Section	Check item	Result	Action
1	Original	Original has bumps.	YES	Original change
2	DF unit	DF unit changes the shape or the hinge is damaged.	YES	Replace DF unit
3	MECHANICAL ADJUSTMENT → DF → Height adjustment	DF unit is not at proper position.	YES	Conduct DF height adjustment.
4	Scanner check	There is no problem on scanner check items.	NO	Clean, Replace
5	Scanner section	Original glass leans or is not at proper position.	YES	Install it at proper position.
6		The install positions of V-mirror unit and the exposure unit are proper.	NO	Conduct the readjustment with using the optics unit positioning jig.
7		The problem has been eliminated through the checks of steps up to 6.	NO	Replace exposure unit → Replace CCD unit

4.3.8 Scanner system: Moire**(1) Typical faulty images****(2) Troubleshooting Step**

Step	Section	Check item	Result	Action
1	Original	Moire does not occur after changing the direction of original set.	YES	Original set direction change
2	Basic setting → Quality Adj.	Moire does not occur after changing the quality of the original.	YES	Change to the other types of original (Text, Text/Photo, Photo).
3	Basic screen → Zoom	Changing the magnification solves moire.	YES	Change the magnification.
4	Setting menu → Administrator setting → System Setting → Expert adjustment → Scan quality adjustment → Texture Elimination	Check the setting value of "Texture Elimination", and it is "OFF".	YES	Turn the setting value "ON". Note Because the gradation peculiarity deteriorates with "ON" of "Texture Elimination", be sure to use "ON" only when moire occurs.
5	Service mode → System Setting → Software DIPSW_27-6	Change the dot complement in skew adjustment and the trouble is solved.	YES	Change the setting value to "0" (reduce moire in the dot section).
6		The problem has been eliminated through the checks of steps up to 5.	NO	Replace CCD unit

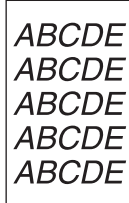
4.3.9 Scanner system: Leaning image**(1) Typical faulty images****(2) Troubleshooting Step**

Step	Section	Check item	Result	Action
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1	Original	Original is leaning.	YES	Setting original Replacing original
2	Scanner check	There is no problem on scanner check items.	NO	Clean, Replace
3	Scanner section	Original glass leans or is not at proper position.	YES	Install it at proper position.
4		The install positions of V-mirror unit and the exposure unit are proper.	NO	Conduct the readjustment with using the optics unit positioning jig.
5		The problem has been eliminated through the checks of steps up to 4.	NO	Replace exposure unit → Replace CCD unit

4.3.10 Scanner system: Image distortion

(1) Typical faulty images



(2) Troubleshooting Step

Step	Section	Check item	Result	Action
1	State of the machine installed	The main body is installed on the horizontal place.	NO	Re-install
2	Scanner check	There is no problem on scanner check items.	NO	Clean, Replace
3	Service mode → Machine adjustment → Warp adjustment	Conduct the warp adjustment and the trouble is solved.	NO	Conduct the warp adjustment.
4	Scanner section	The install positions of V-mirror unit and the exposure unit are proper.	NO	Conduct the readjustment with using the optics unit positioning jig.
5		The problem has been eliminated through the checks of steps up to 4.	NO	Replace exposure unit → Replace CCD unit

4.3.11 Scanner system: Low image density, Rough image

(1) Typical faulty images

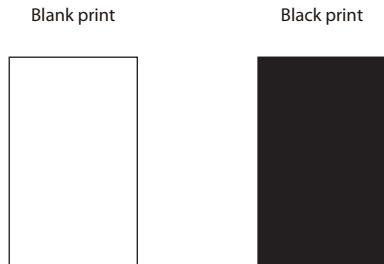


(2) Troubleshooting Step

Step	Section	Check item	Result	Action
1	Scanner check	There is no problem on scanner check items.	NO	Clean, Replace
2	Scanner section	Exposure lamp has dirt.	YES	Cleaning
3		The problem has been eliminated through the checks of steps up to 2.	NO	Replace exposure unit → Replace CCD unit

4.3.12 Scanner system: Blank copy, Black copy

(1) Typical faulty images



(2) Troubleshooting Step

Step	Section	Check item	Result	Action
1	Gradation pattern	Print out the test pattern No.3 or No.5 and the gradation pattern is without any trouble.	NO	Check the image trouble of the printer system.
2	Scanner check	There is no problem on scanner check items.	NO	Clean, Replace
3	Connector, wiring	There is no trouble on CCD unit, connector of the overall control board, and wiring.	NO	Reconnect the connector Replace the wiring
4		The problem has been eliminated through the checks of steps up to 3.	NO	Replace CCD unit → Replace the overall control board

4.3.13 Scanner system: Uneven density

(1) Typical faulty images



(2) Troubleshooting Step

Step	Section	Check item	Result	Action
1	Scanner check	There is no problem on scanner check items.	NO	Clean, Replace
2	Scanner section	V-mirror unit and the exposure unit moves smoothly.	NO	Check the scanner wire
3		The install positions of V-mirror unit and the exposure unit are proper.	NO	Conduct the readjustment with using the optics unit positioning jig.
4		The problem has been eliminated through the checks of steps up to 3.	NO	Replace exposure unit → Replace CCD unit

4.4 Controller system step

4.4.1 OUTLINE

When it is judged as the controller system trouble from the initial check items, check the controller check items.

Note

- The following sample images on each steps are when printing in A3.

4.4.2 Controller check item

- Check the network connection of the controller system.

Step	Section	Check item	Result	Action
1	Network cable	Network cable is properly connected.	NO	Reconnect
2	Network connection	Green LED next to the LAN connector is ON.	NO	Ask the system administrator on the user side to check if the output of HUB has trouble. → Without any trouble, go on to the next step
3	Network Setting	Network setting of the administrator setting is set properly.	NO	Ask the system administrator on the user side to set.

4.4.3 Controller system: Blank print, Black print**(1) Typical faulty images**

Blank print



Black print

**(2) Troubleshooting Step**

Step	Section	Check item	Result	Action
1	Controller check	There is no problem on the controller check item.	NO	Recover the network connection
2	IC board (ICB)	Connector of IC board is surely set.	NO	Reconnect the connector
3	PCI relay board (PCIRB)	Connector on the PCI relay board is surely set.	NO	Reconnect the connector
4	Overall control board (OACB)	Connector of overall control board is surely set.	NO	Reconnect the connector
5		The problem has been eliminated through the checks of steps up to 4.	NO	Replace the IC board. → Replace the PH relay board. → Replace the overall control board.

5. CONTROLLER TROUBLE

5.1 Even if the power of the main body is turned ON, [Data can be received.] is not displayed on the operation panel.

5.1.1 Troubleshooting step

Step	Section	Check item	Result	Action
1	IC Unit	IC unit is connected securely to the main body.	NO	Check the connection of IC unit and then connect it again.
2	IC Unit	Each connector in the IC board is connected securely.	NO	Connect the connector again.
		The problem has been eliminated through the checks of steps up to 2.	NO	Replace the IC board.

5.2 The print jobs on the PC side are completed, but no printing starts.

5.2.1 Troubleshooting step

Step	Section	Check item	Result	Action
1	Main body	Sub power switch of main body is ON.	NO	Turn ON the sub power switch and check it again.
2	Main body	Network cable or USB cable is disconnected from the main body.	YES	Connect the cable to the main body and then check it again.
3	Main body	An error occurs on the main body side.	YES	Check the operation panel of the main body and check it again after returning it to the normal condition.
4	Main body	Jobs are placed in a wait condition.	YES	Check the operation panel of the main body and then check the sequence of jobs.
5	PC	Printing is indicated as [Save in the box] or [Secure Print].	YES	Setting it to [Print] and make printing again.
6	Main body/PC	When an authentication setting is made, user name (account name)/password that has not been registered is entered.	YES	Enter a correct user name (account name)/password and then conduct printing again.
7	Main body/PC	[Enhanced Security mode] is set on the main body.	YES	After consulting with the administrator of the main body, make an authentication setting.
		The problem has been eliminated through the checks of steps up to 7.	NO	Replace the IC board.

6. TROUBLESHOOTING (GP)

6.1 TROUBLESHOOTING (GP-501)

Also called Repair Analysis Procedures, this section contains the basic troubleshooting information that a technician needs to isolate the root cause of a specific symptom.

6.2 Troubleshooting

6.2.1 Troubleshooting

The tables that follow are arranged in order of the normal operational sequence.

6.2.2 General

One of the first rules of troubleshooting is to first understand the normal operating sequence of the machine (Refer to [PN THEORY OF OPERATION GP-501](#)). Then carefully listen to the key operator's description of the problem or complaint. Follow this by your own visual observation. The cause of the problem can be determined by noting at which point in the operating cycle the problem occurred. To pinpoint the problem to a defective electrical component or mechanical part, use the Troubleshooting Guide and the OVERALL WIRING DIAGRAM. During any service call, it is a good practice to check the cable connections for fit and alignment.

Table 4.1 General Troubleshooting

Symptom	Probable Cause	Corrective Action
No indication of power (None of the three green LED's on Punch controller PCB or illuminated)	Not plugged in	Ensure that power cord is properly connected to the machine as well as the supply voltage.
	Power from outlet not correct	Check the power supplied from the outlet.
No indication of power, unit is plugged in.	Punch controller PCB, a minimum of 2 of the 3 LEDs on this board should be lit, if not, PCB is bad.	Replace Punch controller PCB.
	Display panel or cable.	Inspect or replace.
	Door not making interlocks.	Inspect or replace.
	Die Set not making switch.	Inspect or replace.
	Communication cables between GP- 501 and Printer	Check communication cables between printer and GP-501
Indication of power, yet GP-501 does not function (One or two LED's on the Punch controller PCB are illuminated, yet all three not illuminated.	5V from printer is not received at GP- 501	Connect all required communication cables from GP-501 to upstream device. The check to see if all LED's are illuminated.
	Door is not closed	Close door, then check to see if all LED's are illuminated. If door is closed, make sure door switch is being actuated.
	24V power supply is not functioning or not connected	Check to make certain AC is applied to power supply. Also check to make sure 24V is outputted from power supply.
	AC is not connected correctly	See above.
Machine will not start, GP-501 is shown on printer interface screen	Check Power supply board LED, if not lit, board is bad.	Inspect cable connections, replace Power supply board as needed.
	Check Punch controller PCB LEDs, if a minimum of two of the three are not lit, board is bad.	Inspect cable connections, replace Punch controller PCB as needed.
	Door is not closed or properly making the interlock.	Inspect and correct.
GP-501 does not appear on printer interface screen	LED's not illuminated on GP-501 Punch controller PCB.	See above.
	Communication cables between printer and upstream device not connected or faulty	Connect all required communication cables from GP-501 to upstream device.
	Firmware version not correct	Upgrade to the latest firmware for both the printer and GP-501
Paper misfeed is shown on printer interface screen, customer or operator has been unable to locate the misfeed.	Small piece of paper has become torn and is blocking sensor in paper path.	Check each sensor to make certain that they are not blocked.
Paper misfeed, not able to find any large sheets, removed sheets are torn.	Suspect a small piece of paper is hidden somewhere in the paper path.	Run a heavy cover stock through the system by hand. This process may drive any small torn pieces out of the paper path.
Punch does not cycle.	Punch clutch out of adjustment or defective.	Adjust or replace.
	Punch controller PCB.	
	Punch motor.	
Paper misfeed and/or punch shaft does not return to the home position.	Punch brake is not performing properly.	Adjust or replace.
Paper misfeed and/or punch continues to cycle.	Punch Flag sensor (S9) is broken or misaligned.	Adjust or replace.
Paper will not enter the punch area, runs through bypass only.	Divert solenoid malfunction.	Adjust or replace.

Paper is punched in the middle of the sheet.	Back Gauge solenoid is malfunctioning.	Adjust or replace.
Punch paper path is not operable, system will only bypass.	Transport motor not functioning.	Adjust or replace.
	Main control board not functioning properly.	Check connections, replace.
	Exit stepper motor or Entrance stepper motor is not functioning correctly.	Adjust or replace.
	Exit stepper motor or Entrance stepper motor controller boards are not functioning correctly.	Check connections, replace.
Punched holes are not centered.	Die Set positioning bracket is out of adjustment.	Inspect and adjust as required, see adjustment procedure.
Punched holes are not parallel to the edge of the paper.	Back Gauge is not functioning properly.	Inspect and adjust as required, see adjustment procedure.

6.2.3 Back Gauge

Table 4.2 Back Gauge Troubleshooting

Symptom	Probable Cause	Corrective Action
Deep punch or angled deep punch from leading edge of the paper.	Broken weld on paper stop, Back Gauge paddle.	Replace the unit. (Refer to F.15.3.30 Solenoid Spring Replacement)
	Broken or missing Back Gauge linkage springs.	Replace the springs. (Refer to F.15.3.30 Solenoid Spring Replacement)
Cannot remove the Die Set.	Back Gauge paddle is not in the fully opened position and is contacting the Die Set.	Turn the Punch Cycle Knob to ensure the punch drive indicator is lined up with the position indicator.
	Broken weld on paper stop, Back Gauge paddle.	Replace the unit. (Refer to F.15.3.30 Solenoid Spring Replacement)
	Broken or missing linkage spring or springs.	Replace the spring. (Refer to F.15.3.30 Solenoid Spring Replacement)
	Solenoid plunger stuck.	Clean the solenoid. (Refer to F.15.3.12 Cleaning and Checking the Back Gauge Solenoid)
	Solenoid plunger worn.	Replace Back Gauge. (Refer to F.15.3.28 Replacing the back gauge mechanism)
Punches occur 2 to 4" into the sheet.	One or more broken or missing linkage springs.	Replace springs. (Refer to F.15.3.30 Solenoid Spring Replacement)
	Back Gauge paddle is not fully closing, leaving a gap that the paper can slip through especially when using paper with heavy curl.	Adjust Back Gauge adjustment. (Refer to F.15.3.32 Back Gauge Assembly Adjustment)

6.2.4 Die Set

Under normal conditions, the GP-501 punch may experience one mis-feed in 5000. Excessive mis-feeding, such as one in every 1000, requires servicing. The cause may be the Die Set.

Symptom	Probable Cause	Corrective Action
Excessive mis-feeding. Paper does not exit after being punched.	Worn Die Set.	Replace Die Set if it is worn out, greater than 500K cycles.
	Defective Die Set.	Replace.
	Excessive oil on punch pins. Chad and paper dust sticks to the punch pin tip.	Clean pins to remove excess oil. Lubricate with approved lubricants only. (Refer to F.15.2.5 Checking and lubricating the Die Set pins and Die Set shoulder bolts)
	Floating pressure bar not retracting.	Replace pressure bar springs when applicable. (Refer to F.15.2.3.(5) Floating Pressure Bar Spring Replacement)

6.3 Initial Service Action

6.3.1 Initial Service Action

At the start of every service call, you should perform the following.

1. If called for a problem, determine the exact nature of the service complaint.
2. Estimate the cycle life on the Die Sets. Determine if any of the Die Set life cycles have exceeded 500k sheets (cycles).
3. Determine if the customer uses only one Die Set pattern (style) or if they switch between different patterns.
4. Determine the last time the Die Set was lubricated.
5. Determine the date of the last preventative maintenance performed on the punch system.
6. Determine the paper type and quality, especially as it relates to curl and identify if any media changes correlate with the emergence of the customer issue.

6.4 Mis-Feed Service Action

6.4.1 Mis-Feed Service Action

To clear a misfeed, first check the printer screen to see the area of the misfeed.

To clear a mis-feed in the punch:

1. Open the punch cabinet door.
2. Ensure the Chip Bin is not overflowing.
3. Turn punch knob [1] clockwise until the punch is in its home position [2].

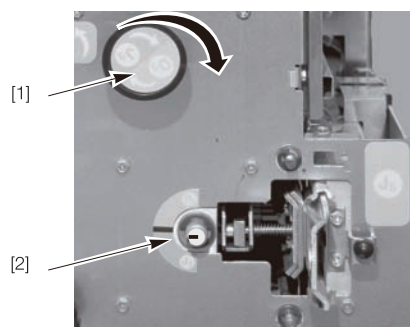


Figure 4.3 Setting the Punch to Its Home Position.

4. Open the Bypass panel cover [1] and check for obstructions in the Bypass [2].
5. Ensure the Entrance Guide is clear [3].
6. Ensure the Diverter is clear [4].

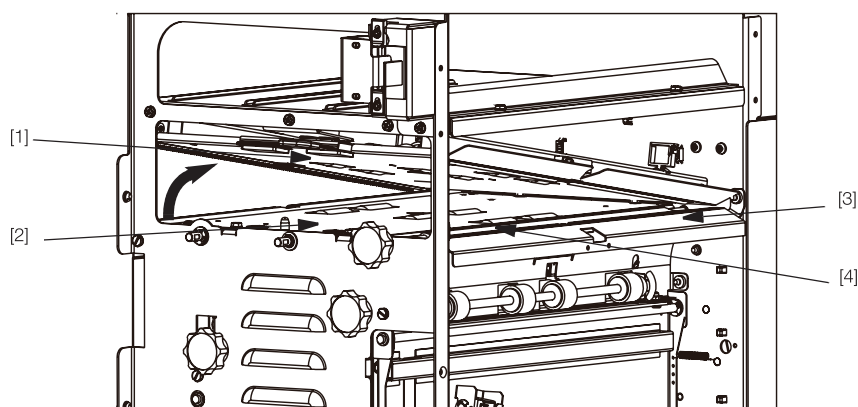


Figure 4.4 Clearing The Bypass.

7. Open the entrance paper Aligner panel latch [1] and clear obstructions in the Aligner.
8. Open the exit paper Aligner panel latch [2] and clear obstructions in each Aligner.

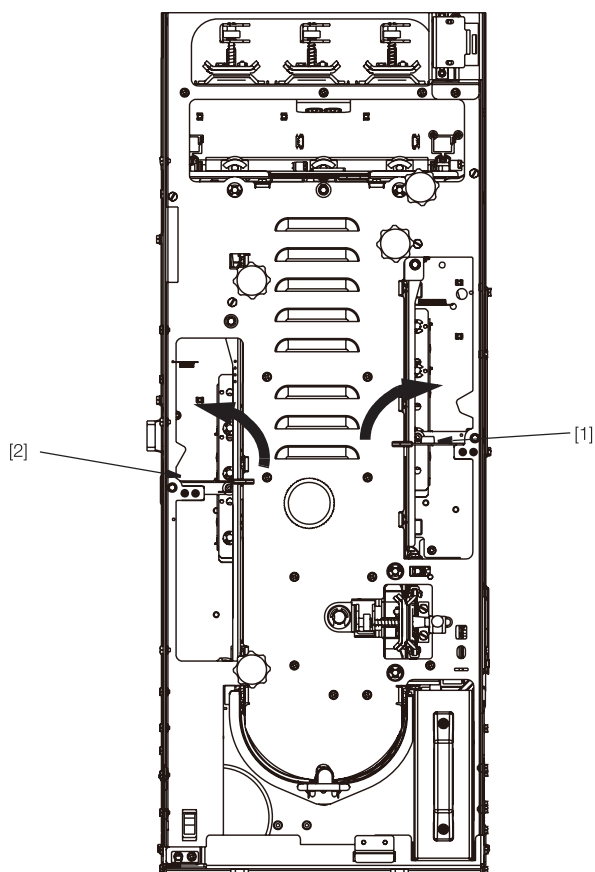


Figure 4.5 Checking Paper Path Through the Punch.

9. Open the bottom U-channel by pressing the lever in [1] and lower the U-channel [2] and clear the path.

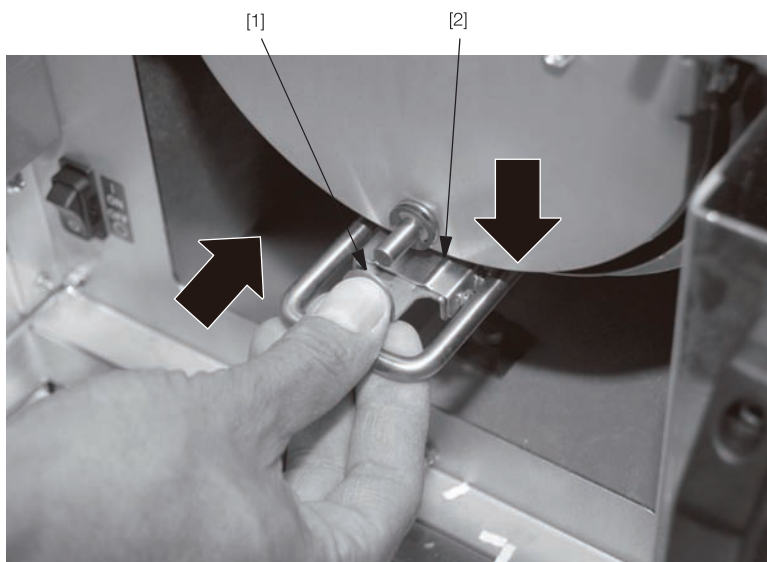


Figure 4.6 Opening the Bottom U-Channel

10. When all the paper is cleared, close the U-channel, Aligner Panels, and Bypass.
11. Shut the cabinet door.
12. Verify on the printer screen that the misfeed has been cleared. If not, repeat the above steps.
13. Press the Start button on the printer. The printing operation should resume.

6.5 Final Service Action

6.5.1 Final Service Action

This section explains the actions a technician should take at the end of every service call. With each step, verify that the system runs smoothly and misfeed free.

1. Inspect each Die Set visually and lubrication as needed. (Refer to [F.15.2.5 Checking and lubricating the Die Set pins and Die Set shoulder bolts](#))
2. Using the customer's primary Die Set pattern, run 200 simplex printed test sheets through the punch mode and examine the output for clean hole quality and even hole alignment.
3. Using the customer's primary Die Set pattern, run 200 duplex printed test sheets through the punch mode and examine the output for clean hole quality and even hole alignment.
4. Using any of the customer's secondary Die Set pattern, run 100 simplex printed test sheets through the punch mode and examine the output for clean hole quality and even hole alignment.
5. Run 100 sheets simplex and 100 sheets duplex through the punch bypass mode.
6. Clean out all paper chips (chad) and paper dust from the chip tray, the bottom of the machine and from the floor around the bottom of the machine. (Refer to [F.15.3.6 Cleaning the base](#))
7. Explain to the customer the service work that was performed and ensure they are satisfied before you close the call.

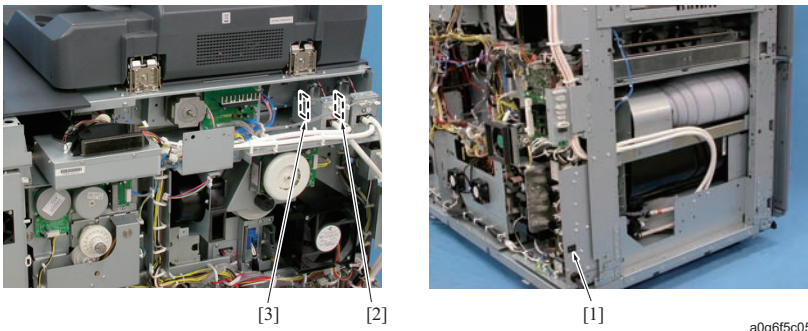
L PARTS/CONNECTOR LAYOUT DRAWING

1. PARTS LAYOUT DRAWING

1.1 bizhub PRO 1200/1200P/1051

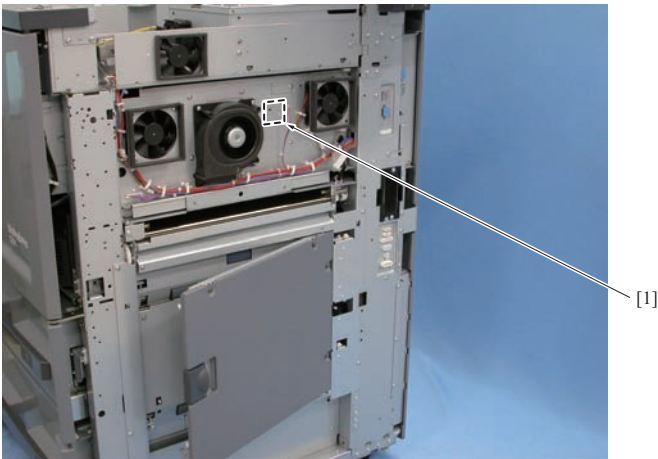
1.1.1 Switch/sensor

(1) Main body rear side



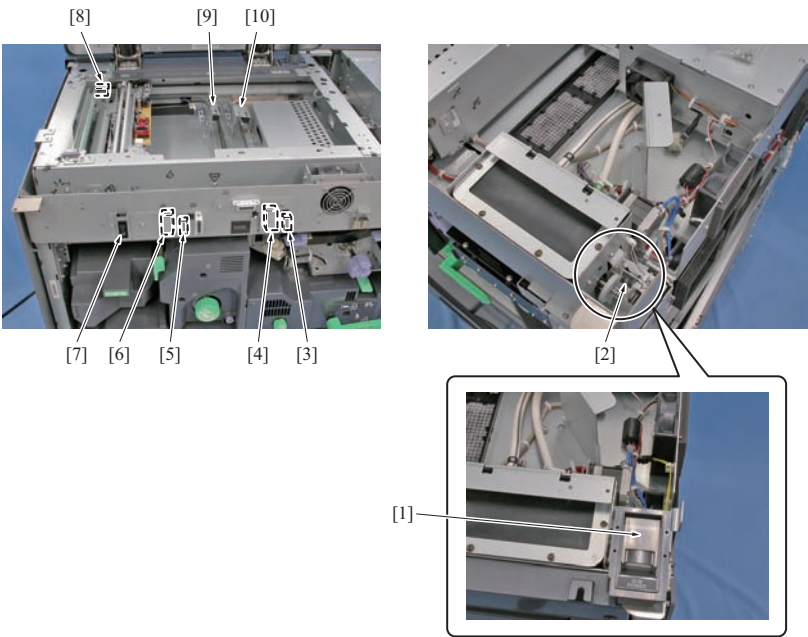
[1]	Dehumidifier heater switch (SW3)	[2]	Toner pump encoder sensor (PS28)
[3]	Air pump encoder sensor (PS29)		

(2) Main body right side



[1]	Temperature-humidity sensor /1 (TEM/HUM1)	-
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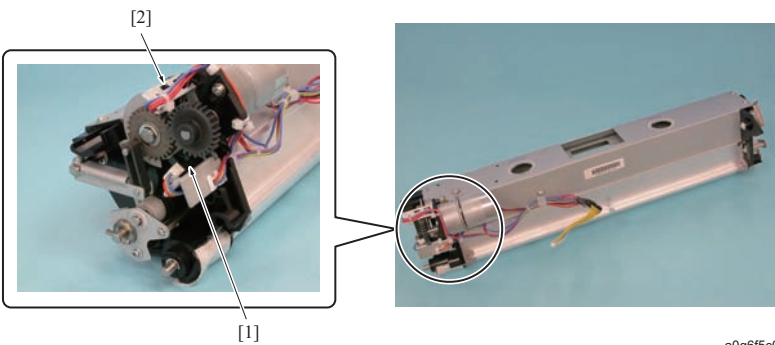
(3) Main body upper surface



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[1]	Sub power switch (SW2)	[2]	Air separation motor encoder sensor (PS30)
[3]	Door open/close sensor /1 (PS1)	[4]	Interlock switch /1 (MS1)
[5]	Door open/close sensor /2 (PS2)	[6]	Interlock switch /2 (MS2)
[7]	Main power switch (SW1)	[8]	Scanner home sensor (PS51)
[9]	APS sensor /1 (PS52)	[10]	APS sensor /2 (PS53)

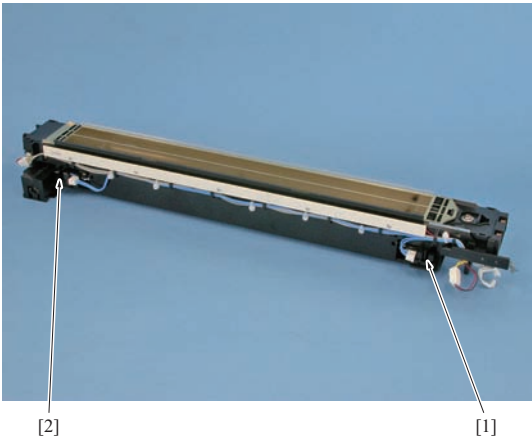
(4) Cleaning section



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[1]	Blade sensor /1 (PS24)	[2]	Blade sensor /2 (PS25)
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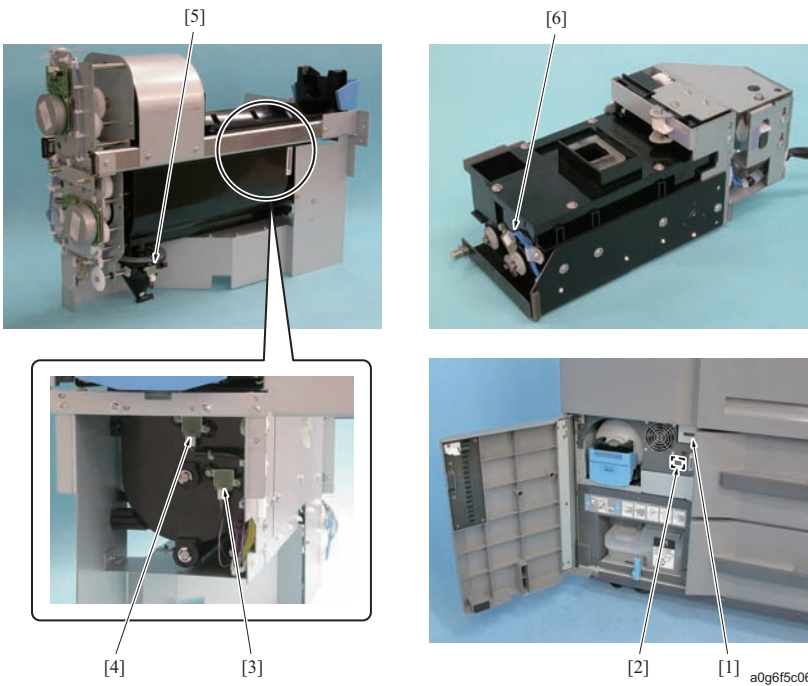
(5) Charger unit



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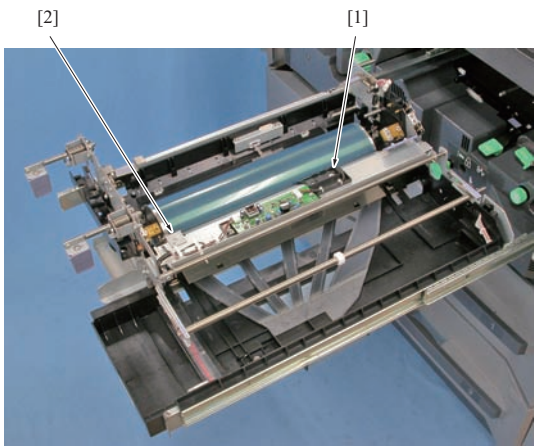
[1]Charger cleaning limit sensor (PS27)	[2]Charger cleaning home sensor (PS26)
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(6) Toner supply section



[1]Door switch /2 (SW5)	[2]Temperature-humidity sensor /2 (TEM/HUM2)
[3]Hopper toner remaining sensor /2 (PS33)	[4]Hopper toner remaining sensor /1 (PS32)
[5]Cup section toner remaining sensor (PS34)	[6]Intermediate hopper toner remaining sensor (PS39)

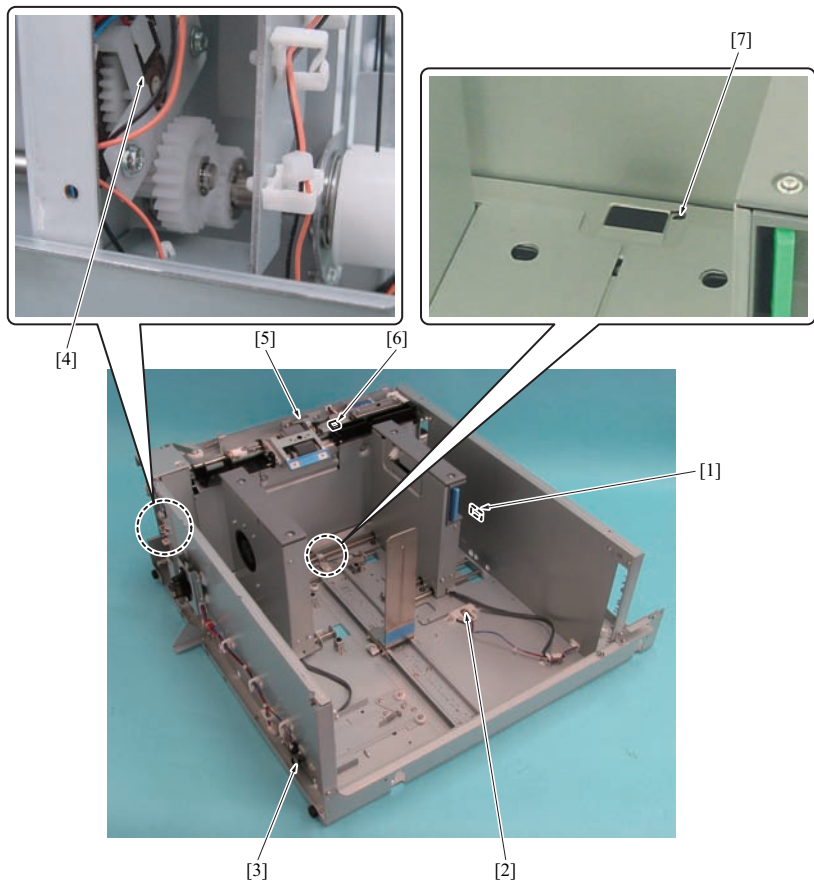
(7) Photosensitive material section



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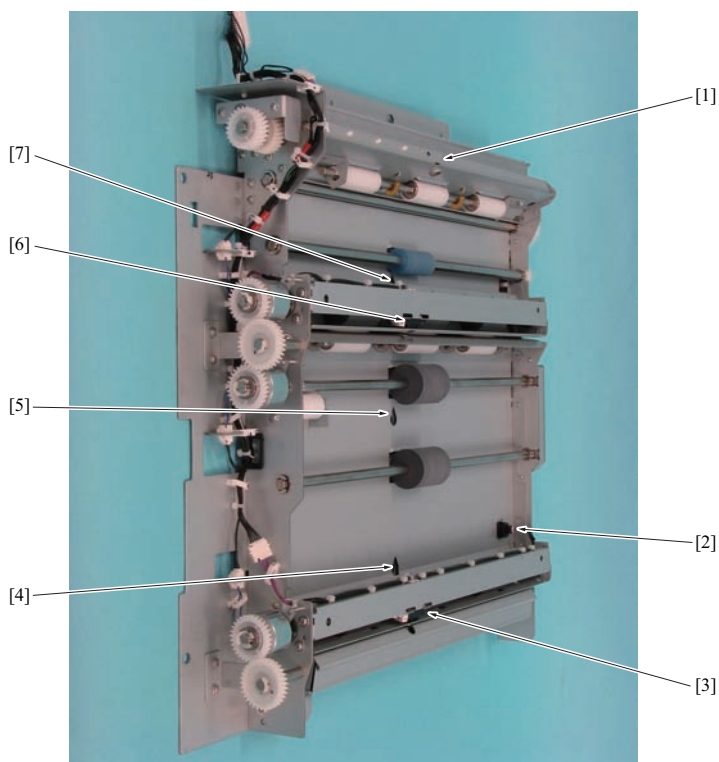
[1]Drum potential sensor (DPS)	[2]Drum temperature sensor (TH5)
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(8) Paper feed section



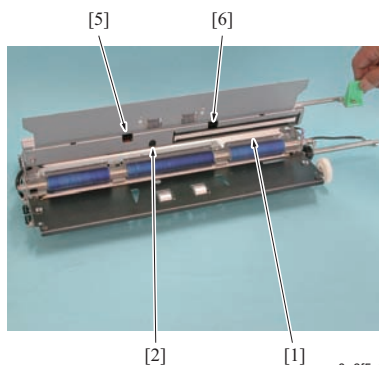
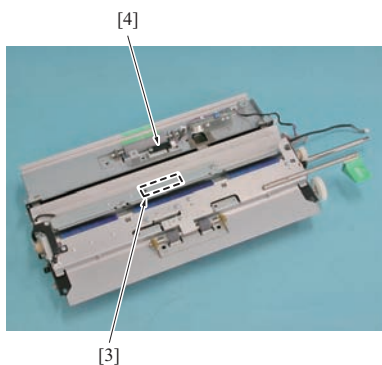
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[1]	Handle release sensor /1 (PS9), /2 (PS13)	[2]	CD paper size VR/1 (VR2), /2 (VR5)
[3]	FD paper size VR/1 (VR3), /2 (VR6)	[4]	Remaining paper VR/1 (VR1), /2 (VR4)
[5]	Upper limit sensor /1 (PS6), /2 (PS10)	[6]	Paper feed sensor /1 (PS7), /2 (PS11)
[7]	Paper empty sensor /1(PS8), /2 (PS12)	-	

(9) Vertical conveyance section

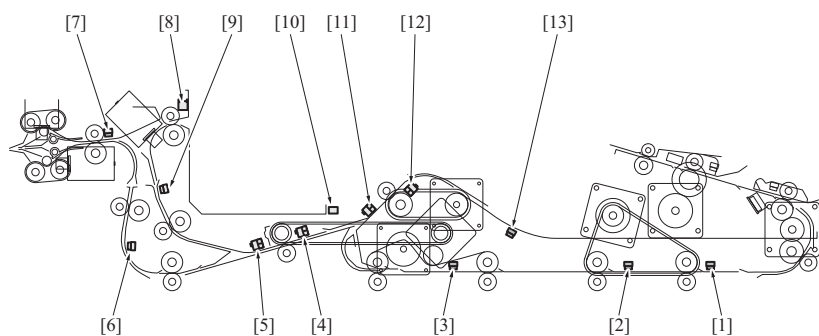
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[1] Loop sensor (PS16)	[2] Door switch /1 (SW4)
[3] Pre-registration sensor /2 (PS18)	[4] Vertical conveyance sensor /3 (PS21)
[5] Vertical conveyance sensor /2 (PS20)	[6] Pre-registration sensor /1 (PS17)
[7] Vertical conveyance sensor /1 (PS19)	-

(10) Registration section

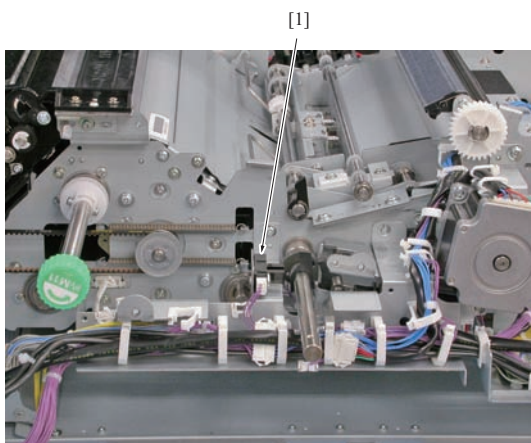
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[1] Centering sensor(PS4)	[2] Paper leading edge sensor (PS41)
[3] Registration sensor (PS40)	[4] ADU deceleration sensor (PS42)
[5] Paper skew sensor /Rr (PS66)	[6] Paper skew sensor /Fr (PS65)

(11) Duplex section /1

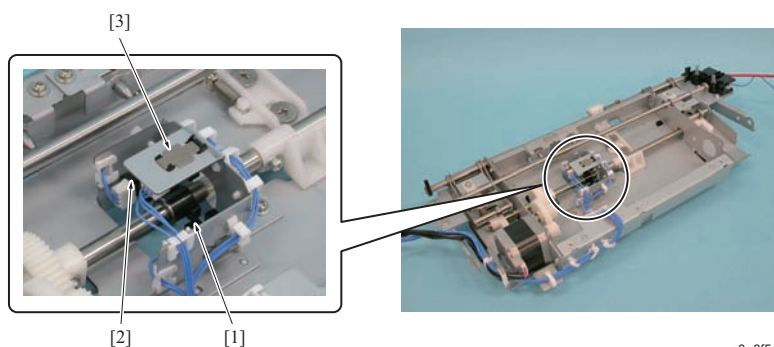
a0g6f5c066cb

[1] ADU exit sensor (PS43)	[2] ADU conveyance sensor /2 (PS36)
[3] ADU conveyance sensor /1 (PS35)	[4] Reverse sensor /2 (PS47)
[5] Reverse sensor /1 (PS48)	[6] ADU reverse paper exit sensor (PS50)
[7] De-curler entrance sensor (PS23)	[8] Fusing exit sensor (PS22)
[9] ADU accelerate sensor (PS49)	[10] Temperature sensor (TEM)
[11] ADU reverse sensor /1 (PS46)	[12] ADU reverse sensor /2 (PS45)
[13] Paper stay sensor (PS64)	-

(12) Duplex section /2

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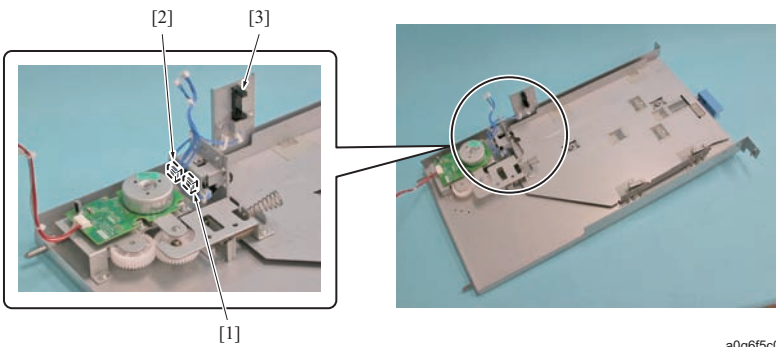
[1] ADU handle release sensor (PS44)	-
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(13) Duplex section /3

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[1] Transfer pressure home sensor (PS54)	[2] Transfer pressure position sensor /1 (PS55)
[3] Transfer pressure position sensor /2 (PS56)	-

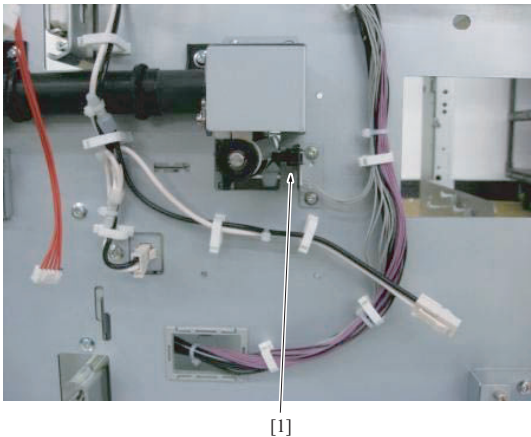
(14) Toner collection section /1



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[1]	Waste toner box set sensor (PS14)	[2]	Waste toner box swing sensor (PS15)
[3]	Waste toner full sensor /1 (PS37)	-	

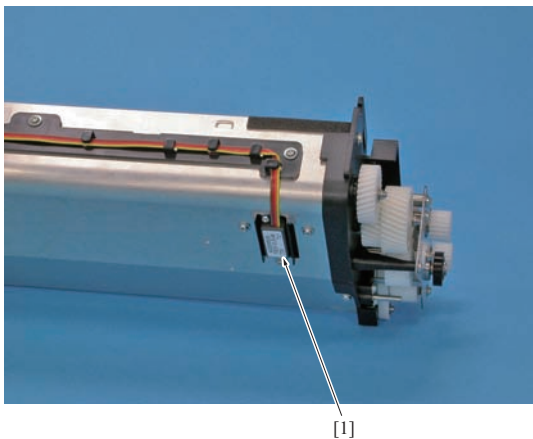
(15) Toner collection section /2



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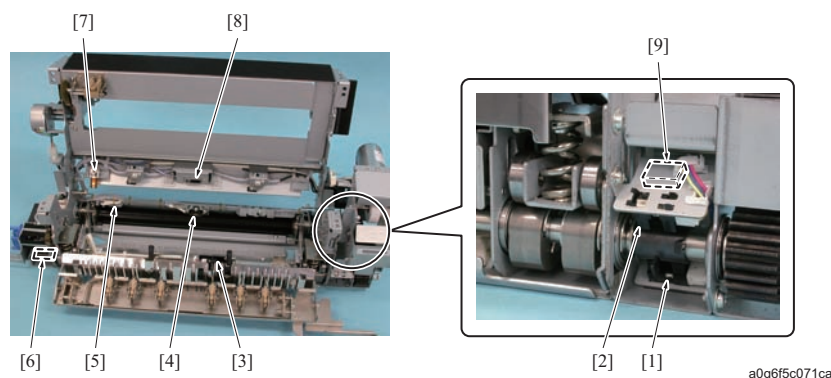
[1]	Waste toner full sensor /2 (PS62)	-
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(16) Developing section

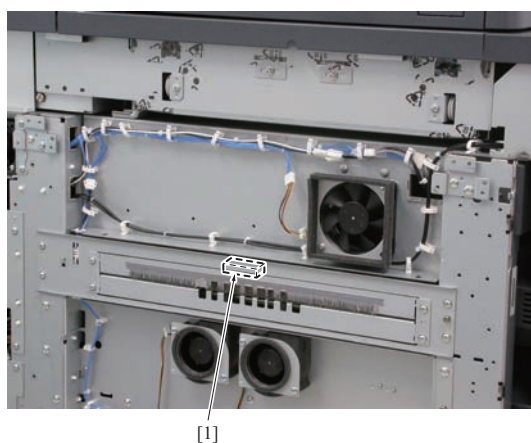


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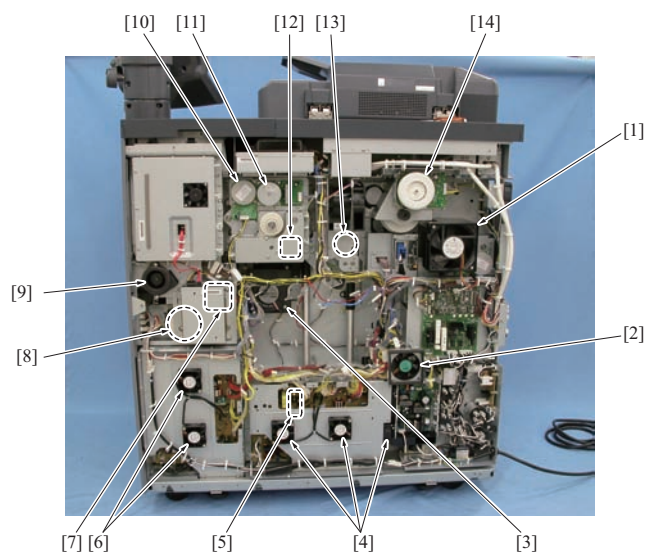
[1]	TCR sensor (TCRS)	-
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(17) Fusing section

[1]	Fusing pressure position sensor /1 (PS59)	[2]	Fusing pressure position sensor /2 (PS60)
[3]	Fusing jam sensor (PS38)	[4]	Fusing temperature sensor /3 (TH3)
[5]	Fusing temperature sensor /4 (TH4)	[6]	Transfer pressure position sensor (PS58)
[7]	Fusing temperature sensor /2 (TH2)	[8]	Fusing temperature sensor /1 (TH1)
[9]	Fusing pressure position sensor /3 (PS61)		-

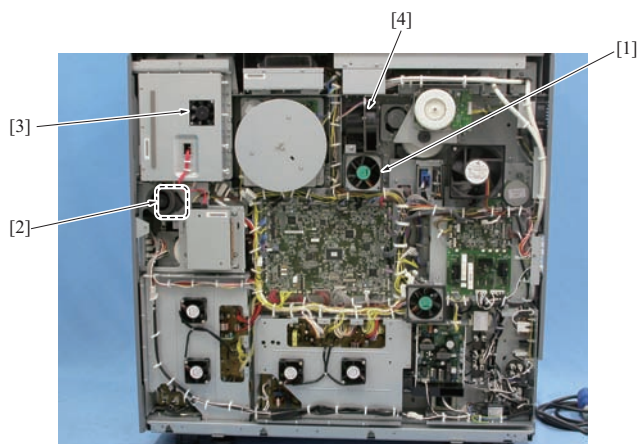
(18) Paper exit section

[1]	Paper exit sensor (PS3)		-
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1.1.2 Load**(1) Main body rear side 1**

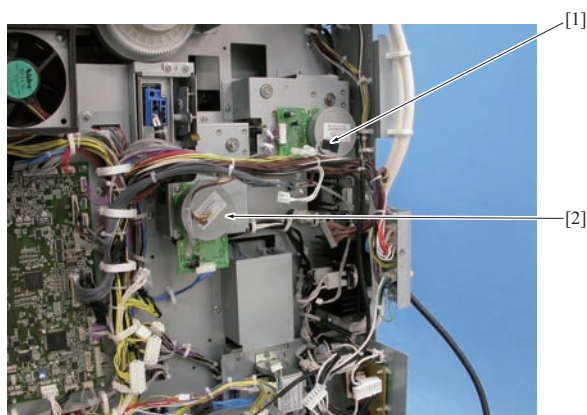
[1]	Cooling fan /1 (FM1)	[2]	DC power supply /3 cooling fan (FM36)
[3]	Collection pipe cooling fan (FM34)	[4]	DC power supply /2 cooling fan (FM42)
[5]	Waste toner motor (M9)	[6]	DC power supply /1 cooling fan (FM41)

[7]	Developing suction fan /2 (FM22)	[8]	Paper feed motor (M4)
[9]	Suction fan (FM32)	[10]	Developing screw motor (M21)
[11]	Developing motor (M3)	[12]	Drum motor (M2)
[13]	Transfer belt cleaning motor (M5)	[14]	Fusing motor (M1)

(2) Main body rear side /2

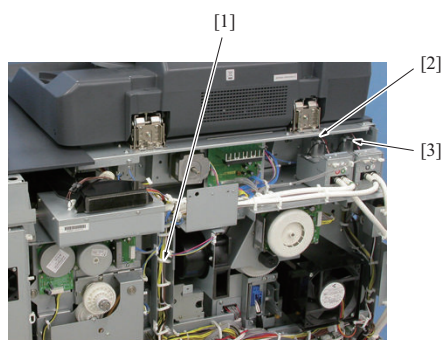
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[1]	Transfer suction fan (FM5)	[2]	Vertical conveyance motor (M8)
[3]	IC cooling fan (FM39)	[4]	Cooling fan /2 (FM2)

(3) Main body rear side /3

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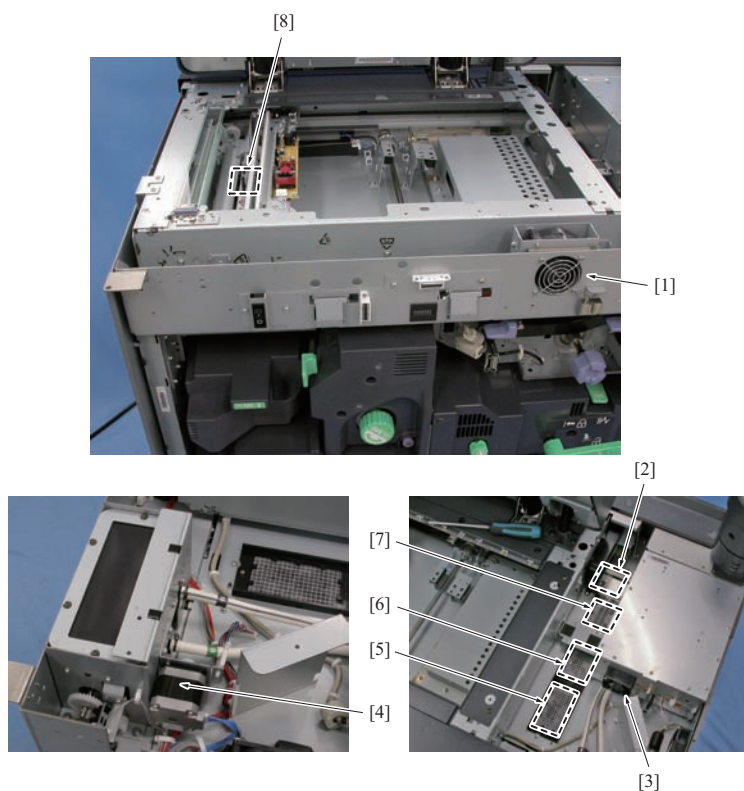
[1]	Paper exit motor (M20)	[2]	Paper exit conveyance motor (M31)
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(4) Main body rear side /4

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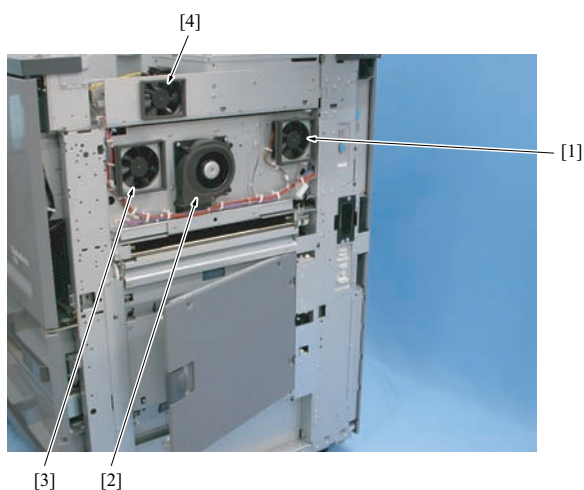
[1]	Scanner motor (M27)	[2]	Air pump motor (M29)
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[3]	Toner pump motor (M28)	-
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(5) Main body upper surface

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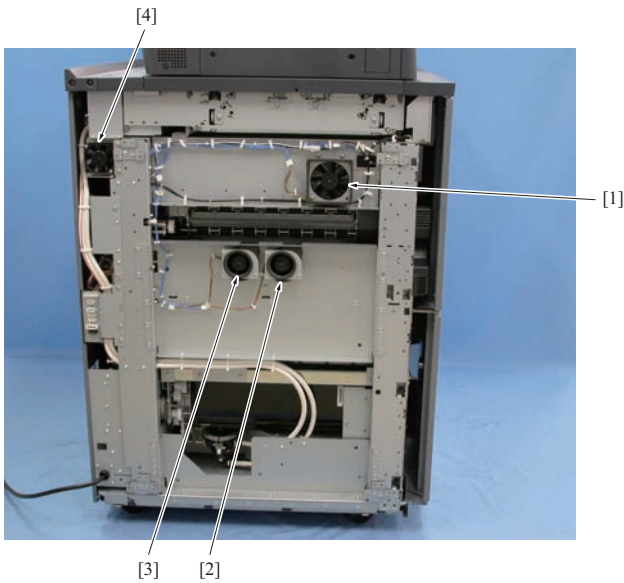
[1]	Front cooling fan (FM18)	[2]	Developing suction fan /1 (FM9)
[3]	Image processing cooling fan (FM12)	[4]	Air separation motor (M10)
[5]	LPH fan /2 (FM25)	[6]	LPH fan /1 (FM3)
[7]	LPH fan /3 (FM26)	[8]	Scanner cooling fan (FM19)

(6) Main body right side

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[1]	Suction cooling fan /1 (FM6)	[2]	Developing cooling fan (FM31)
[3]	Suction cooling fan /2 (FM7)	[4]	Suction cooling fan /3 (FM8)

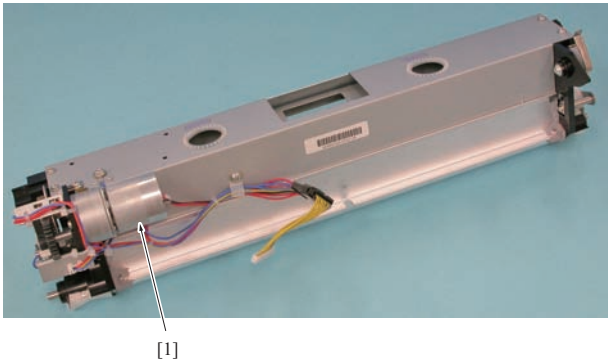
(7) Main body left side



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[1]	Paper exit cooling fan /Up (FM4)	[2]	Paper exit cooling fan /Lw2 (FM28)
[3]	Paper exit cooling fan /Lw1 (FM10)	[4]	Pump cooling fan (FM11)

(8) Cleaning section



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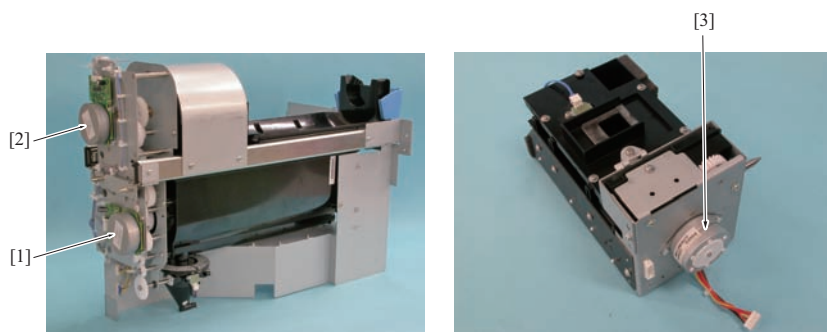
[1]	Blade motor (M22)	-
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(9) Charger unit



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[1]	Charger cleaning motor (M23)	-
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(10) Toner supply section

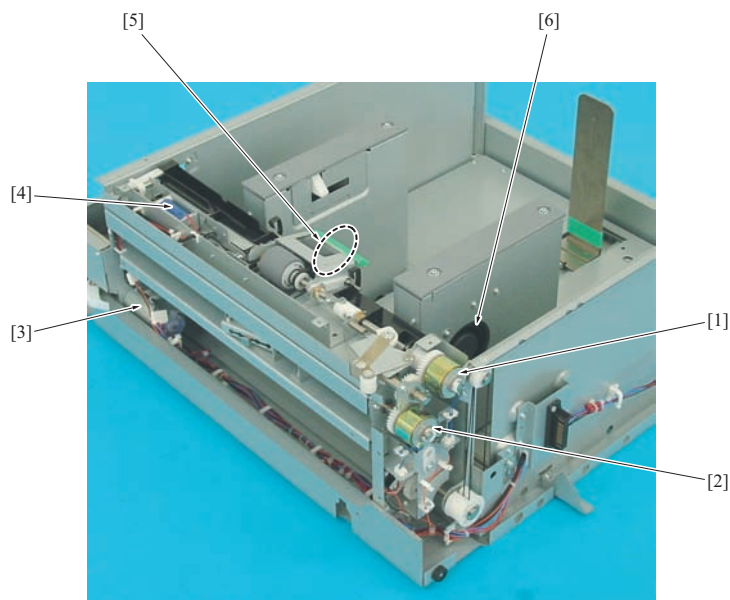
a0g6f5c014ca

[1]	Toner hopper motor (M7)	[2]	Toner bottle motor (M6)
[3]	Intermediate hopper motor (M11)	-	

(11) Photosensitive material section

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[1]	Drum claw solenoid (SD10)	-	
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(12) Paper feed section /1

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[1]	Paper feed clutch /1 (CL4), /2 (CL6)	[2]	Separation clutch /1 (CL5), /2 (CL7)
[3]	Tray lift-up motor /1 (M25), /2 (M34)	[4]	Pick-up solenoid /1 (SD3), /2 (SD4)
[5]	Paper feed assist fan /Fr1 (FM21), / Fr2 (FM23)	[6]	Paper feed assist fan /Rr1 (FM20), / Rr2 (FM24)

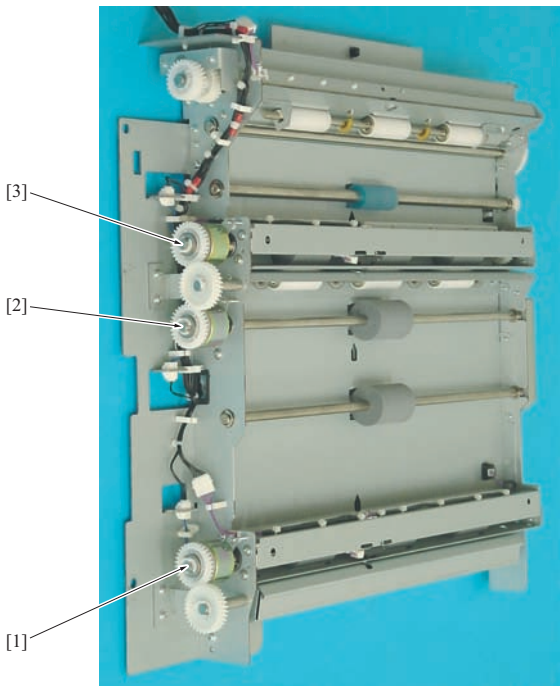
(13) Paper feed section /2



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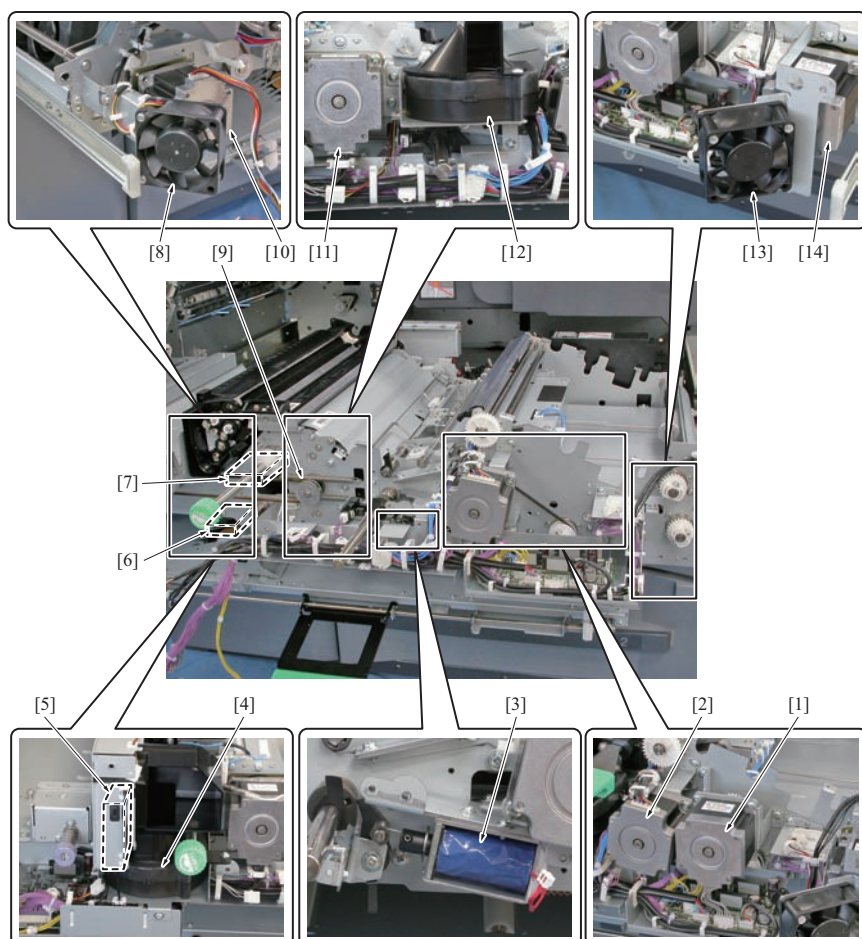
[1]	Dehumidification heater /1 (HTR1)	[2]	Dehumidification heater /2 (HTR2)
[3]	Tray lock solenoid /2 (SD2)	[4]	Tray lock solenoid /1 (SD1)

(14) Vertical conveyance section



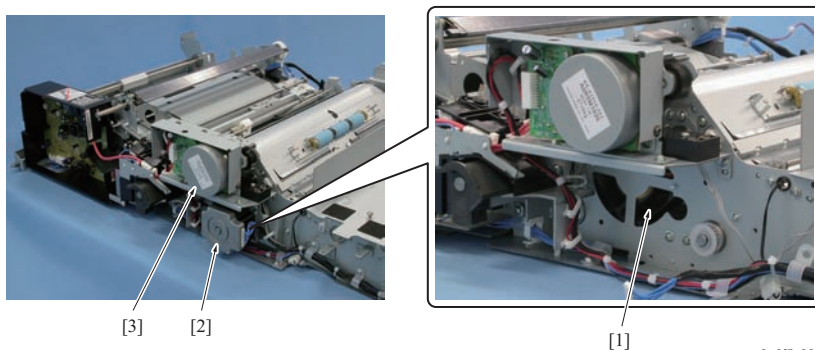
1050fs5065c

[1]	Pre-registration clutch /2 (CL3)	[2]	Vertical conveyance clutch (CL2)
[3]	Pre-registration clutch /1 (CL1)	-	

(15) Duplex section 1

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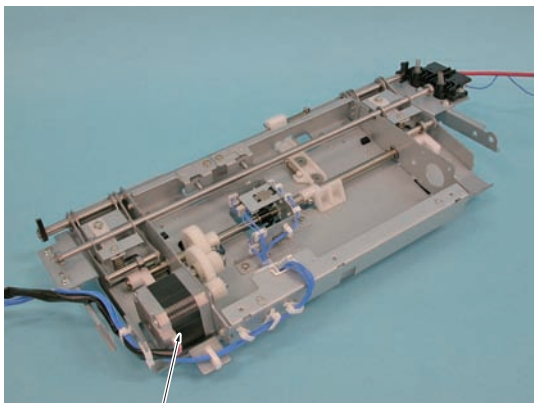
[1] Registration motor (M17)	[2] ADU conveyance motor /2 (M16)
[3] ADU lock solenoid (SD6)	[4] Reverse cooling fan (FM38)
[5] Transfer belt cleaning fan (FM27)	[6] Sensor cooling fan /2 (FM40)
[7] Sensor cooling fan /1 (FM16)	[8] ADU cooling fan /1 (FM14)
[9] Reverse/exit motor (M13)	[10] ADU acceleration motor (M14)
[11] ADU reverse motor (M12)	[12] Belt cooling fan (FM37)
[13] Registration cooling fan (FM17)	[14] Loop motor (M18)

(16) Duplex section 2

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[1] ADU cooling fan /2 (FM15)	[2] ADU conveyance motor /1 (M15)
[3] Transfer belt motor (M30)	-

(17) Duplex section 3 (Transfer belt pressure section)

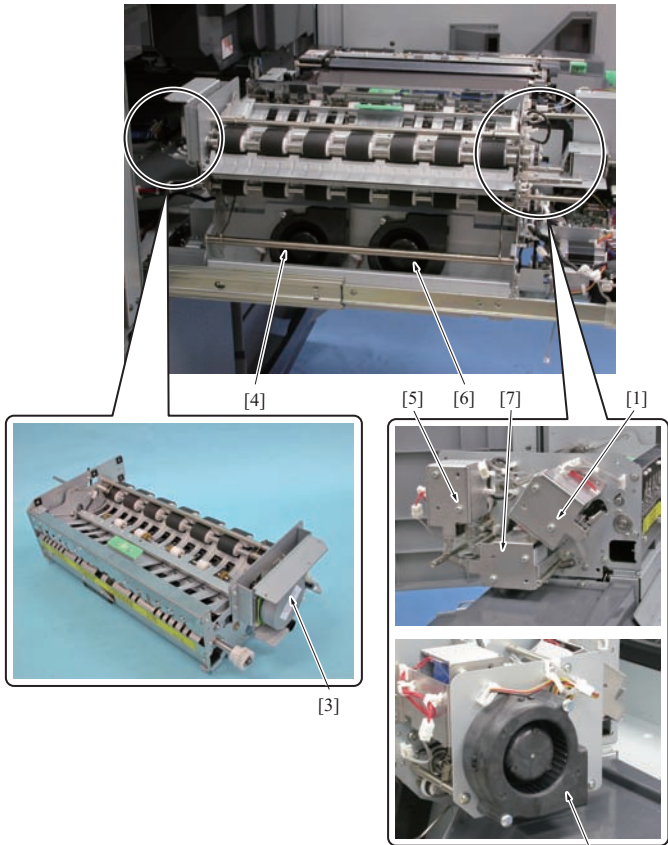


[1]

a0g6f5c027ca

[1]	Transfer belt pressure release motor (M26)	-
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(18) Reverse/exit section

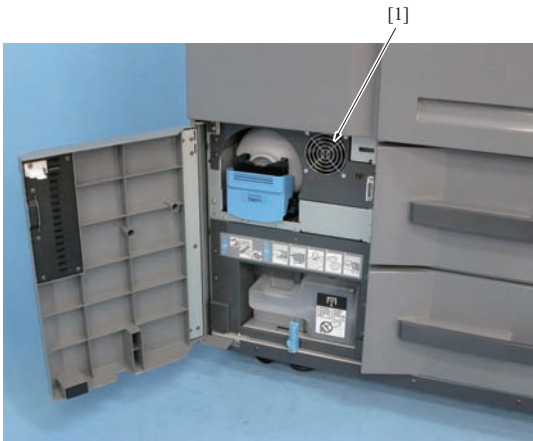


[2]

a0g6f5c028ca

[1]	Reverse/exit solenoid (SD7)	[2]	ADU cooling fan /3 (FM13)
[3]	De-curler motor (M32)	[4]	De-curler fan /2 (FM30)
[5]	De-curler solenoid /Up (SD8)	[6]	De-curler fan /1 (FM29)
[7]	De-curler solenoid /Lw (SD5)	-	

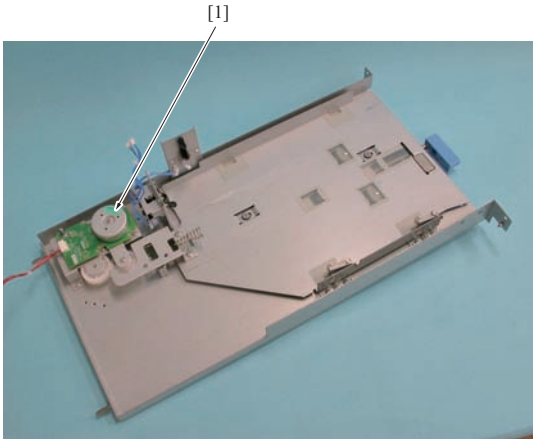
(19) Toner supply section



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[1]	Toner bottle cooling fan (FM35)	-
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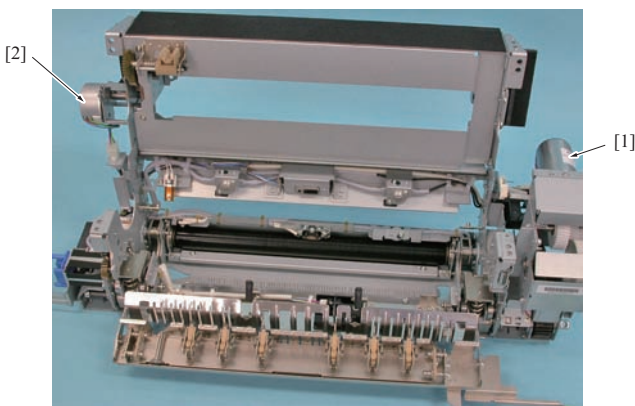
(20) Toner collection section



a0g6f5c033ca

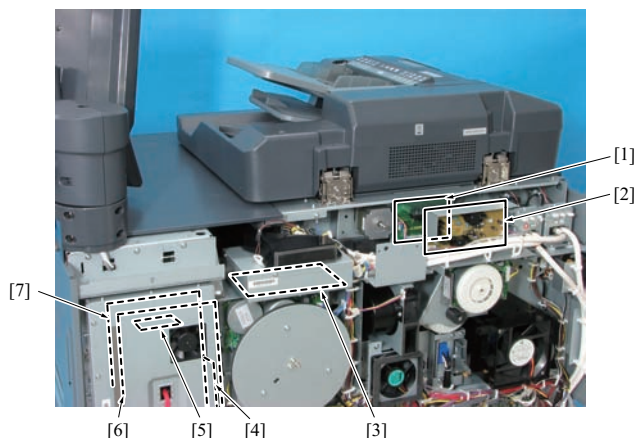
[1]	Waste toner box swing motor (M19)	-
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(21) Fusing section



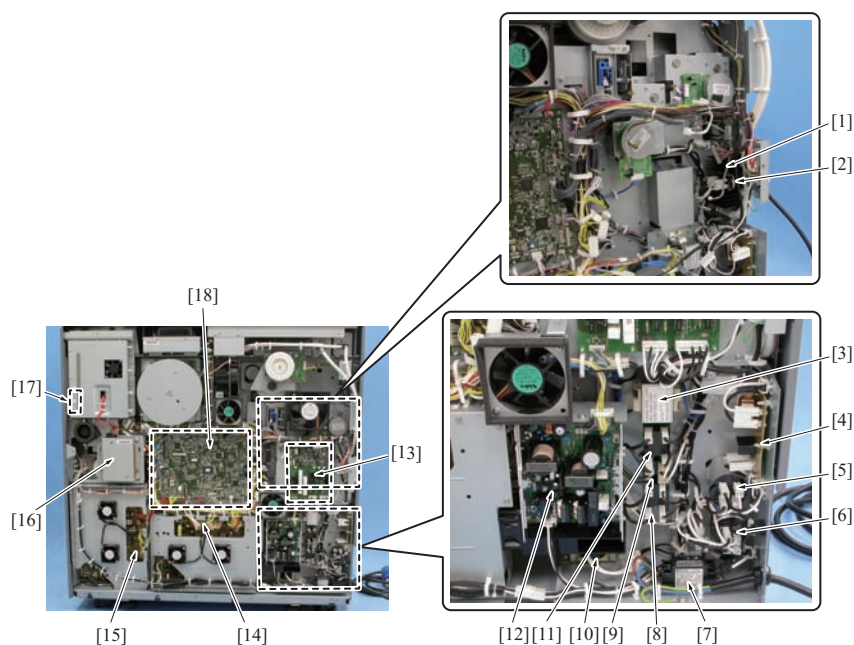
a0g6f5c032ca

[1]	Fusing pressure release motor (M33)	[2]	Web motor (M24)
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1.1.3 Boards and others**(1) Main body rear side 1**

a0g6f5c035cb

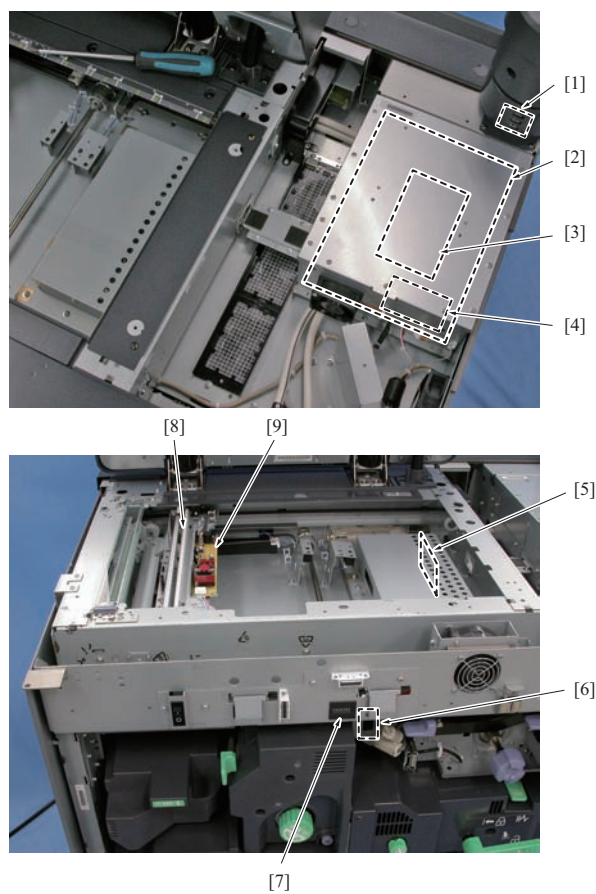
[1]	Scanner drive board (SCB)	[2]	High voltage unit /3 (HV3)
[3]	High voltage unit /1 (HV1)	[4]	PCI relay board (PCIRB)
[5]	DIMM	[6]	IC board (ICB)
[7]	Overall control board (OACB)	-	

(2) Main body rear side 2

a0g6f5c036ca

[1]	Triac /2 (TRC2)	[2]	Triac /1 (TRC1)
[3]	Transformer /1 (T1)	[4]	Noise filter /3 (NF3)
[5]	Noise filter /2 (NF2)	[6]	Noise filter /1 (NF1)
[7]	Circuit breaker (CBR)	[8]	Relay 1 (RL2)
[9]	Relay 2 (RL3)	[10]	Coil (L)
[11]	Main relay (RL1)	[12]	DC power supply /3 (DCPS/3)
[13]	AC drive board (ACDB)	[14]	DC power supply /2 (DCPS/2)
[15]	DC power supply /1 (DCPS/1)	[16]	Hard disk /2 (HDD2)
[17]	CF	[18]	Printer control board (PRCB)

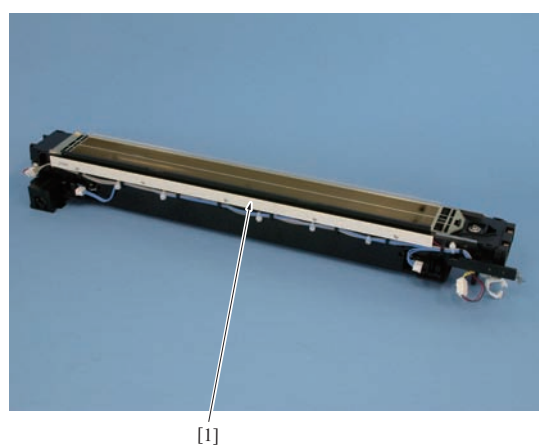
(3) Main body upper surface



a0g6f5c042ca

[1]	Relay board /U (RBU)	[2]	Image processing board (IPB)
[3]	Hard disk /1 (HDD1)	[4]	NVRAM board (NRB)
[5]	CCD board (CCDB)	[6]	Relay board /A (RBA)
[7]	Total counter (CNT1)	[8]	Exposure lamp (L4)
[9]	L4 inverter (L4 INVB)	-	

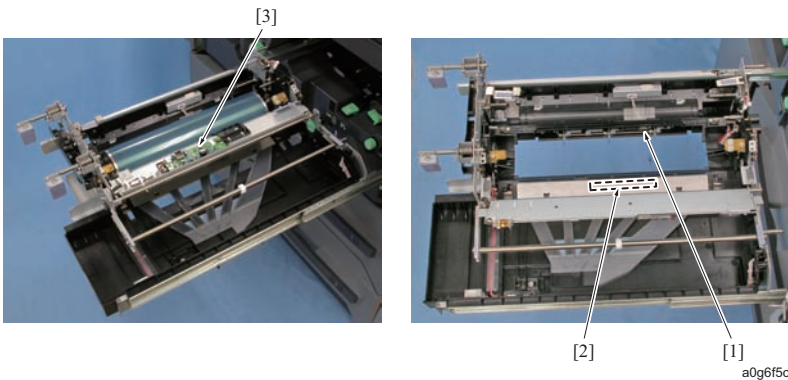
(4) Charger unit



a0g6f5c046ca

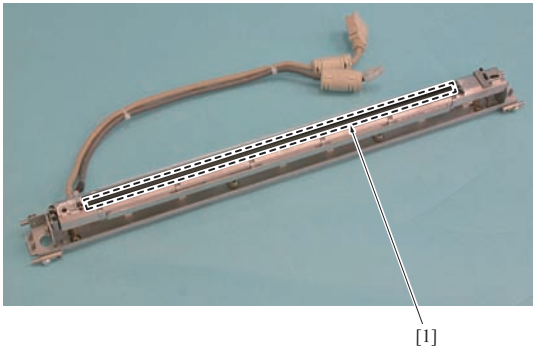
[1]	Erase lamp (EL)	-
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(5) Photosensitive material section



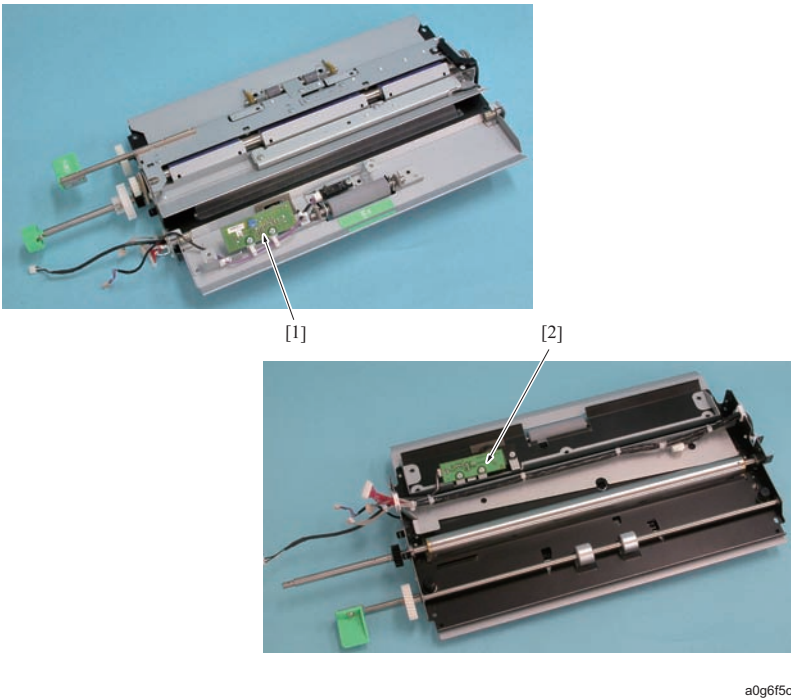
[1]	JAM sensor board (JAMB)	[2]	Toner control board (TCB)
[3]	Drum potential sensor board (DPSB)	-	

(6) LPH section



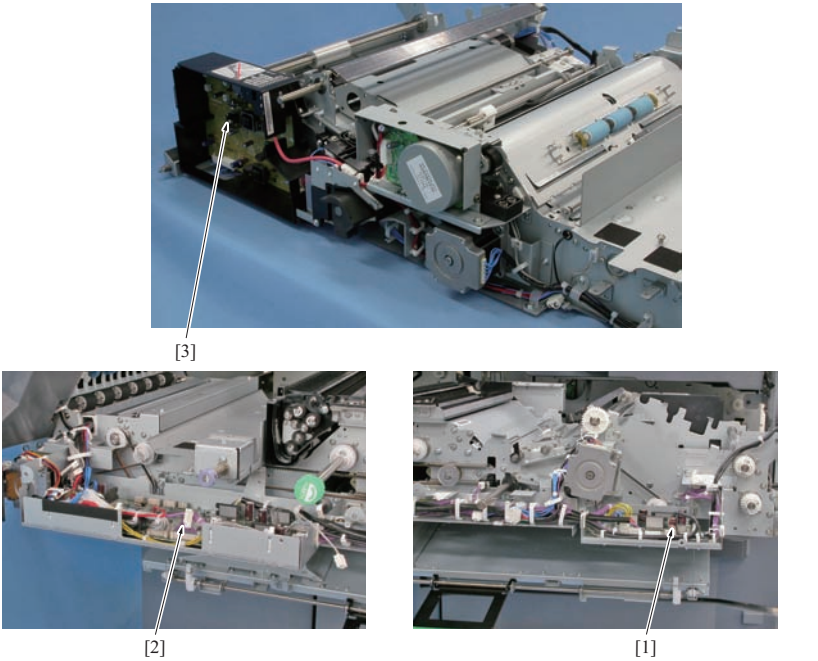
[1]	LPH board (LPHB)	-
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(7) Registration section



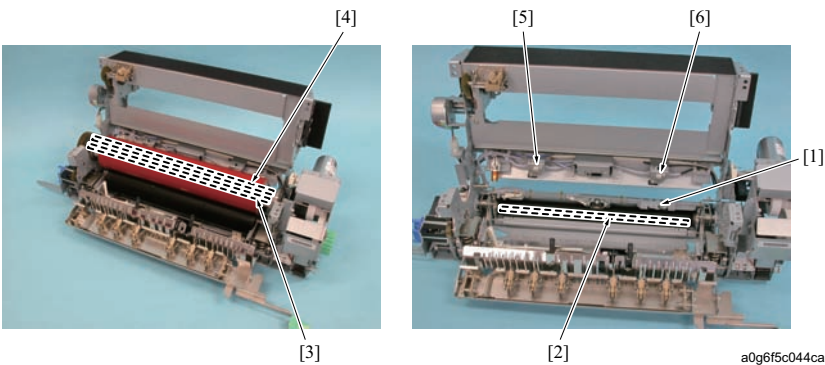
[1]	Multi feed detection board /R (MFDBR)	[2]	Multi feed detection board /S (MFDBS)
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(8) Cleaning section



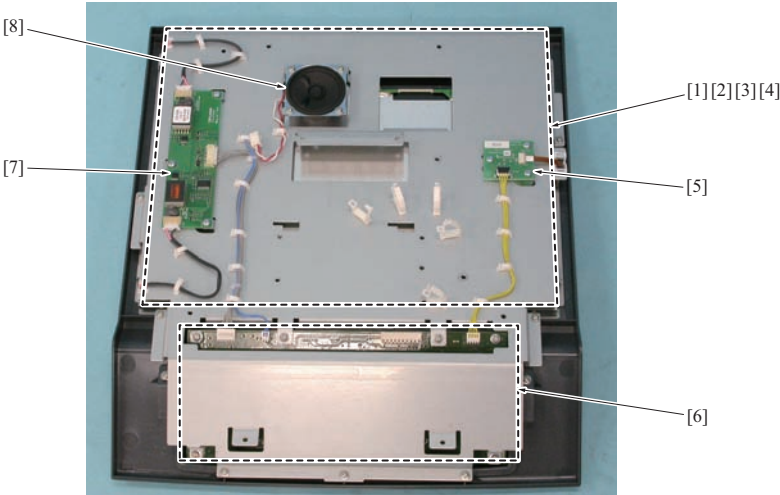
[1]	ADU drive board /2 (ADUDB2)	[2]	ADU drive board /1 (ADUDB1)
[3]	High voltage unit /2 (HV2)		-

(9) Fusing section



[1]	Thermostat /3 (TS3)	[2]	Fusing heater lamp /3 (L3)
[3]	Fusing heater lamp /2 (L2)	[4]	Fusing heater lamp /1 (L1)
[5]	Thermostat /1 (TS1)	[6]	Thermostat /2 (TS2)

(10) Operation panel section

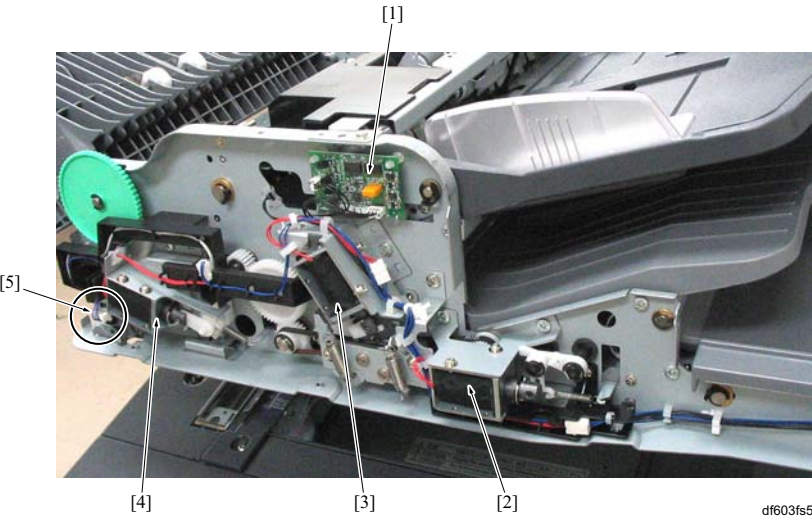


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[1]	LCD board (LCDB)	[2]	Backlight /1
[3]	Backlight /2	[4]	Operation board /2 (OB2)
[5]	Operation board /3 (OB3)	[6]	Operation board /1 (OB1)
[7]	Operation inverter (OB INVB)	[8]	Speaker (SP)

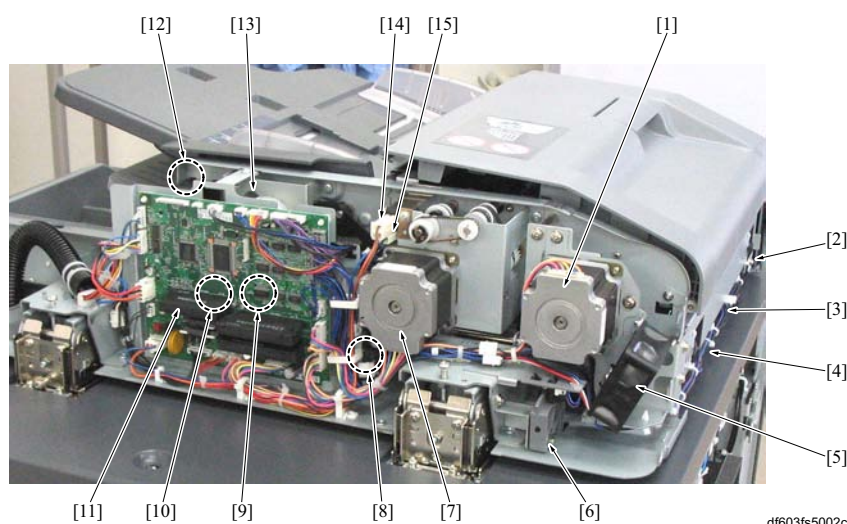
1.2 DF-615

1.2.1 Front side



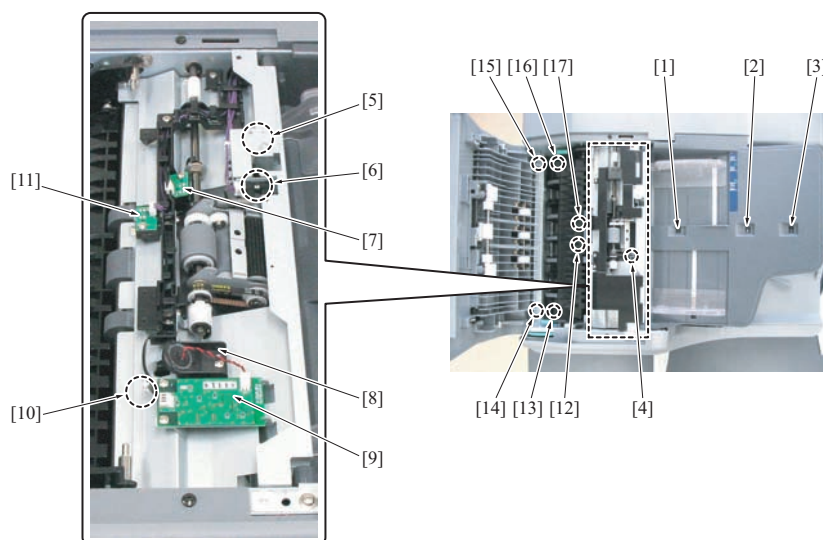
df603fs5001c

[1]	Multi feed detection board /S (MFDBS)	[2]	Paper exit gate solenoid (SD304)
[3]	Pressure roller release solenoid (SD302)	[4]	Gate solenoid (SD303)
[5]	DF open/close sensor (PS301)	-	

1.2.2 Rear side

df603fs5002c

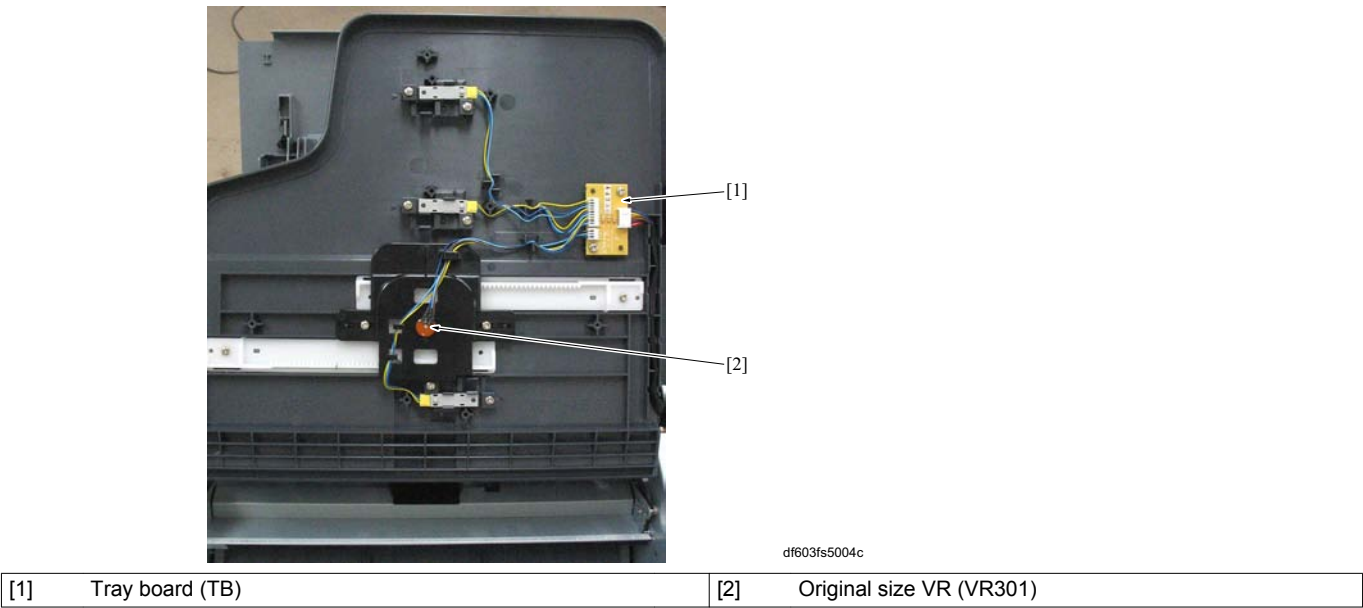
[1]	Original conveyance motor (M301)	[2]	Original skew sensor /Fr (PS312)
[3]	Original conveyance sensor (PS308)	[4]	Original skew sensor /Rr (PS311)
[5]	Cooling fan /Lt (FM301)	[6]	APS timing sensor (PS317)
[7]	Paper feed motor (M302)	[8]	SDF switching solenoid (SD301)
[9]	Original exit motor /1 (M304)	[10]	Original exit motor /2 (M305)
[11]	DF control board (DFCB)	[12]	Cooling fan /Rt (FM302)
[13]	Tray up down motor (M303)	[14]	Cover open/close switch (MS301)
[15]	Tray lower limit sensor (PS316)	-	

1.2.3 Upper surface

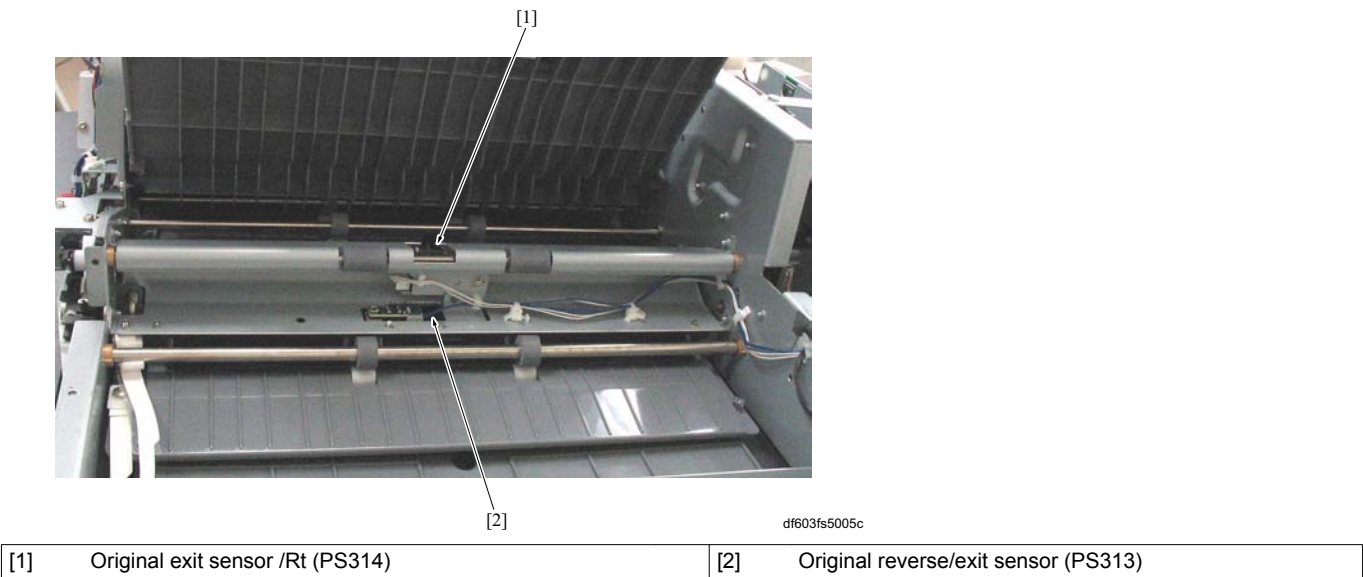
df603fs5003c

[1]	Original count sensor (PS310)	[2]	Size sensor /Lt (PS303)
[3]	Size sensor /Rt (PS302)	[4]	Reverse jam sensor (PS304)
[5]	Original empty sensor (PS305)	[6]	Tray upper limit sensor (PS315)
[7]	Original registration sensor /Rt (PS318)	[8]	Multi-feed sensor /R (MFSR)
[9]	Multi feed detection board /R (MFDBR)	[10]	Multi-feed sensor /S (MFSS)
[11]	Original registration sensor /Lt (PS306)	[12]	Original reverse sensor (PS309)
[13]	Centering LED sensor /Fr (PS319)	[14]	Centering sensor /Fr (PS320)
[15]	Centering sensor /Rr (PS321)	[16]	Centering LED sensor /Rr (PS322)
[17]	Original exit sensor /Lt (PS307)	-	

1.2.4 Upper tray rear side

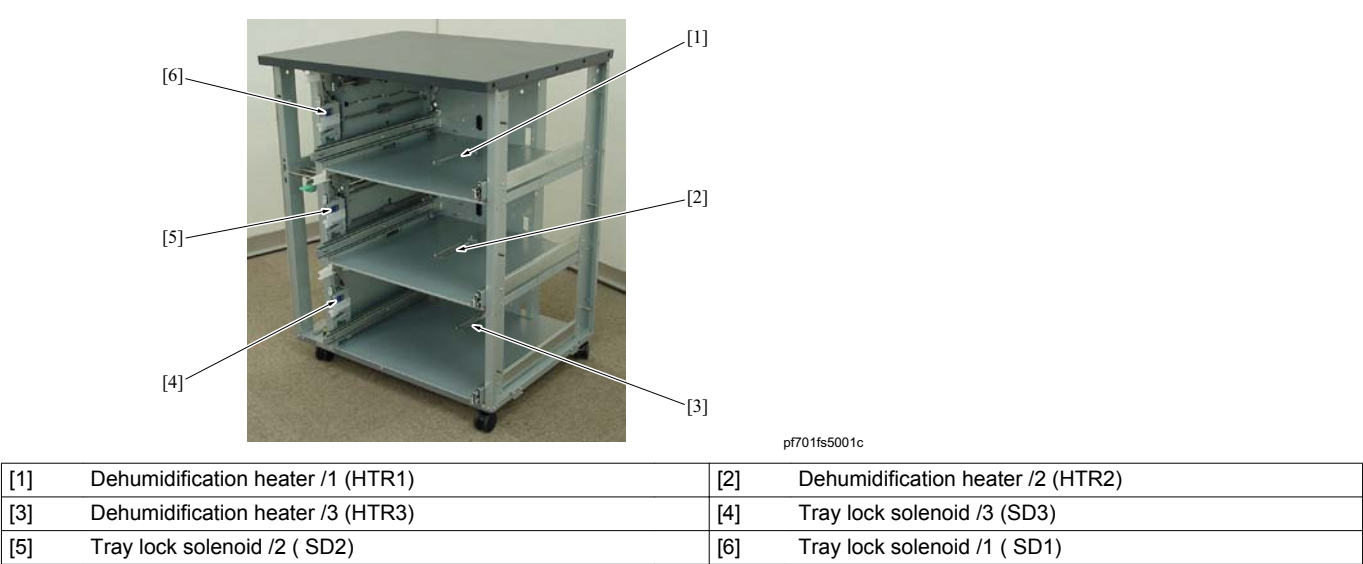


1.2.5 Reverse tray rear side

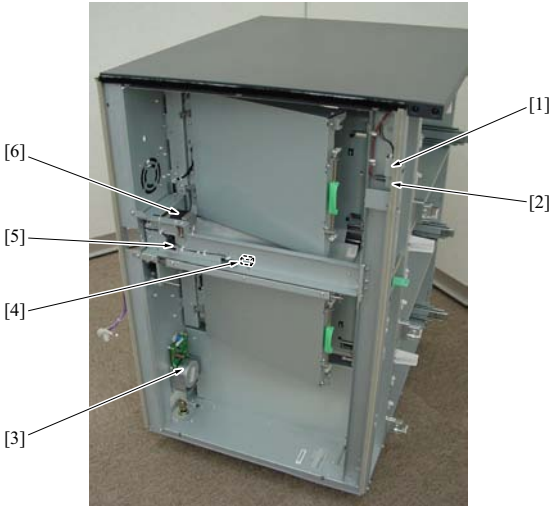


1.3 PF-702/PP-701

1.3.1 Configuration front side



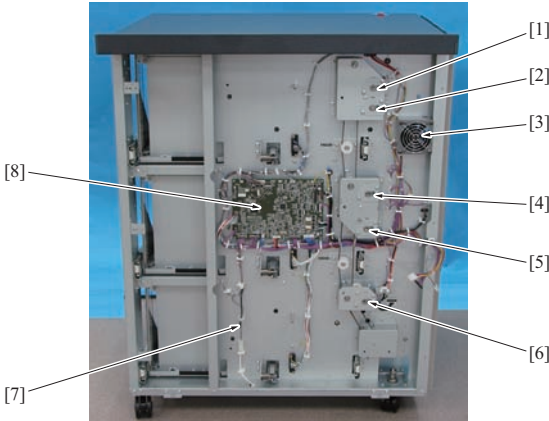
1.3.2 Configuration left side/exit conveyance section



pf701fs5002c

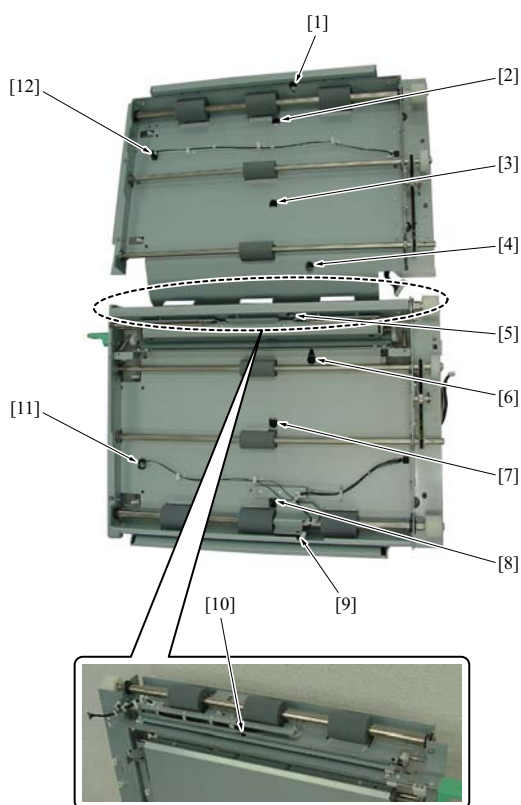
[1]	Door open/close sensor (PS1)	[2]	Interlock switch (MS1)
[3]	Paper feed motor (M1)	[4]	PF exit conveyance sensor (PS24)
[5]	Horizontal conveyance door switch (SW3)	[6]	PF exit conveyance motor (M2)

1.3.3 Configuration rear side



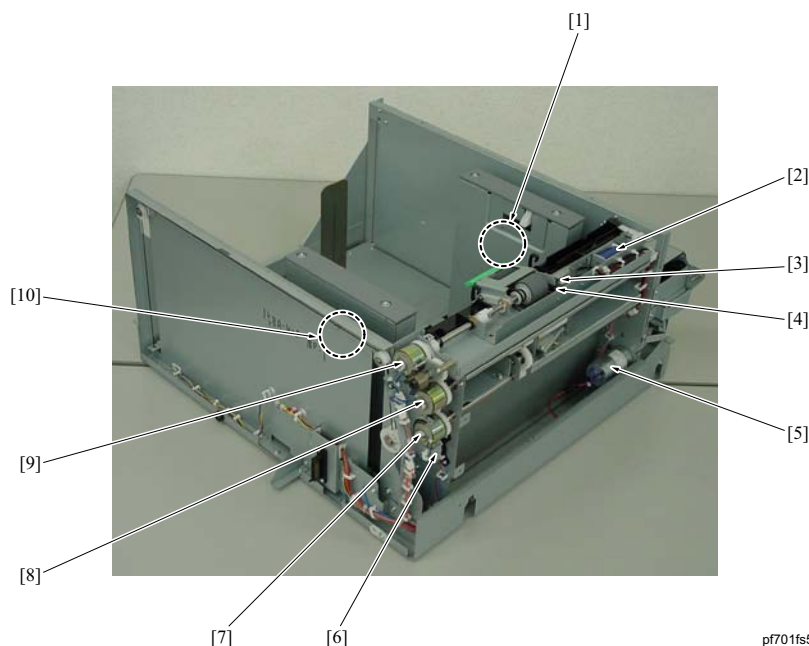
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[1]	Pre-registration clutch /1 (CL1)	[2]	Intermediate clutch /Up (CL2)
[3]	PF cooling fan (FM7)	[4]	Pre-registration clutch /2 (CL3)
[5]	Intermediate clutch /Lw (CL4)	[6]	Pre-registration clutch /3 (CL5)
[7]	Temperature sensor (TEMS)	[8]	PF drive board (PFUDB)

1.3.4 Vertical conveyance section

pf701fs5004c

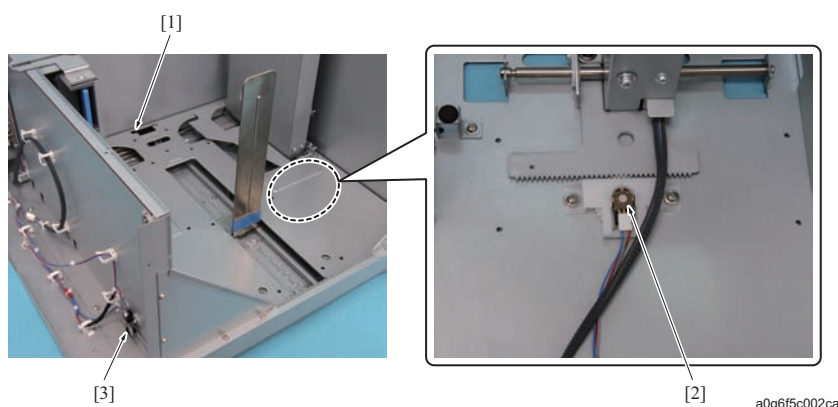
[1]	Pre-registration sensor /1 (PS14)	[2]	Vertical conveyance sensor /1 (PS15)
[3]	Intermediate sensor /Up (PS16)	[4]	Loop sensor /1 (PS17)
[5]	Pre-registration sensor /2 (PS18)	[6]	Loop sensor /3 (PS23)
[7]	Intermediate sensor /Lw (PS22)	[8]	Vertical conveyance sensor /2 (PS21)
[9]	Pre-registration sensor /3 (PS20)	[10]	Loop sensor /2 (PS19)
[11]	Vertical conveyance door switch /Lw (SW2)	[12]	Vertical conveyance door switch /Up (SW1)

1.3.5 Tray section 1

pf701fs5005c

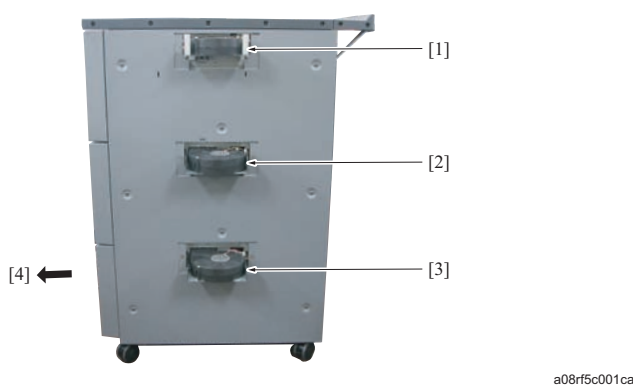
[1]	Paper feed assist fan /Fr1 (FM1), /Fr2 (FM3), /Fr3 (FM5)	[2]	Pick-up solenoid /1 (SD4), /2 (SD5), /3 (SD6)
[3]	Paper feed sensor /1 (PS3), /2 (PS7), /3 (PS11)	[4]	Upper limit sensor /1 (PS2), /2 (PS6), /3 (PS10)
[5]	Paper lift motor /1 (M42), /2 (M43), /3 (M44)	[6]	Remaining paper VR /1 (VR1), /2 (VR4), /3 (VR7)
[7]	Forced separation clutch /1 (CL8), /2 (CL11), /3 (CL14)	[8]	Separation clutch /1 (CL7), /2 (CL10), /3 (CL13)
[9]	Paper feed clutch /1 (CL6), /2 (CL9), /3 (CL12)	[10]	Paper feed assist fan /Rr1 (FM2), /Rr2 (FM4), /Rr3 (FM6)

1.3.6 Tray section 2



[1]	Paper empty sensor /1 (PS4), /2 (PS8), /3 (PS12)	[2]	CD paper size VR /1 (VR2), /2 (VR5), /3 (VR8)
[3]	FD paper size VR /1 (VR3), /2 (VR6), /3 (VR9)	-	

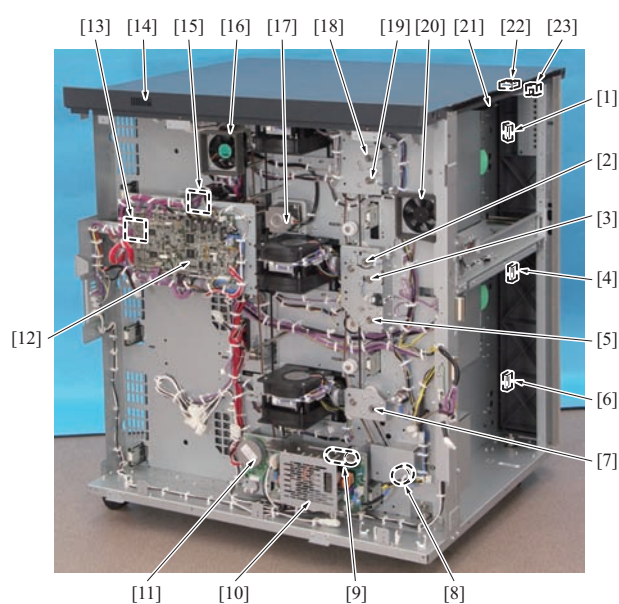
1.3.7 PP-701 (OPTIONAL)



[1]	Paper trailing edge separation fan /1 (FM8)	[2]	Paper trailing edge separation fan /2 (FM9)
[3]	Paper trailing edge separation fan /3 (FM10)	[4]	Front side direction

1.4 PF-703/HT-505/FA-501

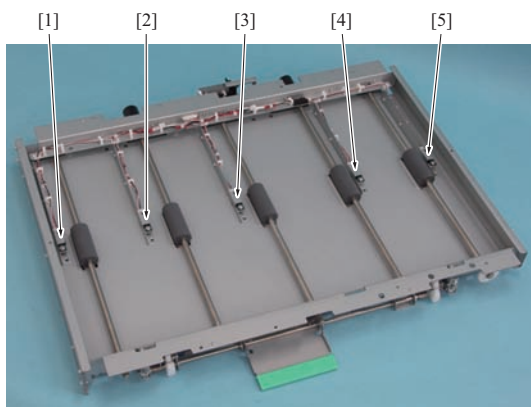
1.4.1 Configuration section



[1]	Tray lock solenoid /1 (SD1)	[2]	Horizontal conveyance exit clutch (CL6)
[3]	Pre-registration clutch /2 (CL3)	[4]	Tray lock solenoid /2 (SD2)
[5]	Intermediate clutch /2 (CL4)	[6]	Tray lock solenoid /3 (SD3)

[7]	Pre-registration clutch /3 (CL15)	[8]	Paper feed motor (M1)
[9]	Noise filter (NF)	[10]	DC power supply /1 (DCPS/1)
[11]	Paper feed belt motor (M2)	[12]	PF drive board (PFUDB)
[13]	Coupling conveyance motor /1 (M4)	[14]	Temperature-humidity sensor (TEM/HUMS)
[15]	Coupling conveyance motor /2 (M5)	[16]	PF cooling fan /2 (FM20)
[17]	Coupling conveyance motor /3 (M6)	[18]	Pre-registration clutch /1 (CL1)
[19]	Intermediate clutch /1 (CL2)	[20]	PF cooling fan /1 (FM19)
[21]	PF cooling fan /3 (FM21)	[22]	Interlock switch (MS1)
[23]	Door open/close sensor (PS1)	-	

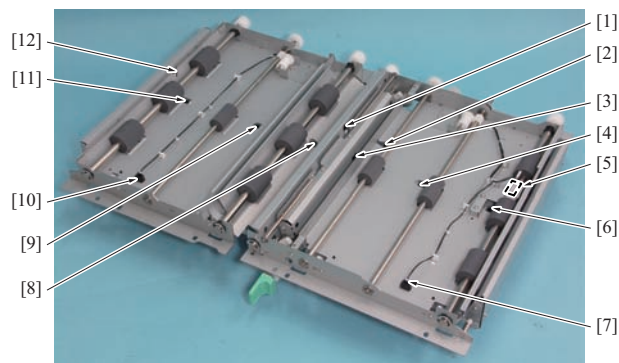
1.4.2 Horizontal conveyance section



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[1]	Horizontal conveyance sensor /5 (PS35)	[2]	Horizontal conveyance sensor /4 (PS34)
[3]	Horizontal conveyance sensor /3 (PS33)	[4]	Horizontal conveyance sensor /2 (PS32)
[5]	Horizontal conveyance sensor /1 (PS31)	-	

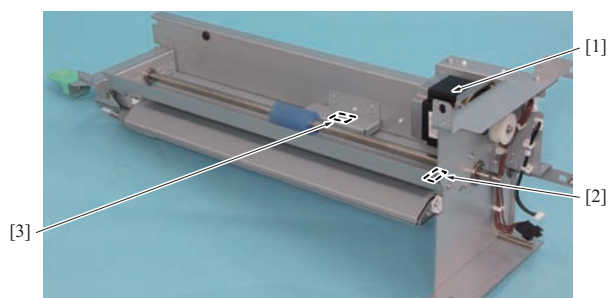
1.4.3 Vertical conveyance section



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[1]	Pre-registration sensor /2 (PS18)	[2]	Loop sensor /3 (PS23)
[3]	Loop sensor /2 (PS19)	[4]	Intermediate sensor /Lw (PS22)
[5]	Pre-registration sensor /3 (PS20)	[6]	Vertical conveyance sensor /3 (PS21)
[7]	Vertical conveyance door switch /Lw (SW2)	[8]	Loop sensor /1 (PS17)
[9]	Intermediate sensor /Up (PS16)	[10]	Vertical conveyance door switch /Up (SW1)
[11]	Vertical conveyance sensor /1 (PS15)	[12]	Pre-registration sensor /1 (PS14)

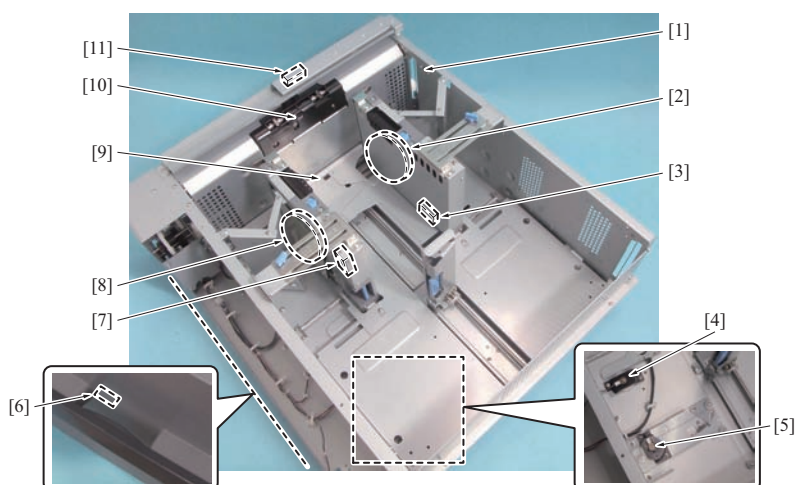
1.4.4 Exit conveyance section



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[1]	PF exit conveyance motor (M3)	[2]	Horizontal conveyance door switch (SW3)
[3]	PF exit conveyance sensor (PS24)	-	

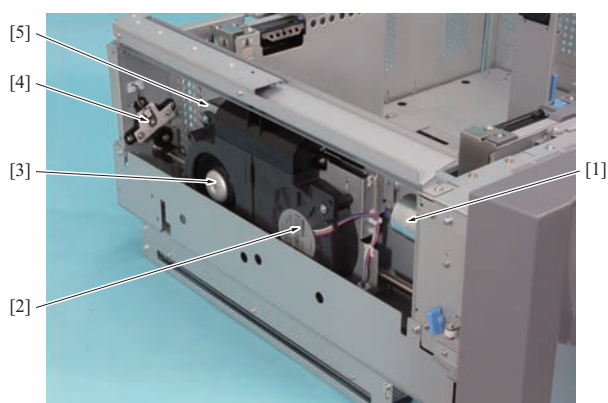
1.4.5 Paper feed tray section 1



a0g6f5c204ca

[1]	Temperature sensors /1 (TEMS/1), /2 (TEMS/2), /3 (TEMS/3)	[2]	Paper feed assist fan /Rr1 (FM2), /Rr2 (FM6), /Rr3 (FM12)
[3]	Shutter solenoid /Rr1 (SD5), /Rr2 (SD7), /Rr3 (SD9)	[4]	CD paper size VR/1 (VR2), /2 (VR5), /3 (VR8)
[5]	FD paper size VR/1 (VR3), /2 (VR6), /3 (VR9)	[6]	Handle release sensors /1 (PS4), /2 (PS8), /3 (PS12)
[7]	Shutter solenoid /Fr1 (SD4), /Fr2 (SD6), /Fr3 (SD8)	[8]	Paper feed assist fan /Fr1 (FM1), /Fr2 (FM5), /Fr3 (FM9)
[9]	Paper empty sensors /1 (PS3), /2 (PS7), /3 (PS11)	[10]	Paper limit sensors /1 (PS5), /2 (PS9), /3 (PS13)
[11]	Paper feed sensor /1 (PS2), /2 (PS6), /3 (PS10)	-	

1.4.6 Paper feed tray section 2

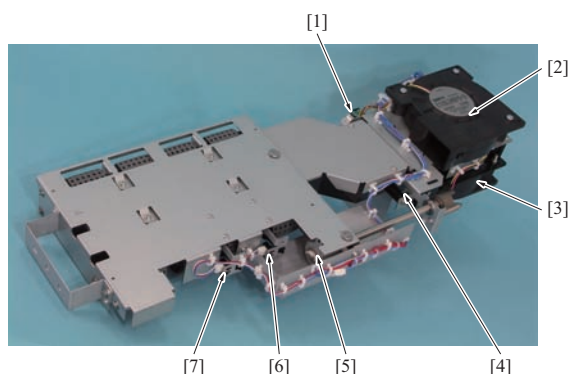


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[1]	Paper lift motors /1 (M7), /2 (M8), /3 (M9)	[2]	Paper leading edge separation fan /Fr1 (FM3), /Fr2 (FM7), /Rr3 (FM11)
[3]	Paper leading edge separation fan /Rr1 (FM4), /Rr2 (FM8), /Rr3 (FM12)	[4]	Remaining paper VR /1 (VR1), /2 (VR4), /3 (VR7)

[5]	Paper leading edge shutter solenoid /1 (SD10), /2 (SD11), /3 (SD12)	-
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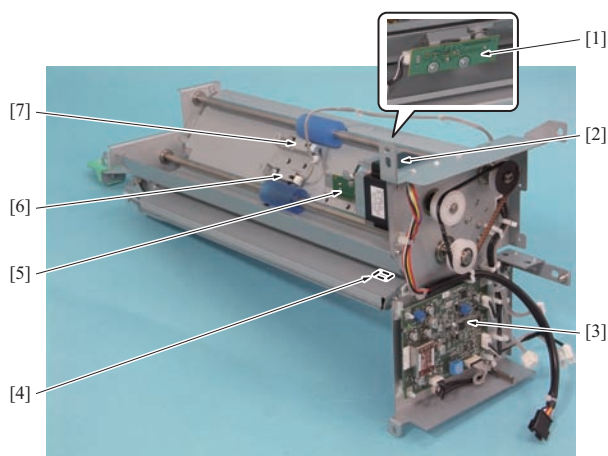
1.4.7 Paper feed suction section



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[1]	Shutter motor /1 (M10), /2 (M11), /3 (M12)	[2]	Paper suction fan /1 (FM13), /3 (FM15), /5 (FM17)
[3]	Paper suction fan /2 (FM14), /4 (FM16), /6 (FM18)	[4]	Shutter home sensor /1 (PS37), /2 (PS38), /3 (PS39)
[5]	Paper feed clutch /1 (CL7), /2 (CL8), /3 (CL9)	[6]	Paper suction sensors /Rr1 (PS26), /Rr2 (PS28), /Rr3 (PS30)
[7]	Paper suction sensors /Fr1 (PS25), /Fr2 (PS27), /Fr3 (PS29)	-	

1.4.8 FA-501 (OPTIONAL) 1



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[1]	Multi feed detection board /S (MFDBS)	[2]	PF exit conveyance motor (M3)
[3]	Multi feed detection drive board (MFDDDB)	[4]	Horizontal conveyance door switch (SW3)
[5]	Multi feed detection board /R (MFDBR)	[6]	PF exit conveyance sensor /1 (PS24)
[7]	PF exit conveyance sensor /2 (PS36)	-	

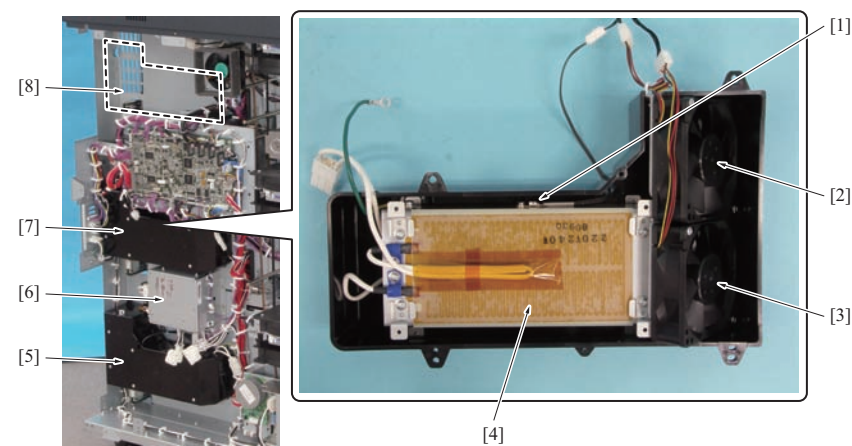
1.4.9 FA-501 (OPTIONAL) 1



a0g6f5c208ca

[1]	DC power supply /2 (DCPS/2)	-
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1.4.10 HT-505 (OPTIONAL)

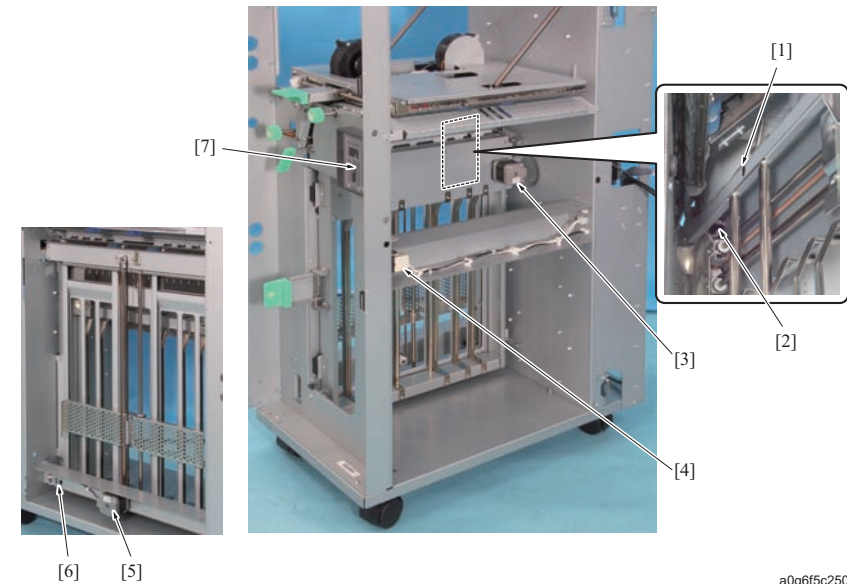


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[1]	Temperature sensor /5 (TEMS/5), /6 (TEMS/6), /7 (TEMS/7)	[2]	Dehumidifier fans /Rt1 (FM22), /Rt2 (FM24), /Rt3 (FM26)
[3]	Dehumidifier fans /Lt1 (FM23), /Lt2 (FM25), /Lt1 (FM27)	[4]	Dehumidification heaters /1 (HTR1), /2 (HTR2), /3 (HTR3)
[5]	Dehumidifier fan heater unit /3	[6]	AC drive board /2 (ACDB/2)
[7]	Dehumidifier fan heater unit /2	[8]	Dehumidifier fan heater unit /1

1.5 RU-506

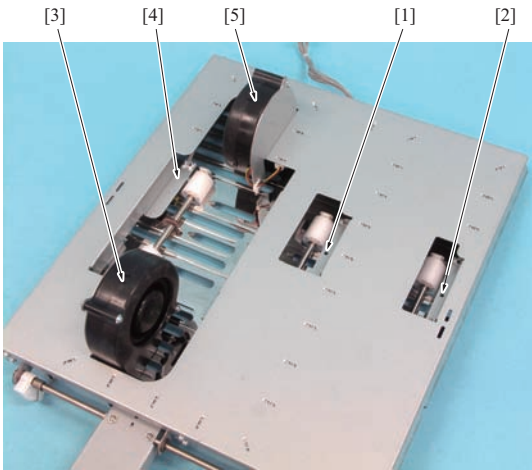
1.5.1 Stacker section (front side)



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[1]	Stacker jam sensor (PS5)	[2]	CD alignment home sensor (PS4)
[3]	CD alignment motor (M4)	[4]	Interlock switch (MS1)
[5]	FD alignment motor (M3)	[6]	FD alignment home sensor (PS3)
[7]	Jam indication board (JAMIB)	-	

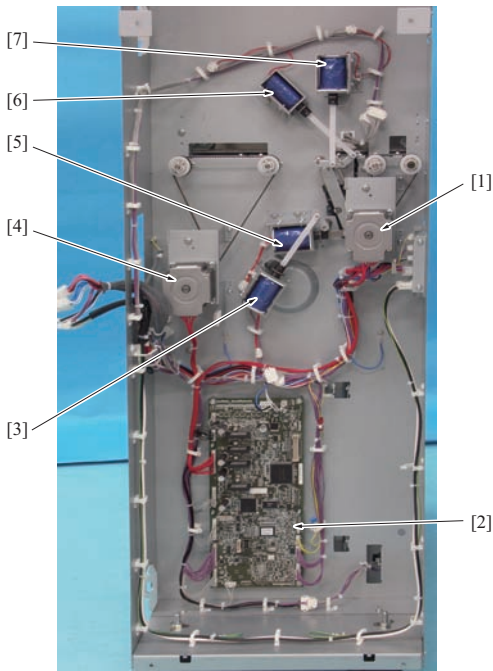
1.5.2 Stacker section (front side)



a0g6f5c251ca

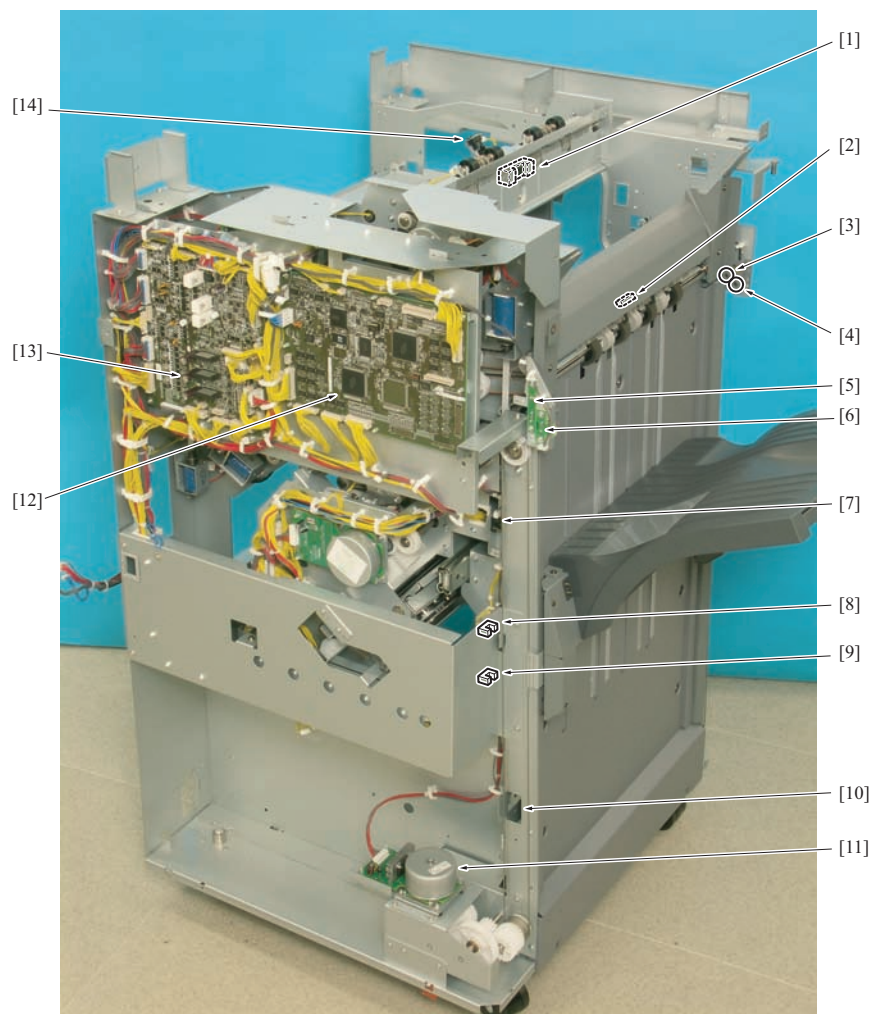
[1]	Entrance sensor (PS1)	[2]	Entrance jam sensor (PS6)
[3]	Stack assist fan /Fr (FM1)	[4]	Paper exit sensor (PS2)
[5]	Stack assist fan /Rr (FM2)	-	

1.5.3 Rear side



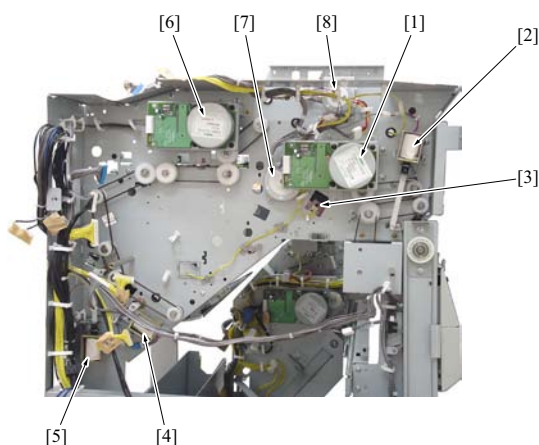
a0g6f5c252ca

[1]	Paper exit motor (M2)	[2]	RU control board (RUCB)
[3]	Stacker entrance guide plate solenoid (SD4)	[4]	Entrance conveyance motor (M1)
[5]	Stack switching solenoid (SD3)	[6]	Stacker exit shutter solenoid (SD2)
[7]	Straight gate solenoid (SD1)	-	

1.6 FS-521**1.6.1 Rear side 1**

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[1]	Sub tray paper full sensor (PS30)	[2]	Main tray paper exit sensor (PS10)
[3]	Tray upper limit LED (LED1)	[4]	Paper empty sensor (PS39)
[5]	Tray upper limit sensor (PS16)	[6]	Paper empty LED (LED2)
[7]	Counter reset sensor (PS15)	[8]	Tray quarter position sensor (PS17)
[9]	Tray middle position sensor (PS6)	[10]	Tray lower limit sensor (PS3)
[11]	Tray up down motor (M3)	[12]	FNS control board (FNSCB)
[13]	FNS drive board (FNSDB)	[14]	Sub tray exit sensor (PS1)

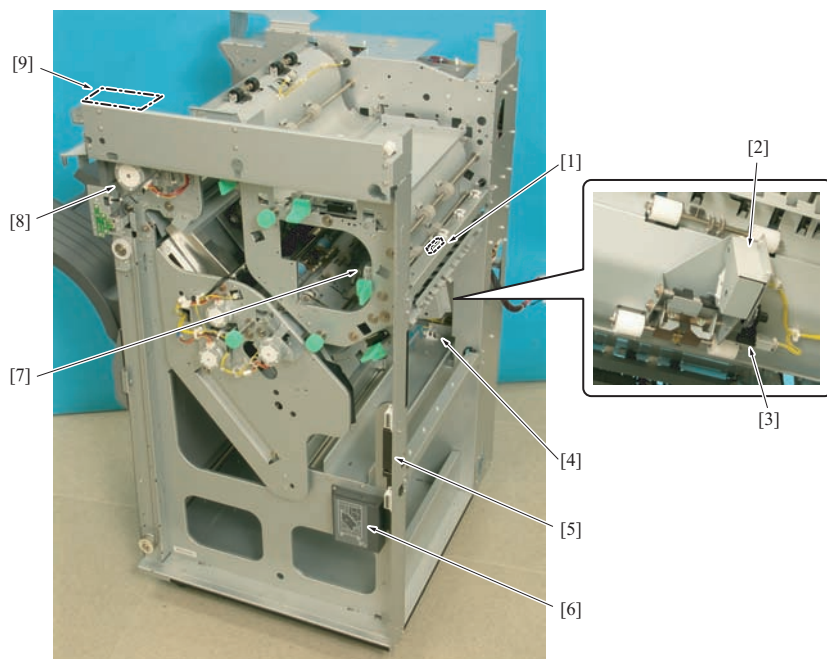
1.6.2 Rear side2

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[1]	Main tray exit motor (M7)	[2]	Paper exit opening solenoid (SD9)
[3]	Paper exit home sensor (PS12)	[4]	Bypass solenoid (SD5)

[5]	Gate solenoid (SD2)	[6]	Conveyance motor (M1)
[7]	Paper exit opening motor (M8)	[8]	Sub tray exit motor (M6)

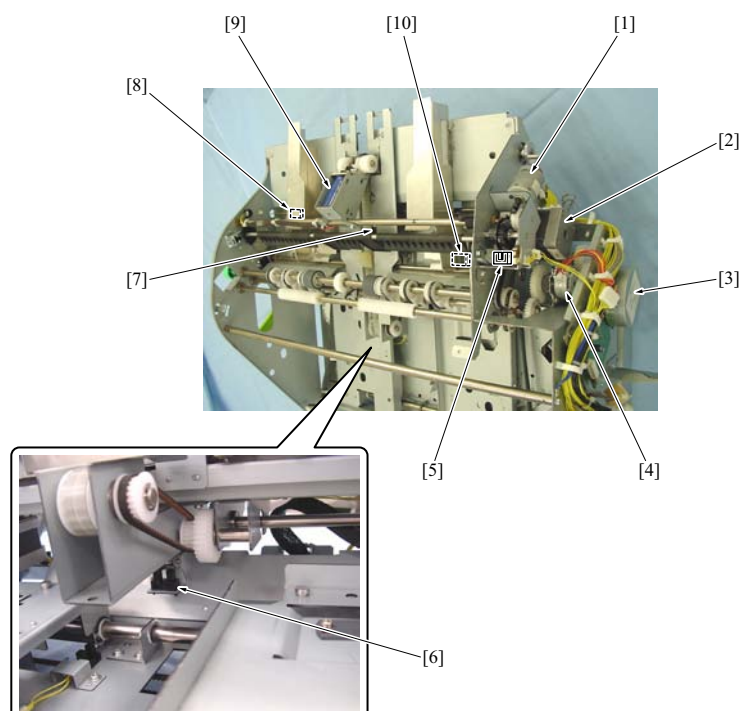
1.6.3 Front side



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[1]	FNS entrance sensor (PS4)	[2]	Bypass roller release motor (M12)
[3]	Bypass roller release home sensor (PS13)	[4]	Staple scraps box set sensor (PS34)
[5]	Door switch (MS1)	[6]	Jam indication board (JAMIB)
[7]	Stacker entrance sensor (PS5)	[8]	Paper exit alignment plate retraction motor (M18)
[9]	Operation board (OB)	-	

1.6.4 Stacker inside 1

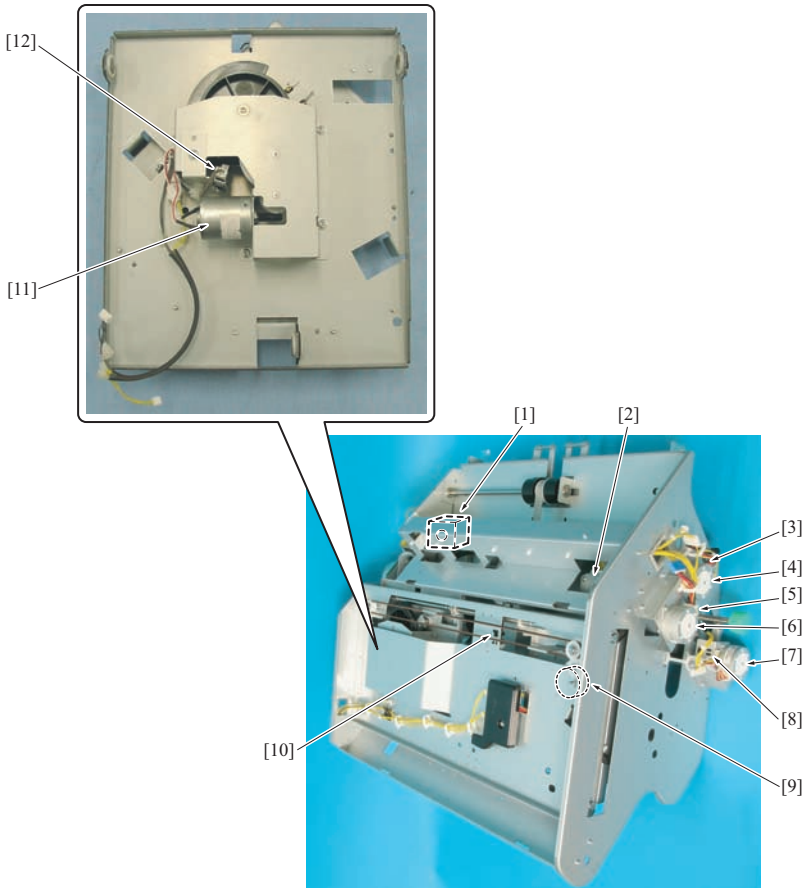


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[1]	Intermediate roller open close motor (M25)	[2]	Stacker entrance motor (M13)
[3]	Paper exit arm motor (M23)	[4]	Paddle motor (M2)
[5]	Intermediate roller home sensor (PS33)	[6]	Paper exit arm home sensor (PS9)
[7]	Stacker empty sensor (PS20)	[8]	Alignment plate home sensor /Fr (PS31)

[9] Intermediate roller release solenoid (SD7)	[10] Alignment plate home sensor /Rr (PS8)
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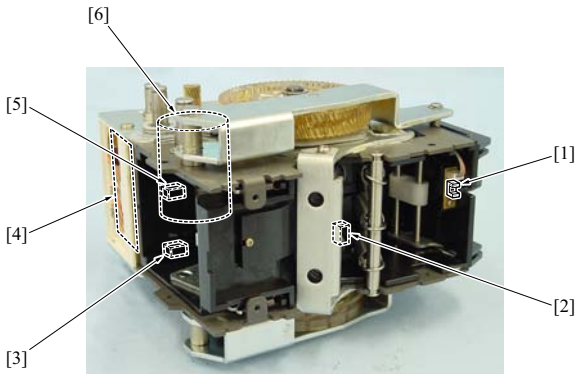
1.6.5 Stacker inside2



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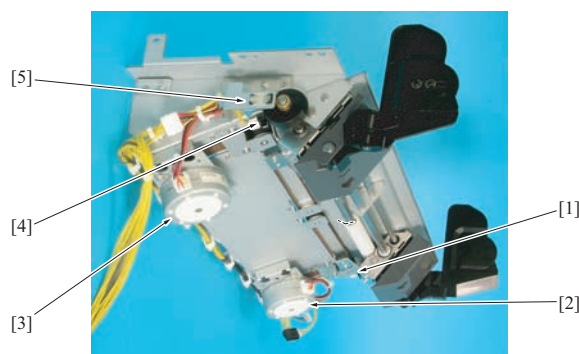
[1] Alignment motor /Rr (M5)	[2] Alignment motor /Fr (M22)
[3] Stack assist home sensor (PS32)	[4] Stack assist motor (M24)
[5] Rear stopper home sensor (PS35)	[6] Rear stopper motor (M26)
[7] Stacker entrance roller release motor (M16)	[8] Stacker entrance roller release home sensor (PS23)
[9] Stapler movement motor (M11)	[10] Stapler movement home sensor (PS11)
[11] Stapler rotation motor (M4)	[12] Stapler rotation home sensor (PS14)

1.6.6 Stapler



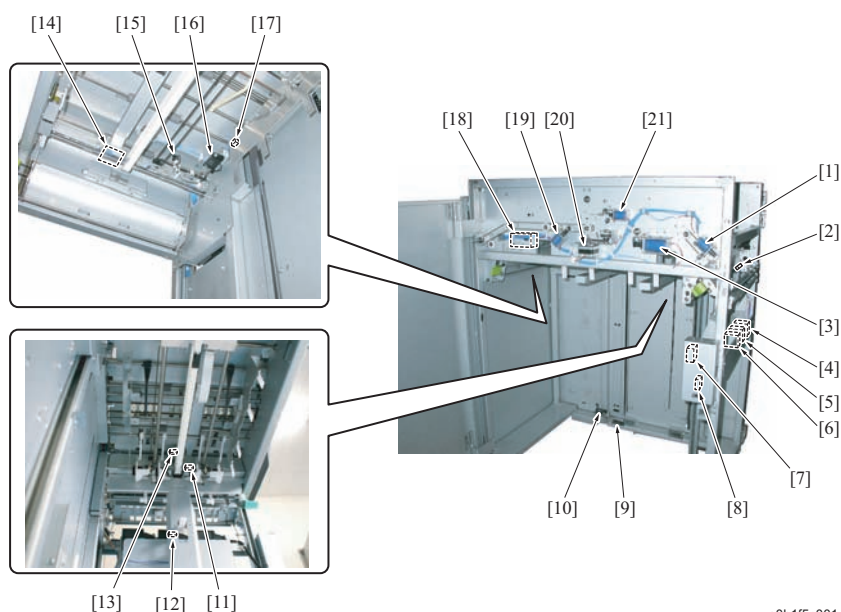
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[1] Staple ready sensor /Rr (PS46) Staple ready sensor /Fr (PS47)	[2] Stapler home sensor /Rr (PS40) Stapler home sensor /Fr (PS41)
[3] Cartridge set sensor /Rr (PS42) Cartridge set sensor /Fr (PS43)	[4] Stapler board (STB)
[5] Staple empty sensor /Rr (PS44) Staple empty sensor /Fr (PS45)	[6] Stapler motor /Rr (M30) Stapler motor /Fr (M31)

1.6.7 Paper exit alignment

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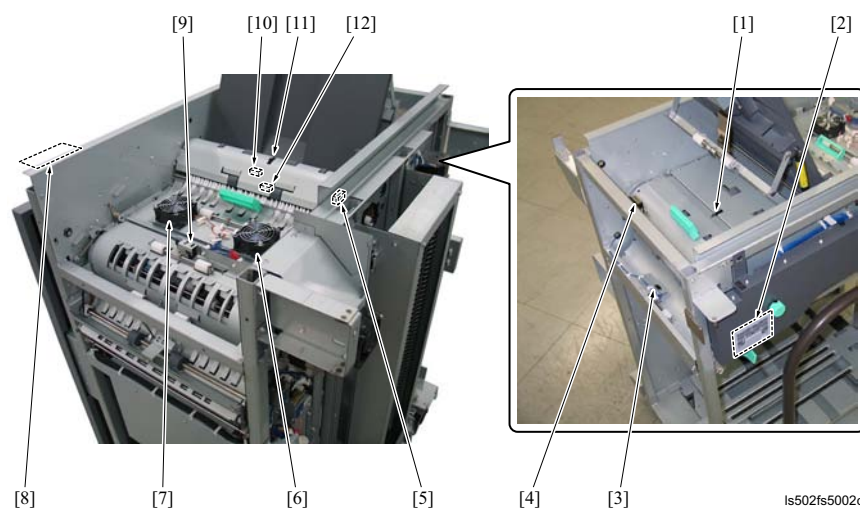
[1]	Paper exit alignment plate home sensor /Fr (PS18)	[2]	Paper exit alignment motor /Fr (M15)
[3]	Paper exit alignment motor /Rr (M14)	[4]	Paper exit alignment plate home sensor /Rr (PS19)
[5]	Paper exit alignment plate retraction home sensor (PS24)	-	

1.7 LS-505**1.7.1 Front side**

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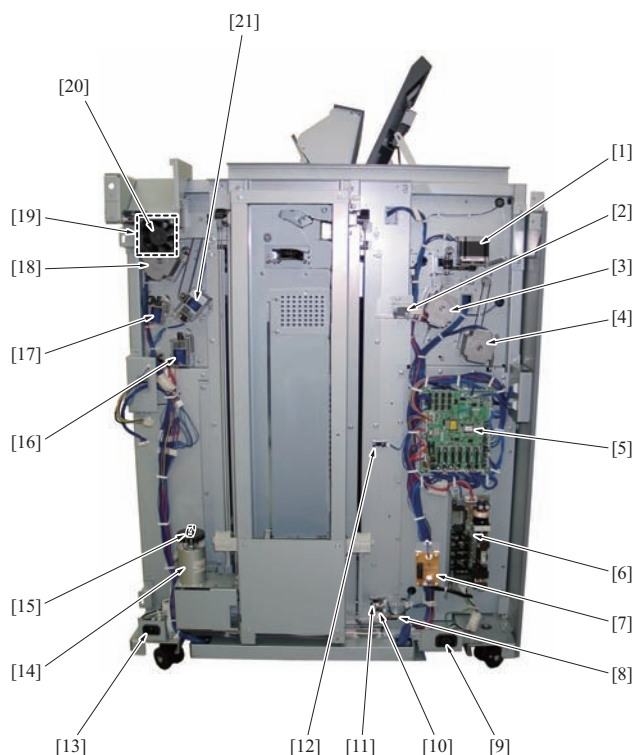
[1]	Entrance conveyance lock solenoid (SD5)	[2]	Entrance sensor (PS4)
[3]	Paper press solenoid /1 (SD6)	[4]	Paper cooling fan motor /Rr (FM5)
[5]	Paper cooling fan motor /Mi (FM3)	[6]	Paper cooling fan motor /Fr (FM1)
[7]	Front door lock solenoid (SD4)	[8]	Front door switch (MS1)
[9]	Hand cart set switch (RS1)	[10]	Stacker tray set LED (LED1)
[11]	Stacker tray upper limit sensor (PS3)	[12]	Paper detection sensor (PS19)
[13]	Grip conveyance home sensor (PS5)	[14]	Relay board /1 (RLB/1)
[15]	Shift unit home sensor (PS11)	[16]	Stacker tray set sensor (PS1)
[17]	Alignment plate home sensor (PS12)	[18]	Coupling conveyance lock solenoid (SD11)
[19]	Paper press solenoid /2 (SD7)	[20]	Alignment motor (M7)
[21]	2nd gate solenoid (SD10)	-	

1.7.2 Upper surface



[1]	Conveyance sensor /3 (PS17)	[2]	Jam indication board (JAMIB)
[3]	Coupling exit sensor (PS18)	[4]	JAM door switch (RS2)
[5]	Subtray door sensor (PS8)	[6]	Paper cooling fan motor /2 (FM6)
[7]	Paper cooling fan motor /1 (FM2)	[8]	Stacker tray operation board (TOB)
[9]	Conveyance sensor /1 (PS7)	[10]	Sub tray full sensor (PS9)
[11]	Sub tray exit sensor (PS10)	[12]	Conveyance sensor /2 (PS16)

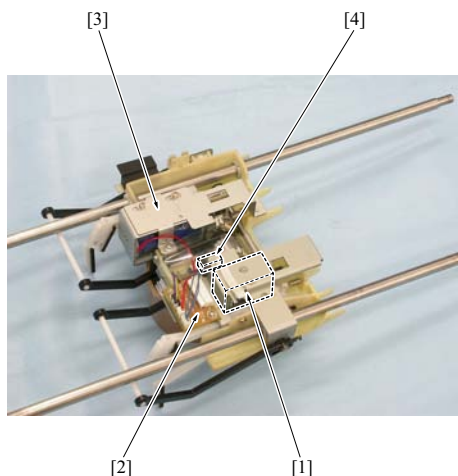
1.7.3 Rear side



[1]	Shift unit motor (M5)	[2]	Stacker tray upper limit switch (MS2)
[3]	Grip conveyance motor (M4)	[4]	Coupling conveyance motor (M6)
[5]	LS control board (LSCB)	[6]	DC power supply (DCPS)
[7]	Relay board (RLB)	[8]	Stacker tray lower limit switch (MS3)
[9]	Outlet	[10]	Stacker tray arm release sensor (PS15)
[11]	5,000 sheets stacked sensor (PS14)	[12]	2,000 sheets stacked sensor (PS13)
[13]	Inlet	[14]	Stacker tray up down motor (M1)
[15]	Stacker tray encoder sensor (PS2)	[16]	Rear stopper solenoid (SD3)
[17]	1st gate solenoid (SD1)	[18]	Conveyance motor (M2)
[19]	Sub tray exit motor (M3)	[20]	Motor cooling fan motor (FM4)

[21]	Job partition solenoid (SD2)	-
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1.7.4 Shift unit

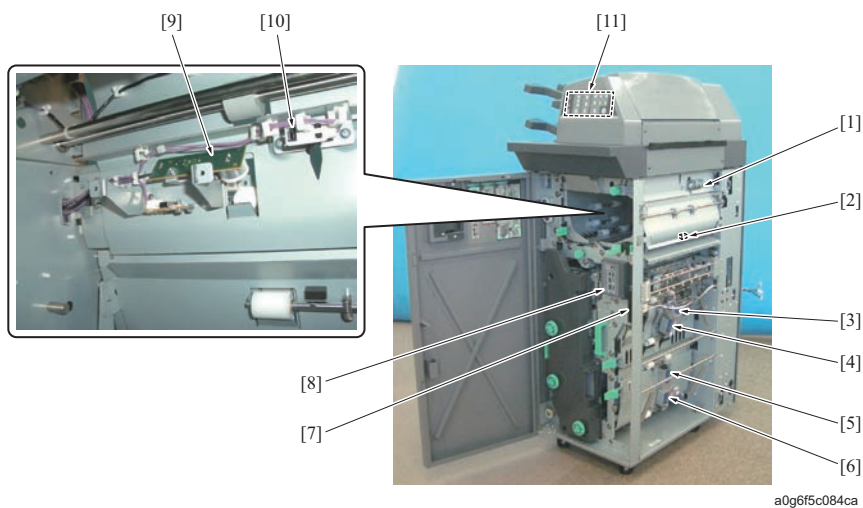


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[1]	Front stopper solenoid (SD9)	[2]	Relay board /2 (RLB/2)
[3]	Paper press solenoid /3 (SD8)	[4]	Paper empty sensor (PS6)

1.8 FD-503

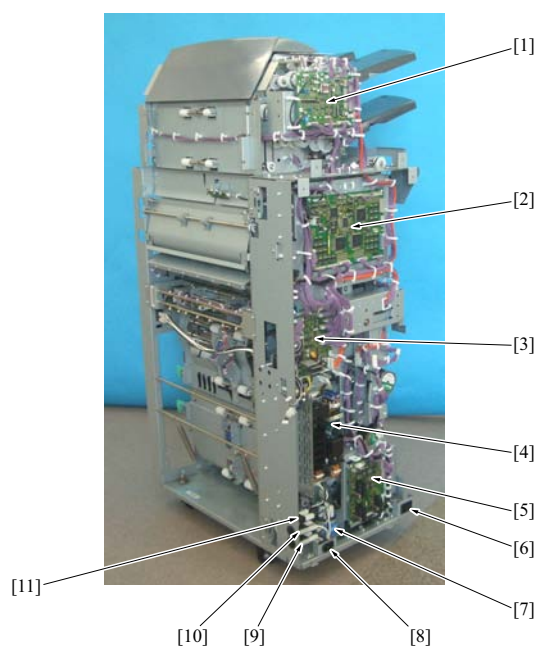
1.8.1 Conveyance section front side/right side



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[1]	Multi-feed detection board /1 (MFDB1)	[2]	FD entrance sensor (PS1)
[3]	Roller solenoid /1 (SD5)	[4]	Roller solenoid /2 (SD6)
[5]	Roller solenoid /3 (SD7)	[6]	Roller solenoid /4 (SD8)
[7]	Door switch (MS1)	[8]	Jam indication board (JAMIB)
[9]	Multi-feed detection board /2 (MFDB2)	[10]	PI exit sensor (PS4)
[11]	FD operation board (FDOB)		-

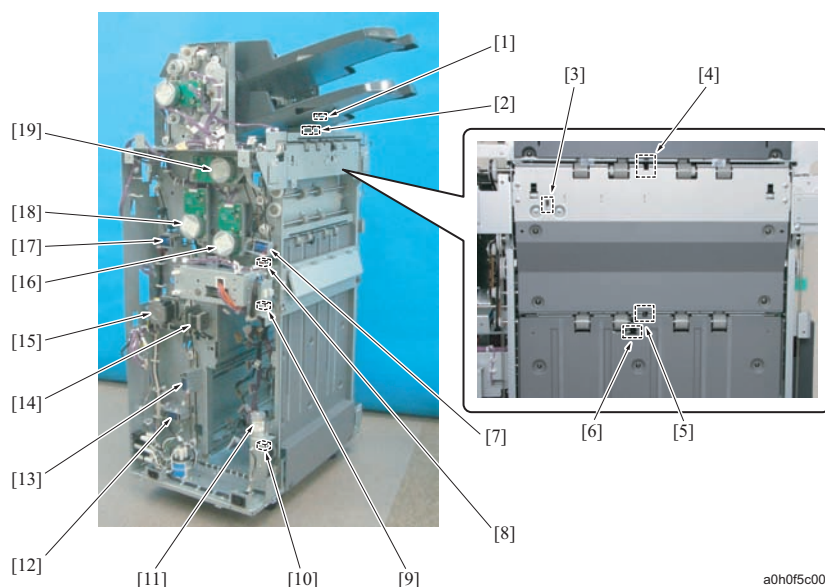
1.8.2 Major boards in the power source section



fd501fs5002c

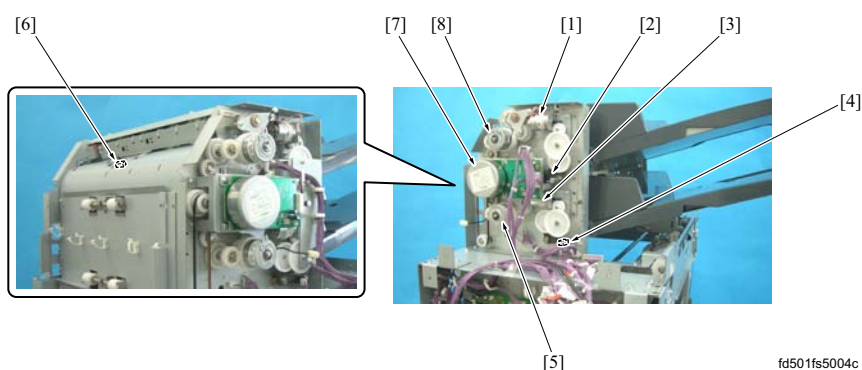
[1]	PI drive board (PIDB)	[7]	Noise filter /1 (NF1)
[2]	FD control board (FDCB)	[8]	Inlet
[3]	Punch drive board (PDB)	[9]	Circuit breaker /1 (CBR1)
[4]	DC power supply (DCPS)	[10]	Circuit breaker /2 (CBR2)
[5]	Folding drive board (FDB)	[11]	Relay (RL1)
[6]	Outlet	-	

1.8.3 Conveyance section rear side/left side



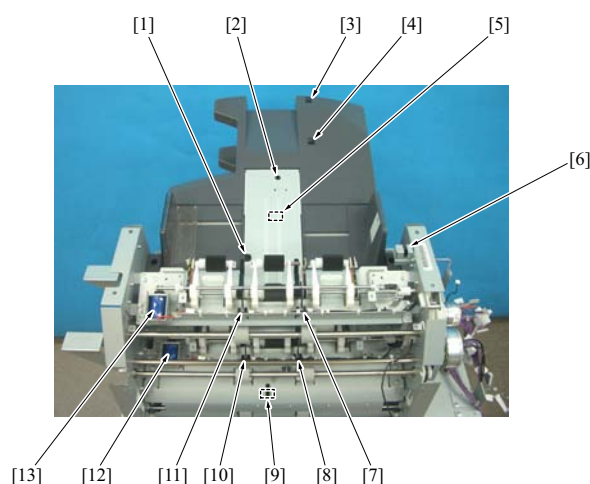
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[1]	Sub tray folding paper full sensor (PS46)	[2]	Paper exit solenoid (SD12)
[3]	Sub tray paper full sensor (PS17)	[4]	Subtray exit sensor (PS16)
[5]	Main tray paper exit sensor (PS18)	[6]	Main tray upper limit sensor (PS20)
[7]	Sub tray gate solenoid (SD9)	[8]	Main tray empty sensor (PS23)
[9]	Main tray folding paper full sensor (PS7)	[10]	Main tray lower limit sensor (PS22)
[11]	Tray up down motor (M11)	[12]	L size gate solenoid (SD4)
[13]	S size gate solenoid (SD3)	[14]	Alignment motor (M12)
[15]	Punch conveyance motor (M2)	[16]	Intermediate conveyance motor (M3)
[17]	Entrance gate solenoid (SD1)	[18]	Entrance conveyance motor (M1)
[19]	Main tray exit motor (M17)	-	

1.8.4 PI rear side

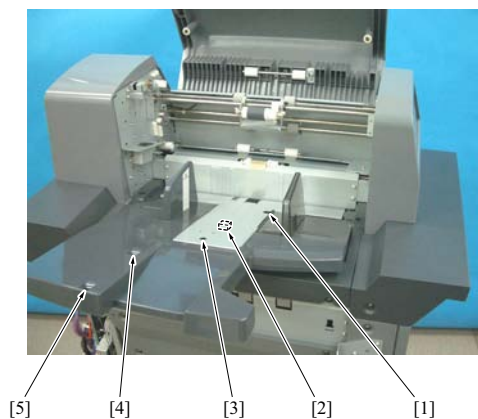
fd501fs5004c

[1] Paper lift motor /Up (M8)	[2] PI lift plate home sensor /Up (PS34)
[3] Paper lift motor /Lw (M9)	[4] PI lift plate home sensor /Lw (PS40)
[5] PI registration clutch /Lw (CL2)	[6] PI conveyance sensor /Up (PS31)
[7] PI conveyance motor (M7)	[8] PI registration clutch /Up (CL1)

1.8.5 PI upper surface

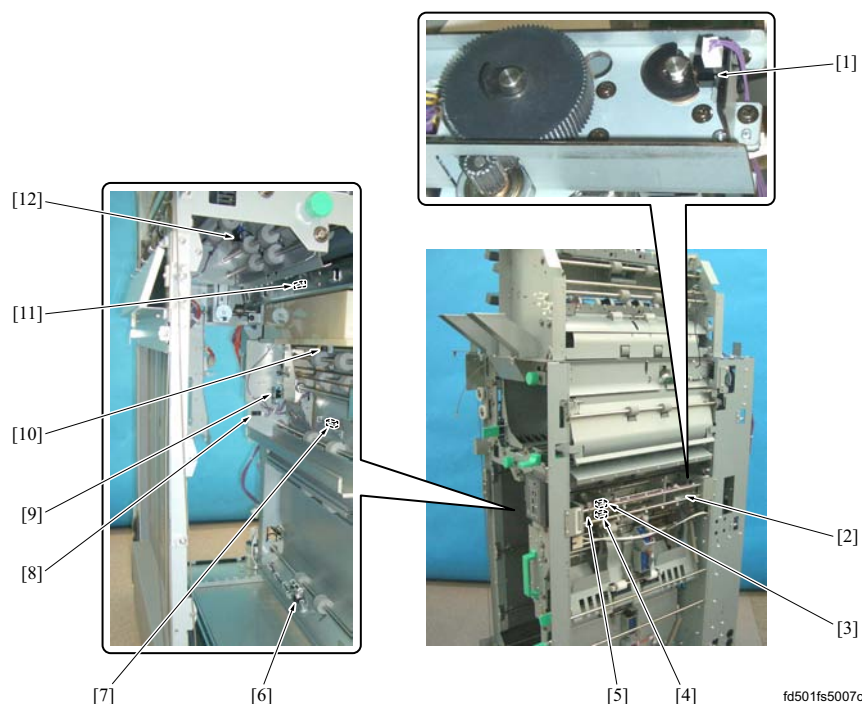
fd501fs5005c

[1] PI paper set sensor /Up (PS44)	[2] S size sensor /Up (PS36)
[3] PI max paper size sensor /Up (PS47)	[4] L size sensor /Up (PS35)
[5] Paper size VR /Up (VR31)	[6] PI cover open/close sensor (PS43)
[7] PI paper empty sensor /Up (PS33)	[8] PI paper empty sensor /Lw (PS39)
[9] PI conveyance sensor /Lw (PS37)	[10] PI upper limit sensor /Lw (PS38)
[11] PI upper limit sensor /Up (PS32)	[12] PI pick-up solenoid /Lw (SD14)
[13] PI pick-up solenoid /Up (SD13)	-

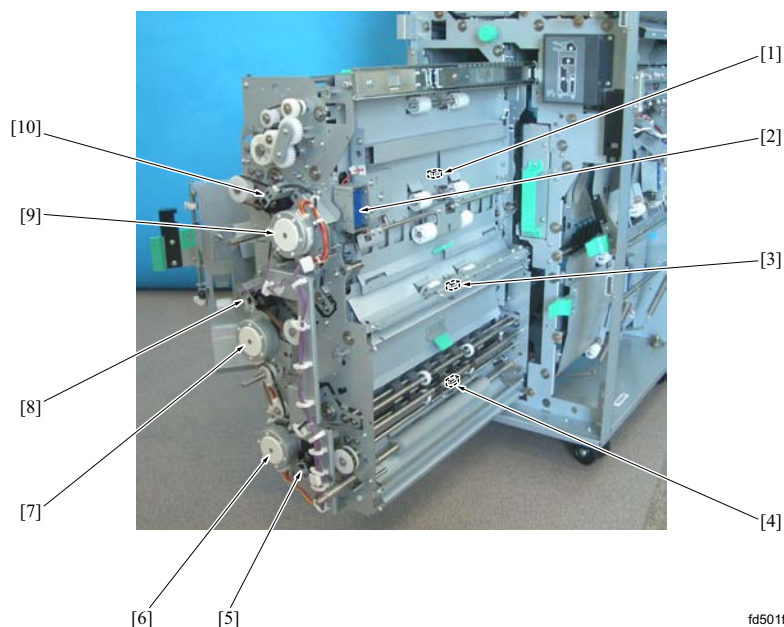
1.8.6 PI lower tray

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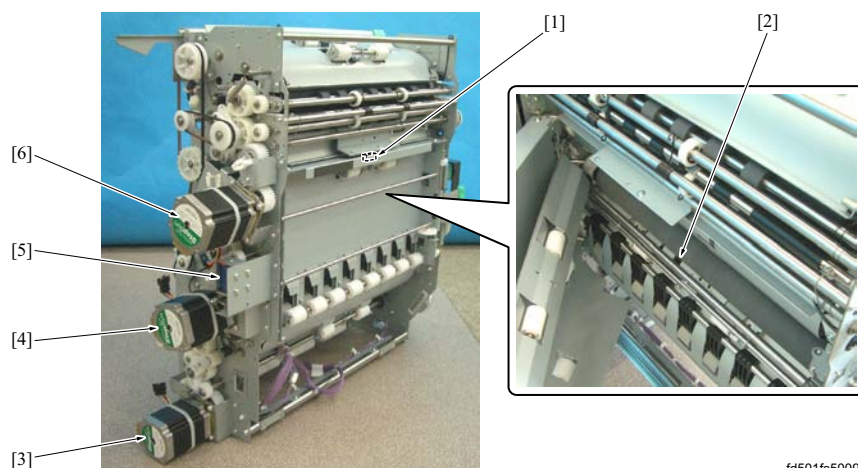
[1] PI paper set sensor /Lw (PS45)	[2] Paper size VR /Lw (VR32)
[3] S size sensor /Lw (PS42)	[4] L size sensor /Lw (PS41)
[5] PI max paper size sensor /Lw (PS48)	-

1.8.7 Punch section

[1] Punch registration home sensor (PS11)	[2] Punch motor (M10)
[3] 3 holes/4 holes home sensor (PS9)	[4] 2 holes home sensor (PS8)
[5] Punch registration motor (M13)	[6] Punch registration sensor (PS6)
[7] Punch conveyance sensor (PS5)	[8] Punch scraps box set sensor (PS12)
[9] Alignment plate home sensor (PS10)	[10] Punch scraps full sensor (PS26)
[11] Folding exit sensor (PS2)	[12] Intermediate conveyance sensor (PS13)

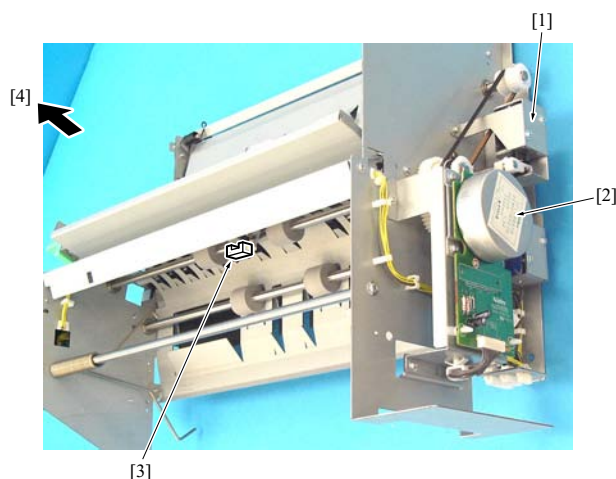
1.8.8 Folding unit front side/right side

[1] S size conveyance sensor (PS58)	[2] 2nd folding roller solenoid (SD18)
[3] Folding entrance sensor (PS52)	[4] 1st folding conveyance sensor (PS51)
[5] 1st folding cam home sensor (PS55)	[6] 1st folding release motor (M14)
[7] 2nd folding release motor (M15)	[8] 2nd folding cam home sensor (PS56)
[9] 3rd folding release motor (M16)	[10] 3rd folding cam home sensor (PS57)

1.8.9 Folding unit rear side/left side

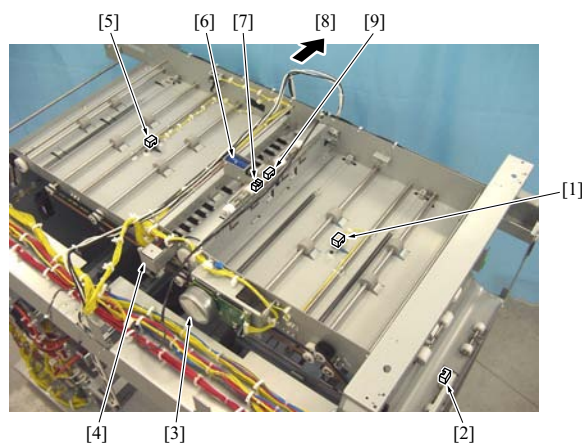
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[1]	3rd folding conveyance sensor (PS54)	[2]	2nd folding conveyance sensor (PS53)
[3]	1st folding motor (M4)	[4]	2nd folding motor (M5)
[5]	Folding gate solenoid (SD15)	[6]	3rd folding motor (M6)

1.9 SD-506**1.9.1 Horizontal conveyance section****(1) Entrance conveyance**

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[1]	Entrance gate solenoid (SD1)	[2]	Entrance conveyance motor (M1)
[3]	Entrance sensor (PS1)	[4]	Right-side direction

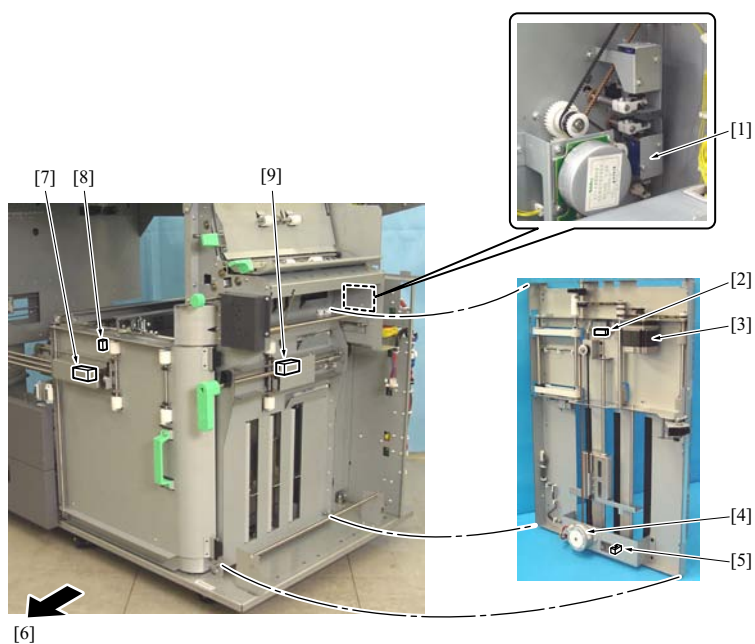
(2) Horizontal conveyance

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[1]	Horizontal conveyance sensor /2 (PS3)	[2]	Horizontal conveyance exit sensor (PS4)
[3]	Horizontal conveyance motor (M2)	[4]	Horizontal conveyance gate solenoid (SD3)
[5]	Horizontal conveyance sensor /1 (PS2)	[6]	Roller release solenoid /4 (SD4)
[7]	Sub tray exit sensor (PS11)	[8]	Front side direction

[9]	Sub tray paper full sensor (PS12)	-
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1.9.2 Right angle conveyance section

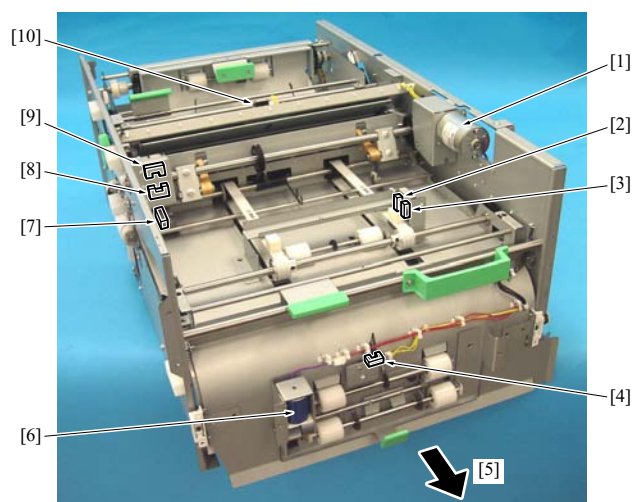


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[1]	Right angle conveyance gate solenoid (SD2)	[2]	Right angle conveyance sensor /1 (PS5)
[3]	Right angle conveyance motor (M6)	[4]	Overlap motor (M13)
[5]	Overlap home sensor (PS17)	[6]	Front side direction
[7]	Roller release solenoid /2 (SD6)	[8]	Right angle conveyance sensor /2 (PS6)
[9]	Roller release solenoid /1 (SD5)	-	

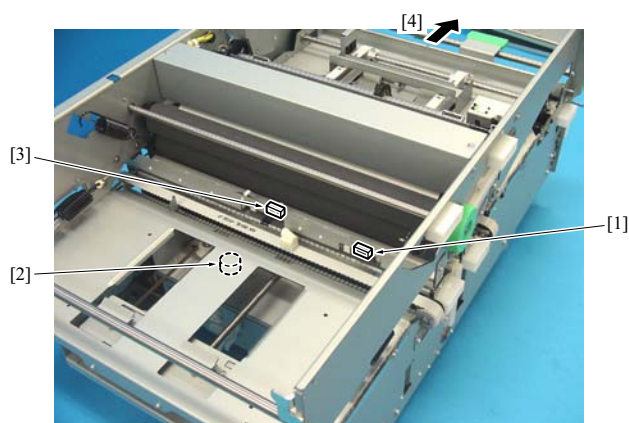
1.9.3 Folding section

(1) Top side /1



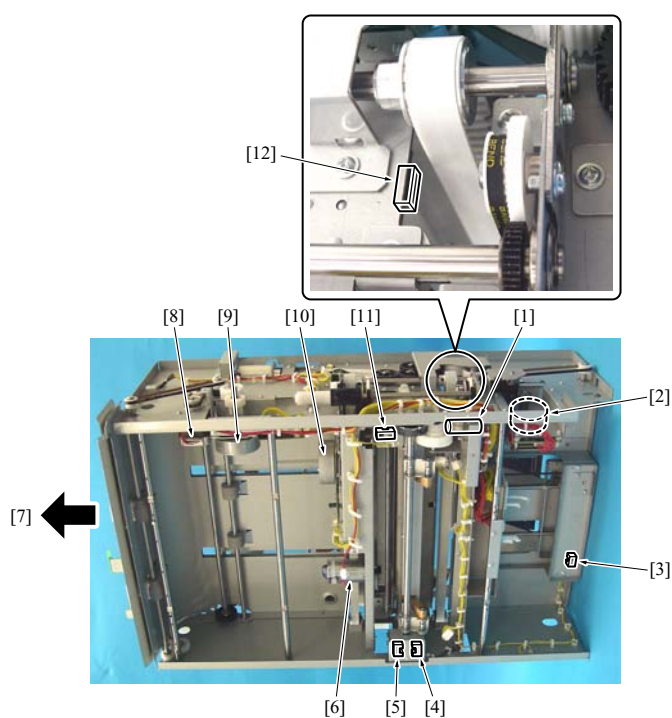
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[1]	2nd folding blade motor (M19)	[2]	Folding main scan alignment home sensor /Fr2 (PS49)
[3]	Folding main scan alignment home sensor /Fr1 (PS18)	[4]	Folding entrance sensor (PS60)
[5]	Front side direction	[6]	Roller release solenoid /3 (SD7)
[7]	Folding sensor /2 (PS44)	[8]	2nd folding blade home sensor /2 (PS23)
[9]	2nd folding blade home sensor /1 (PS22)	[10]	Folding passage sensor (PS8)

(2) Top side /2

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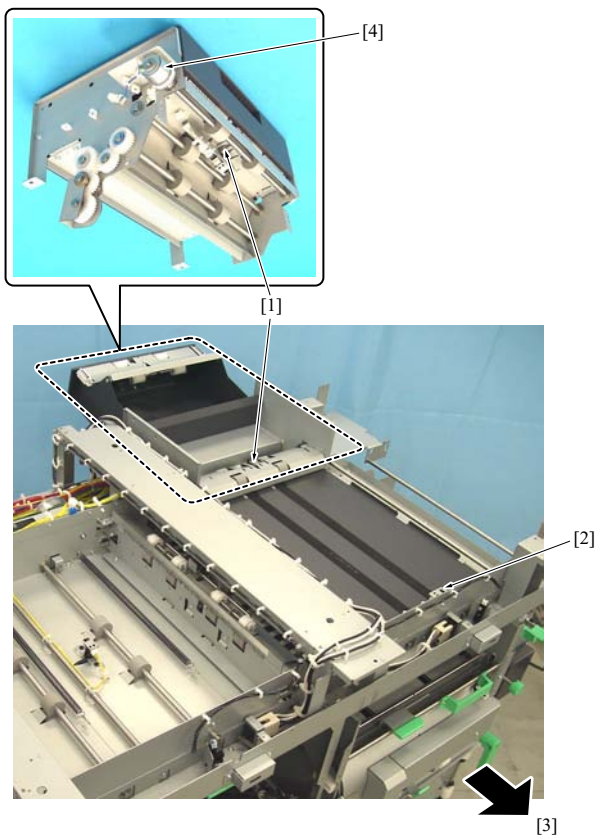
[1]	Folding sub scan alignment home sensor (PS56)	[2]	Folding main scan alignment motor /Rr (M14)
[3]	Folding sensor /1 (PS7)	[4]	Front side direction

(3) Bottom side

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[1]	1st folding blade motor (M18)	[2]	Folding transfer motor (M4)
[3]	Folding main scan alignment home sensor /Rr (PS19)	[4]	1st folding blade home sensor /2 (PS21)
[5]	1st folding blade home sensor /1 (PS20)	[6]	Guide shaft motor (M25)
[7]	Front side direction	[8]	Folding main scan alignment motor /Fr (M7)
[9]	Folding entrance motor (M3)	[10]	Folding sub scan alignment exit motor (M8)
[11]	Guide shaft home sensor (PS46)	[12]	Folding exit home sensor (PS24)

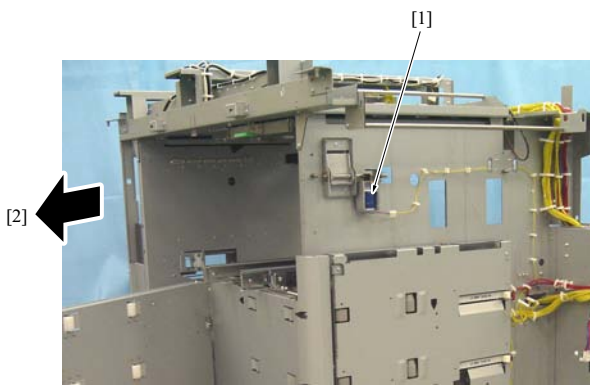
(4) Tri-folding exit



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[1]	Tri-folding exit sensor (PS9)	[2]	Tri-folding paper full sensor (PS10)
[3]	Front side direction	[4]	Tri-folding exit clutch (CL1)

(5) Others

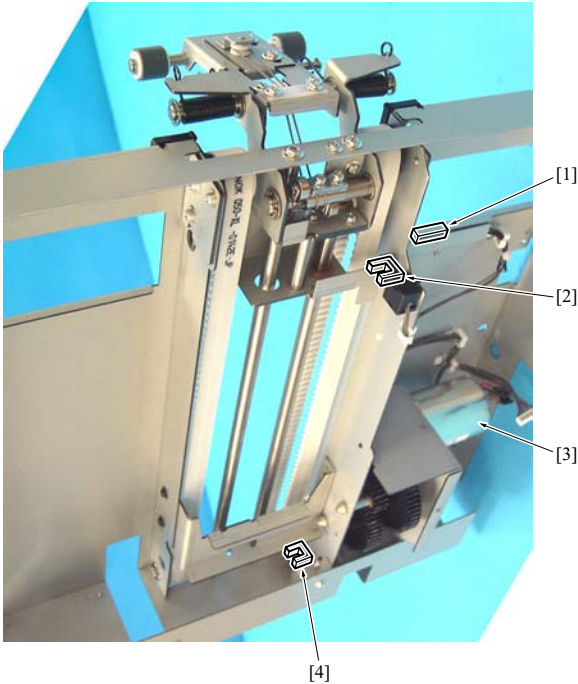


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[1]	Folding unit lock solenoid (SD8)	[2]	Front side direction
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1.9.4 Saddle stitching section

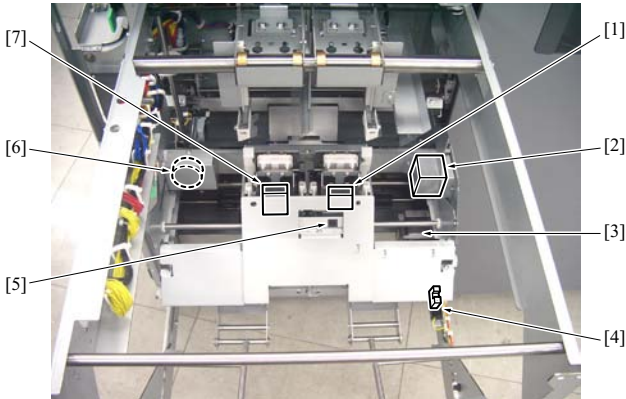
(1) Bundle clip



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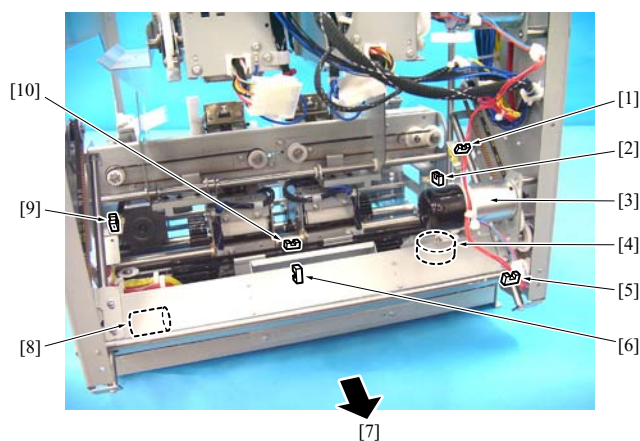
[1]	Bundle sensor /1 (PS14)	[2]	Bundle clip upper limit sensor (PS33)
[3]	Bundle clip motor (M11)	[4]	Bundle clip lower limit sensor (PS30)

(2) Front side



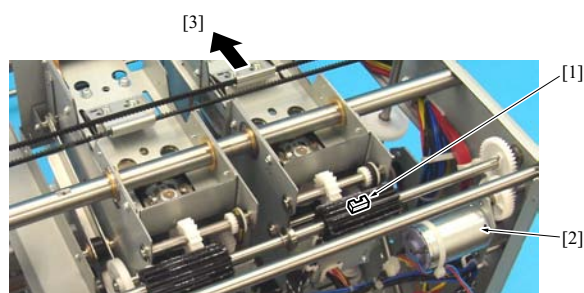
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[1]	Clincher solenoid /Rt (SD9)	[2]	Saddle stitching alignment motor /Rt (M9)
[3]	Bundle arm motor (M10)	[4]	Bundle arm home sensor (PS32)
[5]	Saddle stitching paper sensor (PS13)	[6]	Saddle stitching alignment motor /Lt (M16)
[7]	Clincher solenoid /Lt (SD10)	-	

(3) Rear side /1

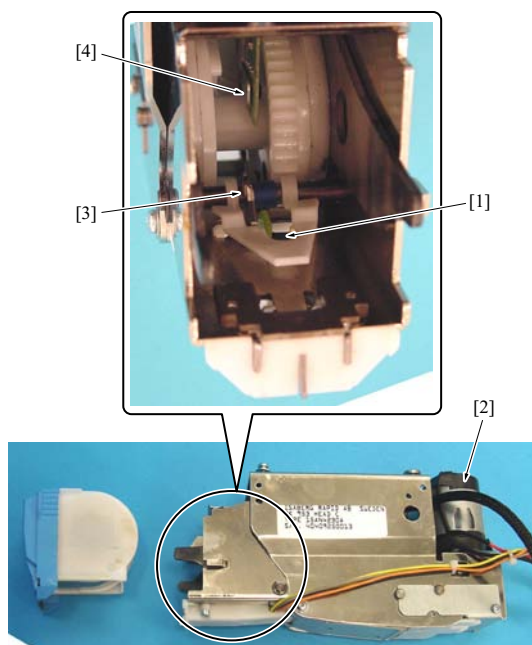
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[1] Bundle arm assist upper limit sensor (PS39)	[2] Saddle stitching alignment home sensor /Lt (PS29)
[3] Bundle arm assist motor (M26)	[4] Stapler movement motor (M15)
[5] Bundle arm assist home sensor (PS38)	[6] Stapler movement home sensor (PS25)
[7] Back side direction	[8] Clincher up down motor (M20)
[9] Saddle stitching alignment home sensor /Rt (PS28)	[10] Clincher up down home sensor (PS26)

(4) Rear side /2

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[1] Saddle stitching hold home sensor (PS27)	[2] Saddle stitching press motor (M21)
[3] Front side direction	-

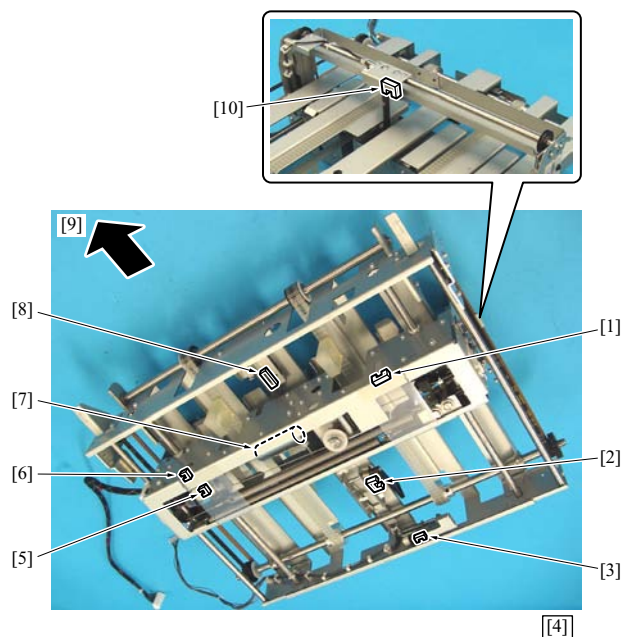
(5) Stapler

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[1] Stapler empty switch /Rt (SW1), /Lt (SW2)	[2] Stapler motor /Rt (M29), /Lt (M30)
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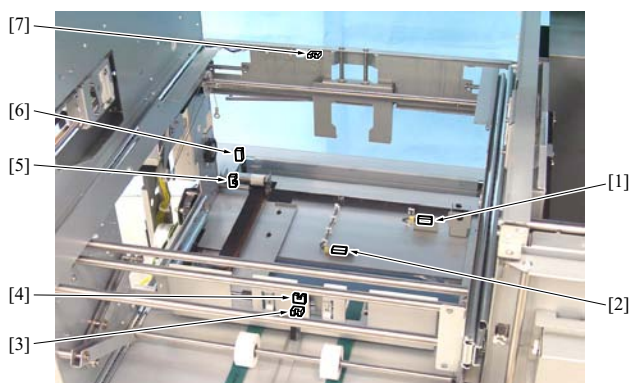
[3] Stapler home sensor /Rt (HS1), /Lt (HS3)

[4] Clincher start sensor /Rt (HS2), /Lt (HS4)

1.9.5 Bundle processing section**(1) Bundle press stage/bundle press bottom side**

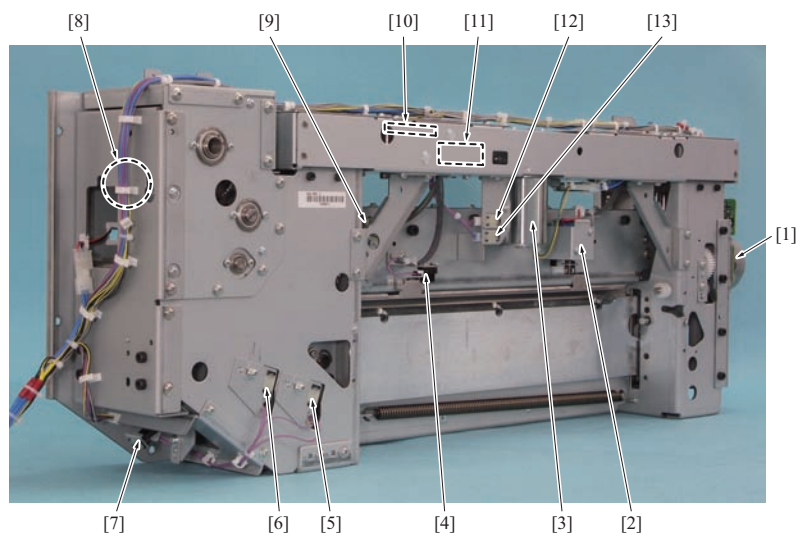
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[1] Bundle press movement home sensor (PS36)	[2] Bundle sensor /4 (PS54)
[3] Bundle registration home sensor (PS34)	[4] Bottom side view
[5] Bundle press lower limit sensor (PS47)	[6] Scraps press home sensor (PS37)
[7] Bundle press motor (M23)	[8] Bundle sensor /2 (PS15)
[9] Front side direction	[10] Trimmer registration sensor (PS55)

(2) Bundle exit

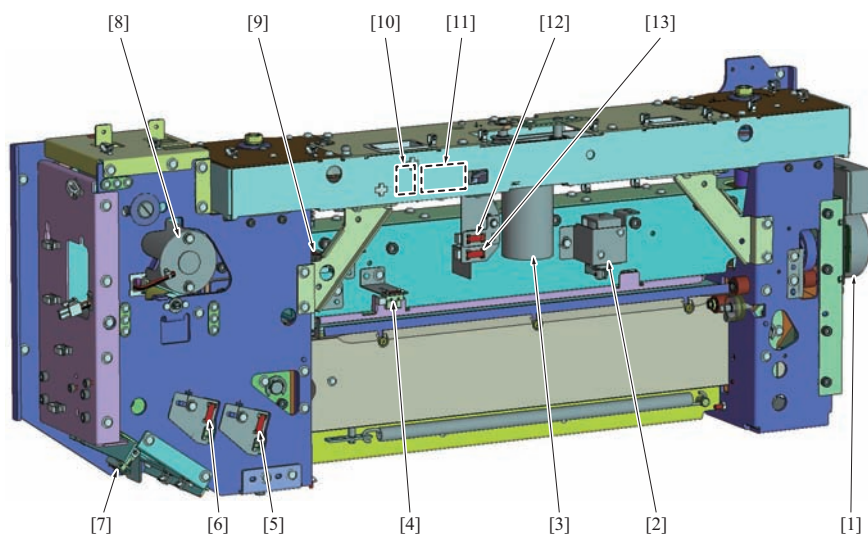
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[1] Bundle tray set sensor (PS58)	[2] Trimmer scraps full sensor (PS41)
[3] Bundle tray paper full sensor (PS61)	[4] Bundle exit sensor /2 (PS57)
[5] Scraps box set sensor (PS40)	[6] Scraps press home sensor (PS48)
[7] Bundle registration plate home sensor (PS16)	-

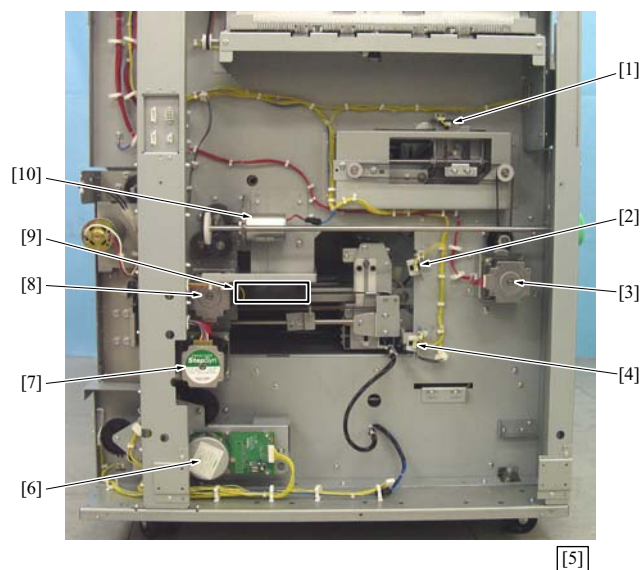
1.9.6 Trimmer section**(1) Previous trimmer unit**

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[1] Trimmer paddle motor (M33)	[2] Trimmer board solenoid (SD11)
[3] Trimmer press motor (M32)	[4] Trimmer board replacement sensor (PS59)
[5] Trimmer blade home sensor (PS50)	[6] Trimmer blade upper limit sensor (PS51)
[7] Wire slack prevention sensor (PS66)	[8] Trimmer blade motor (M31)
[9] Trimmer completion sensor (PS62)	[10] SD drive board /2 (SDDB/2)
[11] Brake solenoid (SD12)	[12] Trimmer press upper limit sensor (PS52)
[13] Trimmer press home sensor (PS53)	-

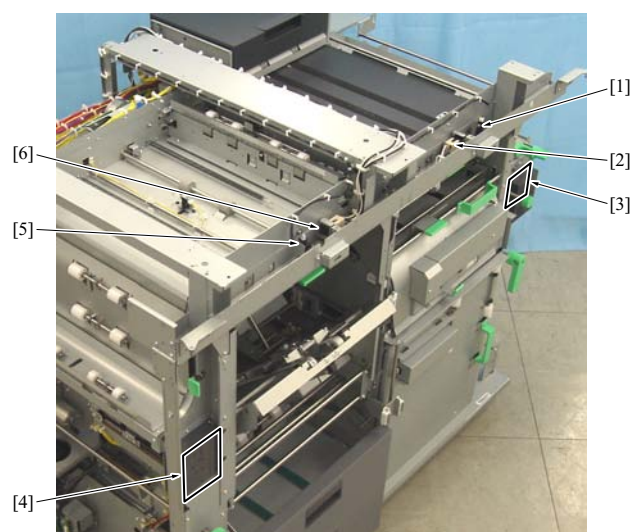
(2) New trimmer unit

[1] Trimmer paddle motor (M33)	[2] Trimmer board solenoid (SD11)
[3] Trimmer press motor (M32)	[4] Trimmer board replacement sensor (PS59)
[5] Trimmer blade upper limit sensor (PS50)	[6] Trimmer blade upper limit sensor (PS51)
[7] Wire slack prevention sensor (PS66)	[8] Trimmer blade motor (M31)
[9] Trimmer completion sensor (PS62)	[10] SD drive board /2 (SDDB/2)
[11] Brake solenoid (SD12)	[12] Trimmer press upper limit sensor (PS52)
[13] Trimmer press home sensor (PS53)	-

1.9.7 Left-side view

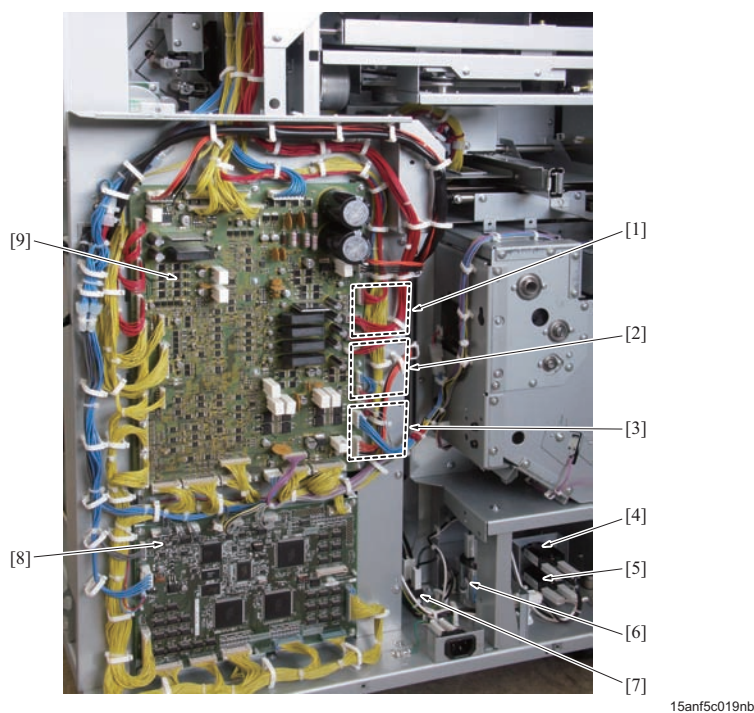
15anf5c017na

[1]	Bundle arm rotation home sensor (PS31)	[2]	Bundle press stage up down upper limit sensor (PS45)
[3]	Bundle arm rotation motor (M22)	[4]	Bundle press stage up down home sensor (PS35)
[5]	Left-side view	[6]	Bundle exit motor (M5)
[7]	Bundle press movement motor (M17)	[8]	Bundle registration motor (M12)
[9]	Scraps removal fan motor (FM1)	[10]	Bundle press stage up down motor (M24)

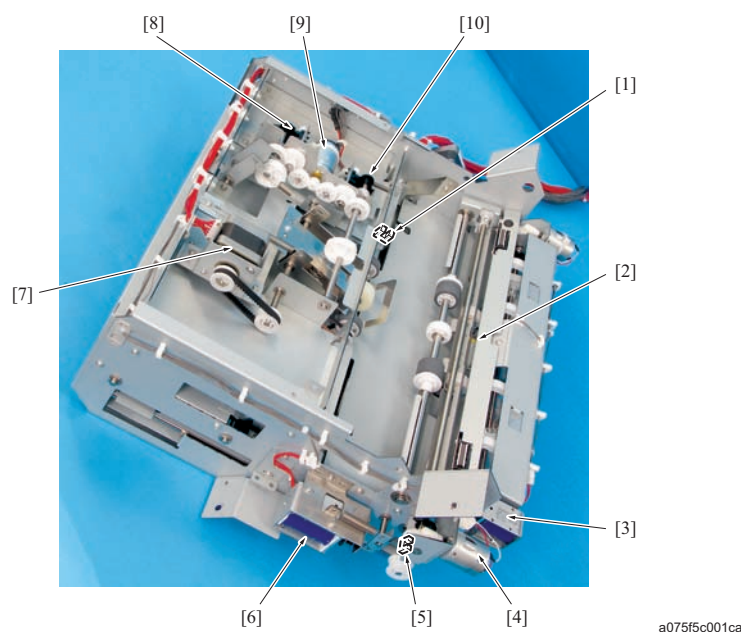
1.9.8 Front side

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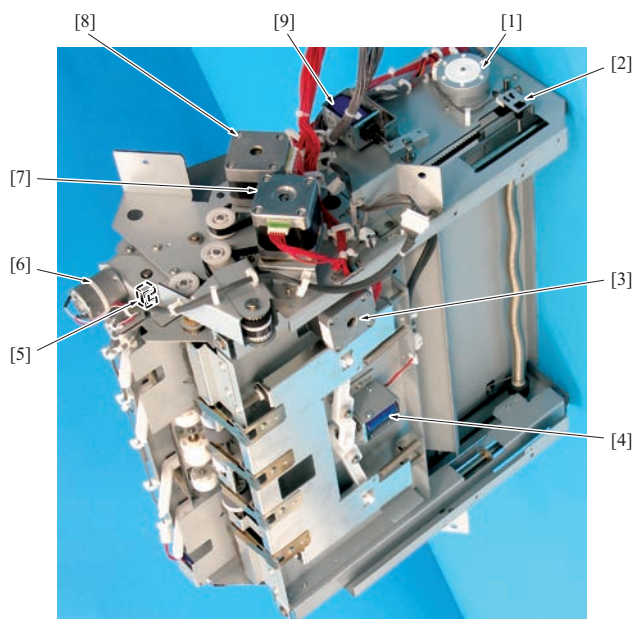
[1]	Front door sensor /Rt (PS42)	[2]	Front door switch /Rt (MS1)
[3]	Jam indication board /1 (JAMIB/1)	[4]	Jam indication board /2 (JAMIB/2)
[5]	Front door sensor /Lt (PS43)	[6]	Front door switch /Lt (MS2)

1.9.9 Rear side

[1]	DC power supply /1 (DCPS1)	[2]	DC power supply /2 (DCPS2)
[3]	DC power supply /3 (DCPS3)	[4]	Circuit breaker /1 (CBR1)
[5]	Circuit breaker /2 (CBR2)	[6]	Noise filter (NF1)
[7]	Power relay /1 (RL1)	[8]	SD control board (SDCB)
[9]	SD drive board (SDDB)	-	

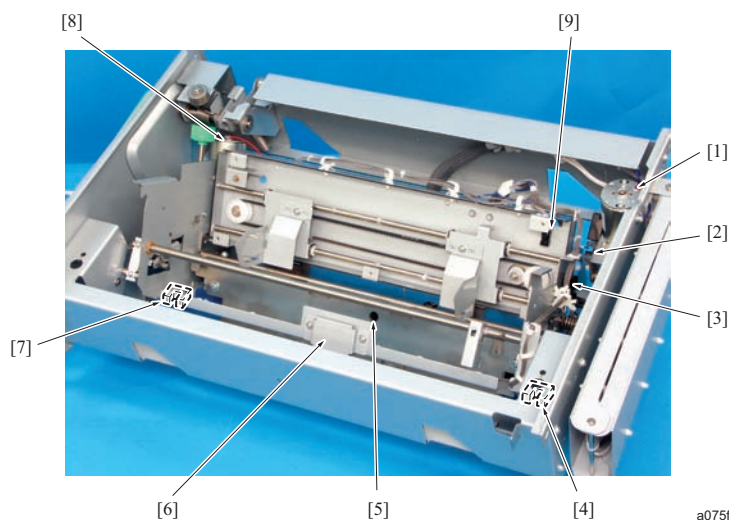
1.10 PB-502**1.10.1 SC section****(1) Front side / Top side**

[1]	SC alignment plate home sensor (PS14)	[2]	SC paper detection sensor (PS16)
[3]	SC pressure arm solenoid (SD13)	[4]	SC roller release motor (M18)
[5]	SC roller release sensor (PS17)	[6]	SC stopper solenoid (SD12)
[7]	SC switchback conveyance motor (M12)	[8]	SC switchback spring pressure detection sensor (PS13)
[9]	SC switchback release motor (M13)	[10]	SC switchback arm pressure detection sensor (PS12)

(2) Rear side/Bottom side

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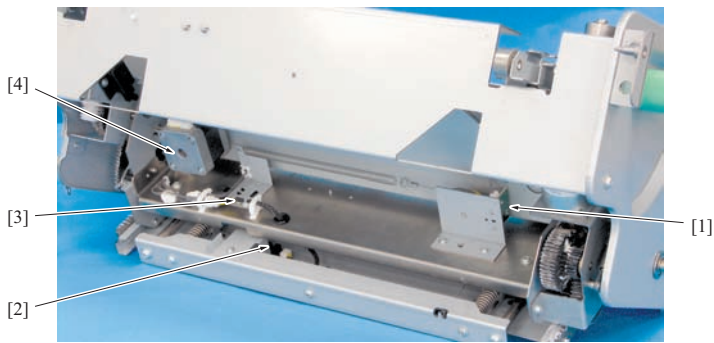
[1]	Clamp entrance movement motor (M19)	[2]	Clamp entrance movement HP sensor (PS18)
[3]	SC alignment motor (M15)	[4]	FD alignment solenoid (SD11)
[5]	Clamp entrance roller release sensor (PS19)	[6]	Clamp entrance roller release motor (M20)
[7]	SC bundle conveyance motor (M17)	[8]	SC entrance conveyance motor (M11)
[9]	Straight gate solenoid (SD91)	-	

1.10.2 Clamp section**(1) Top side**

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[1]	Clamp rotation motor (M23)	[2]	Clamp rotation HP sensor (PS24)
[3]	Clamp rotation pressure sensor (PS25)	[4]	Cover paper table upper limit sensor /Rr (PS27)
[5]	Clamp paper sensor (PS28)	[6]	Clamp paper LED (LED21)
[7]	Cover paper table upper limit sensor /Fr (PS26)	[8]	Clamp motor (M22)
[9]	Clamp alignment HP sensor (PS21)	-	

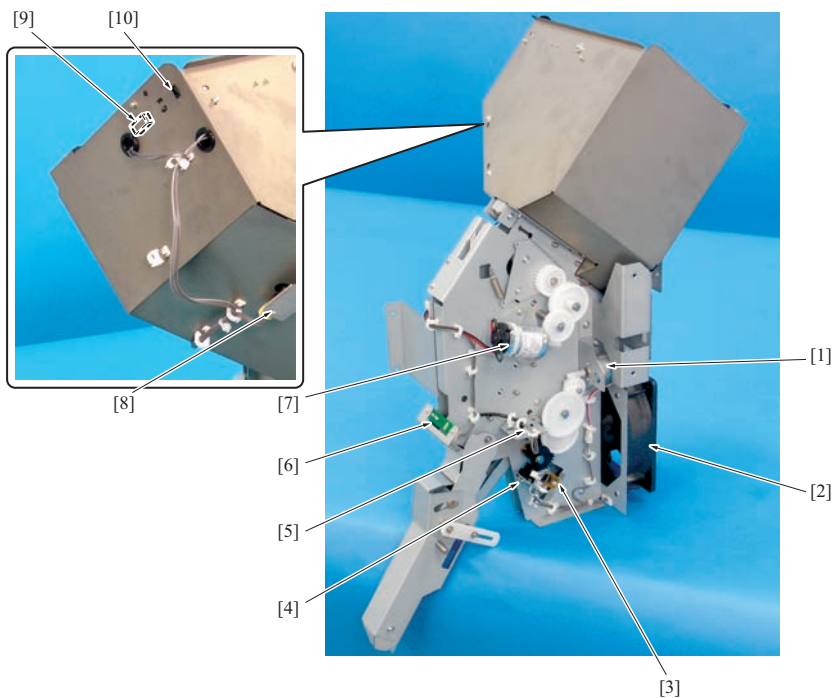
(2) Left side



a075f5c004ca

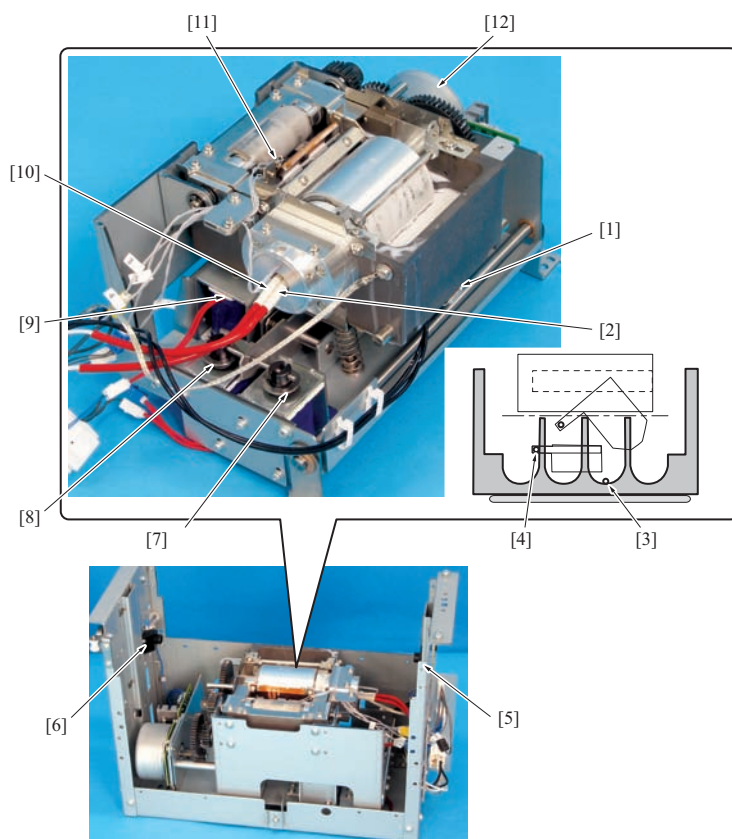
[1]	Booklet thickness sensor (PS29)	[2]	Clamp pressure sensor (PS23)
[3]	Clamp HP sensor (PS22)	[4]	Clamp alignment motor (M21)

1.10.3 Pellet supply section



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[1]	Pellet supply arm motor (M34)	[2]	Exhaust fan /1 (M80)
[3]	Pellet count LED (LED32)	[4]	Pellet supply arm upper limit sensor (PS38)
[5]	Pellet supply arm lower limit sensor (PS39)	[6]	Pellet count sensor (PS37)
[7]	Pellet supply motor (M33)	[8]	Pellet remain sensor (PS36)
[9]	Pellet supply door switch (MS1)	[10]	Pellet supply door sensor (PS40)

1.10.4 Glue tank section**(1) Glue tank**

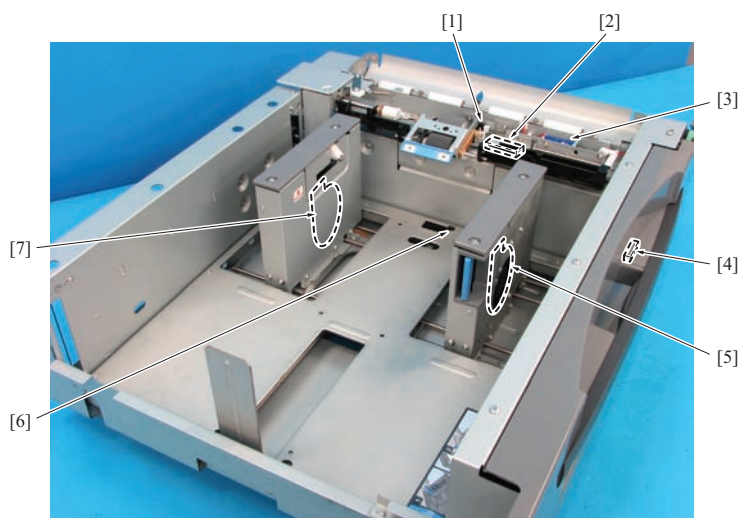
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[1] Glue tank heater (H1)	[2] Glue apply roller heater (H2)
[3] Glue tank temperature sensor /Lw (TH4)	[4] Glue tank temperature sensor /Md (TH3)
[5] Glue apply position detection sensor (PS32)	[6] Glue apply position LED (LED31)
[7] Glue tank up solenoid /2 (SD33)	[8] Glue tank up solenoid /1 (SD31)
[9] Cover paper glue up solenoid (SD32)	[10] Glue apply roller temperature sensor (TH1)
[11] Glue tank temperature sensor /Up (TH2)	[12] Glue apply roller motor (M32)

(2) Glue tank unit movement motor

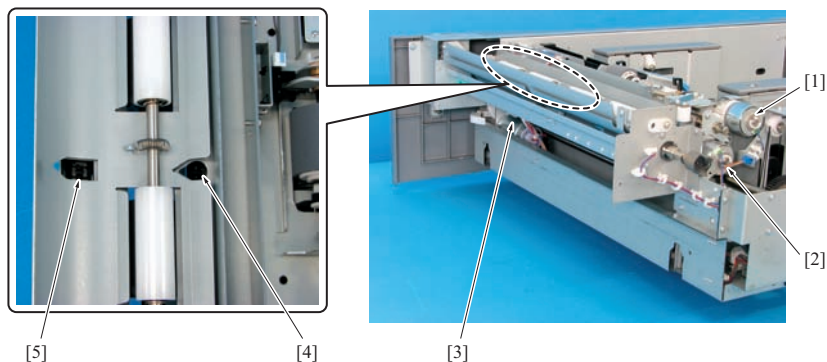
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[1] Glue tank movement limit sensor (PS31)	[2] Glue tank HP sensor (PS33)
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1.10.5 Cover paper supply section**(1) Inside**

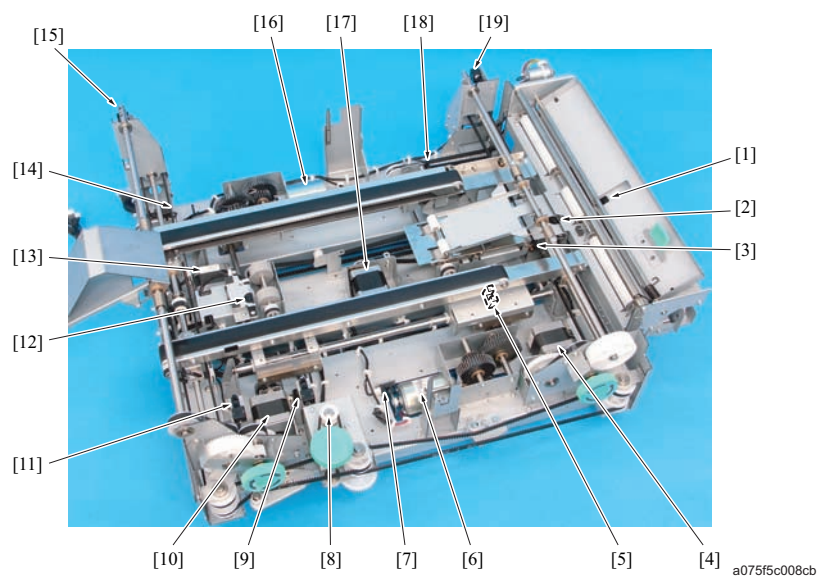
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[1]	Cover paper tray upper limit sensor (PS74)	[2]	Cover paper conveyance sensor /1 (PS75)
[3]	Cover paper pick up solenoid (SD71)	[4]	Cover paper tray knob sensor (PS82)
[5]	Cover paper tray fan /1 (FM71)	[6]	Cover paper empty sensor (PS71)
[7]	Cover paper tray fan /2 (FM72)	-	

(2) Rear side

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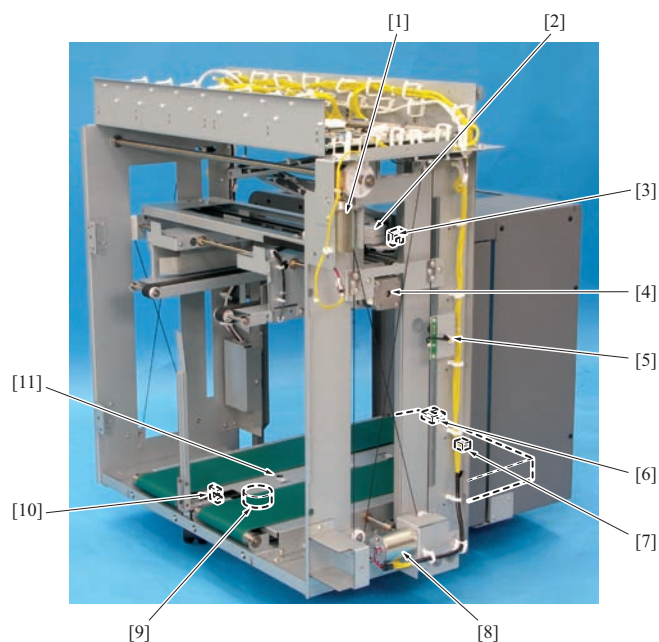
[1]	Cover paper feed clutch (CL71)	[2]	Cover paper separation clutch (CL72)
[3]	Cover paper tray lift motor (M73)	[4]	Cover paper conveyance sensor /2 (PS76)
[5]	Cover paper conveyance sensor /3 (PS77)	-	

1.10.6 Cover paper lift section**(1) cover paper table unit**

[1] Cover paper switchback sensor (PS44)	[2] Cover paper sensor /Rt (PS45)
[3] Cover paper lift solenoid (SD41)	[4] Cover paper conveyance arm motor /Rt (M43)
[5] Cover paper folding pressure sensor (PS52)	[6] Cover paper folding motor /Rt (M48)
[7] Cover paper folding plate encoder sensor (PS50)	[8] Cover paper alignment motor (M41)
[9] Cover paper folding plate home sensor /Lt (PS49)	[10] Cover paper conveyance arm motor /Lt (M44)
[11] Cover paper folding plate position sensor (PS51)	[12] Cover paper sensor /Lt (PS46)
[13] Booklet exit motor (M42)	[14] Cover paper alignment home sensor (PS41)
[15] Cover paper conveyance arm home sensor /Lt (PS43)	[16] Cover paper folding motor /Lt (M49)
[17] Cover paper conveyance motor (M45)	[18] Cover paper folding plate home sensor /Rt (PS48)
[19] Cover paper conveyance arm home sensor /Rt (PS42)	-

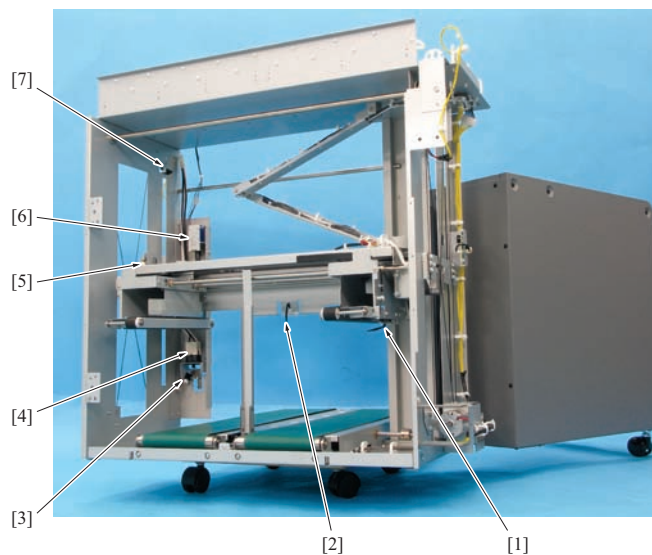
(2) Roller cutter assy

[1] Cutter home switch (SW41)	[2] Cutter end switch (SW42)
[3] Cutter motor (M50)	-

1.10.7 Book stock section**(1) Rear side**

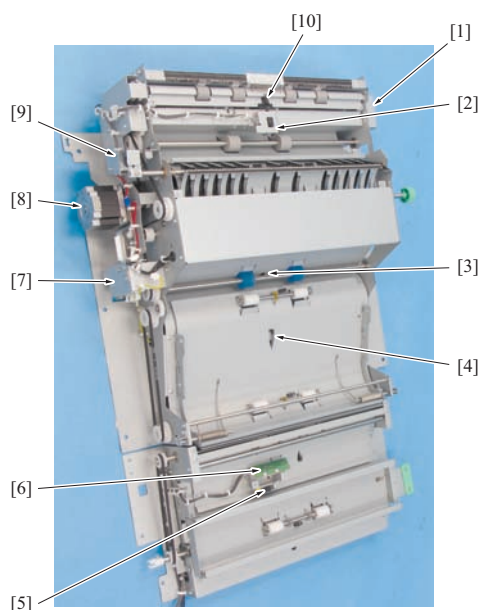
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[1]	Book conveyance belt up down motor (M63)	[2]	Book conveyance belt movement motor (M62)
[3]	Book conveyance belt movement HP sensor (PS62)	[4]	Book conveyance belt motor (M61)
[5]	Book load limit sensor (PS65)	[6]	Cart set sensor (PS69)
[7]	Book sensor /2 (PS67)	[8]	Book movement motor (M64)
[9]	Book stopper motor (M65)	[10]	Book stopper HP sensor (PS68)
[11]	Book sensor /1 (PS66)	-	

(2) Inside

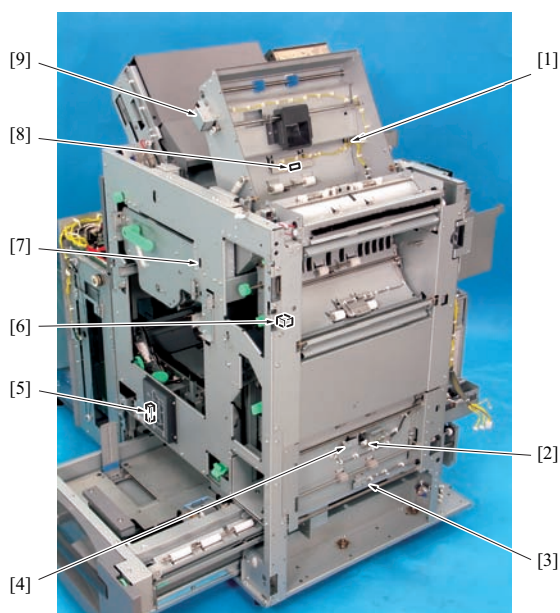
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[1]	Book conveyance belt lower limit sensor (PS64)	[2]	Book end sensor (PS61)
[3]	Stacker door sensor (PS57)	[4]	Stacker door switch (MS4)
[5]	Book upper limit LED (LED61)	[6]	Book door solenoid (SD61)
[7]	Book conveyance belt HP sensor (PS63)	-	

1.10.8 Conveyance section and framework section**(1) Conveyance unit**

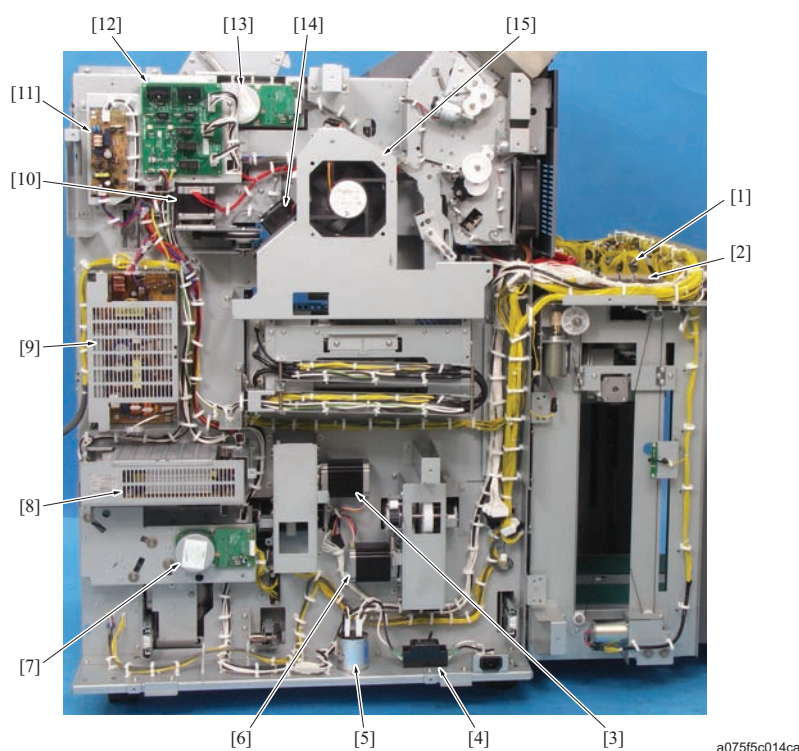
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[1] Sub tray paper exit solenoid (SD4)	[2] Sub tray full sensor (PS5)
[3] Entrance sensor (PS1)	[4] Cover paper entrance sensor (PS3)
[5] Waste box full sensor (PS80)	[6] Multi feed detection board /2 (MFDTB72)
[7] Entrance gate solenoid (SD1)	[8] Entrance conveyance motor (M1)
[9] Sub tray gate solenoid (SD3)	[10] Sub tray exit sensor (PS4)

(2) Right side

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[1] Upper door switch (SW1)	[2] Multi feed detection board /1 (MFDTB71)
[3] Cover paper conveyance sensor /5 (PS79)	[4] Cover paper conveyance sensor /4 (PS78)
[5] Cover paper tray solenoid (SD72)	[6] Front door lock solenoid (SD80)
[7] Front door switch (MS2)	[8] SC entrance sensor (PS2)
[9] Bypass gate solenoid (SD2)	-

(3) Rear side

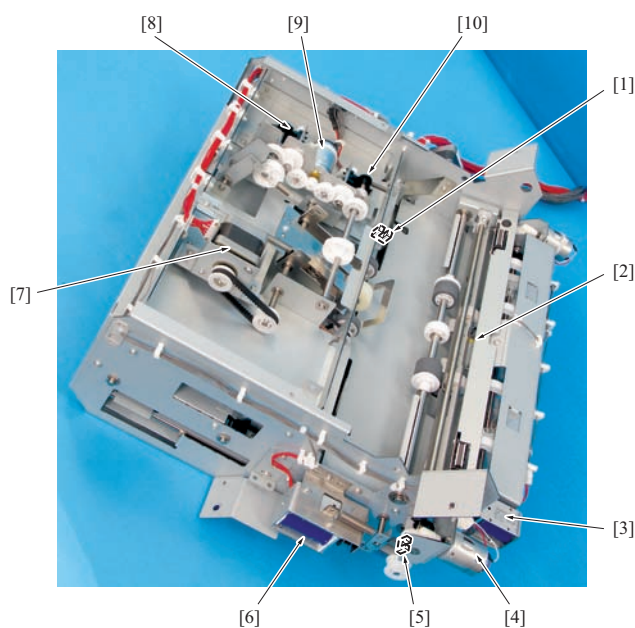
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[1] PB drive board (PBDB)	[2] PB control board (PBCB)
[3] Cover paper table up down motor /Rr (M47)	[4] Circuit breaker (CBR)
[5] Noise filter (NF)	[6] Cover paper table up down motor /Fr (M46)
[7] Cover paper feed motor (M74)	[8] DC power supply unit /1 (DCPU/1)
[9] DC power supply unit /2 (DCPU/2)	[10] Glue tank movement motor (M31)
[11] DC power supply unit /3 (DCPU/3)	[12] AC drive board (ACDB)
[13] Intermediate conveyance motor (M2)	[14] Pellet supply cooling fan motor (M4)
[15] Exhaust fan /2 (M81)	-

(4) Inside

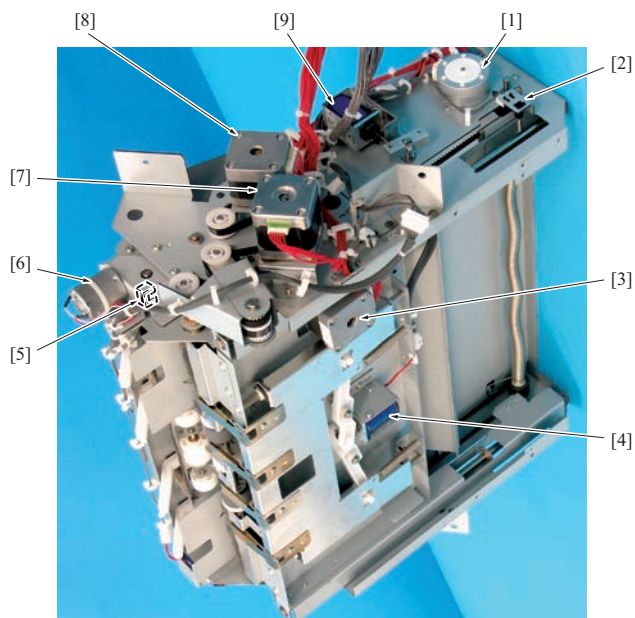
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[1] Cover paper table home sensor /Fr (PS47)	[2] Cover paper table HP sensor /Rr (PS53)
[3] Waste box set sensor (PS81)	-

1.11 PB-503**1.11.1 SC section****(1) Front side / Top side**

a075f5c001ca

[1]	SC alignment plate home sensor (PS14)	[2]	SC paper detection sensor (PS16)
[3]	SC pressure arm solenoid (SD13)	[4]	SC roller release motor (M18)
[5]	SC roller release sensor (PS17)	[6]	SC stopper solenoid (SD12)
[7]	SC switchback conveyance motor (M12)	[8]	SC switchback spring pressure detection sensor (PS13)
[9]	SC switchback release motor (M13)	[10]	SC switchback arm pressure detection sensor (PS12)

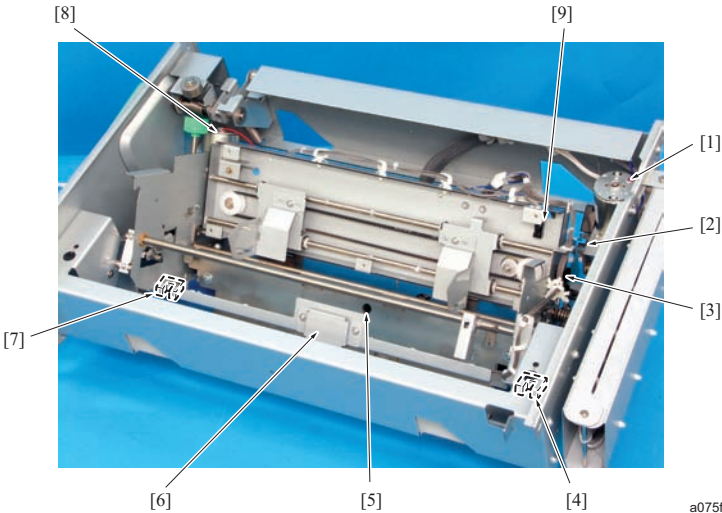
(2) Rear side/Bottom side

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[1]	Clamp entrance movement motor (M19)	[2]	Clamp entrance movement HP sensor (PS18)
[3]	SC alignment motor (M15)	[4]	FD alignment solenoid (SD11)
[5]	Clamp entrance roller release sensor (PS19)	[6]	Clamp entrance roller release motor (M20)
[7]	SC bundle conveyance motor (M17)	[8]	SC entrance conveyance motor (M11)
[9]	Straight gate solenoid (SD91)	-	

1.11.2 Clamp section

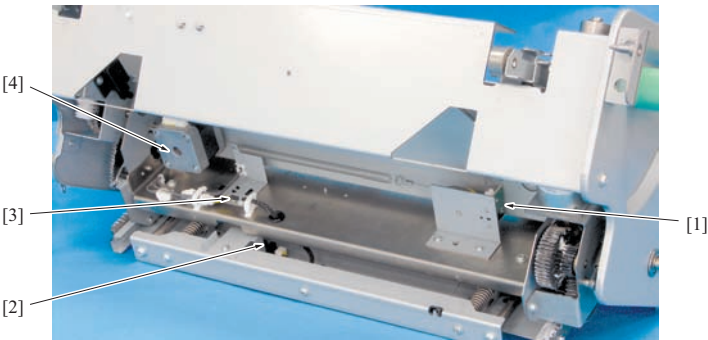
(1) Top side



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[1]	Clamp rotation motor (M23)	[2]	Clamp rotation HP sensor (PS24)
[3]	Clamp rotation pressure sensor (PS25)	[4]	Cover paper table upper limit sensor /Rr (PS27)
[5]	Clamp paper sensor (PS28)	[6]	Clamp paper LED (LED21)
[7]	Cover paper table upper limit sensor /Fr (PS26)	[8]	Clamp motor (M22)
[9]	Clamp alignment HP sensor (PS21)	-	

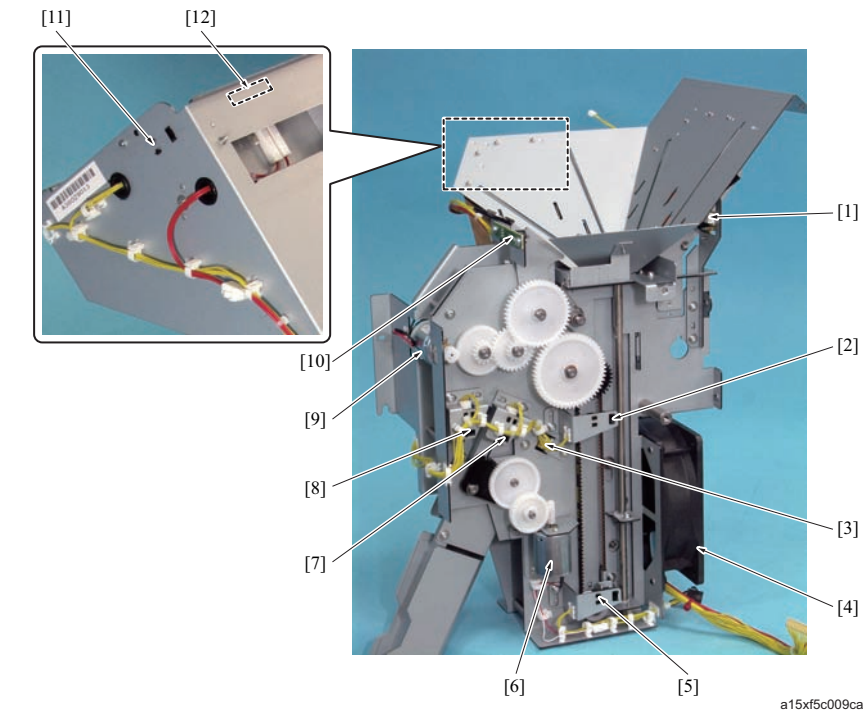
(2) Left side



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[1]	Booklet thickness sensor (PS29)	[2]	Clamp pressure sensor (PS23)
[3]	Clamp HP sensor (PS22)	[4]	Clamp alignment motor (M21)

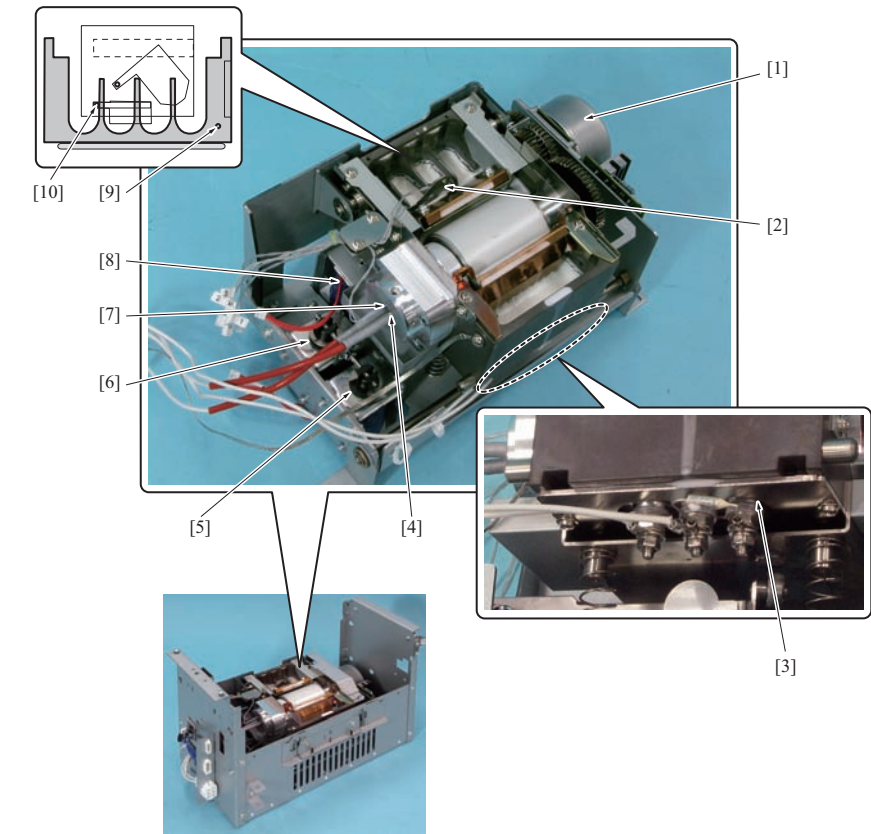
1.11.3 Pellet supply section



[1]	Pellet remaining LED (LED32)	[2]	Pellet supply pipe upper limit sensor (PS95)
[3]	Pellet supply passage sensor (PS37)	[4]	Exhaust fan /1 (FM80)
[5]	Pellet supply pipe home sensor (PS96)	[6]	Pellet supply arm motor (M34)
[7]	Pellet supply arm upper limit sensor (PS38)	[8]	Pellet supply arm home sensor (PS39)
[9]	Pellet supply pipe motor (M33)	[10]	Pellet supply remaining sensor (PS36)
[11]	Pellet supply door sensor (PS40)	[12]	Pellet supply door switch (MS1)

1.11.4 Glue tank section

(1) Glue tank



[1]	Glue apply roller motor (M32)	[2]	Glue tank temperature sensor /Up (TH2)
-----	-------------------------------	-----	--

[3]	Glue tank heater (H1)	[4]	Glue apply roller heater (H2)
[5]	Glue tank up solenoid /2 (SD33)	[6]	Glue tank up solenoid /1 (SD31)
[7]	Glue apply roller temperature sensor (TH1)	[8]	Cover paper glue up solenoid (SD32)
[9]	Glue tank temperature sensor /Lw (TH4)	[10]	Glue tank temperature sensor /Md (TH3)

(2) Glue tank unit movement motor

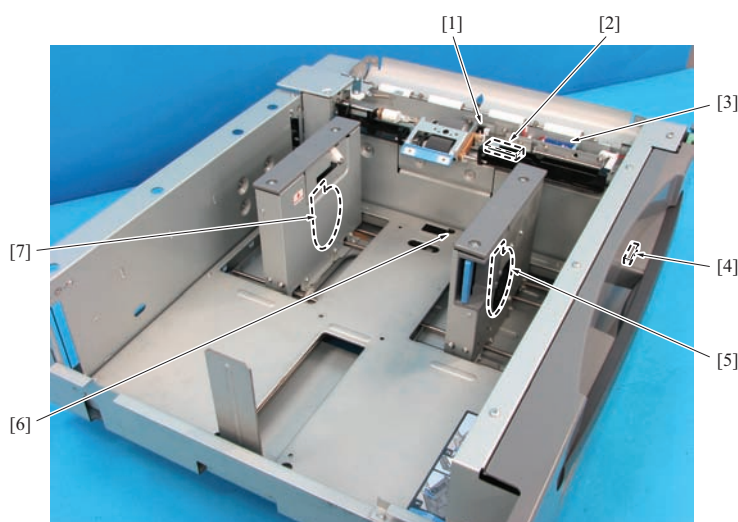


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[1]	Glue tank HP sensor (PS33)	-
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1.11.5 Cover paper supply section

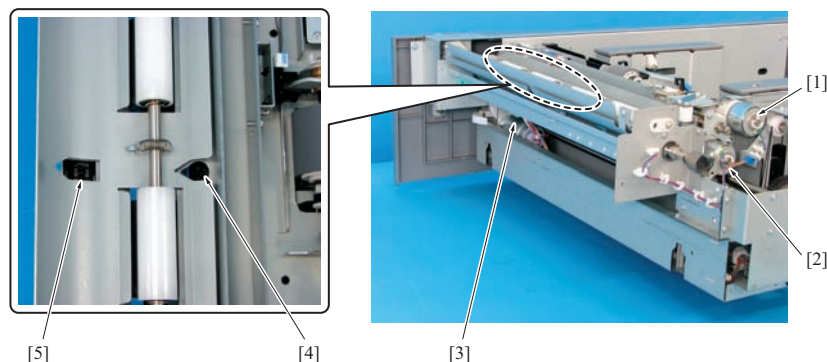
(1) Inside



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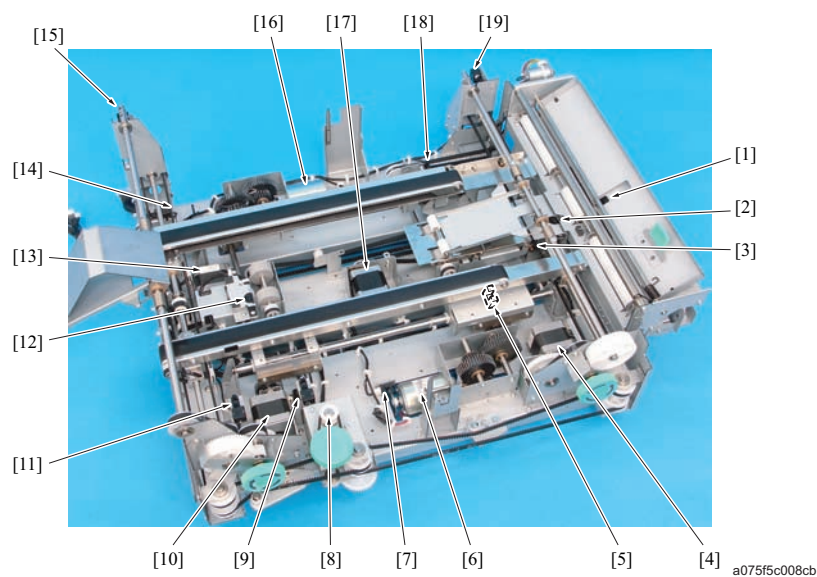
[1]	Cover paper tray upper limit sensor (PS74)	[2]	Cover paper conveyance sensor /1 (PS75)
[3]	Cover paper pick up solenoid (SD71)	[4]	Cover paper tray knob sensor (PS82)
[5]	Cover paper tray fan /1 (FM71)	[6]	Cover paper empty sensor (PS71)
[7]	Cover paper tray fan /2 (FM72)	-	

(2) Rear side



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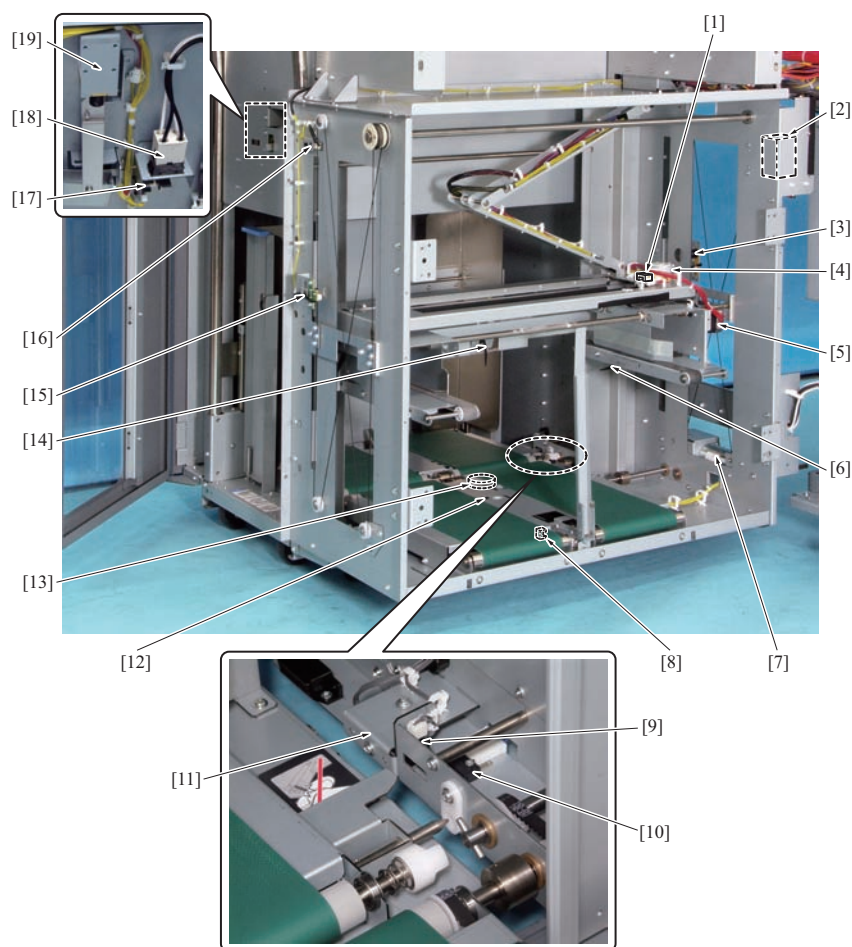
[1]	Cover paper feed clutch (CL71)	[2]	Cover paper separation clutch (CL72)
[3]	Cover paper tray lift motor (M73)	[4]	Cover paper conveyance sensor /2 (PS76)
[5]	Cover paper conveyance sensor /3 (PS77)	-	

1.11.6 Cover paper table section**(1) cover paper table unit**

[1] Cover paper switchback sensor (PS44)	[2] Cover paper sensor /Rt (PS45)
[3] Cover paper lift solenoid (SD41)	[4] Cover paper conveyance arm motor /Rt (M43)
[5] Cover paper folding pressure sensor (PS52)	[6] Cover paper folding motor /Rt (M48)
[7] Cover paper folding plate encoder sensor (PS50)	[8] Cover paper alignment motor (M41)
[9] Cover paper folding plate home sensor /Lt (PS49)	[10] Cover paper conveyance arm motor /Lt (M44)
[11] Cover paper folding plate position sensor (PS51)	[12] Cover paper sensor /Lt (PS46)
[13] Booklet exit motor (M42)	[14] Cover paper alignment home sensor (PS41)
[15] Cover paper conveyance arm home sensor /Lt (PS43)	[16] Cover paper folding motor /Lt (M49)
[17] Cover paper conveyance motor (M45)	[18] Cover paper folding plate home sensor /Rt (PS48)
[19] Cover paper conveyance arm home sensor /Rt (PS42)	-

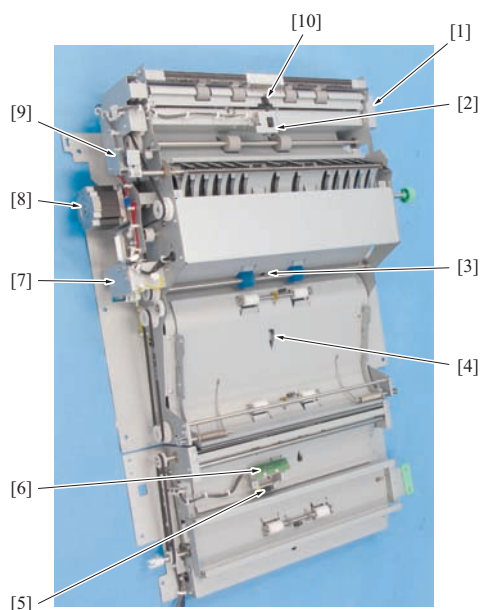
(2) Roller cutter assy

[1] Cutter home switch (SW41)	[2] Cutter end switch (SW42)
[3] Cutter motor (M50)	-

1.11.7 Book stock section**(1) Rear side**

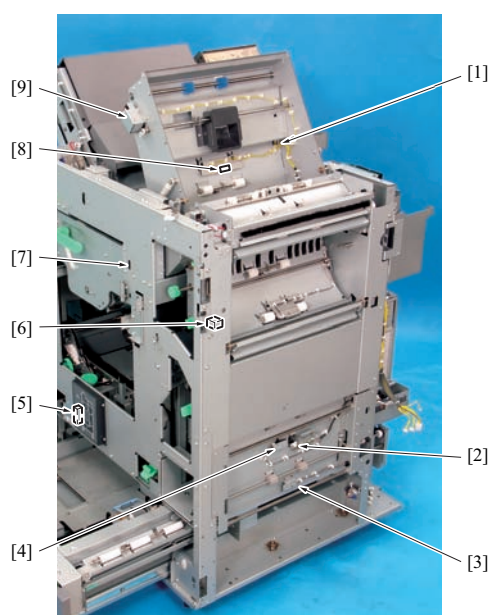
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[1] Booklet conveyance belt movement home sensor (PS62)	[2] Booklet conveyance belt up down motor (M63)
[3] Booklet upper limit sensor (PS65)	[4] Booklet conveyance belt movement motor (M62)
[5] Booklet conveyance belt motor (M61)	[6] Booklet conveyance belt lower limit sensor (PS64)
[7] Booklet conveyance belt movement motor (M64)	[8] Booklet stopper HP sensor (PS68)
[9] Cart set sensor (PS69)	[10] Hand cart set switch (MS2)
[11] Booklet sensor /2 (PS67)	[12] Booklet sensor /1 (PS66)
[13] Booklet stopper motor (M65)	[14] Booklet end sensor (PS61)
[15] Booklet upper limit LED (LED61)	[16] Booklet conveyance belt home sensor (PS63)
[17] Booklet door sensor (PS57)	[18] Booklet door switch (SW3)
[19] Booklet door lock solenoid (SD61)	-

1.11.8 Conveyance section and framework section**(1) Rear side**

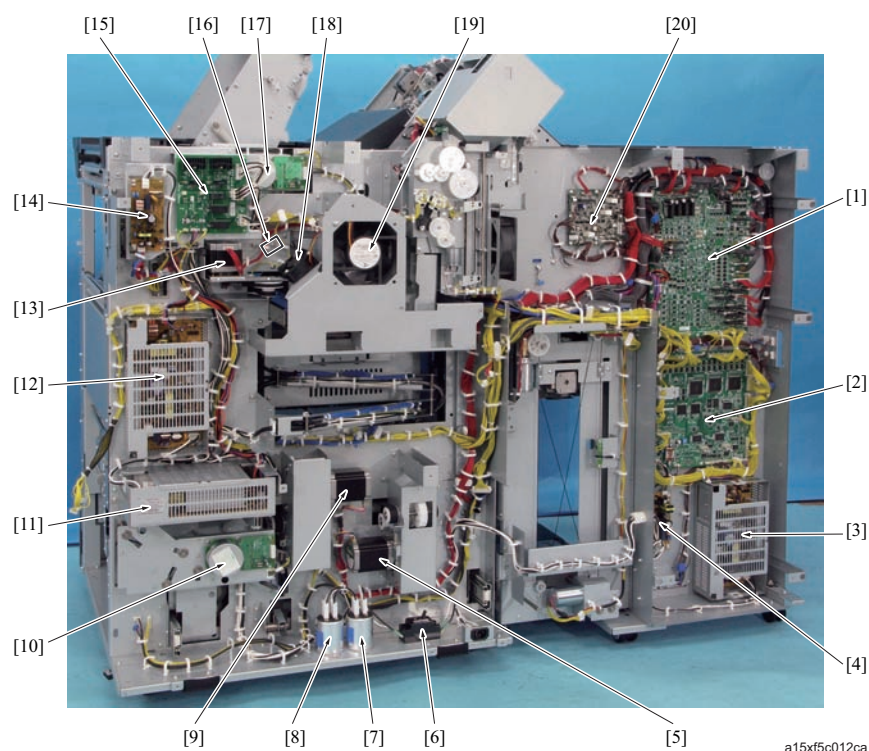
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[1] Sub tray paper exit solenoid (SD4)	[2] Sub tray full sensor (PS5)
[3] Entrance sensor (PS1)	[4] Cover paper entrance sensor (PS3)
[5] Waste box full sensor (PS80)	[6] Multi-feed detection board /R (MFDBR)
[7] Entrance gate solenoid (SD1)	[8] Entrance conveyance motor (M1)
[9] Sub tray gate solenoid (SD3)	[10] Sub tray exit sensor (PS4)

(2) Right side

a15xf5c019ca

[1] Upper door switch /2 (SW4)	[2] Multi-feed detection board /S (MFDBS)
[3] Cover paper conveyance sensor /5 (PS79)	[4] Cover paper conveyance sensor /4 (PS78)
[5] Cover paper tray solenoid (SD72)	[6] Front door lock solenoid (SD80)
[7] Front door switch (SW2)	[8] SC entrance sensor (PS2)
[9] Bypass gate solenoid (SD2)	-

(3) Rear side

[1] PB drive board /1 (PBDB1)	[2] PB control board (PBCB)
[3] DC power supply /4 (DCPU/4)	[4] DC power supply /5 (DCPU/5)
[5] Cover paper table up down motor /Fr (M46)	[6] Circuit breaker (CBR)
[7] Noise filter /1 (NF1)	[8] Noise filter /2 (NF2)
[9] Cover paper table up down motor /Rr (M47)	[10] Cover paper feed motor (M74)
[11] DC power supply /1 (DCPU/1)	[12] DC power supply /2 (DCPU/2)
[13] Glue tank movement motor (M31)	[14] DC power supply /3 (DCPU/3)
[15] AC drive board (ACDB)	[16] Upper door switch /1 (SW1)
[17] Intermediate conveyance motor (M2)	[18] Pellet supply cooling fan (FM4)
[19] Exhaust fan /2 (FM81)	[20] PB drive board /2 (PBDB2)

(4) Inside

[1] Cover paper table home sensor /Fr (PS47)	[2] Cover paper table home sensor /Fr (PS47)
[3] Waste box set sensor (PS81)	-

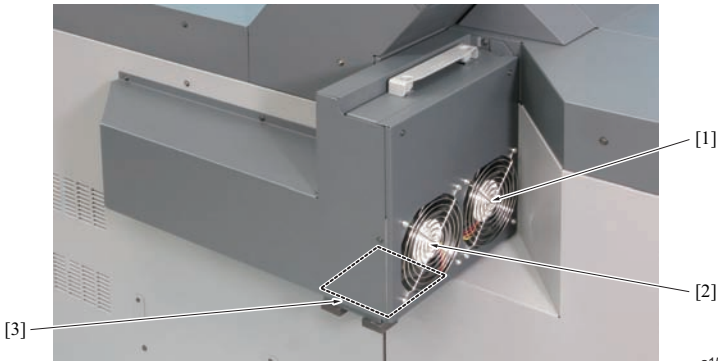
(5) External section



a15xf5c013ca

[1]	Manual operation board (OB1)	[2]	Jam indication board /1 (JAMB1)
[3]	Jam indication board /2 (JAMB2)	[4]	Booklet stock operation board (OB2)

(6) Deodorant unit

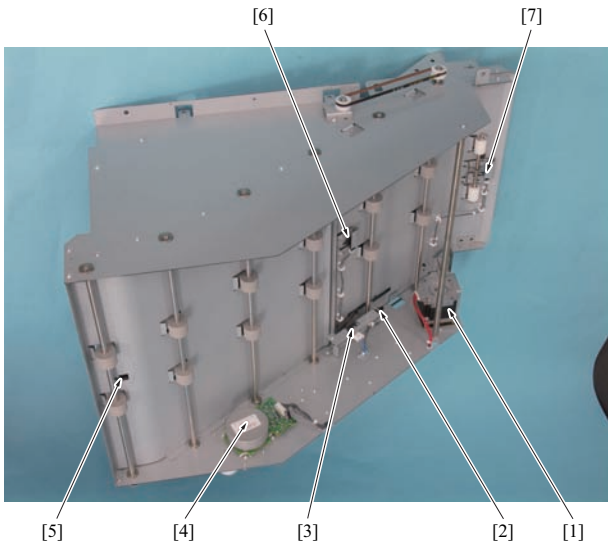


a15xf5c014ca

[1]	Deodorant fan /1 (FM97)	[2]	Deodorant fan /2 (FM98)
[3]	PB drive board /3 (PBDB3)	-	

1.11.9 Relay conveyance section

(1) Relay conveyance unit



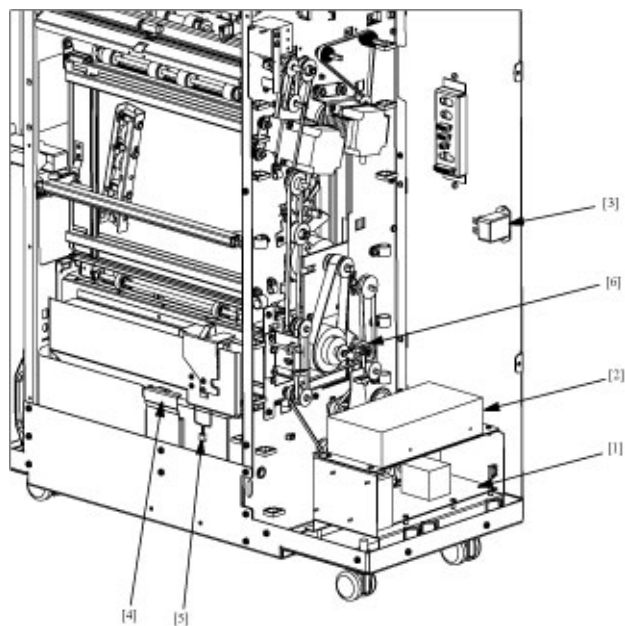
a15xf5c015ca

[1]	Relay conveyance motor (M92)	[2]	Relay conveyance door sensor (PS92)
[3]	Relay conveyance door switch (MS3)	[4]	Relay conveyance paper exit motor (M91)

[5] Relay conveyance paper exit sensor (PS94)	[6] Relay conveyance intermediate sensor (PS91)
[7] Relay conveyance entrance sensor (PS93)	-

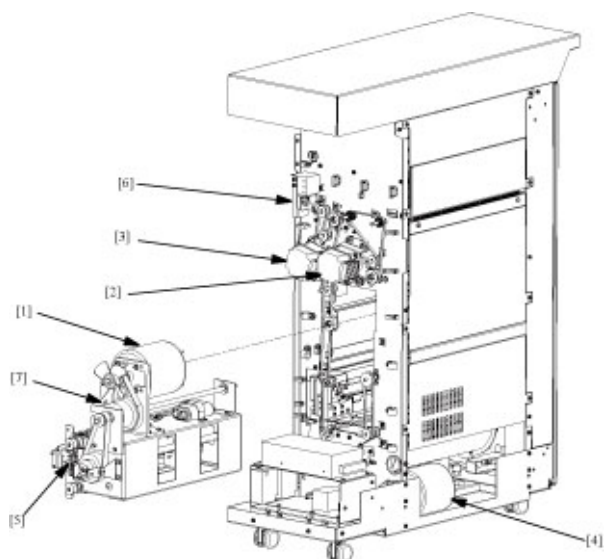
1.12 GP-501

1.12.1 Rear side 1/Right side 1



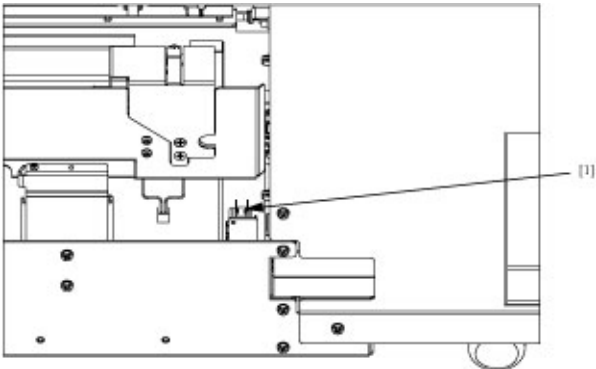
[1] Punch Controller PCB	[2] Power Supply
[3] Power Inlet	[4] Chip Tray Full Sensor
[5] Back Gauge Solenoid	[6] Punch Flag Sensor (S9)

1.12.2 Rear side 2/Left side



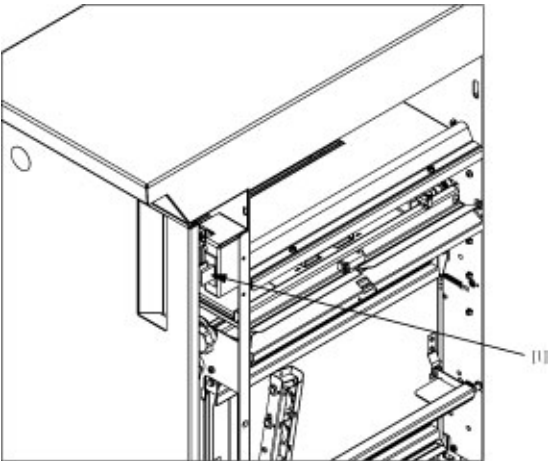
[1] Punch Motor	[2] Exit Stepper Motor
[3] Entrance Stepper Motor	[4] Transport Motor
[5] Die Set Switch	[6] Divert Solenoid
[7] Punch Clutch	-

1.12.3 Right side 2



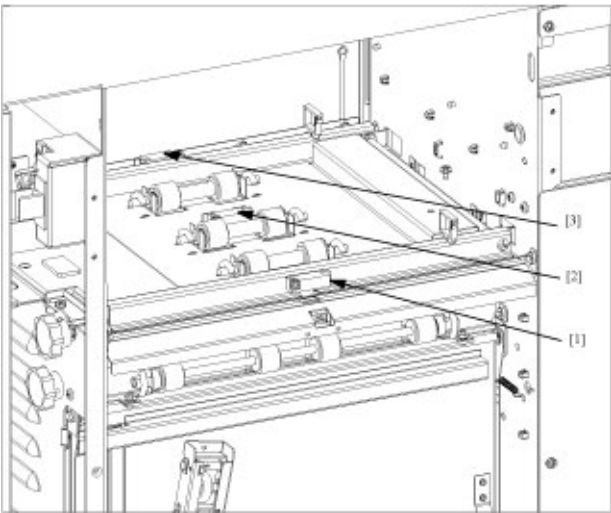
[1]	Chip Tray Switch	-
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1.12.4 Front side



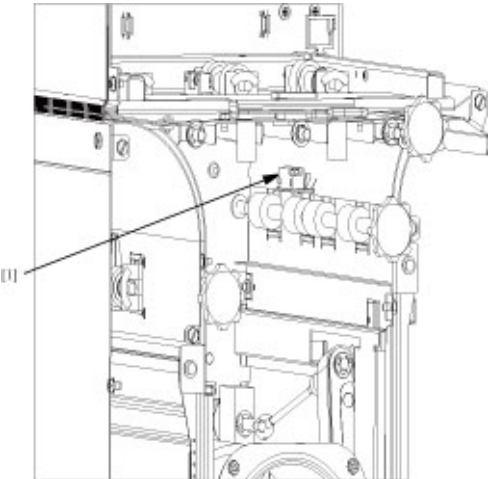
[1]	Door Switch	-
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1.12.5 Bypass conveyance section

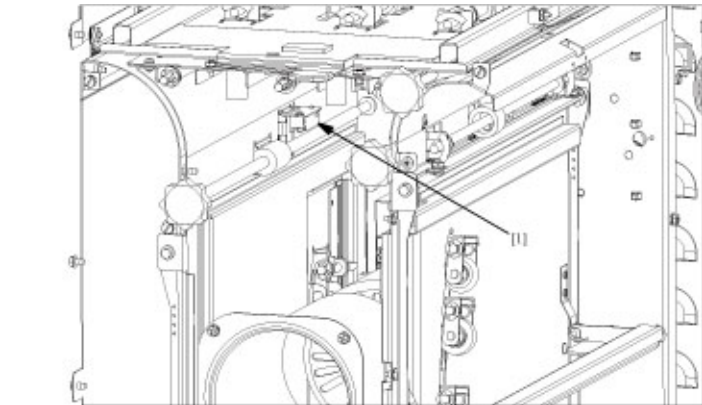


[1]	Enter Sensor (S1)	[2]	Bypass Sensor (S8)
[3]	Exit Sensor (S7)		-

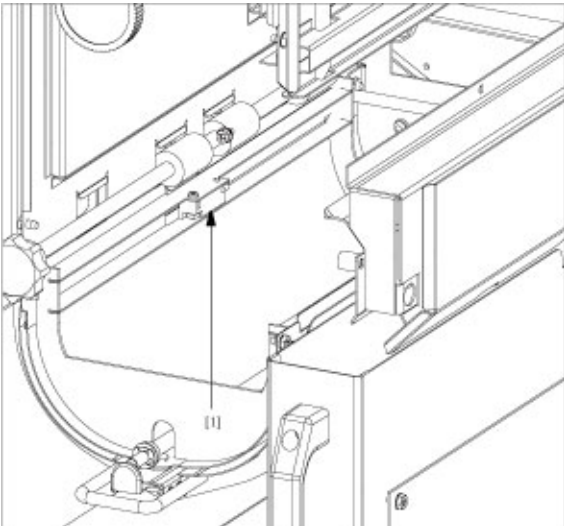
1.12.6 Punch conveyance section



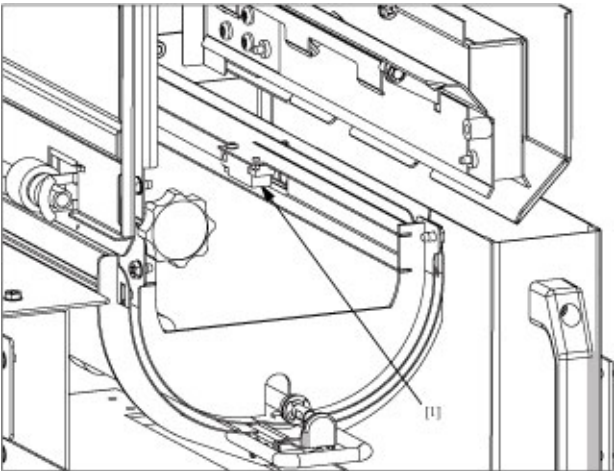
[1]	Stepper 1 Speed Sensor (S2)	-
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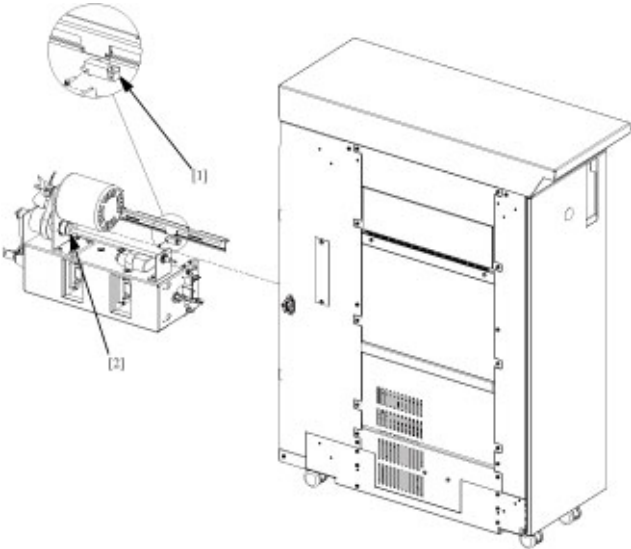
[1]	Stepper 2 Speed Sensor (S6)	-
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[1]	Back Gauge Sensor (S5)	-
-----	------------------------	---



[1]	U-Channel Sensor (S4)	-
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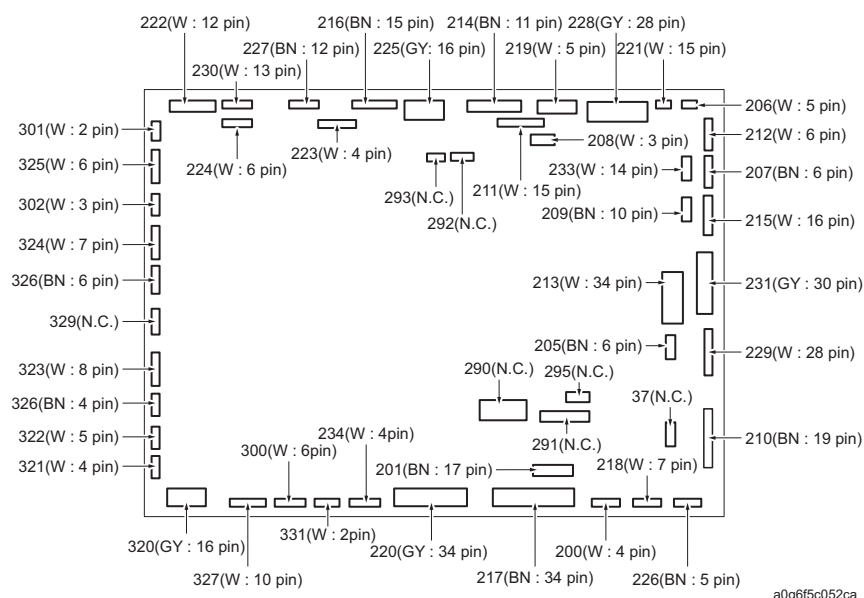


[1]	Punch Module Sensor (S3)	[2]	Punch Brake
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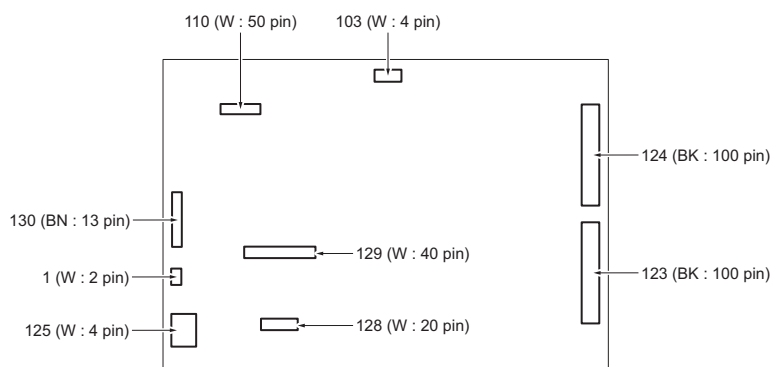
2. CONNECTOR LAYOUT DRAWING IN BOARD

2.1 bizhub PRO 1200/1200P/1051

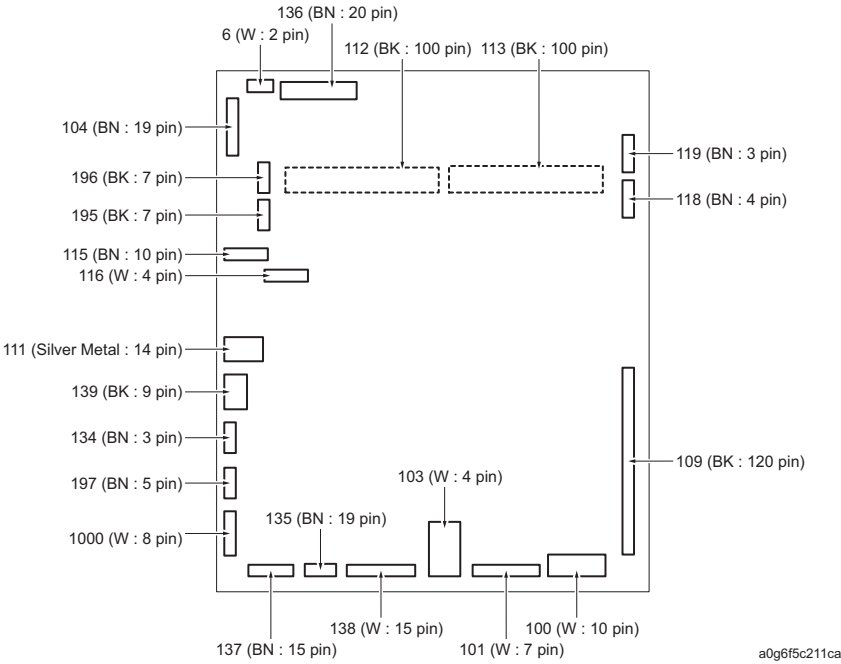
2.1.1 Printer control board



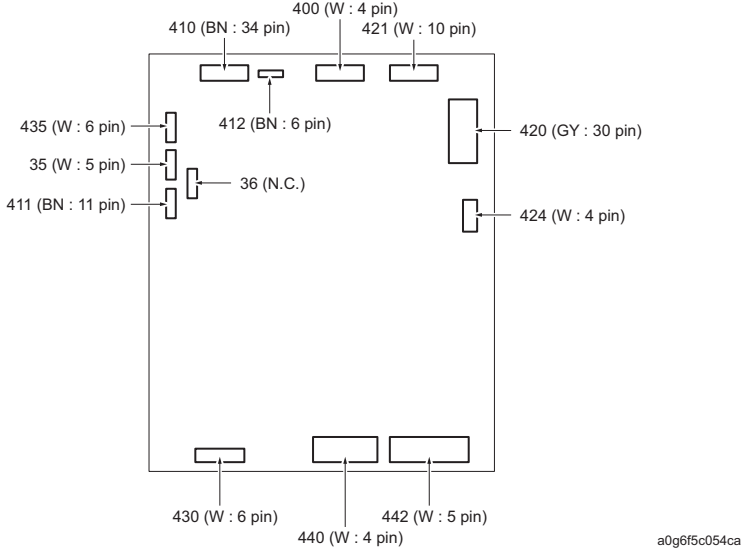
2.1.2 Image-processing board



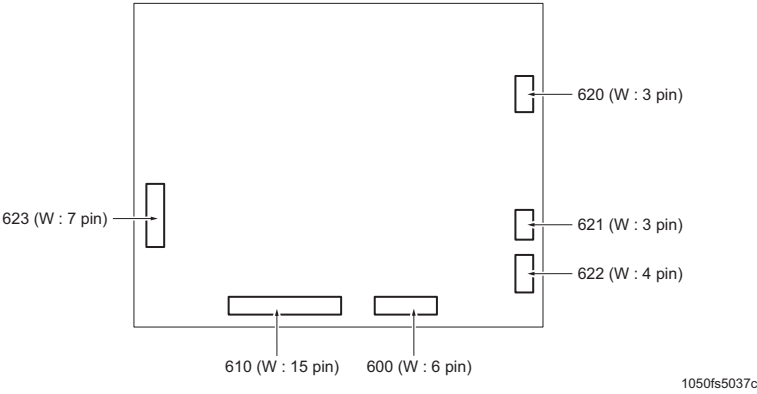
2.1.3 Overall control board



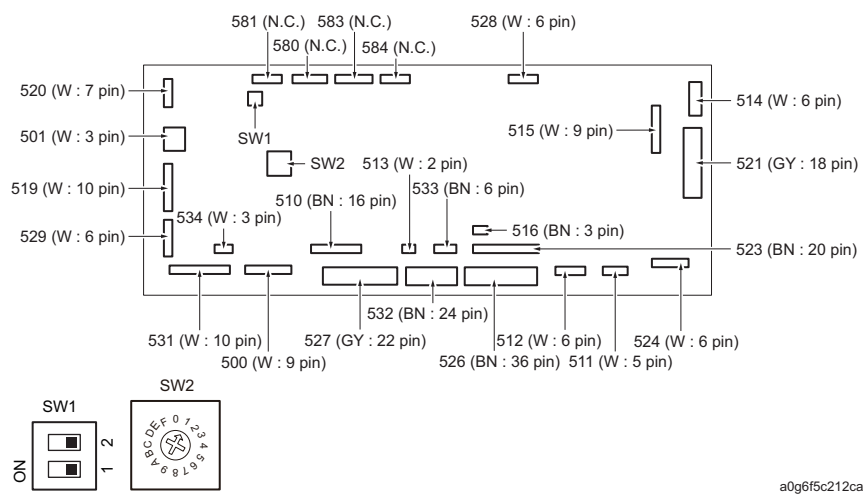
2.1.4 AC drive board



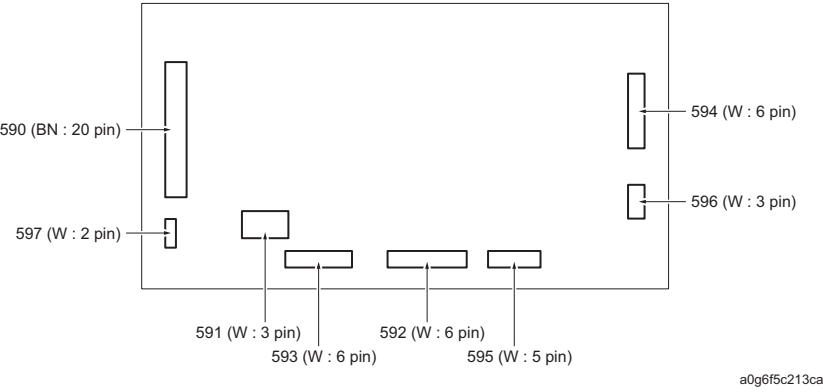
2.1.5 Scanner drive board



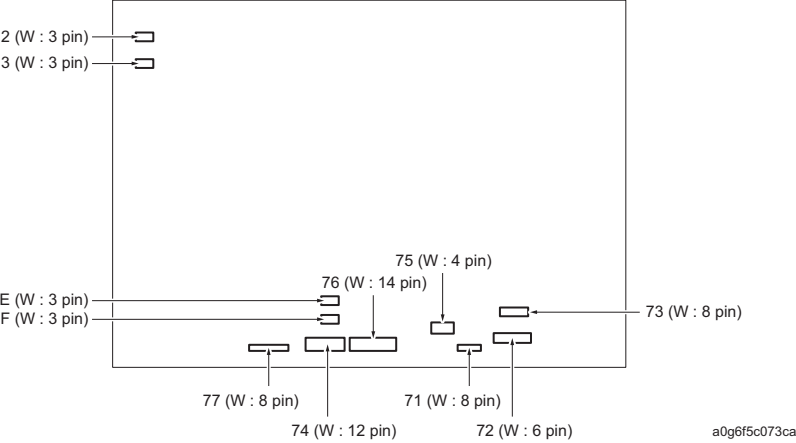
2.1.6 ADU drive board /1



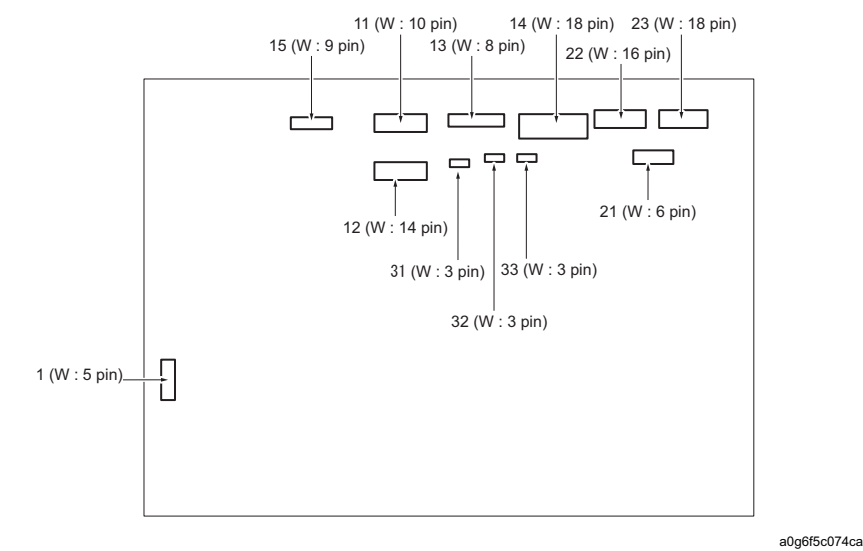
2.1.7 ADU drive board /2



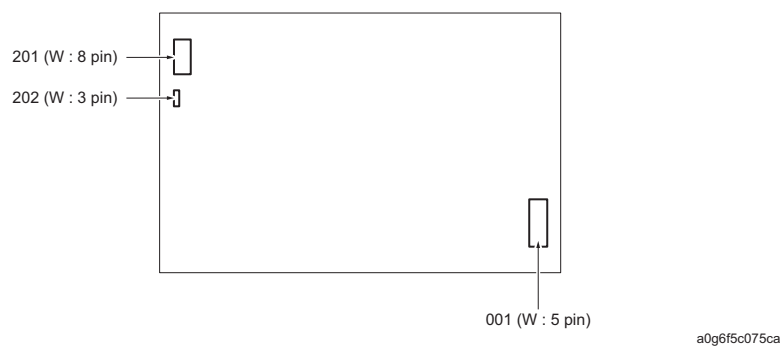
2.1.8 DC power supply /1



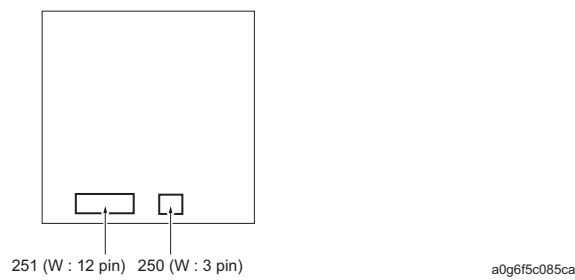
2.1.9 DC power supply /2



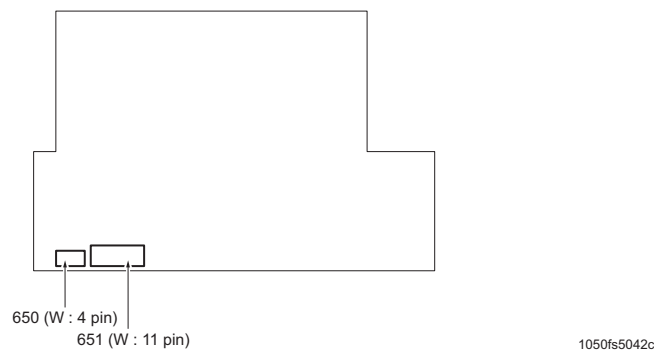
2.1.10 DC power supply /3



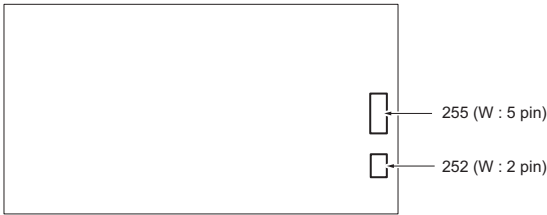
2.1.11 high voltage unit /1



2.1.12 High voltage unit /2

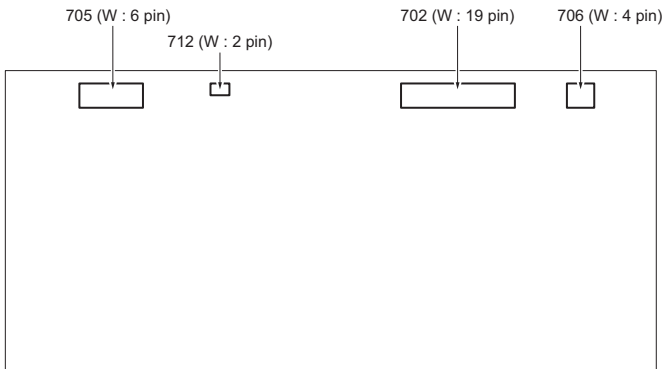


2.1.13 High voltage unit /3



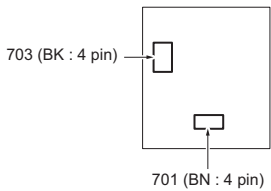
a0g6f5c087ca

2.1.14 Operation board /1



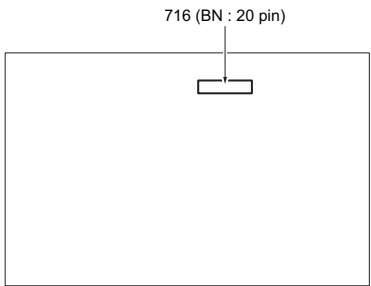
a0g6f5c076ca

2.1.15 Operation board /2



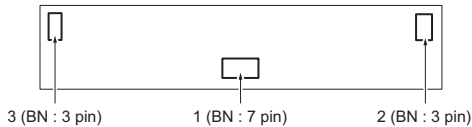
a0g6f5c077ca

2.1.16 LCD board



a0g6f5c078ca

2.1.17 Operation inverter



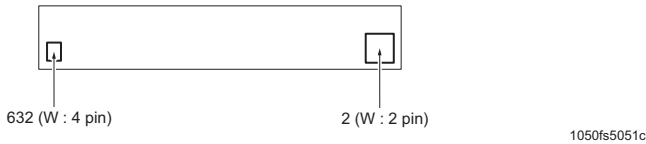
a0g6f5c079ca

2.1.18 CCD board

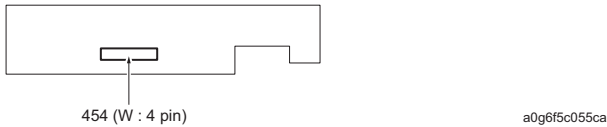


1050fs5047c

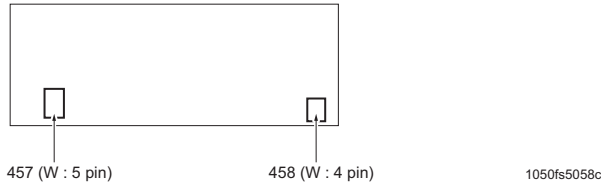
2.1.19 L4 inverter



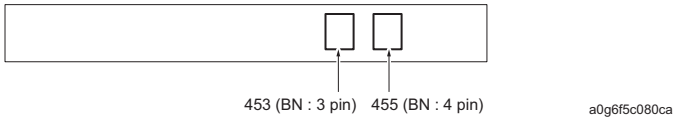
2.1.20 JAM sensor board



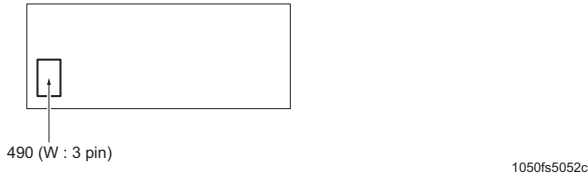
2.1.21 Drum potential sensor board



2.1.22 Toner control board



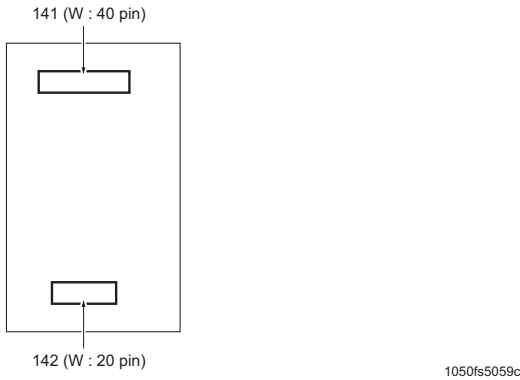
2.1.23 Multi feed detection board /S



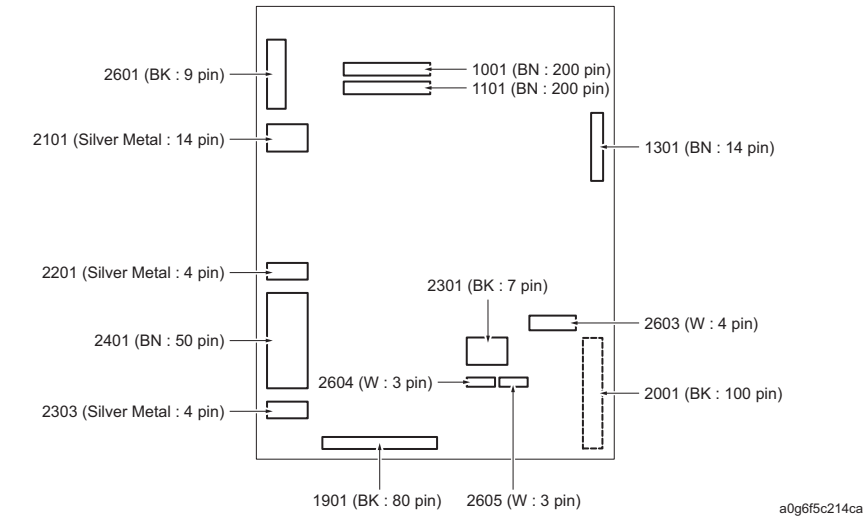
2.1.24 Multi feed detection board /R



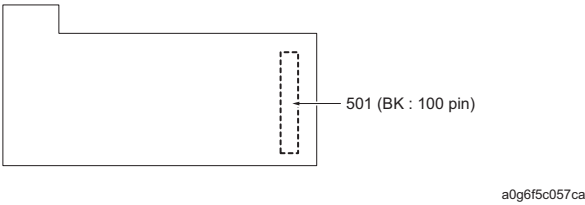
2.1.25 NVRAM board



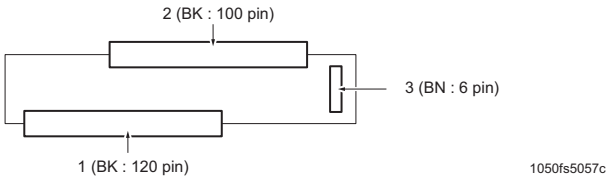
2.1.26 IC board



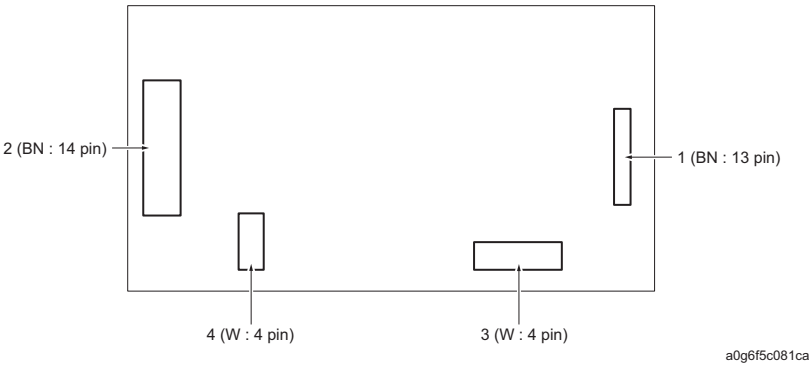
2.1.27 Scan accelerator board



2.1.28 PCI relay board



2.1.29 Relay board /A

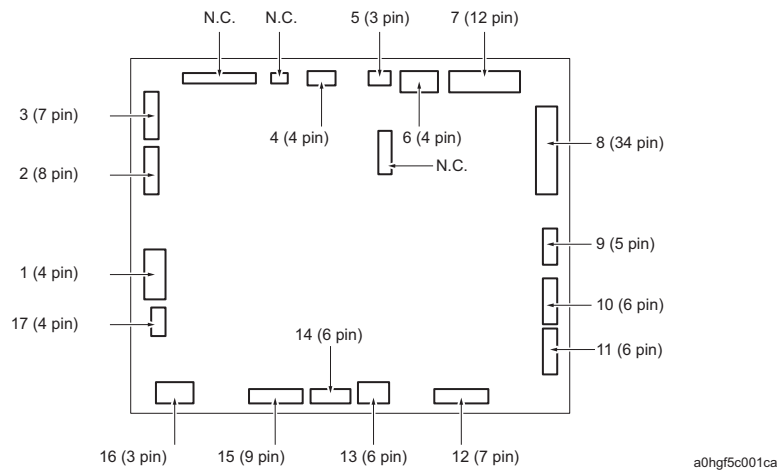


2.1.30 Relay board /U

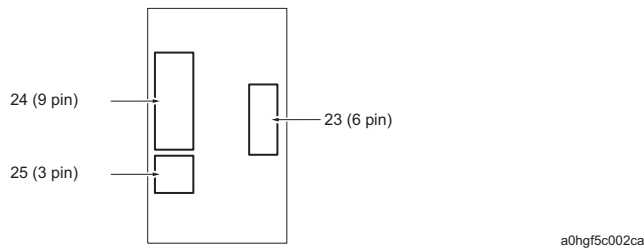


2.2 DF-615

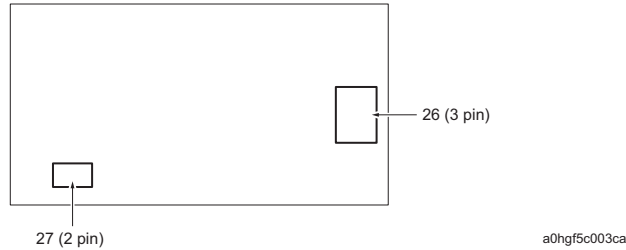
2.2.1 DF control board (DFCB)



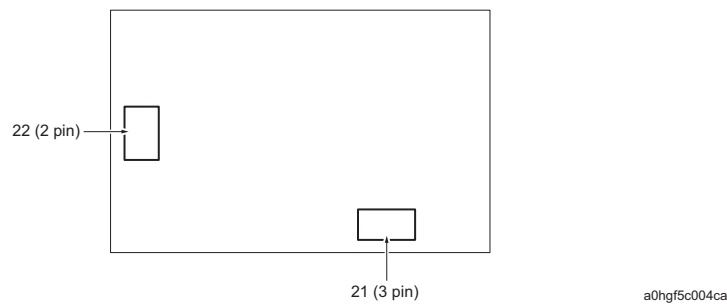
2.2.2 Tray board



2.2.3 Multi feed detection board /R

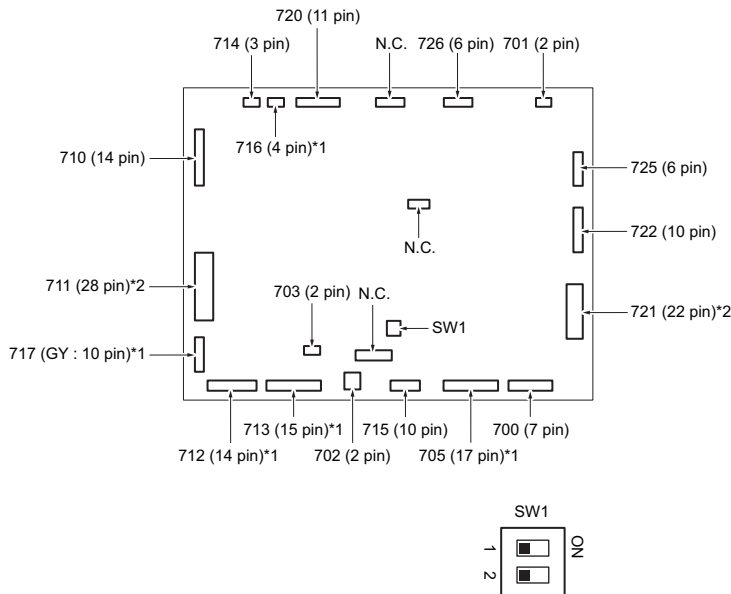


2.2.4 Multi feed detection board /S



2.3 PF-702/PP-701

2.3.1 PF drive board (PFDB)



a0gcf5c001ca

*1 The connector of the wiring harness side is black.

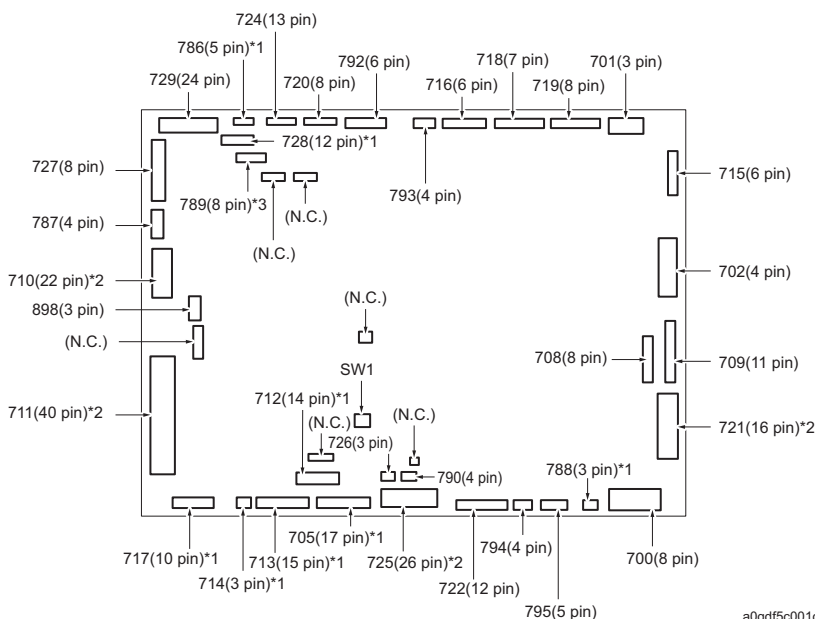
*2 The connector of the wiring harness side is gray.

Note

- Since the setting of DIP switch (SW1) is peculiar to the type, be sure not to change its setting.

2.4 PF-703/HT-505/FA-501

2.4.1 PF drive board (PFDB)



a0gdf5c001ca

*1 The connector of the wiring harness side is black.

*2 The connector of the wiring harness side is gray.

*3 The connector of the wiring harness side is blown.

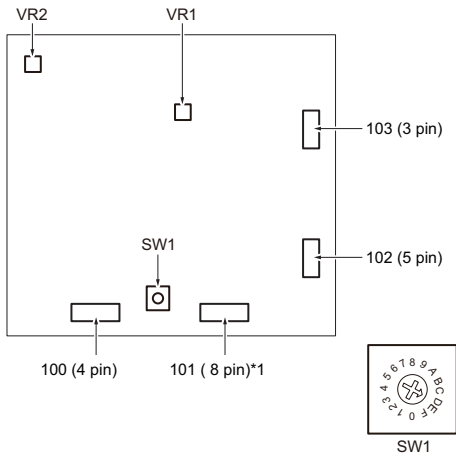
2.4.2 DC power supply /1 (DCPS/1)



a0gdf5c002ca

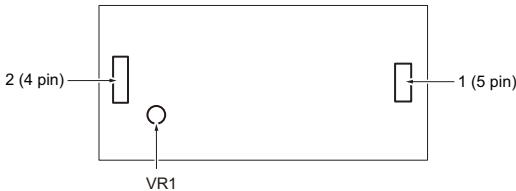
*1 The connector of the wiring harness side is black.

2.4.3 Multi feed detection drive board (MFDDDB) (FA-501)

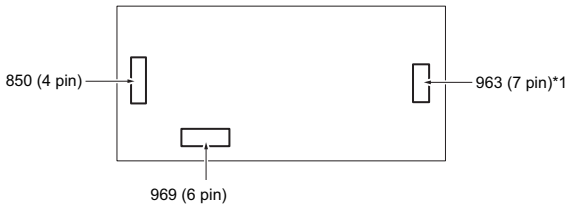


*1 The connector of the wiring harness side is black.

2.4.4 DC power supply /2 (DCPS/2) (FA-501)



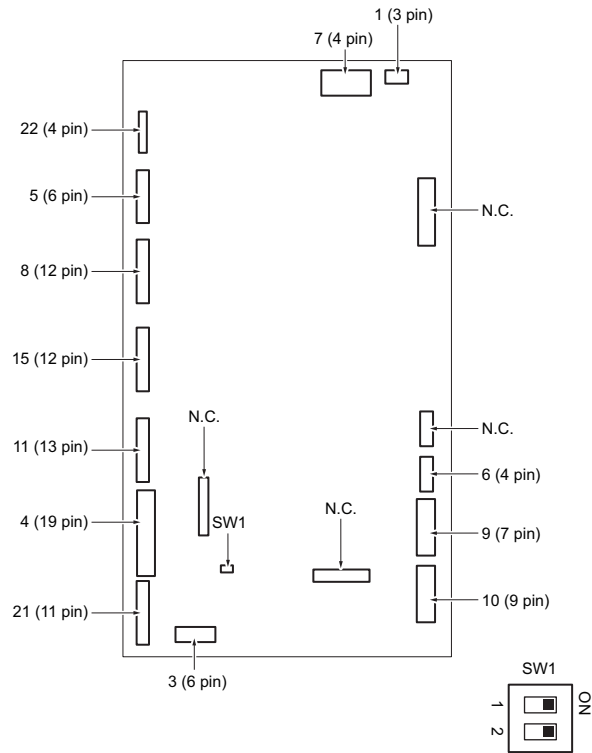
2.4.5 AC drive board /2 (ACDB/2) (HT-505)



*1 The connector of the wiring harness side is blown.

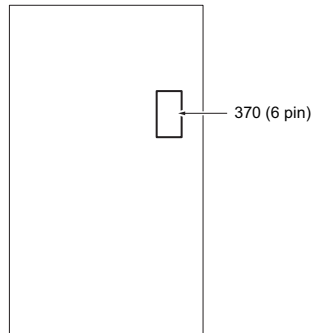
2.5 RU-506

2.5.1 RU control board (RUCB)



a0gef5c001ca

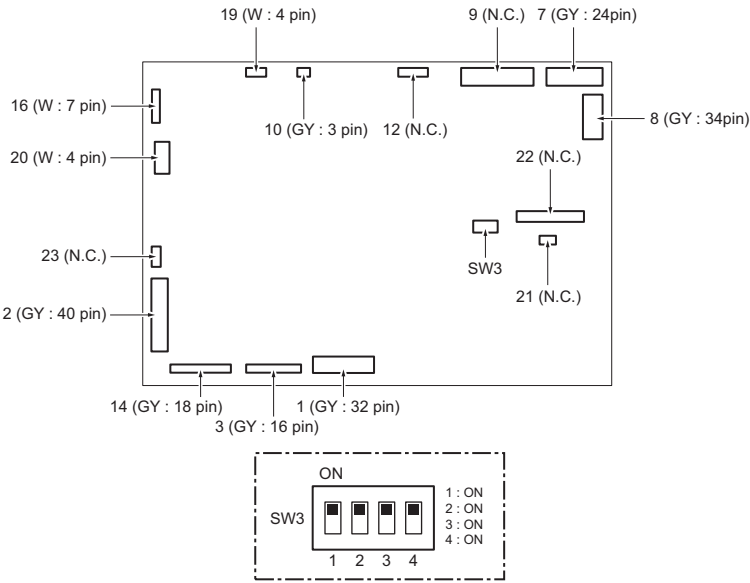
2.5.2 Jam indication board (JAMIB)



a0gef5c002ca

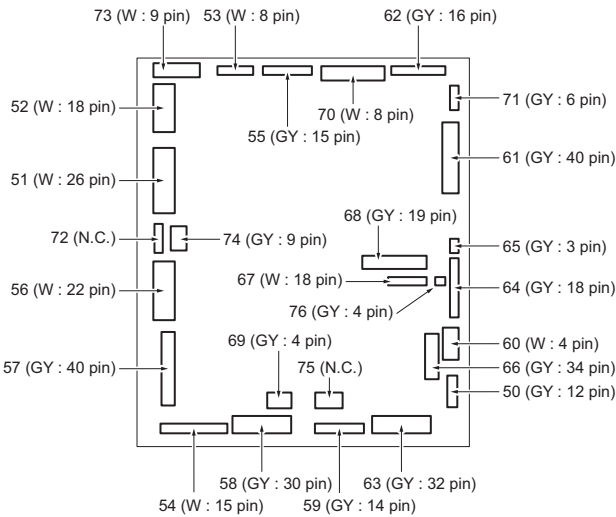
2.6 FS-521

2.6.1 FNS control board (FNSCB)



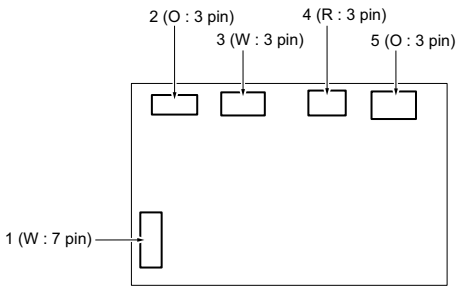
a0gyf5c005ca

2.6.2 FNS drive board (FNSDB)



a0gyf5c006ca

2.6.3 Stapler board (STB)



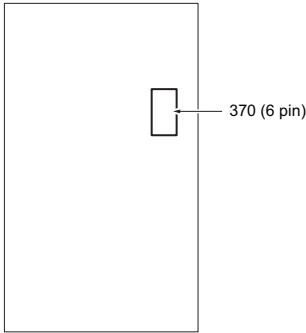
fs503fs5009c

2.6.4 Operation board (OB)



a0gyf5c007ca

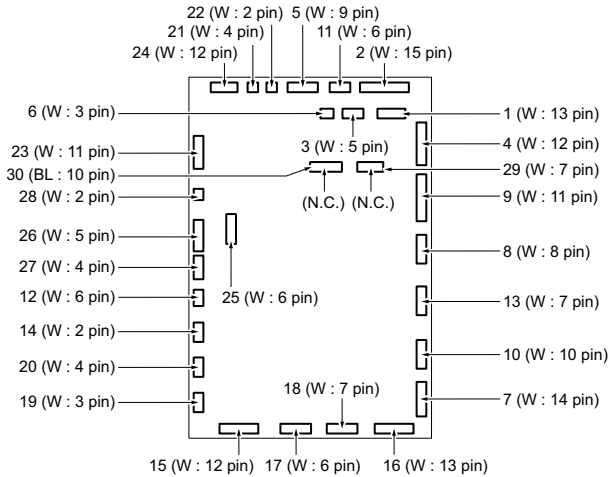
2.6.5 Jam indication board (JAMIB)



a0gyf5c008cb

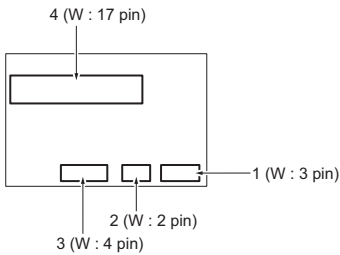
2.7 LS-505

2.7.1 LS control board (LSCB)



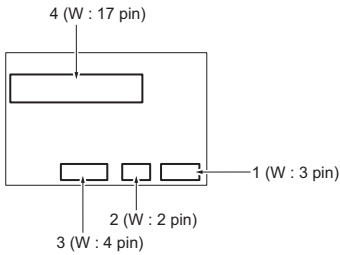
Is502fs5005c

2.7.2 Relay board /1 (RLB/1)



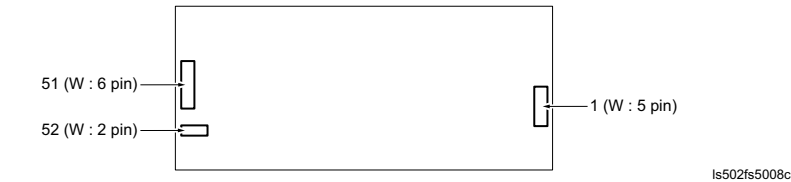
Is502fs5006c

2.7.3 Relay board /2 (RLB/2)



Is502fs5007c

2.7.4 DC power supply (DCPS)

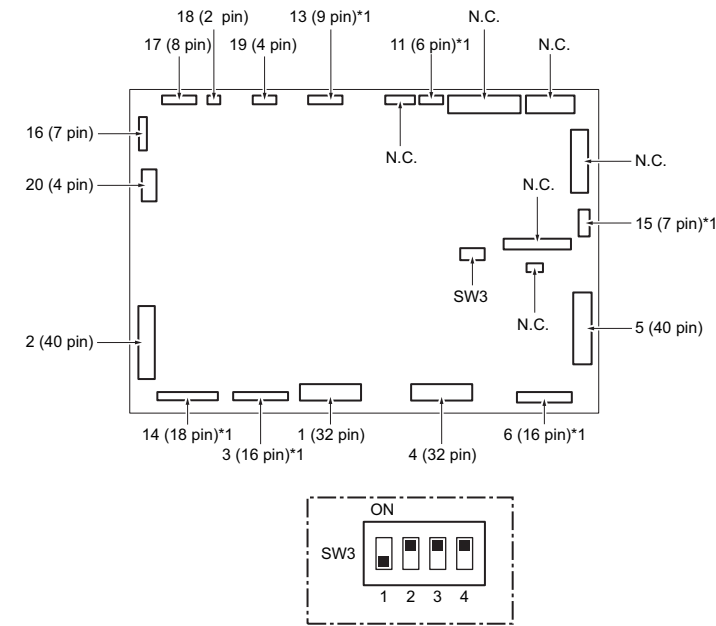


2.7.5 Relay board (RLB)

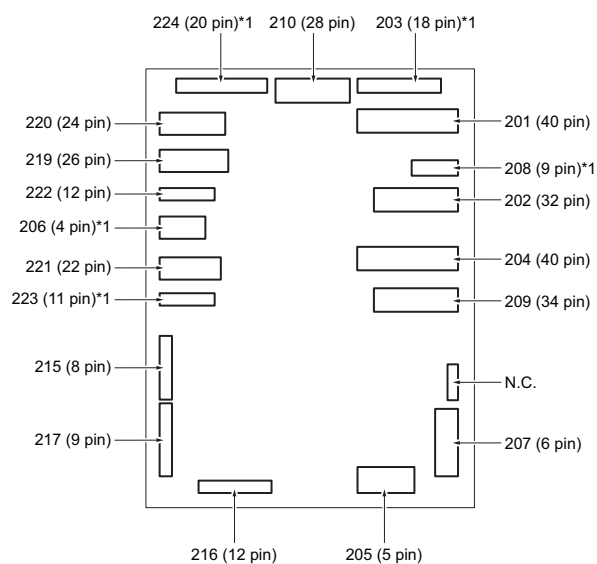


2.8 FD-503

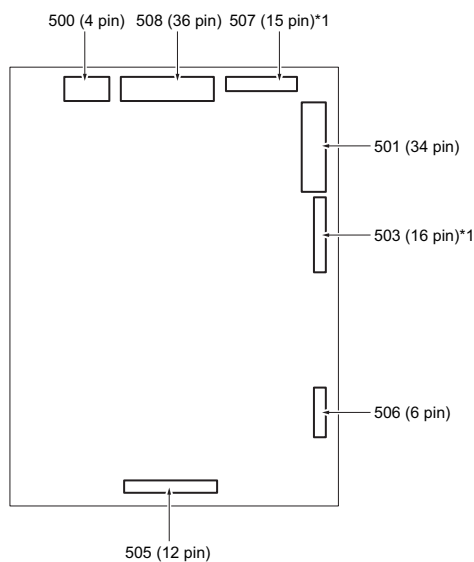
2.8.1 FD control board (FDCB)



*1 The connector of the wiring harness side is blown.

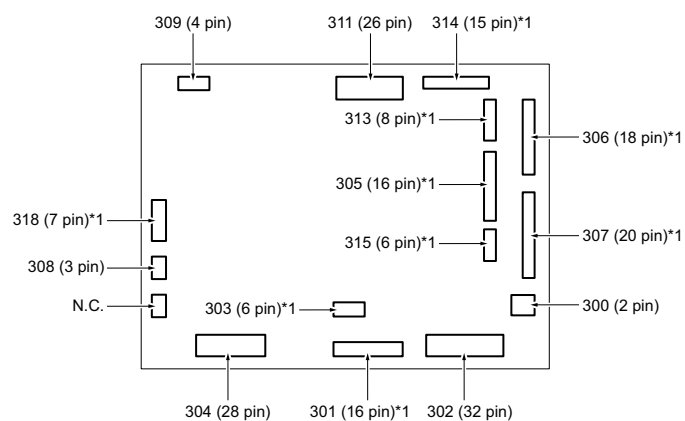
2.8.2 Punch drive board (PDB)

a0h0f5c003cb

2.8.3 Folding drive board (FDB)

a0h0f5c004ca

*1 The connector of the wiring harness side is blown.

2.8.4 PI drive board (PIDB)

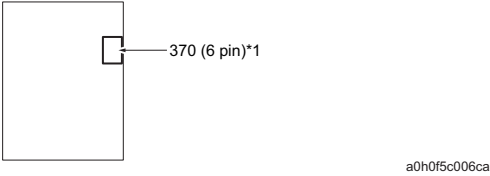
fd501fs5013c

*1 The connector of the wiring harness side is blown.

2.8.5 FD operation board (FDOB)

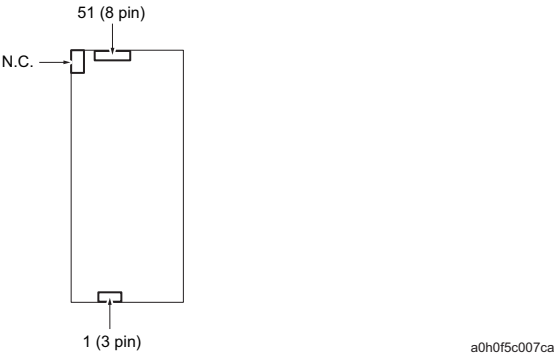


2.8.6 Jam indication board (JAMIB)

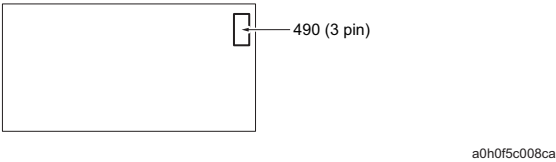


*1 The connector of the wiring harness side is blown.

2.8.7 DC power supply (DCPS)

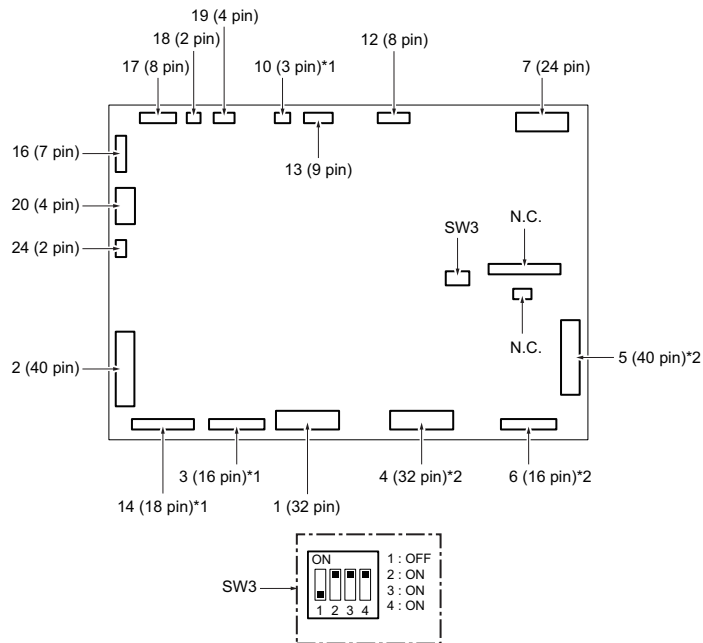


2.8.8 Multi feed detection board /1, /2 (MFDB1, 2)



2.9 SD-506

2.9.1 SD control board (SDCB)

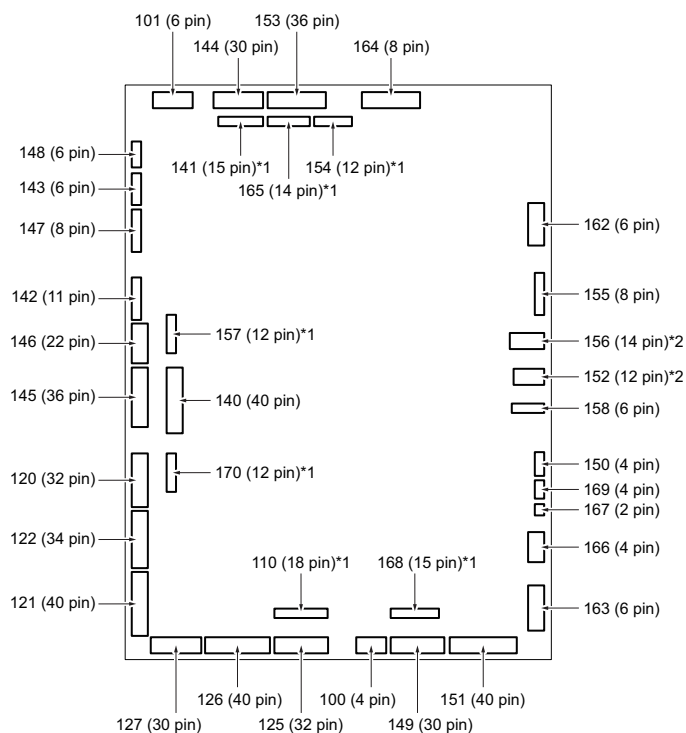


15anf5c020nd

*1 The connector of the wiring harness side is blown.

*2 The connector of the wiring harness side is blue.

2.9.2 SD drive board (SDDB)

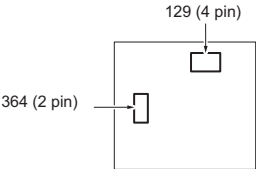


15anf5c021nb

*1 The connector of the wiring harness side is blown.

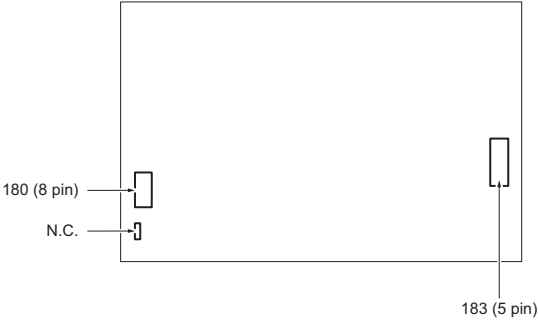
*2 The connector of the wiring harness side is gray.

2.9.3 SD drive board /2 (SDDB/2)



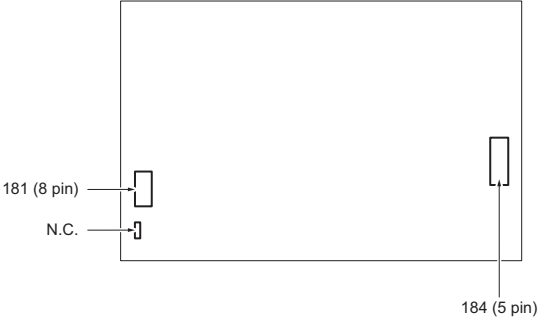
a0h2f5c008ca

2.9.4 DC power supply /1 (DCPS1)



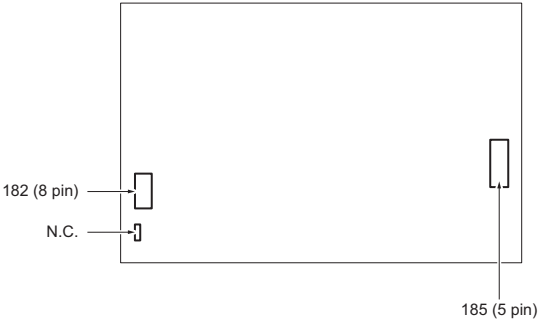
a0h2f5c009ca

2.9.5 DC power supply /2 (DCPS2)



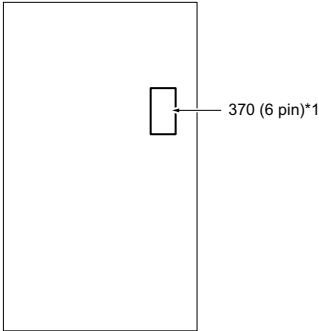
a0h2f5c010ca

2.9.6 DC power supply /3 (DCPS3)



a0h2f5c011ca

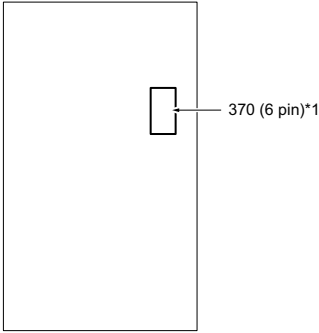
2.9.7 Jam indication board /1 (JAMIB/1)



a0h2f5c012ca

*1 The connector of the wiring harness side is blown.

2.9.8 Jam indication board /2 (JAMIB/2)

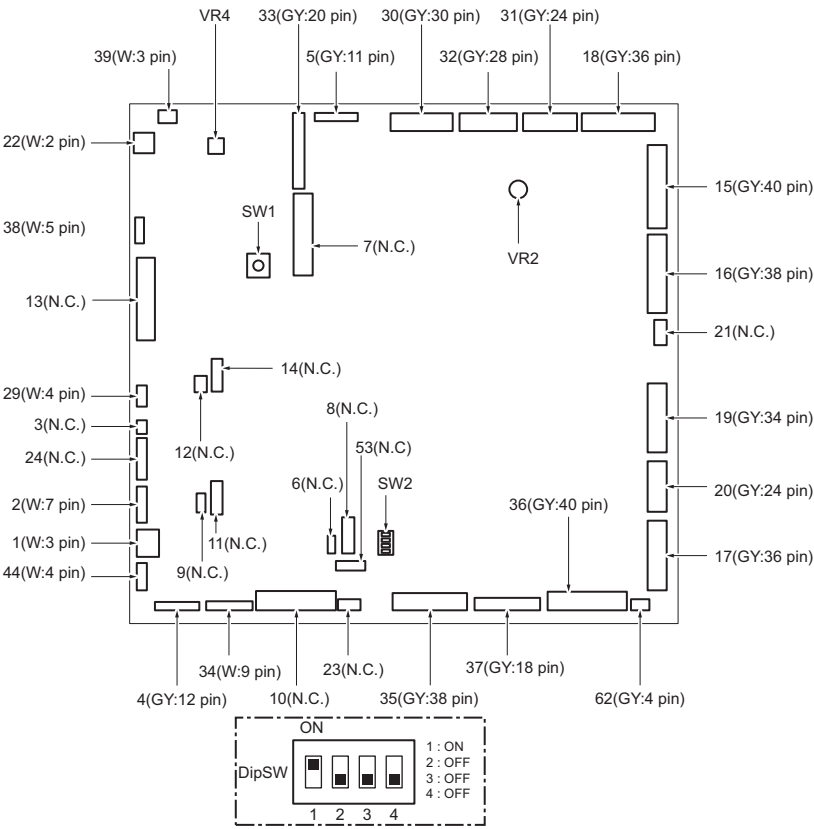


a0h2f5c013ca

*1 The connector of the wiring harness side is blown.

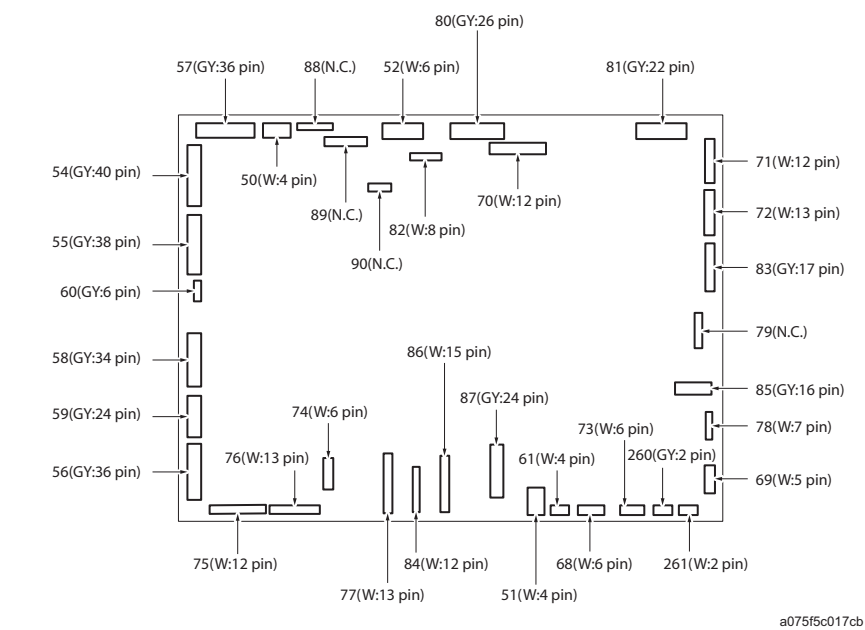
2.10 PB-502

2.10.1 PB control board (PBCB)

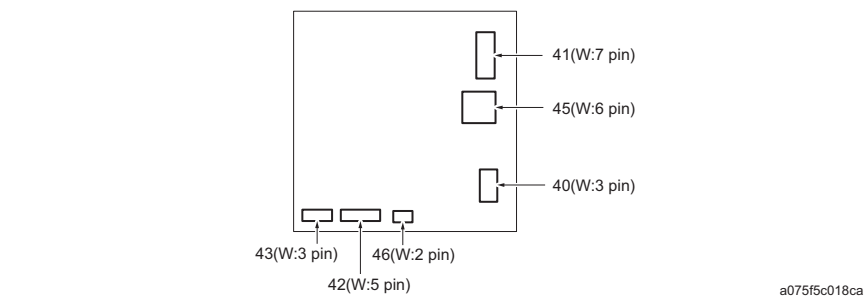


a075f5c016cc

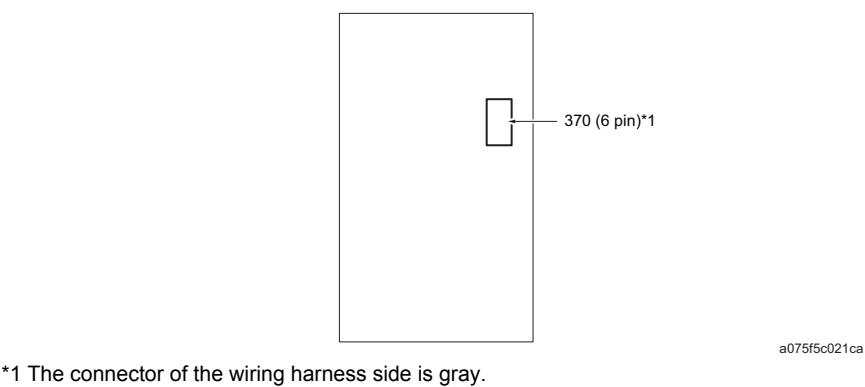
2.10.2 PB drive board (PBDB)



2.10.3 AC drive board (ACDB)

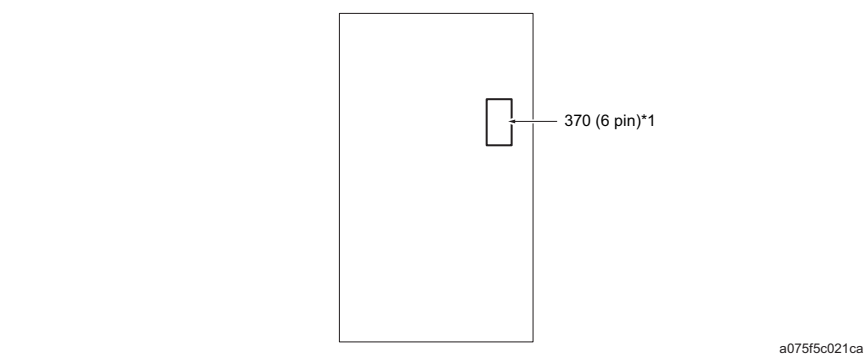


2.10.4 Jam indication board /1 (JAMB1)



*1 The connector of the wiring harness side is gray.

2.10.5 Jam indication board /2 (JAMB2)



*1 The connector of the wiring harness side is white.

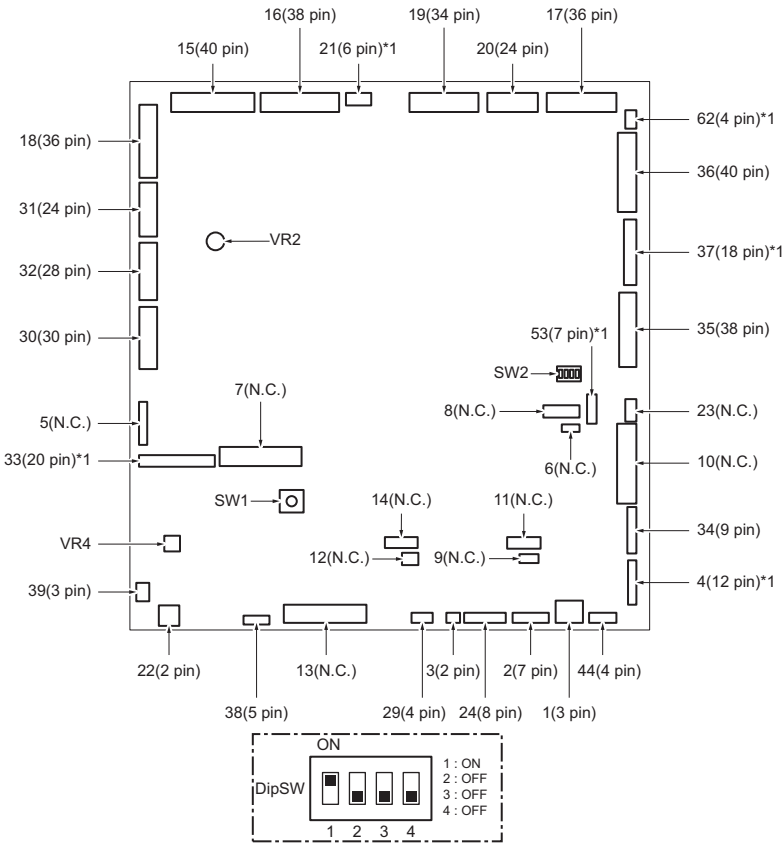
2.10.6 Booklet stock operation board (OB2)



a075f5c023ca

2.11 PB-503

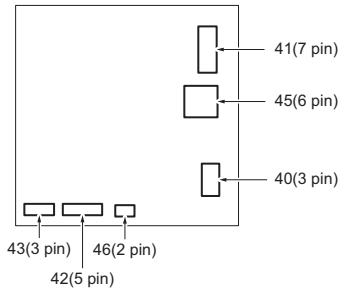
2.11.1 PB control board (PBCB)



a15xf5c001ca

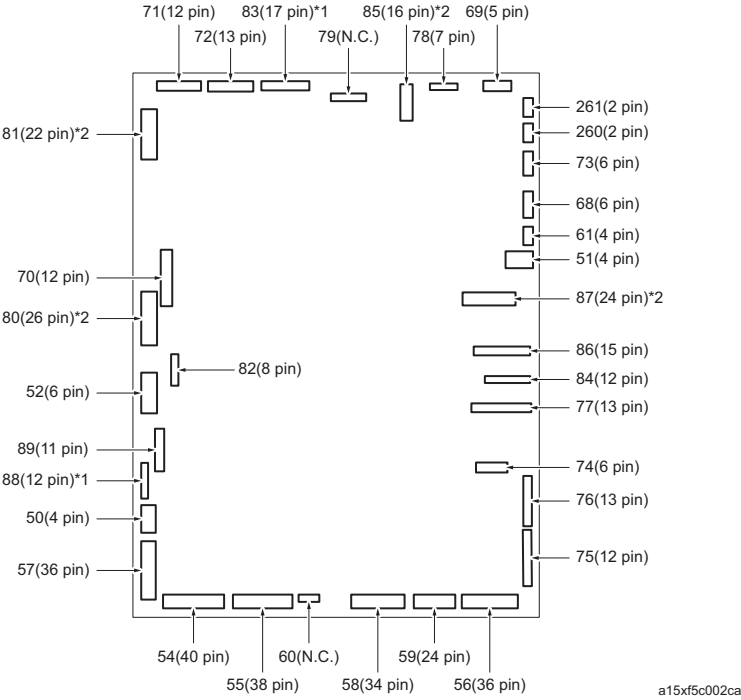
*1 The connector of the wiring harness side is blown.

2.11.2 AC drive board (ACDB)



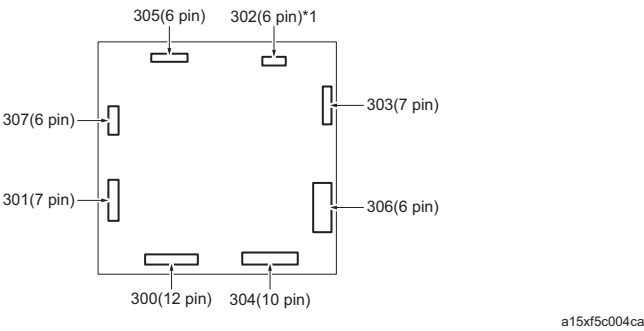
a15xf5c003ca

2.11.3 PB drive board /1 (PBDB1)



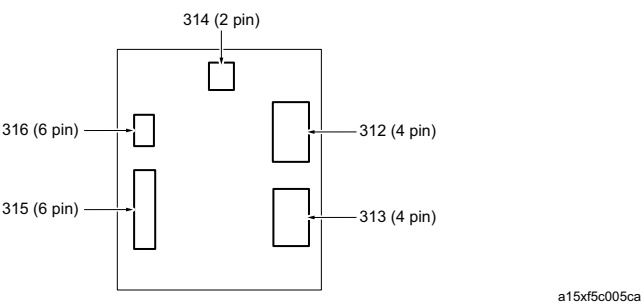
*1 The connector of the wiring harness side is blown.
*2 The connector of the wiring harness side is gray.

2.11.4 PB drive board /2 (PBDB2)

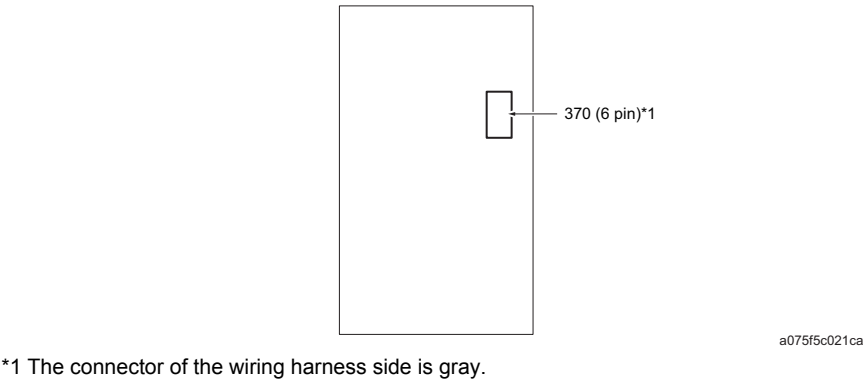


*1 The connector of the wiring harness side is blown.

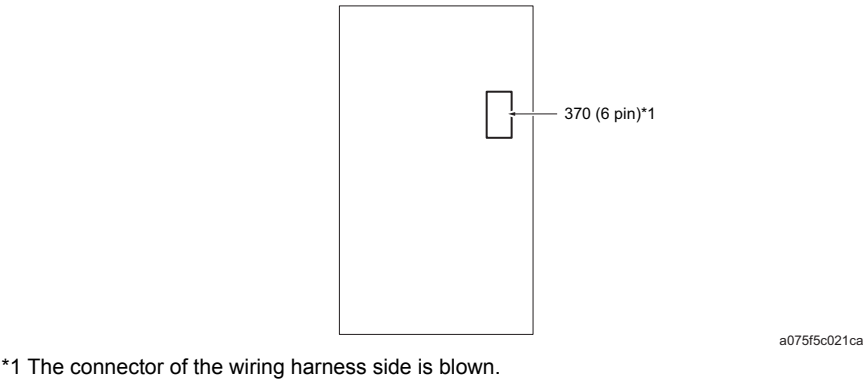
2.11.5 PB drive board /3 (PBDB3)



2.11.6 Jam indication board /1 (JAMB1)



2.11.7 Jam indication board /2 (JAMB2)



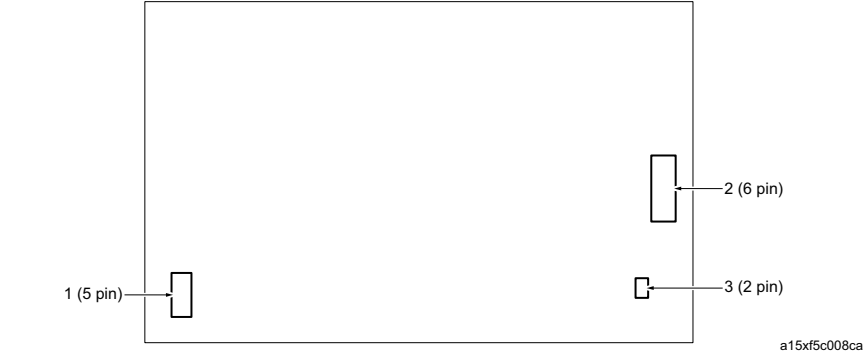
2.11.8 Manual operation board (OB1)



2.11.9 Booklet stock operation board (OB2)



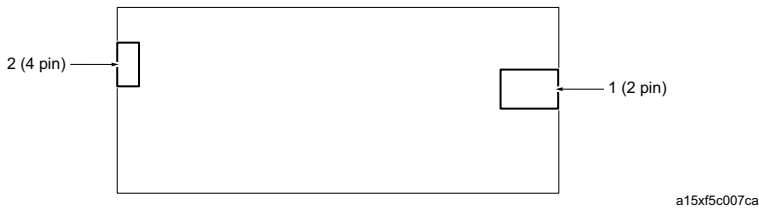
2.11.10 DC power supply /1 (DCPU/1)



2.11.11 DC power supply /2 (DCPU/2)



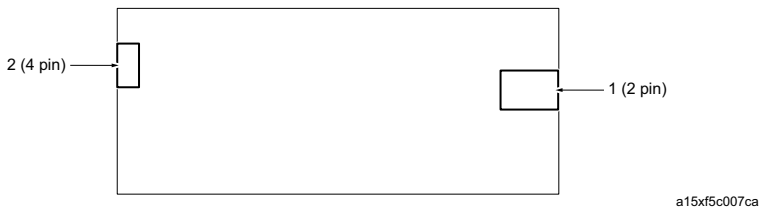
2.11.12 DC power supply /3 (DCPU/3)

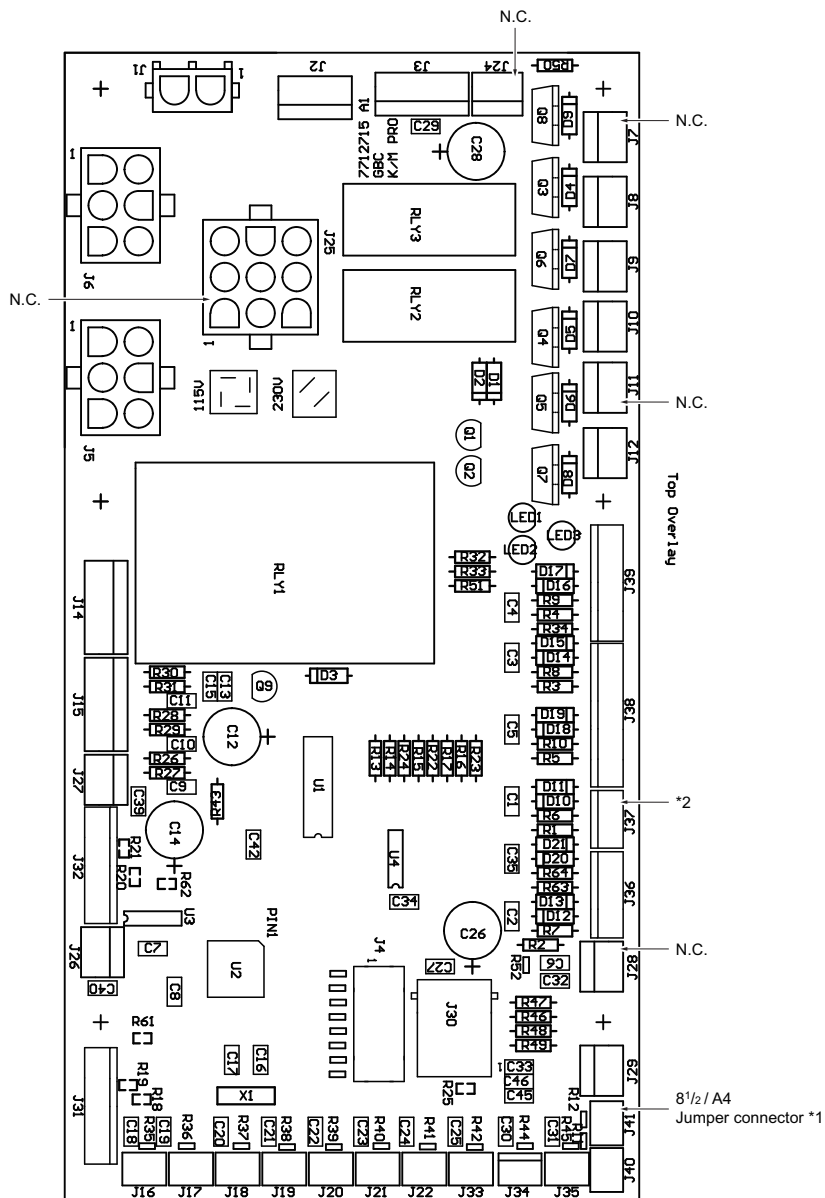


2.11.13 DC power supply /4 (DCPU/4)



2.11.14 DC power supply /5 (DCPU/5)



2.12 GP-501**2.12.1 Punch Controller PCB**

*1 Only for A4 base. On A4 base unit, jumper shorts 2 pins to designate A4 paper size to processor.

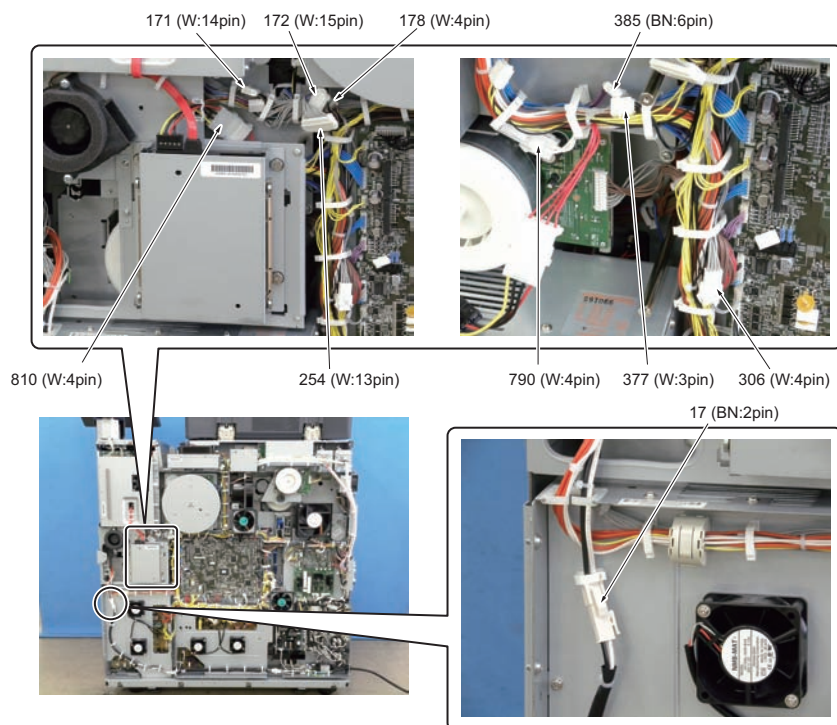
*2 1200/1200P/1051/1250/1250P/1052/951/950: Use 4-pin connector (Default)

C6501/C6501P/C65hc/C8000/C7000/C7000P/C70hc/C6000/C6000L: Use 2-pin connector

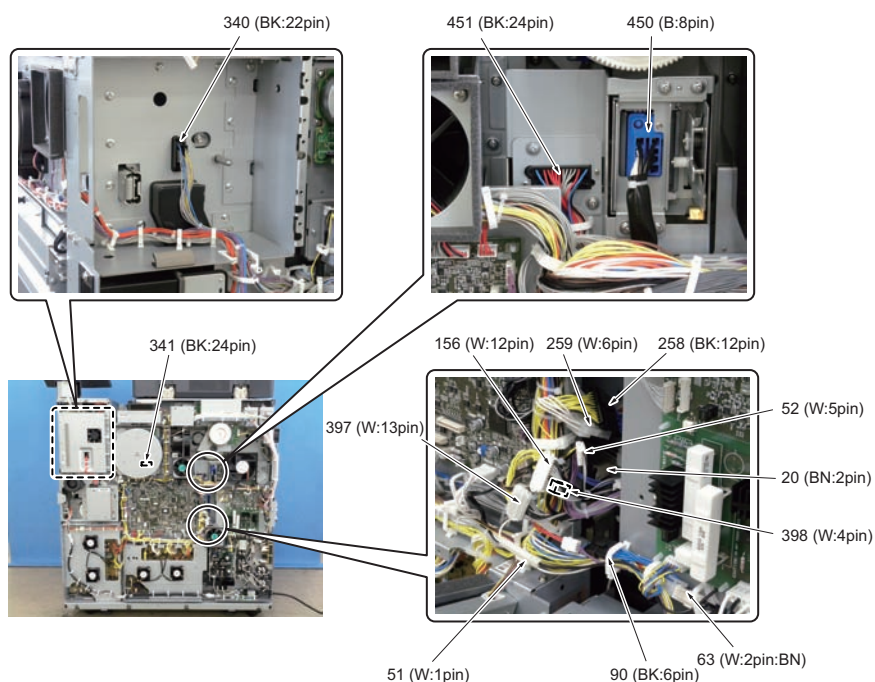
3. RELAY CONNECTOR LAYOUT DRAWING

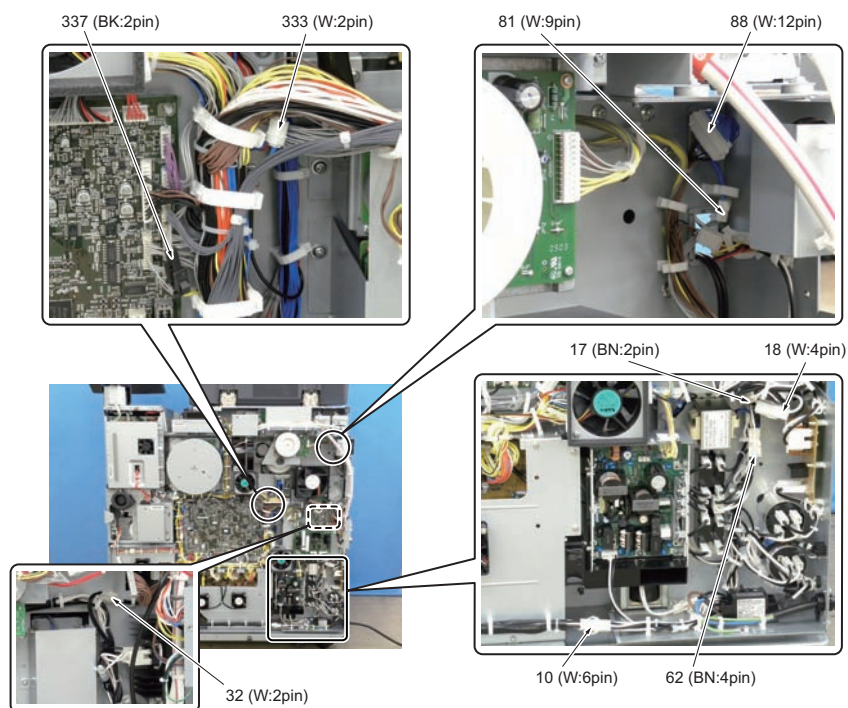
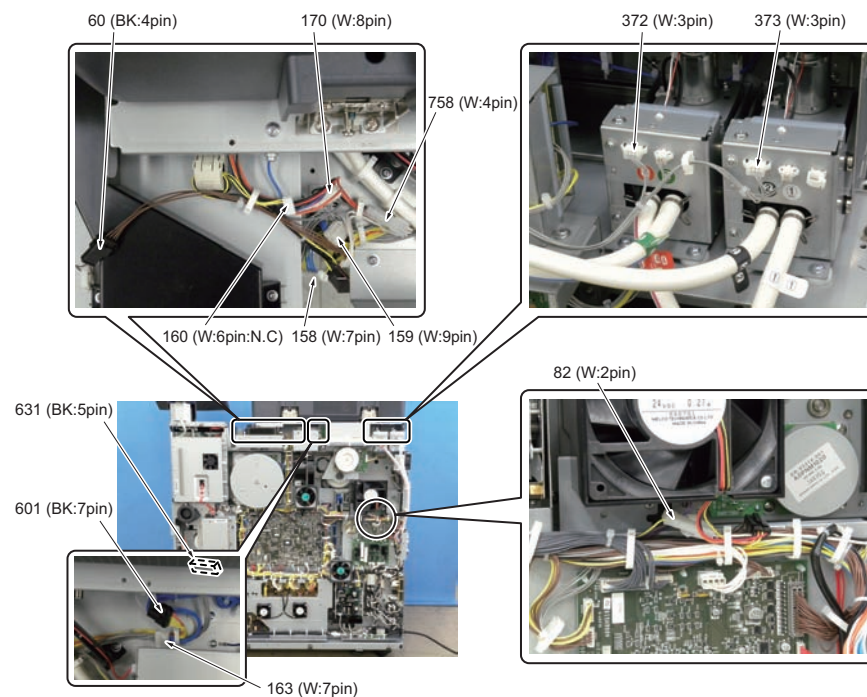
3.1 bizhub PRO 1200/1200P/1051

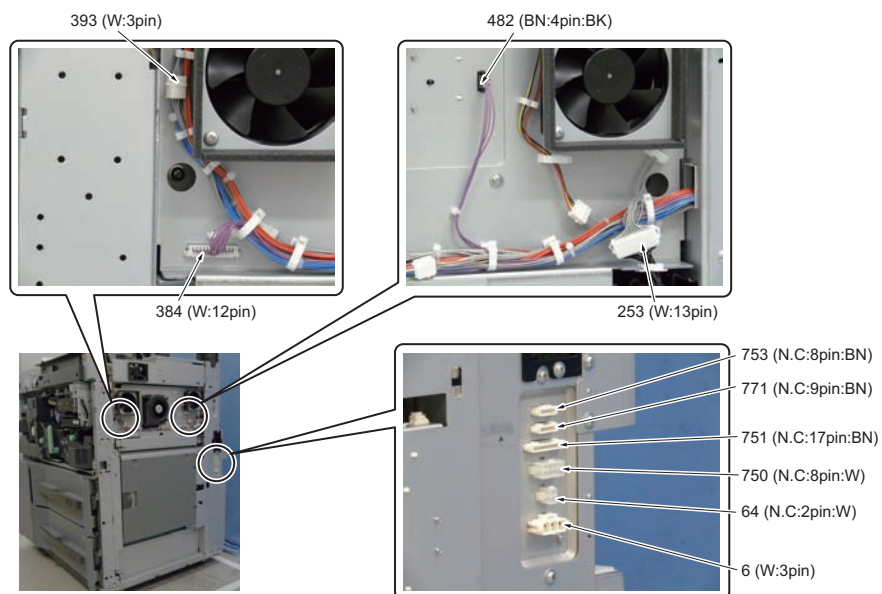
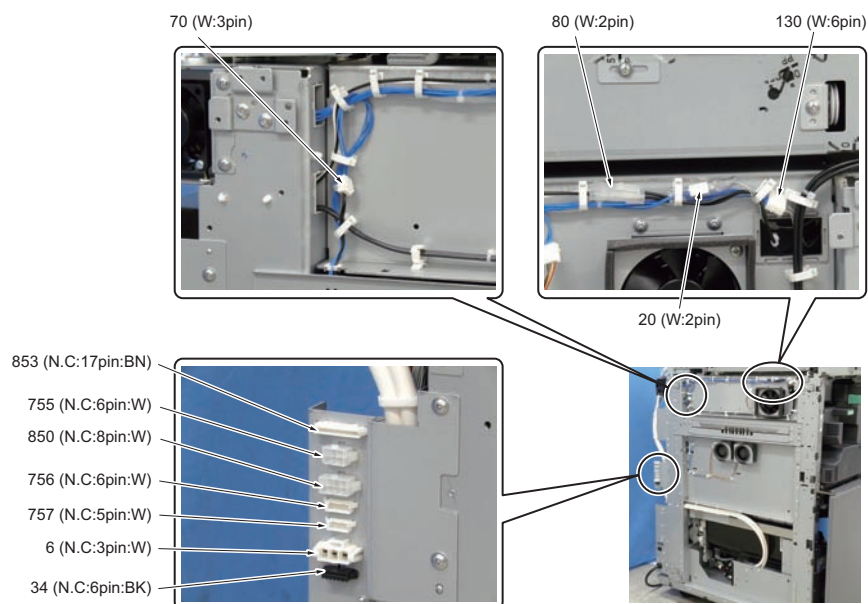
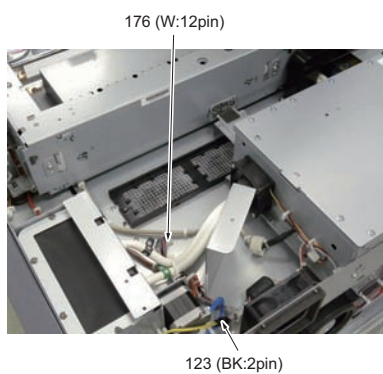
3.1.1 Main body rear side /1

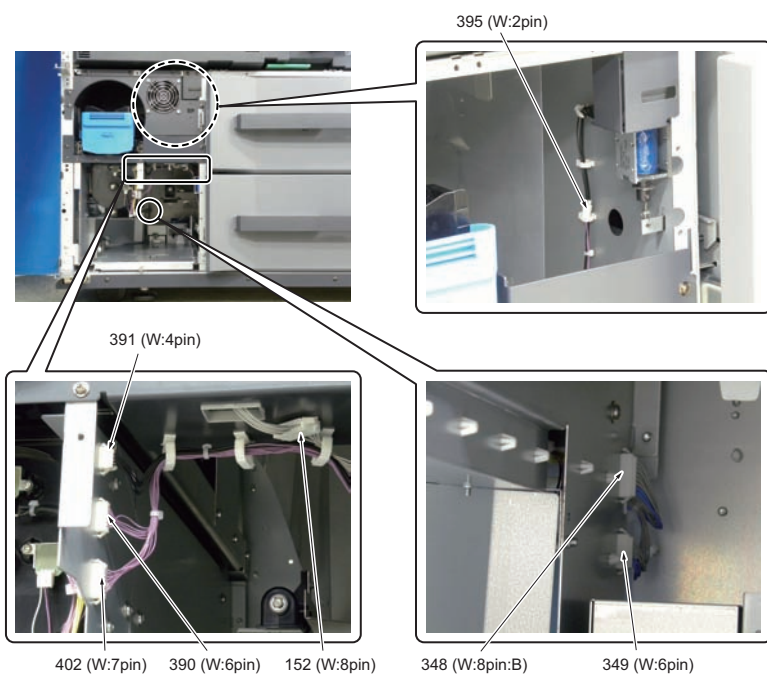
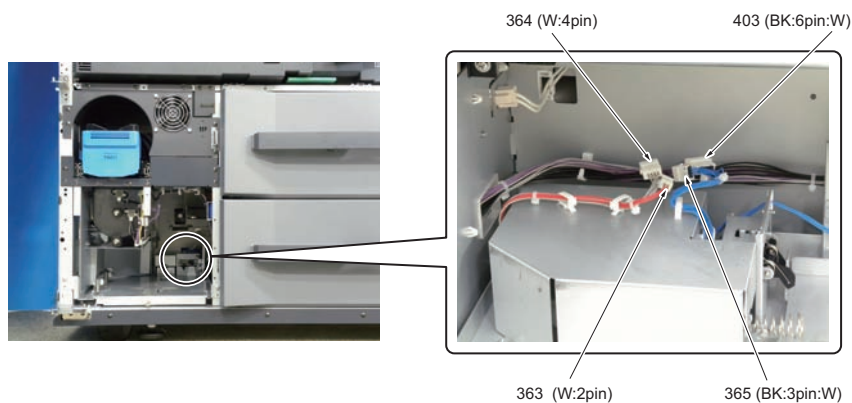


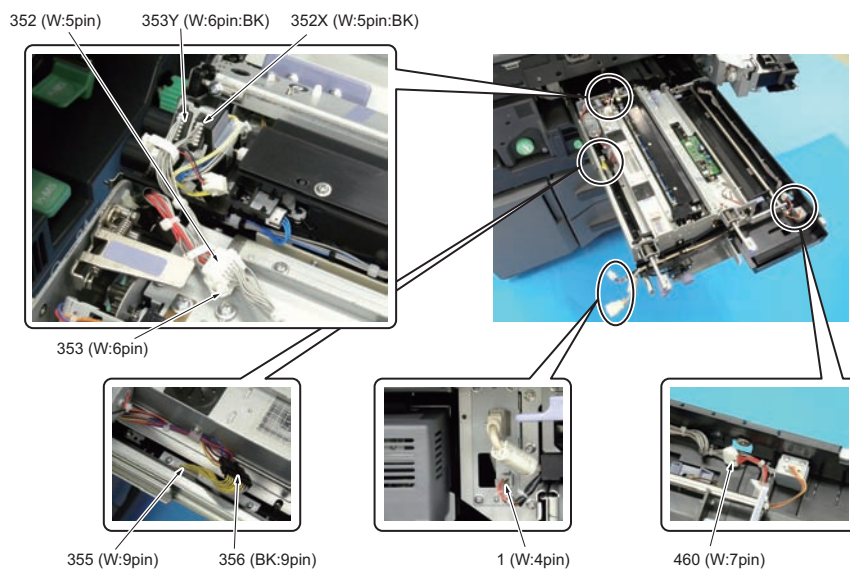
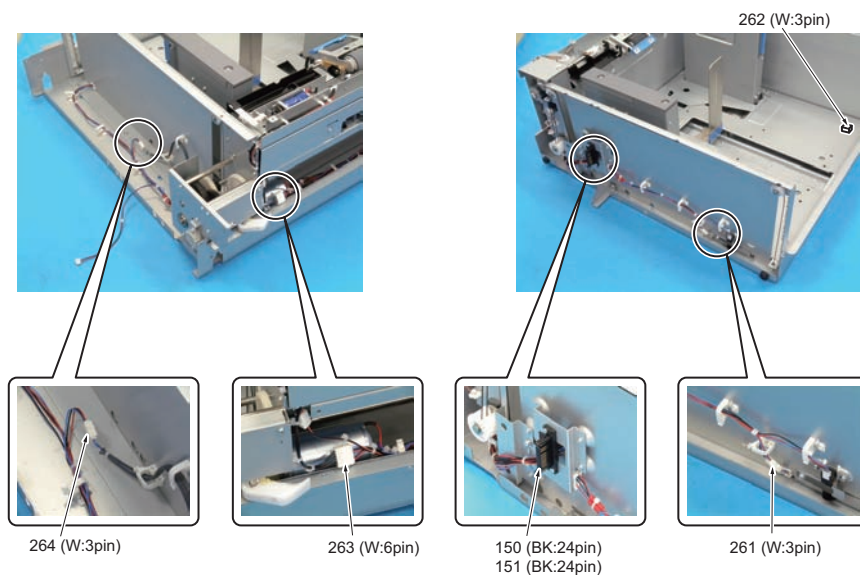
3.1.2 Main body rear side /2

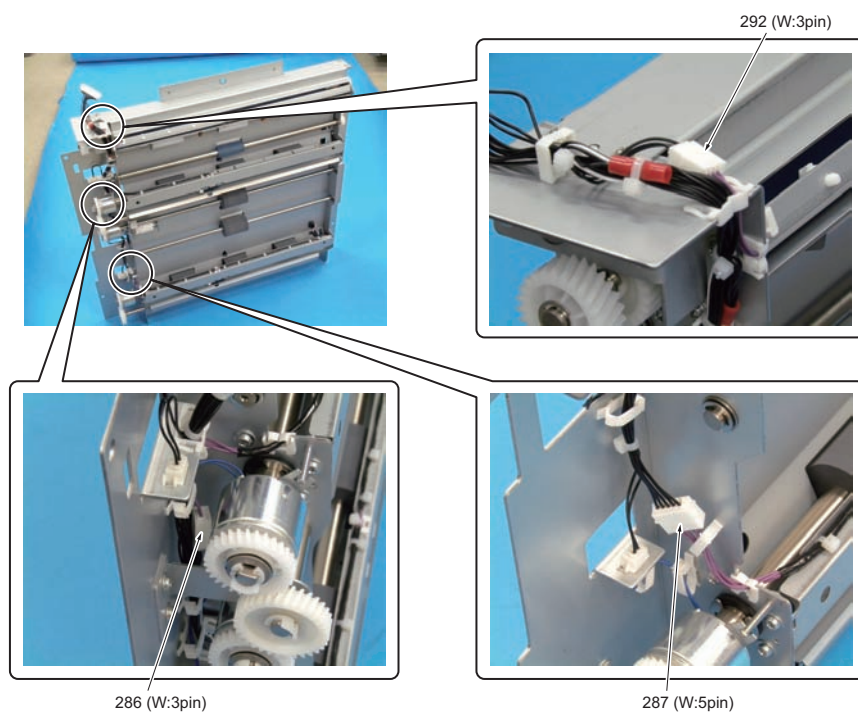
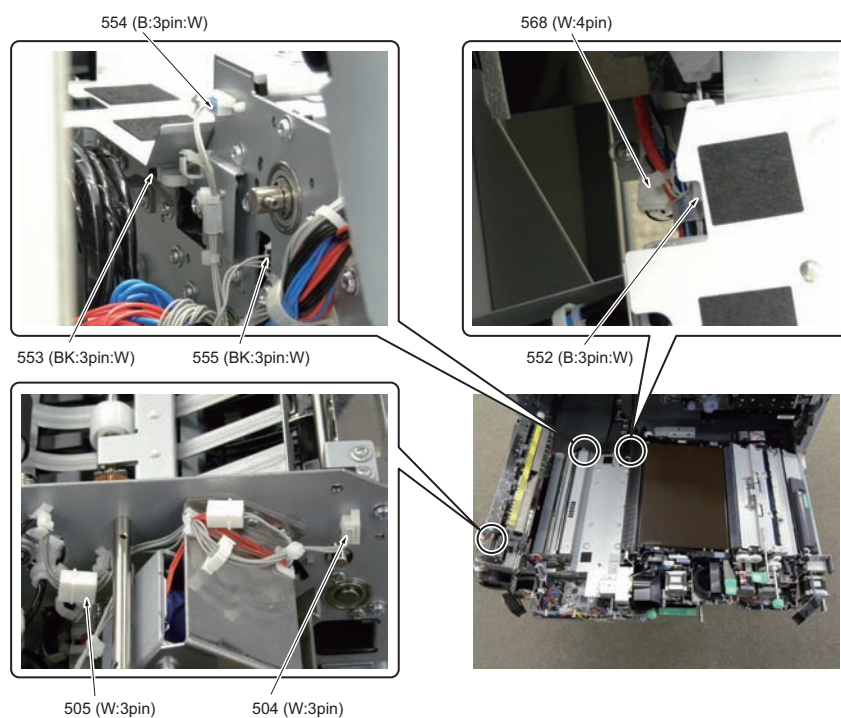


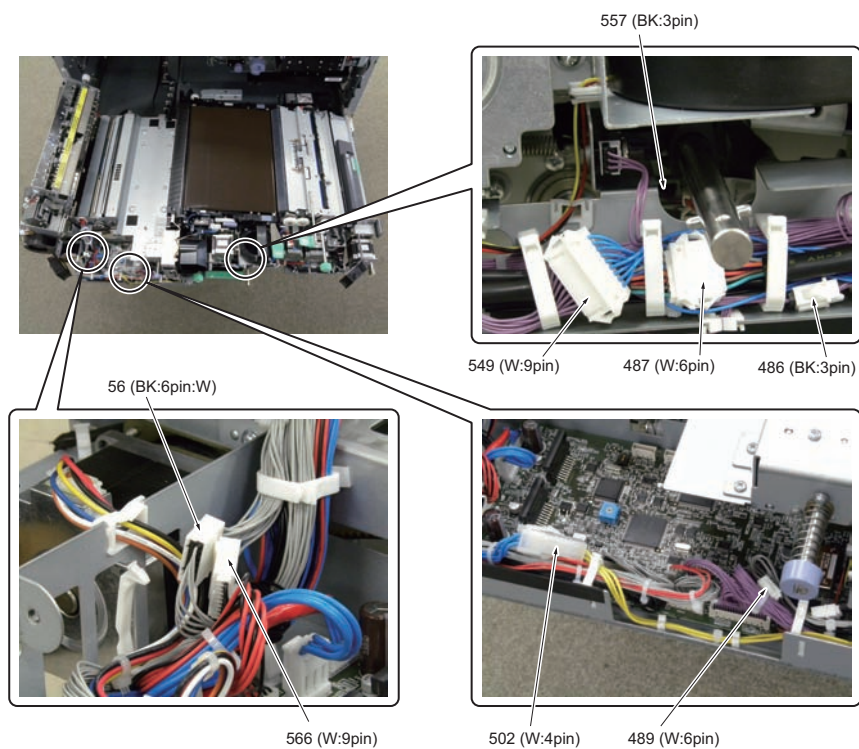
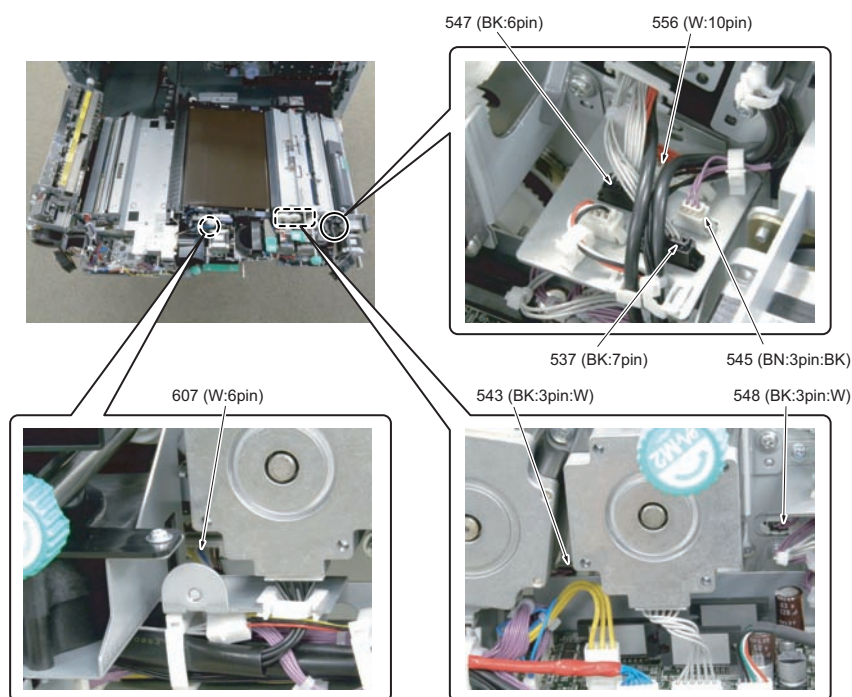
3.1.3 Main body rear side /3**3.1.4 Main body rear side /4**

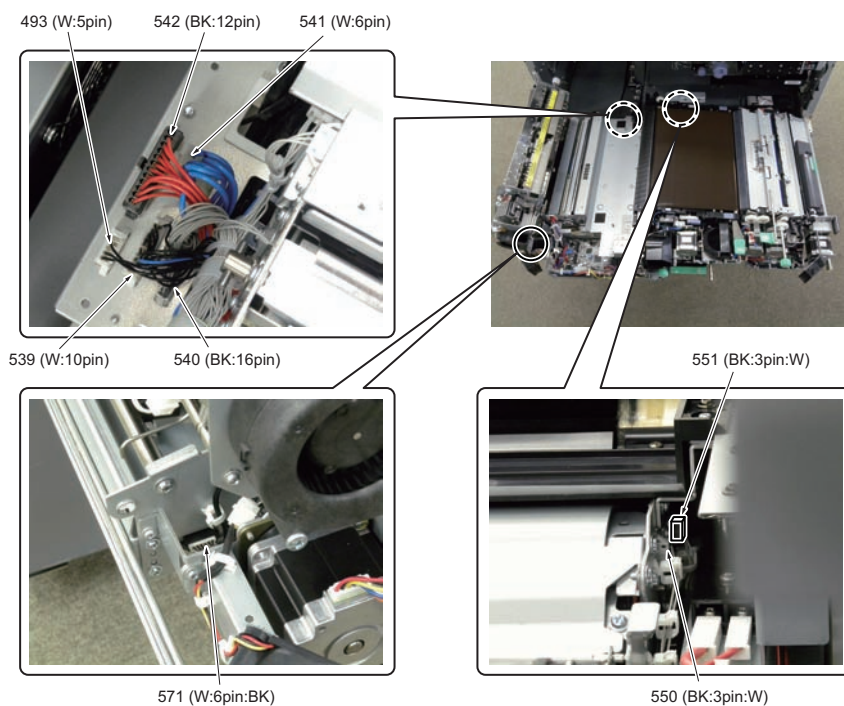
3.1.5 Main body right side**3.1.6 Main body left side****3.1.7 Main body upper surface**

3.1.8 Toner supply section /1**3.1.9 Toner supply section /2****3.1.10 Toner supply section /3**

3.1.11 Photo conductor section**3.1.12 Paper feed section**

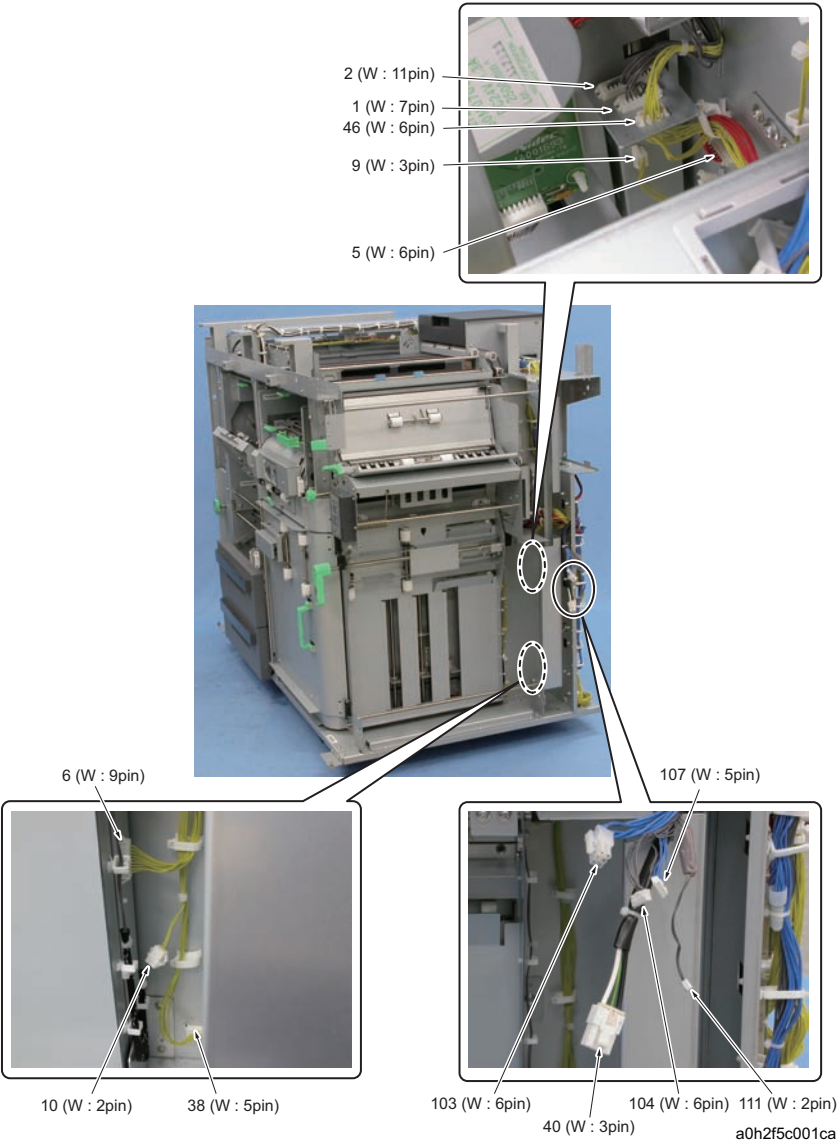
3.1.13 Vertical conveyance section**3.1.14 Registration section****3.1.15 Duplex section /1**

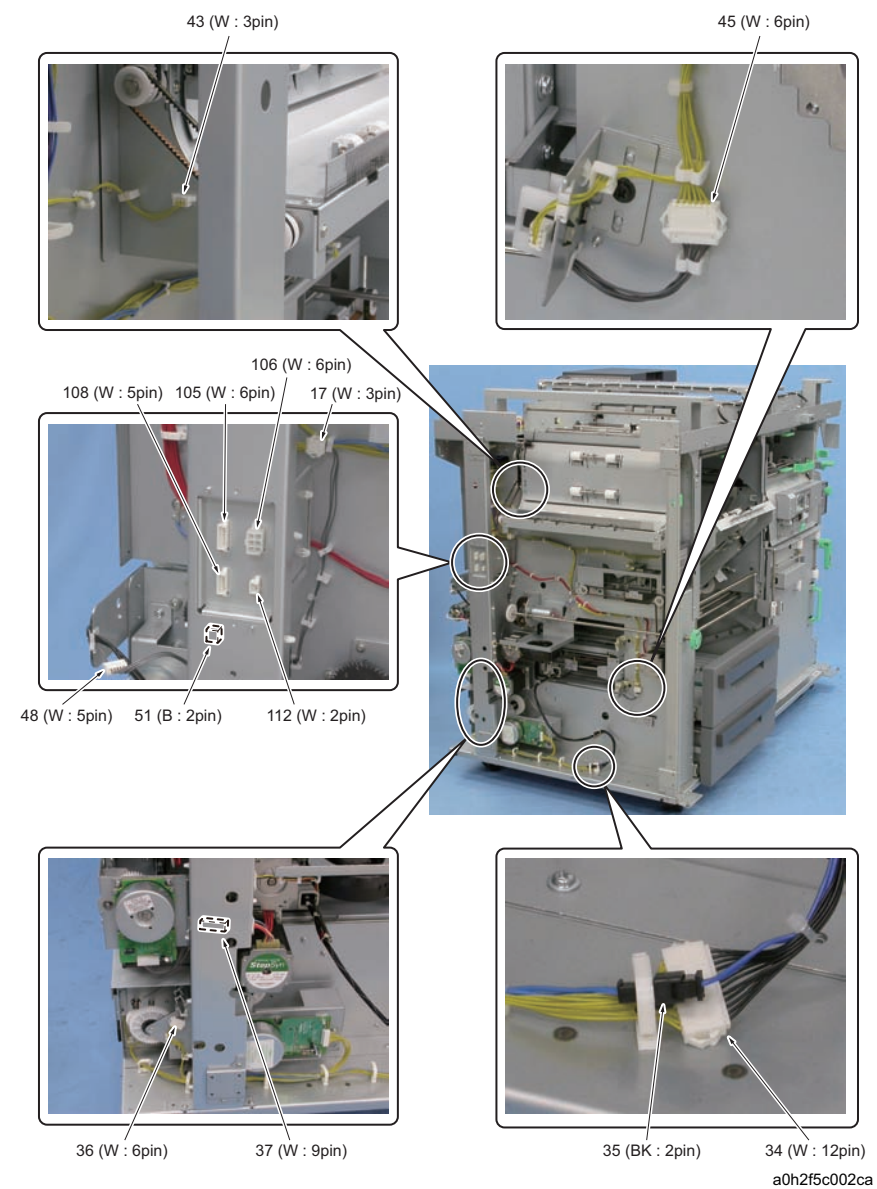
3.1.16 Duplex section /2**3.1.17 Duplex section /3**

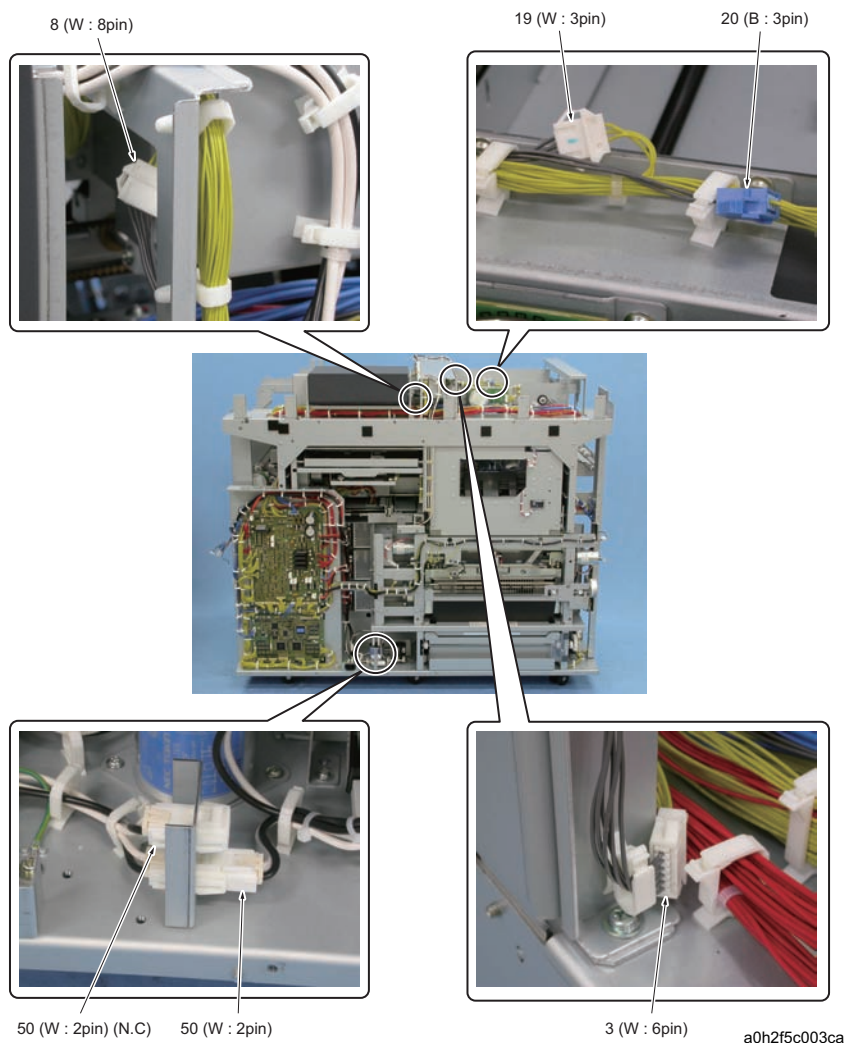
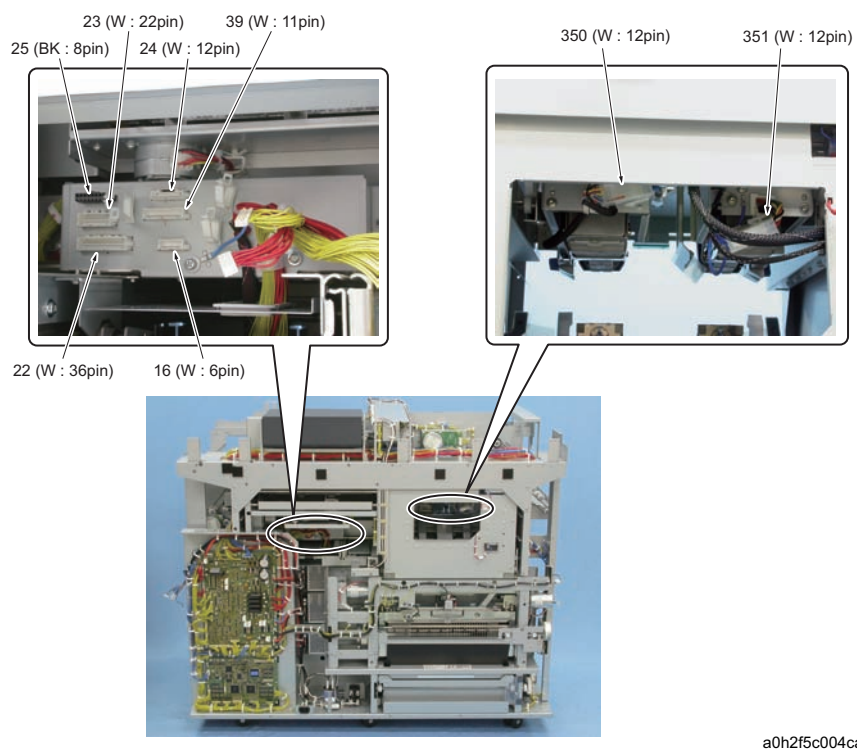
3.1.18 Duplex section /4

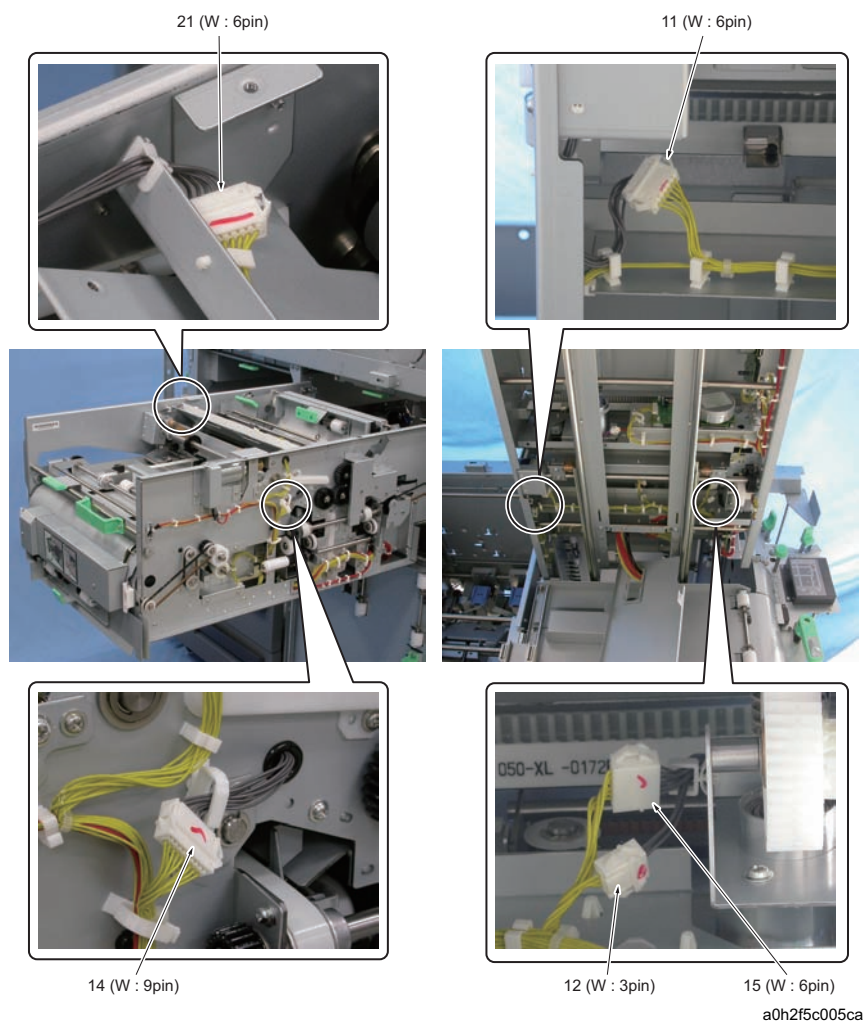
3.2 SD-506

3.2.1 Right side

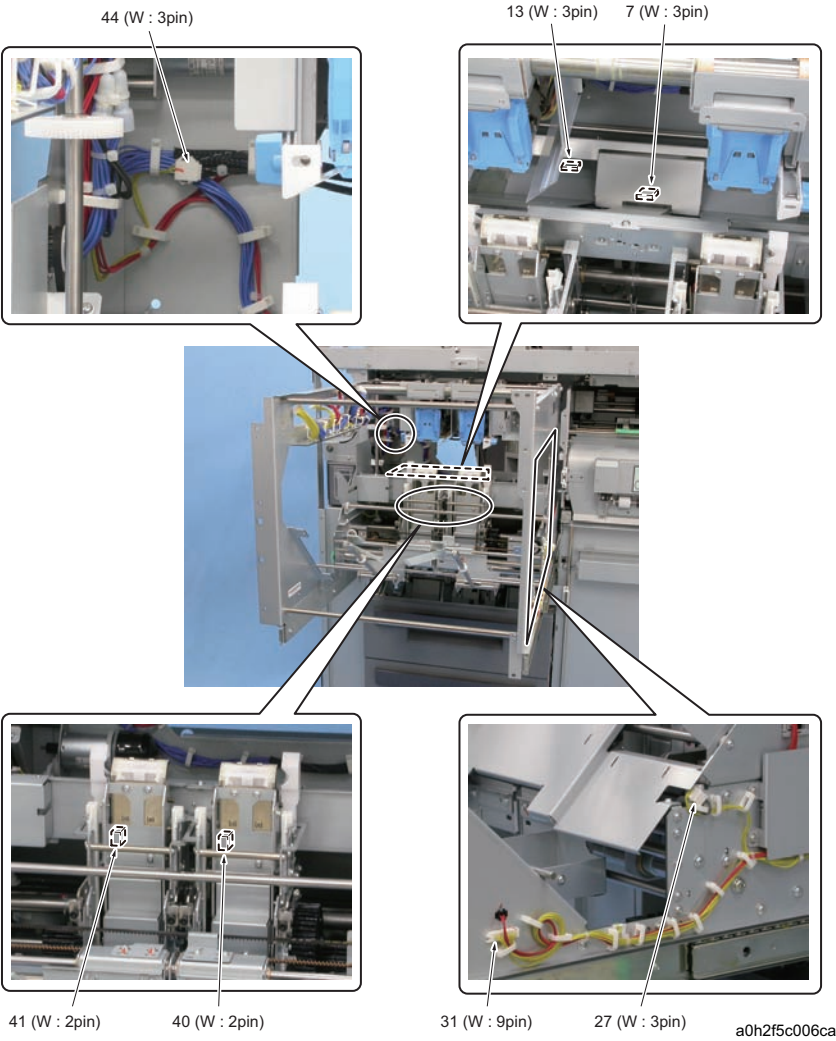


3.2.2 Left side

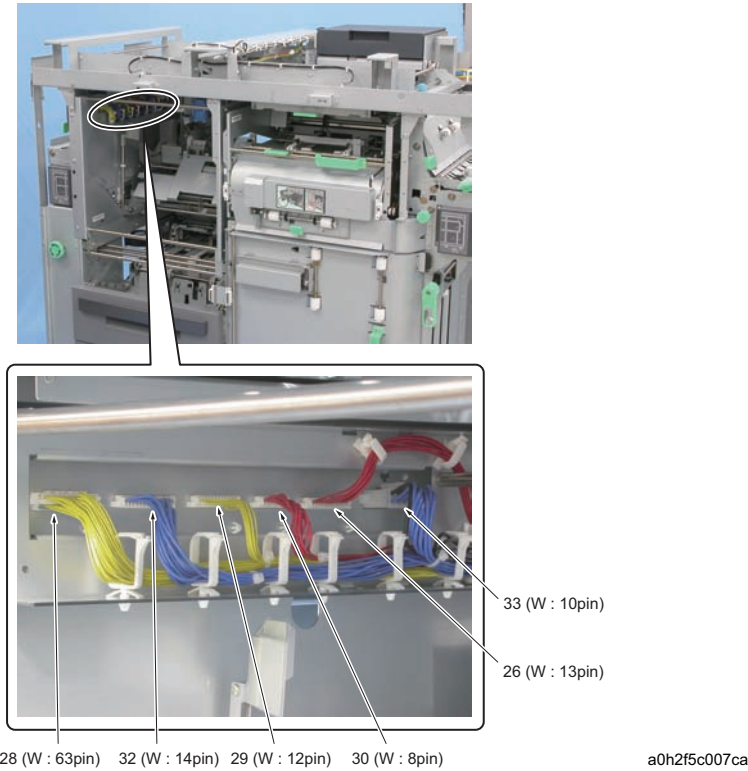
3.2.3 Rear side-1**3.2.4 Rear side-2**

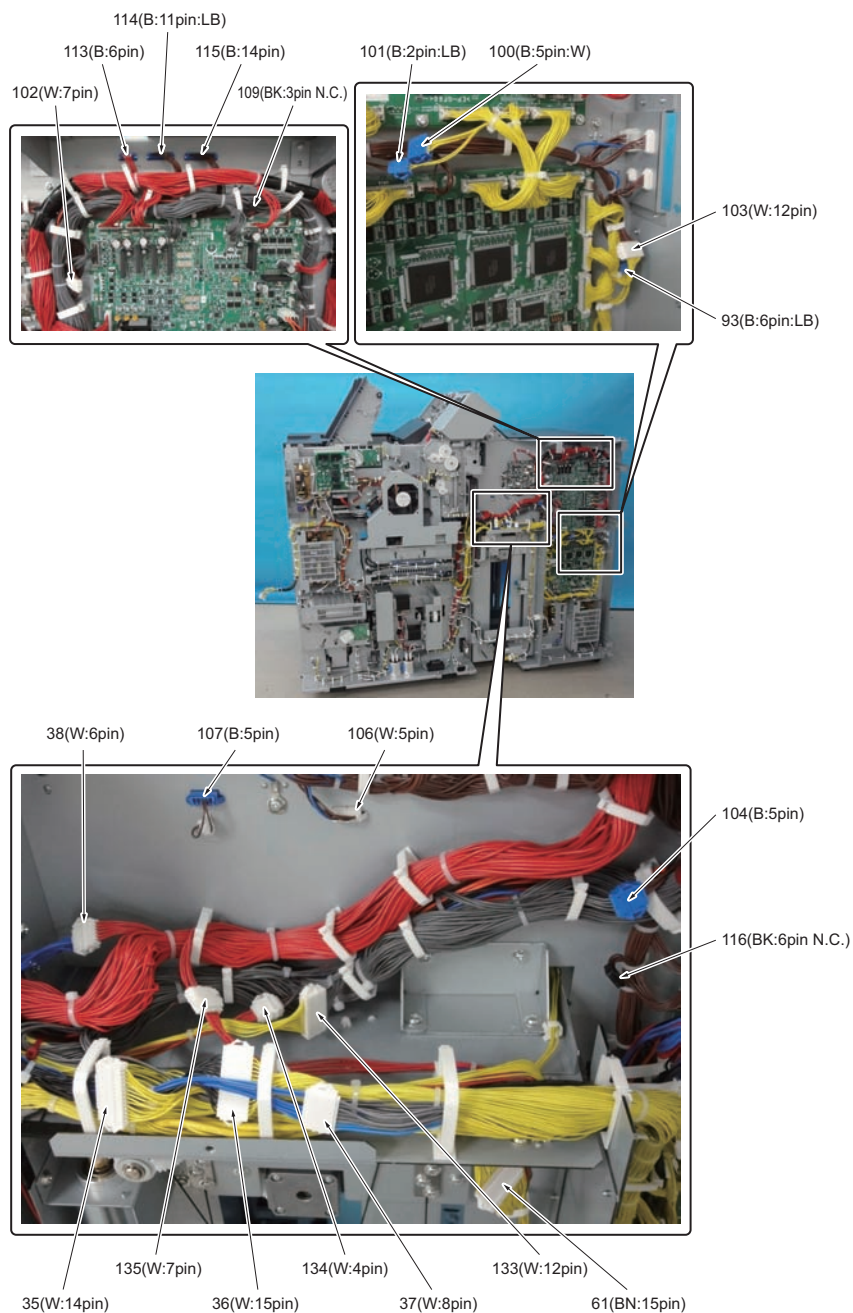
3.2.5 Folding section

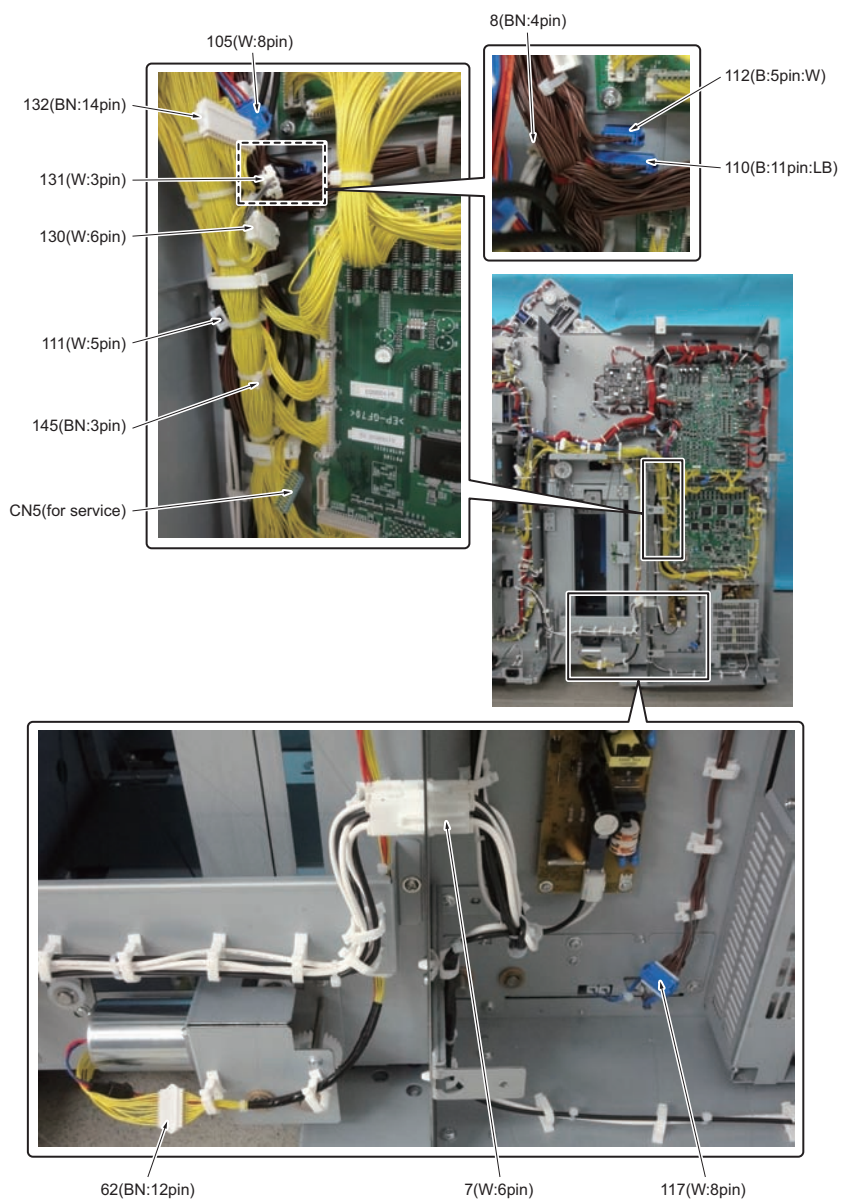
3.2.6 Saddle stitching section-1



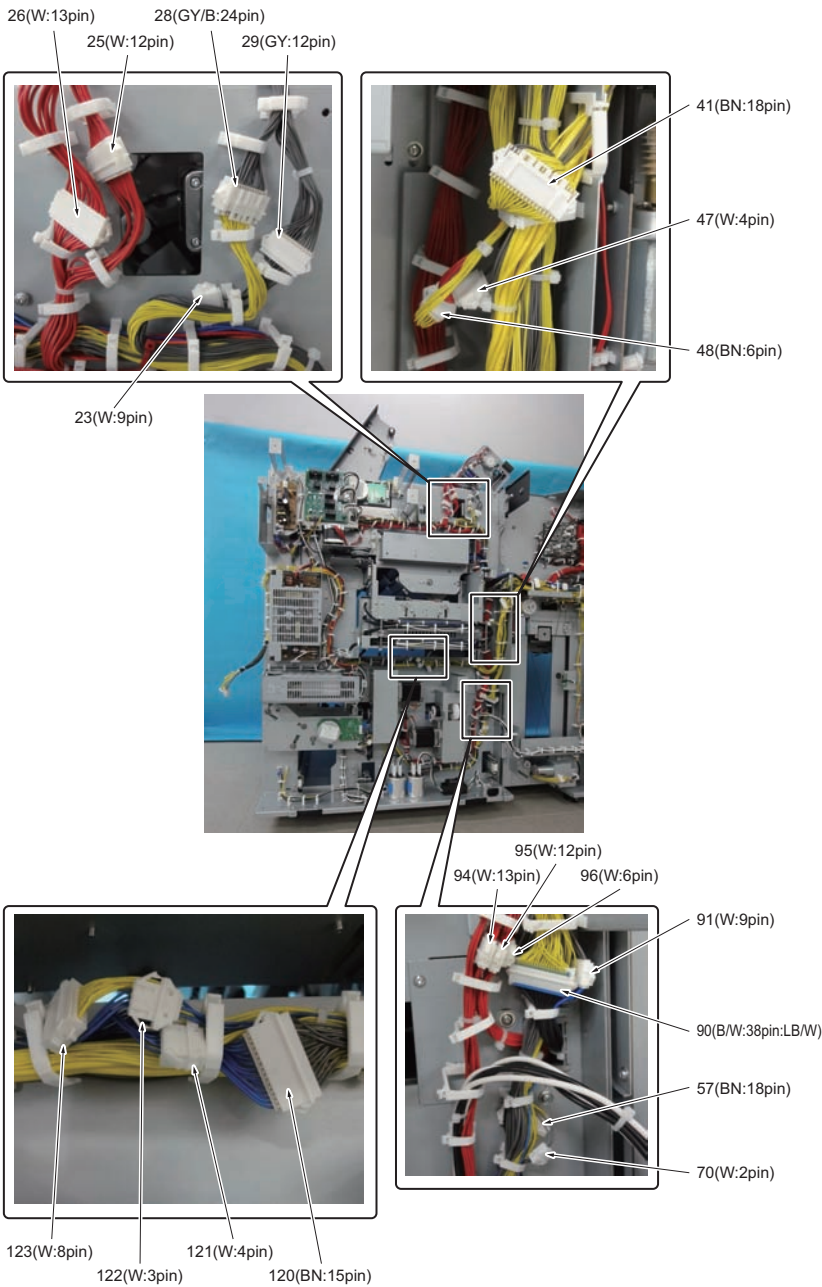
3.2.7 Saddle stitching section-2



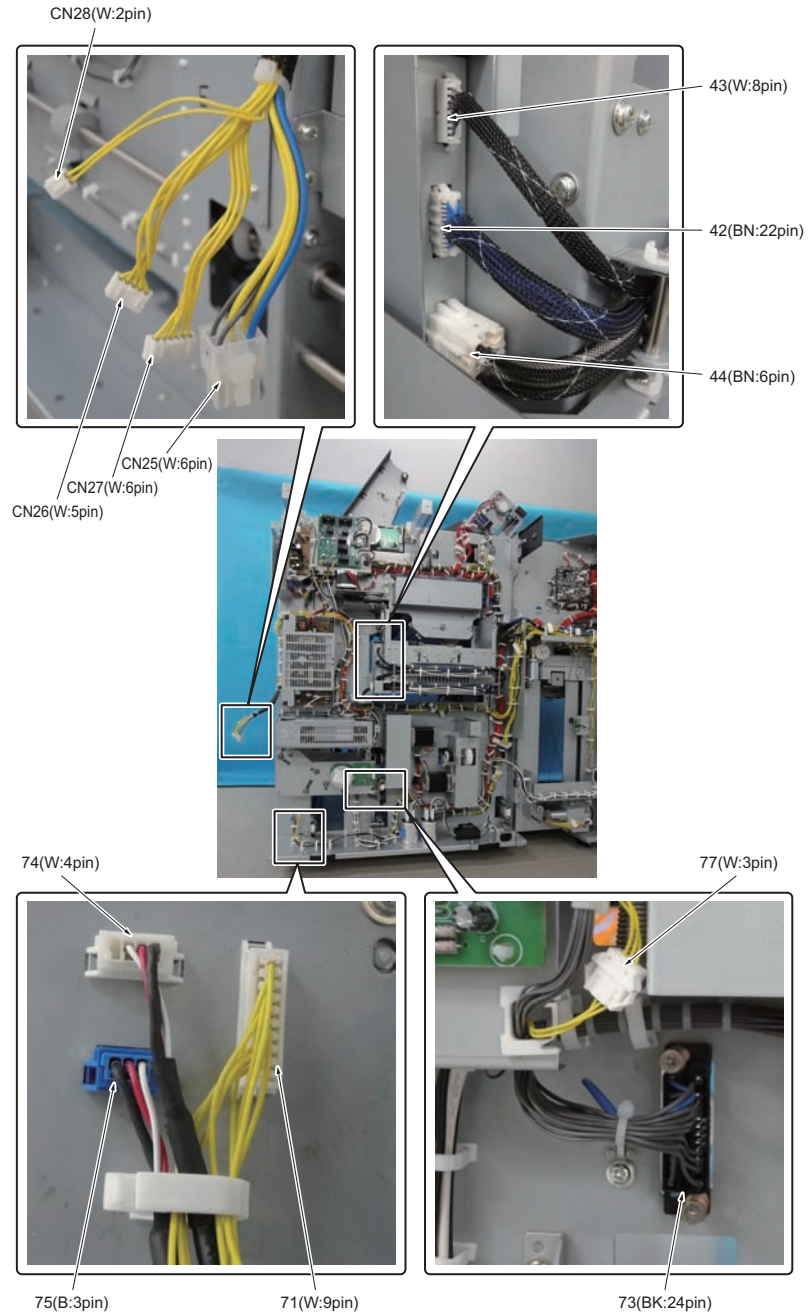
3.3 PB-503**3.3.1 Rear side-1**

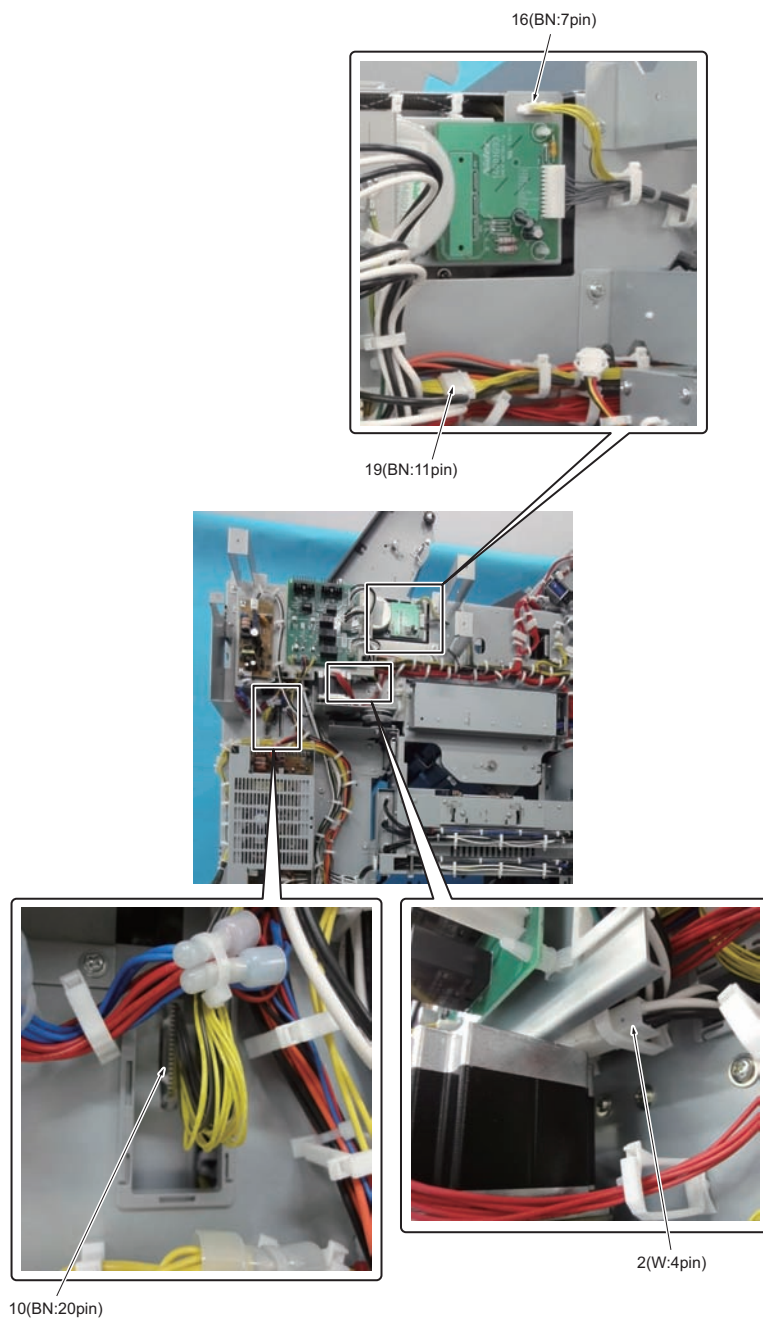
3.3.2 Rear side 2

3.3.3 Rear side 3

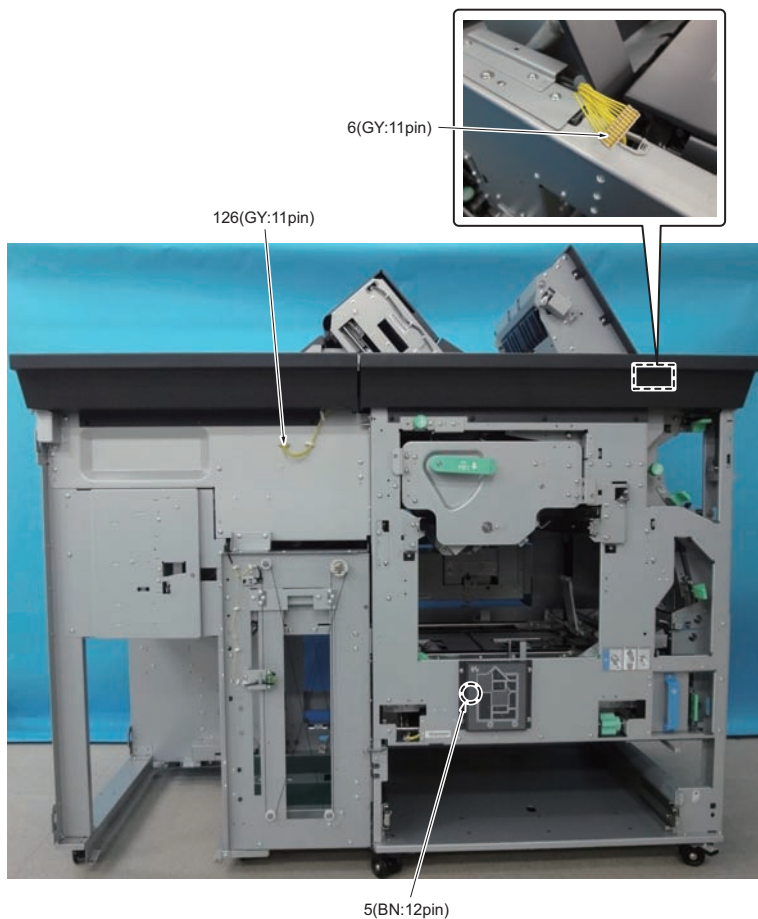


3.3.4 Rear side 4

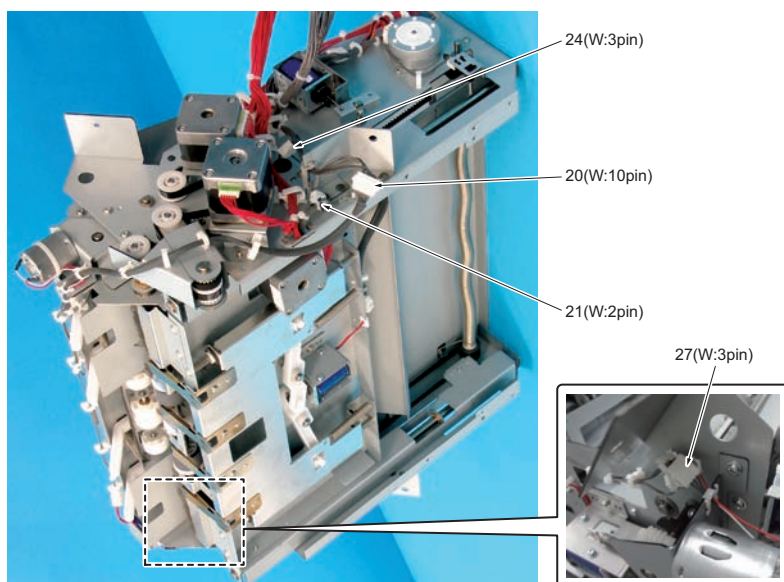


3.3.5 Rear side 5

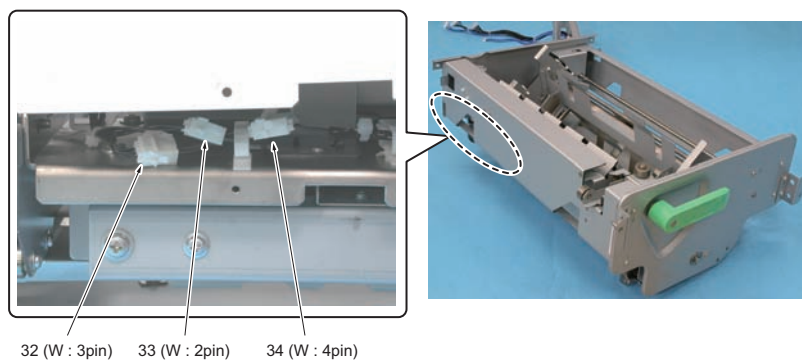
3.3.6 Front side



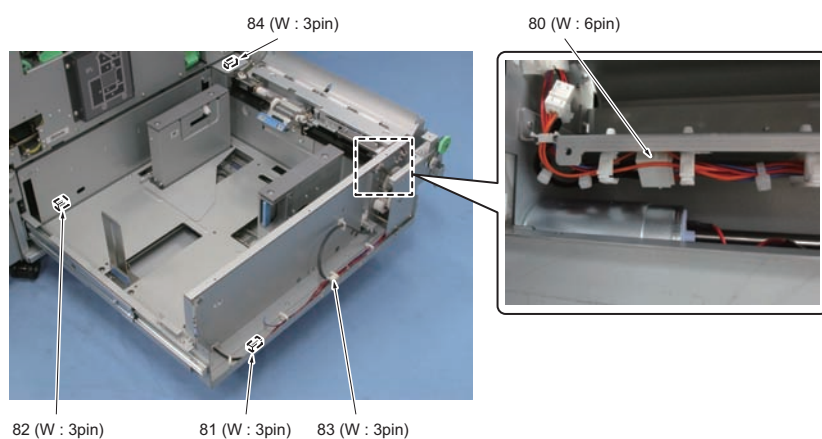
3.3.7 Sub compile (SC) section



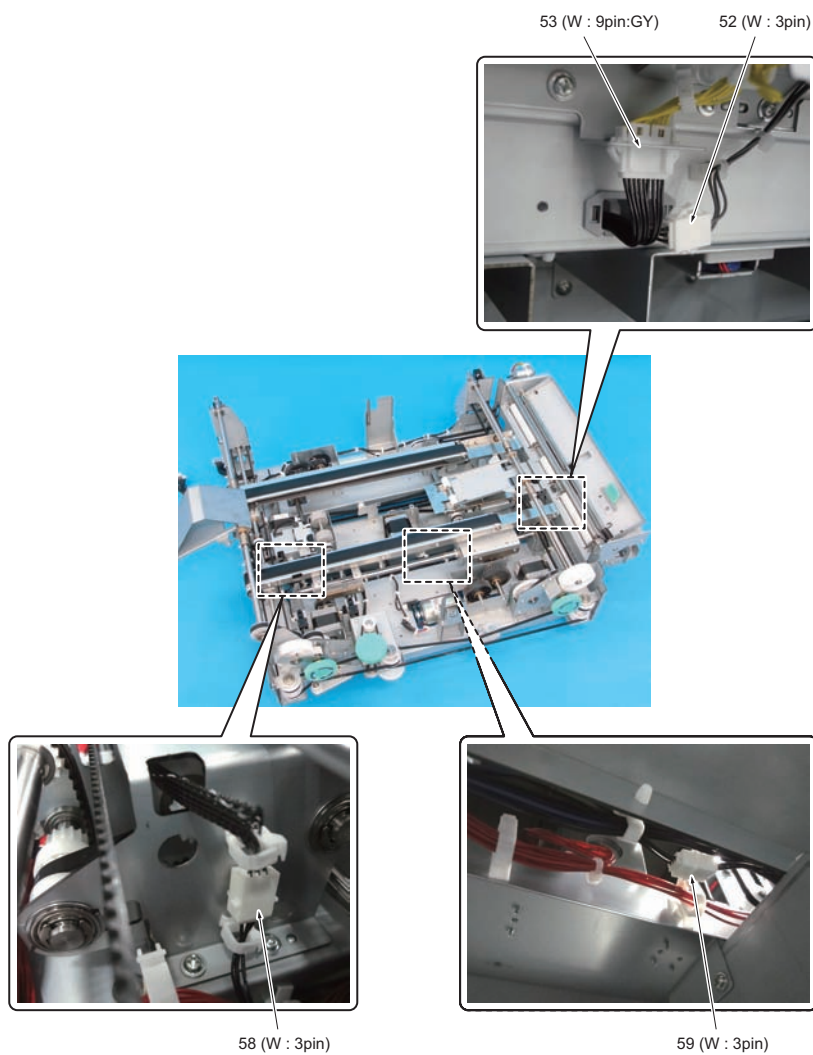
3.3.8 Clamp section



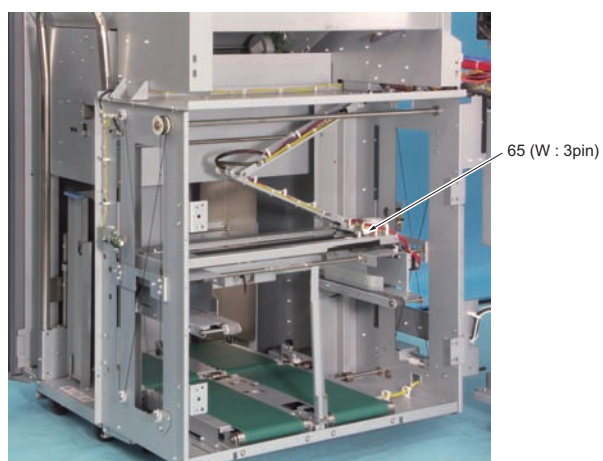
3.3.9 Cover paper supply section



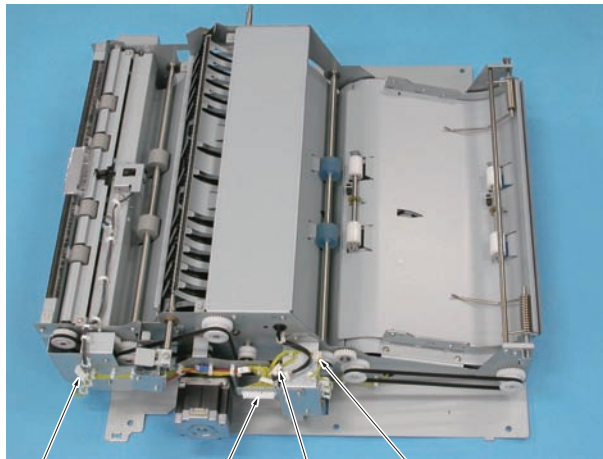
3.3.10 Cover paper table section



3.3.11 Book stock section

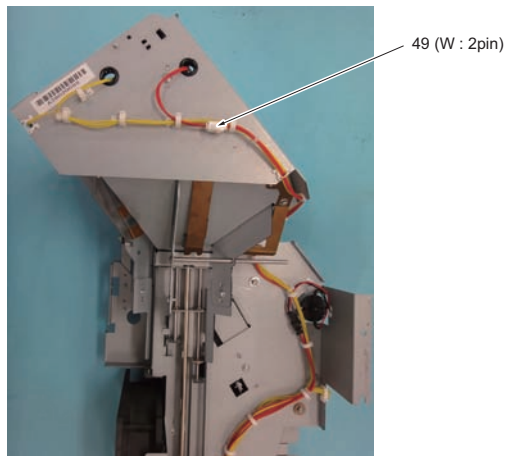


3.3.12 Conveyance section



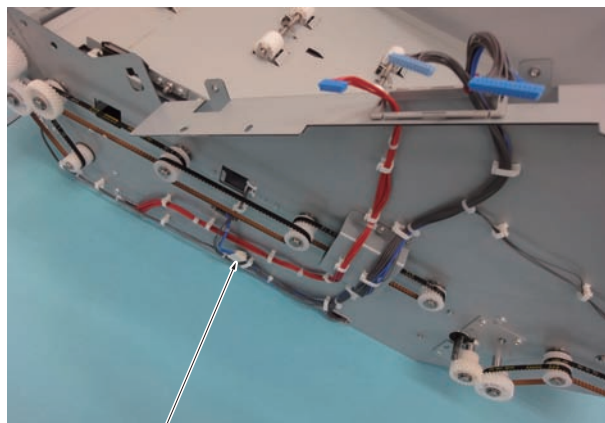
17 (W : 6pin) 10 (BN : 20pin) 11 (W : 3pin) 12 (BN : 3pin)

3.3.13 Pellet supply section



49 (W : 2pin)

3.3.14 Relay conveyance section

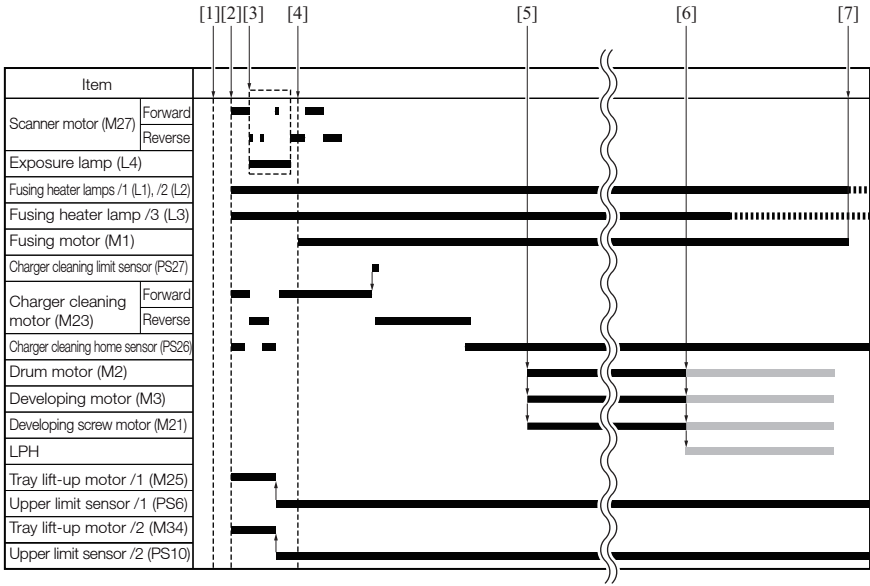


127 (W : 5pin)

M TIMING CHART

1. bizhub PRO 1200/1200P/1051

1.1 Timing chart when sub power switch turns ON



a0g6f5e800ca

[1]	Sub power switch (SW2) ON	[2]	Initial communication between the overall control board (OACB) and the printer control board (PRCB)
[3]	Shading correction starts	[4]	Fusing temperature sensors /1 (TH1), /3 (TH3) get to the specified temperature
[5]	Start of consumable stabilization control	[6]	Start of image stabilization control (for the drum potential correction control, the maximum density adjustment control and the gamma correction control)
[7]	Warming-up completed	-	

Note

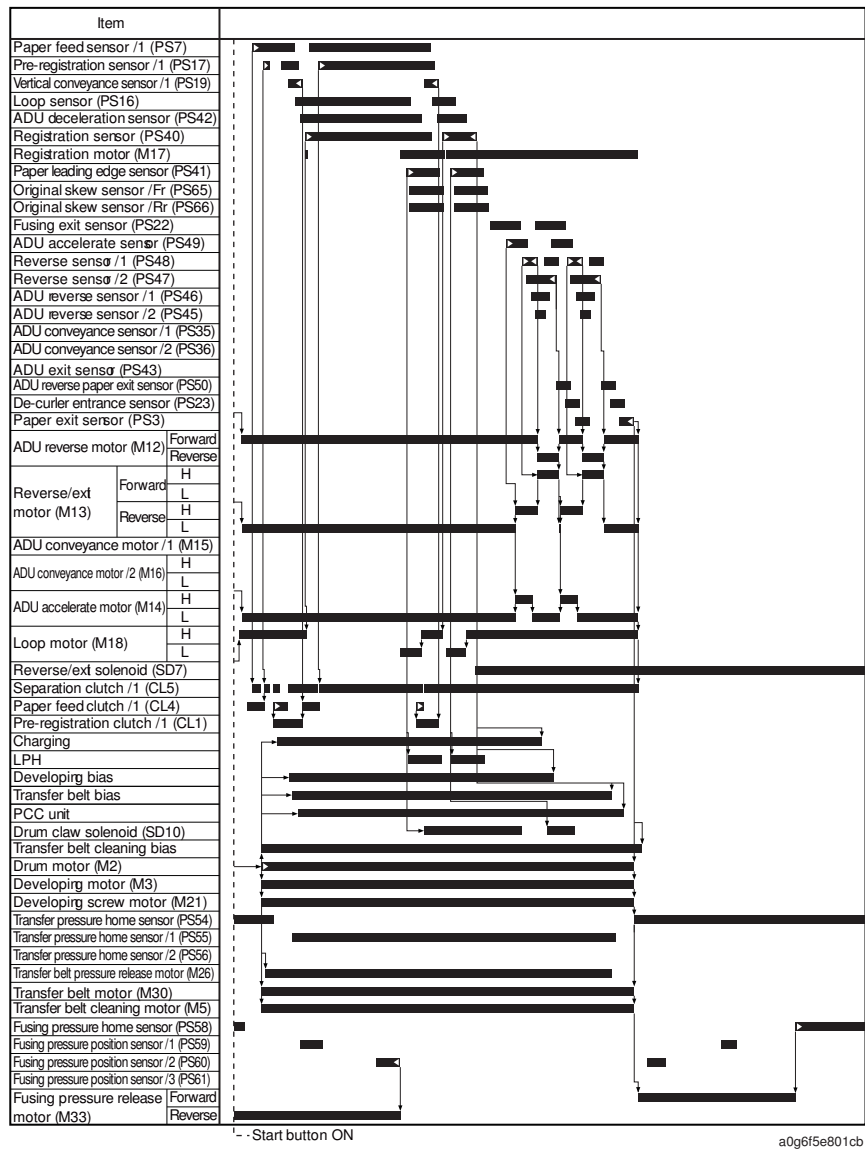
- Various types of operations vary depending on the software DIPSW setting and the environmental settings in the service mode.
- The power is ON with the DF closed.
- The power is turned ON with the paper lift plate of the tray brought down.

1.2 Timing chart of the simplex mode

1.2.1 Operation condition

A4, life size, 2 single-sided originals, single-sided copy (1 copy), reversed paper exit, paper feed tray1, line speed 570mm/sec

1.2.2 Timing chart

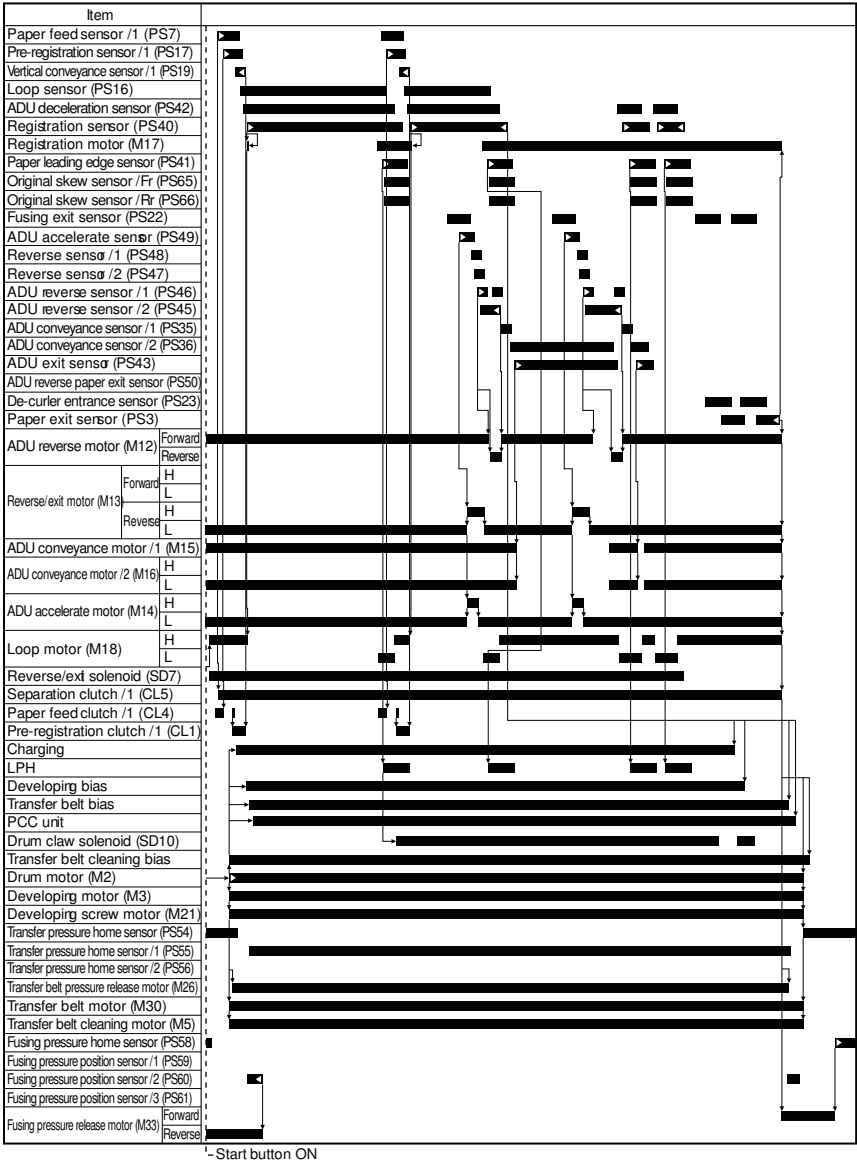


1.3 Timing chart of the duplex mode

1.3.1 Operation condition

A4, life size, 2 double-sided originals, double-sided copy (1 copy), straight paper exit, paper feed tray1, line speed 490mm/sec

1.3.2 Timing chart



a0g6f5e950cb

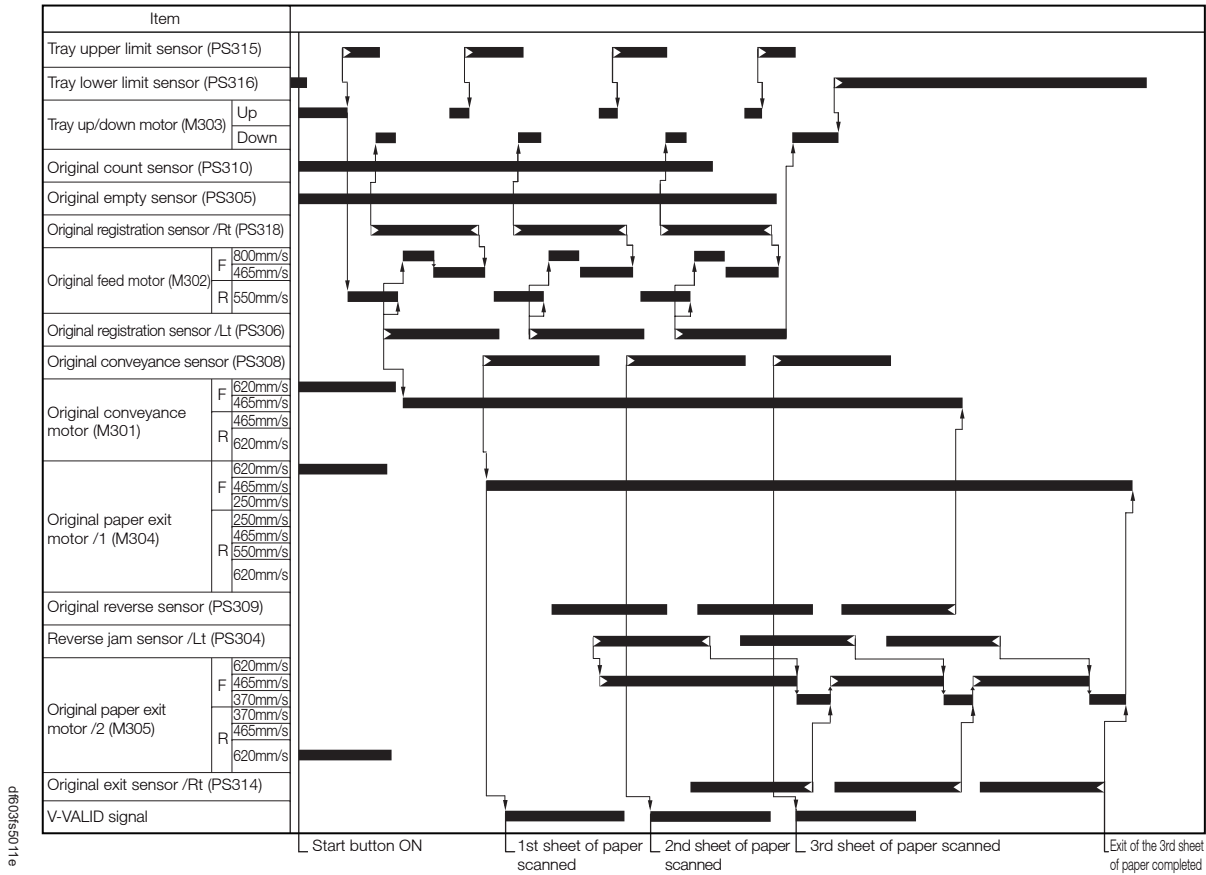
2. DF-615

2.1 Timing chart of the simplex mode

2.1.1 Operation condition

A4, life size, single-sided original, 3 originals

2.1.2 Timing chart

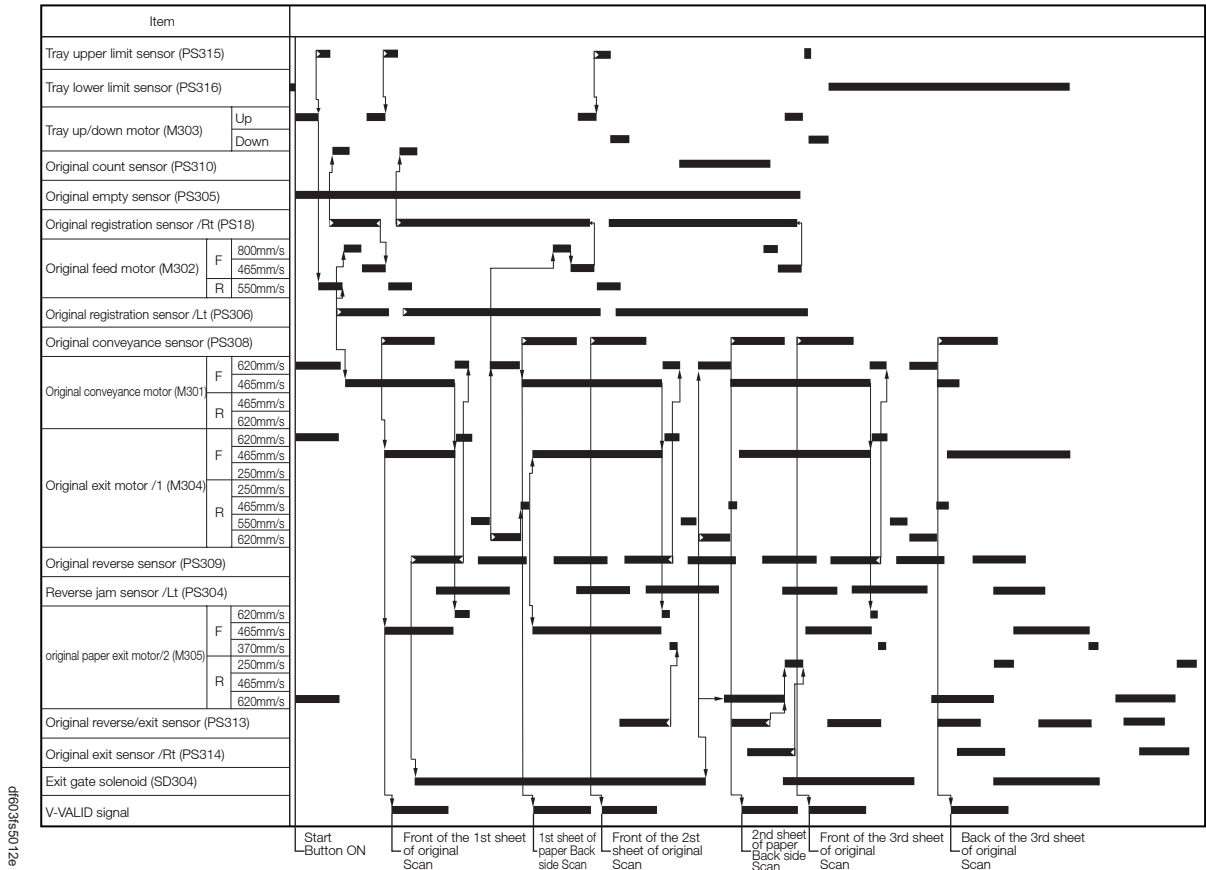


2.2 Timing chart of the duplex mode

2.2.1 Operation condition

A4, life size, single-sided original, 3 originals

2.2.2 Timing chart



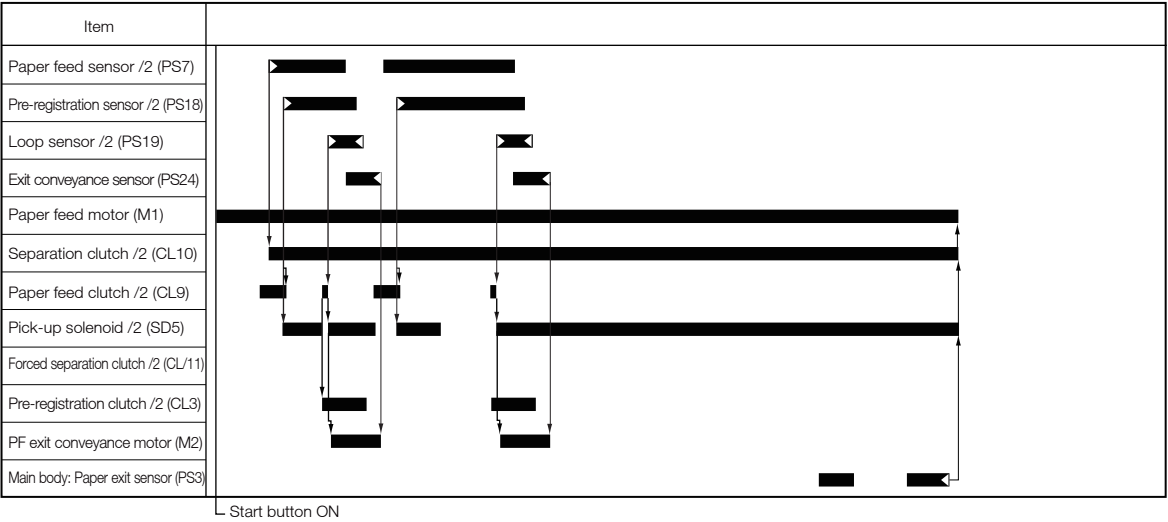
3. PF-702

3.1 Timing chart of the simplex mode

3.1.1 Operation condition

Tray4, A4, 2 originals

3.1.2 Timing chart



p701155008e

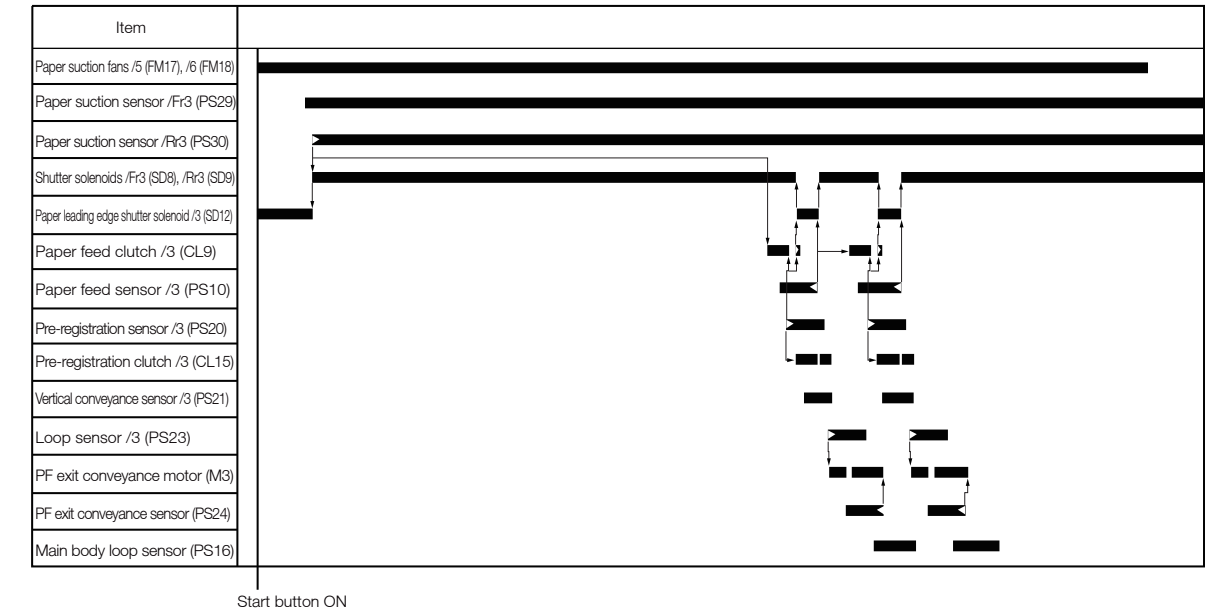
4. PF-703

4.1 Timing chart of the simplex mode

4.1.1 Operation condition

Tray3, A4, 2 originals

4.1.2 Timing chart



p7703160001e

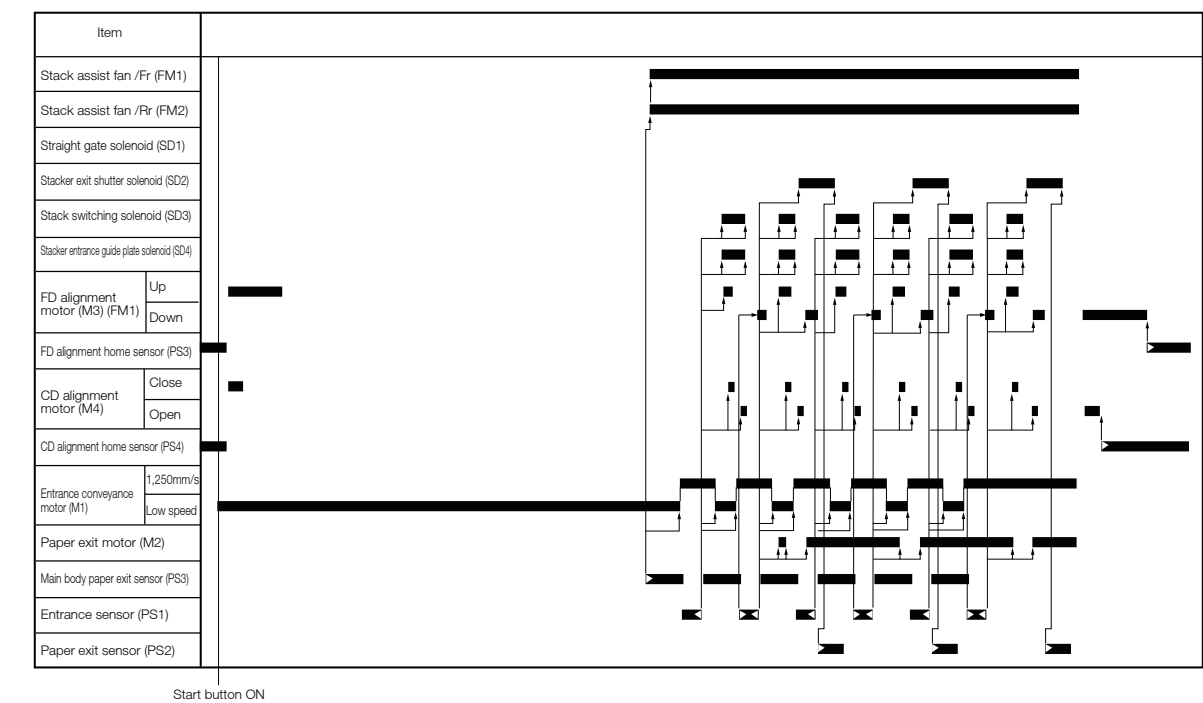
5. RU-506

5.1 Timing chart of the straight exit mode

5.1.1 Operation condition

A4, 3 sheets of paper, 2 copies, duplex print

5.1.2 Timing chart



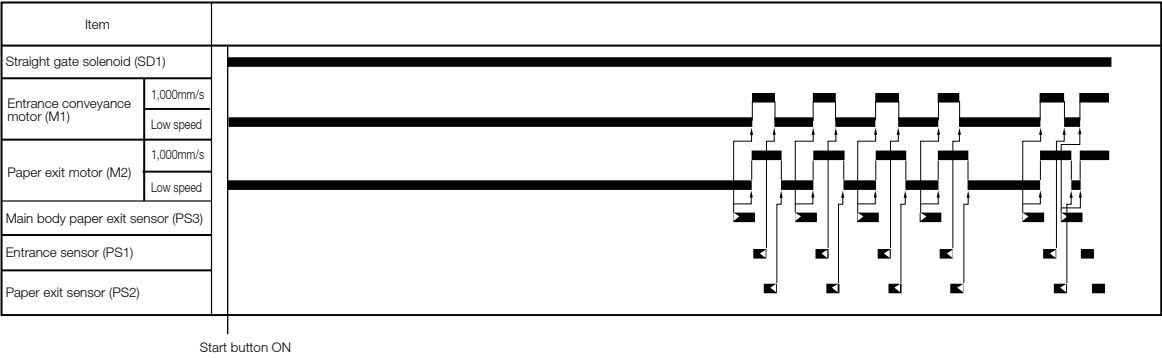
a09af5c502ca

5.2 Timing chart of the double sheets reverse/exit conveyance mode

5.2.1 Operation condition

A4, 2 sheets of paper, 3 copies

5.2.2 Timing chart



a0jgrf5a501ca

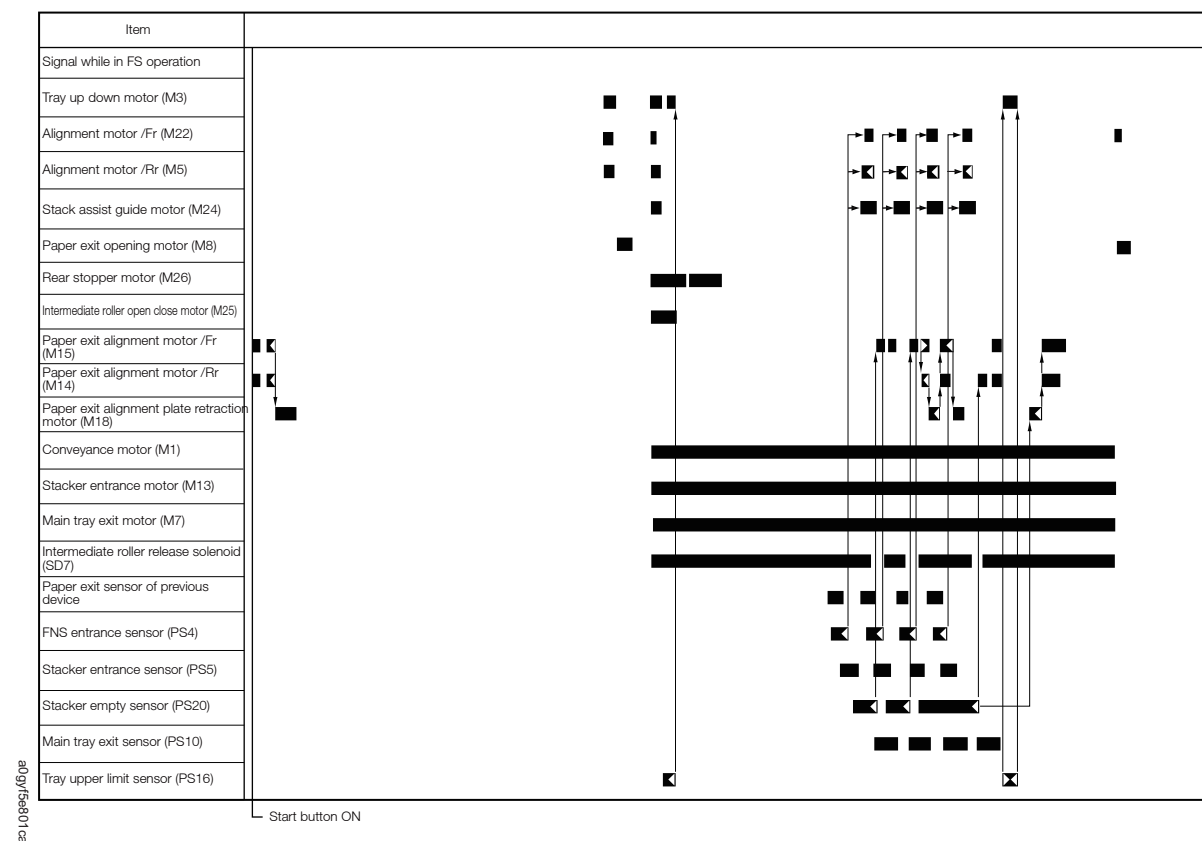
6. FS-521

6.1 Timing chart of the sort mode

6.1.1 Operation condition

Sort, A4, 2 originals, 2 copies, simplex

6.1.2 Timing chart

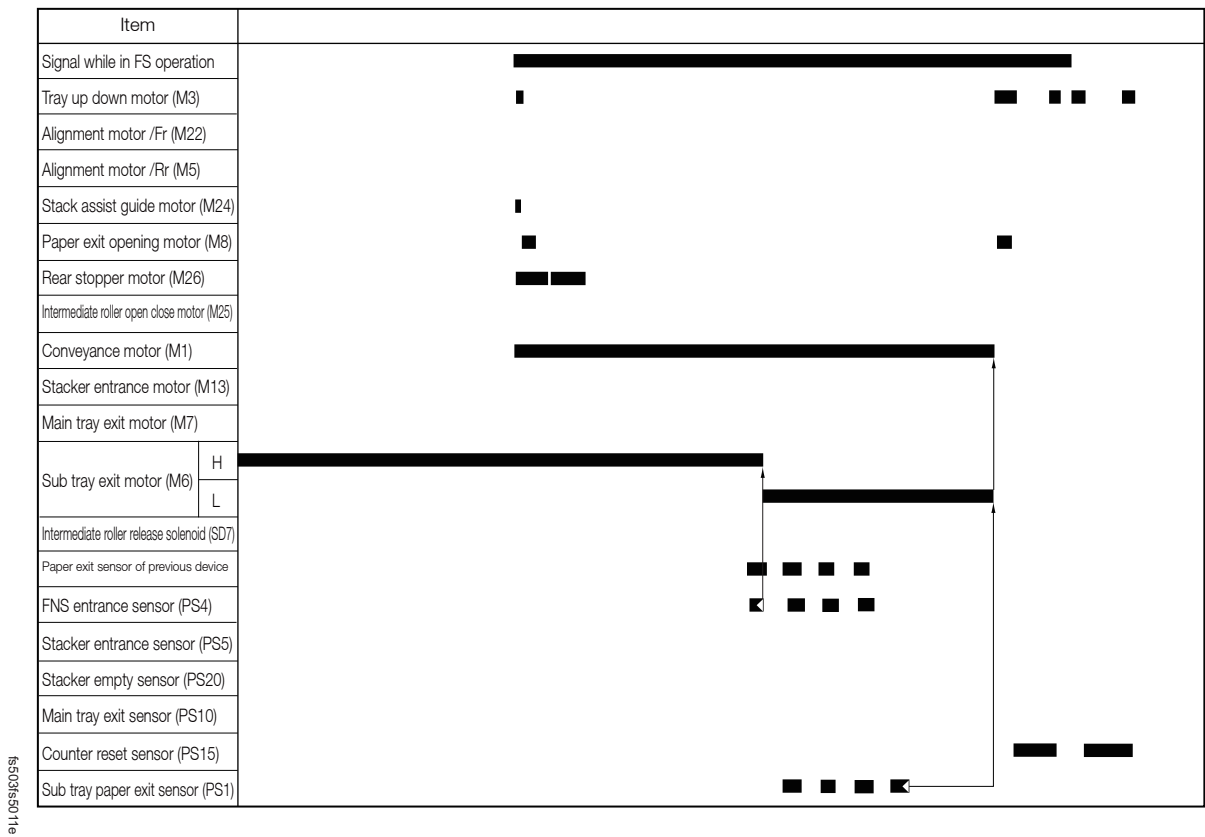


6.2 Timing chart of the sub tray mode

6.2.1 Operation condition

Sub tray, A4, 2 originals, 2 copies, simplex

6.2.2 Timing chart

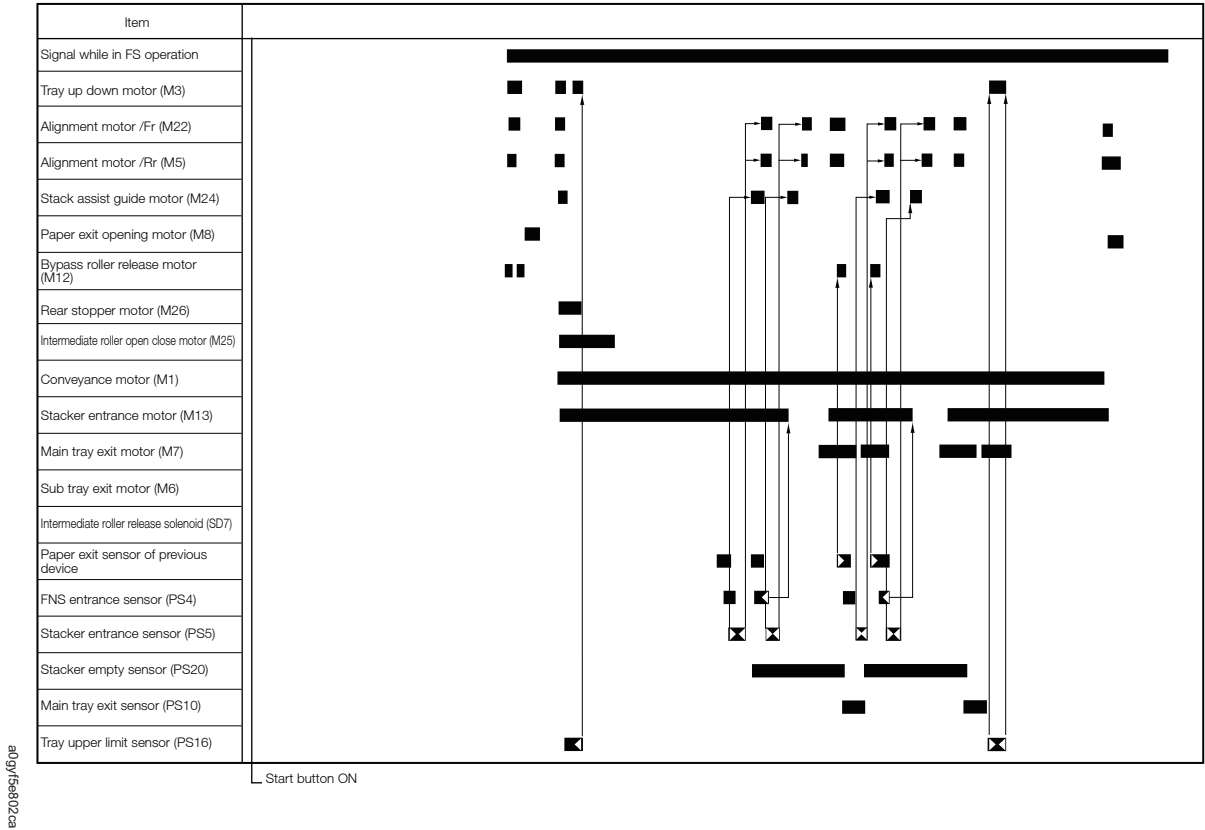


6.3 Timing chart of the staple mode

6.3.1 Operation condition

Staple, A4, 2 originals, 2 copies, simplex

6.3.2 Timing chart



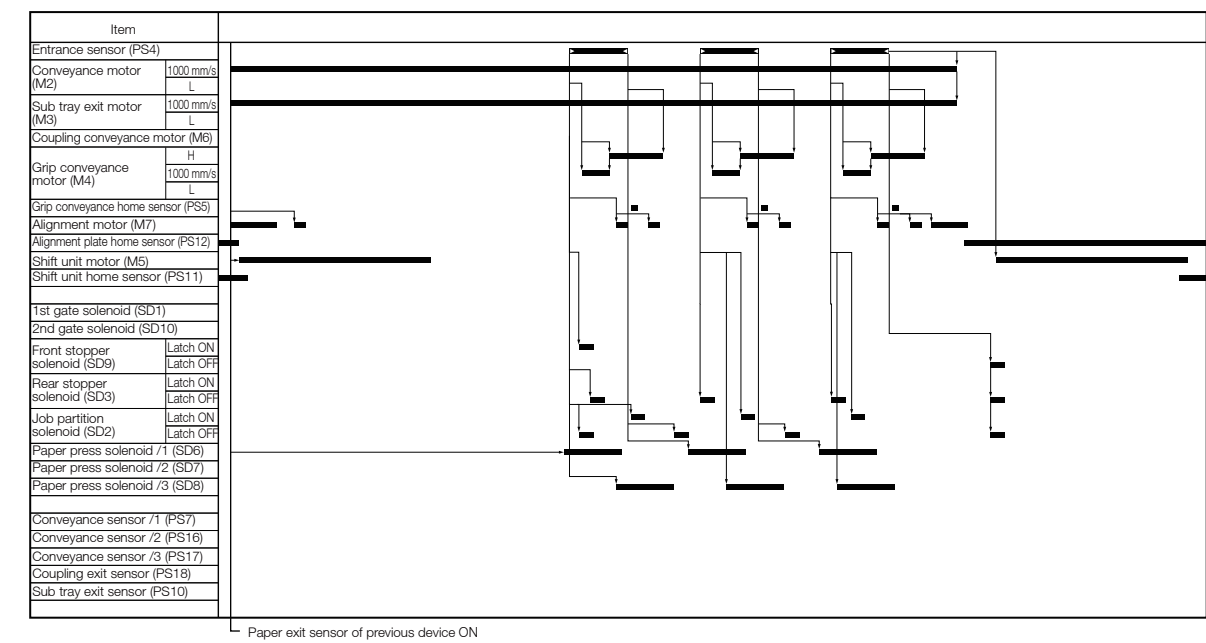
7. LS-505

7.1 Timing chart of the straight mode

7.1.1 Operation condition

A4, straight mode, 3 originals, 1 copy setting

7.1.2 Timing chart



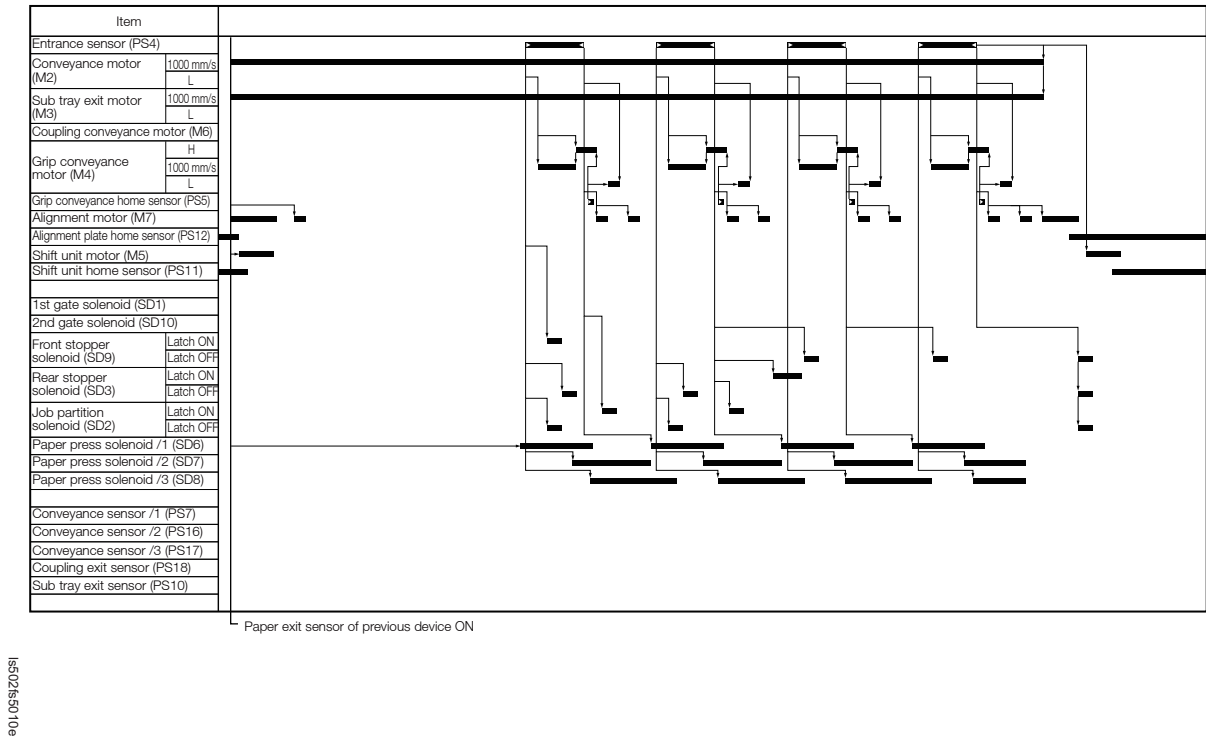
Is502Is5009e

7.2 Timing chart of the shift mode

7.2.1 Operation condition

A3, shift mode, 2 originals, 2copies setting

7.2.2 Timing chart

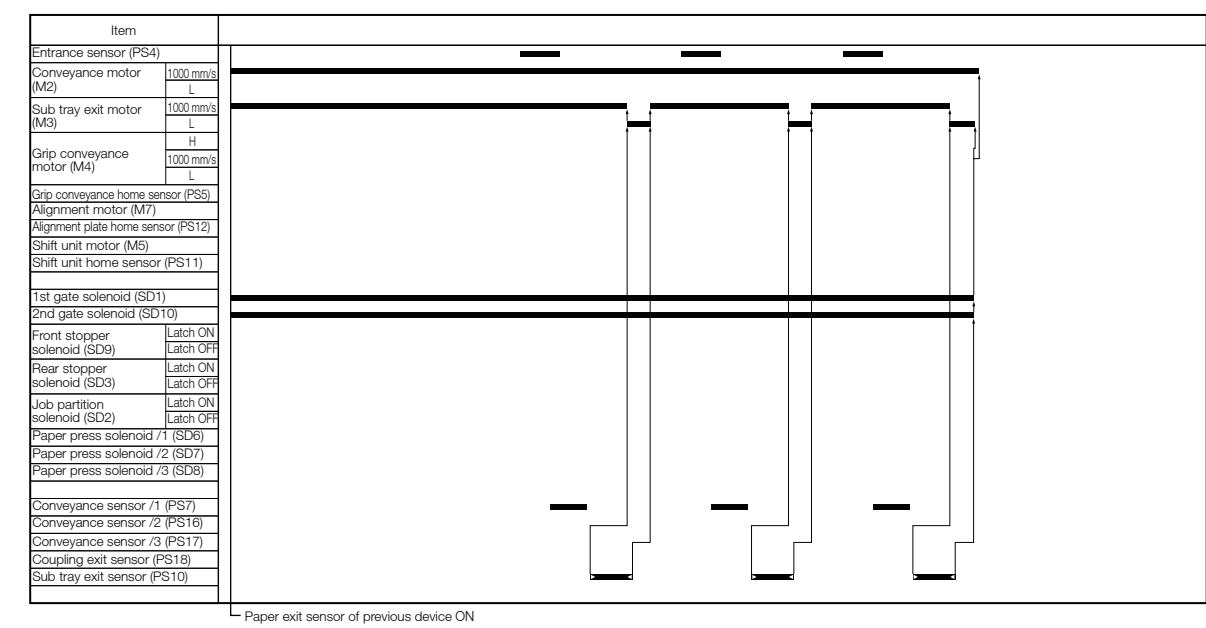


7.3 Timing chart of the sub tray mode

7.3.1 Operation condition

A4, sub tray mode, 3 originals, 1 copy setting

7.3.2 Timing chart



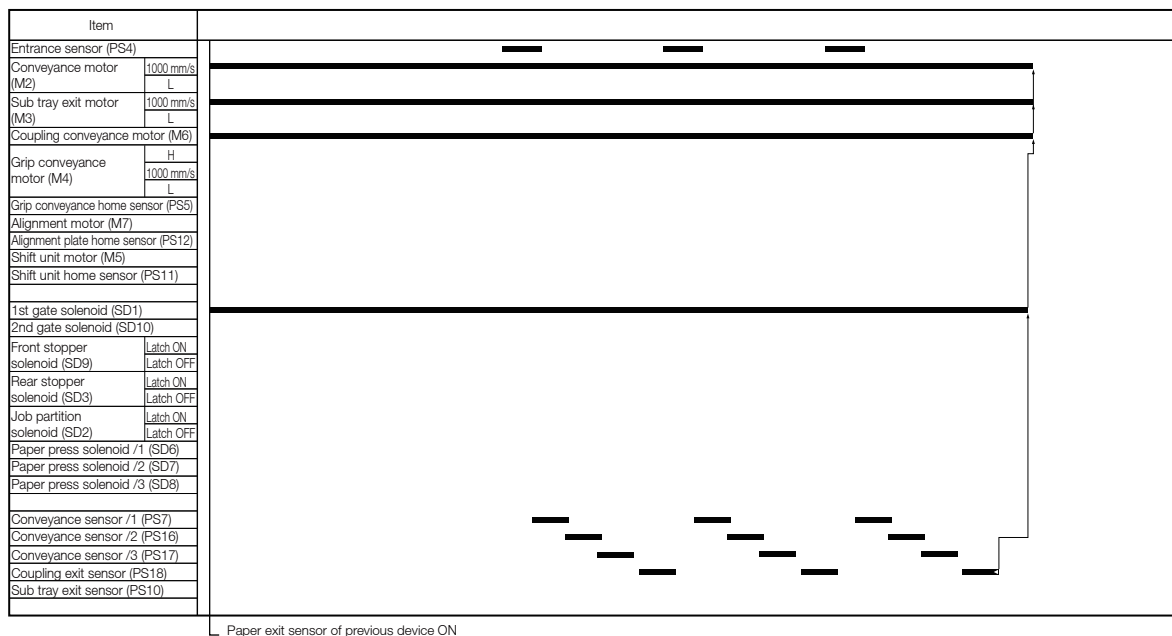
LS02/LS01Ide

7.4 Timing chart of the coupling mode

7.4.1 Operation condition

A4, coupling mode, 3 originals, 1 copy setting

7.4.2 Timing chart



	Paper exit sensor of previous device ON
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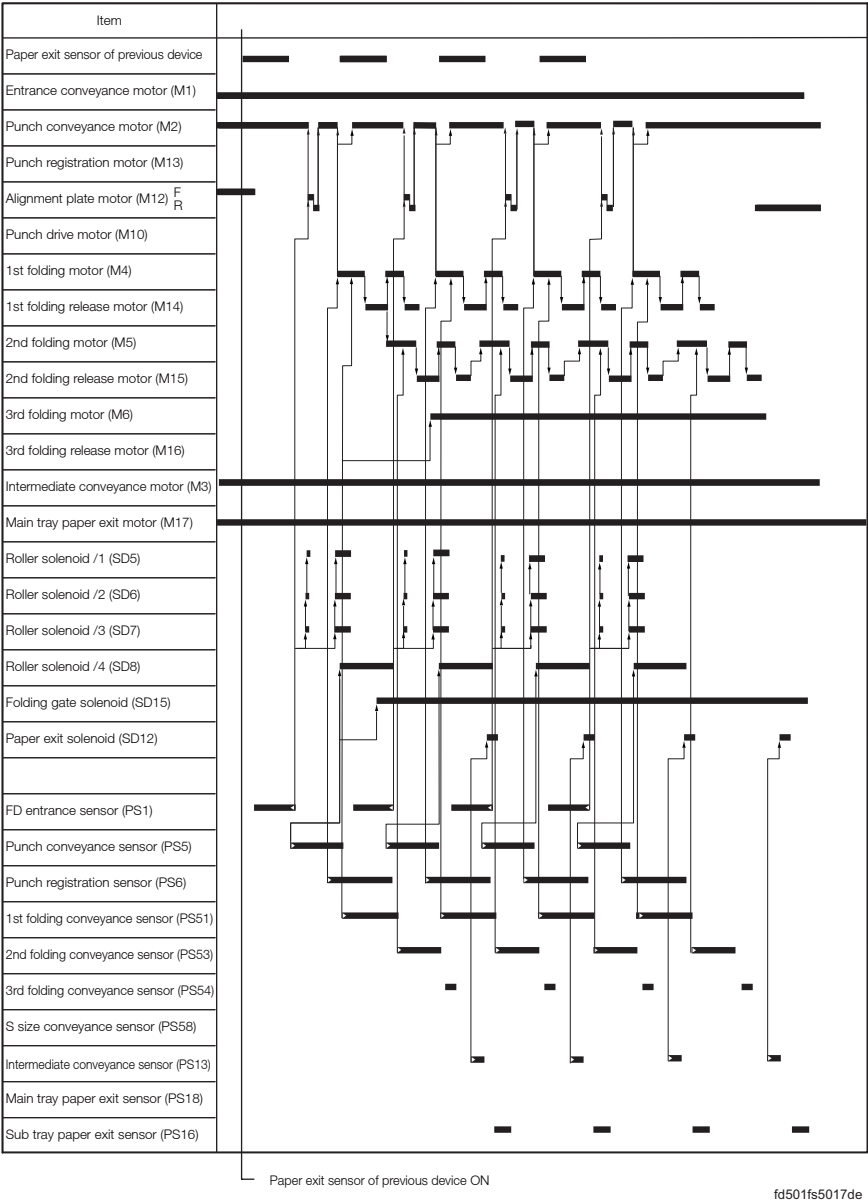
8. FD-503

8.1 Timing chart of the letter fold-in mode

8.1.1 Operation condition

Tri-folding in, A3, 2 originals, 2 copies, sub tray paper exit

8.1.2 Timing chart

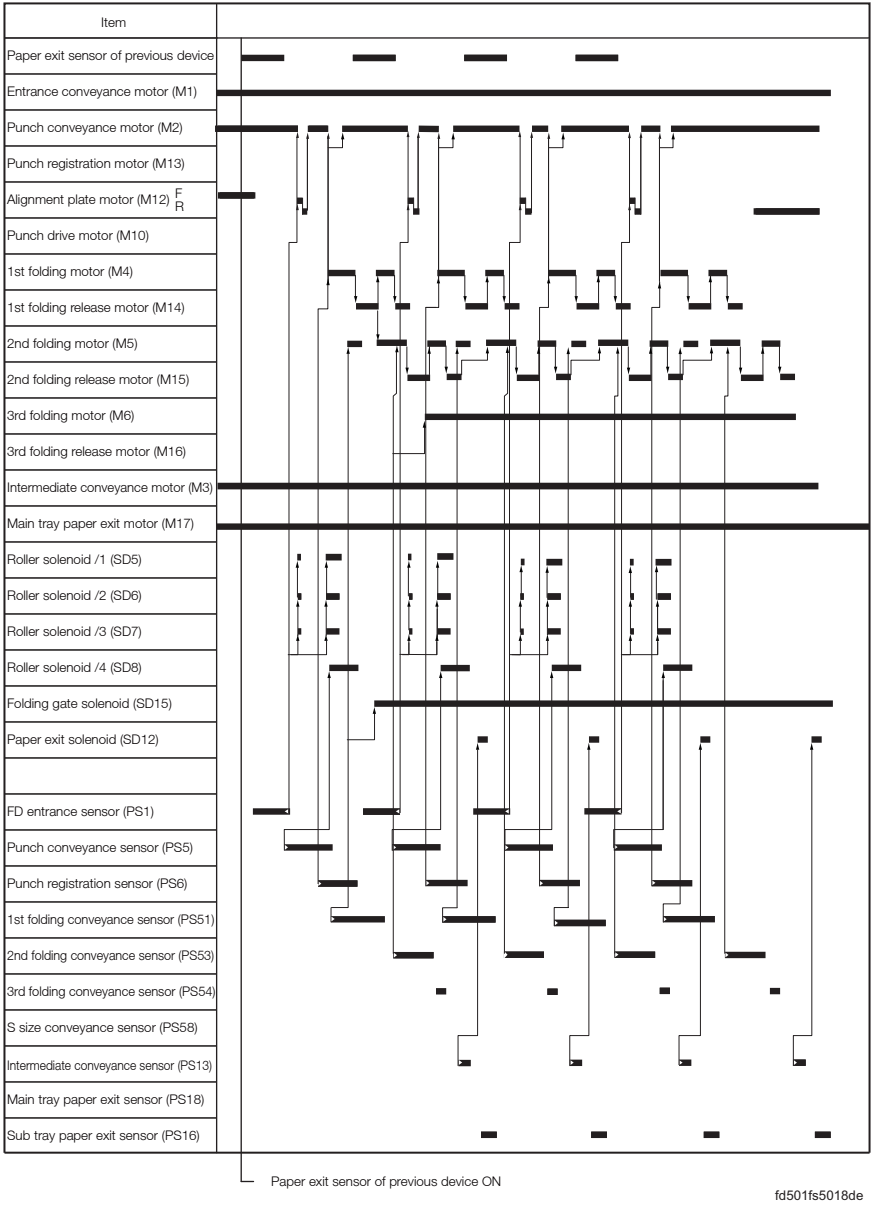


8.2 Timing chart of the letter fold-out mode

8.2.1 Operation condition

Tri-folding out, A3, 2 originals, 2 copies, sub tray paper exit

8.2.2 Timing chart

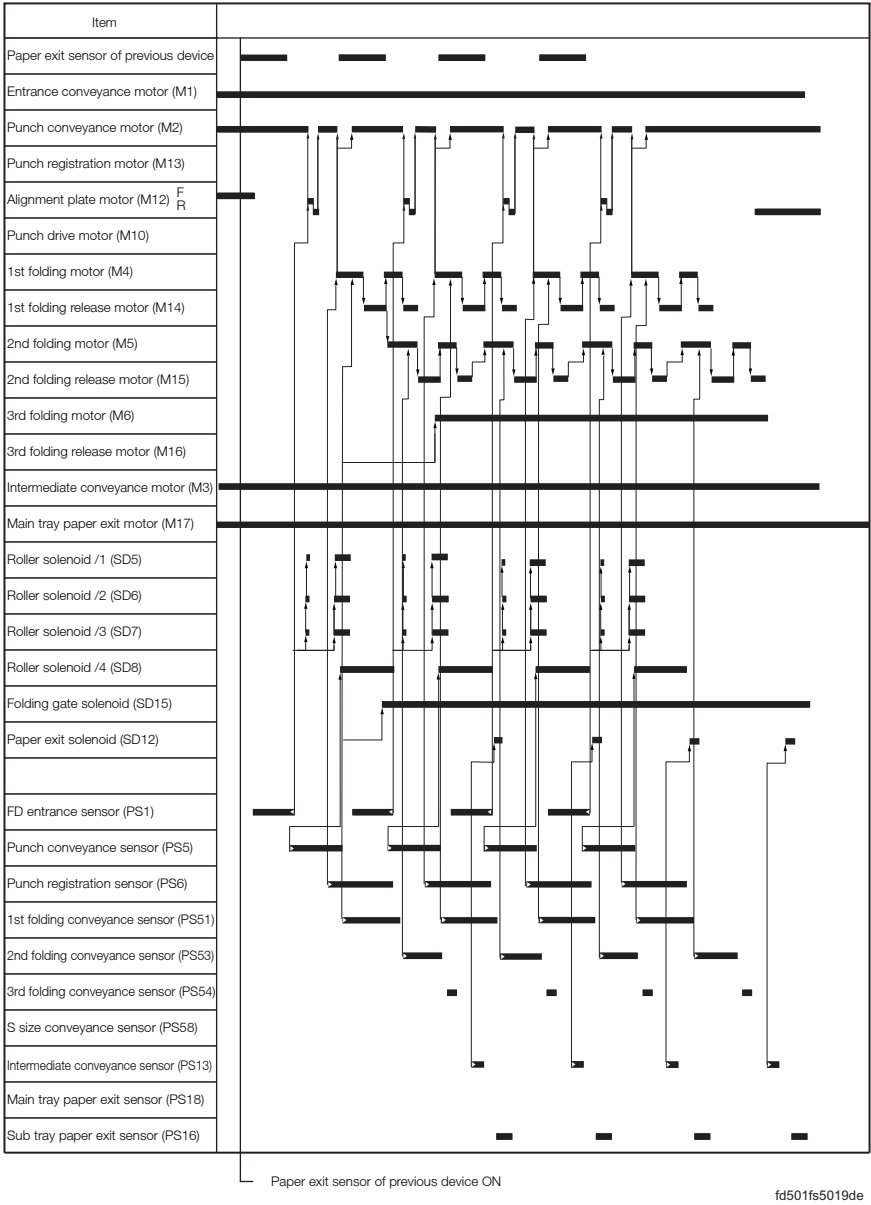


8.3 Timing chart of the double parallel mode

8.3.1 Operation condition

Double parallel, A3, 2 originals, 2 copies, sub tray paper exit

8.3.2 Timing chart

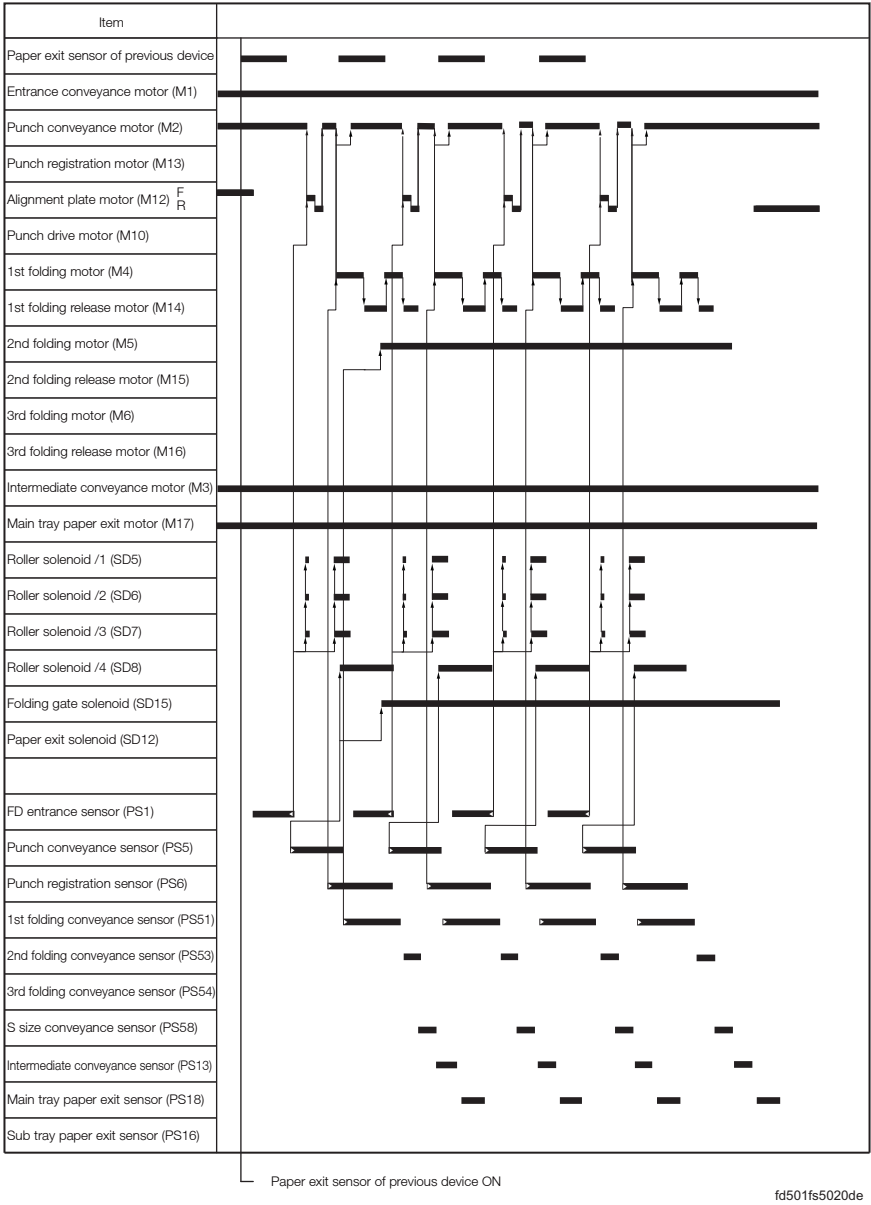


8.4 Timing chart of the half-folding mode

8.4.1 Operation condition

Half-folding, A3, 2 originals, 2 copies, sub tray paper exit

8.4.2 Timing chart

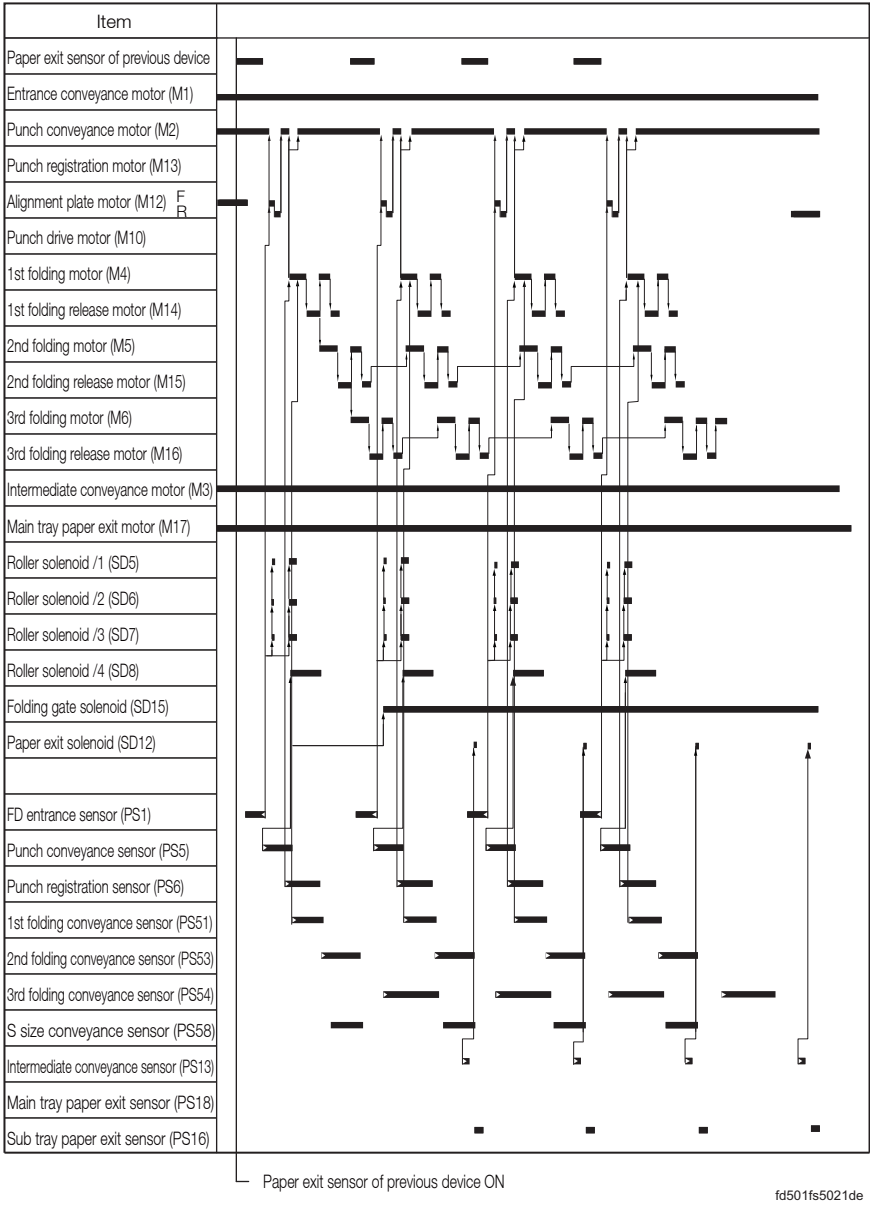


8.5 Timing chart of the gate fold mode

8.5.1 Operation condition

Gate folding, A3, 2 originals, 2 copies, sub tray paper exit

8.5.2 Timing chart

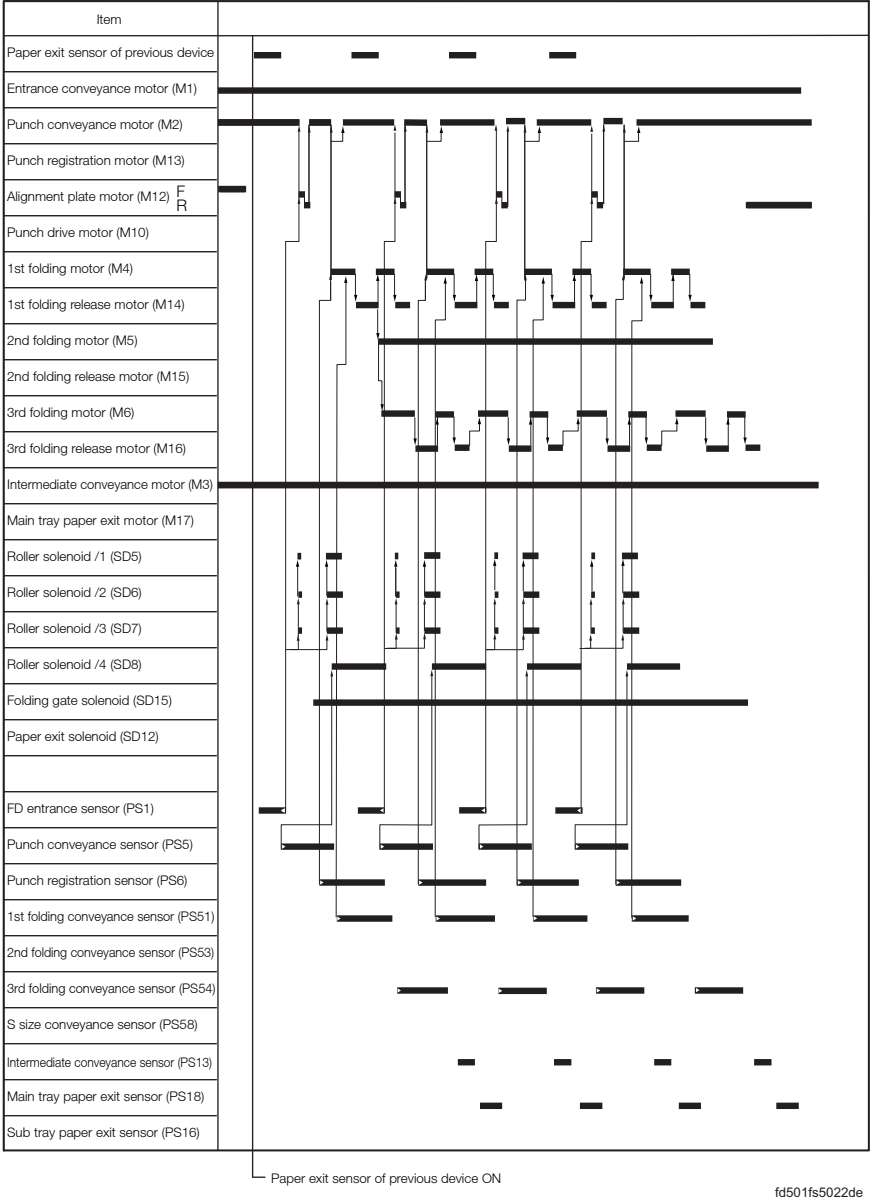


8.6 Timing chart of the Z-fold mode

8.6.1 Operation condition

Z-folding, A3, 2 originals, 2 copies, sub tray paper exit

8.6.2 Timing chart

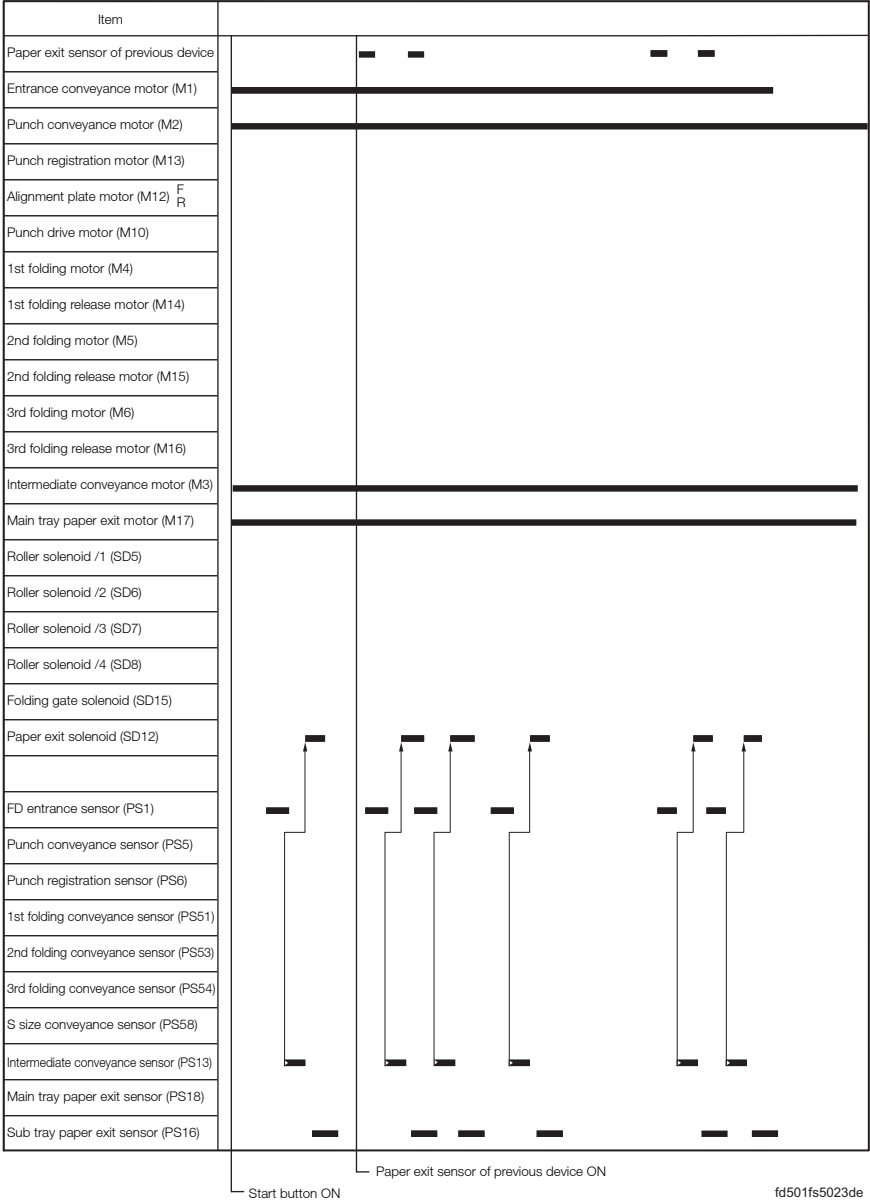


8.7 Timing chart of the PI cover paper insertion mode

8.7.1 Operation condition

PI cover insertion, A4, 2 originals, 2 copies, sub tray paper exit

8.7.2 Timing chart

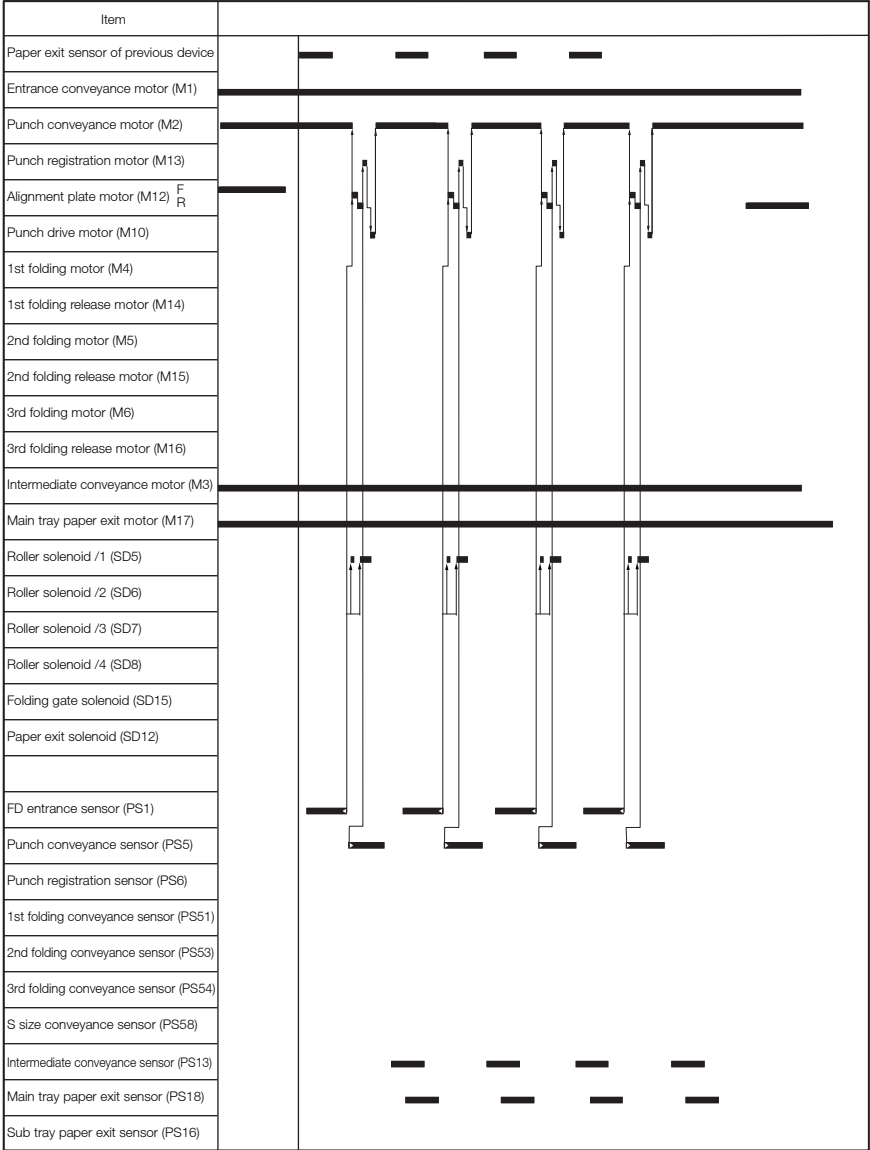


8.8 Timing chart of the punch mode

8.8.1 Operation condition

Punch, A4, 2 originals, 2 copies, sub tray paper exit

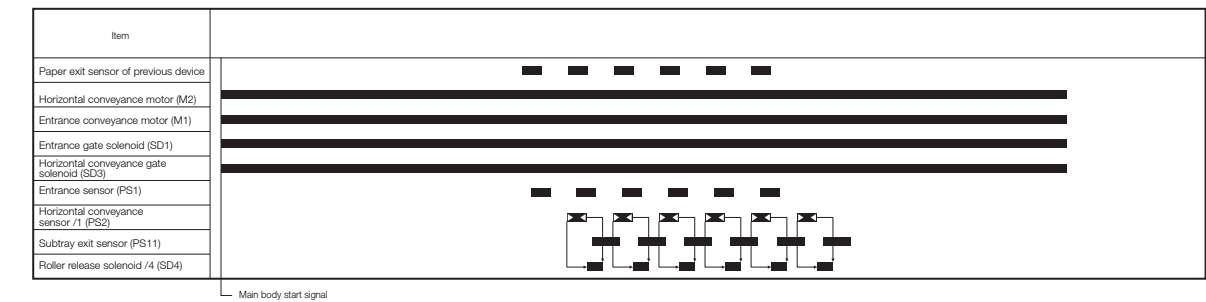
8.8.2 Timing chart



└ Paper exit sensor of previous device ON

fd501fs5024de

9.2.2 Timing chart



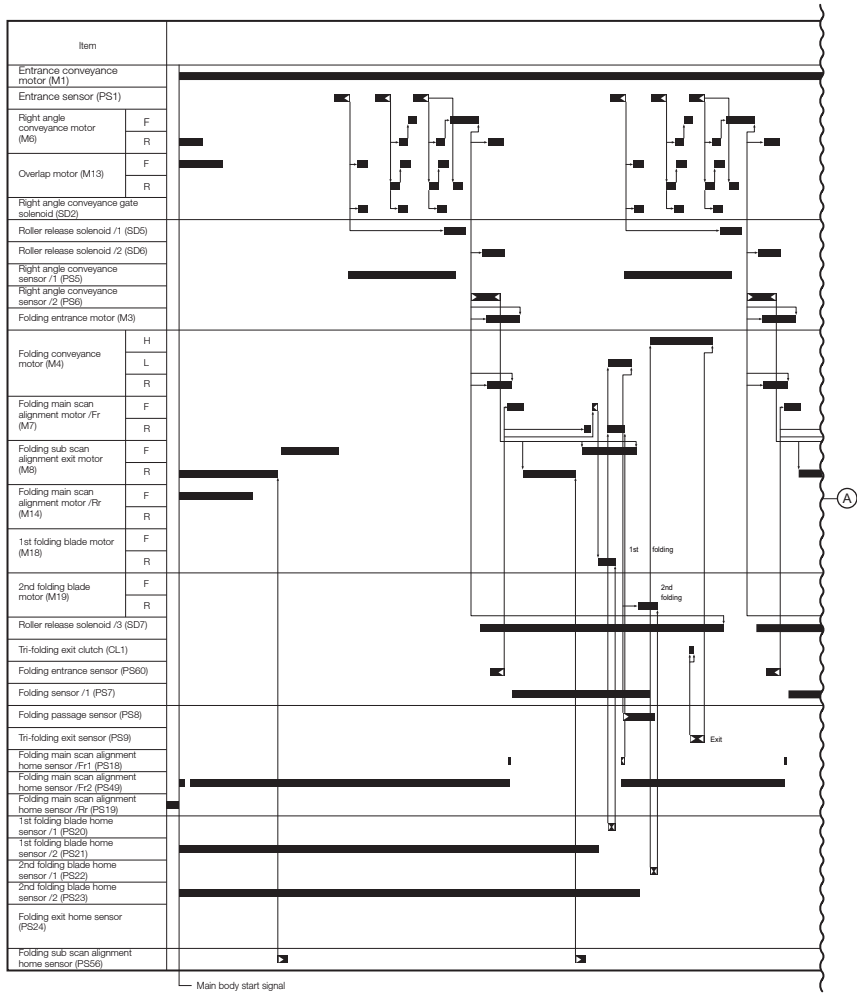
15mm/500 1mb

9.3 Timing chart of the overlap tri-folding mode

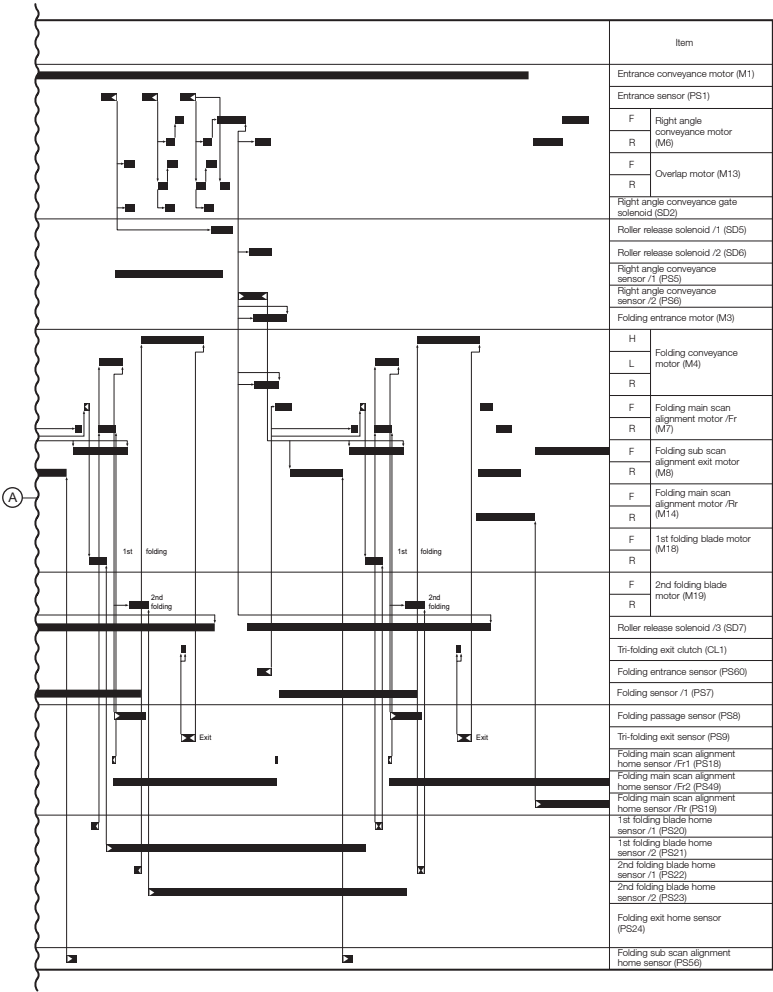
9.3.1 Operation condition

Multi-tri-folding, A4S, 3 originals, 3 copies

9.3.2 Timing chart



15anf5e802nb



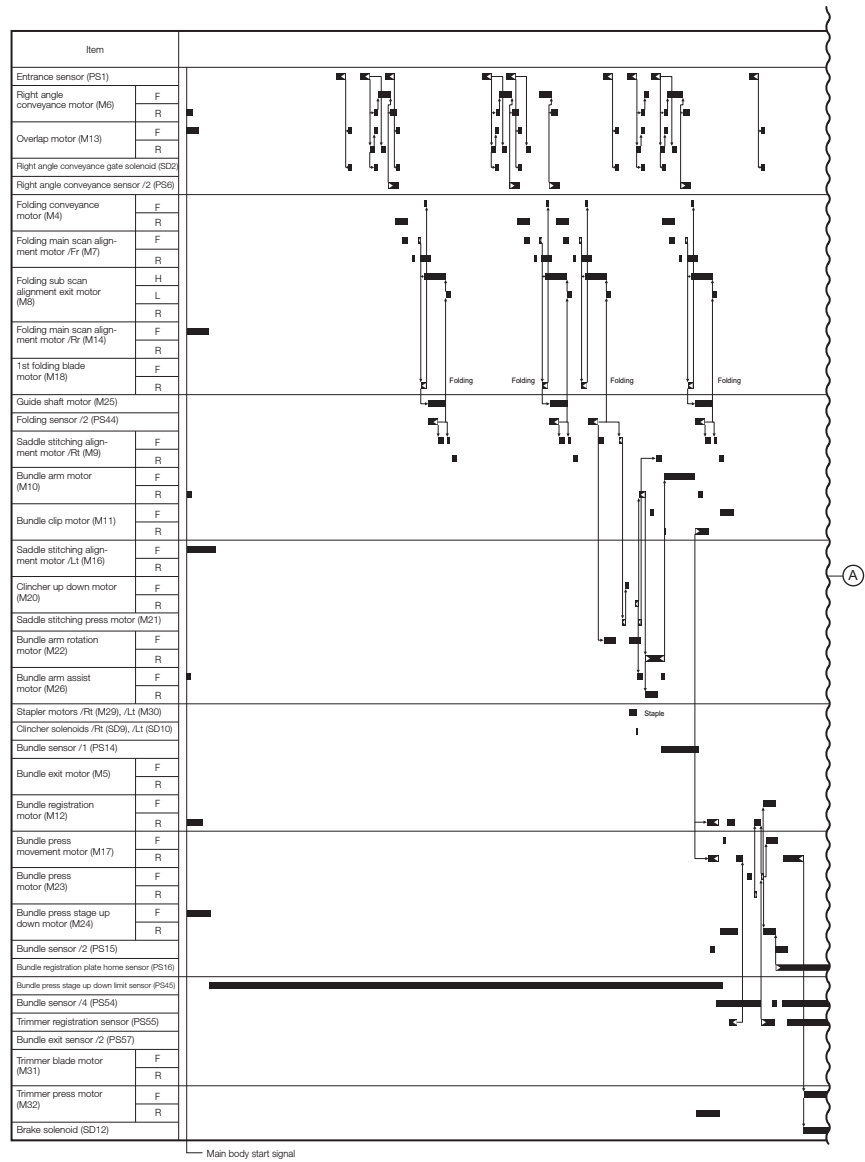
15anf5e803nb

9.4 Timing chart of the saddle stitching (trimmer) mode

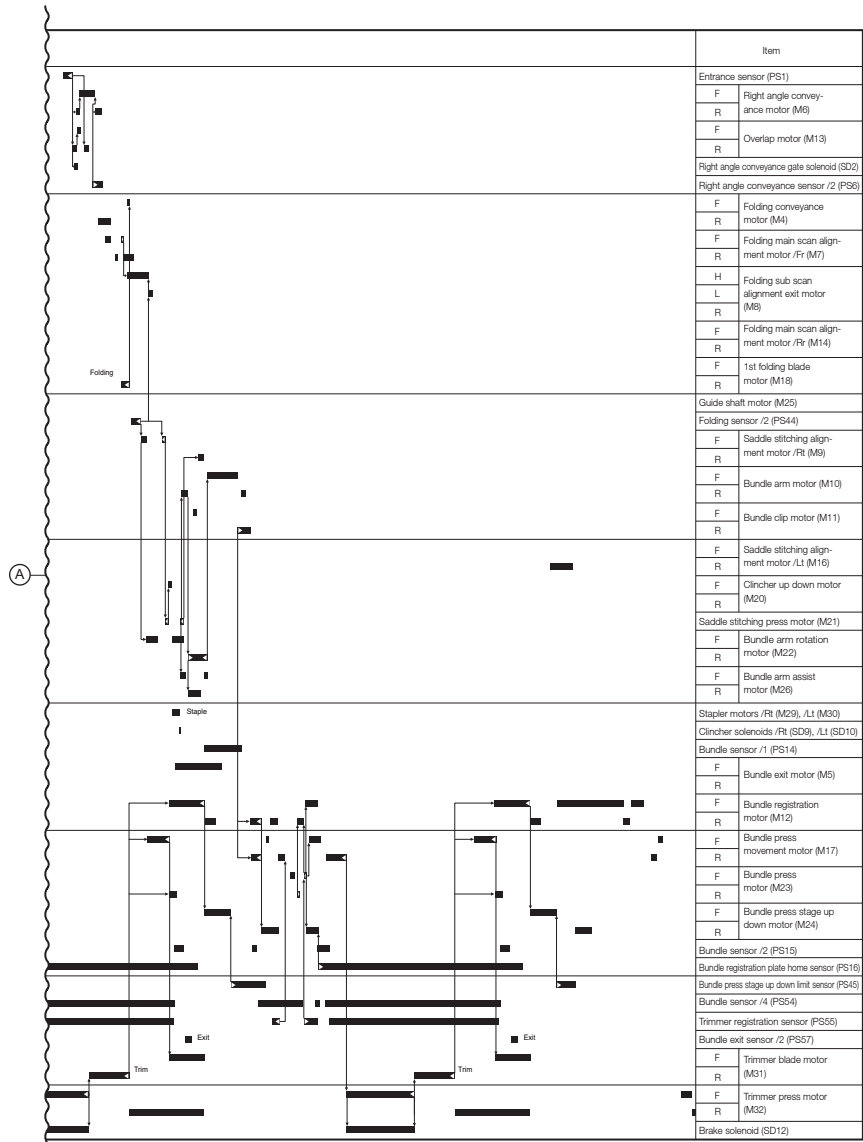
9.4.1 Operation condition

Saddle stitching (with trimming), A3, 5 originals, 2 copies

9.4.2 Timing chart



15anf5e804nb



15anf5e805nb

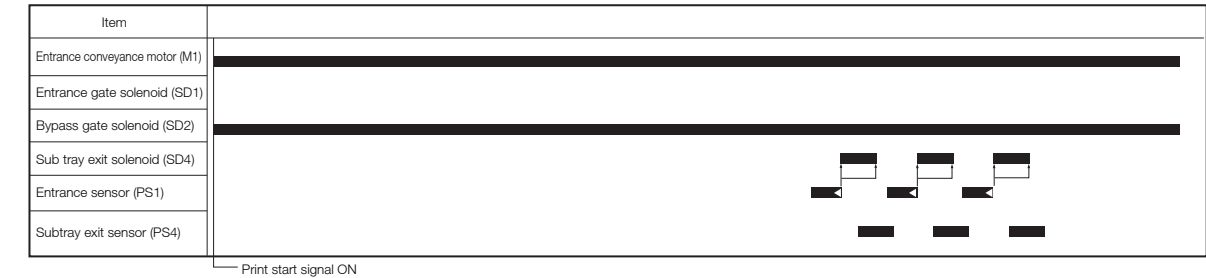
10. PB-502/503

10.1 Timing chart of the sub tray paper exit mode (PB-502/503)

10.1.1 Operation condition

Sub tray paper exit, A4, 3 originals, simplex

10.1.2 Timing chart



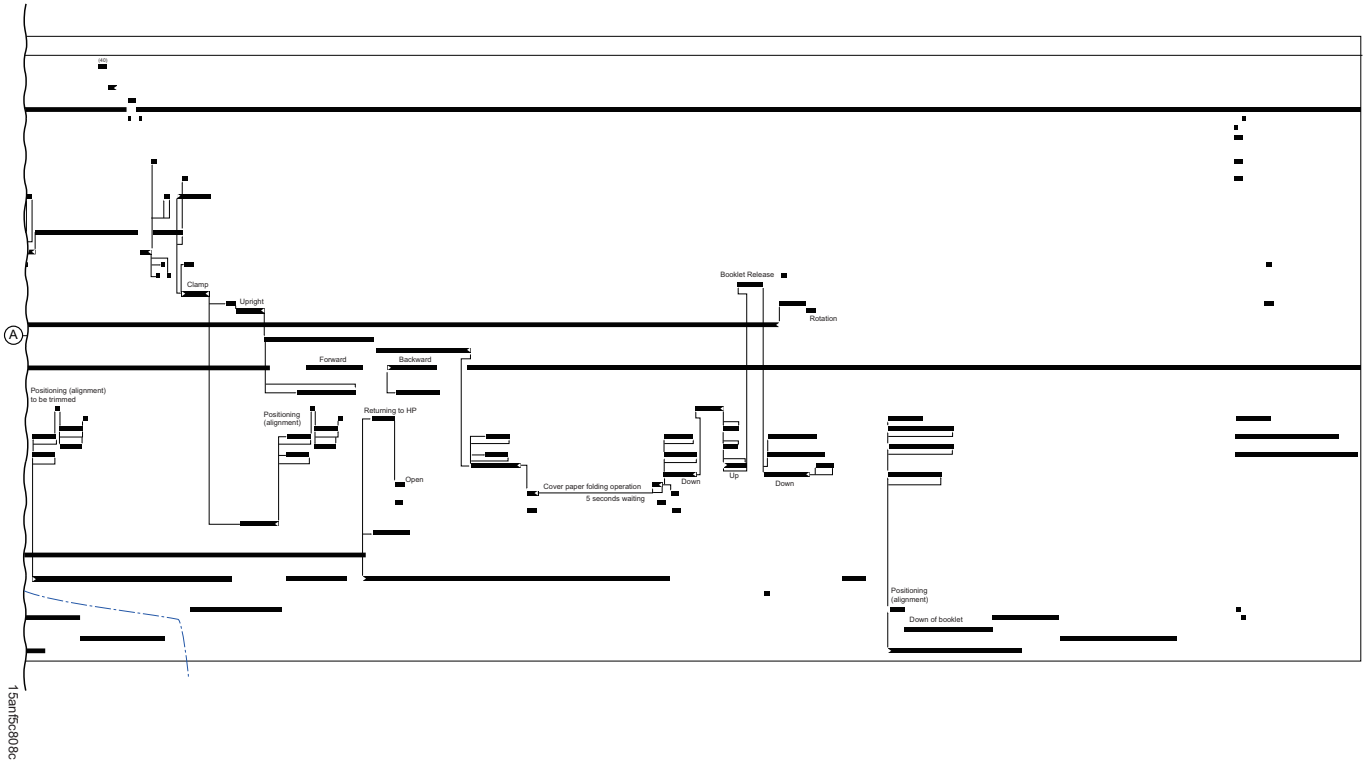
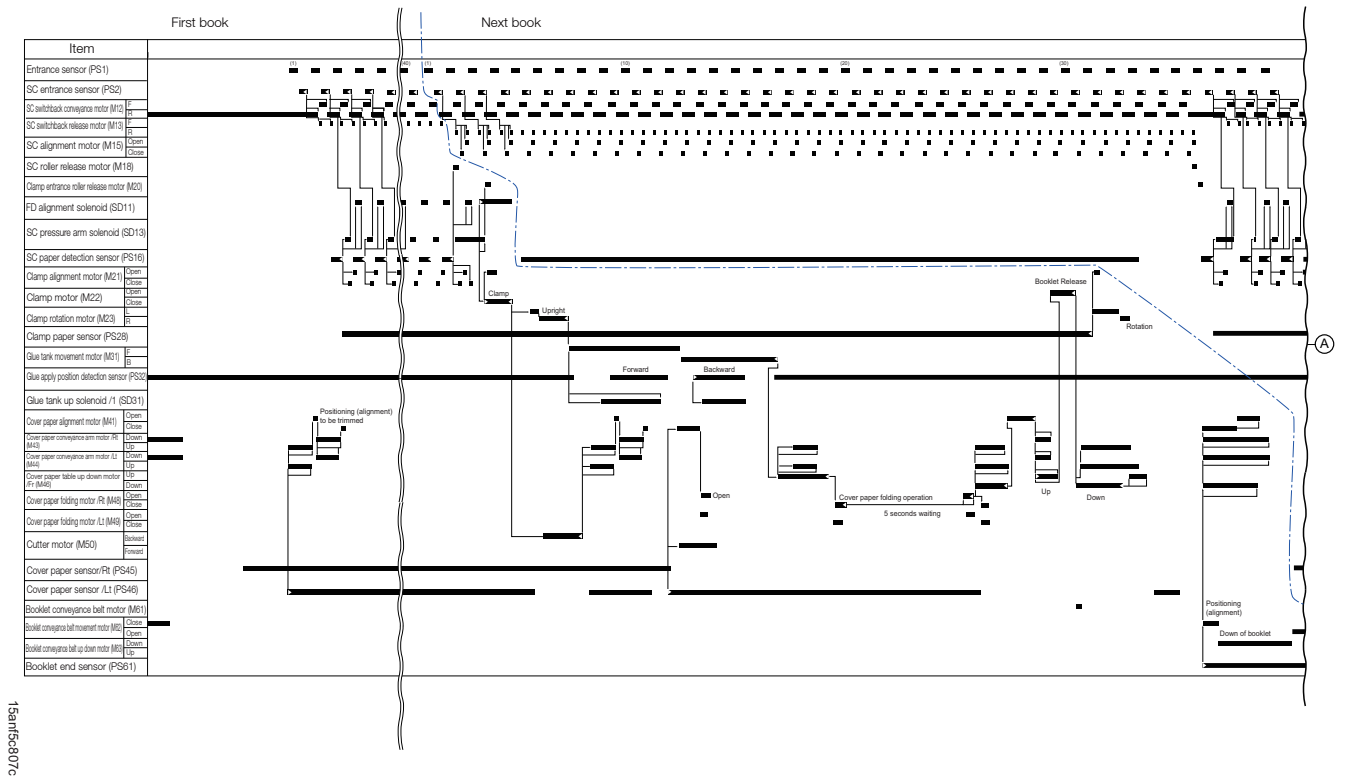
15ar1f5a800ca

10.2 Timing chart of the perfect binding mode (PB cover paper supply) (PB-502)

10.2.1 Operation condition

Perfect Binding, A4, 40 originals, 2 copies, single-sided, PB cover paper supply

10.2.2 Timing chart

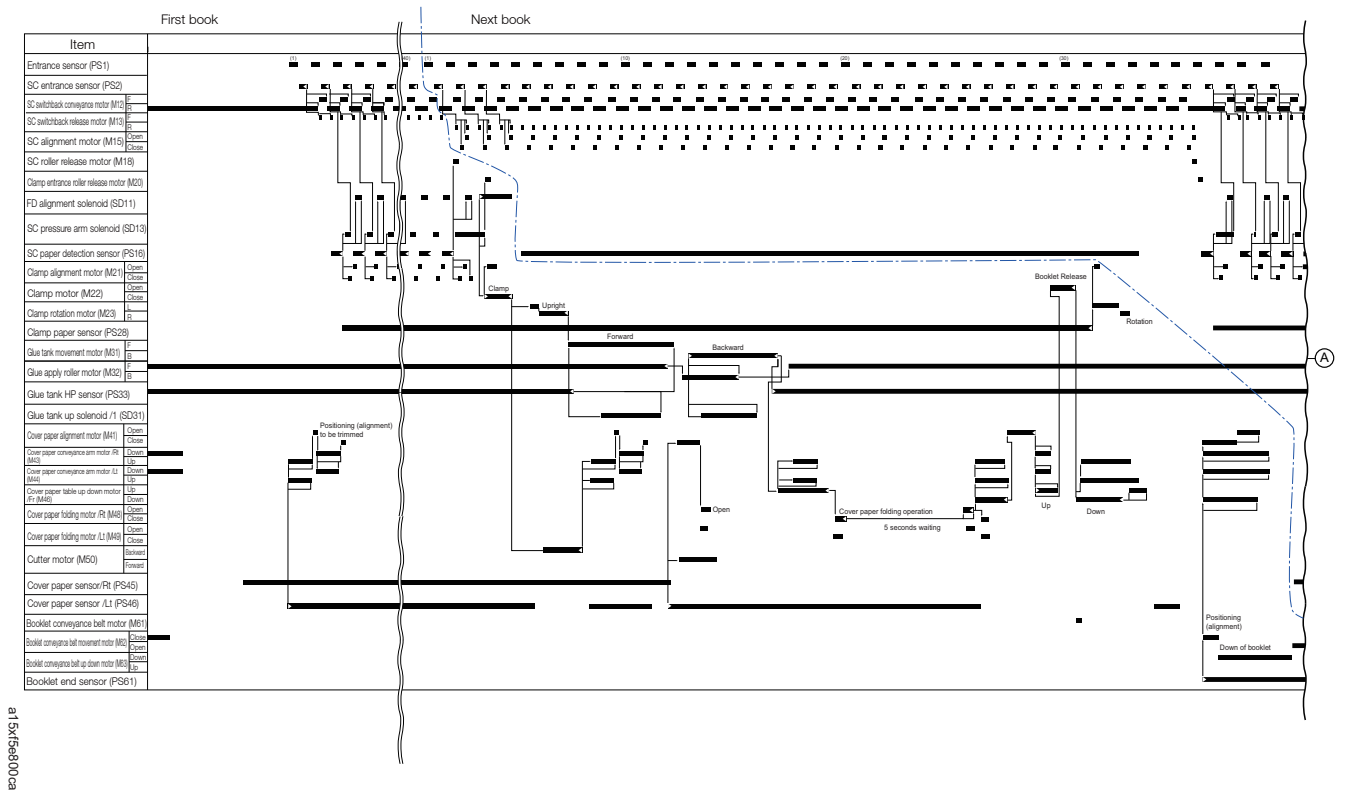


10.3 Timing chart of the perfect binding mode (PB cover paper supply) (PB-503)

10.3.1 Operation condition

Perfect Binding, A4, 40 originals, 2 copies, single side, PB cover paper supply

10.3.2 Timing chart

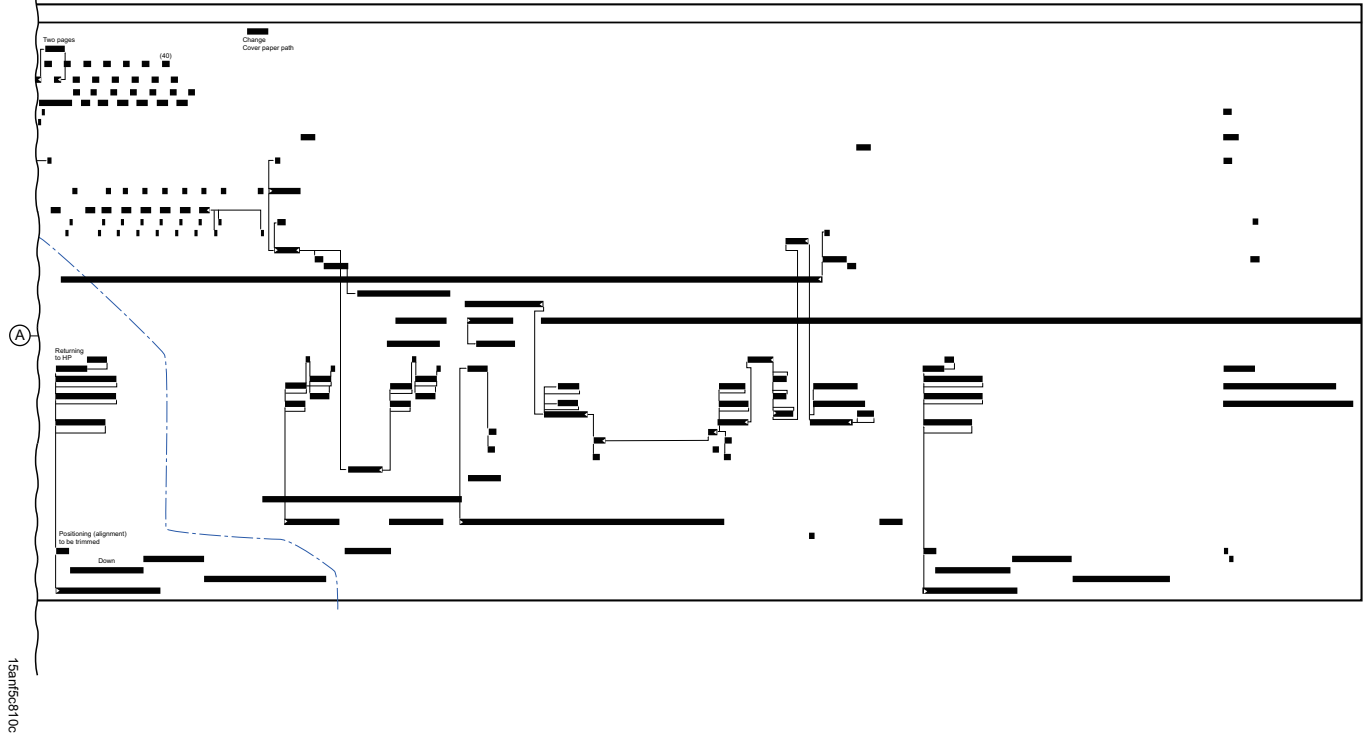
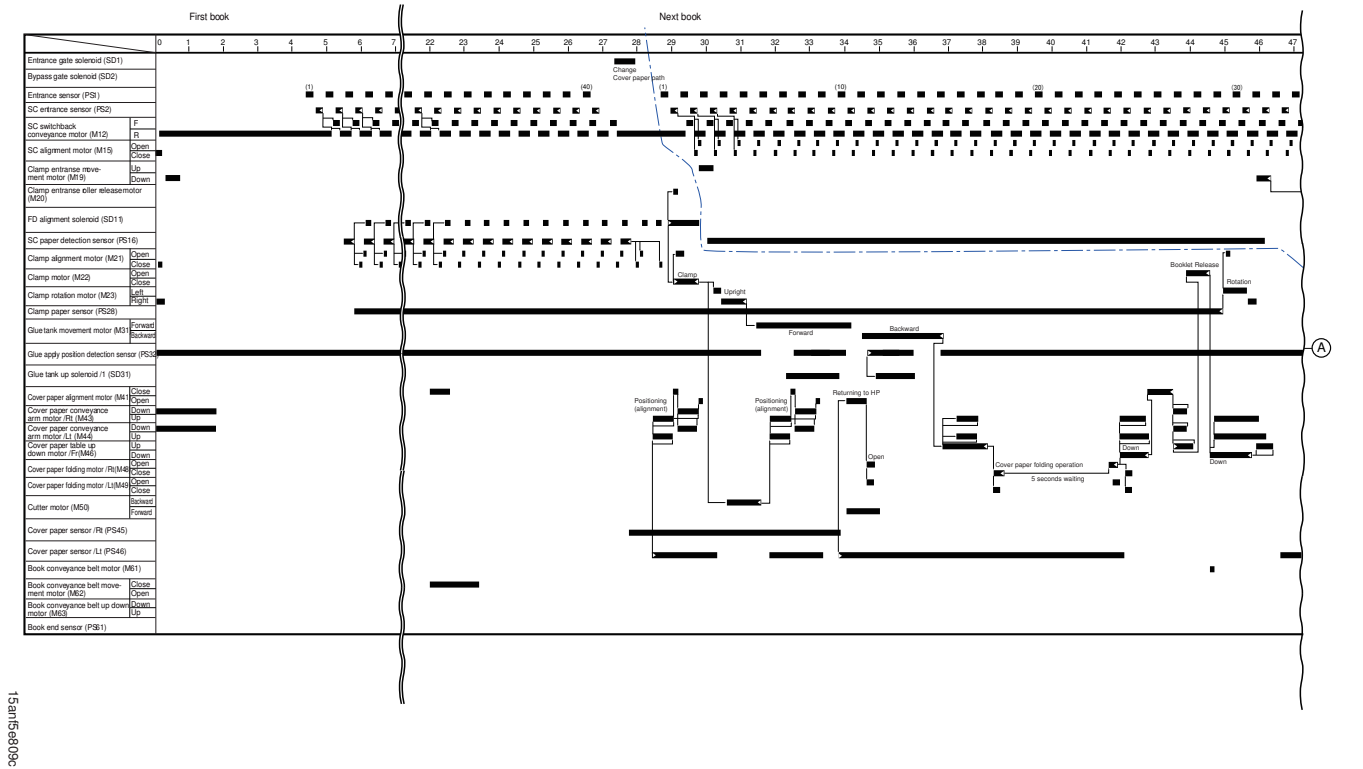


10.4 Timing chart of the perfect binding mode (Main body cover paper supply) (PB-502)

10.4.1 Operation condition

Perfect Binding, A4, 40 originals, 2 copies, single-sided, main body cover paper supply

10.4.2 Timing chart

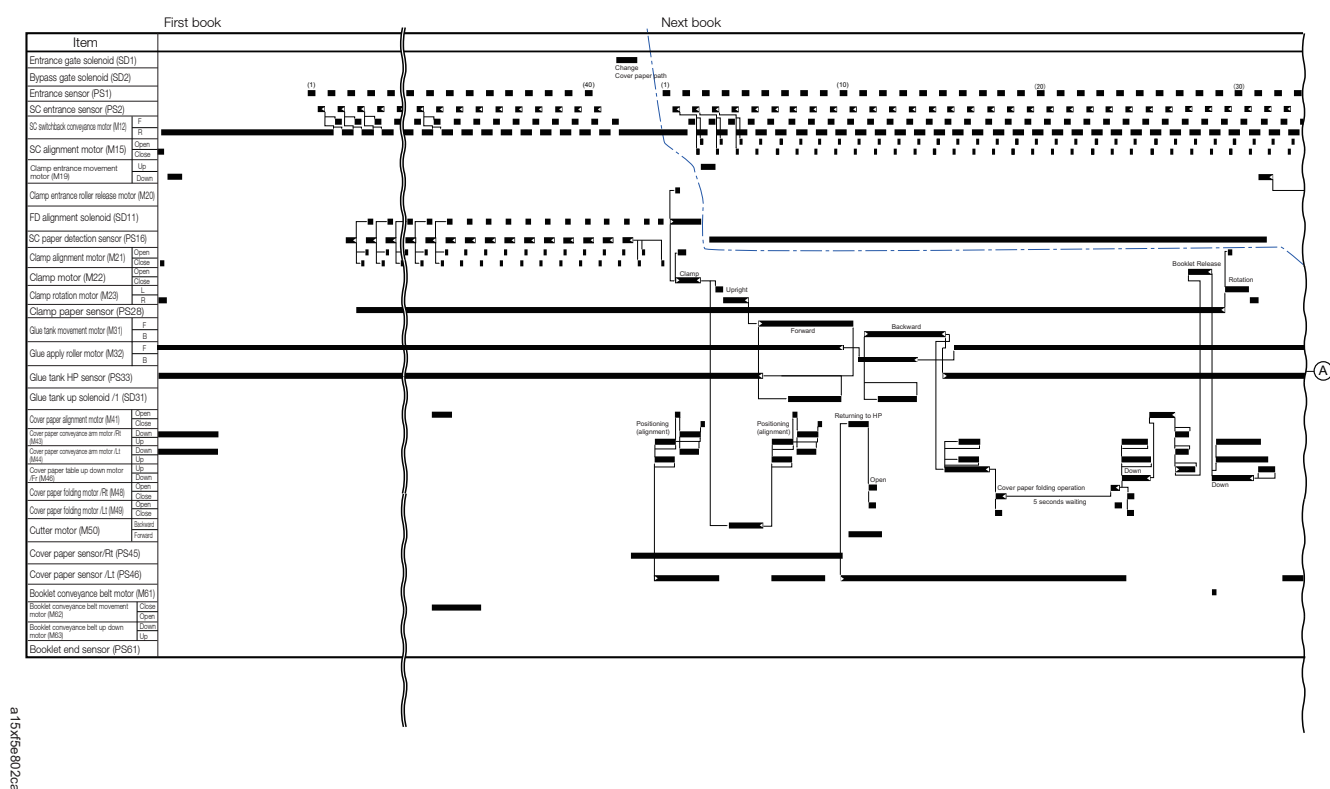


10.5 Timing chart of the perfect binding mode (Main body cover paper supply) (PB-503)

10.5.1 Operation condition

Perfect Binding, A4, 40 originals, 2 copies, single side, main body cover paper supply

10.5.2 Timing chart



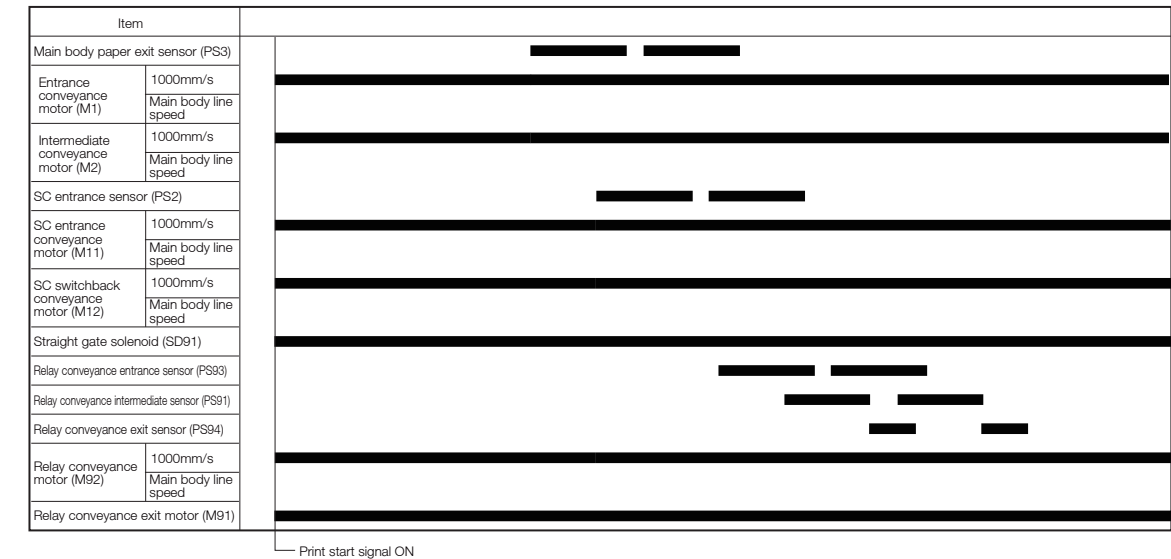
10.6 Timing chart of the relay conveyance mode (PB-503)

10.6.1 Operation condition

Relay conveyance, A3, 2 originals, simplex

* C8000/1200/1200P/1250/1250P/C7000/C7000P/C70hc/C6000

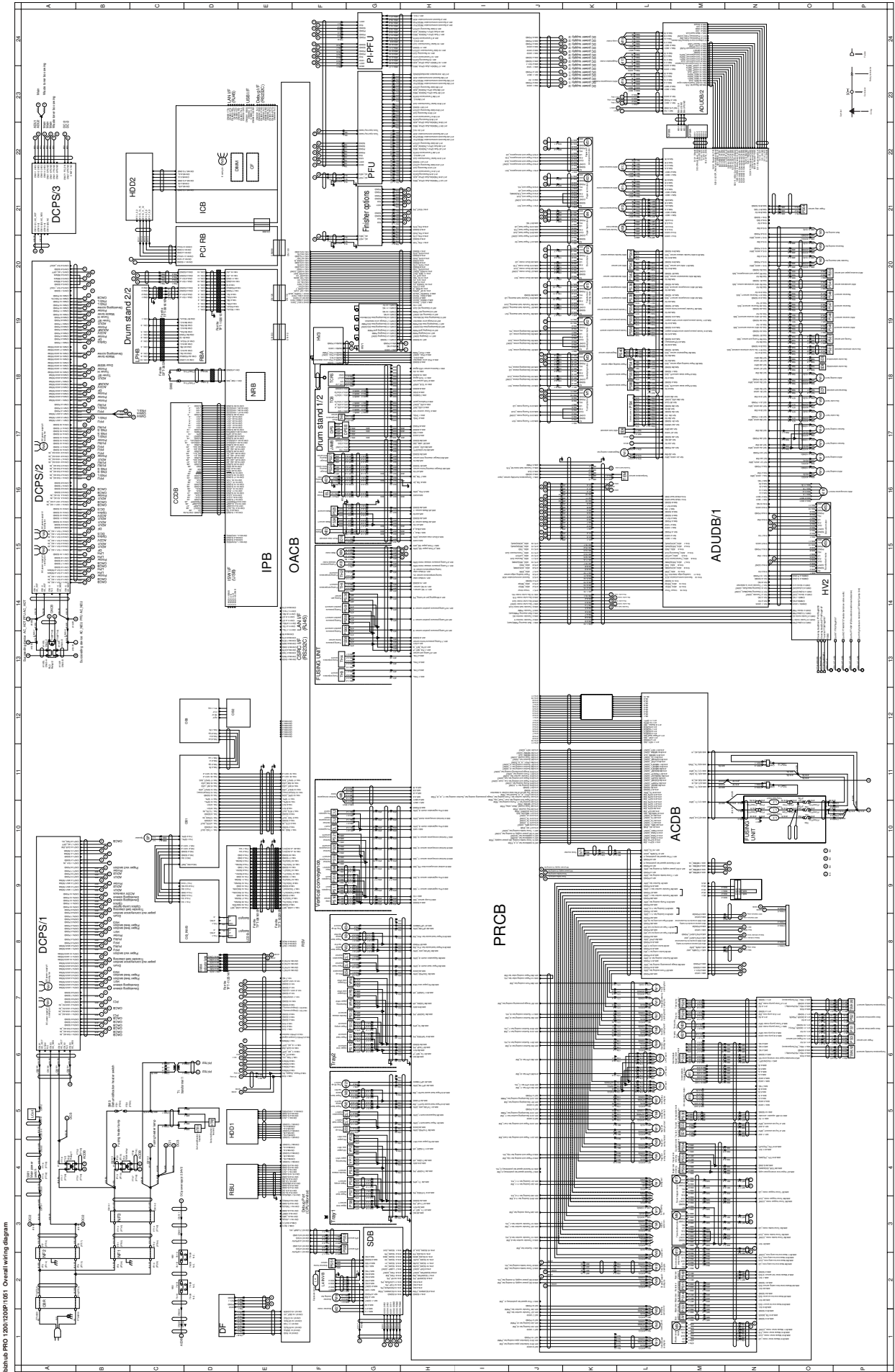
10.6.2 Timing chart



a15x45a804ca

N WIRING DIAGRAM/PAPER SETTING

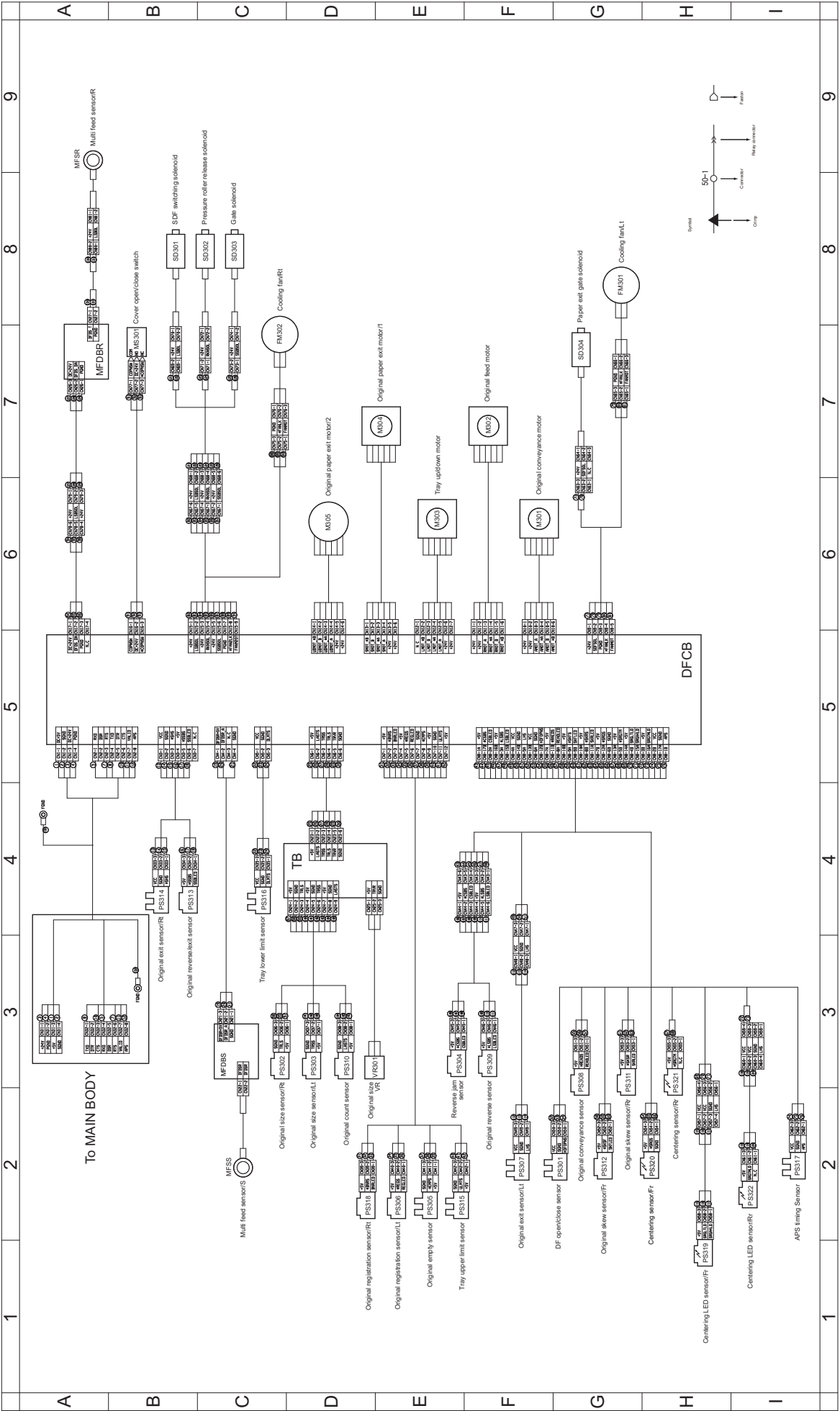
1. bizhub PRO 1200/1200P/1051




- bizhub PRO 1200/1200P/1051 Wiring diagram (a0g6f5c500cb.pdf)
- bizhub PRO 1200/1200P/1051 1/4 (a0g6f5c501cb.pdf)
- bizhub PRO 1200/1200P/1051 2/4 (a0g6f5c502cb.pdf)
- bizhub PRO 1200/1200P/1051 3/4 (a0g6f5c503cb.pdf)
- bizhub PRO 1200/1200P/1051 4/4 (a0g6f5c504cb.pdf)

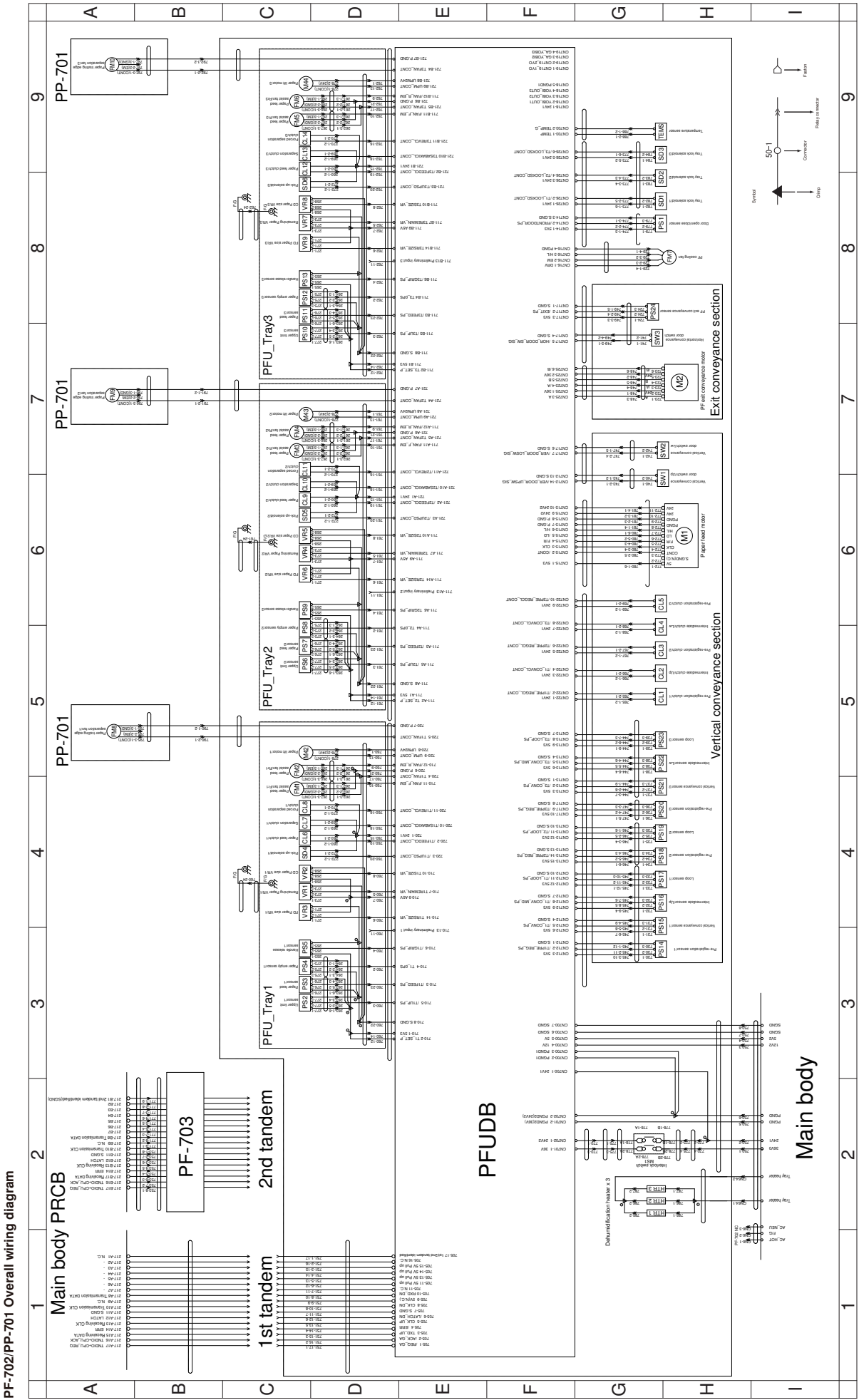
2. DF-615

DF-615 Overall wiring diagram



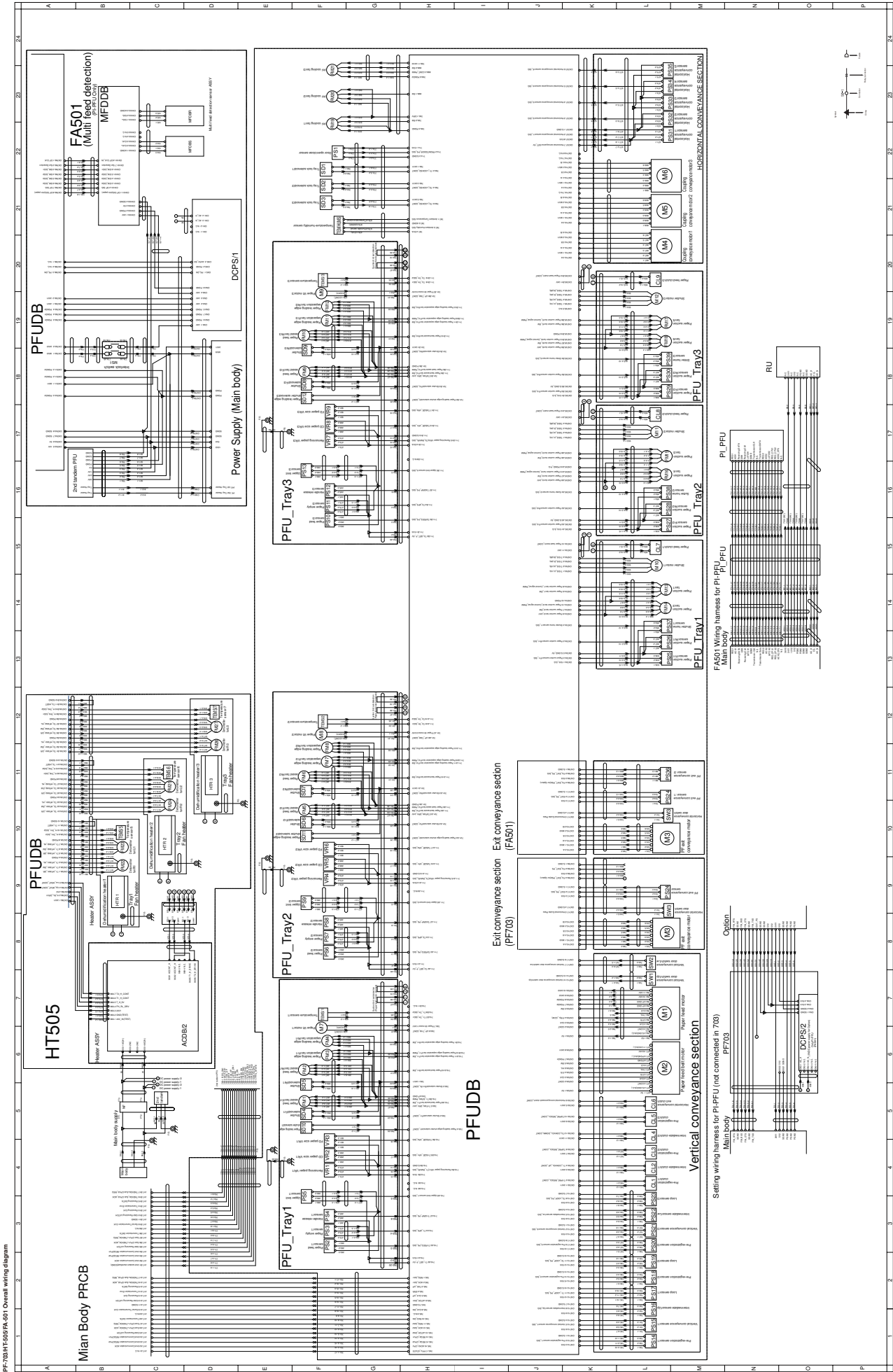
- DF-615 Wiring diagram ( hg5c500ca.pdf)

3. PF-702/PP-701



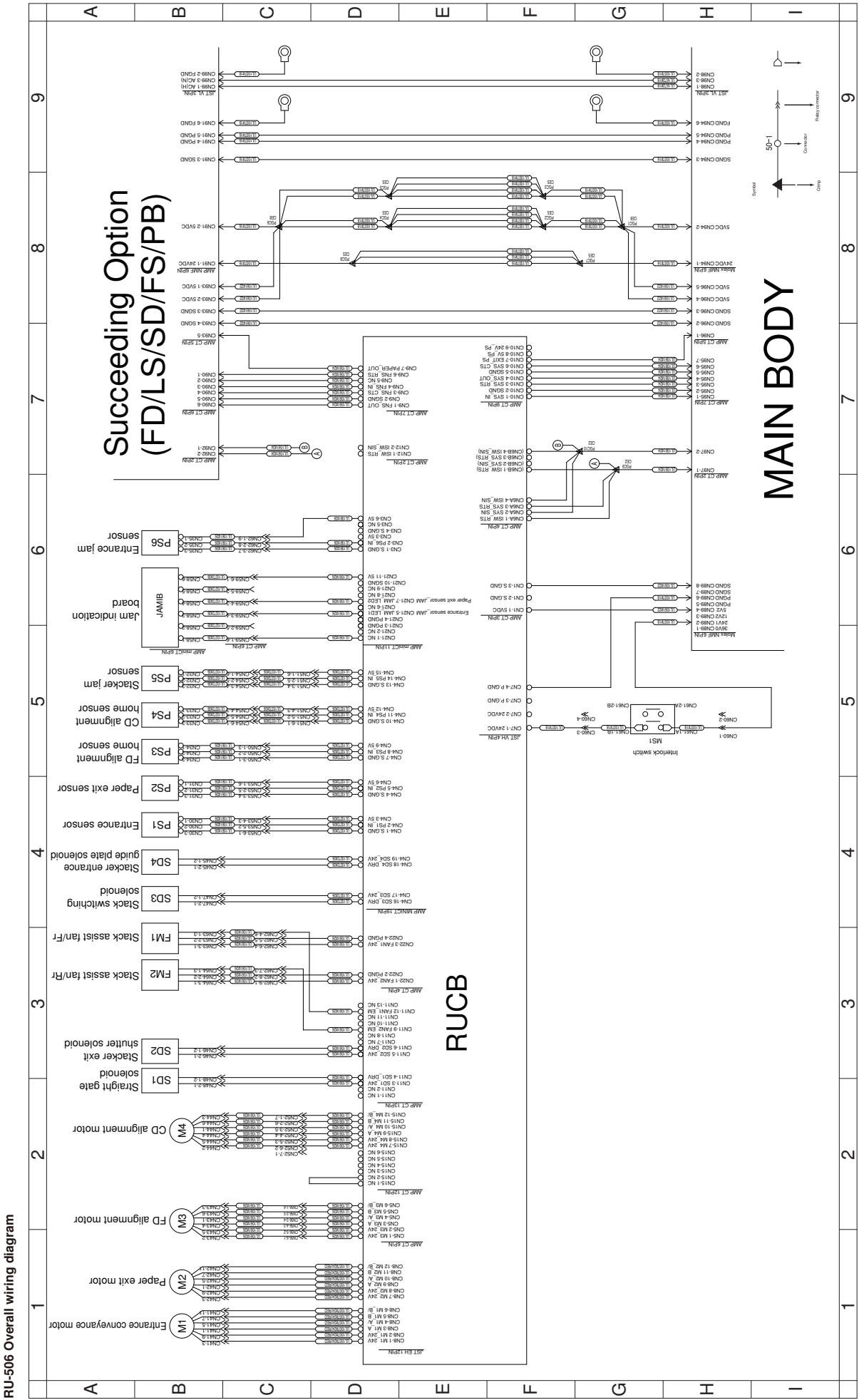
- PF-702/PP-701 Wiring diagram (a0gcf5c500ca.pdf)


4. PF-703/HT-505/FA-501



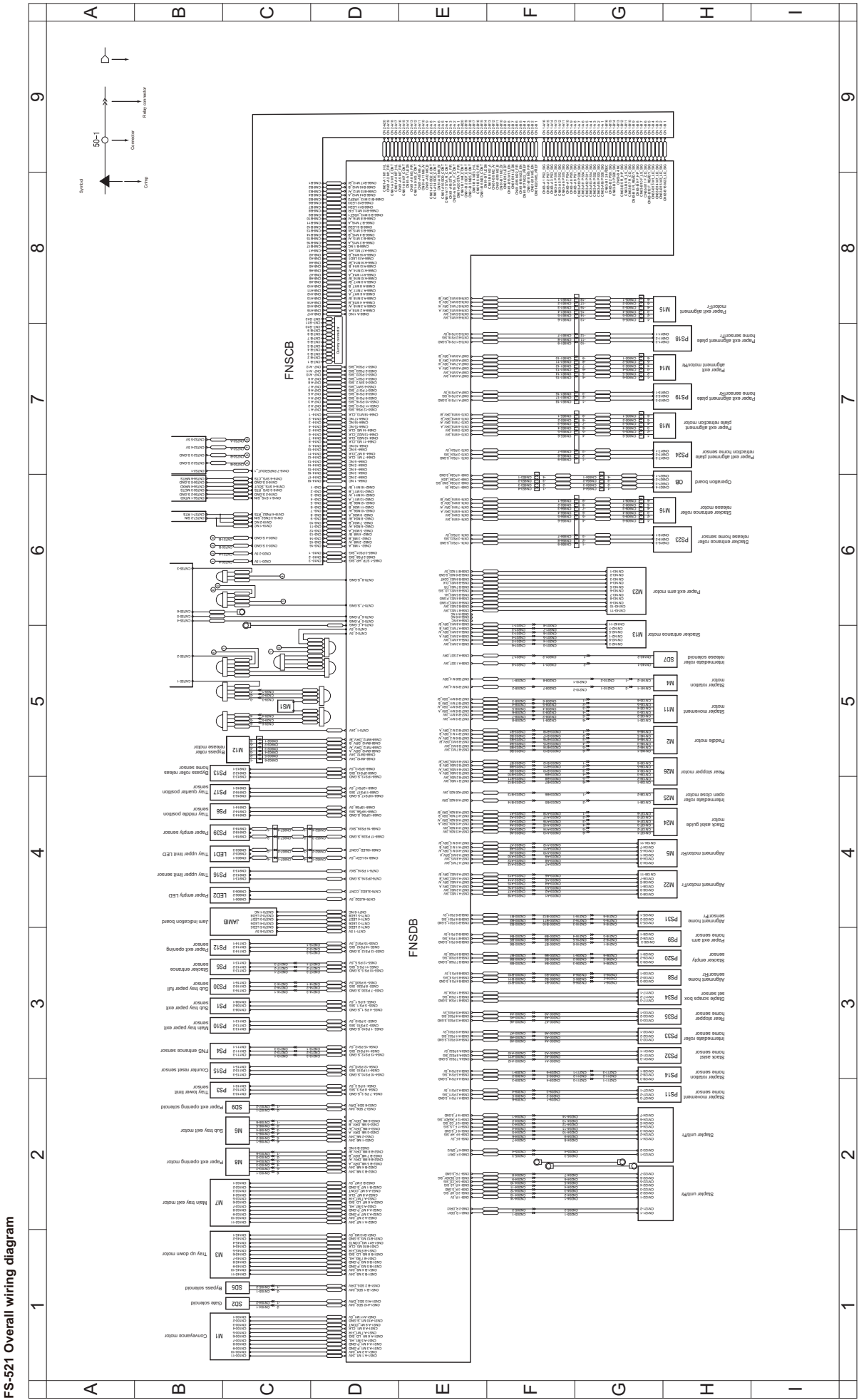
- PF-703/HT-505/FA-501 Wiring diagram (a0gdf5c500ca.pdf)
- PF-703/HT-505/FA-501 Wiring diagram (1/4) (a0gdf5c501ca.pdf)
- PF-703/HT-505/FA-501 Wiring diagram (2/4) (a0gdf5c502ca.pdf)
- PF-703/HT-505/FA-501 Wiring diagram (3/4) (a0gdf5c503ca.pdf)
- PF-703/HT-505/FA-501 Wiring diagram (4/4) (a0gdf5c504ca.pdf)


5. RU-506



- RU-506 Wiring diagram ( 0gef5c500ca.pdf)

6. FS-521



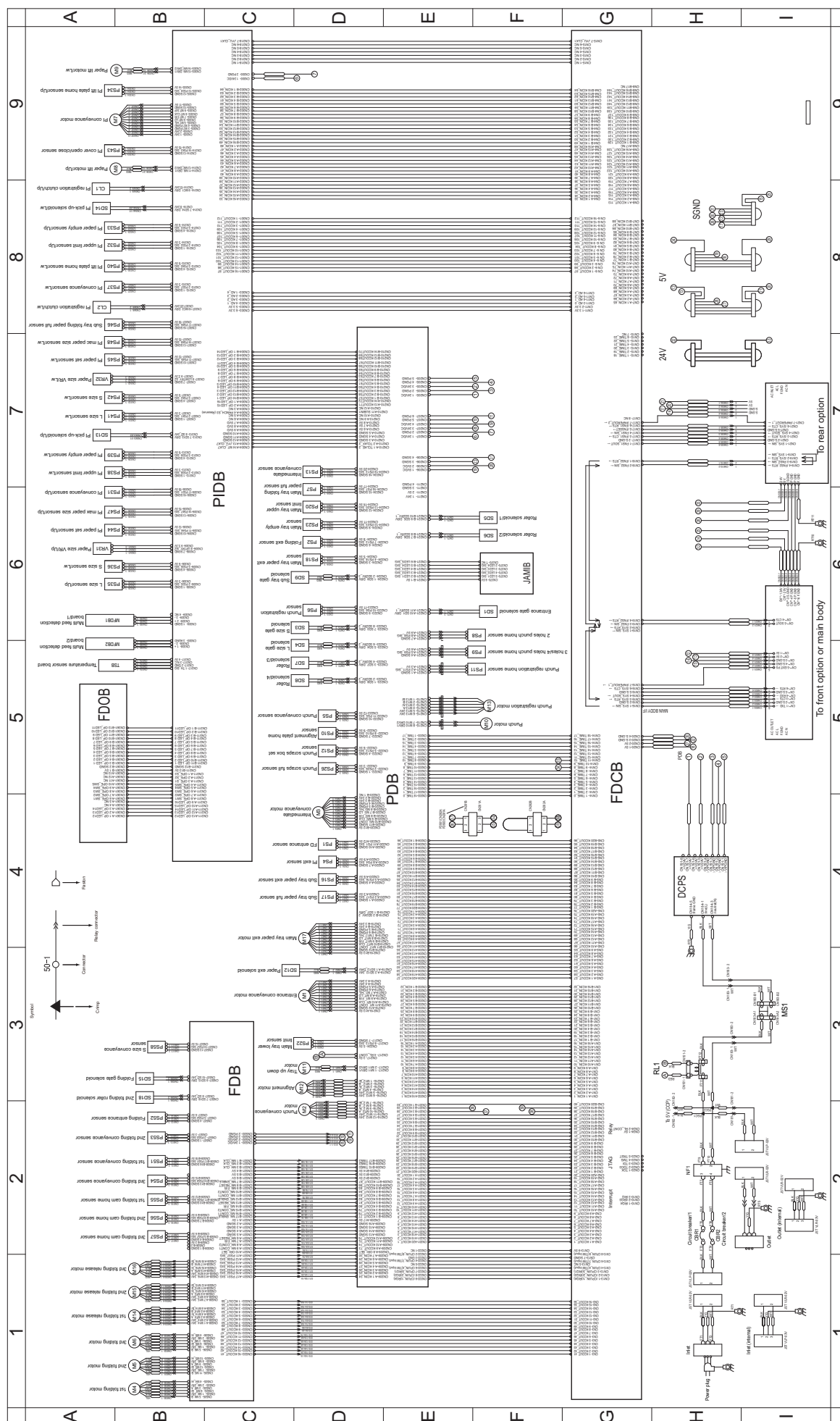
- FS-521 Wiring diagram ( gyf5c500ca.pdf)


LS-505 Overall wiring diagram



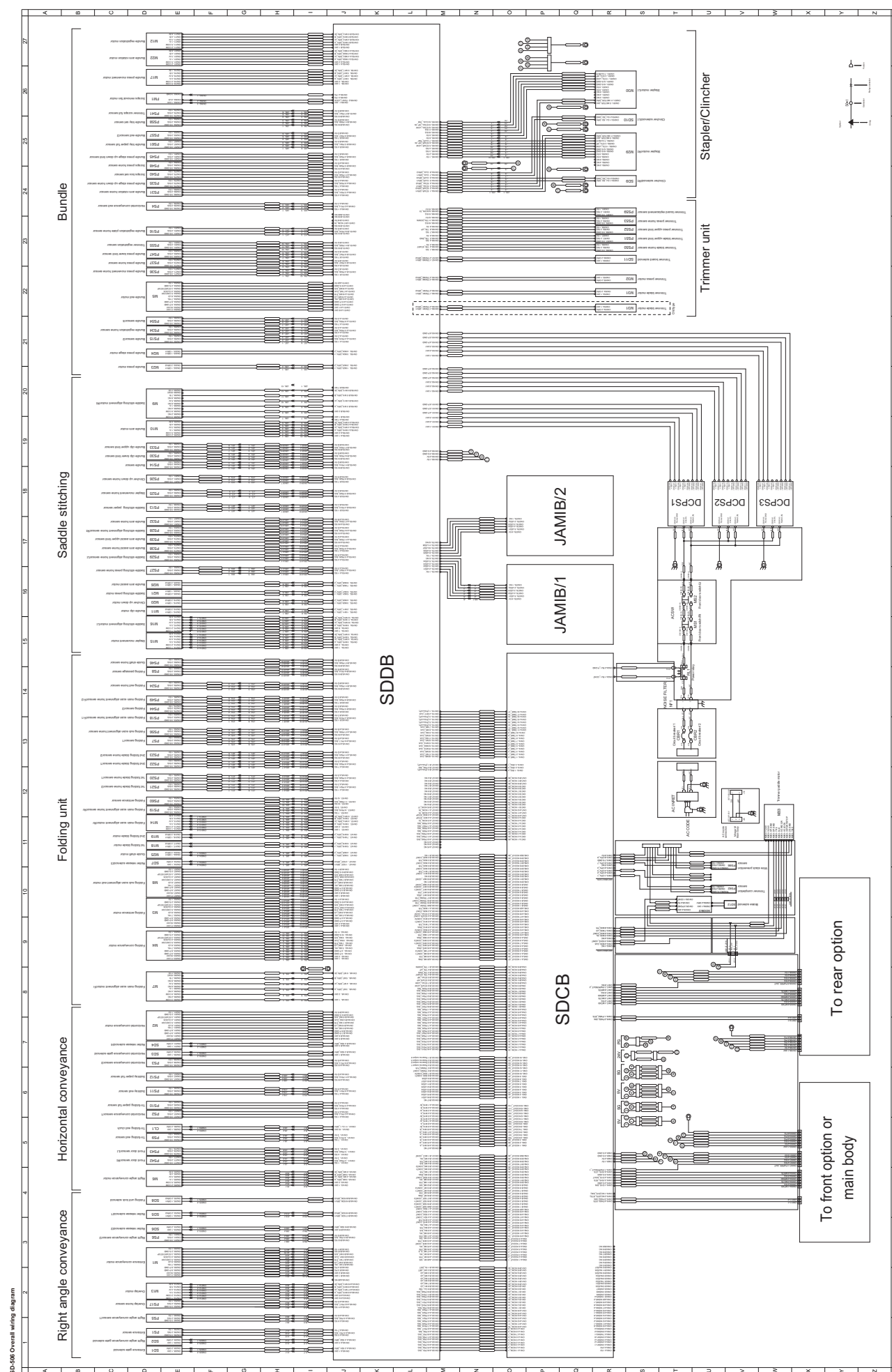
- LS-505 Wiring diagram ( H1M0NC901CA.pdf)

FD-503 Overall wiring diagram



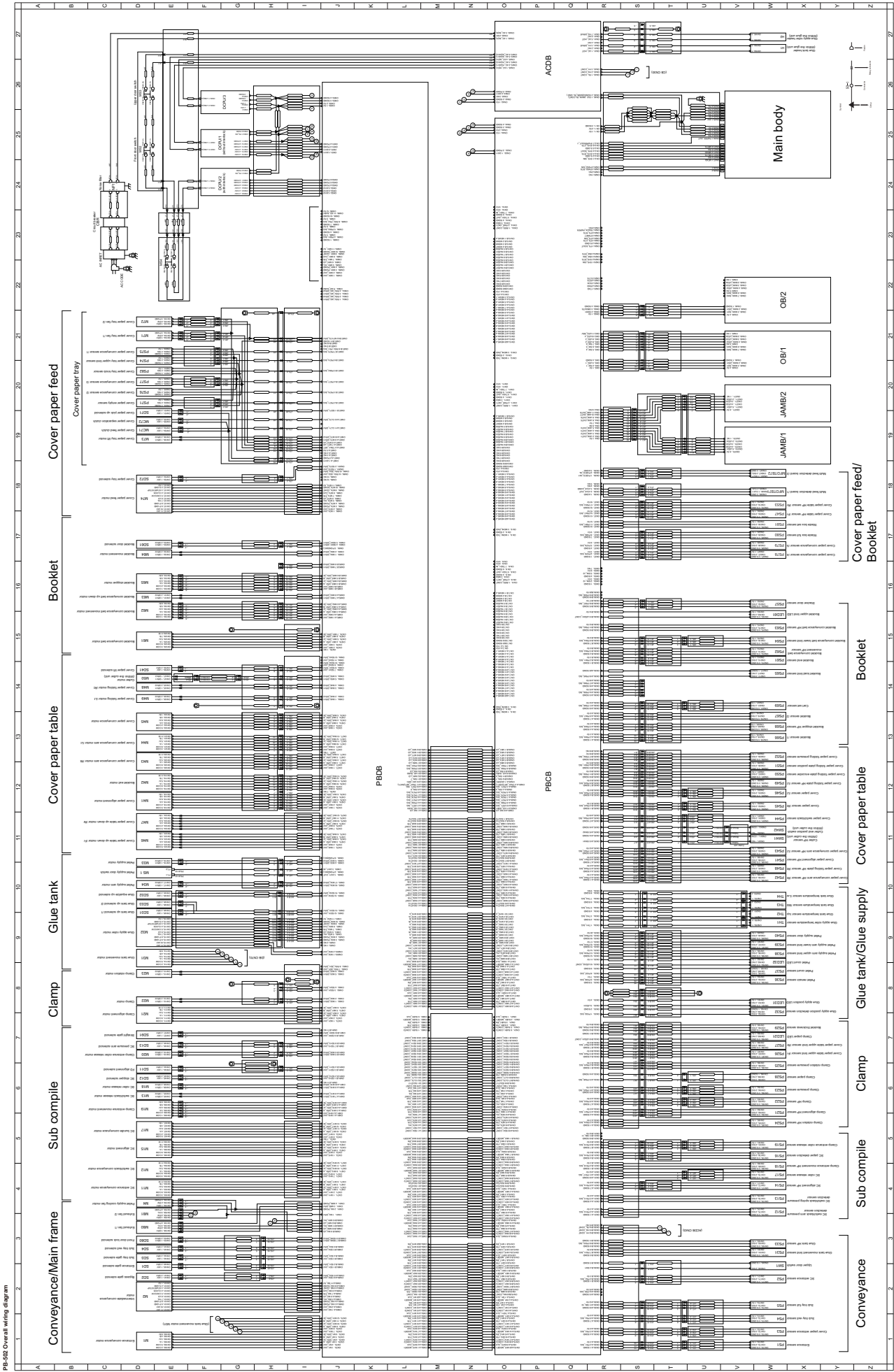
- FD-503 Wiring diagram ( h0f5c501ca.pdf)

9. SD-506



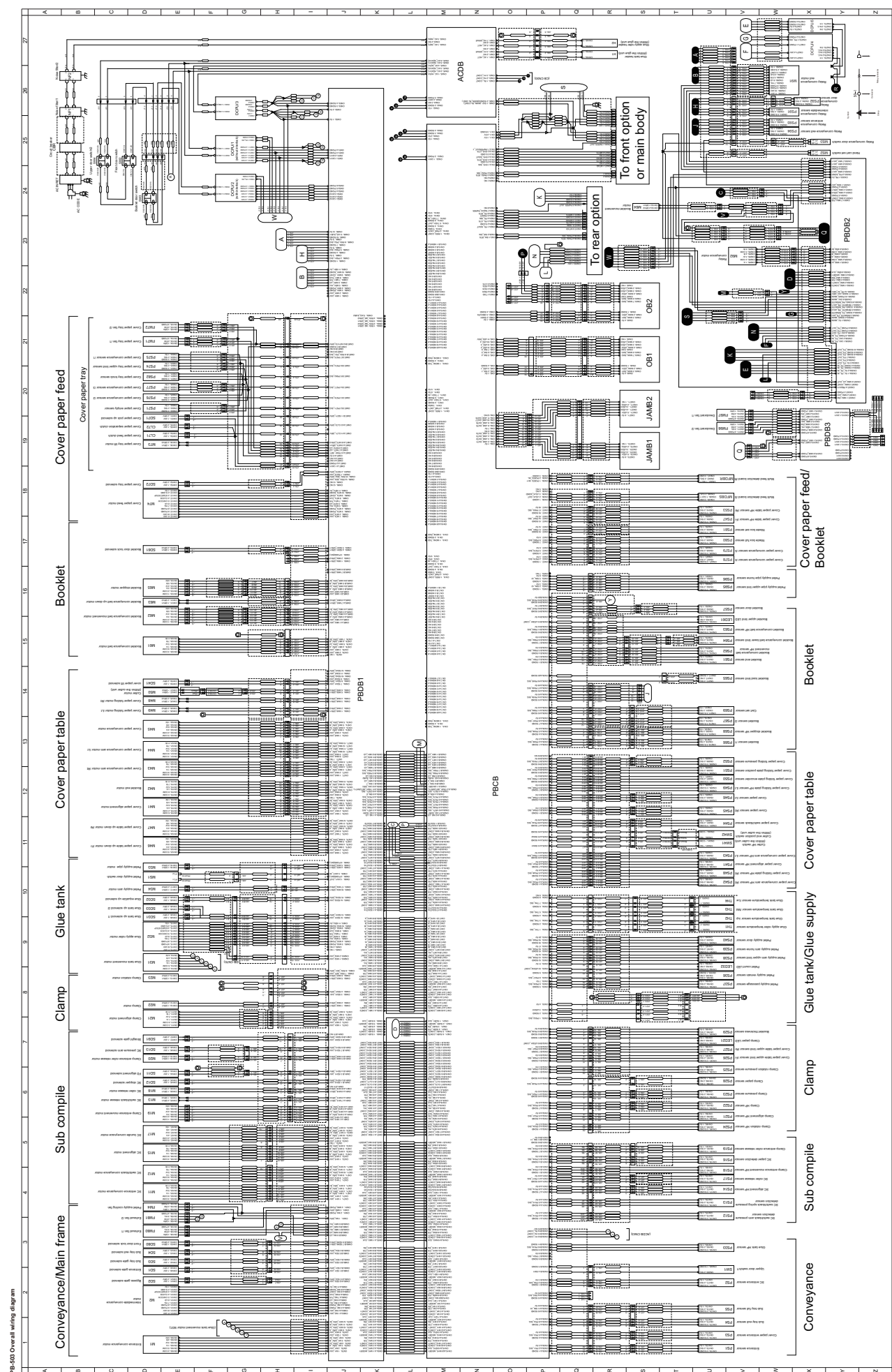
- SD-506 Wiring diagram (h2m0nc501ca.pdf)
- SD-506 Wiring diagram (1/a0h2m0nc511ca.pdf)
- SD-506 Wiring diagram (2/a0h2m0nc512ca.pdf)
- SD-506 Wiring diagram (3/a0h2m0nc513ca.pdf)
- SD-506 Wiring diagram (4/a0h2m0nc514ca.pdf)

10. PB-502



- PB-502 Wiring diagram (075f5c500cd.pdf)
- PB-502 Wiring diagram (1) (a075f5c501cc.pdf)
- PB-502 Wiring diagram (2) (a075f5c502c.pdf)
- PB-502 Wiring diagram (3) (a075f5c503cc.pdf)
- PB-502 Wiring diagram (4) (a075f5c504cc.pdf)

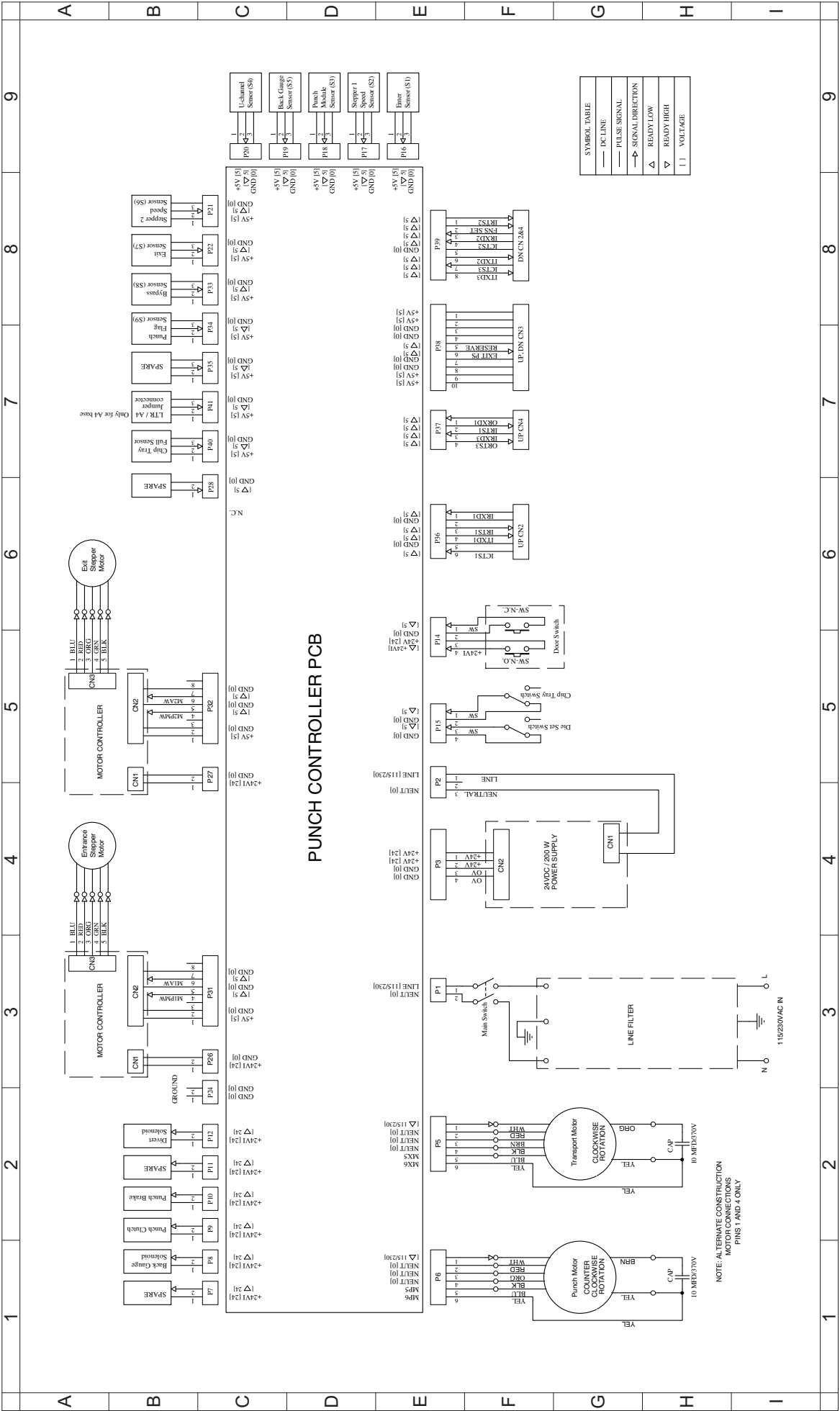
11. PB-503




- PB-503 Wiring diagram (1) (a15xf5c500cb.pdf)
- PB-503 Wiring diagram (2) (a15xf5c501ca.pdf)
- PB-503 Wiring diagram (3) (a15xf5c502cb.pdf)
- PB-503 Wiring diagram (4) (a15xf5c503cb.pdf)
- PB-503 Wiring diagram (5) (a15xf5c504cb.pdf)

12. GP-501

GP-501 Overall wiring diagram



- GP-501 Wiring diagram ( 0n9f5c500ca.pdf)

13. PAPER SETTING

PAPER SETTING

Relationship between the optimum value and the control of each of setting items by paper brand (U.S.A. paper) (1200/1200P)

NOTE

• This table lists the optimum setting values by paper brands checked for paper through by Konica Minolta. For other brands, it is scheduled that information is provided in due course upon completion of the paper through check.

Paper type	Weight	40-48g/m ²	50-61g/m ²	62-71g/m ²	72-91g/m ²	92-130g/m ²	131-161g/m ²	162-216g/m ²	217-244g/m ²	245-300g/m ² PFU Tray	301-350g/m ² PFU Tray 2
Coat (Smoothness: over 100sec)						Dontar Microprint Coated Laser Matte/118gsm (80lb Text) Smart Knightkote Matte Digital Color Imaging press C2S Text/118gsm (80lb) Futura laser Gloss (Text)/115g (80lb) Futura laser Dull (Text)/115g (80lb)		Wausau Exact Gloss Coated (C1S)/215gsm (80lb) Dontar Microprint Coated laser Matte Cover/216gsm (80lb Cover)	Kromekote Laser High Gloss C2S - Ultra Gloss Cast Coat/234.4gsm (10pt) Kromekote Laser High Gloss C1S/12pt		
Line speed (mm/s)		570	570	570	570	570	570	330	330	330	330
Pressure power		Weak	Weak	Weak	Weak	Medium	Medium	Medium	Medium	Medium	Medium
Fusing temp index. (°C)		Standard temp.	Standard temp.	Standard temp.	Standard temp.	Standard temp.	Standard temp.	Standard temp.	Standard temp.	Standard temp.	Standard temp.
PrePrinted (Smoothness: over 100sec)						Dontar Microprint Coated Laser Matte/118gsm (80lb Text) Smart Knightkote Matte Digital Color Imaging press C2S Text/118gsm (80lb) Futura laser Gloss (Text)/115g (80lb) Futura laser Dull (Text)/115g (80lb)		Wausau Exact Gloss Coated (C1S)/215gsm (80lb) Dontar Microprint Coated laser Matte Cover/216gsm (80lb Cover)	Kromekote Laser High Gloss C2S - Ultra Gloss Cast Coat/234.4gsm (10pt) Kromekote Laser High Gloss C1S/12pt		
Line speed (mm/s)		570	570	570	570	570	570	330	330	330	330
Pressure power		Weak	Weak	Weak	Weak	Medium	Medium	Medium	Medium	Medium	Medium
Fusing temp index. (°C)		Standard temp.	Standard temp.	Standard temp.	Standard temp.	Standard temp.	Standard temp.	Standard temp.	Standard temp.	Standard temp.	Standard temp.
Fine (Smoothness: 50 to 100sec)						Hammill Color Copy Paper - Photo White/120gsm (32lb Bond) Hammill Color Copy Cover - Photo White/120gsm (80lb)		Carolina Digital C1S Cover/195gsm	Carolina Digital C2S Cover/234.4gsm (10pt) Carolina Digital C1S Cover/234.4gsm (10pt)		
Line speed (mm/s)		570	570	570	570	570	570	570	490	330	330
Pressure power		Weak	Weak	Weak	Weak	Medium	Medium	Medium	Medium	Medium	Medium
Fusing temp index. (°C)		Standard temp.	Standard temp.	Standard temp.	Standard temp.	Standard temp.	Standard temp.	Standard temp.	Standard temp.	Standard temp.	Standard temp.
Normal (Smoothness: 20 to 50sec)						Dontar Microprint Color Copy/105gsm (28lb Bond) 3M CG3700 125micron clear color laser film Avery 5160 Avery 5352 Xerox one step image transfer paper for laser printers		Dontar Microprint Color Copy Cover/163gsm (80lb Cover) Dontar Microprint Color Copy Cover/216gsm (80lb Cover)			
Line speed (mm/s)		570	570	570	570	570	570	570	330	330	330
Pressure power		Weak	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Fusing temp index. (°C)		Standard temp.	Standard temp.	Standard temp.	+10	+10	+10	+10	Standard temp.	Standard temp.	Standard temp.

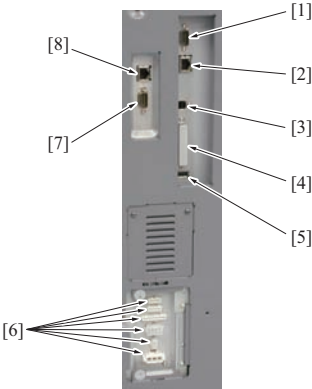
- Paper Setting (Paper Setting.pdf)

O THEORY OF OPERATION bizhub PRO 1200/1200P/1051

1. INTERFACE SECTION

1.1 Configuration

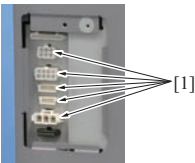
1.1.1 Main body right side



a0g6t2c004ca

	Item	Specifications
[1]	Serial port (RS-232C) for the image controller	Not used
[2]	RJ45 Ethernet connector for the image controller	For the network connection of the image controller
[3]	USB port (USB TypeB) for the image controller	For the USB connection of the image controller
[4]	CF card slot	For CF card slot
[5]	USB port (USB TypeA) for the image controller	For service (Log information acquisition)
[6]	PF connecting connector	For PF connecting
[7]	Serial port (RS-232C)	For CS Remote Care
[8]	RJ45 Ethernet connector	For Internet ISW/Web Utilities/Mail remote notification system

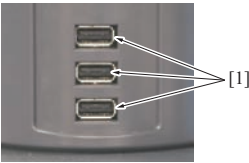
1.1.2 Main body left side



a0g6t2c005ca

	Item	Specifications
[1]	Post-processing unit connecting connector	For the post-processing unit connection

1.1.3 Main body upper side

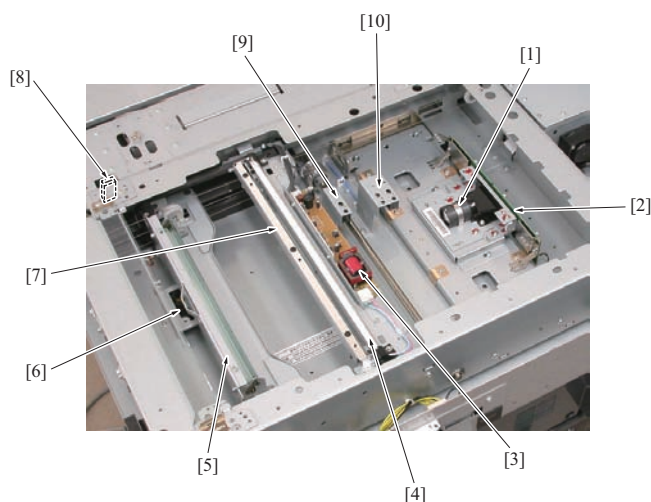


a0g6t2c006ca

	Item	Specifications
[1]	Connecting port (TypeA)	Keyboard, mouse and BoxExplorer (CD/DVD drive, USB Memory, USB-HDD) for ISW of the copier/printer program

2. SCANNER SECTION

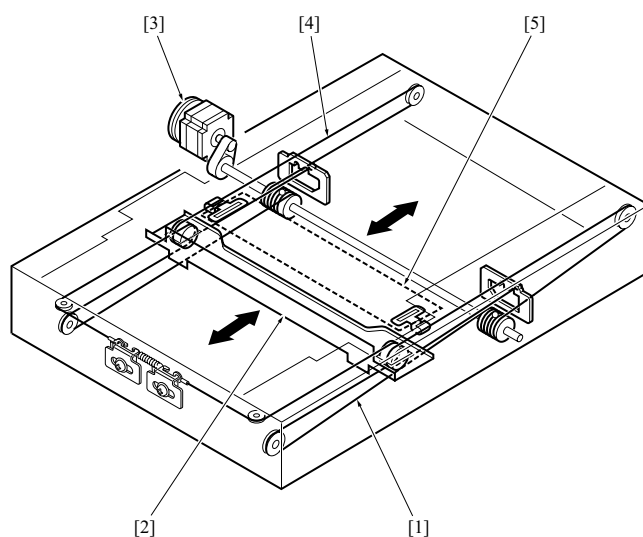
2.1 Configuration



1050to2006c

[1]	CCD lens	[2]	CCD board (CCDB)
[3]	L4 inverter (L4 INVB)	[4]	Exposure lamp (L4)
[5]	V-mirror unit	[6]	Scanner cooling fan (FM19)
[7]	Exposure unit	[8]	Scanner home sensor (PS51)
[9]	APS sensor /1 (PS52)	[10]	APS sensor /2 (PS53)

2.2 Drive



1050to2007c

[1]	Scanner wire /Fr	[2]	V-mirror unit
[3]	Scanner motor (M27)	[4]	Scanner wire /Rr
[5]	Exposure unit	-	

2.3 Operation

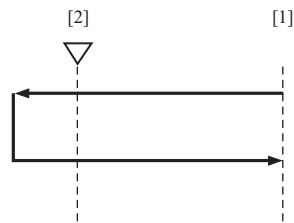
2.3.1 Control when the sub power is turned ON

- When the power switch (SW2) is turned ON, the exposure unit conducts the home position search and the shading correction.

(1) Home position search

- The operation of the home position search varies depending on the ON/OFF condition of the scanner home sensor (PS51) [2].

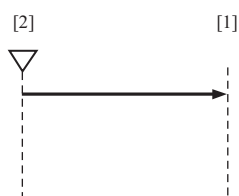
(a) When the scanner home sensor (PS51) is OFF



1050to2008c

[1]	Position at which the original glass APS is read	[2]	Scanner home sensor (PS51)
-----	--	-----	----------------------------

(b) When the scanner home sensor (PS51) is ON

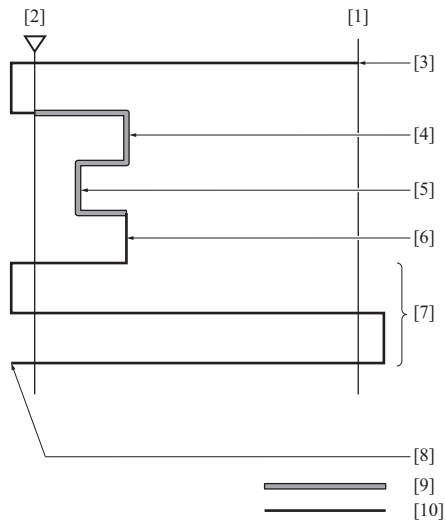


1050to2009c

[1]	Position at which the original glass APS is read	[2]	Scanner home sensor (PS51)
-----	--	-----	----------------------------

(2) Shading correction

- After completion of the home position search [3], the exposure unit conducts shading corrections.
- There are 3 types of shading corrections: white correction 1 [4], white correction 2 [5] and black correction [6].
- For the shading correction at the time of the power ON, each correction is carried out in a series of operations.



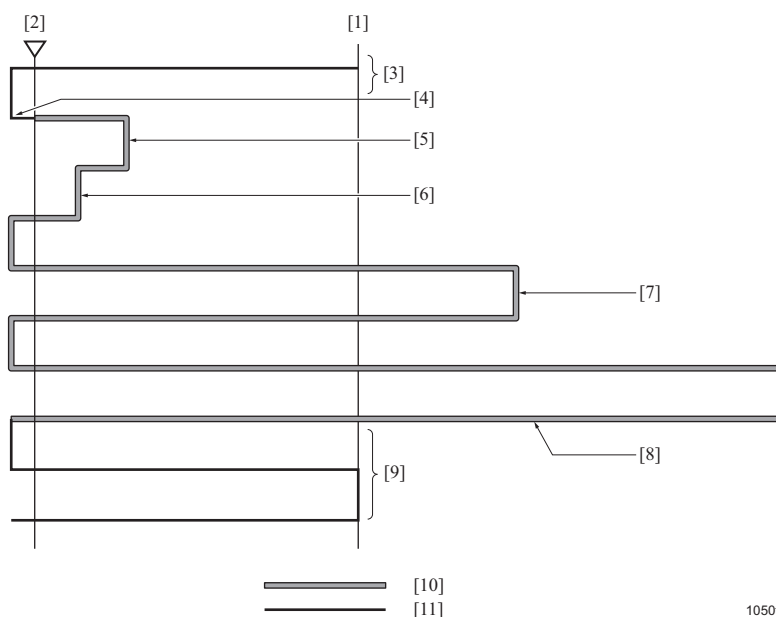
1050to2010c

[1]	Position at which the APS is read	[2]	Scanner home sensor (PS51)
[3]	Home position search terminated	[4]	White correction 1
[5]	White correction 2	[6]	Black correction
[7]	Home position search	[8]	Standby position while in the DF mode
[9]	Exposure lamp (L4) ON	[10]	Movement of the exposure lamp

2.3.2 Control when the start button is turned ON

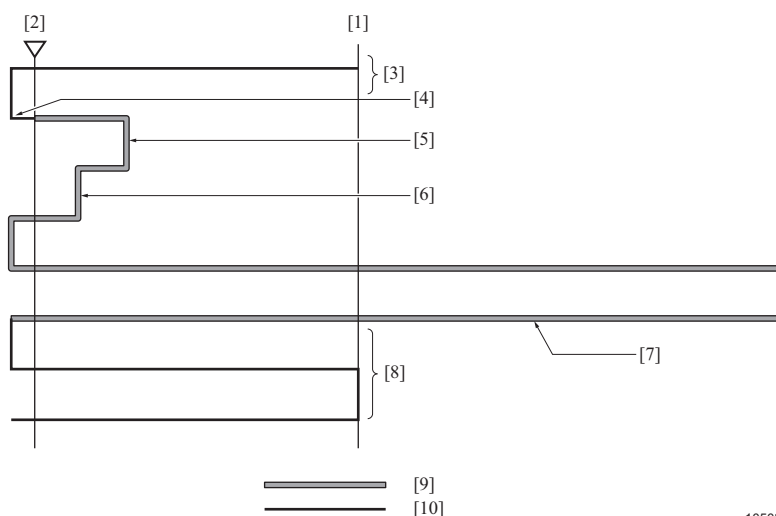
(1) When using original glass

- When the start button is turned ON, the exposure unit conducts the shading correction and then the exposure scan.
- When the AE/AES is selected, the AE/AES scan [7] is made before the exposure scan is made.
- For the shading correction while in the exposure scan, the black correction is not conducted because of the exposure lamp being left turned on.

(a) While in the AE/AES copy

1050to2011c

[1]	Position at which the APS is read	[2]	Scanner home sensor (PS51)
[3]	DF close	[4]	Start button
[5]	White correction 1	[6]	White correction 2
[7]	AE/AES scan	[8]	Position at which the original is read
[9]	Home position search	[10]	Exposure lamp (L4) ON
[11]	Movement of the exposure lamp		

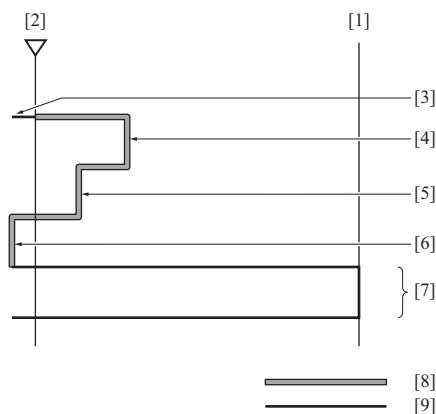
(b) While in the manual copy

1050to2012c

[1]	Position at which the APS is read	[2]	Scanner home sensor (PS51)
[3]	DF close	[4]	Start button
[5]	White correction 1	[6]	White correction 2
[7]	Position at which the original is read	[8]	Home position search
[9]	Exposure lamp (L4) ON	[10]	Movement of the exposure lamp

(2) When the DF is in use

- When the start button is turned ON [3], the exposure unit conducts the shading correction and then moves to the position at which the DF is read.
- The same operations are made when the AE/AES is selected.
- For the shading correction in the DF mode, the black correction is not made because of the exposure lamp being left turned on.



1050to2013c

[1]	Position at which the APS is read	[2]	Scanner home sensor (PS51)
[3]	Start button	[4]	White correction 1
[5]	White correction 2	[6]	Position at which the original is read
[7]	Home position search	[8]	Exposure lamp (L4) ON
[9]	Movement of the exposure lamp		

2.3.3 Original size detection control

(1) Detection method

- The DF mode and the original glass mode is different.

(a) DF mode

- Refer to the DF-615.

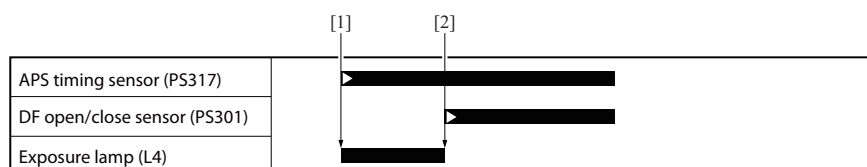
(b) In original glass mode

- In the direction of the main scan : CCD sensor
- In the direction of the sub-scan: the combination of the ON/OFF of the APS sensor /1 (PS52) and the APS sensor /2 (PS53).

Original size	CCD sensor (Length of detection: mm)	PS52 ON/OFF	PS53 ON/OFF
Smallest	102. 0	OFF	OFF
B6S	128. 0	OFF	OFF
B5S	182. 0	ON	OFF
B5	257. 0	OFF	OFF
B4	257. 0	-	ON
A5S	148. 0	OFF	OFF
A5	210. 0	OFF	OFF
A4S	210. 0	ON	OFF
A4	297. 0	OFF	OFF
A3	297. 0	-	ON
Wide paper	304. 8	-	ON
5 ¹ / ₂ x 8 ¹ / ₂ S	139. 7	OFF	OFF
5 ¹ / ₂ x 8 ¹ / ₂	215. 9	OFF	OFF
8 ¹ / ₂ x 14	215. 9	-	ON
8 ¹ / ₂ x 11S	215. 9	ON	OFF
8 ¹ / ₂ x 11	279. 4	OFF	OFF
11 x 17	279. 4	-	ON

* For "-" in the table above, either of ON and OFF is acceptable as a result of the detection.

(2) Detection timing



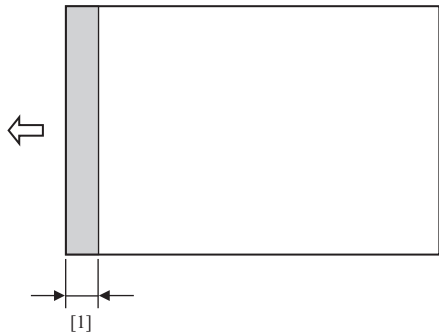
1050to2016e

[1] 1st original size detection (with DF closed)	[2] 2nd original size detection
--	---------------------------------

2.3.4 AE control

- When the AE/AES is selected, the density level of the original is detected automatically to adjust it to an appropriate density.
- The sampling range of the original density when the AE/AES is controlled is different for the original glass mode and the DF mode.

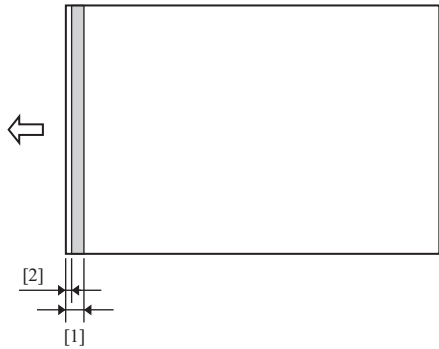
(1) AE/AES sampling range In original glass mode



1050to2014c

[1] 30mm	
----------	--

(2) AE/AES sampling range in the DF mode



1050to2015c

[1] 4mm	[2] 1mm
---------	---------

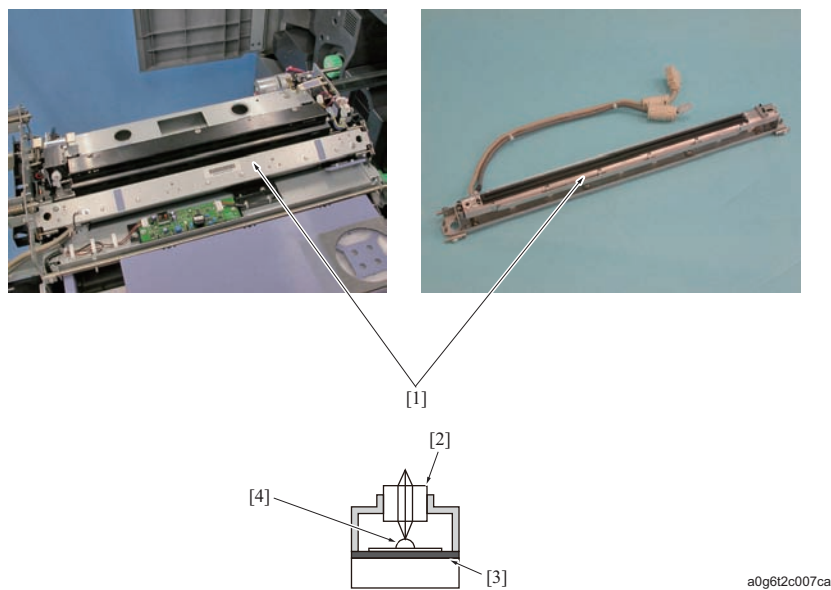
2.3.5 IMAGE PROCESSING

There are following items for the image processing. For details, refer to [O.18. IMAGE PROCESSING](#).

- Shading correction
- AE/AES processing
- Area discrimination
- Brightness/density conversion
- Filter/magnification
- Density gamma (conversion)
- Halftone processing (error diffusion)
- Skew correction
- Compression
- Storage of image data

3. WRITE SECTION (LPH)

3.1 Configuration

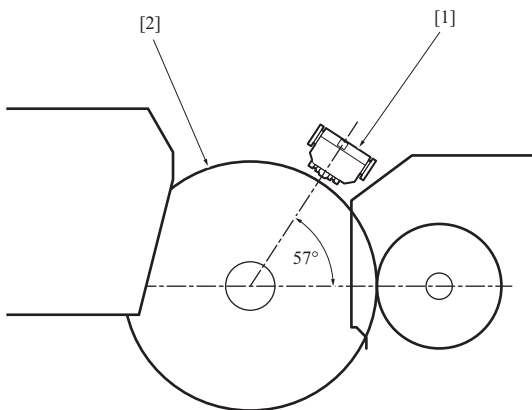


[1]	LPH	[2]	SELFOC Lens Array
[3]	LPH board (LPHB)	[4]	LED

3.2 Operation

3.2.1 Exposure path

- An analog image data read by the CCD sensor is AD converted by the CCD board (CCDB) before being sent out to the image processing board (IPB) for data processing.
- The processed data is transmitted to the LPH board (LPHB) via the relay board /A (RBA) and then converted to the LED light emission signal.
- The LED light emission signal controls the length of time of the LED light radiation to the drum.
- LPH is an exposure device of solid-scanning type which consists of the LED devices and the SELFOC lens through which the light irradiated from the LED device forms an image on the drum.
- The LPHB is mounted on the photo conductor section and forms an electrostatic latent image by irradiating the LED light at a certain angle to the drum.



[1]	LPH	[2]	Drum
-----	-----	-----	------

3.2.2 Image stabilization control

(1) Auto dot diameter adjustment

(a) Purpose

- Correction for the change of the drum sensitivity.
- Prevention of the increase of the toner consumption.
- Retaining of the reproducibility of thin line.
- Correction for the change of the amount of light caused by dirty LPH.

(b) Control outline

1. The drum potential sensor (DPS) measures the charged potential of the unexposed part before making a patch.

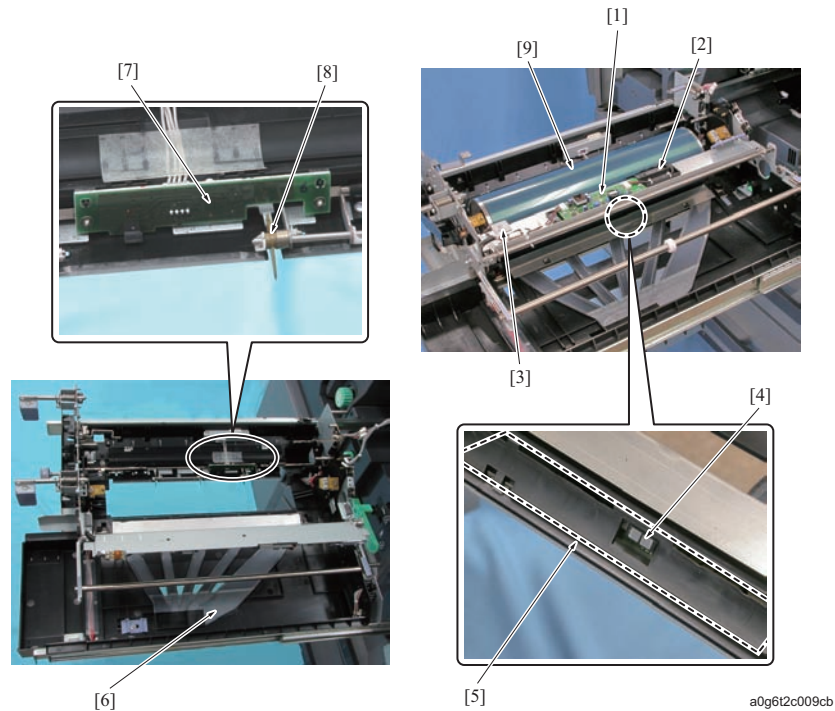
2. It forms a specified number of patches with different LPH exposure time setting and calculates the exposure time that it takes to obtain the preset value of the charged potential for each patch.
It performs the operation above at the line speed 570mm/s (common to PRO1200/1200P/1051).
3. It creates a patch with the calculated exposure time setting, and at this time it feeds back the measured value which is detected by the IDC sensor in the toner control board (TCB) to the LPH exposure time.

(c) Execution timing

- Immediately after the last job of every 20,000 prints for periodical correction counter.
- When performing the auto dot diameter adjustment in the service mode.
- When performing the morning correction.
- Every 100 prints in the continuous print.

4. PHOTO CONDUCTOR SECTION

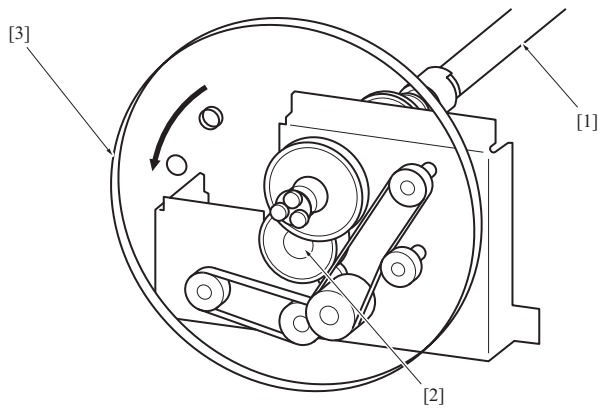
4.1 Configuration



[1]	Drum potential sensor board (DPSB)	[2]	Drum potential sensor board (DPS)
[3]	Drum temperature sensor (TH5)	[4]	IDC sensor
[5]	Toner control board (TCB)	[6]	Duct
[7]	JAM sensor board (JAMB)	[8]	Drum claw
[9]	Drum	-	

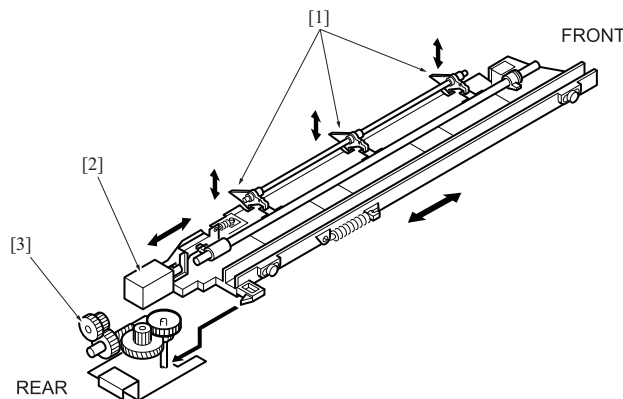
4.2 Drive

4.2.1 Drum drive



[1]	Drum drive shaft	[2]	Drum motor (M2)
[3]	Flywheel		

4.2.2 Drum claw drive



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[1]	Drum claw	[2]	Drum claw solenoid (SD10)
[3]	Drum motor (M2) drive input gear		

4.3 Operation

4.3.1 Drum claw drive

(1) Purpose

- To prevent the occurrence of a drum wrap jam, 3 drum claws are employed to prevent the drum from being wrapped with the copy paper.
- The contact and the release of contact of the drum claws onto the drum is made by turning ON/OFF the drum claw solenoid (SD10).

(2) Oscillation operation

- To prevent the transfer paper from getting soiled in certain areas and the drum from being damaged, the drum claws oscillate front to rear on the drum surface about 8mm.
- There is a projection on the rear side of the drum claw unit.
- A cam provided on the gear presses this projection to push the drum claw unit to the front side. When the gear rotation releases the cam, the drum claw unit is returned to its former position by the spring.
- Repeating the above operation oscillates the drum claws.

4.3.2 Image stabilization control

(1) Drum potential correction

- The drum potential is controlled to keep the image quality at a fixed level at all times, regardless of the operating environment and the number of prints.
- For the drum potential correction control, it measures the potential of the exposed part (black) to adjust the charging current, the grid voltage and the developing bias potential so.
- For details, refer to "[O.17. Image stabilization control.](#)"

(a) Execution timing

- When the fusing temperature is below 50°C with the power switch (SW2) ON.
- When the prescribed condition (number of prints) is met.

(2) Environmental decision control

- The drum temperature sensor (TH5) and the temperature sensor /3 of PF (TEMS/3) detect the temperature of the environment in which the main body is installed, and the humidity sensor /1 (TEM/HUM1) and /2 (TEM/HUM2) detect the environmental humidity.
- Each detected data is used as information to keep the image quality at a fixed level.
- For details, refer to "[O.17. Image stabilization control.](#)"

(a) Execution timing

- When the prescribed conditions are met with the SW2 ON.

(3) Drum rotation control

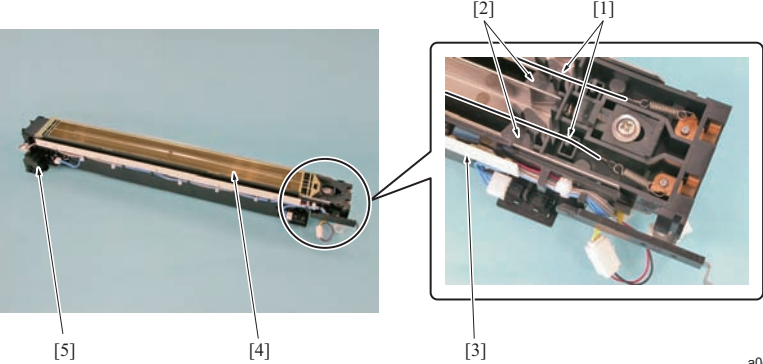
- Under the environments of low humidity and normal humidity and an image running in high humidity, the drum surface that borders the developing unit and the cleaning unit has different surface sensitivity from that borders nothing.
- When printing is made under this condition, uneven printing is made in the sub scan direction of the paper.
- To prevent this uneven printing, the drum is rotated at a fixed cycle for a prescribed period of time to obtain a uniform surface sensitivity.
- For details, refer to "[O.17. Image stabilization control.](#)"

(a) Execution timing

- Once every 3minutes while in idling
- Once every hour while in the low-power mode
- When the prescribed conditions are met with the SW2 ON

5. CHARGING SECTION

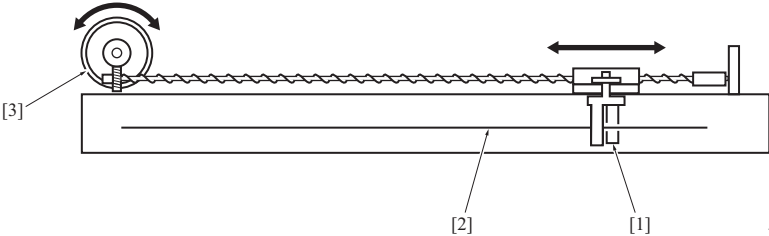
5.1 Configuration



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[1]	Charging wire	[2]	Charger cleaning member
[3]	Erase lamp (EL)	[4]	Charger control plate
[5]	Charger cleaning motor (M23)		-

5.2 Drive



1050to2024c

[1]	Charger cleaning member	[2]	Charging wire
[3]	Charger cleaning motor (M23)		

5.3 Operation

5.3.1 Charging control

- (1) Charging wire
 - The high voltage unit /1 (HV1) uses 24V DC to create a negative charge current to the charging wire to charge the drum.
 - Charging output range: -350μA to -1150μA x 2 power source
- (2) Charging grid
 - To make the discharge of the charging wire uniform, a minus (-) high voltage is sent from the high voltage unit /1 (HV1) to the charging grid.
 - Charging grid voltage output range: -300V to -1000V

5.3.2 Wire cleaning control

- (1) Purpose
 - The wire is cleaned periodically to prevent the deterioration of the discharging characteristics caused by soil adhered to the charging wire.
- (2) Timing

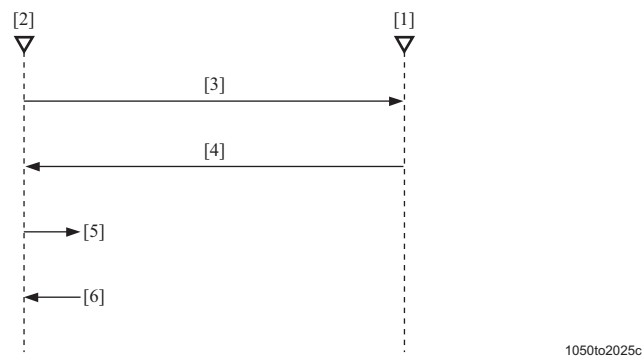
The charging wire is cleaned under the following conditions:

 - The cleaning is made when the number of prints counted from the execution of the previous cleaning is in excess of the specified number with the power switch (SW2) ON, and when the fusing temperature is below 50°C.
 - While in the print, executed after completion of each job of the prescribed print counts.
 - After completion of the automatic replacement of the cleaning blade.
 - When executing [04 Charge Manual Cleaning] in the Adjustment screen.

Note

- The software DIPSW in the service mode specifies the number of prints at which the cleaning operation is conducted.

- (3) Cleaning operation
 - The home position of the cleaning member is provided on the rear side of the machine. It operates as following.



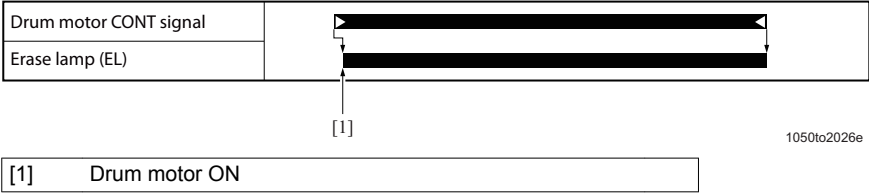
[1]	Charger cleaning limit sensor (PS27)	[2]	Charger cleaning home sensor (PS26)
[3]	Cleaning (going)	[4]	Cleaning (returning)
[5]	Home search (going)	[6]	Home search (returning)

5.3.3 Erase lamp control

(1) Purpose

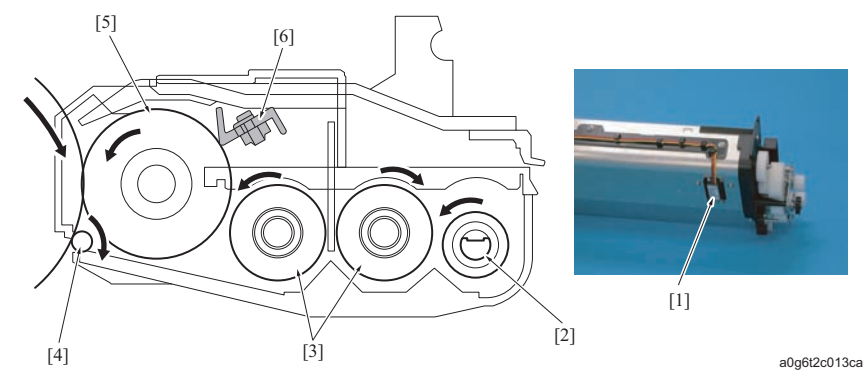
- To neutralize the residual potential on the drum surface and to make the potential on the drum surface uniform, the erase lamp (EL) is turned on before charging.

(2) Timing for the erase lamp to be turned on



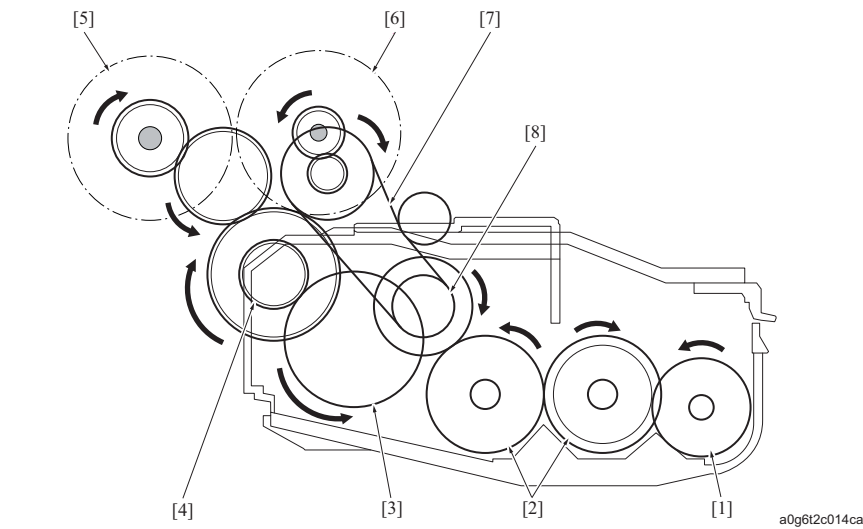
6. DEVELOPING SECTION

6.1 Configuration



[1]	TCR sensor (TCRS)	[2]	Agitator plate
[3]	Agitator screw	[4]	Toner recycle roller
[5]	Developing roller	[6]	Developer regulation blade

6.2 Drive

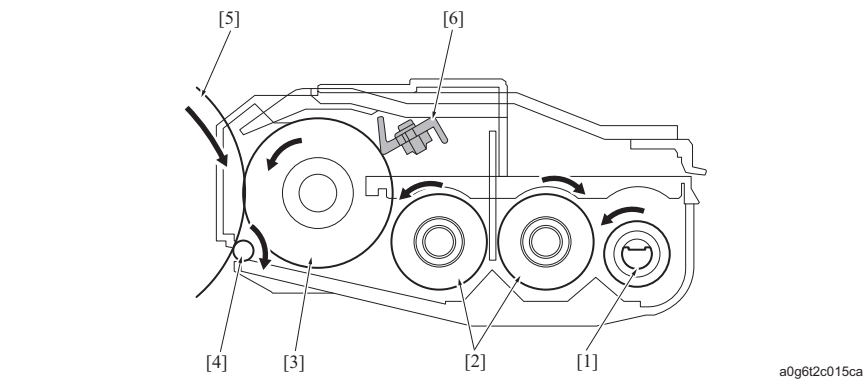


[1]	Gear for the agitator plate	[2]	Gear for the agitator screw
[3]	Gear for the developing roller	[4]	Developing roller drive coupling
[5]	Developing motor (M3)	[6]	Developing screw motor (M21)
[7]	Belt	[8]	Agitator screw drive coupling

6.3 Operation

6.3.1 Flow of developer

- Developer in the developing unit is supplied to the developing roller [3] by the agitator screws [2] and its level is kept at a fixed height by the developer regulation blade [6].
- There are 2 agitator screws equipped.
- The agitator plate [1] furthest from the developing roller is used to stabilize the charging characteristics of toner supplied to the developing unit.
- The toner recycle roller [4] collects the toner scattered and recovers it to the developing unit.

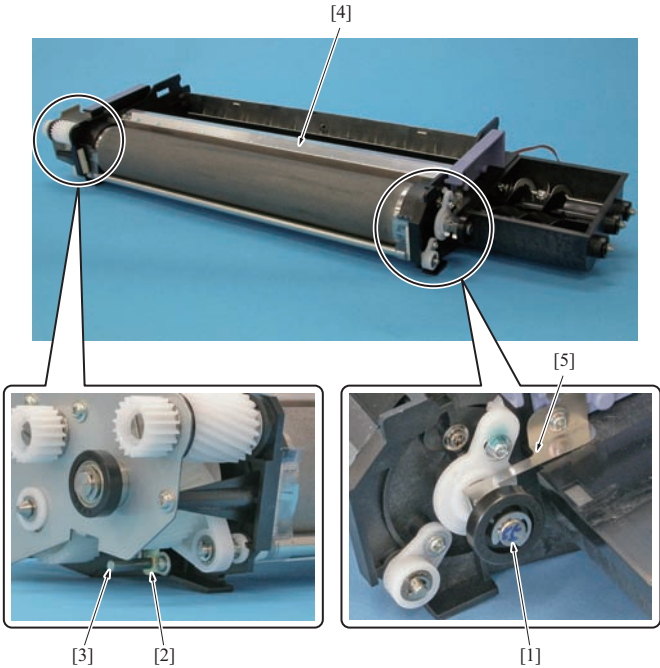


[1]	Agitator plate	[2]	Agitator screw
[3]	Developing roller	[4]	Toner recycle roller
[5]	Drum	[6]	Developer regulation blade

6.3.2 Developing bias

(1) Purpose

- A developing bias voltage is impressed onto the developing roller to expose latent images on the drum.
- The developing bias is provided by the developing bias pin [3] and is applied also to the the developing regulation blade [4].
- There are 2 types of voltage applying route; applying to the developing roller shaft [1] and applying from the section /Rr [2] to the developing roller via the bearing.



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[1]	Developing roller shaft	[2]	Section /Rr
[3]	Developing bias pin	[4]	Developer regulation blade
[5]	Section /Fr		

(2) Timing

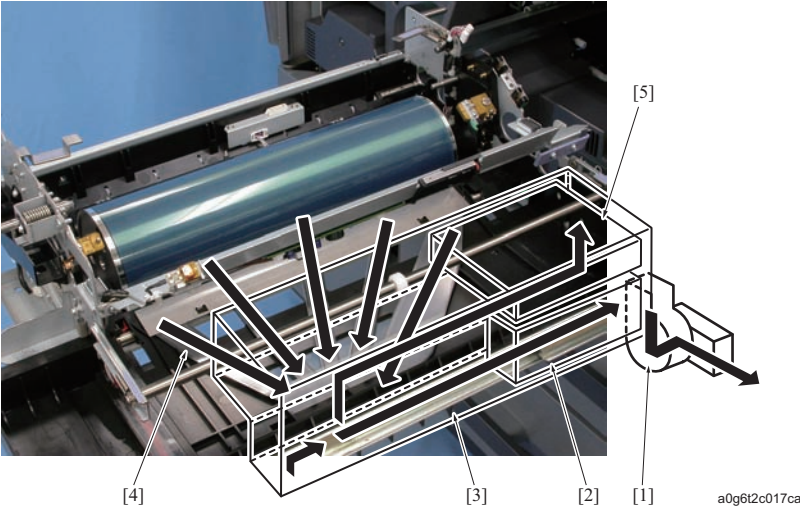
- To prevent unnecessary carriers from adhering to the drum, developing bias turns ON a specified period of time before charging is ON, and it turns OFF a specified period of time after charging is OFF.

6.3.3 Developing suction

(1) Purpose

- The developing suction fan /2 (FM22) [1] is provided to aspirate toner scattering around the developing unit and the drum, and to recover it to the suction filter /Up [5] and /Lw [2] in the developing suction assy [3].

(2) Flow of air



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[1] Developing suction fan /2 (FM22)	[2] Suction filter /Lw
[3] Developing suction assembly	[4] Duct
[5] Suction filter /Up	

(3) Developing suction fan control

- While in the warm-up and the print, the developing suction fan /2 (FM22) turns ON when the drum motor (M2) turns ON, and it turns OFF a specified period of time after the M2 turns OFF.

6.3.4 Toner supply control

- It detects the toner density in the developing unit by the TCR sensor (TCRS) and supplies the toner when the toner density becomes low.

(1) Toner density detection control

- It monitors the output value of the TCR sensor (TCRS) at certain intervals while agitating the developer.

(2) Toner supply control

- The toner hopper motor (M7) turns ON according to the output value of the TCR sensor (TCRS).

6.3.5 Image stabilization control

(1) Maximum density control

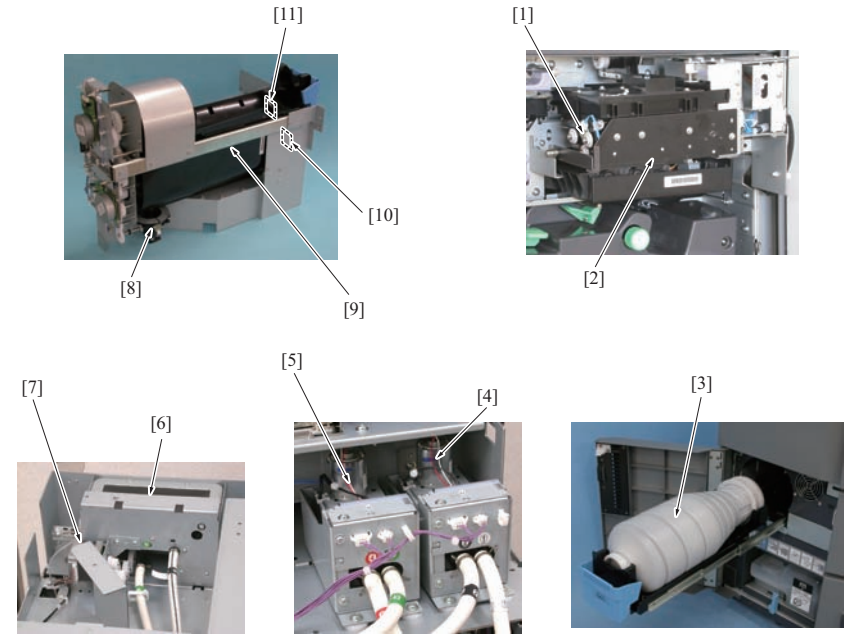
- The maximum density correction control is a control in which the patch, in images written under a fixed condition is developed while changing the speed of rotation of the developing roller. The resulting developed patch densities are compared to a reference density and when the developed patches are the same density as the reference patch, the developer roll speed is memorized.
- For details, refer to "[O.17. Image stabilization control.](#)"

(a) Execution timing

- When the fusing temperature is below 50°C with the SW2 ON.
- When the prescribed condition (number of prints) is met.

7. TONER SUPPLY SECTION

7.1 Configuration

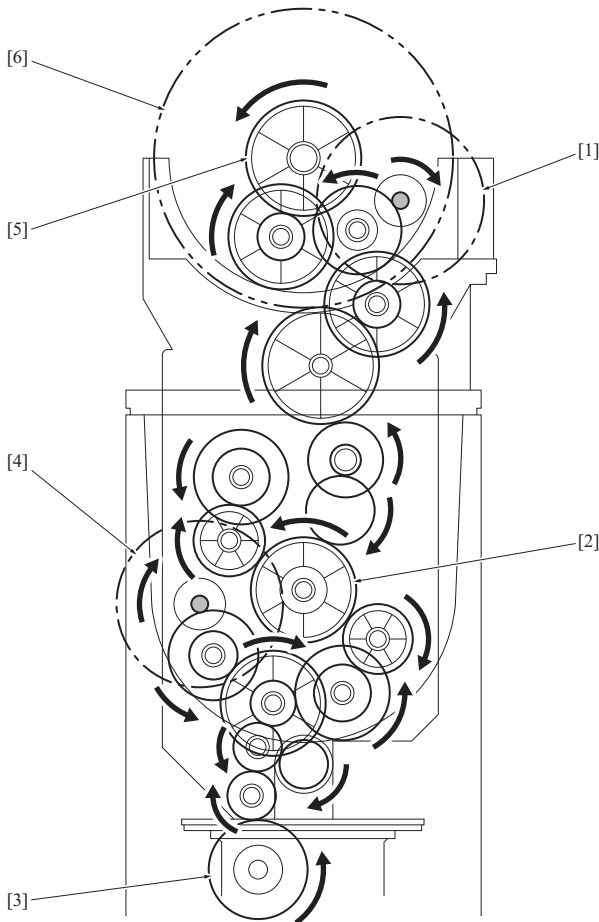


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[1]	Intermediate hopper toner remaining sensor (PS39)	[2]	Intermediate toner hopper
[3]	Toner bottle	[4]	Toner pump motor (M28)
[5]	Air pump motor (M29)	[6]	Air separation unit
[7]	Air separation motor (M10)	[8]	Cup section toner remaining sensor (PS34)
[9]	Toner hopper	[10]	Hopper toner remaining sensor /2 (PS33)
[11]	Hopper toner remaining sensor /1 (PS32)	-	

7.2 Drive

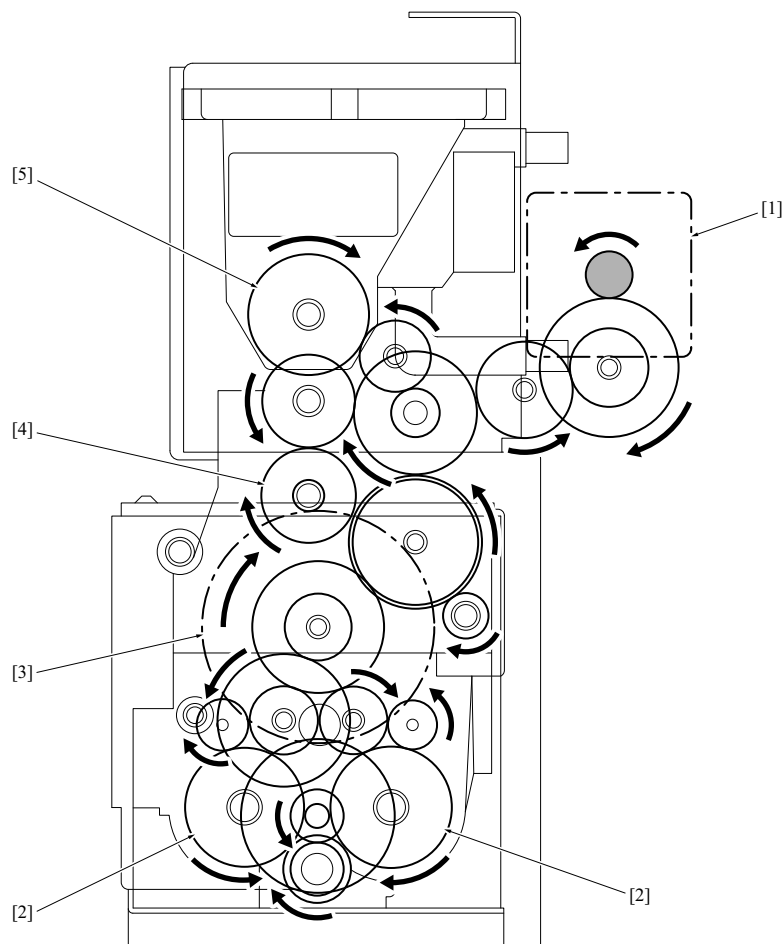
(1) Toner bottle/large capacity hopper drive



1050to2325j

[1]	Toner bottle motor (M6)	[2]	Gear for the large capacity hopper agitator shaft
[3]	Mixing section agitator shaft gear	[4]	Toner hopper motor (M7)
[5]	Gear for the toner bottle rotation shaft	[6]	Toner bottle

(2) Intermediate hopper/air separation drive



1050to2326c

[1]	Air separation motor (M10)	[2]	Gear for the intermediate hopper section agitator shaft
[3]	Intermediate hopper motor (M11)	[4]	Gear for the rotary valve
[5]	Gear for the air separation section agitator shaft	-	

7.3 Operation

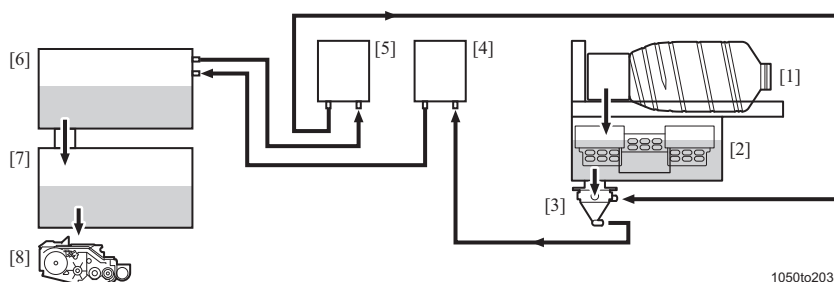
7.3.1 Toner supply to the toner hopper

(1) Purpose

- The toner supply section of the intermediate and low speed machines is equipped near the developing unit. For the high speed machine that deals with a large number of prints, a toner supply section of a large capacity is required and it is not possible to secure a sufficient space near the developing unit.
- So, it is inevitable to place the toner supply section in a location away from the developing unit. As a result, because the distance up to the toner supply section gets extended, a toner conveyance mechanism to deal with the long distance is required.
- As a toner conveyance device for the long distance, this machine employs the air conveyance method using the toner pump and the air pump.

(2) Toner conveyance path

1. Toner put in from the bottle [1] is conveyed to the large capacity hopper [2] by the agitator operation.
 2. When the toner supply operation starts, toner is guided to the mixing section [3], where it is mixed with air from the air pump [5].
 3. Toner mixed with air is conveyed to the air separation section [6] by the pressure from the toner pump [4].
 4. Toner conveyed to the air separation section drops off by its own weight to be separated from the air.
 5. Toner separated from the air at the air separation section is conveyed to the intermediate hopper [7] with the agitator operation.
 6. When the toner supply operation starts, toner in the intermediate hopper is conveyed to the developing unit [8] with the agitator operation.
 7. Finally, air passing through the air separation section is sent to the mixing section by the air pump.
- In this manner, a toner conveyance path is formed that circulates between the large capacity hopper and the developing unit.



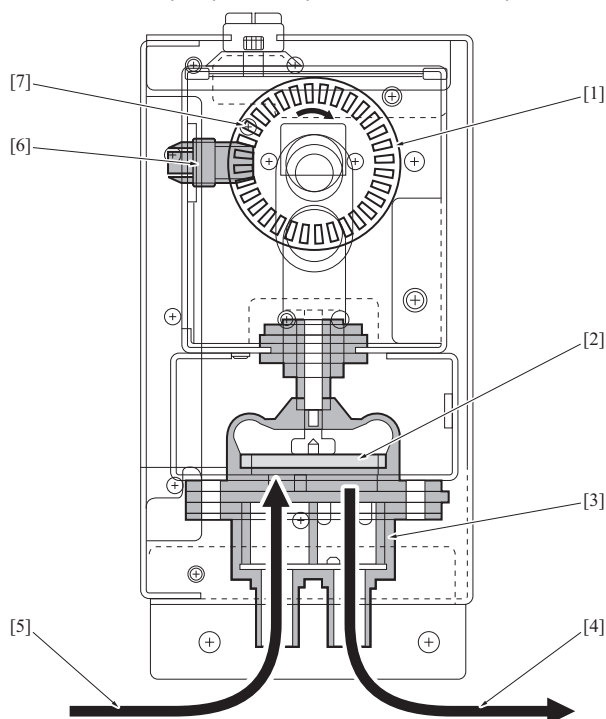
1050to2038c

[1] Toner bottle	[2] Large capacity hopper
[3] Mixing section	[4] Toner pump
[5] Air pump	[6] Air separation section
[7] Intermediate hopper	[8] Developing unit

(3) Pump control

(a) Configuration

- In both the toner pump and the air pump, the toner pump motor (M28) or the air pump motor (M29) reciprocates the diaphragm [2] to circulate air in the pump room [3].
- In this manner, air in the pump room is pressurized to be output.



1050to2039c

[1] Motor	[2] Diaphragm
[3] Pump room	[4] Output air
[5] Input air	[6] Pump encoder sensor
[7] Encoder	-

(b) Control

Each pump motor is equipped with the pump encoder sensor to monitor the speed of the motor.

- When the pump motor is ON and the speed of the motor fails to get to 85% of the prescribed speed within a specified period of time, this speed is deemed to be an error.
- While in operation, if a low speed rotation below a prescribed value is detected a specified number of times in succession, this speed rotation is deemed to be an error.

7.3.2 Toner supply to the developing section

(1) Purpose

- Supply toner, in case toner supply is judged to be required as a result of the toner density control.
- It conducts the toner supply during printing at a prescribed time interval.
- It controls the time for toner supply in accordance with the condition detected by the TCR sensor (TCRS).

(2) Timing

- Toner is supplied when the trailing edge of paper in printing is detected.

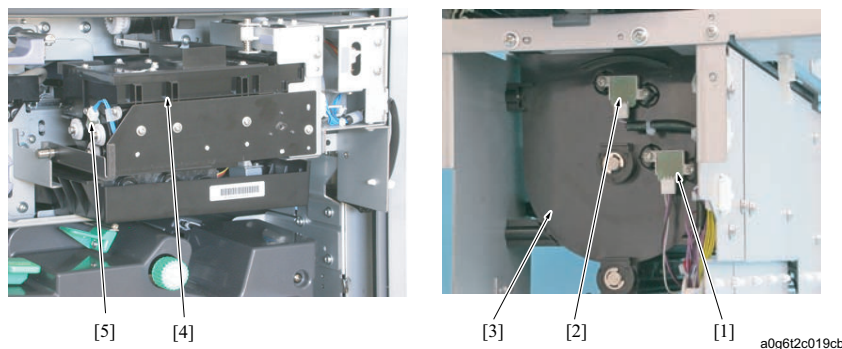
- The toner supply time varies depending on the result of the toner density control and the paper size. This time is normally controlled between 0 to 0.55sec.

7.3.3 Toner remaining detection

(1) Toner remaining detection

- The intermediate hopper section [4] is equipped with the intermediate hopper toner remaining sensor (PS39) [5], and the large capacity hopper [3] is equipped with the hopper toner remaining sensor /1 (PS32) [2], /2 (PS33) [1]. Depending on the ON/OFF condition of each sensor, the toner level is displayed on the operation panel.

(a) Sensor position



[1]	Hopper toner remaining sensor /2 (PS33)	[2]	Hopper toner remaining sensor /1 (PS32)
[3]	Large capacity hopper	[4]	Intermediate hopper
[5]	Intermediate hopper toner remaining sensor (PS39)	-	

(b) Toner remaining display

Display on the operation panel				
PS39	ON	ON	ON	OFF
PS32	ON	OFF	OFF	OFF
PS33	ON	ON	OFF	OFF

1050to2041e

*1 However, the determination is finally made a specified period of time after the toner supply door is closed.

(c) Error detection

- When the error C-2217 which is related to the toner supply occurs, the main body gets into an error latch condition. Be sure to repair the defective part before setting the software DIPSW 3-1 to 0.
- Setting the DIPSW3-1 to 0 without repairing defective parts causes toner to overflow inside and outside of the machine.

(2) Detection timing

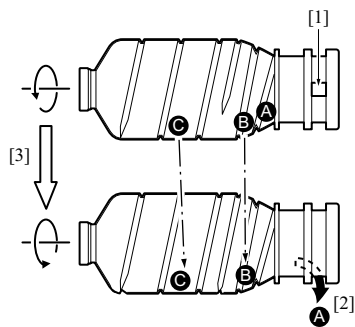
(a) Timing

The detection timing is as following:

- When the sub power switch (SW2) turns ON
- When the front doors /Ft and /Rt, and the toner supply door are opened and closed.
- At all times when the printing.

(b) Toner bottle

- When the toner bottle is rotated, toner moves to the exit of the bottle [1] along the spiral groove carved on the surface of the bottle.
- When the bottle exit turns to the bottom, toner flows into the large capacity hopper [2].

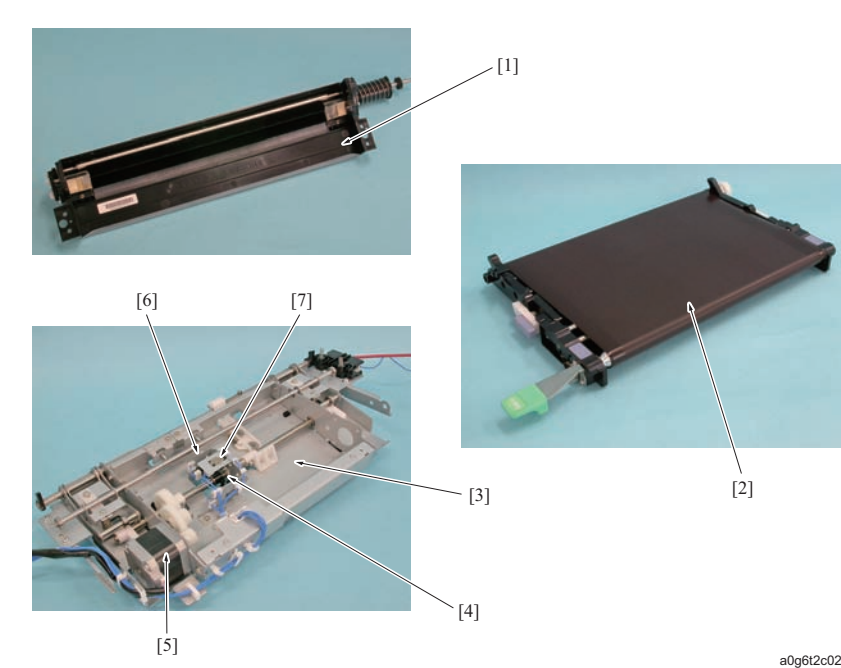


1050to2042c

[1]	Exit	[2]	Into the large capacity hopper
[3]	Rotated to 90	-	

8. TRANSFER/SEPARATION SECTION

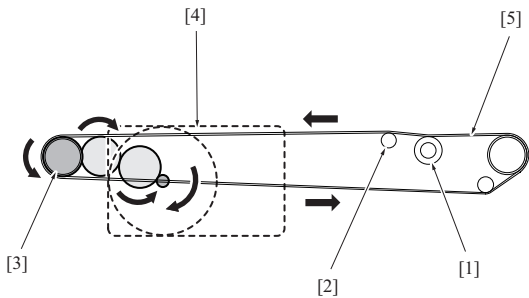
8.1 Configuration



[1]	Transfer belt cleaning unit	[2]	Transfer belt
[3]	Transfer belt pressure unit	[4]	Transfer pressure home sensor (PS54)
[5]	Transfer belt pressure release motor (M26)	[6]	Transfer pressure position sensor /1 (PS55)
[7]	Transfer pressure position sensor /2 (PS56)	-	

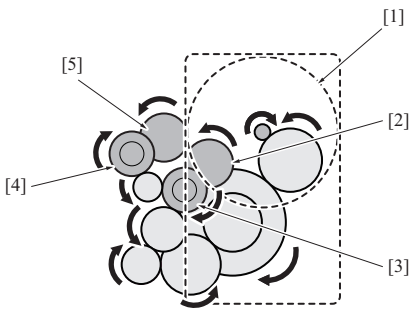
8.2 Drive

8.2.1 Transfer belt drive



[1]	Transfer roller	[2]	Rear nip roller
[3]	Transfer belt roller	[4]	Transfer belt motor (M30)
[5]	Transfer belt	-	

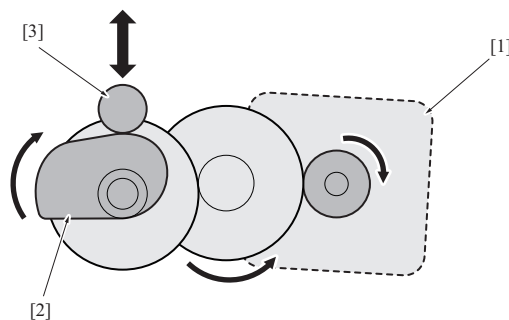
8.2.2 Transfer belt cleaning drive



[1]	Transfer belt cleaning motor (M5)	[2]	2nd cleaning brush gear
-----	-----------------------------------	-----	-------------------------

[3]	2nd cleaning shaft gear	[4]	1st cleaning shaft gear
[5]	1st cleaning brush gear	-	

8.2.3 Transfer belt pressure release drive



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[1]	Transfer belt pressure release motor (M26)	[2]	Cam
[3]	Pressure arm roller	-	

8.3 Operation

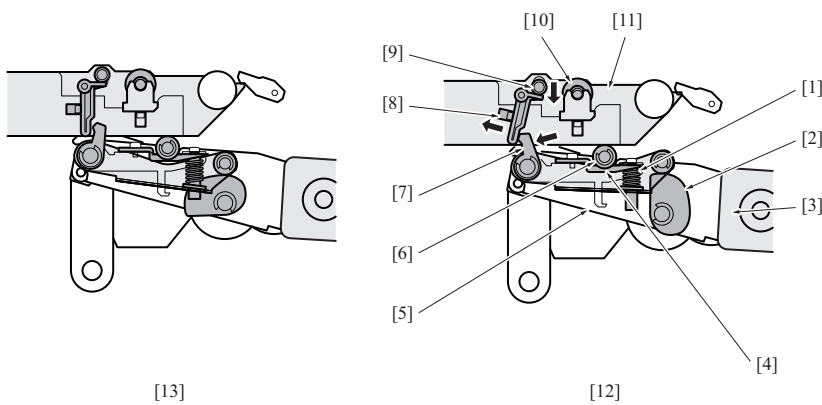
8.3.1 Transfer belt pressure position control

(1) OUTLINE

- There are 2 steps for the transfer belt pressure position: the pressure 1 and the pressure 2.
- Change the 2nd pressure position according to the paper types (paper type, paper weight) which is set for each tray.
- When the specified tray switches during printing for sheet insertion and so on, switch the pressure position to suitable one for paper types in each tray.
- The timing of switching is when the transfer belt turns OFF after transferring to the preceding paper.
- When switching the pressure position, the next paper stays at the registration section.
- When the switching of the pressure position completes, the paper through resumes.
- The rear nip roller position control is interlocked with the transfer belt pressure operation.

(2) Pressure mechanism

- The cam [2] of the transfer pressure unit [3] switches the pressure position of the transfer belt unit [11] between the pressure 1 [13] and the pressure 2 [12].
- The pressure power of the cam [2] is transmitted to the transfer belt unit [11] through the pressure arm [5], the pressure spring [4], the pressure plate and the pressure roller [6].
- Because of its shape, the cam [2] presses the pressure arm [5] up to the different height depending on the pressure position (pressure 1 [13] or pressure 2 [12]). Therefore the pressure to the transfer belt unit [11] also differs.
- When in the pressure 2 position, the pressure arm [5] presses down the rear nip roller release lever /1 [7].
- In this manner, the rear nip roller release lever /2 [8] is released and the rear nip roller [9] comes down.



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[1]	Pressure spring	[2]	Cam
[3]	Transfer pressure unit	[4]	Pressure plate
[5]	Pressure arm	[6]	Pressure roller
[7]	Rear nip roller release lever /1	[8]	Rear nip roller release lever /2
[9]	Rear nip roller	[10]	Transfer roller
[11]	Transfer belt unit	[12]	Pressure 2 position
[13]	Pressure 1 position	-	

(3) pressure position detection

- The pressure position of the transfer belt is controlled by the transfer pressure home sensor (PS54), the transfer pressure position sensor /1 (PS55) and /2 (PS56) which are mounted in the transfer pressure unit.

(4) Returning operation to the home position

- When the ADU handle release sensor (PS44) detects the /2-side print set and the door open/close sensor /1 (PS1) and /2 (PS2) turn ON, the transfer pressure home sensor (PS54) is checked. When it is OFF, the transfer belt pressure release motor (M26) turns ON and moves the pressure position to its home position.
- When PS54 is ON, M26 does not function.

(5) Pressure position table

g/m ²	40 to 49	50 to 61	62 to 71	72 to 91	92 to 130	131 to 161	162 to 216	217 to 244	245 to 300	301 to 350
Coat/Preprinted	Pressure 1	Pressure 1	Pressure 1	Pressure 1	Pressure 1	Pressure 1	Pressure 2	Pressure 2	Pressure 2	Pressure 2
Fine	Pressure 1	Pressure 1	Pressure 1	Pressure 1	Pressure 1	Pressure 1	Pressure 2	Pressure 2	Pressure 2	Pressure 2
Plain paper	Pressure 1	Pressure 1	Pressure 1	Pressure 1	Pressure 1	Pressure 1	Pressure 2	Pressure 2	Pressure 2	Pressure 2
Book/News	Pressure 1	Pressure 1	Pressure 1	Pressure 1	Pressure 1	Pressure 1	Pressure 2	Pressure 2	Pressure 2	Pressure 2
Embossed	Pressure 1	Pressure 1	Pressure 1	Pressure 1	Pressure 1	Pressure 1	Pressure 2	Pressure 2	Pressure 2	Pressure 2
OHP	-	-	-	Pressure 1	-	-	-	-	-	-
Inserting sheet (not printed)	Pressure 1	Pressure 1	Pressure 1	Pressure 1	Pressure 1	Pressure 1	Pressure 2	Pressure 2	Pressure 2	Pressure 2

8.3.2 Transfer/separation control**(1) Transfer belt bias control**

- It applies the DC bias on the transfer belt to enhance its transferability and to prevent dirt on it.
- The DC bias is applied from the transfer roller to the transfer belt.

(2) Bias control in image area

- For the image area (when the paper passes through the transfer nip), it applies the positive DC bias to enhance the transferability.
- The transfer bias switches at 5 points on the paper image area to divide the image area into 6. The divided 6 image areas independently control the transfer output power for each section.
- Image area name: Leading edge 1, leading edge 2, center 1, center 2, trailing edge 1, trailing edge 2

(3) Bias control at the paper interval

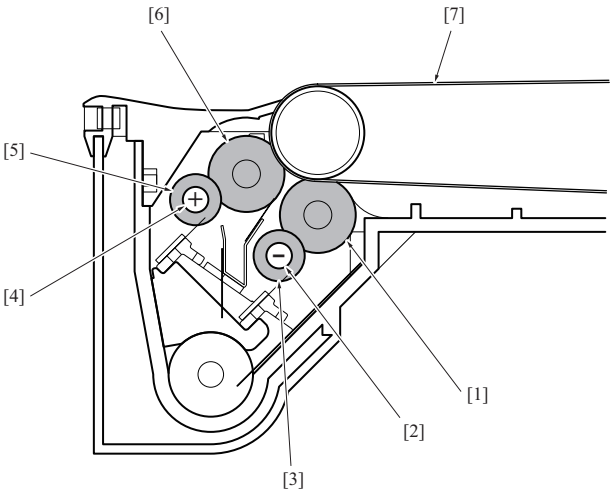
- At the paper interval, It applies the negative DC bias to prevent the toner from adhering.

(4) Separating paper

- To enhance the performance of paper separation from the transfer belt, it neutralizes the transfer belt by the grounded saw-tooth electrode installed at the separation position of the belt.

8.3.3 Transfer belt cleaning brush voltage apply control**(1) Purpose**

- It is equipped with the cleaning shaft to clean the toner collected with the cleaning brush.
- The 1st cleaning shaft [4] is positively-biased [5] to collect the toner which adheres to the transfer belt [7] via the 1st brush [6].
- Then, the 2nd cleaning shaft [3] is positively-biased [2] to collect the toner which adheres to the transfer belt [7] via the 2nd brush [1].
- In this manner, it collects the toner adheres to the transfer belt [7].



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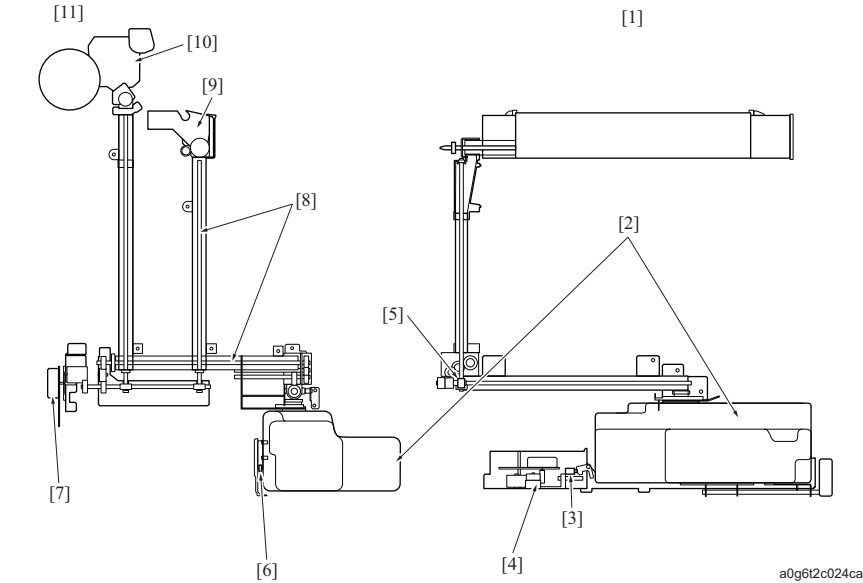
[1]	2nd cleaning brush	[2]	Negative voltage
[3]	2nd cleaning shaft	[4]	1st cleaning shaft
[5]	Positive voltage	[6]	1st cleaning brush
[7]	Transfer belt	-	

(2) ON/OFF timing

- It turns ON/OFF in sync with ON/OFF of the transfer belt motor (M30).

9. TONER COLLECTION SECTION

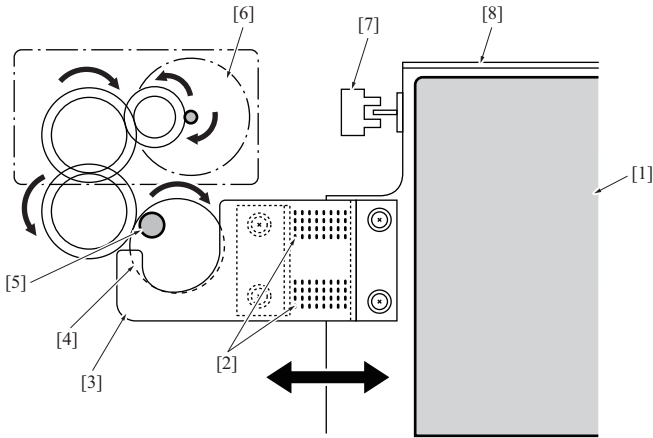
9.1 Configuration



[1]	Left-side view	[2]	Waste toner box
[3]	Waste toner box set sensor /1 (PS14)	[4]	Waste toner box swing motor (M19)
[5]	Waste toner full sensor /2 (PS62)	[6]	Waste toner full sensor /1 (PS37)
[7]	Waste toner motor (M9)	[8]	Toner conveyance pipe
[9]	Transfer belt cleaning unit	[10]	Cleaning unit
[11]	Rear-side view	-	

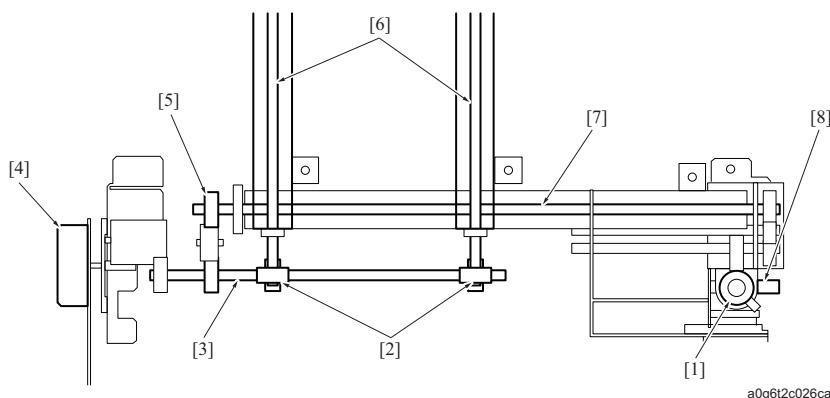
9.2 Drive

9.2.1 Waste toner box swing drive motor



[1]	Waste toner box	[2]	Spring
[3]	Cam plate	[4]	Gear for swing
[5]	Pulley	[6]	Waste toner box swing motor (M19)
[7]	Waste toner box swing sensor (PS15)	[8]	Waste toner box container

9.2.2 Waste toner conveyance drive



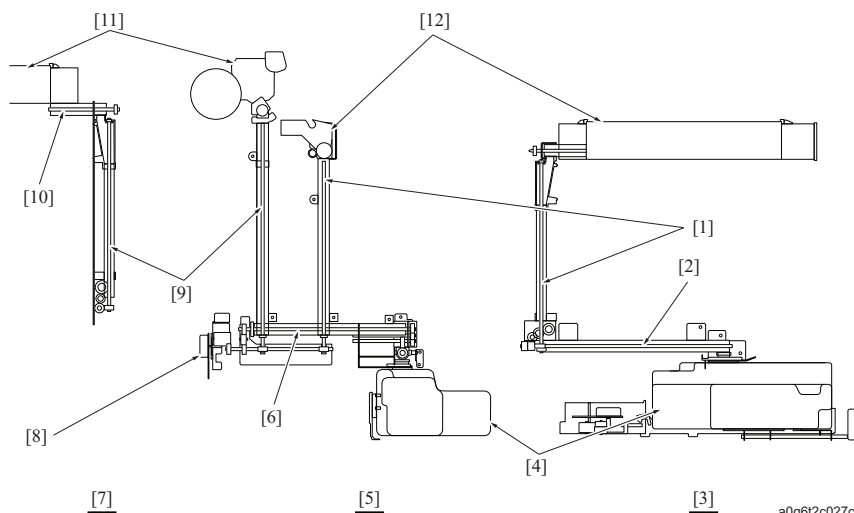
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[1] Torque limiter	[2] Drive gear for vertical conveyance screw
[3] Vertical conveyance drive shaft	[4] Waste toner motor (M9)
[5] Drive gear for horizontal conveyance screw	[6] Vertical conveyance screw
[7] Horizontal conveyance screw	[8] Waste toner full sensor /2 (PS62)

9.3 Operation

9.3.1 Waste toner conveyance path

- To maintain the image quality, it does not recycle the toner collected in the drum cleaning section [11] and the transfer belt cleaning section [12] but convey it to the waste toner box [4] to dispose.
- The toner collected in the drum cleaning section [11] is conveyed to the vertical conveyance section for drum cleaning [9] via the drum cleaner connection section [10].
- The toner collected in the transfer belt cleaning section [12] is conveyed directly to the vertical conveyance section for transfer belt cleaning [1].
- Each vertical conveyance section is connected to the horizontal conveyance section [6]. The toner is conveyed to waste toner box [4] through the horizontal conveyance section and the waste toner box connection section [2].
- Each conveyance pipe has the built-in screws. The waste toner motor (M9) [8] drives each screw excluding one of the drum cleaner connection section [10] for both vertical and horizontal conveyance operation.
- The drum motor (M2) drives the drum cleaner connection section [10].



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[1] Vertical conveyance section for transfer belt cleaning	[2] Waste toner box connection section
[3] Left inside	[4] Waste toner box
[5] Rear side	[6] Horizontal conveyance section
[7] Right inside	[8] Waste toner motor (M9)
[9] Vertical conveyance section for drum cleaning	[10] Drum cleaner connection section
[11] Drum cleaning section	[12] Transfer belt cleaning section

9.3.2 Waste toner box swing control

(1) Purpose

- The swing mechanism is provided to flatten uniformly the toner collected into the waste toner box.

(2) Operation

- Waste toner box swing motor (M19) drives the swing gear.
- There is a shaft installed near the periphery of the swing gear.

- Waste toner box container is equipped with the cam plate. When the swing gear rotates, the shaft rotates with the notch of the cam plate interlocked.
- In this manner, the waste toner box container which is set in fixed position by the spring is pulled toward the swing gear according to the shape of the notch of the cam plate.
- When the shaft passes the notch, the waste toner box container returns to the original position by the spring.
- In this manner, it enables the waste toner box swing operation.

(3) Operation timing

- For 120 seconds when the drum motor (M1) turns ON after the morning correction.
- For 30 seconds at every 500 prints.
- For 120 seconds at every 10000 prints.

9.3.3 Waste toner box detection control

- The waste toner box set sensor (PS14) detects the setting condition of the waste toner box.
- When the PS14 is OFF, the print job is not conducted but it displays the warning message to set the waste toner box on the operation panel.

9.3.4 Waste toner box full detection control

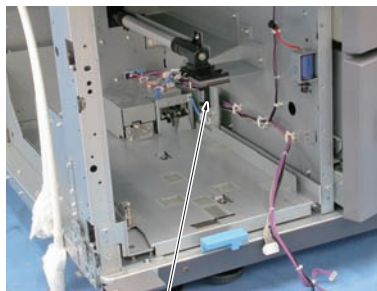
- There are 2 steps for the waste toner box full detection control.

(1) 1st waste toner box full detection control

- The waste toner box is made of transparent material and there is a projection on it [2] for the waste toner full sensor /1 (PS37) [1].
- PS37 is a photo-interrupting type sensor. When the waste toner box is set on its position, the projection is inserted between the light-emitting part and the light-receiving part of PS37.
- As the waste toner box is transparent, the light from the light-emitting part normally reaches to the light-receiving part and it turns PS37 ON.
- When the toner collected in the waste toner box reaches to the projection, the light is interrupted by the toner and PS37 turns OFF.
- By this condition it detects that the toner amount in the waste toner box reaches a predetermined value.



[2]

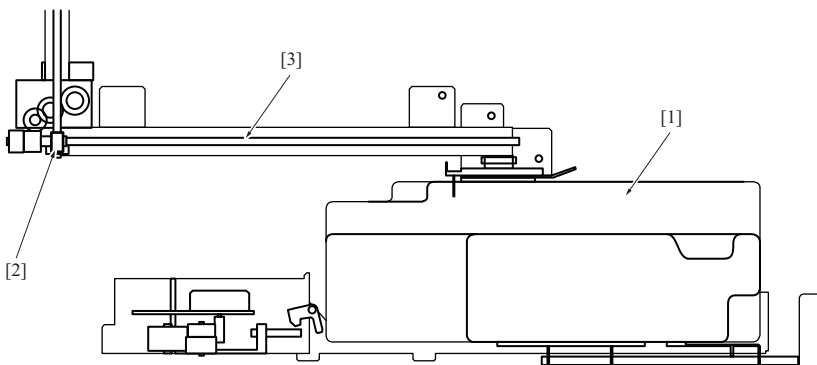


[1]

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(2) 2nd waste toner box full detection control

- The waste toner full sensor /2 (PS62) repeats turning ON/OFF according to the rotation of the screw in the waste toner conveyance pipe.
- By the PS62 sensor signal, it detects that the waste toner screw functions normally.
- When the printing continues after the waste toner full sensor /1 (PS37) detects the waste toner box full, the toner which is over the capacity of the waste toner box [1] accumulates in the waste toner box connection section [3].
- The conveyance pipe in the waste toner box connection section [3] has a torque limiter [2] installed on its screw section.
- When the accumulated toner weight applies specified level of load on the screw, the torque limiter [2] functions to prevent transmitting of the drive power of the waste toner motor (M9) to the screw in the waste toner box connection section.
- In this manner, the light blocking plate on the screw stops and the waste toner full sensor /2 (PS62) stops repetition of turning ON/OFF to indicate the waste toner full condition.



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10. CLEANING SECTION

10.1 Configuration

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[1]	Blade motor (M22)	[2]	PCC unit
[3]	Weight plate	[4]	Cleaning blade

10.2 Drive

10.2.1 Cleaning blade drive

1050to2045c

[1]	Wire	[2]	Pulley for the cleaning blade
[3]	Blade release arm	[4]	Blade motor (M22)

10.3 Operation

10.3.1 Cleaning operation

(1) Assist mechanism

- Toner scraped off by the cleaning blade [2] is collected by the toner guide brush [5]. Then it is scraped by the toner guide shaft [8] and guided to the toner conveyance screw [6].
- At this time, toner remaining on the toner guide shaft is scraped off by the toner collection scraper [7].

1050to2046d

[1]	Cleaning blade /1	[2]	Cleaning blade /2
[3]	Drum	[4]	PCC unit

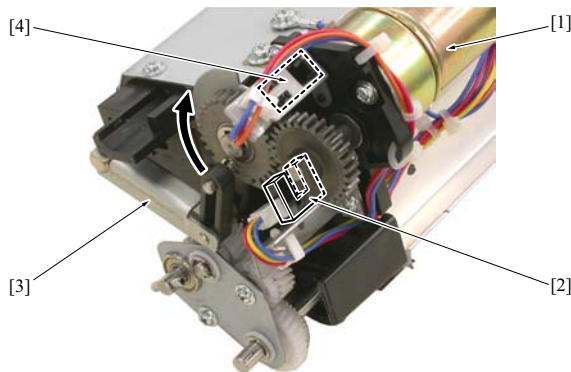
[5]	Toner guide brush	[6]	Toner conveyance screw
[7]	Toner collection scraper	[8]	Toner guide shaft

(2) PCC unit

- The toner brush is equipped with the PCC unit on the upstream to improve the cleaning ability by weakening the toner adhesion to the drum.
- The high voltage unit /3 (HV3) supplies the power (DC) to the PCC and decreases the charged potential of the remaining toner which attaches to the drum surface.

(3) Automatic replacement of the blade

- The cleaning section is equipped with 2 cleaning blades.
- The 2nd cleaning blade pushes up the blade release arm [3] as the blade motor (M22) [1] rotates.
- At this time, the wire wound around the cleaning blade shaft is taken up to rotate the cleaning blade shaft and change the cleaning blades /1 and /2.
- Automatically changing 2 cleaning blades lengthens the maintenance cycle.



1050to2047c

[1]	Blade motor (M22)	[2]	Blade sensor /1 (PS24)
[3]	Blade release arm	[4]	Blade sensor /2 (PS25)

(4) Blade pressure release operation

- To enhance the increased durability of the drum and the cleaning blade, the cleaning blade conducts the pressure release operation to the drum by the blade motor (M22).
- The M22 operates in accord with the ON/OFF of the drum motor (M2).
- The pressure release and the replacement position of the cleaning blade are controlled by the blade sensor /1 (PS24) and the blade sensor /2 (PS25).

(5) Blade setting mode

- As an operation conducted after replacing the cleaning blade for the maintenance purpose, there is the blade set mode in the service mode.
- Executing the blade set mode prevents the curling-up of the cleaning blade by cleaning the drum with the cleaning blade after letting toner adhere to the drum.

Note

- Perform this process only after changing the cleaning blade. Otherwise, the cleaning blade special parts counter is reset, thus making it impossible to implement the auto blade change in the right timing.

10.3.2 Image stabilization control

(1) Black belt creation control

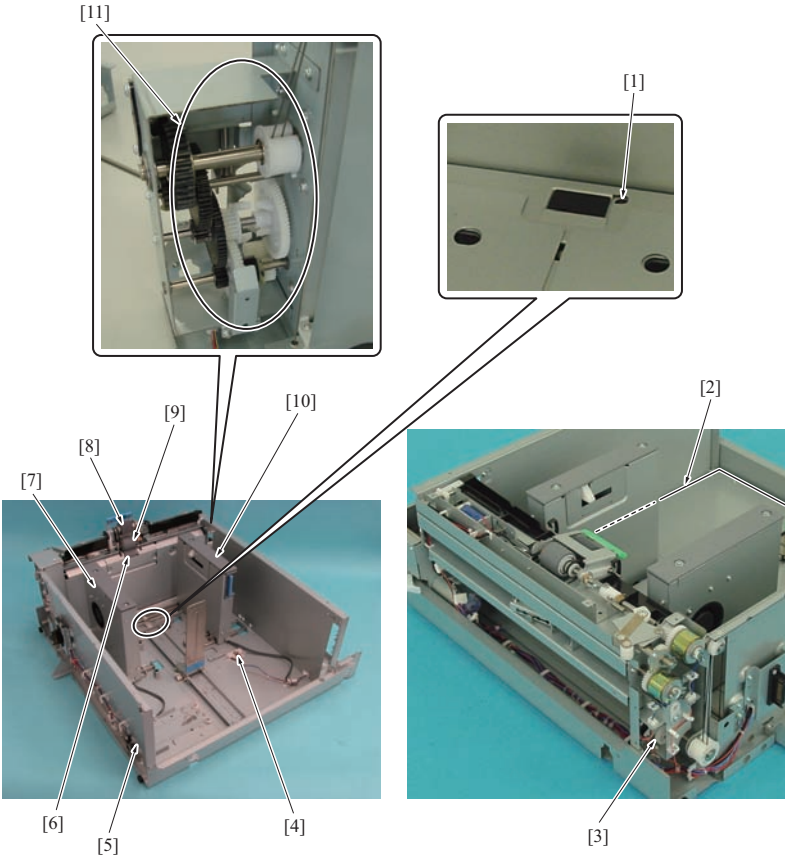
- In order to provide lubrication of the cleaning blade while in the low printing ratio, and to prevent the deterioration of toner while in the increasing driving distance, the LPH is turned ON at prescribed intervals to create black band patterns on the drum.
- For details, refer to "O.17. Image stabilization control."

(a) Execution timing

- 3 times every 5 prints

11. PAPER FEED SECTION

11.1 Configuration

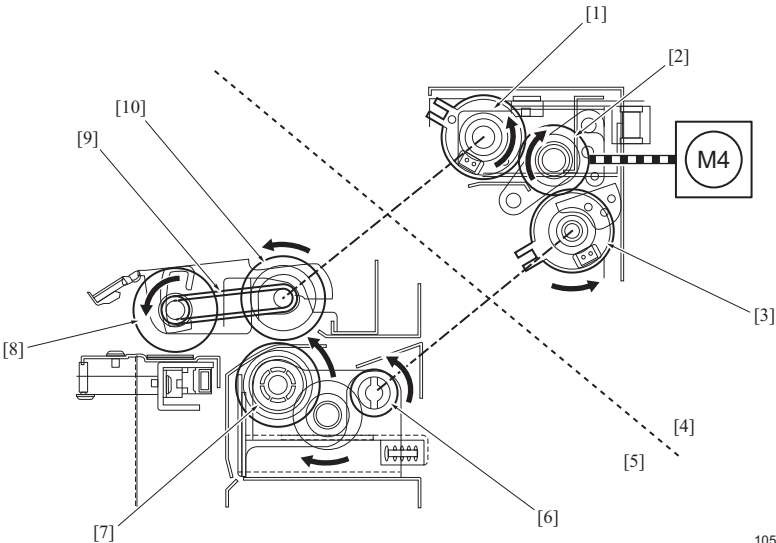


1050to2300c

[1]	Paper empty sensor /1 (PS8), /2 (PS12)	[2]	Paper lift plate
[3]	Remaining paper VR /1 (VR1), Remaining paper VR /2 (VR4)	[4]	CD paper size VR /1 (VR2), CD paper size VR /2 (VR5)
[5]	FD paper size VR /1 (VR3), FD paper size VR /2 (VR6)	[6]	Separation roller
[7]	Paper feed assist fans /Rr1 (FM20), /Rr2 (FM24)	[8]	Pick-up roller
[9]	Paper feed roller	[10]	Paper feed assist fans /Fr1 (FM21), / Fr2 (FM23)
[11]	Paper up/down assist mechanism	-	

11.2 Drive

11.2.1 Paper feed drive

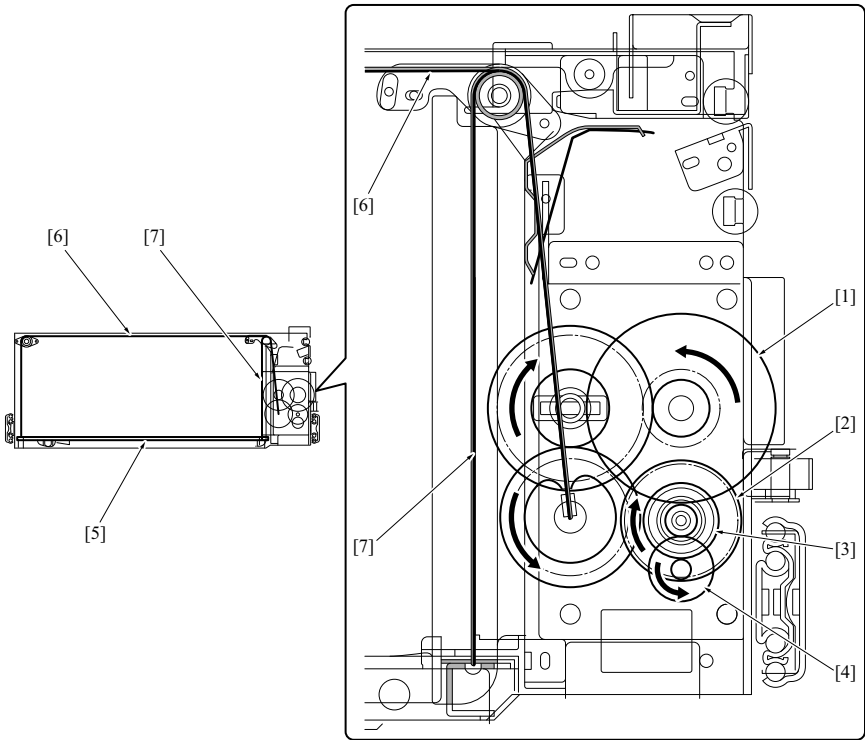


1050to2302c

[1]	Paper feed clutch /1 (CL4), /2 (CL6)	[2]	Coupling
[3]	Separation clutch /1 (CL5), /2 (CL7)	[4]	Tray rear section

[5]	Tray central section	[6]	Torque limiter
[7]	Separation roller	[8]	Pick-up roller
[9]	Belt	[10]	Paper feed roller

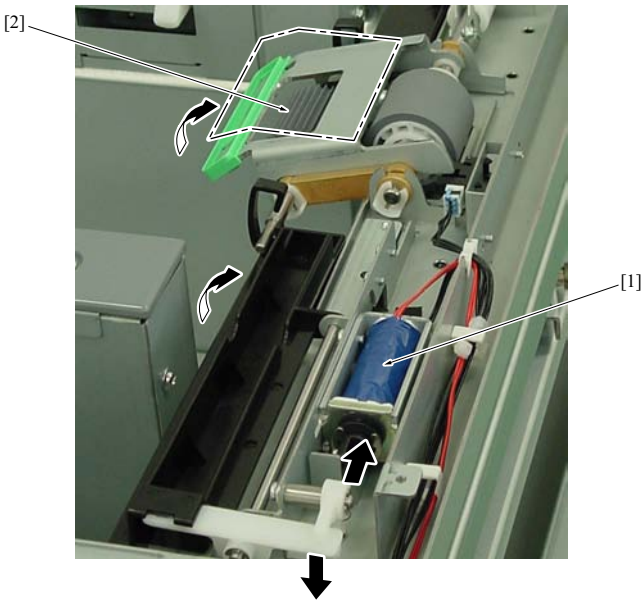
11.2.2 Tray lift drive



1050to2301c

[1]	Lift release coupling gear	[2]	Tray lift-up motor /1 (M25), /2 (M34)
[3]	Torque restriction gear (oil damper)	[4]	One-way clutch
[5]	Paper lift plate	[6]	Lift wires /Fr1, /Rr1
[7]	Lift wires /Fr2 and /Rr2	-	

11.2.3 Pick-up drive



1050to2303c

[1]	Pick-up solenoid /1 (SD3), /2 (SD4)	[2]	Pick-up roller
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11.3 Operation

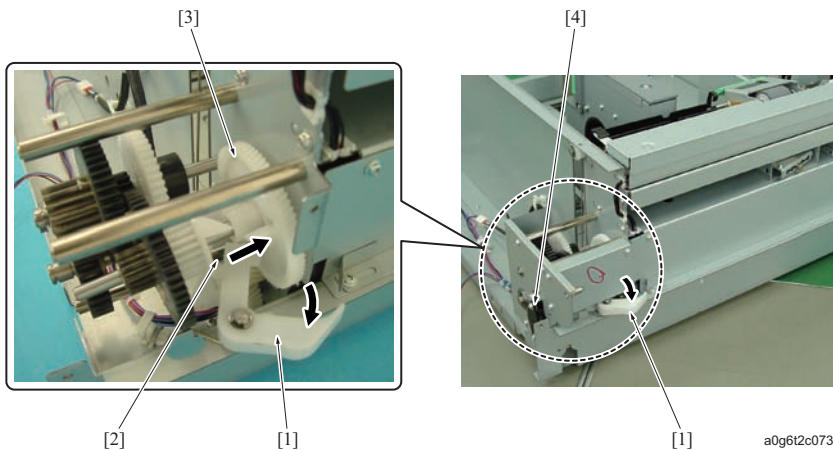
11.3.1 Up/down control

(1) Up operation

- Tray lift-up motor /1 (M25), /2 (M34) take up the lift wires with the pulley and raise the paper lift plate.

(2) Down operation

- When pulling out the tray, the coupling gear [3] that transmits the drive force from the motor shaft [2] of the tray lift-up motor /1 (M25) and /2 (M34) to the pulley is disengaged by the release lever [1].
- The paper lift plate goes down slowly by its own weight through the torque restriction gear [4] that is activated only while in the down operation.



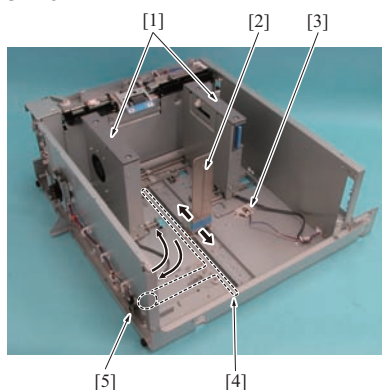
[1]	Release lever	[2]	Motor shaft of the tray lift-up motor /1 (M25) and /2 (M34)
[3]	Coupling gear	[4]	Torque restriction gear

(3) Operation timing

- When the tray is set, the tray lift-up motor /1 (M25) and /2 (M34) turn ON to raise the paper lift plate.
- The M25 and M34 motors stop when the upper limit sensors /1 (PS6) and /2 (PS10) turn ON.
- When PS6/PS10 turn OFF from ON during the print operation, M25/M34 turn ON again. When the paper lift plate is raised until the PS6/PS10 turn ON, M25/M34 turn OFF again.

11.3.2 Paper size detection control

- The FD paper size VR /1 (VR3) and /2 (VR6) detect the paper size in the sub scan direction.
- The FD paper size VR is interlocked with the paper rear guide through the link wire.
- The CD paper size VR /1 (VR2) and /2 (VR5) detect the paper size in the main scan direction.
- The CD paper size VR is interlocked directly with the paper guide.
- After a specified period of time since the tray is set to the main body, each VR informs the detected size data to the control program of the main body.
- For the resistance value of each VR, a default is set by "Tray Adjustment" in the service mode.
- For the paper sizes shown below, it is necessary to set the paper size on the operation panel.
 - Select A5 or $5\frac{1}{2} \times 8\frac{1}{2}$
 - Select $8\frac{1}{2} \times 14$, $8\frac{1}{2} \times 13$, $8\frac{1}{4} \times 13$, $8\frac{1}{8} \times 13\frac{1}{4}$ or 8×13
 - Select 12×18 or SRA3

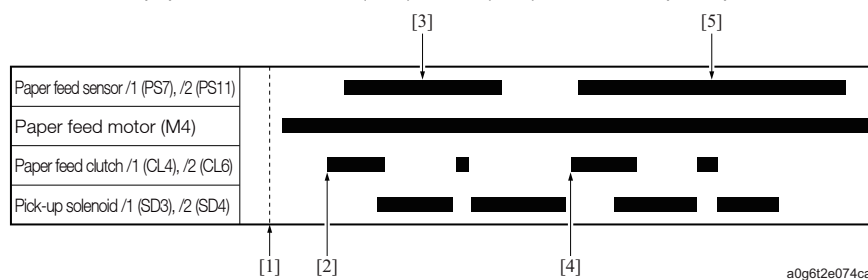


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[1]	Paper guide	[2]	Paper rear guide
[3]	FD paper size VR/1 (VR3) , /2 (VR6)	[4]	Link wire
[5]	CD paper size VR/1 (VR2), /2 (VR5)	-	

11.3.3 Pick-up mechanism

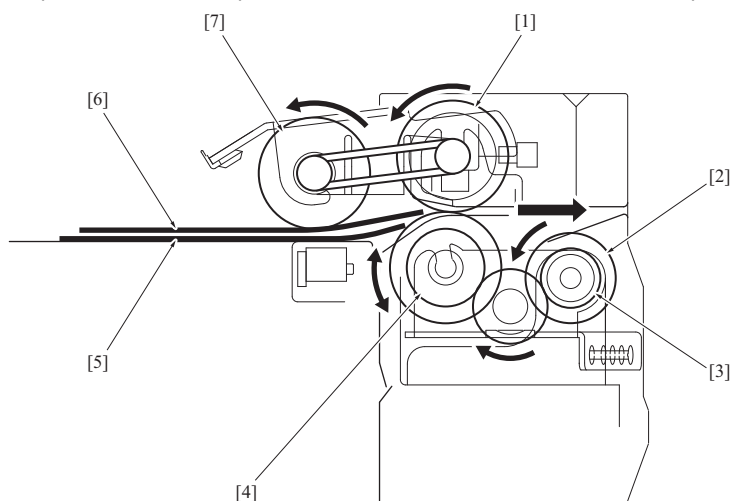
- The pick-up solenoids /1 (SD3) and /2 (SD4) turn OFF to pick up the paper.
- When the SD3/SD4 turn OFF, the pick-up roller goes down and pressurizes paper by its own weight.
- When the paper feed clutches /1 (CL4) and /2 (CL6) turn ON, the pick-up roller rotates to convey the paper to the paper feed roller.



[1] Start button ON	[2] Pick-up of the 1st sheet of paper
[3] Conveyance of the 1st sheet of paper	[4] Pick-up of the 2nd sheet of paper
[5] Conveyance of the 2nd sheet of paper	-

11.3.4 Separation mechanism

- For the transmission of the drive force to the separation roller [4], the drive force of the paper feed motor (M4) is transmitted by the ON/OFF operation of the separation clutches /1 (CL5) and /2 (CL7) [2] through the torque limiter [3].
- The separation roller [4] is driven in the direction opposite to the paper conveyance.
- When no paper is conveyed, and when only 1 sheet of paper is conveyed, the frictional force generating between the paper feed roller [1] and the separation roller [4] or the paper and the separation roller is greater than the frictional force of the torque limiter [3]. Accordingly, the separation roller rotates in the direction of the paper conveyance to convey paper to the vertical conveyance section.
- When 2 or more sheets of paper are conveyed, the frictional force between these sheets of paper is smaller than the frictional force of the torque limiter and the separation roller rotates in the reverse direction to prevent the lower most paper from being conveyed.



[1] Paper feed roller	[2] Separation clutch /1 (CL5), /2 (CL7)
[3] Torque limiter	[4] Separation roller
[5] 2nd sheet of paper	[6] 1st sheet of paper
[7] Pick-up roller	-

(1) Separation clutch control

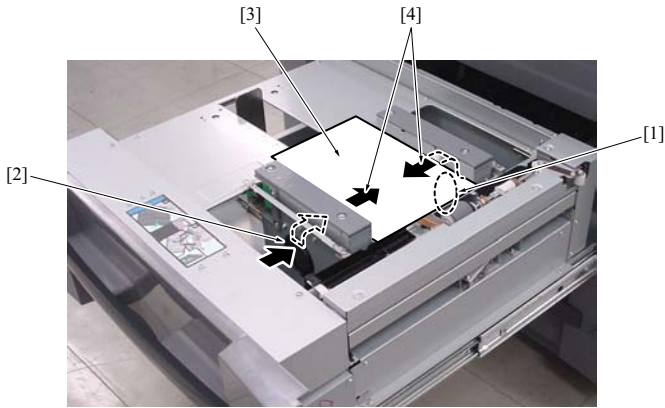
- When paper is slippery (or, when the power for conveyance is insufficient), paper conveyed from the pick-up roller may be unable to pass through the handling sections of the paper feed roller and the separation roller.
- To alleviate this kind of condition, turn OFF the separation clutches /1 (CL5) and /2 (CL7) until paper gets to the handling section to cut off the drive force to the separation roller, and make it function as a driven roller to the paper feed roller. After paper gets to the handling section, turn ON the CL5 and CL7 and to conduct the normal handling operation.
- This control is made unconditionally for the 1st sheet of paper. For the 2nd and the succeeding sheets of paper, the control is made as follows.
 - Type of paper: Preprinted paper: Made unconditionally.
 - Type of paper: Other than Preprinted paper: Made automatically judging from the condition of conveyance at the handling section. ^{*1}

^{*1} For the paper type other than the coated paper, DIPSW39-0/1:1 conducts the control unconditionally. At this time, the control is made unconditionally for the coated paper only in the low temperature.

11.3.5 Air assist mechanism

- The trays /1 and /2 are provided with the paper feed assist fan that assists the paper separation by blowing air [4] on paper [3] from the paper guides, 1 provided at front and rear.
- The tray /1 is provided with the paper feed assist fans /Fr1 (FM21) [2] and /Rr1 (FM20) [1] and tray /2 with paper feed assist fans /Fr2 (FM23) [2] and /Rr2 (FM24) [1].

- Each of the paper feed assist fans is effective especially for thick paper, and paper with a high degree of adhesion (such as coated paper). However, in the case of plain paper, it may not be fed smoothly.



1050to2309c

[1]	Paper feed assist fans /Rr1 (FM20), /Rr2 (FM24)	[2]	Paper feed assist fans /Fr1(FM21), /Fr2 (FM23)
[3]	Paper	[4]	Blow-out of air

(1) Operation timing

- The operation of the paper feed assist fans /Fr1 (FM21), /Rr1 (FM20), /Fr2 (FM23) and /Rr2 (FM24) can be selected from among the following 3 modes: Always ON, Always OFF and Auto.
- While in the Auto mode, the paper feed assist fan is normally turned OFF. However, when the coated paper or the preprinted paper is selected for the type of paper on the operation panel, the paper feed assist fan of the corresponding tray is turned ON.

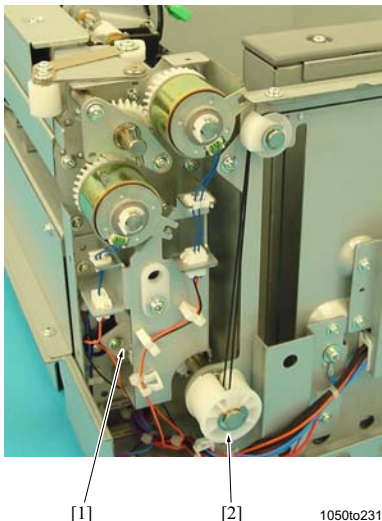
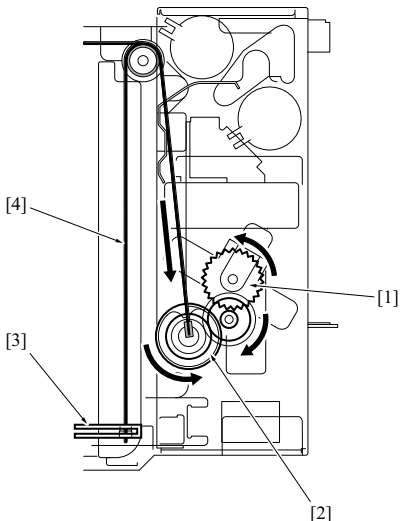
11.3.6 Remaining paper detection control

(1) Paper empty detection

- The paper empty sensors /1 (PS8) and /2 (PS12) carry out the paper empty detection in the tray.

(2) Remaining paper detection control

- The remaining paper detection is made by the remaining paper VR/1 (VR1) and /2 (VR3) [1] that are interlocked through the pulley [2] and the gear with the paper lift plate [4].
- The level of the paper remaining is detected in 6 steps according to the resistance value and sent to the main body after being AD converted.
- At this time, the following are displayed on the operation panel:
 - No Paper (↓ Flashing) : 0
 - 1st step (displayed in yellow): 13.3% or less
 - 2nd step (displayed in yellow): 25% or less
 - 4th step (displayed in white): 50% or less
 - 5th step (displayed in white): 75% or less
 - 7th step (displayed in white): 76% or more



1050to2310c

[1]	Remaining paper VR/1 (VR1), VR/2 (VR4)	[2]	Lift pulley /Rr
[3]	Paper lift plate	[4]	Lift wire

11.3.7 Tray lock control

- Each tray is locked by the tray lock lever.
- When the handle release sensors /1 (PS9) and /2 (PS13) of either of the tray /1 and /2 are OFF, the tray lock solenoids /1 (SD1) and /2 (SD2) of the corresponding tray turn on and the tray lock lever is pulled up to release the lock, thus allowing you to pull out the tray.

- If another OFF is detected while one of PS9 or PS13 is OFF, nothing but SD1 and SD2 which have already turned ON turns ON. This process is to prohibit 2 trays from being pulled out at the same time.
- When a jam that affects the tray and the exit conveyance section occurs, the tray remains being locked until the jammed paper is removed.
- Doing this prevents the paper from being torn.

11.3.8 Dehumidification heater control

- The tray /1 and the tray /2 are provided with the dehumidification heater /1 (HTR1) and /2 (HTR2), 1 each respectively, below each tray. They are turned on when the dehumidification heater switch (SW3) of the main body is turned ON.

11.4 Individual support

11.4.1 Corresponding to overlay printing

- The following are available as the individual support parts for overlay printing.
 - Cleaning brush
 - Paper feed assist plate

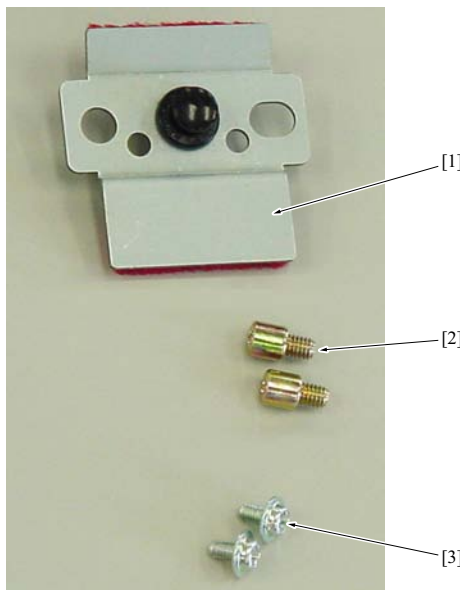
(1) Cleaning brush

(a) Purpose

- When performing overlay printing (refer to [1.8.5 Overlay printing adjustment](#)) on coated paper on which offset printing has been made, the conveyance force of the pick-up roller and the paper feed roller is remarkably reduced by powder that is used to prevent the blocking (back transfer) during the offset printing, thus causing a no feed jam.
- The cleaning brush is a part used to remove this powder to realize the improved feedability of paper.
- The cleaning brush is attachable to the paper feed tray on the main body.
- The cleaning brush can clean the pick-up roller and the paper feed roller.
- Do not use the cleaning brush for the paper with many paper powders.
- If the cleaning brush is used in the manner described above, the paper powder clogs the cleaning brush and reduces the conveyance power.

(b) Configuration

- The package contains the following as a set.
 - [1] Brush main body: 1 pc.
 - [2] Positioning screw: 2 pcs.
 - [3] Screw: 2 pcs. (M3 x 6)
- Only 1 brush is packaged with this machine. When required additionally, brushes can be purchased as service parts.



1050to2311c

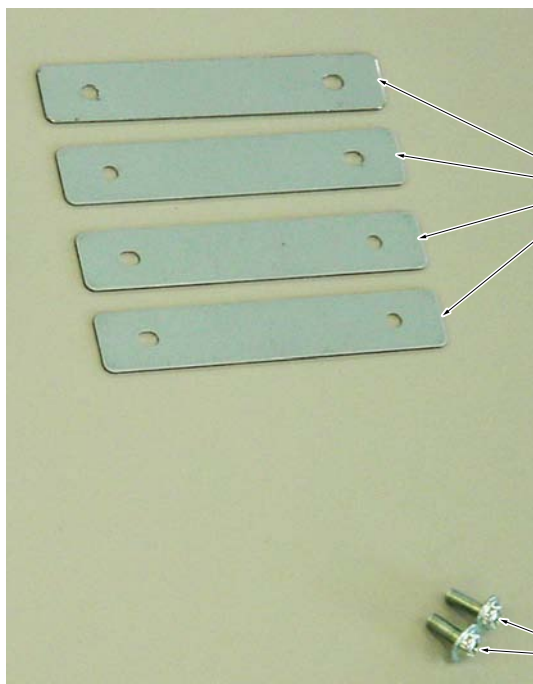
(2) Paper feed assist plate

(a) Purpose

- The paper feed assist plate is used to adjust the pick-up pressure on paper by changing the load on the pick-up roller.
- Adjustments can be made according to the type of paper to increase the paper feed performance.
- It is possible to improve a no feed condition that is apt to occur when a highly adhesive paper like coated paper is fed.
- The paper feed assist plate weighs about 10g and up to 4 plates can be attached to 1 pick-up roller in normal condition (refer to PAPER SETTING). When the surface of the cover paper is powdery, up to 3 plates can be attached (refer to [1.8.5 Overlay printing adjustment](#)).
- Increasing or decreasing the number of plates allows you to adjust the pick-up pressure corresponding to the type of paper.

(b) Configuration

- The package contains the following as a set.
 - [1] Paper feed assist plate: 4 pcs.
 - [2] Screw: 2 pcs. (M3 x 8)
- Only 4 paper feed assist plates are packaged together with the main body. When required additionally, can be purchased as service parts.



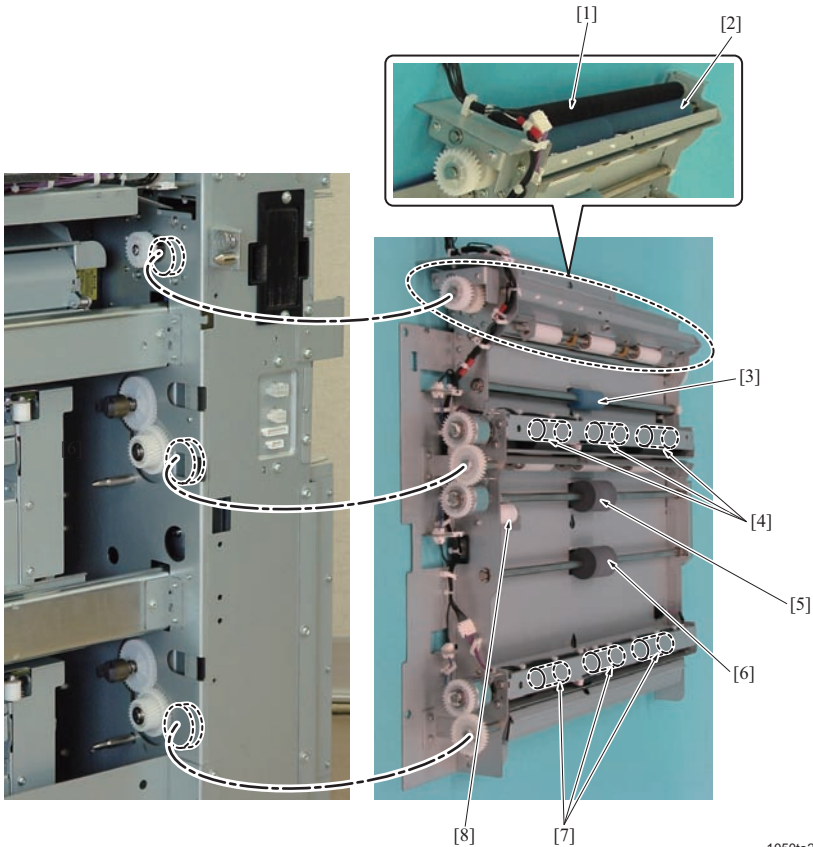
[1]

[2]

1050to2312c

12. VERTICAL CONVEYANCE SECTION

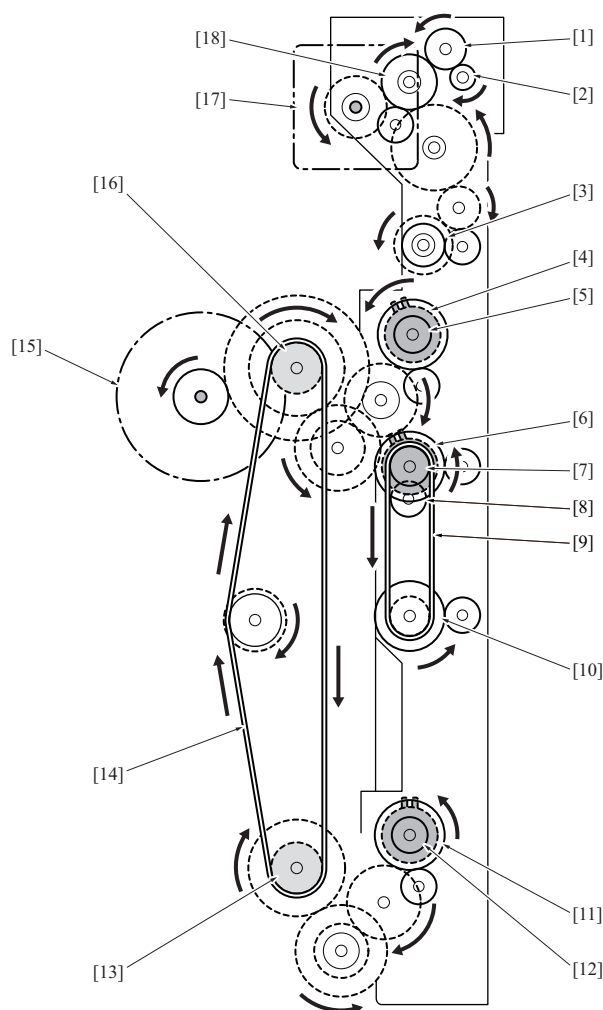
12.1 Configuration



1050to2314d

[1]	Paper dust guide brush	[2]	Conveyance exit roller
[3]	Conveyance roller /1	[4]	Pre-registration roller /1
[5]	Conveyance roller /2	[6]	Conveyance roller /3
[7]	Pre-registration roller /2	[8]	Torque limiter

12.2 Drive



1050to2315d

[1]	Paper dust guide brush	[2]	Scraper shaft
[3]	Conveyance roller /1	[4]	Pre-registration clutch /1 (CL1)
[5]	Pre-registration roller /1	[6]	Vertical conveyance clutch (CL2)
[7]	Conveyance roller /2	[8]	Torque limiter
[9]	Belt	[10]	Conveyance roller /3
[11]	Pre-registration clutch /2 (CL3)	[12]	Pre-registration roller /2
[13]	Coupling (transmission of driving force to the tray /2)	[14]	Belt
[15]	Paper feed motor (M4)	[16]	Coupling (transmission of driving force to the tray /1)
[17]	Vertical conveyance motor (M8)	[18]	Conveyance exit roller

12.3 Operation

12.3.1 Pre-registration control

- When the paper feed starts, paper is sent out to the pre-registration roller by the pick-up roller and the paper feed roller.
- When the paper strikes the pre-registration roller that is stopped, a loop is formed to adjust paper skew.
- When the pre-registration clutches /1 (CL1) and /2 (CL3) turn on, the driving force of the paper feed motor (M4) is transmitted to the pre-registration rollers /1 and /2 to convey paper.

12.3.2 Conveyance control

- Paper fed from the tray /1 is conveyed to the conveyance roller /1 which is also driven by the vertical conveyance motor (M8) by the pre-registration roller /1.
- Paper fed from the tray /2 is conveyed to the conveyance rollers /3 and /2, which are in turn driven by the pre-registration roller /2 and the paper feed motor (M4) through the vertical conveyance clutch (CL2), and then conveyed finally to the conveyance roller /1.
- Since the line speeds of the pre-registration rollers /1 and /2 and the conveyance rollers /3 and /2 that are driven by the M4 are fixed at a high speed, the pre-registration clutches /1 (CL1) and /2 (CL3), and the CL2, while in the transfer/conveyance in a low speed, are turned off to cut off the transmission of the driving force.
- At this time, the conveyance roller /1 driven by the M8 rotates at a low speed. However, it starts to rotate in a high speed when the loop sensor (PS16) detects the trailing edge of paper.

12.3.3 Exit conveyance control

- For the exit conveyance, the vertical conveyance motor (M8) drives the conveyance exit roller and conveyance roller /1.

12.3.4 Paper dust removing mechanism

- At the exit of the vertical conveyance section, paper dust is removed with the paper dust guide brush.
- When paper dust adhering to the conveyance exit roller is removed by the paper dust guide brush (raising brush), it then adheres to the scraper shaft (metal roller) to be removed by the scraper (sheet) that touches the scraper shaft.

13. REGISTRATION SECTION

13.1 Configuration

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[1]	Paper skew sensor /Rr (PS66)	[2]	ADU deceleration sensor (PS42)
[3]	Multi feed detection board /R (MFDBR)	[4]	Loop motor (M18)
[5]	Loop roller	[6]	Registration roller
[7]	Registration motor (M17)	[8]	Paper leading edge sensor (PS41)
[9]	Registration sensor (PS40)	[10]	Multi feed detection board /S (MFDBS)
[11]	Centering sensor (PS4)	[12]	Paper skew sensor /Fr (PS65)

13.2 Drive

(1) Registration roller drive

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[1]	Registration roller /Up	[2]	Registration roller /Lw
[3]	Registration motor (M17)		-

(2) Loop roller drive

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[1]	Loop motor (M18)	[2]	Loop roller
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13.3 Operation

13.3.1 Multi feed detection control

- To detect the multi feed of paper while in the paper conveyance, the multi feed sensor is provided at the exit of the loop roller.

- The multi feed sensor is an acoustic sensor made up of a pair of a sender and a receiver.
- In the multi feed sensor, the multi feed detection board /R (MFDBR) receives the ultrasonic sent from the multi feed detection board /S (MFDBS).
- When a single sheet of paper passes between MFDBS and MFDBR, it is possible to receive a sound wave, but when plural sheets of paper pass through, it is not possible to receive sound waves.
- In this way, a detection is made to check to see if paper is multi fed.

13.3.2 Multi feed detection table

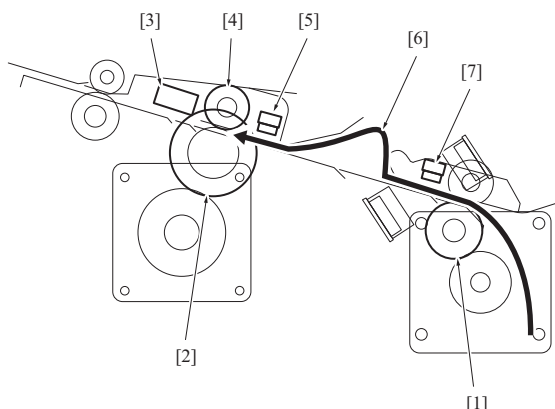
- The following table shows the paper types and the weight for which the multi-feed detection is available.

	40g/m ² to 49g/m ²	50g/m ² to 61g/m ²	62g/m ² to 71g/m ²	72g/m ² to 91g/m ²	92g/m ² to 130g/m ²	131g/m ² to 161g/m ²	162g/m ² to 216g/m ²	217g/m ² to 244g/m ²	245g/m ² to 300g/m ²	301g/m ² to 350g/m ²
Coat	Multi feed detection control: provided									
PrePrinted										
Fine										
Plain paper										
Book/News										
Embossed										
Inserting sheet (not printed)	Unable to select									

13.3.3 Loop control

- When paper conveyed to the loop roller [1] strikes the registration rollers /Up [4] and /Lw [2] which rotate in the reverse direction, a loop [6] is formed before the loop roller turns OFF.
- In this way, a paper skew is adjusted.
- When paper is heavier than 162g/m², it has a stronger repulsive force and occurs a transfer jitter due to the increased partial line speed caused by the force by which the loop tends to go back to its original form. Therefore, it is controlled so that the loop amount becomes smaller than the amount of the paper of 161g/m².
- The registration roller stops rotating in the reverse direction and then it rotates in the forward direction to stop its motion.

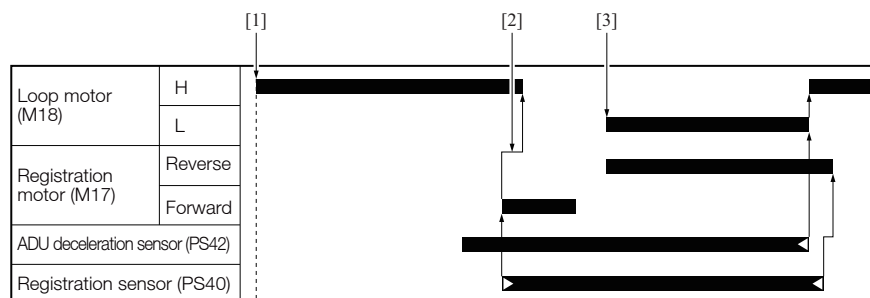
(1) Registration path



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[1] Loop roller	[2] Registration roller /Lw
[3] Paper leading edge sensor (PS41)	[4] Registration roller /Up
[5] Registration sensor (PS40)	[6] Loop
[7] ADU deceleration sensor (PS42)	-

(2) Registration operation



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[1] Start button ON	[2] Loop creation
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[3]	Registration starts	-
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13.3.4 Paper centering correction control

- To detect the centering of paper after registration, the centering sensor (PS4) is provided at the exit of the registration roller.
- The PS4 is a contact image sensor of about 200dpi and the centering information detected by the PS4 is processed at the image-processing section and adjusted during writing so that the image data corresponds to the position.
- The centering amount can be adjusted up to ± 5 mm.
- When the centering amount is in excess of 5mm, the paper is output with same correction condition as the preceding output from that tray applies.

13.3.5 Paper leading edge timing adjustment control

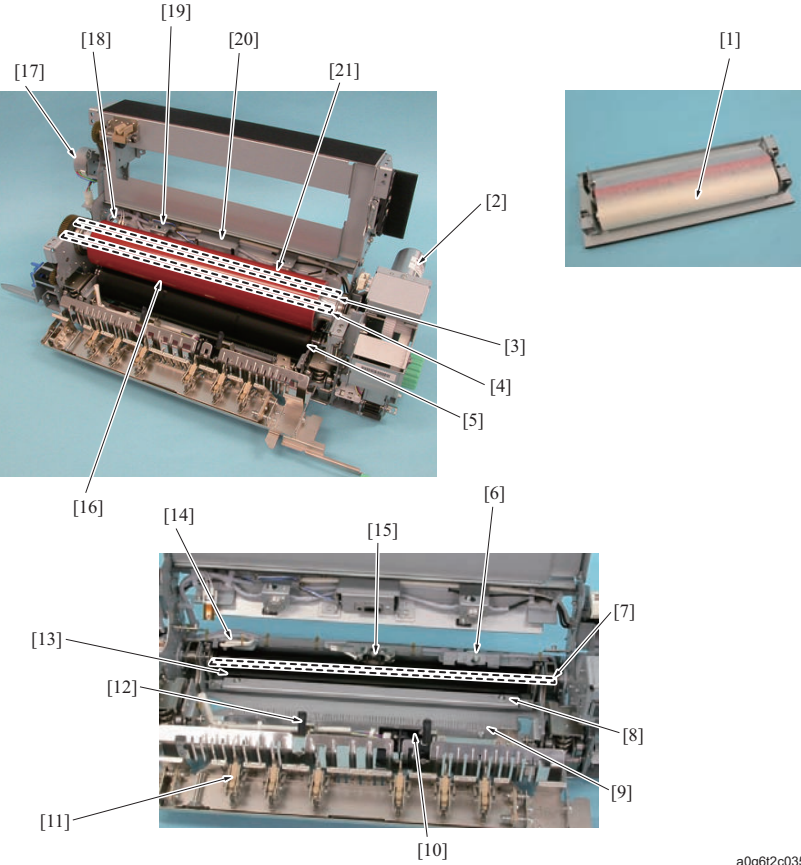
- To detect the paper leading edge timing after registration, the paper leading edge sensor (PS41) is provided at the exit of the registration roller.
- Based on the paper leading edge position detected by the PS41, adjustments are made during writing so that the image data corresponds to the position.

13.3.6 Paper skew detection control

- To detect the centering of paper after registration, the paper skew sensor /Fr (PS65) and /Rr (PS66) are provided.
- It detects the time when the paper passes PS65 and PS66 and determines the paper skew amount according to the time difference. When the amount is excess of the paper skew amount detection threshold (set from the touch panel), the man body gets into JAM and stops.

14. FUSING SECTION

14.1 Configuration

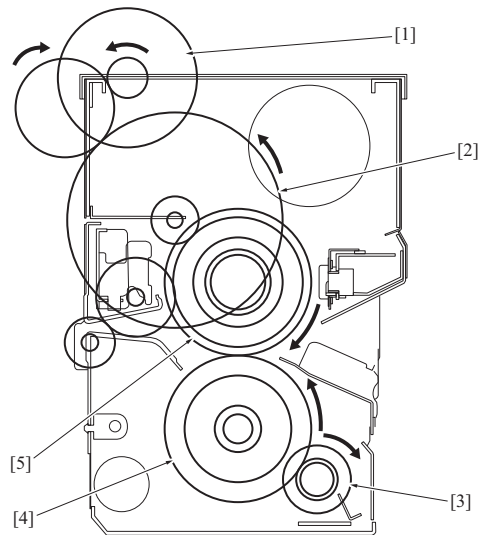


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[1]	Cleaning web	[2]	Fusing pressure release motor (M33)
[3]	Fusing heater lamp /1 (L1)	[4]	Fusing heater lamp /2 (L2)
[5]	Fusing roller /Lw	[6]	Thermostat /3 (TS3)
[7]	Fusing heater lamp /3 (L3)	[8]	Scraper
[9]	Non-contact neutralizing brush	[10]	Fusing jam sensor (PS38)
[11]	Fusing claw /Up	[12]	Fusing claw /Lw
[13]	Fusing heating roller	[14]	Fusing temperature sensor /4 (TH4)
[15]	Fusing temperature sensor /3 (TH3)	[16]	Fusing roller /Up
[17]	Web motor (M24)	[18]	Fusing temperature sensor /2 (TH2)
[19]	Thermostat /1 (TS1)	[20]	Fusing temperature sensor /1 (TH1)
[21]	Thermostat /2 (TS2)		-

14.2 Drive

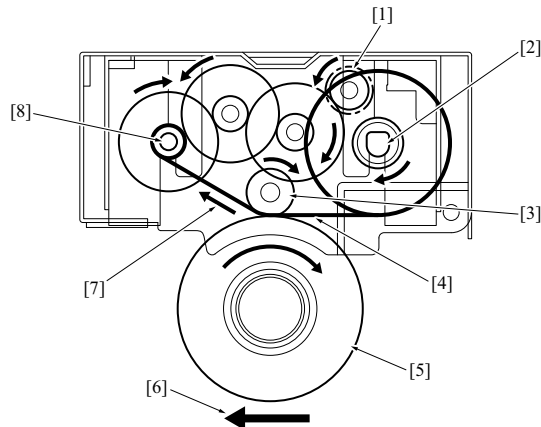
14.2.1 Fusing drive



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[1]	Fusing motor (M1)	[2]	Flywheel
[3]	Fusing heating roller	[4]	Fusing roller /Lw
[5]	Fusing roller /Up	-	

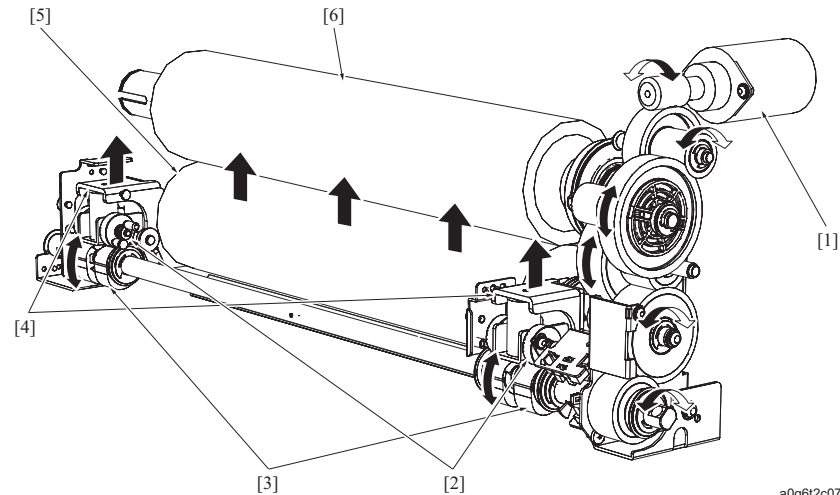
14.2.2 Web drive



1050to2317c

[1]	Web motor (M24)	[2]	Web unwinding shaft
[3]	Pressure roller	[4]	Cleaning web
[5]	Fusing roller /Up	[6]	Paper conveyance direction
[7]	Web wind-up direction	[8]	Web wind-up shaft

14.2.3 Fusing roller /Lw pressure drive



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[1] Fusing pressure release motor (M33)	[2] Pressure roller
[3] Pressure cam	[4] Pressure arm
[5] Fusing roller /Lw	[6] Fusing roller /Up

14.3 Operation

14.3.1 Fusing roller drive control

(1) Speed changeover control

- According to the relationship between the type of paper and the paper weight, the process speed is controlled at a high speed (570mm/s), medium speed (490mm/s) and low speed (330mm/s).

(2) Preparative rotation control

(a) Control when the power is turned ON

- When the fusing temperature is 50°C or less with the sub power switch (SW2) turned ON and the detection temperature of the fusing temperature sensor /1 (TH1) of the fusing roller /Up gets to a specified temperature, the fusing motor (M1) starts the preparatory rotation and stops after a specified period of time or when the TH1 detects a specified temperature.
- The software DIPSW8-2/3 allows you to make a selection between the execution and the non-execution of this preparatory rotation. Also the software DIPSW8-4/5 allows you to change the length of the preparatory rotation time.

(b) Print control

- It conducts the preparatory rotation for a specified period of time before the printing starts.
- The length of the preparatory rotation time is previously specified in accordance with the type of paper and the paper weight.
- It does not conduct the preparatory rotation when the next printing starts within 3 seconds after the previous printing.

(c) Control after the small-size paper printing

- The preparatory rotation time for the next printing differs from the normal time when printing 100 or more sheets continuously on the 279mm (11in.) or less wide paper, and the next printing starts within 240 seconds using either type of paper (must be wider than the paper used in the preceding job); weight 91g/m² or less, paper size A3, B4 or 11 x 17.
- This preparatory rotation time differs according to the idling time.
- Either of longer one is applied; this arranged preparatory rotation time or the normal preparatory rotation time.
- The software DIPSW allows you to make a selection between the execution and the non-execution of this preparatory rotation.

(3) Speed stabilization

- To stabilize the speed, the gear shaft between the M1 and the fusing roller /Up is equipped with a flywheel. The inertia force of the flywheel stabilizes the speed of the fusing roller to minimize the transfer jitter on thick paper.

14.3.2 Pressure release drive control

(1) Purpose

- The pressure release control of the fusing roller /Lw enhances the following performance.
 - Enhancement of the durability of the fusing roller /Lw.
 - Reducing the curl amount and enhancement of fusibility in printing.
 - Warming up of the fusing roller /Lw in the warm-up preparatory rotation.
 - Improvement of the productivity and the durability of the pressure release mechanism.

(2) Operation

(a) Pressure position

- There are 4 steps for the pressure position; very weak, weak, medium, strong.
- As the pressure powers for each pressure position differ between PR1200/1200p and PRO1051, the shapes of the pressure cams differ.
- The pressure position is predetermined in accordance with the type of paper and the paper weight.

Pressure position	Position 1	Position 2	Position 3	Position 4
Pressure power	Strong	Medium	Weak	Very weak

(b) During the preparatory rotation in warming-up

- The pressure position switches to the position 2.

(c) When starting the printing

- The pressure position switches to the position in accordance with the paper type at the same time the preparatory rotation for the printing starts.

(d) While in the print

- The pressure position changes for each paper type.
- After the print completes, it keeps the current pressure position for the next print. When there is no next job input, the pressure position switches to the release position (position 4).
- When the pressure position for the next print differs from the previous one, the pressure position switches when the preparatory rotation for the next print starts.

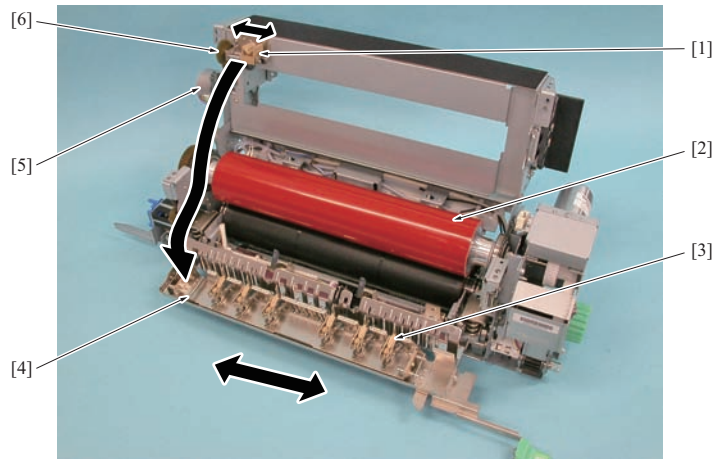
- (e) **Tray individual setting**
 - By the tray individual setting (process setting), it is possible to make the individual settings for each tray.
- (f) **Switching of the pressure position**
 - For PRO1200/1200P, the pressure position repeatedly switches among the position 2 - 4 - 3, excepting during the position 1 is selected for the tray individual setting.
 - For PRO1051, there is no regulation and the position switches to either of the position1 to 4.
- (g) **Improvement of the fusibility at the starting of printing.**
 - At the starting of printing, the pressure position can be temporary boosted to 1 step upper level from the prescribed position to enhance the fusibility.
 - The software DIPSW 19-5 enables to make a selection between the execution and the non-execution of this control.

14.3.3 Web drive control

- The rotation time of the web motor (M24) is controlled so that the web advance distance per print becomes uniform.

14.3.4 Fusing claw oscillating mechanism

- The separation claw oscillating mechanism is provided to avoid damaging the fusing roller /Up (soft roller) [2] with the fusing claw.
- The drive shaft [4] of the fusing claw unit [3] is engaged with the holder [1] to which the drive force of the web motor (M24) [5] is transmitted via the gear [6].
- This process allows the fusing claw unit to shake in synchronization with the ON/OFF of M24.

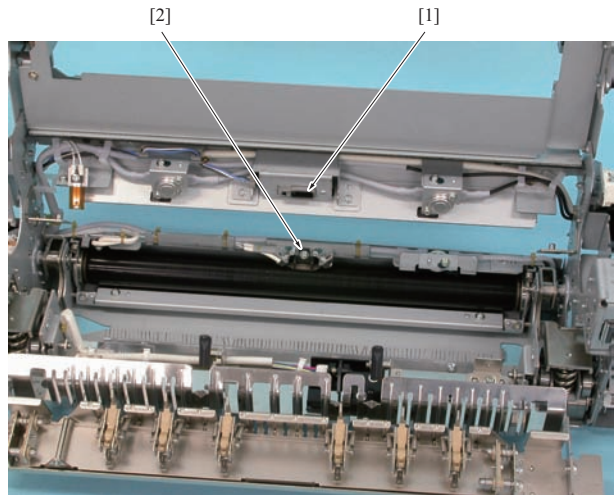


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[1]	Holder	[2]	Fusing roller /Up (soft roller)
[3]	Separation claw unit	[4]	Drive shaft
[5]	Web motor (M24)	[6]	Gear

14.3.5 Fusing temperature control

- The heating of the fusing roller /Up is made by the fusing heater lamps /1 (L1) and /2 (L2) and the heating of the fusing roller /Lw made by the fusing heater lamp /3 (L3) through the fusing heating roller.
- The surface temperature of the fusing roller /Up is detected at fixed intervals by thermistor /1 (TH1) [1] provided at the center, and controlled by turning L1 and L2 ON/OFF through the AC drive board (ACDB) so that it becomes a prescribed temperature.
- The surface temperature of the fusing heating roller is detected at fixed intervals by thermistor /3 (TH3) [2] provided at the center and the temperature of the fusing heating roller is controlled by turning L3 ON/OFF.



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[1] Fusing temperature sensor /1 (TH1)	[2] Fusing temperature sensor /3 (TH3)
--	--

(1) Warm-up

- The fusing heater lamps /1 (L1), /2 (L2) and /3 (L3) turn ON while in the warm-up, and they turn OFF at a prescribed temperature.

(2) While in the print

- For the fusing roller /Up, the temperature setting varies according to the type of paper and the paper weight. The fusing heater lamp /1 (L1) and /2 (L2) is turned ON/OFF so that the temperature comes to a prescribed temperature.
- For the fusing roller, the temperature setting varies according to the type of paper and the paper weight. The fusing heater lamp /3 (L3) is turned ON/OFF so that the temperature comes to a prescribed temperature.

(3) While in standby

- The fusing roller /Up is heated by the fusing heater lamp /1 (L1) when the temperature is 3°C lower than a prescribed temperature (this temperature varies depending on the time elapsed after completion of the warm-up). L1 turns OFF when the temperature is 2°C higher than a prescribed temperature.
- The fusing heating roller is heated by the fusing heater lamp /3 (L3) when the temperature is 1°C lower than a set temperature, and lamp /3 (L3) turns OFF when the temperature is 1°C higher than a set value.
- The heater lamp /2 (L2) is for flicker and does not turn ON.

(4) Control for improvement of the fusibility at the starting of printing.

- The printing starts after the specified period of time after the start button is pressed on the condition that the temperature of the fusing roller /Up is higher than the prescribed temperature.
- When the detected temperature is lower than the prescribed value, it conducts warming-up until the temperature reaches the prescribed value.
- The software DIPSW36-2 can change the condition for conducting this control.

(5) Preparatory rotation after printing

- It conducts the preparatory rotation for 10 seconds when the temperature of the fusing roller /Up reaches the prescribed value while in idling.
- While the drum motor (M2) is rotating after printing, the fusing heater lamp /1 (L1) and /2 (L2) are forcibly turned OFF.
- When there is a print reservation, this control does not function but the printing operation takes priority.
- Also when the next print job is inputted while conducting this control, the printing operation takes priority.

(6) Power save

- The timer starts to count when the last printing completes. When the operation button is not pressed within a specified period of time, the mode switches to the low-power mode or the shut-off mode.
- The length of time which elapses before switching to the low-power mode or the shut-off mode can be specified arbitrarily.
- When the setting time of the low-power mode and the shut-off mode coincides, the shorter one is applied for the low-power mode.

(a) Low-power mode

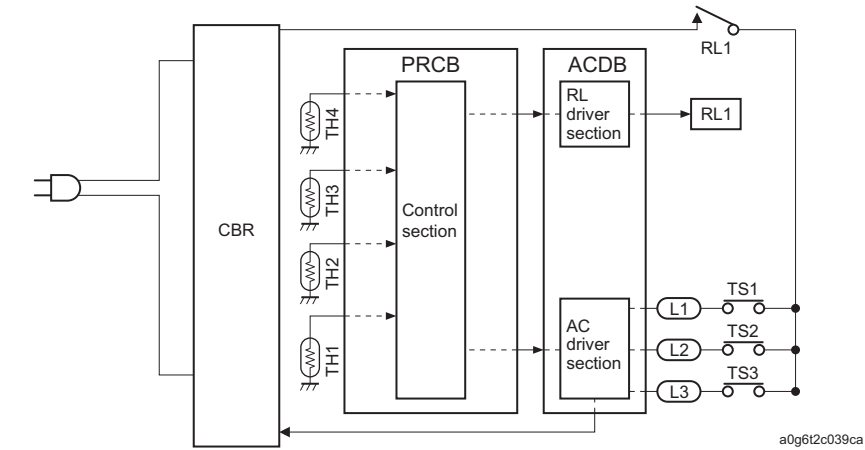
- The fusing roller /Up is heated by the fusing heater lamp /1 (L1) when the temperature is 1°C lower than a prescribed temperature (fixed) and turns OFF L1 when it reaches 2°C higher than a prescribed value.
- The fusing heating roller is heated by the fusing heater lamp /3 (L3) when the temperature is 1°C lower than a prescribed temperature (fixed) and turns OFF the lamp /3 (L3) when it is 2°C higher than a prescribed temperature.
- The heater lamp /2 (L2) is for flicker and does not turn ON.

(b) Shut-OFF mode

- When switching to the shut-off mode, the energization to the fusing heater lamp /1 (L1), /2 (L2) and /3 (L3) turns OFF.

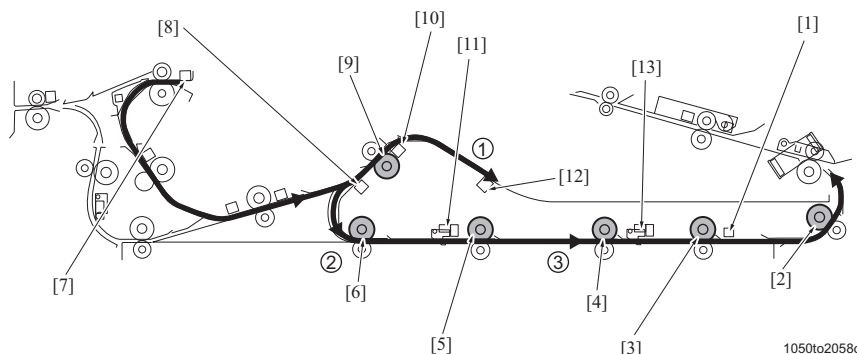
14.3.6 Protection against temperature abnormality

- When the fusing temperature sensor /1 (TH1) detects a prescribed temperature (244°C or more) 10 times at a specified intervals, or the fusing temperature sensor /2 (TH2) detects a prescribed temperature (249°C or more), a message is displayed on the operation panel. The fusing heater lamps /1 (L1) and /2 (L2) turn OFF and the operations stop.
- Thermostats /1 (TS1) and /2 (TS2) also monitor an abnormal temperature rise. TS1 and TS2 cut off the fusing heater lamps /1 (L1) and /2 (L2) at a prescribed temperature.
- When the fusing temperature sensor /3 (TH3) detects a prescribed temperature (220°C or more) 5 times at a specified intervals, or the fusing temperature sensor /4 (TH4) detects a prescribed temperature (240°C or more), a message is displayed on the operation panel. The fusing heater lamps /3 (L3) turns OFF and the operations stop.
- Thermostat /3 (TS3) also monitors an abnormal temperature rise. TS3 cuts off the fusing heater lamp /3 (L3) at a prescribed temperature.
- When TH1/TH2 do not reach a prescribed temperature a specified period of time after the main power switch (SW1) turns ON, L1/L2/L3 turn OFF and copy operations stop.
- When those fusing temperature abnormalities occur, the system gets into an SC latch condition. So, after identifying the cause of the error and repairing it, it is necessary to make the release and recovery operations with the software DIPSW 3-1.



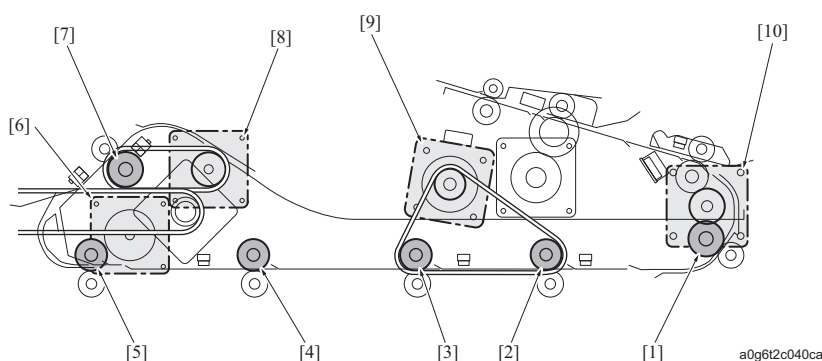
15. DUPLEX SECTION

15.1 Configuration



[1] ADU exit sensor (PS43)	[2] ADU exit roller
[3] ADU conveyance roller /4	[4] ADU conveyance roller /3
[5] ADU conveyance roller /2	[6] ADU conveyance roller /1
[7] fusing exit sensor (PS22)	[8] ADU reverse sensor /1 (PS46)
[9] ADU reversal roller	[10] ADU reverse sensor /2 (PS45)
[11] ADU conveyance sensor /1 (PS35)	[12] Paper stay sensor (PS64)
[13] ADU conveyance sensor /2 (PS36)	-

15.2 Drive



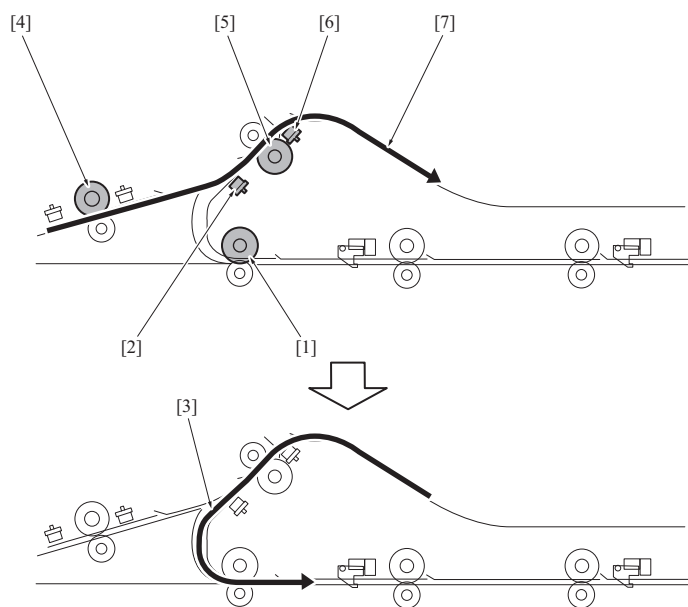
[1] ADU exit roller	[2] ADU conveyance roller /4
[3] ADU conveyance roller /3	[4] ADU conveyance roller /2
[5] ADU conveyance roller /1	[6] ADU conveyance motor /1 (M15)
[7] ADU reversal roller	[8] ADU reverse motor (M12)
[9] ADU conveyance motor /2 (M16)	[10] Loop motor (M18)

15.3 Operation

15.3.1 Conveyance control

(1) ADU paper feed mechanism

- Paper conveyed from the reverse/exit section is conveyed to the duplex reverse section by the reverse/exit roller [4] and the ADU reverse roller [5].
- When the ADU reverse sensor /1 (PS46) [2] detects the trailing edge of paper and turns OFF, the ADU reverse roller rotates in the reverse direction to send paper back in the direction in which it was conveyed.
- At this time, the paper is conveyed to the ADU conveyance roller /1 [1] side, not to the reverse/exit roller side, according to the form of the metal frame of the conveyance path.
- Depending on the number of sheets for duplex print or the paper size, the paper trailing edge stops at the position of PS46, and then the ADU reverse roller reboots to convey the paper to the ADU conveyance roller /1 [1].

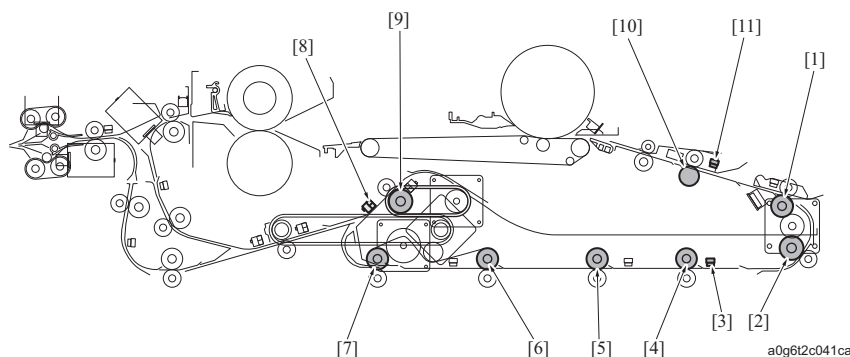


[1] ADU conveyance roller /1	[2] ADU reverse sensor /1 (PS46)
[3] ADU reversed paper	[4] Reversal output roller
[5] ADU reversal roller	[6] ADU reverse sensor /2 (PS45)
[7] ADU paper supplied	-

15.3.2 Duplex circulation control

(1) OUTLINE

- The length of the conveyance path in the duplex section including the registration section is kept at the enough length to circular the 3 sheets of paper, regardless of the paper size.
- When in duplex printing, it is controlled so that 3 sheets of paper always circular in these conveyance paths.
- There are 3 paper stop points in the paper circulation.
- The 3 points are; the registration sensor (PS40), ADU reverse sensor /1 (PS46) and the ADU exit sensor (PS43).

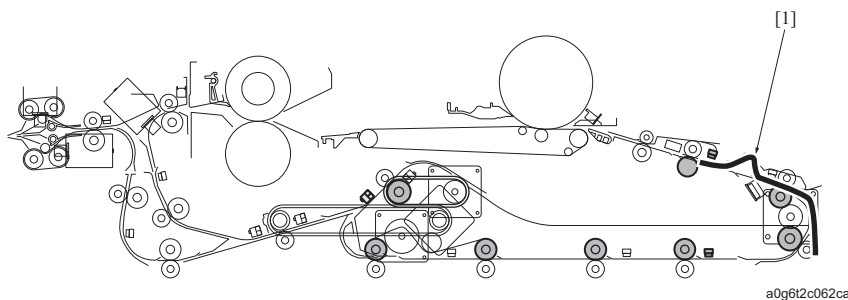


[1] Loop roller	[2] ADU exit roller
[3] ADU exit sensor (PS43)	[4] ADU conveyance roller /4
[5] ADU conveyance roller /3	[6] ADU conveyance roller /2
[7] ADU conveyance roller /1	[8] ADU reverse sensor /1 (PS46)
[9] ADU reversal roller	[10] Registration roller
[11] Registration sensor (PS40)	-

(2) Paper conveyance control

(a) The registration starting up for the front side of the 1st sheet of paper

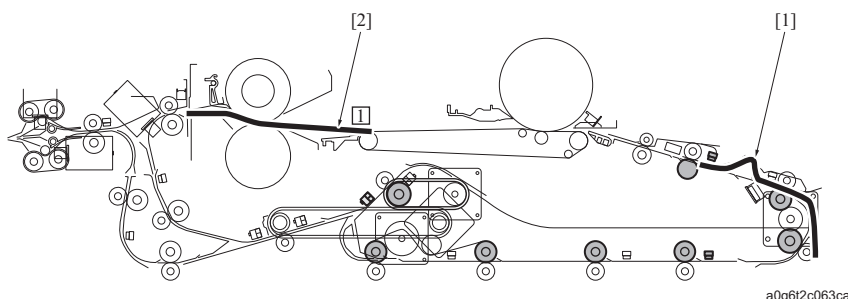
- When the registration sensor (PS40) turns ON for the 1st sheet of paper, the registration roller rotates to register the front side of the 1st paper after the loop formed.



[1] Front of the 1st sheet of original (page 1)	-
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(b) The registration starting up for the front side of the 2nd sheet of paper

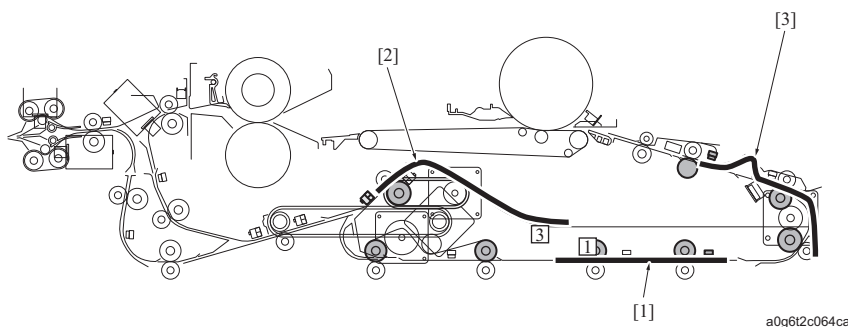
- A specified period of time after the registration of the front side of the 1st sheet of paper, the 2nd sheet of paper is fed. Another specified period of time after, it conducts the registration of the front side of the 2nd sheet of paper.



[1] Front of the 2nd sheet of original (page 4)	[2] Front of the 1st sheet of original (page 3)
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(c) The registration starting up for the front side of the 3rd sheet of paper

- A specified period of time after the registration of the front side of the 2nd sheet of paper, the 3rd sheet of paper is fed.
- When the trailing edge of the 1st sheet of paper with its front side printed passes the ADU reverse sensor /1 (PS46), the ADU reverse roller rotates in the reverse direction to feed the 1st paper toward the ADU conveyance roller /1.
- This operation turns the paper from front side to the back side.
- When the leading edge of the 1st sheet of paper turns ON the ADU exit sensor (PS43), the ADU conveyance roller /4 stops and enters the stand-by.
- At this time, the registration is conducted on the front side of the 3rd sheet of paper which already stands by at the registration section.
- When the trailing edge of the 2nd sheet of paper with its front side printed passes PS46, the ADU reverse roller stops.



[1] Front of the 1st sheet (reversed)	[2] Front of the 2nd sheet of original (page 3)
[3] Front of the 3rd sheet of original (page 5)	-

(d) Starting up of the 1st sheet of paper from the ADU conveyance roller /4 stop point

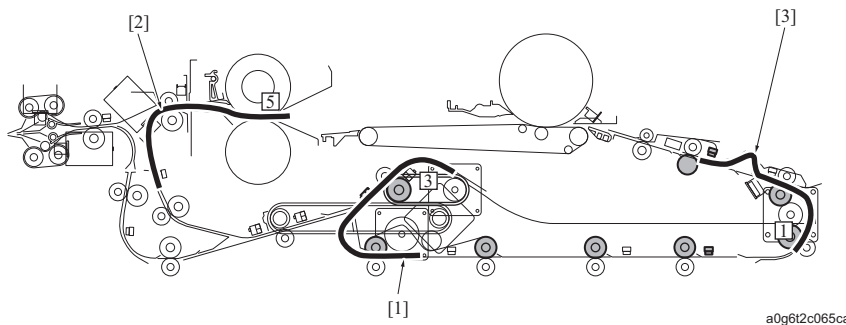
- A specified period of time after the registration of the front side of the 3rd sheet of paper, the 1st sheet of paper stopping at the ADU conveyance roller /4 starts up.

(e) Starting up of the 2nd sheet of paper from the ADU reverse roller stop point

- A specified period of time after the 1st sheet of paper starts up from the ADU conveyance roller /4 stop point, the ADU reverse roller rotates in the reverse direction to feed the 2nd sheet of paper toward the ADU conveyance roller /1.

(f) The registration starting up for the back side of the 1st sheet of paper

- When PS40 turns ON for the 1st sheet of paper, the registration roller rotates to register the back side of the 1st paper after the loop formed.

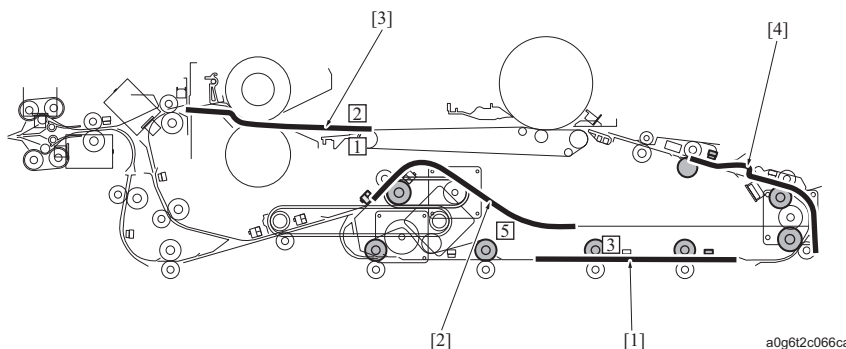


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[1]	Front of the 2nd sheet of original (being reversed)	[2]	Front of the 3rd sheet of original (page 5)
[3]	Back of the 1st sheet of original (page 2)	-	

(g) The registration starting up for the front side of the 4th sheet of paper

- The registration of the front side of the 4th sheet of paper is conducted at the minimum paper interval position from the registration starting up for the back side of the 1st sheet of paper.



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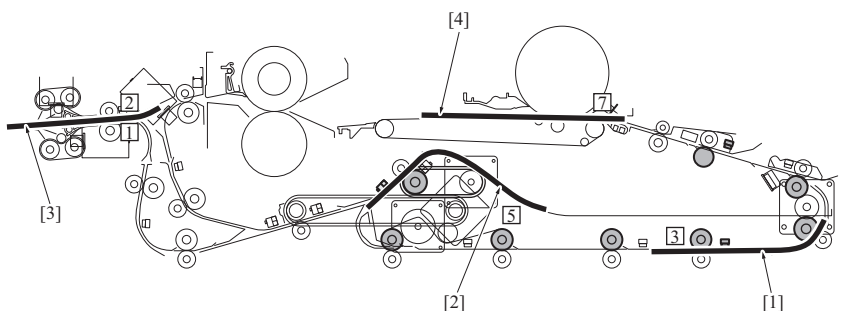
[1]	Front of the 2nd sheet of original (being reversed)	[2]	Front of the 3rd sheet of original (page 5)
[3]	Back of the 1st sheet (both side printed)	[4]	Front of the 4th sheet of original (page 7)

(h) Starting up of the 2nd sheet of paper from the ADU conveyance roller /4 stop point

Starting up of the 3rd sheet of paper from the ADU reverse roller stop point

Paper exit of 1st sheet

- A specified period of time after the registration of the front side of the 4th sheet of paper, the 2nd sheet of paper stopping at the ADU conveyance roller /4 starts up.
- A specified period of time after the 2nd sheet of paper starts up from the ADU conveyance roller /4, the ADU reverse roller rotates in the reverse direction to feed the 3rd sheet of paper toward the ADU conveyance roller /1.
- The 1st sheet of paper with its back side printed is conveyed to a post-process option through the paper exit section.



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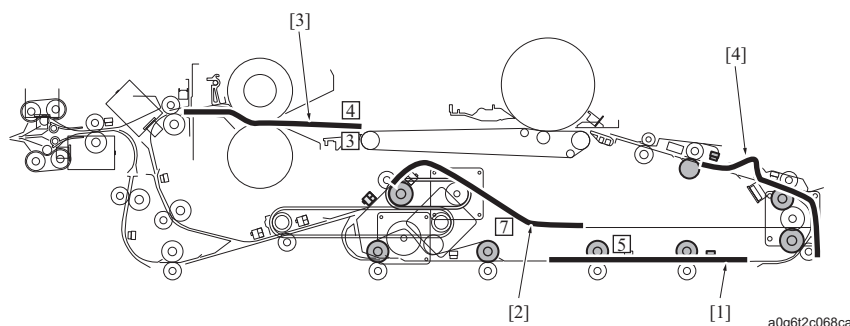
[1]	Front of the 2nd sheet of original (being reversed)	[2]	Front of the 3rd sheet (being reversed)
[3]	Back of the 1st sheet (both side printed)	[4]	Front of the 4th sheet of original (page 7)

(i) The registration starting up for the back side of the 2nd sheet of paper

- When the registration sensor (PS40) turns ON for the back side of the 2nd sheet of paper, the registration roller rotates to register the back side of the 2nd sheet of paper after the loop formed.

(j) The registration starting up for the front side of the 5th sheet of paper

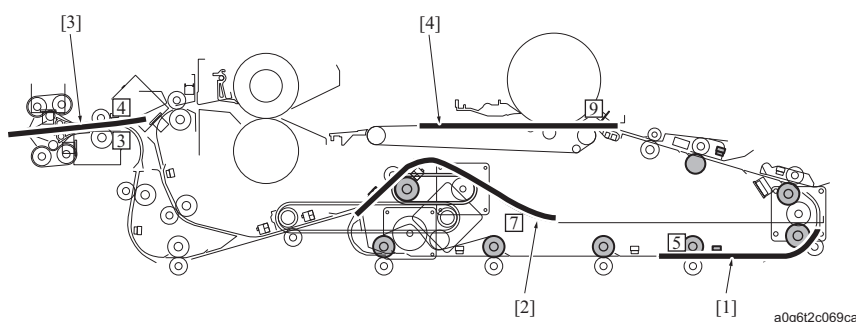
- The registration of the front side of the 5th sheet of paper is conducted at the minimum paper interval position from the registration starting up for the back side of the 2nd sheet of paper.



[1]	Front of the 3rd sheet of original (being reversed)	[2]	Front of the 4th sheet of original (page 7)
[3]	Back of the 2nd sheet (both side printed)	[4]	Front of the 5th sheet of original (page 9)

(k) Starting up of the 3rd sheet of paper from the ADU conveyance roller /4 stop point
Starting up of the 4th sheet of paper from the ADU reverse roller stop point
Paper exit of 2nd sheet

- A specified period of time after the registration of the front side of the 5th sheet of paper, the 3rd sheet of paper stopping at the ADU conveyance roller /4 starts up.
- A specified period of time after the 3rd sheet of paper starts up from the ADU conveyance roller /4, the ADU reverse roller rotates in the reverse direction to feed the 4th sheet of paper toward the ADU conveyance roller /1.
- The 2nd sheet of paper with its back side printed is conveyed to a post-process option through the paper exit section.



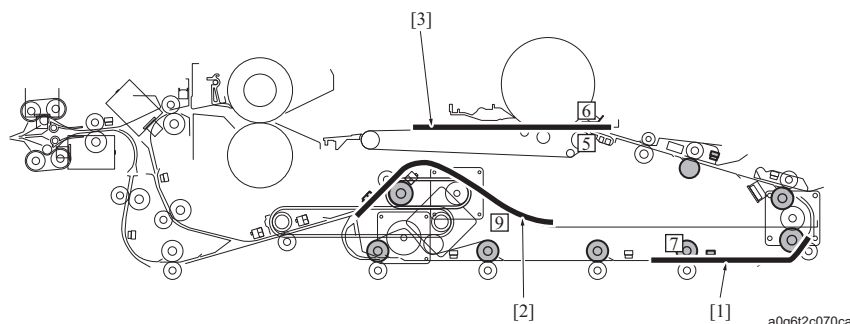
[1]	Front of the 3rd sheet of original (being reversed)	[2]	Front of the 4th sheet of original (being reversed)
[3]	Back of the 2nd sheet (both side printed)	[4]	Front of the 5th sheet of original (page 9)

(l) The registration starting up for the back side of the 3rd sheet of paper

- When the registration sensor (PS40) turns ON for the back side of the 3rd sheet of paper, the registration roller rotates to register the back side of the 3rd sheet of paper after the loop formed.

(m) Starting up of the 4th sheet of paper from the ADU conveyance roller /4 stop point
Starting up of the 5th sheet of paper from the ADU reverse roller stop point

- A specified period of time after the registration of the back side of the 3rd sheet of paper, the 4th sheet of paper stopping at the ADU conveyance roller /4 starts up.
- A specified period of time after the 4th sheet of paper starts up from the ADU conveyance roller /4, the ADU reverse roller rotates in the reverse direction to feed the 5th sheet of paper toward the ADU conveyance roller /1.



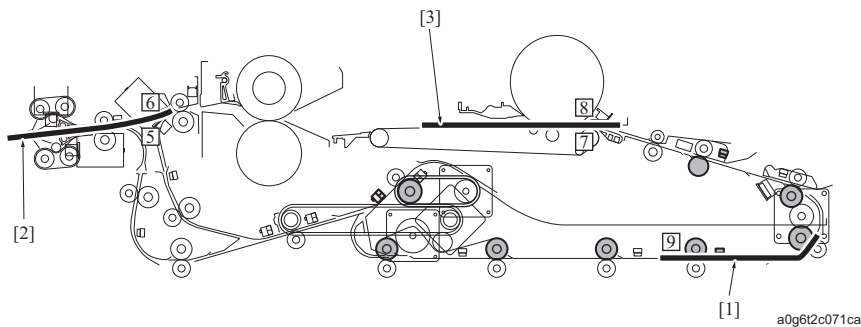
[1]	Front of the 4th sheet of original (being reversed)	[2]	Front of the 5th sheet of original (being reversed)
[3]	Back of the 3rd sheet of original (page 6)	-	

(n) The registration starting up for the back side of the 4th sheet of paper

- When PS40 turns ON for the 4th sheet of paper, the registration roller rotates to register the back side of the 4th sheet of paper after the loop formed.

(o) Starting up of the 5th sheet of paper from the ADU conveyance roller /4 stop point
3rd paper exit

- A specified period of time after the registration of the back side of the 4th sheet of paper, the 5th sheet of paper stopping at the ADU conveyance roller /5 starts up.
- The 3rd sheet of paper with its back side printed is conveyed to a post-process option through the paper exit section.



[1]	Front of the 5th sheet of original (being reversed)	[2]	Back of the 3rd sheet (both side printed)
[3]	Back of the 4th sheet of original (page 8)	-	

(p) The registration starting up for the back side of the 5th sheet of paper
4th paper exit

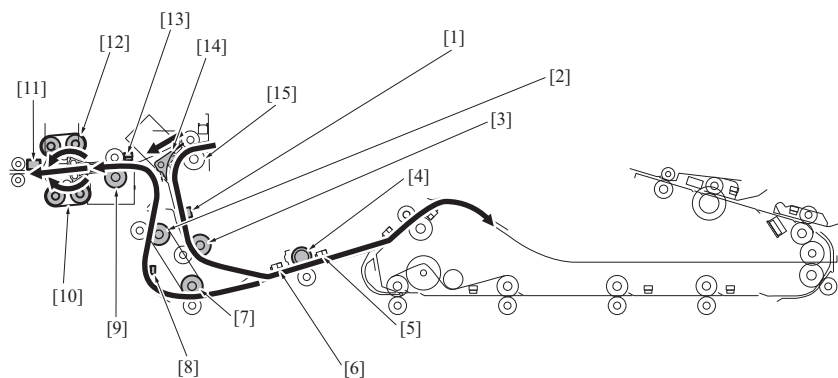
- When PS40 turns ON for the 5th sheet of paper, the registration roller rotates to register the back side of the 5th sheet of paper after the loop formed.
- The 4th sheet of paper with its back side printed is conveyed to a post-process option through the paper exit section.

(q) 5th paper exit

- The 5th sheet of paper is conveyed to a post-process option through the paper exit section.
- When printing more than 5 sheets continuously, it repeats steps (j) to (n).

16. REVERSE/EXIT SECTION

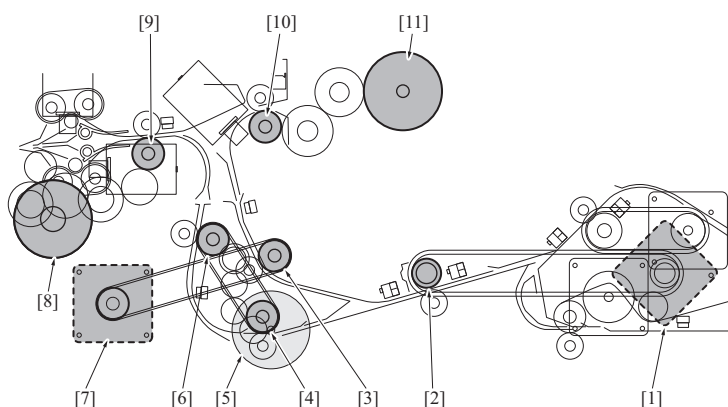
16.1 Configuration



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[1]	ADU accelerate sensor (PS49)	[2]	Exit conveyance roller /2
[3]	ADU accelerator roller	[4]	Reversal output roller
[5]	Reverse sensor /2 (PS47)	[6]	Reverse sensor /1 (PS48)
[7]	Exit conveyance roller /1	[8]	ADU reverse paper exit sensor (PS50)
[9]	De-curler entrance roller	[10]	De-curler belt /Lw
[11]	paper exit sensor (PS3)	[12]	De-curler belt /Up
[13]	De-curler entrance sensor (PS23)	[14]	Reverse gate
[15]	Fixing exit roller	-	

16.2 Drive



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[1]	Reverse/exit motor (M13)	[2]	Reversal output roller
[3]	ADU accelerator roller	[4]	Output convey roller /1
[5]	Paper exit conveyance motor (M31)	[6]	Output convey roller /2
[7]	ADU accelerate motor (M14)	[8]	Paper exit motor (M20)
[9]	Decurler entrance roller	[10]	Fixing exit roller
[11]	Gear for the fusing roller /Up	-	

16.3 Operation

16.3.1 Conveyance control

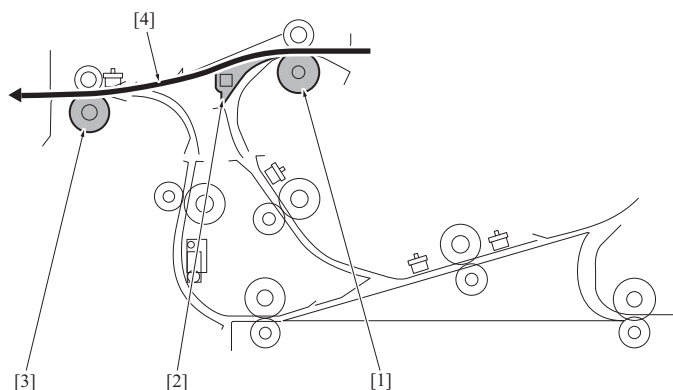
(1) Reverse gate

- The reverse gate is turned ON/OFF by the reverse/exit solenoid (SD7) and switches the conveyance path for paper exited from the fusing section over to either the straight paper exit or the reverse paper exit/ADU paper feed.

(2) Conveyance path

(a) Straight paper exit

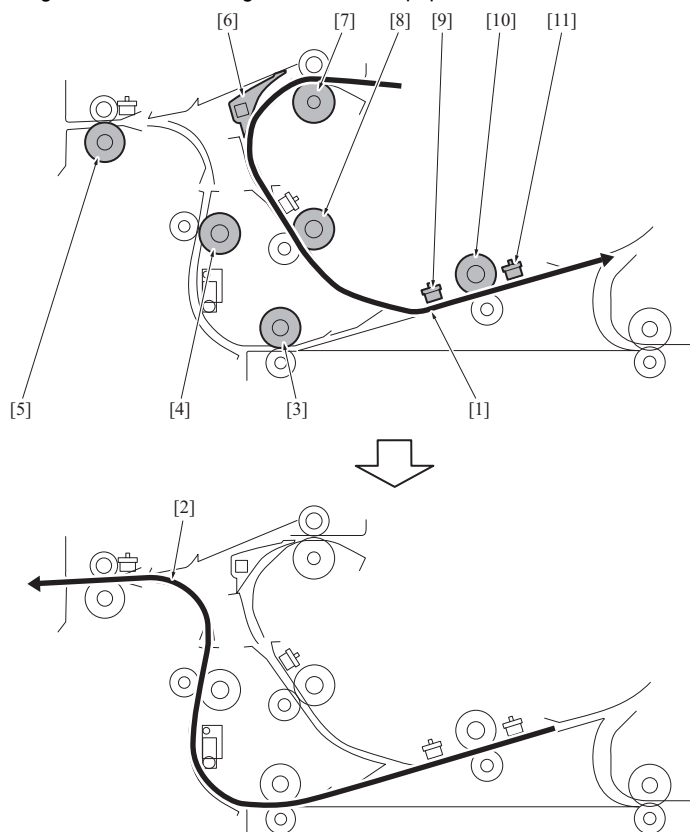
- While in the straight paper exit, the reverse gate is closed when the reverse/exit solenoid (SD7) turns ON. The paper exited from the fusing exit roller [1] is conveyed to the de-curler roller [3] passing over the reverse gate [2].



[1]	Fixing exit roller	[2]	Reverse gate
[3]	De-curler entrance roller		-

(b) Reverse paper exit

- When in the reverse paper exit and the ADU paper feed, the reverse gate [6] is opened when the reverse/exit solenoid (SD7) is OFF, and paper is conveyed to the ADU acceleration roller [8].
- The paper that passed through the ADU acceleration roller is conveyed to the reverse/exit roller [10] according to the shape of the metal frame.
- The reverse/exit roller, when the reverse sensor /1 (PS48) [9] detects the trailing edge of paper turns OFF, and then rotates in reverse to get the paper back in the original direction.
- While in the ADU paper feed, paper is conveyed to the ADU paper feed section passing through the reverse/exit roller.
- Paper sent back by the reverse/exit roller is conveyed to the paper exit roller /1 [3], not to the ADU acceleration roller along the form of the metal frame.
- In this way, the paper is turned over to be conveyed to to the de-curler entrance roller [5] through the exit conveyance roller /2 [4].
- While paper is being conveyed to this paper exit roller, the reverse/exit sensor /2 [11] detects the trailing edge of paper to determine a timing to switch the rotating direction of the paper exit roller to the introducing direction.

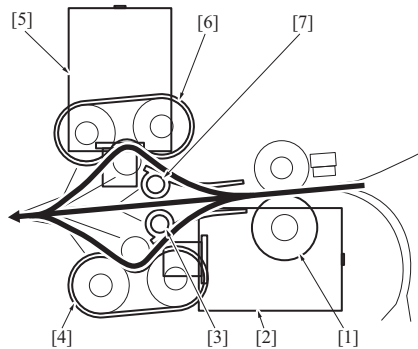


[1]	Paper entering the reverse section	[2]	Paper exiting the reverse section
[3]	Exit conveyance roller /1	[4]	Exit conveyance roller /2
[5]	De-curler entrance roller	[6]	Reverse gate
[7]	Fixing exit roller	[8]	ADU accelerator roller
[9]	Reverse sensor /1 (PS48)	[10]	Reversal output roller
[11]	Reverse sensor /2 (PS47)		-

16.3.2 Decurler switching control

- The de-curler mechanism is provided for correction of the paper curl.

- The de-curler section is provided with the guide members /Up [7] and /Lw [3]. The de-curler solenoids /Up (SD8) [5] and /Lw (SD5) [2] turn ON/OFF the corresponding guide member.
- When either of the solenoids turns ON, the corresponding guide member turns ON to guide the paper which is conveyed from the de-curler entrance roller [1] so that the paper passes through either the de-curler belt /Up [6] or /Lw [4].
- At this time, the paper curl is corrected by belt stroking action.
- The correcting directions of the de-curler belt /Up [6] and /Lw [4] are 180° opposite.
- The de-curler roller /Up or /Lw can be selected from the operation panel and the straight exit is also selectable.
- The paper weight 244g/m² or less paper is available for the de-curler.
- Even though selecting the de-curler setting for the 245g/m² paper from the operation panel, the paper is automatically processed with the straight exit.



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[1]	De-curler entrance roller	[2]	De-curler solenoid /Lw (SD5)
[3]	Guide member /Lw	[4]	De-curler belt /Lw
[5]	De-curler solenoid /Up	[6]	De-curler belt /Up
[7]	Guide member /Up	-	

17. IMAGE STABILIZATION CONTROL

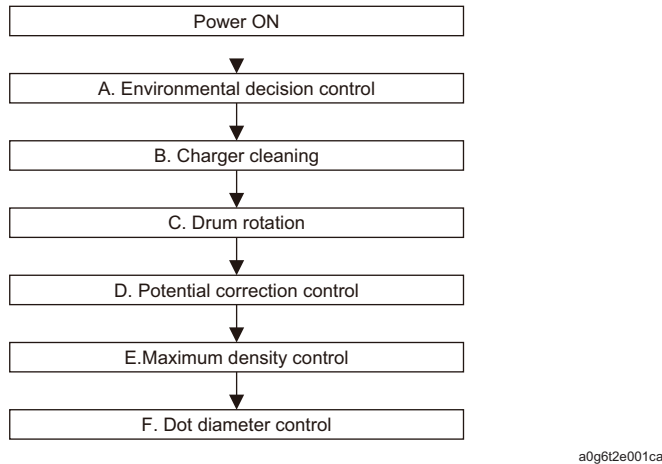
17.1 Outline

- In order to realize the top quality print images at all times, this machine conducts various types of control for image stabilization.
- The operation of the image stabilization control varies according to the power switch (SW2) being turned ON or the print being in operation.

17.2 Operation flow

17.2.1 Image stabilization control flow when the power switch (SW2) is ON

- The following shows the flow of the operation of the image stabilization control when the power switch (SW2) turns ON.



(1) Environmental decision control

(a) Purpose

- To detect the ambient temperature and humidity and feed back the findings to the various types of controls to maintain the image at a fixed quality.
- Also it detects the environmental temperature and humidity in real time to adjust accordingly the environmental changes which occurs after the sub power switch (SW2) turns ON.

(b) Method

- The drum temperature sensor (TH5), the temperature sensor (TEM), the temperature-humidity sensors /1 (TEM/HUM/1) and /2 (TEM/HUM/2) of the main body and the temperature sensor of PF-702/703 detect the environmental temperature and humidity. The detected condition is reflected to the controls related to fusing, transfer, charging, exposure and developing.

(c) Execution timing

- There are 3 methods for the environmental decision control; the morning temperature and humidity decision, the real-time temperature decision and the real-time humidity decision. Each control uses different sensor.
- Morning temperature and humidity decision
 - When the sub power switch (SW2) turns ON 8 hours or more after from previous OFF, it performs this control.
 - The drum temperature sensor (TH5), the temperature sensor (TEM), the temperature-humidity sensors /1 (TEM/HUM1) and /2 (TEM/HUM2) detect the environmental temperature and humidity. The detected condition is reflected to all controls related to fusing, transfer, charging, exposure and developing.
 - The detected temperature is classified into 3 levels and the humidity is classified into 4 levels.
 - The reference temperature and the humidity used for the classification differs in accordance with the period of time elapsing between the previous SW2 OFF and the next ON.
 - When the time elapsed is less than 8 hours, it does not perform the environmental decision but applies the conditions of the previous decision.
- Real-time temperature decision
 - The temperature sensor of PF detects the environmental temperature. The detected condition is reflected to the fusing-related controls.
 - These detections are performed at the prescribed intervals in real time.
 - The reflection of the condition to the fusing-related controls is performed when the temperature level detected by this decision differs from the level detected by the morning decision prescribed times in succession.
 - When the detected temperature is under or over the prescribed temperature, it regards PF-702/703 as not connected and applies the temperature level detected by the morning temperature and humidity decision.
- Real-time humidity decision
 - The temperature-humidity sensors /1 (TEM/HUM1) and /2 (TEM/HUM2) detect the humidity and the detected condition is reflected to the controls related to charging, exposure and developing.
 - These detections are performed at the prescribed intervals in real time. The detected humidity is classified into 4 levels, however the reference humidity value used for this classification differs in accordance with the humidity level classified by the morning temperature and humidity decision.
 - The reflection to each control is performed when the drum motor (M2) turns ON after print start.

(2) Charger cleaning control**(a) Purpose**

- It cleans the charging wire of the charger periodically to make the discharge uniform.

(b) Method

- The charger cleaning motor (M23) drives the charger cleaning unit which cleans the charging wire by its shuttle operation.

(c) Execution timing

- When the fusing temperature is 50°C or less with the sub power switch (SW2) ON, and the PM count value is over the prescribed value (The DIPSW2-1/2/3 allows to change the cycle)
- Every prints from the above timing.
- When the count value reaches the prescribed value during a job, it stops that job to perform the charger cleaning. After completing the cleaning, it resumes the job (The DIPSW2-4/5 allows to change the cycle)

(3) Drum rotation control**(a) Purpose**

- To prevent drum charge dissipation such as an image running at a high humidity.
- When left unused at a low or normal humidity, to prevent an uneven density due to the difference in sensitivity between the cleaning unit area and the developing unit area on the drum.

(b) Method

- When the fusing temperature is below 50°C with the power switch (SW2) ON
 - Rotate the drum for 2minutes 30 seconds, 30 seconds after completion of the charger cleaning operation during warm-up.
 - Then it conducts the potential correction control and the maximum density control.
- When the fusing temperature is above 50°C with the SW2 ON, and machine has been left unused for a long period of time
 - Use the environmental decision values previously obtained as the standard.
 - When at a high humidity, 1minute after the SW2 turns ON, check the machine if it is in the fusing warm-up condition. When it is not in the Ready condition, rotate the drum for 2minutes.
 - When the fusing warm-up condition is completed within 1minute after the SW2 turns ON, the machine is considered to be in the Ready condition at that time and no rotation of the drum is made.

(4) Potential correction control**(a) Purpose**

- To maintain the developing potential difference and gray background margin potential difference at a fixed condition at all times without being influenced by the drum used history (number of prints) and the environmental conditions, it controls the developing bias, the charging grid voltage and the charging current.
- To perform these controls, the drum potential sensor (DPS) is equipped.

(b) Method

- When the fusing temperature is 50°C or less with the power switch (SW2) ON, it performs the following operations.
- It creates a latent patch with the conditions same as those applied in the last-performed dot diameter correction control (exposure time, the charging output and the developing bias). Then the drum potential sensor (DPS) detects that patch.
- It calculates the developing potential difference and the gray background margin potential difference according to the detected potential value, and then correct the developing bias, the charging grid and the charging current so that the potential differences become a prescribed value.

(5) Maximum density control**(a) Purpose**

- It is provided to maintain the maximum density of the image at a fixed condition at all times without being influenced by the environmental conditions and the number of prints, and also this function stabilizes the toner consumption.

(b) Method

- Create several toner patches on the drum surface by changing the speed of rotation of the developing roller.
- Read this patch by the IDC sensor in the toner control board (TCB) and store the number of rotations of the developing roller when the sensor output gets to the specified value, and create the image at this number of rotations.

(c) Execution timing

- When the fusing temperature is below 50°C with the power switch (SW2) ON
- After completion of the job for each 20,000 prints on the PM counter.

(6) Dot diameter control**(a) Purpose**

- It is provided to correct the change of the drum sensitivity due to the environmental conditions and the number of prints, to prevent the increase of the toner consumption, to enhance the reproducibility of thin line and to correct the change of the light volume due to the LPH dirt.

(b) Method

- It forms patches with different LPH exposure time setting, and the drum potential sensor (DPS) detects potential of each patch.

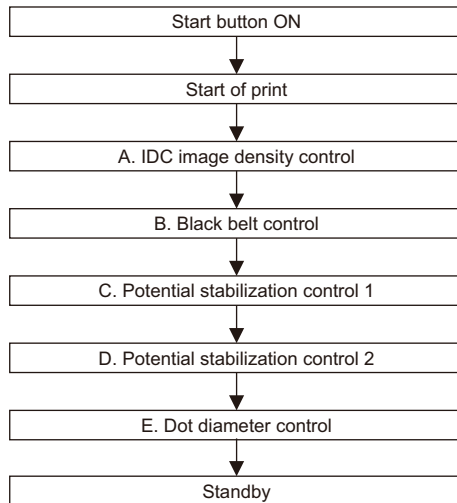
- It calculates the exposure time that it takes for each patch to obtain the prescribed potential value, and creates the pattern patch (set in accordance with the environment) with the calculated exposure time
- The IDC sensor in the toner control board (TCB) reads this patch and reflects to the exposure time to obtain the prescribed value.

(c) Execution timing

- When the fusing temperature is below 50°C with the power switch (SW2) ON
- After completion of the job for each 20,000 prints on the PM counter.

17.2.2 Image stabilization control flow while in the print and during idling

- The following shows the flow of the image stabilization controls taken while in the print and during idling.



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(1) IDC image density control

(a) Purpose

- It is provided to stabilize the maximum image density and the toner consumption.

(b) Method

- It creates a patch with the prescribed conditions, and then the IDC sensor in the toner control board (TCB) reads that patch.
- It controls the number of rotations of the developing roller so that this value becomes the prescribed value.

(c) Execution timing

- Every 10 prints

(2) Black belt creation control

(a) Purpose

- In order to prevent the deterioration of developer toner while in the low printing ratio/in the increasing driving distance, it creates black band patterns in the paper interval areas at prescribed intervals.
- The transfer belt is not released.

(b) Method

- It creates black band patterns avoiding the drum claws.
- It creates 67 black band patterns in every 100 prints.
- Also it creates in the same paper intervals as the toner patches created in the IDC image density control.
- It calculates the print area of last 30 seconds at every 15 seconds and changes the width of the black band patterns accordingly.
- The DIPSW19-6/7 enables to change the maximum width of the black band patterns and the DIPSW19-3/4 enables to change the minimum width.
- To prevent flowing of a large amount of toner to the cleaning section in a high temperature environment, the DIPSW19-4, which is specially provided for the black band patterns width setting in a high temperature environment.
- When the paper interval is 200mm or more, the 6mm black band patterns are created at every 100mm intervals starting from the 200mm behind the paper trailing edge.
- The DIPSW enables to make a selection between the execution and the non-execution of the black band pattern creation. (default is "enabled").

(3) Potential stabilization control

(a) Purpose

- To maintain the charging potential at a fixed condition at all times without being influenced by the drum used history (number of prints) or continuous printing, it controls the charging grid voltage and the charging current.

(b) Method

- It detects the drum potential at paper intervals for every 5 prints and corrects the charging grid voltage and the charging current for the next print so that the potential comes within the target potential range which is set for the potential stabilization control which is performed when the fusing temperature is 50°C or less with the sub power switch (SW2) ON.

(4) Potential stabilization control 2**(a) Purpose**

- To maintain the charging potential difference and the gray background margin potential at a fixed condition at all times without being influenced by the environmental conditions, it controls the developing bias, the charging grid voltage and the charging current.

(b) Method

- It performs the followings for every 50 prints after the sub power switch (SW2) turns ON.
- It creates a patch with the same conditions as when the fusing temperature is 50°C or less with the power switch (SW2) ON, and it corrects the developing bias so that the detected potential becomes a prescribed value.
- At the same time it adds a prescribed background potential on the developing bias, and corrects the charging target potential, charging grid potential and the charging current.

(5) Dot diameter control**(a) Purpose**

- It is provided to correct the change of the drum sensitivity due to the environmental conditions and the number of prints, to prevent the increase of the toner consumption, to enhance the reproducibility of thin line and to correct the change of the light volume due to the LPH dirt.

(b) Method

- It creates the pattern patch which is set in each environment) at the paper interval.
- The IDC sensor in the toner control board (TCB) reads this patch and reflects to the exposure time to obtain the prescribed value.

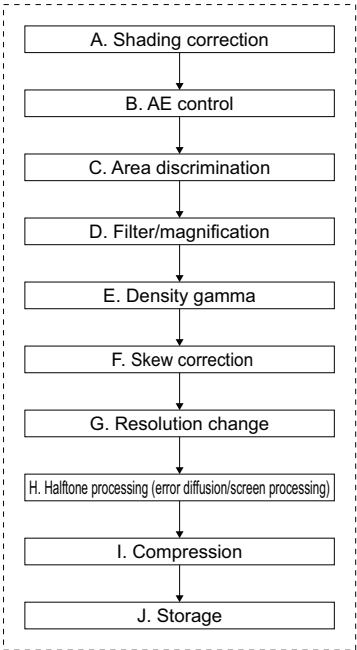
(c) Execution timing

- At paper intervals for every 100 prints

18. IMAGE PROCESSING

18.1 Image processing in the scanner section

18.1.1 Image processing flow in the scanner section



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18.1.2 Shading correction

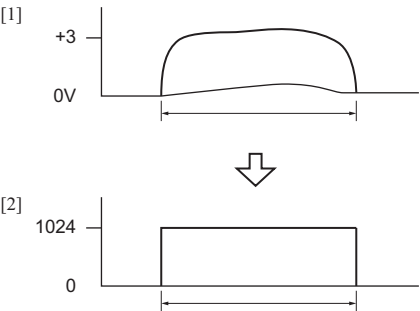
- This is a measure to obtain an even distribution from light of the CCD.
- The following corrections are made at the prescribed timing.

a. White correction

- The output voltage of each pixel of the CCD sensor when the white reference plate is exposed to the exposure lamp is stored as the maximum output of the pixel.

b. Black correction

- The output voltage of each pixel of the CCD sensor when the exposure lamp is turned off is stored as the minimum output of the pixel.
- Conduct calculation to find out what step in this range falls on the image data read from the original based on the difference between the black and white data for each pixel stored in the steps a. and b. stated above, and output the results of the calculation in the 10bits accuracy.

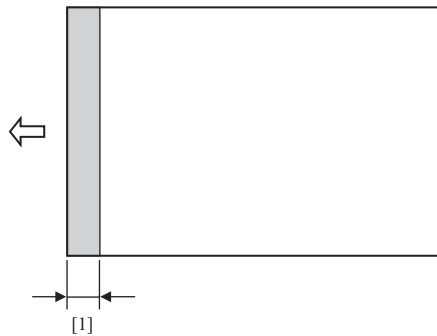


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[1] AD conversion input	[2] Shading correction output
-------------------------	-------------------------------

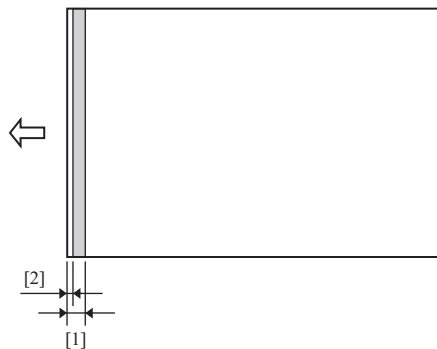
18.1.3 AE control

- Through the AE control, a density suitable for the original density is automatically selected and the copy is made properly.

(1) Sampling area**(a) In original glass mode**

1050to2014c

[1]	30mm	-
-----	------	---

(b) While in the DF print

1050to2015c

[1]	4mm	[2]	1mm
-----	-----	-----	-----

(2) Execution timing

- In original glass print : At the pre-scan before the actual scan when the print or the read starts.
- While in the DF print: At the same time as when the original is read.

18.1.4 Area discrimination

- To make a copy of the original under the correct condition (to make a correct filter processing), check the read section to see if it is a character or a dot picture, and use the results at the image-processing unit at the later stage.

18.1.5 Filter/magnification**(1) Filter processing**

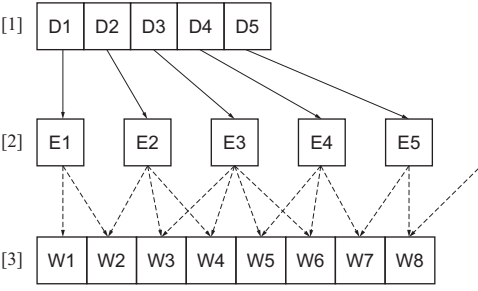
- An appropriate filter processing is made according to the type of an original and the magnification selected.
 - Character: Make the shading of an original conspicuous.
 - Dot section: Suppress moire.
 - Picture: Increase the reproducibility of gradation.

(2) Magnification processing

- For this machine, the sub scan direction magnification is made by the scan speed of the exposure unit (original glass mode) or by the conveyance speed of the DF (DF mode), and the main scan direction magnification is made by processing images electrically.

(a) Main scan magnification processing while in enlargement

- In the following example, if the data of each pixel obtained by reading the original with the CCD are D1 to D5, the positions of the read data in enlarged are E1 to E5.
- When the writing is made only with the data thus read, the following problems occur.
 - It occurs a clearance between data, and this result in a distorted image.
 - The data position does not fall in exactly with the write position.
- As shown with dotted lines in the following drawing, when there is no read data that corresponds exactly to the write position, a density is decided for writing as following and appropriate processing is made.

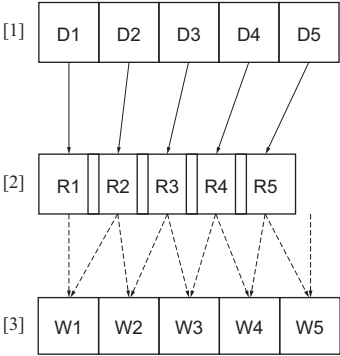


1050to2332c

[1]	Position at which the original is read	[2]	Data position while in enlargement
[3]	Write position		-

(b) Main scan magnification processing while in reduction

- In the following example, if the data of each pixel obtained by reading the original with the CCD are D1 to D5, the positions of the read data in reduced are R1 to R5. They are overlapping each other and do not correspond to the write position.
- Therefore, a density is decided for writing as following and an appropriate processing is made.

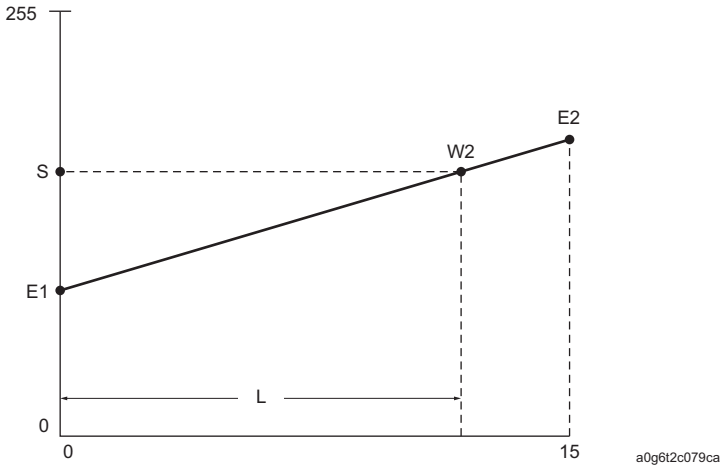


1050to2333c

[1]	Position at which the original is read	[2]	Data position while in enlargement
[3]	Write position		-

(c) Density adjustment

- With the density shown in the axis of coordinate and the position shown in the abscissa axis, when E2-E1 in the drawing of "(1) Vertical magnification while in enlargement" is shown in 16 steps to the direction of the abscissa axis, the following drawing is obtained.
- When the position to the written data W2 is "l," the density S can be obtained in the following expression.
$$S = E1 + \{(E2 - E1) / 16\} \times L$$



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18.1.6 Scanner gamma correction

- To the data obtained after the filter/magnification processing, select a density curve corresponding to the density button selected on the operation panel.
- An appropriate density curve is provided for each of the character/picture/character and the picture/thin character modes.

18.1.7 Skew correction

(1) DF original skew auto adjustment

- Detect an uneven original skew amount for each DF original by the original skew sensors /Fr (PS312) and /Rr (PS311) and adjust the skew amount detected by the sensors by rotating the image data while in the image processing.

18.1.8 Resolution change

- It changes the 600 dpi scanned data to 1200 dpi.

18.1.9 Halftone processing (error diffusion/screen processing)

- To make effective use of the installed memory and obtain an excellent copy image, error diffusion processing is employed, which is one of the pseudo-intermediate processing methods.
- In picture mode, the screen processing is conducted.

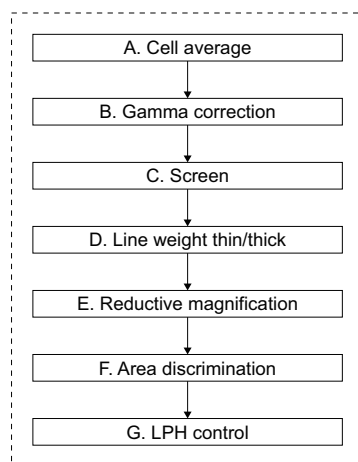
18.1.10 Compression

- To store more image data, data is stored temporarily in the image memory after the images has been compressed.
- 2 types of memories are provided. (Main memory: 256MB, Sub memory: 64MB)
- A part of the hard disk is used as an extended memory of the above.
- In this manner, more than 10,000 pages can be stored in the average word processor documents.

18.1.11 Store

- The image/setting of the originals read by the scanner or the images sent from the IC can be stored as a file in the hard disk in the main body.

18.2 Image processing in the write section



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(1) Cell average (600dpi 2bit/ only for picture mode)

- When performing the screen output, it performs the smoothing process to prevent the moire caused by the contact of the original and the screen process.

(2) Gamma correction (600dpi 2bit/ only for picture mode)

- The inputted image data density and the density at printing are unproportional because of the characteristics of the photo conductor or the developing section, therefore the correction is performed to make the print gradation closer to linear one.

(3) Screen (600dpi 2bit/ only for picture mode)

- Forming the density distribution of a prescribed pattern enables the high-level gradation reproduction.

(4) Line weight thin/thick

(a) Making line weight thinner

- To reduce the letter growing due to the dot gain or the toner spillage at printing, it output the lines thinner using the image process.

(b) Making line weight thicker

- When processing the outline letters, the letters are slimmed down by the surrounding dots due to the dot gain or the toner spillage at printing. To prevent this condition, it output the lines thicker using the image process.

(5) Reductive magnification

- When in the duplex printing, the paper shrinks due to the heat fusing for the front side print, and it makes a magnification error for the back side print.
- To reduce this error, it performs the image process to adjust the proportion between the front side and the back side, by reducing the print magnification for the back side, or enlarging for the front side.

(6) Area discrimination

- It performs the area discrimination on the edges of the letters and lines, and in accordance with the results performs an image process.
- It uses the same process as the area discrimination of the scanner but this function is used for the letter area discrimination for the operation for making line weight thinner/thicker.

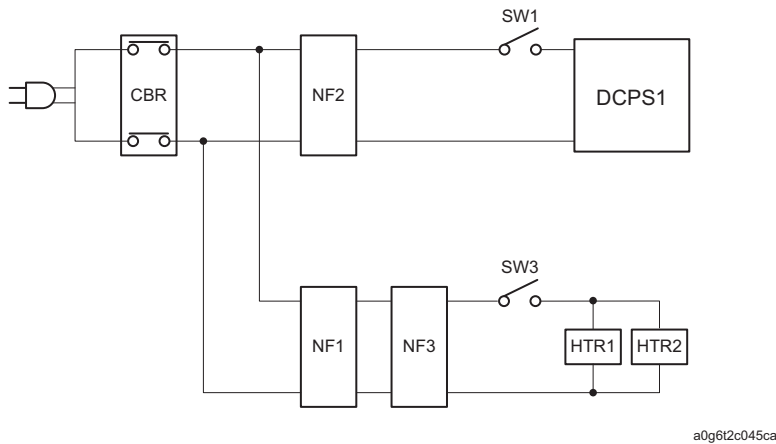
(7) LPH control

- To prepare an image data to process with the LED light, the image data is rearranged the and the correction data is transmitted.
- Adjusting the variation of each LED device enables to obtain the uniform light emission volume.

19. POWER SOURCE SECTION

19.1 Operating parts with the connection of the power cord

19.1.1 Configuration

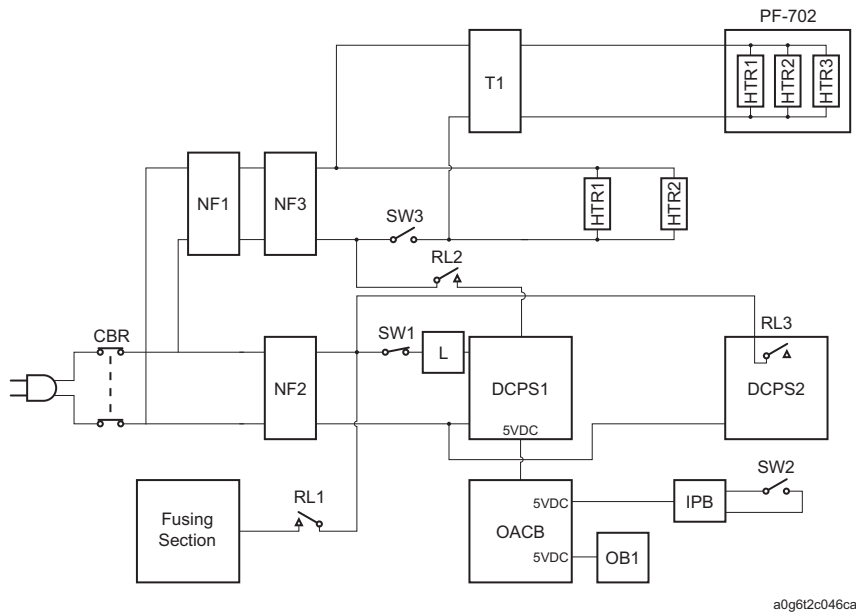


19.1.2 Operation

- The AC line is provided with a circuit breaker (CBR) which cuts off the AC line by itself when an excessive current flows due to a short circuit while in setting the power plug.
- Also, it reduces the noise which comes from the power line with the noise filters /1 (NF1), /2 (NF2) and /3 (NF3).

19.2 Operating parts with the main power switch (SW1) ON

19.2.1 Configuration

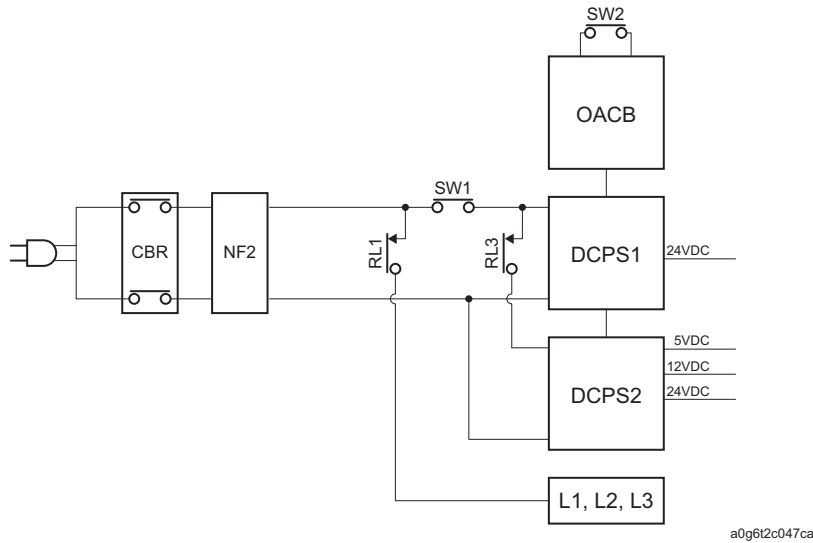


19.2.2 Operation

- When the main power switch (SW1) is turned ON, the AC power is supplied to the DC power supply /1 (DCPS1).
- In this manner, DCPS1 generates 5VDC and 12VDC and supplies them to the overall control board (OACB) and image-processing board (IPB).
- This operation puts the sub power switch (SW2) connected to IPB in the standby for input.
- The AC line is provided with a circuit breaker (CBR) which cuts off the AC line by itself when an excessive current flows due to a short circuit while in SW1 ON.

19.3 Operating parts with the sub power switch (SW2) ON

19.3.1 Configuration

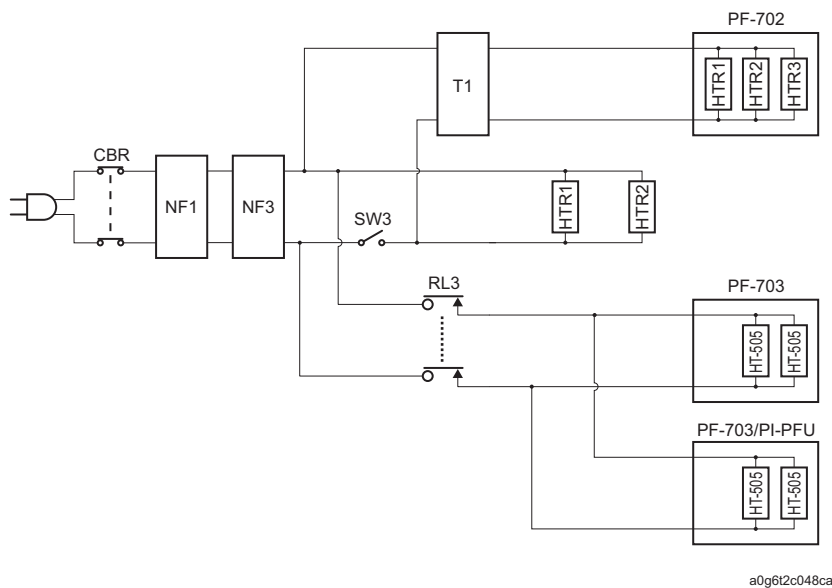


19.3.2 Operation

- When turning on the sub power switch (SW2) the moment the main power switch (SW1) is turned on, the DC power supply /1 (DCPS1) supplies 24V DC power system to each of the boards, the FS and the DF.
- OACB turns ON RL3 and it supplies AC power to DCPS2.
- DC power supply /2 (DCPS2) supplies 5VDC to DF, 5/24VDC to LU, and 5/12/24VDC to each boards.
- Also, the main relay (RL1) turns ON with the AC drive board (ACDB) and it supplies the AC power supply to the fusing heater lamps /1 (L1), /2 (L2), and /3 (L3).
- By this operation, power is supplied to each boards and starts the initial operation of the main body.

19.4 Operating parts with the dehumidification heater switch (SW3) ON

19.4.1 Configuration

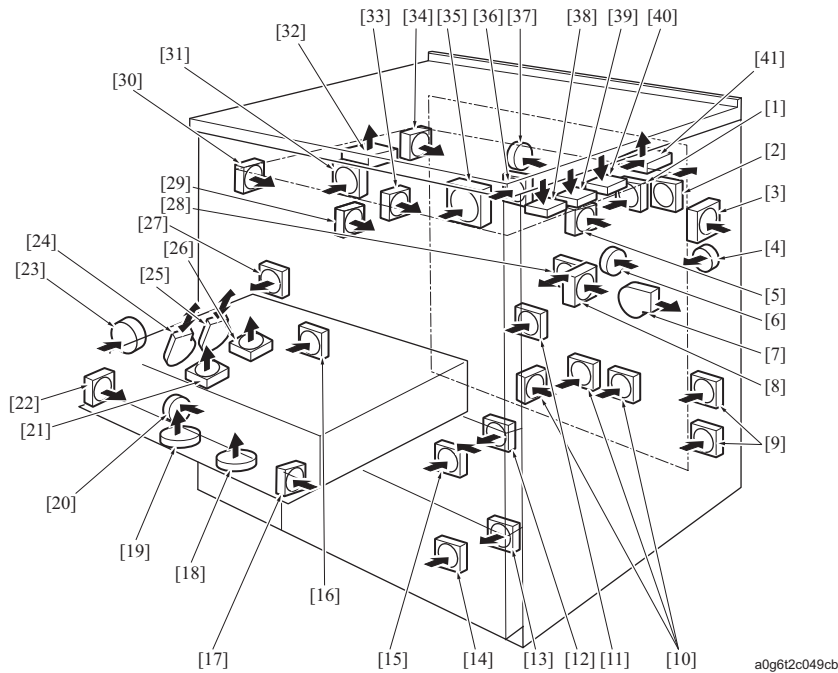


19.4.2 Operation

- Once the power plug is set to the outlet while the dehumidification heater switch (SW3) is ON, the dehumidification heaters /1 (HTR1), /2 (HTR2) of the main body and the dehumidification heater /1 (HTR1), /2 (HTR2) and /3 (HTR3) of PF-703 turn ON.
- HT-505, which is the optional dehumidification heater for PF-703 and PI-PFU (PF-703 + FA-501), turns ON/OFF in accordance with the status of the relay 2 (RL3), regardless whether SW3 is ON or OFF.
- Up to 2 HT-505s can be installed for each PF-703.
- When using multiple PF-703s for tandem of PF-703 or PI-PFU, up to 4 are available for a whole system.

20. FAN CONTROL

20.1 Configuration



[1]	Image processing cooling fan (FM12)	[2]	IC cooling fan (FM39)
[3]	Suction cooling fan /1 (FM6)	[4]	Suction fan (FM32)
[5]	Suction cooling fan /3 (FM8)	[6]	Developing cooling fan (FM31)
[7]	Developing suction fan /2 (FM22)	[8]	Suction cooling fan /2 (FM7)
[9]	DC power supply /1 cooling fan (FM41)	[10]	DC power supply /2 cooling fan (FM42)
[11]	DC power supply /3 cooling fan (FM36)	[12]	Paper feed assist fan /Rr1 (FM20)
[13]	Paper feed assist fan /Rr2 (FM24)	[14]	Paper feed assist fan /Fr2 (FM23)
[15]	Paper feed assist fan /Fr1 (FM21)	[16]	ADU cooling fan /2 (FM15)
[17]	Registration cooling fan (FM17)	[18]	Belt cooling fan (FM37)
[19]	Reverse cooling fan (FM38)	[20]	Transfer belt cleaning fan (FM27)
[21]	Sensor cooling fan /1 (FM16)	[22]	ADU cooling fan /1 (FM14)
[23]	ADU cooling fan /3 (FM13)	[24]	De-curler fan /1 (FM29)
[25]	De-curler fan /2 (FM30)	[26]	Sensor cooling fan /2 (FM40)
[27]	Toner bottle cooling fan (FM35)	[28]	Collection pipe cooling fan (FM34)
[29]	Paper exit cooling fan /Lw2 (FM28)	[30]	Paper exit cooling fan /Up (FM4)
[31]	Front cooling fan (FM18)	[32]	Scanner cooling fan (FM19)
[33]	Paper exit cooling fan /Lw1 (FM10)	[34]	Pump cooling fan (FM11)
[35]	Cooling fan /1 (FM1)	[36]	Transfer suction fan (FM5)
[37]	Cooling fan /2 (FM2)	[38]	LPH fan /2 (FM25)
[39]	LPH fan /1 (FM3)	[40]	LPH fan /3 (FM26)
[41]	Developing suction fan /1 (FM9)	-	

20.2 Operation

20.2.1 Functions

Fan name	Functions
Cooling fan /1 (FM1)	To exhaust around the photo conductor section and the fusing section.
Cooling fan /2 (FM2)	To exhaust around the photo conductor section and the fusing section.
LPH fan /1 (FM3)	To cool down around the LPH section with suction.
Paper exit cooling fan /Up (FM4)	To cool down around the paper exit section with suction.
Transfer suction fan (FM5)	To exhaust around the transfer belt section.
Suction cooling fan /1 (FM6)	To cool down around the LPH section with suction.
Suction cooling fan /2 (FM7)	To cool down around the developing section and the photo conductor section with suction.
Suction cooling fan /3 (FM8)	To cool down around the developing section and the photo conductor section with suction.
Developing suction fan /1 (FM9)	To exhaust around the developing section.
Paper exit cooling fan /Lw1 (FM10)	To cool down around the paper exit section with suction.
Pump cooling fan (FM11)	To cool down the toner pump motor (M28) and the air pump motor (M29) with suction.

Image processing cooling fan (FM12)	To cool down around the overall control board (OACB) and the image processing board (IPB) with suction.
Cooling fan /3 (FM13)	To cool down around the reverse section with suction.
Cooling fan /1 (FM14)	To cool down around the duplex section with suction.
Cooling fan /2 (FM15)	To exhaust around the duplex section.
Sensor cooling fan /1 (FM16)	To cool down around the ADU drive board /1 (ADUB1) with suction.
Registration cooling fan (FM17)	To cool down around the registration section with suction.
Front cooling fan (FM18)	To cool down around the scanner section with suction.
Scanner cooling fan (FM19)	To cool down around the exposure lamp (L4) and the scanner.
Paper feed assist fan /Rr1 (FM20)	To assist the paper feed from the tray /1.
Paper feed assist fan /Fr1 (FM21)	To assist the paper feed from the tray /1.
Developing suction fan /2 (FM22)	To collect toner scattered around the developing unit.
Paper feed assist fan /Fr2 (FM23)	To assist the paper feed from the tray /2.
Paper feed assist fan /Rr2 (FM24)	To assist the paper feed from the tray /2.
LPH fan /2 (FM25)	To cool down around the LPH section with suction.
LPH fan /3 (FM26)	To cool down around the LPH section with suction.
Transfer belt cleaning fan (FM27)	To cool down around the transfer belt section with suction.
Paper exit cooling fan /Lw2 (FM28)	To cool down around the paper exit section with suction.
De-curler fan /1 (FM29)	To cool down the de-curler section with suction and exhaust.
De-curler fan /2 (FM30)	To cool down the de-curler section with suction and exhaust.
Developing cooling fan (FM31)	To cool down around the developing section with suction.
Suction fan (FM32)	To cool down around the photo conductor section with suction.
Collection pipe cooling fan (FM34)	To cool down around the toner collection section with suction.
Toner bottle cooling fan (FM35)	To cool down around the toner bottle section with suction.
DC power supply /3 cooling fan (FM36)	To exhaust around the DC power supply /3 (DCPS3).
Belt cooling fan (FM37)	To cool down around the transfer belt section with suction.
Reverse cooling fan (FM38)	To cool down around the ADU reverse section with suction.
IC cooling fan (FM39)	To exhaust around the ICB.
Sensor cooling fan /2 (FM40)	To cool down around the duplex section with suction.
DC power supply /1 cooling fan (FM41)	To exhaust around the DC power supply /1 (DCPS1).
DC power supply /2 cooling fan (FM42)	To exhaust around the DC power supply /2 (DCPS2).

20.2.2 Control condition

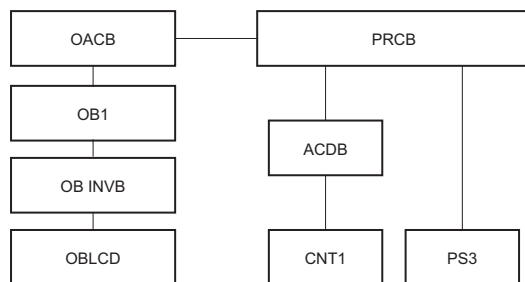
Fan name	Control	Control condition (General condition)
Cooling fan /1 (FM1)	ON (high speed)	• While in the print
	ON (low speed)	• In ready • In low power mode • In warm-up • For 5 minutes after operation
	OFF	• When the sub power switch (SW2) is OFF.
Cooling fan /2 (FM2)	ON (high speed)	• While in the print • For 5 minutes after operation
	ON (low speed)	• In ready • In low power mode • In warm-up
	OFF	• When the sub power switch (SW2) is OFF.
LPH fan /1 (FM3)	ON	• While in the print • In warm-up • For 5 minutes after operation
	OFF	• When the sub power switch (SW2) is OFF. • In ready • In low power mode
Paper exit cooling fan /Up (FM4)	ON	• When the power switch (SW2) is ON.
	OFF	• When the sub power switch (SW2) is OFF.
Transfer suction fan (FM5)	ON	• While in the print • In warm-up: drum motor (M2) synchronous
	OFF	• In ready • In low power mode • When the sub power switch (SW2) is OFF.
Suction cooling fan /1 (FM6)	ON (high speed)	• While in the print • In ready • For 5 minutes after operation

	ON (low speed)	<ul style="list-style-type: none"> • In low power mode • In warm-up
	OFF	<ul style="list-style-type: none"> • When the sub power switch (SW2) is OFF.
Suction cooling fan /2 (FM7)	ON	<ul style="list-style-type: none"> • While in the print
	OFF	<ul style="list-style-type: none"> • In ready • In low power mode • In warm-up • For 5 minutes after operation • When the sub power switch (SW2) is OFF.
Suction cooling fan /3 (FM8)	ON (high speed)	<ul style="list-style-type: none"> • While in the print • In warm-up
	ON (low speed)	<ul style="list-style-type: none"> • For 5 minutes after operation
	OFF	<ul style="list-style-type: none"> • When the sub power switch (SW2) is OFF. • In ready • In low power mode
Developing suction fan /1 (FM9)	ON	<ul style="list-style-type: none"> • While in the print • In warm-up: drum motor (M2) synchronous
	OFF	<ul style="list-style-type: none"> • In ready • In low power mode • When the sub power switch (SW2) is OFF.
Paper exit cooling fan /Lw1 (FM10) Paper exit cooling fan /Lw2 (FM28) Pump cooling fan (FM11)	ON	<ul style="list-style-type: none"> • While in the print
	OFF	<ul style="list-style-type: none"> • In ready • In low power mode • In warm-up • For 5 minutes after operation • When the sub power switch (SW2) is OFF.
Image processing cooling fan (FM12)	ON	<ul style="list-style-type: none"> • When the power switch (SW2) is ON.
	OFF	<ul style="list-style-type: none"> • When the sub power switch (SW2) is OFF.
Cooling fan /3 (FM13) Cooling fan /1 (FM14) Sensor cooling fan /1 (FM16) Sensor cooling fan /2 (FM40) Registration cooling fan (FM17) de-curler fan /1 (FM29) de-curler fan /2 (FM30)	ON	<ul style="list-style-type: none"> • While in the print • For 15 minutes after operation in low-temperature environment
	OFF	<ul style="list-style-type: none"> • In ready • In low power mode • In warm-up • For 5 minutes after operation • When the sub power switch (SW2) is OFF.
Front cooling fan (FM18)	ON	<ul style="list-style-type: none"> • While in the print • In warm-up: drum motor (M2) synchronous
	OFF	<ul style="list-style-type: none"> • In ready • In low power mode • When the sub power switch (SW2) is OFF.
Scanner cooling fan (FM19)	ON	<ul style="list-style-type: none"> • While in the print: Synchronize with the exposure lamp (L4)
	OFF	<ul style="list-style-type: none"> • In ready • In low power mode • In warm-up • For 5 minutes after operation • When the sub power switch (SW2) is OFF.
Paper feed assist fan /Rr1 (FM20) Paper feed assist fan /Fr1 (FM21)	ON	<ul style="list-style-type: none"> • While in the print
	OFF	<ul style="list-style-type: none"> • In ready • In low power mode • In warm-up • For 5 minutes after operation • When the sub power switch (SW2) is OFF.
Developing suction fan /2 (FM22)	ON	<ul style="list-style-type: none"> • While in the print • In warm-up: drum motor (M2) synchronous
	OFF	<ul style="list-style-type: none"> • In ready • In low power mode • When the sub power switch (SW2) is OFF.
Paper feed assist fan /Fr2 (FM23) Paper feed assist fan /Rr2 (FM24)	ON	<ul style="list-style-type: none"> • While in the print
	OFF	<ul style="list-style-type: none"> • In ready • In low power mode • In warm-up • For 5 minutes after operation • When the sub power switch (SW2) is OFF.
LPH fan /2 (FM25) LPH fan /3 (FM26)	ON	<ul style="list-style-type: none"> • While in the print • In warm-up • For 5 minutes after operation
	OFF	<ul style="list-style-type: none"> • When the sub power switch (SW2) is OFF. • In ready • In low power mode

Transfer belt cleaning fan (FM27)	ON (high speed)	<ul style="list-style-type: none"> While in the print In warm-up For 5 minutes after operation
	ON (low speed)	<ul style="list-style-type: none"> In ready In low power mode
	OFF	<ul style="list-style-type: none"> When the sub power switch (SW2) is OFF.
Developing cooling fan (FM31)	ON	<ul style="list-style-type: none"> While in the print In warm-up: drum motor (M2) synchronous
	OFF	<ul style="list-style-type: none"> In ready In low power mode When the sub power switch (SW2) is OFF.
Suction fan (FM32)	ON	<ul style="list-style-type: none"> While in the print In warm-up For 5 minutes after operation
	OFF	<ul style="list-style-type: none"> In ready In low power mode When the sub power switch (SW2) is OFF.
Collection pipe cooling fan (FM34) Toner bottle cooling fan (FM35) DC power supply /3 cooling fan (FM36)	ON (high speed)	<ul style="list-style-type: none"> While in the print
	ON (low speed)	<ul style="list-style-type: none"> In ready In low power mode In warm-up For 5 minutes after operation
	OFF	<ul style="list-style-type: none"> When the sub power switch (SW2) is OFF.
Belt cooling fan (FM37) Reverse cooling fan (FM38) Cooling fan /2 (FM15)	ON	<ul style="list-style-type: none"> While in the print In warm-up For 5 minutes after operation
	OFF	<ul style="list-style-type: none"> In ready In low power mode When the sub power switch (SW2) is OFF.
IC cooling fan (FM39)	ON	<ul style="list-style-type: none"> When the power switch (SW2) is ON.
DC power supply /1 cooling fan (FM41) DC power supply /2 cooling fan (FM42)	ON (high speed)	<ul style="list-style-type: none"> While in the print For 5 minutes after operation
	ON (low speed)	<ul style="list-style-type: none"> In ready In low power mode In warm-up
	OFF	<ul style="list-style-type: none"> When the sub power switch (SW2) is OFF.

21. COUNTER CONTROL

21.1 Configuration



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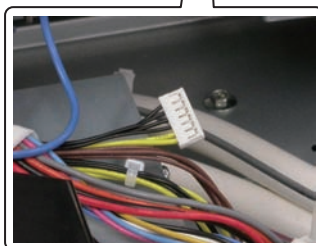
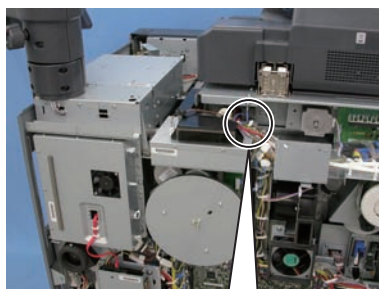
21.2 Operation

Item	Specification/mechanism
Total counter (CNT1)	<ul style="list-style-type: none"> Displays the cumulative number of prints in all copy/print modes Mechanical counter driven by the electronic signal. Counts up for each paper exit signal.
Electronic counter	<ul style="list-style-type: none"> Displays the cumulative number of copies/prints on the operation panel. PM count/cycle, data collection *1, and copy count by parts that require to be replaced. Counts up for each paper exit signal.

*1 Refer to "[I.5.6.2 Data collection.](#)"

(1) Status indicator light

- Installing a status indicator light allows the machine status to be monitored at a place away from the machine according to the condition of the light.



a0g6t2c080ca

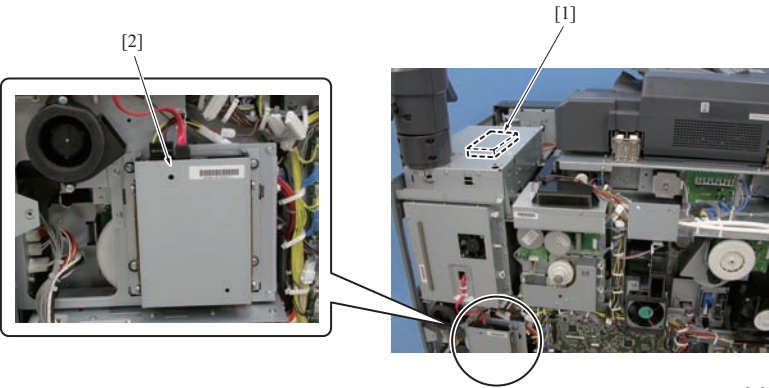
Connector	Pin Number	Signal name	Description	Output timing	Type of signal
160	1	PAT1	Light ON signal	L signal output when the printing available	Open collector
	2	PAT2		L signal output while in the scanning or printing operation	
	3	PAT3		L signal output when an abnormal stop occurs due to jams, error codes, no paper, or no toner	
	4	PAT4		L signal output when the toner supply message is displayed	
	5	24V	24V DC source	At all times	24V, 500mA
	6	P.GND	Power ground	-	-

Note

- A signal is output from the PAT3 when an error code occurs. However, the light does not turn on since the power source of the 24V status indicator light is cut off.

22. HDD CONTROL

22.1 Configuration



a0g6t2c078ca

Symbol	Item	Specification/mechanism
[1]	Hard disk /1 (HDD1)	<div>· Hard disk for the main body</div> <div>· Capacity: 160GB or more</div> <div>· Storage of formatted stamp, watermark and registered overlay image data</div> <div>· Storage of image data</div> <div>· Temporary storage of image data (image memory)</div>
[2]	Hard disk /2 (HDD2)	<div>· Hard disk for the IC controller</div>

22.2 Removable hard disk

22.2.1 OUTLINE

- By installing the option (RH-101), the hard disks /1 (HDD1) and /2 (HDD2) can be used as removable disks.
- RH-101 is an option which including the HDD case.

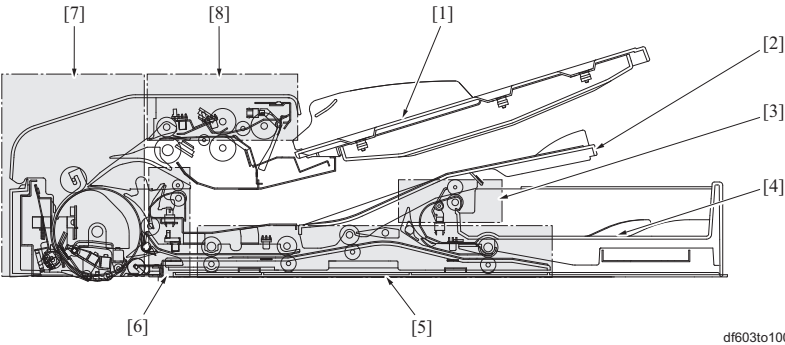
22.2.2 Operation

- Move the hard disk /1 (HDD1) for the main body and the hard disk /2 (HDD2) for the IC controller to the removable cassette of RH-101.
- This operation enables to remove each hard disk after using the main body to put them in a high-security place such as a safe.

PA THEORY OF OPERATION DF-615

1. OUTLINE

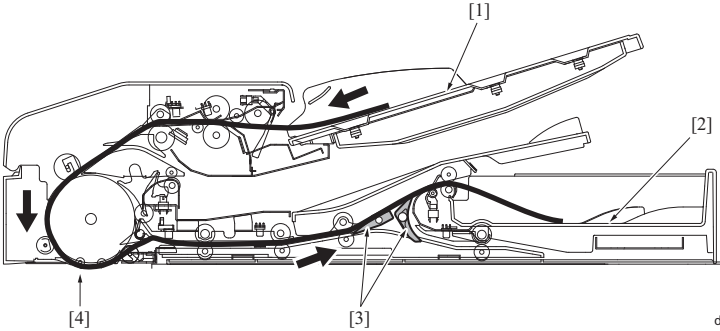
1.1 Unit configuration



[1]	Original feed tray	[2]	Original exit tray (for large size)
[3]	Original exit section (for small size)	[4]	Original exit tray (for small size)
[5]	Reverse section	[6]	Original exit section (for large size)
[7]	Conveyance section	[8]	Paper feed section

1.2 PAPER PATH

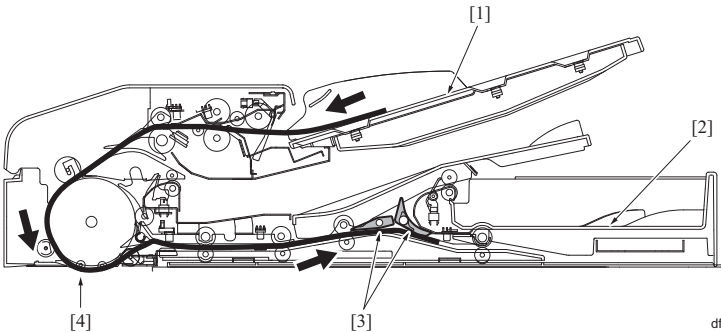
1.2.1 Single sided copy mode (small size)



[1]	Original feed tray	[2]	Original exit tray (for small size)
[3]	Paper exit gate	[4]	Image read position (slit glass section)

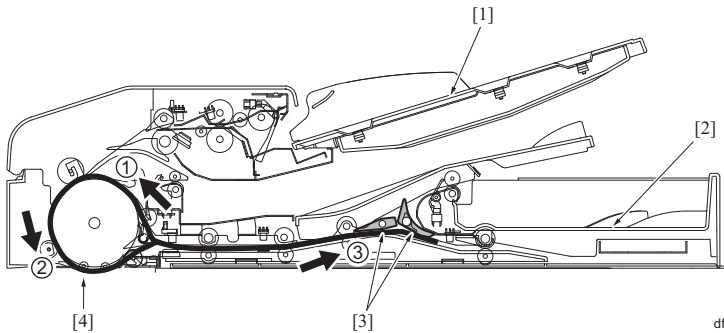
1.2.2 Double sided copy mode (small size)

(1) Front scan



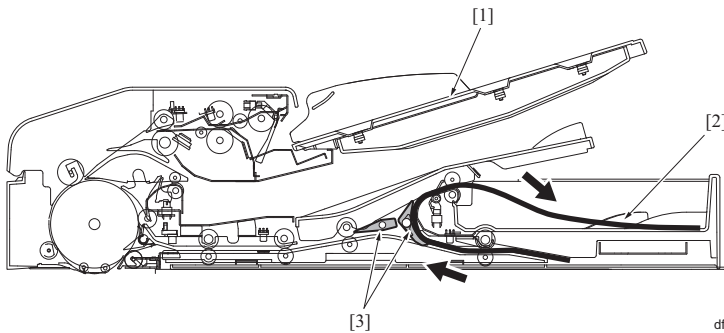
[1]	Original feed tray	[2]	Original exit tray (for small size)
[3]	Paper exit gate	[4]	Image read position (slit glass section)

(2) Rear scan



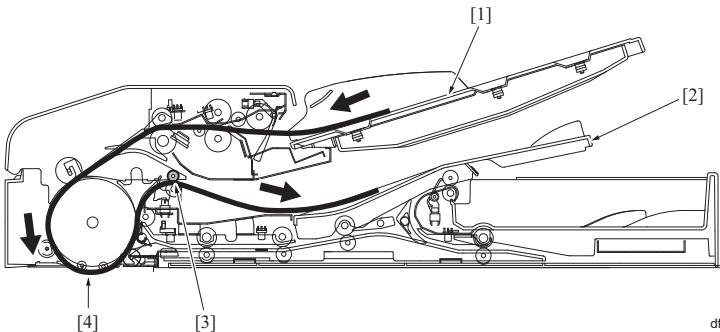
[1]	Original feed tray	[2]	Original exit tray (for small size)
[3]	Paper exit gate	[4]	Image read position (slit glass section)

(3) Paper exit



[1]	Original feed tray	[2]	Original exit tray (for small size)
[3]	Paper exit gate	-	

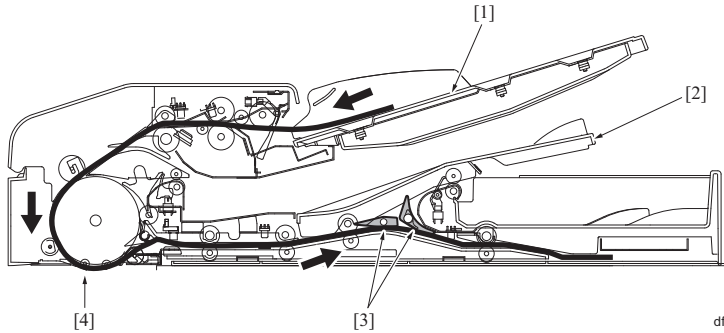
1.2.3 Single sided copy mode (large size)



[1]	Original feed tray	[2]	Original exit tray (for large size)
[3]	Exit roller	[4]	Image read position (slit glass section)

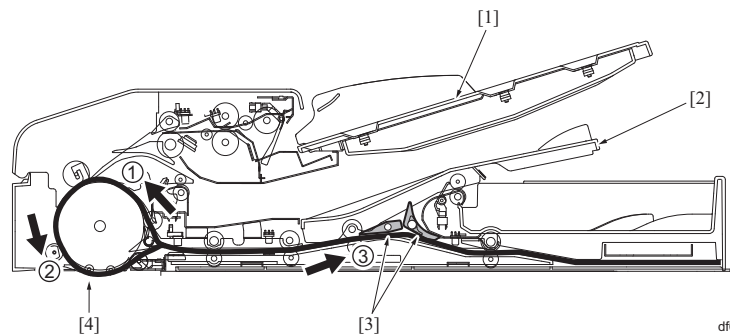
1.2.4 Double sided copy mode (large size)

(1) Front scan



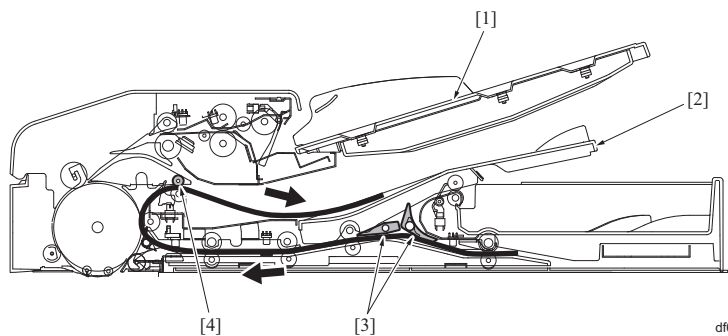
[1]	Original feed tray	[2]	Original exit tray (for large size)
[3]	Paper exit gate	[4]	Image read position (slit glass section)

(2) Rear scan



[1]	Original feed tray	[2]	Original exit tray (for large size)
[3]	Paper exit gate	[4]	Image read position (slit glass section)

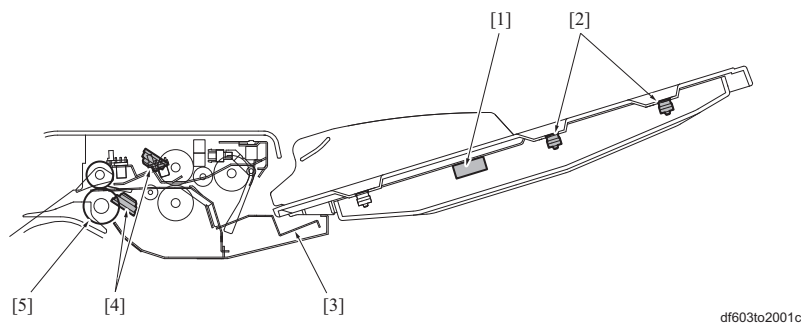
1.2.5 Paper exit



[1]	Original feed tray	[2]	Original exit tray (for large size)
[3]	Paper exit gate	[4]	Exit roller

2. Paper feed section

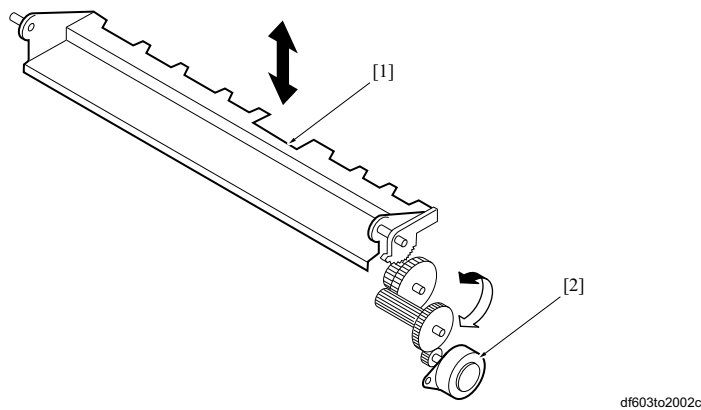
2.1 Configuration



Symbol	Item	Specification/mechanism
[1]	Original size detection in the main scan direction	Guide plate + VR
[2]	Original size detection in the sub scan direction	Photo sensor
[3]	Original feed tray up/down method	Up/down plate + motor
[4]	Multi feed detection	Ultrasonic sensor
[5]	Registration method	Roller + motor

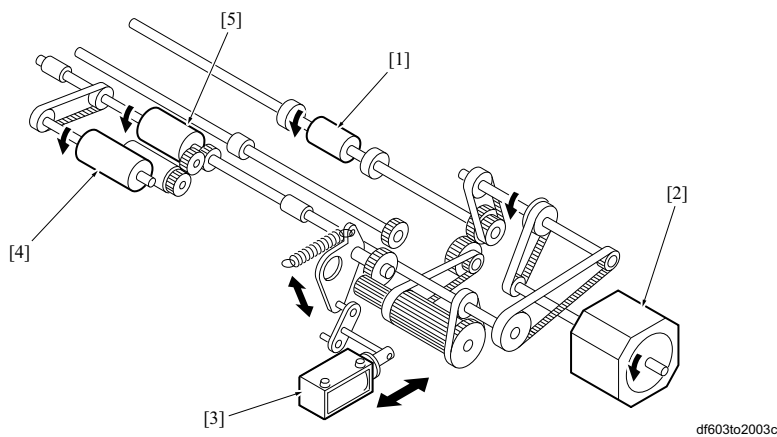
2.2 Drive

2.2.1 Tray up/down drive



[1]	Up/down plate	[2]	Tray up down motor (M303)
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2.2.2 Paper feed drive



[1]	Registration roller	[2]	Paper feed motor (M302)
[3]	SDF switching solenoid (SD301)	[4]	Pick-up roller
[5]	Paper feed roller		-

2.3 Operation

2.3.1 Size detection control

(1) Plain original mode

(a) Size detection in the main scan direction

- The front and rear dimensions of the original are detected according to the position of the guide plate connected to the original size VR (VR301).

(b) Size detection in the sub scan direction

- The right and left dimensions of the original are detected according to the ON/OFF combination of the size sensor /Rt (PS302) and the size sensor /Lt (PS303).

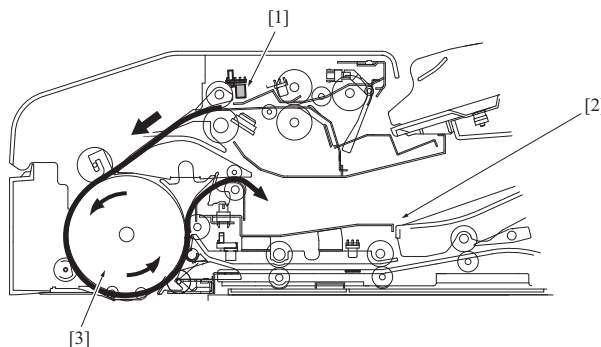
(2) Mixed original mode

(a) Size detection in the main scan direction

- The front and rear dimensions of the maximum mixed original are detected according to the position of the VR301 guide plate.

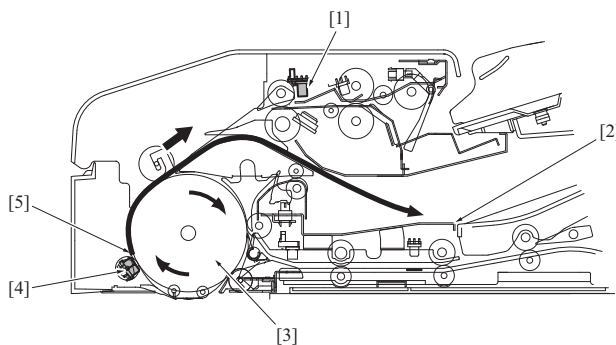
(b) Size detection in the sub scan direction

- The conveyance roller [3] rotates in the forward direction to convey the original to the paper exit tray (for large size) [2].
- The conveyance roller stops rotation a specified period of time after the original registration sensor /Rt (PS318) [1] detects the trailing edge of the original.
- At this time, depending on the ON time period of the PS318, the conveyance direction and the size of the original are detected.



df603to2004c

- A specified period of time after the original registration sensor /Rt (PS318) [1] turns OFF, the conveyance roller [3] rotates in the reverse direction to get the leading edge of the original conveyed to the paper exit section back to the scan standby position [5].
- The trailing edge of the original returned is conveyed to the paper exit tray (for large size) [2] according to the form of the conveyance guide plate.
- The reverse rotation of the conveyance roller stops a specified period of time after the original conveyance sensor (PS308) [4] detects the leading edge of the original.

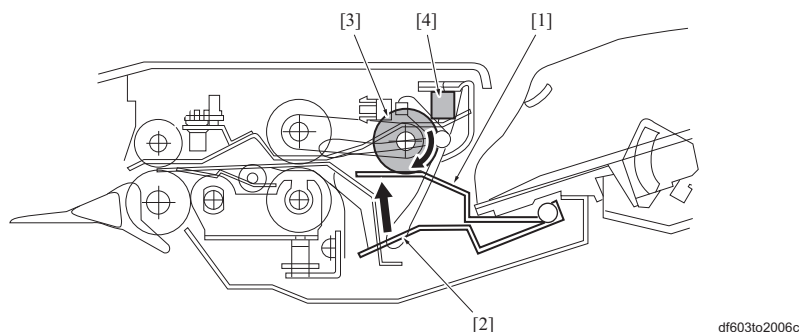


df603to2005c

- After that, the same read (scan) operation as in the normal mode is made.
- The original size detection operation for the second and succeeding originals varies according to a copy mode employed: the single-sided copy mode or the double-sided copy mode.
 - Single-sided copy mode: After the scan operation of the preceding original starts.
 - Double-sided copy mode: After the scan operation of the back side of the preceding original starts.

2.3.2 Pick-up mechanism

- The tray up/down motor (M303) sends up the up/down plate [2] to move the original to the pick-up roller position [1].
- When the tray upper limit sensor (PS315) [4] turns ON, the M303 turns OFF to the standby condition with the up/down plate left raised.
- The original comes into contact with the pick-up roller [3] to conduct the pick-up (paper feed) operation.



df603to2006c

2.3.3 Separation mechanism

(1) Separation control

- Of the originals fed by the pick-up roller, only 1 sheet of original is conveyed to the registration roller side by the original feed roller and the separation roller.
- Even when plural sheets of originals are fed, the separation roller makes a reverse rotation to convey a single sheet of original.

(2) SDF (single document feeder) control

- In the single document feeder mode, to improve the paper feedability of thick paper and other originals the paper feed of which is not guaranteed, the SDF switching solenoid (SD301) cuts off the drive of the separation roller to conduct the paper feed operation.

(3) Multi feed detection control

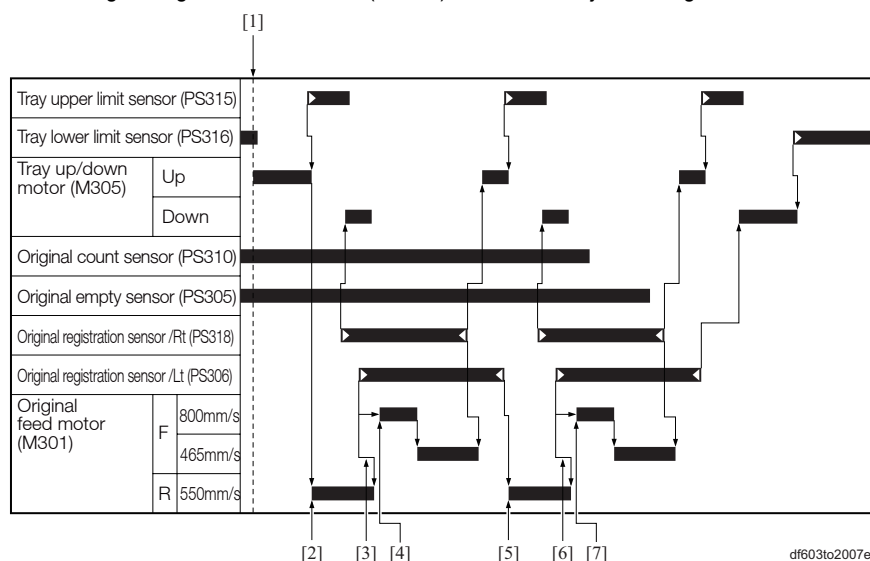
- The multi feed detection is made by using the multi feed sensor /R (MFSR) and the multi feed sensor /S (MFSS) which employ a method to check originals if they are multi fed based on the amount of the transmission of ultrasonic waves.
- The accuracy in the multi feed detection has been improved by using the multi feed sensor of the ultrasonic sensor, which supports the speed-up in the paper feed.
- The multi feed sensor is made up of a pair of a sender and a receiver.
- The following are originals the multi feed of which can be detected.
 - Originals the main scan direction of which is in excess of 210mm. Originals the main scan direction of which is less than 210mm cannot be recognized due to the position of the sensor.
 - Originals the weighing of which is between 50g/m² and 128g/m². Originals the weighing of which is beyond the above-mentioned range are not recognized even when multi fed.

2.3.4 Original empty detection control

- The original empty sensor (PS305) detects the presence of original in the original tray section while in the scan stop.
- The original count sensor (PS310) makes the original empty detection while in the scan to stop the paper feed from the trays /1 to /5 after PS310 detects the trailing edge of the last original.

2.3.5 Registration control

- When the start button is turned ON [1], the tray up/down motor (M303) brings up the up/down plate until the tray upper limit sensor (PS315) ON on [2].
- A specified period of time after the PS315 turns ON, the original feed motor (M302) is driven in a reverse rotation to convey the original to the registration roller.
- When the original registration sensor /Rt (PS318) turns ON, the up/down plate comes down by a fixed distance and a loop is formed until the original registration sensor /Lt (PS306) turns ON to adjust an original skew.



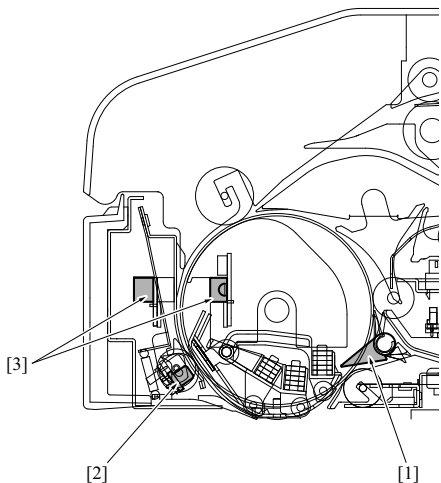
df603to2007e

[1]	Start button ON	[2]	Feed of the 1st sheet of paper
[3]	Loop formation of the 1st sheet of paper	[4]	Pre-feed of the 1st sheet of paper
[5]	Feed of the 2nd sheet of paper	[6]	Loop formation of the 2nd sheet of paper

[7]	Pre-feed of the 2nd sheet of paper	-
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3. Conveyance section

3.1 Configuration

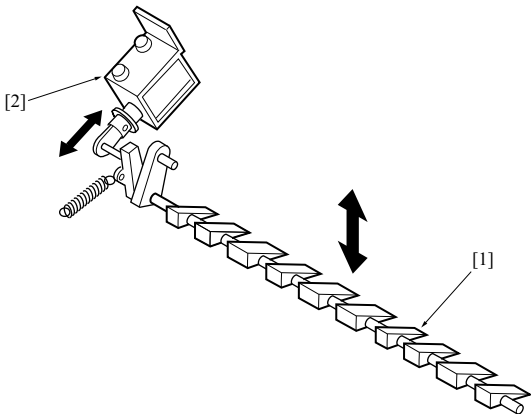


df603to2008c

Symbol	Item	Specification/mechanism
[1]	Conveyance path switching method	Flapper + solenoid
[2]	Original skew detection method	Photo sensor
[3]	Original centering detection method	LED sensor

3.2 Drive

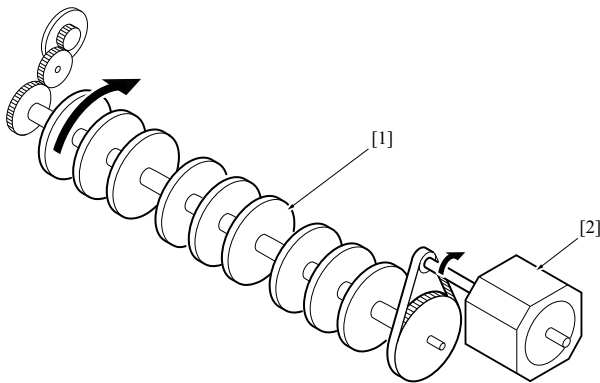
3.2.1 Flapper up/down drive



df603to2009c

[1]	Flapper	[2]	Gate solenoid (SD303)
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3.2.2 Conveyance drive



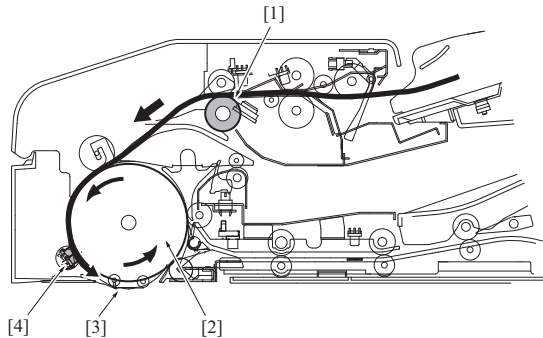
df603to2010c

[1]	Conveyance roller	[2]	Original conveyance motor (M301)
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3.3 Operation

3.3.1 Conveyance control

- The originals that have been fed up to the registration roller [1] by the separation mechanism are pre-fed by the registration roller [1] to be conveyed to the conveyance roller [2] at a high speed.
- A specified period of time after the original conveyance sensor (PS308) [4] turns ON, the conveyance roller [2] is switched into the scan speed to convey the original onto the slit glass (original scan position) [3].



df603to2011c

- The originals are read when they pass through the slit glass [5].

3.3.2 Mixed original mode control

- The mixed original sizes copy mode is applicable to both the same size originals and the different size originals.
- Since the size detection in the direction of the original feed is made according to the ON time of the original registration sensor /Rt (PS318), the size detection operation is made before the scan operation for each original.

3.3.3 Z-Fold original mode control

- In the Z-Fold mode, the same detection operation as in the mixed original sizes copy mode is made on the 1st sheet of original to determine the original size. For the 2nd and succeeding originals, the normal original conveyance is made.

3.3.4 Skew correction control

- The original skew sensor /Rr (PS311) and the original skew sensor /Fr (PS312) are provided to make adjustments when the original is conveyed with its leading edge skewed.
- PS311 and PS312 are provided on the front side and the rear side of the conveyance path before scan to detect the amount of skew based on the time difference when the leading edge of the original turns ON these sensors.
- The amount of skew detected is adjusted by image processing.
- The relationship of the distance between the 2 sensors makes it effective only on original larger than A4S in width and the correction of the tilt angle up to 1.5°C is made.

3.3.5 Centering correction control

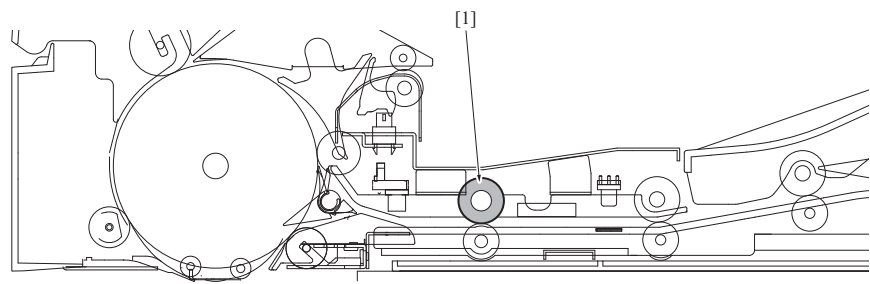
- The centering sensor /Rr (PS321) and the centering LED sensor /Rr (PS322) detect the leading edge of the original pre-fed.
- According to the timing of this detection, the centering sensor /Fr (PS320) and the centering LED sensor /Fr (PS319) detect the side edge of the original to determine the effective read area in the main scan direction.
- The width of the original size that can be detected is restricted only to A4 or 11inch. However, PS320 needs to be positioned to the width of the original you want to detect.
- The maximum range that can be corrected is within $\pm 3\text{mm}$. When in excess of this range, only 3mm is corrected.
- The centering adjustment control is invalid for original sizes other than A4 and 11inch and in the mixed original mode.
- The sensor can detect any color in the original.

3.3.6 Cooling fan control

- The cooling fan /Lt (FM301) cools the original conveyance motor (M301) to prevent getting too hot while in operation.
- The cooling fan turns ON when the original feed is started, and it turns OFF when the original exit is completed.
- The cooling fan /Rt (FM302) cools the original exit motor /1 (M304), the original exit motor /2 (M305), the DF control board (DFCB) and the tray up/down motor (M303) to prevent them from getting too hot while in operation.

4. REVERSAL SECTION

4.1 Configuration

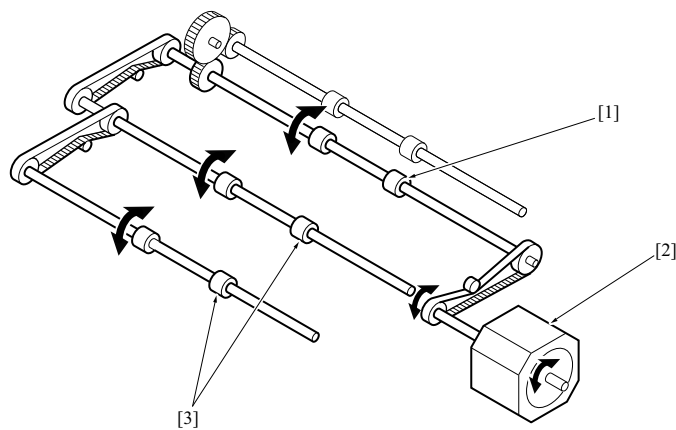


df603to2016c

Symbol	Item	Specification/mechanism
[1]	Stabilization of scan speed	Pressure roller release method
-	Reverse method	Paper exit gate + solenoid

4.2 Drive

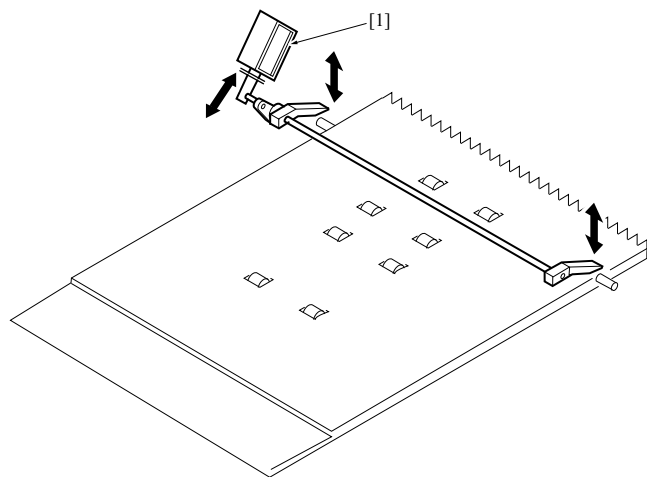
4.2.1 Reverse drive



df603to2017c

[1]	Reverse roller	[2]	Paper feed motor /1 (M304)
[3]	Reverse conveyance roller	-	

4.2.2 Pressure roller release drive



df603to2018c

[1]	Pressure roller release solenoid (SD302)	-
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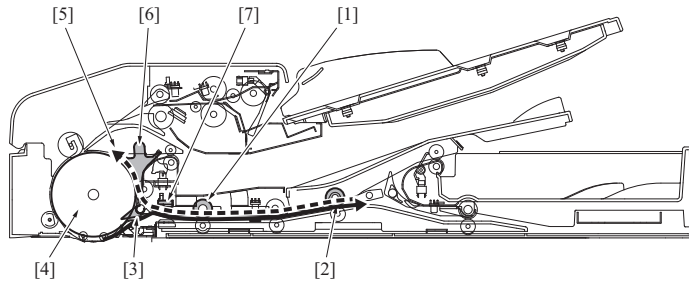
4.3 Operation

4.3.1 Reverse mechanism

(1) Small-size original

- When the gate solenoid (SD303) starts up, the flapper [3] closes and originals the front of which has been scanned are conveyed [2] to the reverse section by the reverse roller [1].

- A specified period of time after the original reverse sensor (PS309) [7] turns OFF by detecting the trailing edge of the original, SD303 opens the paper exit gate [6] and the reverse paper feed [5] is made while rotating in the reverse direction at a low speed and then at a high speed to guide the original to the conveyance roller [4].

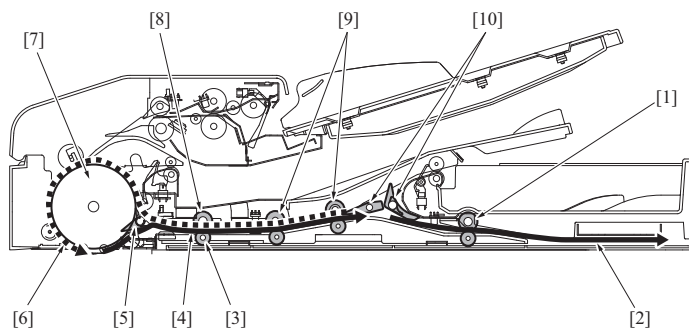


df603to2027c

[1] Reverse roller	[2] Conveyance to the reversal section
[3] Flapper	[4] Conveyance roller
[5] Reverse feed	[6] Paper exit gate
[7] Original reverse sensor (PS309)	-

(2) Large-size original

- When the gate solenoid (SD303) starts up, the flapper [5] closes and originals the front of which has been scanned are conveyed [4] to the reverse section by the reverse roller [8].
- The original conveyed to the reversal section, because it cannot be contained in the reversal section, is conveyed to the paper exit reversal section [2] by the reverse conveyance roller [9], the paper exit reverse roller [1].
- At this time, the exit gate solenoid (SD304) closes the exit gate [10].
- The originals that have been conveyed to the reversal section and the paper exit reversal section are fed in reverse [6] in the same manner as small-size originals.
- At this time, since the originals do not yet pass through the reverse roller [8], the reverse conveyance roller [9] even if they reach the conveyance roller [7], after the reverse roller makes the reverse rotation, the pressure roller release solenoid (SD302) activates to release the pressure roller [3] for the reverse roller.
- The originals are released from the pressure roller and guided to the conveyance roller [7].



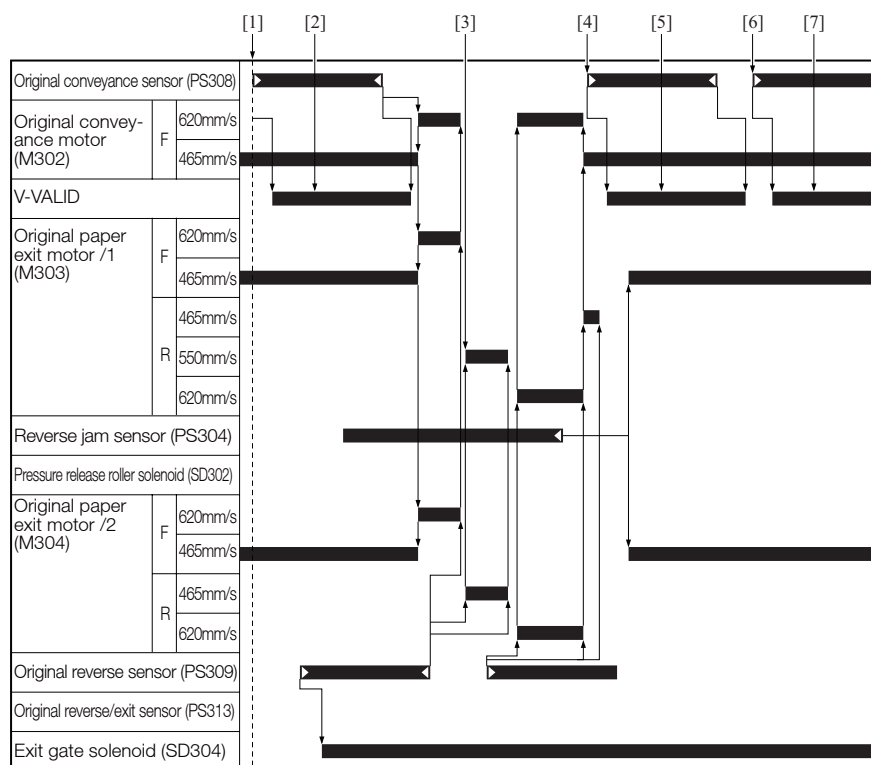
df603to2028c

[1] Paper exit reverse roller	[2] Conveyance to the paper exit reversal section
[3] Pressure roller	[4] Conveyance to the reversal section
[5] Flapper	[6] Reverse feed
[7] Conveyance roller	[8] Reverse roller
[9] Reverse conveyance roller	[10] Paper exit gate

4.3.2 Registration control

(1) Small-size original

- A specified period of time after the start of the conveyance [1] of the 1st original, the front of the 1st original is read [2].
- The 1st original conveyed to the reverse section stops temporarily after being accelerated by the original exit motor /2 (M305) and the original exit motor /1 (M304).
- M305 and M304 start a reverse rotation [3] to let the original hit against the conveyance roller for registration.
- For the original that has been registered, a specified period of time after the original conveyance sensor (PS308) turns ON [4], the back of the 1st original is read [5].

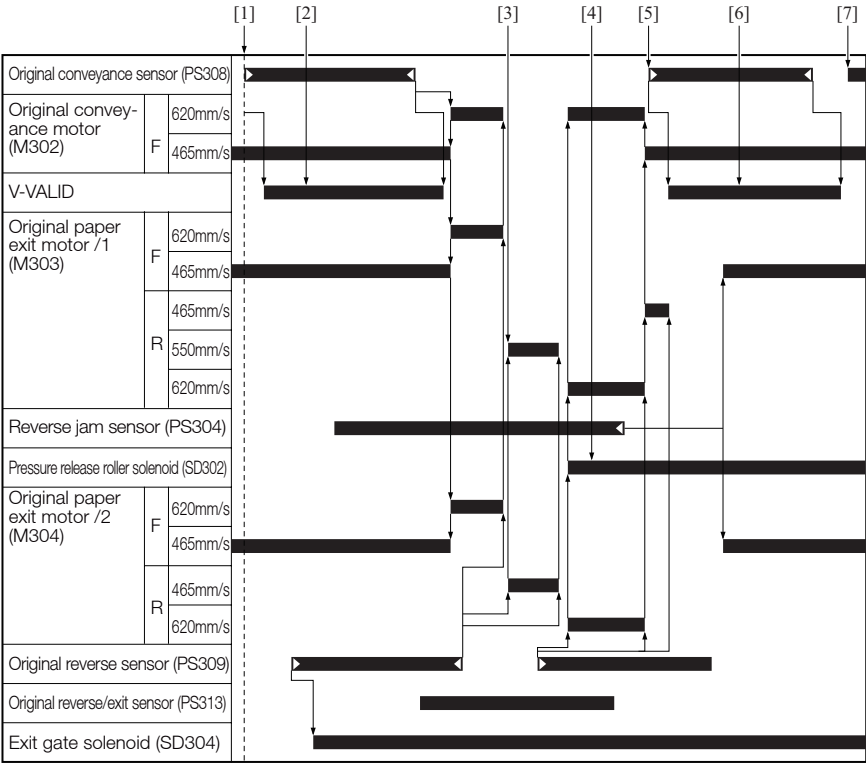


df603to2020e

[1]	Front of the 1st sheet of original	[2]	Reading of the front of the 1st sheet of original
[3]	Reversal of the 1st sheet of original	[4]	Back of the 1st sheet of original
[5]	Reading of the back of the 1st sheet of original	[6]	Front of the 2nd sheet of original
[7]	Reading of the front of the 2nd sheet of original	-	

(2) Large-size original

- A specified period of time after the start of the conveyance [1] of the 1st original, the front of the 1st original is read [2].
- The 1st original conveyed to the reverse section stops temporarily after being accelerated by the original exit motor /2 (M305) and the original exit motor /1 (M304).
- M305 and M304 start a reverse rotation [3] to let the original hit against the conveyance roller for registration.
- For the back of the original that has been registered, a specified period of time after the original reverse sensor (PS309) turns ON, the pressure release roller solenoid (SD302) is turned ON [4] to release the pressure roller, and then release the conveyance force of the reverse section.
- A specified period of time after the original conveyance sensor (PS308) turns ON [5], the back of the 1st original is read [6].



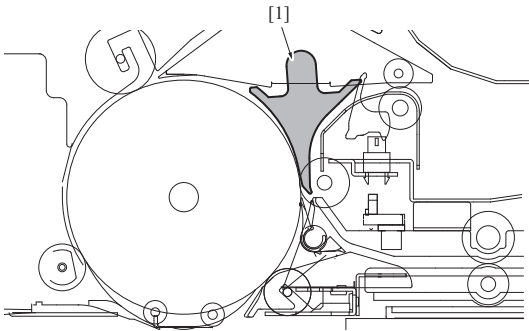
df603to2021e

[1]	Front of the 1st sheet of original	[2]	Reading of the front of the 1st sheet of original
[3]	Reversal of the 1st sheet of original	[4]	Pressure roller release
[5]	Back of the 1st sheet of original	[6]	Reading of the back of the 1st sheet of original
[7]	Front of the 2nd sheet of original	-	

5. PAPER EXIT SECTION

5.1 Configuration

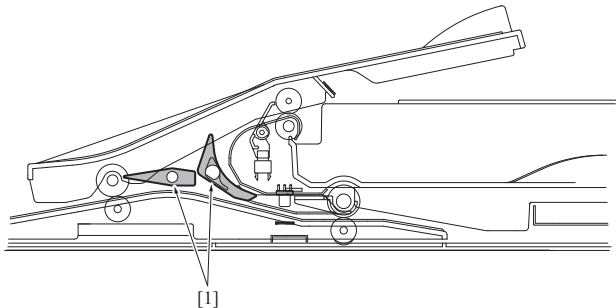
(1) Paper exit section (large size)



df603to2022c

Symb ol	Item	Specification/mechanism
[1]	Conveyance path switching method	Paper exit gate + solenoid

(2) Paper exit section (small size)

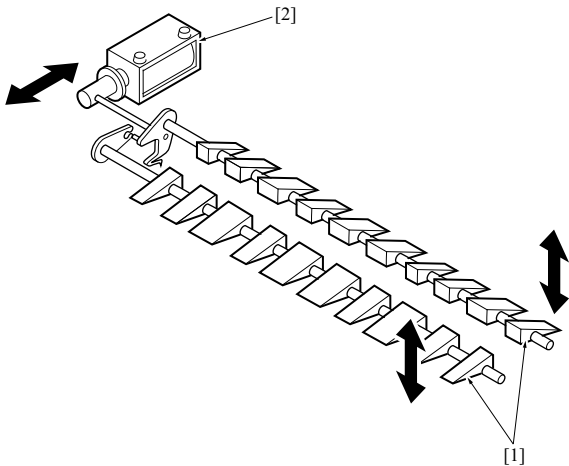


df603to2023c

Symb ol	Item	Specification/mechanism
[1]	Conveyance path switching method	Paper exit gate + solenoid

5.2 Drive

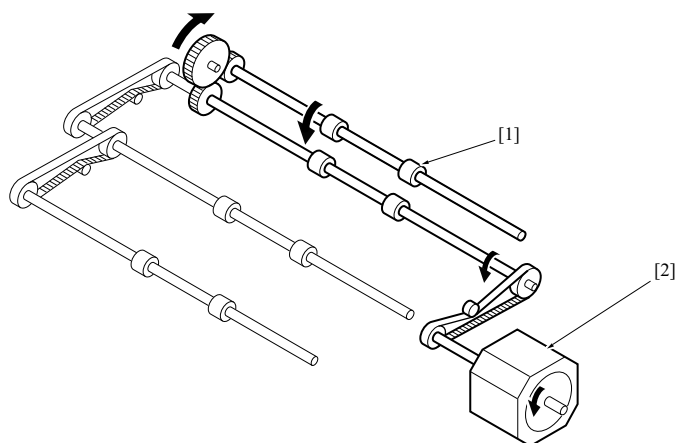
5.2.1 Exit gate drive



df603to2024c

[1]	Paper exit gate	[2]	Exit gate solenoid (SD304)
-----	-----------------	-----	----------------------------

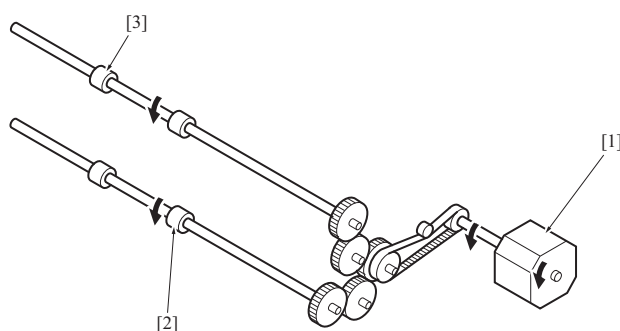
5.2.2 Paper exit drive (for large size)



df603to2025c

[1]	Paper exit roller /1	[2]	Original exit motor /1 (M304)
-----	----------------------	-----	-------------------------------

5.2.3 Paper exit drive (for small size)



df603to2026c

[1]	Original exit motor /2 (M305)	[2]	Paper exit reverse roller
[3]	Paper exit roller /2	-	

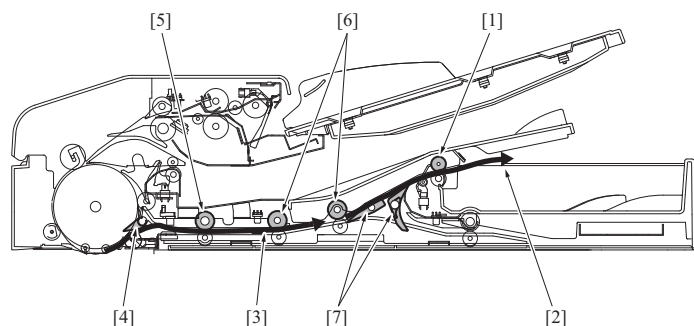
5.3 Operation

5.3.1 Paper exit mechanism

(1) Paper exit operation of small-size original

(a) Single-sided original

- The originals that have been scanned are conveyed to the reverse section [3] because the flapper [4] is closed by the gate solenoid (SD303).
- The originals conveyed to the reversal section are conveyed to the exit gate [7] by the reverse roller [5], the reverse conveyance roller [6].
- After that, they are conveyed to the paper exit roller /2 [1] through the exit gate [7] that has been opened by the exit gate solenoid (SD304).
- The paper exit roller /2 [1] exits the originals to the original exit tray (for small size) [2] with their copied side down.



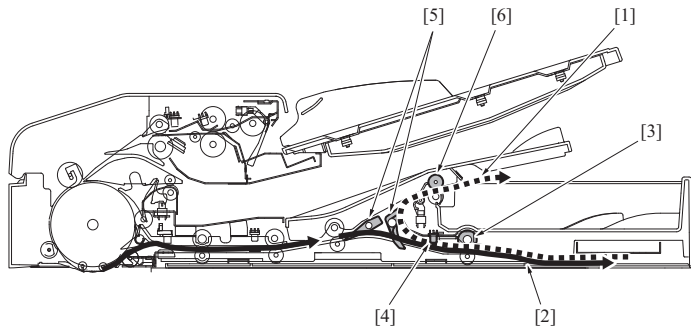
df603to2029c

[1]	Paper exit roller /2	[2]	Exits the originals to the original exit tray (for small size)
[3]	Conveyance to the reversal section	[4]	Flapper
[5]	Reverse roller	[6]	Reverse conveyance roller
[7]	Paper exit gate	-	

(b) Double-sided original

- The originals the rear face of which has been scanned are conveyed to the exit gate [5] in the same manner as with the single-sided originals.

- At this time, the exit gate solenoid (SD304) closes the gate [5], so the originals are conveyed to the paper exit reversal section [2] through the paper exit reverse roller [3].
- When the original reverse/exit sensor (PS313) [4] of the paper exit reversal section detects the originals, the paper exit reverse roller [3] stops.
- When SD304 opens the exit gate [5], the paper exit reverse roller [3] starts to make a high speed reverse rotation to send back the conveyed originals.
- At this time, the exit gate [5] is open and the originals are exited to the original exit tray (for small size) [1] with their front face down.



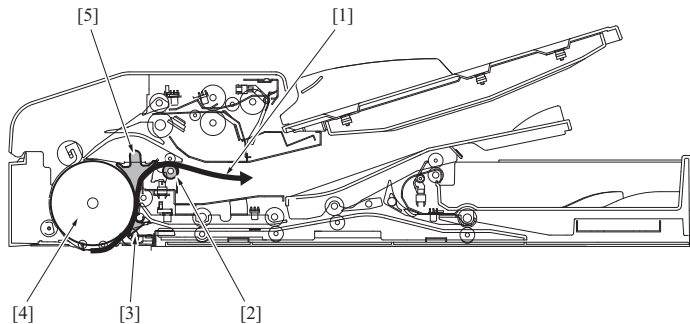
df603to2030c

[1]	Exits the originals to the original exit tray (for small size)	[2]	Conveyance to the paper exit reversal section
[3]	Paper exit reverse roller	[4]	Original reverse/exit sensor (PS313)
[5]	Paper exit gate	[6]	Paper exit roller /2

(2) Paper exit operation of large-size original

(a) Single-sided original

- The originals that have been scanned are conveyed to the paper exit roller /1 [2] by the conveyance roller [4] because of the flapper [3] and the paper exit gate [5] being opened by the gate solenoid (SD303).
- The paper exit roller /1 [2] makes a low speed normal rotation to exit the originals to the original exit tray (for large size) [1] with their copied face down.

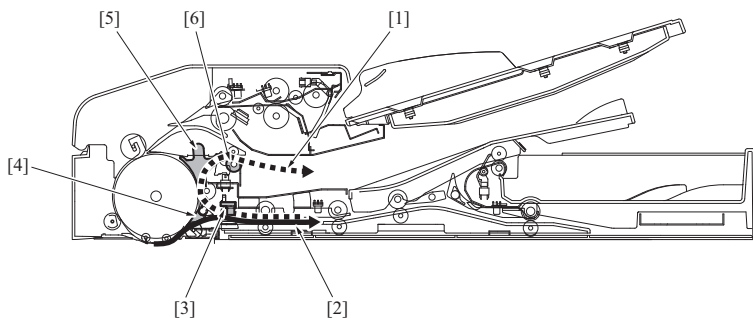


df603to2031c

[1]	Exits the originals to the original exit tray (for large size)	[2]	Paper exit roller /1
[3]	Flapper	[4]	Conveyance roller
[5]	Paper exit gate	-	

(b) Double-sided original

- The originals the rear face of which has been scanned are conveyed to the reverse section [2] because the flapper [4] is closed by the gate solenoid (SD303).
- When the reverse sensor (PS309) [3] detects the trailing edge of the originals conveyed, SD303 opens the flapper [4] and the paper exit gate.
- The originals are exited to the original exit tray (for large size) [1] by the paper exit roller /1 [6] through the flapper that is open.



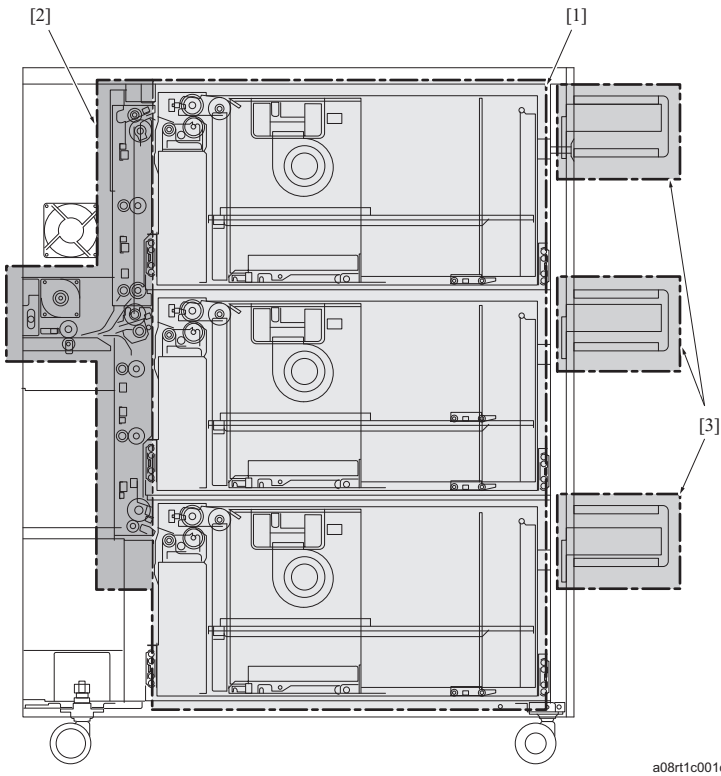
df603to2032c

[1]	Exits the originals to the original exit tray (for large size)	[2]	Conveyance to the reversal section
[3]	Reverse sensor (PS309)	[4]	Flapper
[5]	Paper exit gate	[6]	Paper exit roller /1

PB THEORY OF OPERATION PF-702/PP-701

1. OUTLINE

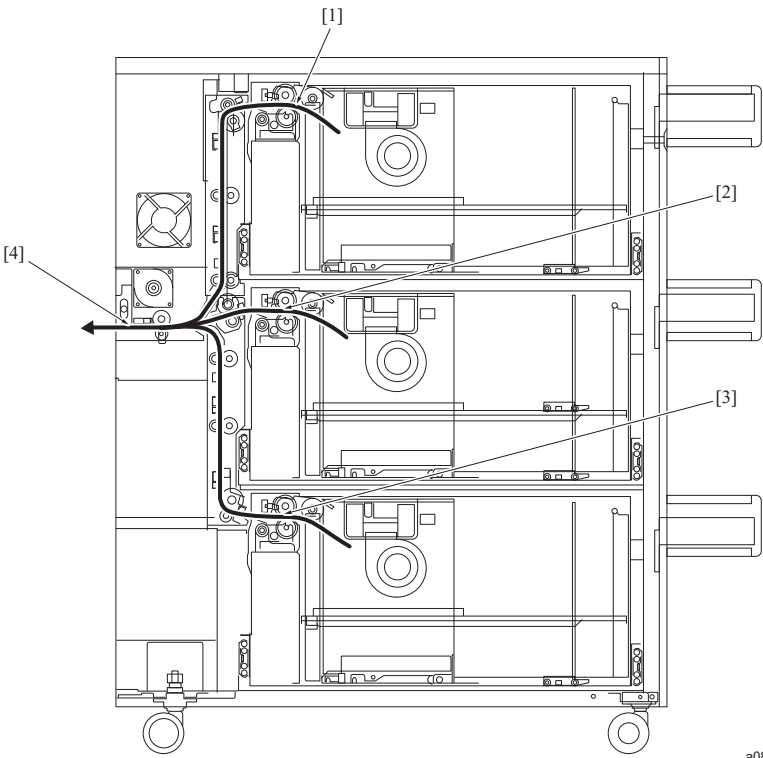
1.1 Unit configuration



a08rt1c001ca

[1] Paper feed section	[2] Conveyance section
[3] PP-701 (Option)	-

1.2 Paper path

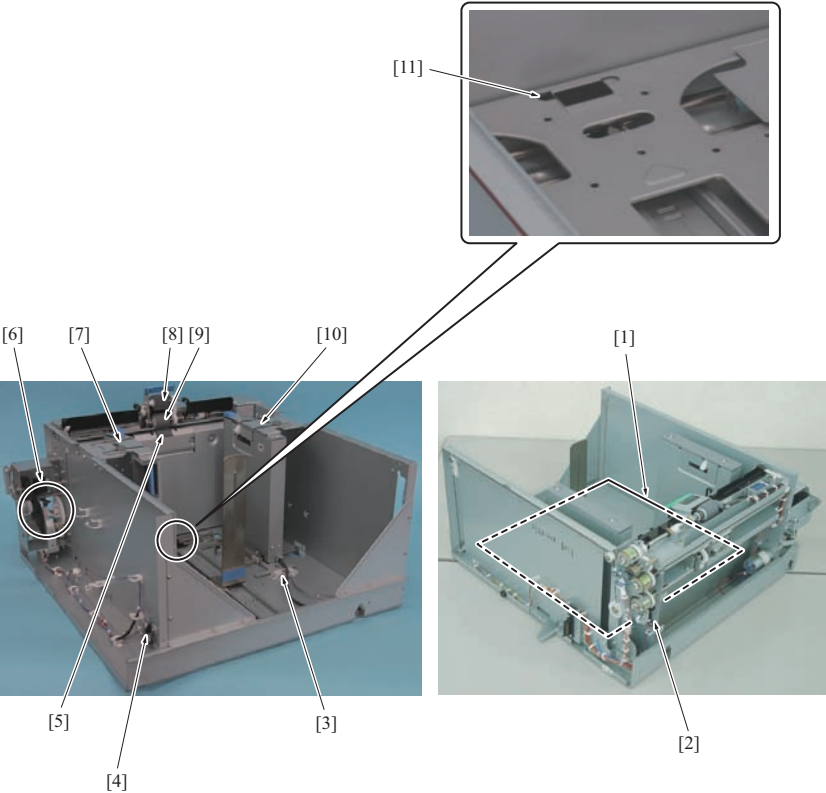


a08rt1c002ca

[1] Paper path of the tray 1	[2] Paper path of the tray2
[3] Paper path of the tray3	[4] Paper path to the main body (trays 1, 2 and 3)

2. PAPER FEED SECTION

2.1 Configuration

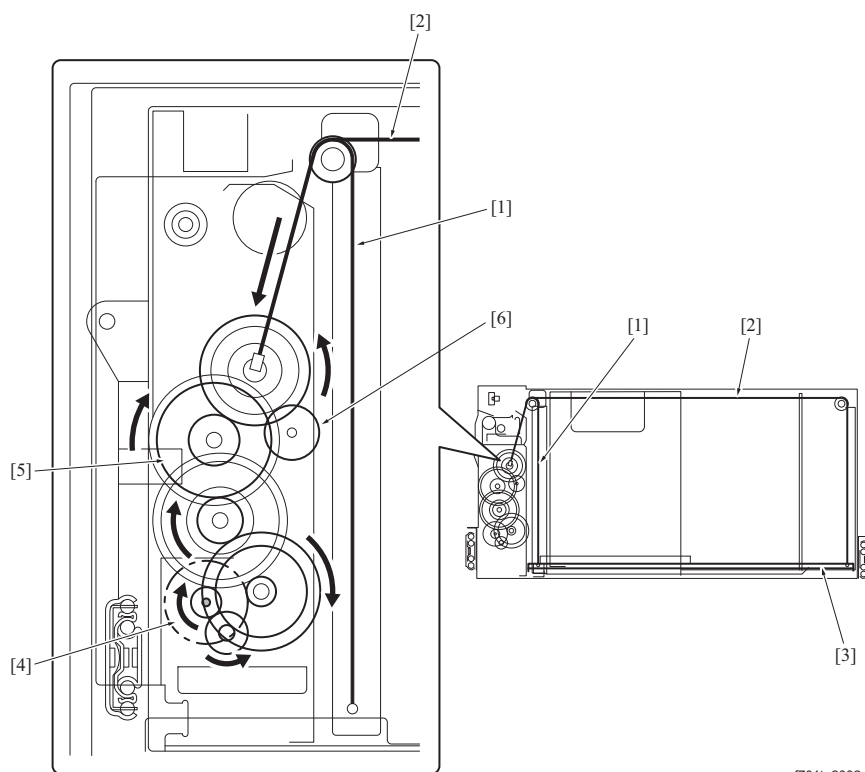


a08rt2e001cb

[1]	Paper lift plate	[2]	Remaining paper VR /1 (VR1), /2 (VR4), /3 (VR7)
[3]	CD paper size VR/1 (VR2), /2 (VR5), /3 (VR8)	[4]	FD paper size VR /1 (VR3),VR /2 (VR6) and VR /3 (VR9)
[5]	Separation roller	[6]	Paper up/down assist mechanism
[7]	Paper feed assist fan /Fr1 (FM1), /Fr2 (FM3), /Fr3 (FM5)	[8]	Pick-up roller
[9]	Paper feed roller	[10]	Paper feed assist fan /Rr1 (FM2), /Rr2 (FM4), /Rr3 (FM6)
[11]	Paper empty sensor /1(PS4), /2 (PS8), /3 (PS12)	-	

2.2 Drive

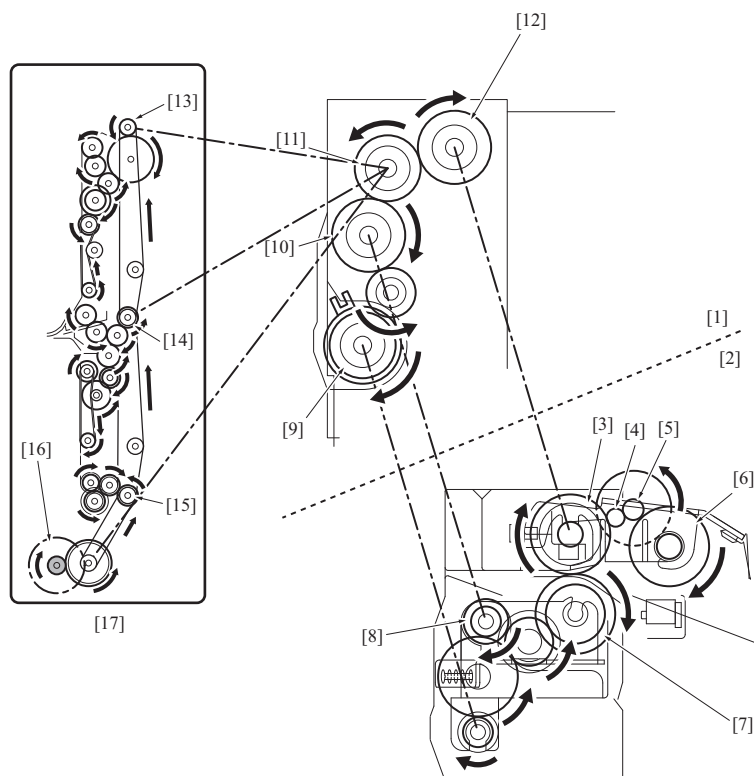
2.2.1 Tray lift drive



pf701to2002d

[1]	Lift wires /Fr2 and /Rr2	[2]	Lift wires /Fr1, /Rr1
[3]	Paper lift plate	[4]	Paper lift motor /1 (M42), /2 (M43), /3 (M44)
[5]	Lift release coupling gear	[6]	Torque restriction gear (oil damper)

2.2.2 Paper feed drive

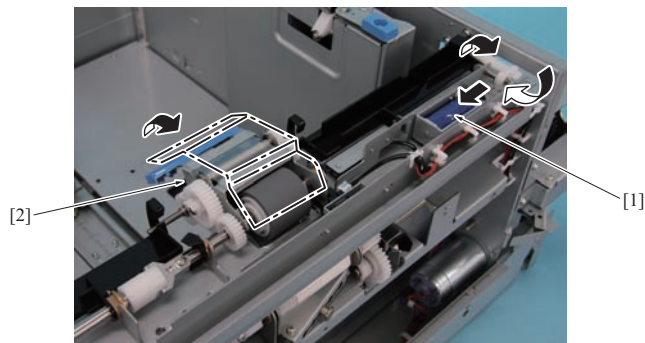


a08rt2c002cb

[1]	Tray rear section	[2]	Tray central section
[3]	Paper feed roller	[4]	Paper dust removing brush
[5]	Scraper shaft	[6]	Pick-up roller

[7] Separation roller	[8] Torque limiter
[9] Forced separation clutch /1 (CL8), /2 (CL11), /3 (CL14)	[10] Separation clutches /1 (CL7), /2 (CL10) and /3 (CL13)
[11] Coupling	[12] Paper feed clutch /1 (CL6), /2 (CL9), /3 (CL12)
[13] Coupling (transmission of driving force to tray1)	[14] Coupling (transmission of driving force to tray2)
[15] Coupling (transmission of driving force to tray3)	[16] Paper feed motor (M1)
[17] PF rear section	-

2.2.3 Pick-up drive



a0gct2c001ca

[1] Pick-up solenoid /1 (SD4), /2 (SD5), /3 (SD6)	[2] Pick-up roller
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2.3 Operation

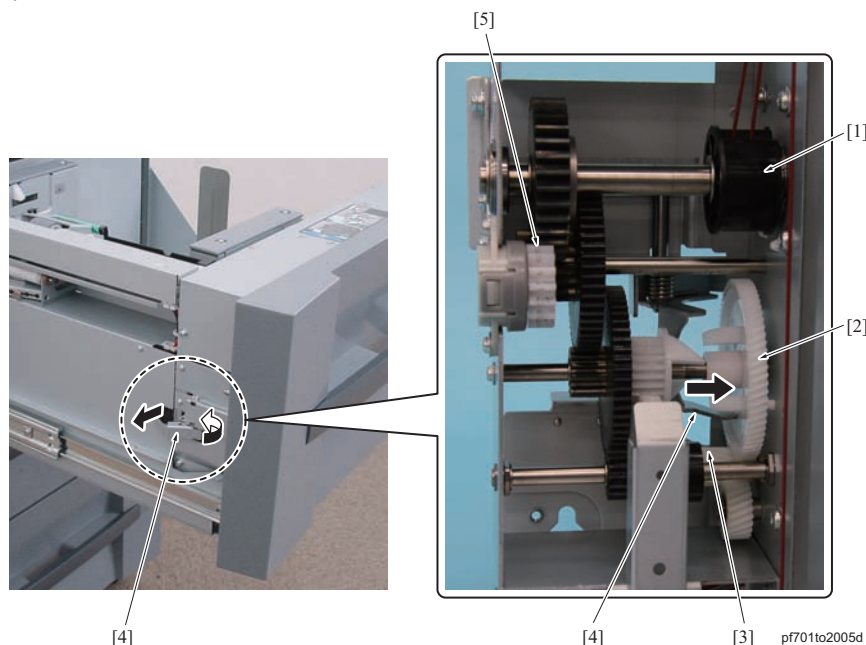
2.3.1 Up/down control

(1) Up operation

- The paper lift motors /1 (M42), /2 (M43) and /3 (M44) wind up the lift wires through the pulleys to lift up the paper lift plate.

(2) Down operation

- When pulling out the tray, the coupling gear [2] that transmits the drive force from the motor shaft [3] to the pulley [1] is detached by the release lever [4].
- The paper lift plate goes down slowly by its own weight through the torque restriction gear [5] that is activated only while in the down operation.



pf701to2005d

[1] Pulley	[2] Coupling gear
[3] Motor shaft	[4] Release lever
[5] Torque restriction gear	-

(3) Operation timing

- When the tray is set, the paper lift motors /1 (M42), /2 (M43) and /3 (M44) turn ON to raise the paper lift plate.
- When the upper limit sensors /1 (PS2), /2 (PS6), and /3 (PS10) turns ON, M42, M43, and M44 stop.

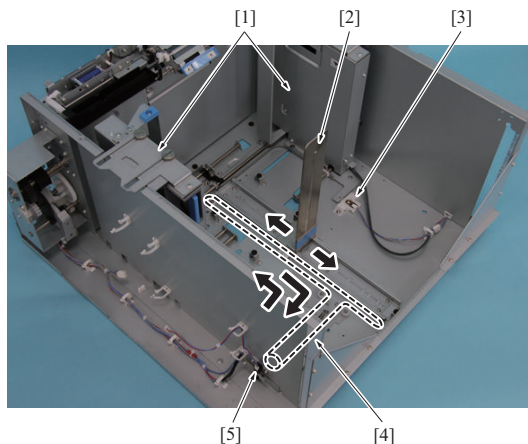
- When the sensors PS2, PS6 and PS10 turn OFF from ON during printing, the motors M42, M43 and M44 turn ON again to bring up the paper lift plate until the sensors PS2, PS6 and PS10 turn ON, and the motors M42, M43 and M44 turn OFF.

2.3.2 Size detection control

There are 2 types of the paper size detection: detection in the main scan direction and detection in the sub scan direction.

(1) Detection mechanism

- The FD paper size VR/1 (VR3), /2 (VR6), /3 (VR9) detect the paper size in the sub scan direction. The FD paper size VR is interlocked with the paper rear guide through the link wire.
- The FD paper size VR/1 (VR2), /2 (VR5), /3 (VR8) detect the paper size in the sub scan direction. The CD paper size VR is interlocked directly with the paper guide.
- After a specified period of time since the tray is set to PF, each VR informs the detected size data to the control program of the main body. For the resistance value, a default is set by "Tray Adjustment" in the service mode.
- For the paper sizes shown below, it is necessary to set the paper size in the user mode, selecting [Tray Setting] - [Size Setting] - [Detection Size Setting].
 - A5, $5\frac{1}{2} \times 8\frac{1}{2}$
 - 8×13 , $8\frac{1}{4} \times 13$, $8\frac{1}{2} \times 13$, $8\frac{1}{8} \times 13\frac{1}{4}$, or $8\frac{1}{2} \times 14$
 - SRA3, 12×18

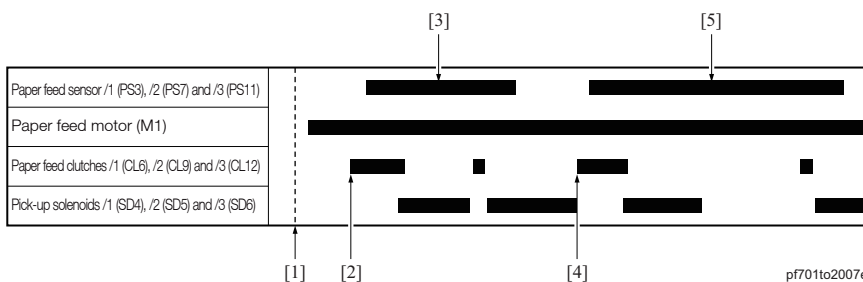


a0gt2c002ca

[1] Paper guide	[2] Paper rear guide
[3] CD paper size VR/1 (VR2), /2 (VR5), /3 (VR8)	[4] Link wire
[5] FD paper size VR/1 (VR3), /2 (VR6), /3 (VR9)	-

2.3.3 Pick-up mechanism

- The pick-up solenoids /1 (SD4), /2 (SD5) and /3 (SD6) turn OFF to pick up the paper.
- When the solenoids SD4, SD5 and SD6 turn OFF, the pick-up roller goes down to press paper by its own weight.
- When the paper feed clutches /1 (CL6), /2 (CL9) and /3 (CL12) turn ON, the pick-up roller rotates to convey the paper to the paper feed roller.



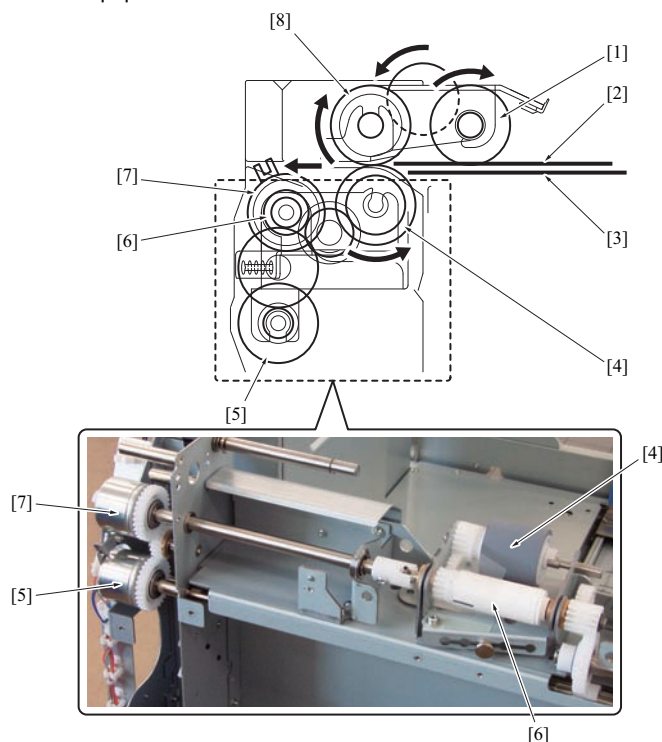
pf701to2007e

[1] Start button ON	[2] Pick-up of the 1st sheet of paper
[3] Conveyance of the 1st sheet of paper	[4] Pick-up of the 2nd sheet of paper
[5] Conveyance of the 2nd sheet of paper	-

2.3.4 Separation mechanism

- For the transmission of the drive force to the separation roller [4], the drive force of the paper feed motor (M1) is transmitted by the ON/OFF operation of the separation clutches /1 (CL7), /2 (CL10) and /3 (CL13) [8] through the torque limiter [7].
- The drive force can be transmitted directly, not through the torque limiter [7], to the separation roller by the ON/OFF operation of the forced separation clutches /1 (CL8), /2 (CL11) and /3 (CL14) [5].
- The separation roller [4] is driven in the direction opposite to the paper conveyance. However, when no paper is conveyed and only 1 sheet of paper is conveyed, the frictional force generating between the paper feed roller [1] and the separation roller [4] or the paper and the separation roller is greater than the frictional force of the torque limiter [3]. Accordingly, the separation roller rotates in the direction of the paper conveyance to convey paper to the vertical conveyance section.
- When 2 or more sheets of paper are conveyed, the frictional force between these sheets of paper is smaller than the frictional force of the torque limiter and the separation roller rotates in the reverse direction to prevent the lower most paper from being conveyed.

- When paper is slippery, it rotates the separation roller [4] momentarily in the reverse direction independent of the torque limiter [7] for greater separation of paper.



a08r12c003cb

[1]	Pick-up roller	[2]	1st sheet of paper
[3]	2nd sheet of paper	[4]	Separation roller
[5]	Forced separation clutch /1 (CL8), /2 (CL11), /3 (CL14)	[6]	Torque limiter
[7]	Forced separation clutch /1 (CL7), /2 (CL10), /3 (CL13)	[8]	Paper feed roller

(1) Separation clutch control

- When paper is slippery (or, when the power for conveyance is insufficient), paper conveyed from the pick-up roller may be unable to pass through the handling sections of the paper feed roller and the separation roller.
 - To alleviate this kind of condition, turn OFF the separation clutches /1 (CL7), /2 (CL10) and /3 (CL13) until paper gets to the handling section to cut off the drive force to the separation roller, and make it function as a driven roller to the paper feed roller. After paper gets to the handling section, turn ON the CL7, CL10 and CL13 to conduct the normal separation operation.
 - This control is made unconditionally for the 1st sheet of paper. For the 2nd and the succeeding sheets of paper, the control is made as follows.
 - Type of paper: Preprinted paper: Made unconditionally.
 - Type of paper: Other than Preprinted paper: Made automatically judging from the condition of conveyance at the handling section. ^{*1}
- ^{*1} For the paper type other than the coated paper, the DIPSW39-2/3/4/5/6/7:1 enables the control unconditionally. At this time, the control is made unconditionally for the coated paper only in the low temperature.
Set the DIPSW 39-2/3/4/5/6/7 to "1" corresponding to the selected tray .

(2) Forced separation clutch control

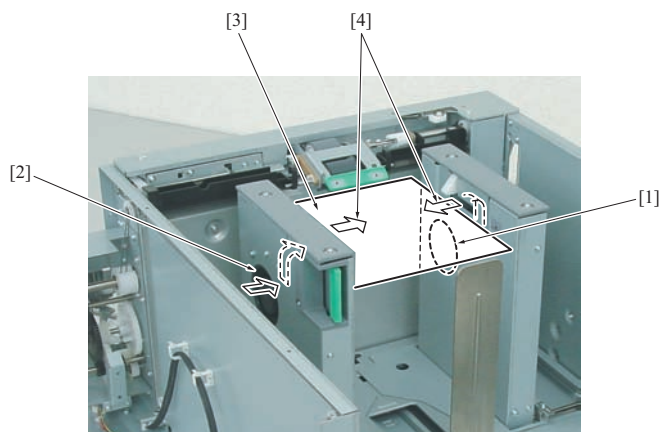
- If the paper is slippery, when paper is conveyed to the separation roller, it rotates the separation roller momentarily in the reverse direction independent of the torque limiter for greater separation of paper.
- This control is automatically made only in the high temperature condition for the coated paper and the preprinted paper more than 72g/m².
However, the DIPSW26-4 can be used to select a high temperature as a condition for control.

2.3.5 Paper dust removing mechanism

- This mechanism is provided to remove paper dust from the paper feed roller.
- Paper dust adhered to the paper feed roller is removed by the paper dust removal brush (raising brush) and transferred to the scraper shaft (metal roller). Then the scraper (sheet) scrapes off the paper dust from the shaft.

2.3.6 Air assist mechanism

- Trays1 to 3 are provided with paper feed assist fans that blow air [4] onto paper [3] from a pair of paper guides attached both in front and in the rear and assist the separation of paper.
- The tray1 is provided with the paper feed assist fans /Fr1 (FM1) [2] and /Rr1 (FM2) [1], the tray2 with paper feed assist fans /Fr2 (FM3) [2] and /Rr2 (FM4) [1], and tray3 with paper feed assist fans /Fr3 (FM5) [2] and /Rr3 (FM6) [1].
- Each of the paper feed assist fans is effective especially for thick paper, and paper with a high degree of adhesion (such as coated paper). However, in the case of plain paper, it may not be fed smoothly.



pf701to2010c

[1]	Paper feed assist fan /Rr1 (FM2), /Rr2 (FM4), /Rr3 (FM6)	[2]	Paper feed assist fan /Fr1 (FM1), /Fr2 (FM3), /Fr3 (FM5)
[3]	Paper	[4]	Blow-out of air

(1) Operation timing

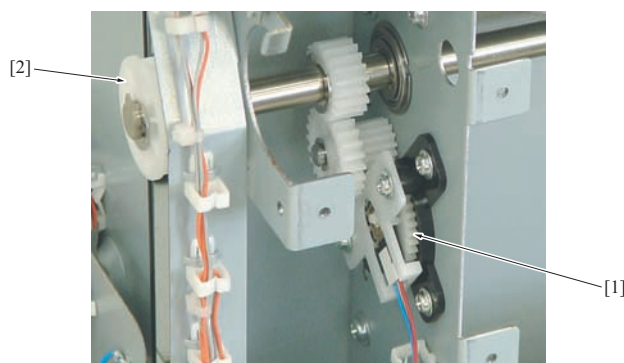
- The operation of the paper feed assist fans /Fr1 (FM1), /Rr1 (FM2), /Fr2 (FM3), /Rr2 (FM4), /Fr3 (FM5) and /Rr3 (FM6) can be selected among the following 3 modes in the user mode, selecting [Tray Setting] - [Air Assist].
- Always ON, Always OFF and Auto.
- While in the Auto mode, the paper feed assist fan is normally turned OFF, but when the coated paper or the preprinted paper is selected for the type of paper on the operation panel, the paper feed assist fan of the corresponding tray is turned ON.

2.3.7 Paper empty detection control

- The paper empty sensors /1 (PS4), /2 (PS8) and /3 (PS12) detect the paper empty in the tray.

2.3.8 Remaining paper detection control

- The remaining paper VR/1 (VR1), /2 (VR4) and /3 (VR7) that are interlocked through the pulley and the gear with the paper lift plate detects the remaining paper.
- The remaining paper quantity is detected in the following 6 stages according to the resistance value, and the main body is informed of the detection.
 - No Paper (↓ Flashing): 0
 - Stage 1 (displayed in red): 10% or less
 - Stage 2 (displayed in red): 25% or less
 - Stage 4 (displayed in red): 50% or less
 - Stage 5 (displayed in red): 75% or less
 - Stage 7 (displayed in red): 76% or more



pf701to2011c

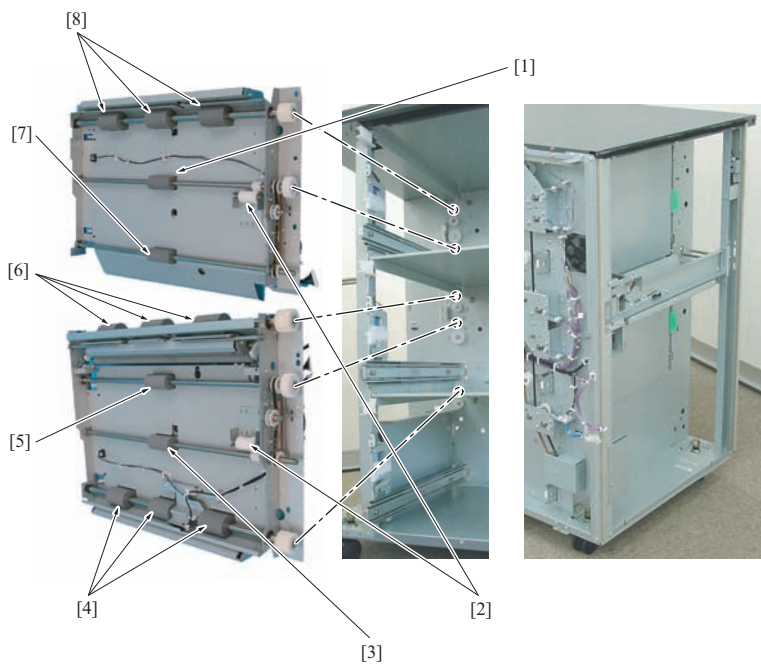
[1]	Remaining paper VR /1 (VR1), /2 (VR4), /3 (VR7)	[2]	Lift pulley /Rr
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2.3.9 Tray lock control

- Each tray is locked by the tray lock lever.
- When it detects that either of the handle release sensors /1 (PS5), /2 (PS9) and /3 (PS13) of the trays 1 to 3 turns OFF, either of the tray lock solenoids /1 (SD1), /2 (SD2) and /3 (SD3) of the corresponding tray turns ON to bring up the tray lock lever and release the lock, thus allowing the tray to be pulled out.
- When it finds that any other sensor turns OFF while either of the sensors PS5, PS9 and PS13 is OFF, any of the solenoids SD1, SD2 and SD3 other than the one that has already turned ON does not turn ON. It prevents 2 or more trays from being pulled out at the same time.
- When a jam that affects the tray and the exit conveyance section occurs, the tray remains being locked until the jammed paper is removed. Doing this prevents the paper from being torn.

3. CONVEYANCE SECTION

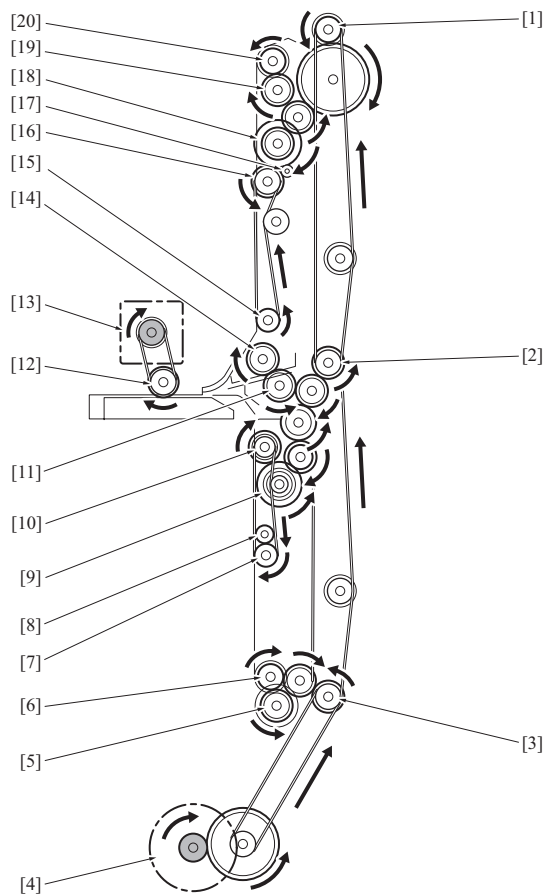
3.1 Configuration



a08rt2e004ca

[1]	Conveyance roller /1	[2]	Torque limiter
[3]	Conveyance roller /4	[4]	Pre-registration roller /5
[5]	Conveyance roller /3	[6]	Pre-registration roller /4
[7]	Conveyance roller /2	[8]	Pre-registration roller /3

3.2 Drive



pf701to2013c

[1]	Coupling (transmission of driving force to tray1)	[2]	Coupling (transmission of driving force to tray2)
-----	---	-----	---

[3]	Coupling (transmission of driving force to tray3)	[4]	Paper feed motor (M1)
[5]	Pre-registration clutch /3 (CL5)	[6]	Pre-registration roller /5
[7]	Conveyance roller /4	[8]	Torque limiter
[9]	Intermediate clutch /Lw (CL4)	[10]	Conveyance roller /3
[11]	Pre-registration clutch /2 (CL3)	[12]	Exit conveyance roller
[13]	PF exit conveyance motor (M2)	[14]	Pre-registration roller /4
[15]	Conveyance roller /2	[16]	Conveyance roller /1
[17]	Torque limiter	[18]	Intermediate clutch /Up (CL2)
[19]	Pre-registration clutch /1 (CL1)	[20]	Pre-registration roller /3

3.3 Operation

3.3.1 Pre-registration control

- When the paper feed starts, paper is sent out to the pre-registration roller by the pick-up roller and the paper feed roller.
- When the paper strikes the pre-registration roller that is stopped, a loop is formed to adjust paper skew.
- When the pre-registration clutches /1 (CL1), /2 (CL3) and /3 (CL5) turn on, the driving force of the paper feed motor (M1) is transmitted to the pre-registration rollers 3/, /4 and /5 to convey paper in the direction of the main body.

3.3.2 Conveyance control

- For the vertical conveyance, the driving force of the paper feed motor (M1) is transmitted by turning on and off the intermediate clutches /Up (CL2) and /Lw (CL4), and the pre-registration clutches /1 (CL1), /2 (CL3) and /3 (CL5).
- The PF exit conveyance motor (M2) operates the exit conveyance.
- Paper that is fed from tray1 is conveyed to the conveyance rollers /1 and /2 driven through the pre-registration roller /3 and CL2 that are in turn driven by the CL/1, and then conveyed to the exit conveyance roller. When the loop sensor /1 (PS17) detects the trailing edge of paper, the CL2 turns OFF.
- Paper that is fed from tray 2 is conveyed to the exit conveyance roller by the pre-registration roller /4 that is in turn driven by the CL3.
- Paper that is fed from tray /3 is conveyed to the conveyance rollers /5 and /3 through the pre-registration roller /5, CL4 that is in turn driven by the CL/4, and then conveyed to the exit conveyance roller. When the loop sensor /3 (PS23) detects the trailing edge of paper, the CL4 turns OFF.
- The exit conveyance roller is driven by the PF exit conveyance motor (M2). It starts to rotate at a low speed when the loop sensors /1 (PS17), 2/ (PS19) and /3 (PS23) detect paper, and turns off when the exit sensor (PS24) detects the trailing edge of paper.
- A torque limiter is provided on the gear of each conveyance roller /1 and /4 to prevent the rollers from rotating when the clutches are released. This prevents paper that is temporarily stopping on the vertical paper feed path from falling off the path and causing a paper jam.

4. OTHERS

4.1 Dehumidification heater control

- Trays1 to 3 are provided with the dehumidification heaters /1 (HTR/1), /2 (HTR2) and /3 (HTR3), 1 each respectively, below each tray. They are turned on when the dehumidification heater switch (SW3) of the main body is turned ON.



pf701to2014c

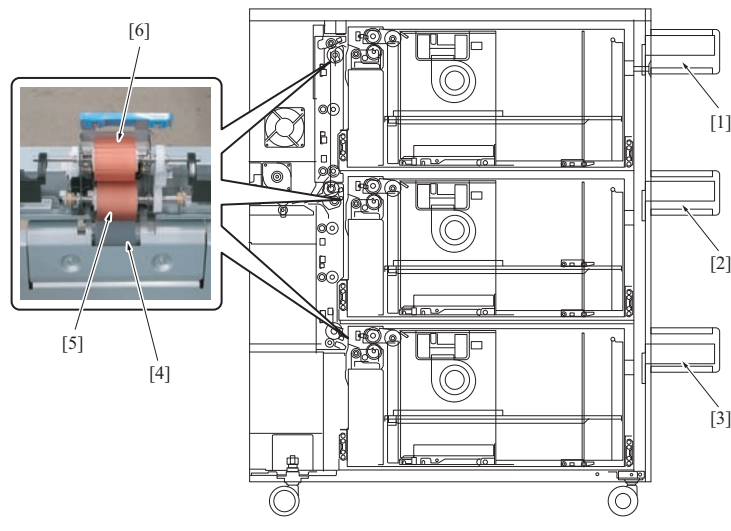
[1]	Dehumidification heater /1 (HTR1)	[2]	Dehumidification heater /2 (HTR2)
[3]	Dehumidification heater /3 (HTR3)	-	

4.2 Main body temperature rise prevention assist mechanism

- To enhance cooling in the main body, air drawn by the PF cooling fan (FM7) is distributed inside the main body.

5. PP-701 (OPTIONAL)

5.1 Configuration

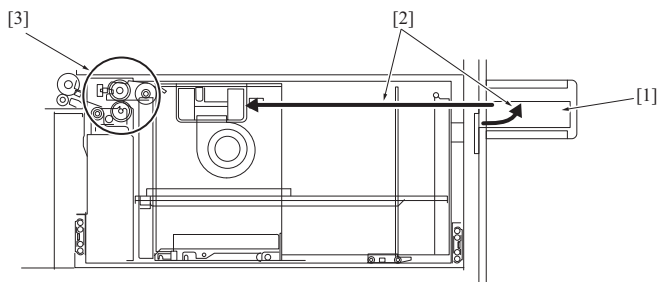


a08rt2c006ca

[1]	Paper trailing edge separation fan /1 (FM8)	[2]	Paper trailing edge separation fan /2 (FM9)
[3]	Paper trailing edge separation fan /3 (FM10)	[4]	Separation roller
[5]	Paper feed roller	[6]	Pick-up roller

5.2 Operation

- The paper trailing edge separation fans /1 (FM8), /2 (FM9) and /3 (FM10) [1] provided on the right side of the PF blow air [2] to the stacked papers to assist the paper separation.
- Operating timing of FM8, FM9, FM10 are the same that of the paper feed assist fans provided inside the tray.
- Urethane rollers are used for feeding papers for overprinting since urethane is less affected by powders used for overlay printing.
- The assist fans [3] and urethane rollers ensure paper feed accuracy when overlay printing.



a08rt2c007ca

[1]	Paper trailing edge separation fan /1 (FM8), /2 (FM9) and /3 (FM10)	[2]	Air
[3]	Paper feed section		-

6. INDIVIDUAL SUPPORT PARTS

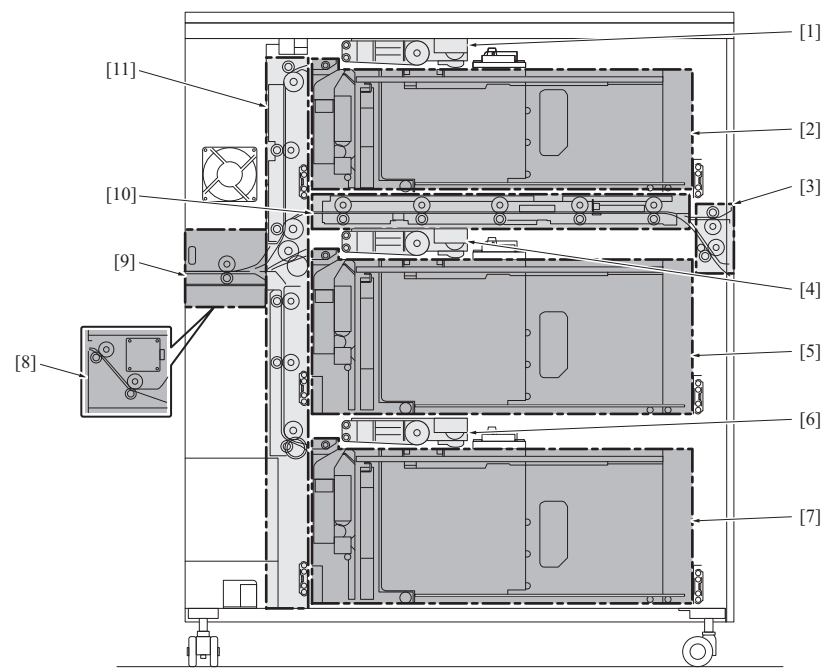
6.1 Corresponding to overlay printing

- The following are available as the individual support parts for overlay printing.
 - Paper feed assist plate (refer to [G.15. INDIVIDUAL SUPPORT PARTS](#))

PC THEORY OF OPERATION PF-703/HT-505/FA-501

1. OUTLINE

1.1 Unit configuration

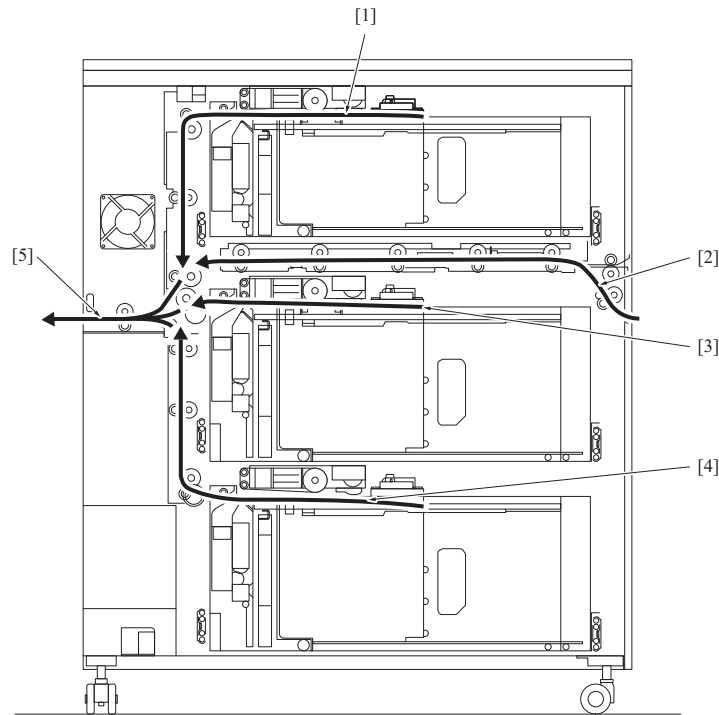


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[1]	Paper feed suction section (Tray1)	[2]	Paper feed tray section (Tray1)
[3]	Entrance conveyance section	[4]	Paper feed suction section (Tray2)
[5]	Paper feed tray section (Tray2)	[6]	Paper feed suction section (Tray3)
[7]	Paper feed tray section (Tray3)	[8]	Exit conveyance section (FA-501: PI-PFU)
[9]	Exit conveyance section (PF)	[10]	Horizontal conveyance section
[11]	Vertical conveyance section	-	

1.2 PAPER PATH

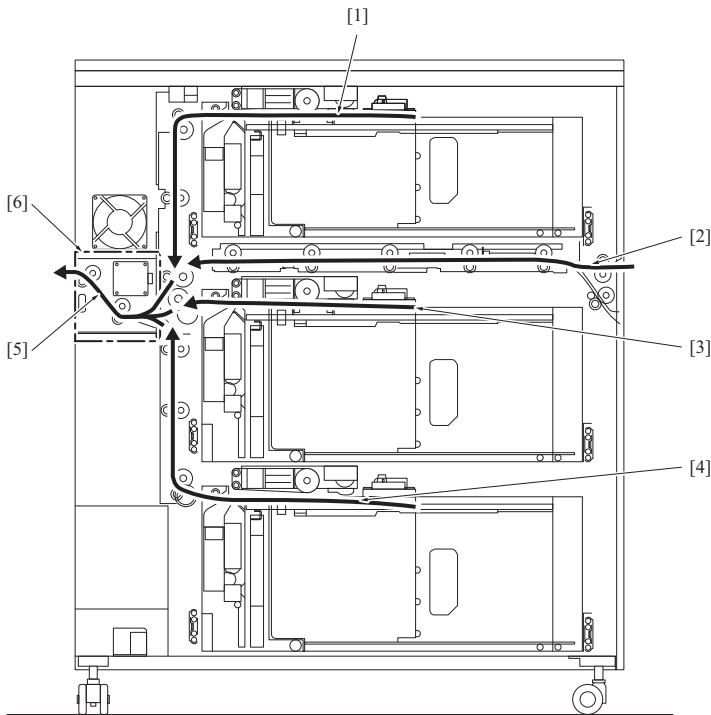
(1) PF



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[1]	Paper path of the tray1	[2]	PF coupling conveyance path
[3]	Paper path of the tray2	[4]	Paper path of the tray3
[5]	Paper path to the main body	-	

(2) PI-PFU

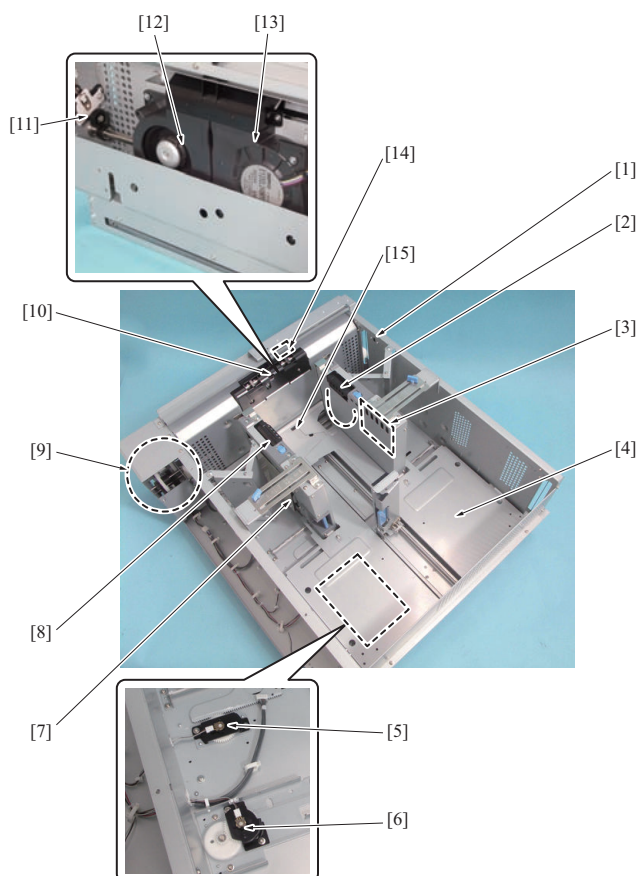


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[1]	Paper path of the tray1	[2]	PI-PFU coupling conveyance path
[3]	Paper path of the tray2	[4]	Paper path of the tray3
[5]	Paper path to the finisher	[6]	FA-501 (Option)

2. PAPER FEED TRAY SECTION

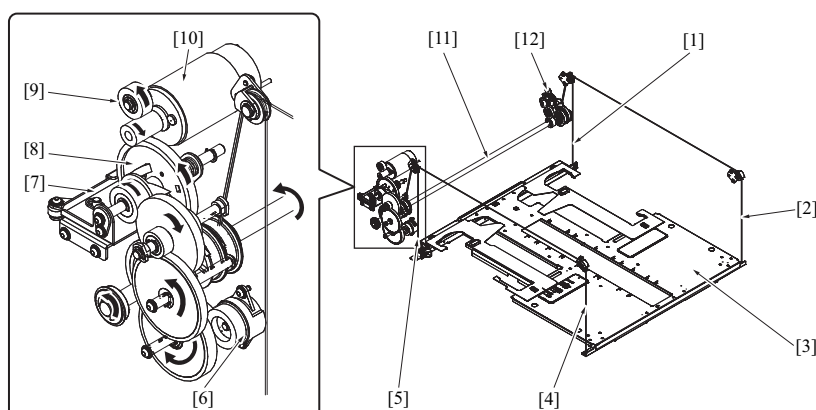
2.1 Configuration



[1] Temperature sensor /1 (TEMS/1), /2 (TEMS/2), /3 (TEMS/3)	[2] Paper feed assist fan /Rr1 (FM2), /Rr2 (FM6), /Rr3 (FM10)
[3] Shutter solenoid /Rr1 (SD5), /Rr2 (SD7), /Rr3 (SD9)	[4] Paper lift plate
[5] CD paper size VR/1 (VR2), /2 (VR5), /3 (VR8)	[6] FD paper size VR/1 (VR3), /2 (VR6), /3 (VR9)
[7] Shutter solenoid /Fr1 (SD4), /Fr2 (SD6), /Fr3 (SD8)	[8] Paper feed assist fan /Fr1 (FM1), /Fr2 (FM5), /Fr3 (FM9)
[9] Paper lift motor /1 (M7), /2 (M8), /3 (M9)	[10] Upper limit sensor /1 (PS5), /2 (PS9) and /3 (PS13)
[11] Remaining paper VR /1 (VR1), /2 (VR4), /3 (VR7)	[12] Paper leading edge separation fan /Rr1 (FM4), /Rr2 (FM8), /Rr3 (FM12)
[13] Paper leading edge separation fan /Fr1 (FM3), /Fr2 (FM7), /Fr3 (FM11)	[14] Paper feed sensor /1 (PS2), /2 (PS6), /3 (PS10)
[15] Paper empty sensor /1(PS3), /2 (PS7), /3 (PS11)	[16] -

2.2 Drive

(1) Tray lift drive

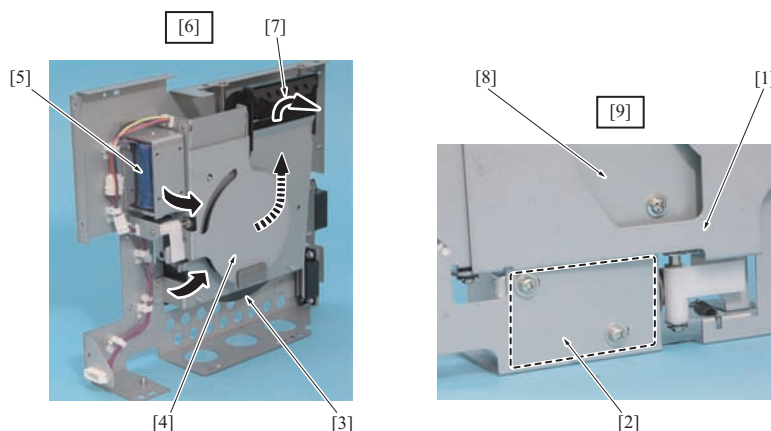


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[1] Lift wire /RrLt	[2] Lift wire /RrRt
---------------------	---------------------

[3]	Paper lift plate	[4]	Lift wire /FrRt
[5]	Lift wire /FrLt	[6]	Up-down damper (oil damper)
[7]	Regulating plate	[8]	Lift release coupling gear
[9]	Lock idler	[10]	Paper lift motor /1 (M7), /2 (M8), /3 (M9)
[11]	Wire winding shaft	[12]	Remaining paper VR /1 (VR1), /2 (VR4), /3 (VR7)

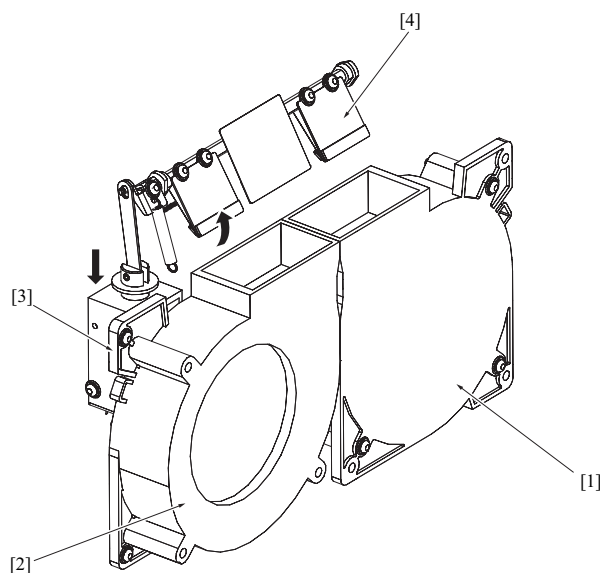
(2) Side guide shutter drive



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[1]	Side guide shutter /Rr	[2]	Shutter solenoid /Rr1 (SD5), /Rr2 (SD7), /Rr3 (SD9)
[3]	Paper feed assist fan /Fr1 (FM1), /Fr2 (FM5), /Fr3 (FM9)	[4]	Side guide shutter /Fr
[5]	Shutter solenoid /Fr1 (SD4), /Fr2 (SD6), /Fr3 (SD8)	[6]	Side guide /Fr
[7]	Flow of air	[8]	Paper feed assist fan /Rr1 (FM2), /Rr2 (FM6), /Rr3 (FM10)
[9]	Side guide /Rr	-	

(3) Paper leading edge shutter drive



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[1]	Paper leading edge separation fan /Fr1 (FM3), /Fr2 (FM7), /Fr3 (FM11)	[2]	Paper leading edge separation fan /Rr1 (FM4), /Rr2 (FM8), /Rr3 (FM12)
[3]	Paper leading edge shutter solenoid /1 (SD10), /2 (SD11), /3 (SD12)	[4]	Paper leading edge shutter

2.3 Operation

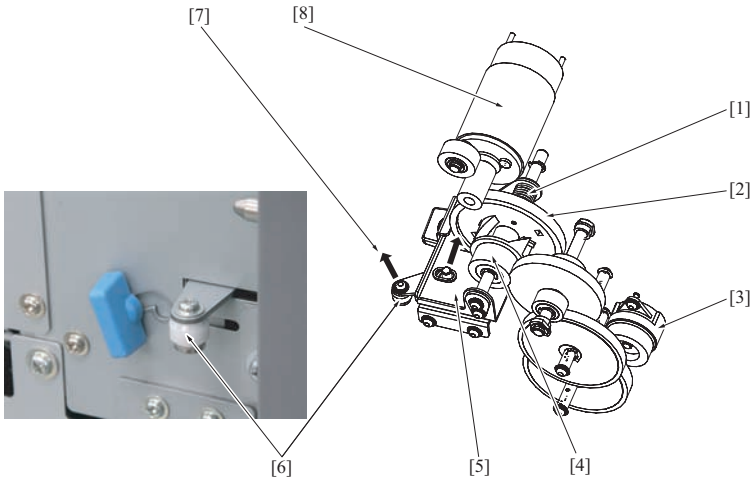
2.3.1 Up/down control

(1) Up operation

- The paper lift motors /1 (M7), /2 (M8) and /3 (M9) wind up the lift wires through the pulleys to lift up the paper lift plate.

(2) Down operation

- When the tray is pulled out, the release lever [6] returns to the direction of arrow [7] and the regulation plate [5] moves to the direction which for loosening the pressure of the spring [1].
- By this operation, the coupling gear /1 [2] which transmits the drive of the paper lift motors /1 (M7), /2 (M8), and /3 (M9) [8] is separated from the coupling gear /2 [4].
- With the up-down damper (oil damper) [3] which operates only in going down, the paper lift plate goes down slowly with its own weight.



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[1]	Spring	[2]	Coupling gear /1
[3]	Up-down damper (oil damper)	[4]	Coupling gear /2
[5]	Regulating plate	[6]	Release lever
[7]	Coupling gear release direction	-	

(3) Operation timing

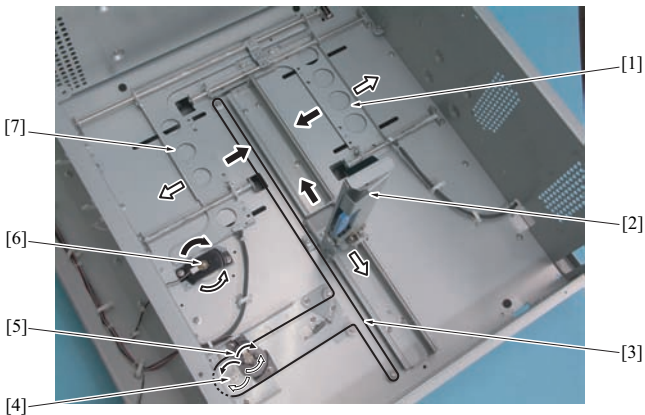
- Once the tray is set and the paper empty sensors /1 (PS3), /2 (PS7), and /3 (PS11) detect the paper, the paper lift motors /1 (M7), /2 (M8), and /3 (M9) turn ON and move up the paper lift plate.
- When the upper limit sensors /1 (PS5), /2 (PS9), and /3 (PS13) turns ON, M7, M8, and M9 stop.
- When PS5, PS9, and PS13 turn OFF from ON during printing operation, M7, M8, and M9 turn ON again. The paper lift plate goes up until PS5, PS9, and PS13 turn ON, and then M7, M8, and M9 turn OFF.

2.3.2 Size detection control

There are 2 types of the paper size detection: detection in the main scan direction and detection in the sub scan direction.

(1) Detection mechanism

- The CD paper size VR /1 (VR2), /2 (VR5), and /3 (VR8) [6] detect the size in the main scan direction.
- The paper side guide /Fr mounting plate [7] rotates the gears of VR2, VR5, and VR8 directly to change the resistance value and detects the wide 0.628mm (0.314mm at one side of the paper side guide) for each 1° rotation.
- The FD paper size VR /1 (VR3), /2 (VR6), and /3 (VR9) [5] detect the size in the sub scan direction.
- When the paper trailing edge guide [2] is moved, the wire [3] rotates the pulley [4], changes the resistance value of VR3, VR6, and VR9, and detects 1.129mm for each 1° rotation.
- For the paper sizes shown below, it is necessary to set the paper size in the user mode, selecting [Tray Setting] - [Size Setting] - [Detection Size Setting].
 - A5, 5 1/2 x 8 1/2
 - 8 x 13, 8 1/4 x 13, 8 1/2 x 13, 8 1/8 x 13 1/4, or 8 1/2 x 14
 - SRA3, 12 x 18



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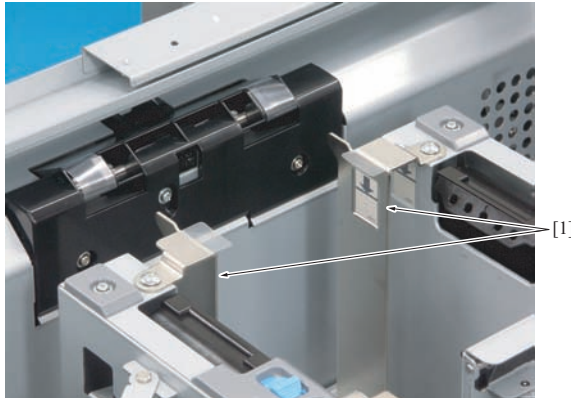
[1] Paper side guide /Rr mounting plate	[2] Paper rear guide
[3] Wire	[4] Pulley
[5] FD paper size VR/1 (VR3), /2 (VR6), /3 (VR9)	[6] CD paper size VR/1 (VR2), /2 (VR5), /3 (VR8)
[7] Paper side guide /Fr mounting plate	-

(2) Guide shift amount

- The following list shows the shift amount of the paper side guide and the paper trailing edge guide.

	Minimum position	Maximum position	Changeable amount
Gap between paper side guides	140mm *1	324mm	190mm
Paper rear guide	133mm	463mm	359.4mm

- *1 When the wide is shorter than 140mm, use the small size guides [1]. The gap between the small size guides is 95mm.



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[1] Small size guide	-
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(3) Operation timing

- It is informed to the main body after specified time when tray is set.

2.3.3 Air control

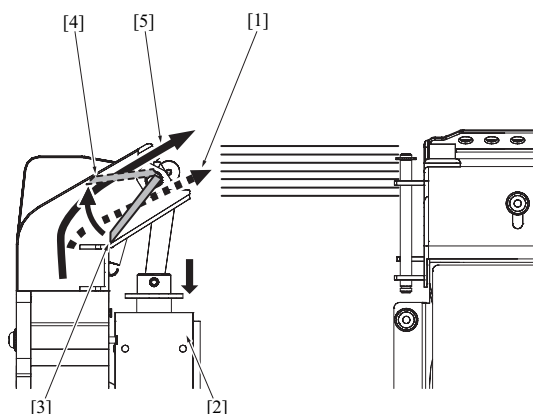
- Each tray has 4 fans; the paper assist fans /Fr and /Rr, and the paper leading edge separation fans /Fr and /Rr.

(1) Air mechanism in the main scan direction

- The paper side guides /Fr and /Rr have the paper assist fans /Fr and /Rr.
It blows the air to the paper from both sides (back and forth) in the main scan direction to float the paper to be fed.
It can control the rotation number of the paper feed assist fans /Fr and /Rr. It controls the number by the paper type/weight.
Tray1: Paper feed assist fan /Fr1 (FM1), /Rr1 (FM2)
Tray2: Paper feed assist fan /Fr2 (FM5), /Rr2 (FM6)
Tray3: Paper feed assist fan /Fr3 (FM9), /Rr3 (FM10)
- The intake of the paper assist fans /Fr and /Rr has the shutters /Fr and /Rr which are opened by each of the shutter solenoids /Fr and /Rr and control the air volume up or down.
When the shutter solenoid turns ON, the shutter closes to reduce the air volume.
Tray1: Shutter solenoid /Fr1 (SD4), /Rr1 (SD5)
Tray2: Shutter solenoid /Fr2 (SD6), /Rr2 (SD7)
Tray3: Shutter solenoid /Fr3 (SD8), /Rr3 (SD9)

(2) Air mechanism in the sub scan direction

- The paper leading edge separation fans /Fr and /Rr are at the paper leading edge side.
It blows the air to the paper leading edge to float and separate the paper.
Tray1: Paper leading edge separation fan /Fr1 (FM3), /Rr1 (FM4)
Tray2: Paper leading edge separation fan /Fr2 (FM7), /Rr2 (FM8)
Tray3: Paper leading edge separation fan /Fr3 (FM11), /Rr3 (FM12)
- The paper leading edge shutter is at the duct exit, and the paper leading edge shutter solenoid /1 (SD10), /2 (SD11), and /3 (SD12) [2] control the angle of blowing air.
- When SD10, SD11, and SD12 are OFF [3], it blows the air to the upper side of paper [5] to separate the paper.
- When SD10, SD11, and SD12 are ON [4], it blows the air from the leading edge side [1] to float the paper.



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[1] Air when it is ON	[2] Paper leading edge shutter solenoid /1 (SD10), /2 (SD11), /3 (SD12)
[3] Paper leading edge shutter when it is OFF	[4] Paper leading edge shutter when it is ON
[5] Air when it is OFF	-

- When the paper is floating with SD10, SD11, SD12 ON, the paper side guide shutter opens and increases the air volume with the shutter solenoids /Fr1 (SD4), /Rr1 (SD5), /Fr2 (SD6), /Rr2 (SD7), /Fr3 (SD8), and /Rr3 (SD9) turning OFF.
- When SD10, SD11, and SD12 are OFF, SD4, SD5, SD6, SD7, SD8, and SD9 turn ON and assist the separation by closing the paper side guide shutter and decreasing the air volume.
- This operation brings the stable floating, separation, and suction.

(3) Air volume control by paper

- The air volume control of the paper assist fans /Fr and /Rr and the paper leading edge separation fans /Fr and /Rr is automatically set by the paper type, the size and the weight in the following table. This setting can be set manually with the operation panel. The number 1 to 9 on the operation panel applies to 20% to 100%.

(4) Air-blow setting table by paper type

(a) Paper length: less than 160mm

Type of paper	Air-Assist setting	Weight (g/m ²)									
		40 to 49	50 to 61	62 to 71	72 to 91	92 to 130	131 to 161	162 to 216	217 to 244	245 to 300	301 to 350
Coat	Lead	6	6	4	7	9	9	9	9	9	9
	Side	0	0	4	4	4	7	9	9	9	9
PrePrinted	Lead	6	6	4	4	7	9	9	9	9	9
	Side	0	0	4	4	4	7	7	9	9	9
Fine/Plain paper	Lead	6	6	4	4	7	9	9	9	9	9
	Side	0	0	4	4	4	7	7	9	9	9
Book/News / Embossed	Lead	6	6	4	4	7	9	9	Unable to select		
	Side	0	0	4	4	4	7	7			

(b) Paper length: 160mm or longer, B5 (182mm) or shorter

Type of paper	Air-Assist setting	Weight (g/m ²)									
		40 to 49	50 to 61	62 to 71	72 to 91	92 to 130	131 to 161	162 to 216	217 to 244	245 to 300	301 to 350
Coat	Lead	1	2	4	7	9	9	9	9	9	9
	Side	2	2	4	4	4	7	9	9	9	9
PrePrinted	Lead	1	2	4	4	7	9	9	9	9	9
	Side	2	2	4	4	4	7	7	9	9	9
Fine/Plain paper	Lead	1	2	4	4	7	9	9	9	9	9
	Side	2	2	4	4	4	7	7	9	9	9
Book/News / Embossed	Lead	1	2	4	4	7	9	9	Unable to select		
	Side	2	2	4	4	4	7	7			

(c) Paper length: B5 (182mm) or longer, A4S (297mm) or shorter

Type of paper	Air-Assist setting	Weight (g/m ²)									
		40 to 49	50 to 61	62 to 71	72 to 91	92 to 130	131 to 161	162 to 216	217 to 244	245 to 300	301 to 350

Coat	Lead	1	2	4	7	9	9	9	9	9	9
	Side	2	2	4	4	4	7	9	9	9	9
PrePrinted	Lead	1	1	2	4	7	9	9	9	9	9
	Side	2	2	2	4	4	7	7	9	9	9
Fine/Plain paper	Lead	1	1	2	7	7	9	9	9	9	9
	Side	2	2	2	2	4	7	7	9	9	9
Book/News / Embossed	Lead	1	1	2	7	7	9	9	Unable to select		
	Side	2	2	2	2	4	7	7			

(d) Paper length: longer than A4S (297mm)

Type of paper	Air-Assist setting	Weight (g/m ²)									
		40 to 49	50 to 61	62 to 71	72 to 91	92 to 130	131 to 161	162 to 216	217 to 244	245 to 300	301 to 350
Coat	Lead	1	2	4	7	9	9	9	9	9	9
	Side	2	2	4	4	4	7	9	9	9	9
PrePrinted	Lead	1	1	2	4	7	9	9	9	9	9
	Side	2	2	2	4	4	7	7	9	9	9
Fine/Plain paper	Lead	1	1	2	4	6	9	9	9	9	9
	Side	2	2	2	2	4	7	7	9	9	9
Book/News / Embossed	Lead	1	1	2	4	6	9	9	Unable to select		
	Side	2	2	2	2	4	7	7			

(e) Paper wide 138mm or less (use small guide)

Type of paper	Air-Assist setting	Weight (g/m ²)									
		40 to 49	50 to 61	62 to 71	72 to 91	92 to 130	131 to 161	162 to 216	217 to 244	245 to 300	301 to 350
Coat	Lead	1	2	4	4	7	9	9	9	9	9
	Side	2	2	4	4	4	7	9	9	9	9
PrePrinted	Lead	1	1	2	4	7	9	9	9	9	9
	Side	2	2	2	2	2	7	7	9	9	9
Fine/Plain paper	Lead	1	1	2	4	7	9	9	9	9	9
	Side	2	2	2	2	2	7	7	9	9	9
Book/News / Embossed	Lead	1	1	2	4	7	9	9	Unable to select		
	Side	2	2	2	2	2	7	7			

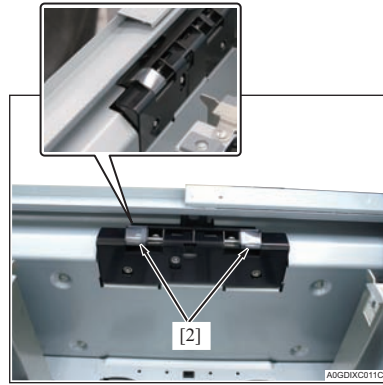
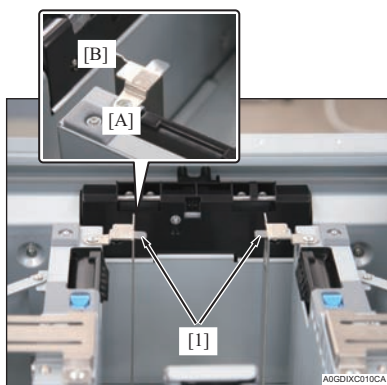
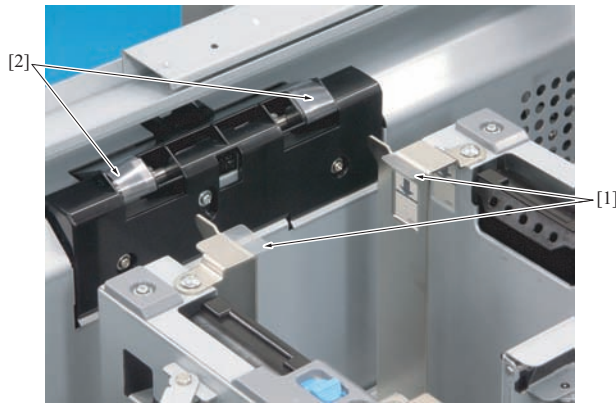
(f) Paper wide 138mm or less (use small guide) and paper length less than 160mm

Type of paper	Air-Assist setting	Weight (g/m ²)									
		40 to 49	50 to 61	62 to 71	72 to 91	92 to 130	131 to 161	162 to 216	217 to 244	245 to 300	301 to 350
Coat	Lead	6	6	6	4	7	9	9	9	9	9
	Side	0	0	0	4	4	7	9	9	9	9
PrePrinted	Lead	6	6	6	4	7	9	9	9	9	9
	Side	0	0	0	2	2	7	7	9	9	9
Fine/Plain paper	Lead	6	6	6	4	7	9	9	9	9	9
	Side	0	0	0	2	2	7	7	9	9	9
Book/News / Embossed	Lead	6	6	6	4	7	9	9	Unable to select		
	Side	0	0	0	2	2	7	7			

- When using the paper in the small size (paper width 138mm or shorter) or in the short size (paper length 160mm or shorter), apply 2 kinds of regulation sheets to enhance the feedability.
- For the short size, apply the regulation sheet /2 [2] to adjust the air volume. For the small size, apply the regulation sheet /1 [1] to regulate the paper floating.

Note

- For the small size, be sure to use not only the regulation sheet /1 but also the duct lock.
- Make sure to put the regulation sheet /1 in using the small-size paper.
- Make sure to put the regulation sheet /2 only when a trouble occurs in using the short-size paper.

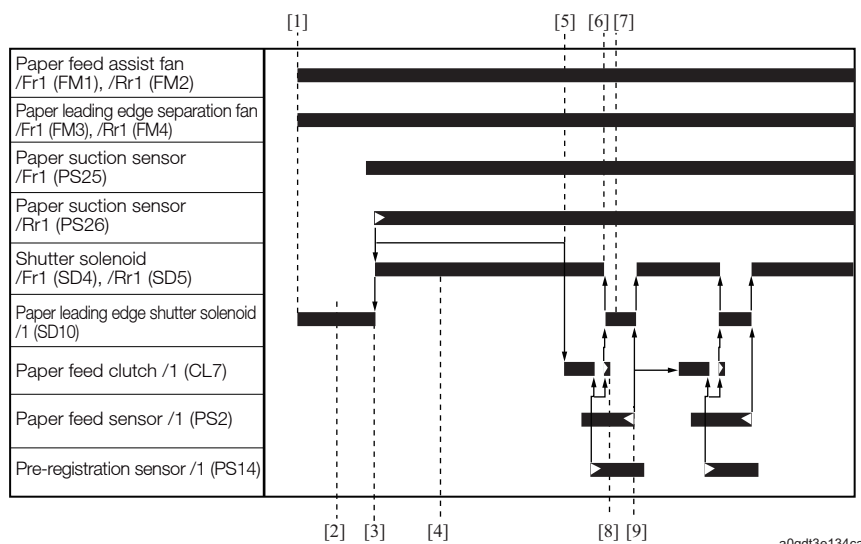


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- Application basis of the regulation sheets /1 [1] and /2 [2]
 - Be sure to apply the position A as the basis.
 - Be sure that the sticking area of the sheet does not come out from the position B.

(5) Operation timing

- It explains the operation timing by taking the tray1 as an example.
- When receiving a print job [1], the paper leading edge separation fans /Fr1 (FM3), /Rr1 (FM4), the paper leading edge shutter solenoid /1 (SD10), and the paper feed assist fans /Fr1 (FM1), /Rr (FM2) turn ON and float the paper [2].
- When the paper suction sensors /Fr1 (PS25), /Rr1 (PS26) on the paper feed suction section turn ON with paper floating, SD10 turns OFF and the shutter solenoids /Fr1 (SD4) and /Rr1 (SD5) turn ON and decreases the air volume of the paper side guide [3] to separate the paper [4].
- For the 1st sheet, the conveyance by the paper feed belt starts [5] with the paper feed clutch /1 (CL7) turning ON after the specified time when the fan air volume gets stabilized.
- To assist the conveyance by the pre-registration roller nipping the paper, after the specified time when CL7 turns ON, SD10 turns ON again and SD4 and SD5 turn OFF [6] to float the 2nd sheet [7]. At this time, CL7 turns OFF [8] right after the operation to prevent the double feed.
- When the paper feed sensor /1 (PS2) detects the trailing edge of the 1st sheet, SD10 turns OFF and SD4 and SD5 turn ON to separate the 2nd sheet [9].
- FM1 and FM2 turn OFF when the image writing completes. FM3 and FM4 turn OFF when the printing completes.



[1]	Start button ON	[2]	Floating paper
[3]	Switch to paper separation air	[4]	Separating paper
[5]	Start of paper feed belt conveyance	[6]	Switch to paper float air
[7]	Floating 2nd paper	[8]	Stop of double feed prevention
[9]	Separation of 2nd paper	-	

2.3.4 Paper empty detection control

- The paper empty sensors /1 (PS3), /2 (PS7) and /3 (PS11) detect the paper empty in the tray.

2.3.5 Remaining paper detection control

The remaining paper VR/1 (VR1), /2 (VR4) and /3 (VR7) that are interlocked through the pulley and the gear with the paper lift plate detects the remaining paper.

The remaining paper quantity is detected in the following 6 stages according to the resistance value, and the main body is informed of the detection.

(1) Tray1

- No Paper (↓ Flashing) : 0
- Stage 1 (displayed in yellow): 14.8% or less
- Stage 2 (displayed in yellow): 25% or less
- Stage 4 (displayed in white): 50% or less
- Stage 5 (displayed in white): 75% or less
- Stage 7 (displayed in white): 76% or more

(2) Tray2, 3

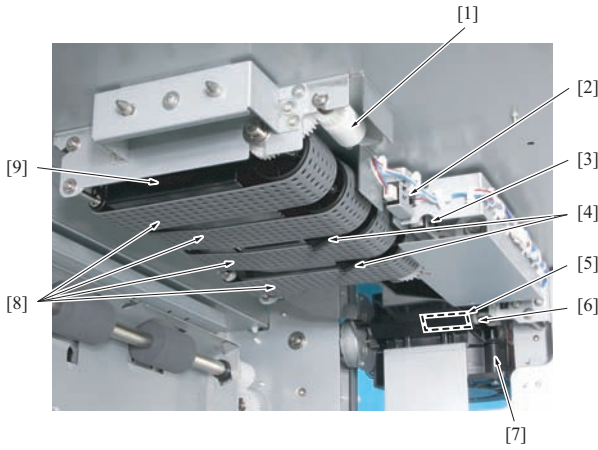
- No Paper (↓ Flashing) : 0
- Stage 1 (displayed in yellow): 10.8% or less
- Stage 2 (displayed in yellow): 25% or less
- Stage 4 (displayed in white): 50% or less
- Stage 5 (displayed in white): 75% or less
- Stage 7 (displayed in white): 76% or more

2.3.6 Tray lock control

- Each tray is locked by the tray lock lever.
- When it detects that either of the handle release sensors /1 (PS4), /2 (PS8) and /3 (PS12) of the trays 1 to 3 turns OFF, either of the tray lock solenoids /1 (SD1), /2 (SD2) and /3 (SD3) of the corresponding tray turns ON to bring up the tray lock lever and release the lock, thus allowing the tray to be pulled out.
- When it finds that any other sensor turns OFF while either of the sensors PS4, PS8 and PS12 is OFF, any of the solenoids SD1, SD2 and SD3 other than the one that has already turned ON does not turn ON. It prevents 2 or more trays from being pulled out at the same time.
- When a jam that affects the tray and the exit conveyance section occurs, the tray remains being locked until the jammed paper is removed. Doing this prevents the paper from being torn.

3. PAPER FEED SUCTION SECTION

3.1 Configuration

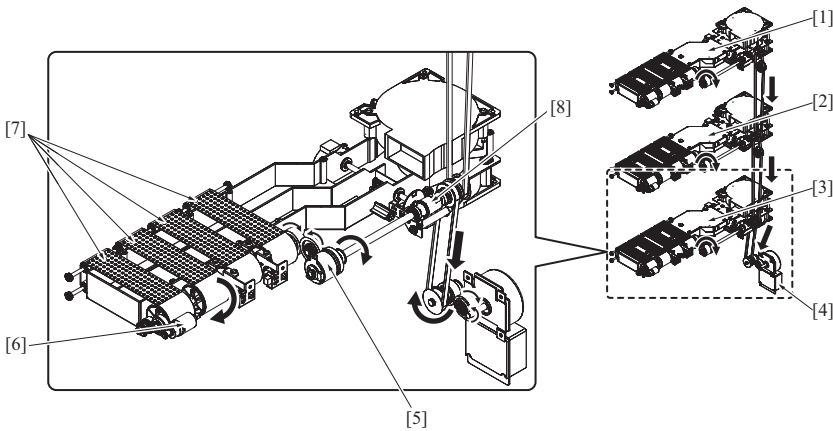


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[1]	Torque limiter	[2]	Paper suction sensor /Fr1 (PS25), /Fr2 (PS27), /Fr3 (PS29)
[3]	Paper suction sensor /Rr1 (PS26), /Rr2 (PS28), /Rr3 (PS30)	[4]	Actuator (paper suction detection)
[5]	Duct shutter	[6]	Paper suction fan /1 (FM13), /3 (FM15), /5 (FM17)
[7]	Paper suction fan /2 (FM14), /4 (FM16), /6 (FM18)	[8]	Paper feed belt
[9]	Suction duct		-

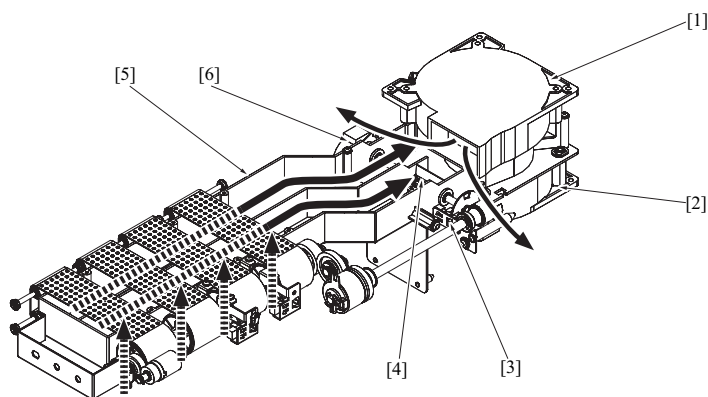
3.2 Drive

(1) Paper feed drive



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[1]	Paper feed suction unit /1	[2]	Paper feed suction unit /2
[3]	Paper feed suction unit /3	[4]	Paper feed belt motor (M2)
[5]	Paper feed clutch /1 (CL7), /2 (CL8), /3 (CL9)	[6]	Torque limiter
[7]	Paper feed belt	[8]	Coupling

(2) Paper feed suction/shutter drive

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[1] Paper suction fan /1 (FM13), /3 (FM15), /5 (FM17)	[2] Paper suction fan /2 (FM14), /4 (FM16), /6 (FM18)
[3] Shutter home sensor /1 (PS37), /2 (PS38), /3 (PS39)	[4] Suction shutter
[5] Suction duct	[6] Shutter motor /1 (M10), /2 (M11), /3 (M12)

3.3 Operation**3.3.1 Suction control****(1) Shutter operation**

- The inside of the paper feed suction duct is separated into 2 and the duct at the trailing edge side has the suction shutter.
- Shutter motors /1 (M10), /2 (M11), and /3 (M12) drive the suction shutter to control the absorption area.
- By closing the suction shutter to stop suctioning at the trailing edge side, it enables the suction applied to the paper size and prevents the double feed in the small size.
- When the shutter home sensors /1 (PS37), /2 (PS38), and /3 (PS39) turn ON, the suction shutter opens fully in a horizontal position to conduct the suctioning.

(2) Shutter control

- 2 kinds of controls are conducted depending on the paper size.

		Paper length in the sub scan direction		
		150mm or less	More than 150mm but less than 210mm	210mm or longer
Paper length in the main scan direction	138mm or less	Control B	Control A	Control B
	138mm or more	Control A	Control A	Control B

(a) Control A

- When the start button is turned ON, the shutter motors /1 (M10), /2 (M11), and /3 (M12) turn ON from the position where the shutter home sensors /1 (PS37), /2 (PS38), and /3 (PS39) are ON (open), and turn OFF after specified time. They stop at the suction shutter close position and the paper is fed.

(b) Control B

- When the start button turns ON, the paper feed is conducted while PS37, PS38, and PS39 are at ON position (open).

(3) Suction fan control

- The paper suction fans /1 (FM13), /3 (FM15), /5 (FM17), /2 (FM14), /4 (FM16), /6 (FM18) turn ON when receiving a print job, and turn OFF when the printing completes.
- It does not control the rotation number of the suction fan.

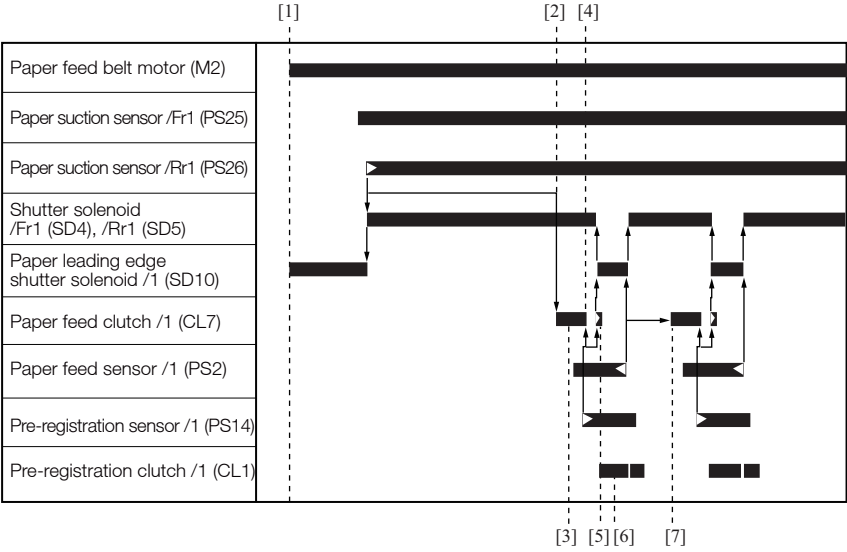
3.3.2 Paper feed belt control**(1) Operation**

- The paper feed belt motor (M2) drives the paper feed belt via the paper feed clutches /1 (CL7), /2 (CL8), and /3 (CL9).

(2) Control

- It explains the operation timing by taking the tray1 as an example.
- When the start button turns ON, M2 turns ON [1].
- After the specified time [2] since the paper suction sensors /Fr1 (PS25), /Rr1 (PS26) turn ON, CL7 turns ON with suctioning paper and drives the paper feed belt to feed the paper [3].
- After the specified time since the pre-registration sensor /1 (PS14) detects the leading edge of paper, the pre-registration roller forms the loop to adjust the skew and CL7 turns OFF [4].
- After the specified time since it turns OFF, it turns ON again to assist the nipping of the pre-registration roller [5], and then it turns OFF.

- With this operation, the 2nd sheet of paper which already sticks to the paper feed belt is not conveyed by CL7 turning OFF. Only the 1st sheet of paper is conveyed [6] by the pre-registration roller /1 which already receives the drive from the paper feed motor (M1) by the pre-registration clutch /1 (CL1) turning ON.
- After the specified time since PS2 detects the trailing edge of the 1st sheet, CL7 turns ON again [7] to feed the 2nd sheet.
- When one of PS25 or PS26 is ON or when both of PS25 and PS26 are OFF, it stands by for specified time and CL7 does not turn ON. This is the standby to complete the suctioning.

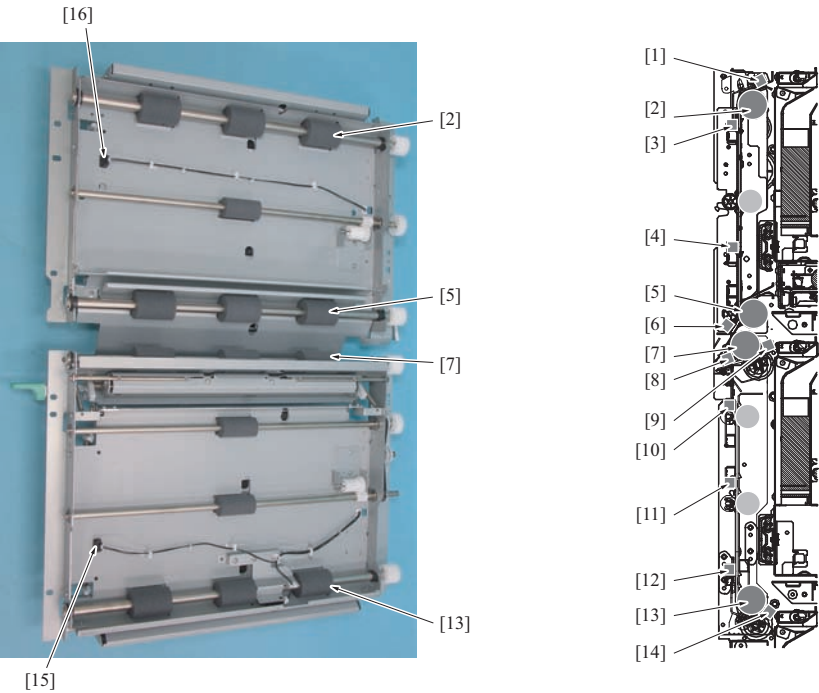


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[1]	Start button ON	[2]	Start of paper feed belt conveyance
[3]	Paper feed belt conveyance	[4]	Pause of skew adjustment
[5]	Assist to the registration roller	[6]	Registration roller conveyance
[7]	Start of 2nd sheet of paper conveyance	-	

4. VERTICAL CONVEYANCE SECTION

4.1 Configuration

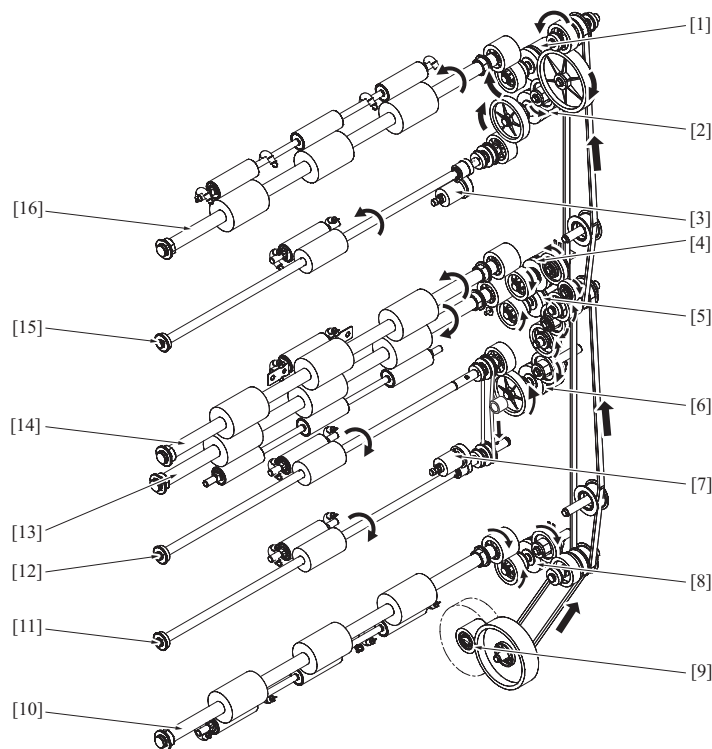


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[1]	Pre-registration sensor /1 (PS14)	[2]	Pre-registration roller (Tray1)
[3]	Vertical conveyance sensor /1 (PS15)	[4]	Intermediate sensor /Up (PS16)
[5]	Horizontal registration roller	[6]	Loop sensor /1 (PS17)
[7]	Pre-registration roller (Tray2)	[8]	Loop sensor /2 (PS19)
[9]	Pre-registration sensor /2 (PS18)	[10]	Loop sensor /3 (PS23)
[11]	Intermediate sensor /Lw (PS22)	[12]	Vertical conveyance sensor /3 (PS21)
[13]	Pre-registration roller (Tray3)	[14]	Pre-registration sensor /3 (PS20)
[15]	Vertical conveyance door switch /Lw (SW2)	[16]	Vertical conveyance door switch /Up (SW1)

4.2 Drive

(1) Operation



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[1] Pre-registration clutch /1 (CL1)	[2] Intermediate clutch /1 (CL2)
[3] Torque limiter /Up	[4] Horizontal conveyance exit clutch (CL6)
[5] Pre-registration clutch /2 (CL3)	[6] Intermediate clutch /2 (CL4)
[7] Torque limiter /Lw	[8] Pre-registration clutch /3 (CL15)
[9] Paper feed motor (M1)	[10] Pre-registration roller /3 (Tray3)
[11] Intermediate conveyance roller /3	[12] Intermediate conveyance roller /2
[13] Pre-registration roller /2 (Tray2)	[14] Horizontal registration roller
[15] Intermediate conveyance roller /1	[16] Pre-registration roller /1 (Tray1)

4.3 Operation

4.3.1 Pre-registration control

- When the paper feed starts, paper is sent out to the pre-registration roller by the paper feed belt.
- When the paper strikes the pre-registration roller that is stopped, a loop is formed to adjust paper skew.
- When the pre-registration clutches /1 (CL1), /2 (CL3) and /3 (CL5) turn ON, the driving force of the paper feed motor (M1) is transmitted to the pre-registration rollers 1/, /2 and /3 to convey paper in the direction of the main body.

4.3.2 Conveyance control

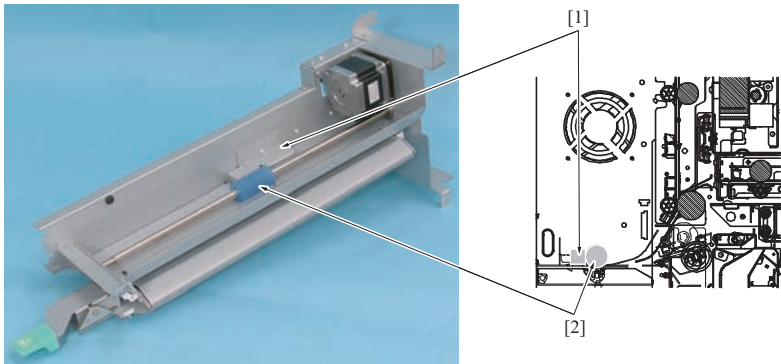
- For the vertical conveyance, the driving force of the paper feed motor (M1) is transmitted by turning ON and OFF the intermediate clutches /1 (CL2) and /2 (CL4), and the pre-registration clutches /1 (CL1), /2 (CL3) and /3 (CL5).
- For the conveyance from the horizontal conveyance section, the driving force of the paper feed motor (M1) is transmitted by turning ON and OFF the horizontal conveyance exit clutch (CL6).
- Paper that is fed from tray1 is conveyed to the intermediate conveyance rollers /1 driven through the pre-registration roller /1 and CL2 which are driven by the CL1, and then conveyed to the exit conveyance roller. When the vertical conveyance roller /1 (PS15) detects the trailing edge of paper, CL2 turns off.
- Paper that is fed from tray2 is conveyed to the exit conveyance roller by the pre-registration roller /2 that is driven via CL3.
- Paper that is fed from tray3 is conveyed to the intermediate conveyance rollers /3 and /2 driven through the pre-registration roller /3 and CL4 which are driven by CL5, and then conveyed to the exit conveyance roller.
- When the vertical conveyance roller /2 (PS21) detects the trailing edge of paper, CL4 turns off.
- For the paper from the horizontal conveyance, CL6 turns ON when the horizontal conveyance sensor /5 (PS35) turns ON, and CL6 turns OFF when PS17 detects the trailing edge of the paper.
- A torque limiter is provided on the gear of each intermediate conveyance rollers /1 and /3.
- This prevents paper that is temporarily stopping on the vertical paper feed path from falling off the path and causing a paper jam.
- Since the line speed is different between PF and PI-PFU, the rotation number of the paper feed motor (M1) varies.

PF: 1943.3rpm

PI-PFU: 1559.4rpm

5. EXIT CONVEYANCE SECTION

5.1 Configuration

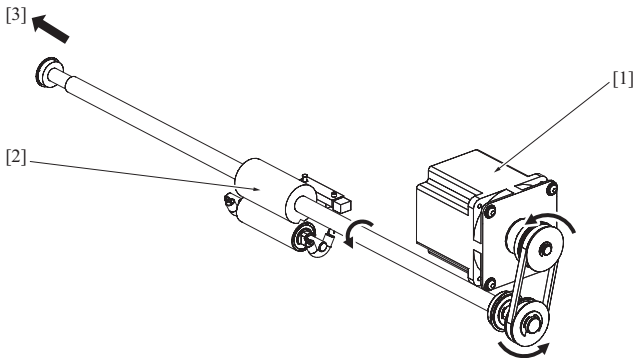


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[1] PF exit conveyance sensor	[2] PF paper exit roller
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5.2 Drive

(1) PF exit conveyance drive



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[1] PF exit conveyance motor (M3)	[2] PF paper exit roller
[3] Front side	-

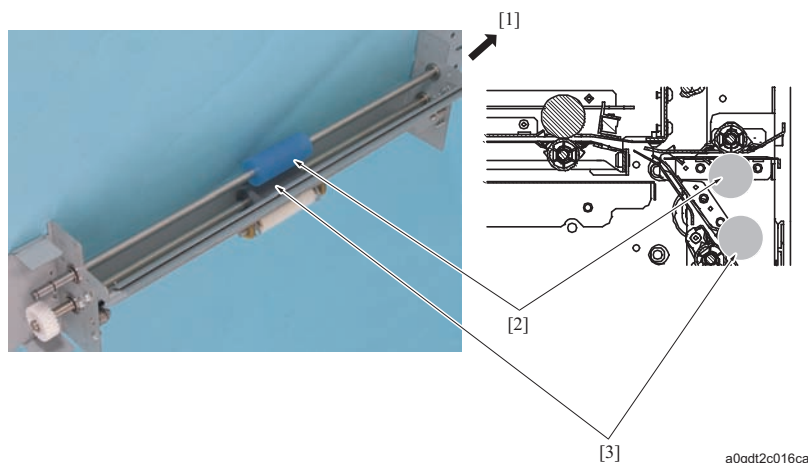
5.3 Operation

5.3.1 Exit conveyance control

- The PF paper exit roller is driven by the PF exit conveyance motor (M3). It starts to rotate at a fixed speed when the loop sensors /1 (PS17), 2/ (PS19) and /3 (PS23) detect paper, and turns OFF when the PF exit sensor (PS24) detects the trailing edge of paper.

6. ENTRANCE CONVEYANCE SECTION

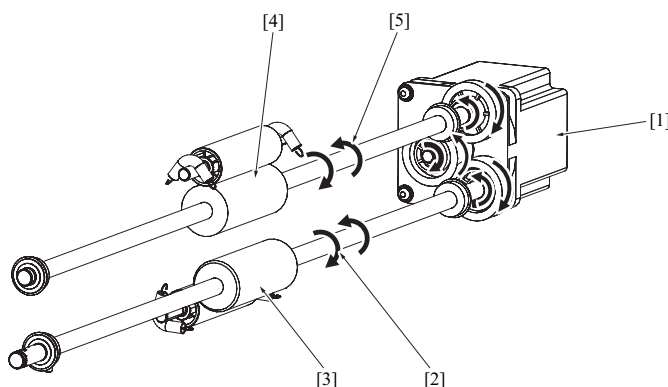
6.1 Configuration



[1]	Front side	[2]	Entrance conveyance roller /Up
[3]	Entrance conveyance roller /Lw	-	

6.2 Drive

(1) Entrance conveyance drive



[1]	Coupling conveyance motor /1 (M4)	[2]	Rotation direction when PF
[3]	Entrance conveyance roller /Lw	[4]	Entrance conveyance roller /Up
[5]	Rotation direction when PI-PFU	-	

6.3 Operation

6.3.1 Entrance conveyance control

- The rotation direction of the coupling conveyance motor /1 (M4) is different between multiple PF and PI-PFU since the conveyance paths of them are different.

(1) Control in the case of multiple PF

- The coupling conveyance motor /1 (M4) conveys at a constant speed of 1250mm/s.

(2) Control in the case of PI-PFU

(a) Main body straight paper exit

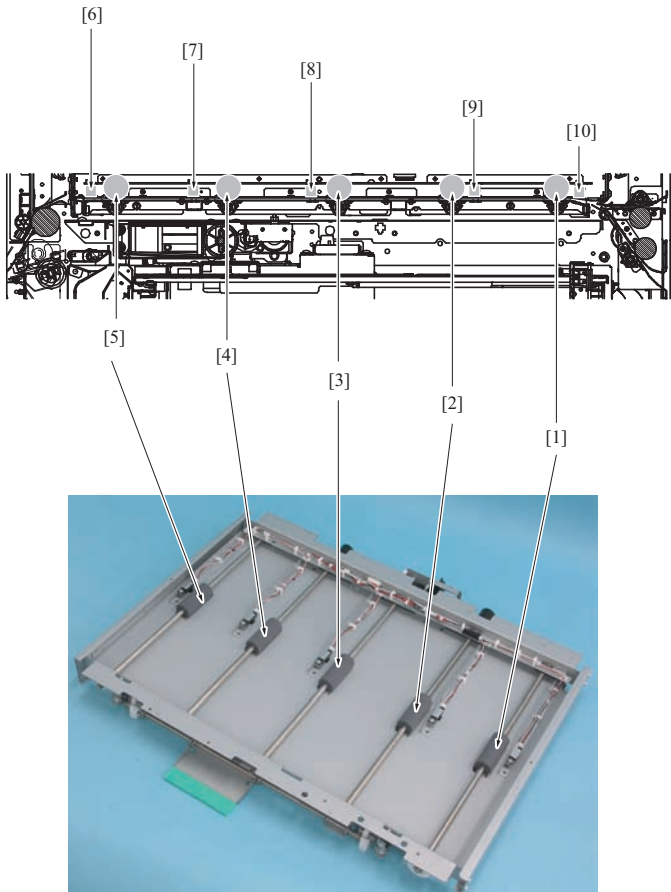
- The coupling conveyance motor /1 (M4) speeds up to , 1000mm/s after specified time (the specified time is depending on main body paper exit 570mm/s, 490mm/s, or 330mm/s) since the paper exit sensor (PS3) of the main body detects the leading edge and turns ON.

(b) Main body reverse paper exit

- The coupling conveyance motor /1 (M4) conveys at a constant speed of 1250mm/s.

7. HORIZONTAL CONVEYANCE SECTION

7.1 Configuration

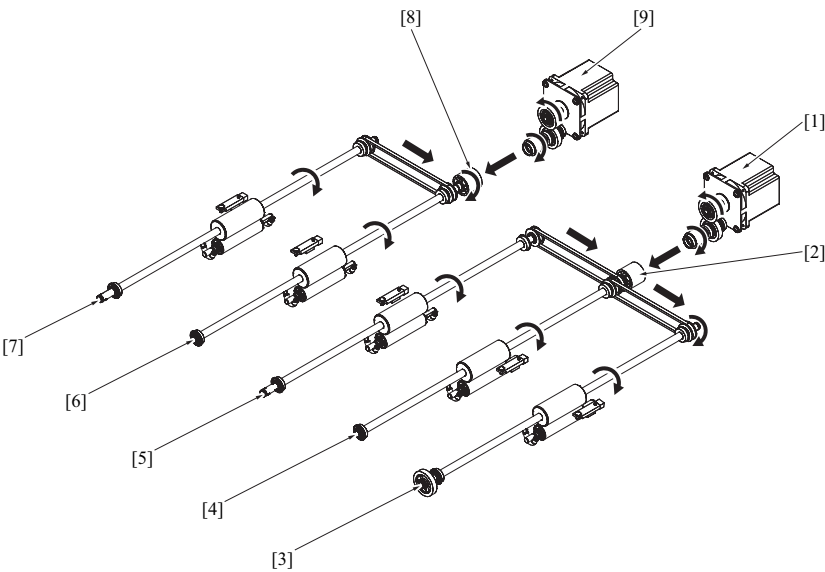


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[1]	Horizontal conveyance roller /1	[2]	Horizontal conveyance roller /2
[3]	Horizontal conveyance roller /3	[4]	Horizontal conveyance roller /4
[5]	Horizontal conveyance roller /5	[6]	Horizontal conveyance roller /5 (PS35)
[7]	Horizontal conveyance roller /4 (PS34)	[8]	Horizontal conveyance roller /3 (PS33)
[9]	Horizontal conveyance roller /2 (PS32)	[10]	Horizontal conveyance roller /1 (PS31)

7.2 Drive

(1) Horizontal conveyance drive



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[1] Coupling conveyance motor /2 (M5)	[2] Coupling
[3] Horizontal conveyance roller /1	[4] Horizontal conveyance roller /2
[5] Horizontal conveyance roller /3	[6] Horizontal conveyance roller /4
[7] Horizontal conveyance roller /5	[8] Coupling
[9] Coupling conveyance motor /3 (M6)	-

7.3 Operation

7.3.1 Horizontal conveyance control

- Since the horizontal conveyance section is unified with the tray1, the tray1 cannot be pulled out during the horizontal conveyance.

(1) Control in the case of multiple PF

- The coupling conveyance motors /2 (M5) and /3 (M6) convey at a constant speed of 1250mm/s.

(2) Control in the case of PI-PFU

(a) Main body straight paper exit

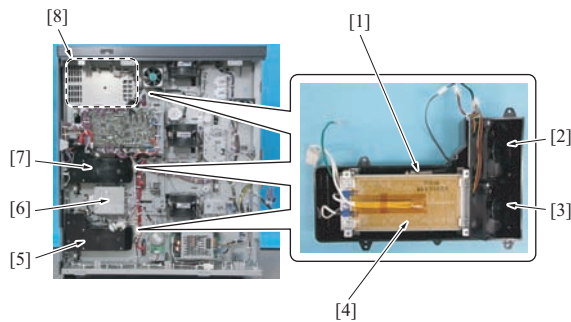
- When the paper length in the sub scan direction is 217mm or longer in main body straight pape exit, the coupling conveyance motor /2 (M5) speeds up to, 1000mm/s after specified time (the specified time is depending on main body paper exit 570mm/s, 490mm/s, or 330mm/s) since the paper exit sensor (PS3) detects the leading edge and turns ON.
- The coupling conveyance motor /3 (M6) conveys at a constant speed of 1000mm/s.

(b) Main body reverse paper exit

- The coupling conveyance motors /2 (M5) and /3 (M6) starts at 1000mm/s and speeds up to 1250mm/s to accommodate to the speed of main body paper exit when the paper exit sensor (PS3) of the main body turns ON and detects the leading edge of the 1st sheet.
- It slows down to 1000mm/s when the horizontal conveyance sensor /5 (PS35) turns ON and detects the leading edge of the paper.
- When the paper trailing edge of the 1st sheet turns OFF PS35, M6 increases the speed to 1250mm/s again.
- When the paper leading edge of the 2nd sheet turns ON the horizontal conveyance sensor /1 (PS31), M5 increases the speed to 1250mm/s again.

8. HT-505 (OPTIONAL)

8.1 Configuration



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[1]	Temperature sensor /5 (TEMS/5), /6 (TEMS/6), /7 (TEMS/7)	[2]	Dehumidifier fan /Rt1 (FM22), /Rt2 (FM24), /Rt3 (FM26)
[3]	Dehumidifier fan /Lt1 (FM23), /Lt2 (FM25), /Lt3 (FM27)	[4]	Dehumidification heater /1 (HTR1), /2 (HTR2), /3 (HTR3)
[5]	Dehumidifier fan heater unit /3	[6]	AC drive board /2 (ACDB/2)
[7]	Dehumidifier fan heater unit /2	[8]	Dehumidifier fan heater unit /1

8.2 Operation

8.2.1 Dehumidifier fan heater control

- 2 units of HT can be installed to PF at maximum. 4 units of HT can be installed to the coupling of 2 PF at maximum (up to 2 units for each PF).
- 6 units can be installed in total if HT is installed to PI-PFU, but ON setting (automatic/forced ON) is available to 4 units at maximum.
- The following order is the priority of ON setting, when 6 units of HT are installed.
 - PFU1 > PFU2 > PI-PFU
 - Tray1 > Tray2 > Tray3
- In this case, [Dehumidify Mode Setting] of PFU1 and PFU2 turns to [Auto] and [Dehumidify Mode] of PI-PFU turns to [Forced Off].
- At this time, [Auto] and [Forced On] of PI-PFU is unselectable.
- However, when [Dehumidify Mode] is set to [Forced Off] on one of the trays of PFU1 or PFU2, [Dehumidify Mode] can be changed to [Auto] or [Forced On] on the tray of PI-PFU.

(1) Dehumidifier fan heater preliminary dry control

- The dehumidification heaters /1 (HTR1), /2 (HTR2), and /3 (HTR3) and the dehumidifier fans /Rt1 (FM22), /Lt1 (FM23), /Rt2 (FM24), /Lt2 (FM25), /Rt3 (FM26), and /Lt3 (FM27) control the dehumidifying with the hot air circulation and prevent the jam occurred in paper feed section.
- When the temperature-humidity sensor (TEM/HUMS) of PF detects the outer humidity 56% or more, HTR1, HTR2, HTR3, and FM22, FM23, FM24, FM25, FM26, FM27 turn ON.
- It can control "Paper Feed Wait during Pre-Drying" from [UTILITY] - [Function Setting] - [PFU Preliminary Dry Setting].

The following table shows the operations.

Setting	Paper feed operation
None	It does not conduct the print wait operation for the preliminary dry. It starts the paper feed operation if it is in the print wait condition.
Provided	When the sub power switch (SW2) turns ON and when the tray is set, it conducts the paper feed wait operation for the preliminary dry. It takes about 6 minutes to 10 minutes for the paper feed wait.

(2) Start condition of the dehumidification mode control

- The dehumidification control can be set to [Auto], [Forced On], or [Forced Off] from [MACHINE] - [Tray Setting] - [Dehumidify Mode Setting].
- The following table shows the operations.

Dehumidify Mode Setting	Paper Feed Wait during Pre-Drying	Paper feed operation
Automatic	None	It conducts the dehumidification heater/ dehumidification fan control by the humidity which the temperature-humidity sensor (TEM/HUMS) detects. However, it does not conduct the paper feed wait during pre-drying.
	Provided	It conducts the dehumidification heater/ dehumidification fan control by the humidity which TEM/HUMS detects. When the sub power switch (SW2) turns ON or when the tray is set, it conducts the paper feed wait during pre-drying depending on the detected humidity.

Forced On	None	It conducts the dehumidification heater/ dehumidification fan control regardless of the detected humidity by TEM/HUMS. It does not conduct the paper feed wait during pre-drying.
	Provided	It conducts the dehumidification heater/ dehumidification fan control regardless of the detected humidity by TEM/HUMS. When SW2 turns ON or when the tray is set, it conducts the paper feed wait during pre-drying depending on the detected humidity.
Forced Off	-	It does not conduct the dehumidification heater/ dehumidification fan control nor the paper feed wait during pre-drying.

(3) Operation contents

- The print operation of the corresponding tray differs depending on the setting of "Paper Feed Wait during Pre-Drying" during dehumidification control.

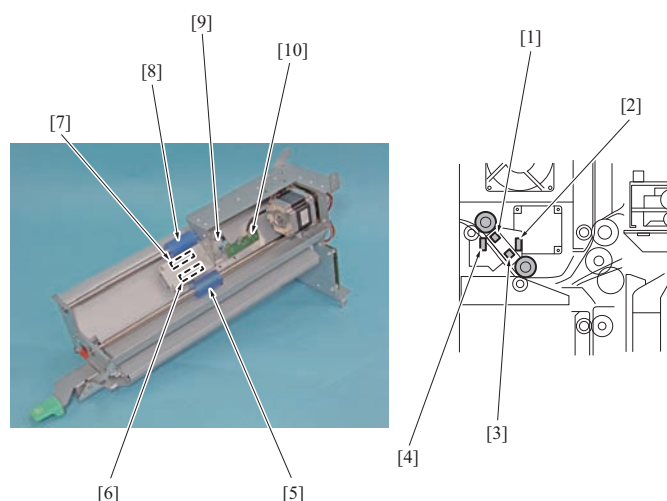
Outer humidity	Paper feed wait control time
55% or less	0 minute
56% to 60%	6 minutes
61 to 65%	
66 to 70%	8 minutes
71 to 75%	
76% or more	10 minutes

(4) Stop condition of the dehumidification mode control

- When the dehumidify mode setting is changed to [Forced Off] during dehumidification control.

9. FA-501 (OPTIONAL)

9.1 Configuration

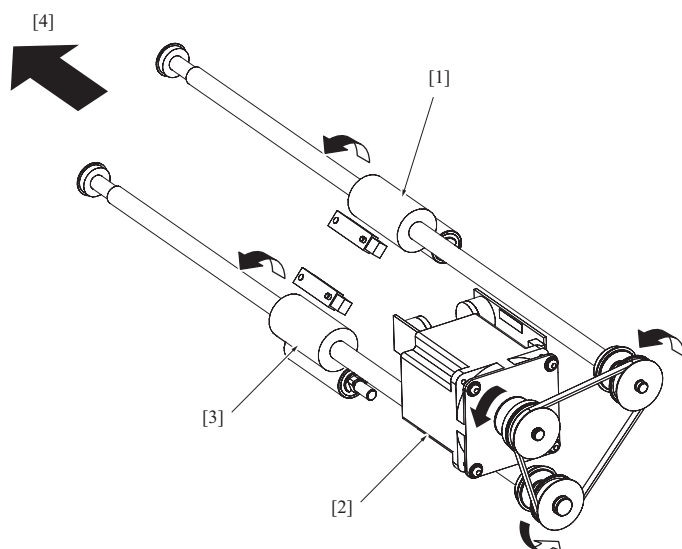


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[1] PF exit conveyance sensor /2 (PS36)	[2] Multi feed detection board /R (MFDBR)
[3] PF exit conveyance sensor /1 (PS24)	[4] Multi feed detection board /S (MFDBS)
[5] PF paper exit roller	[6] PF exit conveyance sensor /1 (PS24)
[7] PF exit conveyance sensor /2 (PS36)	[8] PF Paper exit roller /2
[9] Multi feed detection board /S (MFDBS)	[10] Multi feed detection board /R (MFDBR)

9.2 Drive

(1) Exit conveyance drive



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[1] PF Paper exit roller /2	[2] PF exit conveyance motor (M3)
[3] PF paper exit roller	[4] Front side

9.3 Operation

9.3.1 Exit conveyance control

- PF exit conveyance motor (M3) drives the PF paper exit roller and PF paper exit roller /2.
- M3 drives at a constant speed of 1000mm/s.

9.3.2 Multi feed detection control

- The following table shows the paper types and the weight for which the multi-feed detection is available.

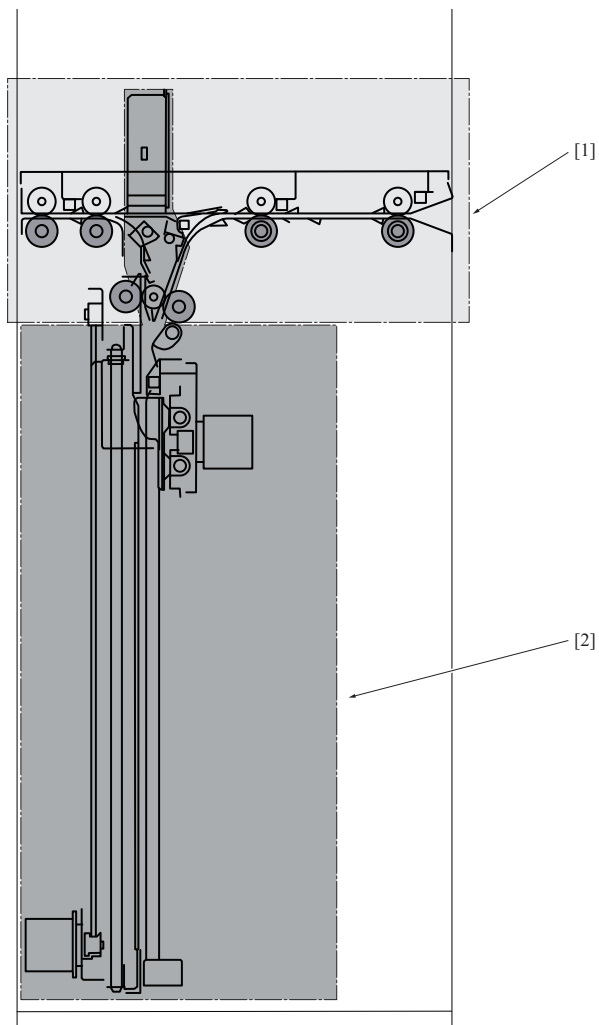
	40 to 49g/m ²	50 to 61g/m ²	62 to 71g/m ²	72 to 91g/m ²	92 to 130g/m ²	131 to 161g/m ²	162 to 216g/m ²	217 to 244g/m ²	245 to 300g/m ²	301 to 350g/m ²
Coat										

PrePrinted	Multi feed detection control: provided	
Fine		
Plain paper		
Book/ News		
Embossed		
Inserting sheet (not printed)		Unable to select

PP THEORY OF OPERATION RU-506

1. OUTLINE

1.1 Unit configuration

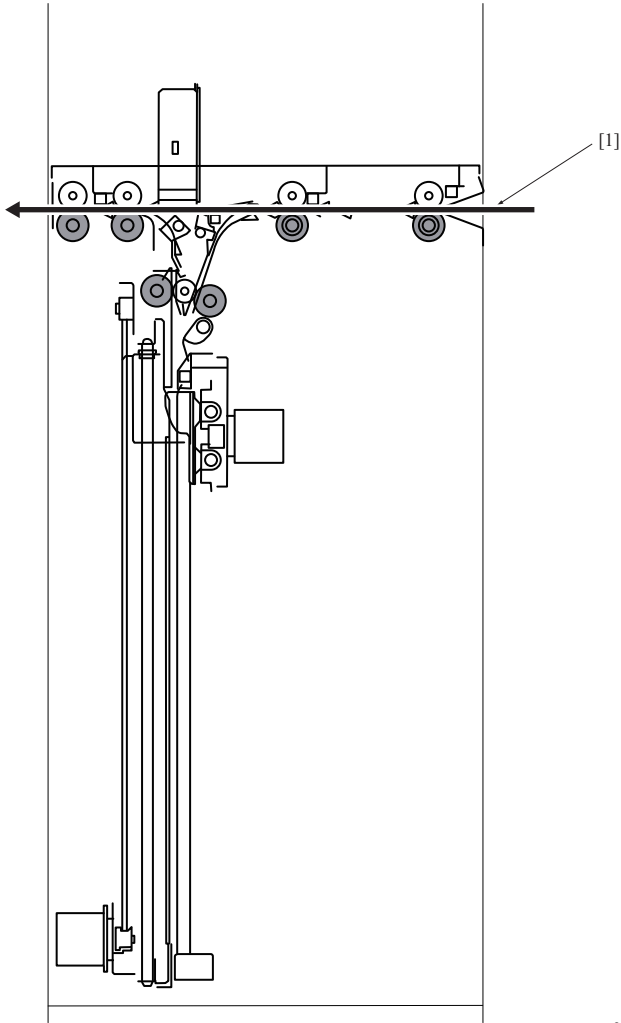


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[1] Conveyance section	[2] Stacker section
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1.2 Paper path

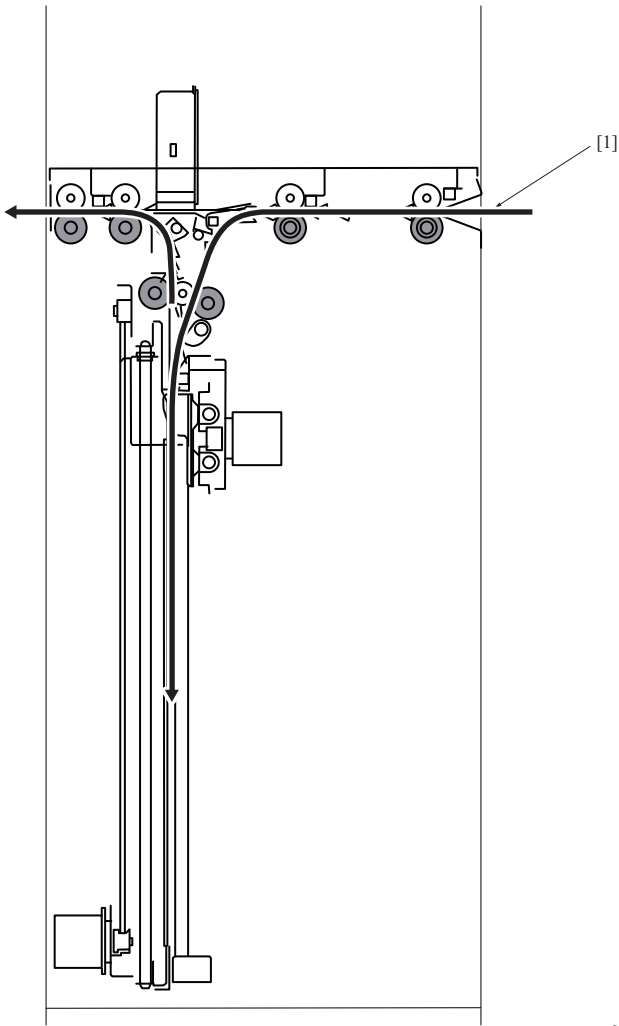
1.2.1 Straight conveyance



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[1]	Straight conveyance path	-
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1.2.2 Reverse/exit conveyance

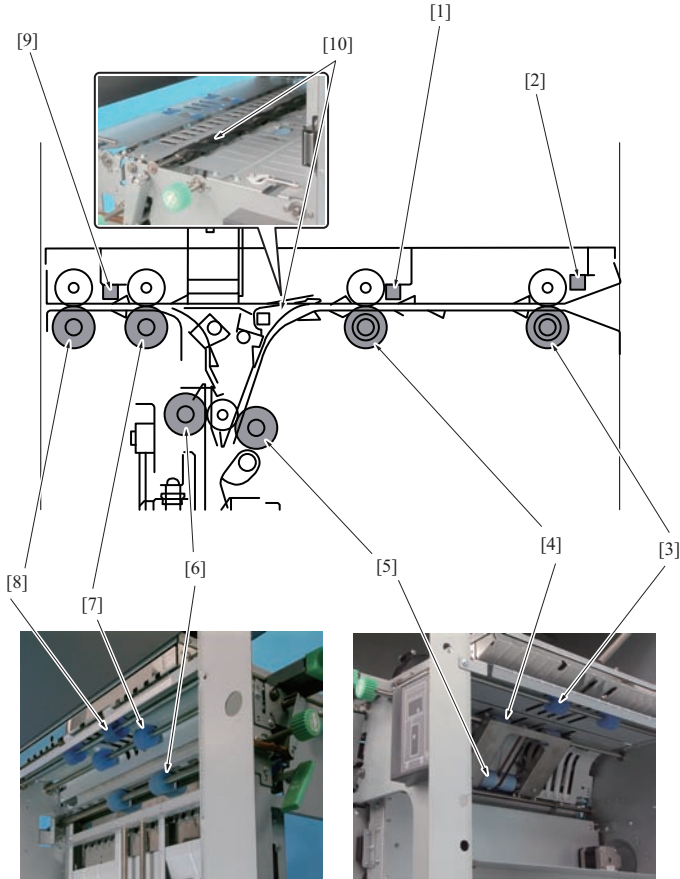


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[1]	Reverse/exit conveyance path	-
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2. CONVEYANCE SECTION

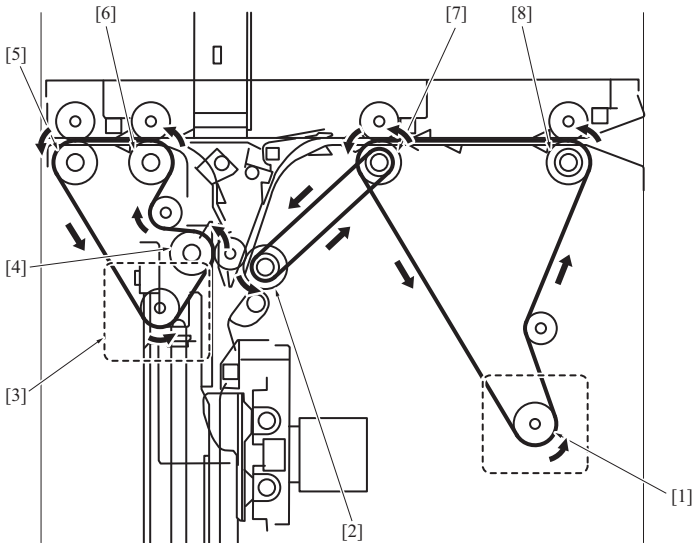
2.1 Configuration



[1]	Entrance sensor (PS1)	[2]	Entrance jam sensor (PS6)
[3]	Entrance roller /1	[4]	Entrance roller /2
[5]	Stacker entrance roller	[6]	Paper refeed roller
[7]	Merging section roller	[8]	Exit roller
[9]	Paper exit sensor (PS2)	[10]	Straight gate

2.2 Drive

2.2.1 Conveyance drive

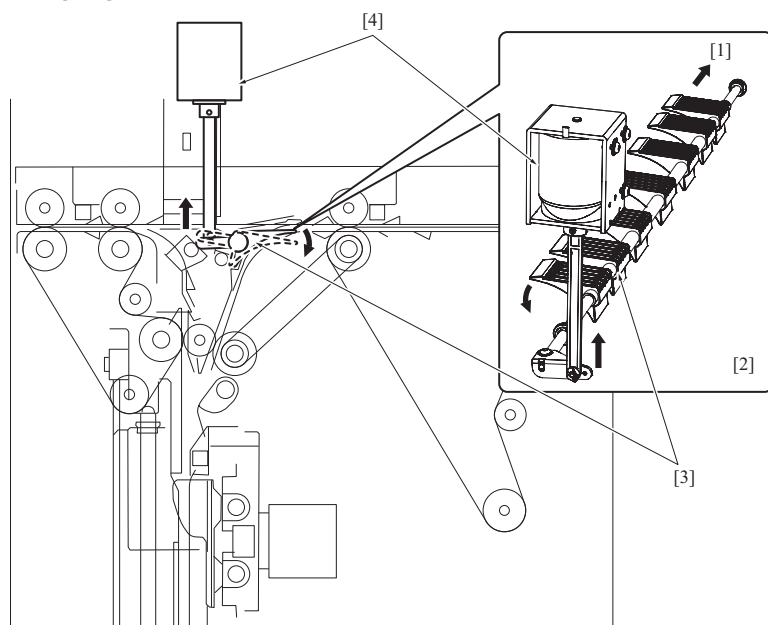


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[1]	Entrance conveyance motor (M1)	[2]	Stacker entrance roller
[3]	Paper exit motor (M2)	[4]	Paper refeed roller

[5] Exit roller	[6] Merging section roller
[7] Entrance roller /2	[8] Entrance roller /1

2.2.2 Straight gate drive



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[1] Front side direction	[2] Rear side
[3] Straight gate	[4] Straight gate solenoid (SD1)

2.3 Operation

2.3.1 Conveyance path switching operation

(1) Straight gate solenoid (SD1) control

The straight gate switches the path to the straight conveyance and the path to the reverse/exit conveyance. The straight gate solenoid (SD1) switches them. When SD1 is OFF, it is set to the reverse/exit conveyance. When SD1 turns ON, the top of the straight gate goes down and works as the straight conveyance path.

(a) In the straight conveyance mode

When the start button turns ON, the straight gate solenoid (SD1) turns ON to switch the conveyance path to the straight conveyance. SD1 turns OFF when the job completes.

(b) In the reverse/exit conveyance mode

In the reverse/exit conveyance mode, the straight gate solenoid (SD1) keeps being OFF and the conveyance path is always set to the reverse/exit conveyance.

2.3.2 Conveyance control

(1) Mechanism

The entrance conveyance motor (M1) and the paper exit motor (M2) conduct the conveyance.

M1 drives the entrance rollers /1, /2 and the stacker entrance roller through the timing belt. M2 drives the paper refeed roller, the paper exit roller, and the merging section roller through the timing belt.

(2) Conveyance line speed switch control

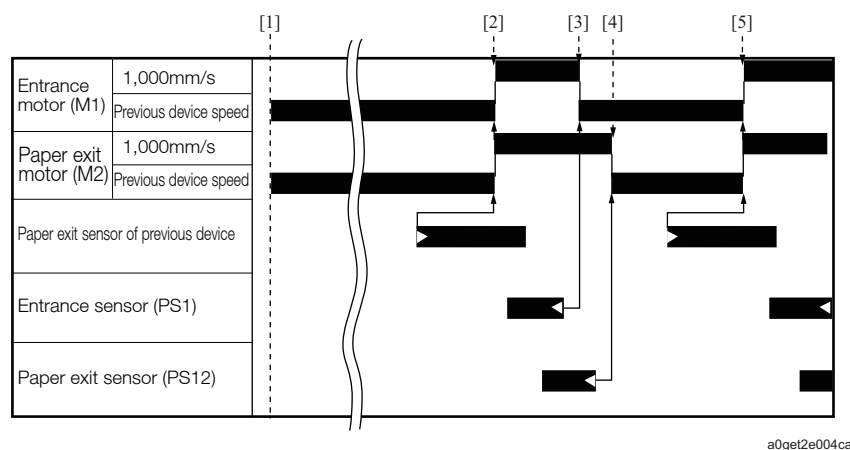
The paper conveyance to RU is conducted in accordance with the conveyance line speed of the previous device, and the paper is exited at the speed 1000mm/s.

In the simplex mode, the double sheets reverse/exit conveyance is conducted to the paper conveyed at the speed 1250mm/s or 570mm/s (in case the continuous copy speed of 1200/1200P is 120 sheets/min.).

In the cases other than mentioned above, the straight conveyance or the single sheet reverse/exit conveyance is conducted depending on the configuration and the mode of the post-process options.

(a) Straight conveyance

When the start button turns ON, the entrance motor (M1) and the paper exit motor (M2) turn ON [1] corresponding to the line speed of previous device. A specified period of time after the paper exit sensor of previous device detects the paper leading edge and turns ON, M1 and M2 accelerate to 1,000mm/s to convey the paper [2]. A specified period of time after the entrance sensor (PS1) detects the paper trailing edge and turns OFF, M1 slows down in accordance with the paper exit speed from previous device. A specified period of time after the paper exit sensor (PS2) detects the paper trailing edge and turns OFF, M2 slows down in accordance with the paper exit speed from previous device. A specified period of time after the paper exit sensor of previous device detects the 2nd paper leading edge, M1 and M2 accelerate to 1,000mm/s again [5]. It repeats these operations until the job completes.

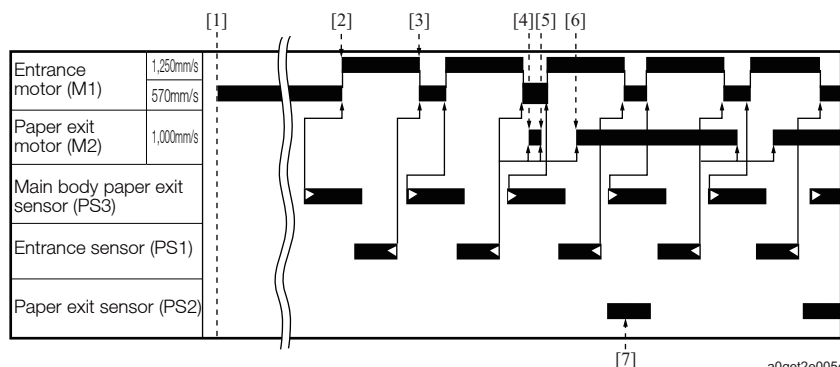


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[1]	ON at the speed of previous device paper exit	[2]	Accelerate to 1,000mm/s
[3]	Slow down to the speed of previous device paper exit (M1)	[4]	Slow down to the speed of previous device paper exit (M2)
[5]	Accelerate to 1,000mm/s	-	

(b) In the double sheets reverse/exit conveyance (1200/1200P only)

When the start button turns ON, the entrance motor (M1) turns ON at the line speed 570mm/s [1]. After the specified time since the paper exit sensor (PS3) of the main body detects the paper leading edge, M1 accelerate to 1,250mm/s [2]. A specified period of time after the entrance sensor (PS1) detects the paper trailing edge and turns OFF, M1 slows down [3]. M1 repeats these operations for each paper. A prescribed period of time after PS1 detects the trailing edge of the 2nd sheet and turns OFF, the paper exit motor (M2) turns ON [4]. After a prescribed period of time, M2 turns OFF [5] and at this time the alignment in FD direction is performed. After another prescribed period of time, M2 turns ON again [6] and refeeds the double sheets of paper and exits them [7].



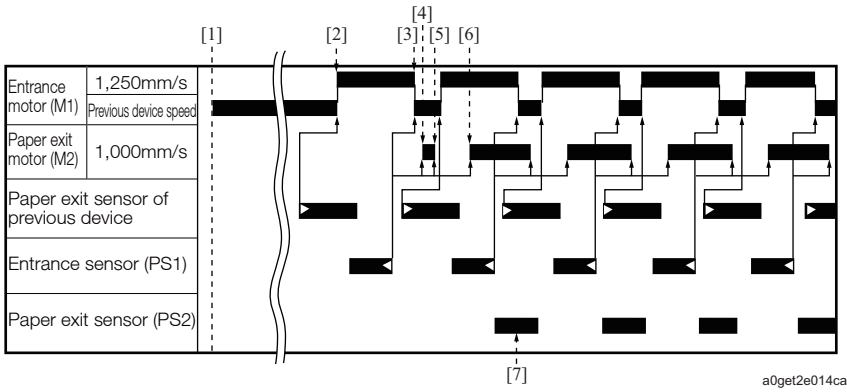
a0get2e005ca

[1]	Start button ON	[2]	Switching to 1,250mm/s
[3]	Deceleration	[4]	M2 ON
[5]	M2 OFF	[6]	M2 ON by paper refeed start
[7]	Paper exit	-	

(c) In the single sheet reverse/exit conveyance

When the start button turns ON, the entrance motor (M1) turns ON corresponding to the line speed of previous device [1]. After the specified time since the paper exit sensor of previous device detects the paper leading edge, M1 accelerate to 1,250mm/s [2]. A specified period of time after the entrance sensor (PS1) detects the paper trailing edge and turns OFF, M1 slows down [3]. M1 repeats these operations for each paper.

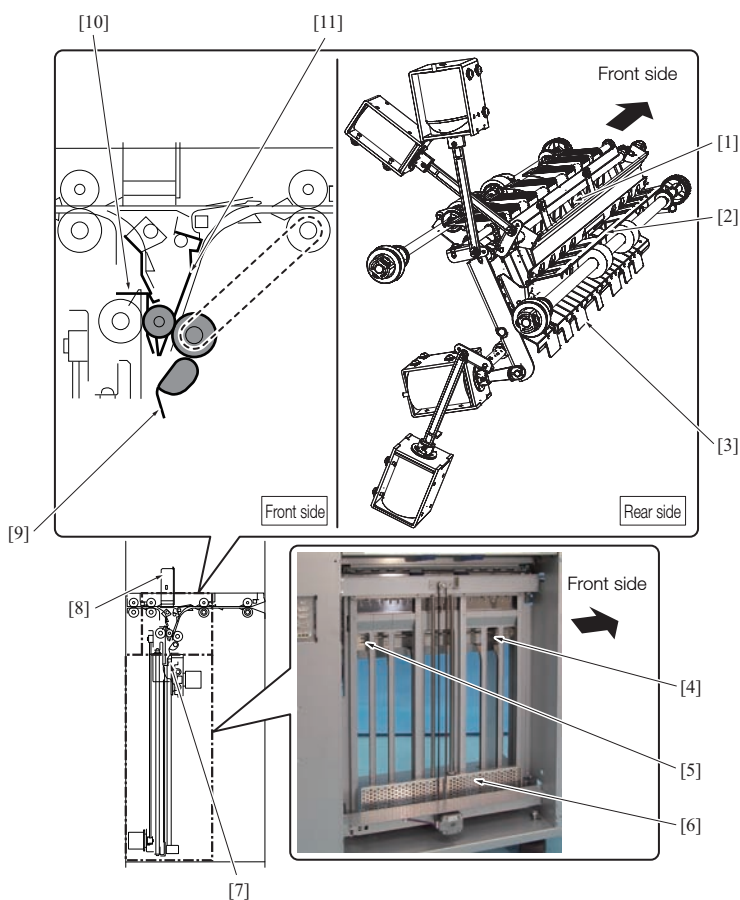
A prescribed period of time after PS1 detects the paper trailing edge and turns OFF, the paper exit motor (M2) turns ON [4]. After a prescribed period of time, M2 turns OFF [5] and the alignment in FD direction is performed during the time. After another prescribed period of time, M2 turns ON again [6]. Then it refeeds and exits the paper [7].



[1]	Start button ON	[2]	Switching to 1,250mm/s
[3]	Deceleration	[4]	M2 ON
[5]	M2 OFF	[6]	M2 ON by paper refeed start
[7]	Paper exit		-

3. STACKER SECTION

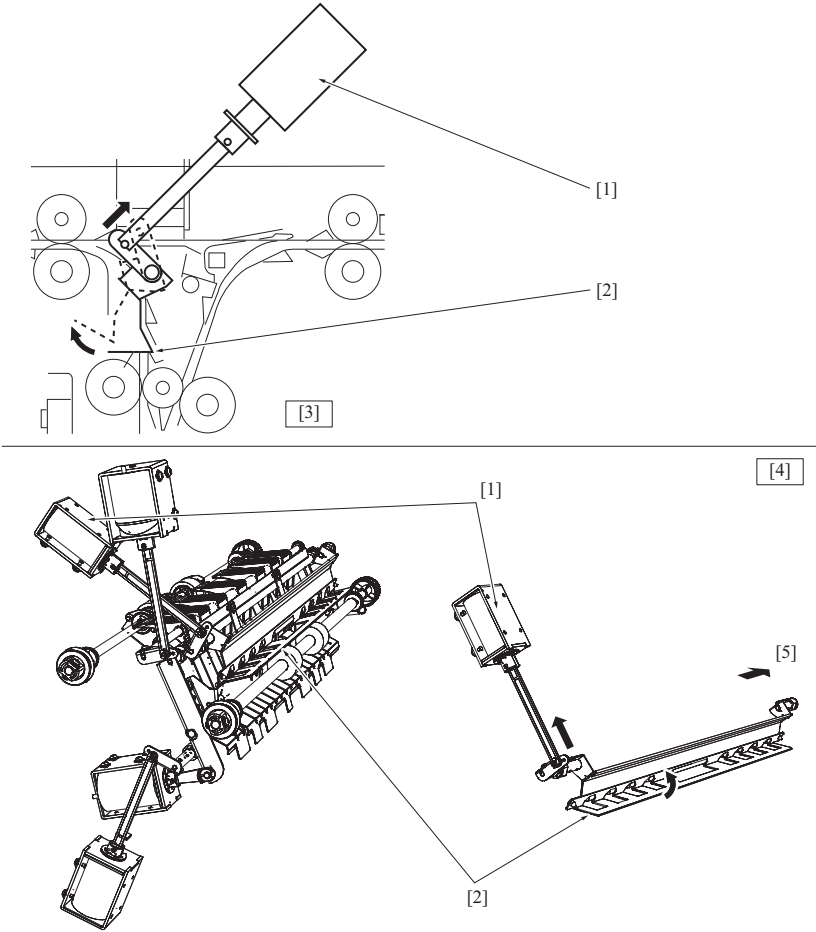
3.1 Configuration



[1]	Stack switching guide plate	[2]	Stacker exit shutter
[3]	Stacker entrance guide plate	[4]	CD alignment plate /Fr
[5]	CD alignment plate /Rr	[6]	FD alignment plate
[7]	Stacker jam sensor (PS5)	[8]	Stack assist fan /Fr (FM1), /Rr (FM2)
[9]	Stacker entrance guide plate	[10]	Stacker exit shutter
[11]	Stack switching guide plate	-	

3.2 Drive

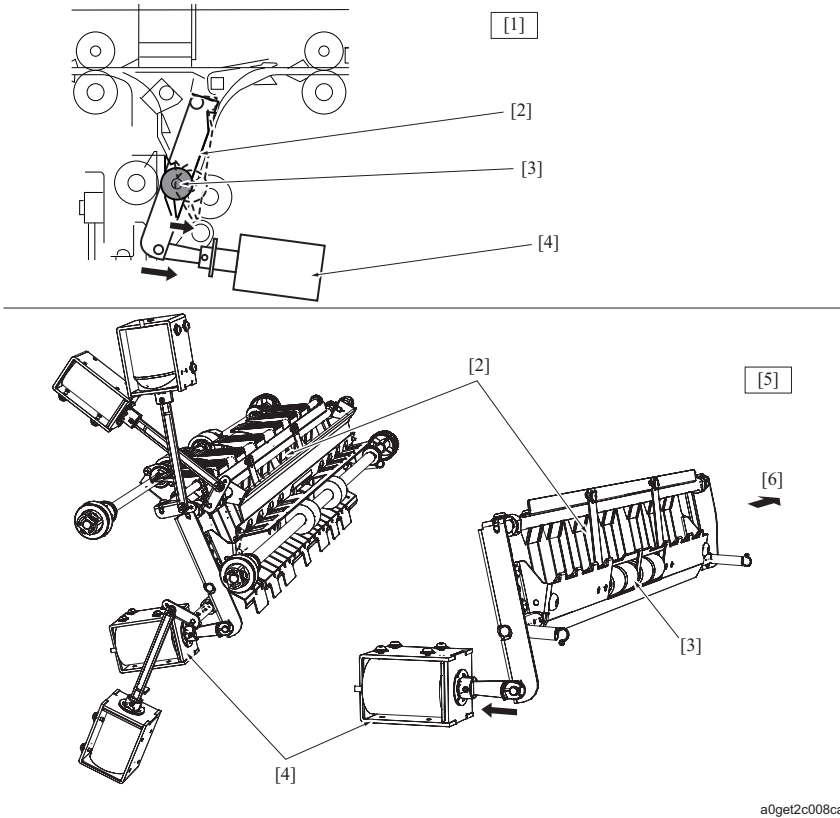
3.2.1 Stacker exit shutter drive



a0get2c007ca

[1]	Stacker exit shutter solenoid (SD2)	[2]	Stacker exit shutter
[3]	Front side	[4]	Rear side
[5]	Front side direction	-	

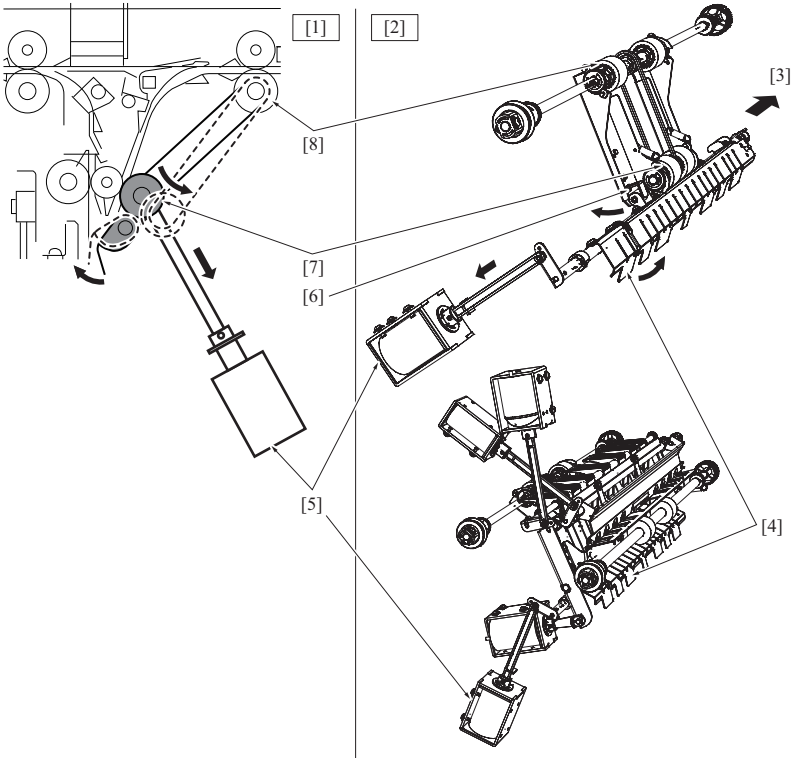
3.2.2 Stack switching drive



a0get2c008ca

[1]	Front side	[2]	Stack switching guide plate
[3]	Driven roller	[4]	Stack switching solenoid (SD3)
[5]	Rear side	[6]	Front side direction

3.2.3 Stacker entrance guide plate drive

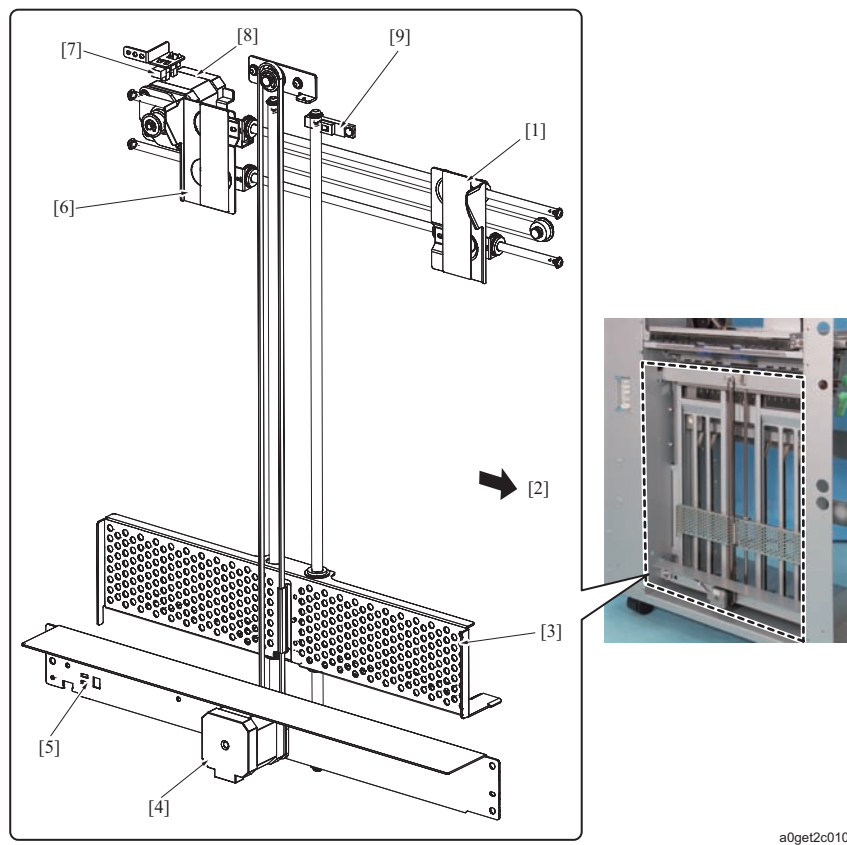


a0get2c009ca

[1]	Front side	[2]	Rear side
[3]	Front side direction	[4]	Stacker entrance guide plate
[5]	Stacker entrance guide plate solenoid (SD4)	[6]	Connection roller

[7]	Stacker entrance roller	[8]	Entrance roller /2
-----	-------------------------	-----	--------------------

3.2.4 Alignment drive



[1]	CD alignment plate /Fr	[2]	Front side direction
[3]	FD alignment plate	[4]	FD alignment motor (M3)
[5]	FD alignment home sensor (PS3)	[6]	CD alignment plate /Rr
[7]	CD alignment home sensor (PS4)	[8]	CD alignment motor (M4)
[9]	Stacker jam sensor (PS5)	-	

3.3 Operation

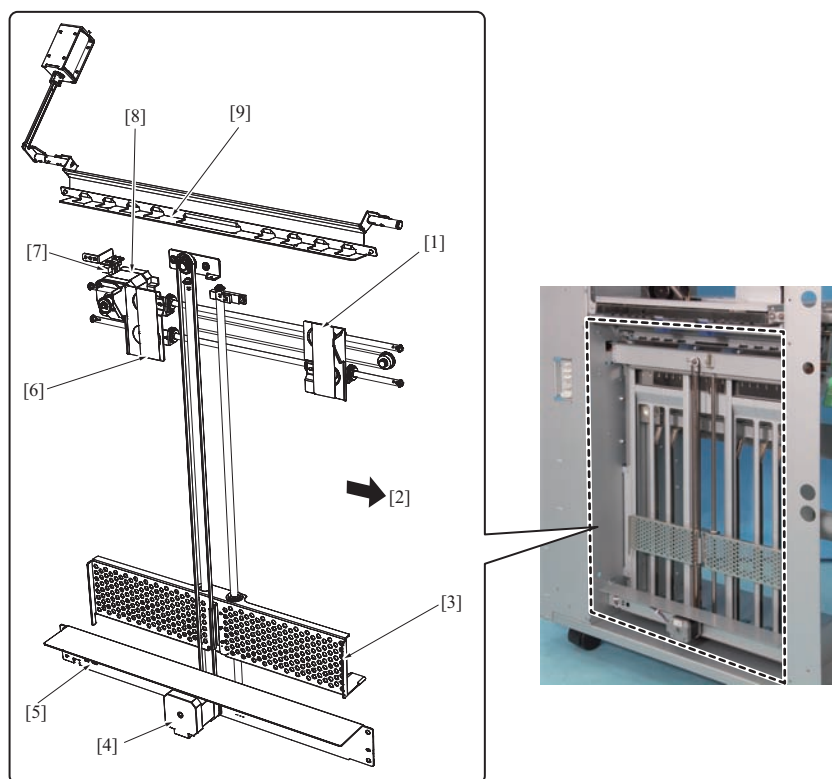
3.3.1 Alignment control

(1) Alignment in the main scan direction

The CD alignment motor (M4) [8]drives the CD alignment plate /Rr [6] and /Fr [1] via the timing belt to perform the alignment in the main scan direction. The CD alignment home sensor (PS4) [7] detects the home position. While the paper entering, the plates stay at 10mm away from each paper edge. The alignment is performed for each stack of paper.

(2) Alignment in the sub scan direction

For the alignment in the sub scan direction, the FD alignment motor (M3) [4] lifts the FD alignment plate [3] via the timing belt to press it against the stacker exit shutter [9]. The FD alignment home sensor (PS3) [5] detects the home position.



a0get2c011ca

[1]	CD alignment plate /Fr	[2]	Front side direction
[3]	FD alignment plate	[4]	FD alignment motor (M3)
[5]	FD alignment home sensor (PS3)	[6]	CD alignment plate /Rr
[7]	CD alignment home sensor (PS4)	[8]	CD alignment motor (M4)
[9]	Stacker exit shutter	-	

3.3.2 Reverse/exit control

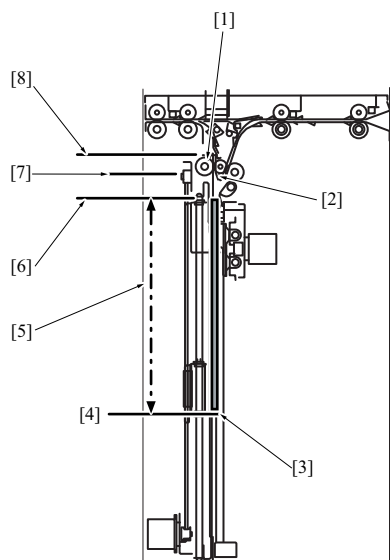
(1) Movement control in the sub scan direction

According to the movement of the FD alignment plate [2], the trailing edge (upper direction) in stacking moves to either of the 3 positions other than the home position.

Position A [6]: The position at which the paper trailing edge is 50mm lower than the stacker exit shutter [1]. Paper which conveyed to the stacker is stacked at this position first.

Position B [7]: The position at which the paper trailing edge is 28mm lower than the stacker exit shutter [1] by raising the paper from the position A [6]. The position of the paper trailing edge is higher than the position of the lower edge of the stack switching guide plate [2]. This position is used when in the double sheets reverse/exit mode, to feed the paper leading edge of the 1st page into the paper exit path and stand by for entering of the 2nd page.

Position C [8]: Alignment in the FD direction is conducted at the position where the paper trailing edge touches to the stacker exit shutter [1]. After the alignment, refeeding is conducted.



a0get2c012ca

[1]	Stacker exit shutter	[2]	Stack switching guide plate
[3]	FD alignment plate	[4]	The position of the paper leading edge
[5]	Paper length in the sub scan direction	[6]	Position C (50mm lower than the reference)
[7]	Position B (28mm lower than the reference)	[8]	Position A (stacker exit shutter, reference)

(2) Double sheets reverse/exit conveyance control

When the start button turns ON [1], the FD alignment motor (M3) turns ON to move the FD alignment plate to the position in accordance with the paper size (position A) and turns OFF. The CD alignment motor (M4) turns ON to move the CD alignment plate /Rr and /Fr to the positions 10mm away from each paper edge and then turns OFF.

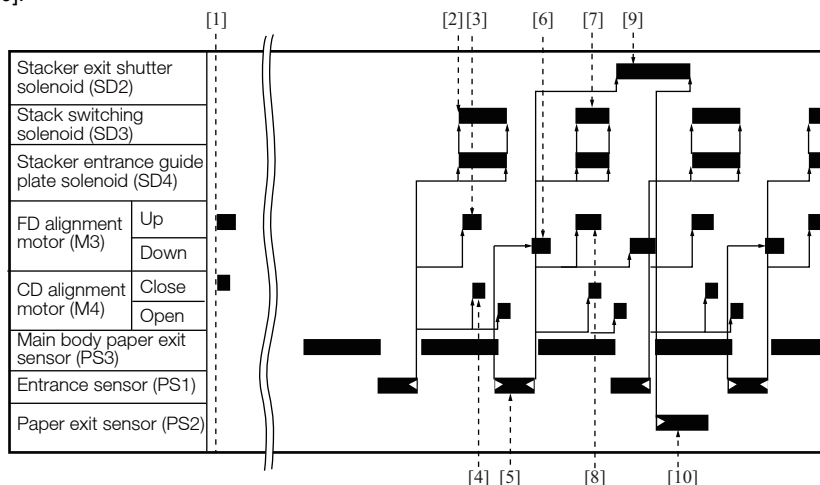
A specified period of time after the entrance sensor (PS1) turns OFF and the 1st paper trailing edge is detected, the stack switching solenoid (SD3) and the stacker entrance guide plate solenoid (SD4) turn ON [2] and open the paper exit path.

M3 lifts the FD alignment plate [3] to feed the 1st paper trailing edge into the paper path opened (position B). At this time, M4 performs the alignment in main scan direction [4].

After the specified time since PS1 detects the leading edge of the 2nd sheet and turns ON, M3 lowers [6] and moves the trailing edge of the 1st and 2nd sheet under the stack switching guide plate (position A).

M3 lifts the double sheets of the paper toward the paper exit path opened again when SD3 and SD4 turn ON [7] and the paper is pressed against the stacker exit shutter to be aligned in the sub scan direction [8] (position C).

When the stacker exit shutter solenoid (SD2) turns ON, the stacker exit shutter opens [9] and the conveyance to the paper exit path starts [10].



a0get2e013ca

[1]	Start button ON	[2]	Opening the paper exit path
[3]	Lifting up of the paper	[4]	CD alignment operation
[5]	Entering 2nd page	[6]	Lowering of the double sheets of paper
[7]	Opening the paper exit path	[8]	FD alignment operation
[9]	Opening the stacker exit shutter	[10]	Double sheets reverse/exit conveyance

(3) Single sheet reverse/exit control

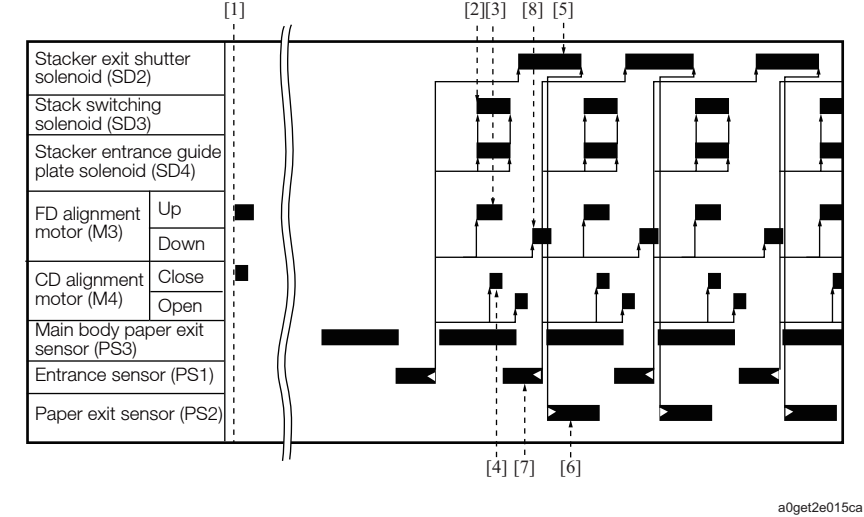
When the start button turns ON [1], the FD alignment motor (M3) turns ON to move the FD alignment plate to the position in accordance with the paper size (position A) and turns OFF. The CD alignment motor (M4) turns ON to move the CD alignment plate /Rr and /Fr to the positions 10mm away from each paper edge and then turns OFF.

After the specified time since the entrance sensor (PS1) turns OFF and the trailing edge is detected, the stack switching solenoid (SD3) and the stacker entrance guide plate solenoid (SD4) turn ON [2] and open the paper exit path.

M3 lifts the FD alignment plate to feed the paper trailing edge into the paper path opened. Alignment in the sub scan direction is conducted at the position where the paper trailing edge touches to the stacker exit shutter [3] (position C). At this time, M4 performs the alignment in the main scan direction [4].

When the stacker exit shutter solenoid (SD2) turns ON, the stacker exit shutter opens [5] and the conveyance to the paper exit path starts [6]. Moreover, M3 lowers [8] to the position A for receiving the succeeding paper.

Repeat this operation after the succeeding paper.



a0get2e015ca

[1]	Start button ON	[2]	Opening the paper exit path
[3]	FD alignment operation	[4]	CD alignment operation
[5]	Stacker exit shutter	[6]	Exit conveyance
[7]	Conveyance of the succeeding paper	[8]	Lowering of the FD alignment plate

3.3.3 Stack assist fan control

(1) Control

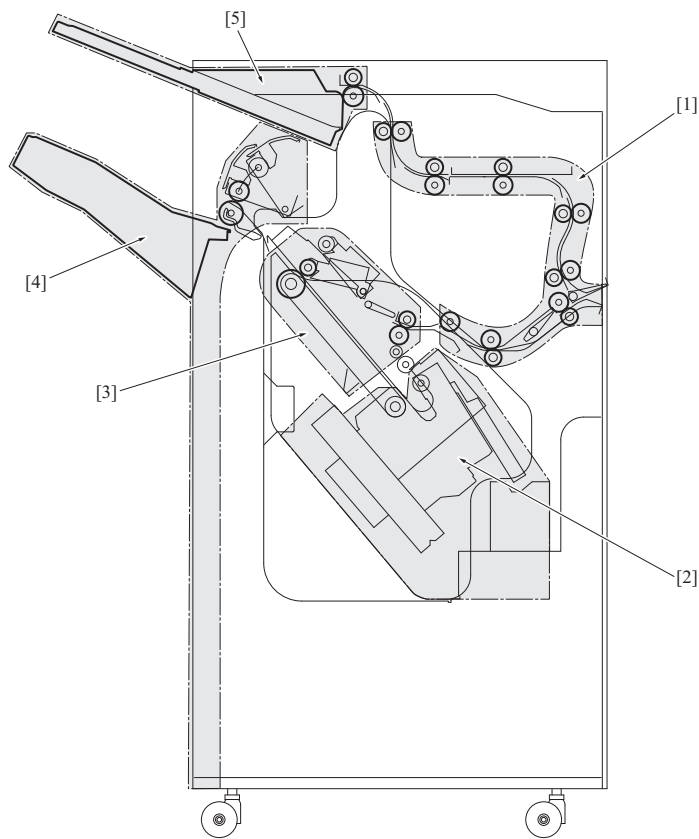
Stack assist fan /Fr (FM1) and /Rr (FM2) function only in the reverse/exit mode.

When the paper exit sensor (PS3) of the main body detects the 1st paper leading edge and turns ON, FM1 and FM2 turn ON.

PF THEORY OF OPERATION FS-521

1. OUTLINE

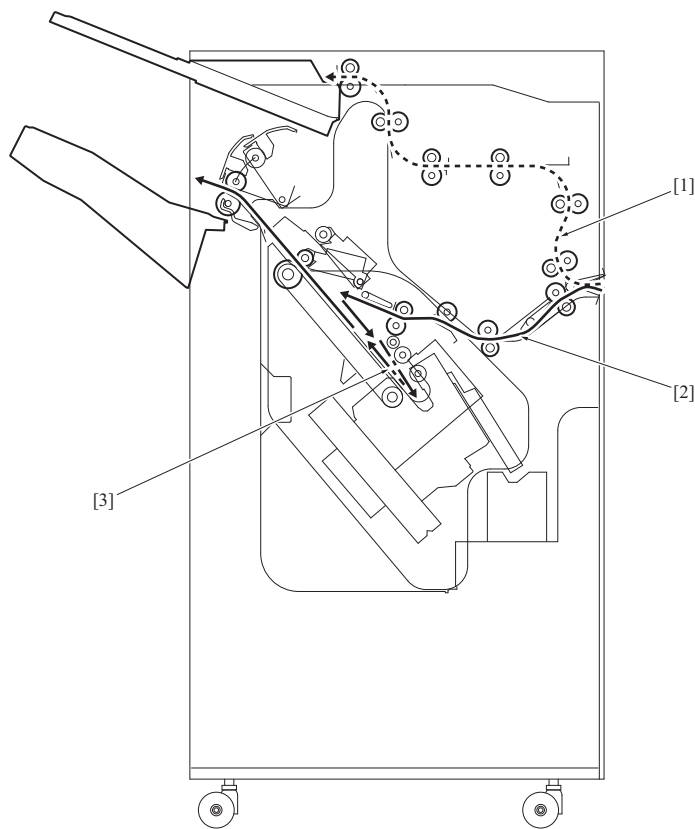
1.1 Unit configuration



fs503to1001c

[1]	Paper conveyance section	[2]	Stapler section
[3]	Stacker section	[4]	Main tray section
[5]	Sub tray section	-	

1.2 Paper path

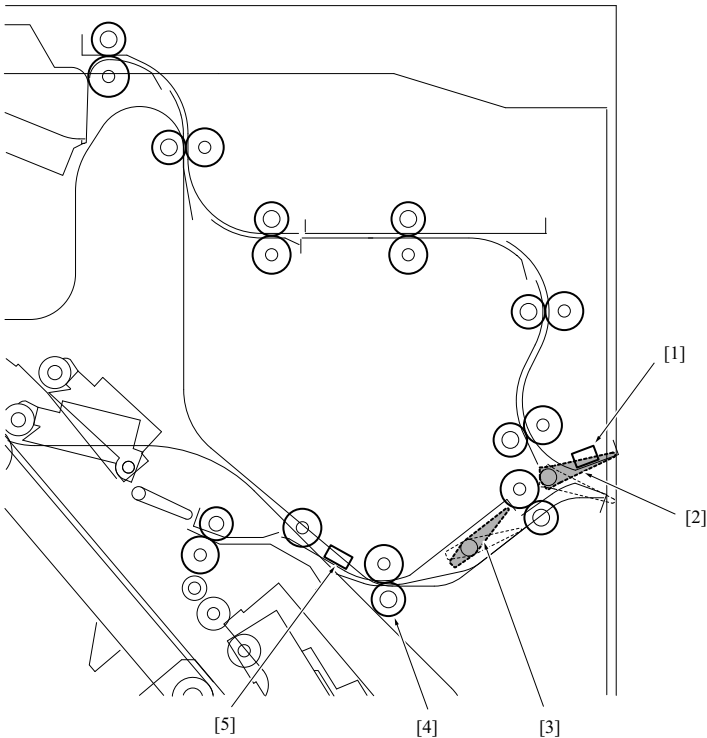


fs503to1002c

[1]	Sub tray paper path	[2]	Main tray paper path (straight/sort/staple)
[3]	Main tray paper path (only while in stapling)	-	

2. PAPER CONVEYANCE SECTION

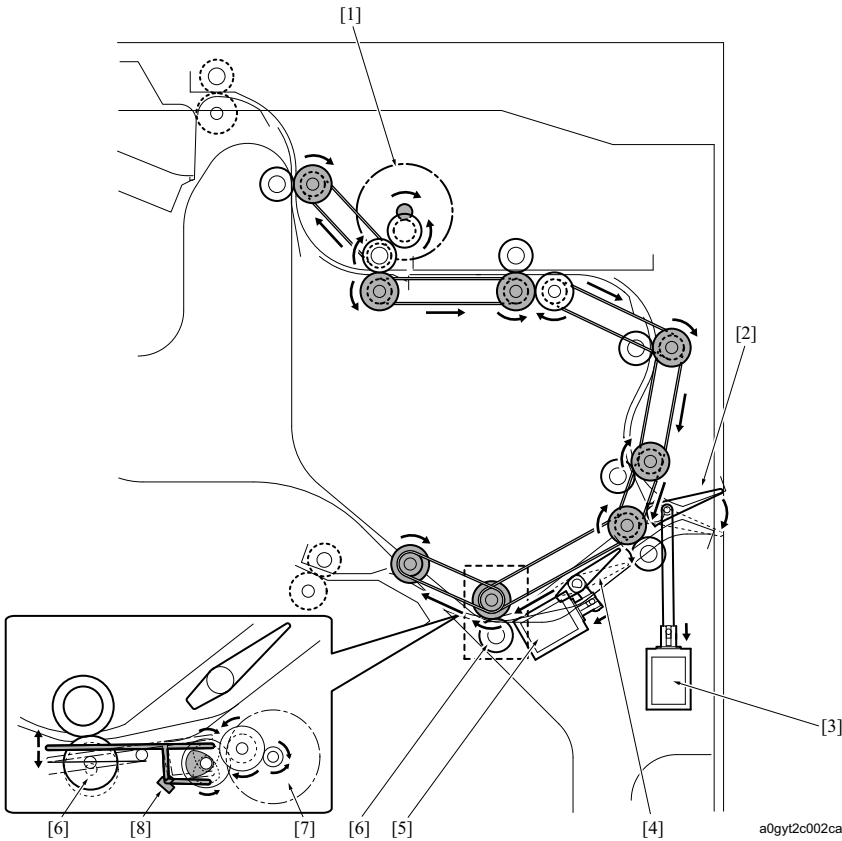
2.1 Configuration



a0gyt2c001ca

[1]	FNS entrance sensor (PS4)	[2]	Tray gate
[3]	Bypass gate	[4]	Bypass roller /Lw
[5]	Stacker entrance sensor (PS5)	-	

2.2 Drive



a0gyt2c002ca

[1]	Conveyance motor (M1)	[2]	Tray gate
-----	-----------------------	-----	-----------

[3] Gate solenoid (SD2)	[4] Bypass gate
[5] Bypass solenoid (SD5)	[6] Bypass roller /Lw
[7] Bypass roller release motor (M12)	[8] Bypass roller release home sensor (PS13)

2.3 Operation

2.3.1 Conveyance path switching

(1) Tray gate control

The tray gate switches the paper conveyance path between the main tray and the sub tray.

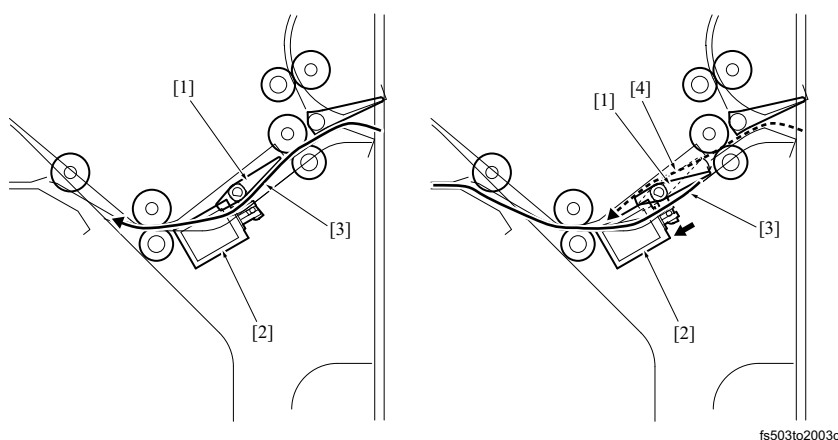
The tray gate is normally specified to the conveyance path to the main tray. When paper is exited to the sub tray, however, the gate is switched to the path to the sub tray through the drive of the solenoid (SD2).

(2) Bypass gate control

The bypass gate is provided on the paper path to the stacker section. Even while in the staple operation, the bypass gate conveys the next page to reduce a loss of time for a high productivity.

The drive of the bypass gate [1] is made by the bypass solenoid (SD5) [2]. The operation of SD5 is limited only to the small-size paper (A4, B5 and, 8 1/2 x 11) except for thick paper in the staple mode.

For the 1st page on and after the 2nd copy, paper is sent to the regular route [3]. SD5 operates only on the 2nd page to send paper to the bypass route [4]. The 1st and 2nd pages are put upon one another to be conveyed to the stacker simultaneously. On and after the 3rd page, SD5 is released and paper is sent on the regular route a sheet of paper at a time.



fs503to2003c

[1] Bypass gate	[2] Bypass solenoid (SD5)
[3] Regular route	[4] Bypass route

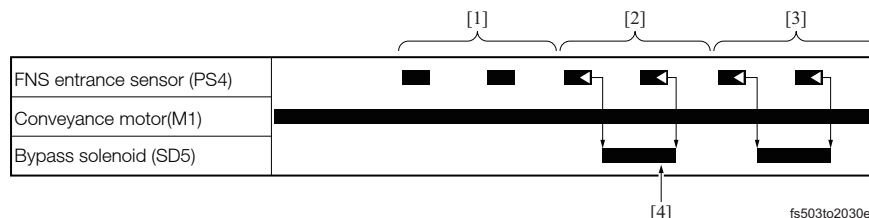
(a) For the 1st copy

The bypass solenoid (SD5) does not operate when the paper of the 1st copy is passing through it.

(b) For the 2nd and subsequent copies

A specified period of time after the FNS entrance sensor (PS4) detects the trailing edge of the 1st page of the 2nd copy, the bypass solenoid (SD5) turns ON to draw the 2nd page of the 2nd copy into the bypass route. A specified period of time after the PS4 detected the trailing edge of the 2nd page of the 2nd copy, the bypass solenoid turns OFF.

SD5 does not turn on when the 3rd and subsequent pages are being conveyed.



fs503to2030e

[1] 1st copy	[2] 2nd copy
[3] 3rd copy	[4] Drawing of the 2nd page of the 2nd copy into the bypass

2.3.2 Bypass roller /Lw pressure release control

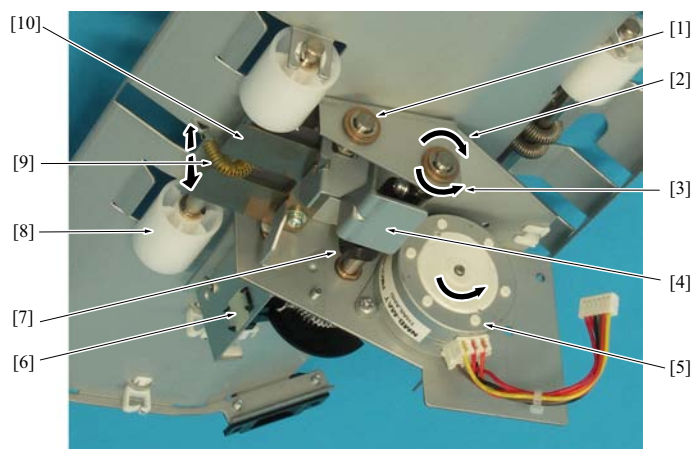
The bypass roller is provided after the bypass gate of the paper conveyance path to the stacker section. The nip status of the bypass roller has 3 steps, which are normal pressure, pressure release and high pressure.

The status for normal 1 sheet conveyance is normal pressure.

The pressure of the bypass roller is released for the small-size paper (A4, B5 and 8 1/2 x 11) except thick paper in the staple mode, because 1st and 2nd paper after the 2nd copy are overlapped on the bypass gate. Paper other than the small-size paper is not overlapped even in the staple mode, therefore the pressure of the bypass roller is not released in this case.

The status for thick paper is high pressure, because the paper conveyance in bypass gate section has a large curvature.

The 3 steps of bypass roller /Lw [8] nip status is driven by the bypass roller release motor (M12) [5]. The bypass roller release home sensor (PS13) [6] detects the home position, and the pressure is normal pressure status by the spring [9]. When M12 rotates in the reverse direction [2], the pressure release lever [4] is driven through the cam [7] and the pressure of the bypass roller /Lw is released by leverage from the center of the shaft [1]. When M12 rotates in the forward direction [3], the elastically-deformed pressure spring plate [10] presses the shaft of the bypass roller /Lw to be high pressed.



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[1]	Shaft	[2]	Reverse
[3]	Forward	[4]	Pressure release lever
[5]	Bypass roller release motor (M12)	[6]	Bypass roller release home sensor (PS13)
[7]	Cam	[8]	Bypass roller /Lw
[9]	Spring	[10]	Pressure spring plate

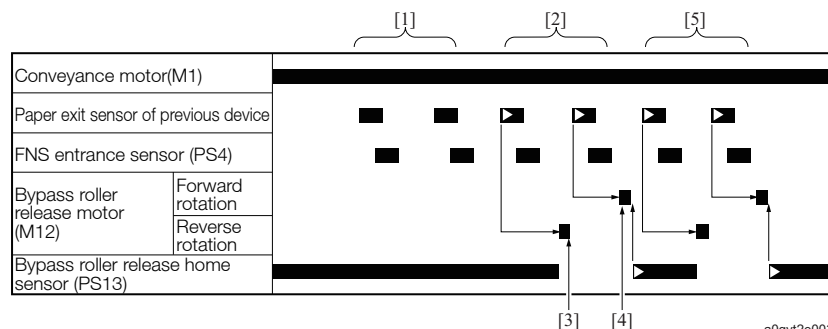
(1) Small-size paper in the staple mode

(a) For the 1st copy

The bypass roller release motor (M12) does not work while passing the 1st copy.

(b) For the 2nd and subsequent copies

After a specified period of time when the paper exit sensor of previous device detects the leading edge of 1st page of 2nd copy, the bypass roller release motor (M12) turns reverse rotation ON to move the bypass roller /Lw to the pressure release point, and then turns OFF. After a specified period of time when the paper exit sensor of previous device detects the leading edge of 2nd page of 2nd copy, M12 turns forward rotation ON at the timing the 2nd page of 2nd copy drawn into the bypass route passes through on the bypass roller /Up side, and then M12 turns OFF with turning ON the bypass roller release home sensor (PS13). M12 does not turn on when the 3rd and subsequent pages are being conveyed.



a0gyt2e003ca

[1]	1st copy	[2]	2nd copy
[3]	Pressure release	[4]	Pressure (returning to the home position)
[5]	3rd copy	-	

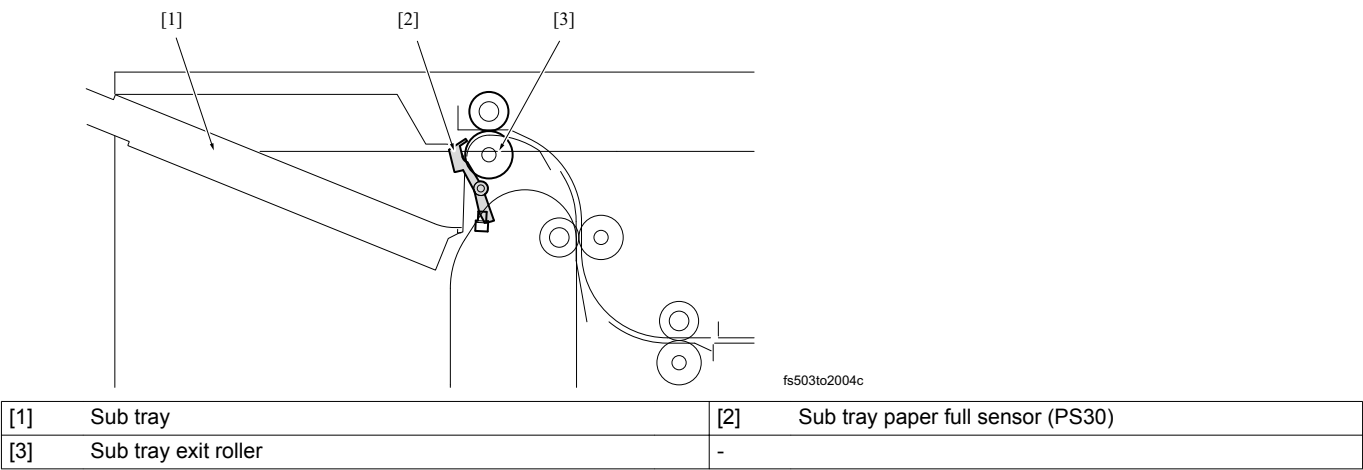
(2) Thick paper control

When the paper exit sensor of previous device detects the leading edge of paper, the bypass roller release motor (M12) turns forward rotation ON to move the bypass roller /Lw to the high pressure position, and then turns OFF.

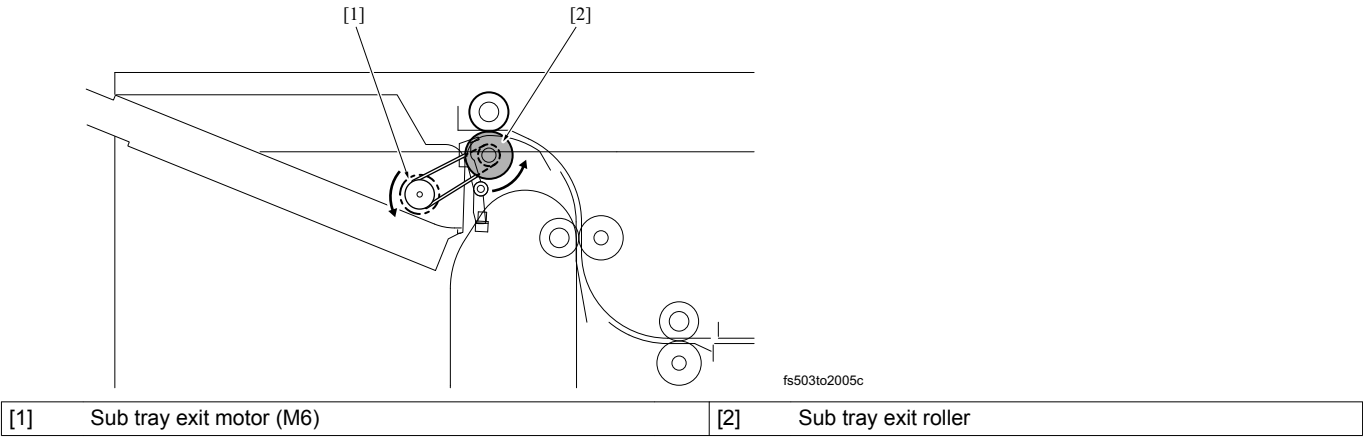
When the print operation completes, M12 turns reverse rotation ON, and then M12 turns OFF with turning ON the bypass roller release home sensor (PS13).

3. SUB TRAY SECTION

3.1 Configuration



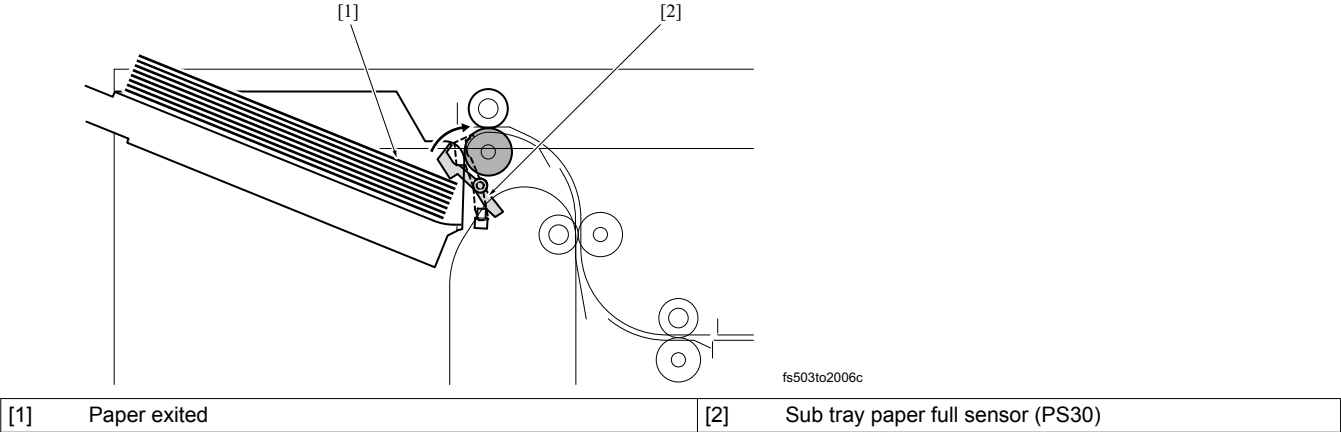
3.2 Drive



3.3 Operation

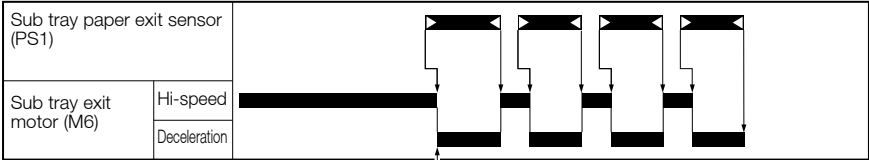
(1) Sub tray paper full detection control

When paper that has been exited into the sub tray gets to the specified thickness, the sub tray paper full sensor (PS30) turns ON to send the "sub tray paper full" information to the main body. Then, the main body displays the message on its operation panel.



(2) Conveyance speed switching control

Paper conveyed by the conveyance motor (M1) is decelerated for each sheet of paper to be exited into the sub tray, thus preventing paper from having an uneven edge.



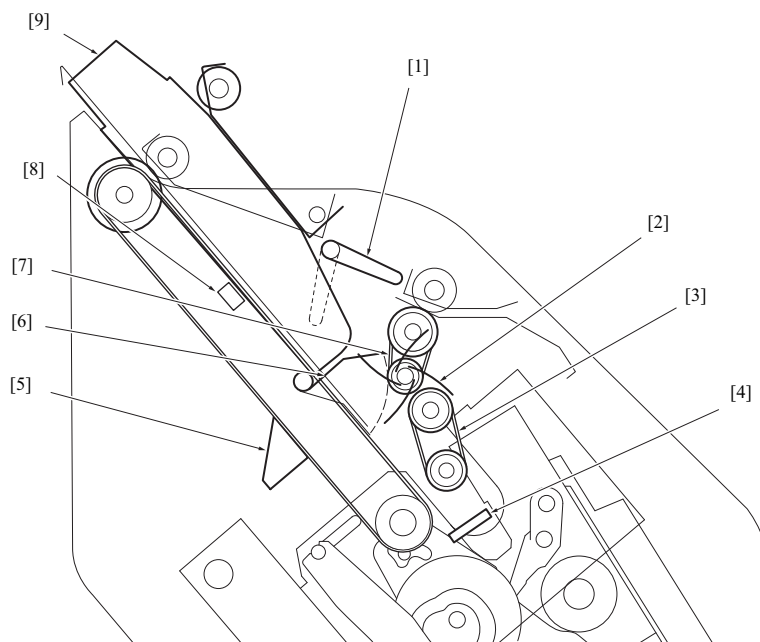
[1]

fs503to2031e

[1]	Deceleration of the sub tray exit motor (M6)	-
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4. STACKER SECTION

4.1 Configuration

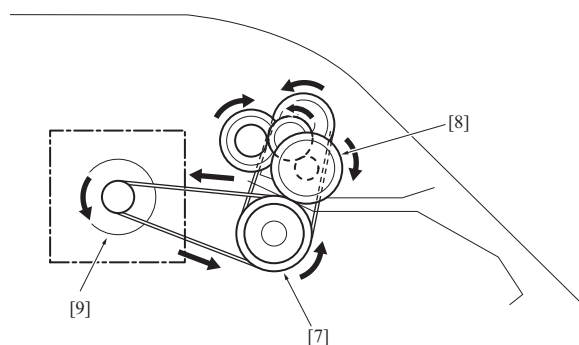
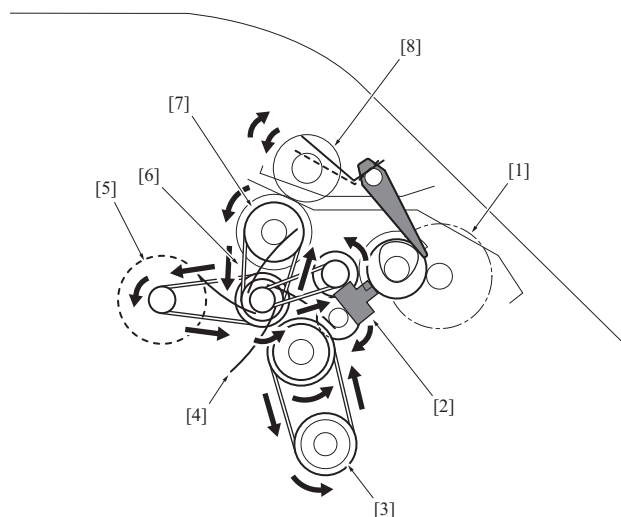


a0gyt2c004ca

[1]	Stack assist plate	[2]	Paddle
[3]	Swing roller	[4]	Flat-stapling stopper
[5]	Paper exit arm	[6]	Rear stopper
[7]	Stacker entrance belt	[8]	Stacker empty sensor (PS20)
[9]	Alignment plate	-	

4.2 Drive

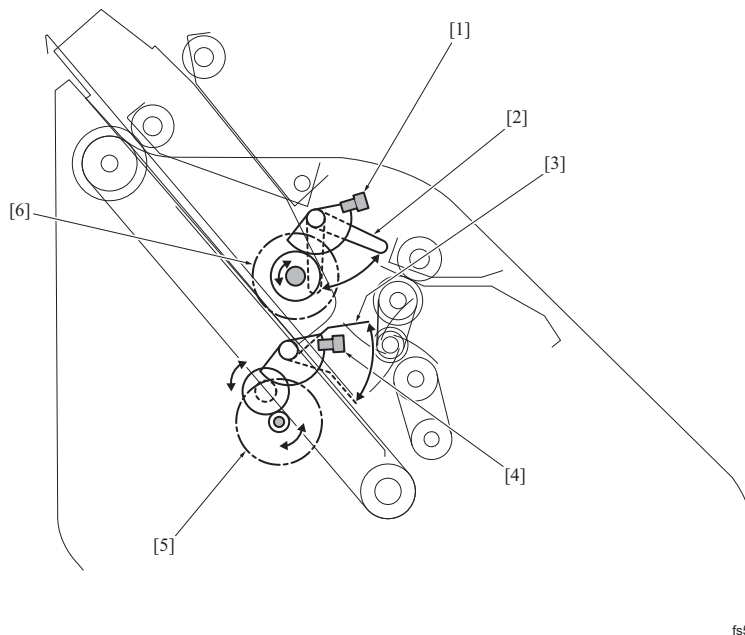
4.2.1 Stacker entrance roller/paddle drive



a0gyt2c023ca

[1] Stacker entrance roller release motor (M16)	[2] Stacker entrance roller release home sensor (PS23)
[3] Swing roller	[4] Paddle
[5] Paddle motor (M2)	[6] Stacker entrance belt
[7] Stacker entrance roller /Lw	[8] Stacker entrance roller /Up
[9] Stacker entrance motor (M13)	-

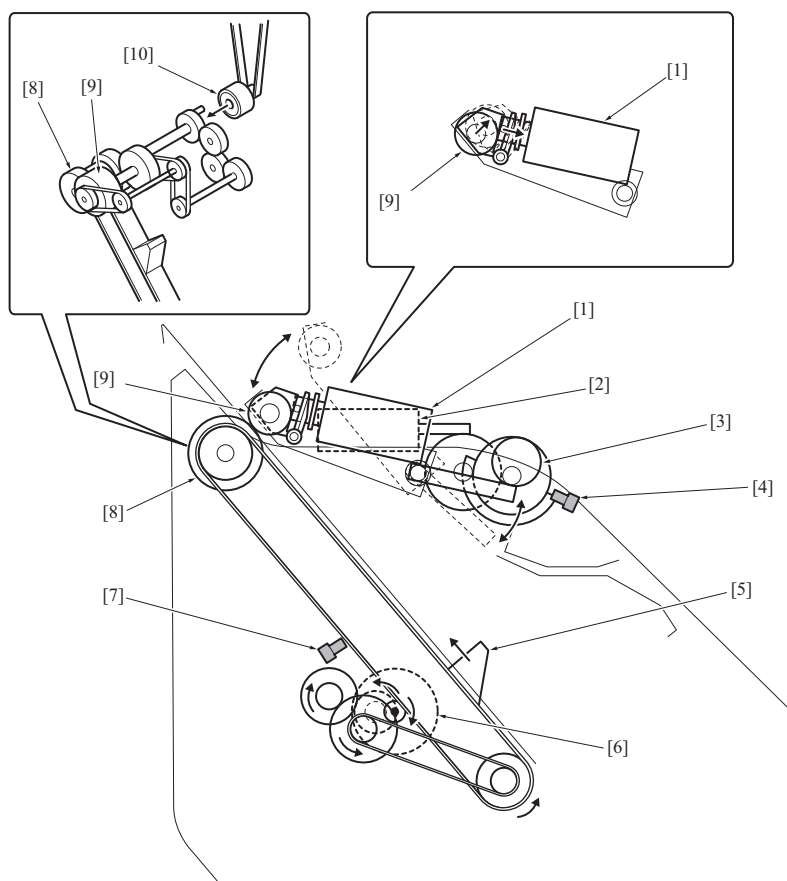
4.2.2 Stack assist plate/rear stopper drive



fs503to2009c

[1] Stack assist home sensor (PS32)	[2] Stack assist plate
[3] Rear stopper	[4] Rear stopper home sensor (PS35)
[5] Rear stopper motor (M26)	[6] Stack assist motor (M24)

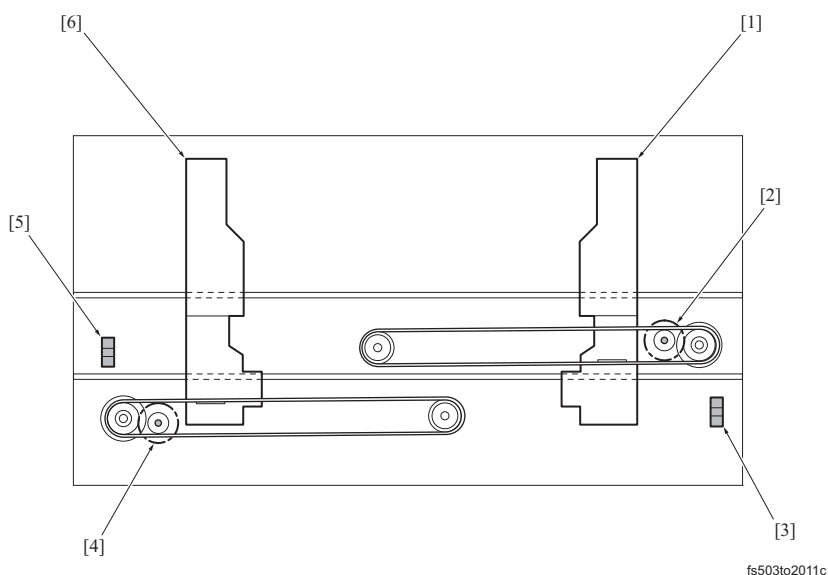
4.2.3 Intermediate roller/paper exit arm drive



a0gyt2c006ca

[1] Intermediate roller release solenoid (SD7)	[2] Intermediate roller open close motor (M25)
[3] Eccentric cam	[4] Intermediate roller home sensor (PS33)
[5] Paper exit arm	[6] Paper exit arm motor (M23)
[7] Paper exit arm home sensor (PS9)	[8] Intermediate roller /Lw
[9] Intermediate roller /Up	[10] Coupling

4.2.4 Alignment drive



[1] Alignment plate /Rr	[2] Alignment motor /Rr (M5)
[3] Alignment plate home sensor /Rr (PS8)	[4] Alignment motor /Fr (M22)
[5] Alignment plate home sensor /Fr (PS31)	[6] Alignment plate /Fr

4.3 Operation

4.3.1 Stacker conveyance speed control

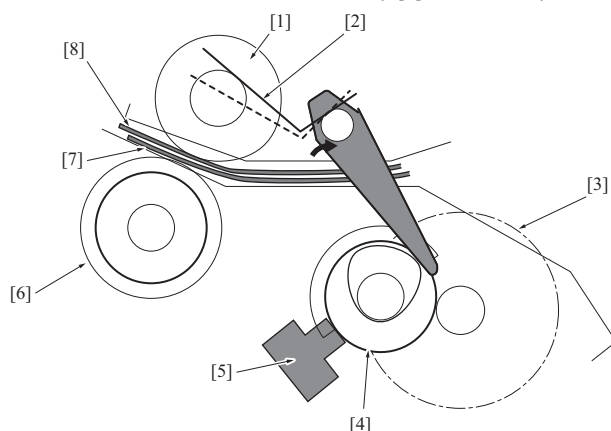
Paper conveyed by the conveyance motor (M1) is sent to the stacker when the stacker entrance motor (M13) is decelerated a specified period of time after the stacker entrance sensor (PS5) turns ON and before it runs through the stacker entrance roller.

4.3.2 Stacker entrance roller control

Conduct the stacker entrance roller control to the paper conveyed with being overlapped.

(1) 2 sheets conveyance

For 2 sheets of paper, the cam [4] of the stacker entrance roller release motor (M16) [3] release the pressure of the stacker entrance roller / Up [1]. At this time, the stacker entrance roller /Up [1] drives at 1040mm/s and the stacker entrance roller /Lw [6] drives at 1000mm/s. Therefore, the upper paper [8] is sent before the lower paper [7]. The stacker entrance roller release home sensor (PS23) [5] detects the home position when the stacker entrance roller /Up [1] release the pressure.



[1] Stacker entrance roller /Up	[2] Holding material
[3] Stacker entrance roller release motor (M16)	[4] Cam
[5] Stacker entrance roller release home sensor (PS23)	[6] Stacker entrance roller /Lw

[7] Lower paper	[8] Upper paper
-----------------	-----------------

(2) 1 sheet conveyance

When paper is 1 sheet, the stacker entrance roller /Up [6] is still pressed. At this time, since the stacker entrance roller /Lw [6] has the torque limiter, it is driven with the stacker entrance roller /Up [6].

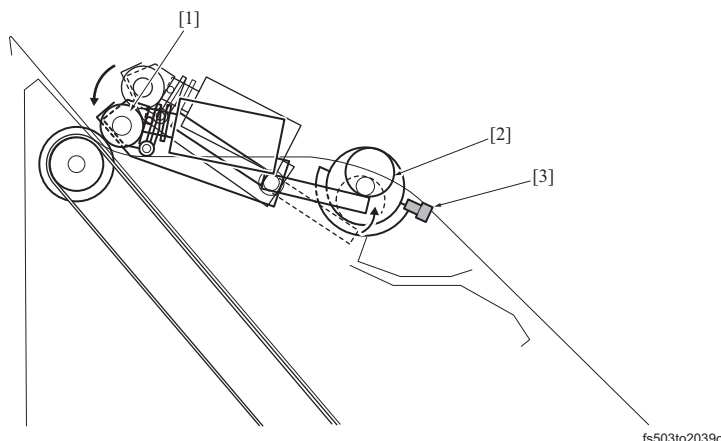
4.3.3 Intermediate roller control

The roller drive of the intermediate roller /Lw is transmitted from the main tray paper exit motor (M7) by the belt and the coupling, and the transmission of the conveyance power to paper is made by the pressure/release of the intermediate roller /Up.

(1) Non-staple control

While in the non-staple mode, when the start signal is turned ON, the intermediate roller /Up [1] is driven up to the nip standby position by the cam [2] of the intermediate roller open close motor (M25).

The intermediate roller home sensor (PS33) [3] detects the home position of the intermediate roller /Up open/close operation.

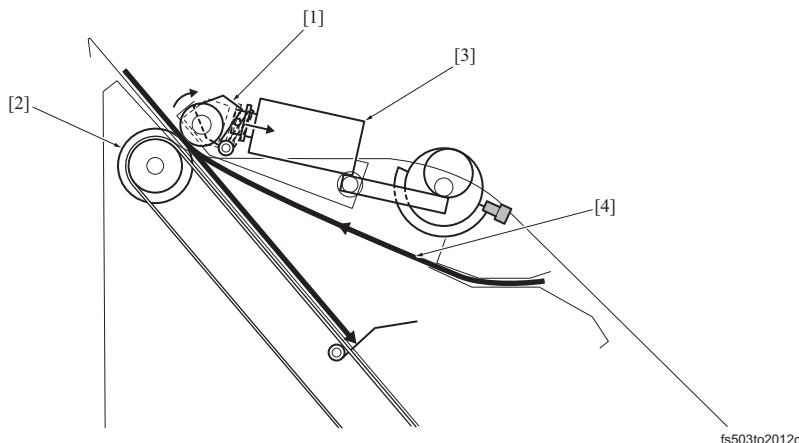


[1] Intermediate roller /Up	[2] Cam of the intermediate roller open close motor (M25)
[3] Intermediate roller home sensor (PS33)	-

While in the print operation, the intermediate roller release solenoid (SD7) [3] makes the pressure/release of the intermediate roller /Up [1] onto the intermediate roller /Lw [2].

When paper is being conveyed to the stacker, SD7 turns ON to release the nip, and paper that passes through the opening between the intermediate roller /Up [1] and the intermediate roller /Lw [2] is conveyed to the stacker.

When paper is being exited, SD7 turns OFF and the intermediate roller /Up [1] is pressed against the intermediate roller /Lw [2] by the pressure of the spring. The paper is nipped before being exited.

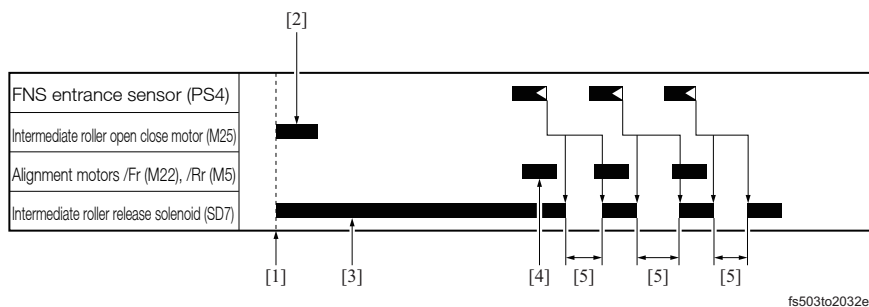


[1] Intermediate roller /Up	[2] Intermediate roller /Lw
[3] Intermediate roller release solenoid (SD7)	[4] Paper

(a) Straight mode

The intermediate roller release solenoid (SD7) turns ON to release pressure with the start signal ON, and stands by for conveying paper to the stacker.

After the alignment operation completes, SD7 turns OFF, and the intermediate roller /Up and /Lw press paper and eject it. It conducts the same operation to each paper.



fs503to2032e

[1]	Start signal ON	[2]	Movement of the intermediate roller /Up to the nip standby position
[3]	Nip release of the intermediate roller /Up	[4]	Alignment operation
[5]	Paper nip by the intermediate rollers /Up and /Lw	-	

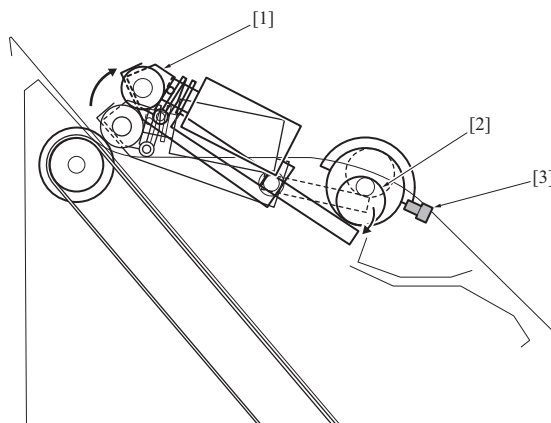
(b) Shift mode

1st and 2nd pages of 2nd and subsequent copies are overlapped on the stacker for securing time of moving the paper exit alignment plate to the shift position in the shift mode of small-size (A4, B5, 8¹/₂ x 11) which paper intervals are conveyed within the specified period of time. SD7 does not turn OFF after 1st page of 2nd and subsequent copies in this case.

When pages are not overlapped on the stacker, it conducts the same operation as straight mode.

(2) Staple control

While in the staple mode operation, through the initial operation made when the start signal turns ON, the intermediate roller /Up [1] is moved to the evacuation position by the eccentric cam [2] driven by the intermediate roller open close motor (M25).



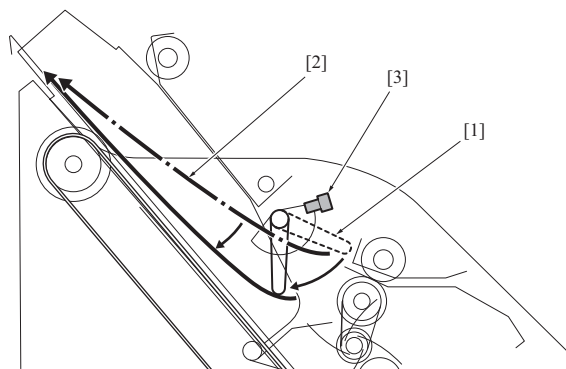
fs503to2013c

[1]	Intermediate roller /Up	[2]	Eccentric cam
[3]	Intermediate roller home sensor (PS33)	-	

4.3.4 Stack assist control

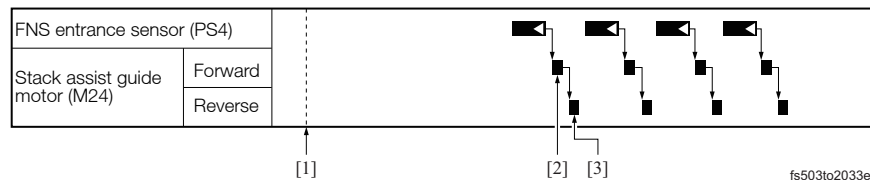
The stack assist plate is a paper pressure plate that is used to increase the speed to put paper in the stacker for an increased productivity. The stack assist motor (M24) drives the stack assist plate [1]. When being conveyed to the stacker section, each sheet of paper is pressed at the position near the rear end of the paper [2] to be stacked at a speed faster than a free fall.

The stack assist plate rotates by 65 degrees from the home position in the staple mode and by 80 degrees the shift and straight mode. The stack assist home sensor (PS32) [3] detects the home position.



fs503to2014c

[1]	Stack assist plate	[2]	Paper
[3]	Stack assist home sensor (PS32)	-	



[1]	Start signal ON	[2]	Paper pressure by the stack assist plate
[3]	Movement of the stack assist plate to the evacuation position	-	

4.3.5 Rear stopper control

The rear stopper is a paper rear stopper when paper is exited in the non-staple (straight/sort) mode. It shortens the conveyance distance to the main tray for an improved productivity.

The rear stopper motor (M26) drives and releases the rear stopper in the staple mode. The set state in the non-staple mode (the position at which the rear stopper stops paper) is the home position of the rear stopper, and the rear stopper home sensor (PS35) detects it.

4.3.6 Alignment control

(1) Horizontal alignment

The horizontal alignment is made by the 2 alignment plates, that is, alignment plate /Fr and alignment plate /Rr. Each of the alignment motor /Fr (M22) and the alignment motor /Rr (M5) drive these 2 alignment plates independently.

The alignment home sensor /Fr (PS31) detects the home position of the alignment plate /Fr, and the alignment home sensor /Rr (PS8) detects the home position of the alignment plate /Rr.

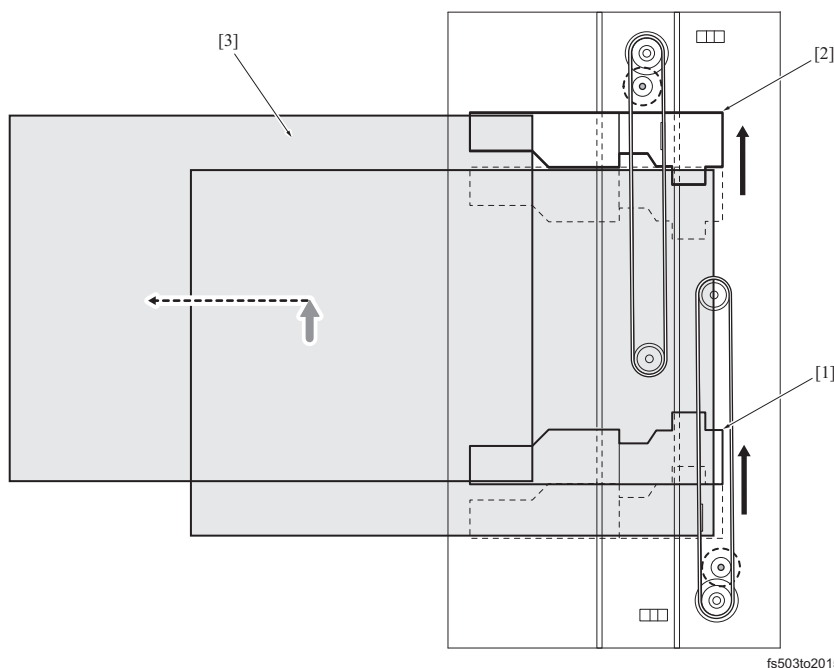
(a) Straight mode

In the straight mode, each sheet of paper sent to the stacker is aligned by the alignment plate /Fr and the alignment plate /Rr before being exited to the straight position.

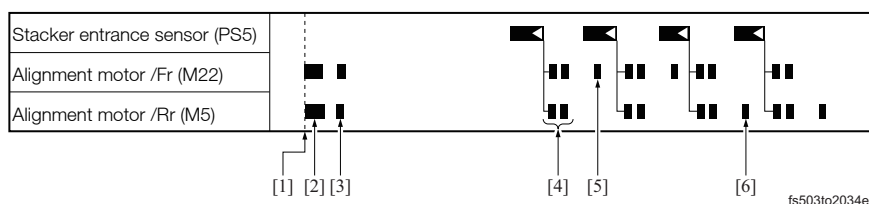
(b) Shift mode

In the shift mode, each time a sheet of paper is sent to the stacker, the alignment plate /Fr [1] and the alignment plate /Rr [2] shift to the rear to convey the paper [3] to the shift position before exiting it.

However, the alignment plates make only alignment operation and do not shift for the 1st page of 2nd and subsequent copies when pages are overlapped in the shift mode. The paper exit alignment plate shifts after 2nd page is conveyed to the stacker.



[1]	Alignment plate /Fr	[2]	Alignment plate /Rr
[3]	Paper	-	



[1]	Start signal ON	[2]	Home position search
-----	-----------------	-----	----------------------

[3]	Move to the size position	[4]	Alignment operation for each sheet of paper
[5]	Move the paper to the shift position in the rear	[6]	Move the paper to the shift position in the front

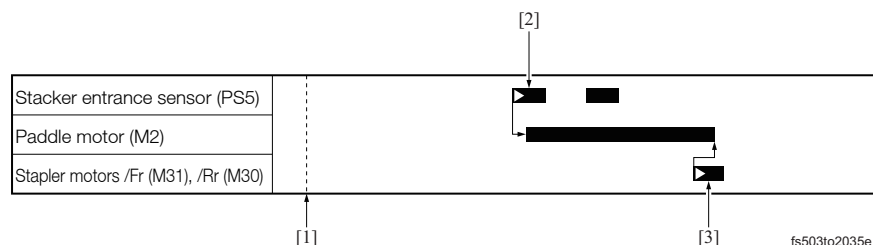
(c) Staple mode

In the staple mode, the alignment operation is made by the alignment plates /Fr and /Rr for each sheet of paper that has been sent to the stacker. After the last sheet of paper of the copy is conveyed to the stacker section, the alignment operation for the staple is made for stapling.

(2) Vertical alignment

In the staple mode, for the vertical alignment of paper, the paper is pushed against the flat-stapling stopper by the paddle driven by the paddle motor (M2).

The vertical alignment is assisted by the swing roller that is interlocked with the paddle by M2.



[1]	Start button ON	[2]	Stapling of the 1st sheet of paper
[3]	Stapling	-	

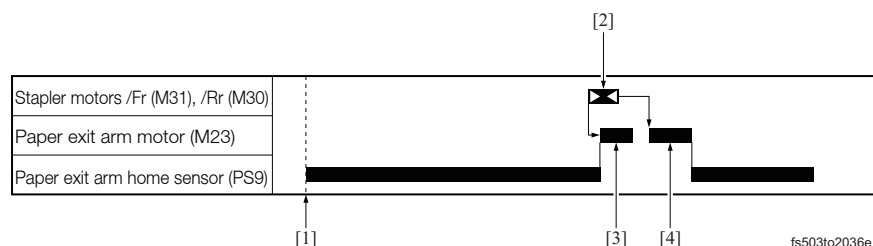
4.3.7 Stacker paper exit

(1) Non-staple control

In the non-staple mode, the nip of the intermediate rollers /Up and /Lw eject the paper.

(2) Staple control

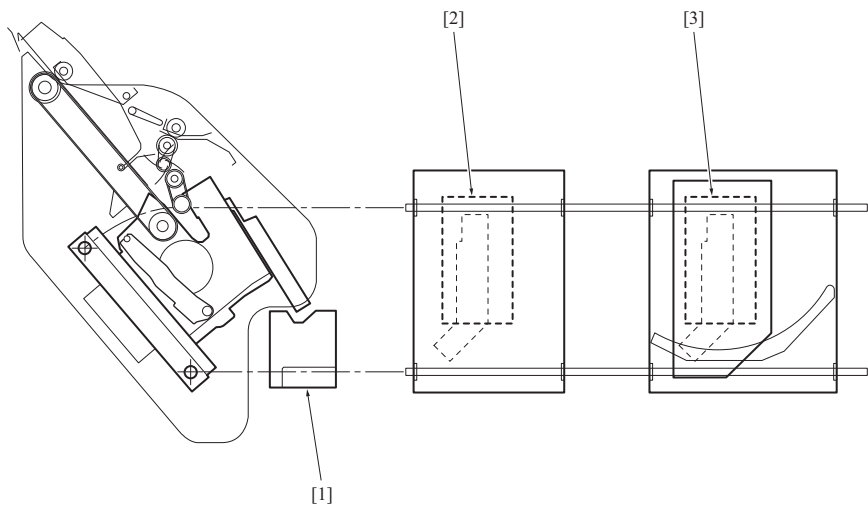
In the staple mode, the paper exit arm that is driven by the paper exit arm motor (M23) eject the paper. The paper exit arm home sensor (PS9) detects the home position of the paper exit arm.



[1]	Start signal ON	[2]	Stapling
[3]	Movement to the paper exit arm standby position	[4]	Paper exit operation of paper bundle

5. STAPLER SECTION

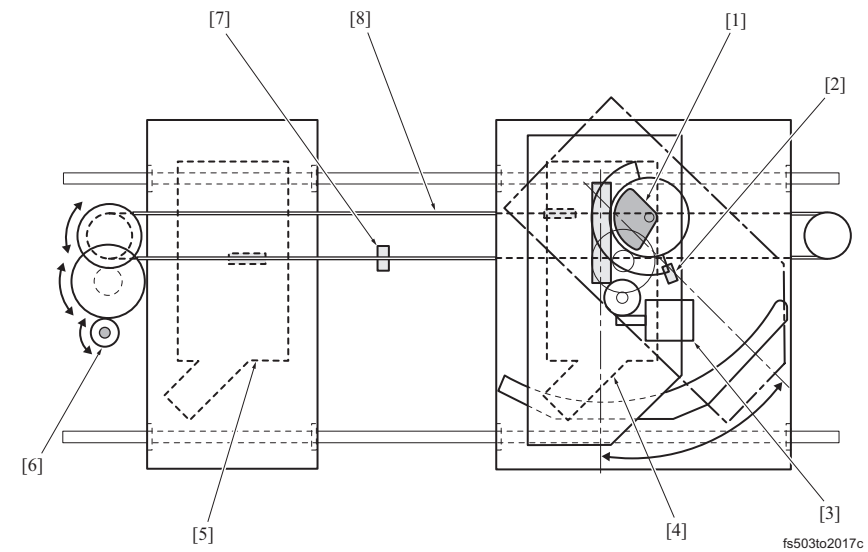
5.1 Configuration



[1]	Stapler /Fr	[2]	Stapler /Rr
[3]	Staple scraps box	[4]	-

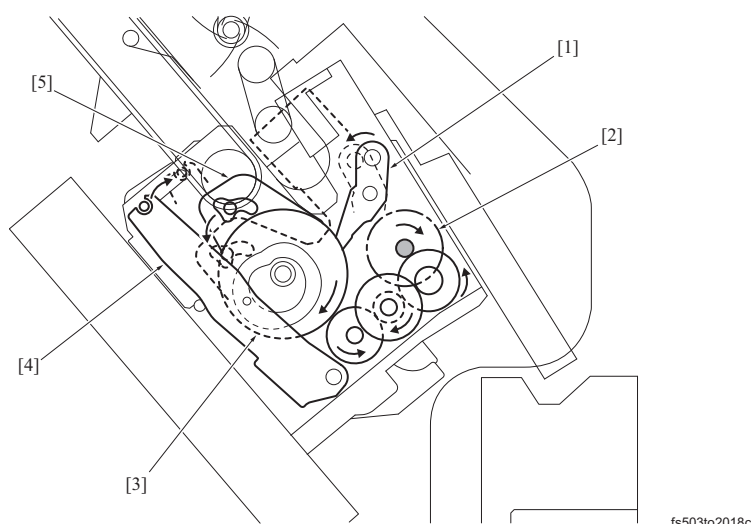
5.2 Drive

5.2.1 Stapler movement/rotation



[1]	Cam	[2]	Stapler rotation home sensor (PS14)
[3]	Stapler rotation motor (M4)	[4]	Stapler /Rr
[5]	Stapler /Fr	[6]	Stapler movement motor (M11)
[7]	Stapler movement home sensor (PS11)	[8]	Belt

5.2.2 Stapler



[1]	Staple cut/bending arm	[2]	Stapler motors /Rr (M30), /Fr (M31)
[3]	Eccentric cam	[4]	Stapling arm
[5]	Pressure plate	-	

5.3 Operation

5.3.1 Stapler movement control

For stapler movements, there are 2 types, that is, the horizontal movement of the stapler intervals and the rotation of the stapler /Rr. Movement is made according to the staple mode.

The stapler movement motor (M11) makes the horizontal movement of the stapler. The stapler /Rr and the stapler /Fr are fixed on the upper side and the lower side of a belt that forms a loop and moved respectively in the opposite direction by the motor M11.

The stapler movement home sensor (PS11) detects the home position of the horizontal movement.

The stapler rotation motor (M4) makes the 45 degrees rotational movement of the stapler /Rr for the one-corner stapling at rear.

The stapler rotation home sensor (PS14) detects the home position of the rotational movement.

(1) 1 point staple

(a) 1 point /front staple

When the start signal is turned ON, the stapler movement motor (M11) also turns ON to move the stapler to the position according to the paper size.

(b) 1 point /one-corner stapling at rear staple size movement

When the start signal is turned ON, the stapler movement motor (M11) also turns ON to move the stapler to the position according to the paper size. After a specified period of time, the stapler rotation motor (M4) also turns ON to rotate the stapler /Rr and move it diagonally.

When a staple empty condition of the stapler /Rr is detected at the one-corner stapling at rear, M4 is driven to replace the cartridge and the stapler is returned to its vertical position.

(2) 2 points staple

When the start signal is turned ON, the stapler movement motor (M11) also turns ON to move the stapler to the position according to the paper size.

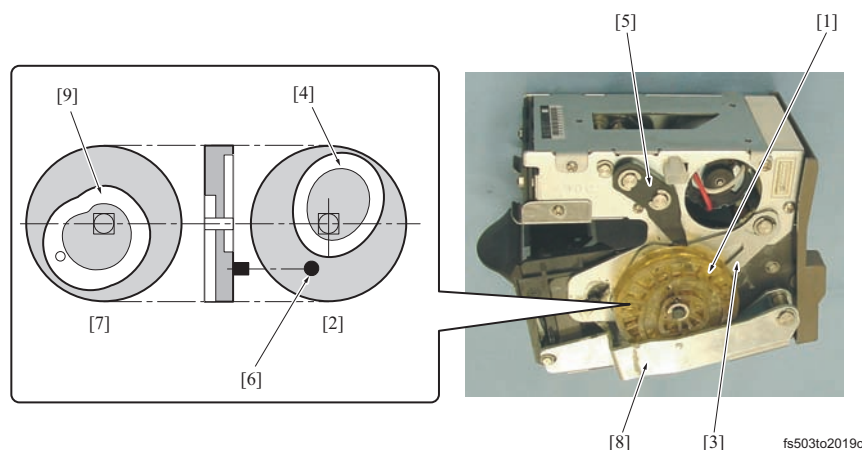
5.3.2 Staple control

The staple control is made by the stapler motors /Rr (M30) and /Fr (M31) to drive the eccentric cam.

The inside [2] of the eccentric cam [1] has the cam groove [4] of the pressure arm [3] and the pin [6] of the staple cut/clinch arm [5]. The outside [7] of the eccentric cam also has the cam groove [9] of the stapling arm [8].

Each time when the eccentric cam makes a 1/4 turn, each of the following operations is made: 1. paper pressure, 2. stapling, 3. staple cut/clinch, and 4. return to the home position. A series of the operations completes in a full turn.

The stapler home sensors /Rr (PS40) and /Fr (PS41) detect the home position.

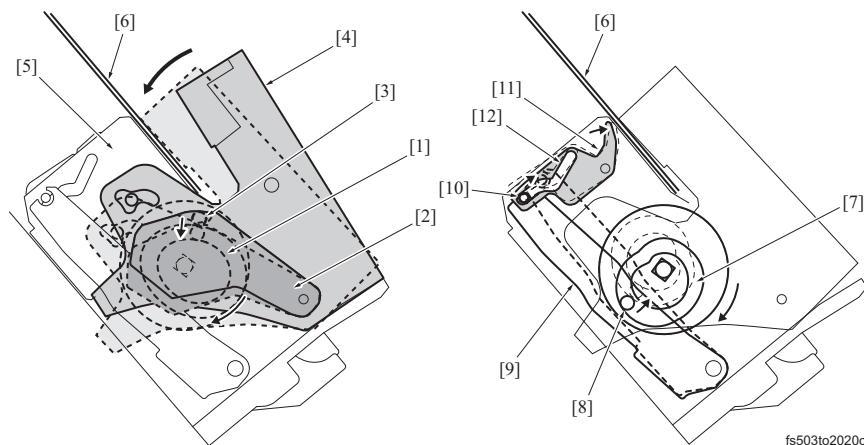


[1]	Eccentric cam	[2]	Inside
[3]	Pressure arm	[4]	Cam groove (for pressure arm)
[5]	Staple cut/clinch arm	[6]	Pin (for staple cut/clinch)
[7]	Outside	[8]	Stapling arm
[9]	Cam groove (for stapling arm)	-	

(1) Paper pressure

When the eccentric cam rotates 90 degrees from the home position, the cam groove [1] on the inside drives the pin [3] provided on the pressure arm [2] in the arrow-marked direction. The pressure arm [2] drives the pressure plate [4] and presses the clinch side hard against the staple side [5] to press the paper [6].

At the same time, the pin [8] provided in the groove [7] on the outside of the cam drives the stapling arm [9]. The pin [10] at the tip of the stapling arm moves along the groove [12] of the pressure claw [11], and drives the pressure claw [11] with the lever to press the paper. The following figure shows an inside cam on the left and an outside cam on the right.

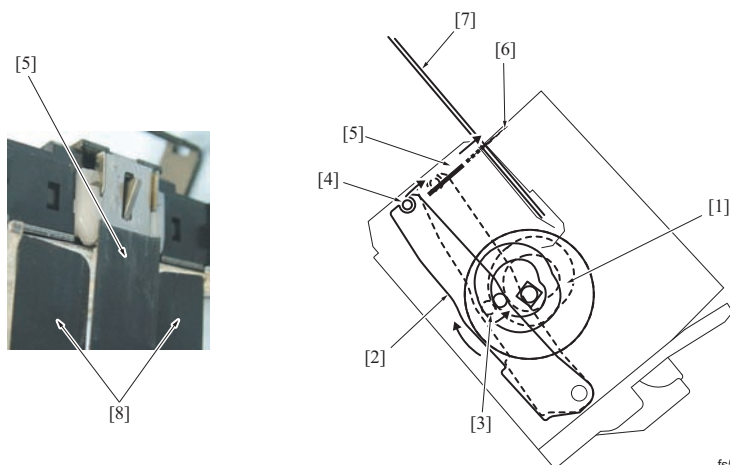


[1]	Cam groove	[2]	Pressure arm
[3]	Pin	[4]	Pressure plate
[5]	Staple side	[6]	Paper
[7]	Cam groove (for stapling arm)	[8]	Pin
[9]	Stapling arm	[10]	Pin
[11]	Pressure claw	[12]	Groove

(2) Staple control

When the eccentric cam rotates from 90 degrees to 180 degrees the cam groove [1] on the outside drives the pin [3] provided on the stapling arm [2] in the arrow-marked direction. The pin at the tip [4] of the stapling arm pushes up the stapling blade [5] to push out the staple [6], punch out the paper [7] and staple it.

At the same time, to make preparation for the next stapling, the staple is bent at 90 degrees by the staple bending blade [8].



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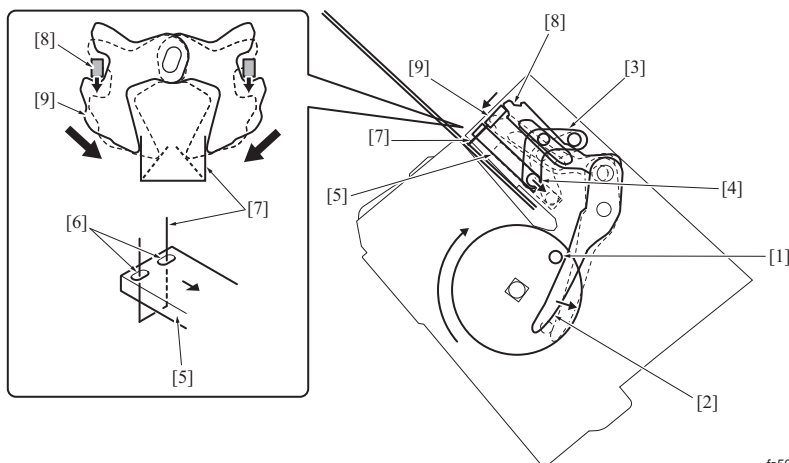
[1]	Cam groove	[2]	Stapling arm
[3]	Pin	[4]	Pin at the tip
[5]	Stapling blade	[6]	Staple
[7]	Paper	[8]	Staple bending blade

(3) Staple cut/clinch control

When the eccentric cam rotates from 180 degrees to 270 degrees the pin [1] provided on the inside drives the staple cut/clinch arm [2] in the arrow-marked direction.

At the start of rotation, the lever operation of the staple cut/clinch arm [2] rotates the coupling metal fitting [3] to pull the pin [4] in the arrow-marked direction and the staple [7] inserted into the round hole [6] of the staple cut blade [5] is cut. Cut staple scraps drop into the duct to be collected in the staple scraps box.

With the further rotation of the eccentric cam, the tip of the presser metal fitting [8] that is interlocked with the staple cut/clinch arm [2] pushes down the clinch metal fitting [9] to clinch the staple [7] that has been cut. When the eccentric cam rotates up to 270 degrees the clinch operation is completed. After completion of clinching, the eccentric cam rotates to the home position to complete a series of operations.



fs503to2022c

[1]	Pin	[2]	Staple cut/clinch arm
[3]	Coupling metal fitting	[4]	Pin
[5]	Staple cut blade	[6]	Round hole
[7]	Staple	[8]	Presser metal fitting
[9]	Clincher plate	-	

(4) Cartridge detection

The cartridge set sensors /Rr (PS42) and /Fr (PS43) detect the presence of a cartridge or the incorrect setting of a cartridge. When there is no cartridge or the cartridge is set incorrectly, an error message is displayed on the operation section.

(5) Staple detection

When the staples run short, the staple empty sensors /Rr (PS44) and /Fr (PS45) detect this condition and display an error message on the operation section.

(6) Staple tip detection

The staple ready sensors /Rr (PS46) and /Fr (PS47) detect the tip of the staple.

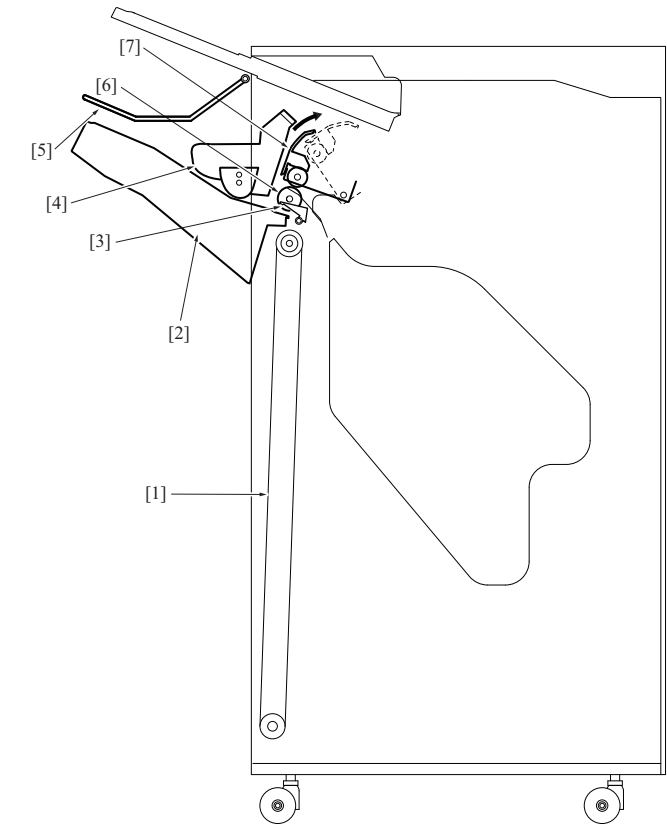
While in the stapling operation, the staple ready sensors determine that the staples have been clogged when the PS46 and PS47 do not turn ON within a specified period of time after the staple home sensors /Rr (PS 40), /Fr (PS41) turn OFF, and rotate the stapler motors /Rr (M30), /Fr (M31) in the reverse direction up to the home position.

(7) Staple scraps box detection

The stapler scraps box set sensor (PS34) detects the presence of a staple scraps box or the incorrect setting of a box. When there is no staple scraps box or it is set incorrectly, an error message is displayed on the operation section.

6. MAIN TRAY SECTION

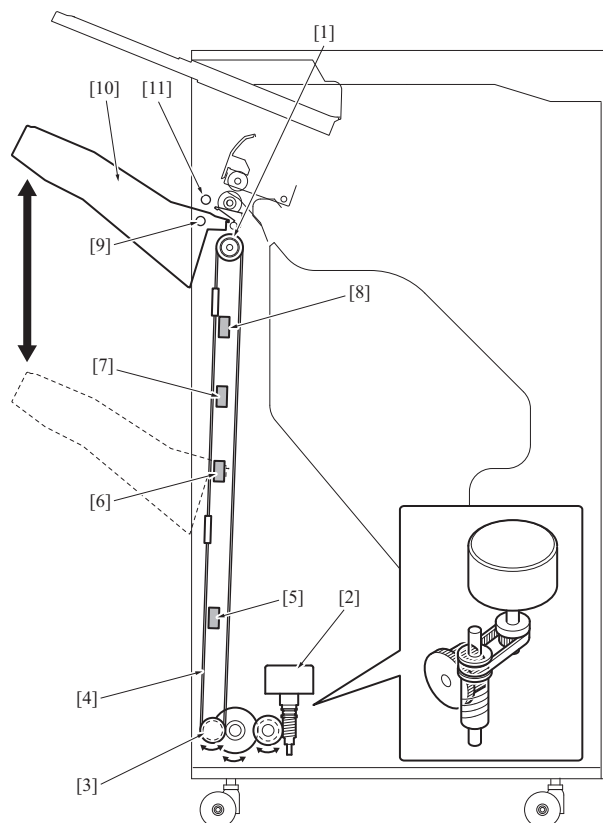
6.1 Configuration



[1]	Lift wire	[2]	Main tray
[3]	Paper press arm	[4]	Paper exit alignment plate
[5]	Thin paper holding material	[6]	Main tray paper exit roller
[7]	Paper exit opening unit	-	

6.2 Drive

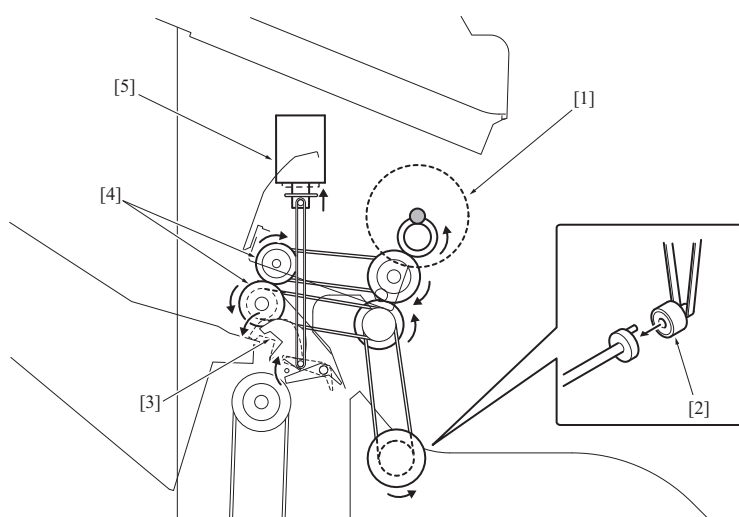
6.2.1 Tray up/down drive



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[1] Lift pulley /Up	[2] Tray up down motor (M3)
[3] Lift pulley /Lw	[4] Lift wire
[5] Tray lower limit sensor (PS3)	[6] Tray middle position sensor (PS6)
[7] Tray quarter position sensor (PS17)	[8] Counter reset sensor (PS15)
[9] Paper empty sensor (PS39)/Paper empty LED (LED2)	[10] Main tray
[11] Tray upper limit sensor (PS16)/Tray upper limit LED (LED1)	-

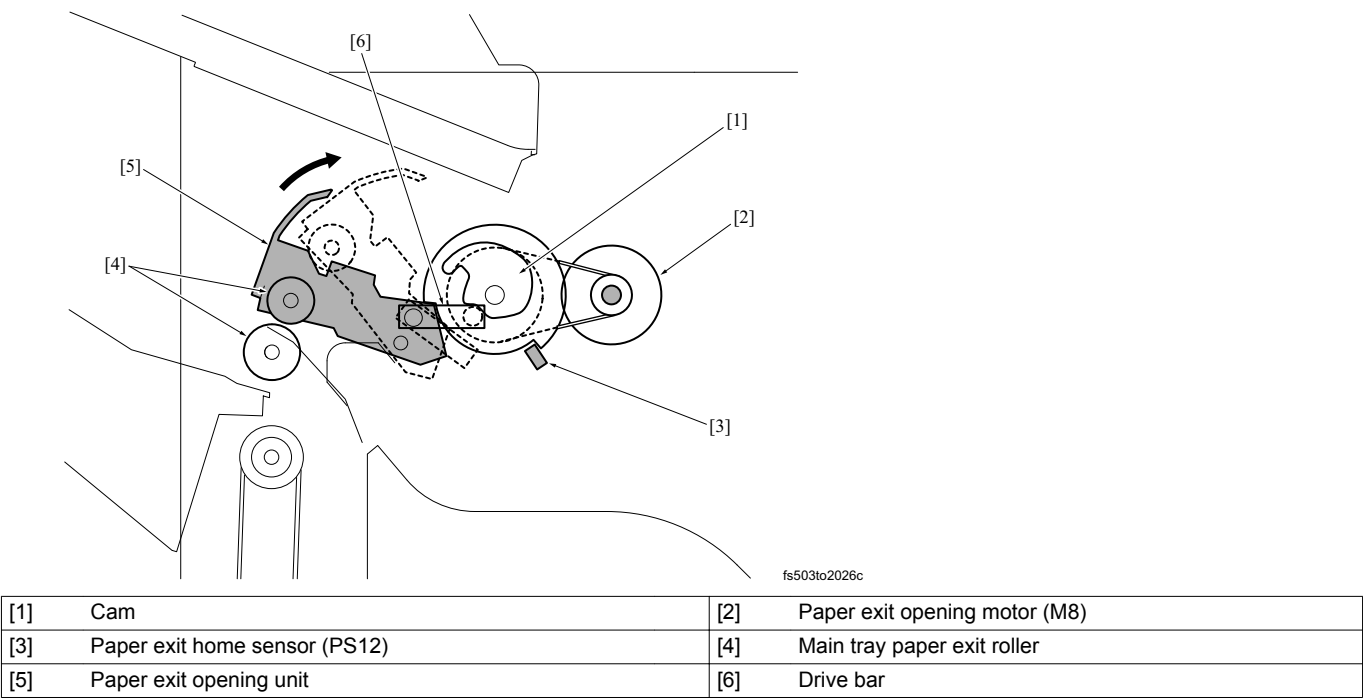
6.2.2 Main tray paper exit drive



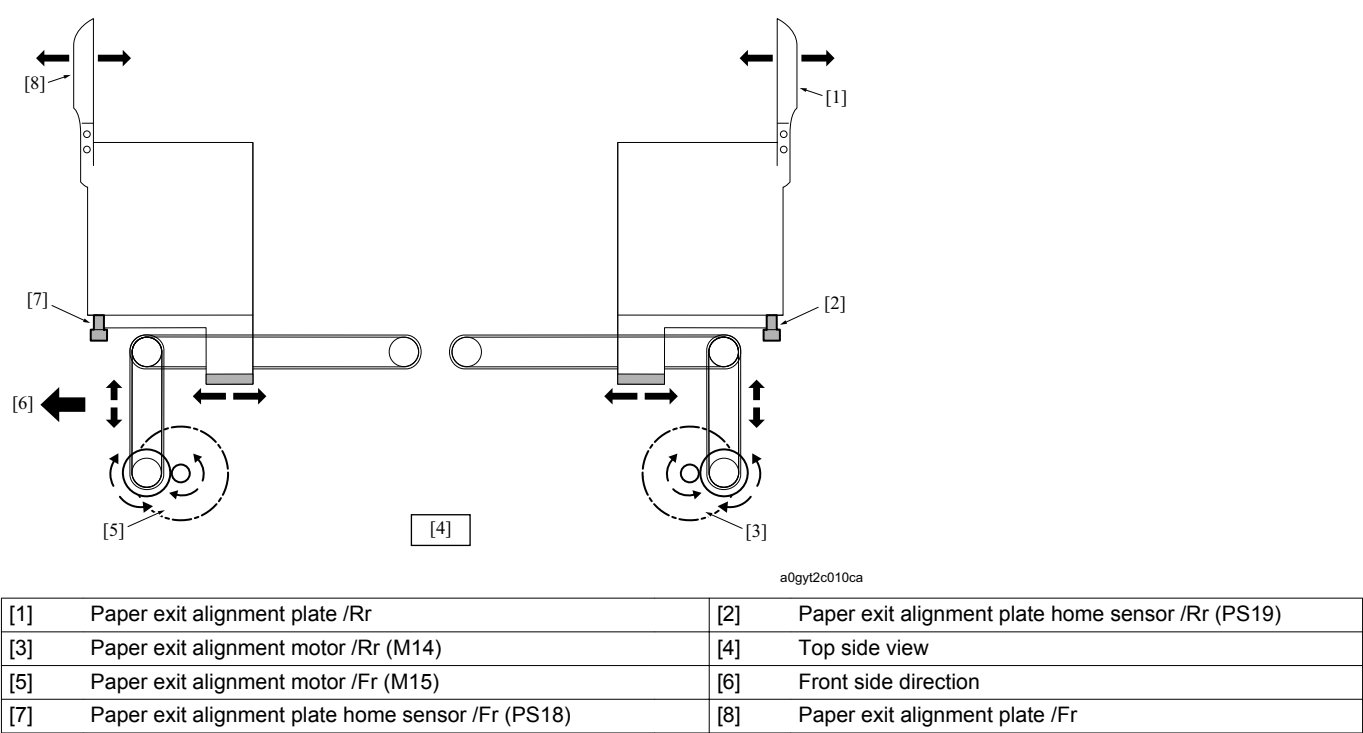
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[1] Main tray exit motor (M7)	[2] Coupling
[3] Paper press arm	[4] Main tray paper exit roller
[5] Paper exit opening solenoid (SD9)	-

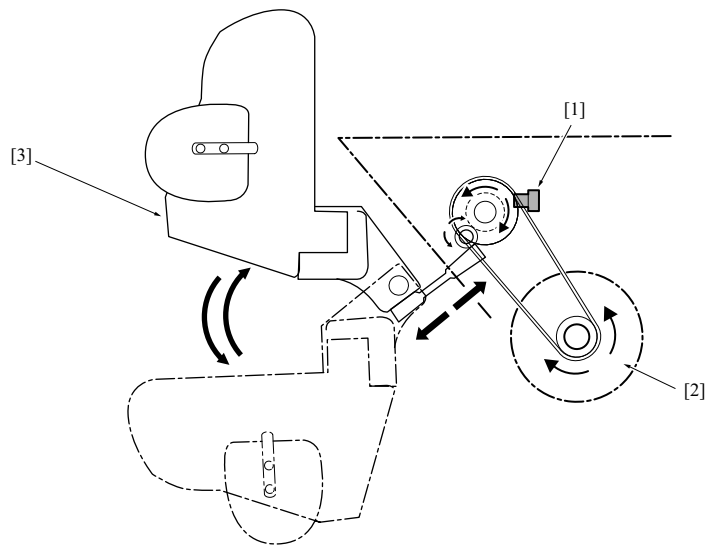
6.2.3 Paper exit opening drive



6.2.4 Paper exit alignment plate drive



6.2.5 Paper exit alignment plate retraction drive



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[1]	Paper exit alignment plate retraction home sensor (PS24)	[2]	Paper exit alignment plate retraction motor (M18)
[3]	Paper exit alignment plate		-

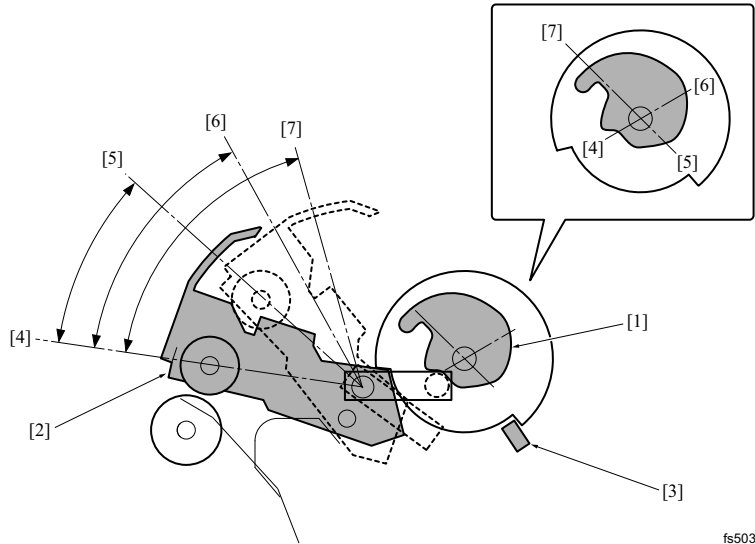
6.3 Operation

6.3.1 Paper exit opening control

When paper is too long and protruding, the paper exit opening is opened and closed for alignment. There are 3 opening positions available according to the mode and the paper length. For paper shorter than the following length, the paper exit opening is not opened in the non-staple mode or the staple mode.

Mode	Angle of the opening	Paper length in the sub scan direction
Non-staple	Approx. 27 degrees	239mm or more
Staple	Approx. 44 degrees	400mm or more
Staple	Approx. 55 degrees	Between 219mm and 400mm

For the open/close of the paper exit opening, the paper exit motor (M8) rotates and the deformed cam [1] lifts up the entire paper exit opening unit [2] to open the paper exit opening. The paper exit home sensor (PS12) [3] detects the open/close of the paper exit opening.



fs503to2027c

[1]	Deformed cam	[2]	Paper exit opening unit
[3]	Paper exit home sensor (PS12)	[4]	Position at 0 degree
[5]	Position at 27 degrees	[6]	Position at 44 degrees
[7]	Position at 55 degrees		-

(1) Non-staple control

In the case that the paper length in the sub scan direction is less than 239mm, the paper exit opening closes with the home position search of the paper exit opening motor (M8) by the start signal ON and then the paper is nipped and exited after the staple operation.

In the case that the paper length is 239mm or longer, paper exit unit is opened by 27 degrees after the home position search of M8 by the start signal ON. While in printing, after the alignment operation, the paper exit opening is closed temporary to nip the paper to be exited.

(2) Staple control

In the case that the paper length in the sub scan direction is less than 219mm, the paper exit opening closes with the home position search of the paper exit opening motor (M8) by the start signal ON and then the paper is nipped and exited after the staple operation.

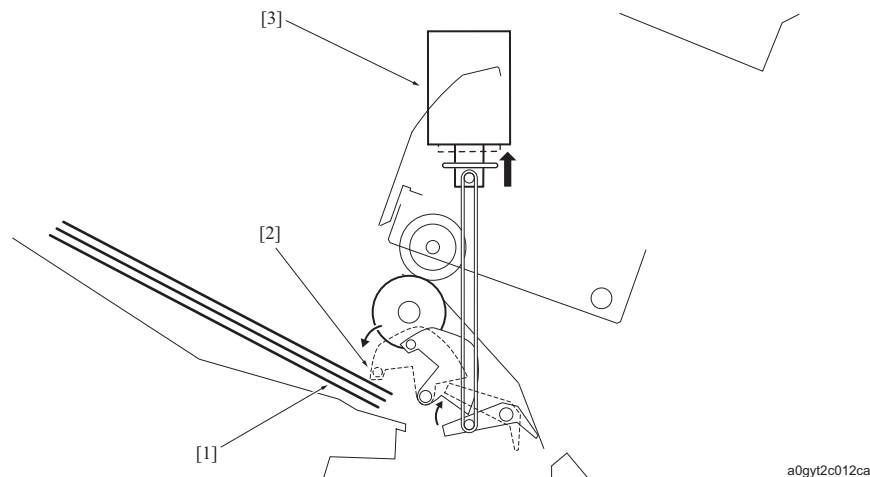
In the case that the paper length is 219mm or longer, paper exit unit is opened by 44 degrees (paper length: 400mm or more)/55 degrees (paper length: 219mm or more and less than 400mm) after the home position search of M8 by the start signal ON. After the staple operation, it closes the paper exit opening temporary to nip the paper and then exits paper.

6.3.2 Paper press arm control

Paper press arm control avoids exited pages misalignment.

Paper exit solenoid (SD9) drives paper press arm.

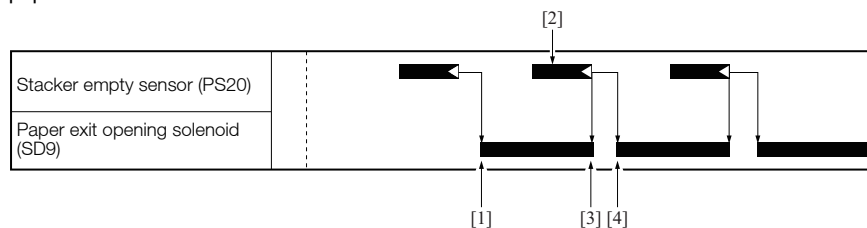
Subsequent pages cause a misalignment of pages already exited, so the paper press arm presses exited pages to avoid that misalignment.



[1] Paper	[2] Paper press arm
[3] Paper exit opening solenoid (SD9)	-

(1) Straight/Shift mode

After a specified period of time when the stacker empty sensor (PS20) detects the trailing edge of paper, the paper exit opening solenoid (SD9) turns ON to press exited paper and stands by for subsequent exited paper. After a specified period of time when the stacker empty sensor (PS20) detects the trailing edge of the subsequent paper, SD9 turns OFF and paper press arm releases, right before the trailing edge of paper passes through the paper exit roller, for the preparation to press paper which is passing through. It repeats the operation for each paper exit.

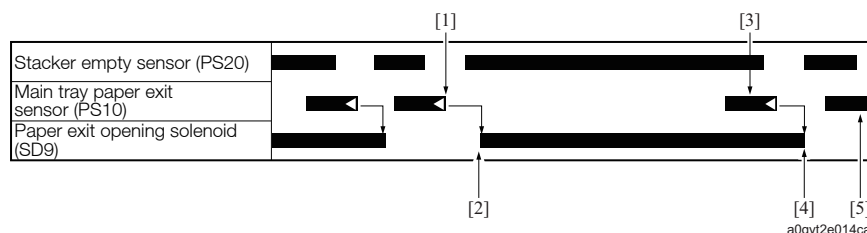


[1] Pressure for 1st paper	[2] 2nd paper exit
[3] Pressure release	[4] Pressure for 2nd paper

(2) Subset staple mode

The paper press arm presses paper when the inserted paper exits, because the bundle of stapled sheets misaligns paper which is inserted between the bundle of stapled sheets in the subset staple mode which the number of staple sheets is 10 or more.

After a specified period of time when the main tray paper exit sensor (PS10) detects the trailing edge of inserted paper, the paper exit opening solenoid (SD9) turns ON and inserted paper is pressed. After a specified period of time when PS10 detects the trailing edge of the bundle of stapled sheets, SD9 turns OFF and stands by for exiting inserted paper.



[1] Trailing edge detection of insert paper	[2] Pressure
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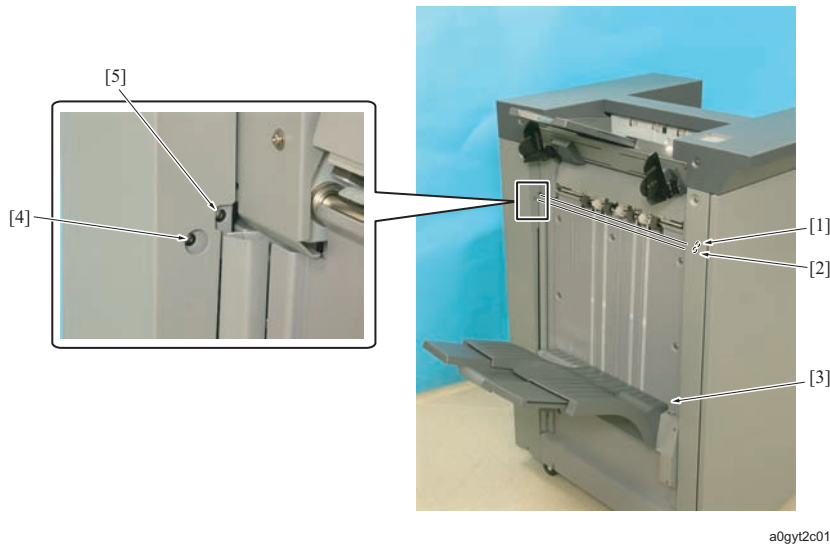
[3]	Bundle of staple paper	[4]	Pressure release
[5]	Insert Paper	-	

6.3.3 Main tray up/down control

The driving force of the tray up down motor (M3) rotates the lift pulley by the belt and the gear to wind up the lift wire. The main tray goes up or down according to the direction in which the up/down wire is wound up. When the lift pulley /Lw rotates clockwise as seen from the front, the main tray goes up and when it rotates counterclockwise, the tray goes down.

The tray upper limit LED (LED1) [1] and the tray upper limit sensor (PS16) [5] detect the upper surface of paper (the main tray upper surface when no paper is exited) [3].

The paper empty LED (LED2) [4] and the paper empty sensor (PS39) [2] detect extraction of paper in continuous operation.



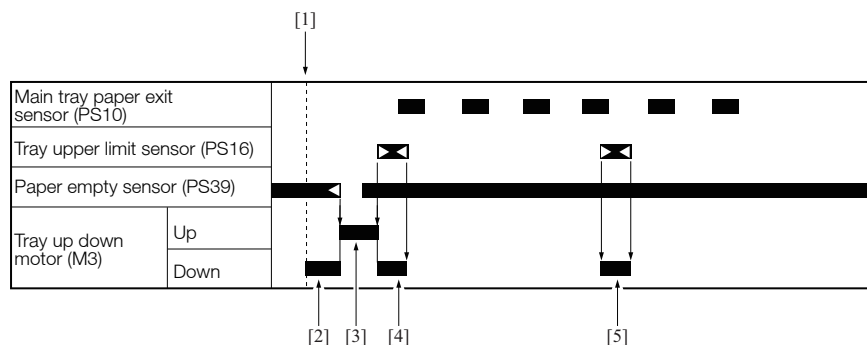
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[1]	Tray upper limit LED (LED1)	[2]	Paper empty sensor (PS39)
[3]	Upper surface of paper (Main tray upper surface when no paper is exited)	[4]	Paper empty LED (LED2)
[5]	Tray upper limit sensor (PS16)	-	

(1) Non-staple control

With the start signal ON [1] from the main body, the tray up down motor (M3) turns ON to move down the main tray [2], then the paper empty sensor (PS39) turns OFF, and then M3 turns reverse rotation ON to move up the main tray. The tray upper limit sensor (PS16) turns ON to rotate M3 in forward direction, and moves down the main tray to the turning OFF position of PS16 from the paper exit opening. This operation maintains the distance between the upper surface of the paper exited in the main tray (the surface of the main tray when no paper exited) and the paper exit opening at a fixed distance to prevent the paper exited from having an uneven edge.

During the print operation, the exited paper turns PS16 ON, and M3 turns ON to move down the main tray to the specified position.



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[1]	Start signal ON	[2]	Main tray moving down
[3]	Main tray moving up	[4]	Main tray moving down to the specified position
[5]	Main tray moving down to the specified position	-	

(2) Staple control

(a) When the number of staple sheets is 20 or less.

It conducts same control as non-staple control.

(b) When the number of staple sheet is more than 20.

The stacker empty sensor (PS20) detects the trailing edge of paper, then the tray up down motor (M3) turns ON to move down the main tray to the position according to the number of staple sheets, and then the motor turns OFF.

When the paper empty sensor (PS39) turns OFF unexpectedly with the error caused by the staple sheets, M3 turns ON to move up the main tray to the position which the tray upper limit sensor (PS16) turns ON, then the rotation is changed over to move down the main tray to the position which PS16 turns OFF, and then M3 turns OFF.

(3) Main tray paper detection control

The tray quarter position sensor (PS17), the tray middle position sensor (PS6), and the tray lower limit sensor (PS3) detect the maximum number of loadable sheets on the main tray.

The stopping position of paper full detection varies according to the size of paper for each mode.

PS17 position: About 750 sheets (in the case of 80g/m²)

PS6 position: About 1500 sheets (in the case of 80g/m²)

PS3 position: About 3000 sheets (in the case of 80g/m²)

After it stops by detecting paper full, the paper full detection status is released when the tray up down motor (M3) turns ON to turn the counter reset sensor (PS15) ON.

(a) Straight/Shift mode

It stops printing when each sensors turn ON and displays the message on the operation panel.

Z-Folding/center folding (weight: less than 130g/m²) stops at 50 main tray paper exit (switchable with DIPSW) by the software counter.

Weight (g/m ²)	Large size (longer side: 320mm or more)	Small size (longer side: 250mm to 319mm)	Minimum size (longer side: 249mm or less)
64 to 300	PS6	PS3 (straight mode) PS6 (shift mode)	PS17

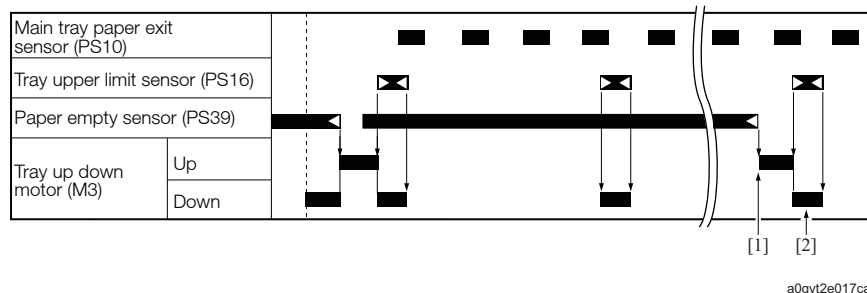
(b) Staple mode

Staple sheet	Large size (longer side: 320mm or more)	Small size (longer side: 250mm to 319mm)	Minimum size (longer side: 249mm or less)
2 to 5	PS17		
6 to 9	PS6	PS6	PS17
10 to 100		PS3	PS6

(4) Detection of paper removal in the continuous print mode

It turns OFF the paper empty sensor (PS39) and detects the removal if the exited paper is removed while in continuous printing.

Once it turns OFF PS39 while in continuous printing, it turns ON the tray up down motor (M3) and raises the main tray until the tray upper limit sensor (PS16) turns ON, and then by switching the rotation it lowers the main tray until PS16 turns OFF to turn OFF M3.



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[1] Lift of the main tray by detecting the paper removal	[2] Main tray moving down to the specified position
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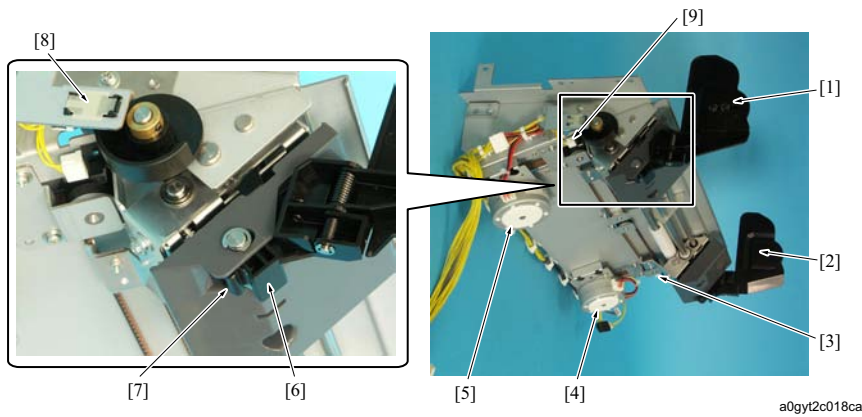
(5) Temporary stop button

Exiting paper to the main tray stops temporary by pressing the temporary stop button for more than 1second while in the straight mode or the shift mode.

Press start key of the main body to restart.

6.3.4 Paper exit alignment control

Paper exit alignment motor /Fr (M15) [4] operates the alignment drive of the paper exit alignment plate /Fr [2] and the paper exit alignment plate home sensor /Fr (PS18) [3] detects the home position. As well, the paper exit alignment motor /Rr (M14) [5] operates the alignment drive of the paper exit alignment plate /Rr [1] and the paper exit alignment plate home sensor /Rr (PS19) [9] detects the home position. When the paper exit alignment plate /Fr, /Rr moves to the paper size or returns to the home position, paper exit alignment plate retraction motor (M18) projects the rack [7] and pushes up the bottom of the paper exit alignment plate [6] to conduct the retraction of the paper exit alignment plate. Once the rack is pulled back, the paper exit alignment plate falls down to the alignment position with its weight. Paper exit alignment plate retraction home sensor (PS24) [8] detects the home position in the retraction.



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[1]	Paper exit alignment plate /Rr	[2]	Paper exit alignment plate /Fr
[3]	Paper exit alignment plate home sensor /Fr (PS18)	[4]	Paper exit alignment motor /Fr (M15)
[5]	Paper exit alignment motor /Rr (M14)	[6]	Bottom of the paper exit alignment plate
[7]	Rack	[8]	Paper exit alignment plate retraction home sensor (PS24)
[9]	Paper exit alignment plate home sensor /Rr (PS19)	-	

(1) Straight mode

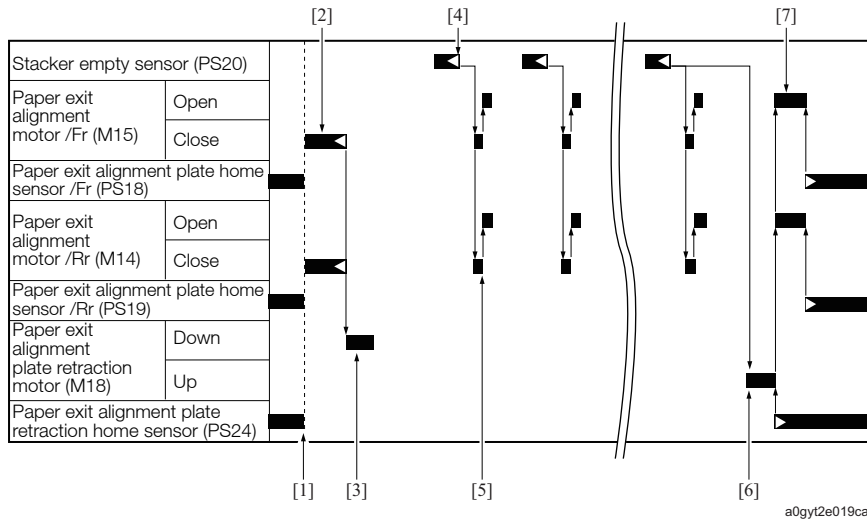
In the straight mode, it conducts the alignment operation at the center of the main tray if the paper is over 182mm in the main scan direction. It turns ON the paper exit alignment motors /Fr (M15) and /Rr (M14) with the start signal ON, and the paper exit alignment plates /Fr and /Rr move to the paper size standby position which is at the center of the main tray with remaining in the retraction status (lift up), and then it turns OFF.

Once the movement to the paper size stand by position is completed, it turns ON the paper exit alignment plate retraction motor (M18) and pulls down the paper exit alignment plates /Fr and /Rr.

After a specified period of time when the stacker empty sensor (PS20) detects the trailing paper edge, it conducts the alignment operation on the paper exit alignment plates /Fr and /Rr by turning ON M15 and M14 for each paper exit.

After a specified period of time when the last alignment operation is finished, it turns ON M18 to evacuate (lift up) the paper exit alignment plates /Fr and /Rr and then turns OFF M18 by turning ON the paper exit alignment home sensor (PS24).

At the same time, it turns ON M15 and M14 by turning ON PS24, moves the paper exit alignment plates /Fr and /Rr to the home position, and turns OFF M15 and M14 by turning ON the paper exit alignment plate home sensors /Fr (PS18) and /Rr (PS19).



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[1]	Start signal ON	[2]	Move to paper size stand by position
[3]	Paper exit alignment plate retraction release (down)	[4]	Trailing edge of paper detected
[5]	Alignment operation	[6]	Paper exit alignment plate retraction (up)
[7]	Returning to the home position of paper exit alignment plate	-	

(2) Shift mode

In the shift mode, it conducts the alignment operation at the position 10mm away in front and rear from the center of the main tray (Shift amount: 20mm) if the paper is over 210mm in the main scan direction.

If the paper is 210mm or less in the main scan direction, it does not conduct the paper exit alignment but conducts the shift operation with the alignment plate of the stacker.

It conducts the paper exit alignment operation with one paper exit alignment plate while in fixing the other plate, but the operation differs in small-size and large-size according to the length in the sub scan direction.

When shifting to the front side, in a case of small-size, it conducts the alignment operation with the paper exit alignment plate /Fr while in fixing the paper exit alignment plate /Rr to the position of the paper edge which exited from the stacker. When shifting to the back side, it conducts the alignment with the paper exit alignment plate /Rr while in fixing the paper exit alignment plate /Fr.

When shifting to the front side, in a case of large-size, it conducts the alignment operation by fixing the paper exit alignment plate /Fr while shifting the paper exit alignment plate /Rr to the front along with the exiting paper from the stacker. When shifting to the back side as well, it conducts the alignment operation with the paper exit alignment plate /Fr while in fixing the paper exit alignment plate /Rr.

(a) Small-size (sub-scanning direction length: shorter than 297mm)

It turns ON the paper exit alignment motors /Fr (M15) and /Rr (M14) with the start signal ON, and the paper exit alignment plates /Fr and /Rr move to the paper size standby position which is 10mm front side from the center paper exit position of the main tray with remaining in the retraction status (lift up), and then it turns OFF.

Once the movement to the paper size stand by position is completed, it turns ON the paper exit alignment plate retraction motor (M18) and pulls down the paper exit alignment plates /Fr and /Rr.

After a specified period of time when the stacker empty sensor (PS20) detects the trailing paper edge, it conducts the alignment operation with the paper exit alignment plate /Fr by turning ON M15 for each paper exit.

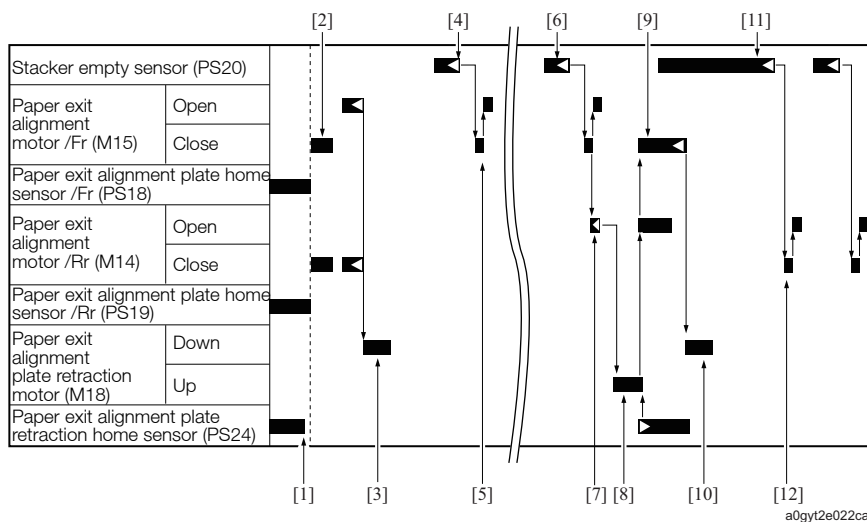
Once the last alignment operation of the 1st copy is finished, it turns ON M14 to keep the paper exit alignment plate /Rr from the edge of paper at the same time as moving back to the paper size stand by position of M15 and then turns OFF at the specified position.

It turns ON M18 by turning OFF M15 and M14 to evacuate (lift up) the paper exit alignment plates /Fr and /Rr and then turns OFF M18 by turning ON the paper exit alignment home sensor (PS24).

Once the evacuation (lift up) is finished by turning ON PS24, it turns ON M15 and M14, moves to the shift position on the rear side, and turns OFF M15 and M14. It turns ON M18 by turning OFF M15 which moves longer to pull down the paper exit alignment plate.

It conducts the alignment operation on the paper exit alignment plate /Rr for each paper exit after a specified period of time when PS20 detects the trailing edge of paper.

After completion of the job, as well as the straight mode, once the last alignment operation is finished, it evacuates (lifts up) the paper exit alignment plate and goes back to the home position.



[1]	Start signal ON	[2]	Movement to the paper size
[3]	Paper exit alignment plate retraction release (down)	[4]	Trailing edge of paper detected
[5]	Alignment operation by the paper exit alignment plate /Fr	[6]	Trailing edge of the last page detection of the 1st copy
[7]	Move away from the edge of paper	[8]	Paper exit alignment plate retraction (up)
[9]	Shift movement to the rear side	[10]	Paper exit alignment plate retraction release (down)
[11]	Conveyance of 2 pages with the 1st and the 2nd page of the 2nd copy	[12]	Alignment operation by the paper exit alignment plate /Rr

(b) Large-size (sub-scanning direction length: 298mm or longer)

It turns ON the paper exit alignment motors /Fr (M15) and /Rr (M14) with the start signal ON, and the paper exit alignment plate /Fr moves to the paper size standby position which is 10mm front side from the center paper exit position of the main tray with remaining in the retraction status (lift up), and the paper exit alignment plate /Rr moves to the center paper exit position of the main tray with remaining in the retraction status (lift up), and then it turns OFF.

Once the movement to the paper size stand by position is completed, it turns ON the paper exit alignment plate retraction motor (M18) and pulls down the paper exit alignment plates /Fr and /Rr.

It turns ON M14 with the paper trailing edge detection of FNS entrance sensor (PS4), assists the shift by moving the paper exit alignment plate /Rr forward along with the timing of the stacker alignment plate shift, and turns OFF once, then conducts the alignment operation on the paper exit alignment plate /Rr by turning ON M14 again after a specified period of time when the stacker empty sensor (PS20) detects the trailing paper edge.

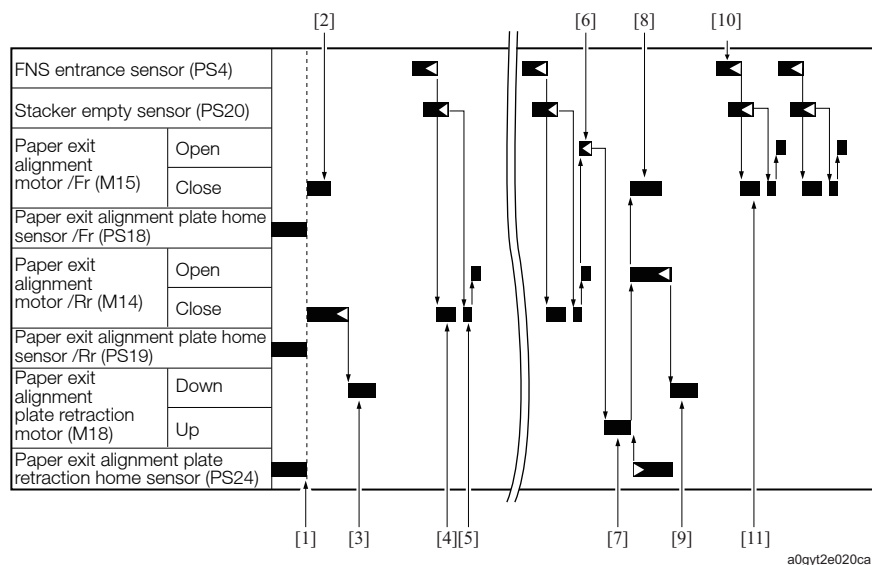
Once the last alignment operation of the 1st copy is finished, it turns ON M15 to keep the paper exit alignment plate /Fr from the edge of paper at the same time as moving back to the paper size stand by position of M14 and then turns OFF at the specified position.

It turns ON M18 by turning OFF M15 and M14 to evacuate (lift up) the paper exit alignment plates /Fr and /Rr and then turns OFF M18 by turning ON the paper exit alignment home sensor (PS24).

Once the evacuation (lift up) is finished by turning ON PS24, it turns ON M15 and M14, moves to the shift position on the rear side, and turns OFF M15 and M14. It turns ON M18 by turning OFF M14 which moves longer to pull down the paper exit alignment plate.

It turns ON M15 by the PS4 detection of the trailing edge of paper, assists the shift to the rear side at the paper exit alignment plate /Fr, and conducts the alignment operation at the paper exit alignment plate /Fr by turning ON M15 again after a specified period of time when PS20 detects the trailing edge of paper.

After completion of the job, as well as the straight mode, once the last alignment operation is finished, it evacuates (lifts up) the paper exit alignment plate and goes back to the home position.



[1]	Start signal ON	[2]	Movement to the paper size
[3]	Paper exit alignment plate retraction release (down)	[4]	Paper exit alignment plate /Rr shift assist operation
[5]	Alignment operation by the paper exit alignment plate /Fr	[6]	Move away from the edge of paper
[7]	Paper exit alignment plate retraction (up)	[8]	Shift movement to the rear side
[9]	Paper exit alignment plate retraction release (down)	[10]	1st page conveyance of the 2nd copy
[11]	Paper exit alignment plate /Fr shift assist operation	-	

(3) Staple mode

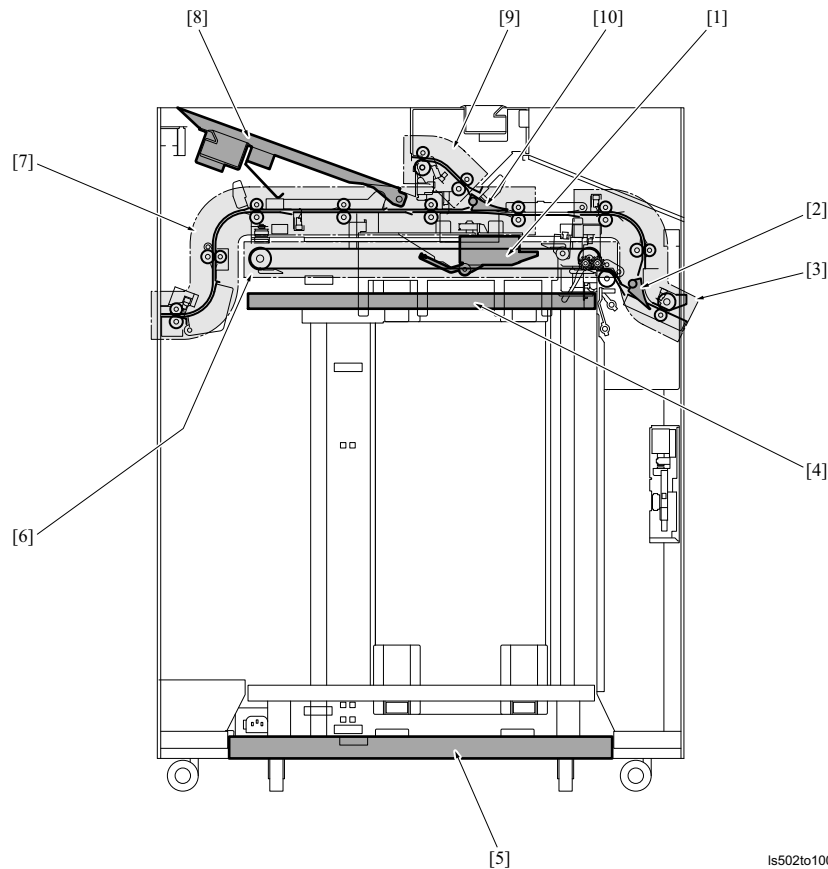
Conduct the paper exit alignment only in the case of the staple mode with 20 sheets or less of minimum-size (the main scan direction 182mm to 249mm). Control sequence is the same as the straight mode of nonstaple.

The paper exit alignment does not work in the other staple modes.

PM THEORY OF OPERATION LS-505

1. OUTLINE

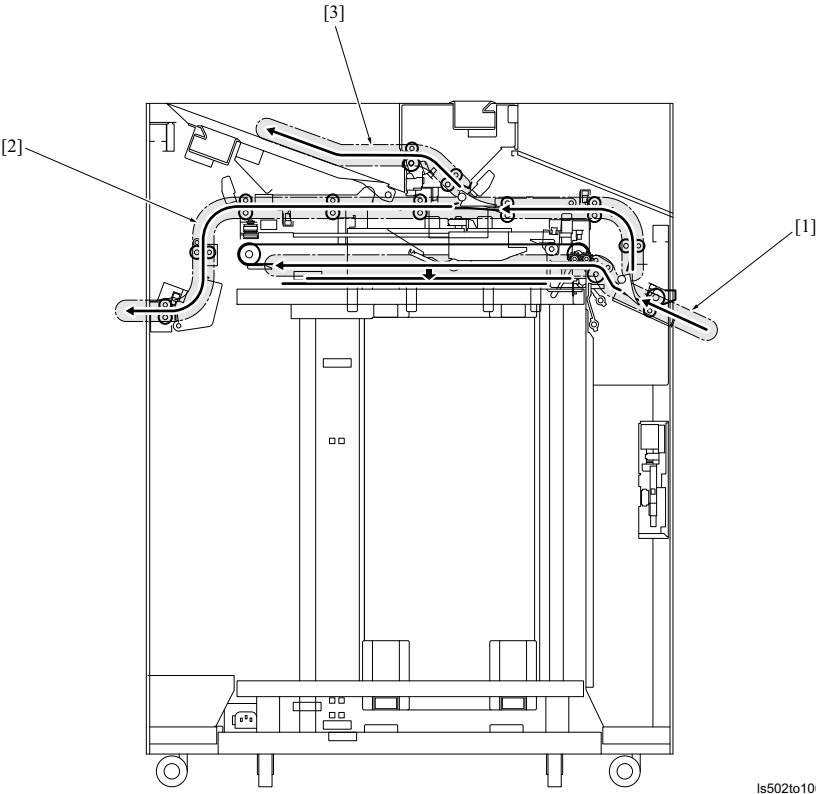
1.1 Unit configuration



Is502to1001c

[1]	Conveyance unit	[2]	1st gate
[3]	Entrance conveyance section	[4]	Stacker tray
[5]	Hand cart	[6]	Stacker tray conveyance section
[7]	Coupling conveyance section	[8]	Sub tray
[9]	Sub tray conveyance section	[10]	2nd gate

1.2 Paper path

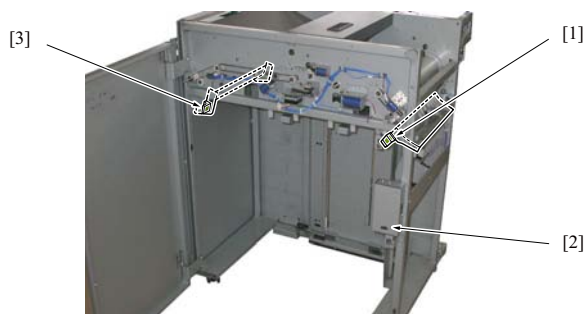


Is502to1002c

[1]	Stacker tray non-sort/sort mode	[2]	Coupling mode
[3]	Sub tray mode		-

2. COUPLING CONVEYANCE SECTION

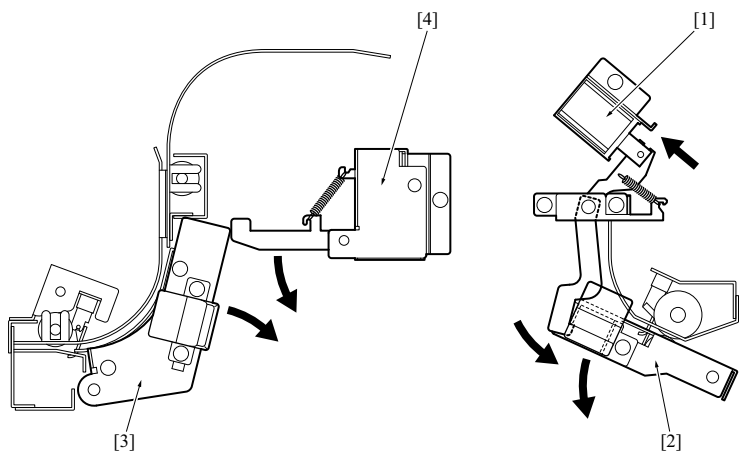
2.1 Configuration



Is502to2001c

[1]	Entrance conveyance lock solenoid (SD5)	[2]	Front door lock solenoid (SD4)
[3]	Coupling conveyance lock solenoid (SD11)	-	

2.2 Drive



Is502to2002c

[1]	Entrance conveyance lock solenoid (SD5)	[2]	Entrance jam release lever
[3]	Coupling jam release lever	[4]	Coupling conveyance lock solenoid (SD11)

2.3 Operation

2.3.1 Door open/close mechanism

While the LS is in operation, the front door lock solenoid (SD4) locks the front door, thus making it impossible to open and close it. However, while in the coupling conveyance (coupling mode) or while exiting paper into the sub tray (sub tray mode), the front door can be opened and closed.

Pressing the paper removing switch on the stacker tray operation board (TOB) brings down the stacker tray. When the stacker tray arm release sensor (PS15) is turn ON, SD4 turns OFF immediately.

The lock is released due to SD4 being turned off and the front door can be opened and closed.

2.3.2 Jam release lever lock mechanism

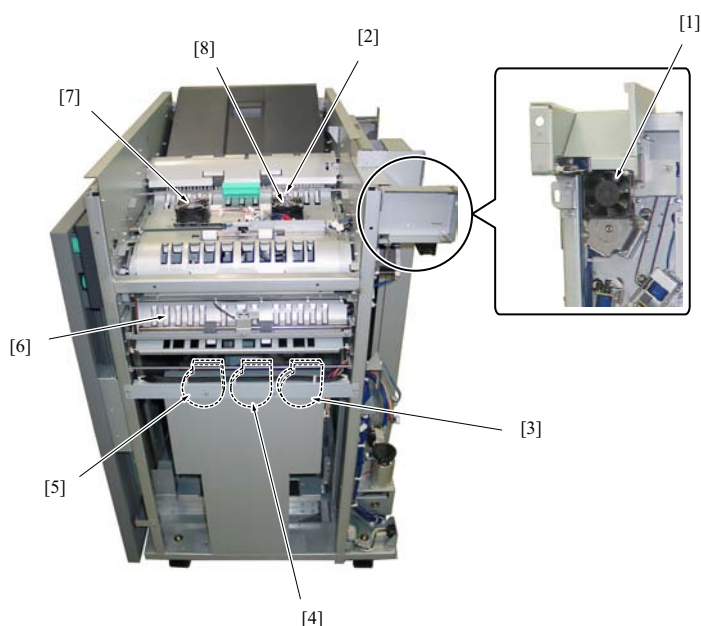
The entrance guide plate and the coupling guide plate are provided with a jam release lever to release jams. The entrance conveyance lock solenoid (SD5) and the coupling conveyance lock solenoid (SD11) operate each of the jam release levers.

- ON/OFF timing of SD5 and SD11

	Operation timing
ON (Lock)	When the stacker tray goes up, and while in printing
OFF (Release)	While in standing by, when the stacker tray goes down after completion of printing, and when the front door is open (except in coupling mode and in sub tray mode)

3. ENTRANCE CONVEYANCE SECTION

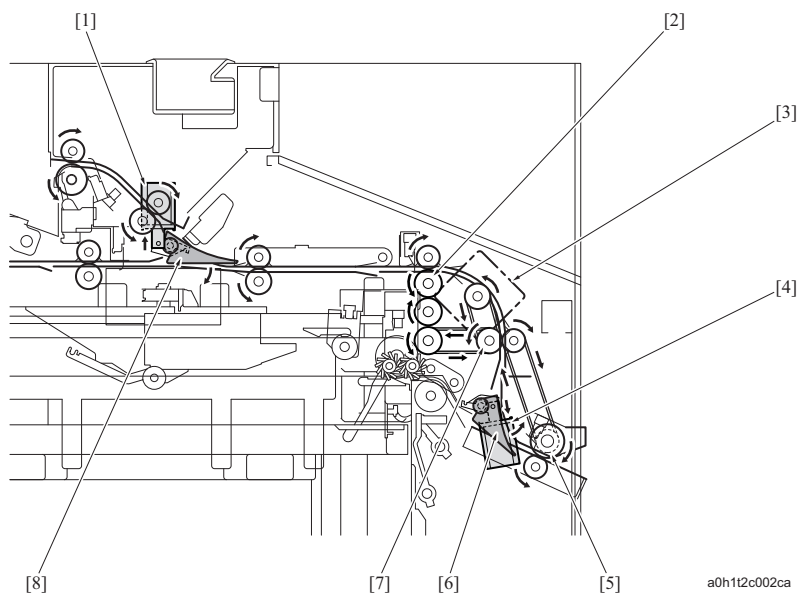
3.1 Configuration



ls502to2003c

[1]	Motor cooling fan motor (FM4)	[2]	2nd gate
[3]	Paper cooling fan motor /Rr (FM5)	[4]	Paper cooling fan motor /Mi (FM3)
[5]	Paper cooling fan motor /Fr (FM1)	[6]	1st gate
[7]	Paper cooling fan motor /1 (FM2)	[8]	Paper cooling fan motor /2 (FM6)

3.2 Drive



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[1]	2nd gate solenoid (SD10)	[2]	Coupling conveyance roller /2
[3]	Conveyance motor (M2)	[4]	1st gate solenoid (SD1)
[5]	Entrance roller	[6]	1st gate
[7]	Coupling conveyance roller /1	[8]	2nd gate

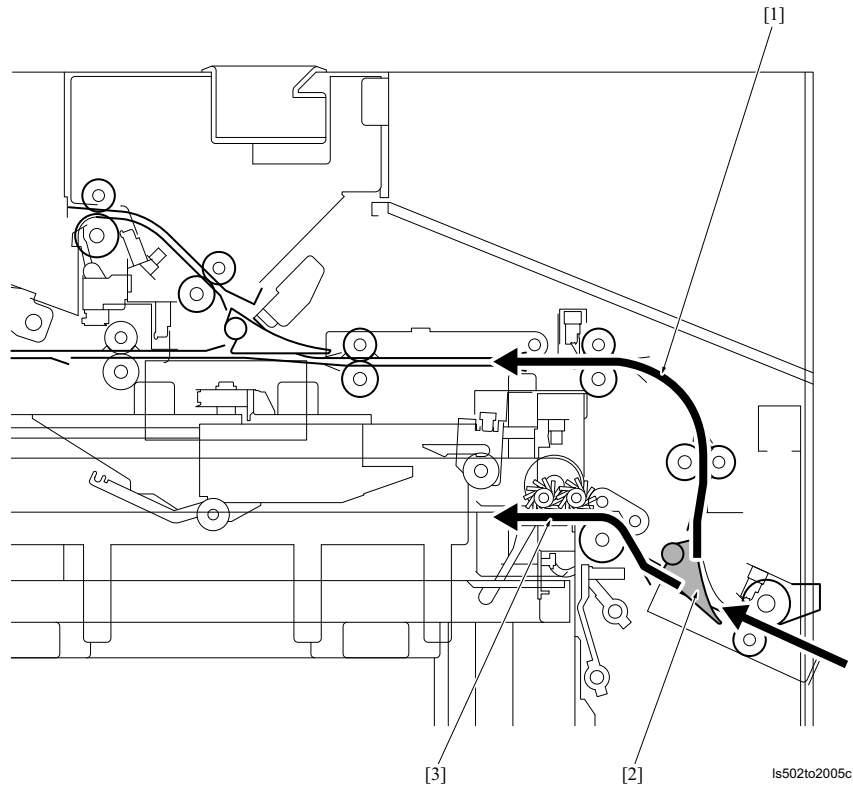
3.3 Operation

3.3.1 Path switching

The path along which paper conveyed to the entrance guide plate is conveyed varies according to the operation mode. The 1st gate and the 2nd gate switch the conveyance path.

(1) 1st gate

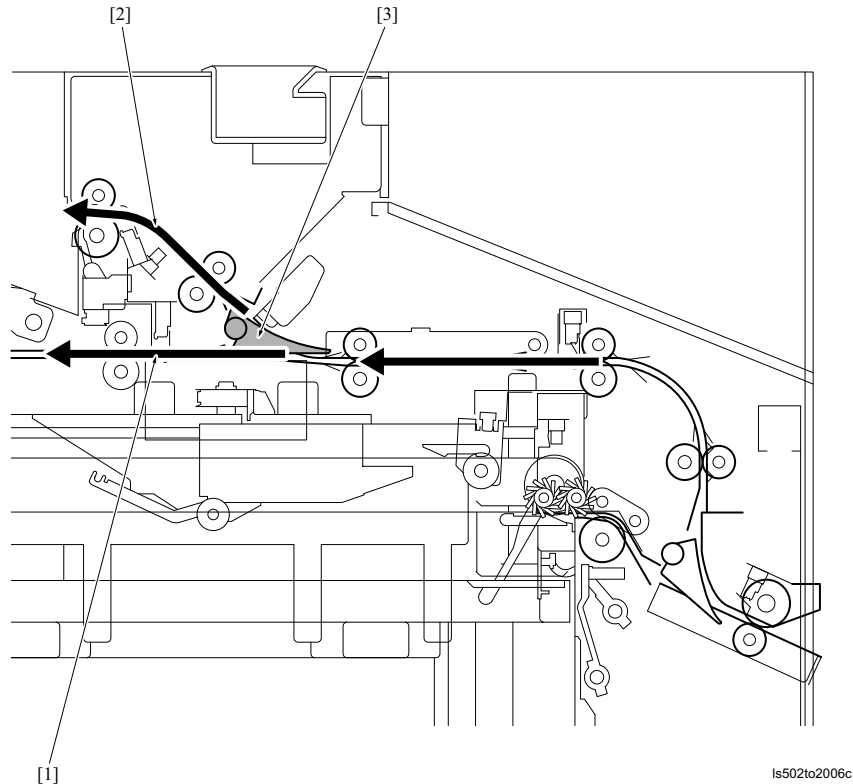
The switching of the conveyance path is made between the stacker tray output (stacker tray non-sort mode and stacker tray sort mode) and the sub tray paper exit (sub tray mode) and the coupling conveyance (coupling mode).



[1]	Sub tray mode/coupling mode	[2]	1st gate
[3]	Stacker tray non-sort mode/stacker tray sort mode		

(2) 2nd gate

The conveyance path is switched between the sub tray paper exit (sub tray mode) and the coupling conveyance (coupling mode).

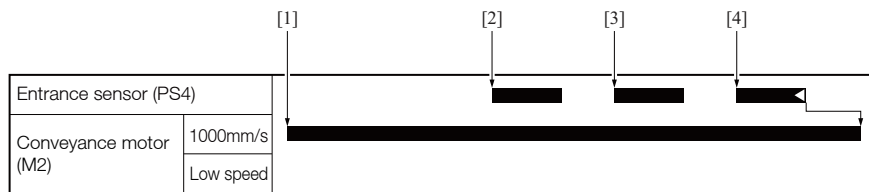


[1]	Coupling mode	[2]	Sub tray mode
[3]	2nd gate		-

3.3.2 Conveyance line speed control

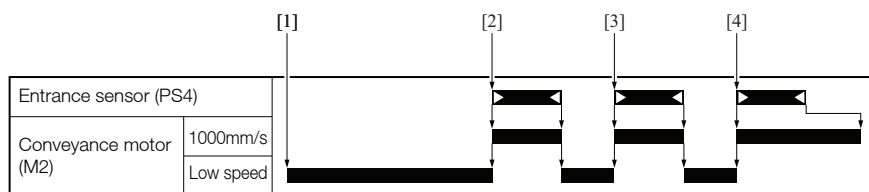
The conveyance process speed of the entrance roller and the coupling conveyance rollers 1/ and /2 that are driven by the conveyance motor (M/2) varies according to the exit line speed of the previous device (main body or post processing machine). These operations are common to all the modes.

(1) When the exit line speed of the previous device is 1000mm/s



[1]	Paper exit sensor of previous device ON	[2]	1st sheet of paper
[3]	2nd sheet of paper	[4]	3rd sheet of paper

(2) When the exit line speed of the previous device is other than 1000mm/s

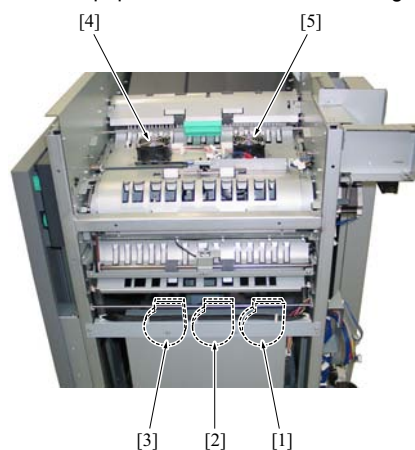


[1]	Paper exit sensor of previous device ON	[2]	1st sheet of paper
[3]	2nd sheet of paper	[4]	3rd sheet of paper

3.3.3 Paper cooling mechanism

Paper conveyed to the LS is likely to curl up due to fusing heat.

Heat storage accumulated in paper stacked during continuous printing causes tacking (sheets of paper sticking hard each other by toner) when toner that has been fused is refused and adheres. So, fresh air is blown on the paper from under the entrance guide plate and above the path guide of the upper surface of the paper stack section, thus cooling down the paper to correct curling and prevent tacking.

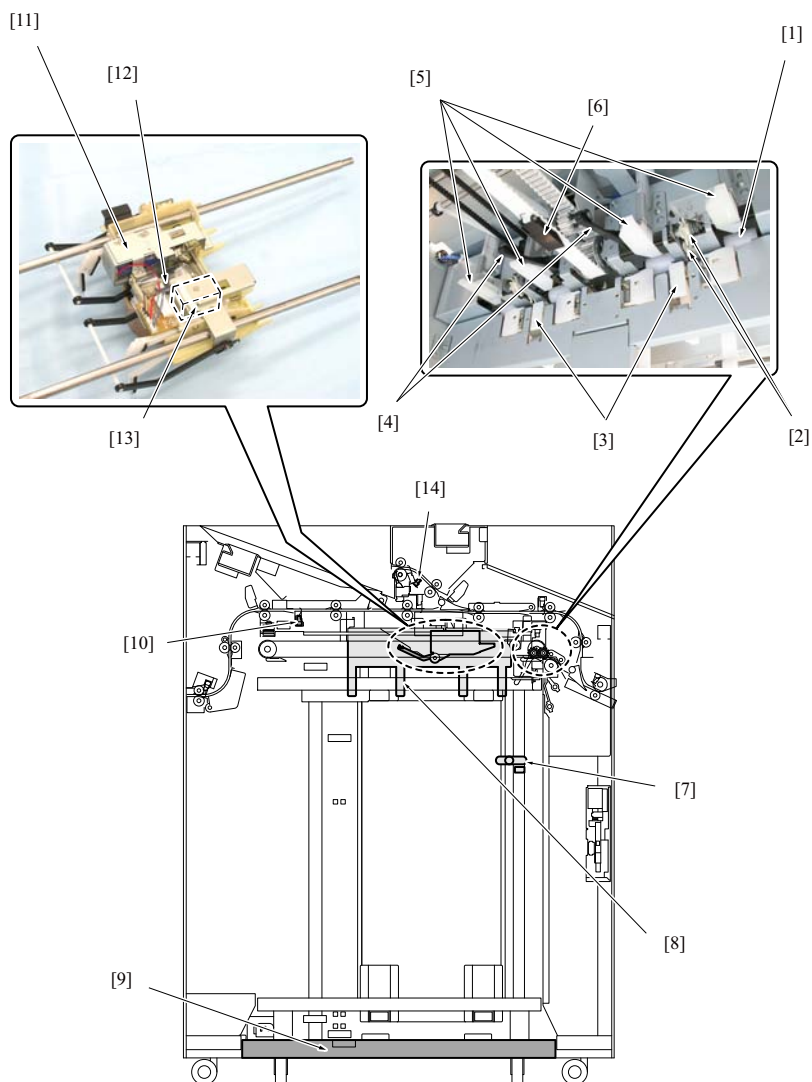


Is502to2028c

[1]	Paper cooling fan motor /Rr (FM5)	[2]	Paper cooling fan motor /Mi (FM3)
[3]	Paper cooling fan motor /Fr (FM1)	[4]	Paper cooling fan motor /1 (FM2)
[5]	Paper cooling fan motor /2 (FM6)		-

4. CONVEYANCE SECTION

4.1 Configuration

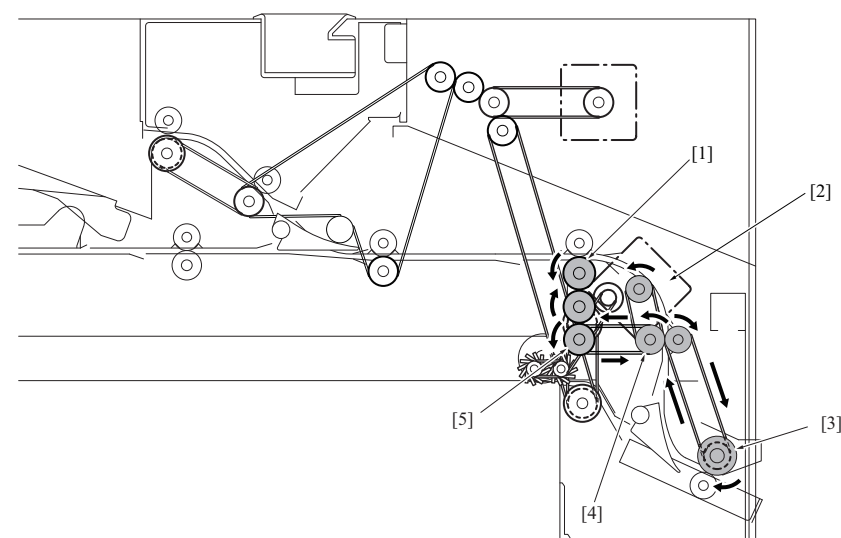


Is502to2009c

[1] De-curler roller	[2] Paddler
[3] Job partition plate	[4] Paper empty detection actuator
[5] Paper press arm /1	[6] Grip belt
[7] Paper detection sensor (PS19)	[8] Guide plate
[9] Hand cart	[10] Conveyance sensor /3 (PS17)
[11] Paper press solenoid /3 (SD8)	[12] Paper empty sensor (PS6)
[13] Front stopper solenoid (SD9)	[14] Sub tray full sensor (PS9)

4.2 Drive

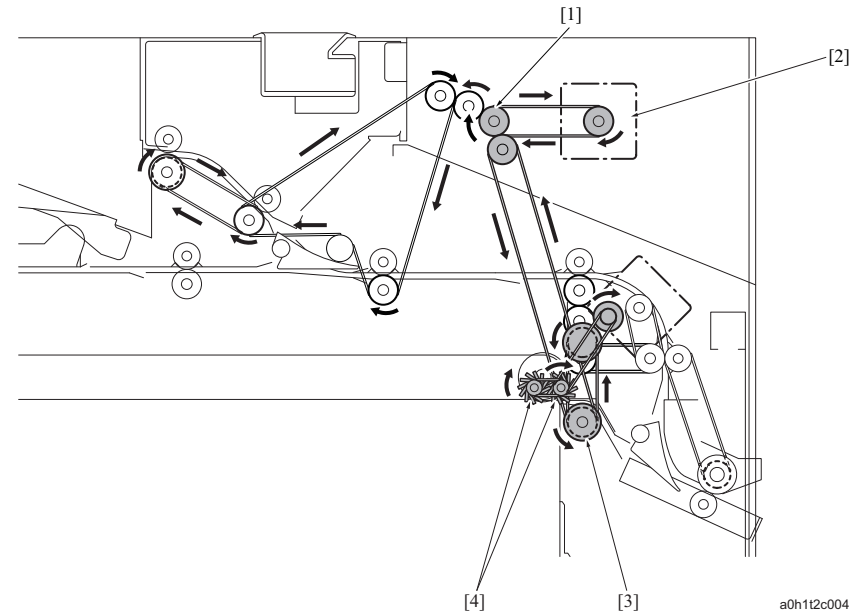
4.2.1 Entrance conveyance drive



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[1]	Coupling conveyance roller /2	[2]	Conveyance motor (M2)
[3]	Entrance roller	[4]	Coupling conveyance roller /1
[5]	One-way clutch	-	

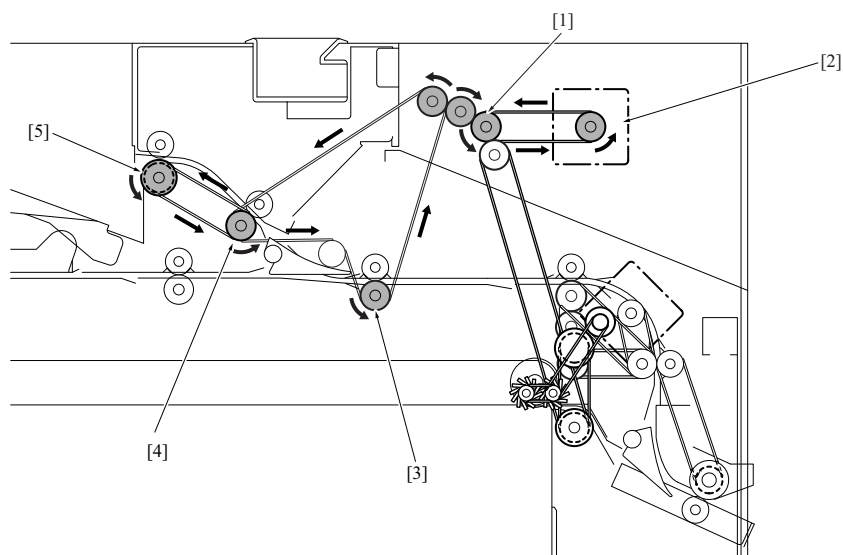
4.2.2 Stacker tray conveyance drive (M3 reverse)



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[1]	One-way clutch	[2]	Sub tray exit motor (M3)
[3]	De-curler roller	[4]	Paddler

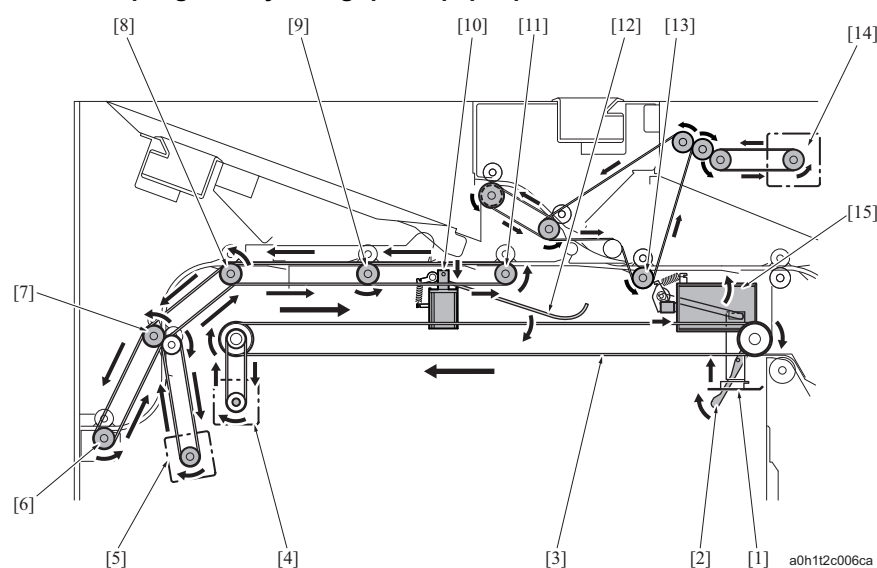
4.2.3 Sub tray conveyance drive (M3 forward)



a0h1t2c005ca

[1]	One-way clutch	[2]	Sub tray exit motor (M3)
[3]	Coupling conveyance roller /3	[4]	Sub tray conveyance roller
[5]	Sub tray exit roller	-	

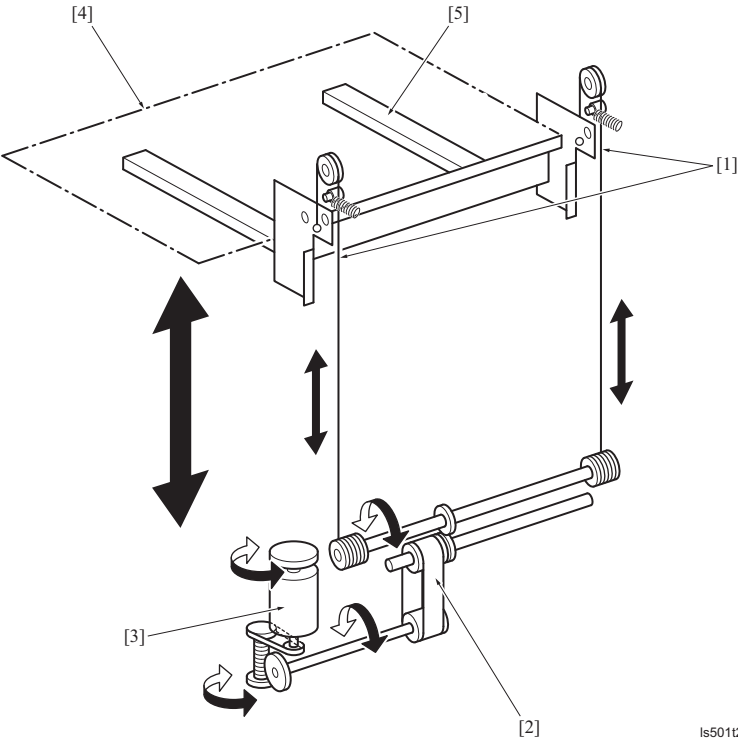
4.2.4 Coupling conveyance/grip belt/paper press arm drive



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[1]	Paper press arm /1	[2]	Stacker tray paper empty detection actuator
[3]	Grip belt	[4]	Grip conveyance motor (M4)
[5]	Coupling conveyance motor (M6)	[6]	Coupling paper exit roller
[7]	Coupling conveyance roller /7	[8]	Coupling conveyance roller /6
[9]	Coupling conveyance roller /5	[10]	Paper press solenoid /2 (SD7)
[11]	Coupling conveyance roller /4	[12]	Paper press arm /2
[13]	Coupling conveyance roller /3	[14]	Sub tray exit motor (M3)
[15]	Paper press solenoid /1 (SD6)	-	

4.2.5 Stacker tray up down drive

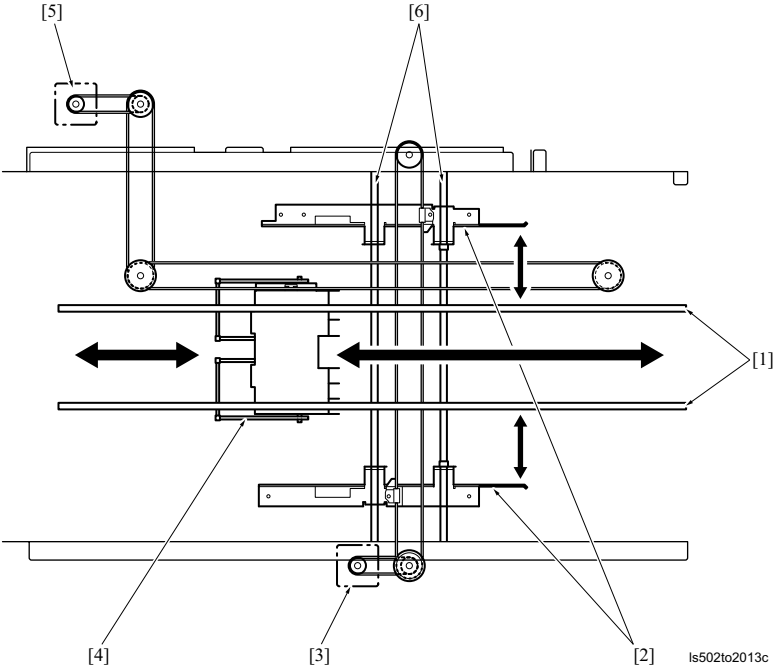


Is50112c001a

[1]	Wire	[2]	Belt
[3]	Stacker tray up down motor (M1)	[4]	Stacker tray
[5]	Stacker tray up down arm	-	

4.2.6 Shift unit/alignment plate drive

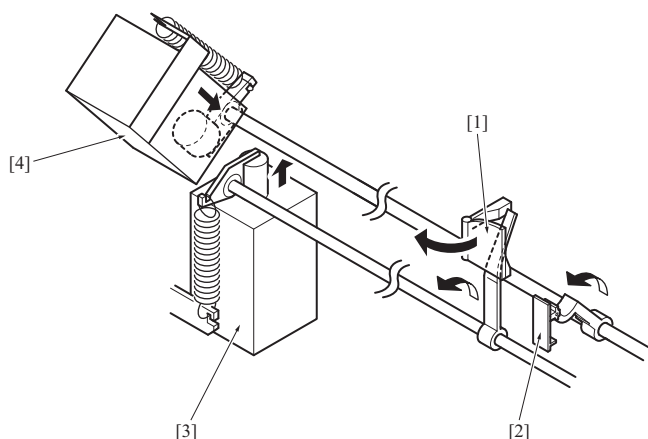
LS drawing as seen from above. On the right-side is the main body.



Is502to2013c

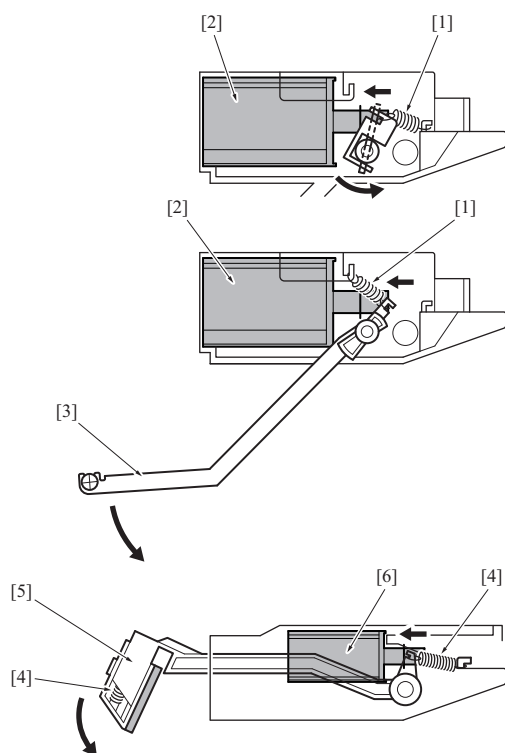
[1]	Guide rail	[2]	Alignment plate
[3]	Alignment motor (M7)	[4]	Conveyance unit
[5]	Shift unit motor (M5)	[6]	Guide rail

4.2.7 Rear stopper/job partition plate drive



[1]	Rear stopper	[2]	Job partition plate
[3]	Rear stopper solenoid (SD3)	[4]	Job partition solenoid (SD2)

4.2.8 Front stopper/paper press arm drive



[1]	Spring	[2]	Paper press solenoid /3 (SD8)
[3]	Paper press arm /3	[4]	Spring
[5]	Front stopper	[6]	Front stopper solenoid (SD9)

4.3 Operation

4.3.1 Stacker tray conveyance

While in the stacker tray non-sort mode and the stacker tray sort mode, paper is conveyed into the stacker tray.

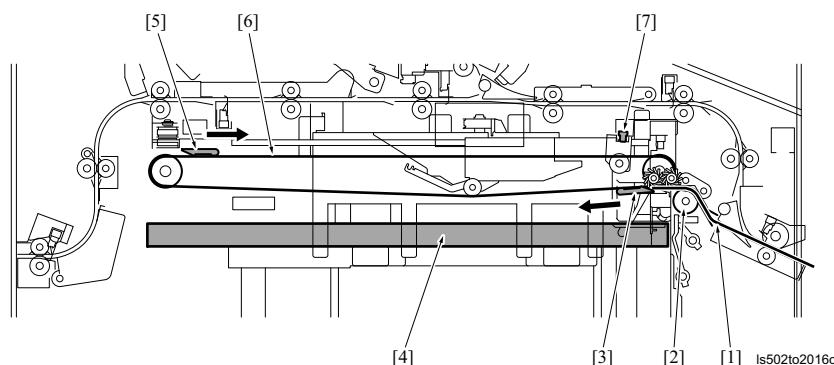
(1) De-curler

Paper that has passed through the 1st gate is conveyed to the grip belt by the de-curler roller. At this time, the de-curler roller corrects the curled paper.

(2) Grip conveyance

Paper conveyed by the de-curler roller enters and is held by the grip provided on the grip belt. The paper held by the grip is conveyed to the section above the stacker tray by the rotation of the grip belt.

2 grips are provided on the grip belt and each one of them conveys paper one after the other. The grip conveyance home sensor (PS5) controls the position where the grip is waiting for paper from the de-curler roller.



[1] Paper	[2] De-curler roller
[3] Grip	[4] Stacker tray
[5] Grip	[6] Grip belt
[7] Grip conveyance home sensor (PS5)	-

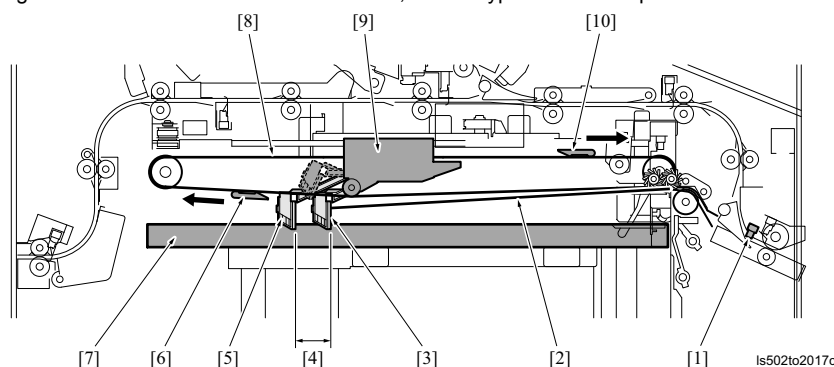
(3) Front stopper control

Paper conveyed by the grip strikes against the front stopper equipped to the shift unit and is released from the grip. At this time, the shift unit has been moved to the position specified in advance for each paper size.

2 types of the front stoppers, more specifically, a movable type and a stationary type, are employed. In stacker tray non-sort mode, only the movable type front stopper is employed. A distance of 20mm is kept between the position where the movable type front stopper stops and the position in which the stationary type front stopper is, which is the shift distance.

When stacking tab paper, paper is aligned by either stationary type front stopper or movable type front stopper. Therefore, it is impossible to shift tab paper for stacking.

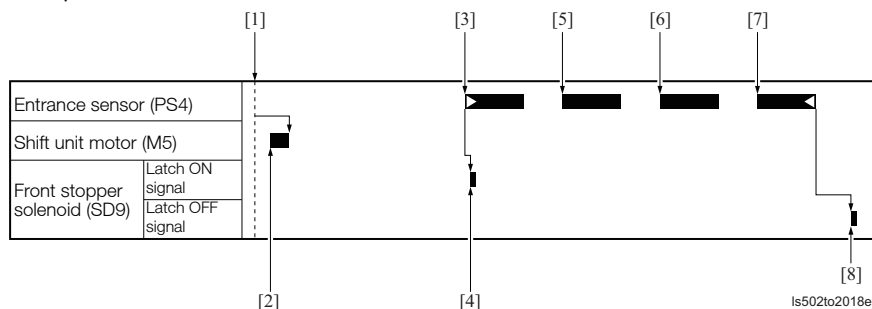
For the front stopper solenoid (SD9) that drives the movable type front stopper, a latch-type solenoid is employed that is not required to be energized to maintain the ON state. However, a latch-type solenoid requires a different control signal for each ON and OFF action.



[1] Entrance sensor (PS4)	[2] Paper
[3] Movable type front stopper	[4] 20mm
[5] Stationary type front stopper	[6] Grip
[7] Stacker tray	[8] Grip belt
[9] Conveyance unit	[10] Grip

(a) Stacker tray non-sort mode

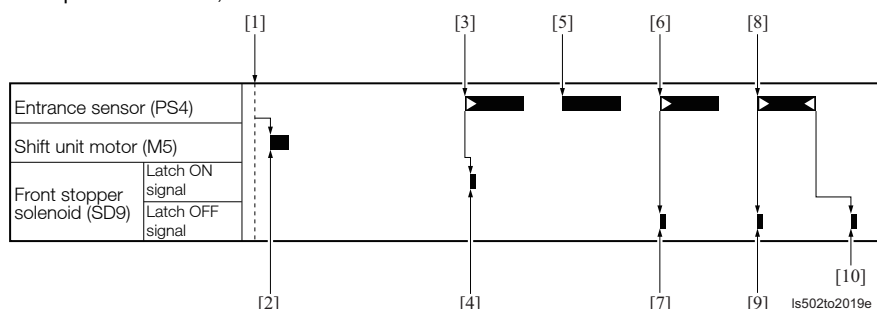
Example: A4 4 sheets, 1 set



[1] Paper exit sensor of previous device ON	[2] The conveyance unit starts to move
[3] 1st sheet of paper	[4] Movable type front stopper ON
[5] 2nd sheet of paper	[6] 3rd sheet of paper
[7] Last sheet of paper	[8] Movable type front stopper OFF

(b) Stacker tray sort mode

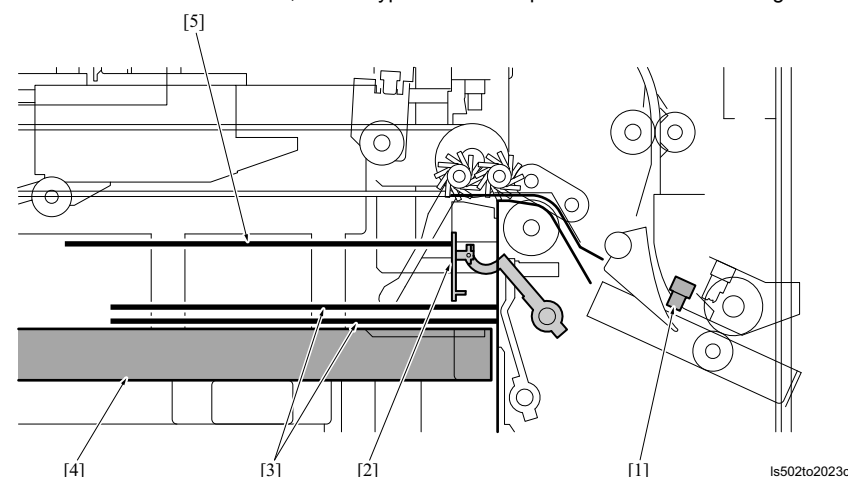
Example: A4 2 sheets, 2 sets



[1] Paper exit sensor of previous device ON	[2] The conveyance unit starts to move
[3] Shift of the 1st sheet of paper	[4] Movable type front stopper ON
[5] Shift of the 2nd sheet of paper	[6] Non-shift of the 1st sheet of paper
[7] Movable type front stopper OFF	[8] Non-shift of the 2nd sheet of paper
[9] Movable type front stopper OFF secured	[10] Movable type front stopper OFF secured

(4) Job partition plate

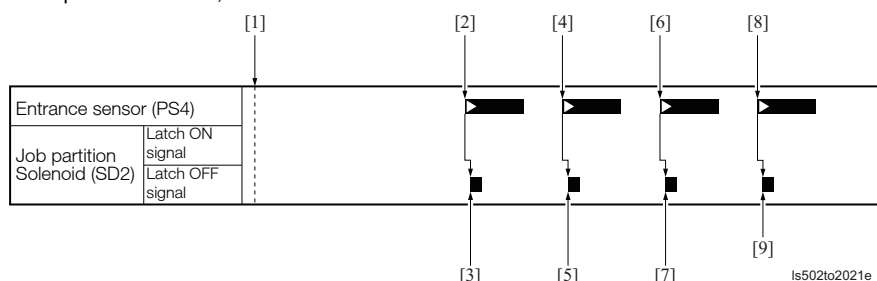
In stacker tray sort mode, the trailing edge of the shift paper is restricted by the job partition plate and the paper is exited onto the stacker tray 20mm shifted from the non-shift paper. At this time, the upper surface of the non-shift paper does not come to the same level as the lower edge of the job partition plate and the 1st sheet of the shift paper is in possibility of getting into the lower side of the job partition plate. To prevent this, the job partition plate is attached to the upper surface of the non-shift paper that has been exited to restrict the entry of the paper. For the job partition solenoid (SD2) that drives the job partition plate, a latch-type solenoid is employed that is not required to be energized to maintain the ON state. However, a latch-type solenoid requires a different control signal for each ON and OFF action.



[1] Entrance sensor (PS4)	[2] Job partition plate
[3] Non-shift paper	[4] Stacker tray
[5] Shift paper	-

(a) Stacker tray non-sort mode

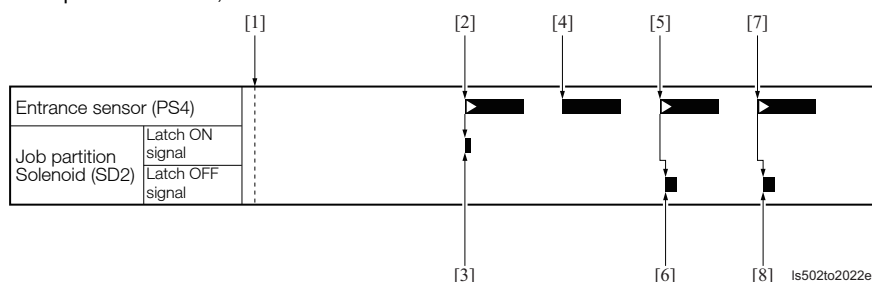
Example: A4 4 sheets, 1 set



[1] Paper exit sensor of previous device ON	[2] 1st sheet of paper
[3] Job partition plate close	[4] 2nd sheet of paper
[5] Job partition plate close	[6] 3rd sheet of paper
[7] Job partition plate close	[8] Last sheet of paper
[9] Job partition plate close	-

(b) Stacker tray sort mode

Example: A4 2 sheets, 2 sets



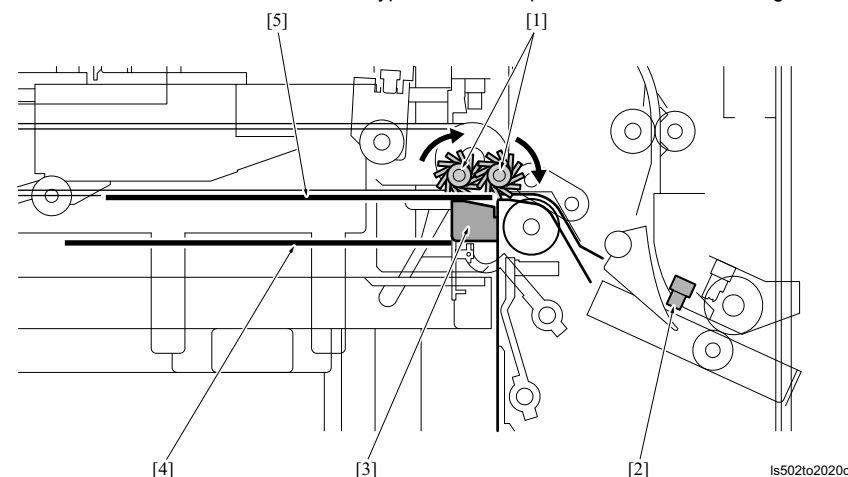
[1]	Paper exit sensor of previous device ON	[2]	Shift of the 1st sheet of paper
[3]	Job partition plate open (shift amount: 20mm)	[4]	Shift of the 2nd sheet of paper
[5]	Non-shift of the 1st sheet of paper	[6]	Job partition plate close
[7]	Non-shift of the 2nd sheet of paper	[8]	Job partition plate close

(5) Rear stopper control

While in the stacker tray sort mode is in shifting, the rear stopper is left open and this plays as a guide for the trailing edge of paper.

To assist the separation of paper released from the grip, the paddle is rotated at a high speed.

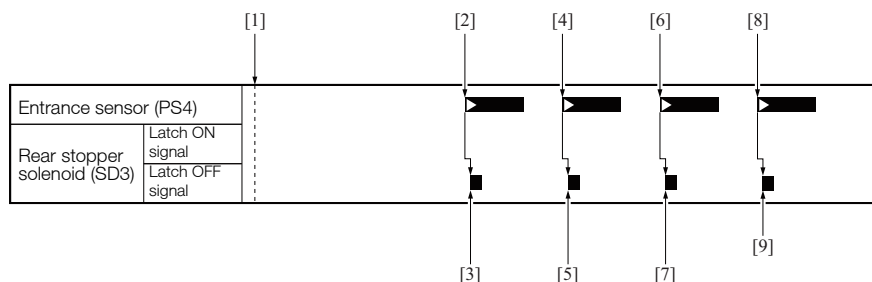
For the rear stopper solenoid (SD3) that drives the rear stopper, a latch-type solenoid is employed that does not need to be energized to maintain the ON state. However, a latch-type solenoid requires a different control signal for each ON and OFF action.



[1]	Paddler	[2]	Entrance sensor (PS4)
[3]	Rear stopper	[4]	Paper position while in the stacker tray sort mode
[5]	Paper position while in the stacker tray non-sort mode	-	

(a) Stacker tray non-sort mode

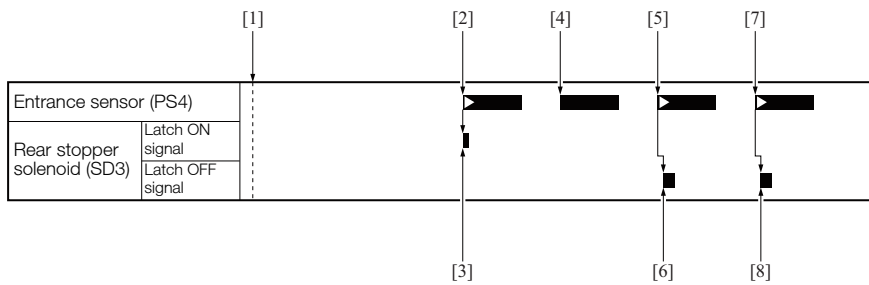
Example: A4 4 sheets, 1 set



[1]	Paper exit sensor of previous device ON	[2]	1st sheet of paper
[3]	Rear stopper close	[4]	2nd sheet of paper
[5]	Rear stopper close	[6]	3rd sheet of paper
[7]	Rear stopper close	[8]	Last sheet of paper
[9]	Rear stopper close	-	

(b) Stacker tray sort mode

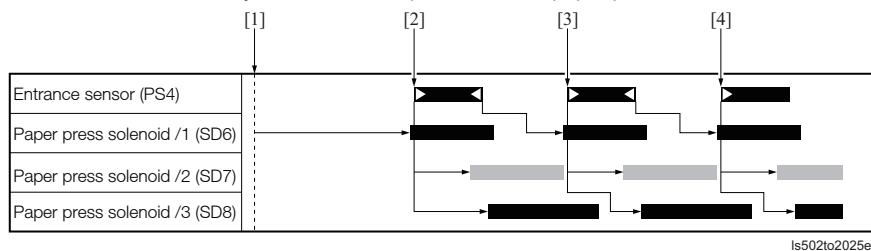
Example: A4 2 sheets, 2 sets



[1]	Paper exit sensor of previous device ON	[2]	Shift of the 1st sheet of paper
[3]	Rear stopper open	[4]	Shift of the 2nd sheet of paper
[5]	Non-shift of the 1st sheet of paper	[6]	Rear stopper close
[7]	Non-shift of the 2nd sheet of paper	[8]	Rear stopper close

(6) Paper press arm

The paper that has been released from the grip is pressed one at a time onto the stacker tray by the paper pressure arms /1, /2 and /3 to be loaded on the stacker tray. However, the operation of the paper pressure arm /2 is limited only to the paper size larger than B4.

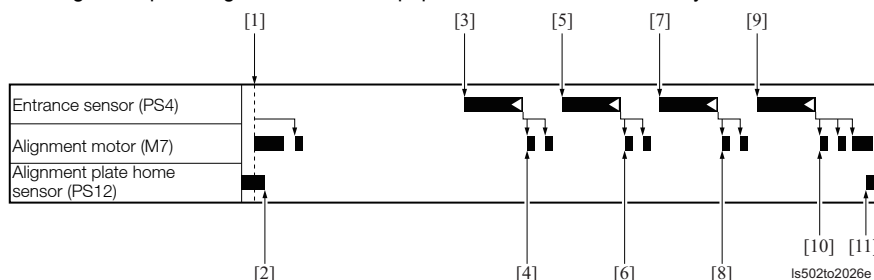


Is502to2025e

[1]	Paper exit sensor of previous device ON	[2]	1st sheet of paper
[3]	2nd sheet of paper	[4]	Last sheet of paper

(7) Alignment plate control

The alignment plate aligns each sheet of paper loaded on the stacker tray.



Is502to2026e

[1]	Paper exit sensor of previous device ON	[2]	Movement to a position specified for each paper size
[3]	1st sheet of paper	[4]	Alignment of the 1st sheet of paper
[5]	2nd sheet of paper	[6]	Alignment of the 2nd sheet of paper
[7]	3rd sheet of paper	[8]	Alignment of the 3rd sheet of paper
[9]	Last sheet of paper	[10]	Alignment of the last sheet of paper
[11]	Returning to the home position	-	

(8) Stacker tray up down control

The paper empty sensor (PS6) detects the upper surface of paper loaded on the stacker tray through the paper press arm /3. When PS6 is turned off by loading exited paper, the stacker tray up down motor (M1) turns on to lower the stacker tray down to the position at which PS6 turns on. The stacker tray is thus held at a fixed height when paper is being exited.

The number of sheets of paper loaded on the stacker tray is detected by the 2,000 sheets stacked sensor (PS13) and the 5,000 sheets stacked sensor (PS14) provided on the up down path of the stacker tray and displayed on the operation panel. (The main unit makes 3,000 sheets stacked detection.)

When the hand cart once pulled out is put back to its original position, the stacker tray moves up to return to its home position. If the paper detection sensor (PS19) detects that paper is loaded on the stacker tray, the tray stops moving up in order to prevent the uplifted paper from damaging the alignment plate.

(9) Hand cart detection mechanism

The hand cart set switch (RS1) detects the set condition of the hand cart. The set condition of the stacker tray is detected by checking to see if the light from the stacker tray set LED (LED1) gets to the stacker tray set sensor (PS1).

4.3.2 Coupling conveyance

In coupling mode, paper is conveyed to the device connected to the subsequent stage of the LS through the coupling conveyance section.

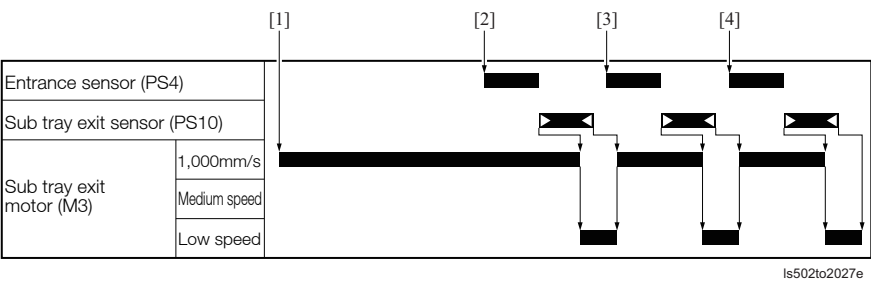
(1) Line speed switching

When paper is conveyed from the main body, the conveyance motor (M2) at the entrance conveyance section is rotated at the same speed as the conveyance speed of the main body. When paper is conveyed to the LS, the speed of rotation of M2 is increased up to 1,000mm/s to convey paper.

4.3.3 Sub tray conveyance

In sub tray mode, paper is exited into the sub tray.

(1) Line speed switching



[1]	Paper exit sensor of previous device ON	[2]	1st sheet of paper
[3]	2nd sheet of paper	[4]	Last sheet of paper

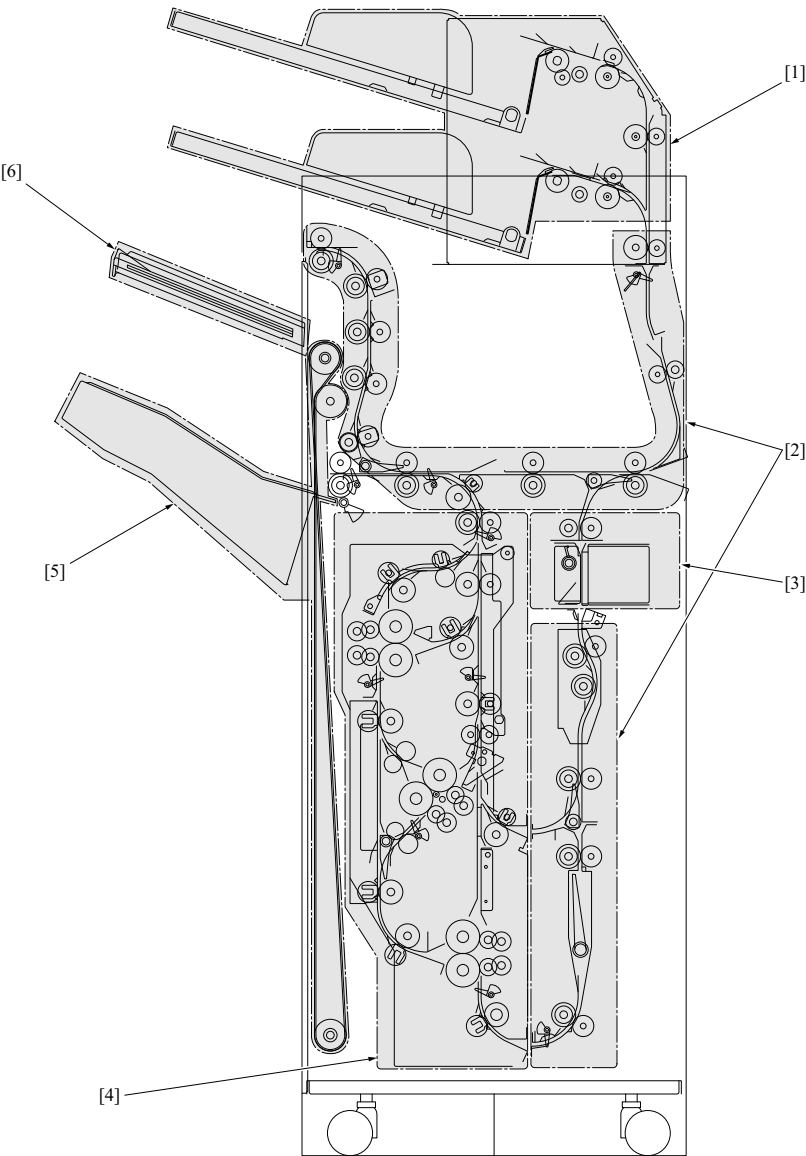
(2) Paper full control

When the number of the sheets of paper discharged on the sub-tray gets to 200, the sub tray full sensor (PS9) turns ON to give indication of "paper full" on the operation panel.

PN THEORY OF OPERATION FD-503

1. OUTLINE

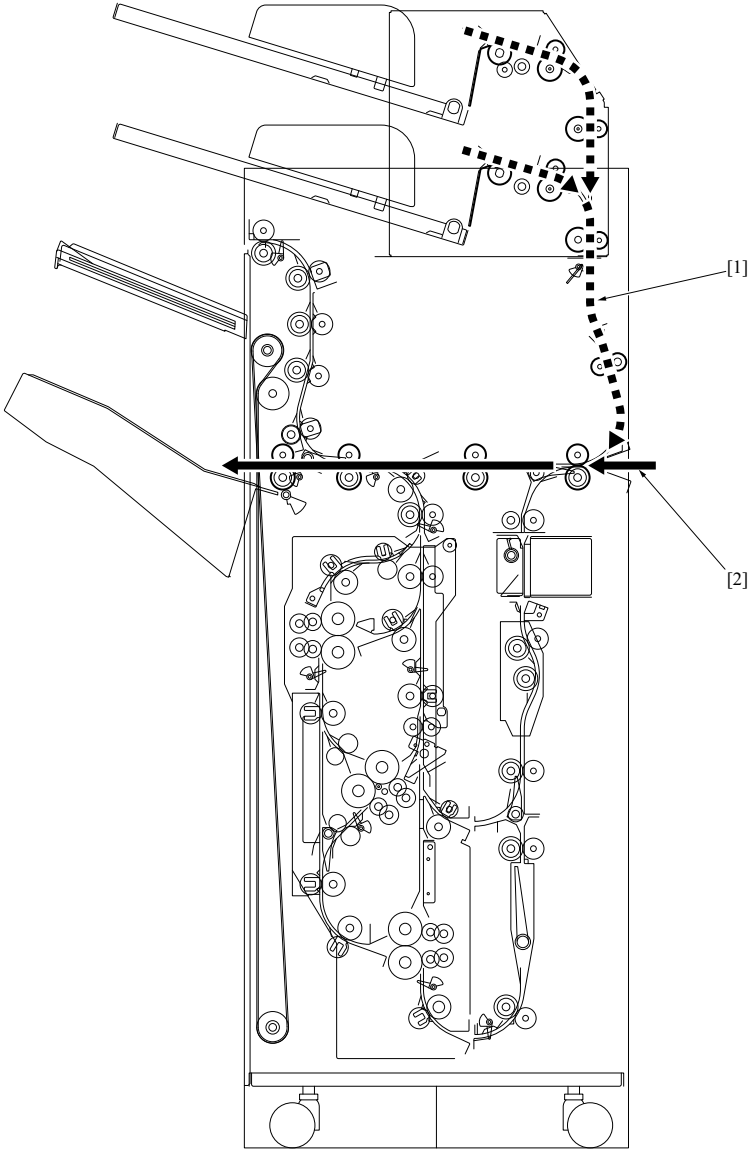
1.1 Unit configuration



fd501to1001c

[1]	PI section	[2]	Conveyance section
[3]	Punch section	[4]	Folding conveyance section
[5]	Main tray section	[6]	Sub tray section

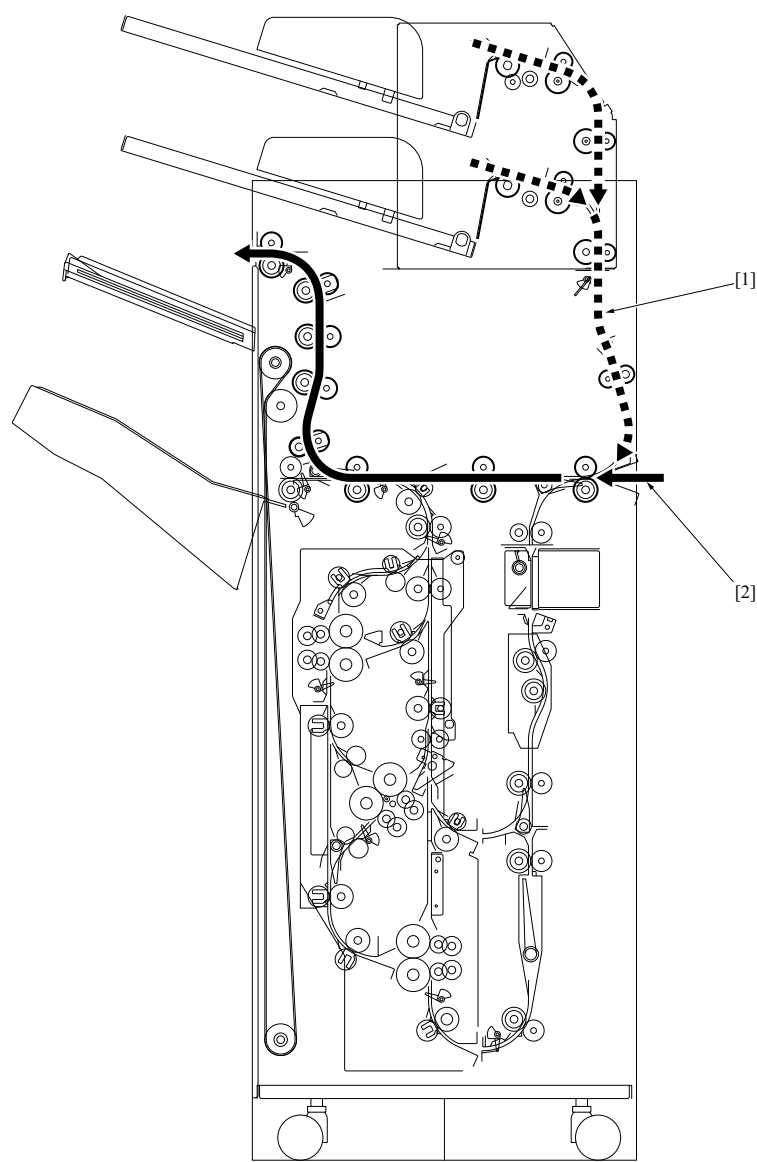
1.2 Paper path
(1) Straight mode



fd501to1002c

[1]	Paper through from the PI	[2]	Paper through from the previous device
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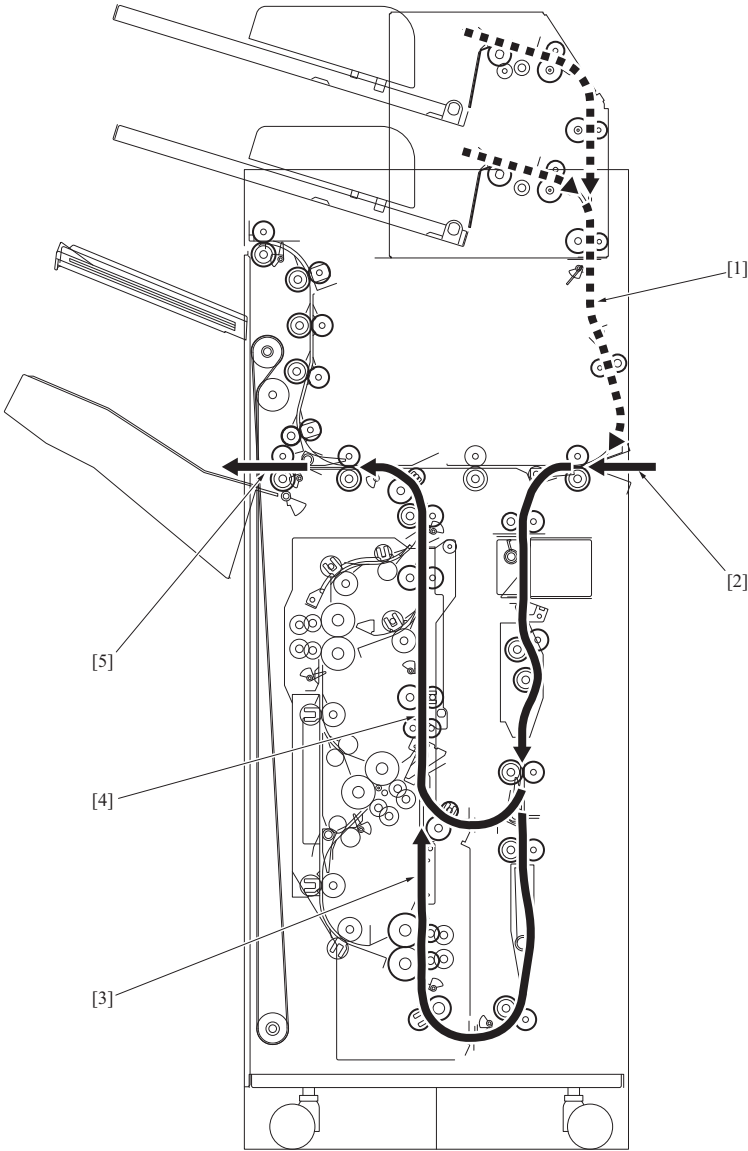
(2) Sub tray mode



fd501to1003c

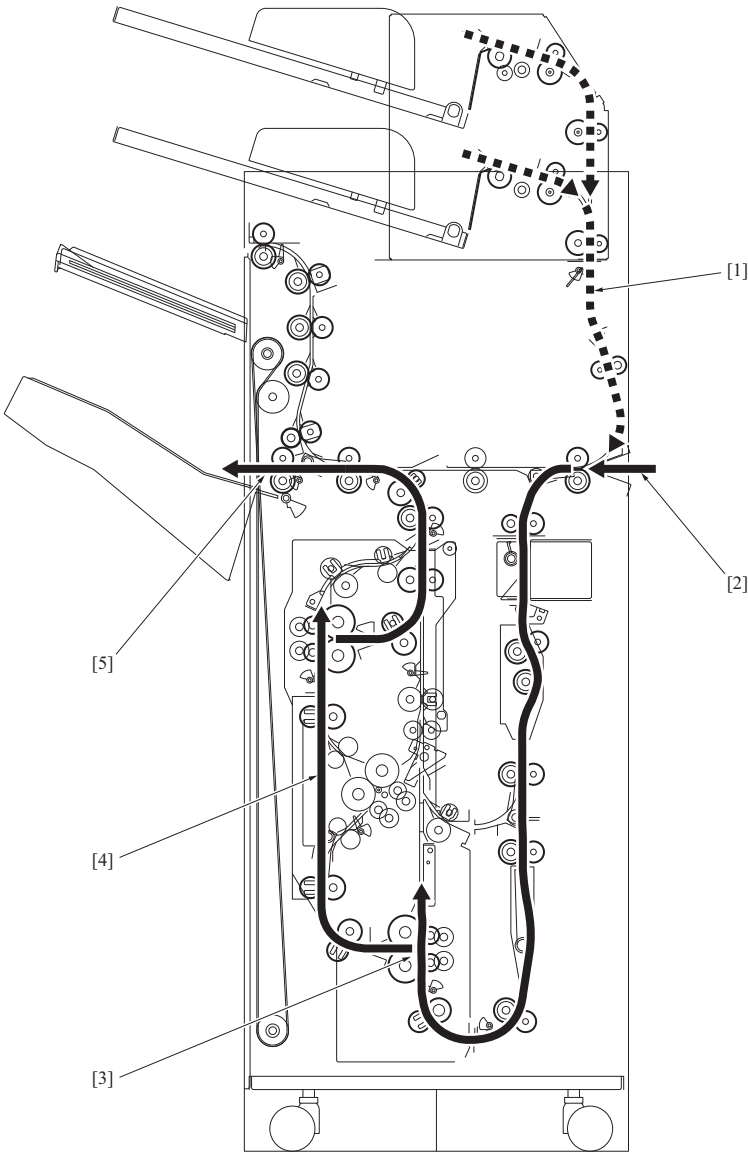
[1]	Paper through from the PI	[2]	Paper through from the previous device
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(3) Punch mode (L and S sizes)



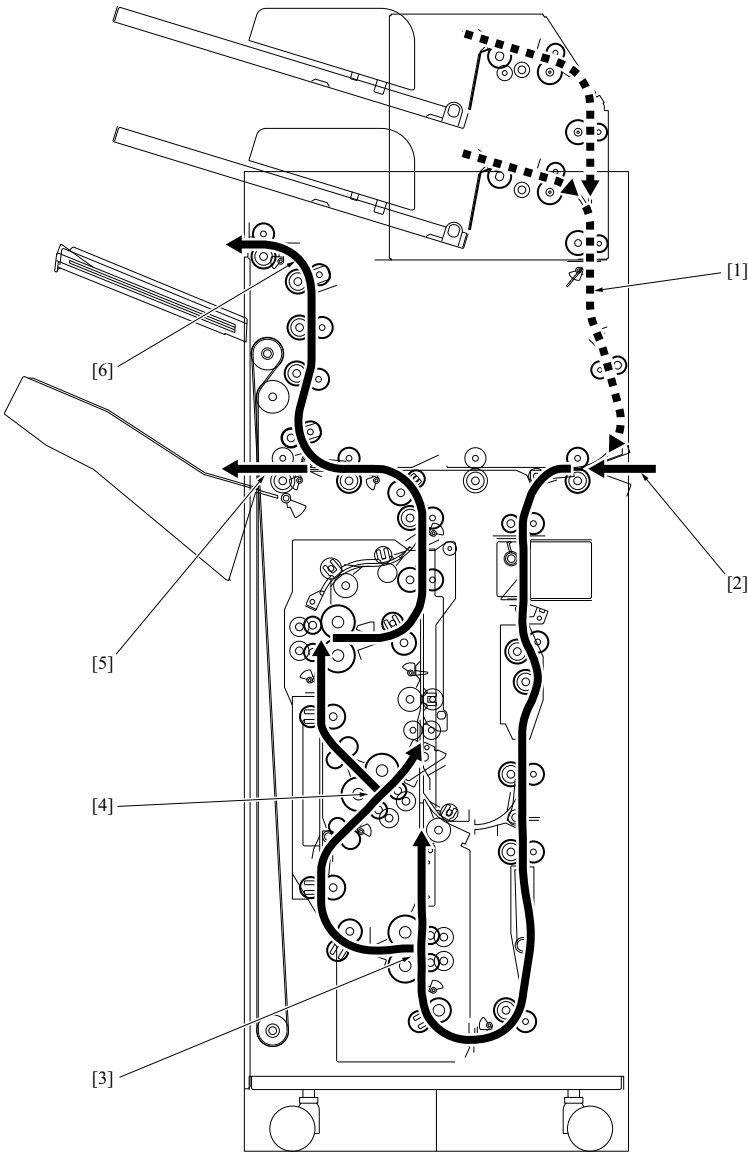
[1]	Paper through from the PI	[2]	Paper through from the previous device
[3]	For L size	[4]	For S size
[5]	Paper exit to the main tray, paper through to the next option	-	

(4) Z-Fold mode



[1]	Paper through from the PI	[2]	Paper through from the previous device
[3]	1st folding	[4]	2nd folding
[5]	Paper exit to the main tray, paper through to the next option	-	

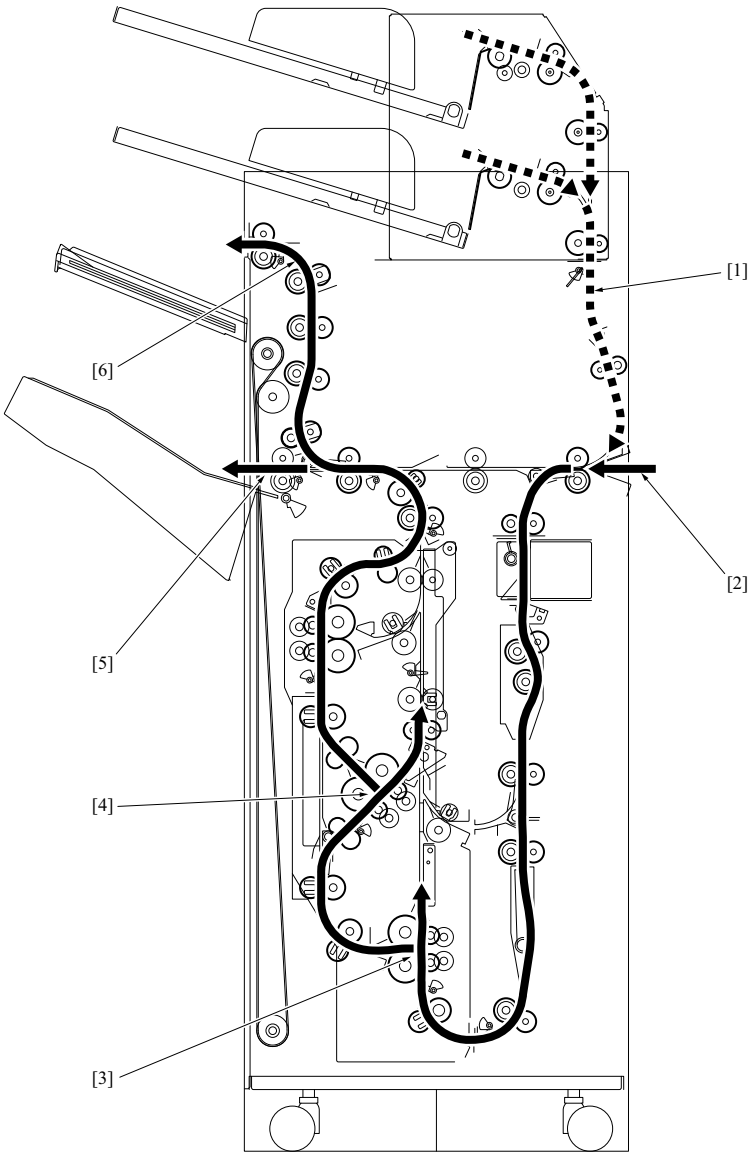
(5) Letter fold-out mode



fd501to1006c

[1]	Paper through from the PI	[2]	Paper through from the previous device
[3]	1st folding	[4]	2nd folding
[5]	Paper exit to the main tray	[6]	Paper exit to the sub tray

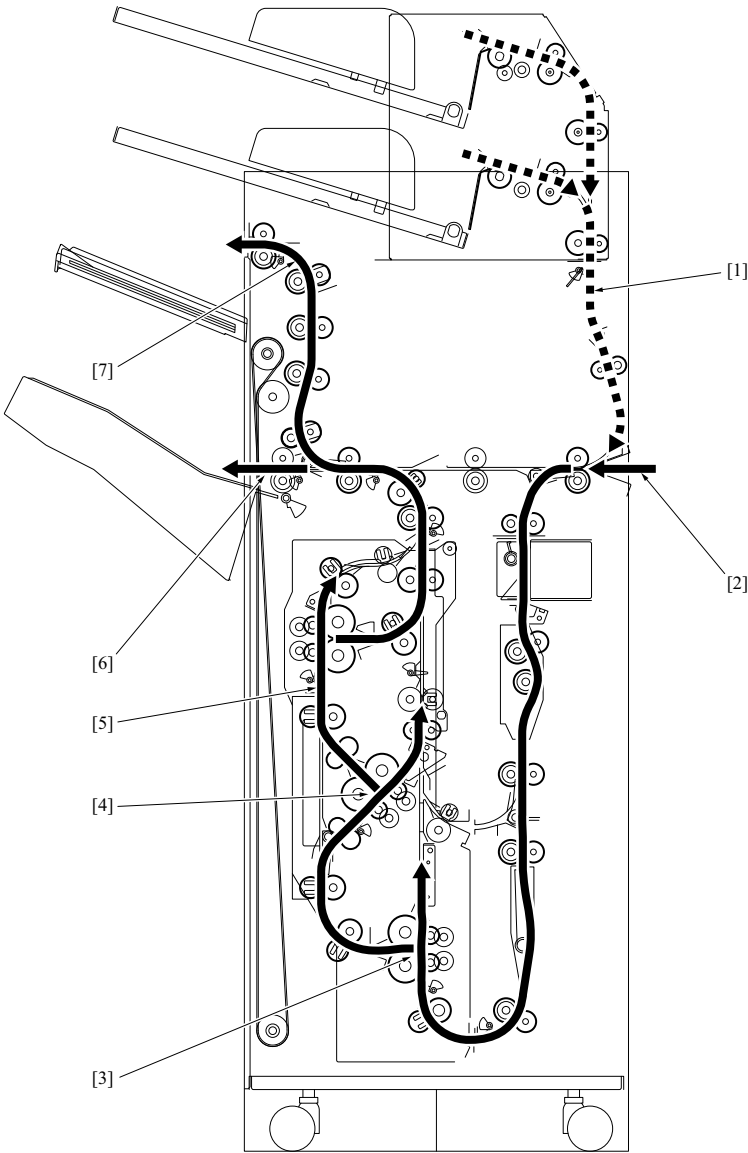
(6) Tri-Fold-in/double parallel mode



fd501to1007c

[1]	Paper through from the PI	[2]	Paper through from the previous device
[3]	1st folding	[4]	2nd folding
[5]	Paper exit to the main tray	[6]	Paper exit to the sub tray

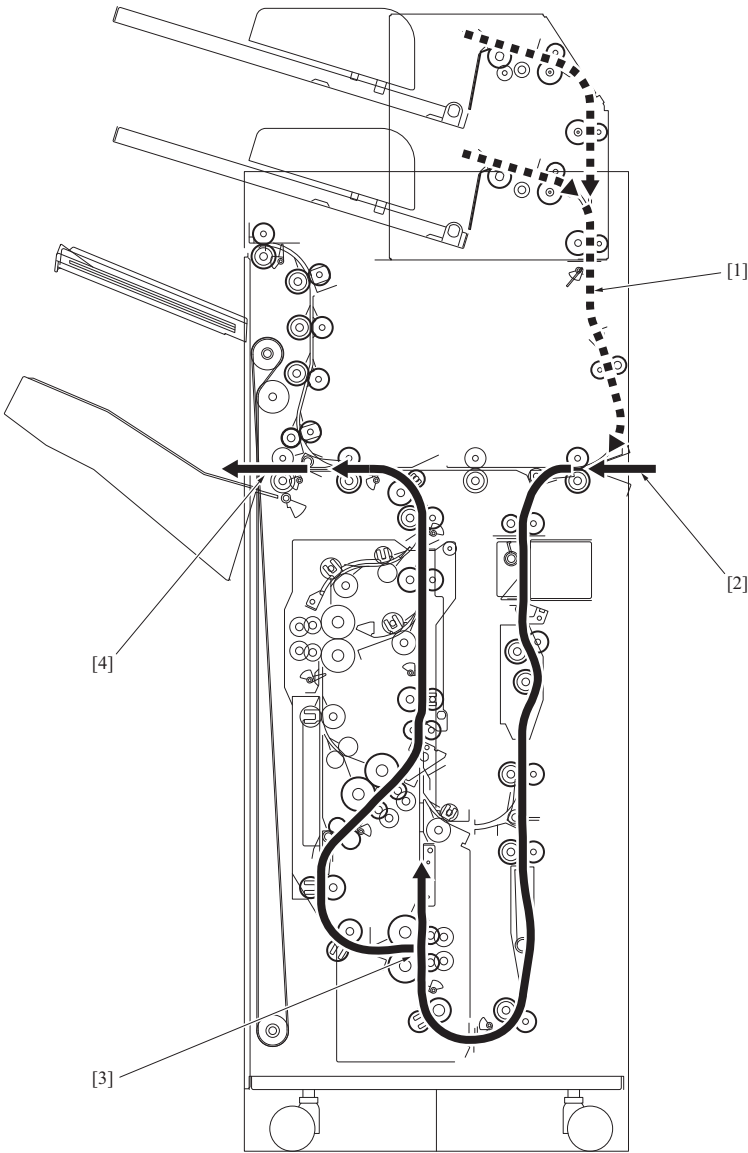
(7) Gate fold mode



fd501to1008c

[1]	Paper through from the PI	[2]	Paper through from the previous device
[3]	1st folding	[4]	2nd folding
[5]	3rd folding	[6]	Paper exit to the main tray
[7]	Paper exit to the sub tray	-	

(8) Half-Fold mode

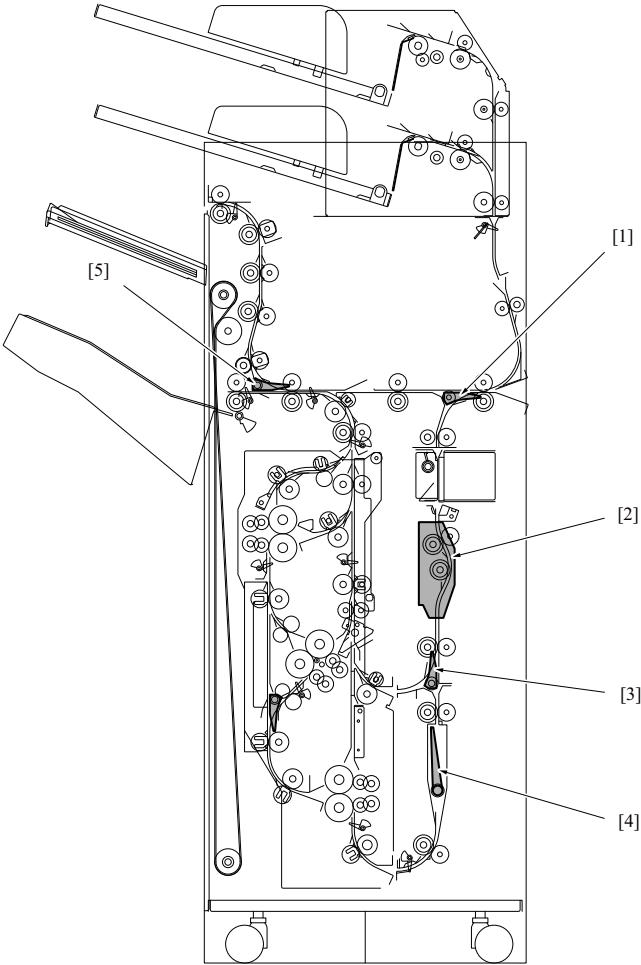


fd501to1009c

[1]	Paper through from the PI	[2]	Paper through from the previous device
[3]	Folding	[4]	Paper exit to the main tray, paper through to the next option
[5]	Paper exit to the sub tray	-	

2. CONVEYANCE SECTION

2.1 Configuration

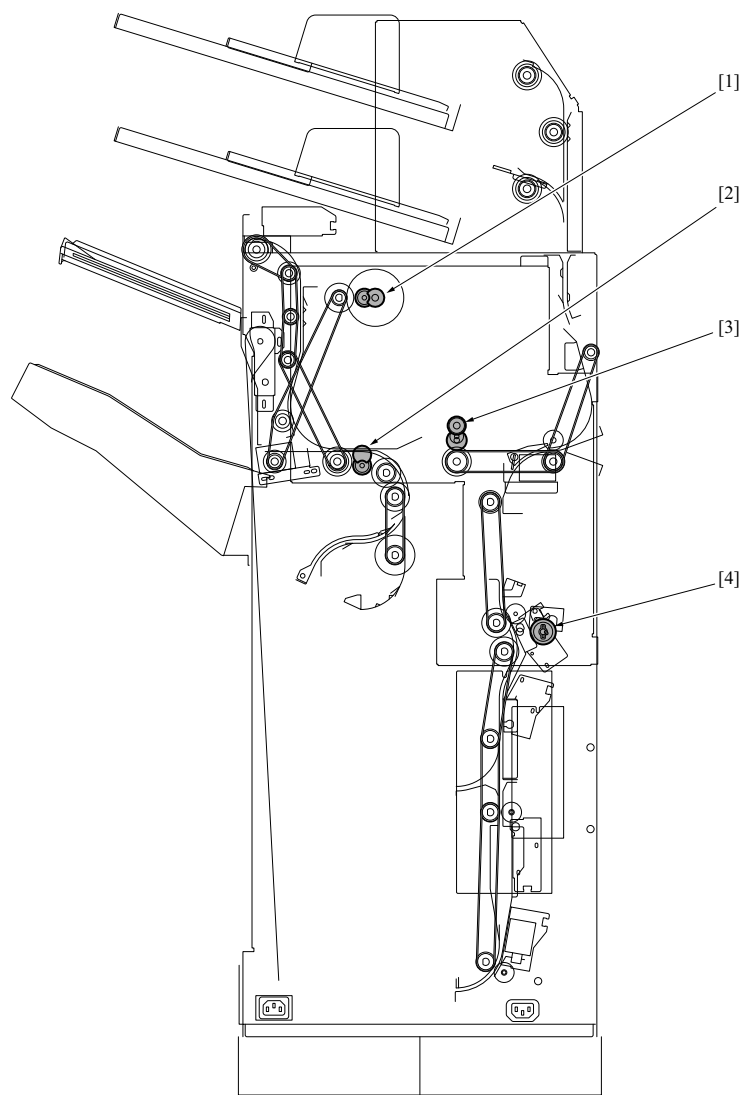


fd501to2001c

[1]	Entrance gate	[2]	Alignment plate /Fr, /Rr
[3]	S size gate	[4]	L size gate
[5]	Sub tray gate	-	

2.2 Drive

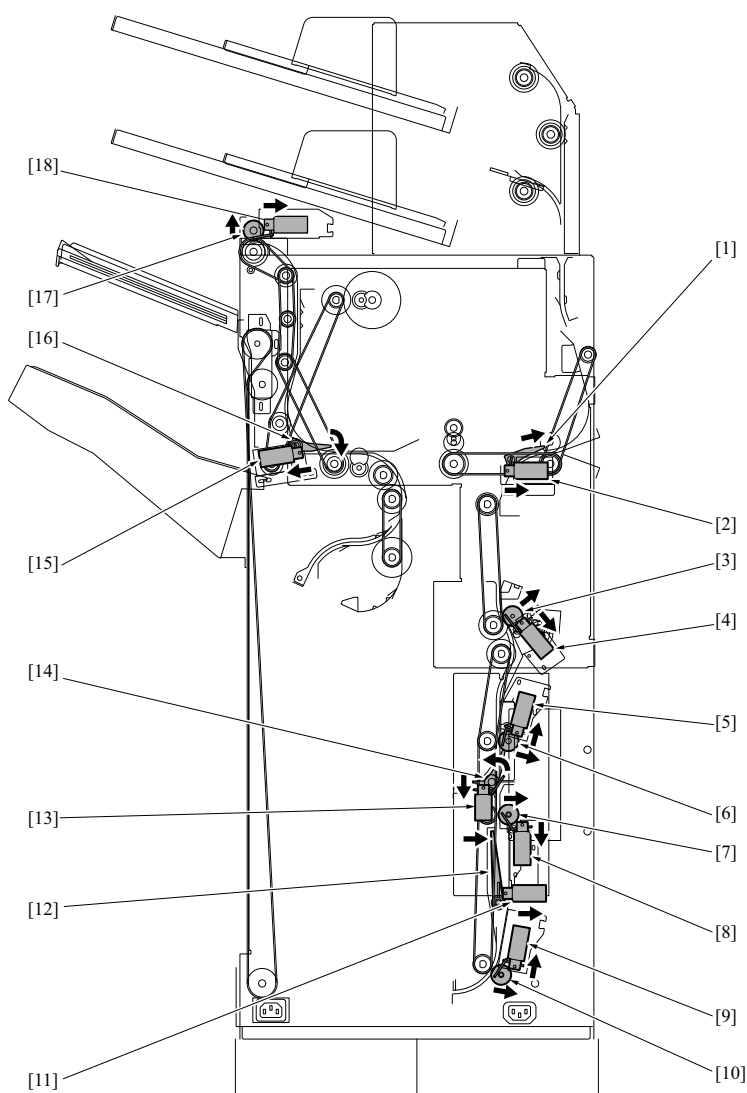
2.2.1 Conveyance drive



fd501to2002c

[1]	Main tray exit motor (M17)	[2]	Intermediate conveyance motor (M3)
[3]	Entrance conveyance motor (M1)	[4]	Punch conveyance motor (M2)

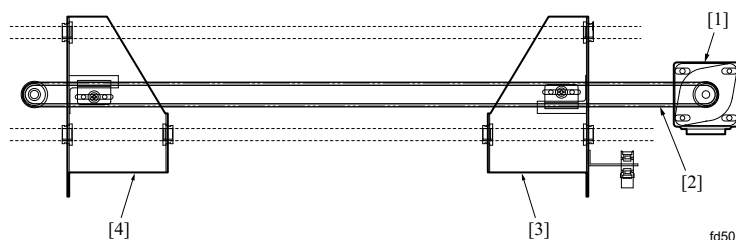
2.2.2 Gate drive



fd501to2003c

[1] Entrance gate	[2] Entrance gate solenoid (SD1)
[3] Vertical conveyance roller /Rt	[4] Roller solenoid /1 (SD5)
[5] Roller solenoid /2 (SD6)	[6] Vertical conveyance roller /2
[7] Vertical conveyance roller /3	[8] Roller solenoid /3 (SD7)
[9] Roller solenoid /4 (SD8)	[10] Vertical conveyance roller /4
[11] L size gate solenoid (SD4)	[12] L size gate
[13] S size gate solenoid (SD3)	[14] S size gate
[15] Sub tray gate solenoid (SD9)	[16] Sub tray gate
[17] Sub tray paper exit roller	[18] Paper exit solenoid (SD12)

2.2.3 Alignment drive



fd501to2004c

[1] Alignment motor (M12)	[2] Belt
[3] Alignment plate /Rr	[4] Alignment plate /Fr

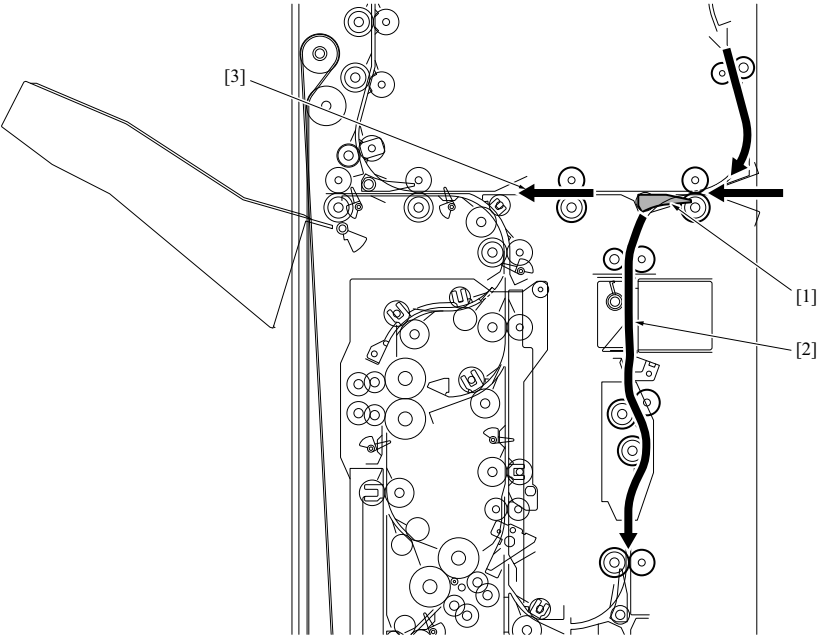
2.3 Operation

2.3.1 Conveyance path switching

The conveyance path of the paper that has been conveyed to the entrance guide plate varies according to the presence of a punch or folding, the tray into which paper is exited, and the paper size. The entrance gate, the sub tray gate, the S size gate, the L size gate and the folding gate make the switching of the conveyance path. (For details of the folding gate, refer to [PL.4. FOLDING CONVEYANCE SECTION](#))

(1) Entrance gate

The entrance gate solenoid (SD1) switches between the straight conveyance and the punch/folding conveyance by. In the straight mode, the SD1 remains OFF.
When conveying the 1st sheet of paper for punching/folding operation, SD1 is energized a specified period of time after the start button is turned ON.
For the 2nd and the succeeding sheets of paper, SD1 is energized in accord with the conveyance direction of the succeeding page after the preceding page passes through the FD entrance sensor (PS1).

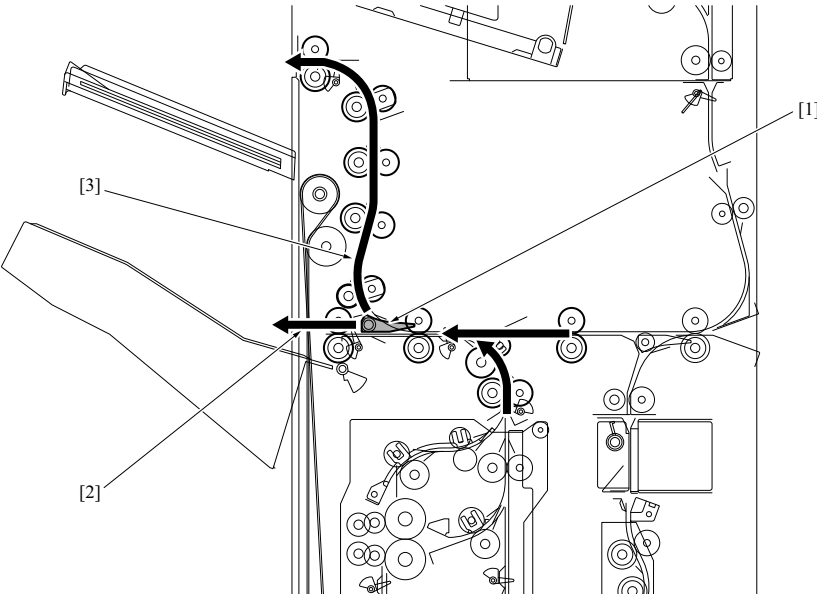


fd501to2005c

[1]	Entrance gate	[2]	Punch mode or folding mode
[3]	Straight mode	-	

(2) Sub tray gate

The sub tray gate solenoid (SD9) switches between the main tray paper exit and the sub tray paper exit. In the mode of the main tray paper exit, the SD9 remains OFF.
When exiting the 1st sheet of paper into the sub tray, switch the SD9 a specified period of time after the start button is turned ON.
For the 2nd and the succeeding sheets of paper, SD9 is energized in accord with the paper exit direction of the succeeding page after the preceding page passes through the intermediate conveyance sensor (PS13).

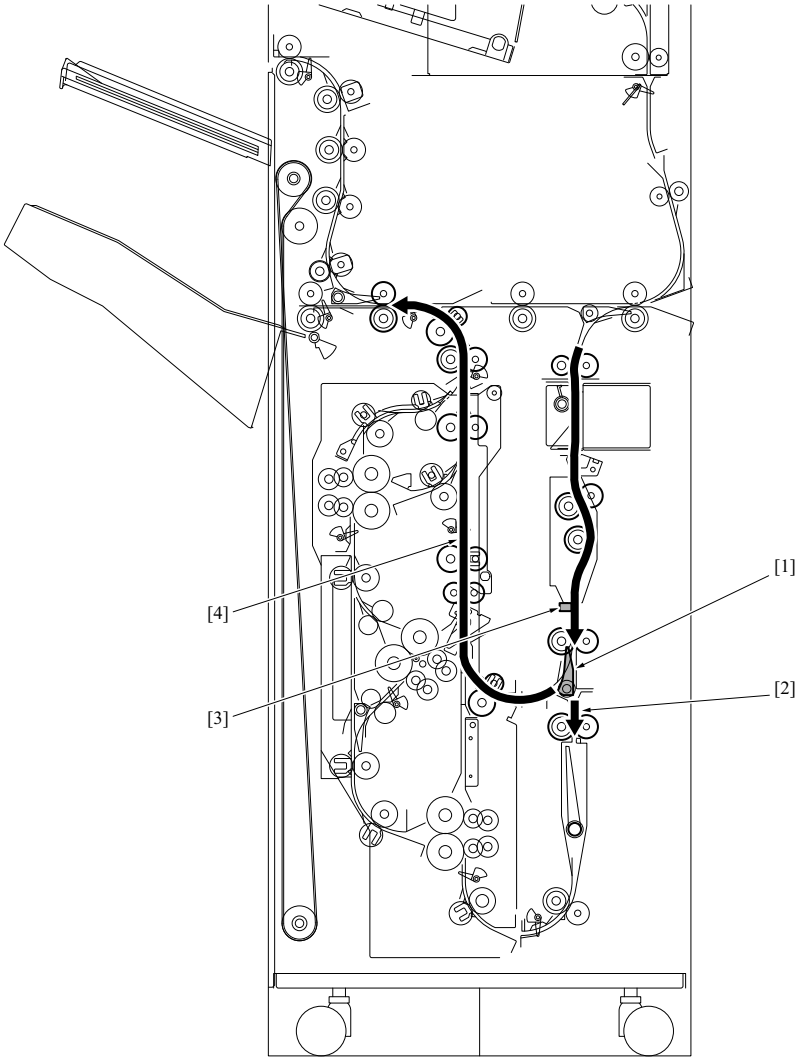


fd501to2006c

[1]	Sub tray gate	[2]	Main tray exit
[3]	Sub tray exit		-

(3) S size gate

Switching is made according to the paper size and the presence of folding. S size gate solenoid (SD3) makes the drive of the gate. In the punch mode with no folding and in the case of the S size paper, SD3 remains OFF.
When conducting the folding operation or when feeding the 1st sheet of large-size paper, switch SD3 a specified period of time after the start button is turned ON.
For the 2nd and the succeeding sheets of paper, switch the sub tray gate solenoid (SD9) in accord with the paper exit direction of the succeeding page after the preceding page passes through the punch conveyance sensor (PS5).
S size paper: The length in the sub scan direction is 216mm or less.

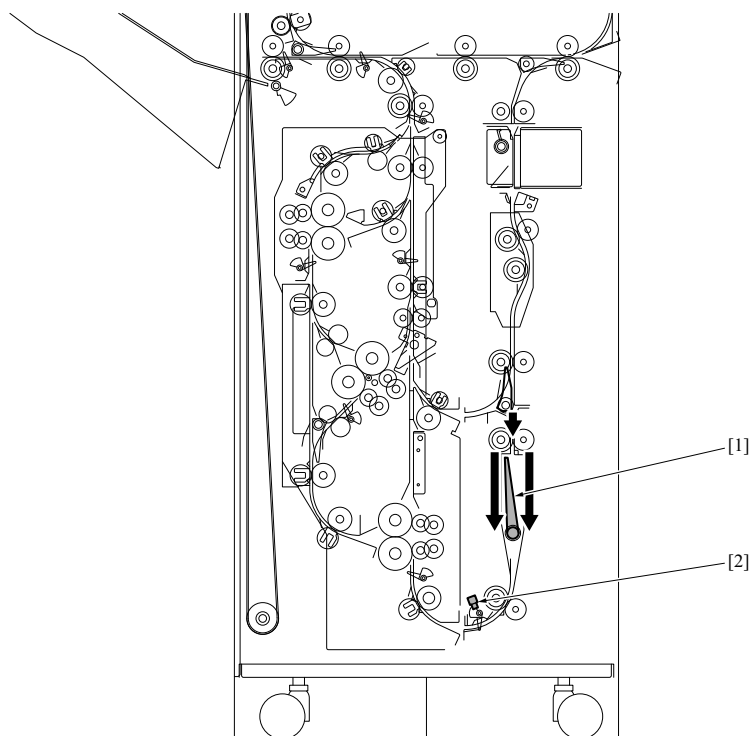


fd5011to2007c

[1]	S size gate	[2]	For the folding mode (regardless of the presence of a punch)
[3]	Punch conveyance sensor (PS5)	[4]	For the S size paper with a punch only

(4) L size gate

When folding the paper, the conveyance path is switched back and forth for each paper conveyance to prevent the succeeding paper from coming into contact with the trailing edge of the L size paper that is in folding process.
L size gate solenoid (SD4) makes the drive of the gate.
L size paper: The length in the sub scan direction is 217mm or more.

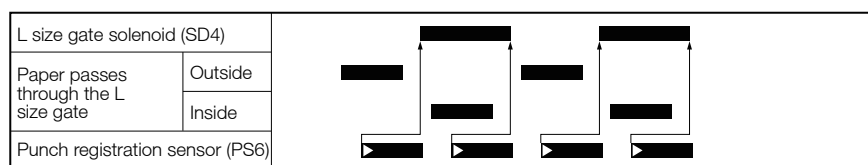


fd501to2008c

[1] L size gate (SD4-OFF position)	[2] Punch registration sensor (PS6)
------------------------------------	-------------------------------------

For the control of the L size gate, SD4 stands by at the OFF position (outer path) for the 1st sheet of paper to pass through. The 1st sheet of paper turns ON SD4 a specified period of time after the punch registration sensor (PS6) turns ON, and makes the switch to the inner path.

When the 2nd sheet of paper turns ON PS6, SD4 turns OFF after a specified period of time to make the switch to the outer path. The above operations are repeated for each sheet of paper.



fd501to2039e

2.3.2 Conveyance line speed control

The conveyance line speed of each conveyance section varies according to the type of paper and paper weight.

(1) Line speed switching

The following list shows each of conveyance sections and the range of the conveyance line speed.

Conveyance section	Conveyance line speed
Entrance conveyance section	290mm/s to 1000mm/s
Intermediate conveyance section	800mm/s to 1000mm/s
Punch conveyance section	490mm/s to 1000mm/s
Main tray paper exit section	205mm/s to 1000mm/s
Sub tray paper exit section	500mm/s

2.3.3 Alignment control

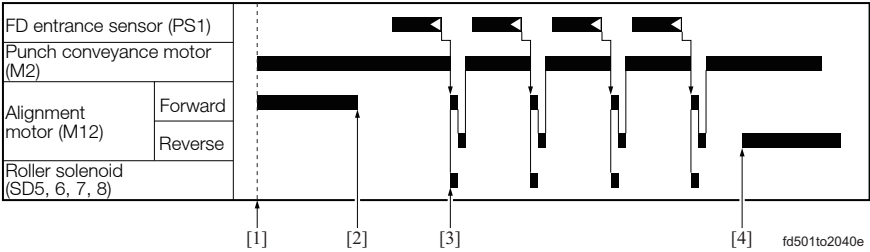
On paper conveyed to the punching position, the 2 alignment plates make a alignment operation to improve the accuracy of the punch hole positioning and the folding. The forward and reverse rotation of the alignment motor (M12) drives the alignment plate. The alignment plate home sensor (PS10) detects its home position.

When the start button is turned ON, M12 rotates in the forward direction to move the alignment plates /Fr and /Rr to the standby position of the paper size.

When the paper is conveyed to the punch position in a specified number of steps after it passes through the FD entrance sensor (PS1), the roller solenoid /1 (SD5), the roller solenoid /2 (SD6), the roller solenoid /3 (SD7) and the roller solenoid /4 (SD8) release the pressure of each roller and M12 conducts the alignment operation.

The roller solenoids that release each of the rollers from pressure are modified according to the size and the direction of paper aligned.

A specified period of time after completion of punching the last paper, M12 rotates in the reverse direction to bring the alignment plate back to the home position.



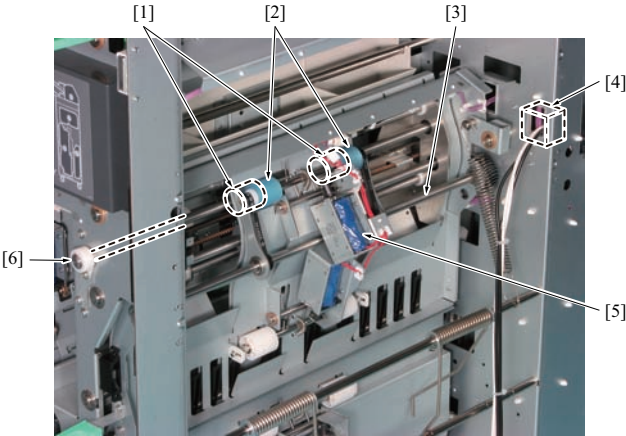
[1]	Start button ON	[2]	Move to the standby position
[3]	Alignment operation	[4]	Move to the home position

2.3.4 Gap recovery control

When conveying 2 pages at a time, conduct the gap recovery control after alignment.

Note

- The gap recovery control is only for 1200/1200P/1051 and 1250/1250P/1052.

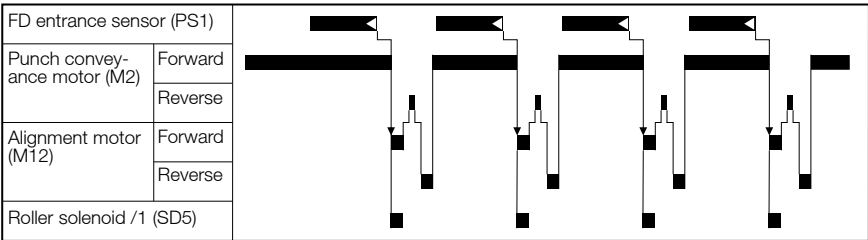


[1]	Vertical conveyance roller /Lt	[2]	Vertical conveyance roller /Rt
[3]	Drive shaft	[4]	Punch conveyance motor (M2)
[5]	Roller solenoid /1 (SD5)	[6]	One-way clutch

(1) Small-size paper

Once the roller solenoid /1 (SD5) turns OFF after the alignment and presses each roller, the punch conveyance motor (M2) [4] rotates in the reverse.

The drive of the punch conveyance motor (M2) [4] is passed to the vertical conveyance roller /Rt [2] to rotate it in the reverse. At this time, the vertical conveyance roller /Lt [1] does not rotate in the reverse but keeps stopping since it has the one-way clutch [6]. According to this operation, only the vertical conveyance roller /Rt [2] side of the overlapped paper is returned to adjust the gap of paper.

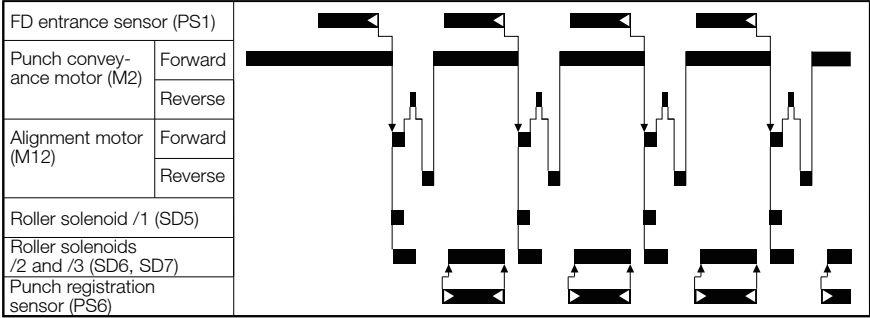


(2) Large-size paper

Once the roller solenoid /1 (SD5) turns OFF after the alignment and presses each roller, the punch conveyance motor (M2) [4] rotates in the reverse.

The drive of the punch conveyance motor (M2) [4] is passed to the vertical conveyance roller /Rt [2] to rotate it in the reverse. At this time, the vertical conveyance roller /Lt [1] does not rotate in the reverse but keeps stopping since it has the one-way clutch [6]. According to this operation, only the vertical conveyance roller /Rt [2] side of the overlapped paper is returned to adjust the gap of paper.

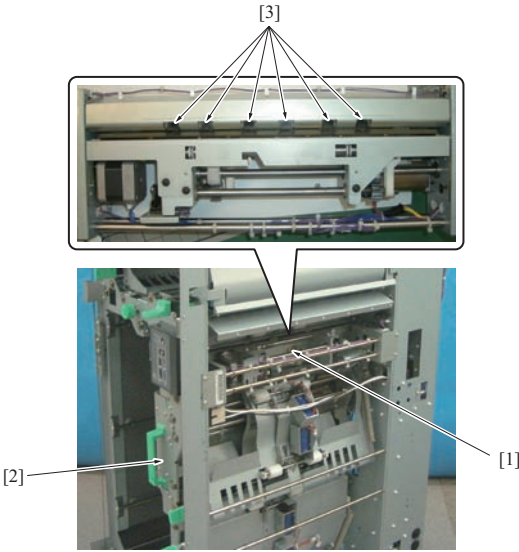
At the same time as the punch conveyance motor (M2) [4] stops, the roller solenoids /2 and /3 (SD6/SD7) turn OFF and press each roller.



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3. PUNCH SECTION

3.1 Configuration

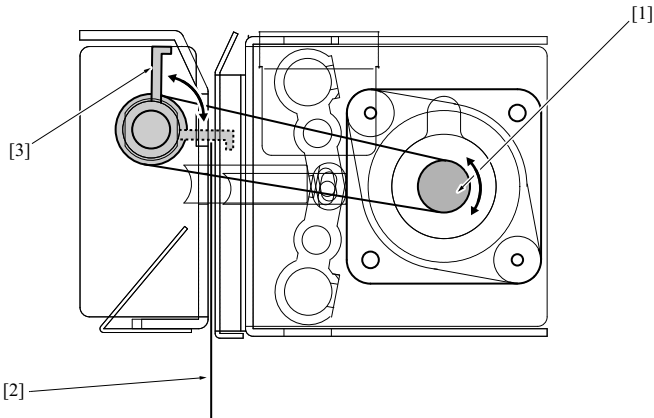


[1]	Punch hole switching mechanism	[2]	Punch scraps box
[3]	Punch rear claw		-

3.2 Drive

3.2.1 Rear registration drive

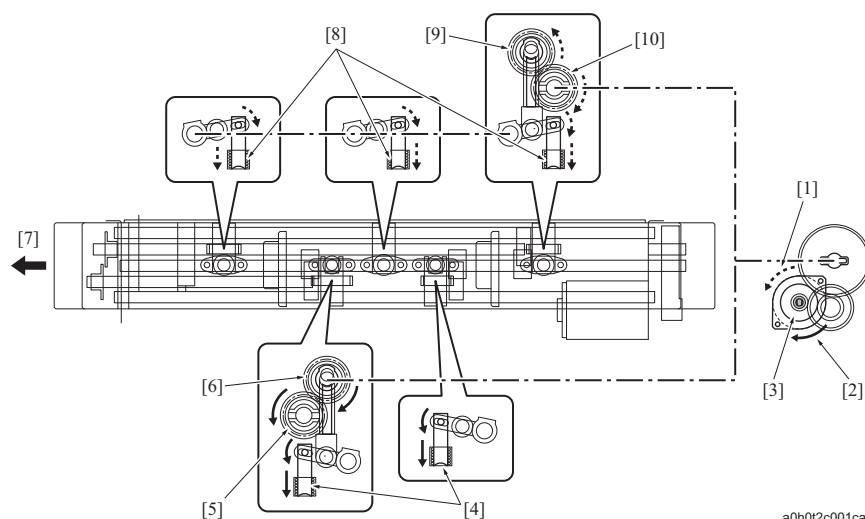
(1) Rear registration drive



fd501to2010c

[1]	Punch registration motor (M13)	[2]	Paper
[3]	Punch rear claw		-

3.2.2 Punch drive



a0h0t2c001ca

[1]	Rotation when punching 3 holes (as seen from the front)	[2]	Rotation when punching 2 holes (as seen from the front)
[3]	Punch motor (M10)	[4]	2-hole punch edge
[5]	One-way clutch (2-hole punch)	[6]	Eccentric cam
[7]	Front side direction	[8]	3-hole punch edge
[9]	Eccentric cam	[10]	One-way clutch (3-hole punch)

3.3 Operation

(1) Punch control

The punch registration motor (M13) drives the punch rear claw to hold down the trailing edge of paper, and the punch motor (M10) drives the eccentric cam for punching.

After alignment operations, the roller solenoids /1 to /4 are turned ON to let paper be placed in the unfixed condition. The paper, however, is held by the curvature of the conveyance section. Then, the punch registration motor (M13) rotates a specified number of steps and the punch rear claw holds the trailing edge of paper to move it to the punching position. After a specified period of time, the punch motor (M10) drives for punching. After completion of punching, M13 returns the punch rear claw to the home position. The position of the home position is detected by the punch registration home sensor (PS11).

(2) Punch hole switching control

The punch hole is switched according to the rotational direction of the punch motor (M10).

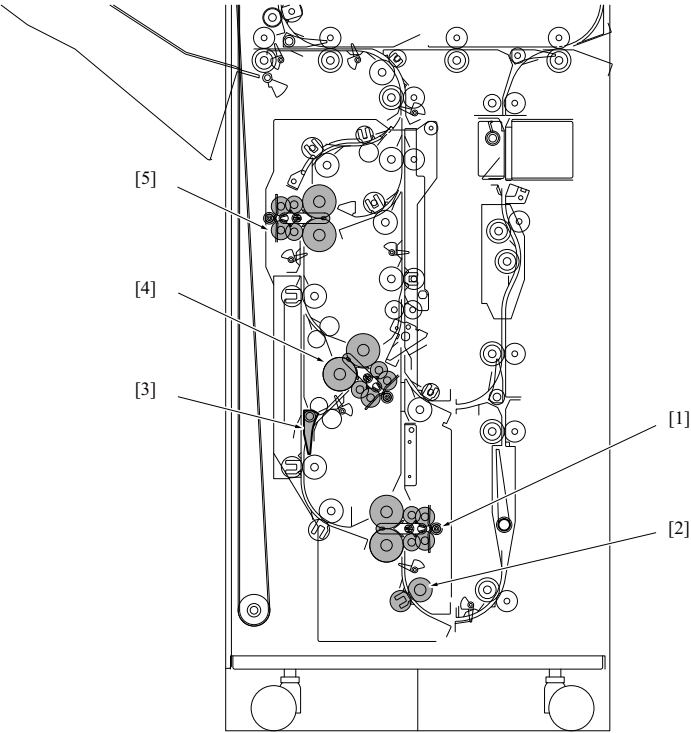
For 2-hole, M10 rotates counterclockwise to drive the 2-hole punch edge. For 3-hole, M10 rotates clockwise to drive the 3-hole punch edge. The 2-hole punch home sensor (PS8) detects the position of the 2-hole punch edge, and the 3-hole/4-hole punch home sensor (PS9) detects the position of the 3-hole punch edge.

(3) Punch-hole scraps box control

The punch scraps box set sensor (PS12) detects the setting of the punch scraps box, and the punch scraps full sensor (PS26) detects the full condition of the punch scraps box.

4. FOLDING CONVEYANCE SECTION

4.1 Configuration

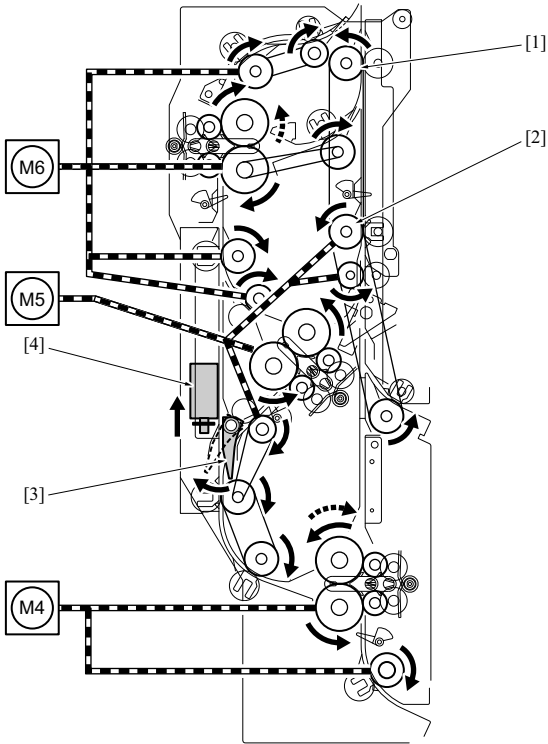


fd501to2012c

[1]	1st folding mechanism	[2]	Registration roller
[3]	Folding gate	[4]	2nd folding mechanism
[5]	3rd folding mechanism	-	

4.2 Drive

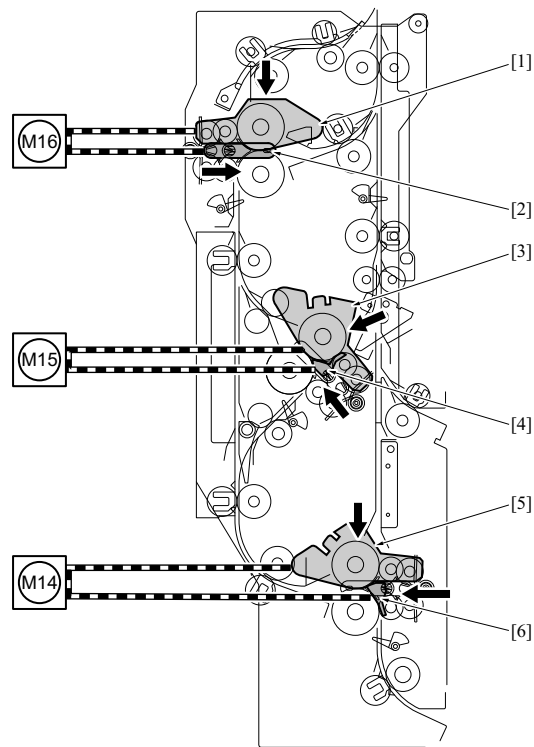
4.2.1 Conveyance drive



fd501to2013c

[1]	Coupling	[2]	The pulley operates as an idler due to the bearing
[3]	Folding gate	[4]	Folding gate solenoid (SD15)

4.2.2 Folding drive



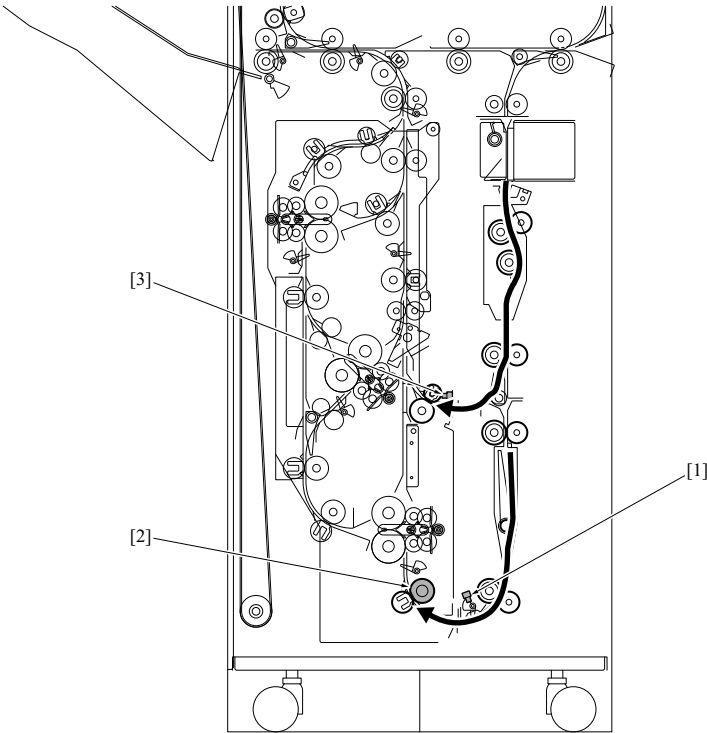
fd501to2014c

[1]	3rd folding roller /1 mounting board	[2]	3rd folding guide
[3]	2nd folding roller /1 mounting board	[4]	2nd folding guide
[5]	1st folding roller /1 mounting plate	[6]	1st folding guide

4.3 Operation

4.3.1 Registration control

The paper that has passes through the punch registration sensor (PS6) and arrives at the folding conveyance section is pressed against the registration roller to make adjustments for skew. A specified period of time after the PS6 turns ON, the 1st folding motor (M4) resumes the conveyance of paper. When no folding operation is made, no registration control is made. However, no folding is made on the paper that has entered the folding conveyance section from the folding entrance sensor side. The paper is conveyed vertically as is and exited to the main tray or the sub tray.



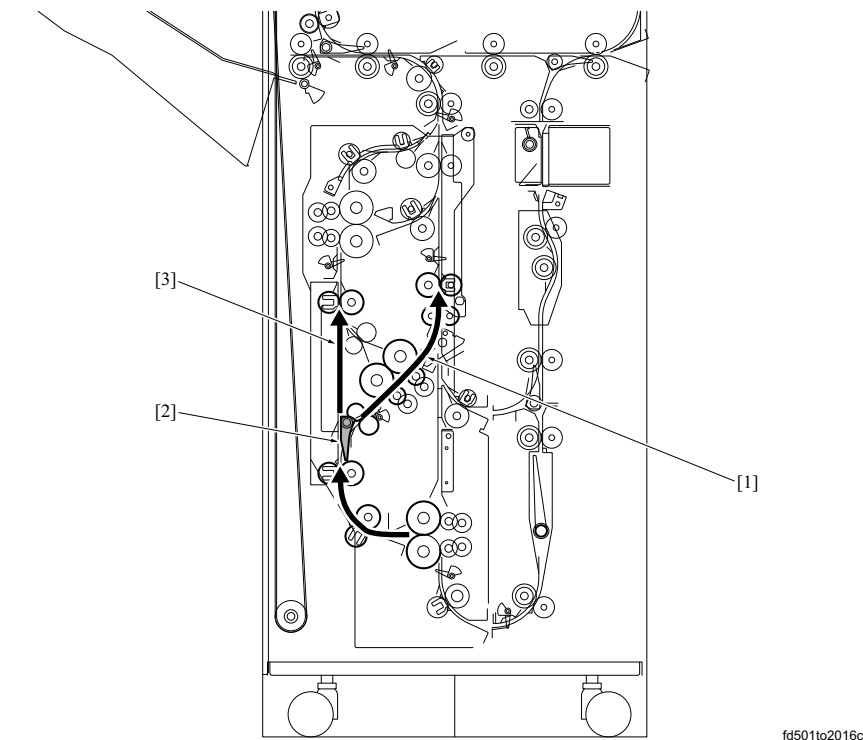
fd501to2015c

[1]	Punch registration sensor (PS6)	[2]	Registration roller
-----	---------------------------------	-----	---------------------

[3]	Folding entrance sensor (PS52)	-
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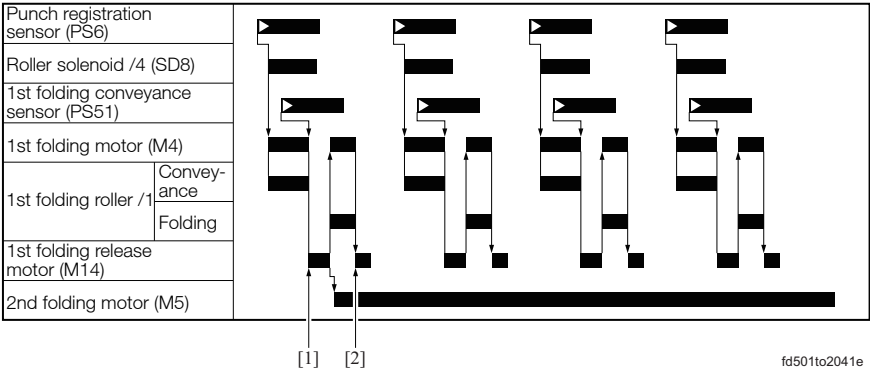
4.3.2 Conveyance path switching

The folding gate solenoid (SD15) switches the conveyance path between the 2nd folding and the 3rd folding.
Except for the Z-Fold mode, a specified period of time after the 1st folding conveyance sensor (PS51) turns ON, SD15 turns ON to convey the paper to the 2nd folding after the 1st folding. In the Z-Fold mode, SD15 remains OFF and the paper is conveyed to the 3rd folding after the 1st folding.



[1]	Except for the Z-Fold mode	[2]	Folding gate
[3]	In the Z-Fold mode		-

It shows the time chart of the 1st folding roller /1, but the other folding rollers are controlled as well.

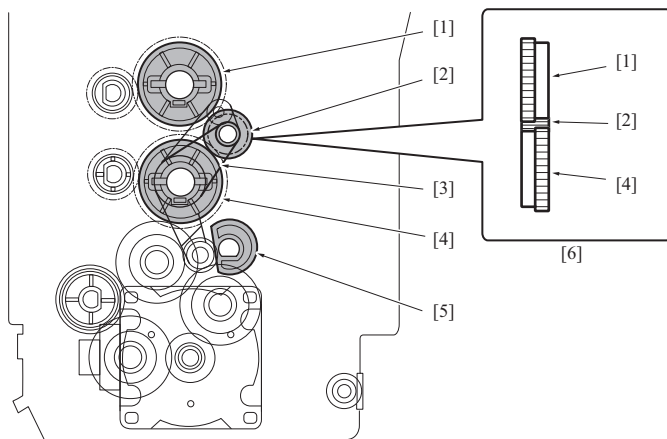


[1]	Change of the 1st folding roller /1 to the folding position	[2]	Change of the 1st folding roller /1 to the conveyance position
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4.3.3 1st folding control

(1) Conveyance/folding switching control

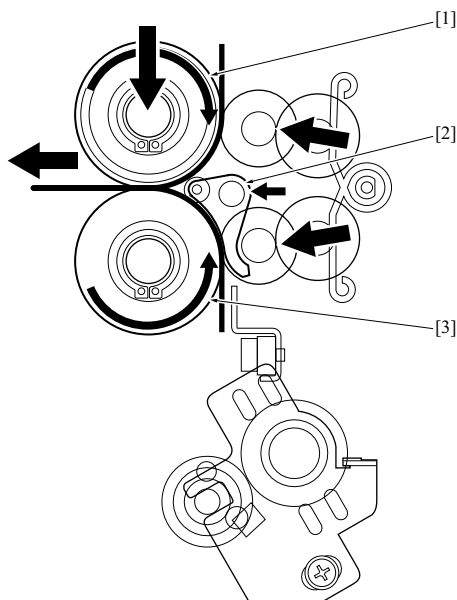
The switching between conveyance and folding is made by moving the 1st folding roller /1. The 1st folding release motor (M14) drives the eccentric cam for this switching.
After the 1st folding conveyance sensor (PS51) turns ON, the paper is conveyed by a specified number of steps. While the paper is being conveyed, the 1st folding roller gears /1 [1] and /2 [4] rotate in the same direction since these 2 gears are interlocked each other through the idle gear [2].
After conveying the paper by the prescribed number of steps, M14 rotates until it gets to a specified number of steps. It rotates the eccentric cam [5] to allow the idle gear arm [3] to separate the idle gear [2] from the 1st folding roller gears /1 [1] and /2 [4]. At the same time, when M14 starts up, the cam provided on the inside of the 1st roller gear /2 [4] rotates to allow the 1st roller /1 and 1st roller /2 to contact each other closely to rotate 1st roller /1. get the gears engaged.
The phases of the 1st folding roller gears /1 [1] and the 1st folding roller gears /2 [3] are not aligned in the depth direction. Therefore, they do not engage with each other the idle gear [2] has been separated.



fd501to2017c

[1]	1st folding roller gear /1	[2]	Idle gear
[3]	Idle gear arm	[4]	1st folding roller gear /2
[5]	Eccentric cam	[6]	Seen from the FD side

In parallel with this, when the 1st folding release motor (M14) starts up, the winding-up of the wire that pulls the folding guide [2] to the right side is loosened to allow the folding guide [2] to push out the paper in the clearance between the 1st folding rollers /1 [1] and /2 [3]. As a result, the paper gets caught in the rollers to be folded.



fd501to2018c

[1]	1st folding roller /1	[2]	Folding guide
[3]	1st folding roller /2	-	

4.3.4 2nd folding control

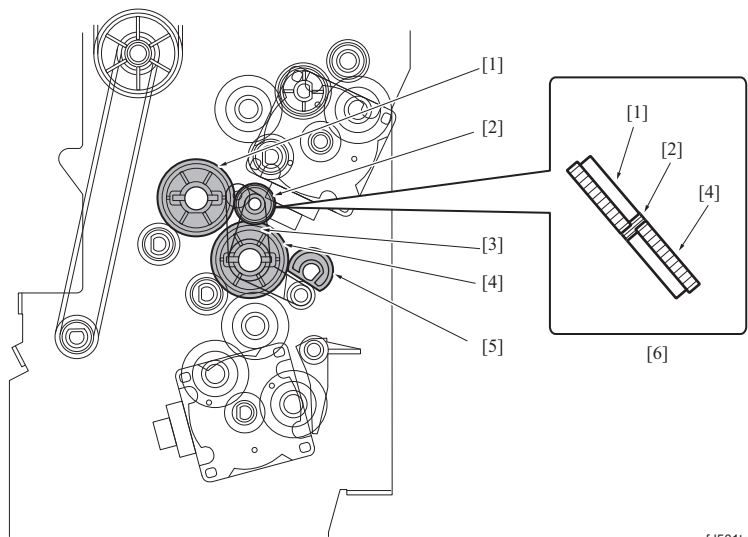
(1) Conveyance/folding switching control

The switching between conveyance and folding is made by moving the 2nd folding roller /1. The 2nd folding release motor (M15) drives the eccentric cam for this switching.

After the 2nd folding conveyance sensor (PS53) turns ON, the paper is conveyed by a specified number of steps. While the paper is being conveyed, the 2nd folding roller gears /1 [1] and /2 [4] rotate in the same direction since these 2 gears are interlocked each other through the idle gear [2].

After conveying the paper by the prescribed number of steps, M15 rotates until it gets to a specified number of steps. It rotates the eccentric cam [5] to allow the idle gear arm [3] to separate the idle gear [2] from the 2nd folding roller gears /1 [1] and /2 [4]. At the same time, when M14 starts up, the cam provided on the inside of the 2nd roller gear /2 [4] rotates to allow the 2nd roller /1 [1] and 2nd roller /2 to contact each other closely to rotate the 2nd roller /1.

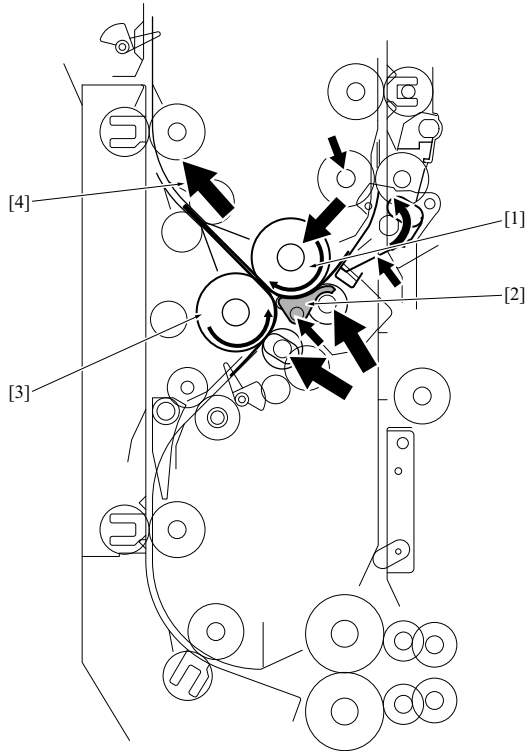
The phases of the 2nd folding roller gears /1 [1] and the 2nd folding roller gears /2 [3] are not aligned in the depth direction. Therefore, they do not engage with each other the idle gear [2] has been separated.



fd501to2019c

[1]	2nd folding roller gear /1	[2]	Idle gear
[3]	Idle gear arm	[4]	2nd folding roller gear /2
[5]	Eccentric cam	[6]	Seen from the FD side

In parallel with this, when the 2nd folding release motor (M15) starts up, the winding-up of the wire that pulls the folding guide [2] to the right side is loosened to allow the folding guide [2] to push out the paper in the clearance between the 2nd folding rollers /1 [1] and /2 [3]. As a result, the paper gets caught in the rollers to be folded.

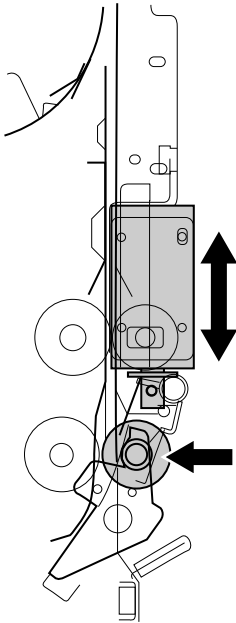


fd501to2020c

[1]	2nd folding roller /1	[2]	Folding guide
[3]	2nd folding roller /2	[4]	Direction of paper exit

(2) Gate fold assist control

In the Gate fold mode, the 2nd folding roller solenoid (SD18) turns ON a specified period of time after the 1st folding motor (M4) starts folding. When SD18 starts up, the 2nd roller is pressed firmly. This is a measure taken to avoid a multiple fold that is apt to occur at the folding section of paper when the 2nd folding is made.



fd501to2021c

4.3.5 3rd folding control

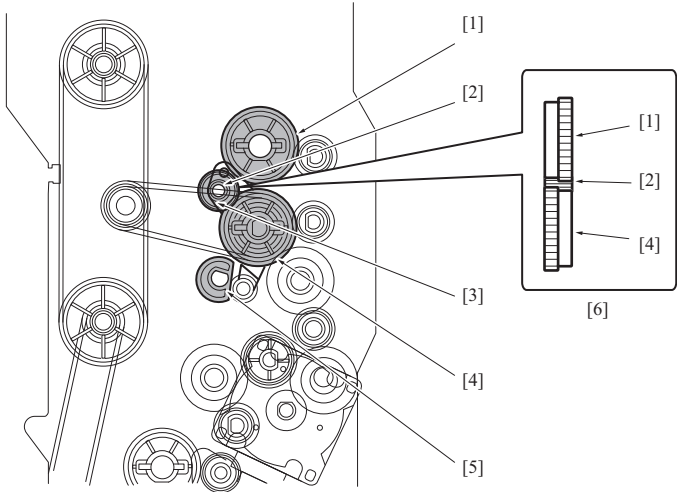
(1) Conveyance/folding switching control

The switching between conveyance and folding is made by moving the 3rd folding roller /1. The 3rd folding release motor (M16) drives the eccentric cam for this switching.

After the 3rd folding conveyance sensor (PS54) turns ON, the paper is conveyed by a specified number of steps. While the paper is being conveyed, the 3rd folding roller gears /1 [1] and /2 [4] rotate in the same direction since these 2 gears are interlocked each other through the idle gear [2].

After conveying the paper by the prescribed number of steps, M16 rotates until it gets to a specified number of steps. It rotates the eccentric cam [5] to allow the idle gear arm [3] to separate the idle gear [2] from the 3rd folding roller gears /1 [1] and /2 [4]. At the same time, when M16 starts up, the cam provided on the inside of the 3rd roller gear /2 [4] rotates to allow the 3rd roller /1 [1] and 3rd roller /2 to contact each other closely to rotate the 3rd roller /1.

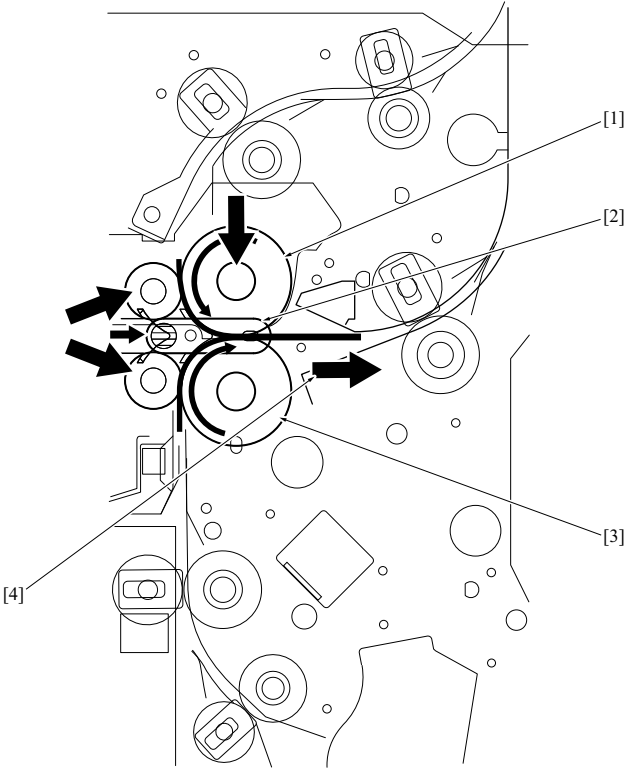
The phases of the 3rd folding roller gears /1 [1] and the 3rd folding roller gears /2 [4] are not aligned in the depth direction. Therefore, they do not engage with each other the idle gear [2] has been separated.



fd501to2022c

[1]	3rd folding roller gear /1	[2]	Idle gear
[3]	Idle gear arm	[4]	3rd folding roller gear /2
[5]	Eccentric cam	[6]	Seen from the FD side

In parallel with this, when the 3rd folding release motor (M16) starts up, the winding-up of the wire that pulls the folding guide [2] to the left side is loosened to allow the folding guide [2] to push out the paper in the clearance between the 3rd folding rollers /1 [1] and /2 [3]. As a result, the paper gets caught in the rollers to be folded.

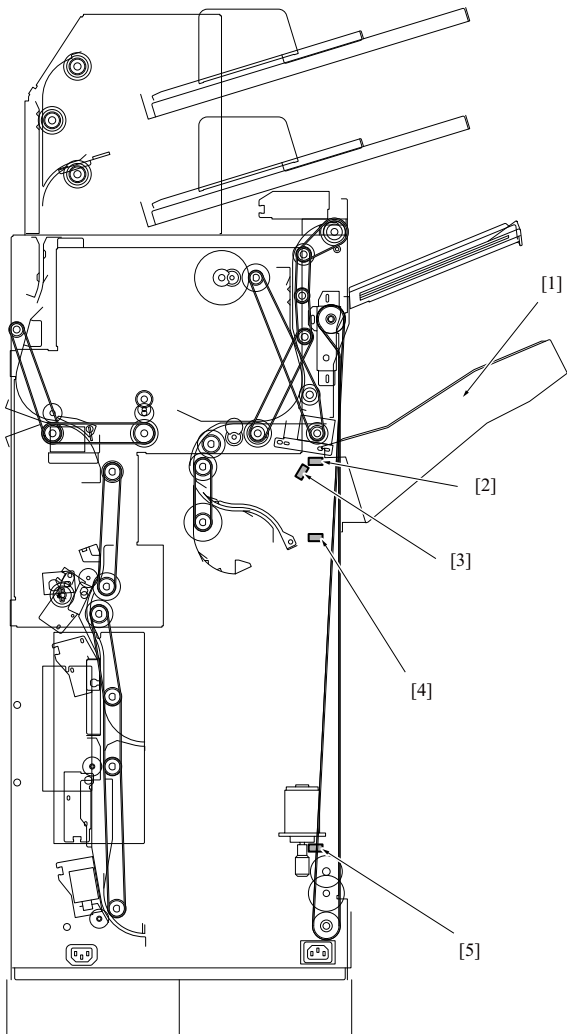


fd501to2023

[1]	3rd folding roller /1	[2]	Folding guide
[3]	3rd folding roller /2	[4]	Direction of paper exit

5. MAIN TRAY SECTION

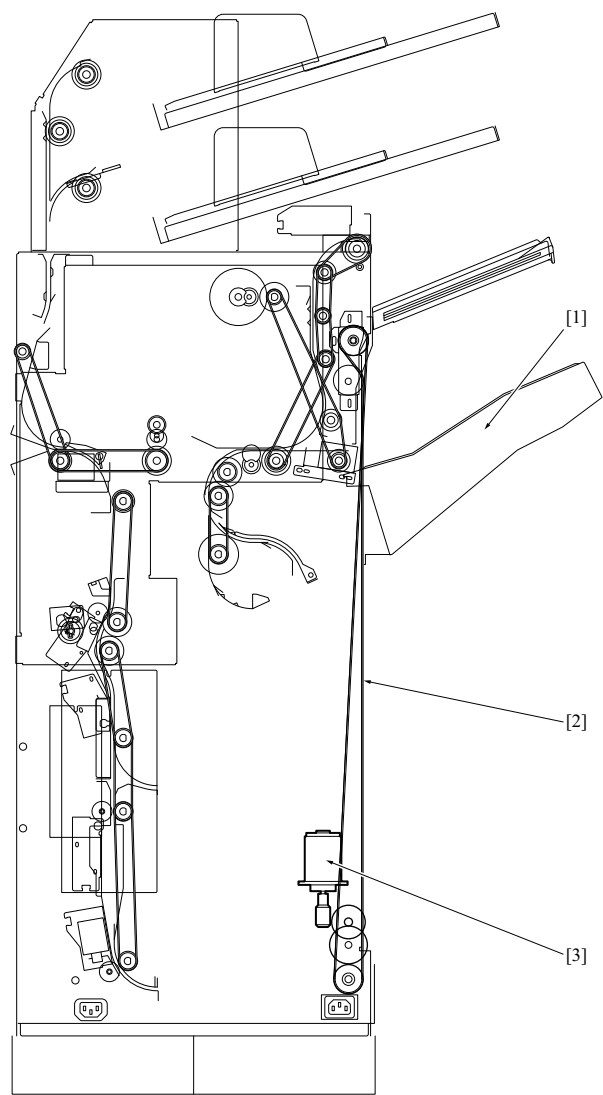
5.1 Configuration



fd501to2035c

[1]	Main tray	[2]	Main tray paper exit sensor (PS18)
[3]	Main tray upper limit sensor (PS20)	[4]	Main tray folding paper full sensor (PS7)
[5]	Main tray lower limit sensor (PS22)	-	

5.2 Drive



fd501to2036c

[1]	Main tray	[2]	Up/down wire
[3]	Tray up down motor (M11)	-	

5.3 Operation

5.3.1 Main tray up/down control

The up/down operation of the main tray is controlled by rotating the tray up/down motor (M11) in the normal or reverse direction.

(1) Main tray paper detection

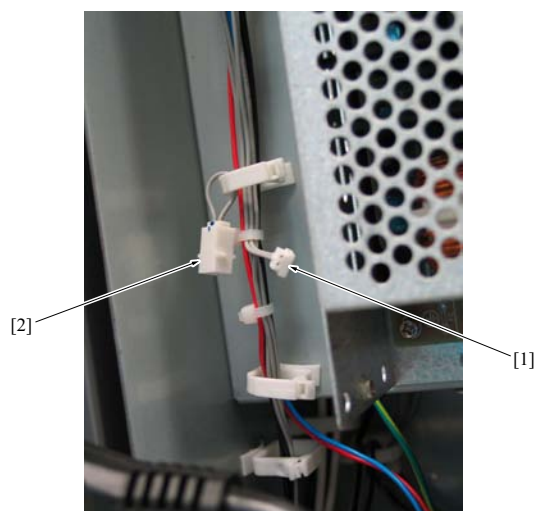
A specified period of time after the main tray paper exit sensor (PS18) turns ON, M11 starts up to bring down the main tray until the main tray upper limit sensor (PS20) turns OFF, and then bring it up again until PS20 turns ON. After the paper is exited, PS20 maintains the distance between the upper surface of the paper exited in the main tray (the surface of the main tray when no paper exited) and the paper exit opening at a fixed distance to prevent the paper exited from having an uneven edge.

(2) Switching the operation of the main tray

The main tray is set so that it normally does not operate. When letting the main tray operate, insert the short connector [2] into the CN90 [1].

⚠ CAUTION

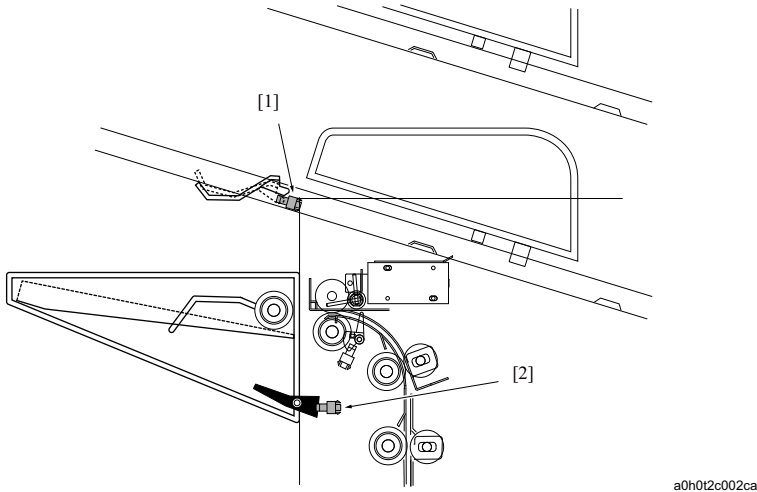
- Letting the main tray operate with the next option connected has a risk of damaging the machine. Be sure not to connect the short connector.



fd501to2037c

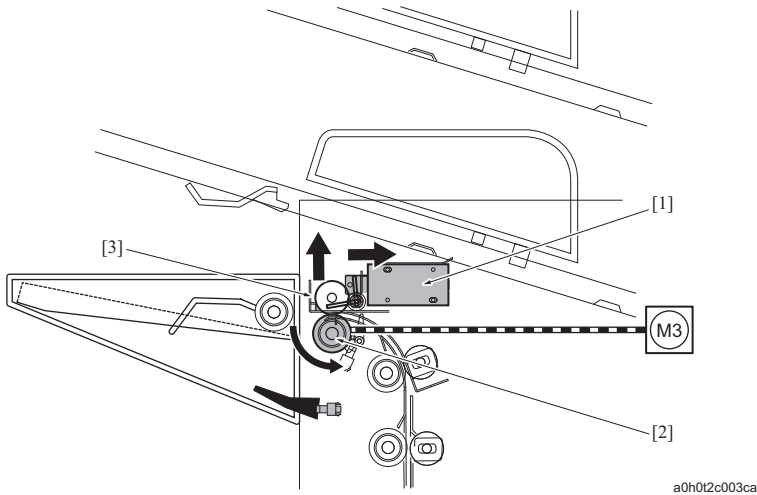
6. SUB TRAY SECTION

6.1 Configuration



[1]	Sub tray folding paper full sensor (PS46)	[2]	Sub tray paper full sensor (PS17)
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6.2 Drive

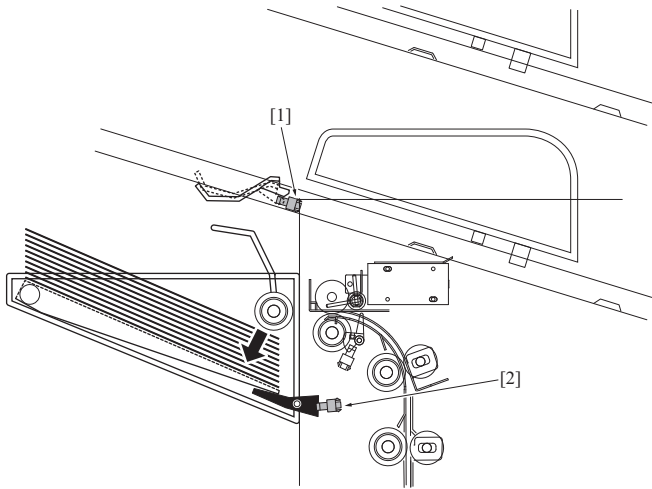


[1]	Paper exit solenoid (SD12)	[2]	Sub tray paper exit roller (drive)
[3]	Sub tray paper exit roller (driven)		-

6.3 Operation

6.3.1 Sub tray full-status detection control

The plate of the sub tray (with folding tray) has lift structure, so it moves down with its left edge as the axis of the movement when the paper is exited to the sub tray. When paper that has been exited into the sub tray gets to the specified thickness, the sub tray paper full sensor (PS17) [2] turns ON to send the "sub tray paper full" information to the main body. Then, the main body displays the message on its operation panel. When the folded paper on the sub tray is unfolded and the sub tray paper full sensor (PS46) [1] turns ON, the "sub tray paper full" information is also sent to the main body.

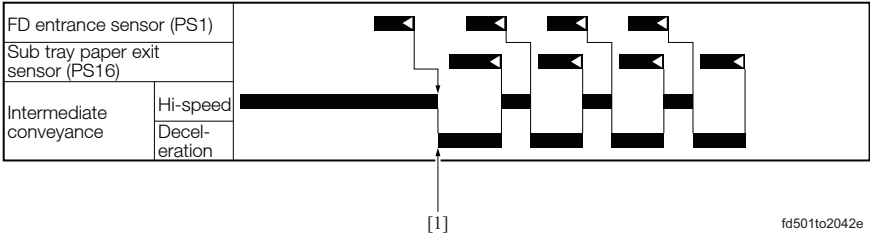


a0h0t2c004ca

[1]	Sub tray folding paper full sensor (PS46)	[2]	Sub tray paper full sensor (PS17)
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6.3.2 Line speed switching

Paper conveyed by the intermediate conveyance motor (M3) is decelerated for each sheet of paper to be exited into the sub tray.

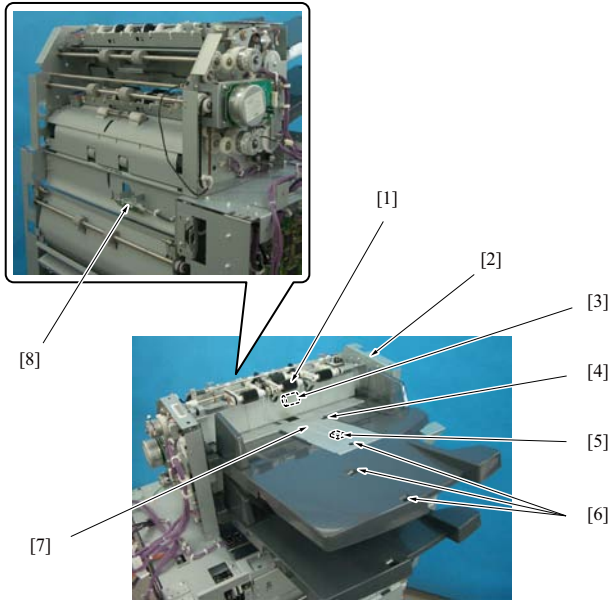


fd501to2042e

[1]	Deceleration of the intermediate conveyance motor (M3)	-
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7. PI SECTION

7.1 Configuration

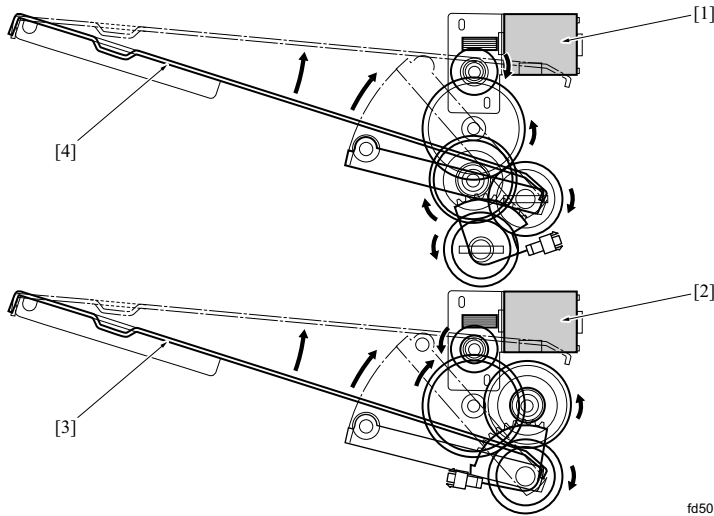


fd501to2027c

[1]	Paper pick-up mechanism	[2]	Manual operation
[3]	Paper separation mechanism	[4]	Paper set sensor
[5]	Paper size VR (main scan direction)	[6]	Paper size sensor (sub scan direction)
[7]	Lift plate	[8]	Multi-feed sensor

7.2 Drive

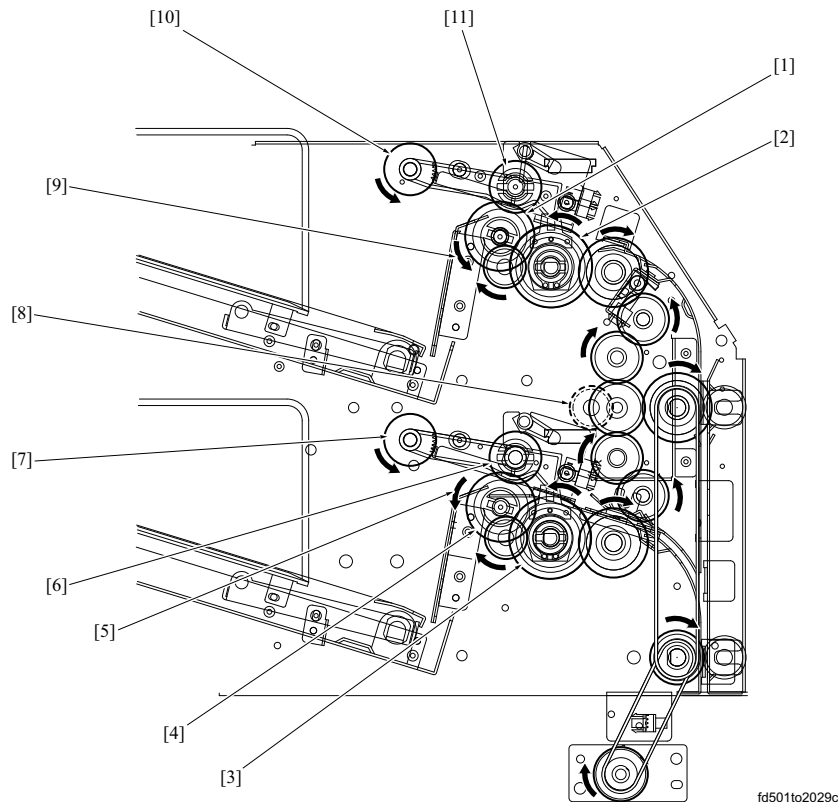
7.2.1 Tray lift drive



fd501to2028c

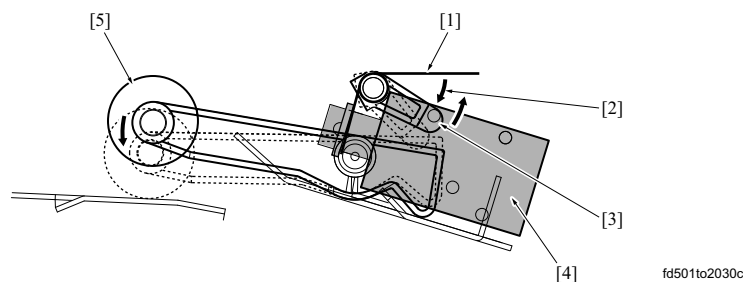
[1]	Paper lift motor /Up (M8)	[2]	Paper lift motor /Lw (M9)
[3]	PI lift plate /Lw	[4]	PI lift plate /Up

7.2.2 Paper feed drive



[1]	Separation roller /Up	[2]	PI registration clutch /Up (CL1)
[3]	PI registration clutch /Lw (CL2)	[4]	Separation roller /Lw
[5]	Rotational direction of separation roller /Lw	[6]	Paper feed roller /Lw
[7]	Pick-up roller /Lw	[8]	PI conveyance motor (M7)
[9]	Rotational direction of separation roller /Up	[10]	Pick-up roller /Up
[11]	Paper feed roller /Up	-	

7.2.3 Pick-up drive



[1]	Spring	[2]	Direction of the spring load
[3]	Release arm	[4]	PI pick-up solenoid /Up (SD13), /Lw (SD14)
[5]	Pick-up roller /Up, /Lw	-	

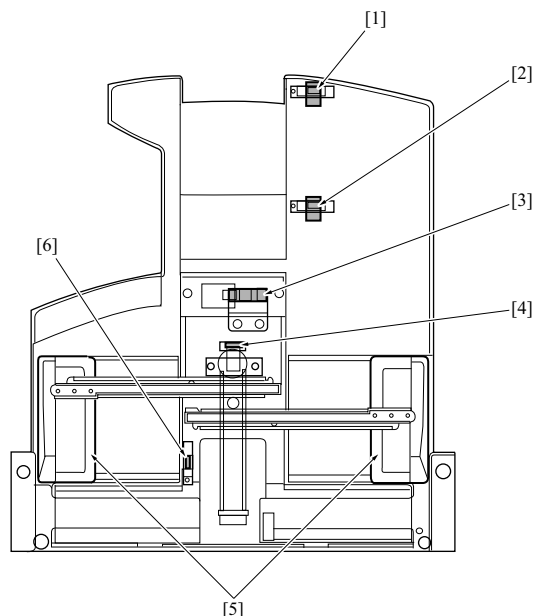
7.3 Operation

7.3.1 Size detection control

For the size detection of a paper, there are the following 2 directions for each of the tray /Up and the tray /Lw: that is, the main scan direction and the sub scan direction.

The following 3 sensors: PI maximum size sensors /Up (PS47) and /Lw (PS48) [1], L size sensors /Up (PS35) and /Lw (PS41) [2] and S size sensors /Up (PS36) and /Lw (PS42) [3], detect the size in the sub scan when the PI paper set sensors /Up (PS44) and /Lw (PS45) [6] turn ON. When the PS44 and PS45 are OFF, the tray is judged "paper empty."

The paper size VR /Up (VR31) and /Lw (VR32) [4] which are interlocked with the paper regulation plate [5] detect the size in the main scan.



fd501to2031c

[1]	PI maximum size sensor /Up (PS47), /Lw (PS48)	[2]	L size sensor /Up (PS35), /Lw (PS41)
[3]	S size sensor /Up (PS36), /Lw (PS42)	[4]	Paper size VR /Up (VR31), /Lw (VR32)
[5]	Paper regulation plate	[6]	PI paper set sensor /Up (PS44), /Lw (PS45)

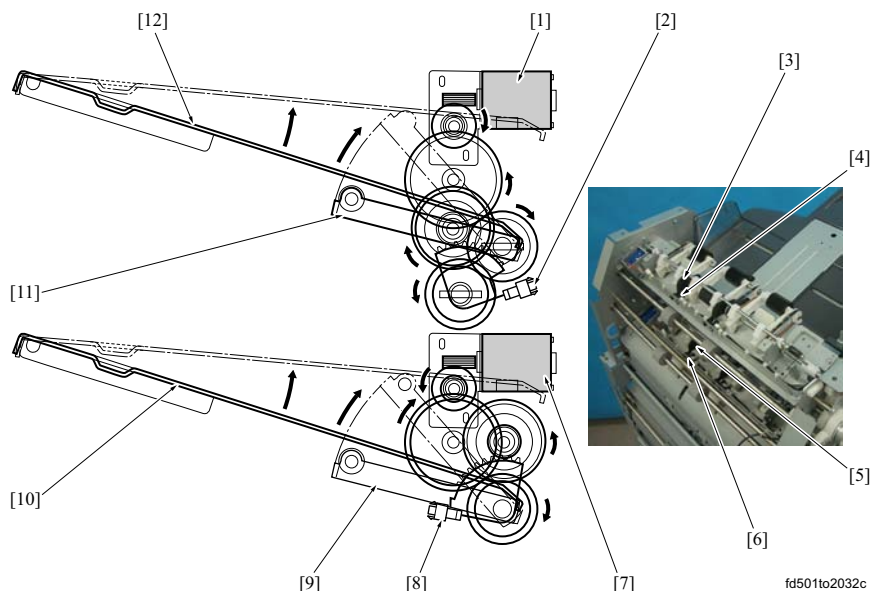
7.3.2 Up/down control

For the up/down of the tray, when the paper lift motors /Up (M8) [1] and /Lw (M9) [7] rotate in the normal and reverse directions, the lift arms /Up [11] and /Lw [9] start up to bring up and down the PI lift plates /Up [12] and /Lw [10]. The PI lift plate home sensors /Up (PS34) [2] and /Lw (PS40) [8] detect the lower limit position. The PI upper limit sensors /Up (PS32) [4] and /Lw (PS38) [6] detect the upper limit position at the position to which the actuators /Up [3] and /Lw [5] are pushed up by the PI lift plate.

When the PI paper set sensors /Up (PS44) and /Lw (PS45) are ON with the main body start button ON, M8 and M9 turn ON to bring up the PI lift plate. When PS32 and PS38 turn ON, M8 and M9 stop.

While in the copy/print operation, when PS32 and PS38 turn OFF from ON, M8 and M9 turn ON again to bring up the plate until PS32 and PS38 turn ON.

When PS44 and PS45 turn OFF with no paper left, M8 and M9 make a reverse rotation to move down the PI lift plate until PS34 and PS40 turn ON.



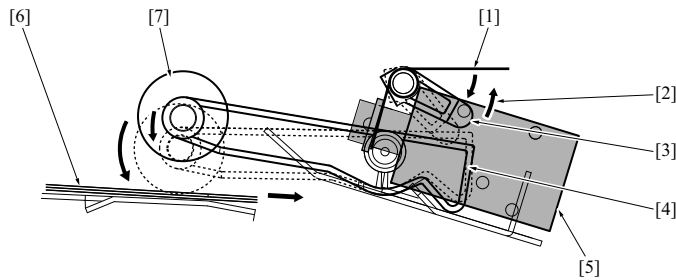
fd501to2032c

[1]	Paper lift motor /Up (M8)	[2]	PI lift plate home sensor /Up (PS34)
[3]	Actuator /Up	[4]	PI upper limit sensor /Up (PS32)
[5]	Actuator /Lw	[6]	PI upper limit sensor /Lw (PS38)
[7]	Paper lift motor /Lw (M9)	[8]	PI lift plate home sensor /Lw (PS40)
[9]	Lift arm /Lw	[10]	PI lift plate /Lw
[11]	Lift arm /Up	[12]	PI lift plate /Up

7.3.3 Pick-up mechanism

The picking-up of the paper [6] is made when the PI pick-up solenoids /Up (SD13) and /Lw (SD14) [5] turn ON. The release arm that is pressed down by the spring [1] in the direction of [2] presses down the paper feed arm [4] to place the pick-up rollers /Up and /Lw [7] in the release

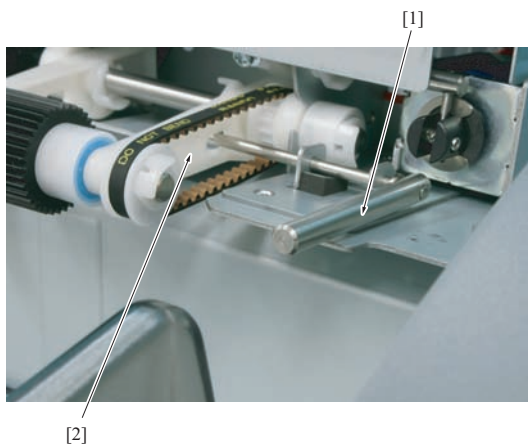
condition. When SD13 and SD14 [5] turn ON, the release arm is released upward and the pick-up rollers /Up and /Lw [7] go down by their own weight. The pick-up roller that is rotated by the PI conveyance motor (M7) presses down the paper to pick it up.



fd501to2033c

[1]	Spring	[2]	Direction of the spring load
[3]	Release arm	[4]	Paper feed arm
[5]	PI pick-up solenoid /Up (SD13), /Lw (SD14)	[6]	Paper
[7]	Pick-up roller /Up, /Lw	-	

Paper feed arm retaining lever [1] is provided in the pick-up roller section to prevent multi-feed. By moving the paper feed arm retaining levers [1] on the front and back to inside, the pick-up rollers on the front and back are secured while the roller in the middle presses against paper. Multi-feed is prevented by reducing the pressure against paper when feeding papers.



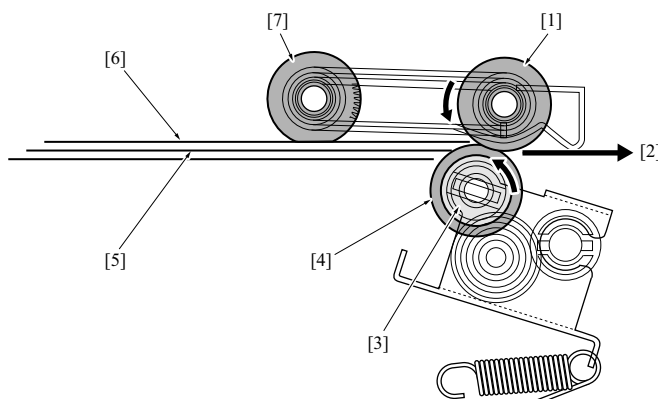
fd501to2044c

7.3.4 Separation mechanism

The separation roller [4] is driven in the direction opposite to the paper conveyance [2]. However, when no paper is conveyed or only 1 sheet of paper is conveyed, the frictional force generating between the paper feed roller [1] and the separation roller [4] or the paper and the separation roller is greater than the frictional force of the torque limiter [3]. Accordingly, the separation roller [4] rotates in the direction of the paper conveyance [2] to convey paper to the vertical conveyance section.

When 2 or more sheets of paper are conveyed, the frictional force between these sheets of paper is smaller than the frictional force of the torque limiter [3] and the separation roller [4] rotates in the reverse direction to prevent the lower most paper from being conveyed.

When the PI registration clutches /Up (CL1) and /Lw (CL2) turn ON according to the PI paper feed demand signal, the paper feed roller [1], the separation roller [4] and the pick-up roller [7] rotate to convey the paper one at a time.

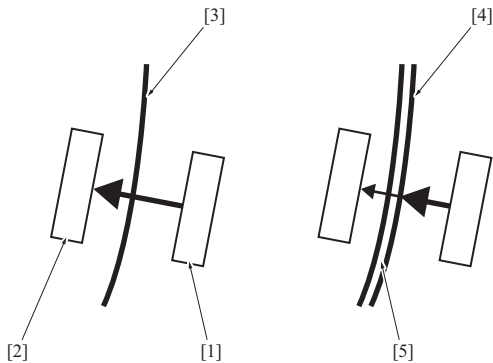


fd501to2034c

[1]	Paper feed roller /Up, /Lw	[2]	Paper conveyance direction
[3]	Torque limiter	[4]	Separation roller /Up, /Lw
[5]	2nd sheet of paper	[6]	1st sheet of paper
[7]	Pick-up roller /Up, /Lw	-	

7.3.5 Multi feed detection control

To detect a multi-feed while in the PI paper feed, the PI conveyance path is provided with the multi-feed sensor. The multi-feed sensor is an ultrasonic sensor made up of a pair of a sender and a receiver. This sensor receives ultrasonic waves sent from the multi-feed detection board /1 (MFDB1) [1] by the multi-feed detection board /2 (MFDB2) [2]. Based on the difference in the amount of ultrasonic waves received when a single sheet of paper [3] and the plural sheets of paper [4] pass through between the sender and the receiver, a check is made to see if paper has been multi-fed or not. The multi-feed detection function turns ON (operates) when the LED on the lower side is turned on by the multi-feed detection function selection button on the FD operation board (FDOB) and when no selection is made. It turns OFF (does not operate) when the LED on the upper side is turned on.



fd501to2038c

[1]	Multi-feed detection board /1 (MFDB1)	[2]	Multi-feed detection board /2 (MFDB2)
[3]	1 sheet of paper	[4]	More than 1 sheet of paper
[5]	Layer of air	-	

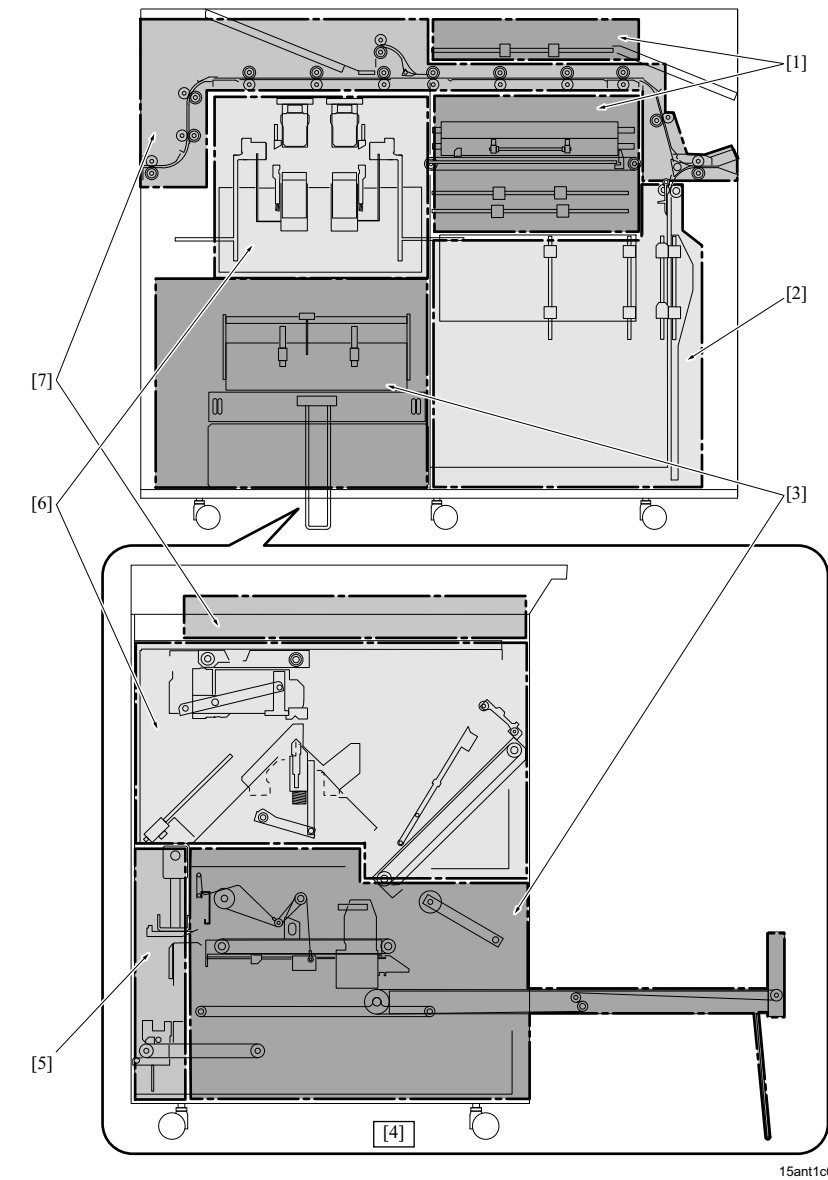
7.3.6 Paper empty detection control

The PI empty sensors /Up (PS33) and /Lw (PS39) detect the presence of paper in the tray section while in the print stop. PI set sensors /Up (PS44) and /Lw (PS45) detect the paper empty while in the print to stop the paper feed from the trays /1 to /5 when PS44 and PS45 detect the trailing edge of the last paper.

PO THEORY OF OPERATION SD-506

1. OUTLINE

1.1 Unit configuration

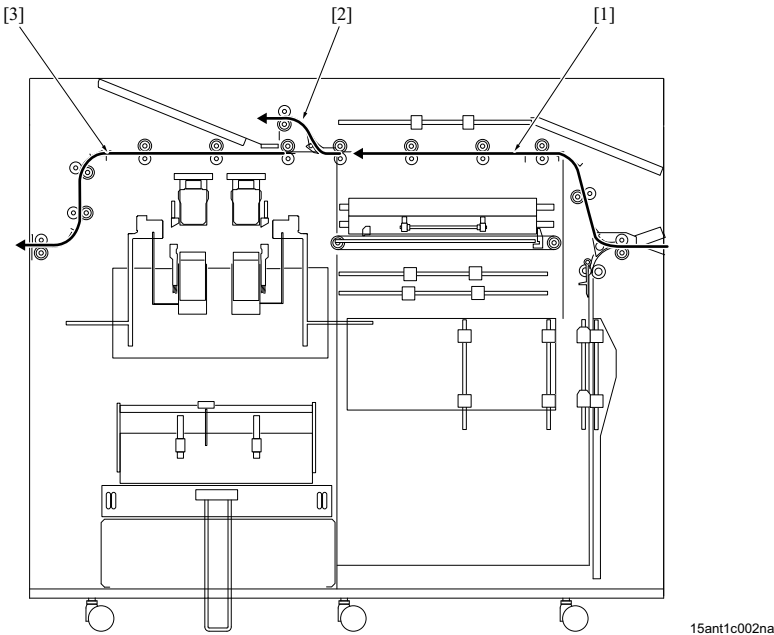


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[1]	Folding section	[2]	Right angle conveyance section
[3]	Bundle processing section	[4]	Left-side view
[5]	Trimmer section	[6]	Saddle stitching section
[7]	Horizontal conveyance section	-	

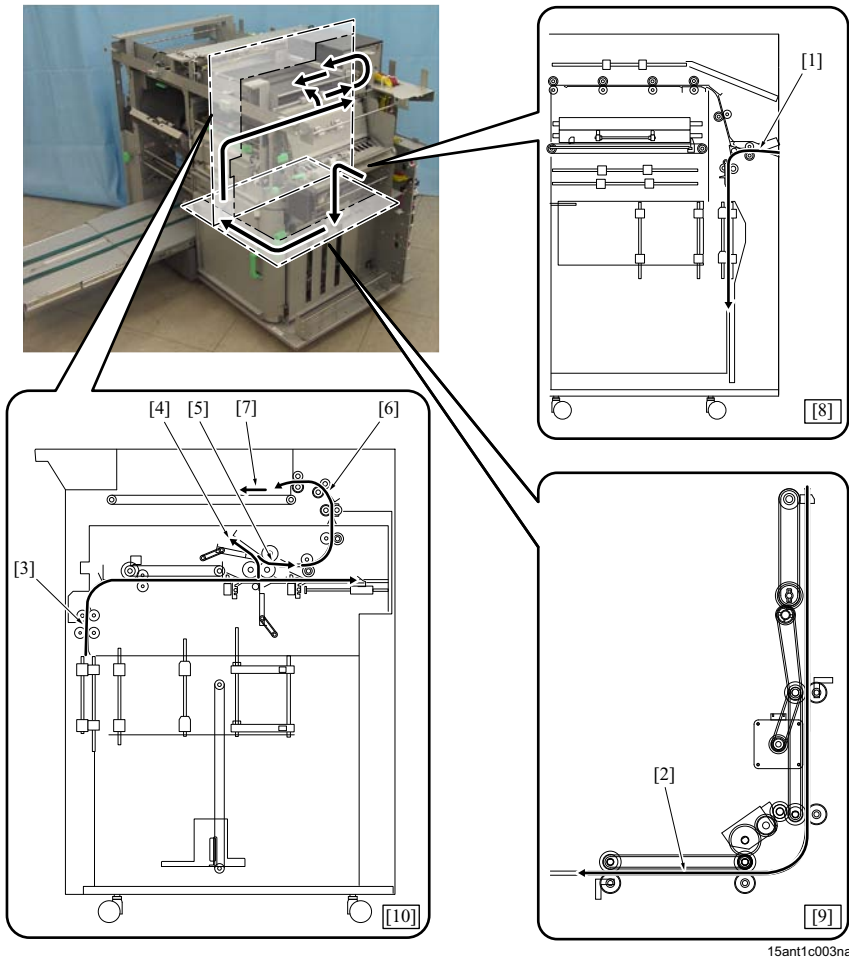
1.2 Paper path

(1) Coupling exit/subtray exit mode



[1]	Horizontal conveyance	[2]	Sub tray exit
[3]	Coupling exit		-

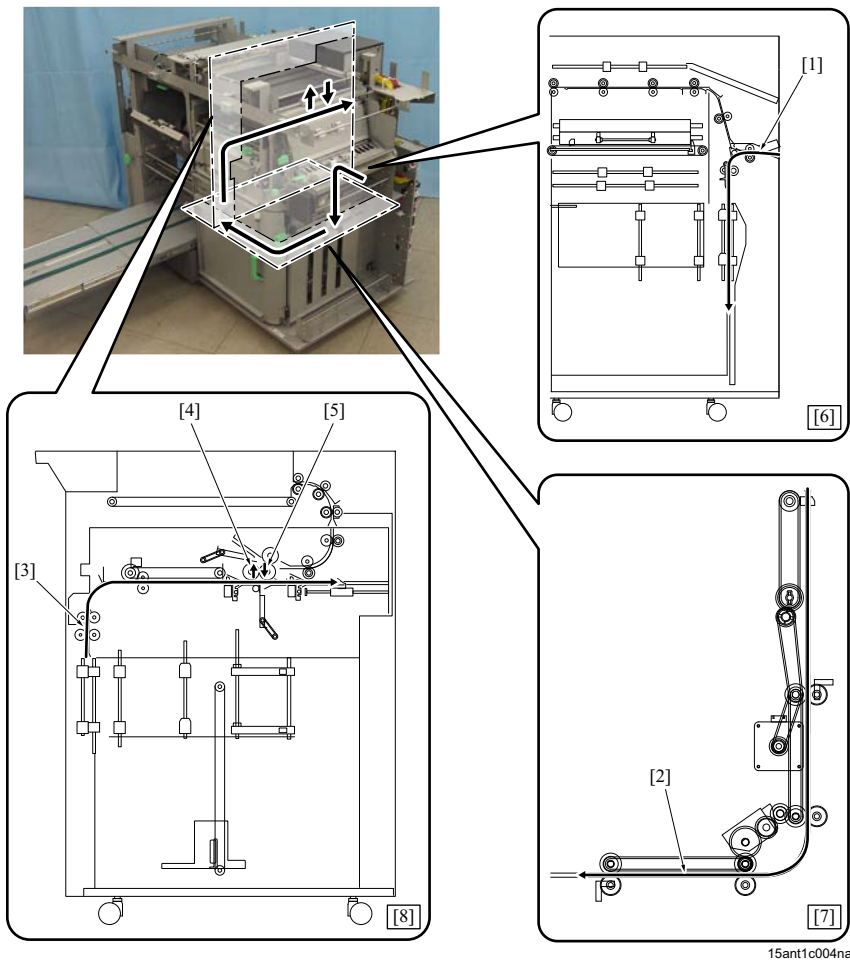
(2) Overlap tri-folding mode



[1]	Stack to the angle conveyance section	[2]	Right angle conveyance
[3]	Conveyance to the folding section	[4]	1st folding
[5]	2nd folding	[6]	Paper exit
[7]	Stack movement of the paper exit	[8]	Front side view

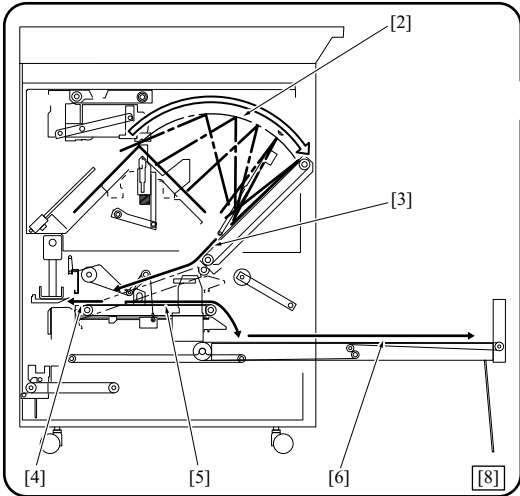
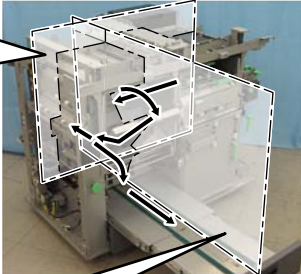
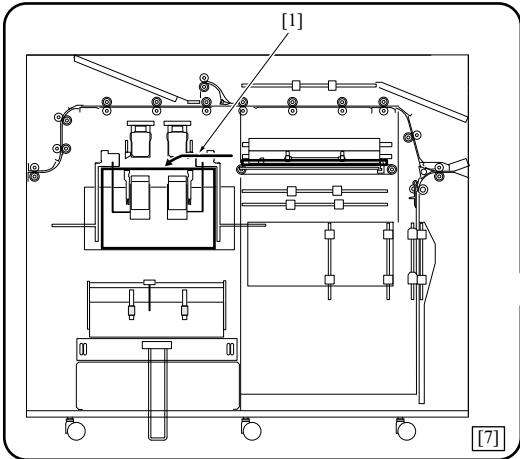
[9] Top side view	[10] Right-side view
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(3) Center folding/saddle stitching mode
(a) From the paper exit from the main body to the center folding



[1] Stack to the angle conveyance section	[2] Right angle conveyance
[3] Conveyance to the folding section	[4] Center folding (1st folding)
[5] Release from the folding roller	[6] Front side view
[7] Top side view	[8] Right-side view

(b) From the center folding to the paper exit

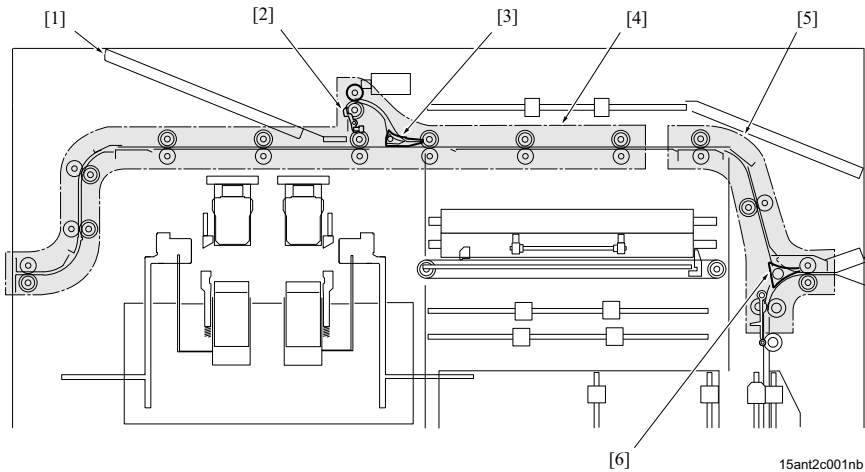


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[1]	Conveyance from the folding section to the saddle stitching section	[2]	Movement by the bundle arm
[3]	Movement by the clip	[4]	Conveyance to the trimmer section (only for saddle stitching mode)
[5]	Paper exit	[6]	Stack movement of the paper exit
[7]	Front side view	[8]	Left-side view

2. HORIZONTAL CONVEYANCE SECTION

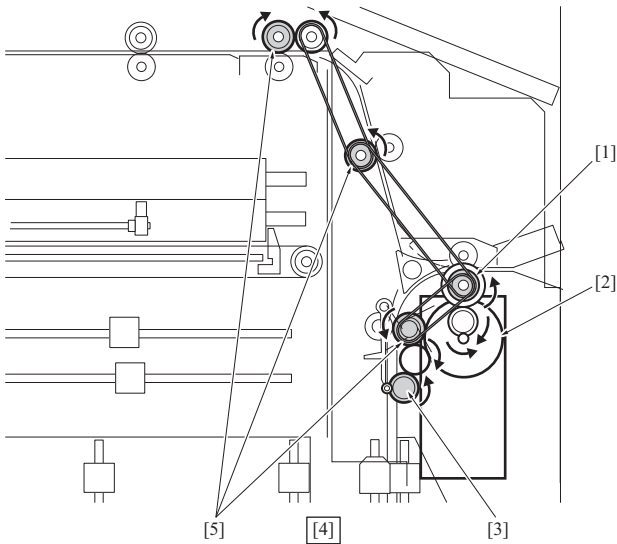
2.1 Configuration



[1]	Sub tray	[2]	Sub tray paper full sensor (PS12)
[3]	Horizontal conveyance gate	[4]	Horizontal conveyance
[5]	Entrance conveyance	[6]	Entrance gate

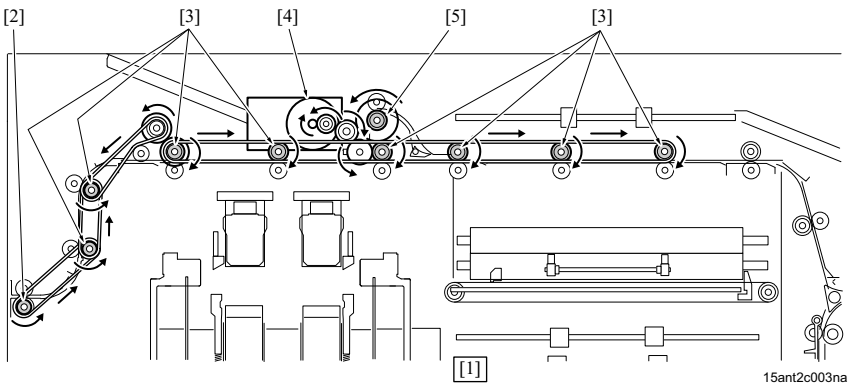
2.2 Drive

2.2.1 Entrance conveyance drive



[1]	Entrance roller	[2]	Entrance conveyance motor (M1)
[3]	Overlap assist roller	[4]	Front side view
[5]	Conveyance roller	-	

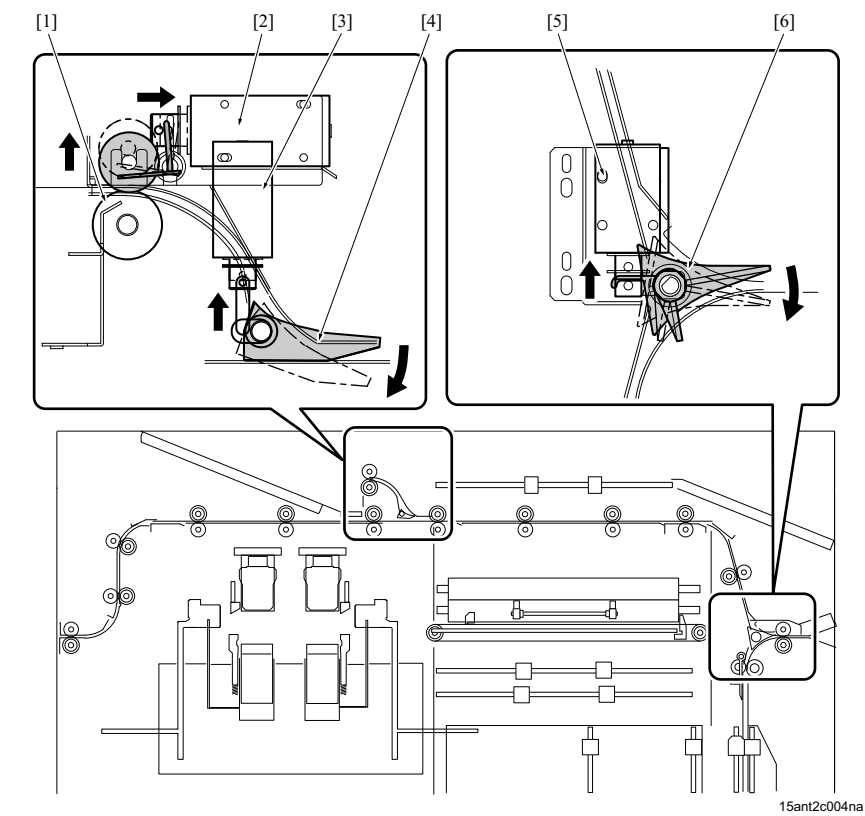
2.2.2 Horizontal conveyance drive



[1]	Front side view	[2]	Exit roller
[3]	Conveyance roller	[4]	Horizontal conveyance motor (M2)

[5]	Sub tray exit roller	-
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2.2.3 Gate drive/sub tray pressure release drive



[1]	Sub tray exit roller	[2]	Roller release solenoid /4 (SD4)
[3]	Horizontal conveyance gate solenoid (SD3)	[4]	Horizontal conveyance gate
[5]	Entrance gate solenoid (SD1)	[6]	Entrance gate

2.3 Operation

2.3.1 Conveyance path switching control

(1) Entrance gate solenoid control

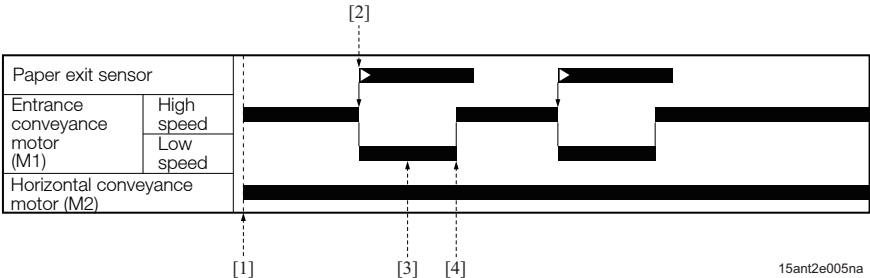
The entrance gate switches the path to the horizontal conveyance section and one to the right angle conveyance section. The entrance gate solenoid (SD1) switches them. The right angle conveyance path is selected when SD1 turns OFF and the horizontal conveyance path is selected when it turns ON.
In the coupling exit mode and the sub tray exit mode, SD1 turns ON and sets the entrance gate to the horizontal conveyance section when the main body print signal turns ON. SD1 turns OFF after the paper exit.

(2) Horizontal conveyance gate control

The horizontal conveyance gate switches the path to the sub tray section and the coupling conveyance path to the succeeding device. The horizontal conveyance gate solenoid (SD3) switches them. The coupling conveyance path is selected when SD3 turns OFF and the sub tray path is selected when it turns ON.

2.3.2 Conveyance line speed switch control

The entrance conveyance motor (M1) and the horizontal conveyance motor (M2) convey them.
M1 and M2 turn ON when the main body start signal [1] turns ON. M1 switches its rotational speed in accordance with the main body line speed [2] when the main body paper exit sensor turns ON [3]¹. Then it switches its rotational speed to high speed [4] to convey the paper when it receives the paper trailing edge signal (when the paper trailing edge passes through the fusing).
^{*1} C6501/C6501P only. For C8000/1200/1200P/1250/1250P/C7000/C7000P/C70hc/C6000, the speed is not switched.

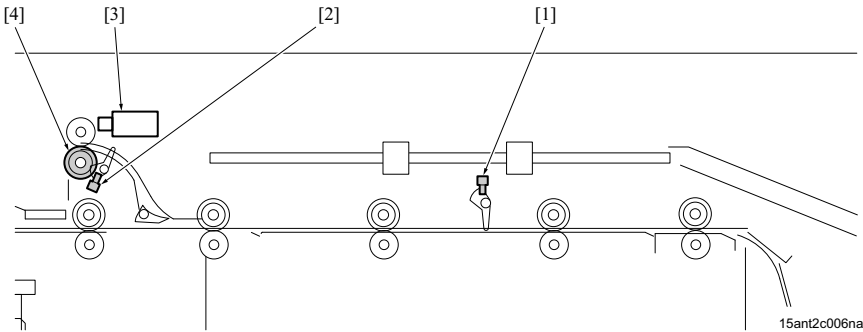


[1]	Main body print signal	[2]	Main body exit sensor ON
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[3] M1 switching to low speed	[4] Main body paper trailing edge signal
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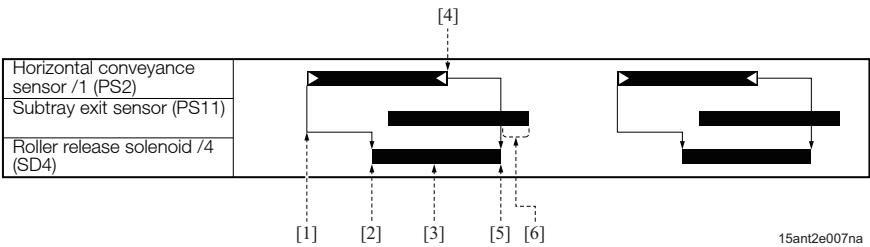
2.3.3 Sub tray paper exit control

When exiting the paper to the sub tray, the paper misalignment is prevented by releasing the nipping of the sub tray exit roller by the roller release solenoid /4 (SD4) to nip the paper only at the trailing edge and slowing down the paper by the sub tray exit roller that is rotating in low speed for every paper. The horizontal conveyance sensor /1 (PS2) [1] and the sub tray exit sensor (PS11) [2] detect the paper exited to the sub tray.



[1] Horizontal conveyance sensor /1 (PS2)	[2] Sub tray exit sensor (PS11)
[3] Roller release solenoid (SD4)	[4] Sub tray exit roller

The roller release solenoid /4 (SD4) turns ON [2] to release the nipping of the sub tray exit roller [3] after a specified period of time since the horizontal conveyance sensor /1 (PS2) detects the leading edge of paper [1]. SD4 turns OFF [5] and the subtray exit roller nips the trailing edge of paper [6] after a specified period of time since PS2 detects the trailing edge of paper [4]. This control is conducted for every paper exited to the sub tray.



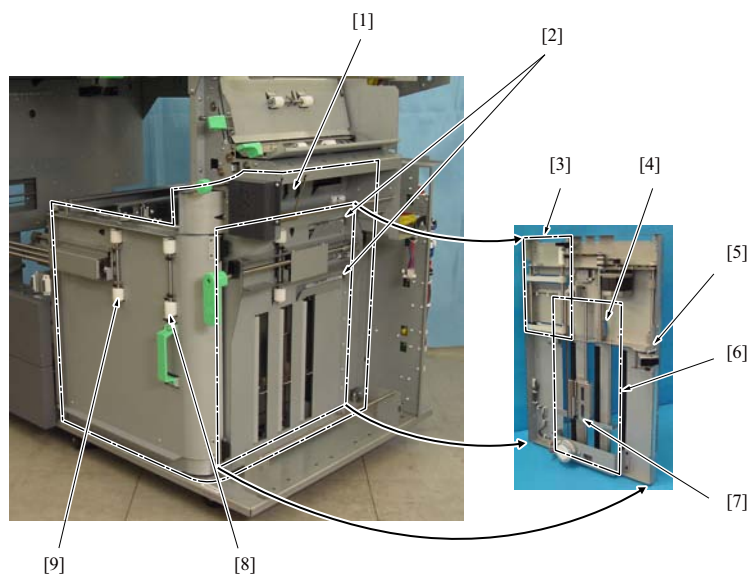
[1] Detection of the leading edge of paper	[2] SD4 ON
[3] Releasing nip	[4] Detection of the trailing edge of paper
[5] SD4 OFF	[6] Nipping the trailing edge of paper

2.3.4 Sub tray paper full detection control

The sub tray paper full sensor (PS12) detects the sub tray paper full via the actuator. PS12 turns ON under normal circumstances. The sub tray paper full condition is detected and the sub tray paper full signal is transmitted to the main body when stacked paper presses the actuator and PS12 turns OFF. Then, the main body displays the message on its operation panel.

3. RIGHT ANGLE CONVEYANCE SECTION

3.1 Configuration

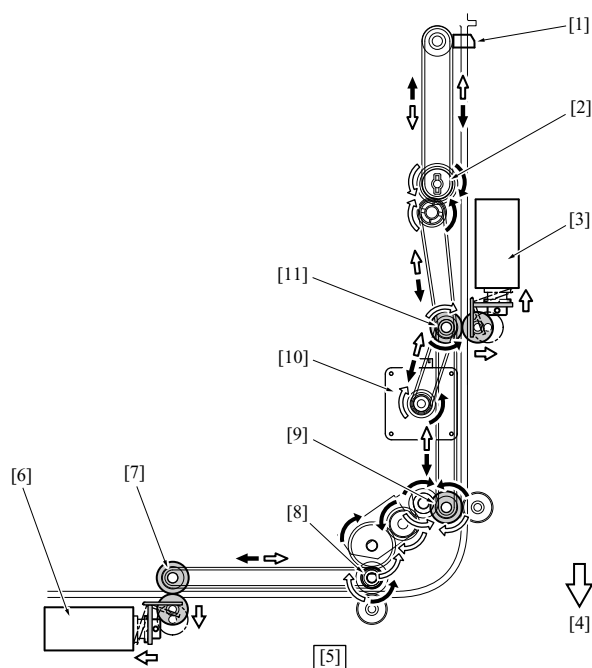


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[1]	Right angle conveyance gate	[2]	Alignment claws
[3]	Alignment section	[4]	Right angle conveyance roller /1
[5]	Right angle conveyance roller /2	[6]	Overlap section
[7]	Overlap stopper	[8]	Right angle conveyance roller /3 (driven)
[9]	Right angle conveyance roller /1 (driven)	-	

3.2 Drive

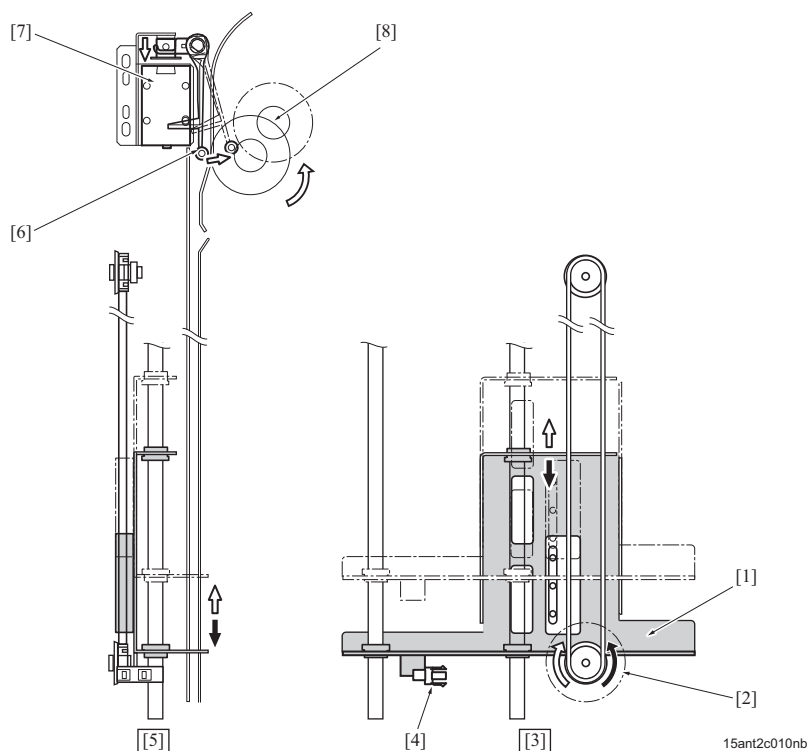
3.2.1 Right angle conveyance drive/alignment drive



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[1]	Alignment claws	[2]	Torque limiter
[3]	Roller release solenoid /1 (SD5)	[4]	Front side direction
[5]	Top side view	[6]	Roller release solenoid /2 (SD6)
[7]	Right angle conveyance roller /4	[8]	Right angle conveyance roller /3
[9]	Right angle conveyance roller /2	[10]	Right angle conveyance motor (M6)
[11]	Right angle conveyance roller /1	-	

3.2.2 Overlap drive



[1]	Overlap stopper	[2]	Overlap motor (M13)
[3]	Right-side view	[4]	Overlap home sensor (PS17)
[5]	Front side view	[6]	Right angle conveyance gate
[7]	Right angle conveyance gate solenoid (SD2)	[8]	Overlap assist roller

3.3 Operation

3.3.1 Paper overlap control

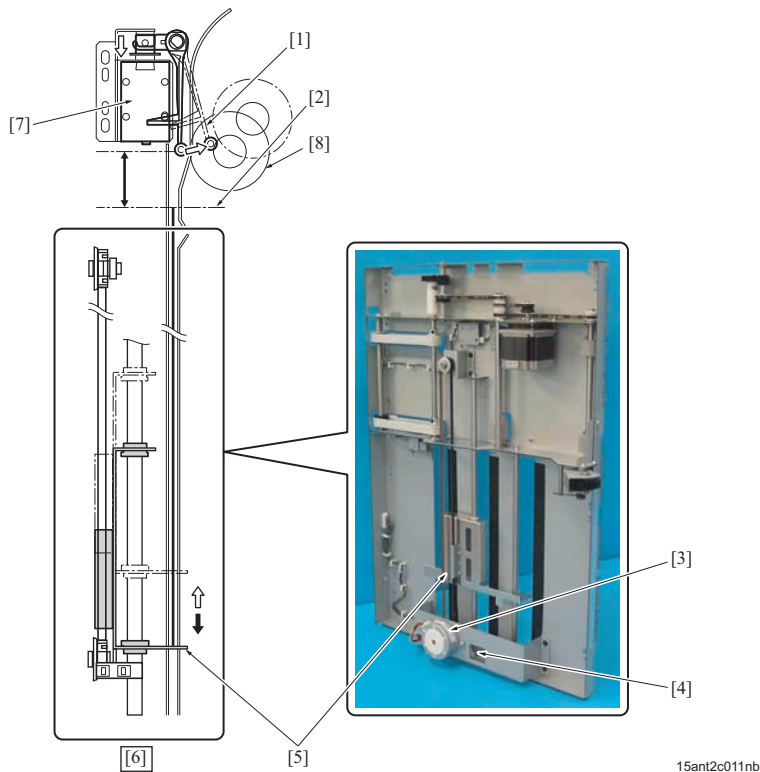
(1) Overlap mechanism

When the folding operation is conducted for more than 1 sheet of paper, they are overlapped in the right angle conveyance section, and then conveyed to the folding section.

The overlap mechanism is the mechanism to overlap the paper in adequate paper conveyance order. The right angle conveyance gate [1] driven by the right angle conveyance gate solenoid (SD2) [7] and the overlap stopper [5] driven by the overlap motor (M13) [3] conduct the operation. The overlap home sensor (PS17) [4] detects the home position of the overlap stopper.

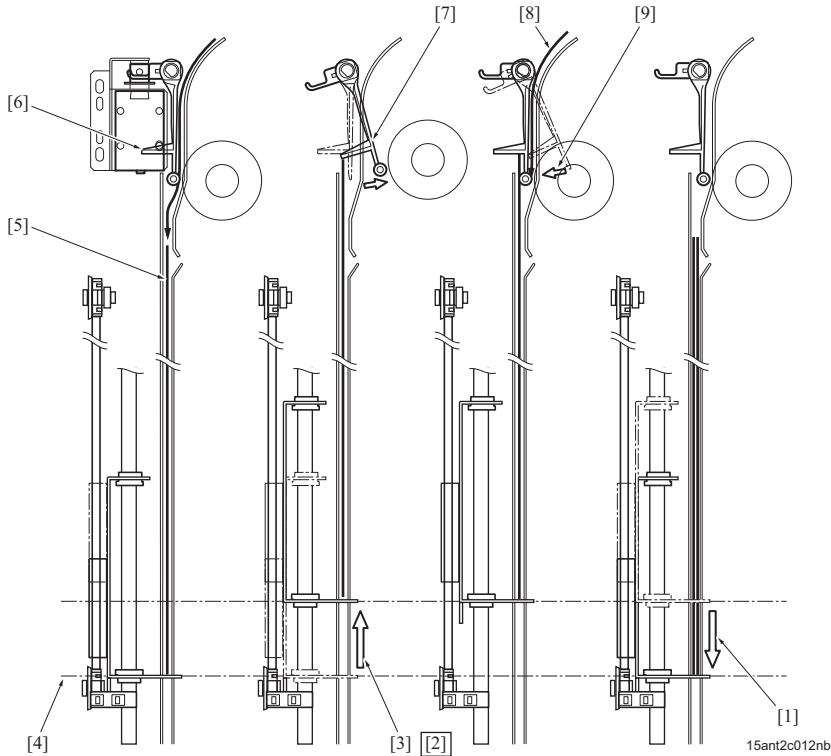
The overlap stopper [5] is positioned at the position where the trailing edge of paper [2] is positioned 20mm under from the right angle conveyance gate [1] in accordance with the paper size when it stands by for the paper.

The paper from the main body is conveyed into between the right-angle conveyance gate [1] and the overlap assist roller [8]. Then the paper is conveyed further by the overlap assist roller [8] driven by the entrance conveyance motor (M1) and stopped by the overlap stopper.



[1]	Right angle conveyance gate	[2]	Position of the trailing edge of paper
[3]	Overlap motor (M13)	[4]	Overlap home sensor (PS17)
[5]	Overlap stopper	[6]	Front side view
[7]	Right angle conveyance gate solenoid (SD2)	[8]	Overlap assist roller

The first stacked sheet of paper [5] is conveyed while the overlap stopper is located at the standby position [4]. Before conveying the second paper, right angle conveyance gate solenoid (SD2) turns ON to move the right angle conveyance gate [6] to the right [7]. At the time, overlap motor (M13) moves the overlap stopper 30mm upward [3]. It transfers the stacked paper to the left-side of the right angle conveyance gate. The right angle conveyance gate is replaced [9] to clear the conveyance path. The subsequent paper [8] passes the right-side of the right angle conveyance gate and the paper is overlapped in adequate order. Then, M13 moves the overlap stopper downward [1]. The same as the second sheet is conducted until all of sheets are stacked.



[1]	Overlap stopper descending 30mm down	[2]	Front side view
[3]	Overlap stopper moving 30mm upward	[4]	Standby position of the overlap stopper
[5]	1st paper	[6]	Right angle conveyance gate

[7] Movement of the right angle conveyance gate	[8] 2nd paper
[9] Replacement of the right angle conveyance gate	-

(2) Overlap control

(a) Overlap tri-folding mode control

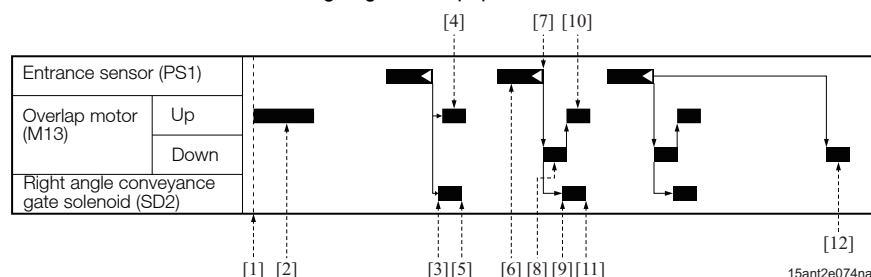
In the overlap tri-folding mode, up to 5 sheets are stacked in the right angle conveyance section and conveyed to the folding section. The overlap tri-folding is available only with paper of 50g/m² to 91g/m² in weight and is unavailable with others.

The overlap motor (M13) turns ON when the main body start signal [1] turns ON and moves the overlap stopper upward to its standby position.

Turning ON the right angle conveyance gate solenoid (SD2) [3] after a specified period of time since the entrance sensor (PS1) detects the trailing edge of the paper, the right angle conveyance gate is switched, M13 moves the paper upward [4], and isolate the paper from the conveyance gate by transferring it to the left-side of the right angle conveyance gate. Turning OFF SD2 [5], the conveyance gate opens and waits for the subsequent paper.

Conveying the subsequent paper through the right-side of the right angle conveyance gate [6] and detecting the trailing edge of paper by the entrance sensor (PS1) [7], M13 descends the overlap stopper down [8]. When the trailing edge of paper passes under the right angle conveyance gate, SD2 turns ON [9] to switch the right angle conveyance gate and M13 moves up the overlap stopper [10] to send the conveyed sheets of paper to the left-side of the right angle conveyance gate. Then, SD2 turns OFF [11] and stands by for the subsequent paper.

The overlap stopper moves down to the standby position and stands by for the 1st paper of the subsequent set [12] after a specified period of time since PS1 detects the trailing edge of last paper of the set.



[1] Main body start signal	[2] Movement to the standby position
[3] Switching the right conveyance gate	[4] Separating paper
[5] Securing conveyance path	[6] Conveyance of the subsequent paper
[7] Trailing edge of the subsequent paper detected	[8] Descent of paper
[9] Switching the right conveyance gate	[10] Separating paper
[11] Securing conveyance path	[12] Movement to the standby position

(b) Center folding/saddle stitching mode control

In the center folding/saddle stitching mode, 1, 2, or 3 sheets of paper are stacked and conveyed to the folding section. The number of the stacked sheets is different depending on its paper weight and the conveyance pattern.

Plain paper (less than 131g/m²): up to 3 sheets are stacked and conveyed to the folding section.

Thick paper (131g/m² or more): due to the limit of the folding performance, up to 2 sheets are stacked and conveyed to the folding section.

- Plain paper

The first 3 sheets of paper of the set are stacked before being conveyed to the folding section. After that, 2 sheets of paper are stacked before being conveyed to the folding section. The number of sheets conveyed together at the last conveyance for that set is one of the followings; 3 sheets (when the total number of sheets is 6 or more even number), 2 sheets (when the total number of sheets is odd) or 1 sheet (when the total number of sheets is 4).

- Thick paper

Up to 2 sheets of paper can be stacked for the thick paper.

For every set, 2 sheets of paper are stacked and conveyed to the folding section at first. Similarly, 2 sheets of paper are stacked and conveyed to the folding section for the subsequent sheets. At the final conveyance, 2 sheets are conveyed (if the total number of the paper is even) or 1 sheet is conveyed (if the number is odd).

- Using PI function

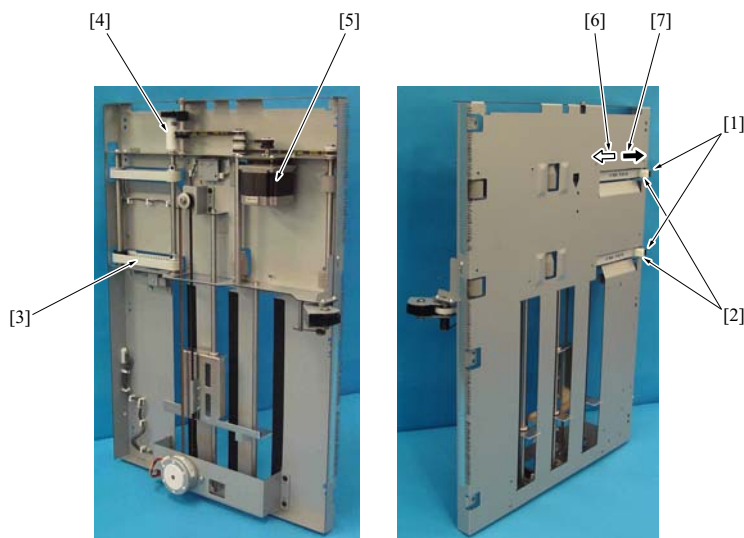
The same as the thick paper control is conducted because the paper type information cannot be obtained in the print job using PI.

3.3.2 Alignment control

(1) Alignment mechanism

The alignment is conducted by driving the alignment claws [2] by the right angle conveyance motor (M6) [5] through the belt [3] and the torque limiter [4].

The alignment claws move to the rear of the shelter direction [7] and stops at the mechanical stoppers [1] through the torque limiter when M6 is rotating toward the paper conveyance direction. Rotating M6 in the reverse direction, the alignment claws push the edge of paper to conduct the alignment [6].



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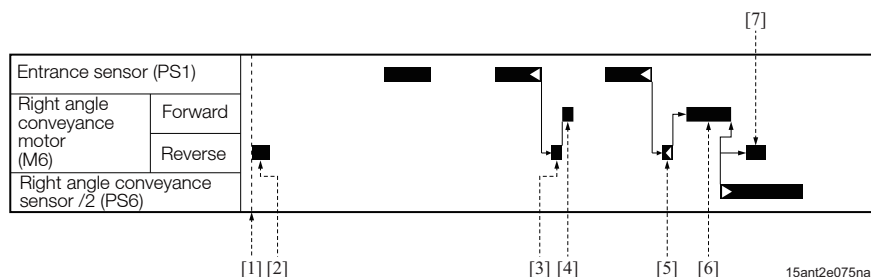
[1]	Mechanical stoppers	[2]	Alignment claws
[3]	Belt	[4]	Torque limiter
[5]	Right angle conveyance motor (M6)	[6]	Aligning direction
[7]	Shelter direction	-	

(2) Alignment control

The right angle conveyance motor (M6) rotates in the reverse direction when the main body start signal [1] turns ON and the alignment claws move to the standby position [2] in accordance with the paper size.

No alignment operation is conducted for the 1st paper. M6 rotates in the reverse direction to align paper with the alignment claws [3] after a specified period of time since the entrance sensor (PS1) detects the trailing edge of 2nd paper. Then, M6 rotates in the forward direction to replace the alignment claws to the standby position [4].

M6 rotates to convey the paper to the folding section [6] and evacuate the alignment claws to the home position after a specified period of time after the alignment operation [5] for the last paper of the set. After a specified period of time after the right angle conveyance sensor /2 (PS6) detects the leading edge of paper, M6 rotates in the reverse direction to move the alignment claws to the standby position [7] for the subsequent copy.



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[1]	Main body start signal	[2]	Standby position movement
[3]	Alignment operation	[4]	Return to the standby position
[5]	Alignment operation	[6]	Paper conveyance to the folding section
[7]	Return to the standby position	-	

3.3.3 Right angle conveyance control

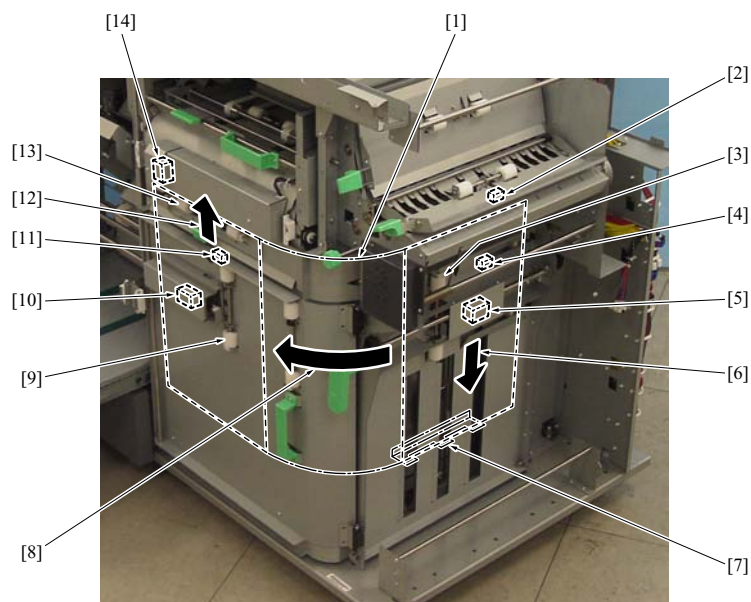
(1) Right angle conveyance mechanism

In the right angle conveyance, the right angle conveyance motor (M6) and the roller release solenoids /1 (SD5) [5] and /2 (SD6) [10] convey the paper.

When conveying the paper to the overlap section, the paper falls vertically [6] to the overlap stopper [7] by its own weight after conveyed by the overlap assist roller. At the time, the press by the right angle conveyance roller /1 [3] is released by default since the conveyance direction is not the rotational direction of the right angle conveyance roller /1 [3] but the axial direction of the right angle conveyance roller /1.

After stacking and aligning the specified number of papers, the roller release solenoid /1 (SD5) [5] turns ON to nip the paper and convey the paper to the position rotated 90 degrees from the right side to the front side [8]. The roller release solenoid /3 (SD7) [14] is OFF to release the pressure of the folding entrance roller by default since the upper edge of the paper [1] passes over the folding entrance roller [13].

When conveying the paper from the right angle conveyance section to the folding section [12], the roller release solenoid /2 (SD6) [10] turns ON to release the pressure of the right angle conveyance roller /4 [9] and convey the paper to the folding section by nipping the paper with the folding entrance roller [13].



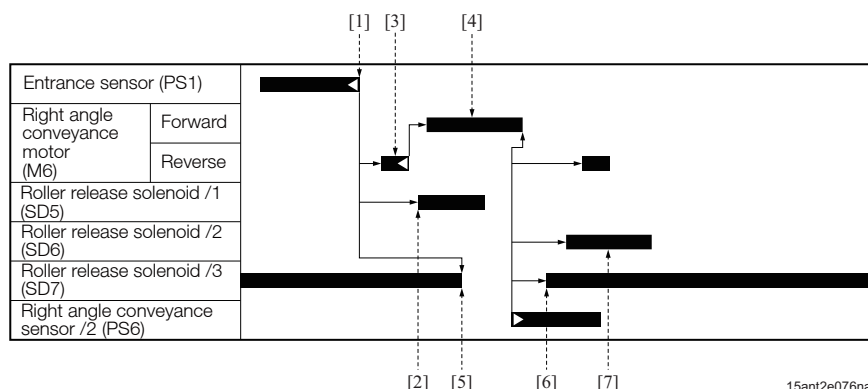
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[1]	Upper edge of the paper path	[2]	Entrance sensor (PS1)
[3]	Right angle conveyance roller /1	[4]	Right angle conveyance sensor /1 (PS5)
[5]	Roller release solenoid /1 (SD5)	[6]	Paper conveyance to the overlap section
[7]	Overlap stopper	[8]	Right angle conveyance
[9]	Right angle conveyance roller /4	[10]	Roller release solenoid /2 (SD6)
[11]	Right angle conveyance sensor /2 (PS6)	[12]	Paper conveyance to the folding section
[13]	Folding entrance roller	[14]	Roller release solenoid /3 (SD7)

(2) Conveyance control

The roller release solenoid /1 (SD5) turns ON to press the right angle conveyance roller /1 [2] after a specified period of time since the entrance sensor (PS1) detects the trailing edge of last paper of the set [1]. After the alignment operation [3], the right angle conveyance motor (M6) rotates in the forward direction to convey the paper to the front side [4] by rotating 90 degrees. At this time, the roller release solenoid (SD7) turns OFF a specified period of time after the entrance sensor (PS1) detects the trailing edge of paper and releases the pressure of the folding entrance roller /1 [5].

A specified period of time after the right angle conveyance sensor /2 (PS6) detects the leading edge of paper, SD7 turns ON to pressure the folding entrance roller /1 and nip [6] the upper section of paper that has been conveyed to the front side. Also, a specified period of time after that, when the roller release solenoid /2 (SD6) turns ON [7] to release the right angle conveyance roller /4 and convey the paper to the folding section.

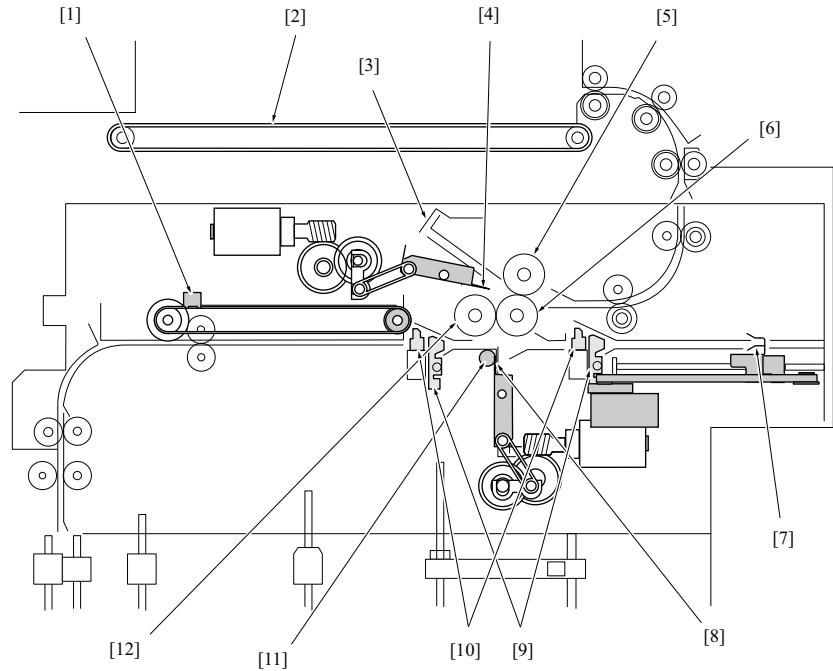


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[1]	Trailing edge of the last paper of the set detected	[2]	Right angle conveyance roller /1 pressure
[3]	Paper alignment	[4]	Paper conveyance
[5]	Folding entrance roller pressure release	[6]	Folding entrance roller pressure
[7]	Right angle conveyance roller /4 pressure release	-	

4. FOLDING SECTION

4.1 Configuration

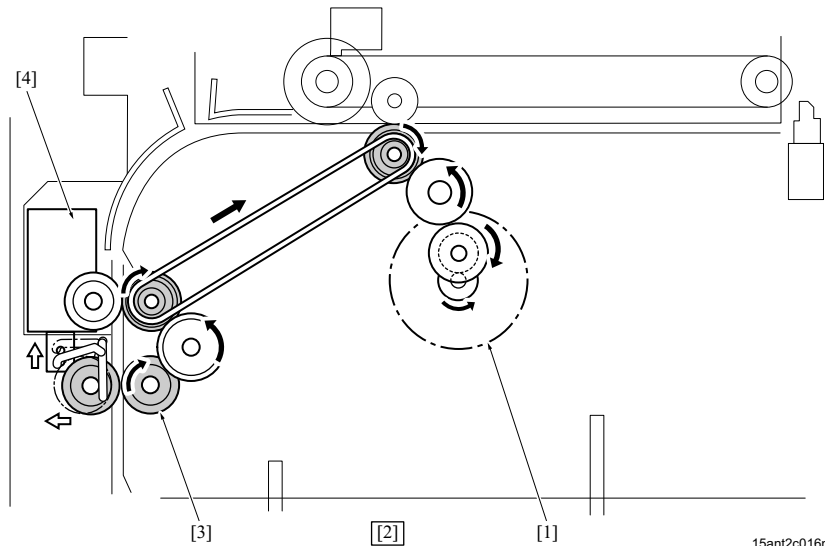


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[1]	Alignment claw /Fr (main scan)	[2]	Conveyance belt (tri-folding)
[3]	2nd folding stopper	[4]	2nd folding blade
[5]	Folding roller /3	[6]	Folding roller /2
[7]	Alignment stopper /Rr (main scan)	[8]	1st folding blade
[9]	Folding alignment stopper /Rt (sub scan)	[10]	Folding exit claws (same as for sub scan alignment)
[11]	Guide shaft (folding exit)	[12]	Folding roller /1

4.2 Drive

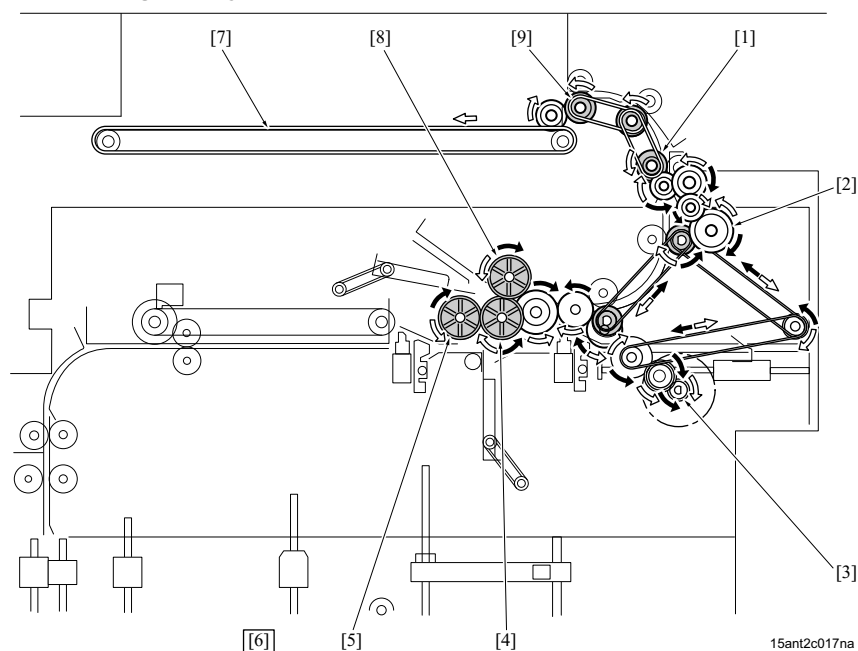
4.2.1 Folding entrance drive



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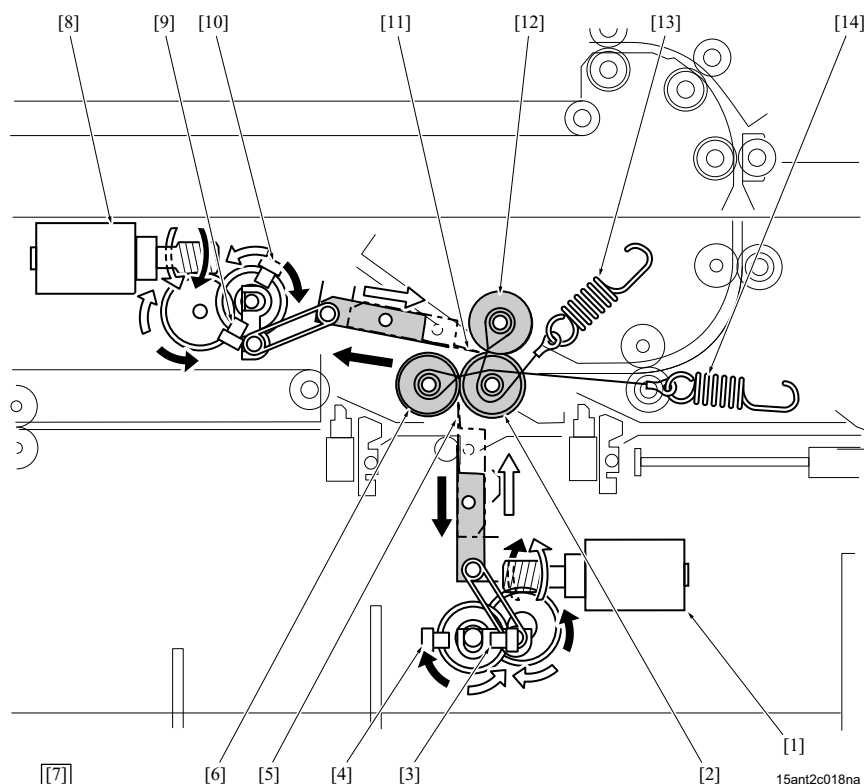
[1]	Folding entrance motor (M3)	[2]	Right-side view
[3]	Folding entrance roller /1	[4]	Roller release solenoid /3 (SD7)

4.2.2 Folding conveyance drive



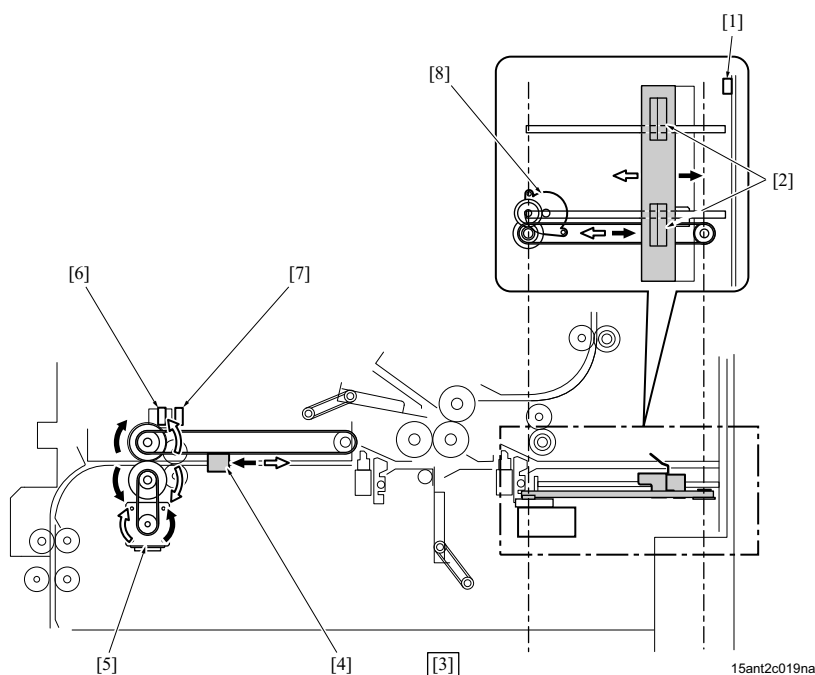
[1]	One-way clutch	[2]	Oscillation connecting gear
[3]	Folding transfer motor (M4)	[4]	Folding roller /2
[5]	Folding roller /1	[6]	Right-side view
[7]	Paper exit belt	[8]	Folding roller /3
[9]	Tri-folding exit clutch (CL1)	-	

4.2.3 Folding blade drive



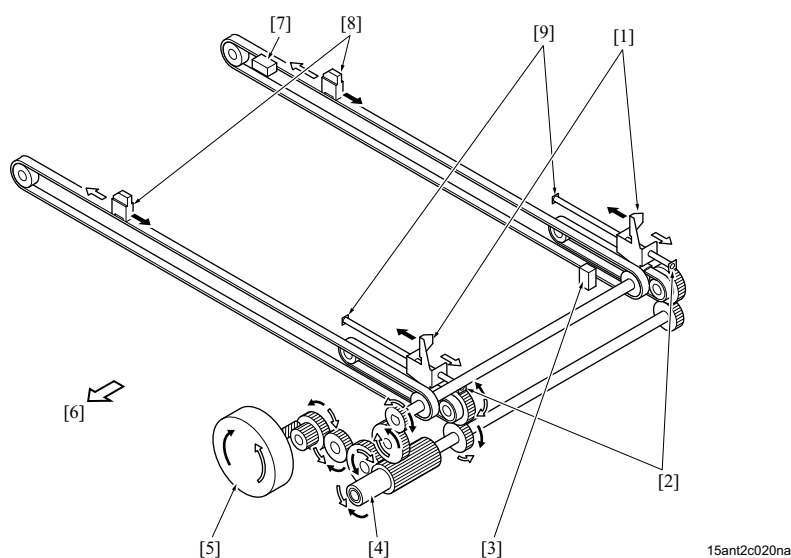
[1]	1st folding blade motor (M18)	[2]	Folding roller /2
[3]	1st folding blade home sensor /2 (PS21)	[4]	1st folding blade home sensor /1 (PS20)
[5]	1st folding blade	[6]	Folding roller /1
[7]	Right-side view	[8]	2nd folding blade motor (M19)
[9]	2nd folding blade home sensor /2 (PS23)	[10]	2nd folding blade home sensor /1 (PS22)
[11]	2nd folding blade	[12]	Folding roller /3
[13]	Spring (Connect folding rollers /2 and /3)	[14]	Spring (Connect folding rollers /1 and /2)

4.2.4 Folding main scan alignment drive



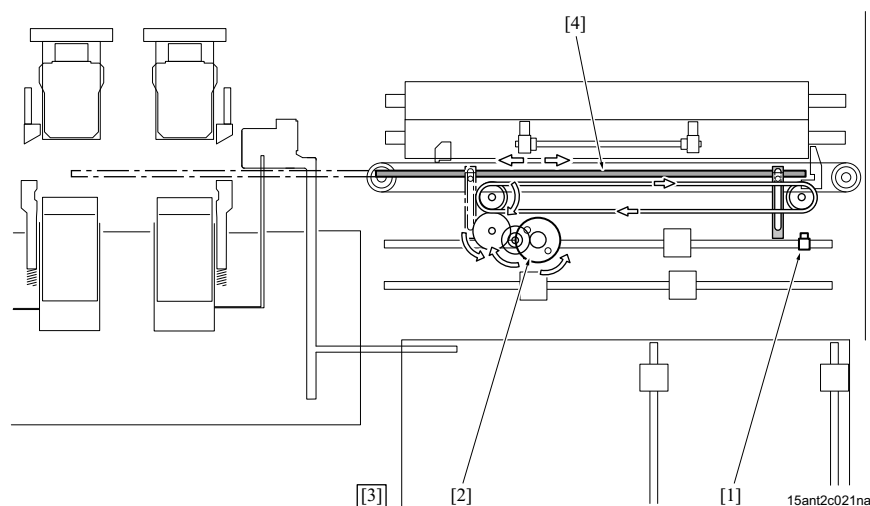
[1]	Folding main scan alignment home sensor /Rr (PS19)	[2]	Alignment stopper /Rr
[3]	Right-side view	[4]	Alignment claw /Fr
[5]	Folding main scan alignment motor /Fr (M7)	[6]	Folding main scan alignment home sensor /Fr1 (PS18)
[7]	Folding main scan alignment home sensor /Fr2 (PS49)	[8]	Folding main scan alignment motor /Rr (M14)

4.2.5 Folding sub scan alignment/center folding exit drive



[1]	Folding alignment stoppers /Rt	[2]	Home position stoppers /Rt
[3]	Folding exit home sensor (PS24)	[4]	Torque limiter
[5]	Folding sub scan alignment exit motor (M8)	[6]	Front side direction
[7]	Folding sub scan alignment home sensor (PS56)	[8]	Folding exit claws
[9]	Alignment stoppers /Lt	-	

4.2.6 Guide shaft drive



[1]	Guide shaft home sensor (PS46)	[2]	Guide shaft motor (M25)
[3]	Front side view	[4]	Guide shaft

4.3 Operation

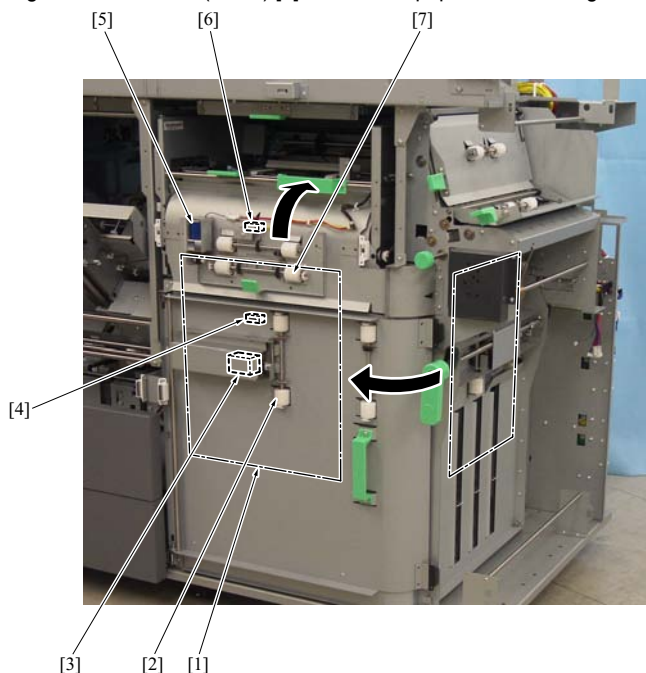
4.3.1 Folding entrance conveyance control

(1) Mechanism

The folding entrance motor (M3) and the roller release solenoid /3 (SD7) [5] conduct the folding entrance conveyance operation.

The paper [1] conveyed from the right angle conveyance section is conveyed to the folding entrance with the pressure of the folding entrance roller /1 [7] released. Once the right angle conveyance is completed, SD7 [5] turns ON to pressure the nipping of the folding entrance roller /1 and the roller release solenoid /2 (SD6) [3] turns ON to release the right angle conveyance roller /4, M3 convey the paper to the folding section.

The folding entrance sensor (PS60) [6] detects the paper at the folding entrance.



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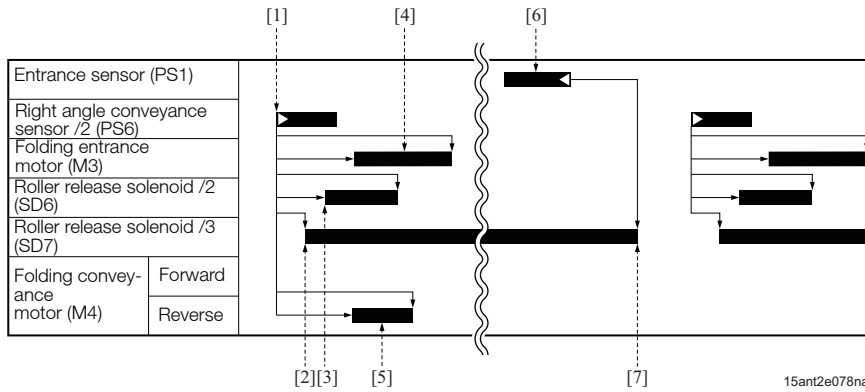
[1]	Paper	[2]	Right angle conveyance roller /4
[3]	Roller release solenoid /2 (SD6)	[4]	Right angle conveyance sensor /2 (PS6)
[5]	Roller release solenoid /3 (SD7)	[6]	Folding entrance sensor (PS60)
[7]	Folding entrance roller /1	-	

(2) Control

The roller release solenoid /3 (SD7) turns ON to nip the paper with the folding entrance roller [2] after a specified period of time since the right angle conveyance sensor /2 (PS6) detects the leading edge of paper [1], and then the roller release solenoid /2 (SD6) turns ON to release the nip of the right angle conveyance roller /4 after a specified period of time. Then the folding entrance motor (M3) turns ON and conveys the paper to the folding section [4].

At the time, the folding transfer motor (M4) rotates in the reverse direction [5] to prevent the paper from being caught between the folding rollers /1 and /2.

SD7 turns OFF to release the pressure of the folding entrance roller [7] after a specified period of time since the entrance sensor (PS1) detects the trailing edge of last paper of the subsequent set [6] and it stands by for the paper of the subsequent set being conveyed to the front side of the right angle conveyance section.



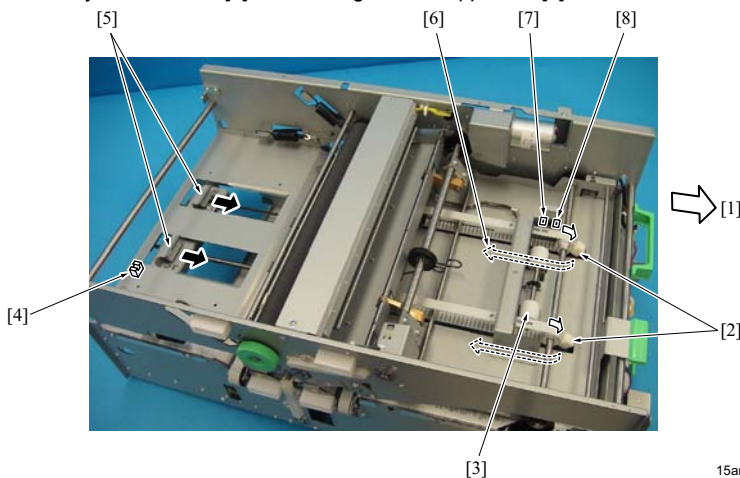
[1]	Last paper of the 1st set	[2]	Folding entrance roller nipped
[3]	Nip of the right angle conveyance roller /4 released	[4]	Folding entrance conveyance
[5]	Caught-protection to the folding section	[6]	Last paper of the subsequent set
[7]	Nip of the folding entrance roller released	-	

4.3.2 Folding main scan alignment control

(1) Mechanism

In the folding main scan alignment, the alignment stoppers /Rr [5] driven by the folding main scan alignment motor /Rr (M14) stop at the appropriate position in accordance with the paper size, and then the alignment claws /Fr [2] driven by the folding main scan alignment motor /Fr (M7) conduct the alignment operation. The folding main scan alignment home sensors /Fr1 (PS18) [8] and /Fr2 (PS49) [7] detect the home position of the alignment claws /Fr and the folding main scan alignment home sensor /Rr (PS19) [4] detects the home position of the alignment stopper /Rr.

The alignment claws /Fr [2] convey [6] the paper by pushing its trailing edge once the paper passes through the folding entrance roller /3 [3] and until the leading edge of paper contacts with the alignment stopper /Rr because there is no conveyance roller between the folding entrance conveyance roller /3 [3] and the alignment stopper /Rr [5].



[1]	Front side direction	[2]	Alignment claw /Fr
[3]	Folding entrance roller /3	[4]	Folding main scan alignment home sensor /Rr (PS19)
[5]	Alignment stopper /Rr	[6]	Paper conveyance
[7]	Folding main scan alignment home sensor /Fr2 (PS49)	[8]	Folding main scan alignment home sensor /Fr1 (PS18)

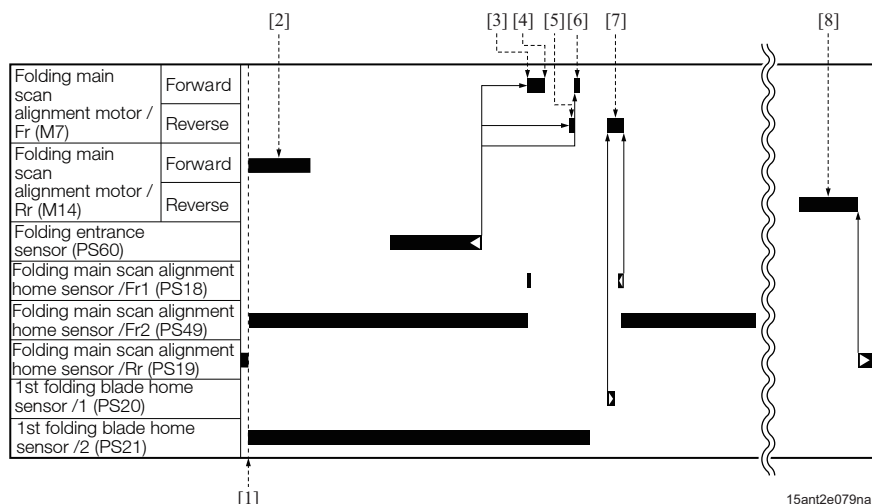
(2) Control

The folding main scan alignment motor /Rr (M14) drives the alignment stoppers /Rr to the appropriate position in accordance with the paper size [2] when the main body start signal [1] turns ON.

The folding main scan alignment motor /Fr (M7) rotates in the forward direction [3] to let the alignment claws /Fr push the trailing edge of paper for conveyance after a specified period of time since the folding entrance sensor (PS60) detects the trailing edge of paper, and then M7 stops after a specified period of time [4]. The alignment stoppers /Rr push the leading edge of paper to conduct the alignment. M7 rotates in the reverse direction [5], and after a specified period of time it rotates in the forward direction to conduct the alignment again [6].

M7 rotates in the reverse direction to replace the alignment claws to the home position [7] when the 1st folding blade home sensor /1 (PS20) detects the completion of the folding operation. M7 starts rotating to replace the alignment claws to the home position for subsequent set when PS21 detects the completion of the folding operation since the 1st folding blade conducts the reciprocal operation in which the 1st folding blade home sensor /1 (PS20) and the 1st folding blade home sensor /2 (PS21) counter changes their positions at each folding operation. M7 stops rotating when the folding main scan alignment home sensor /Fr1 (PS18) detects the home position of the alignment claw /Fr.

Transmitting the print termination signal from SD, M14 rotates to move the alignment stoppers to the home position [8]. It stops rotating when the folding main scan alignment home sensor /Rr (PS19) detects the home position of the alignment stoppers.



4.3.3 Folding control

(1) Mechanism

Folding has the 1st folding and 2nd folding.

The 1st folding is conducted in the overlap tri-folding mode, the overlap tri-folding mode, and the saddle stitching mode.

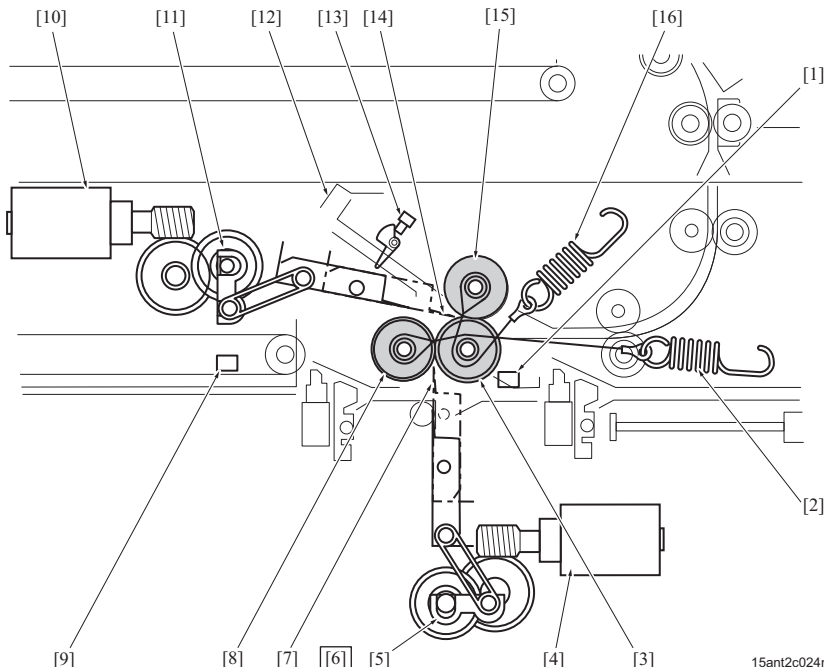
In the 1st folding operation, the 1st folding blade [7] pushes and inserts the paper between the folding rollers /1 [8] and /2 [3].

The folding rollers /1 and /2 are pressured each other by the spring [2]. The 1st blade motor (M18) [4] drives the 1st folding blade via the crank mechanism [5].

In the 2nd folding operation, as well, the 2nd folding blade [14] pushes and inserts the paper between the folding rollers /2 [3] and /3 [15]. The 2nd folding operation has an adjustable stopper [12] which defines the fold from the 1st folding and accurizes the 2nd folding position.

The folding rollers /2 and /3 are pressured each other by the spring [16]. The 2nd blade motor (M19) [10] drives the 2nd folding blade via the crank mechanism [11].

The folding sensors /2 (PS44) [9], /1 (PS7) [1], and the folding passage sensor (PS8) [13] detect paper.



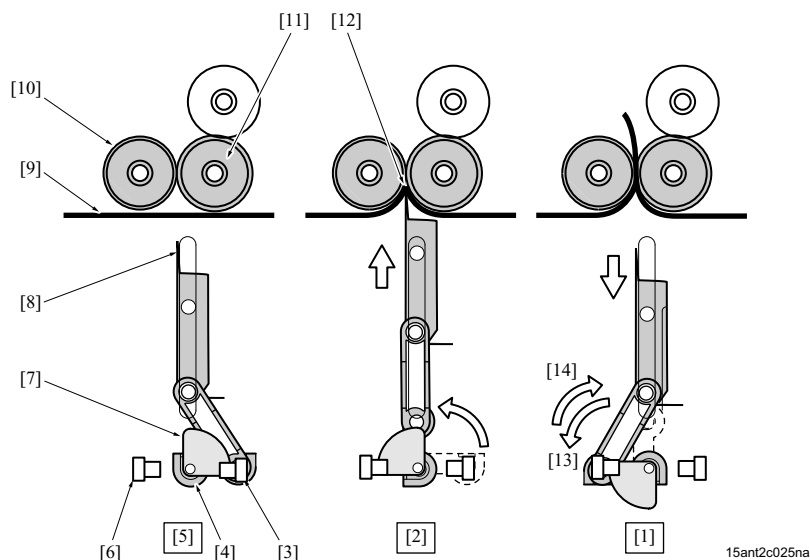
(2) Tri-folding control

(a) Operation

After the initial operation, the 1st folding blade [8] is at the standby position /1 [5]. In the actuator [7], the 1st folding blade home sensor /2 (PS21) [3] turns ON and the 1st folding blade home sensor /1 (PS20) [6] turns OFF. When paper [9] is conveyed to the folding section and the 1st folding blade motor (M18) is rotated [2], the crank [4] rotates 90 degrees to project the 1st folding blade to the paper and push the paper [12] between the folding roller /1 [10] and /2 [11] with its edge. At the time, the actuator also rotates 90 degrees so that PS21 [3] turns OFF and PS20 [6] turns ON.

M18 keeps rotating in the same direction [13], and then the crank [4] stops when it reaches at the standby position /2 [1] (PS20 turns OFF) where is 180 degrees opposite from the standby position /1. In the 1st folding operation for the subsequent set, M18 rotates in the reverse direction [14] and the crank [4] also rotates 180 degrees in the reverse direction to conduct the 1st folding operation.

The 2nd folding operation is operated as in the 1st folding operation.



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[1]	Standby position /2	[2]	Projecting position
[3]	1st folding blade home sensor /2 (PS21)	[4]	Crank
[5]	Standby position /1	[6]	1st folding blade home sensor /1 (PS20)
[7]	Actuator	[8]	1st folding blade
[9]	Paper	[10]	Folding roller /1
[11]	Folding roller /2	[12]	Insert paper
[13]	Rotational direction to the standby position /2	[14]	1st folding for the subsequent set

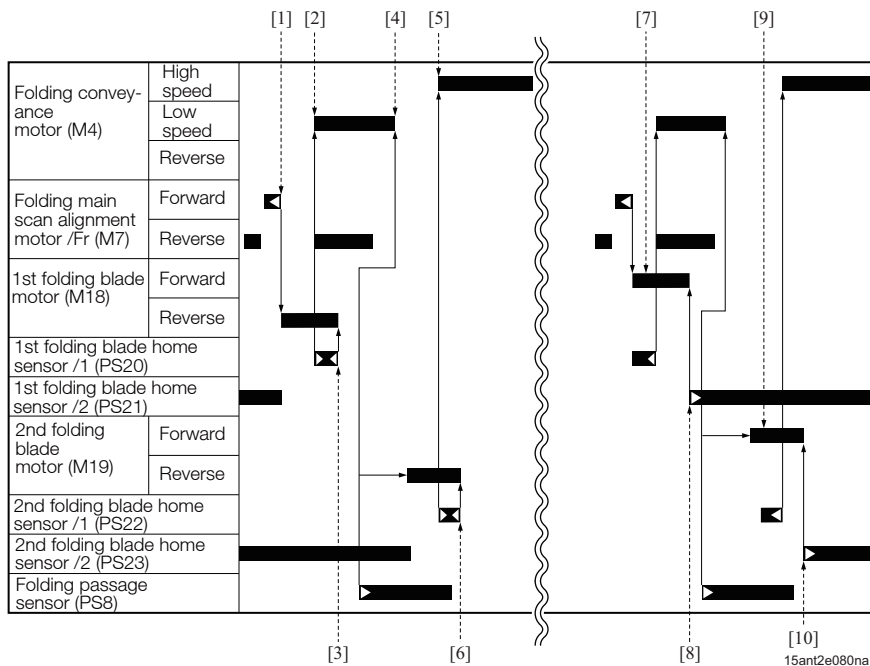
(b) Control

When the folding main scan alignment motor /Fr (M7) stops rotating at the completion of the paper alignment operation, the 1st folding blade motor (M18) turns ON and starts rotating in the reverse direction [1]. The 1st folding blade folds and inserts the paper between the folding rollers /1 and /2. When the 1st folding blade home sensor /1 (PS20) turns ON, the folding transfer motor (M4) turns ON [2] to conduct the 1st folding. M18 stops when PS20 turns OFF [3]. Then, M4 turns OFF and the 1st folding operation is completed [4] after a specified period of time since the folding passage sensor (PS8) detects the leading edge of paper.

After a specified period of time since PS8 turns ON, the 2nd folding blade motor (M19) turns ON and rotates in the reverse direction to start the 2nd folding operation.

When the 2nd folding blade home sensor /1 (PS22) turns ON, M4 rotates [5] in high speed to perform the 2nd folding, and then the tri-folded paper is conveyed to the tri-folding exit. M19 stops when PS22 turns OFF [6].

The 1st folding operation for the subsequent set, M18 rotates in the forward direction to conduct the 1st folding [7] and stops rotating [8] when the 1st folding blade home sensor /2 (PS21) turns ON. In the 2nd folding operation, M19 rotates in the forward direction to conduct the 2nd folding [9] and stops rotating when the 2nd folding blade home sensor /2 (PS23) turns ON [10].

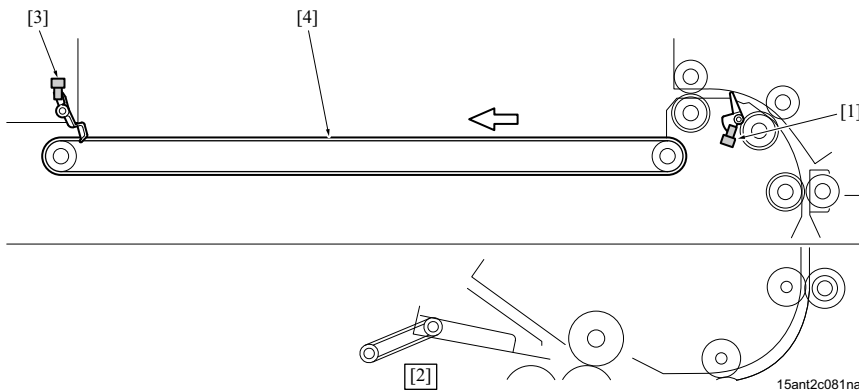


[1] Paper alignment operation completed	[2] 1st folding
[3] 1st folding blade motor (M18) stopped	[4] 1st folding completed
[5] 2nd folding	[6] 2nd folding blade motor (M19) stopped
[7] 1st folding by M18 rotating the forward direction	[8] M18 stopped
[9] 2nd folding by M19 rotating the forward direction	[10] M19 stopped

(3) Tri-folding exit control

(a) Operation

In the multi-letter folding exit, the driving force of the folding transfer motor (M4) is transmitted via the tri-folding exit clutch (CL1). CL1 turns ON and the exit belt [4] is driven approximately 7mm to convey the paper to the front side for every paper exit. The tri-folding paper full sensor (PS10) [3] detects the paper when it is reached at the front, and then the main body displays the message on the operation panel.

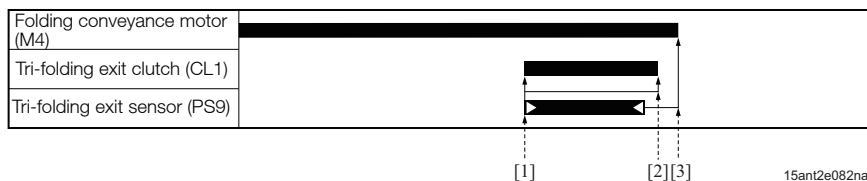


[1] Tri-folding exit sensor (PS9)	[2] Right-side view
[3] Tri-folding paper full sensor (PS10)	[4] Paper exit belt

(b) Control

The tri-folding exit clutch (CL1) turns ON and drives the exit belt [1] and stops it [2] after a specified period of time when the tri-folding exit sensor (PS9) detects the leading edge of paper.

The folding transfer motor (M4) stops [3] after a specified period of time since PS9 detects the trailing edge of paper.

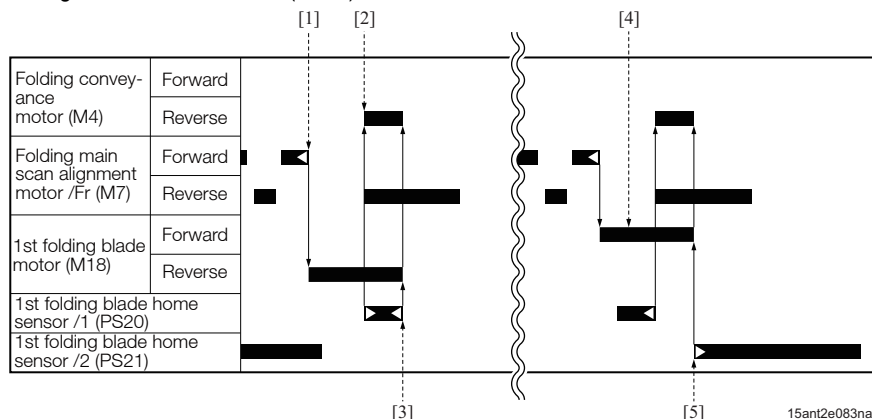


[1] Exit belt drive	[2] Exit belt stop
[3] Folding transfer motor (M4) stopped	-

(4) Center folding control

When the folding main scan alignment motor /Fr (M7) stops at the completion of the paper alignment operation, the 1st folding blade motor (M18) turns ON and rotates in the reverse direction [1] to let the 1st folding blade insert the paper between the folding rollers /1 and /2. When the 1st folding blade home sensor /1 (PS20) turns ON, the folding transfer motor (M4) rotates in the reverse direction [2] to rotate the folding rollers /1 and /2 in the reverse direction to release the paper. When PS20 turns OFF, M18 and M4 stop rotating [3].

The folding operation for the subsequent set, M18 rotates in the forward direction to conduct the folding [4] and stops rotating [8] when the 1st folding blade home sensor /2 (PS21) turns ON.



[1]	1st folding blade is projected with the paper	[2]	Folding transfer motor (M18) rotating the reverse direction
[3]	M18 and M4 stopped	[4]	M18 rotating the forward direction
[5]	M18 stopped	-	

4.3.4 Folding sub scan alignment control

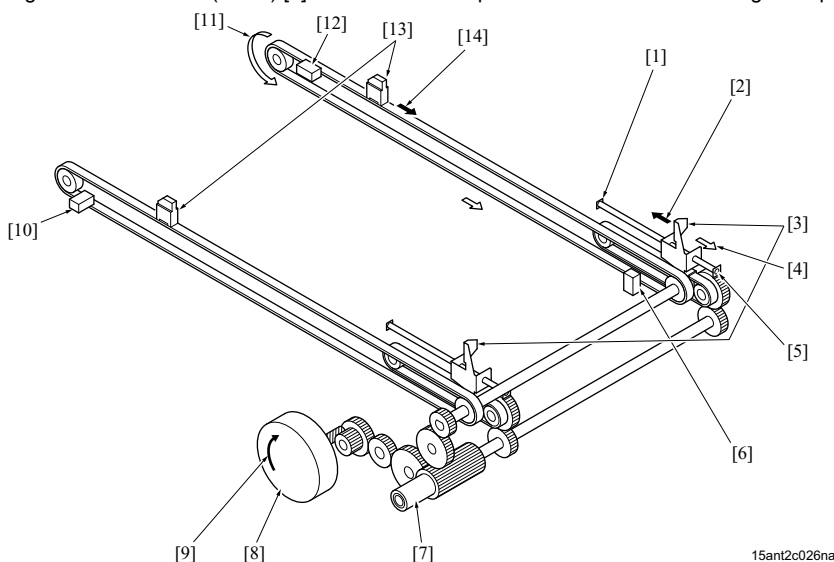
(1) Mechanism

The folding sub scan alignment operation is conducted in the multi letter folding mode and is conducted with the folding exit claws [13] and the folding alignment stoppers /Rt [3] driven by the folding sub scan alignment exit motor (M8) [8].

The folding exit claws move to the right [14] and the folding alignment stoppers /Rt move to the left [2] when M8 rotates in the reverse direction [9]. The folding alignment stoppers /Rt are contacted with the alignment stopper [1] and stopped by the torque limiter [7]. The folding exit claws move to the positions for the paper width of A4S or 8 1/2 x 11S and conduct the folding sub scan alignment operation, and then the folding is conducted.

In the multi center folding mode and the saddle stitching mode, M8 rotates in the forward direction to move the folding exit claws to the left [11] after the folding operation. Once the folding exit claws make a round, they conduct the paper exit operation to the saddle stitching section. At the time, the folding alignment stoppers /Rt moving to the right [4] are contacted with the alignment stopper [5] and stopped by the torque limiter [7].

The folding sub scan alignment home sensor (PS56) [12] detects the home position of the folding exit claws in the alignment operation. The folding exit home sensor (PS24) [6] detects the initial position and the center folding exit operation.

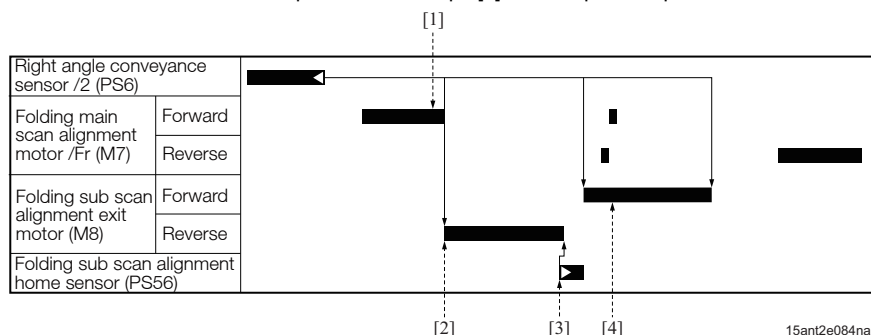


[1]	Alignment stopper	[2]	Alignment direction (Left)
[3]	Folding alignment stoppers /Rt	[4]	Movement in the center folding exit operation (Right)
[5]	Home position stopper	[6]	Folding exit home sensor (PS24)
[7]	Torque limiter	[8]	Folding sub scan alignment exit motor (M8)
[9]	M8 rotated in the reverse direction	[10]	Folding sensor /2 (PS44)
[11]	Direction at the center folding exit operation	[12]	Folding sub scan alignment home sensor (PS56)
[13]	Folding exit claws	[14]	Alignment direction (Right)

(2) Folding sub scan alignment control

The folding sub scan alignment exit motor (M8) rotates in the reverse direction to conduct the alignment operation in the sub scan direction [2] after a specified period of time since the right angle conveyance sensor /2 (PS6) detects the trailing edge of paper and the alignment operation in the main scan direction is conducted [1]. When the folding sub scan alignment home sensor (PS56) detects the folding exit claws, M8 conducts the alignment by pressing the side of the paper, and then it stops [3]

The M8 conducts the shelter operation and stops [4] after a specified period of time since PS6 detects the trailing edge of paper.



[1]	Alignment operation in the main scan direction	[2]	Alignment operation in the sub scan direction
[3]	M8 stopped	[4]	Shelter operation

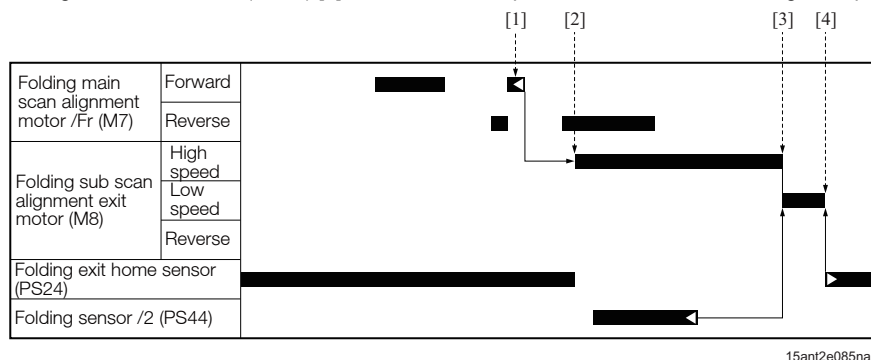
(3) Center folding exit operation

The folding sub scan alignment operation is conducted in the multi-letter folding mode and is conducted with the folding exit claws [13] and the folding alignment stoppers /Rt [3] driven by the folding sub scan alignment exit motor (M8) [8].

The folding exit claws move to the right [14] and the folding alignment stoppers /Rt move to the left [2] when M8 rotates in the reverse direction [9]. The folding alignment stoppers /Rt are contacted with the alignment stopper [1] and stopped by the torque limiter [7]. The folding exit claws move to the positions for the paper width of A4S or 8 1/2 x 11S and conduct the folding sub scan alignment operation, and then the folding is conducted.

In the multi-center folding mode and the saddle stitching mode, M8 rotates in the forward direction to move the folding exit claws to the left [11] after the folding operation. Once the folding exit claws make a round, they conduct the paper exit operation to the saddle stitching section. At the time, the folding alignment stoppers /Rt moving to the right [4] are contacted with the alignment stopper [5] and stopped by the torque limiter [7].

The folding sub scan alignment home sensor (PS56) [12] detects the home position of the folding exit claws in the alignment operation. The folding exit home sensor (PS24) [6] detects the initial position and the center folding exit operation.



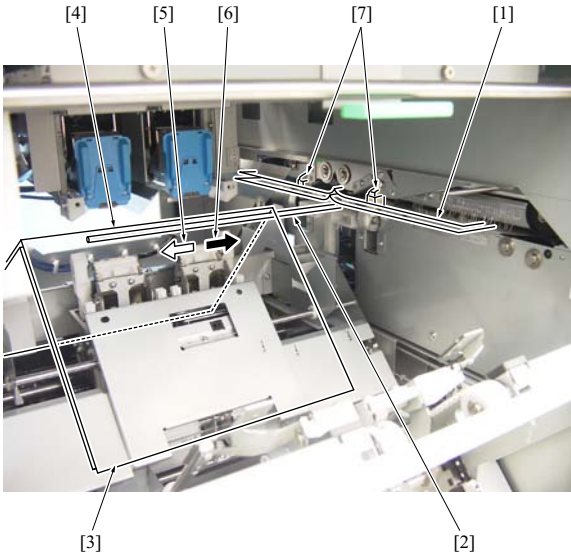
[1]	Realignment operation in the main scan direction	[2]	Paper exit operation started
[3]	Switched to the low speed	[4]	Stopped at home position

4.3.5 Guide shaft control

(1) Mechanism

The guide shaft [2] holds the fold line [4] from the bottom and makes certain of the stack [3] in the saddle stitching section when the folding exit claws [7] exit the folded paper [1] to the saddle stitching section.

The guide shaft is projected [5] in sync with the paper exit only when the first folded paper for each set is exited and put away immediately to the folding section [6]. In the subsequent paper exit, the guide shaft does not operate because the paper [3] stacked in the saddle stitching section works as the guide.

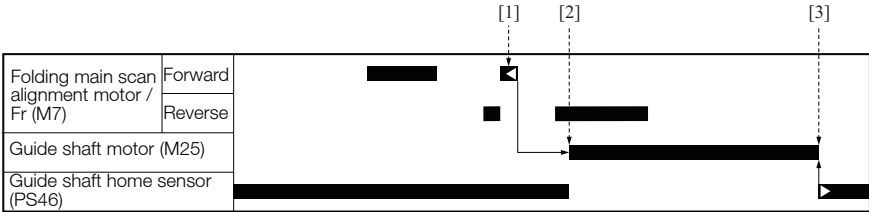


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[1]	Folded paper	[2]	Guide shaft
[3]	Stacked paper	[4]	Fold line
[5]	Projection direction of the guide shaft	[6]	Storage direction of the guide shaft
[7]	Folding exit claws	-	

(2) Guide shaft control

The guide shaft motor (M25) turns ON [2] and the guide shaft is projected after a specified period of time since the folding main scan alignment motor /Fr (M7) completes the realignment operation in the main scan direction [1] (after the center folding operation). The guide shaft conducting the back and forth operation by the belt rotation stops when the guide shaft home sensor (PS46) turns ON [3].



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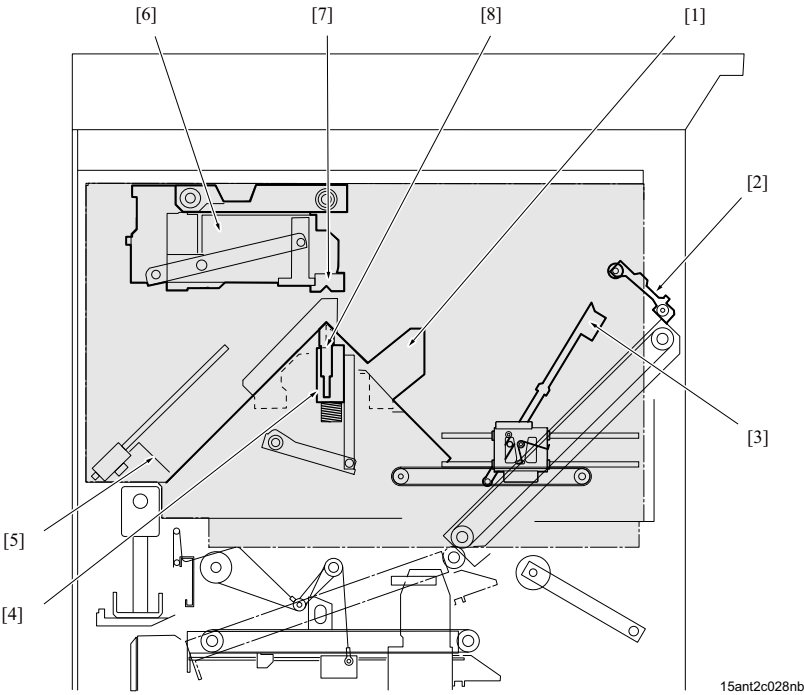
[1]	Realignment operation in the main scan direction	[2]	Guide shaft projecting started
[3]	Guide shaft motor (M25) stopped	-	

(3) Folding unit lock control

During the print operation, the folding unit lock solenoid (SD8) locks the folding unit to prevent the guide shaft or the folding exit claws from damage due to pulling out the folding unit by mistake. When the paper gets jammed, the positions of the guide shaft and the folding exit claws are monitored. SD8 turns OFF and releases the lock only when both the folding exit home sensor (PS24) and the guide shaft home sensor (PS46) detect the home position.

5. SADDLE STITCHING SECTION

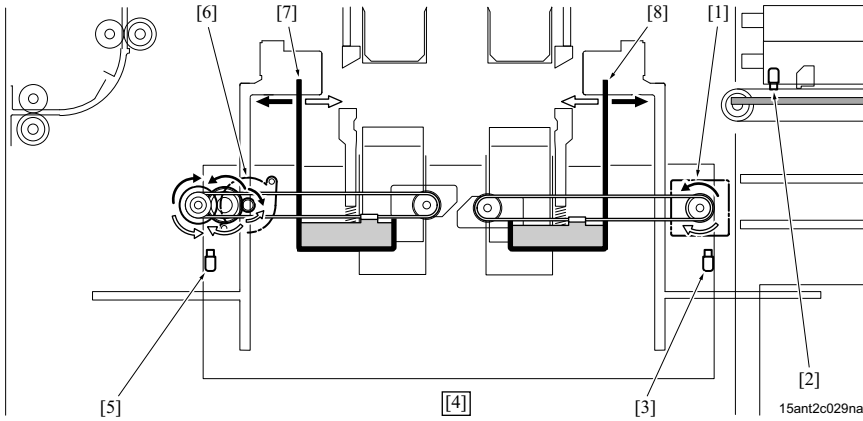
5.1 Configuration



[1]	Saddle stitching alignment plate	[2]	Clip
[3]	Bundle arm	[4]	Clincher
[5]	Bundle arm assist plate	[6]	Stapler
[7]	Saddle stitching hold /Up	[8]	Saddle stitching hold /Lw

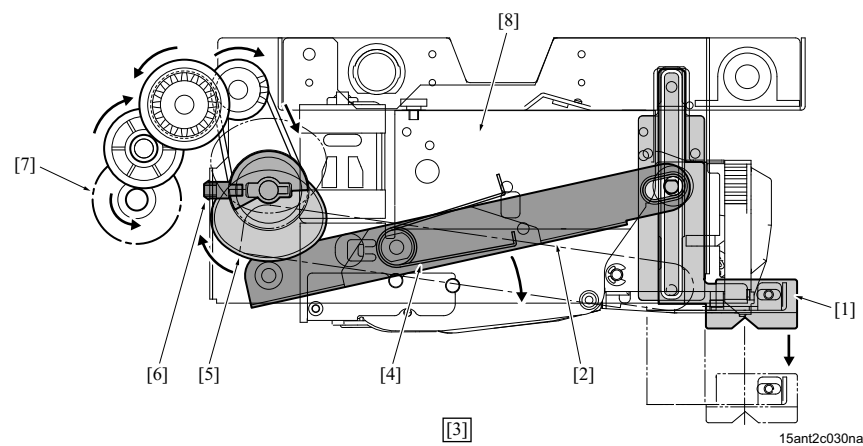
5.2 Drive

5.2.1 Saddle stitching alignment drive



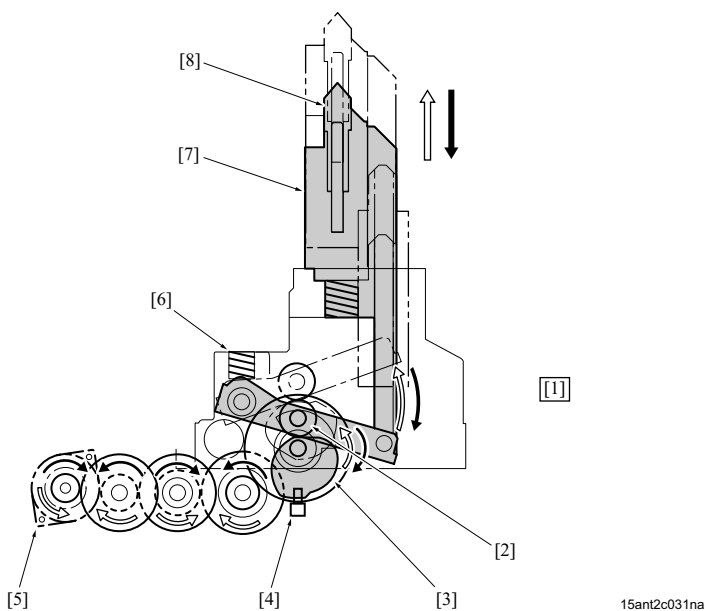
[1]	Saddle stitching alignment motor /Rt (M9)	[2]	Folding sensor /2 (PS44)
[3]	Saddle stitching alignment home sensor /Rt (PS28)	[4]	Front side view
[5]	Saddle stitching alignment home sensor /Lt (PS29)	[6]	Saddle stitching alignment motor /Lt (M16)
[7]	Saddle stitching alignment plate /Lt	[8]	Saddle stitching alignment plate /Rt

5.2.2 Saddle stitching hold drive



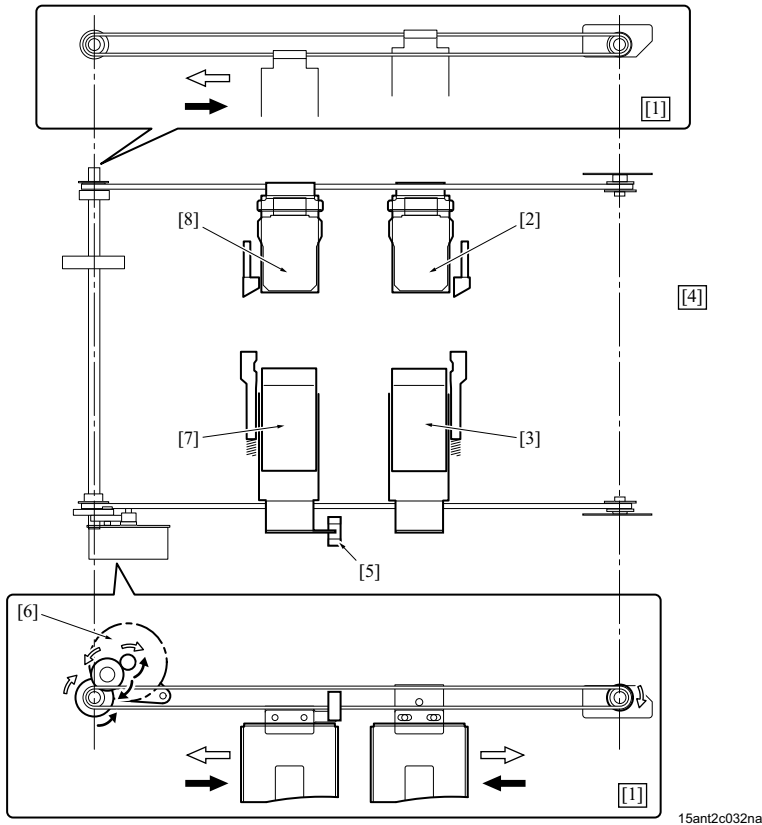
[1]	Saddle stitching hold /Up	[2]	Arm
[3]	Left-side view	[4]	Spring
[5]	Eccentric cam	[6]	Saddle stitching hold home sensor (PS27)
[7]	Saddle stitching press motor (M21)	[8]	Stapler

5.2.3 Clincher up down drive



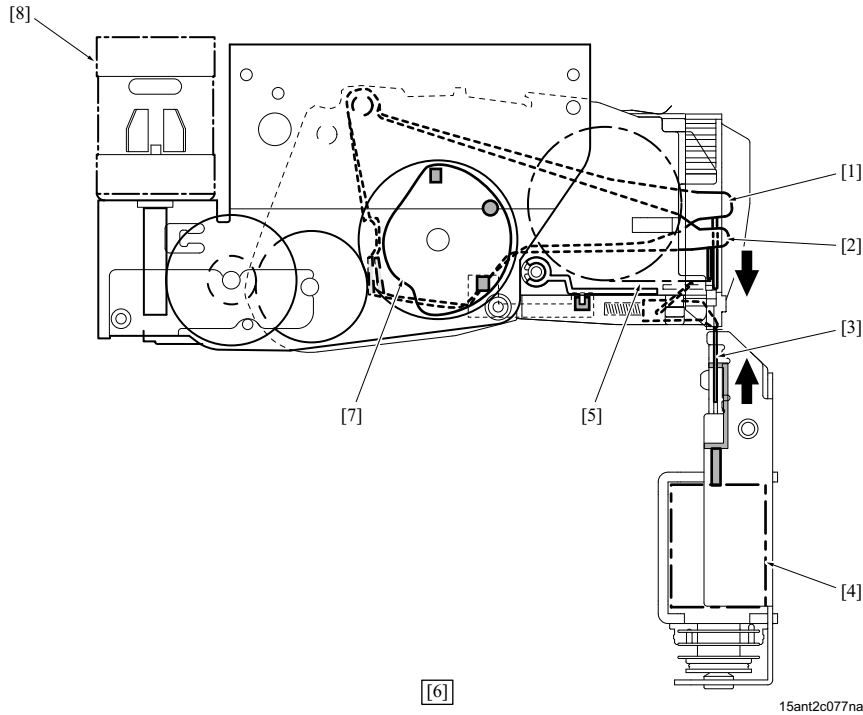
[1]	Left-side view	[2]	Roller
[3]	Eccentric cam	[4]	Clincher up down home sensor (PS26)
[5]	Clincher up down motor (M20)	[6]	Spring
[7]	Clincher /Rt, /Lt	[8]	Saddle stitching hold /Lw

5.2.4 Stapler/clincher movement drive

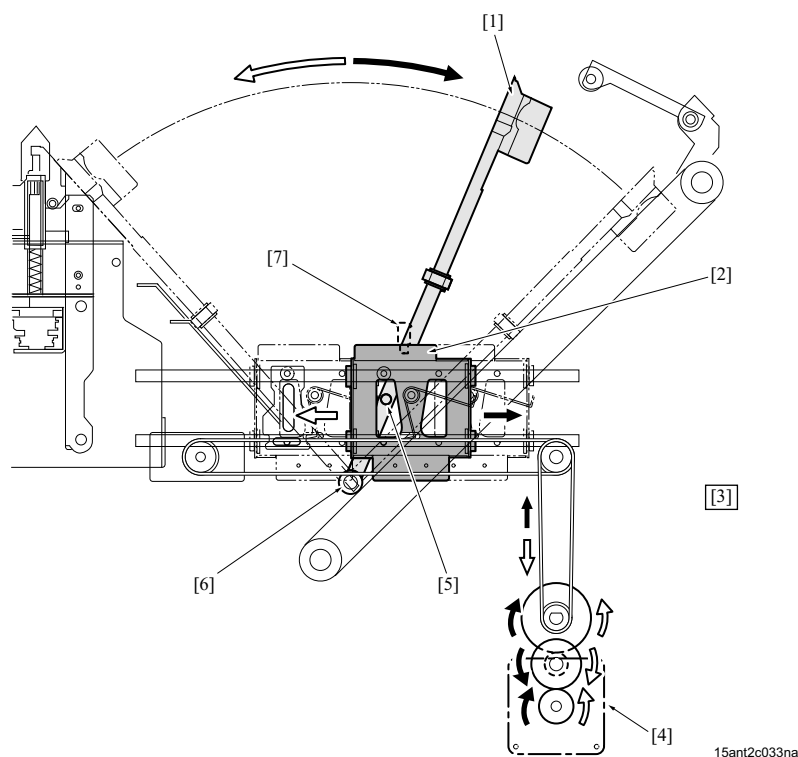


[1]	Top side view	[2]	Stapler /Rt
[3]	Clincher /Rt	[4]	Front side view
[5]	Stapler movement home sensor (PS25)	[6]	Stapler movement motor (M15)
[7]	Clincher /Lt	[8]	Stapler /Lt

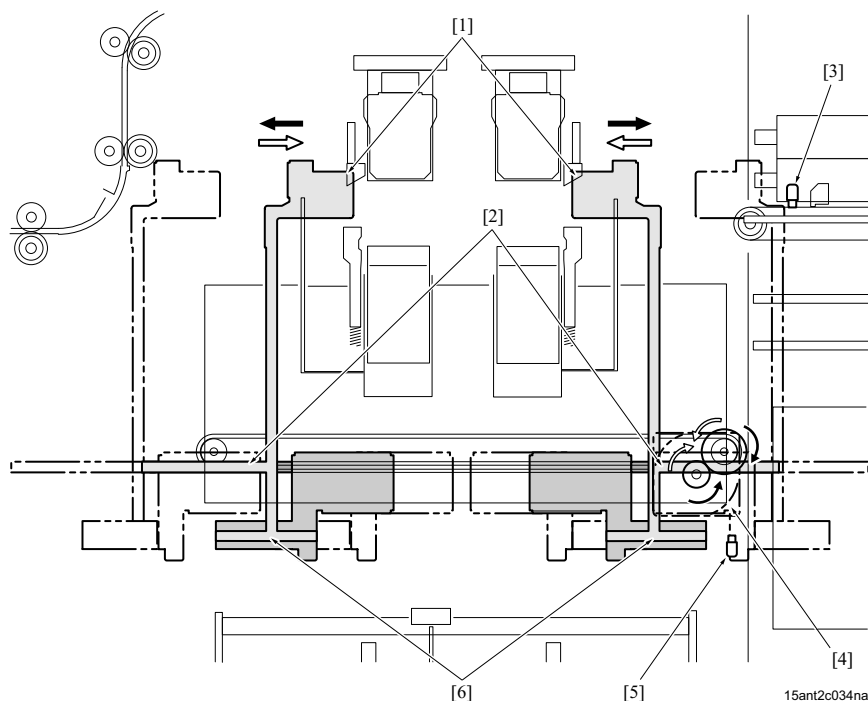
5.2.5 Stapler/clincher drive



[1]	Stapling arm	[2]	Staple bending arm
[3]	Clincher plate	[4]	Clincher solenoid /Rt (SD9), /Lt (SD10)
[5]	Staple	[6]	Left-side view
[7]	Eccentric cam	[8]	Stapler motor /Rt (M29), /Lt (M30)

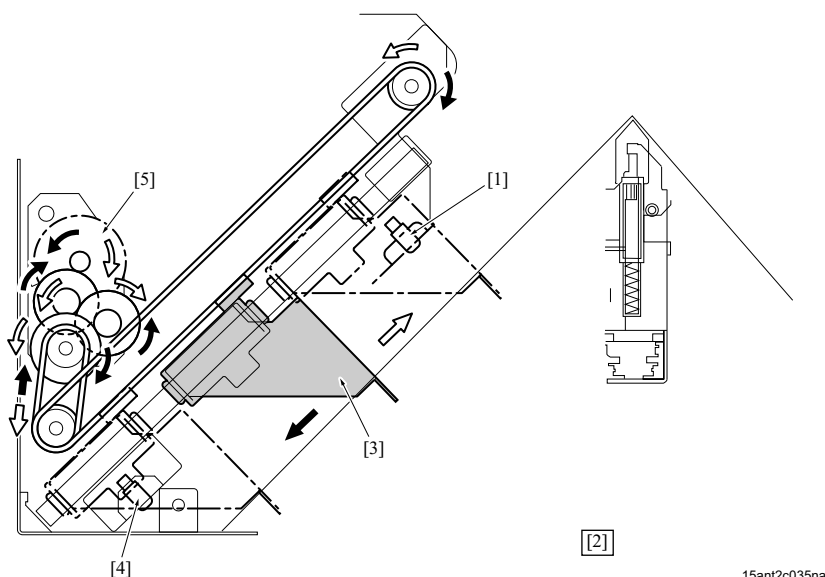
5.2.6 Bundle arm rotation drive

[1]	Bundle arm	[2]	Slide guide
[3]	Left-side view	[4]	Bundle arm rotation motor (M22)
[5]	Guide shaft	[6]	Fulcrum shaft
[7]	Bundle arm rotation home sensor (PS31)	-	

5.2.7 Bundle arm movement drive

[1]	Bundle arm	[2]	Guide shaft
[3]	Folding sensor /2 (PS44)	[4]	Bundle arm motor (M10)
[5]	Bundle arm home sensor (PS32)	[6]	Fulcrum shaft

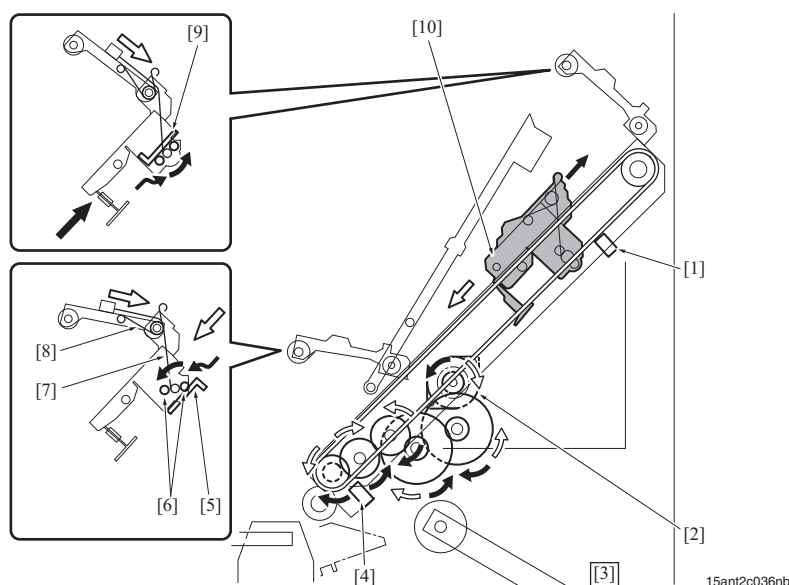
5.2.8 Bundle arm assist drive



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[1]	Bundle arm assist upper limit sensor (PS39)	[2]	Left-side view
[3]	Bundle arm assist plate	[4]	Bundle arm assist home sensor (PS38)
[5]	Bundle arm assist motor (M26)	-	

5.2.9 Bundle clip drive



15ant2c036nb

[1]	Bundle clip upper limit sensor (PS33)	[2]	Bundle clip motor (M11)
[3]	Left-side view	[4]	Bundle clip lower limit sensor (PS30)
[5]	Release plate /Lw	[6]	Release roller
[7]	Wire	[8]	Spring
[9]	Release plate /Up	[10]	Clip

5.3 Operation

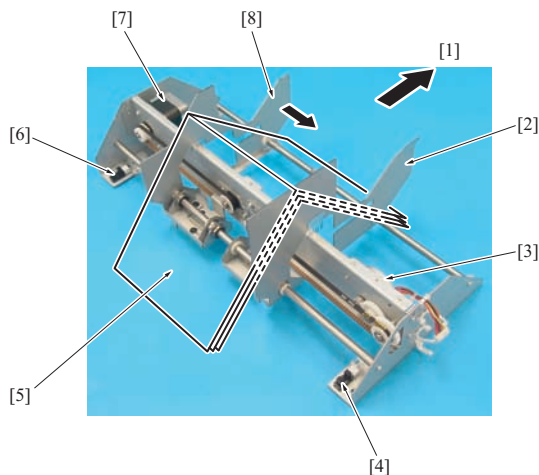
5.3.1 Saddle stitching alignment control

(1) Mechanism

In the saddle stitching alignment, the saddle stitching alignment plates /Lt [2] and /Rt [8] align the center folded paper [5] in the sub scan direction.

The saddle stitching alignment motor /Lt (M16) [3] drives the saddle stitching alignment plate /Lt [2] in the sub scan direction via the belt by rotating in the forward and reverse directions. The saddle stitching alignment plate /Lt moves to the position for the appropriate paper size when the main body start signal turns ON, and it does not move during the print operation. It return to the position at the saddle stitching alignment home sensor /Lt (PS29) [4] after the print operation.

The saddle stitching alignment motor /Rt (M9) [7] drives the saddle stitching alignment plate /Rt [8] in the sub scan direction via the belt by rotating in the forward and reverse directions. The alignment operation is conducted by M9 by rotating in the forward/reverse directions every time the center folded paper is conveyed. It return to the position at the saddle stitching alignment home sensor /Rt (PS28) [6] after the print operation.



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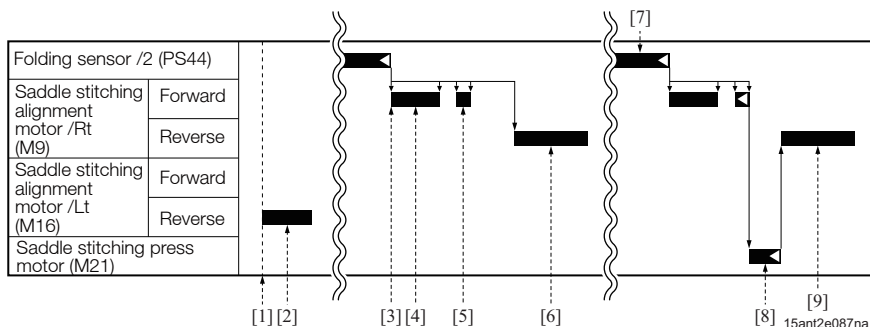
[1]	Front side direction	[2]	Saddle stitching alignment plate /Lt
[3]	Saddle stitching alignment motor /Lt (M16)	[4]	Saddle stitching alignment home sensor /Lt (PS29)
[5]	Paper	[6]	Saddle stitching alignment home sensor /Rt (PS28)
[7]	Saddle stitching alignment motor /Rt (M9)	[8]	Saddle stitching alignment plate /Rt

(2) Control

The saddle stitching alignment motor /Lt (M16) rotates in the reverse direction when the main body start signal [1] turns ON and the saddle stitching alignment plate /Lt moves to the position for the appropriate paper size [2].

The saddle stitching alignment motor /Rt (M9) rotates in the forward direction and the saddle stitching alignment plate /Rt conducts the preliminary alignment operation [4] when the folding sensor /2 (PS44) at the exit of the folding section detects the trailing edge of the paper [3]. Then, M9 rotates in the forward direction to conduct the alignment operation [5] when the paper is stacked at the stapler position. After a specified period of time, M9 rotates in the reverse direction to go back the saddle stitching alignment plate to its home position and stands by for the subsequent set [6].

For the last paper of the set [7], M9 rotates in the reverse direction to go back the saddle stitching alignment plate to its home position when the saddle stitching press motor (M21) is completed with holding the paper [8].



[1]	Main body print signal	[2]	Moved for appropriate paper size
[3]	Detected the trailing edge of paper	[4]	Preliminary alignment operation
[5]	Alignment operation	[6]	Moved to the home position
[7]	Last paper of the set	[8]	Held the paper with the saddle stitching hold
[9]	Moved to the home position		

5.3.2 Stapler/clinchers movement control

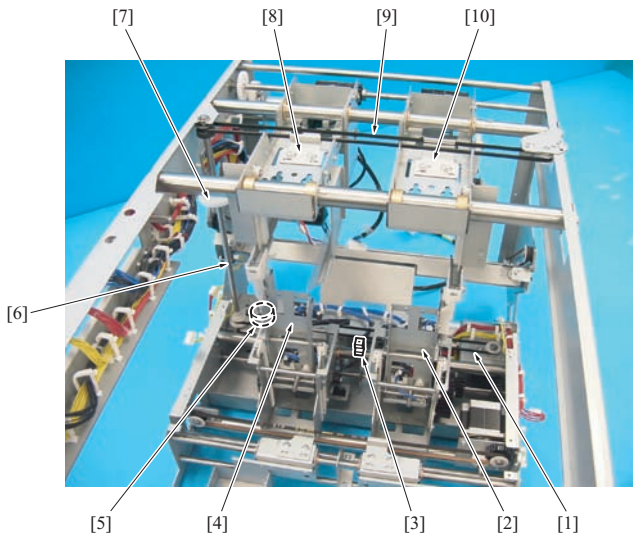
(1) Mechanism

The staplers/clinchers move to the stapling position in accordance with the paper size.

The stapling position is different for every paper size to make the stapling distance half of the paper size.

The staplers /Rt [10] and /Lt [8] are fixed to the belt /Up [9] and the clinchers /Rt [2] and /Lt [4] to the belt /Lw [1]. The stapler movement motor (M15) [5] moves them in the sub scan direction via the connecting shaft [6].

To prevent the tooth skipping of the belts /Up and /Lw at the maintenance, the gear-shaped rotating knob [7] is provided on the connecting shaft [6]. By rotating the knob manually, the staplers /Rt and /Lt and the clinchers /Rt and /Lt move simultaneously.



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[1]	Belt /Lw	[2]	Clincher /Rt
[3]	Stapler movement home sensor (PS25)	[4]	Clincher /Lt
[5]	Stapler movement motor (M15)	[6]	Connecting shaft
[7]	Rotating knob	[8]	Stapler /Lt
[9]	Belt /Up	[10]	Stapler /Rt

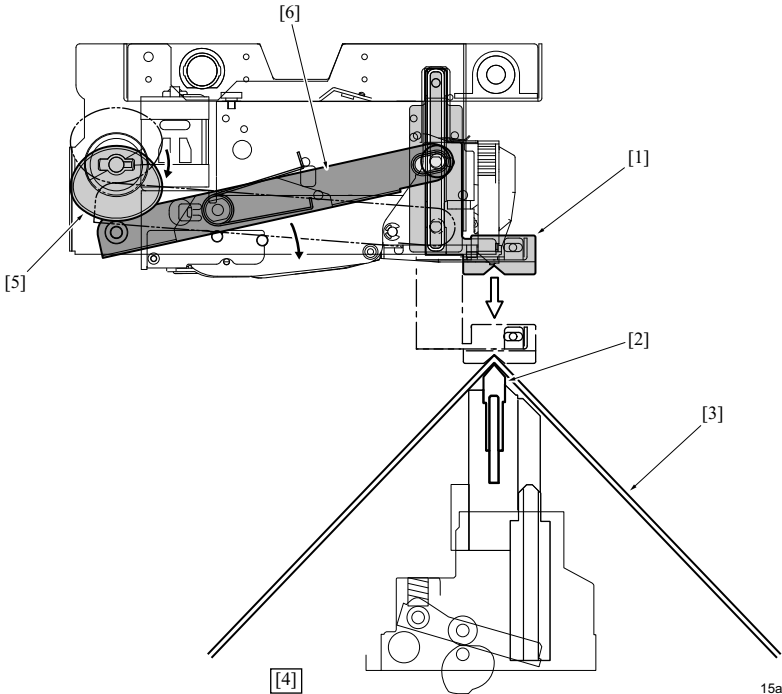
(2) Control

The stapler movement motor (M15) rotates in the forward direction when the main body start signal turns ON and moves the staplers and the clinchers to the position for the appropriate paper size. They go back to their home position at the end of the printing operation.

5.3.3 Saddle stitching hold control

(1) Mechanism

The saddle stitching hold is the mechanism to prevent the paper misalignment at stapling. The saddle stitching hold /Up [1] moves down to the saddle stitching hold /Lw [2] at its lower position and hold the center folded paper [3] at the fold line from both up and down. The eccentric cam [5] moves the saddle stitching hold /Up [1] up and down via the arm [6].



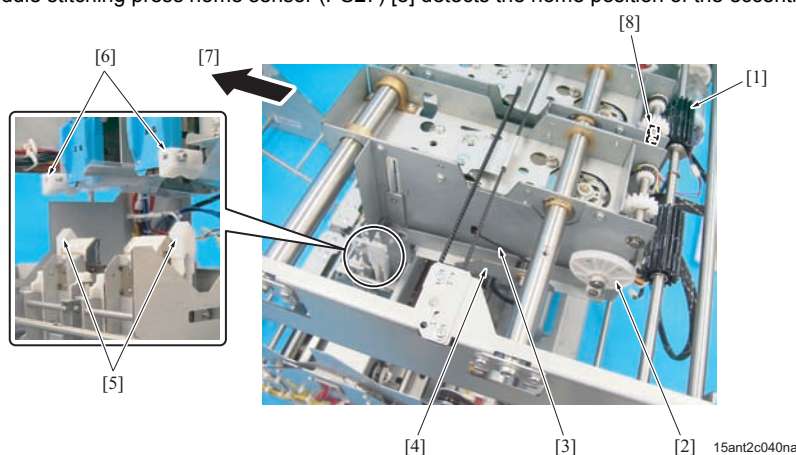
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[1]	Saddle stitching hold /Up	[2]	Saddle stitching hold /Lw
[3]	Center folded paper	[4]	Left-side view
[5]	Eccentric cam	[6]	Arm

The spring [3] enforces the saddle stitching hold /Up [6] toward the saddle stitching hold /Lw [5]. When the saddle stitching press motor (M21) rotates the eccentric cam [2] via the gear [1], the arm [4] moves along with the shape of the eccentric cam and the spring [3] lowers the saddle stitching hold /Up.

The saddle stitching hold /Up [6] holding the center folded paper at its lower position is pushed up to its upper position by the saddle stitching hold /Lw [5] during the stapling operation. This allows the paper to be moved from the lower position to the upper position without any misalignment.

The saddle stitching press home sensor (PS27) [8] detects the home position of the eccentric cam.

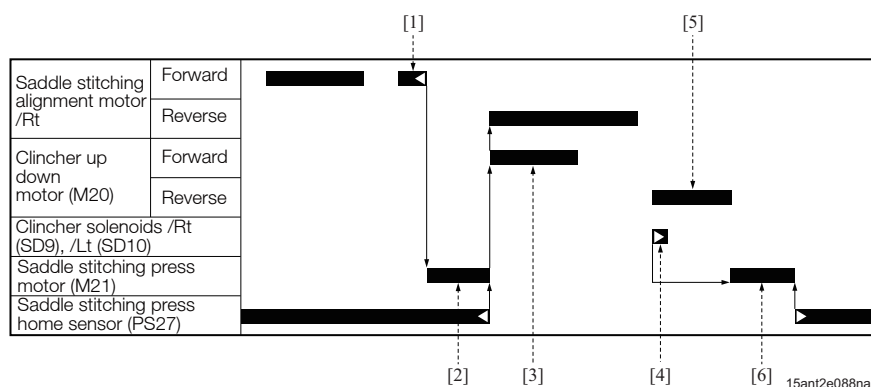


[1] Gear	[2] Eccentric cam
[3] Spring	[4] Arm
[5] Saddle stitching hold /Lw	[6] Saddle stitching hold /Up
[7] Front side direction	[8] Saddle stitching hold home sensor (PS27)

(2) Control

(a) Saddle stitching mode

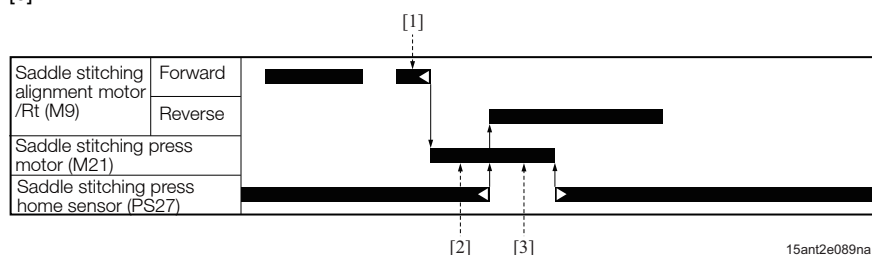
At the end of the paper alignment operation [1], the saddle stitching press motor (M21) rotates to move the saddle stitching hold /Up downward [2] and hold the paper between the saddle stitching holds /Up and /Lw. Then, the clincher up down motor (M20) starts rotating and the saddle stitching hold /Up is pushed up by the saddle stitching hold /Lw while holding the paper [3]. M20 rotates in the reverse direction and lowers the saddle stitching hold /Lw [5] when the clinching operation [4] is started. Also the spring lowers the saddle stitching hold /Up. M21 turns ON and go back the saddle stitching hold /Up to its standby position [6] after a specified period of time since the clinching operation is started.



[1] Alignment operation	[2] Saddle stitching hold /Up moved down
[3] Saddle stitching hold /Lw moved up	[4] Clinching operation
[5] Saddle stitching hold /Lw moved down	[6] Saddle stitching hold /Up moved up

(b) Multi-center folding mode

At the end of the paper alignment operation [1], the saddle stitching press motor (M21) rotates to move the saddle stitching hold /Up downward [2] and stack the paper securely. Then, M21 keeps rotating to move the saddle stitching hold /Up upward to its standby position [3].



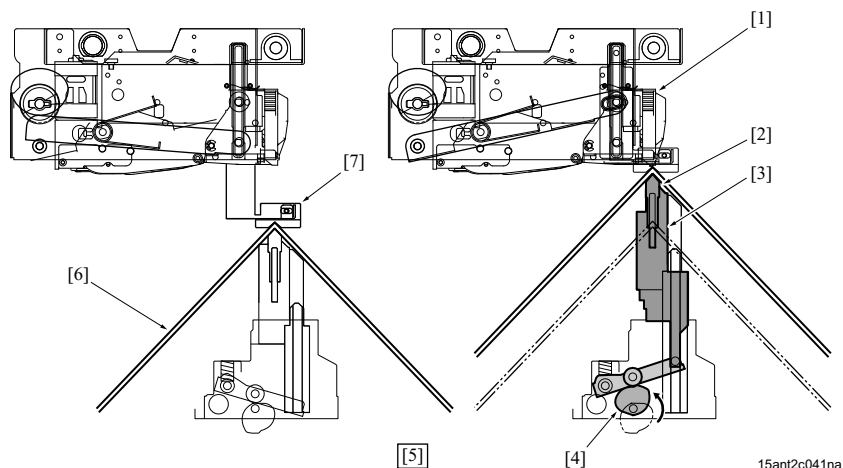
[1] Alignment operation	[2] Saddle stitching hold /Up moved down
[3] Saddle stitching hold /Up moved up	-

5.3.4 Clincher up down control

(1) Mechanism

The clincher shelters at the lower position to obtain space between the stapler and the clincher when the paper is conveyed between them.

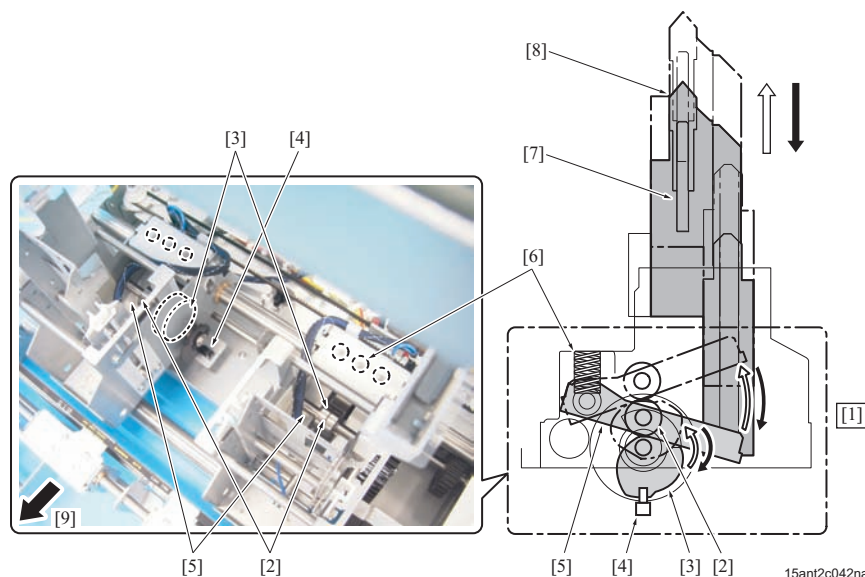
After the alignment operation, the saddle stitching hold /Up [7] moves down and holds the center folded paper [6]. Then the eccentric cam [4] drives the saddle stitching hold /Lw [2] and the clincher [3] to push up the saddle stitching hold /Up [7] to the position where the stapler [1] is positioned while holding the center folded paper.



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[1]	Stapler	[2]	Saddle stitching hold /Lw
[3]	Clincher	[4]	Eccentric cam
[5]	Left-side view	[6]	Center folded paper
[7]	Saddle stitching hold /Up	-	

The clincher [7] moves down to the lower position by its own weight and moves upward by the clincher up down motor (M20). The roller [2] attached to the arm [5] is pushed up and the clincher is contacted with the stapler when M20 rotates the eccentric cam [3]. The paper between the clincher and the stapler is held securely by the spring [6]. Once the stapling operation is completed, M20 rotates in the reverse direction to go back the eccentric cam, and then the clincher moves down by its own weight.



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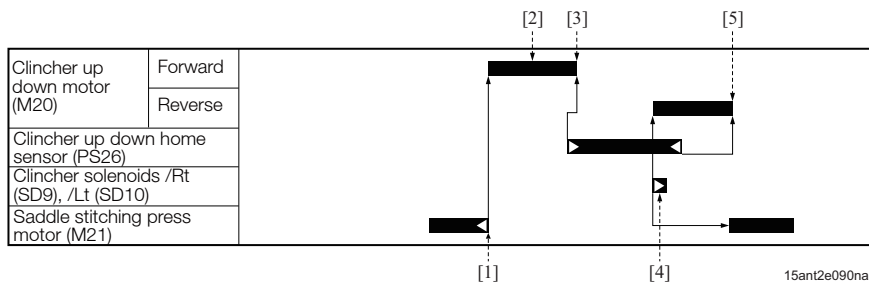
[1]	Left-side view	[2]	Roller
[3]	Eccentric cam	[4]	Clincher up down home sensor (PS26)
[5]	Arm	[6]	Spring
[7]	Clincher /Rt, /Lt	[8]	Saddle stitching hold /Lw
[9]	Front side direction	-	

(2) Control

The clincher moves up or down only in the saddle stitching mode.

Once the saddle stitching press motor (M21) moves down the saddle stitching hold /Up [1], the clincher up down motor (M20) rotates in the forward direction to move up the clinchers /Rt and /Lt and the saddle stitching hold /Lw [2]. M20 is stopped when the clincher up down home sensor (PS26) turns ON.

M20 rotates in the reverse direction to move down the clinchers /Rt and /Lt and the saddle stitching hold /Lw when the clincher solenoids /Rt (SD9) and /Lt (SD10) starts the clinching operation [4]. They are stopped at the lower position [5] when PS26 turns OFF.

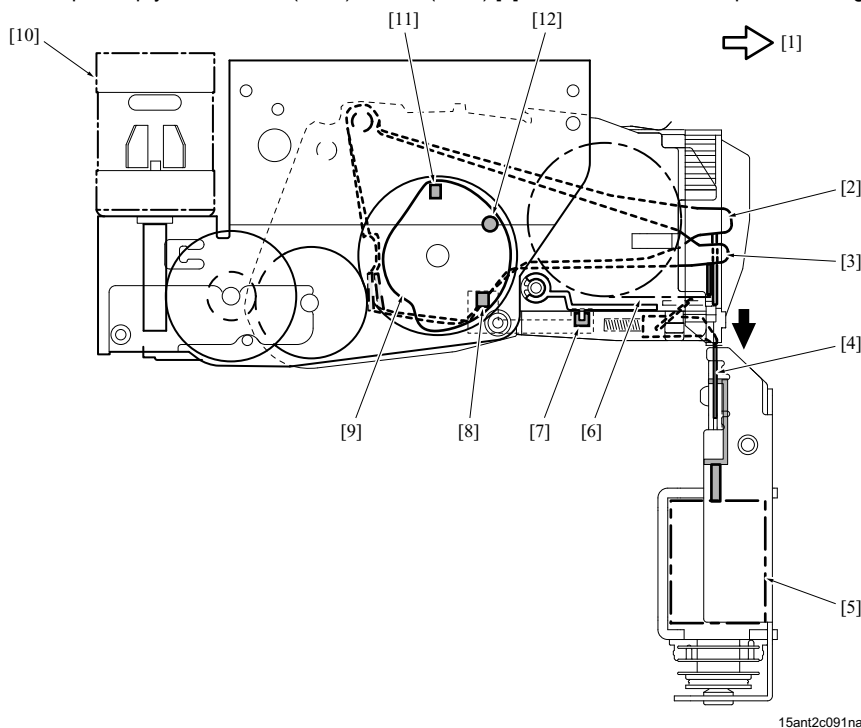


[1]	Saddle stitching hold /Up moving down stopped	[2]	Clinchers /Rt and /Lt moved up
[3]	Clinchers /Rt and /Lt stopped at the upper position	[4]	Clinching operation
[5]	Clinchers /Rt and /Lt stopped at lower position	-	

5.3.5 Stapler control

(1) Mechanism

The stapler motors /Rt (M29) and /Lt (M30) [10] and the clincher solenoids /Rt (SD9) and /Lt (SD10) [5] operate the stapler operation. The stapler home sensors /Rt (HS1) and /Lt (HS3) [8] and the clincher start sensors /Rt (HS2) and /Lt (HS4) [11] detect the stapler operation. HS1, HS2, HS3, and HS4 are hall element sensors and control the position of the magnet [12] of the rotating eccentric cam [9]. M29 and M30 [10] drive the staple bending arm [3] and the stapling arm [2] via the eccentric cam [9]. The staple bending arm bends the rolled staple [6] into the U-shape and the stapling arm staples it toward the clincher. Then the clincher solenoids /Rt (SD9) and /Lt (SD10) bend the staple by driving the clincher plate [4]. The stapling operation is completed with these operations. The staple empty switches /Rt (SW1) and /Lt (SW2) [7] detect whether the staple or cartridge is set or not.



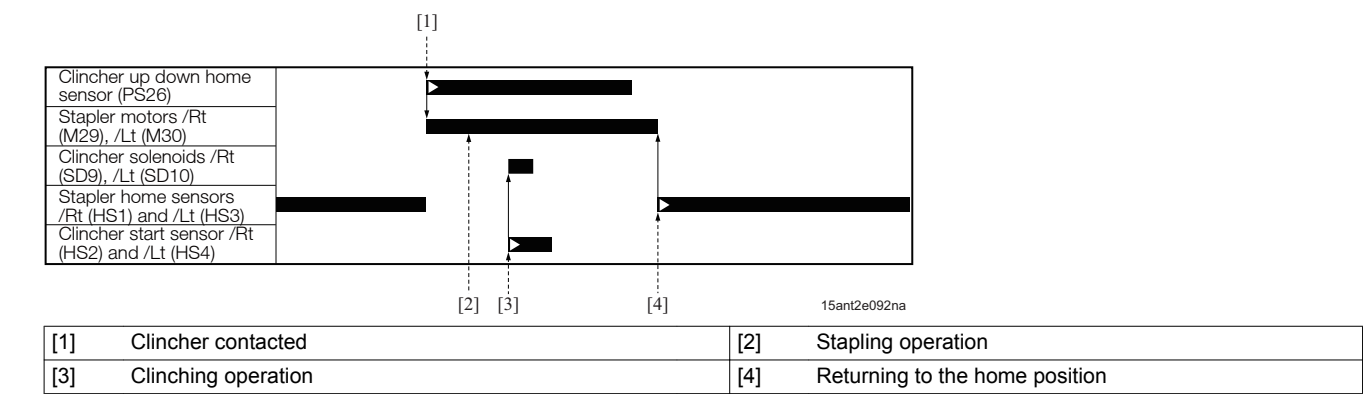
[1]	Front side direction	[2]	Stapling arm
[3]	Staple bending arm	[4]	Clincher plate
[5]	Clincher solenoid /Rt (SD9), /Lt (SD10)	[6]	Staple
[7]	Stapler empty switch /Rt (SW1), /Lt (SW2)	[8]	Stapler home sensor /Rt (HS1), /Lt (HS3)
[9]	Eccentric cam	[10]	Stapler motor /Rt (M29), /Lt (M30)
[11]	Clincher start sensor /Rt (HS2), /Lt (HS4)	[12]	Magnet

(2) Control

(a) Stapler control

The stapler motors /Rt (M29) and /Lt (M30) start the stapling operation [2] when the clincher up down home sensor (PS26) detects that the clinchers /Rt and /Lt are contacted with the stapler assy [1].

The clincher solenoids /Rt (SD9) and /Lt (SD10) bend the staple and the stapling operation is completed when the clincher start sensors /Rt (HS1) and /Lt (HS3) in the stapler assy turn ON [3]. M29 and M30 stop and return to the home position [4] when the stapler home sensors /Rt (HS1) and /Lt (HS3) detects the home position.



(b) Staple and cartridge detection

When the remaining amount of the staple becomes 20 or the cartridge is not set, the staple empty switches /Rt (SW1) and /Lt (SW2) turn ON and the main body displays the message on its operation panel.

5.3.6 Bundle arm control

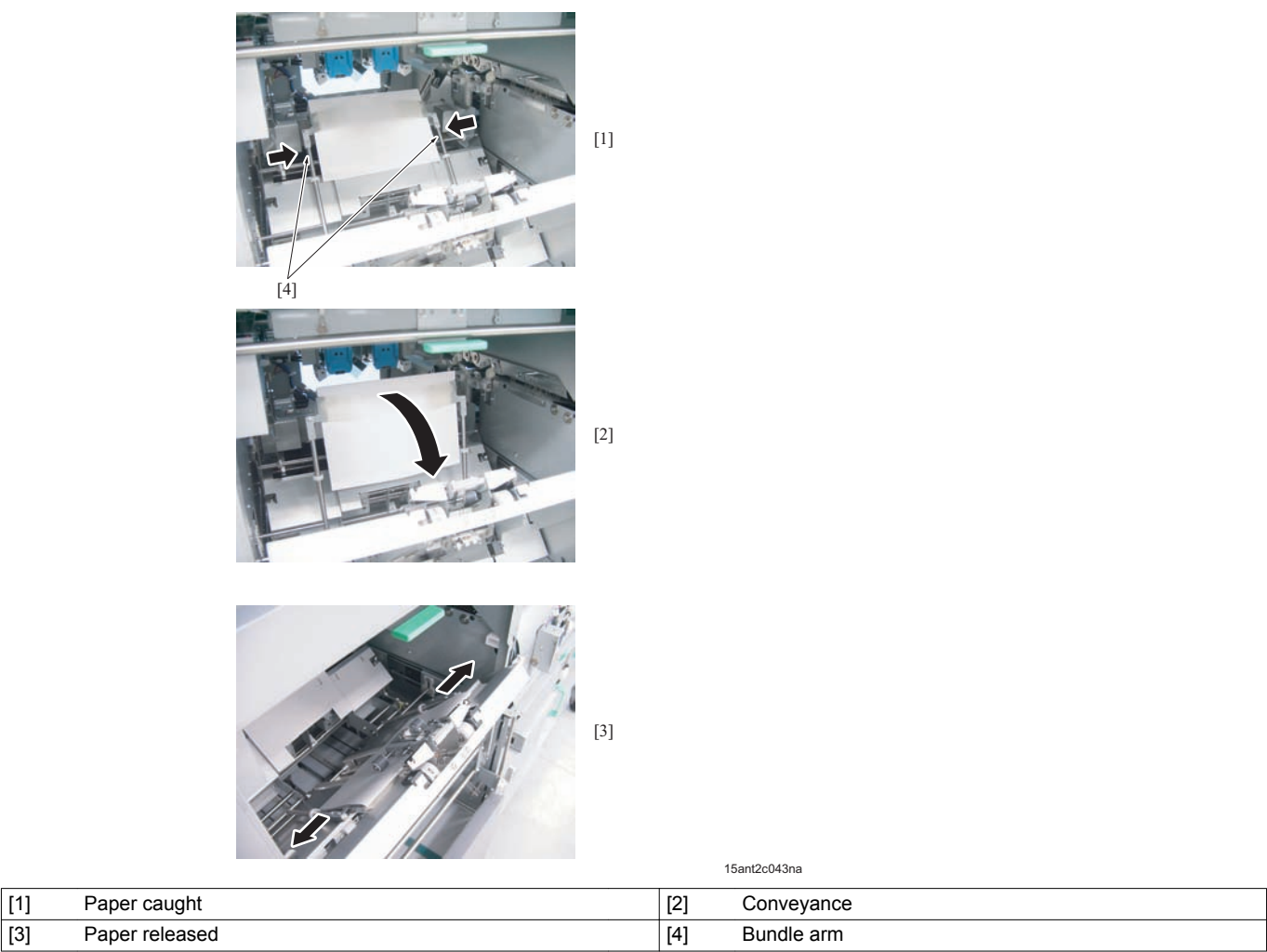
The bundle arm [4] rotates and moves in the sub scan direction.

It rotates to convey the paper from the stapling section to the bundle clip section and moves in the sub scan direction to catch/release the paper.

In the multi center folding mode, the bundle arm rotates to the stapling position after the last paper of the set is conveyed. In the saddle stitching mode, it rotates after the stapling operation.

By moving the bundle arm, the tip of the bundle arm is inserted under the fold line of the paper and the paper is caught [1].

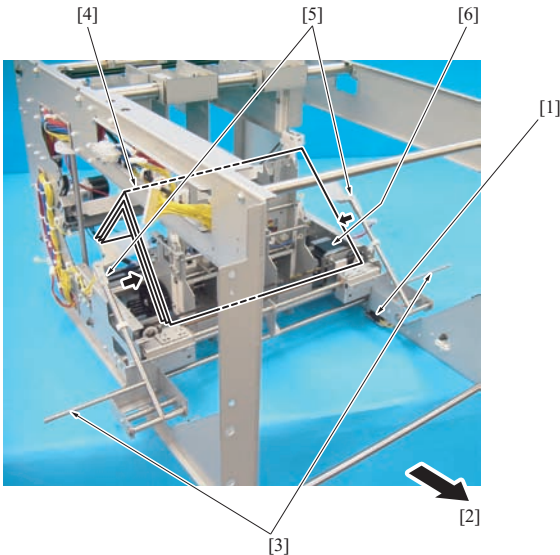
The caught paper is conveyed to the bundle clip section [2] by the rotation of the bundle arm. The bundle arm moves in the outside of the sub scan direction and releases the paper [3] when the bundle clip holds the paper at the folding side.



(1) Bundle arm movement mechanism

The bundle arm motor (M10) [6] drives the bundle arm [5] to catch/release the paper [4] in the sub scan direction via the belt.

The bundle arm home sensor (PS32) [1] detects the home position of the bundle arm.

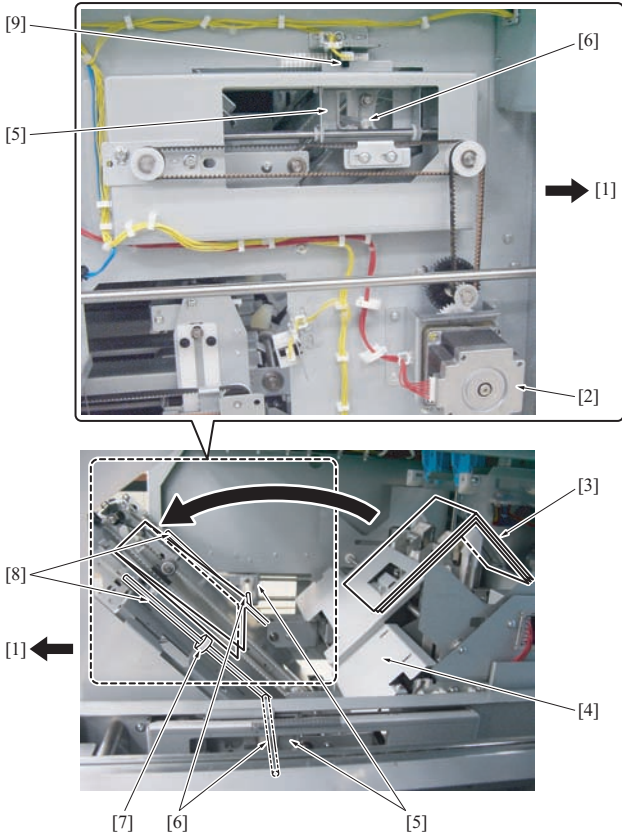


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[1]	Bundle arm home sensor (PS32)	[2]	Front side direction
[3]	Guide shaft	[4]	Paper
[5]	Bundle arm	[6]	Bundle arm motor (M10)

(2) Bundle arm rotation mechanism

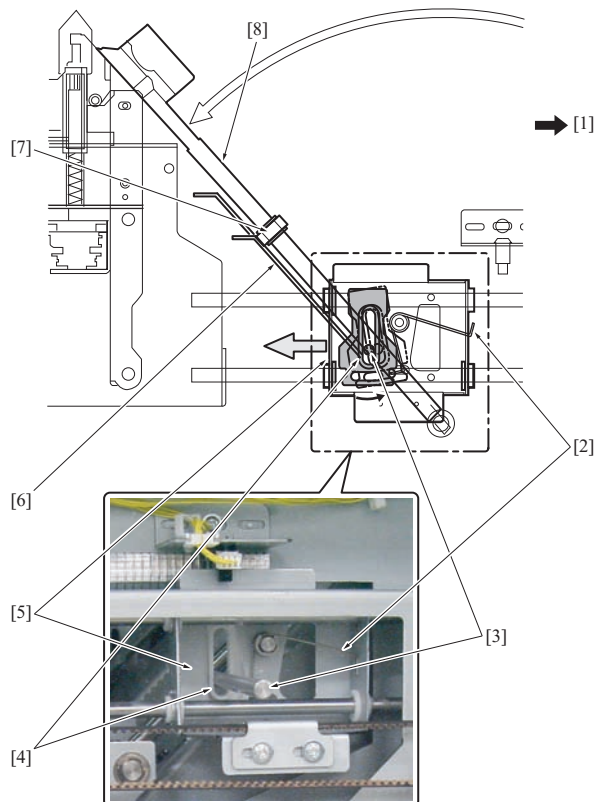
The bundle arm rotation motor (M22) [2] drives the bundle arm [8] via the belt, slide guide [5], and guide shaft [6]. When M22 drives the slide guide [5] in the main scan direction, the guide shaft [6] passing through the long hole of the slide guide is rotated, and then the bundle arm [8] is rotated around the fulcrum. When it is driven to the paper [3] side, M22 stops where the ring [7] is contacted with the guide plate [4]. The bundle arm rotation home sensor (PS31) [9] detects the home position of the bundle arm.



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[1]	Front side direction	[2]	Bundle arm rotation motor (M22)
[3]	Paper	[4]	Guide plate
[5]	Slide guide	[6]	Guide shaft
[7]	Ring	[8]	Bundle arm
[9]	Bundle arm rotation home sensor (PS31)	-	

In the rotation drive of the bundle arm [8], the slide guide [5] has to be overrun to be sure to make the ring [7] of the bundle arm contact with the guide plate [4]. To prevent any parts from damage due to the overrun, the guide shaft [3] is movable with the shock absorbing guide [4] and the spring [2].



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[1]	Front side direction	[2]	Spring
[3]	Guide shaft	[4]	Shock absorbing guide
[5]	Slide guide	[6]	Guide plate
[7]	Ring	[8]	Bundle arm

(3) Bundle arm control

The bundle arm motor (M10) rotates in the reverse direction when the main body start signal [1] turns ON and moves the bundle arm to the appropriate position in accordance with the paper size.

The bundle arm rotation motor (M22) rotates in the forward direction to rotate the bundle arm to the stapling section [3] after a specified period of time since the folding sensor /2 (PS44) detects the trailing edge of paper of the last set. It stops the bundle arm in an upright position [4] when the bundle arm rotation home sensor (PS31) turns OFF.

Then, M22 rotates again [5] to drive the bundle arm until it is contacted with the guide plate on the stapling section [6]. The timing for M22 to restart the rotation [5] is different between in the multi-center folding mode and in the saddle stitching mode. (The picture shows the time chart of the saddle stitching mode)

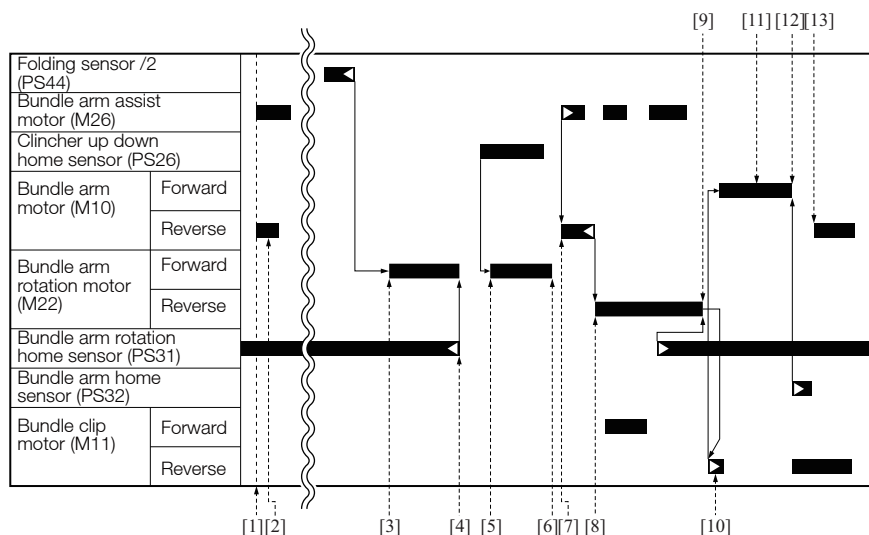
- Multi center folding mode: When the saddle stitching press home sensor (PS27) detects the saddle stitching hold /Up has been moved to its upper position.
- Saddle stitching mode: After a specified period of time since the clincher up down home sensor (PS26) detects that the clinchers are contacted with the staplers.

M10 inserts the tip of the bundle arm under the fold line of the paper [7] when the bundle arm assist motor (M26) starts the assisting operation by pushing up the trailing edge of paper at the back side and M10 stops after a specified period of time [8].

M22 rotates in the reverse direction to convey the paper to the bundle clip section when M10 stops [8]. It stops after a specified period of time since PS31 turns ON.

M10 rotates in the forward direction to pull out the bundle arm from the paper and take shelter it from the conveyance path [11] after a specified period of time since the bundle clip motor (M11) starts to catch the paper [10]. M10 stops when the bundle arm home sensor (PS32) turns ON [12].

M10 rotates in the reverse direction to go back the bundle arm to its standby position [13] for the subsequent set after a specified period of time since it stops.



[1] Main body start signal	[2] Moved for appropriate paper size
[3] Bundle arm started to rotate	[4] Bundle arm stopped in an upright position
[5] Bundle arm restarted to rotate	[6] Bundle arm contacted with the guide plate
[7] Bundle arm inserted under the fold line	[8] Insertion completed and conveyance started
[9] Conveyance completed	[10] Paper clip caught paper
[11] Bundle arm shelter operation	[12] Shelter completed
[13] Bundle arm moved for the subsequent set	-

* The picture shows the time chart of the saddle stitching mode

5.3.7 Bundle arm assist control

(1) Mechanism

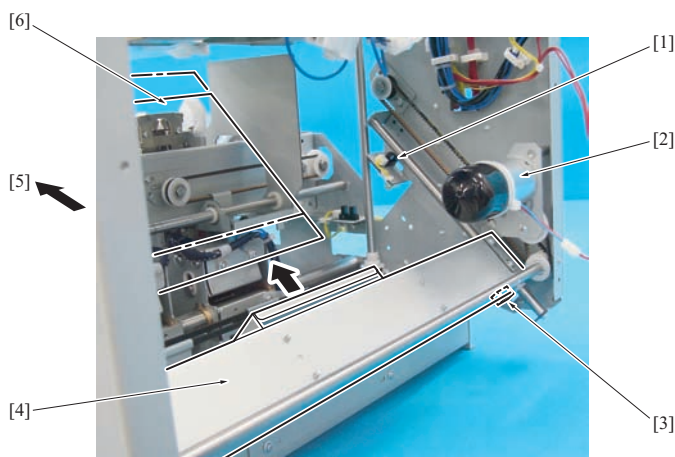
The bundle arm assist mechanism is the mechanism to assist the paper conveyance of the bundle arm rotation drive to be conducted without fault. It pushes up the fore edge side of the paper [6] with the bundle arm assist plate [4] to tilt it to the front.

The bundle arm assist motor (M26) [2] drives the bundle arm plate [4] via the belt.

The bundle arm assist upper limit sensor (PS39) [1] detects the upper home position and the bundle arm assist home sensor (PS38) [3] detects the lower home position.

The bundle arm assist plate [4] waits at the position 5mm below the fore edge side of the paper during standby. To keep the error to a minimum, the small-size paper (less than 314mm) and the large-size paper (314mm or more) are moved to the standby position from the position of PS39 and PS38 respectively since the driving time of M26 (DC brush motor) positions the standby position for the paper.

In the bundle arm assist operation, the fore edge side of the paper is pushed up 35mm (or until PS39 turns ON).



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[1] Bundle arm assist upper limit sensor (PS39)	[2] Bundle arm assist motor (M26)
[3] Bundle arm assist home sensor (PS38)	[4] Bundle arm assist plate
[5] Front side direction	[6] Paper

(2) Control

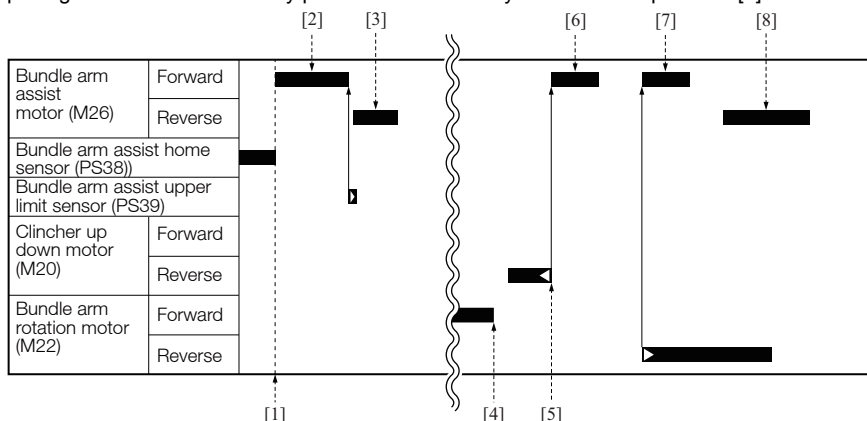
(a) Small-size paper (less than 314mm)

For the small-size paper, the bundle arm assist motor (M26) rotates in the forward direction when the main body start signal [1] turns ON to drive the bundle arm assist plate at the home position to the position at the bundle arm assist upper limit sensor (PS39) [2]. After a specified period of time, M26 rotates in the reverse direction to drive the bundle arm assist plate from the upper limit position to the standby position in accordance with the paper size [3] and stands by for the paper.

Then, M26 rotates in the forward direction to push up the fore edge side of the paper [6] for assisting the bundle arm to be inserted under the fold line of the paper. The operation timing [6] of M26 is different between in the multi center folding mode and in the saddle stitching mode. (The picture shows the time chart of the saddle stitching mode)

- Multi-center folding mode: When the bundle arm is contacted with the guide plate of the stapler section [4] by the bundle arm rotation motor (M22).
- Saddle stitching mode: When the clincher moves downward [5] at the end of the stapling operation.

M26 rotates in the forward direction to assist the bundle arm to convey the paper [7] after a specified period. Then the bundle arm assist plate goes back to the standby position and stands by for the subsequent set [8].



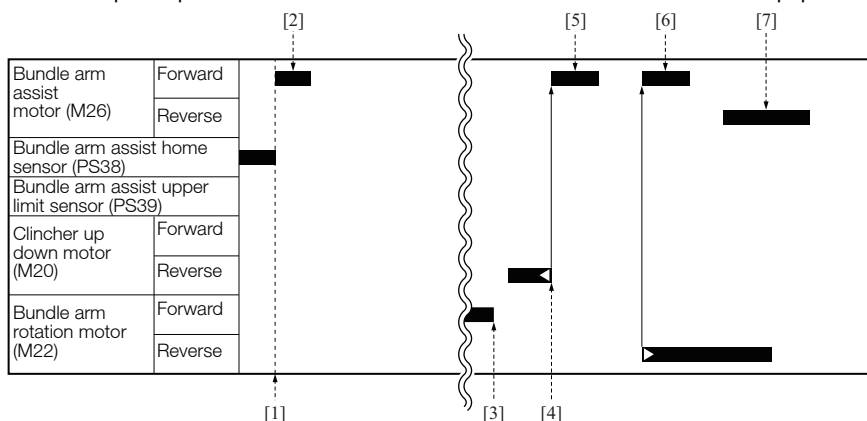
[1]	Main body start signal	[2]	Movement to the upper limit
[3]	Moved for appropriate paper size	[4]	Bundle arm contacted with the guide plate
[5]	Clincher moved down	[6]	Assist of the insertion of the bundle arm
[7]	Assist of the bundle arm conveyance	[8]	Moved for appropriate paper size

* The picture shows the time chart of the saddle stitching mode

(b) Large-size paper (314mm or more)

For the large-size paper, the bundle arm assist motor (M26) rotates in the forward direction when the main body start signal [1] turns ON to drive the bundle arm assist plate to the standby position in accordance with the paper size [2] and stands by for the paper.

The subsequent operation is conducted in the same manner as for the small-size paper.



[1]	Main body start signal	[2]	Moved for appropriate paper size
[3]	Bundle arm contacted with the guide plate	[4]	Clincher moved down
[5]	Assist of the insertion of the bundle arm	[6]	Assist of the bundle arm conveyance
[7]	Moved for appropriate paper size	-	

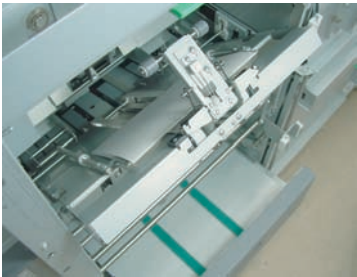
* The picture shows the time chart of the saddle stitching mode

5.3.8 Bundle clip control

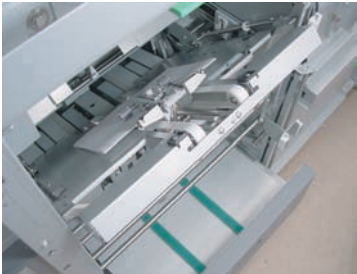
(1) Mechanism

The bundle clip is the mechanism to hold the paper that the bundle arm conveyed to the slope and convey the paper to the bundle press stage with its fore edge side to the trimmer section.

The bundle clip catches, releases, and conveys the paper. It catches the paper at the upper limit position [1], conveys it [2], and then release it at the lower limit position [3].



[1]



[2]

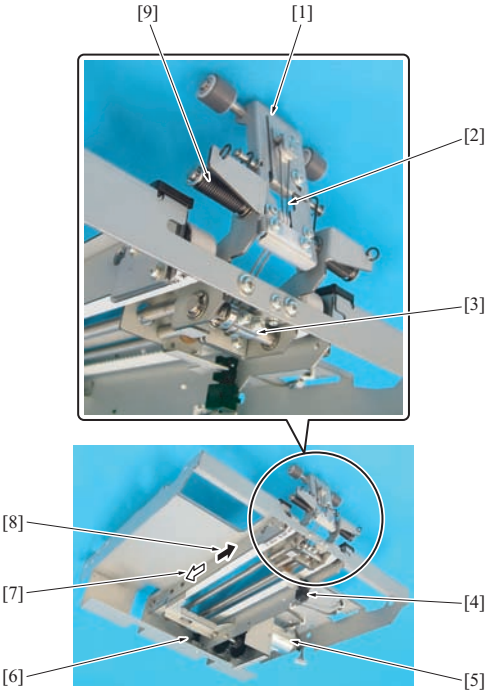


[3]

15ant2c047na

[1] Catching	[2] Conveyance
[3] Releasing	-

The bundle clip motor (M11) [5] drives the bundle clip [1] up [8] and down [7] via the gear and belt. The spring [9] provides the bundle clip the force to catch the paper, and the wire [2] and the winding shaft [3] open the bundle clip to release the paper. The bundle clip upper limit sensor (PS33) [4] detects the upper limit of the bundle clip and the bundle clip lower limit sensor (PS30) [6] detects the lower limit.



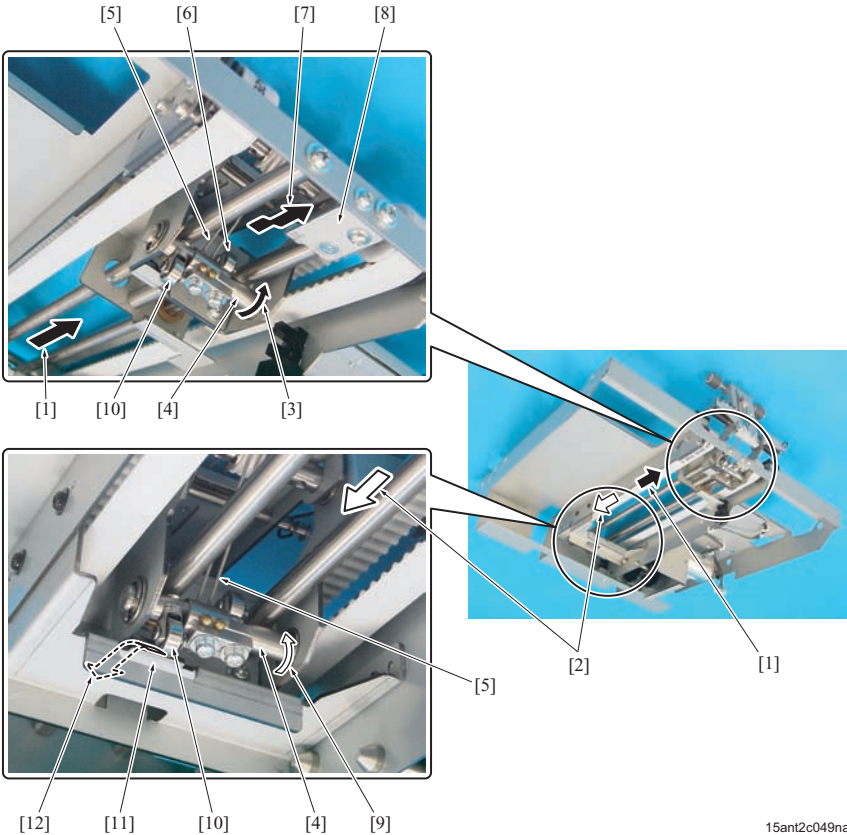
15ant2c048na

[1] Clip	[2] Wire
[3] Winding shaft	[4] Bundle clip upper limit sensor (PS33)
[5] Bundle clip motor (M11)	[6] Bundle clip lower limit sensor (PS30)

[7] Down	[8] Up
[9] Spring	-

The bundle clip is closed all the time except when it is located at the upper and lower limit position. When the bundle clip moves up [1], the release roller /Up [6] gets onto [7] the release plate /Up [8]. Then the wire winding shaft [4] rotates [3] and takes up the wire [5] to open the bundle clip.

In the same way, when the bundle clip moves down [2], the release roller /Lw [10] gets onto [12] the release plate /Lw [11] and then the wire winding shaft [4] rotates [9] and takes up the wire [5] to open the bundle clip.



15ant2c049na

[1] Up	[2] Down
[3] Wire winding rotation	[4] Wire winding shaft
[5] Wire	[6] Release roller /Up
[7] Getting over at up	[8] Release plate /Up
[9] Wire winding rotation	[10] Release roller /Lw
[11] Release plate /Lw	[12] Getting over at down

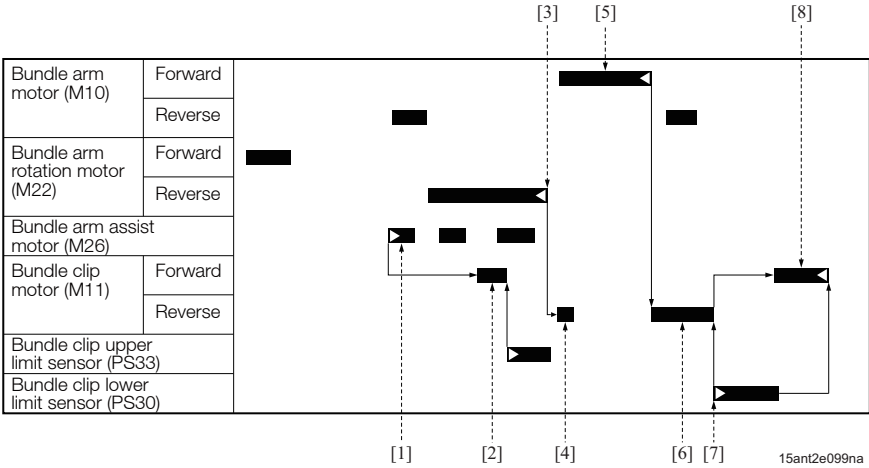
(2) Control

The bundle clip motor (M11) rotates in the forward direction to move up the bundle clip until the bundle clip upper limit sensor (PS33) turns ON [2] after a specified period of time since the bundle assist motor (M26) starts the assisting operation [1]. Then, the bundle clip stops with its clip opened.

The bundle arm conveys the paper from the stapling section to the bundle clip section, and then the bundle arm rotation motor (M22) stops [3]. After a specified period of time, M11 rotates in the reverse direction to move down the bundle clip and close the bundle clip to catch the paper, and then M11 stops after a specified period of time [4].

When the bundle arm motor (M10) completes the shelter operation [5], M11 rotates in the reverse direction to move down the bundle clip [6]. The bundle clip opens the clip to release the paper [7] and M11 stops when the bundle clip lower limit sensor (PS30) turns ON.

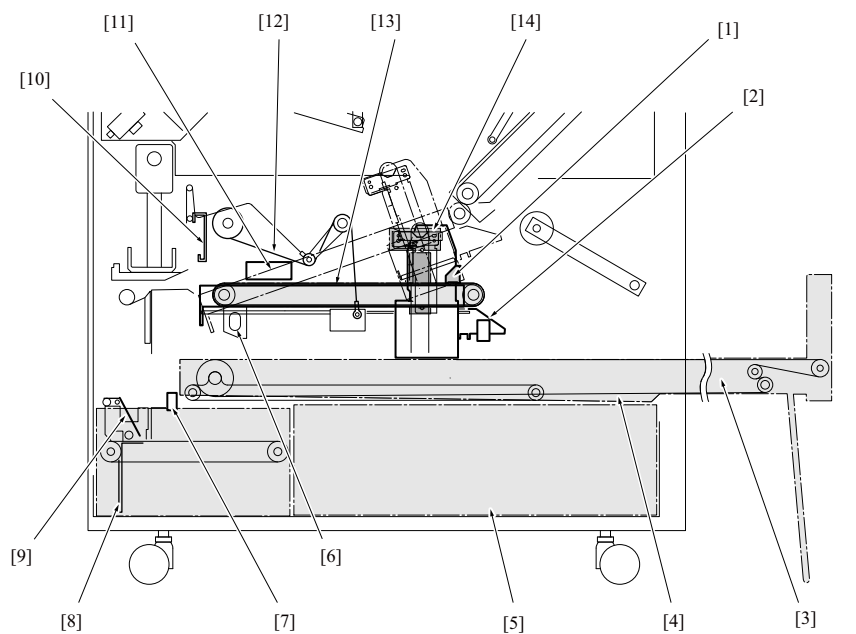
M11 rotates in the forward direction to move up the bundle clip after a specified period of time since M11 stops. Then, M11 stops to move the bundle clip at the standby position for the subsequent set after a specified period of time since PS30 turns OFF [8].



[1]	Assisting operation by the bundle arm	[2]	Bundle clip opened
[3]	Paper conveyance by the bundle arm completed	[4]	Paper caught
[5]	Bundle arm shelter operation	[6]	Conveyed by the bundle clip
[7]	Paper released	[8]	Returned to the standby position

6. BUNDLE PROCESSING SECTION

6.1 Configuration

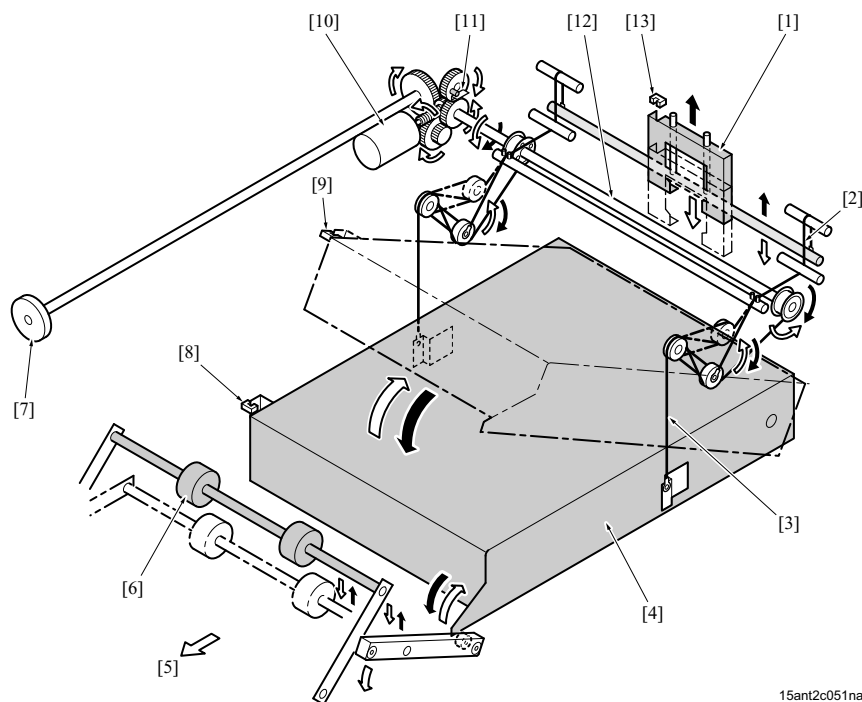


15ant2c050nb

[1] Exit claws	[2] Bundle tray paper full sensor (PS61)
[3] Bundle exit tray	[4] Bundle exit conveyance belt
[5] Scraps box	[6] Registration claw
[7] Trimmer scraps full sensor (PS41)	[8] Trimmer scraps press plate
[9] Shutter	[10] Bundle registration plate
[11] Trimmer scraps removal fan (FM1)	[12] Lift wire
[13] Bundle press stage	[14] Bundle press plate

6.2 Drive

6.2.1 Bundle press stage lift drive

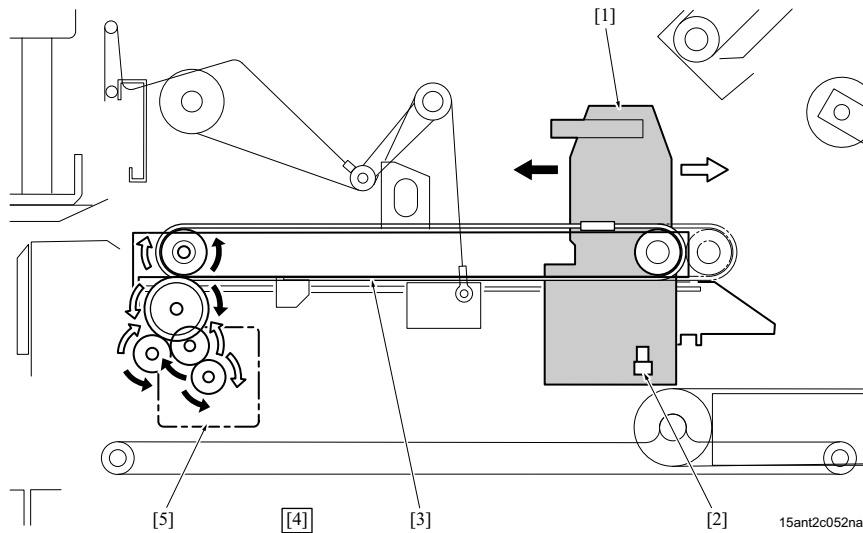


15ant2c051na

[1] Bundle registration plate	[2] Bundle registration plate wire
[3] Lift wire	[4] Bundle press stage
[5] Front side direction	[6] Bundle exit auxiliary roller
[7] Knob	[8] Bundle press stage up down home sensor (PS35)
[9] Bundle press stage up down upper limit sensor (PS45)	[10] Bundle press stage up down motor (M24)

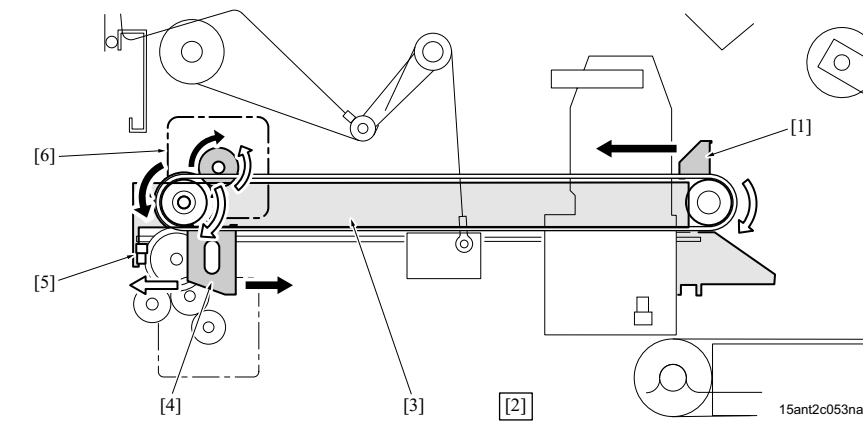
[11]	Over-winding-prevention stopper	[12]	Wire winding shaft
[13]	Bundle registration plate home sensor (PS16)	-	

6.2.2 Bundle press movement drive



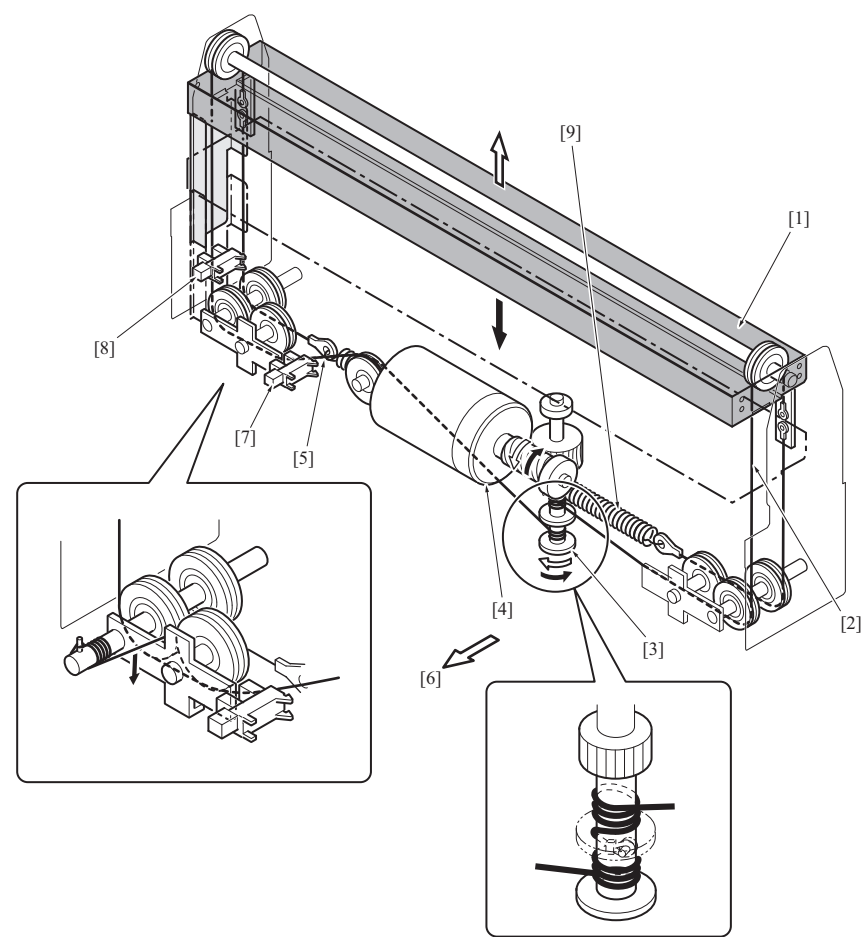
[1]	Bundle press	[2]	Bundle press movement home sensor (PS36)
[3]	Bundle press stage	[4]	Left-side view
[5]	Bundle press movement motor (M17)	-	

6.2.3 Bundle registration drive



[1]	Exit claws	[2]	Left-side view
[3]	Bundle press stage	[4]	Registration claws
[5]	Bundle registration home sensor (PS34)	[6]	Bundle registration motor (M12)

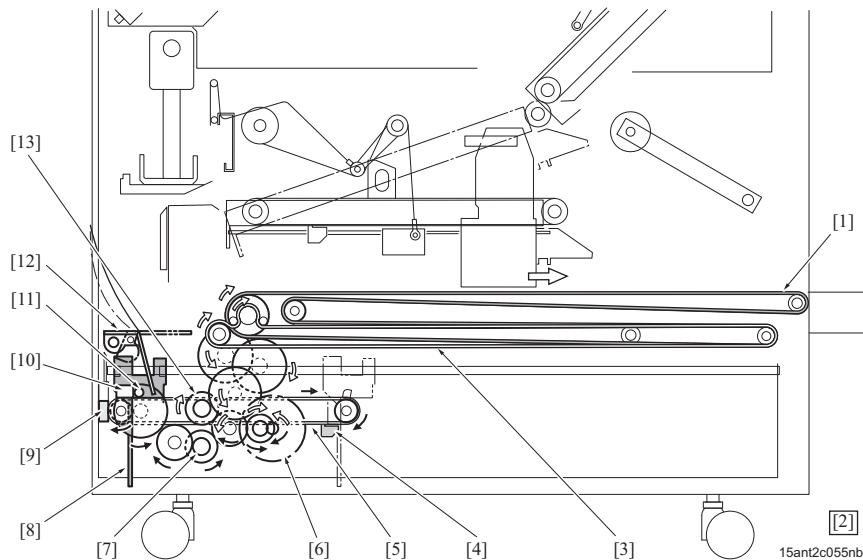
6.2.4 Bundle press drive



15ant2c054nb

[1]	Press plate	[2]	Release wire /Rt
[3]	Wire winding shaft	[4]	Bundle press motor (M23)
[5]	Release wire /Lt	[6]	Front side direction
[7]	Bundle press lower limit sensor (PS47)	[8]	Bundle press home sensor (PS37)
[9]	Spring	-	

6.2.5 Bundle exit drive



15ant2c055nb

[1]	Bundle exit conveyance belt	[2]	Left-side view
[3]	Bundle exit drive belt	[4]	Actuator
[5]	Belt	[6]	Bundle exit motor (M5)
[7]	One-way clutch (for the bundle exit conveyance belt)	[8]	Trimmer scraps press plate
[9]	Scraps press home sensor (PS48)	[10]	Trimmer scraps press claws

[11]	Pin	[12]	Shutter
[13]	One-way clutch (for pressing the trimmer scraps)	-	

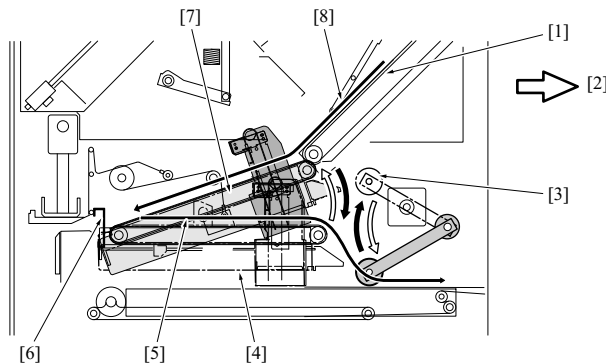
6.3 Operation

6.3.1 Bundle press stage up down control

The bundle press stage conducts the up and down operation to convey and exit the paper by the switch back method.

The bundle press stage is moved up [7] to decrease the angle difference when receiving the paper [8] conveyed by the bundle clip from the slope [1]. The bundle press stage exits the paper [5] to the bundle exit tray at the horizontal position [4] at the paper exit.

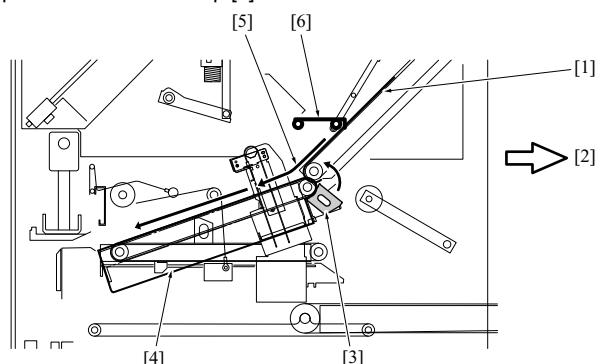
The bundle registration plate [6] and the bundle exit auxiliary roller [3] move up and down together with the up and down operation of the bundle press stage.



15ant2c057na

[1]	Slope	[2]	Front side direction
[3]	Bundle exit auxiliary roller	[4]	Bundle press stage (horizontal position)
[5]	Paper path at the paper exit	[6]	Bundle registration plate
[7]	Bundle press stage (upper position)	[8]	Paper path to the bundle press stage

The registration claws [3] push in the paper to make sure that the paper is conveyed to the bundle press stage when the bundle press stage [4] receives the paper from the bundle clip [6].



15ant2c061na

[1]	Slope	[2]	Front side direction
[3]	Registration claws	[4]	Bundle press stage
[5]	Paper conveyance	[6]	Bundle clip

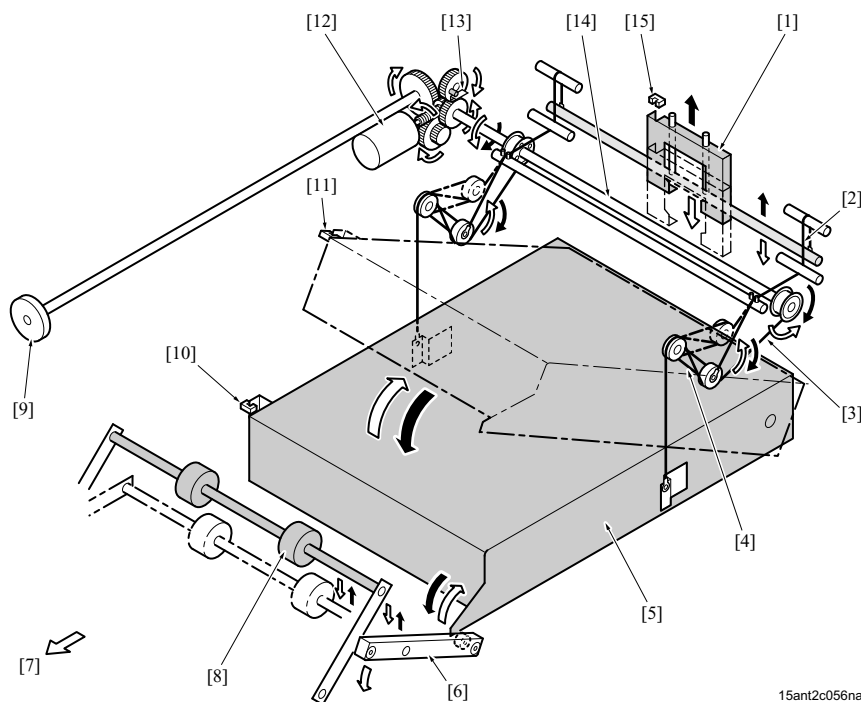
(1) Mechanism

The bundle press stage up down motor (M24) [12] rotates the wire winding shaft [14] and winds up the lift wire [3]. During the initial phase, the wire is tightened and the wire arm [4] comes to the horizontal position but the bundle press stage [5] does not move up. At the time, as the wire arm comes horizontal, the bundle registration plate wire [2] is loosened and the bundle registration plate [1] moves down and works as the stopper against the registration operation.

Then, the bundle press stage moves up as the wire winding shaft [14] rotates and winds up the up down wire [3] and it stops when the bundle press stage up down limit sensor (PS45) [11] turns ON.

The bundle registration plate home sensor (PS16) [15] detects the home positions (shelter position) for the bundle registration plate, and the bundle press stage up down home sensor (PS35) [10] detects the home position of the bundle press stage.

The over-winding-prevention stopper [13] prevents the over winding since you can move up and down the bundle press stage manually by rotating the knob [9].



15ant2c056na

[1] Bundle registration plate	[2] Bundle registration plate wire
[3] Lift wire	[4] Wire arm
[5] Bundle press stage	[6] Bundle exit auxiliary roller arm
[7] Front side direction	[8] Bundle exit auxiliary roller
[9] Jam clearing knob	[10] Bundle press stage up down home sensor (PS35)
[11] Bundle press stage up down upper limit sensor (PS45)	[12] Bundle press stage up down motor (M24)
[13] Over-winding-prevention stopper	[14] Wire winding shaft
[15] Bundle registration plate home sensor (PS16)	-

(2) Control

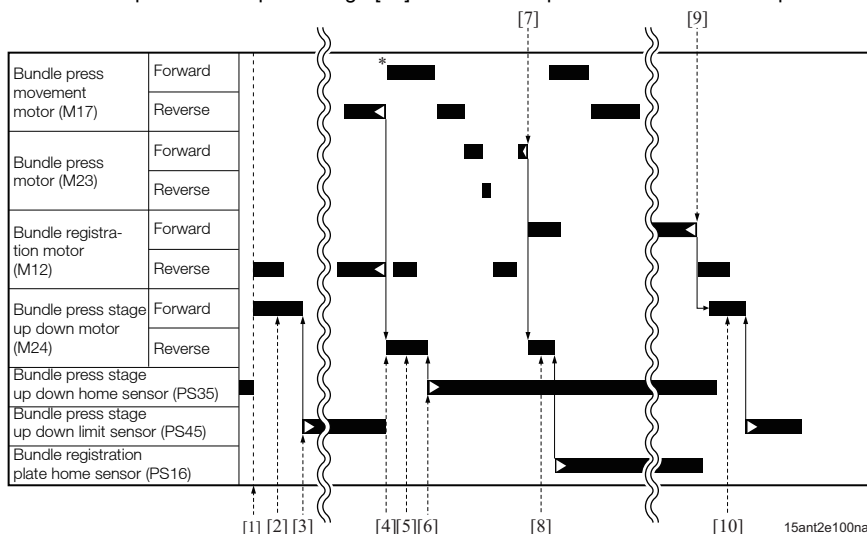
(a) Trimming mode

The bundle press stage up down motor (M24) rotates in the forward direction to move up the bundle press stage [2] when the main body start signal [1] turns ON. M24 stops while holding the bundle press stage in slanting position when the bundle press stage up down limit sensor (PS45) turns ON [3].

M24 rotates in the reverse direction to move down the bundle press stage [5] after the bundle clip releases the paper, the bundle registration motor (M12) assists the paper conveyance operation, and the bundle press movement motor (M17) conveys the paper to the paper conveyance position [4]. M24 stops when the bundle press stage up down home sensor (PS35) turns ON [6].

M24 starts to rotate in the forward direction and moves up the bundle registration plate [8] to open the paper path to the trimmer section when the bundle press motor (M23) completes the paper press operation [7] after the registration operation.

M24 moves up the bundle press stage [10] for the subsequent set when M12 completes the paper exit [9].



15ant2e100na

[1] Main body start signal	[2] Bundle press stage moved up
[3] Stopped at the upper limit	[4] Paper conveyance assisting operation completed
[5] Bundle press stage moved down	[6] Returning to the home position
[7] Paper press operation completed	[8] Bundle registration plate moved up

[9] Paper exit completed

[10] Bundle press stage moved up

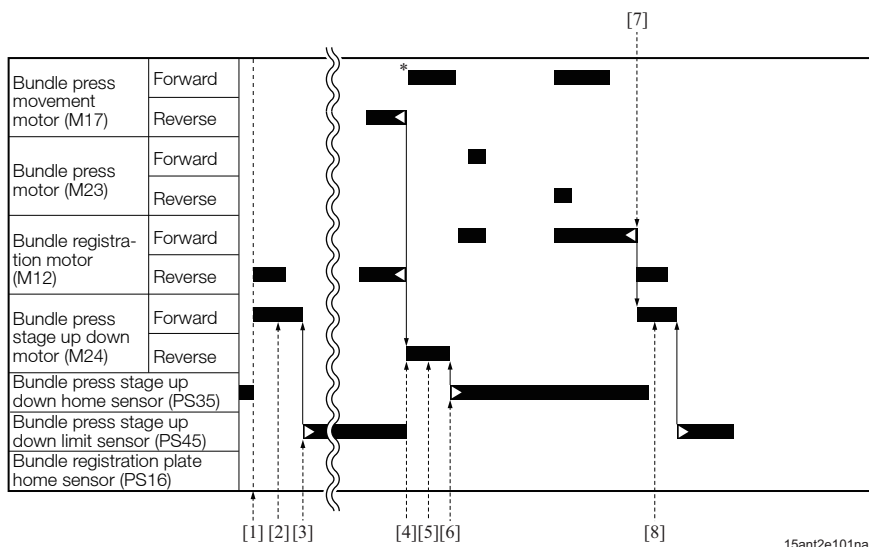
* Only for paper of 297mm or more (before folding)

(b) No trimming mode

The bundle press stage up down motor (M24) rotates in the forward direction to move up the bundle press stage [2] when the main body start signal [1] turns ON. M24 stops while holding the bundle press stage in slanting position when the bundle press stage up down upper limit sensor (PS45) turns ON [3].

M24 rotates in the reverse direction to move down the bundle press stage [5] after the bundle clip releases the paper, the bundle registration motor (M12) assists the paper conveyance operation, and the bundle press movement motor (M17) conveys the paper to the paper conveyance position [4]. M24 stops when the bundle press stage up down home sensor (PS35) turns ON [6].

M24 moves up the bundle press stage [8] for the subsequent set when M12 completes the paper exit [7].



15ant2e101na

[1] Main body start signal	[2] Bundle press stage moved up
[3] Stopped at the upper limit	[4] Paper conveyance assisting operation completed
[5] Bundle press stage moved down	[6] Returning to the home position
[7] Paper exit completed	[8] Bundle press stage moved up

* Only for paper of 297mm or more (before folding)

6.3.2 Bundle press movement control

The bundle press movement is the mechanism to convey the paper to the trimmer section by pressing the paper with the press section to prevent the trimming skew at the trimmer operation after the paper registration operation.

(1) Mechanism

The bundle press movement motor (M17) drives the bundle press section [9] in the main scan direction.

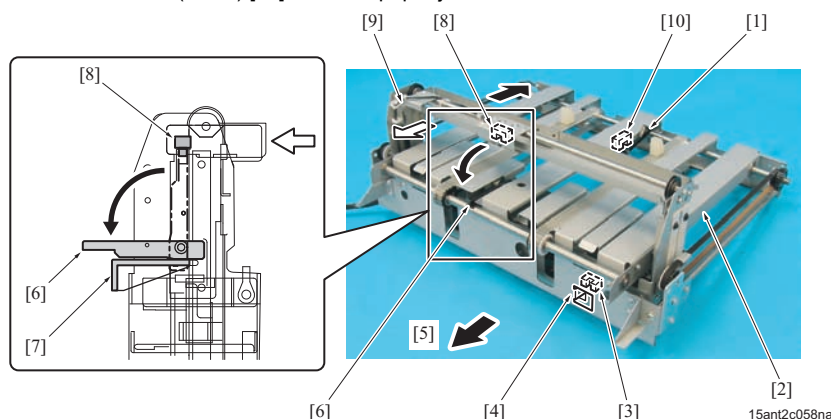
When receiving the paper with the bundle press stage [2], the bundle press section [9] moves 100mm backward from the home position to obtain the paper conveyance path.

When conducting the bundle registration operation, the bundle press section moves to the appropriate position in accordance with the paper size.

The bundle press movement home sensor (PS36) [3] detects the home position of the bundle press section.

When the bundle press section moves to the home position, the metal plate [7] gets down the actuator [6] for the trimmer registration sensor (PS55) [8] and obtains the paper conveyance path.

The bundle sensor /4 (PS54) [10] is for the paper jam detection.



15ant2c058na

[1] Actuator	[2] Bundle press stage
[3] Bundle press movement home sensor (PS36)	[4] Actuator

[5] Front side direction	[6] Actuator
[7] Metal plate	[8] Trimmer registration sensor (PS55)
[9] Bundle press section	[10] Bundle sensor /4 (PS54)

(2) Control

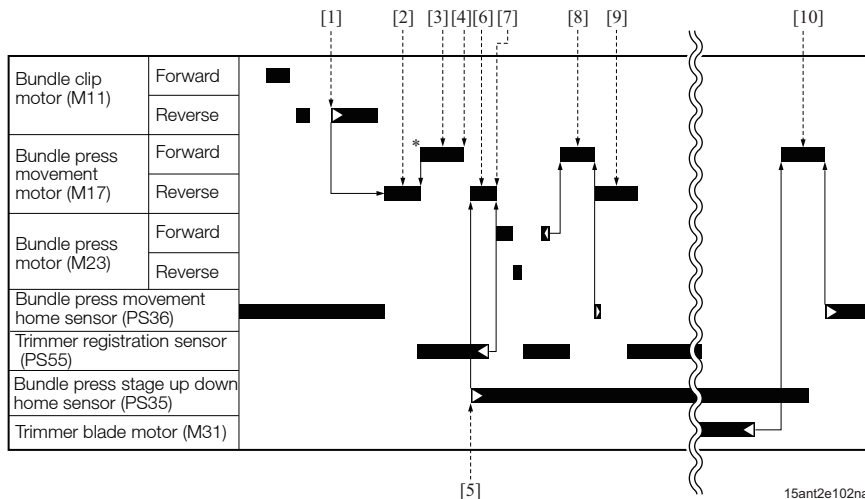
(a) Trimming mode

The bundle press movement motor (M17) rotates in the reverse direction to move the bundle press section to the paper conveyance position [2] after specified period of time since the bundle clip motor (M11) starts conveying the paper [1]. Then M17 rotates in the forward direction to move the bundle press section to the appropriate press standby position in accordance with the paper size [3].

M17 rotates in the reverse direction and searches for the press position [6] for the paper when the bundle press stage up down home sensor (PS35) detects that the bundle press stage has been moved down [5]. M17 stops the bundle press section at the appropriate position in accordance with the paper size [7] after a specified period of time since the trimmer registration sensor (PS55) turns OFF.

M17 searches the home position [8] and then moves the bundle press section to the paper trimming position [9] after a specified period of time since the bundle press motor (M23) completes the paper press operation.

The bundle press section is returned to the home position [10] after a specified period of time since the trimming operation is completed.



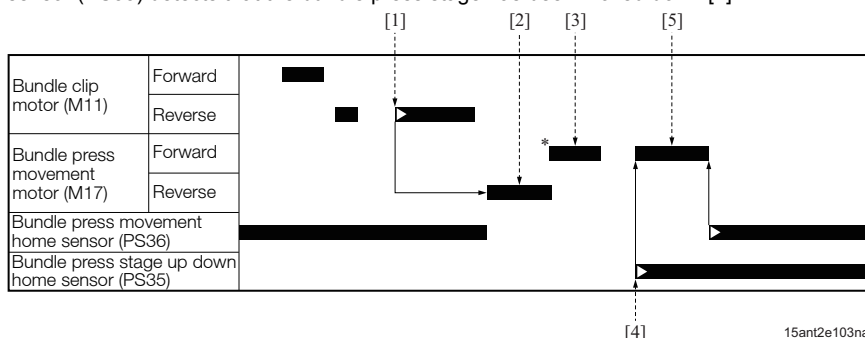
[1] Conveyed by the bundle clip	[2] Moved to the paper conveyance position
[3] Moved to the press standby position	[4] Home position detected
[5] Bundle press stage moving down completed	[6] Searching the press position
[7] Press position stop	[8] Home position search
[9] Moved to the trimming position	[10] Returning to the home position

* Only for paper of 297mm or more (before folding)

(b) No trimming mode

The bundle press movement motor (M17) rotates in the reverse direction to move the bundle press section to the paper conveyance position [2] after a specified period of time since the bundle clip motor (M11) starts conveying the paper [1]. Then M17 rotates in the forward direction to move the bundle press section to the appropriate press position in accordance with the paper size [3].

M17 rotates in the forward direction to return the bundle press section to the home position [5] when the bundle press stage up down home sensor (PS35) detects that the bundle press stage has been moved down [4].



[1] Conveyed by the bundle clip	[2] Moved to the shelter position
[3] Moved to the press position	[4] Bundle press stage up down home position
[5] Returning operation to the home position	-

* Only for paper of 297mm or more (before folding)

6.3.3 Bundle press control

The bundle press is the mechanism to hold the paper during trim operation to prevent the trimming skew after the paper registration operation.

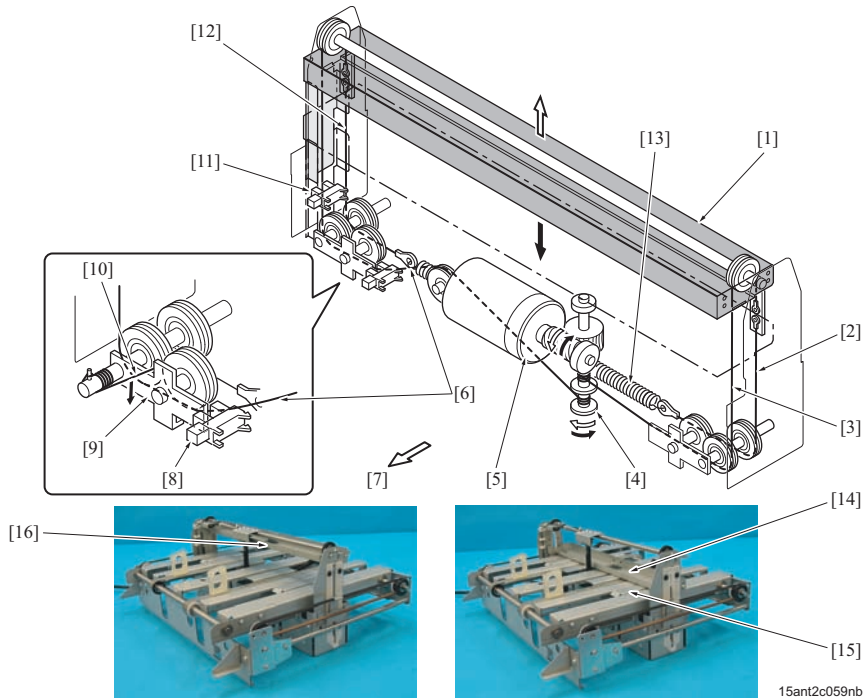
(1) Mechanism

The bundle press plates /Up [1] and /Lw [15] hold the paper. The bundle press plate /Up is pulled to the bundle press plate /Lw [15] (to the direction to hold and press the paper) by the spring [13] via the press wires /Rt [2] and /Lt [12]. The bundle press plate /Up [1] moves down with the force of the spring [13] when the bundle press motor (M23) [5] rotates the wire winding shaft [4] and releases the release wires /Rt [3] and /Lt [6]. The force of the spring presses the paper.

When M23 keeps rotating, the press wire /Lt [6] is loosened and the bundle press lower limit sensor (PS47) [8] turns OFF by the actuator [9] due to the spring [10], and then the paper press position is detected.

The wire winding shaft [4] winds the release wires /Rt [3] and /Lt [6] to move up the bundle press plate /Up [1] for releasing the press the paper [16] when M23 rotates in reverse.

The bundle press home sensor (PS37) [11] detects the home position of the bundle press plate /Up [1].



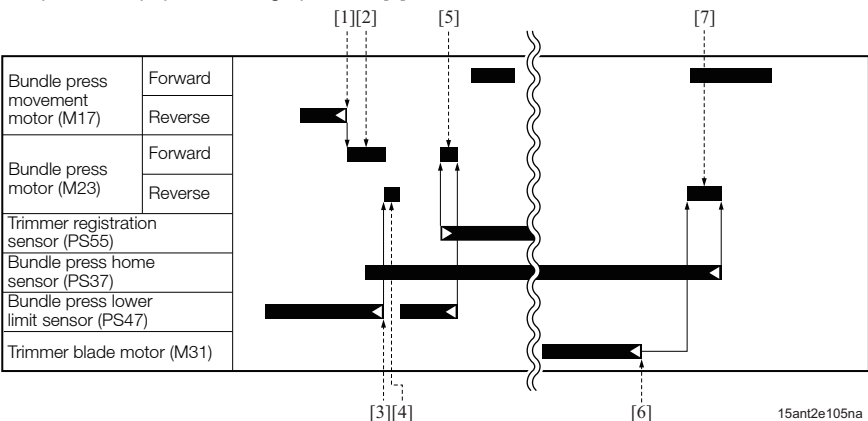
[1]	Bundle press plate /Up	[2]	Press wire /Rt
[3]	Release wire /Rt	[4]	Wire winding shaft
[5]	Bundle press motor (M23)	[6]	Release wire /Lt
[7]	Front side direction	[8]	Bundle press lower limit sensor (PS47)
[9]	Actuator	[10]	Spring
[11]	Bundle press home sensor (PS37)	[12]	Press wire /Lt
[13]	Spring	[14]	Bundle press plate /Up (down)
[15]	Bundle press plate /Lw	[16]	Bundle press plate /Up (up)

(2) Control

The bundle press motor (M23) rotates in the forward direction to conduct the paper press operation [2] to press the paper properly when the bundle press movement motor (M17) completes the press position search [1]. M23 rotates in the reverse direction to move up the bundle press plate /Up slightly to prevent the paper from becoming loose [4] when the bundle press lower limit sensor (PS47) detects the lower limit [3] and turns OFF.

M23 rotates in the forward direction to press the paper [5] after a specified period of time since the trimmer registration sensor (PS55) detects the completion of the registration operation.

M23 rotates in the reverse direction to return the bundle press plate /Up to the home position [7] when the trimmer blade motor (M31) completes the paper trimming operation [6].



[1]	Searching the press position completed	[2]	Press operation
-----	--	-----	-----------------

[3]	Lower limit detected	[4]	Press release
[5]	Press	[6]	Trimming completed
[7]	Returning to the home position	-	

6.3.4 Bundle registration control

The paper registration operation reforms the skew at trimming.

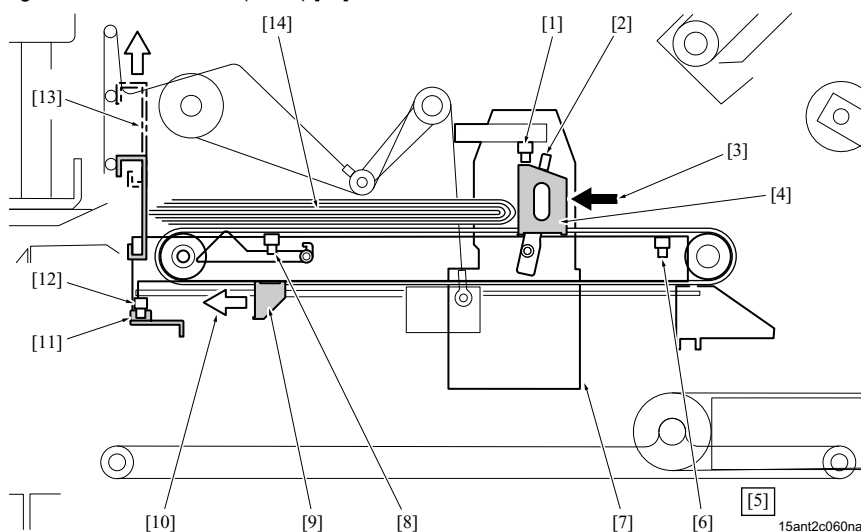
(1) Mechanism

The bundle registration motor (M12) drives the registration claws [4].

2 registration claws [4] conduct the registration by making the paper [14] contact [3] with the bundle registration plate [13] from the gutter side. In the registration operation, the bundle press section [7] conducts the pressing by moving to the appropriate position in accordance with the paper size. To conduct the bundle registration, the registration claws [4] press the paper until the actuator [2] on the bundle press section comes in the upright position and the trimmer registration sensor (PS55) [1] turns ON.

The bundle exit claws [9] are located at the 180 degrees opposite to the registration claws on the belt. M12 rotates in the reverse direction [10] to exit the paper at the paper exit.

The home position of the registration claws [4] is detected when the registration claws push the actuator [11] and turns ON the bundle registration home sensor (PS34) [12].



[1]	Trimmer registration sensor (PS55)	[2]	Actuator
[3]	Registration direction	[4]	Registration claws
[5]	Left-side view	[6]	Bundle sensor /2 (PS15)
[7]	Bundle press section	[8]	Bundle sensor /4 (PS54)
[9]	Bundle exit claws	[10]	Drive direction of the bundle exit tabs
[11]	Actuator	[12]	Bundle registration home sensor (PS34)
[13]	Bundle registration plate	[14]	Paper

(2) Control

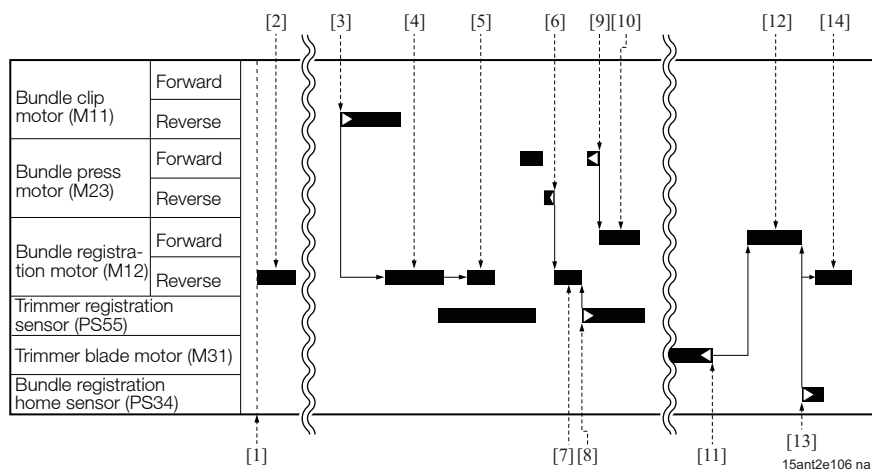
The bundle registration motor (M12) rotates in the reverse direction when the main body start signal turns ON [1] and the registration claws move to the standby position in accordance with the paper size [2].

The bundle registration motor (M12) rotates in the reverse direction to conduct the paper conveyance assisting operation [4] and the pre-registration operation [5] after a specified period of time since the bundle clip motor (M11) starts conveying the paper [3]. Then M12 stops when the registration claws reach at the specified position.

M12 rotates in the reverse direction and conducts the registration operation [7] with the registration claws when the bundle press motor (M23) completes the press releasing operation [6]. The registration claws stop when the trimmer registration sensor (PS55) turns ON [8].

M12 rotates in the forward direction to move the registration claws to the specified shelter position [10] when M23 completes the press operation [9].

M12 rotates in the forward direction to let the bundle exit claws push the paper to conduct the paper exit operation [12] after a specified period of time since the trimmer blade motor (M31) completes the trimming operation [11]. M12 stops when the bundle registration home sensor (PS34) turns ON [13]. M12 rotates in the reverse direction to move the bundle exit claws to the standby position [14] after a specified period of time. Then it stands by for the subsequent set.



[1] Main body start signal	[2] Standby position movement
[3] Conveyance by the bundle clip started	[4] Assist of the paper conveyance
[5] Pre-registration	[6] Press release
[7] Registration	[8] Registration operation completed
[9] Paper press operation completed	[10] Shelter operation
[11] Trimming completed	[12] Paper exit operation
[13] Home position detected	[14] Standby position movement

6.3.5 Bundle exit control

(1) Mechanism

(a) Bundle exit mechanism

The paper is exited to the bundle exit tray [12].

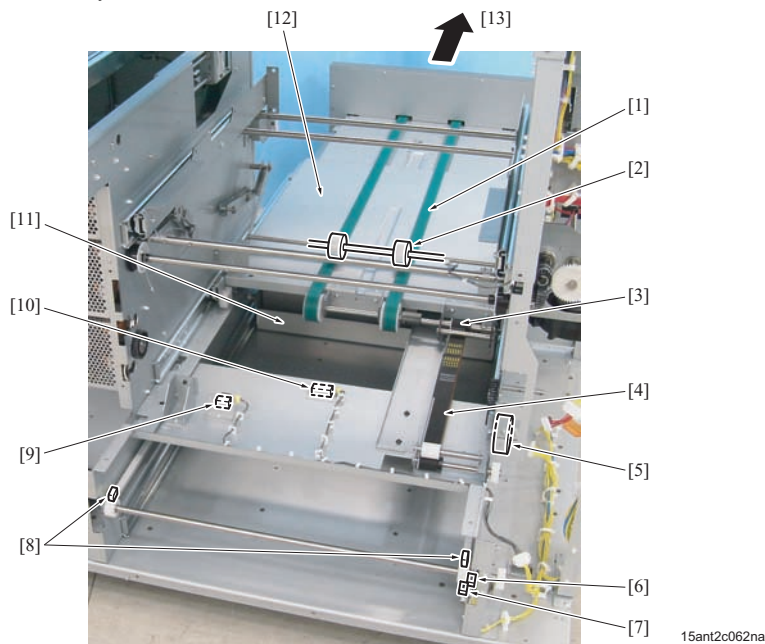
The paper exited to the bundle exit tray is conveyed to the front by the bundle exit conveyance belt [1] and stacked.

The bundle exit motor (M5) [5] drives the bundle exit conveyance belt [1] via the bundle exit drive belt [4] and the bundle exit belt drive shaft [3].

M5 drives the bundle exit conveyance belt for a specified period of time to convey the paper to the front [13] for every paper exit. The bundle exit tray is expandable.

The bundle tray set sensor (PS58) [9] detects whether the bundle exit tray is stored or not.

M5 also drives the scrap press plate [11]. In each drive path from M5 to the bundle exit drive belt and the scraps press plate, there is a one-way clutch respectively that switches the rotational direction of M5. Therefore, the bundle exit drive and the scraps press plate are not driven simultaneously.

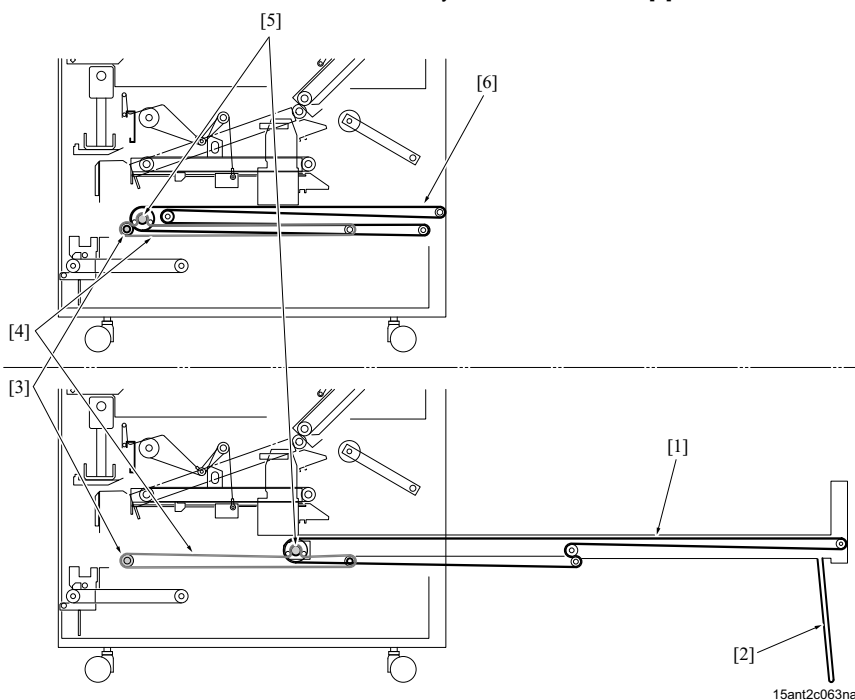


[1] Bundle exit conveyance belt	[2] Bundle exit auxiliary roller
[3] Bundle exit belt drive shaft	[4] Bundle exit drive belt
[5] Bundle exit motor (M5)	[6] Scraps press home sensor (PS48)
[7] Scraps box set sensor (PS40)	[8] Scraps press claws
[9] Bundle tray set sensor (PS58)	[10] Trimmer scraps full sensor (PS41)
[11] Scraps press plate	[12] Bundle exit tray

[13] Front side direction	-
---------------------------	---

(b) Bundle exit tray expanding mechanism

The bundle exit tray is expandable. The folded bundle exit conveyance belt [6] is also expanded [1] when the bundle exit tray is expanded. At the time, it also moves the bundle exit conveyance belt drive shaft [5] for the bundle exit conveyance belt [1] and [6].



[1] Bundle exit conveyance belt (expanded)	[2] Folding stand
[3] Drive shaft	[4] Bundle exit drive belt
[5] Bundle exit conveyance belt drive shaft	[6] Bundle exit conveyance belt (folded)

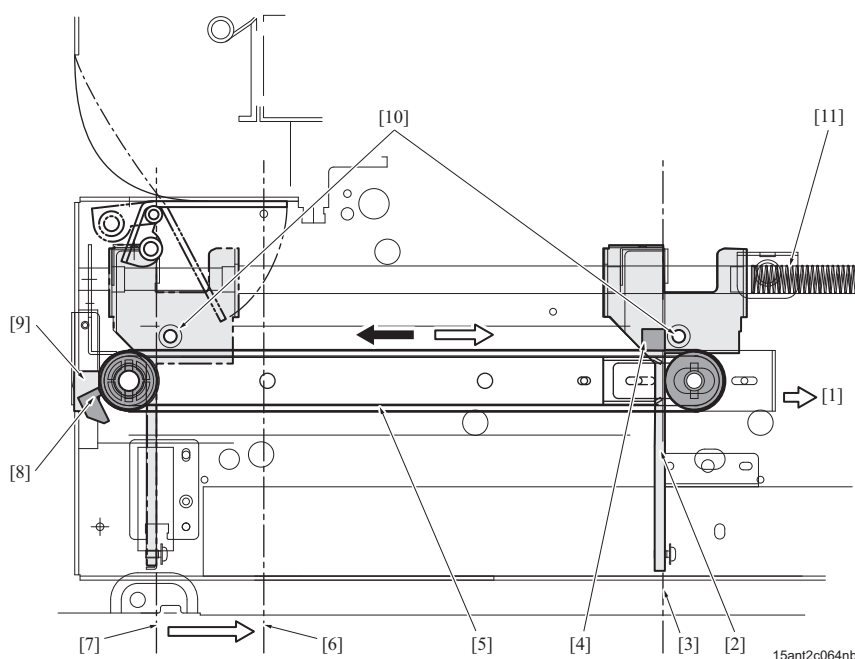
(c) Trimmer scraps press mechanism

Trimmer scraps press is executed by driving the bundle exit motor (M5). M[5] drives the pins [10] via the scraps press claws [4] on the belt [5] to move the scraps press plate [2] forward [1], then the plate presses the trimmer scraps. The spring [11] pushes the scraps press plate to put it back.

The trimmer scraps press is carried out when the actuator [8] turns ON the scraps press home sensor (PS48) [9] with the press position [3] of the scraps press plate is at the home position.

The maximum displacement of the scraps press plate is 200mm.

The trimmer scraps press is carried out when the trim is performed 5 times or when the total trimmed number of sheets becomes 60 sheets (30 sheets before folding) or more.



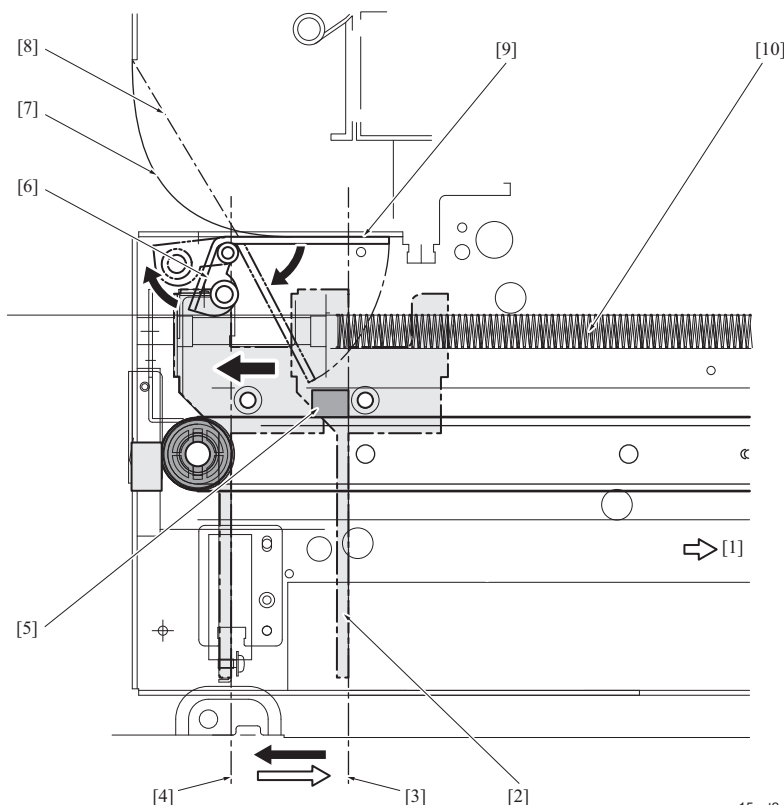
[1] Front side direction	[2] Scraps press plate
[3] Press position	[4] Scraps press claws

[5]	Belt	[6]	Scraps press plate home position (trimming position)
[7]	Backmost position	[8]	Actuator
[9]	Scraps press home sensor (PS48)	[10]	Pin
[11]	Spring		-

(d) Shutter mechanism

When the bundle exit motor (M5) moves the scraps press claw [5] backward and the spring [10] pushes the scraps press plate [2] to its backmost position [4], the shutter arm [6] is pushed up and the shutter [9] is opened. On the other hand, the shutter is closed when the scraps press plate is moved forward from the back most position to the position [3] by the spring of the shutter arm. Opening the shutter allows the guide sheet [7], which is attached to the shutter, to be straightened [8] due to the tension. Closing the shutter allows slack in the guide sheet to widen the dropping path of scraps.

Before trimming, the scraps press plate moves 50mm [3] from the backmost position and stops to be ready for trimming. The shutter repeats opening/closing operation by shuttling the scraps press plate 50mm back and forth in each trimming operation. This shutter operation creates vibration with the guide sheet to shake off the trimmer scraps.

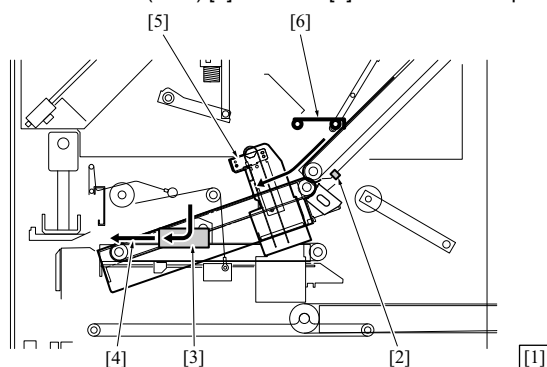


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[1]	Front side direction	[2]	Scraps press plate
[3]	Shutter closing position	[4]	Shutter opening position
[5]	Scraps press claws	[6]	Shutter arm
[7]	Guide sheet	[8]	Guide sheet (straightened)
[9]	Shutter	[10]	Spring

(2) Trimmer scraps removal control

The scraps removal fan motor (FM1) [3] blows air [4] to make sure to put the trimmer scraps to the scraps box.

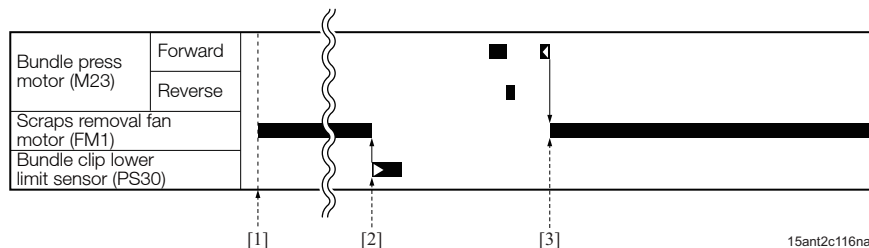


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[1]	Left-side view	[2]	Bundle clip lower limit sensor (PS30)
[3]	Scraps removal fan motor (FM1)	[4]	Air
[5]	Bundle press	[6]	Bundle clip

The trimmer scraps removal fan (FM1) operates only in the trimmer mode.

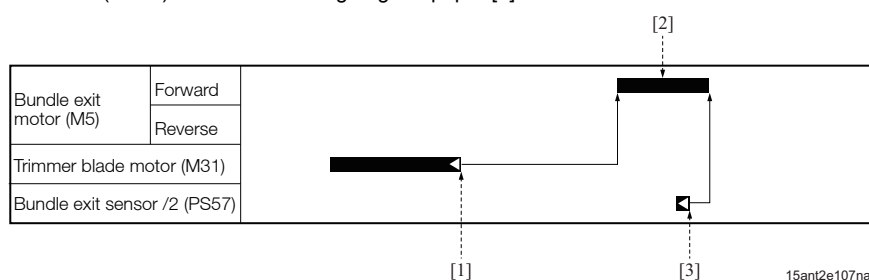
When the main body start signal [1] turns ON, FM1 is rotated and the bundle clip releases [2] the paper, FM1 stops for a time to prevent the paper from having the uneven edge. When the bundle press motor (M23) completes the paper press [3], FM1 is rotated again to send air so that sheet trimming scraps get in the scraps box without fail.



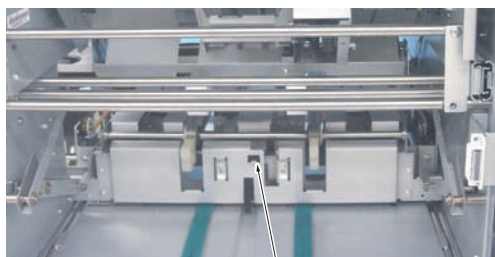
[1]	Main body start signal	[2]	Bundle clip released the paper
[3]	Paper press operation completed		-

(3) Bundle exit control

The bundle exit motor (M5) rotates in the forward direction and the bundle exit conveyance belt conveys the exit paper [2] after a specified period of time since the trimmer blade motor (M31) completes the trimming [1]. M5 stops after a specified period of time since the bundle exit sensor /2 (PS57) detects the trailing edge of paper [3].



[1]	Trimming completed	[2]	Bundle exit conveyance
[3]	Trailing edge of paper detected		-



[1]

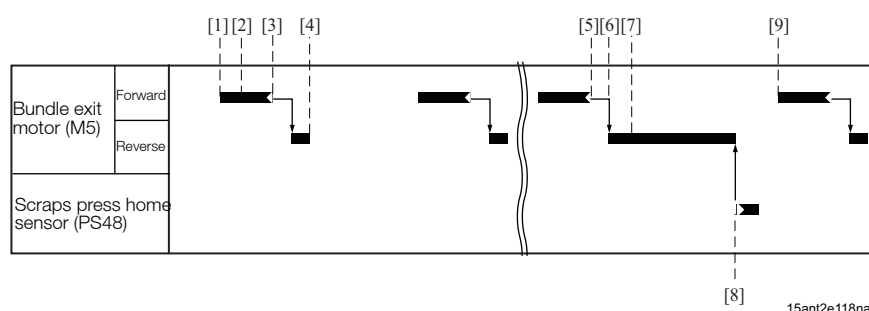
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[1]	Bundle paper exit sensor /2 (PS57)		-
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(4) Shutter/trimmer scraps press control

When the trimming is executed with the shutter closed, the bundle exit motor (M5) starts rotating forward to exit paper [1]. Then the scraps press plate moves backward to drop the trimmer scraps with the shutter opened [2]. After a specified period of time since the paper exit is finished [3], the M5 motor rotates in reverse to move the scraps press plate frontward 50mm and stops [4] with the shutter closed. Then the next trimming is excused in this condition.

After a specified period of time from paper exit when the trimming is performed 5 times or when the total trimmed number of sheets becomes 60 sheets or more after the previous scraps press operation [5], the M5 motor starts rotating in reverse to start the press operation [6]. When the press operation is started, the shutter opened by the paper exit operation is closed again [7]. When the scraps press home sensor (PS48) is ON (at the position where pressing trimmer scraps), the M5 motor stops [8] and next operation of the trimming and paper exit [9] is performed.

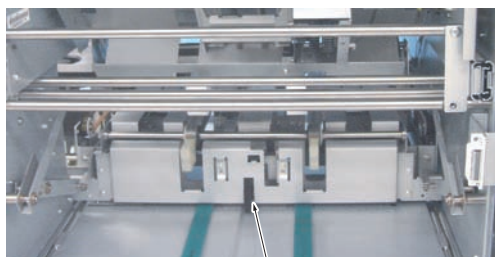


[1]	Start of paper exit	[2]	Shutter is opened
[3]	Finish of paper ejection	[4]	Shutter is closed

[5]	Finish of paper ejection	[6]	Start of press operation
[7]	Shutter is closed	[8]	Press position stop
[9]	Paper exit	-	

(5) Bundle exit paper full control

The bundle tray paper full sensor (PS61) [1] detects the bundle exit paper full. The main body displays the message on its operation panel when the paper full is detected.



[1]

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[1]	Bundle tray paper full sensor (PS61)	-	
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(6) Trimmer scraps full control

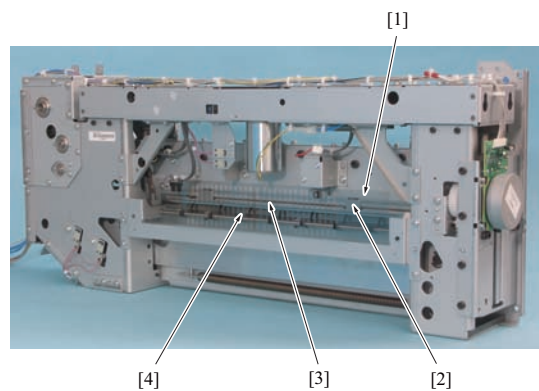
The trimmer scraps full sensor (PS41) detects the paper scraps full of the scraps box. When the PS 41 is turned ON for 3 seconds after the paper exit operation driven by the bundle exit motor (M5) is finished, the scraps are detected as full. The main body displays the message on its operation panel when the scrap full is detected.

(7) Trimmer scraps tray set detection

The scraps box set sensor (PS40) detects whether the scraps box is set or not. The main body displays the message on its operation panel when the scraps box is not set.

7. TRIMMER SECTION

7.1 Configuration

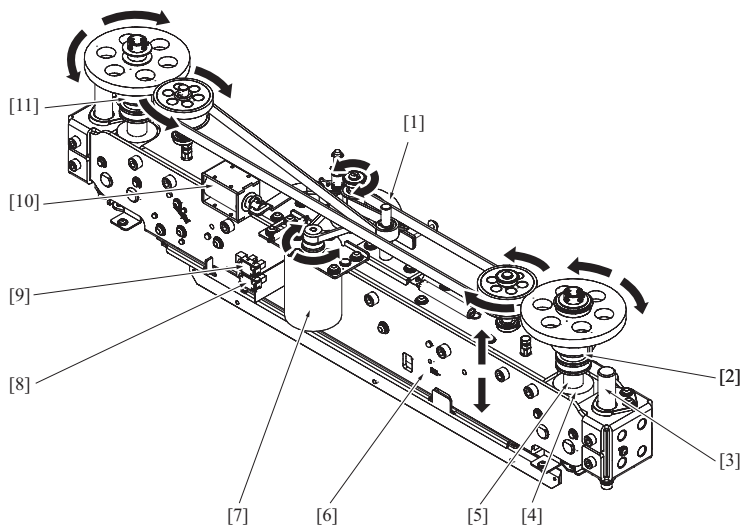


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[1]	Trimmer press plate	[2]	Trimmer board
[3]	Trimmer blade	[4]	Trimmer paddle

7.2 Drive

7.2.1 Trimmer press drive

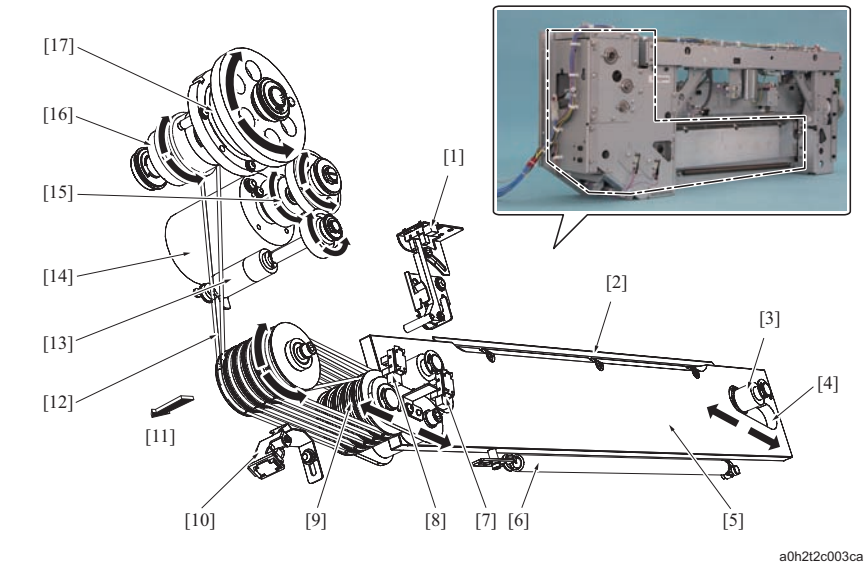


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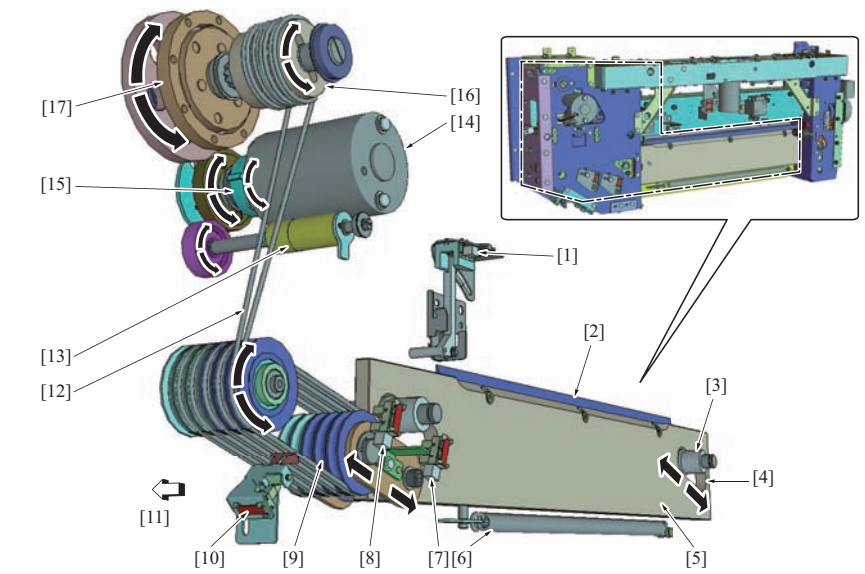
[1]	Trimmer brake	[2]	Planetary gear
[3]	Slide guide shaft	[4]	Nut
[5]	Press drive screw	[6]	Trimmer press plate
[7]	Trimmer press motor (M32)	[8]	Trimmer press home sensor (PS53)
[9]	Trimmer press upper limit sensor (PS52)	[10]	Brake solenoid (SD12)
[11]	Planetary gear	-	

7.2.2 Trimmer blade drive

- Previous trimmer unit

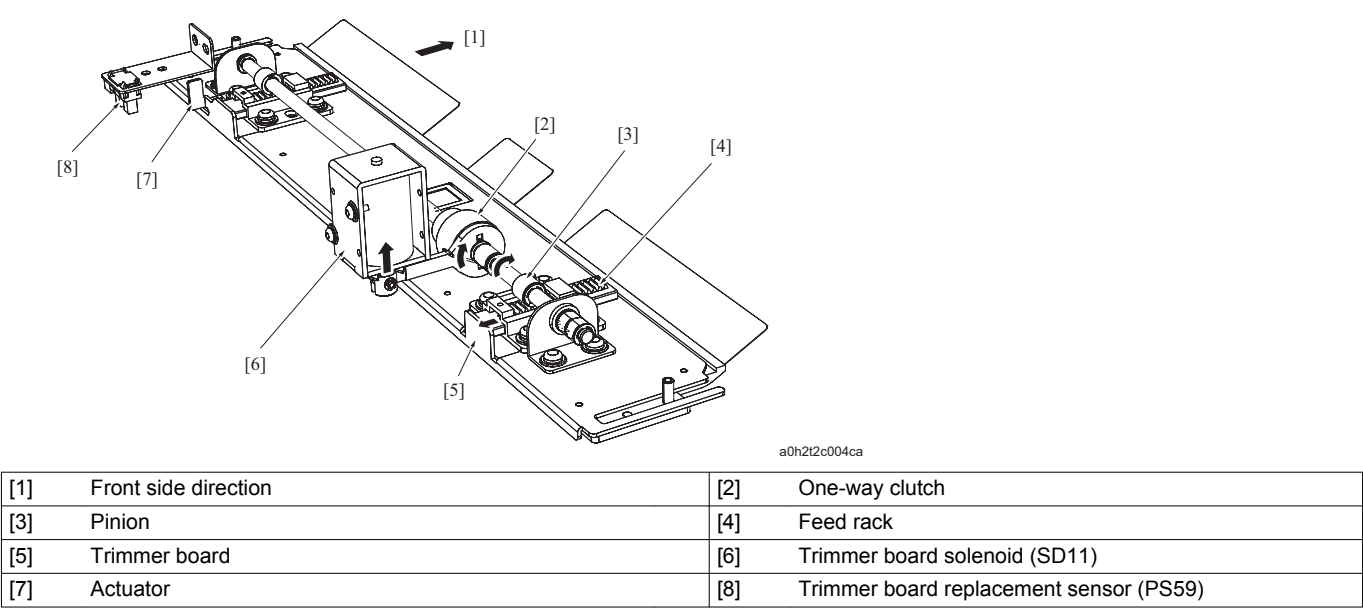


• New trimmer unit

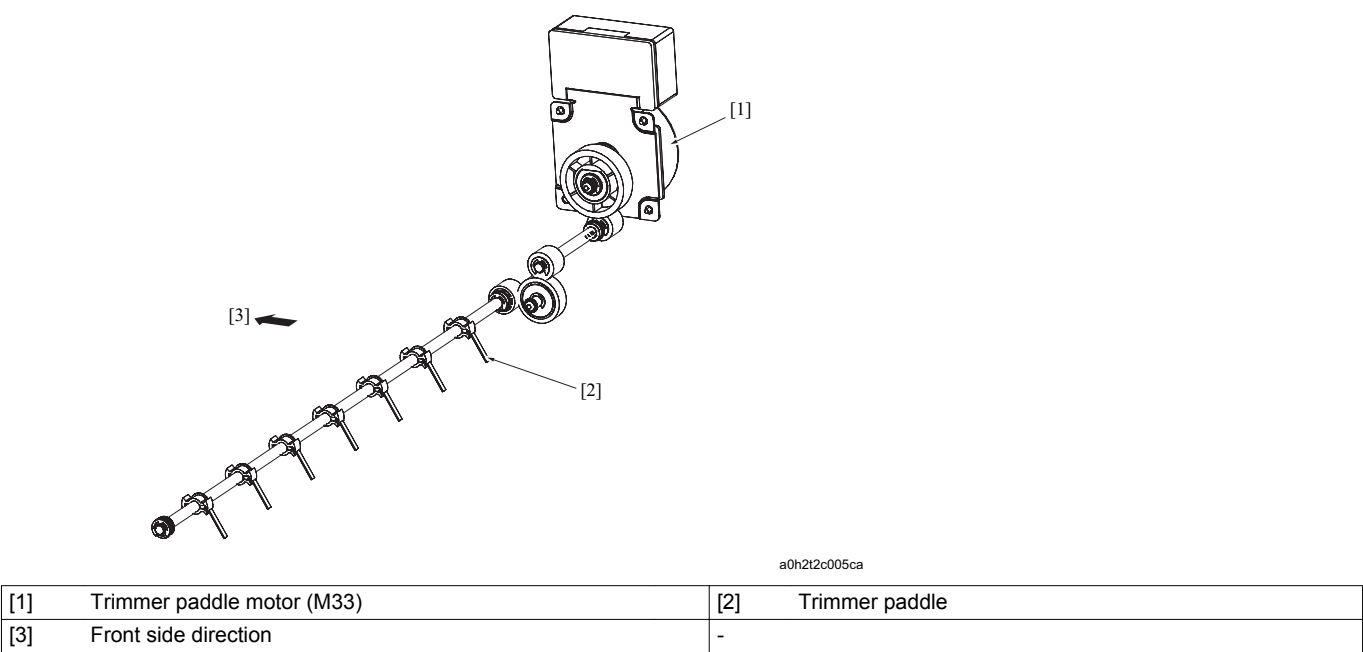


[1]	Trimmer completion sensor (PS62)	[2]	Trimmer blade
[3]	Guide shaft	[4]	Guide hole
[5]	Trimmer blade retaining plate	[6]	Spring
[7]	Trimmer blade home sensor (PS50)	[8]	Trimmer blade upper limit sensor (PS51)
[9]	Movable pulley	[10]	Wire slack prevention sensor (PS66)
[11]	Front side direction	[12]	Wire
[13]	Torque limiter	[14]	Trimmer blade motor (M31)
[15]	Planetary gear	[16]	Winding pulley
[17]	Planetary gear	-	

7.2.3 Trimmer board drive



7.2.4 Paddle drive

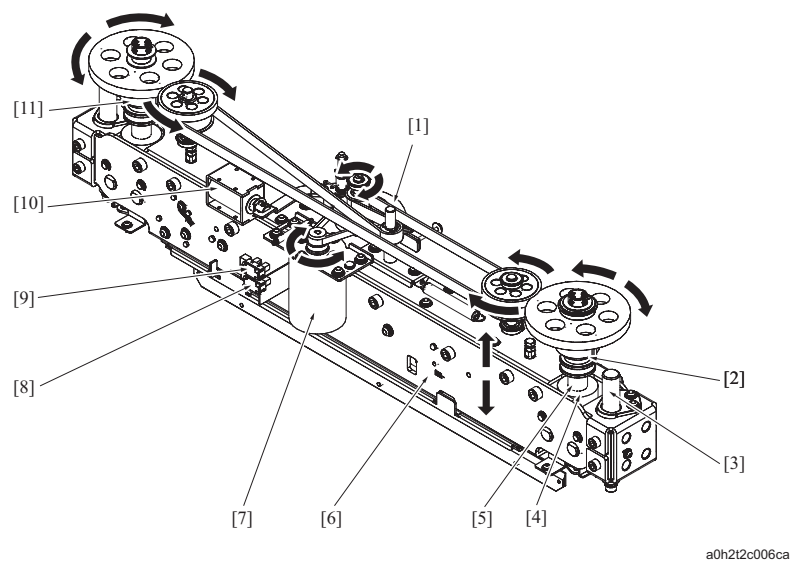


7.3 Operation

7.3.1 Trimmer press control

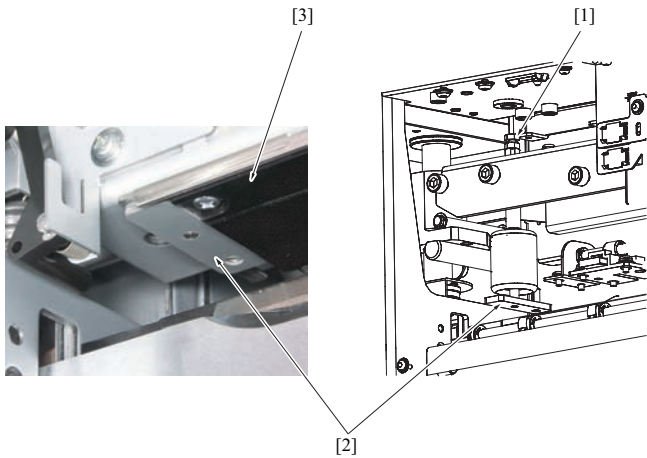
(1) Mechanism

The trimmer press is the mechanism to hold the paper at its fore-edge side to prevent the trimming misalignment. It opens about 6mm at the home position and drives the planetary gears [2] and [11] by the driving of the trimmer press motor (M32) [7]. The output shaft of the planetary gear rotates the press drive screw (trapezoidal screw) [5] and drives the nut [4] up and down. By this operation, the trapezoidal nut drives the trimmer press retaining plate [6] along the shaft [3] and presses paper. M32 detects the completion of the paper press via overcurrent. M32 rotates in the reverse direction to widen the opening to approximately 20mm before conveying the paper to the trimmer section, in case the number of the print paper is 16 or more (32 or more for the saddle stitched paper). The trimmer press home sensor (PS53) [8] and the trimmer press upper limit sensor (PS52) [9] detect the home position and 20mm of opening respectively. The brake solenoid (SD12) [10] drives the trimmer brake [1]. It presses the timing belt from M32 with ON to prevent the inverse rotation caused by the pushing of the trimmer blade.



[1]	Trimmer brake	[2]	Planetary gear
[3]	Slide guide shaft	[4]	Nut
[5]	Press drive screw (trapezoidal screw)	[6]	Trimmer press plate
[7]	Trimmer press motor (M32)	[8]	Trimmer press home sensor (PS53)
[9]	Trimmer press upper limit sensor (PS52)	[10]	Brake solenoid (SD12)
[11]	Planetary gear	-	

When changing the trimming position of the trimmer board or replacing the trimmer board via the I/O check mode, M32 rotates in the reverse direction to move up the trimmer press section higher than the position of the trimmer press upper limit sensor (PS52) and release the trimmer board [3] by pushing the shaft [1] of the trimmer board fixing plate [2] to the upper plate. At the time, the opening is approximately 23mm. The position is detected via overcurrent.



[1]	Shaft	[2]	Trimmer board fixing plate
[3]	Trimmer board	-	

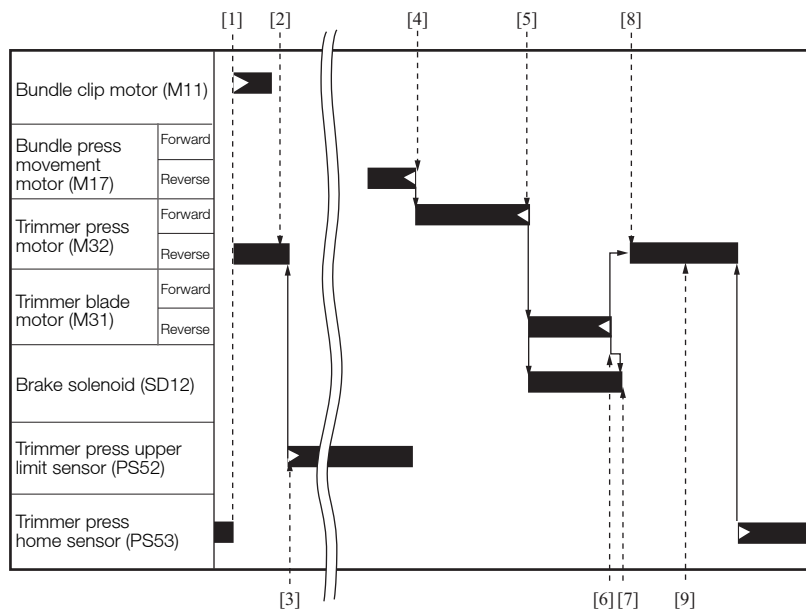
(2) Control

(a) The number of the print paper is 16 or more (32 or more for the saddle stitched paper)

The trimmer press motor (M32) rotates in the reverse direction [2] when the bundle clip motor starts conveying the paper [1]. When the trimmer press upper limit sensor (PS52) [3] detects upper limit position of the trimmer board, M32 opens the opening to 20mm and is stopped to wait for the paper.

When the conveyance of the bundle press movement motor (M17) completes [4], M32 rotates in the forward direction to press paper and stops when detecting the over current of M32 [5]. The brake solenoid (SD12) turns ON when M32 stops, and keeps the belt to prevent the trimmer press board from being pushed up by the trimmer blade.

When the trimmer blade motor (M31) completes trimming [6], SD12 turns OFF [7] and M32 rotates in the reverse direction to start opening [8]. When the print is completed, the returning operation to the home position [9] of M32 stops by PS53 ON.



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[1]	Conveyance by the bundle clip started	[2]	Opening operation
[3]	Stopped when the opening is approx. 20mm	[4]	Conveyance of the trimmed paper completed
[5]	Trimmer press completed	[6]	Trimming completed
[7]	Brake release	[8]	Opening operation started
[9]	Returning operation to the home position	-	

(b) The number of the print paper is 15 or less (30 for the saddle stitched paper)

The trimmer press motor (M32) rotates in the forward direction to press the paper without widening the opening when the paper is conveyed to the opening.

7.3.2 Trimmer blade control

(1) Mechanism

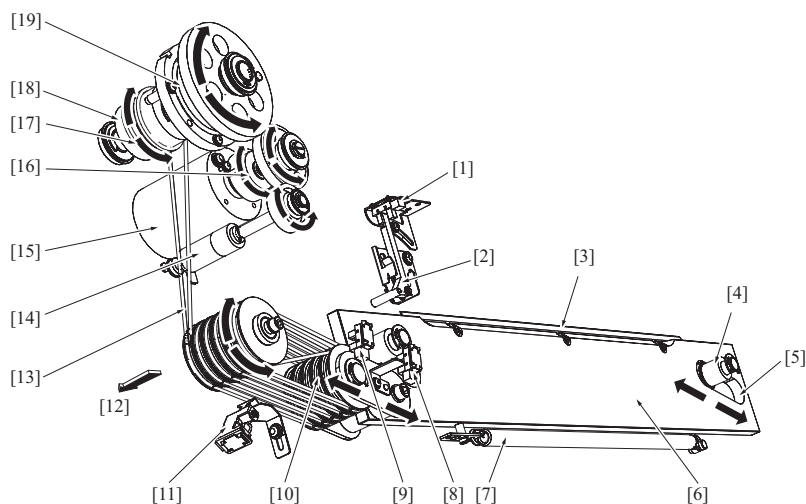
The trimmer blade [3] driven by the trimmer blade motor (M31) [15] conducts the trimming while trimmer press presses the paper.

When the trimmer blade [3] goes up, M31 drives the winding pulley [18] in the direction of winding [17] to wind up the wire [13]. The planetary gears [16] and [19] are between M31 and the winding pulley [18] and it enables the high output by high gear ratio.

Once the wire [13] is wound up, the trimmer blade retaining plate [6] goes up in a slanting direction since the movable pulley is pulled and the guide hole [5] is controlled by the guide shaft [4]. It trims the paper with the trimmer blade [3] attached on the trimmer blade retaining plate [6]. The completion of the trimming is detected when the upper surface of the trimmer blade retaining plate [6] pushes up the actuator [2] and the trimmer completion sensor (PS62) [1] turns ON. When PS62 cannot detect it, the overcurrent of M31 detects the completion of the trimming. If the overcurrent of M31 is not detected even if the trimmer blade keeps moving up, the trimmer blade upper limit sensor (PS51) [9] detects the upper limit.

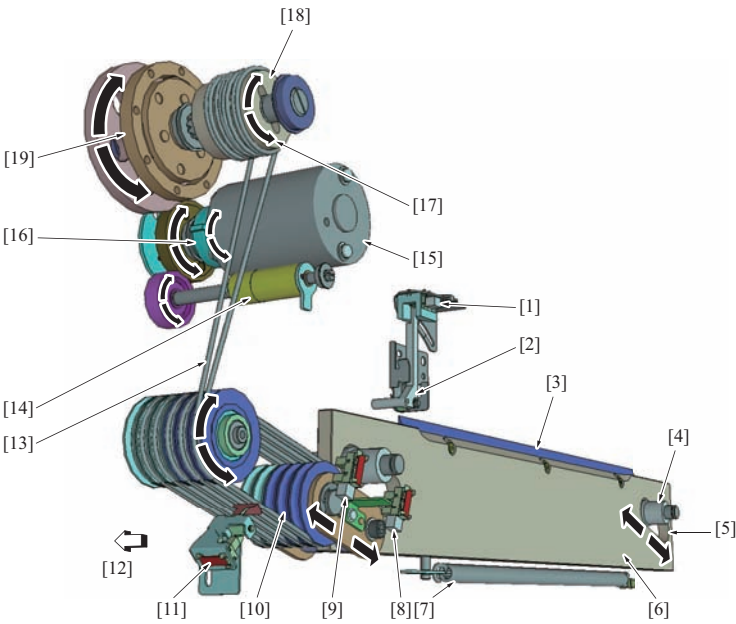
For moving down the trimmer blade, M31 rotates in the reverse direction to loosen the wire and the spring [7] lowers the trimmer blade retaining plate [6]. The trimmer blade home sensor (PS50) [8] detects the lower limit. The torque limiter is equipped to prevent the wire from being slacking inertially when moving down. Wire slack prevention sensor (PS66) [11] detects the slack of the wire.

- Previous trimmer unit



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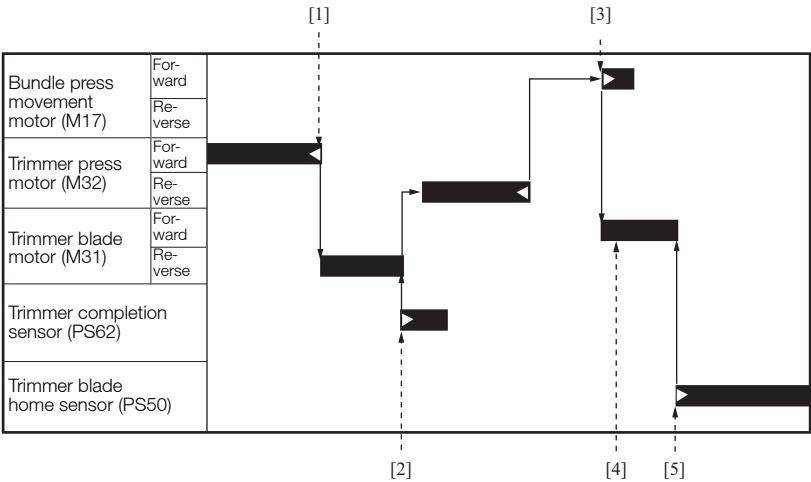
- New trimmer unit



[1]	Trimmer completion sensor (PS62)	[2]	Actuator
[3]	Trimmer blade	[4]	Guide shaft
[5]	Guide hole	[6]	Trimmer blade retaining plate
[7]	Spring	[8]	Trimmer blade home sensor (PS50)
[9]	Trimmer blade upper limit sensor (PS51)	[10]	Movable pulley
[11]	Wire slack prevention sensor (PS66)	[12]	Front side direction
[13]	Wire	[14]	Torque limiter
[15]	Trimmer blade motor (M31)	[16]	Planetary gear
[17]	Winding direction	[18]	Winding pulley
[19]	Planetary gear	-	

(2) Control

The trimmer blade motor (M31) starts trimming when the trimmer press motor (M32) completes the press and stops [1]. M31 stops when the trimming completes with the trimmer completion sensor (PS62) ON [2]. M31 starts the returning operation to the home position [4] when the bundle press motor (M17) starts releasing the press [3]. M31 stops when the trimmer blade home sensor (PS50) turns ON [5].



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[1]	Trimming started when trimmer press completed	[2]	Trimming completed
[3]	Paper exit operation started	[4]	Returning operation to the home position
[5]	Home position detected	-	

7.3.3 Trimmer board control

(1) Mechanism

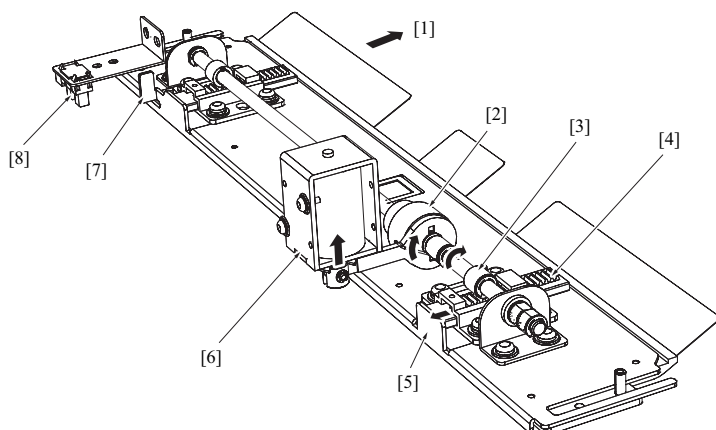
If the trimmer board gets the trimmer blade to the same position many times, the trimmer operation is carried out improperly due to the damage on the board. For this reason, the trimmer board is slid 1mm backward for sheet cutting each time a job of 700 times trimming is completed.

The trimmer board solenoid (SD11) [6] slides the trimmer board [5] to backward with its fixing released by the trimmer press motor (M32). The pinion [3] pushes the feed rack [4] 0.5mm every time SD11 turns ON. The rotation of the pinion [3] is transmitted to the rack by the one-way clutch [2] and pushes the trimmer board when SD2 turns ON. The pinion [3] does not rotate and push the trimmer board when SD11 turns OFF by the one-way clutch.

Each time a job of 700 times trimming is completed, SD11 is turned on twice to move the trimmer board 1mm. The trimmer board can be slid up to approximately 26mm. The main body displays the message on its operation panel when the trimmer board replacement sensor (PS59) [8] is turned ON by the actuator [7]. The trimmer operation is prohibited when the trimming is conducted 700 times since PS59 turns ON.

Note

- The operation timing of the trimmer board solenoid can be selected among 500/300/700 (700 by default), and the travel distance can be selected among 1.0/1.5/2.0mm (1.0 by default) from "Finisher Adjustment" in service mode.
- If 1050, if the DIPSW22-5 setting in service mode is changed to 1, the operation timing of the trimmer board solenoid becomes selectable among 700/500/300 (700 by default) on the adjustment screen in the user mode.
- The burr occurs on the trimmed edge of the paper before the movement cycle of the trimmer board and that depends on the paper type.

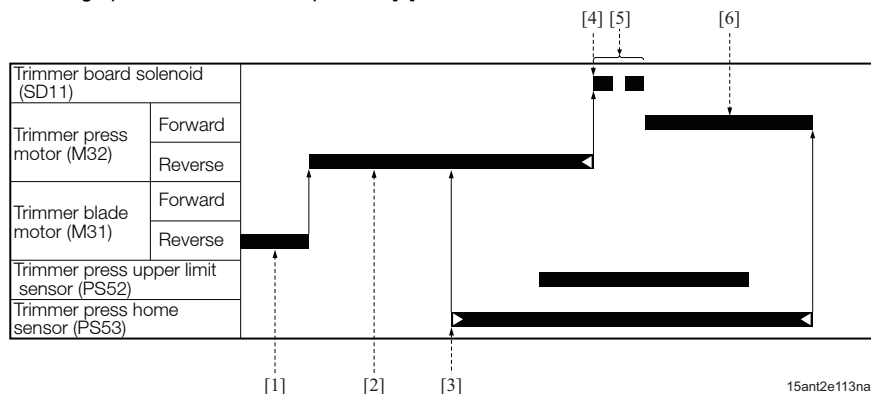


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[1]	Front side direction	[2]	One-way clutch
[3]	Pinion	[4]	Feed rack
[5]	Trimmer board	[6]	Trimmer board solenoid (SD11)
[7]	Actuator	[8]	Trimmer board replacement sensor (PS59)

(2) Control

The trimmer press motor (M32) starts the returning operation [2] to the home position when the 700th trimmer operation [1] is completed. M32 does not stop by defection of the trimmer press home sensor (PS53) [3]. The opening keeps widening until the overcurrent of M32 is detected [4]. When M32 stops, the trimmer board solenoid (SD11) turns ON/OFF twice [5] to move the trimmer board 1mm. Then, M32 starts the returning operation to the home position [6].



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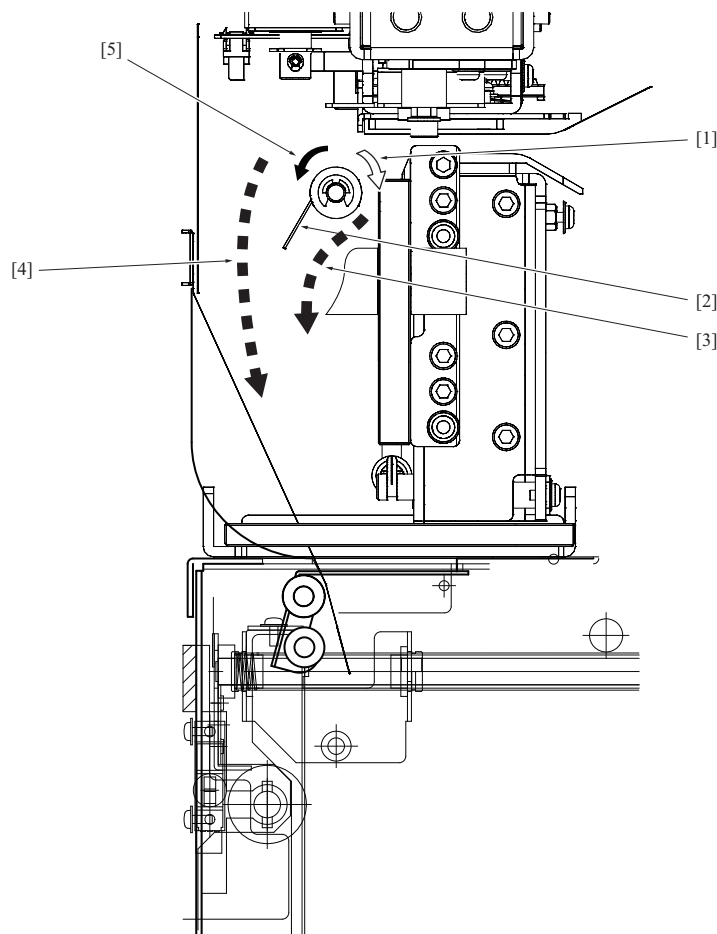
[1]	700th trimmer operation	[2]	Opening operation of the trimmer press
[3]	Home position detected	[4]	Overcurrent of M32 detected
[5]	Trimmer board moved 1mm	[6]	Returning operation to the home position

7.3.4 Trimmer paddle control

(1) Mechanism

The trimmer paddle [2] is provided to prevent the saddle-stitched paper from creating trails with scraps by getting into the paper during the press operation, and to drop the scraps forcibly. The trimmer paddle motor (M33) drives the trimmer paddle.

Trimming amount is 15mm or less: M33 rotates forward [1] to drop [3] the trimming scraps with the trimming paddle. Trimming amount is more than 15mm: The M33 motor rotates in the reverse direction [5] to rake and to drop the scraps to the wider dropping path [4].



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[1]	Trimmer paddle motor (M33) forward direction	[2]	Trimmer paddle
[3]	Dropping path (Trimming amount is 15mm or less)	[4]	Dropping path (Trimming amount is more than 15mm)
[5]	Trimmer paddle motor (M33) reverse direction	-	

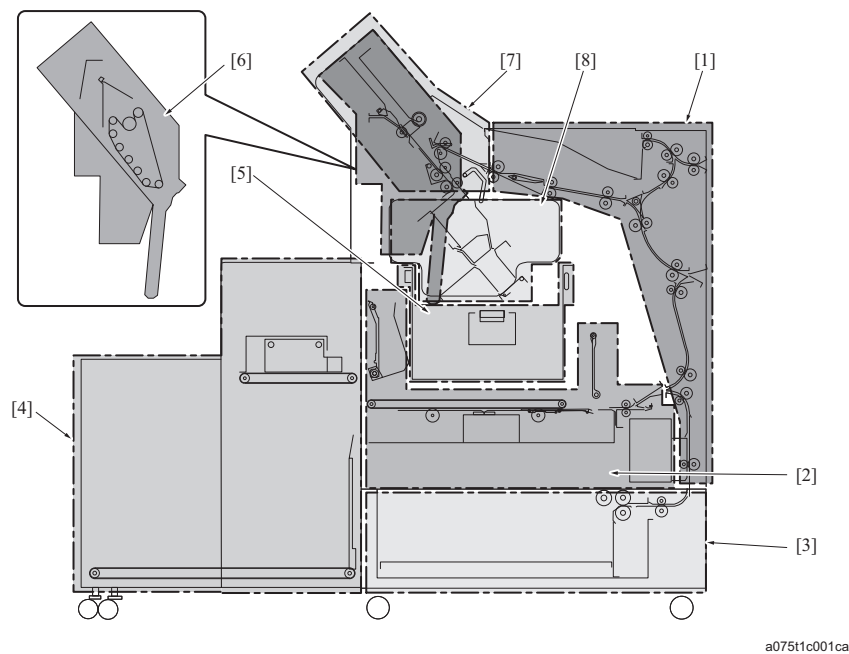
(2) Control

In trimming mode, the trimmer paddle motor (M33) starts forward/reverse rotation after the bundle clip motor (M11) operates paper clipping, and then the M33 motor stops when the trimming JOB is finished.
If the trimming amount value is specified by the "Trimming adjustment" in service mode, the forward/reverse rotation of motor is controlled by the trimming amount that adds the adjusted value. (Edges of standard-sized paper are trimmed by 3mm even when the adjustment value is specified to 0.)

PP THEORY OF OPERATION PB-502

1. OUTLINE

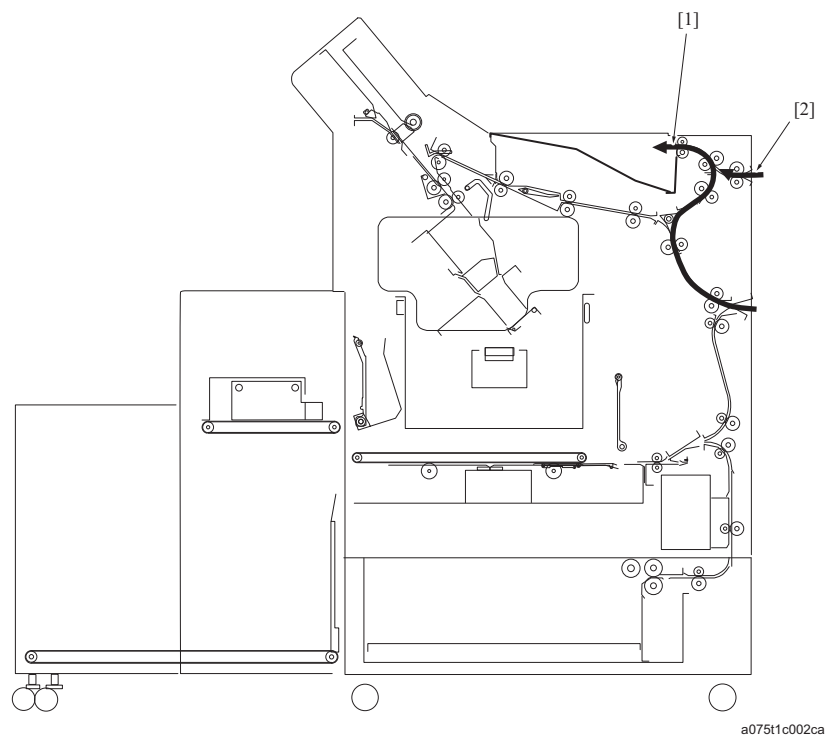
1.1 Unit configuration



[1]	Conveyance section	[2]	Cover paper table section
[3]	Cover paper supply section	[4]	Book stock section
[5]	Glue tank section	[6]	Pellet supply section
[7]	Sub compile (SC) section	[8]	Clamp section

1.2 Paper path

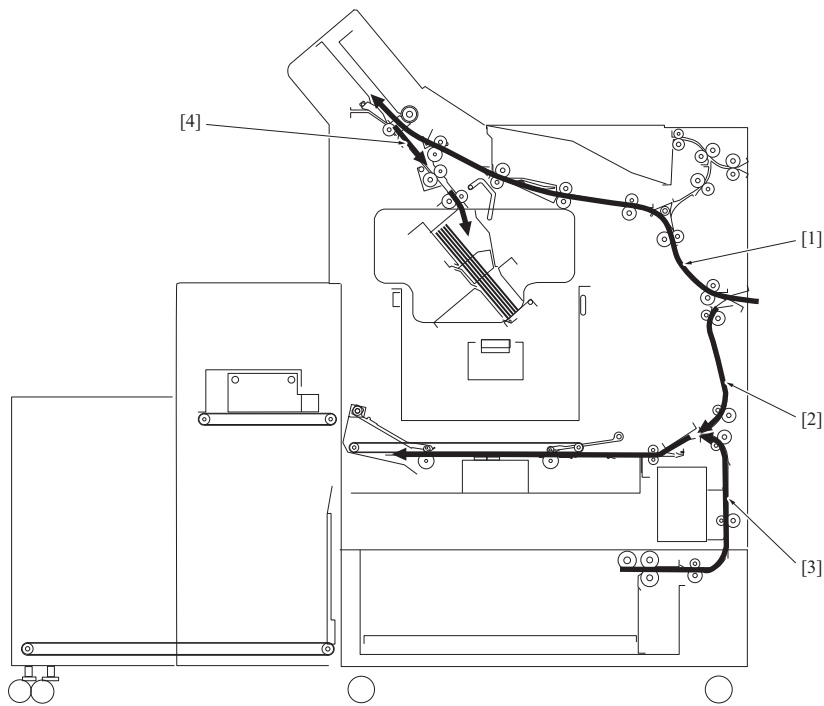
1.2.1 Sub tray exit



[1]	Sub tray exit	[2]	Exit from the FD sub tray
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1.2.2 Perfect binding mode

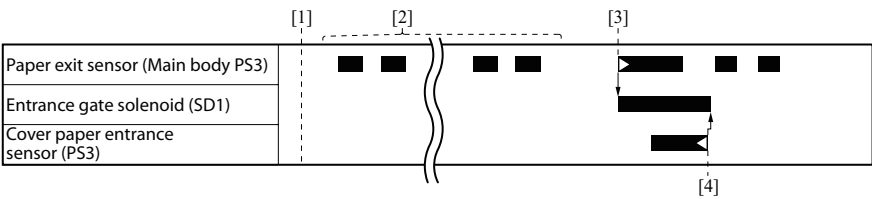
(1) Conveyance of inside papers to the clamp section and conveyance of cover paper



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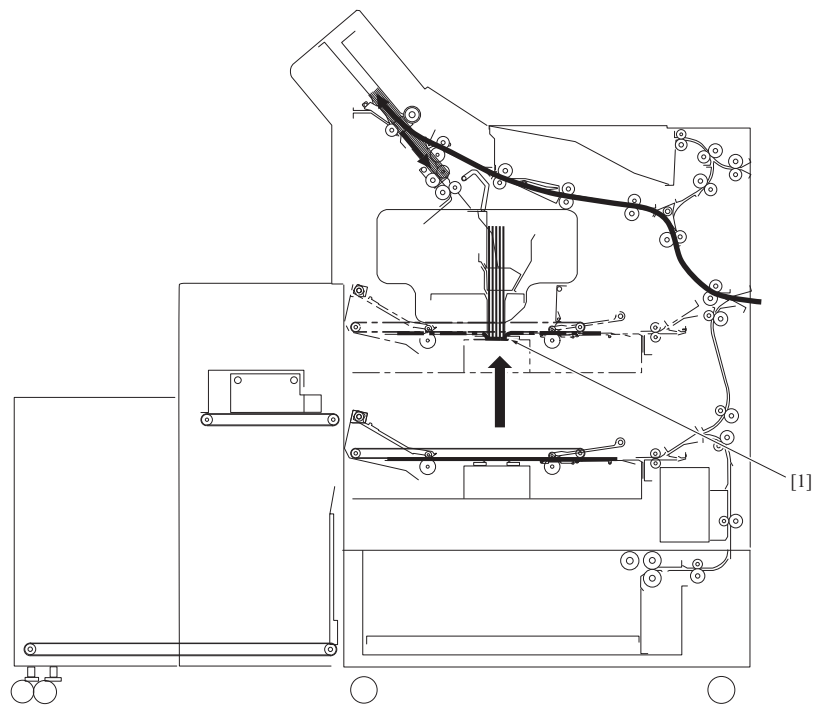
[1]	Conveyance of inside paper	[2]	Conveyance of cover paper from the main body
[3]	Conveyance of cover paper from the PB tray	[4]	Switchback conveyance

(2) Clamping and glue application



[1]	Switchback conveyance	[2]	Bypass conveyance
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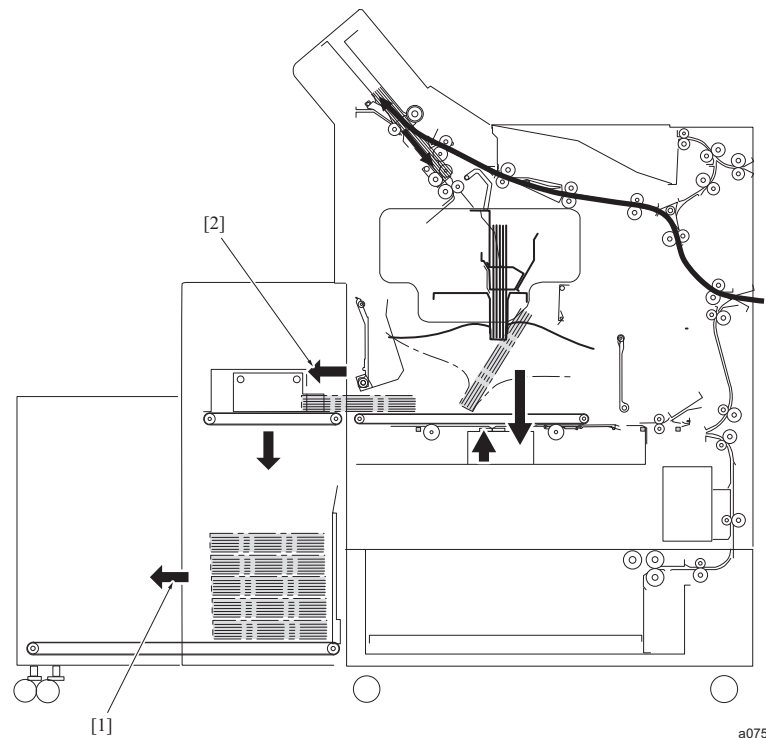
(3) Glue application to cover paper and cover paper folding operation



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[1] Cover paper folding operation	-
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(4) Book stock

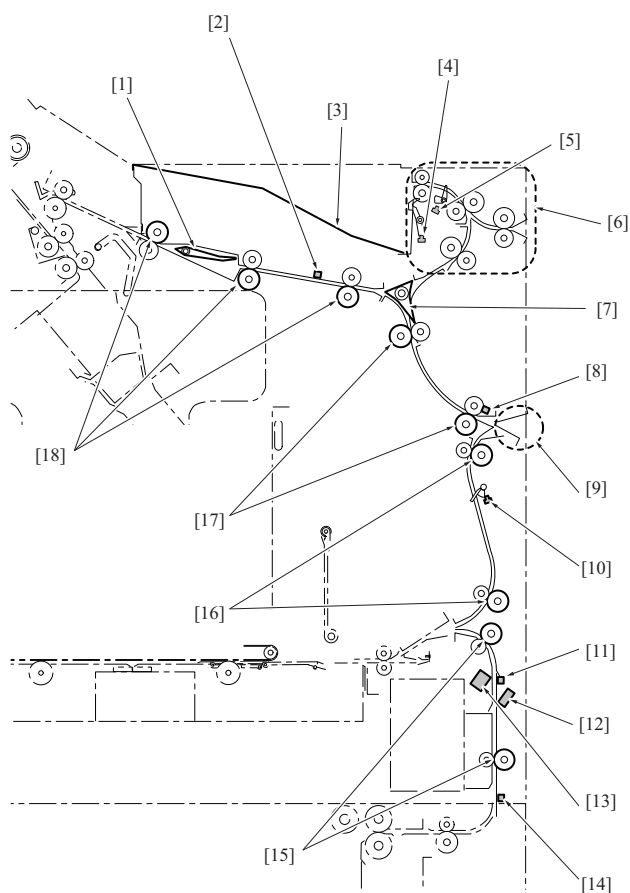


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[1] Moving to the second row	[2] Paper exit of the book
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2. CONVEYANCE SECTION

2.1 Configuration

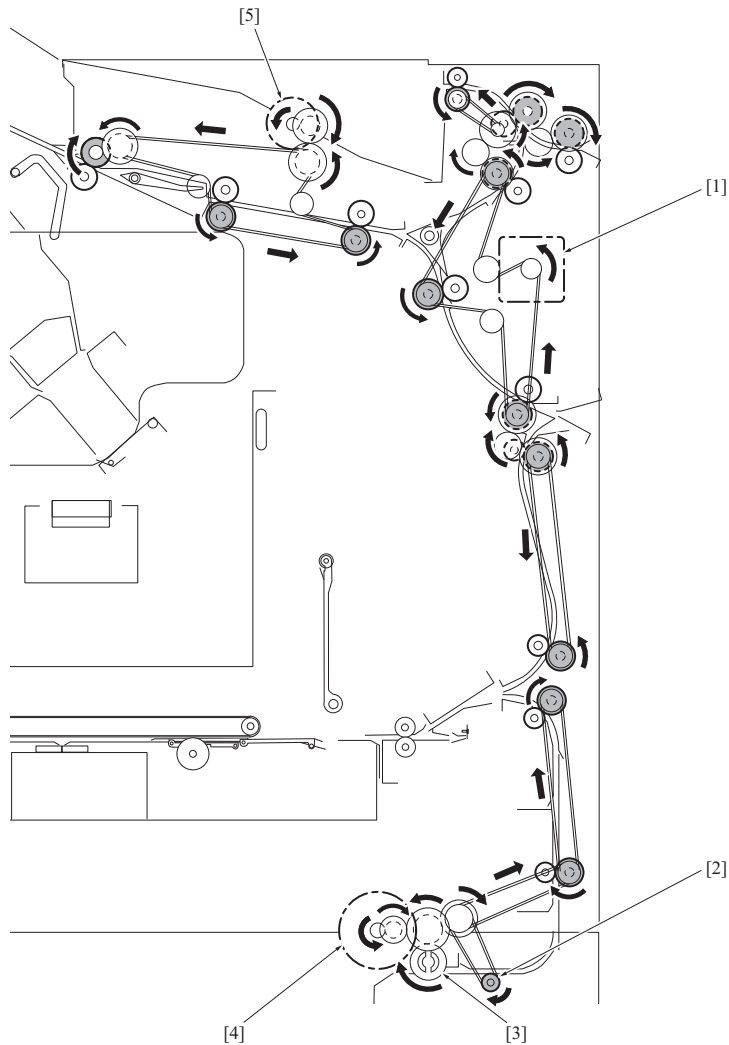


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[1] Bypass gate	[2] SC entrance sensor (PS2)
[3] Sub tray	[4] Sub tray full sensor (PS5)
[5] Sub tray exit sensor (PS4)	[6] Sub tray conveyance roller
[7] Sub tray gate	[8] Entrance sensor (PS1)
[9] Entrance gate	[10] Cover paper entrance sensor (PS3)
[11] Cover paper conveyance sensor /4 (PS78)	[12] Multi feed detection board /1 (MFDTB71)
[13] Multi feed detection board /2 (MFDTB72)	[14] Cover paper conveyance sensor /5 (PS79)
[15] Cover paper feed roller	[16] Cover paper conveyance roller
[17] Entrance conveyance roller	[18] Intermediate conveyance roller

2.2 Drive

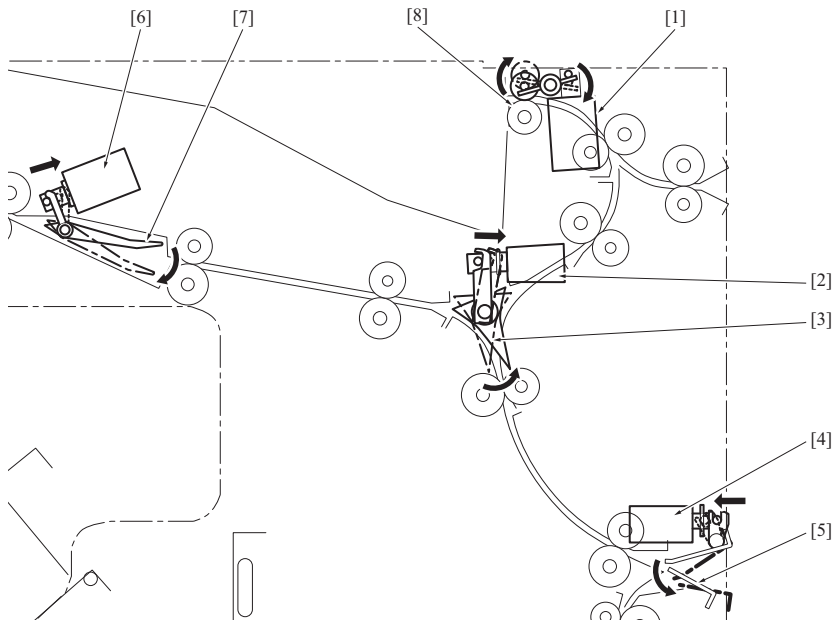
2.2.1 Entrance conveyance drive/Intermediate conveyance drive/Cover paper conveyance drive



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[1]	Entrance conveyance motor (M1)	[2]	Registration roller (to the cover paper supply section)
[3]	Paper feed roller (to the cover paper supply section)	[4]	Cover paper feed motor (M74)
[5]	Intermediate conveyance motor (M2)	-	

2.2.2 Entrance gate drive/Bypass gate drive/Sub tray gate drive/Sub tray exit and separation drive



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[1] Sub tray paper exit solenoid (SD4)	[2] Sub tray gate solenoid (SD3)
[3] Sub tray gate	[4] Entrance gate solenoid (SD1)
[5] Entrance gate	[6] Bypass gate solenoid (SD2)
[7] Bypass gate	[8] Paper exit driven roller

2.3 Operation

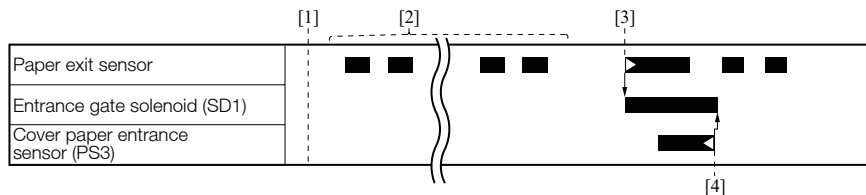
2.3.1 Gate control

(1) Entrance gate control

- The entrance gate switches the paper path for the cover paper used for perfect binding so that the paper conveyed from the main body, PI-PFU or the PI of FD is conveyed to the cover paper table section.
- The entrance gate solenoid (SD1) activates the gate. When the SD1 turns OFF, the gate is opened to convey the cover paper toward the sub tray gate, and when the SD1 turns ON, the gate is changed to make a paper path toward the cover paper table section.
- The SD1 turns OFF while the inside papers for perfect binding are conveyed, or while they are exit on the sub tray. It turns ON while cover paper is conveyed from the main body, PI-PFU or PI of FD.

(a) When cover paper being conveyed from the main body

- When a print job is received, the entrance gate solenoid (SD1) turns OFF [1] to open the entrance gate toward the sub tray gate.
- Cover paper is conveyed through the entrance gate [2].
- When the paper exit sensor of the previous device (main body or post processing machine) detects the leading edge of the cover paper, the SD1 turns ON to switch the entrance gate direction toward the cover table section [4].
- Once a prescribed time period has elapsed after the cover paper entrance sensor (PS3) detects the trailing edge of cover paper [4], the SD1 turns OFF to switch the entrance gate direction toward the sub tray gate for conveying paper to the SC section.



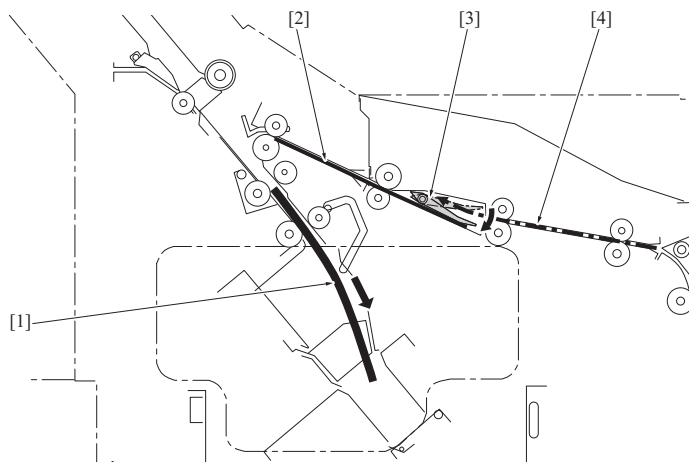
[1] Print start signal ON	[2] Paper conveyance
[3] Cover paper leading edge detection	[4] Cover paper trailing edge detection

(2) Sub tray gate control

- The sub tray gate switches the paper path for inside papers used for perfect binding between toward the SC section and toward the sub tray to be exit.
- The sub tray gate solenoid (SD3) activates the sub tray gate. When the SD3 is OFF, the gate is opened toward the SC section, and when the SD3 becomes ON, the gate direction is switched toward the sub tray to exit inside papers.
- While inside papers are exit on the sub tray, the SD3 turns ON upon receiving a print job, and turns OFF when the job is finished.

(3) Bypass gate control

- The SC section is designed to stack a certain number of inside papers (n) of the subsequent book while the pages of previous book is glued at the clamp section. The bypass gate [3] operates to lay next 2 sheets of inside paper ("n+1"th and "n+2"th) one on top of another and keep them until the stacked "n"th sheet of inside paper at the SC section is conveyed to the clamp section [1]. It saves time for conveying the inside paper and increases productivity.
- The bypass gate solenoid (SD2) activates the bypass gate.

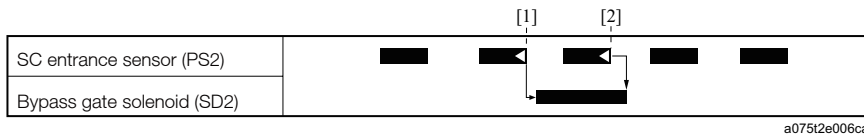


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[1] Paper bundle from the first page to the "n"th page of the 2nd and subsequent copies	[2] "n+1"th paper of subsequent book
[3] Bypass gate	[4] "n+2"th paper of subsequent book

(a) Control

1. The bypass gate solenoid (SD2) turns ON when a specified period of time has elapsed after the SC entrance sensor (PS2) detects the trailing edge [1] of the "n+1"th inside paper of subsequent book.
2. The solenoid turns OFF when a prescribed time period has elapsed after the "n+2"th inside paper is laid over the "n+1"th inside paper, and the SC entrance sensor (PS2) detects the trailing edge of the "n+2"th inside paper [2].



[1]	Detection of trailing edge of "n+1"th paper of subsequent book	[2]	Detection of trailing edge of "n+2"th paper
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2.3.2 Entrance conveyance control

- The entrance conveyance motor (M1) drives the entrance conveyance roller, sub tray conveyance roller, main body cover paper conveyance roller, and the cover paper conveyance roller. The drive force is transmitted via the gear and the timing belt.

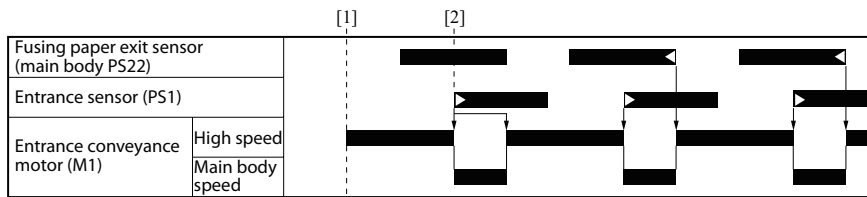
(1) Perfect binding mode**(a) When feeding cover paper from the PB cover paper tray**

- The entrance conveyance motor (M1) starts to turn at high speed upon receiving a print job.
- The M1 stops when the JOB is finished.

(b) When feeding cover paper from the main body

1. When detecting that the print start signal turns ON, the entrance conveyance motor (M1) turns ON [1] (starts to turn at high speed).
2. When the main body paper exit sensor is turned ON [4] by the leading edge of the cover paper, the M1 starts to turn at the same speed as the main unit. *1
3. Upon detection of the trailing edge of the cover paper by the main body paper exit sensor, the M1 starts to turn at high speed [5] to convey the paper.

*1 1051 only. The speed of M1 is not switched for C8000/1200/1200P/C7000/C7000P/C70hc/C6000.

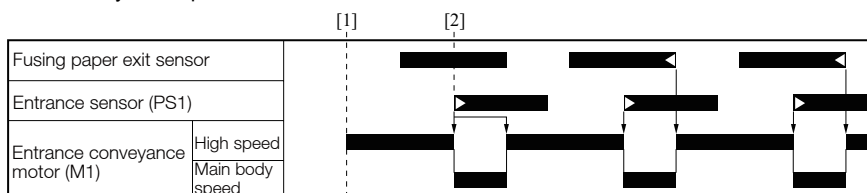


[1]	Print start signal ON	[2]	Paper
[3]	Change of main body process speed	[4]	Change to the same speed as the main unit
[5]	Change to high speed rotation		-

(2) Sub tray exit mode**(a) Large-size double-sided mode, single-sided main body straight mode (320mm or longer in the sub scan direction)**

1. The entrance conveyance motor (M1) starts to turn at high speed [1] upon receiving a print job, and starts to decelerate [2] in accordance with the main body process speed when the entrance sensor (PS1) detects the leading edge of paper.
2. After the specified time period from the entrance sensor (PS1), the M1 starts to turn at high speed again.

*1 1051 only. The speed of M1 is not switched for C8000/1200/1200P/C7000/C7000P/C70hc/C6000.



[1]	Print start signal ON	[2]	Change to the main body process speed
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(b) Small-size all modes, large-size main body reverse paper exit mode (320mm or shorter in the sub scan direction)

- When detecting that the print start signal turns ON, the entrance conveyance motor (M1) turns ON (starts to turn at high speed).

2.3.3 Intermediate conveyance control

- The intermediate conveyance roller is driven by the drive force of the intermediate conveyance motor (M2) transmitted via the gear and the timing belt.

(1) Perfect binding mode

- The intermediate conveyance motor (M2) starts to rotate when a print job is received.

(2) Sub tray paper exit mode

- The intermediate conveyance motor (M2) does not work.

2.3.4 Cover paper conveyance control

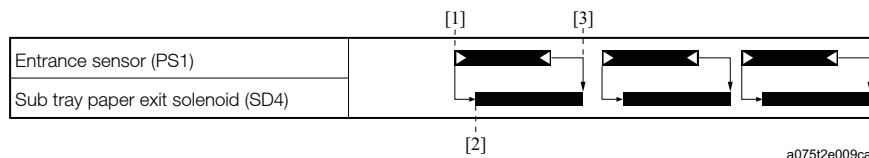
- The cover paper conveyance section and the cover paper conveyance roller are driven by the drive force of the cover paper feed motor (M74) transmitted via the gear, timing belt, and the coupling.
- The M74 stops when a prescribed time period has elapsed after the cover paper conveyance sensor /4 (PS78) detects the trailing edge of the cover paper.
- For details of the feeding operation, refer to [COVER PAPER SUPPLY SECTION](#)

2.3.5 Sub tray paper exit release control

- The sub tray release operation is performed to align edges of papers exit onto the sub tray.
- The sub tray exit solenoid (SD4) activates the operation. The sub tray exit roller separates from the spring when the SD4 becomes On, and the roller moves to push the spring when the SD4 turns Off.

(1) Large-size (320mm or longer in the sub scan direction)

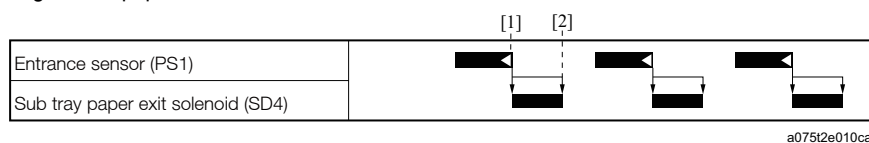
- When a prescribed time period has elapsed after the entrance sensor (PS1) detects the leading edge of paper [1], the sub tray exit solenoid (SD4) turns ON to release the sub tray exit roller from the spring [2].
- The SD4 turns OFF to make the roller push the spring [3] when a prescribed time period has elapsed after the PS1 detects the trailing edge of the paper.



[1]	Paper leading edge detection	[2]	The sub tray exit roller separates from the spring
[3]	The sub tray exit roller pushes against the spring	-	

(2) Small-size (320mm or shorter in the sub scan direction)

- After the entrance sensor (PS1) detects the trailing edge of paper, the sub tray exit solenoid (SD4) turns ON to make the sub tray exit roller separate from the spring [1].
- The SD4 turns OFF to make the roller push the spring [2] when a prescribed time period has elapsed after the PS1 detects the trailing edge of the paper.



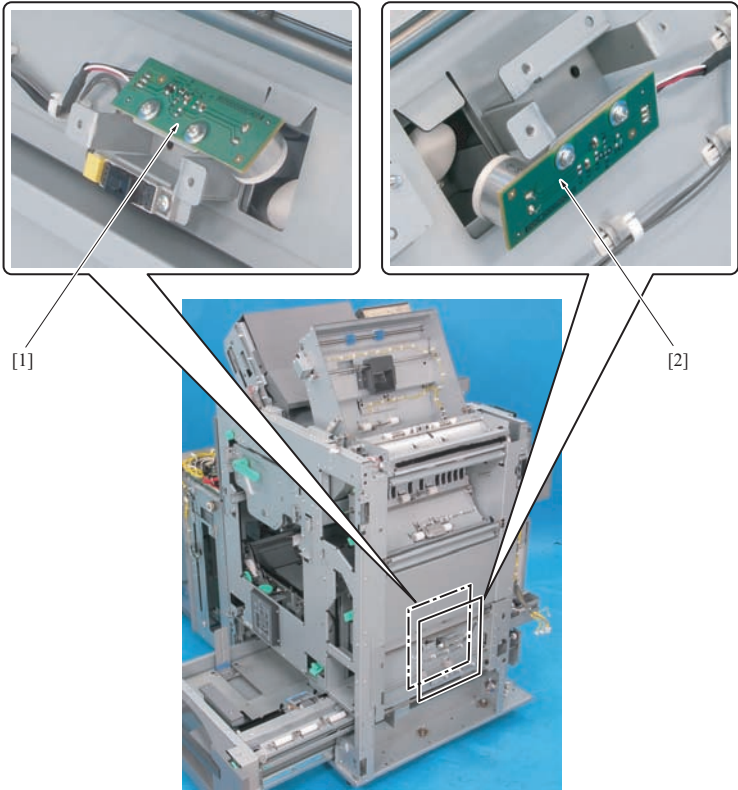
[1]	The sub tray exit roller separates from the spring	[2]	The sub tray exit roller pushes against the spring
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2.3.6 Sub tray full-status detection control

- When the sub tray becomes full, the sub tray full sensor (PS5) detects the full-status.

2.3.7 Cover paper multi feed detection control

- When multiple papers are conveyed from the PB cover paper tray at a time, the supersonic sensors; multi feed detection board /1 (MFDTB71) [2] and /2 (MFDTB72) [1] detect the error. The MFDTB71 transmits a supersonic wave and the MFDTB72 receives it.

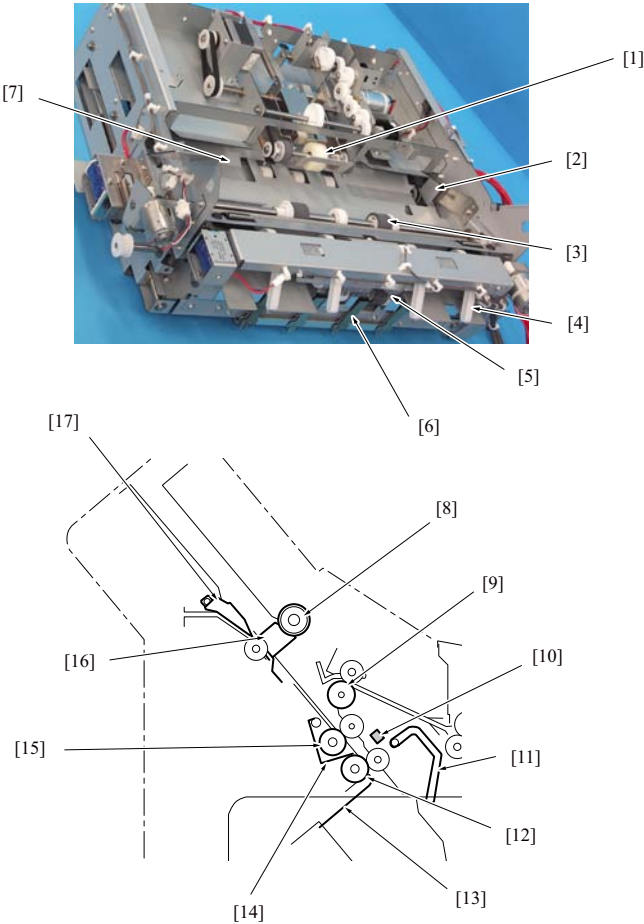


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[1]	MFDBR	[2]	MFDBS
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3. SUB COMPILE (SC) SECTION

3.1 Configuration

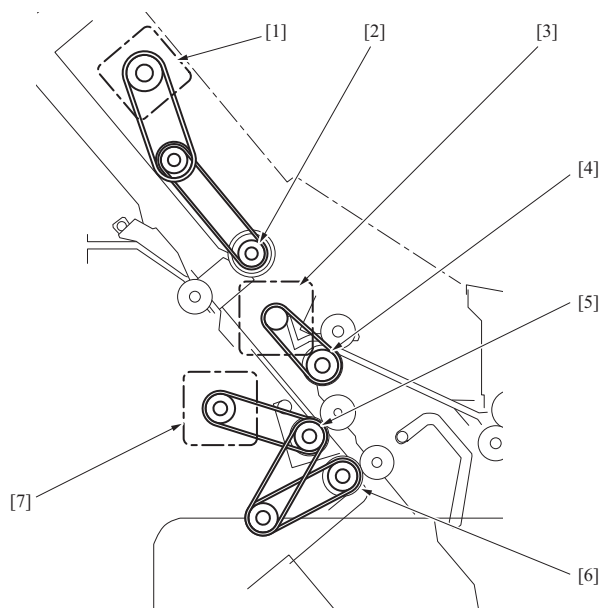


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[1]	Switchback roller	[2]	SC alignment plate
[3]	SC entrance roller	[4]	Pressure arm
[5]	Clamp entrance roller	[6]	FD alignment plate
[7]	Straight gate	[8]	Switchback roller
[9]	SC entrance roller	[10]	SC paper detection sensor (PS16)
[11]	Pressure arm	[12]	Clamp entrance roller
[13]	FD alignment plate	[14]	SC stopper
[15]	SC roller	[16]	SC alignment plate
[17]	Straight gate	-	

3.2 Drive

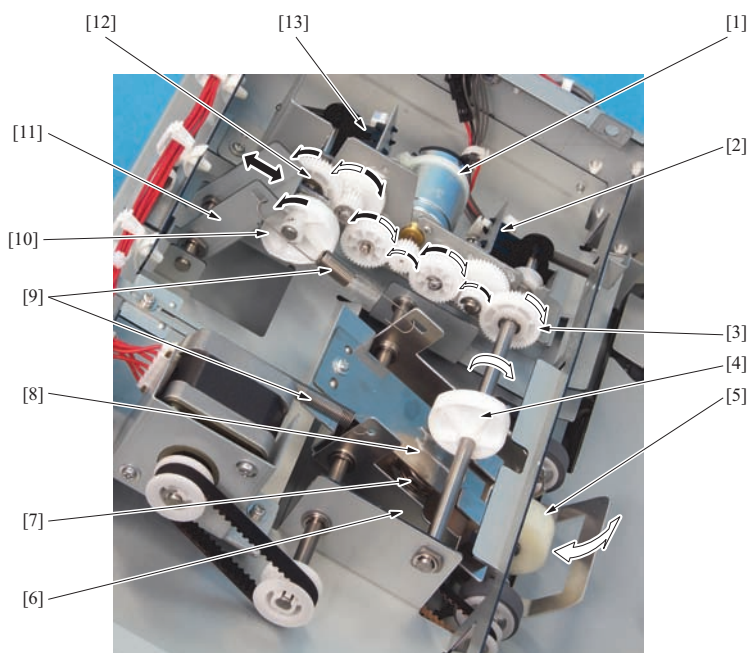
3.2.1 SC entrance conveyance drive/Switchback conveyance drive/Paper bundle conveyance drive



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[1]	SC switchback conveyance motor (M12)	[2]	SC switchback roller
[3]	SC entrance conveyance motor (M11)	[4]	SC entrance roller
[5]	SC roller	[6]	Clamp entrance roller
[7]	SC bundle conveyance motor (M17)	-	

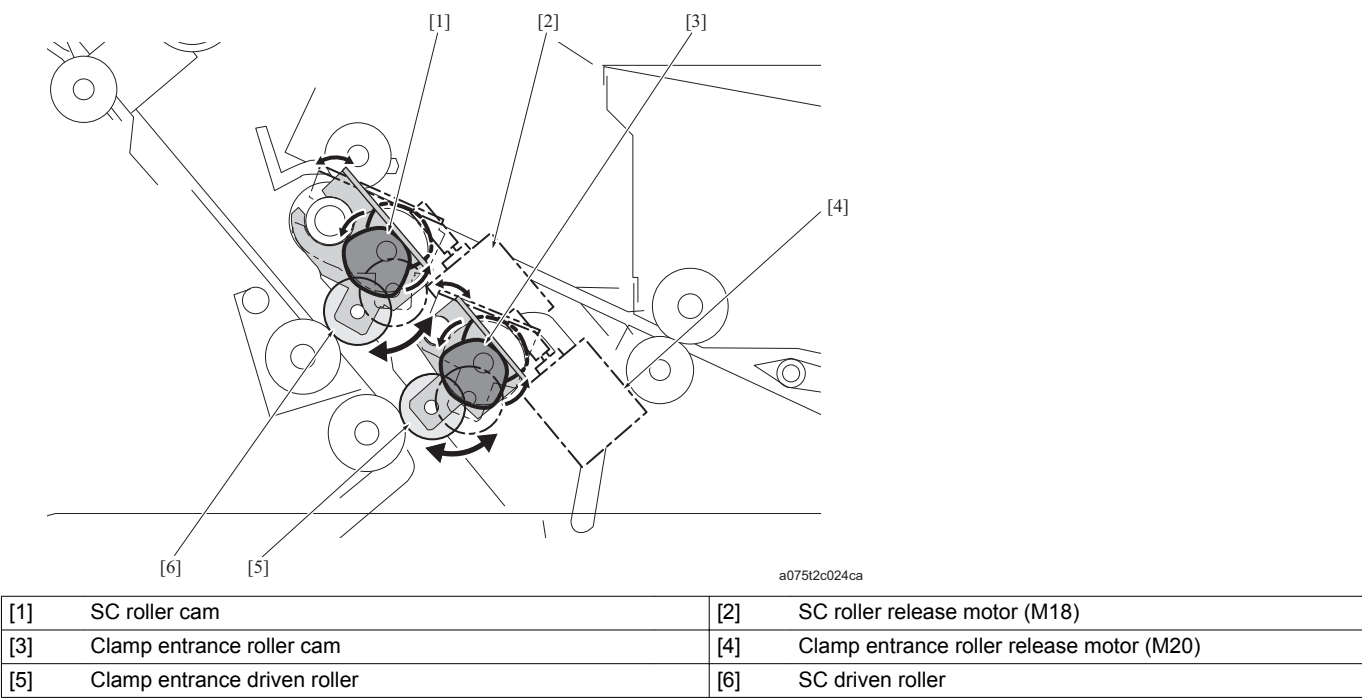
3.2.2 Switchback release drive



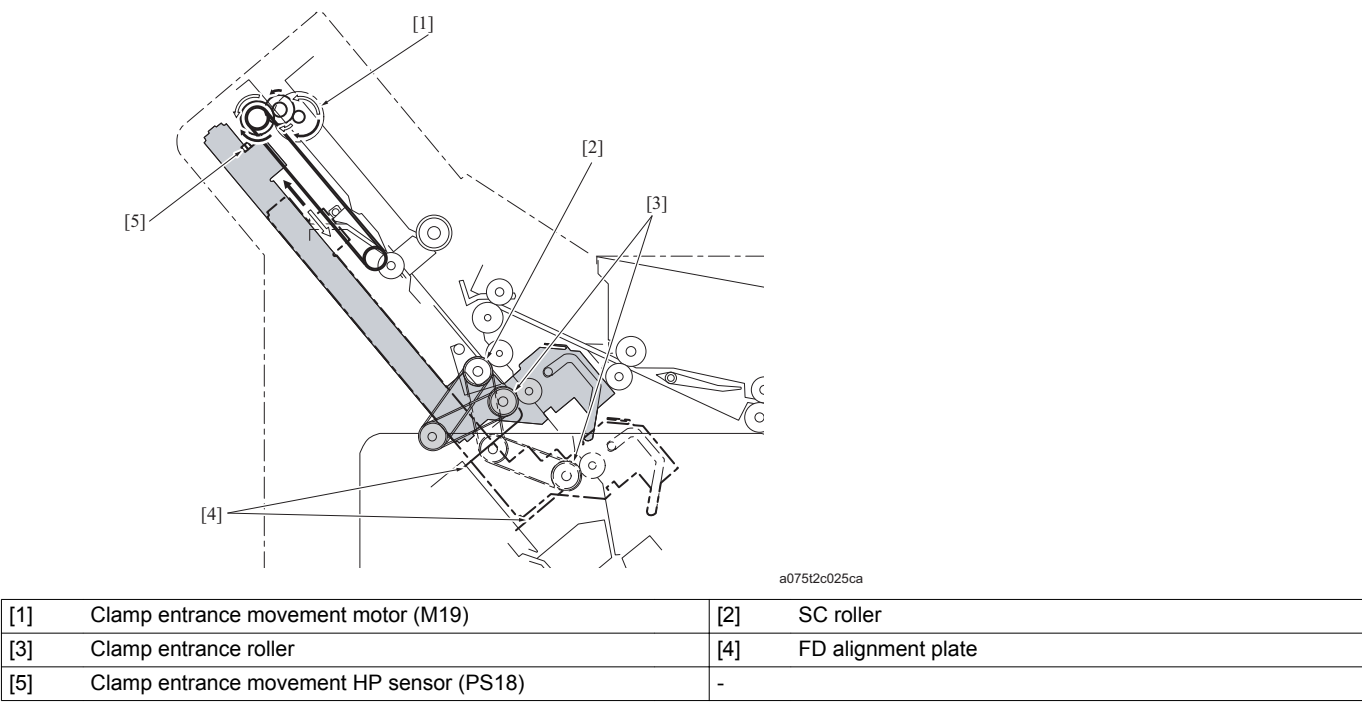
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[1]	SC switchback release motor (M13)	[2]	SC switchback arm pressure detection sensor (PS12)
[3]	One-way clutch	[4]	Press cam
[5]	SC switchback roller	[6]	Pressure bracket
[7]	Pressure spring	[8]	Pressure plate
[9]	Switchback spring	[10]	Switchback cam
[11]	Switchback arm	[12]	One-way clutch
[13]	SC switchback spring pressure detection sensor (PS13)	-	

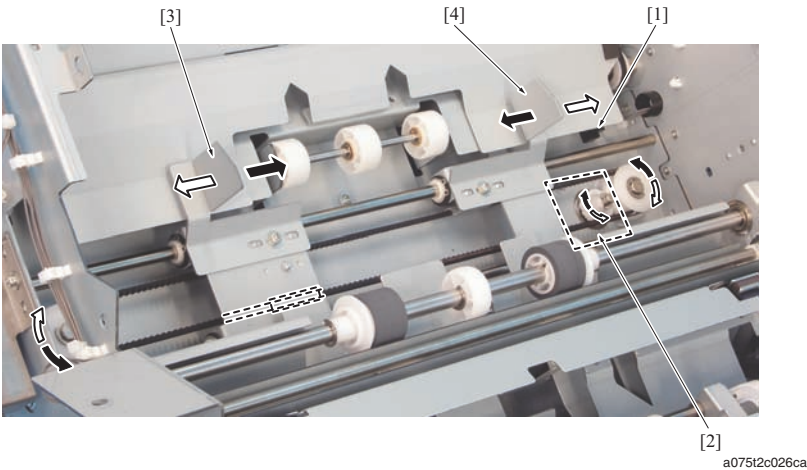
3.2.3 SC roller release drive/Clamp entrance release drive



3.2.4 Clamp entrance movement drive

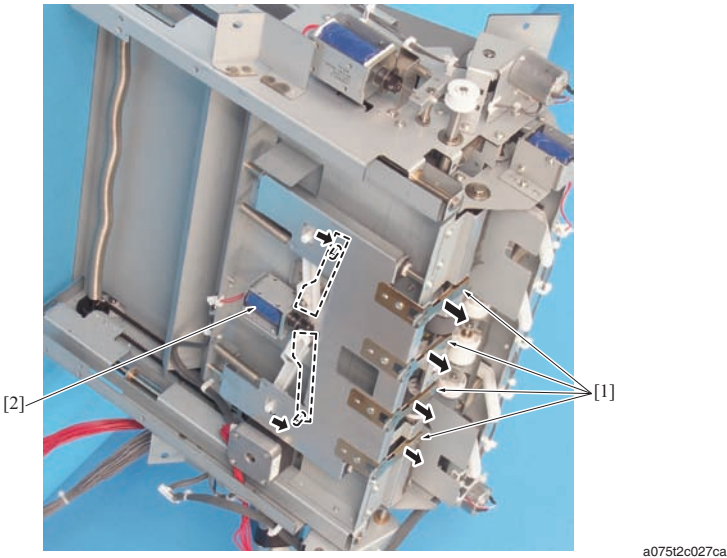


3.2.5 SC main scan alignment drive



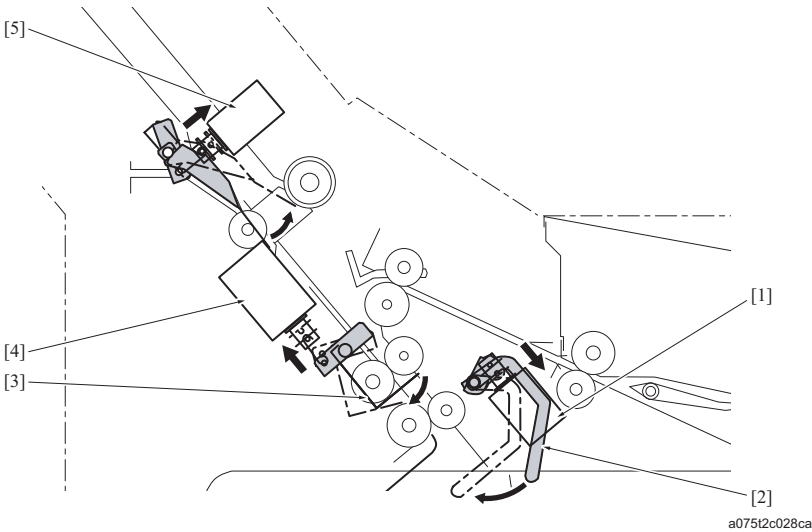
[1]	SC alignment plate home sensor (PS14)	[2]	SC alignment motor (M15)
[3]	SC alignment plate /Fr	[4]	SC alignment plate /Rr

3.2.6 Sub scan alignment drive



[1]	FD alignment plate	[2]	FD alignment solenoid (SD11)
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3.2.7 SC stopper drive/SC pressure arm drive/Straight gate drive



[1]	SC pressure arm solenoid (SD13)	[2]	SC pressure arm
[3]	SC stopper	[4]	SC stopper solenoid (SD12)

[5]	Straight gate solenoid (SD91)	-
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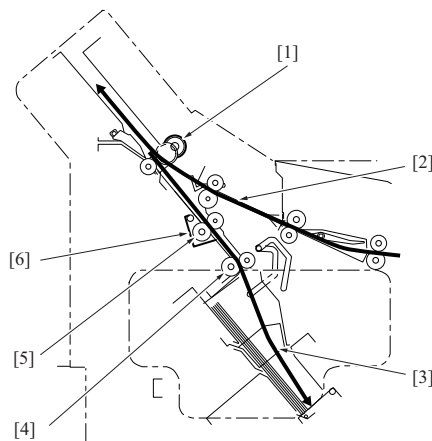
3.3 Operation

3.3.1 SC section operation overview

- The SC section is provided to stack a certain number of paper for subsequent book while papers for the previous book being glued at the clamp section and the glue tank section.
- The number of papers stacked in the SC section varies depending on the print mode and paper size.

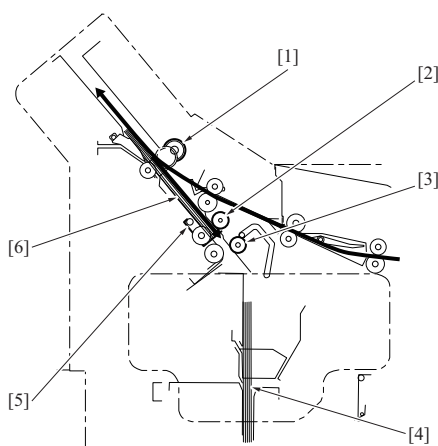
(1) Operation overview

- A page [2] for the first book [3] goes to the SC section and then goes to the clamp section. Once the paper [2] is set in the SC section, the SC stopper [6] is released, and the paper is conveyed to the clamp section by the SC switchback roller [1], SC roller [5] and the clamp entrance roller [4]. All inside papers for the first book are conveyed to the clamp section in this manner one by one.



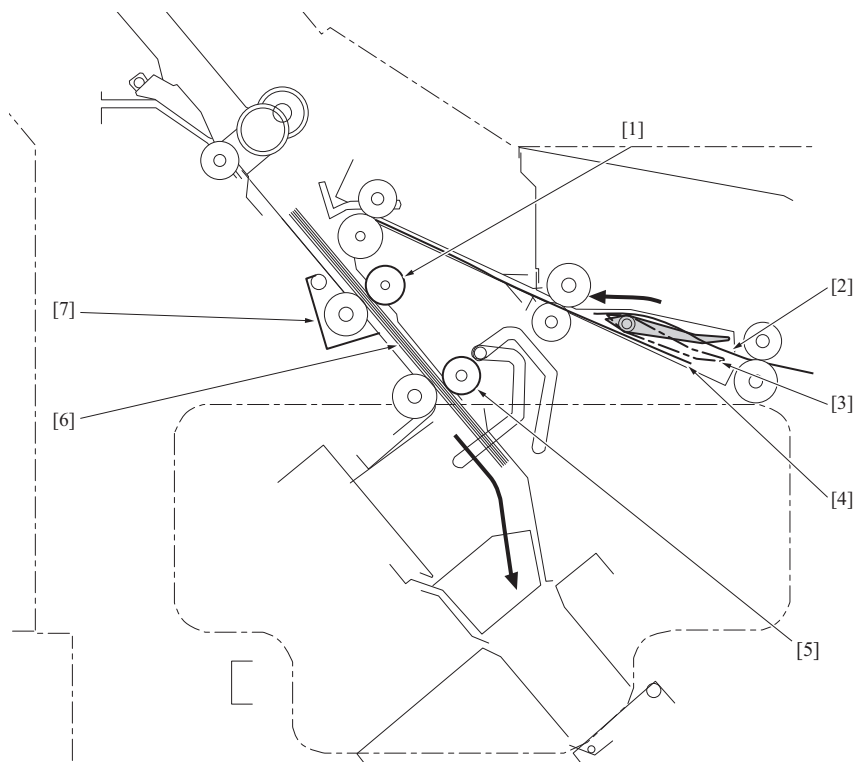
[1]	Switchback roller	[2]	Paper
[3]	Page for the first book	[4]	Clamp entrance roller
[5]	SC roller	[6]	SC stopper

- When the last page of the first book reaches the clamp section, the SC stopper [5] moves back to its original position, and the SC driven roller [2] and the clamp entrance driven roller [3] move away from their paper-feed position. A certain number of papers (n) for the next book are stacked in the SC section by the SC switchback roller [1].



[1]	Switchback roller	[2]	SC driven roller
[3]	Clamp entrance driven roller	[4]	All inside papers for the first book
[5]	SC stopper	[6]	Page for the next book

- When binding of the first book is finished, the clamp unit inclines from its upright position to receive paper for the next book. At the same time, the SC stopper [7] moves to open the path, and the SC driven roller [1] and clamp entrance driven roller [5] go into the position to convey the paper (n) [6] stacked in the SC section. During the above operation, the 2nd paper ("n+1"th [4] and "n+2"th [2]) are set in the bypass gate [3].
- The 2 sheets of paper are conveyed to the clamp section at a time.
- The rest of the papers for the book are conveyed to the clamp section one by one in the same manner as for the first book.



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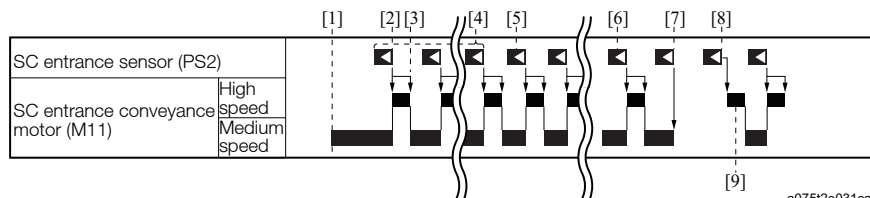
[1]	SC driven roller	[2]	"n+2"th page
[3]	Bypass gate	[4]	"n+1"th page
[5]	Clamp entrance driven roller	[6]	Paper bundle "n"
[7]	SC stopper	-	

3.3.2 SC entrance conveyance control

- The SC entrance roller is driven by the drive force of the SC entrance conveyance motor (M11) transmitted via the belt.

(1) Control

- The SC entrance conveyance motor (M11) starts to turn at low speed [1] upon receiving a print job.
- The M11 speed changes to high speed when the SC entrance sensor (PS2) detects the trailing edge of paper [2].
- When a prescribed time has elapsed after the M11 acceleration, the M11 returns to low speed [3] before the paper goes through the SC entrance roller.
- The above conveyance operation is carried out for the last paper of the first book [4] and the first page [5] to the "n"th page [6] of the next book (n=37 to 38 when the papers are A4 sized and one-side printed).
- The M11 stops to stop the SC entrance roller when the PS2 detects [7] the trailing edge of "n+1"th page.
- When the PS2 detects [8] "n+2"th paper trailing edge, the M11 starts to turn at high speed [9] to convey the "n+1"th and "n+2"th papers at a time.
- The rest of the papers for the second book are conveyed in the same manner as for the first book, and the papers for the subsequent books are conveyed in the same manner as for the second book.



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[1]	Print start signal ON	[2]	Detection of the trailing edge of paper
[3]	Change M11 to low speed	[4]	Last page of the first book
[5]	First page of the second book	[6]	"n"th page of the second book
[7]	Trailing edge detection of "n+1"th page of second book	[8]	Trailing edge detection of "n+2"th page of second book
[9]	M11 turns at high speed	-	

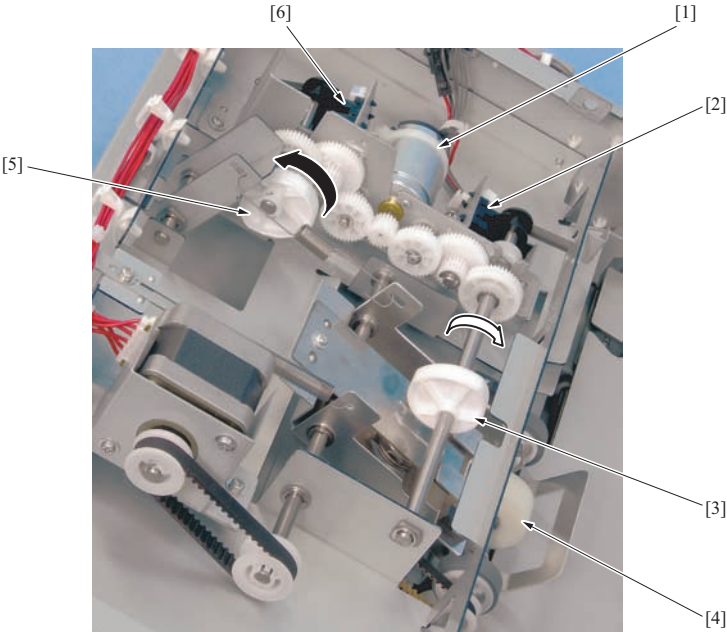
3.3.3 SC switchback conveyance control

- The SC switchback conveyance motor (M12) drives the SC switchback roller. The SC switchback release motor (M13) drives the releasing operation of the roller.

(1) SC switchback roller release mechanism

- The SC switchback release motor (M13) drives the pressure cam [3] and the switchback cam [5]. The forward rotation of the motor drives the pressure cam [3] and the reverse rotation of the motor drives the switchback cam [5].
- The SC switchback roller [4] has 3 preset positions for releasing (kept away from the driven roller), pressing strongly or slightly against the driven roller.
- The "pressing strongly" status of the SC switchback roller [4] is used when conveying inside paper to the clamp section and for the relay conveyance, and the roller becomes the "pressing slightly" status when conveying inside paper to the SC section so that the SC stopper stops the papers properly.
- The SC switchback arm pressure detection sensor (PS12) [2] detects the pressure cam position, and the SC switchback spring pressure detection sensor (PS13) [6] detects the position of the switchback cam. The PS12 is ON when the pressure cam is at its home position, and the PS13 is OFF when the switchback cam is at its home position.

PS12	PS13	SC switchback roller status (position)
ON	OFF	Release
OFF	OFF	Press strongly
ON	ON	Press slightly
OFF	ON	Not used ("press strongly" status)

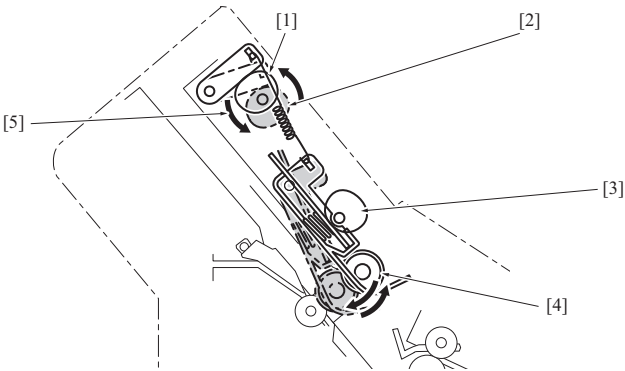


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[1]	SC switchback release motor (M13)	[2]	SC switchback arm pressure detection sensor (PS12)
[3]	Pressure cam	[4]	SC switchback roller
[5]	Switchback cam	[6]	SC switchback spring pressure detection sensor (PS13)

(a) Switchback cam drive (light pressure)

- The switchback cam [1] rotates counterclockwise [5] to switch the SC switchback roller [4] position between releasing and light pressing while the pressure cam [3] is at its home position.
- While the SC switchback spring pressure detection sensor (PS13) is OFF, the SC switchback roller is in the release position (kept away from the driven roller).
- When the PS13 is ON [2], the SC switchback roller moves to press slightly against the driven roller.
- The PS13 is kept OFF while the switchback cam is at its home position.



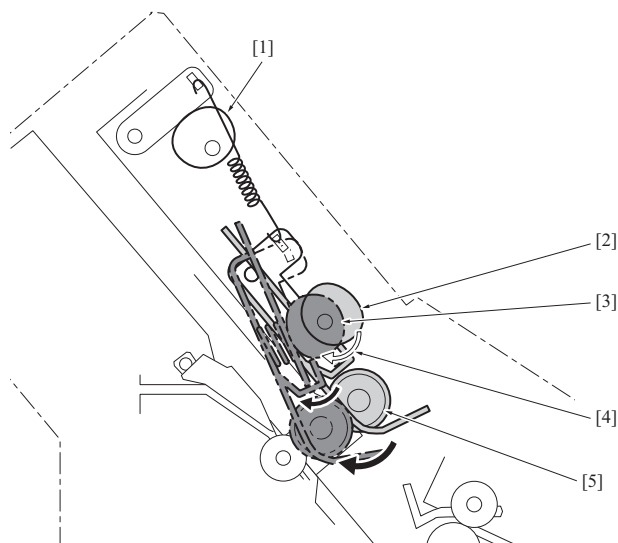
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[1]	Switchback cam (home position)	[2]	Switchback cam (press slightly)
[3]	Pressure cam	[4]	SC switchback roller

[5]	Rotating direction of the switchback cam	-
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(b) Pressure cam drive (strong pressure)

- The pressure cam [2] rotates clockwise [4] to switch the SC switchback roller [5] position between releasing and strong pressing. The switch operation of the pressure cam is made while the switchback cam [1] is at its home position.
- While the SC switchback arm pressure detection sensor (PS12) is ON, the SC switchback roller is in the release position (kept away from the driven roller).
- When the PS12 is OFF [3], the SC switchback roller moves to press strongly against the driven roller.



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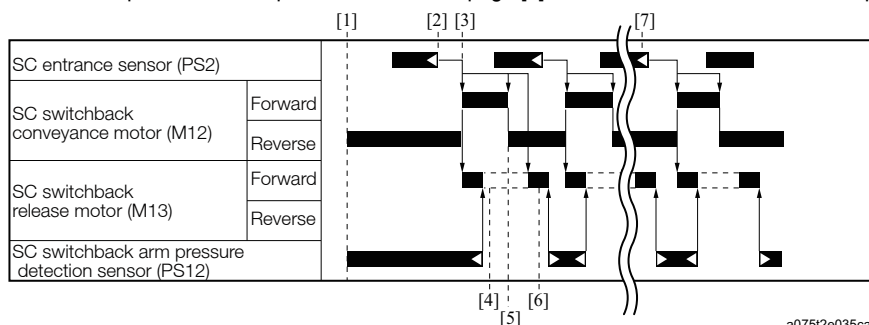
[1]	Switchback cam (home position)	[2]	Pressure cam (home position)
[3]	Pressure cam (PS12 turns OFF)	[4]	Rotation direction of the pressure cam
[5]	SC switchback roller		-

(2) SC switchback roller control (Perfect binding mode)

- Inside papers of the first book are conveyed to the clamp section one by one without being stacked at the SC section.
- When conveying inside papers to the clamp section without stacking them in the SC section, the SC switchback roller position is switched between releasing and strong pressing. The rotation direction of the roller is also switched between forward and reverse.
- When conveying inside papers of the next and subsequent books, a certain number of papers (n) are first stacked in the SC section, and the stacked inside papers are conveyed to the clamp section at a time. "n+1"th paper and the subsequent papers are conveyed to the clamp section one by one without being stacked at the SC section.
- When stacking papers in the SC section, the SC switchback roller position is switched between releasing and light pressing. During the stacking, the SC switchback roller rotates in the reverse direction.

(a) First book

- The SC switchback conveyance motor (M12) starts to turn in the reverse direction [1] when detecting that the print start signal turns ON. The switchback roller is in its release position to make paper go to the SC section.
- The M12 reverses the direction of rotation (starts to turn in the forward direction) after the SC entrance sensor (PS2) detects the trailing edge of paper [2]. At the same time, the SC switchback release motor (M13) starts to rotate in the forward direction. When the SC switchback arm pressure detection sensor (PS12) turns OFF, the M13 stops and the switchback roller is strongly pressed against the driven roller [4].
- The inside papers are nipped between the switchback roller and the driven roller strongly [4] and conveyed to the SC section by the forward rotation of the roller.
- When a prescribed time has elapsed after the PS2 detects the trailing edge of the paper, the M12 reverses the direction of rotation [5] to convey inside papers to the clamp section.
- When a prescribed time has elapsed after the PS2 detects the trailing edge of the paper, the M13 starts to turn in the forward direction again to move the switchback roller away from the driven roller [6], and when the PS12 turns On, the motor stops.
- The above operations are repeated until the last page [7] of the first book reaches the clamp section.



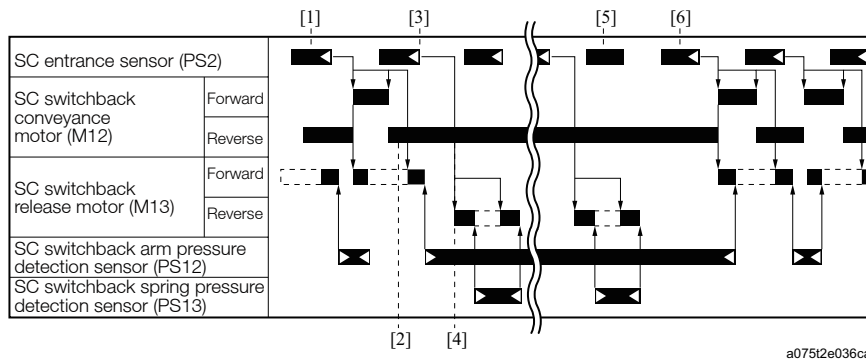
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[1]	Print start signal ON	[2]	Detection of the trailing edge of paper
[3]	M12 forward rotation and strong pressure	[4]	Strong pressure status

[5] Switchback conveyance start	[6] Release
[7] Last page of the first book	-

(b) The second and subsequent books

1. The SC switchback conveyance motor (M12) continues to turn in the reverse direction after the last page [1] of the previous book is conveyed to the clamp section [2].
2. When a prescribed time has elapsed after the SC entrance sensor (PS2) detects the trailing edge of the first page of the next book [3], the SC switchback release motor (M13) starts to rotate in the reverse direction [4].
3. When the SC switchback spring pressure detection sensor (PS13) turns ON, the M13 stops and the switchback roller is lightly pressed against the driven roller. The inside papers are then conveyed to the SC section and stopped by the SC stopper.
4. After the PS2 detects the trailing edge of the paper, the M13 reverses the direction of rotation again. Then the switchback roller is moved away from the driven roller to accept the next page.
5. The above operations are repeated until a certain number of papers (n) are stacked in the SC section. (every books)
6. While the next 2 papers ("n+1"th page [5] and "n+2"th page [6]) are set in the bypass gate, the stacked n papers are conveyed to the clamp section at a time.
7. When the PS2 detects the trailing edge of the "n+2"th page, the M12 starts to turn in the forward direction. At the same time, the M13 also starts to turn in the forward direction to push strongly the switchback roller against the driven roller. After the "n+1"th page and the "n+2"th page are conveyed to the clamp section through the SC section at a time, the following papers are conveyed to the clamp section one by one in the same manner as for the first book.



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[1] The last page of the previous book	[2] Conveyance of the last page of the first book
[3] Detection of the first page of the next book	[4] Light pressing start
[5] "n+1"th page	[6] "n+2"th page

3.3.4 SC main scan alignment control

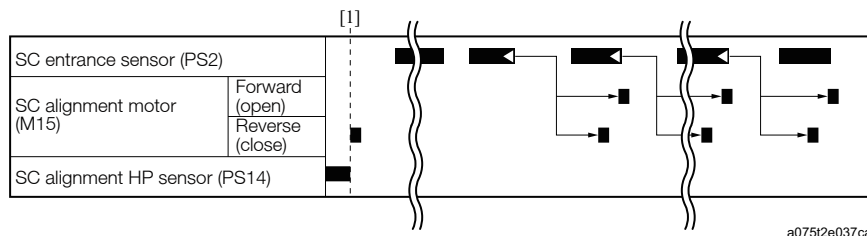
- The SC alignment motor (M15) drives the SC alignment plates /Fr and /Rr via the belt to move them by 9mm as they are oscillated. This movement aligns the edges of the papers stacked in the SC section in the main scan direction.
- The alignment operation is carried out every time a page is stacked in the SC section when stacking a certain number of papers of the second or subsequent books.
- While inside papers are conveyed to the clamp section without being stacked in the clamp section, this alignment operation is not performed.

(1) Control

1. Upon receiving of a print job, the SC alignment motor (M15) starts to turn in the reverse direction to shift the SC alignment plates /Fr and /Rr to the position 9mm outer the paper edges [1].
2. After the SC entrance sensor (PS2) detects the trailing edge of the first page of the second or subsequent book, the M15 starts to turn in the reverse direction to carry out the main scan direction alignment with the SC alignment plates /Fr and /Rr.
3. When a prescribed time has elapsed after the PS2 detection, the M15 starts to turn in the forward direction to move the SC alignment plates /Fr and /Rr back to their standby positions.
4. Every time a page is stacked in the SC section, this alignment operation is performed.

Note

- The set positions of the 2 alignment plates (the distance between the 2 plates) can be adjusted in the service mode.

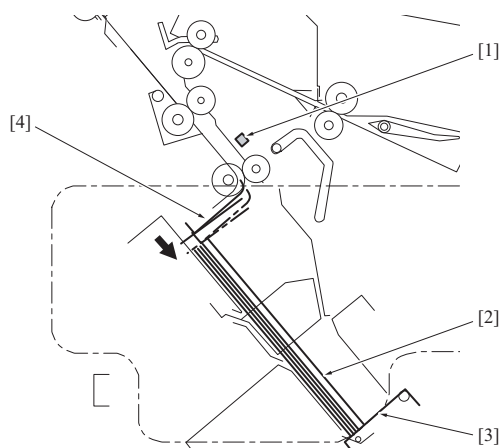


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[1] Print start signal ON	-
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3.3.5 Sub scan alignment control

- The FD alignment solenoid (SD11) drives the FD alignment plate [4] so that the inside papers [2] are hit against the reference plate [3] of the clamp section to be aligned in the sub scan direction.
- The SC paper detection sensor (PS16) detects the timing of the movement.

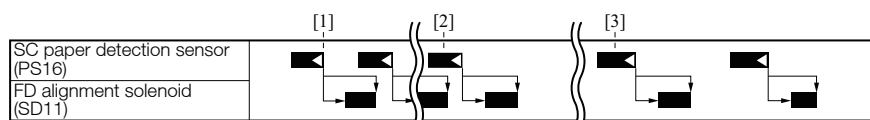


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[1]	SC paper detection sensor (PS16)	[2]	Paper
[3]	Reference plate	[4]	FD alignment plate

(1) Control

1. When a prescribed time has elapsed after the PS16 detects the trailing edge of the first page of the first book [1], if the clamp alignment plate /Fr and /Rr are closed for alignment operation, the SD11 turns ON.
2. The SD11 turns OFF after a prescribed time has passed since it became ON, and waits for the next page.
3. Until the last page [2] reaches the clamp section, the sub-scan-direction alignment is performed every time a page comes to the section.
4. After the PS16 detects trailing edge of n paper (from the first page to the "n"th page) of the second book [3], the alignment operation is performed.
5. The alignment operation is also carried out for the 2 papers ("n+1"th and "n+2"th page) laid one on top of another at the bypass gate.

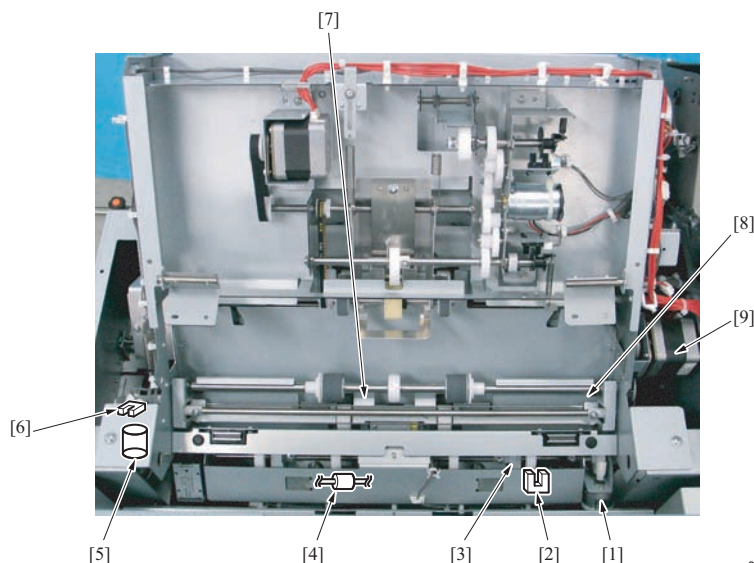


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[1]	Paper trailing edge detection by PS16	[2]	Last page of the first book
[3]	Paper set	-	

3.3.6 SC paper bundle conveyance control

- The SC bundle conveyance motor (M17) [9] drives the SC roller and the clamp entrance roller.
- The SC roller release motor (M18) [5] drives the SC driven roller [7] via the cam [8] to move the roller away from (release) or contact with (press) the opposite roller.
- The SC roller release sensor (PS17) [6] detects the press/release operation of the roller. While the roller is pressed against the opposite roller, the PS17 is kept ON.
- The clamp entrance roller release motor (M20) [1] drives the cam [3] and the clamp entrance roller [4] to move them away from (release) or contact with (press) the opposite roller.
- The clamp entrance roller release sensor (PS19) [2] detects the press/release operation of the roller. While the roller and the cam are in the pressed status, the PS19 is kept ON.



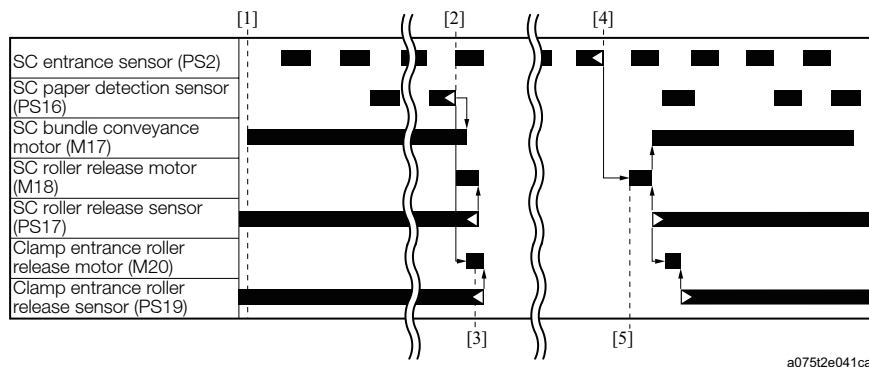
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[1]	Clamp entrance roller release motor (M20)	[2]	Clamp entrance roller release sensor (PS19)
[3]	Cam	[4]	Clamp entrance driven roller

[5]	SC roller release motor (M18)	[6]	SC roller release sensor (PS17)
[7]	SC driven roller	[8]	Cam
[9]	SC bundle conveyance motor (M17)	-	

(1) Control

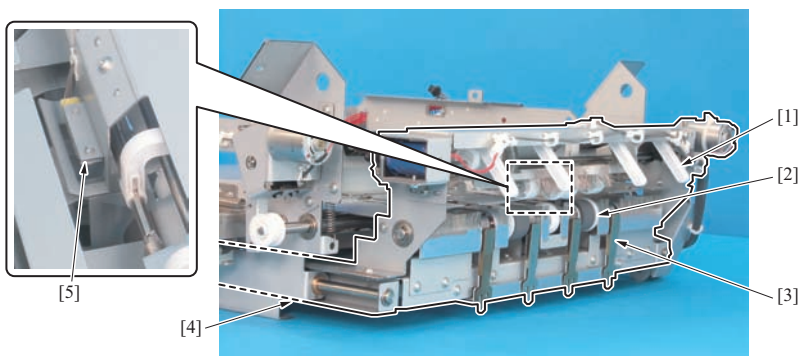
- Upon receiving of a print job, the SC bundle conveyance motor (M17) starts to rotate [1], and the inside paper are conveyed to the clamp section one by one with the SC roller and the clamp entrance roller.
- When the SC paper detection sensor (PS16) detects the trailing edge of the last paper [2], the SC roller release motor (M18) starts to rotate to start stacking paper in the SC section. When a prescribed time has elapsed after the M18 starts to rotate, the M17 stops to stop conveying paper to the clamp section. The clamp entrance roller release motor (M20) also starts to rotate to release the clamp entrance roller [3].
- The M18 stops when the PS17 becomes OFF, and the M20 stops when the PS19 becomes OFF. The next bundle of paper is kept stacked in the SC section until the clamp section is ready for them.
- The M18 turns ON and starts to rotate again [5] after a specified period of time after the SC entrance sensor (PS2) detects [4] the trailing edge of the last page of the stacked paper in the SC section.
- When the pressing of the SC roller is finished after the PS17 turns ON, the M17 turns ON and starts to convey the stacked paper.
- When the leading edges of the paper go through the clamp entrance, the M20 starts to rotate to convey the paper to the clamp section.
- Then the next 2 pages set in the bypass gate are conveyed to the clamp section at a time. All the above operations are repeated for the subsequent books.



[1]	Print start signal ON	[2]	Trailing edge of the last page of each book detection
[3]	Clamp entrance roller moves away from the paper conveyance position	[4]	Trailing edge of "n"th page detection
[5]	The SC roller is set in the position for paper conveyance	-	

3.3.7 Clamp entrance movement control

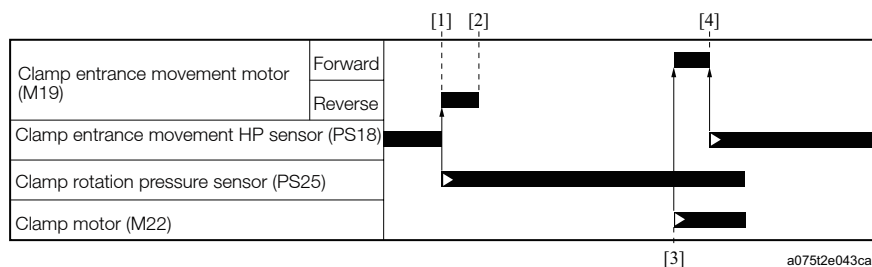
- The clamp entrance movement motor (M19) drives the clamp entrance assy [4] via the belt.
- The clamp entrance assy consists of the clamp entrance roller [2], FD alignment plate [3], SC pressure arm [1], and the SC paper detection sensor (PS16) [5].
- The clamp entrance assy movement moves the FD alignment plate in accordance with the paper size.



[1]	SC pressure arm	[2]	Clamp entrance roller
[3]	FD alignment plate	[4]	Clamp entrance assy
[5]	SC paper detection sensor (PS16)	-	

(1) Control

- When the clamp rotation pressure sensor (PS25) turns ON [1] and the clamp section is set at the compiling position, the clamp entrance movement motor (M19) reverses its rotation direction to lower the clamp assy. The motor stops [2] when the clamp assy is set at the position corresponding to the paper size, and the clamp assy becomes ready for accepting the next paper.
- When the clamp motor (M22) initiates clamping operation [3], the M19 starts to turn in the forward direction to lift the clamp entrance assy until the assy reaches the position out of way of the clamping operation. The clamp entrance movement HP sensor (PS18) detects that the assy reaches the position (the sensor becomes ON, and the M19 is stopped [5].
- The above operations are repeated for each book.



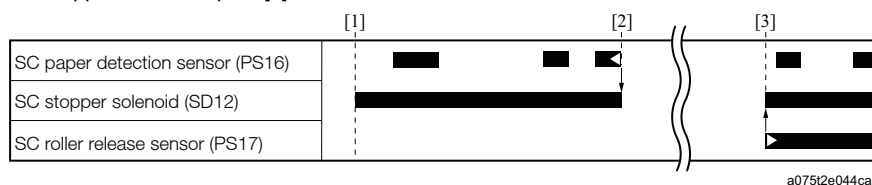
[1]	Clamp section is set at the compiling position	[2]	Movement of clamp entrance assy in accordance with paper size
[3]	Clamping starts	[4]	Clamp entrance assy home position

3.3.8 SC stopper control

- In order to stack paper in the SC section, the SC stopper is activated by the SC stopper solenoid (SD12) and closes the paper feed path toward the clamp section.

(1) Control

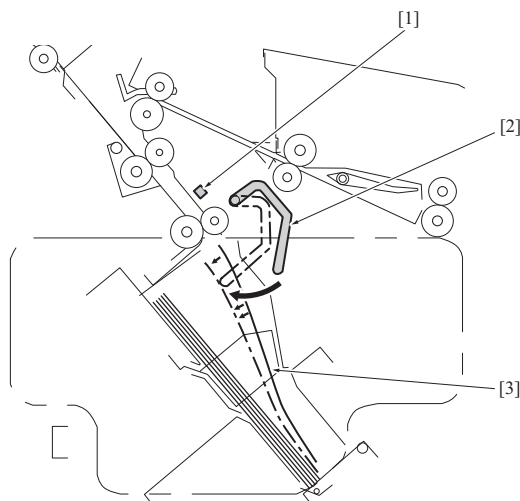
- When detecting that the print start signal turns ON [1], the SC stopper solenoid (SD12) turns ON to release the SC stopper.
- When the SC paper detection sensor (PS16) detects the trailing edge of the last page of each book, the SD12 turns OFF to set the SC stopper to close the path [2].
- When the SC roller release sensor (PS17) becomes ON and the SC roller holds down a bundle of paper, the SD12 turns ON to move the SC stopper out of the path [3].



[1]	Print start signal ON	[2]	Set SC stopper
[3]	Move SC stopper out of the paper path	-	

3.3.9 SC pressure arm control

- The SC pressure arm [2] presses paper [3] conveyed from the SC section to stack paper neatly in the clamp section. The SC pressure arm assists to stack paper to the clamp section.
- The SC paper detection sensor (PS16) [1] detects the timing of the movement.

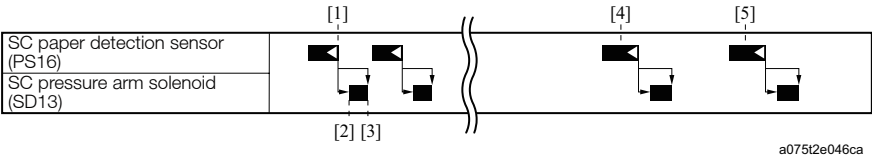


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[1]	SC paper detection sensor (PS16)	[2]	SC pressure arm
[3]	Paper	-	

(1) Control

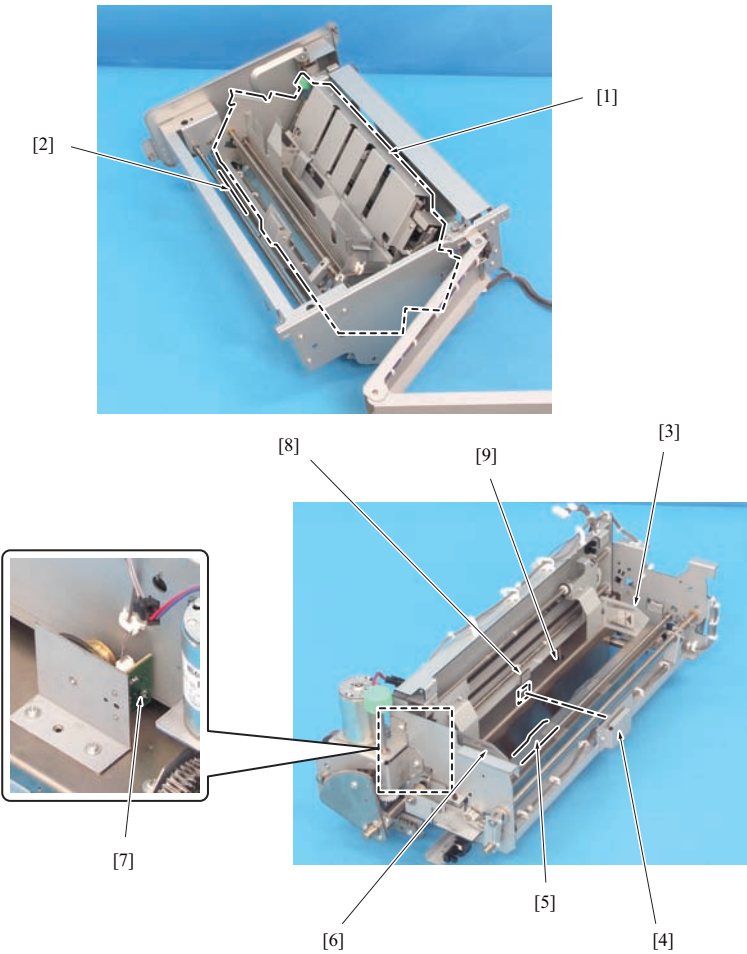
- When a prescribed time has elapsed after the SC paper detection sensor (PS16) detects the paper trailing edge [1], the SC pressure arm solenoid (SD13) turns ON to make the SC pressure arm press paper [2].
- The SD13 becomes OFF to move the SC pressure arm back to its original position [3] after a prescribed time has passed since the PS2 detected the trailing edge of the paper.
- The above operations are also performed when a bundle of paper [4] or 2 sheets of paper [5] are conveyed to the clamp section.



[1]	Trailing edge of paper detected	[2]	Pressure arm presses paper
[3]	SC pressure arm goes back to its original position	[4]	Conveyance of a bundle of paper
[5]	Conveyance of 2 pages at a time	-	

4. CLAMP SECTION

4.1 Configuration

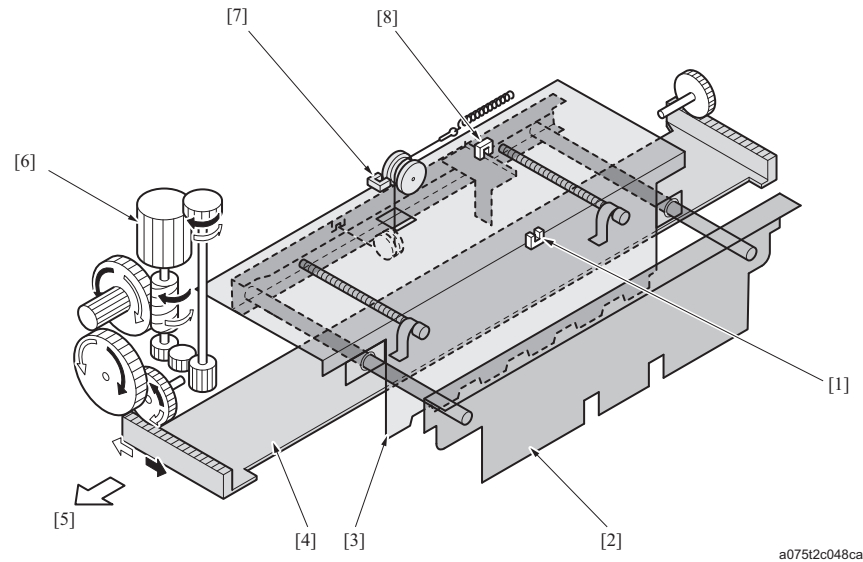


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[1]	Clamp rotation assy	[2]	Reference plate
[3]	Clamp alignment plate /Rr	[4]	Clamp paper LED (LED21)
[5]	Clamp pressure plate	[6]	Clamp alignment plate /Fr
[7]	Booklet thickness sensor (PS29)	[8]	Clamp paper sensor (PS28)
[9]	Clamp fixing plate	-	

4.2 Drive

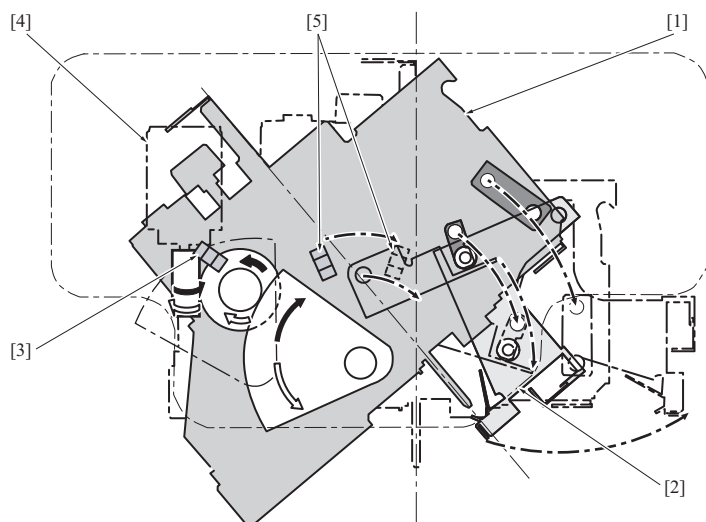
4.2.1 Clamp drive



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[1]	Clamp pressure sensor (PS23)	[2]	Clamp pressure plate
[3]	Clamp fixing plate	[4]	Pressure drive plate
[5]	Front side	[6]	Clamp motor (M22)
[7]	Booklet thickness sensor (PS29)	[8]	Clamp HP sensor (PS22)

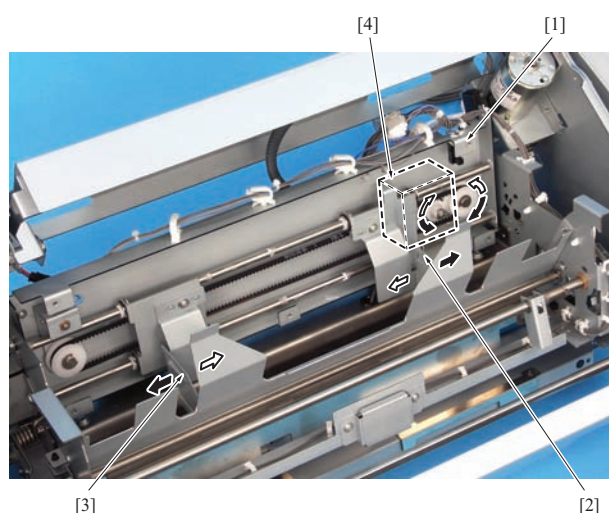
4.2.2 Clamp rotation drive



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[1]	Clamp rotation assy	[2]	Reference plate
[3]	Clamp rotation HP sensor (PS24)	[4]	Clamp rotation motor (M23)
[5]	Clamp rotation pressure sensor (PS25)	-	

4.2.3 Clamp alignment drive



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[1]	Clamp alignment HP sensor (PS21)	[2]	Clamp alignment plate /Rr
[3]	Clamp alignment plate /Fr	[4]	Clamp alignment motor (M21)

4.3 Operation

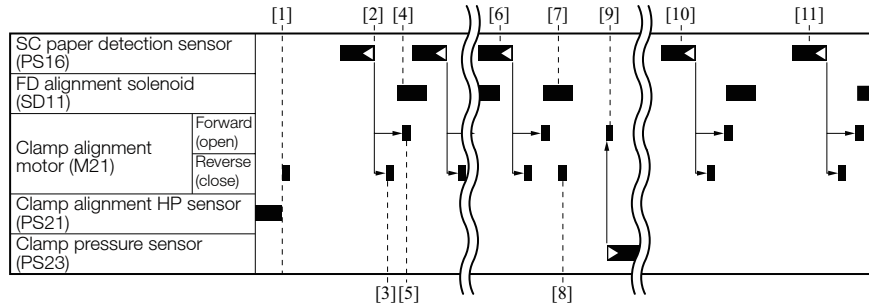
4.3.1 Clamp alignment control

- In order to line up edges of paper stacked in the clamp section in the main scan direction, the clamp alignment motor (M21) drives the clamp alignment plates /Fr and /Rr via the belt.
- The main-scan-direction alignment operation is performed when the following paper are set in the clamp section; all inside paper of the first book, "n" paper of the subsequent books stacked in the SC section, the next 2 pages ("n+1"th and "n+2"th paper) of the subsequent books, and "n+3"th and the subsequent page.

(1) Control

1. Upon receiving a print job, the clamp alignment motor (M21) starts to turn in the reverse direction to shift the clamp alignment plates /Fr and /Rr offset 9mm from the paper edges [1].
2. When a prescribed time has elapsed after the SC paper detection sensor (PS16) detects [2] the trailing edge of the first page of the first book, the M21 starts reverse rotation again to perform the main-scan-direction alignment [3] with the clamp alignment plates /Fr and /Rr.

3. Then, while the FD alignment solenoid (SD11) turns ON and paper edges in the sub scan direction are lined up [4], the M21 turns in the forward direction to move the clamp alignment plates /Fr and /Rr away from the paper [5].
4. The SD11 is kept ON until the sub-scan-direction alignment for the last page of the first book [6] is finished. When the SD11 turns OFF and the pressure toward the papers is released, the M21 starts to turn in the reverse direction to press the bundle of paper from its front and back sides [8].
5. When the clamp pressure sensor (PS23) turns ON and clamping the paper is finished, the M21 starts to turn in the forward direction to release the paper [9].
6. After a prescribed time has passed since the PS16 detects the trailing edge of the "n"th paper [10] stacked in the SC section, the alignment operations are performed.
7. The alignment operation is also carried out for the 2 sheets of paper ("n+1"th and "n+2"th page) laid one on top of another [11] at the bypass gate.



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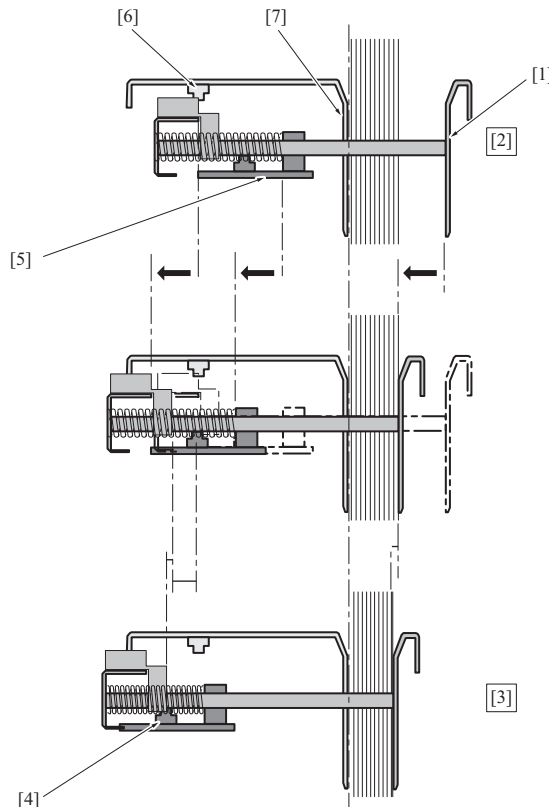
[1]	Movement of clamp plates in accordance with paper size	[2]	Trailing edge of the first page
[3]	Line up edges in main scan direction	[4]	Alignment in sub scan direction is in progress
[5]	Standby position movement	[6]	Last page of the first book
[7]	Alignment in sub scan direction is in progress	[8]	Standby position movement
[9]	A bundle of "n" paper	[10]	2 sheets of paper

4.3.2 Clamp control

- The clamp fixing plate and the clamp pressure plate clamp a bundle of paper stacked in the clamp section.

(1) Mechanism

1. The gap between the clamp fixing plate [7] and the clamp pressure plate [1] is 45mm when the clamp HP sensor (PS22) [6] is ON [2].
2. Before applying pressure by the clamp motor (M22), the pressure drive plate [5] is move to the left side.
3. The clamp pressure plate moves together with the pressure drive plate [5].
4. When the clamp pressure sensor (PS23) [4] becomes ON after applying pressure to the papers, the clamping operation is finished [3].



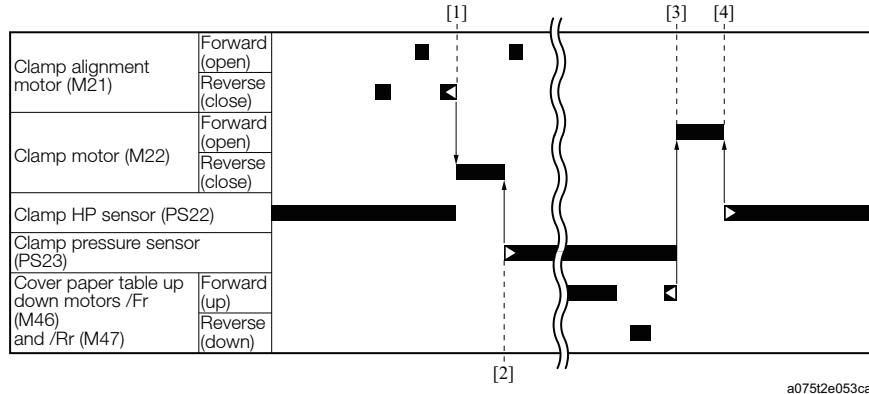
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[1]	Clamp pressure plate	[2]	Home position
[3]	Finish of clamping	[4]	Clamp pressure sensor (PS23)

[5]	Pressure drive plate	[6]	Clamp HP sensor (PS22)
[7]	Clamp fixing plate	-	

(2) Control

- When alignment of the last page is finished [1] by the clamp alignment motor (M21), the clamp motor (M22) starts to turn in the reverse direction to close the clamp pressure plate.
- Upon completion of clamping, the clamp pressure sensor (PS23) turns ON and the M22 stops [2].
- After the spine edges of the compressed inside paper is evened up, the cover paper table up down motors /Fr (M46) and /Rr (M47) lift the cover paper table, and the M22 starts to turn in the forward direction. Then, the clamp pressure plate opening operation is started [3].
- M22 stops when the clamp home sensor (PS22) becomes ON.



[1]	Start to close of the clamp pressure plate	[2]	Completion of clamping
[3]	Start to open	[4]	Returning to the home position

4.3.3 Clamp rotation control

- A bundle of inside papers of a book is clamped and rotated to be glued on its spine.

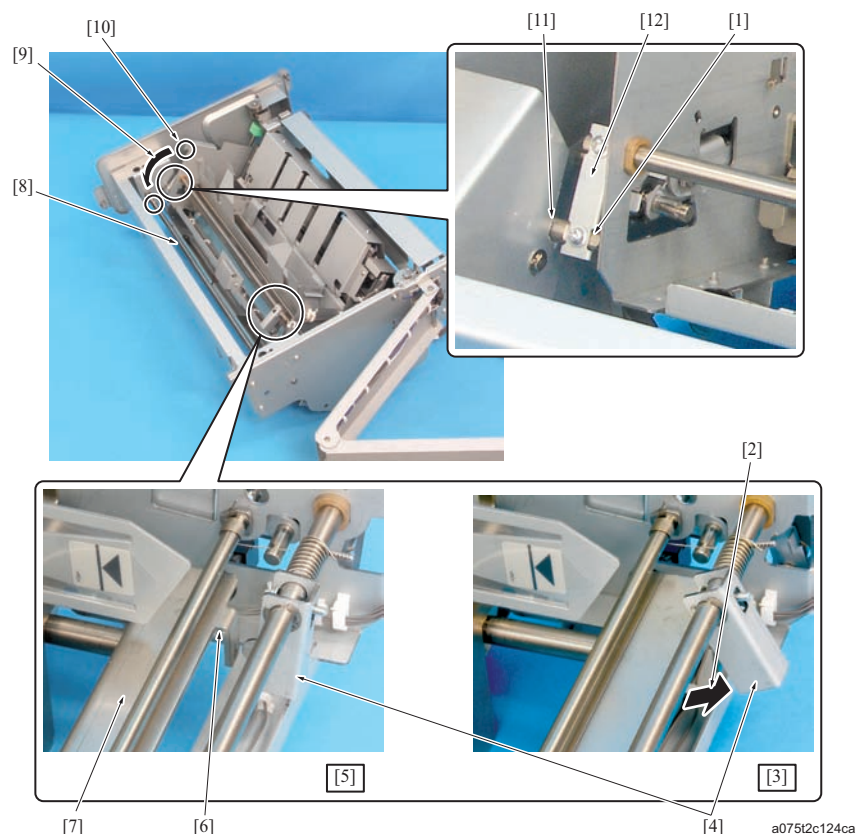
(1) Clamp assy angle change /fixing mechanism

- The drive force of the clamp rotation motor (M23) rotates the clamp rotation assy.
- There are 3 preset tilt angles of the clamp rotation assy as following.

Home position	45 degrees
Clamped	50 degrees
Glue applied	90 degrees

(a) Angle change mechanism

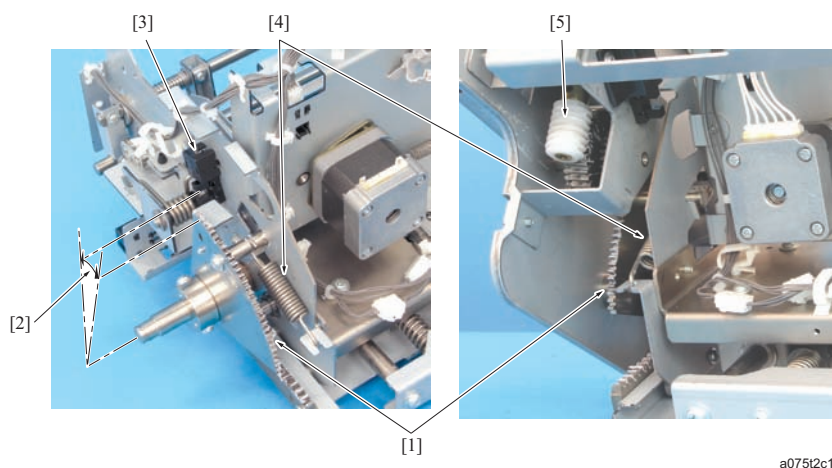
- The tilt angle of the clamp assy is changed for clamping and gluing as following.
- When the clamp rotation assy is in its home position and the clamp pressure plate [7] is also in its home position [3], the tab [6] of the pressure plate presses [2] the release cover [4], and the pin [1] of the switch arm [12] is inserted in the clamp angle stopper notch [11] to stop the rotation of the clamp rotation assy at the angle for clamping.
- When the clamp rotation assy is in its home position, and the clamp pressure plate is not [5], the switch arm drops by its own weight as the tab of the clamp pressure plate is not pressing the release cover. For this reason, the switch arm pin is not inserted in the clamp angle stopper notch, and the clamp rotation assy keeps rotating until the glue angle stopper notch [10] is inserted over the shaft [8] [9].
- The tilt angle of the clamp assy cannot be changed directly between the clamping angle and the gluing angle. To change the angle, the assy first must go back to the home position to release the stoppers.



[1]	Pin	[2]	Release
[3]	Clamp pressure plate is at its home position	[4]	Release bar
[5]	Clamp pressure plate is out of its home position	[6]	Tab of the clamp pressure plate
[7]	Clamp pressure plate	[8]	Regulation shaft
[9]	Engaging of notch and shaft to stop at gluing angle	[10]	Glueing angle stopper notch
[11]	Clamping angle stopper notch	[12]	Switch arm

(b) Fixing of the clamp rotation assy

- While clamping or glueing is performed, the corresponding stopper locks the clamp rotation assy. Moreover, in order to reinforce the fixing state of the assy, the clamp rotation motor (M23) [5] rotates the gear [1] 10 degrees [2] to pull the spring [4] applying the spring load to the assy. The operations fix the clamp rotation assy securely.
- The clamp rotation pressure sensor (PS25) detects that the prescribed pressure is applied to the clamp rotation assy and becomes ON.



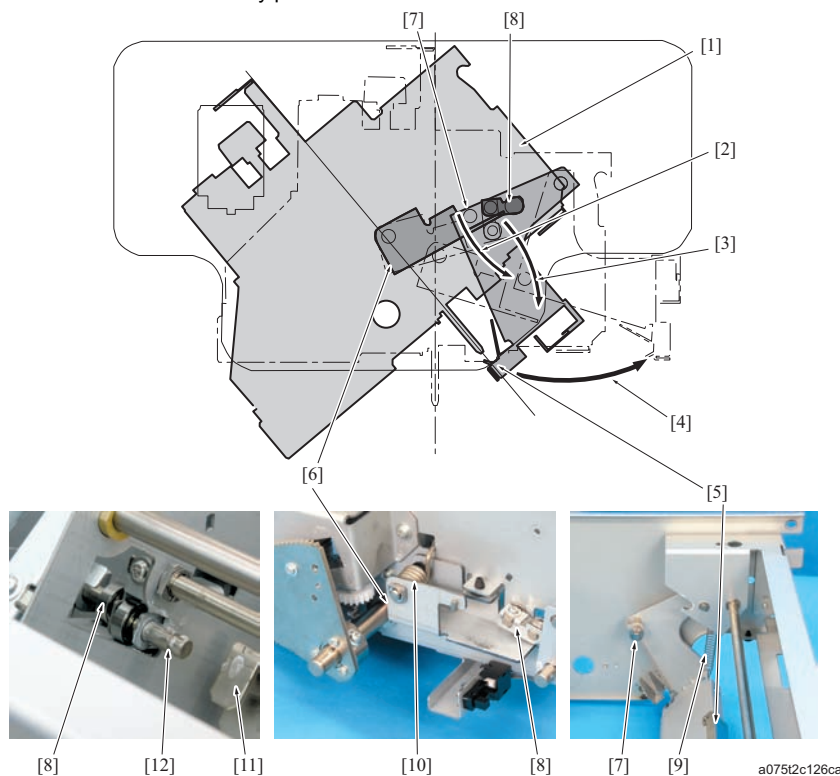
[1]	Gear	[2]	Gear rotates 10 degrees to apply spring load to the assy
[3]	Clamp rotation pressure sensor (PS25)	[4]	Spring
[5]	Clamp rotation motor (M23)	-	

(2) Reference plate opening/closing mechanism

(a) Opening/closing of the reference plate

- The reference plate [5] opens/closes in synchronization with the rotation of the clamp rotation assy [1].

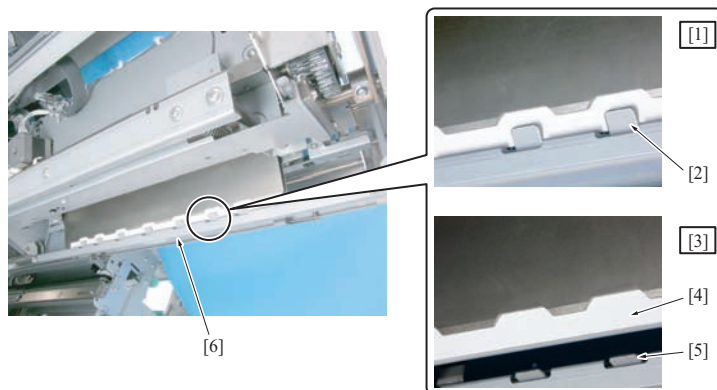
1. When the clamp rotation assy stops at the angle for glueing, the release arm [8] presses down the reference plate mounting bracket [6], and the reference plate is separated from a bundle of inside papers. The separation of the reference plate prevents the plate from damaging the paper edges when the clamp rotation assy is upstanding.
2. Further rotation [3] of the reference plate mounting bracket [6] makes the pin [7] go down [2], and the reference plate is released [4] from the spring [9].
3. The reference plate goes back to its home position with the reference mounting bracket [6] which pushes up the pin [7].
4. While clamping operation is in progress, the reference plate is fixed at the upper position with the spring [10].
5. When the clamp pressure plate returns to its home position, the release arm [8] is pushed up by the tab [11] of the clamp pressure plate and moved back to its standby position.



[1]	Clamp rotation assy	[2]	Pin of the reference plate goes down
[3]	Rotation of the reference plate mounting bracket	[4]	Release of the reference plate
[5]	Reference plate	[6]	Reference plate mounting bracket
[7]	Pin	[8]	Release arm
[9]	Spring (for release)	[10]	Spring (for applying pressure)
[11]	Tab of the clamp pressure plate	[12]	Pin

(b) Paper guard tabs mechanism for clamping

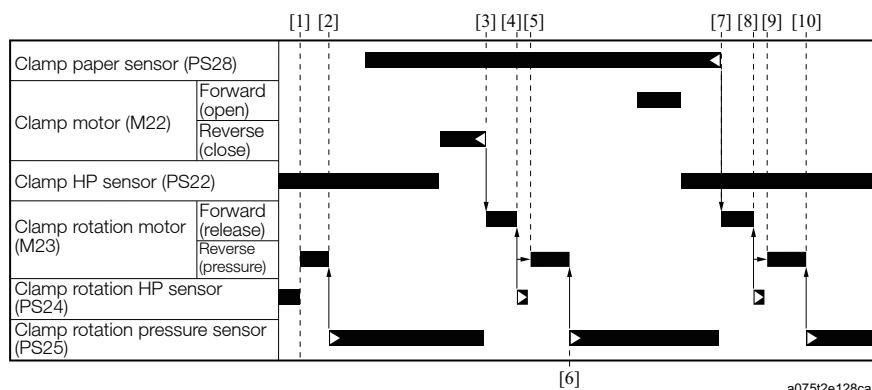
- The reference plate [6] has paper guard tabs [2] to prevent inside papers [4] from going off the reference plate while they are clamped [1].
- While the reference plate contacts with the stopper, the paper guard tabs are protruding.
- When the reference plate is opened [3], the paper guard tabs are retracted [5] so as not to damage the paper edges.



[1]	Clamped	[2]	Paper guard tabs
[3]	When the reference plate is opened	[4]	Inside paper
[5]	Paper guard tabs retracted	[6]	Reference plate

(3) Control

- When detecting that the print start signal turns ON [1], the clamp rotation motor (M23) starts to turn in the reverse direction.
- The M23 stops when the clamp rotation pressure sensor (PS25) becomes ON, and the clamp rotation assy is set at the compiling position [2].
- When clamping of the inside papers by the clamp motor (M22) is finished [3], the M23 starts to turn in the forward direction to rotate the clamp rotation assy 15 degrees counterclockwise.
- The M23 stops [4] when the clamp rotation home sensor (PS24) becomes ON. The tilt angle of the gear is 15 degrees when the assy returns to the home position, however, the clamp rotation assy rotates 5 degrees as the gear has rotated 10 degrees more separately for fixing the assy. As the result, the clamp rotation assy tilt angle changes from 50 degrees for clamping to 45 degrees (home position). At this time, since the clamp pressure plate is out of the home position, the pin is free from the clamp angle stopper notch, which allows the clamp rotation assy to rotate to the gluing angle.
- After a prescribed time has elapsed, the M23 starts to turn in the reverse direction to rotate the clamp rotation assy clockwise [5].
- When the PS25 turns ON, the spring fixes the assy, and the M23 stops [6]. At this time, the gear has rotated 55 degrees, however, in order to secure the assy, it has rotated 10 degrees more than the clamp rotation assy, the clamp rotation assy rotates 45 degrees clockwise from its home position and becomes upright state (90 degrees).
- When the clamp paper sensor (PS28) detects [7] that the bundle of paper is released from the clamp, the M23 starts to turn in the forward direction to return the clamp rotation assy to the home position.
- The M23 stops [8] when the PS24 becomes ON, and the clamp rotation assy stops at its home position (tilt angle of 45 degrees). At this time, since the clamp pressure plate is in the home position, the pin is engaged with the clamp angle stopper notch, which allows the clamp rotation assy to rotate to the clamping angle.
- Then, the M23 starts to turn in the reverse direction [9] to move the clamp rotation assy to the clamping position [10] and stops when the PS25 becomes ON.



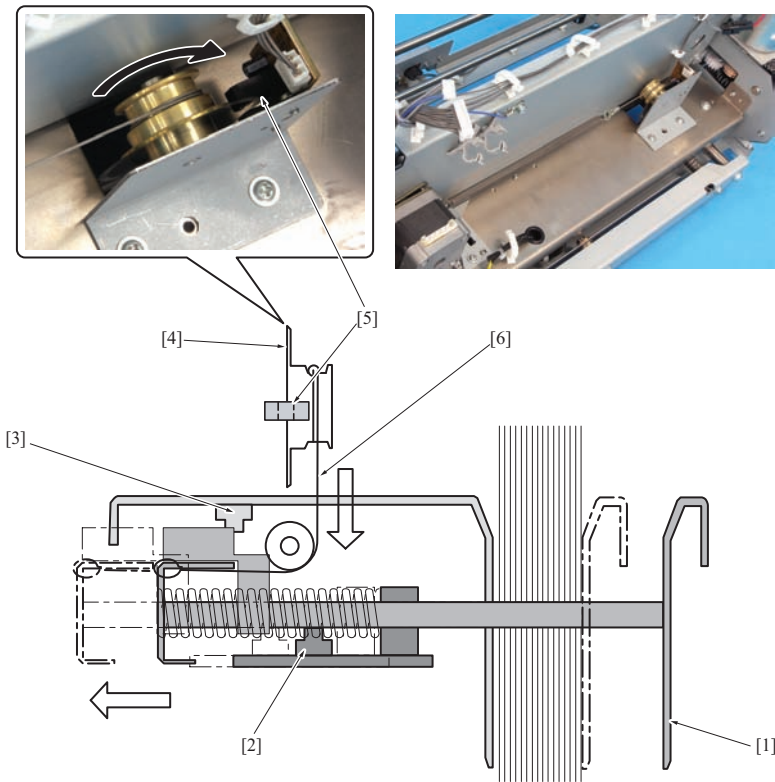
[1]	Print start signal ON	[2]	Set at the compiling position
[3]	Completion of clamp	[4]	M23 stopped
[5]	M23 starts to apply pressure	[6]	Upright state completion
[7]	Paper release	[8]	Home position
[9]	M23 starts to apply pressure	[10]	Clamp position

4.3.4 Book thickness detection control

- The booklet thickness sensor (PS29) detects the book thickness.
- The detected thickness is used to determine the trimming amount of the cover paper.

(1) Mechanism

- The clamp pressure plate [1] is moved by winding up the wire[6].
- When the wire [6] is wound up, the encoder plate [4] rotates.
- The booklet thickness sensor (PS29) [5] detects and counts how much the encoder scale is rotated.
- The sensor continue the counting until the clamp pressure sensor (PS23) [2] turns ON.

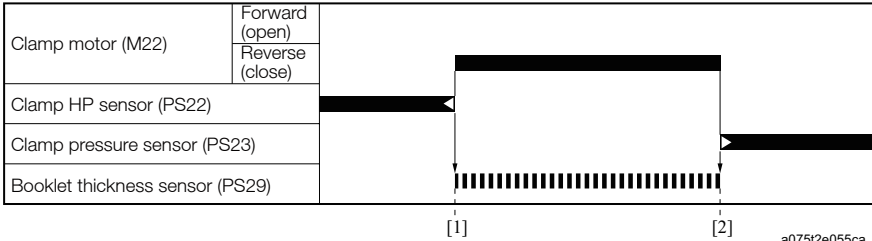


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[1]	Clamp pressure plate	[2]	Clamp pressure sensor (PS23)
[3]	Clamp HP sensor (PS22)	[4]	Encoder scale
[5]	Booklet thickness sensor (PS29)	[6]	Wire

(2) Control

1. When the clamp home sensor (PS22) switches to ON from OFF, pulse count by the booklet thickness sensor (PS29) is started [1].
2. The pulse count is stopped [2] when the clamp pressure sensor (PS23) turns ON.
3. During the initial operation at power-ON, the no paper status data is detected and memorized as an initial data. The book thickness is determined according to the difference.

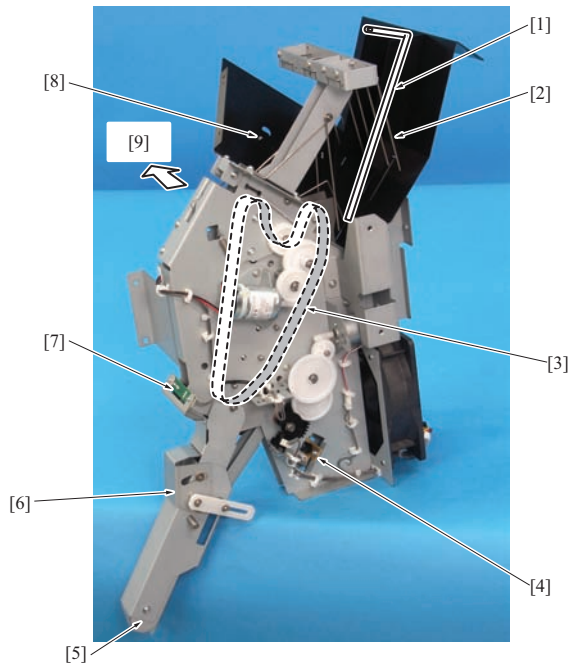


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[1]	Count start	[2]	Count end
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5. PELLET SUPPLY SECTION

5.1 Configuration

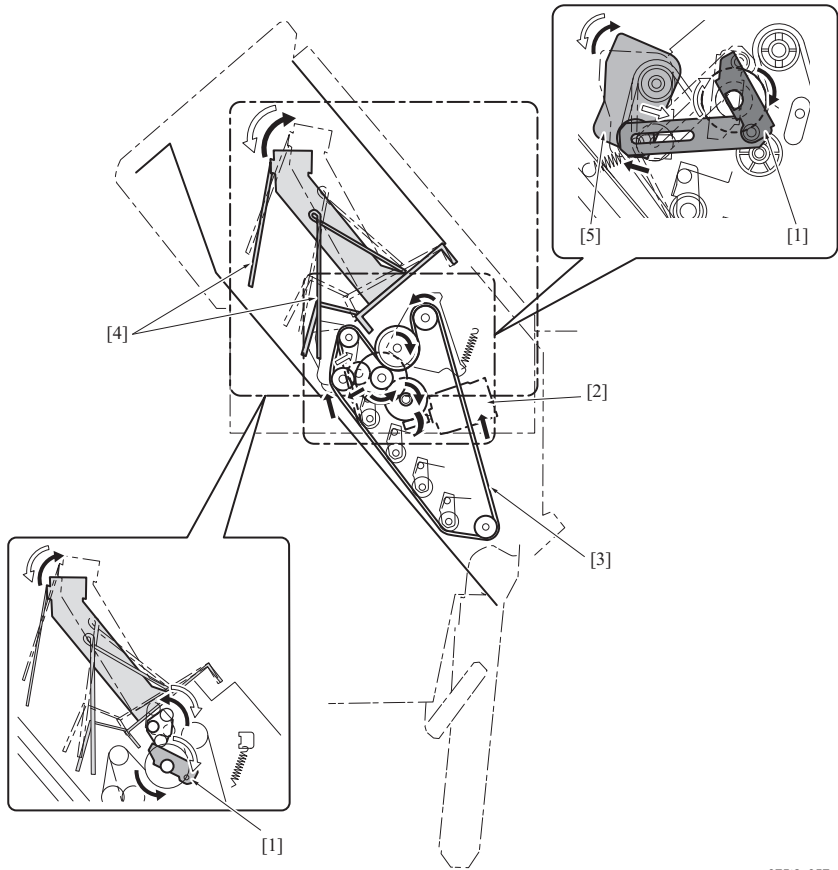


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[1]	Stirring stick	[2]	Stirring comb
[3]	Conveyance belt	[4]	Pellet count LED (LED32)
[5]	Pellet supply arm	[6]	Shutter
[7]	Pellet count sensor (PS37)	[8]	Pellet remain sensor (PS36)
[9]	Front side	-	

5.2 Drive

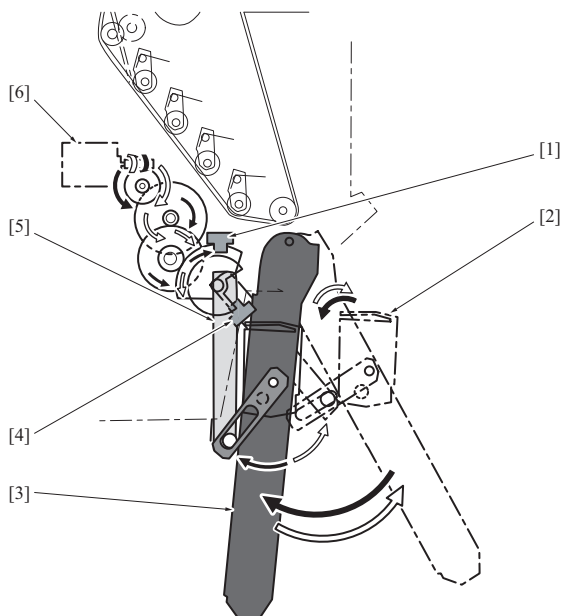
5.2.1 Pellet supply drive



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[1]	Plate cam	[2]	Pellet supply motor (M33)
[3]	Pellet conveyance belt	[4]	Stirring comb
[5]	Oscillating plate	-	

5.2.2 Pellet supply arm drive



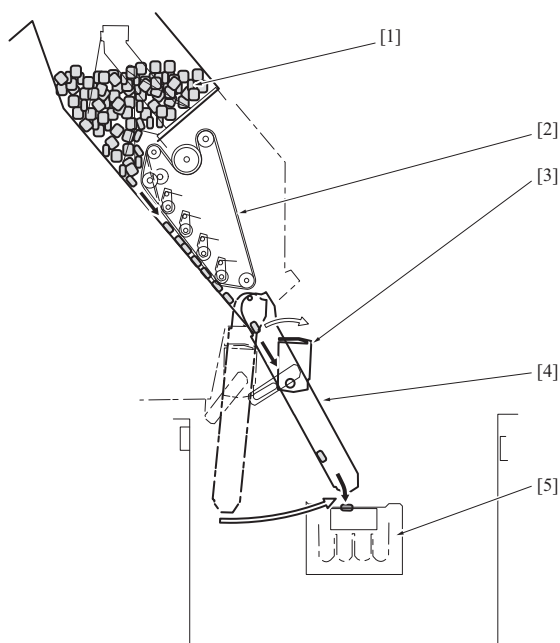
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[1]	Pellet supply arm lower limit sensor (PS39)	[2]	Shutter
[3]	Pellet supply arm	[4]	Pellet supply arm upper limit sensor (PS38)
[5]	Drive arm	[6]	Pellet supply arm motor (M34)

5.3 Operation

5.3.1 Pellet supply operation overview

- The pellet supply arm [4] is moved above the glue tank [5] to supply pellets [1]. Then the pellets [1] are conveyed by the pellet conveyance belt [2] to drop them into the glue tank.
- The glue tank temperature sensor /Up (TH2) provided in the glue tank unit determines the timing to supply pellets into the glue tank. As the molten glue inside the glue tank decreases, the TH2 surface not soaked in the glue becomes wider. It finally causes the TH2 temperature lower than a prescribed level, and it is judged that the glue is getting low and another pellets must be supplied.
- Checking the TH2 temperature is carried out in the following timing. a. When the glue tank HP sensor (PS33) turns ON after gluing operation.
- The number of pellets supplied at a time varies depending on the thickness of the book.



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[1]	Pellet	[2]	Pellet conveyance belt
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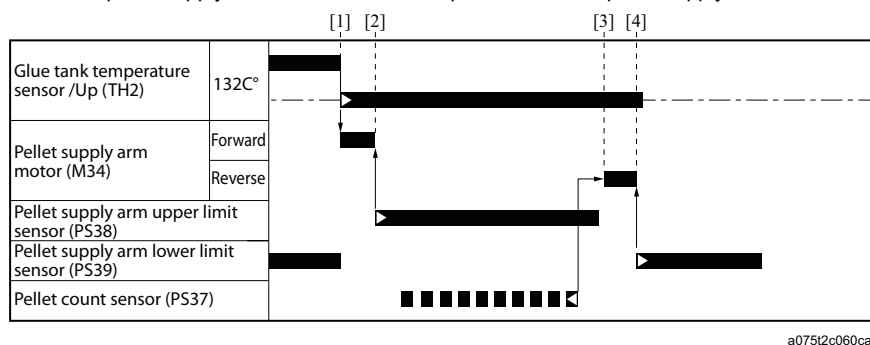
[3] Shutter	[4] Pellet supply arm
[5] Glue tank	-

5.3.2 Pellet supply arm control

- The pellet supply arm motor (M34) activates the pellet supply arm. When the pellet supply arm moves above the glue tank, the shutter is opened to drop pellets in the glue tank.
- In order to prevent the arm from the evaporated glue or radiant heat rose from the glue tank, the arm is kept at its home position except when supplying pellets. In this case, the shutter shuts down to stop the pellets from dropping down by the vibration. They are dropped next time the pellets are supplied.

(1) Control

- When the glue tank temperature sensor /Up (TH2) detects a temperature lower than 34°, the pellet supply arm motor (M34) starts to turn in the forward direction [1].
- When the pellet supply arm reaches the pellet supply position (above the glue tank) and the pellet supply arm upper limit sensor (PS38) becomes ON, the M34 stops [2].
- When a prescribed time has elapsed after a certain number of pellets is counted by the pellet count sensor (PS37), the M34 starts reverse rotation to move the arm back to its home position [3].
- When the pellet supply arm reaches the home position and the pellet supply arm lower limit sensor (PS39) becomes On, the M34 stops.



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[1] Pellet supply arm motor (M34) forward rotation starts	[2] Pellet supply position stop
[3] Start to evacuate	[4] Evacuation complete

(2) Stop operation during pellet supply

- When all the inside papers have stacked up, while the pellet supply arm motor (M34) is turning in the forward direction, the M34 reverses the rotation direction to move the pellet supply arm back to the home position.

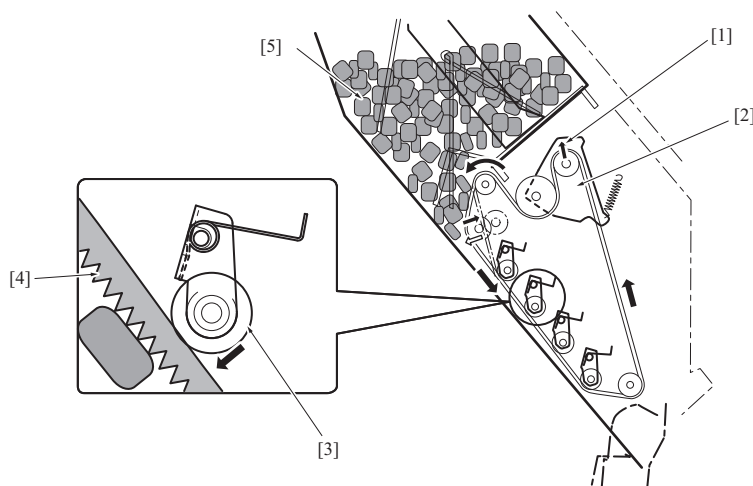
5.3.3 Pellet supply control

(1) Mechanism

- The pellet supply motor (M33) drives the pellet conveyance belt, the oscillating plate, and the stirring comb.

(a) Pellet supply pipe

- The pellets [5] are conveyed by the pellet conveyance belt moved by the motor.
- The conveyance roller [3] presses the pellet conveyance belt [4] with the spring force.
- In order to keep the belt in a constant tension while the belt is oscillating to convey pellets, the tension plate [2] is pulled by the spring and applies tension [1] to the pellet conveyance belt.



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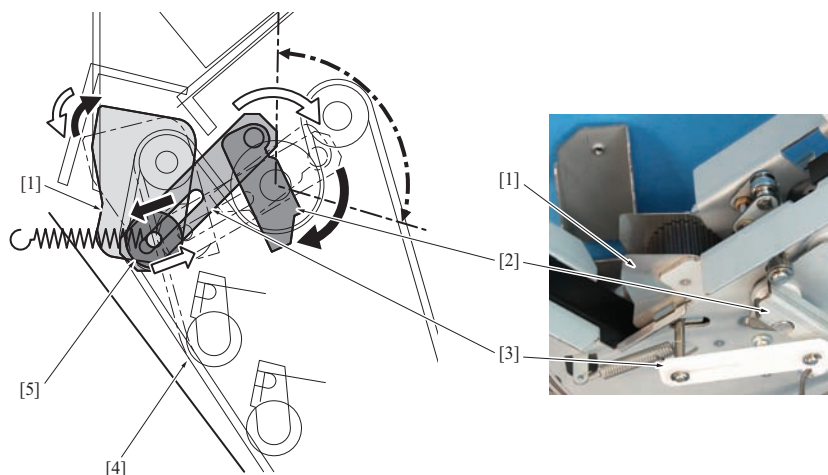
[1] Belt tension	[2] Tension plate
[3] Conveyance roller	[4] Pellet conveyance belt

[5] Pellet

-

(b) Oscillating of the pellet conveyance belt

- The pellet supply motor (M33) rotates the plate cam [2] and the rotation force is transmitted to the oscillating plate [1] via the connecting plate [3]. Then the introduction roller [5] is driven to oscillate the pellet conveyance belt [4] in synchronization with the belt rotation movement.

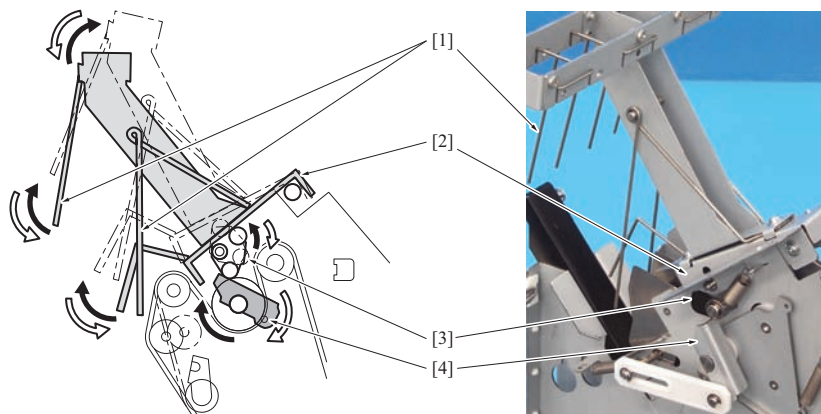


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[1]	Oscillating plate	[2]	Plate cam
[3]	Connecting plate	[4]	Conveyance belt
[5]	Introduce roller		-

(c) Stirring comb

- The pellets are stirred by the stirring comb which is shaking.
- In order to shake the stirring comb [1], the pellet supply motor (M33) moves the plate cam [4] in synchronization with the pellet conveyance belt movement, and the cam moves the stirring comb mounting plate [2] up and down via the shaking plate [3].

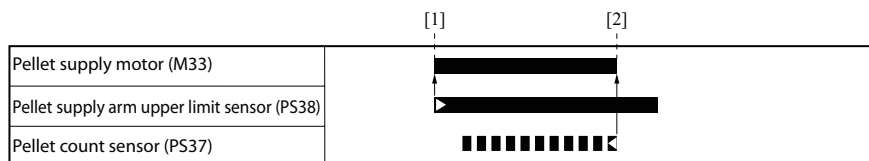


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[1]	Stirring comb	[2]	Mounting plate
[3]	Oscillating plate	[4]	Plate cam

(2) Control**(a) Normal operation**

- When the pellet supply arm moves to the pellet supply position and the pellet supply arm upper limit sensor (PS38) becomes On, the pellet supply motor (M33) starts to rotate to start supplying pellets [1] to the glue tank.
- The M33 stops to stop the pellet supply operation when the pellet count sensor (PS37) counts a certain number of pellets.



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[1]	Supplying pellets is started	[2]	Supplying pellets is finished
-----	------------------------------	-----	-------------------------------

(b) When the PS37 does not count the prescribed number of pellets

- When the number of pellets counted by the pellet count sensor (PS37) do not reach the specified amount within the specified time, the pellet supply motor (M33) stops. At the next pellet supply, the M33 rotates in reverse direction for 3 seconds and then starts forward rotation. It prevents the pellets from getting stuck in the conveyance belt section.

(c) Stop operation during pellet supply

- When all the inside papers have stacked up, while the pellet supply motor (M33) is turning, the M33 stops.

5.3.4 Pellet supply amount control**(1) Pellet passage detection**

- The pellet count LED (LED32) and the pellet count sensor (PS37) detect the pellets passed through the pellet supply path. (the sensor turns ON/OFF for every 2 or 3 pellets.)

(2) Control

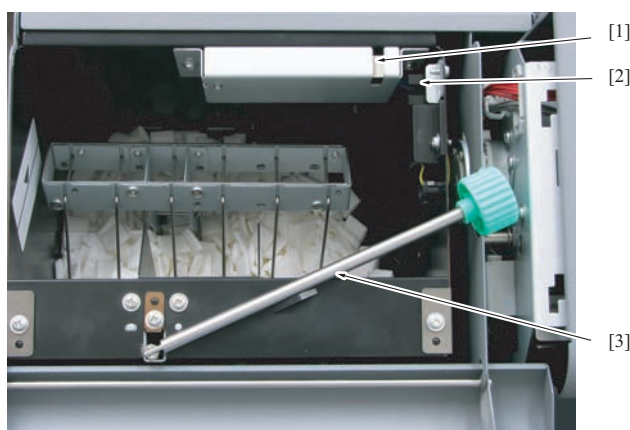
- The number of pellets to be supplied is calculated as a required number of counts to be counted by the pellet count sensor (PS37) based on the glue consumption expected according to the book thickness detected at the last time.
- When the calculated count is reached, pellet supply is stopped.

5.3.5 Pellet remaining amount detection control

- While the pellet supply arm is in the home position turning the pellet supply arm lower limit sensor (PS39) ON, the detection of remaining number of pellets inside the pellet supply hopper is carried out.
- When the remaining amount of pellet becomes 150g or less, the pellet supply hopper is detected as empty.
- When 1 second has elapsed after the pellet supply remaining sensor (PS36) switches to OFF from ON, a message to notify the empty status appears on the main body touch panel.

5.3.6 Pellet supply door opening/closing detection control

- The pellet supply door switch (MS1) [1] and the pellet supply door sensor (PS40) [2] detect the open/close of the pellet supply door.
- When the MS1 is turned OFF, 24VDC supplied to the pellet supply motor (M33) is shut off to stop the motor.
- When the PS40 detects the above status, a message appears on the main body touch panel.



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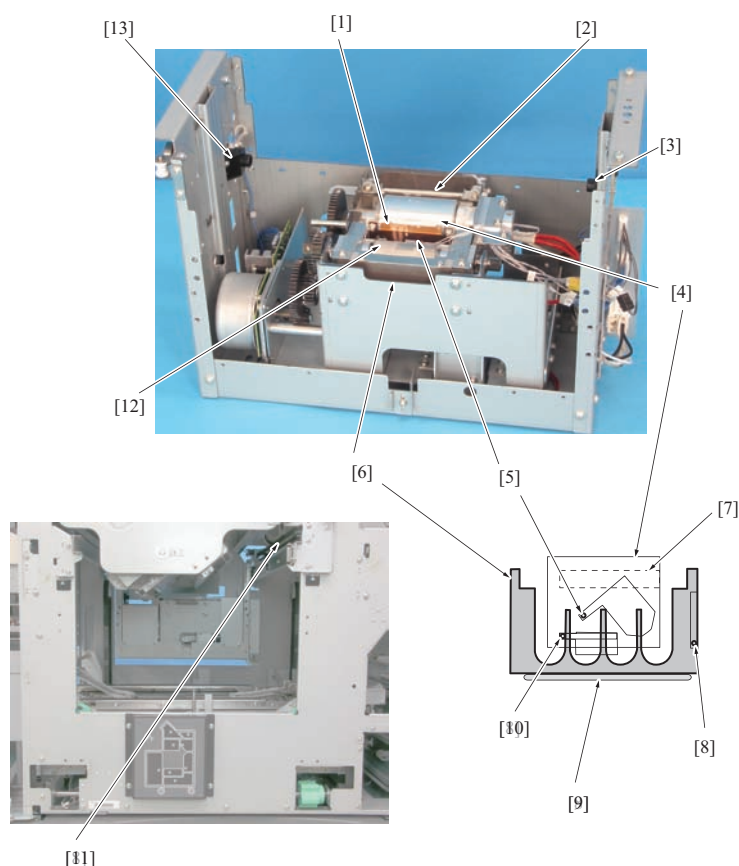
[1]	Pellet supply door switch (MS1)	[2]	Pellet supply door sensor (PS40)
[3]	Stirring stick	-	

5.3.7 Stirring stick

- The stirring stick is provided to stir the pellets manually when the pellets are stuck to the lower part of the pellet supply hopper.

6. GLUE TANK SECTION

6.1 Configuration

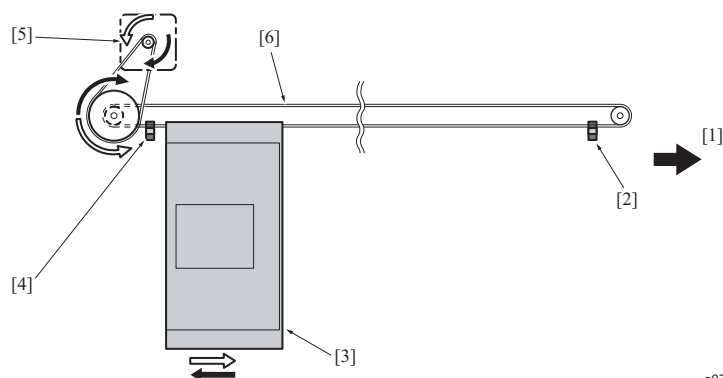


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[1] Scrape plate	[2] Scrape bar
[3] Glue apply position detection sensor (PS32)	[4] Glue apply roller
[5] Glue tank temperature sensor /Up (TH2)	[6] Glue tank
[7] Glue apply roller heater (H2)	[8] Glue tank temperature sensor /Lw (TH4)
[9] Glue tank heater (H1)	[10] Glue tank temperature sensor /Md (TH3)
[11] Timing belt	[12] Cover paper glue Roller
[13] Glue apply position LED (LED31)	-

6.2 Drive

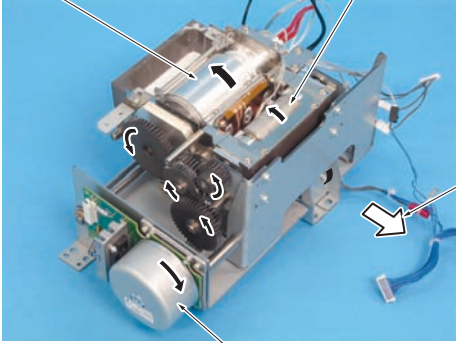
6.2.1 Glue tank movement drive



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[1] Front side	[2] Glue tank movement limit sensor (PS31)
[3] Glue tank unit	[4] Glue tank HP sensor (PS33)
[5] Glue tank movement motor (M31)	[6] Timing belt

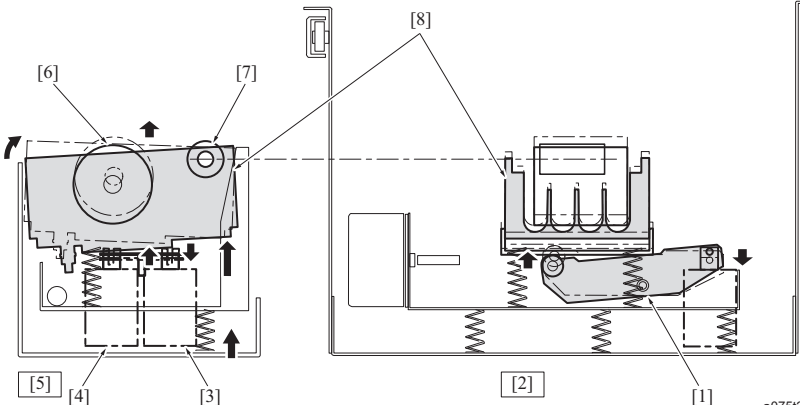
6.2.2 Glue apply roller drive



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[1]	Front side	[2]	Glue apply roller motor (M32)
[3]	Glue apply roller	[4]	Cover paper glue roller

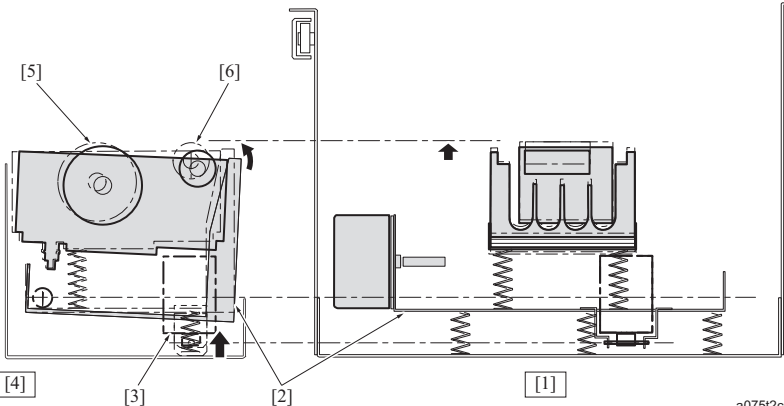
6.2.3 Tank up drive



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[1]	Arm	[2]	Front side view
[3]	Glue tank up solenoid /1 (SD31)	[4]	Glue tank up solenoid /2 (SD33)
[5]	Left-side view	[6]	Glue apply roller
[7]	Cover paper glue roller	[7]	Glue tank

6.2.4 Cover paper glue lifting drive



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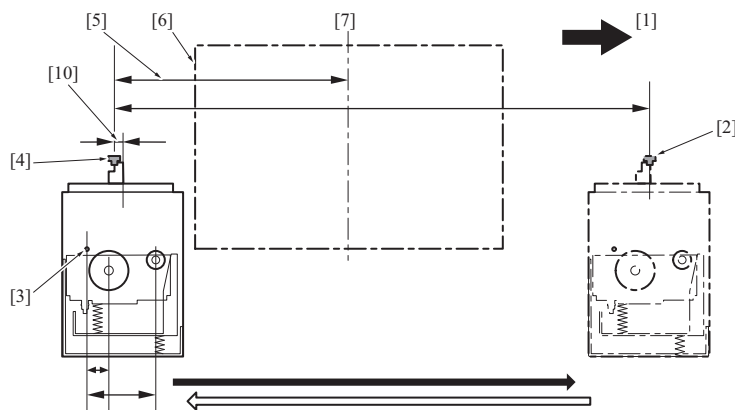
[1]	Front side view	[2]	Glue tank base plate
[3]	Cover paper glue up solenoid (SD32)	[4]	Left-side view
[5]	Glue apply roller	[6]	Cover paper glue roller

6.3 Operation

6.3.1 Glue tank unit movement control

(1) Mechanism

- The glue tank unit is moved by the drive force of the glue tank movement motor (M31) transmitted via the timing belt. The gap [5] between the glue tank home sensor (PS33) and the center [7] of the inside papers [6] is 322.5mm.
- The glue apply position detection sensor (PS32) [3] detects the edge of the inside papers.

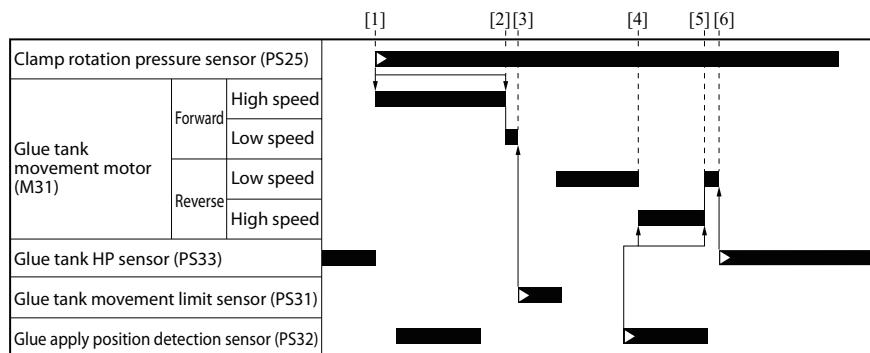


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[1]	Front side	[2]	Glue tank movement limit sensor (PS31)
[3]	Glue apply position detection sensor (PS32)	[4]	Glue tank HP sensor (PS33)
[5]	322.5mm	[6]	Inside paper
[7]	Center of the inside papers	-	

(2) Control

- When the upright movement of the clamp section is finished turning the clamp rotation pressure sensor (PS25) On, the glue tank movement motor (M31) starts to turn in the forward direction at high speed to move the glue tank forward [1]. This operation applies glue to the spine of the inside papers.
- When the glue tank movement limit sensor (PS31) becomes On after a prescribed time has elapsed since the PS25 turns On, the M31 pauses [3].
- Then, the M31 starts reverse rotation at low speed [4], and the glue apply position detection sensor (PS32) starts to detect edges of the inside papers.
- After the PS32 becomes ON upon detection of the inside papers edge, the M31 shifts to high speed [5] to move the glue tank backward applying glue to the spine again.
- When the glue tank HP sensor (PS33) becomes On after a prescribed time has elapsed since the PS32 turns On, the M31 stops [7].



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[1]	Clamp rotation assy is upright	[2]	Decelerates at the position 2mm before the limit
[3]	Stops at the limit position	[4]	Shifts to high speed upon the edge detection of inside papers
[5]	Decelerates before the home position	[6]	Stopped at home position

6.3.2 Glue apply roller control

(1) Mechanism

- The glue apply roller motor (M32) drives the glue apply roller via the gear.
- As the glue apply roller rotates, a layer of molten glue is formed on the roller metal surface due to the viscosity of the glue.

(2) Control

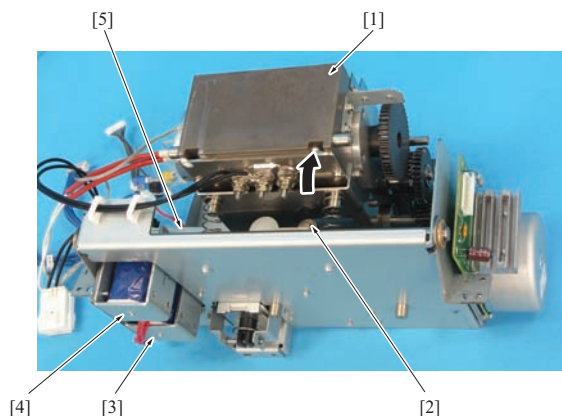
- The glue apply roller motor (M32) starts to rotate when the glue tank temperature sensor/Md (TH3) detects a prescribed temperature *1.
- When the glue applying mode is switched to standby mode, the M32 stops.

*1 Default: 145°C (changeable in the service mode)

6.3.3 Glue tank lifting control

(1) Mechanism

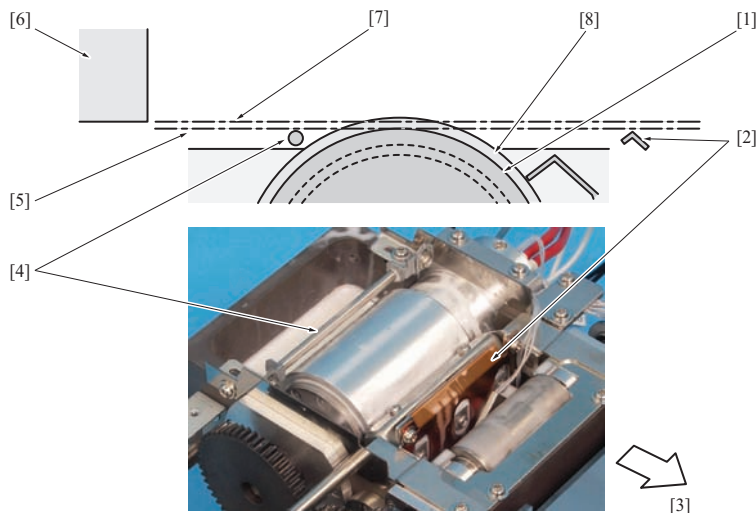
- The glue apply roller is lifted to the glue apply position when the glue tank up solenoid /1 (SD31) [3] and /2 (SD33) [4] become On.
- The SD31 and SD33 activate the arm [5] to lift the roller [2], and the glue tank [1] is lifted being rotated pivoted to the cover paper roller shaft.



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[1]	Glue tank	[2]	Roller
[3]	Glue tank up solenoid /1 (SD31)	[4]	Glue tank up solenoid /2 (SD33)
[5]	Arm	-	

- While the glue tank up solenoid /1 (SD31), /2 (SD33) are ON, the gap between the level tangent line [5] of the metal surface [1] of the glue apply roller and the spine surface [7] of inside papers [6] is about 1mm *1.
 - The glue apply thickness is changed by the thickness of paper to keep the book strength.
-1200/1200P/1051-
Regardless of the book thickness, the glue apply thickness is 0.8mm
-C6501/C6501P/C65hc-
Thickness of paper is less than 7mm: The glue apply thickness is 0.8mm
Thickness of paper is 7mm or more: The glue apply thickness is 1.2mm
 - The scrape plate [2] and the scrape bar [4] scrape off excess glue from the spine of inside papers.
 - While the SD31 and SD33 are ON, the scrape plate is placed 0.5mm *2 away from the metal surface of the glue apply roller.
 - While the SD31 and SD33 are ON, the scrape bar contacts with the metal surface of the glue apply roller (0.0mm *2 gap).
- *1 The mechanical adjustment "Glue apply roller gap adjustment" can adjust the glue application quantity.
*2 The mechanical adjustment "Glue tank positioning" can adjust the thickness of molten glue layer to be formed on the roller surface.



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[1]	Metal surface of the glue apply roller	[2]	Scrape plate
[3]	Front side	[4]	Scrape bar
[5]	Level tangent line	[6]	Inside paper
[7]	Spine surface	[8]	Layer of molten glue

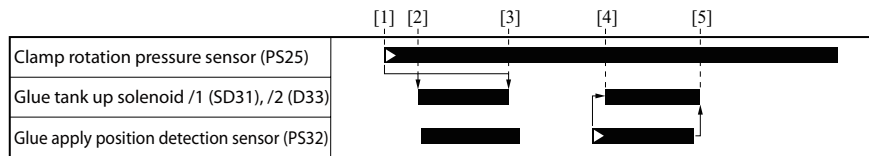
(2) Control

- When a prescribed time has elapsed after the clamp section is set at its upright position [1] turning the clamp rotation pressure sensor (PS25) On, the glue tank assy starts movement toward the front side. While the glue tank assy is moving, the glue tank up solenoids /1 (SD31) and /2 (SD33) turn ON to lift the glue apply roller to apply glue to the spine of inside papers [2].
- When the glue has applied along the inside paper spine by a length of 5mm longer than the paper length during a predetermined time period after the PS25 turns On, the SD31 and SD33 become Off to lower the glue apply roller [3]. Then, the glue tank assy starts to move backward.

3. The second glue application [4] during the backward movement is activated when the SD31 and SD33 turn On again at the time the glue apply roller passed the inside paper edge through by 4mm, which is the timing when a predetermined time has elapsed after the glue apply position detection sensor (PS32) detects the inside paper edge.
4. During a predetermined time period after the PS32 turns ON, the SD31 and SD33 turn OFF [5] at the position the glue apply roller passed trailing edge of the inside paper through by 4mm.

Note

- The sensors ON/OFF timing can be changed in the service mode.

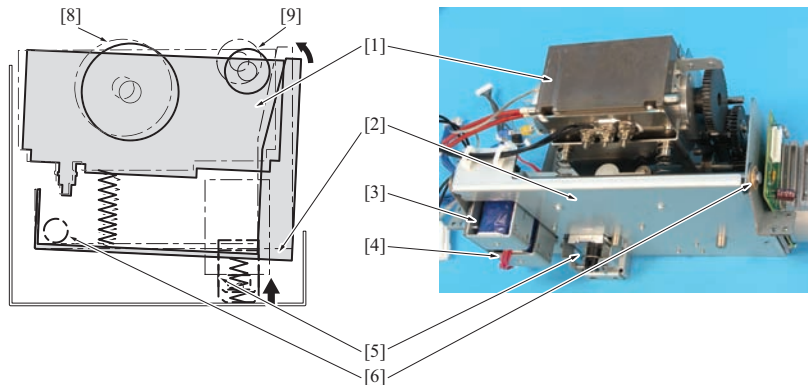


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[1]	Clamp rotation assy is upright	[2]	Glue application during frontward movement
[3]	Completion of glue application	[4]	Glue application during backward movement
[5]	Completion of glue application	-	

6.3.4 Cover paper glue control**(1) Mechanism**

- The cover paper glue up solenoid (SD32) [5] lifts the cover paper roller side [9] of the glue tank base plate [2].
- The glue tank up solenoid/1 (SD31) [4] and /2 (SD33) [3], which lift the glue apply roller [8] side of the glue tank, are also attached to the glue tank base plate, and as the result, the whole glue tank assy is lifted.



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[1]	Glue tank	[2]	Glue tank base plate
[3]	Glue tank up solenoid /2 (SD33)	[4]	Glue tank up solenoid /1 (SD31)
[5]	Cover paper glue up solenoid (SD32)	[6]	Fulcrum shaft
[7]	Left-side view	[8]	Glue apply roller
[9]	Cover paper roller	-	

(2) Control

- The control varies according to the thickness of the book. When the thickness of the book is 6mm or less, the cover paper glue up solenoid (SD32) turns ON and off at the same time as the glue tank up solenoid/1 (SD31), /2 (SD33). However, during backward movement of the glue tank, SD32 turns OFF with a specified time delay after the SD31 and SD33 turns OFF. It always turns OFF when the thickness of the book is 7mm or more.

6.3.5 Glue temperature control**(1) Mechanism**

- The glue tank heater (H1) heats the glue tank bottom to melt the pellets.
- The glue apply roller heater (H2) heats the glue apply roller to keep the glue adhered to the roller surface at a constant viscosity.

(2) Temperature detection

The glue apply roller temperature sensor (TH1) [7] detects the temperature of the glue apply roller [8], and the glue tank temperature sensor / Up (TH2) [6], /Md (TH3) [3], and /Lw (TH4) [2] detects the temperature of the glue tank [5].

(a) TH1

- Detects temperature of the center portion of the glue apply roller, and the glue apply roller heater (H2) [9] is controlled according to the detected temperature.
- The target temperature is 165 °C.

(b) TH2

- This sensor is provided on the inner surface of the glue tank, at the position 29mm above the bottom of the tank, in order to detect glue level.

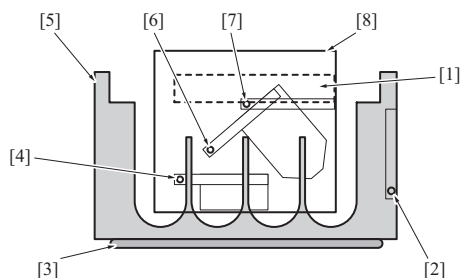
- When the glue runs low, the glue surface becomes lower, and finally the TH2 comes out of the glue. It causes a sudden drop in temperature of the TH2. The temperature drop is detected as a low glue level, and activates the pellet supply operation.
- The target temperature is 132 °C. *1
- *1 Changeable in the service mode.

(c) TH3

- This sensor is also provided on the inner surface of the glue tank, at the position 15.4mm above the tank bottom, to detect the viscosity of the molten glue. According to the detected result, rotating or not rotating the glue apply roller is determined.
- The target temperature is 145 °C. *1
- *1 Changeable in the service mode.

(d) TH4

- The glue tank temperature sensor /Lw (TH4) is provided on the inner bottom surface of the glue tank and detects temperature of the glue tank heater (H1) [3] to control the heater.
- The target temperature is 185 °C.



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[1]	Glue apply roller heater (H2)	[2]	Glue tank temperature sensor /Lw (TH4)
[3]	Glue tank heater (H1)	[4]	Glue tank temperature sensor /Md (TH3)
[5]	Glue tank	[6]	Glue tank temperature sensor /Up (TH2)
[7]	Glue apply roller temperature sensor (TH1)	[8]	Glue apply roller

(3) Control

(a) Glue apply roller heater (H2) control

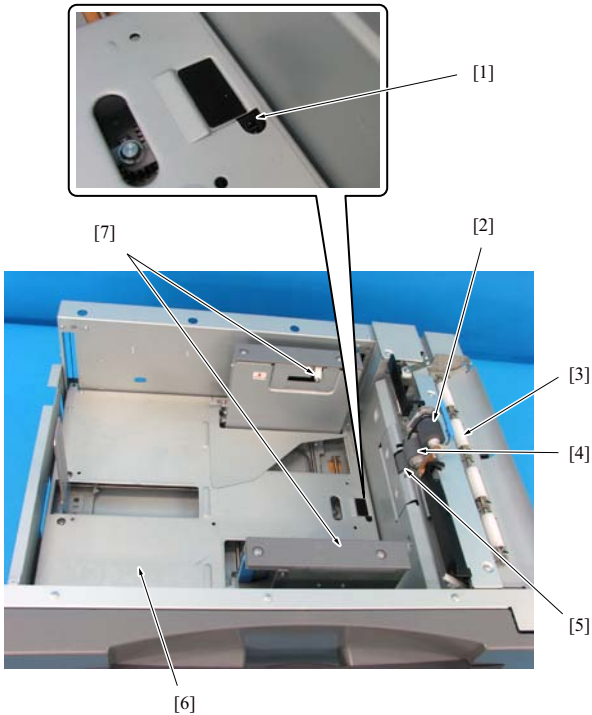
- The H2 is turned ON/OFF according to a temperature detected by the glue apply roller temperature sensor (TH1) in order to keep 165°C.
- When the temperature drops/rises 1°C from the target temperature, the H1 turns ON/OFF.

(b) Glue tank heater (H1) control

- The H1 is turned ON/OFF according to a temperature detected by the glue tank temperature sensor /Lw (TH4) in order to keep 185 °C.
- When the temperature drops/rises 1 °C from the target temperature, the H1 turns ON/OFF.

7. COVER PAPER SUPPLY SECTION

7.1 Configuration

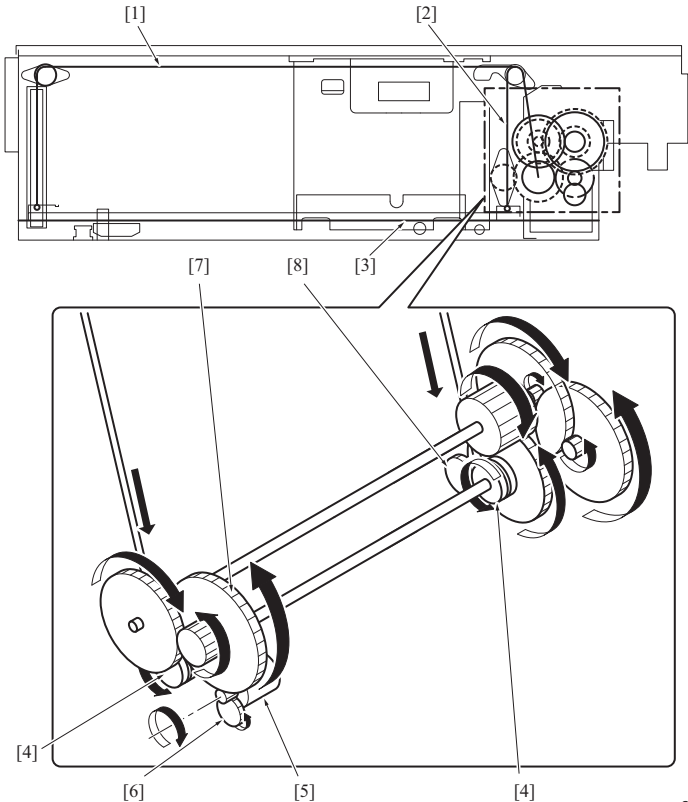


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[1]	Cover paper empty sensor (PS71)	[2]	Pick-up roller
[3]	Conveyance roller	[4]	Paper feed roller
[5]	Separation roller	[6]	Cover paper tray lift plate
[7]	Cover paper tray fan	-	

7.2 Drive

7.2.1 Cover paper tray lift drive

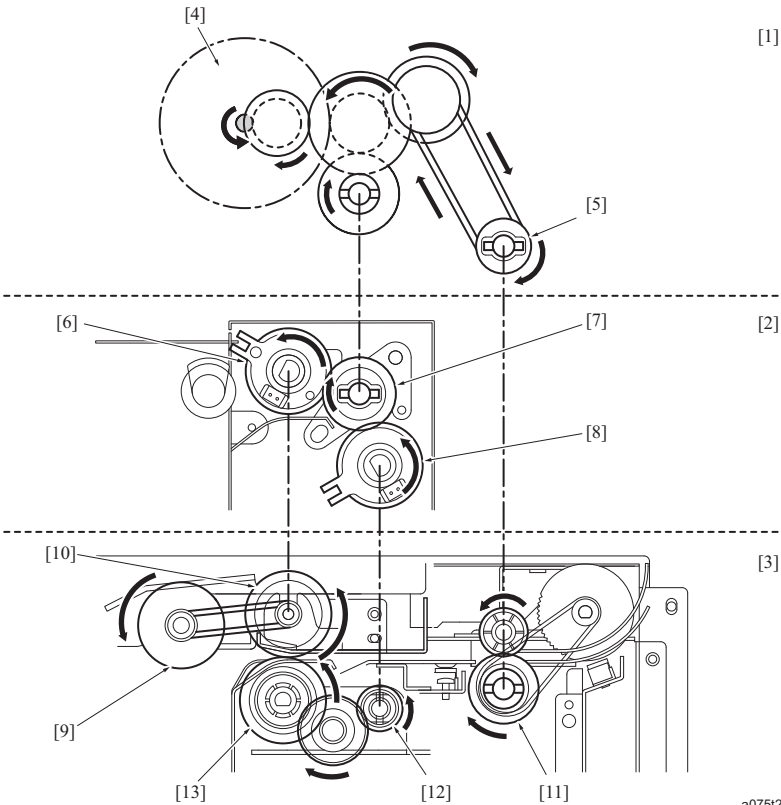


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[1]	Cover paper tray lift wire /Fr1, /Rr1	[2]	Cover paper tray lift wire /Fr2, /Rr2
[3]	Cover paper tray lift plate	[4]	Pulley

[5]	Cover paper tray lift motor (M73)	[6]	One-way clutch
[7]	Lift release coupling gear	[8]	Torque restriction gear (oil damper)

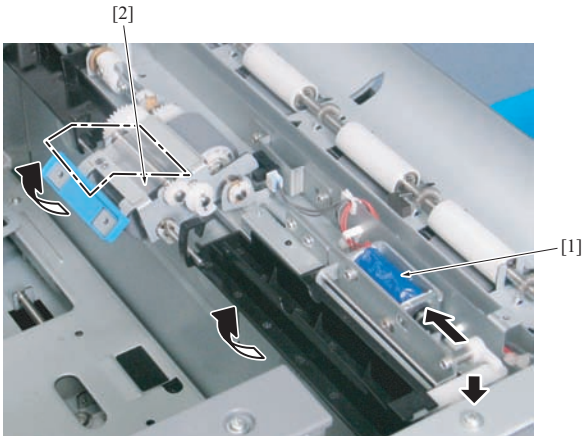
7.2.2 Paper feed drive



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[1]	PB backside	[2]	Backside of cover paper tray
[3]	Center of cover paper tray	[4]	Cover paper feed motor (M74)
[5]	Coupling	[6]	Cover paper feed clutch (MC71)
[7]	Coupling	[8]	Cover paper separation clutch (MC72)
[9]	Pick-up roller	[10]	Paper feed roller
[11]	Conveyance roller	[12]	Torque limiter
[13]	Separation roller		-

7.2.3 Pick-up drive



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[1]	Cover paper pick up solenoid (SD71)	[2]	Pick-up roller
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7.3 Operation

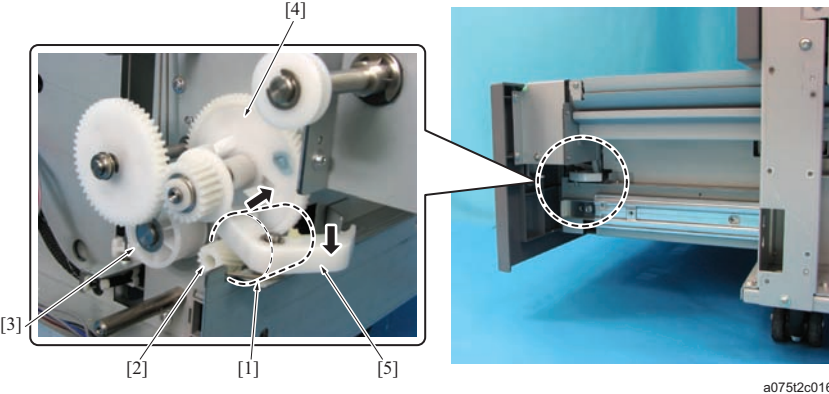
7.3.1 Up/down control

(1) Up operation

- The cover paper tray lift plate is lifted with the cover paper tray lift wire wound up around the pulley by the drive force of the cover paper tray lift motor (M73) [1].

(2) Down operation

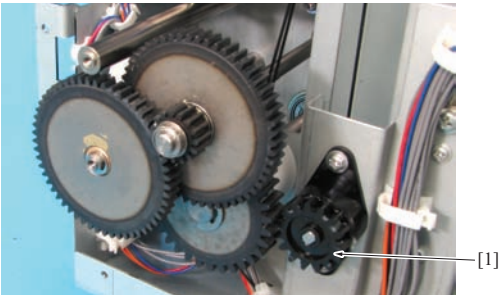
- When the cover paper tray is pulled out, the release lever [5] separates the coupling gear [4] that transmits the motor drive force from the motor shaft [2] to the pulley [3]. (goes down by its own weight)



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[1]	Cover paper tray lift motor (M73)	[2]	Motor shaft
[3]	Pulley	[4]	Coupling gear
[5]	Release lever	-	

- In order to lower the plate slowly by its own weight, the torque limiting gear [1] works only when lowering the cover paper tray lift plate.



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[1]	Torque restriction gear	-	
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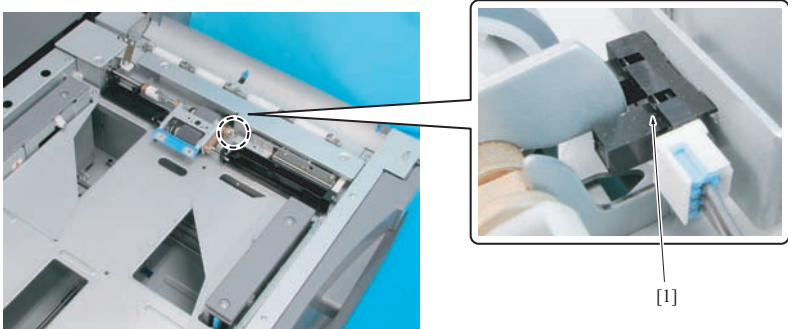
(3) Operation timing

(a) When cover paper is set

- When cover papers are loaded on the tray, the cover paper tray lift motor (M73) starts to rotate to lift the cover paper lift plate.
- The M73 stops when the cover paper tray upper limit sensor (PS74) turns ON.

(b) While feeding cover paper

- While cover papers being fed, the PS74 turns OFF due to a decrease in stacking height of papers, and the M73 starts to rotate again.
- The M73 keeps rotating to lift the cover paper lift plate until the PS74 turns ON again.



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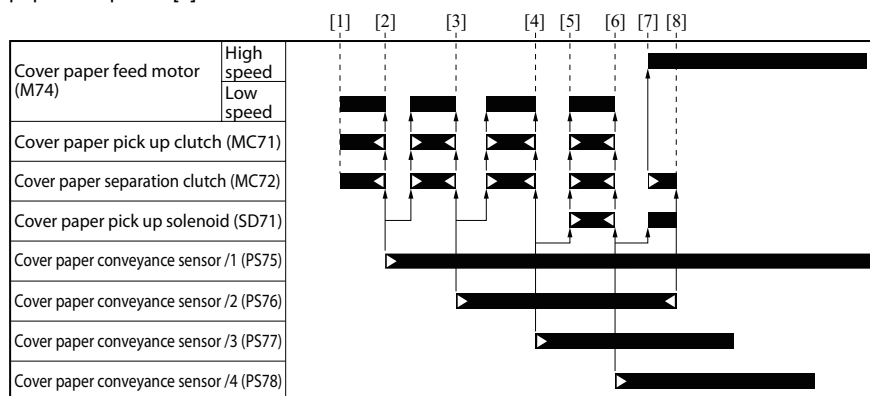
[1]	Cover paper tray upper limit sensor (PS74)	-	
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7.3.2 Pick-up mechanism

- Picking up the cover paper is activated when the cover paper pick-up solenoid (SD71) turns OFF.

(1) Control

- With cover paper feed signal, cover paper feed motor (M74), cover paper feed clutch (MC71) and cover paper separation clutch (MC72) turn ON, and rotate the pick-up roller which is pressing down the cover paper with its own weight, and starts the paper feeding of the cover paper [1].
- When the cover paper conveyance sensor /1 (PS75) is turned ON by the leading edge of the cover paper, M74, MC71, MC72 are temporary turned OFF, and cover paper feeding is stopped [2].
- After the specified time, M74, MC71, MC72 are turned back ON, and the leading edge of the cover paper is sent to the cover paper conveyance sensor /2 (PS76), then M74, MC71 are turned OFF again [3].
- After the specified time, M74, MC71, MC72 are turned back ON, and the leading edge of the cover paper is sent to the cover paper conveyance sensor /3 (PS77), then M74, MC71, and MC72 are turned OFF again [4].
- After the specified time, M74, MC71, MC72 and the cover paper pick up solenoid (SD71) are turned ON, the pick up roller is put back to its original position, and the cover paper is conveyed by only the paper feed roller and the conveyance roller [5].
- When the leading edge of the cover paper turns ON the cover paper conveyance sensor /4 (PS78), M74, MC71, MC72, SD71 turn OFF [6].
- After the specified time, M74 rotates at high speed, cover paper is conveyed by only the conveyance roller while MC72 turns ON and the next cover paper is sent to the reverse direction to be separated [7].
- After the back edge of the cover paper has passed the PS76, MC72 and SD71 turn OFF, and the paper feeding of the first sheet of cover paper completes [8].

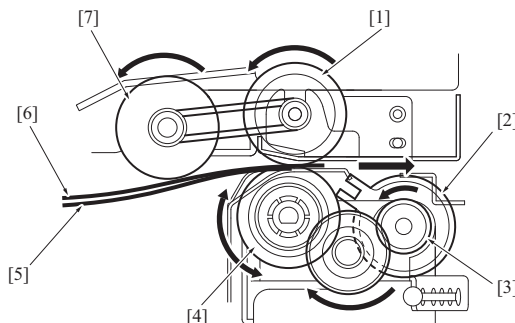


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[1]	Cover paper supply signal on	[2]	Conveyed to PS75
[3]	Conveyed to PS76	[4]	Conveyed to PS77
[5]	Pick up roller goes back to its original position	[6]	Conveyed to PS78
[7]	Conveyance of conveyance roller only	[8]	Pick up paper feeding of first sheet of cover paper complete

7.3.3 Separation mechanism

- The drive force of the cover paper feed motor (M74) is transmitted to the separation roller [4] via the torque limiter [3] when the cover paper separation clutch (MC72) [2] is ON/OFF.
- The separation roller [4] is driven in the direction opposite to the cover paper feeding direction. However, the roller rotates in the same direction with the paper feed direction as long as 1 sheet of cover paper or no paper is fed because the friction force between the cover paper feed roller [1] and separation roller [4], or paper and the separation roller is larger than the torque limited by the torque limiter [3].
- When multi-feed occurs, the separation roller reverses the rotation direction to feed the lower sheet that contacts with the roller back to the tray because the friction force drops due to the multi-feed and becomes lower than the torque limited by the torque limiter.



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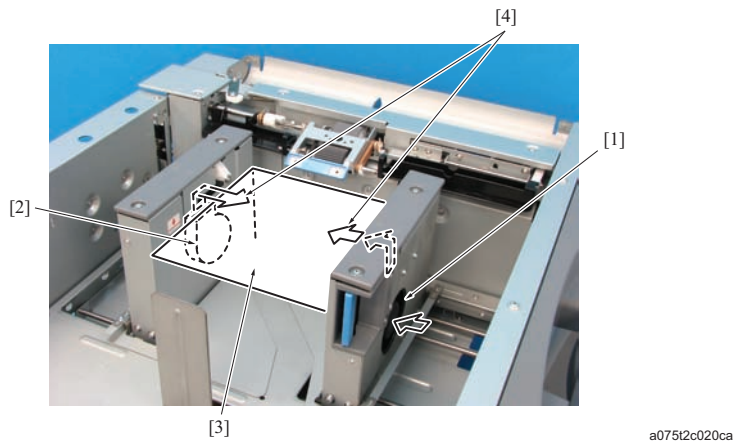
[1]	Paper feed roller	[2]	Cover paper separation clutch (MC72)
[3]	Torque limiter	[4]	Separation roller
[5]	Second sheet of cover paper	[6]	First sheet of cover paper
[7]	Pick-up roller	-	

7.3.4 Paper feed mechanism

- The cover paper feed motor (M74) drives the conveyance roller. Cover papers fed from the feeding section are conveyed to the conveyance section by the conveyance roller.

7.3.5 Air assist mechanism

- The cover paper tray is equipped with the cover paper tray fan /1 (M71) and /2 (M72), which blow air [4] to the cover paper [3] from the front and back cover paper guides.
- Using the tray fans is effective especially when feeding heavy paper or coated paper. However, in the case of plain paper, it may not be fed smoothly.



[1]	Cover paper tray fan /1 (M71)	[2]	Cover paper tray fan /2 (M72)
[3]	Cover paper	[4]	Blow-out of air

(1) Operation timing

- When receiving a print job, cover paper tray fans /1 (M71) and /2 (M72) turn ON, and after the specified time, cover paper feed motor (M74) turns ON.

7.3.6 Cover paper empty detection control

- The cover paper empty sensor (PS71) detects an empty status of the cover paper tray.

7.3.7 Paper feed assist plate

(1) Purpose

The paper feed assist plate (P/N: 56UA4070) can be attached to the pick-up roller to adjust the pressure to cover paper applied from the roller. By changing the number of plates to be attached to the roller depending on the cover paper type, paper feed accuracy can be improved.

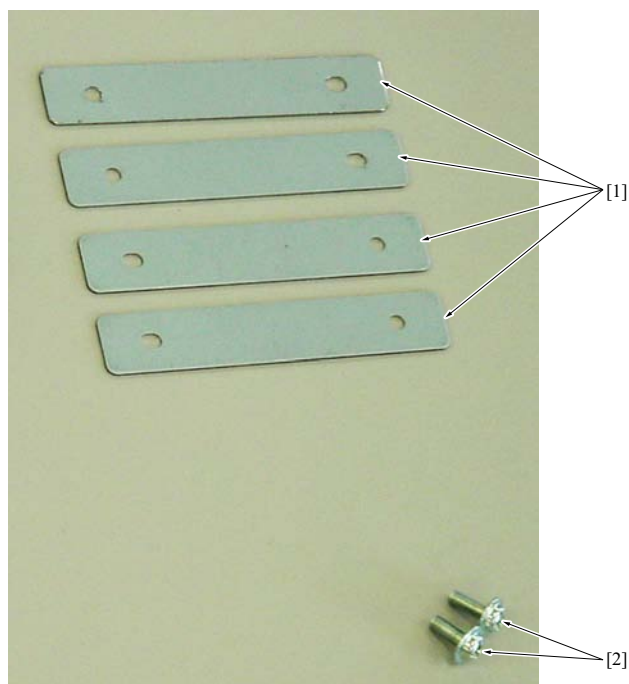
Using the plates is effective especially when feeding coated cover paper or similar type that is likely to stick tightly causing no-feed trouble. The paper feed assist plate weighs about 10g and up to 4 plates can be attached to 1 pick-up roller in normal condition. When the surface of the cover paper is powdery, up to 8 plates can be attached. Increase or decrease the number of plates according to paper type or condition to improve cover paper feed accuracy.

(2) Configuration

The package contains the following as a set.

[1] Paper feed assist plate	4 plates
[2] Screws	2 screws (M3 x 8)

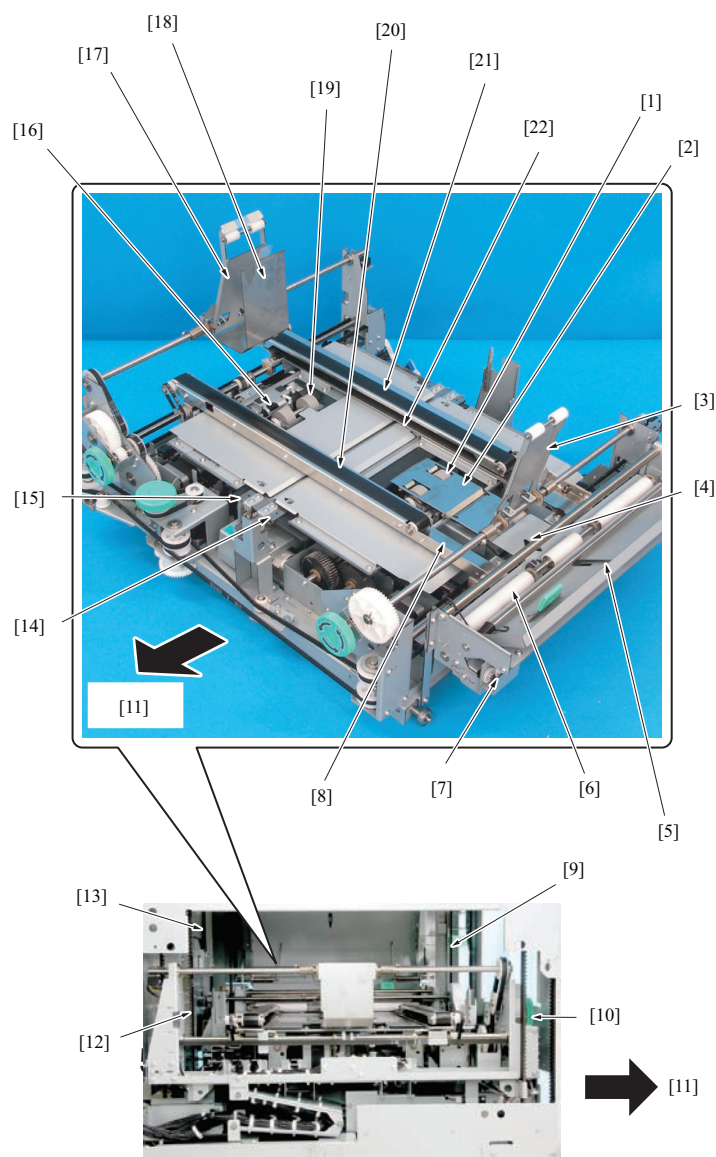
Only 4 paper feed assist plates are packaged together with the main body. When required additionally, can be purchased as service parts.



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8. COVER PAPER TABLE SECTION

8.1 Configuration

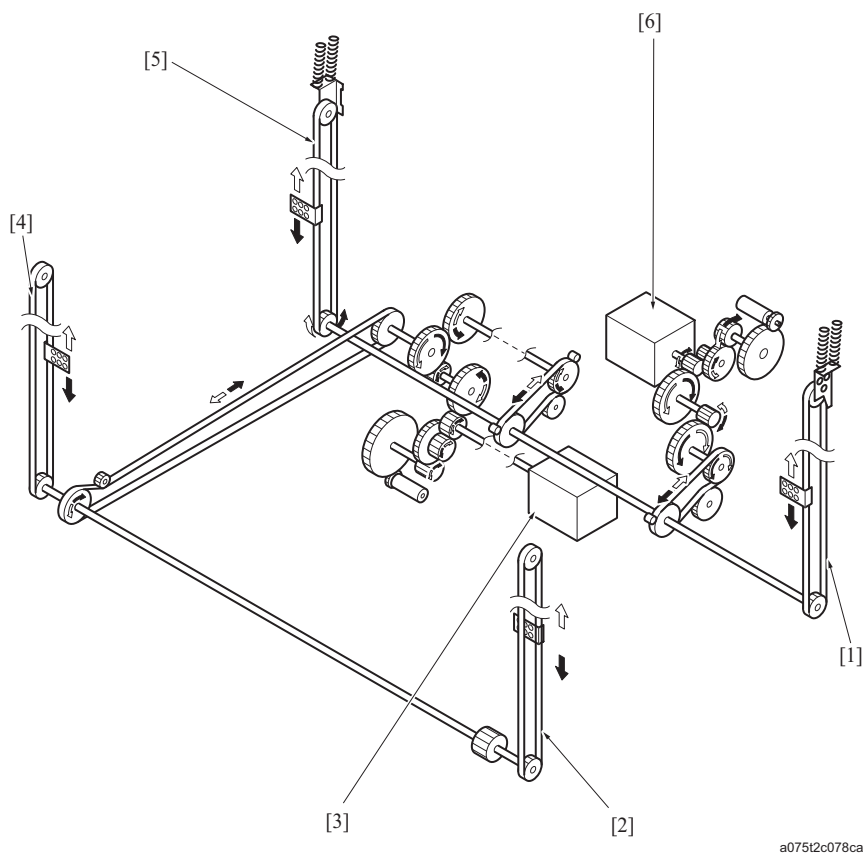


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[1] Cover paper conveyance roller /Rt	[2] Cover paper lift plate /Rt
[3] Cover paper conveyance arm /Rt	[4] Cover paper sensor /Rt (PS45)
[5] Cover paper switchback sensor (PS44)	[6] Cover paper table entrance roller
[7] Cutter	[8] Cover paper alignment plate /Fr
[9] Cover paper table up down belt /Fr_Rr	[10] Cover paper table up down belt/Fr_Lt
[11] Front side	[12] Cover paper table up down belt /Rr_Lt
[13] Cover paper table up down belt /Rr_Rt	[14] Cover paper folding plate /Rt
[15] Cover paper folding plate /Lt	[16] Cover paper sensor /Lt (PS46)
[17] Cover paper conveyance arm /Lt	[18] Cover paper lift plate /Lt
[19] Cover paper conveyance roller /Lt	[20] Book exit belt /Fr
[21] Book exit belt /Rr	[22] Cover paper alignment plate /Rr

8.2 Drive

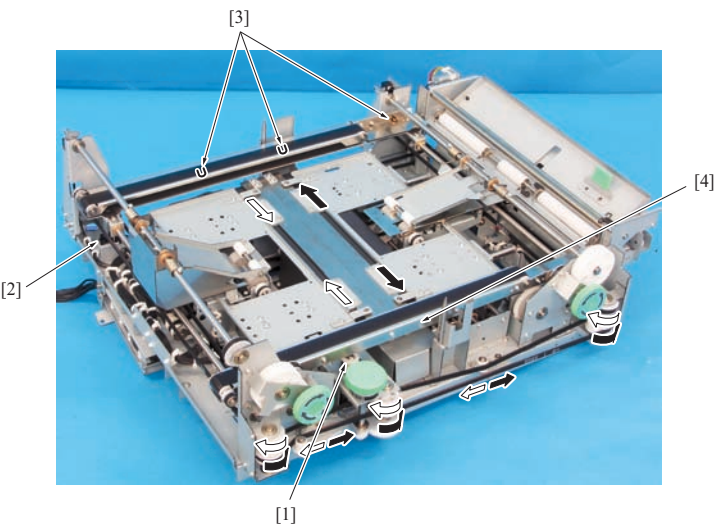
8.2.1 Cover paper table up down/Fr and /Rr drive



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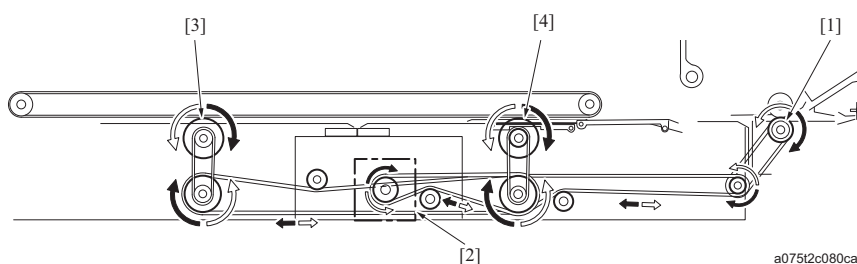
[1]	Cover paper table up down belt /Rr_Rt	[2]	Cover paper table up down belt /Fr_Rt
[3]	Cover paper table up down motor /Fr (M46)	[4]	Cover paper table up down belt /Fr_Lt
[5]	Cover paper table up down belt /Rr_Lt	[6]	Cover paper table up down motor /Rr (M47)

8.2.2 Cover paper alignment drive



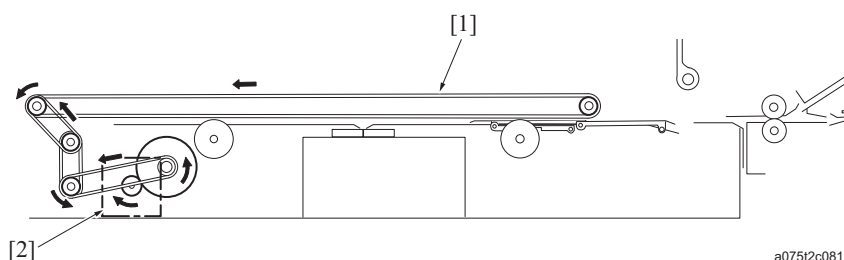
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[1]	Cover paper alignment motor (M41)	[2]	Cover paper alignment home sensor (PS41)
[3]	Cover paper alignment plate /Rr	[4]	Cover paper alignment plate /Fr

8.2.3 Cover paper conveyance drive

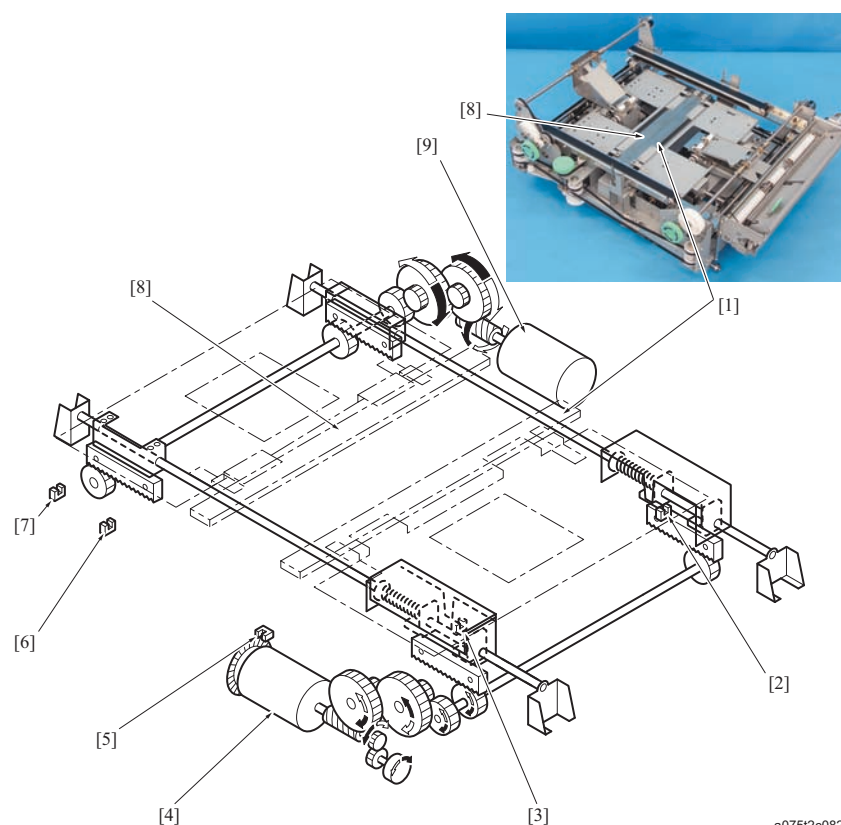
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[1]	Cover paper table entrance roller	[2]	Cover paper conveyance motor (M45)
[3]	Cover paper conveyance roller /Lt	[4]	Cover paper conveyance roller /Rt

8.2.4 Book exit drive

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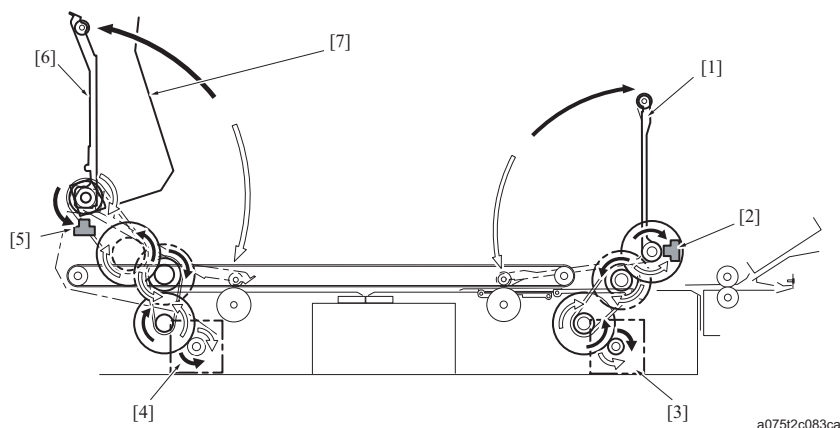
[1]	Book exit belt /Fr, /Rr	[2]	Booklet exit motor (M42)
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8.2.5 Cover paper folding plate /Rt and /Lt drive

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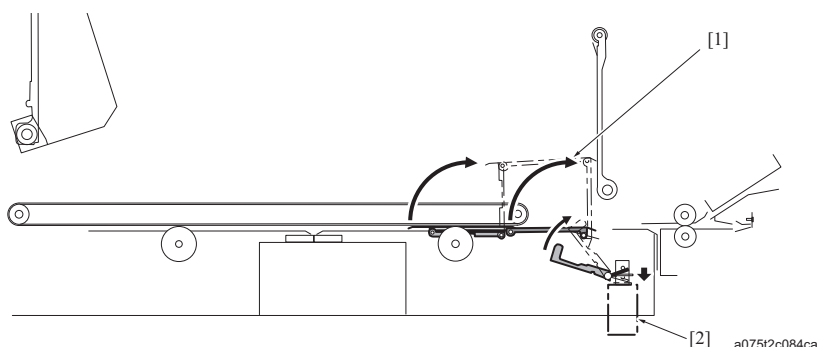
[1]	Cover paper folding plate /Rt	[2]	Cover paper folding plate home sensor /Rt (PS48)
[3]	Cover paper folding pressure sensor (PS52)	[4]	Cover paper folding motor /Rt (M48)
[5]	Cover paper folding plate encoder sensor (PS50)	[6]	Cover paper folding plate home sensor /Lt (PS49)
[7]	Cover paper folding plate position sensor (PS51)	[8]	Cover paper folding plate /Lt
[9]	Cover paper folding motor /Lt (M49)	-	

8.2.6 Cover paper conveyance arm /Rr and /Lt drive



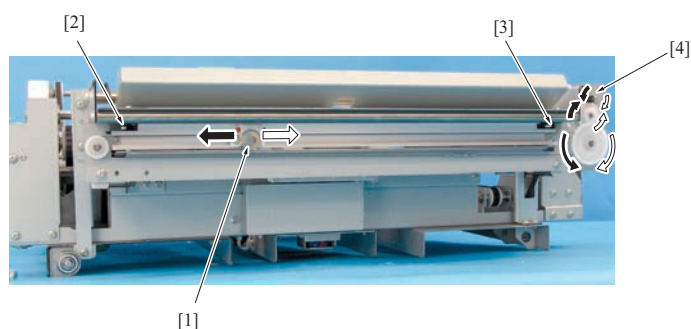
[1]	Cover paper conveyance arm /Rt	[2]	Cover paper conveyance arm home sensor /Rt (PS42)
[3]	Cover paper conveyance arm motor /Rt (M43)	[4]	Cover paper conveyance arm motor /Lt (M44)
[5]	Cover paper conveyance arm home sensor /Lt (PS43)	[6]	Cover paper conveyance arm /Lt
[7]	Cover paper lift plate /Lt	-	

8.2.7 Cover paper lift drive



[1]	Cover paper lift plate /Rt	[2]	Cover paper lift solenoid (SD41)
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8.2.8 Cutter drive



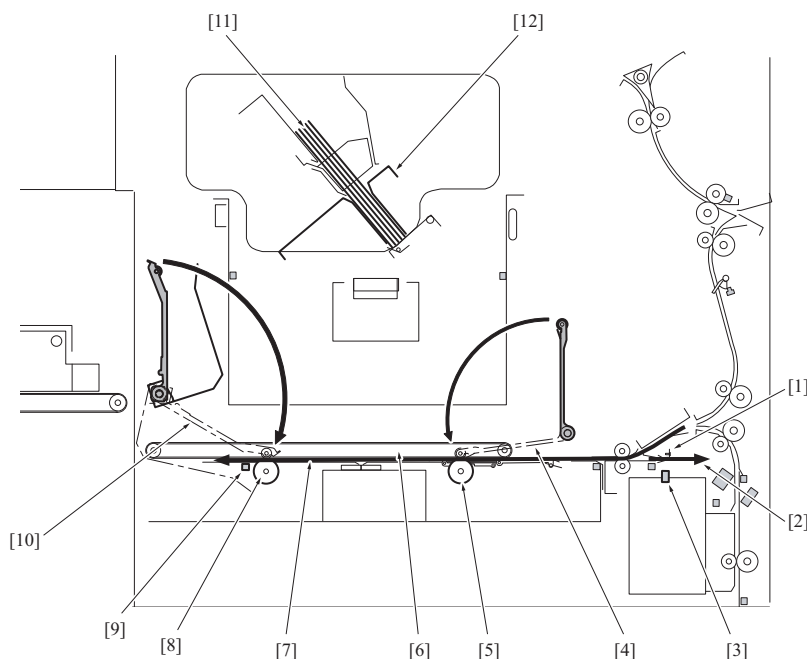
[1]	Cutter	[2]	Cutter home switch (SW41)
[3]	Cutter end switch (SW42)	[4]	Cutter motor (M50)

8.3 Operation

8.3.1 Cover paper table section operation overview

1. The cover paper conveyance arms /Rt [4] and /Lt [10] are activated when detecting that the print start signal turns ON, and they are pressed against the cover paper conveyance rollers /Rt [5] and /Lt [8].
2. When a cover paper is fed [7], alignment operation is carried out by the cover paper alignment plate /Rr and /Fr [6].
3. After the thickness of inside papers [11] is detected by clamping operation made by the clamp pressure plate [12], the cover paper is fed backward (switchback) [2].
4. The backward feeding is made to feed the cover paper to the roller cutter assy so that the paper edge protrudes away from the cover paper switchback sensor (PS44) [3] by the trimming amount.
5. The roller cutter [1] trims the cover paper edge and then the paper is conveyed to the left side again.
6. Alignment operation to attach the cover paper to the inside papers is carried out.

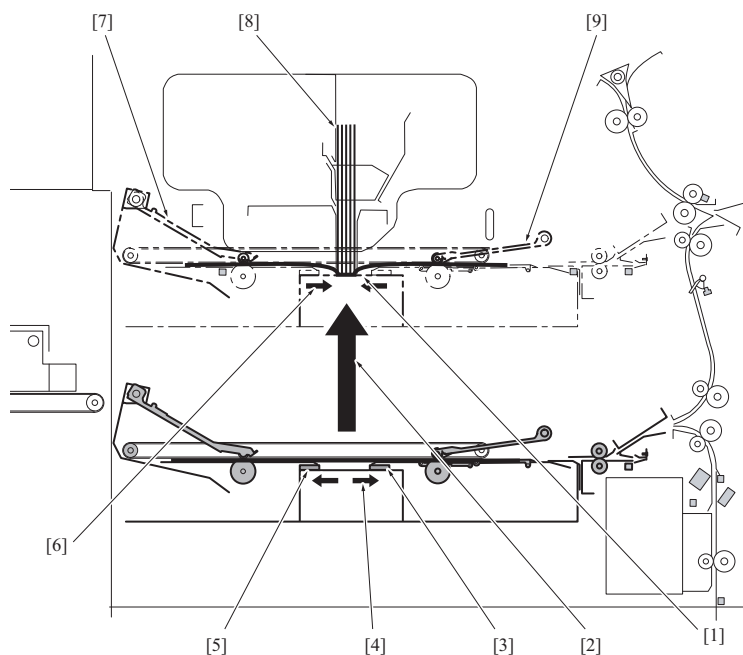
7. The cover paper is moved to left and right by the reverse/forward rotation of the cover paper conveyance rollers /Rt and /Lt for positioning properly with reference to the cover paper sensor /Lt (PS46) [9] as starting point.



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[1]	Roller cutter	[2]	Switchback conveyance
[3]	Cover paper switchback sensor (PS44)	[4]	Cover paper conveyance arm /Rt
[5]	Cover paper conveyance roller /Rt	[6]	Cover paper alignment plate /Rr, /Fr
[7]	Cover paper conveyance	[8]	Cover paper conveyance roller /Lt
[9]	Cover paper sensor /Lt (PS46)	[10]	Cover paper conveyance arm /Lt
[11]	Bundle of inside papers	[12]	Clamp pressure plate

8. When the alignment operation of the cover paper completes and CD alignment plate returns to home position, the cover paper folding plates /Rt [3] and /Lt [5] are opened [4].
9. When the cover paper on the lifted unit attaches to the spine of inside papers [8], the book spine backing plate [1] presses against the spine to attach the cover paper securely.
10. The cover paper folding plates /Rt and /Lt are moved inward to press [6] both edge surfaces of the spine to create the perfect corners. During up and down operation of the cover paper table unit, the cover paper conveyance arms /Rt [9] and /Lt [7] are moved away from the cover paper so as not to let the paper pulled by the arms.
11. The pressures to the spine are applied for 3 seconds for the glue to harden fully.

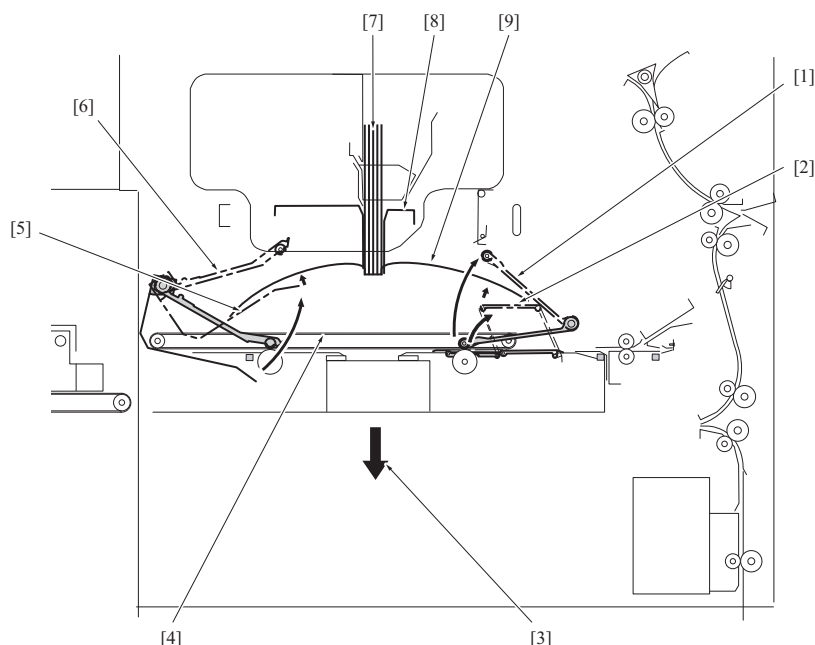


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[1]	Book spine backing plate	[2]	Lift of cover paper table unit
[3]	Cover paper folding plate /Rt	[4]	Opening

[5]	Cover paper folding plate /Lt	[6]	Pressurize
[7]	Cover paper conveyance arm /Lt	[8]	Bundle of inside papers
[9]	Cover paper conveyance arm /Rt	-	

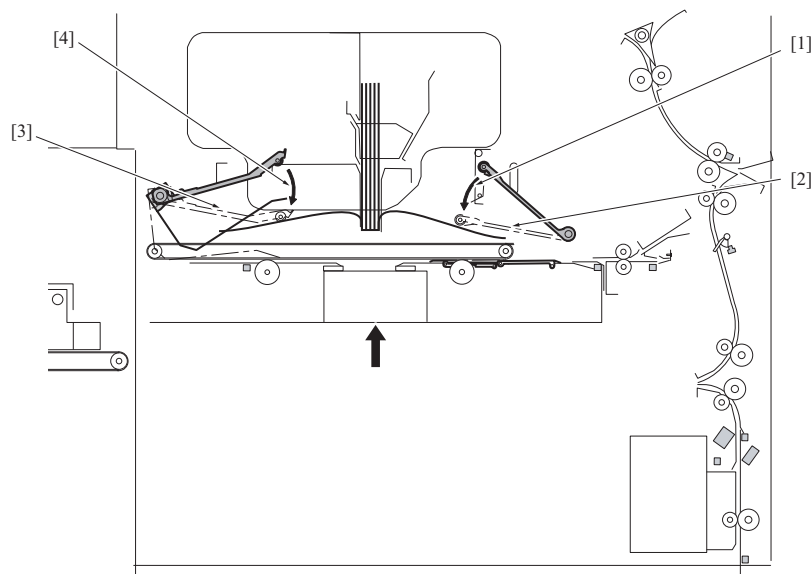
12. The cover paper folding plates /Rt and /Lt are opened, and the cover paper table unit is lowered [3].
13. While the cover paper table is going down, the inside papers of the book [7] are held by the clamp pressure plate [8]. Since both sides of the cover paper [9] bow, the cover paper lift plate /Lt [5] integrated with the cover paper conveyance arm /Lt [6] supports the left-side of the cover paper. The right-side of the paper triggers the cover lift plate /Rt [2] and supports the cover. The cover paper conveyance arm /Rt [1] is moved away from the cover paper lift plate /Rt.
14. The book exit belt [4] is moved to the position to receive the book.



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[1]	Cover paper conveyance arm /Rt	[2]	Cover paper lift plate /Rt
[3]	Down	[4]	Book exit belt
[5]	Cover paper lift plate /Lt	[6]	Cover paper conveyance arm /Lt
[7]	Book	[8]	Clamp pressure plate
[9]	Cover paper	-	

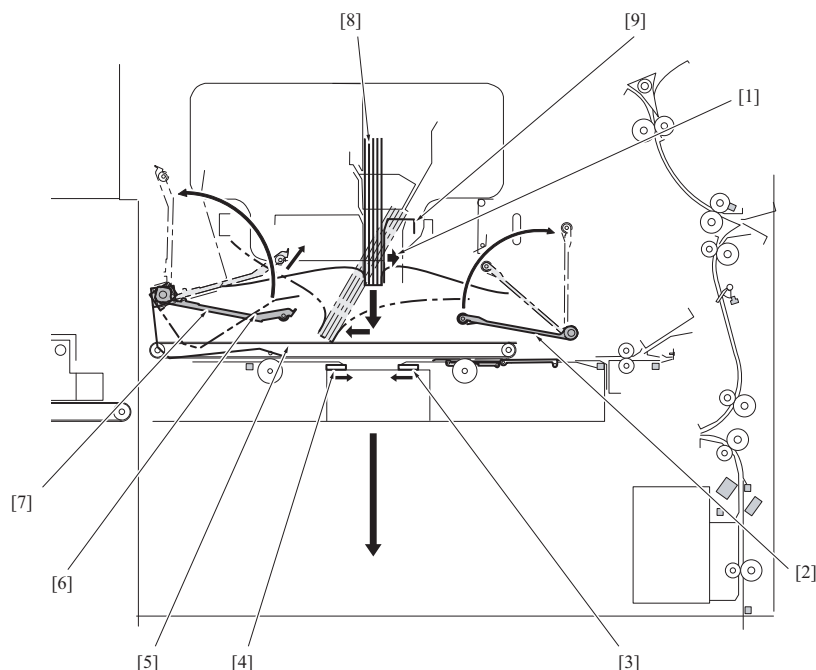
15. When the book exit belt is set at the receiving position, the cover paper table unit is lifted again.
16. When lifting the unit is started, the cover paper conveyance arms /Rt [2] and /Lt [3] are folded [1] [4] to keep them from contact with the clamp section.



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[1]	The arm is folded	[2]	Cover paper conveyance arm /Rt
[3]	Cover paper conveyance arm /Lt	[4]	The arm is folded

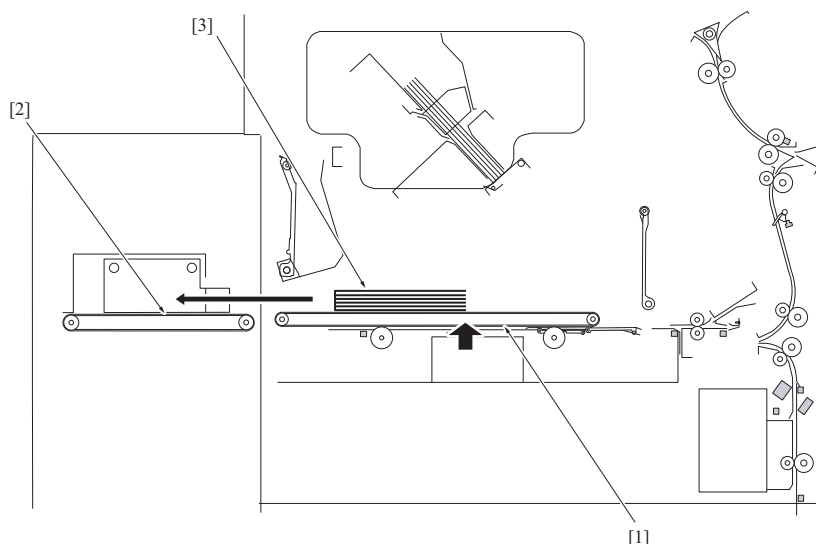
17. When the book (inside papers) [8] is released from the clamp pressure plate [9], the cover paper table unit is lowered.
18. At the start of the unit lowering operation, the cover paper conveyance arm /Rt [2], /Lt [7], and the cover paper folding plate /Rt [3], /Lt [4] are returned to their home positions. When the cover paper lift plate /Lt [6] returns to its home position, it flips up the left-side of the cover paper toward the inside papers.
19. The book exit belt [5] is activated after a prescribed time has elapsed since the table unit lowering operation is started so that the belt starts to move at the same time the book contacts with the belt and the book is laid down on the belt.



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[1] Book exit belt	[2] Cover paper conveyance arm /Rt
[3] Cover paper folding plate /Rt	[4] Cover paper folding plate /Lt
[5] Book exit belt	[6] Cover paper lift plate /Lt
[7] Cover paper conveyance arm /Lt	[8] Book
[9] Clamp pressure plate	-

20. The cover paper table unit goes down to its home position, and then goes up until the book exit belt surface becomes horizontal to the book conveyance belt [3] surface.
21. The book exit belt [1] starts to move again to convey the book [3] on it to the book stock section.



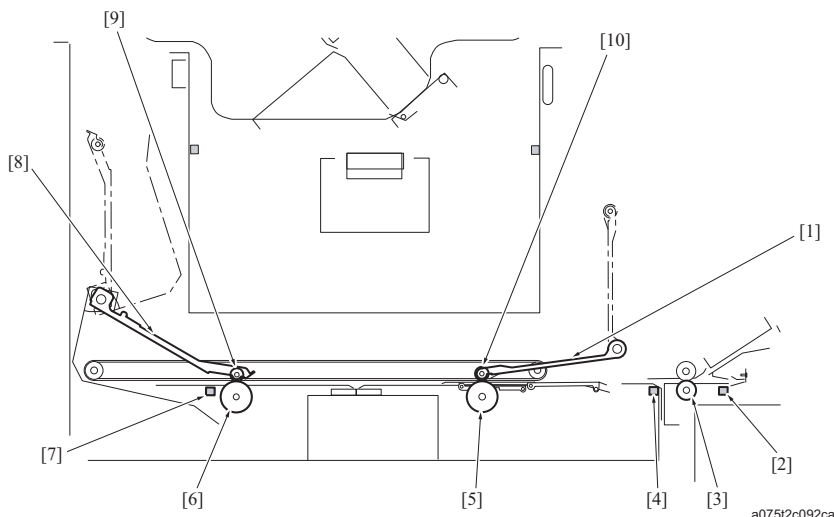
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[1] Book exit belt	[2] Book conveyance belt
[3] Book	-

8.3.2 Cover paper conveyance control

(1) Mechanism

- The cover paper conveyance motor (M45) drive force transmitted via the gear and the belt drives the cover paper table entrance roller [3], the cover paper conveyance rollers /Rt [5] and /Lt [6].
- A cover paper is conveyed being nipped between the driven rollers [9] and [10] provided on the tips of the cover paper conveyance rollers /Rt and /Lt and the cover paper conveyance arms /Rt [1] and /Lt [8].
- On the cover paper conveyance path, the cover paper sensor /Rt (PS45) [4], /Lt (PS46) [7] and the cover paper switchback sensor (PS44) [2] are provided.
- The PS44 is used to position the cover paper for trimming.
- PS45 is the starting point of when carrying in cover paper to the up/down cover paper section. Cover paper is carried in after specified time from when PS45 detected the leading edge of the paper, cover paper stops and alignment operation is carried out.
- The PS46 is used to position the cover paper to be attached to the spine of inside papers.



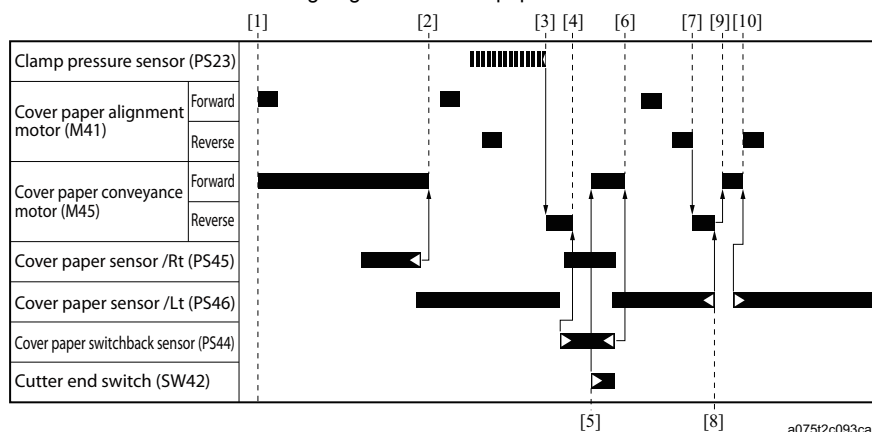
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[1] Cover paper conveyance arm /Rt	[2] Cover paper switchback sensor (PS44)
[3] Cover paper table entrance roller	[4] Cover paper sensor /Rt (PS45)
[5] Cover paper conveyance roller /Rt	[6] Cover paper conveyance roller /Lt
[7] Cover paper sensor /Lt (PS46)	[8] Cover paper conveyance arm /Lt
[9] Driven roller /Rt	[10] Driven roller /Lt

(2) Control

(a) When conveying cover paper from the PB cover paper tray

- Upon receiving of a print job, the cover paper conveyance motor (M45) starts to turn in the forward direction [1].
- The M45 stops [2] when a prescribed time has elapsed after the cover paper sensor /Rt (PS45) detects the leading edge of the cover paper.
- When clamping the inside papers is finished, the booklet thickness sensor (PS29) detects the last pulse and the book thickness information is obtained. Then the M45 starts reverse rotation [3] to convey the cover paper toward the roller cutter assy.
- The cover paper moves until it reaches the position to be trimmed off by the amount determined according to the paper size setting and the book thickness information, and the M45 stops [4].
- When the cutter end position switch (SW42) detects the finish of the cutting operation [5], the M45 starts forward rotation to convey the cover paper to the left-hand for the alignment.
- The M45 stops [6] when a prescribed time has elapsed after the PS44 detects the trailing edge of the cover paper.
- When the alignment operation by the cover paper alignment motor (M41) is finished [7], the cover paper is conveyed to the right-hand by the M45 reverse rotation for the next positioning operation.
- The M45 keeps rotating to position the cover paper properly to be attached to the inside papers until the cover paper sensor /Lt (PS46), the reference sensor for the positioning, turns OFF [8].
- After a prescribed time has elapsed, the M45 starts forward rotation to convey the cover paper to the left hand [9] and stops [10] after the PS46 detects the leading edge of the cover paper.



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[1]	Print start signal ON	[2]	Cover paper conveyance to the cover paper table is finished
[3]	Starting conveyance toward the roller cutter assy	[4]	Stop after conveying trimming amount
[5]	Trimming is completed	[6]	Cover paper stops for alignment
[7]	Cover paper alignment is completed	[8]	Cover paper positioning reference search
[9]	Starting cover paper positioning	[10]	Cover paper positioning is completed

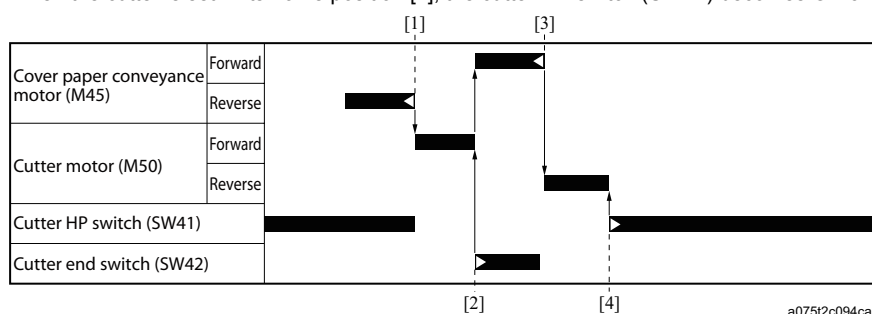
8.3.3 Cover paper cutting control

(1) Mechanism

- The cutter motor (M50) drives the roller cutter via the pulley and the wire.
- The front side is the home position and the trimming is carried out when the cover paper is moved to the back side from the front side.

(2) Control

- When the cover paper is conveyed to the roller cutter assy by the cover paper conveyance motor (M45), the motor stops [1] and the cutter motor (M50) starts forward rotation to start the trimming operation.
- When the cutter blade cut the paper and reaches the limit position, the cutter end position switch (SW42) turns ON and the M50 stops. At the same time, the M45 starts forward rotation to convey the cover paper.
- When the conveyance by the M45 is finished [3], the M50 starts to rotate again to make the cutter return to its home position.
- When the cutter is set in its home position [4], the cutter HP switch (SW41) becomes ON and the M50 stops.

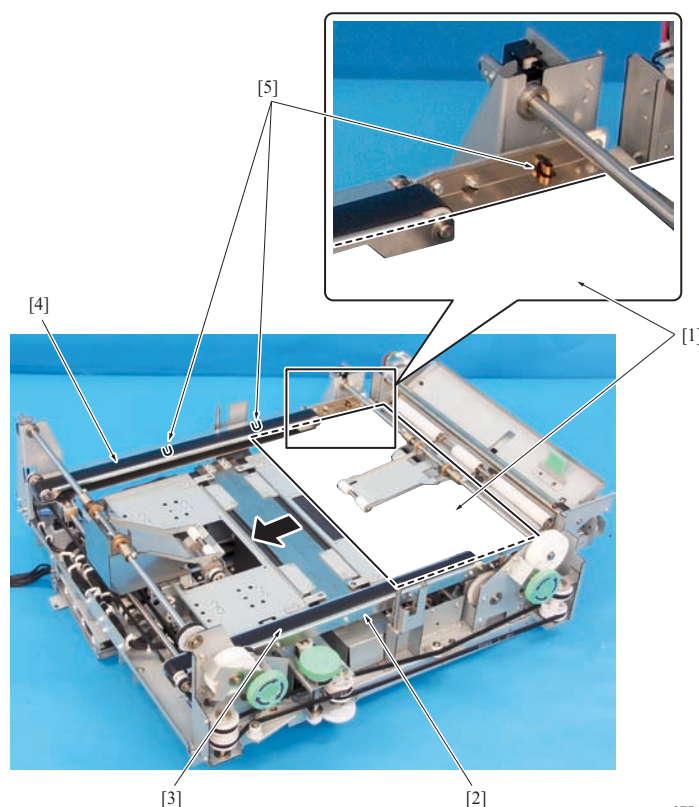


[1]	Start of cutting	[2]	Trimming is completed
[3]	Starting home position return operation	[4]	Cutter is set in its home position

8.3.4 Cover paper alignment drive

(1) Mechanism

- The cover paper alignment motor (M41) drives the cover paper alignment plates /Fr [2] and /Rr [5], the book exit belts /Fr [3] and /Rr [4] for changing their positions.
- The cover paper alignment plate /Rr presses the cover paper against the cover paper alignment plate /Fr to position the cover paper properly, and the cover paper alignment /Fr judges the alignment accuracy.



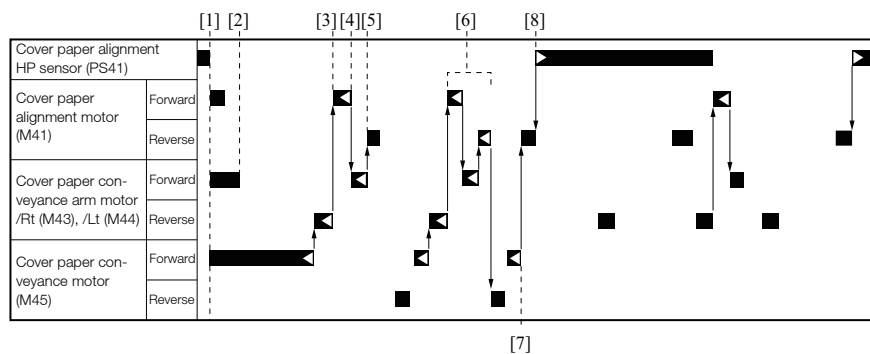
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[1]	Cover paper	[2]	Cover paper alignment plate /Fr
[3]	Book exit belt /Fr	[4]	Book exit belt /Rr
[5]	Cover paper alignment plate /Rr	-	

(2) Control

(a) Cover paper trimming mode

- When detecting that the print start signal turns ON [1], the cover paper alignment motor (M41) starts forward rotation to set the alignment parts in the positions for the alignment operation, and stops [2].
- After the conveyance arms /Rt and /Lt move away from the cover paper conveyance rollers /Rt and /Lt by the cover paper conveyance arm motors /Rt (M43) and /Lt (M44), and the arms stops, the M41 starts forward rotation to position the cover paper to be trimmed [3].
- When the cover paper is set at the trimming position with the cover paper alignment plates /Rr and /Fr holding down both sides of the paper, the M41 stops [4].
- The conveyance arms /Rt and /Lt are pressed against the cover paper conveyance rollers /Rt and /Lt [5] by the M43 and M44 drive force. Then the M41 starts reverse rotation to move the cover paper alignment plates /Rr and /Fr away from the cover paper, and stops.
- When the cover paper trimming is finished, the cover paper alignment operation [6] to be attached to the inside papers is performed in the same manner as for the trimming.
- When positioning the cover paper by the cover paper conveyance motor (M45) is finished, the M41 starts reverse rotation to perform preparation operation [7] for the next cover paper table lifting operation.
- The M41 stops [8] when the cover paper alignment home sensor (PS41) becomes ON.



[7]

[1]	Print start signal ON	[2]	Setting the plates and belts ready for the conveyance
[3]	Positioning (alignment) for cover paper trimming	[4]	Stops at the trimming position
[5]	Positioning (alignment) cover paper to be attached to inside papers	[6]	Starting preparation for cover table lifting operation
[7]	Alignment-related parts return to its home position	[8]	Returning to the home position

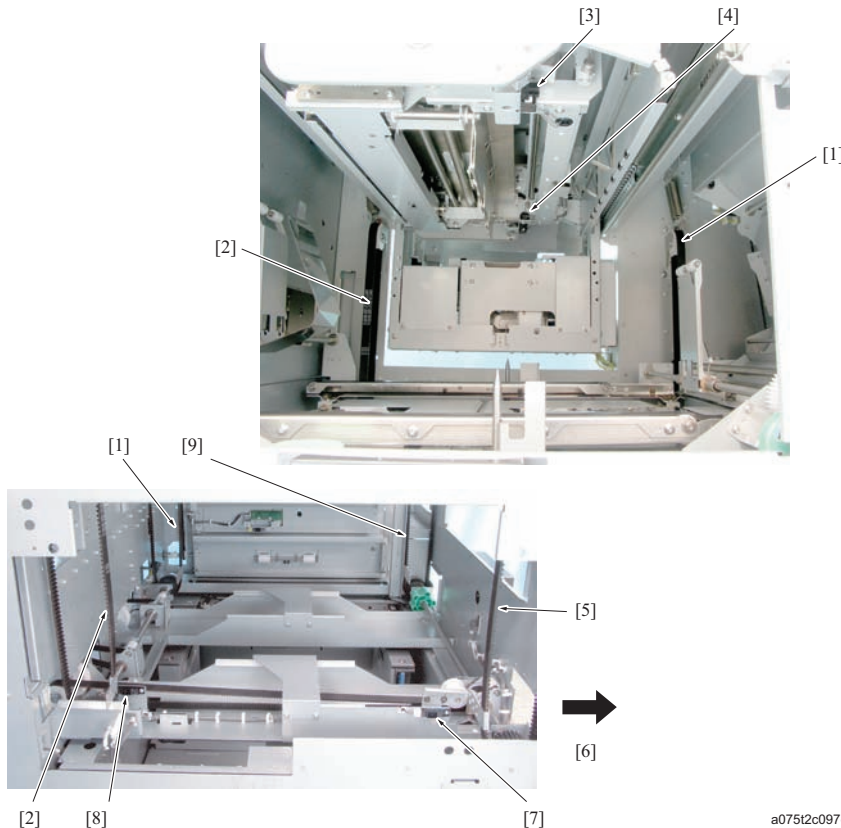
(b) Cover paper Not trimming mode

When the sub-scanning direction length of inside papers is over 182mm, the first positioning operation for trimming is not performed. Only the positioning operation for attaching the cover to the inside papers is performed.

However, when the inside paper is smaller than B5 size, alignment is done twice. Once when cover paper is carried in, and once after leading edge positioning is done.

8.3.5 Cover paper table up down control**(1) Mechanism**

- The cover paper table up down motor /Fr (M46) drives the cover paper table up down belts /Fr_Rt [9] and /Fr_Lt [5], and the cover paper table up down motor /Rr (M47) drives the cover paper table up down belts /Rr_Rt [1] and /Rr_Lt [2].
- The cover paper table upper limit sensor /Fr (PS26) [3] detects that the front side of the cover paper table that is driven by the M46 reaches the upper limit.
- The cover paper table upper limit sensor /Rr (PS27) [4] detects that the rear side of the cover paper table that is driven by the M47 reaches the upper limit.
- The cover paper table home sensor /Fr (PS47) [7] detects that the front side of the cover paper table is in its home position, and the cover paper table home sensor /Rr (PS53) [8] detects that the rear side of the cover paper table is in the home position.



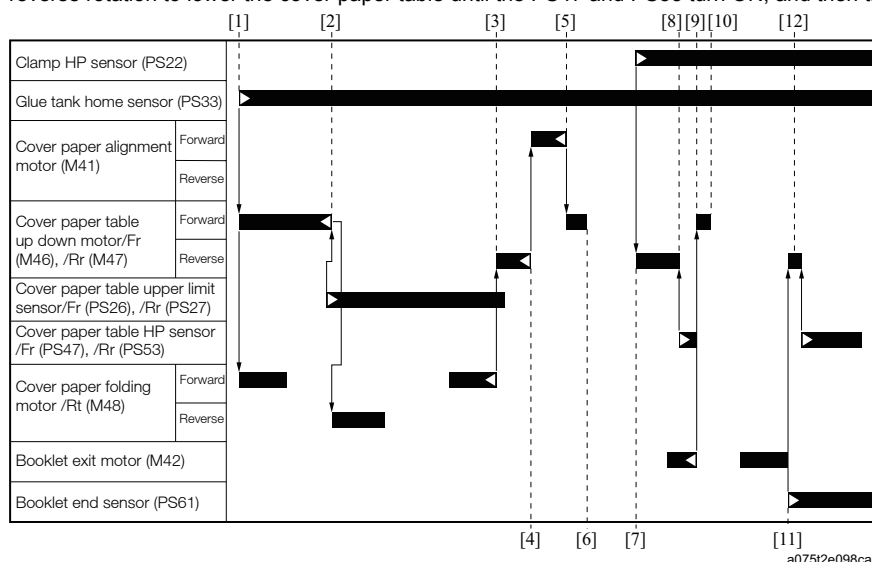
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[1]	Cover paper table up down belt /Fr_Rt	[2]	Cover paper table up down belt /Rr_Lt
[3]	Cover paper table upper limit sensor /Fr (PS26)	[4]	Cover paper table upper limit sensor /Rr (PS27)
[5]	Cover paper table up down belt/Fr_Lt	[6]	Front side
[7]	Cover paper table home sensor /Fr (PS47)	[8]	Cover paper table home sensor /Rr (PS)
[9]	Cover paper table up down belt /Fr_Rt	-	

(2) Control

1. When applying glue to the spine of inside papers is finished and the glue tank HP sensor (PS33) turns ON, the cover paper table up down motors /Fr (M46) and /Rr (M47) start forward rotation to lift the cover paper table [1].
2. During a prescribed time period after the cover paper table upper limit sensors /Fr (PS26) and /Rr (PS27) become ON, the cover paper is pressed against the spine of inside papers, and then M46 and M47 stop [2].
3. After the book spine ends are neatly folded, the cover paper folding motor /Rt (M48) moves the cover paper folding plate /Rt away from the book and stops, and then the reverse rotation of the M46 and M47 lowers the cover paper table [3].
4. The M46 and M47 keeps rotating until the cover paper table reaches the position to receive the book, and they stop [4].
5. When the cover paper alignment motor (M41) drives the book exit belt (attached to the cover paper alignment plates /Fr and /Rr) to the position to receive the book, and stops, the M46 and M47 start forward rotation to lift the cover paper table [5].
6. The motors stop [6] when the cover paper table reaches to the position to receive the book.
7. When the clamp home sensor (PS22) turns ON upon completion of opening movement of the clamp pressure plate (the book is released from the plate), the M46 and M47 starts reverse rotation to lower the cover paper table [7] to receive the book.
8. The M46 and M47 stop when the cover paper table home sensors /Fr (PS47) and /Rr (PS53) detect that the cover paper table reaches its home position.
9. When the booklet exit motor (M42) drives the book exit belt to convey the book to the predetermined position and stops, the M46 and M47 starts forward rotation to lift the cover paper table [9].
10. In order to align the surface of the book exit belt with that of the book conveyance belt in the book stock section, the cover table is lifted by 60mm and the M46 and M47 stop [10].

11. When the booklet end sensor (PS61) turns ON detecting that the book has exit to the book stock section [11], the M46 and M47 starts reverse rotation to lower the cover paper table until the PS47 and PS53 turn ON, and then the motors stop [12].



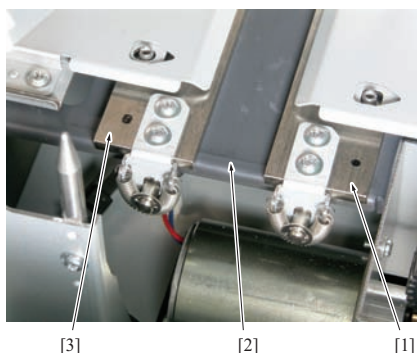
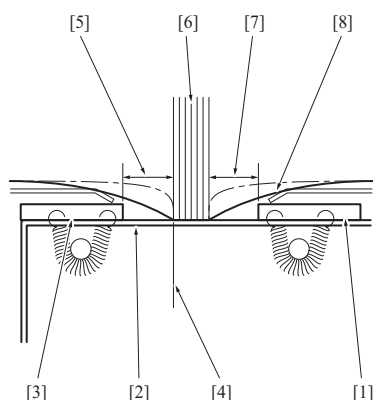
[1]	Completion of glue application	[2]	Completion of pressing the book spine
[3]	Starting to lower the cover paper table for preparing book receiving operation	[4]	Standby for receiving book
[5]	Book exit belt movement is finished	[6]	Going up and stopping at the position to receive book
[7]	Starting book receiving operation	[8]	Stopped at home position
[9]	Starting lifting to the book exit position	[10]	Lifting by 60mm
[11]	Book exit is finished	[12]	Returning to the home position

8.3.6 Cover paper folding plate control

(1) Mechanism

(a) OUTLINE

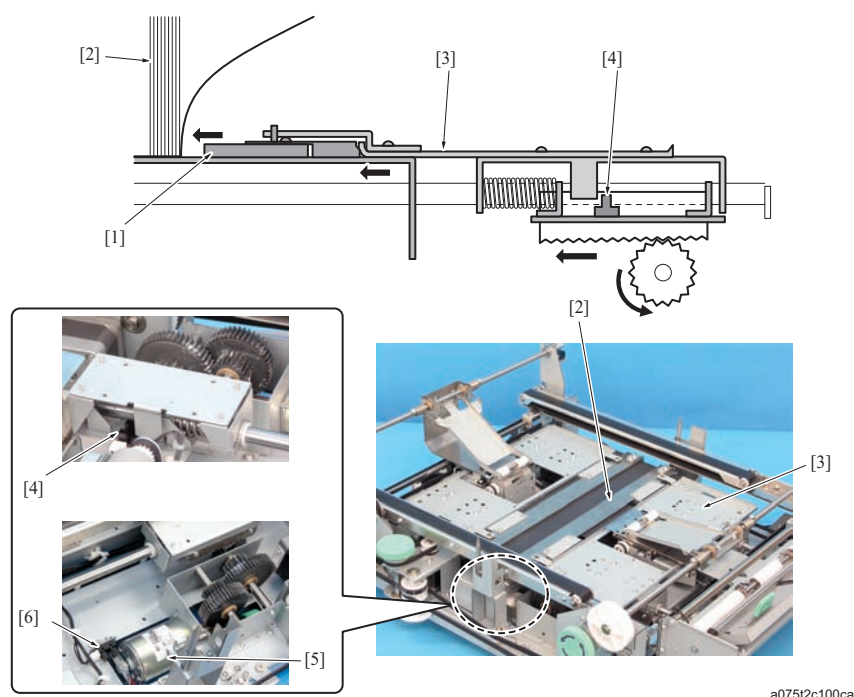
- In order to let the book spin ends to form perfect corners, the cover paper folding motors /Rt (M48) and /Lt (M49) move the cover paper folding plates /Rt [1] and /Lt [3] respectively inward to press the book spine [6] from both left and right side with the spine pressed by the book spine backing plate [2] on the cover paper [8].
- The cover paper folding plate /Lt is used as the reference position [4], and the cover paper folding plate /Rt presses the book against the plate /Lt with spring load.
- The standby position of the cover paper folding plate /Lt is 15mm [5] left from the reference position [4], and that of the cover paper folding plate /Rt is 15mm [7] right from the right end of the book regardless of the book thickness.



[1]	Cover paper folding plate /Rt	[2]	Book spine backing plate
[3]	Cover paper folding plate /Lt	[4]	At the reference position
[5]	15mm	[6]	Book
[7]	15mm	-	

(b) Pressure mechanism

- The cover paper folding motor /Rt (M48) [5] drives the cover paper folding operation via the gear.
- The cover paper folding pressure sensor (PS52) [4] detects the pressure applied to the book.
- The cover paper folding plate encoder sensor (PS50) [6] detects how much the M48 has rotated.

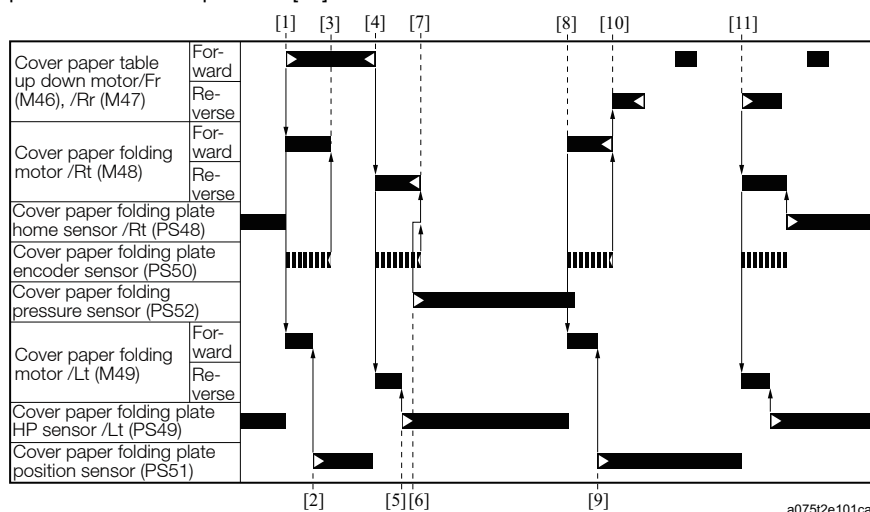


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[1]	Cover paper folding plate /Rt	[2]	Book
[3]	Pressure drive plate /Rt	[4]	Cover paper folding pressure sensor (PS52)
[5]	Cover paper folding motor /Rt (M48)	[6]	Cover paper folding plate encoder sensor (PS50)

(2) Control

- When the cover paper table up down motors /Fr (M46) and /Rr (M47) start to rise to stick the cover paper to the book spine and cover paper alignment completes, when the CD alignment plate returns to home position, the cover paper folding motors /Rt (M48) and /Lt (M49) start forward rotation to move the cover paper folding plates /Rt and /Lt outward [1].
- The M49 stops [2] when a prescribed time has elapsed after the cover paper folding plate position sensor (PS51) turns ON.
- The M48 stops [3] when the cover paper folding plate encoder sensor (PS50) has count certain pulses correspond to the book thickness.
- When the M46 and M47 stop upon completion of pressing the cover paper against the spine of inside papers, the M48 and M49 start reverse rotation to move the cover paper folding plate /Rt and /Lt inward (toward the book) [4].
- When the cover paper folding plate /Lt has moved to the reference position during a prescribed time period after the cover paper folding plate home sensor /Lt (PS49) turns ON, the M49 stops [5].
- When the cover paper folding pressure sensor (PS52) turns ON [6], the PS50 starts to count again until the pressure plate moves 3mm pressing the book, and then the M48 stops [7].
- The M48 and M49 start forward rotation to release the book from the pressure [8].
- The M49 stops [9] when the cover paper folding plate /Lt reaches its standby position after the PS51 turns ON.
- The M48 stops [10] when the cover paper folding plate /Rt reaches its standby position after the PS50 counted certain pulses.
- When the M46 and M47 start to rotate to lower the cover paper table, the M48 and M49 start to drive to return the cover paper folding plates to their home positions [11].



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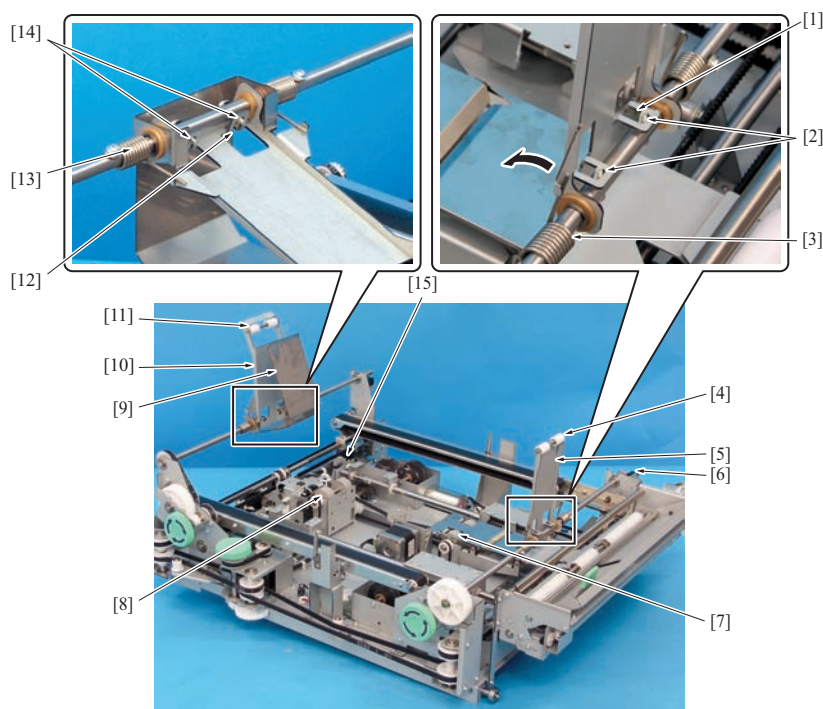
[1]	Movement to the standby position	[2]	Cover paper folding plate /Lt stops at the standby position
[3]	Cover paper folding plate /Rt stops at the standby position	[4]	Starts to fold cover paper

[5]	Cover paper folding plate /Lt stops at the reference position	[6]	Start to apply pressure to the book
[7]	Stops applying a certain pressure to the book	[8]	Releasing book after pressing it for a certain time to harden the glue
[9]	Cover paper folding plate /Lt stops at the standby position	[10]	Cover paper folding plate /Rt stops at the standby position
[11]	Returning to the home position	-	

8.3.7 Cover paper conveyance arm control

(1) Mechanism

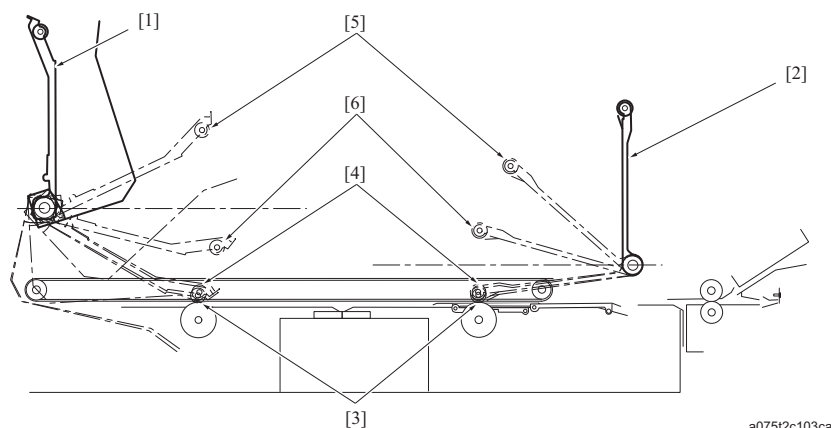
- The cover paper conveyance arms /Rt [5] and /Lt [10] press/separate the driven rollers [4] and [11] against/from the cover paper conveyance rollers /Rt [7] and /Lt [8].
- The cover paper conveyance arm /Lt is equipped with the cover paper lift plate /Lt [9] which lifts the left-side of the cover paper to prevent it from being fold while the cover paper alignment plates (book exit belts) are moved inward to attach the cover paper to the inside papers.
- The cover paper conveyance arm motors /Rt (M43) and /Lt (M44) drive the cover paper conveyance arms /Rt and /Lt via the pins [2] and [14].
- While conveying a cover paper, the pins [2] and [14] come off the notches [1] and [12] of the cover paper conveyance arms, and the cover paper conveyance rollers /Rt and /Lt are pressed against the paper with the spring load [3] and [13].
- The cover paper conveyance arm home sensors /Rt (PS42) [6] and /Lt (PS43) [15] detect that the arms are in their home positions. The upright positions of the paper cover conveyance arm /Lt and /Rt are their home positions.



[1]	Notch of cover paper conveyance arm /Rt	[2]	Pin
[3]	Spring	[4]	Driven roller
[5]	Cover paper conveyance arm /Rt	[6]	Cover paper conveyance arm home sensor /Rt (PS42)
[7]	Cover paper conveyance roller /Rt	[8]	Cover paper conveyance roller /Lt
[9]	Cover paper lift plate /Lt	[10]	Cover paper conveyance arm /Lt
[11]	Driven roller	[12]	Notch of cover paper conveyance arm /Lt
[13]	Spring	[14]	Pin
[15]	Cover paper conveyance arm home sensor /Lt (PS43)	-	

- The following table shows the preset angles of the cover paper conveyance arms for each operation.

Operation	Cover paper conveyance arm / Lt [1]	Cover paper conveyance arm / Rt [2]
Home position [1] [2]	+90 degrees	+90 degrees
Cover paper conveyance [3]	-30.4 degrees	-8 degrees
Cover paper alignment, attachment [4]	-29.4 degrees	-7 degrees
Temporary lowering of cover paper table (for book exit belt preparation) [5]	+25.4 degrees	+41.2 degrees
Re-lifting of cover paper table (to receive book) [6]	-14.1 degrees	+15.3 degrees



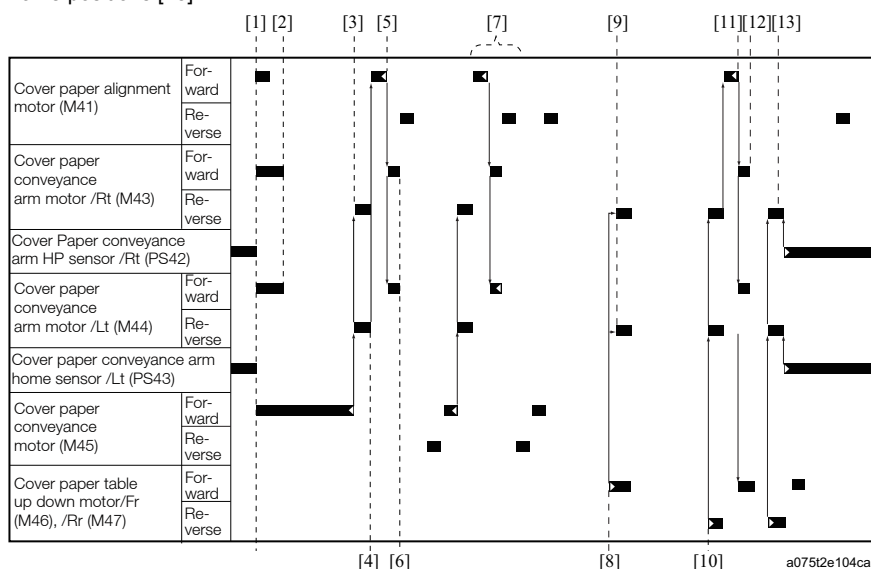
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[1]	Cover paper conveyance arm /Lt	[2]	Cover paper conveyance arm /Rt
[3]	Cover paper conveyance	[4]	Cover paper alignment, attachment
[5]	Temporary lowering of cover paper table (for book exit belt preparation)	[6]	Re-lifting of cover paper table (to receive book)

(2) Control

(a) Cover paper trimming mode

- When detecting that the print start signal turns ON [1], the cover paper conveyance arm motors /Rt (M43) and /Lt (M44) start forward rotating to make the driven rollers provided on the tips of the arms press against the conveyance rollers /Rt and /Lt, and the motors stop [2].
- When the cover paper conveyance motor (M45) stops [3] after conveying the cover paper to the cover paper table, the M43 and M44 start reverse rotation to move the driven rollers away from the paper [4].
- When the cover paper alignment motor (M41) stops [5] after making the arms press against both edges of the cover paper for alignment, the M43 and M44 start forward rotation to press the conveyance rollers /Rt and /Lt with the driven rollers [6] to prevent the paper from moving.
- When the cover paper trimming is finished, the cover paper alignment operation [7] to be attached to the inside papers is performed in the same manner as for the trimming.
- When a prescribed time has elapsed after the cover paper table is lifted [8] by the cover paper table up down motors /Fr (M46) and /Rr (M47), the cover paper folding plates /Rt and /Lt start to move inward to fold the cover paper along the inside papers, and at the same time, the M43 and M44 start reverse rotation to move the driven rollers away from the paper [9].
- When the cover paper table starts temporary lowering to prepare for receiving the book with the M46 and M47 drive forces, the M43 and M44 start reverse rotation [10] to support both sides of the cover paper with the cover paper lift plate /Lt and /Rt. It prevents the cover paper alignment plates /Fr and /Rr from unexpectedly folding the cover paper.
- When the M41 stops [11] after setting the book exit belt /Fr and /Rr at the book receiving position, the cover paper table starts to move upward again, and at the same time, the M43 and M44 start forward rotation to move the arms so that they do not contact with the clamp section.
- When the cover paper table starts downward movement receiving the book, the M43 and M44 drives the arms to return them to the home positions [13].



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[1]	Print start signal ON	[2]	Driven rollers are pressed against the conveyance rollers
[3]	Cover paper conveyance is completed	[4]	Release
[5]	Completion of positioning (alignment) cover paper for trimming	[6]	Driven rollers are pressed against the paper

[7]	Positioning (alignment) cover paper to be attached to inside papers	[8]	Starting lifting the cover paper table
[9]	Driven rollers release the paper for cover paper folding operation	[10]	Temporary lowering of the cover paper table
[11]	Book exit belt is set to standby	[12]	Moving the arms to avoid contact with clamp section
[13]	Returning to the home position	-	

(b) Cover paper Not trimming mode

When the sub-scanning direction length of inside papers is over 182mm, the first positioning operation for trimming is not performed. Only the positioning operation for attaching the cover to the inside papers is performed. However, when the inside paper is smaller than B5 size, alignment is done twice. Once when cover paper is carried in, and once after leading edge positioning is done.

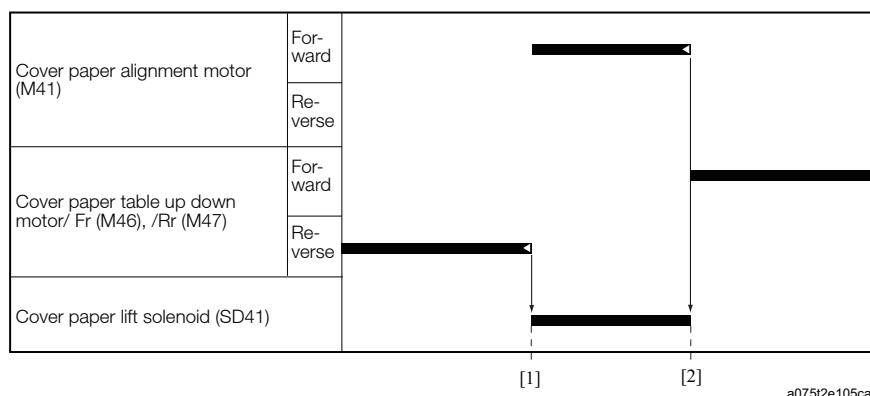
8.3.8 Cover paper lifting (supporting) control

(1) Mechanism

- The cover paper lift solenoid (SD41) activates the cover paper lift plate /Rt.
- The cover paper lift plate /Rt supports the right-side of the cover paper to prevent it from bowing down and being unexpectedly folded when the cover paper table is temporary lowered for setting the book exit belt at the standby position.

(2) Control

- When the cover paper table up down motors /Fr (M46) and /Rr (M47) stop after lowering the table for setting the book exit belt at the standby position, the cover paper lift solenoid (SD41) is activated to move the cover paper lift plate for supporting the right-side of the cover paper. This operation prevents the right-side of the paper from bowing.
- The SD41 turns OFF when the cover paper alignment motor (M41) stops after setting the book exit belt at the standby position.



[1]	Supporting cover page with the cover lift plate	[2]	Ending supporting cover paper
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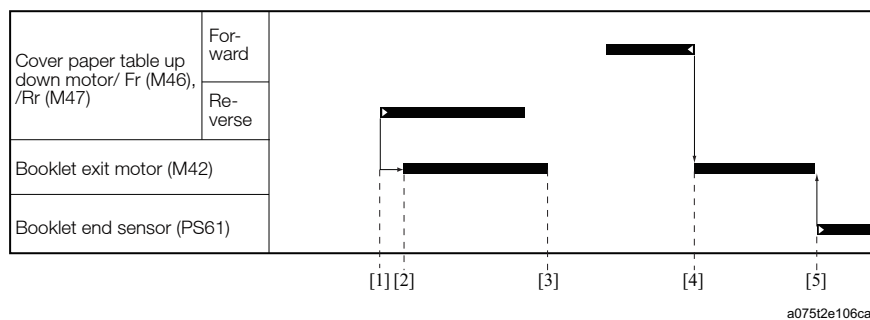
8.3.9 Book paper exit control

(1) Mechanism

- The booklet exit motor (M42) drives the book exit belts /Fr and /Rr.

(2) Control

- After the cover paper is folded along the inside papers, the cover paper table up down motors /Fr (M46) and /Rr (M47) start reverse rotation to lower the cover paper table [1].
- When the book spine corner touches the book exit belt surface (when a prescribed time has elapsed after the table starts to go down), the booklet exit motor (M42) starts to rotate at low speed so that the book is slowly laid down on the belt [2].
- When a prescribed time has elapsed after starting the rotation, the M42 stops [3].
- The M42 starts high-speed rotation to exit the book [4] toward the book stock section when the M46 and M47 have moved the cover paper table upward by 60mm so that the book exit belt horizontally aligns with the book conveyance belt in the book stock section.
- The M42 stops [5] when the booklet end sensor (PS61) turns ON detecting that the book has conveyed to the book stock section.

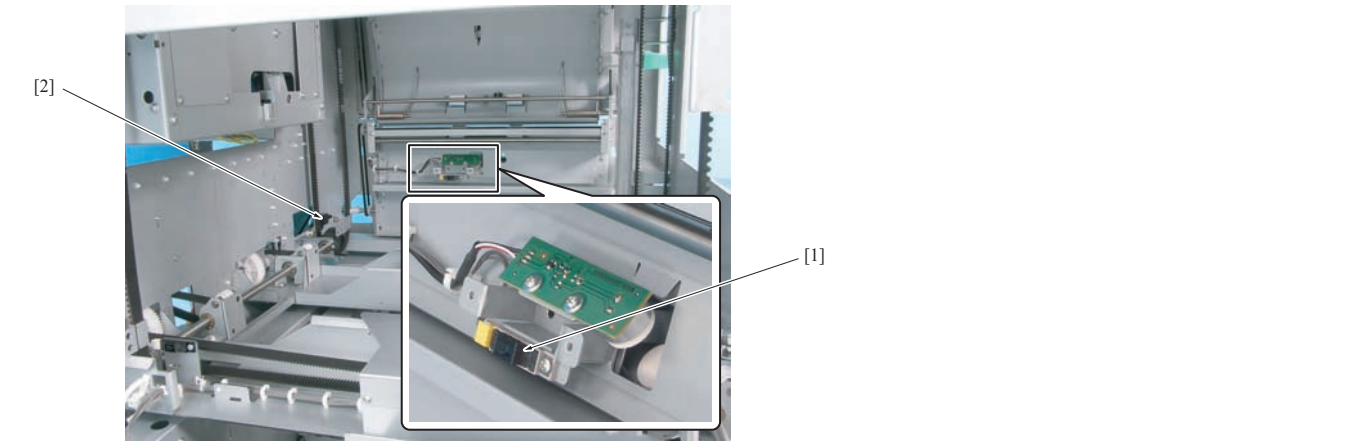


[1]	Cover paper table goes down to convey the book to the belt	[2]	Receiving the book
[3]	Temporary stop	[4]	Paper exit of the book

[5]	Paper exit completed	-
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8.3.10 Waste paper control

- The waste box full sensor (PS80) [1] detects a full status of the waste box by receiving a light reflected off the waste paper in the box.
- The waste box set sensor (PS81) is provided to detect whether the waste box is properly set or not. The actuator of the waste box activates the sensor.

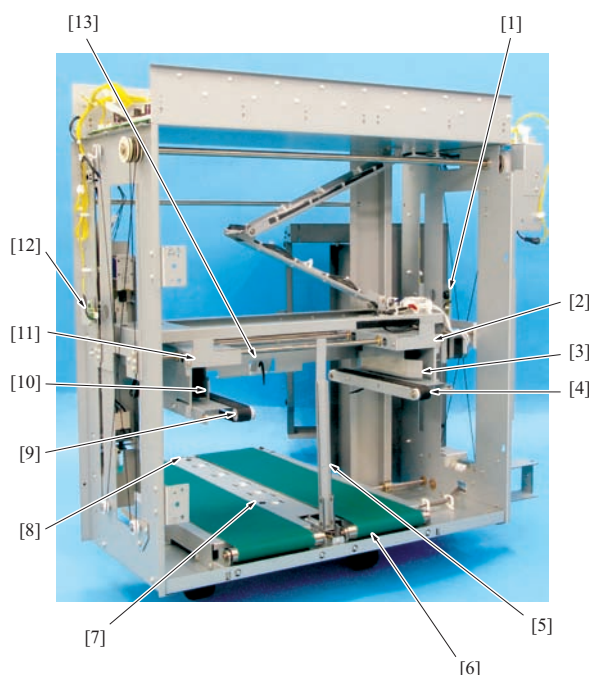


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[1]	Waste box full sensor (PS80)	[2]	Waste box set sensor (PS81)
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9. BOOK STOCK SECTION

9.1 Configuration

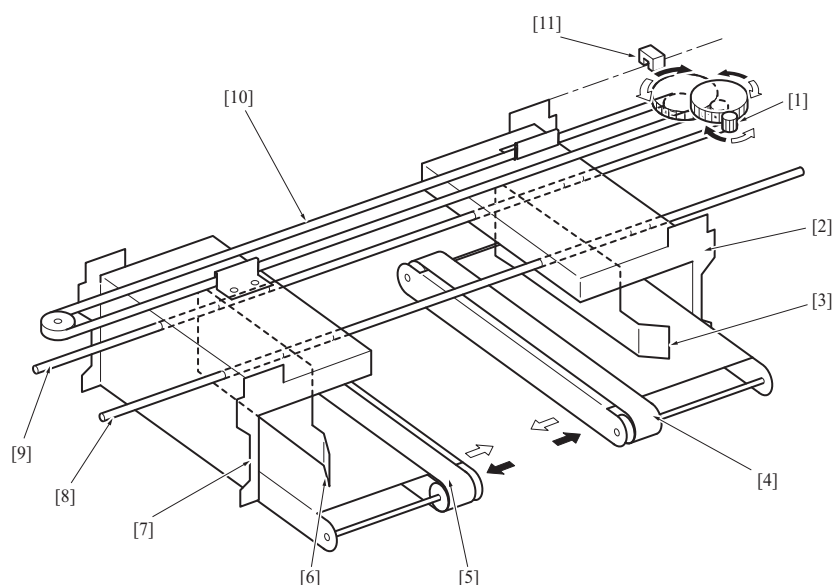


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[1] Upper limit sensor (PS65)	[2] Book conveyance arm /Rr
[3] Book guide /Rr	[4] Book conveyance belt /Rr
[5] Book stopper	[6] Book movement belt
[7] Book sensor /1 (PS66)	[8] Book sensor /2 (PS67)
[9] Book conveyance belt /Fr	[10] Book guide /Fr
[11] Book conveyance arm /Fr	[12] Book upper limit LED (LED61)
[13] Book end sensor (PS61)	-

9.2 Drive

9.2.1 Book conveyance drive

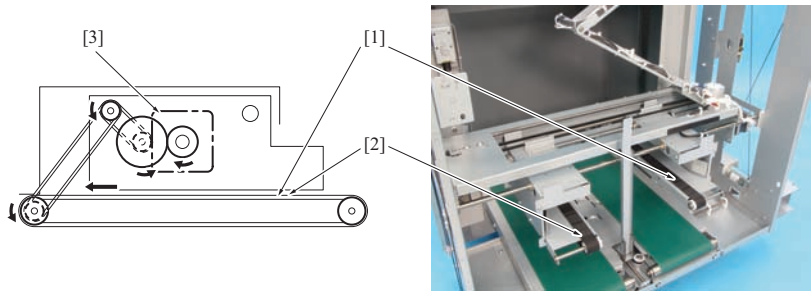


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[1] Booklet conveyance belt movement motor (M62)	[2] Book conveyance arm /Rr
[3] Book guide /Rr	[4] Book conveyance belt /Rr
[5] Book conveyance belt /Fr	[6] Book guide /Fr
[7] Book conveyance arm /Fr	[8] Guide shaft /Rt
[9] Guide shaft /Lt	[10] Timing belt

[11]	Book conveyance belt movement home sensor (PS62)	-
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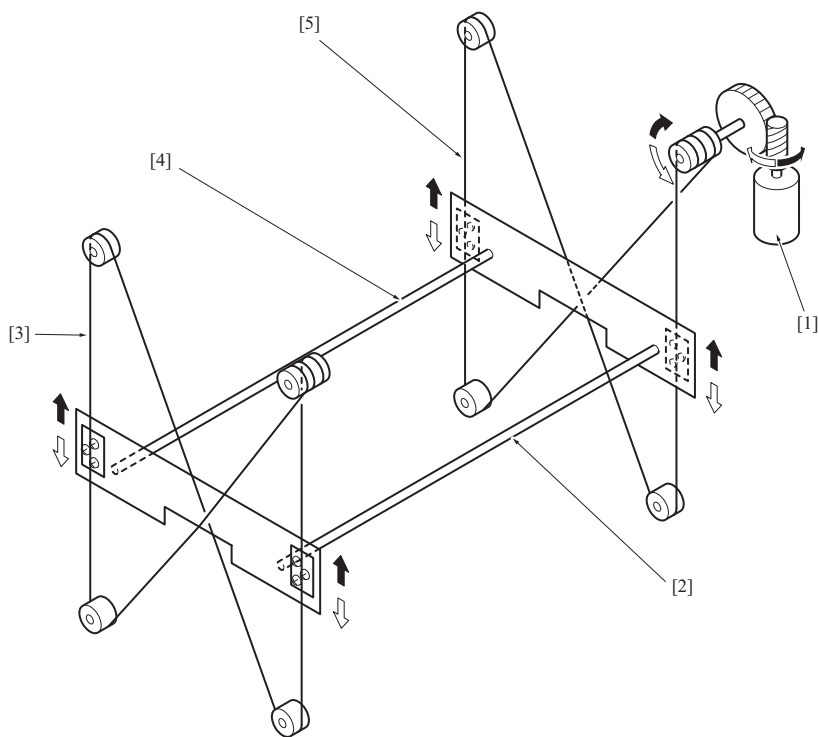
9.2.2 Book conveyance belt drive



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[1]	Book conveyance belt /Rr	[2]	Book conveyance belt /Fr
[3]	Booklet conveyance belt motor (M61)	-	

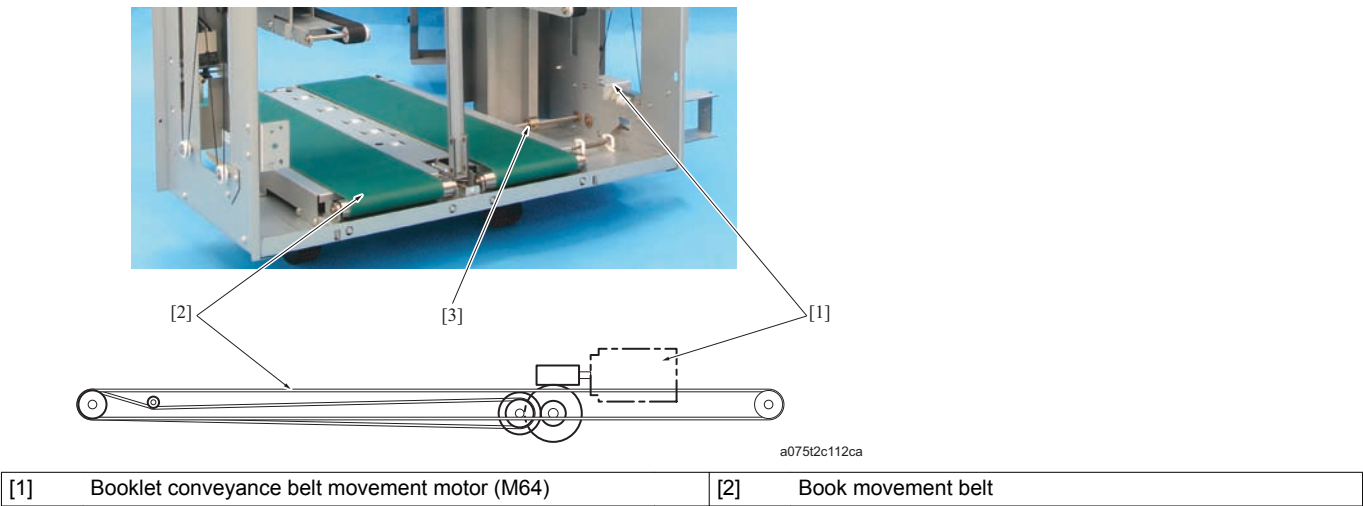
9.2.3 Book conveyance up down drive



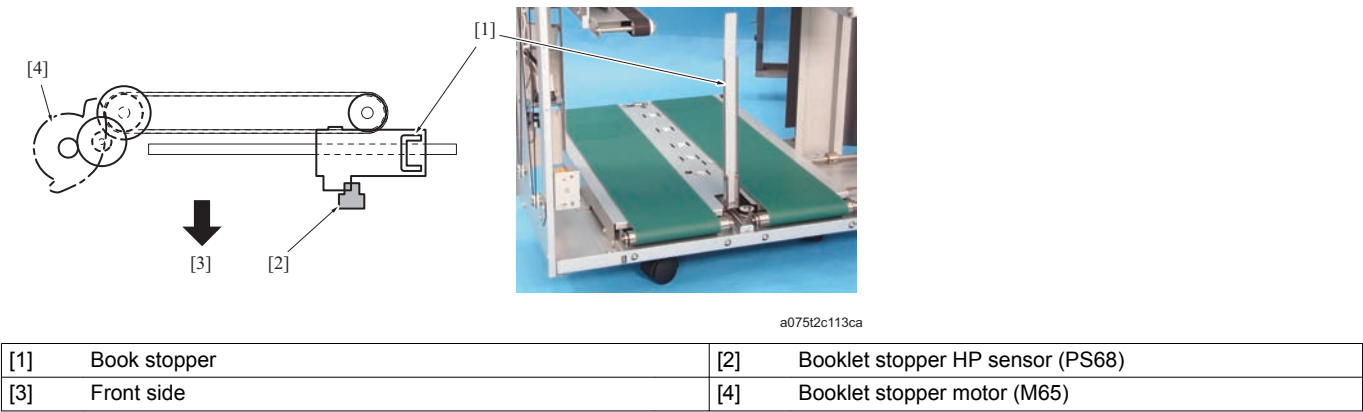
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[1]	Booklet conveyance belt up down motor (M63)	[2]	Guide shaft /Rt
[3]	Book lift wire/Rr Book lift wire/Fr	[4]	Guide shaft /Lt
[5]	Book lift wire /Rr	-	

9.2.4 Book movement drive



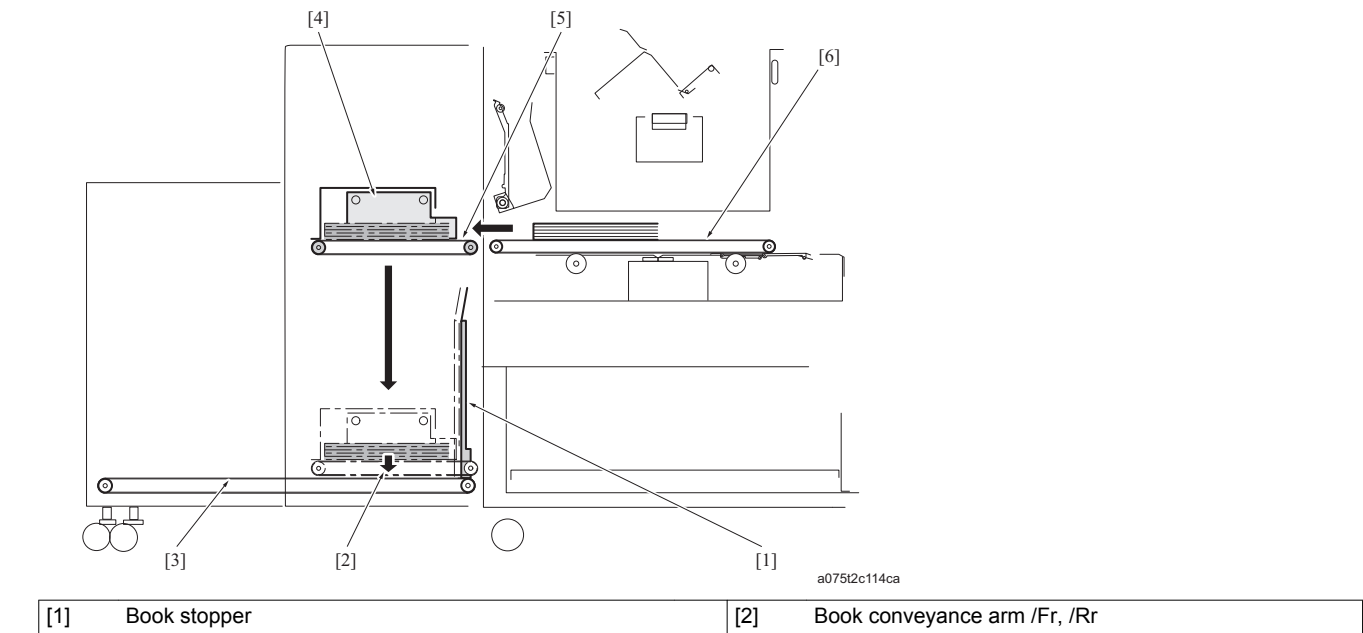
9.2.5 Book stopper drive



9.3 Operation

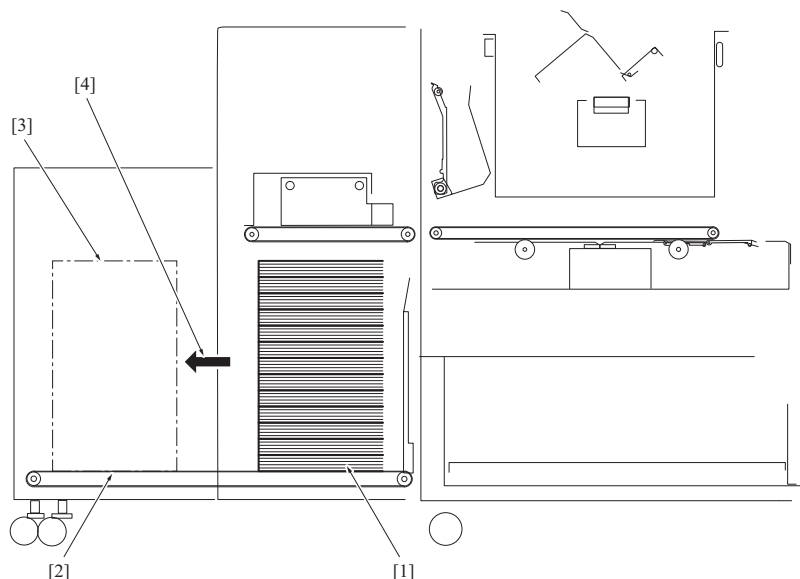
9.3.1 Book stock section operation overview

1. When detecting that the print start signal turns ON, the book conveyance arms /Fr and /Rr [3] and the book stopper [1] are moved to the positions correspond to the selected paper size.
2. The book conveyance belt [5] is driven in synchronization with the drive of the book exit belt [6] in the cover paper table section, and the conveyance belt receives the book from the exit belt.
3. The book guides /Fr and /Rr [4] are moved to the positions where they contact with the book side edges to align the book.
4. The book is conveyed downward until it reaches to the position to be stacked.
5. The book conveyance arms /Fr and /Rr are opened to drop the book onto the book movement belt [3].



[3]	Book movement belt	[4]	Book guide /Fr, /Rr
[5]	Book conveyance belt	[6]	Book exit belt

6. When books have been stacked to the upper limit, the stack of books [1] is moved to the second row [4] by the book movement belts /1 [2] and /2 [3], and then it keeps stacking the subsequent books in the first row.



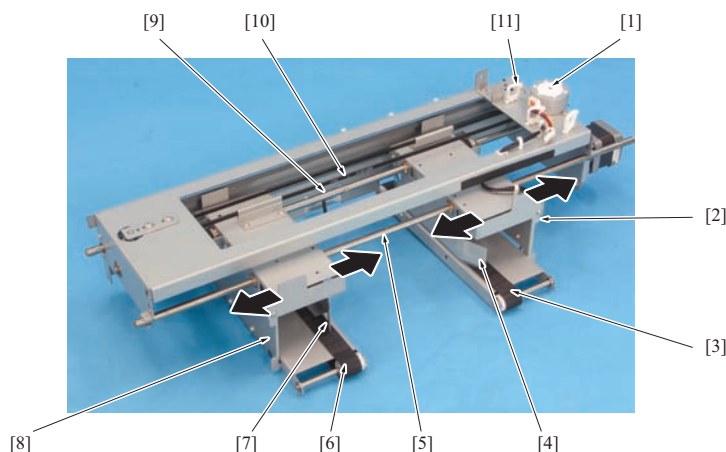
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[1]	Stack of books at the first row	[2]	Book movement belt
[3]	Second row	-	

9.3.2 Book conveyance and movement control

(1) Mechanism

- The booklet conveyance belt movement motor (M62) [1] drives the book movement arms /Fr [8] and /Rr [2] via the timing belt [10].
- The book movement arms /Fr and /Rr move in the main scan direction along the guide shaft /Rt [5] and /Lt [9].
- The book conveyance belt movement home sensor (PS62) is provided to detect whether the arms in their home position or not.
- The guide shafts /Fr and /Rr are moved up or down by the booklet conveyance belt up/down motor (M63).
- The book movement arms /Fr and /Rr include the book conveyance belts /Fr [6], /Rr [3], and the book guide /Fr [7], /Rr [4].
- Registration regulating plate /Fr [7], /Rr [4] slides along the guide shaft /Rt [5], /Lt [9].

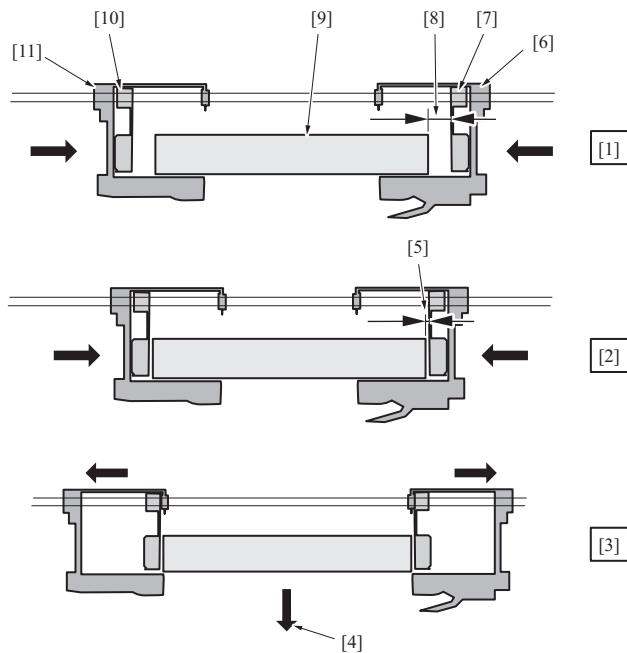


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[1]	Booklet conveyance belt movement motor (M62)	[2]	Book movement arm /Rr
[3]	Book conveyance belt /Rr	[4]	Book guide /Rr
[5]	Guide shaft /Rt	[6]	Book conveyance belt /Fr
[7]	Book guide /Fr	[8]	Book movement arm /Fr
[9]	Guide shaft /Lt	[10]	Timing belt
[11]	Book conveyance belt movement home sensor (PS62)	-	

(a) Operation

- When receiving a book from the cover paper table section [1], the book movement arms /Fr [6] and /Rr [11] are moved to the positions correspond to the book size, and the book guides /Fr [7] and /Rr [10] are set at the positions 17mm outer the book edges [9].
- Then the book guides are moved inward to the positions 2mm away from the book edges to align the book to be stacked.
- When the book is conveyed downward to the position to be stacked, the book movement arm /Fr [6] and /Rr [10] are moved outward to drop the book [3].

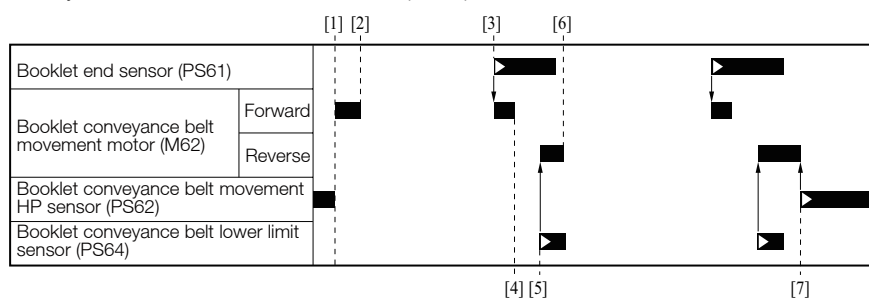


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[1]	Standby/receiving book	[2]	Aligning the book and moving down
[3]	Releasing the book	[4]	Book drops
[5]	Gap between the book edge and the guide is 2mm during alignment	[6]	Book movement arm /Fr
[7]	Book guide /Fr	[8]	Gap between the book edge and the guide is 17mm in the standby status
[9]	Book	[10]	Book guide /Rr
[11]	Book movement arm /Rr	-	

(2) Control

- When detecting that the print start signal turns ON [1], the book conveyance belt movement motor (M62) starts forward rotation to move the book movement arms /Fr and /Rr to the positions correspond to the book size [2].
- When the booklet end sensor (PS61) turns ON [3], the M62 starts forward rotation again to move the regulation plates /Fr and /Rr inward until the gap between the regulation plates and book edges become 2mm to perform alignment [4].
- When the booklet conveyance belt lower limit sensor (PS64) turns ON [5], the M62 starts reverse rotation to move the arms to home position and stops [6]. However, when there are subsequent books, book conveyance assy moves the book movement arms to standby position after returning to the upper limit home position.
- After releasing the book, the M62 reverse rotation is continued until the arms stop at their home positions [7] turning ON the book conveyance belt movement home sensor (PS62).



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[1]	Print start signal ON	[2]	Stop the arms at the positions correspond to the book size
[3]	Receiving the book is completed	[4]	Guides stop at the positions for alignment
[5]	Start to move the arms to their standby position	[6]	Stopping at the standby position
[7]	Returning to the home position	-	

9.3.3 Book conveyance belt control

(1) Mechanism

- The booklet conveyance belt motor (M61) drives the book conveyance belt.
- The book conveyance belts /Fr [2] and /Rr [1] receive the book conveyed from the cover paper table section.
- The booklet presses the book end sensor (PS61) [3] and turns it ON. It detects the completion of the receiving operation.

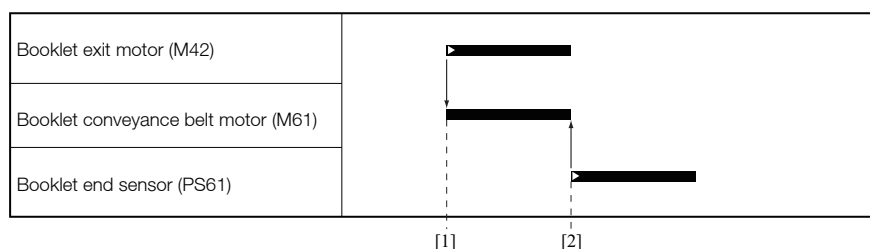


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[1]	Book conveyance belt /Rr	[2]	Book conveyance belt /Fr
[3]	Booklet end sensor (PS61)	-	

(2) Control

1. The booklet conveyance belt motor (M61) starts to drive upon starting of the booklet exit motor (M42) to receive the book [1] conveyed from the cover paper table section.
2. The M61 stops [2] when the booklet end sensor (PS61) turns ON.



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[1]	Book conveyance belt drive	[2]	Receiving the book is completed
-----	----------------------------	-----	---------------------------------

9.3.4 Book conveyance up down control

(1) Mechanism

- The booklet conveyance assy [5] is moved up and down with the book lift wires /Fr [4] and /Rr [3] driven by the booklet conveyance belt up down motor (M63) [1].
- The booklet conveyance belt home sensor (PS63) [6] detects whether the book conveyance assy is at its upper limit home position or not. The book conveyance belt lower limit sensor (PS64) [2] provided at the bottom of the book movement arm /Rr detects whether the book conveyance assy is at its lower limit position (top surface of the stacked books or the movement belt position).

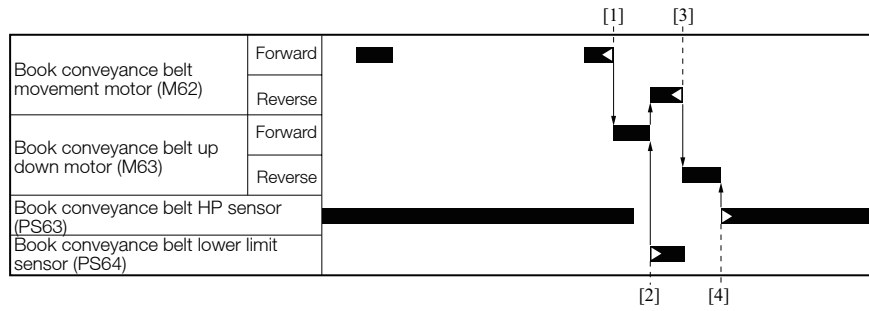


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[1]	Booklet conveyance belt up down motor (M63)	[2]	Booklet conveyance belt lower limit sensor (PS64)
[3]	Book lift wire /Rr	[4]	Book lift wire /Rr Book lift wire /Fr
[5]	Book conveyance assy	[6]	Booklet conveyance belt home sensor (PS63)

(2) Control

1. When the book alignment driven by the booklet conveyance belt movement motor (M62) is finished, the booklet conveyance belt up down motor (M63) starts forward rotation to lower the book conveyance assy [1].
2. M63 stops when the booklet conveyance belt lower limit sensor (PS64) turns ON [2].
3. When the M62 stops [3], the M63 starts reverse rotation to lift the book conveyance assy.
4. The M63 stops [4] when the book conveyance belt home sensor (PS63) detects that the assy reaches its upper home position.



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[1]	Book conveyance assy starts to go down	[2]	Stopping at the book release position
[3]	Releasing book is completed	[4]	Returning to the home position

9.3.5 Book movement control

(1) Mechanism

- The book movement motor (M64) drives the book movement belt.
- The belt moves the first row of books to the second row.

(2) Control

(a) While in the print

- The booklet movement motor (M64) is allowed to drive only when the booklet sensor /2 (PS67) is OFF (no stack of books exist at the second row).
- When the booklet load limit sensor (PS65) detects that book has been stacked up to the limit at the first row, the M64 starts to drive the belt and stops after the specified period of time when the PS67 turns ON.

(b) Book manual movement

- The booklet movement motor (M64) is allowed to drive only when the booklet sensor /1 (PS66) is ON and the booklet sensor /2 (PS67) is OFF.
- When the book movement button is turned On, the book movement motor (M64) starts to drive the belt, and stops when the PS67 turns On.

9.3.6 Book stopper control

(1) Mechanism

- The book stopper supports the stacked books to prevent them from falling down.
- The booklet stopper motor (M65) drives the book stopper.
- The booklet stopper HP sensor (PS68) detects whether the book stopper is at its home position or not.

(2) Control

- Upon receiving of a print job, the booklet stopper motor (M65) starts forward rotation to move the stopper to the position correspond to the book size.
- When the job is finished, the M65 starts reverse rotation to return the stopper to its home position, and the motor stops when the booklet stopper HP sensor (PS68) turns ON.

9.3.7 Book full status detection control

- When books have been stacked up to the limit at the first row, the full-status is detected by the booklet load limit sensor (PS65) and notified by the booklet upper limit LED (LED61).
- Since any light to the PS65 is blocked while the book conveyance assy is moving up or down, the PS65 status is checked only while the book conveyance belt home sensor (PS63) is ON.
- Even when the PS65 is not detecting the full-status, continuing stacking books cannot be made under the following conditions.

(1) When the stacked book size is the same

- Book thickness is classified into 3 levels; a, b, and c, and allowable number of books to be stacked is determined according to the combination of a, b, and c as shown in the following table.
 - Book a: 10 to 30 sheets
 - Book b: 31 to 150 sheets
 - Book c: 151 to 300 sheets
- Mixing more than 2 among a, b, and c-level books in 1 stack is not allowed.

Books already stacked	Books to be stacked over		
	Book a	Book b	Book c
Book a	50 copies in total	(30 - a)	(20 - a)
Book b	(35 - b) until detected by PS65	35 copies in total or until detected by PS65	(20 - b) copies or until detected by PS65
Book c	Until detected by PS65	Until detected by PS65	Until detected by PS65

*Stacking more books is stopped when the result of the calculations shown in the table become negative value.

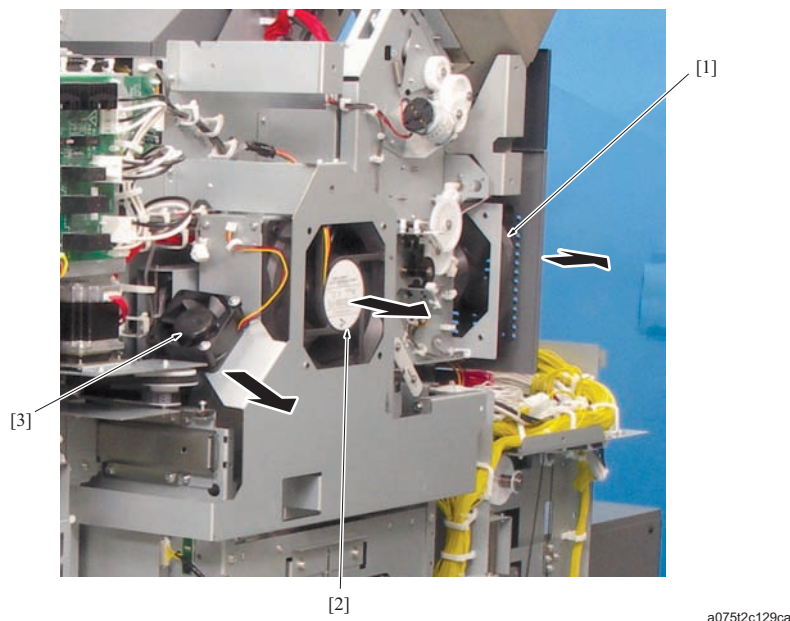
*Stacking more books is stopped when the PS65 detects full status even when the result of the calculations is positive.

(2) When the stacked book size is different from each other

- It moves the stacked books on the first row to the second row, and then stacks the different size books on the open first row. When the handcart is not set, bookbinding is stopped.

10. OTHERS

10.1 Fan control



[1]	Exhaust fan /1 (M80)	[2]	Exhaust fan /2 (M81)
[3]	Pellet supply cooling fan motor (M4)	-	

10.1.1

(1) Pellet supply cooling fan (M4)

(a) Purpose

- The fan cools the air above the molten glue surface in the glue tank for the maintenance of a temperature differential to molten glue. This allows the glue tank temperature sensor /Up (TH2) to detect a drop in temperature precisely when it comes out of the molten glue that is getting low for the notification that pellets need to be supplied.

(b) ON timing

- The M4 turns ON upon completion of warm-up of the glue tank.
- The M4 turns On when the temperature sensor/Md (TH3) detects the temperature around the middle in the glue tank is higher than the preset temperature.

(c) OFF timing

- The M4 turns Off when the temperature sensor/Md (TH3) detects the temperature around the middle in the glue tank is lower than the preset temperature.

(2) Exhaust fan /1 (FM80), /2 (FM81)

(a) Purpose

- The fans are provided to prevent an excessive increase in temperature inside the PB-501 exhausting air and deodorize.

(b) ON timing

- The M80 and M81 turn ON upon completion of warm-up of the glue tank.
- The M80 and M81 turn Off when the temperature sensor/Md (TH3) detects the temperature around the middle in the glue tank is lower than the preset temperature.

(c) OFF timing

- The FM80 and FM81 turn OFF when the temperature sensor /Md (TH3) detects the temperature around the middle in the glue tank is lower than the preset temperature.

10.2 Door opening/closing control

- When the front door, upper door, and stacker door are opened with the front door switch (MS2), upper door switch (MS3), and stacker door switch (MS4) [3] turned Off, a 24VDC/2 (DCPU/2) supply is shut down to stop all operations instantly.
- When the pellet supply door is opened with the pellet supply door switch (MS1) turned Off, the pellet supply motor (M33) is stopped instantly.
- During initialization and printing operations, the front door lock solenoid (SD80), book door solenoid (SD61) turn on, and disables the stacker door to open/close. During idling, jam occurrence or in service mode, SD80 and SD61 turn OFF and open/close of the front door is enabled.
- A message is displayed in the touch panel when the stacker door sensor (PS57) switches from on to off.



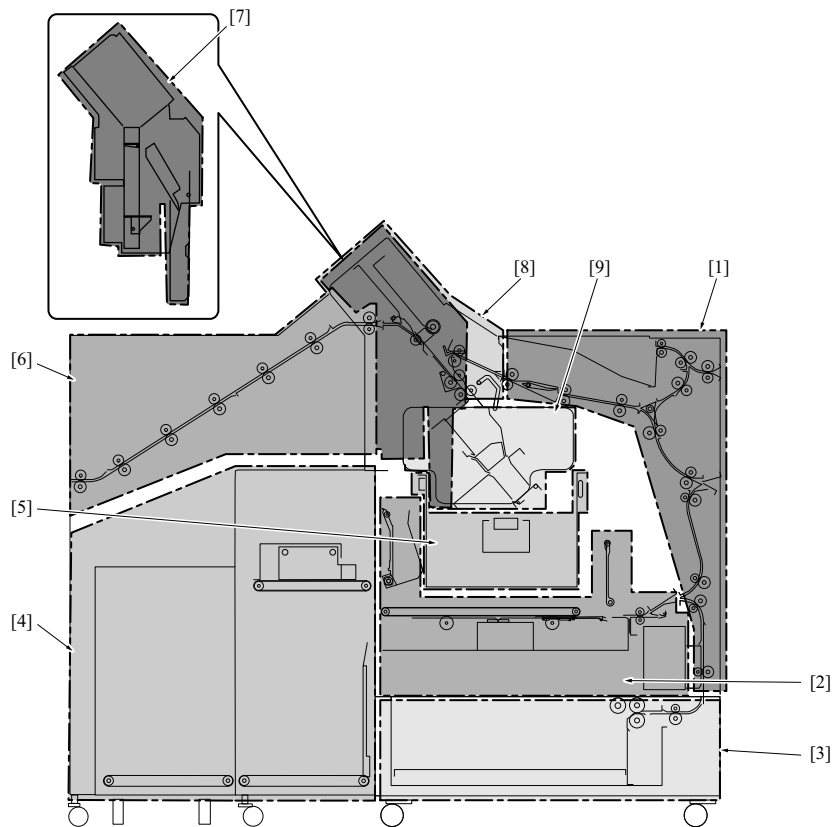
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[1]	Book door solenoid (SD61)	[2]	Stacker door sensor (PS57)
[3]	Stacker door switch (MS4)	-	

PQ THEORY OF OPERATION PB-503

1. OUTLINE

1.1 Unit configuration

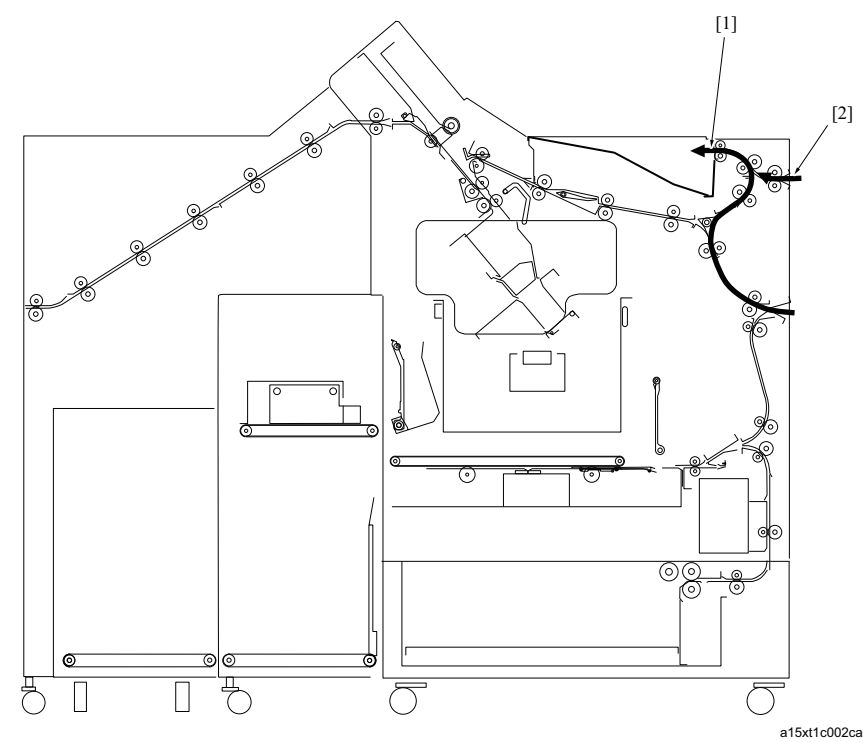


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[1]	Conveyance section	[2]	Cover paper table section
[3]	Cover paper supply section	[4]	Book stock section
[5]	Glue tank section	[6]	Relay conveyance section
[7]	Pellet supply section	[8]	Sub compile (SC) section
[9]	Clamp section	-	

1.2 Paper path

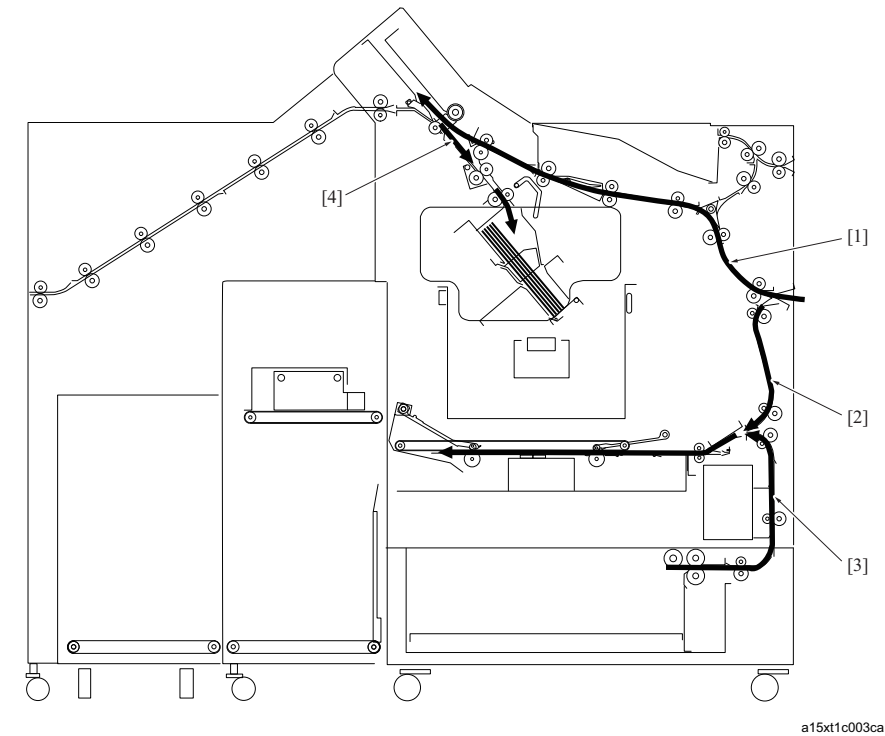
1.2.1 Sub tray exit



[1] Sub tray exit	[2] Exit from the FD sub tray
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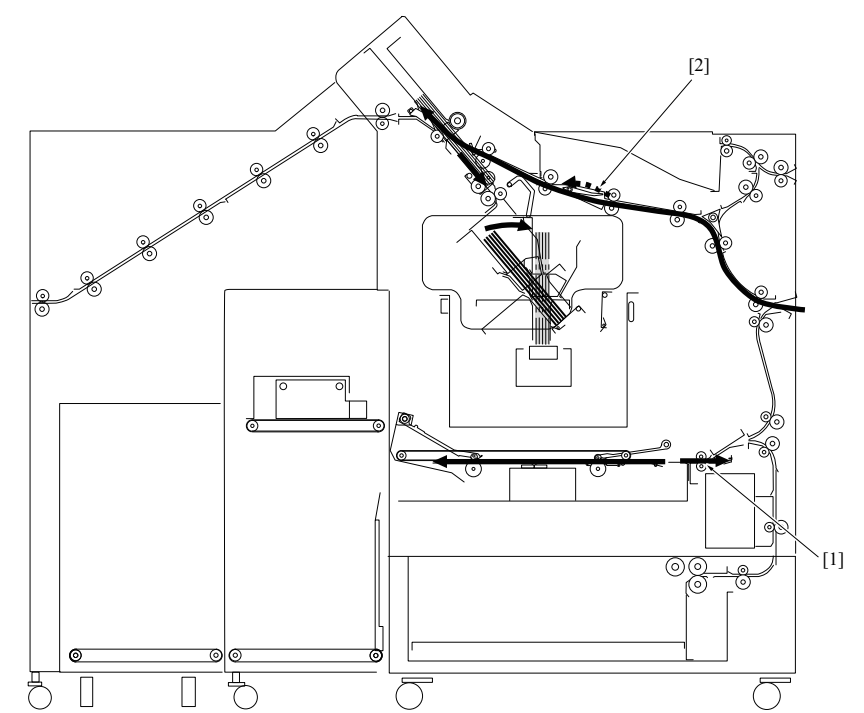
1.2.2 Perfect binding mode

(1) Conveyance of inside papers to the clamp section and conveyance of cover paper



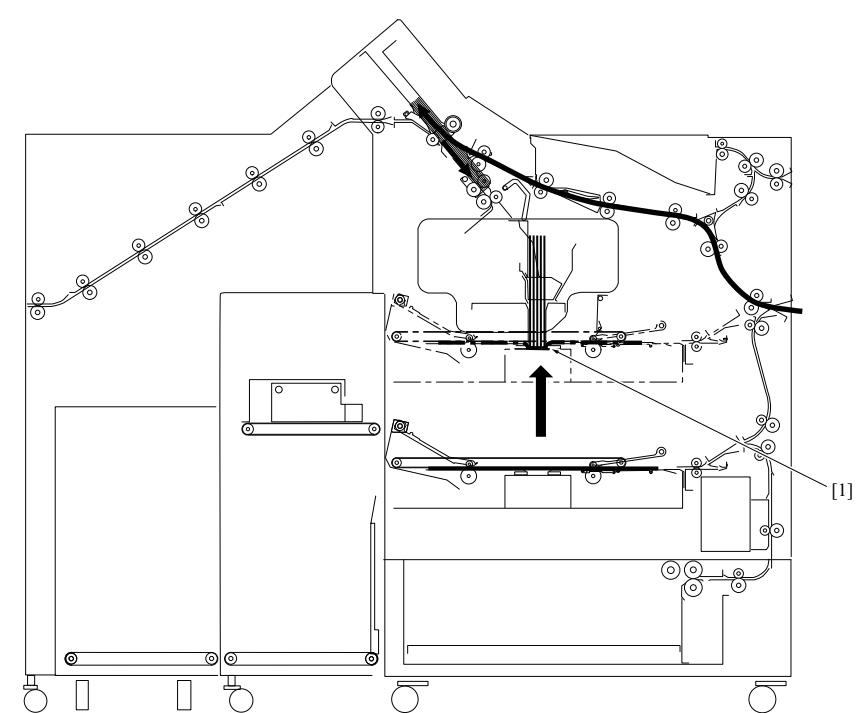
[1] Conveyance of inside paper	[2] Conveyance of cover paper from the main body
[3] Conveyance of cover paper from the PB tray	[4] Switchback conveyance

(2) Clamping and glue application



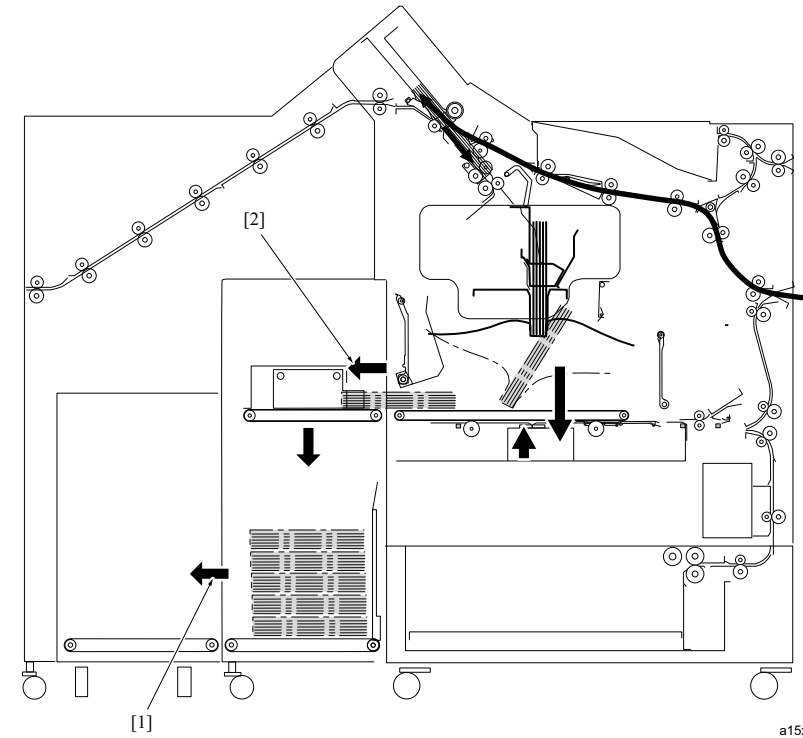
[1] Switchback conveyance	[2] Bypass conveyance
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(3) Glue application to cover paper and cover paper folding operation



[1] Cover paper folding operation	-
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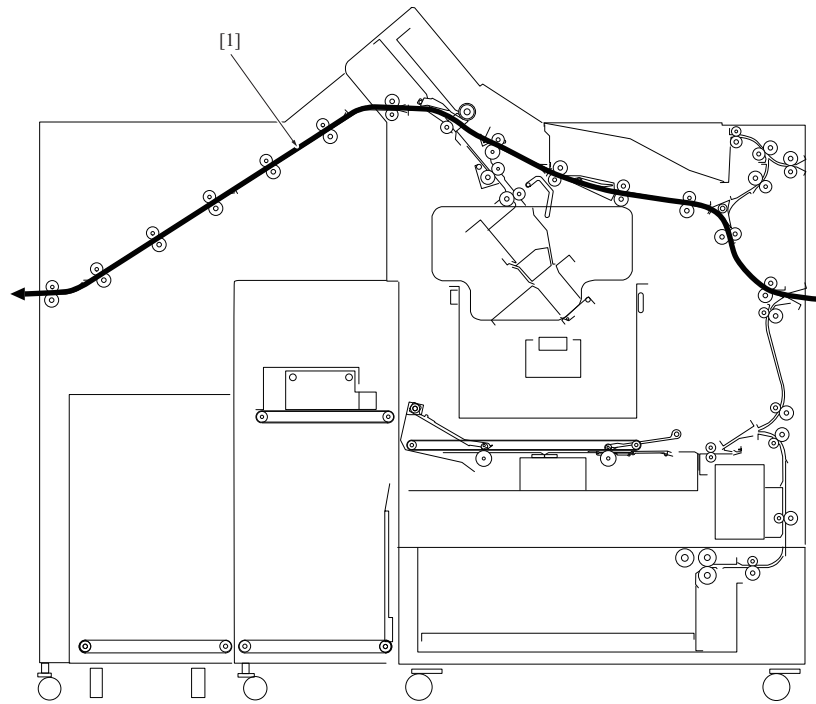
(4) Book stock



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[1] Moving to the second row	[2] Paper exit of the book
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1.2.3 Relay conveyance mode

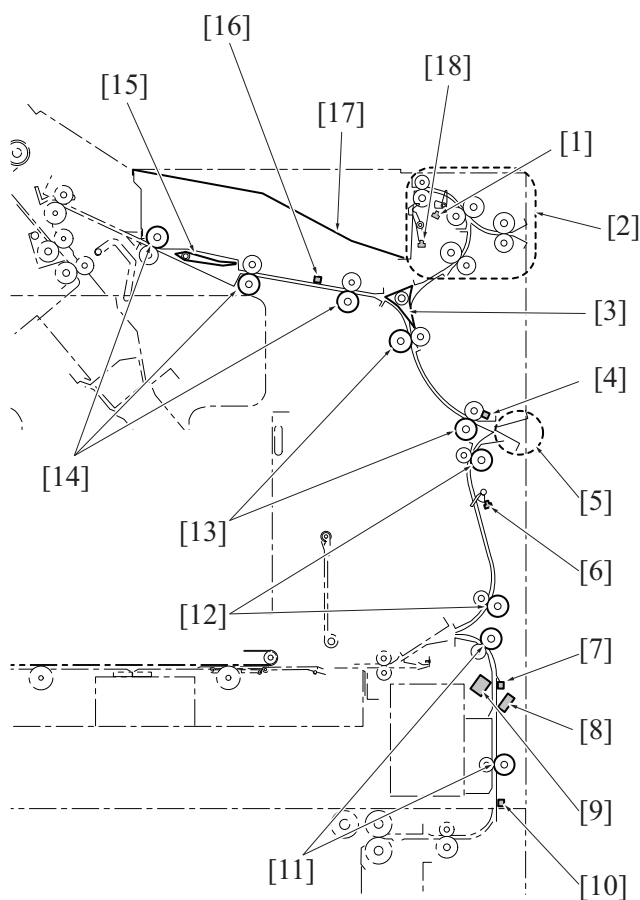


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[1] Coupling exit	-
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2. CONVEYANCE SECTION

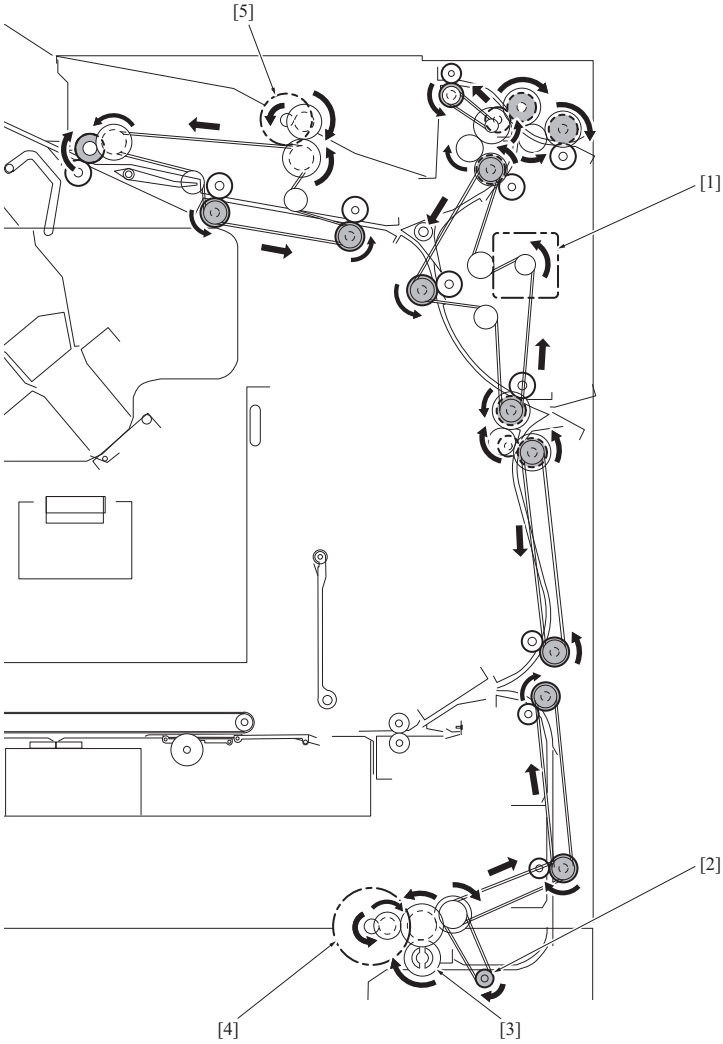
2.1 Configuration



[1] Sub tray exit sensor (PS4)	[2] Sub tray conveyance roller
[3] Sub tray gate	[4] Entrance sensor (PS1)
[5] Entrance gate	[6] Cover paper entrance sensor (PS3)
[7] Cover paper conveyance sensor /4 (PS78)	[8] Cover paper multi-feed detection board /1 (MFDTB71)
[9] Cover paper multi-feed detection board /2 (MFDTB72)	[10] Cover paper conveyance sensor /5 (PS79)
[11] Cover paper feed roller	[12] Cover paper conveyance roller
[13] Entrance conveyance roller	[14] Intermediate conveyance roller
[15] Bypass gate	[16] SC entrance sensor (PS2)
[17] Sub tray	[18] Sub tray full sensor (PS5)

2.2 Drive

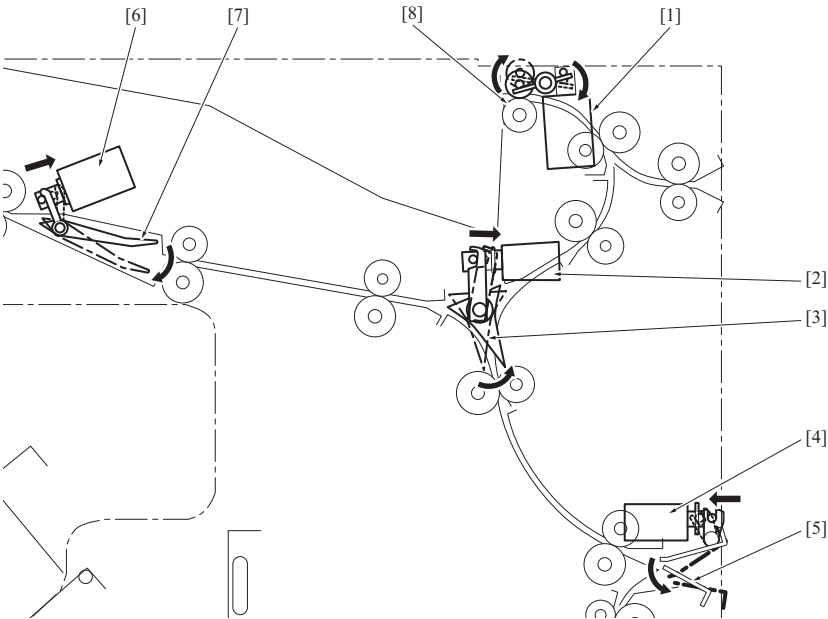
2.2.1 Entrance conveyance drive/Intermediate conveyance drive/Cover paper conveyance drive



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[1]	Entrance conveyance motor (M1)	[2]	Registration roller (to the cover paper supply section)
[3]	Paper feed roller (to the cover paper supply section)	[4]	Cover paper feed motor (M74)
[5]	Intermediate conveyance motor (M2)	-	

2.2.2 Entrance gate drive/Bypass gate drive/Sub tray gate drive/Sub tray exit and separation drive



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[1] Sub tray paper exit solenoid (SD4)	[2] Sub tray gate solenoid (SD3)
[3] Sub tray gate	[4] Entrance gate solenoid (SD1)
[5] Entrance gate	[6] Bypass gate solenoid (SD2)
[7] Bypass gate	[8] Paper exit driven roller

2.3 Operation

2.3.1 Gate control

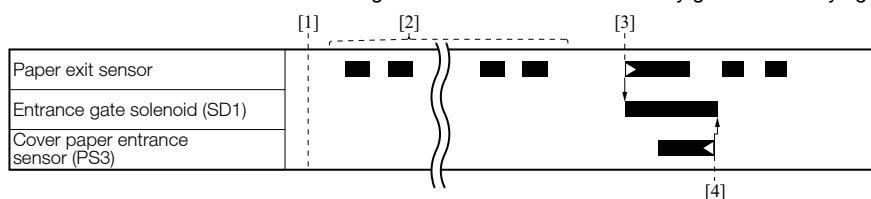
(1) Entrance gate control

- The entrance gate switches the paper path for the cover paper used for perfect binding so that the paper conveyed from the main body, PI-PFU*¹ or the PI of FD is conveyed to the cover paper table section.
- The entrance gate solenoid (SD1) activates the gate. When the SD1 turns OFF, the gate is opened to convey the cover paper toward the sub tray gate, and when the SD1 turns ON, the gate is changed to make a paper path toward the cover paper table section.
- The SD1 turns OFF while the inside paper for perfect binding is conveyed, relay conveyed, or exited on the sub tray. It turns ON while cover paper is conveyed from the main body, PI-PFU*¹, or PI of FD.

*1 1200/1200P/1250/1250P only.

(a) When cover paper being conveyed from the main body

- When a print job is received, the entrance gate solenoid (SD1) turns OFF [1] to open the entrance gate toward the sub tray gate.
- Cover paper is conveyed through the entrance gate [2].
- When the paper exit sensor of the previous device (main body or post processing machine) detects the leading edge of the cover paper, the SD1 turns ON to switch the entrance gate direction toward the cover table section [4].
- Once a prescribed time period has elapsed after the cover paper entrance sensor (PS3) detects the trailing edge of cover paper [4], the SD1 turns OFF to switch the entrance gate direction toward the sub tray gate for conveying paper to the SC section.



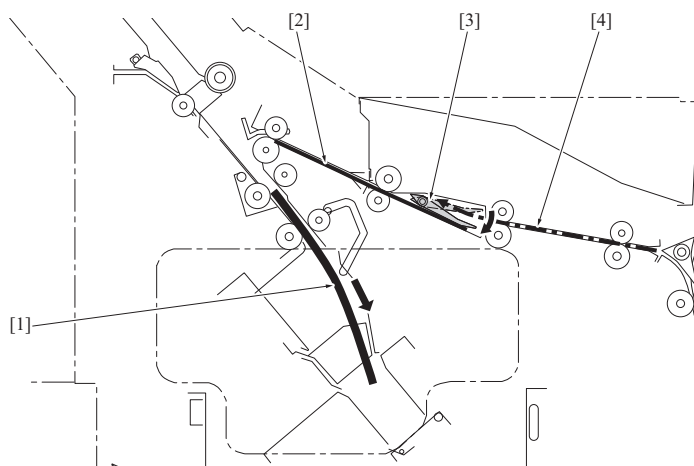
[1] Print start signal ON	[2] Paper conveyance
[3] Cover paper leading edge detection	[4] Cover paper trailing edge detection

(2) Sub tray gate control

- The sub tray gate is provided for switching the path to the SC section which conveys the inside paper for the perfect binding and the relay conveyance paper and the path to the sub tray paper exit.
- The sub tray gate solenoid (SD3) activates the sub tray gate. When the SD3 is OFF, the gate is opened toward the SC section, and when the SD3 becomes ON, the gate direction is switched toward the sub tray to exit inside papers.
- While inside papers are exit on the sub tray, the SD3 turns ON upon receiving a print job, and turns OFF when the job is finished.

(3) Bypass gate control

- The SC section is designed to stack a certain number of inside papers (n) of the subsequent book while the pages of previous book is glued at the clamp section. The bypass gate [3] operates to lay next 2 sheets of inside paper ("n+1"th and "n+2"th) one on top of another and keep them until the stacked "n"th sheet of inside paper at the SC section is conveyed to the clamp section [1]. It saves time for conveying the inside paper and increases productivity.
- The bypass gate solenoid (SD2) activates the bypass gate.
- The bypass gate is not driven in the relay conveyance mode.



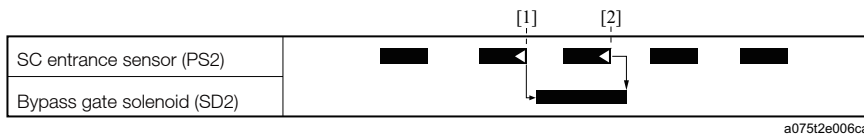
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[1] Paper bundle from the first page to the "n"th page of the 2nd and subsequent copies	[2] "n+1"th paper of subsequent book
---	--------------------------------------

[3] Bypass gate	[4] "n+2"th paper of subsequent book
-----------------	--------------------------------------

(a) Control

1. The bypass gate solenoid (SD2) turns ON when a specified period of time has elapsed after the SC entrance sensor (PS2) detects the trailing edge [1] of the "n+1"th inside paper of subsequent book.
2. The solenoid turns OFF when a prescribed time period has elapsed after the "n+2"th inside paper is laid over the "n+1"th inside paper, and the SC entrance sensor (PS2) detects the trailing edge of the "n+2"th inside paper [2].



[1] Detection of trailing edge of "n+1"th paper of subsequent book	[2] Detection of trailing edge of "n+2"th paper
--	---

2.3.2 Entrance conveyance control

- The entrance conveyance motor (M1) drives the entrance conveyance roller, sub tray conveyance roller, main body cover paper conveyance roller, and the cover paper conveyance roller. The drive force is transmitted via the gear and the timing belt.

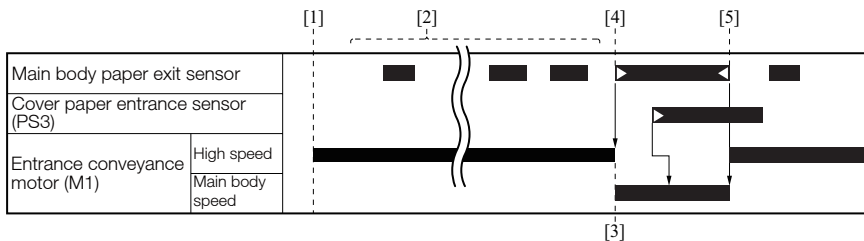
(1) Perfect binding mode**(a) When feeding cover paper from the PB cover paper tray**

- The entrance conveyance motor (M1) starts to turn at high speed upon receiving a print job.
- The M1 stops when the JOB is finished.

(b) When feeding cover paper from the main body

1. When detecting that the print start signal turns ON, the entrance conveyance motor (M1) turns ON [1] (starts to turn at high speed).
2. When the main body paper exit sensor is turned ON [4] by the leading edge of the cover paper, the M1 starts to turn at the same speed as the main unit. *1
3. Upon detection of the trailing edge of the cover paper by the main body paper exit sensor, the M1 starts to turn at high speed [5] to convey the paper.

*1 1051/1052 only. The speed of M1 is not switched for C8000/1200/1200P/1250/1250P/C7000/C7000P/C70hc/C6000.

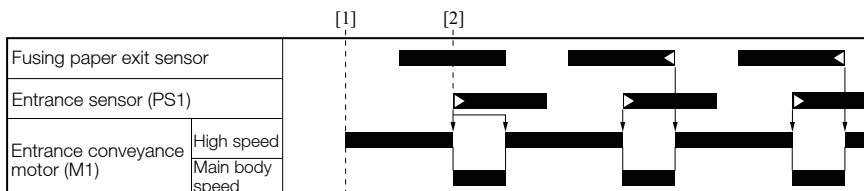


[1] Print start signal ON	[2] Paper
[3] Change of main body process speed	[4] Change to the same speed as the main unit
[5] Change to high speed rotation	-

(2) Sub tray paper exit mode/Relay conveyance mode**(a) Large-size double-sided mode, single-sided main body straight mode (320mm or longer in the sub scan direction)**

1. The entrance conveyance motor (M1) starts to turn at high speed [1] upon receiving a print job, and starts to decelerate [2] in accordance with the main body process speed when the main body exit sensor detects the leading edge of paper. *1
2. After turning OFF the fusing exit sensor, switches M1 to the high speed rotation.

*1 1051/1052 only. The speed of M1 is not switched for C8000/1200/1200P/1250/1250P/C7000/C7000P/C70hc/C6000.



[1] Print start signal ON	[2] Change to the main body process speed
---------------------------	---

(b) Small-size all modes, large-size main body reverse paper exit mode (320mm or shorter in the sub scan direction)

- When detecting that the print start signal turns ON, the entrance conveyance motor (M1) turns ON (starts to turn at high speed).

2.3.3 Intermediate conveyance control

- The intermediate conveyance roller is driven by the drive force of the intermediate conveyance motor (M2) transmitted via the gear and the timing belt.

(1) Perfect binding mode

- The intermediate conveyance motor (M2) starts to rotate when a print job is received.

(2) Sub tray paper exit mode

- The intermediate conveyance motor (M2) does not work.

(3) Relay conveyance mode

- The intermediate conveyance motor (M2) starts to rotate when a print job is received.

2.3.4 Cover paper conveyance control

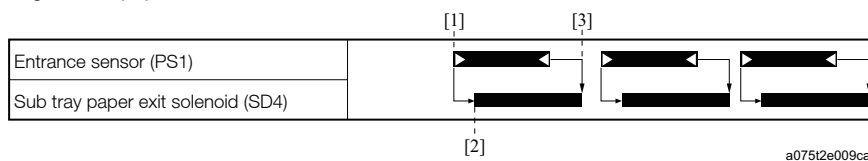
- The cover paper conveyance section and the cover paper conveyance roller are driven by the drive force of the cover paper feed motor (M74) transmitted via the gear, timing belt, and the coupling.
- The M74 stops when a prescribed time period has elapsed after the cover paper conveyance sensor /4 (PS78) detects the trailing edge of the cover paper.
- For details of the feeding operation, refer to [PN.7. COVER PAPER SUPPLY SECTION](#).

2.3.5 Sub tray paper exit release control

- The sub tray release operation is performed to align edges of papers exit onto the sub tray.
- The sub tray exit solenoid (SD4) activates the operation. The sub tray exit roller separates from the spring when the SD4 becomes On, and the roller moves to push the spring when the SD4 turns Off.

(1) Large-size (320mm or longer in the sub scan direction)

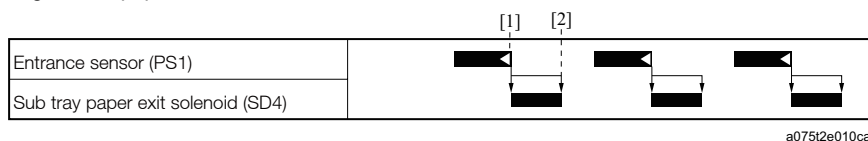
- When a prescribed time period has elapsed after the entrance sensor (PS1) detects the leading edge of paper [1], the sub tray exit solenoid (SD4) turns ON to release the sub tray exit roller from the spring [2].
- The SD4 turns OFF to make the roller push the spring [3] when a prescribed time period has elapsed after the PS1 detects the trailing edge of the paper.



[1]	Paper leading edge detection	[2]	The sub tray exit roller separates from the spring
[3]	The sub tray exit roller pushes against the spring	-	

(2) Small-size (320mm or shorter in the sub scan direction)

- After the entrance sensor (PS1) detects the trailing edge of paper, the sub tray exit solenoid (SD4) turns ON to make the sub tray exit roller separate from the spring [1].
- The SD4 turns OFF to make the roller push the spring [2] when a prescribed time period has elapsed after the PS1 detects the trailing edge of the paper.



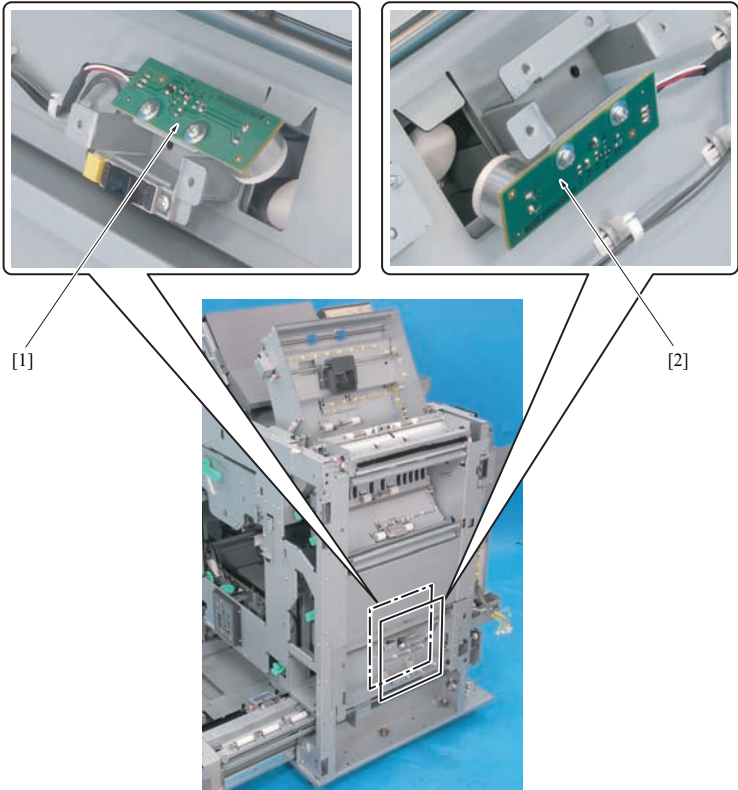
[1]	The sub tray exit roller separates from the spring	[2]	The sub tray exit roller pushes against the spring
-----	--	-----	--

2.3.6 Sub tray full-status detection control

- When the sub tray becomes full, the sub tray full sensor (PS5) detects the full-status.

2.3.7 Cover paper multi feed detection control

- When multiple papers are conveyed from the PB cover paper tray at a time, the supersonic sensors; multi-feed detection board /S (MFDBS) [2] and /R (MFDBR) [1] detect the error. The MFDBS transmits a supersonic wave and the MFDBR receives it.

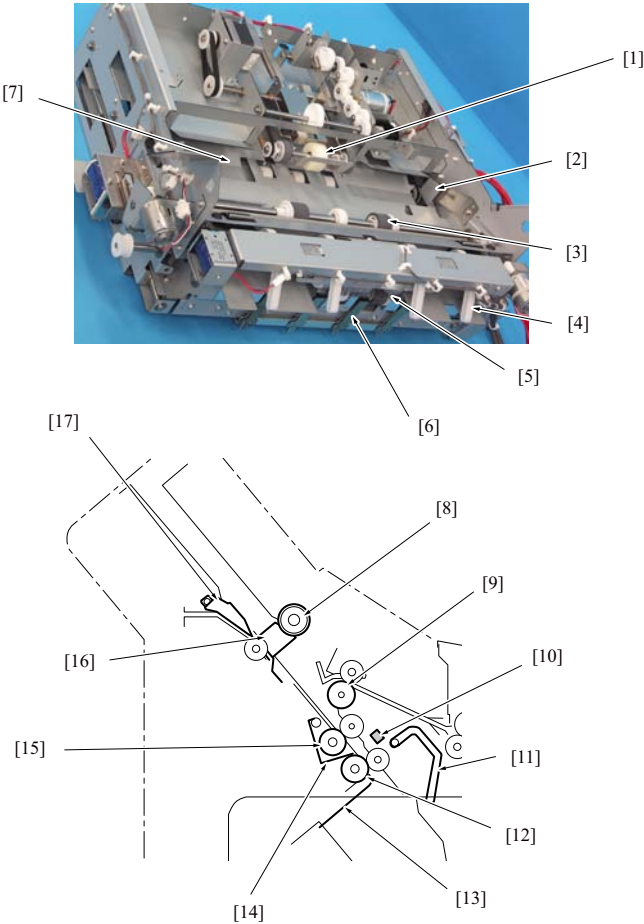


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[1]	MFDBR	[2]	MFDBS
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3. SUB COMPILE (SC) SECTION

3.1 Configuration

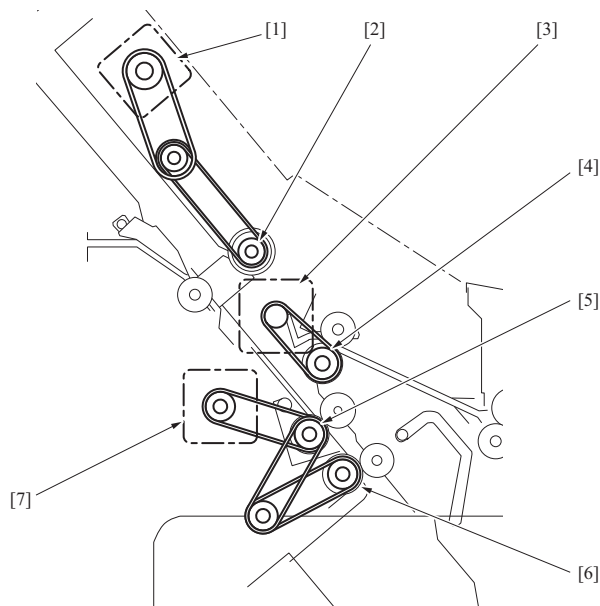


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[1]	Switchback roller	[2]	SC alignment plate
[3]	SC entrance roller	[4]	Pressure arm
[5]	Clamp entrance roller	[6]	FD alignment plate
[7]	Straight gate	[8]	Switchback roller
[9]	SC entrance roller	[10]	SC paper detection sensor (PS16)
[11]	Pressure arm	[12]	Clamp entrance roller
[13]	FD alignment plate	[14]	SC stopper
[15]	SC roller	[16]	SC alignment plate
[17]	Straight gate	-	

3.2 Drive

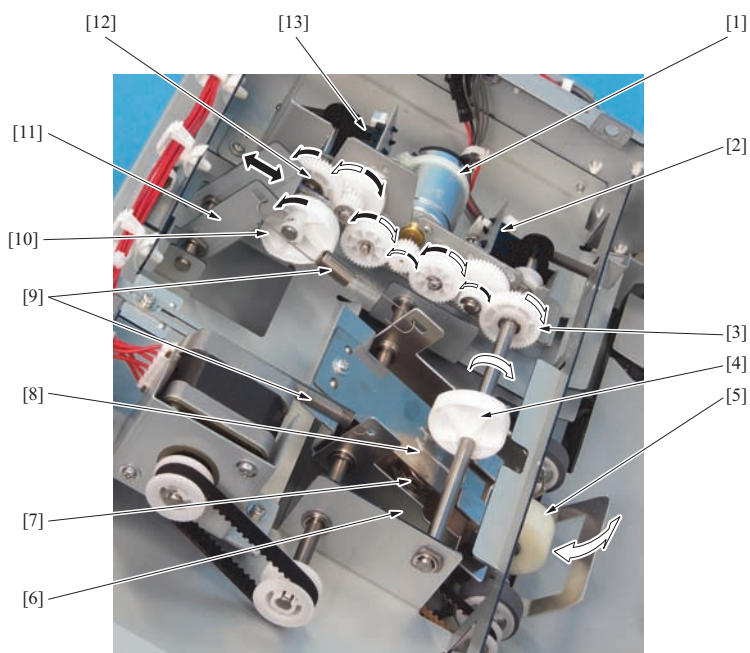
3.2.1 SC entrance conveyance drive/Switchback conveyance drive/Paper bundle conveyance drive



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[1]	SC switchback conveyance motor (M12)	[2]	SC switchback roller
[3]	SC entrance conveyance motor (M11)	[4]	SC entrance roller
[5]	SC roller	[6]	Clamp entrance roller
[7]	SC bundle conveyance motor (M17)	-	

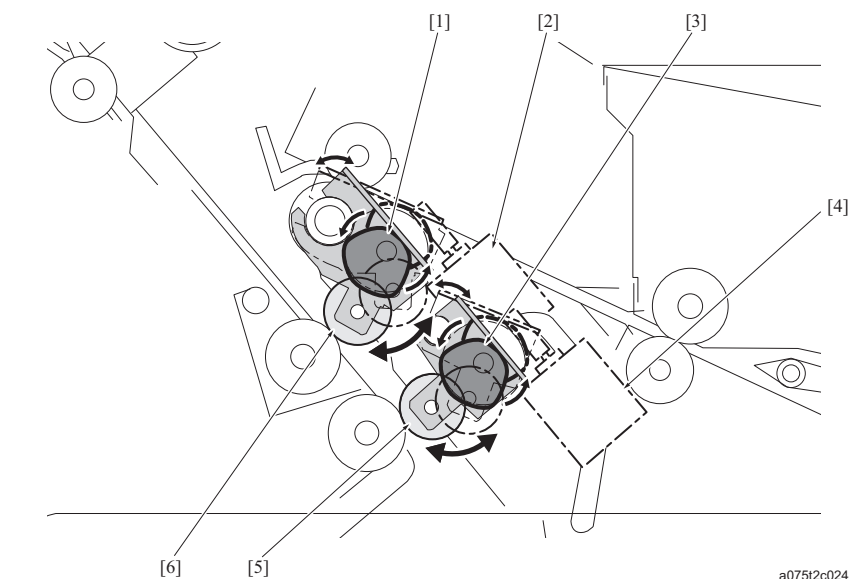
3.2.2 Switchback release drive



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[1]	SC switchback release motor (M13)	[2]	SC switchback arm pressure detection sensor (PS12)
[3]	One-way clutch	[4]	Press cam
[5]	SC switchback roller	[6]	Pressure bracket
[7]	Pressure spring	[8]	Pressure plate
[9]	Switchback spring	[10]	Switchback cam
[11]	Switchback arm	[12]	One-way clutch
[13]	SC switchback spring pressure detection sensor (PS13)	-	

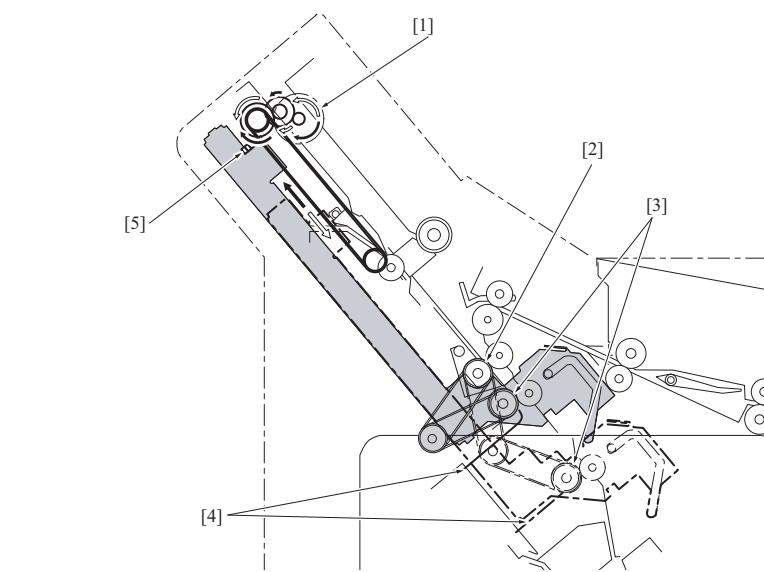
3.2.3 SC roller release drive/Clamp entrance release drive



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[1]	SC roller cam	[2]	SC roller release motor (M18)
[3]	Clamp entrance roller cam	[4]	Clamp entrance roller release motor (M20)
[5]	Clamp entrance driven roller	[6]	SC driven roller

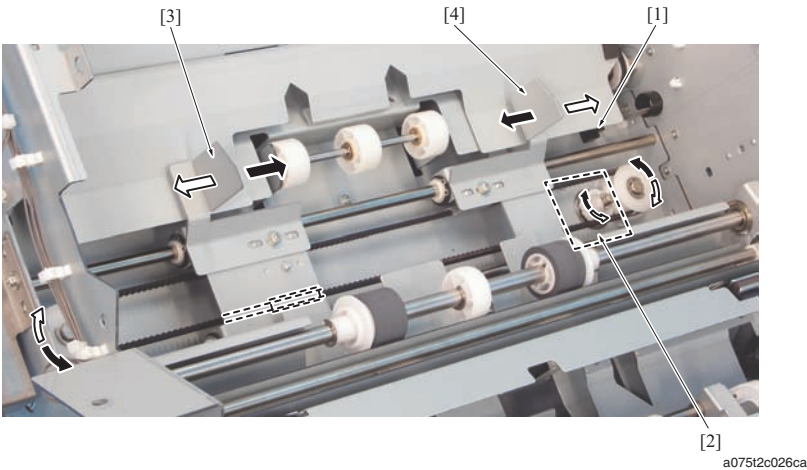
3.2.4 Clamp entrance movement drive



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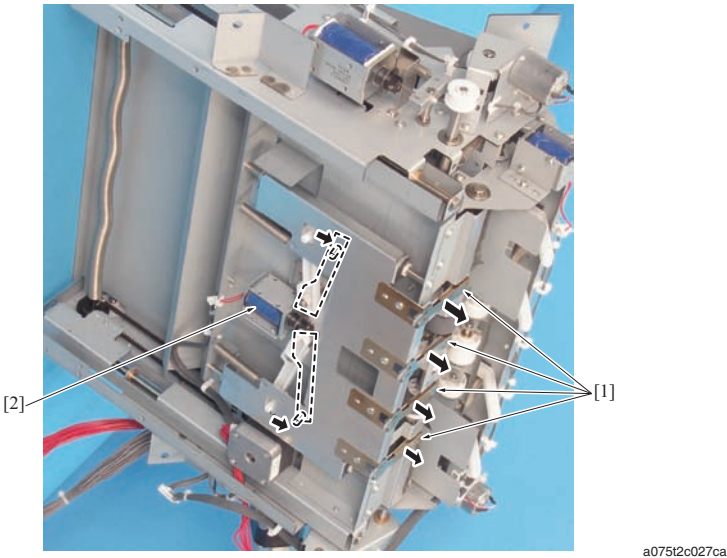
[1]	Clamp entrance movement motor (M19)	[2]	SC roller
[3]	Clamp entrance roller	[4]	FD alignment plate
[5]	Clamp entrance movement HP sensor (PS18)	-	

3.2.5 SC main scan alignment drive



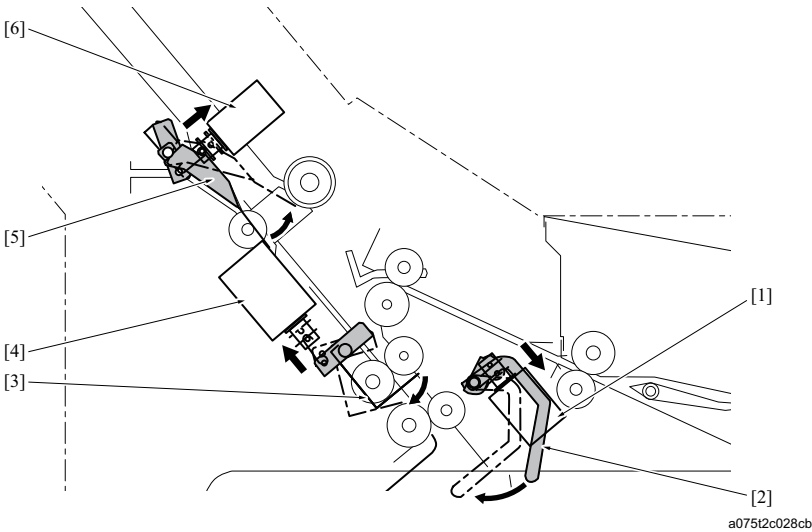
[1]	SC alignment plate home sensor (PS14)	[2]	SC alignment motor (M15)
[3]	SC alignment plate /Fr	[4]	SC alignment plate /Rr

3.2.6 Sub scan alignment drive



[1]	FD alignment plate	[2]	FD alignment solenoid (SD11)
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3.2.7 SC stopper drive/SC pressure arm drive/Straight gate drive



[1]	SC pressure arm solenoid (SD13)	[2]	SC pressure arm
[3]	SC stopper	[4]	SC stopper solenoid (SD12)

[5] Straight gate	[6] Straight gate solenoid (SD91)
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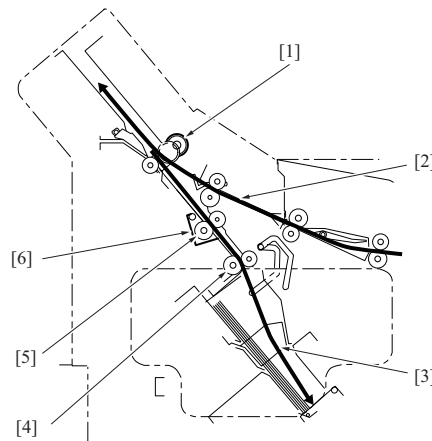
3.3 Operation

3.3.1 SC section operation overview

- The SC section is provided to stack a certain number of paper for subsequent book while papers for the previous book being glued at the clamp section and the glue tank section.
- The number of papers stacked in the SC section varies depending on the print mode and paper size.
- In the relay conveyance mode, the straight gate is driven and the paper is conveyed to the relay conveyance section.

(1) Perfect binding mode overview

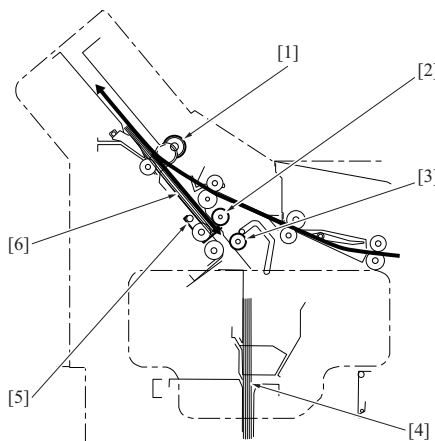
1. A page [2] for the first book [3] goes to the SC section and then goes to the clamp section. Once the paper [2] is set in the SC section, the SC stopper [6] is released, and the paper is conveyed to the clamp section by the SC switchback roller [1], SC roller [5] and the clamp entrance roller [4]. All inside papers for the first book are conveyed to the clamp section in this manner one by one.



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[1] Switchback roller	[2] Paper
[3] Page for the first book	[4] Clamp entrance roller
[5] SC roller	[6] SC stopper

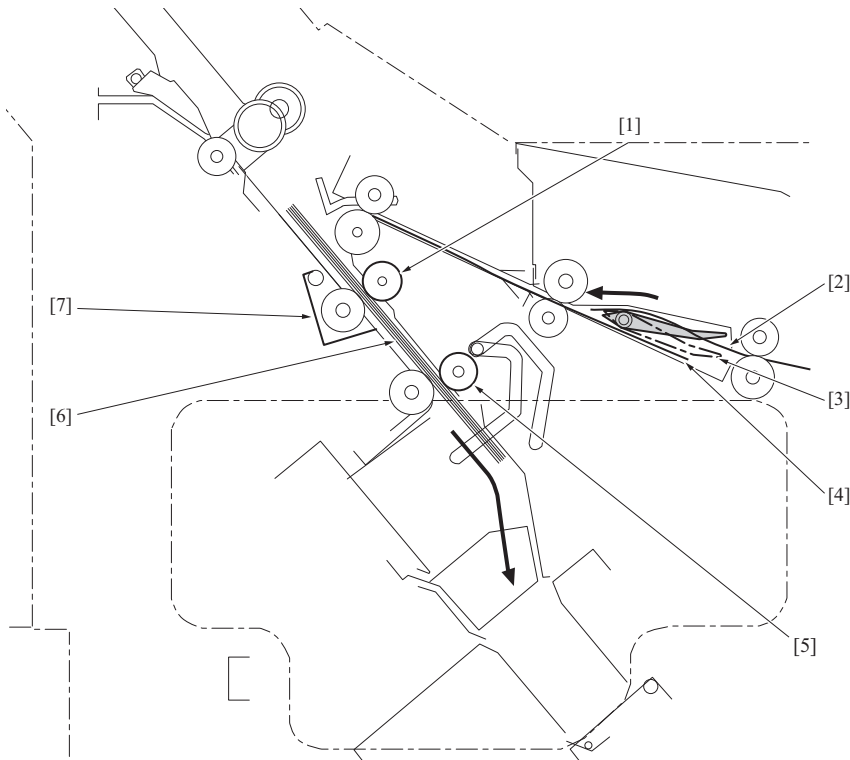
2. When the last page of the first book reaches the clamp section, the SC stopper [5] moves back to its original position, and the SC driven roller [2] and the clamp entrance driven roller [3] move away from their paper-feed position. A certain number of papers (n) for the next book are stacked in the SC section by the SC switchback roller [1].



a15xt2c039ca

[1] Switchback roller	[2] SC driven roller
[3] Clamp entrance driven roller	[4] All inside papers for the first book
[5] SC stopper	[6] Page for the next book

3. When binding of the first book is finished, the clamp unit inclines from its upright position to receive paper for the next book. At the same time, the SC stopper [7] moves to open the path, and the SC driven roller [1] and clamp entrance driven roller [5] go into the position to convey the paper (n) [6] stacked in the SC section. During the above operation, the 2nd paper ("n+1"th [4] and "n+2"th [2]) are set in the bypass gate [3].
4. The 2 sheets of paper are conveyed to the clamp section at a time.
5. The rest of the papers for the book are conveyed to the clamp section one by one in the same manner as for the first book.

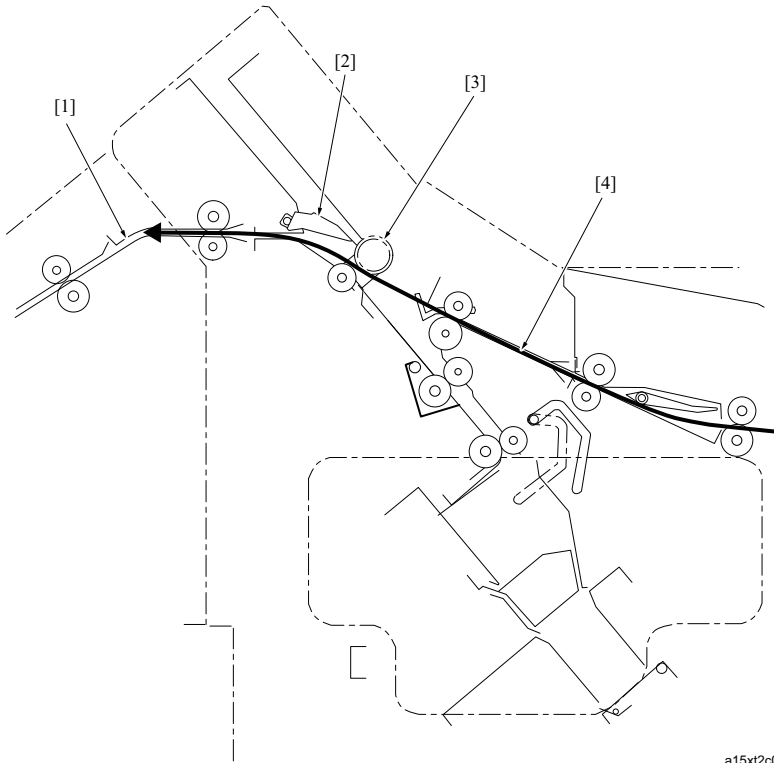


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[1]	SC driven roller	[2]	"n+2"th page
[3]	Bypass gate	[4]	"n+1"th page
[5]	Clamp entrance driven roller	[6]	Paper bundle "n"
[7]	SC stopper	-	

(2) Relay conveyance mode

1. The conveyed paper [4] is switched to the path to the relay conveyance section by the straight gate [2] and conveyed to the relay conveyance section one by one by the switchback roller [3] that is in the high pressing mode.



a15xt2c001ca

[1]	Relay conveyance section	[2]	Straight gate
[3]	Switchback roller	[4]	Paper

3.3.2 Gate control of the relay conveyance

- The straight gate solenoid (SD91) drives the straight gate.
- The perfect binding mode keeps SD91 being OFF and does not switch the straight gate.
- In the relay conveyance mode, SD91 turns ON upon receiving a print job and switches the straight gate to the path to the relay conveyance section.

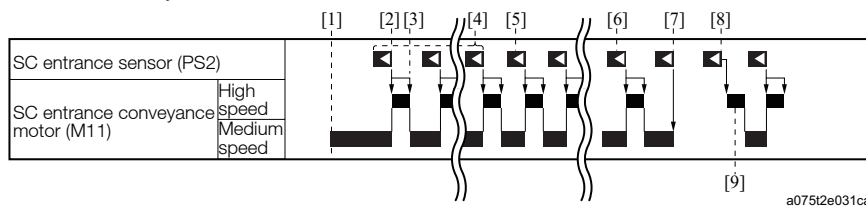
3.3.3 SC entrance conveyance control

- The SC entrance roller is driven by the drive force of the SC entrance conveyance motor (M11) transmitted via the belt.

(1) Control

(a) Perfect binding mode

1. The SC entrance conveyance motor (M11) starts to turn at low speed [1] upon receiving a print job.
2. The M11 speed changes to high speed when the SC entrance sensor (PS2) detects the trailing edge of paper [2].
3. When a prescribed time has elapsed after the M11 acceleration, the M11 returns to low speed [3] before the paper goes through the SC entrance roller.
4. The above conveyance operation is carried out for the last paper of the first book [4] and the first page [5] to the "n"th page [6] of the next book (n=37 to 38 when the papers are A4 sized and one-side printed).
5. The M11 stops to stop the SC entrance roller when the PS2 detects [7] the trailing edge of "n+1"th page.
6. When the PS2 detects [8] "n+2"th paper trailing edge, the M11 starts to turn at high speed [9] to convey the "n+1"th and "n+2"th papers at a time.
7. The rest of the papers for the second book are conveyed in the same manner as for the first book, and the papers for the subsequent books are conveyed in the same manner as for the second book.



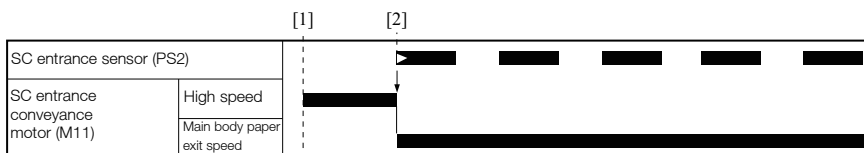
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[1]	Print start signal ON	[2]	Detection of the trailing edge of paper
[3]	Change M11 to low speed	[4]	Last page of the first book
[5]	First page of the second book	[6]	"n"th page of the second book
[7]	Trailing edge detection of "n+1"th page of second book	[8]	Trailing edge detection of "n+2"th page of second book
[9]	M11 turns at high speed	-	

(b) Relay conveyance mode

1. The SC entrance conveyance motor (M11) starts to turn at high speed upon receiving a print job [1].
2. Once the SC entrance sensor (PS2) detects [2] the leading edge of the 1st sheet, M11 switches to the speed of the main body paper exit.^{*1}

^{*1} 1051/1052 only. The speed of M1 is not switched for C8000/1200/1200P/1250/1250P/C7000/C7000P/C70hc/C6000.



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[1]	Print start signal ON	[2]	Paper leading edge detection
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3.3.4 SC switchback conveyance control

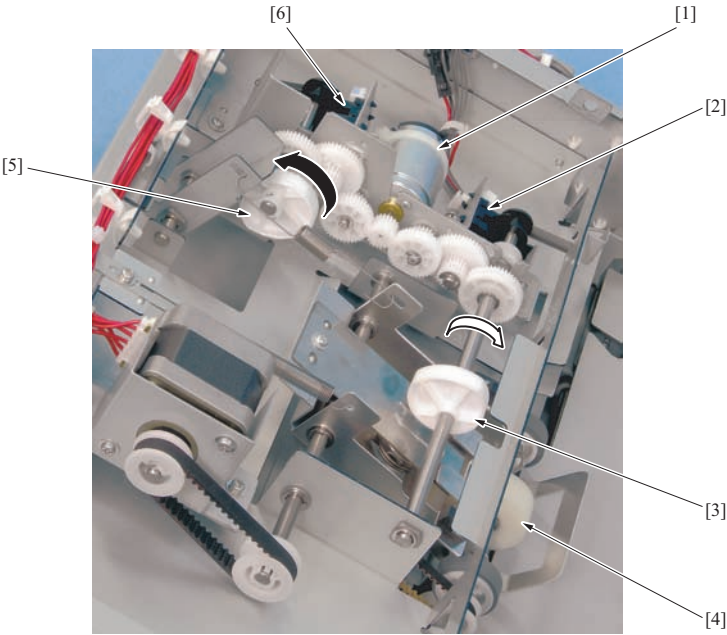
- The SC switchback conveyance motor (M12) drives the SC switchback roller. The SC switchback release motor (M13) drives the releasing operation of the roller.

(1) SC switchback roller release mechanism

- The SC switchback release motor (M13) drives the pressure cam [3] and the switchback cam [5]. The forward rotation of the motor drives the pressure cam [3] and the reverse rotation of the motor drives the switchback cam [5].
- The SC switchback roller [4] has 3 preset positions for releasing (kept away from the driven roller), pressing strongly or slightly against the driven roller.
- The "pressing strongly" status of the SC switchback roller [4] is used when conveying inside paper to the clamp section and for the relay conveyance, and the roller becomes the "pressing slightly" status when conveying inside paper to the SC section so that the SC stopper stops the papers properly.
- The SC switchback arm pressure detection sensor (PS12) [2] detects the pressure cam position, and the SC switchback spring pressure detection sensor (PS13) [6] detects the position of the switchback cam. The PS12 is ON when the pressure cam is at its home position, and the PS13 is OFF when the switchback cam is at its home position.

PS12	PS13	SC switchback roller status (position)
ON	OFF	Release
OFF	OFF	Press strongly

ON	ON	Press slightly
OFF	ON	Not used ("press strongly" status)

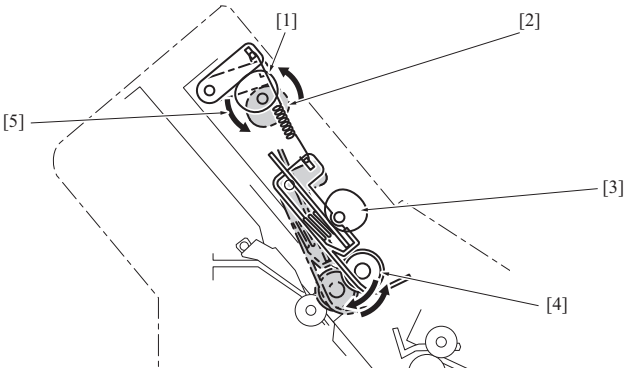


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[1]	SC switchback release motor (M13)	[2]	SC switchback arm pressure detection sensor (PS12)
[3]	Pressure cam	[4]	SC switchback roller
[5]	Switchback cam	[6]	SC switchback spring pressure detection sensor (PS13)

(a) Switchback cam drive (light pressure)

- The switchback cam [1] rotates counterclockwise [5] to switch the SC switchback roller [4] position between releasing and light pressing while the pressure cam [3] is at its home position.
- While the SC switchback spring pressure detection sensor (PS13) is OFF, the SC switchback roller is in the release position (kept away from the driven roller).
- When the PS13 is ON [2], the SC switchback roller moves to press slightly against the driven roller.
- The PS13 is kept OFF while the switchback cam is at its home position.

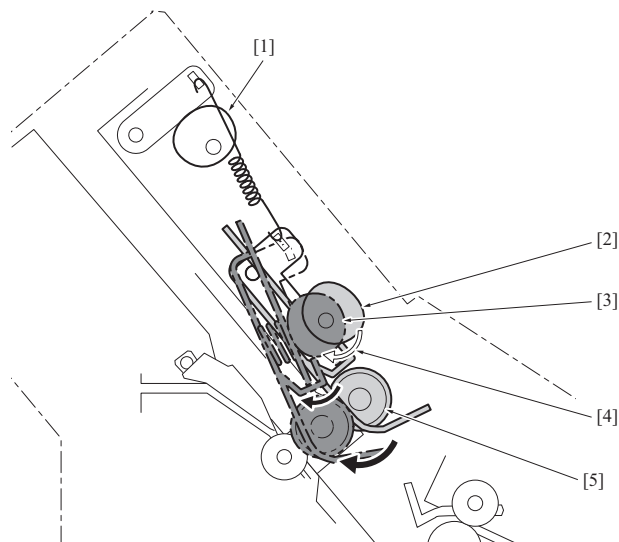


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[1]	Switchback cam (home position)	[2]	Switchback cam (press slightly)
[3]	Pressure cam	[4]	SC switchback roller
[5]	Rotating direction of the switchback cam	-	

(b) Pressure cam drive (strong pressure)

- The pressure cam [2] rotates clockwise [4] to switch the SC switchback roller [5] position between releasing and strong pressing. The switch operation of the pressure cam is made while the switchback cam [1] is at its home position.
- While the SC switchback arm pressure detection sensor (PS12) is ON, the SC switchback roller is in the release position (kept away from the driven roller).
- When the PS12 is OFF [3], the SC switchback roller moves to press strongly against the driven roller.



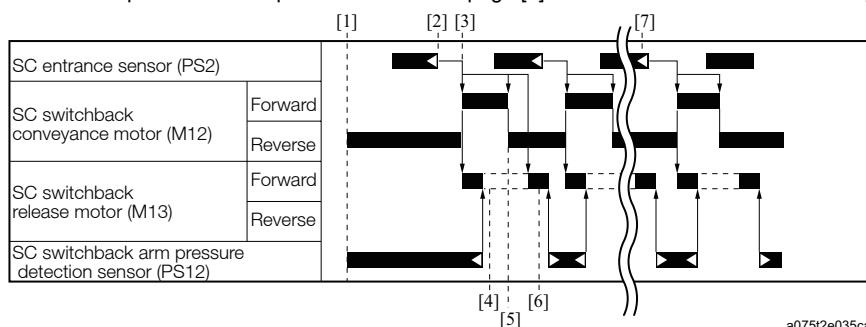
[1]	Switchback cam (home position)	[2]	Pressure cam (home position)
[3]	Pressure cam (PS12 turns OFF)	[4]	Rotation direction of the pressure cam
[5]	SC switchback roller	-	

(2) SC switchback roller control (Perfect binding mode)

- Inside papers of the first book are conveyed to the clamp section one by one without being stacked at the SC section.
- When conveying inside papers to the clamp section without stacking them in the SC section, the SC switchback roller position is switched between releasing and strong pressing. The rotation direction of the roller is also switched between forward and reverse.
- When conveying inside papers of the next and subsequent books, a certain number of papers (n) are first stacked in the SC section, and the stacked inside papers are conveyed to the clamp section at a time. "n+1"th paper and the subsequent papers are conveyed to the clamp section one by one without being stacked at the SC section.
- When stacking papers in the SC section, the SC switchback roller position is switched between releasing and light pressing. During the stacking, the SC switchback roller rotates in the reverse direction.

(a) First book

- The SC switchback conveyance motor (M12) starts to turn in the reverse direction [1] when detecting that the print start signal turns ON. The switchback roller is in its release position to make paper go to the SC section.
- The M12 reverses the direction of rotation (starts to turn in the forward direction) after the SC entrance sensor (PS2) detects the trailing edge of paper [2]. At the same time, the SC switchback release motor (M13) starts to rotate in the forward direction. When the SC switchback arm pressure detection sensor (PS12) turns OFF, the M13 stops and the switchback roller is strongly pressed against the driven roller [4].
- The inside papers are nipped between the switchback roller and the driven roller strongly [4] and conveyed to the SC section by the forward rotation of the roller.
- When a prescribed time has elapsed after the PS2 detects the trailing edge of the paper, the M12 reverses the direction of rotation [5] to convey inside papers to the clamp section.
- When a prescribed time has elapsed after the PS2 detects the trailing edge of the paper, the M13 starts to turn in the forward direction again to move the switchback roller away from the driven roller [6], and when the PS12 turns On, the motor stops.
- The above operations are repeated until the last page [7] of the first book reaches the clamp section.

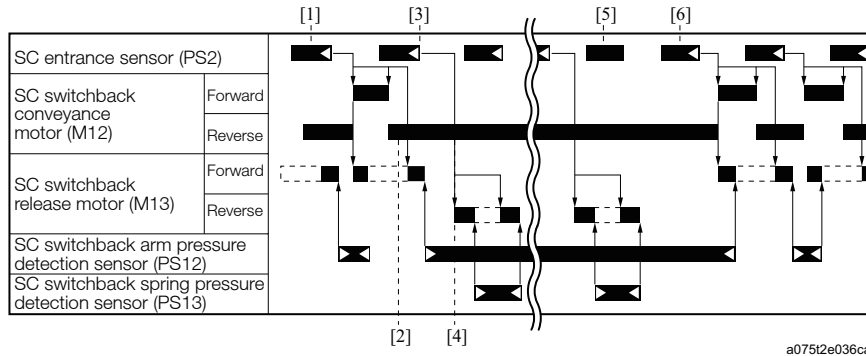


[1]	Print start signal ON	[2]	Detection of the trailing edge of paper
[3]	M12 forward rotation and strong pressure	[4]	Strong pressure status
[5]	Switchback conveyance start	[6]	Release
[7]	Last page of the first book	-	

(b) The second and subsequent books

- The SC switchback conveyance motor (M12) continues to turn in the reverse direction after the last page [1] of the previous book is conveyed to the clamp section [2].
- When a prescribed time has elapsed after the SC entrance sensor (PS2) detects the trailing edge of the first page of the next book [3], the SC switchback release motor (M13) starts to rotate in the reverse direction [4].

- When the SC switchback spring pressure detection sensor (PS13) turns ON, the M13 stops and the switchback roller is lightly pressed against the driven roller. The inside papers are then conveyed to the SC section and stopped by the SC stopper.
- After the PS2 detects the trailing edge of the paper, the M13 reverses the direction of rotation again. Then the switchback roller is moved away from the driven roller to accept the next page.
- The above operations are repeated until a certain number of papers (n) are stacked in the SC section. (every books)
- While the next 2 papers ("n+1"th page [5] and "n+2"th page [6]) are set in the bypass gate, the stacked n papers are conveyed to the clamp section at a time.
- When the PS2 detects the trailing edge of the "n+2"th page, the M12 starts to turn in the forward direction. At the same time, the M13 also starts to turn in the forward direction to push strongly the switchback roller against the driven roller. After the "n+1"th page and the "n+2"th page are conveyed to the clamp section through the SC section at a time, the following papers are conveyed to the clamp section one by one in the same manner as for the first book.



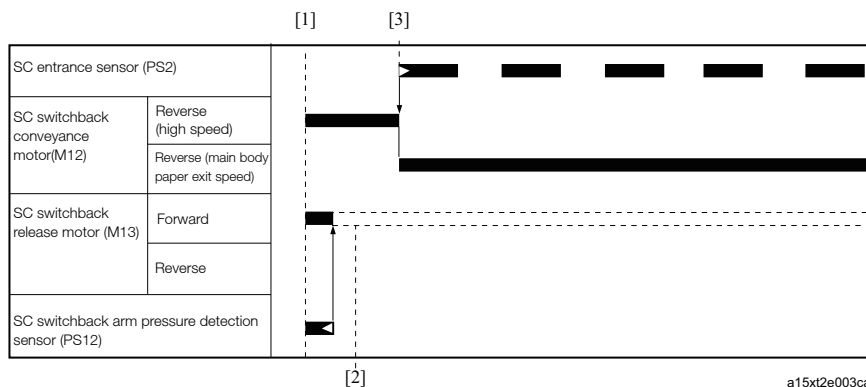
[1]	The last page of the previous book	[2]	Conveyance of the last page of the first book
[3]	Detection of the first page of the next book	[4]	Light pressing start
[5]	"n+1"th page	[6]	"n+2"th page

(3) SC switchback roller control (Relay conveyance mode)

- The SC switchback roller is set to "pressing strongly" and the release operation is not conducted.
 - The SC switchback roller rotates reverse and it conducts the deceleration control to the line speed of the main body paper exit. *1
- *1 1051/1052 only. The speed is not switched for C8000/1200/1200P/1250/1250P/C7000/C7000P/C70hc/C6000.

(a) Control

- The SC switchback conveyance motor (M12) starts to turn in the reverse direction at high speed [1] upon receiving of a print job. At the same time, the SC switchback release motor (M13) starts to rotate in the forward direction.
- When the SC switchback arm pressure detection sensor (PS12) turns OFF, the M13 stops and the switchback roller is strongly pressed against the driven roller [2].
- Once the SC entrance sensor (PS2) detects [3] the leading edge, M12 decelerates [3] to the speed of the main body paper exit.
- Paper is conveyed to the relay conveyance section.



[1]	Print start signal ON	[2]	Press strongly
[3]	Paper leading edge detection		-

3.3.5 SC main scan alignment control

- The SC alignment motor (M15) drives the SC alignment plates /Fr and /Rr via the belt to move them by 9mm as they are oscillated. This movement aligns the edges of the papers stacked in the SC section in the main scan direction.
- The alignment operation is carried out every time a page is stacked in the SC section when stacking a certain number of papers of the second or subsequent books.
- While inside papers are conveyed to the clamp section without being stacked in the clamp section, this alignment operation is not performed.

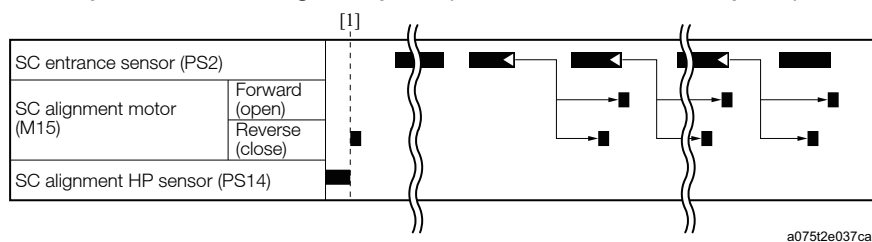
(1) Control

- Upon receiving of a print job, the SC alignment motor (M15) starts to turn in the reverse direction to shift the SC alignment plates /Fr and /Rr to the position 9mm outer the paper edges [1].
- After the SC entrance sensor (PS2) detects the trailing edge of the first page of the second or subsequent book, the M15 starts to turn in the reverse direction to carry out the main scan direction alignment with the SC alignment plates /Fr and /Rr.

3. When a prescribed time has elapsed after the PS2 detection, the M15 starts to turn in the forward direction to move the SC alignment plates /Fr and /Rr back to their standby positions.
4. Every time a page is stacked in the SC section, this alignment operation is performed.

Note

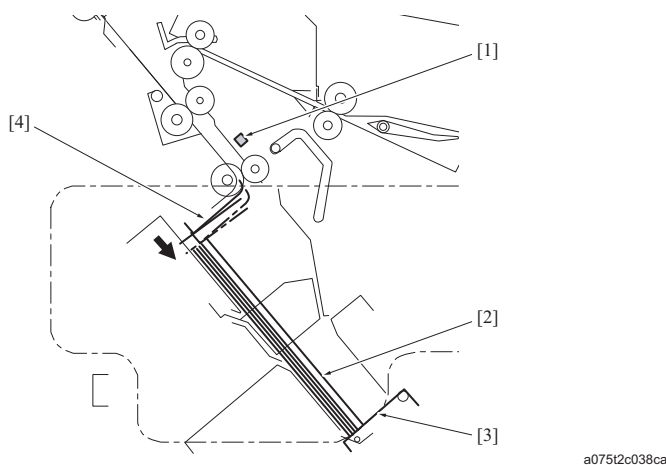
- The set positions of the 2 alignment plates (the distance between the 2 plates) can be adjusted in the service mode.



[1]	Print start signal ON	-
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3.3.6 Sub scan alignment control

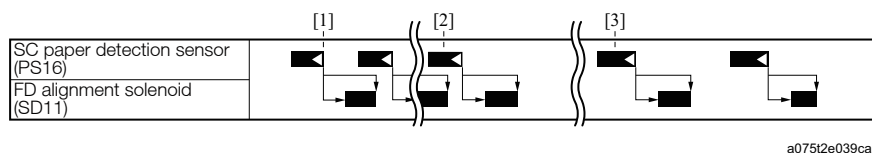
- The FD alignment solenoid (SD11) drives the FD alignment plate [4] so that the inside papers [2] are hit against the reference plate [3] of the clamp section to be aligned in the sub scan direction.
- The SC paper detection sensor (PS16) detects the timing of the movement.



[1]	SC paper detection sensor (PS16)	[2]	Paper
[3]	Reference plate	[4]	FD alignment plate

(1) Control

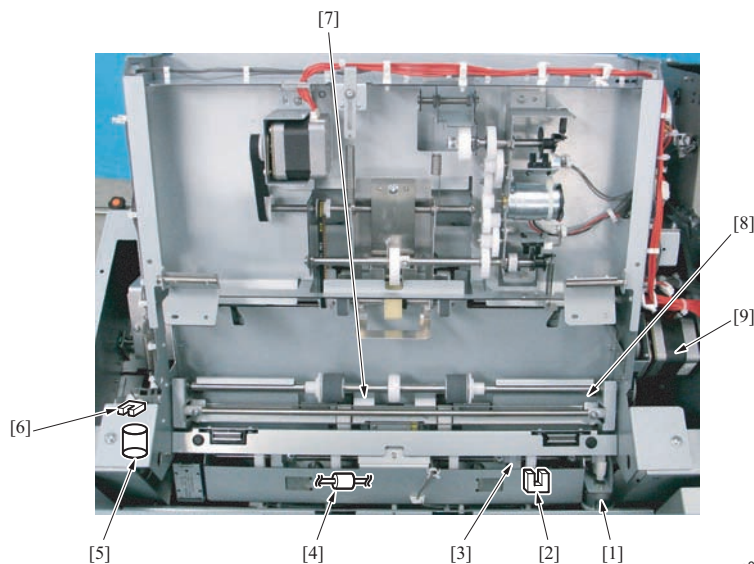
1. When a prescribed time has elapsed after the PS16 detects the trailing edge of the first page of the first book [1], if the clamp alignment plate /Fr and /Rr are closed for alignment operation, the SD11 turns ON.
2. The SD11 turns OFF after a prescribed time has passed since it became ON, and waits for the next page.
3. Until the last page [2] reaches the clamp section, the sub-scan-direction alignment is performed every time a page comes to the section.
4. After the PS16 detects trailing edge of n paper (from the first page to the "n"th page) of the second book [3], the alignment operation is performed.
5. The alignment operation is also carried out for the 2 papers ("n+1"th and "n+2"th page) laid one on top of another at the bypass gate.



[1]	Paper trailing edge detection by PS16	[2]	Last page of the first book
[3]	Paper set		-

3.3.7 SC paper bundle conveyance control

- The SC bundle conveyance motor (M17) [9] drives the SC roller and the clamp entrance roller.
- The SC roller release motor (M18) [5] drives the SC driven roller [7] via the cam [8] to move the roller away from (release) or contact with (press) the opposite roller.
- The SC roller release sensor (PS17) [6] detects the press/release operation of the roller. While the roller is pressed against the opposite roller, the PS17 is kept ON.
- The clamp entrance roller release motor (M20) [1] drives the cam [3] and the clamp entrance roller [4] to move them away from (release) or contact with (press) the opposite roller.
- The clamp entrance roller release sensor (PS19) [2] detects the press/release operation of the roller. While the roller and the cam are in the pressed status, the PS19 is kept ON.

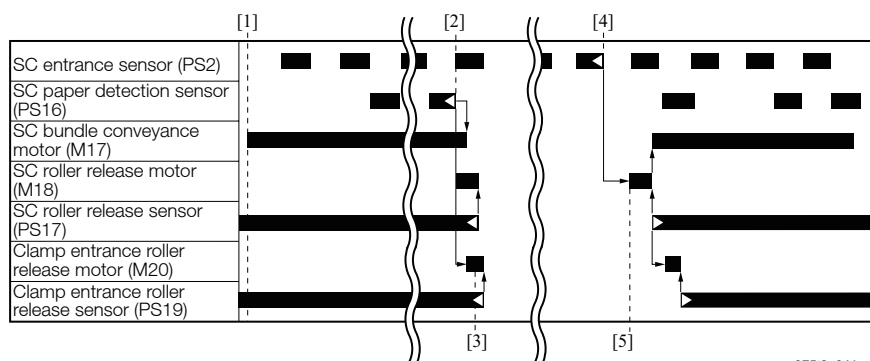


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[1]	Clamp entrance roller release motor (M20)	[2]	Clamp entrance roller release sensor (PS19)
[3]	Cam	[4]	Clamp entrance driven roller
[5]	SC roller release motor (M18)	[6]	SC roller release sensor (PS17)
[7]	SC driven roller	[8]	Cam
[9]	SC bundle conveyance motor (M17)	-	

(1) Control

- Upon receiving of a print job, the SC bundle conveyance motor (M17) starts to rotate [1], and the inside paper are conveyed to the clamp section one by one with the SC roller and the clamp entrance roller.
- When the SC paper detection sensor (PS16) detects the trailing edge of the last paper [2], the SC roller release motor (M18) starts to rotate to start stacking paper in the SC section. When a prescribed time has elapsed after the M18 starts to rotate, the M17 stops to stop conveying paper to the clamp section. The clamp entrance roller release motor (M20) also starts to rotate to release the clamp entrance roller [3].
- The M18 stops when the PS17 becomes OFF, and the M20 stops when the PS19 becomes OFF. The next bundle of paper is kept stacked in the SC section until the clamp section is ready for them.
- The M18 turns ON and starts to rotate again [5] after a specified period of time after the SC entrance sensor (PS2) detects [4] the trailing edge of the last page of the stacked paper in the SC section.
- When the pressing of the SC roller is finished after the PS17 turns ON, the M17 turns ON and starts to convey the stacked paper.
- When the leading edges of the paper go through the clamp entrance, the M20 starts to rotate to convey the paper to the clamp section.
- Then the next 2 pages set in the bypass gate are conveyed to the clamp section at a time. All the above operations are repeated for the subsequent books.

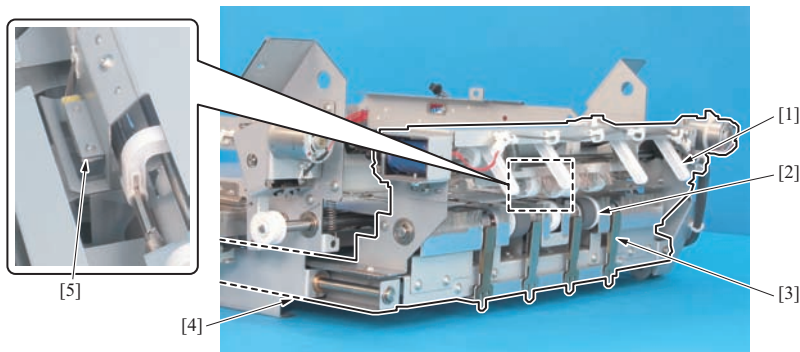


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[1]	Print start signal ON	[2]	Trailing edge of the last page of each book detection
[3]	Clamp entrance roller moves away from the paper conveyance position	[4]	Trailing edge of "n"th page detection
[5]	The SC roller is set in the position for paper conveyance	-	

3.3.8 Clamp entrance movement control

- The clamp entrance movement motor (M19) drives the clamp entrance assy [4] via the belt.
- The clamp entrance assy consists of the clamp entrance roller [2], FD alignment plate [3], SC pressure arm [1], and the SC paper detection sensor (PS16) [5].
- The clamp entrance assy movement moves the FD alignment plate in accordance with the paper size.

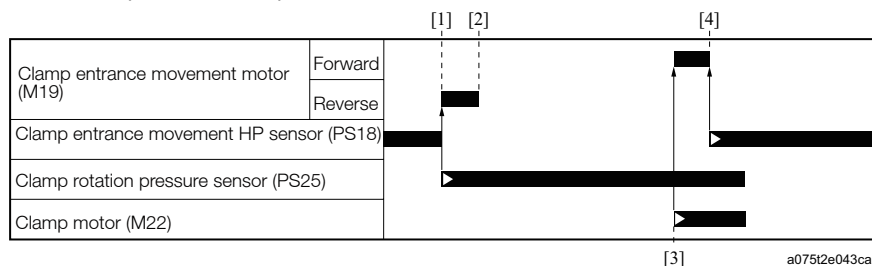


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[1]	SC pressure arm	[2]	Clamp entrance roller
[3]	FD alignment plate	[4]	Clamp entrance assy
[5]	SC paper detection sensor (PS16)	-	

(1) Control

- When the clamp rotation pressure sensor (PS25) turns ON [1] and the clamp section is set at the compiling position, the clamp entrance movement motor (M19) reverses its rotation direction to lower the clamp assy. The motor stops [2] when the clamp assy is set at the position corresponding to the paper size, and the clamp assy becomes ready for accepting the next paper.
- When the clamp motor (M22) initiates clamping operation [3], the M19 starts to turn in the forward direction to lift the clamp entrance assy until the assy reaches the position out of way of the clamping operation. The clamp entrance movement HP sensor (PS18) detects that the assy reaches the position (the sensor becomes ON, and the M19 is stopped [5].
- The above operations are repeated for each book.



[3]

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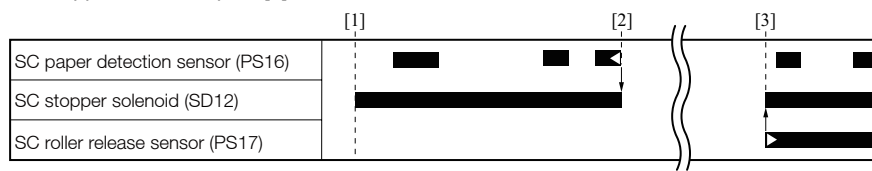
[1]	Clamp section is set at the compiling position	[2]	Movement of clamp entrance assy in accordance with paper size
[3]	Clamping starts	[4]	Clamp entrance assy home position

3.3.9 SC stopper control

- In order to stack paper in the SC section, the SC stopper is activated by the SC stopper solenoid (SD12) and closes the paper feed path toward the clamp section.

(1) Control

- When detecting that the print start signal turns ON [1], the SC stopper solenoid (SD12) turns ON to release the SC stopper.
- When the SC paper detection sensor (PS16) detects the trailing edge of the last page of each book, the SD12 turns OFF to set the SC stopper to close the path [2].
- When the SC roller release sensor (PS17) becomes ON and the SC roller holds down a bundle of paper, the SD12 turns ON to move the SC stopper out of the path [3].

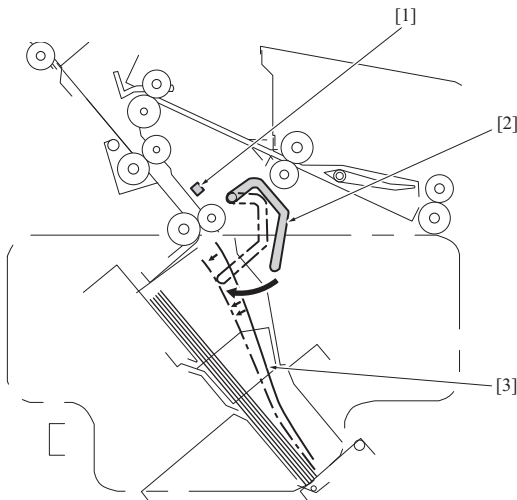


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[1]	Print start signal ON	[2]	Set SC stopper
[3]	Move SC stopper out of the paper path	-	

3.3.10 SC pressure arm control

- The SC pressure arm [2] presses paper [3] conveyed from the SC section to stack paper neatly in the clamp section. The SC pressure arm assists to stack paper to the clamp section.
- The SC paper detection sensor (PS16) [1] detects the timing of the movement.

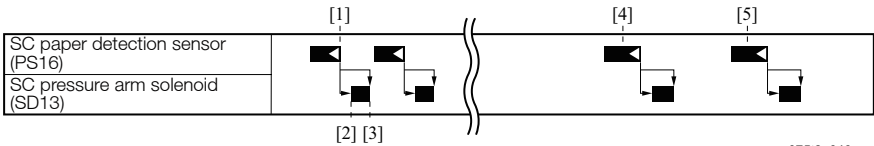


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[1]	SC paper detection sensor (PS16)	[2]	SC pressure arm
[3]	Paper		-

(1) Control

1. When a prescribed time has elapsed after the SC paper detection sensor (PS16) detects the paper trailing edge [1], the SC pressure arm solenoid (SD13) turns ON to make the SC pressure arm press paper [2].
2. The SD13 becomes OFF to move the SC pressure arm back to its original position [3] after a prescribed time has passed since the PS2 detected the trailing edge of the paper.
3. The above operations are also performed when a bundle of paper [4] or 2 sheets of paper [5] are conveyed to the clamp section.

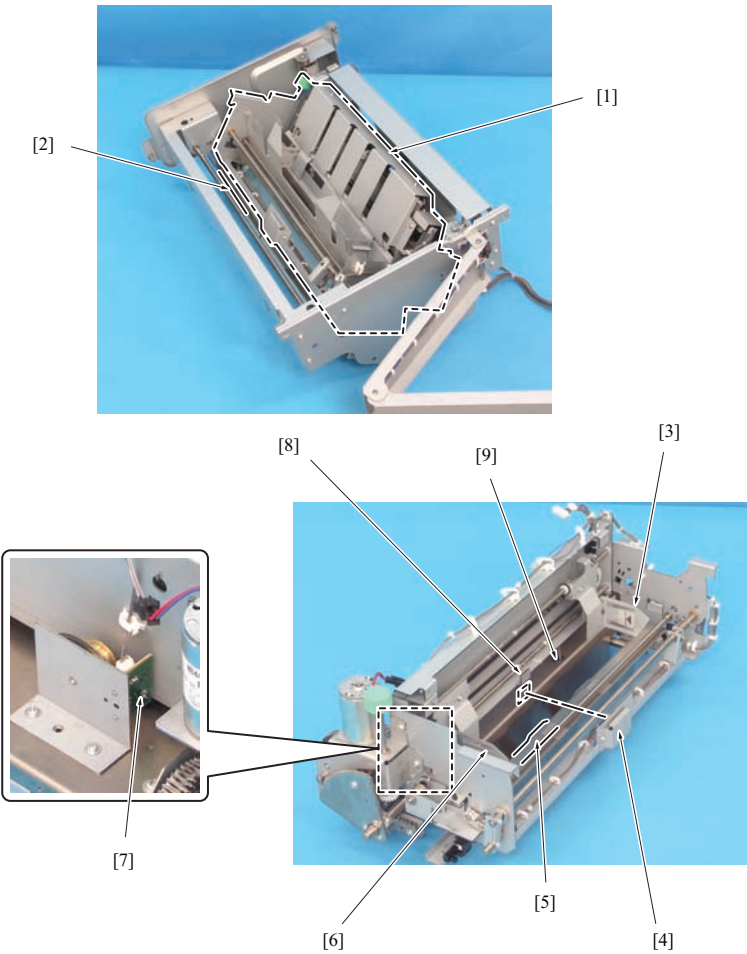


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[1]	Trailing edge of paper detected	[2]	Pressure arm presses paper
[3]	SC pressure arm goes back to its original position	[4]	Conveyance of a bundle of paper
[5]	Conveyance of 2 pages at a time		-

4. CLAMP SECTION

4.1 Configuration

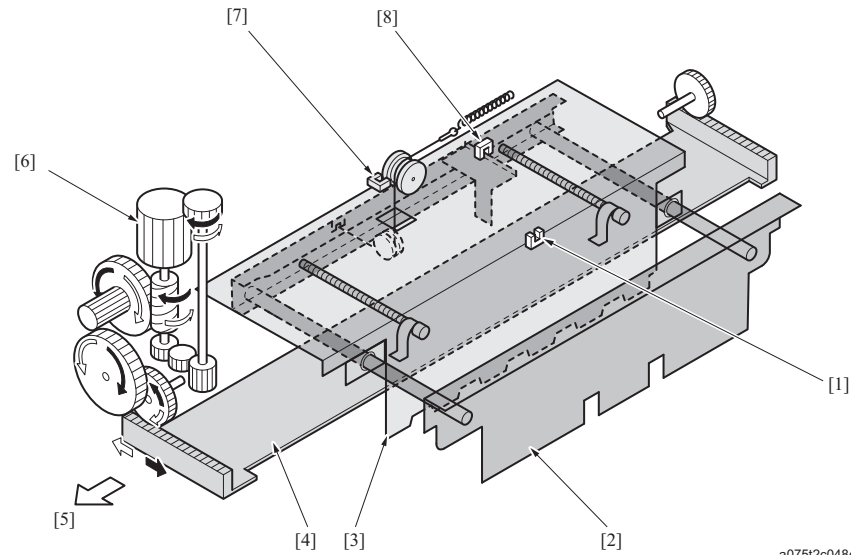


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[1]	Clamp rotation assy	[2]	Reference plate
[3]	Clamp alignment plate /Rr	[4]	Clamp paper LED (LED21)
[5]	Clamp pressure plate	[6]	Clamp alignment plate /Fr
[7]	Booklet thickness sensor (PS29)	[8]	Clamp paper sensor (PS28)
[9]	Clamp fixing plate	-	

4.2 Drive

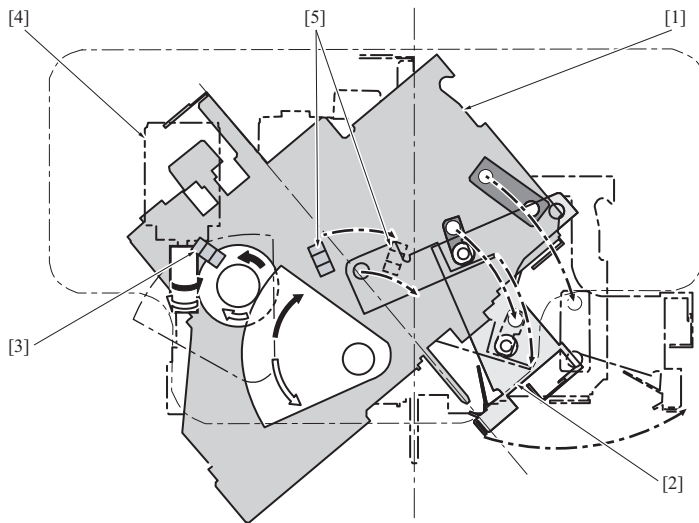
4.2.1 Clamp drive



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[1]	Clamp pressure sensor (PS23)	[2]	Clamp pressure plate
[3]	Clamp fixing plate	[4]	Pressure drive plate
[5]	Front side	[6]	Clamp motor (M22)
[7]	Booklet thickness sensor (PS29)	[8]	Clamp HP sensor (PS22)

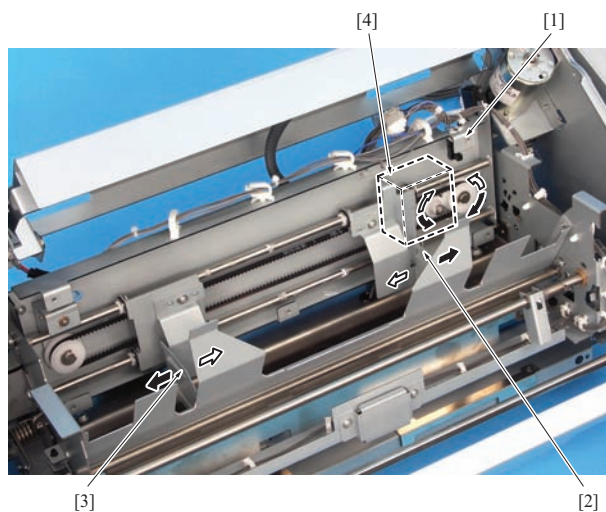
4.2.2 Clamp rotation drive



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[1]	Clamp rotation assy	[2]	Reference plate
[3]	Clamp rotation HP sensor (PS24)	[4]	Clamp rotation motor (M23)
[5]	Clamp rotation pressure sensor (PS25)	-	

4.2.3 Clamp alignment drive



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[1]	Clamp alignment HP sensor (PS21)	[2]	Clamp alignment plate /Rr
[3]	Clamp alignment plate /Fr	[4]	Clamp alignment motor (M21)

4.3 Operation

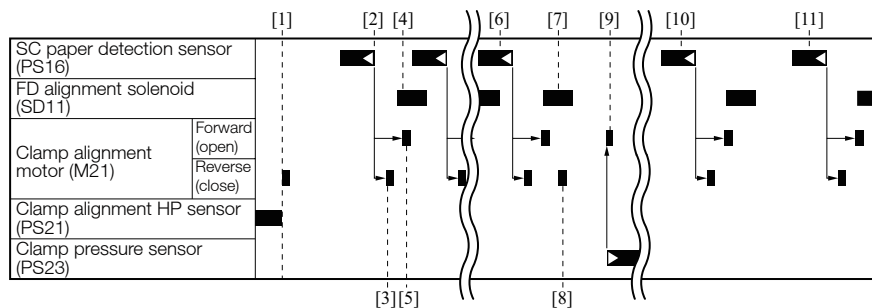
4.3.1 Clamp alignment control

- In order to line up edges of paper stacked in the clamp section in the main scan direction, the clamp alignment motor (M21) drives the clamp alignment plates /Fr and /Rr via the belt.
- The main-scan-direction alignment operation is performed when the following paper are set in the clamp section; all inside paper of the first book, "n" paper of the subsequent books stacked in the SC section, the next 2 pages ("n+1"th and "n+2"th paper) of the subsequent books, and "n+3"th and the subsequent page.

(1) Control

1. Upon receiving a print job, the clamp alignment motor (M21) starts to turn in the reverse direction to shift the clamp alignment plates /Fr and /Rr offset 9mm from the paper edges [1].
2. When a prescribed time has elapsed after the SC paper detection sensor (PS16) detects [2] the trailing edge of the first page of the first book, the M21 starts reverse rotation again to perform the main-scan-direction alignment [3] with the clamp alignment plates /Fr and /Rr.

3. Then, while the FD alignment solenoid (SD11) turns ON and paper edges in the sub scan direction are lined up [4], the M21 turns in the forward direction to move the clamp alignment plates /Fr and /Rr away from the paper [5].
4. The SD11 is kept ON until the sub-scan-direction alignment for the last page of the first book [6] is finished. When the SD11 turns OFF and the pressure toward the papers is released, the M21 starts to turn in the reverse direction to press the bundle of paper from its front and back sides [8].
5. When the clamp pressure sensor (PS23) turns ON and clamping the paper is finished, the M21 starts to turn in the forward direction to release the paper [9].
6. After a prescribed time has passed since the PS16 detects the trailing edge of the "n"th paper [10] stacked in the SC section, the alignment operations are performed.
7. The alignment operation is also carried out for the 2 sheets of paper ("n+1"th and "n+2"th page) laid one on top of another [11] at the bypass gate.



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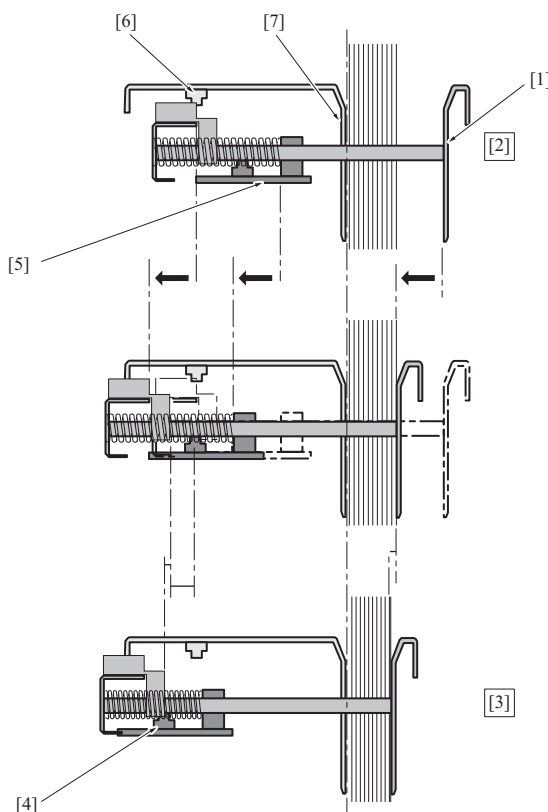
[1]	Movement of clamp plates in accordance with paper size	[2]	Trailing edge of the first page
[3]	Line up edges in main scan direction	[4]	Alignment in sub scan direction is in progress
[5]	Standby position movement	[6]	Last page of the first book
[7]	Alignment in sub scan direction is in progress	[8]	Standby position movement
[9]	A bundle of "n"paper	[10]	2 sheets of paper

4.3.2 Clamp control

- The clamp fixing plate and the clamp pressure plate clamp a bundle of paper stacked in the clamp section.

(1) Mechanism

1. The gap between the clamp fixing plate [7] and the clamp pressure plate [1] is 45mm when the clamp HP sensor (PS22) [6] is ON [2].
2. Before applying pressure by the clamp motor (M22), the pressure drive plate [5] is move to the left side.
3. The clamp pressure plate moves together with the pressure drive plate [5].
4. When the clamp pressure sensor (PS23) [4] becomes ON after applying pressure to the papers, the clamping operation is finished [3].



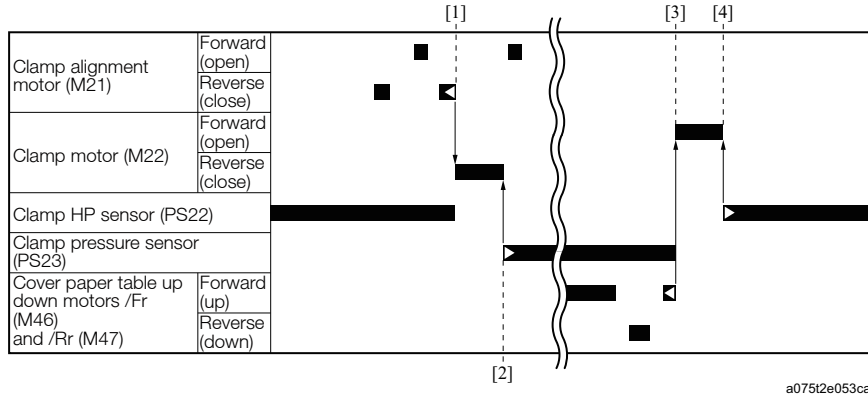
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[1]	Clamp pressure plate	[2]	Home position
[3]	Finish of clamping	[4]	Clamp pressure sensor (PS23)

[5] Pressure drive plate	[6] Clamp HP sensor (PS22)
[7] Clamp fixing plate	-

(2) Control

- When alignment of the last page is finished [1] by the clamp alignment motor (M21), the clamp motor (M22) starts to turn in the reverse direction to close the clamp pressure plate.
- Upon completion of clamping, the clamp pressure sensor (PS23) turns ON and the M22 stops [2].
- After the spine edges of the compressed inside paper is evened up, the cover paper table up down motors /Fr (M46) and /Rr (M47) lift the cover paper table, and the M22 starts to turn in the forward direction. Then, the clamp pressure plate opening operation is started [3].
- M22 stops when the clamp home sensor (PS22) becomes ON.



[1] Start to close of the clamp pressure plate	[2] Completion of clamping
[3] Start to open	[4] Returning to the home position

4.3.3 Clamp rotation control

- A bundle of inside papers of a book is clamped and rotated to be glued on its spine.

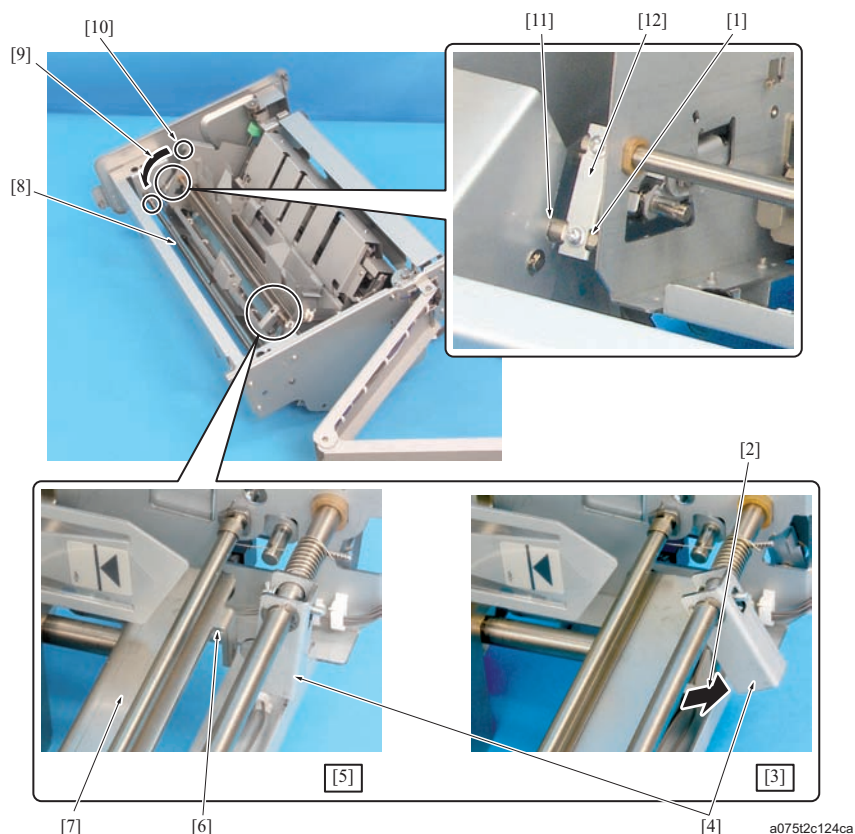
(1) Clamp assy angle change /fixing mechanism

- The drive force of the clamp rotation motor (M23) rotates the clamp rotation assy.
- There are 3 preset tilt angles of the clamp rotation assy as following.

Home position	45 degrees
Clamped	50 degrees
Glue applied	90 degrees

(a) Angle change mechanism

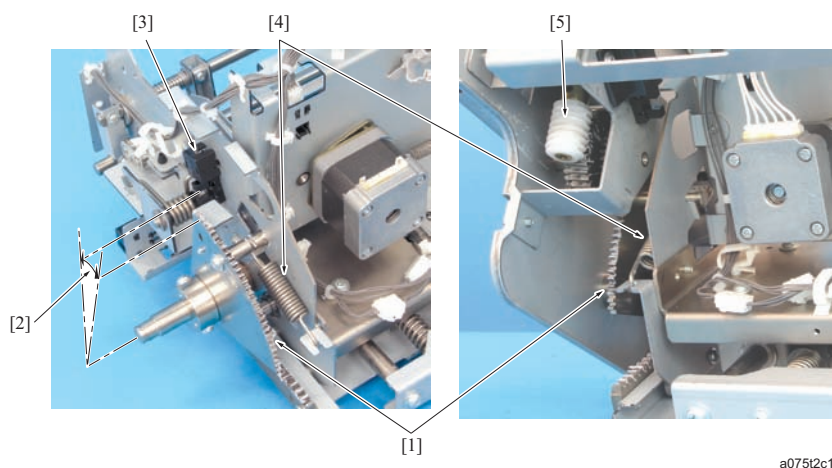
- The tilt angle of the clamp assy is changed for clamping and gluing as following.
- When the clamp rotation assy is in its home position and the clamp pressure plate [7] is also in its home position [3], the tab [6] of the pressure plate presses [2] the release cover [4], and the pin [1] of the switch arm [12] is inserted in the clamp angle stopper notch [11] to stop the rotation of the clamp rotation assy at the angle for clamping.
- When the clamp rotation assy is in its home position, and the clamp pressure plate is not [5], the switch arm drops by its own weight as the tab of the clamp pressure plate is not pressing the release cover. For this reason, the switch arm pin is not inserted in the clamp angle stopper notch, and the clamp rotation assy keeps rotating until the glue angle stopper notch [10] is inserted over the shaft [8] [9].
- The tilt angle of the clamp assy cannot be changed directly between the clamping angle and the gluing angle. To change the angle, the assy first must go back to the home position to release the stoppers.



[1]	Pin	[2]	Release
[3]	Clamp pressure plate is at its home position	[4]	Release bar
[5]	Clamp pressure plate is out of its home position	[6]	Tab of the clamp pressure plate
[7]	Clamp pressure plate	[8]	Regulation shaft
[9]	Engaging of notch and shaft to stop at glueing angle	[10]	Glueing angle stopper notch
[11]	Clamping angle stopper notch	[12]	Switch arm

(b) Fixing of the clamp rotation assy

- While clamping or glueing is performed, the corresponding stopper locks the clamp rotation assy. Moreover, in order to reinforce the fixing state of the assy, the clamp rotation motor (M23) [5] rotates the gear [1] 10 degrees [2] to pull the spring [4] applying the spring load to the assy. The operations fix the clamp rotation assy securely.
- The clamp rotation pressure sensor (PS25) detects that the prescribed pressure is applied to the clamp rotation assy and becomes ON.



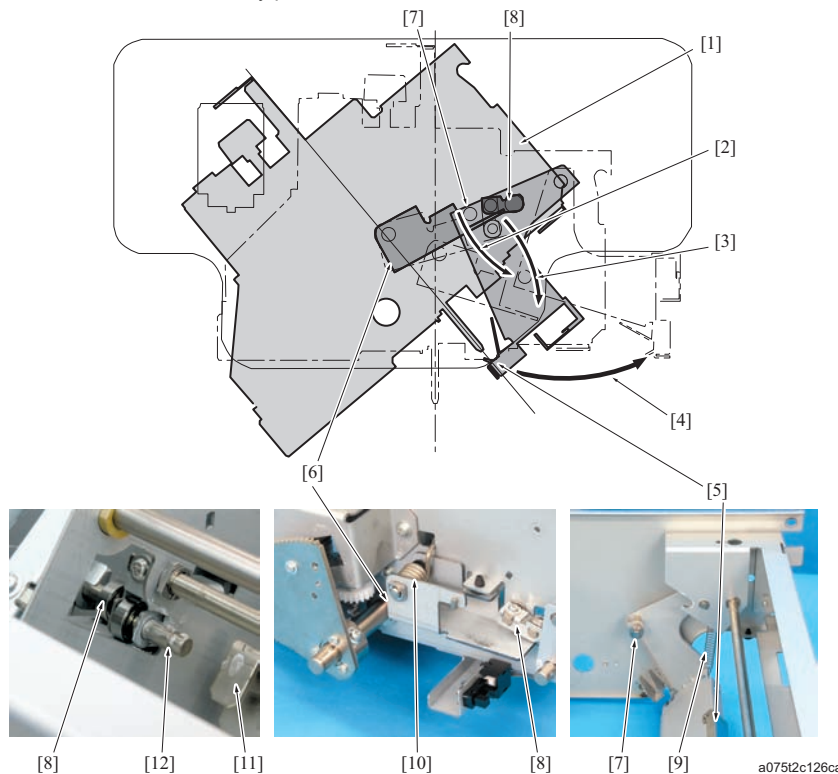
[1]	Gear	[2]	Gear rotates 10 degrees to apply spring load to the assy
[3]	Clamp rotation pressure sensor (PS25)	[4]	Spring
[5]	Clamp rotation motor (M23)	-	

(2) Reference plate opening/closing mechanism

(a) Opening/closing of the reference plate

- The reference plate [5] opens/closes in synchronization with the rotation of the clamp rotation assy [1].

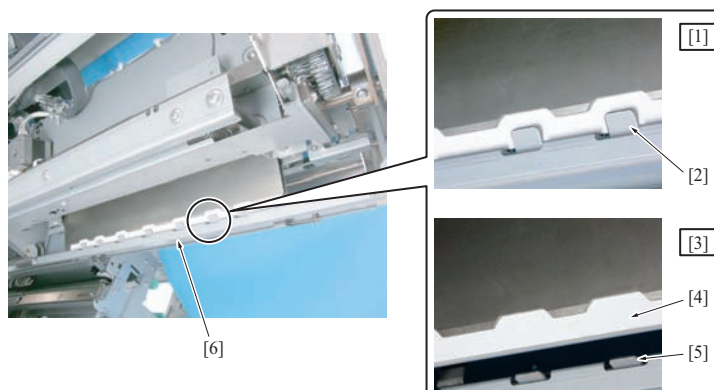
1. When the clamp rotation assy stops at the angle for glueing, the release arm [8] presses down the reference plate mounting bracket [6], and the reference plate is separated from a bundle of inside papers. The separation of the reference plate prevents the plate from damaging the paper edges when the clamp rotation assy is upstanding.
2. Further rotation [3] of the reference plate mounting bracket [6] makes the pin [7] go down [2], and the reference plate is released [4] from the spring [9].
3. The reference plate goes back to its home position with the reference mounting bracket [6] which pushes up the pin [7].
4. While clamping operation is in progress, the reference plate is fixed at the upper position with the spring [10].
5. When the clamp pressure plate returns to its home position, the release arm [8] is pushed up by the tab [11] of the clamp pressure plate and moved back to its standby position.



[1]	Clamp rotation assy	[2]	Pin of the reference plate goes down
[3]	Rotation of the reference plate mounting bracket	[4]	Release of the reference plate
[5]	Reference plate	[6]	Reference plate mounting bracket
[7]	Pin	[8]	Release arm
[9]	Spring (for release)	[10]	Spring (for applying pressure)
[11]	Tab of the clamp pressure plate	[12]	Pin

(b) Paper guard tabs mechanism for clamping

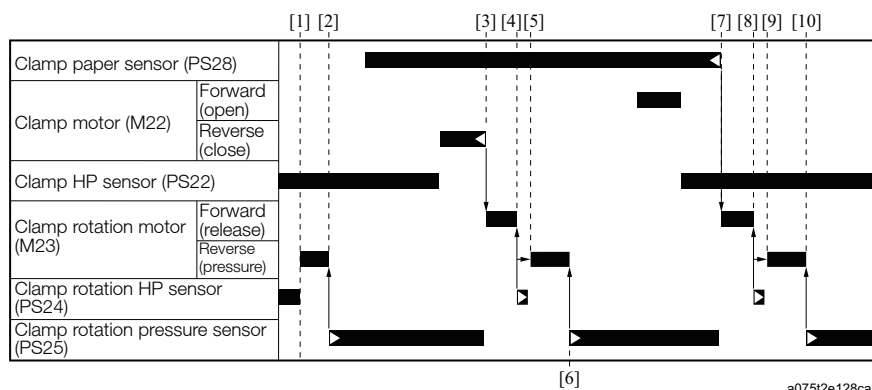
- The reference plate [6] has paper guard tabs [2] to prevent inside papers [4] from going off the reference plate while they are clamped [1].
- While the reference plate contacts with the stopper, the paper guard tabs are protruding.
- When the reference plate is opened [3], the paper guard tabs are retracted [5] so as not to damage the paper edges.



[1]	Clamped	[2]	Paper guard tabs
[3]	When the reference plate is opened	[4]	Inside paper
[5]	Paper guard tabs retracted	[6]	Reference plate

(3) Control

- When detecting that the print start signal turns ON [1], the clamp rotation motor (M23) starts to turn in the reverse direction.
- The M23 stops when the clamp rotation pressure sensor (PS25) becomes ON, and the clamp rotation assy is set at the compiling position [2].
- When clamping of the inside papers by the clamp motor (M22) is finished [3], the M23 starts to turn in the forward direction to rotate the clamp rotation assy 15 degrees counterclockwise.
- The M23 stops [4] when the clamp rotation home sensor (PS24) becomes ON. The tilt angle of the gear is 15 degrees when the assy returns to the home position, however, the clamp rotation assy rotates 5 degrees as the gear has rotated 10 degrees more separately for fixing the assy. As the result, the clamp rotation assy tilt angle changes from 50 degrees for clamping to 45 degrees (home position). At this time, since the clamp pressure plate is out of the home position, the pin is free from the clamp angle stopper notch, which allows the clamp rotation assy to rotate to the gluing angle.
- After a prescribed time has elapsed, the M23 starts to turn in the reverse direction to rotate the clamp rotation assy clockwise [5].
- When the PS25 turns ON, the spring fixes the assy, and the M23 stops [6]. At this time, the gear has rotated 55 degrees, however, in order to secure the assy, it has rotated 10 degrees more than the clamp rotation assy, the clamp rotation assy rotates 45 degrees clockwise from its home position and becomes upright state (90 degrees).
- When the clamp paper sensor (PS28) detects [7] that the bundle of paper is released from the clamp, the M23 starts to turn in the forward direction to return the clamp rotation assy to the home position.
- The M23 stops [8] when the PS24 becomes ON, and the clamp rotation assy stops at its home position (tilt angle of 45 degrees). At this time, since the clamp pressure plate is in the home position, the pin is engaged with the clamp angle stopper notch, which allows the clamp rotation assy to rotate to the clamping angle.
- Then, the M23 starts to turn in the reverse direction [9] to move the clamp rotation assy to the clamping position [10] and stops when the PS25 becomes ON.



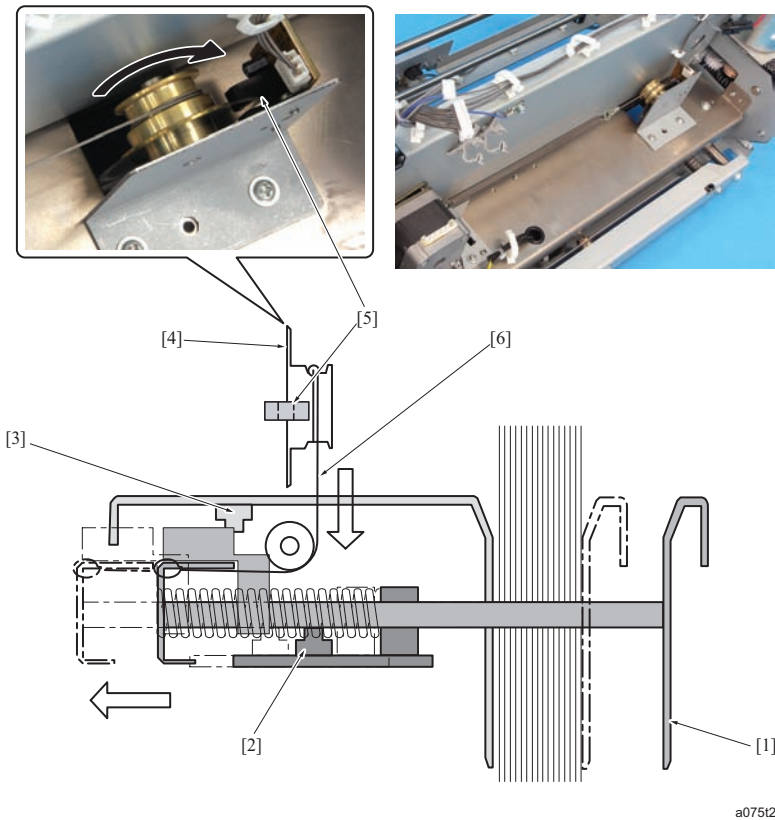
[1]	Print start signal ON	[2]	Set at the compiling position
[3]	Completion of clamp	[4]	M23 stopped
[5]	M23 starts to apply pressure	[6]	Upright state completion
[7]	Paper release	[8]	Home position
[9]	M23 starts to apply pressure	[10]	Clamp position

4.3.4 Book thickness detection control

- The booklet thickness sensor (PS29) detects the book thickness.
- The detected thickness is used to determine the trimming amount of the cover paper.

(1) Mechanism

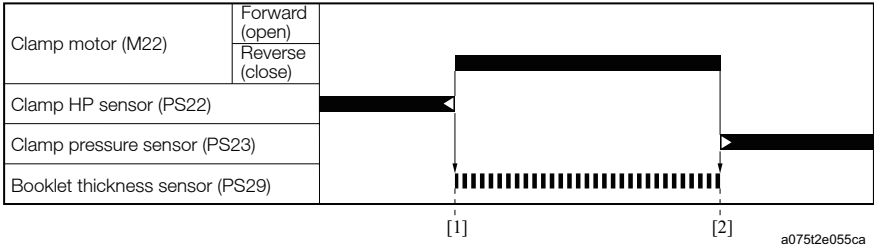
- The clamp pressure plate [1] is moved by winding up the wire[6].
- When the wire [6] is wound up, the encoder plate [4] rotates.
- The booklet thickness sensor (PS29) [5] detects and counts how much the encoder scale is rotated.
- The sensor continue the counting until the clamp pressure sensor (PS23) [2] turns ON.



[1]	Clamp pressure plate	[2]	Clamp pressure sensor (PS23)
[3]	Clamp HP sensor (PS22)	[4]	Encoder scale
[5]	Booklet thickness sensor (PS29)	[6]	Wire

(2) Control

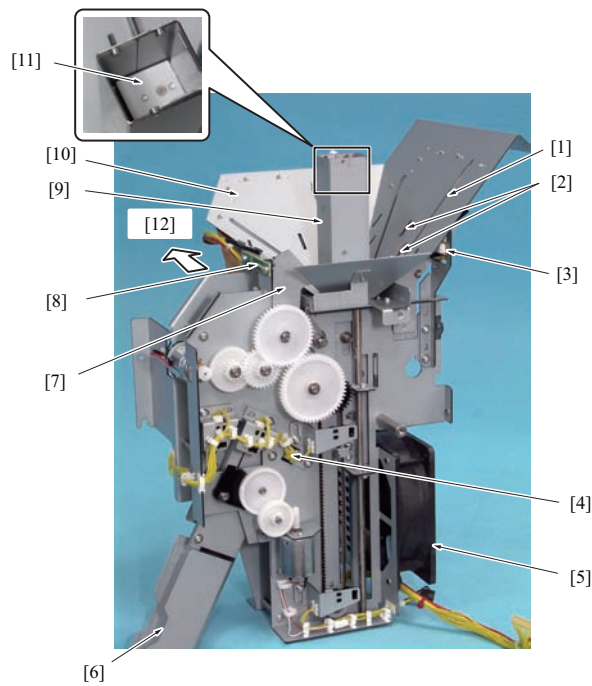
- 1. When the clamp home sensor (PS22) switches to ON from OFF, pulse count by the booklet thickness sensor (PS29) is started [1].
- 2. The pulse count is stopped [2] when the clamp pressure sensor (PS23) turns ON.
- 3. During the initial operation at power-ON, the no paper status data is detected and memorized as an initial data. The book thickness is determined according to the difference.



[1]	Count start	[2]	Count end
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5. PELLET SUPPLY SECTION

5.1 Configuration

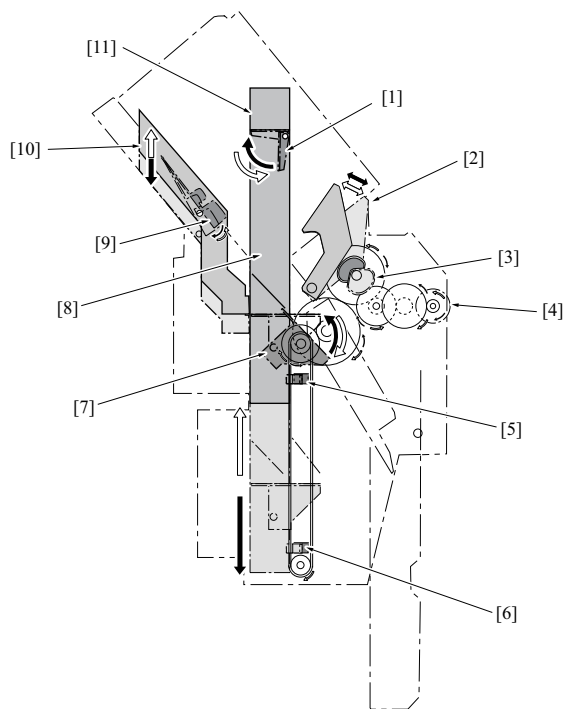


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[1]	Agitator blade /1	[2]	Agitator blade /3
[3]	Pellet remaining LED (LED32)	[4]	Pellet supply passage sensor (PS37)
[5]	Exhaust fan /1	[6]	Pellet supply arm
[7]	Agitator blade /2	[8]	Pellet supply remaining sensor (PS36)
[9]	Pellet supply pipe	[10]	Hopper
[11]	Fixed measure	[12]	Front side

5.2 Drive

5.2.1 Pellet supply drive

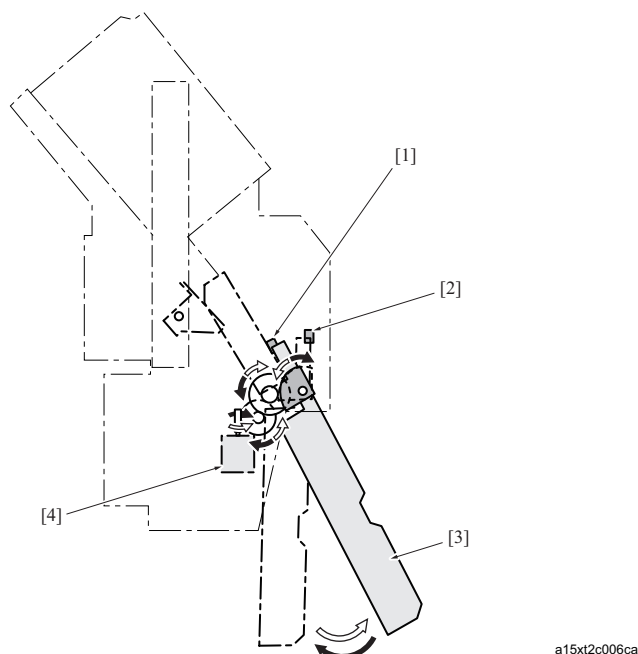


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[1]	Measure bottom plate	[2]	Agitator blade /2
[3]	Agitator blade cam	[4]	Pellet supply pipe motor (M33)
[5]	Pellet supply pipe upper limit sensor (PS95)	[6]	Pellet supply pipe home sensor (PS96)
[7]	Pellet supply pipe shutter	[8]	Pellet supply pipe

[9]	Agitator blade /3	[10]	Agitator blade /1
[11]	Fixed measure	-	

5.2.2 Pellet supply arm drive

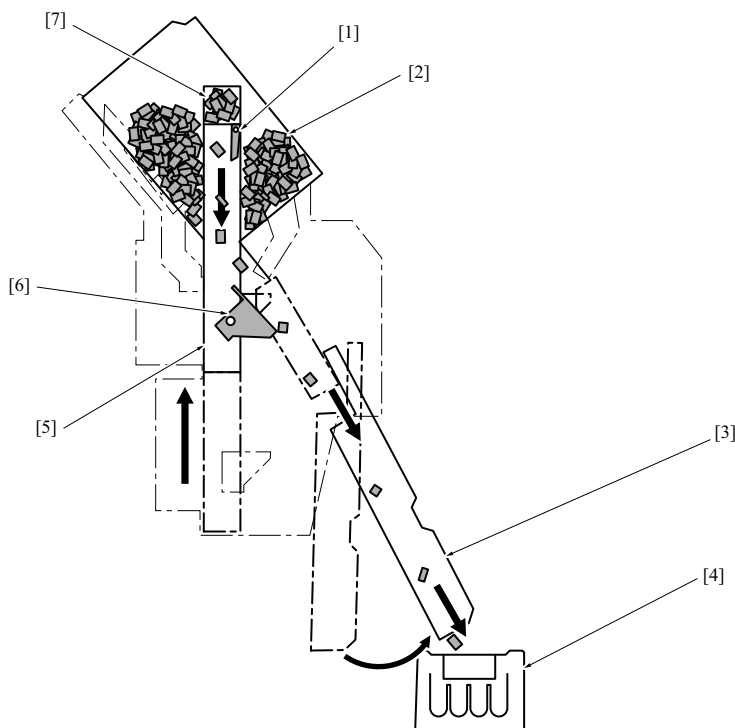


[1]	Pellet supply arm upper limit sensor (PS38)	[2]	Pellet supply arm home sensor (PS39)
[3]	Pellet supply arm	[4]	Pellet supply arm motor (M34)

5.3 Operation

5.3.1 Pellet supply operation overview

- The pellet supply arm [3] is moved above the glue tank [4] to supply pellets [2]. Next, it moves up the pellet supply pipe and scoop the fixed amount of pellet with the fixed measure [7] on the top. Then, it opens the measure bottom plate [1] and the pellet supply pipe shutter [6] to drop the pellet.
- The glue tank temperature sensor /Up (TH2) provided in the glue tank unit determines the timing to supply pellets into the glue tank. As the molten glue inside the glue tank decreases, the TH2 surface not soaked in the glue becomes wider. It finally causes the TH2 temperature lower than a prescribed level, and it is judged that the glue is getting low and another pellets must be supplied.
- Checking the TH2 temperature is carried out in the following timing.
 - a. When the glue tank HP sensor (PS33) turns ON after gluing operation.
- The interval of the pellet supply changes since the amount of glue depends on the thickness of the book. However, the forced supply operation is conducted if the temperature of TH2 does not turn to be under the specified temperature even the expected amount of glue is much.
- The maximum stacking capacity of the hopper is 1.2kg.
- To prevent the overflowing of glue from the glue tank, pellet supply is forbidden for 2 minutes after the pellet supply is conducted.



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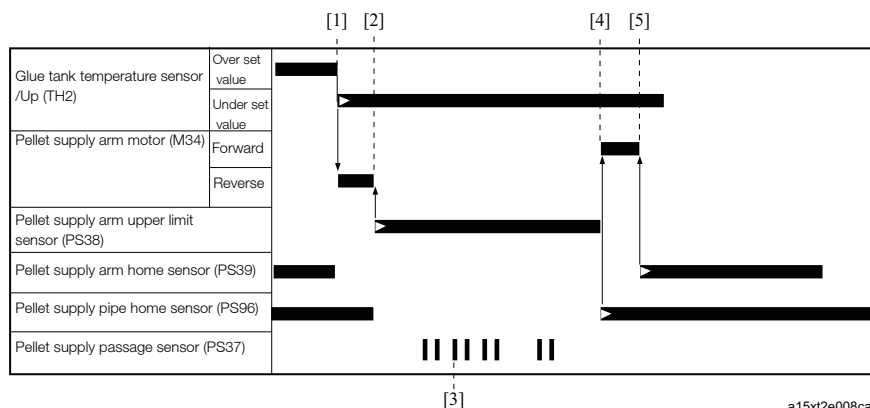
[1]	Measure bottom plate	[2]	Pellet
[3]	Pellet supply arm	[4]	Glue tank
[5]	Pellet supply pipe	[6]	Pellet supply pipe shutter
[7]	Fixed measure	-	

5.3.2 Pellet supply arm control

- The pellet supply arm motor (M34) activates the pellet supply arm. Once the pellet supply arm moves to the top of the glue tank, the pellet supply pipe motor (M33) conducts the pellet supply operation.
- In order to prevent the arm from the evaporated glue or radiant heat rose from the glue tank, the arm is kept at its home position except when supplying pellets.

(1) Control

- When the glue tank temperature sensor /Up (TH2) detects temperature lower than the set temperature, the pellet supply arm motor (M34) starts to turn in the reverse direction [1].
- When the pellet supply arm reaches the pellet supply position (above the glue tank) and the pellet supply arm upper limit sensor (PS38) becomes ON, the M34 stops [2].
- Once the pellet supply pipe home sensor (PS96) detects that the pellet supply pipe returns to the home position after the pellet is supplied [3], M34 turns in the forward direction and starts the shelter operation [4].
- When the pellet supply arm home sensor (PS39) turns ON and the pellet supply arm reaches the home position, M34 turns OFF.



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[1]	Pellet supply arm motor (M34) ON	[2]	Pellet supply position stop
[3]	Pellet supply	[4]	Start to evacuate
[5]	Evacuation complete	-	

(2) Stop operation during pellet supply

- When all the inside papers have stacked up, while the pellet supply arm motor (M34) is turning in the reverse direction, the M34 reverses the rotation direction to the forward to move the pellet supply arm back to the home position.

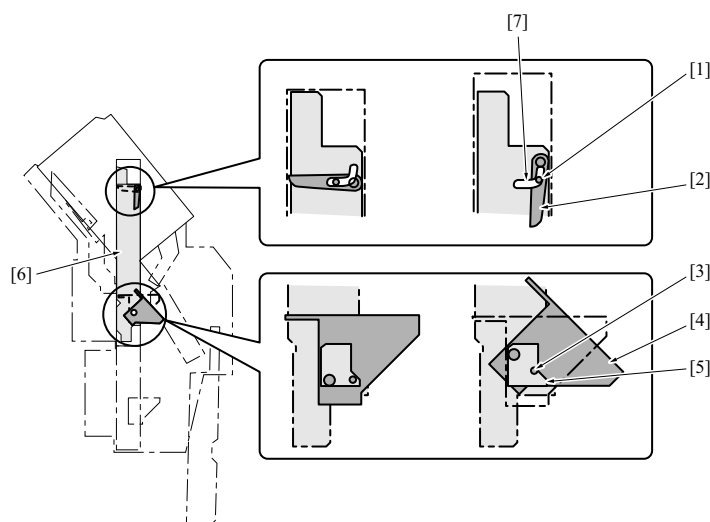
5.3.3 Pellet supply amount control

(1) Mechanism

- It scoops the pellet in the hopper with the fixed measure on the top of the pellet supply pipe and supplies the specified amount of pellet.
- 19g of pellet is supplied by 1 scoop with the fixed measure.
- The pellet supply pipe motor (M33) drives the pellet supply pipe and the agitator blade.

(a) Pellet supply pipe

- The pellet supply pipe has the fixed measure on the top and the supply pipe shutter on the bottom.
- The measure bottom plate [2] and the pellet supply pipe shutter [4] of the fixed measure are driven via the plate cam [6] and operate the opening operation.
- The plate cam is driven between the position 10mm lower from the upper limit of the pellet supply pipe (ON position of the pellet supply pipe upper limit sensor (PS95)) and the upper limit position.
- Once the pellet supply pipe [6] moves up upper than the position 10mm lower from the upper limit, the pin [1] of the measure bottom plate [2] moves along the guide hole [7] of the plate cam and opens the measure bottom plate [2]. It opens fully at the upper limit position.
- The pin [3] of the pellet supply pipe shutter [4] moves along the guide hole [5] and is set to the path to the pellet supply arm.

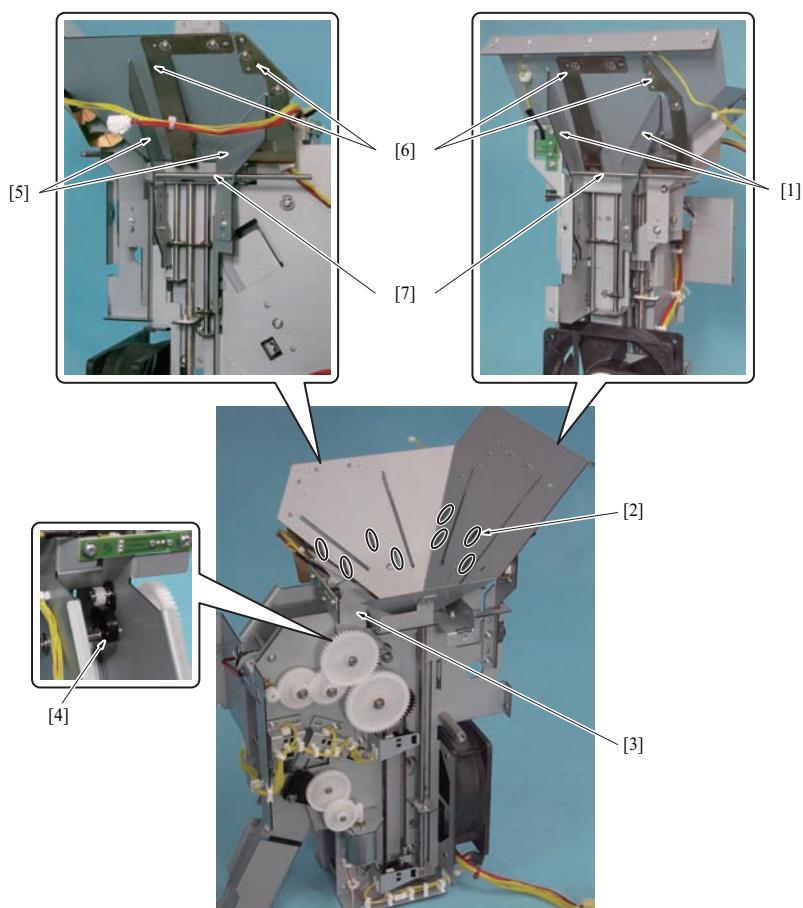


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[1]	Pin of measure bottom plate	[2]	Measure bottom plate
[3]	Pin of pellet supply pipe shutter	[4]	Pellet supply pipe shutter
[5]	Guide hole	[6]	Plate cam
[7]	Guide hole	-	

(b) Agitator blade

- There are 3 types of agitator blade; /1, /2 and /3. They are pushed out from the bottom of the hopper and agitate and separate the stuck pellet.
- There are 4 agitator blades /1 in total; 2 each [1] and [5] on the bottom of 2 hoppers. They are pushed when the pellet supply pipe moves up to the top.
- There is 1 agitator blade /2 [3] and the agitator blade cam [4] drives it. The agitator blade cam rotates 5 times while the pellet supply pipe moves up to the top and swings the agitator blade /2 for 5 laps.
- There are 8 agitator blades /3 [2] in total; 2 each on 2 each of brackets [6] on the bottom of 2 hoppers. They swing by being pushed by the shaft [7] installed on the agitator blade /1.



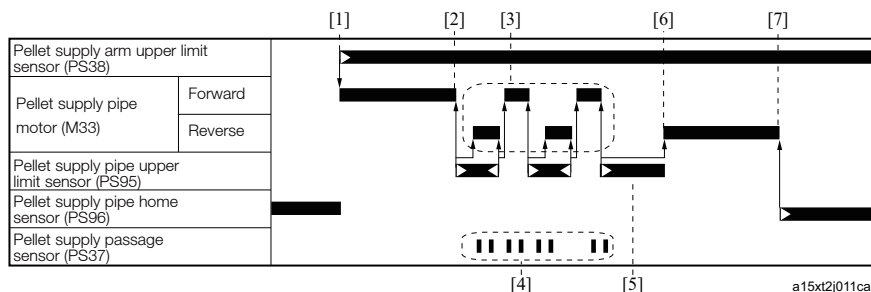
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[1]	Agitator blade /1	[2]	Agitator blade /3
[3]	Agitator blade /2	[4]	Agitator blade cam
[5]	Agitator blade /1	[6]	Bracket of agitator blade /2
[7]	Shaft	-	

(2) Control

(a) Supply control

- When the pellet supply arm moves to the pellet supply position and the pellet supply arm upper limit sensor (PS38) turns ON, the pellet supply pipe motor (M33) turns forward rotation ON [1] and lifts the pellet supply pipe.
- When the pellet supply pipe upper limit sensor (PS95) detects that it reaches to the upper limit, M33 turns OFF.
- To swing the pellet supply pipe, M33 turns reverse rotation ON a specified period of time after M33 turns OFF. It stops again when PS95 turns OFF and turns forward rotation ON to move up again. It conducts this swing operation twice.
- After conducting this swing operation twice, it waits [5] for the pellet dropping [4]. M33 turns reverse rotation ON after a specified period of time and starts the home position return operation [6].
- M33 turns OFF [7] when the pellet supply pipe home sensor (PS96) turns ON.



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[1]	Starting lifting the pellet supply pipe	[2]	Reaching to the upper limit of the pellet supply pipe
[3]	Swing of the pellet supply pipe	[4]	Pellet supply
[5]	Standby for the pellet dropping	[6]	Starting home position return operation
[7]	Completing home position return operation	-	

(b) Pellet passage detection

- The pellet supply passage sensor (PS37) monitors the passage of the pellet on the pellet supply path. It monitors it for the period between when the pellet supply pipe motor (M33) starts the supply operation turning ON the pellet supply pipe upper limit sensor (PS95) for the first time and when the supply operation finishes with turning ON the pellet supply pipe home sensor (PS96) by the home

position search of the M33. When PS37 detects the glue passage without turning ON once, it displays the glue supply alarm. When PS37 detects the glue passage without turning ON more than twice, it displays C-1517.

5.3.4 Pellet remaining amount detection control

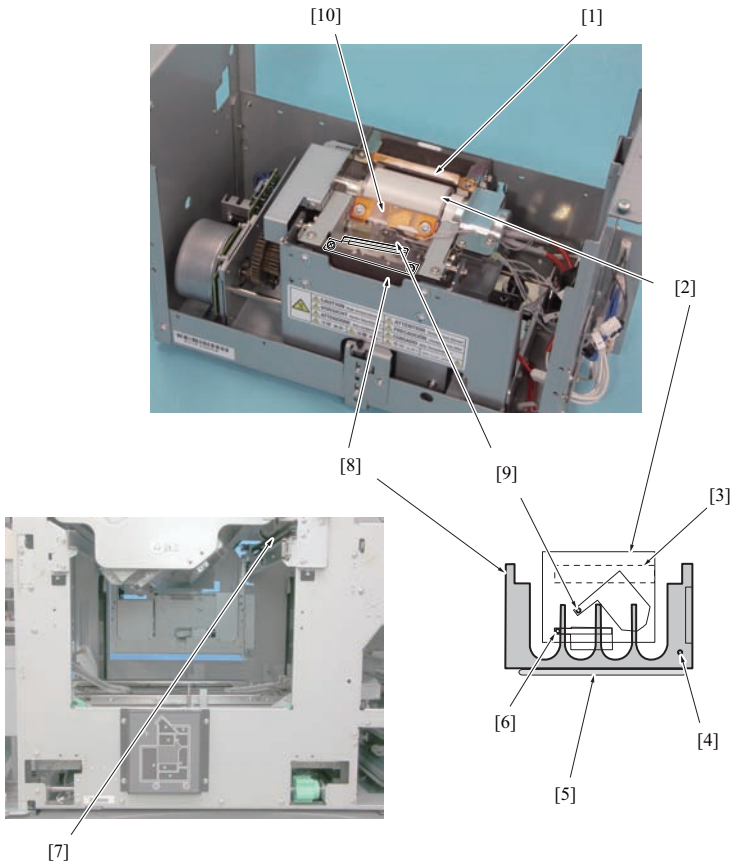
- The pellet remaining LED (LED32) and the pellet supply remaining sensor (PS36) detect the remaining amount of the pellet.
- While the pellet supply arm is in the home position turning the pellet supply arm lower limit sensor (PS39) ON, the detection of remaining number of pellets inside the pellet supply hopper is carried out.
- When the remaining amount of pellet becomes 150g or less, the pellet supply hopper is detected as empty.
- When 1 second has elapsed after the pellet supply remaining sensor (PS36) switches to OFF from ON, a message to notify the empty status appears on the main body touch panel.

5.3.5 Pellet supply door opening/closing detection control

- The pellet supply door switch (MS1) [1] and the pellet supply door sensor (PS40) [2] detect the open/close of the pellet supply door.
- When the MS1 is turned OFF, 24VDC supplied to the pellet supply motor (M33) is shut off to stop the motor.
- When the PS40 detects the above status, a message appears on the main body touch panel.

6. GLUE TANK SECTION

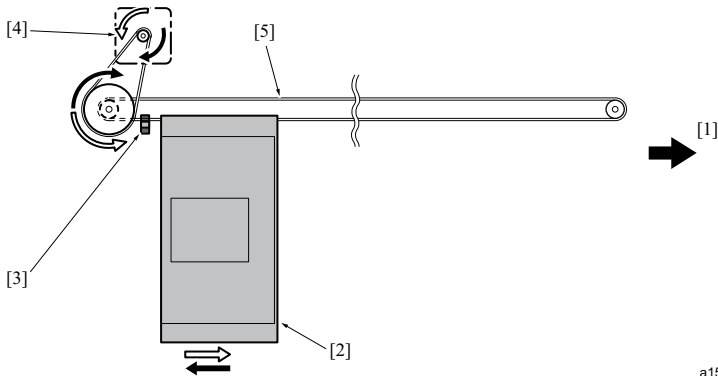
6.1 Configuration



[1]	Scrape plate /Rr	[2]	Glue apply roller
[3]	Glue apply roller heater (H2)	[4]	Glue tank temperature sensor /Lw (TH4)
[5]	Glue tank heater (H1)	[6]	Glue tank temperature sensor /Md (TH3)
[7]	Timing belt	[8]	Glue tank
[9]	Glue tank temperature sensor /Up (TH2)	[10]	Scrape plate /Fr

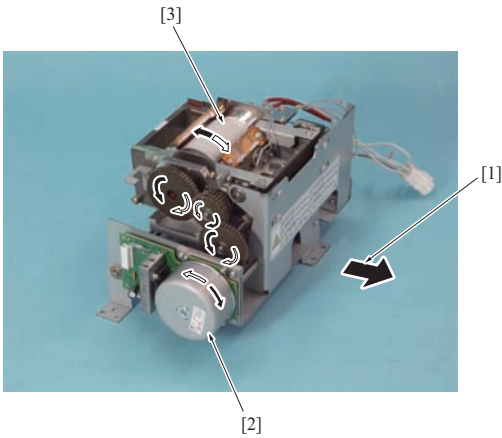
6.2 Drive

6.2.1 Drive



[1]	Front side	[2]	Glue tank unit
[3]	Glue tank HP sensor (PS33)	[4]	Glue tank movement motor (M31)
[5]	Timing belt	-	

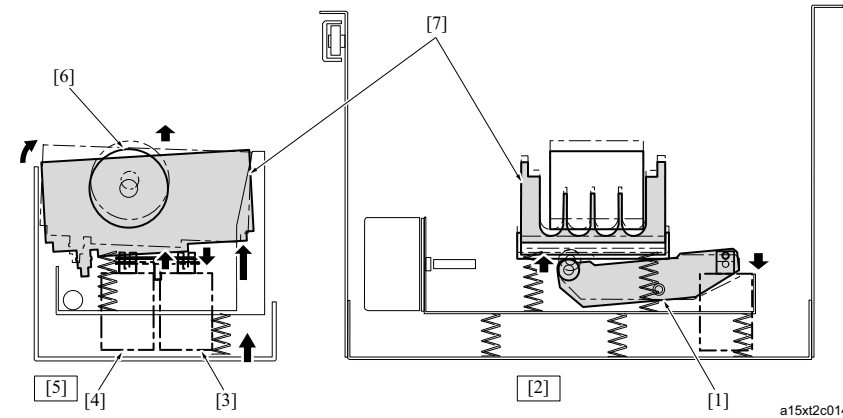
6.2.2 Glue apply roller drive



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[1]	Front side	[2]	Glue apply roller motor (M32)
[3]	Glue apply roller		-

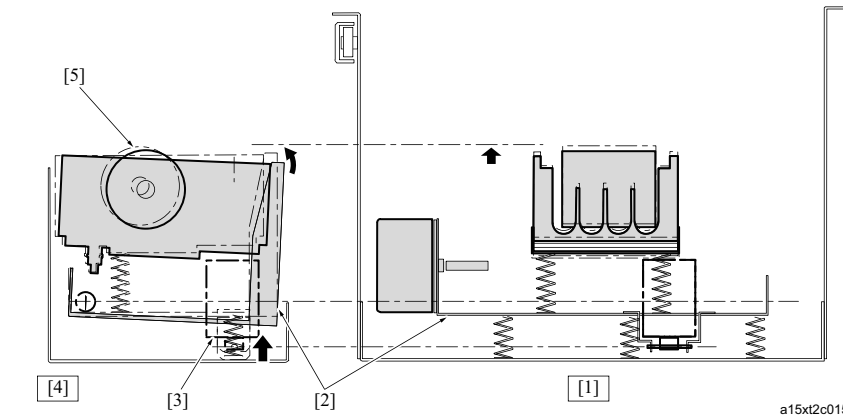
6.2.3 Tank up drive



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[1]	Arm	[2]	Front side view
[3]	Glue tank up solenoid /1 (SD31)	[4]	Glue tank up solenoid /2 (SD33)
[5]	Left-side view	[6]	Glue apply roller
[7]	Glue tank		-

6.2.4 Cover paper glue lifting drive



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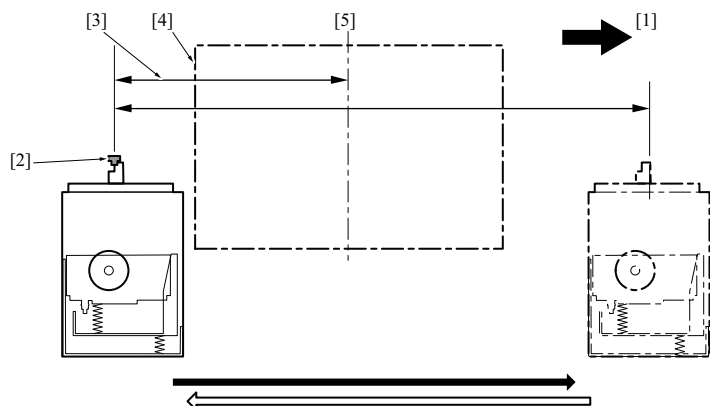
[1]	Front side view	[2]	Glue tank base plate
[3]	Cover paper glue up solenoid (SD32)	[4]	Left-side view
[5]	Glue apply roller		-

6.3 Operation

6.3.1 Glue tank unit movement control

(1) Mechanism

- The glue tank unit is moved by the drive force of the glue tank movement motor (M31) transmitted via the timing belt. The gap [3] between the glue tank HP sensor (PS33) and the center [5] of the inside papers [4] is 322.5mm.
- It conducts the gluing operation by shuttling (going back and forth).

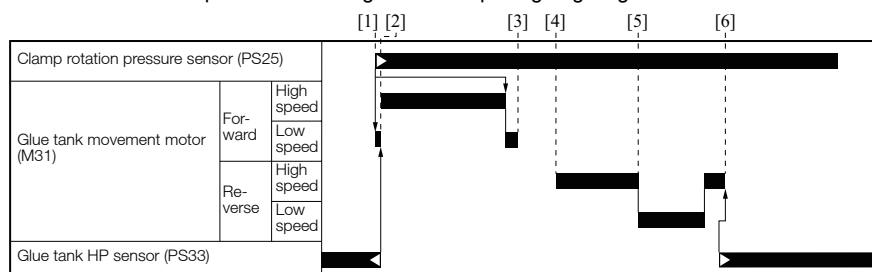


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[1]	Front side	[2]	Glue tank HP sensor (PS33)
[3]	322.5mm	[4]	Inside paper
[5]	Center of the inside papers	-	

(2) Control

- When the upright movement of the clamp section finishes turning the clamp rotation pressure sensor (PS25) ON, the glue tank movement motor (M31) starts to turn in the forward direction at low speed to move the glue tank forward [1].
- M31 switches [2] to the high speed when the glue tank HP sensor (PS33) turns OFF and conducts the gluing operation to the inside paper during forward movement.
- After a specified period of time since the gluing operation during forward movement completes, M31 switches to the low speed and stops [3].
- After a specified period of time, M31 turns ON (turns in reverse at low speed) [4] and starts going back.
- After a specified period of time, it switches to the high speed drive [5] and conducts the gluing operation during going back.
- After a specified period of time, M31 stops [6] at the position where the glue tank HP sensor (PS33) turns ON and passes 2mm after it switches to the low speed at the timing of the completing of gluing.



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[1]	Clamp rotation assy is upright	[2]	Switch to high speed
[3]	Stop going forward	[4]	Start going back
[5]	Switch to high speed	[6]	Stop at the position where 2mm over from home position

6.3.2 Glue apply roller control

(1) Mechanism

- The glue apply roller motor (M32) drives the glue apply roller via the gear.
- As the glue apply roller rotates, a layer of molten glue is formed on the roller metal surface due to the viscosity of the glue.
- The thickness of glue layer can be changed by changing the rotation number of the glue apply roller. The glue layer turns to be thicker by rotating at high speed. *1

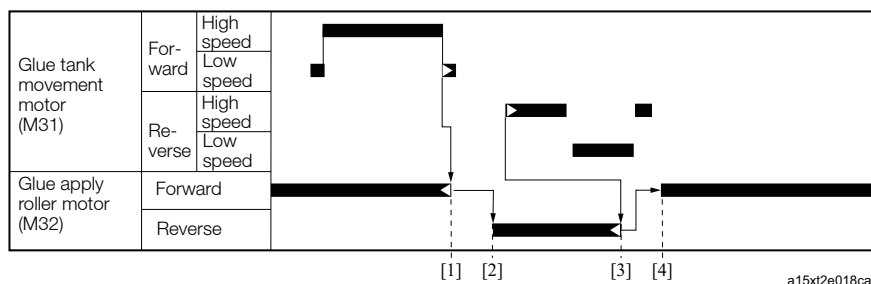
*1 The standard glue layer of the glue apply roller is about 2.0mm.

(2) Control

(a) Operation during printing

- After a specified period of time since the glue tank movement motor (M31) moves forward, conducts the gluing operation for the outward and switches to the low speed, the glue apply roller motor (M32) which has turned ON turns OFF [1] and the glue apply roller stops.
- After a specified period of time since it turns OFF, it turns reverse rotation ON [2] before M31 starts going back.
- When M31 turns ON to start going back, the gluing operation during the glue tank going back for return. After a specified period of time since M31 turns ON, M32 turns OFF [3].

4. After a specified period of time since M32 turns OFF, M32 turns forward rotation ON preparing for the next book.



[1]	Forward rotation OFF by the completion of the gluing for outward	[2]	Reverse rotation ON for return
[3]	Reverse rotation OFF for return	[4]	Forward rotation ON of the next book

(b) Operation during warming up

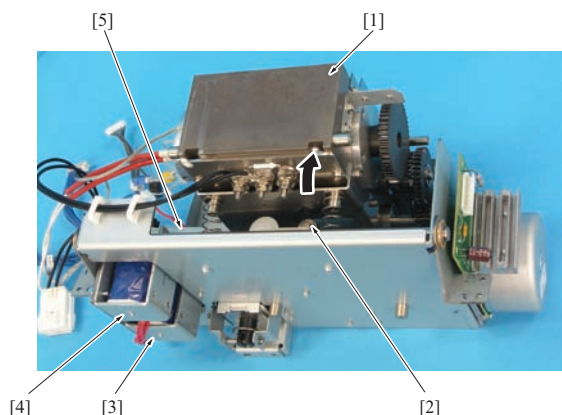
- Once the glue tank temperature sensor /Md (TH3) reaches to the specified temperature (100 °C), the glue apply roller motor (M32) turns forward rotation ON and turns OFF after a specified period of time (3 seconds).
- After a specified period of time (3 seconds) since it turns OFF, it turns forward rotation ON again.
- It repeats the above mentioned interval operation until TH3 reaches to the specified temperature *1.
- Once TH3 reaches to the specified temperature, M32 turns ON at all times (forward rotation).
- When the glue applying mode is switched to standby mode, the M32 stops.

*1 Default setting: 145 °C (It can be changed by "Glue Tank -Mid" of "I.5.8.32 Temperature Adjustment (Perfect Binder Adjustment).")

6.3.3 Glue tank lifting control

(1) Mechanism

- When the glue tank up solenoids /1 (SD31) [3] and /2 (SD33) [4] turn ON, the arm [5] lifts the roller [2] and the glue tank [1] moves up. Then, the glue apply roller moves up to the glue apply position.

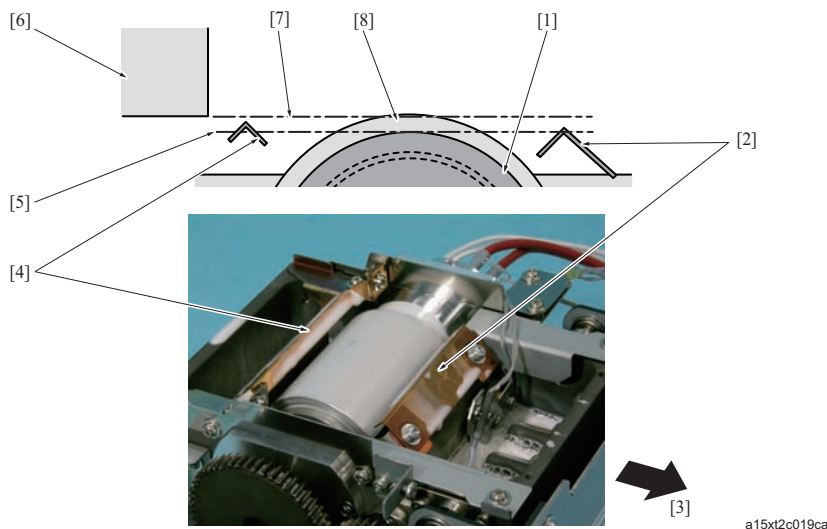


[1]	Glue tank	[2]	Roller
[3]	Glue tank up solenoid /1 (SD31)	[4]	Glue tank up solenoid /2 (SD33)
[5]	Arm		-

- When the glue tank up solenoids /1 (SD31) and /2 (SD33) are ON, the gap between the level tangent line [5] of the metal surface [1] of the glue apply roller and the spine surface [7] of inside paper [6] is the gap of the glue apply roller. *1
- The scrape plates /Fr [2] and /Rr [4] scrape off excess glue from the spine of inside papers.
- When SD31, SD33 and the cover paper glue up solenoid (SD32) are ON, the scrape plate /Fr is placed 1.5mm under the spine surface [7], and 2.5mm when SD32 turns OFF. *2
- When SD31, SD33 and SD32 are ON, the scrape plate /Rr is placed 1.0mm *2 under the spine surface [7].

*1 The standard of the glue apply roller gap is 1.8mm and it can be changed by the mechanical adjustment "I.18.5 Glue apply roller gap adjustment".

*2 The mechanical adjustment "I.18.6 Cover paper glue gap adjustment" can adjust the scraped-off glue amount.



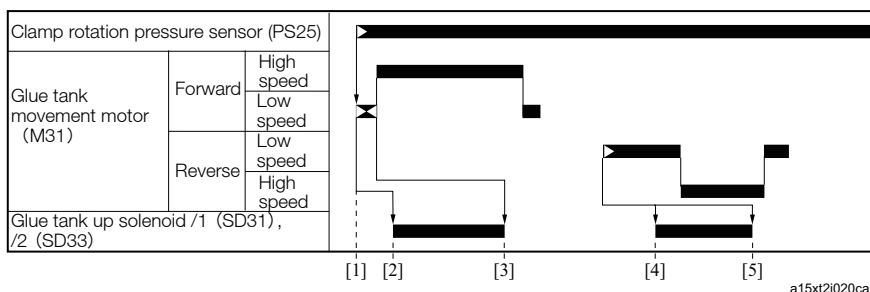
[1]	Metal surface of the glue apply roller	[2]	Scrape plate /Fr
[3]	Front side	[4]	Scrape plate /Rr
[5]	Level tangent line	[6]	Inside paper
[7]	Spine surface	[8]	Layer of molten glue

(2) Control

- When the upright movement of the clamp section finishes [1] by turning the clamp rotation pressure sensor (PS25) ON, the glue tank movement motor (M31) turns ON and the glue tank assy starts moving forward. While the glue tank assy is moving, the glue tank up solenoids /1 (SD31) and /2 (SD33) turn ON to lift the glue apply roller to apply glue to the spine of inside paper [2] after a specified period of time since M31 turns ON.
- When the glue has applied along the inside paper spine by a length of 5mm longer than the paper length after a specified period of time since M31 has turned to high speed, SD31 and SD33 turn OFF to lower the glue apply roller [3].
- After a specified period of time since the going back starts by the reverse rotation ON of M31, SD31 and SD33 turn ON at the timing when the glue apply roller passes the paper edge 4mm and conduct the gluing operation for going back [4].
- After a specified period of time, SD31 and SD33 turn OFF [5] at the position the glue apply roller passed trailing edge of the inside paper through by 4mm.

Note

- The sensors ON/OFF timing can be changed in the service mode.



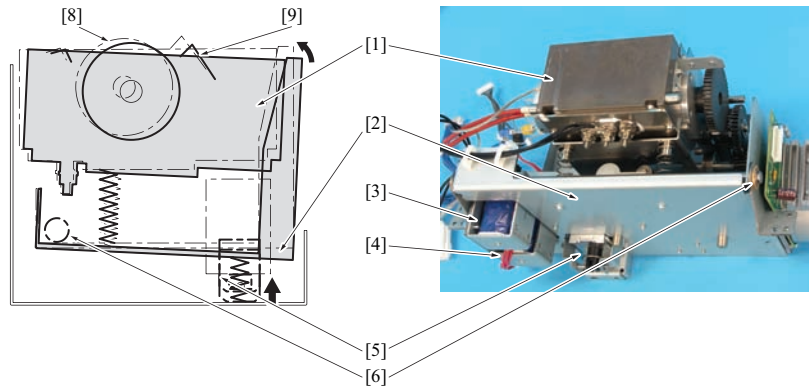
[1]	Clamp rotation assy is upright	[2]	Glue application during frontward movement
[3]	Completion of glue application	[4]	Glue application during backward movement
[5]	Completion of glue application	-	

6.3.4 Cover paper glue control

(1) Mechanism

- The cover paper glue up solenoid (SD32) [5] lifts the scrape plate /Fr side [9] of the glue tank base plate [2].
- The glue tank up solenoid /1 (SD31) [4] and /2 (SD33) [3], which lift the glue apply roller [8] side of the glue tank, are also attached to the glue tank base plate, and as the result, the whole glue tank assy is lifted.
- Changing the height of the scrape plate with SD32 turning ON/OFF controls the thickness of the glue layer. Switches the thick coat mode and the thin coat mode. The thick coat mode is for keeping the book strength. *1
 - Thin coat mode (SD32: ON)
Thickness of paper is less than 7mm: The glue apply thickness is 0.8mm
 - Thick coat mode (SD32: OFF)
Thickness of paper is 7mm or more: The glue apply thickness is 1.2mm

*1 In the case of 1200/1200P/1051/1250/1250P/1052, only the thin coat mode is used no matter how thick the paper bundle is.



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[1]	Glue tank	[2]	Glue tank base plate
[3]	Glue tank up solenoid /2 (SD33)	[4]	Glue tank up solenoid /1 (SD31)
[5]	Cover paper glue up solenoid (SD32)	[6]	Fulcrum shaft
[7]	Left-side view	[8]	Glue apply roller
[9]	Scrape plate /Fr	-	

(2) Control

- The control differs depending on the glue apply thickness mode. *1
 - Thin coat mode
The cover paper glue up solenoid (SD32) turns ON a specified time before turning ON the tank up solenoids /1 (SD31) and /2 (SD33) and turns OFF at the same time when SD31 and SD33 turn OFF.
 - Thick coat mode
Always OFF.
- *1 In the case of 1200/1200P/1051/1250/1250P/1052, only the thin coat mode is used no matter how thick the paper bundle is.

6.3.5 Glue temperature control

(1) Mechanism

- The glue tank heater (H1) heats the glue tank bottom to melt the pellets.
- The glue apply roller heater (H2) heats the glue apply roller to keep the glue adhered to the roller surface at a constant viscosity.

(2) Temperature detection

The glue apply roller temperature sensor (TH1) [7] detects the temperature of the glue apply roller [8], and the glue tank temperature sensor / Up (TH2) [6], /Md (TH3) [3], and /Lw (TH4) [2] detects the temperature of the glue tank [5].

(a) TH1

- Detects temperature of the center portion of the glue apply roller, and the glue apply roller heater (H2) [9] is controlled according to the detected temperature.
- The target temperature is 165 °C. *1
*1 It can be changed by "Adjustment screen" or "Apply Roller" of Service Mode "[I.5.8.32 Temperature Adjustment \(Perfect Binder Adjustment\)](#)."

(b) TH2

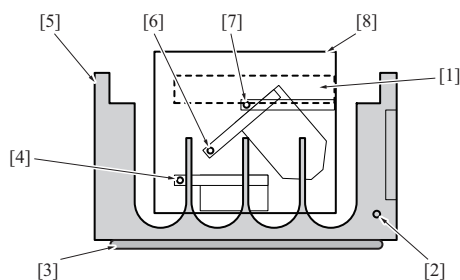
- This sensor is provided on the inner surface of the glue tank, at the position 29mm above the bottom of the tank, in order to detect glue level.
- When the glue runs low, the glue surface becomes lower, and finally the TH2 comes out of the glue. It causes a sudden drop in temperature of the TH2. The temperature drop is detected as a low glue level, and activates the pellet supply operation.
- The target temperature is 132 °C. *1
*1 It can be changed by "Glue Tank -Top" of Service Mode "[I.5.8.32 Temperature Adjustment \(Perfect Binder Adjustment\)](#)."

(c) TH3

- This sensor is also provided on the inner surface of the glue tank, at the position 15.4mm above the tank bottom, to detect the viscosity of the molten glue. According to the detected result, rotating or not rotating the glue apply roller is determined.
- The target temperature is 145 °C. *1
*1 It can be changed by "Glue Tank -Mid" of Service Mode "[I.5.8.32 Temperature Adjustment \(Perfect Binder Adjustment\)](#)."

(d) TH4

- The glue tank temperature sensor /Lw (TH4) is provided on the inner bottom surface of the glue tank and detects temperature of the glue tank heater (H1) [3] to control the heater.
- The target temperature is 185 °C. *1
*1 It can be changed by "Adjustment screen" or "Glue Tank -Low" of Service Mode "[I.5.8.32 Temperature Adjustment \(Perfect Binder Adjustment\)](#)."



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[1]	Glue apply roller heater (H2)	[2]	Glue tank temperature sensor /Lw (TH4)
[3]	Glue tank heater (H1)	[4]	Glue tank temperature sensor /Md (TH3)
[5]	Glue tank	[6]	Glue tank temperature sensor /Up (TH2)
[7]	Glue apply roller temperature sensor (TH1)	[8]	Glue apply roller

(3) Control

(a) Glue apply roller heater (H2) control

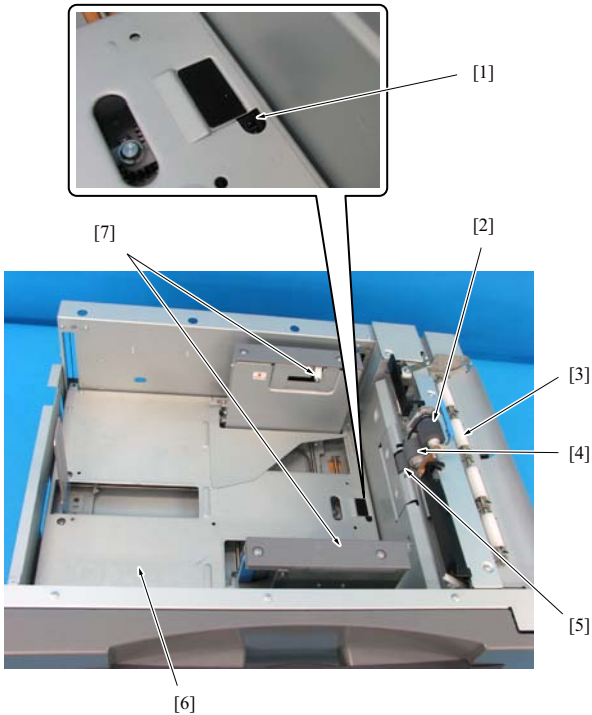
- During warming up, H2 turns ON so that the glue apply roller temperature sensor (TH1) is 180 °C. It lowers to 165 °C when the warming up completes.
- After the completion of the warming up, it controls ON/OFF of H2 so that the glue apply roller temperature sensor (TH1) is 165 °C.
- When the temperature drops/rises 1 °C from the target temperature, the H1 turns ON/OFF.

(b) Glue tank heater (H1) control

- The H1 is turned ON/OFF according to a temperature detected by the glue tank temperature sensor /Lw (TH4) in order to keep 185 °C.
- When the temperature drops/rises 1 °C from the target temperature, the H1 turns ON/OFF.

7. COVER PAPER SUPPLY SECTION

7.1 Configuration

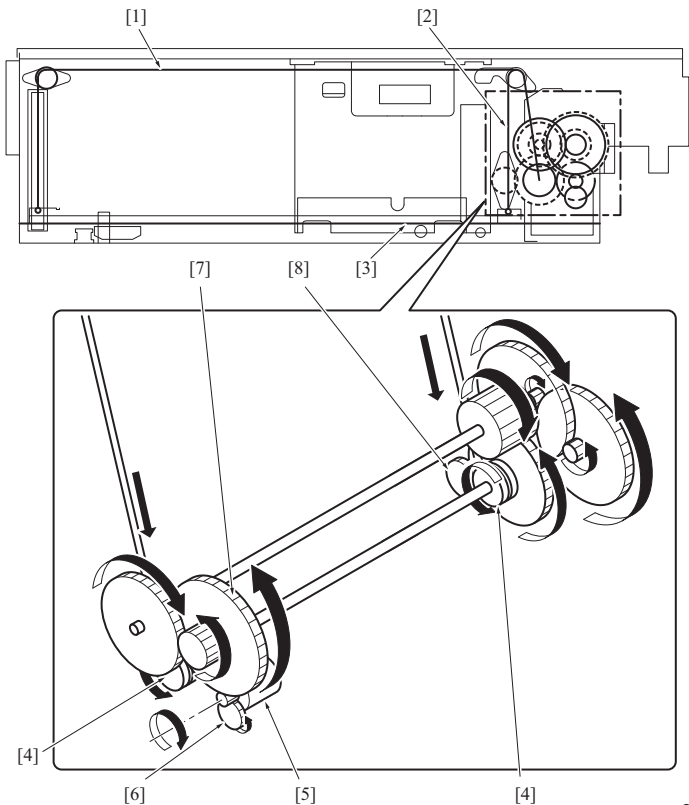


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[1]	Cover paper empty sensor (PS71)	[2]	Pick-up roller
[3]	Conveyance roller	[4]	Paper feed roller
[5]	Separation roller	[6]	Cover paper tray lift plate
[7]	Cover paper tray fan		-

7.2 Drive

7.2.1 Cover paper tray lift drive

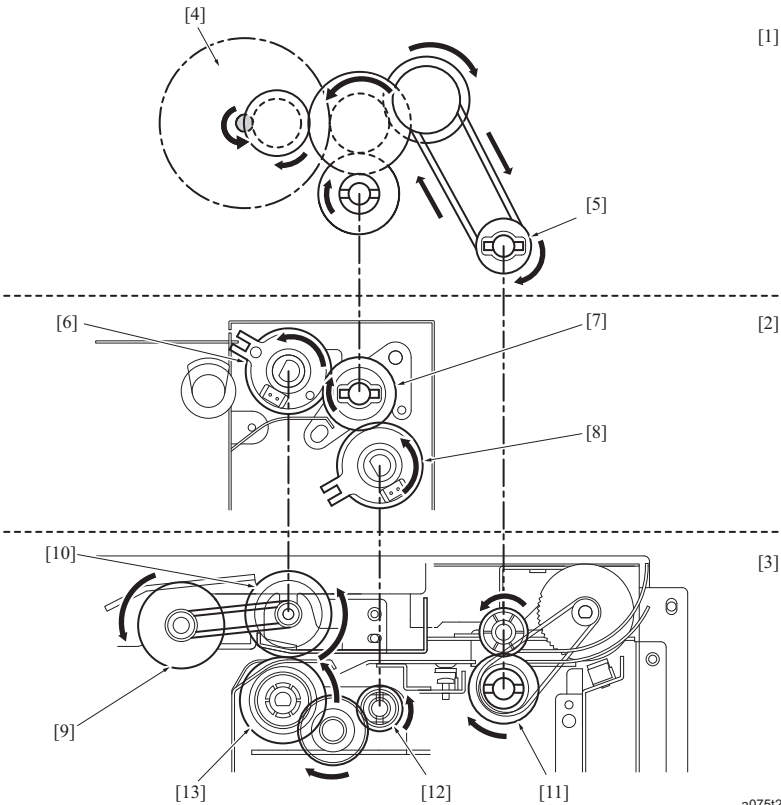


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[1]	Cover paper tray lift wire /Fr1, /Rr1	[2]	Cover paper tray lift wire /Fr2, /Rr2
[3]	Cover paper tray lift plate	[4]	Pulley

[5]	Cover paper tray lift motor (M73)	[6]	One-way clutch
[7]	Lift release coupling gear	[8]	Torque restriction gear (oil damper)

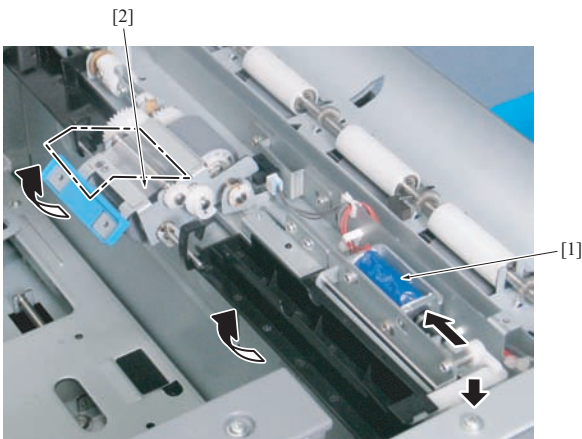
7.2.2 Paper feed drive



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[1]	PB backside	[2]	Backside of cover paper tray
[3]	Center of cover paper tray	[4]	Cover paper feed motor (M74)
[5]	Coupling	[6]	Cover paper feed clutch (CL71)
[7]	Coupling	[8]	Cover paper separation clutch (CL72)
[9]	Pick-up roller	[10]	Paper feed roller
[11]	Conveyance roller	[12]	Torque limiter
[13]	Separation roller	-	

7.2.3 Pick-up drive



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[1]	Cover paper pick up solenoid (SD71)	[2]	Pick-up roller
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7.3 Operation

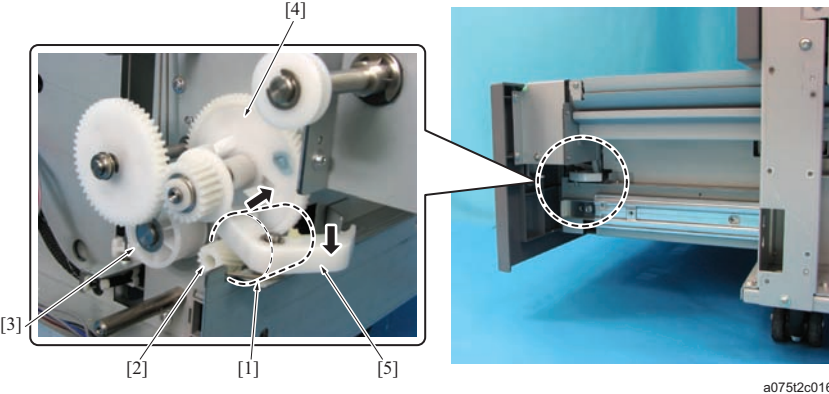
7.3.1 Up/down control

(1) Up operation

- The cover paper tray lift plate is lifted with the cover paper tray lift wire wound up around the pulley by the drive force of the cover paper tray lift motor (M73) [1].

(2) Down operation

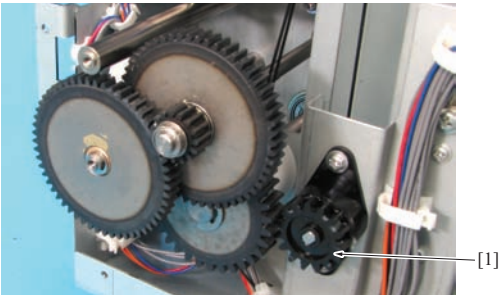
- When the cover paper tray is pulled out, the release lever [5] separates the coupling gear [4] that transmits the motor drive force from the motor shaft [2] to the pulley [3]. (goes down by its own weight)



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[1]	Cover paper tray lift motor (M73)	[2]	Motor shaft
[3]	Pulley	[4]	Coupling gear
[5]	Release lever	-	

- In order to lower the plate slowly by its own weight, the torque limiting gear [1] works only when lowering the cover paper tray lift plate.



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[1]	Torque restriction gear	-	
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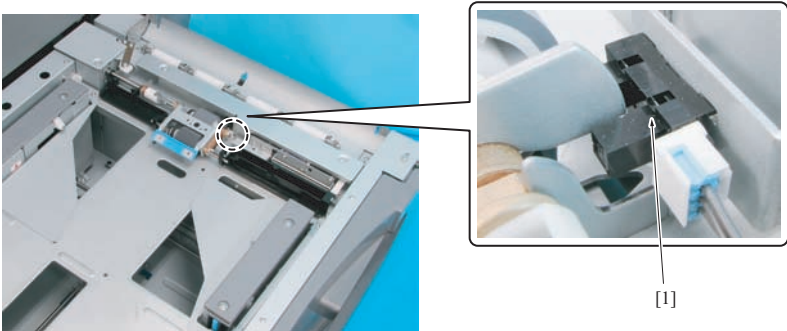
(3) Operation timing

(a) When cover paper is set

- When cover papers are loaded on the tray, the cover paper tray lift motor (M73) starts to rotate to lift the cover paper lift plate.
- The M73 stops when the cover paper tray upper limit sensor (PS74) turns ON.

(b) While feeding cover paper

- While cover papers being fed, the PS74 turns OFF due to a decrease in stacking height of papers, and the M73 starts to rotate again.
- The M73 keeps rotating to lift the cover paper lift plate until the PS74 turns ON again.



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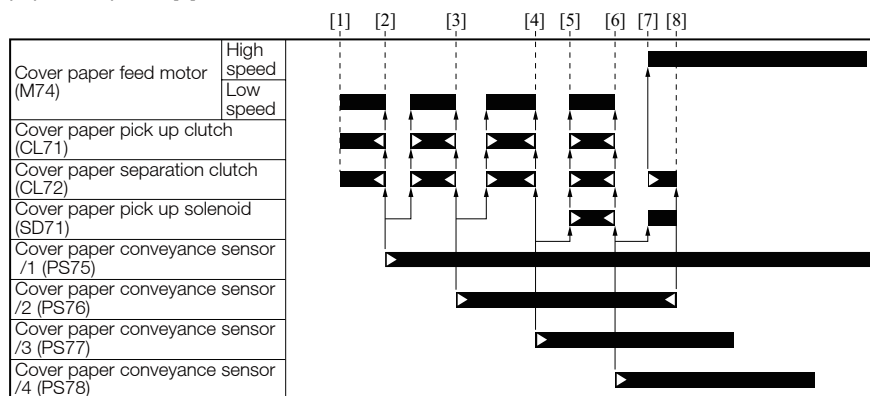
[1]	Cover paper tray upper limit sensor (PS74)	-	
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7.3.2 Pick-up mechanism

- Picking up the cover paper is activated when the cover paper pick-up solenoid (SD71) turns OFF.

(1) Control

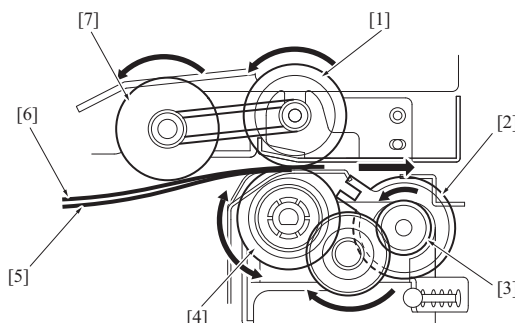
- With cover paper feed signal, cover paper feed motor (M74), cover paper feed clutch (CL71) and cover paper separation clutch (CL72) turn ON, and rotate the pick-up roller which is pressing down the cover paper with its own weight, and starts the paper feeding of the cover paper [1].
- When the cover paper conveyance sensor /1 (PS75) is turned ON by the leading edge of the cover paper, M74, CL71, CL72 are temporary turned OFF, and cover paper feeding is stopped [2].
- After the specified time, M74, CL71, CL72 are turned back ON, and the leading edge of the cover paper is sent to the cover paper conveyance sensor /2 (PS76), then M74, CL71 are turned OFF again [3].
- After the specified time, M74, CL71, CL72 are turned back ON, and the leading edge of the cover paper is sent to the cover paper conveyance sensor /3 (PS77), then M74, CL71, and CL72 are turned OFF again [4].
- After the specified time, M74, CL71, CL72 and the cover paper pick up solenoid (SD71) are turned ON, the pick up roller is put back to its original position, and the cover paper is conveyed by only the paper feed roller and the conveyance roller [5].
- When the leading edge of the cover paper turns ON the cover paper conveyance sensor /4 (PS78), M74, CL71, CL72, SD71 turn OFF [6].
- After the specified time, M74 rotates at high speed, cover paper is conveyed by only the conveyance roller while CL72 turns ON and the next cover paper is sent to the reverse direction to be separated [7].
- After the back edge of the cover paper has passed the PS76, CL72 and SD71 turn OFF, and the paper feeding of the first sheet of cover paper completes [8].



[1]	Cover paper supply signal on	[2]	Conveyed to PS75
[3]	Conveyed to PS76	[4]	Conveyed to PS77
[5]	Pick up roller goes back to its original position	[6]	Conveyed to PS78
[7]	Conveyance of conveyance roller only	[8]	Pick up paper feeding of first sheet of cover paper complete

7.3.3 Separation mechanism

- The drive force of the cover paper feed motor (M74) is transmitted to the separation roller [4] via the torque limiter [3] when the cover paper separation clutch (CL72) [2] is ON/OFF.
- The separation roller [4] is driven in the direction opposite to the cover paper feeding direction. However, the roller rotates in the same direction with the paper feed direction as long as 1 sheet of cover paper or no paper is fed because the friction force between the cover paper feed roller [1] and separation roller [4], or paper and the separation roller is larger than the torque limited by the torque limiter [3].
- When multi-feed occurs, the separation roller reverses the rotation direction to feed the lower sheet that contacts with the roller back to the tray because the friction force drops due to the multi-feed and becomes lower than the torque limited by the torque limiter.



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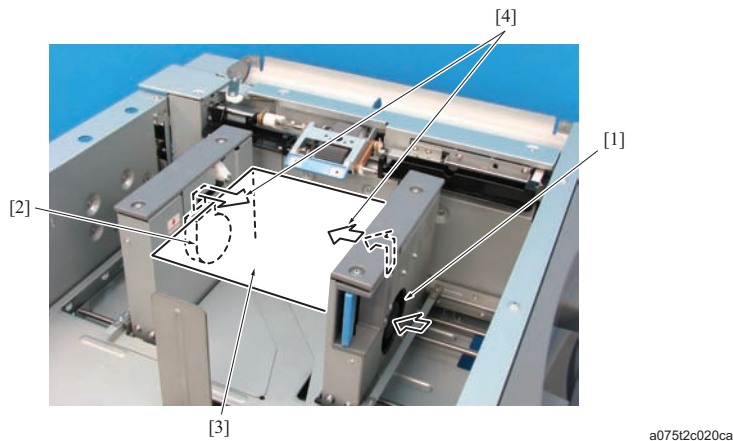
[1]	Paper feed roller	[2]	Cover paper separation clutch (CL72)
[3]	Torque limiter	[4]	Separation roller
[5]	Second sheet of cover paper	[6]	First sheet of cover paper
[7]	Pick-up roller	-	

7.3.4 Paper feed mechanism

- The cover paper feed motor (M74) drives the conveyance roller. Cover papers fed from the feeding section are conveyed to the conveyance section by the conveyance roller.

7.3.5 Air assist mechanism

- The cover paper tray is equipped with the cover paper tray fan /1 (FM71) and /2 (FM72), which blow air [4] to the cover paper [3] from the front and back cover paper guides.
- Using the tray fans is effective especially when feeding heavy paper or coated paper. However, in the case of plain paper, it may not be fed smoothly.



[1]	Cover paper tray fan /1 (FM71)	[2]	Cover paper tray fan /2 (FM72)
[3]	Cover paper	[4]	Blow-out of air

(1) Operation timing

- When receiving a print job, cover paper tray fans /1 (FM71) and /2 (FM72) turn ON, and after the specified time, cover paper feed motor (M74) turns ON.

7.3.6 Cover paper empty detection control

- The cover paper empty sensor (PS71) detects an empty status of the cover paper tray.

7.3.7 Paper feed assist plate

(1) Purpose

The paper feed assist plate (P/N: 56UA4070) can be attached to the pick-up roller to adjust the pressure to cover paper applied from the roller. By changing the number of plates to be attached to the roller depending on the cover paper type, paper feed accuracy can be improved.

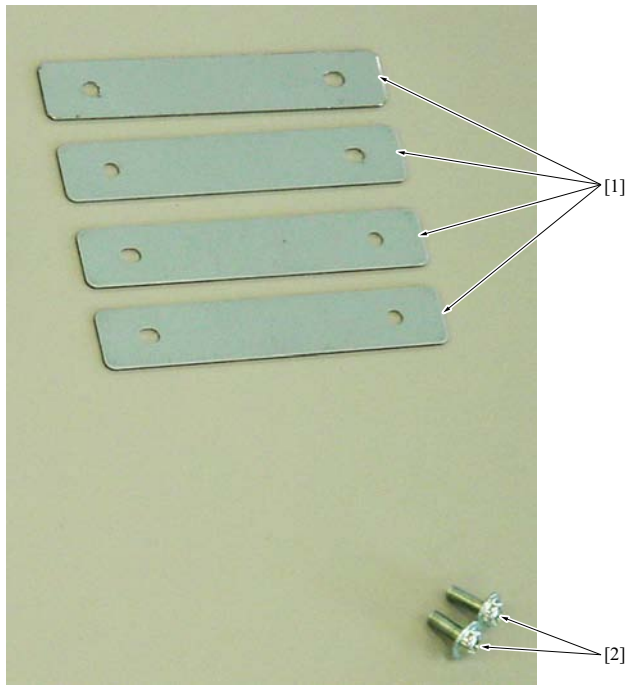
Using the plates is effective especially when feeding coated cover paper or similar type that is likely to stick tightly causing no-feed trouble. The paper feed assist plate weighs about 10g and up to 4 plates can be attached to 1 pick-up roller in normal condition. When the surface of the cover paper is powdery, up to 8 plates can be attached. Increase or decrease the number of plates according to paper type or condition to improve cover paper feed accuracy.

(2) Configuration

The package contains the following as a set.

[1] Paper feed assist plate	4 plates
[2] Screws	2 screws (M3 x 8)

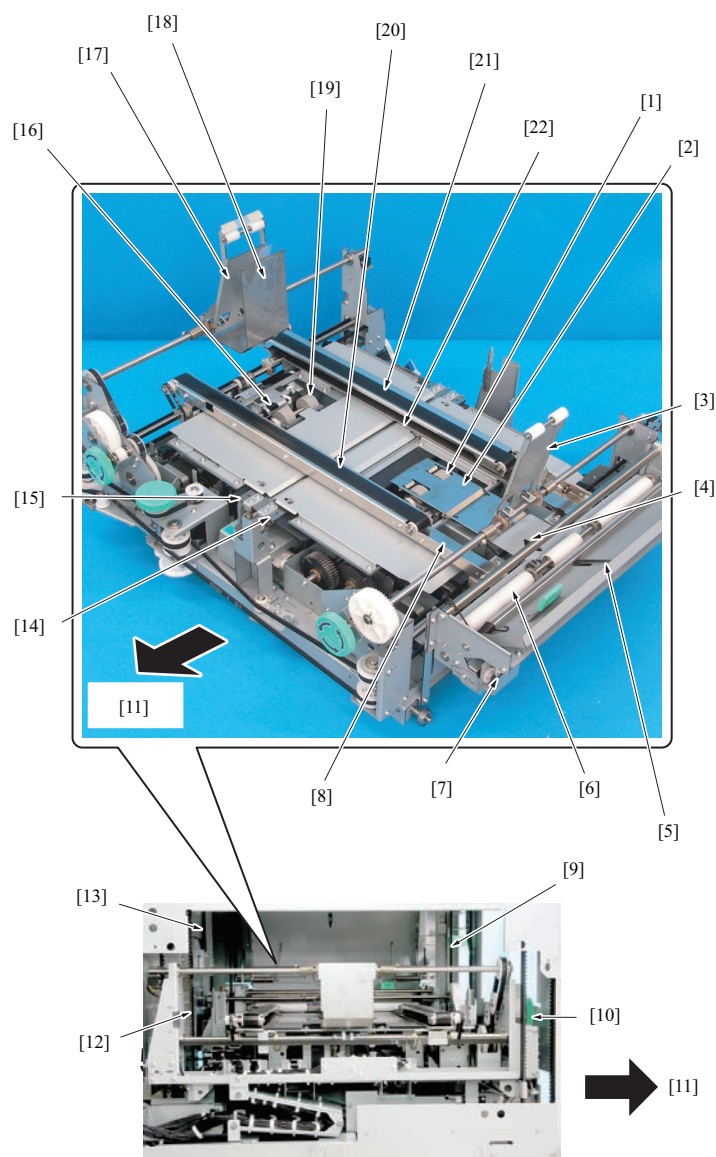
It can be purchased as the service part if necessary.



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8. COVER PAPER TABLE SECTION

8.1 Configuration

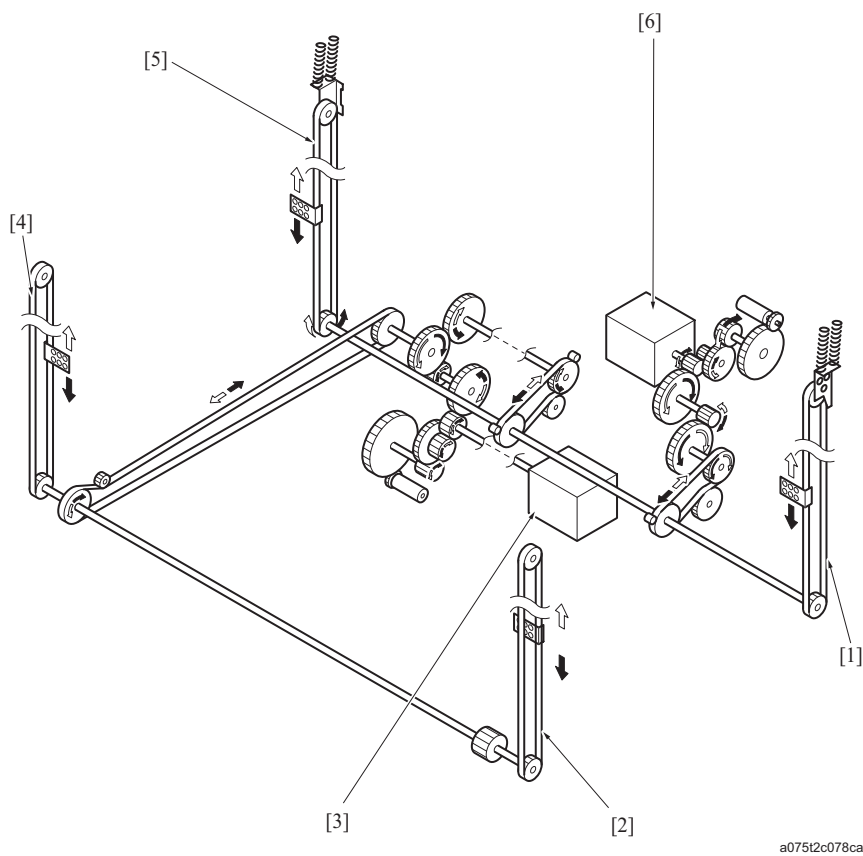


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[1]	Cover paper conveyance roller /Rt	[2]	Cover paper lift plate /Rt
[3]	Cover paper conveyance arm /Rt	[4]	Cover paper sensor /Rt (PS45)
[5]	Cover paper switchback sensor (PS44)	[6]	Cover paper table entrance roller
[7]	Cutter	[8]	Cover paper alignment plate /Fr
[9]	Cover paper table up down belt /Fr_Rr	[10]	Cover paper table up down belt/Fr_Lt
[11]	Front side	[12]	Cover paper table up down belt /Rr_Lt
[13]	Cover paper table up down belt /Rr_Rt	[14]	Cover paper folding plate /Rt
[15]	Cover paper folding plate /Lt	[16]	Cover paper sensor /Lt (PS46)
[17]	Cover paper conveyance arm /Lt	[18]	Cover paper lift plate /Lt
[19]	Cover paper conveyance roller /Lt	[20]	Book exit belt /Fr
[21]	Book exit belt /Rr	[22]	Cover paper alignment plate /Rr

8.2 Drive

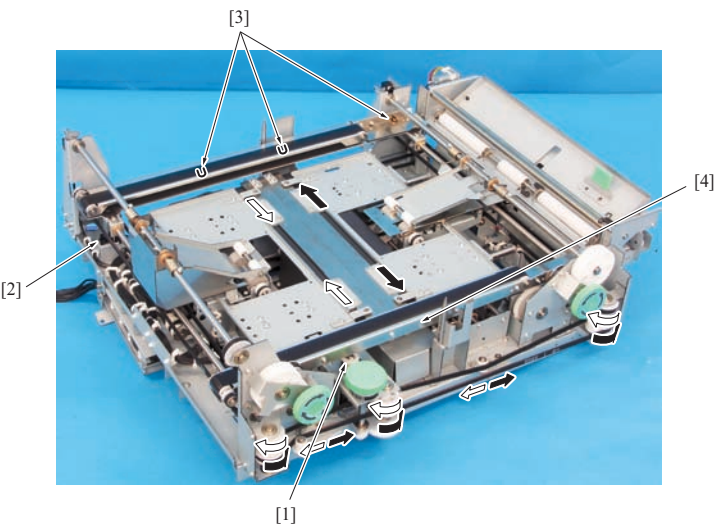
8.2.1 Cover paper table up down/Fr and /Rr drive



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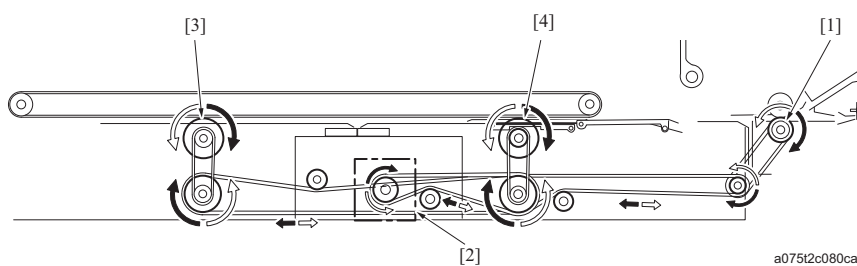
[1]	Cover paper table up down belt /Rr_Rt	[2]	Cover paper table up down belt /Fr_Rt
[3]	Cover paper table up down motor /Fr (M46)	[4]	Cover paper table up down belt /Fr_Lt
[5]	Cover paper table up down belt /Rr_Lt	[6]	Cover paper table up down motor /Rr (M47)

8.2.2 Cover paper alignment drive



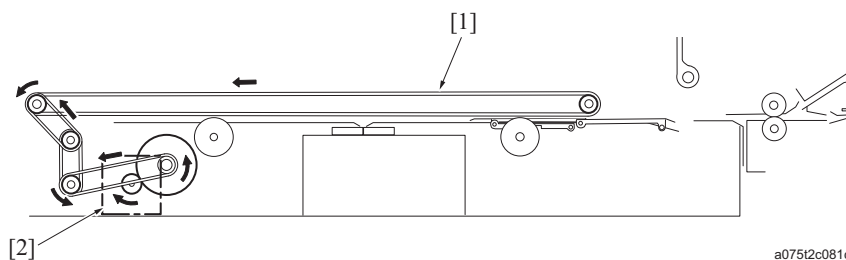
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[1]	Cover paper alignment motor (M41)	[2]	Cover paper alignment home sensor (PS41)
[3]	Cover paper alignment plate /Rr	[4]	Cover paper alignment plate /Fr

8.2.3 Cover paper conveyance drive

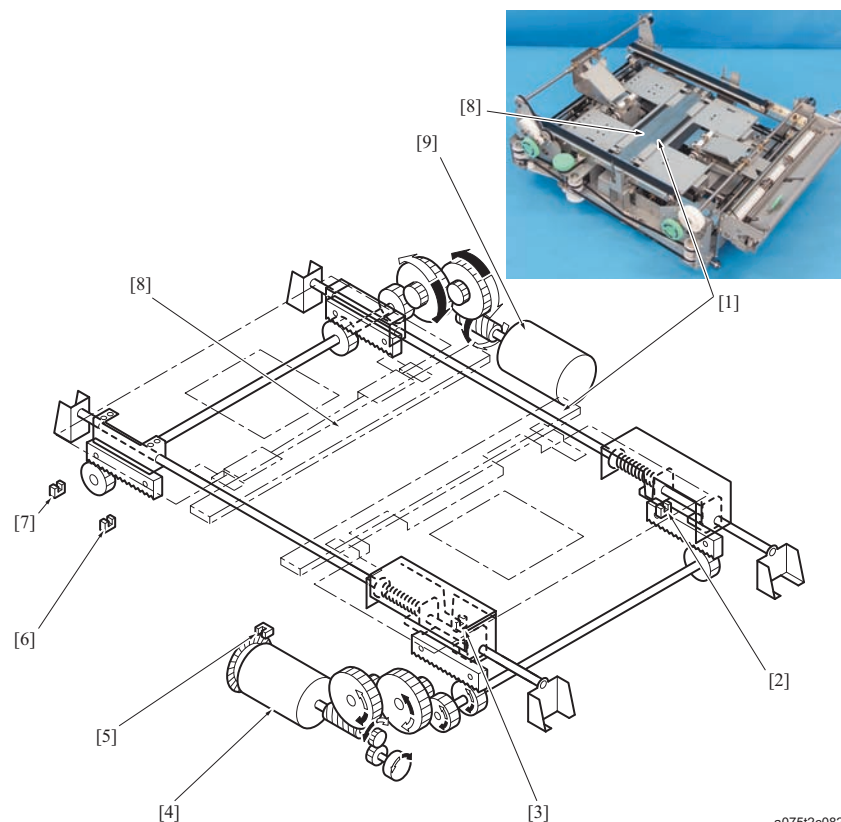
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[1]	Cover paper table entrance roller	[2]	Cover paper conveyance motor (M45)
[3]	Cover paper conveyance roller /Lt	[4]	Cover paper conveyance roller /Rt

8.2.4 Book exit drive

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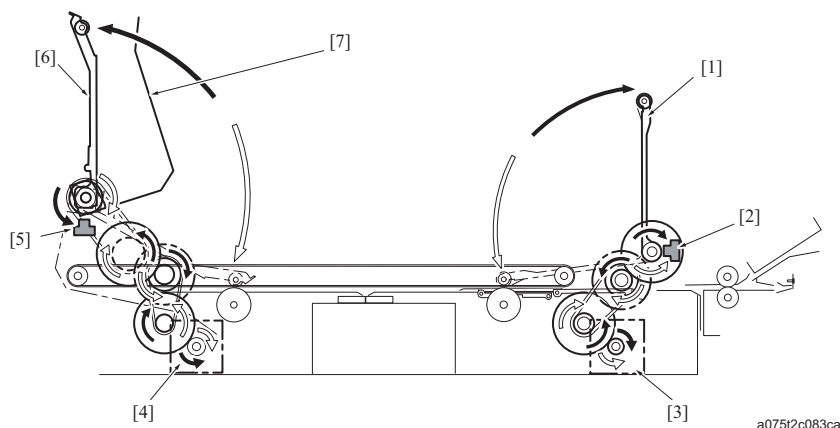
[1]	Book exit belt /Fr, /Rr	[2]	Booklet exit motor (M42)
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8.2.5 Cover paper folding plate /Rt and /Lt drive

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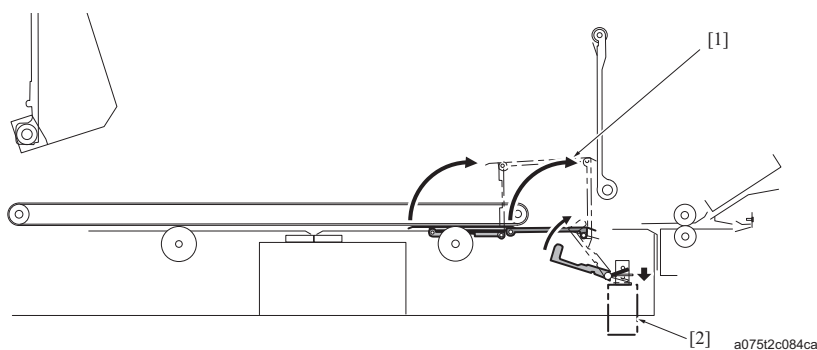
[1]	Cover paper folding plate /Rt	[2]	Cover paper folding plate home sensor /Rt (PS48)
[3]	Cover paper folding pressure sensor (PS52)	[4]	Cover paper folding motor /Rt (M48)
[5]	Cover paper folding plate encoder sensor (PS50)	[6]	Cover paper folding plate home sensor /Lt (PS49)
[7]	Cover paper folding plate position sensor (PS51)	[8]	Cover paper folding plate /Lt
[9]	Cover paper folding motor /Lt (M49)	-	

8.2.6 Cover paper conveyance arm /Rr and /Lt drive



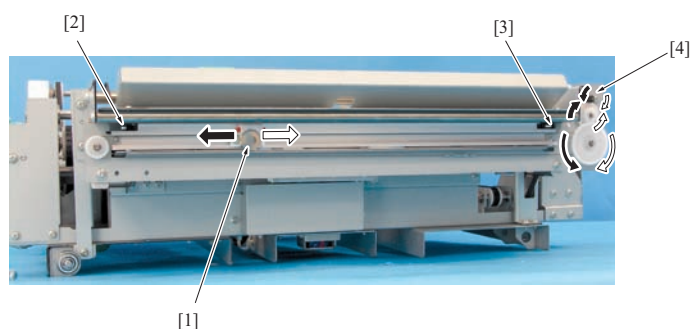
[1]	Cover paper conveyance arm /Rt	[2]	Cover paper conveyance arm home sensor /Rt (PS42)
[3]	Cover paper conveyance arm motor /Rt (M43)	[4]	Cover paper conveyance arm motor /Lt (M44)
[5]	Cover paper conveyance arm home sensor /Lt (PS43)	[6]	Cover paper conveyance arm /Lt
[7]	Cover paper lift plate /Lt	-	

8.2.7 Cover paper lift drive



[1]	Cover paper lift plate /Rt	[2]	Cover paper lift solenoid (SD41)
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8.2.8 Cutter drive



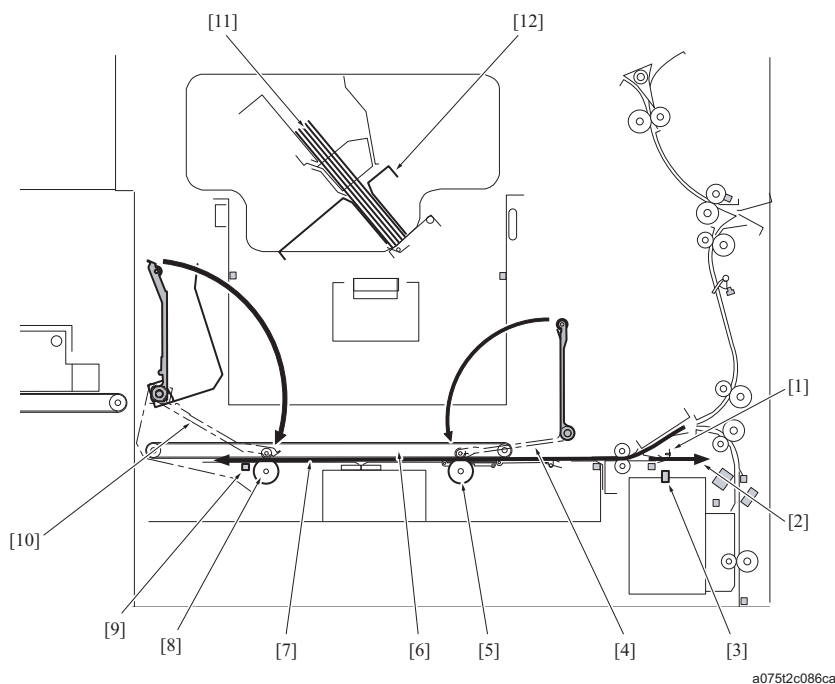
[1]	Cutter	[2]	Cutter home switch (SW41)
[3]	Cutter end switch (SW42)	[4]	Cutter motor (M50)

8.3 Operation

8.3.1 Cover paper table section operation overview

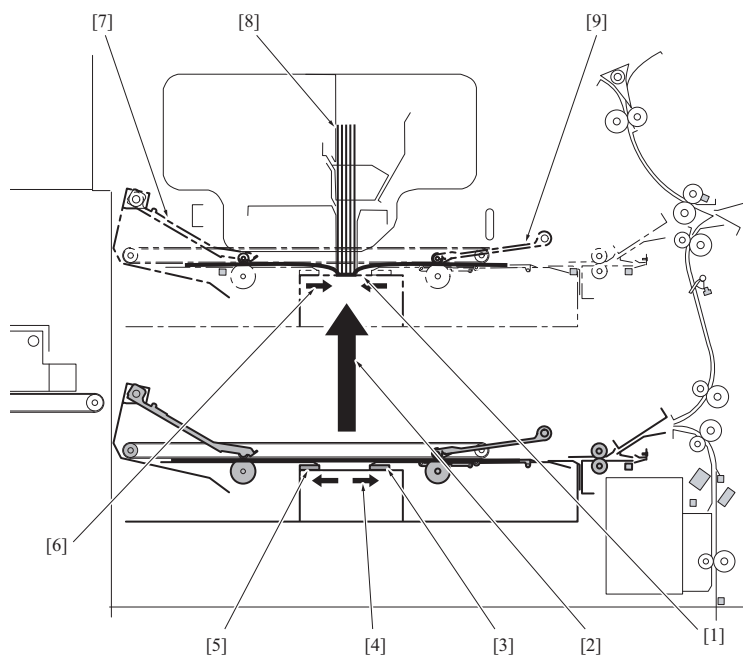
1. The cover paper conveyance arms /Rt [4] and /Lt [10] are activated when detecting that the print start signal turns ON, and they are pressed against the cover paper conveyance rollers /Rt [5] and /Lt [8].
2. When a cover paper is fed [7], alignment operation is carried out by the cover paper alignment plate /Rr and /Fr [6].
3. After the thickness of inside papers [11] is detected by clamping operation made by the clamp pressure plate [12], the cover paper is fed backward (switchback) [2].
4. The backward feeding is made to feed the cover paper to the roller cutter assy so that the paper edge protrudes away from the cover paper switchback sensor (PS44) [3] by the trimming amount.
5. The roller cutter [1] trims the cover paper edge and then the paper is conveyed to the left side again.
6. Alignment operation to attach the cover paper to the inside papers is carried out.

7. The cover paper is moved to left and right by the reverse/forward rotation of the cover paper conveyance rollers /Rt and /Lt for positioning properly with reference to the cover paper sensor /Lt (PS46) [9] as starting point.



[1]	Roller cutter	[2]	Switchback conveyance
[3]	Cover paper switchback sensor (PS44)	[4]	Cover paper conveyance arm /Rt
[5]	Cover paper conveyance roller /Rt	[6]	Cover paper alignment plate /Rr, /Fr
[7]	Cover paper conveyance	[8]	Cover paper conveyance roller /Lt
[9]	Cover paper sensor /Lt (PS46)	[10]	Cover paper conveyance arm /Lt
[11]	Bundle of inside papers	[12]	Clamp pressure plate

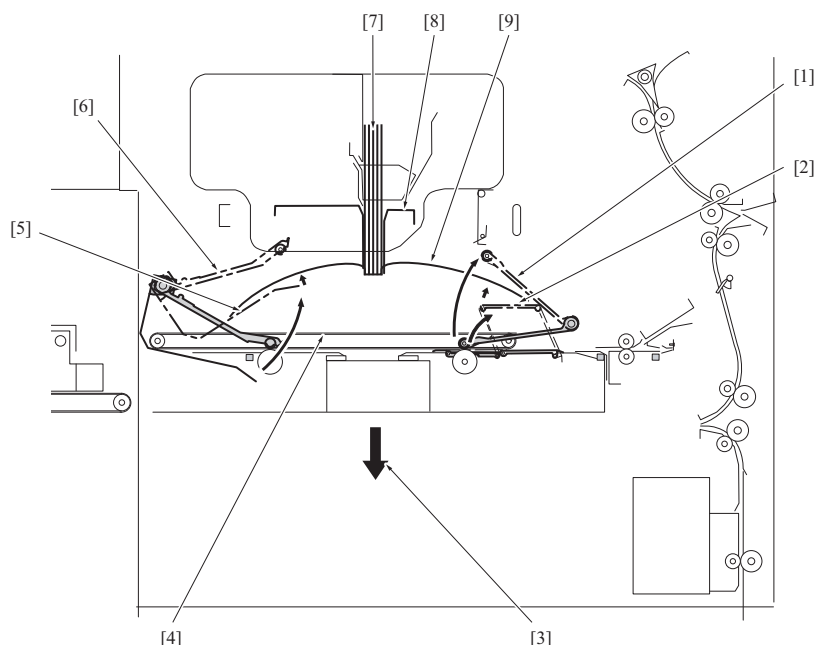
8. When the alignment operation of the cover paper completes and CD alignment plate returns to home position, the cover paper folding plates /Rt [3] and /Lt [5] are opened [4].
9. When the cover paper on the lifted unit attaches to the spine of inside papers [8], the book spine backing plate [1] presses against the spine to attach the cover paper securely.
10. The cover paper folding plates /Rt and /Lt are moved inward to press [6] both edge surfaces of the spine to create the perfect corners. During up and down operation of the cover paper table unit, the cover paper conveyance arms /Rt [9] and /Lt [7] are moved away from the cover paper so as not to let the paper pulled by the arms.
11. The pressures to the spine are applied for 3 seconds for the glue to harden fully.



[1]	Book spine backing plate	[2]	Lift of cover paper table unit
[3]	Cover paper folding plate /Rt	[4]	Opening

[5]	Cover paper folding plate /Lt	[6]	Pressurize
[7]	Cover paper conveyance arm /Lt	[8]	Bundle of inside papers
[9]	Cover paper conveyance arm /Rt	-	

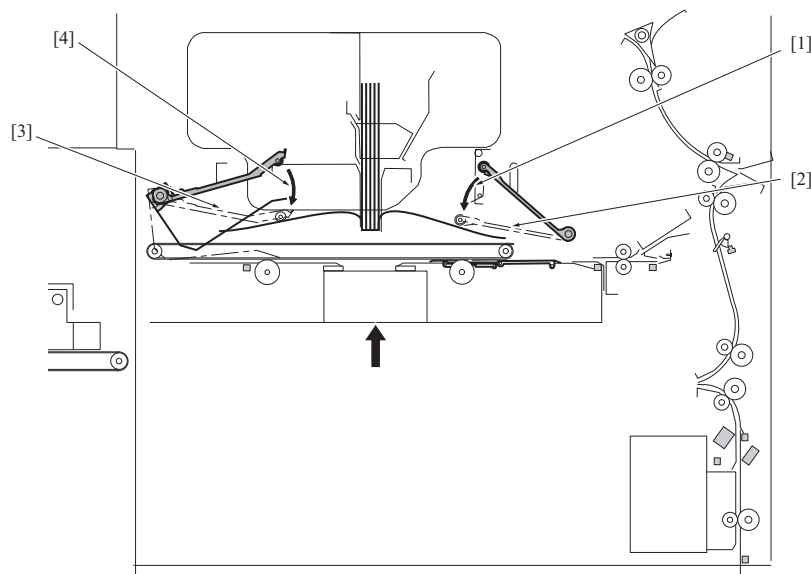
12. The cover paper folding plates /Rt and /Lt are opened, and the cover paper table unit is lowered [3].
13. While the cover paper table is going down, the inside papers of the book [7] are held by the clamp pressure plate [8]. Since both sides of the cover paper [9] bow, the cover paper lift plate /Lt [5] integrated with the cover paper conveyance arm /Lt [6] supports the left-side of the cover paper. The right-side of the paper triggers the cover lift plate /Rt [2] and supports the cover. The cover paper conveyance arm /Rt [1] is moved away from the cover paper lift plate /Rt.
14. The book exit belt [4] is moved to the position to receive the book.



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[1]	Cover paper conveyance arm /Rt	[2]	Cover paper lift plate /Rt
[3]	Down	[4]	Book exit belt
[5]	Cover paper lift plate /Lt	[6]	Cover paper conveyance arm /Lt
[7]	Book	[8]	Clamp pressure plate
[9]	Cover paper	-	

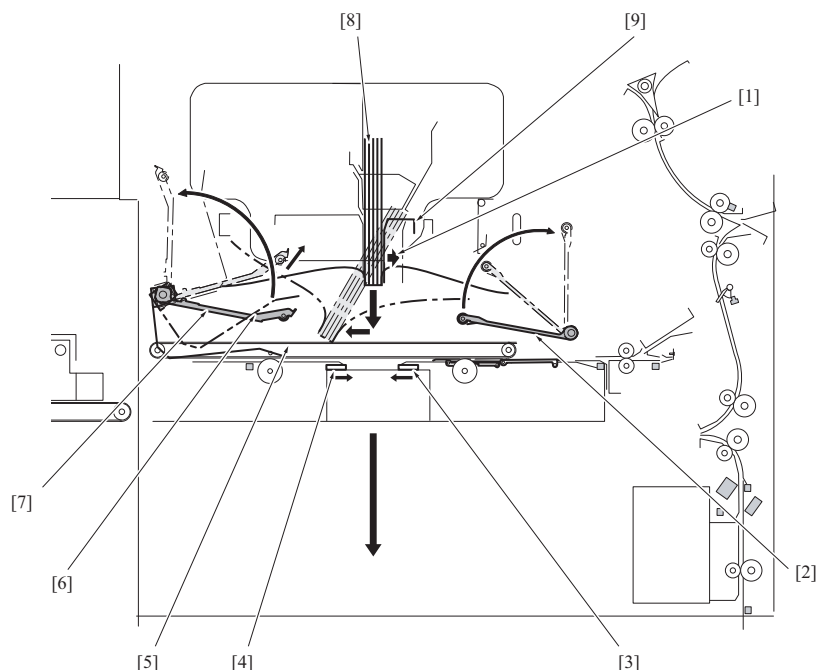
15. When the book exit belt is set at the receiving position, the cover paper table unit is lifted again.
16. When lifting the unit is started, the cover paper conveyance arms /Rt [2] and /Lt [3] are folded [1] [4] to keep them from contact with the clamp section.



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[1]	The arm is folded	[2]	Cover paper conveyance arm /Rt
[3]	Cover paper conveyance arm /Lt	[4]	The arm is folded

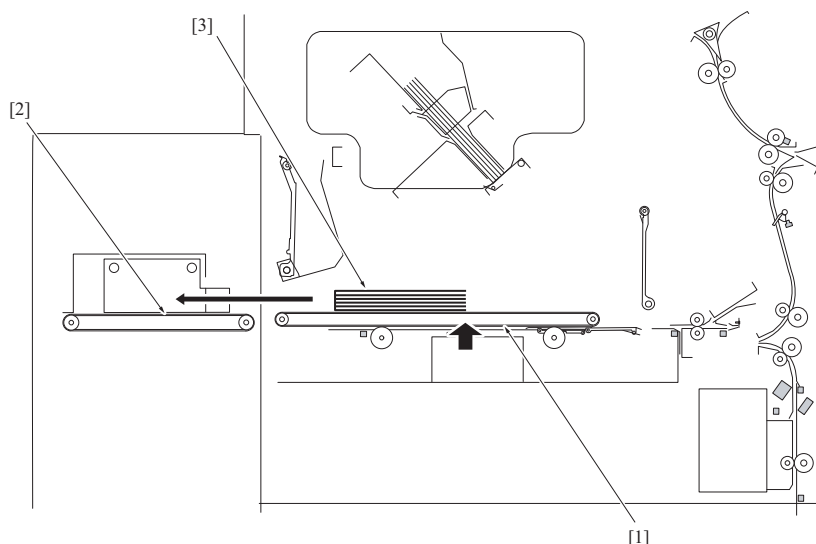
17. When the book (inside papers) [8] is released from the clamp pressure plate [9], the cover paper table unit is lowered.
18. At the start of the unit lowering operation, the cover paper conveyance arm /Rt [2], /Lt [7], and the cover paper folding plate /Rt [3], /Lt [4] are returned to their home positions. When the cover paper lift plate /Lt [6] returns to its home position, it flips up the left-side of the cover paper toward the inside papers.
19. The book exit belt [5] is activated after a prescribed time has elapsed since the table unit lowering operation is started so that the belt starts to move at the same time the book contacts with the belt and the book is laid down on the belt.



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[1]	Book exit belt	[2]	Cover paper conveyance arm /Rt
[3]	Cover paper folding plate /Rt	[4]	Cover paper folding plate /Lt
[5]	Book exit belt	[6]	Cover paper lift plate /Lt
[7]	Cover paper conveyance arm /Lt	[8]	Book
[9]	Clamp pressure plate	-	

20. The cover paper table unit goes down to its home position, and then goes up until the book exit belt surface becomes horizontal to the book conveyance belt [3] surface.
21. The book exit belt [1] starts to move again to convey the book [3] on it to the book stock section.



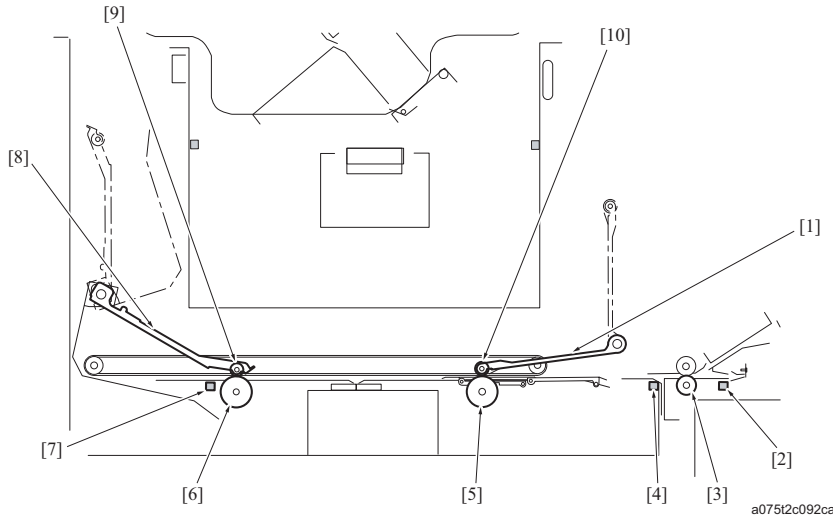
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[1]	Book exit belt	[2]	Book conveyance belt
[3]	Book	-	

8.3.2 Cover paper conveyance control

(1) Mechanism

- The cover paper conveyance motor (M45) drive force transmitted via the gear and the belt drives the cover paper table entrance roller [3], the cover paper conveyance rollers /Rt [5] and /Lt [6].
- A cover paper is conveyed being nipped between the driven rollers [9] and [10] provided on the tips of the cover paper conveyance rollers /Rt and /Lt and the cover paper conveyance arms /Rt [1] and /Lt [8].
- On the cover paper conveyance path, the cover paper sensor /Rt (PS45) [4], /Lt (PS46) [7] and the cover paper switchback sensor (PS44) [2] are provided.
- The PS44 is used to position the cover paper for trimming.
- PS45 is the starting point of when carrying in cover paper to the up/down cover paper section. Cover paper is carried in after specified time from when PS45 detected the leading edge of the paper, cover paper stops and alignment operation is carried out.
- The PS46 is used to position the cover paper to be attached to the spine of inside papers.



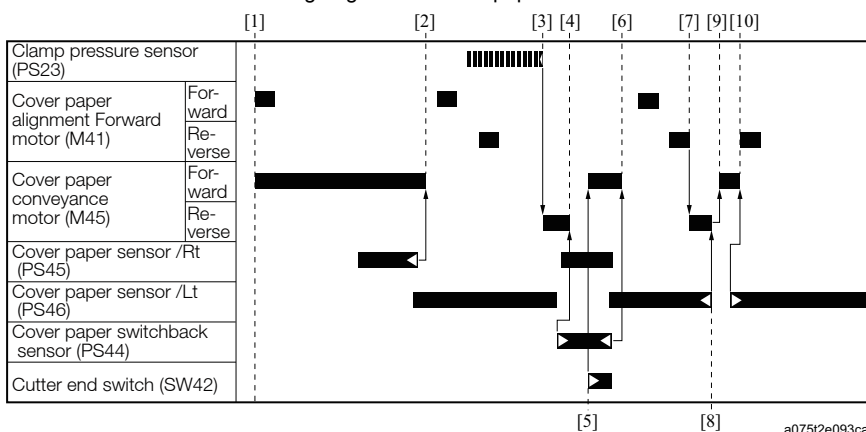
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[1] Cover paper conveyance arm /Rt	[2] Cover paper switchback sensor (PS44)
[3] Cover paper table entrance roller	[4] Cover paper sensor /Rt (PS45)
[5] Cover paper conveyance roller /Rt	[6] Cover paper conveyance roller /Lt
[7] Cover paper sensor /Lt (PS46)	[8] Cover paper conveyance arm /Lt
[9] Driven roller /Rt	[10] Driven roller /Lt

(2) Control

(a) When conveying cover paper from the PB cover paper tray

- Upon receiving of a print job, the cover paper conveyance motor (M45) starts to turn in the forward direction [1].
- The M45 stops [2] when a prescribed time has elapsed after the cover paper sensor /Rt (PS45) detects the leading edge of the cover paper.
- When clamping the inside papers is finished, the booklet thickness sensor (PS29) detects the last pulse and the book thickness information is obtained. Then the M45 starts reverse rotation [3] to convey the cover paper toward the roller cutter assy.
- The cover paper moves until it reaches the position to be trimmed off by the amount determined according to the paper size setting and the book thickness information, and the M45 stops [4].
- When the cutter end position switch (SW42) detects the finish of the cutting operation [5], the M45 starts forward rotation to convey the cover paper to the left-hand for the alignment.
- The M45 stops [6] when a prescribed time has elapsed after the PS44 detects the trailing edge of the cover paper.
- When the alignment operation by the cover paper alignment motor (M41) is finished [7], the cover paper is conveyed to the right-hand by the M45 reverse rotation for the next positioning operation.
- The M45 keeps rotating to position the cover paper properly to be attached to the inside papers until the cover paper sensor /Lt (PS46), the reference sensor for the positioning, turns OFF [8].
- After a prescribed time has elapsed, the M45 starts forward rotation to convey the cover paper to the left hand [9] and stops [10] after the PS46 detects the leading edge of the cover paper.



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[1]	Print start signal ON	[2]	Cover paper conveyance to the cover paper table is finished
[3]	Starting conveyance toward the roller cutter assy	[4]	Stop after conveying trimming amount
[5]	Trimming is completed	[6]	Cover paper stops for alignment
[7]	Cover paper alignment is completed	[8]	Cover paper positioning reference search
[9]	Starting cover paper positioning	[10]	Cover paper positioning is completed

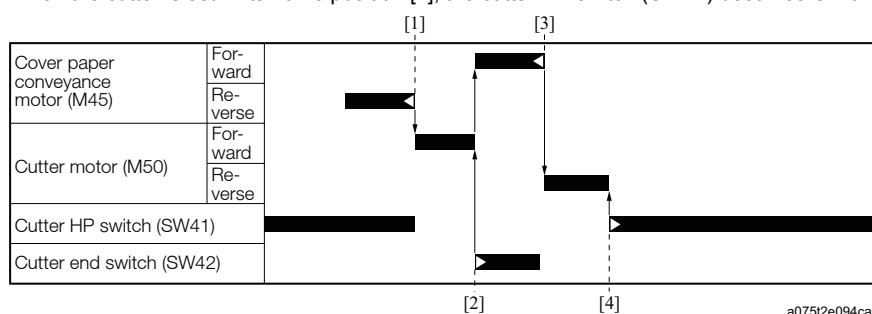
8.3.3 Cover paper trimming control

(1) Mechanism

- The cutter motor (M50) drives the roller cutter via the pulley and the wire.
- The front side is the home position and the trimming is carried out when the cover paper is moved to the back side from the front side.

(2) Control

- When the cover paper is conveyed to the roller cutter assy by the cover paper conveyance motor (M45), the motor stops [1] and the cutter motor (M50) starts forward rotation to start the trimming operation.
- When the cutter blade cut the paper and reaches the limit position, the cutter end position switch (SW42) turns ON and the M50 stops. At the same time, the M45 starts forward rotation to convey the cover paper.
- When the conveyance by the M45 is finished [3], the M50 starts to rotate again to make the cutter return to its home position.
- When the cutter is set in its home position [4], the cutter HP switch (SW41) becomes ON and the M50 stops.

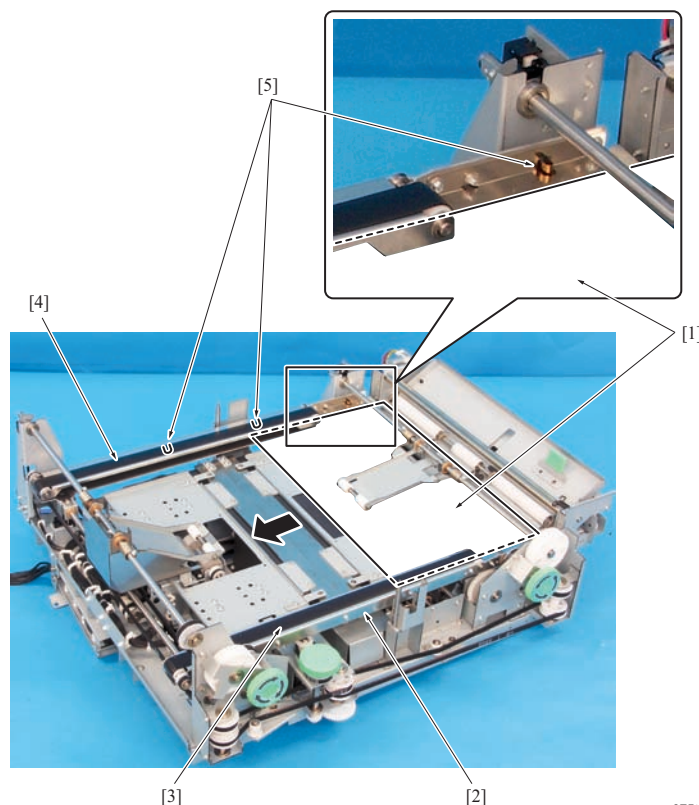


[1]	Start of cutting	[2]	Trimming is completed
[3]	Starting home position return operation	[4]	Cutter is set in its home position

8.3.4 Cover paper alignment drive

(1) Mechanism

- The cover paper alignment motor (M41) drives the cover paper alignment plates /Fr [2] and /Rr [5], the book exit belts /Fr [3] and /Rr [4] for changing their positions.
- The cover paper alignment plate /Rr presses the cover paper against the cover paper alignment plate /Fr to position the cover paper properly, and the cover paper alignment /Fr judges the alignment accuracy.



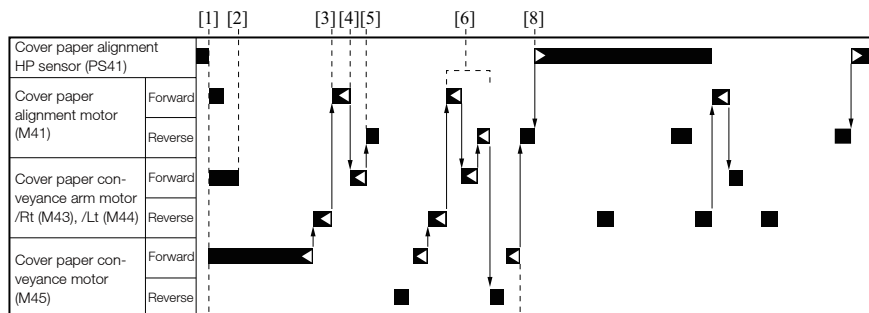
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[1]	Cover paper	[2]	Cover paper alignment plate /Fr
[3]	Book exit belt /Fr	[4]	Book exit belt /Rr
[5]	Cover paper alignment plate /Rr	-	

(2) Control

(a) Cover paper trimming mode

- When detecting that the print start signal turns ON [1], the cover paper alignment motor (M41) starts forward rotation to set the alignment parts in the positions for the alignment operation, and stops [2].
- After the conveyance arms /Rt and /Lt move away from the cover paper conveyance rollers /Rt and /Lt by the cover paper conveyance arm motors /Rt (M43) and /Lt (M44), and the arms stops, the M41 starts forward rotation to position the cover paper to be trimmed [3].
- When the cover paper is set at the trimming position with the cover paper alignment plates /Rr and /Fr holding down both sides of the paper, the M41 stops [4].
- The conveyance arms /Rt and /Lt are pressed against the cover paper conveyance rollers /Rt and /Lt [5] by the M43 and M44 drive force. Then the M41 starts reverse rotation to move the cover paper alignment plates /Rr and /Fr away from the cover paper, and stops.
- When the cover paper trimming is finished, the cover paper alignment operation [6] to be attached to the inside papers is performed in the same manner as for the trimming.
- When positioning the cover paper by the cover paper conveyance motor (M45) is finished, the M41 starts reverse rotation to perform preparation operation [7] for the next cover paper table lifting operation.
- The M41 stops [8] when the cover paper alignment home sensor (PS41) becomes ON.



[7]

[1]	Print start signal ON	[2]	Setting the plates and belts ready for the conveyance
[3]	Positioning (alignment) for cover paper trimming	[4]	Stops at the trimming position
[5]	Positioning (alignment) cover paper to be attached to inside papers	[6]	Starting preparation for cover table lifting operation
[7]	Alignment-related parts return to its home position	[8]	Returning to the home position

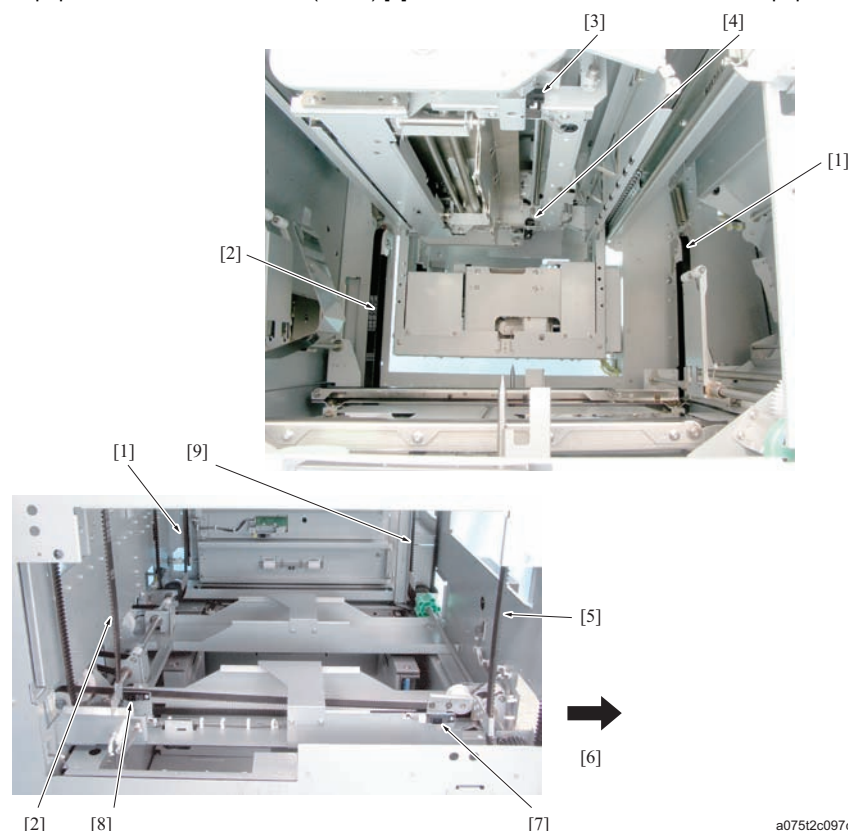
(b) Cover paper Not trimming mode

When the sub-scanning direction length of inside papers is over 182mm, the first positioning operation for trimming is not performed. Only the positioning operation for attaching the cover to the inside papers is performed.

However, when the inside paper is smaller than B5 size, alignment is done twice. Once when cover paper is carried in, and once after leading edge positioning is done.

8.3.5 Cover paper table up down control**(1) Mechanism**

- The cover paper table up down motor /Fr (M46) drives the cover paper table up down belts /Fr_Rt [9] and /Fr_Lt [5], and the cover paper table up down motor /Rr (M47) drives the cover paper table up down belts /Rr_Rt [1] and /Rr_Lt [2].
- The cover paper table upper limit sensor /Fr (PS26) [3] detects that the front side of the cover paper table that is driven by the M46 reaches the upper limit.
- The cover paper table upper limit sensor /Rr (PS27) [4] detects that the rear side of the cover paper table that is driven by the M47 reaches the upper limit.
- The cover paper table home sensor /Fr (PS47) [7] detects that the front side of the cover paper table is in its home position, and the cover paper table home sensor /Rr (PS53) [8] detects that the rear side of the cover paper table is in the home position.



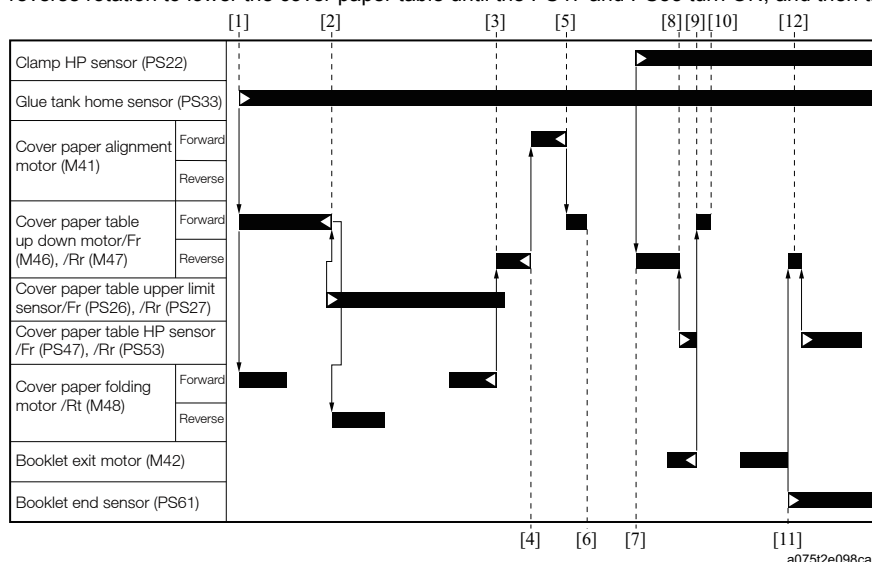
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[1]	Cover paper table up down belt /Rr_Rt	[2]	Cover paper table up down belt /Rr_Lt
[3]	Cover paper table upper limit sensor /Fr (PS26)	[4]	Cover paper table upper limit sensor /Rr (PS27)
[5]	Cover paper table up down belt/Fr_Lt	[6]	Front side
[7]	Cover paper table home sensor /Fr (PS47)	[8]	Cover paper table home sensor /Rr (PS)
[9]	Cover paper table up down belt /Fr_Rt	-	

(2) Control

1. When applying glue to the spine of inside papers is finished and the glue tank HP sensor (PS33) turns ON, the cover paper table up down motors /Fr (M46) and /Rr (M47) start forward rotation to lift the cover paper table [1].
2. During a prescribed time period after the cover paper table upper limit sensors /Fr (PS26) and /Rr (PS27) become ON, the cover paper is pressed against the spine of inside papers, and then M46 and M47 stop [2].
3. After the book spine ends are neatly folded, the cover paper folding motor /Rt (M48) moves the cover paper folding plate /Rt away from the book and stops, and then the reverse rotation of the M46 and M47 lowers the cover paper table [3].
4. The M46 and M47 keeps rotating until the cover paper table reaches the position to receive the book, and they stop [4].
5. When the cover paper alignment motor (M41) drives the book exit belt (attached to the cover paper alignment plates /Fr and /Rr) to the position to receive the book, and stops, the M46 and M47 start forward rotation to lift the cover paper table [5].
6. The motors stop [6] when the cover paper table reaches to the position to receive the book.
7. When the clamp home sensor (PS22) turns ON upon completion of opening movement of the clamp pressure plate (the book is released from the plate), the M46 and M47 starts reverse rotation to lower the cover paper table [7] to receive the book.
8. The M46 and M47 stop when the cover paper table home sensors /Fr (PS47) and /Rr (PS53) detect that the cover paper table reaches its home position.
9. When the booklet exit motor (M42) drives the book exit belt to convey the book to the predetermined position and stops, the M46 and M47 starts forward rotation to lift the cover paper table [9].
10. In order to align the surface of the book exit belt with that of the book conveyance belt in the book stock section, the cover table is lifted by 60mm and the M46 and M47 stop [10].

11. When the booklet end sensor (PS61) turns ON detecting that the book has exit to the book stock section [11], the M46 and M47 starts reverse rotation to lower the cover paper table until the PS47 and PS53 turn ON, and then the motors stop [12].



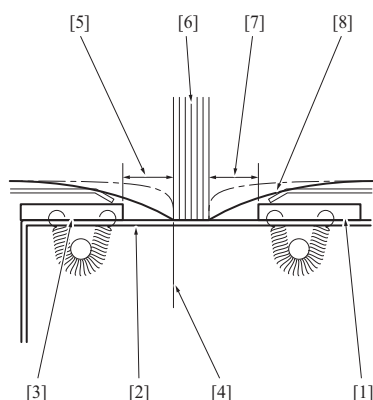
[1]	Completion of glue application	[2]	Completion of pressing the book spine
[3]	Starting to lower the cover paper table for preparing book receiving operation	[4]	Standby for receiving book
[5]	Book exit belt movement is finished	[6]	Going up and stopping at the position to receive book
[7]	Starting book receiving operation	[8]	Stopped at home position
[9]	Starting lifting to the book exit position	[10]	Lifting by 60mm
[11]	Book exit is finished	[12]	Returning to the home position

8.3.6 Cover paper folding plate control

(1) Mechanism

(a) OUTLINE

- In order to let the book spin ends to form perfect corners, the cover paper folding motors /Rt (M48) and /Lt (M49) move the cover paper folding plates /Rt [1] and /Lt [3] respectively inward to press the book spine [6] from both left and right side with the spine pressed by the book spine backing plate [2] on the cover paper [8].
- The cover paper folding plate /Lt is used as the reference position [4], and the cover paper folding plate /Rt presses the book against the plate /Lt with spring load.
- The standby position of the cover paper folding plate /Lt is 15mm [5] left from the reference position [4], and that of the cover paper folding plate /Rt is 15mm [7] right from the right end of the book regardless of the book thickness.

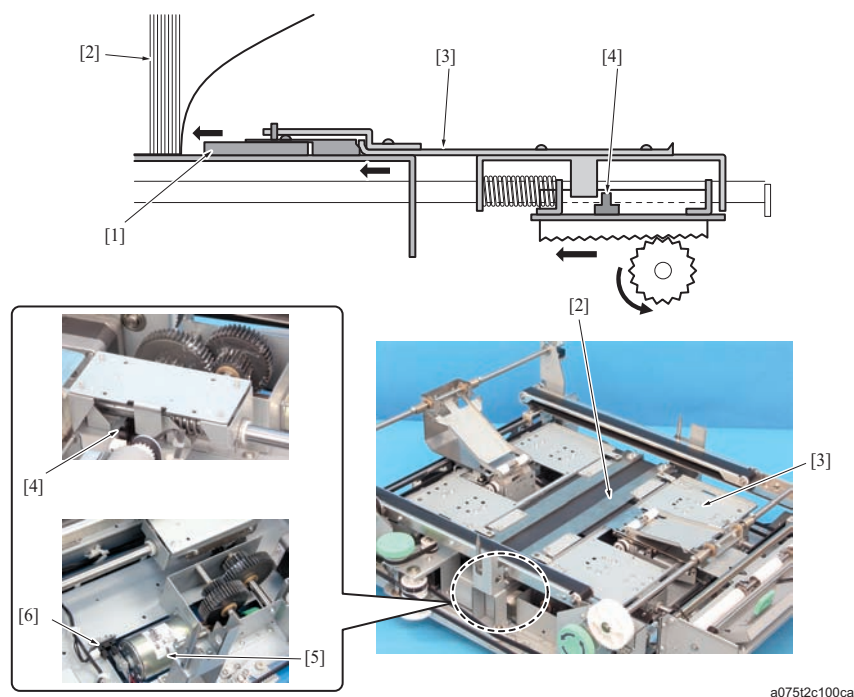


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[1]	Cover paper folding plate /Rt	[2]	Book spine backing plate
[3]	Cover paper folding plate /Lt	[4]	At the reference position
[5]	15mm	[6]	Book
[7]	15mm	-	

(b) Pressure mechanism

- The cover paper folding motor /Rt (M48) [5] drives the cover paper folding operation via the gear.
- The cover paper folding pressure sensor (PS52) [4] detects the pressure applied to the book.
- The cover paper folding plate encoder sensor (PS50) [6] detects how much the M48 has rotated.

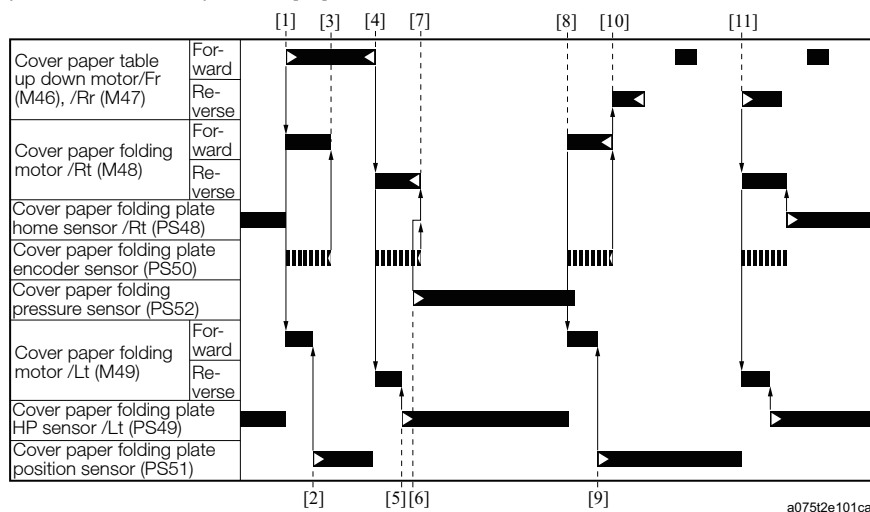


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[1]	Cover paper folding plate /Rt	[2]	Book
[3]	Pressure drive plate /Rt	[4]	Cover paper folding pressure sensor (PS52)
[5]	Cover paper folding motor /Rt (M48)	[6]	Cover paper folding plate encoder sensor (PS50)

(2) Control

- When the cover paper table up down motors /Fr (M46) and /Rr (M47) start to rise to stick the cover paper to the book spine and cover paper alignment completes, when the CD alignment plate returns to home position, the cover paper folding motors /Rt (M48) and /Lt (M49) start forward rotation to move the cover paper folding plates /Rt and /Lt outward [1].
- The M49 stops [2] when a prescribed time has elapsed after the cover paper folding plate position sensor (PS51) turns ON.
- The M48 stops [3] when the cover paper folding plate encoder sensor (PS50) has count certain pulses correspond to the book thickness.
- When the M46 and M47 stop upon completion of pressing the cover paper against the spine of inside papers, the M48 and M49 start reverse rotation to move the cover paper folding plate /Rt and /Lt inward (toward the book) [4].
- When the cover paper folding plate /Lt has moved to the reference position during a prescribed time period after the cover paper folding plate home sensor /Lt (PS49) turns ON, the M49 stops [5].
- When the cover paper folding pressure sensor (PS52) turns ON [6], the PS50 starts to count again until the pressure plate moves 3mm pressing the book, and then the M48 stops [7].
- The M48 and M49 start forward rotation to release the book from the pressure [8].
- The M49 stops [9] when the cover paper folding plate /Lt reaches its standby position after the PS51 turns ON.
- The M48 stops [10] when the cover paper folding plate /Rt reaches its standby position after the PS50 counted certain pulses.
- When the M46 and M47 start to rotate to lower the cover paper table, the M48 and M49 start to drive to return the cover paper folding plates to their home positions [11].



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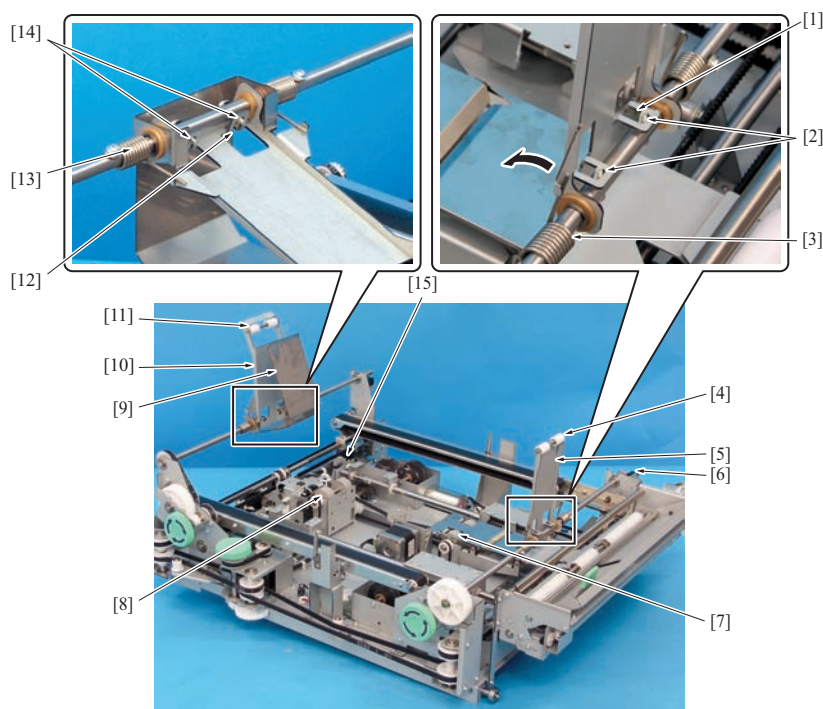
[1]	Movement to the standby position	[2]	Cover paper folding plate /Lt stops at the standby position
[3]	Cover paper folding plate /Rt stops at the standby position	[4]	Starts to fold cover paper

[5]	Cover paper folding plate /Lt stops at the reference position	[6]	Start to apply pressure to the book
[7]	Stops applying a certain pressure to the book	[8]	Releasing book after pressing it for a certain time to harden the glue
[9]	Cover paper folding plate /Lt stops at the standby position	[10]	Cover paper folding plate /Rt stops at the standby position
[11]	Returning to the home position	-	

8.3.7 Cover paper conveyance arm control

(1) Mechanism

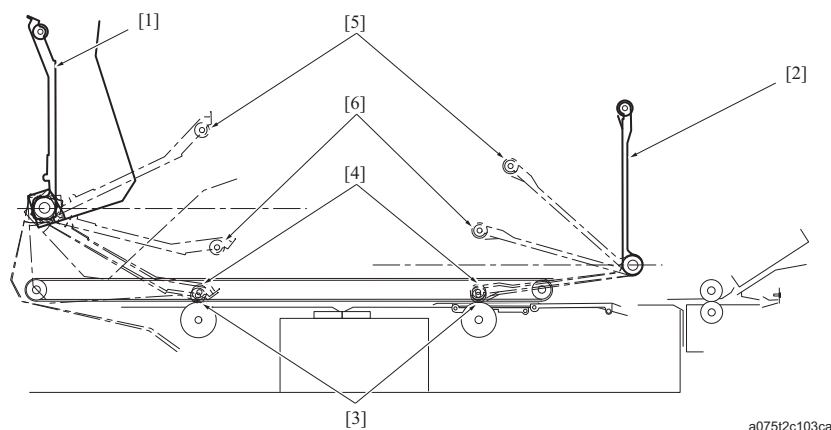
- The cover paper conveyance arms /Rt [5] and /Lt [10] press/separate the driven rollers [4] and [11] against/from the cover paper conveyance rollers /Rt [7] and /Lt [8].
- The cover paper conveyance arm /Lt is equipped with the cover paper lift plate /Lt [9] which lifts the left-side of the cover paper to prevent it from being fold while the cover paper alignment plates (book exit belts) are moved inward to attach the cover paper to the inside papers.
- The cover paper conveyance arm motors /Rt (M43) and /Lt (M44) drive the cover paper conveyance arms /Rt and /Lt via the pins [2] and [14].
- While conveying a cover paper, the pins [2] and [14] come off the notches [1] and [12] of the cover paper conveyance arms, and the cover paper conveyance rollers /Rt and /Lt are pressed against the paper with the spring load [3] and [13].
- The cover paper conveyance arm home sensors /Rt (PS42) [6] and /Lt (PS43) [15] detect that the arms are in their home positions. The upright positions of the paper cover conveyance arm /Lt and /Rt are their home positions.



[1]	Notch of cover paper conveyance arm /Rt	[2]	Pin
[3]	Spring	[4]	Driven roller
[5]	Cover paper conveyance arm /Rt	[6]	Cover paper conveyance arm home sensor /Rt (PS42)
[7]	Cover paper conveyance roller /Rt	[8]	Cover paper conveyance roller /Lt
[9]	Cover paper lift plate /Lt	[10]	Cover paper conveyance arm /Lt
[11]	Driven roller	[12]	Notch of cover paper conveyance arm /Lt
[13]	Spring	[14]	Pin
[15]	Cover paper conveyance arm home sensor /Lt (PS43)	-	

- The following table shows the preset angles of the cover paper conveyance arms for each operation.

Operation	Cover paper conveyance arm / Lt [1]	Cover paper conveyance arm / Rt [2]
Home position [1] [2]	+90 degrees	+90 degrees
Cover paper conveyance [3]	-30.4 degrees	-8 degrees
Cover paper alignment, attachment [4]	-29.4 degrees	-7 degrees
Temporary lowering of cover paper table (for book exit belt preparation) [5]	+25.4 degrees	+41.2 degrees
Re-lifting of cover paper table (to receive book) [6]	-14.1 degrees	+15.3 degrees



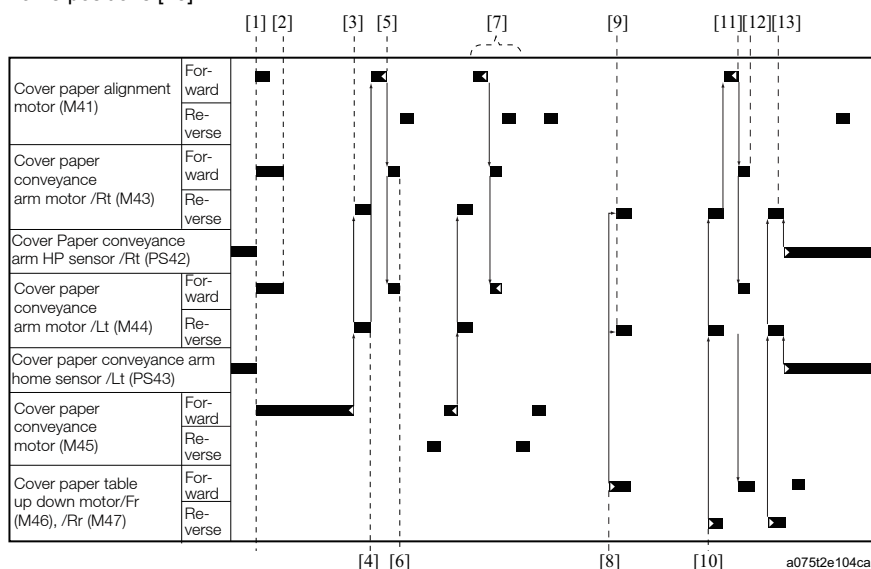
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[1]	Cover paper conveyance arm /Lt	[2]	Cover paper conveyance arm /Rt
[3]	Cover paper conveyance	[4]	Cover paper alignment, attachment
[5]	Temporary lowering of cover paper table (for book exit belt preparation)	[6]	Re-lifting of cover paper table (to receive book)

(2) Control

(a) Cover paper trimming mode

- When detecting that the print start signal turns ON [1], the cover paper conveyance arm motors /Rt (M43) and /Lt (M44) start forward rotating to make the driven rollers provided on the tips of the arms press against the conveyance rollers /Rt and /Lt, and the motors stop [2].
- When the cover paper conveyance motor (M45) stops [3] after conveying the cover paper to the cover paper table, the M43 and M44 start reverse rotation to move the driven rollers away from the paper [4].
- When the cover paper alignment motor (M41) stops [5] after making the arms press against both edges of the cover paper for alignment, the M43 and M44 start forward rotation to press the conveyance rollers /Rt and /Lt with the driven rollers [6] to prevent the paper from moving.
- When the cover paper trimming is finished, the cover paper alignment operation [7] to be attached to the inside papers is performed in the same manner as for the trimming.
- When a prescribed time has elapsed after the cover paper table is lifted [8] by the cover paper table up down motors /Fr (M46) and /Rr (M47), the cover paper folding plates /Rt and /Lt start to move inward to fold the cover paper along the inside papers, and at the same time, the M43 and M44 start reverse rotation to move the driven rollers away from the paper [9].
- When the cover paper table starts temporary lowering to prepare for receiving the book with the M46 and M47 drive forces, the M43 and M44 start reverse rotation [10] to support both sides of the cover paper with the cover paper lift plate /Lt and /Rt. It prevents the cover paper alignment plates /Fr and /Rr from unexpectedly folding the cover paper.
- When the M41 stops [11] after setting the book exit belt /Fr and /Rr at the book receiving position, the cover paper table starts to move upward again, and at the same time, the M43 and M44 start forward rotation to move the arms so that they do not contact with the clamp section.
- When the cover paper table starts downward movement receiving the book, the M43 and M44 drives the arms to return them to the home positions [13].



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[1]	Print start signal ON	[2]	Driven rollers are pressed against the conveyance rollers
[3]	Cover paper conveyance is completed	[4]	Release
[5]	Completion of positioning (alignment) cover paper for trimming	[6]	Driven rollers are pressed against the paper

[7]	Positioning (alignment) cover paper to be attached to inside papers	[8]	Starting lifting the cover paper table
[9]	Driven rollers release the paper for cover paper folding operation	[10]	Temporary lowering of the cover paper table
[11]	Book exit belt is set to standby	[12]	Moving the arms to avoid contact with clamp section
[13]	Returning to the home position	-	

(b) Cover paper Not trimming mode

When the sub-scanning direction length of inside papers is over 182mm, the first positioning operation for trimming is not performed. Only the positioning operation for attaching the cover to the inside papers is performed. However, when the inside paper is smaller than B5 size, alignment is done twice. Once when cover paper is carried in, and once after leading edge positioning is done.

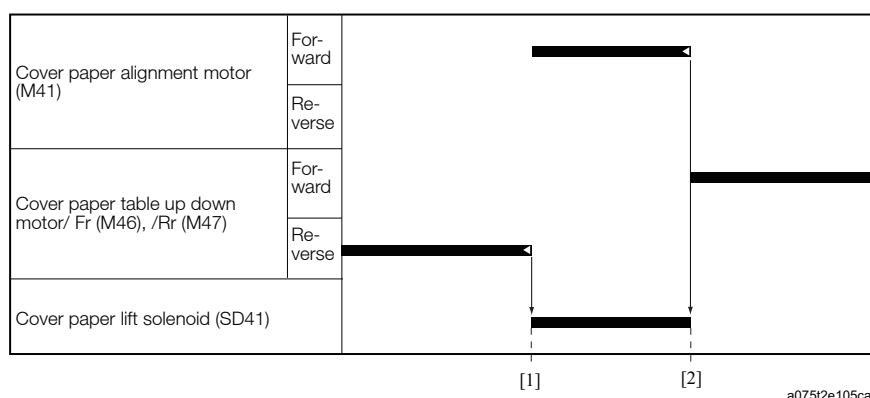
8.3.8 Cover paper lifting (supporting) control

(1) Mechanism

- The cover paper lift solenoid (SD41) activates the cover paper lift plate /Rt.
- The cover paper lift plate /Rt supports the right-side of the cover paper to prevent it from bowing down and being unexpectedly folded when the cover paper table is temporary lowered for setting the book exit belt at the standby position.

(2) Control

- When the cover paper table up down motors /Fr (M46) and /Rr (M47) stop after lowering the table for setting the book exit belt at the standby position, the cover paper lift solenoid (SD41) is activated to move the cover paper lift plate for supporting the right-side of the cover paper. This operation prevents the right-side of the paper from bowing.
- The SD41 turns OFF when the cover paper alignment motor (M41) stops after setting the book exit belt at the standby position.



[1]	Supporting cover page with the cover lift plate	[2]	Ending supporting cover paper
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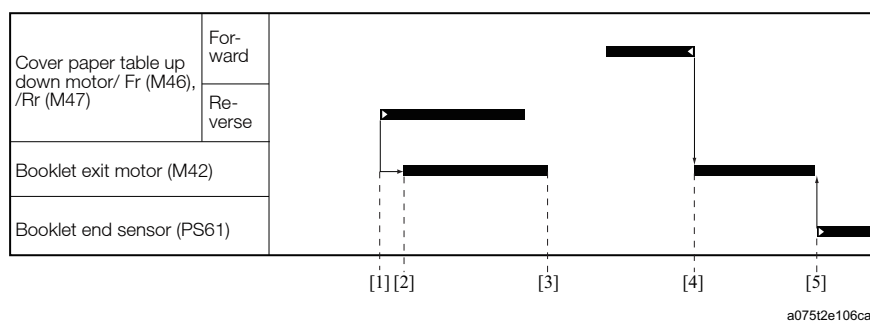
8.3.9 Book paper exit control

(1) Mechanism

- The booklet exit motor (M42) drives the book exit belts /Fr and /Rr.

(2) Control

- After the cover paper is folded along the inside papers, the cover paper table up down motors /Fr (M46) and /Rr (M47) start reverse rotation to lower the cover paper table [1].
- When the book spine corner touches the book exit belt surface (when a prescribed time has elapsed after the table starts to go down), the booklet exit motor (M42) starts to rotate at low speed so that the book is slowly laid down on the belt [2].
- When a prescribed time has elapsed after starting the rotation, the M42 stops [3].
- The M42 starts high-speed rotation to exit the book [4] toward the book stock section when the M46 and M47 have moved the cover paper table upward by 60mm so that the book exit belt horizontally aligns with the book conveyance belt in the book stock section.
- The M42 stops [5] when the booklet end sensor (PS61) turns ON detecting that the book has conveyed to the book stock section.

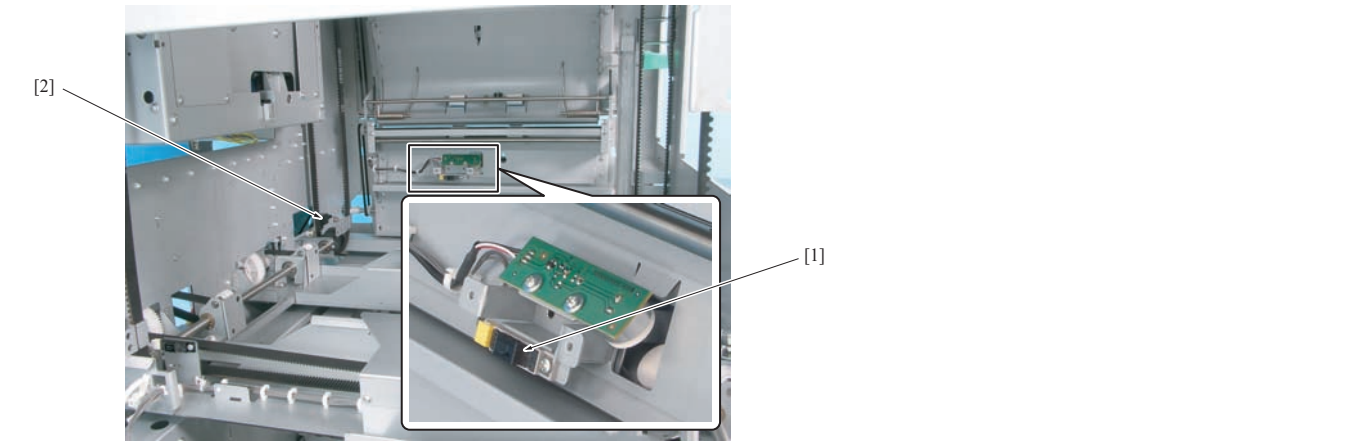


[1]	Cover paper table goes down to convey the book to the belt	[2]	Receiving the book
[3]	Temporary stop	[4]	Paper exit of the book

[5]	Paper exit completed	-
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8.3.10 Waste paper control

- The waste box full sensor (PS80) [1] detects a full status of the waste box by receiving a light reflected off the waste paper in the box.
- The waste box set sensor (PS81) is provided to detect whether the waste box is properly set or not. The actuator of the waste box activates the sensor.

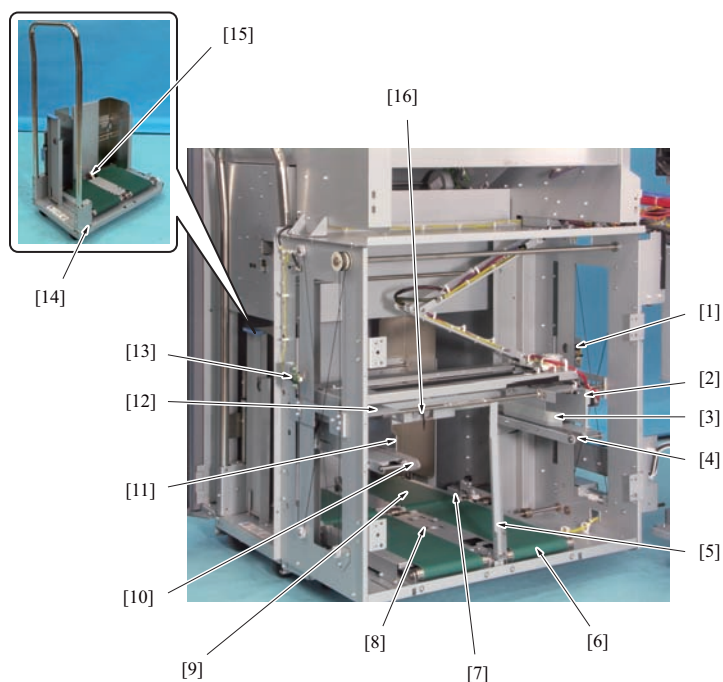


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[1]	Waste box full sensor (PS80)	[2]	Waste box set sensor (PS81)
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9. BOOK STOCK SECTION

9.1 Configuration

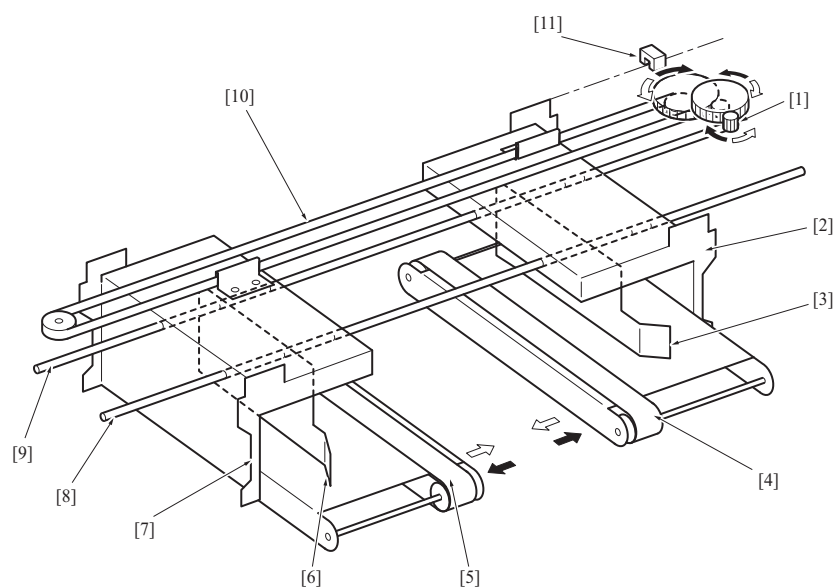


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[1]	Booklet upper limit sensor (PS65)	[2]	Book conveyance arm /Rr
[3]	Book guide /Rr	[4]	Book conveyance belt /Rr
[5]	Book stopper	[6]	Book movement belt /l
[7]	Booklet sensor /2 (PS67)	[8]	Booklet sensor /1 (PS66)
[9]	Book movement belt /2	[10]	Book conveyance belt /Fr
[11]	Book guide /Fr	[12]	Book conveyance arm /Fr
[13]	Booklet upper limit LED (LED61)	[14]	Handcart
[15]	Actuator (for booklet sensor /2)	[16]	Booklet end sensor (PS61)

9.2 Drive

9.2.1 Book conveyance drive

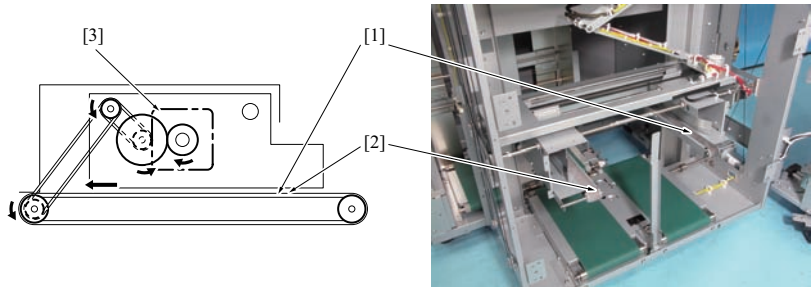


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[1]	Booklet conveyance belt movement motor (M62)	[2]	Book conveyance arm /Rr
[3]	Book guide /Rr	[4]	Book conveyance belt /Rr
[5]	Book conveyance belt /Fr	[6]	Book guide /Fr
[7]	Book conveyance arm /Fr	[8]	Guide shaft /Rt
[9]	Guide shaft /Lt	[10]	Timing belt

[11]	Book conveyance belt movement home sensor (PS62)	-
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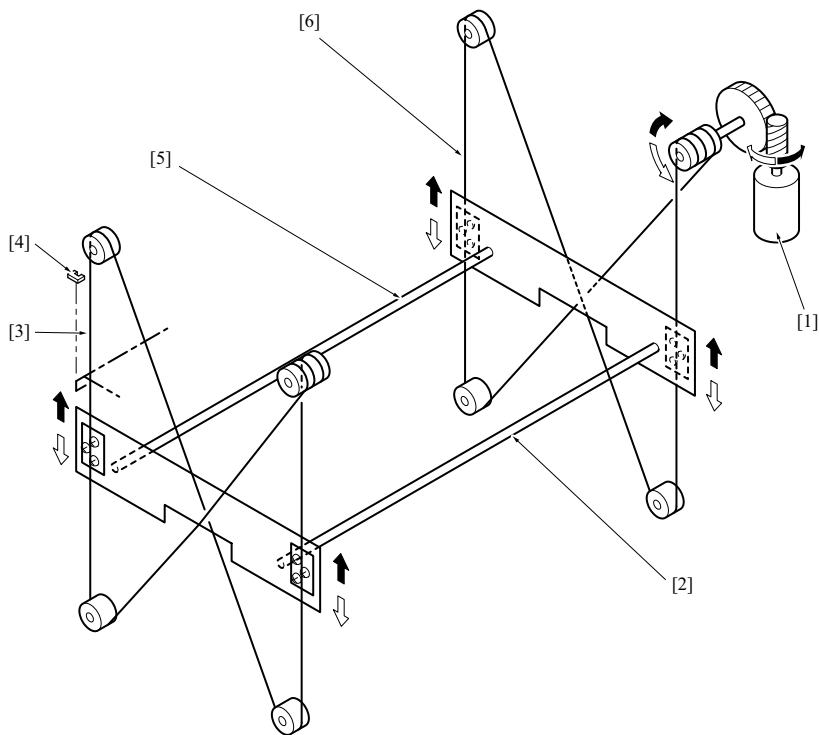
9.2.2 Book conveyance belt drive



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[1]	Book conveyance belt /Rr	[2]	Book conveyance belt /Fr
[3]	Booklet conveyance belt motor (M61)		-

9.2.3 Book conveyance up down drive



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[1]	Booklet conveyance belt up down motor (M63)	[2]	Guide shaft /Rt
[3]	Book lift wire/Rr Book lift wire/Fr	[4]	Book conveyance belt home sensor (PS63)
[5]	Guide shaft /Lt	[6]	Book lift wire /Rr

9.2.4 Book movement drive

The diagram shows a top-down view of the book movement drive mechanism. It includes a motor (1) connected to a belt (2) which drives a series of rollers (3) and a timing belt (4). Two photographs provide detailed views: one shows the motor and belt assembly, and the other shows the rollers and timing belt in operation.

[1]	Booklet conveyance belt movement motor (M64)	[2]	Book movement belt /1
[3]	Book movement belt /2	[4]	Timing belt

9.2.5 Book stopper drive

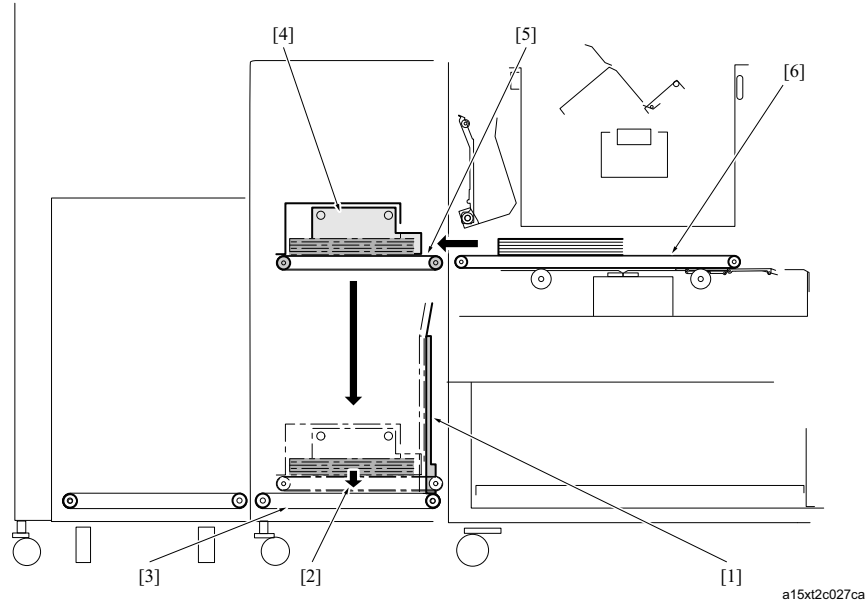
The diagram illustrates the book stopper drive mechanism. It shows a motor (4) driving a belt (2) which moves a stopper arm (1) and a sensor (3). Two photographs show the stopper in its open and closed positions.

[1]	Book stopper	[2]	Booklet stopper HP sensor (PS68)
[3]	Front side	[4]	Booklet stopper motor (M65)

9.3 Operation

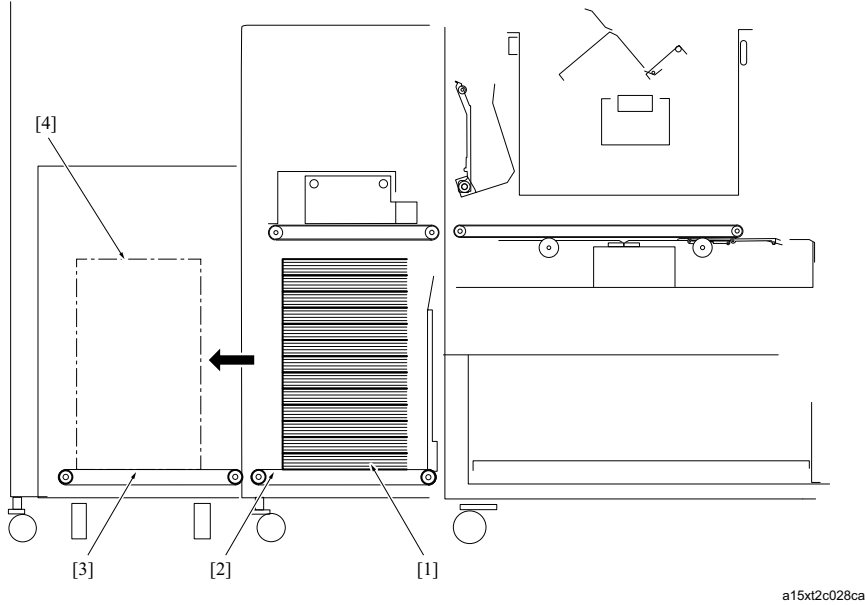
9.3.1 Book stock section operation overview

1. When detecting that the print start signal turns ON, the book guides /Fr and /Rr [4] and the book stopper [1] are moved to the positions correspond to the selected paper size.
2. The book conveyance belt [5] is driven in synchronization with the drive of the book exit belt [6] in the cover paper table section, and the conveyance belt receives the book from the exit belt.
3. The book guides /Fr and /Rr [4] are moved to the positions where they contact with the book side edges to align the book.
4. The book is conveyed downward until it reaches to the position to be stacked.
5. The book conveyance arms /Fr and /Rr are opened to drop the book onto the book movement belt /1 [3].



[1]	Book stopper	[2]	Book conveyance arm /Fr, /Rr
[3]	Book movement belt /1	[4]	Book guide /Fr, /Rr
[5]	Book conveyance belt	[6]	Book exit belt

6. When books have been stacked to the upper limit, the stack of books [1] is moved to the second row [4] by the book movement belts /1 [2] and /2 [3], and then it keeps stacking the subsequent books in the first row.

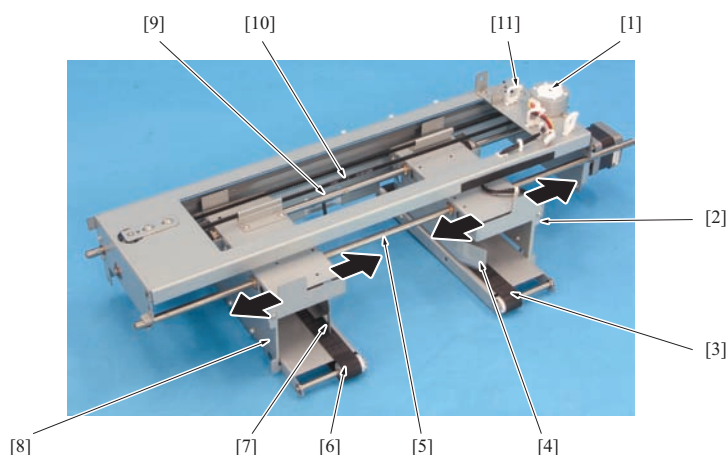


[1]	Stack of books at the first row	[2]	Book movement belt /1
[3]	Book movement belt /2	[4]	Second row

9.3.2 Book conveyance and movement control

(1) Mechanism

- The booklet conveyance belt movement motor (M62) [1] drives the book movement arms /Fr [8] and /Rr [2] via the timing belt [10].
- The book movement arms /Fr and /Rr move in the main scan direction along the guide shaft /Rt [5] and /Lt [9].
- The book conveyance belt movement home sensor (PS62) is provided to detect whether the arms in their home position or not.
- The guide shafts /Fr and /Rr are moved up or down by the booklet conveyance belt up down motor (M63).
- The book movement arms /Fr and /Rr include the book conveyance belts /Fr [6], /Rr [3], and the book guide /Fr [7], /Rr [4].
- Registration regulating plate /Fr [7], /Rr [4] slides along the guide shaft /Rt [5], /Lt [9].

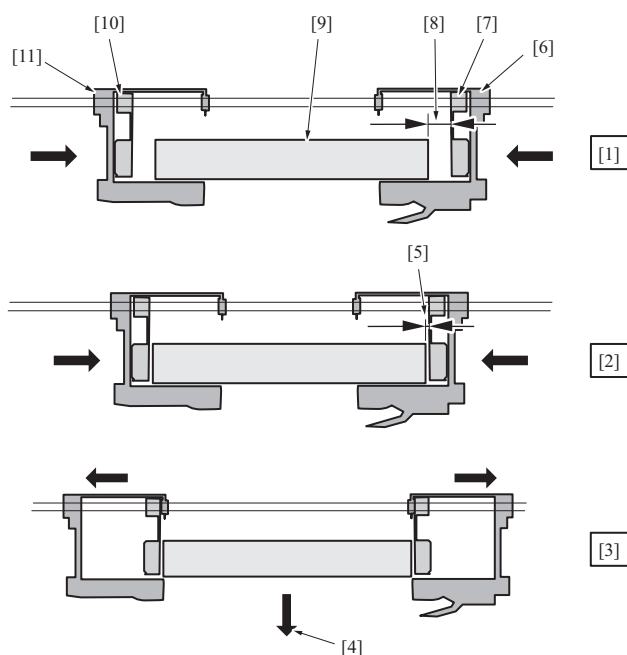


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[1]	Booklet conveyance belt movement motor (M62)	[2]	Book movement arm /Rr
[3]	Book conveyance belt /Rr	[4]	Book guide /Rr
[5]	Guide shaft /Rt	[6]	Book conveyance belt /Fr
[7]	Book guide /Fr	[8]	Book movement arm /Fr
[9]	Guide shaft /Lt	[10]	Timing belt
[11]	Book conveyance belt movement home sensor (PS62)	-	

(a) Operation

- When receiving a book from the cover paper table section [1], the book movement arms /Fr [6] and /Rr [11] are moved to the positions correspond to the book size, and the book guides /Fr [7] and /Rr [10] are set at the positions 17mm outer the book edges [9].
- Then the book guides are moved inward to the positions 2mm away from the book edges to align the book to be stacked.
- When the book is conveyed downward to the position to be stacked, the book movement arm /Fr [6] and /Rr [10] are moved outward to drop the book [3].



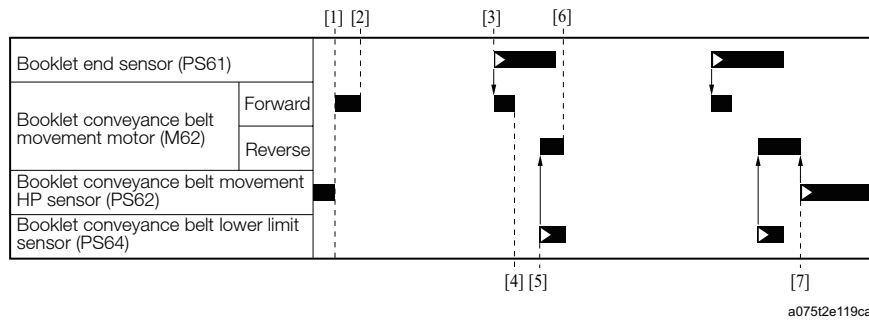
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[1]	Standby/receiving book	[2]	Aligning the book and moving down
[3]	Releasing the book	[4]	Book drops
[5]	Gap between the book edge and the guide is 2mm during alignment	[6]	Book movement arm /Fr
[7]	Book guide /Fr	[8]	Gap between the book edge and the guide is 17mm in the standby status
[9]	Book	[10]	Book guide /Rr
[11]	Book movement arm /Rr	-	

(2) Control

- When detecting that the print start signal turns ON [1], the book conveyance belt movement motor (M62) starts forward rotation to move the book movement arms /Fr and /Rr to the positions correspond to the book size [2].
- When the booklet end sensor (PS61) turns ON [3], the M62 starts forward rotation again to move the regulation plates /Fr and /Rr inward until the gap between the regulation plates and book edges become 2mm to perform alignment [4].

3. When the booklet conveyance belt lower limit sensor (PS64) turns ON [5], the M62 starts reverse rotation to move the arms to home position and stops [6]. However, when there are subsequent books, book conveyance assy moves the book movement arms to standby position after returning to the upper limit home position.
4. After releasing the book, the M62 reverse rotation is continued until the arms stop at their home positions [7] turning ON the book conveyance belt movement home sensor (PS62).



[1] Print start signal ON	[2] Stop the arms at the positions correspond to the book size
[3] Receiving the book is completed	[4] Guides stop at the positions for alignment
[5] Start to move the arms to their standby position	[6] Stopping at the standby position
[7] Returning to the home position	-

9.3.3 Book conveyance belt control

(1) Mechanism

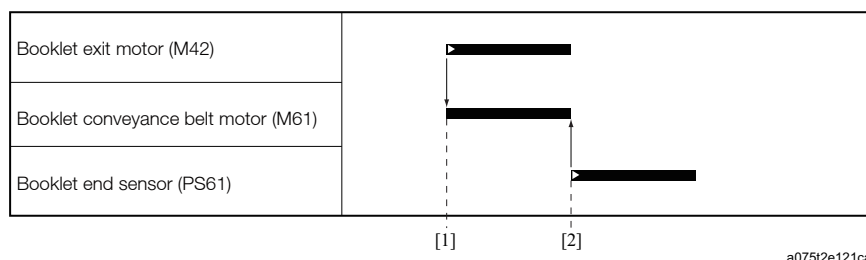
- The booklet conveyance belt motor (M61) drives the book conveyance belt.
- The book conveyance belts /Fr [2] and /Rr [1] receive the book conveyed from the cover paper table section.
- The booklet presses the book end sensor (PS61) [3] and turns it ON. It detects the completion of the receiving operation.



[1] Book conveyance belt /Rr	[2] Book conveyance belt /Fr
[3] Booklet end sensor (PS61)	-

(2) Control

- The booklet conveyance belt motor (M61) starts to drive upon starting of the booklet exit motor (M42) to receive the book [1] conveyed from the cover paper table section.
- The M61 stops [2] when the booklet end sensor (PS61) turns ON.



[1] Book conveyance belt drive	[2] Receiving the book is completed
--------------------------------	-------------------------------------

9.3.4 Book conveyance up down control

(1) Mechanism

- The booklet conveyance assy [5] is moved up and down with the book lift wires /Fr [4] and /Rr [3] driven by the booklet conveyance belt up down motor (M63) [1].
- The booklet conveyance belt home sensor (PS63) [6] detects whether the book conveyance assy is at its upper limit home position or not. The book conveyance belt lower limit sensor (PS64) [2] provided at the bottom of the book movement arm /Rr detects whether the book conveyance assy is at its lower limit position (top surface of the stacked books or the movement belt position).

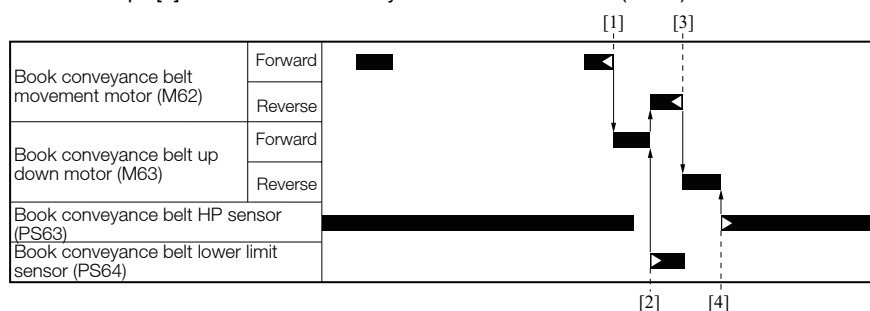


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[1] Booklet conveyance belt up down motor (M63)	[2] Booklet conveyance belt lower limit sensor (PS64)
[3] Book lift wire /Rr	[4] Book lift wire /Rr Book lift wire /Fr
[5] Book conveyance assy	[6] Booklet conveyance belt home sensor (PS63)

(2) Control

- When the book alignment driven by the booklet conveyance belt movement motor (M62) is finished, the booklet conveyance belt up down motor (M63) starts forward rotation to lower the book conveyance assy [1].
- M63 stops when the booklet conveyance belt lower limit sensor (PS64) turns ON [2].
- When the M62 stops [3], the M63 starts reverse rotation to lift the book conveyance assy.
- The M63 stops [4] when the book conveyance belt home sensor (PS63) detects that the assy reaches its upper home position.



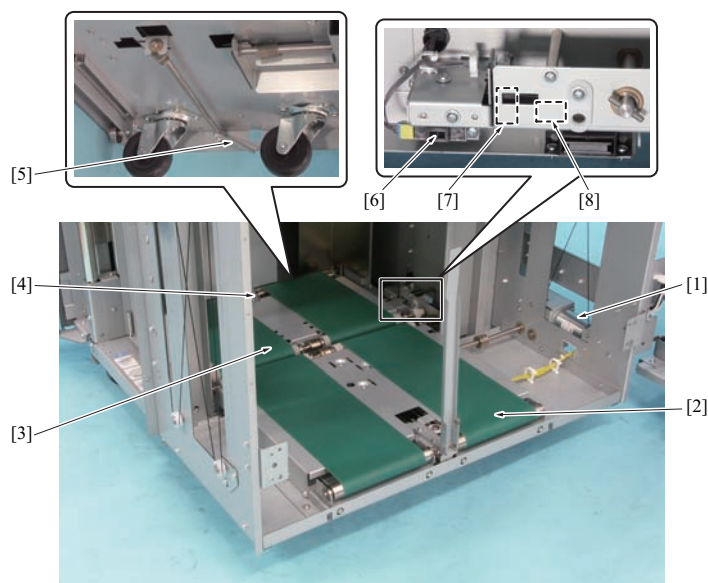
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[1] Book conveyance assy starts to go down	[2] Stopping at the book release position
[3] Releasing book is completed	[4] Returning to the home position

9.3.5 Book movement control

(1) Mechanism

- The booklet movement motor (M64) [1] drives the book movement belts /1 [2] and /2 [3].
- It moves the books of the first row stacked on the book movement belt /1 to the book movement belt /2 of the second row.
- The shielding plate [5] of the actuator [4] on the handcart turns ON the booklet sensor /2 (PS67) [6] and detects whether there is any book stacking on the second row.



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[1] Booklet conveyance belt movement motor (M64)	[2] Book movement belt /1
[3] Book movement belt /2	[4] Actuator

[5] Shielding plate	[6] Booklet sensor /2 (PS67)
[7] Cart set sensor (PS69)	[8] Hand cart set switch (MS2)

(2) Control

(a) While in the print

- The booklet movement motor (M64) is allowed to drive only when the booklet sensor /2 (PS67) is OFF (no stack of books exist at the second row).
- It allows the driving of M64 only when the cart set sensor (PS69) and the hand cart set switch (MS2) are ON.
- When the booklet load limit sensor (PS65) detects that book has been stacked up to the limit at the first row, the M64 starts to drive the belt and stops after the specified period of time when the PS67 turns ON.

(b) Book manual movement

- The booklet movement motor (M64) is allowed to drive only when the booklet sensor /1 (PS66) is ON and the booklet sensor /2 (PS67) is OFF.
- It allows the driving of M64 only when the cart set sensor (PS69) and the hand cart set switch (MS2) are ON.
- It drives the M64 with turning ON the book movement button and stops after the specified period of time when the PS67 turns ON.

9.3.6 Book stopper control

(1) Mechanism

- The book stopper supports the stacked books to prevent them from falling down.
- The booklet stopper motor (M65) drives the book stopper.
- The booklet stopper HP sensor (PS68) detects whether the book stopper is at its home position or not.

(2) Control

- Upon receiving of a print job, the booklet stopper motor (M65) starts forward rotation to move the stopper to the position correspond to the book size.
- When the job is finished, the M65 starts reverse rotation to return the stopper to its home position, and the motor stops when the booklet stopper HP sensor (PS68) turns ON.

9.3.7 Book full status detection control

- When books have been stacked up to the limit at the first row, the full-status is detected by the booklet load limit sensor (PS65) and notified by the booklet upper limit LED (LED61).
- Since any light to the PS65 is blocked while the book conveyance assy is moving up or down, the PS65 status is checked only while the book conveyance belt home sensor (PS63) is ON.
- Even when the PS65 is not detecting the full-status, continuing stacking books cannot be made under the following conditions.

(1) When the stacked book size is the same

- Book thickness is classified into 3 levels; a, b, and c, and allowable number of books to be stacked is determined according to the combination of a, b, and c as shown in the following table.
 - Book a: 10 to 30 sheets
 - Book b: 31 to 150 sheets
 - Book c: 151 to 300 sheets
- Mixing more than 2 among a, b, and c-level books in 1 stack is not allowed.

Books already stacked	Books to be stacked over		
	Book a	Book b	Book c
Book a	50 copies in total	(30 - a)	(20 - a)
Book b	(35 - b) until detected by PS65	35 copies in total or until detected by PS65	(20 - b) copies or until detected by PS65
Book c	Until detected by PS65	Until detected by PS65	Until detected by PS65

*Stacking more books is stopped when the result of the calculations shown in the table become negative value.

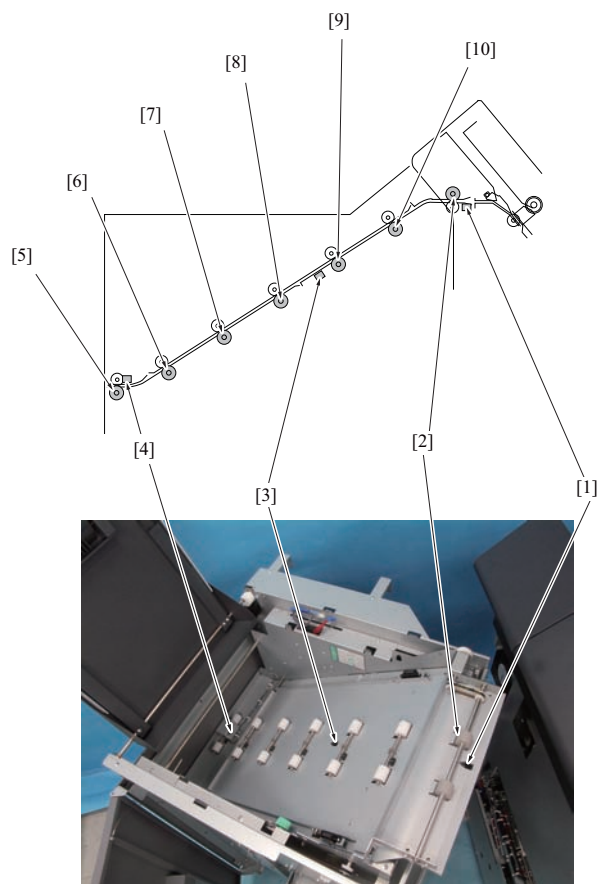
*Stacking more books is stopped when the PS65 detects full status even when the result of the calculations is positive.

(2) When the stacked book size is different from each other

- It moves the stacked books on the first row to the second row, and then stacks the different size books on the open first row. When the handcart is not set, bookbinding is stopped.

10. RELAY CONVEYANCE SECTION

10.1 Configuration

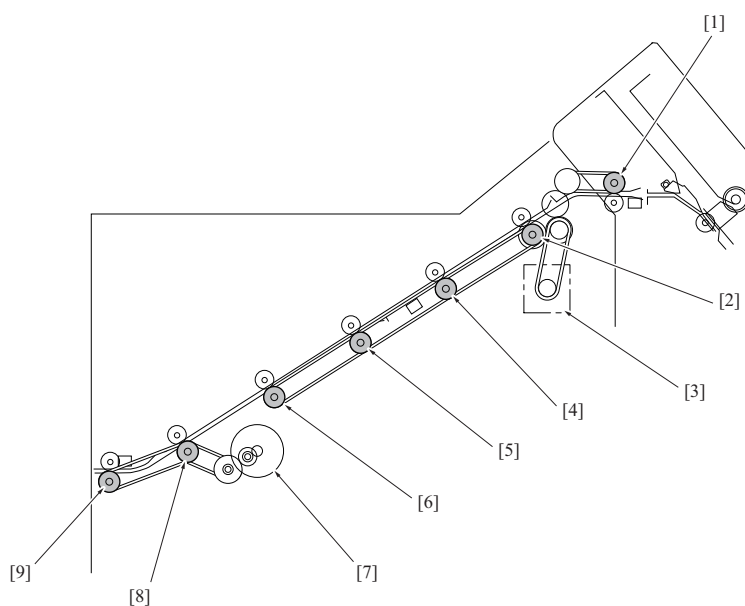


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[1]	Relay conveyance entrance sensor (PS93)	[2]	Relay conveyance roller /1
[3]	Relay conveyance intermediate sensor (PS91)	[4]	Relay conveyance paper exit sensor (PS94)
[5]	Relay paper exit roller /2	[6]	Relay paper exit roller /1
[7]	Relay conveyance roller /5	[8]	Relay conveyance roller /4
[9]	Relay conveyance roller /3	[10]	Relay conveyance roller /2

10.2 Drive

10.2.1 Relay conveyance roller drive / Relay paper exit roller drive



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[1]	Relay conveyance roller /1	[2]	Relay conveyance roller /2
[3]	Relay conveyance motor (M92)	[4]	Relay conveyance roller /3 (One-way clutch)
[5]	Relay conveyance roller /4	[6]	Relay conveyance roller /5 (One-way clutch)
[7]	Relay conveyance paper exit motor (M91)	[8]	Relay paper exit roller /1
[9]	Relay paper exit roller /2	-	

10.3 Operation

10.3.1 Relay conveyance control

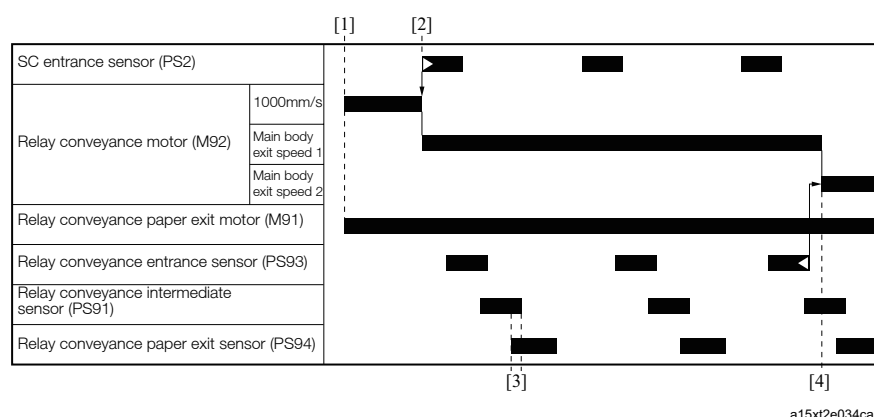
(1) Mechanism

- The relay conveyance motor (M92) switches the relay conveyance rollers /1, /2, /3, /4 and /5 between 1000mm/s and the speed of the main body paper exit, and drives them. *1
- The relay conveyance exit motor (M91) drives the relay paper exit rollers /1 and /2 at the constant speed 1000mm/s.
- The relay conveyance rollers /3 and /5 have the one-way clutch and it applies for the paper pulling out by the relay conveyance paper exit rollers /1 and /2.

*1 The speed is switched only for 1051. For C8000/1200/1200P/1250/1250P/C7000/C7000P/C70hc/C6000, the speed is kept at 1000mm/s and not switched.

(2) Control

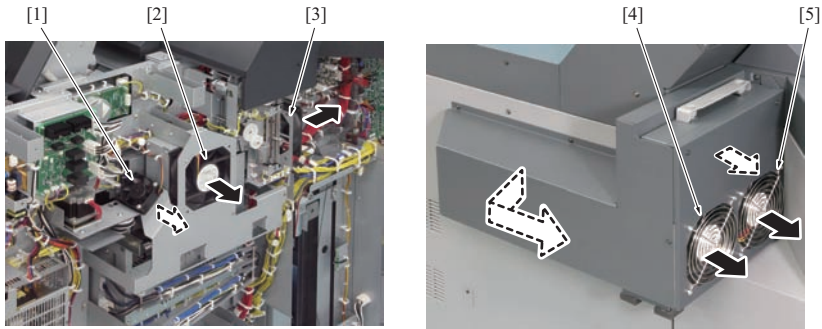
- Upon receiving a print job, the relay conveyance motor (M92) and the relay conveyance exit motor (M91) turn ON [1] at the speed 1000mm/s.
- Once the SC entrance sensor (PS2) turns ON and detects the leading edge, M92 decelerates to the speed of the main body paper exit [2].
- During the period [3] between when the relay conveyance exit sensor (PS94) turns ON and the relay conveyance intermediate sensor (PS91) turns OFF, the relay paper exit rollers /2 and /1 pull and convey the paper from the relay conveyance roller.
- If the speed of the main body paper exit for the next paper changes, it switches to the speed of it [4] after a specified period of time since the relay conveyance entrance sensor (PS93) turns OFF and detects the trailing edge of paper.



[1]	Print start signal ON	[2]	Decelerates to the speed of main body paper exit
[3]	Pull out conveyance by the relay paper exit roller	[4]	Speed switchover

11. OTHERS

11.1 Fan control



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[1]	Pellet supply cooling fan (FM4)	[2]	Exhaust fan /2 (FM81)
[3]	Exhaust fan /1 (FM80)	[4]	Deodorant fan /2 (FM98)
[5]	Deodorant fan /1 (FM97)	-	

11.1.1

(1) Pellet supply cooling fan (FM4)

(a) Purpose

- The fan cools the air above the molten glue surface in the glue tank for the maintenance of a temperature differential to molten glue. This allows the glue tank temperature sensor /Up (TH2) to detect a drop in temperature precisely when it comes out of the molten glue that is getting low for the notification that pellets need to be supplied.

(b) ON timing

- The M4 turns ON upon completion of warm-up of the glue tank.
- The M4 turns ON when the temperature sensor /Md (TH3) detects the temperature around the middle in the glue tank is higher than the preset temperature.

(c) OFF timing

- The M4 turns OFF when the temperature sensor /Md (TH3) detects the temperature around the middle in the glue tank is lower than the preset temperature.

(2) Exhaust fan /1 (FM80), /2 (FM81)

(a) Purpose

- The fans are provided to prevent an excessive increase in temperature inside the PB-501 exhausting air and deodorize.

(b) ON timing

- The FM80 and FM81 turn ON upon completion of warm-up of the glue tank.
- The FM80 and FM81 turn ON when the temperature sensor /Md (TH3) detects the temperature around the middle in the glue tank is higher than the preset temperature.

(c) OFF timing

- The FM80 and FM81 turn OFF when the temperature sensor /Md (TH3) detects the temperature around the middle in the glue tank is lower than the preset temperature.

(3) Deodorant fan /1 (FM97), /2 (FM98)

(a) Purpose

- Exhausts air from the exhaust fans /1 (FM80) and /2 (FM81) to the outside through the deodorant filter.

(b) ON timing

- Turns ON FM97 and FM98 with turning ON the sub power switch (SW2) of the main body.

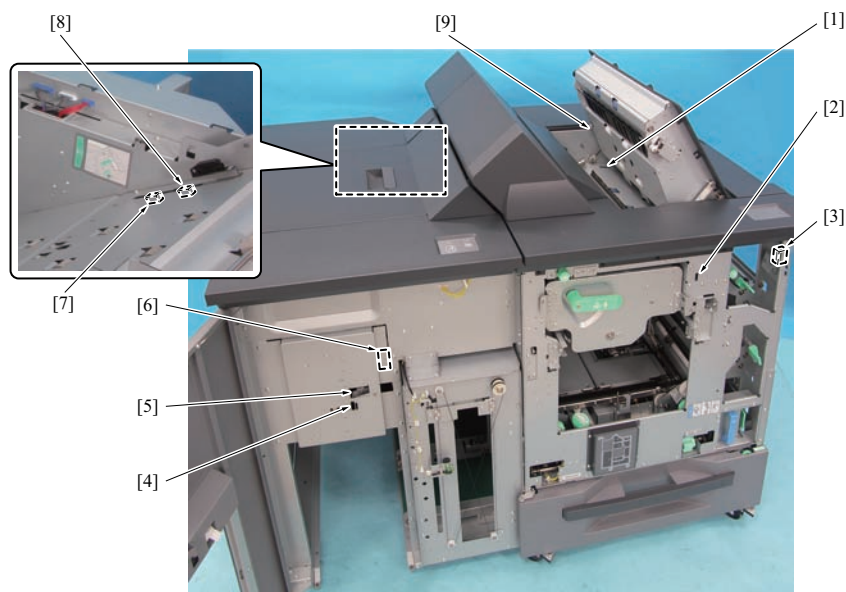
(c) OFF timing

- Turns OFF FM97 and FM98 with turning OFF the sub power switch (SW2) of the main body.

11.2 Door opening/closing control

- When the front door, upper door and the book door are open and the front door switch (SW2) [2], the upper door switch /2 (SW4) [1] and the booklet door switch (SW3) [5] turn OFF, the DC power supply unit /2 (DCPU/2) is shut down to stop all operations instantly.
- When the pellet supply door is opened with the pellet supply door switch (MS1) turned OFF, the pellet supply motor (M33) is stopped instantly.

- During initialization and printing operations, the front door lock solenoid (SD80) [3], booklet door lock solenoid (SD61) [6] turn ON, and disables the front door and the book door to open/close. During idling, jam occurrence or in service mode, SD80 and SD61 turn OFF and open/close of the front door is enabled.
- A message is displayed in the touch panel when the booklet door sensor (PS57) [4], upper door switch /1 (SW1) [9], and relay conveyance door sensor (PS92) [8] switch from ON to OFF.
- When the relay conveyance door is opened with the relay door switch (MS3) [7] turned OFF, the relay conveyance motor (M92) and the relay conveyance exit motor (M91) are stopped instantly.



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[1]	Upper door switch /2 (SW4)	[2]	Front door switch (SW2)
[3]	Front door lock solenoid (SD80)	[4]	Booklet door sensor (PS57)
[5]	Booklet door switch (SW3)	[6]	Booklet door lock solenoid (SD61)
[7]	Relay conveyance door switch (MS3)	[8]	Relay conveyance door sensor (PS92)
[9]	Upper door switch /1 (SW1)	-	

PR THEORY OF OPERATION GP-501

1. PREFACE

1.1 INTRODUCTION

This service manual is provided for use by an authorized service technician for the repair and maintenance of the GP-501 Punch.

The GP-501 Punch is an innovative, labor saving solution for punching paper in-line and includes the following design features:

- Maximum productivity saver with punching in-line at the speed of the printer! Does not slow up or stop the print system.
- Quick-change die sets that are self-latching without tools or levers.
- GP-501 Punch die sets are available in all of the most common hole patterns and include an Identifying Label providing user with the hole pattern and name.
- Convenient storage area for three extra Die Sets located above the sheet bypass.
- Accurate hole punching with consistent alignment.

With each GP-501 Punch, the customer receives a user manual. They are encouraged to keep this manual for future reference.

The information contained in the user manual is also helpful to the service technician.

Please refer to it for detailed information regarding dies sets, operation or specifications.

1.1.1 Setting the Right Expectations

The following excerpts are copied from sales and marketing literature. This customer expectation information is helpful for the service technician.

1.2 PRODUCT POSITIONING

The GP-501 Punch provides a flexible, cost effective punching solution for light to medium level production oriented customers.

- Designed for customers that have the need to punch their documents at a maximum of 60-70% of their overall workflow.
- Recommended punching limit to 200K sheets per month. (600k sheets in bypass mode)
- Die Sets will decrease in performance over time based on the types of stocks and weights that are being punched.
- The expected life of a dieset is 500K punches. However, if paper stock punched is typically 20 lb. bond, then up to 2 million punches can be achieved.
- Should be regarded as a long-term supply item.

1.3 LONG EDGE FEED (LEF) ONLY

The GP-501 Punch is designed to punch LEF only. No exceptions. Attempting to punch a sheet size other than LEF will cause a misfeed.

- Use a colored sheet insert (instead of the tab) in the job workflow for easier tab insertion after the job has been run.

2. OUTLINE

2.1 Unit configuration diagram

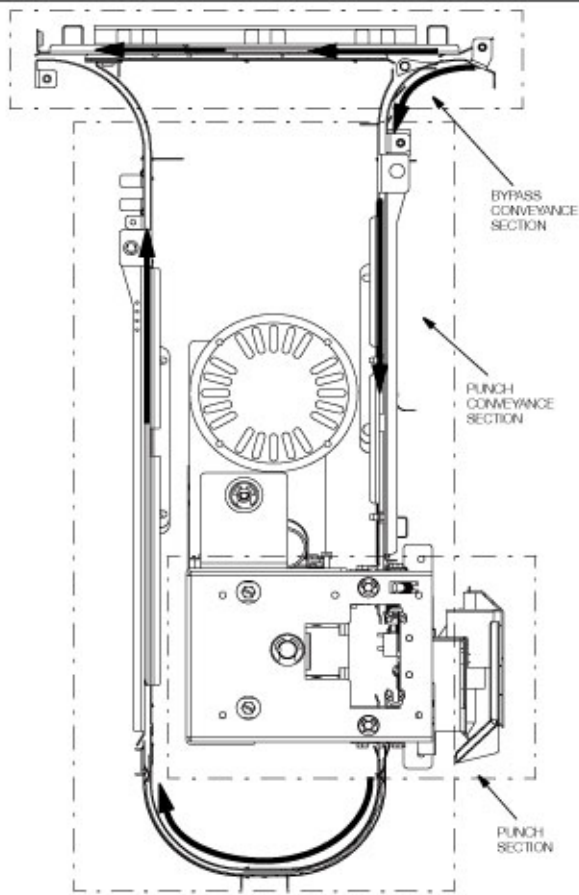


Figure 1.3 Unit Configuration Diagram

2.2 Paper path

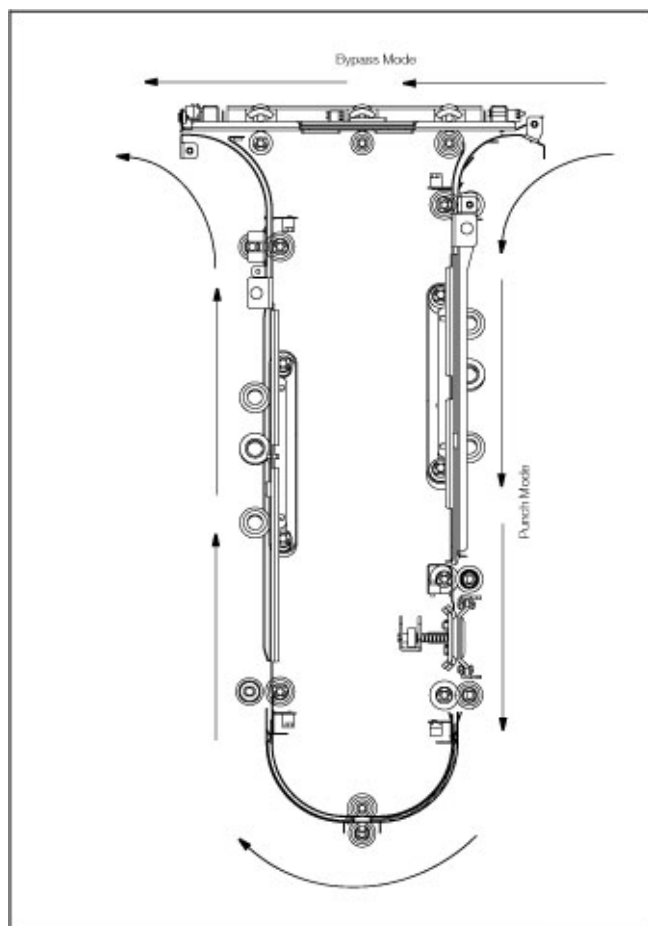
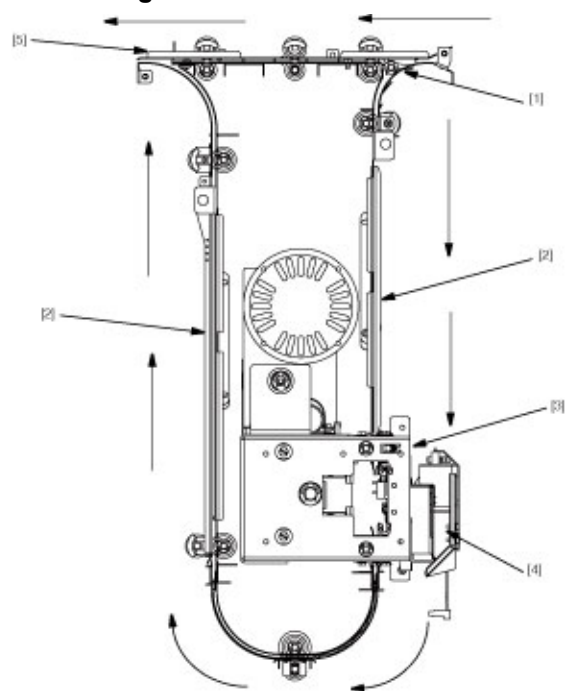


Figure 1.4 Paper Path

3. CONVEYANCE SECTION

3.1 Configuration



[1]	Diverter	[2]	Aligner Panel
[3]	Punch Module	[4]	Back Gauge Mechanism
[5]	Bypass Assembly	-	

4. PRINCIPLE OF OPERATION

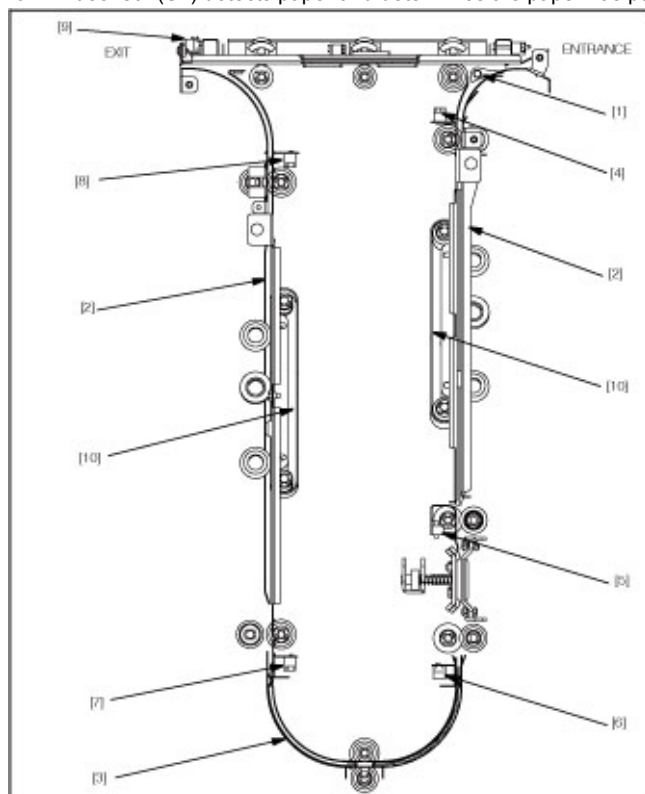
4.1 Punch conveyance control

The GP-501 Punch is a machine that punches various die set hole patterns into single sheets of paper. The machine is placed between a printer and a finisher. The punch has two paper paths.

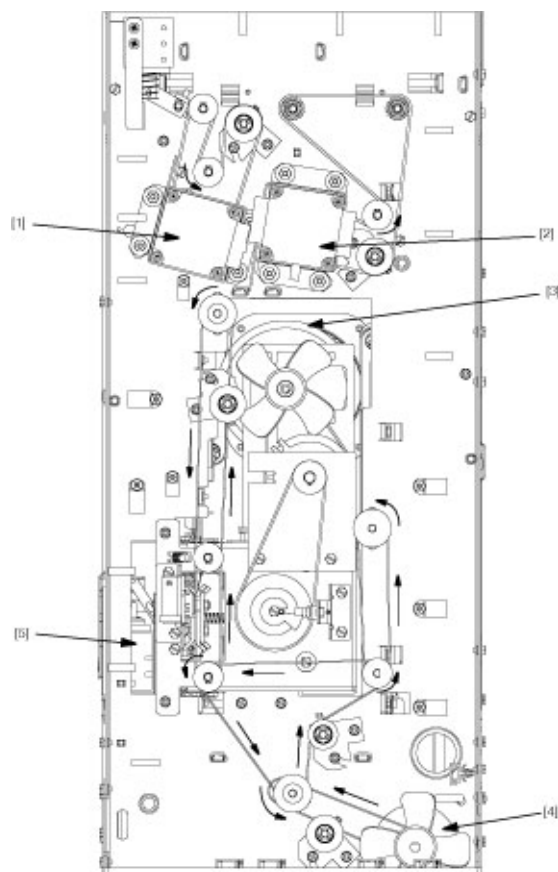
- The punch mode
- The bypass mode

The bypass moves the paper from the printer to the finisher without punching holes. The punch path routes the paper from the printer through the punch to be punched and then routes the paper to the finisher.

1. Communication system alerts the punch machine of the paper entry from the up-stream device.
On receiving the 40 command, AC motors and stepper motor turns on. Diverter gate moves to up position.
2. The paper enters the punch machine through entrance feed section
3. Enter sensor (S1) detects paper and acknowledges transfer of sheet from up-stream device
4. Paper passes through entry guide. Stepper 1 speed sensor (S2) is provided to detect paper jam.
Entrance stepper motor RPM increases to accelerate sheet to aligner path. After trailing edge of sheet leaves S2, entrance stepper motor slows down in preparation for next sheet.
5. Paper enters aligner panel. Entrance stepper motor accelerates to match sheet speed with aligner speed. Paper is edge aligned in preparation for punch.
6. Back gauge solenoid is energized and back gauge pedal blocks the paper path. Sheet arrives at Punch module sensor (S3). Punch module brake disengages and Punch clutch engages. After Punch clutch is engaged punch shaft begin to rotate. Paper punching is done. Leading edge of flag leaves Punch flag sensor (S9). Then Punch module brake engages and back gauge gate comes down. Trailing edge of sheet unblocks S3 and back gauge pedal comes up.
7. Paper passes through U-channel. U-channel sensor (S4) and Back gauge sensor (S5) are provided to detect any paper jam
8. Stepper 2 speed sensor (S6) detects paper and triggers exit stepper motor for speed which decelerates sheet
9. Exit sensor (S7) detects paper and determines the paper has passed through completely for other operation or for stacking purpose



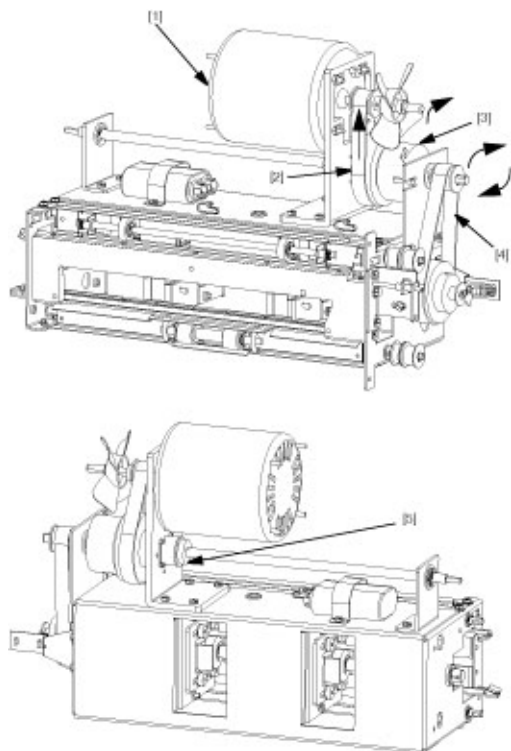
[1] Diverter	[2] Aligner Panels
[3] U-Channel	[4] Stepper 1 Speed Sensor (S2)
[5] Punch Module Sensor (S3)	[6] U-Channel Sensor (S4)
[7] Back Gauge Sensor (S5)	[8] Stepper 2 Speed Sensor (S6)
[9] Exit Sensor (S7)	[10] Aligner Drive Belt



[1]	Entrance Stepper Motor	[2]	Exit Stepper Motor
[3]	Punch Motor	[4]	Transport Motor
[5]	Back Gauge Solenoid	-	

4.2 Punch operation

1. Punch motor (AC motor) rotates continually after receiving start command from printer.
 2. Belt turns continually when motor is powered.
 3. Punch clutch (Electromagnetic 24V DC clutch) when energized connects Punch motor to the punch mechanism which transmits power.
 4. Belt only turns when Punch clutch is energized.
 5. Punch module brake is a 24V DC electromagnetic type and is energized when the Punch clutch is not powered.
- Punching Operation** - Back gauge solenoid is energized and back gauge pedal blocks the paper path. Sheet arrives at Punch module sensor (S3). Punch module brake disengages and Punch clutch engages. After clutch is engaged punch shaft begin to rotate. Paper punching is done through cam mechanism which pushes the pins forward. Leading edge of flag leaves flag sensor. Punch module brake engages and back gauge gate comes down. Trailing edge of sheet unblocks S3 and back gauge pedal comes up.



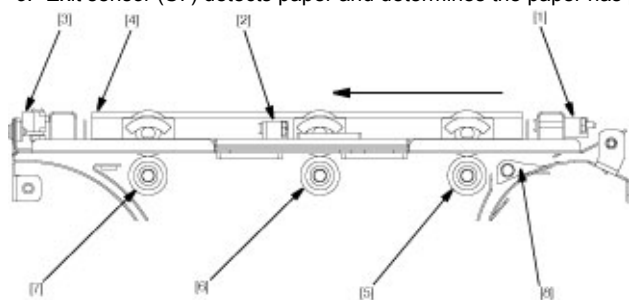
4.3 Chip tray control

Chip tray switch determines when chip tray is present and informs GP-501 processor that chip tray is present. A signal voltage is communicated to Punch Controller PCB. If the chip tray is pulled out GP-501 processor notifies printer that chip tray is out. Printer will show the error message on the screen.

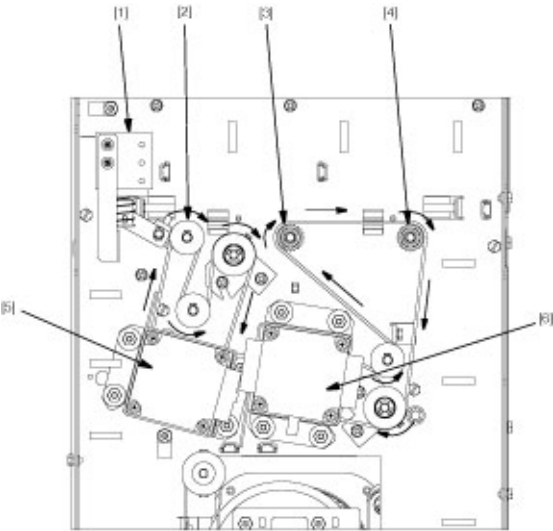
Chip tray full occurs after 5000 punches or is detected by Chip tray full sensor. Clear occurs when chip tray is removed to empty the bin and GP-501 is powered on.

4.4 Bypass conveyance control

1. Communication system alerts the punch machine of the paper entry from the up-stream device.
Motor starts on receiving 40 command from printer, diverter solenoid goes 'ON' on receiving 15 command from printer.
2. Diverter gate remains in closed position
3. Enter sensor (S1) detects paper and acknowledges transfer of sheet from up-stream device
4. Bypass sensor (S8) is provided in bypass panel to detect jam
5. Exit sensor (S7) detects paper and determines the paper has passed through completely for other operation or for stacking purpose



[1]	Enter Sensor (S1)	[2]	Bypass Sensor (S8)
[3]	Exit Sensor (S7)	[4]	Bypass Panel
[5]	Entrance Roller	[6]	Intermediate Roller
[7]	Exit Roller	[8]	Diverter



[1]	Divert Solenoid	[2]	Entrance Roller
[3]	Intermediate Roller	[4]	Exit Roller
[5]	Entrance Stepper Motor	[6]	Exit Stepper Motor

5. Punch module

5.1 Tools Required

- Phillips screw driver or 1/4" nut driver
- Hex wrench, 5/64"

NOTE

- Empty the paper chip bin and replace it. This makes it easier to find small parts that you may drop into the bin.

5.2 Procedure

Remove the module to lubricate the cams, or to service or replace the following components.

- Punch motor
- Drive motor belt
- Punch module brake
- Cams
- Flexible drive coupling
- Punch Module drive rollers

The clutch can be replaced without removing the module. (refer to [F.15.3.36 Punch Clutch Replacement](#)).



WARNING

- Disconnect the GP-501 Punch from its power source before removing the Back Gauge assembly. Failure to observe this warning can result in severe injury or death and damage the punch.



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