



ECOSYS M6230cidn
ECOSYS M6630cidn
ECOSYS M6235cidn
ECOSYS M6635cidn
PF-5100

**SERVICE
MANUAL**

Published in May 2018
Rev.2

CAUTION

RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE. DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.

It may be illegal to dispose of this battery into the municipal waste stream. Check with your local solid waste officials for details in your area for proper disposal.

ATTENTION

IL Y A UN RISQUE D'EXPLOSION SI LA BATTERIE EST REMPLACÉE PAR UN MODÈLE DE TYPE INCORRECT. METTRE AU REBUT LES BATTERIES UTILISÉES SELON LES INSTRUCTIONS DONNÉES.

Il peut être illégal de jeter les batteries dans des eaux d'égout municipales. Vérifiez avec les fonctionnaires municipaux de votre région pour les détails concernant des déchets solides et une mise au rebut appropriée.

Notation of products in the manual

For the purpose of this service manual, products are identified to the following type.

HyPAS model

Product name	Print speed	FAX	100 V	120 V	220-240 V	Australia
ECOSYS M6230cdn	30 ppm	-	×	×	○	○
ECOSYS M6630cidn	30 ppm	○	×	○	○	○
ECOSYS M6235cdn	35 ppm	-	×	○	○	×
ECOSYS M6635cidn	35 ppm	○	○	○	×	○

Revision history

Revision	Date	Pages	Revised contents
1	5 February 2018	1-20	Deletion: (3-12) Scan Extension Kit (A) added Note
		2-16	Deletion: (for 35 ppm model only)
		2-27	Deletion: Format SD Card →Format SSD
		2-35	Correction: Procedures 5
		2-36	Added: MS-5100B
		2-40	Added: Note: Installing OCR dictionary
		3-15	Correction: (4-3) Sensors and Switches
		4-35 to 4-37 4-91 to 4-93	Correction: Execute the Color Registration
		4-90	Added: (2-2) Initializing the FAX system
		6-6	Correction: Fax Sys Conf Output list
		6-8,6-10 to 6-12	Added: Color life counter
		6-30,6-32,6-34 to 6-38,6-48,6- 49,6-69	Correction: Setting range, Initial setting U034,U065,U066,U067,U068,U070,U071,U140,U332
		6-77	Correction: DP FD(ChartA) Description
		6-91 to 6-93,6- 143	Correction: destination code →country code, country code list
		6-122	Correction: U699 Description
		7-52,7-59,7-67	Correction: Measures
		7-80,7-82,7-115	Deletion: J4301,J4302,J4303,J4304,J4309,J4311,J4312,J4313,J 4314,J4319
		7-137,7-182	Added: C6910
8-12,8-27	Correction: Main/Engine PWB YC33, Power supply PWB YC105		
2	6 June 2018	1-1	Correction: Image Write System→Scanning method
		1-2	Correction: Memory: Standard/ Maximum
		4-4	Correction: 100V: MK-5156
		4-5	Correction: MK-5159 Part No.
		4-11	Added: IMPORTANT after detaching the primary trans- fer unit
		4-15, 4-149	Added: IMPORTANT
		4-90,6-92,6-143	Correction: Country code list
		4-191 to 4-197	Added: Installing the new document processor
		4-256 to 4-280	Added: Cassette lift unit
		5-3	Correction: Preparations
		7-38	Deletion: (4-14) 4
		7-50,7-68,7-69	Added: (5-14) 6, (6-10) 1, (6-13) 1
		7-76	Correction: (1-9) 3

Revision	Date	Pages	Revised contents
2		7-87	Correction: 9: engine PWB→ main/engine PWB
		7-119	Added: J9010 4, 5
		7-144	Correction: C640 3
		7-209	Deletion: F040 2 Firmware upgrade
		7-219	Correction: (1-7) 3, 4
		7-286, 7-288	Added: 7-9 (6)



Safety precautions

This booklet provides safety warnings and precautions for our service personnel to ensure the safety of their customers, their machines as well as themselves during maintenance activities. Service personnel are advised to read this booklet carefully to familiarize themselves with the warnings and precautions described here before engaging in maintenance activities.

Safety warnings and precautions

Various symbols are used to protect our service personnel and customers from physical danger and to prevent damage to their property. These symbols are described below:

⚠ DANGER: High risk of serious bodily injury or death may result from insufficient attention to or incorrect compliance with warning messages using this symbol.

⚠ WARNING: Serious bodily injury or death may result from insufficient attention to or incorrect compliance with warning messages using this symbol.

⚠ CAUTION: Bodily injury or damage to property may result from insufficient attention to or incorrect compliance with warning messages using this symbol.

Symbols

The triangle (\triangle) symbol indicates a warning including danger and caution. The specific point of attention is shown inside the symbol.



General warning.



Warning of risk of electric shock.



Warning of high temperature.

⊘ indicates a prohibited action. The specific prohibition is shown inside the symbol.



General prohibited action.



Disassembly prohibited.

● indicates that action is required. The specific action required is shown inside the symbol.



General action required.





Remove the power plug from the wall outlet.











Always ground the copier.

1. Installation Precautions

WARNING











- Do not use a power supply with a voltage other than that specified. Avoid multiple connections to one outlet: they may cause fire or electric shock. When using an extension cable, always check that it is adequate for the rated current. 
- Connect the ground wire to a suitable grounding point. Not grounding the copier may cause fire or electric shock. Connecting the earth wire to an object not approved for the purpose may cause explosion or electric shock. Never connect the ground cable to any of the following: gas pipes, lightning rods, ground cables for telephone lines and water pipes or faucets not approved by the proper authorities. 

CAUTION:





- Do not place the copier on an infirm or angled surface: the copier may tip over, causing injury. 
- Do not install the copier in a humid or dusty place. This may cause fire or electric shock. 
- Do not install the copier near a radiator, heater, other heat source or near flammable material. This may cause fire. 
- Allow sufficient space around the copier to allow the ventilation grills to keep the machine as cool as possible. Insufficient ventilation may cause heat buildup and poor copying performance. 
- Always handle the machine by the correct locations when moving it. 
- Always use anti-toppling and locking devices on copiers so equipped. Failure to do this may cause the copier to move unexpectedly or topple, leading to injury. 
- Avoid inhaling toner or developer excessively. Protect the eyes. If toner or developer is accidentally ingested, drink a lot of water to dilute it in the stomach and obtain medical attention immediately. If it gets into the eyes, rinse immediately with copious amounts of water and obtain medical attention. 
- Advise customers that they must always follow the safety warnings and precautions in the copier's instruction handbook. 












2. Precautions for Maintenance

WARNING

- Always remove the power plug from the wall outlet before starting machine disassembly. 
- Always follow the procedures for maintenance described in the service manual and other related brochures. 
- Under no circumstances attempt to bypass or disable safety features including safety mechanisms and protective circuits. 
- Always use parts having the correct specifications. 
- Always use the thermostat or thermal fuse specified in the service manual or other related brochure when replacing them. Using a piece of wire, for example, could lead to fire or other serious accident. 
- When the service manual or other serious brochure specifies a distance or gap for installation of a part, always use the correct scale and measure carefully. 
- Always check that the copier is correctly connected to an outlet with a ground connection. 
- Check that the power cable covering is free of damage. Check that the power plug is dust-free. If it is dirty, clean it to remove the risk of fire or electric shock. 
- Never attempt to disassemble the optical unit in machines using lasers. Leaking laser light may damage eyesight. 
- Handle the charger sections with care. They are charged to high potentials and may cause electric shock if handled improperly. 



CAUTION

- Wear safe clothing. If wearing loose clothing or accessories such as ties, make sure they are safely secured so they will not be caught in rotating sections. 
- Use utmost caution when working on a powered machine. Keep away from chains and belts. 
- Handle the fixing section with care to avoid burns as it can be extremely hot. 
- Check that the fixing unit thermistor, heat and press rollers are clean. Dirt on them can cause abnormally high temperatures. 

- Do not remove the ozone filter, if any, from the copier except for routine replacement. 
- Do not pull on the AC power cord or connector wires on high-voltage components when removing them; always hold the plug itself. 
- Do not route the power cable where it may be stood on or trapped. If necessary, protect it with a cable cover or other appropriate item. 
- Treat the ends of the wire carefully when installing a new charger wire to avoid electric leaks. 
- Remove toner completely from electronic components. 
- Run wire harnesses carefully so that wires will not be trapped or damaged. 
- After maintenance, always check that all the parts, screws, connectors and wires that were removed, have been refitted correctly. Special attention should be paid to any forgotten connector, trapped wire and missing screws. 
- Check that all the caution labels that should be present on the machine according to the instruction handbook are clean and not peeling. Replace with new ones if necessary. 
- Handle greases and solvents with care by following the instructions below: 
 - Use only a small amount of solvent at a time, being careful not to spill. Wipe spills off completely.
 - Ventilate the room well while using grease or solvents.
 - Allow applied solvents to evaporate completely before refitting the covers or turning the power switch on.
 - Always wash hands afterwards.
- Never dispose of toner or toner bottles in fire. Toner may cause sparks when exposed directly to fire in a furnace, etc. 
- Should smoke be seen coming from the copier, remove the power plug from the wall outlet immediately. 

3. Miscellaneous

 **WARNING**

- Never attempt to heat the drum or expose it to any organic solvents such as alcohol, other than the specified refiner; it may generate toxic gas. 
- Keep the machine away from flammable liquids, gases, and aerosols. A fire or an electric shock might occur. 

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1 Specifications

1-1 Specifications

(1) Common function

Item		Description	
		35 ppm model	30 ppm model
Type		Desktop	
Printing Method		Electrophotography by semiconductor laser	
Paper Weight	Cassette	60 to 163 g/m ²	
	Multi Purpose Tray	60 to 220 g/m ²	
Paper Type	Cassette	Plain, Rough, Recycled, Vellum, Preprinted, Bond, Color (Colour), Prepunched, Letterhead, Thick, High Quality, Custom 1 to 8(Duplex: Same as Simplex)	
	Multi Purpose Tray	Plain, Transparency (OHP film), Rough, Vellum, Labels, Recycled,Preprinted, Bond, Cardstock, Coated, Color (Colour), Prepunched,Letterhead, Envelope, Thick, High Quality, Custom 1 to 8	
Paper Size	Cassette 1	A4, A5, A6, B5, B5(ISO), B6, Folio, Oficio II, 216 × 340mm, Letter, Legal, Statement, Executive,16K, Custom(105 × 148 to 216 × 356 mm)	
	Multi Purpose Tray	A4, A5, A6, B5, B5 (ISO), B6, Folio, Oficio II, 216 × 340 mm, Letter, Legal, Statement, Executive, 16K, Envelope #10, Envelope #9, Envelope #6 3/4, Envelope Monarch, Envelope DL, Envelope C5, Hagaki (Cardstock), Oufuku Hagaki (Return postcard), Youkei 4, Youkei 2, Custom (70 × 148 to 216 × 356 mm)	
Warm-up Time (23°C/73.4°F, 60%)	Power on	25 seconds or less	26 seconds or less
	Sleep	19 seconds or less	17 seconds or less
Paper Capacity	Cassette	300 sheets (64 g/m ²)*1, 250 sheets (80 g/m ²)*1	
	Multi Purpose Tray	110 sheets (64 g/m ²), 100 sheets (80 g/m ²)	
Output Tray Capacity	Inner tray	250 sheets (80 g/m ²)	
Image Write System		Semiconductor laser	
Light source		LED	
Scanning method		Flat surface scanning by the CCD image sensor	
Photoconductor		OPC drum (diameter 30 mm)	
Charging system		Contact charger roller method	
Developer system		Non-magnetic 2-component touch-down developing system Developer: 2-component Toner replenishing: Automatic from the toner container	
Transfer system		Primary: Transfer belt method Secondary: Transfer roller method	
Separation system		Small diameter separation, separation needle	

Item		Description			
		35 ppm model		30 ppm model	
Cleaning system		Drum: Counter blade Primary transfer belt: Fur brush			
Charge erasing system		Exposure by cleaning lamp (LED)			
Fusing system		Heat and pressure fusing with the heat roller and the press roller Heat source: halogen heater Abnormally high temperature protection devices: thermostat			
Memory		Standard: 1024 MB (On-Board) Maximum: 3072 MB (On-Board +2048MB DIMM)			
Interface	Standard	USB Interface Connector: 1 (Hi-Speed USB) Network interface: 1 (10 BASE-T/100 BASE-TX/1000 BASE-T) USB Port: 2 (Hi-Speed USB) Fax: 1 (4 in 1 model only)			
	Option	eKUIO: 1			
Operating Environment	Temperature	10 to 32.5°C/50 to 90.5°F			
	Humidity	10 to 80 %			
	Altitude	3500 m/11482 ft maximum			
	Brightness	1500 lux maximum			
Dimension (W x D x H)		480 x 577 x 619.5 mm / 18.89" x 22.72" x 24.39"		475 x 558 x 616 mm / 18.70" x 21.97" x 24.25"	
Weight (without toner container)		36.4 Kg / 80.25 lbs	36.5 Kg / 80.47 lbs	35.3 Kg / 77.82 lbs	35.4 Kg / 78.04 lbs
Space Required (W x D)		480 x 770.8 mm / 18.89" x 30.35"?(Using multi purpose tray)		475 x 751.8 mm / 18.70" x 29.60"?(Using multi purpose tray)	
Power source		120V AC, 60Hz, 10.3A 220-240V AC, 50Hz, 5.6A		100V AC, 50/60Hz, 11.1A 120V AC, 60Hz, 9.0A 220-240V AC, 50Hz, 5.0A	

*1 Up to upper limit height line in the cassette.

(2) Copy function

Item		Description			
		35 ppm model		30 ppm model	
		Black and White	Color	Black and White	Color
Copy Speed	A4	35 sheets/min	35 sheets/min	30 sheets/min	30 sheets/min
	Letter	37 sheets/min	37 sheets/min	32 sheets/min	32 sheets/min
	Legal	30 sheets/min	30 sheets/min	26 sheets/min	26 sheets/min
	B5	35 sheets/min	35 sheets/min	27 sheets/min	27 sheets/min
	A5	35 sheets/min	35 sheets/min	27 sheets/min	27 sheets/min
	A6	35 sheets/min	35 sheets/min	27 sheets/min	27 sheets/min
First Copy Time (A4, place on the platen, feed from Cassette)		7.5 seconds or less	8.5 seconds or less	7.5 seconds or less	9.0 seconds or less
Zoom Level		Manual mode: 25 to 400%, 1% increments Fixed zoom rate: 400%, 200%, 141%, 122%, 115%, 100%, 86%, 81%, 70%, 50%, 25%			
Continuous Copying		1 to 999 sheets			
Resolution		600 × 600 dpi			
Supported Original Types		Sheet, Book, 3-dimensional objects (maximum original size: Folio/Ledger)			
Original Feed System		Fixed			

(3) Printer function

Item	Description			
	35 ppm model		30 ppm model	
	Black and White	Color	Black and White	Color
Copy Speed	Same as Copying Speed.			
First Print Time (A4)	6.0 seconds or less	7.5 seconds or less	6.5 seconds or less	7.5 seconds or less
Resolution	600 × 600 dpi, 9600 dpi equivalent × 600 dpi, 1200 × 1200 dpi			
Operating System	Windows 7, Windows 8, Windows 8.1, Windows 10, Windows Server 2008/R2, Windows Server 2012/R2, Windows Server 2016, Mac OS X v10.5 or later			
Interface	Hi-Speed USB: 1 Network interface: 1 (10 BASE-T/100 BASE-TX/1000 BASE-T) Optional Interface (Option): 1 (For IB-50/IB-51 mounting) Wireless LAN (Option): 1 (For IB-36 mounting)			
Page Description Language	PRESCRIBE			
Emulations	PCL6 (PCL-XL/PCL-5e), KPDL3 (PostScript3 compatible), PDF, XPS, OpenXPS			

(4) Scanner function

Item	Description				
	35 ppm model		30 ppm model		
	Black and White	Color	Black and White	Color	
Resolution	600 dpi, 400 dpi, 300 dpi, 200×400 dpi, 200 dpi, 200×100 dpi				
File Format	TIFF(MMR/JPEG compression), JPEG, PDF(MMR/JPEG compression), XPS, PDF/A, High compression PDF, Encrypted PDF, OPEN XPS, MS Office file*1*2, Searchable PDF*1				
Scanning Speed (A4, 300 dpi, Image quality: Text/Photo original)	1-Sided (Single)	60 Images/min	40 Images/min	60 Images/min	40 Images/min
	2-Sided (Duplex)	62 Images/min	46 Images/min	26 Images/min	17 Images/min
Interface	Ethernet (10 BASE-T/100 BASE-TX/1000 BASE-T), USB				
Transmission System	SMB, SMTP, FTP, FTPoverSSL, USB, TWAIN*4, WIA*4, WSD				

*1: When installing the optional OCR extension kit

*2: Microsoft Office 2007 or later

*3: When using the document processor (except TWAIN scanning)

*4: Supported Operating Systems: Windows Server 2008, Windows Server 2008 R2, Windows 7, Windows 8, Windows 8.1, Windows 10, Windows Server 2012, Windows Server 2012 R2, Windows Server 2016

(5) Document processor

Item	Description	
	35 ppm model	30 ppm model
Original type	Sheet originals	
Paper Size	Maximum: Folio / Legal Minimum: A6-R/Statement-R	
Paper Weight	1-sided (Single): 50 to 120 g/m ² 2-sided (Duplex): 50 to 120 g/m ²	
Loading Capacity	100 sheets (50 to 80 g/m ²) ^a	75 sheets (50 to 80 g/m ²) ^b

- a. Up to upper limit height line in the document processor.
- b. Up to upper limit height line in the document processor.

(6) Paper Feeder (500-sheet x1)

Item	Description
Paper Supply Method	Friction roller feeder (Paper Capacity: 500 sheets (80 g/m ²) × Maximum 3 cassettes)
Paper Size	A4, A5, B5, B5 (ISO), B6, Folio, Oficio II, 216 × 340 mm, Letter, Legal, Statement, Executive, 16K, Envelope #10, Envelope #9, Envelope #6 3/4, Envelope Monarch, Envelope DL, Envelope C5, Youkei 4, Youkei 2, Custom (92 × 162 to 216 × 356 mm)
Supported Paper	Paper weight: 60 to 220 g/m ² Media types: Plain, Recycled, Preprinted, Labels, Bond, Vellum, Color (Colour), Prepunched, Letterhead, Envelope, Coated, Thick, High Quality, Custom 1 to 8
Dimension (W × D × H)	390 × 532 × 116 mm / 15.35" × 20.94" × 4.57"
Weight	4.1 Kg or less / 9.04 lbs or less

(7) Manual stapler

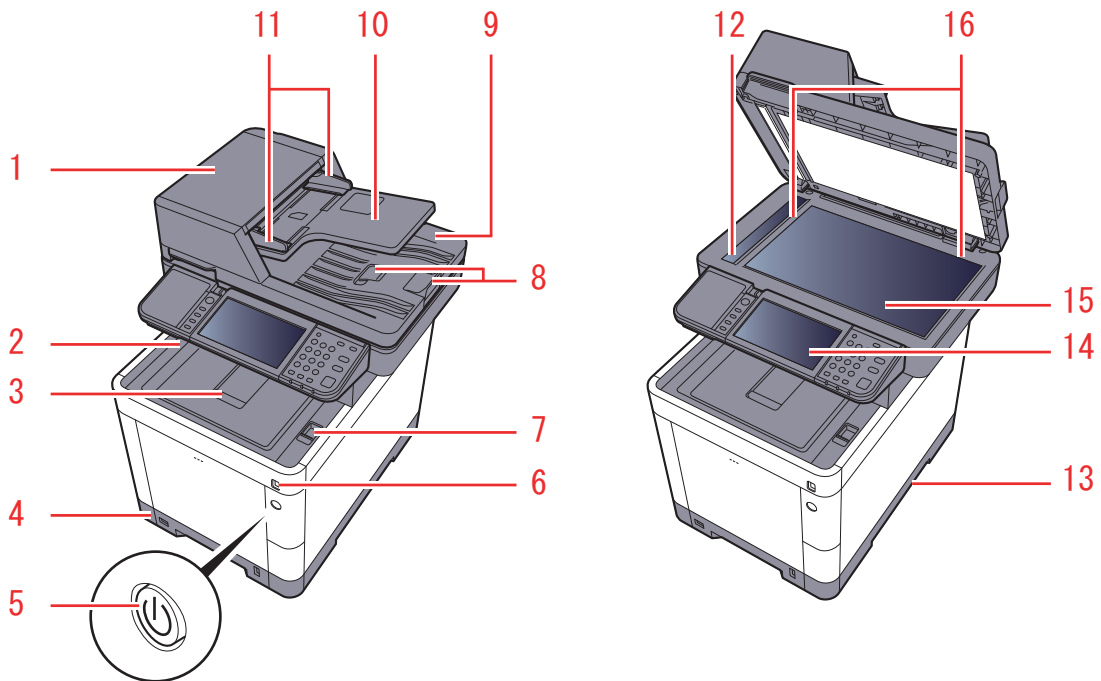
Item	Description
Paper Weight	90 g/m ² or less
Number of stapled sheets*1	20 sheets (80 g/m ²) maximum, 15 sheets (90 g/m ² or less) maximum
Dimension (W × D × H)	67 × 165 × 135 mm / 2.64" × 6.50" × 5.31"
Weight	0.6 Kg or less / 1.32 lbs or less

*1: Paper stack up to 2mm thick.

1-2 Part Names

(1) 30 ppm model

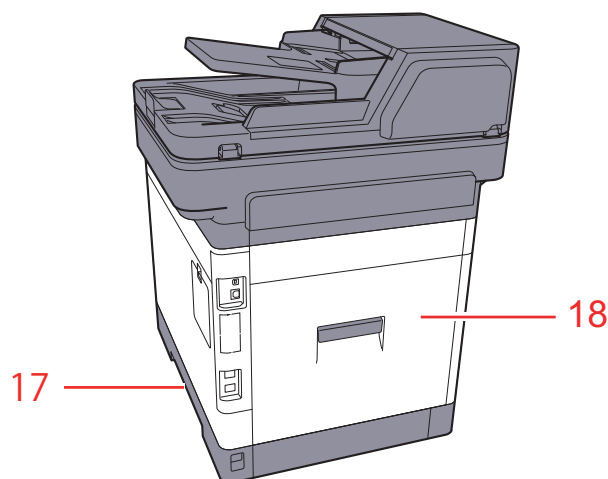
(1-1) Main unit exterior



- 1. Document processor
- 2. Inner tray
- 3. Paper stopper
- 4. Cassette 1
- 5. Power switch
- 6. USB memory slot

- 7. Scanner unit open lever
- 8. Original stopper
- 9. Original Eject Table
- 10. Original tray
- 11. Original width guides
- 12. Slit glass

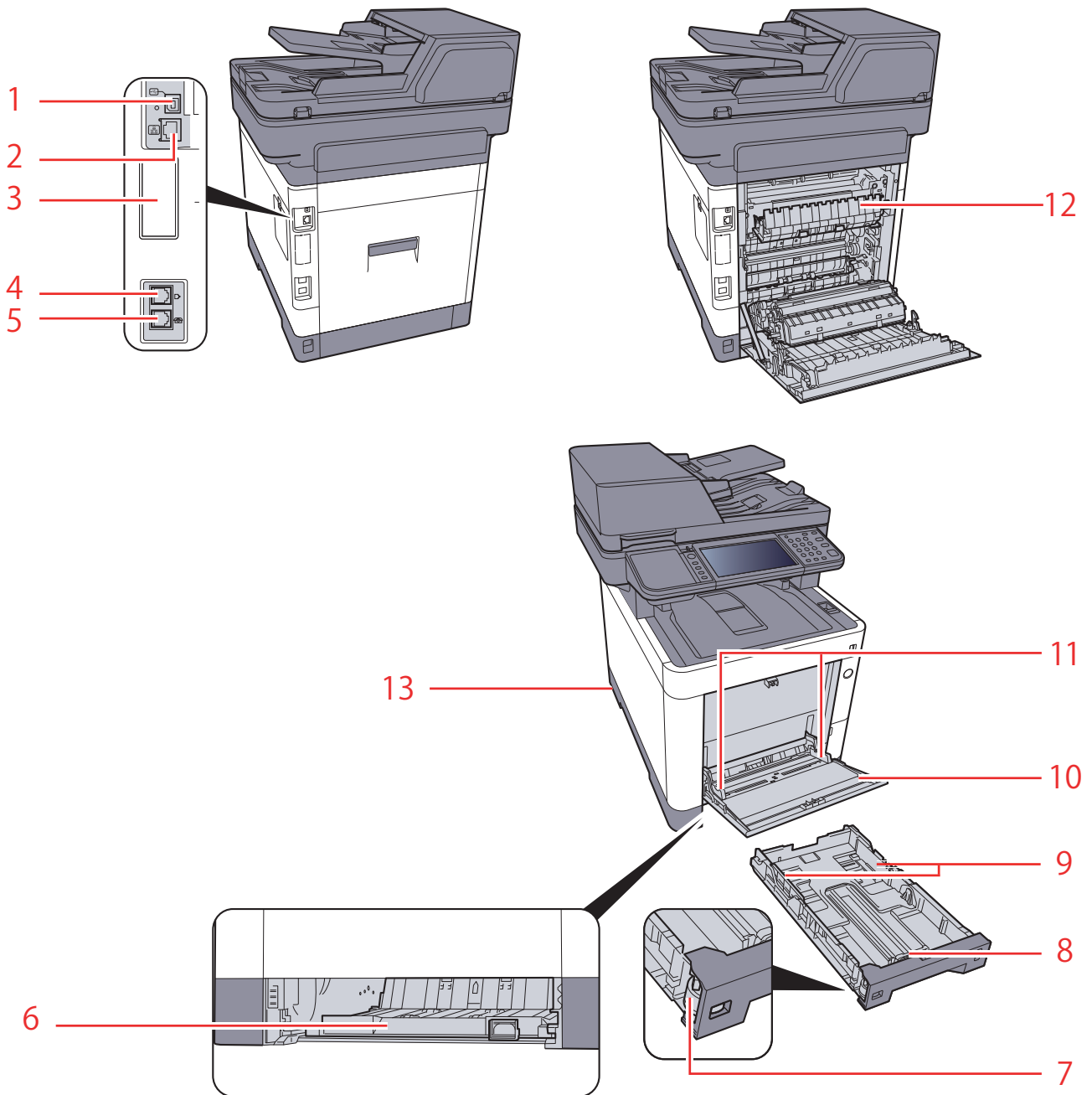
- 13. Handles
- 14. Operation panel
- 15. Platen
- 16. Original size indicator



- 17. Handles

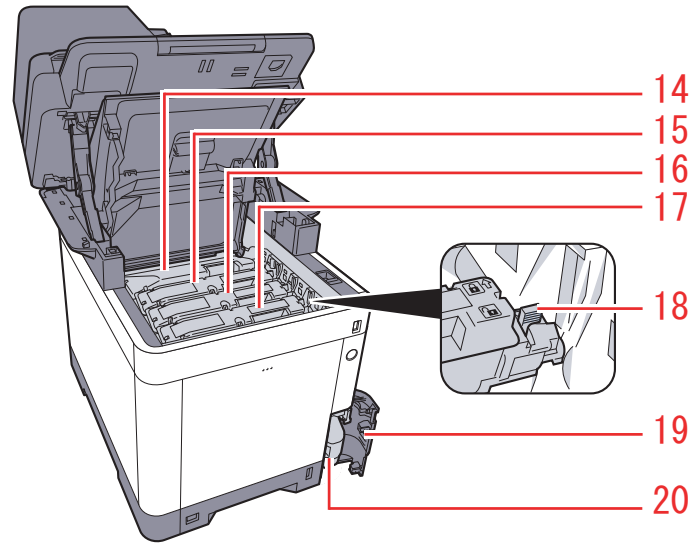
- 18. Rear cover 1

(1-2) Connector / Interior



1. USB interface connector
2. Network interface connector
3. Optional interface
4. LINE connector
5. TEL connector
6. Conveying cover

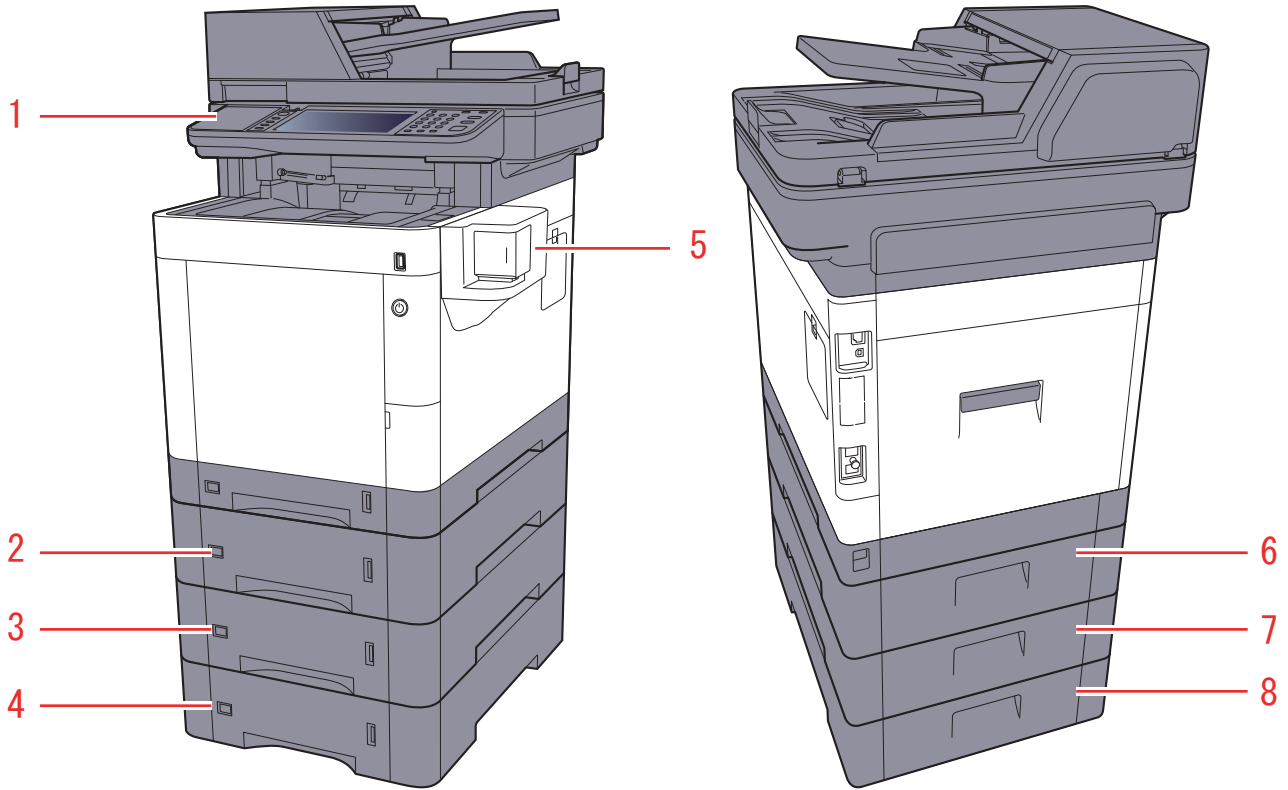
7. Size dial
8. Paper length guide
9. Paper width guides
10. Multi purpose tray
11. Paper width guides
12. Fuser cover
13. Anti-theft lock slot



- 14. Toner container (Black)
- 15. Toner container (Magenta)
- 16. Toner container (Cyan)
- 17. Toner container (Yellow)

- 18. Toner container lock lever
- 19. Waste toner cover
- 20. Waste toner box

(1-3) With Optional Equipments Attached

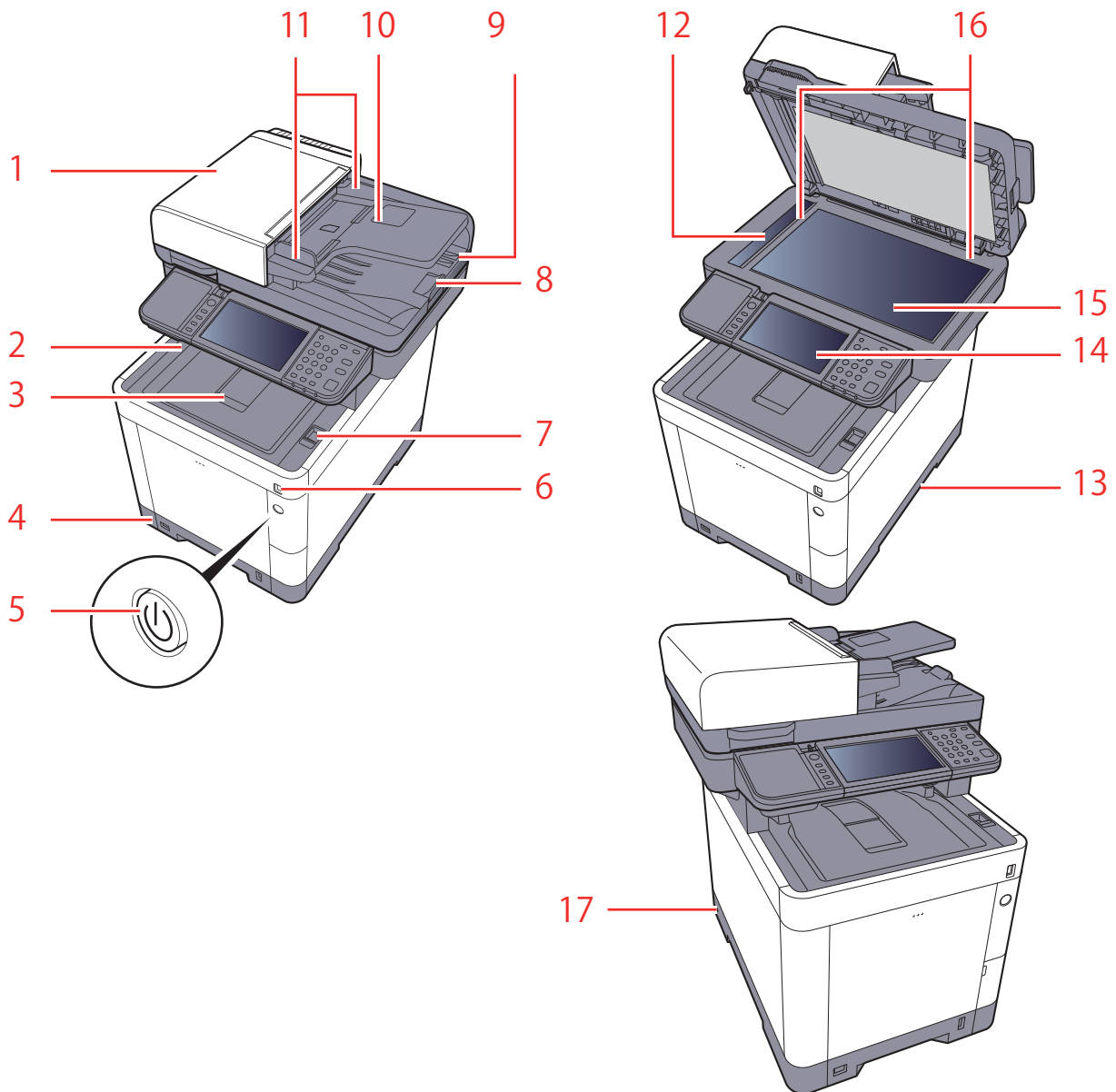


- 1. Card reader
- 2. Cassette 2
- 3. Cassette 3
- 4. Cassette 4

- 5. Manual stapler
- 6. Rear cover 2
- 7. Rear cover 3
- 8. Rear cover 4

(2) 35 ppm model

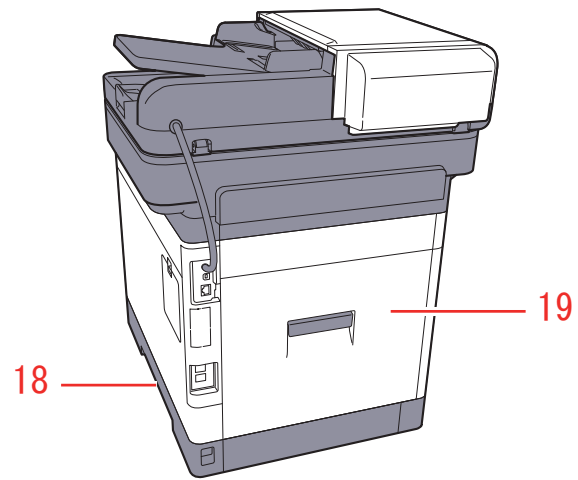
(2-1) Main unit exterior



- 1. Document processor
- 2. Inner tray
- 3. Paper stopper
- 4. Cassette 1
- 5. Power switch
- 6. USB memory slot

- 7. Scanner unit open lever
- 8. Original stopper
- 9. Original Eject Table
- 10. Original tray
- 11. Original width guides
- 12. Slit glass

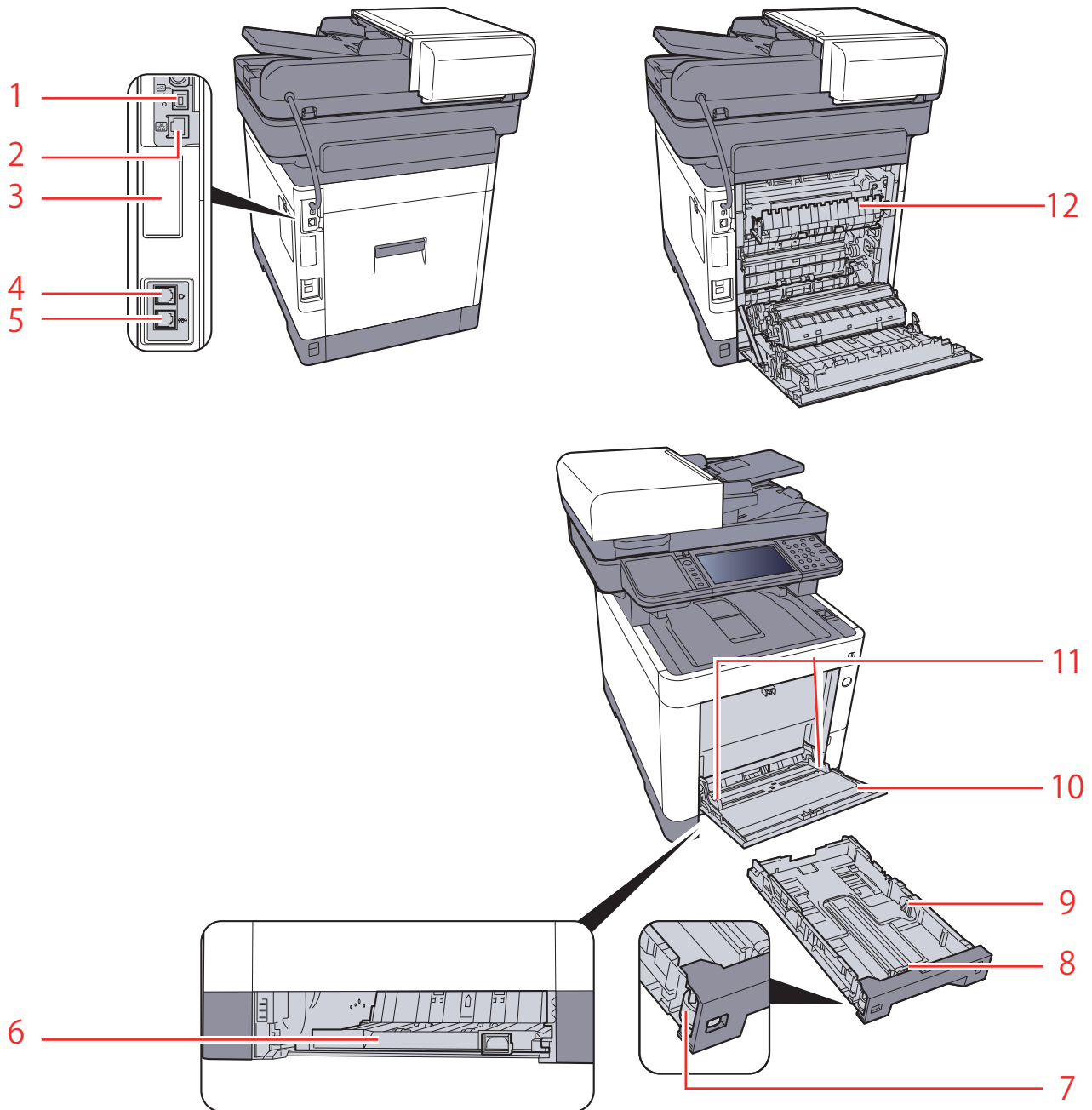
- 13. Handles
- 14. Operation panel
- 15. Platen
- 16. Original size indicator
- 17. Anti-theft lock slot



18. Handles

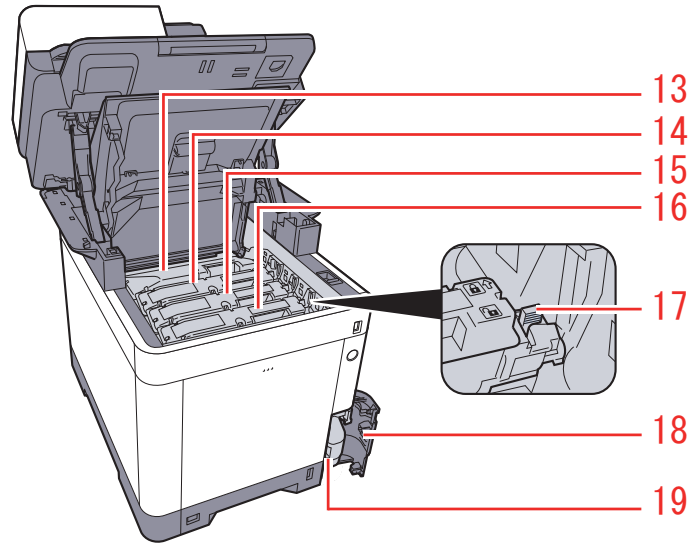
19. Rear cover 1

(2-2) Connector / Interior



- 1. USB interface connector
- 2. Network interface connector
- 3. Optional interface
- 4. LINE connector
- 5. TEL connector
- 6. Conveying cover

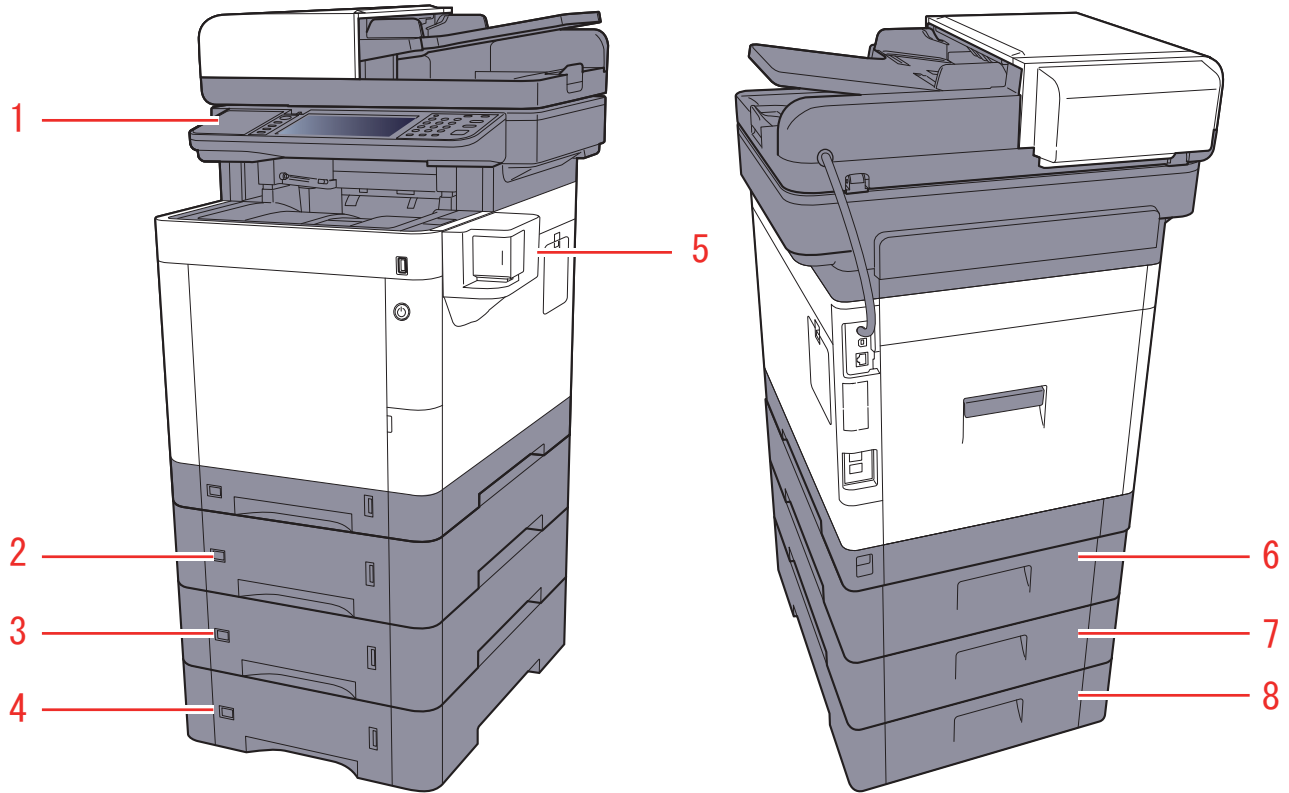
- 7. Size dial
- 8. Paper length guide
- 9. Paper width guides
- 10. Multi Purpose Tray
- 11. Paper width guides
- 12. Fuser cover



- 13. Toner container (Black)
- 14. Toner container (Magenta)
- 15. Toner container (Cyan)
- 16. Toner container (Yellow)

- 17. Toner container lock lever
- 18. Waste toner cover
- 19. Waste toner box

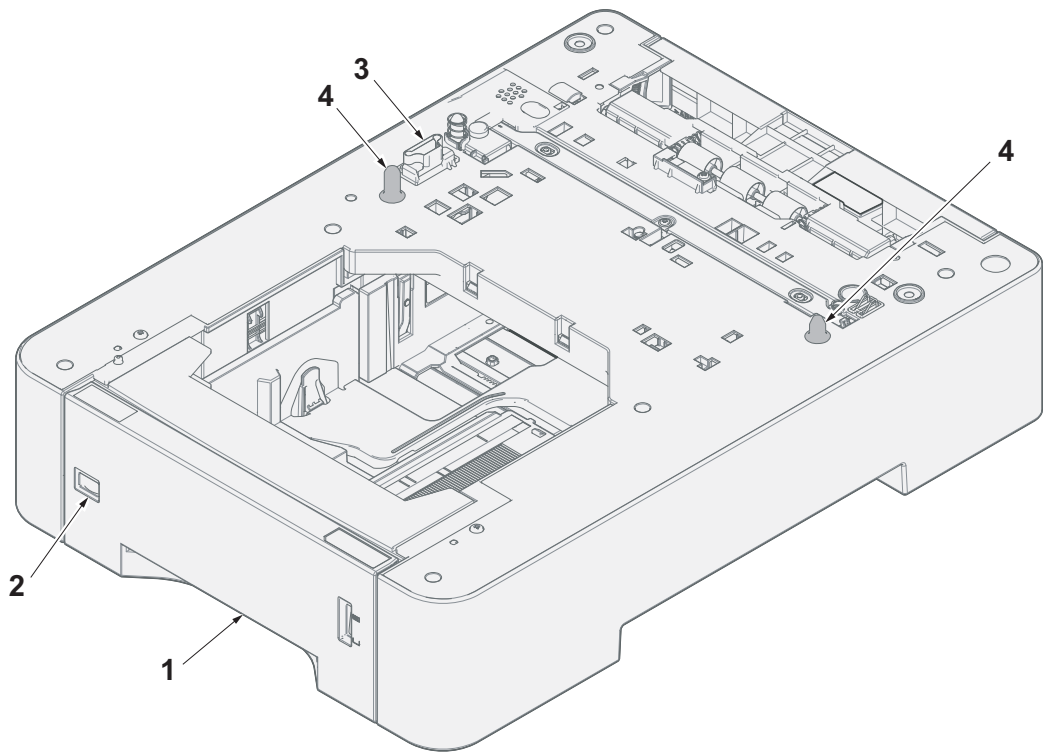
(2-3) With Optional Equipments Attached



- 1. Card reader
- 2. Cassette 2
- 3. Cassette 3
- 4. Cassette 4






- 5. Manual stapler
- 6. Rear cover 2
- 7. Rear cover 3
- 8. Rear cover 4

(3) Part Names of Paper Feeder



- 1. Cassette
- 2. Paper size window
- 3. Interface connector
- 4. Pins

(4) Operation panel key











	Displays the Home screen.		Displays the Status/Job Cancel screen.		Displays the screen for sending. You can change it to display the Address Book screen.
			Displays the Copy screen.		Displays the FAX screen.



Touch panel
Displays buttons for configuring machine settings.

Blinks while printing or sending/receiving.
Blinks while the machine is accessing the machine memory, fax memory or USB memory (general purpose item).

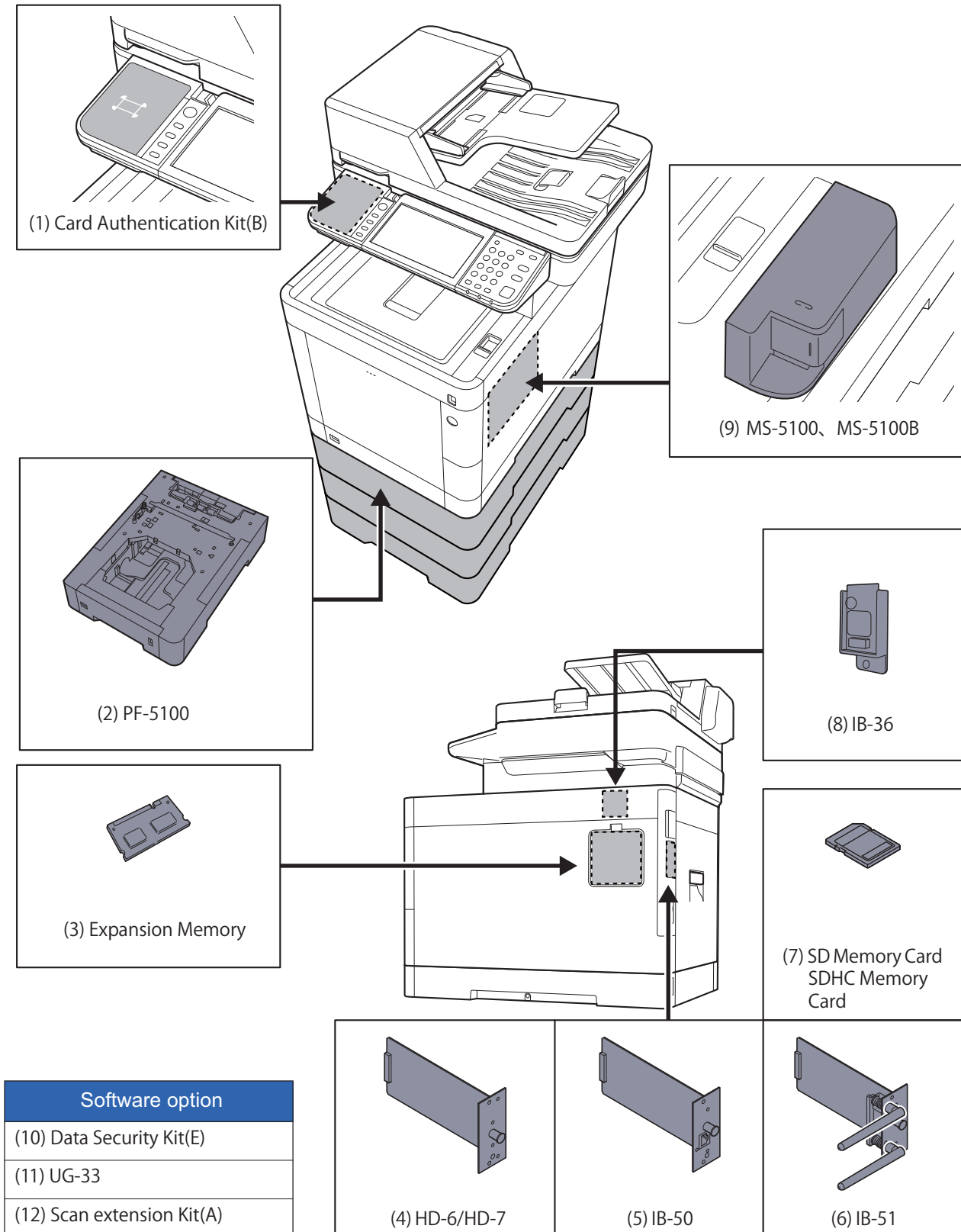
Lights or blinks when an error occurs and a job is stopped.

	Displays the System Menu screen.		Authenticates user switching, and exits the operation for the current user (i.e. log out).		Puts the machine into Sleep Mode. Recovers from Sleep if in Sleep Mode.
	Numeric keys. Enter numbers and symbols.		Clears entered numbers and characters.		Returns settings to their default states.
			Specifies registered information such as address numbers and user IDs by number.		Cancels or pauses the job in progress.
			Finalizes numeric key entry, and finalizes details during setting of functions. Operates linked with the on-screen [OK].		Starts copying and scanning operations and processing for setting operations.

1-3 Optional Equipment

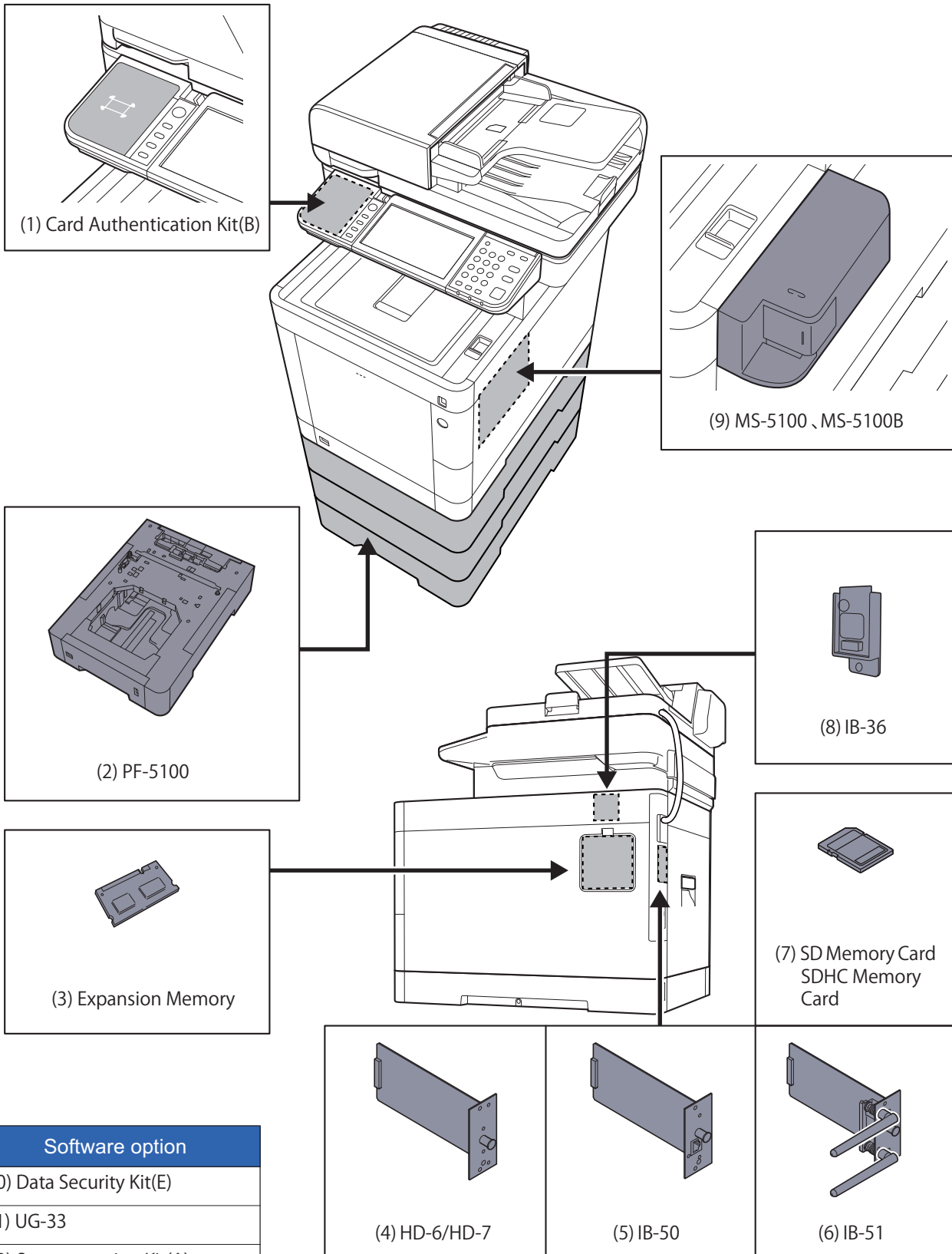
(1) 30 ppm model

The following options are available for this machine.



(2) 35 ppm model

The following options are available for this machine.



Software option

(10) Data Security Kit(E)

(11) UG-33

(12) Scan extension Kit(A)

(3) Optional Equipment

(3-1) Card Authentication Kit(B) <Card Authentication Kit>

User login administration is available using ID cards. To do so, it is necessary to register ID card information on the previously registered local user list. Refer to the Card Authentication Kit Operation Guide for more information about registration.

(3-2) PF-5100 <500 sheets x1 Paper Feeder>

Three additional cassettes identical to the machine's cassette can be installed in the machine. Paper loading method is the same as the standard cassettes.

(3-3) Memory Module

The machine can perform more multiple jobs simultaneously by adding more memory. You can increase the machine's memory up to 2,048 MB by plugging in the optional memory modules.

(3-4) HD-6/HD-7 <SSD>

With an SSD installed in the main unit, received print data can be rasterized and stored in the SSD. This enables high-speed printing of multiple copies using the electronic sort function. Also, you can use the Document Box functions.

(3-5) IB-50 <Network Interface Kit>

The Network Interface Kit provides a high-speed connection for the Gigabit-per-second interface. Network printing is available with the network protocols such as TCP/IP and NetBUEI for a variety of OS of Windows, Macintosh and UNIX.

(3-6) IB-51 <Wireless Network Interface Kit>

This is a wireless LAN interface card which supports the wireless LAN specifications IEEE802.11n (Max 300 Mbps) and 11 g/b.

With the utilities supplied, settings are possible for a variety of OS and network protocols.

(3-7) SD/SDHC memory card

The SD/SDHC memory card is a micro chip card that can be written optional fonts, macros, forms, etc.

The SDHC memory card (maximum 32GB) and the SD memory card is inserted into the memory card slot.

(3-8) IB-36 <Wireless Network Interface Kit>

This is a wireless LAN interface card which supports the wireless LAN specifications IEEE802.11n (max. 65 Mbps) and 11 g/b.

In addition, network printing is possible without using the wireless LAN router because Wi-Fi Direct is supported.

(3-9) MS-5100, MS-5100B <Manual stapler>

It can staple the originals or the printouts. It can staple 20 sheets (80 g/m²).

(3-10) Data Security Kit(E) <Data Security Kit>

The Data Security Kit overwrites all unnecessary data in the storage area so that it cannot be retrieved. The Data Security Kit encrypts data before storing it in the SSD. It guarantees higher security because no data can be decrypted by ordinary output or operations.

(3-11) UG-33 <ThinPrint Option>

This application enables print data to print directly without a printer driver.

(3-12) Scan Extension Kit(A) <OCR Extension Kit>

This option enables the use of the OCR function in the applications of the machine.

*: To use this function, an SSD or SD/SDHC memory card must be inserted. (See page P.2-40)

*: To use this function, the application and OCR dictionary must be installed. (See page P.2-40)

2 Installation

2-1 Environment

Installation environment

1. Temperature: 50 to 90.5°F (10 to 32.5°C) (But humidity should be 70% or less when the temperature is 90.5°F (32.5°C).)
2. Humidity: 10 to 80% (But the temperature should be 86°F (30°C) or less when humidity is 80%.)
3. Power requirements:
 - 30 ppm model
AC100V: 11.1A or more, AC120V: 9.0A or more, AC220V - 240V: 5.0A or more
 - 35 ppm model
AC100V: 11.4A or more, AC120V: 10.3A or more, AC220V - 240V: 5.6A or more
4. Frequency fluctuation: 50Hz+/-2% or 60Hz+/-2%

Installation location

The operative environmental conditions are as follows:

Adverse environmental conditions may affect the image quality. It is recommended to use the machine as follows: Humidity: 36 to 65% Temperature: 60.8 to 80.6°F or less (16 to 27°C)

Avoid the following locations when selecting a site for the machine.

- Avoid locations near a window or with exposure to direct sunlight.
- Avoid locations with vibrations.
- Avoid locations with rapid temperature fluctuations.
- Avoid locations with direct exposure to hot or cold air.
- Avoid poorly ventilated locations.

If the floor is delicate against casters, when this machine is moved after installation, the floor material may be damaged. During operation, some ozone is released, but the amount does not cause any ill effect to one's health. If, however, the machine is used over a long period of time in a poorly ventilated room or when making an extremely large number of copies, the smell may become unpleasant. To maintain the appropriate environment for copy work, it is suggested that the room be properly ventilated.

Installation space

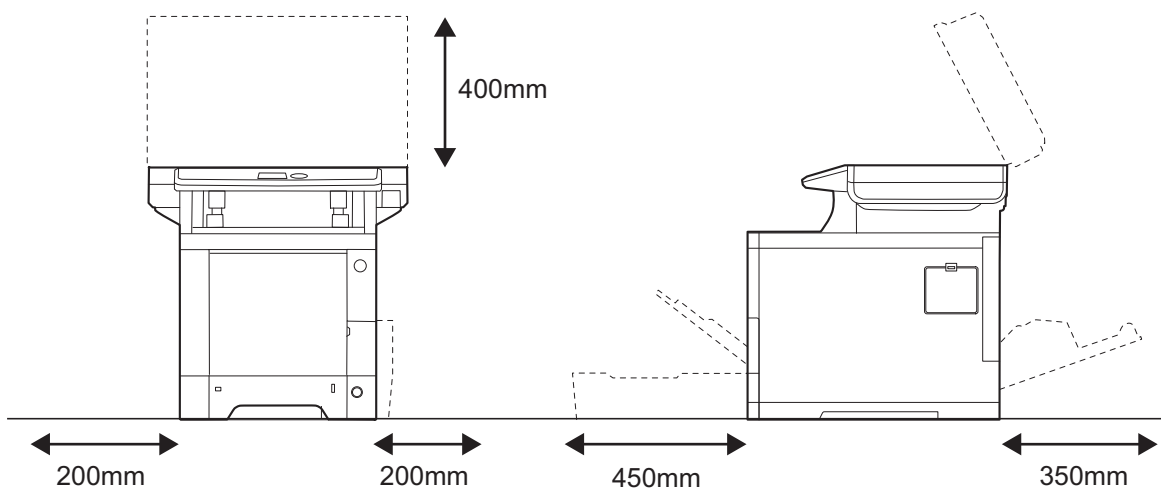
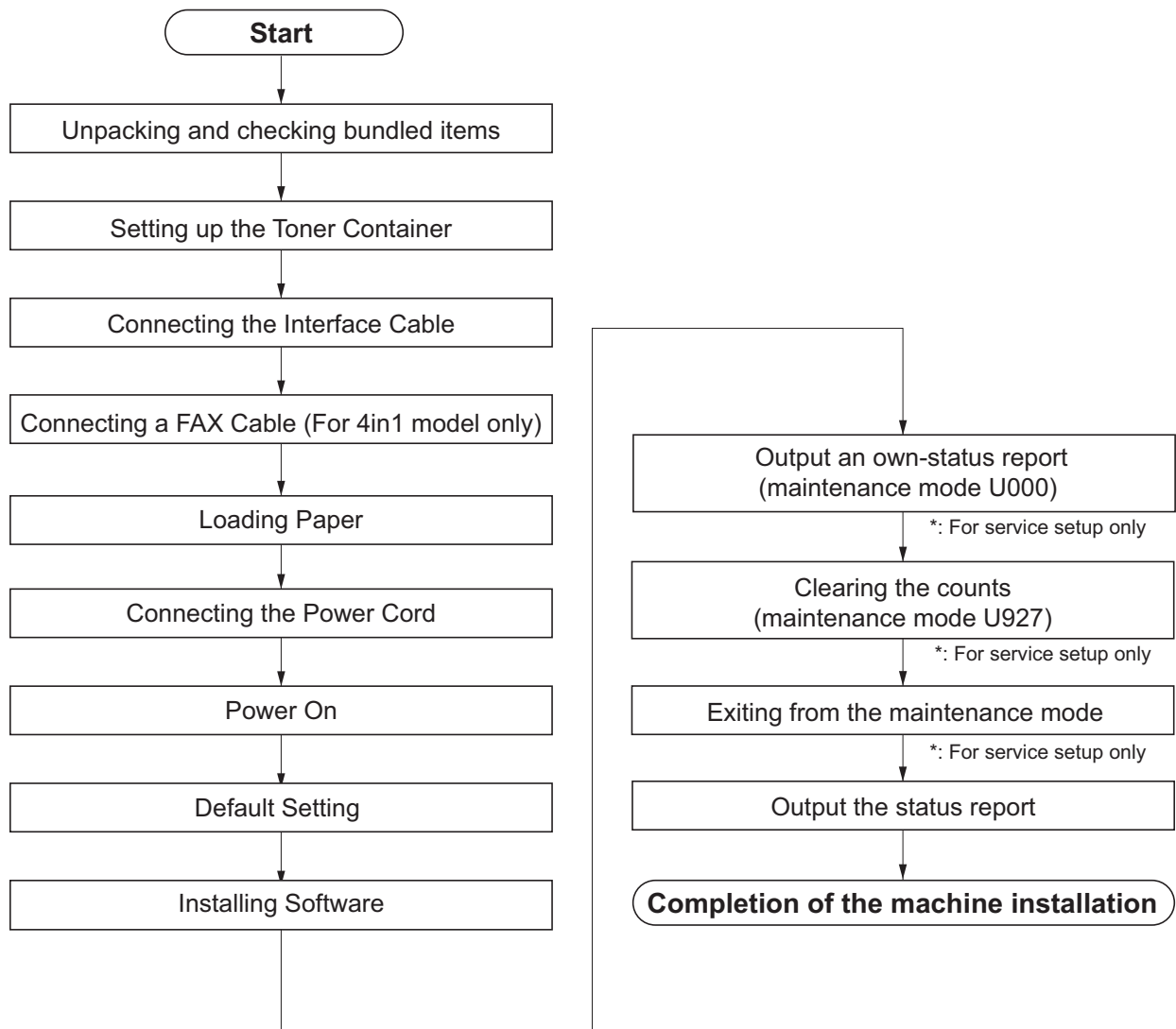


Figure 2-1

2-2 Installing the machine

Installation procedures



(1) Unpacking and checking bundled items

Take out the machine and accessories from the packing case.

Remove the tape and cushioning materials for packing from the main unit.

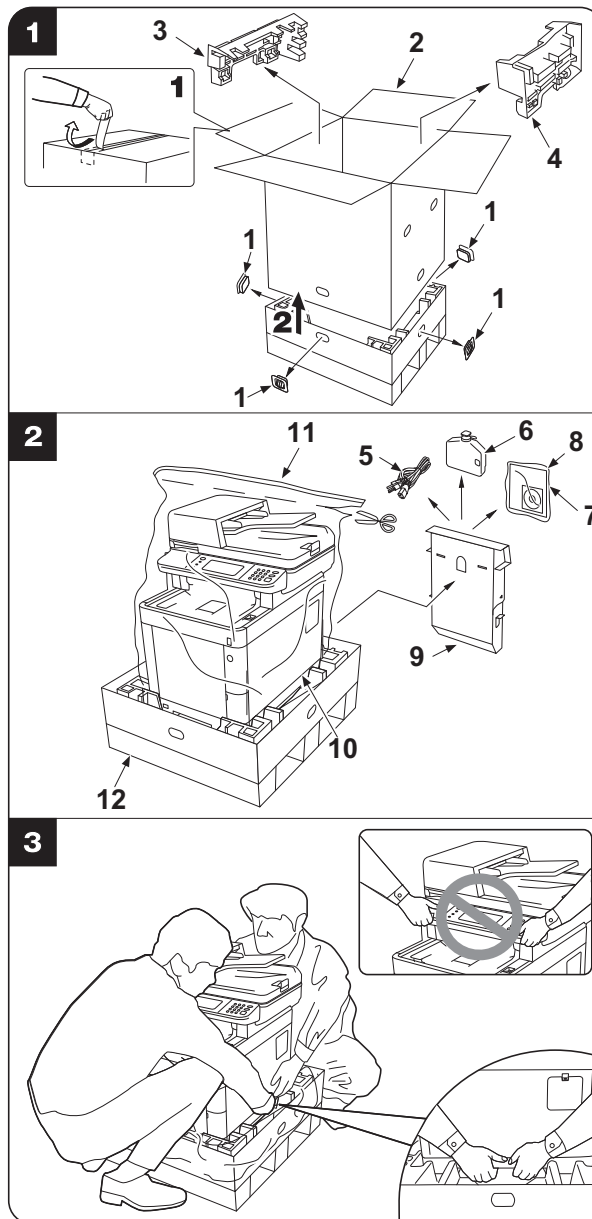


Figure 2-2

1. Hinge joints
2. Outer case
3. Left upper pad
4. Right upper pad
5. Power cord

6. Waste toner box
7. Operation guide, etc.
8. Plastic bag
9. Document tray
10. Main unit

11. Vacuum plastic bag for main unit
12. Bottom case

IMPORTANT

Make sure to install the main unit on a level surface.

* :Notes on main unit transportation

When transporting the main unit, lift the left and right handles of the main unit base with two people as shown in the figure.

Do not hold the operation unit because it will cause damage.

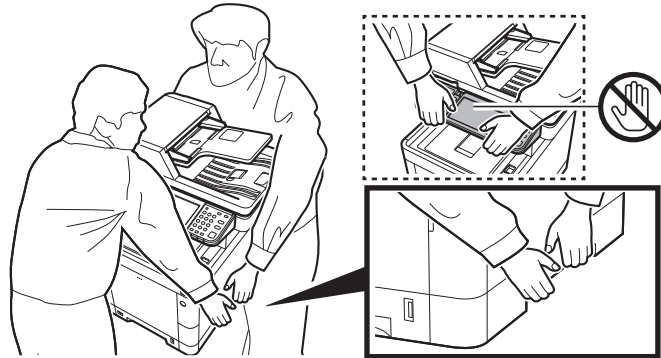


Figure 2-3

(2) Setting up the Toner Container

IMPORTANT

Before setting up the toner containers, open the DP (a) to check the cushion materials (b) are removed.

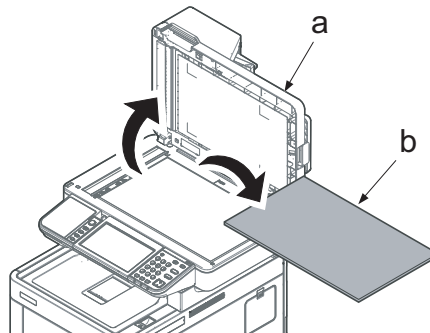


Figure 2-4

Set up the toner container of Y, C, Mand K. The procedures are same for all colors.

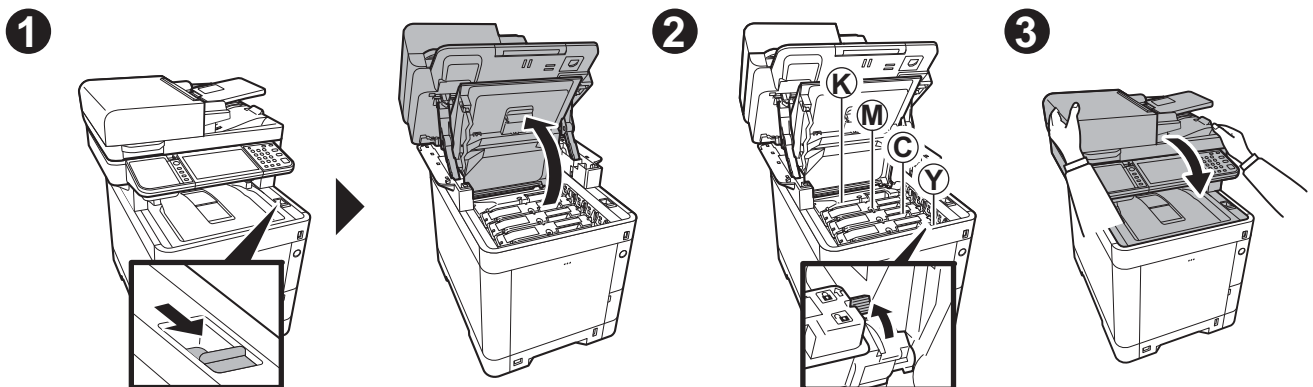


Figure 2-5

(3) Connecting the Interface Cable

Connection environment	Functions	Necessary Cable
Connect a LAN cable to the main unit.	Printer Scanner Network FAX	LAN cable (10Base-T, 100Base-TX or 1000Base-T)

Connection environment	Functions	Necessary Cable
Connect a USB cable to the main unit.	Printer Scanner (TWAIN/ WIA)	USB2.0 compatible cable*(Hi-Speed USB compliant, Max. 5.0m long)

*: If applicable USB 2.0 cable is not used, it might cause the failure.

In the case of the LAN connection

1. Connect the LAN cable to the network interface connector.
2. Connect the other end of the cable to the hub.

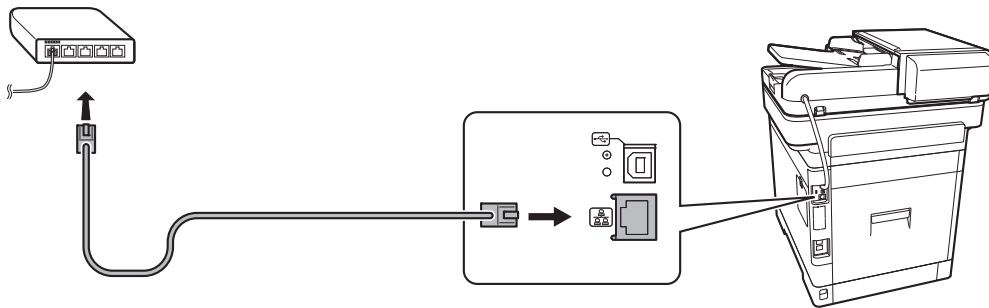


Figure 2-6

In the case of the USB connection

1. Connect the USB cable to the USB interface connector located on the left side of the main unit.
2. Connect the other end of the cable to the PC.

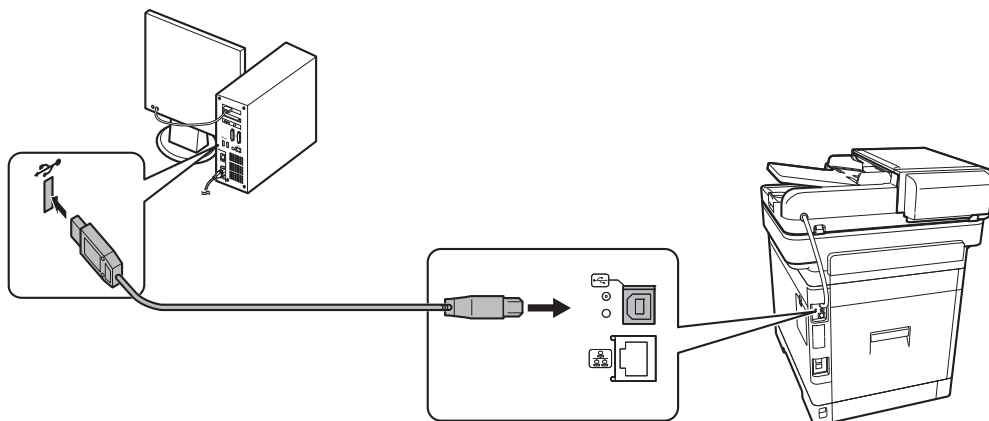


Figure 2-7

(4) Connecting a FAX Cable (For 4in1 model only)

General FAX connection example

In the case of the general telephone line

- a. Modular jack



Figure 2-8

ADSL

Connect a cord between the LINE connector of the main unit and the PHONE port of the splitter.

- a. Modular jack
- b. ADSL modem
- c. Splitter (PHONE port)
- d. PC

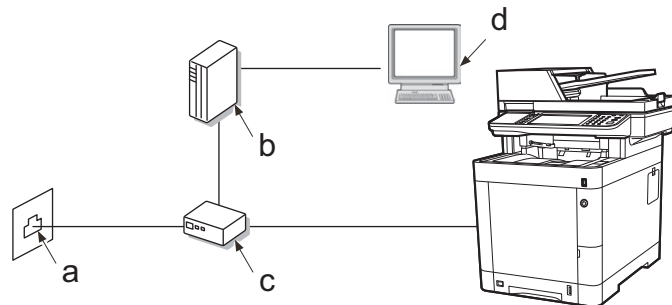


Figure 2-9

ISDN

Connect a cord between the LINE connector of the main unit and the analog port of the terminal adapter.

- a. Modular jack
- b. Terminal adapter (Analog port)
- c. PC

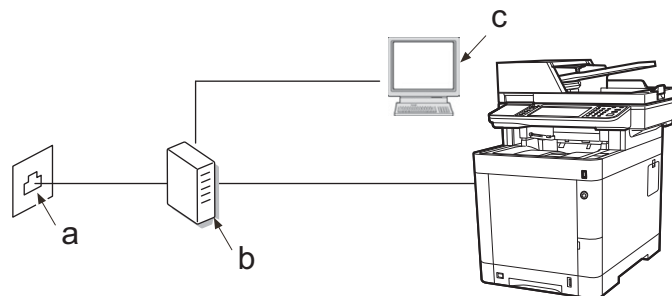


Figure 2-10

Modular cord connection

Connect a modular cord to the LINE connector (a) of the main unit.

When using a commercially available telephone set, connect a modular cord to the TEL connector (b) of the main unit.

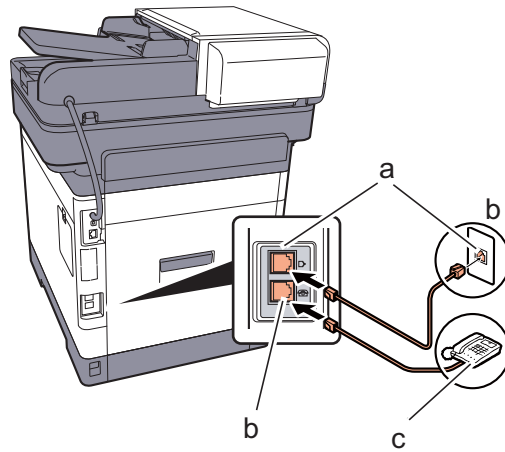


Figure 2-11

(5) Loading Paper

The cassettes can hold plain paper, recycled paper or color paper.

The number of sheets that can be loaded in each cassette is as shown below. Cassette 1 250 sheets (Plain paper: 80g/m²) Cassette 2 to 4 500 sheets (Plain paper: 80g/m²)

IMPORTANT

Cassette 1 can hold paper with the weight between 60 - 163g/m². Cassettes 2 to 4 can hold paper with the weight between 60 - 220g/m².

1. Pull the cassette completely out of the main unit.

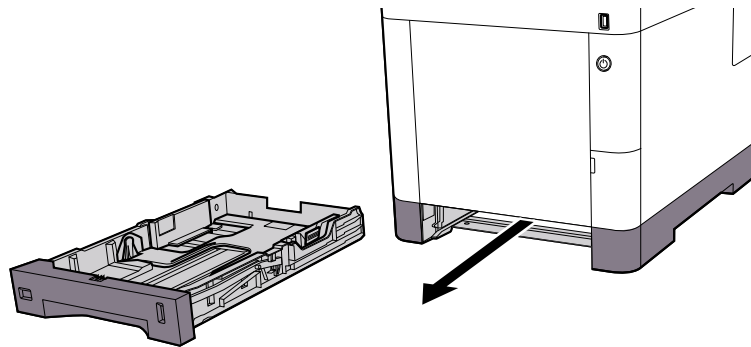


Figure 2-12

Note

When pulling the cassette out of the main unit, make sure it is supported and does not fall out.

2. Adjust the paper size of the cassette.

1) Adjust the position of the paper width guides located on the left and right sides of the cassette. Press the paper length tab and slide the guides to the paper size to use.

Paper sizes are marked on the cassette.

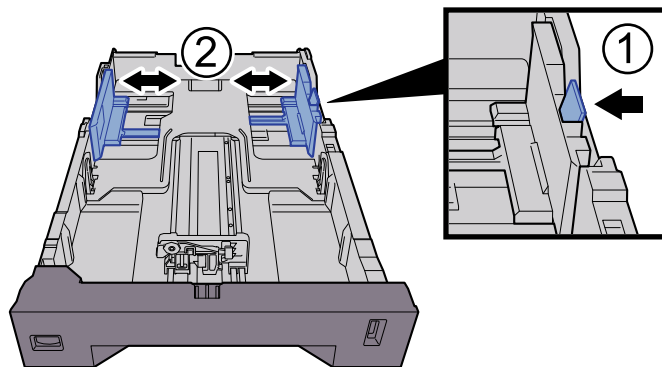


Figure 2-13

2) Adjust the position of the paper length guide. Press the tab and slide the guides to the paper size to use.

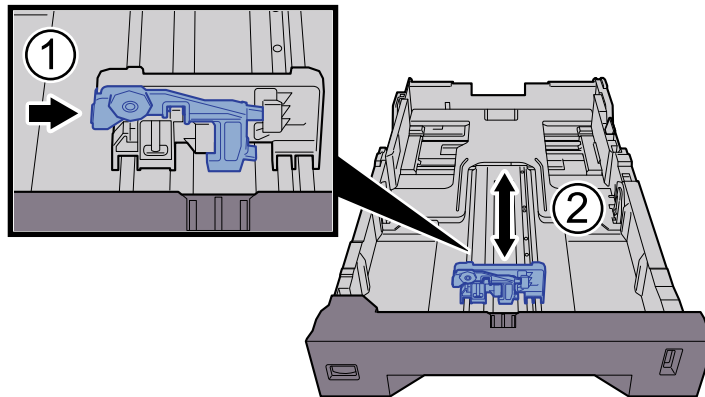


Figure 2-14

3) Turn the size dial so that the paper size to use appears in the paper size window.

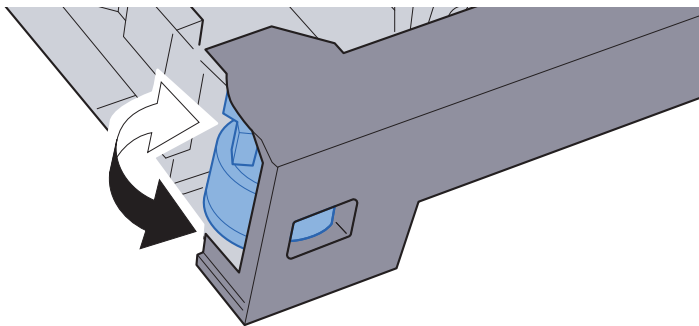


Figure 2-15

3. Load paper.

- 1) Fan the paper, then tap it on a level surface to align the edges. Load the paper in the cassette after aligning its edges.
- 2) Load the paper with the print side facing up.

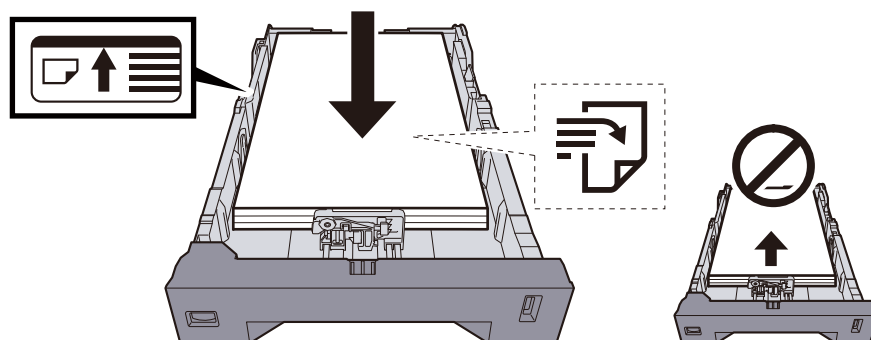


Figure 2-16

IMPORTANT

Before loading paper in the cassette, fan the paper taken from a new package to separate it. (See page 10 ???)
Before loading the paper, be sure that it is not curled or folded. Such paper may cause paper jams.
Make sure that the loaded paper does not exceed the level indicator (see the illustration above).

If paper is loaded without adjusting the paper length guide and paper width guides to the paper size to use, the paper may skew or become jammed.

4. Gently insert the cassette all the way into the main unit.

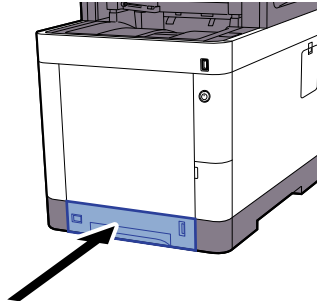


Figure 2-17

Precaution for Loading Paper

Before loading paper in the cassette or MP tray, treat the paper taken from a new package to separate it in the following steps.

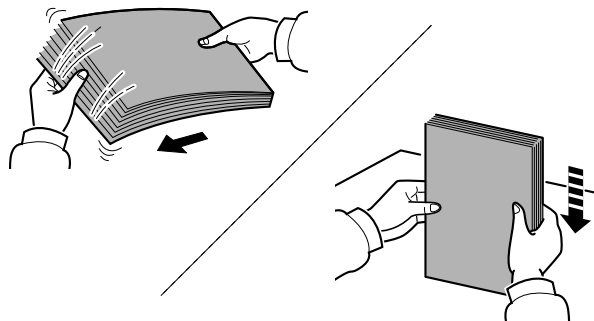


Figure 2-18

Fan the paper, then tap it on a level surface to align the edges.

In addition, note the following points.

If the paper is curled or folded, straighten it before loading. Such paper may cause a jam.

Avoid exposing paper taken from a package to high temperatures and high humidity as dampness can be a cause of problems. Seal any remaining paper after loading in the MP tray or cassettes back in the paper storage bag.

If the machine will not be used for a prolonged period, protect all paper from humidity by removing it from the cassettes and sealing it in the paper storage bag.

IMPORTANT

If you print onto paper already used for printing, do not use it with a staple or clip. This may cause poor image quality or malfunctions.

(6) Connecting the Power Cord

1. Connect one end of the supplied power cord to the main unit and the other end to a power outlet.

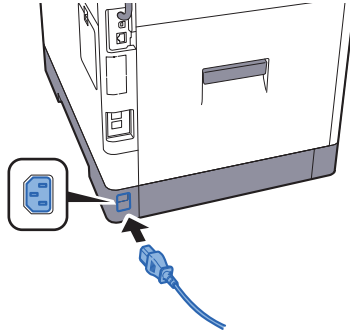


Figure 2-19

IMPORTANT

Only use the power cord that comes with the main unit.

(7) Turn the power on.

1. Turn the power switch on.

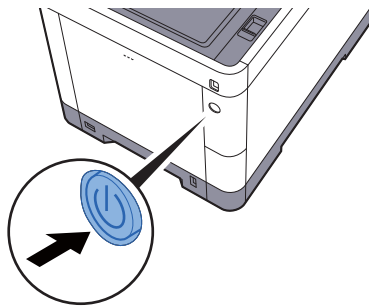


Figure 2-20

IMPORTANT

After turning off the power switch, do not turn on the power switch again immediately. Wait 5 seconds or more, and then turn on the power switch.

(8) Default Setting

The Machine Setup Wizard is launched when the equipment is turned on for the first time after being installed. Available of setting the necessary items. Also, it can be reset from System Menu as below.



Figure 2-21

(8-1) Setting Date and Time

1. Display the screen.
[System Menu/Counter] key > [Date/Timer/Energy Saver]
2. Configure the settings.
[Time Zone] > [Date/Time] > [Date Format]

Item	Descriptions
Time Zone	Set the time difference from GMT. Choose the nearest listed location from the list. If you select a region that utilizes summer time, configure settings for summer time.
Date/Time	Follow the steps below to set the local date and time at the place of installation. If you perform Send as E-mail, the date and time set here will be displayed on the header. Value: Year (2000 to 2037), Month (1 to 12), Day (1 to 31), Hour (00 to 23), Minute(00 to 59), Second (00 to 59)
Date Format	Select the display format of year, month, and date. The year is displayed in Westernnotation. Value: month/day/year, day/month/year, year/month/day

(8-2) Network Setup (LAN Cable Connection)

TCP/IP (IPv4) Settings

Set up TCP/IP (IPv4) to connect to the Windows network.

The default settings are as follows.

- TCP/IP: On
- DHCP: On
- Auto-IP: On
- IP Address: 0.0.0.0
- Subnet Mask: 0.0.0.0
- Default Gateway: 0.0.0.0

1. Display the screen.

Select [System Menu/Counter] key > [System/Network] > [Network] > [Wired Network Settings] > [TCP/IP Setting]

Note

The factory default login user name and login password are set as shown below.

Login User Name (30ppm model): 3500

Login Password (35ppm model): 3500

2. Select [IPv4] for setting.

IMPORTANT

Restart the network from System Menu, or turn the power off and then on waiting 5 seconds or more.

When using DHCP server

[DHCP]: Set to [On].

When setting the static IP address

[DHCP]: Set to [Off].

[IP Address]: Enter the address.

[Subnet Mask]: Enter the subnet mask in decimal representation (0 to 255).

[Default Gateway]: Enter the address.

[Auto-IP]: [Off]

When using the Auto-IP,
enter "0.0.0.0" in IP Address.

(8-3) Altitude Adjustment Setting

Execute [Altitude Adjustment] from the System Menu when setting up at a high altitude place.

When the printing quality declines in the environment of an altitude higher than 1001m sea level, the setting of [Altitude Adjustment] mode can recover the printing quality.

1. Select [System Menu/Counter] key > [Adjustment/Maintenance] > [Service Setting] > [Altitude Adjustment]

2. Select [Normal], [1001 - 2000m], [2001 - 3000m] or [3001 - 3500m] then press the [OK] key.

*: Normal: Altitude from 0 to 1000m

(9) Installing Software

1. Install appropriate software in your PC from the bundled DVD (Product Library) if you want to use the printer function of this machine or perform TWAIN / WIA transmission or Network FAX transmission from your PC. See the Operation Guide supplied with the main unit.

(10)Output an maintenance report (maintenance mode U000)(for service)

1. Input "10871087" using the numeric keys to enter the maintenance mode.
2. Input "000" using the numeric keys and press the [Start] key.
3. Select [Maintenance] and press the [Start] key to output the status report.
4. Press the [Stop] key.

(11)Clearing the counts (maintenance mode U927)(for service)

1. Input "927" using the numeric keys and press the [Start] key.
2. Select [Execute].
3. Press the [Start] key to clear the counter value.
4. Press the [Stop] key.

(12)Exiting from the maintenance mode (for service)

1. Input "001" using the numeric keys and press the [Start] key.
- *: The maintenance mode is exited.

(13) Completion of installing the main unit (Turning the power off)

1. Turn the power switch off.

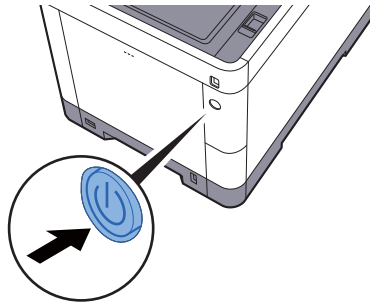


Figure 2-22

IMPORTANT

If using the products equipped with the fax function, note that turning the machine off at the main power switch disables fax transmission and reception.

Remove paper from the cassettes and seal it in the paper storage bag to protect it from humidity.

2-3 Installing the optional equipment

(1) Card Authentication Kit(B)

User login administration is available using ID cards. To do so, it is necessary to register ID card information on the previously registered local user list.

Installing the ID card reader

ID card reader holder installation requires the following parts:
IC card reader holder 10 (1702P60UN1).....1pc

Supplied parts of IC card reader holder 10 (1702P60UN1)

ID card reader holder..... 1pc

Label..... 1pc

Screw (M3x8 screw with the binding head)..... 1pc

1. Mount the ID card reader (a) to the ID card reader holder (b).

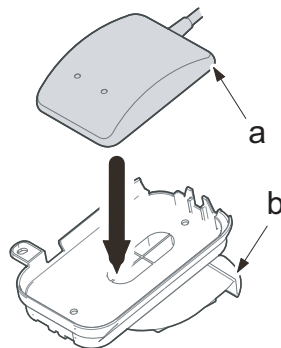


Figure 2-23

2. Route the USB cable (a) from the ID card reader through the ribs (c) of the ID card reader holder (b), wind around its back and route through another rib (d).

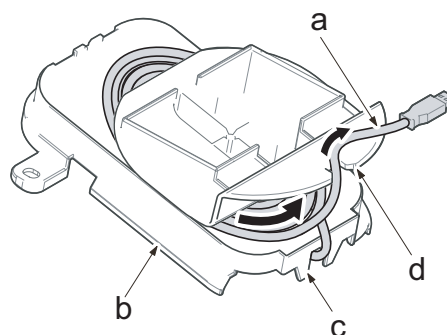


Figure 2-24

3. Slide the left panel plates (a) and remove it.
4. Remove the left operation panel cover (b) and the left operation panel sheet (c).
5. Remove the ID card reader cover (d).

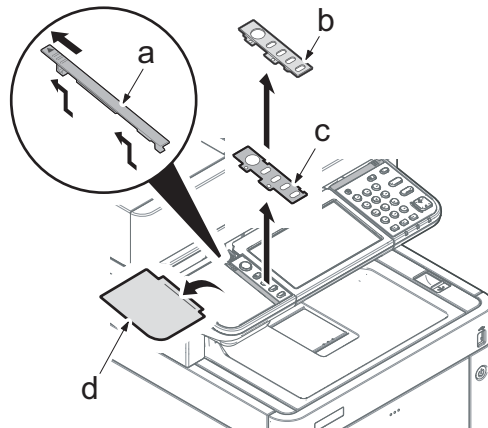


Figure 2-25

6. Connect the USB connector (a) to the USB interface slot (b).
7. Attach the ID card reader holder (c) with the screw (d).
8. Reattach the parts in the original position.

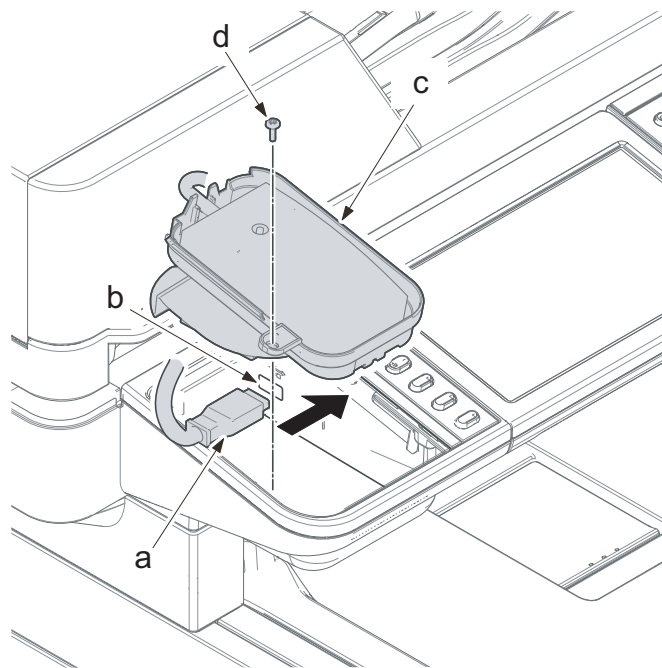


Figure 2-26

9. Affix the label (c) on the ID card reader cover (b) aligning it with the reference position (a).

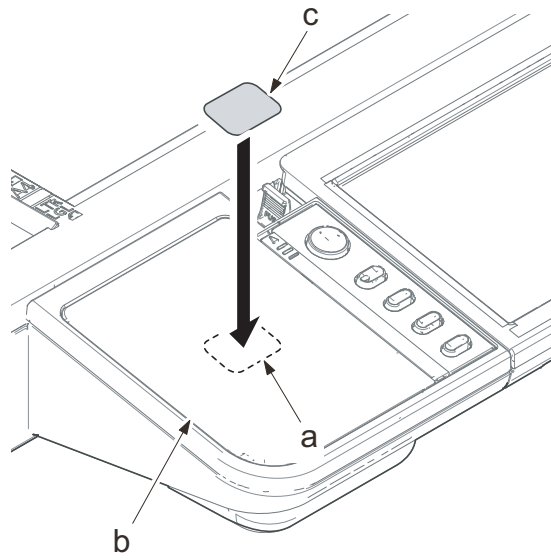


Figure 2-27

(2) Paper Feeder (500-sheet x1)

Three cassettes the same as the one for the main unit can be installed. Installation is the same as the standard cassette.

Installing the Paper Feeder

1. Take out the paper feeder (a) from the packing case, and place it at the installation location.
2. Lift the main unit straight up, and then fit it on the paper feeder while inserting the positioning pins (b) into the positioning holes at the main unit bottom.

Maximum number to install: three

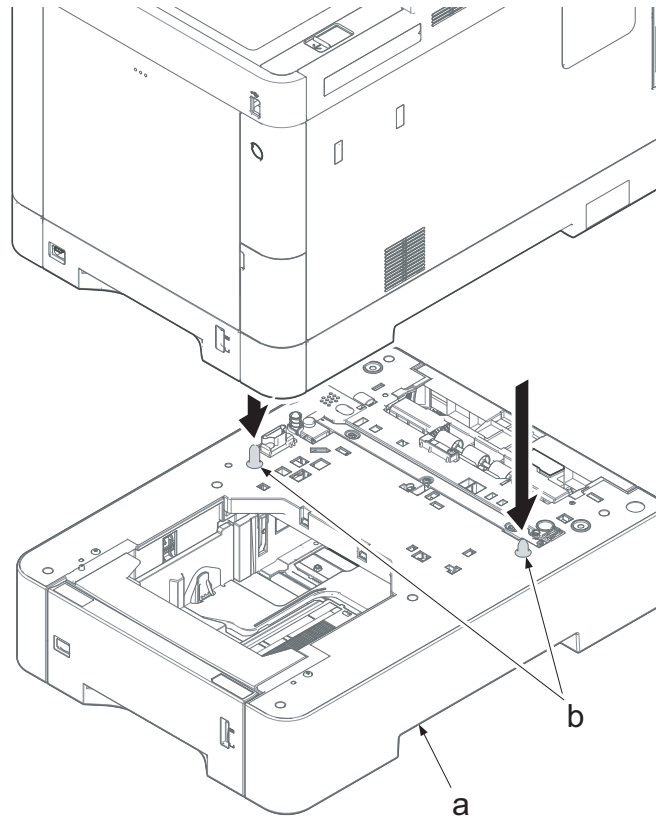


Figure 2-28

3. Pull out the cassette (b) from the paper feeder (a).

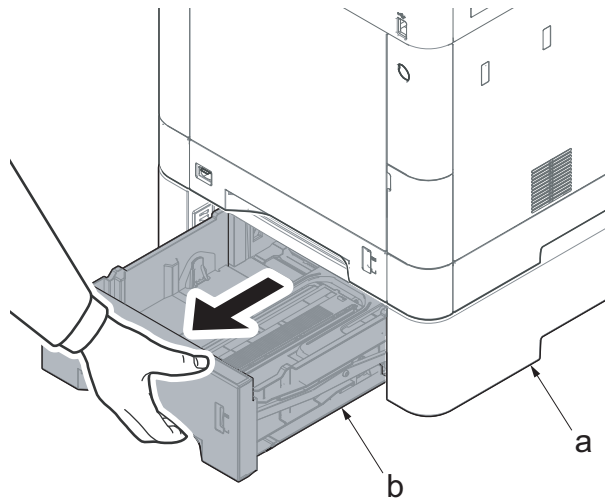


Figure 2-29

4. Adjust the position of the paper width guides located on the left and right sides of the cassette. Press the tab and slide the guides to the paper size to use.
*: Paper sizes are marked on the cassette.

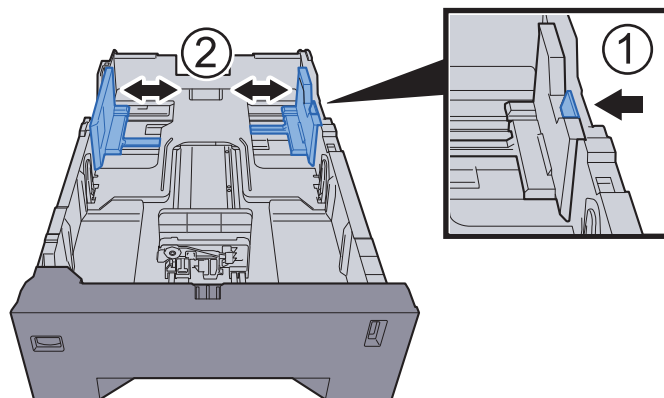


Figure 2-30

5. Adjust the position of the paper length guide. Press the tab and slide the guides to the paper size to use.

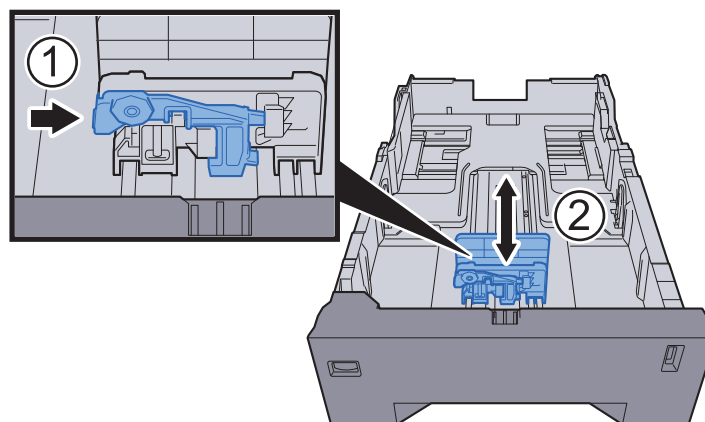


Figure 2-31

6. Turn the size dial so that the paper size to use appears in the paper size window.

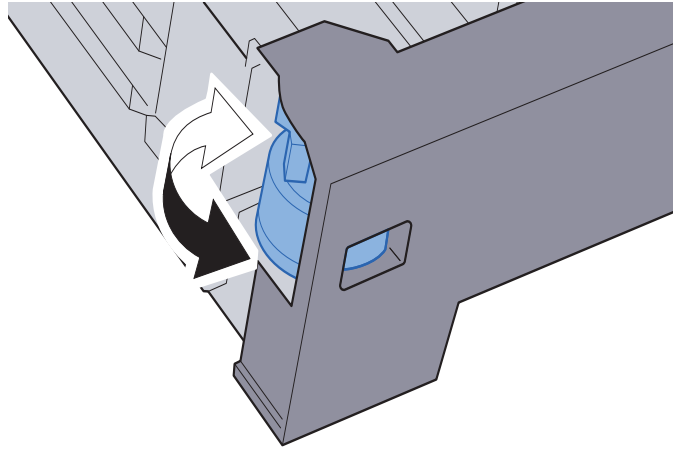


Figure 2-32

7. Fan the paper taken from a package to separate it, and then tap it on a level surface to align the edges.

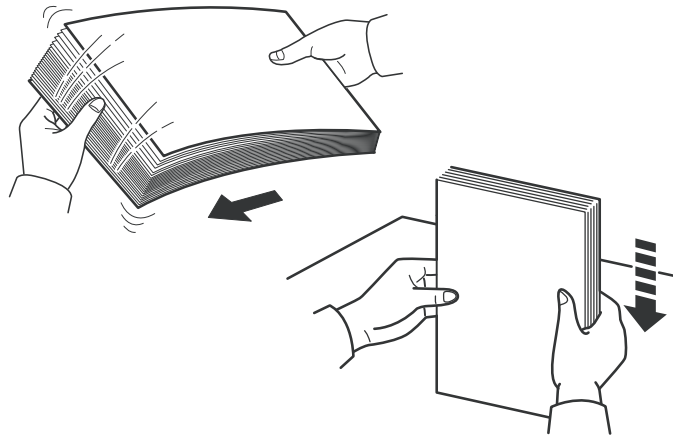


Figure 2-33

8. Load the paper with the print side facing up.

*: Make sure that the loaded paper does not exceed the level indicator (see the illustration above).

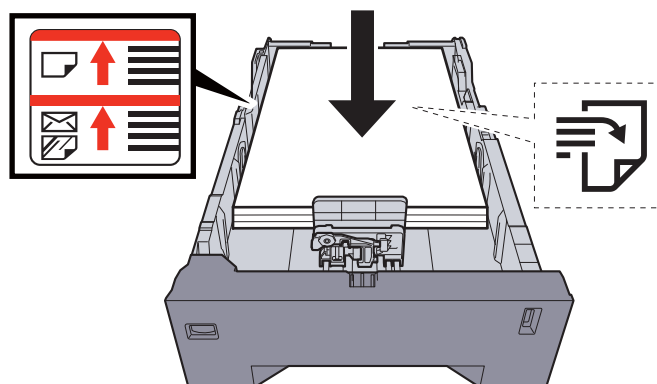


Figure 2-34

9. Push the cassette (b) back in the paper feeder (a).

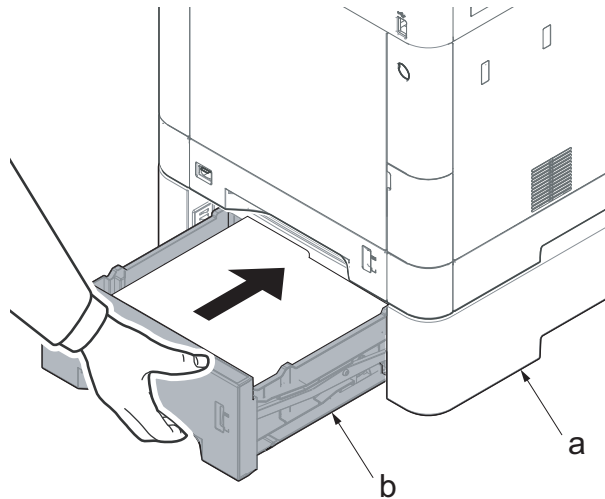


Figure 2-35

(3) Memory Module

The machine can perform more multiple jobs simultaneously by adding more memory. You can increase the machine's memory up to 3,072 MB by plugging in the optional memory modules (2,048 MB).

Precautions for Handling the Memory Modules

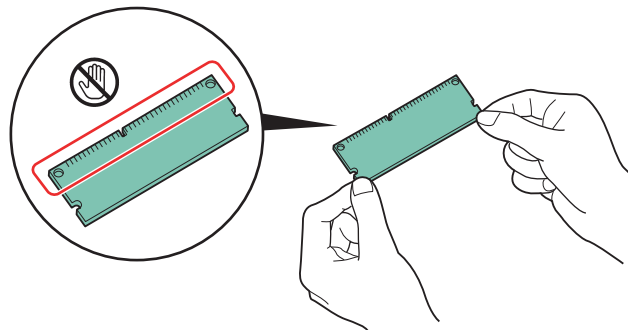


Figure 2-36

To protect electronic parts, discharge static electricity from your body by touching a water pipe (faucet) or other large metal object before handling the memory modules. Or, wear an antistatic wrist strap, if possible, when you install the memory modules.

Installing the Memory Modules

1. Turn off the main unit and disconnect the power cord and all interface cables.
 2. Press the power switch one second or more to discharge the electric charge inside the main unit.
- *: Otherwise, The PWB may be damaged.

3. Remove the cover.

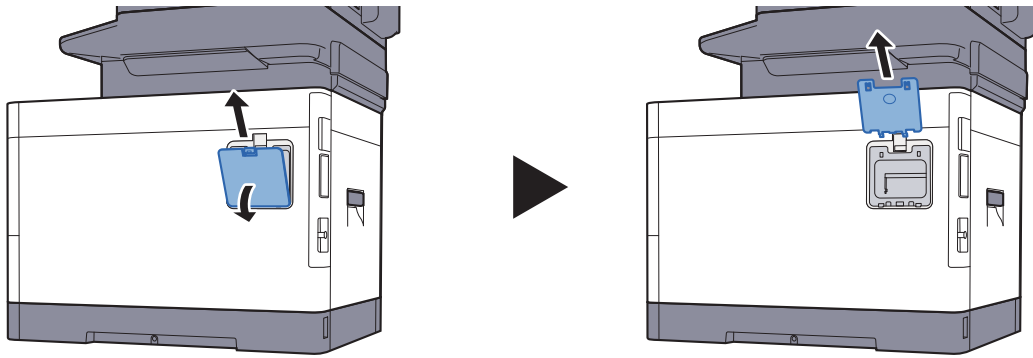


Figure 2-37

4. Remove the memory module from its package.
 5. With the memory connection terminal pointing toward the socket, align the cut-out part with the socket terminal and insert it straight in on an angle.
- *: Before inserting the memory module, make sure that the power switch is turned off.

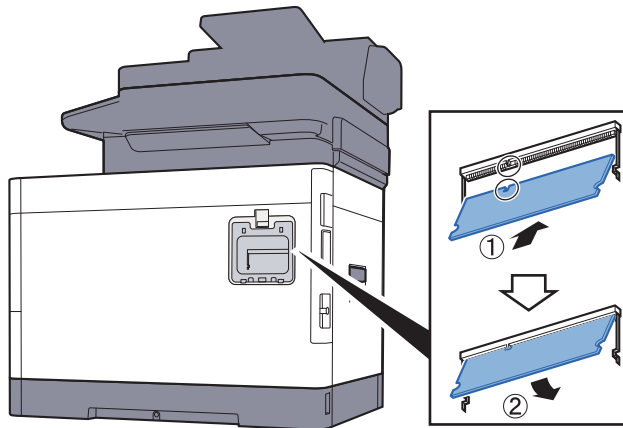


Figure 2-38

6. Carefully press the inserted memory module toward the main unit.
7. Reattach the covers.

Removing the Memory Module

To remove the memory module, remove the right cover and the memory slot cover from the main unit. Then, carefully push the two stoppers so that the memory module pops up from the socket.

IMPORTANT

When detaching the memory, unlock both sides of the memory.
(Memory comes off if releasing the stoppers at the both sides of memory)

Verifying the Memory Module

To verify that the memory module is working properly, print out a status page and check its content.

(4) HD-6/HD-7 (SSD)

With an SSD installed in the main unit, received print data can be rasterized and stored in the SSD. This enables high-speed printing of multiple copies using the electronic sort function. Also, you can use the Document Box functions. See "Document Box" in the Operation Guide supplied with the main unit for details.

(5) IB-50 (Network Interface Kit)

The Network Interface Kit provides a high-speed connection for the Gigabit-per-second interface. Network printing is available with the network protocols such as TCP/IP and NetBUEI for a variety of OS of Windows, Macintosh and UNIX. See the Operation Guide supplied with the IB-50 for details.

The installation procedures are same as for an SSD.

(6) IB-51 (Wireless Network Interface Kit)

This is a wireless LAN interface card which supports the wireless LAN specifications IEEE802.11n (Max 300 Mbps) and 11 g/b.

With the utilities supplied, settings are possible for a variety of OS and network protocols. See the Operation Guide supplied with the IB-51 for details.

The installation procedures are same as for an SSD.

Installing the SSD/IB-50/IB-51

1. Turn the power switch off and unplug the power cord from the outlet.
2. Press the power switch one second or more to discharge the electric charge inside the main unit.

*: Otherwise, The PWB may be damaged.

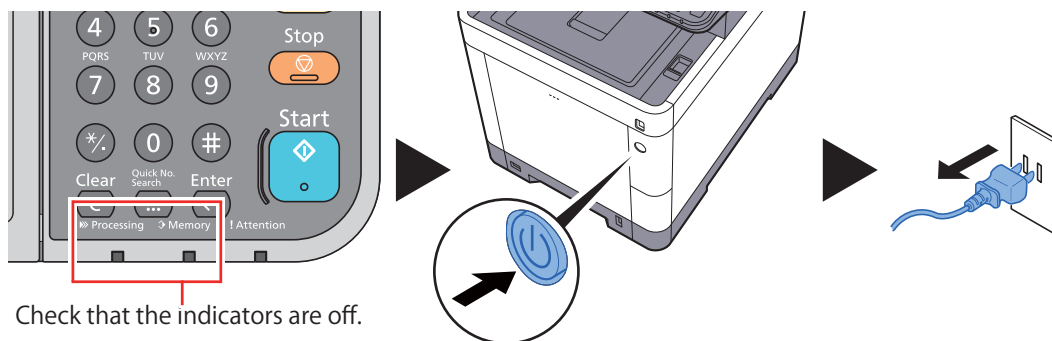


Figure 2-39

3. Remove the interface cover.

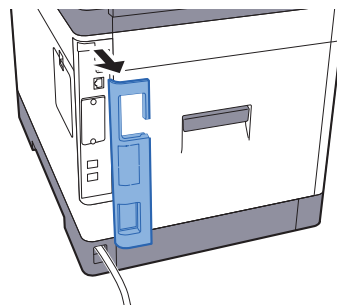


Figure 2-40

4. Remove two screws (M3x8) and remove the cover.

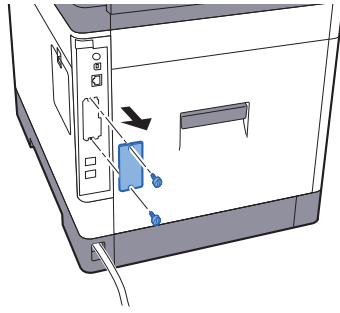


Figure 2-41

5. Insert it straight into the optional interface slot.

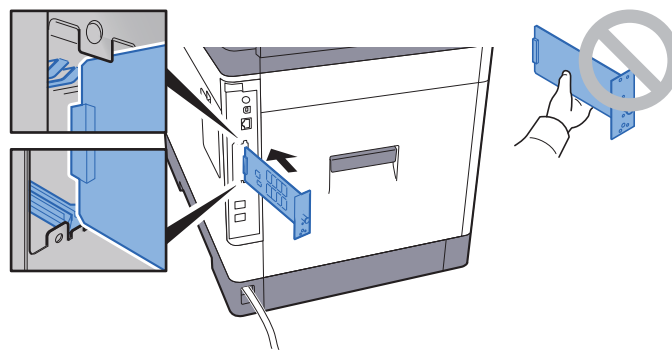


Figure 2-42

6. Remove the breakaway cover from the interface cover. Reattach the interface cover to its original position.

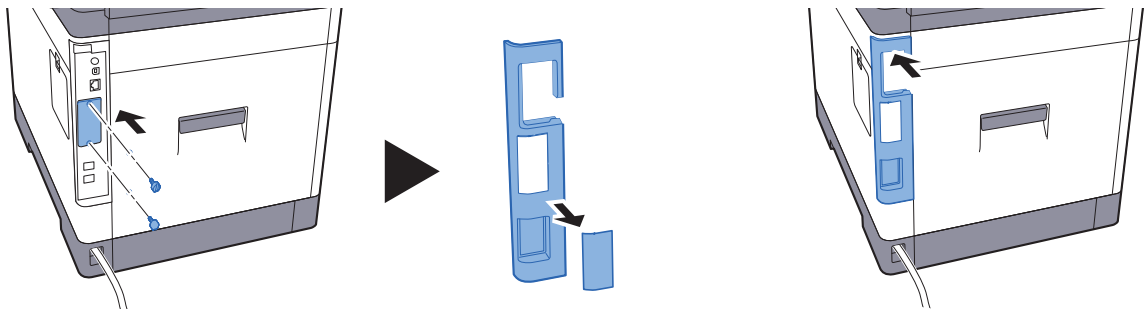


Figure 2-43

7. Insert the power cord into the outlet and turn the power switch on.

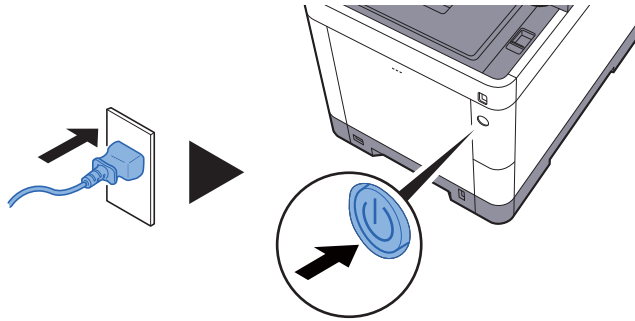


Figure 2-44

Formatting an SSD

When an optional SSD is inserted into the main unit for the first time, it must be formatted before use. Formatting will delete all existing data on an SSD.

Format procedure in the system menu

1. Press the [System Menu/Counter] key.
2. By pressing [^] [V] key, select [Adjustment/Maintenance] > [Service Settings] > Enter the Login User Name and the Login Password > [Format SSD].
3. Select [Yes] to execute the initialization.
4. Turn the power switch off then on. Take interval more than 5 seconds between Off and On.

Note

The factory default login user name and login password are set as shown below.

Login User Name/Login Password (30 ppm model): 3000 / 3000

Login User Name/Login Password (35 ppm model): 3500 / 3500

(7) IB-36 (Wireless Network Interface Kit)

Supplied parts of IB-36 (Wireless Network Interface Kit)
(1503S50UN0)
PWB UNIT 1pc

IMPORTANT

Before attaching the expansion memory, make sure to do the following procedure.

Otherwise, there might be the possibility to damage the PWB.

1. Unplug the power cord.
2. Press the power switch one second or more to discharge the electric charge inside the main unit.

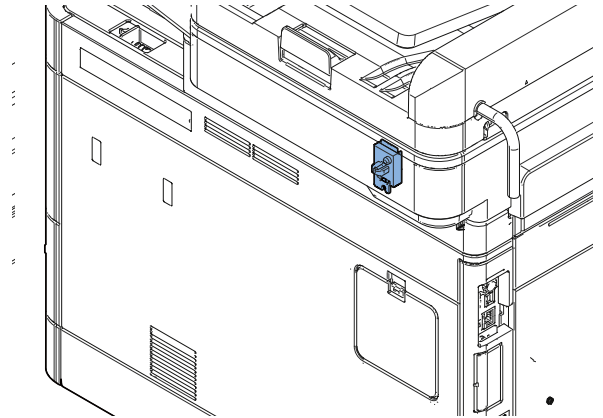


Figure2-45

1. Pull the lower part of the opening toward the machine rear side and release the hook (a).
2. Remove the interface cover (b).

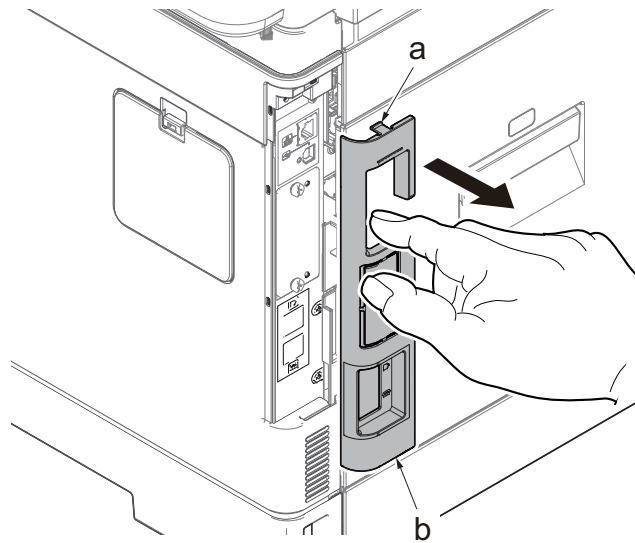


Figure 2-46

*: For 35ppm model: Take out DP cable (b) from the opening section of the interface cover (a) and then remove.

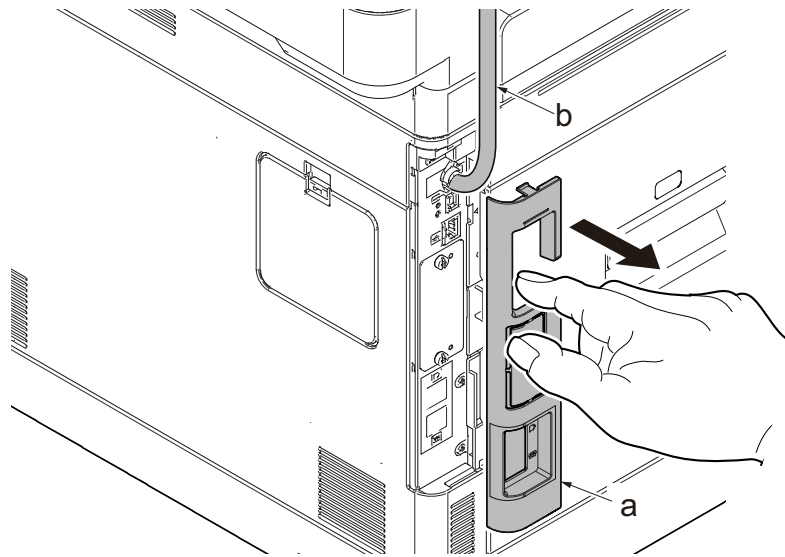


Figure 2-47

3. Remove the screw (a) (M3x8).
4. Slide the upper right cover (b) toward the machine rear side and detach it.

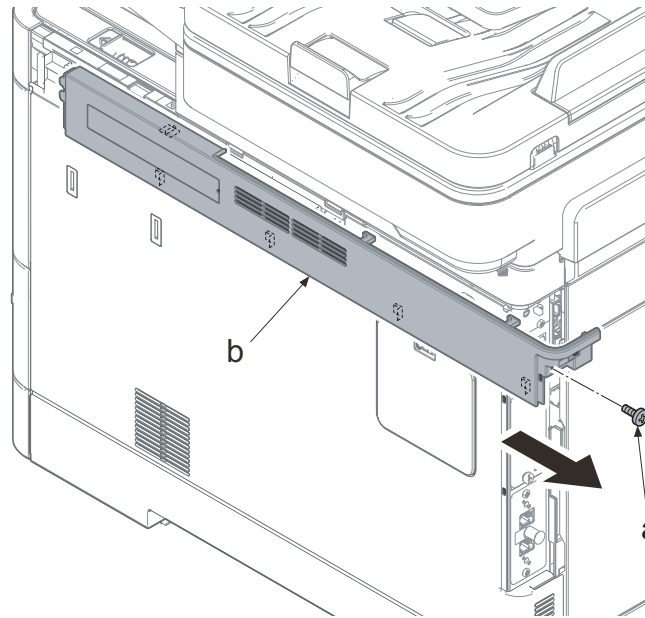


Figure 2-48

5. Pull the lever (a).
6. Lift up the scanner unit (b) and open the inner tray (c).

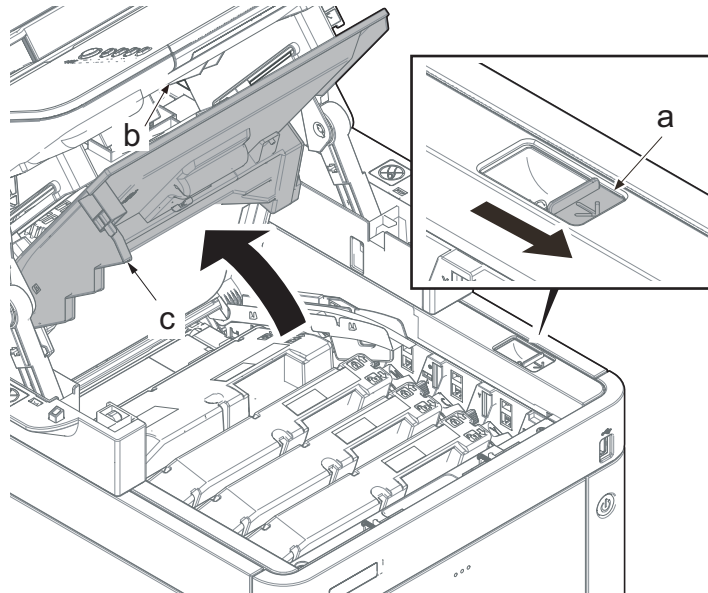


Figure 2-49

7. Release the hook (a) using a flat-blade screwdriver (d).
8. Insert the flat-blade screwdriver (d) into the hole from the machine front side and release three hooks (b). (Release in the order from 1 to 3)
9. Remove the scanner right cover (c).

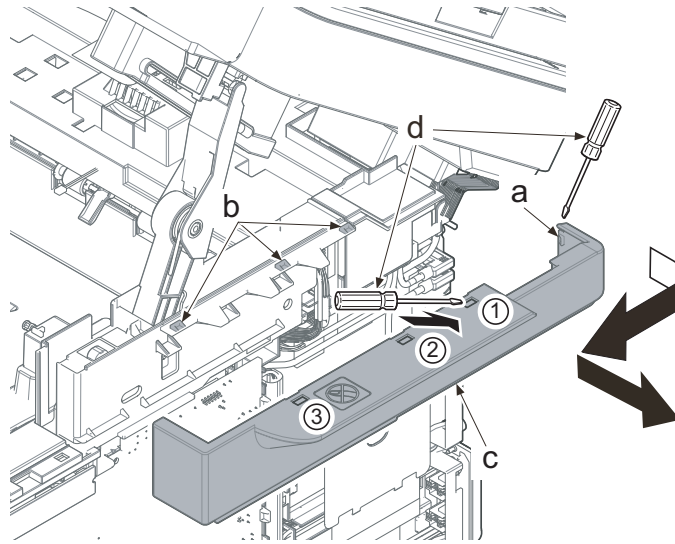


Figure 2-50

10. Insert the PWB unit (a) to the opening section (b) of the shield box.
11. Connect the connector (c) from the connector (d) of the main/engine PWB.

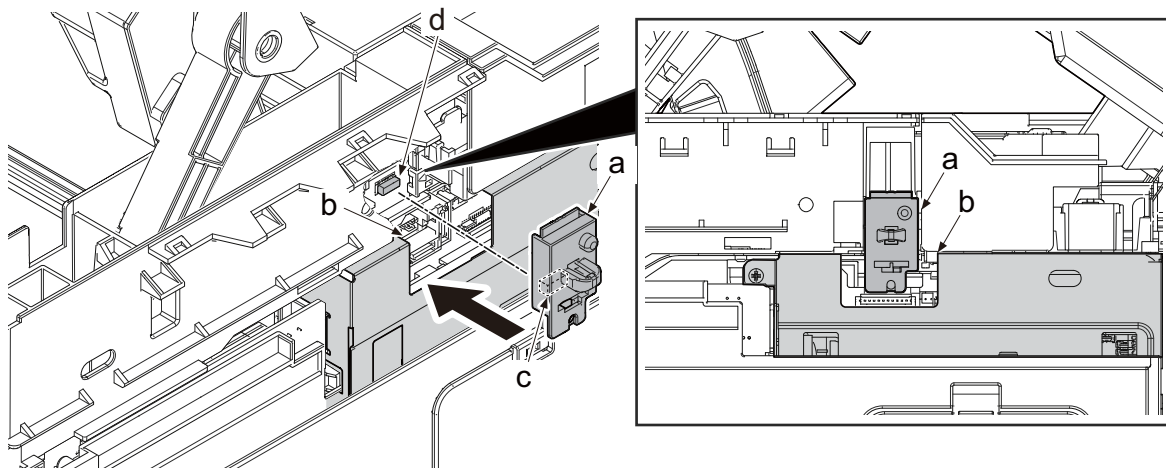


Figure 2-51

When disconnecting/connecting the connector (c) to the main/engine PWB connector (d), connect straight to the main/engine PWB.

If operating diagonally, it might cause the connector damage.

12. Insert the scanner right cover (a) from the front side of the machine and fix three positions of hooks (b).
13. Fix the hook (c) and reattach to the original position.

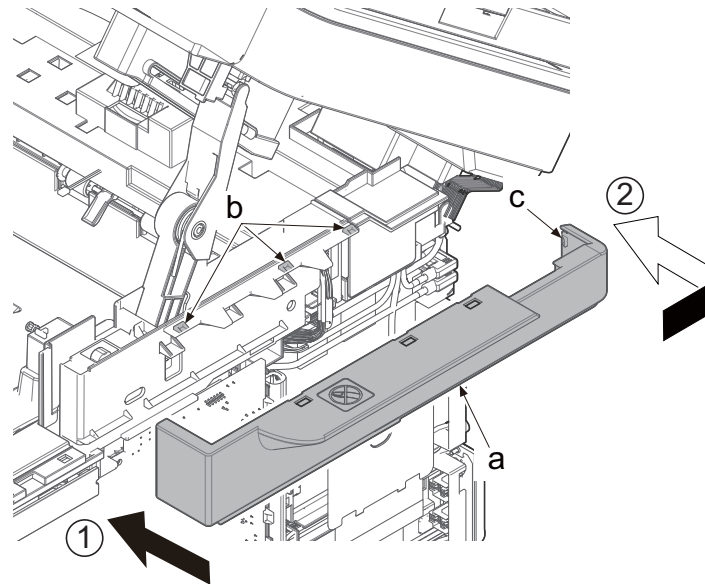


Figure 2-52

14. Close the scanner unit.
15. After inserting the upper right cover (a) at the hook (b) of the machine front side and then, sliding it to the machine front side and fasten seven hooks (c) and insert the positioning boss (d) in the hole to fix in the original position with the screw (e) (M3 x 8).

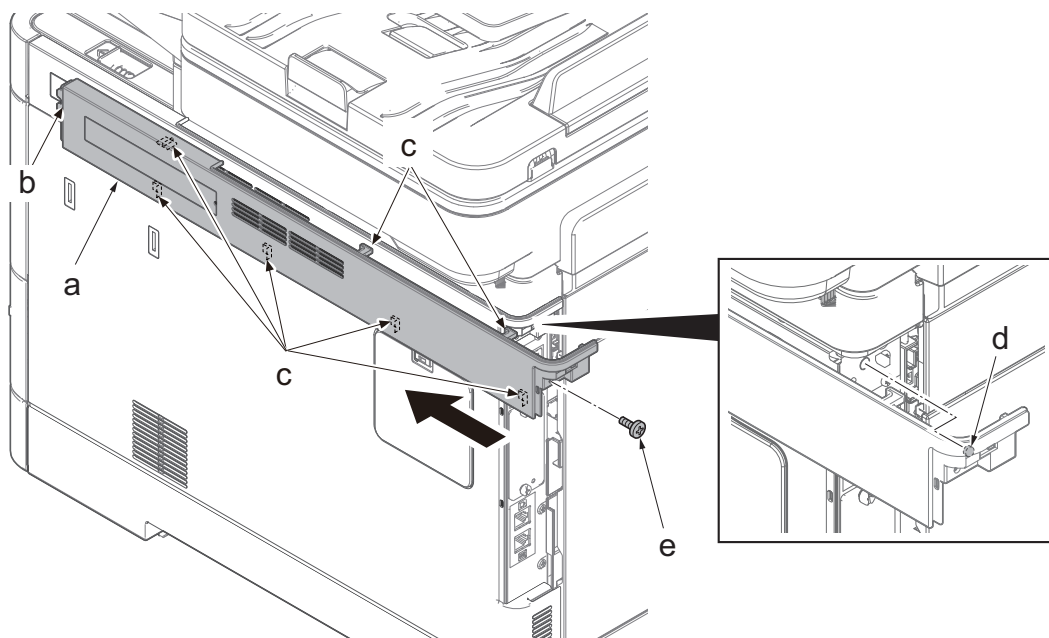


Figure 2-53

16. Reattach the interface cover (a) to the original position.

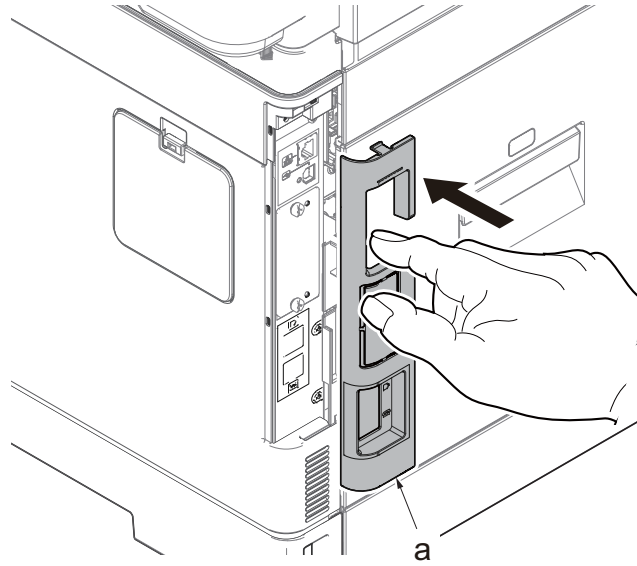
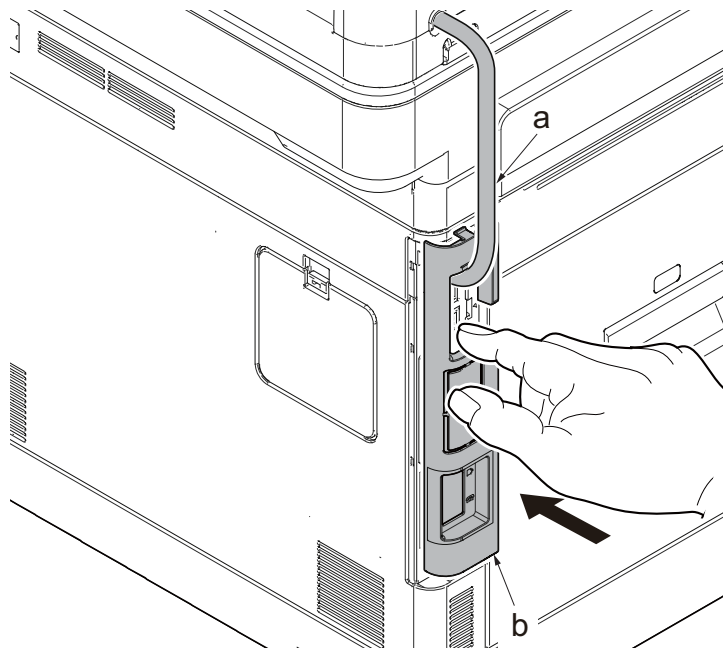


Figure 2-54

*: For 35ppm model: Put DP cable (b) through the opening section of the interface cover (a) and then install.



(8) SD/SDHC Card

An SD/SDHC card is useful for storing fonts, macros, and overlays. The main unit is equipped with a slot for an SDHC card with a maximum size of 32GB, and an SD card with a maximum size of 2GB.

Reading the SD/SDHC Card

The contents of the SD/SDHC card are read into the main unit after turning the power on.

Formatting an SD/SDHC Card

To use an unused SD/SDHC card, you must first format it with the main unit.

1. Turn the power switch off and unplug the power cord from the outlet.

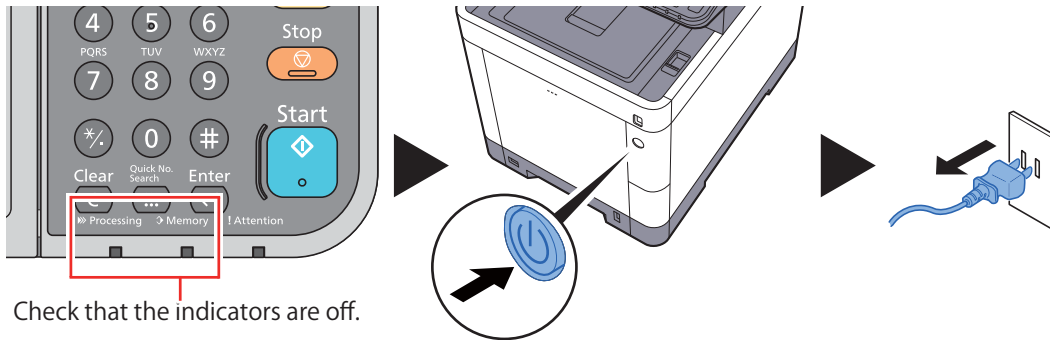


Figure 2-55

2. Remove the interface cover.

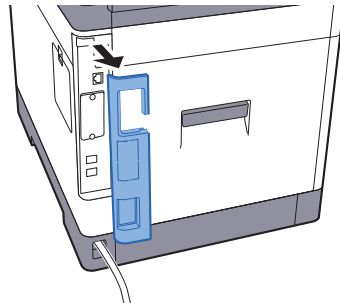


Figure 2-56

3. Remove two screws (M3x8) and remove the cover.

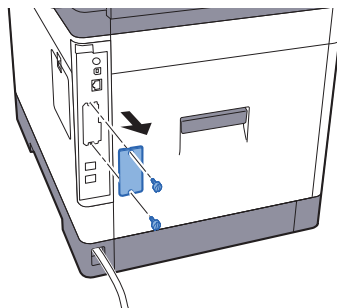


Figure 2-57

4. Insert the SD/SDHC card into the SD/SDHC card slot.

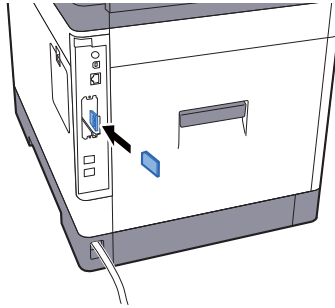


Figure 2-58

5. Reattach the interface cover to its original position.

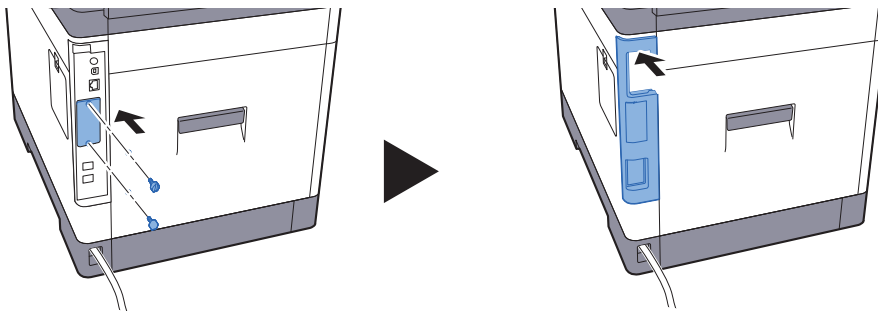


Figure 2-59

6. Insert the power cord into the outlet and turn the power switch on.

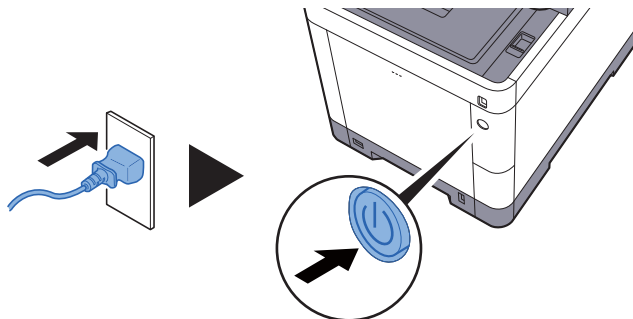


Figure 2-60

7. Format the SD/SDHC card from the operation panel.

Format procedure in the system menu

1. Press the [System Menu/Counter] key.
2. By pressing [^] [V] key, select [Adjustment/Maintenance] > [Service Settings] > Enter the Login User Name and the Login Password > [Format SD Card].
3. Select [Yes] to execute the initialization.
4. Press the [Stop] key.

IMPORTANT

Formatting will delete all existing data on the SD card.

If you have installed an application, do not format the SD card to avoid the removal of the application in the SD card.

Note

The factory default login user name and login password are set as shown below.

Login User Name/Login Password (30 ppm model): 3000 / 3000

Login User Name/Login Password (35 ppm model): 3500 / 3500

(9) MS-5100/ MS-5100B (Manual stapler)

It can staple the originals or the printouts.

Manual stapler installation requires the following parts:

Manual stapler MS-5100 (1903R90UN0)..... 1pc
Manual stapler MS-5100B (1903R90UN2)..... 1pc

Supplied parts of Manual stapler MS-5100 (1903R90UN0)

Manual stapler..... 1pc
Relay wire.....1pc
Stapler cover.....1pc
Screw (M3x8 screw with the binding head).....3pc
Screw (M3x10 screw with the binding head).....2pc

Supplied parts of Manual stapler MS-5100B (1903R90UN2)

Manual stapler..... 1pc
Relay wire.....1pc
Stapler cover.....1pc
Screw (M3x8 screw with the binding head).....3pc
Screw (M3x10 screw with the binding head).....2pc
Stapler attachment plate *11pc
Relay wire B*1.....1pc

*1: The stapler attachment plate (a) and the relay wire B (b) are not used in this model.

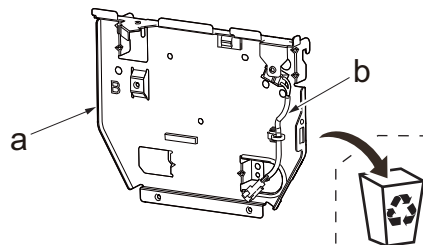


Figure 2-61

1. Insert a flat-blade screwdriver (c) into the hole (b) at the machine rear side of the upper right cover lid (a), and detach it while lifting it up and sliding it toward the machine rear side.

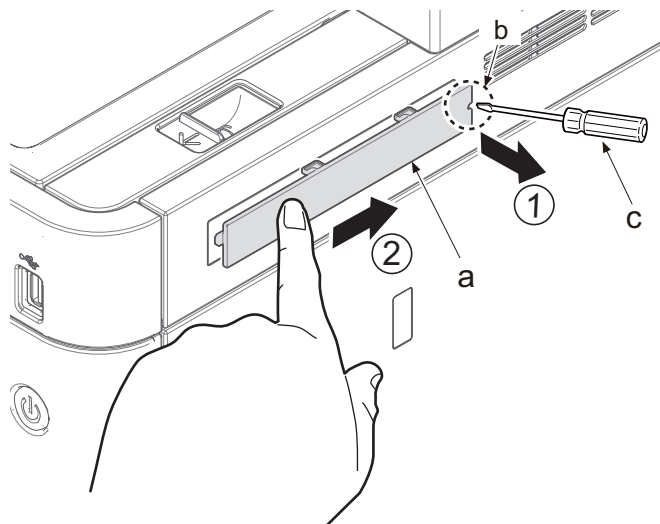


Figure 2-62

2. Insert a flat-blade screwdriver (b) into the cut-out portion of two seals (a) and remove them from the middle right cover (c).

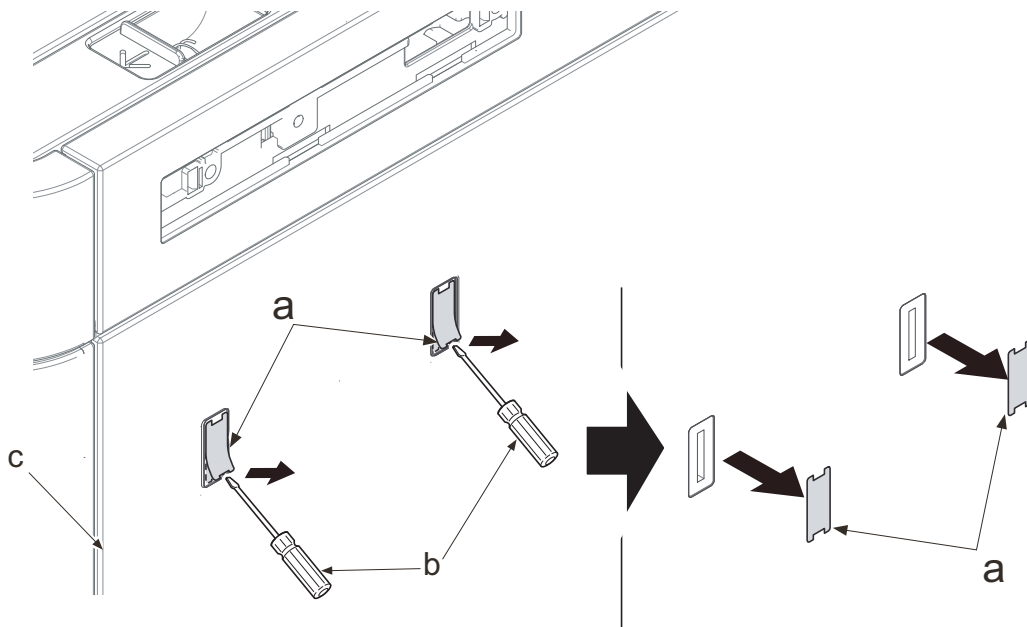


Figure 2-63

3. Connect the connector (b) of the relay wire (a) to the connector (c) of the main unit.

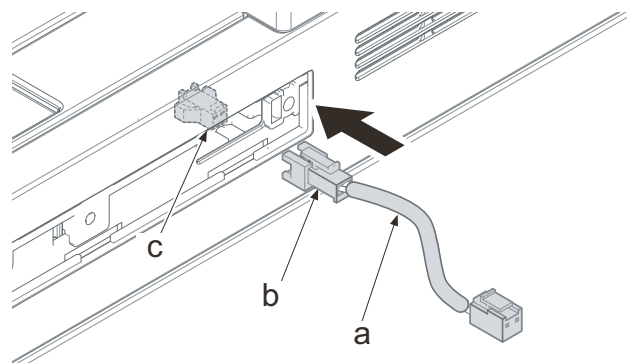


Figure 2-64

4. Connect the other connector (a) to the connector (d) of the PWB while passing it through the opening (c) of the stapler (b).
*: After connecting the connector, push the excess wire in the opening.

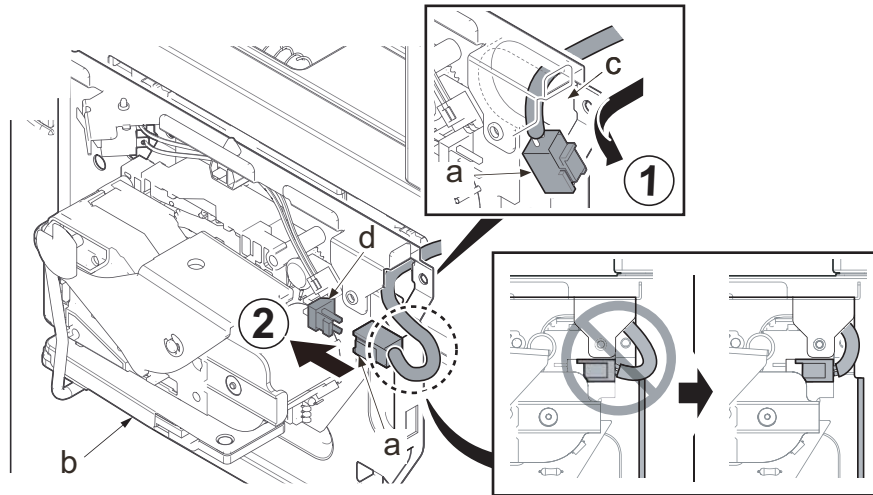


Figure 2-65

5. Insert two hooks (b) of the manual stapler (a) into each of the square holes (c), and then lift it to insert three hooks (d) into the square hole (e).

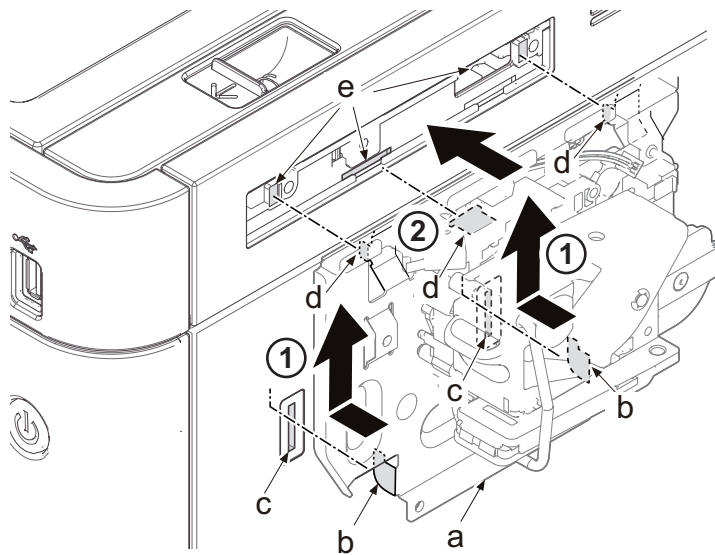


Figure 2-66

6. Secure the stapler (b) with two screws (a)(M3x10).

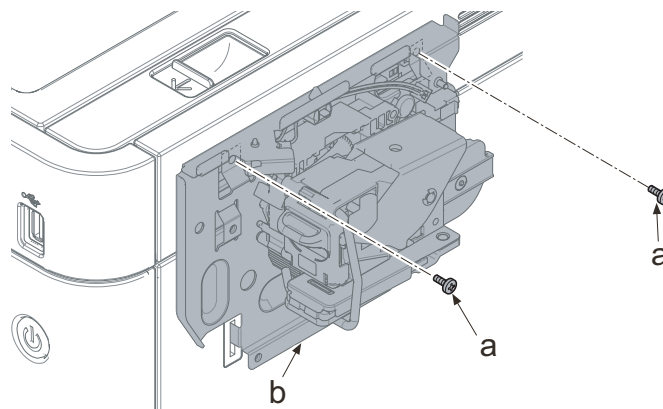


Figure 2-67

7. Open the stapler lid (a).
8. Attach the stapler cover (b) by sliding it to the machine rear side to fasten the hook (c).

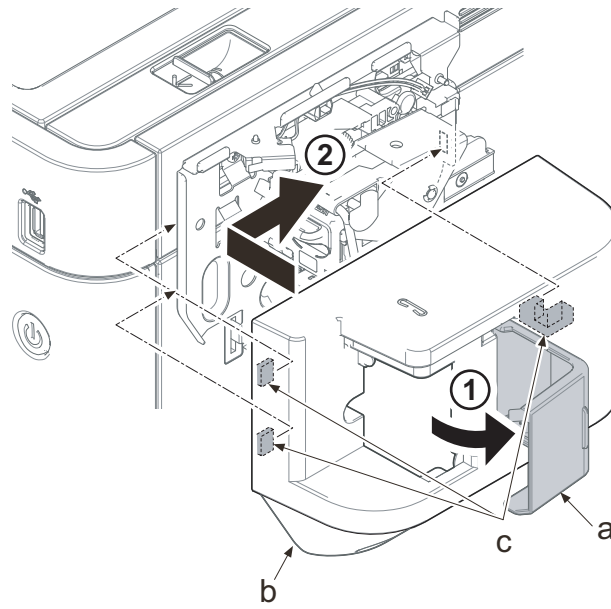


Figure 2-68

9. Secure the stapler cover (b) with three screws (a)(M3x8).

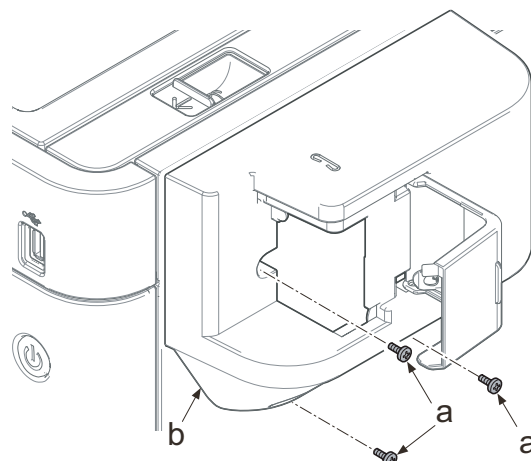


Figure 2-69

10. Close the stapler lid (a).

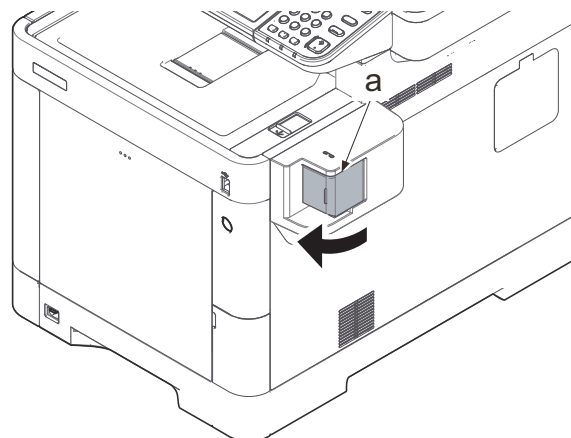


Figure 2-70

2-4 Optional Applications

The applications listed below are installed in this machine.

Application
Data Security Kit
Card Authentication Kit *1
ThinPrint Option *1
OCR Extension Kit *1

*1: This can be used on a trial basis for a limited time.

*: Restrictions such as the number of times the application can be used during the trial period differ depending on the application.

*: If you change the date/time while using the trial version of an application, you will no longer be able to use the application.

Starting Use of an Application

Use the procedure below to start using an application.

1. [System Menu/Counter] key > [System/Network] > [Optional Function]

If the login user name entry screen appears during operations, enter a login user name and password, and select [Login]. For this, you need to login with administrator privileges.

The factory default login user name and login password are set as shown below.

Model name	Login User Name	Login Password
30 ppm model	3000	3000
35 ppm model	3500	3500

2. Select the desired application and select [Activate].

*: You can view detailed information on the selected application by selecting [].

3. Select [Official] and enter a license key.

Some applications do not require you to enter a license key. If the license key entry screen does not appear, go to Step 4.

To use the application as a trial, select [Trial] without entering the license key.

4. Select [Yes] in the confirmation screen.

Icons of activated application are displayed in the Home screen.

*: The icon of the OCR expansion kit is not displayed on the home screen.

Installing OCR dictionary

[System Menu/Counter] key > [System/Network] > [OCR dictionary installation]

*: When installing the OCR dictionary firmware, it is necessary that the SSD or the SD card has to be installed.

*: It is necessary to format the SSD / SD card at the system menu in the main unit. (See page P.6-139)

*: If both an SSD and an SD/SDHC memory card are inserted, the OCR dictionary will be installed on the SSD.

*: If you will use an SD/SDHC memory card, a 32 GB SD/SDHC memory card is recommended.

Checking Details of an Application

Use the procedure below to check the details of an application.

1. Select [System Menu/Counter] key > [System/Network] > [Optional Function]

If the login user name entry screen appears during operations, enter a login user name and password, and select [Login]. For this, you need to login with administrator privileges.

The factory default login user name and login password are set as shown below.

Model name	Login User Name	Login Password
30 ppm model	3000	3000
35 ppm model	3500	3500

2. Select the desired application and select [].

*: You can view detailed information on the selected application.

(1) Data Security Kit(E) (Data Security Kit)

The Data Security Kit overwrites all unnecessary data in the storage area so that it cannot be retrieved. The Data Security Kit encrypts data before storing it in the SSD. It guarantees higher security because no data can be decrypted by ordinary output or operations.

(2) Card Authentication Kit(B)

User login administration is available using ID cards. To do so, it is necessary to register ID card information on the previously registered local user list. Refer to the Card Authentication Kit Operation Guide for more information about registration.

Activating Card Authentication Kit

IMPORTANT

To install the optional function, you need the License Key. Please access the designated website of your dealer or service representative, and register the "Machine No." indicated on your machine and the "Product ID" indicated on the License Certificate supplied with the product to issue the License Key.

1. Turn the power switch on.
Press the [System Menu/Counter] key, then press [System/Network].

If the login user name entry screen appears during operations, enter a login user name and password, and select [Login]. For this, you need to login with administrator privileges.

The factory default login user name and login password are set as shown below.

Model name	Login User Name	Login Password
30 ppm model	3000	3000
35 ppm model	3500	3500

2. Press [Next] in "Optional Function".
3. Select [CARD AUTHENTICATION KIT(B)], and press [Start].
4. The license key entry screen appears.
Input the license key using the numeric keys and press [Official].
5. Check the product name "CARD AUTHENTICATION KIT (B)" and then press [Yes].

6. When using the SSFC card, execute maintenance mode U222 and set [SSFC].

*: When the machine enters Energy Saver sleep mode, the ID card cannot be recognized. If you want to use the card reader during the sleep mode, set [Off] in "Sleep Rules" of [Sleep Level] by referring to the operation guide.

*: When the optional network interface kit is equipped, the setting is unnecessary.

(3) UG-33 (ThinPrint Option)

This application enables print data to print directly without a printer driver.

3 Machine Design

3-1 Mechanical Configuration

(1) Cross-section view(30 ppm model)

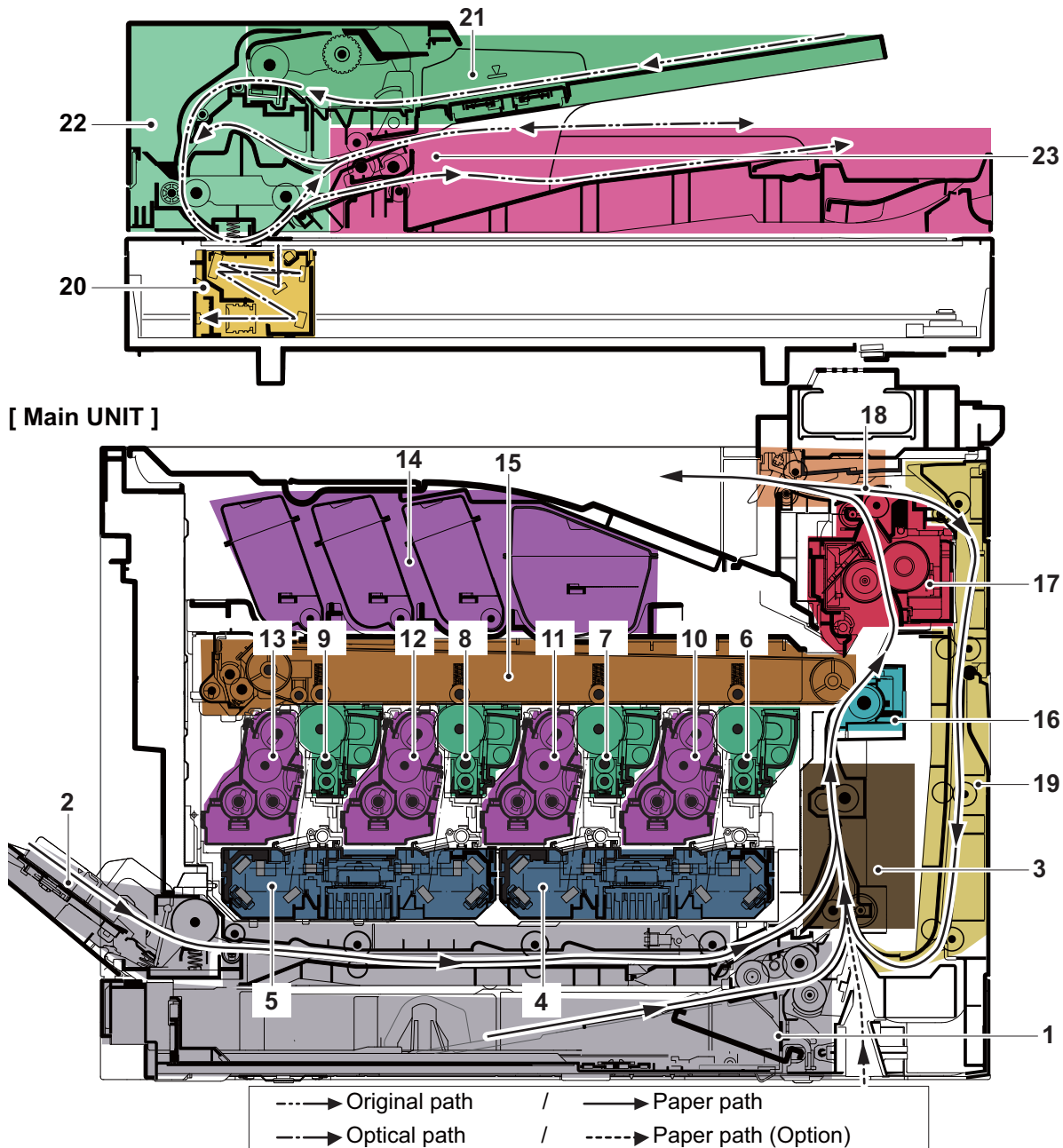


Figure 3-71

- | | | |
|--------------------------------|---|---|
| 1. Cassette paper feed section | 10. Developer unit K | 18. Feedshift and exit section |
| 2. MP paper feed section | 11. Developer unit M | 19. Duplex conveying section |
| 3. Paper conveying section | 12. Developer unit C | 20. Image scanner unit |
| 4. Laser scanner unit KM | 13. Developer unit Y | 21. DP original feed section |
| 5. Laser scanner unit CY | 14. Toner container section | 22. DP original conveying section |
| 6. Drum unit K | 15. Primary transfer section | 23. DP original switchback and exit section |
| 7. Drum unit M | 16. Secondary transfer and separation section | |
| 8. Drum unit C | 17. Fuser section | |
| 9. Drum unit Y | | |

(2) Cross-section view (35 ppm model)

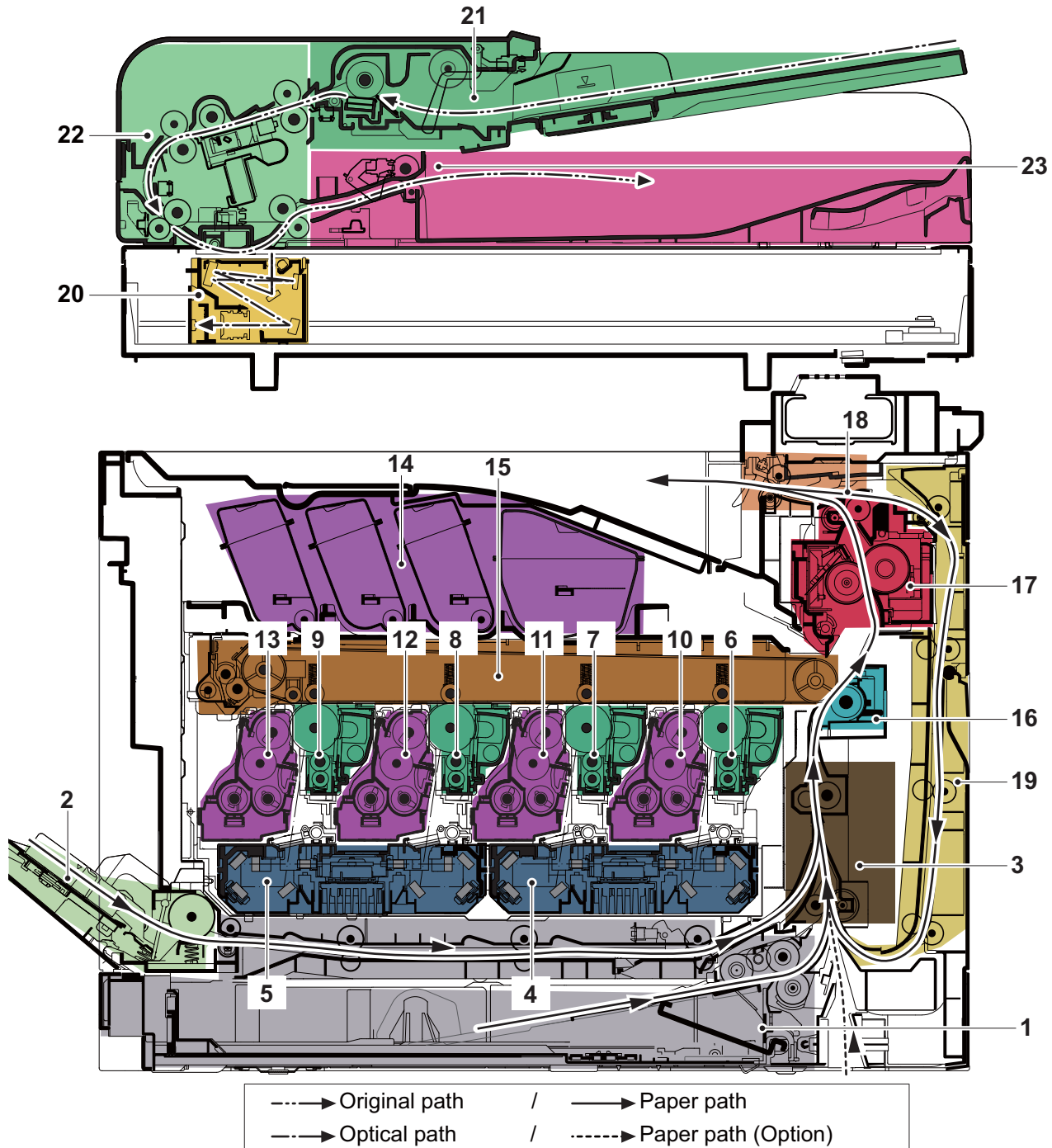
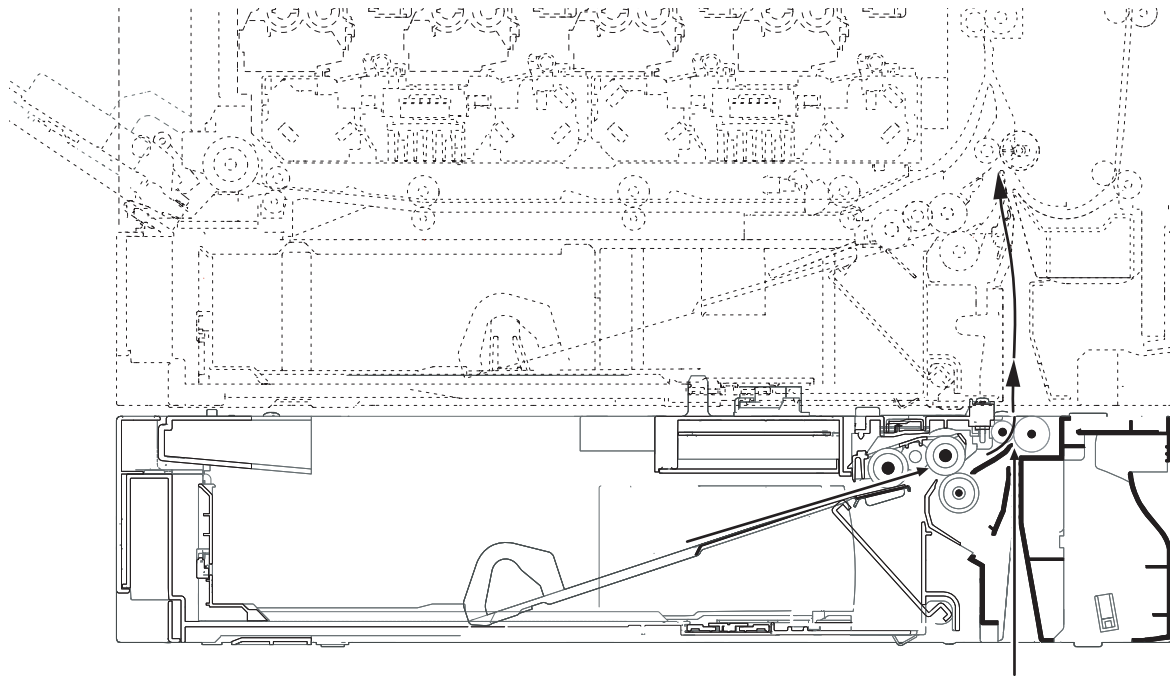


Figure 3-72

- | | | |
|--------------------------------|---|-----------------------------------|
| 1. Cassette paper feed section | 10. Developer unit K | 18. Feedshift and exit section |
| 2. MP paper feed section | 11. Developer unit M | 19. Duplex conveying section |
| 3. Paper conveying section | 12. Developer unit C | 20. Image scanner unit |
| 4. Laser scanner unit KM | 13. Developer unit Y | 21. DP original feed section |
| 5. Laser scanner unit CY | 14. Toner container section | 22. DP original conveying section |
| 6. Drum unit K | 15. Primary transfer section | 23. DP original exit section |
| 7. Drum unit M | 16. Secondary transfer and separation section | |
| 8. Drum unit C | 17. Fuser section | |
| 9. Drum unit Y | | |

(3) Cross-section view (Optional paper feeder)



→ Paper path

Figure 3-73

1. Cassette paper feed section

(4) Paper conveying and Paper detection

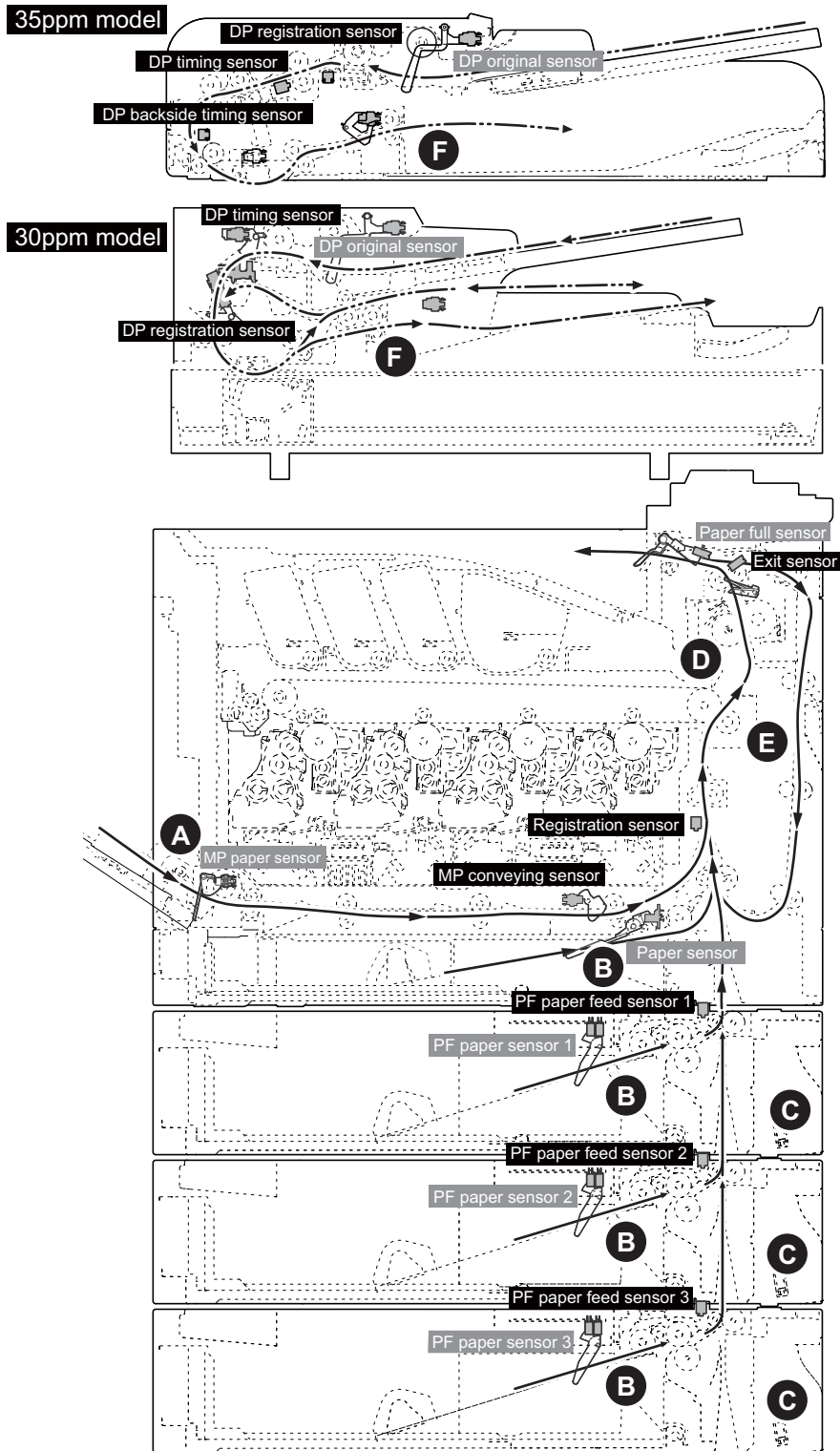


Figure 3-74

[Paper jam]

- A. Paper jam at the MP tray
- B. Paper jam at cassette 1-4
- C. Paper jam at rear cover 2-4

- D. Paper jam at rear cover 1
- E. Paper jam at the duplex unit
- F. Paper jam at the document processor

3-2 Electric parts

(1) Wire connection diagram (Machine right side)

30 ppm model

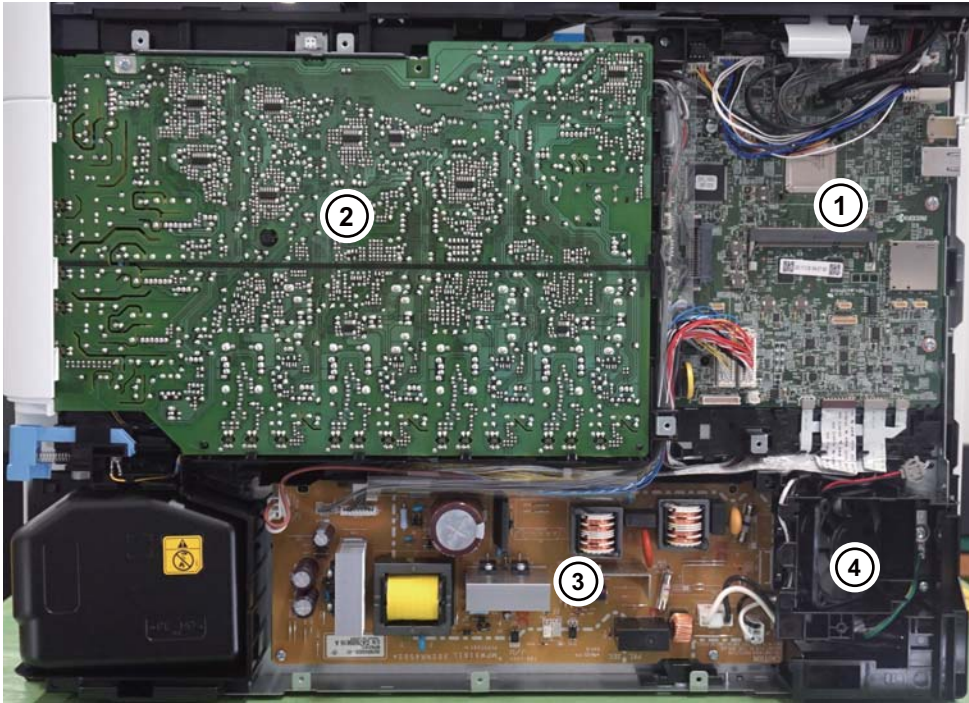


Figure 3-75

35 ppm model

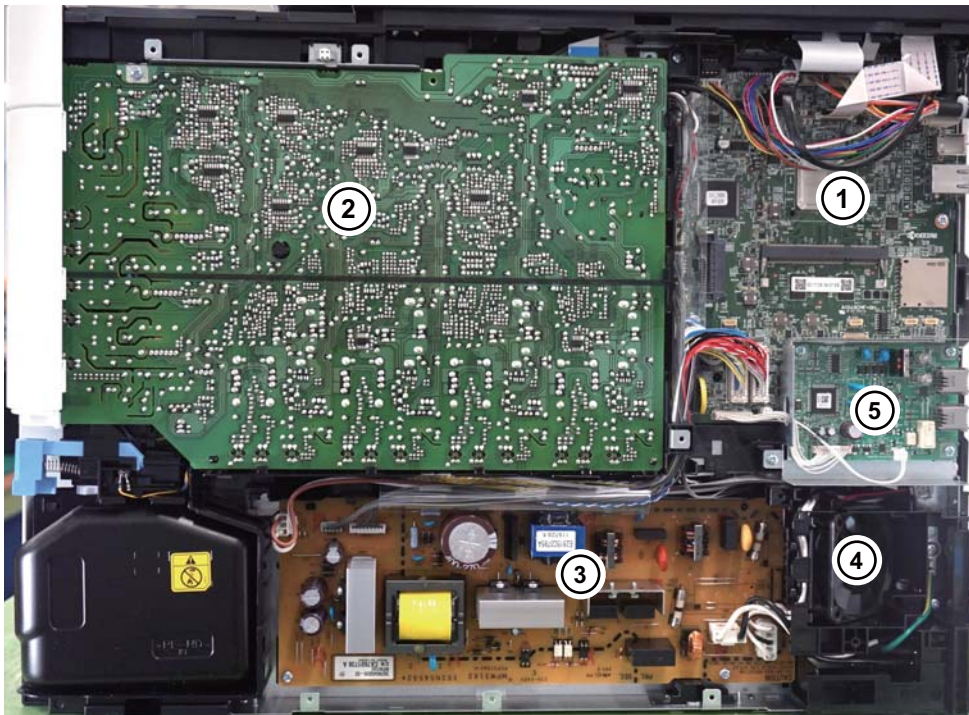


Figure 3-76

- 1. Main/Engine PWB
- 2. High-voltage PWB
- 3. Power source PWB

- 4. Power source fan motor
- 5. FAX PWB (4 in 1 model)

(2) Wire connection diagram (Machine left side)

30 ppm model

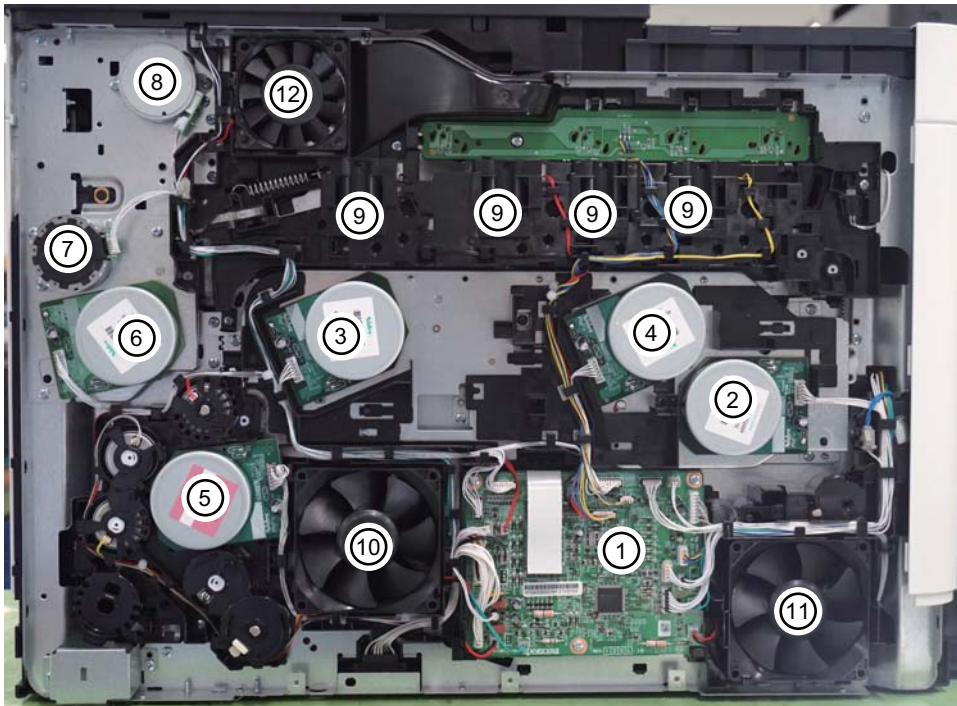


Figure 3-77

35 ppm model

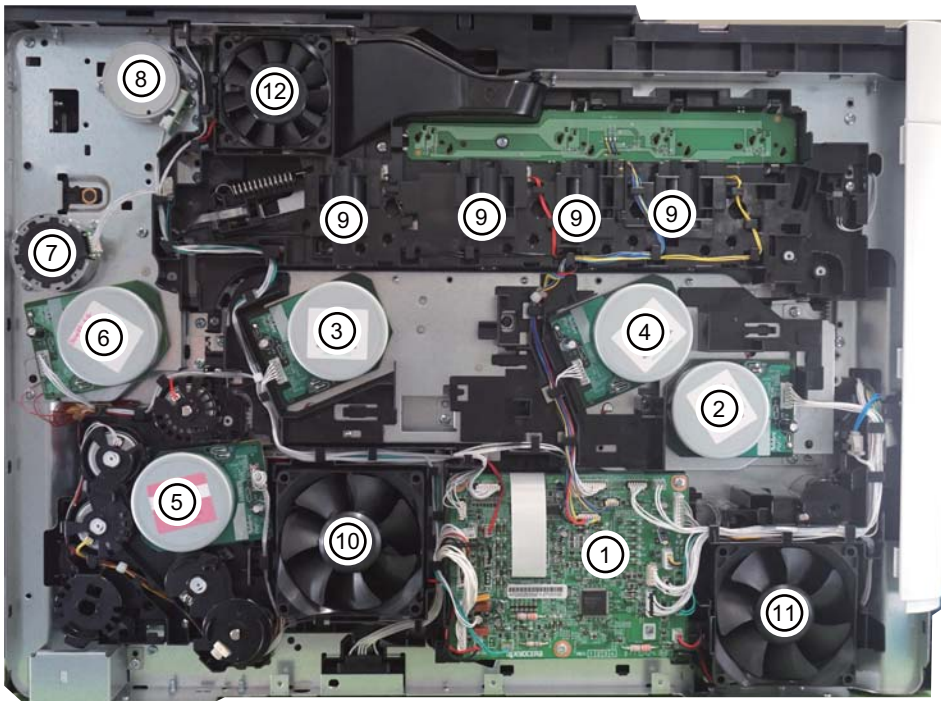


Figure 3-78

- | | |
|------------------------------|-------------------------|
| 1. Engine relay PWB | 7. Fuser motor |
| 2. Developer motor | 8. Duplex exit motor |
| 3. Drum motor 1 | 9. Toner motor |
| 4. Drum motor 2 | 10. LSU fan motor 1 |
| 5. Conveying developer motor | 11. LSU fan motor 2 |
| 6. Primary transfer motor | 12. Container fan motor |

(3) Descriptions about the major PWBs

(3-1) Main/Engine PWB

It controls the software for the interface and the image data processing, and the hardware for the generation of the high-voltage and the bias, and the paper conveying system.

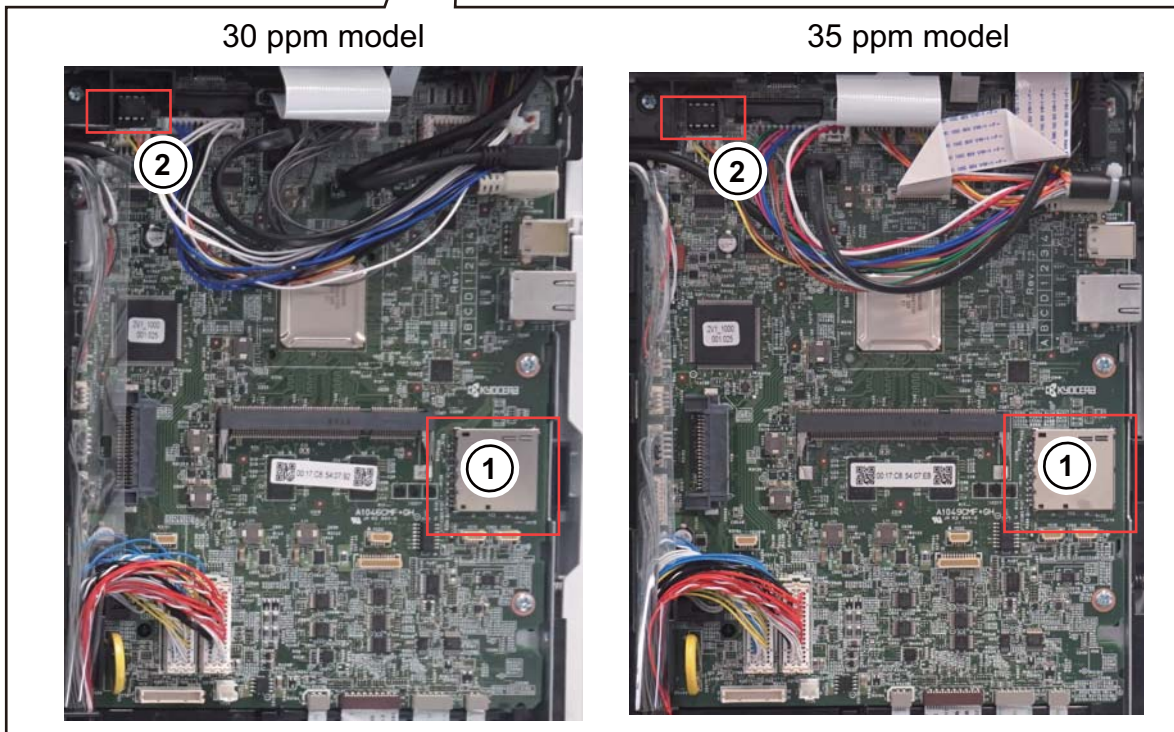
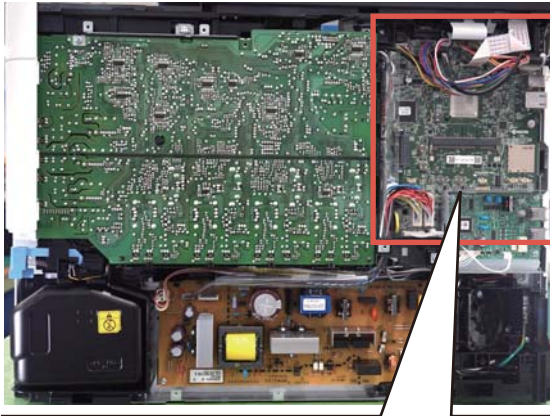


Figure 3-79

- 1. SD card socket
- 2. EEPROM

(3-2) Engine relay PWB

It consists of the control to drive each electric part and the wiring relay circuit to the main/engine PWB.

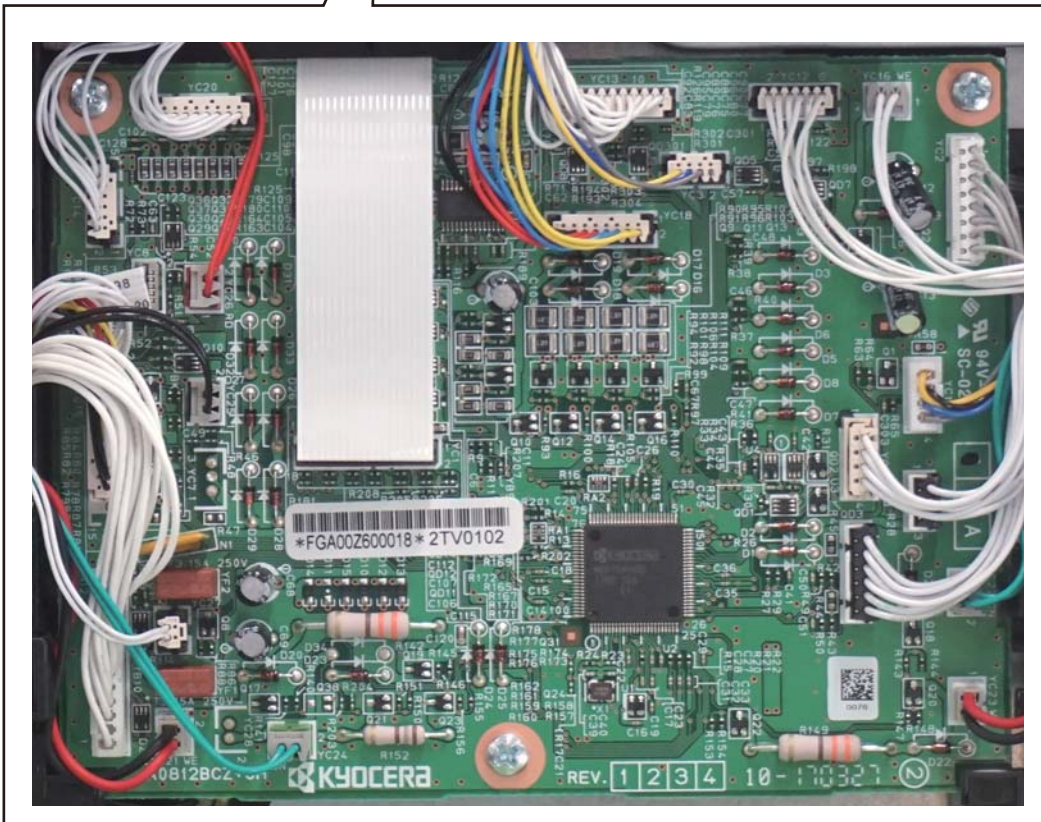
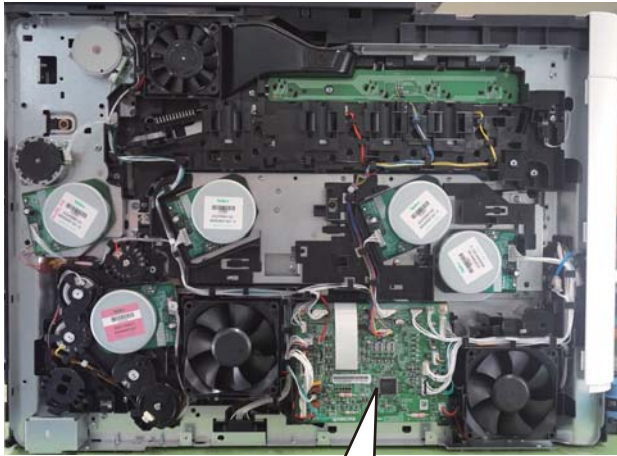


Figure 3-80

(3-3) High-voltage PWB

Generating the main charger high-voltage and the developer bias, the transfer bias and the transfer cleaning bias.

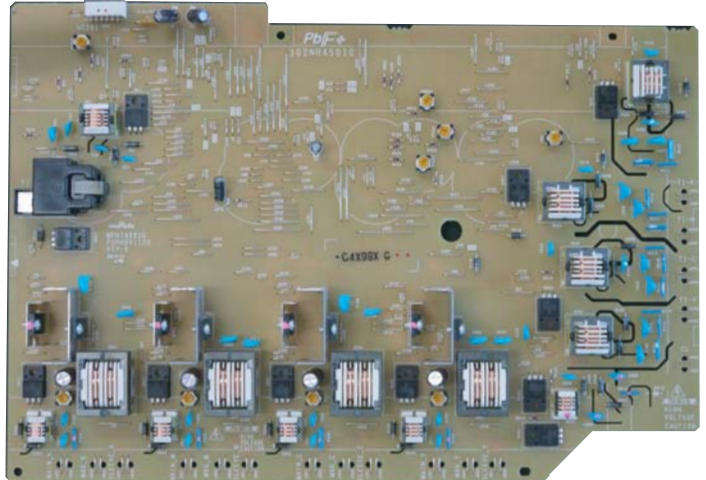


Figure 3-81

(3-4) Power source PWB

The input voltage (AC) from the AC power supply is changed to DC such as 24 V DC, and it controls the fuser heater.



Figure 3-82

(3-5) Operation panel PWB

It consists of the wiring relay circuit for the main/engine PWB, the panel-L PWB, the panel-R PWB and the LCD.



Figure 3-83

(3-6) FAX PWB (4 in 1 model)

Modulating or demodulating, compressing or decompressing the image data, changing the resolution, and smoothing the image



Figure 3-84

(3-7) PF main PWB (Optional Paper Feeder)

It controls the interface to the main unit and the entire paper feeder.

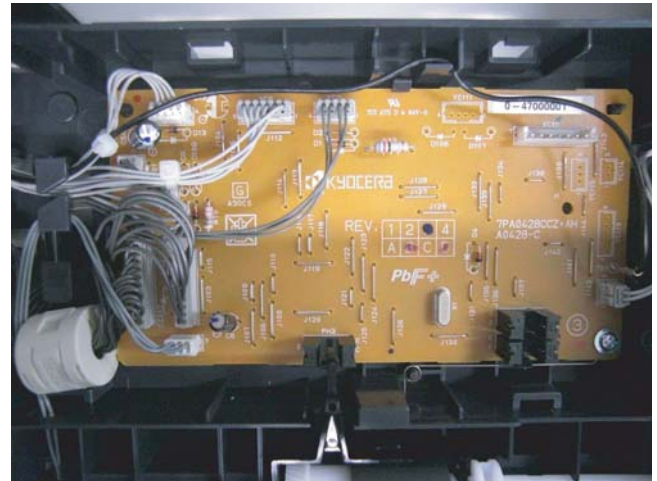


Figure 3-85

(4) Electric parts layout

(4-1) PWBs

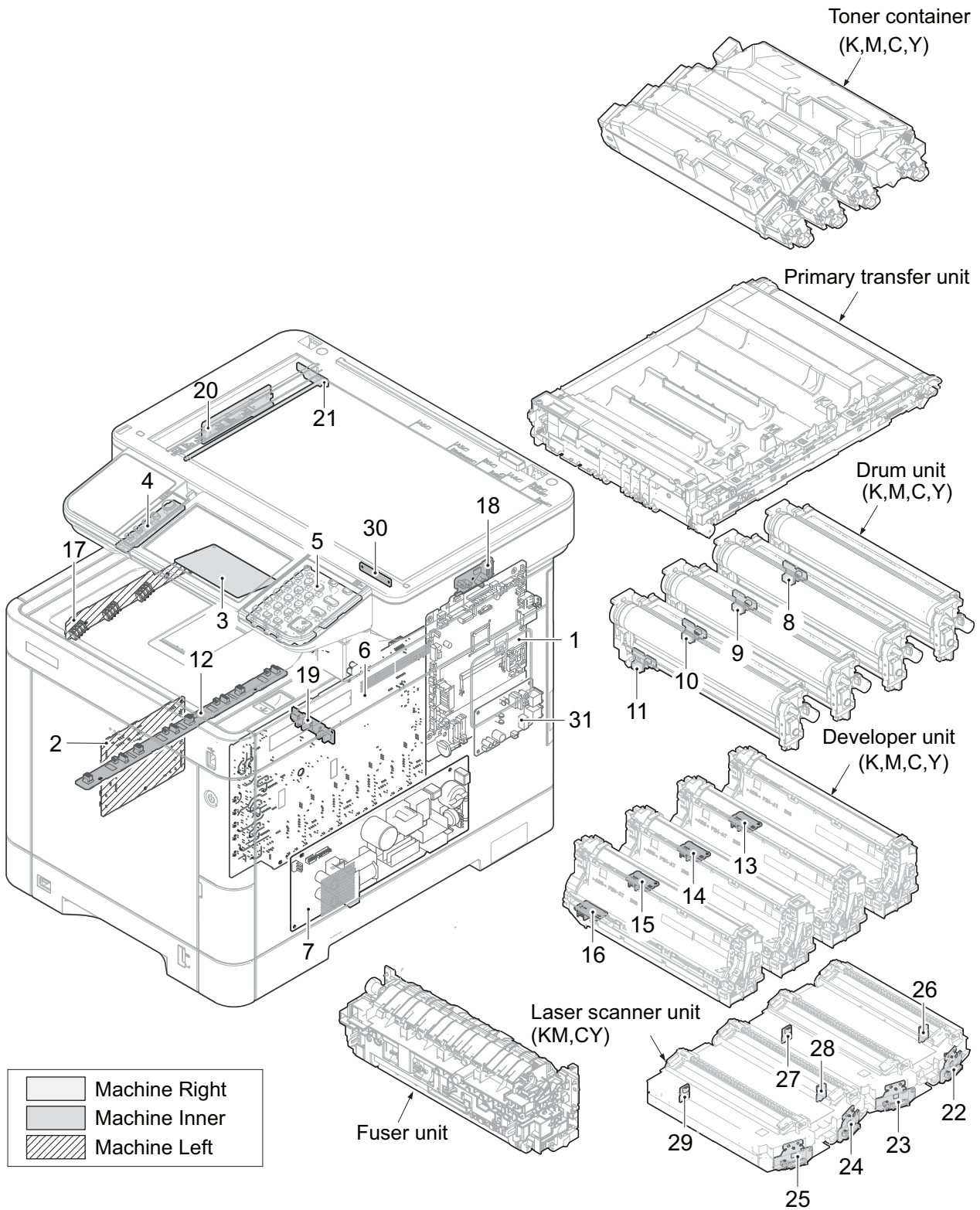


Figure 3-86

1. Main/Engine PWB Controlling the entire software to control the interface to the PC and the network and the image data process, etc.. Controlling the entire hardware to control the high-voltage, bias output, paper conveying system, fuser temperature, etc..
2. Engine relay PWB Consisting of the drive control circuit for each electric part and the wiring relay circuit to the main/engine PWB
3. Operation panel PWB Consisting of the wiring relay circuit for the main/engine PWB, the panel-L PWB, the panel-R PWB and the LCD
4. Panel-L PWB..... Consisting of the LED indicator and the key switches
5. Panel-R PWB..... Consisting of the LED indicator and the key switches
6. High-voltage PWB..... Generating the main charger high-voltage, the developer bias, the transfer bias and the transfer cleaning bias
7. Power supply PWB Changing the input voltage (AC) from the AC power supply to DC such as 24 V DC and controlling the fuser heater
8. Drum PWB K..... Wiring relay to the electric parts inside drum unit K and storing the individual drum information in the EEPROM
9. Drum PWB M Wiring relay to the electric parts inside drum unit M and storing the individual drum information in the EEPROM
10. Drum PWB C..... Wiring relay to the electric parts inside drum unit C and storing the individual drum information in the EEPROM
11. Drum PWB Y Wiring relay to the electric parts inside drum unit Y and storing the individual drum information in the EEPROM
12. Drum relay PWB Consisting of the wiring relay circuit to the main/engine PWB, the drum units and the developer units
13. Developer PWB K Wiring relay to the electric parts inside developer unit K
14. Developer PWB M..... Wiring relay to the electric parts inside developer unit M
15. Developer PWB C Wiring relay to the electric parts inside developer unit C
16. Developer PWB Y Wiring relay to the electric parts inside developer unit Y
17. Toner container relay PWB Consisting of the wiring relay circuit between the main/engine PWB and the toner containers
18. Exit PWB Consisting of the wiring relay circuit between the main/engine PWB and each electric part in the exit section
19. Cassette PWB..... Consisting of the wiring relay circuit between the engine relay PWB and each electric part in the cassette
20. CCD PWB Scanning the original image
21. LED PWB Controlling the LED
22. APC PWB K Emitting and controlling the laser beam (Black)
23. APC PWB M..... Emitting and controlling the laser beam (Magenta)
24. APC PWB C Emitting and controlling the laser beam (Cyan)
25. APC PWB Y Emitting and controlling the laser beam (Yellow)
26. PD PWB K..... Controlling the synchronous lateral laser beam (Black)
27. PD PWB M Controlling the synchronous lateral laser beam (Magenta)
28. PD PWB C Controlling the synchronous lateral laser beam (Cyan)
29. PD PWB Y..... Controlling the synchronous lateral laser beam (Yellow)
30. Zener PWB..... Controlling the fuser erasing voltage
31. FAX PWB *1 Modulating or demodulating, compressing or decompressing the image data, changing the resolution, and smoothing the image

*1: 4 in 1 models (FAX standard models) only

(4-2) Part name table

No.	Name used in service manual	Name used in parts list	Part.No.
1	Main/Engine PWB	PARTS PWB ASSY MAIN SP	(Except for EU) 302TY9401_(30 ppm model) 302TZ9401_(30 ppm model) 4 in 1 302V09402_(35 ppm model) 302V19405_(35 ppm model) 4 in 1
		PARTS PWB ASSY MAIN EU SP	(EU) 302TY9402_(30 ppm model) 302TZ9402_(30 ppm model) 4 in 1 302V09403_(35 ppm model) 302V19406_(35 ppm model) 4 in 1
2	Engine relay PWB	PWB ASSY ENGINE CONNECT SP	302TV9405_
3	Operation panel PWB	PARTS PWB ASSY PANEL MAIN SP	302TY9403_
4	Panel-L PWB	PWB ASSY H PANEL KEY-L SP	302NM9410_
5	Panel-R PWB	PARTS PWB ASSY H PANEL KEY-R SP	302TY9404_
6	High-voltage PWB	PARTS HIGH VOLTAGE UNIT SP	302NR9403_
7	Power source PWB	PARTS SWITCHING REGULATOR 100V SP	(100/120V) 302NR9404_(30 ppm model) 302NS9401_(35 ppm model)
		PARTS SWITCHING REGULATOR 230V SP	(230V) 302TY9405_(30 ppm model) 302NS9402_(35 ppm model)
8	Drum PWB K	- (DK-5140)	- (302NR9301_)
9	Drum PWB M		
10	Drum PWB C		
11	Drum PWB Y		
12	Drum relay PWB	PARTS PWB ASSY DRUM CONNECT SP	302NR9412_
13	Developer PWB K	- (DV-5140 (K)) (DV-5150 (K))	- (302NR9302_) (30 ppm model) (302NS9301_) (35 ppm model)
14	Developer PWB M	- (DV-5140 (M)) (DV-5150 (M))	- (302NR9304_) (30 ppm model) (302NS9303_) (35 ppm model)
15	Developer PWB C	- (DV-5140 (C)) (DV-5150 (C))	- (302NR9305_) (30 ppm model) (302NS9304_) (35 ppm model)
16	Developer PWB Y	- (DV-5140 (Y)) (DV-5150 (Y))	- (302NR9303_) (30 ppm model) (302NS9302_) (35 ppm model)
17	Toner container relay PWB	PARTS PWB ASSY CONTAINER CONN SP	302TV9406_

No.	Name used in service manual	Name used in parts list	Part.No.
18	Exit PWB	PARTS PWB ASSY EXIT SP	302NR9413_(30 ppm model) 302NS9405_(35 ppm model)
19	Cassette PWB	P.W.BOARD ASSY CASSETTE	302KT9407_
20	CCD PWB	-	-
21	LED PWB	(PARTS ISU ASSY SP)	(302V09302_)
22	APC PWB K	-	-
23	APC PWB M	(LK-5270A)	(302TV9301_)
24	APC PWB C	-	-
25	APC PWB Y	(LK-5270B)	(302TV9302_)
26	PD PWB K	-	-
27	PD PWB M	(LK-5270A)	(302TV9301_)
28	PD PWB C	-	-
29	PD PWB Y	(LK-5270B)	(302TV9302_)
30	Zener PWB	P.W.BOARD ASSY FUSER ZENER	302HN0124_
31	FAX PWB *1	PARTS FAX UNIT E SP PARTS FAX UNIT U SP PARTS FAX UNIT J SP	302R79433_ 302R79434_ 303PA9401_

*1: 4 in 1 models (FAX standard models)

(4-3) Sensors and Switches

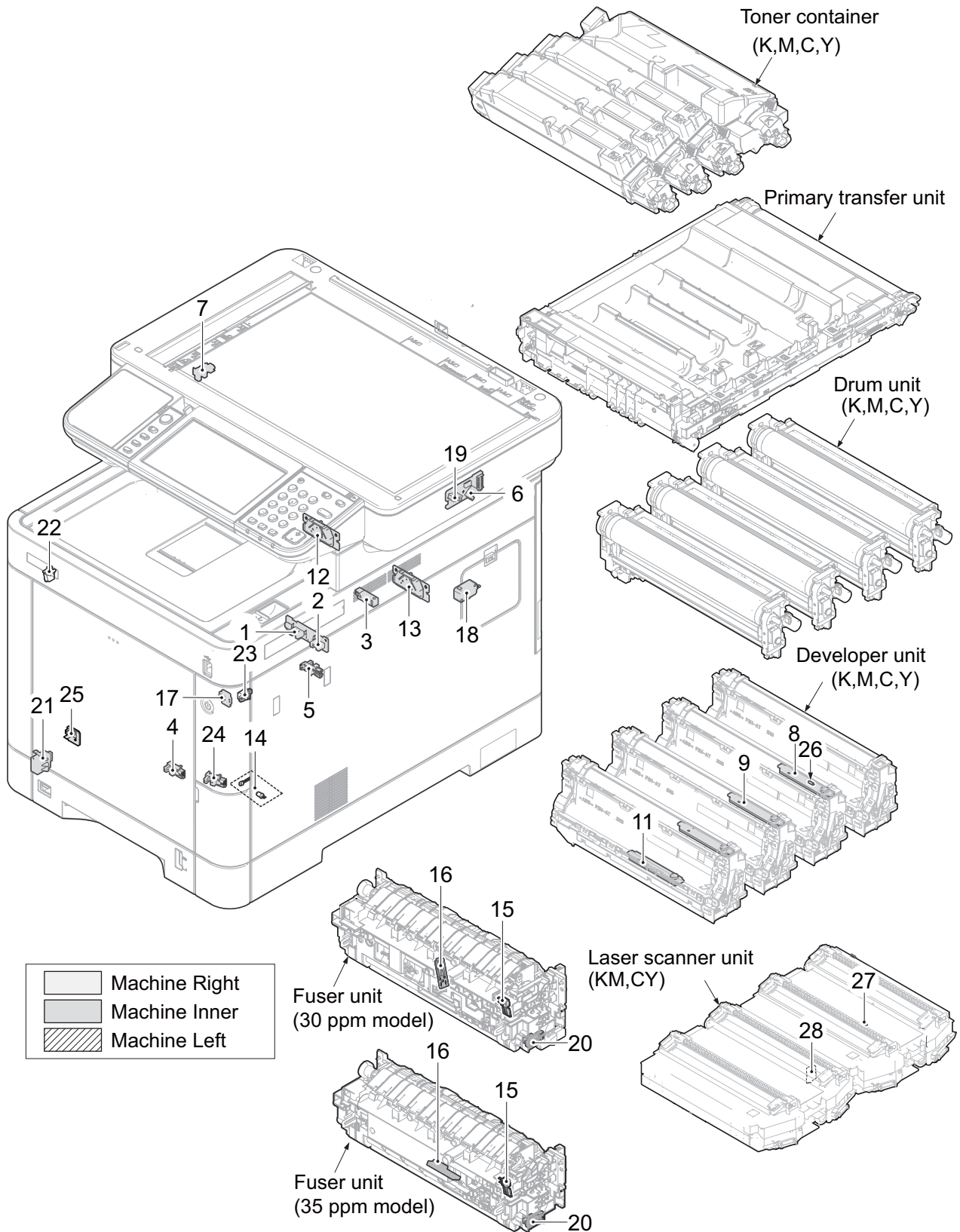


Figure 3-87

1. Paper sensor..... Detecting the presence of paper in the cassette
2. Lift sensor..... Detecting the upper limit when lifting the lift plate inside the cassette
3. Registration sensor Controlling the timing to start the secondary paper feeding
4. MP paper sensor..... Detecting the presence of the paper on the MP tray
5. MP conveying sensor..... Detecting the paper jam at the MP conveying section
6. Exit sensor Detecting the paper jam at the fuser section
7. Home position sensor Detecting the position of the image scanner unit
8. Toner sensor K..... Detecting the toner amount inside developer unit K
9. Toner sensor M Detecting the toner amount inside developer unit M
10. Toner sensor C..... Detecting the toner amount inside developer unit C
11. Toner sensor Y..... Detecting the toner amount inside developer unit Y
12. ID sensor 1..... Measuring the toner density at the calibration
13. ID sensor 2..... Measuring the toner density at the calibration
14. Waste toner sensor Detecting the waste toner amount inside the waste toner box
15. Fuser thermistor 1 Detecting the temperature at the heat roller (edge)
16. Fuser thermistor 2 Detecting the temperature at the heat roller (center)
17. Power switch..... Turning on and off the main/engine PWB, the engine relay PWB and the operation panel PWB, etc.
18. Interlock switch..... Shutting off the 24V power supply line and resetting when the inner tray or the rear cover is opened
19. Paper full sensor Detecting the paper-full on the inner tray
20. Press-release sensor Detecting the mode of the fuser pressure
21. Cassette size switch..... Detecting the paper size setting by the size dial and detecting the presence of cassette
22. Tray switch Detecting the opening and closing of the inner tray
23. Toner container switch Detecting the presence of the toner container
24. Waste toner cover sensor Detecting the opening and closing of the waste toner cover
25. Outer temperature sensor Detecting the temperature and humidity outside the main unit
26. Developer thermistor..... Detecting the temperature inside developer unit K
27. LSU thermistor KM..... Detecting the temperature inside LSU
28. LSU thermistor CY Detecting the temperature inside LSU

(4-4) Part name table

No.	Name used in service manual	Name used in parts list	Part.No.
1	Paper sensor	-	-
2	Lift sensor	(P.W.BOARD ASSY CASSETTE)	(302KT9407_)
3	Registration sensor	PARTS SENSOR OPT. SP	303NW9404_
4	MP paper sensor	PARTS SENSOR OPT. SP	302P79401_
5	MP conveying sensor	PARTS SENSOR OPT. SP	302P79401_
6	Exit sensor	- (PARTS PWB ASSY EXIT SP)	- (302NR9413_) (30 ppm model) (302NS9405_) (35 ppm model)
7	Home position sensor	PARTS ISU ASSY SP	302V09302_
8	Toner sensor K	- (DV-5140 (K)) (DV-5150 (K))	- (302NR9302_) (30 ppm model) (302NS9301_) (35 ppm model)
9	Toner sensor M	- (DV-5140 (M)) (DV-5150 (M))	- (302NR9304_) (30 ppm model) (302NS9303_) (35 ppm model)
10	Toner sensor C	- (DV-5140 (C)) (DV-5150 (C))	- (302NR9305_) (30 ppm model) (302NS9304_) (35 ppm model)
11	Toner sensor Y	- (DV-5140 (Y)) (DV-5150 (Y))	- (302NR9303_) (30 ppm model) (302NS9302_) (35 ppm model)
12	ID sensor 1	PARTS ID SENSOR SP	302NR9402_
13	ID sensor 2	PARTS ID SENSOR SP	302NR9402_
14	Waste toner sensor	PARTS TONER FULL DETECT ASSY SP	302NR9407_
15	Fuser thermistor 1	- (FK-5141) (FK-5151) (FK-5142) (FK-5152) (FK-5140) (FK-5150)	- (302NR9310_) (30 ppm model) [100V] (302PB9302_) (35 ppm model) [100V] (302NR9311_) (30 ppm model) [120V] (302PB9303_) (35 ppm model) [120V] (302NR9309_) (30 ppm model) [230V] (302PB9301_) (35 ppm model) [230V]

No.	Name used in service manual	Name used in parts list	Part.No.
16	Fuser thermistor 2	- (FK-5141) (FK-5151) (FK-5142) (FK-5152) (FK-5140) (FK-5150)	- (302NR9310_) (30 ppm model) [100V] (302PB9302_) (35 ppm model) [100V] (302NR9311_) (30 ppm model) [120V] (302PB9303_) (35 ppm model) [120V] (302NR9309_) (30 ppm model) [230V] (302PB9301_) (35 ppm model) [230V]
17	Power switch	PARTS PWB ASSY EXIT SP	302NR9416_
18	Interlock switch	SW.MICRO	7SM010104+++H01
19	Paper full sensor	- (PARTS PWB ASSY EXIT SP)	- (302NR9413_) (30 ppm model) (302NS9405_) (35 ppm model)
20	Press-release sensor	- (FK-5141) (FK-5151) (FK-5142) (FK-5152) (FK-5140) (FK-5150)	- (302NR9310_) (30 ppm model) [100V] (302PB9302_) (35 ppm model) [100V] (302NR9311_) (30 ppm model) [120V] (302PB9303_) (35 ppm model) [120V] (302NR9309_) (30 ppm model) [230V] (302PB9301_) (35 ppm model) [230V]
21	Cassette size switch	SWITCH SIZE	302HN4418_
22	Tray switch	SW.PUSH	7SP01000004+H01
23	Toner container switch	SW.PUSH	7SP01000004+H01
24	Waste toner cover sensor	PARTS SENSOR OPT. SP	302P79401_
25	Outer temperature sensor	PARTS PWB ASSY THERMISTOR SP	302M29413_
26	Developer thermistor K	- (DV-5140 (K)) (DV-5150 (K))	- (302NR9302_) (30 ppm model) (302NS9301_) (35 ppm model)
27	LSU thermistor KM	- (LK-5270A)	- (302TV9301_)
28	LSU thermistor YC	- (LK-5270B)	- (302TV9302_)

(4-5) Motors

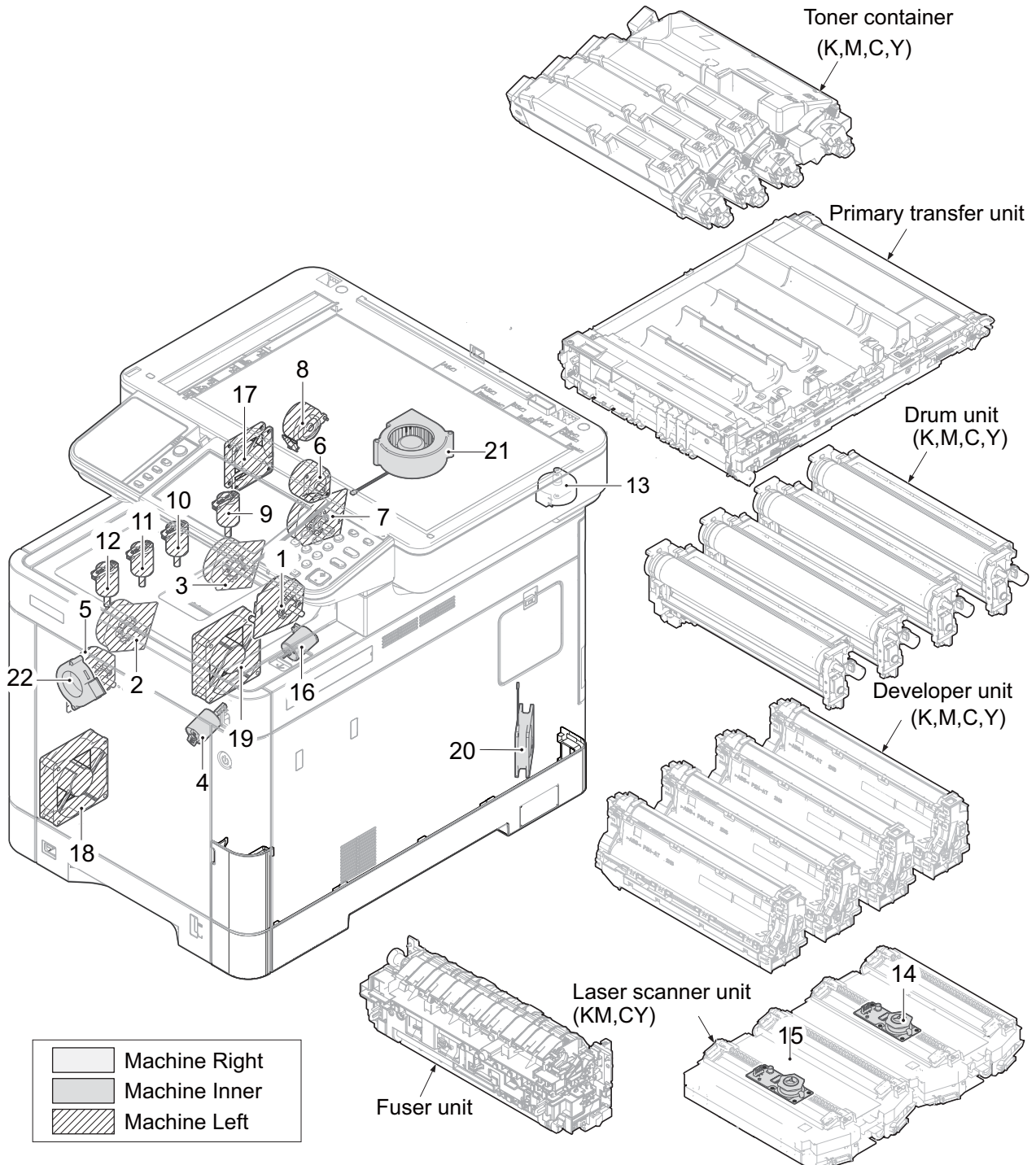


Figure 3-88

1. Conveying developer motor Driving the paper feeding and conveying systems and developer unit K
2. Drum motor 1 Driving drum unit K and M
3. Drum motor 2 Driving drum unit C and Y
4. Lift motor Operating the lift plate inside the cassette
5. Developer motor..... Driving developer unit Y, M and C
6. Fuser motor..... Driving the transfer and fuser sections
7. Primary transfer motor Driving the primary transfer unit
8. Duplex exit motor Driving the duplex conveying and exit section
9. Toner motor K..... Supplying the toner to developer unit K
10. Toner motor M..... Supplying the toner to developer unit M
11. Toner motor C Supplying the toner to developer unit C
12. Toner motor Y..... Supplying the toner to developer unit Y
13. Image scanner motor Driving the image scanner unit
14. Polygon motor KM..... Driving polygon mirror KM
15. Polygon motor CY Driving polygon mirror CY
16. LSU cleaning motor..... Driving the LSU glass cleaning system
17. Container fan motor Cooling the developer unit
18. LSU fan motor 1 Cooling LSU-KM
19. LSU fan motor 2 Cooling LSU-CY
20. Power supply fan motor Cooling the power supply unit
21. Exit fan motor Diffusing the steam
22. Transfer fan motor..... Cooling the primary transfer unit

(4-6) Part name table

No.	Name used in service manual	Name used in parts list	Part.No.
1	Conveying developer motor	PARTS MOTOR-BL W10 SP	302LC9429_
2	Drum motor 1	PARTS MOTOR-BL W20 SP (DR-5140) (DR-5150)	302K99432_ (302NR9313_) (30 ppm model) (302NT9312_) (35 ppm model)
3	Drum motor 2		
4	Lift motor	PARTS DC MOTOR ASSY SP	302NV9401_
5	Developer motor	PARTS MOTOR-BL W20 SP (DR-5140) (DR-5150)	302K99432_ (302NR9313_) (30 ppm model) (302NT9312_) (35 ppm model)
6	Fuser motor	PARTS MOTOR-PM MOVING SP	303NB9404_
7	Primary transfer motor	PARTS MOTOR-BL W20 SP	302K99432_
8	Duplex exit motor	PARTS MOTOR EJECT SP	302P79406_
9	Toner motor K	PARTS DC MOTOR ASSY SP	302NR9408_
10	Toner motor M	PARTS DC MOTOR ASSY SP	302NR9408_
11	Toner motor C	PARTS DC MOTOR ASSY SP	302NR9408_
12	Toner motor Y	PARTS DC MOTOR ASSY SP	302NR9408_
13	Image scanner motor	PARTS MOTOR ISU SP	302LW9406_
14	Polygon motor KM	- (LK-5270A)	- (302TV9301_)
15	Polygon motor CY	- (LK-5270B)	- (302TV9302_)
16	LSU cleaning motor	PARTS DC MOTOR ASSY SP	302NG9405_
17	Container fan motor	PARTS,FAN COOLING CONVEYING SP	302FZ9442_
18	LSU fan motor 1	PARTS FAN MOTOR SP	302NG9422_
19	LSU fan motor 2	PARTS FAN MOTOR SP	302NG9422_
20	Power source fan motor	PARTS,FAN COOLING CONVEYING SP	302FZ9442_
21	Exit fan motor	PARTS,FAN COOLING DLP 70 SP	302FZ9438_
22	Transfer fan motor	PARTS FAN MOTOR SP	302NG94220

(4-7) Clutches and Solenoids and other parts

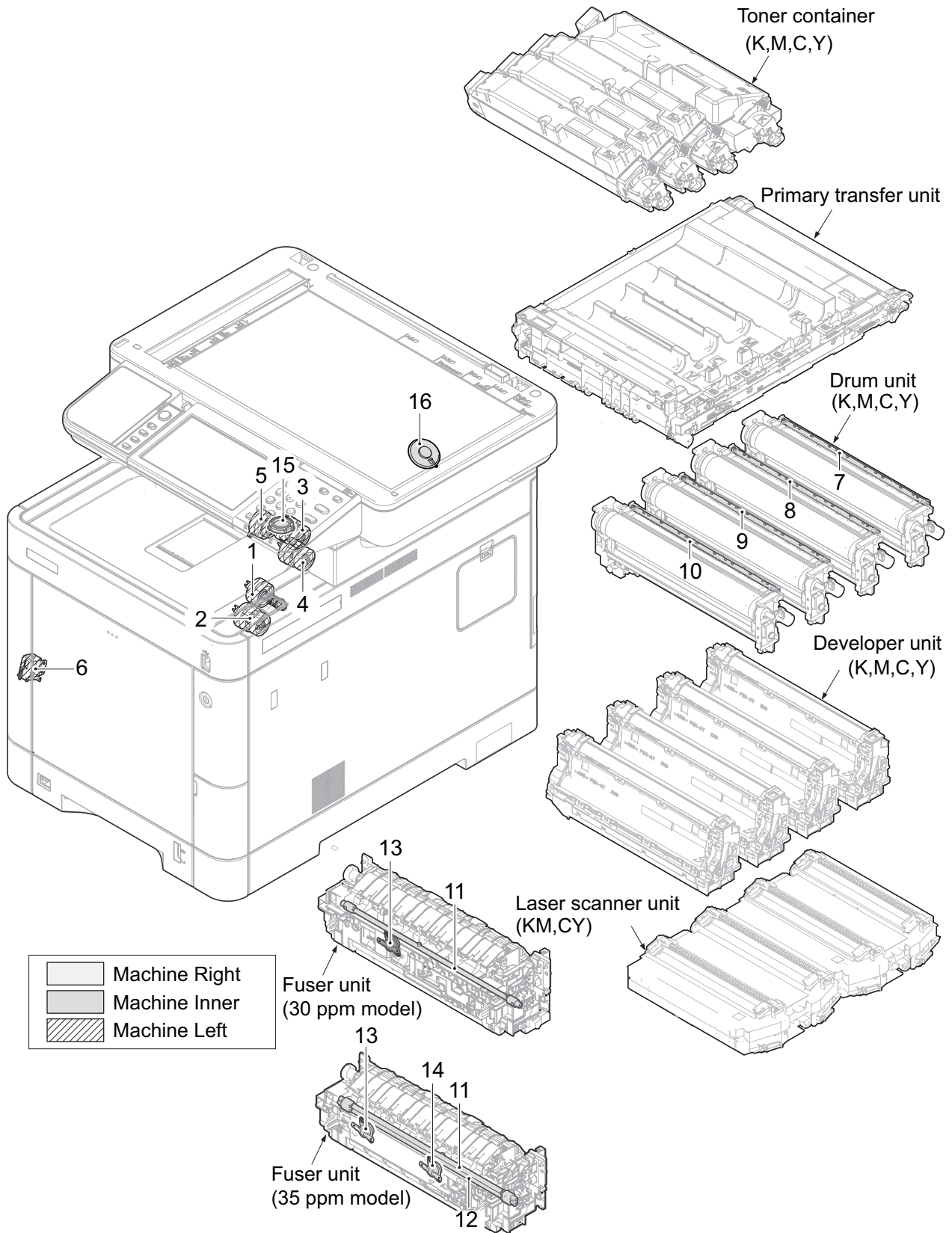


Figure 3-89

1. Paper feed clutch Controlling the primary paper feeding from the cassette
2. MP conveying clutch Controlling the drive for the MP conveying section
3. Registration clutch..... Controlling the drive for the secondary paper feeding
4. Middle clutch Controlling the drive for the paper conveying section
5. Developer clutch Controlling the drive to developer unit K
6. MP solenoid Controlling the MP lift plate
7. Cleaning lamp K..... Removing the remaining electric charge on the drum (Black)
8. Cleaning lamp M Removing the remaining electric charge on the drum (Magenta)
9. Cleaning lamp C..... Removing the remaining electric charge on the drum (Cyan)
10. Cleaning lamp Y..... Removing the remaining electric charge on the drum (Yellow)
11. Fuser heater 1..... Heating the heat roller
12. Fuser heater 2*1 Heating the heat roller
13. Fuser thermostat 1 Shutting off the power supply to the fuser heater when the abnormal high temperature on the heat roller is detected
14. Fuser thermostat 2*1..... Shutting off the power supply to the fuser heater when the abnormal high temperature on the heat roller is detected
15. Speaker..... Generates an error sound
16. Speaker *2 Generates an line monitor sound

(4-8) Part name table

No.	Name used in service manual	Name used in parts list	Part.No.
1	Paper feed clutch	PARTS CLUTCH 35 Z35R SP	302NR9401_
2	MP conveying clutch	CLUTCH 50 Z35R	302KV4404_
3	Registration clutch	PARTS CLUTCH 35 Z35R SP	302NR9401_
4	Middle clutch	PARTS CLUTCH 35 Z35R SP	302NR9401_
5	Developer clutch	PARTS CLUTCH 35 Z35R SP	302NR9401_
6	MP solenoid	SOLENOID TONER	302GR4415_
7	Cleaning lamp K	DK-5140	302NR9301_
8	Cleaning lamp M		
9	Cleaning lamp C		
10	Cleaning lamp Y		
11	Fuser heater 1	- (FK-5141) (FK-5151) (FK-5142) (FK-5152) (FK-5140) (FK-5150)	- (302NR9310_) (30 ppm model) [100V] (302PB9302_) (35 ppm model) [100V] (302NR9311_) (30 ppm model) [120V] (302PB9303_) (35 ppm model) [120V] (302NR9309_) (30 ppm model) [230V] (302PB9301_) (35 ppm model) [230V]
12	Fuser heater 2 *1	- (FK-5151) (FK-5152) (FK-5150)	- (302PB9302_) (35 ppm model) [100V] (302PB9303_) (35 ppm model) [120V] (302PB9301_) (35 ppm model) [230V]
13	Fuser thermostat 1	- (FK-5141) (FK-5151) (FK-5142) (FK-5152) (FK-5140) (FK-5150)	- (302NR9310_) (30 ppm model) [100V] (302PB9302_) (35 ppm model) [100V] (302NR9311_) (30 ppm model) [120V] (302PB9303_) (35 ppm model) [120V] (302NR9309_) (30 ppm model) [230V] (302PB9301_) (35 ppm model) [230V]

No.	Name used in service manual	Name used in parts list	Part.No.
14	Fuser thermostat 2 *1	- (FK-5151) (FK-5152) (FK-5150)	- (302PB9302_) (35 ppm model) [100V] (302PB9303_) (35 ppm model) [120V] (302PB9301_) (35 ppm model) [230V]
15	Speaker	-	-
16	Speaker*2	-	-

*1: 35 ppm model

*2: 4 in 1 models (FAX standard models)

(4-9) Document processor (30 ppm model)

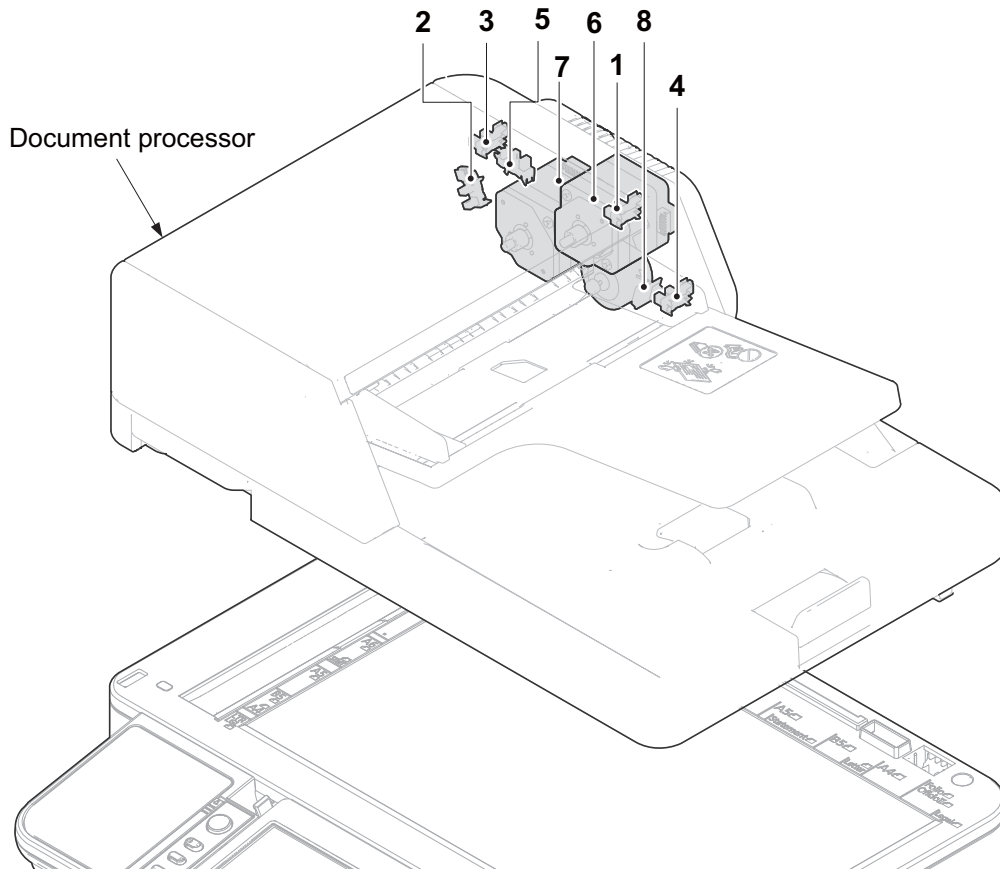


Figure 3-90

- 1. DP original sensor Detecting the presence of the original in the document processor
- 2. DP registration sensor Detecting the timing to convey the original in the document processor
- 3. DP timing sensor Detecting the timing to scan the original in the document processor
- 4. DP switchback sensor Detecting the position of the feedshift guide in the document processor
- 5. DP sensor Detecting the opening and closing of the document processor
- 6. DP feed motor Driving the original feed section in the document processor
- 7. DP conveying motor Driving the original conveying section in the document processor
- 8. DP switchback motor Driving the original switchback section in the document processor

(4-10) Part name table

No.	Name used in service manual	Name used in parts list	Part.No.
1	DP original sensor	- (PARTS DP ASSY SP)	- (302NV9303_)
2	DP registration sensor		
3	DP timing sensor		
4	DP switchback sensor		
5	DP sensor		
6	DP feed motor		
7	DP conveying motor		
8	DP switchback motor		

(4-11) Document processor (35 ppm model)

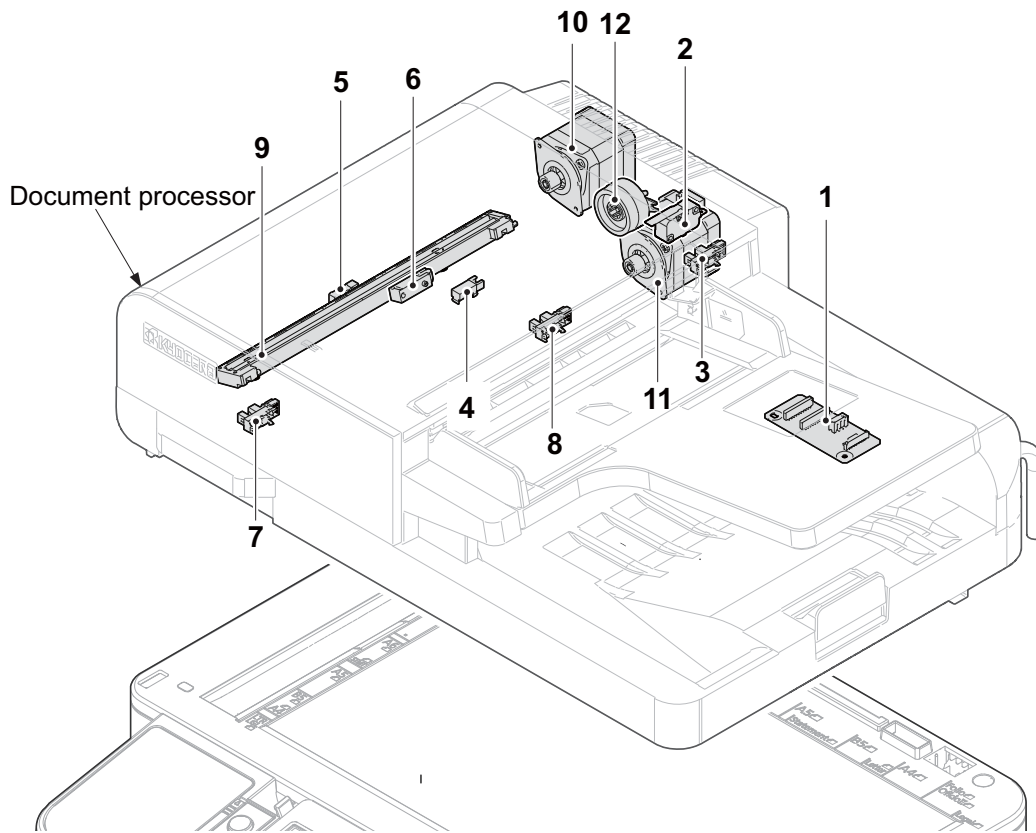


Figure 3-91

1. DP CIS relay PWB Consisting of the wiring relay circuit between the main/engine PWB and DPCIS
2. DP top cover switch Shutting off the 24V power supply line when the DP top cover is opened
Interlock switch
3. DP original sensor Detecting the presence of the original in the document processor
4. DP registration sensor Detecting the timing to convey the original in the document processor
5. DP timing sensor Detecting the timing to scan the original in the document processor (first
(front) side)
6. DP second (back) side timing sensor Detecting the timing to scan the original in the document processor (second
(back) side)
7. DP sensor Detecting the opening and closing of the document processor
8. DP exit sensor Detecting the exit paper on the document processor
9. DPCIS Scanning the second side of original data
10. DP feed motor Driving the original feed section in the document processor
11. DP conveying motor Driving the original conveying section in the document processor
12. DP feed clutch Controlling the drive of the original primary feeding section in the document
processor

(4-12) Part name table

No.	Name used in service manual	Name used in parts list	Part.No.
1	DP CIS relay PWB	PARTS PWB ASSY CIS CONNECT SP (PARTS DSDP ASSY SP)	302V19407_ (302V09301_)
2	DP top cover switch	INTER LOCK SWITCH (PARTS DSDP ASSY SP)	2FB2716_ (302V09301_)
3	DP original sensor	PARTS SENSOR OPT. SP (PARTS DSDP ASSY SP)	302P79401_ (302V09301_)
4	DP registration sensor	PARTS MOTOR PAPER FEED SP (PARTS DSDP ASSY SP)	303R49404_ (302V09301_)
5	DP timing sensor	PARTS MOTOR PAPER FEED SP (PARTS DSDP ASSY SP)	303R49404_ (302V09301_)
6	DP second sid timing sensor	PARTS SENSOR OPT. SP (PARTS DSDP ASSY SP)	303NW9404_ (302V09301_)
7	DP sensor	PARTS SENSOR OPT. SP (PARTS DSDP ASSY SP)	302P79401_ (302V09301_)
8	DP exit sensor	PARTS SENSOR OPT. SP (PARTS DSDP ASSY SP)	302P79401_ (302V09301_)
9	DPCIS	PARTS CIS SP (PARTS DSDP ASSY SP)	303R49405_ (302V09301_)
10	DP feed motor	PARTS MOTOR PAPER FEED SP (PARTS DSDP ASSY SP)	303R49404_ (302V09301_)
11	DP conveying motor	PARTS MOTOR PAPER FEED SP (PARTS DSDP ASSY SP)	303R49404_ (302V09301_)
12	DP feed clutch	PARTS CLUTCH 35 Z35R SP (PARTS DSDP ASSY SP)	302NR9401_ (302V09301_)

(4-13) Paper feeder (Optinal unit)

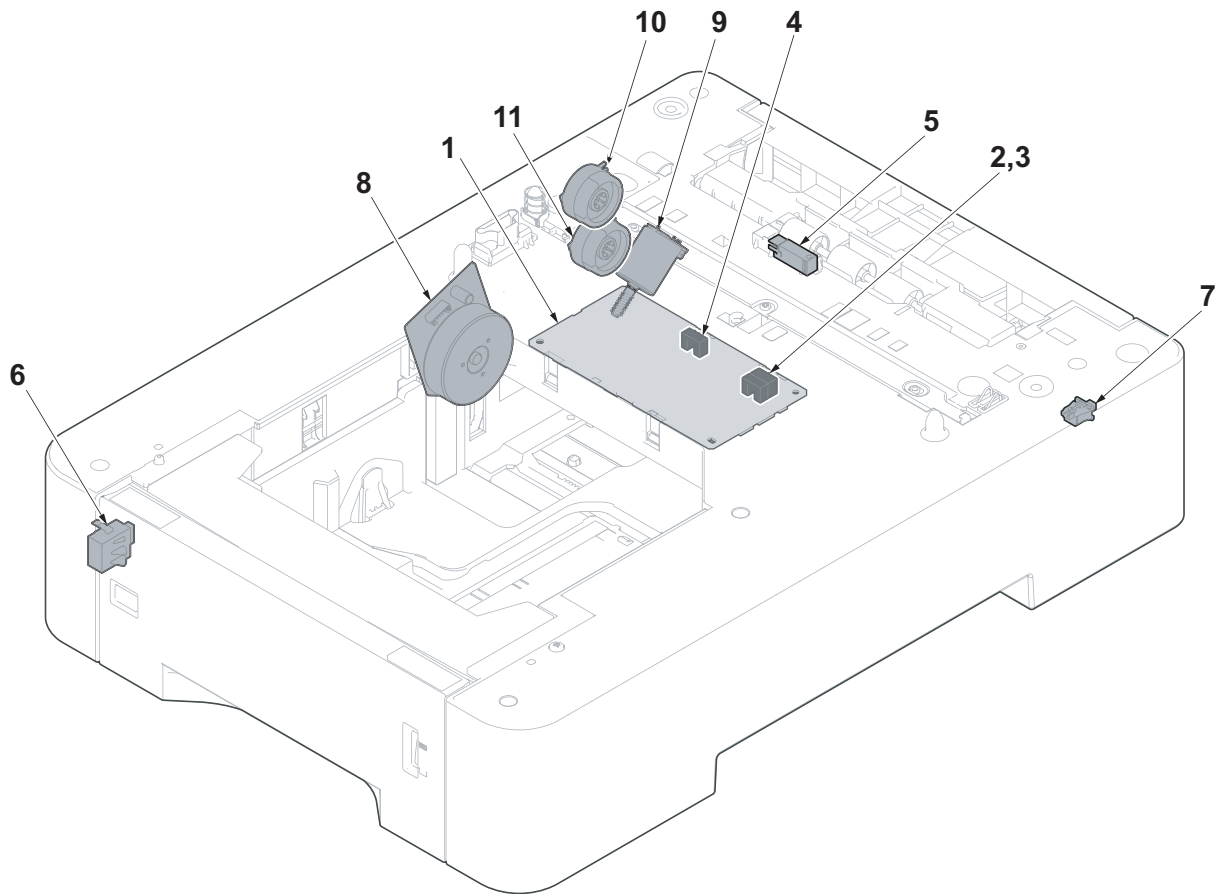


Figure 3-92 ?Electric parts layout

- | | |
|----------------------------------|--|
| 1.PF main PWB..... | Interfacing to the main unit and controlling the entire paper feeder |
| 2.PF paper sensor 1..... | Detecting the level of the remaining paper inside the cassette |
| 3.PF paper sensor 2..... | Detecting the level of the remaining paper inside the cassette |
| 4.PF lift sensor | Detecting the upper limit when lifting the lift plate inside the cassette |
| 5.PF feed sensor..... | Detecting the paper jam at the paper feeder |
| 6.PF cassette size switch..... | Detecting the paper size setting by the size dial |
| 7.PF rear cover switch 2-4 | Consisting of the safety circuit when opening and closing the PF rear cover
2-4 |
| 8.PF feed motor | Driving the paper feeding system |
| 9.PF lift motor | Operating the lift plate inside the cassette |
| 10.PF feed clutch | Controlling the timing for the paper feeding |
| 11.PF conveying clutch | Controlling the paper conveying |

(4-14) Part name table

No.	Name used in service manual	Name used in parts list	Part.No.
1	PF main PWB	PARTS PWB ASSY PF MAIN SP	303PK9401_
2	PF paper sensor 1	PARTS PWB ASSY PF MAIN SP	303PK9401_
3	PF paper sensor 2		
4	PF lift sensor		
5	PF feed sensor	PARTS SENSOR OPT. SP	303NW9406_
6	PF cassette size switch	SWITCH SIZE	302HN4418_
7	PF rear cover switch	SW.PUSH	7SP01000001+H01
8	PF paper feed motor	- (PARTS DRIVE UNIT SP)	- (303PK9402_)
9	PF lift motor		
10	PF paper feed clutch		
11	PF conveying clutch		

(5) Drive unit

(5-1) Wire connection

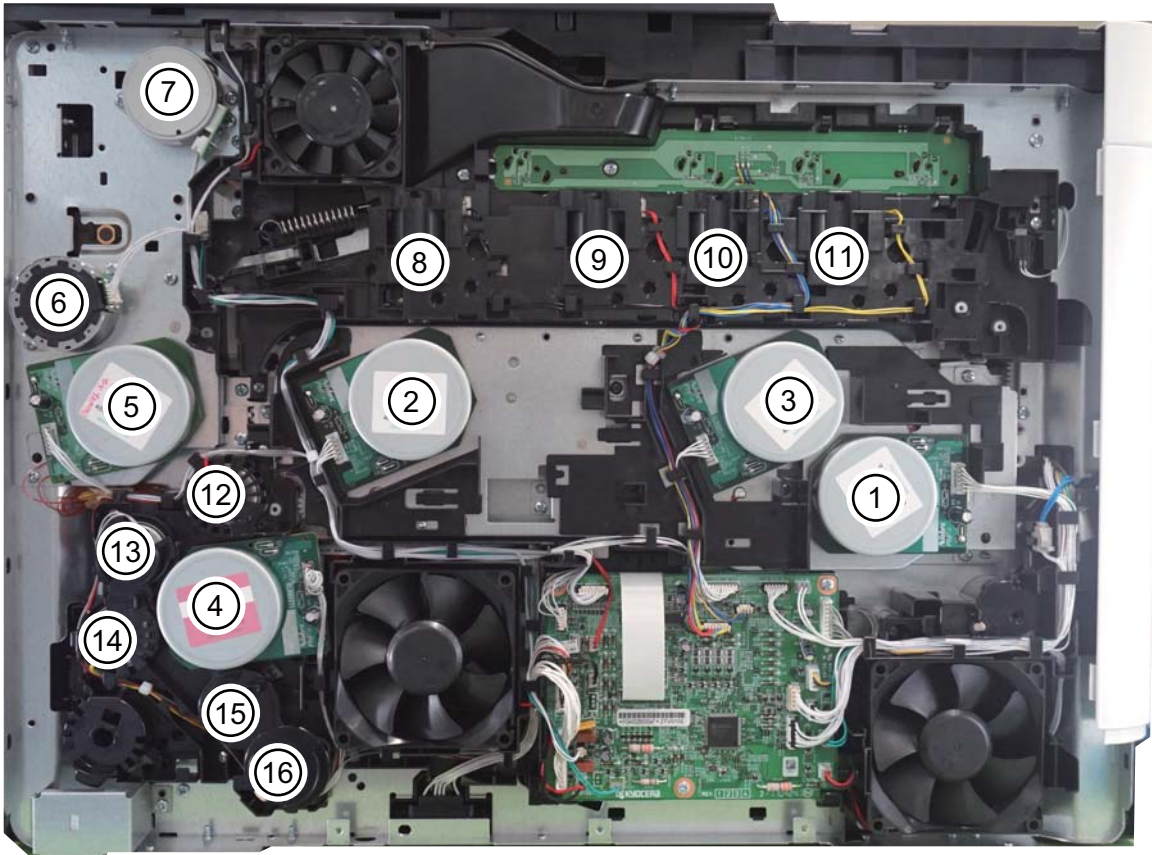


Figure 3-93

- | | |
|------------------------------|-------------------------|
| 1. Developer motor | 10. Toner motor C |
| 2. Drum motor 1 | 11. Toner motor Y |
| 3. Drum motor 2 | 12. Developer clutch |
| 4. Conveying developer motor | 13. Registration clutch |
| 5. Primary transfer motor | 14. Middle clutch |
| 6. Fuser motor | 15. Paper feed clutch |
| 7. Duplex exit motor | 16. MP conveying clutch |
| 8. Toner motor K | |
| 9. Toner motor M | |

(5-2) Drive system for the paper conveying

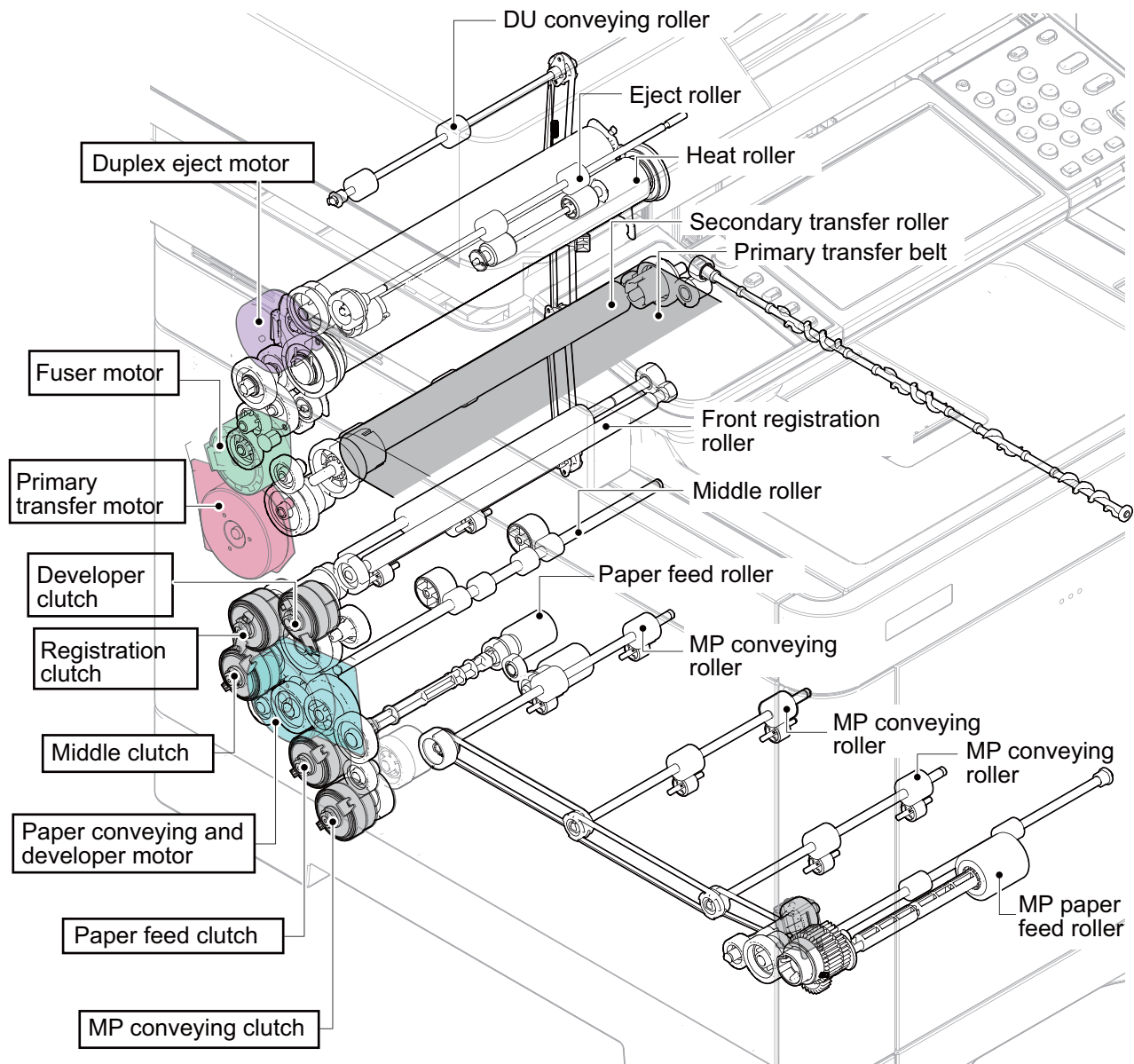


Figure 3-94

(5-3) Unit Design

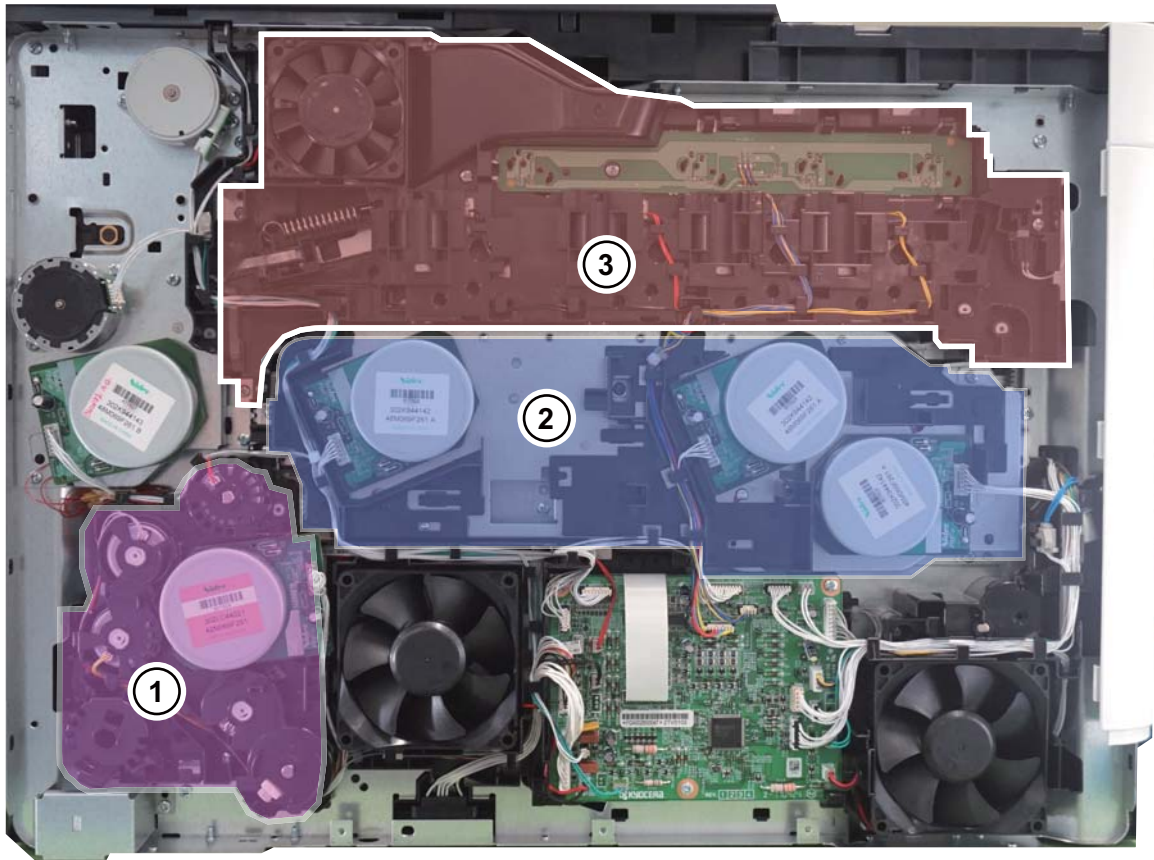


Figure 3-95

1. Paper conveying and Developer K drive section

2. Main drive motor section

3. Toner motor section

1. Paper conveying and Developer K drive section

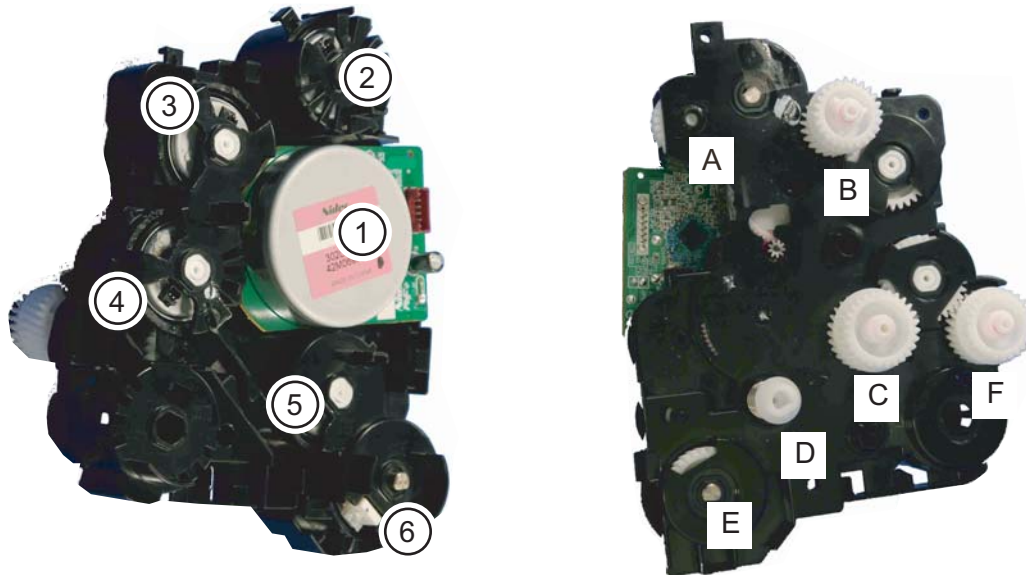


Figure 3-96 Paper conveying drive unit

- | | | |
|------------------------------|------------------------|------------------------|
| 1. Conveying developer motor | 3. Registration clutch | 5. Paper feed clutch |
| 2. Developer clutch | 4. Middle clutch | 6. MP conveying clutch |

- A. Joint gear (Developer unit K: Clutch 2)
- B. Joint gear (Registration roller: Clutch 3)
- C. Joint gear (Middle roller: Clutch 4)
- D. Joint coupling (Paper feed roller: Clutch 5)
- E. Joint gear (MP conveying roller: Clutch 6)
- F. Joint gear (DU conveying roller: Clutch 4)

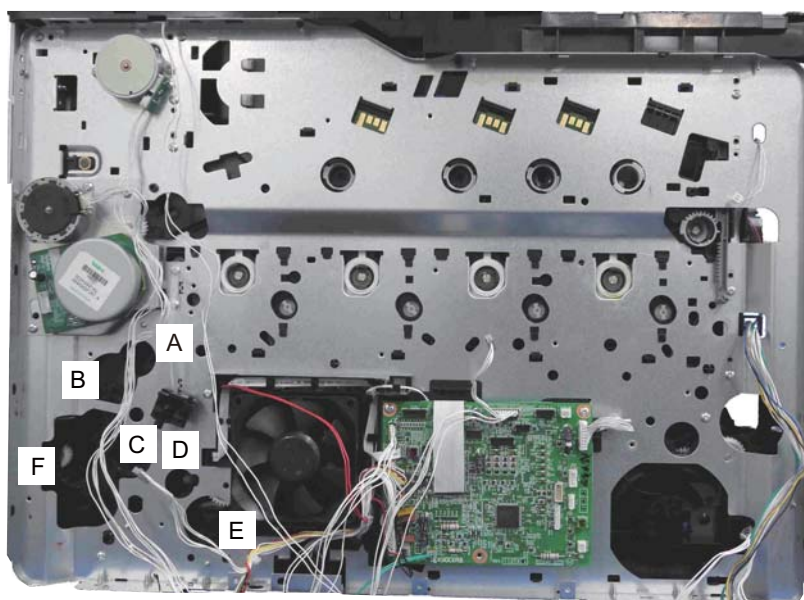


Figure 3-97

Name used in service manual	Name used in parts list	Part.No.
Paper conveying drive unit	PARTS FEED DRIVE ASSY SP	302NR9426_

2. Main drive motor section

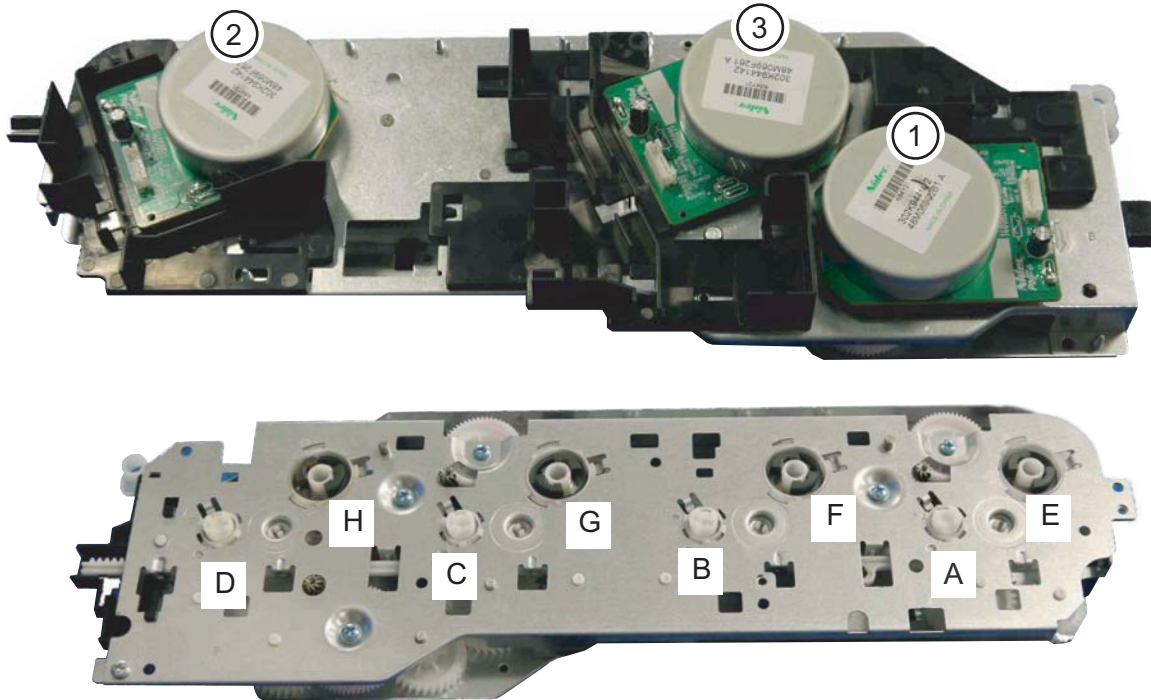


Figure 3-98 Main drive motor unit

1. Developer motor (Driving developer unit C, M and Y)
2. Drum motor 1 (Driving drum unit K and M)
3. Drum motor 2 (Driving drum unit C and Y)

- A. Developer drive coupling K (Driving developer unit K)
- B. Developer drive coupling M (Driving developer unit M)
- C. Developer drive coupling C (Driving developer unit C)
- D. Developer drive coupling Y (Driving developer unit Y)
- E. Drum drive coupling K (Driving drum unit K)
- F. Drum drive coupling M (Driving drum unit M)
- G. Drum drive coupling C (Driving drum unit C)
- H. Drum drive coupling Y (Driving drum unit Y)

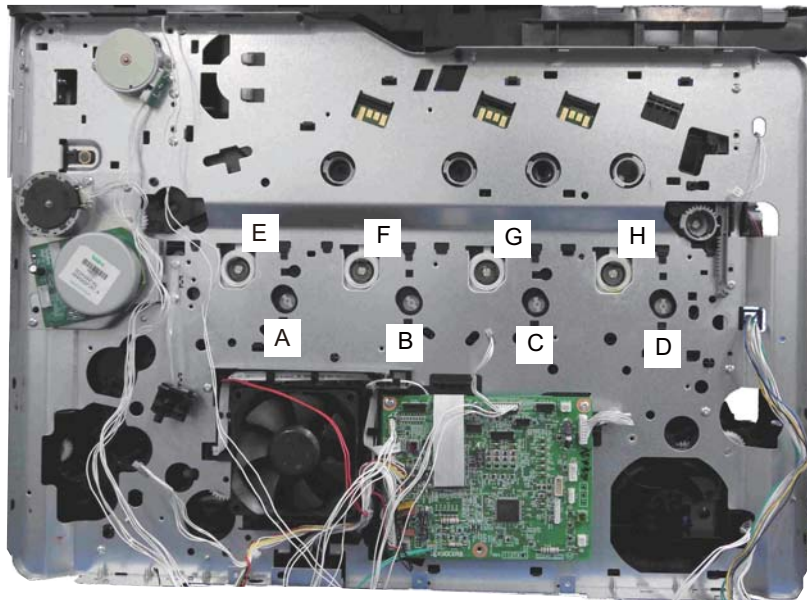


Figure 3-99

Name used in service manual	Name used in parts list	Part.No.
Main drive motor unit	DR-5140	302NR9313_ (30 ppm model)
	DR-5150	302NT9312_ (35 ppm model)

3. Toner motor section

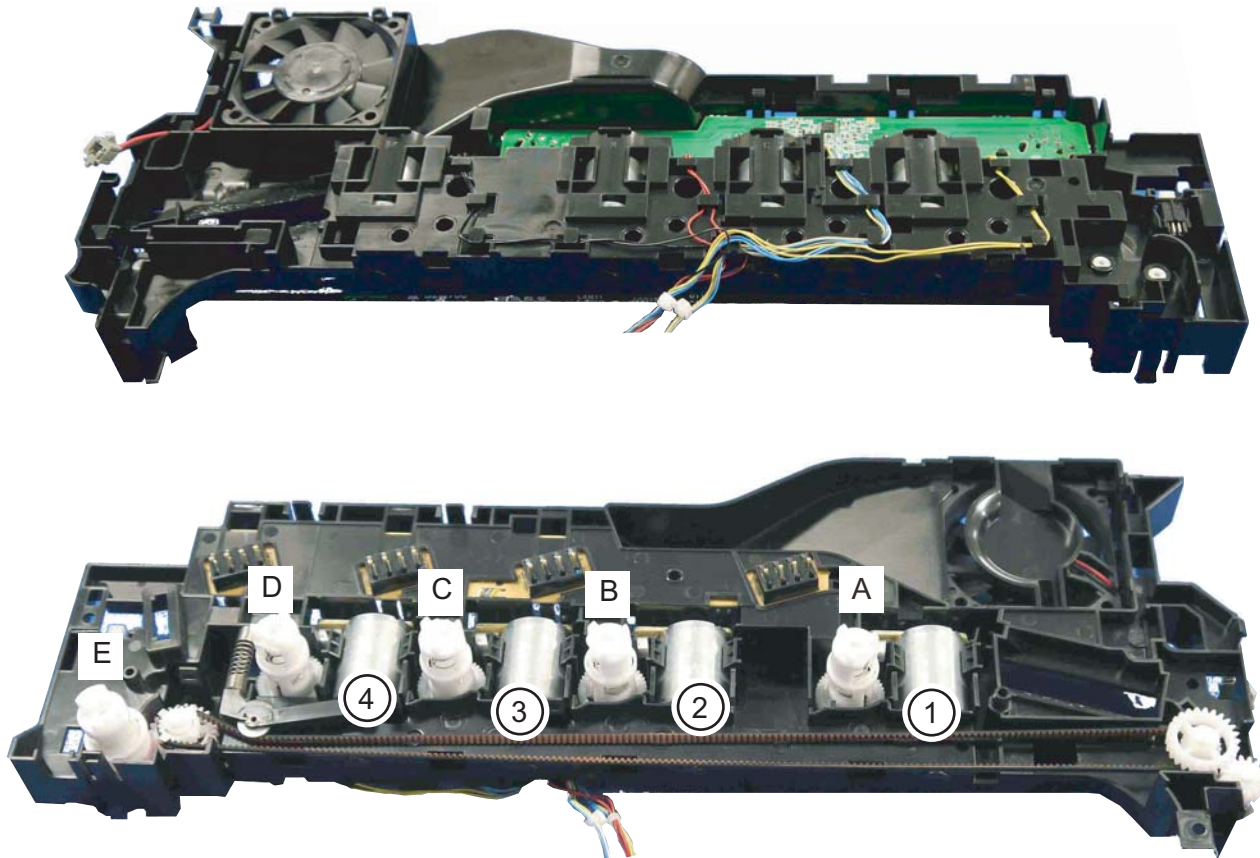


Figure 3-100

1. Toner motor K (Driving toner container K)
2. Toner motor M (Driving toner container M)
3. Toner motor C (Driving toner container C)
4. Toner motor Y (Driving toner container Y)

- A. Container drive coupling K (Driving toner container K)
- B. Container drive coupling M (Driving toner container M)
- C. Container drive coupling C (Driving toner container C)
- D. Container drive coupling Y (Driving toner container Y)
- E. Transfer cleaning drive coupling (Primary transfer cleaning drive)

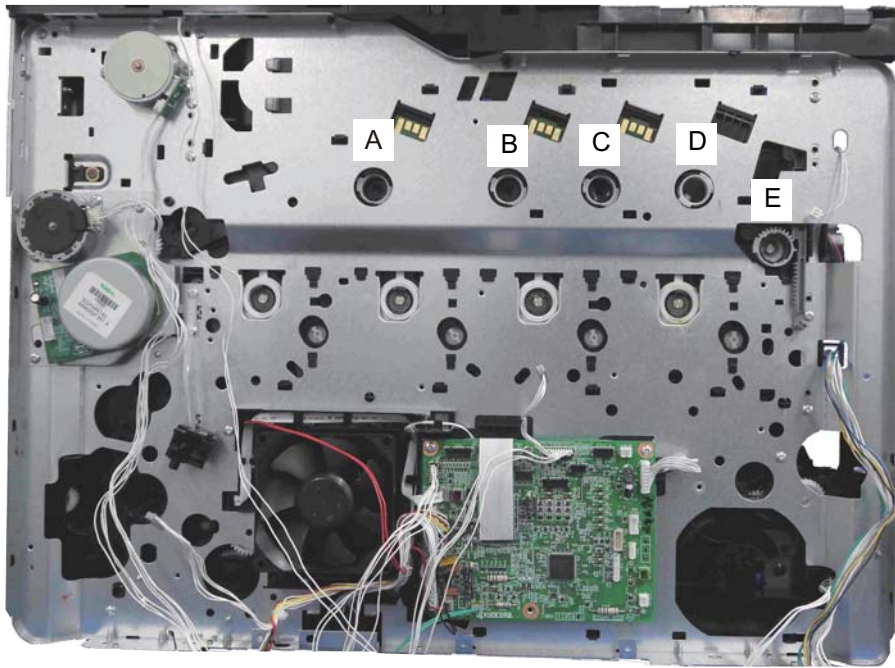


Figure 3-101

3-3 Paper feed and conveying section

The paper feed and conveying section consists of the cassette paper feed section and the MP tray paper feed section, and the paper conveying section conveying the fed paper to the transfer and separat

(1) Cassette paper feed section

The cassette can load 250 sheets of plain paper (80g/m²). And forwards the paper by rotating the pickup roller and conveys the paper to the conveying section by rotating the feed roller.

[Components parts]

1. Paper feed roller
2. Pickup roller
3. Paper feed holder
4. Retard roller
5. Retard holder
6. Separation pad
7. Lift plate
8. Paper width guides
9. Paper length guide
10. Cassette base
11. Actuator
(Paper sensor)

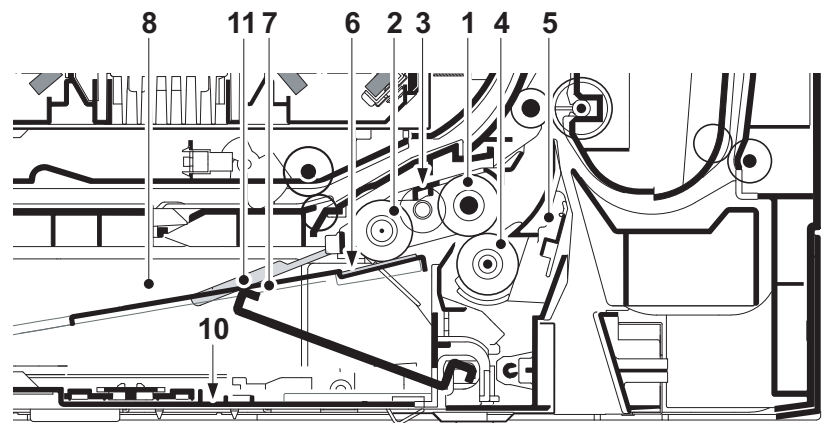


Figure 3-102

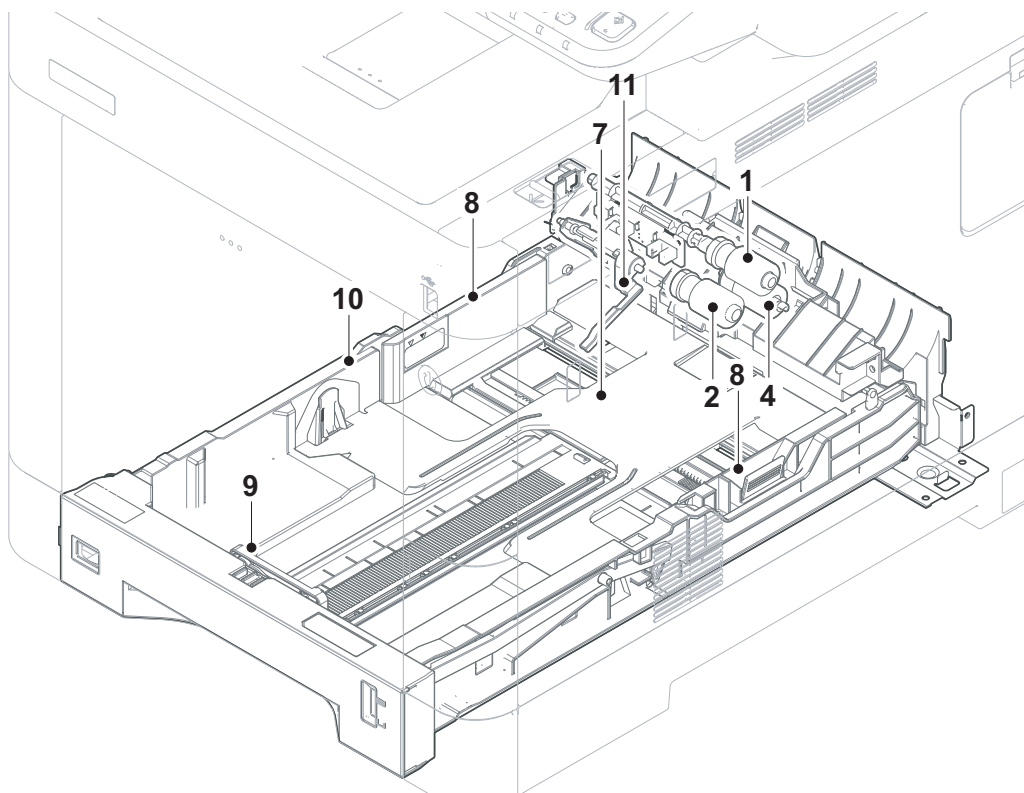


Figure 3-103

[Control block diagram]

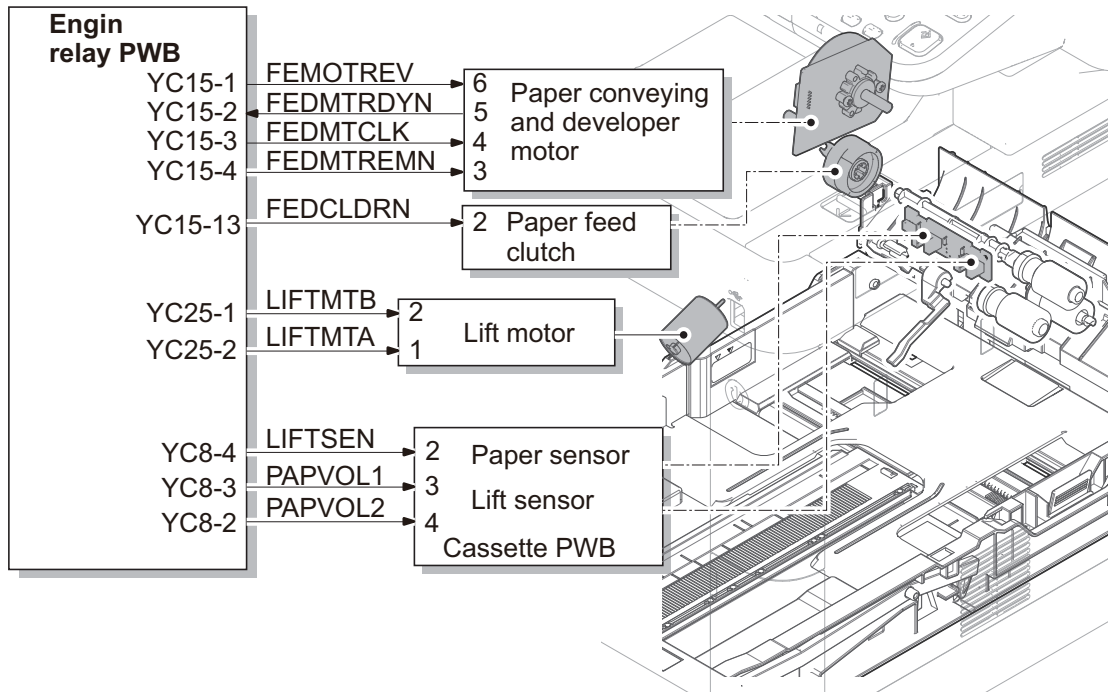


Figure 3-104

(2) MP tray paper feed section

The MP tray can load 100 sheets of plain paper (80g/m²). The paper on the MP tray is fed by rotating the MP feed roller and operating the MP lift plate according to the MP solenoid. Multi-feeding is prevented by the effect of the MP separation pad.

[Components parts]

1. MP feed roller
2. MP separation pad
3. MP lift plate
4. MP separation pad
5. MP conveying roller
6. MP conveying pulley
7. MP paper width guides
8. MP base
9. MP cover
10. MP tray
11. Actuator
(MP paper sensor)

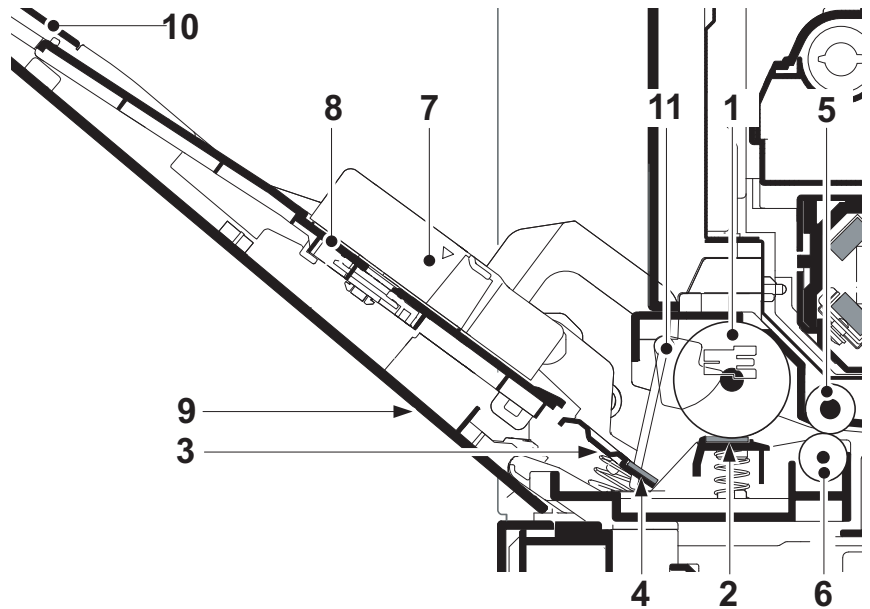


Figure 3-105

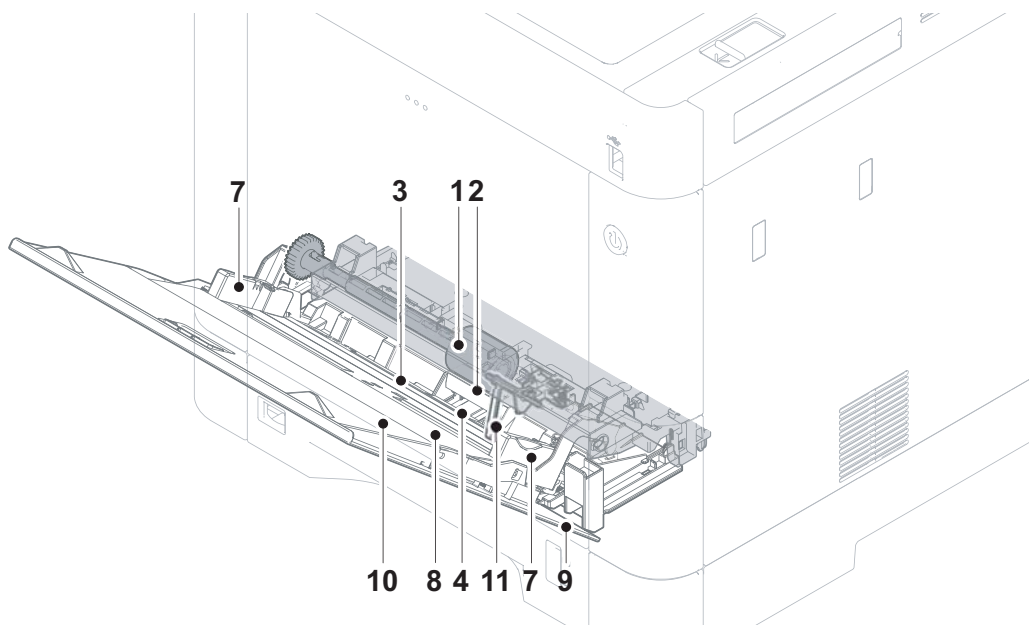


Figure 3-106

[Control block diagram]

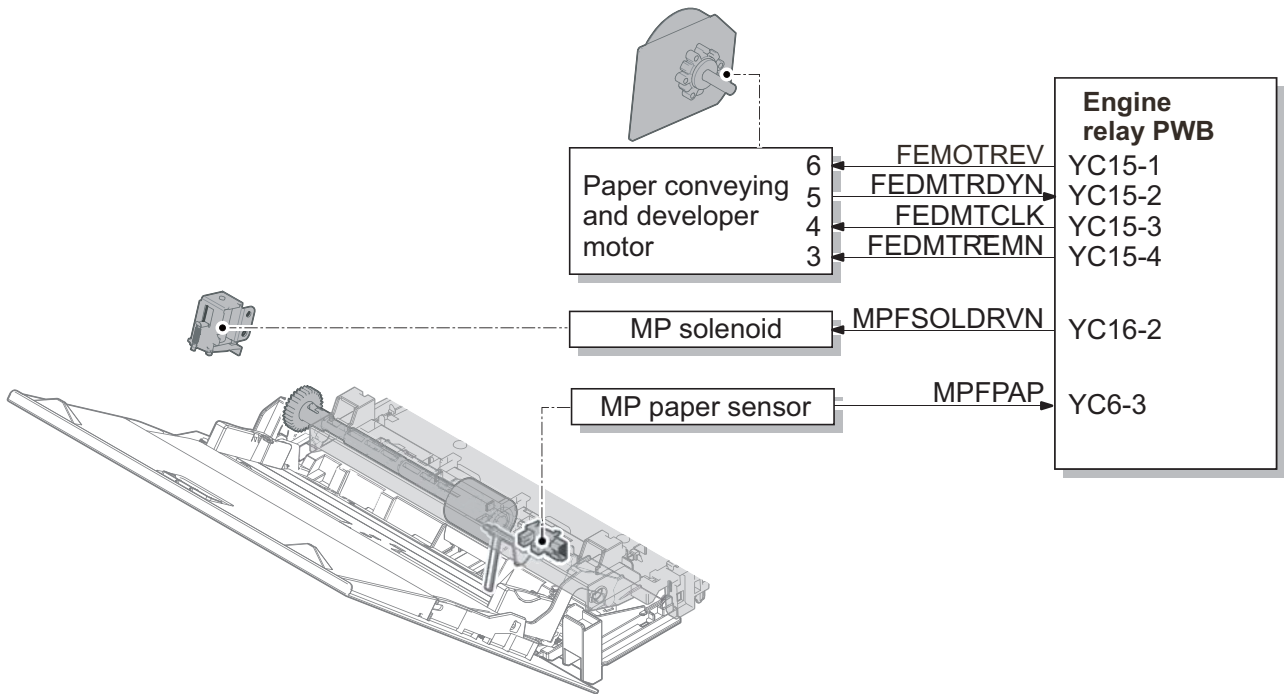


Figure 3-107

(3) MP conveying section

The paper conveying section conveys paper to the transfer and separation section when the paper is fed from the cassette or the MP tray, or re-fed in the duplex print. The fed paper is conveyed to where it turns the registration sensor on by the middle roller or the MP conveying roller, and then, conveyed to the transfer and separation section by the registration front and rear rollers.

[Components parts]

1. MP conveying roller
2. MP conveying pulley
3. Upper MP conveying guide
4. Lower MP conveying guide
5. Middle roller
6. Middle pulley
7. Front registration roller
8. Rear registration roller
9. MP conveying sensor
10. Actuator
(MP conveying sensor)
11. Registration sensor

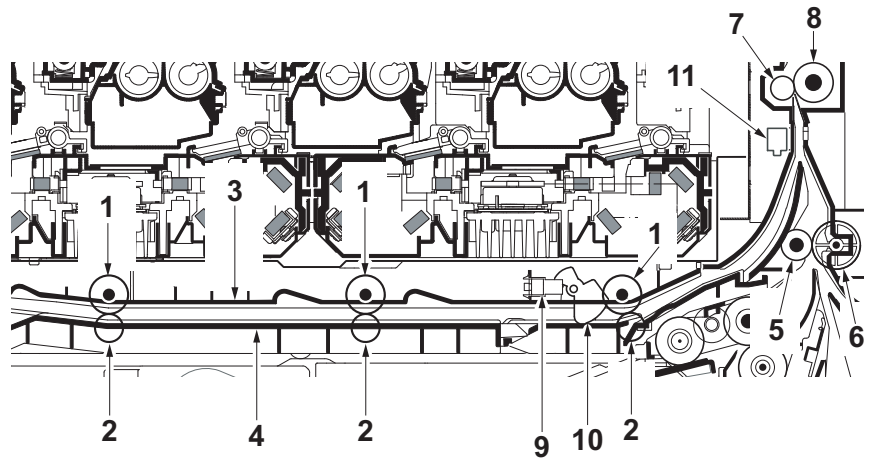


Figure 3-108

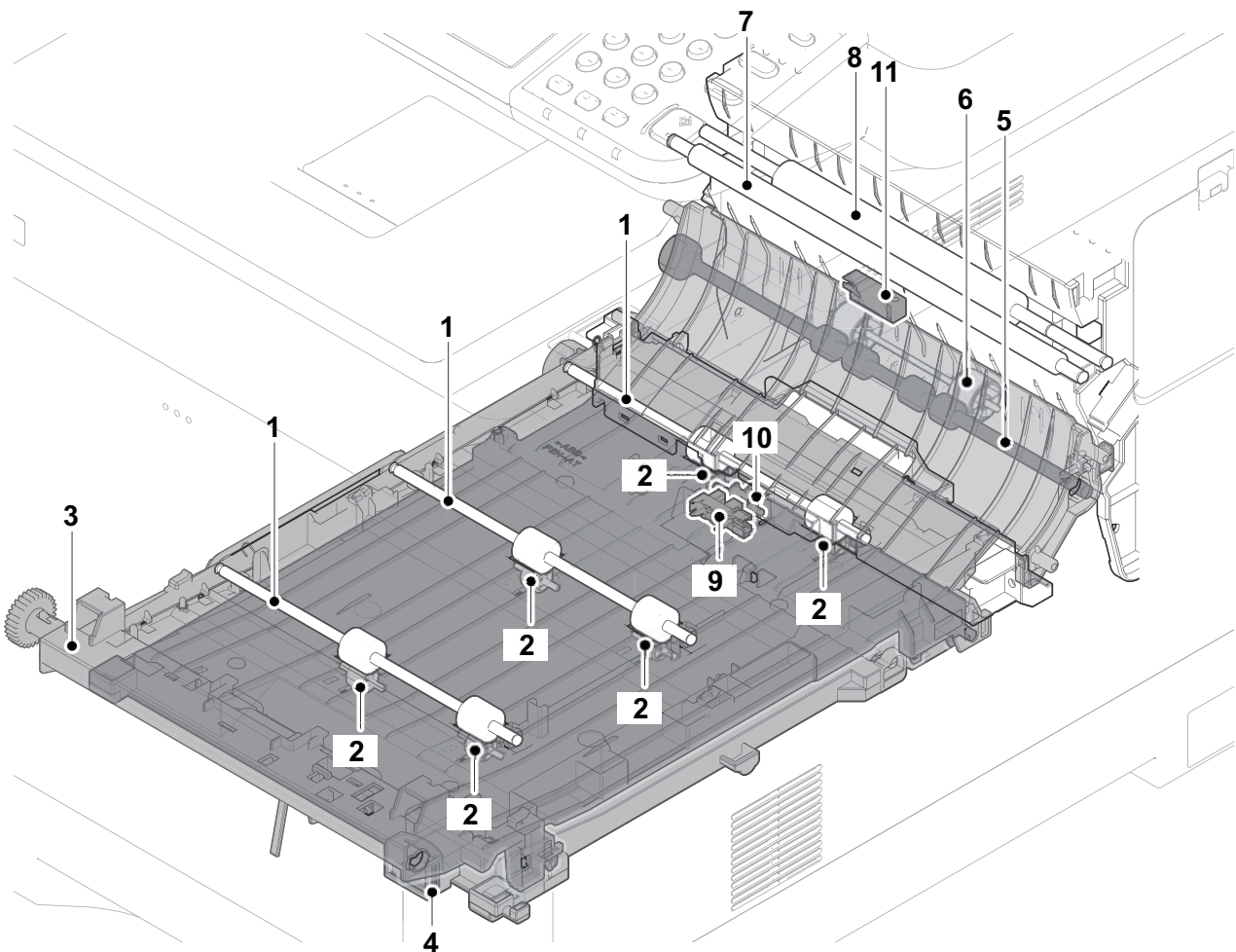


Figure 3-109

[Control block diagram]

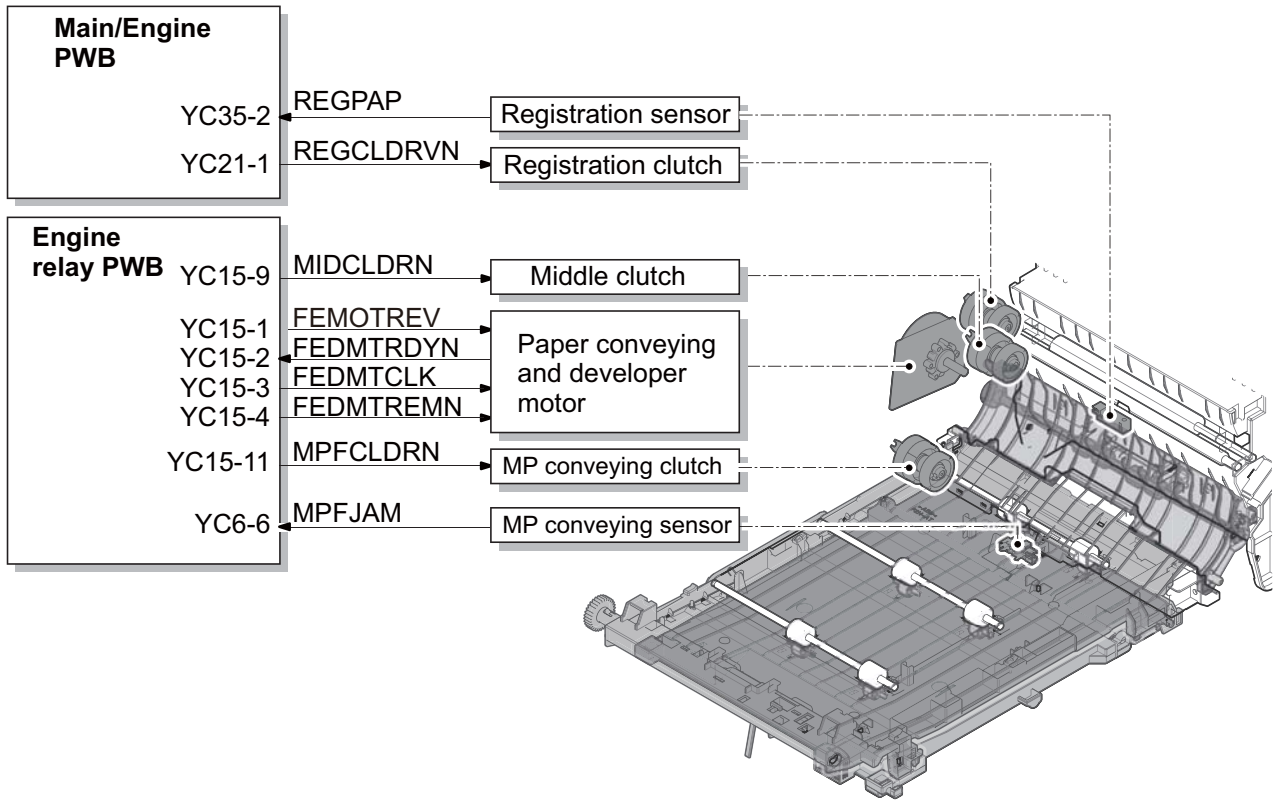


Figure 3-110

3-4 Optical section

The optical section consists of the image scanner section for scanning the original and the laser scanner section to write the image.

(1) Image scanner section

The image on the original is exposed by the exposure lamp and that reflection light is scanned by the CCD image sensor on the CCD PWB via three mirrors and the ISU lens to change the electric signal.

When using the document processor, the image scanner unit stops at the original scanning position (DP slit glass) and scans the image from the original conveyed in the document processor.

[Components parts]

1. CCD
2. Scanner carriage
3. ISU frame
4. Contact glass
5. Original size indicator
6. Slit glass
7. Lens
8. Mirror

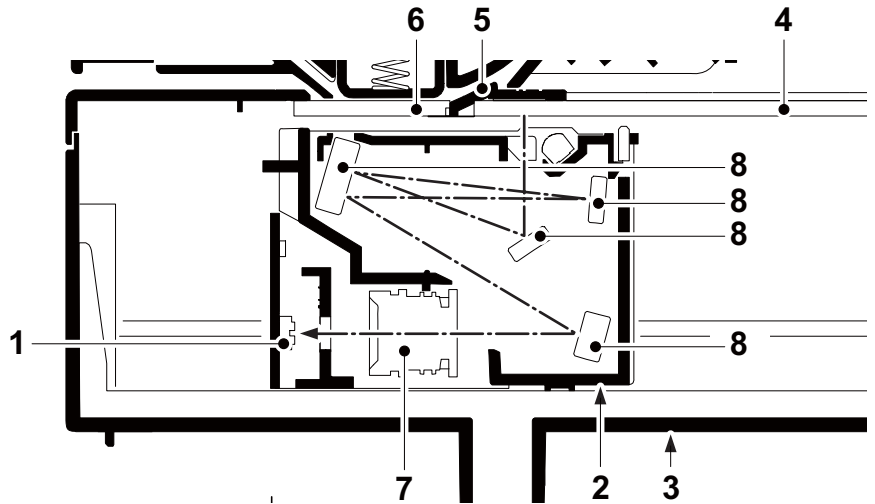


Figure 3-111

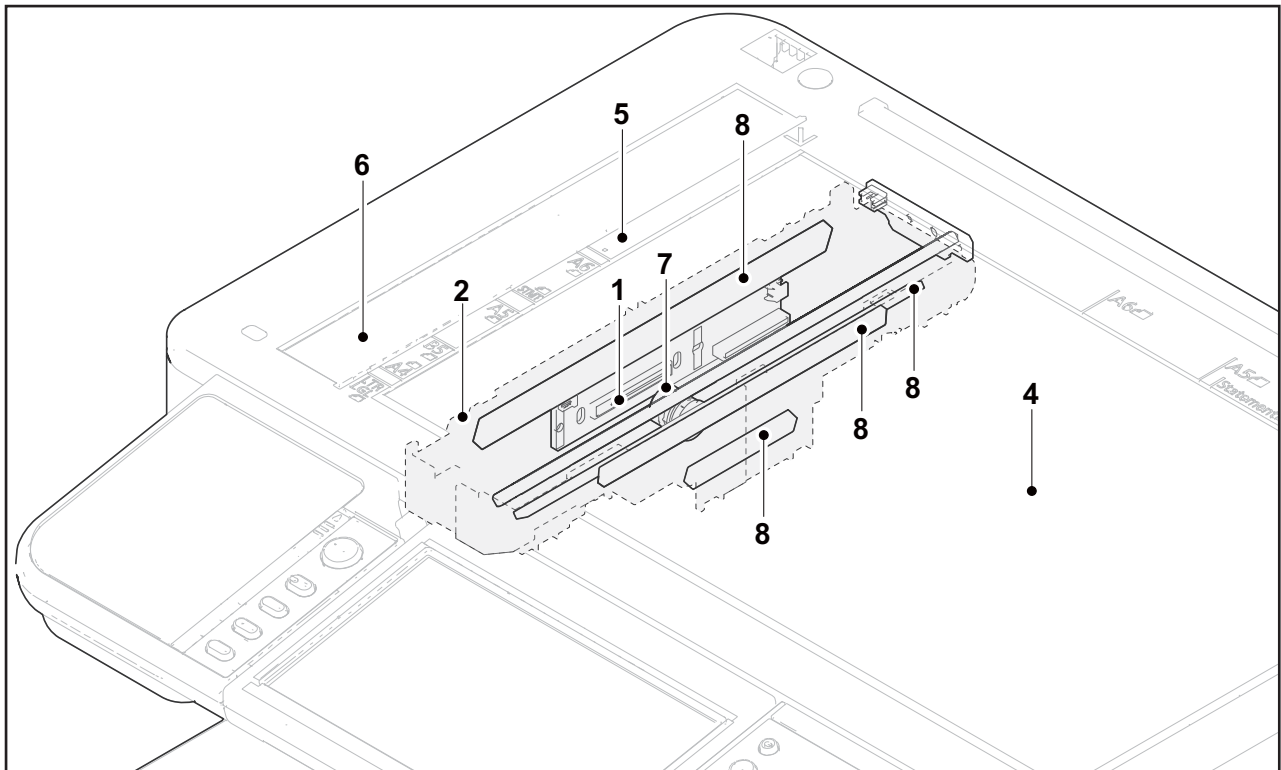


Figure 3-112

[Control block diagram]

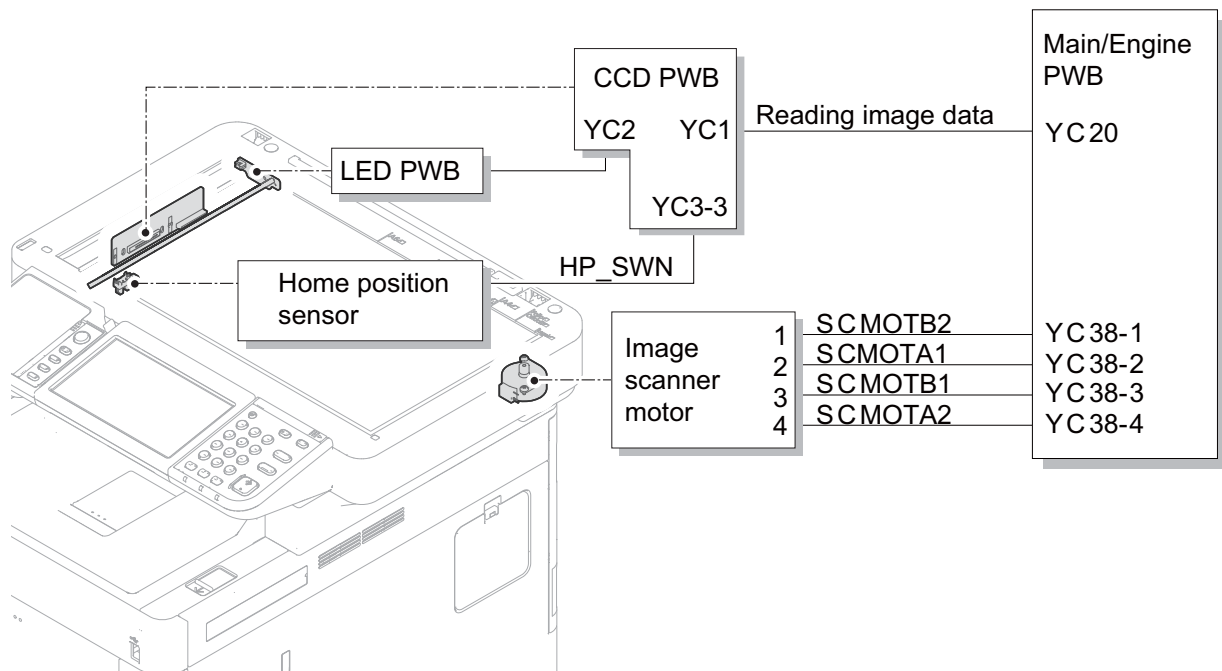


Figure 3-113

(2) Laser scanner unit

The charged drum surface is scanned by the laser emitted from the laser scanner units. The laser reflects to the polygon mirrors by rotating the polygon motor so that the laser scans horizontally to the image. The laser scanner unit has some lenses and mirrors, that adjust the diameter of the laser to focus the laser to the drum surface. Also, the LSU cleaning motor operates to automatically clean the LSU glass.

[Components parts]

1. Polygon motor
2. Polygon mirror
3. f θ lens A
4. f θ lens B
5. Mirror A
6. Mirror B
7. Mirror C
8. LSU glass
9. Spiral

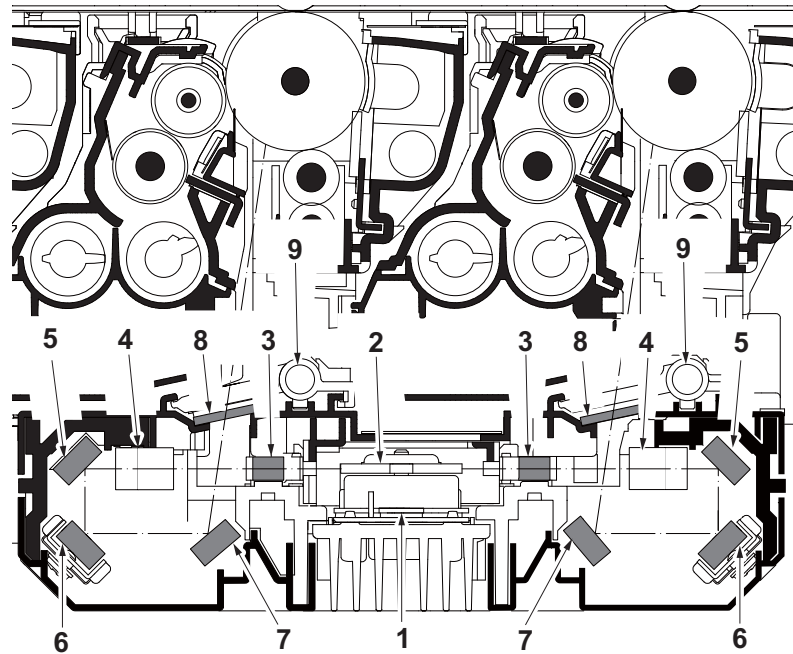


Figure 3-114

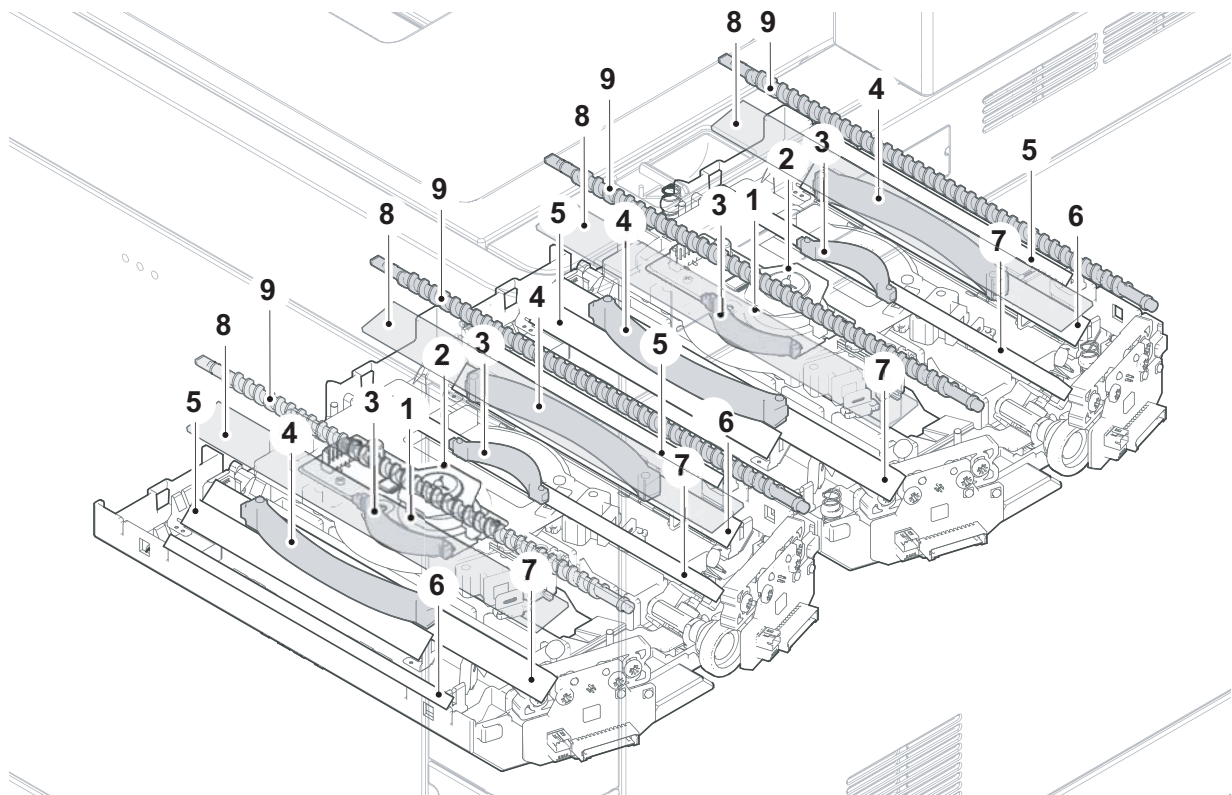


Figure 3-115

[Control block diagram]

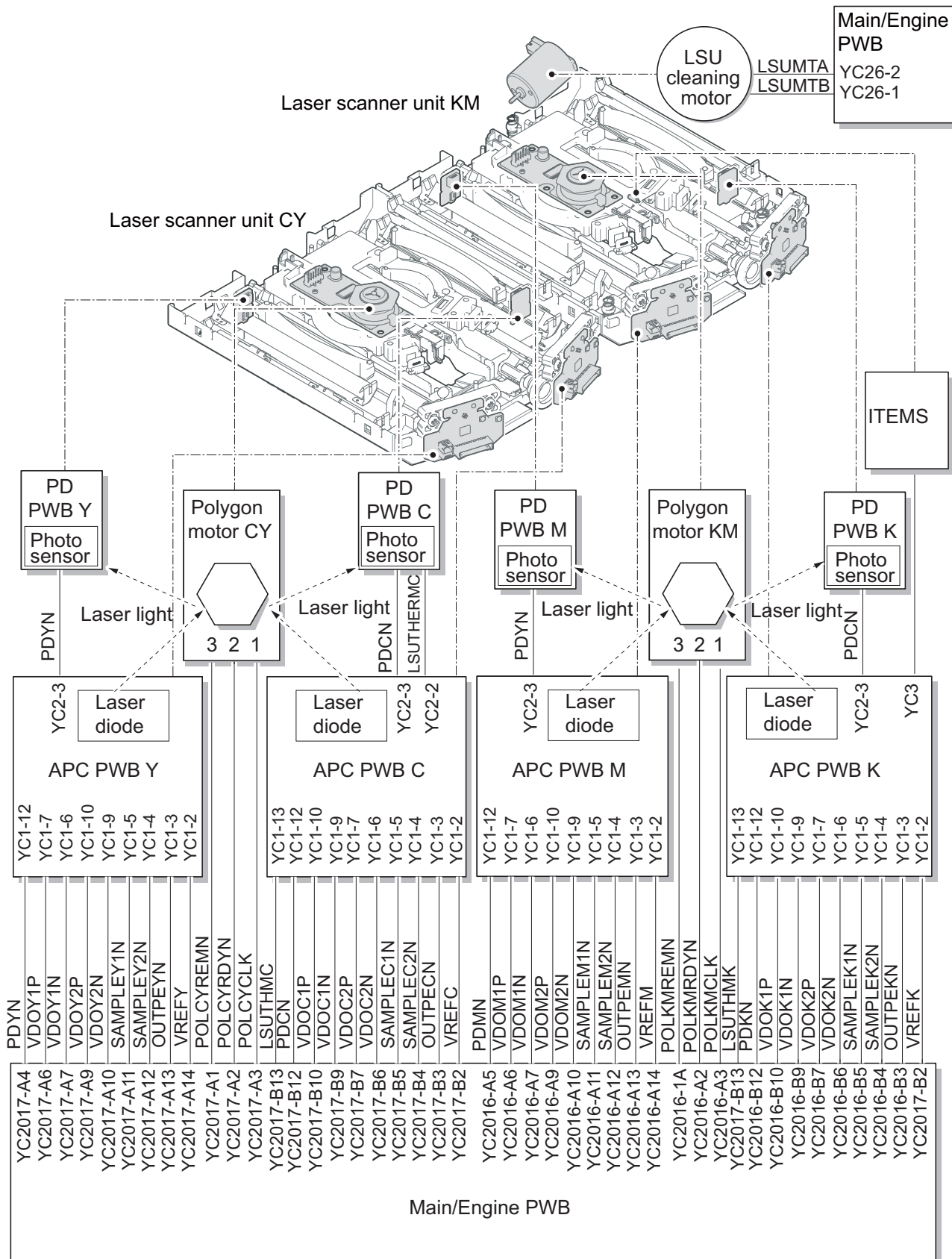


Figure 3-116

3-5 Developer section

(1) Developer unit

The developer section consists of the magnet roller forming the magnetic brush, the sleeve roller forming the thin layer by replacing the toner, the developer blade, and the developer screw mixing up the toner. The toner density is adjusted by impressing the bias to the magnet roller and the sleeve roller. The toner amount inside the developer unit is detected by the toner sensor.

[Components parts]

1. Sleeve roller
2. Magnet roller
3. Developer screw A
4. Developer screw B
5. Developer blade
6. Developer case
7. Developer top cover
8. Developer base
9. Toner sensor

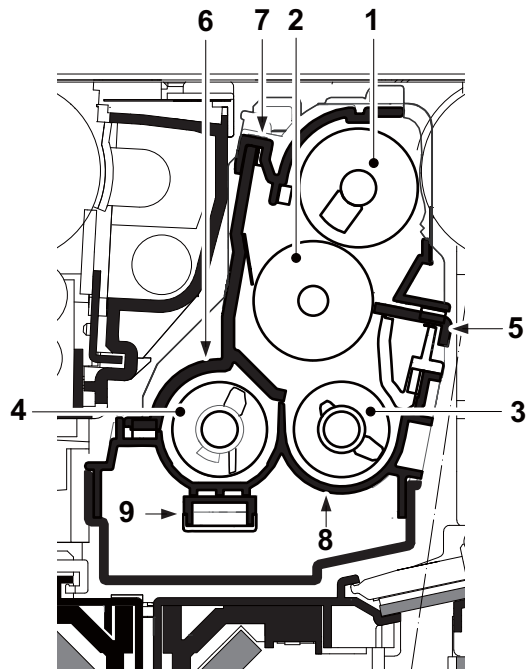


Figure 3-117

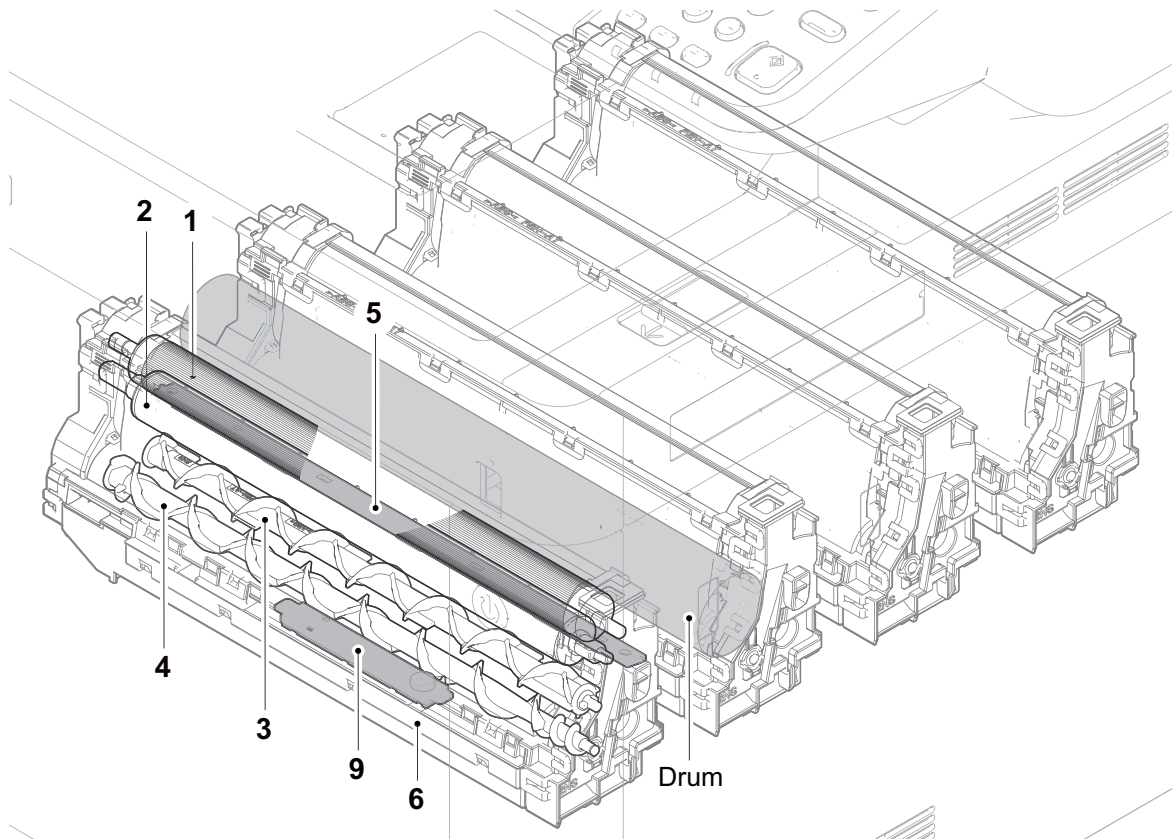


Figure 3-118

[Control block diagram]

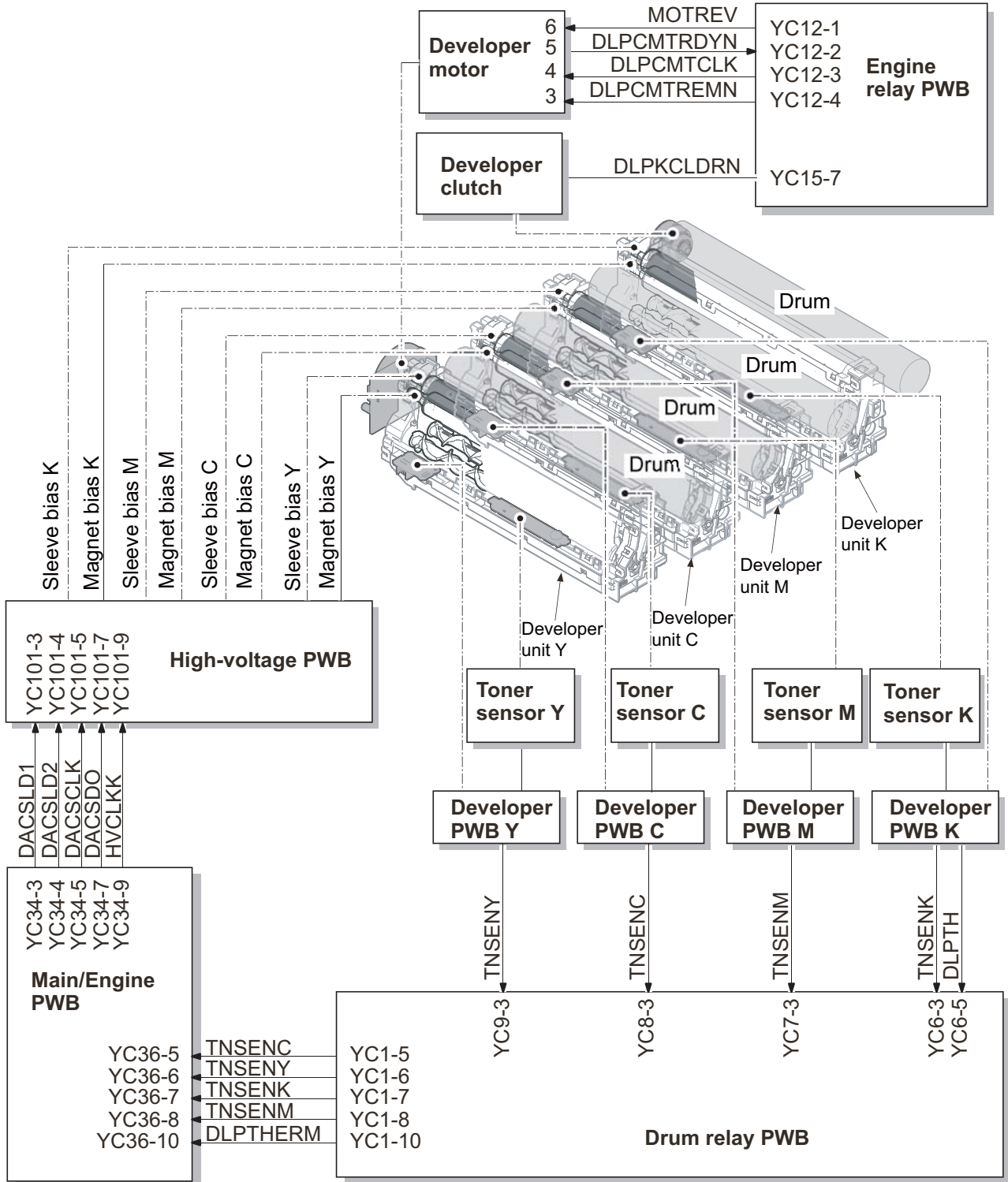


Figure 3-119

3-6 Drum section

The drum section consists of the drum, the charger roller unit, and the cleaning unit. The drum surface is evenly charged to prepare forming the electrical latent image by emitting the laser.

(1) Charger roller unit

The charged roller with the electric charge contacts the drum surface and rotates to charge the drum evenly.

[Components parts]

1. Drum
2. Charger roller
3. Charger cleaning roller
4. Charger case

(2) Cleaning unit

The remaining toner on the drum surface after transferring is removed by the cleaning blade, and collected to the waste toner box by the drum screw. The cleaning lamp consists of the LED lamp, and it removes the remaining electric charge on the drum before the main charge.

[Components parts]

5. Drum frame
6. Cleaning blade
7. Drum screw
8. Cleaning lamp

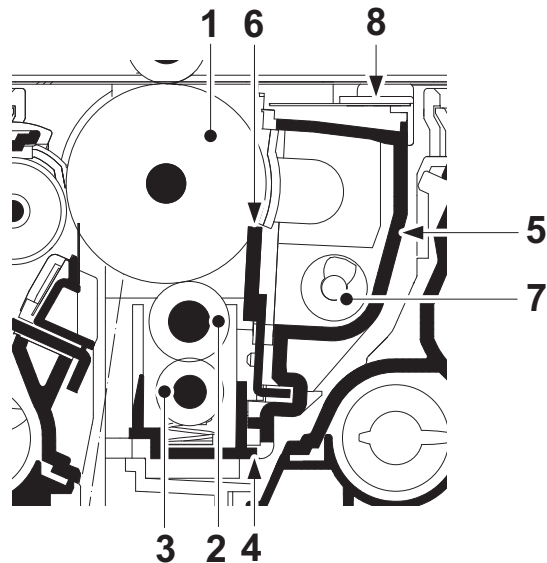


Figure 3-120

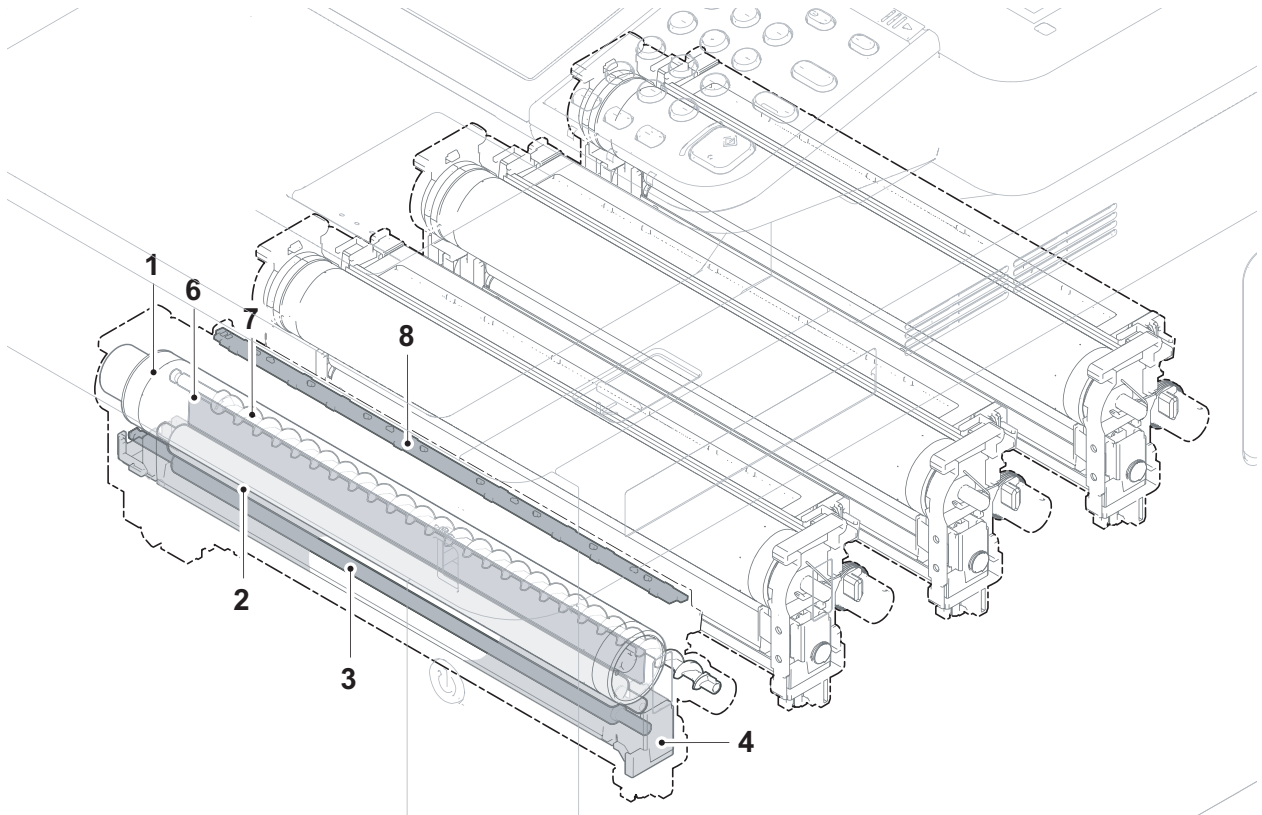


Figure 3-121

[Control block diagram]

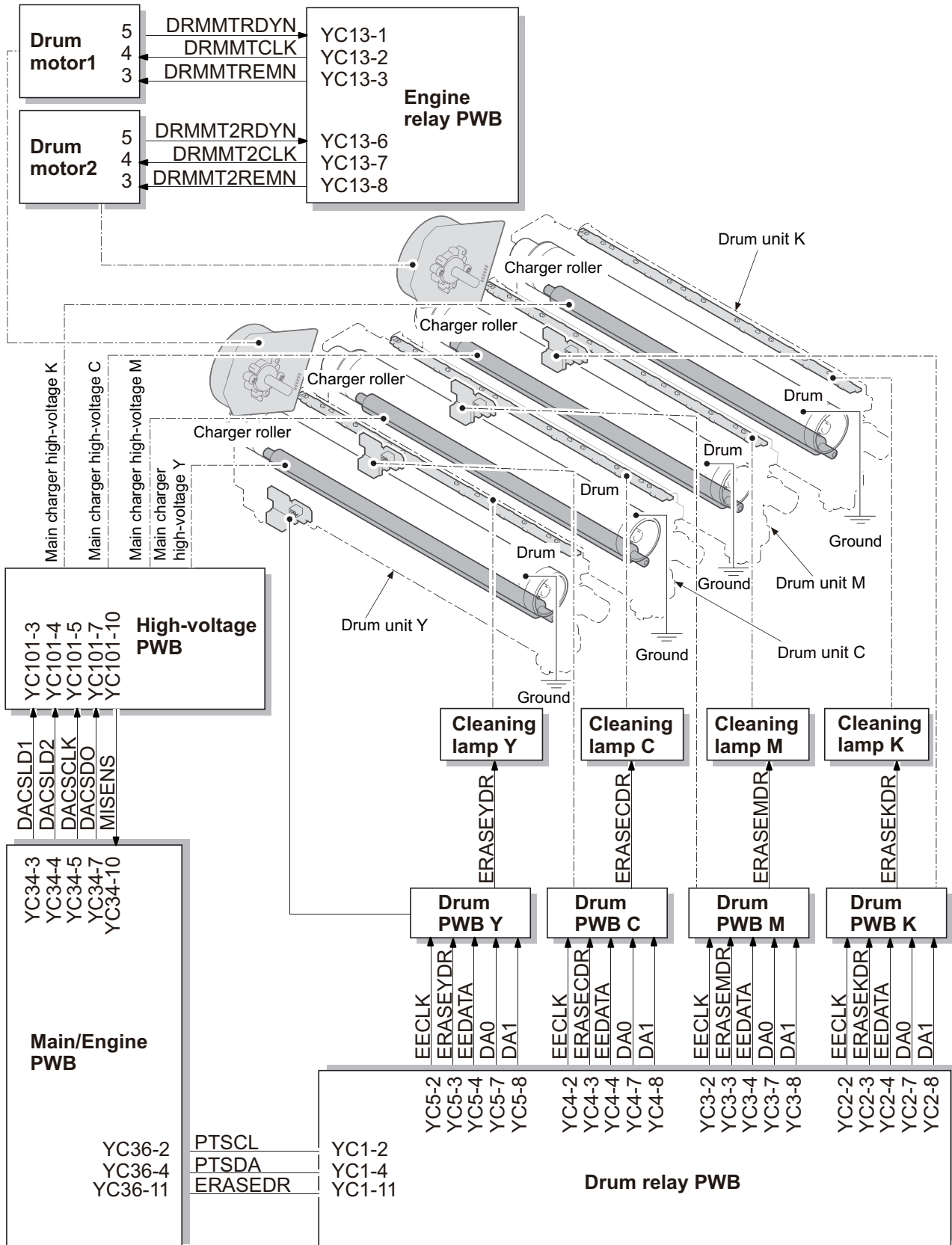


Figure 3-122

3-7 Transfer and separation section

(1) Primary transfer section

The primary transfer section consists of the transfer cleaning unit, the transfer belt and four primary transfer rollers facing each drum. When printing the color image, the toner image with a single color formed on each drum is repeatedly transferred on the transfer belt by impressing the bias to the primary transfer rollers facing each drum, and then the full color toner image is formed. Also, the ID sensor attached to the main unit measures the toner density on the transfer belt.

The transfer cleaning unit collects the remaining toner on the transfer belt after the secondary transferring, and forwards it to the waste toner box as waste toner.

[Components parts]

1. Tension roller
2. Drive roller
3. Primary transfer roller K
4. Primary transfer roller M
5. Primary transfer roller C
6. Primary transfer roller Y
7. Transfer belt
8. Cleaning fur brush
9. Cleaning roller
10. Cleaning blade
11. Cleaning screw
12. ID sensor 1
13. ID sensor 2

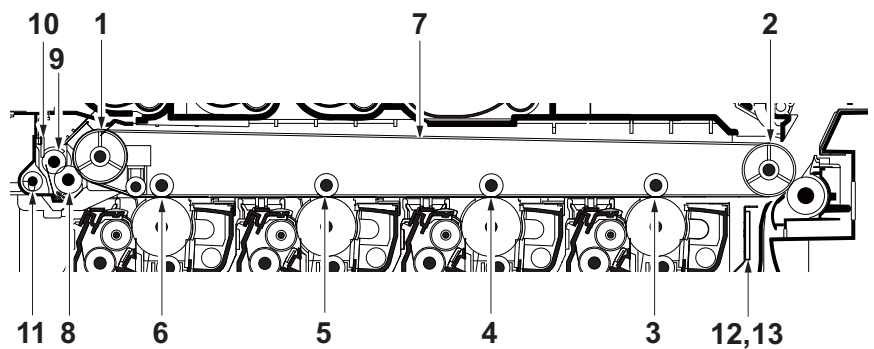


Figure 3-123

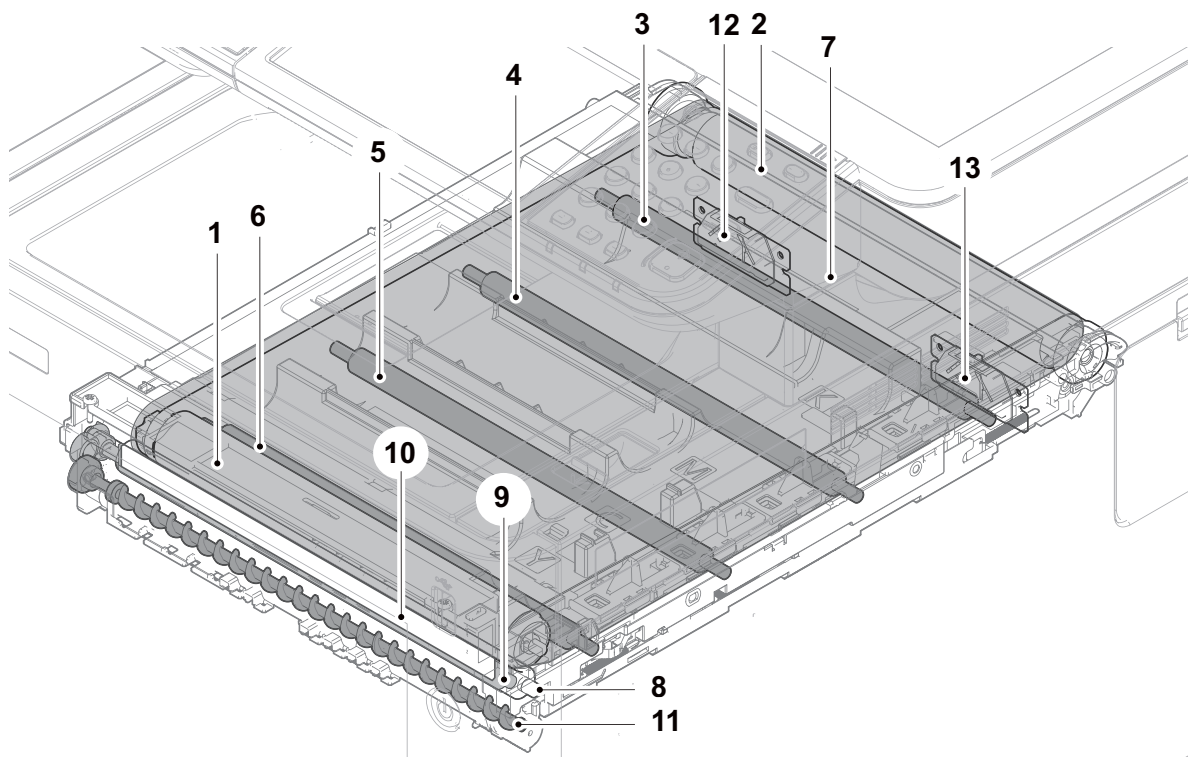


Figure 3-124

[Control block diagram]

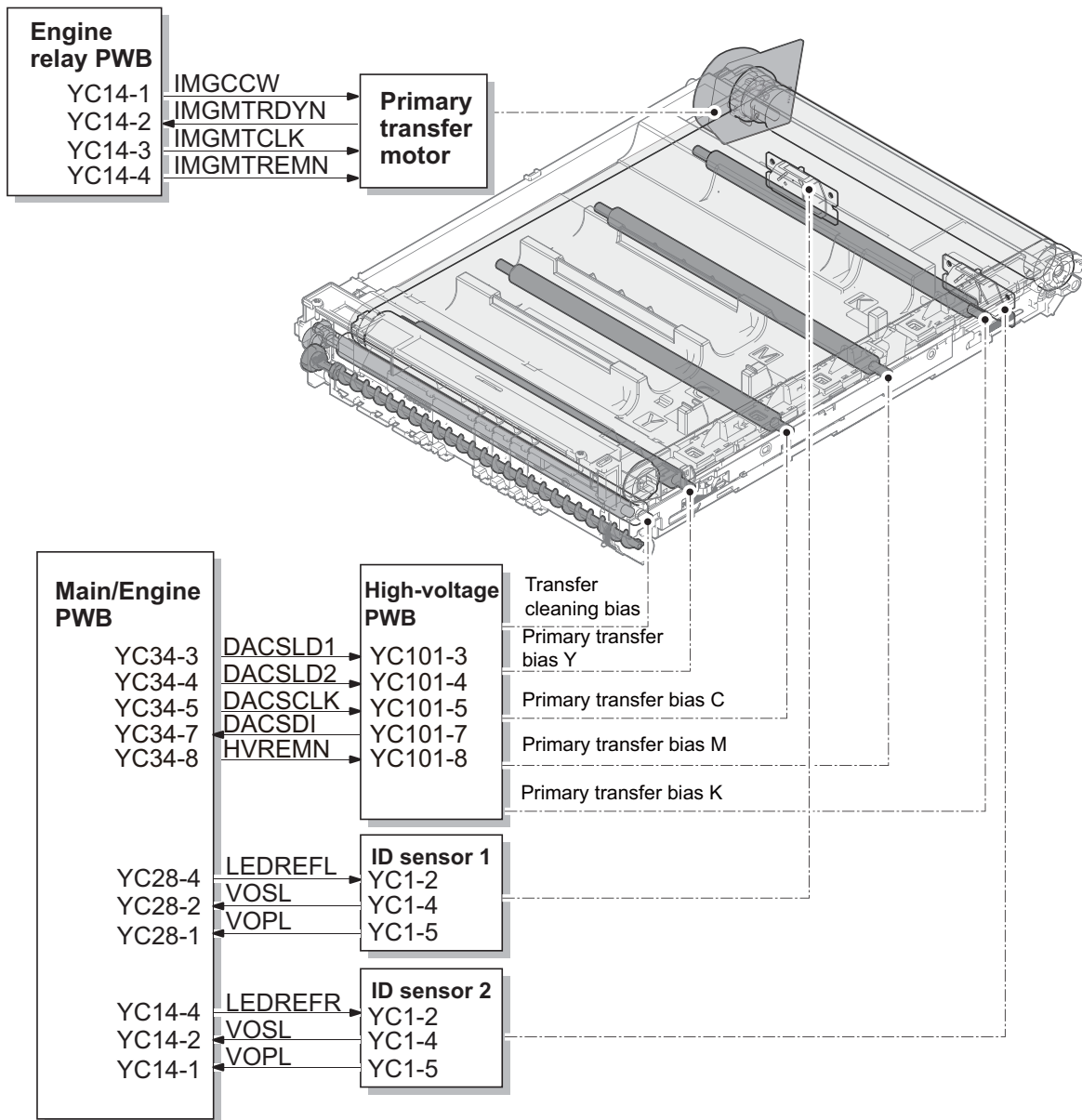


Figure 3-125

(2) Secondary transfer roller section

The secondary transfer roller section consists of the secondary transfer roller attached to the paper conveying unit, and the separation brush. The DC bias from the high-voltage PWB is impressed to the secondary transfer roller, and the toner image formed on the transfer belt is transferred to the paper by the potential gap. After transferring, the paper is separated by self stripping and the electric charge on the paper is removed by the separation brush contacting the ground.

[Components parts]

1. Secondary transfer roller
2. Primary transfer belt
3. Transfer front guide
4. Separation brush

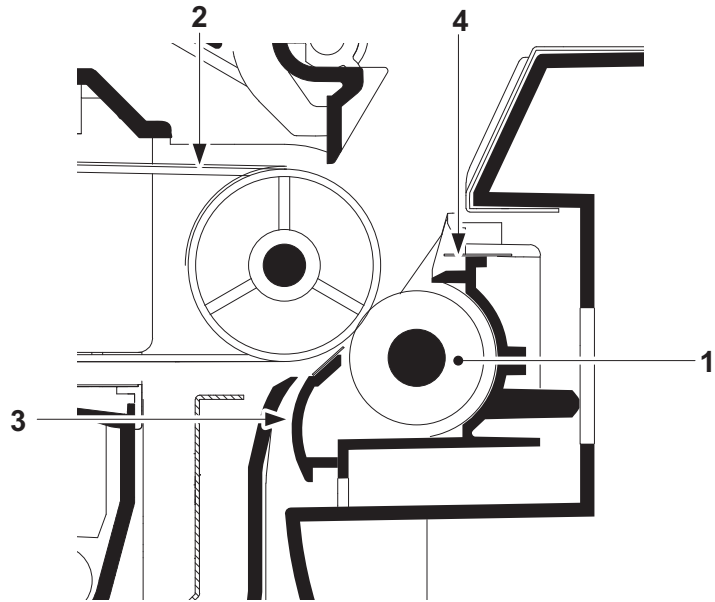


Figure 3-126

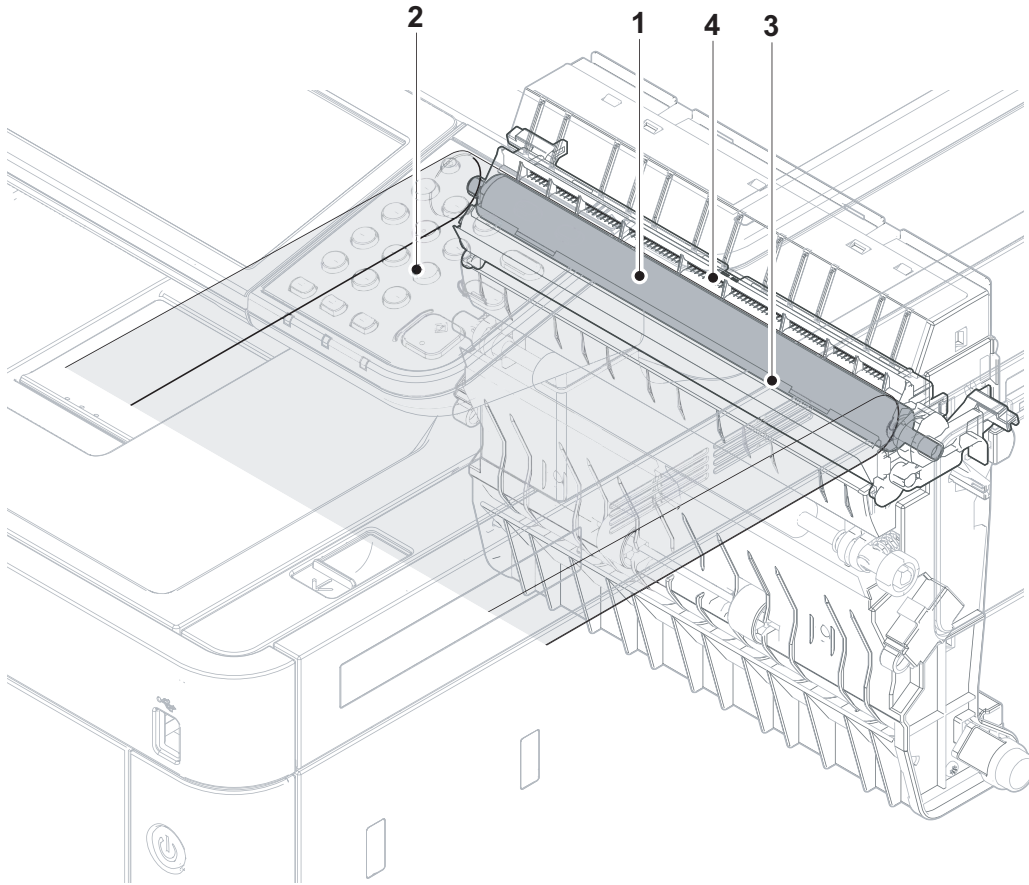


Figure 3-127

[Control block diagram]

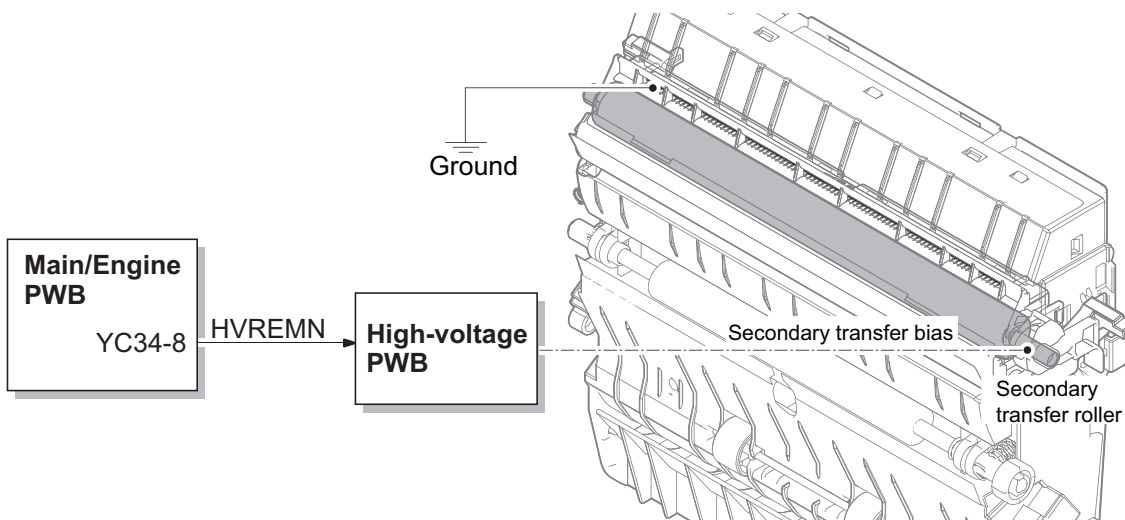


Figure 3-128

3-8 Fuser section

The paper from the transfer and separation section is pinched between the heat roller and the press roller. The heat roller is heated by the fuser heater, and the paper is pressed by the press roller with the pressure added by the pressure spring toward the heat roller, so toner is fused on the paper by that heat and pressure.

The surface temperature of the heat roller is detected by the fuser thermistor and controlled by the main/engine PWB. If the fuser section has abnormal temperature, the power supply line is shut off by switching the fuser thermostat and the fuser heater is turned off forcibly.

(1) Fuser unit

[Components parts]

1. Heat roller
2. Fuser heater 1
3. Fuser heater 2
4. Fuser thermostat 1
5. Fuser thermostat 2 *2
6. Fuser thermistor 1
7. Fuser thermistor 2 *1
8. Fuser thermistor 2 *2
9. Separation plate
10. Press roller
11. Actuator
(Exit sensor)
12. Fuser exit roller
13. Fuser exit pulley
14. Fuser front guide

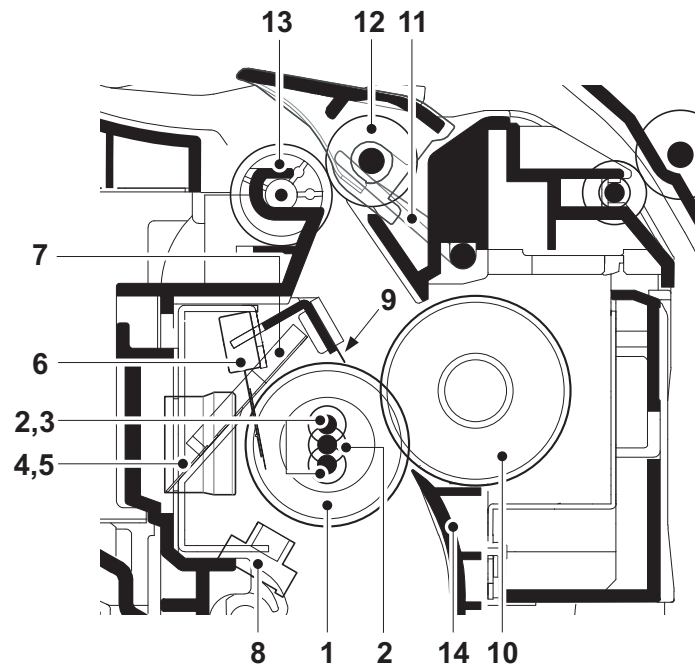
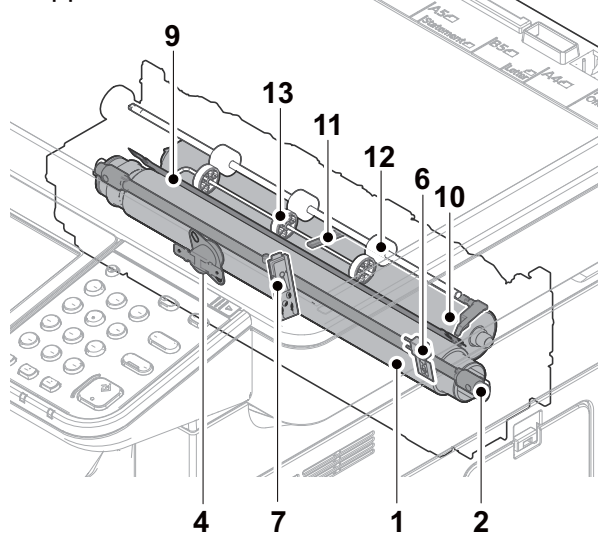


Figure 3-129

*1: 30 ppm model

*2: 35 ppm model

30 ppm model



35 ppm model

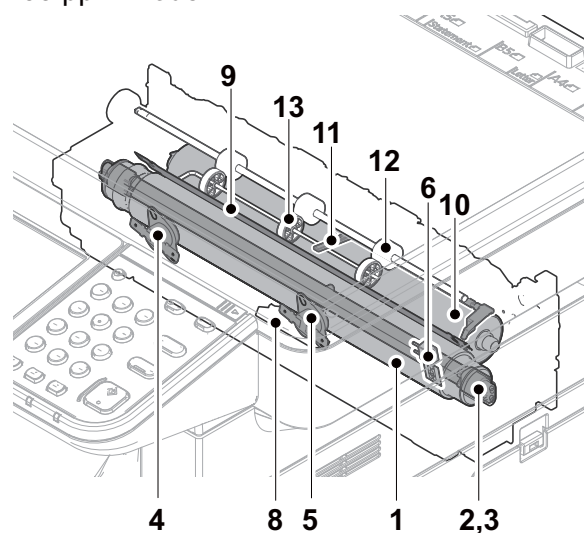


Figure 3-130

[Control block diagram]
30 ppm model

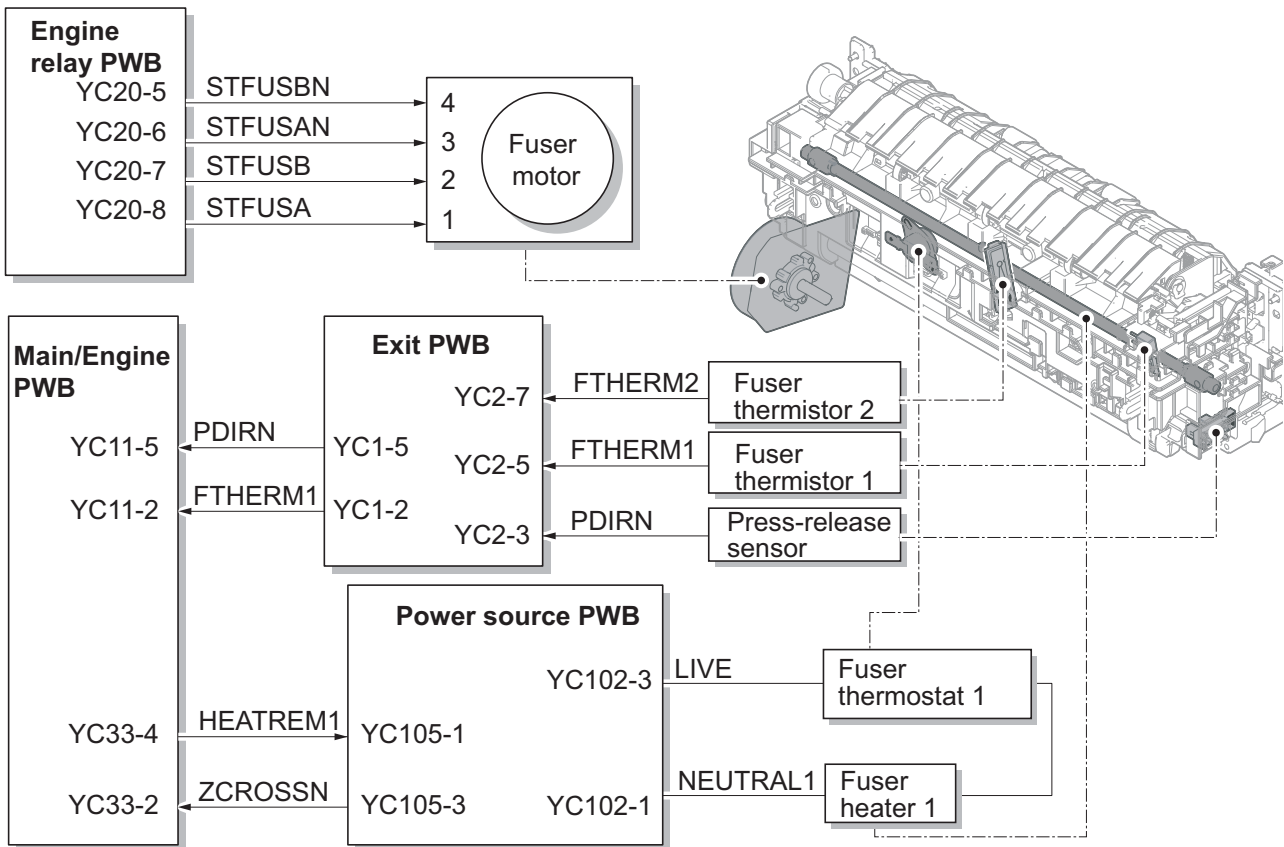


Figure 3-131

35 ppm model

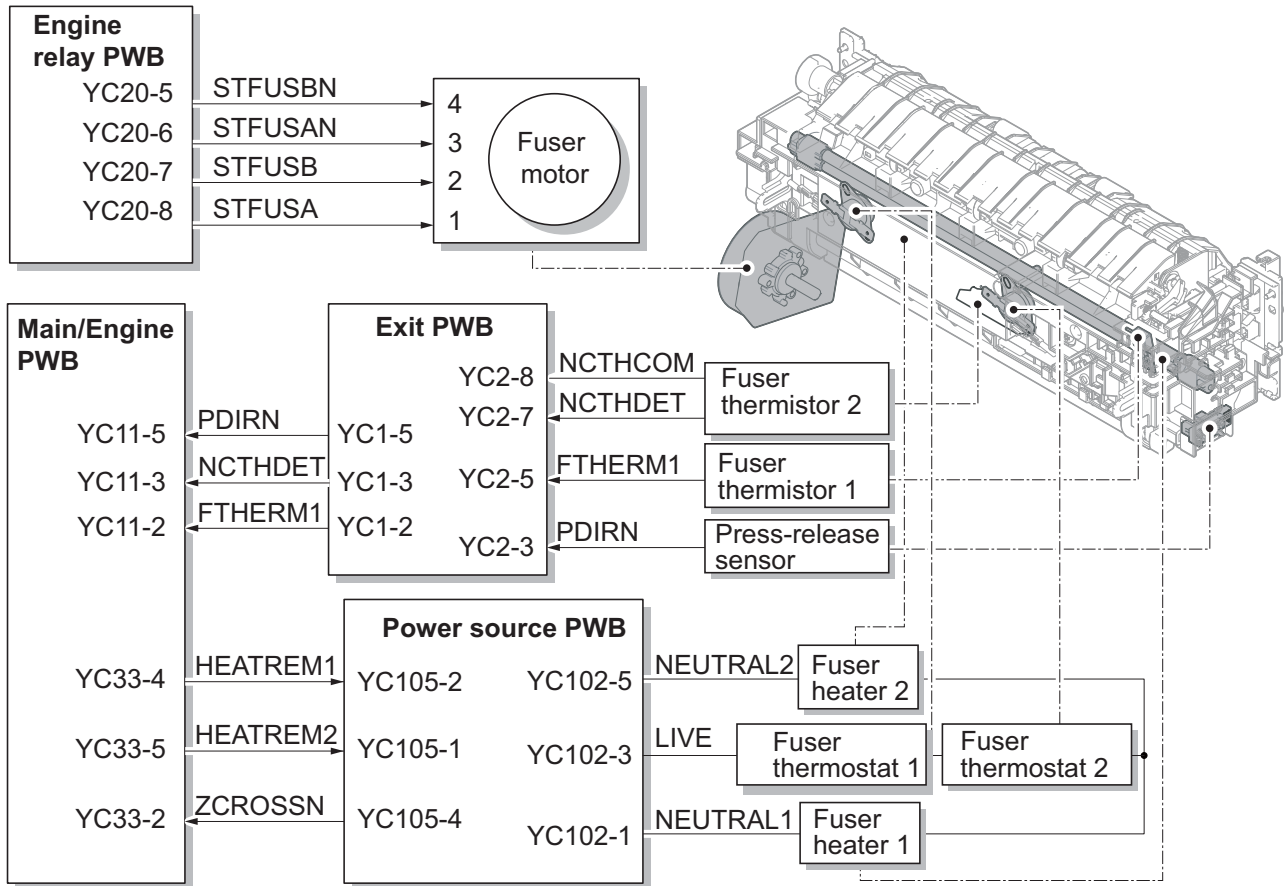


Figure 3-132

3-9 Exit and feedshift section

The exit and feedshift section consists of the paper path from the fuser section to the inner tray or the duplex conveying section.

(1) Exit unit

[Components parts]

1. Exit roller
2. Exit pulley
3. Lower exit roller
4. Lower exit pulley
5. Feedshift guide
6. Actuator
(Exit sensor)
7. Actuator
(Exit full sensor)

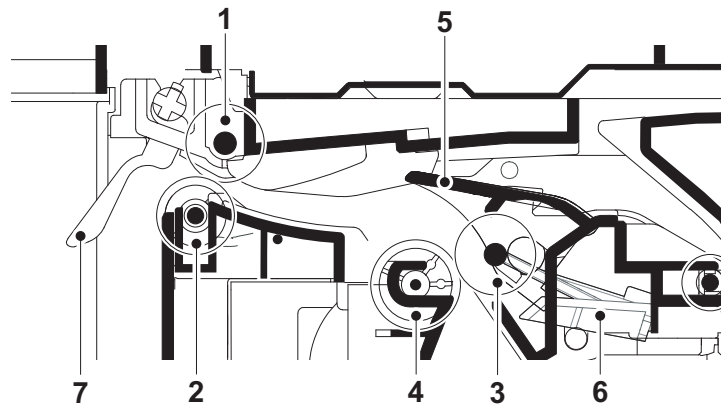


Figure 3-133

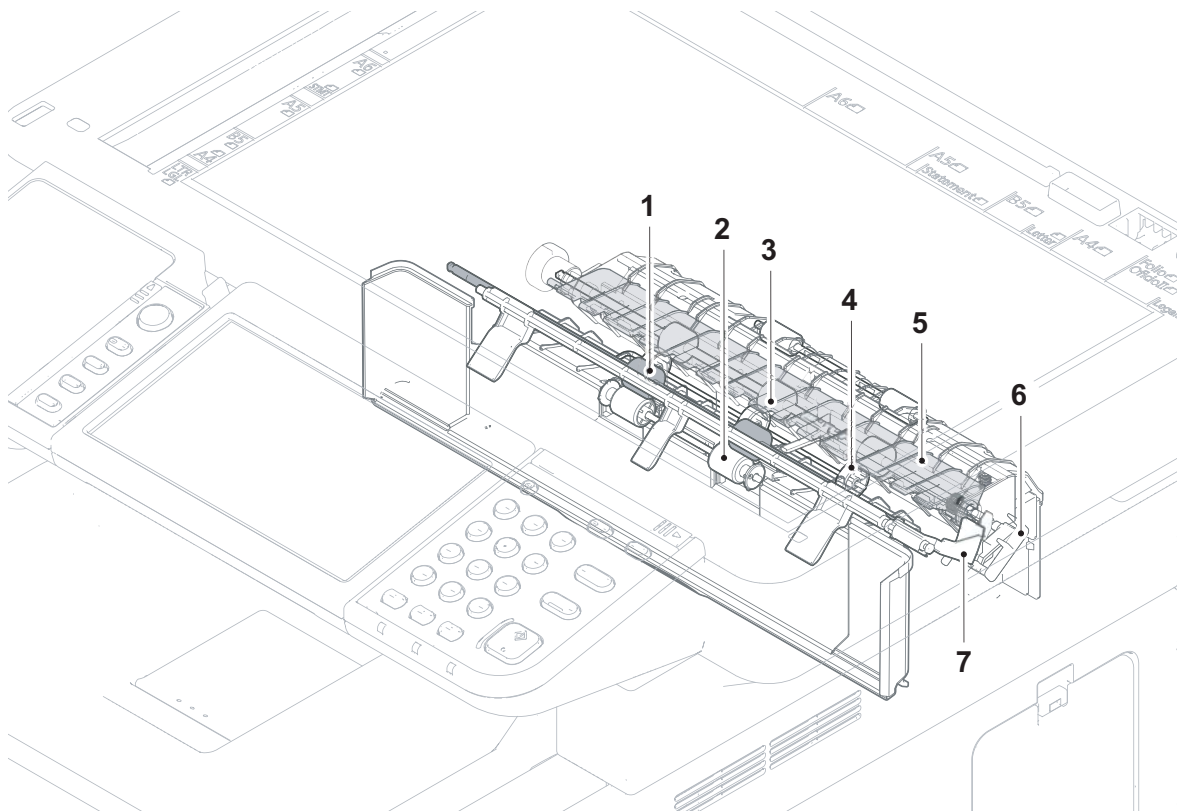


Figure 3-134

[Control block diagram]

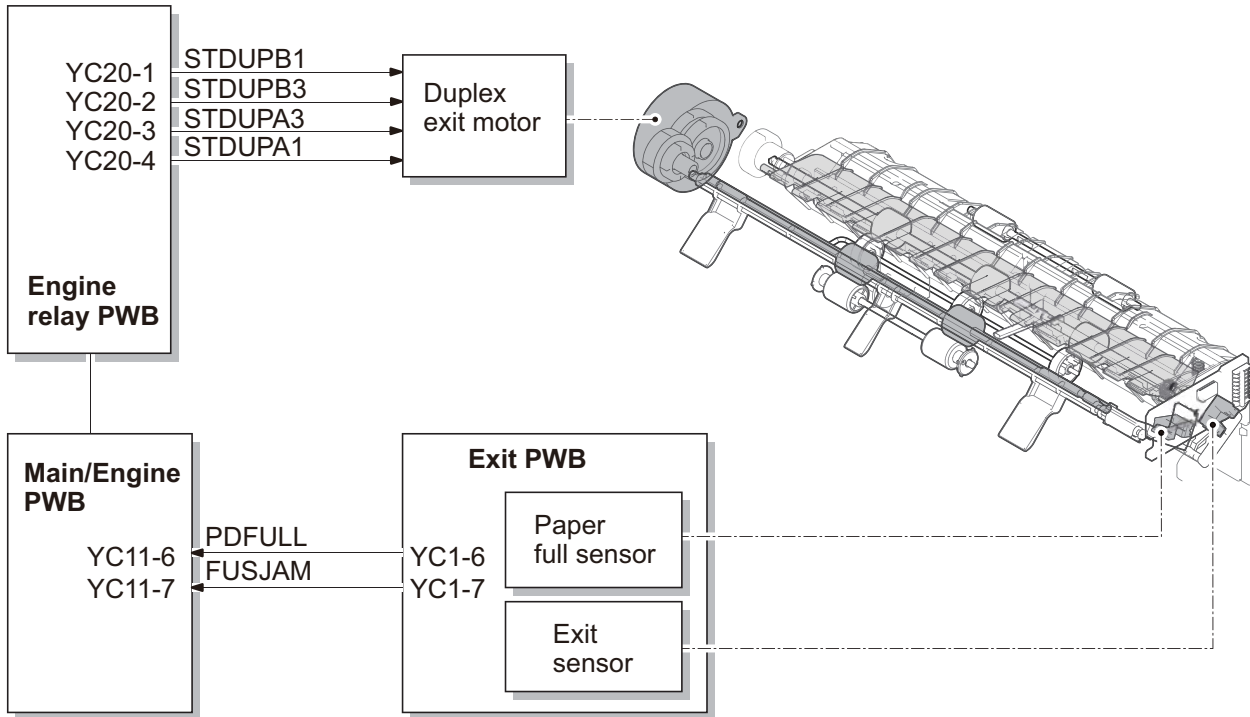


Figure 3-135

3-10 Duplex conveying section

(1) Duplex conveying unit

The duplex conveying section consists of the paper conveying path to forward the paper from the exit and feedshift section in the duplex print to the paper conveying section.

[Components parts]

1. DU conveying roller L
2. DU conveying pulley L
3. DU conveying roller S
4. DU conveying pulley S
5. DU base
6. DU conveying guide

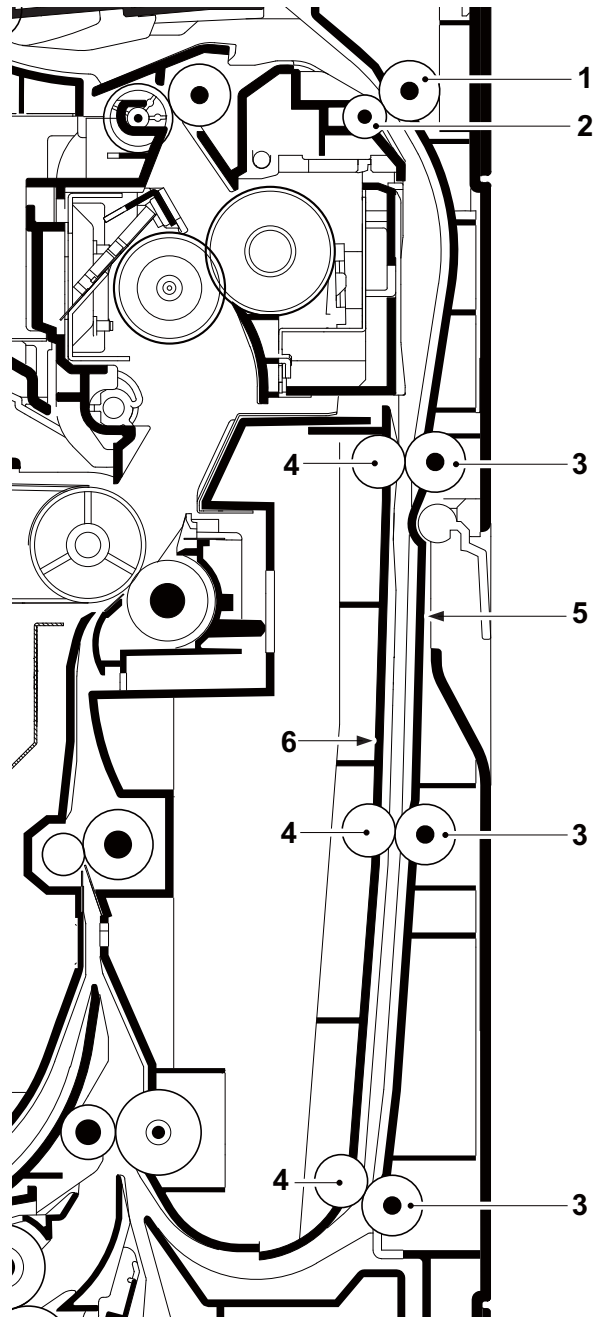


Figure 3-136

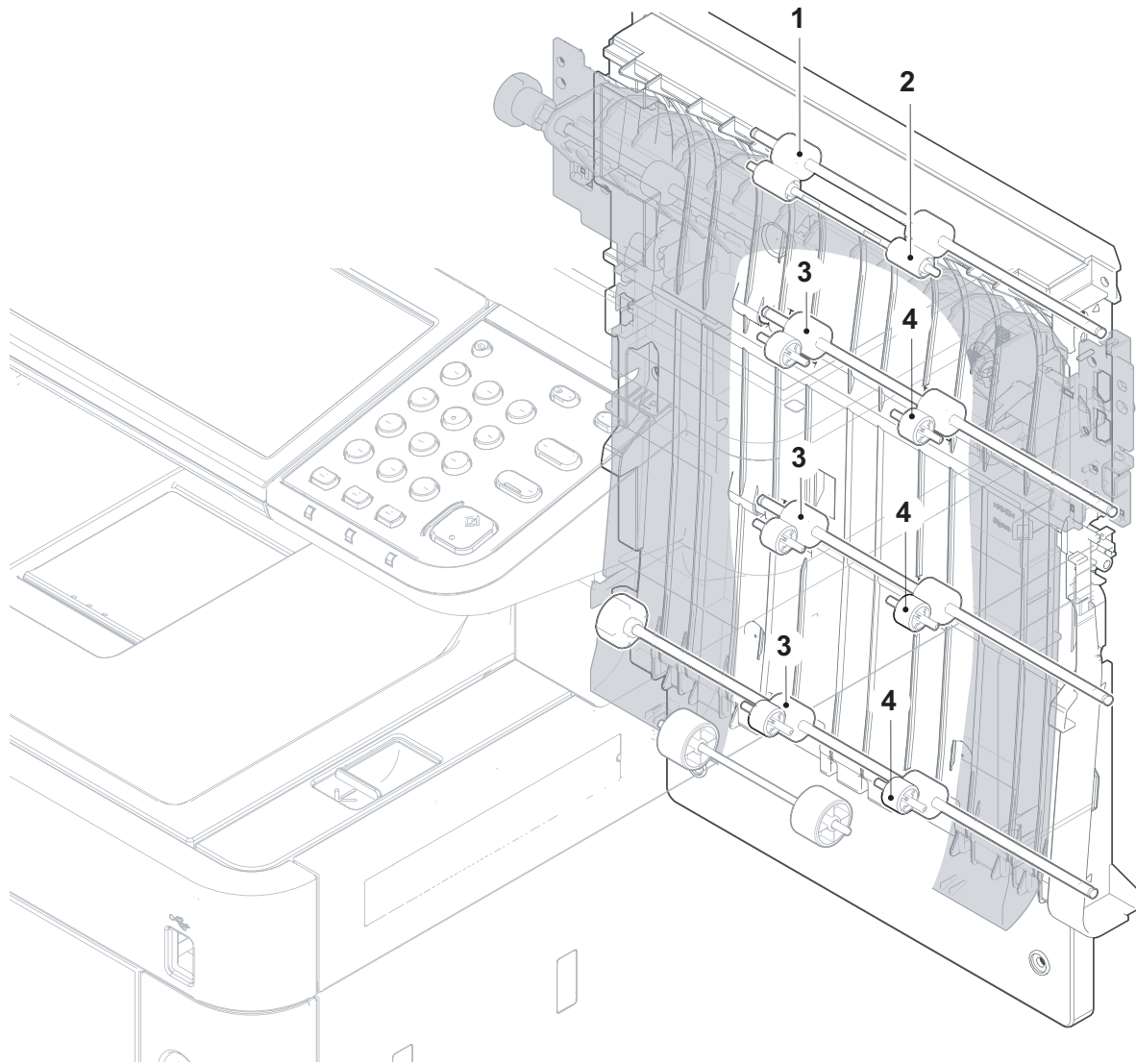


Figure 3-137

[Control block diagram]

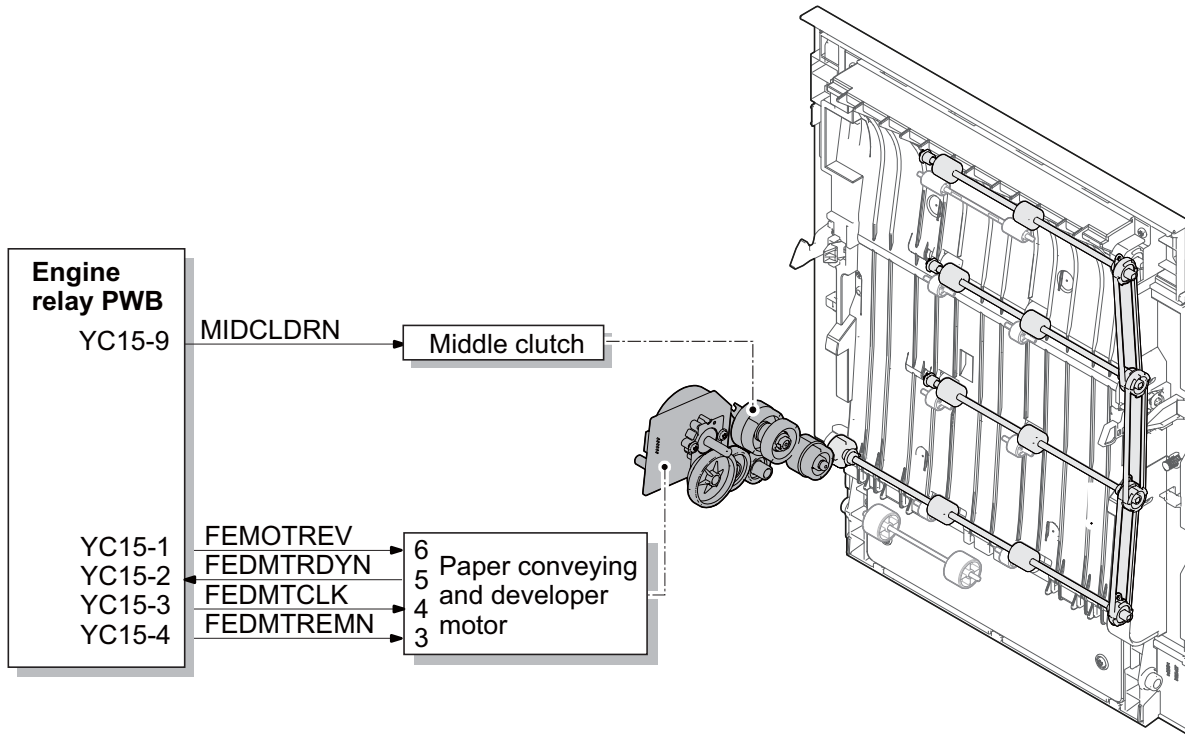


Figure 3-138

3-11 Document processor (30 ppm model)

(1) Original paper feed section

The original feed section consists of the parts in the figure, and conveys the original on the original tray to the original conveying section. The original is fed by rotating the DP forwarding pulley and the DP feed roller.

[Components parts]

1. DP forwarding pulley
2. DP feed roller
3. DP feed holder
4. DP separation pad
5. Front separation pad
6. Actuator
(DP original sensor)
7. Original tray
8. Actuator
(DP timing sensor)

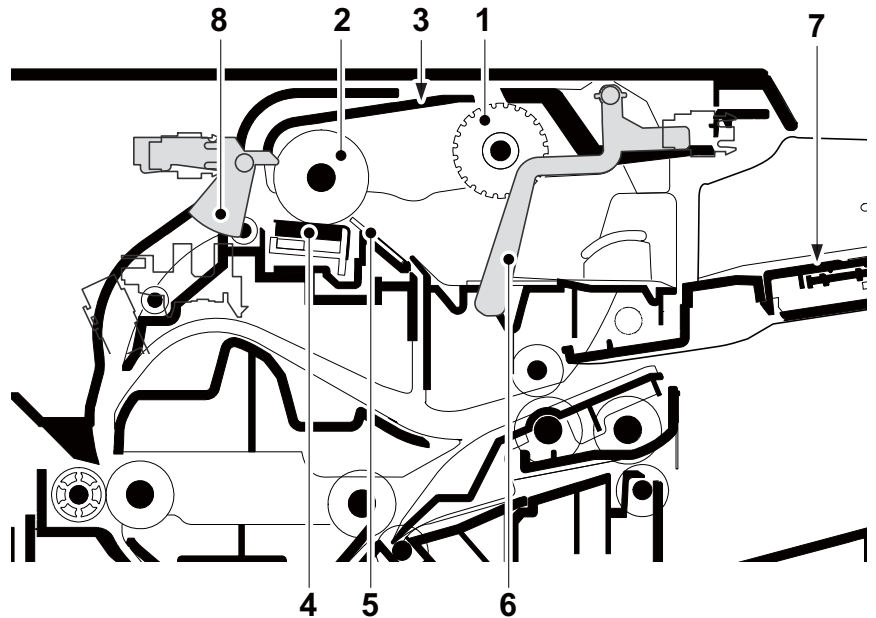


Figure 3-139

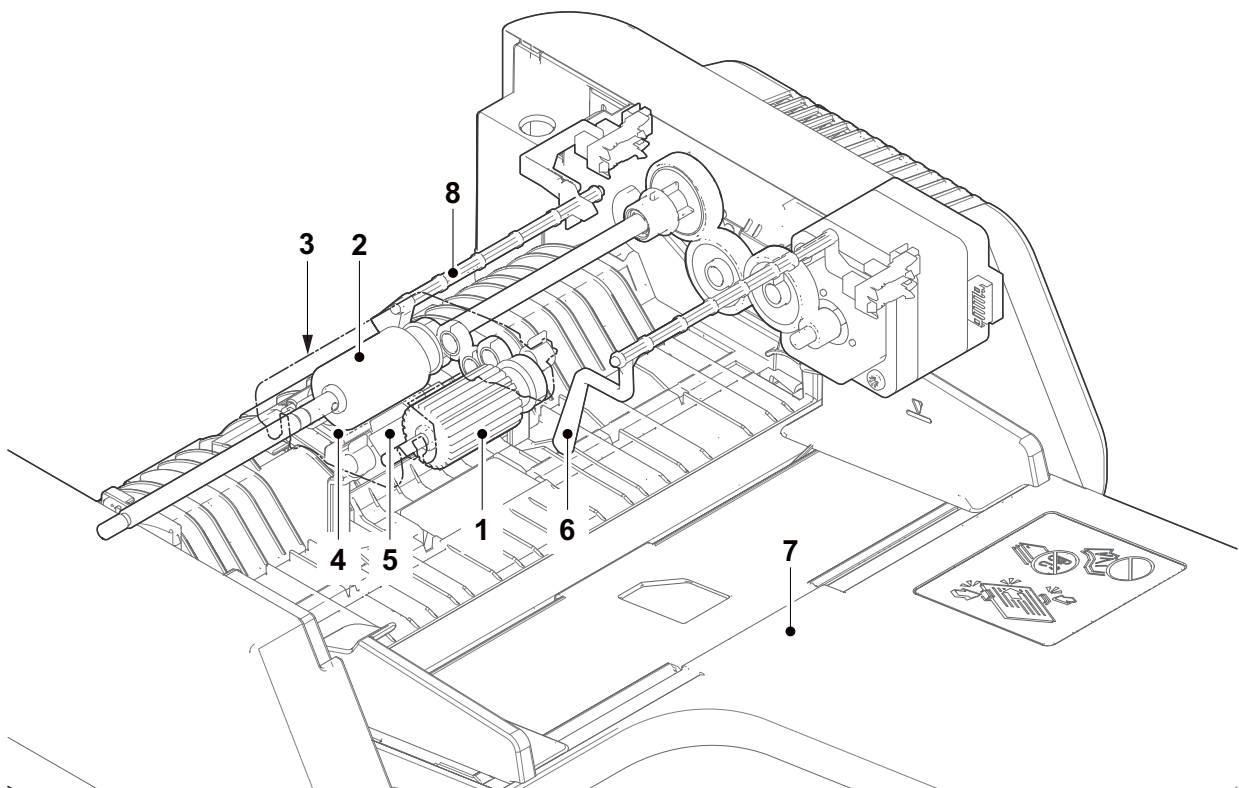


Figure 3-140

[Control block diagram]

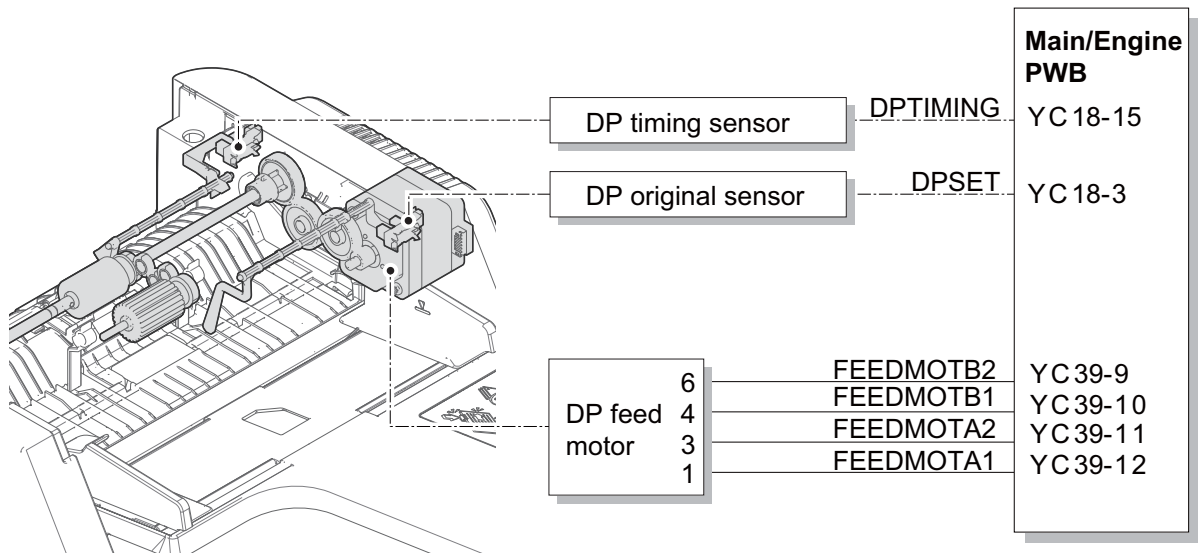


Figure 3-141

(2) Original conveying section and Original switchback and exit section

The original conveying section consists of the parts in the figure. The conveyed original is scanned at the optical section in the main unit when passing the DP slit glass.

The original switchback and exit section consists of the parts in the figure. The original already scanned is exited to the original exit table by the exit roller. When scanning the original in the duplex switchback mode, the original is conveyed to the switchback tray once and then re-conveyed to the original conveying section by the switchback roller.

[Components parts]

1. Actuator
(DP registration sensor)
2. DP registration roller
3. DP registration pulley
4. Scanner guide
5. DP slit glass
6. DP conveying roller
7. DP conveying pulley
8. Feedshift guide
9. Switchback roller
10. Retard pulley
11. DP exit roller
12. DP exit pulley
13. Switchback guide
14. Exit tray

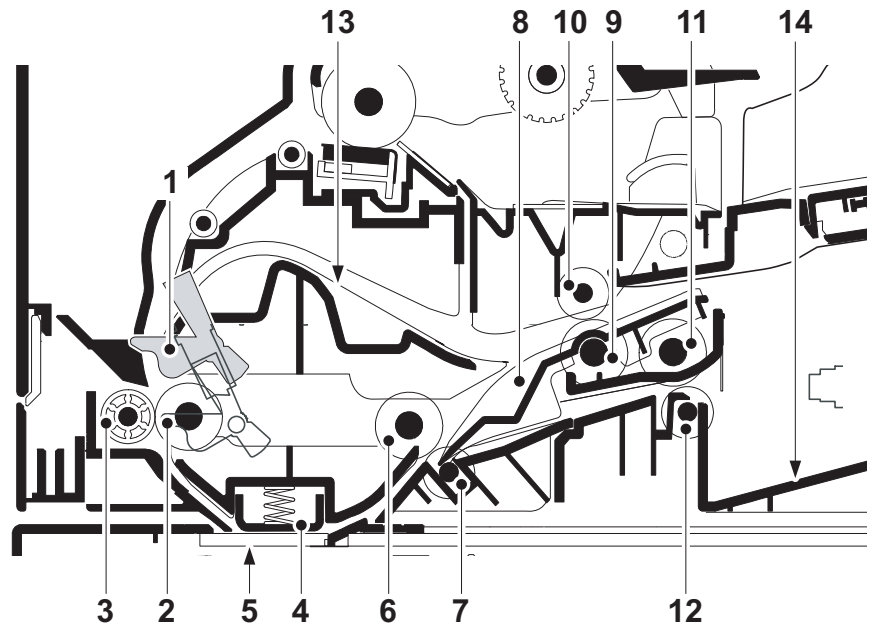


Figure 3-142

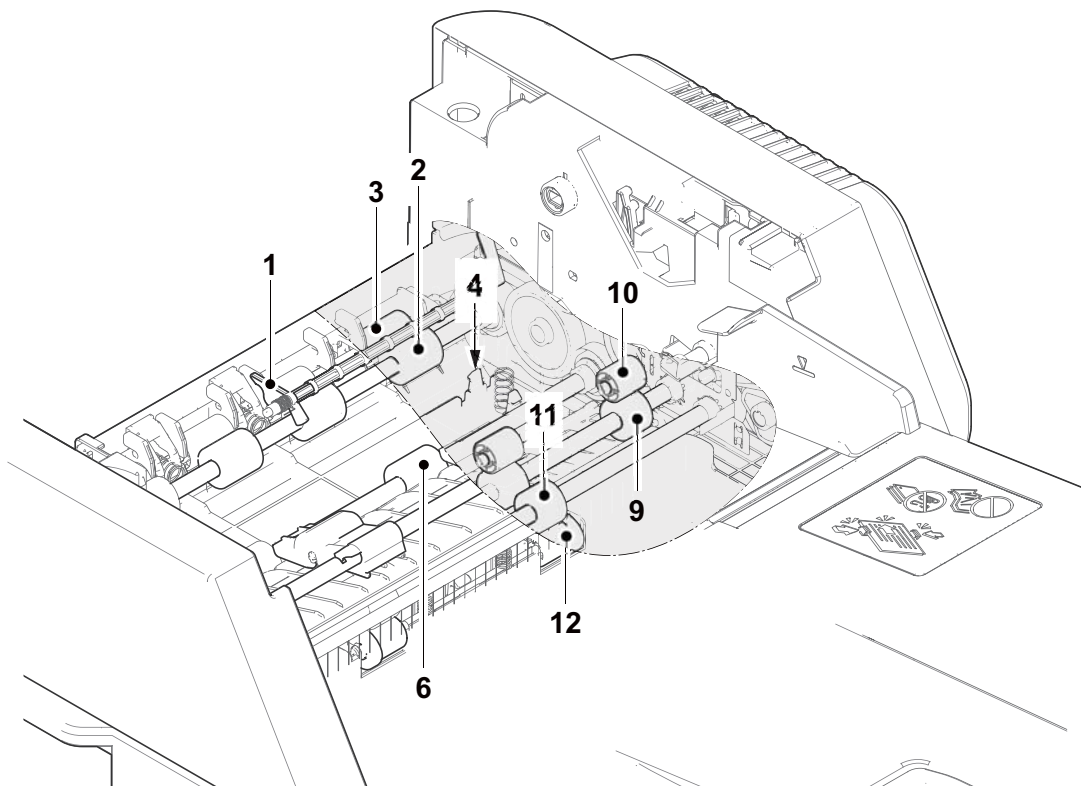


Figure 3-143

[Control block diagram]

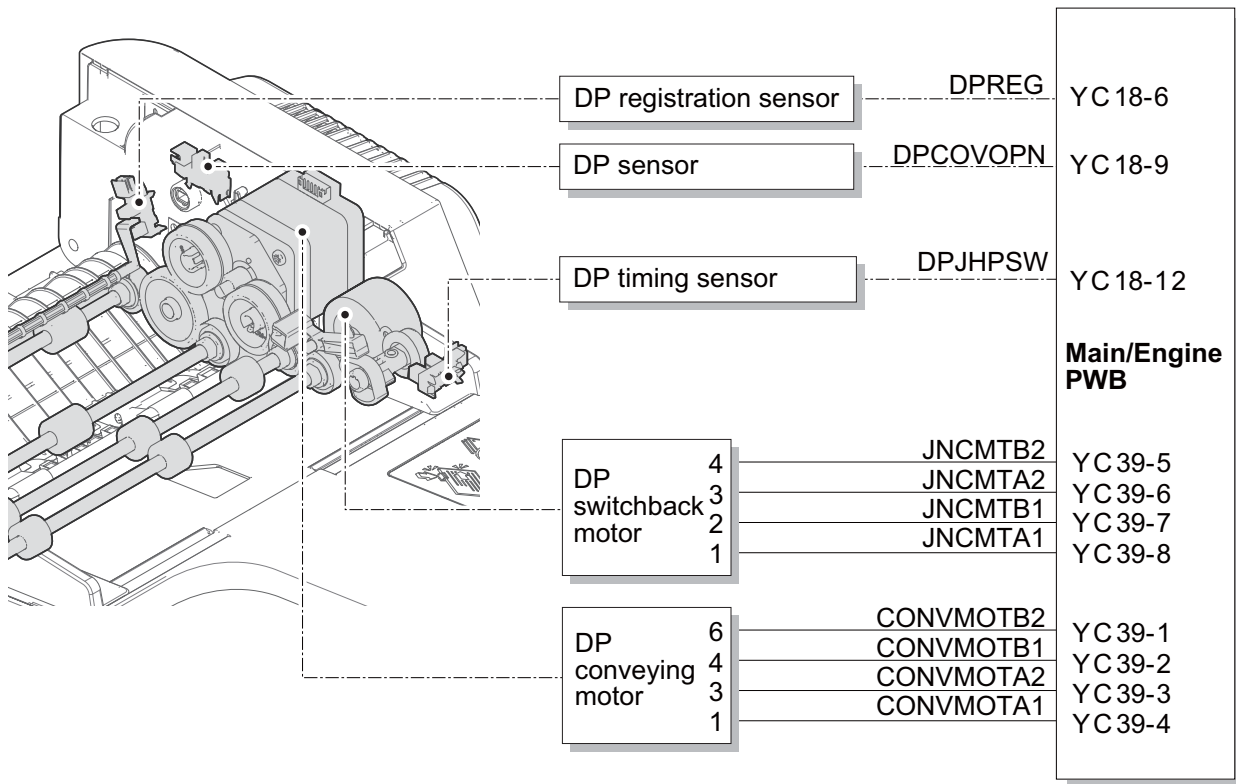
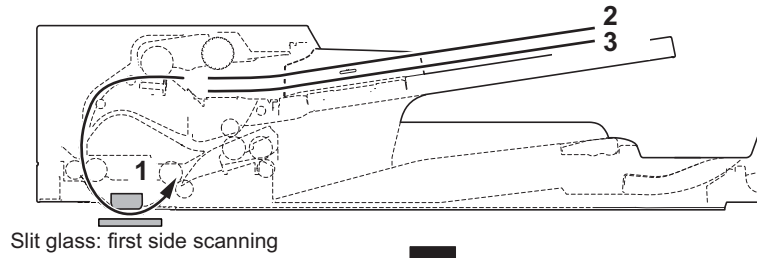


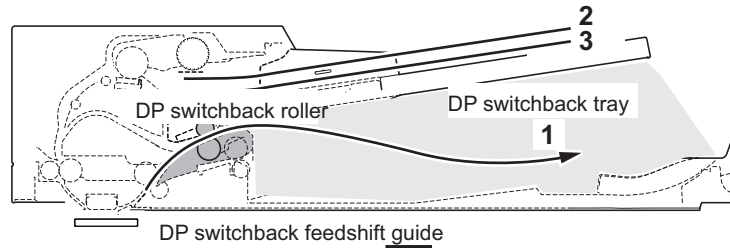
Figure 3-144

(3) Reversing duplex scanning

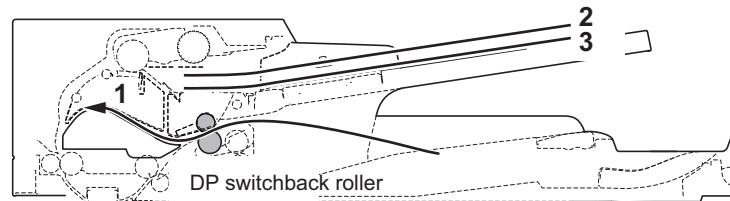
The first side of original is scanned at the slit glass (machine main body).



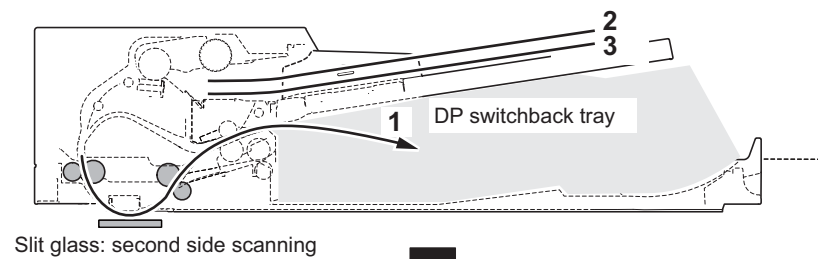
Conveyed to the DP switchback tray by the DP switchback feedshift guide.



The original is reversed by the DP switchback roller.



The second side of original is scanned at the slit glass (machine main body) and the original is conveyed to the DP switchback tray.



Ejected to the original eject table by the DP switchback, DP feedshift and DP eject rollers.

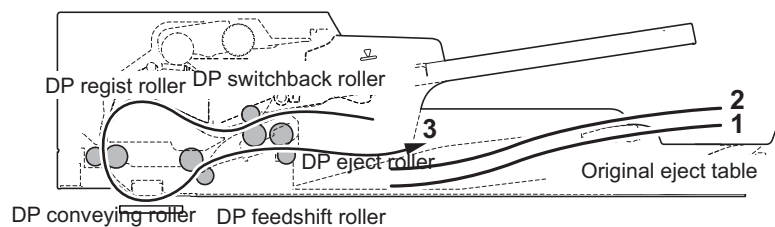


Figure 3-145

3-12 Document processor (35 ppm model)

(1) Original paper feed section

The original feed section consists of the parts in the figure, and conveys the original on the original tray to the original conveying section. The original is fed by rotating the DP forwarding pulley and the DP feed roller.

Components parts

1. DP forwarding pulley
2. DP feed roller
3. DP feed holder
4. DP separation pad
5. Front separation pad
6. Friction pad
7. Actuator
(DP original sensor)
8. DP original stopper
9. DP original width guide
10. Original tray
11. DP registration sensor
12. Conveying pulley
13. Paper feed shaft guide plate

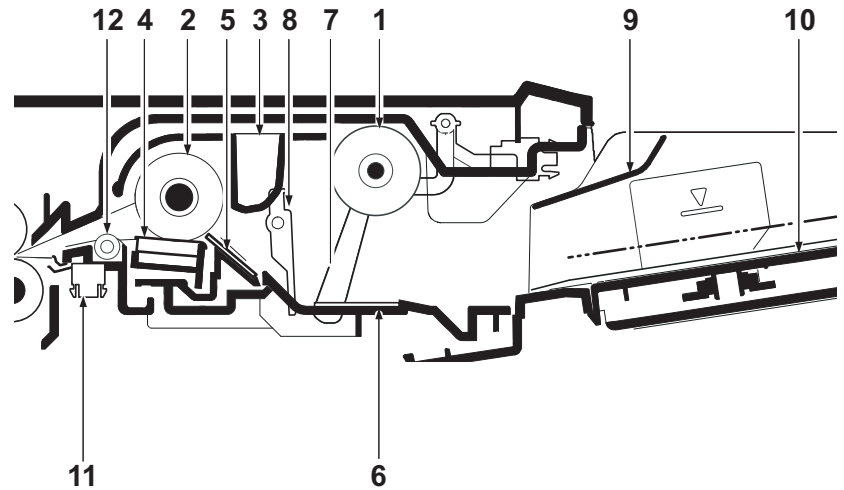


Figure 3-146

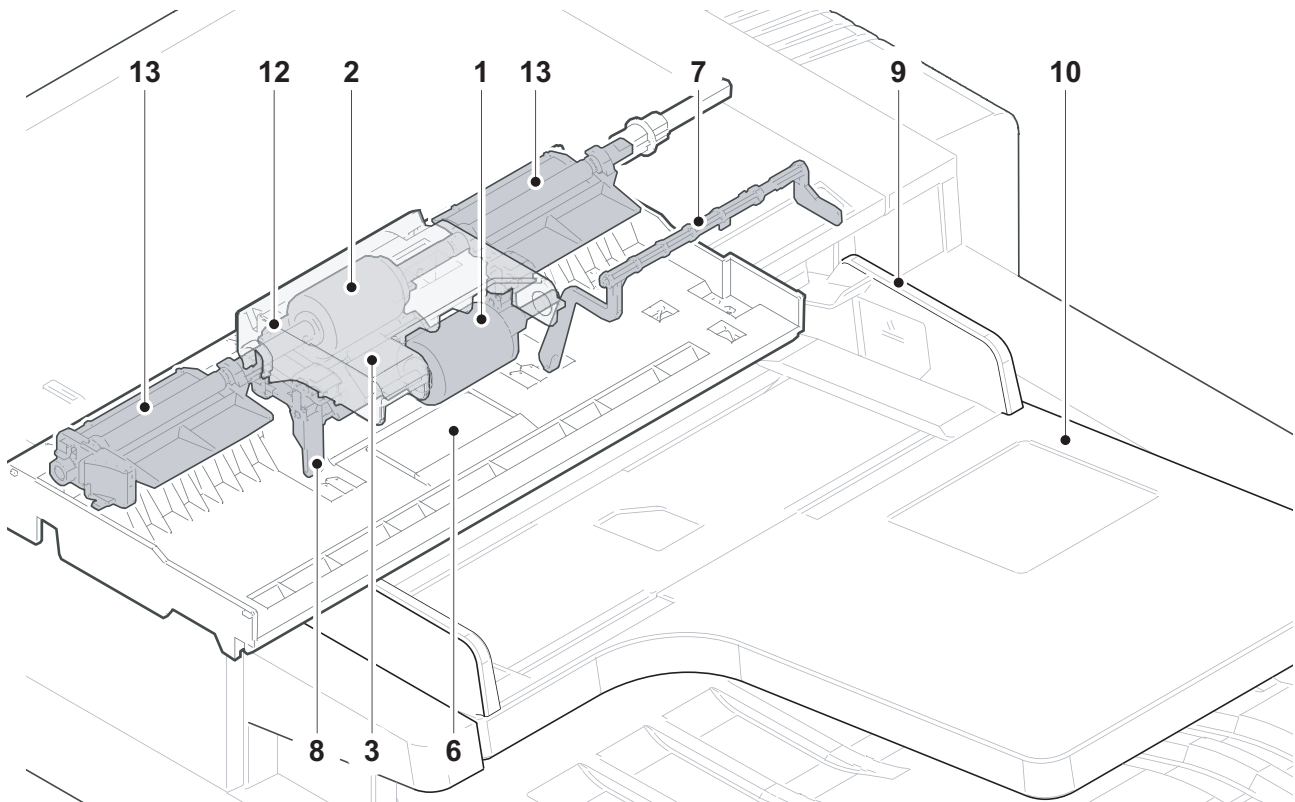


Figure 3-147

Control block diagram

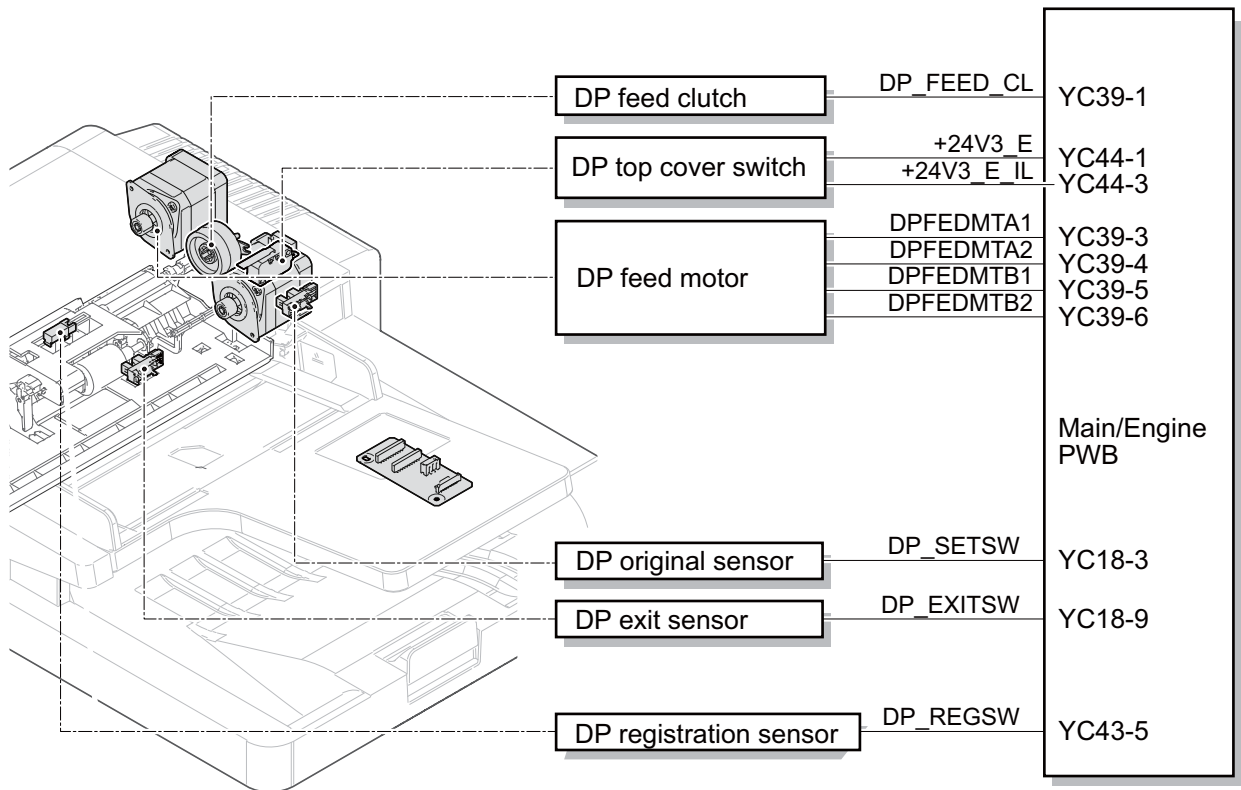


Figure 3-148

(2) Original conveying section and exit section

The original conveying section consists of the parts in the figure. The second (back) side of the conveyed original is scanned passing the CIS and at the same time, the first (front) side is scanned by the optical section (CCD) in the main unit when passing the slit glass. The original already scanned is exited to the original exit table by the exit roller.

Components parts

1. DP registration roller
2. DP registration pulley
3. DP second (back) side timing sensor
4. DP CIS
5. DP CIS roller
6. DP conveying roller A
7. DP conveying pulley
8. DP timing sensor
9. DP conveying roller B
10. DP conveying pulley
11. Scanner guide pulley
12. Scanner guide
13. DP conveying roller C
14. DP conveying pulley
15. Actuator (DP exit sensor)
16. DP exit roller
17. DP exit pulley
18. Exit tray
19. Slit glass (main unit)

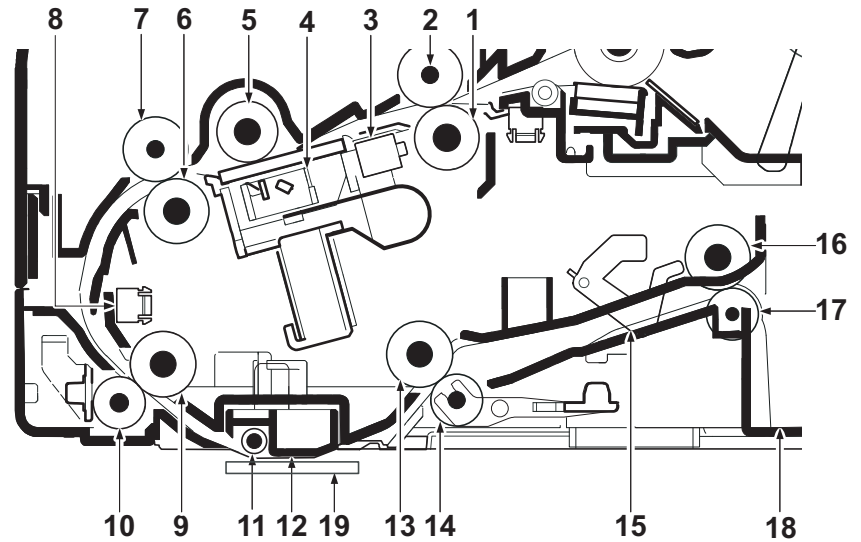


Figure 3-149

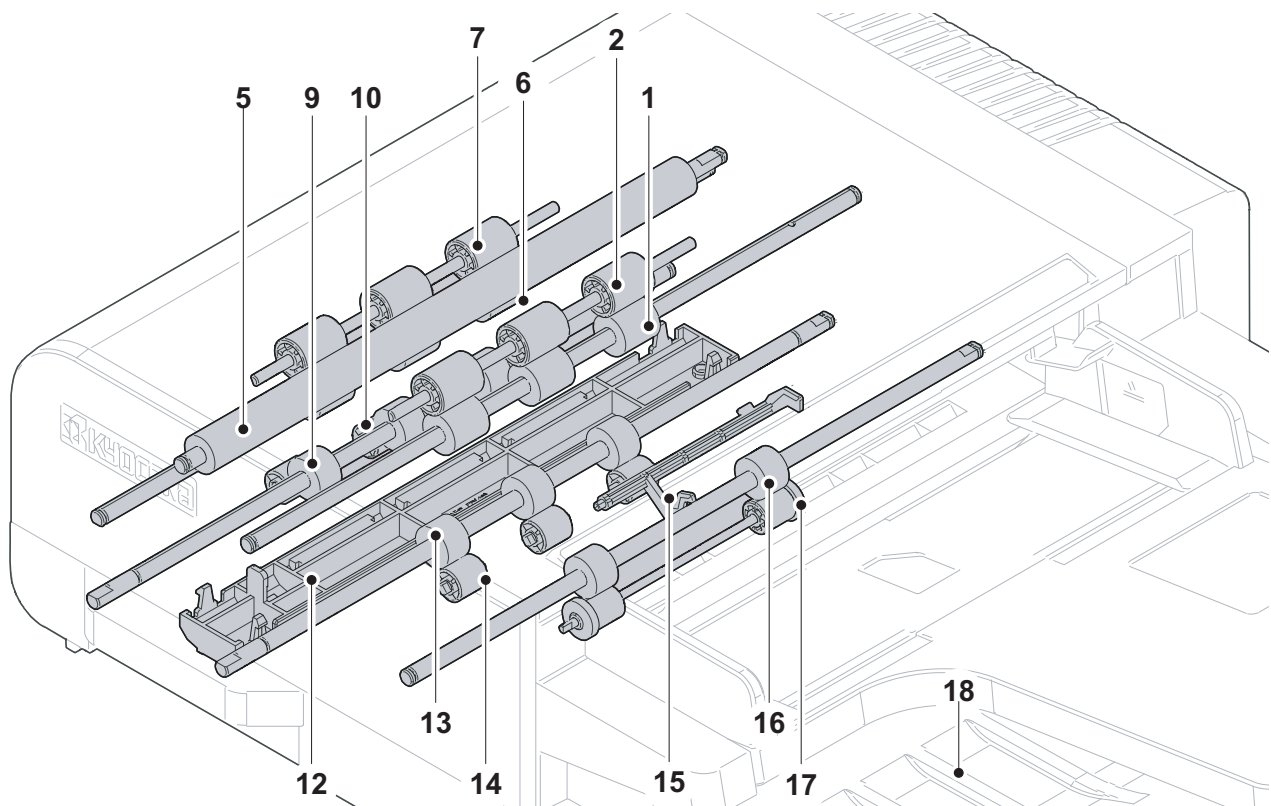


Figure 3-150

Control block diagram

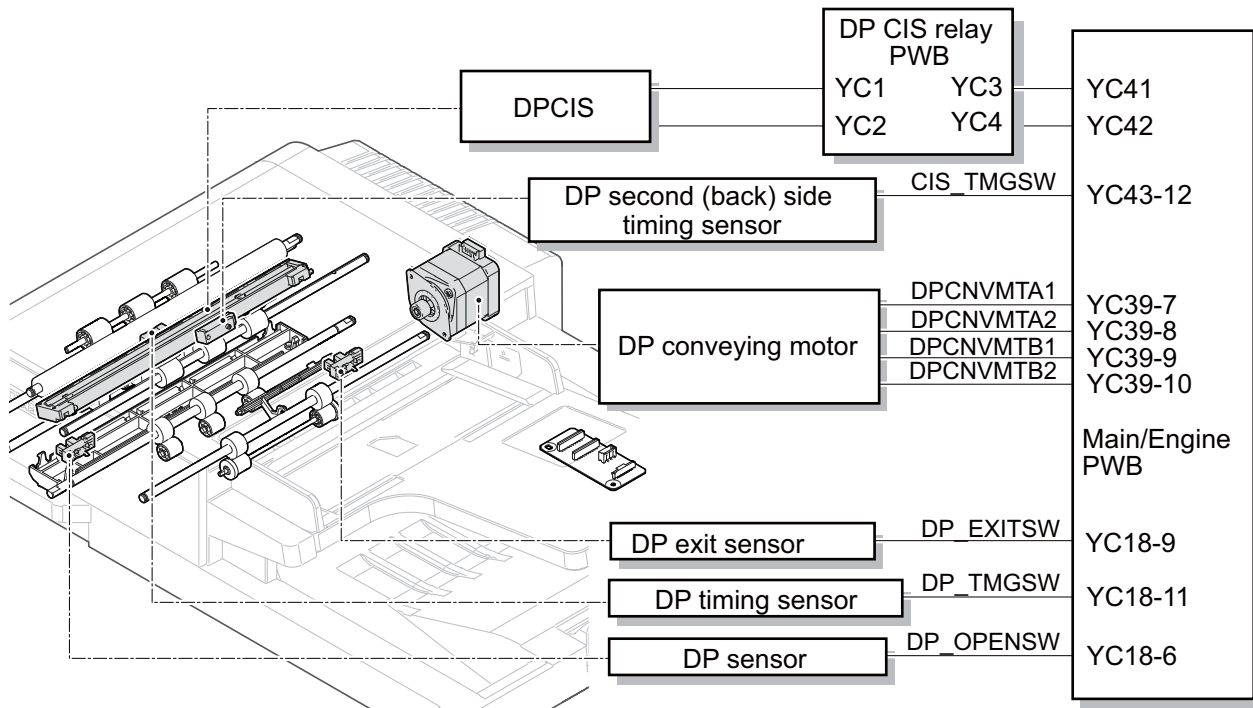


Figure 3-151

3-13 Optional paper feeder

(1) Paper feed section

The paper feeder is a mechanism that feeds paper from its cassette to the main unit. The cassette can load 500 sheets of plain paper (80g/m²), and the paper is fed by the rotation of the pickup roller and feed roller. The retard roller prevents the paper from multi-feeding by the effect of the torque limiter.

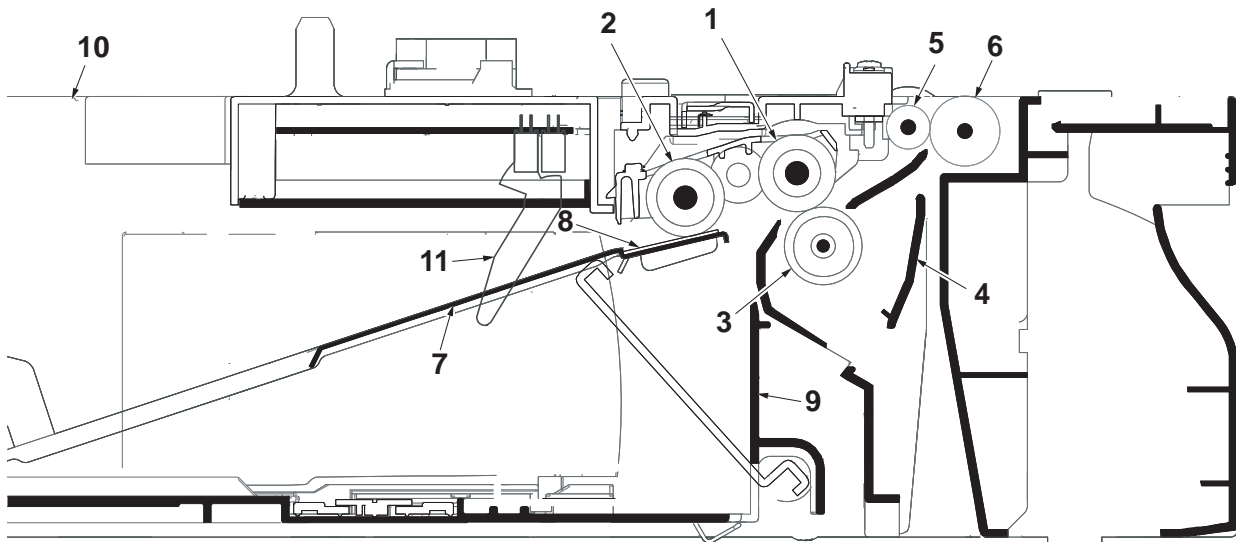


Figure 3-152

- | | |
|----------------------|------------------------|
| 1. Paper feed roller | 7. Lift plate |
| 2. Pickup roller | 8. Bottom pad |
| 3. Retard roller | 9. Cassette base |
| 4. Retard guide | 10. Upper cover |
| 5. Conveying roller | 11. Actuator |
| 6. Conveying pulley | (PF paper sensor 1, 2) |

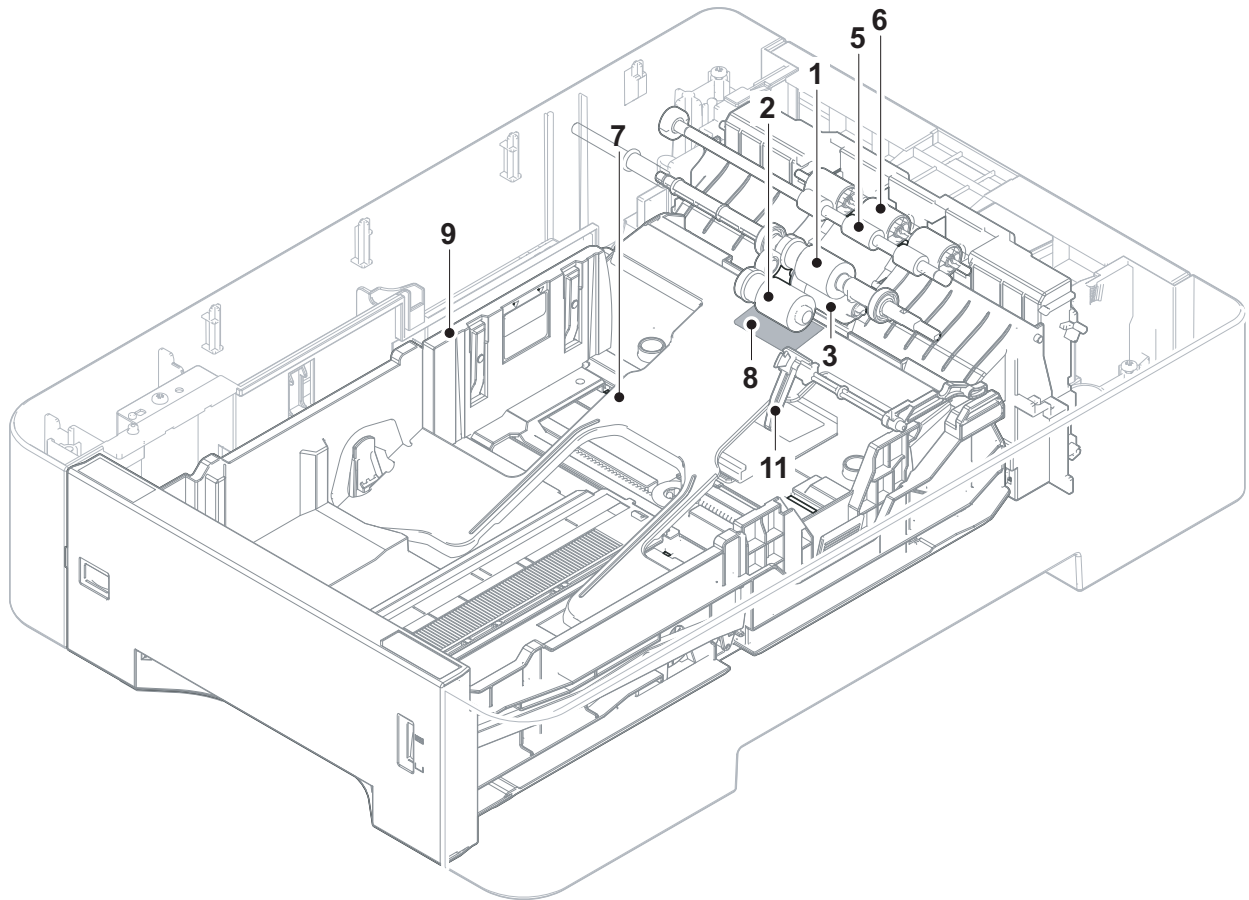


Figure 3-153

[Control block diagram]

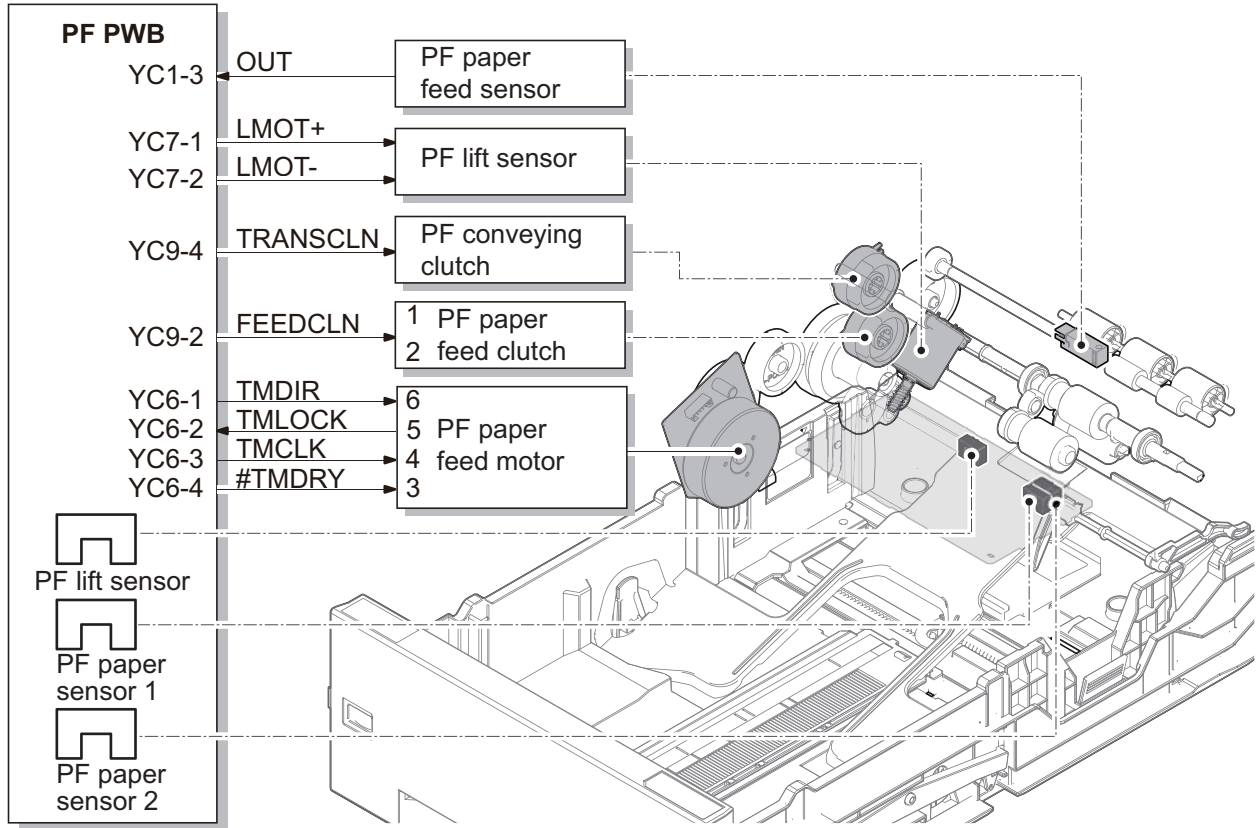


Figure 3-154

4 Maintenance

4-1 Precautions for the maintenance

(1) Precautions

Before disassembling the main unit, press the power switch to turn the power off. Before work, unplug the power plug after confirming the operation panel is turned off.

When handling the PWBs (printed wiring boards), do not touch parts with bare hands. Make sure not to damage the PWB.

If ICs are mounted on the PWB, do not touch them by hand or something charged with electrostatic.

Make sure to release the hook before disconnecting the connector with the hook.

Take care not to pinch up the wire and cable.

Use the original screws when reassembling the parts once disassembled.

If the types and the sizes of screws are not sure, refer to the parts list.

(2) Storage and handling of the drum

Note the following when handling and storing the drum.

When detaching the drum unit, never expose the drum surface to strong direct light.

Store in the range of ambient temperature of -20 to 40 degree C (-4°F to 104°F) and ambient humidity of 85% RH or less. Avoid storing the drum unit in the place where the temperature and humidity may suddenly change even if these changes are within the tolerable range.

Avoid exposure to any substance which is harmful or may affect the quality of the drum.

Do not touch the drum surface with any object.

Make sure not to touch the drum surface with bare hands or gloves.

If the drum is touched by hands or stained with oil, clean it.

(3) Storage of the toner container

Store the toner container in a cool dark place.

Do not place the toner container under direct sunshine or in a damp environment.

(4) Screening of the toner container

Look at the screening film on the brand protection seal affixed to the toner container through the windows of the validation viewer.

Look at the screening film through two windows to check the genuineness.

A black-colored band when seen through the the anti-counterfeit film portion left side window (mark ●).

A shiny or gold-colored band when seen through the anti-counterfeit film portion right side window (mark ☀).

When seen as the above, it is genuine. Otherwise (e.g. both seen in gold), it is a counterfeit.

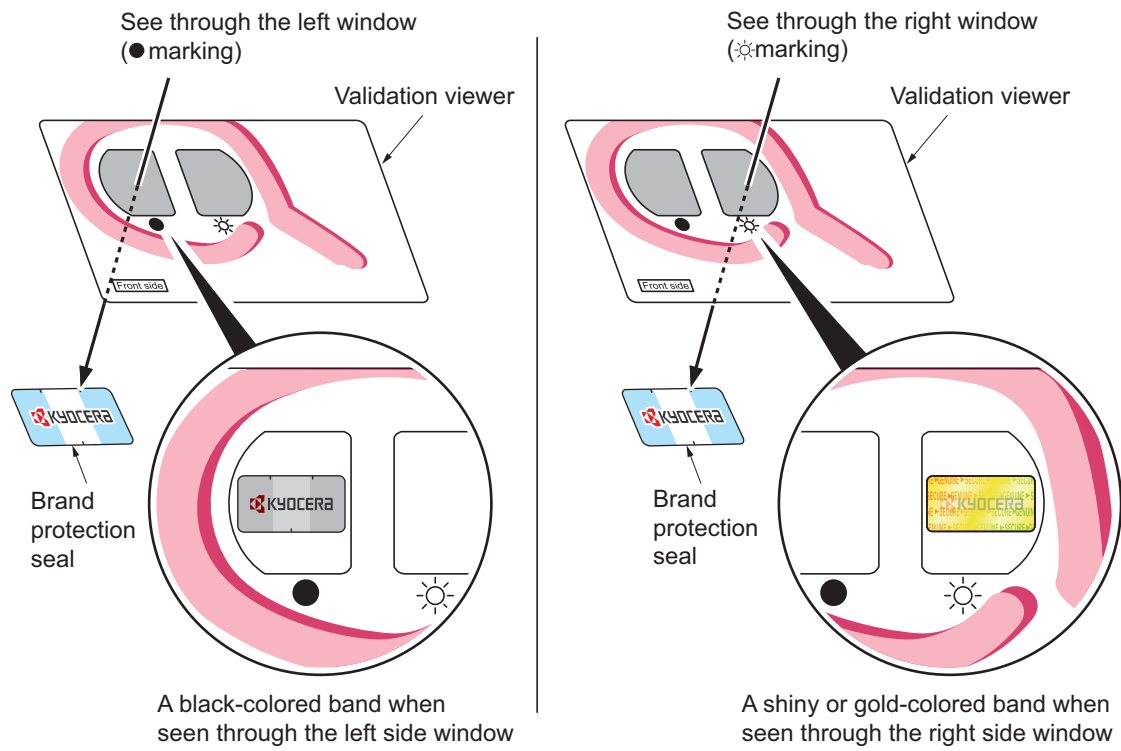


Figure 4-155

The brand protection seal has an incision as shown below to prohibit reuse.

Three cut parts at the red circle section

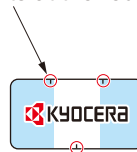


Figure 4-156

4-2 Maintenance parts

(1) Maintenance Kits

30 ppm model
120V

Maintenance parts name		Quantity	Part No.
Name used in service manual	Name used in parts list		
MK-5142 (200.000 images)	MK-5142/MAINTENANCE KIT	1	1702NR7US1
Drum unit	DK-5140	4	
Developer unit (K)	DV-5140(K)	1	
Developer unit (Y)	DV-5140(Y)	1	
Developer unit (M)	DV-5140(M)	1	
Developer unit (C)	DV-5140(C)	1	
Primary transfer unit	TR-5140	1	
Secondary transfer roller unit	PARTS ROLLER TRANSFER ASSY SP	1	
Fuser unit	FK-5142	1	
Paper feed roller unit	PARTS HOLDER FEED ASSY SP	1	
Retard roller	PARTS RETARD ASSY SP	1	

230V/240V

Maintenance parts name		Quantity	Part No.
Name used in service manual	Name used in parts list		
MK-5140	MK-5140/MAINTENANCE KIT	1	1702NR8NL1
MK-5144 (200.000 images)	MK-5144/MAINTENANCE KIT	1	1702NR8AS1
Drum unit	DK-5140	4	
Developer unit (K)	DV-5140(K)	1	
Developer unit (Y)	DV-5140(Y)	1	
Developer unit (M)	DV-5140(M)	1	
Developer unit (C)	DV-5140(C)	1	
Primary transfer unit	TR-5140	1	
Secondary transfer roller unit	PARTS ROLLER TRANSFER ASSY SP	1	
Fuser unit	FK-5140	1	
Paper feed roller unit	PARTS HOLDER FEED ASSY SP	1	
Retard roller	PARTS RETARD ASSY SP	1	

**35 ppm model
100V**

Maintenance parts name		Quantity	Part No.
Name used in service manual	Name used in parts list		
MK-5156 (200.000 images)	MK-5156/MAINTENANCE KIT	1	1702NS9JP2
Drum unit	DK-5140	4	
Developer unit (K)	DV-5150(K)(J)	1	
Developer unit (Y)	DV-5150(Y)(J)	1	
Developer unit (M)	DV-5150(M)(J)	1	
Developer unit (C)	DV-5150(C)(J)	1	
Primary transfer unit	TR-5140	1	
Secondary transfer roller unit	PARTS ROLLER TRANSFER ASSY SP	1	
Fuser unit	FK-5151	1	
Paper feed roller unit	PARTS HOLDER FEED ASSY SP	1	
Retard roller	PARTS RETARD ASSY SP	1	

120V

Maintenance parts name		Quantity	Part No.
Name used in service manual	Name used in parts list		
MK-5157 (200.000 images)	MK-5157/MAINTENANCE KIT	1	1702NS7US3
Drum unit	DK-5140	4	
Developer unit (K)	DV-5150(K)	1	
Developer unit (Y)	DV-5150(Y)	1	
Developer unit (M)	DV-5150(M)	1	
Developer unit (C)	DV-5150(C)	1	
Primary transfer unit	TR-5140	1	
Secondary transfer roller unit	PARTS ROLLER TRANSFER ASSY SP	1	
Fuser unit	FK-5152	1	
Paper feed roller unit	PARTS HOLDER FEED ASSY SP	1	
Retard roller	PARTS RETARD ASSY SP	1	

230V/240V

Maintenance parts name		Quantity	Part No.
Name used in service manual	Name used in parts list		
MK-5155	MK-5155/MAINTENANCE KIT	1	1702NS8NL3
MK-5159 (200.000 images)	MK-5159/MAINTENANCE KIT	1	1702NS8AS3
Drum unit	DK-5140	4	
Developer unit (K)	DV-5150(K)	1	
Developer unit (Y)	DV-5150(Y)	1	
Developer unit (M)	DV-5150(M)	1	
Developer unit (C)	DV-5150(C)	1	
Primary transfer unit	TR-5140	1	
Secondary transfer roller unit	PARTS ROLLER TRANSFER ASSY SP	1	
Fuser unit	FK-5150	1	
Paper feed roller unit	PARTS HOLDER FEED ASSY SP	1	
Retard roller	PARTS RETARD ASSY SP	1	

(2) Maintenance kit (DP)

30 ppm model

Maintenance parts name		Quantity	Part No.
Name used in service manual	Name used in parts list		
MK-3140 (200.000 images)	MK-3140/MAINTENANCE KIT	1	1702P60UN0
DP separation pad	PARTS DP PAD ASSY SP	1	
DP feed roller	PARTS PULLEY PAPER FEED ASSY SP	1	
DP forwarding pulley	PARTS PULLEY PICKUP ASSY SP	1	

35 ppm model

Maintenance parts name		Quantity	Part No.
Name used in service manual	Name used in parts list		
MK-5200 (200.000 images)	MK-5200/MAINTENANCE KIT	1	1703R40UN0
DP feed roller	PARTS HOLDER PICKUP ASSY SP	1	
DP separation pad	PARTS DP PAD ASSY SP	1	

(3) Clearing the maintenance kit message

Replace the maintenance kit at every 200,000 images.

The message "Replace MK." appears at the replacement timing.

Execute maintenance mode U251 to reset the count after replacing the maintenance kit in the following procedures.

4-3 Periodic maintenance procedures

(1) Detaching and reattaching the Primary transfer unit

1. Pull the lever (a).
2. Lift up the scanner unit (b) and open the inner tray (c).

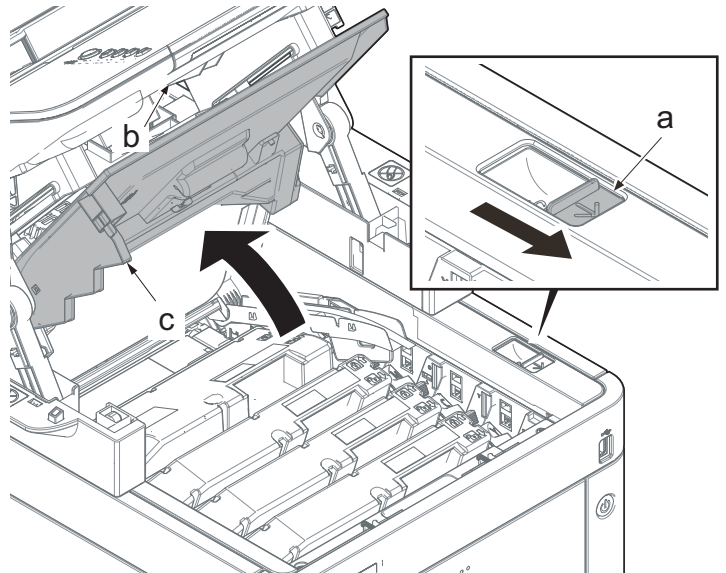


Figure 4-157

3. Rotate the lock lever (a).

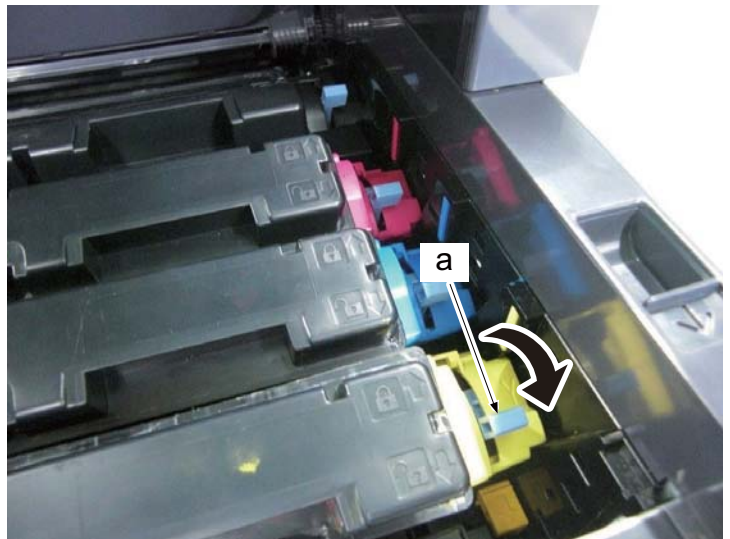


Figure 4-158

4. Detach the toner containers (K, M, C and Y)(a).

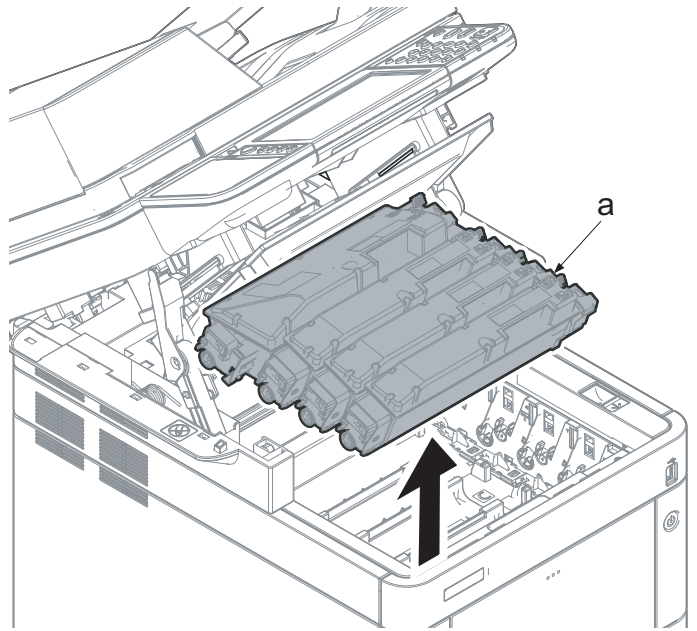


Figure 4-159

*: When detaching the toner container (a), first lift its handle (b) and then pull it out upward.

IMPORTANT

Without releasing the lock lever, do not lift up the toner container forcefully.

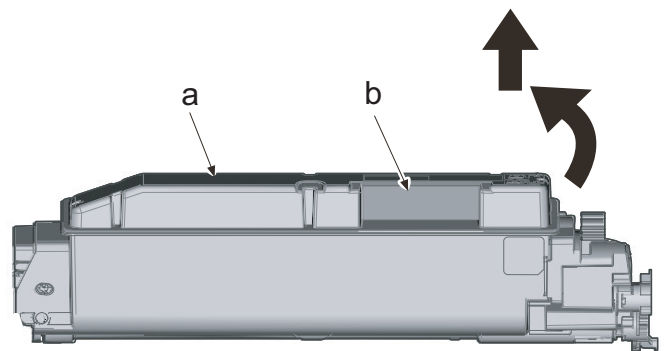


Figure 4-160

5. Pull the right shutter lever (a) in the direction of the arrow.

*: Close the toner feed inlet by pulling this lever.

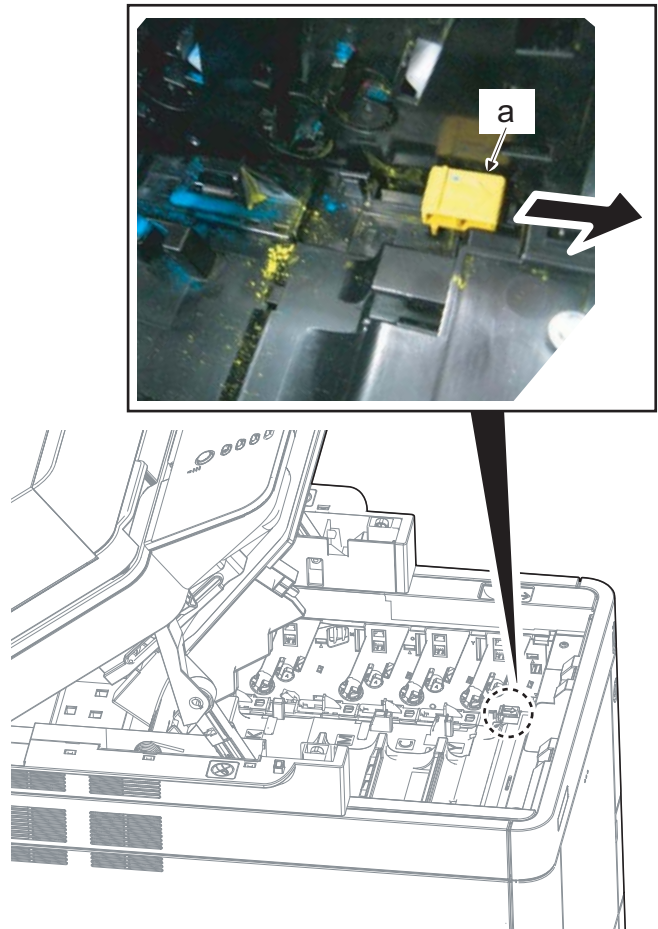


Figure 4-161

6. Remove the screw (a)(M3x12).

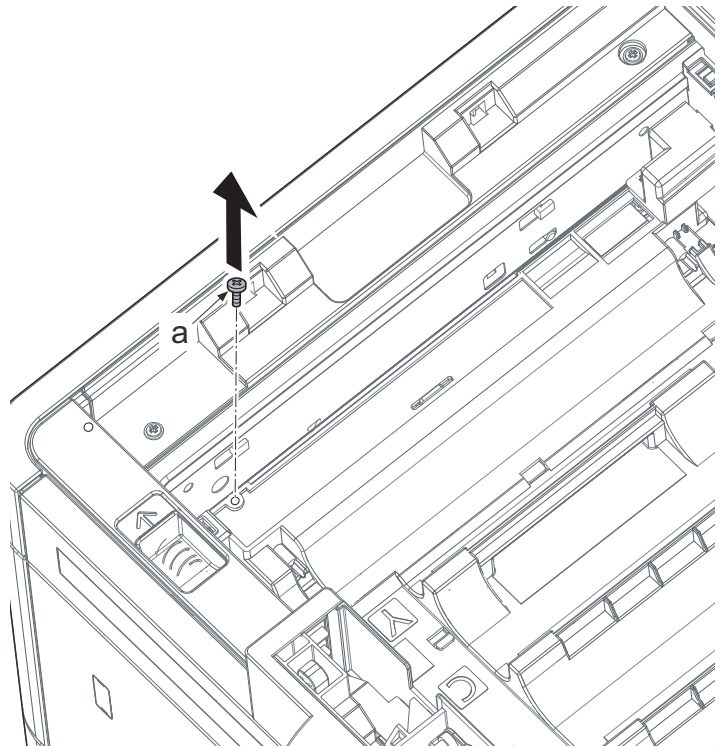


Figure 4-162

7. Remove the screw (a)(M3x12)
8. Remove the lever cover (b).
9. Lift up the drive release lever (c).

*: When raising the lever, the joint of the drive coupling is released.

IMPORTANT

If omitting to attach the lever cover, "Cover open" message is displayed while the tray switch is not turned on.

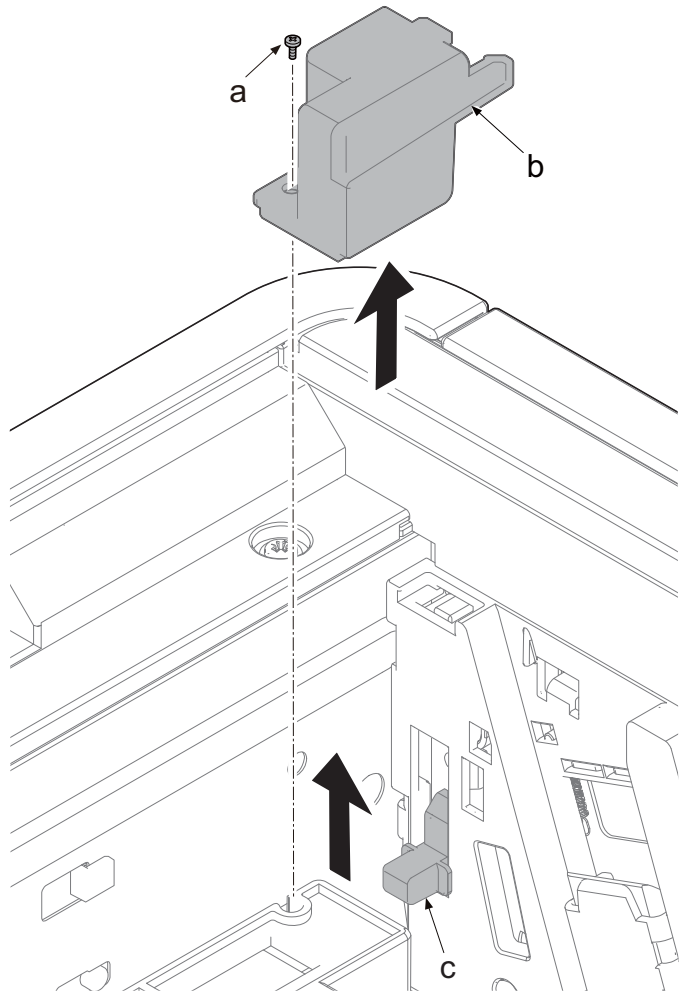


Figure 4-163

10. Hold the handle (a) and detach the primary transfer unit (b).

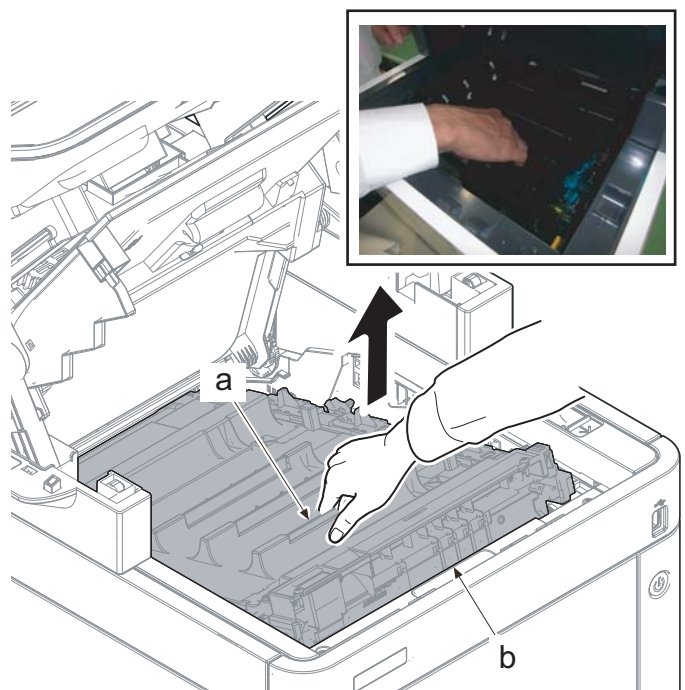


Figure 4-164

*: Hold the handle (b) at the machine front side and lift up the primary transfer unit (a). Then, further lift it up and pull it toward the machine front side to detach.

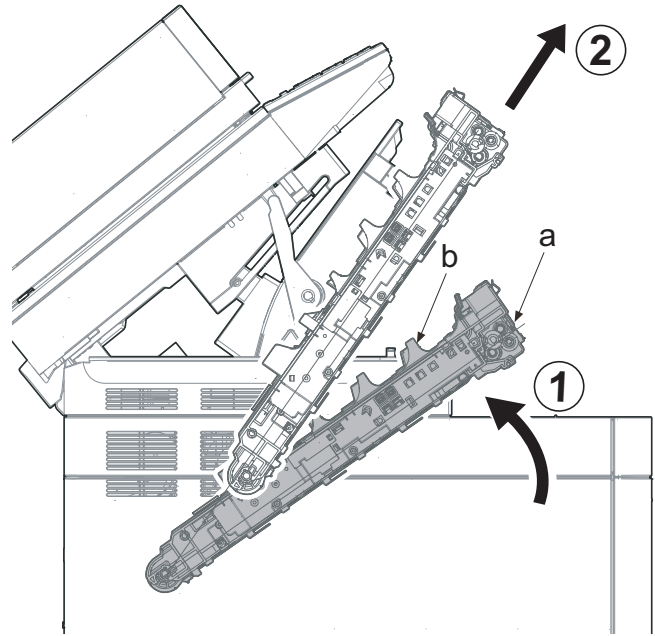


Figure 4-165

*: When removing the primary transfer unit (a) or it is unstable to install it, hold the handle (b) at the machine rear side by the other hand

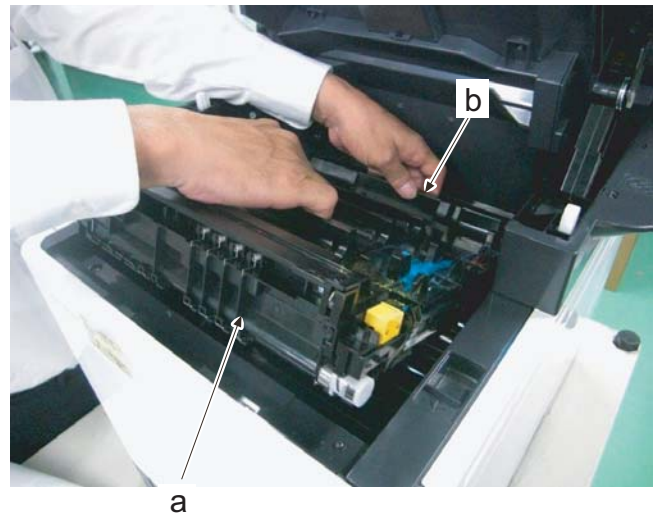


Figure 4-166

IMPORTANT

Do not touch the release lever (b) after detaching the primary transfer unit (a).

This lever (b) is connected with the shutter lever (c) and so they are released together by installing the toner container into the main unit.

The operation mistakenly open the toner feed inlet (d).

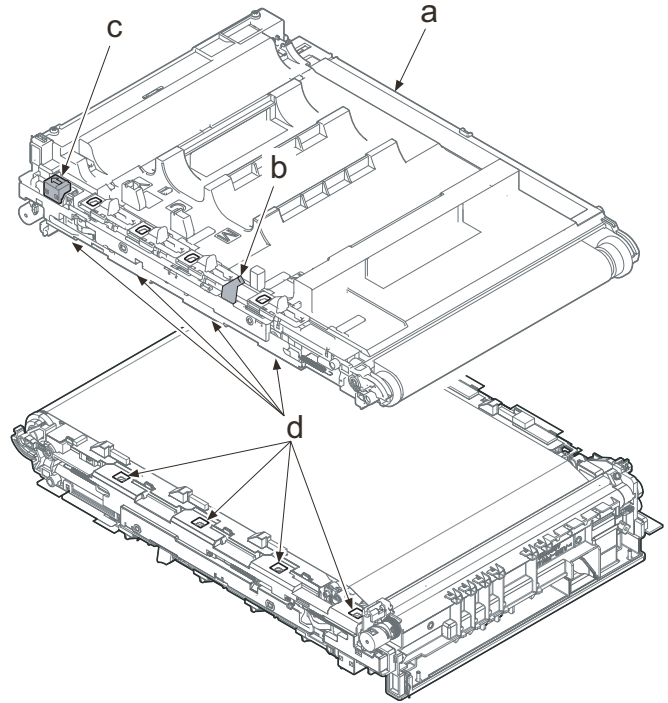


Figure 4-167

Be sure not to contact / touch the high voltage terminals at the front frame when cleaning the machine inside after detaching the primary transfer unit.

If a high voltage terminal come off, an abnormal image (e.g. vertical streaks) will appear due to the contact failure of the primary transferring (a) or the primary transfer cleaning (b).

In that case, the high voltage terminal spring might be deformed due to the shock of coming-off. Then, replace with new high voltage terminal spring (302NR3902_).

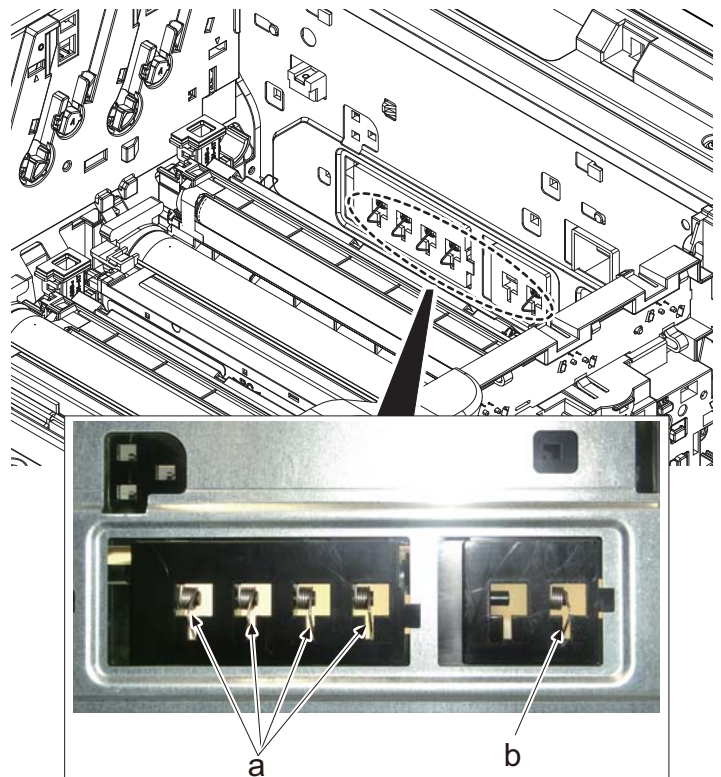


Figure 4-168

(2) Drum section

(2 - 1) Detaching and reattaching the drum unit

1. Detach the drum unit (M,C and Y)(a) by pulling it up.
Lift up the drum unit (K)(b) and pull it toward the machine front side to detach it.

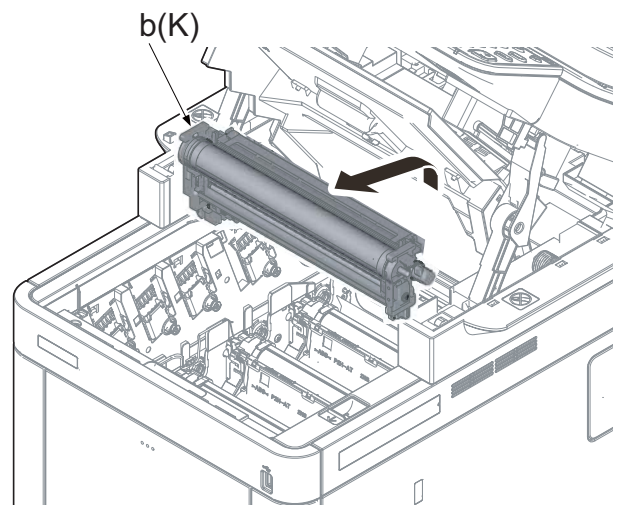
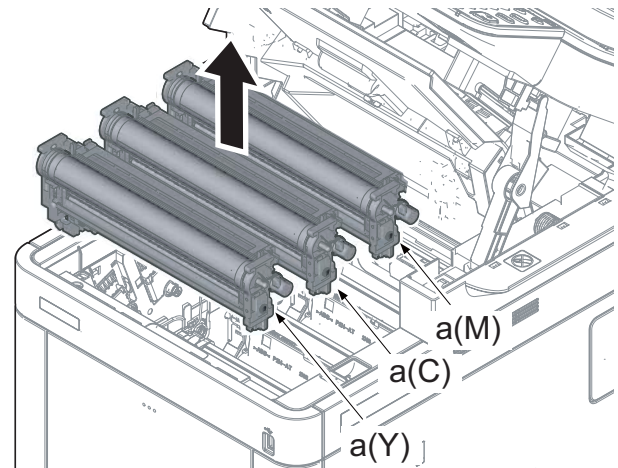


Figure 4-169

*: Hold the handles (b) on both sides when detaching the drum unit (a).

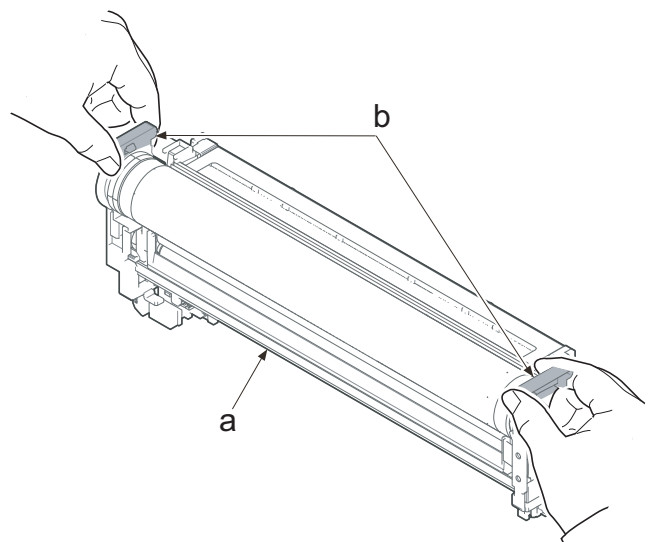


Figure 4-170

*: When attaching the drum unit (K)(a), tilt it toward you to insert the drum shafts (b) along the rails (c) all the way. Then, make it vertical and push into the main unit.

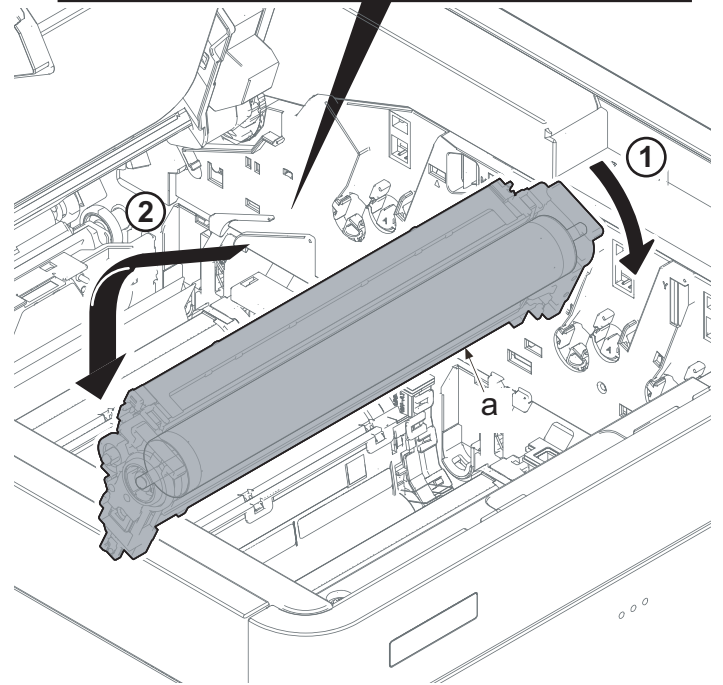
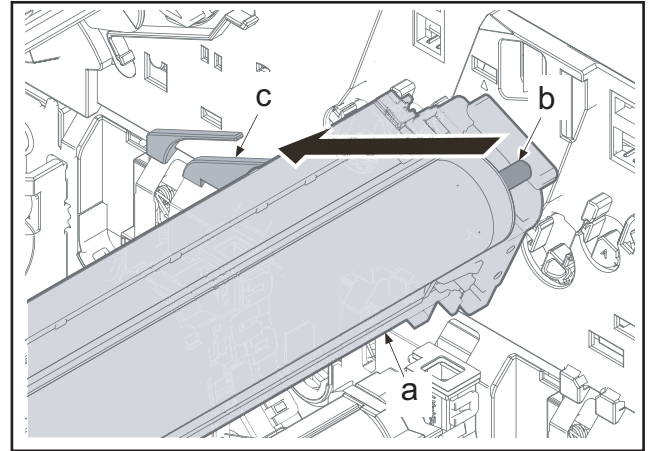


Figure 4-171

(3) Developer section

(3 - 1) Detaching and reattaching the developer unit

1. Detach the developer unit (K, M, C and Y)(a).

*: connection portion (b)

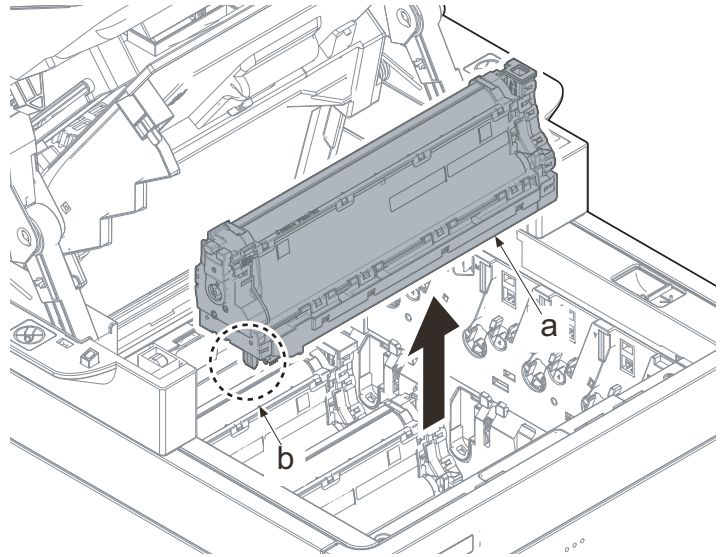


Figure 4-172

*: When detaching the developer unit (a), hold both the left and right handles (b).

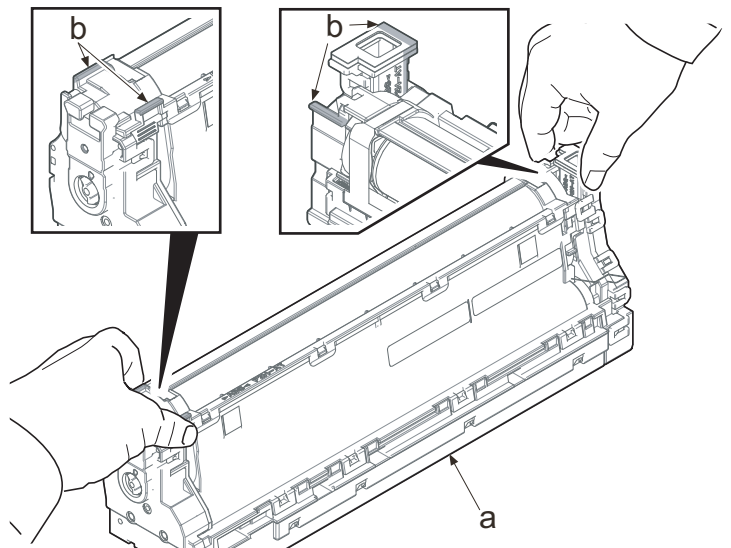


Figure 4-173

*: Make sure not to touch the gears (a) in the drive section where there is grease.

2. Detach the developer unit (K, M, C and Y)(a).
3. Reattach the parts in the original position.

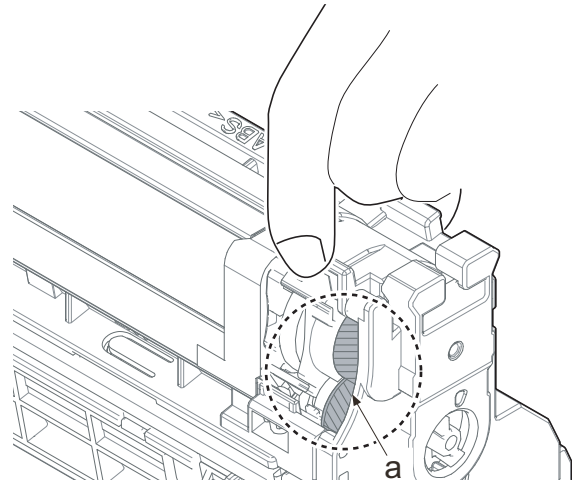


Figure 4-174

IMPORTANT

When attaching the developer unit (a), match the colors between the back side (b) of the developer unit and the right side (c) of the main unit.

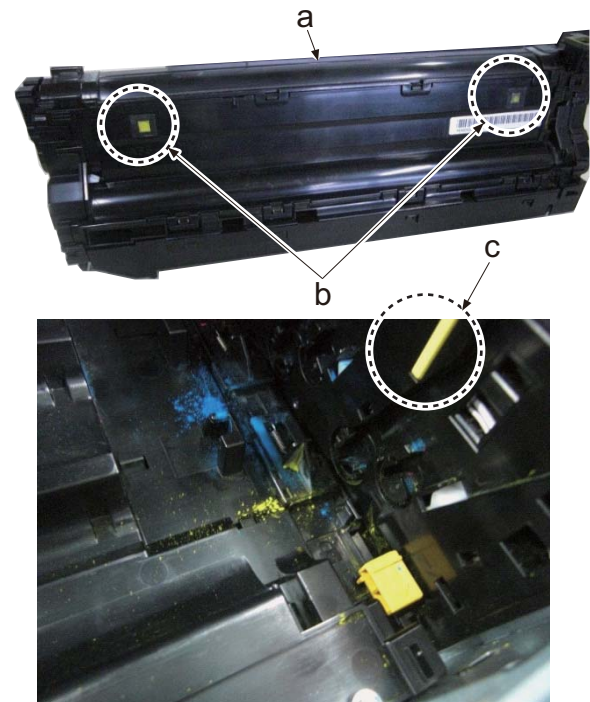


Figure 4-175

Take care not to touch the transfer high-voltage terminal (b) when attaching/detaching developer unit Y (a). It may cause the contact failure with deformation, etc.

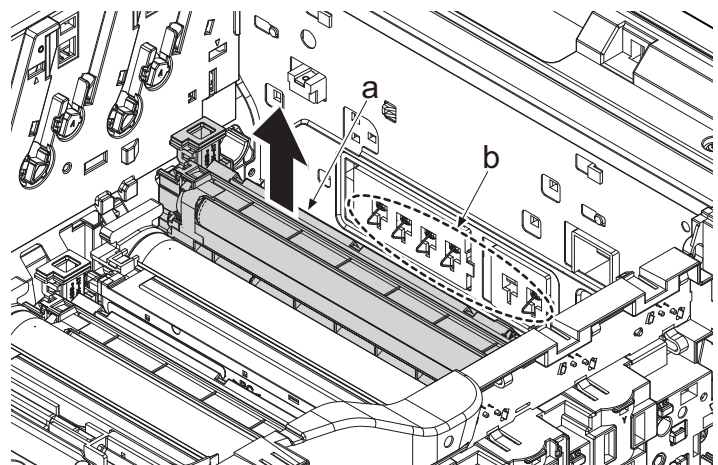


Figure 4-176

*: Remove the cap (b) when attaching the new developer unit (a).

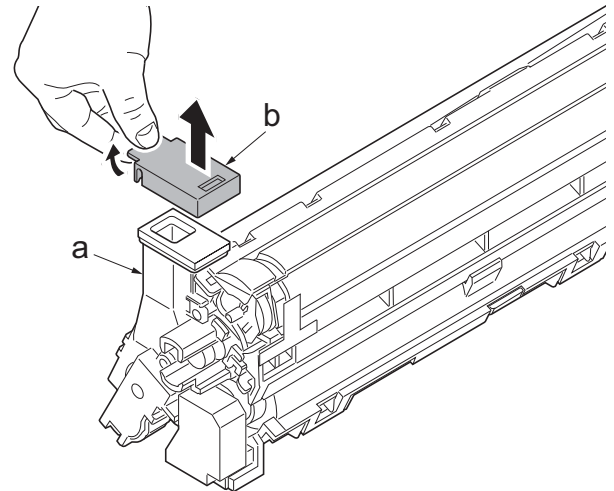


Figure 4-177

4. Attach the new drum unit (K,M,C and Y).
5. Reattach the parts in the original position.
6. Attach the new primary transfer unit.
7. Reattach the parts in the original position.
8. Detach the toner containers (K, M, C and Y).
9. Close the inner tray.

(4) Fuser section

(4 - 1) Detaching and reattaching the fuser unit

1. Open the rear cover (a).

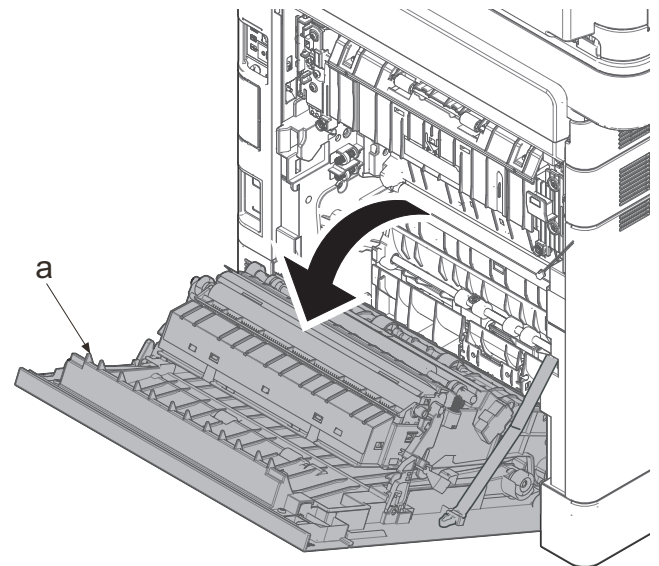


Figure 4-178

2. Pull the lower part of the opening toward the machine rear side and release the hook (a).
3. Remove the interface cover (b).

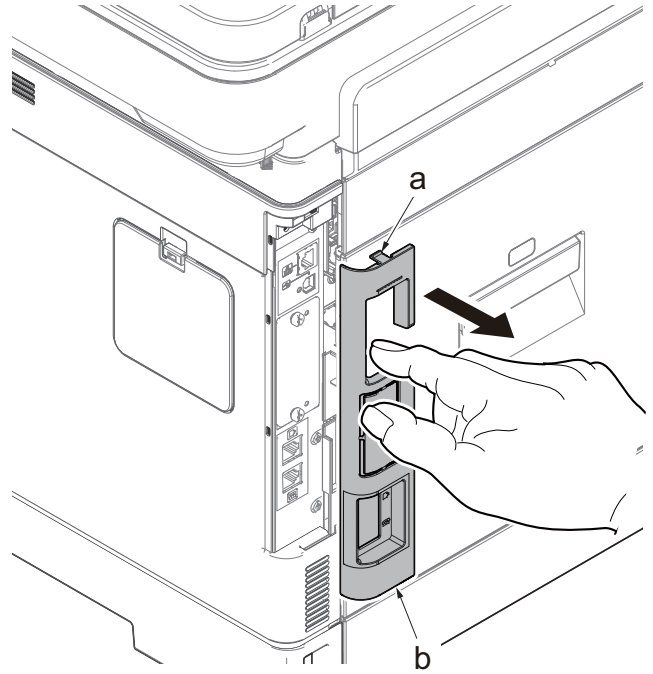


Figure 4-179

4. Remove the screw (a)(M3x8).
5. Remove the fuser wire cover (b).

*: First insert the hook (c) into the opening (d) and secure the screw.

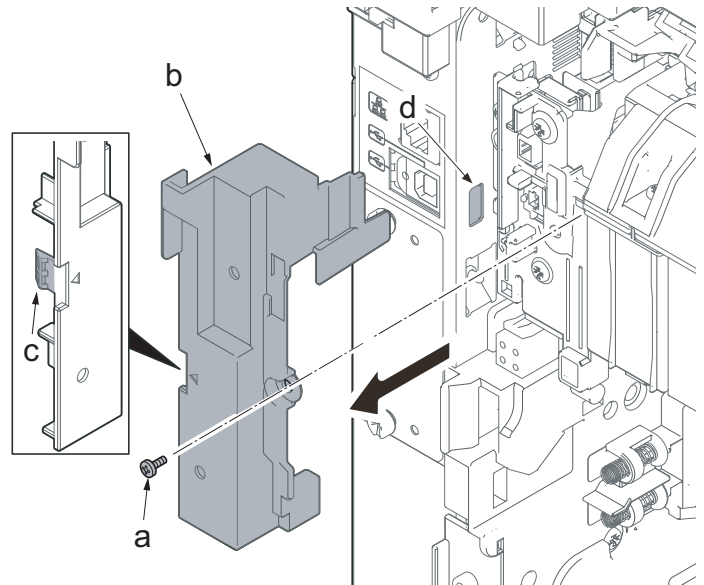


Figure 4-180

6. Disconnect two connectors.
- *: Disconnect each connector of the exit PWB (a) and the fuser heater (b).
Do not disconnect two connectors (c) of the fuser unit.

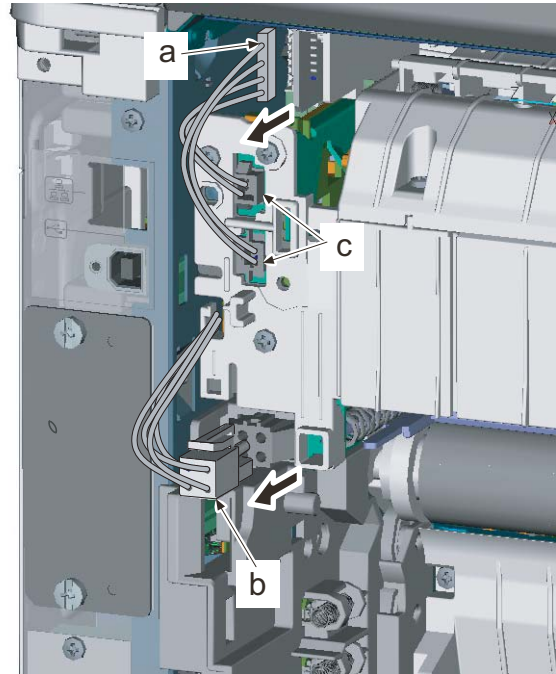


Figure 4-181

7. Remove two screws (a)(M3x8: silver). (Screws that are secured at the position with the triangle engraving.)
8. Detach the fuser unit (b).
9. Attach the new fuser unit.
10. Reattach the parts in the original position.

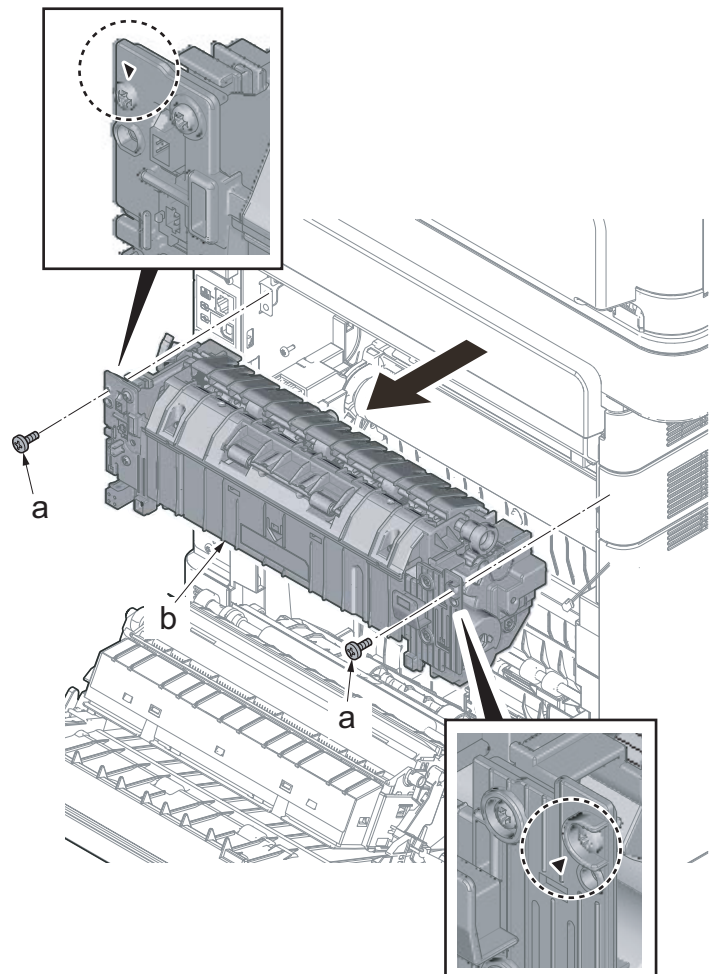


Figure 4-182

IMPORTANT

Take care not to touch the connector of the pressure release sensor (b) when fitting the fuser unit (a). A service call error may appear if the sensor is disconnected.

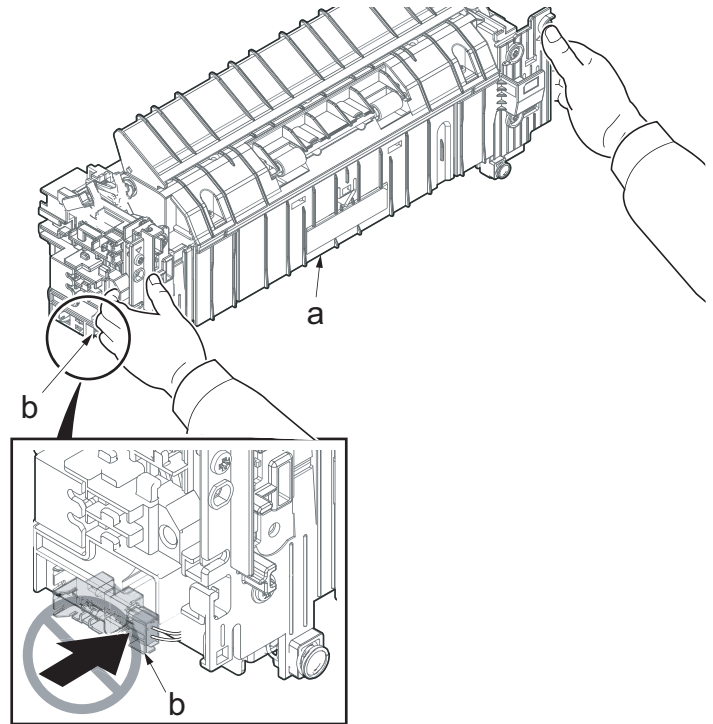


Figure 4-183

When attaching the fuser unit, first secure the screws and connect the connectors. For prevention of damage from static-electricity

Before reattaching the fuser wire cover, put the wire (a) in between the ribs (b) so that it is not caught by the fuser wire cover.

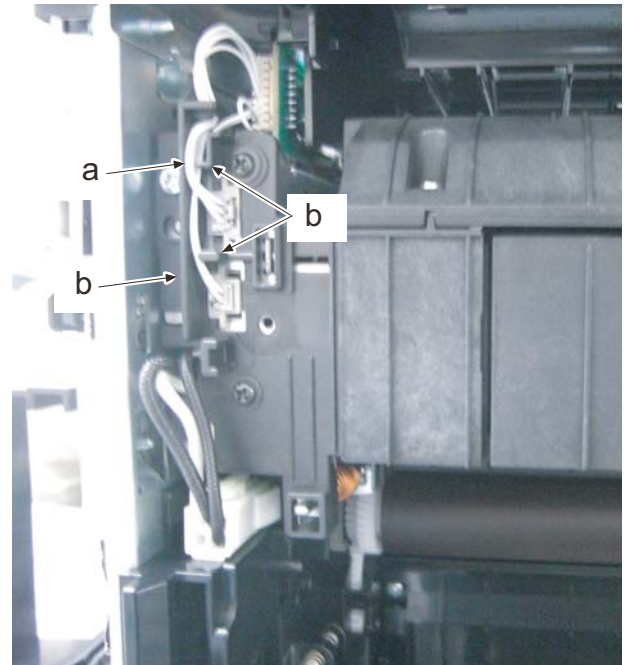


Figure 4-184

(5) Detaching and reattaching the Retard roller

1. Pull out the cassette (a).

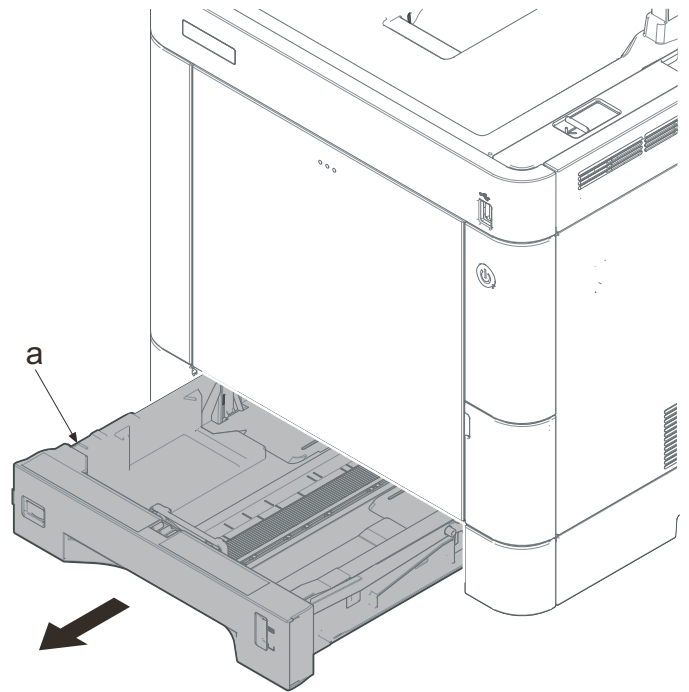


Figure 4-185

2. Pull the conveying stopper (a) toward the machine right side and rotate it by using a flat-blade screwdriver (b).
3. Release the hook (c) of the conveying stopper (a) from the rib (d) and pull the conveying stopper (a) out.

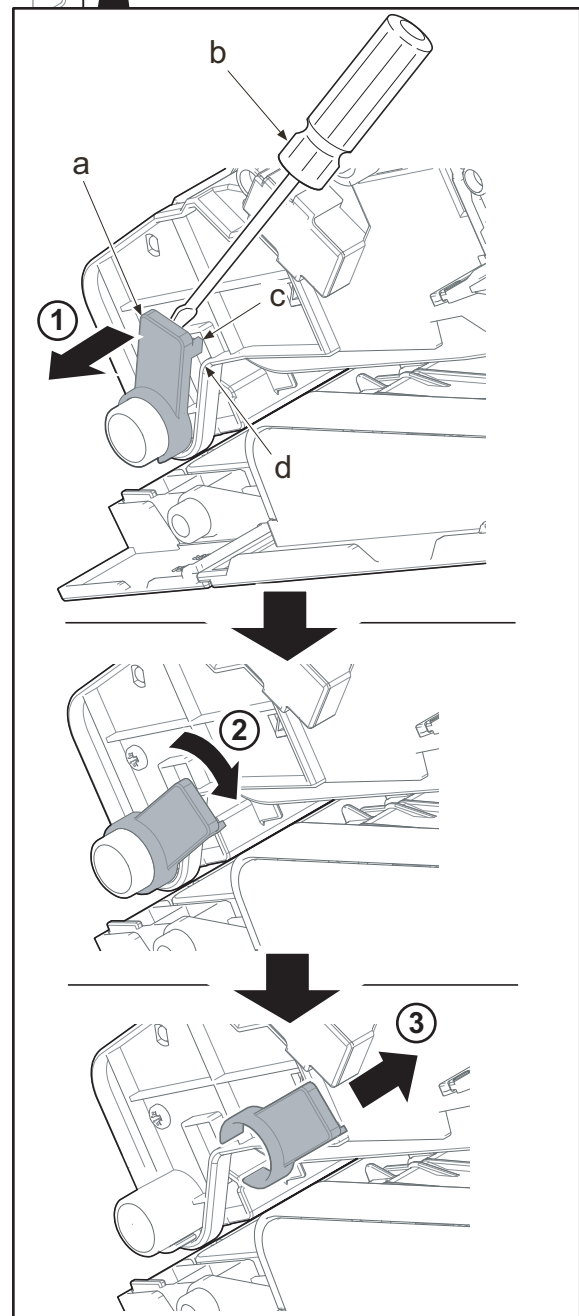
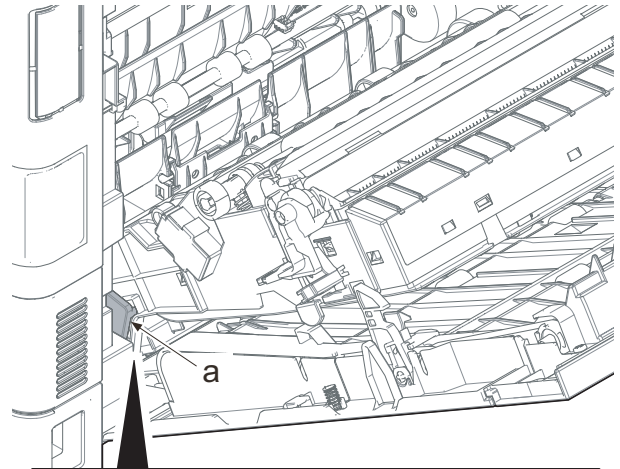


Figure 4-186

4. Slide the duplex paper conveying unit (a) toward the machine right side.
5. Release the fulcrum part of the duplex paper conveying unit (a) at the machine left side, and pull the unit out toward the machine rear side.

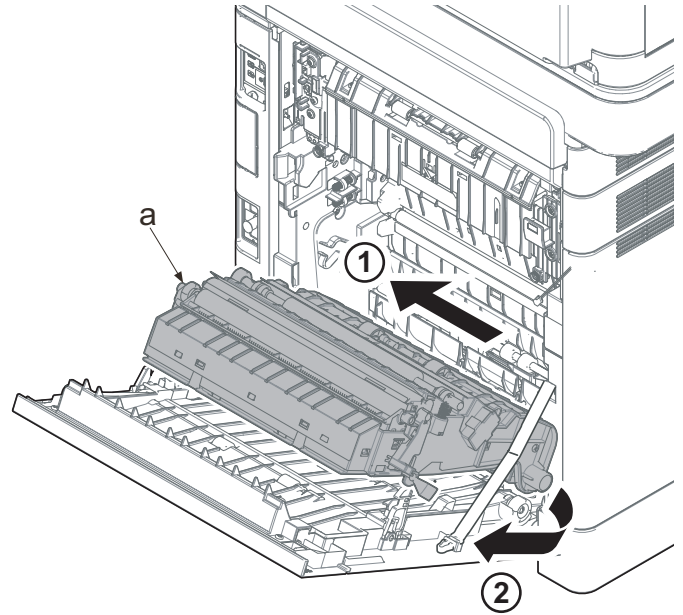


Figure 4-187

6. Release two hooks (a).
7. Remove the retard cover (b) toward you.
- *: Place the flat-blade screwdriver (c) into the center and remove it by bending it towards the machine rear side.
8. Remove the retard roller unit (d).

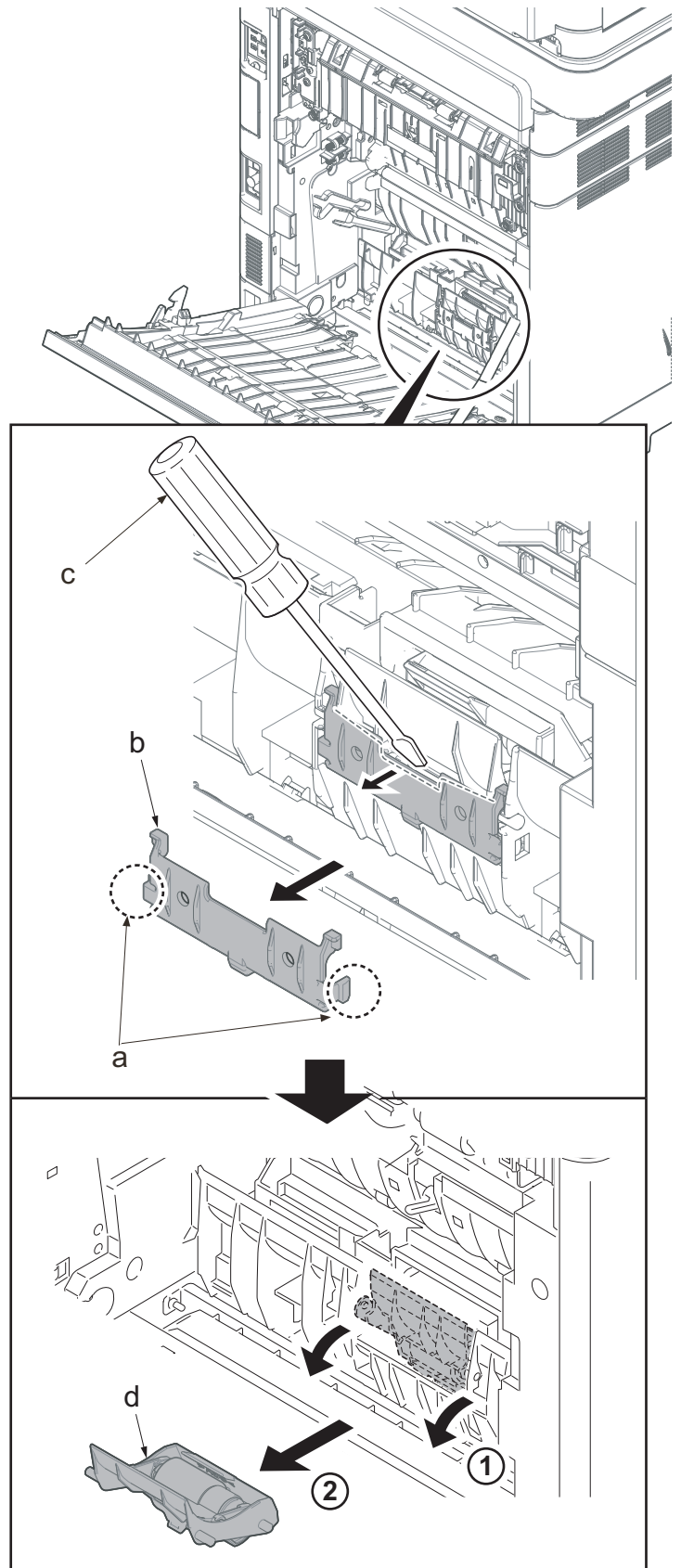


Figure 4-188

IMPORTANT

Install the cassette first when attaching the retard roller unit. The retard pressure release lever must be located at the machine front side from the retard roller unit to apply appropriate pressure.

When reattaching the retard cover (a), fasten two upper hooks (b) and then push the retard cover to fasten two lower hooks (c).

Check if four hooks (b and c) are surely fastened after reattaching it.

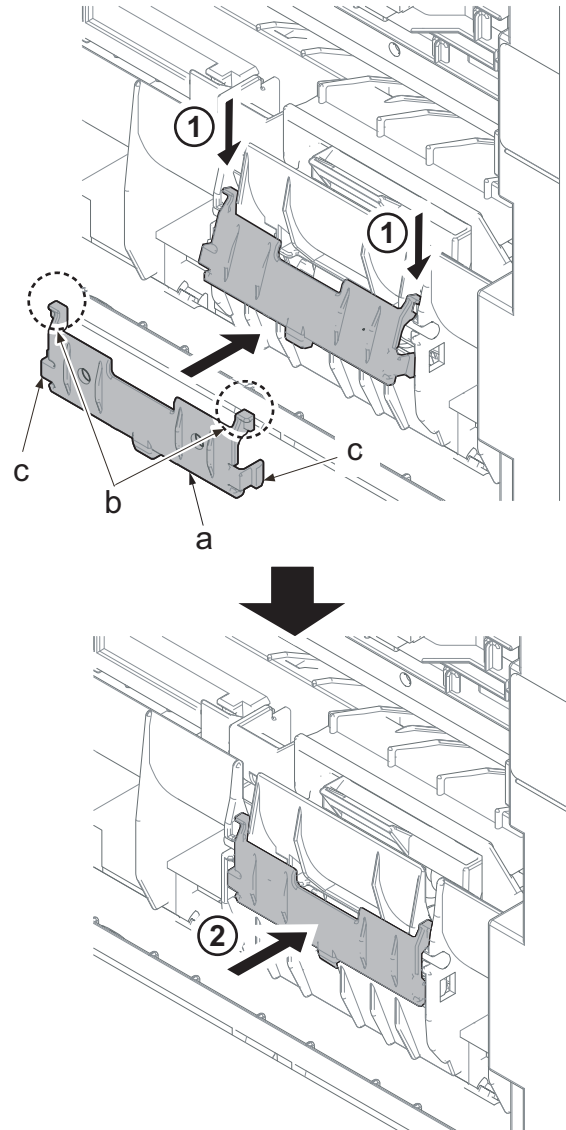


Figure 4-189

(6) Detaching and reattaching the middle roller unit

1. Push the machine right side hook (a) outward using a flat-blade screwdriver (b).

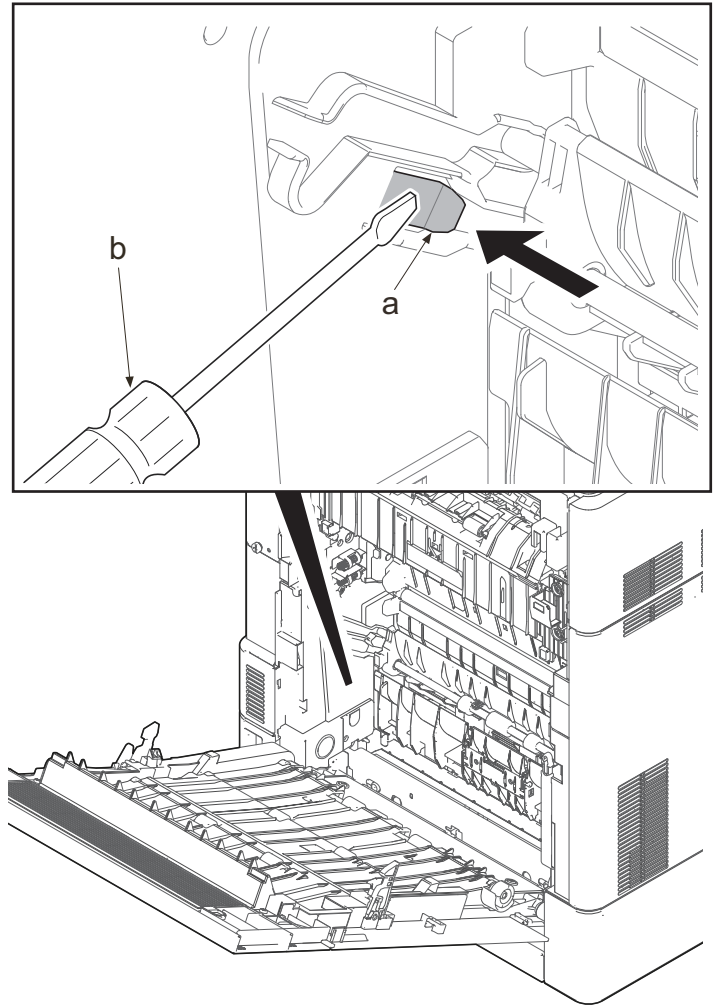


Figure 4-190

2. Pull the middle roller unit (b) out by holding handle A2 (a).

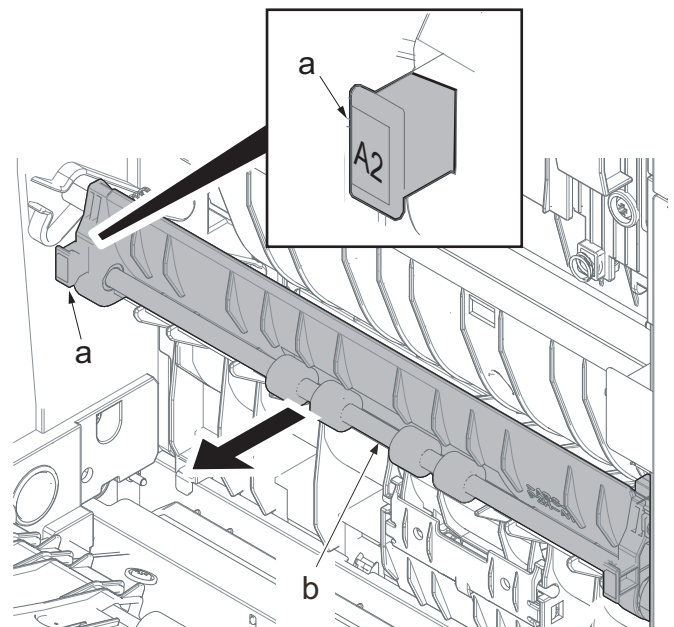


Figure 4-191

3. Remove the machine right side shaft (b) of the middle roller unit (a) from the rail (c).
4. Detach the middle roller unit (a).

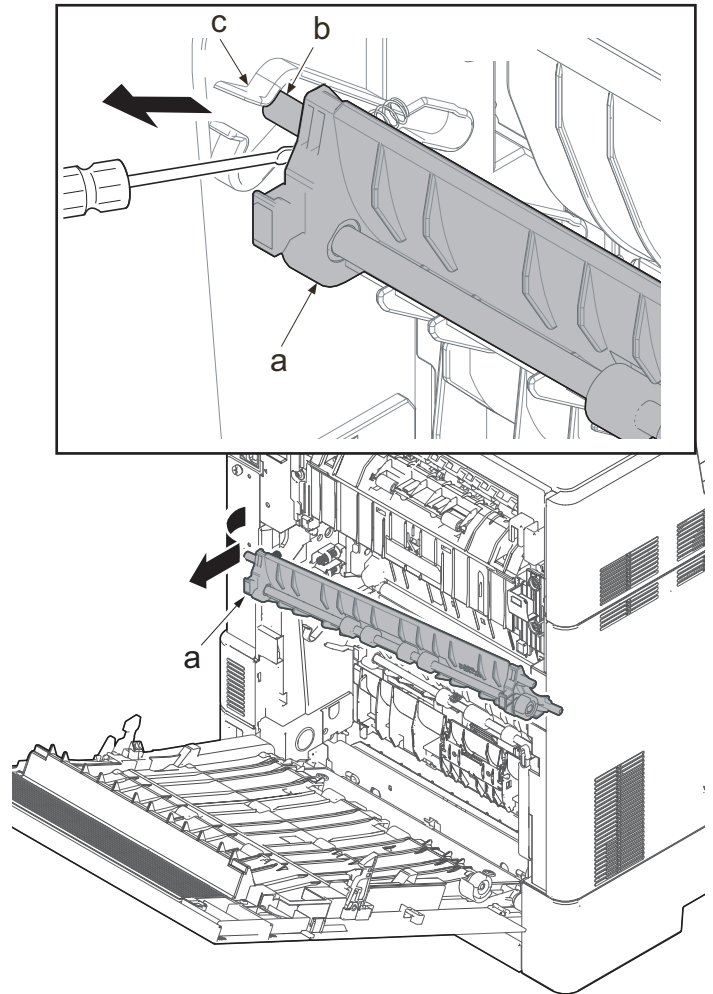


Figure 4-192

5. Rotate the lever (b) of the paper feed roller pin (a) toward the machine rear side.
6. Slide the paper feed roller pin (a) toward the machine front side.

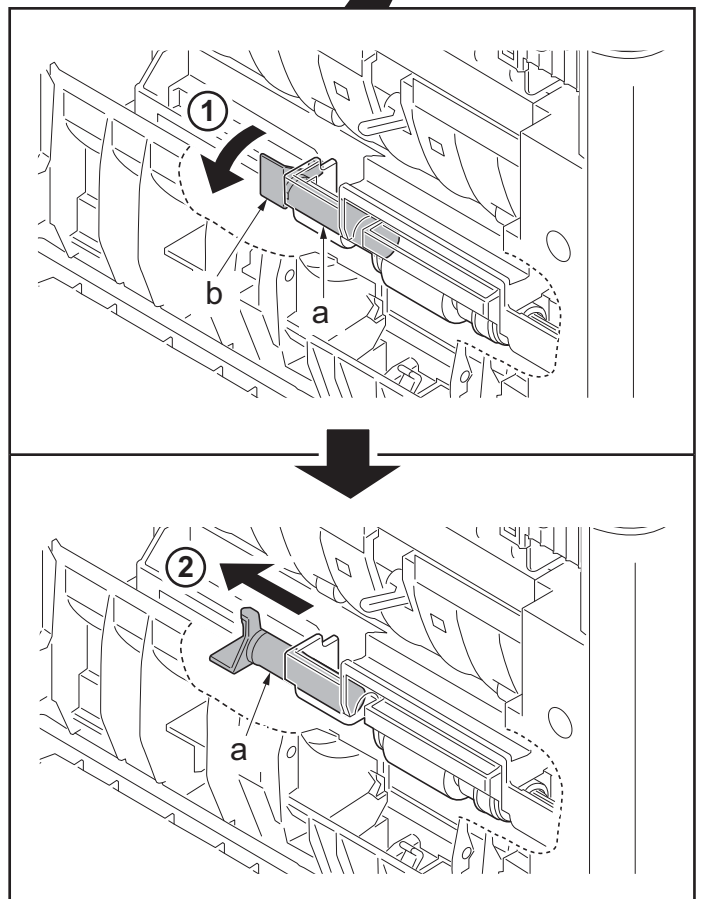
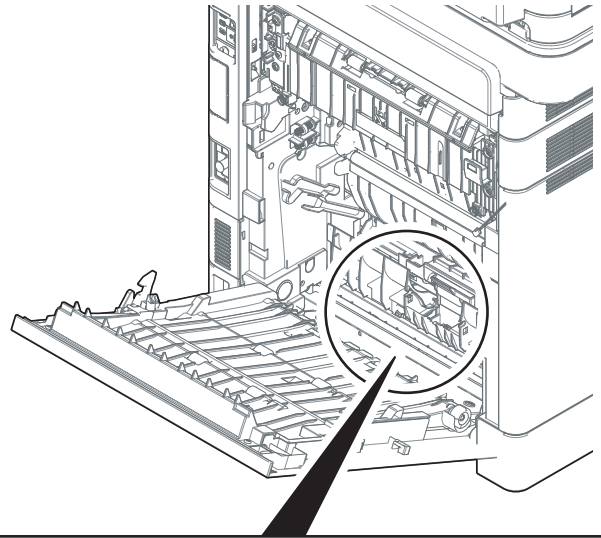


Figure 4-193

7. Detach the paper feed roller unit (a).
- *: Make sure it should not come off/be lost when attaching/detaching the paper feed roller unit (a).
8. Attach the new feed roller unit.
9. Reattach the parts in the original position.
10. Attach the new retard roller unit.
11. Reattach the parts in the original position.

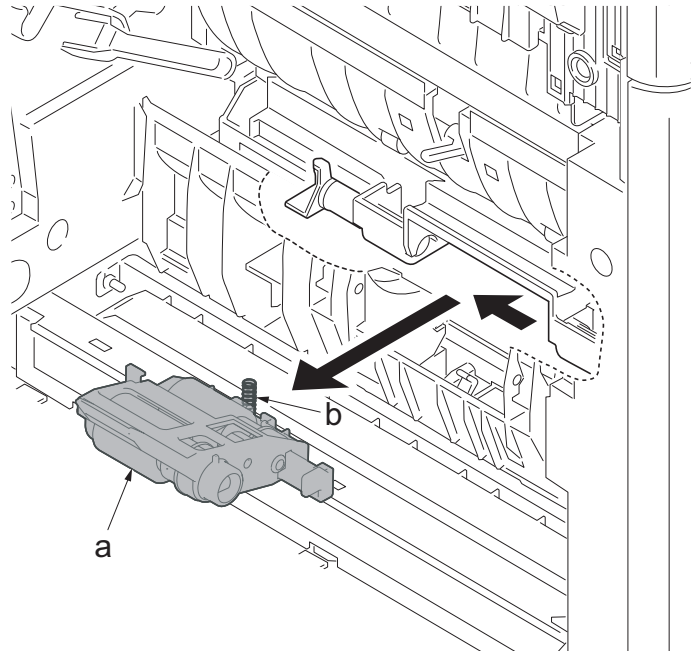


Figure 4-194

IMPORTANT

When attaching the paper feed roller unit, make sure to check if the pickup spring is attached correctly.

The way to attach the pickup spring

Insert the pickup spring (b) into the cross-shape boss of the feeding holder (a) and press the spring until the edge of the spring contacts on the surface (c) of the paper feeding holder.

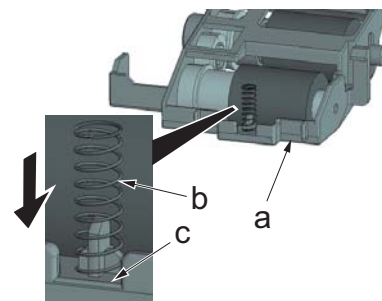


Figure 4-195

The way to attach the pickup spring

After attaching the paper feed roller unit (a), touch your fingertips at the bottom of the pickup roller of it and feel the rebound of the spring if pressing to the upper direction.

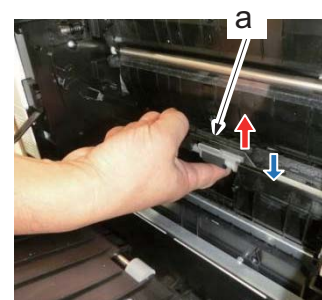


Figure 4-196

(7) Detaching and reattaching the secondary transfer roller unit

1. Release two hooks (b) of the duplex paper conveying unit (a).
2. Detach the secondary transfer roller unit (c).
3. Attach the new secondary transfer roller unit (c).
4. Reattach the parts in the original position.
5. Reattach the duplex conveying unit in the reverse order of removal.
6. Close the rear cover.

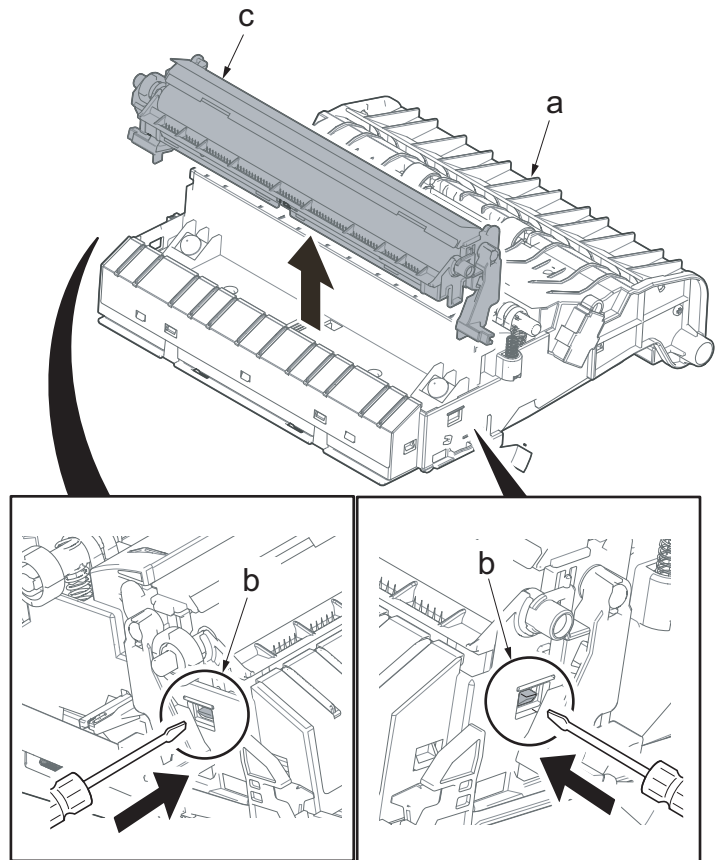


Figure 4-197

IMPORTANT

When reattaching the secondary transfer roller unit (a), first fit the upper part and then insert the hook (b) into the square hole.

Then, insert each hook (c) of both transfer release levers into the inside ribs (d).

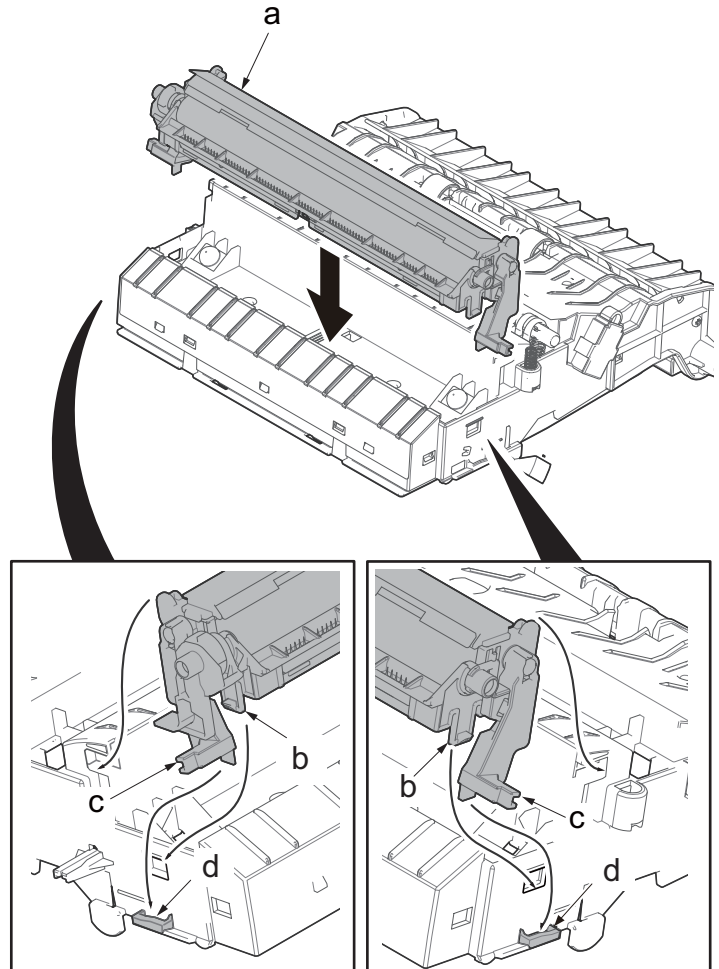


Figure 4-198

(8) Document processor (30 ppm model)

(8 - 1) Detaching and reattaching the DP paper feed roller unit

1. Open the DP upper cover (a).

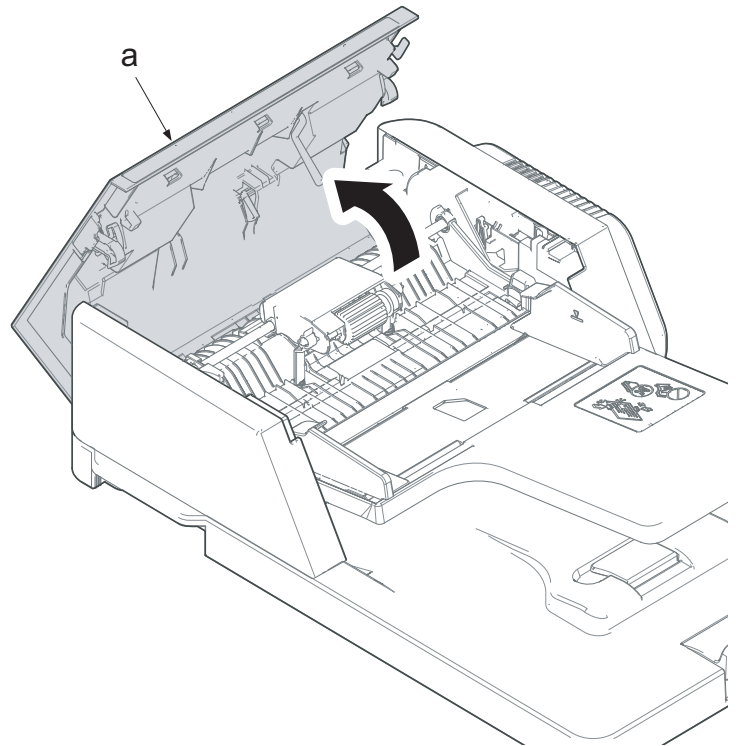


Figure 4-199

2. Push the lock lever (a) toward the machine rear side.
3. Release the hook (b).
4. Rotate the lock lever (a) to the release position (c).
5. Shift the machine front side of the DP feed roller shaft (d) toward the machine left side to remove it from the holding part (e).
6. Then, lift the shaft and pull the DP paper feed roller unit (f) out toward the machine front side.

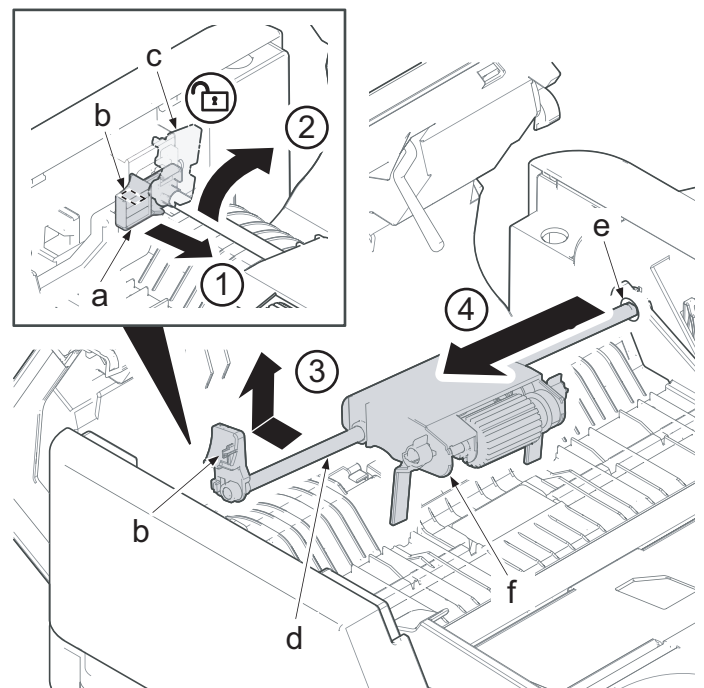


Figure 4-200

(8 - 2) Detaching and reattaching the DP separation pad

1. Push both hooks (b) inward and remove the DP separation pad assembly (a).
 2. Attach the new DP separation pad assembly.
 3. Reattach the parts in the original position.
- *: Check if the pressure spring (c) is surely in the protrusion (d) when reattaching it.
4. Attach the new DP feed roller unit.
 5. Reattach the parts in the original position.

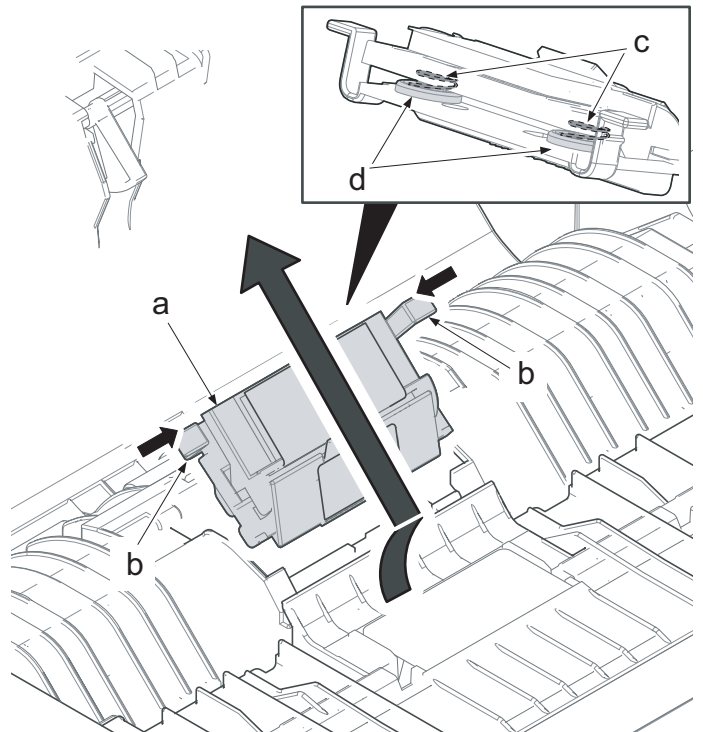


Figure 4-201

(9) Document processor (35 ppm model)

(9 - 1) Detaching and reattaching the DP paper feed roller unit

1. Open the DP top cover (b) of the document processor (a).

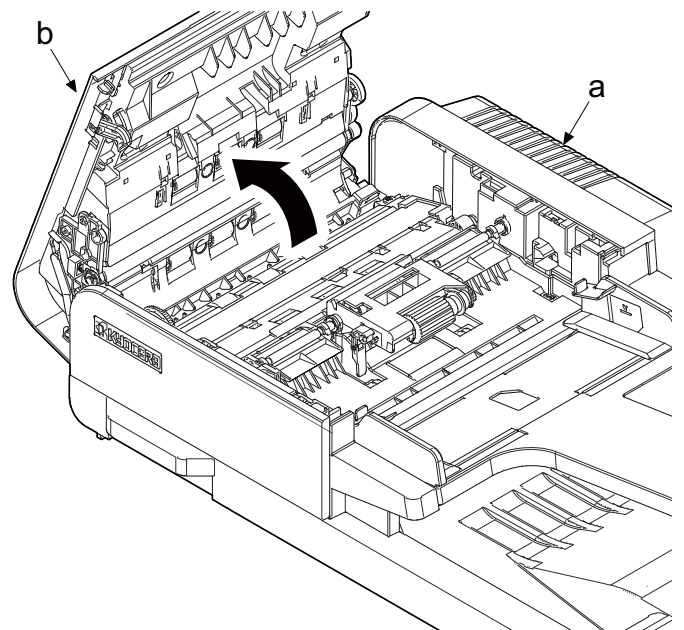


Figure 4-202

2. Push the lock lever (a) toward the machine rear side.
3. Release the hook (b).
4. Rotate the lock lever (a) to the release position (c).
5. Shift the machine front side of the DP feed roller shaft (d) toward the machine left side to remove it from the holding part (e).
6. Then, lift the shaft and pull the DP paper feed roller unit (f) out toward the machine front side.

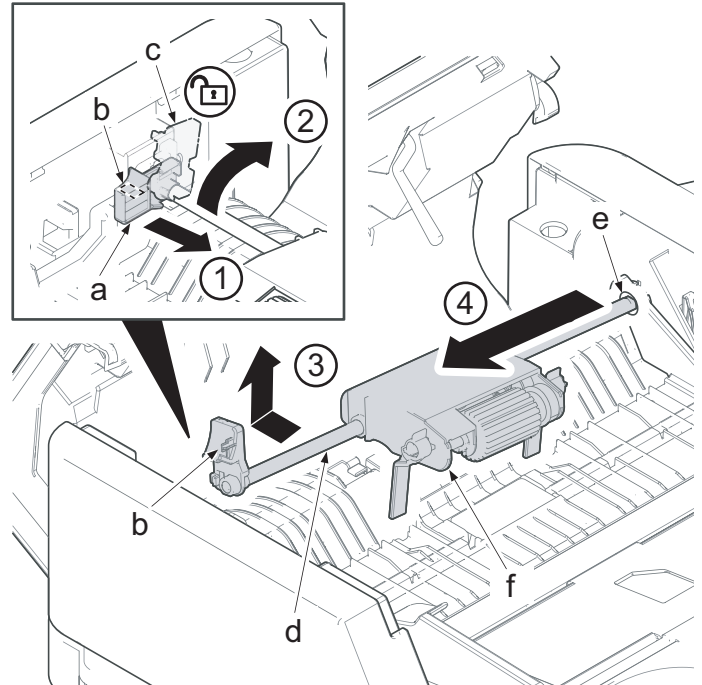


Figure 4-203

(9 - 2) Detaching and reattaching the DP separation pad

1. Push both hooks (b) inward and remove the DP separation pad assembly (a).
 2. Attach the new DP separation pad assembly.
 3. Reattach the parts in the original position.
- *: Check if the pressure spring (c) is surely in the protrusion (d) when reattaching it.
4. Attach the new DP feed roller unit.
 5. Reattach the parts in the original position.

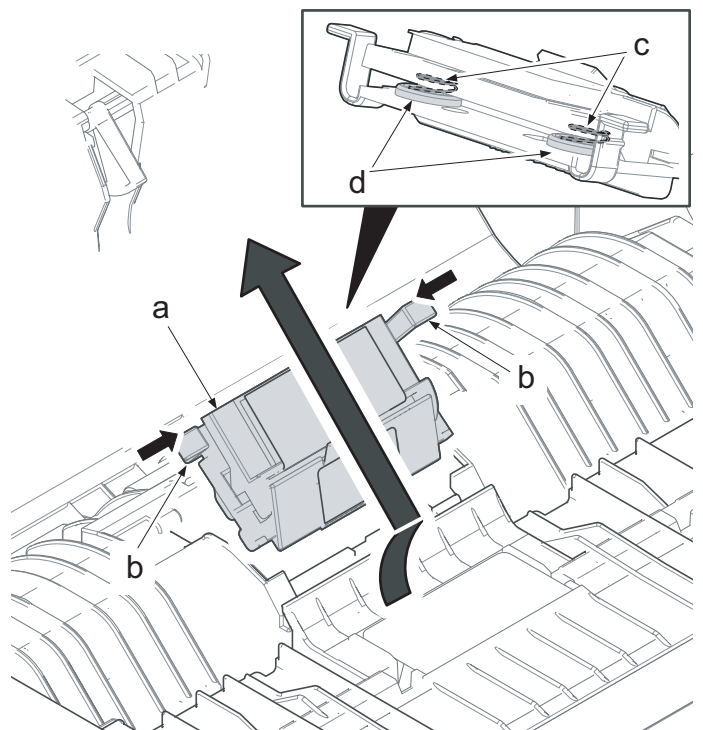
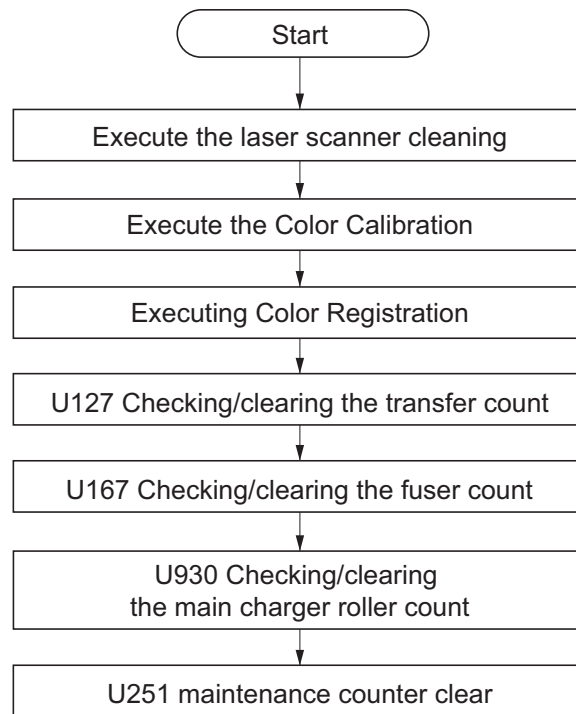


Figure 4-204

(10) Adjustment procedures after replacing the maintenance kit

Execute the following procedures after replacing the above maintenance kit.



Execute the laser scanner cleaning

1. Display the screen.
[System Menu/Counter] key > [Adjustment/Maintenance] > [Laser Scanner Cleaning]
2. Adjust
Select [Execute]. The laser scanner cleaning is started.

Execute [Color Calibration]

1. Display the screen.
[System Menu/Counter] key> [Adjustment/Maintenance] > [Color Calibration].
2. Adjust
Select [Execute]. Calibration is started.

Execute the Color Registration

Auto registration and manual registration are available for Color Registration. Color drift can be largely corrected through auto registration. However, if it is not resolved or to perform more detailed settings, use the manual registration.

Auto correction

1. Load paper.

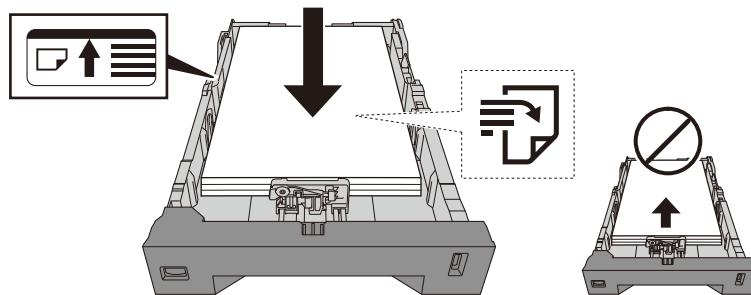


Figure 4-205

IMPORTANT

- Load the paper with the print side facing up.
- After removing new paper from its packaging, fan the paper before loading it in the multi-purpose tray.
- Before loading the paper, be sure that it is not curled or folded. Paper that is curled or folded may cause paper jams.
- Ensure that the loaded paper does not exceed the level indicator (see illustration above).
- If paper is loaded without adjusting the paper length guide and paper width guide, the paper may skew or become jammed.

2. Display the screen.

[System Menu/Counter] key > [Adjustment/Maintenance > [Color Registration] > [Auto]

3. Print the chart

Select [Start].

A charts is printed.

Chart sample (Auto)

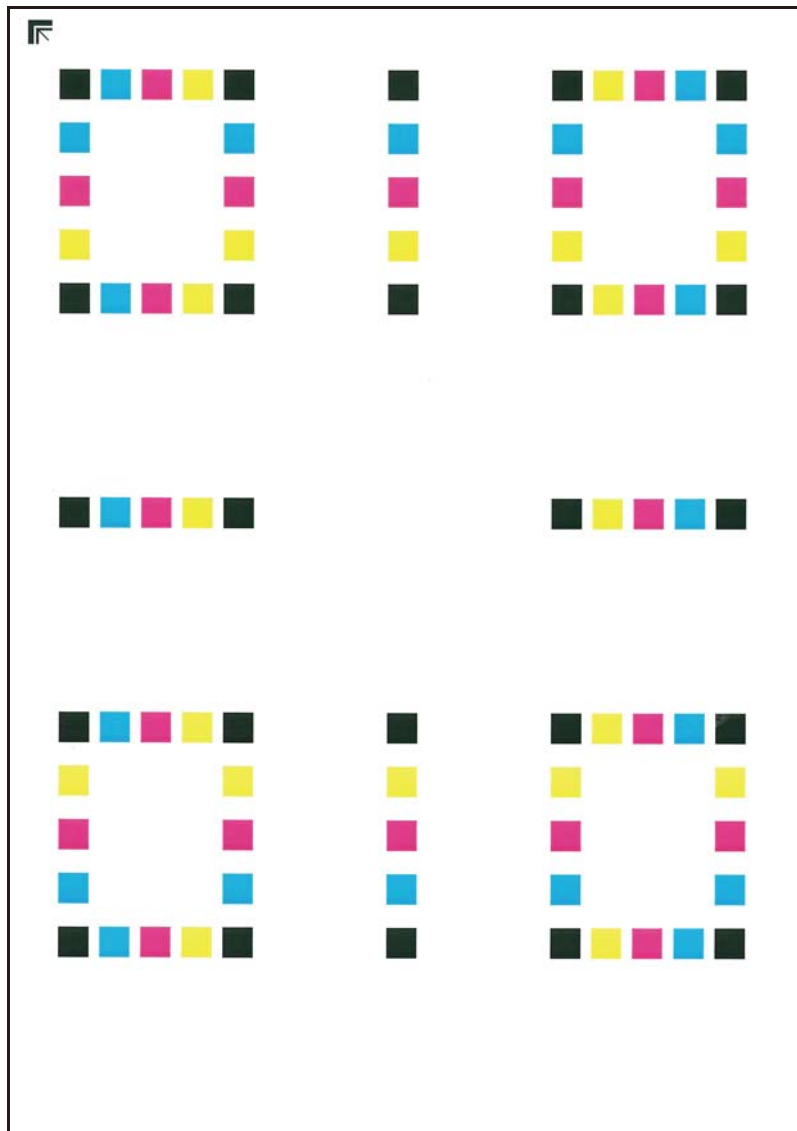


Figure 4-206

3. Perform the color registration

- (1)As shown in the illustration, place the printed side down on the platen with the edge with the arrows toward the back.

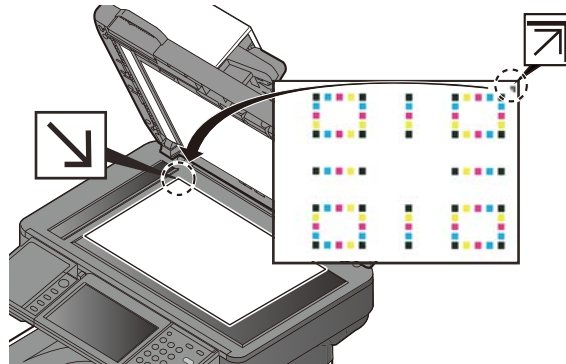


Figure 4-207

- (2)Select [Start] to scan the chart.

When scanning is finished, color printing position correction starts.

- (3)When color printing position correction ends, Select [OK].

Manual Correction

1. Display the screen.
[System Menu/Counter] key > [Adjustment/Maintenance] > [Color Registration] > [Manual]
2. Print the chart
Select [Print Chart].
A chart is printed. The chart indicating H1 to H5 (upper) and V1 to V5 (lower) per each color M (Magenta), C (Cyan) and Y (Yellow) is printed.

Chart sample (Manual)

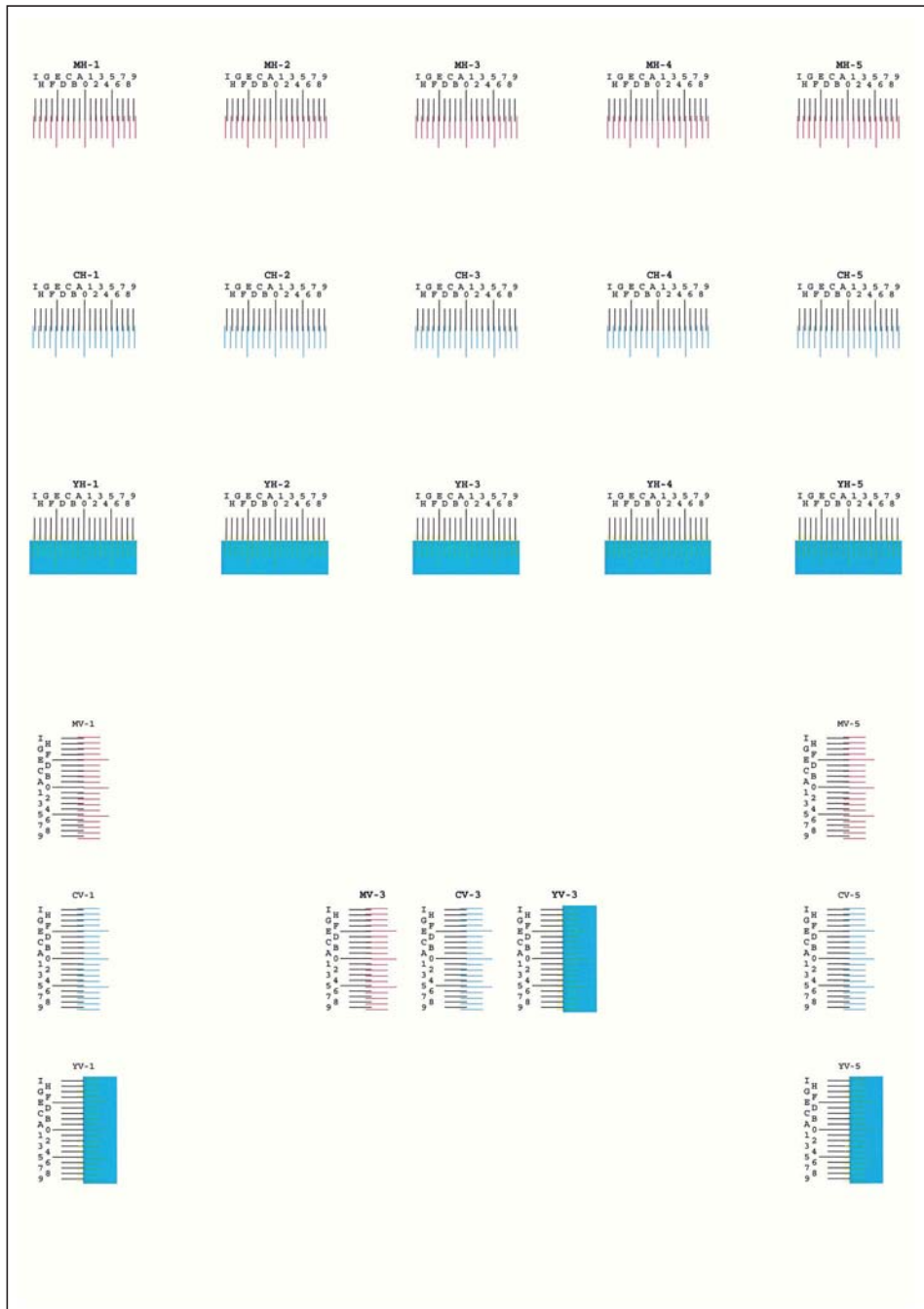


Figure 4-208

3. Input values.

(1) Find the point where two lines are most aligned from each chart. If it is at "0", the correction is unnecessary. In case of the illustration below, "B" is the value that should be set.

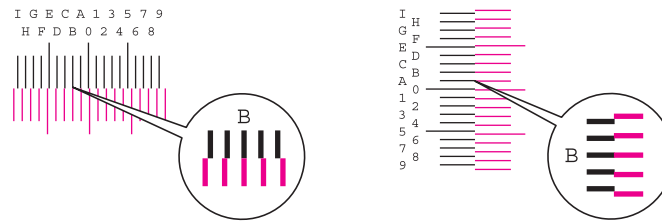


Figure 4-209

Read the values from H1 to H5 in the chart.

Read the value of V-3 (center) only of V1 to V5 in the chart.

(2) [Detail] > [Registration]

(3) Select the chart to be corrected.

(4) Select [+] or [-] to input the value read from the chart.

Select [+] to shift the values of 0 to 9. Press the [-] to go in reverse.

Select [-] to shift the value from 0 to alphabets of A to I. Press the [+] to go in reverse.

Numeric keys input is not available.

(5) Repeat the step (3) and (4) to input the values in the chart

(6) Select [Start] after completing all the inputs. Start [Color Registration]

(7) Select [OK] when completing the color registration adjustment.

Executing a maintenance item

1. Input "10871087" using the numeric keys to enter the maintenance mode.
2. Input the number with the numeric keys.

U127 Checking/clearing the transfer count

1. Press the [Start] key.
- * : The transfer count is displayed.

Indication	Description
Mid(Cnt)	Primary transfer counter
2nd(Cnt)	Secondary transfer counter

1. Select [Clear].
2. Press the [Start] key to clear all the transfer counter values.

U167 Checking/clearing the fuser count

1. Press the [Start] key.
- * : The fuser count is displayed.
2. Select [Clear].
3. Press the [Start] key to clear the counter value.

U930 Checking/clearing the main charger roller
count

- 1.Press the [Start] key.
* : The main charger roller counter value appears. (K,M,C and Y)
- 2.Select [Clear].
- 3.Press the [Start] key to clear the counter value.

U251 maintenance counter clear

- 1.Press the [Start] key.
- 2.Select [Clear].
- 3.Press the [Start] key to clear the setting value.

Canceling the maintenance mode

- 1.Input "001" using the numeric keys and press the [Start] key.

4-4 Disassembly and Reassembly procedures

(1) External covers

(1 - 1) Detaching and reattaching the front cover

1. Pull the lever (a).
2. Lift up the scanner unit (b) and open the inner tray (c).

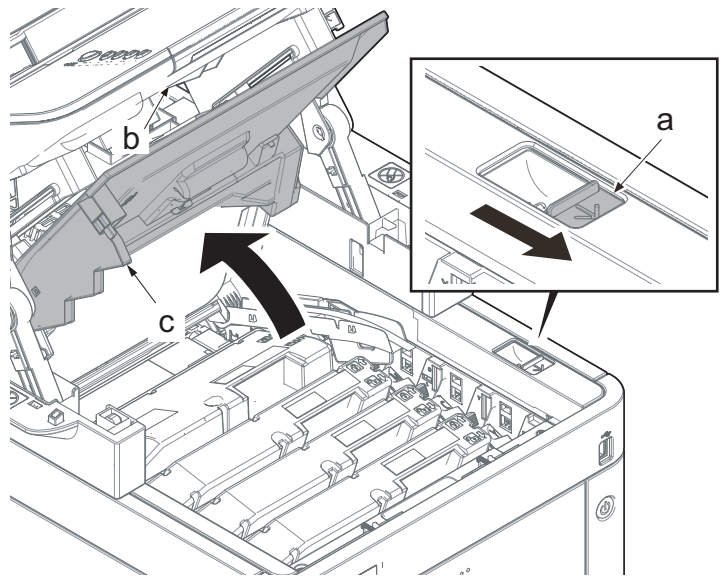


Figure 4-210

3. Open the MP tray (a).
4. Remove two screws (b)(M3x8).
5. Open the waste toner cover (c).

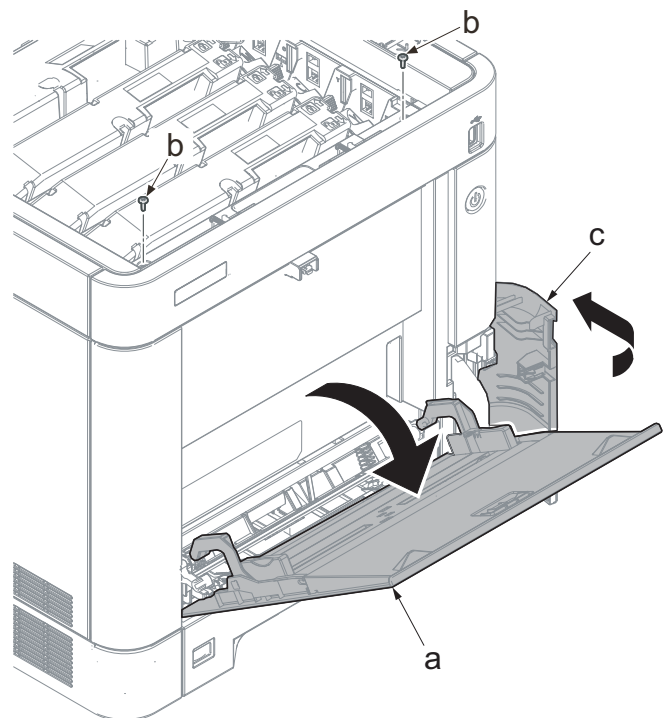


Figure 4-211

6. Slightly lift up the front cover (a) to release the boss (b).
7. Tilt the front cover (a) toward the machine front side.
8. Then, remove the front cover (a) by lifting it up.

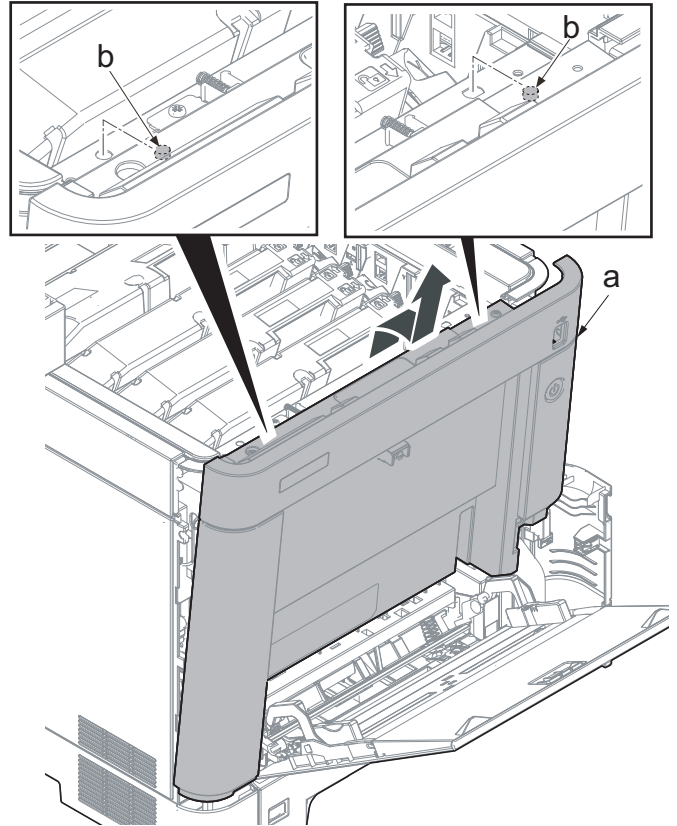


Figure 4-212

IMPORTANT

Make sure not to touch the waste toner cover sensor (b) when reattaching the front cover (a). If the waste toner cover sensor (b) comes off, even if you close the waste toner cover, "cover open" will be displayed.

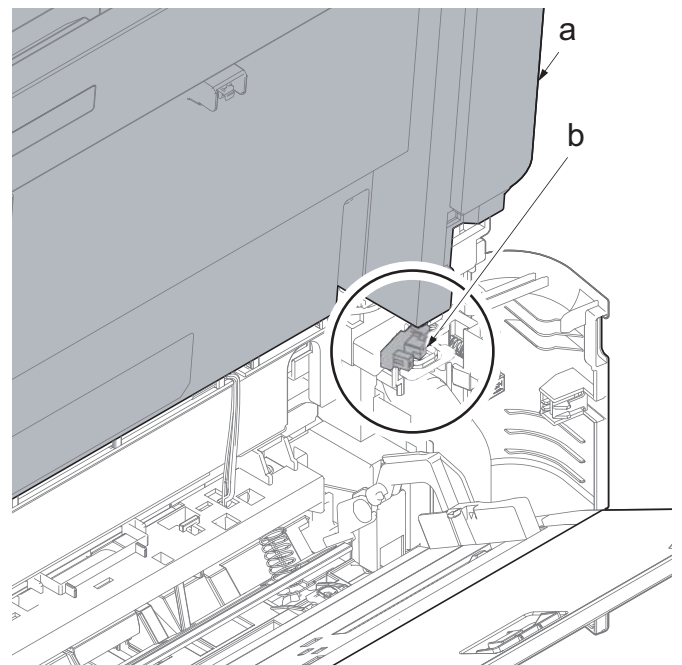


Figure 4-213

(1 - 2) Detaching and reattaching the interface cover.

1. Pull the lower part of the opening toward the machine rear side and release the hook (a).
2. Remove the interface cover (b).

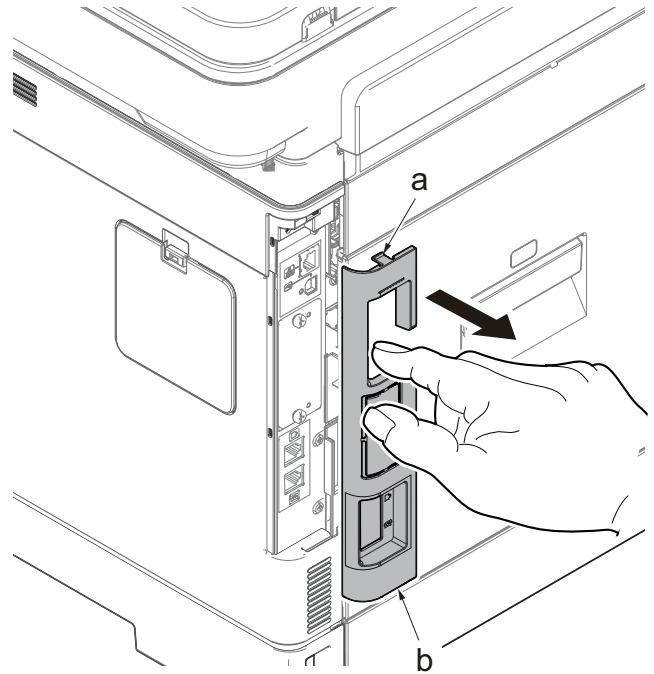


Figure 4-214

*: For 35ppm model: Take out DP cable (b) from the opening section of the interface cover (a) and then remove.

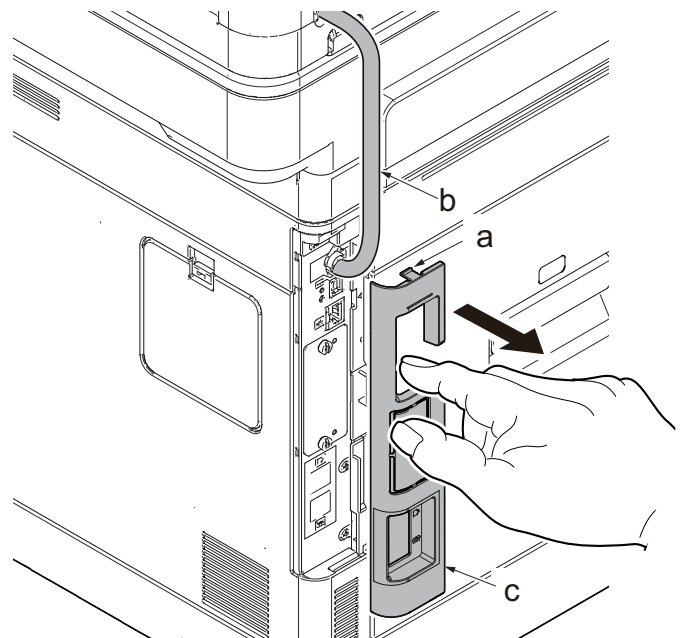


Figure 4-215

(1 - 3) Detaching and reattaching the upper right cover

1. Pull the lower part of the opening toward the machine rear side and release the hook (a).
2. Remove the interface cover (b).

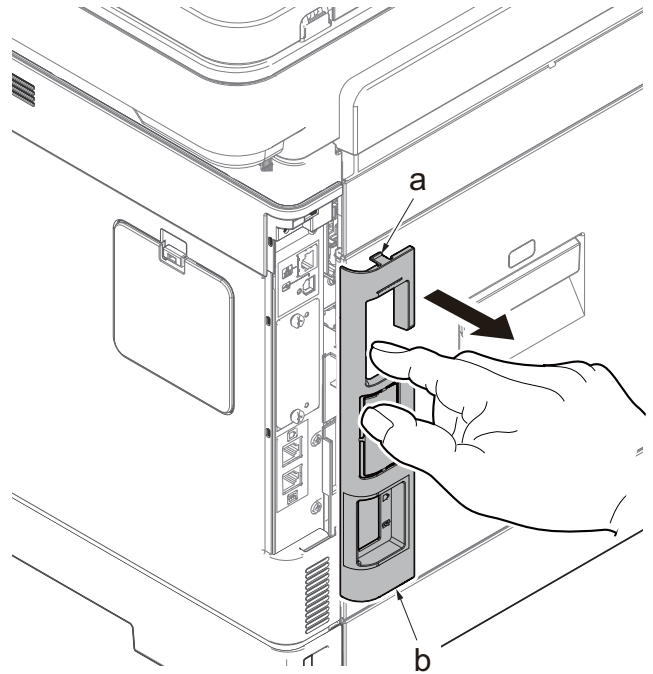


Figure 4-216

3. Remove the screw (a)(M3x8).
4. Slide the upper right cover (b) toward the machine rear side and detach it.

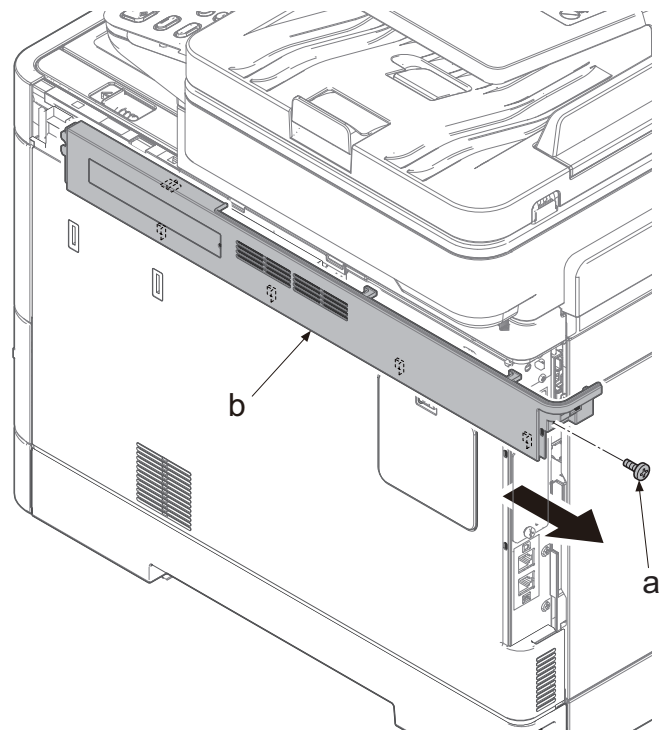


Figure 4-217

IMPORTANT

When reattaching the upper right cover (a), insert the hook (b) to the machine front side, and then fasten seven hooks (c) by sliding it toward the machine front side and insert the positioning projection (d) into the hole.

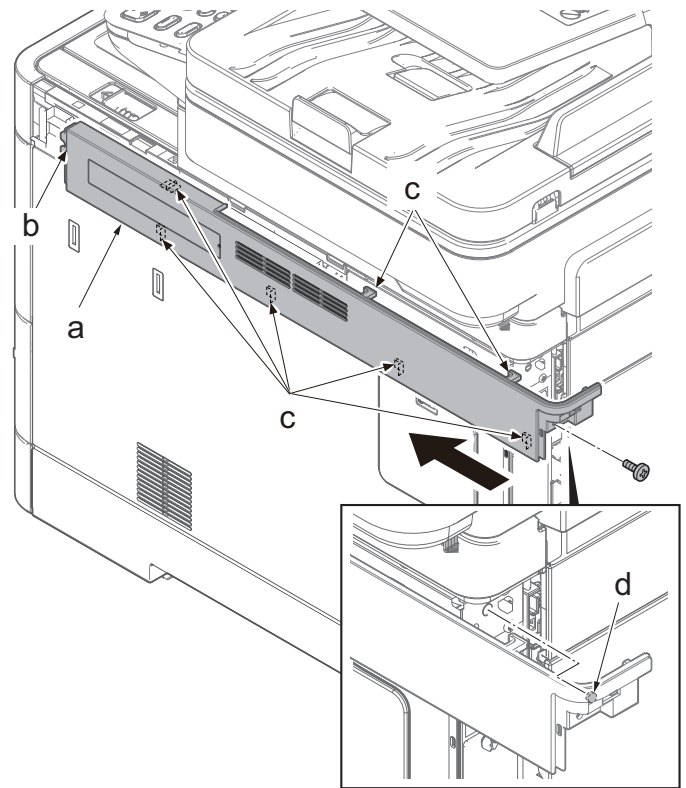


Figure 4-218

(1 - 4) Detaching and reattaching the middle right cover

1. Pull the lower part of the opening toward the machine rear side and release the hook (a).
2. Remove the interface cover (b).

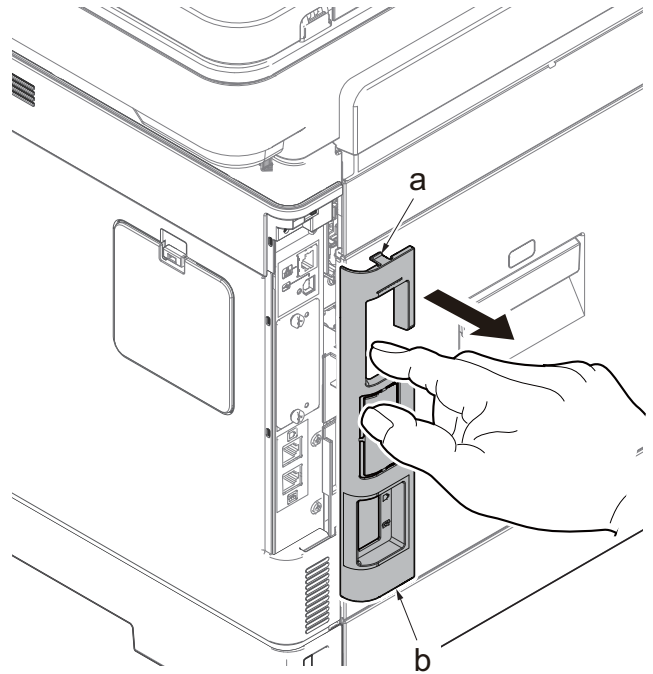


Figure 4-219

3. Remove the screw (a)(M3x8).
4. Slide the upper right cover (b) toward the machine rear side and detach it.

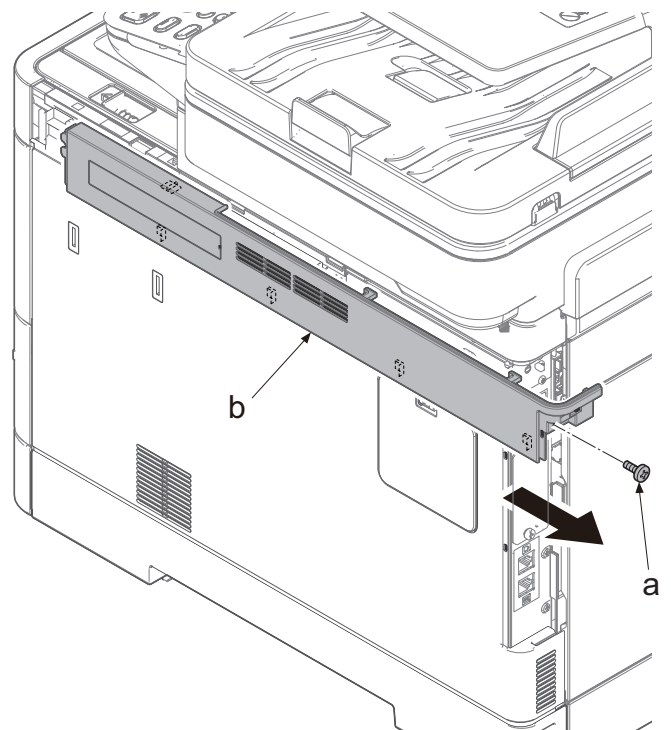


Figure 4-220

IMPORTANT

When reattaching the upper right cover (a), insert the hook (b) to the machine front side, and then fasten seven hooks (c) by sliding it toward the machine front side and insert the positioning projection (d) into the hole.

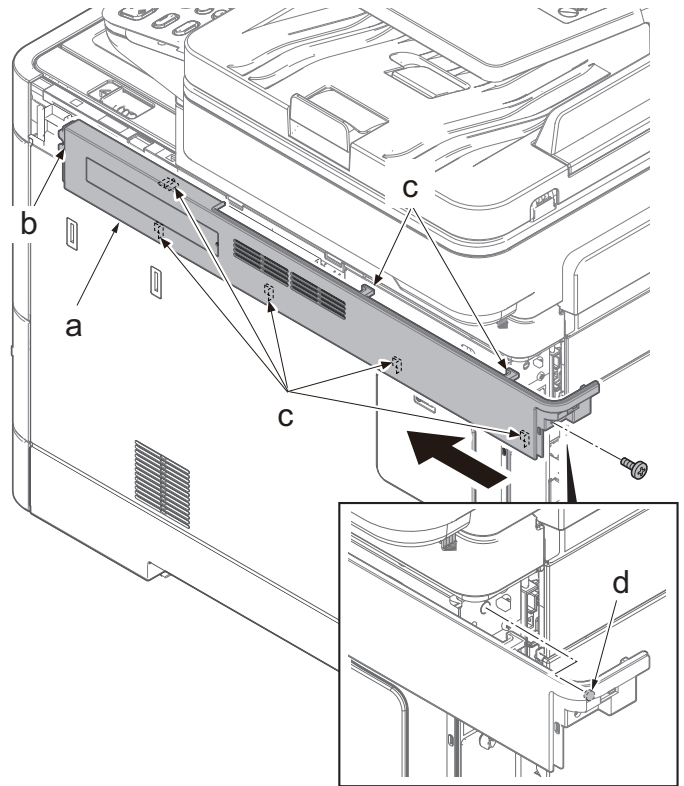


Figure 4-221

5. Open the waste toner cover (a).
6. Press the arm (b) down.
7. Remove the waste toner cover (a).

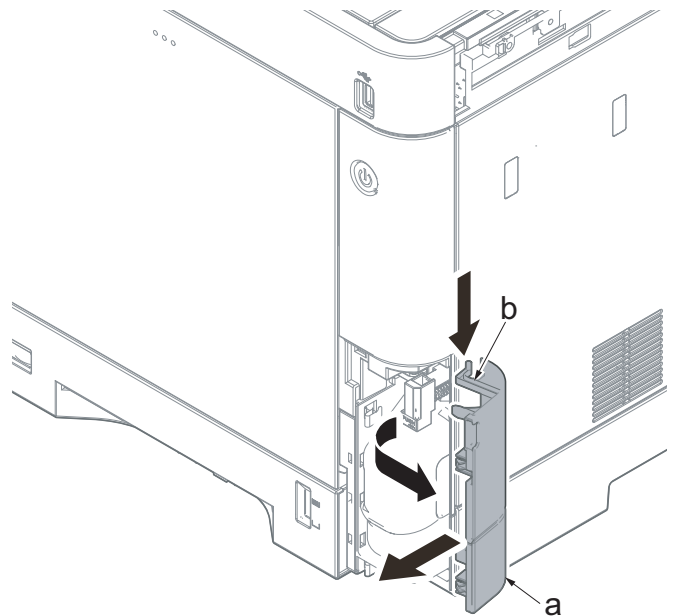


Figure 4-222

- 8. Push the lever (a) and open the memory cover (b).
- 9. Remove the memory cover (b).

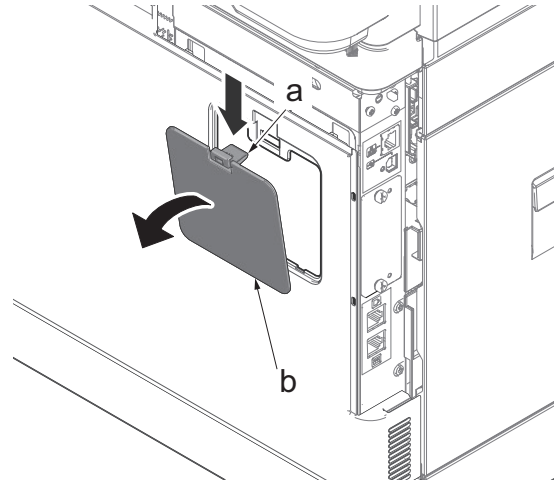


Figure 4-223

- 10. Pull up the shield lid (a) and pull it toward you to remove it.

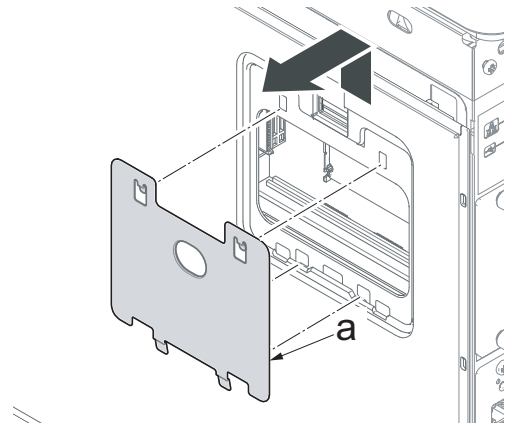


Figure 4-224

- 11. Open the rear cover (a).

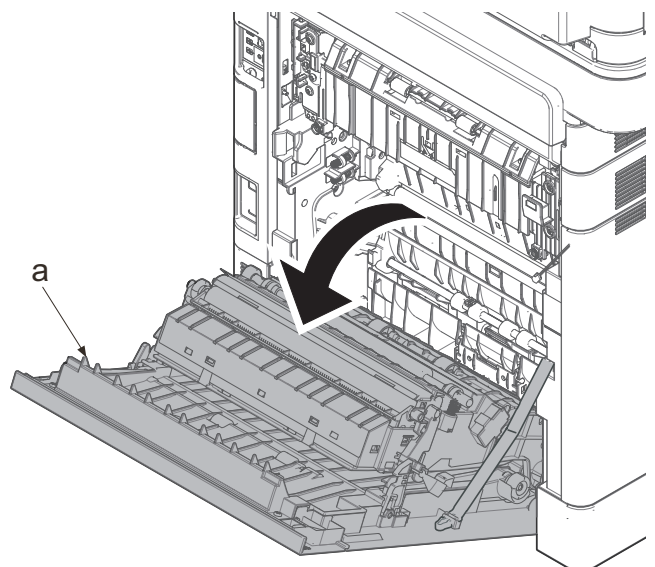


Figure 4-225

12. Push the machine front side of the middle right cover (a) toward the machine rear side and then lift up its machine rear side to detach it.

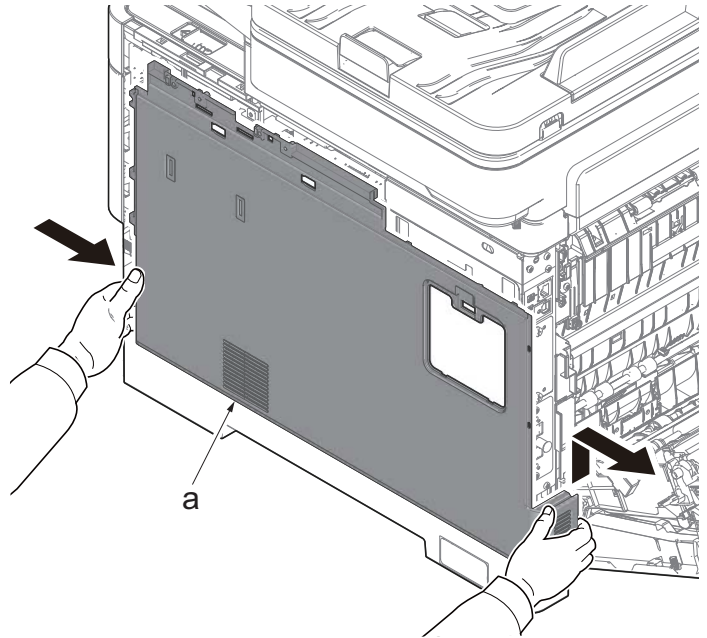


Figure 4-226

IMPORTANT

When reattaching the middle right cover (a), insert the lower rib into the the lower right cover (b). Slide it toward the machine front side to fasten three hooks (c) and then lower it to fasten three hooks (d), and fasten two hooks (e) at the machine rear side. Check if three hooks (d) at the machine rear side are surely fastened.

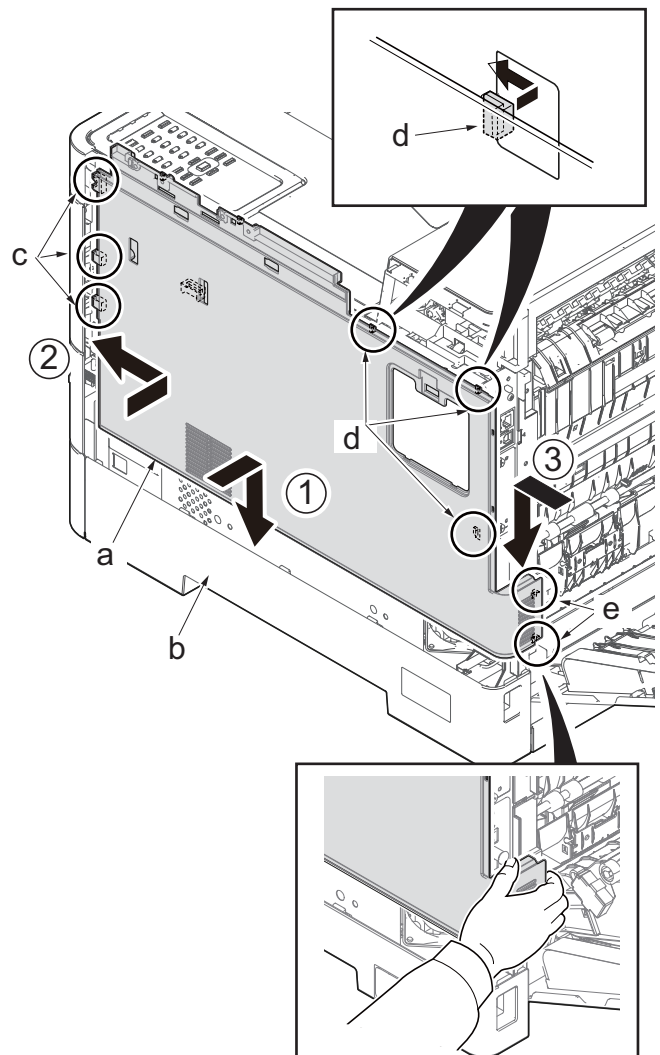


Figure 4-227

(1 - 5) Detaching and reattaching the lower left cover

1. Pull the lower part of the opening toward the machine rear side and release the hook (a).
2. Remove the interface cover (b).

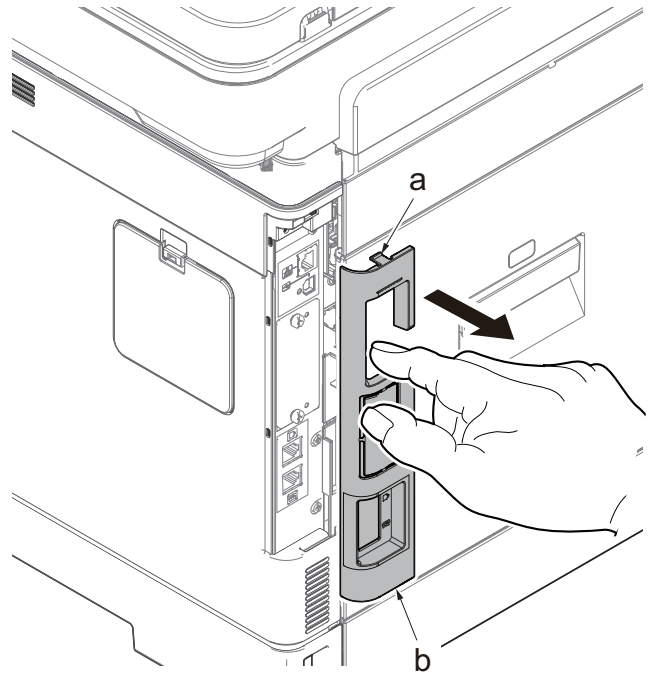


Figure 4-228

3. Remove the screw (a)(M3x8).
4. Slide the upper right cover (b) toward the machine rear side and detach it.

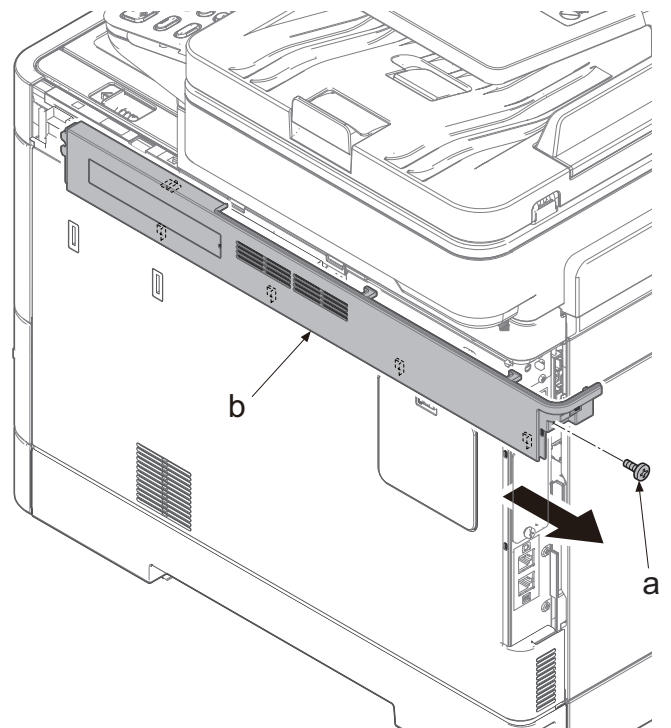


Figure 4-229

IMPORTANT

When reattaching the upper right cover (a), insert the hook (b) to the machine front side, and then fasten seven hooks (c) by sliding it toward the machine front side and insert the positioning projection (d) into the hole.

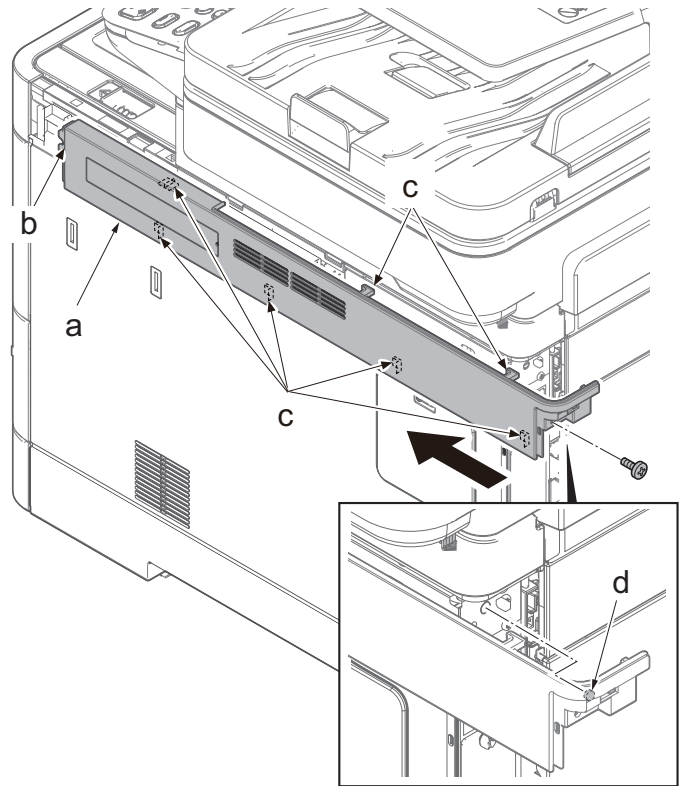


Figure 4-230

5. Open the waste toner cover (a).
6. Press the arm (b) down.
7. Remove the waste toner cover (a).

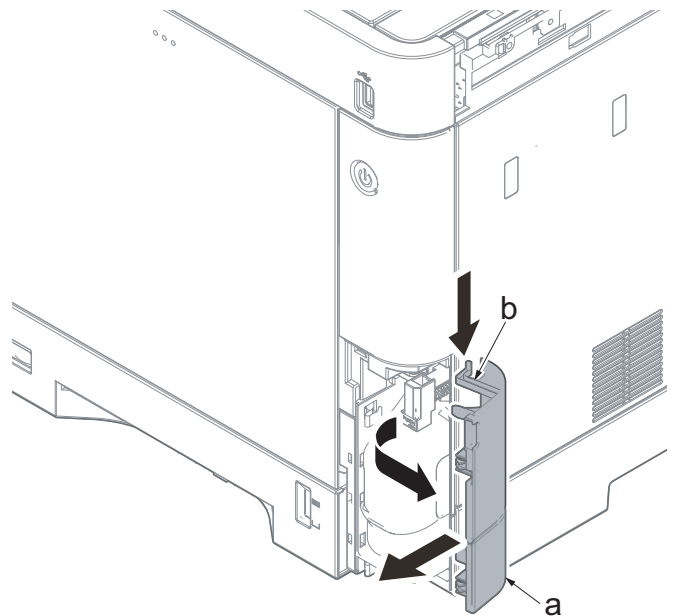


Figure 4-231

- 8. Push the lever (a) and open the memory cover (b).
- 9. Remove the memory cover (b).

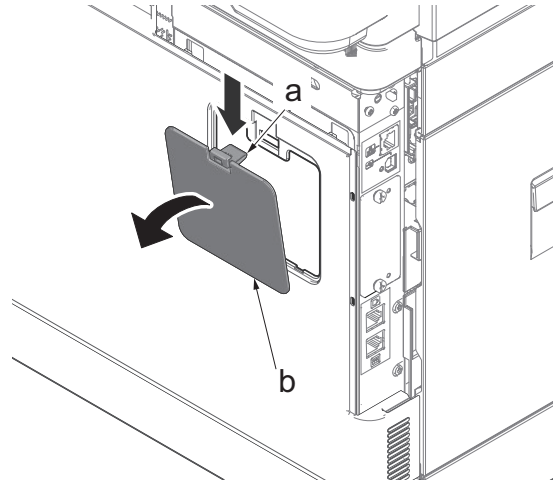


Figure 4-232

- 10. Pull up the shield lid (a) and pull it toward you to remove it.

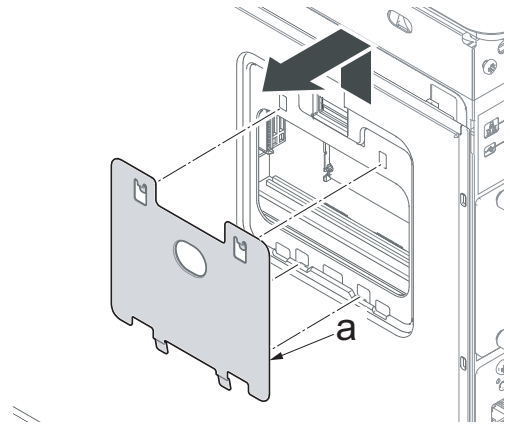


Figure 4-233

- 11. Open the rear cover (a).

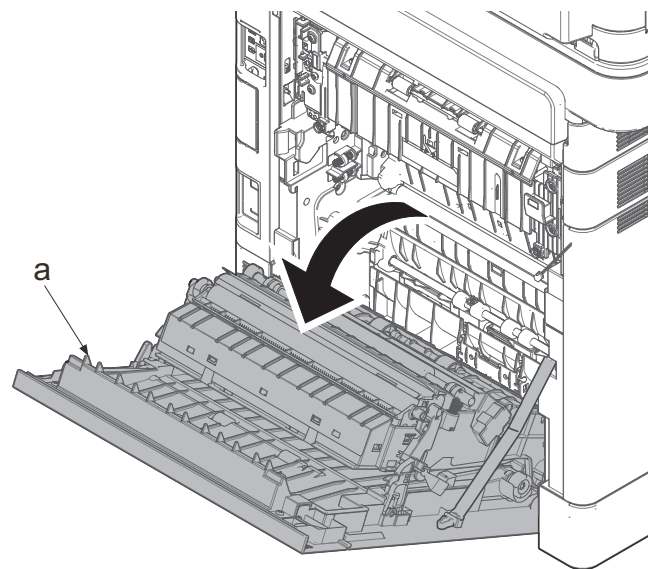


Figure 4-234

12. Push the machine front side of the middle right cover (a) toward the machine rear side and then lift up its machine rear side to detach it.

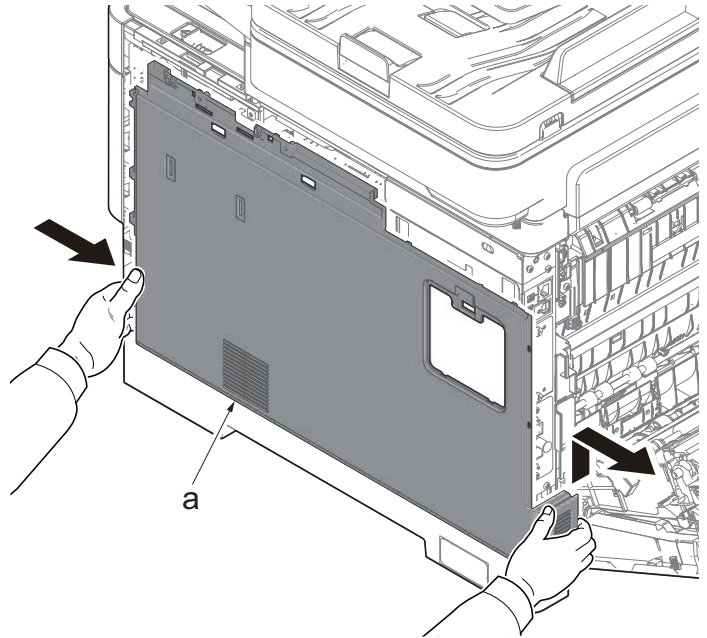


Figure 4-235

IMPORTANT

When reattaching the middle right cover (a), insert the lower rib into the the lower right cover (b). Slide it toward the machine front side to fasten three hooks (c) and then lower it to fasten three hooks (d), and fasten two hooks (e) at the machine rear side.

Check if three hooks (d) at the machine rear side are surely fastened.

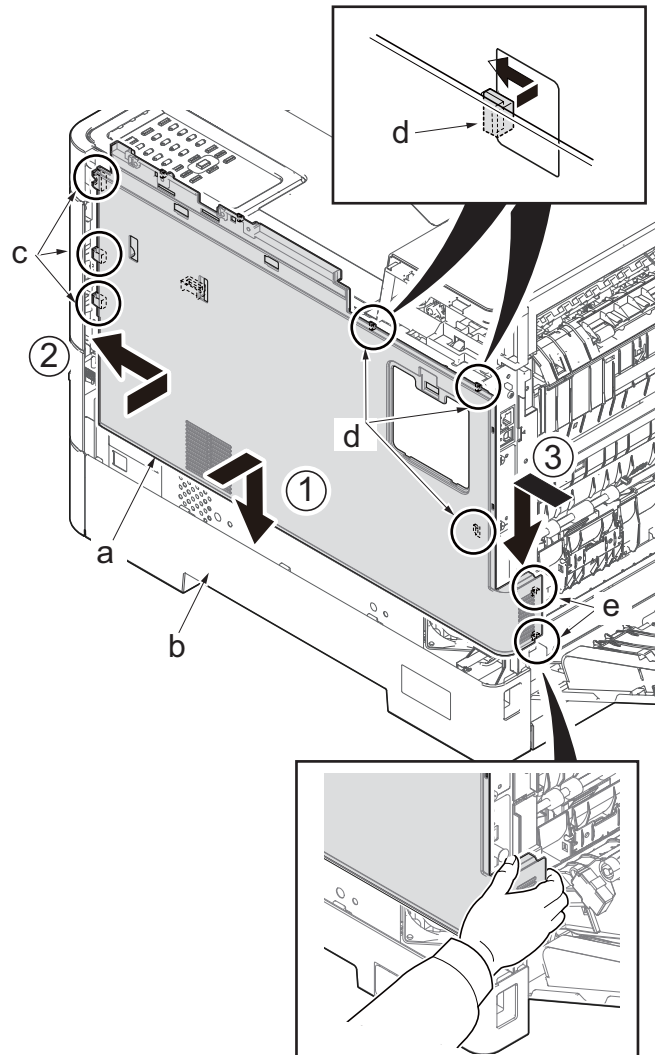


Figure 4-236

13. Remove the screw (a)(M3x8).
14. Release the hook (c) of the lower right cover (b) toward the machine right side and slide it toward the machine rear side to detach it.

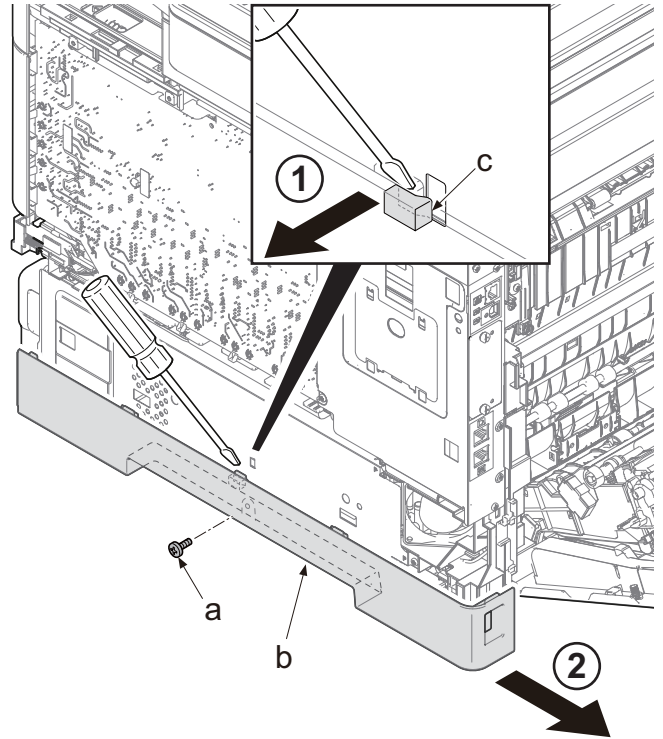


Figure 4-237

(1 - 6) Detaching and reattaching the upper left cover

1. Open the rear cover (a).

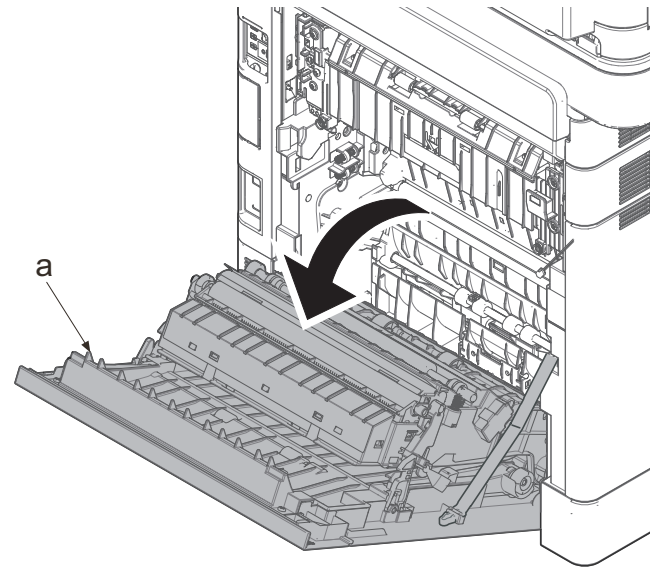


Figure 4-238

2. Remove the screw (a)(M3x8).
3. Slide the upper left cover (b) toward the machine rear side and detach it.

IMPORTANT

When reattaching the upper left cover (b), insert the hook (c) to the machine front side, and then fasten seven hooks (d) by sliding it toward the machine front side.

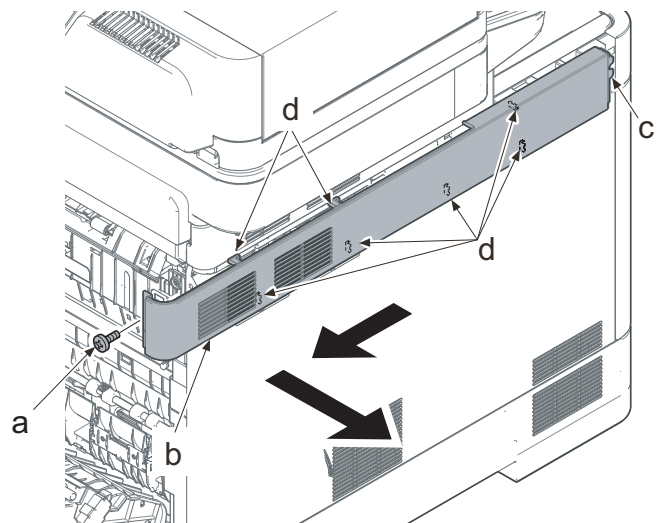


Figure 4-239

(1 - 7) Detaching and reattaching the middle left cover

1. Open the rear cover (a).

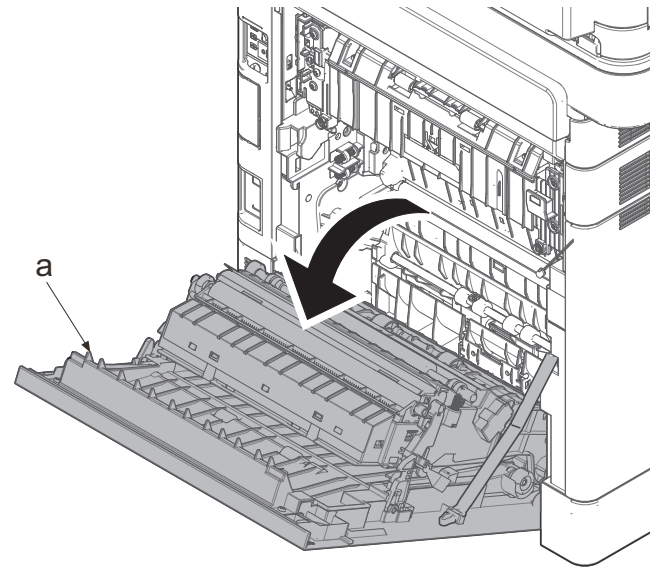


Figure 4-240

2. Remove the screw (a)(M3x8).
3. Slide the upper left cover (b) toward the machine rear side and detach it.

IMPORTANT

When reattaching the upper left cover (b), insert the hook (c) to the machine front side, and then fasten seven hooks (d) by sliding it toward the machine front side.

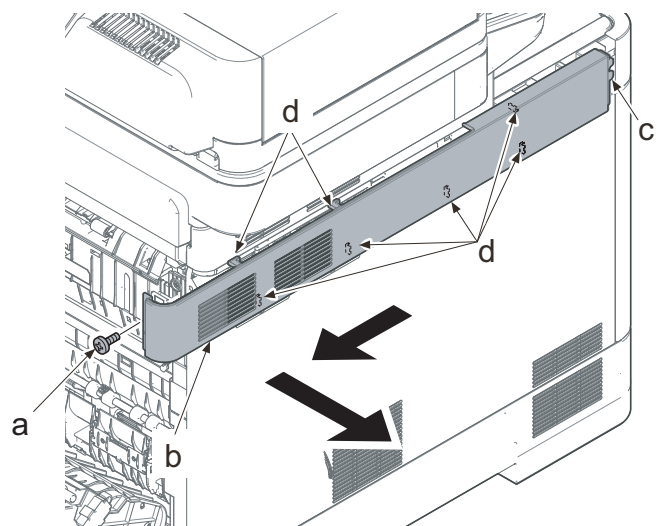


Figure 4-241

4. Lift up the machine rear side of the middle left cover (a) to release three hooks (b).
5. Slide the middle left cover (a) toward the machine rear side to release two hooks (c).
6. Detach the middle left cover (a).

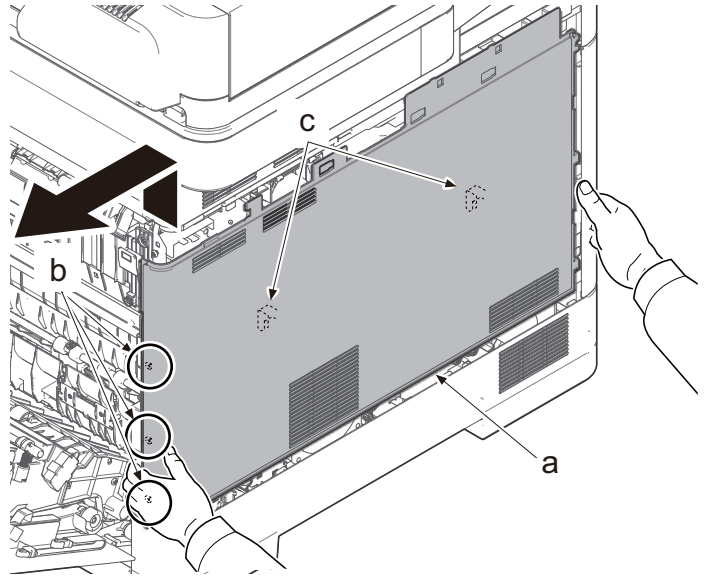


Figure 4-242

IMPORTANT

When reattaching the middle left cover (a), insert the lower rib into the lower left cover (b). Slide it toward the machine front side to fasten three hooks (c) and four hooks (d), then lower the machine rear side of it to fasten three hooks (e) at the machine rear side.

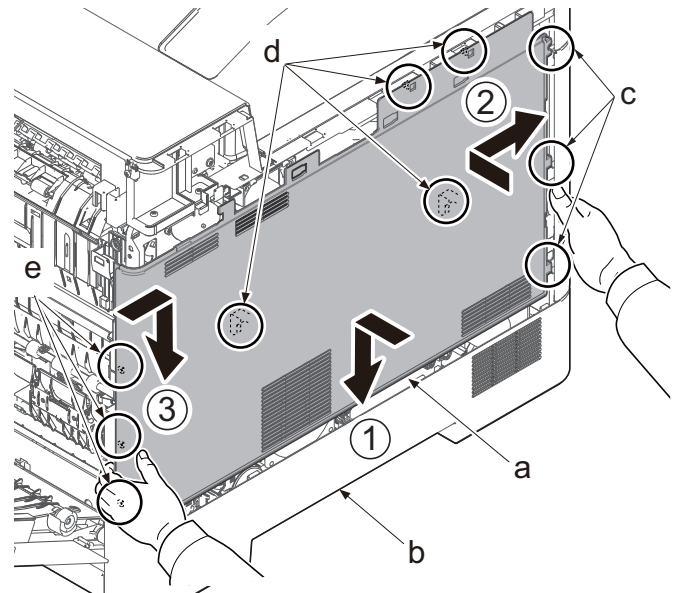


Figure 4-243

(1 - 8) Detaching and reattaching the lower left cover

1. Open the rear cover (a).

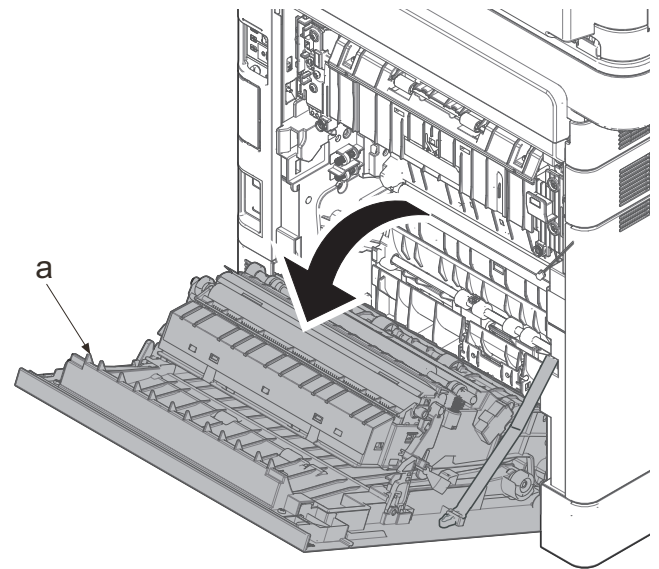


Figure 4-244

2. Remove the screw (a)(M3x8).
3. Slide the upper left cover (b) toward the machine rear side and detach it.

IMPORTANT

When reattaching the upper left cover (b), insert the hook (c) to the machine front side, and then fasten seven hooks (d) by sliding it toward the machine front side.

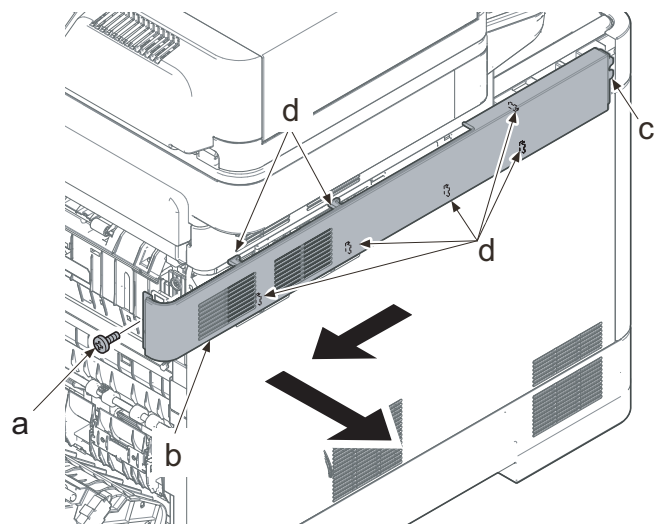


Figure 4-245

4. Lift up the machine rear side of the middle left cover (a) to release three hooks (b).
5. Slide the middle left cover (a) toward the machine rear side to release two hooks (c).
6. Detach the middle left cover (a).

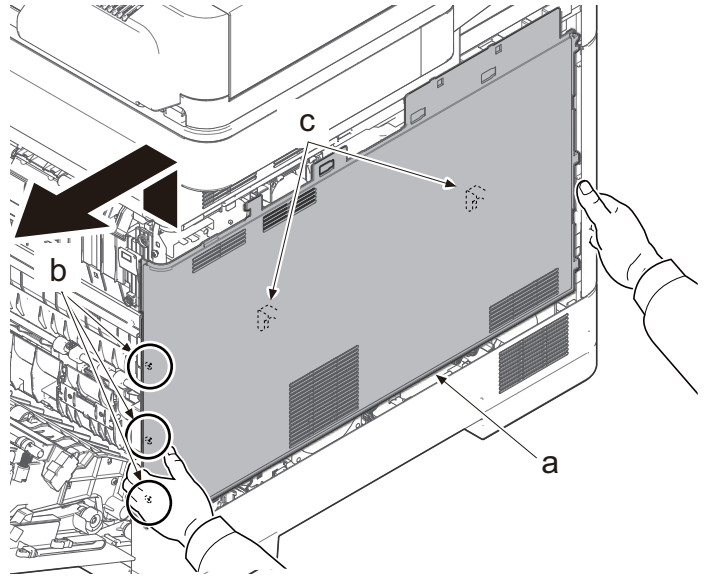


Figure 4-246

IMPORTANT

When reattaching the middle left cover (a), insert the lower rib into the lower left cover (b). Slide it toward the machine front side to fasten three hooks (c) and four hooks (d), then lower the machine rear side of it to fasten three hooks (e) at the machine rear side.

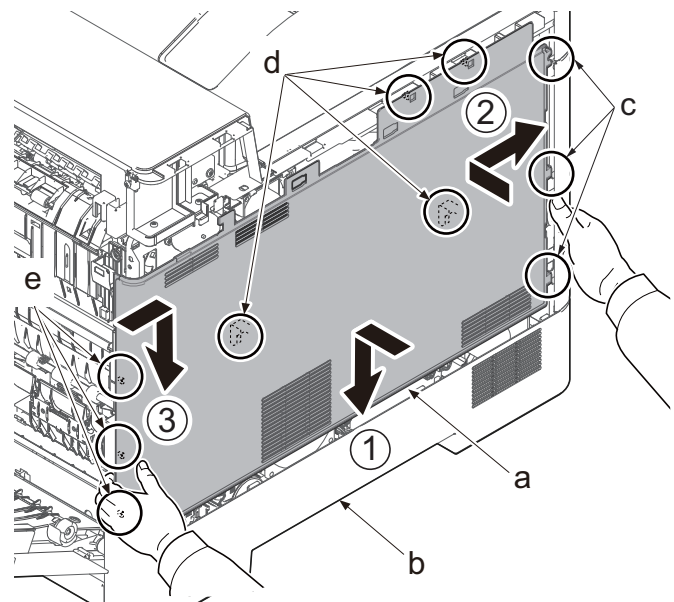


Figure 4-247

7. Remove the screw (a)(M3x8).
8. Pull the rib (b) toward the machine front side and release the center hook (c).
9. Detach the lower left cover (d).

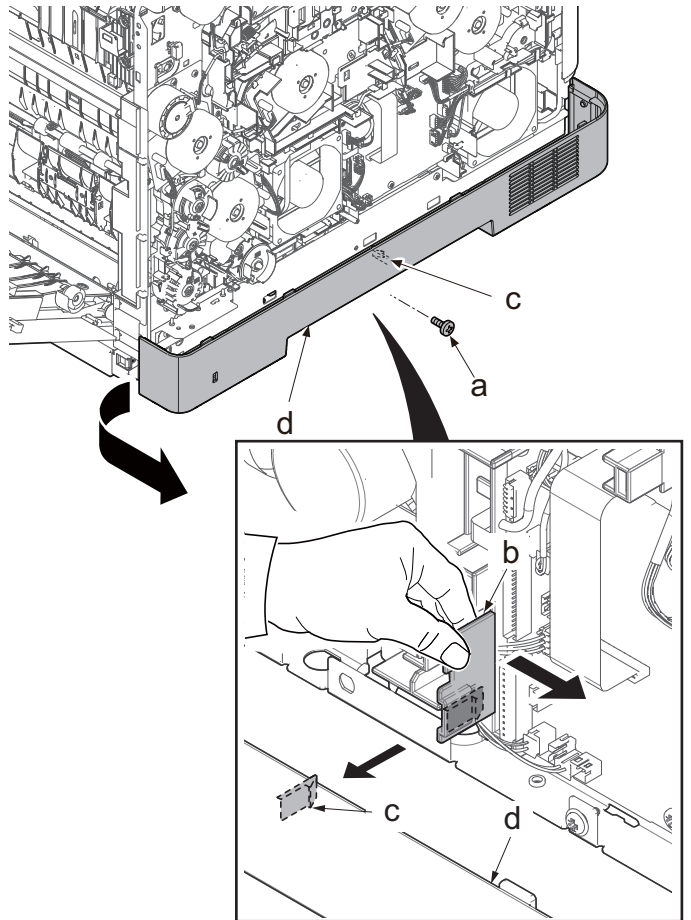


Figure 4-248

IMPORTANT

When attaching the lower left cover (a), insert two bosses (b) at the machine front side into the holes and apply the center hook (c). Then, push it toward the machine rear side.

Check if the hook at the center is surely fastened.

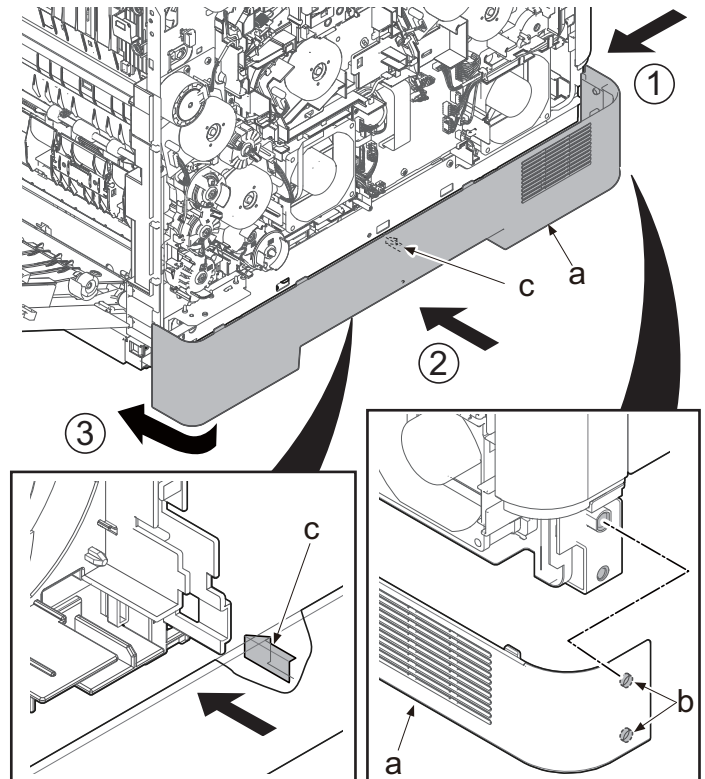


Figure 4-249

(1 - 9) Detaching and reattaching the rear cover

1. Open the rear cover (a).

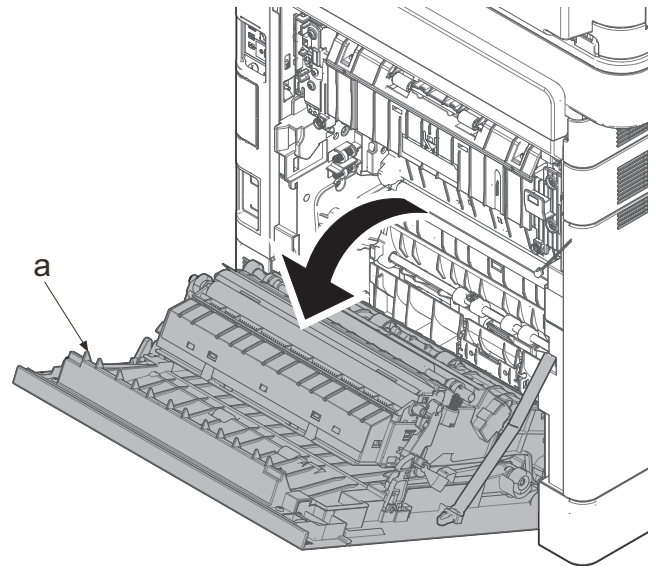


Figure 4-250

2. Close the duplex conveying unit (a).
3. Remove two straps (c) of the rear cover (b).

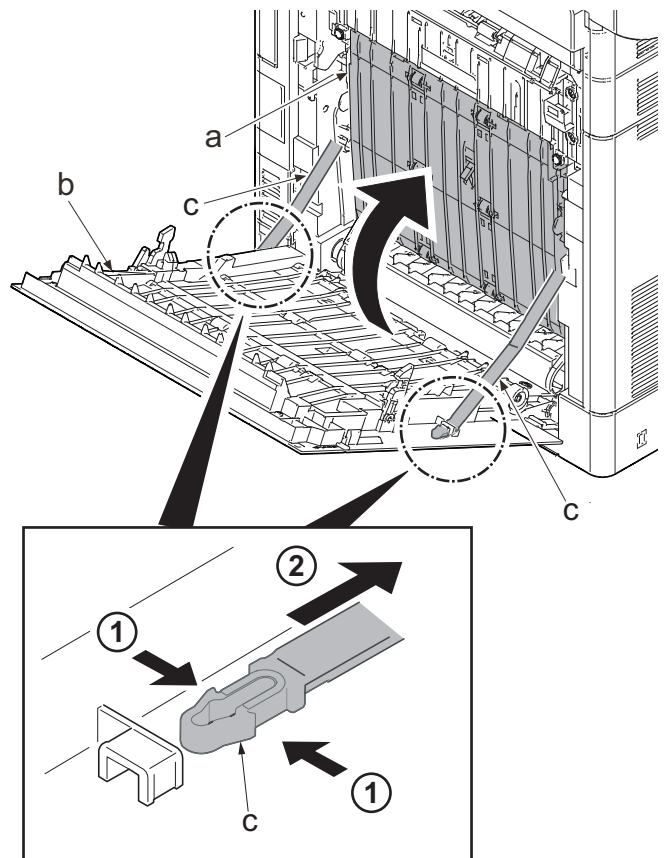


Figure 4-251

4. Align the rear cover in the direction of the arrow, then release the fulcrum parts (b) and (c), and remove the rear cover (a).

*: To remove the fulcrum pin, first spread out the frame on the side (b).

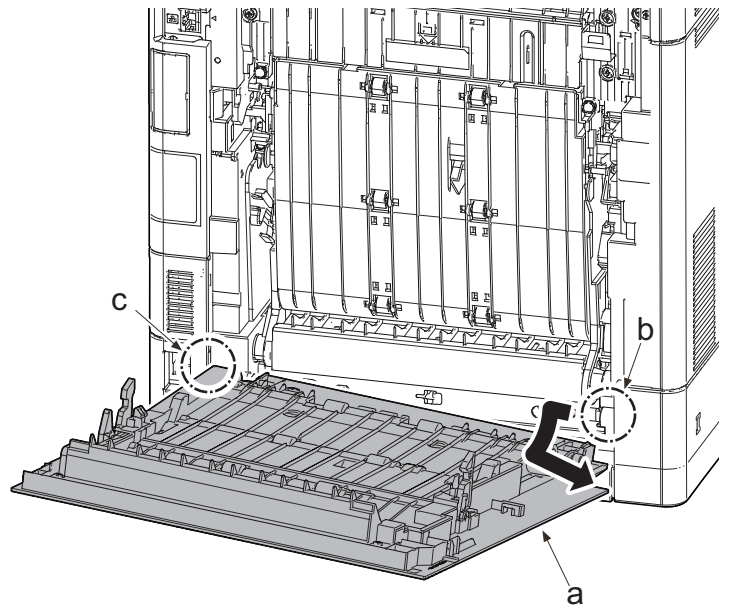


Figure 4-252

4-5 PWBs replacement

IMPORTANT

Before replacing the PWBs, make sure to do the following procedure.
Otherwise, The PWB may be damaged.

1. Unplug the power cord.
2. Press the power switch one second or more to discharge the electric charge inside the main unit.

(1) Detaching and reattaching the main/engine PWB

30 ppm model

1. Pull the lower part of the opening toward the machine rear side and release the hook (a).
2. Remove the interface cover (b).

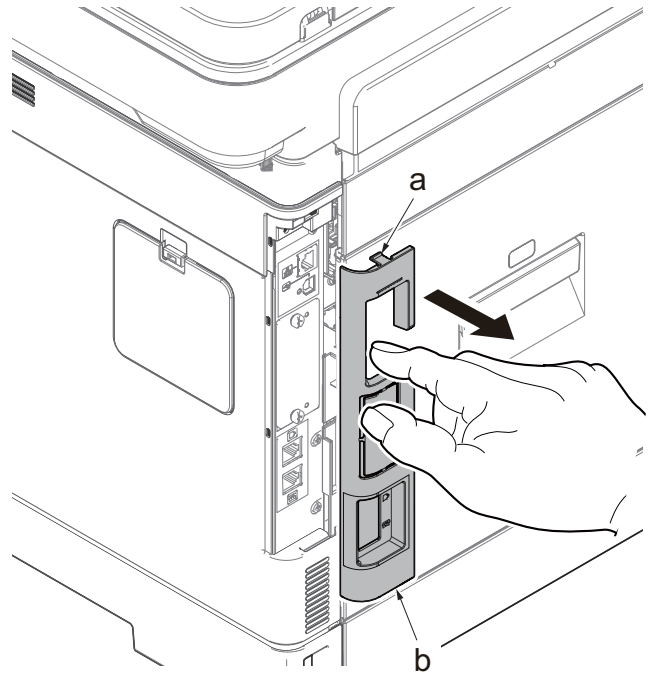


Figure 4-253

3. Remove the screw (a)(M3x8).
4. Slide the upper right cover (b) toward the machine rear side and detach it.

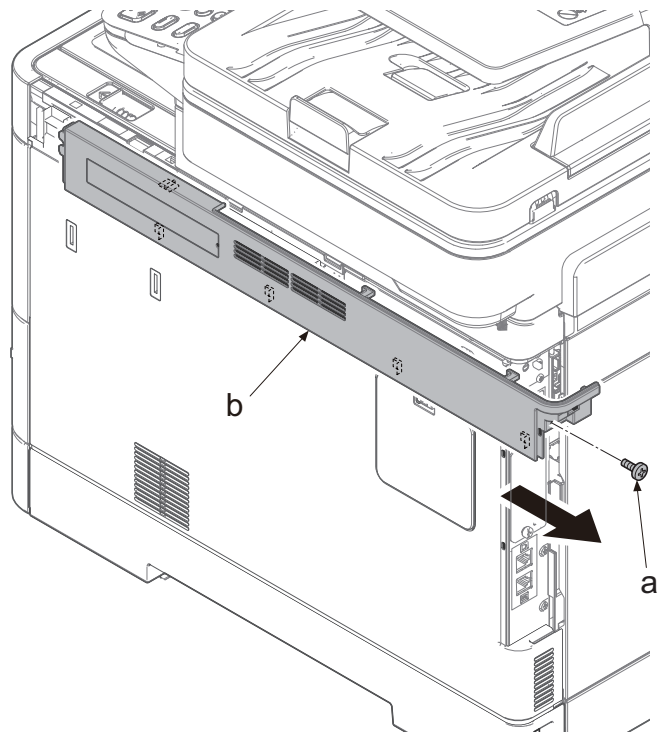


Figure 4-254

IMPORTANT

When reattaching the upper right cover (a), insert the hook (b) to the machine front side, and then fasten seven hooks (c) by sliding it toward the machine front side and insert the positioning projection (d) into the hole.

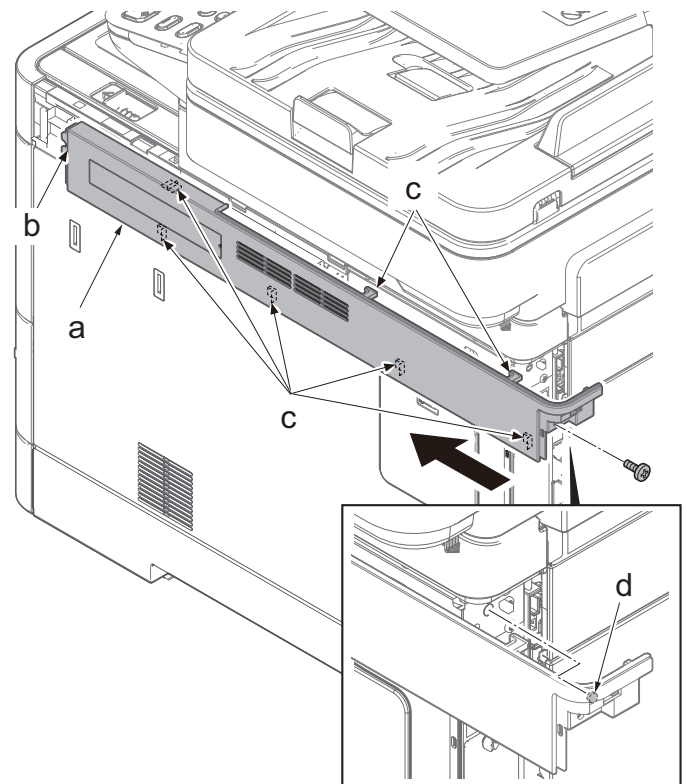


Figure 4-255

5. Open the waste toner cover (a).
6. Press the arm (b) down.
7. Remove the waste toner cover (a).

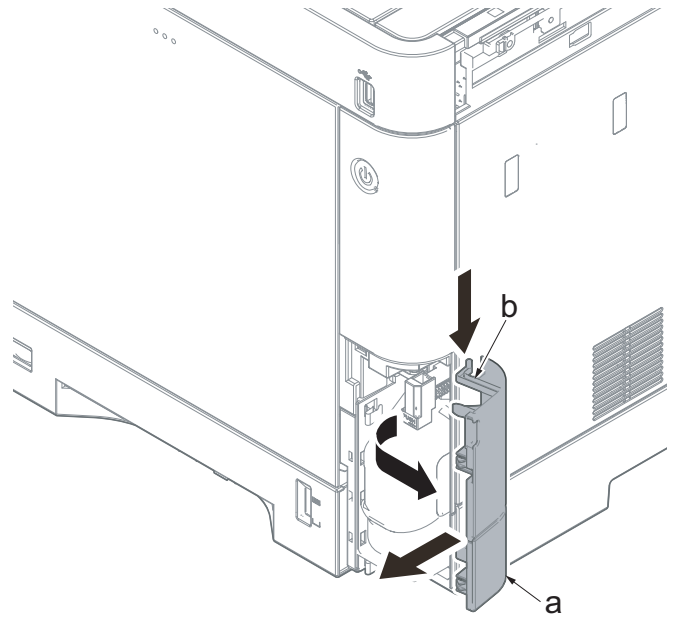


Figure 4-256

8. Push the lever (a) and open the memory cover (b).
9. Remove the memory cover (b).

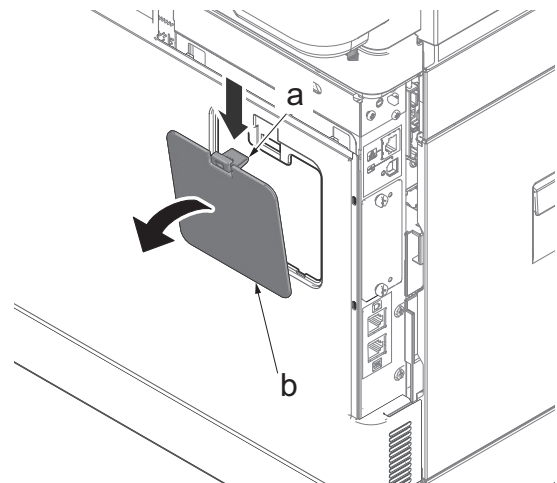


Figure 4-257

10. Pull up the shield lid (a) and pull it toward you to remove it.

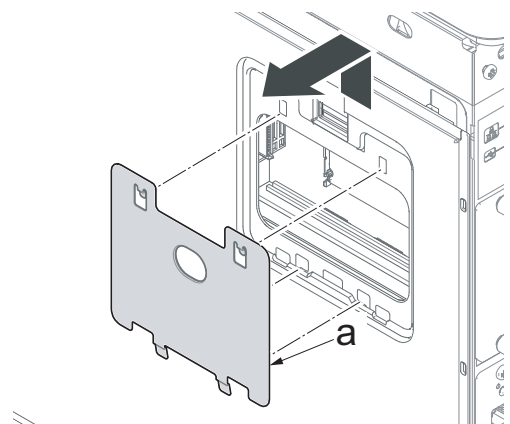


Figure 4-258

11. Open the rear cover (a).

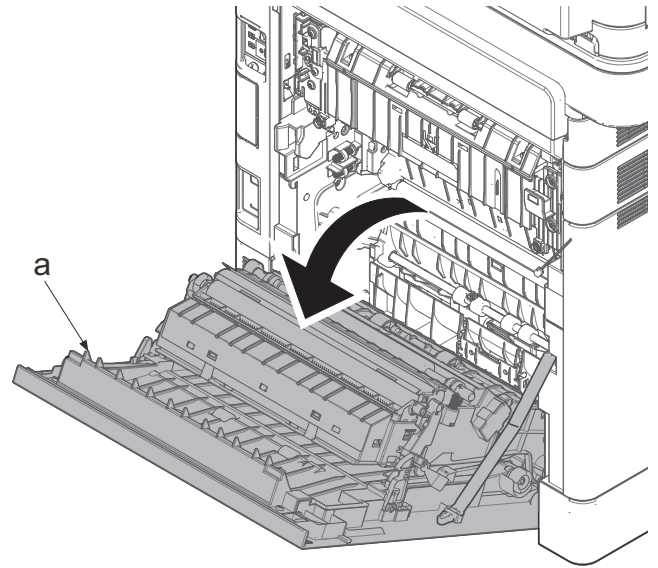


Figure 4-259

12. Push the machine front side of the middle right cover (a) toward the machine rear side and then lift up its machine rear side to detach it.

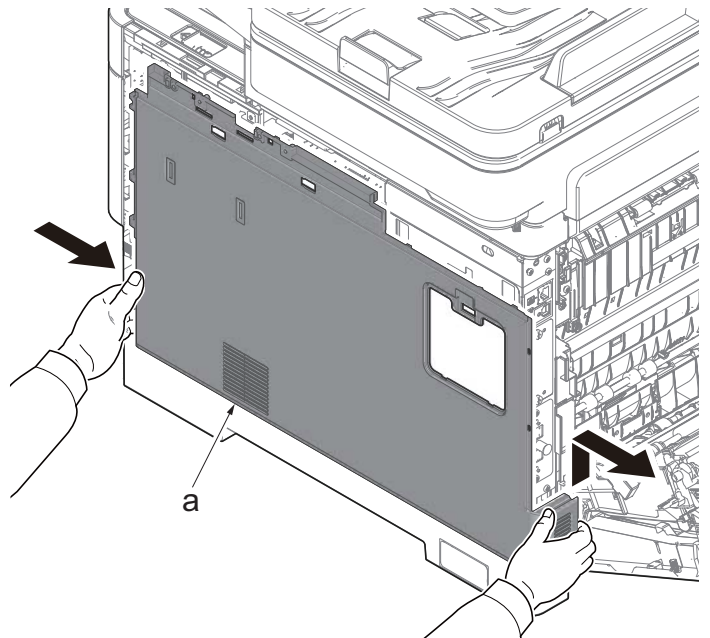


Figure 4-260

IMPORTANT

When reattaching the middle right cover (a), insert the lower rib into the the lower right cover. Slide it toward the machine front side to fasten three hooks (c) and then lower it to fasten three hooks (d), and fasten two hooks (e) at the machine rear side.

Check if three hooks (d) at the machine rear side are surely fastened.

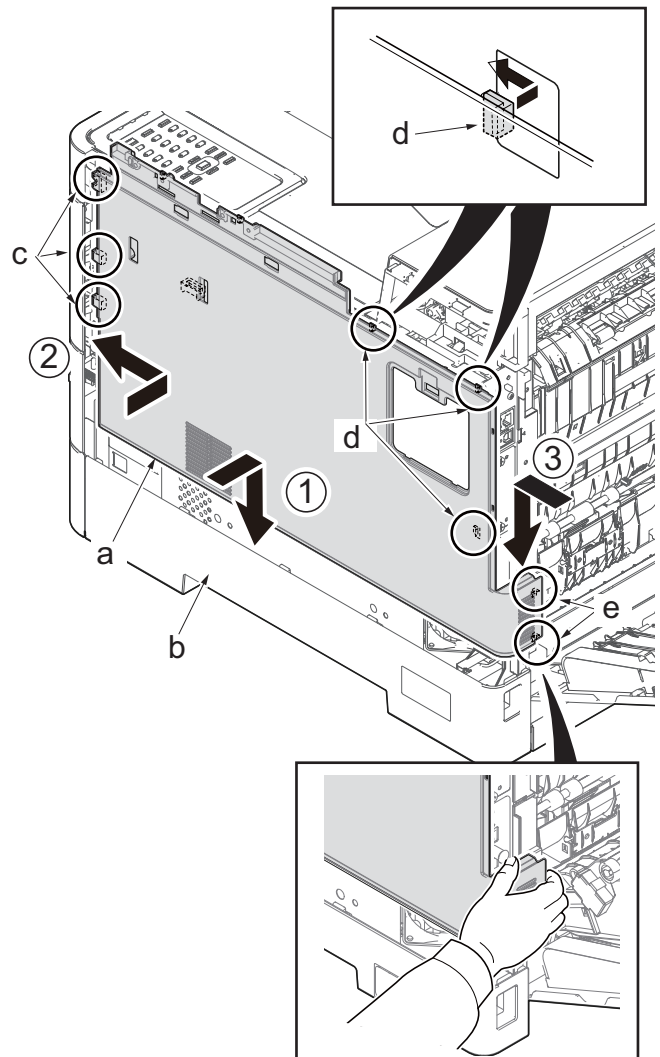


Figure 4-261

13. Remove the network connector cap (a).

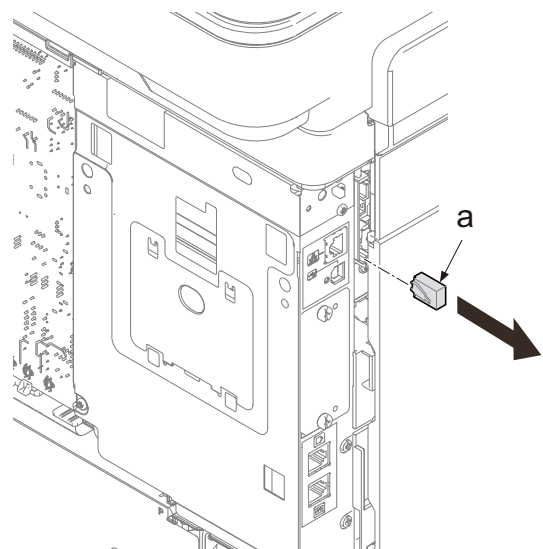


Figure 4-262

*: If the optional board (b) is installed, remove two pins (a) and remove it.

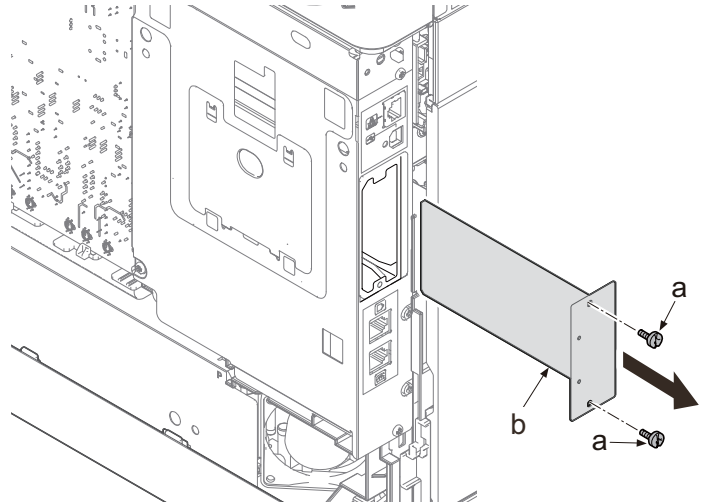


Figure 4-263

- 14. Remove four screws (a)(M3x8).
- 15. Remove the screw (b)(M3x8).
Remove two ground terminal (c).

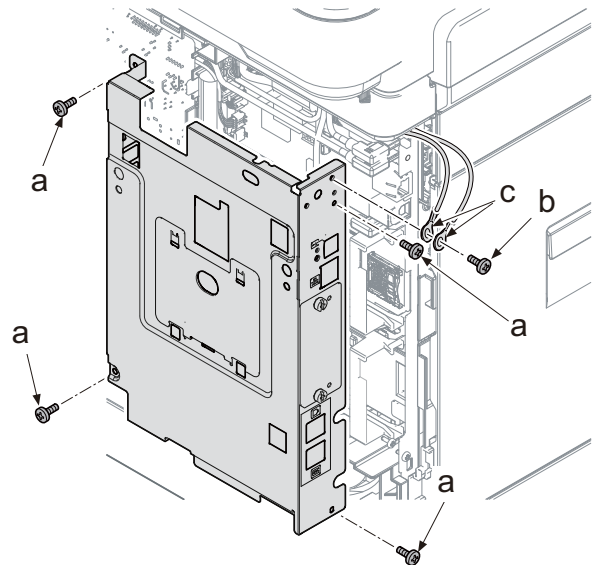


Figure 4-264

16. Remove the network connector (a) while sliding it toward the machine rear side and then remove the controller shield (b).

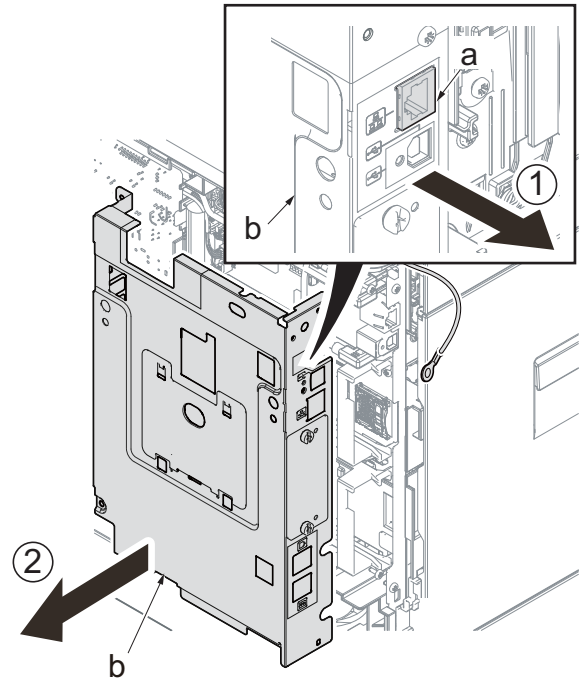


Figure 4-265

IMPORTANT

Pull out the ground wire (b) from the cut-out (c) of the controller shield (a) and secure it with the screw (d) when reattaching the controller shield (a).

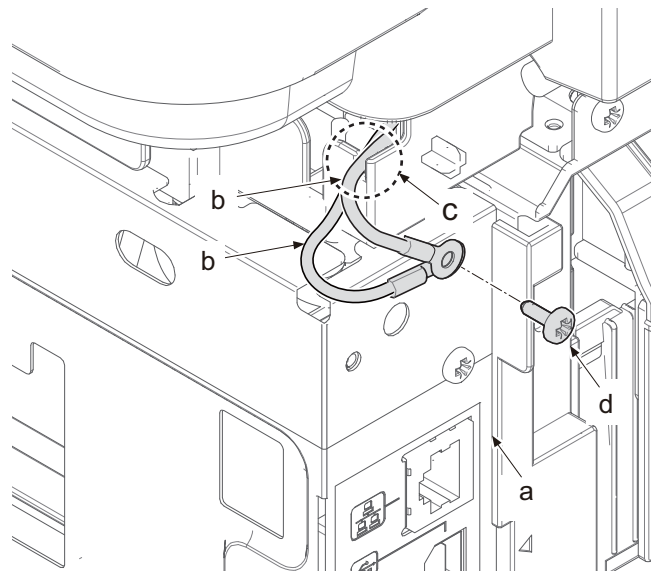


Figure 4-266

(4 in 1 model)

17. Disconnect two connectors from the main/engine PWB (a).

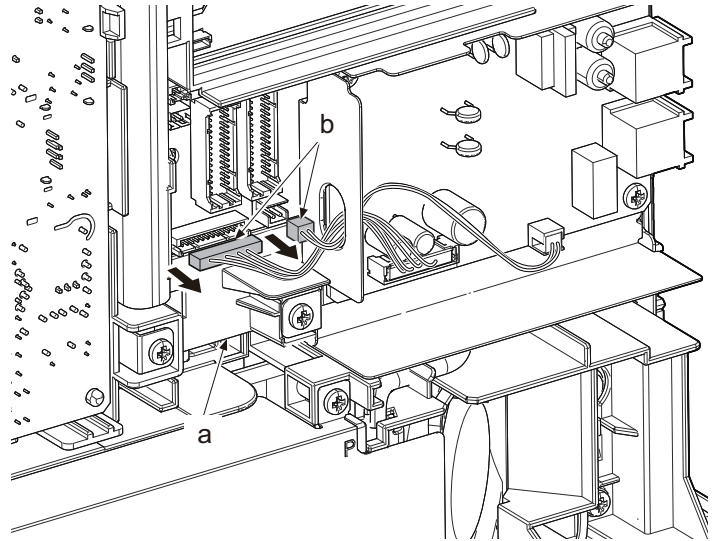


Figure 4-267

18. Remove three screws (a)(M3x8).
19. Detach the FAX unit (b).

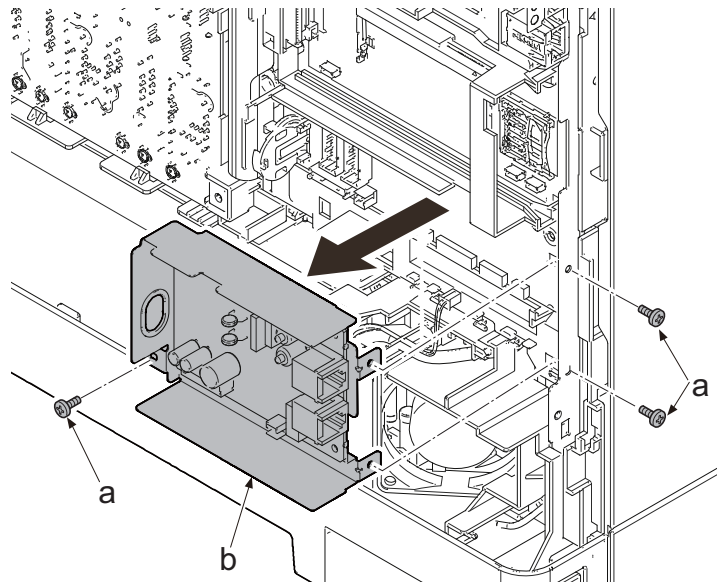


Figure 4-268

20. Open the wire alignment film (c) by releasing its square hole from the hook (b) of the upper PWB guide (a).

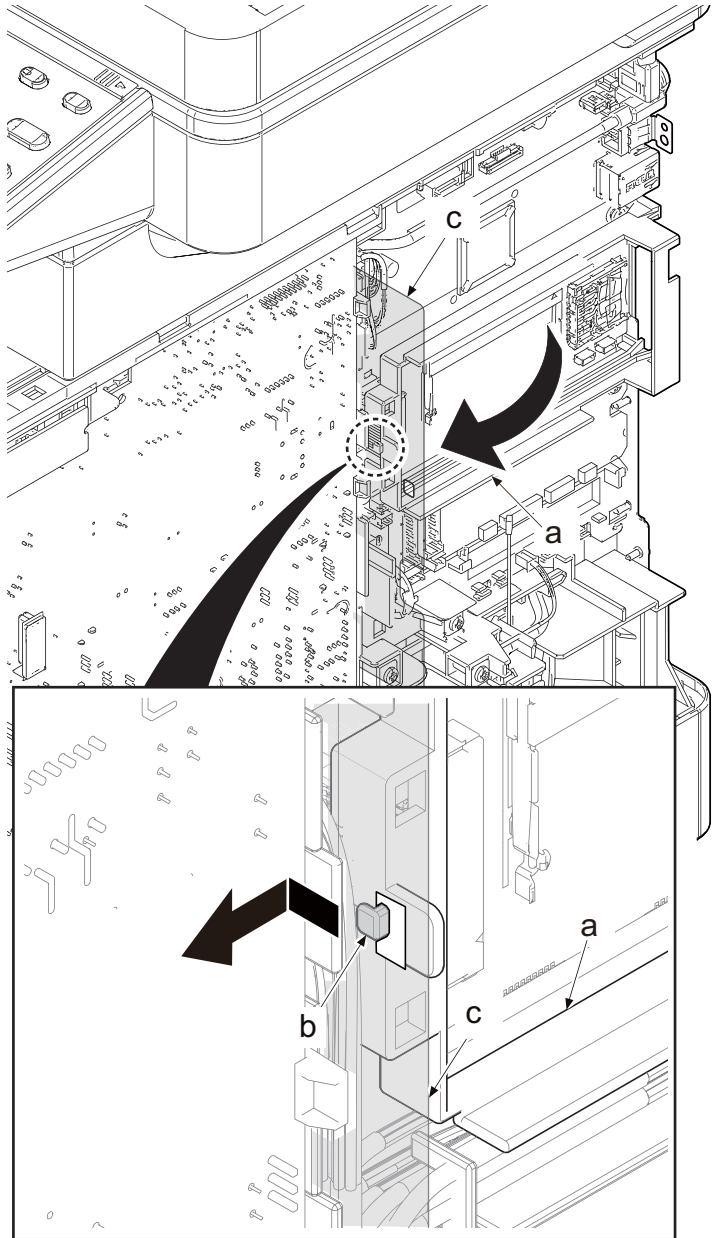


Figure 4-269

21. Release two hooks (b) of the PWB guides (a).

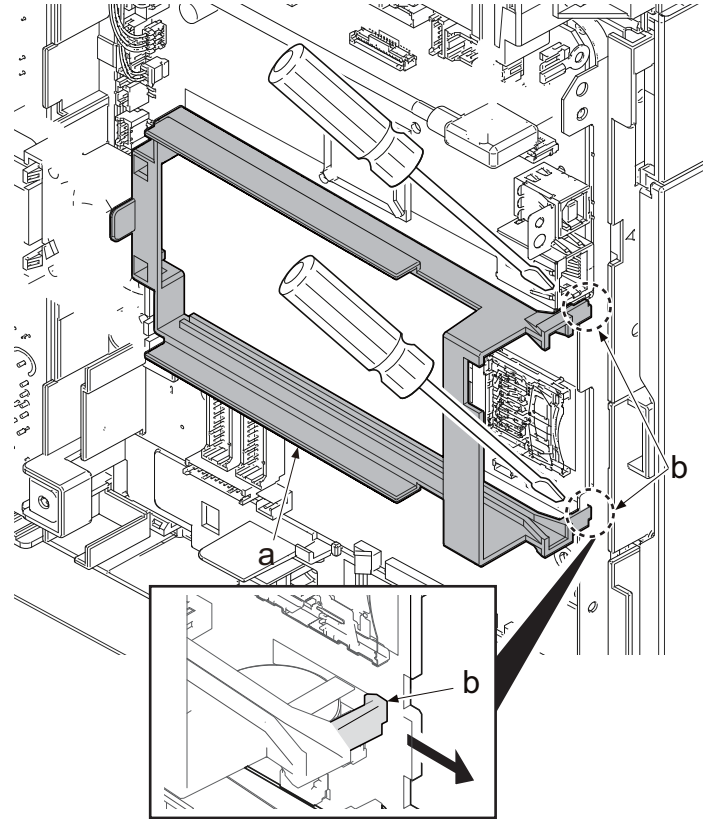


Figure 4-270

22. Slide the PWB guide (a) in the direction of the arrow to release two hooks (b).

IMPORTANT

Check if two hooks (b) are fastened after reattaching the PWB guide (a).
The optional PWB connector can not be connected without hooking.

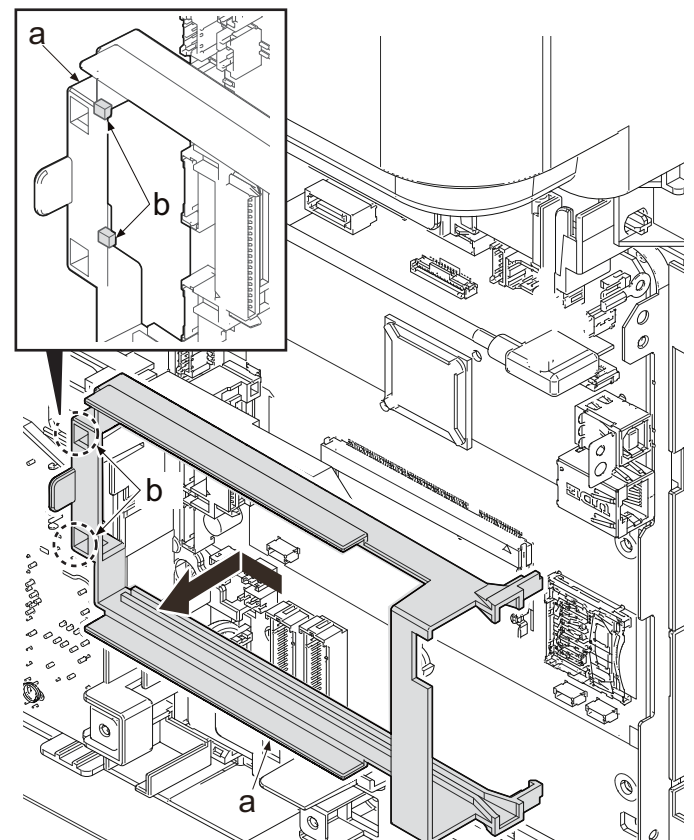


Figure 4-271

23. Disconnect all the connectors and the FFCs from the main/engine PWB (a).
Release the wire from the wire guide (b).

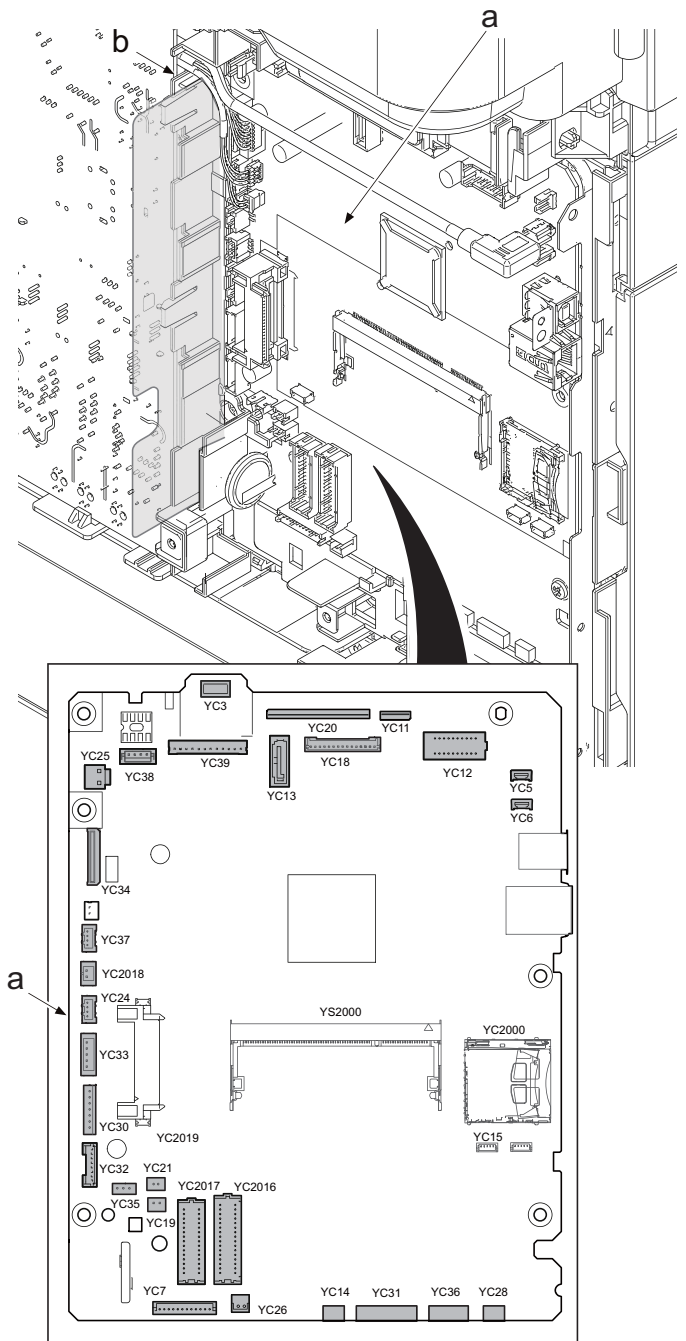


Figure 4-272

- 24. Remove six screws (a)(M3x8).
- 25. Remove the main/engine PWB (b).

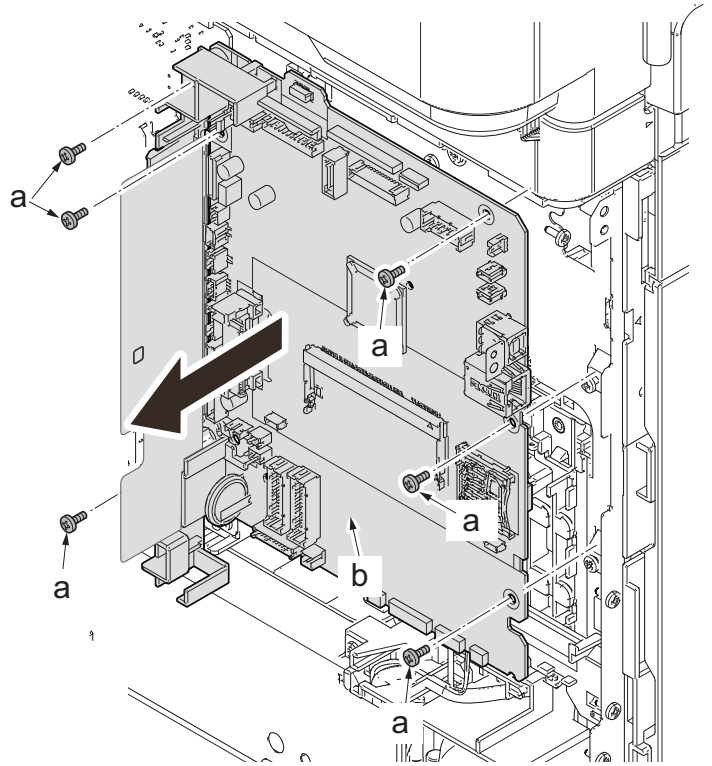


Figure 4-273

- 26. Release two hooks (a).
- 27. Remove the wire guide (b).

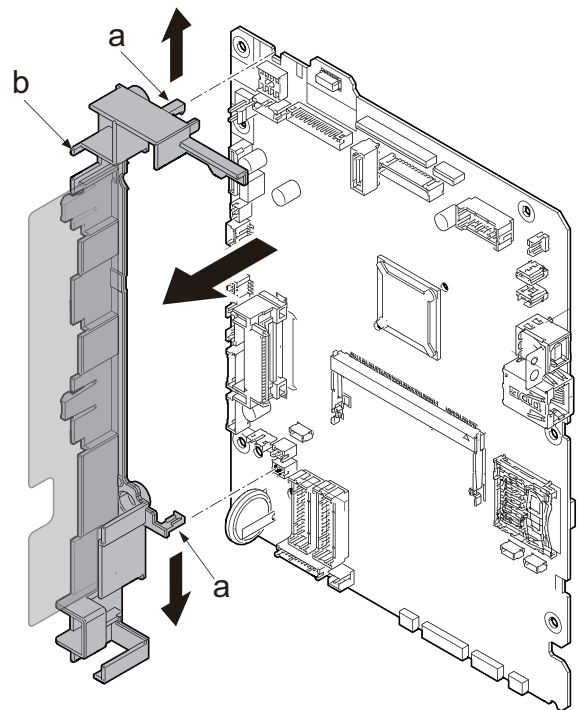


Figure 4-274

28. Replace the EEPROM(U19S) (b) from the old PWB (a) to the new one.
29. Check the main/engien PWB and clean or replace it if necessary.
*: Replace the optional memory from the old PWB to the new one, if installed.
30. Reattach the parts in the original position.

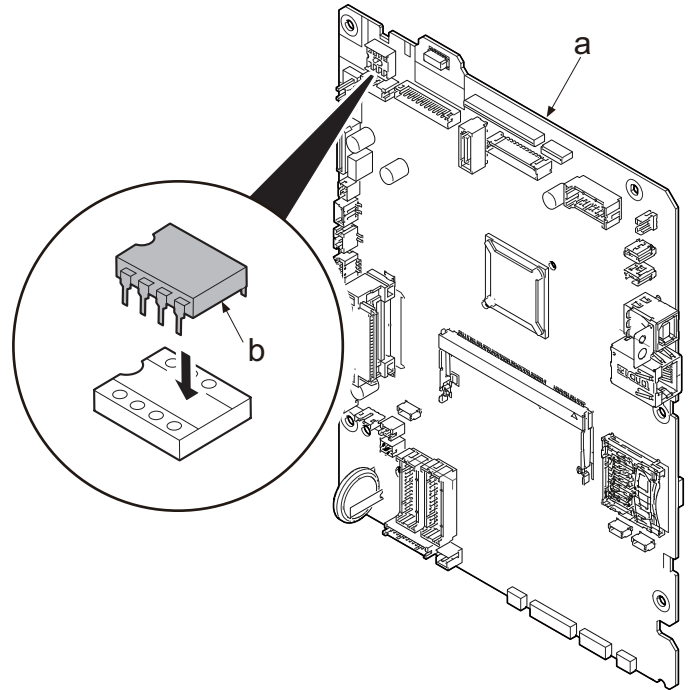


Figure 4-275

35 ppm model

1. Pull the lower part of the opening toward the machine rear side and release the hook (a).
2. Pull the DP cable (b) out from the opening and remove the interface cover (c).

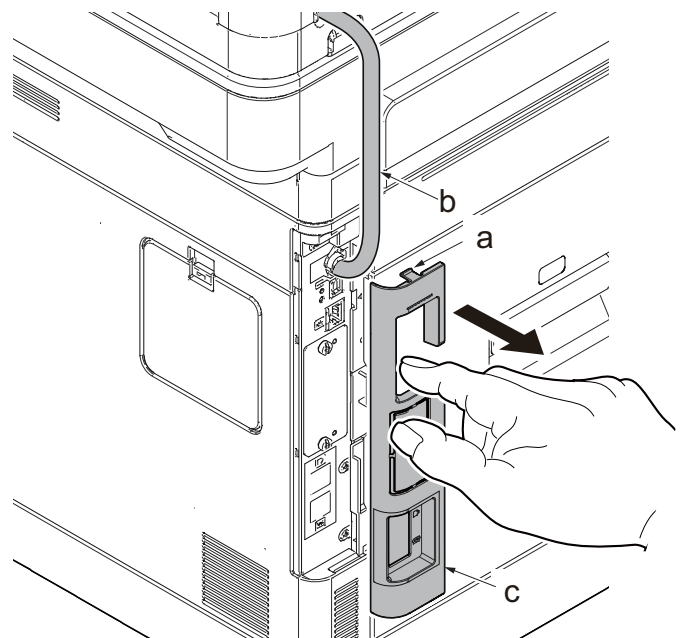


Figure 4-276

3. Remove the screw (a)(M3x8).
4. Slide the upper right cover (b) toward the machine rear side and detach it.

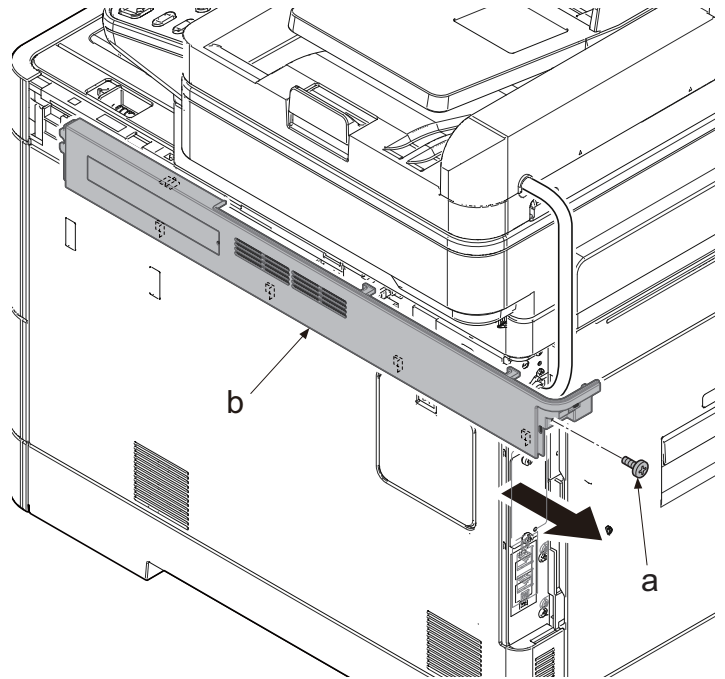


Figure 4-277

IMPORTANT

When reattaching the upper right cover (a), insert the hook (b) to the machine front side, and then fasten seven hooks (c) by sliding it toward the machine front side and insert the positioning projection (d) into the hole.

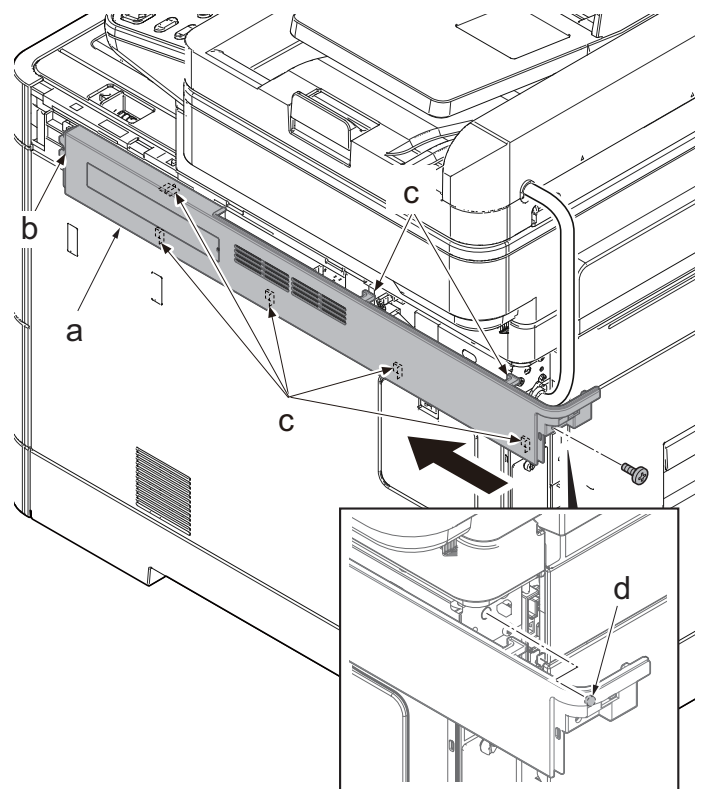


Figure 4-278

5. Open the waste toner cover (a).
6. Press the arm (b) down.
7. Remove the waste toner cover (a).

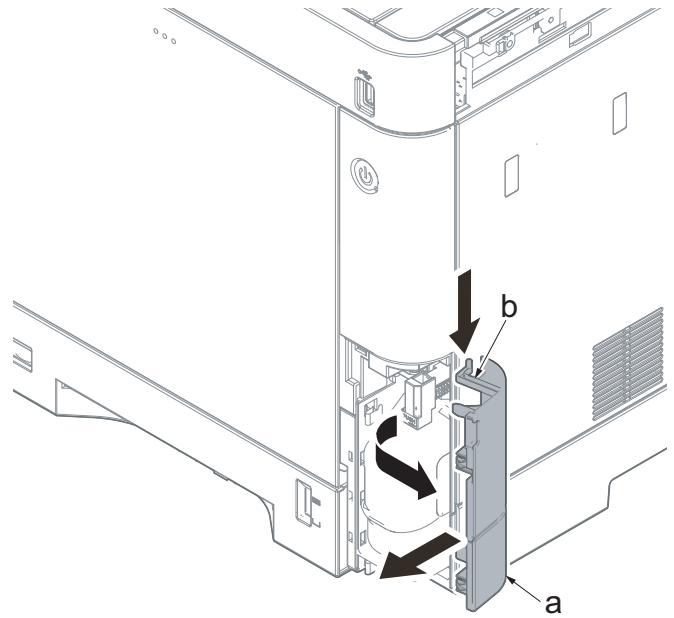


Figure 4-279

8. Push the lever (a) and open the memory cover (b).
9. Remove the memory cover (b).

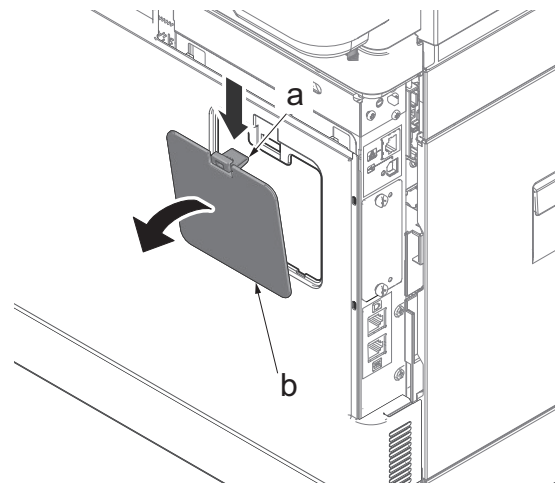


Figure 4-280

10. Pull up the shield lid (a) and pull it toward you to remove it.

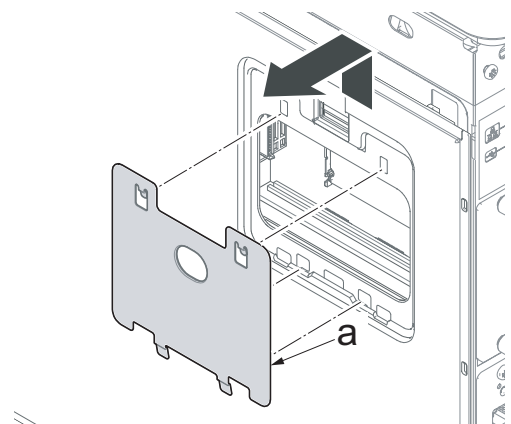


Figure 4-281

11. Open the rear cover (a).

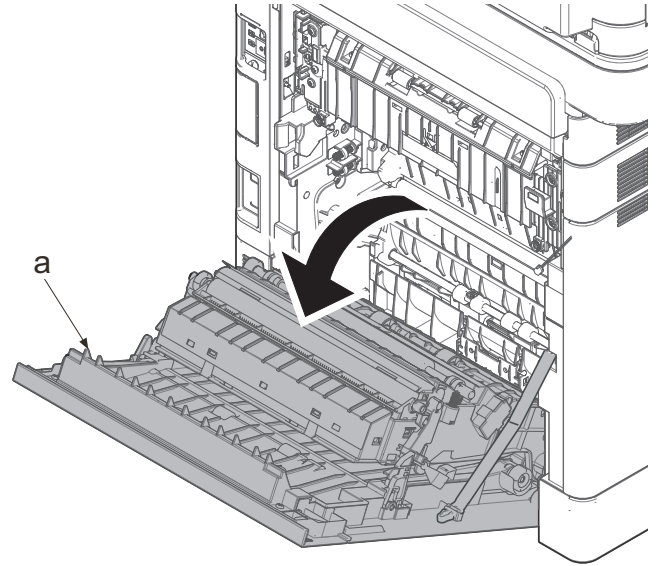


Figure 4-282

12. Push the machine front side of the middle right cover (a) toward the machine rear side and then lift up its machine rear side to detach it.

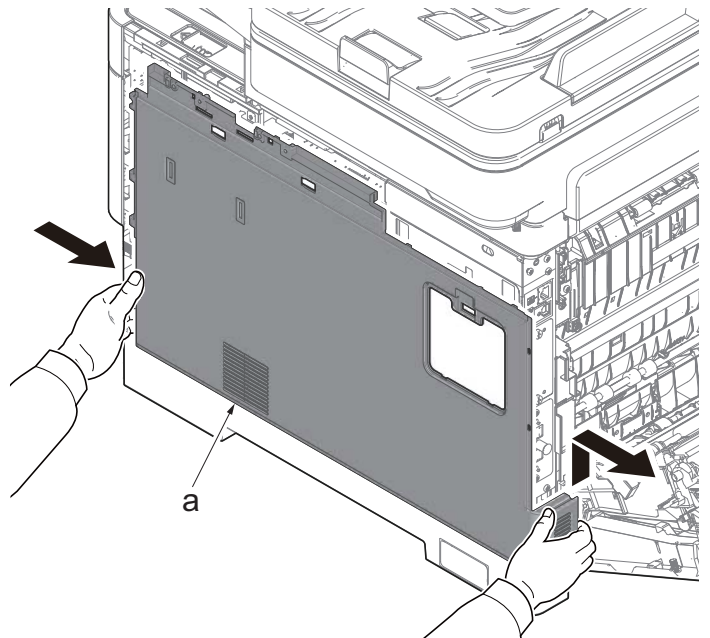


Figure 4-283

IMPORTANT

When reattaching the middle right cover (a), insert the lower rib into the the lower right cover. Slide it toward the machine front side to fasten three hooks (c) and then lower it to fasten three hooks (d), and fasten two hooks (e) at the machine rear side.

Check if three hooks (d) at the machine rear side are surely fastened.

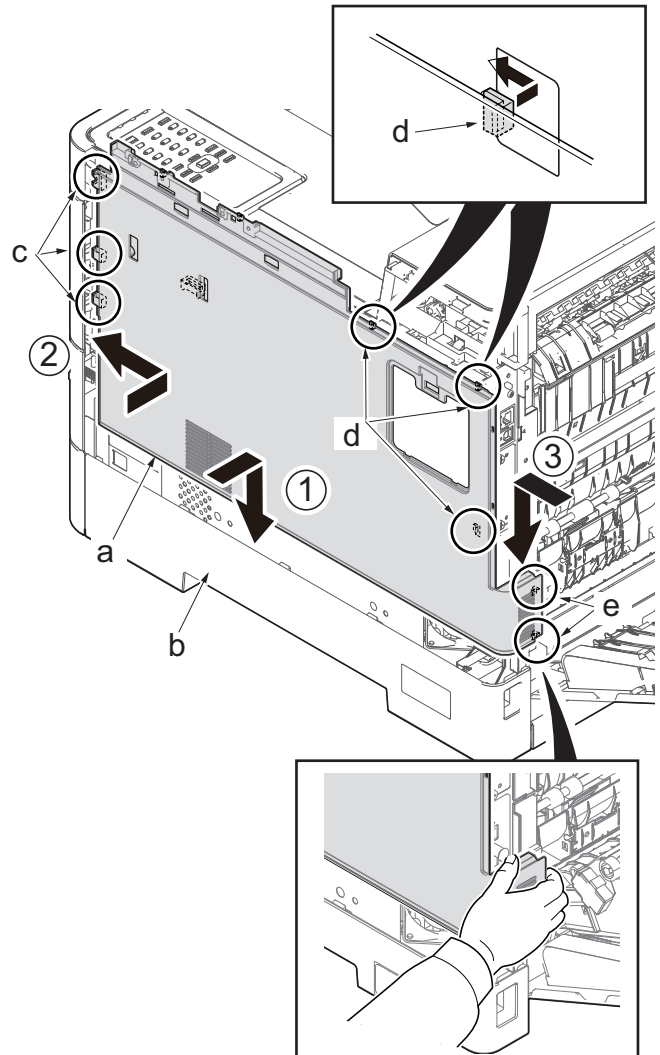


Figure 4-284

13. Remove the network connector cap (a).

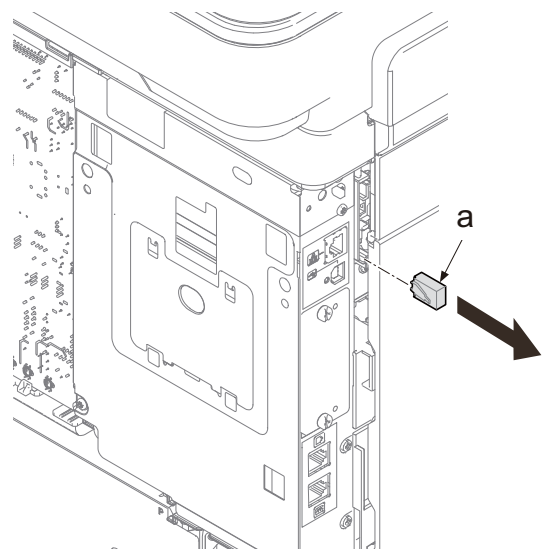


Figure 4-285

*: If the optional board (b) is installed, remove two pins (a) and remove it.

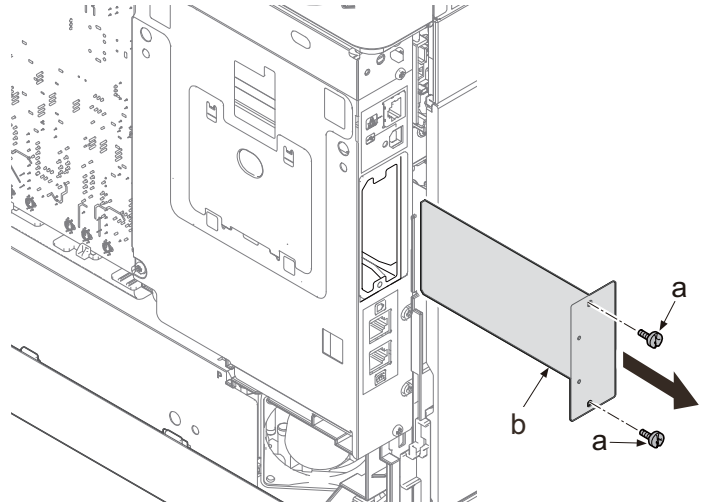


Figure 4-286

- 14. Remove four screws (a)(M3x8).
- 15. Remove the screw (b)(M3x8).
Remove two ground terminal (c).

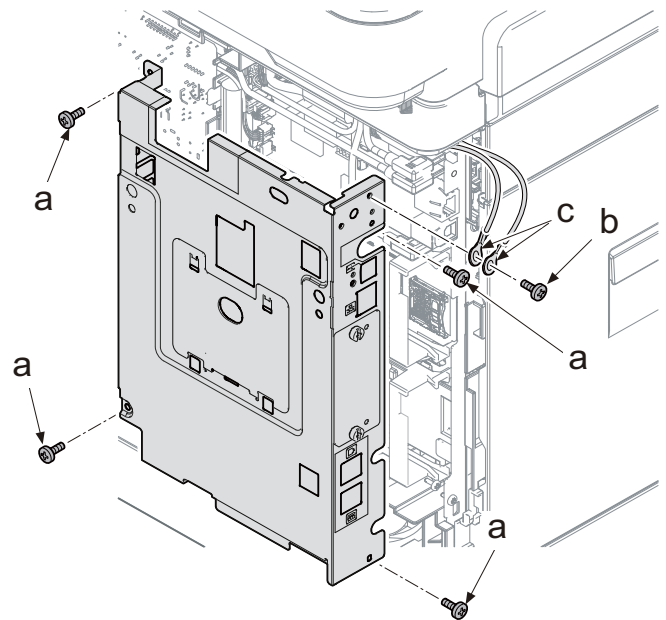


Figure 4-287

16. Remove the network connector (a) while sliding it toward the machine rear side and then remove the controller shield (b).

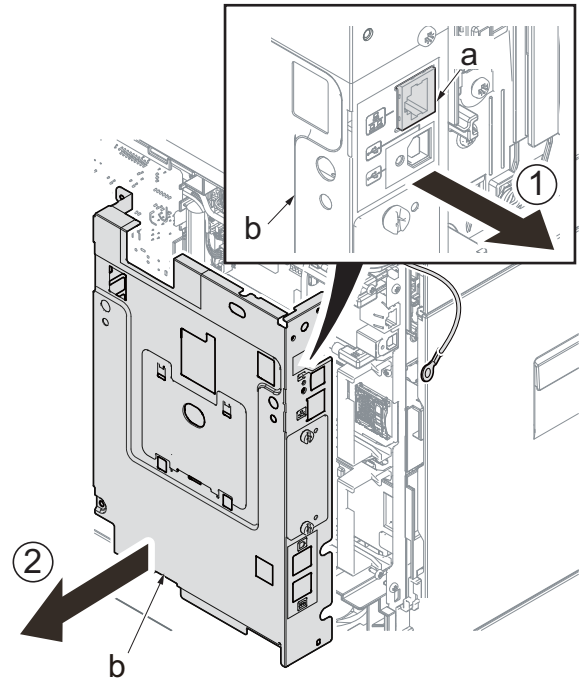


Figure 4-288

IMPORTANT

Pull out the ground wire (b) from the cut-out (c) of the controller shield (a) and secure it with the screw (d) when reattaching the controller shield (a).

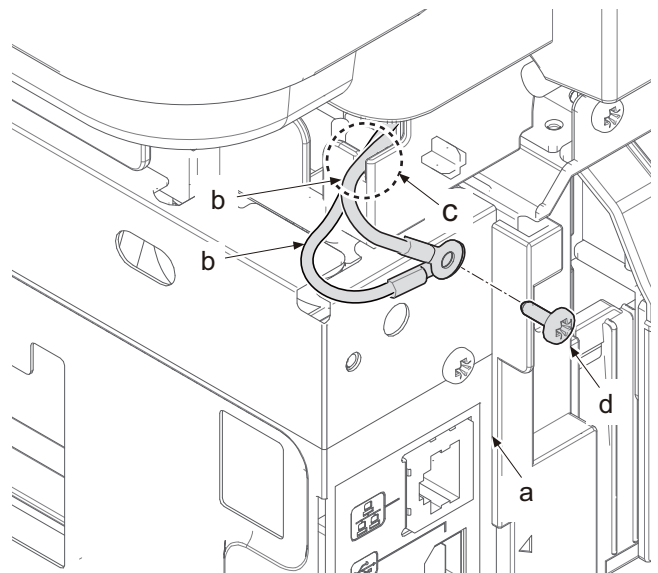


Figure 4-289

(4 in 1 model)

17. Disconnect two connectors from the main/engine PWB (a).

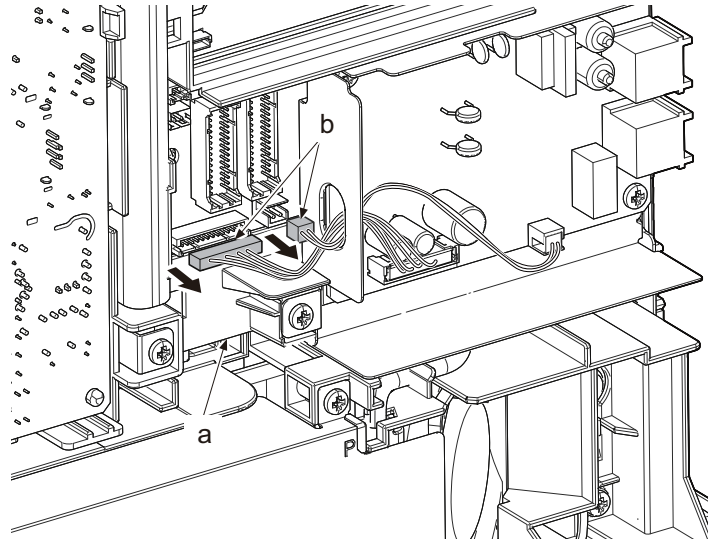


Figure 4-290

18. Remove three screws (a)(M3x8).
19. Detach the FAX unit (b).

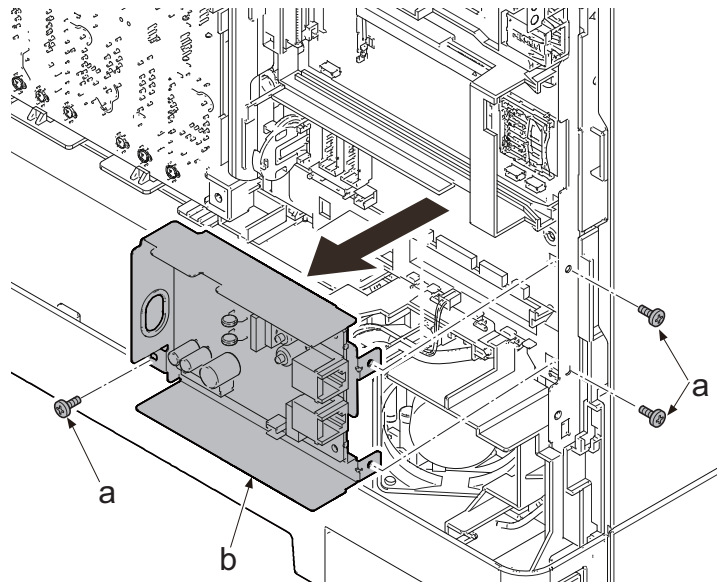


Figure 4-291

20. Open the wire alignment film (c) by releasing its square hole from the hook (b) of the upper PWB guide (a).

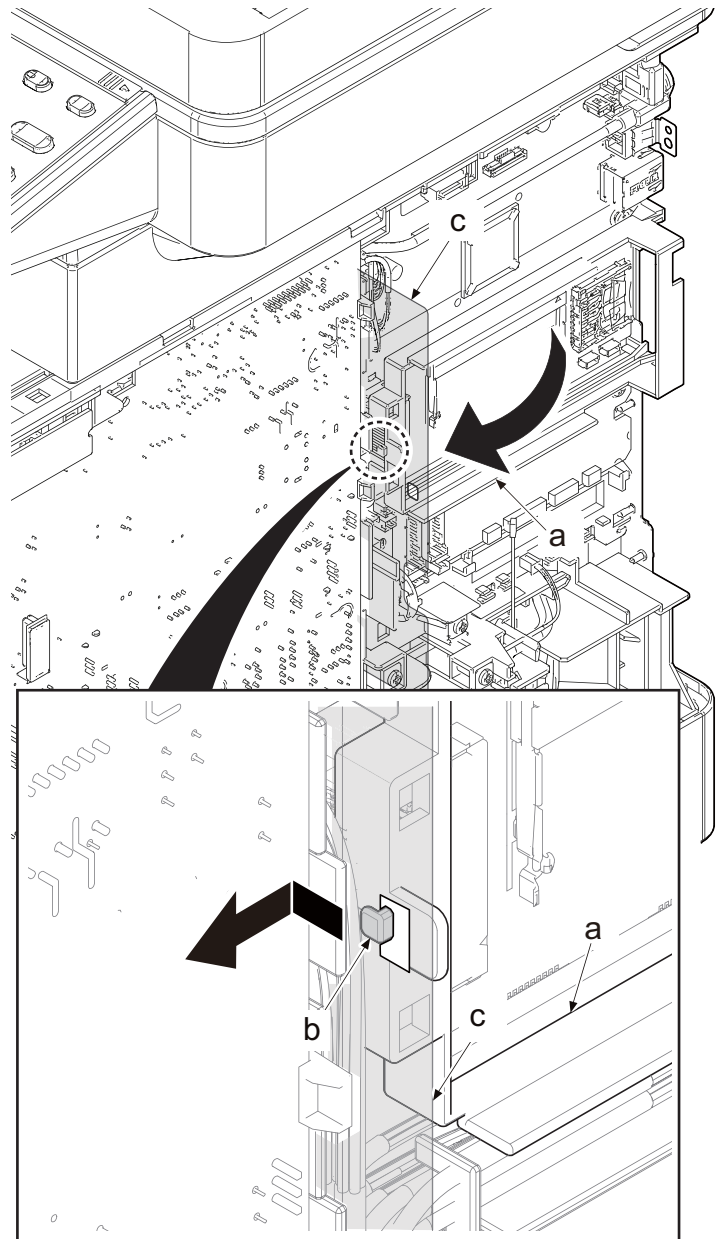


Figure 4-292

21. Release two hooks (b) of the PWB guides (a).

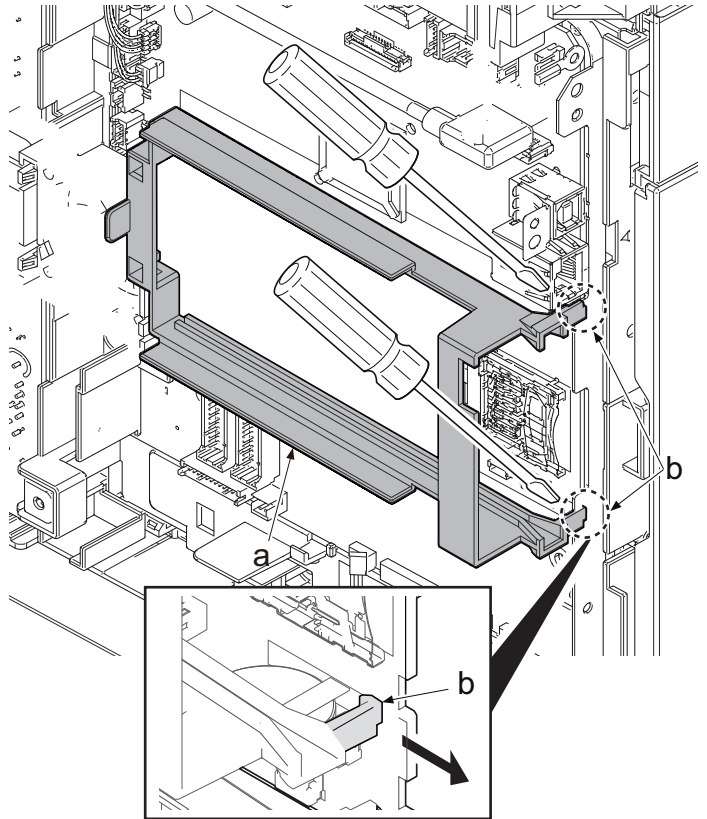


Figure 4-293

22. Slide the PWB guide (a) in the direction of the arrow to release two hooks (b).

IMPORTANT

Check if two hooks (b) are fastened after reattaching the PWB guide (a).
The optional PWB connector can not be connected without hooking.

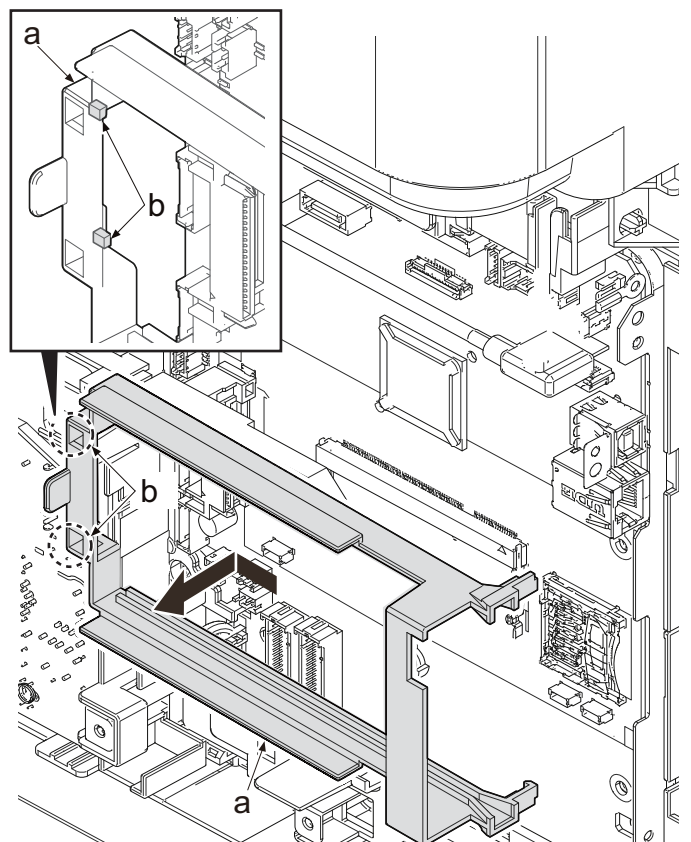


Figure 4-294

23. Disconnect all the connectors and the FFCs from the main/engine PWB (a).
Release the wire from the wire guide (b).

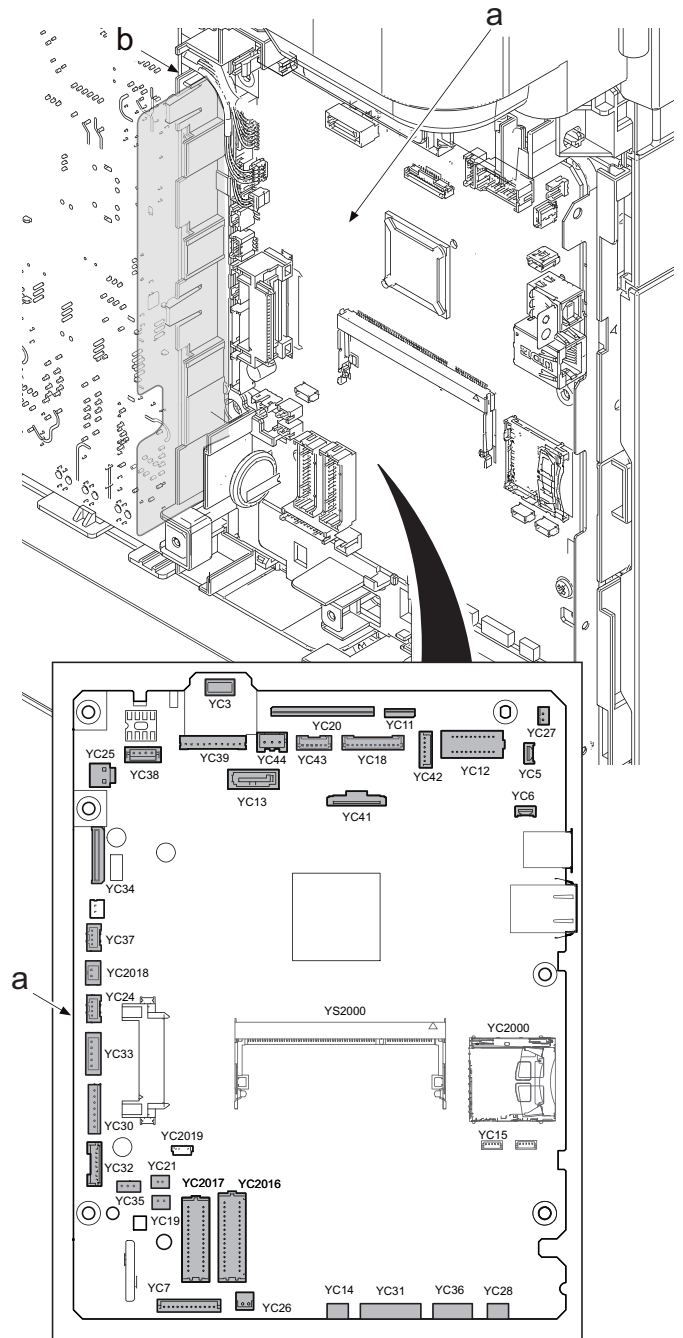


Figure 4-295

- 24. Remove six screws (a)(M3x8).
- 25. Remove the main/engine PWB (b).

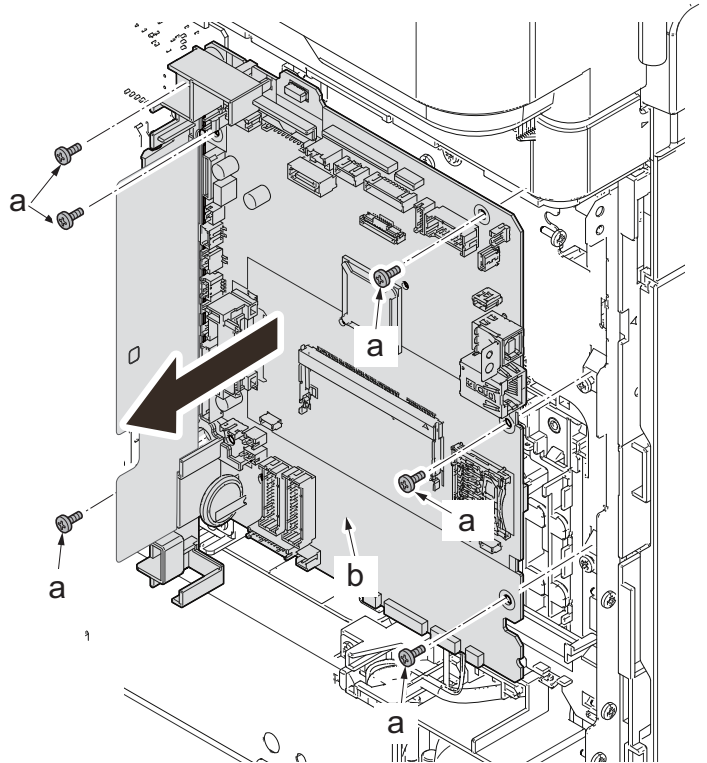


Figure 4-296

- 26. Release two hooks (a).
- 27. Remove the wire guide (b).

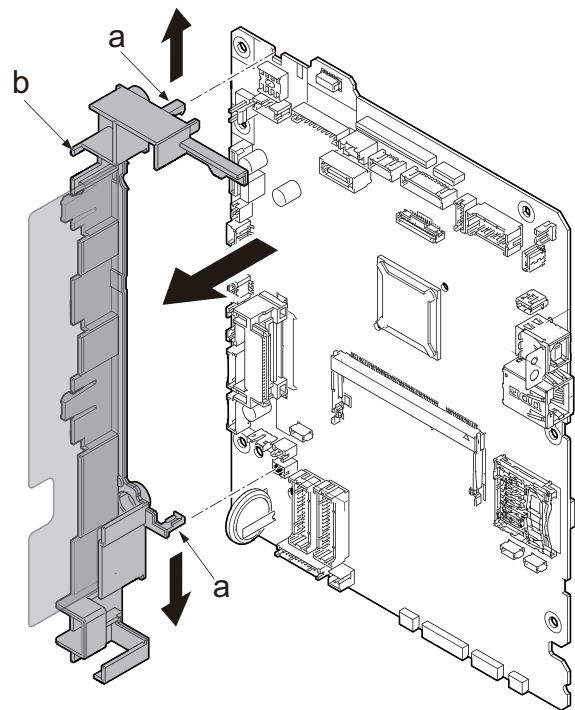


Figure 4-297

28. Replace the EEPROM(U19S) (b) from the old PWB (a) to the new one.
29. Check the main/engien PWB and clean or replace it if necessary.
*: Replace the optional memory from the old PWB to the new one, if installed.
30. Reattach the parts in the original position.

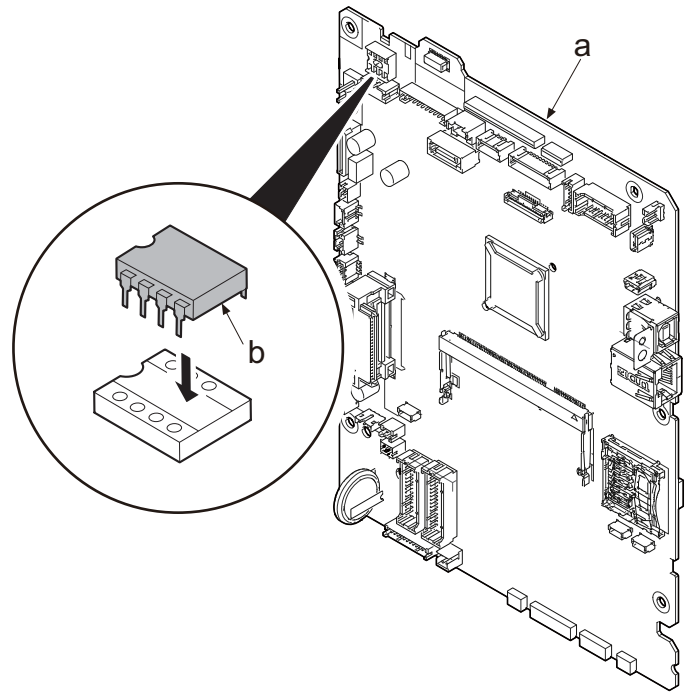


Figure 4-298

(2) Procedure to be followed after the main/engine PWB has been replaced

Notes when replacing the main/engine PWB

- *: The C0180 (Machine number mismatch) is displayed when the device is powered up after its main/engine PWB has been replaced. Store the serial number data for the main/engine PWB by using U004.
- *: Since the MAC address changes, check the network settings.
Example: If the printer name is registered with the IP address, reset the IP address.

Execute the following after replacing the main/engine PWB.

(2 - 1)Firmware update

Upgrade the main and the engine firmware to the latest version, and install the option language and color table (1,2).
(See page P.5-1)

(2 - 2)Initializing the FAX system (4 in 1 model only)

1. Input "10871087" using the numeric keys to enter the maintenance mode.
2. Input "600" using the numeric keys and press the [Start] key.
3. Select [Country Code] and enter a country code using the numeric keys.
*: Refer to the following country code list.
4. Select [Execute].
5. Press the [Start] key to start data initialization.
*: Press the [Stop] key to cancel the data initialization.

Country code list

country code	Destination	country code	Destination
000	Japan	007	South America ^{*3}
156	Asian nations ^{*1}	253	European nations ^{*4}
254	Taiwan	250	Russia
097	Korea	009	Australia
038	China	126	New Zealand ^{*5}
181	North America ^{*2}		

*1: Applied for Sales company competent Singapore, India, Thailand, Hong Kong.

*2: Applied for Sales company competent USA, Canada, Mexico, Brazil.

*3: Applied for Sales company competent Bolivia, Chile, Peru, Argentina.

*4: Applied for Sales company competent Italy, Germany, Spain, U.K., Netherlands, Sweden, France, Austria, Switzerland, Belgium, Denmark, Finland, Portugal, Ireland, Norway, Saudi Arabia, Turkey.

*5: Change the country code when selling in New Zealand. The country code to input is 126.

(2 - 3) Adjust the scanner image

Execute maintenance mode U411 by using the scanner automatic adjustment original. (See page P.6-77)

(2 - 4) Adjust the image

Execute [Color Calibration]

1. Display the screen.
[System Menu/Counter] key> [Adjustment/Maintenance] > [Color Calibration].
2. Adjust
Select [Execute]. Calibration is started.

Execute the Color Registration

Auto registration and manual registration are available for Color Registration. Color drift can be largely corrected through auto registration. However, if it is not resolved or to perform more detailed settings, use the manual registration.

Auto correction

1. Load paper.

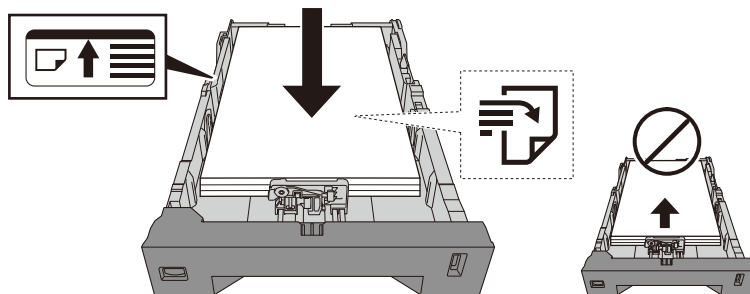


Figure 4-299

IMPORTANT

- Load the paper with the print side facing up.
 - After removing new paper from its packaging, fan the paper before loading it in the multi-purpose tray.
 - Before loading the paper, be sure that it is not curled or folded. Paper that is curled or folded may cause paper jams.
 - Ensure that the loaded paper does not exceed the level indicator (see illustration above).
 - If paper is loaded without adjusting the paper length guide and paper width guide, the paper may skew or become jammed.
2. Display the screen.
[System Menu/Counter] key > [Adjustment/Maintenance > [Color Registration] > [Auto]
 3. Print the chart
Select [Start].
A charts is printed.

Chart sample (Auto)

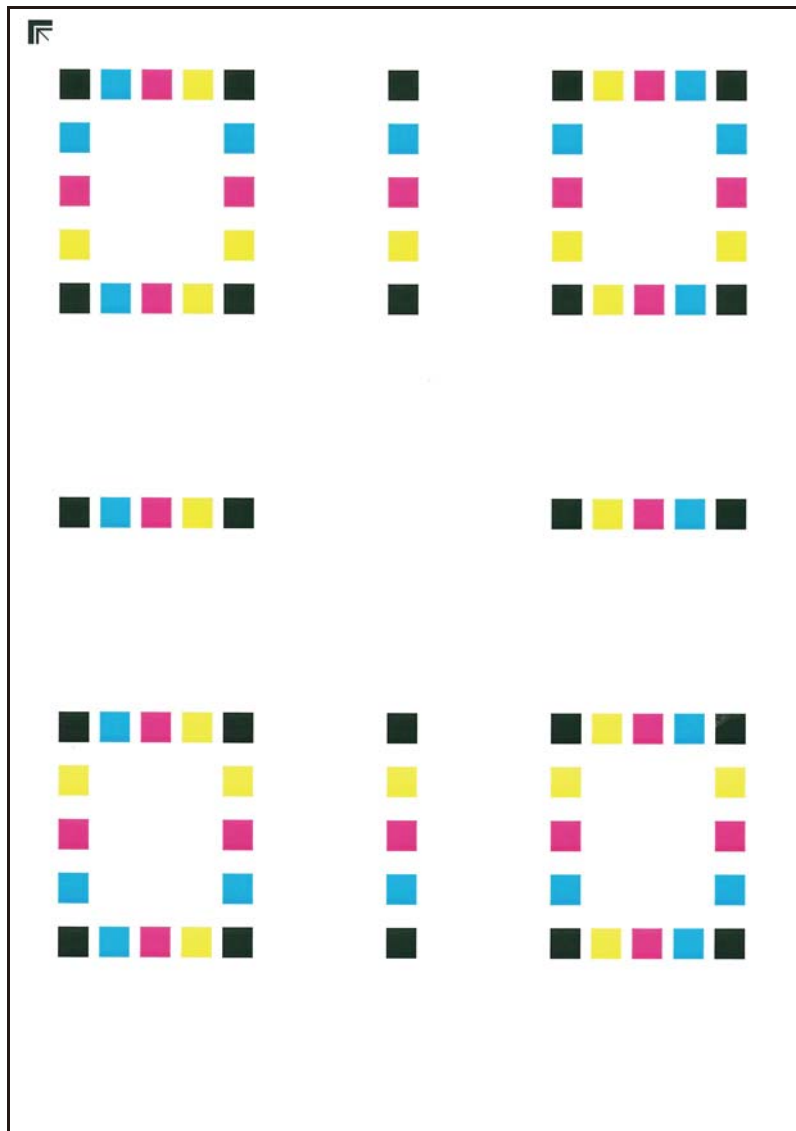


Figure 4-300

3. Perform the color registration

- (1)As shown in the illustration, place the printed side down on the platen with the edge with the arrows toward the back.

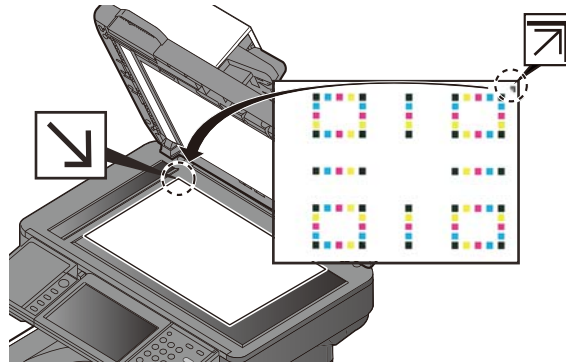


Figure 4-301

- (2)Select [Start] to scan the chart.

When scanning is finished, color printing position correction starts.

- (3)When color printing position correction ends, Select [OK].

Manual Correction

1. Display the screen.
[System Menu/Counter] key > [Adjustment/Maintenance] > [Color Registration] > [Manual]
2. Print the chart
Select [Print Chart].
A chart is printed. The chart indicating H1 to H5 (upper) and V1 to V5 (lower) per each color M (Magenta), C (Cyan) and Y (Yellow) is printed.

Chart sample (Manual)

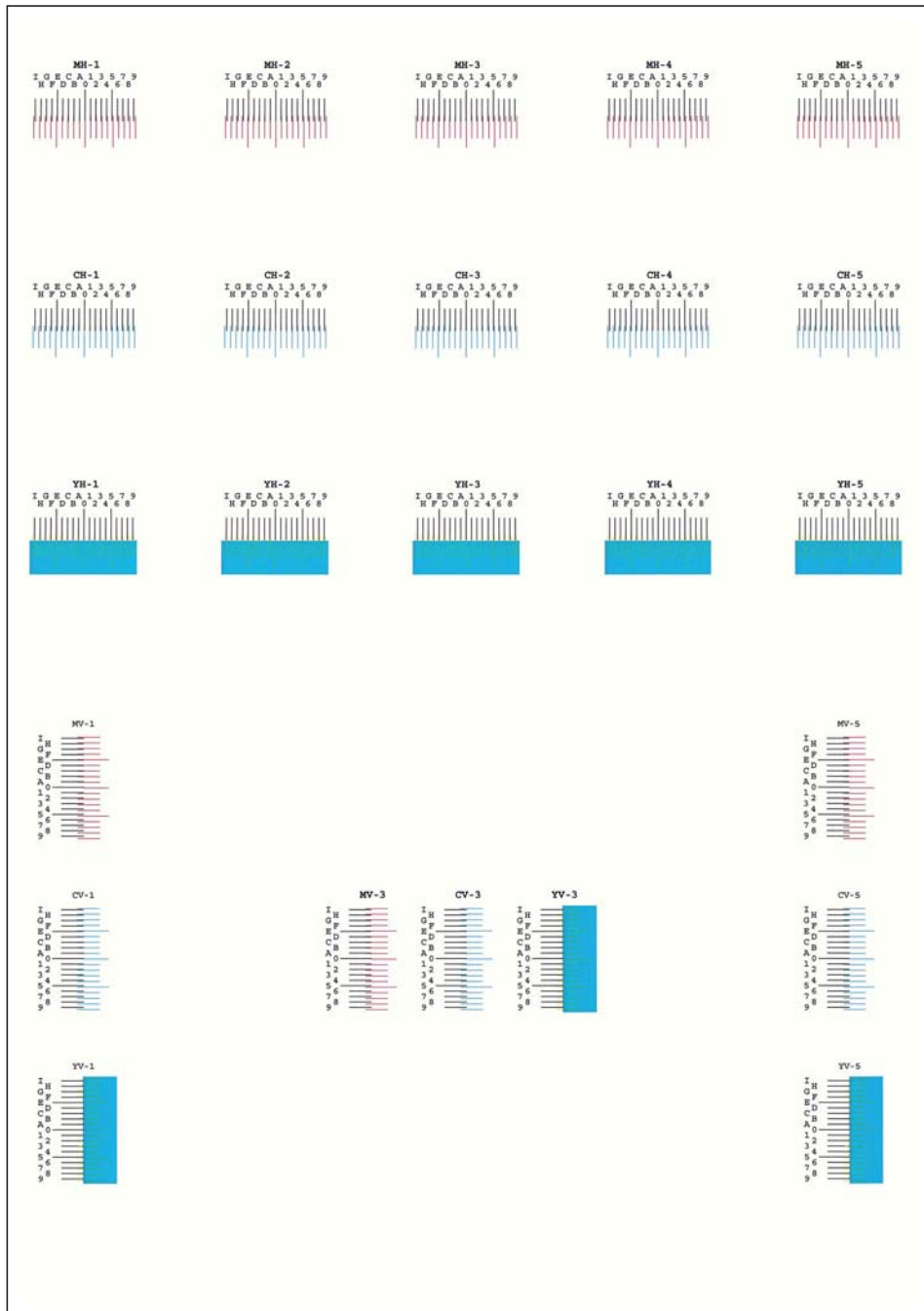


Figure 4-302

3. Input values.

- (1) Find the point where two lines are most aligned from each chart. If it is at "0", the correction is unnecessary. In case of the illustration below, "B" is the value that should be set.

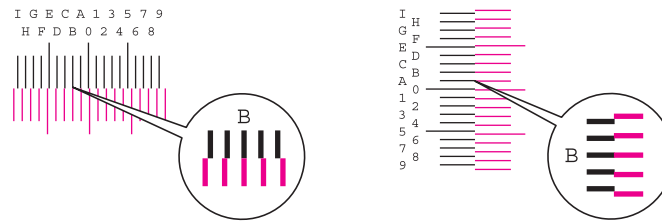


Figure 4-303

Read the values from H1 to H5 in the chart.

Read the value of V-3 (center) only of V1 to V5 in the chart.

(2)[Detail] > [Registration]

(3) Select the chart to be corrected.

(4) Select [+] or [-] to input the value read from the chart.

Select [+] to shift the values of 0 to 9. Press the [-] to go in reverse.

Select [-] to shift the value from 0 to alphabets of A to I. Press the [+] to go in reverse.

Numeric keys input is not available.

(5) Repeat the step (3) and (4) to input the values in the chart

(6) Select [Start] after completing all the inputs. Start [Color Registration]

(7) Select [OK] when completing the color registration adjustment.

(2 - 5) Import the backup data

If the data is exported with maintenance mode U917, import it before replacing the main/engine PWB. (See page P.6-130)

(KYOCERA Net Viewer is also available.)

(2 - 6) Re-activate the license

Re-activate the license if optional licensed product is installed.

(1) Card Authentication Kit(B)

*: When using the SSFC card, execute maintenance mode U222 and set [SSFC].

(See page P.6-57)

(2) UG-33 (ThinPrint)

(3) Data Security Kit (E)

*: Re-input four-digit encrypted code that was input at setup.

(2 - 7) Reset the initial values

Reset the Fax initial values such as user initial values and phone number from the System Menu and Command Center.

(2 - 8)Reset the maintenance items

Reset the maintenance items below if necessary.

No.	Maintenance	No.	Maintenance
U250	Maintenance counter preset	U603	User Data 1
U251	Clearing the maintenance counter	U604	User data 2
U253	Switching the double/single counts	U610	System 1
U260	Switching the timing for copy counting	U611	System 2
U345	Maintenance timing pre-caution setting	U612	System 3
U402	Print margin adjustment	U625	Communication Setting
U403	Scanning margin adjustment (table)	U695	Fax function customization
U404	Scanning margin adjustment (DP)		
U425	Target adjustment		

(2 - 9)Canceling the maintenance mode

Input "001" using the numeric keys and press the [Start] key.

(3) Detaching and reattaching the engine relay PWB

1. Open the rear cover (a).

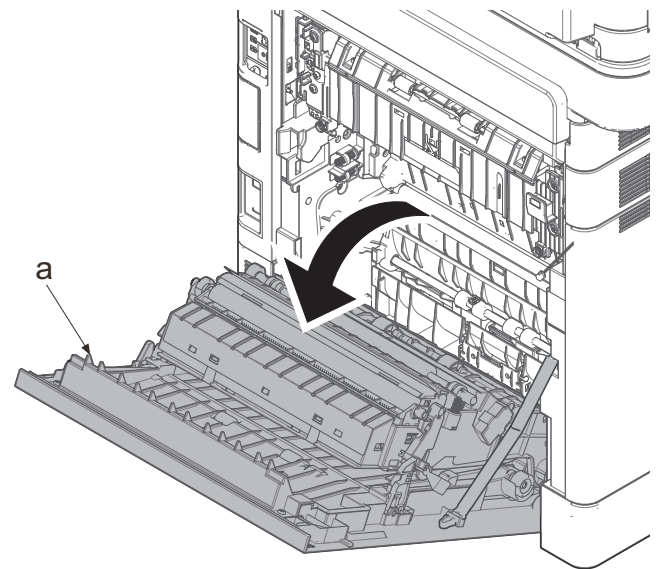


Figure 4-304

2. Remove the screw (a)(M3x8).
3. Slide the upper left cover (b) toward the machine rear side and detach it.

IMPORTANT

When reattaching the upper left cover (b), insert the hook (c) to the machine front side, and then fasten seven hooks (d) by sliding it toward the machine front side.

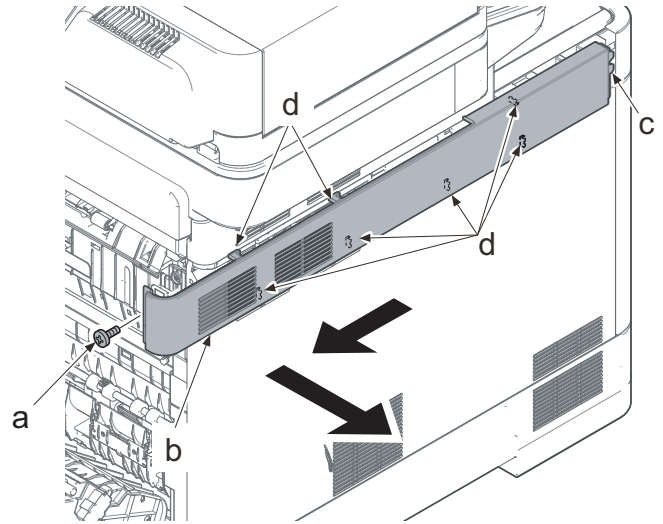


Figure 4-305

4. Lift up the machine rear side of the middle left cover (a) to release three hooks (b).
5. Slide the middle left cover (a) toward the machine rear side to release two hooks (c).
6. Detach the middle left cover (a).

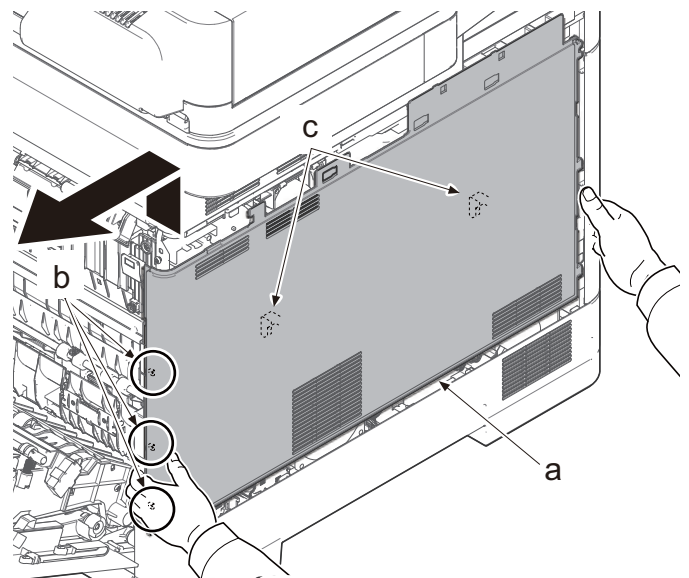


Figure 4-306

IMPORTANT

When reattaching the middle left cover (a), insert the lower rib into the lower left cover (b). Slide it toward the machine front side to fasten three hooks (c) and four hooks (d), then lower the machine rear side of it to fasten three hooks (e) at the machine rear side.

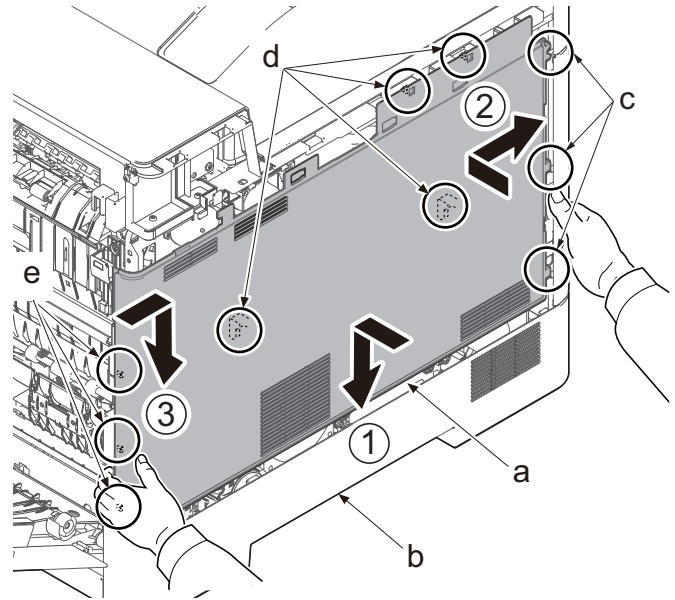


Figure 4-307

7. Remove the screw (a)(M3x8).
8. Pull the rib (b) toward you and release the center hook (c).
9. Detach the lower left cover (d).

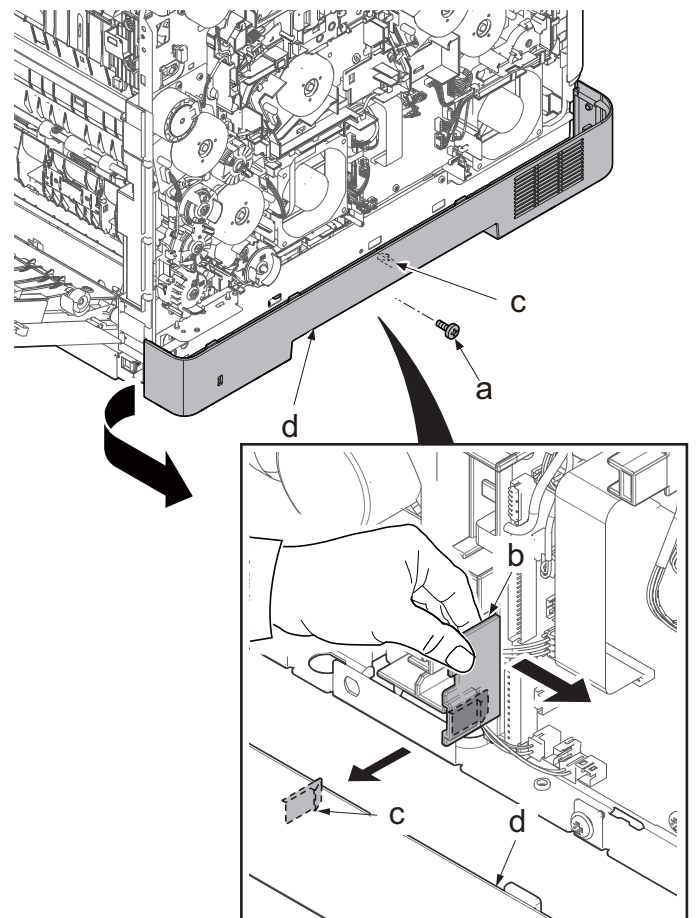


Figure 4-308

IMPORTANT

When attaching the lower left cover (a), insert two bosses (b) at the machine front side into the holes and apply the center hook (c). Then, push it toward the machine rear side.

Check if the hook (c) at the center is surely fastened.

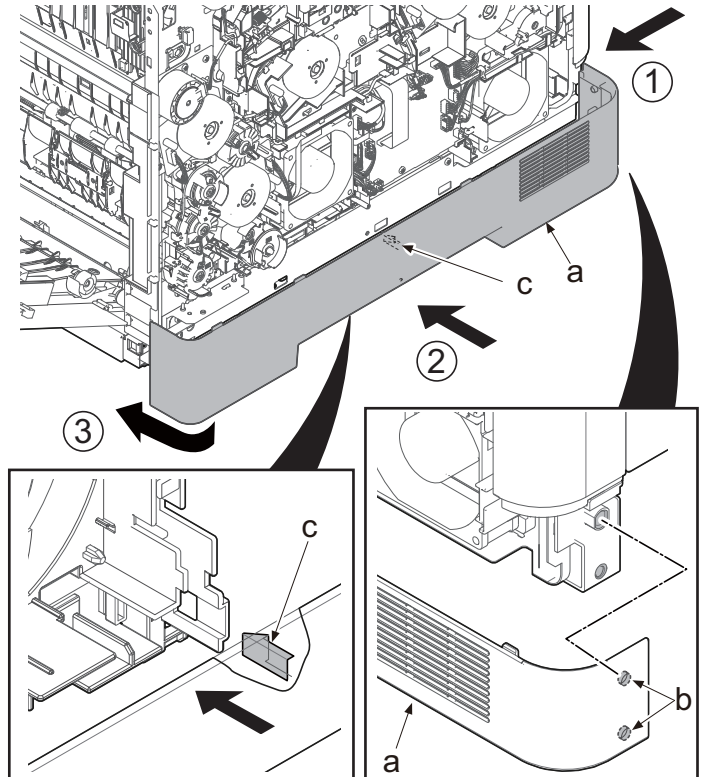


Figure 4-309

10. Disconnect all the connectors and FFCs from the engine relay PWB (a). (24 connectors)

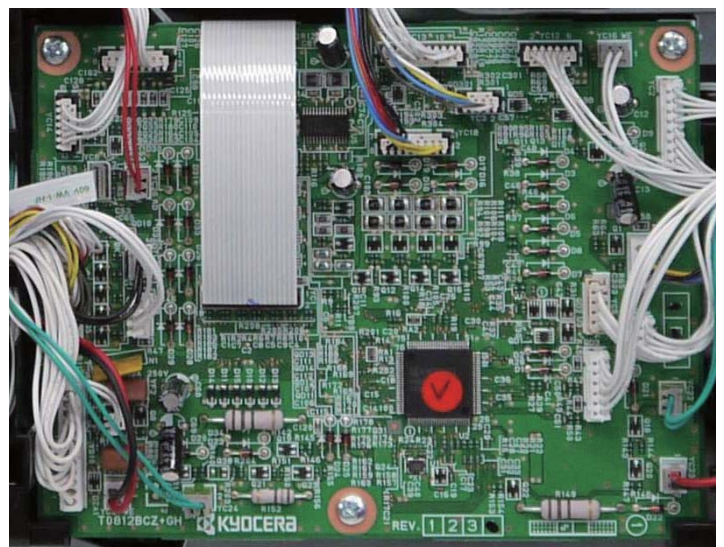
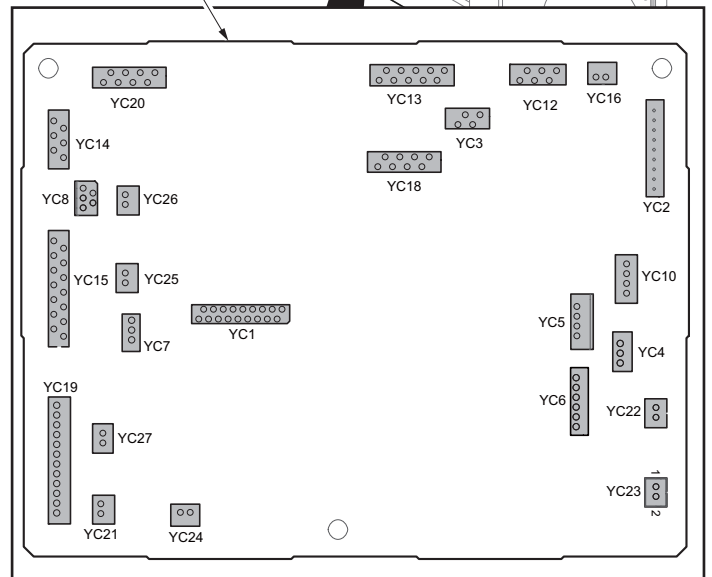
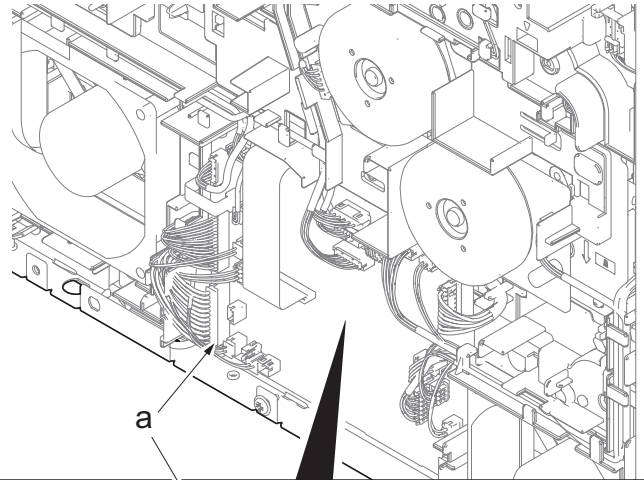


Figure 4-310

11. Remove three screws (a)(M3x8).
12. Detach the engine relay PWB (b).
13. Check the engine relay PWB and clean or replace it if necessary.
14. Reattach the parts in the original position.

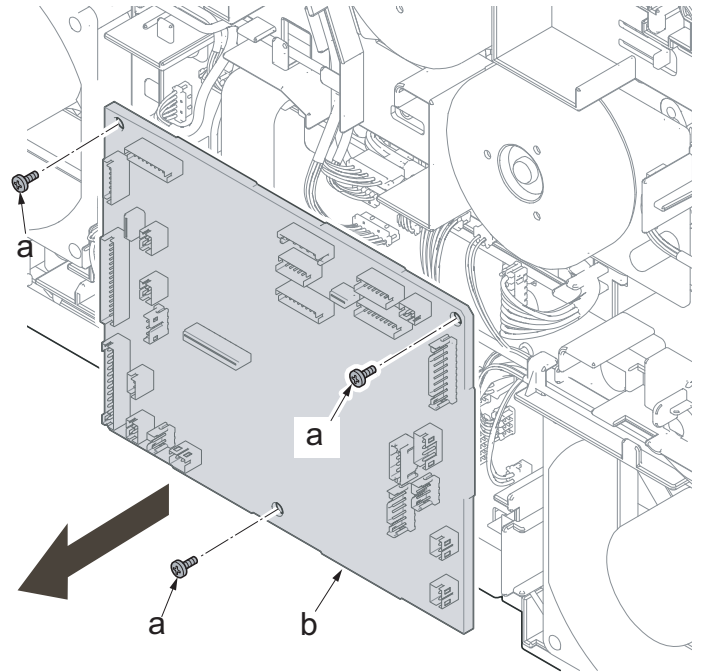


Figure 4-311

(4) Detaching and reattaching the high-voltage PWB

IMPORTANT

Before replacing the PWBs, make sure to do the following procedure.

1. Unplug the power cord.
2. Press the power switch one second or more to discharge the electric charge inside the main unit.

1. Pull the lower part of the opening toward the machine rear side and release the hook (a).
2. Remove the interface cover (b).

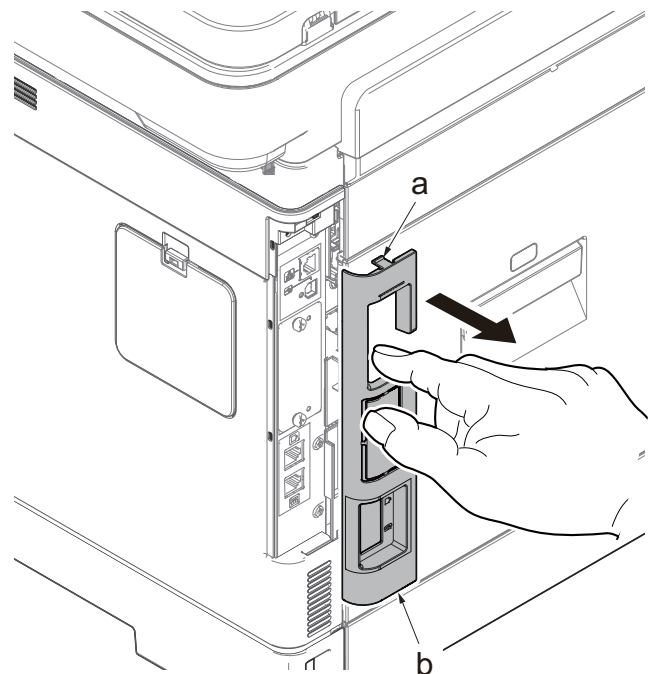


Figure 4-312

3. Remove the screw (a)(M3x8).
4. Slide the upper right cover (b) toward the machine rear side and detach it.

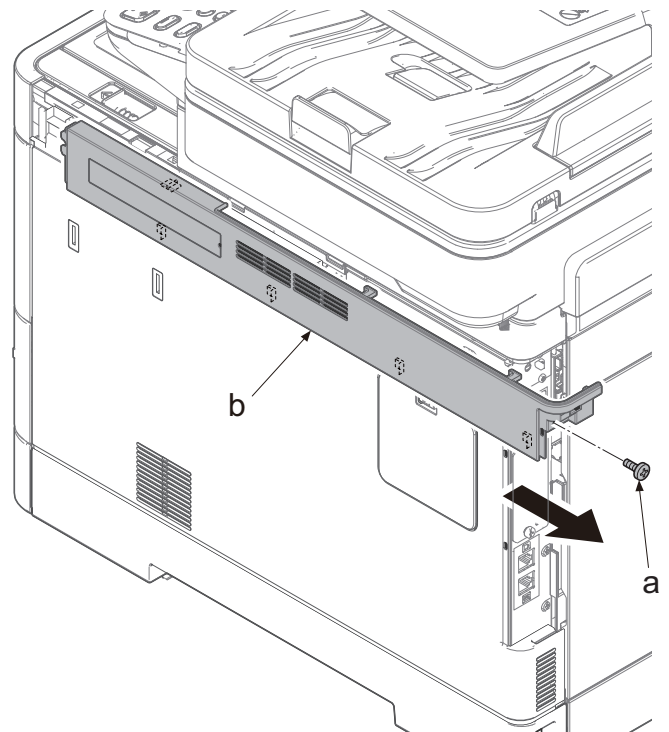


Figure 4-313

IMPORTANT

When reattaching the upper right cover (a), insert the hook (b) to the machine front side, and then fasten seven hooks (c) by sliding it toward the machine front side and insert the positioning projection (d) into the hole.

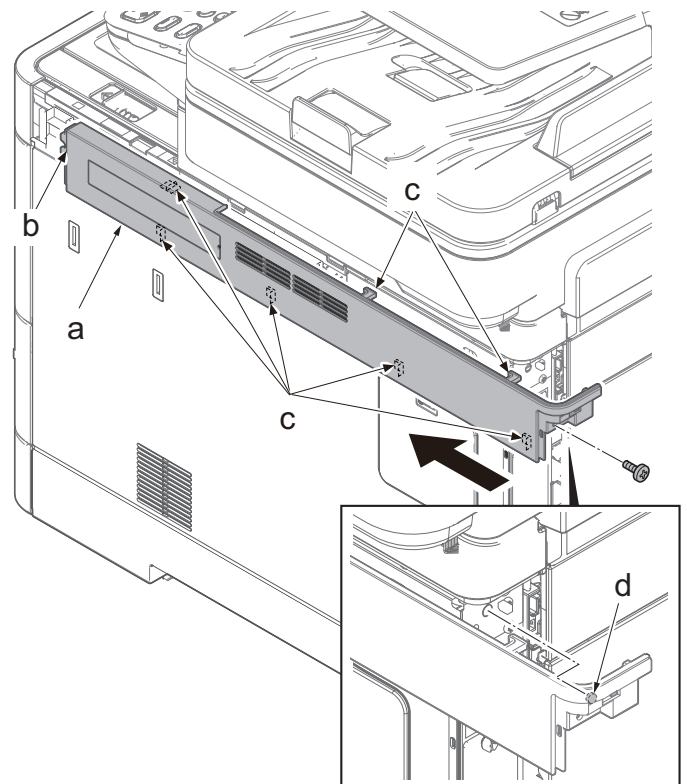


Figure 4-314

5. Open the waste toner cover (a).
6. Press the arm (b) down.
7. Remove the waste toner cover (a).

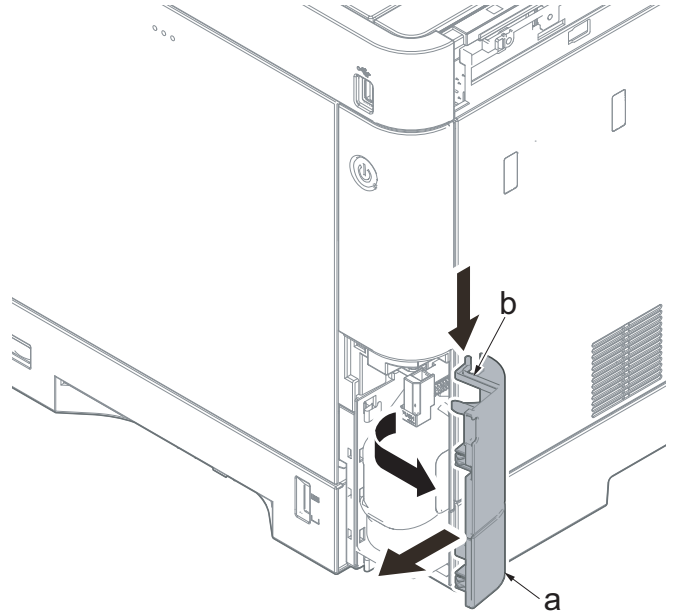
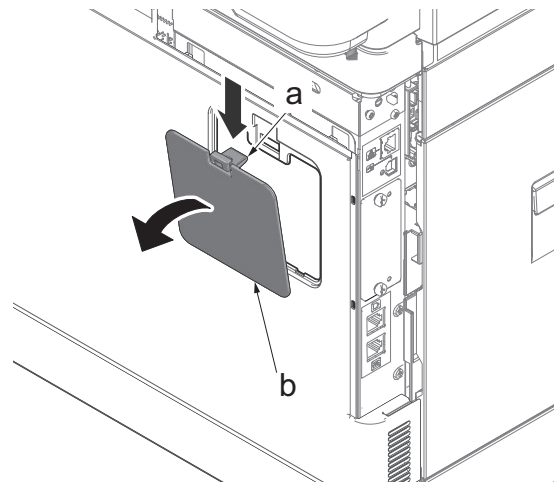


Figure 4-315

8. Push the lever (a) and open the memory cover (b).
9. Remove the memory cover (b).



Figure

10. Pull up the shield lid (a) and pull it toward you to remove it.

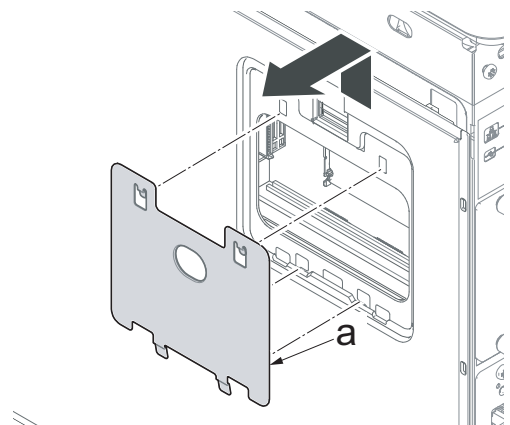


Figure 4-317

11. Open the rear cover (a).

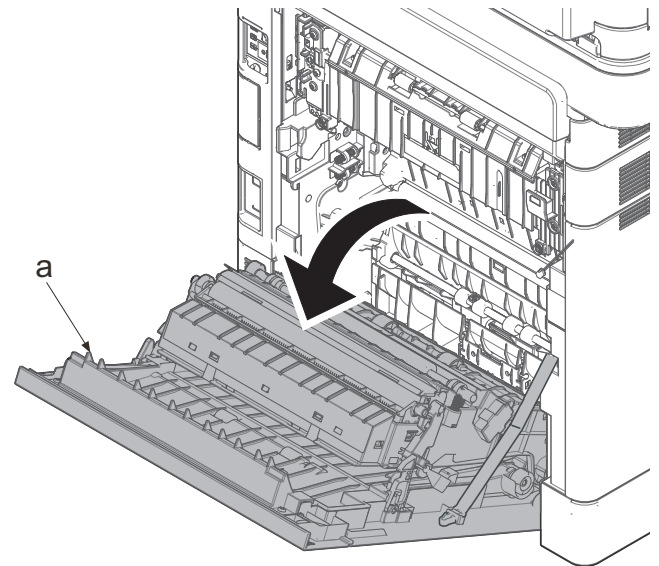


Figure 4-318

12. Push the machine front side of the middle right cover (a) toward the machine rear side and then lift up its machine rear side to detach it.

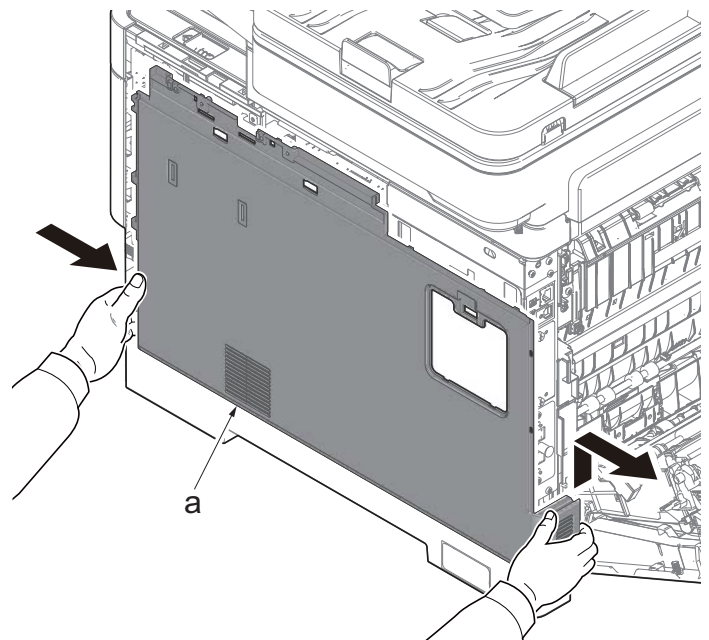


Figure 4-319

IMPORTANT

When reattaching the middle right cover (a), insert the lower rib into the the lower right cover (b). Slide it toward the machine front side to fasten three hooks (c) and then lower it to fasten three hooks (d), and fasten two hooks (e) at the machine rear side.

Check if three hooks (d) at the machine rear side are surely fastened.

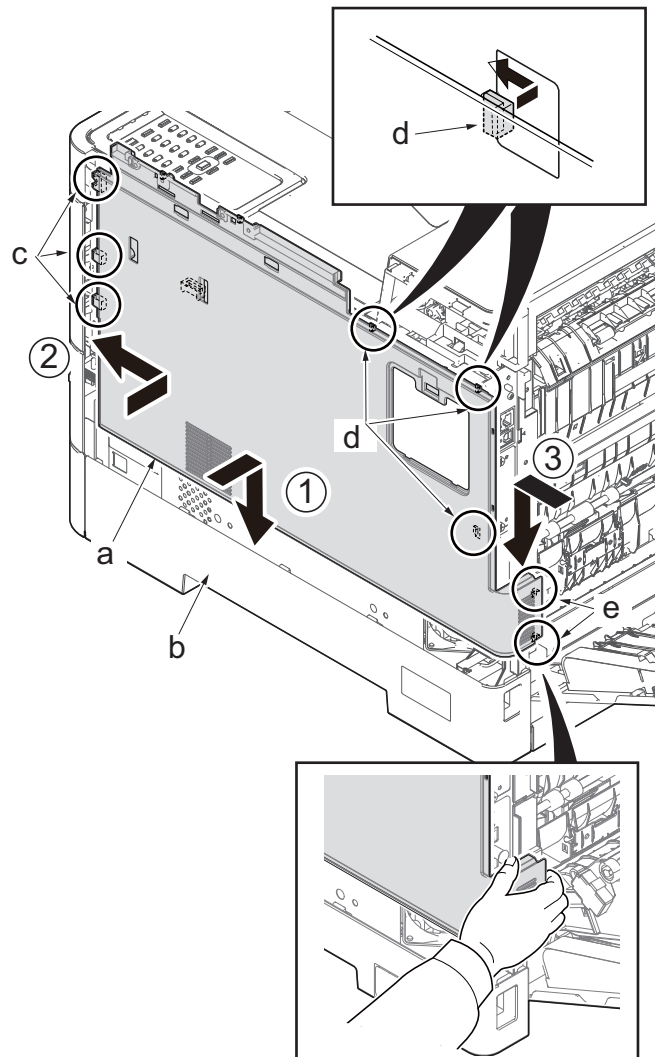


Figure 4-320

- 13. Pull the lever (a).
- 14. Lift up the scanner unit (b) and open the inner tray (c).

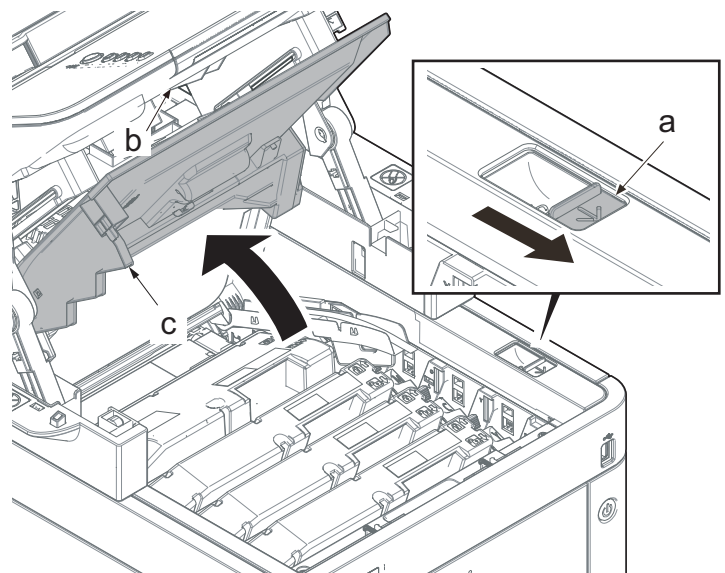


Figure 4-321

15. Open the MP tray (a).
16. Remove two screws (b)(M3x8).

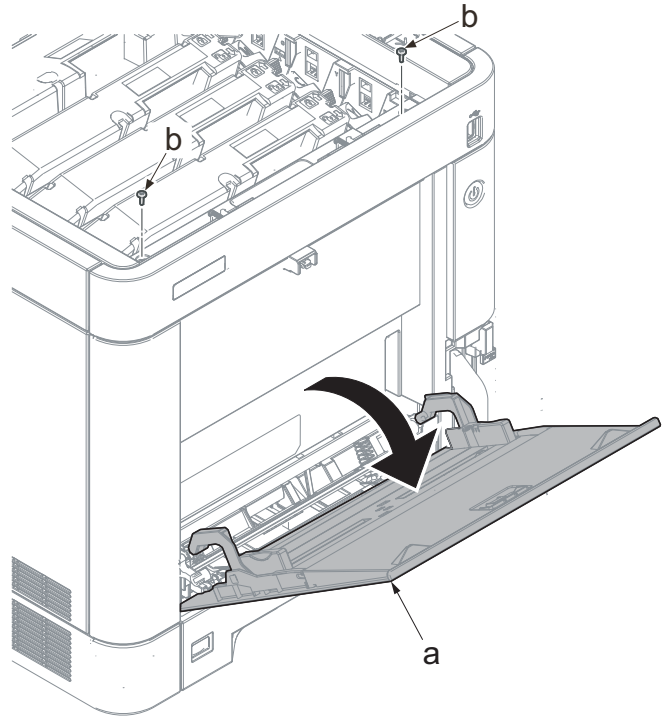


Figure 4-322

17. Slightly lift up the front cover (a) to release the boss (b).
18. Tilt the front cover (a) toward the machine front side.
19. Then, remove the front cover (a) by lifting it up.

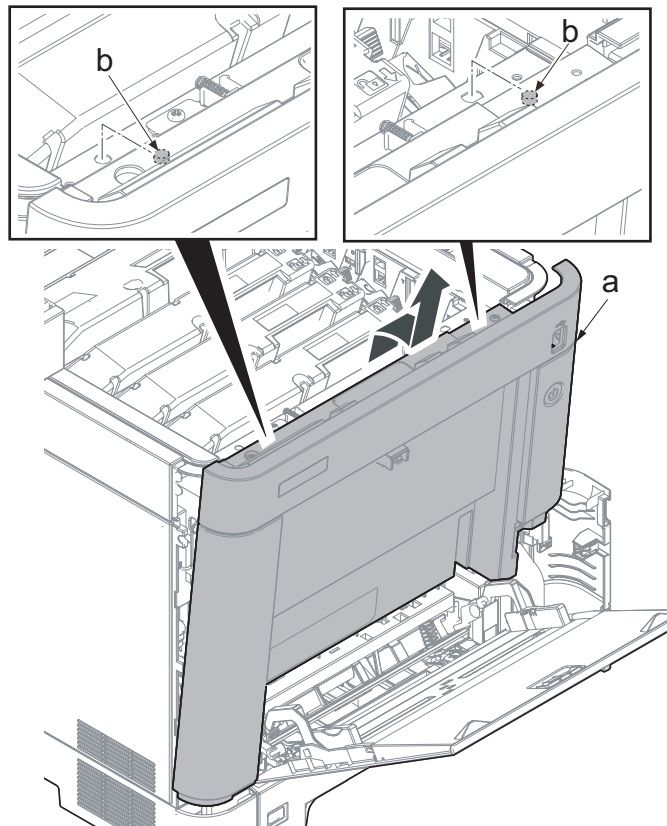


Figure 4-323

IMPORTANT

Make sure not to touch the waste toner cover sensor (b) when reattaching the front cover (a).

If the waste toner cover sensor (b) comes off, even if you close the waste toner cover, "cover open" will be displayed.

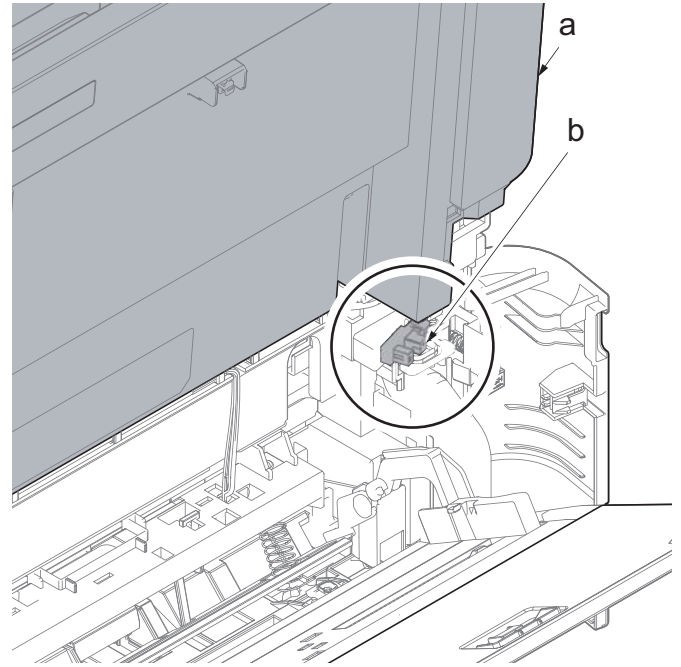


Figure 4-324

20. Remove the screw (a)(M3x8).

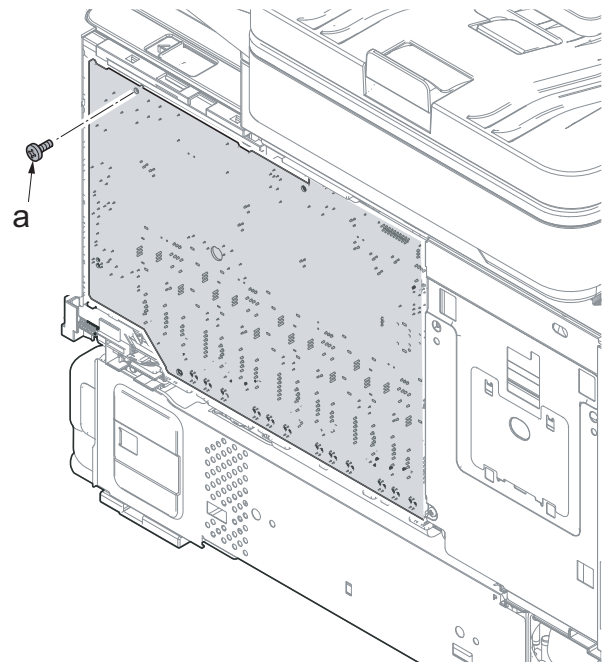


Figure 4-325

21. Release four hooks (a) at both sides of the high-voltage PWB (c).
22. Slightly tilt the PWB toward you and release the FFC (b).

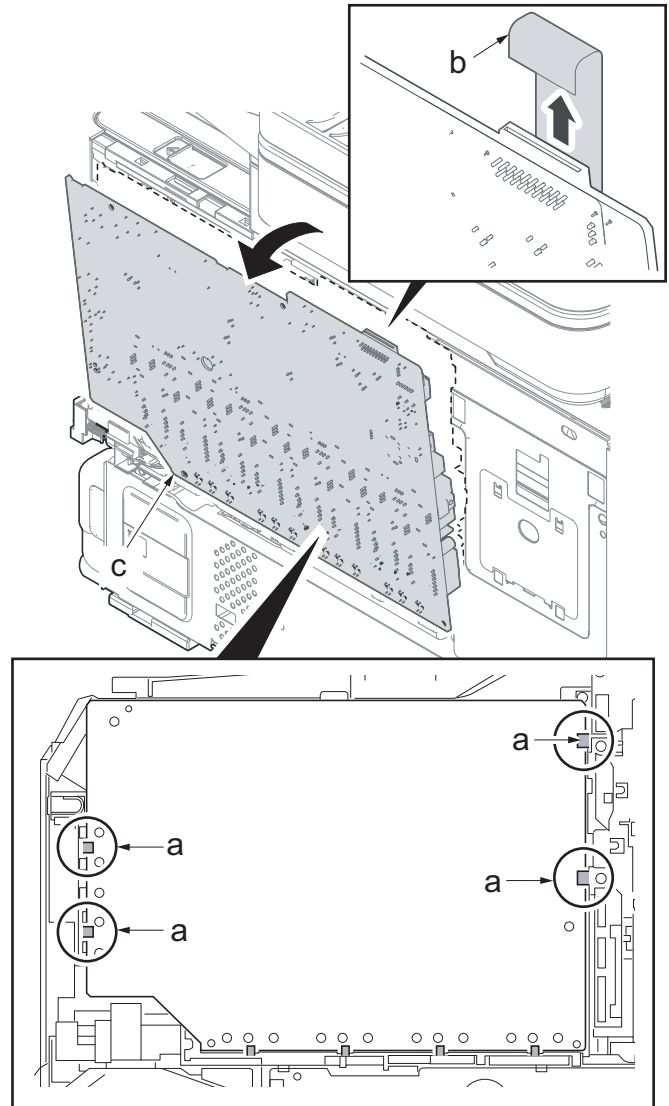


Figure 4-326

23. Tilt the high-voltage PWB (a) to 90 degrees and pull it out toward you.

*: The lower hook (b) on the PWB might break if removing it without push it down.

24. Check the high-voltage PWB and clean or replace it if necessary.

25. Reattach the parts in the original position.

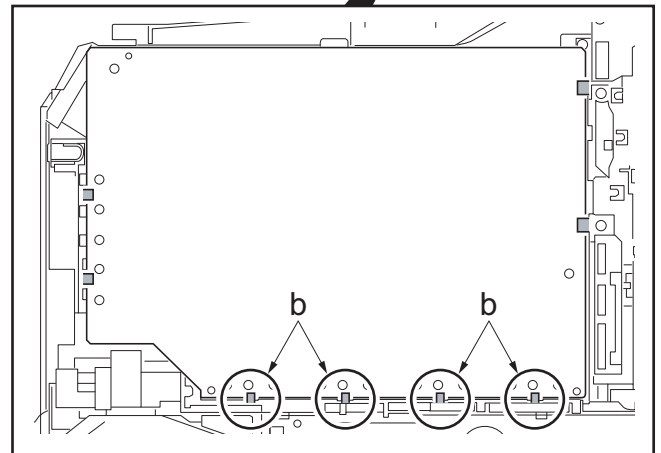
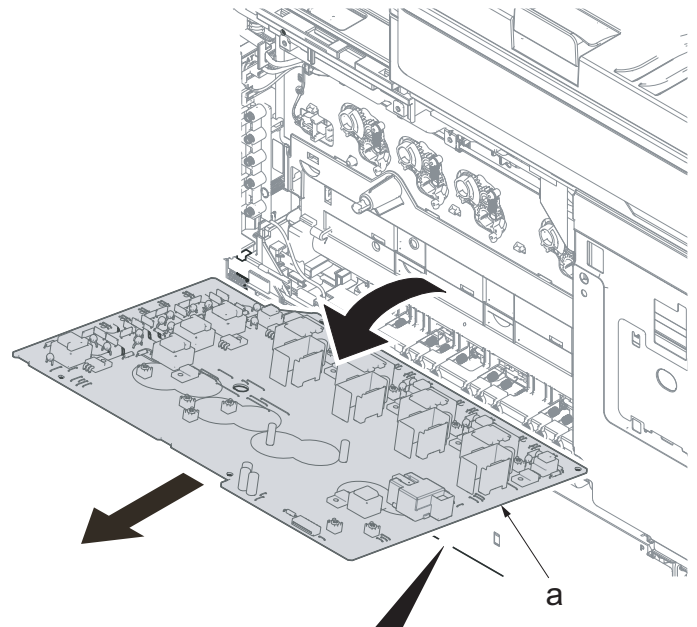


Figure 4-327

IMPORTANT

When reattaching the high-voltage PWB (d), insert the lower part of the PWB into four of the lower hooks (b) and insert the left and right positioning pins (c) into the holes. Then, raise the PWB and apply two hooks each at the left and right side.

After reattaching the high-voltage PWB (d), check that it is secured with two hooks at the each left and right side and four hooks (b). (If the hook is not fastened, the image failure might appear.)

Also, check the terminal spring (e) contacts the terminal (f).
(Check from The PWB hole)

Terminal :
Lower side: 12
Left side: 5

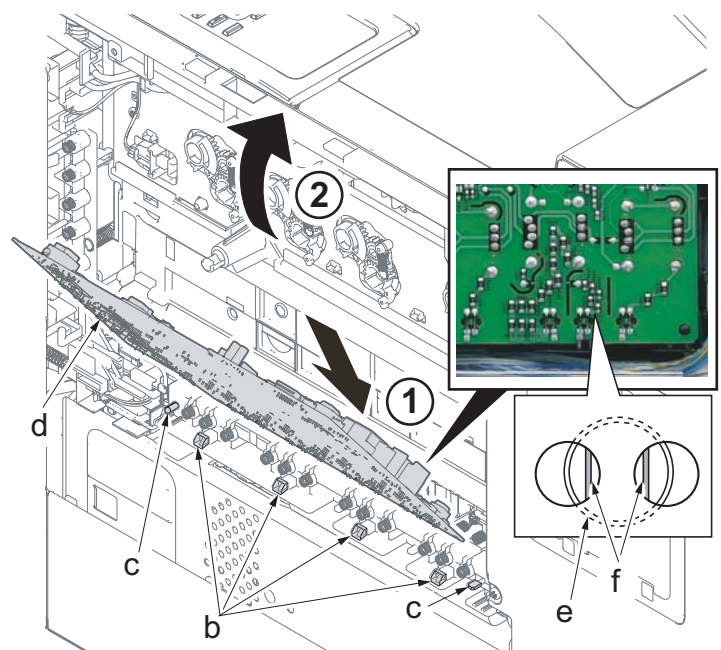


Figure 4-328

(5) Detaching and reattaching the power supply PWB

IMPORTANT

Even if the power switch of the main unit is turned off and the power cord is unplugged, the electric charge may remain in the capacitors on the low voltage PWB, so that please be careful not to touch the mounted parts to protect you from electric shock.

1. Pull the lower part of the opening toward the machine rear side and release the hook (a).
2. Remove the interface cover (b).

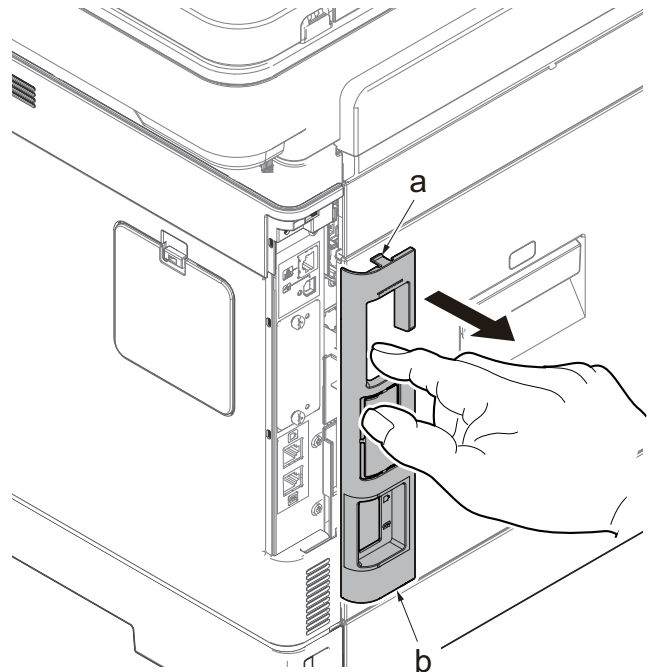


Figure 4-329

3. Remove the screw (a)(M3x8).
4. Slide the upper right cover (b) toward the machine rear side and detach it.

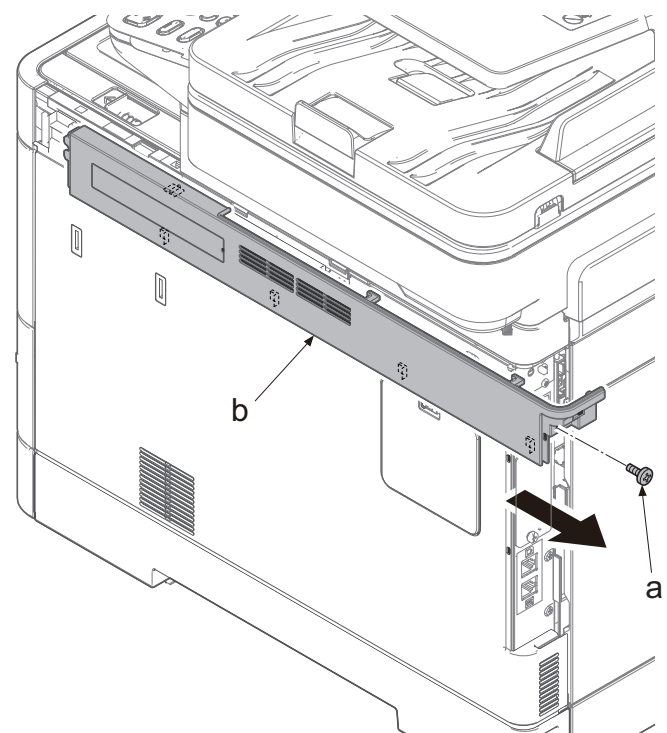


Figure 4-330

IMPORTANT

When reattaching the upper right cover (a), insert the hook (b) to the machine front side, and then fasten seven hooks (c) by sliding it toward the machine front side and insert the positioning projection (d) into the hole.

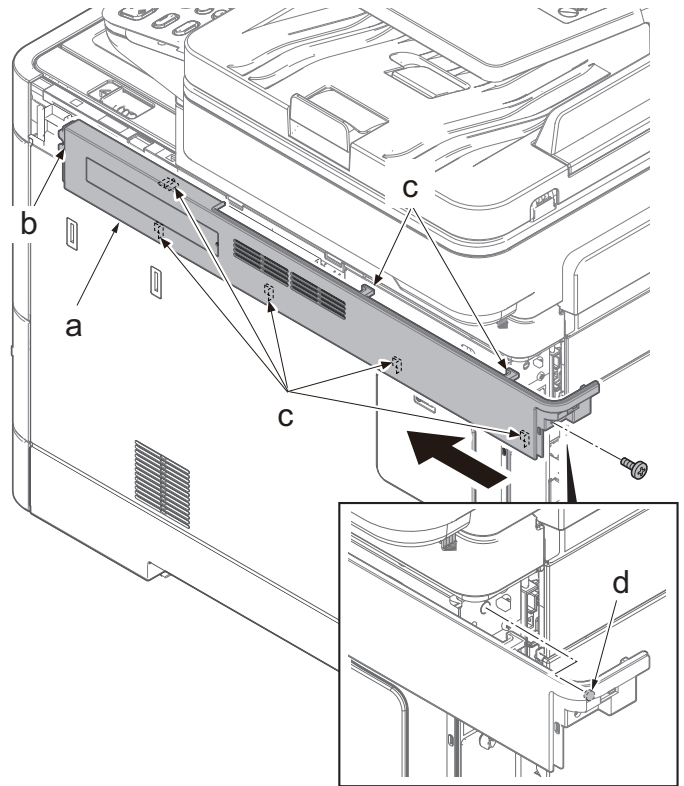


Figure 4-331

5. Open the waste toner cover (a).
6. Press the arm (b) down.
7. Remove the waste toner cover (a).

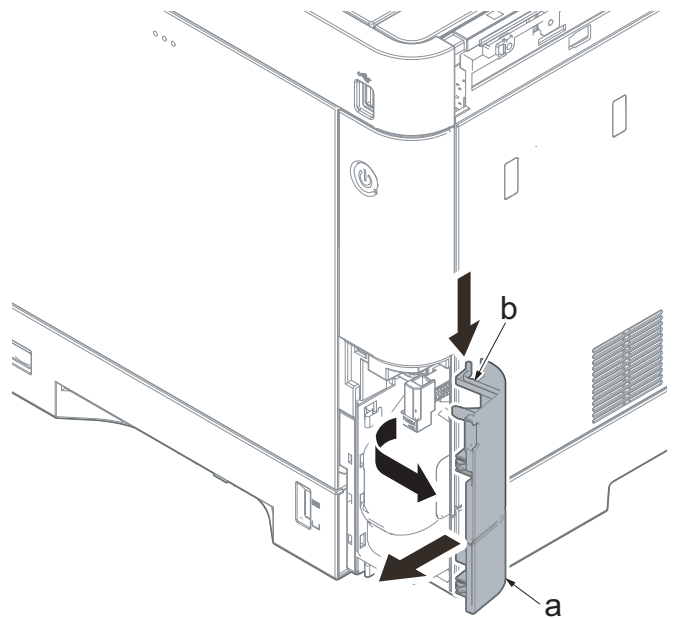


Figure 4-332

- 8. Push the lever (a) and open the memory cover (b).
- 9. Remove the memory cover (b).

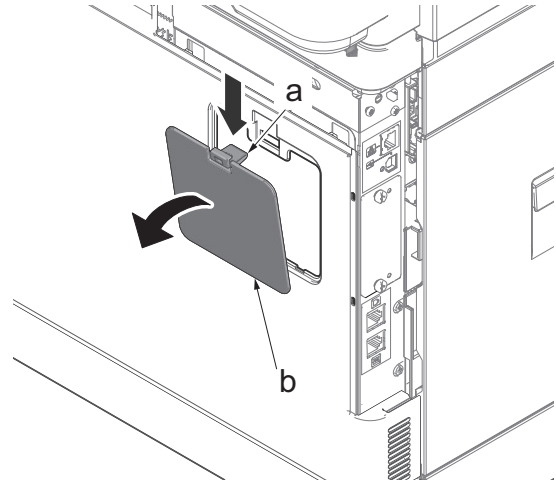


Figure 4-333

- 10. Pull up the shield lid (a) and pull it toward you to remove it.

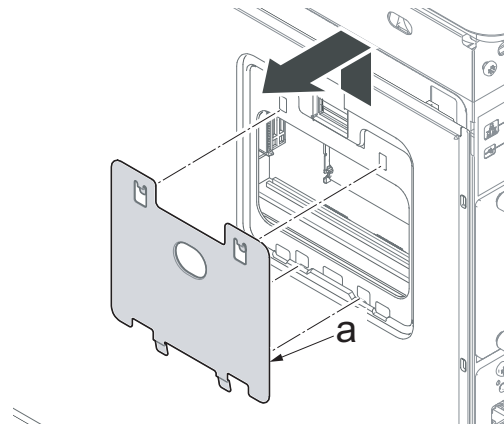


Figure 4-334

- 11. Open the rear cover (a).

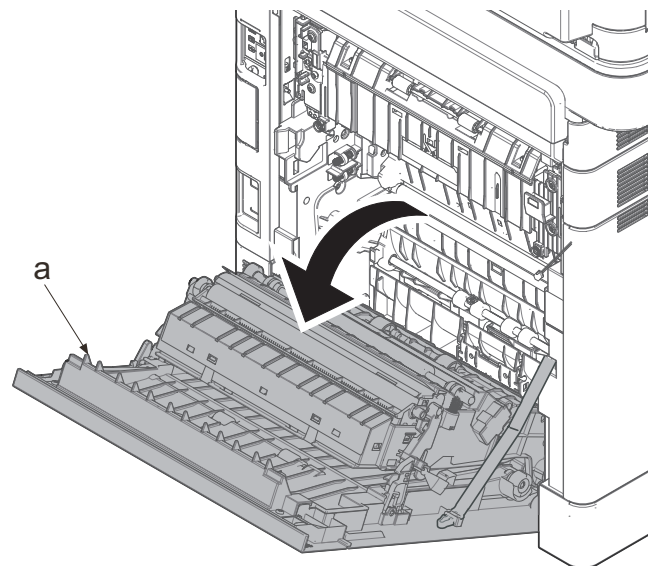


Figure 4-335

12. Push the machine front side of the middle right cover (a) toward the machine rear side and then lift up its machine rear side to detach it.

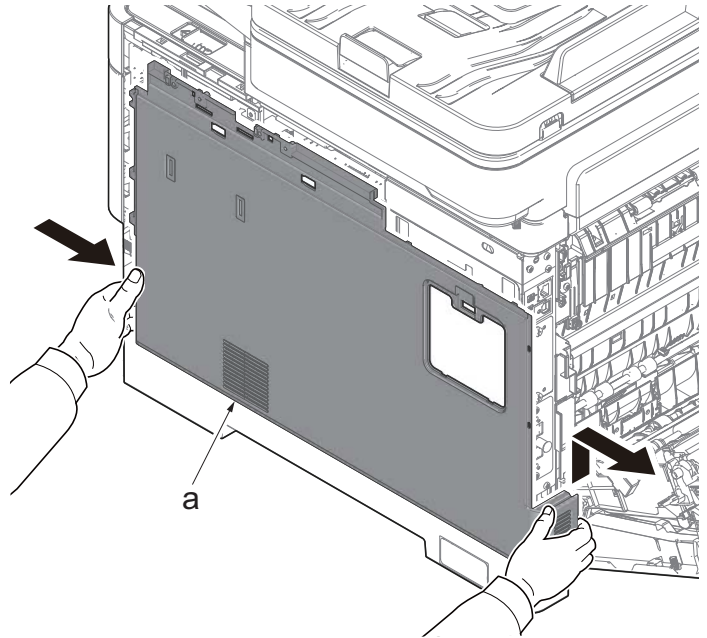


Figure 4-336

IMPORTANT

When reattaching the middle right cover (a), insert the lower rib into the the lower right cover (b). Slide it toward the machine front side to fasten three hooks (c) and then lower it to fasten three hooks (d), and fasten two hooks (e) at the machine rear side. Check if three hooks (d) at the machine rear side are surely fastened.

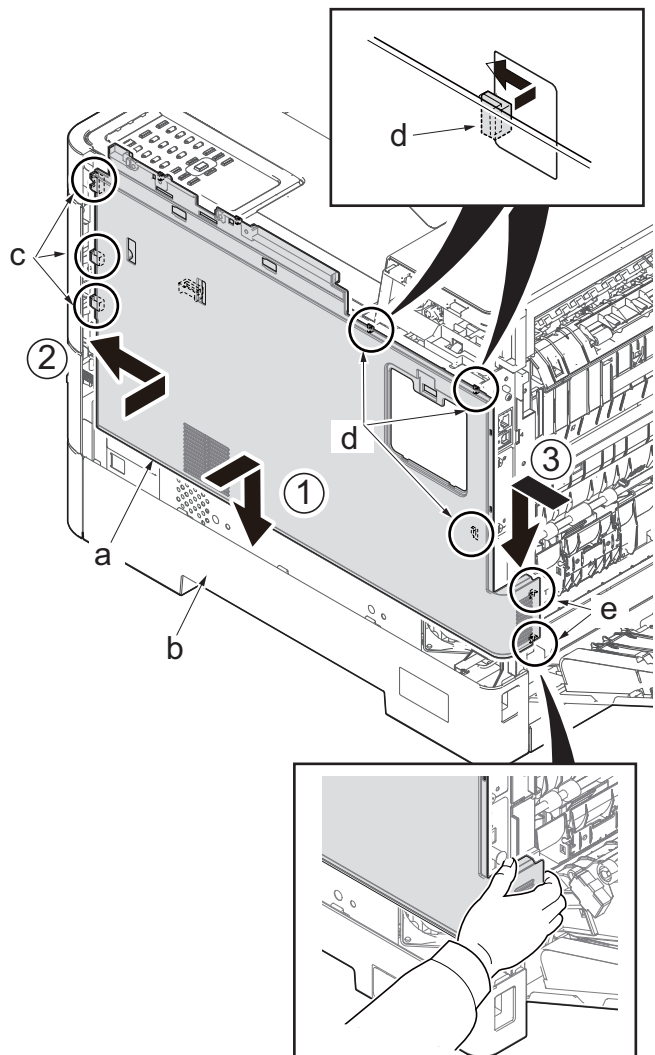


Figure 4-337

13. Remove the screw (a)(M3x8).
14. Release the hook (c) of the lower right cover (b) toward the machine right side and slide it toward the machine rear side to detach it.

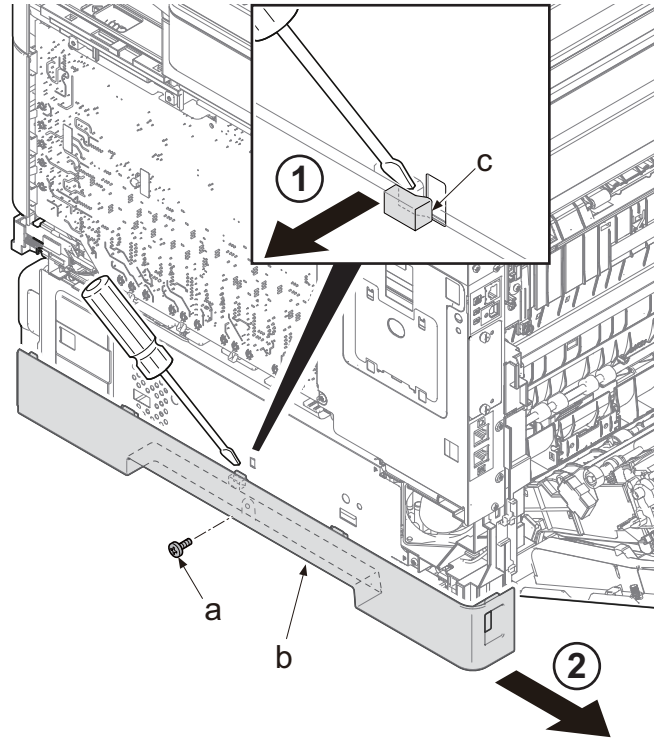


Figure 4-338

15. Remove two screws (a)(M3x8: P-tite)
16. Remove the screw (b)(M3x8: S-tite)
17. Release the hook (c).
18. Remove the power supply shield (d).

IMPORTANT

The screw (a) and (b) are different and secure them at the original place.

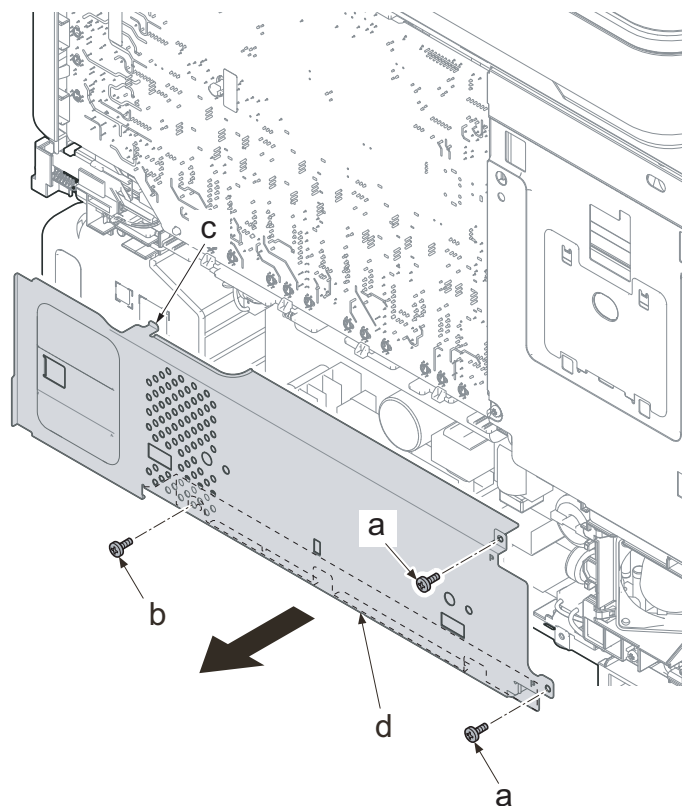


Figure 4-339

19. Disconnect all the connectors from the power supply PWB (a). (five connectors)
20. Remove two screws (b)(M3x8).
21. Release two hooks (c).
22. Remove the power supply PWB (a).
23. Check the operation panel PWB and clean or replace it if necessary.
24. Reattach the parts in the original position.

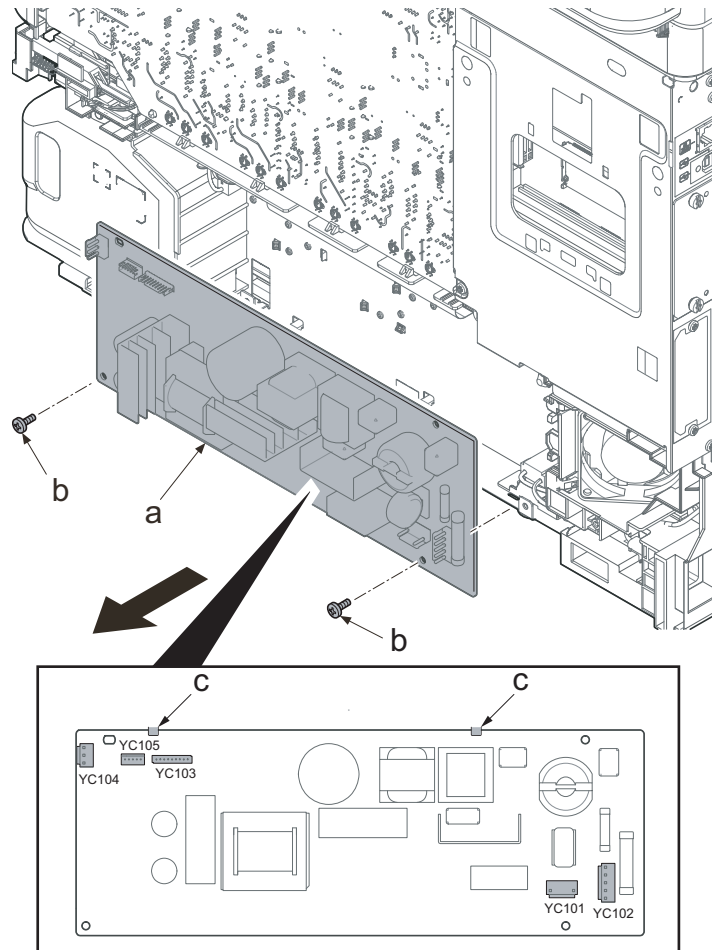


Figure 4-340

IMPORTANT

When reattaching the power supply shield (a), insert the lower two hooks (b) into the square holes (c) of the main unit and fasten the upper hook (d). Then, secure it with the screws (e).

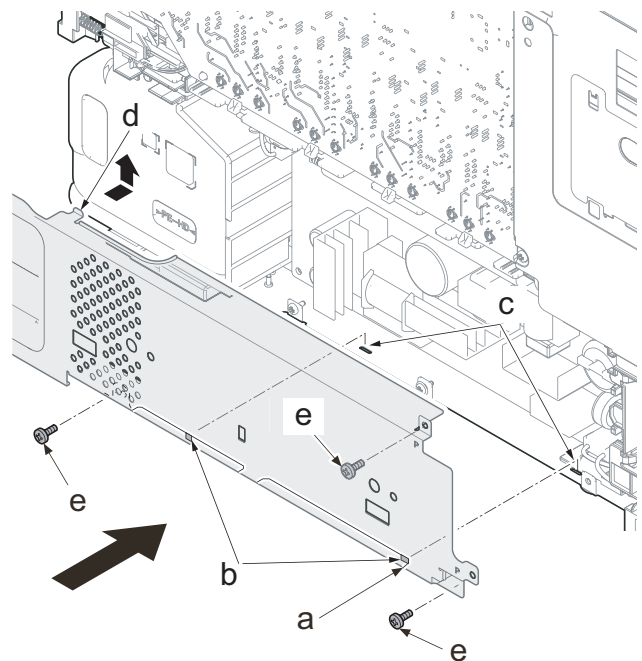


Figure 4-341

(6) Detaching and reattaching the operation panel PWB

1. Remove the lower LCD cover (b) from the operation panel assembly (a).

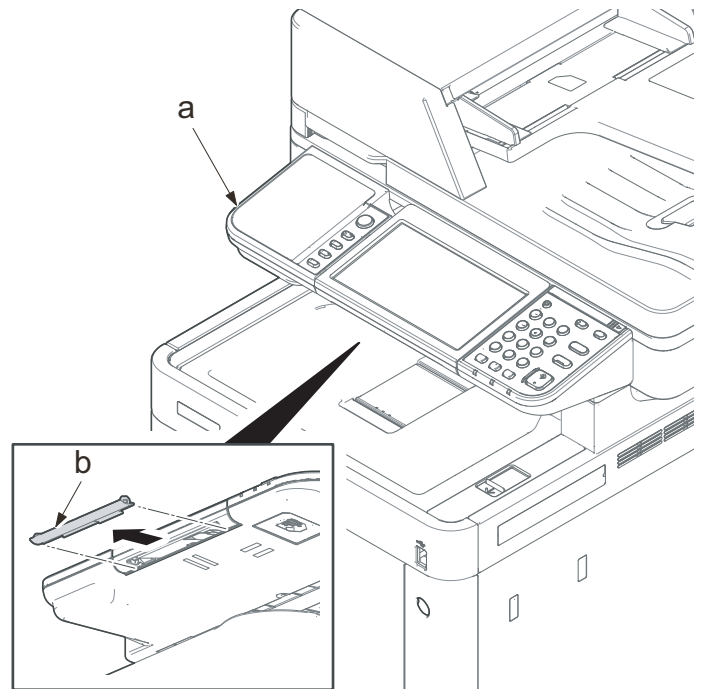


Figure 4-342

2. Push the lock lever (a).
3. Tilt the LCD cover (b) toward the machine front side while bending it.
4. Disconnect the USB connector (d) from the operation panel PWB (c).
5. Disconnect two FFCs (e) from the operation panel PWB (c).
6. Disconnect two FFCs (f) from the operation panel PWB (c).
7. Disconnect two connectors (g) from the operation panel PWB (c).

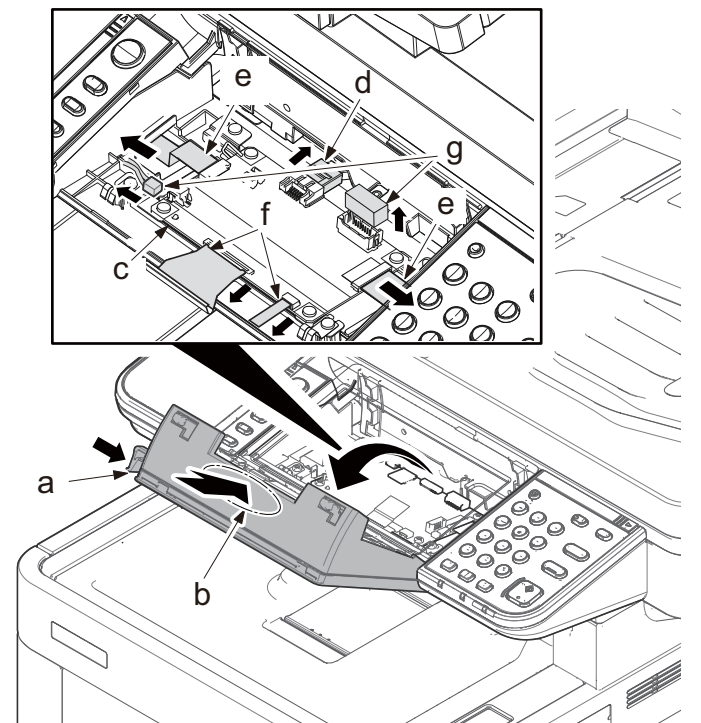


Figure 4-343

8. Remove four screws (a)(M3x8).
Remove the ground terminal (c).
9. Remove the operation panel PWB (b).
10. Check the operation panel PWB and clean or replace it if necessary.
11. Reattach the parts in the original position.

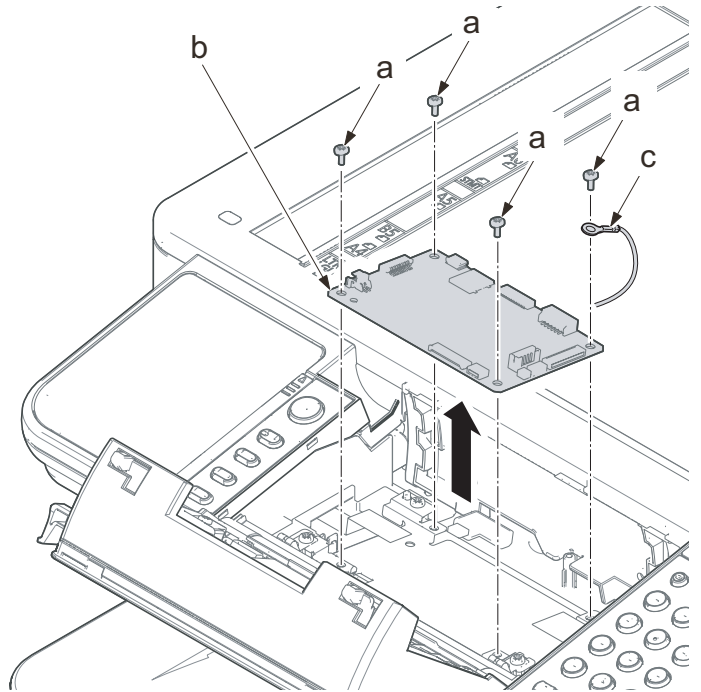


Figure 4-344

4-6 Other parts

(1) Optical section (image scanning)

(1 - 1) Detaching and reattaching the scanner carriage assembly

1. Slide the left and right panel plates (a) and remove them.

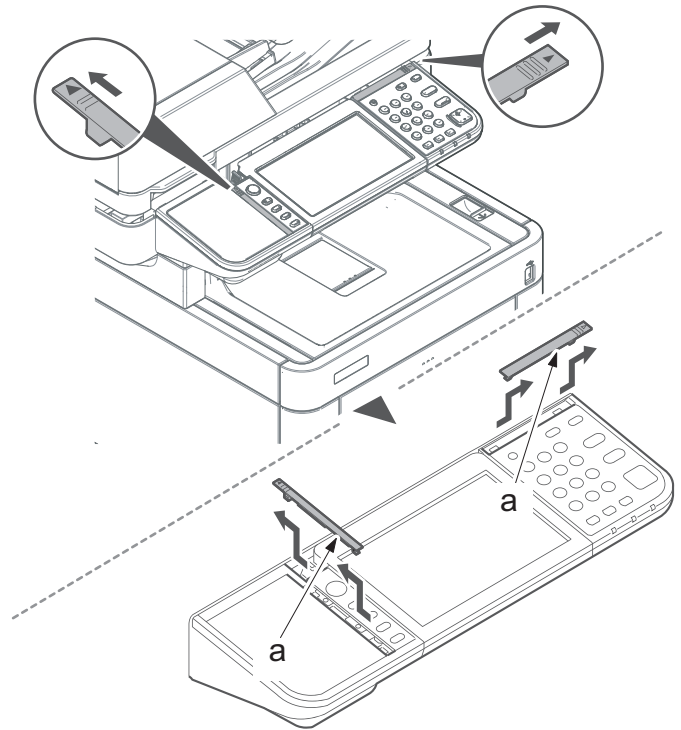


Figure 4-345

2. Remove the left and right operation panel covers (a).
3. Remove the left and right operation panel sheets (b).

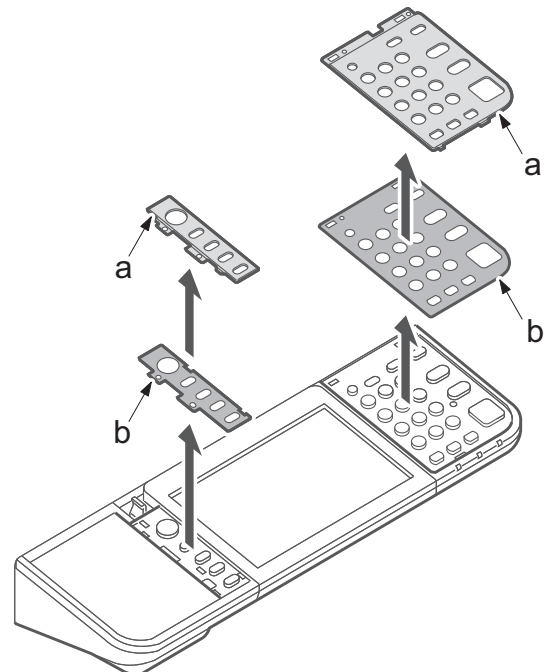


Figure 4-346

4. Remove the Card reader cover (a).
5. Remove the LCD lower cover (b).
6. Remove two screws (c)(M3x8).

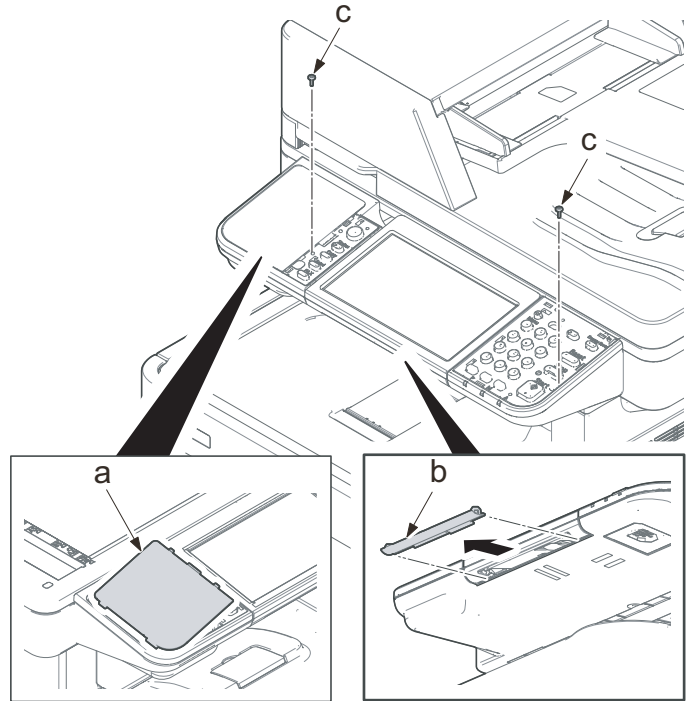


Figure 4-347

7. Push the lock lever (a).
8. Tilt the LCD cover (b) toward the machine front side while bending it.
9. Disconnect the FFC (d) from the operation panel PWB (c).

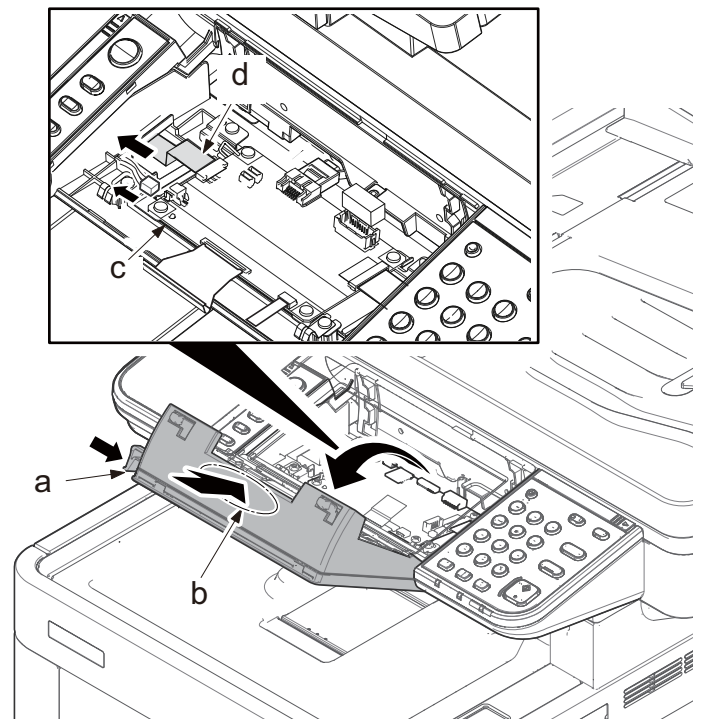


Figure 4-348

10. Release two hooks (a).
11. Remove the left key cover (b) toward the machine front side.
12. Disconnect two FFCs (d) from the panel-R PWB (c).
13. Release two hooks (e).
14. Remove the right key cover (f) toward the machine front side.

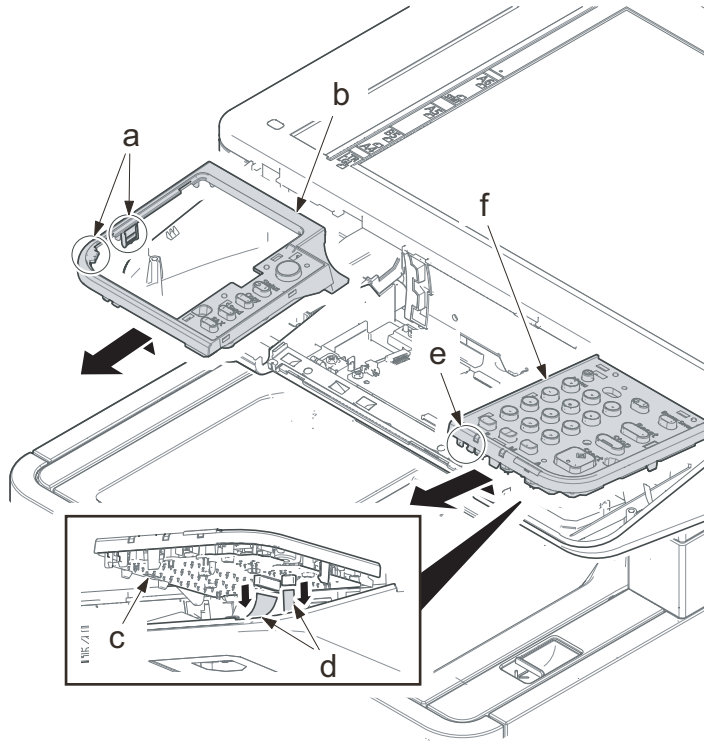


Figure 4-349

15. Remove two screws (a)(M3x8).
16. Release two hooks (b).
17. Detach the ISU upper frame assembly (d) from the ISU (c).

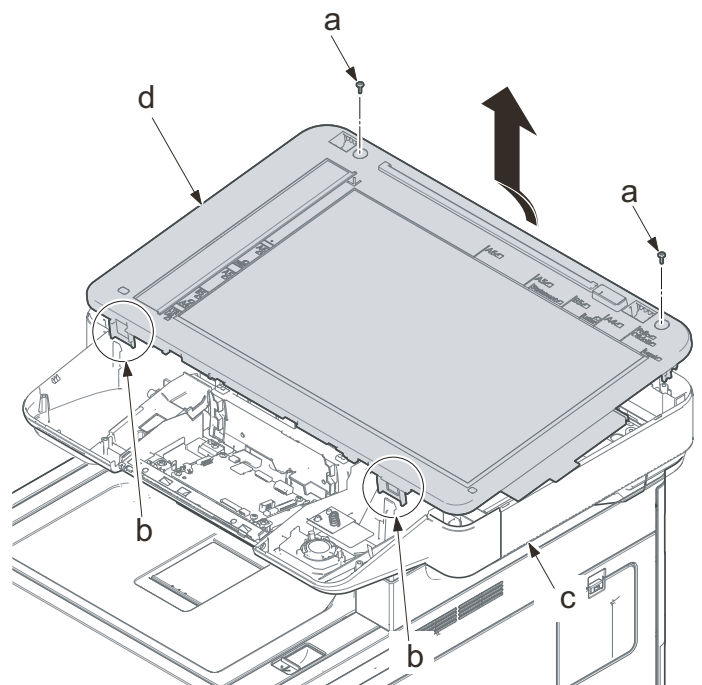


Figure 4-350

18. Remove the drive belt (b) from two pulleys (a).
19. Detach the scanner carriage assembly (d) and the ISU shaft (e) from the ISU lower frame (c).

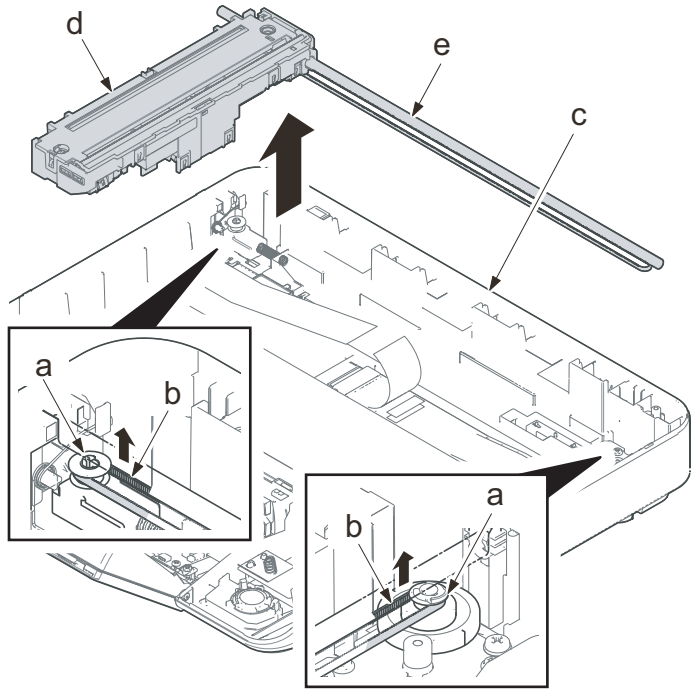


Figure 4-351

20. Pull out the ISU shaft (b) from the scanner carriage assembly (a).
21. Remove the drive belt (d) from the holding part (c) of the scanner carriage assembly (a).
22. Check the scanner carriage assembly and clean or replace it if necessary.
23. Reattach the parts in the original position.

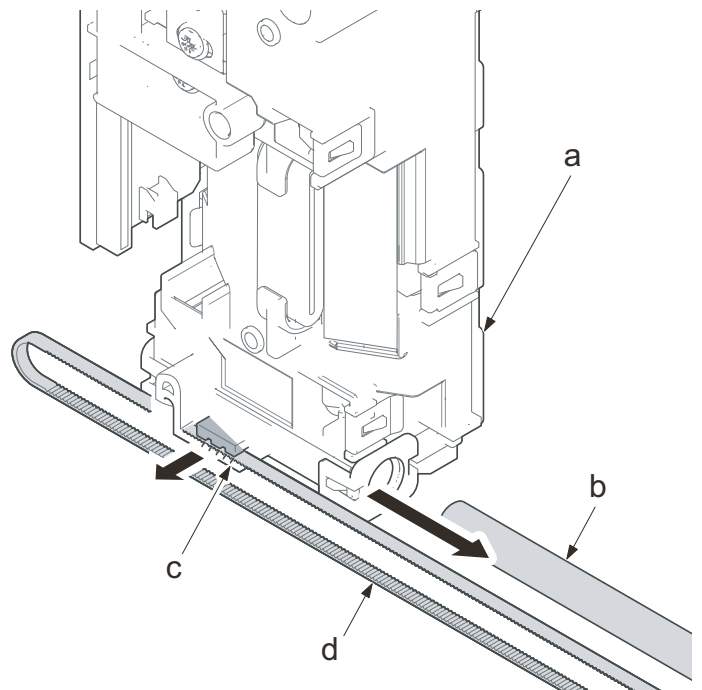


Figure 4-352

(1 - 2) Detaching and reattaching the ISU

1. Pull the lower part of the opening toward the machine rear side and release the hook (a).
2. Remove the interface cover (b).

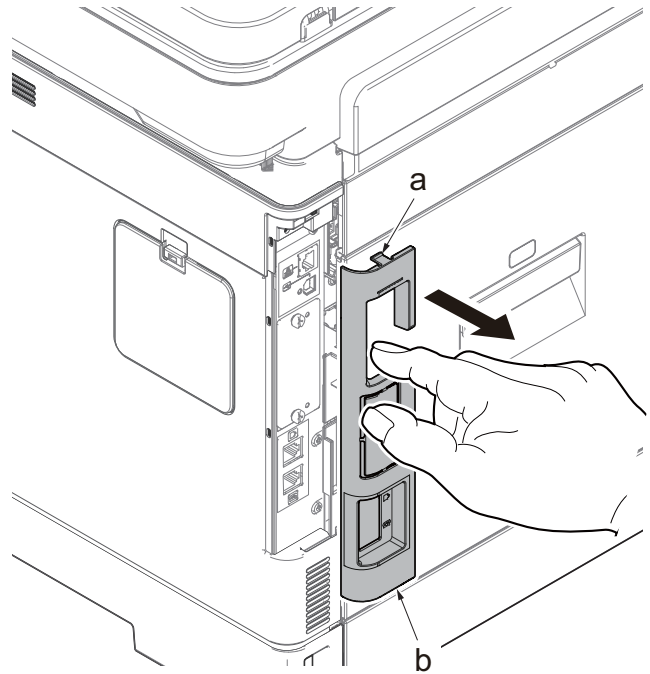


Figure 4-353

3. Remove the screw (a)(M3x8).
4. Slide the upper right cover (b) toward the machine rear side and detach it.

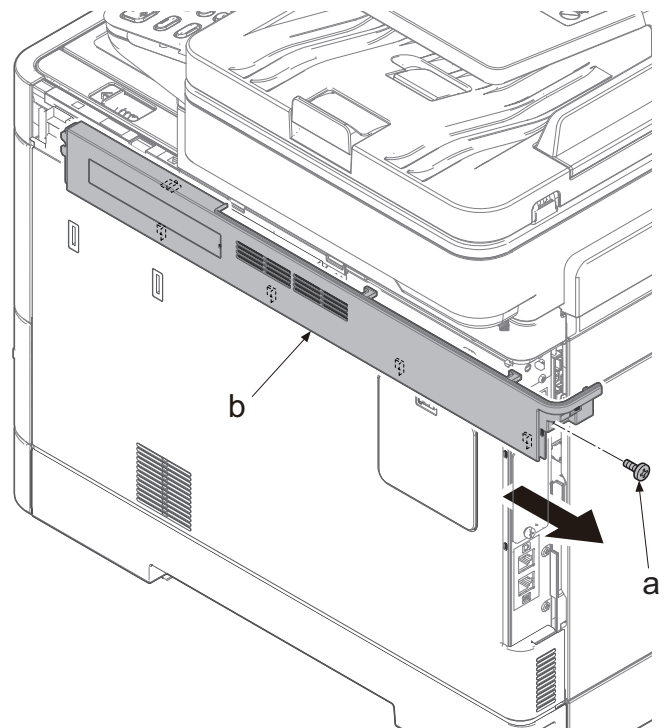


Figure 4-354

IMPORTANT

When reattaching the upper right cover (a), insert the hook (b) to the machine front side, and then fasten seven hooks (c) by sliding it toward the machine front side and insert the positioning projection (d) into the hole.

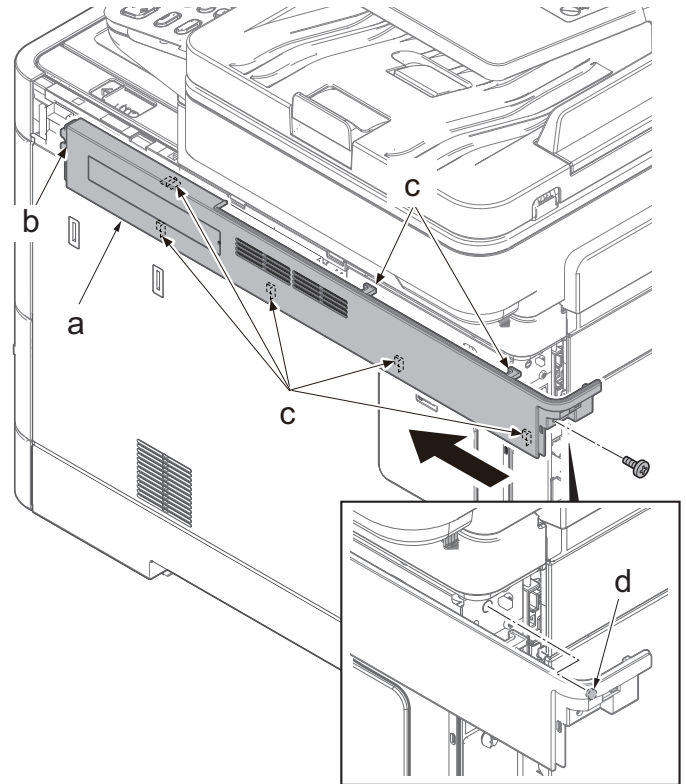


Figure 4-355

5. Open the waste toner cover (a).
6. Press the arm (b) down.
7. Remove the waste toner cover (a).

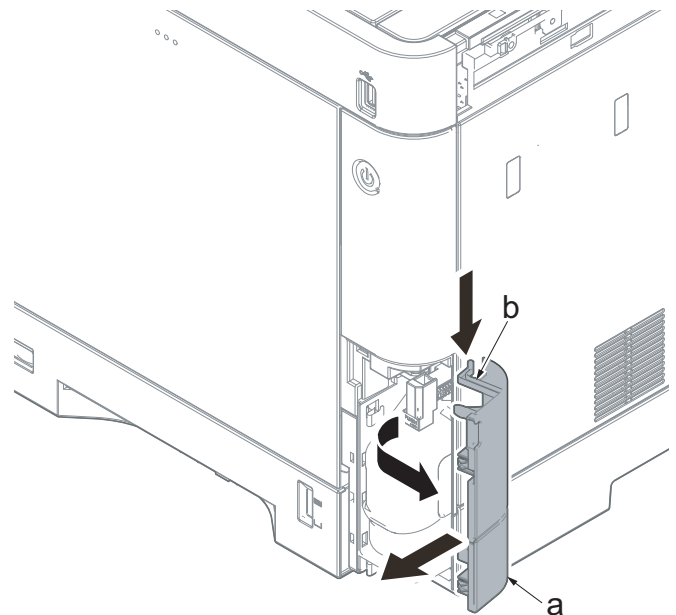


Figure 4-356

- 8. Push the lever (a) and open the memory cover (b).
- 9. Remove the memory cover (b).

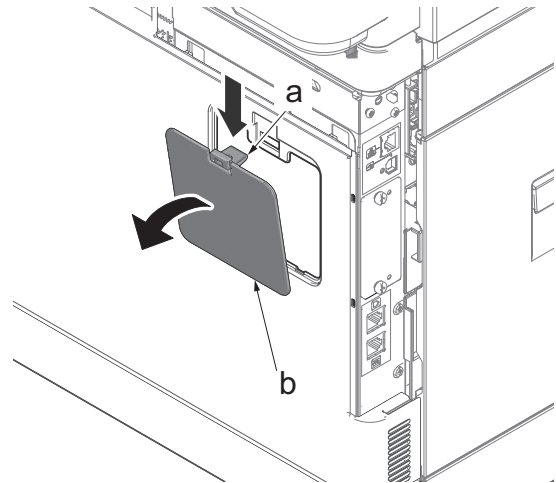


Figure 4-357

- 10. Pull up the shield lid (a) and pull it toward you to remove it.

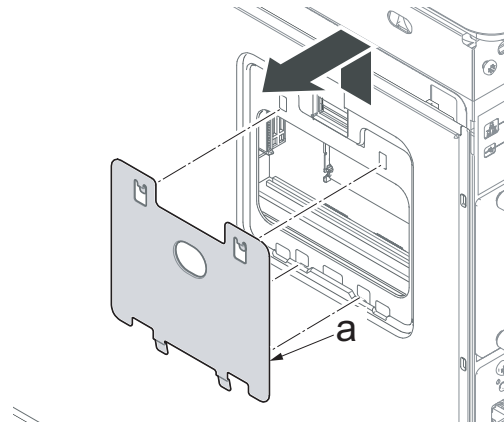


Figure 4-358

- 11. Open the rear cover (a).

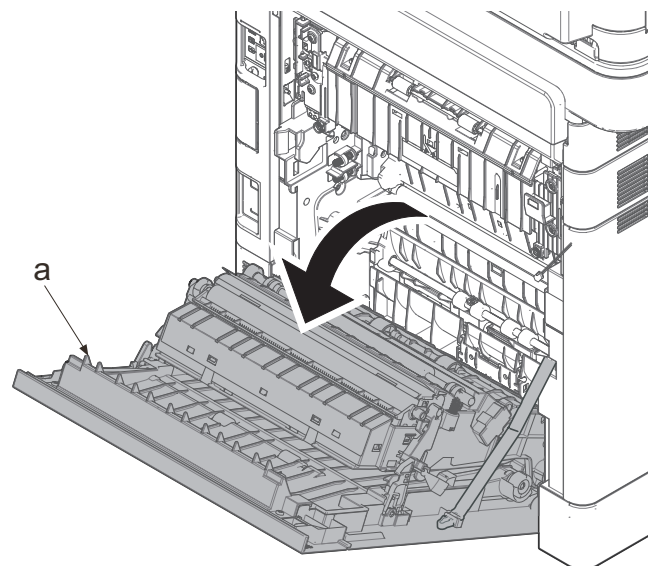


Figure 4-359

12. Push the machine front side of the middle right cover (a) toward the machine rear side and then lift up its machine rear side to detach it.

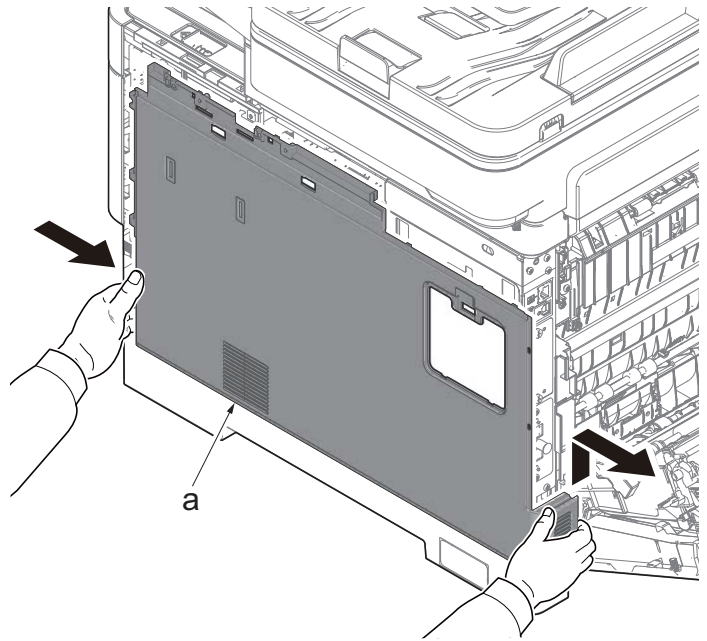


Figure 4-360

IMPORTANT

When reattaching the middle right cover (a), insert the lower rib into the the lower right cover (b). Slide it toward the machine front side to fasten three hooks (c) and then lower it to fasten three hooks (d), and fasten two hooks (e) at the machine rear side. Check if three hooks (d) at the machine rear side are surely fastened.

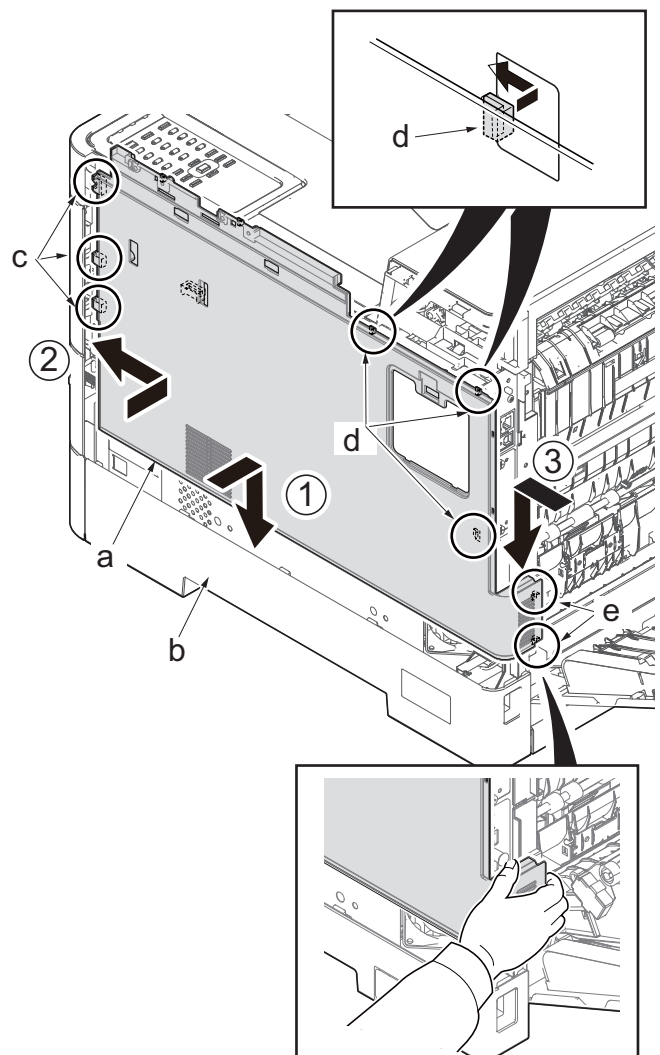


Figure 4-361

13. Remove the network connector cap (a).

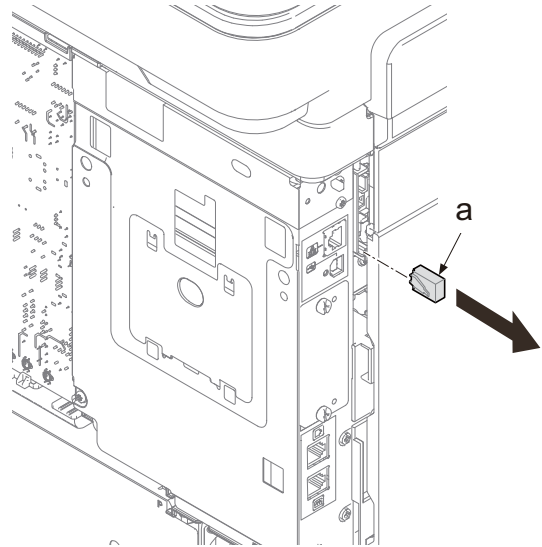


Figure 4-362

*: If the optional board (b) is installed, remove two pins (a) and remove it.

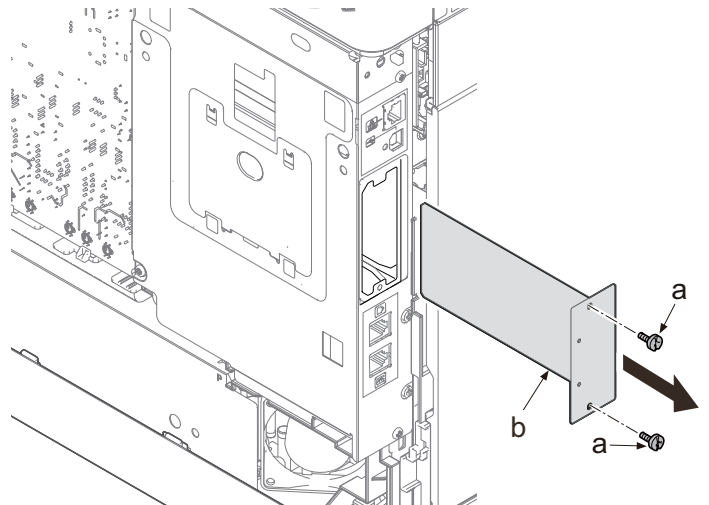


Figure 4-363

- 14. Remove four screws (a)(M3x8).
- 15. Remove the screw (b)(M3x8).
Remove the ground terminal (c).

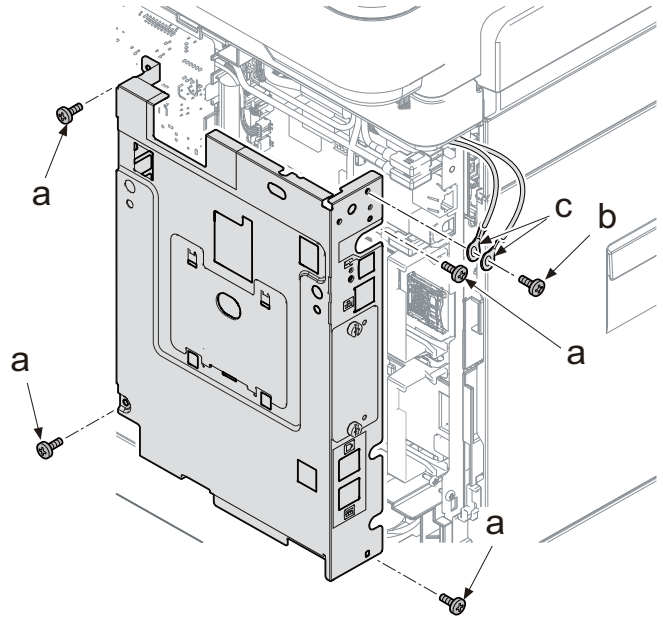


Figure 4-364

- 16. Remove the network connector (a) while sliding it toward the machine rear side and then remove the controller shield (b).

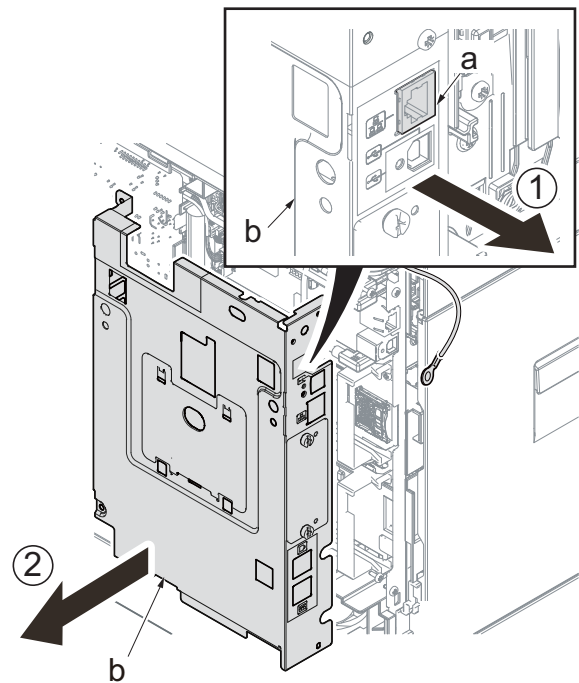


Figure 4-365

IMPORTANT

Pull out the ground wire (b) from the cut-out (c) of the controller shield (a) and secure it with the screw (d) when reattaching the controller shield (a).

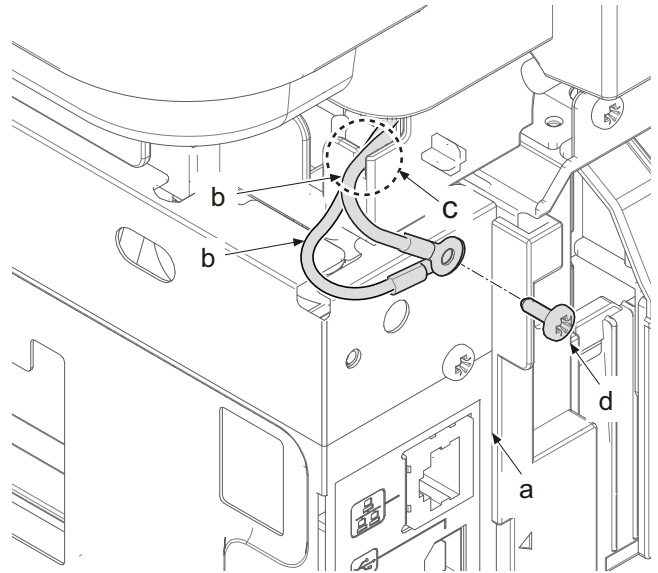


Figure 4-366

If removing the shield cover (b) when removing the controller shield (a), reattach it at that time.

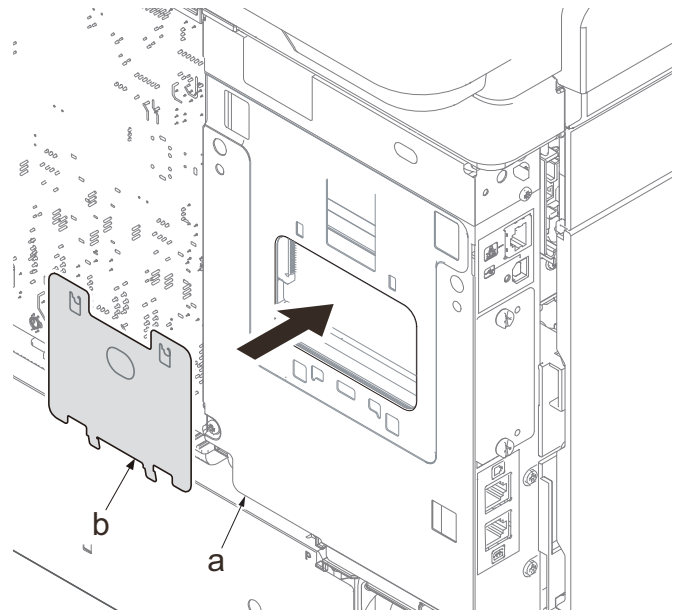


Figure 4-367

17. Remove the screw (a)(M3x8).
18. Slide the upper left cover (b) toward the machine rear side and detach it.

IMPORTANT

When reattaching the upper left cover (b), insert the hook (c) to the machine front side, and then fasten seven hooks (d) by sliding it toward the machine front side.

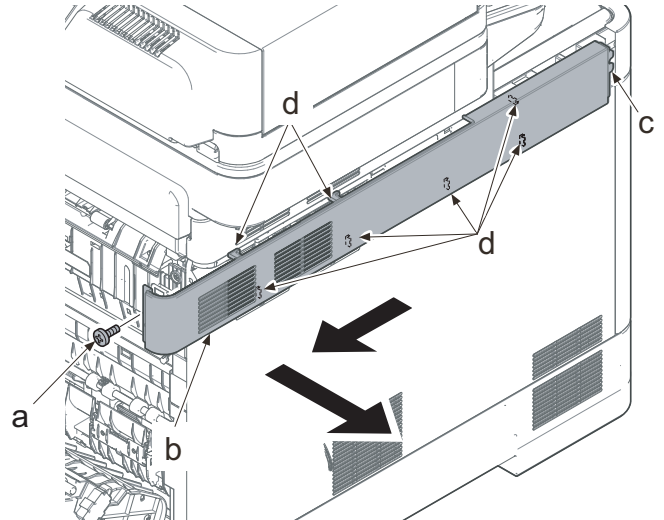


Figure 4-368

19. Pull the document processor out upward. (See page P.181)

20. Push the DP lock button (a).

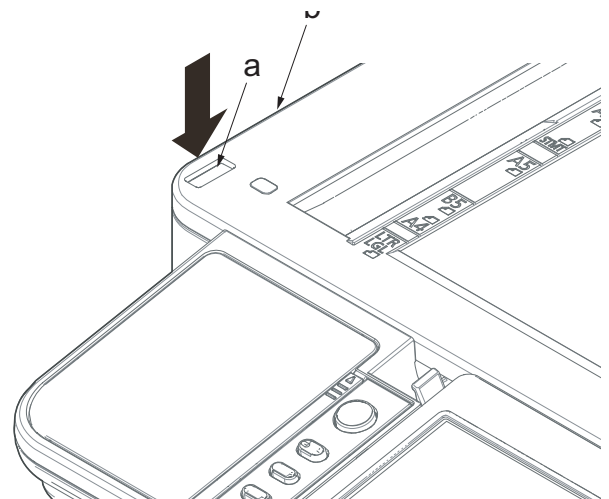


Figure 4-369

21. Pull the lever (a).
22. Lift up the scanner unit (b) and open the inner tray (c).

*: The inner tray is locked unless the document processor is installed. Thus, push the DP lock button at the left side of the scanner unit (b) to release the inner tray.

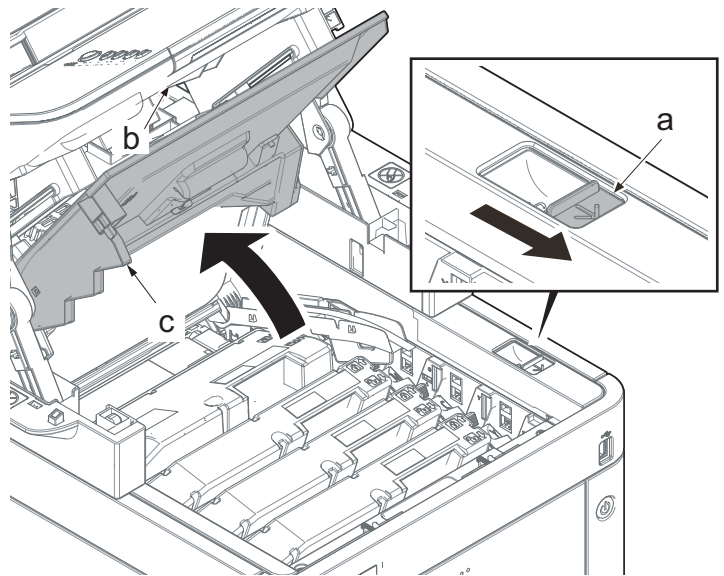


Figure 4-370

23. Pull out the left and right pins (b) from the inside of the inner tray (a) while opening the inner tray (a) in the middle of full-open angle.

*: Broaden the gap between the rails (c) when the pins (b) are in the center of the rails (c), and pull out the pins from the inner tray (a).

*: This procedure lowers the inner tray and only the scanner unit is opened.

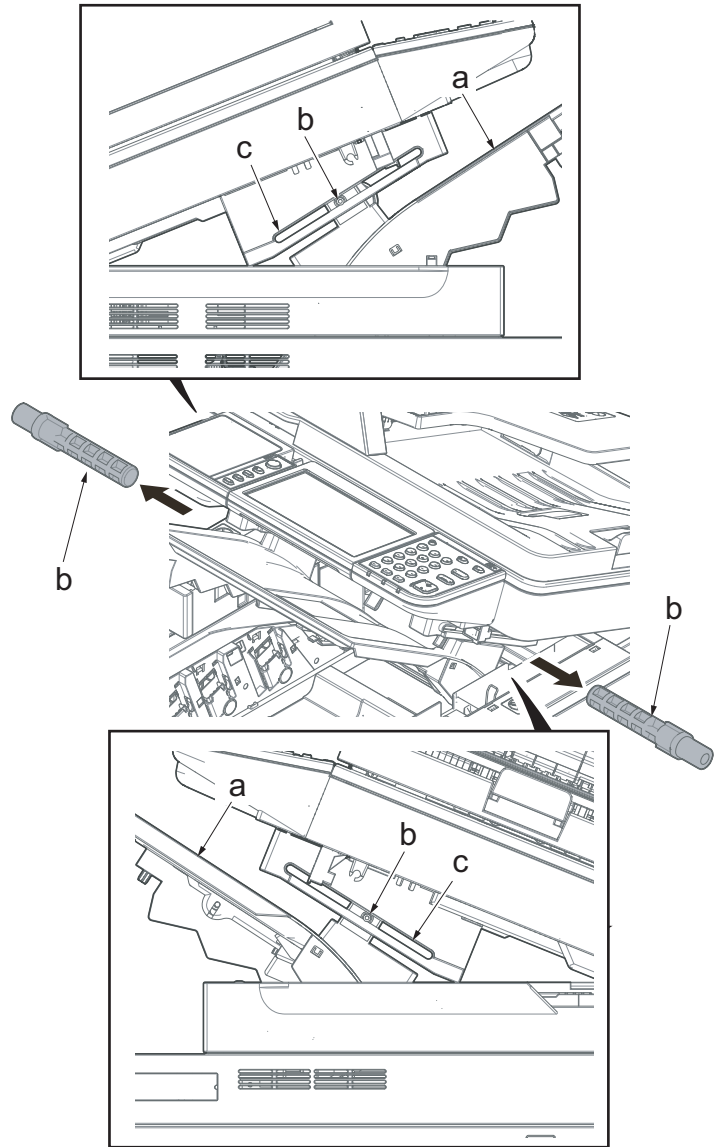


Figure 4-371

24. Release the hook (a) using a flat-blade screwdriver (d).
25. Insert the flat-blade screwdriver (d) into the hole from the machine front side and release three hooks (b). (Release in the order from 1 to 3)
26. Remove the scanner right cover (c).

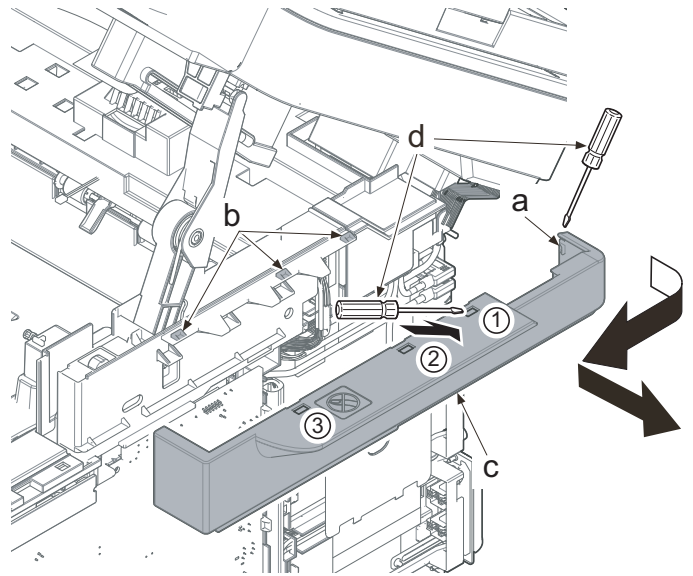


Figure 4-372

27. Release the hook (a) using a flat-blade screwdriver (d).
28. Insert the flat-blade screwdriver (d) into the hole from the machine front side and release four hooks (b). (Release in the order from 1 to 4)
29. Slide the scanner left cover (c) toward the machine front side and detach it.

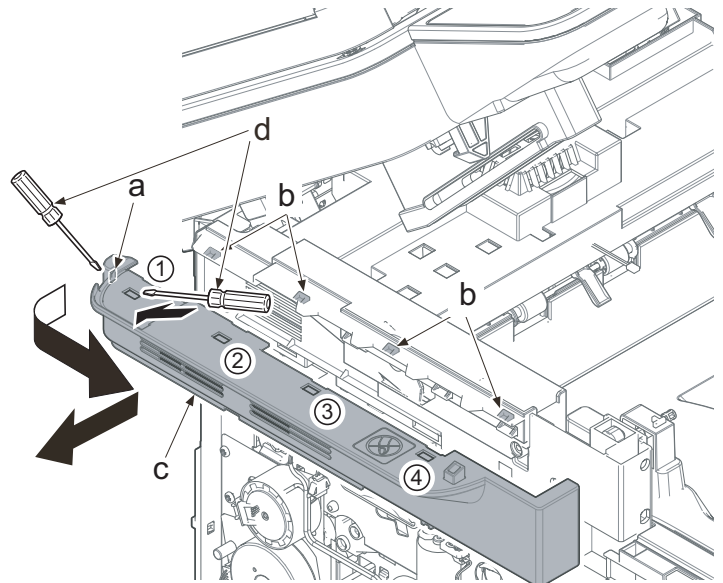


Figure 4-373

30. Pull out the left and right arm pins (a) while pushing them out toward the machine right side using a flat-blade screwdriver (c).

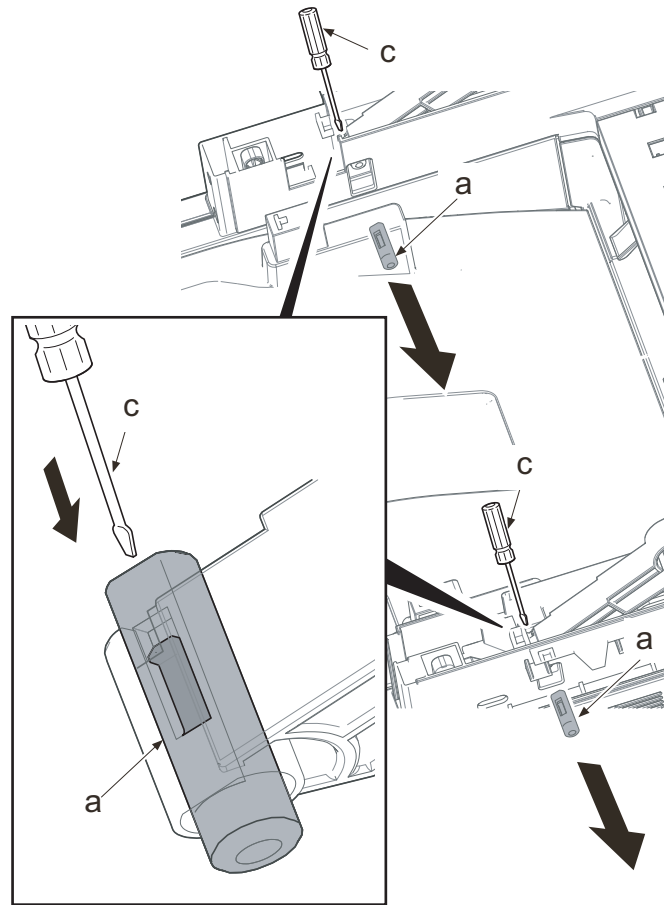


Figure 4-374

IMPORTANT

When reattaching the arm pins (a), fit their D-cut parts to the holes and insert them from the machine right side.

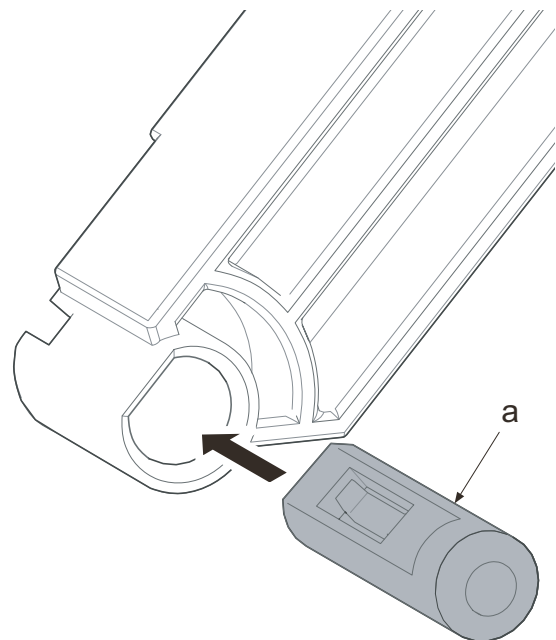


Figure 4-375

31. Inset the flat-blade screwdriver through the lower side of the upper rear cover (a) and release the hook (b) inside.
32. Release two hooks (c).
33. Remove the upper rear cover (a).

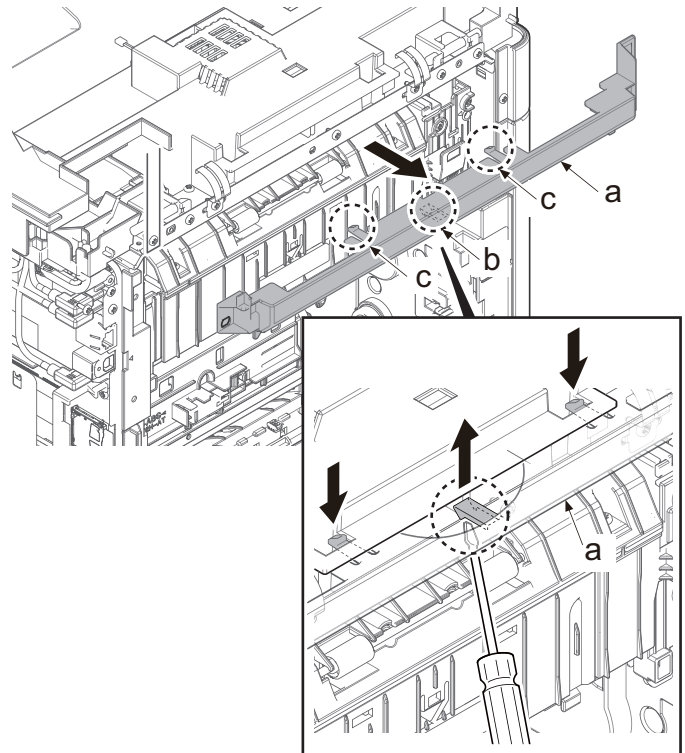


Figure 4-376

34. Release the hook (a).
- *: Insert a flat-blade screwdriver into the square hole to release the hook by pushing it toward the machine rear side.
35. Remove the upper exit cover (b).

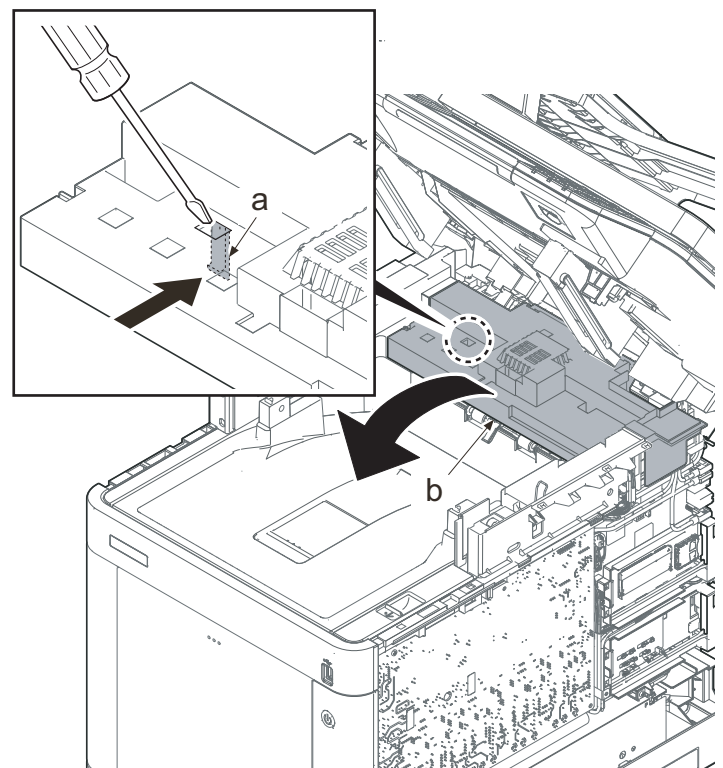


Figure 4-377

IMPORTANT

When reattaching the upper exit cover (a), insert the two hooks (b) into the square holes (c) of the main unit and fasten the hook (d). Then, secure it with the screws (e).

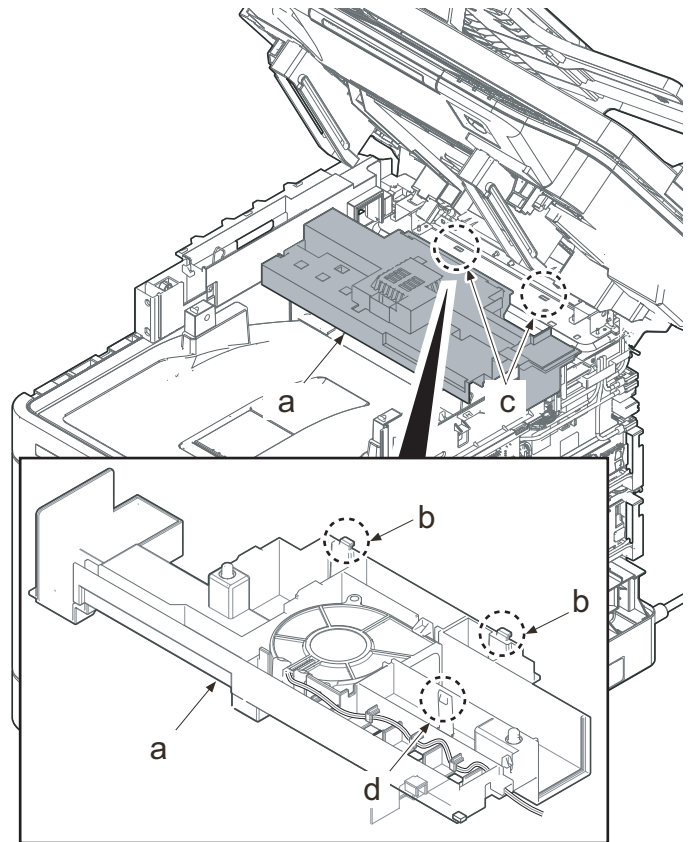


Figure 4-378

36. Disconnect the following five connectors connected to the main/engine PWB (a).
- YC38
 - YC12
 - YC5(BLACK)
 - YC13(BLACK)
 - YC20 FFC

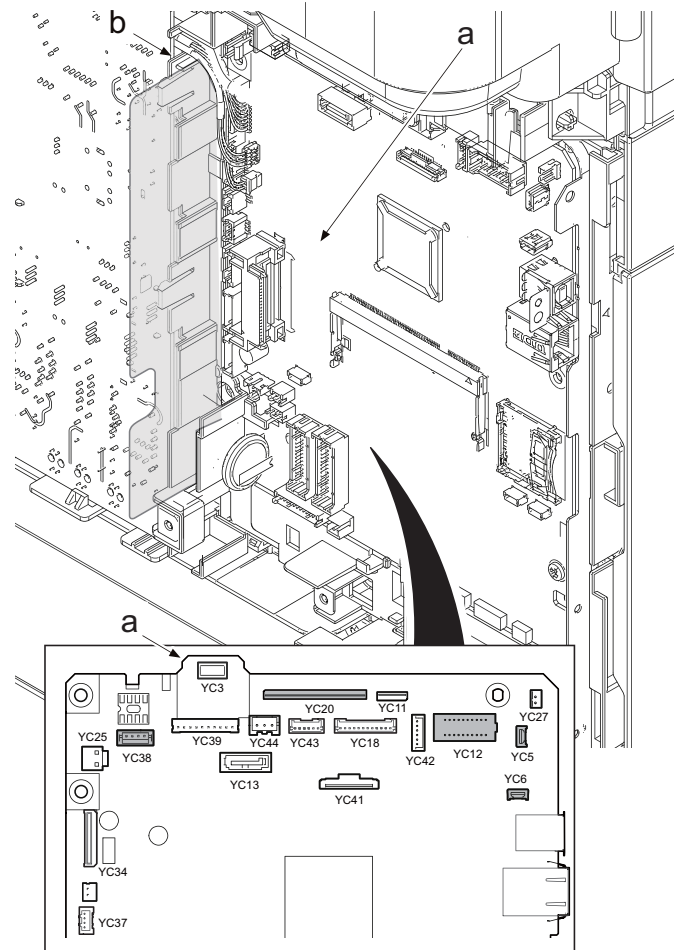


Figure 4-379

37. Remove the wire (a) from the hook (b).

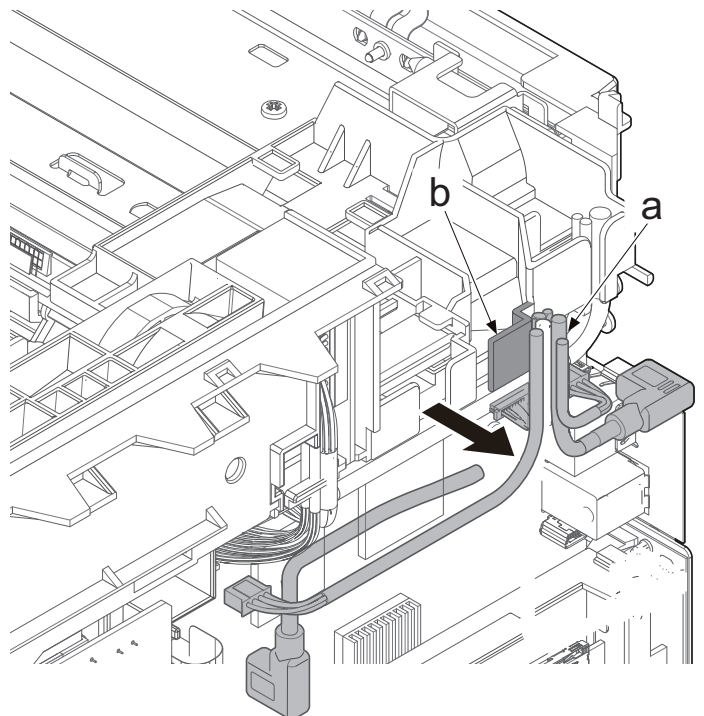


Figure 4-380

38. Pass the film (b) and FFC (a) through the hook (c) to pull them out when disconnecting the FFC (a).
39. Keep the FFC (a) horizontal and pass it through the ferrite core (d). Release it from four hooks (e) and remove it.

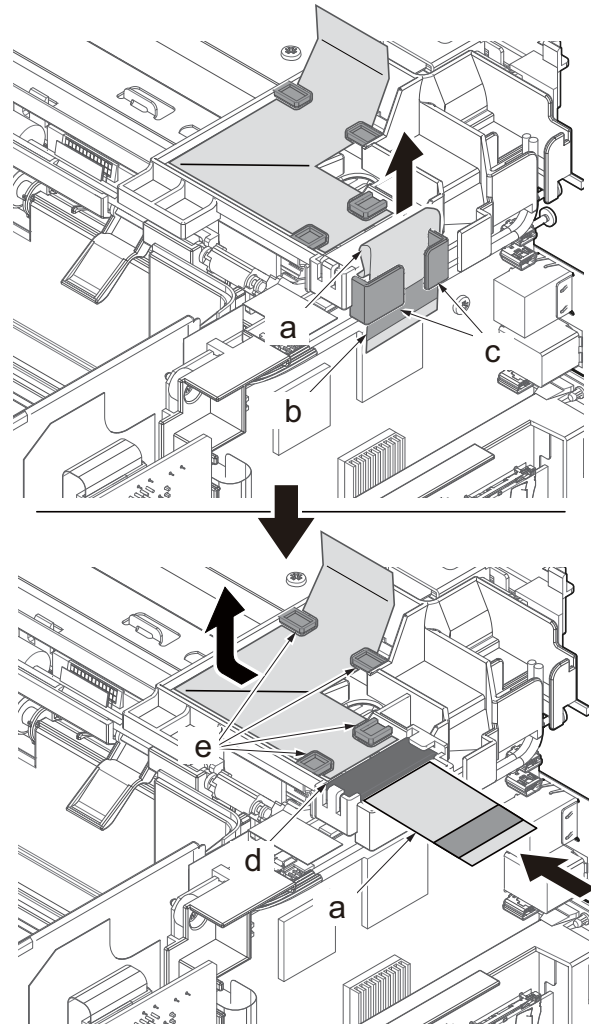


Figure 4-381

30 ppm model

- 40. Disconnect the connector (b)(YC18) and connector (c)(YC39) from the main/engine PWB (a).
- 41. Remove the wire (b) from the hook (c).

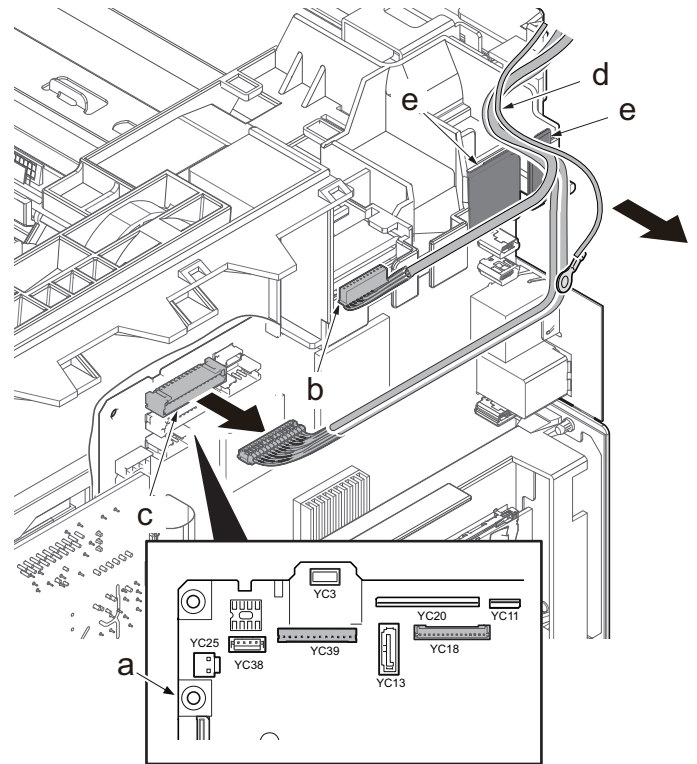


Figure 4-382

35 ppm model

- 42. Disconnect the connector (b)(YC41) from the main/engine PWB (a).

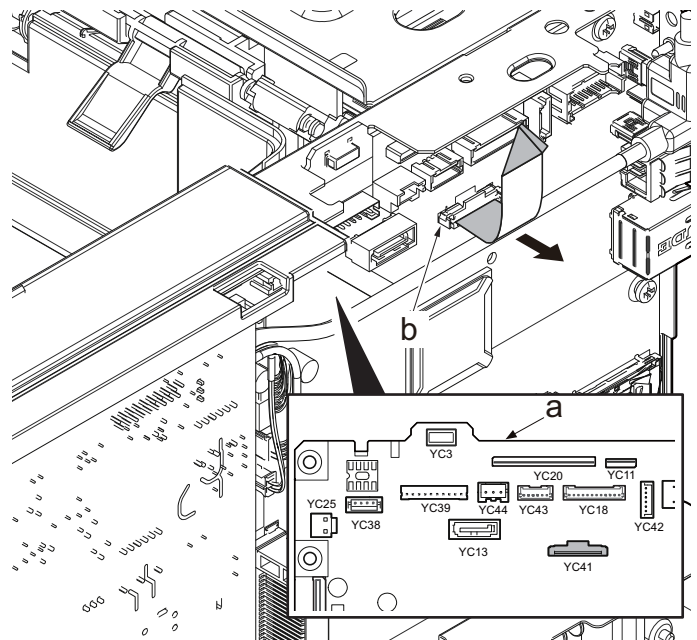


Figure 4-383

43. Pull out the pins (b) from the brackets (a) of the left and right fulcrum parts.

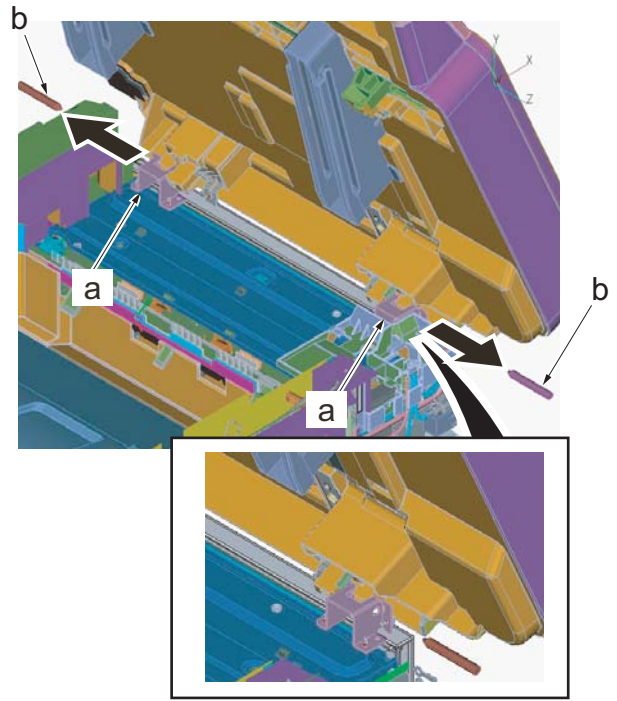


Figure 4-384

44. Detach the scanner unit (a).

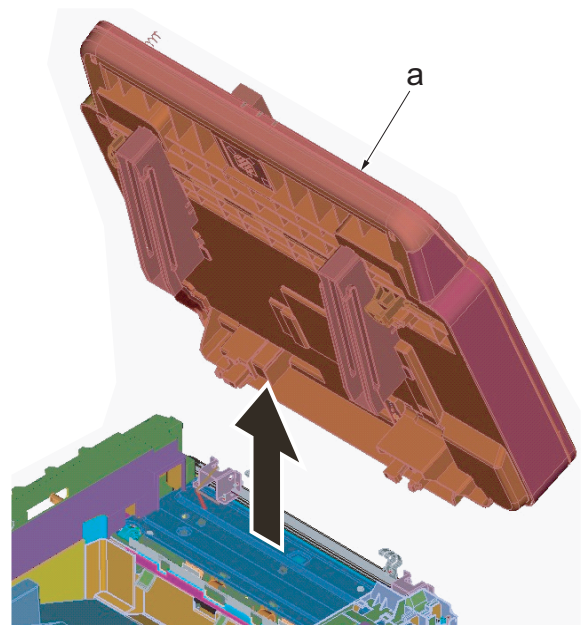


Figure 4-385

(2) Optical section (Laser scanning)

(2 - 1) Detaching and reattaching the LSU

1. Pull the lever (a).
2. Lift up the scanner unit (b) and open the inner tray (c).

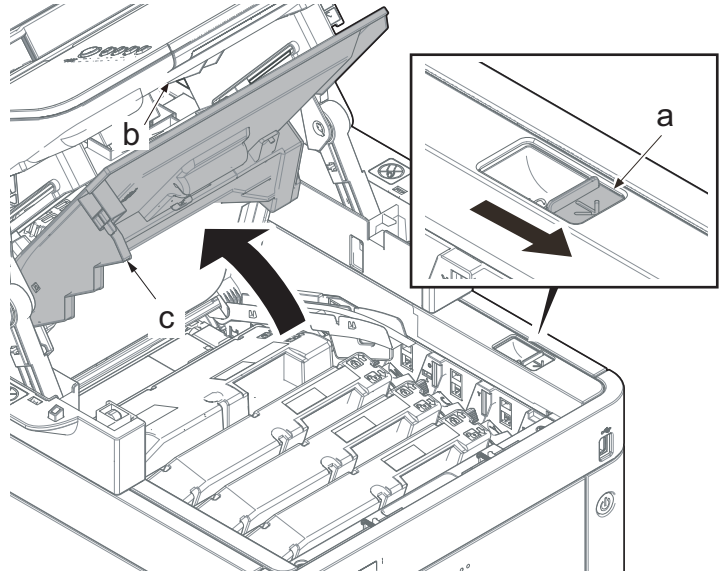


Figure 4-386

3. Rotate the lock lever (a).

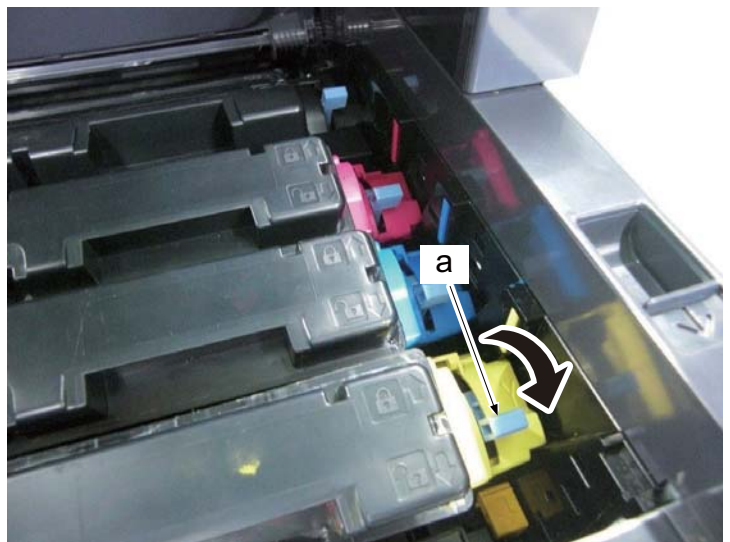


Figure 4-387

4. Detach the toner containers (K, M, C and Y)(a).

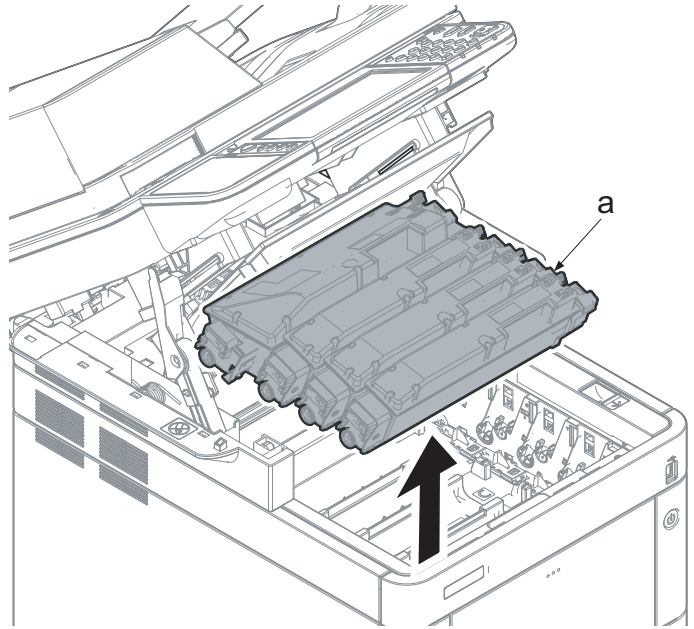


Figure 4-388

*: When detaching the toner container (a), first lift its handle (b) and then pull it out upward.

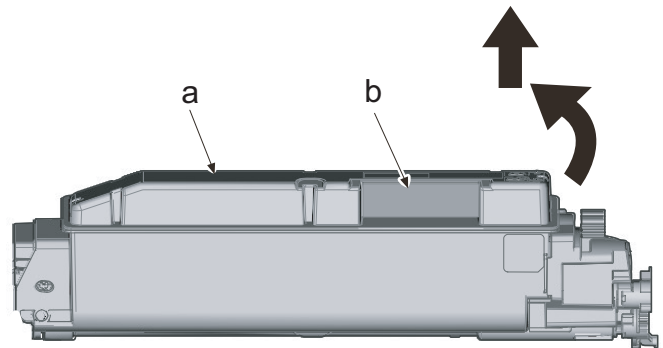


Figure 4-389

5. Pull the right shutter lever (a) in the direction of the arrow.

*: Close the toner feed inlet by pulling this lever.

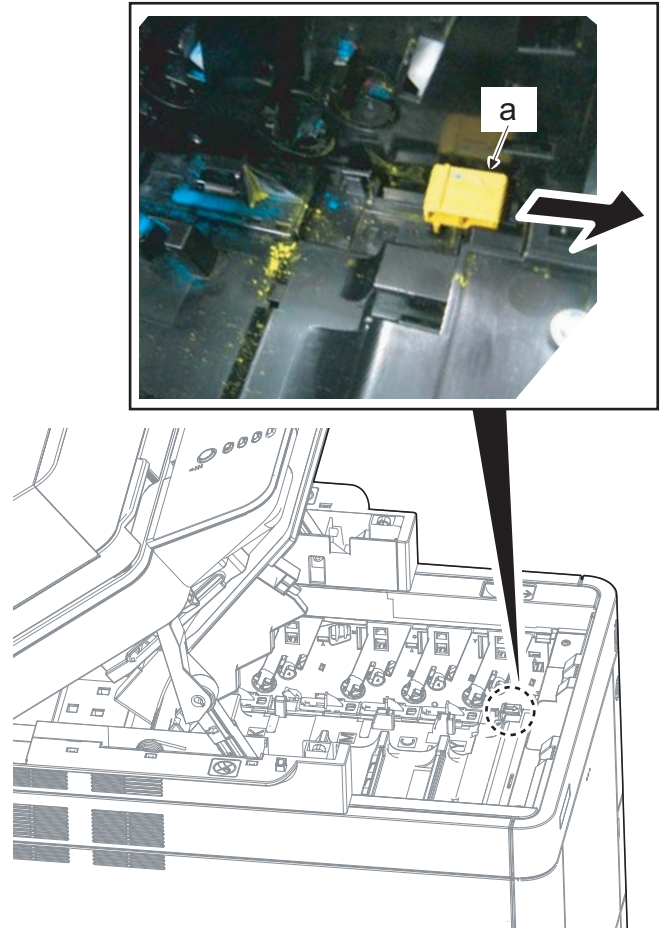


Figure 4-390

6. Remove the screw (a)(M3x12).

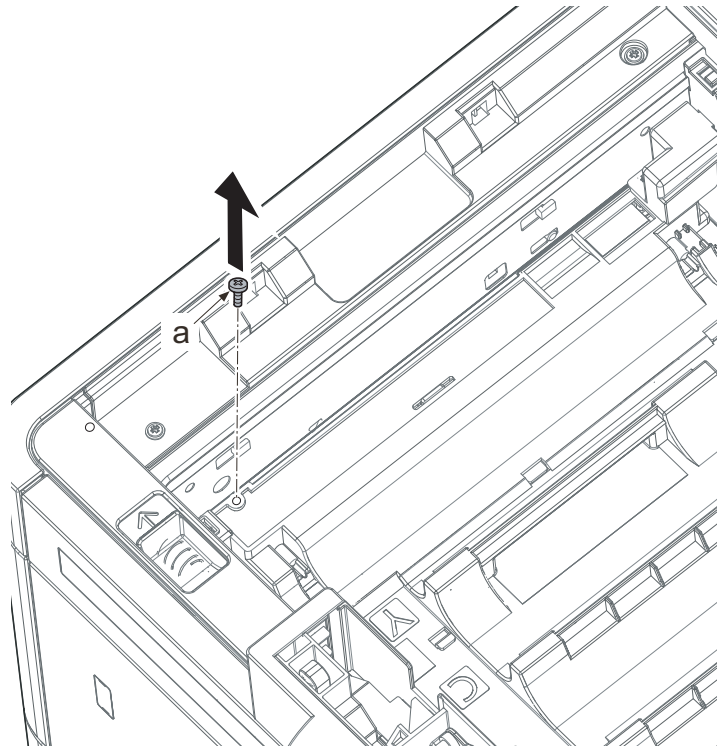


Figure 4-391

7. Remove the screw (a)(M3x12).
8. Remove the lever cover (b).
9. Lift up the drive release lever (c).

*: When raising the lever, the joint of the drive coupling is released.

IMPORTANT

If omitting to attach the lever cover, "Cover open" message is displayed while the tray switch is not turned on.

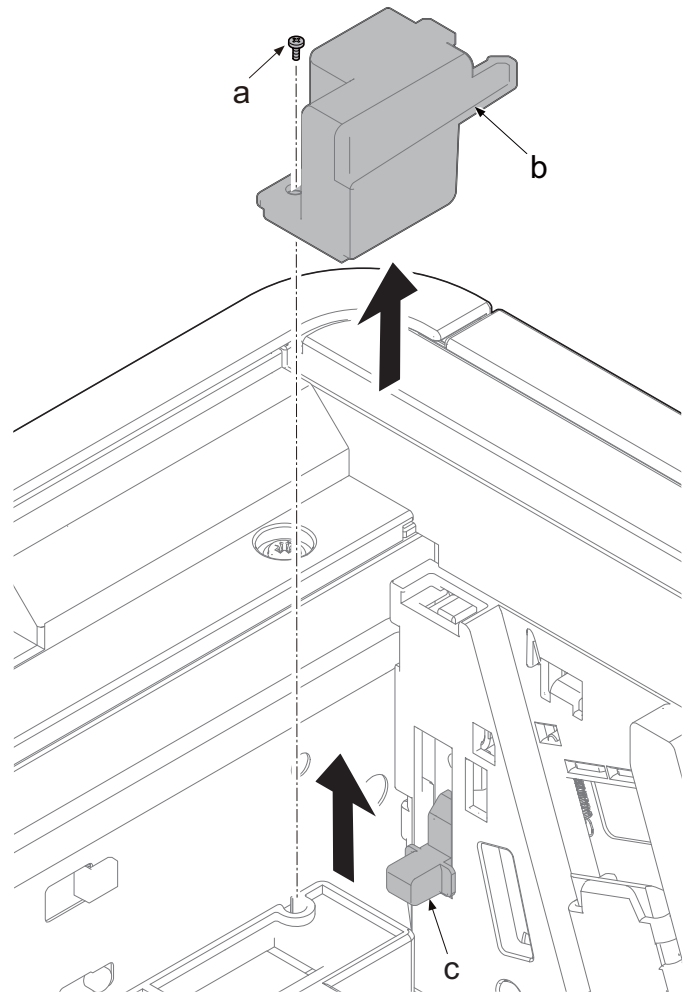


Figure 4-392

10. Detach the primary transfer unit (a).

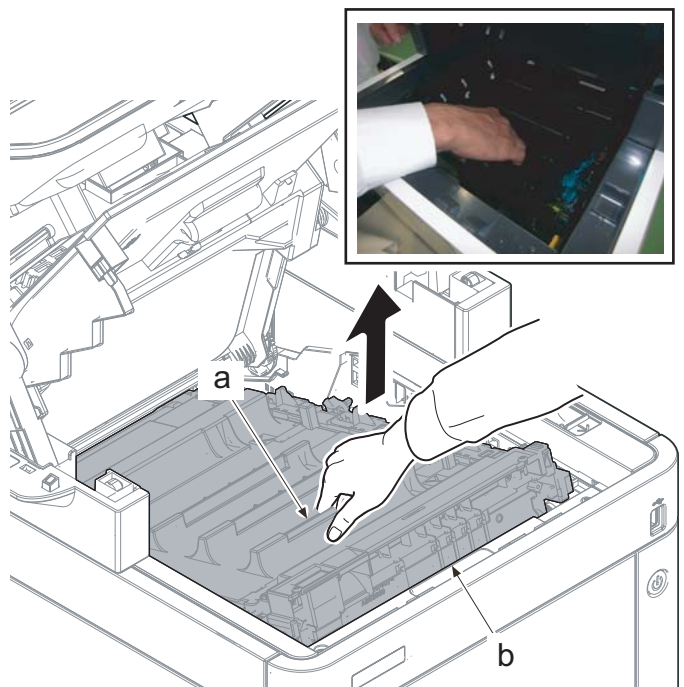


Figure 4-393

*: Hold the handle (b) at the machine front side and lift up the primary transfer unit (a). Then, further lift it up and pull it toward the machine front side to detach.

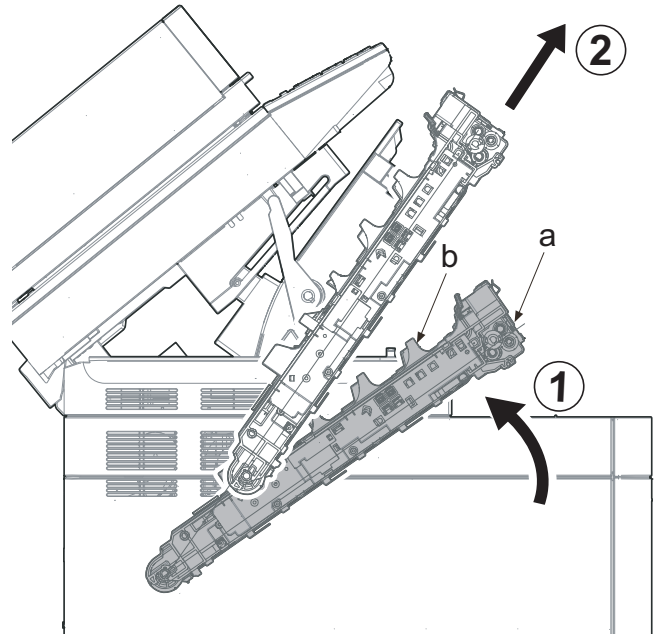


Figure 4-394

*: When removing the primary transfer unit (a) or it is unstable to install it, hold the handle (b) at the machine rear side by the other hand

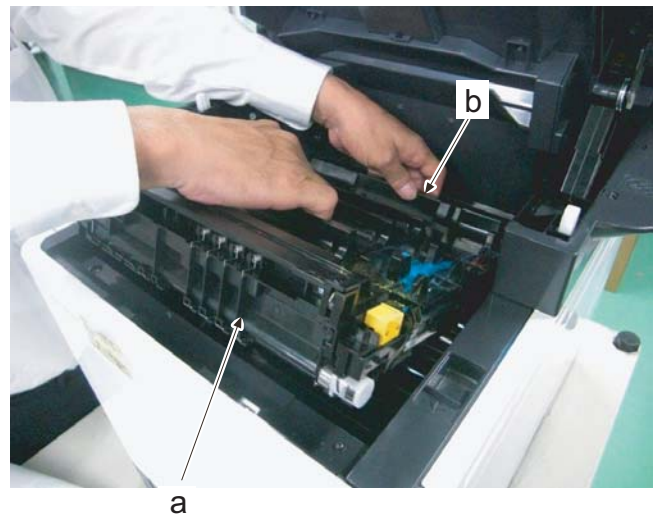


Figure 4-395

*: Do not touch the release lever (b) after detaching the primary transfer unit (a). This lever (b) is connected with the shutter lever (c) and so they are released together by installing the toner container into the main unit. The operation mistakenly open the toner feed inlet (d).

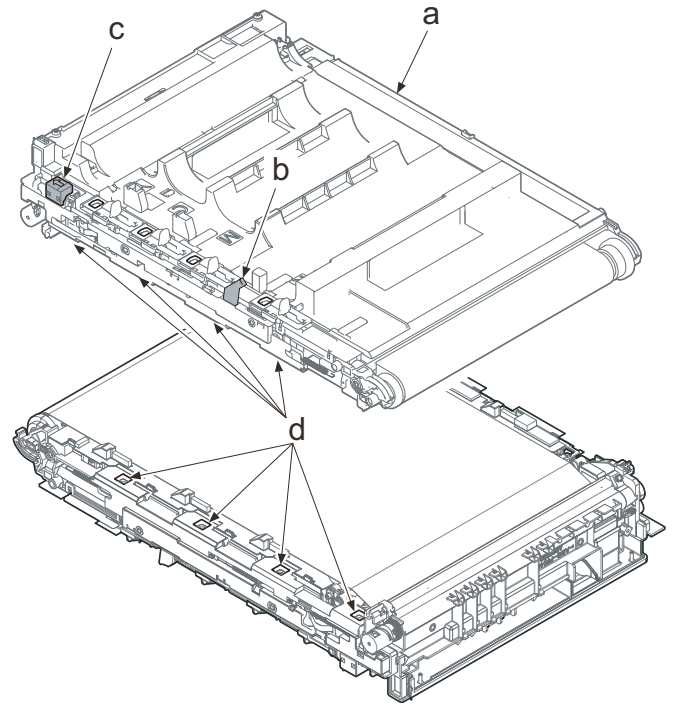


Figure 4-396

11. Detach the drum unit (M,C and Y)(a) by pulling it up.
Lift up the drum unit (K)(b) and pull it toward the machine front side to detach it.

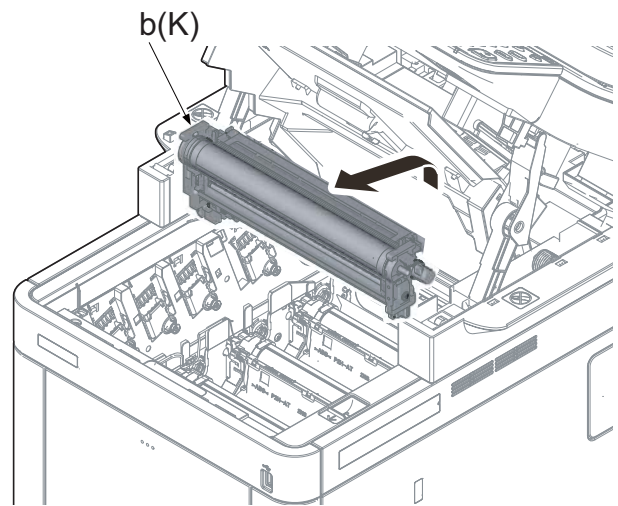
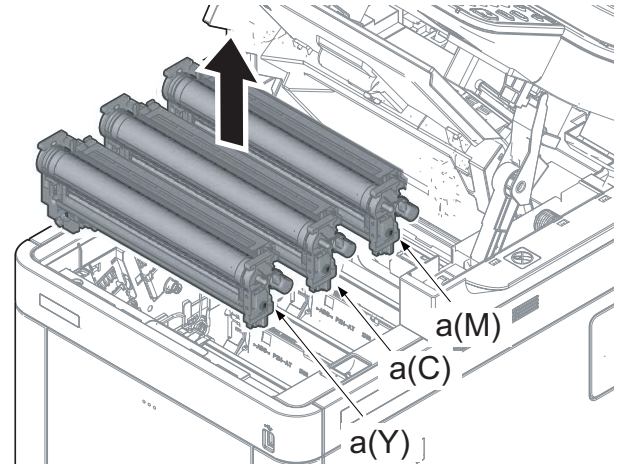


Figure 4-397

IMPORTANT
Hold the handles (b) on both sides when detaching the drum unit (a).

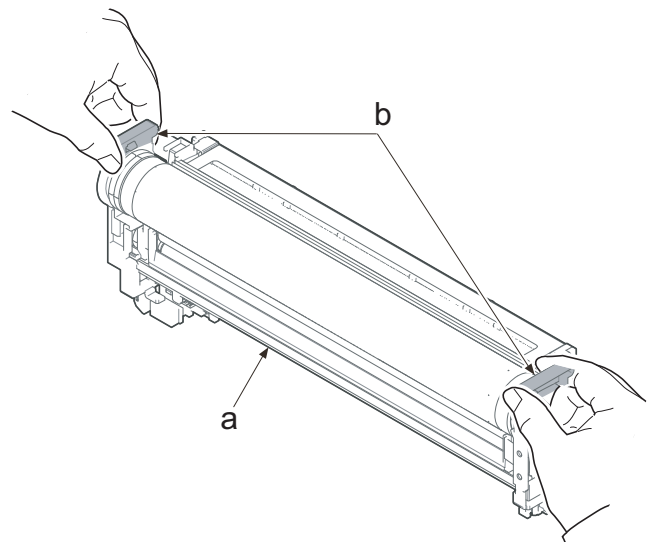


Figure 4-398

12. Detach the developer unit (K, M, C and Y)(a).

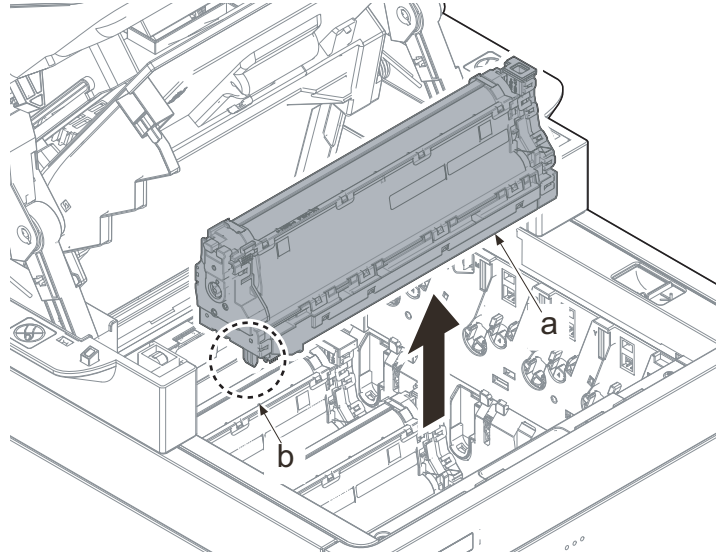


Figure 4-399

*: When detaching the developer unit (a), hold both the left and right handles (b).

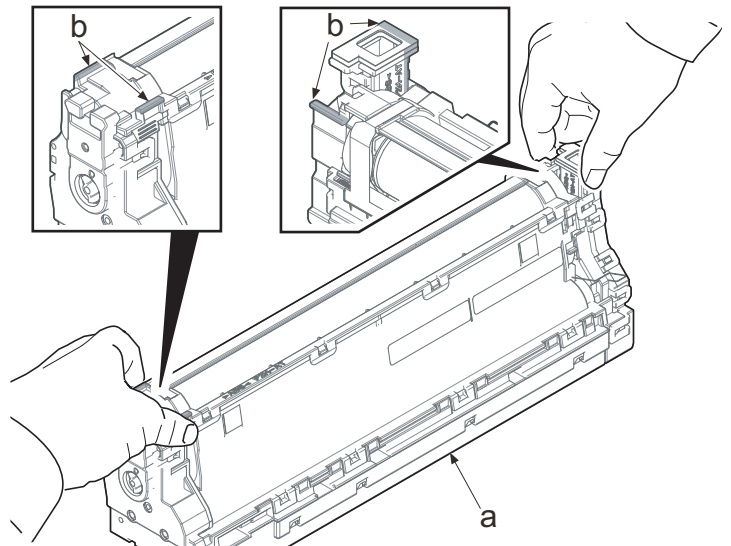


Figure 4-400

*: Make sure not to touch the gears (a) in the drive section where there is grease.

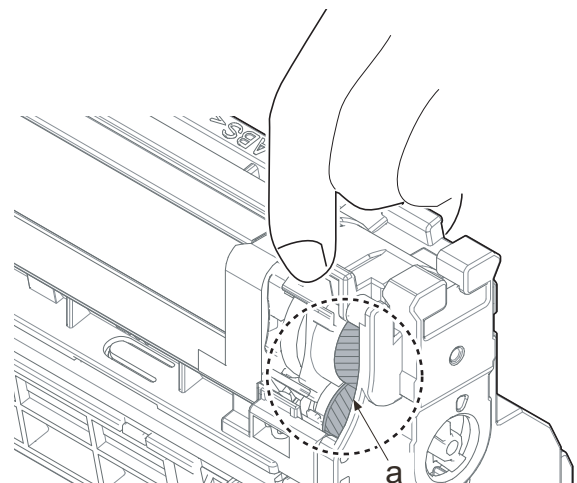


Figure 4-401

IMPORTANT

When attaching the developer unit (a), match the colors between the back side (b) of the developer unit and the right side (c) of the main unit.

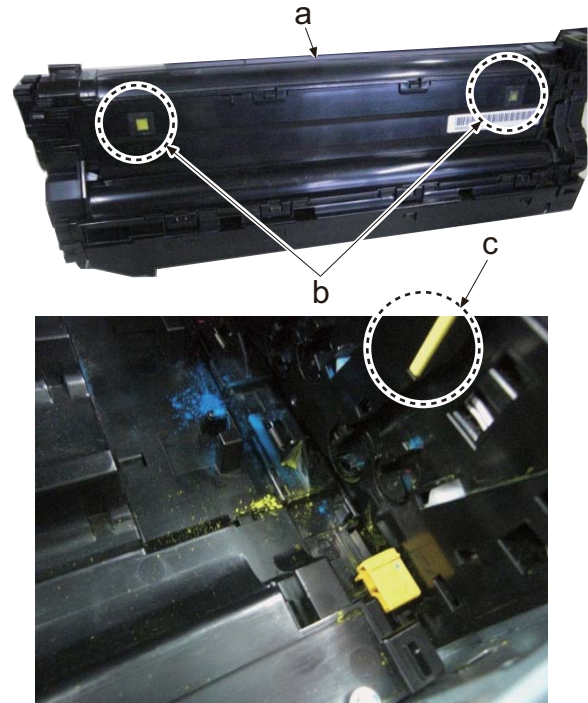


Figure 4-402

Take care not to touch the transfer high-voltage terminal (b) when attaching/detaching developer unit Y (a). It may cause the contact failure with deformation, etc.

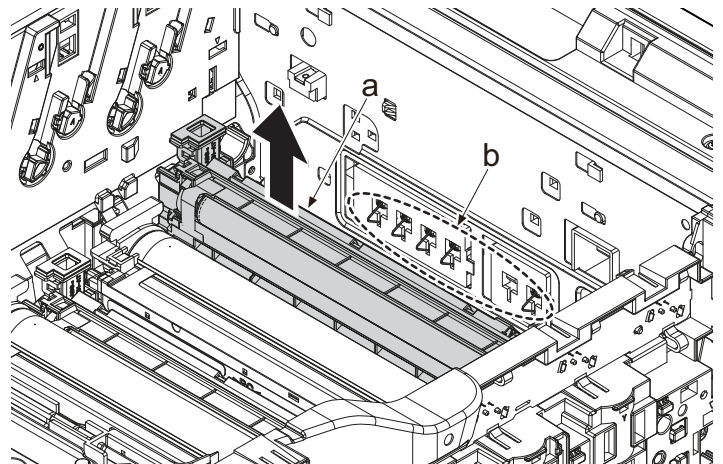


Figure 4-403

13. Open the rear cover (a).
14. Pull the lower part of the opening toward the machine rear side and release the hook (a).
15. Remove the interface cover (b).

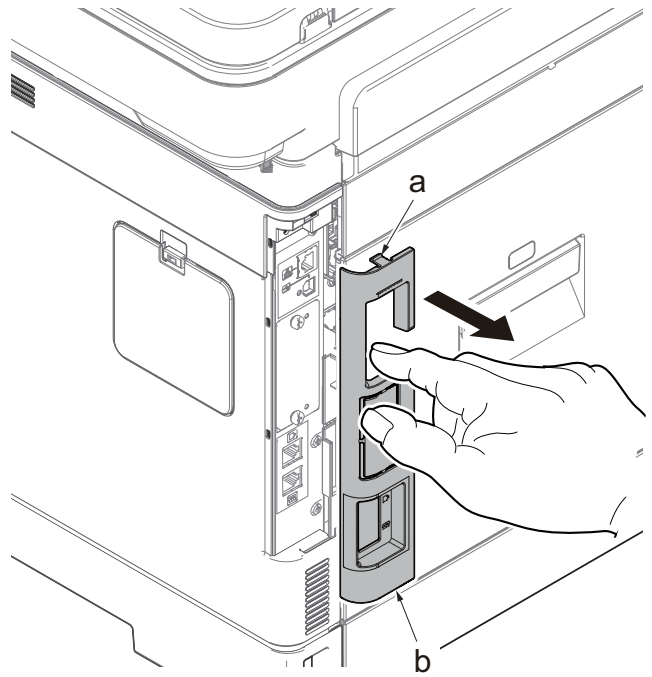


Figure 4-404

16. Remove the screw (a)(M3x8).
17. Slide the upper right cover (b) toward the machine rear side and detach it.

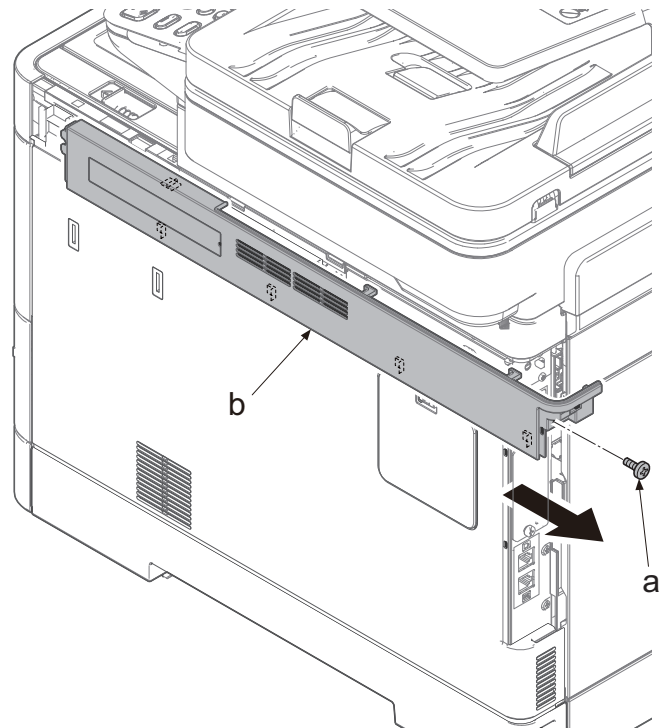


Figure 4-405

IMPORTANT

When reattaching the upper right cover (a), insert the hook (b) to the machine front side, and then fasten seven hooks (c) by sliding it toward the machine front side and insert the positioning projection (d) into the hole.

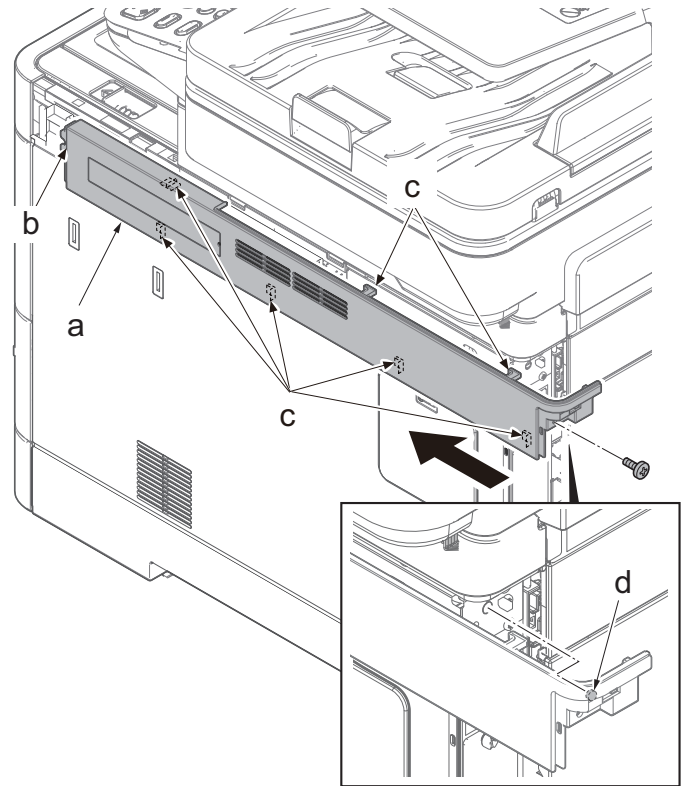


Figure 4-406

18. Open the waste toner cover (a).
19. Press the arm (b) down.
20. Remove the waste toner cover (a).

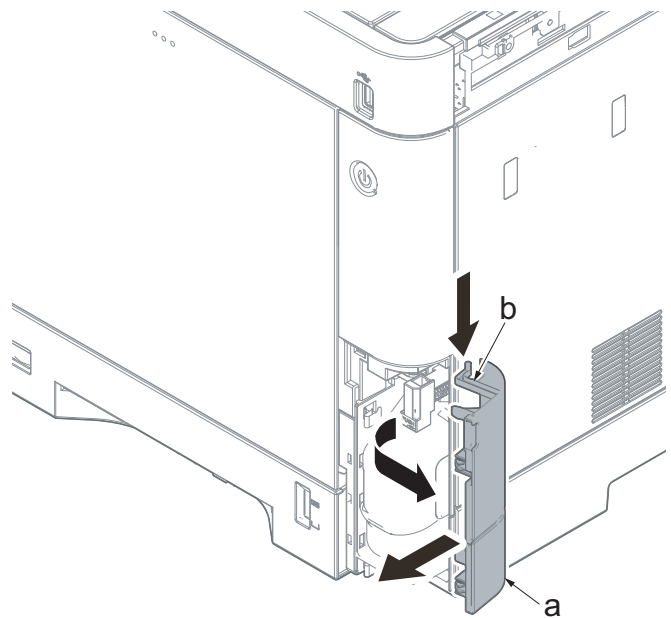


Figure 4-407

- 21. Push the lever (a) and open the memory cover (b).
- 22. Remove the memory cover (b).

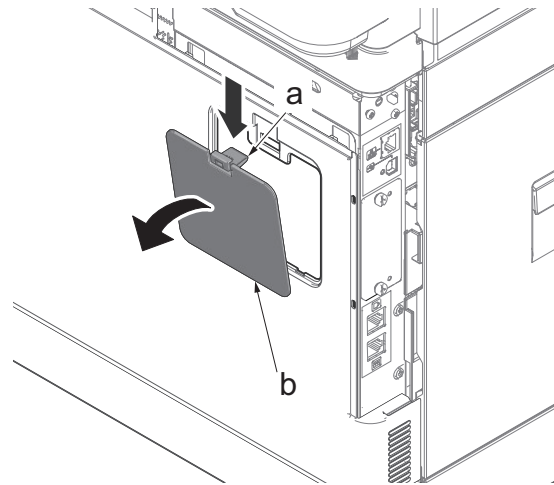


Figure 4-408

- 23. Pull up the shield lid (a) and pull it toward you to remove it.

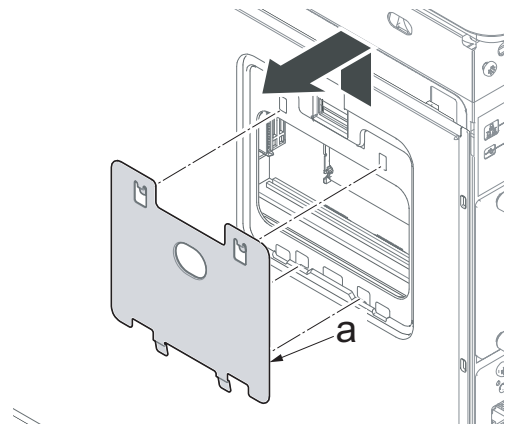


Figure 4-409

- 24. Open the rear cover (a).

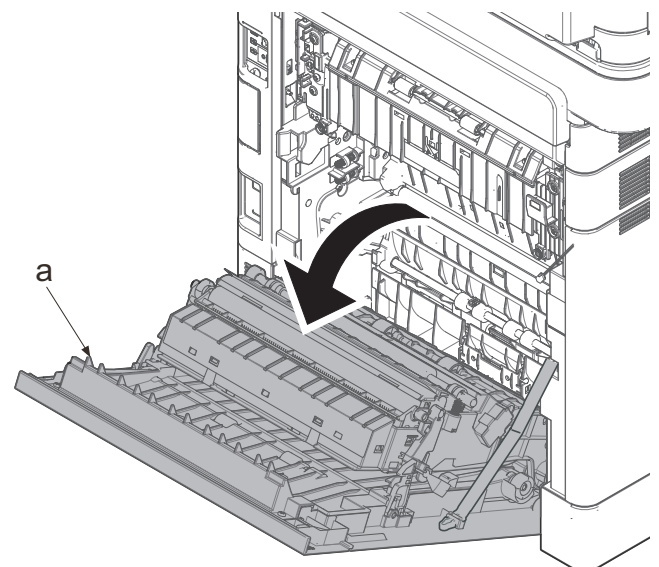


Figure 4-410

25. Push the machine front side of the middle right cover (a) toward the machine rear side and then lift up its machine rear side to detach it.

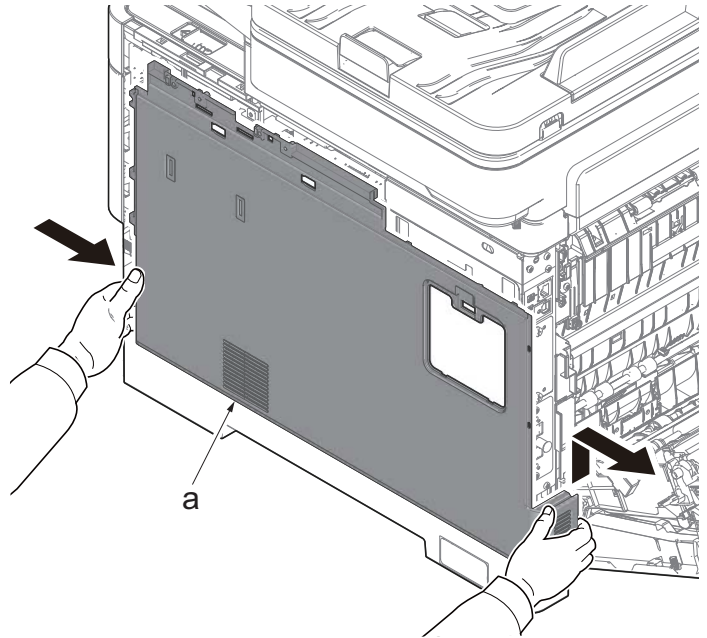


Figure 4-411

IMPORTANT

When reattaching the middle right cover (a), insert the lower rib into the the lower right cover (b). Slide it toward the machine front side to fasten three hooks (c) and then lower it to fasten three hooks (d), and fasten two hooks (e) at the machine rear side. Check if three hooks (d) at the machine rear side are surely fastened.

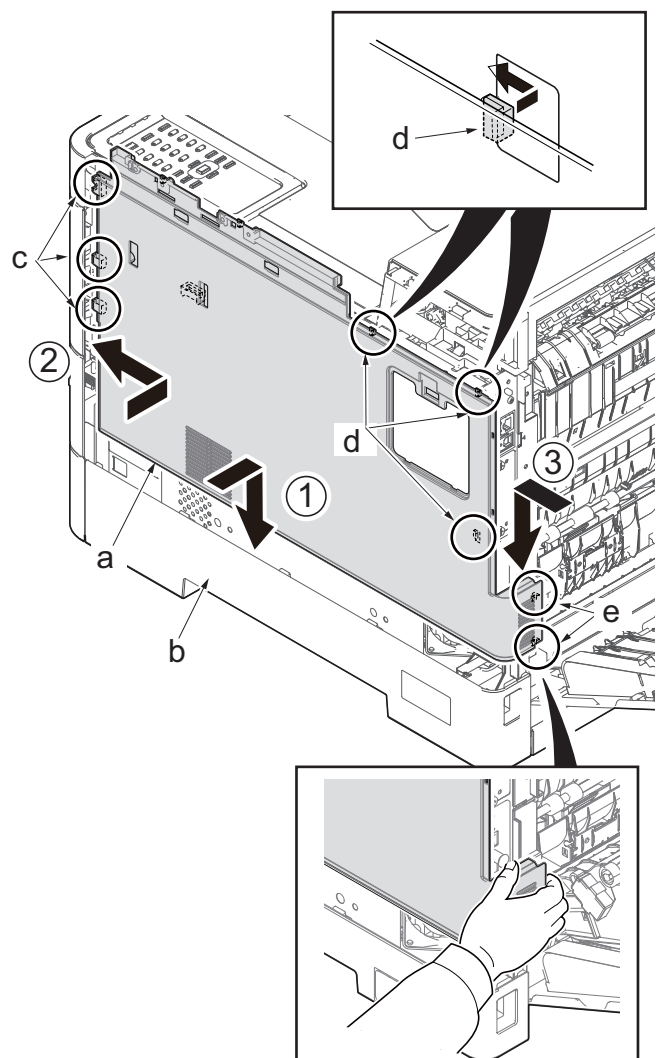


Figure 4-412

26. Remove the network connector cap (a).

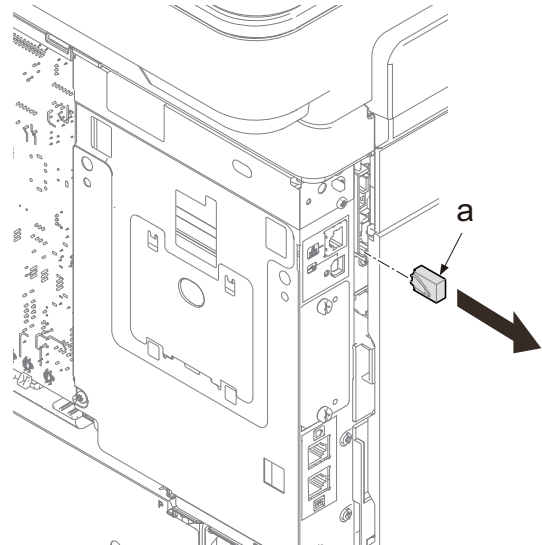


Figure 4-413

27. If the optional board (b) is installed, remove two pins (a) and remove it.

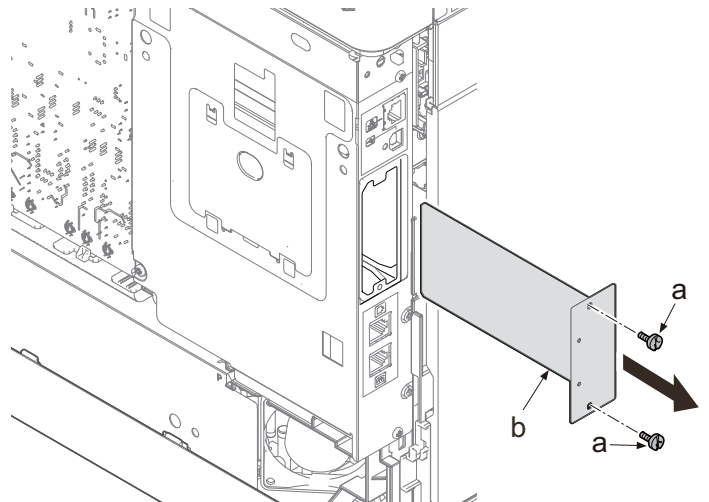


Figure 4-414

- 28. Remove four screws (a)(M3x8).
- 29. Remove the screw (b)(M3x8) and remove two ground terminals (c).

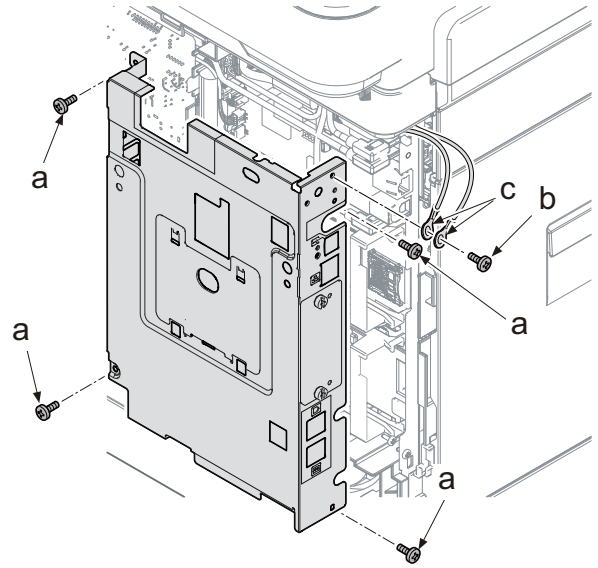


Figure 4-415

- 30. Remove the network connector (a) while sliding it toward the machine rear side and then remove the controller shield (b).

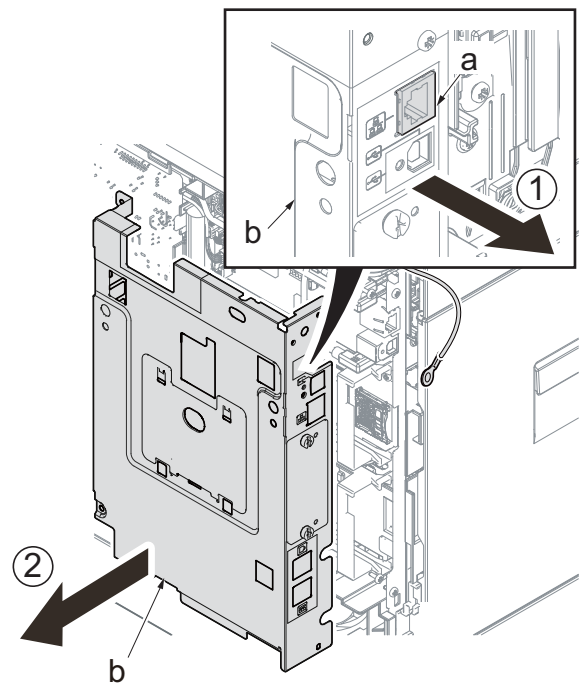


Figure 4-416

IMPORTANT

Pull out the ground wire (b) from the cut-out (c) of the controller shield (a) and secure it with the screw (d) when reattaching the controller shield (a).

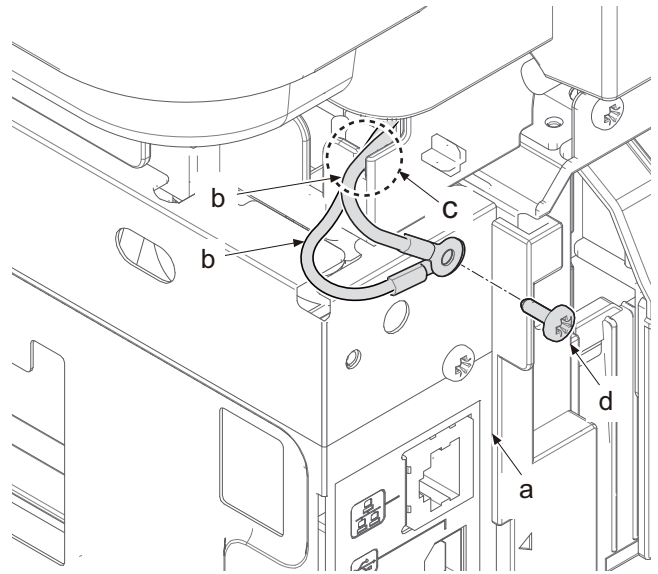


Figure 4-417

31. Open the wire alignment film (c) by releasing its square hole from the hook (b) of the upper PWB guide (a).

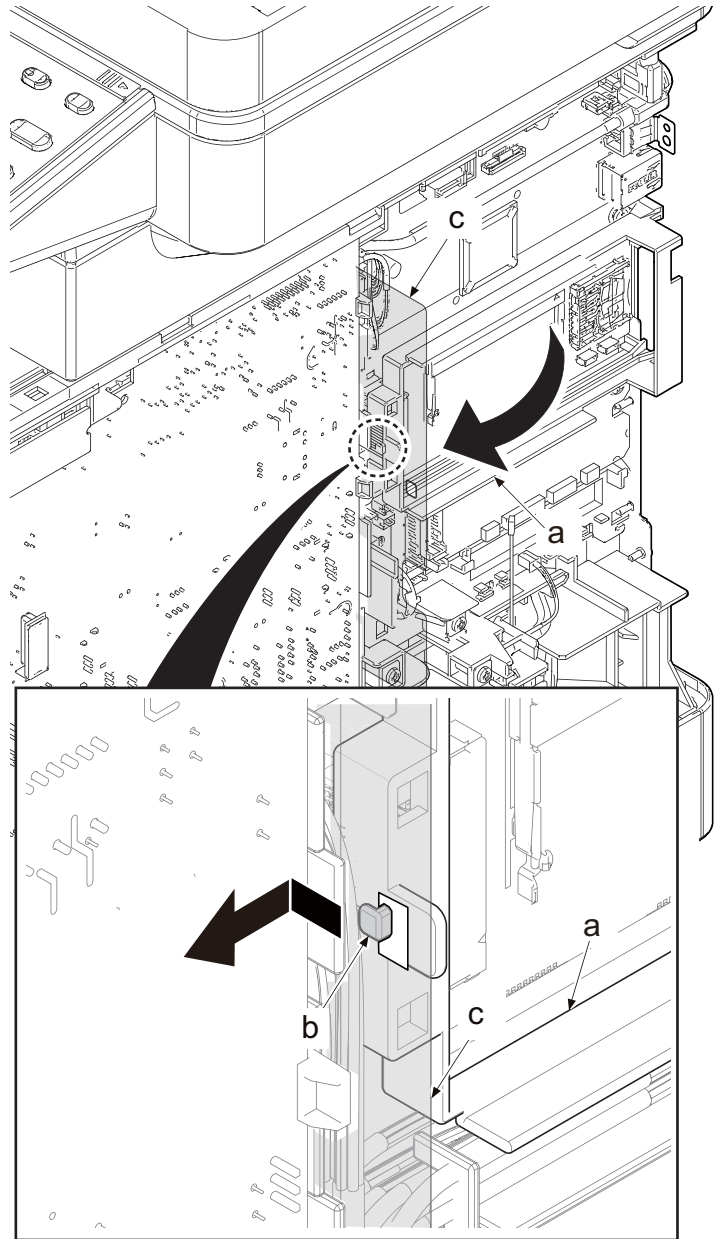


Figure 4-418

- 32. Disconnect two connectors (YC2016 and YC2017) from the main/engine PWB (a).
- 33. Release the wire (d) from the wire guide (c).

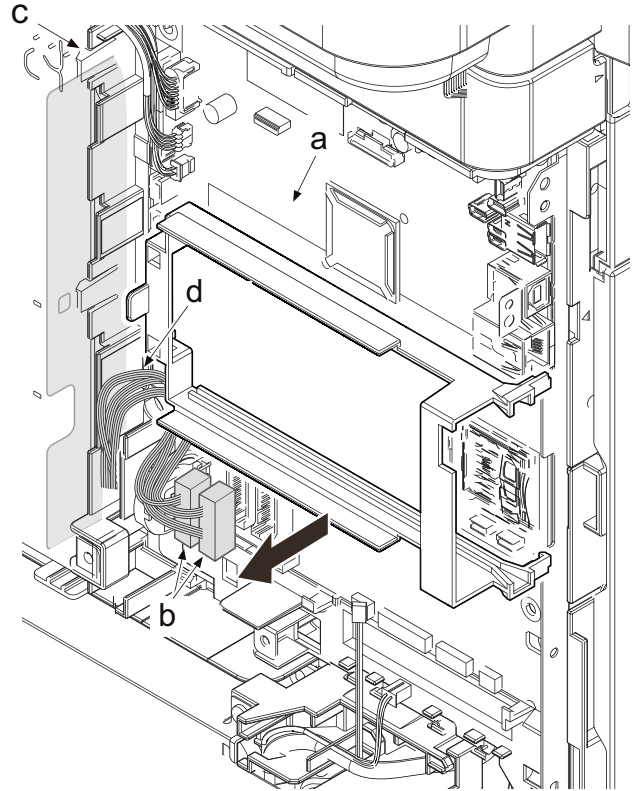


Figure 4-419

- 34. When removing the laser scanner unit (CY), open the wiring film (a) after removing the connector YC2017.

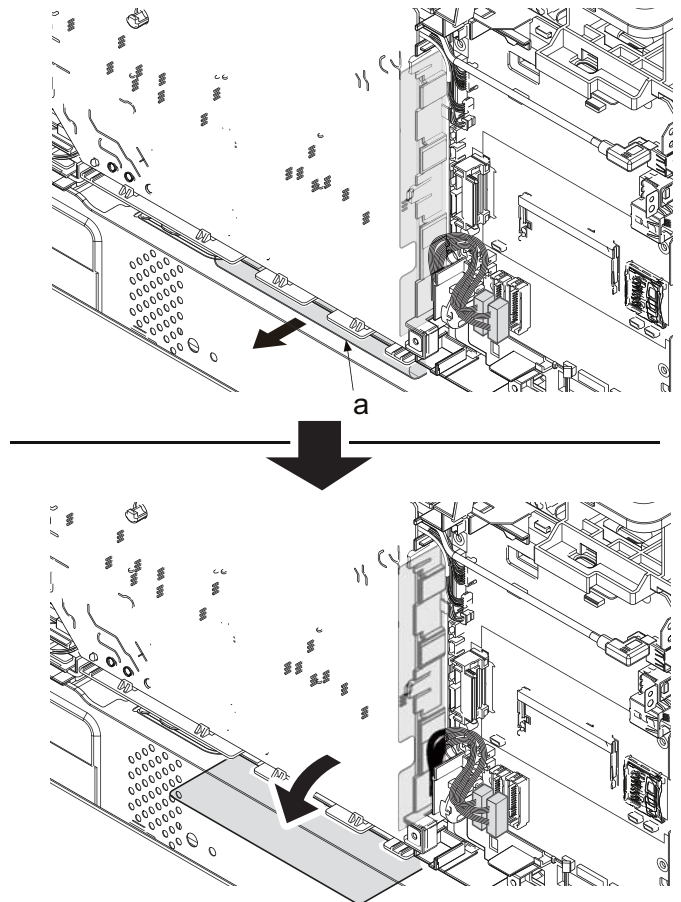


Figure 4-420

35. Pull the wire (a) into the main unit from the opening (b).

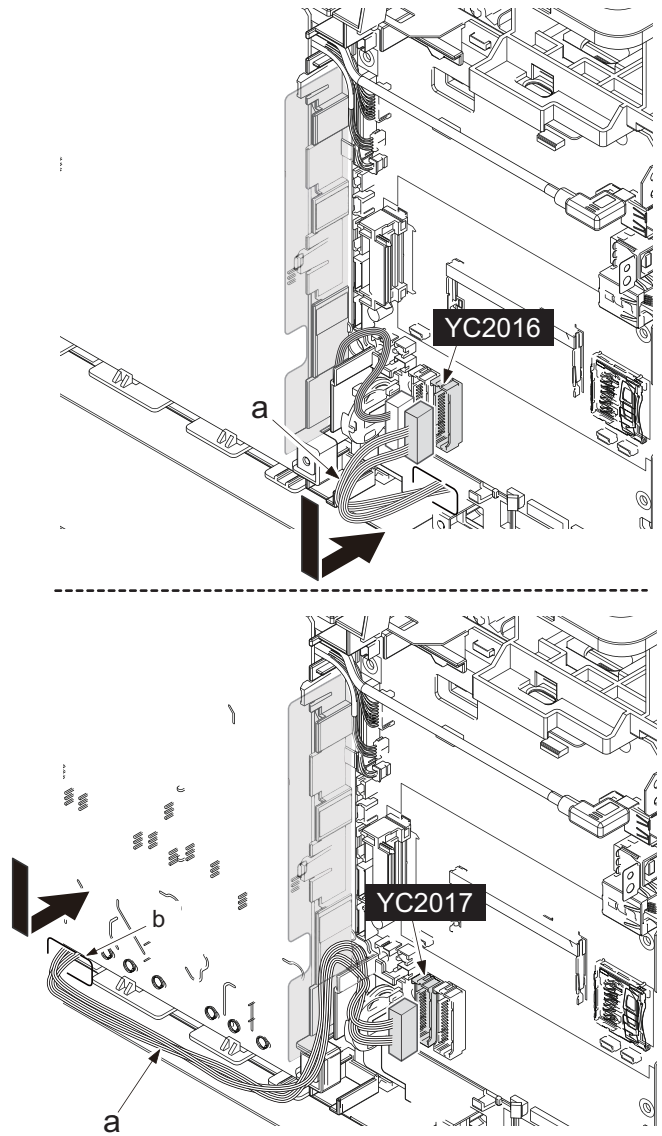


Figure 4-421

36. Remove each set of three pins (a).
37. Detach the LSUs (b) for KM and CY.
- *: Pull out the wire from the opening and remove it.
38. Check the paper feed drive unit and clean or replace it if necessary.
39. Reattach the parts in the original position.
40. Execute the following after replacing with the new laser scanner unit.

System Menu

[Adjustment/Maintenance]

1. Execute [Color Calibration]
2. Execute the Color Registration

IMPORTANT

Secure the pins in order of A, B and C when reattaching the LSU.

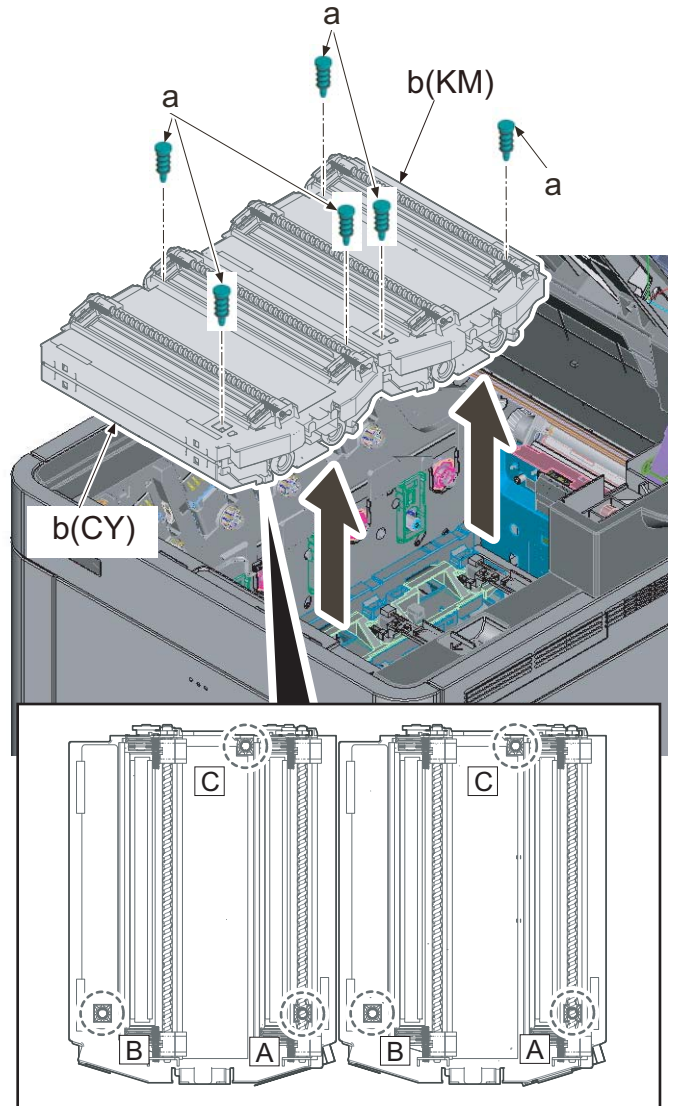


Figure 4-422

Make sure to return the spiral (b) to the lock position after relocating it to reattach the pin (a) that is in the position A.

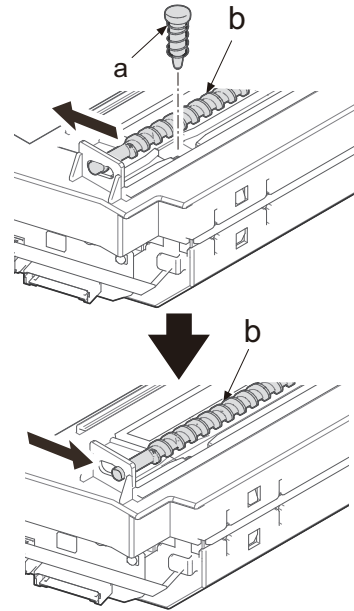


Figure 4-423

IMPORTANT

Make sure not to touch the APC PWB (b) when holding the LSU (a).

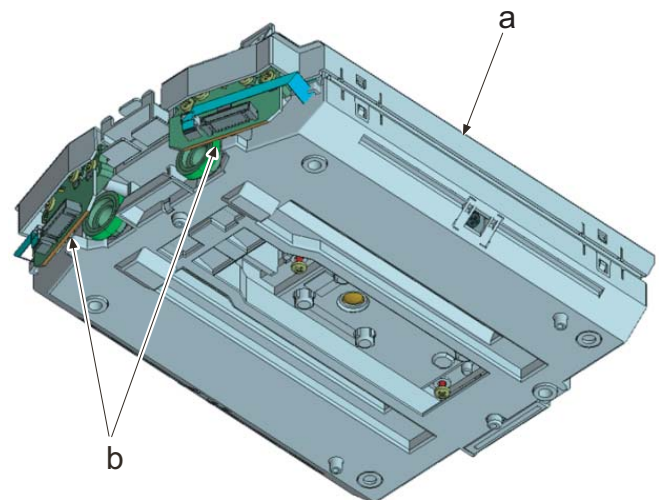


Figure 4-424

IMPORTANT

Pull the wire (b) out from the aperture (c) of the frame when reattaching the LSU (a).
There is an engraving (d) of an arrow indicating the opening position in the frame.

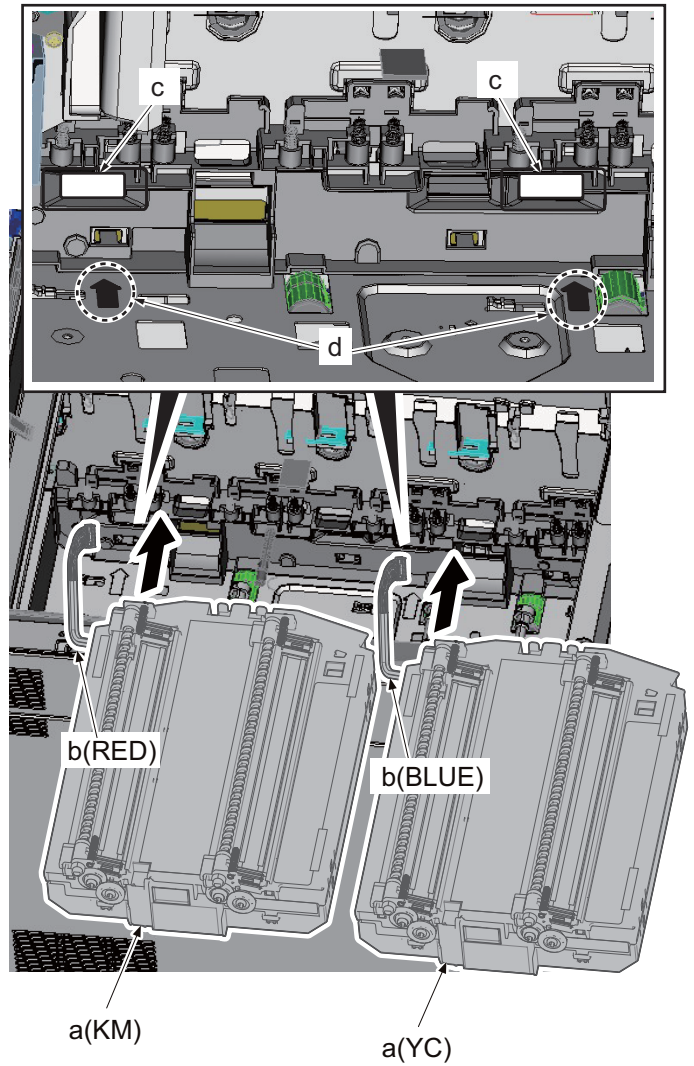


Figure 4-425

Please be care not locate the wire saddle (b) on the pin protrusion (c) before reattaching the LSU (a).

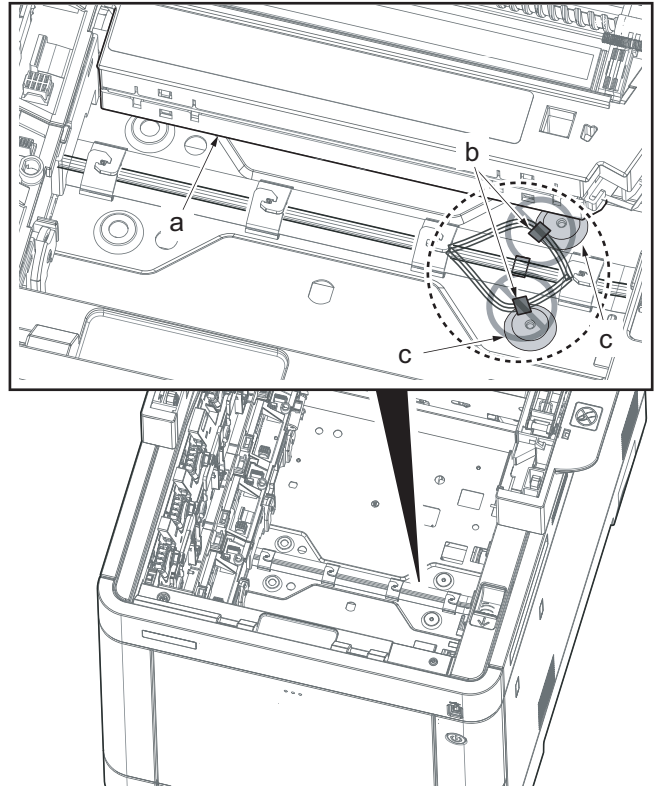


Figure 4-426

(3) MP tray paper feed section

(3 - 1) Detaching and reattaching the MP paper feed roller

1. Pull out the cassette (a).

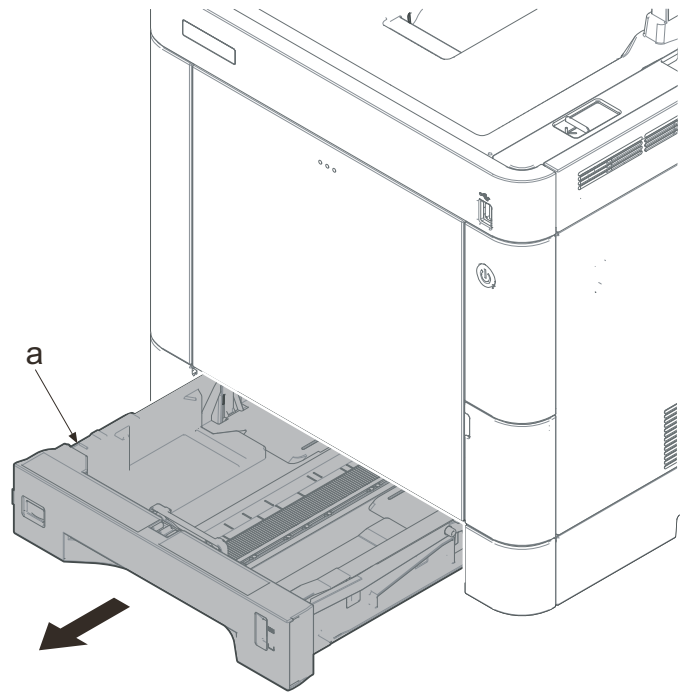


Figure 4-427

2. Lower the release lever (a).
3. Open the lower MP paper conveying unit (b).

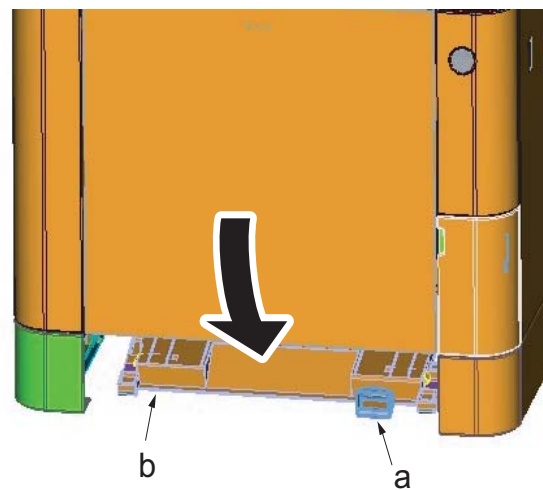


Figure 4-428

4. Pull the lever (a).
5. Lift up the scanner unit (b) and open the inner tray (c).

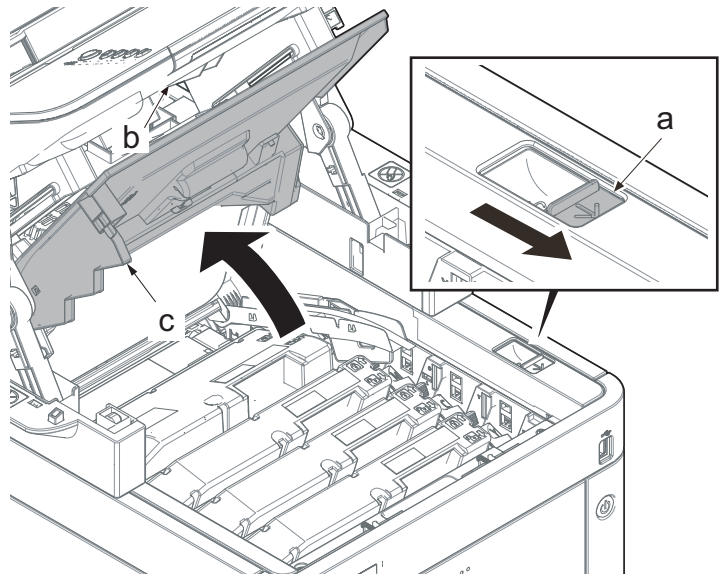


Figure 4-429

6. Open the MP tray (a).
7. Remove two screws (b)(M3x8).
8. Open the waste toner cover (c).

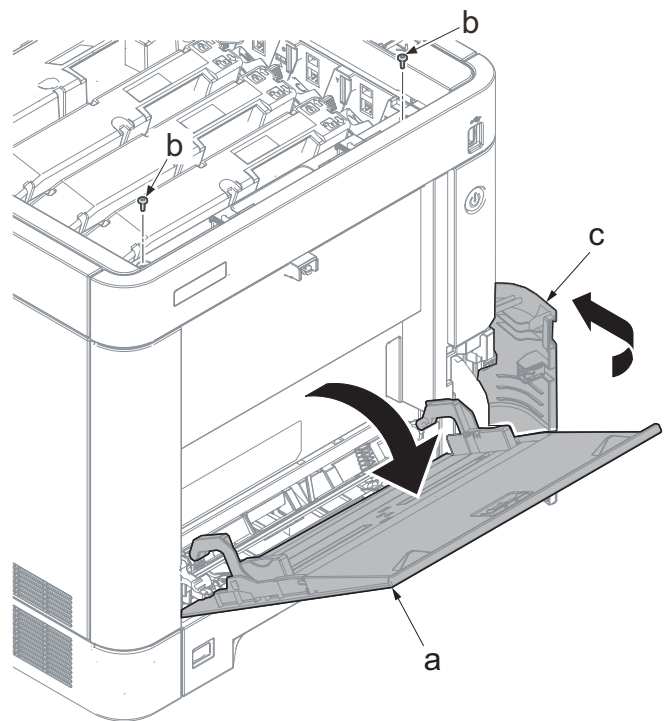


Figure 4-430

9. Slightly lift up the front cover (a) to release the boss (b).
10. Tilt the front cover (a) toward the machine front side.
11. Then, remove the front cover (a) by lifting it up.

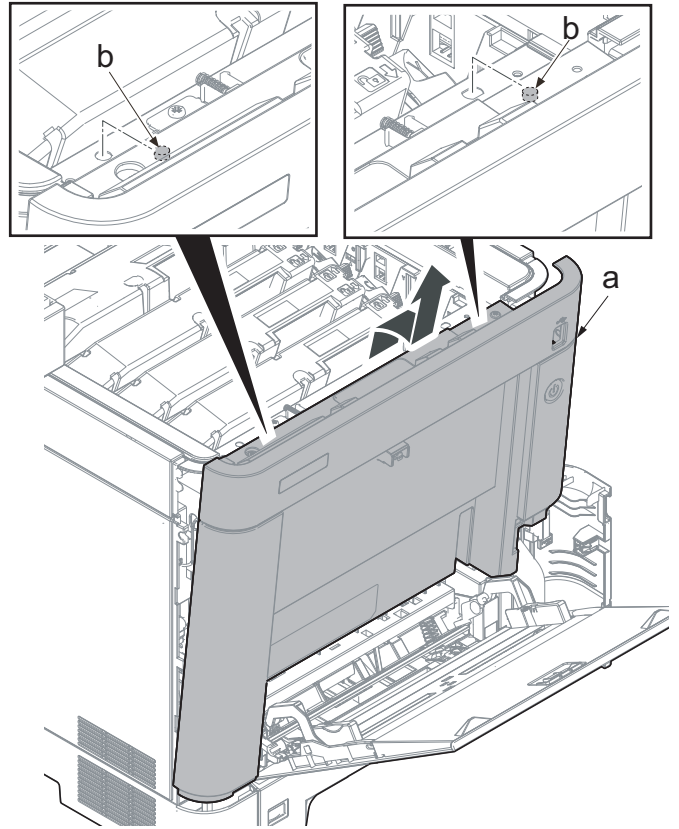


Figure 4-431

IMPORTANT

Make sure not to touch the waste toner cover sensor (b) when reattaching the front cover (a).
If the waste toner cover sensor (b) comes off, even if you close the waste toner cover, "cover open" will be displayed.

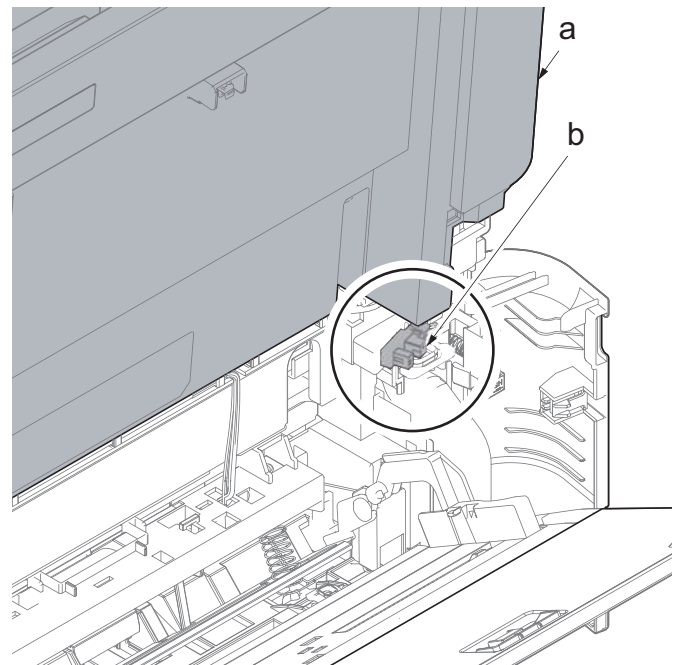


Figure 4-432

12. Open the MP tray (a) slightly.
13. Lift up the MP tray cover (b) and release two hooks (c).

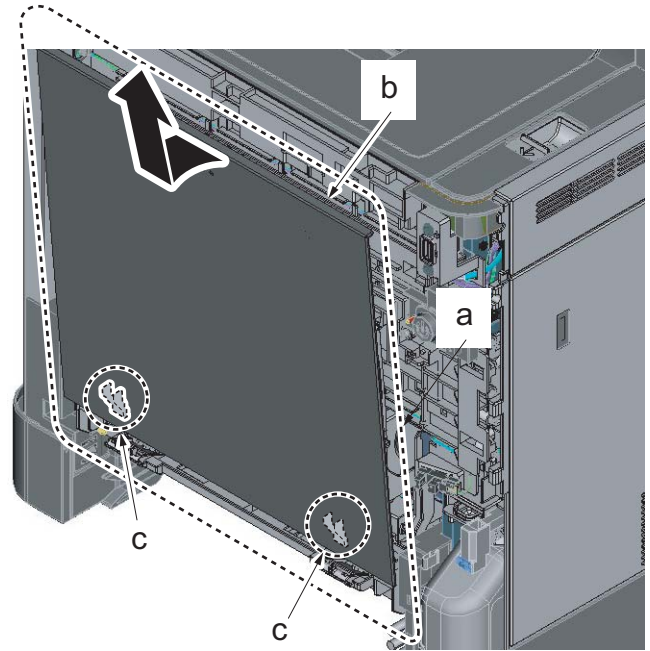


Figure 4-433

14. Fully open the MP tray (a).
15. Slide the arm (b) to the machine rear side and lift it up to remove.

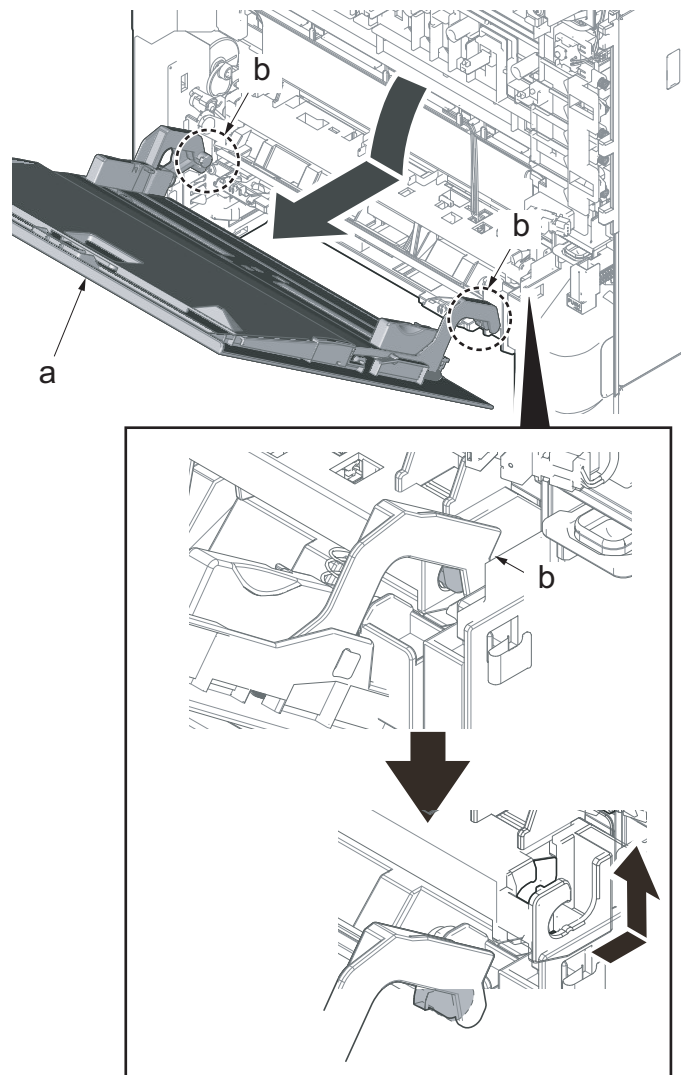


Figure 4-434

16. Remove two screws (a)(M3x8).
17. Detach the lower MP paper feed unit (b).

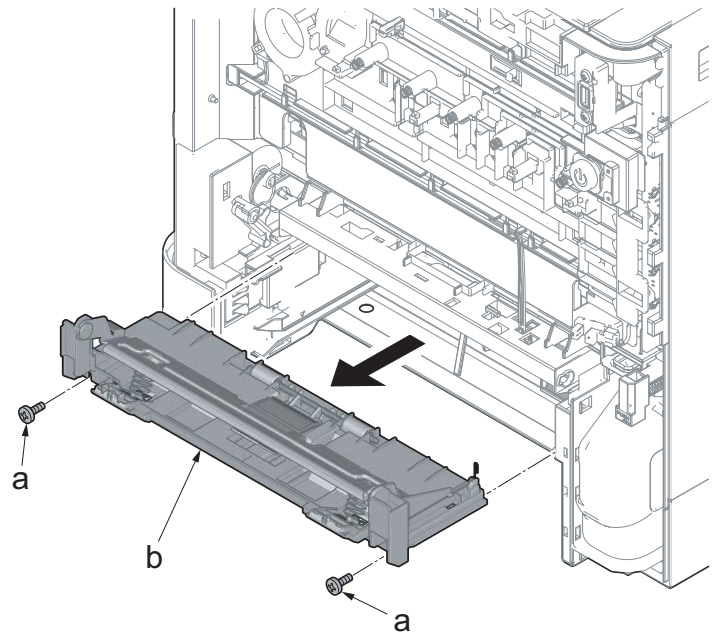


Figure 4-435

IMPORTANT

Lower the MP lift plate (b) so that the lever (c) is on it when reattaching the lower MP paper feed unit (a).

*: The paper is not fed because the MP lift plate (b) cannot ascend and descend when it is not in the correct position.

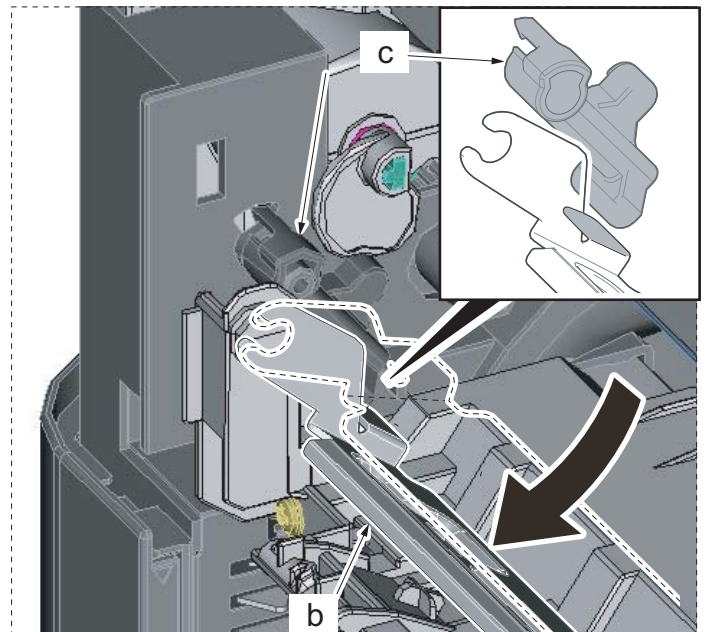


Figure 4-436

18. Pull the hook (a) toward the machine front side.
19. Slide the MP paper feed shaft (b).
20. Remove the MP paper feed roller (c).

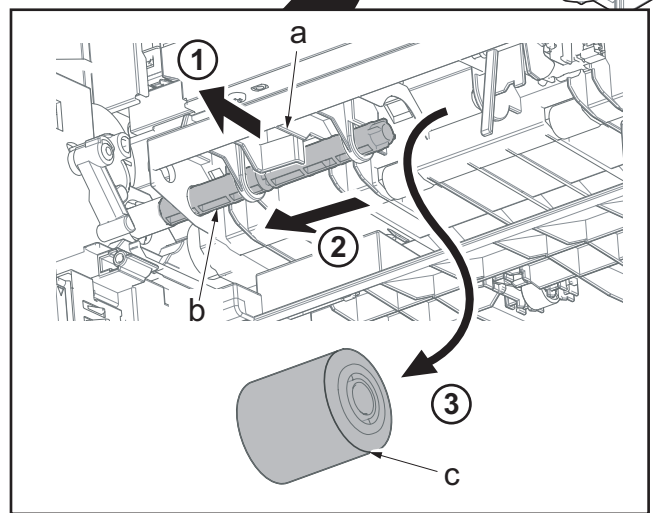
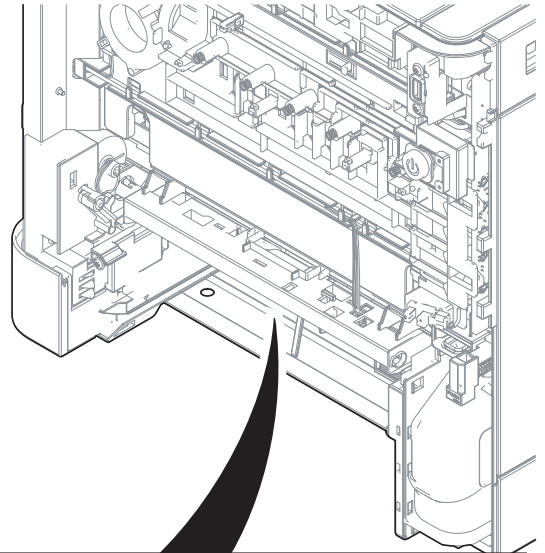


Figure 4-437

IMPORTANT

When reattaching the MP paper feed roller (a), be aware of the attachment direction.

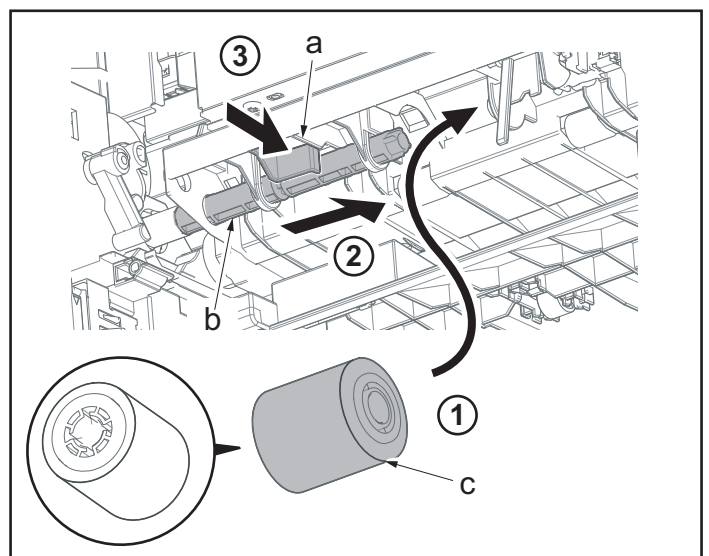


Figure 4-438

(3 - 2) Detaching and reattaching the MP tray paper conveying unit

1. Remove the MP paper feed roller (a).
2. Pull the hook (b) toward the machine front side.
3. Slide the MP paper feed shaft (c).
4. Pull the MP paper feed shaft (c) out from the drive joint (d).

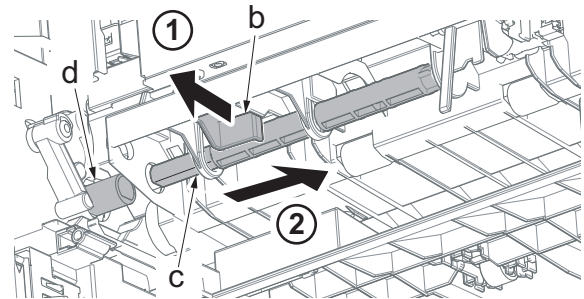


Figure 4-439

5. Disconnect the connector (b) (YC6) from the engine relay PWB (a).
6. Release the wire from eight hooks (c).

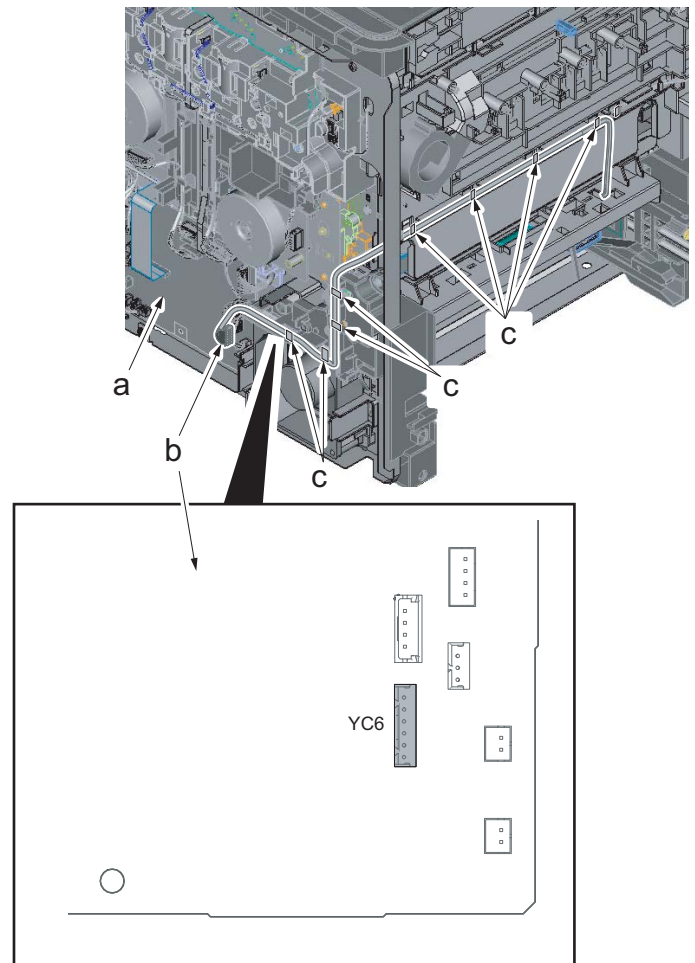


Figure 4-440

7. Remove two screws (a)(M3x8).
8. Detach the MP conveying unit (b) by pulling it toward the machine front side.

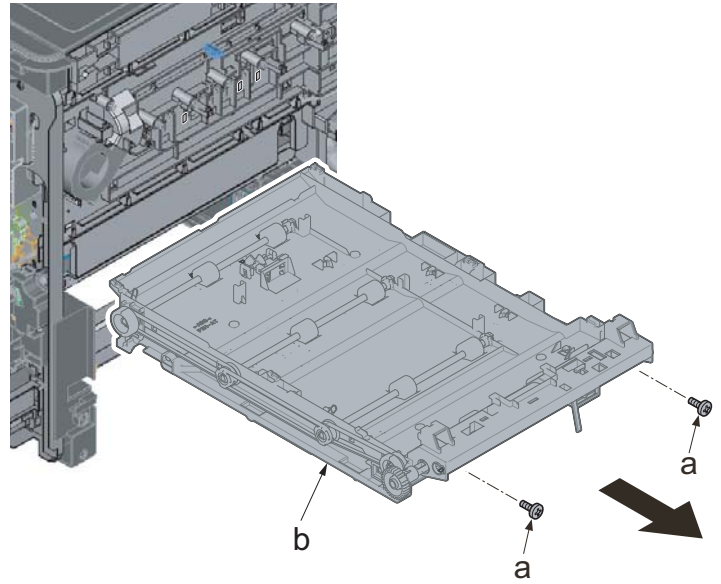


Figure 4-441

IMPORTANT

Check if the wire is fastened to the hook (b) before reattaching the MP conveying unit (a).

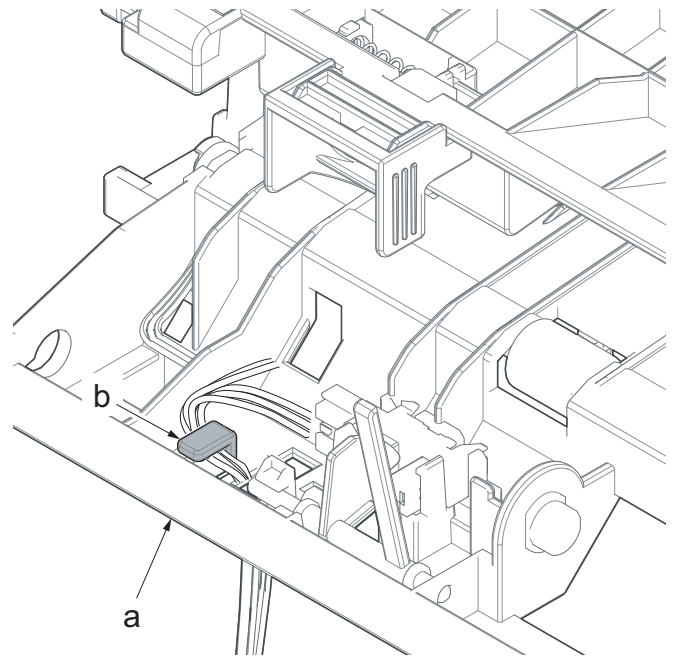


Figure 4-442

Lower the actuator (a) of the paper sensor before reattaching the MP conveying unit.

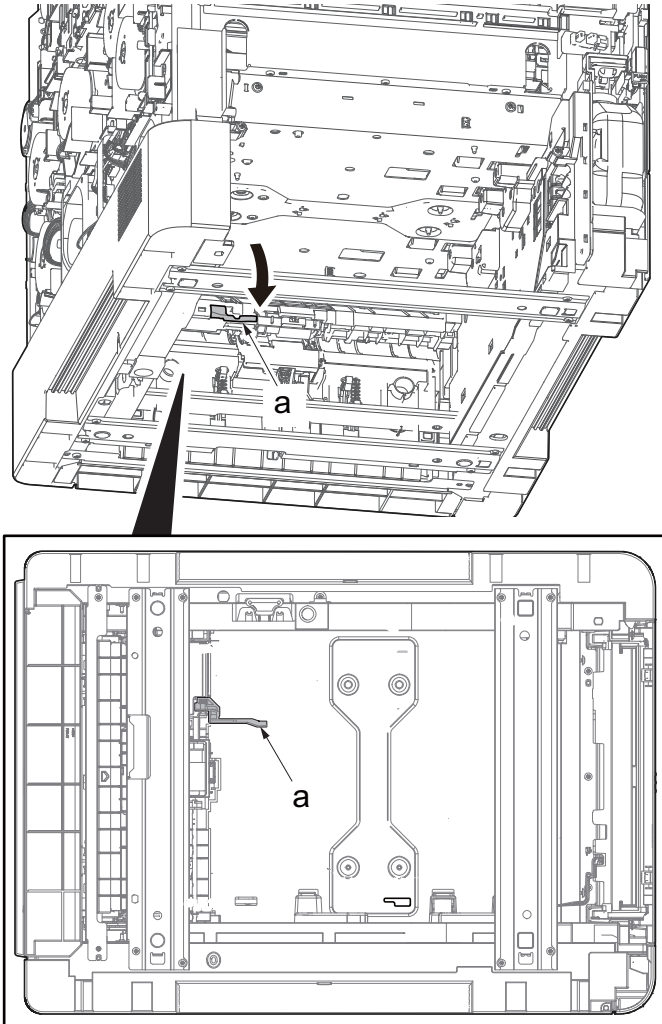


Figure 4-443

First apply the positioning (c) to the cutout at the left and right side and then secure the screw.

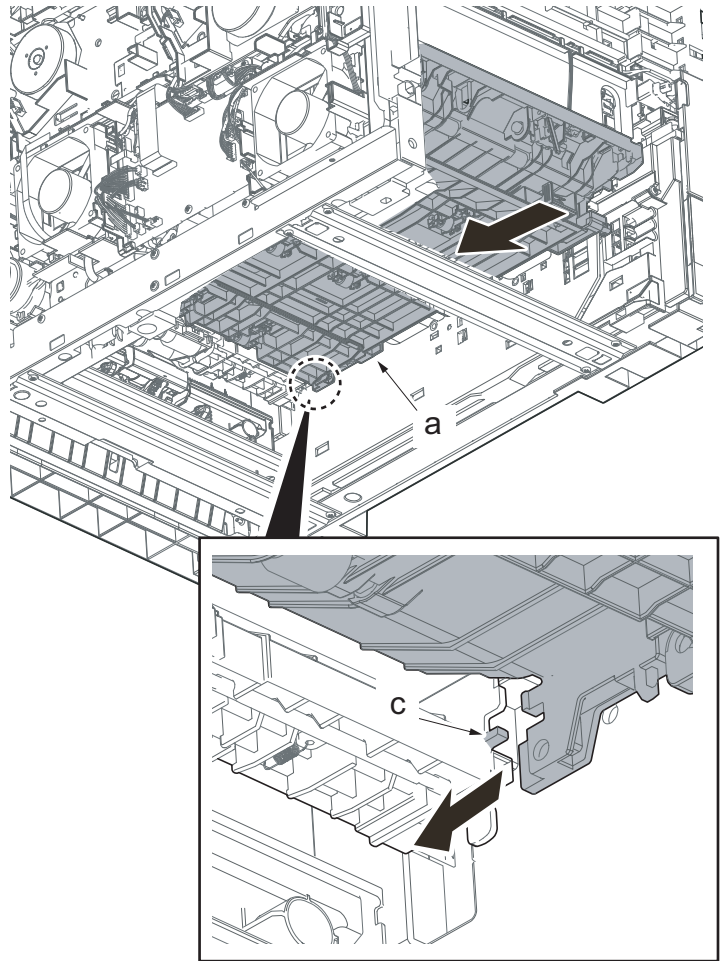


Figure 4-444

(4) Drum section

(4 - 1) Detaching and reattaching the main charger roller unit

1. Detach the drum unit (a).
2. Pull the hook (c) of the main charger roller unit (b) in the drum unit (a) to release it.
3. Push the main charger roller unit (b) from the opposite side of the opening.

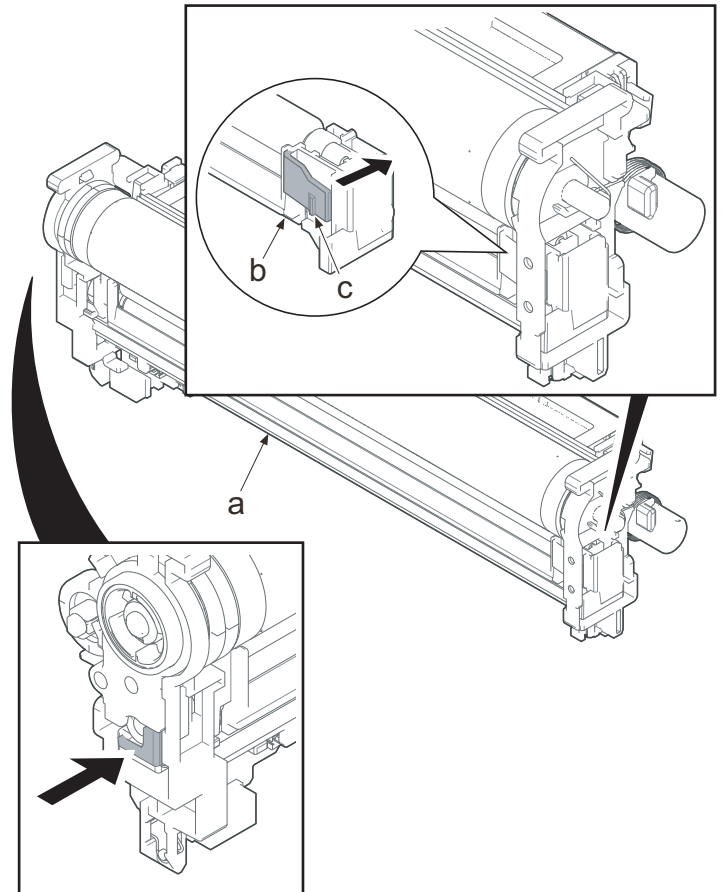


Figure 4-445

4. Pull the main charger roller unit (b) by holding the handle (a).

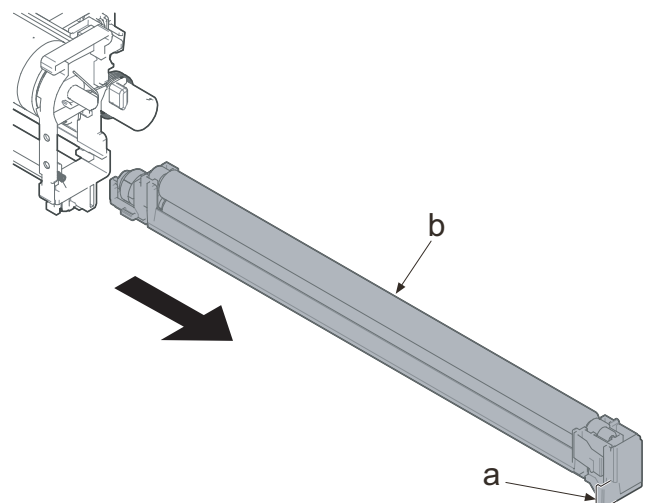


Figure 4-446

(5) Eject section

(5 - 1) Detaching and reattaching the eject unit

1. Detach the scanner unit. (See page P.123)
2. Release two hooks (c) of the wire guide (b) using a flat-blade screwdriver (a).
3. Slide the wire guide (b) toward the machine right side and then detach it by lifting up.

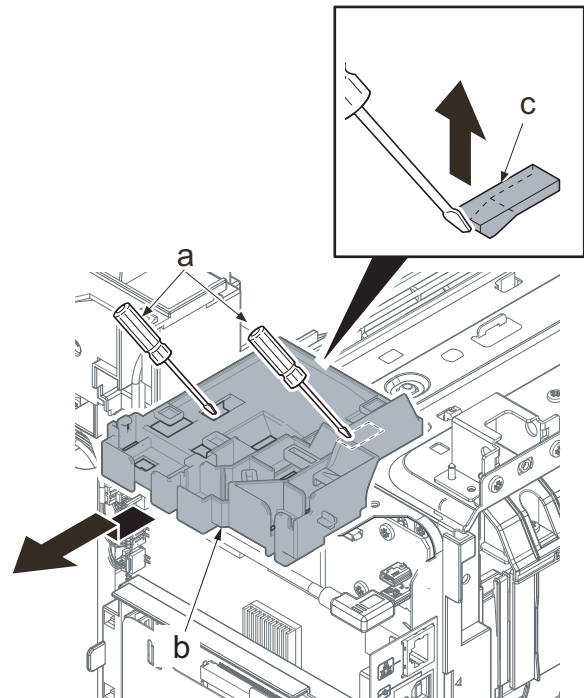


Figure 4-447

4. Remove the FFC (b) from the connector (a) of the main/engine PWB.
Pull out from the opening (c).

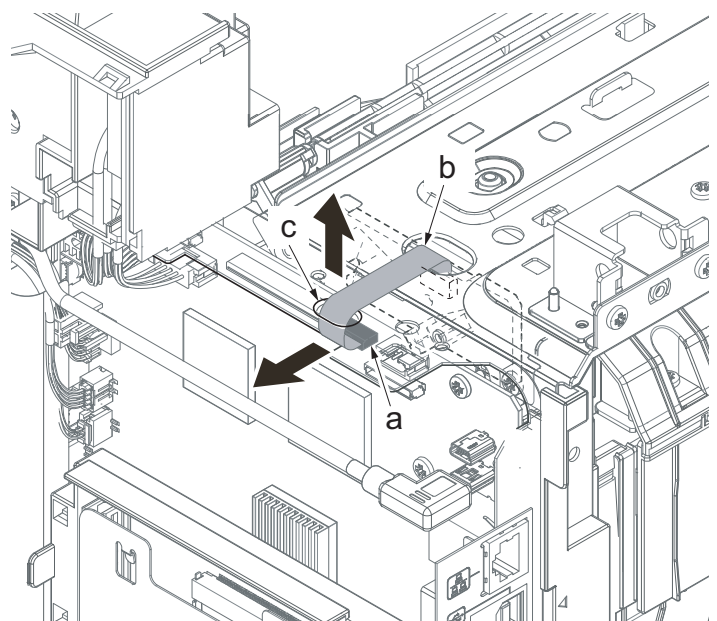


Figure 4-448

- 5. Remove six screws (a)(M3x8).
- 6. Get down the main/engine PWB (b).

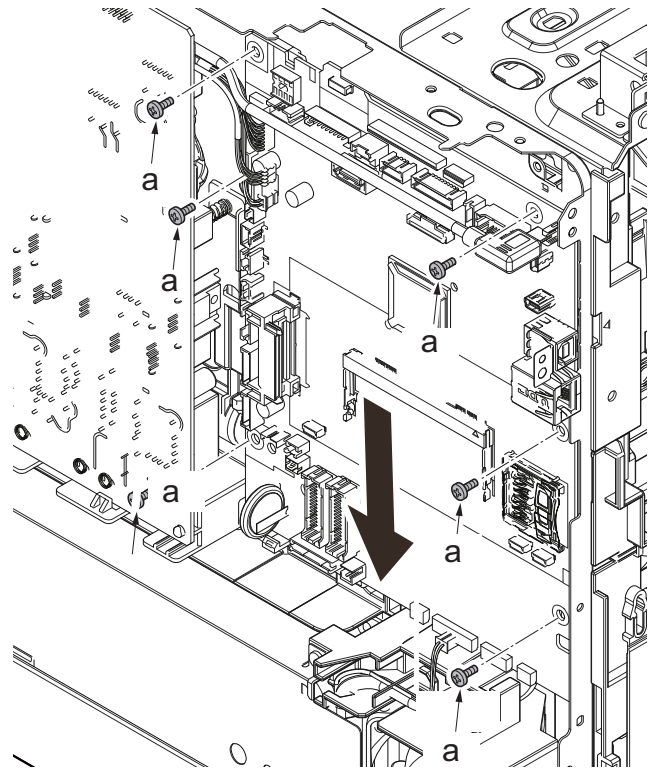


Figure 4-449

- 7. Remove four screws (a)(M3x8).

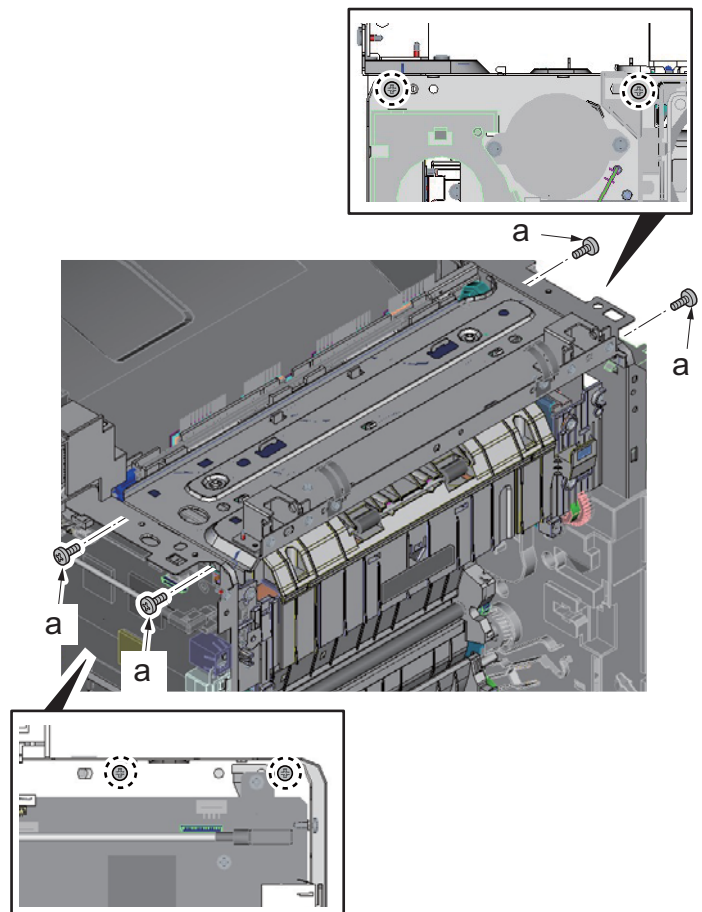


Figure 4-450

8. Disconnect the connector (b) of the exit PWB (a).

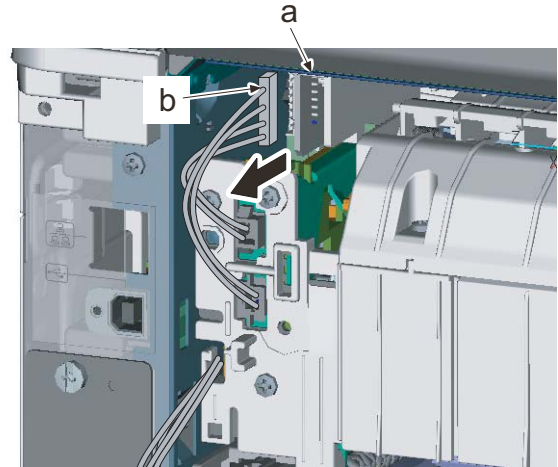


Figure 4-451

9. Detach the exit unit (a). Broaden the left and right frame of the main unit slightly to pull out the bosses of the stay of the exit unit (a) from the holes, and detach the exit unit (a).

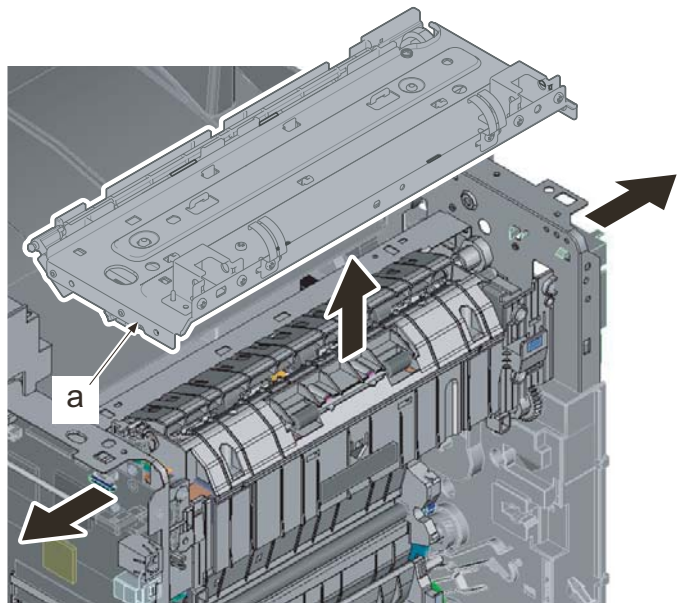


Figure 4-452

(6) Duplex conveying unit

(6 - 1) Detaching and reattaching the duplex conveying unit

1. Open the rear cover (a).

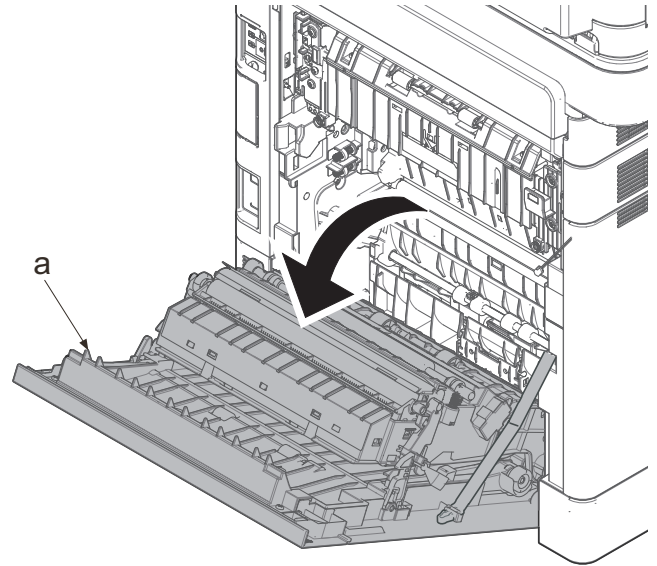


Figure 4-453

2. Pull the conveying stopper (a) toward the machine right side and rotate it by using a flat-blade screwdriver (b).
3. Release the hook (c) of the conveying stopper (a) from the rib (d) and pull the conveying stopper (a) out.

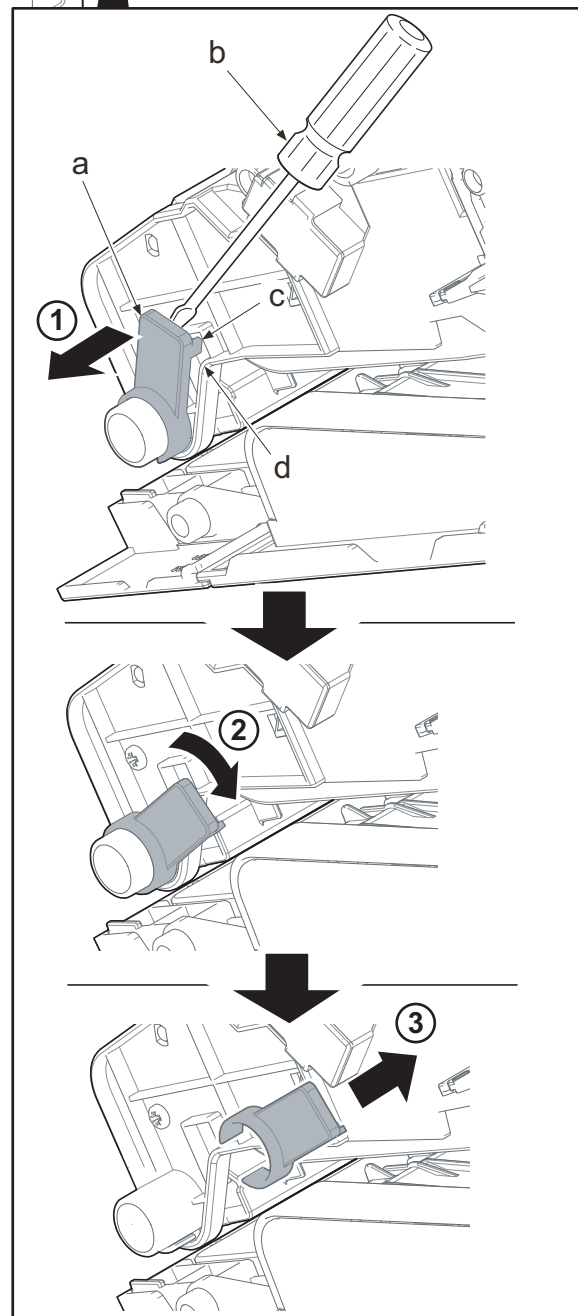
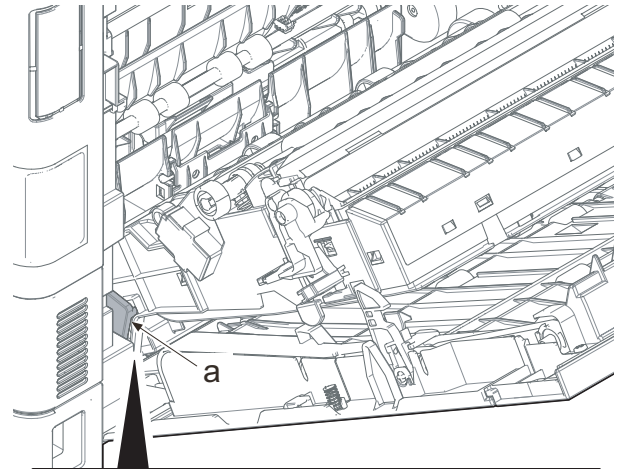


Figure 4-454

4. Slide the duplex paper conveying unit (a) toward the machine right side.
5. Release the fulcrum part of the duplex paper conveying unit (a) at the machine left side, and pull the unit out toward the machine rear side.

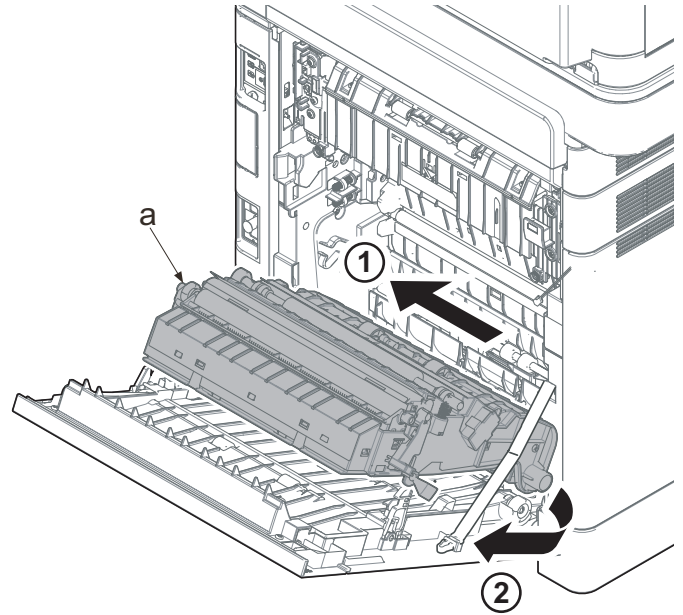


Figure 4-455

(7) Document processor (30 ppm model)

(7 - 1) Detaching and reattaching the document processor

1. Open the DP upper cover (a).
2. Release five hooks (c) using a flat-blade screwdriver (b).
3. Detach the DP rear cover (d).

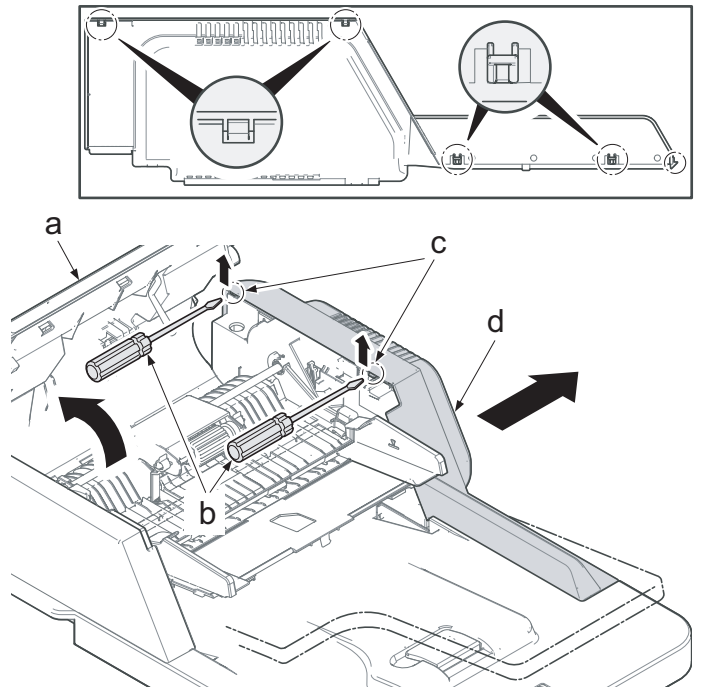


Figure 4-456

4. Remove two screws (a)(M3x8).

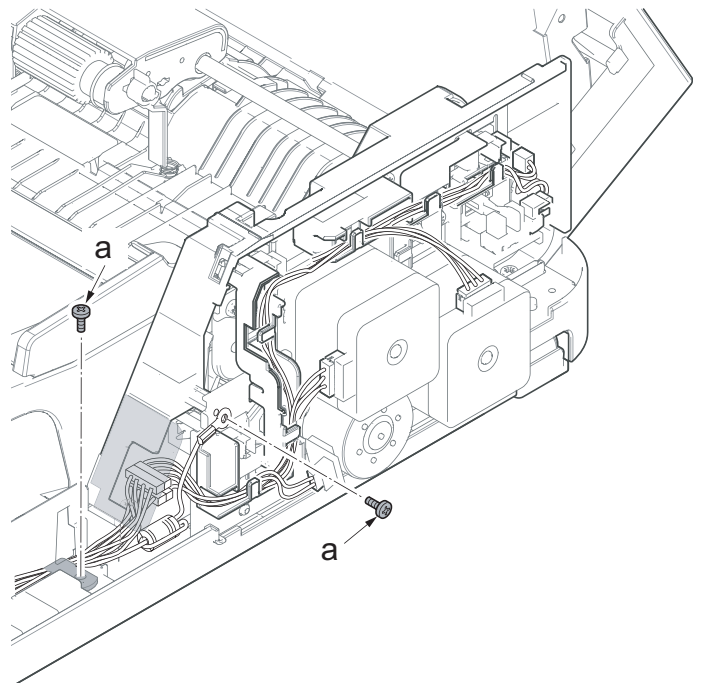


Figure 4-457

5. Pull out the wire (b) from the back of the film (a).
6. Disconnect two connectors (c).

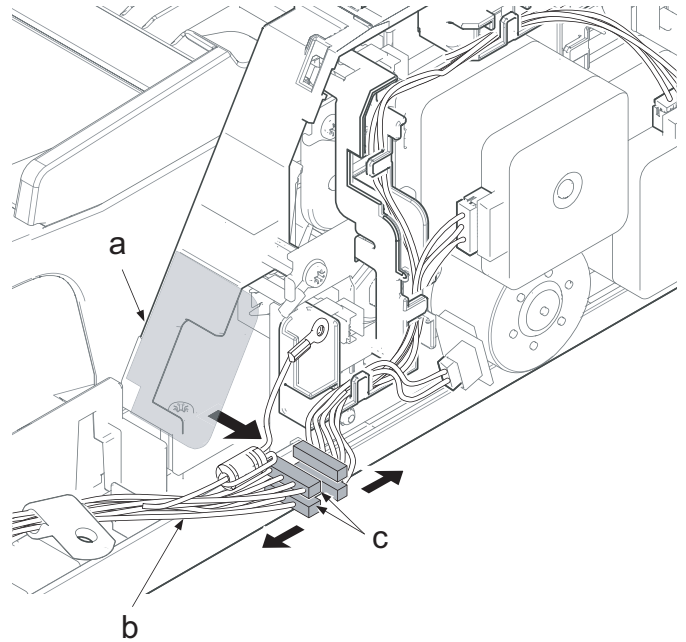


Figure 4-458

7. Open the document processor (a).
 8. Pull out the wire from the opening (c) of the scanner unit (b).
 9. Remove the document processor (a) upward.
- *: The document processor can not be opened when the scanner unit is opened.

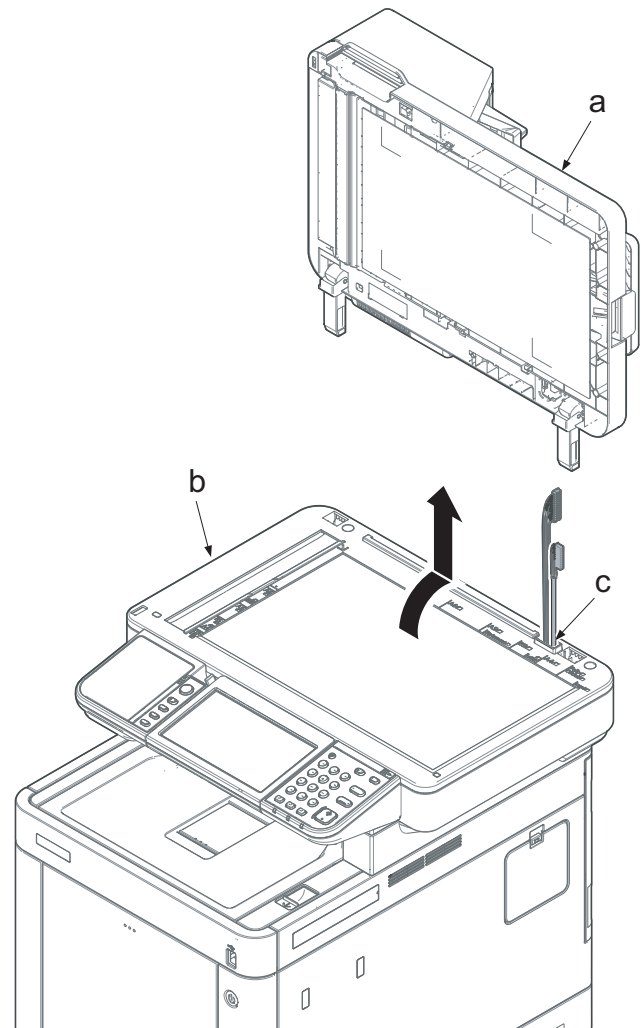


Figure 4-459

(7 - 2) Detaching and reattaching the DP feed motor and DP conveying motor

1. Open the DP upper cover (a).
2. Release five hooks (b).
3. Detach the DP rear cover (c).

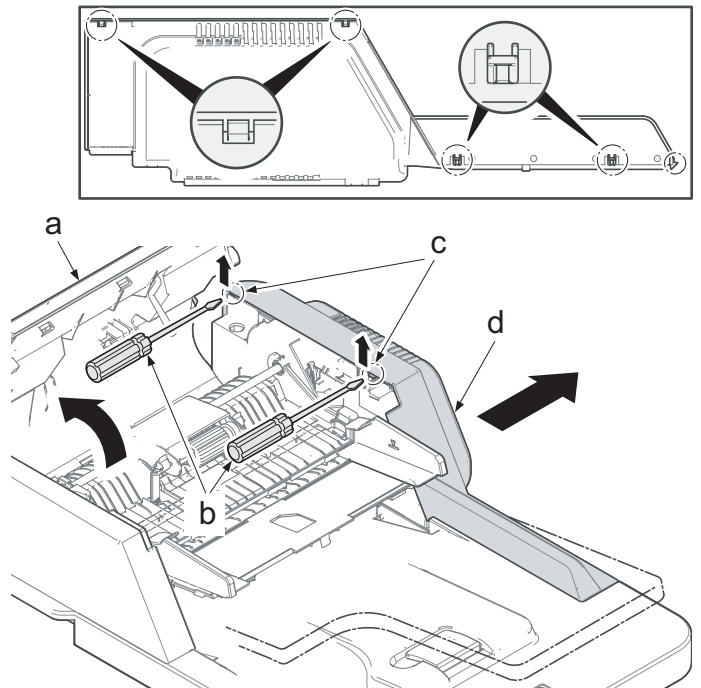


Figure 4-460

4. Disconnect five connectors (a) from the motor and sensors.
5. Release the wire (d) from six hooks (c) of the wire guide (b).

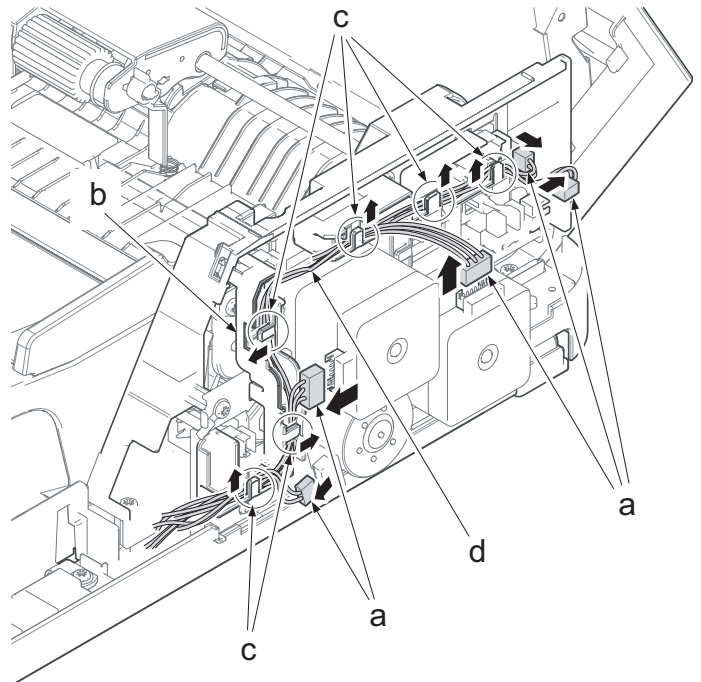


Figure 4-461

6. Remove two screws (a)(M3x8) and remove the ground terminal (b).
7. Detach drive unit B (c).

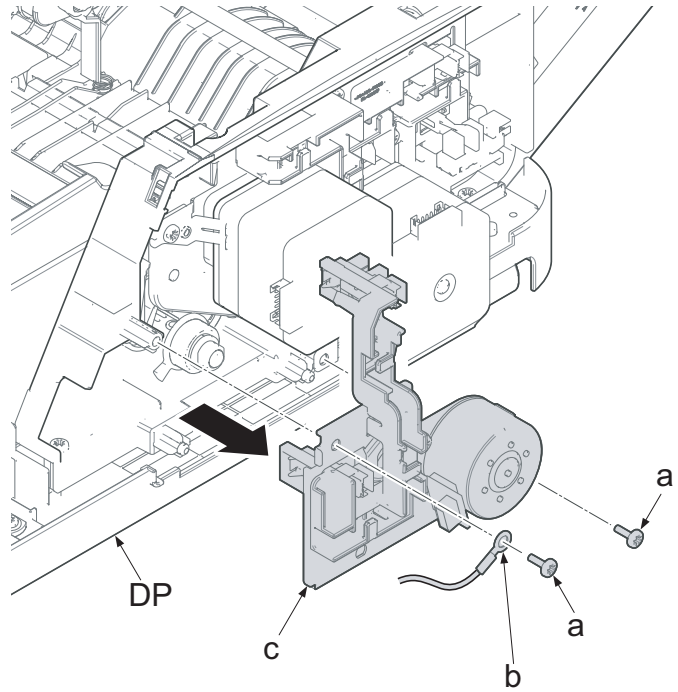


Figure 4-462

8. Remove four screws (a)(M3x8).
 9. Detach drive unit A (b).
- *: DP paper feed motor (c)
DP conveying motor (d)

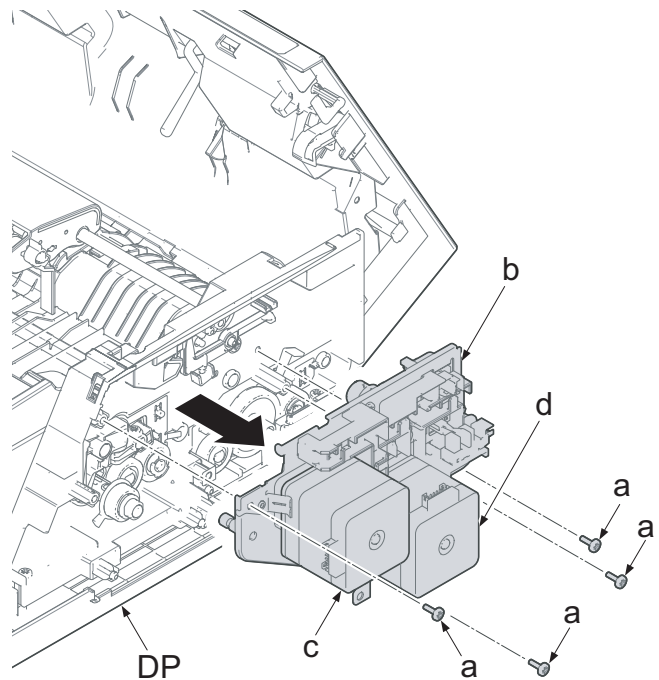


Figure 4-463

10. Remove two gears (a).
11. Remove four screws (b)(M3x8).
12. Remove the drive cover (c).
13. Remove the DP paper feed motor (d) and DP paper conveying motor (e).
14. Check the DP paper feed motor and DP paper conveying motor and clean or replace it if necessary.
15. Reattach the parts in the original position.

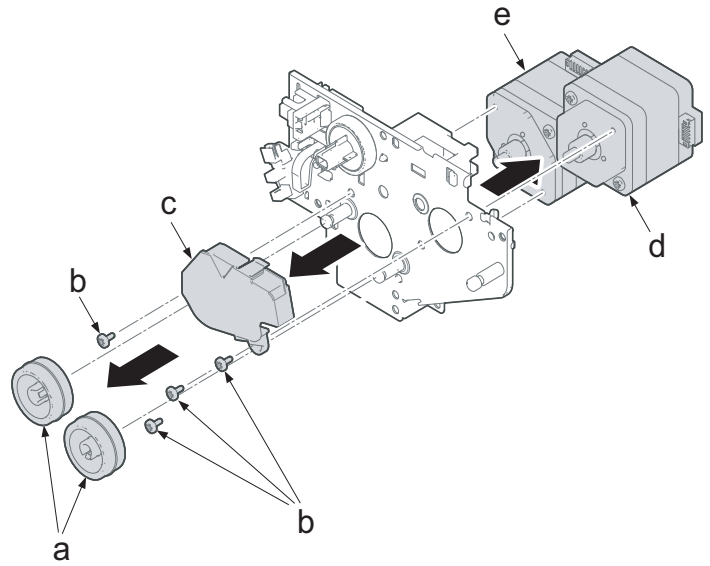


Figure 4-464

(7 - 3) Detaching and reattaching the DP reverse motor

1. Open the DP upper cover (a).
2. Release five hooks (b).
3. Detach the DP rear cover (c).

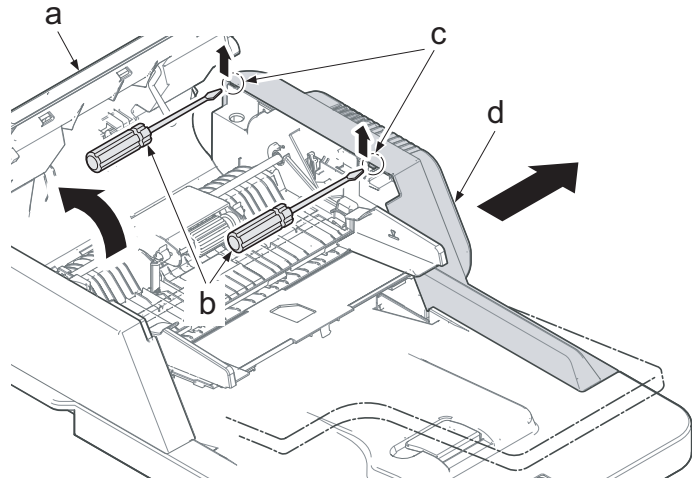
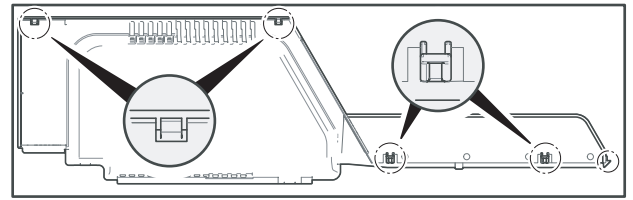


Figure 4-465

4. Disconnect the connector (b) from the DP reverse motor (a).
5. Remove two screws (c)(M3x8).
6. Remove the DP reverse motor (a).
7. Check the feed drive unit and clean or replace it if necessary.
8. Reattach the parts in the original position.

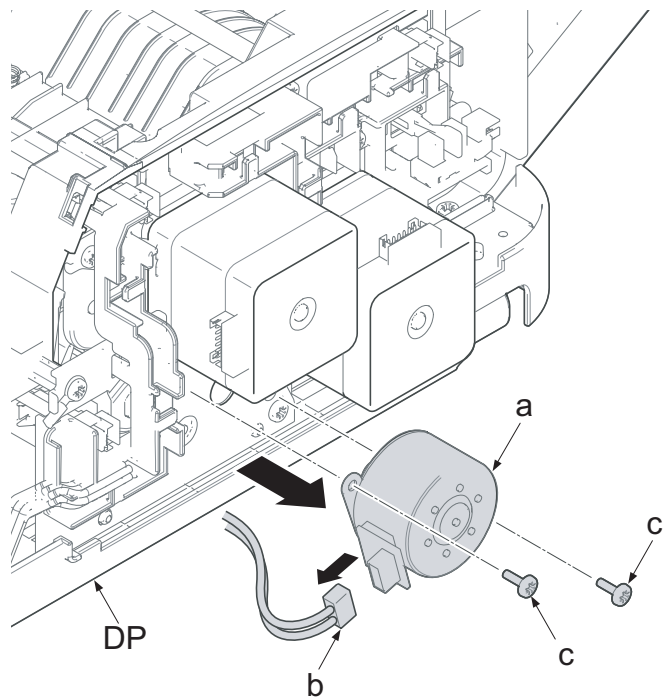


Figure 4-466

(8) Document processor (35 ppm model)

(8 - 1) Detaching and reattaching the document processor

1. Open the DP top cover (b) of the document processor (a).

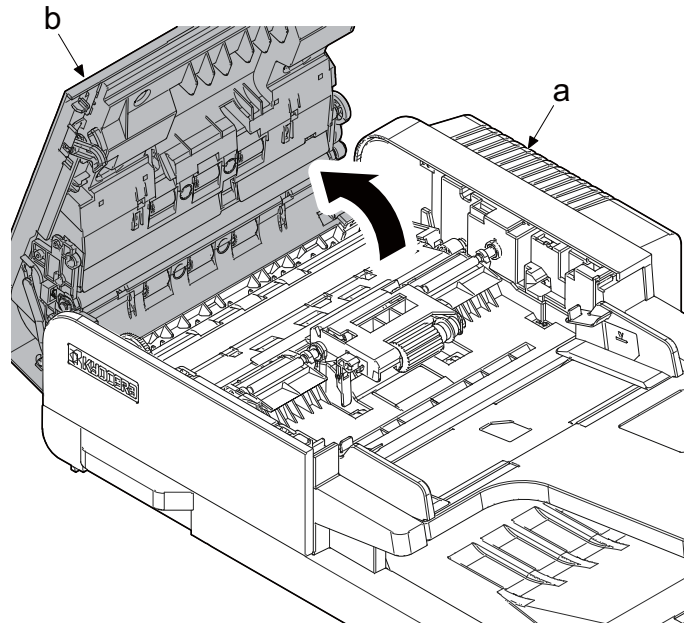


Figure 4-467

2. Release two hooks (b) using a flat-blade screwdriver (a).
3. Release the lower hook (c) and remove the DP rear left cover (d).

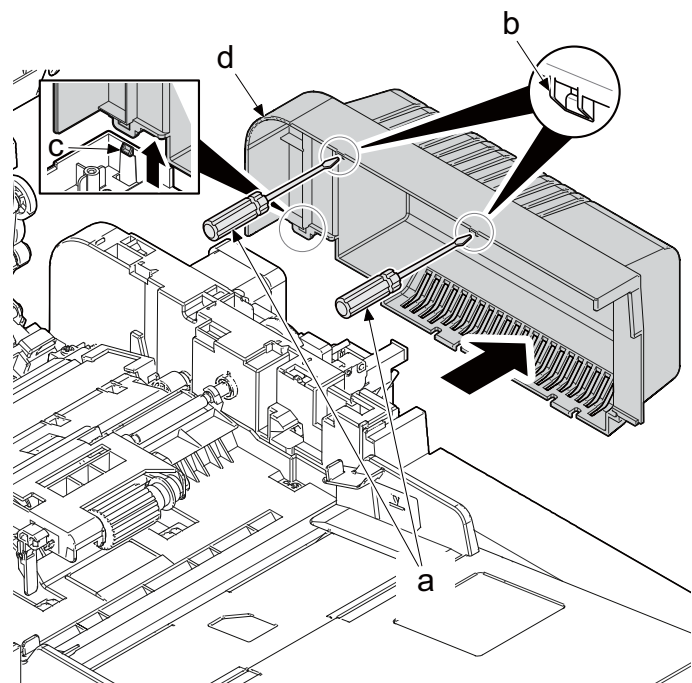


Figure 4-468

4. Release two hooks (b) using a flat-blade screwdriver (a).

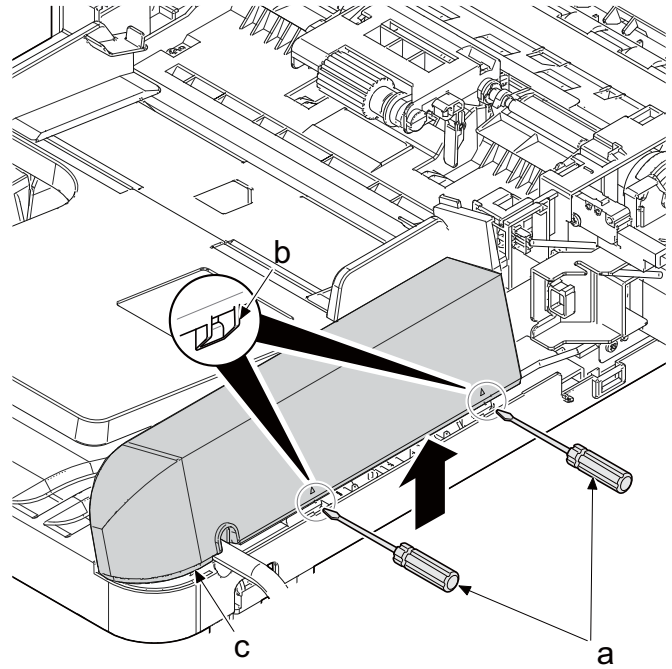


Figure 4-469

5. Release three hooks (b) by pushing the DP right rear cover (a) in the direction of the arrow and detach it.

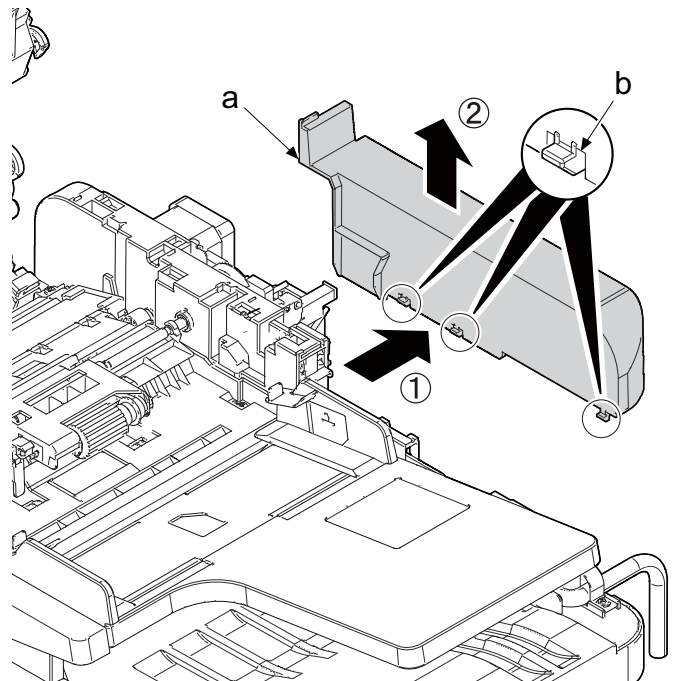


Figure 4-470

6. Remove the screw (a) and detach the strap (b).

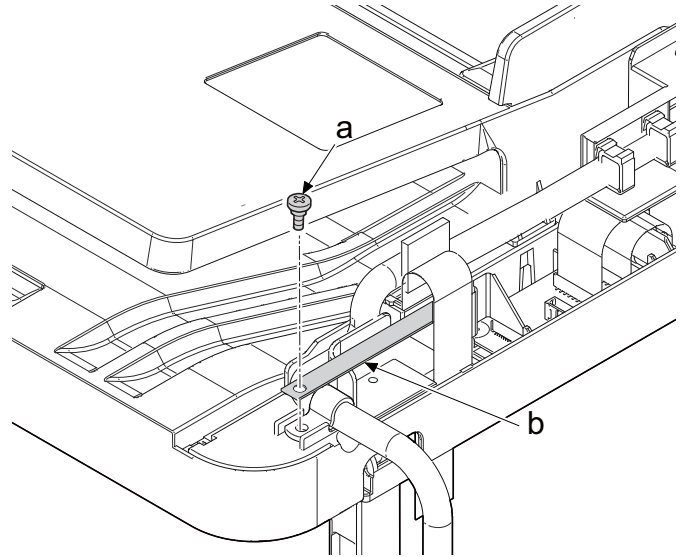


Figure 4-471

7. Detach the wire stopper (a) and then disconnect the FFC (c) from the connector (b).

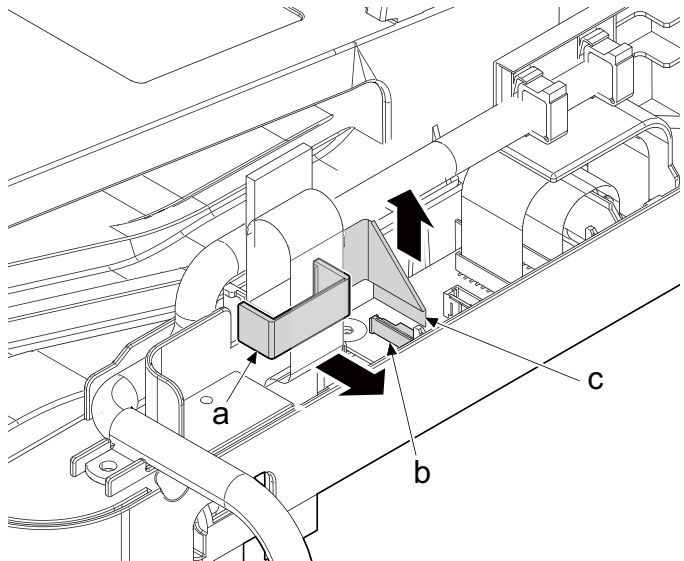


Figure 4-472

8. Disconnect the connector (a) from the PWB. Disconnect five connectors (b).
9. Release two wire saddle (c) and remove the wire (d).

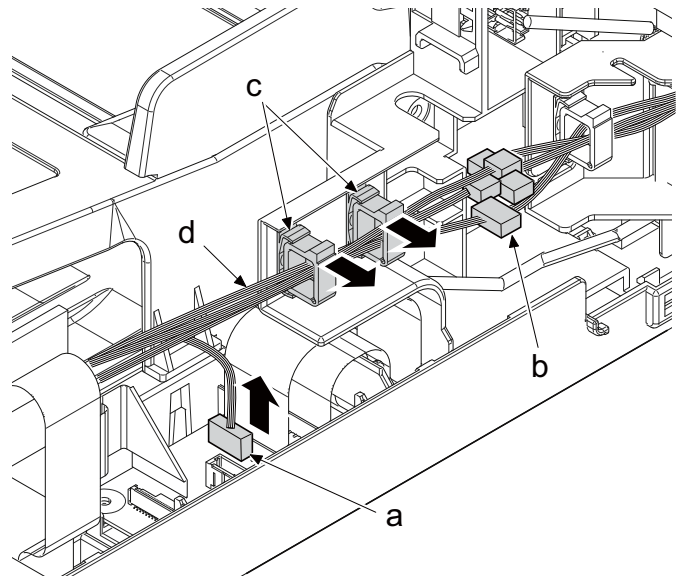


Figure 4-473

10. Open the document processor (a).
11. Remove the document processor (a) upward.

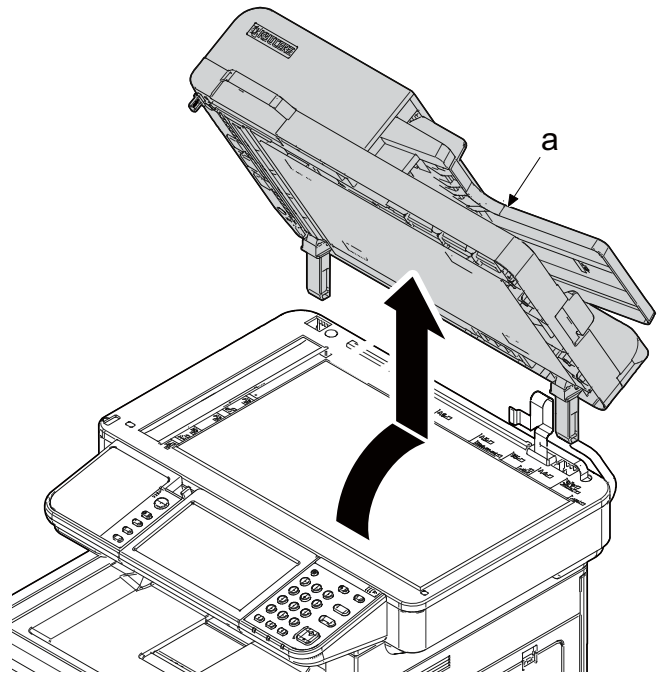


Figure 4-474

Installing the new document processor

IMPORTANT

The operator should start the operation after holding the round ground terminal to touch the metal part of the main unit before removing the FFC protection bag. (Avoiding the static damage to the electric parts inside the DP)

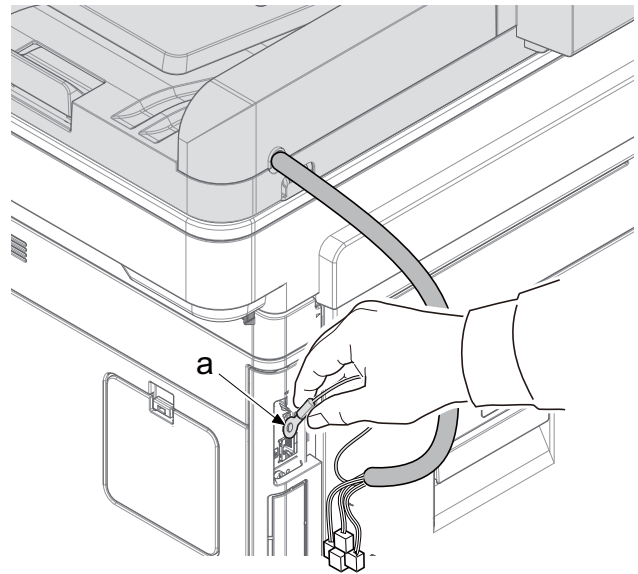


Figure 4-475

1. Open the DP top cover (b) of the new document processor (a).

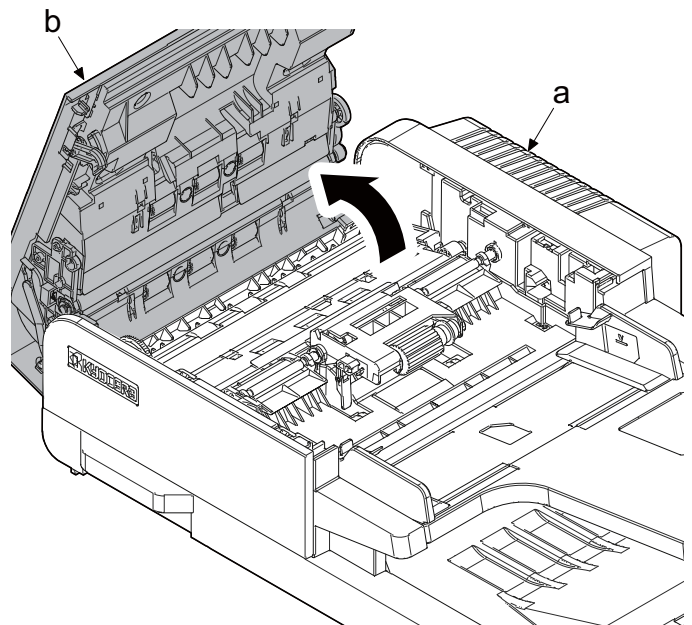


Figure 4-476

2. Release two hooks (b) using a flat-blade screwdriver (a).
3. Release the lower hook (c) and remove the DP rear left cover (d).

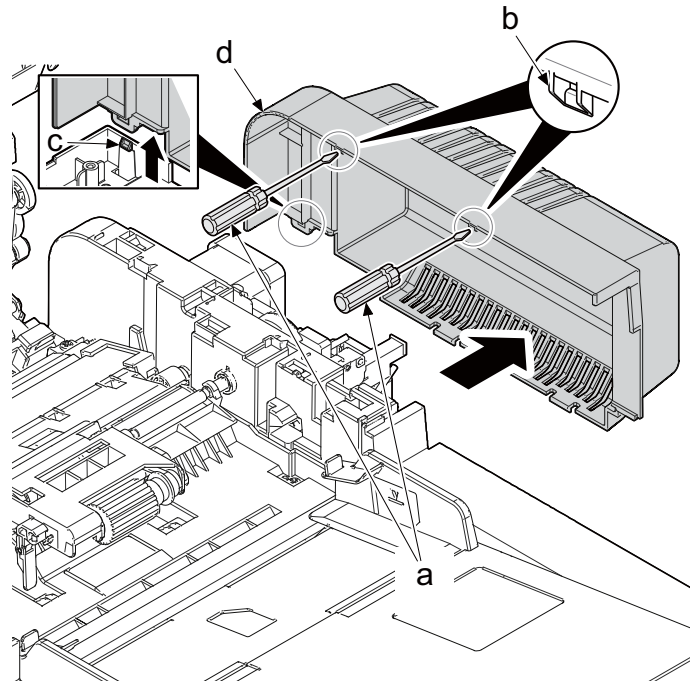


Figure 4-477

4. Release two hooks (b) using a flat-blade screwdriver (a).

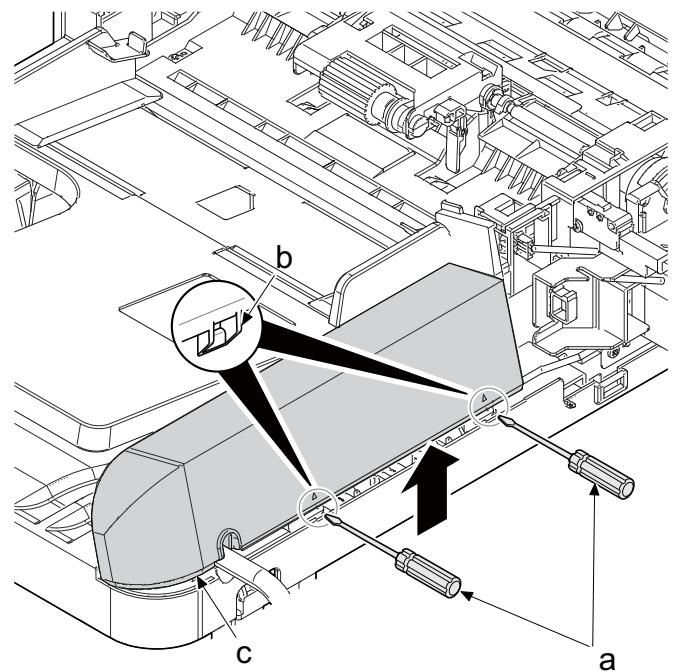


Figure 4-478

5. Release three hooks (b) by pushing the DP right rear cover (a) in the direction of the arrow and detach it.

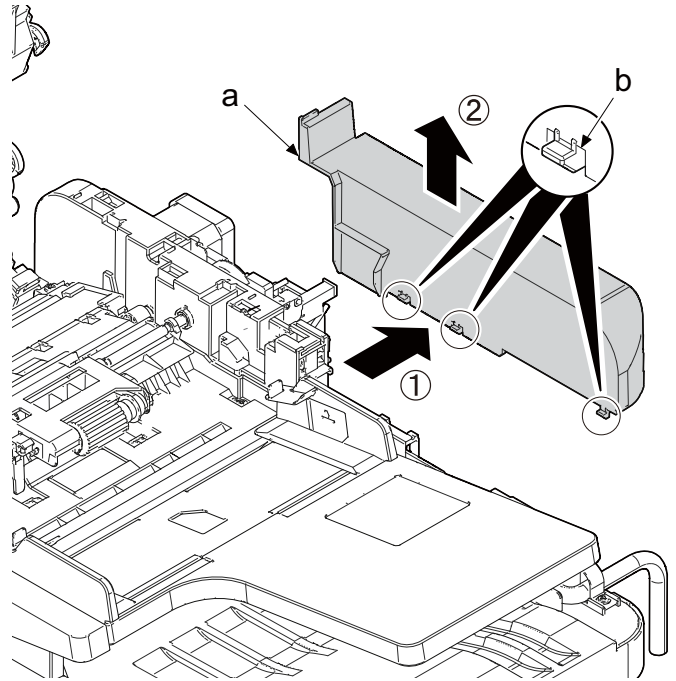


Figure 4-479

6. Remove the screw (a) and detach the strap (b).
*: Removed strap is not used.

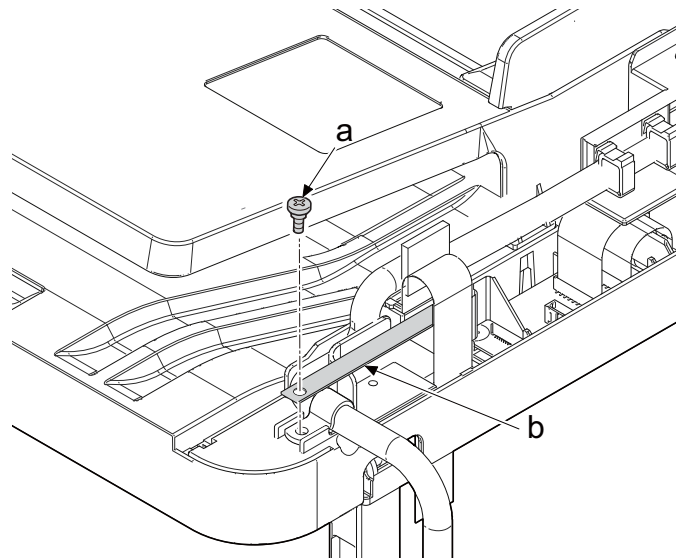


Figure 4-480

7. Detach the wire stopper (a) and then disconnect the FFC (c) from the connector (b).

*: Removed FFC is not used.

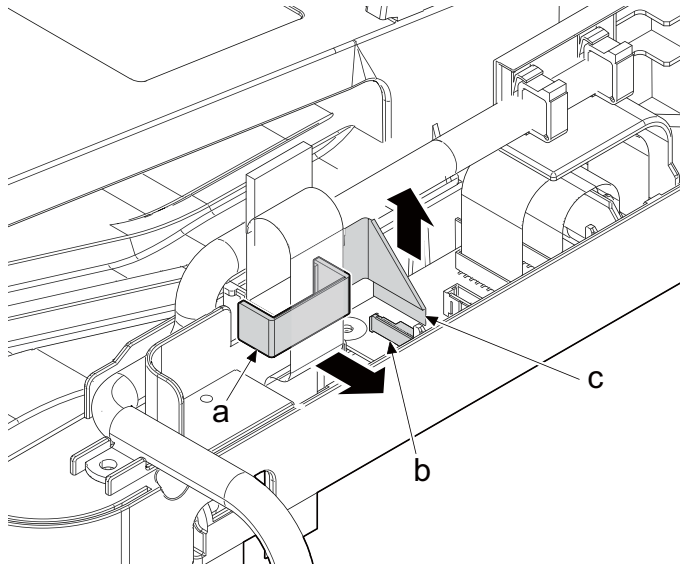


Figure 4-481

8. Disconnect the connector (a) from the PWB. Disconnect five connectors (b).

9. Release two wire saddle (c) and remove the wire (d).

*: Removed wire is not used.

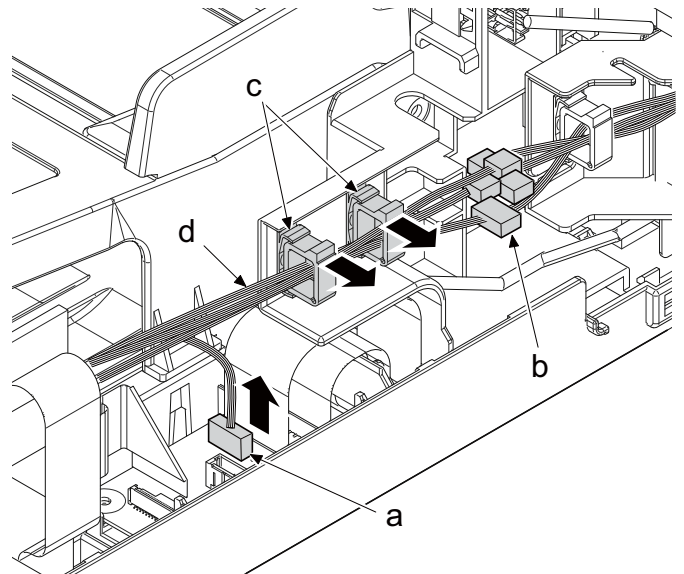


Figure 4-482

10. Pass the FFC (b) and strap (c) through the aperture (d).
11. Attach the new document processor (a).

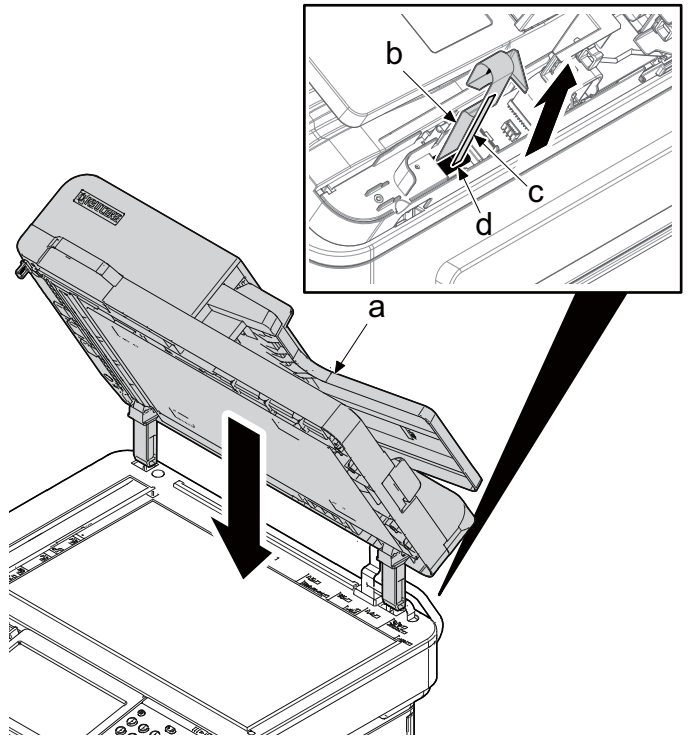


Figure 4-483

12. Connect the connector (a) to the PWB. Connect five connectors (b).
13. Fix the wire (d) with two wire saddles (c).

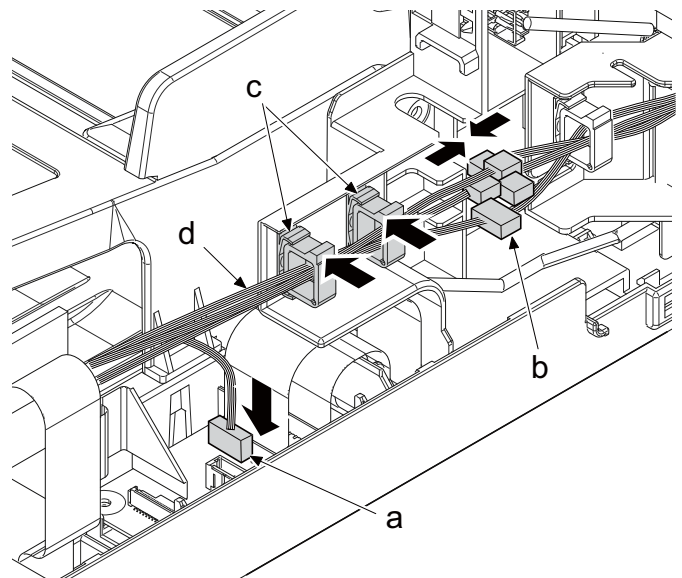


Figure 4-484

14. Connect the FFC (c) to the connector (b) and fix it with the wire stopper (a).

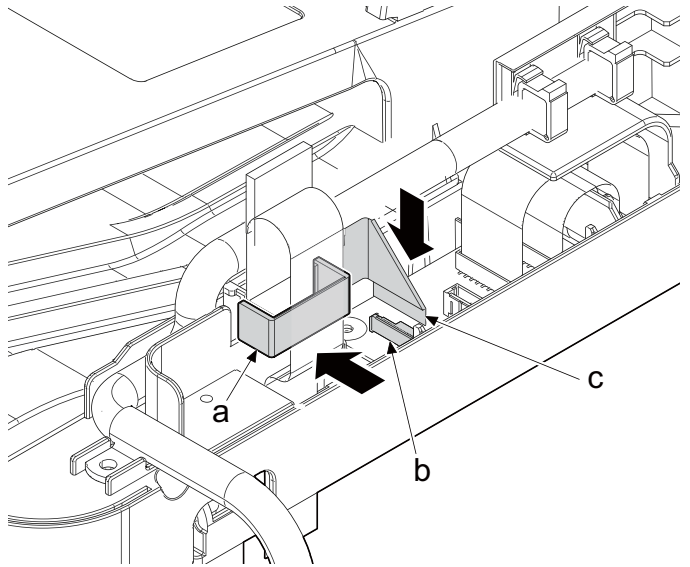


Figure 4-485

15. Attach the strap (b) with the screw (a) removed.

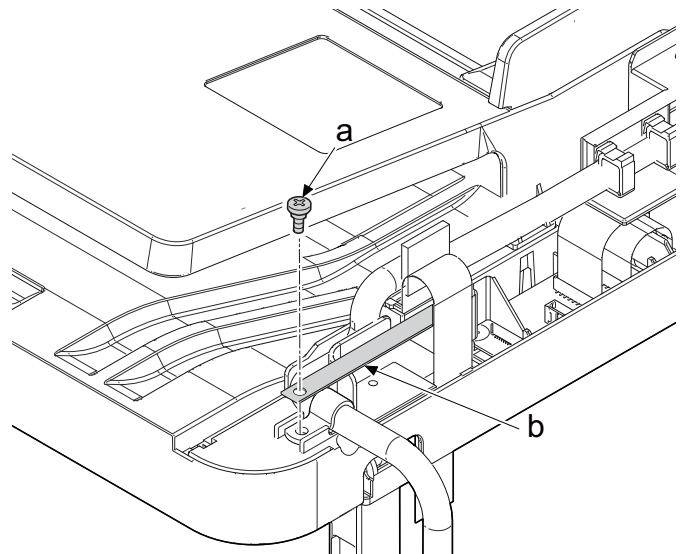


Figure 4-486

16. Hang three hooks (b)

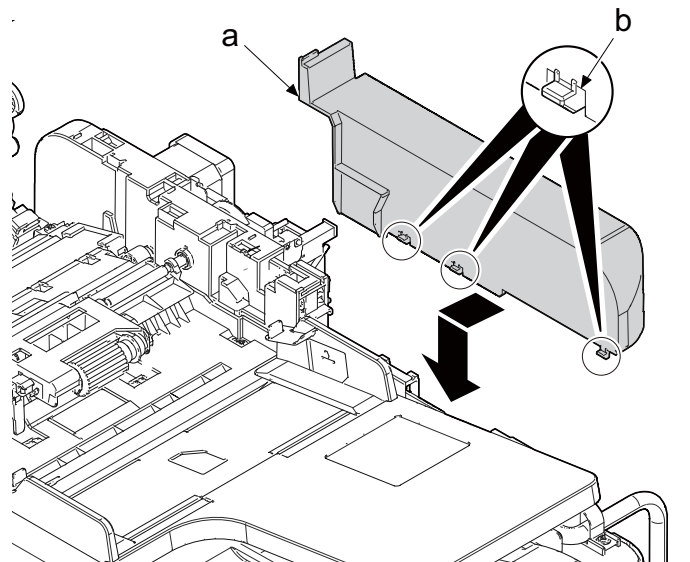


Figure 4-487

17. Hang two hooks (a) and attach the DP rear right cover (b).

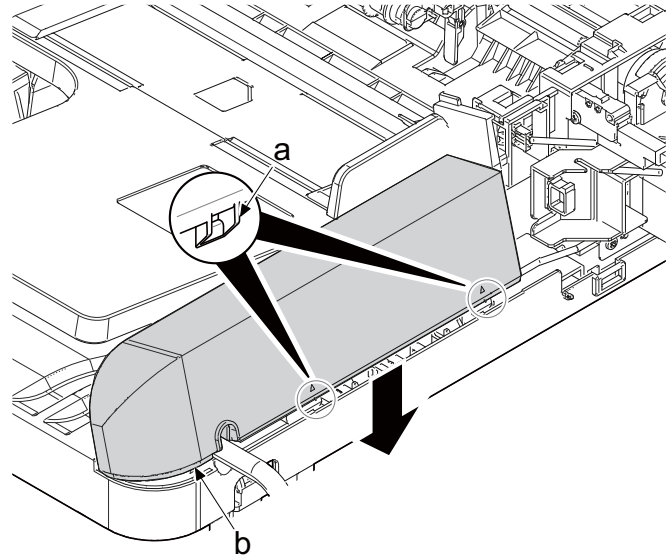


Figure 4-488

18. After latching the lower hook (c) and (a) and then two upper hooks (b), attach the DP rear left cover (d).

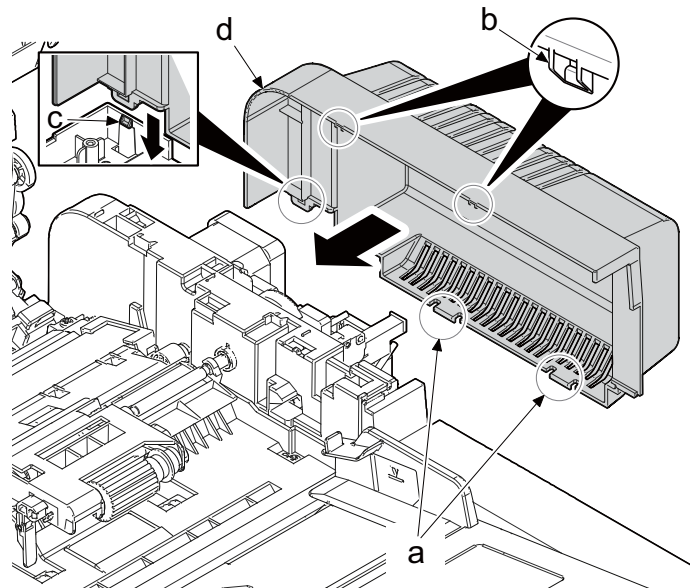


Figure 4-489

19. Close the DP upper cover (b) of the document processor (a).

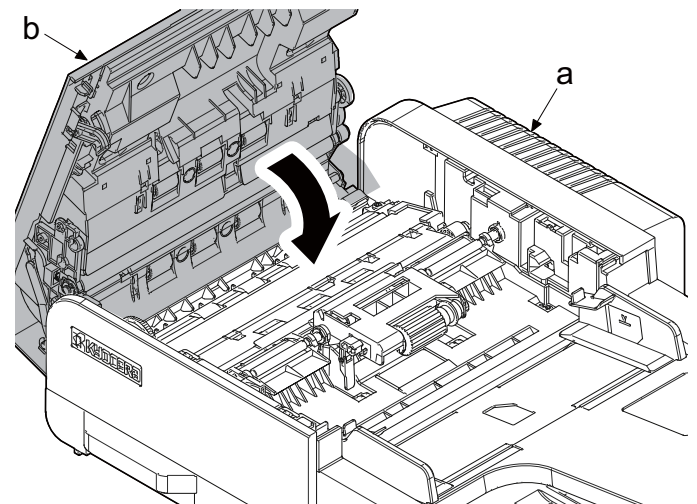


Figure 4-490

(8 - 2) Detaching and reattaching the CIS

1. Open the DP top cover (b) of the document processor (a).

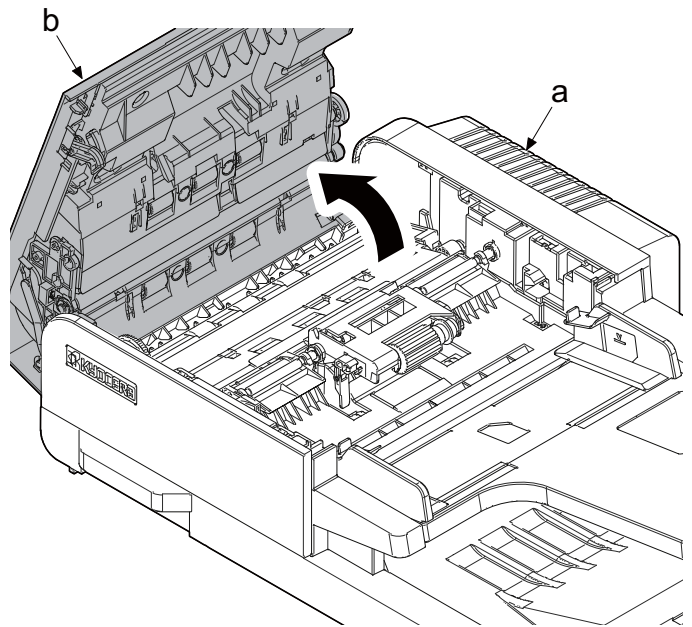


Figure 4-491

2. Release two hooks (b) using a flat-blade screwdriver (a).
3. Release the lower hook (c) and remove the DP rear left cover (d).

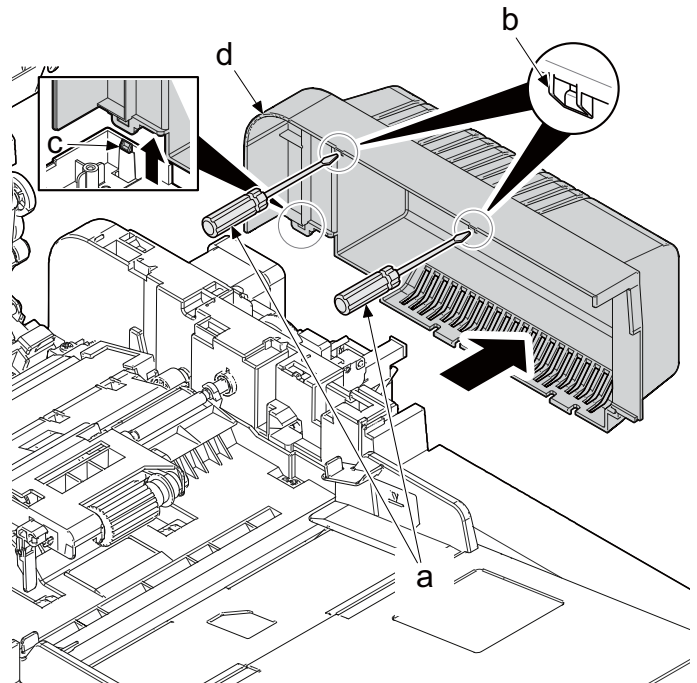


Figure 4-492

4. Release two hooks (b) using a flat-blade screwdriver (a).

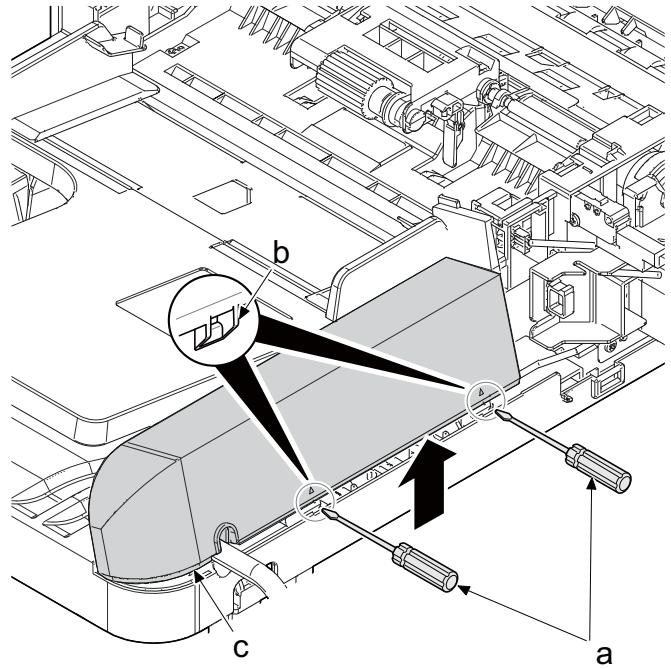


Figure 4-493

5. Release three hooks (b) by pushing the DP right rear cover (a) in the direction of the arrow and detach it.

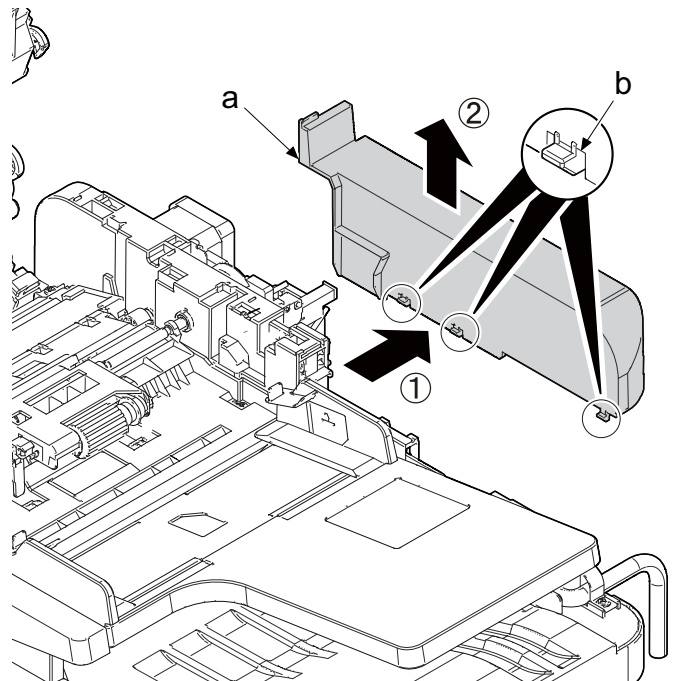


Figure 4-494

6. Release three hooks (c) using a flat-blade screwdriver (a).
7. Release the hook (c) and remove the DP front cover (d).

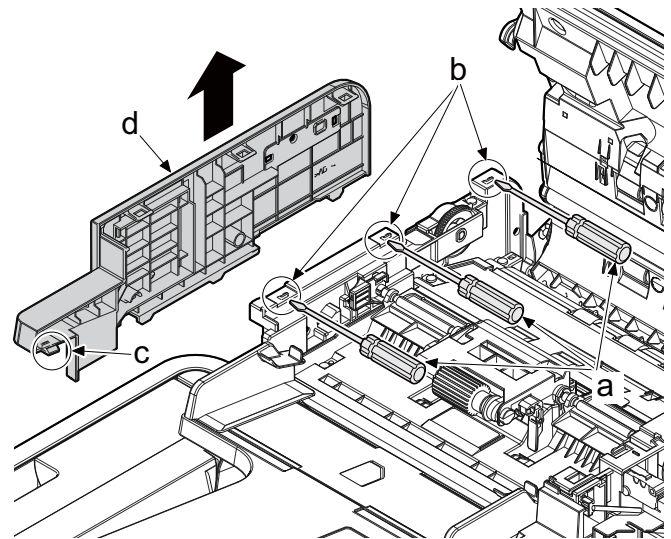


Figure 4-495

8. Remove the screw (a) and detach the strap (b).

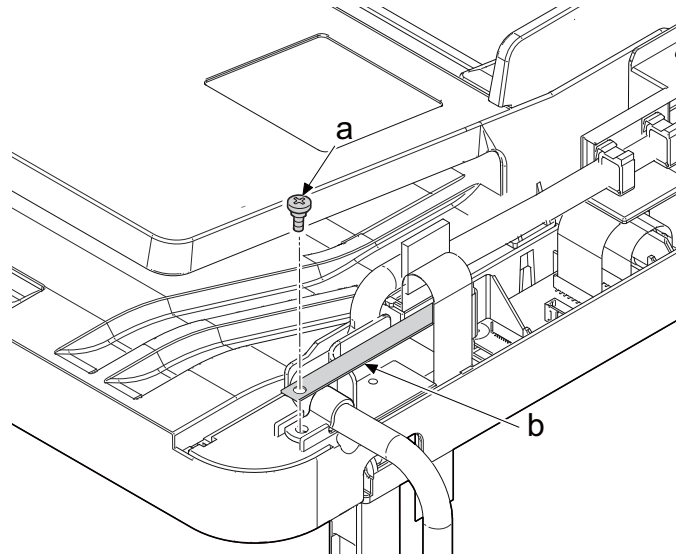


Figure 4-496

9. Remove two FFCs (a).

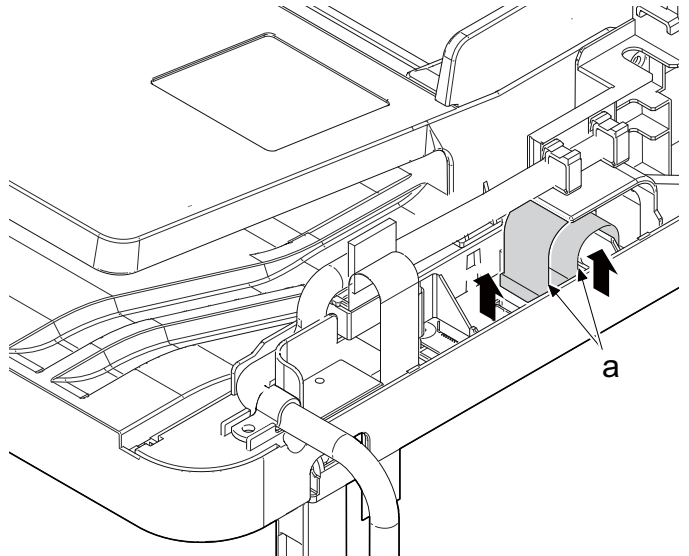


Figure 4-497

10. Disconnect the connector (a) from the PWB. Disconnect five connectors (b).

11. Release two wire saddle (c) and remove the wire (d).

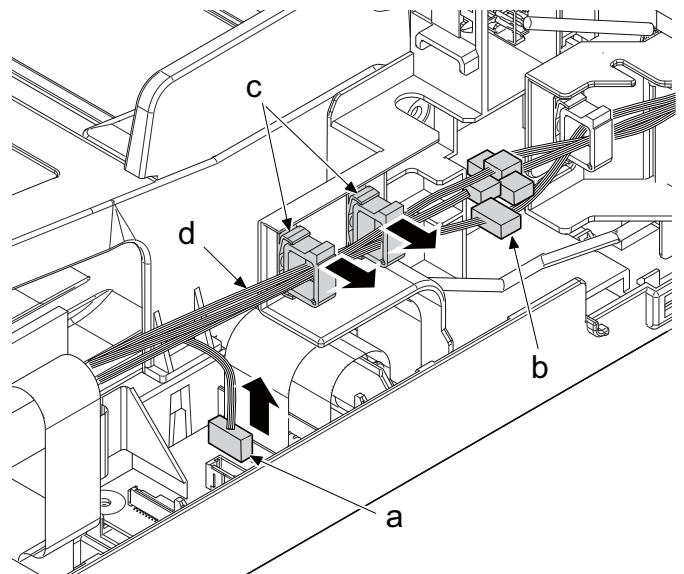


Figure 4-498

12. Remove four screws (a)(M3x8) detach the DP conveying unit (b) from the DP base unit (c).

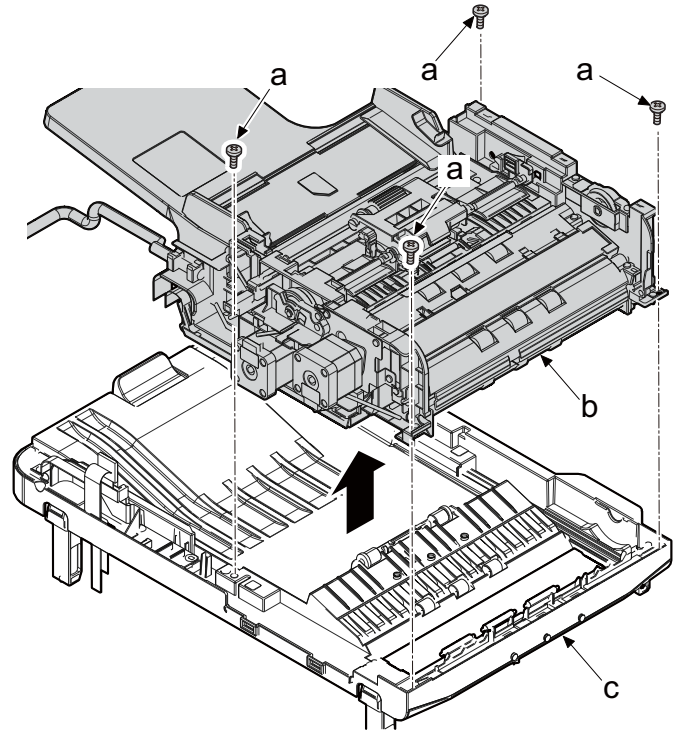


Figure 4-499

13. Remove four hooks (a) and then remove the FFC guide (b).

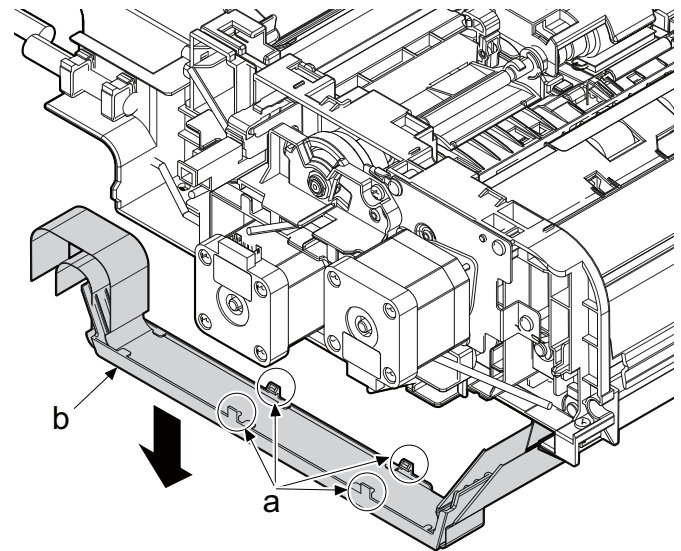


Figure 4-500

14. Push the lock lever (a) toward the machine rear side.
15. Release the hook (b).
16. Rotate the lock lever (a) to the release position (c).
17. Shift the machine front side of the DP feed roller shaft (d) toward the machine left side to remove it from the holding part (e).
18. Then, lift the shaft and pull the DP paper feed roller unit (f) out toward the machine front side.

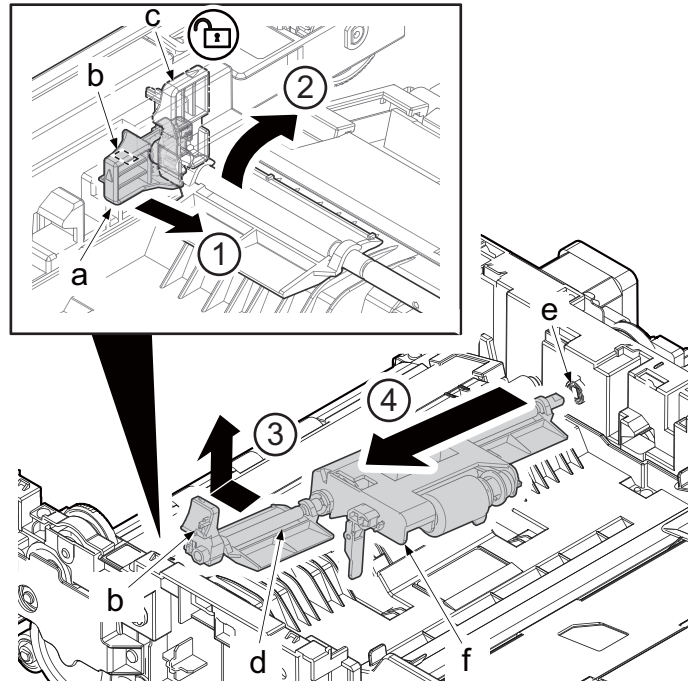


Figure 4-501

19. Remove two screws (a)(M3x8).
20. Detach the jam release dial (b).

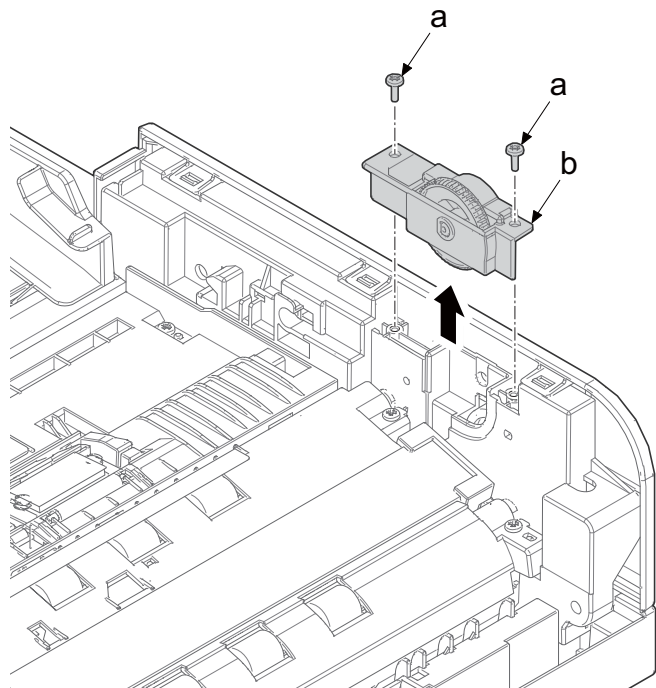


Figure 4-502

21. Remove four screws (a)(M3x8).
 22. Slide the conveying guide (b) in the direction of the arrow by the gap.
- *: Release the protrusion (c) of the CIS guide.

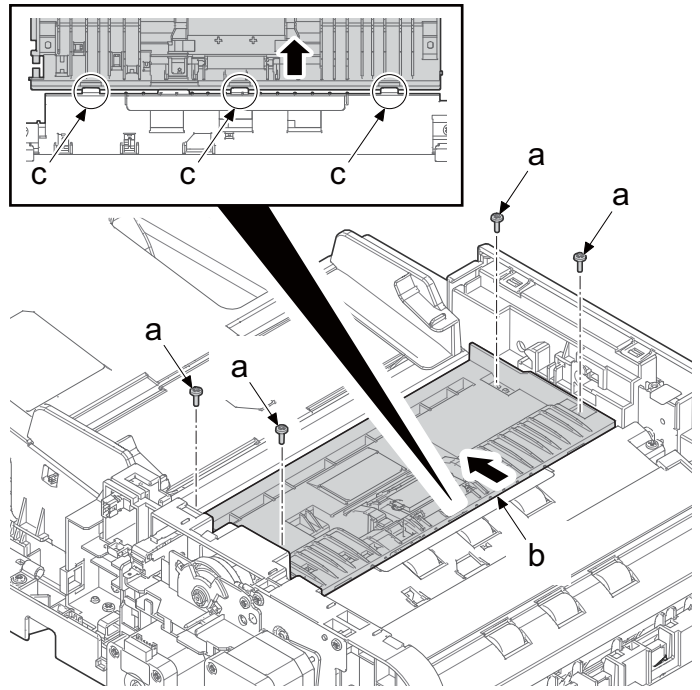


Figure 4-503

23. Remove four screws (a)(M3x8).
24. Detach the CIS assembly (b) in the direction of the arrow.

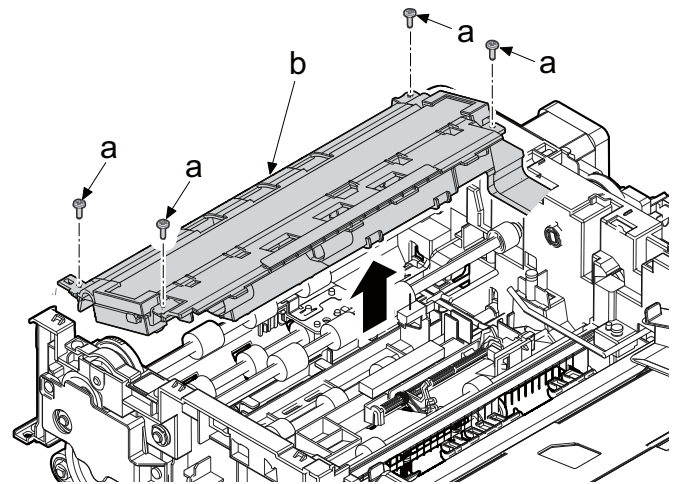


Figure 4-504

25. Release two FFCs (c) from the CIS assembly (a).

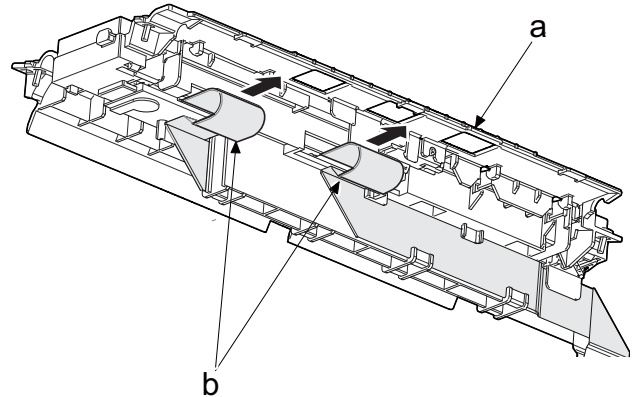


Figure 4-505

26. Release each two hooks (b) of the front and rear glass holder (a) in the direction of the arrow and detach them.

27. Detach the CIS glass (d) and the front and rear spacers (e) from the CIS assembly (c).

*: Since the front and rear spacers (e) are not fixed, take care not to lose them.

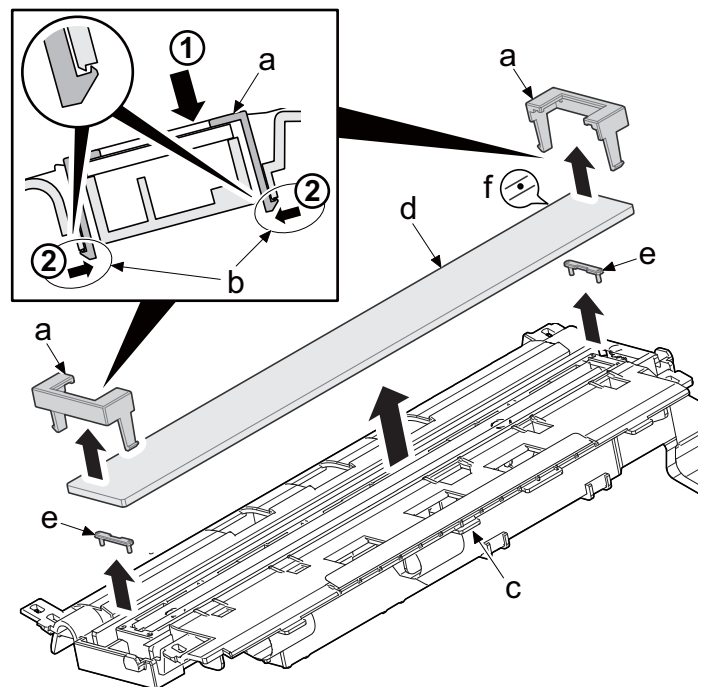


Figure 4-506

IMPORTANT

Check the position of black marking (f) for distinction of the surface / back side of the glass.
Also, make sure not to touch the glass surface.
If it is dirty, wipe it off with a dry cloth.

28. Detach the CIS (a) in the direction of the arrow.

*: Take care not to lose two springs (c).

29. Check or replace the CIS (a), and then reattach the parts in the original position.

IMPORTANT

When reassembling, check that the spring (c) is inserted on the boss of the CIS assembly (b).

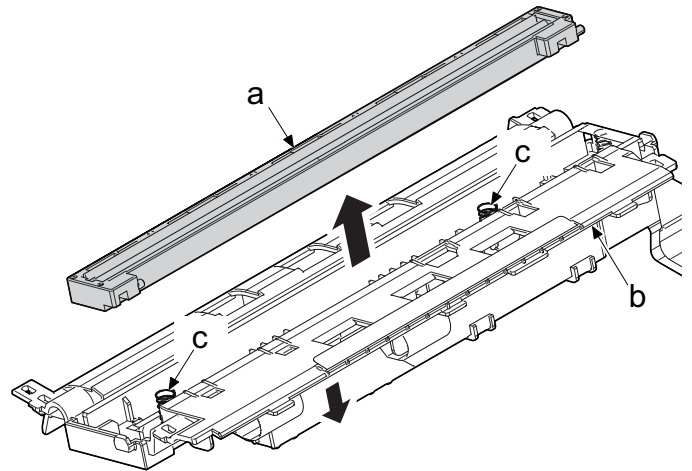


Figure 4-507

(9) Drive section

(9 - 1) Detaching and reattaching the main drive motor unit

1. Open the rear cover (a).

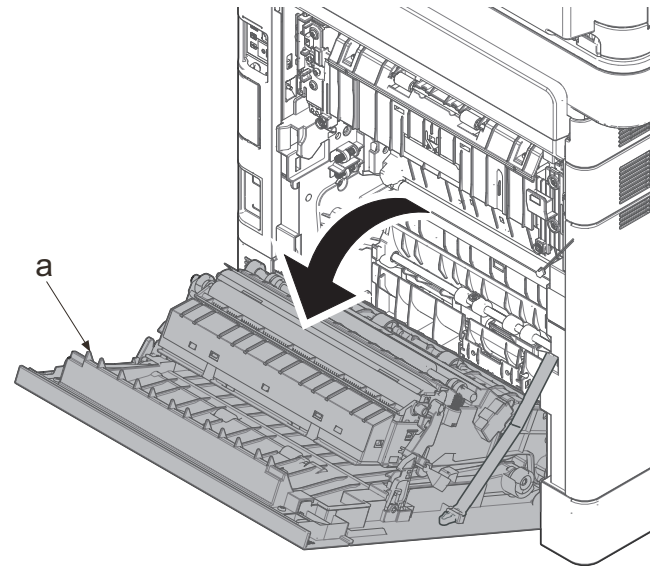


Figure 4-508

2. Remove the screw (a)(M3x8).
3. Slide the upper left cover (b) toward the machine rear side and detach it.

IMPORTANT

When reattaching the upper left cover (b), insert the hook (c) to the machine front side, and then fasten seven hooks (d) by sliding it toward the machine front side.

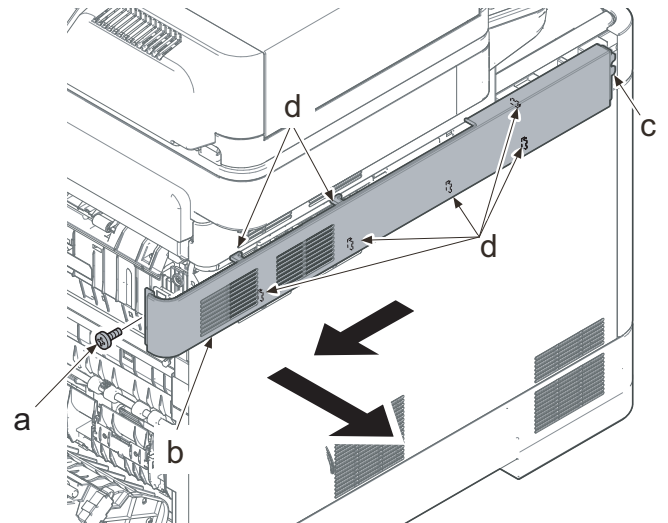


Figure 4-509

4. Lift up the machine rear side of the middle left cover (a) to release three hooks (b).
5. Slide the middle left cover (a) toward the machine rear side to release two hooks (c).
6. Detach the middle left cover (a).

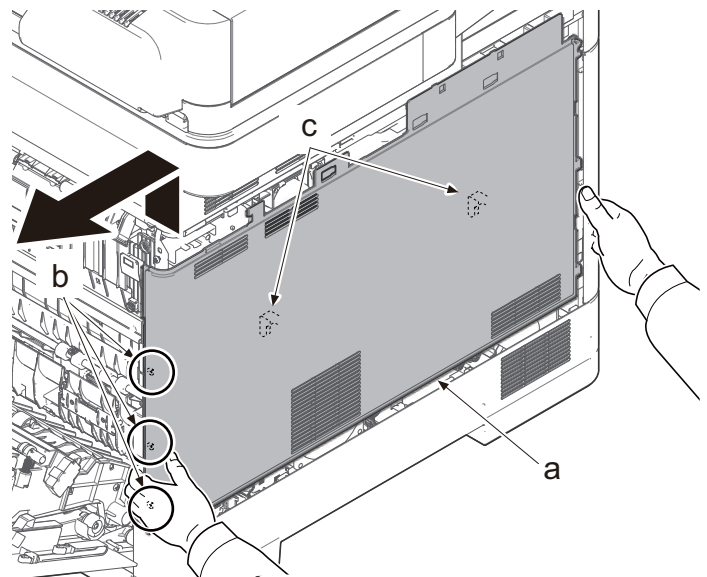


Figure 4-510

IMPORTANT

When reattaching the middle left cover (a), insert the lower rib into the lower left cover (b). Slide it toward the machine front side to fasten three hooks (c) and four hooks (d), then lower the machine rear side of it to fasten three hooks (e) at the machine rear side.

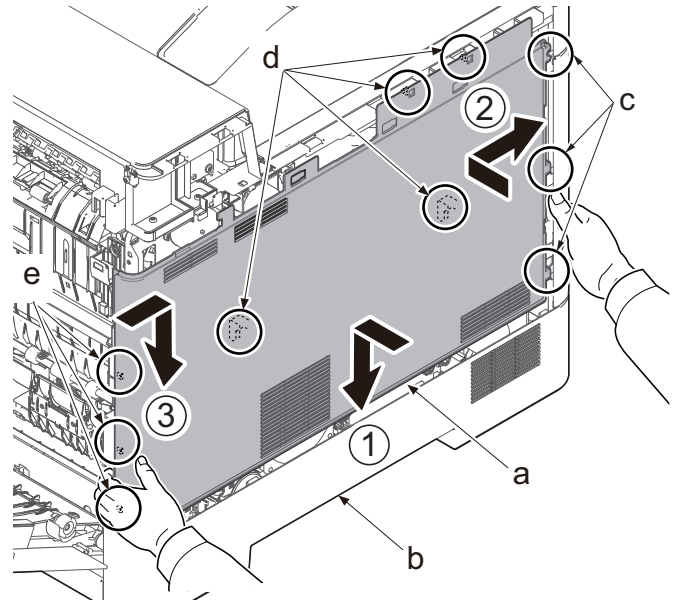


Figure 4-511

View of the main drive unit

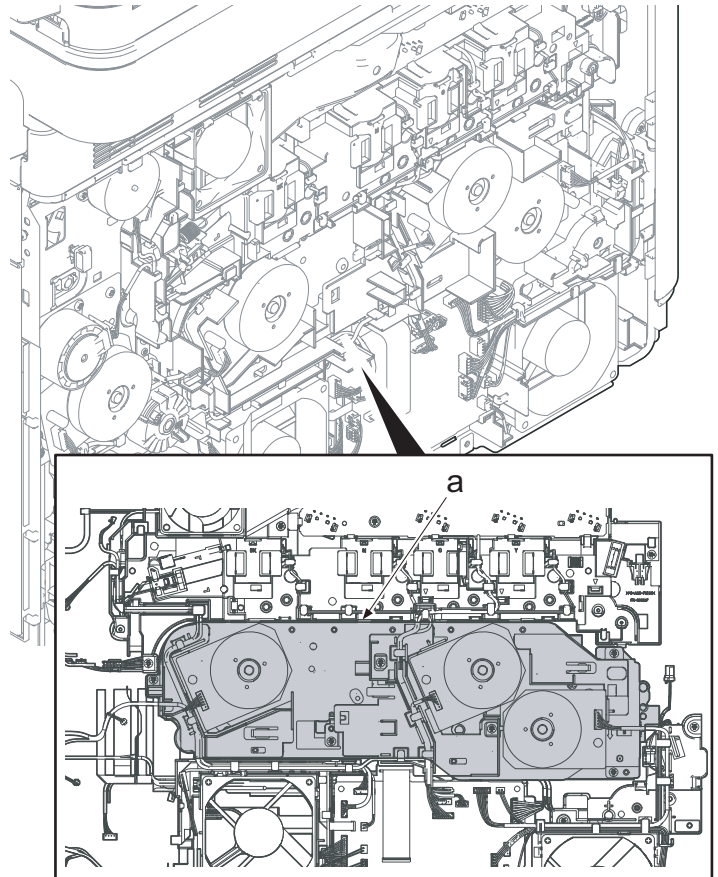


Figure 4-512

7. Disconnect the connector (b) of the drum motor 1 (a). Release the wire from the hook (c).

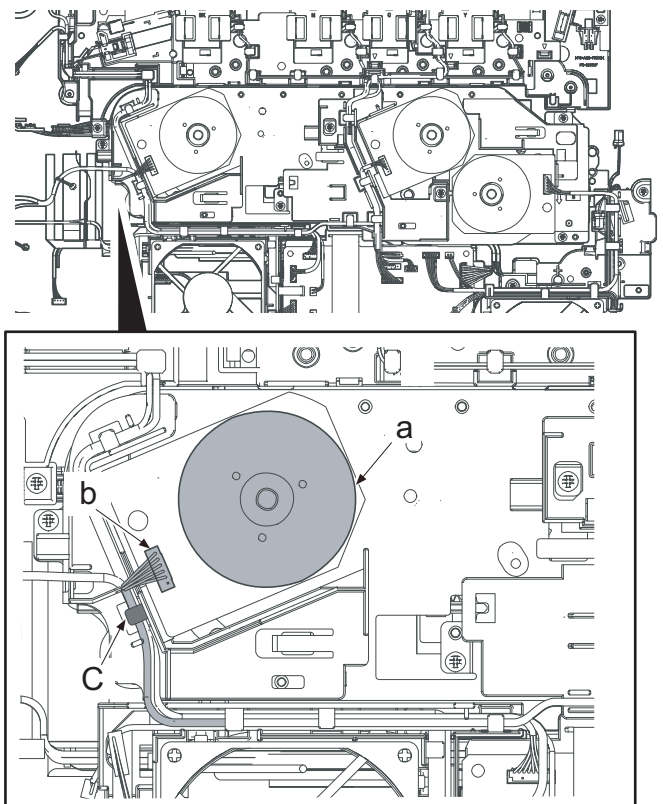


Figure 4-513

8. Disconnect three connectors (b) from the engine relay PWB (a). Release the wire (c) from eight hooks (d).

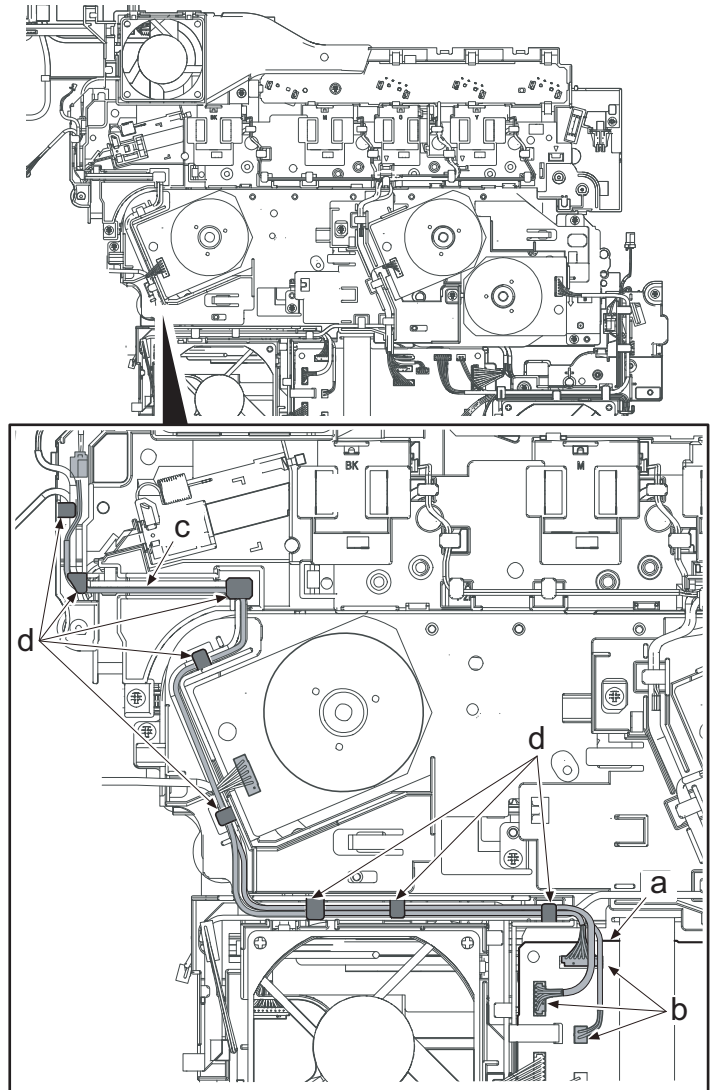


Figure 4-514

9. Disconnect the connector (b) of the drum motor 2 (a).
10. Release the wire from two hooks (f) of the wire guide (e).
11. Disconnect the connector (d) of the developer motor (c).

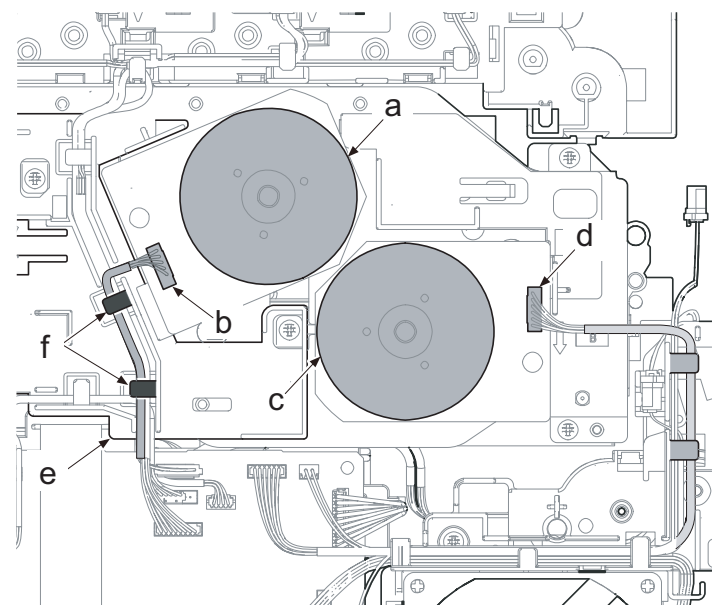


Figure 4-515

12. Disconnect two connectors from the engine relay PWB (a).
13. Release the wire from four hooks (c) of the wire guide (b).

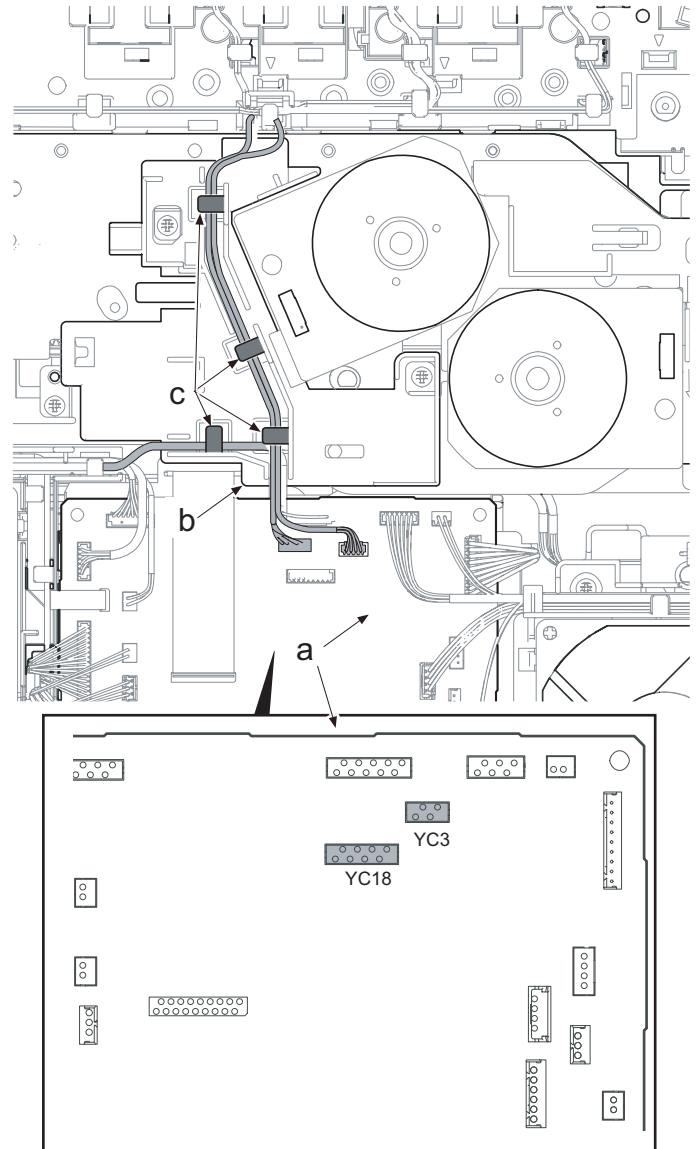


Figure 4-516

14. Pull the lever (a).
15. Lift up the scanner unit (b) and open the inner tray (c).

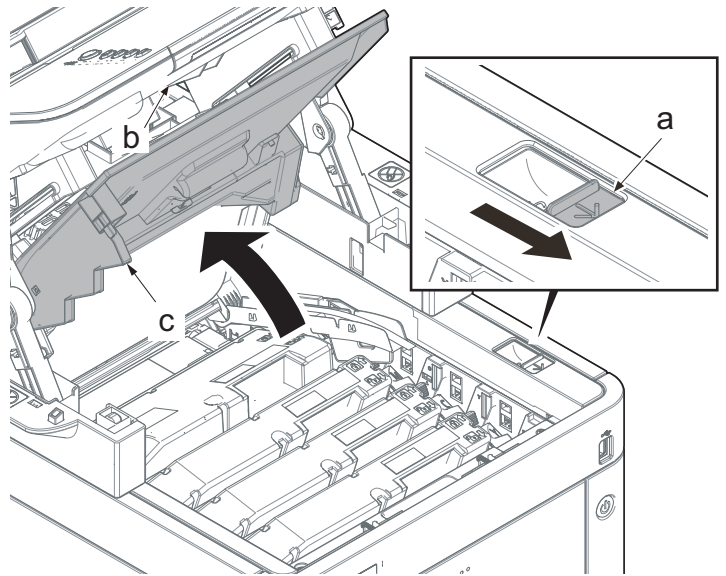


Figure 4-517

16. Detach toner container Y (a).

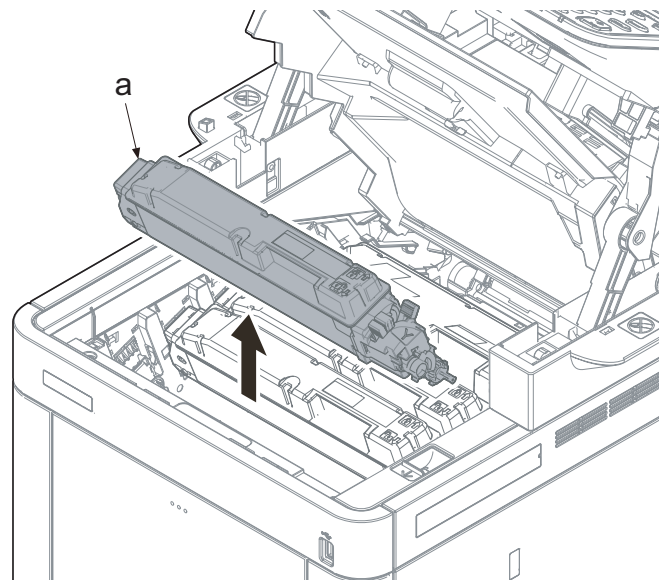


Figure 4-518

17. Remove the screw (a)(M3x12).
18. Remove the lever cover (b).
19. Lift up the drive release lever (c).

*: When raising the lever, the joint of the drive coupling is released.

IMPORTANT

If omitting to attach the lever cover, "Cover open" message is displayed while the tray switch is not turned on.

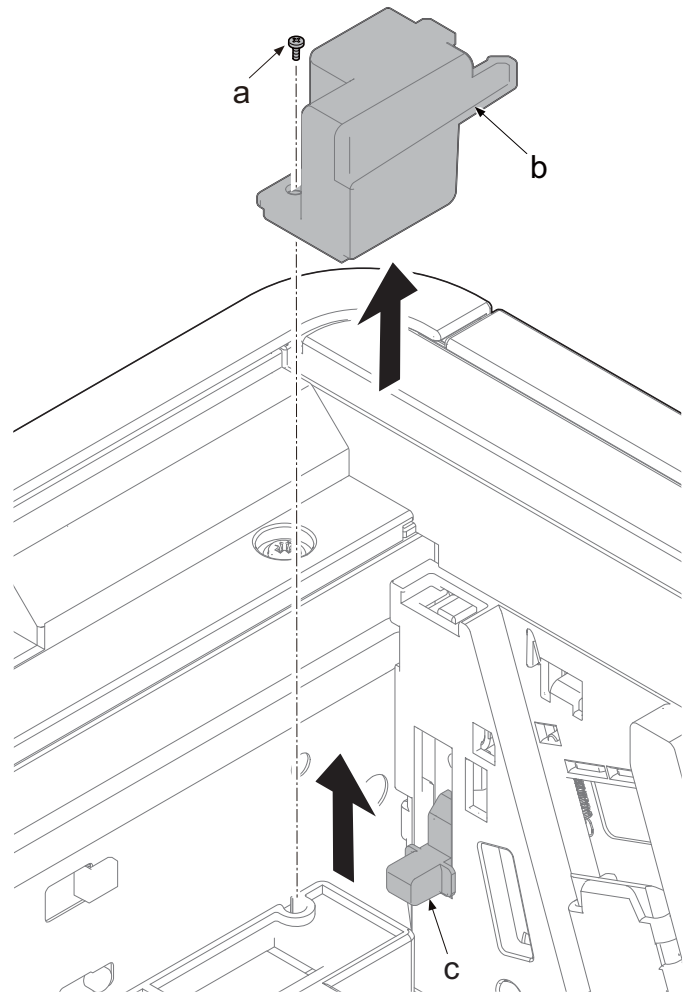


Figure 4-519

- 20. Remove six screws (a)(M3x8).
- 21. Detach the main drive motor unit (b).

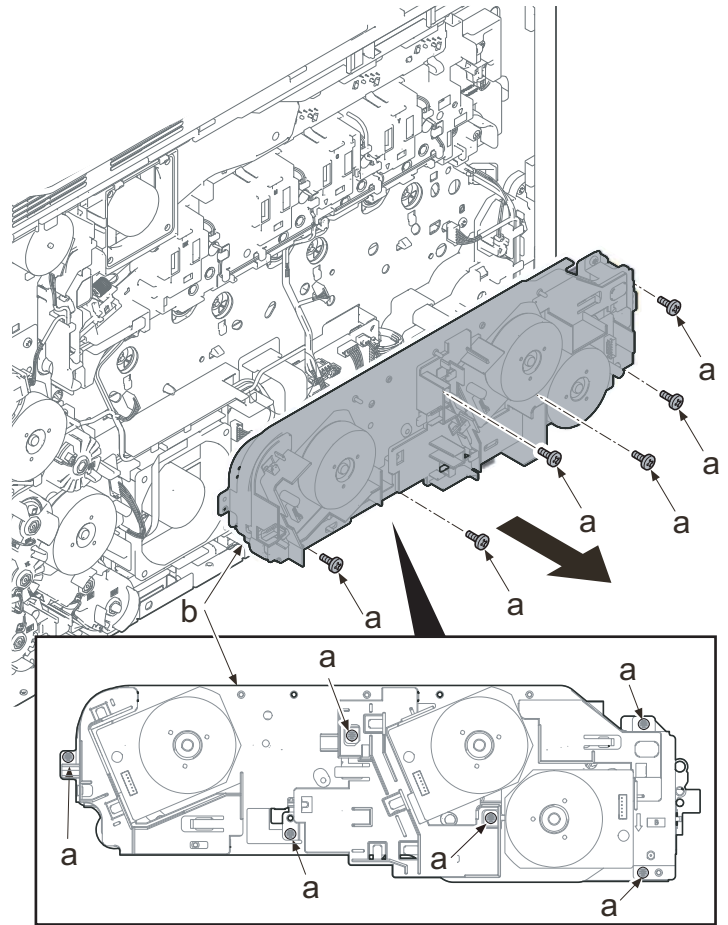


Figure 4-520

*: When detaching the main drive motor unit (a), pull out the drive release lever (b) from the drive release joint (c).

22. Check the paper feed drive unit and clean or replace it if necessary.
23. Reattach the parts in the original position.

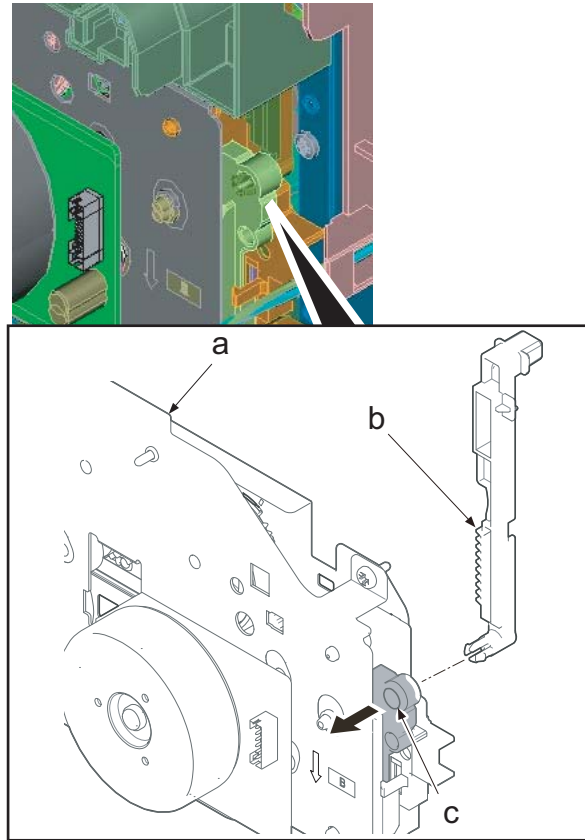


Figure 4-521

IMPORTANT

Attach the main drive motor unit (a) after confirming the drive coupling is at the release position. (Drive release joint (b) is raised.)

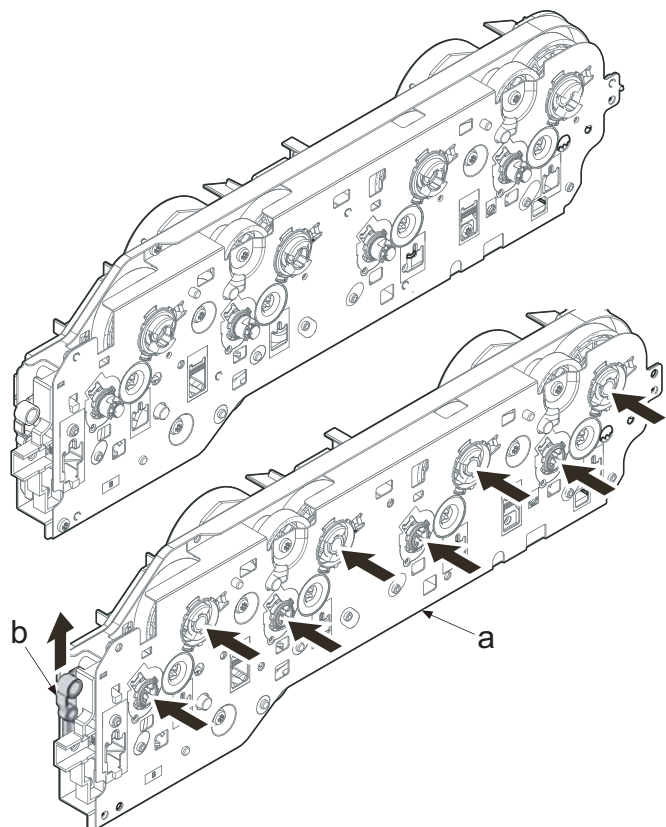


Figure 4-522

Insert the drive release lever (b) into the drive release joint (c) when reattaching the main drive motor unit (a). Do not turn the developer motor (d) in the reverse direction of the engraving arrow (e).

After reattaching the main drive motor unit (a), check if the couplings for driving the developer unit and the drum unit are relocated by being connected with the drive release lever (b).

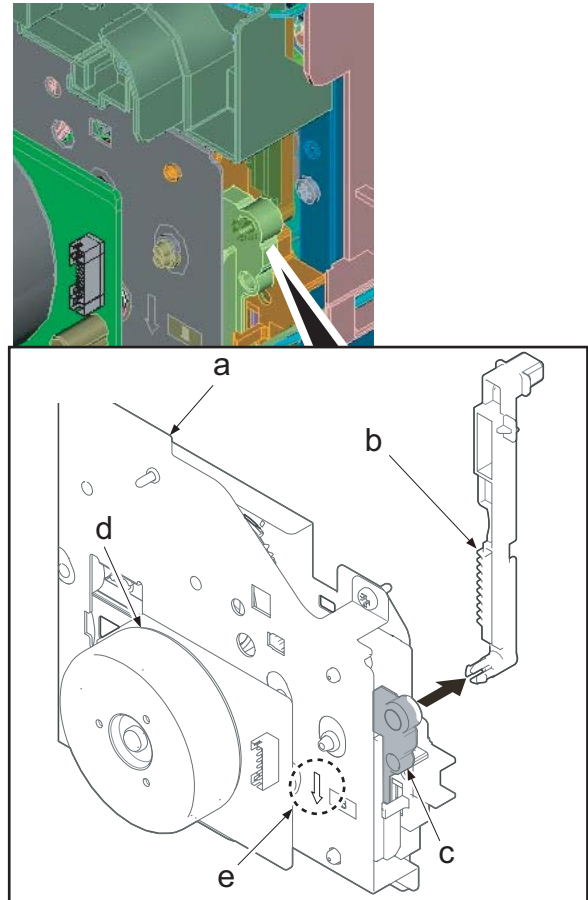


Figure 4-523

(9 - 2) Detaching and reattaching the paper feed drive unit

1. Open the rear cover (a).

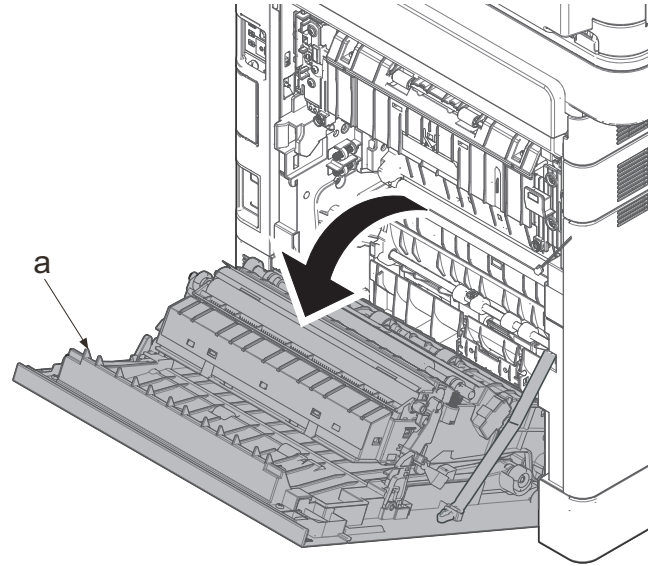


Figure 4-524

2. Remove the screw (a)(M3x8).
3. Slide the upper left cover (b) toward the machine rear side and detach it.

IMPORTANT

When reattaching the upper left cover (b), insert the hook (c) to the machine front side, and then fasten seven hooks (d) by sliding it toward the machine front side.

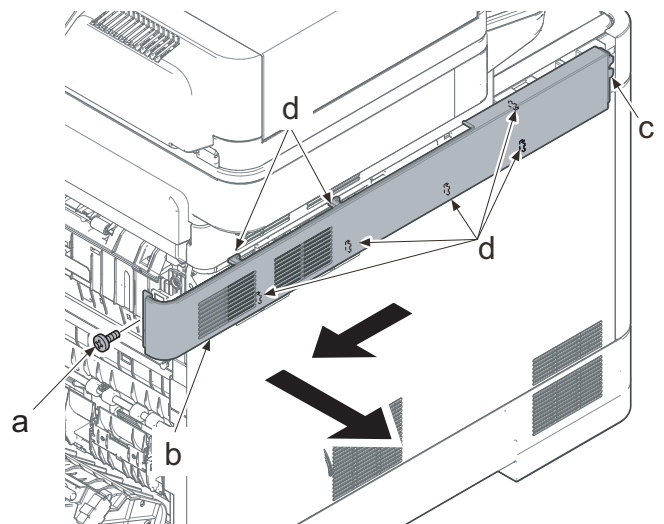


Figure 4-525

4. Lift up the machine rear side of the middle left cover (a) to release three hooks (b).
5. Slide the middle left cover (a) toward the machine rear side to release two hooks (c).
6. Detach the middle left cover (a).

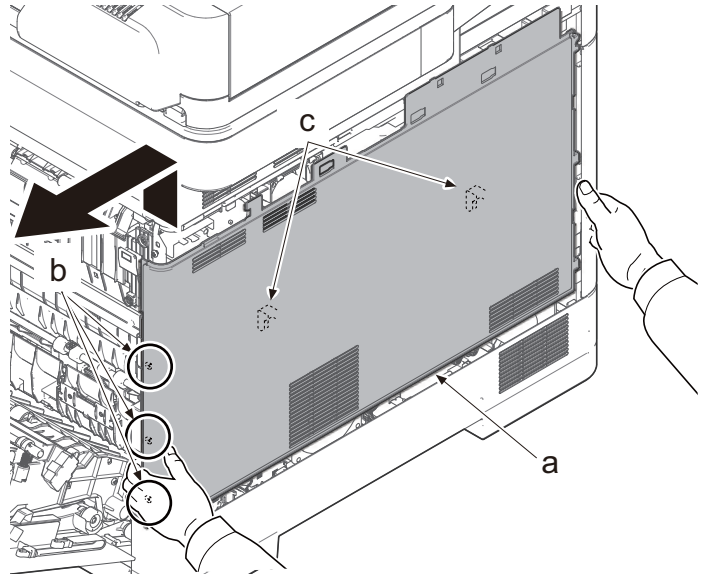


Figure 4-526

IMPORTANT

When reattaching the middle left cover (a), insert the lower rib into the lower left cover (b). Slide it toward the machine front side to fasten three hooks (c) and four hooks (d), then lower the machine rear side of it to fasten three hooks (e) at the machine rear side.

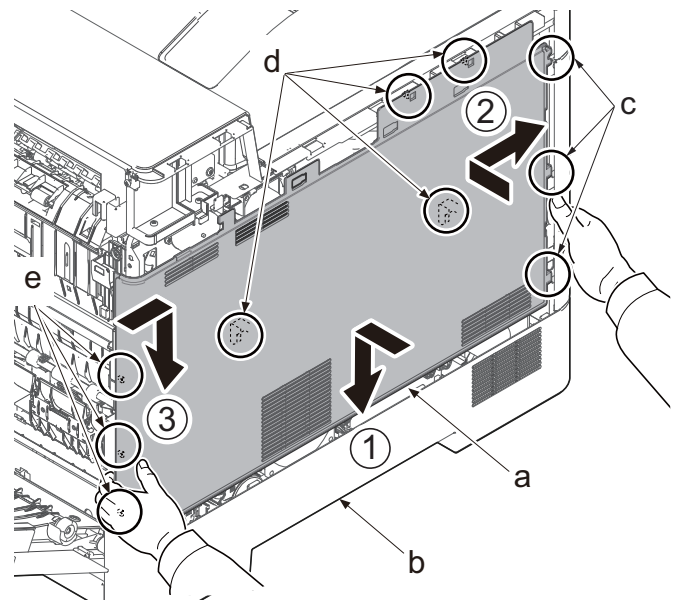


Figure 4-527

7. Remove the screw (a)(M3x8).
8. Pull the rib (b) toward the machine front side and release the center hook (c).
9. Detach the lower left cover (d).

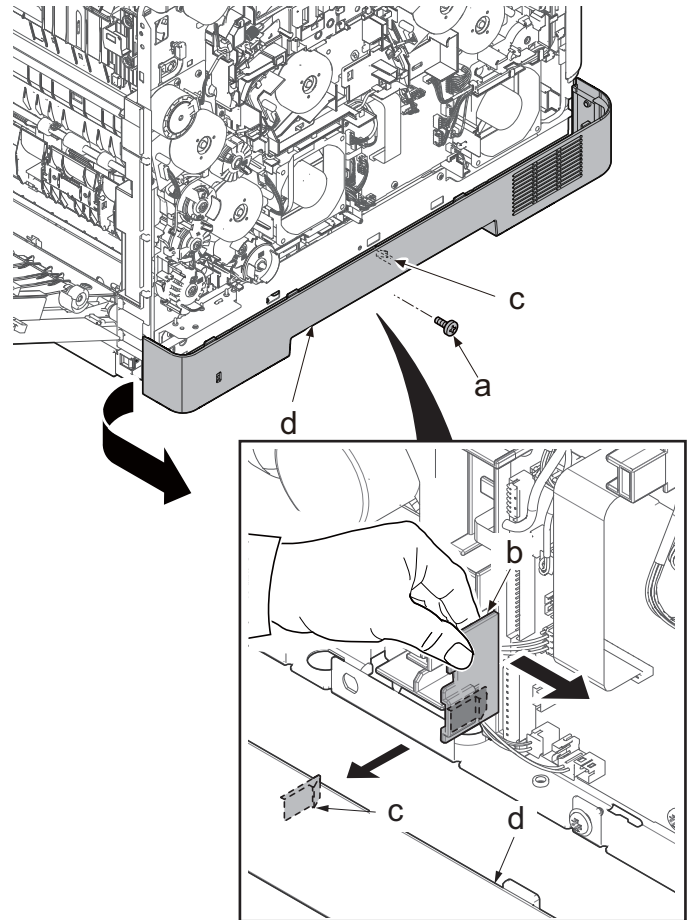


Figure 4-528

IMPORTANT

When attaching the lower left cover (a), insert two bosses (b) at the machine front side into the holes and apply the center hook (c). Then, push it toward the machine rear side.

Check if the hook at the center is surely fastened.

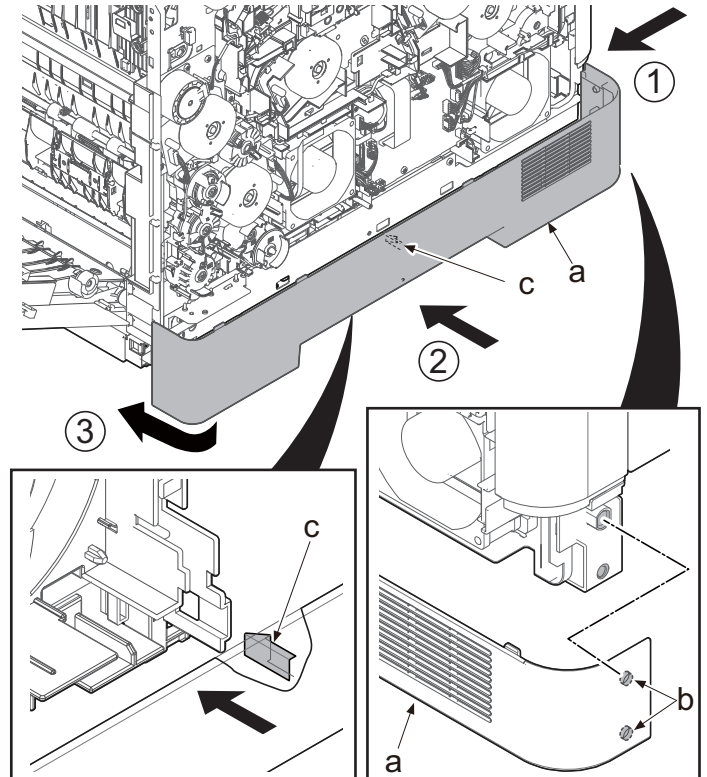


Figure 4-529

10. Disconnect the connector (b) of the primary transfer motor (a).
11. Release the wire from four hooks (c).

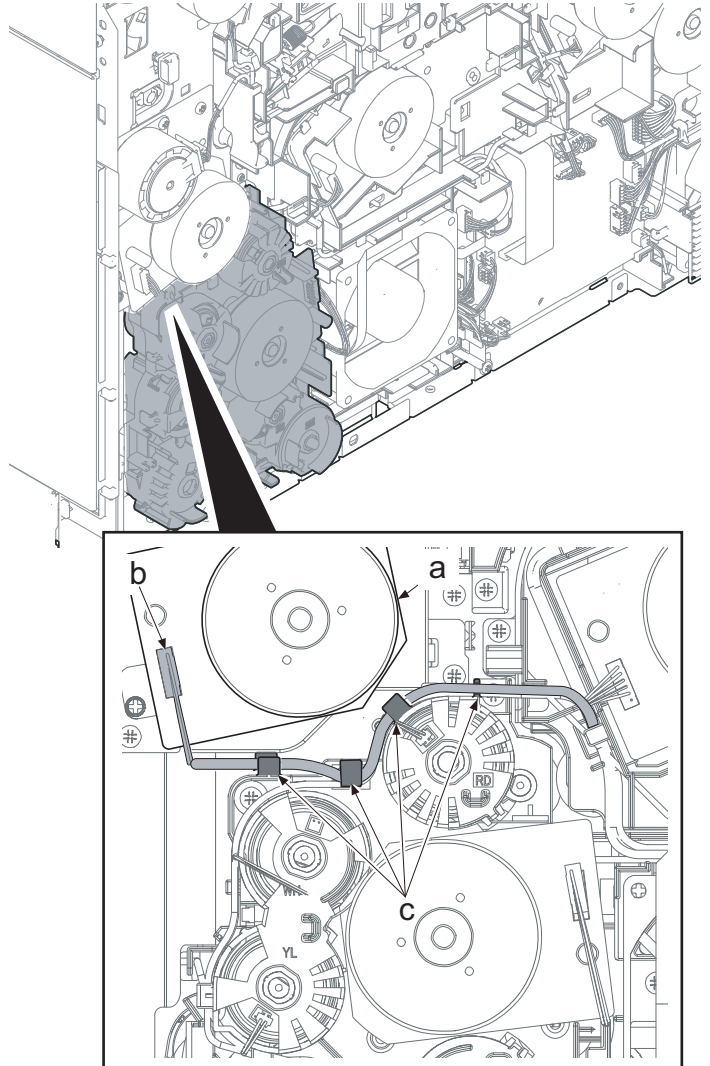


Figure 4-530

12. Disconnect five connectors (b) of the clutch in the paper feed drive unit (a).
13. Disconnect the connector (c) of the motor in the paper feed drive unit.
14. Release the wire from twelve hooks (d).

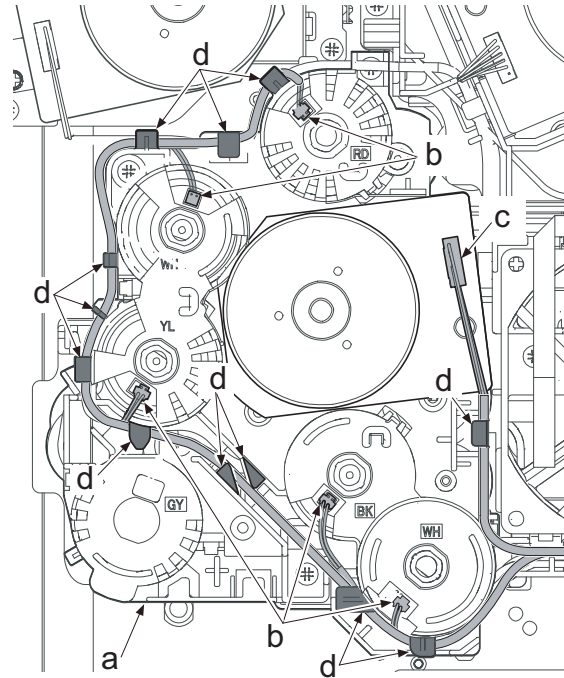


Figure 4-531

15. Remove three screws (a)(M3x12).
16. Detach the paper feed drive unit (b).
17. Check the paper feed drive unit and clean or replace it if necessary.
18. Reattach the parts in the original position.

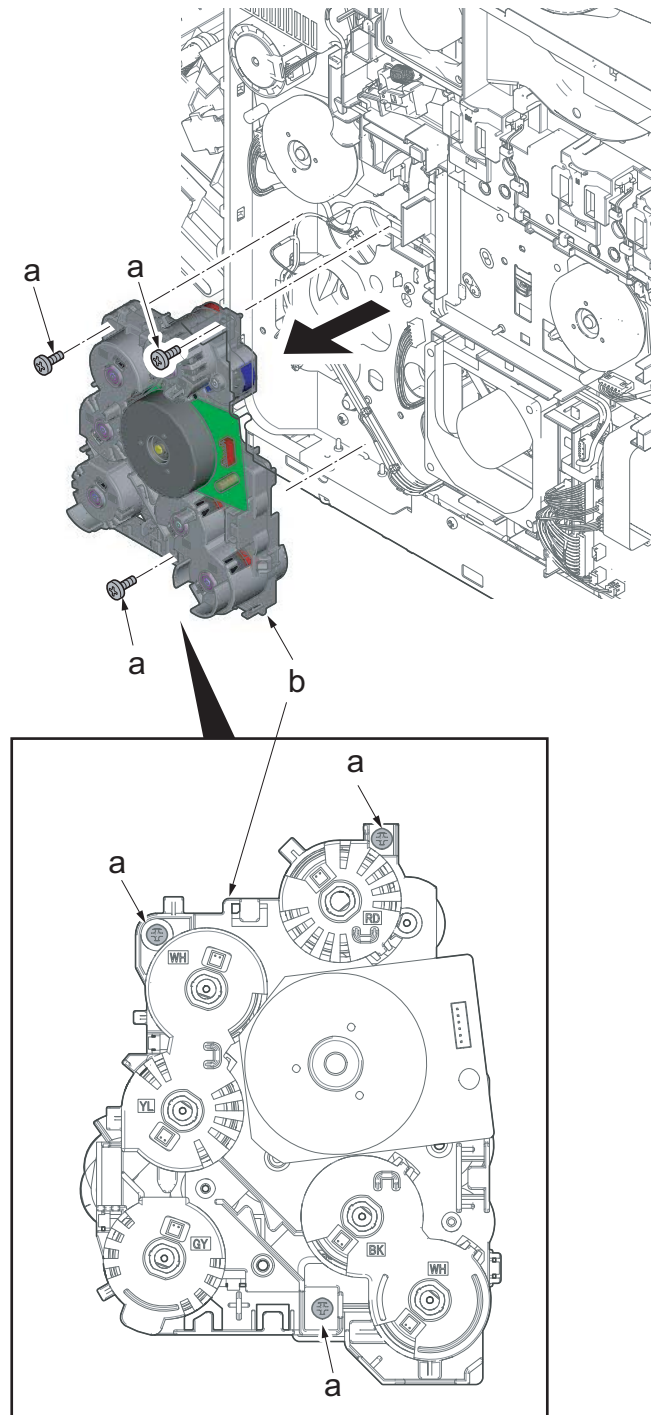


Figure 4-532

(9 - 3) Detaching and reattaching the MP paper feed drive unit

1. Open the rear cover (a).

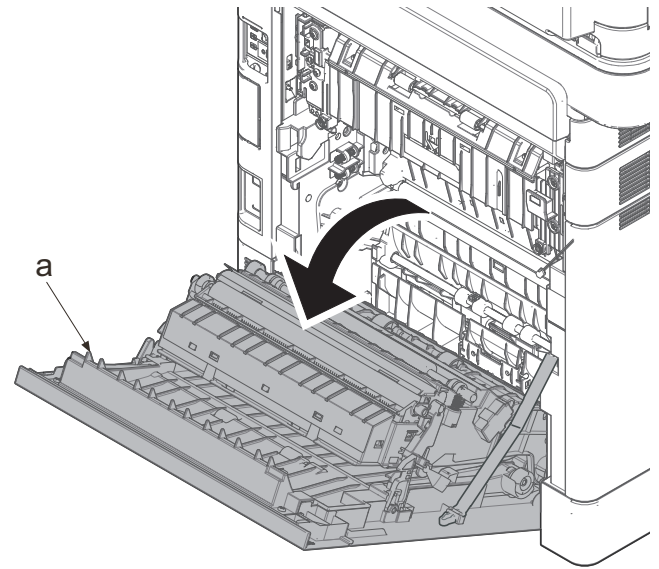


Figure 4-533

2. Remove the screw (a)(M3x8).
3. Slide the upper left cover (b) toward the machine rear side and detach it.

IMPORTANT

When reattaching the upper left cover (b), insert the hook (c) to the machine front side, and then fasten seven hooks (d) by sliding it toward the machine front side.

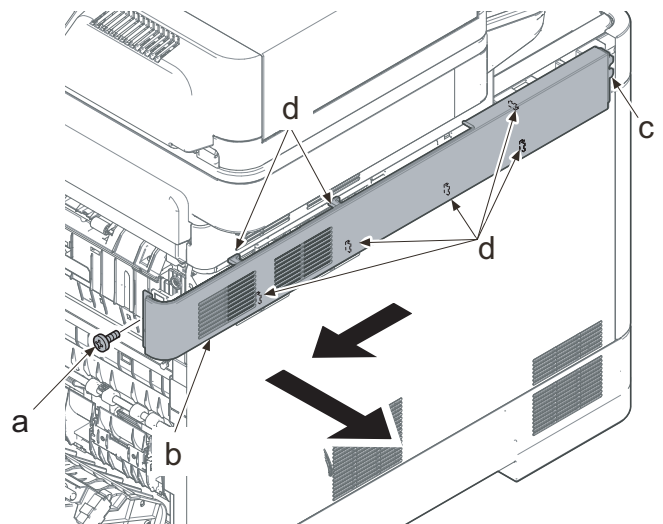


Figure 4-534

4. Lift up the machine rear side of the middle left cover (a) to release three hooks (b).
5. Slide the middle left cover (a) toward the machine rear side to release two hooks (c).
6. Detach the middle left cover (a).

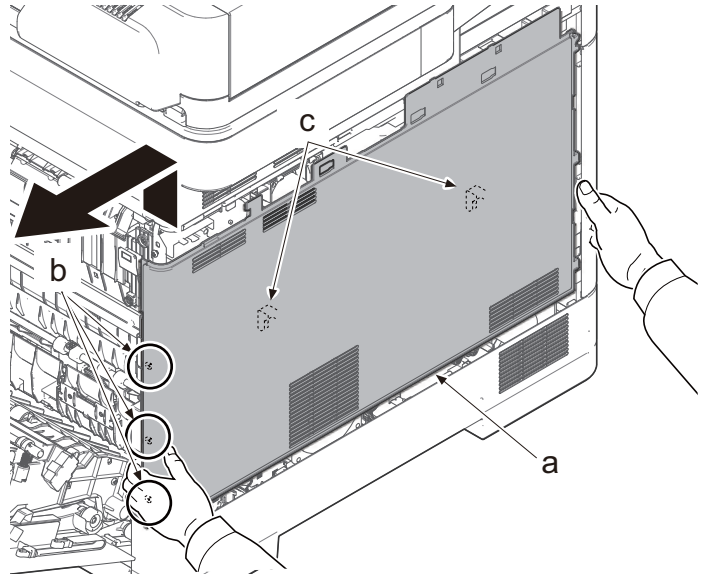


Figure 4-535

IMPORTANT

When reattaching the middle left cover (a), insert the lower rib into the lower left cover (b). Slide it toward the machine front side to fasten three hooks (c) and four hooks (d), then lower the machine rear side of it to fasten three hooks (e) at the machine rear side.

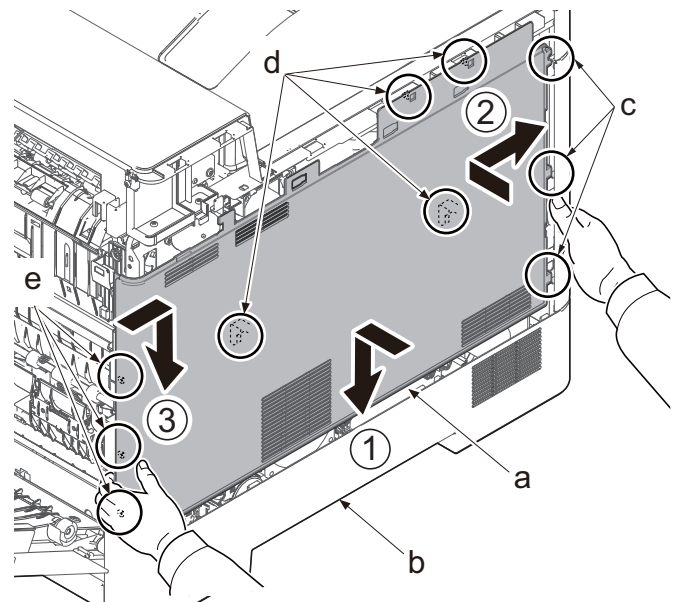


Figure 4-536

7. Remove the screw (a)(M3x8).
8. Pull the rib (b) toward the machine front side and release the center hook (c).
9. Detach the lower left cover (d).

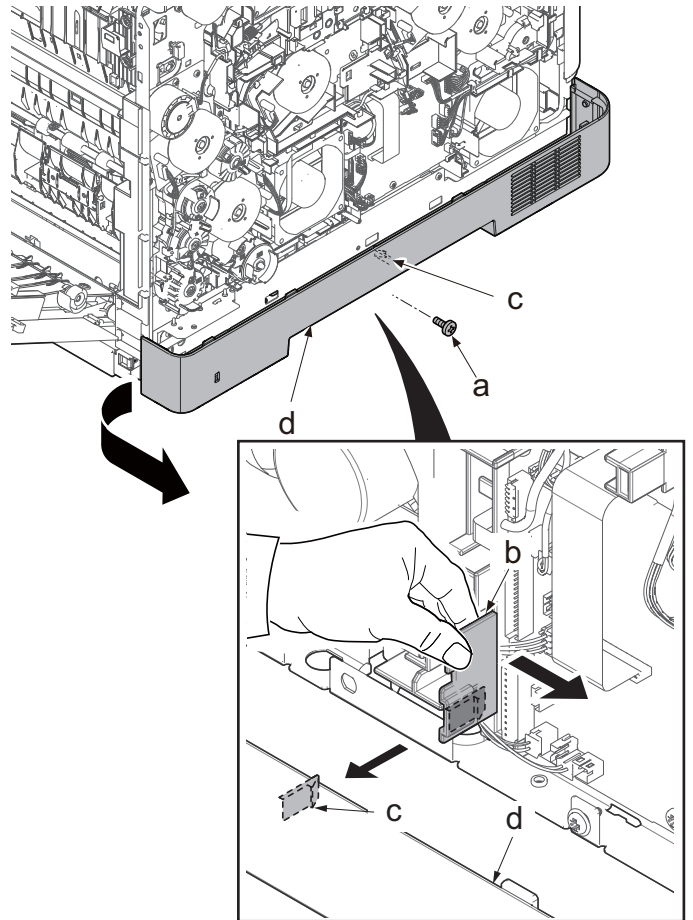


Figure 4-537

IMPORTANT

When attaching the lower left cover (a), insert two bosses (b) at the machine front side into the holes and apply the center hook (c). Then, push it toward the machine rear side.

Check if the hook at the center is surely fastened.

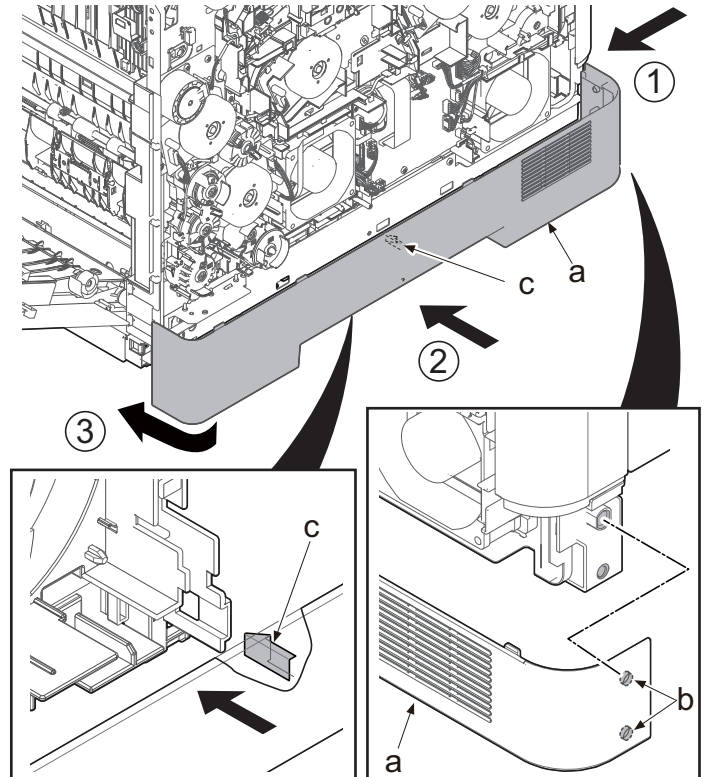


Figure 4-538

10. Pull the lever (a).

11. Lift up the scanner unit (b) and open the inner tray (c).

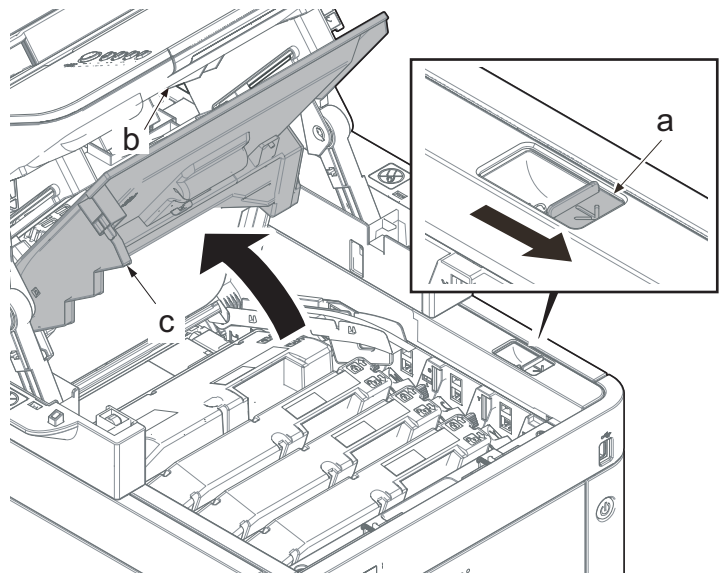


Figure 4-539

12. Open the MP tray (a).
13. Remove two screws (b)(M3x8).
14. Open the waste toner cover (c).

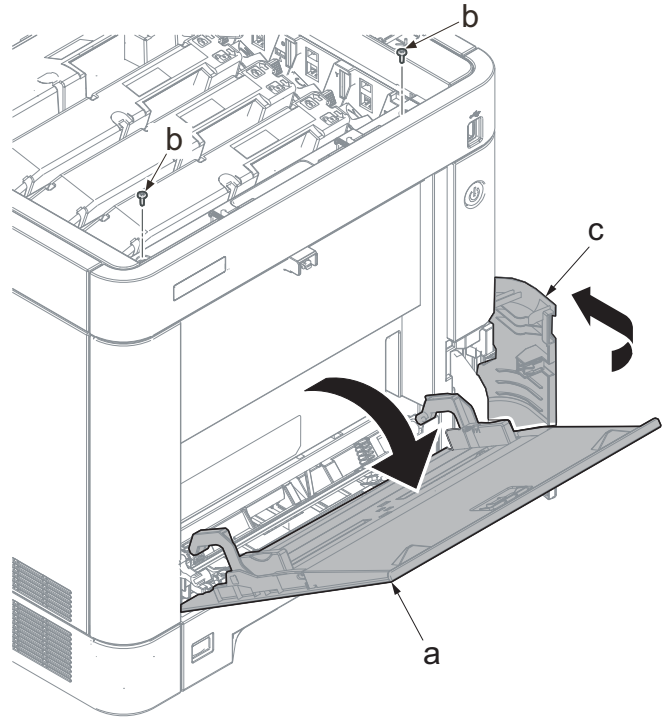


Figure 4-540

15. Slightly lift up the front cover (a) to release the boss (b).
16. Tilt the front cover (a) toward the machine front side.
17. Then, remove the front cover (a) by lifting it up.

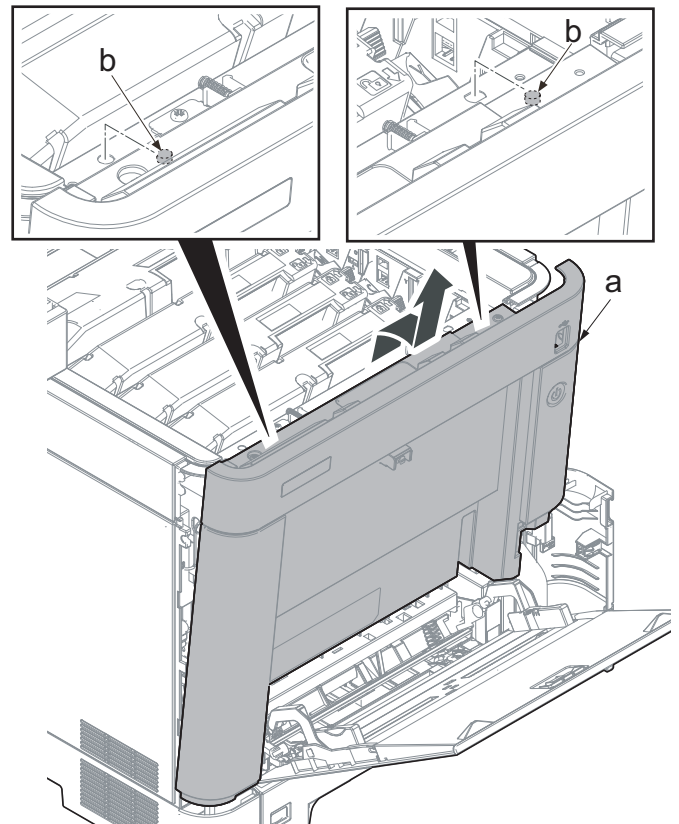


Figure 4-541

IMPORTANT

Make sure not to touch the waste toner cover sensor (b) when reattaching the front cover (a).

If the waste toner cover sensor (b) comes off, even if you close the waste toner cover, "cover open" will be displayed.

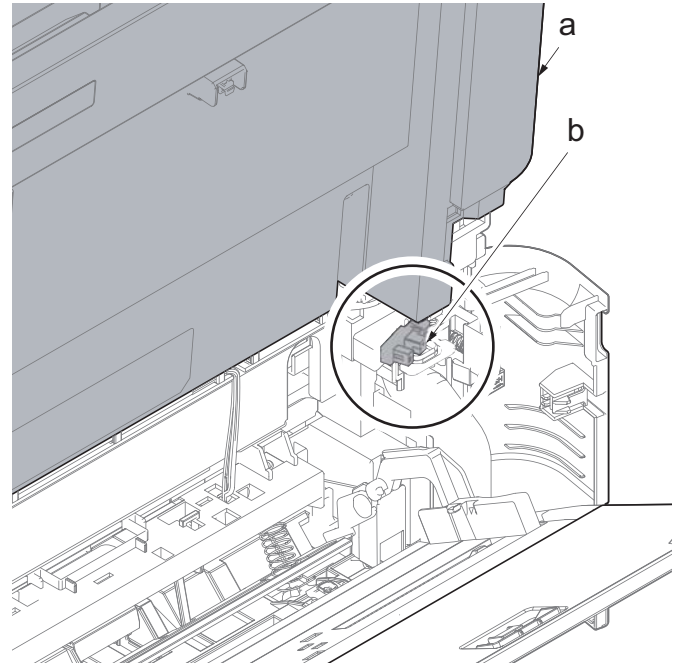


Figure 4-542

18. Pull out the cassette (a).
19. Open the MP tray (b) slightly.
20. Lift up the MP tray cover (c) and release two hooks (d).

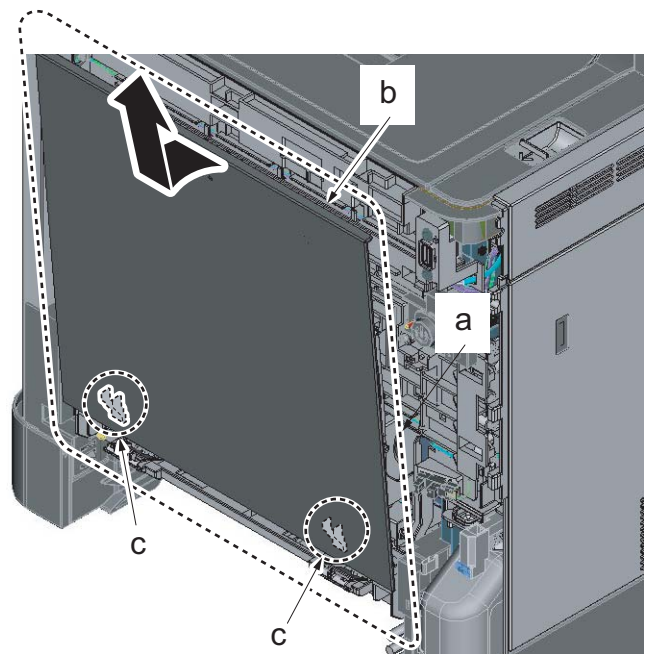


Figure 4-543

- 21. Fully open the MP tray (a).
- 22. Slide the arm (b) to the machine rear side and lift it up to remove.

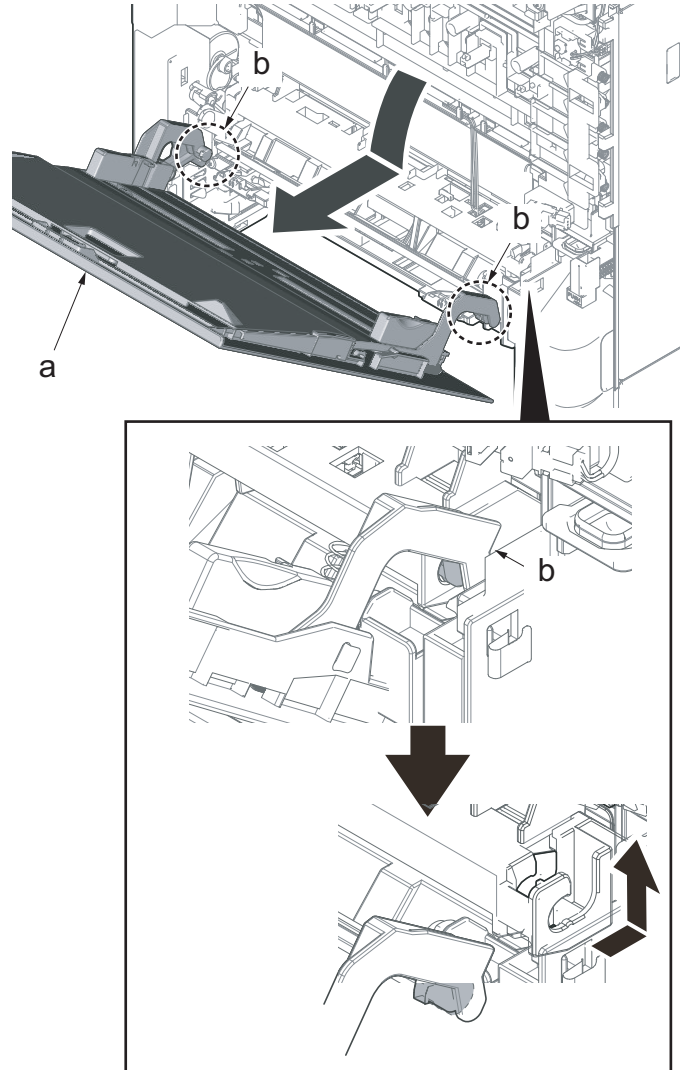


Figure 4-544

- 23. Rotate the cam (a) inside the main unit to the position in the figure.

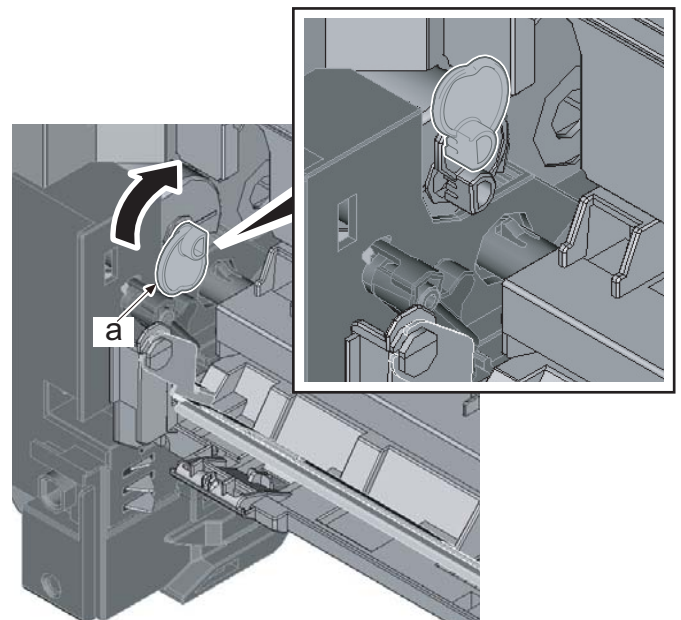


Figure 4-545

24. Disconnect eight connectors (b) from the engine relay PWB (a).

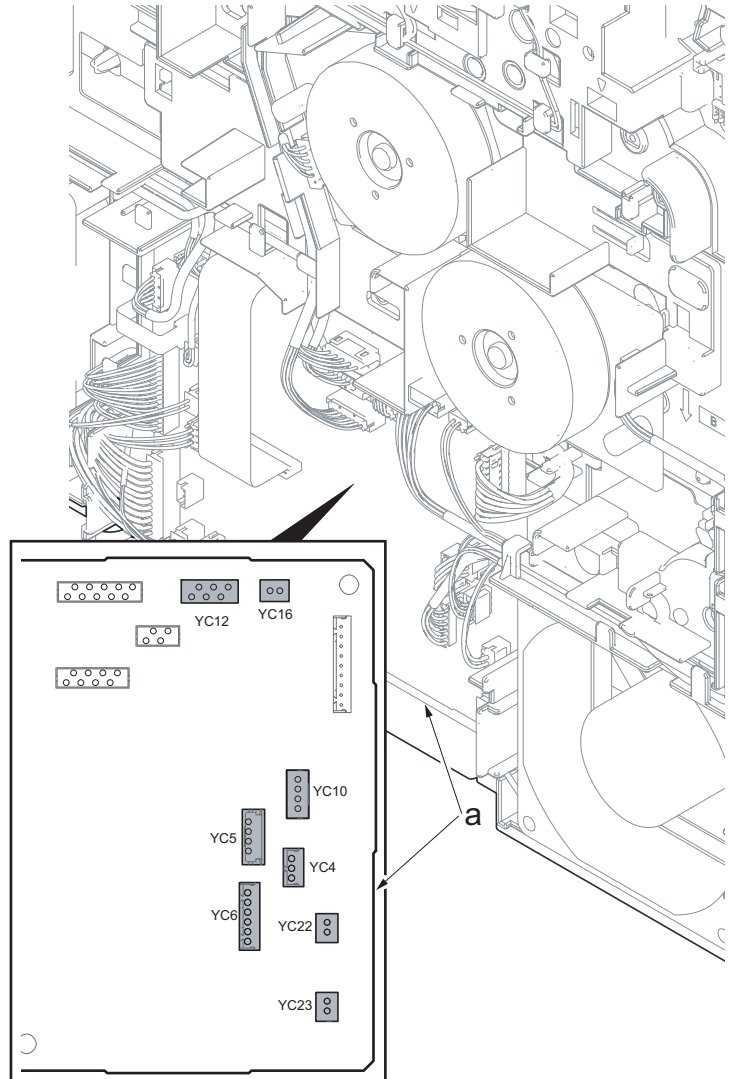


Figure 4-546

25. Release the wire (b) from five hooks (a).

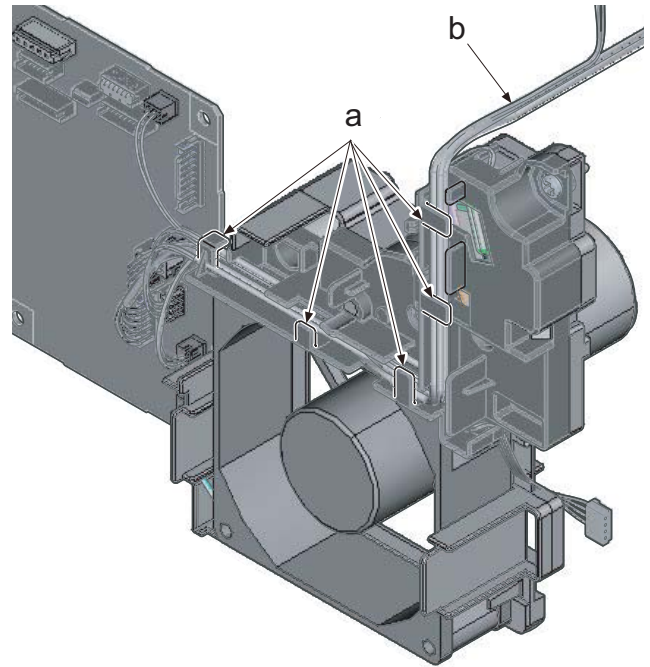


Figure 4-547

- 26. Remove two screws (a)(M3x12).
- 27. Lift up the MP paper feed drive unit (b) to release the lower two hooks (c).
- 28. Detach the MP paper feed drive unit (b).
- 29. Check the MP paper feed drive unit and clean or replace it if necessary.
- 30. Reattach the parts in the original position.

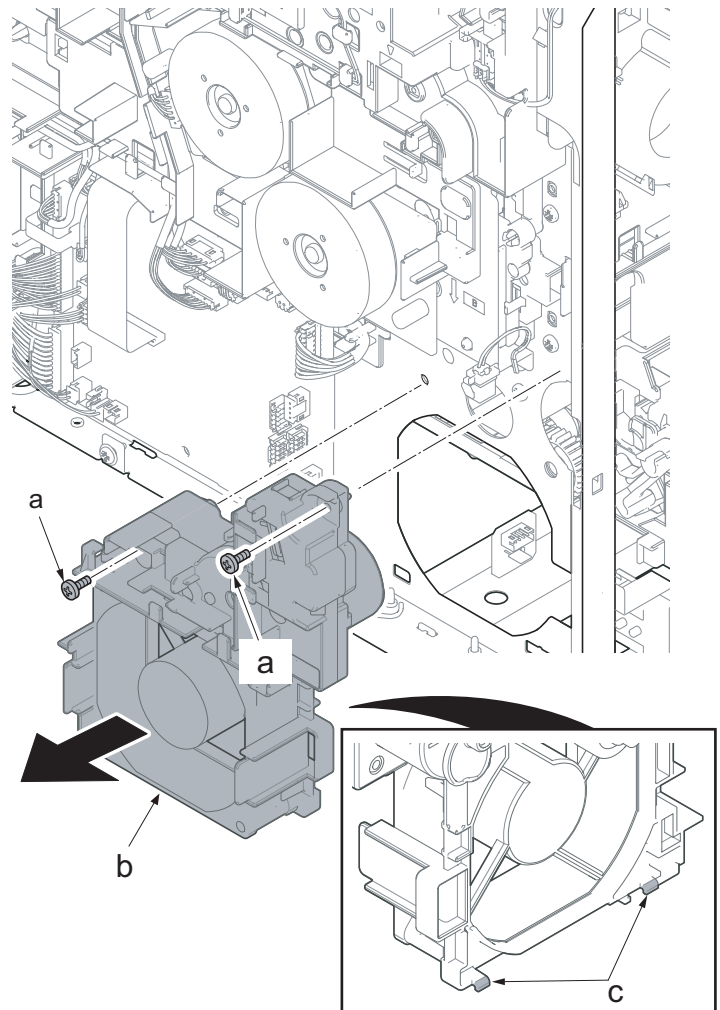


Figure 4-548

(9 - 4) Detaching and reattaching the toner motor unit

1. Open the rear cover (a).

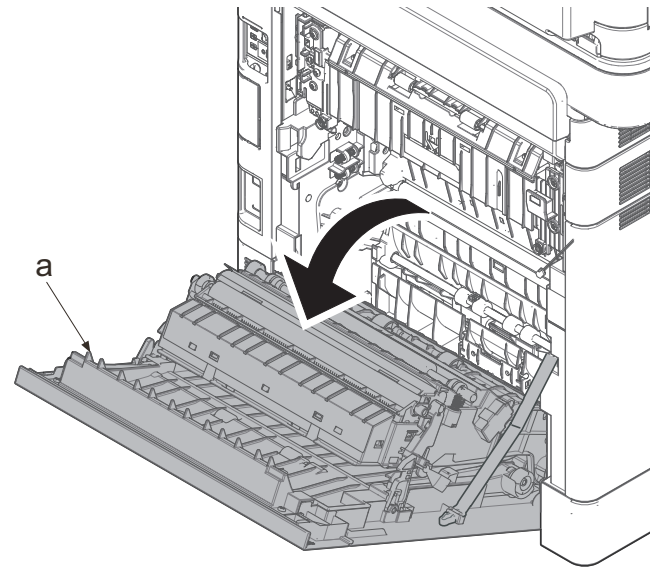


Figure 4-549

2. Remove the screw (a)(M3x8).
3. Slide the upper left cover (b) toward the machine rear side and detach it.

IMPORTANT

When reattaching the upper left cover (b), insert the hook (c) to the machine front side, and then fasten seven hooks (d) by sliding it toward the machine front side.

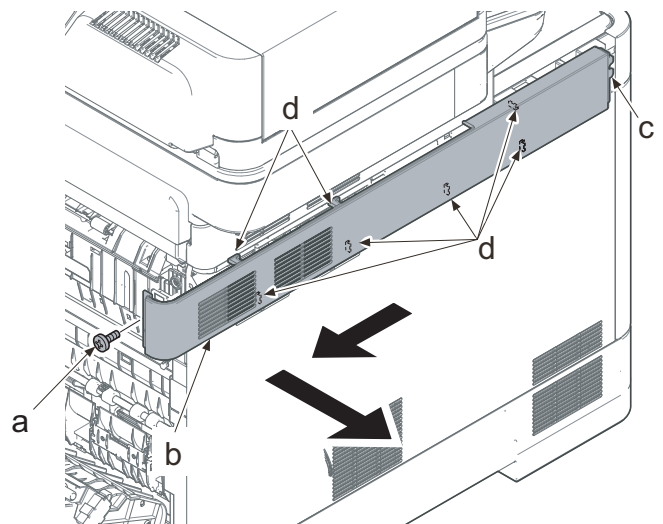


Figure 4-550

4. Lift up the machine rear side of the middle left cover (a) to release three hooks (b).
5. Slide the middle left cover (a) toward the machine rear side to release two hooks (c).
6. Detach the middle left cover (a).

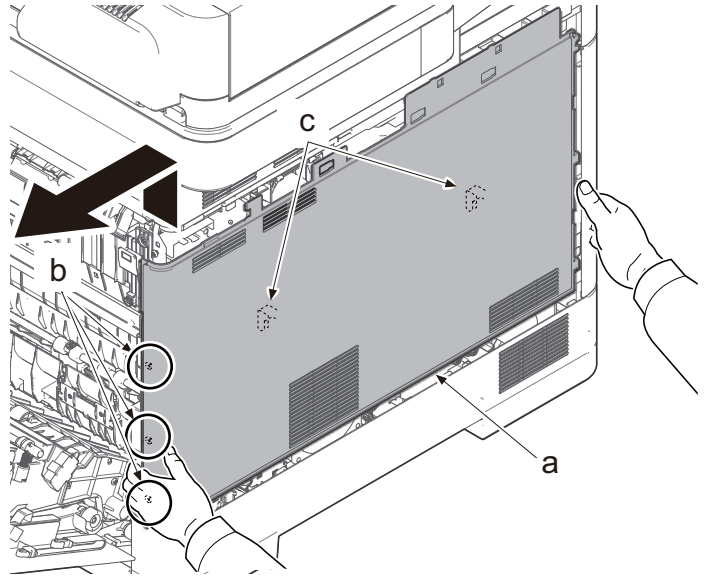


Figure 4-551

IMPORTANT

When reattaching the middle left cover (a), insert the lower rib into the lower left cover (b). Slide it toward the machine front side to fasten three hooks (c) and four hooks (d), then lower the machine rear side of it to fasten three hooks (e) at the machine rear side.

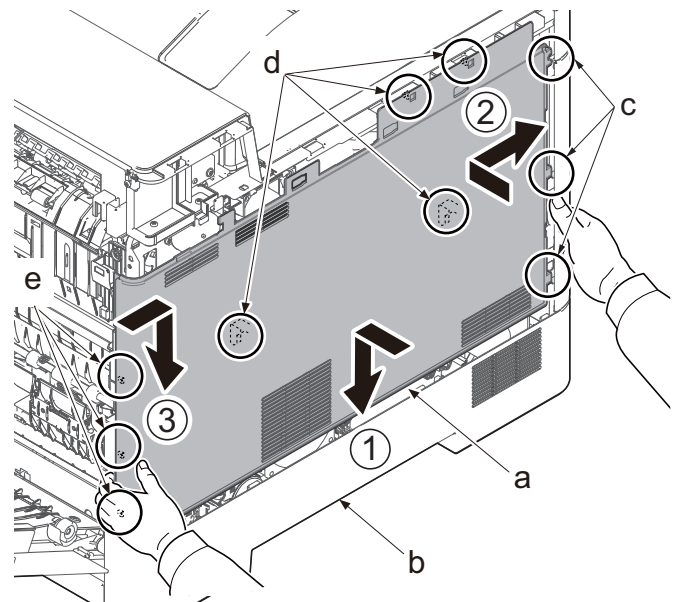


Figure 4-552

7. Remove the screw (a)(M3x8).
8. Pull the rib (b) toward you and release the center hook (c).
9. Detach the lower left cover (d).

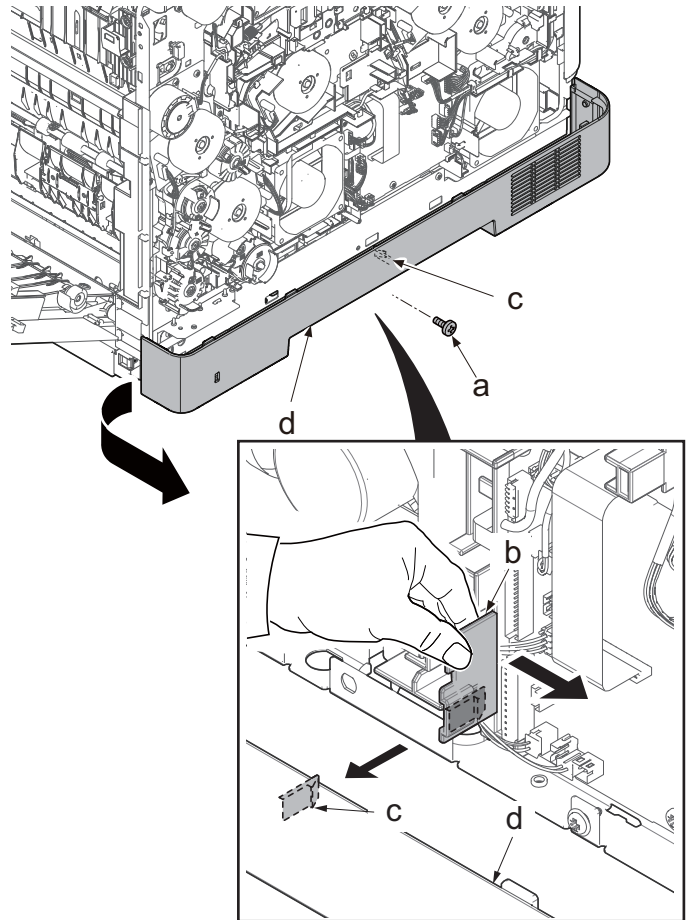


Figure 4-553

IMPORTANT

When attaching the lower left cover (a), insert two bosses (b) at the machine front side into the holes and apply the center hook (c). Then, push it toward the machine rear side. Then, attach it with the screw.

Check if the hook at the center is surely fastened.

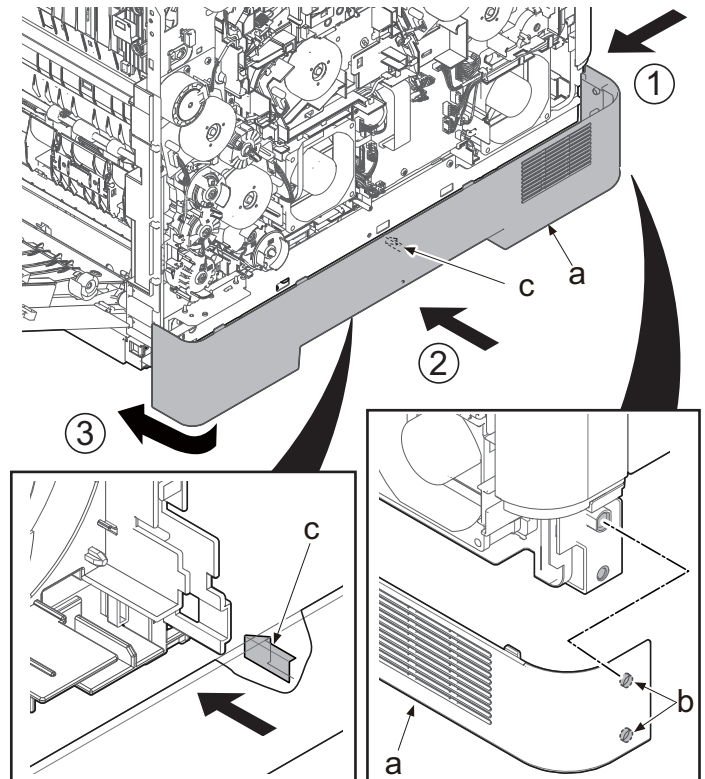


Figure 4-554

10. Detach the main drive motor unit (a). (See page P.206)

11. Disconnect the connector (b) of the tray switch (a).

12. Release the wires of the exit motor (d) and the fuser motor (e) from three hooks (c).

13. Disconnect the connector (g) of the container fan motor (f).

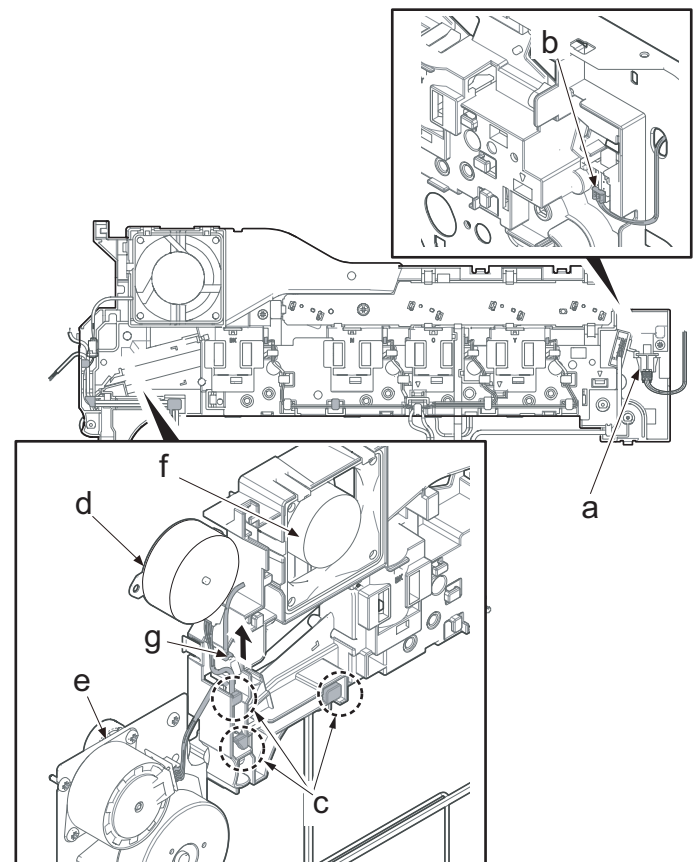


Figure 4-555

14. Release the wire from three hooks (b) of the toner motor unit (a).

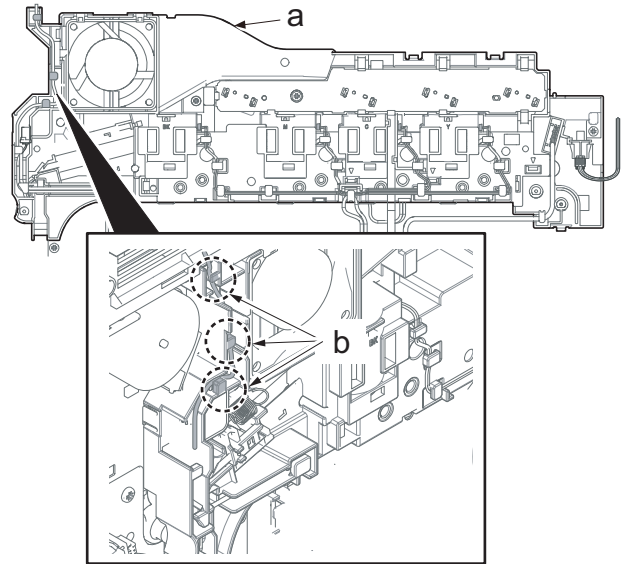


Figure 4-556

15. Release the hook (b) of the cleaner spring (a).

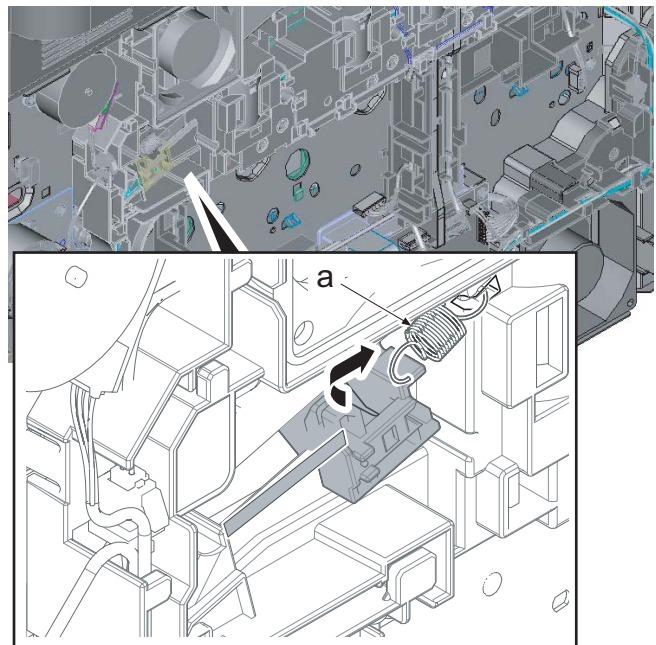


Figure 4-557

16. Pull the lever (a).
17. Lift up the scanner unit (b) and open the inner tray (c).

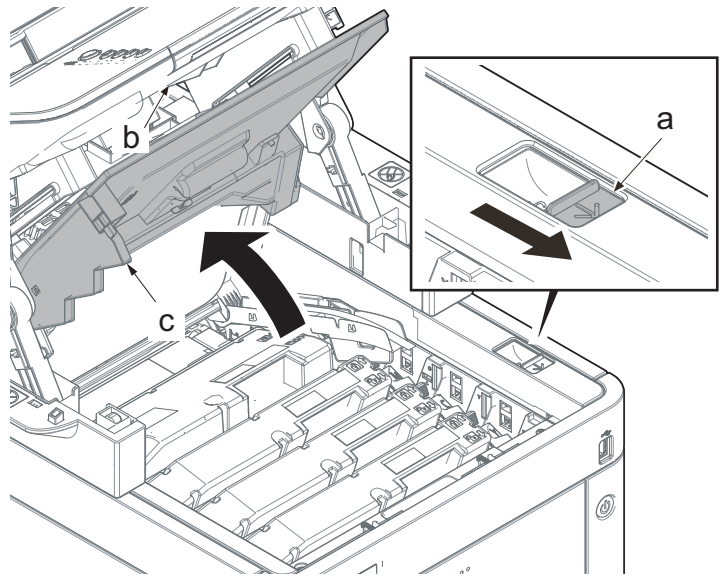


Figure 4-558

18. Relocate the cleaner slider (a) to the center of the rail (b).
19. Insert a flat-blade screwdriver (c) from the square hole.
20. Lift up the hook (d) to release.
21. Remove the cleaner slider (e) while rotating it.

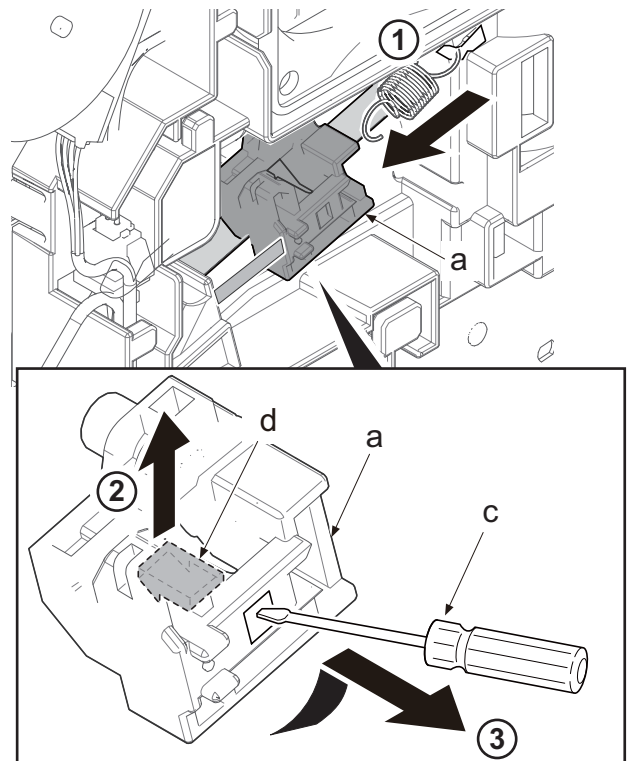


Figure 4-559

22. Remove the cleaner film (b) through the gap of the ribs (a).

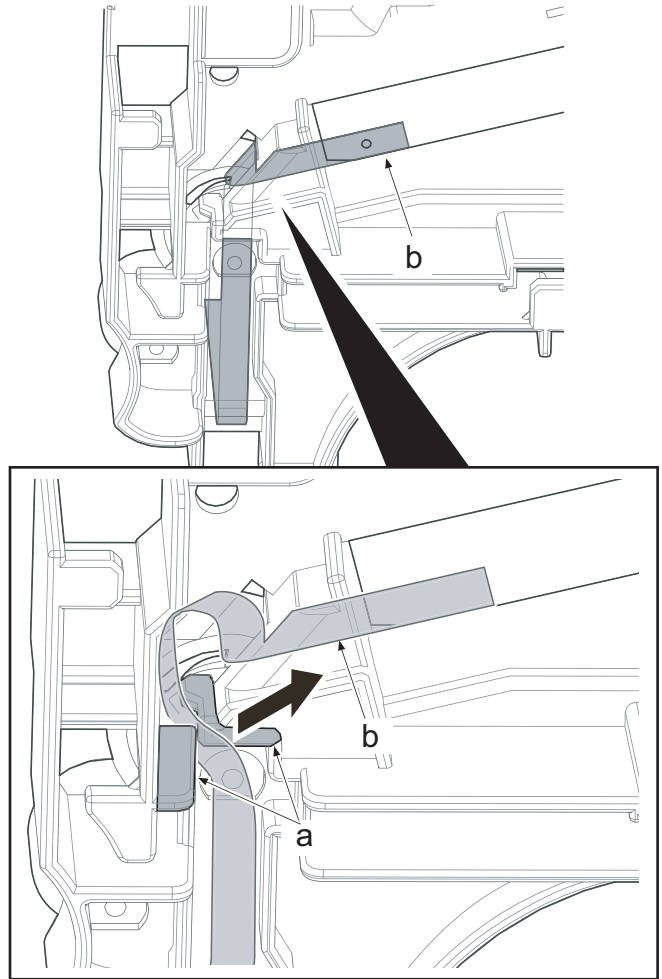


Figure 4-560

23. Remove four screws (b)(M3x8) from the toner motor unit (a).

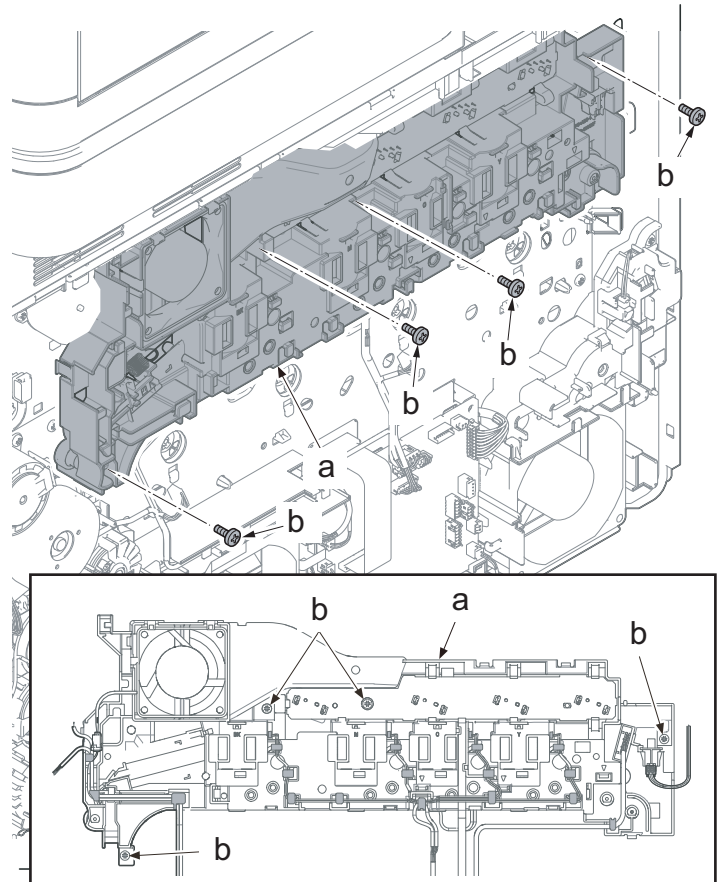


Figure 4-561

- 24. Release eight hooks (a).
- 25. Detach the toner motor unit (b).
- *: Check the triangle engravings (c) as for the position of the three inside hooks.

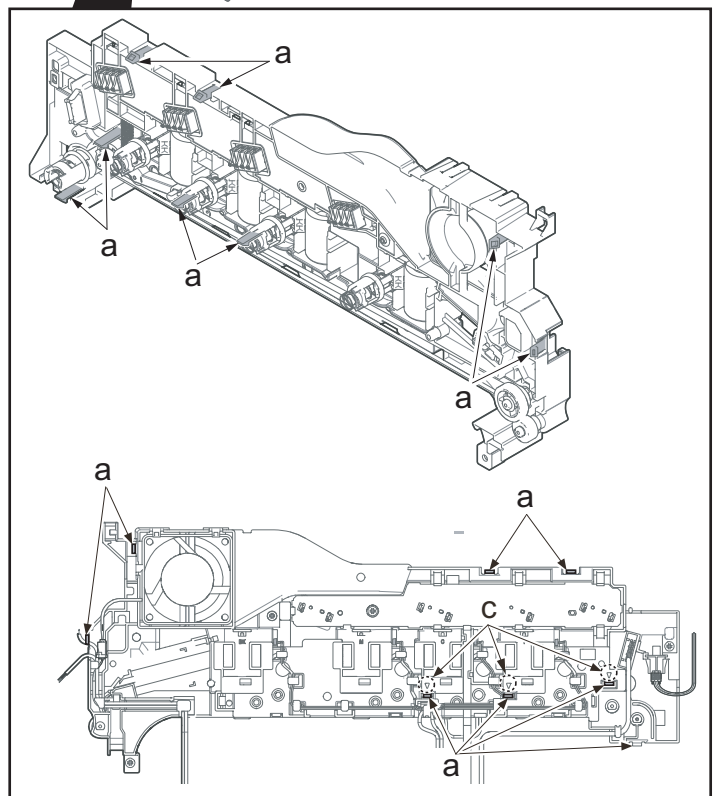
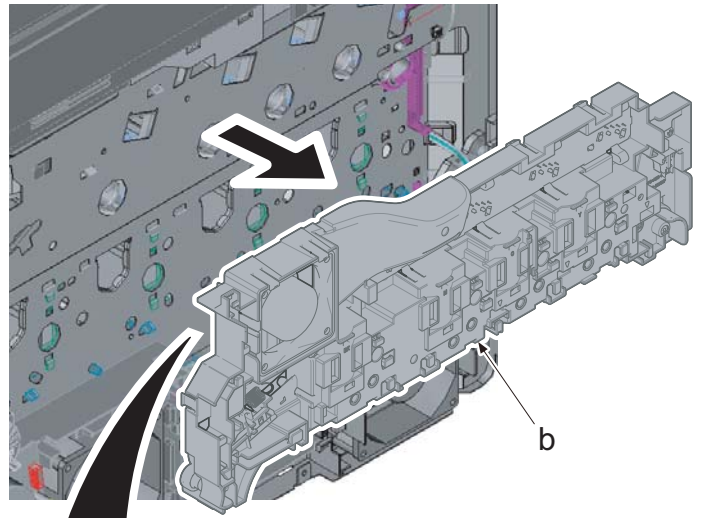


Figure 4-562

(9 - 5) Detaching and reattaching the toner motor

1. Remove the tension spring (a).
- *: Take care not to lose the spring.

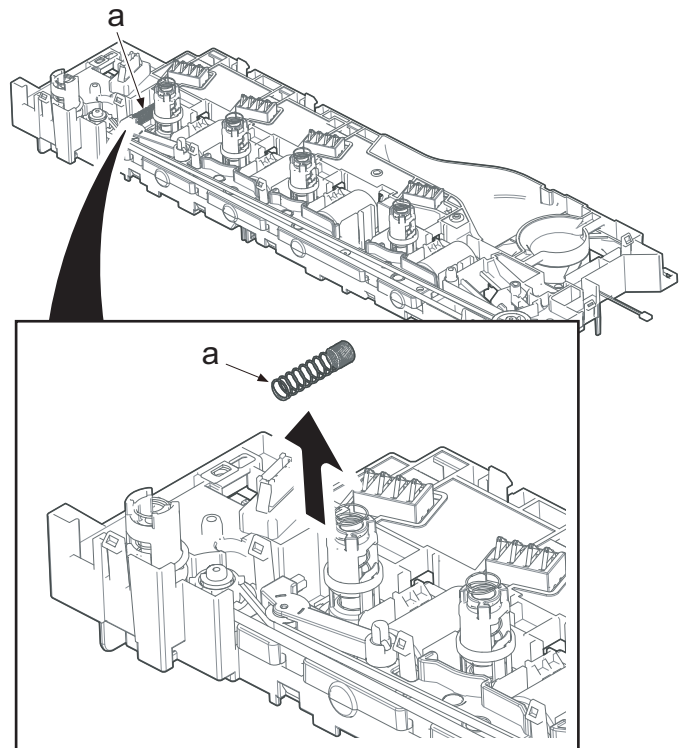


Figure 4-563

2. Release the tension arm (a) to loosen the tension..
3. Remove the belt (b).

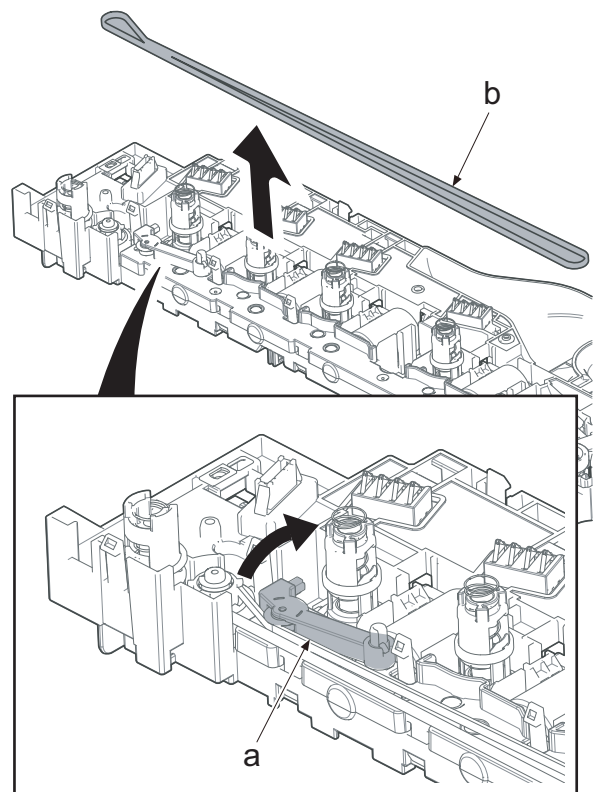


Figure 4-564

- 4. Release six hooks (a).
- 5. Remove the toner motor cover (b).

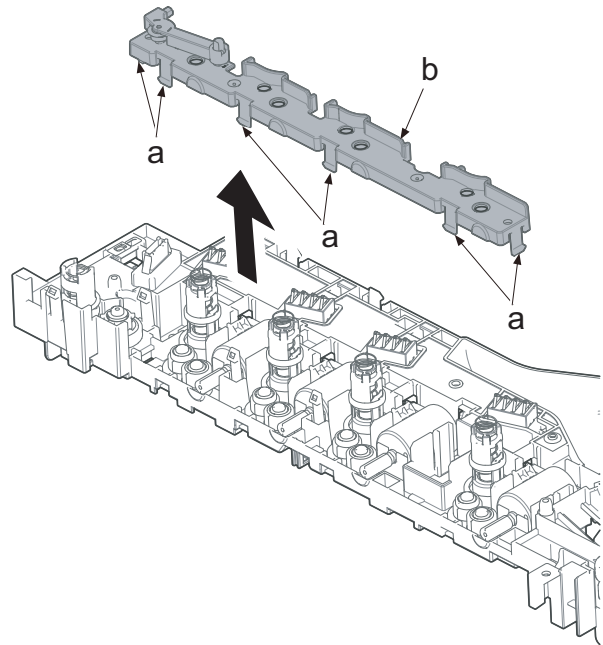


Figure 4-565

- 6. Disconnect the connector (a) of each toner motor.

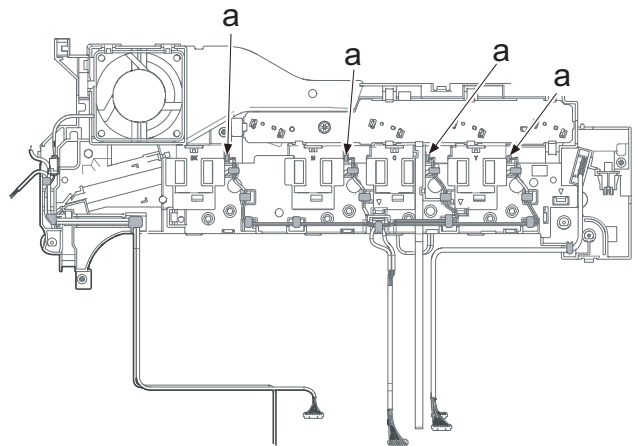


Figure 4-566

7. Release each set of two hooks (a).
8. Remove four toner motors (b).

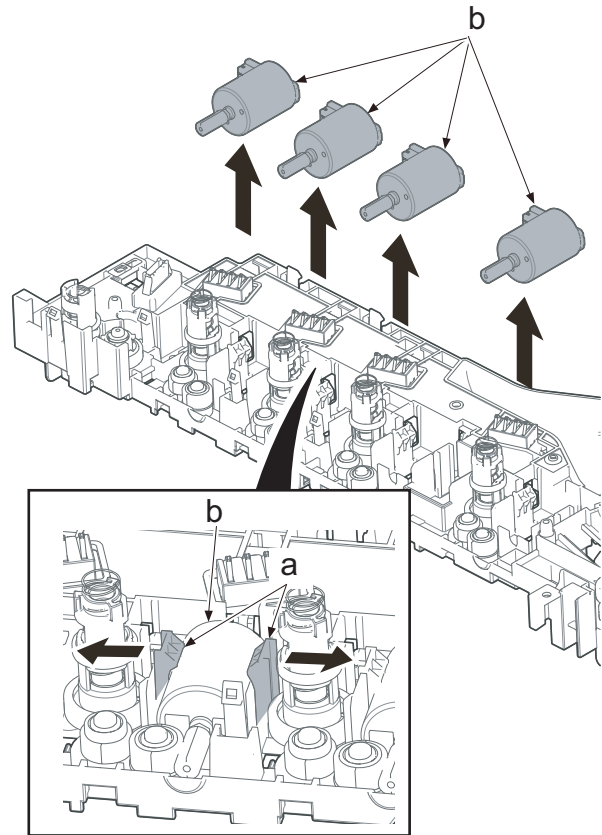


Figure 4-567

IMPORTANT

Apply one drop of grease (d) (EM-50LP) on the gear surface when attaching the new motor.

Insert the boss (c) to the positioning hole (b) of the toner motor (a) and reattach it.

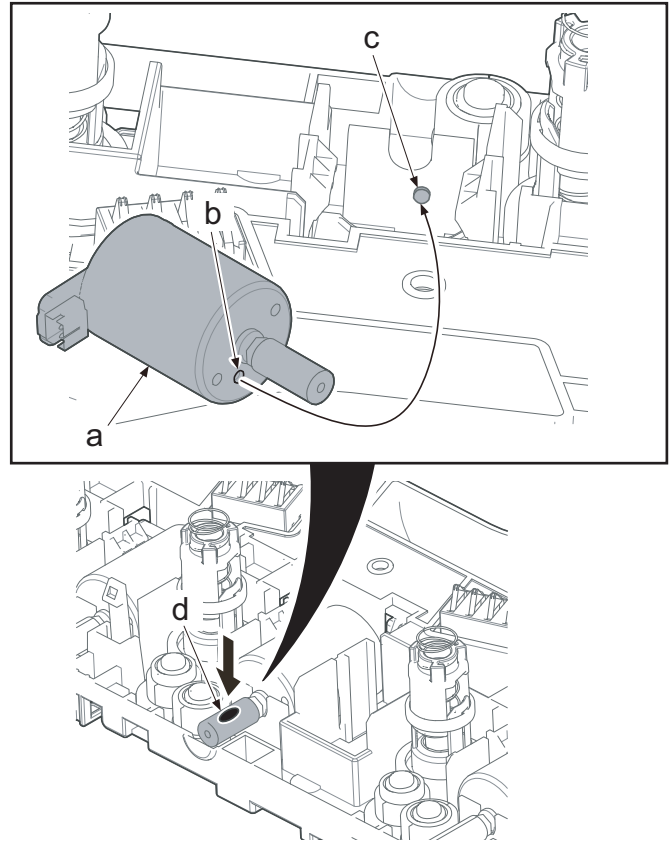


Figure 4-568

IMPORTANT

Reattach the drive cam (b) if coming off when reattaching the toner motor unit (a).

Check if the drive cam (b) gear is meshed with the lock lever (c) gear when reattaching the toner motor unit (a).

*: Drive can not be released without the drive cam.

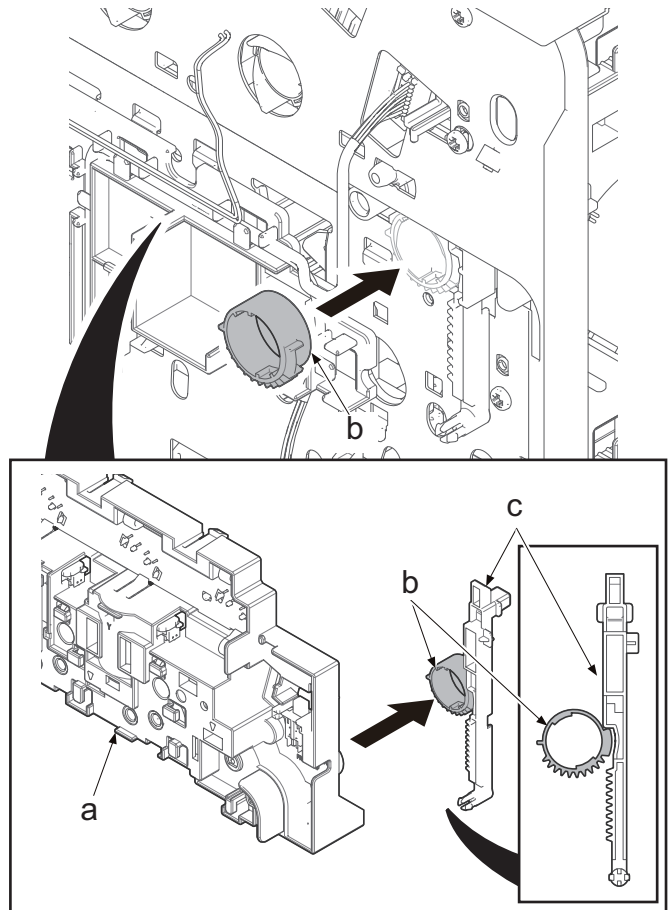


Figure 4-569

(9 - 6) Detaching and reattaching the lift motor

1. Open the rear cover (a).

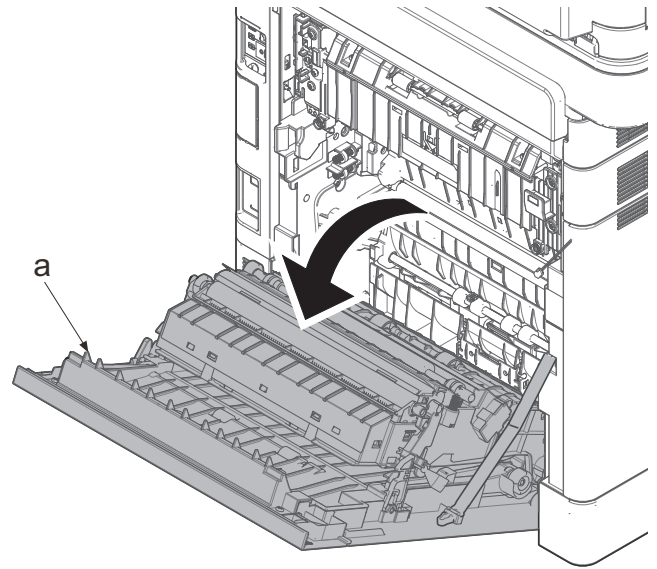


Figure 4-570

2. Remove the screw (a)(M3x8).
3. Slide the upper left cover (b) toward the machine rear side and detach it.

IMPORTANT

When reattaching the upper left cover (b), insert the hook (c) to the machine front side, and then fasten seven hooks (d) by sliding it toward the machine front side.

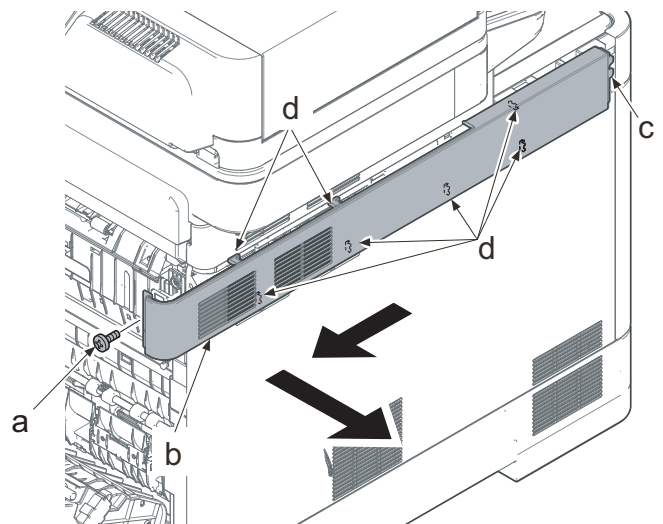


Figure 4-571

4. Lift up the machine rear side of the middle left cover (a) to release three hooks (b).
5. Slide the middle left cover (a) toward the machine rear side to release two hooks (c).
6. Detach the middle left cover (a).

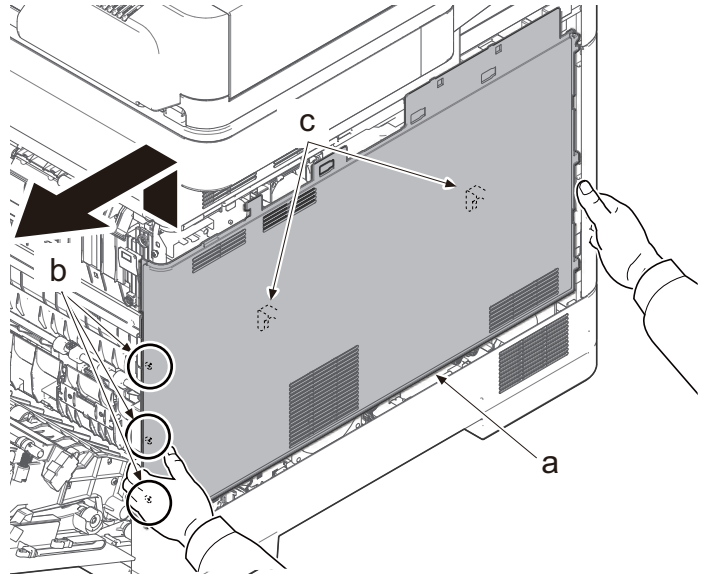


Figure 4-572

IMPORTANT

When reattaching the middle left cover (a), insert the lower rib into the lower left cover (b). Slide it toward the machine front side to fasten three hooks (c) and four hooks (d), then lower the machine rear side of it to fasten three hooks (e) at the machine rear side.

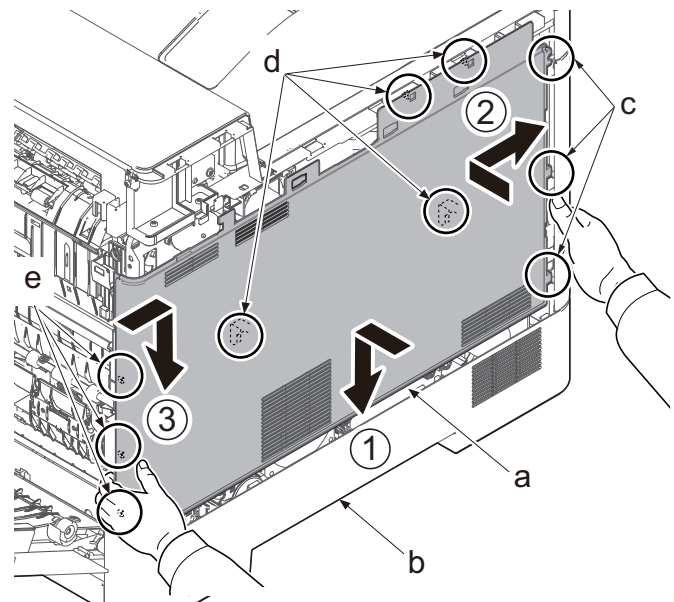


Figure 4-573

7. Remove the screw (a)(M3x8).
8. Pull the rib (b) toward you and release the center hook (c).
9. Detach the lower left cover (d).

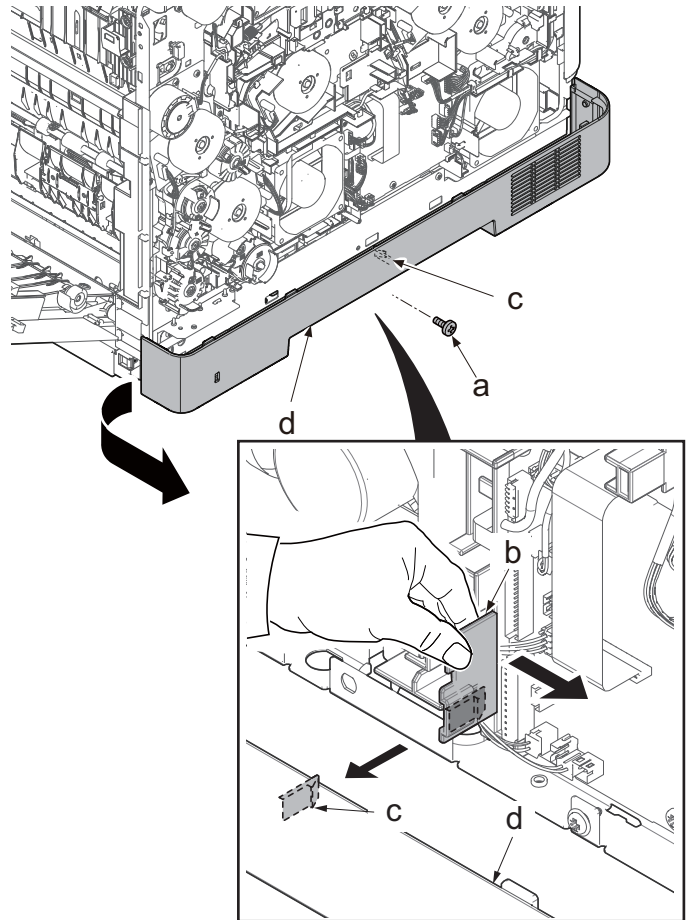


Figure 4-574

IMPORTANT

When attaching the lower left cover (a), insert two bosses (b) at the machine front side into the holes and apply the center hook (c). Then, push it toward the machine rear side. Then, push it toward the machine rear side.

Check if the hook at the center is surely fastened.

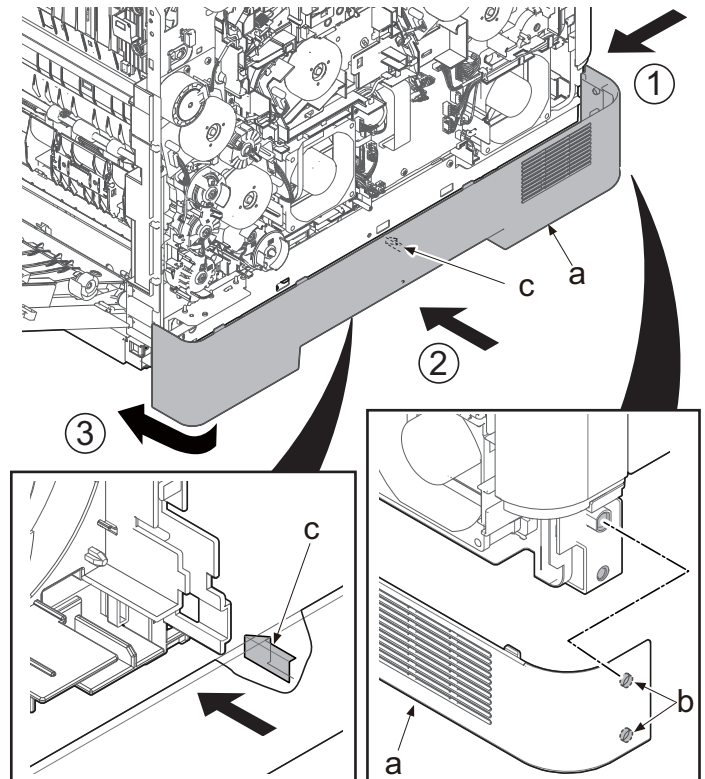


Figure 4-575

10. Disconnect all the connectors and FFCs from the engine relay PWB (a). (23 connectors)

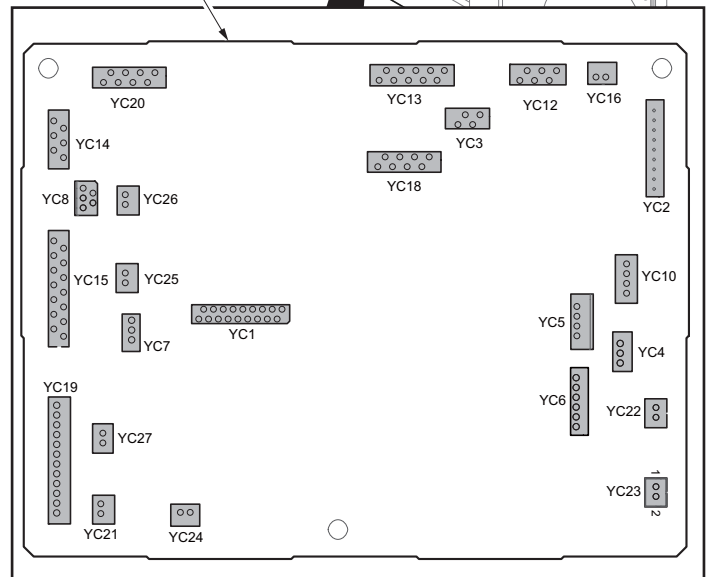
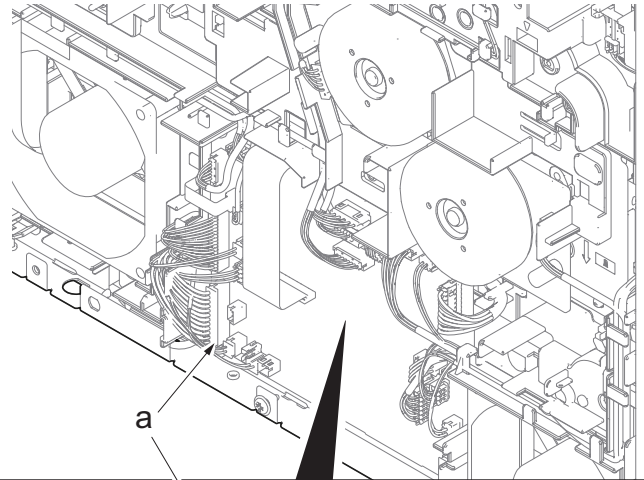


Figure 4-576

- 11. Remove three screws (a)(M3x8).
- 12. Detach the engine relay PWB (b).

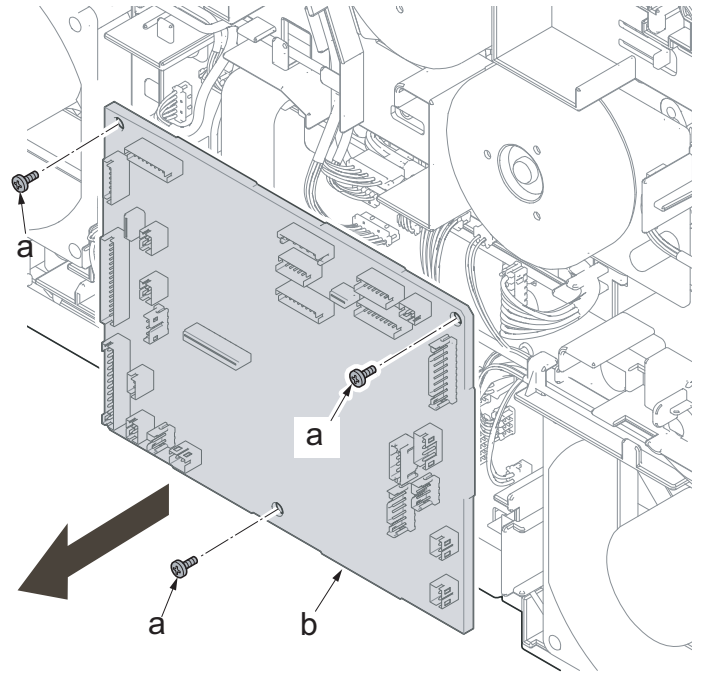


Figure 4-577

- 13. Disconnect the connector (b) of the lift motor (a).
- 14. Release the wire from ten hooks (c).

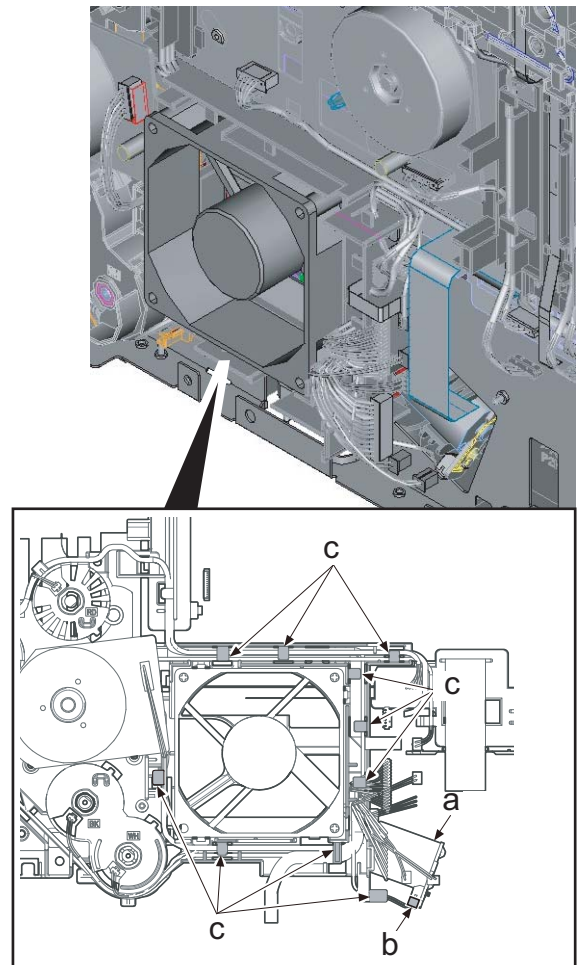


Figure 4-578

- 15. Release four hooks (a).
- 16. Remove the rear left duct (b).

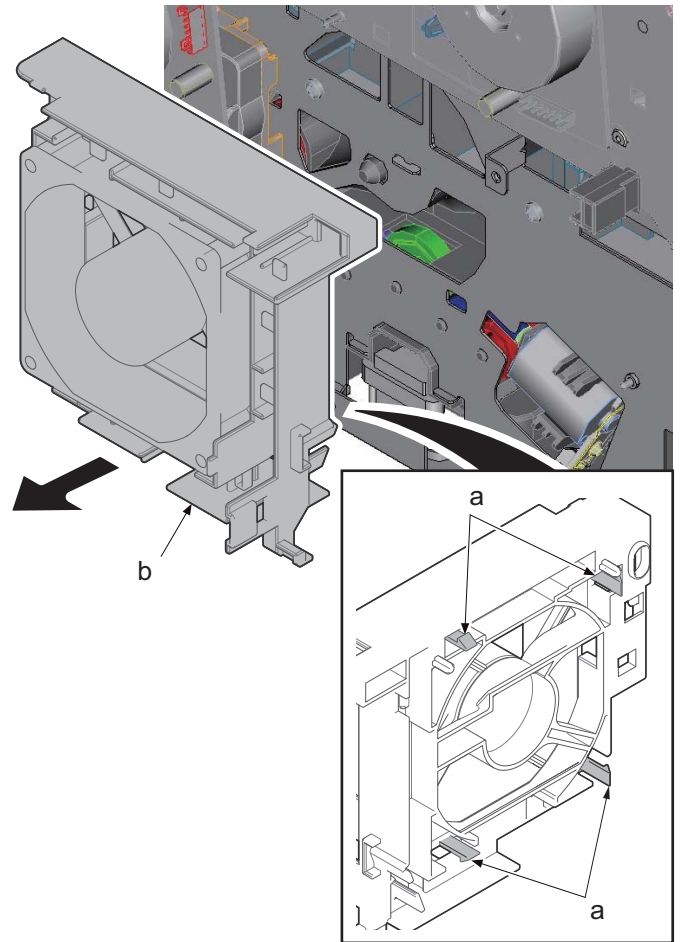


Figure 4-579

- 17. Release two hooks (a).
- 18. Remove the lift motor (b).
- 19. Check the paper feed drive unit and clean or replace it if necessary.
- 20. Reattach the parts in the original position.

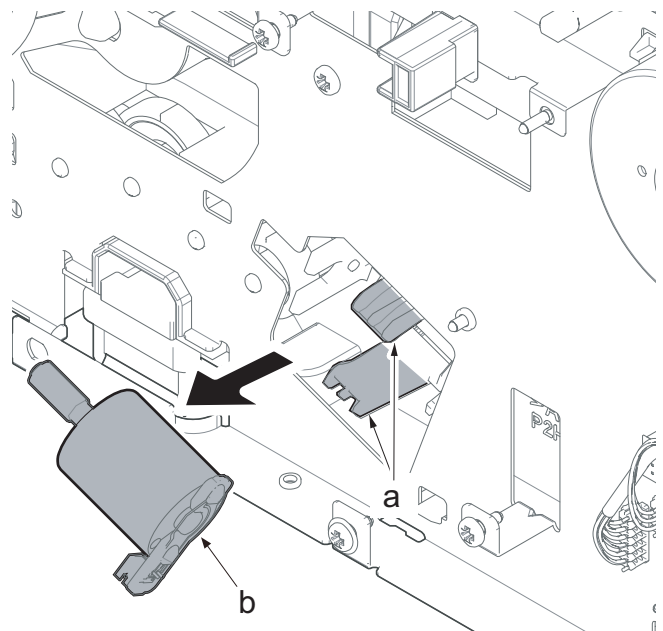


Figure 4-580

IMPORTANT

Apply one drop of grease (EM-50LP) on the gear surface when attaching the new lift motor (a).

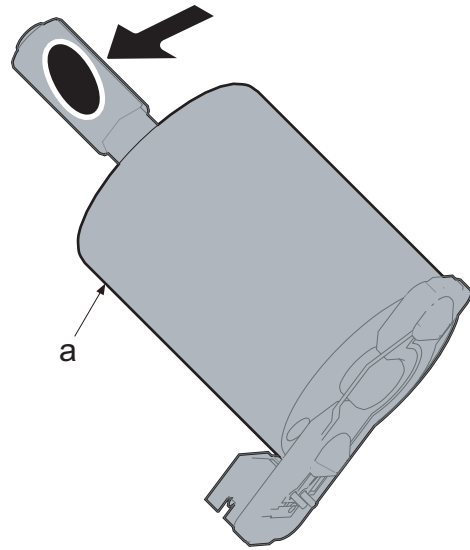


Figure 4-581

Insert the boss (c) to the positioning hole (b) of the lift motor (a) and reattach it.

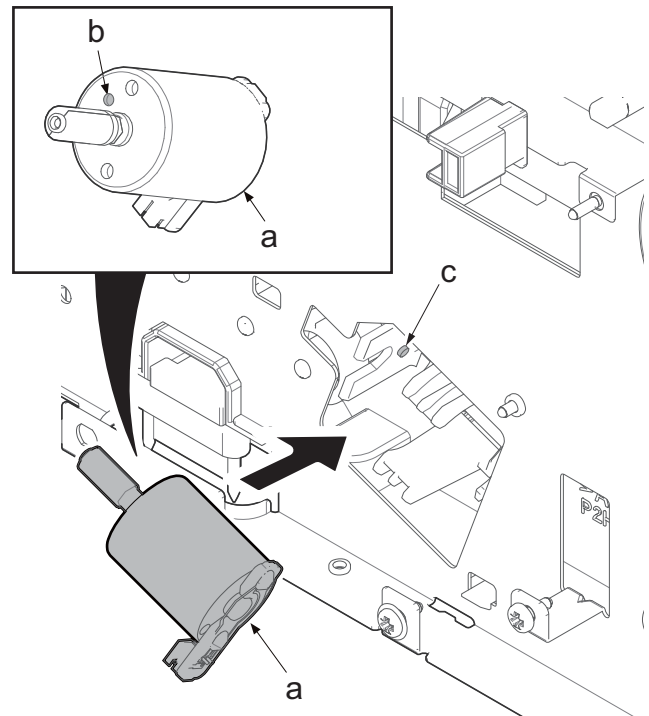


Figure 4-582

Attach the lift motor (a) after confirming it is not run over the rib (b).

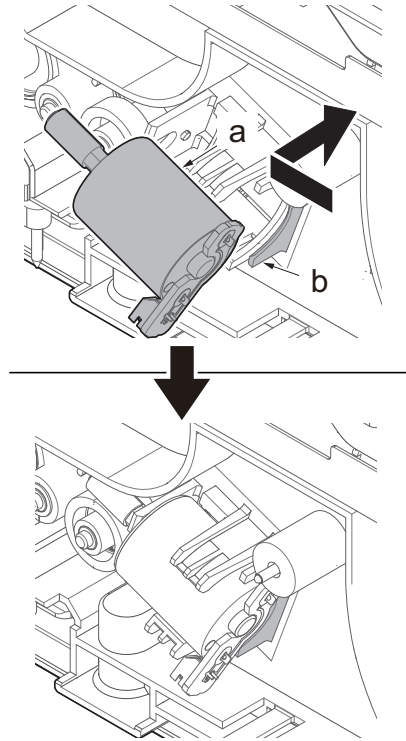


Figure 4-583

(9 - 7) Detaching and reattaching the cassette lift unit

1. Pull out the cassette (a).

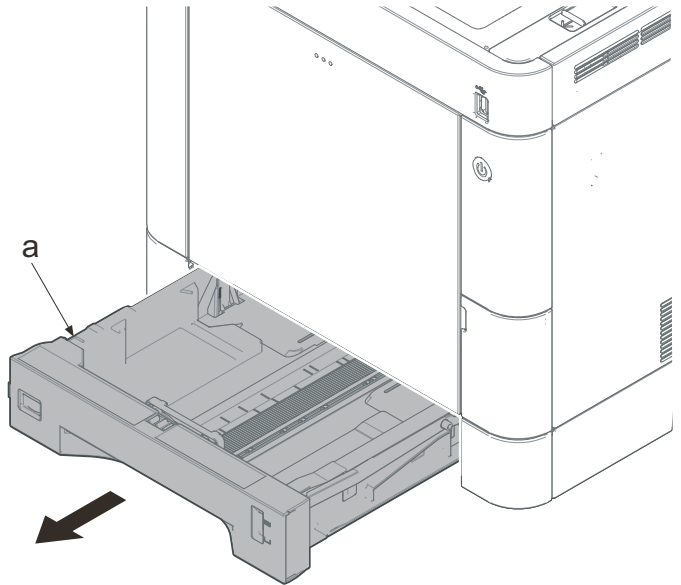


Figure 4-584

2. Lower the release lever (a).
3. Open the lower MP paper conveying unit (b).

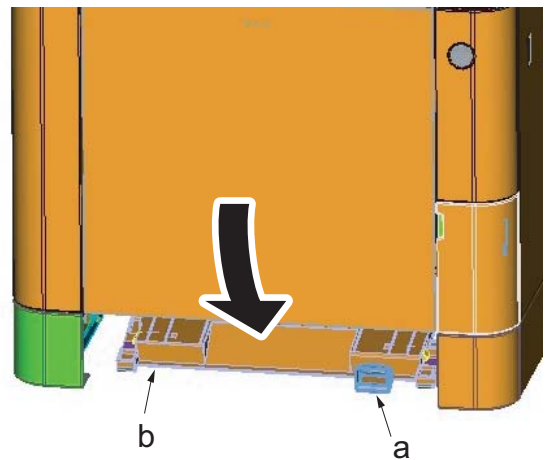


Figure 4-585

4. Pull the lever (a).
5. Lift up the scanner unit (b) and open the inner tray (c).

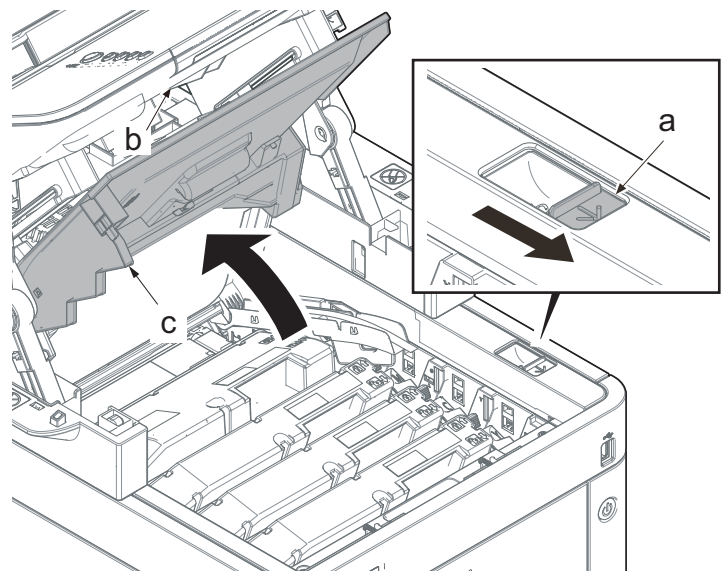


Figure 4-586

6. Open the MP tray (a).
7. Remove two screws (b)(M3x8).
8. Open the waste toner cover (c).

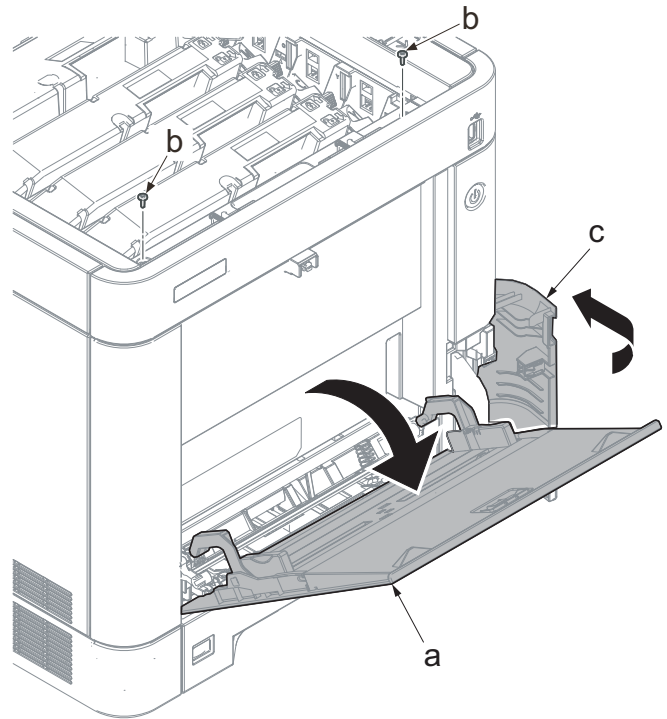


Figure 4-587

9. Slightly lift up the front cover (a) to release the boss (b).
10. Tilt the front cover (a) toward the machine front side.
11. Then, remove the front cover (a) by lifting it up.

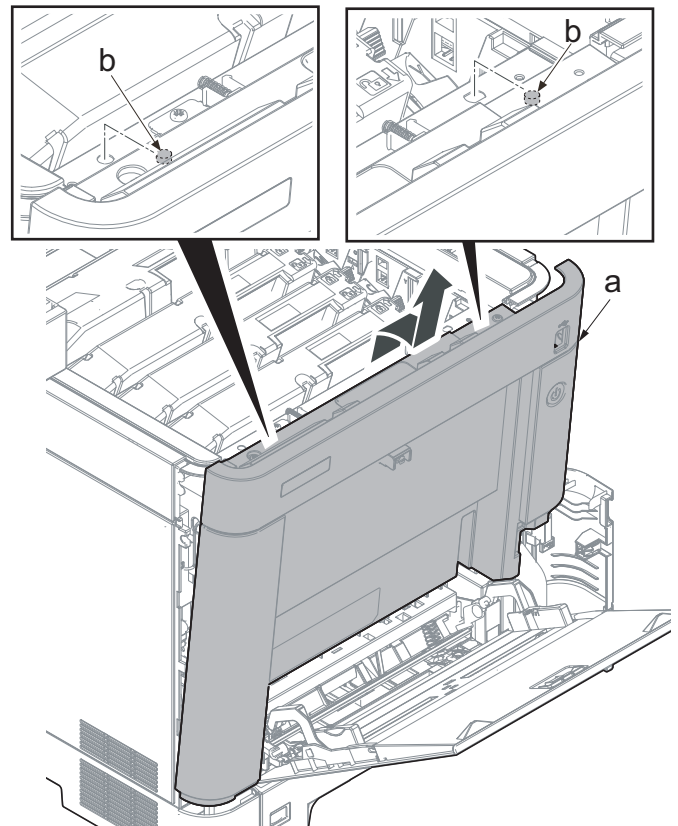


Figure 4-588

IMPORTANT

Make sure not to touch the waste toner cover sensor (b) when reattaching the front cover (a).

If the waste toner cover sensor (b) comes off, even if you close the waste toner cover, "cover open" will be displayed.

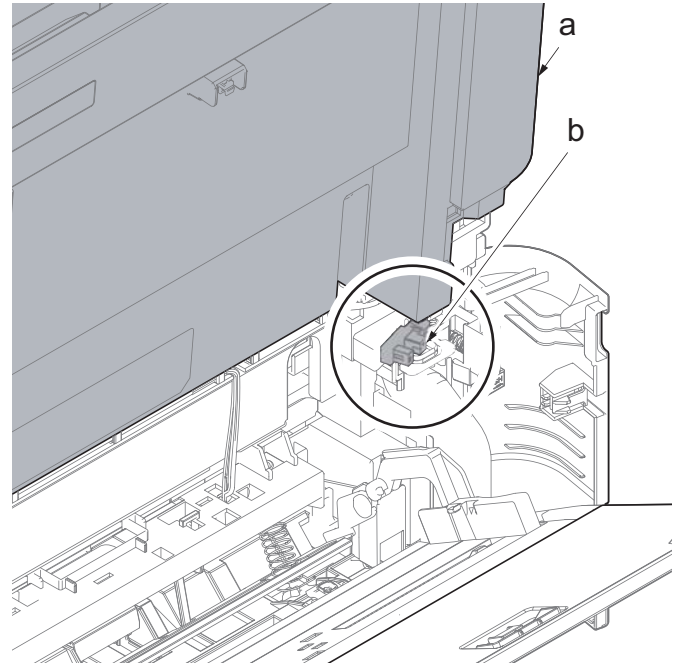


Figure 4-589

12. Open the MP tray (a) slightly.
13. Lift up the MP tray cover (b) and release two hooks (c).

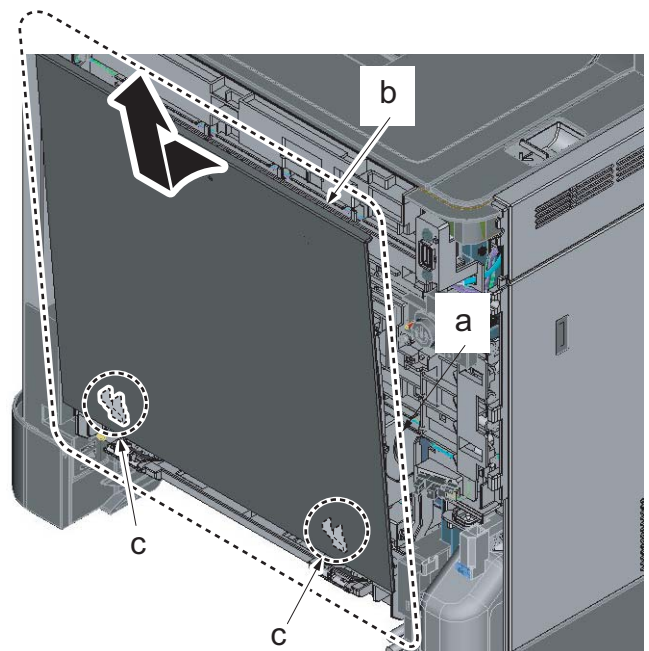


Figure 4-590

14. Fully open the MP tray (a).
15. Slide the arm (b) to the machine rear side and lift it up to remove.

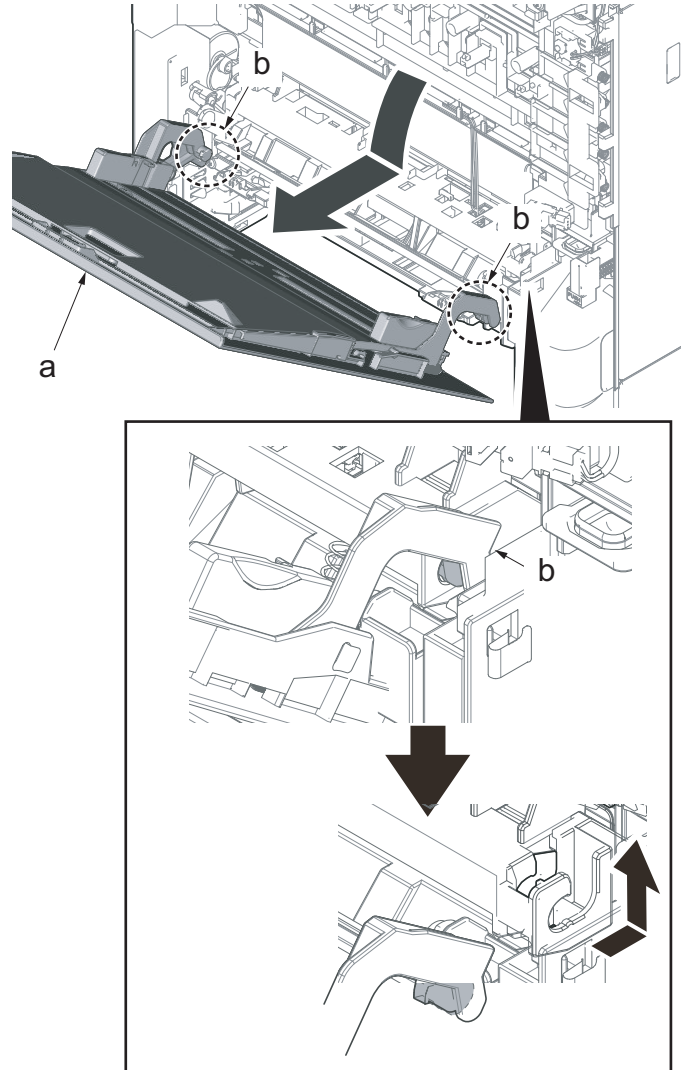


Figure 4-591

16. Remove two screws (a)(M3x8).
17. Detach the lower MP paper feed unit (b).

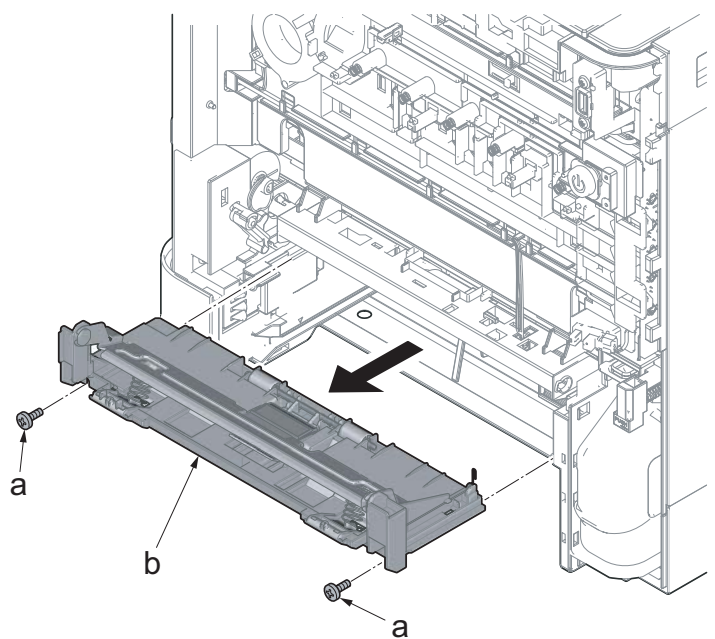


Figure 4-592

IMPORTANT

Lower the MP lift plate (b) so that the lever (c) is on it when reattaching the lower MP paper feed unit (a).

*: The paper is not fed because the MP lift plate (b) cannot ascend and descend when it is not in the correct position.

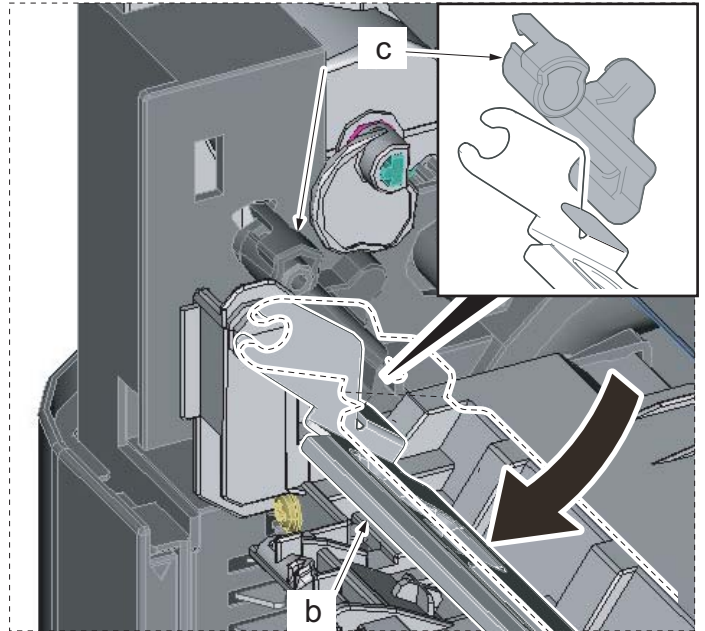


Figure 4-593

18. Pull the hook (a) toward the machine front side.
19. Slide the MP paper feed shaft (b).
20. Remove the MP paper feed roller (c).

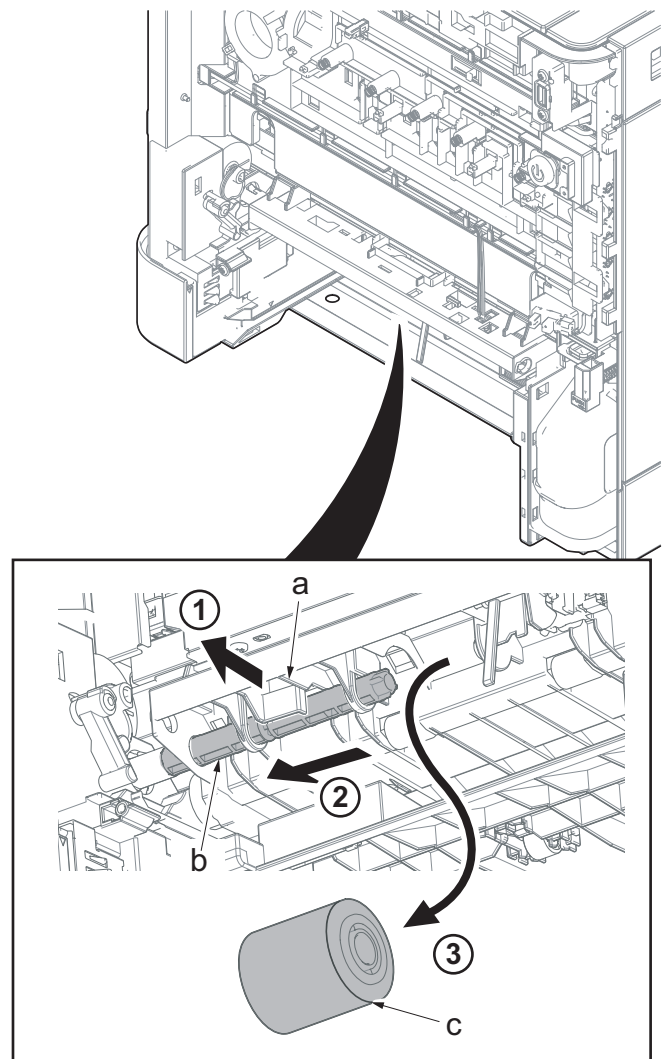


Figure 4-594

IMPORTANT

When reattaching the MP paper feed roller (a), be aware of the attachment direction.

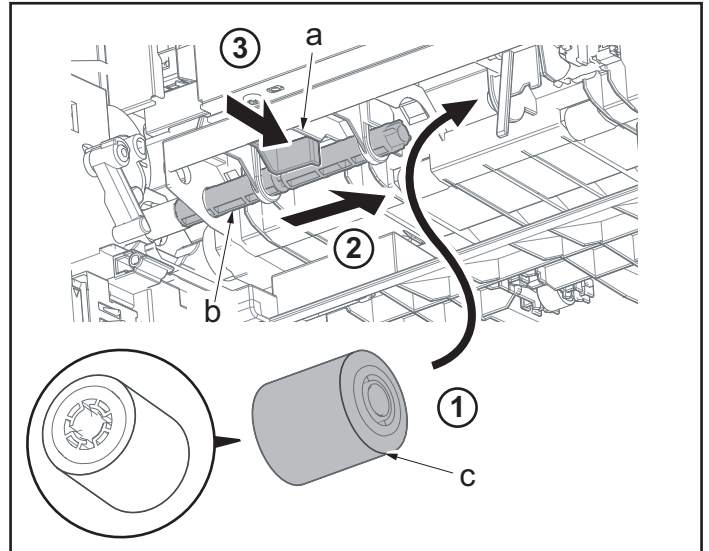


Figure 4-595

Detaching the MP tray paper conveying unit

21. Pull the hook (b) toward the machine front side.
22. Slide the MP paper feed shaft (c).
23. Pull the MP paper feed shaft (c) out from the drive joint (d).

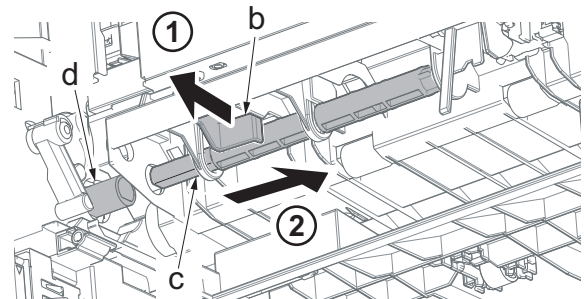


Figure 4-596

24. Open the rear cover (a).

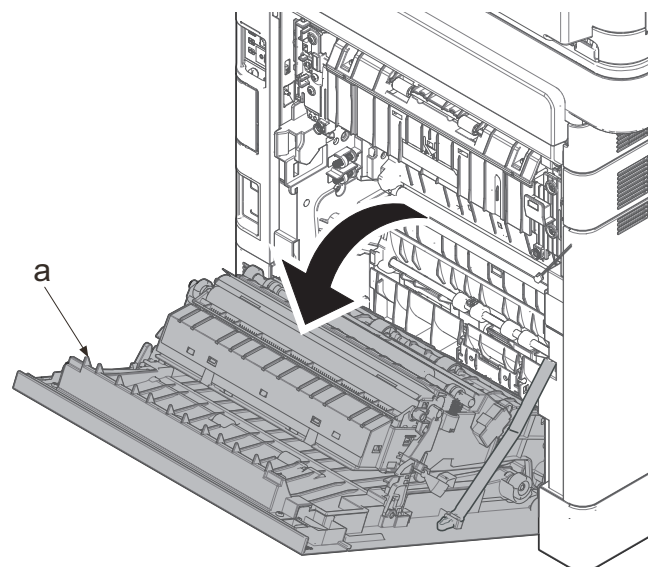


Figure 4-597

25. Remove the screw (a)(M3x8).
26. Slide the upper left cover (b) toward the machine rear side and detach it.

IMPORTANT

When reattaching the upper left cover (b), insert the hook (c) to the machine front side, and then fasten seven hooks (d) by sliding it toward the machine front side.

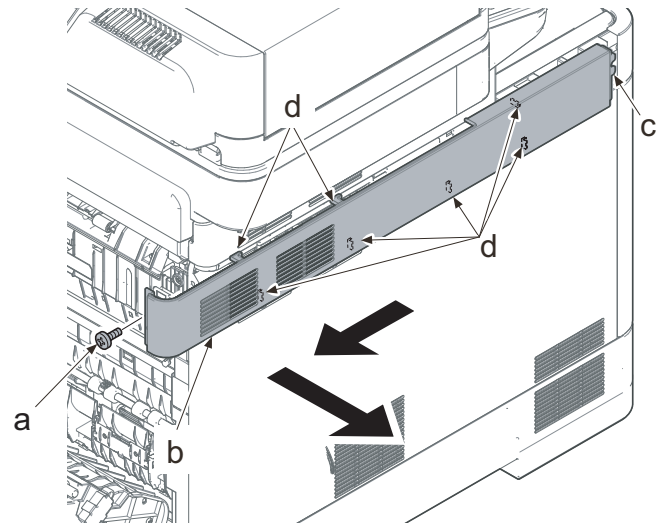


Figure 4-598

27. Lift up the machine rear side of the middle left cover (a) to release three hooks (b).
28. Slide the middle left cover (a) toward the machine rear side to release two hooks (c).
29. Detach the middle left cover (a).

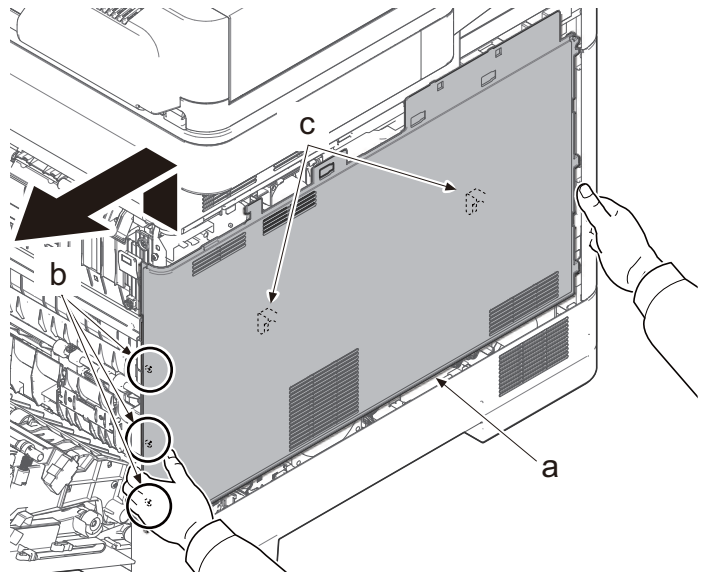


Figure 4-599

IMPORTANT

When reattaching the middle left cover (a), insert the lower rib into the lower left cover (b). Slide it toward the machine front side to fasten three hooks (c) and four hooks (d), then lower the machine rear side of it to fasten three hooks (e) at the machine rear side.

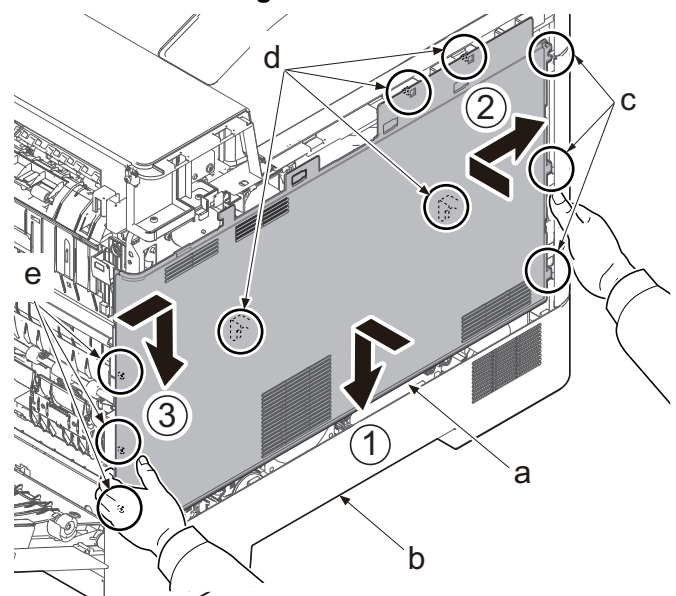


Figure 4-600

30. Remove the screw (a)(M3x8).
31. Pull the rib (b) toward the machine front side and release the center hook (c).
32. Detach the lower left cover (d).

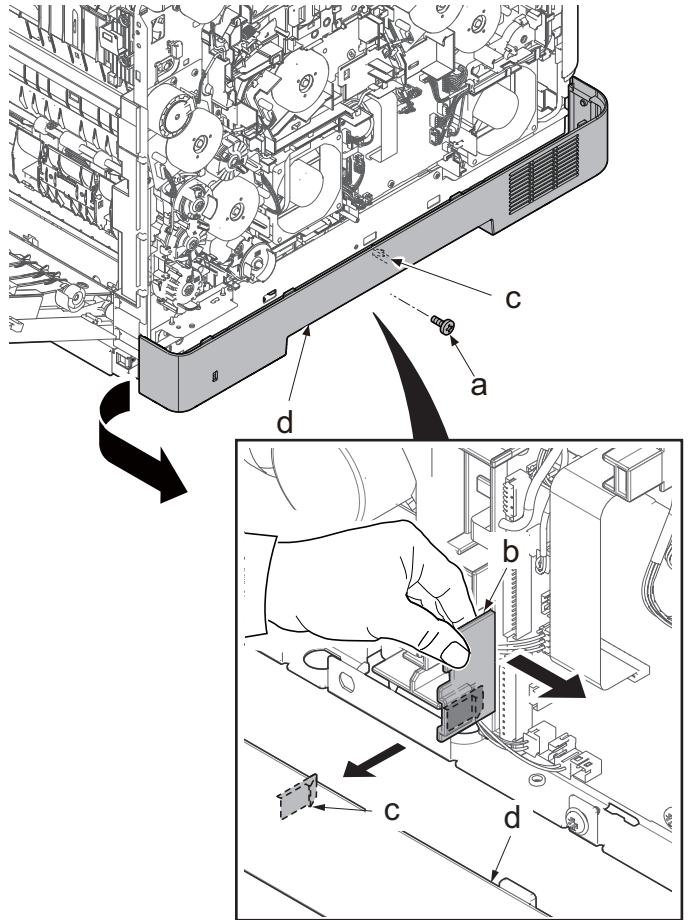


Figure 4-601

IMPORTANT

When attaching the lower left cover (a), insert two bosses (b) at the machine front side into the holes and apply the center hook (c). Then, push it toward the machine rear side.

Check if the hook at the center is surely fastened.

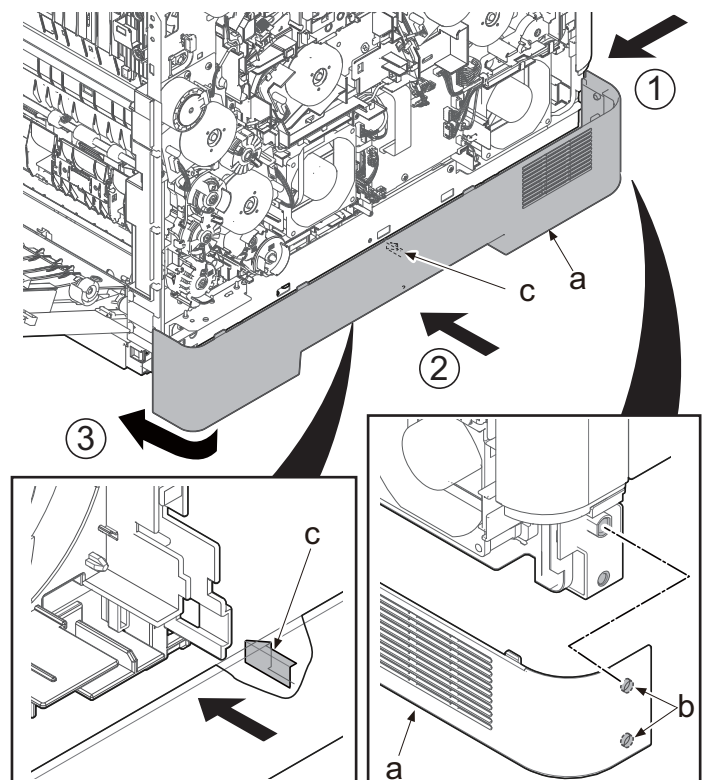


Figure 4-602

- 33. Disconnect the connector (b) (YC6) from the engine relay PWB (a).
- 34. Release the wire from eight hooks (c).

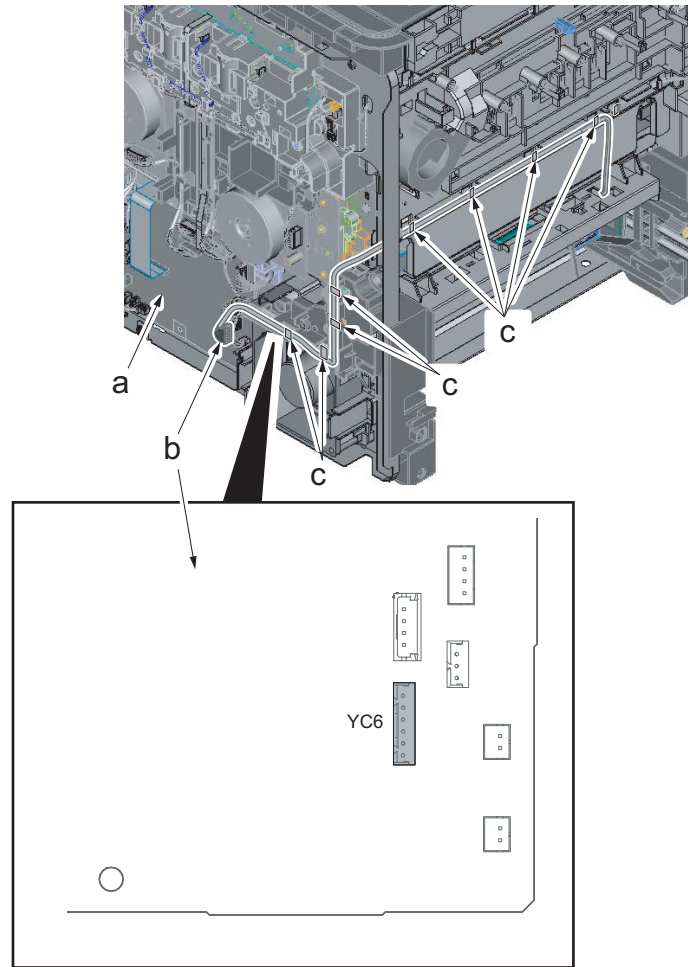


Figure 4-603

- 35. Remove two screws (a)(M3x8).
- 36. Detach the MP conveying unit (b) by pulling it toward the machine front side.

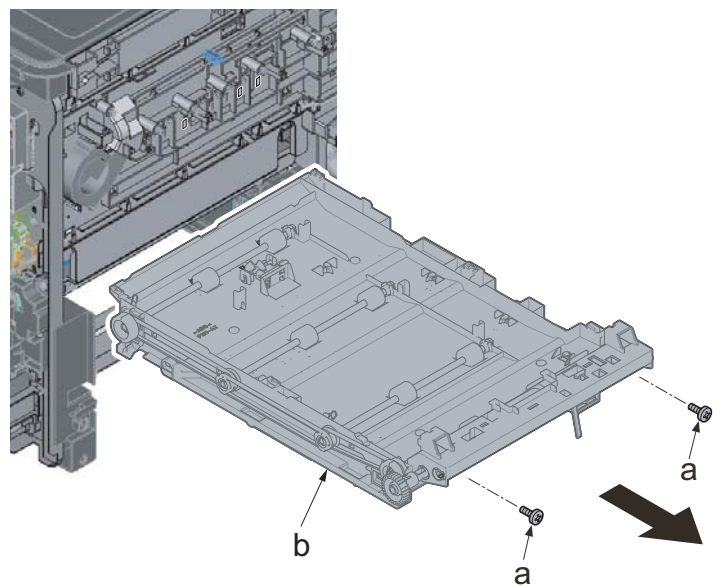


Figure 4-604

IMPORTANT

Check if the wire is fastened to the hook (b) before reattaching the MP conveying unit (a).

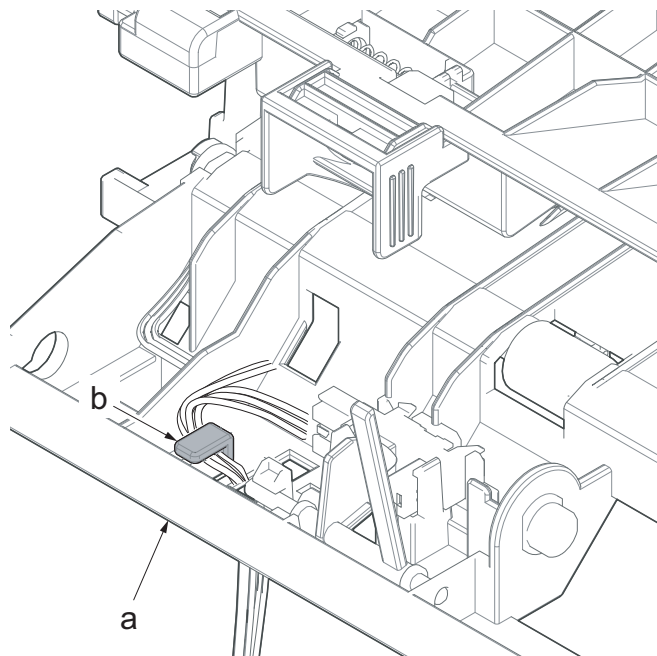


Figure 4-605

Lower the actuator (a) of the paper sensor before reattaching the MP conveying unit.

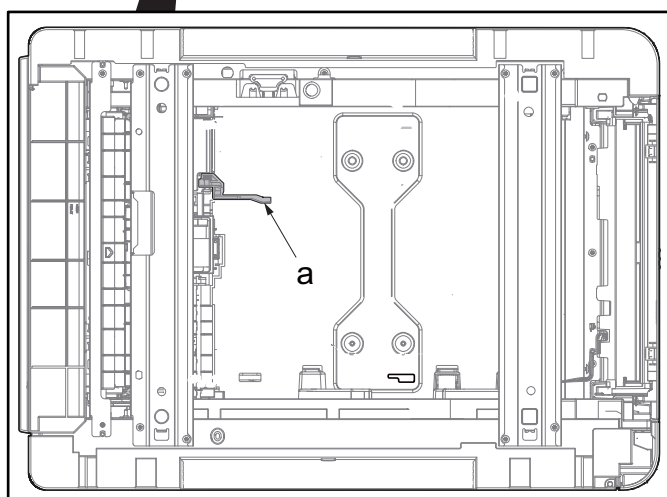
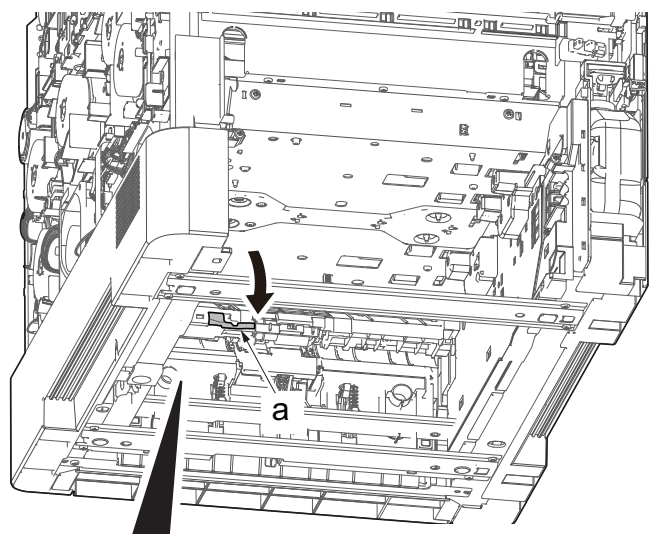


Figure 4-606

First apply the positioning (c) to the cutout at the left and right side and then secure the screw.

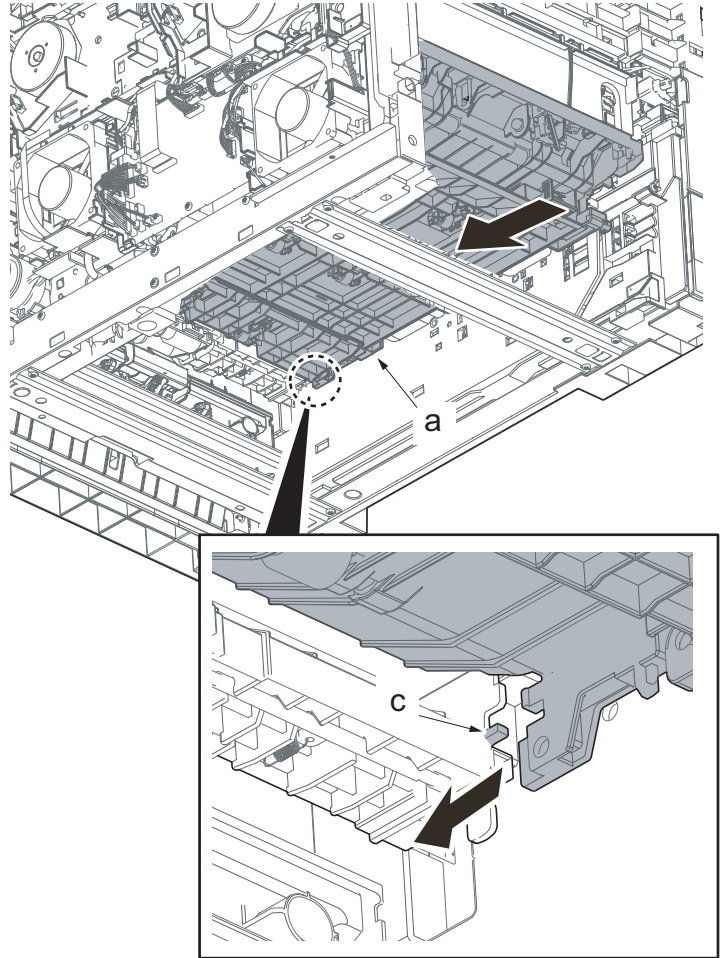


Figure 4-607

Detaching the engine relay PWB

37. Disconnect all the connectors and FFCs from the engine relay PWB (a). (24 connectors)

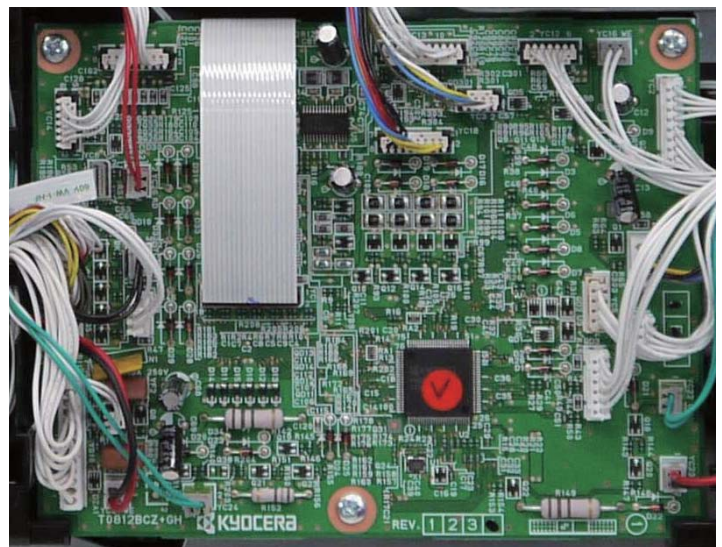
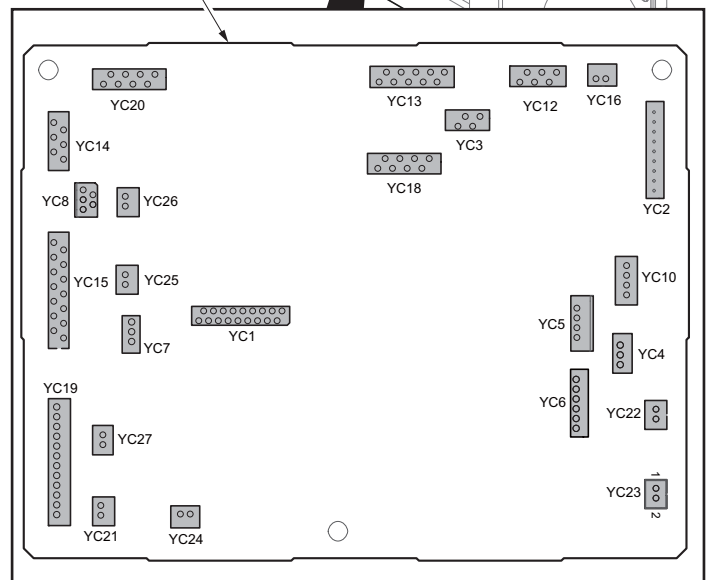
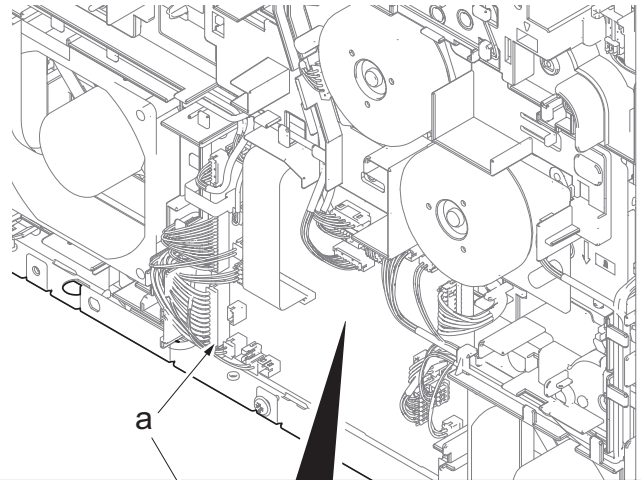


Figure 4-608

38. Remove three screws (a)(M3x8).
39. Detach the engine relay PWB (b).
40. Check the engine relay PWB and clean or replace it if necessary.
41. Reattach the parts in the original position.

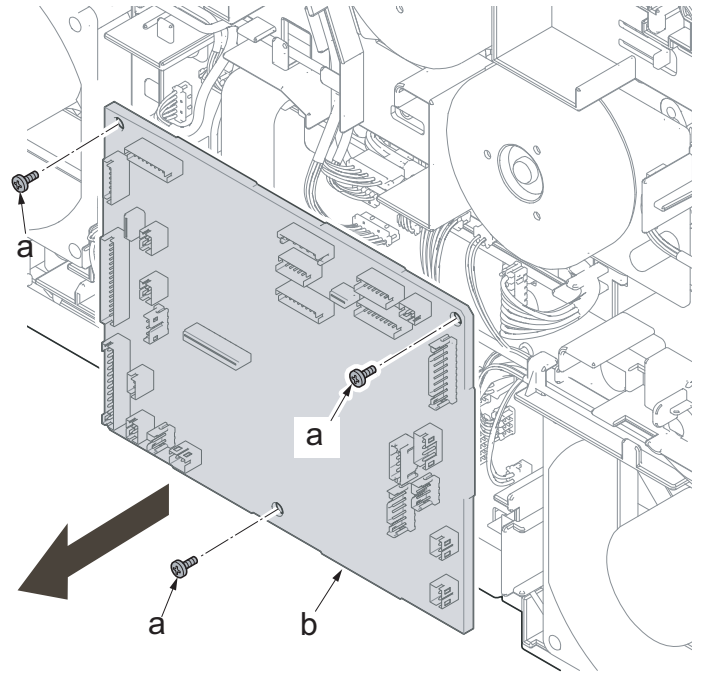


Figure 4-609

Detaching the MP paper feed drive unit

42. Rotate the cam (a) inside the main unit to the position in the figure.

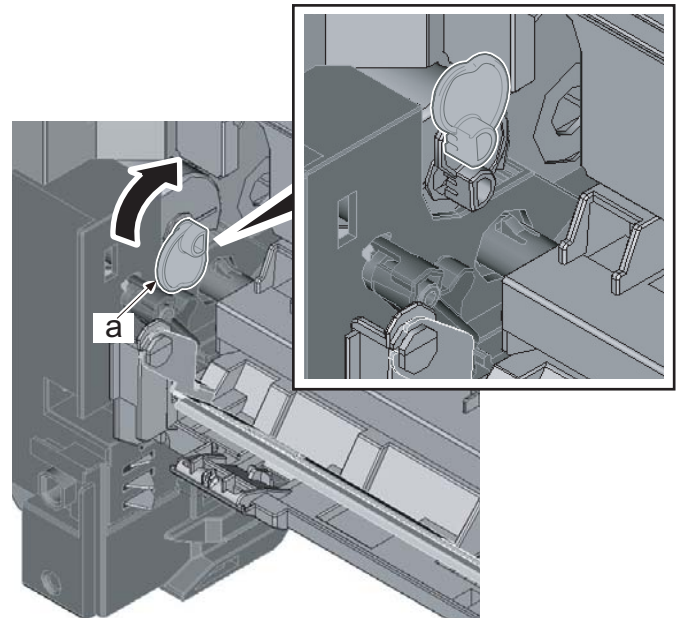


Figure 4-610

43. Disconnect eight connectors (b) from the engine relay PWB (a).

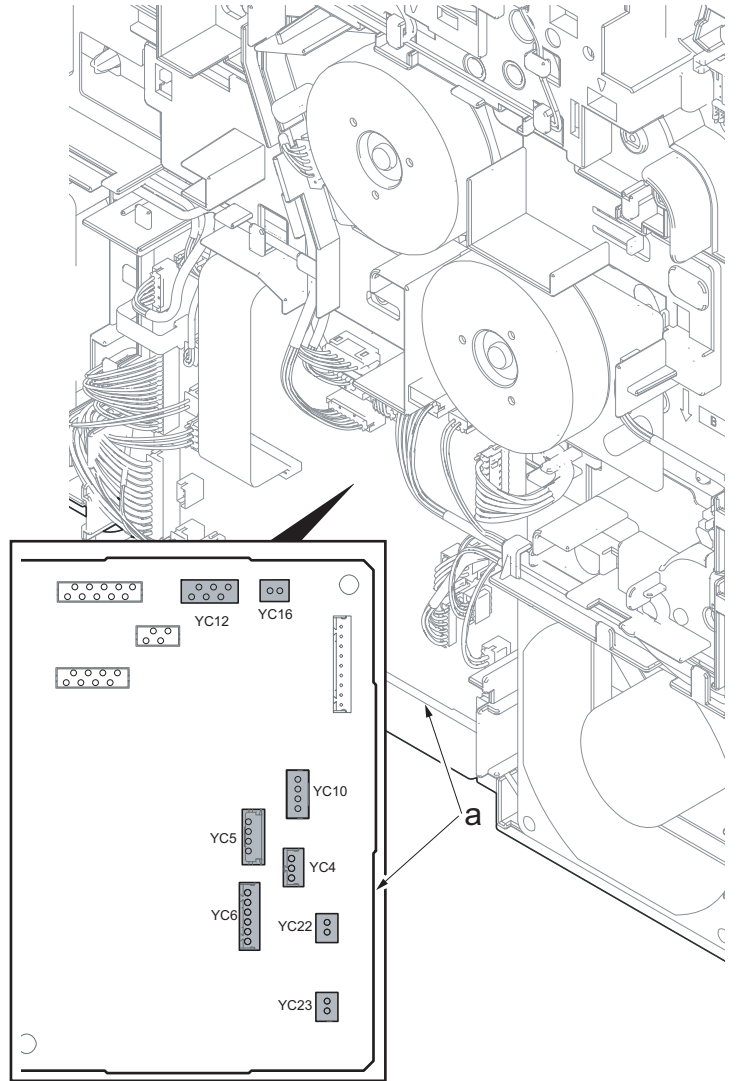


Figure 4-611

44. Release the wire (b) from five hooks (a).

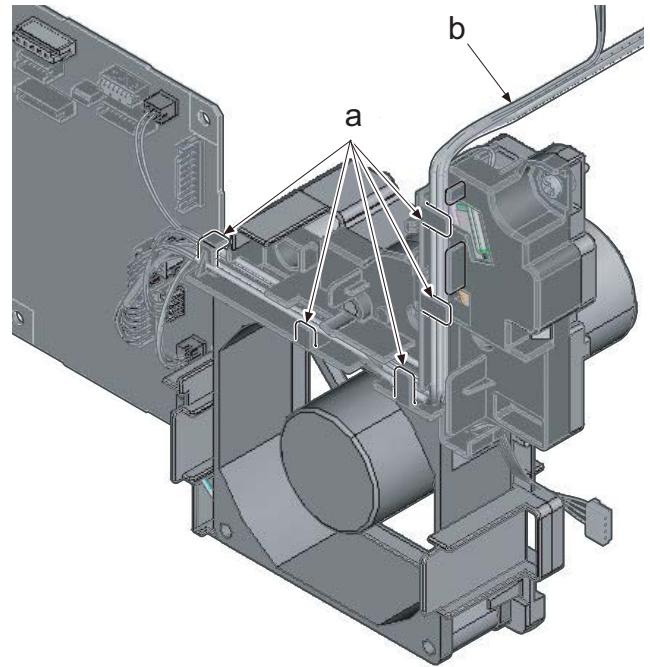


Figure 4-612

- 45. Remove two screws (a)(M3x12).
- 46. Lift up the MP paper feed drive unit (b) to release the lower two hooks (c).
- 47. Detach the MP paper feed drive unit (b).
- 48. Check the MP paper feed drive unit and clean or replace it if necessary.
- 49. Reattach the parts in the original position.

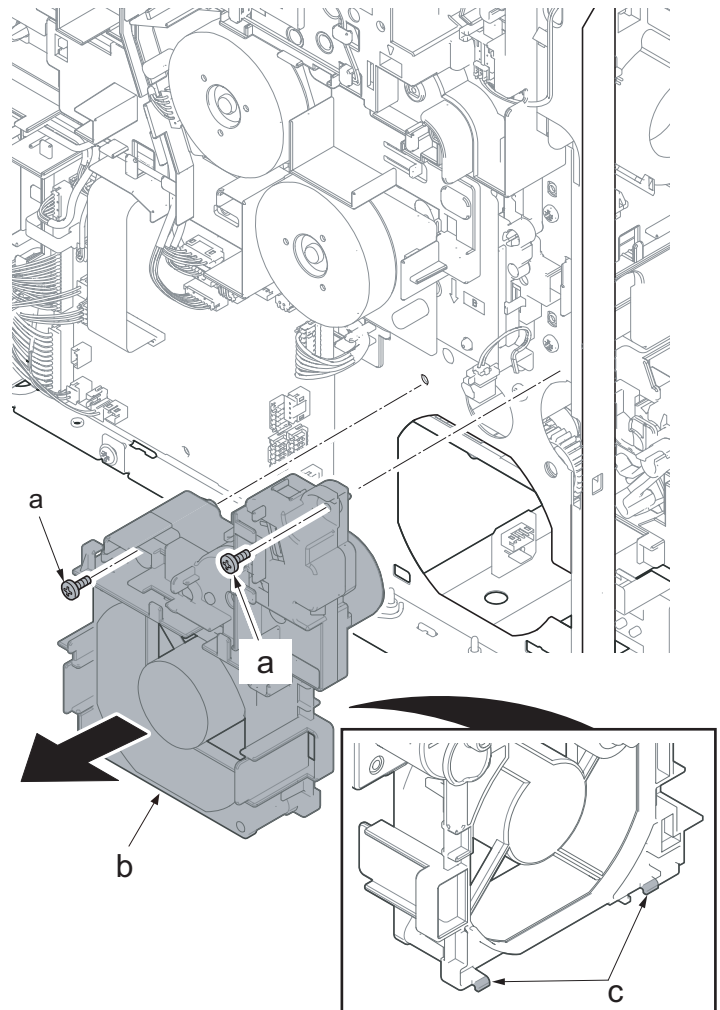


Figure 4-613

Detaching the paper feed drive unit

50. Disconnect the connector (b) of the primary transfer motor (a).
51. Release the wire from four hooks (c).

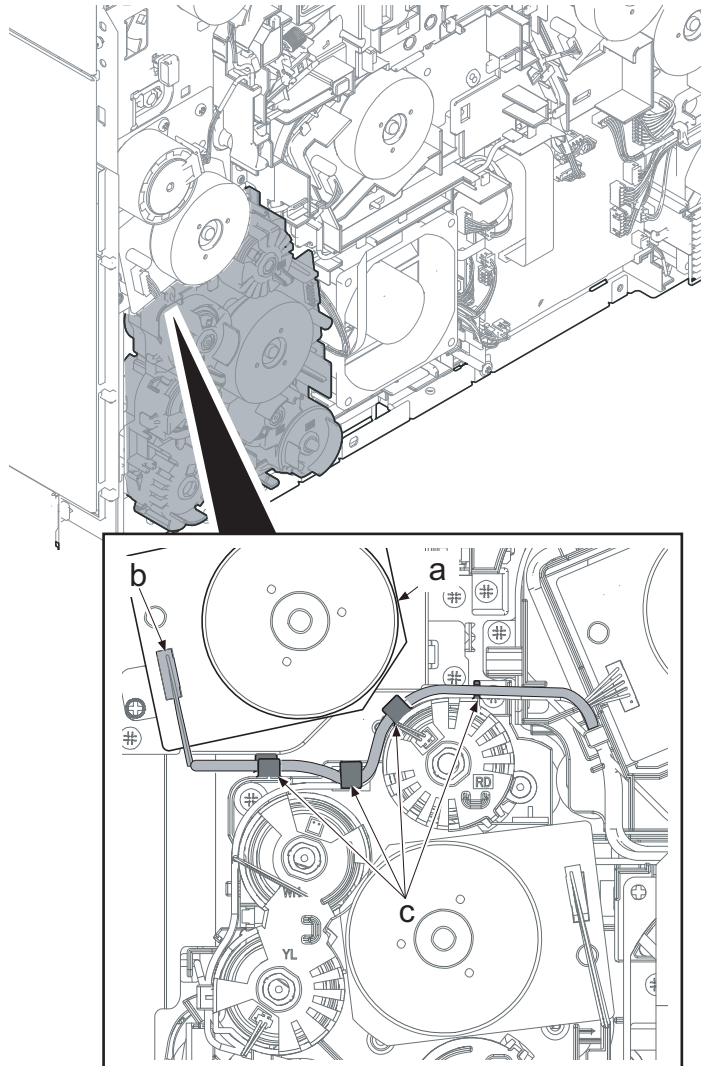


Figure 4-614

52. Disconnect five connectors (b) of the clutch in the paper feed drive unit (a).
53. Disconnect the connector (c) of the motor in the paper feed drive unit.
54. Release the wire from twelve hooks (d).

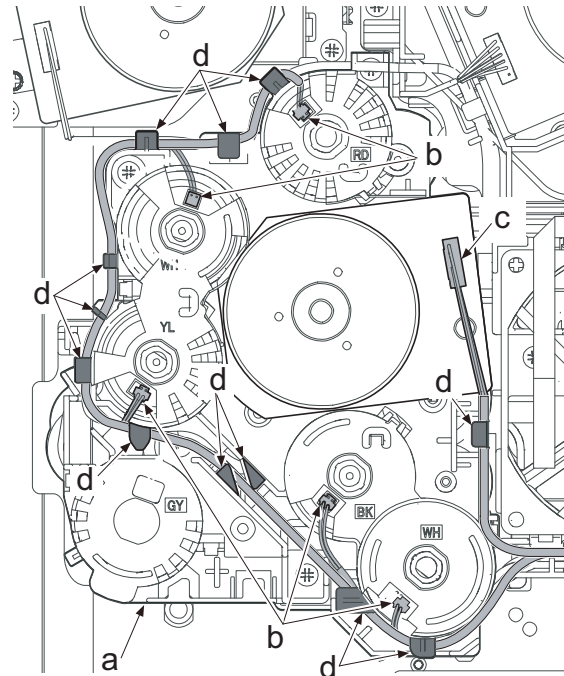


Figure 4-615

55. Remove three screws (a)(M3x12).
56. Detach the paper feed drive unit (b).
57. Check the paper feed drive unit and clean or replace it if necessary.
58. Reattach the parts in the original position.

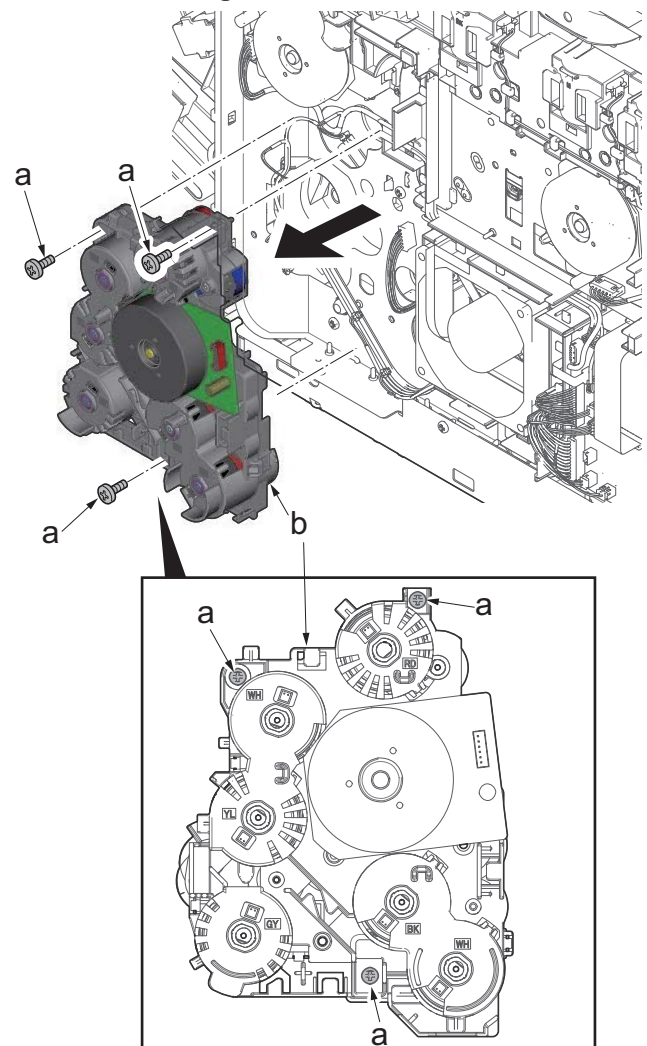


Figure 4-616

- 59. Remove the pin (a)(M3x8).
- 60. Remove two screws (a)(M3x8).

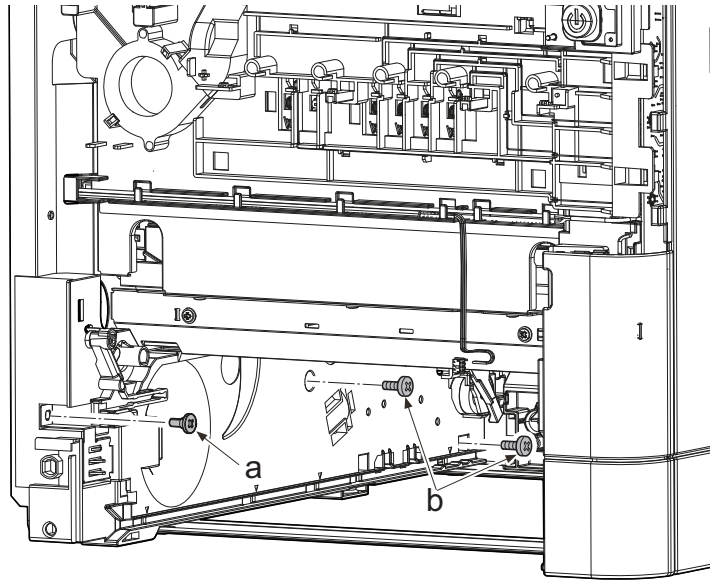


Figure 4-617

- 61. Close the duplex conveying unit (a).
- 62. Remove two straps (c) of the rear cover (b).

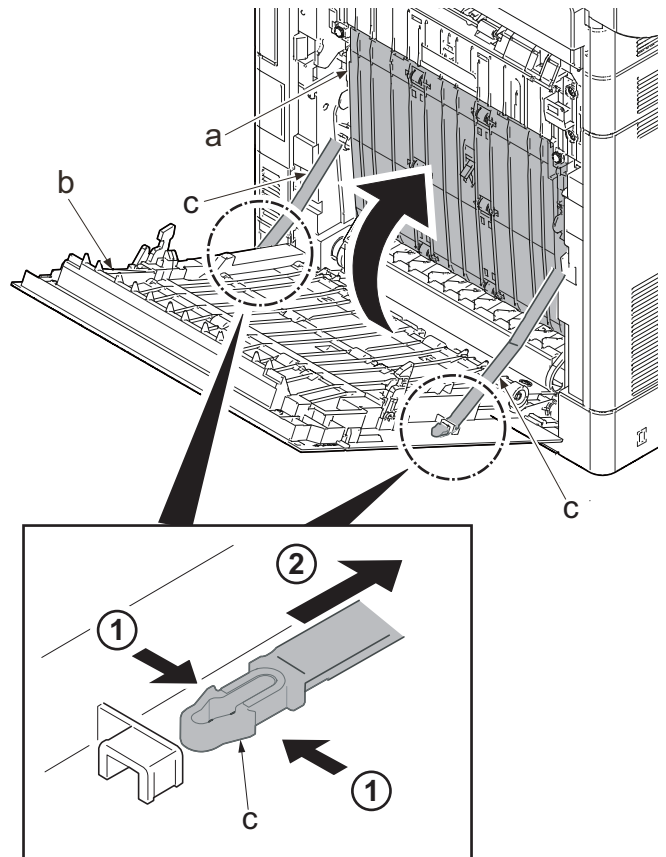


Figure 4-618

63. Align the rear cover in the direction of the arrow, then release the fulcrum parts (b) and (c), and remove the rear cover (a).

*: To remove the fulcrum pin, first spread out the frame on the side (b).

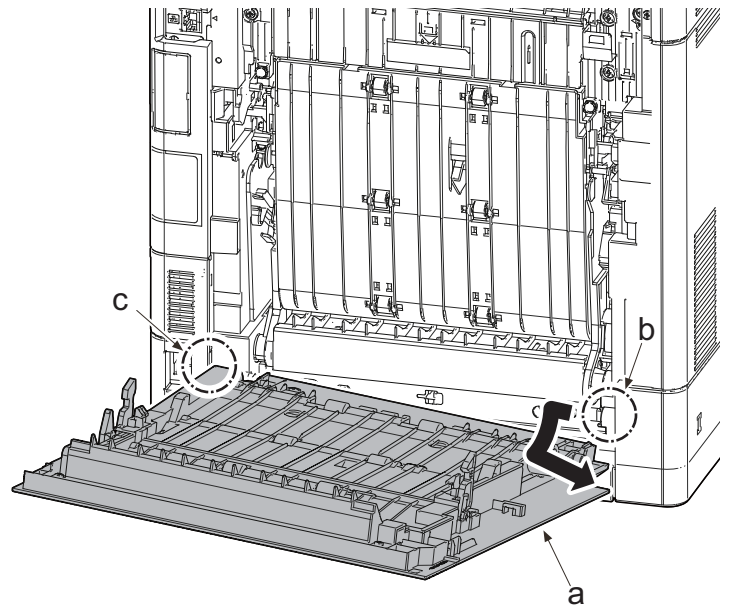


Figure 4-619

64. Pull the conveying stopper (a) toward the machine right side and rotate it by using a flat-blade screwdriver (b).
65. Release the hook (c) of the conveying stopper (a) from the rib (d) and pull the conveying stopper (a) out.

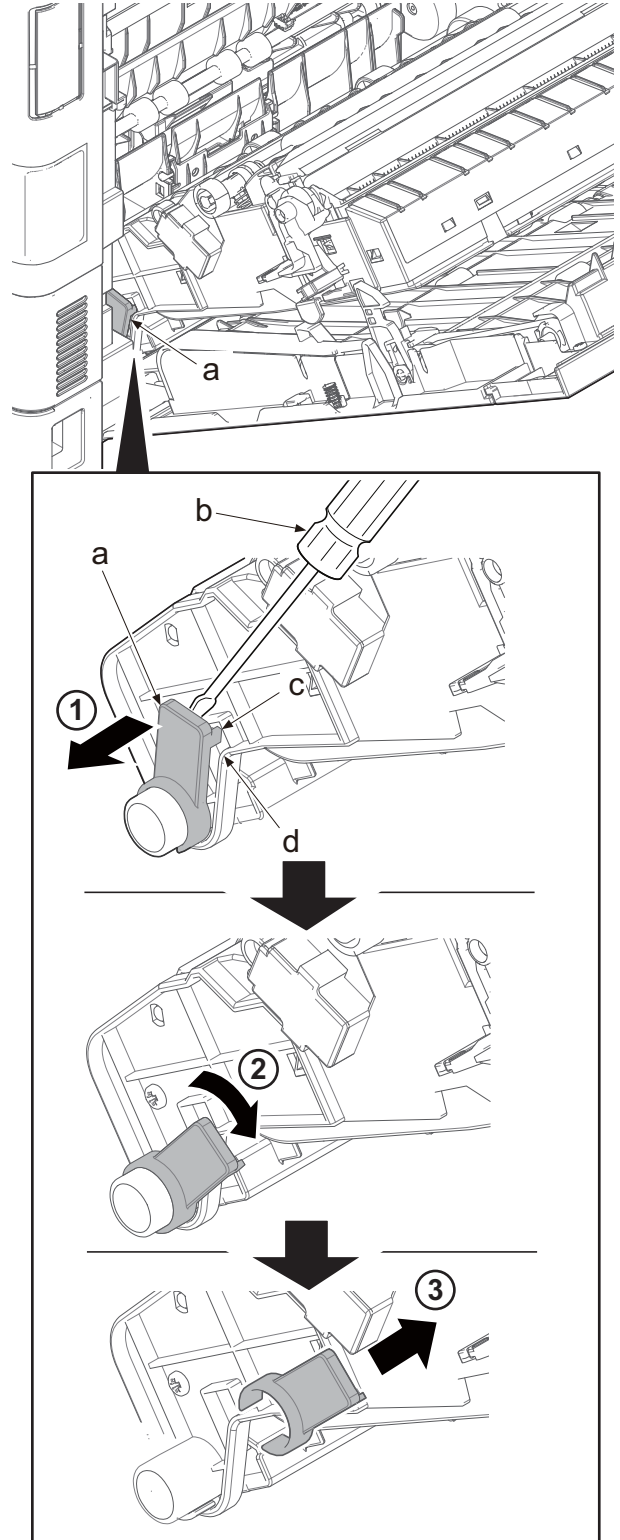


Figure 4-620

66. Slide the duplex paper conveying unit (a) toward the machine right side.
67. Release the fulcrum part of the duplex paper conveying unit (a) at the machine left side, and pull the unit out toward the machine rear side.

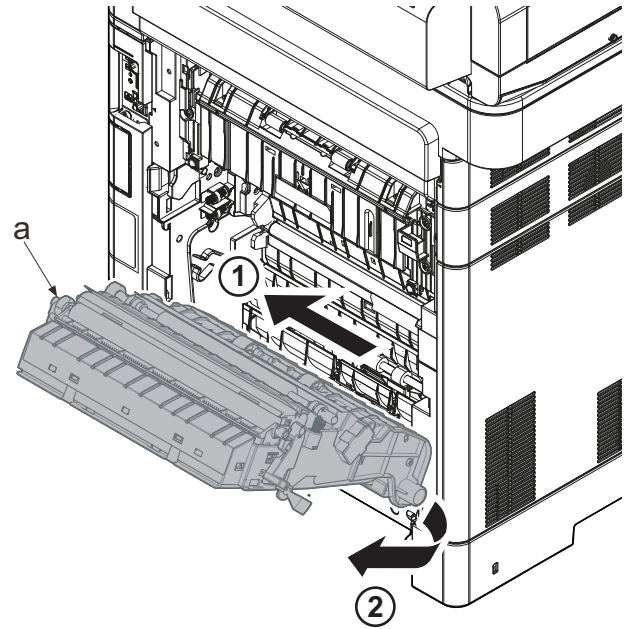


Figure 4-621

Detaching the middle roller unit

68. Push the machine right side hook (a) outward using a flat-blade screwdriver (b).

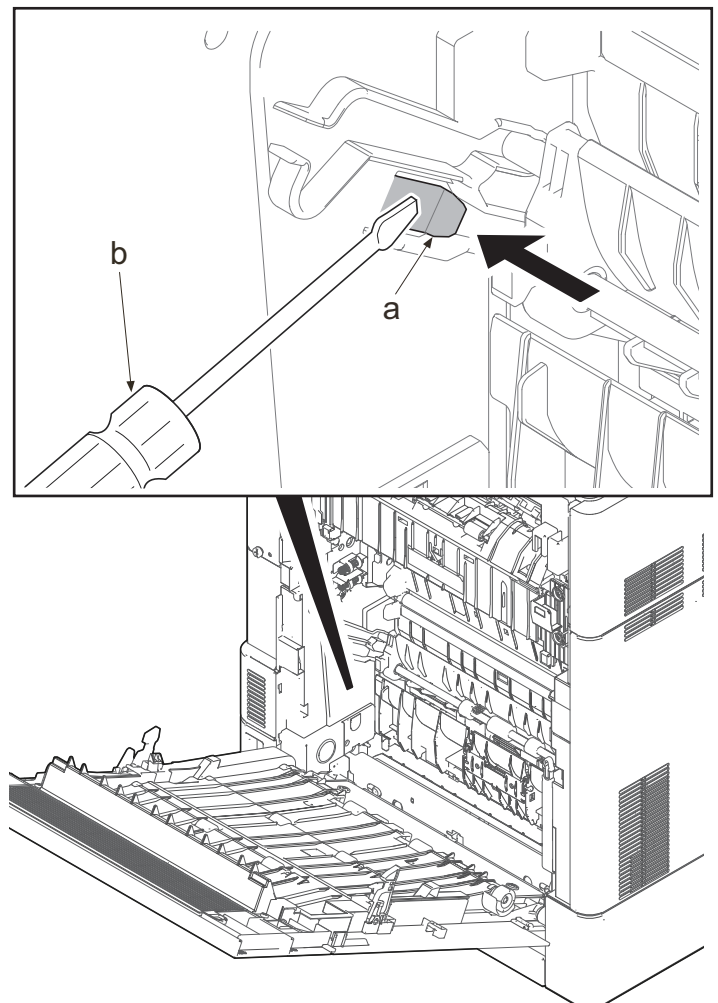


Figure 4-622

69. Pull the middle roller unit (b) out by holding handle A2 (a).

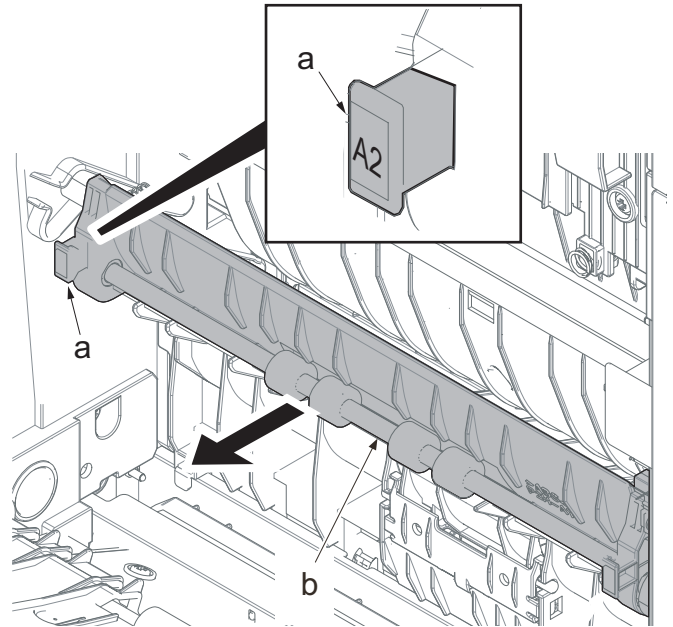


Figure 4-623

70. Remove the machine right side shaft (b) of the middle roller unit (a) from the rail (c).
71. Detach the middle roller unit (a).

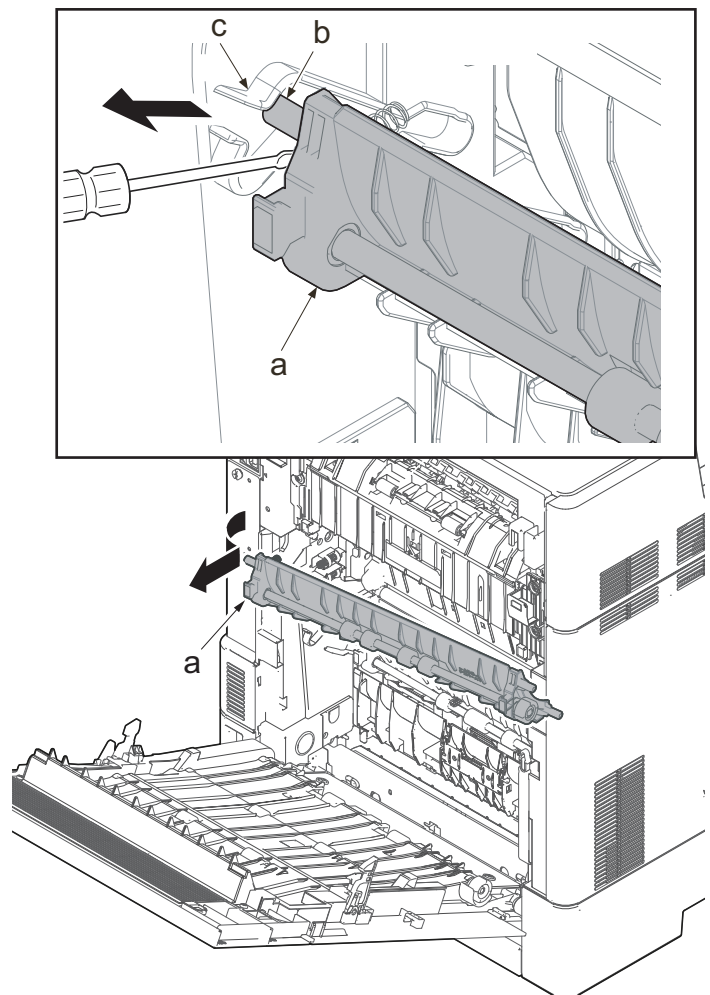


Figure 4-624

72. Remove two screws (a)(M3x8)

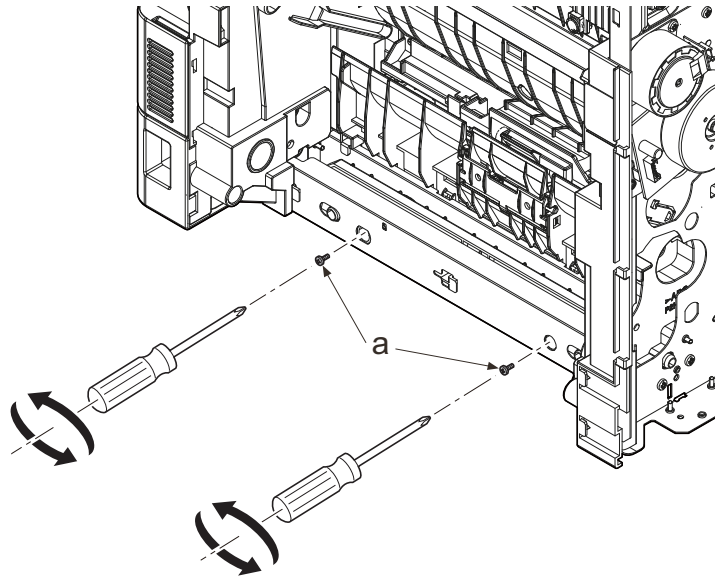


Figure 4-625

73. Detach the cassette guide (a).

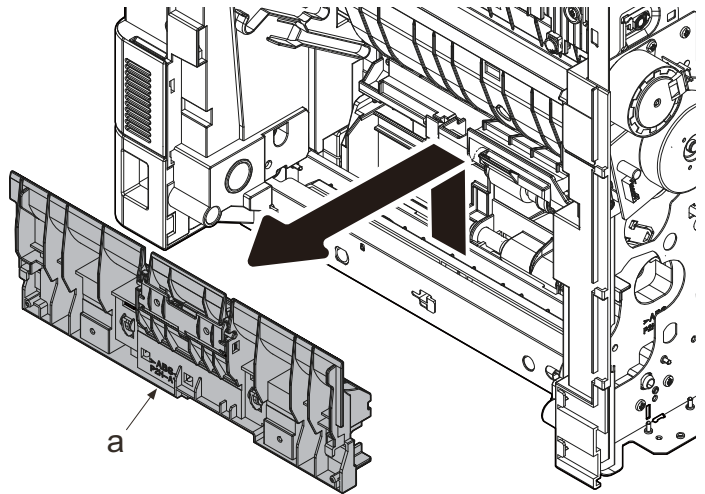


Figure 4-626

74. Remove two screws (a)(M3x8)

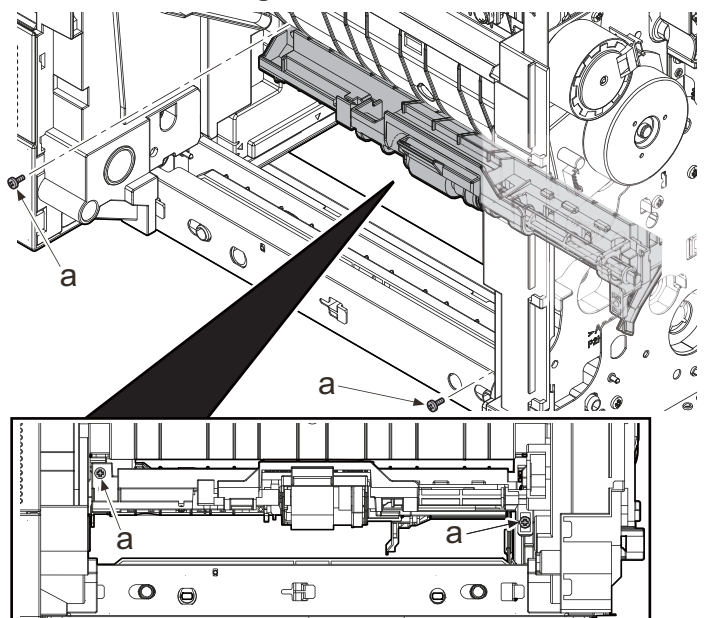


Figure 4-627

75. Detach the pick-up guide (a) in the direction of the arrow while passing the FFC (b) through the aperture.

*: Take care of the FFC not being caught up.

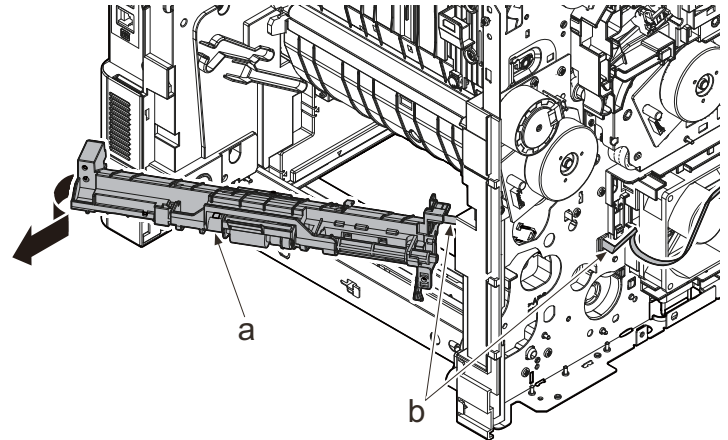


Figure 4-628

76. Insert the flat-blade screwdriver (b) into the gap on the left side cassette guide (a) and release the hook (c).

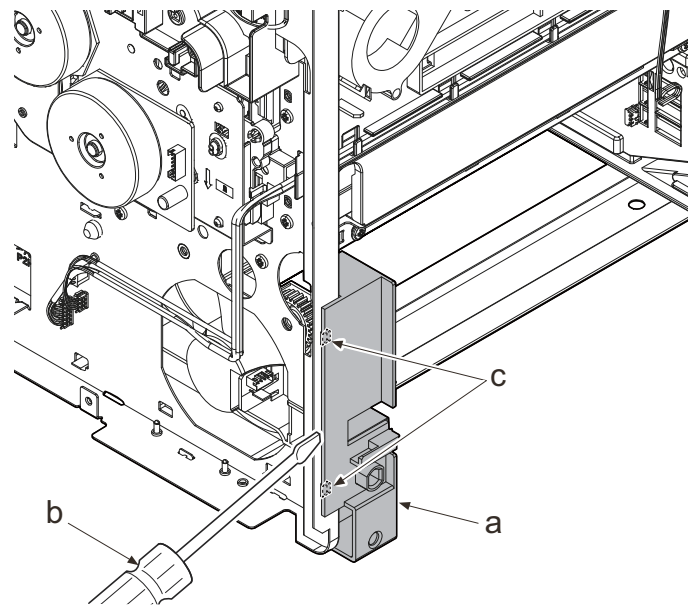


Figure 4-629

77. Release three hooks (b) with a flat-blade screwdriver (a) while pressing the part A.

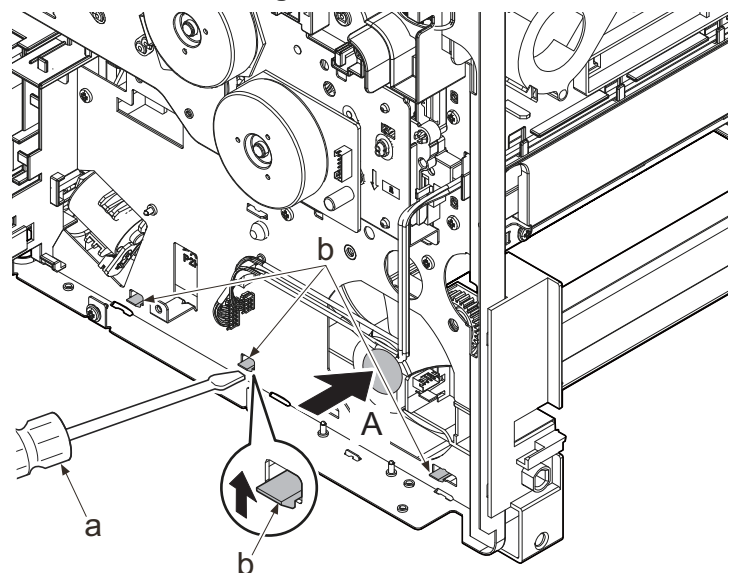


Figure 4-630

78. Release the hook (b) with a flat-blade screwdriver (a) while pressing the part A.

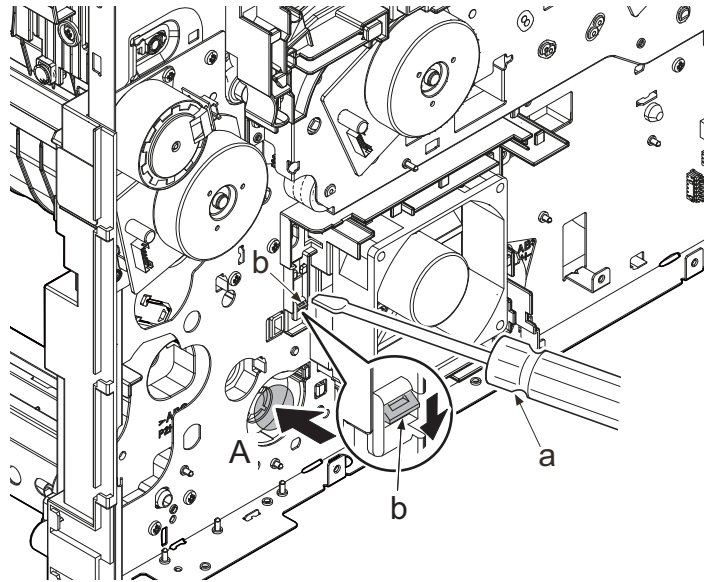


Figure 4-631

79. Detach the cassette lift unit (a) the direction of the arrow.

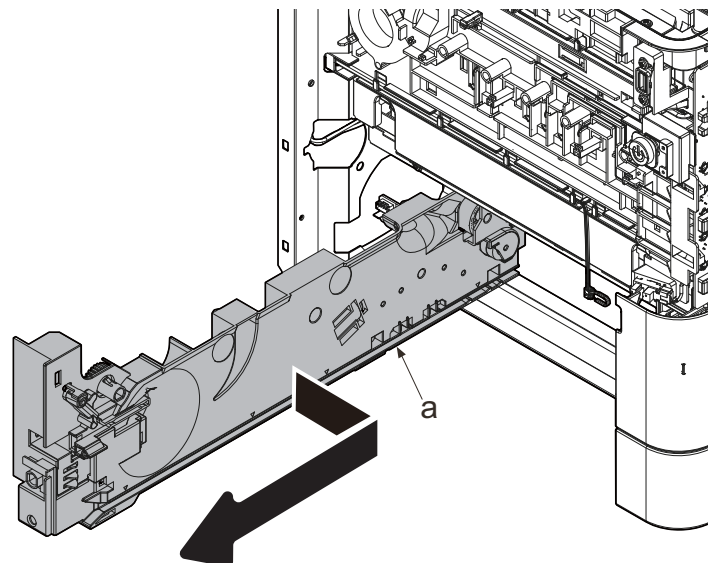


Figure 4-632

80. Check the cassette lift unit (a) and clean or replace it if necessary.

81. Reattach the parts in the original position.

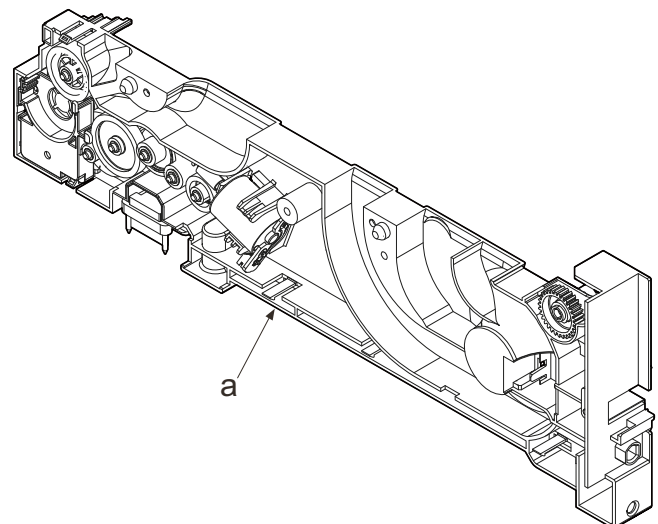


Figure 4-633

(10) Operation section

(10 - 1) Detaching and reattaching the language sheet

1. Slide the left and right panel plates (a) and remove them.

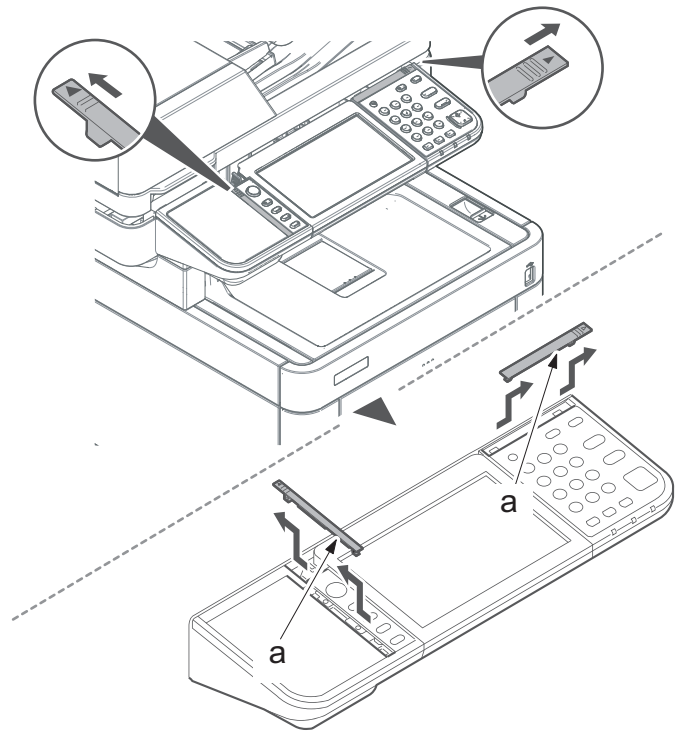


Figure 4-634

2. Remove the left and right operation panel covers (a).
3. Replace the left and right operation panel sheets (b) with the ones in the supported language.
4. Reattach the parts in the original position.

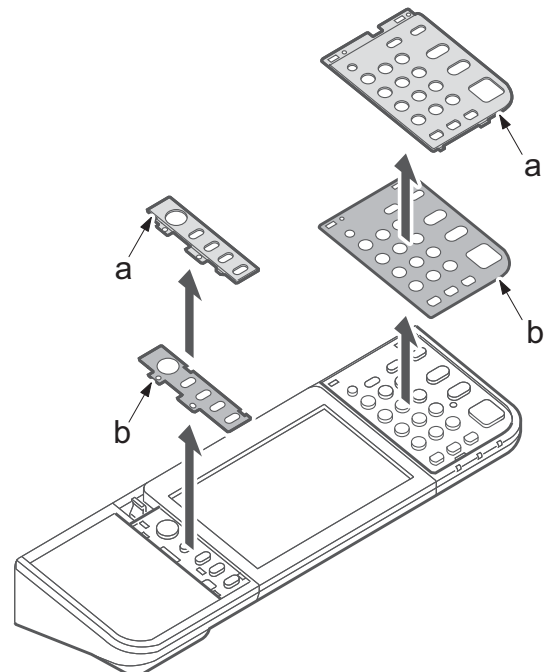


Figure 4-635

(11)Fan motor

(11 - 1)Attaching direction

IMPORTANT

When reattaching the fan motor, be aware of the attachment direction (in-take/exhaust).

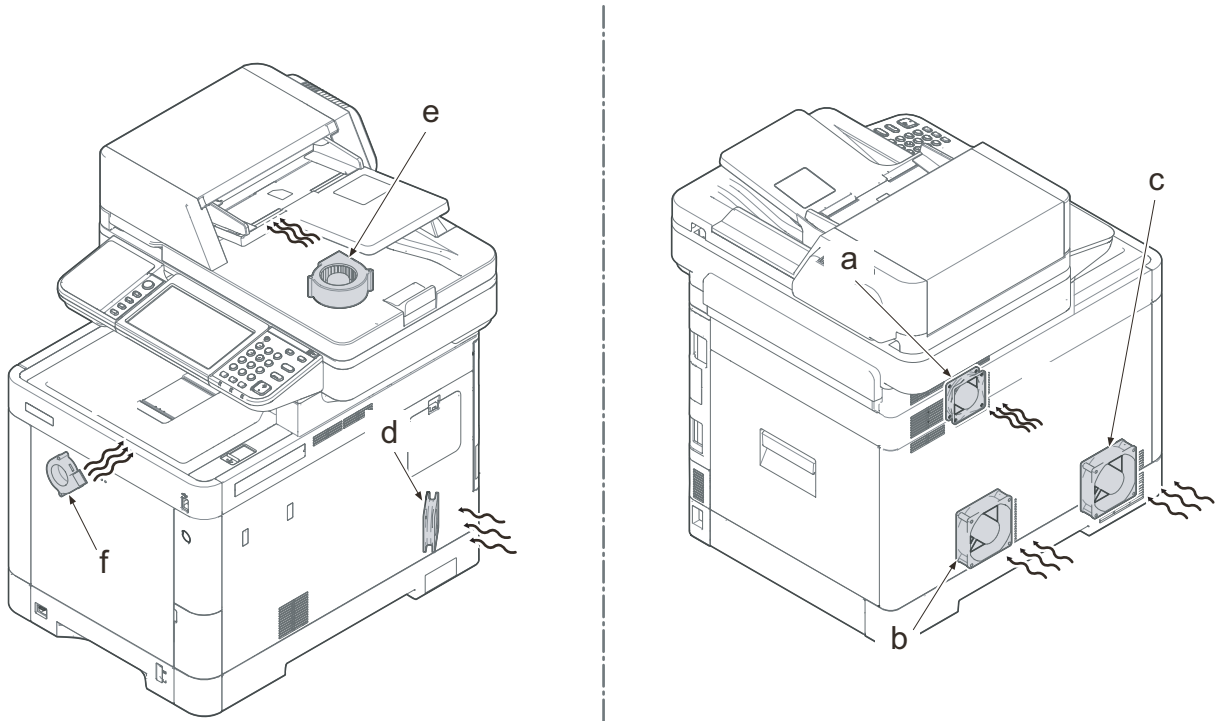


Figure 4-636

- a. Container fan motor : (Rating label: inside) in-take
- b. LSU fan motor1 : (Rating label: inside) in-take
- c. LSU fan motor2 : (Rating label: inside) in-take
- d. Power supply fan motor : (Rating label: inside) in-take
- e. Eject fan motor : (Rating label: lower) in-take
- f. Transfer fan motor : (Rating label: inside) in-take

4-7 Disassembly & reassembly procedures for the paper feeder (option)

(1) Detaching and reattaching the retard roller unit and feed roller unit

(1 - 1) Detaching and reattaching the retard roller unit

1. Open the PF rear cover (a).

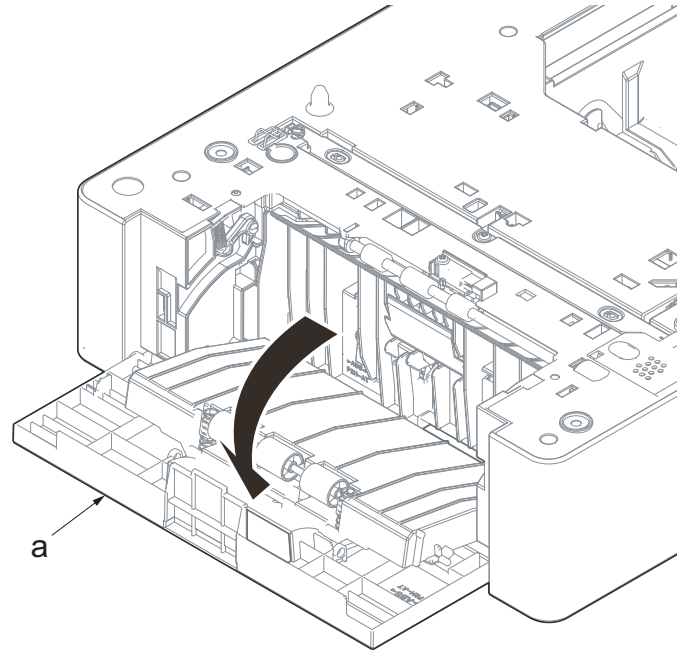


Figure 4-637

2. Release two hooks (a) using a flat-blade screwdriver (b).
3. Remove the retard guide (c).

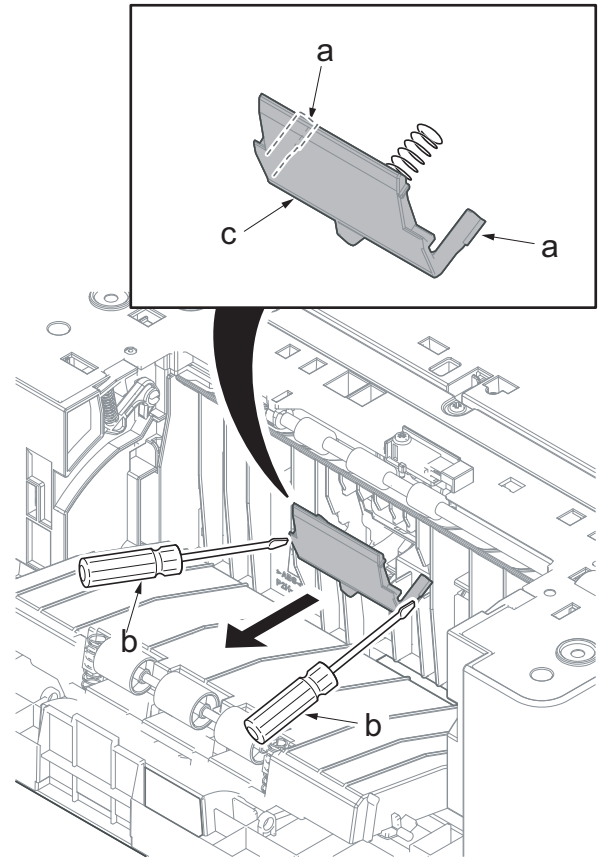


Figure 4-638

4. Remove the retard roller unit (a).
5. Check the retard roller unit and clean or replace it if necessary.
6. Reattach the parts in the original position.

IMPORTANT

Install the cassette first when attaching the retard roller unit. The retard pressure release lever must be located at the machine front side from the retard roller unit to apply appropriate pressure.

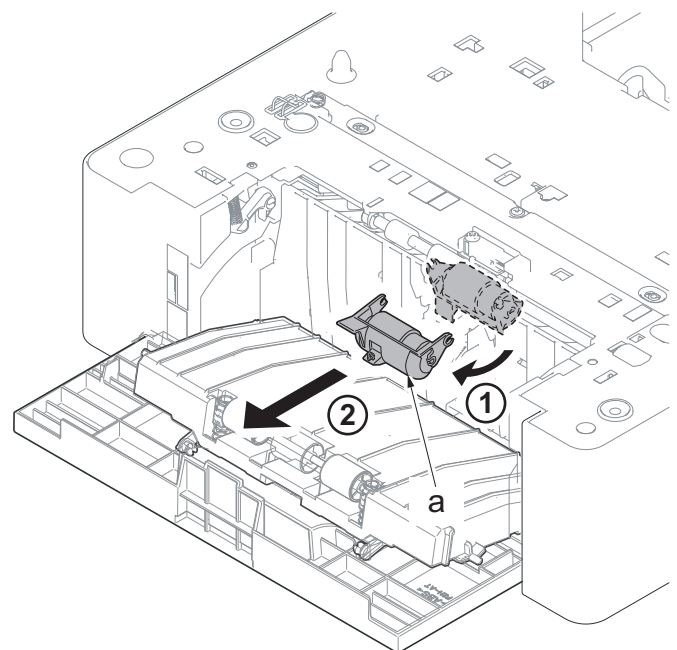


Figure 4-639

(2) Detaching and reattaching the paper feed roller unit

1. Remove the cassette (a) from the paper feeder (b).
2. Remove the retard roller unit.

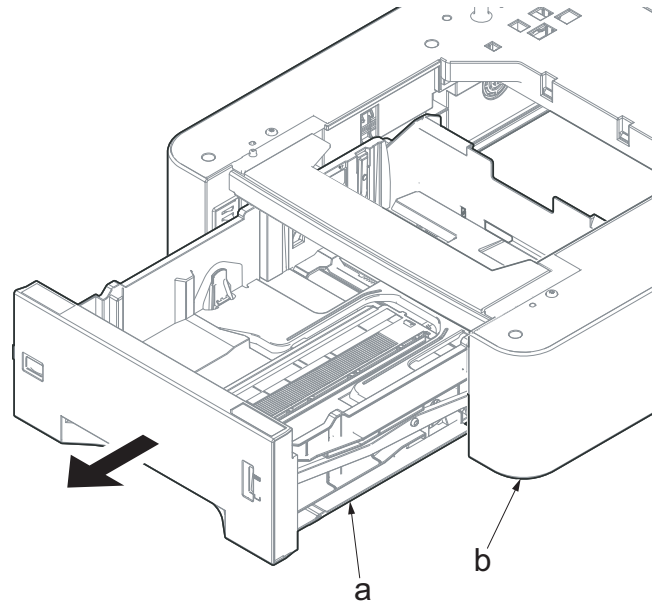


Figure 4-640

3. Place the paper feeder (a) while turning it over.

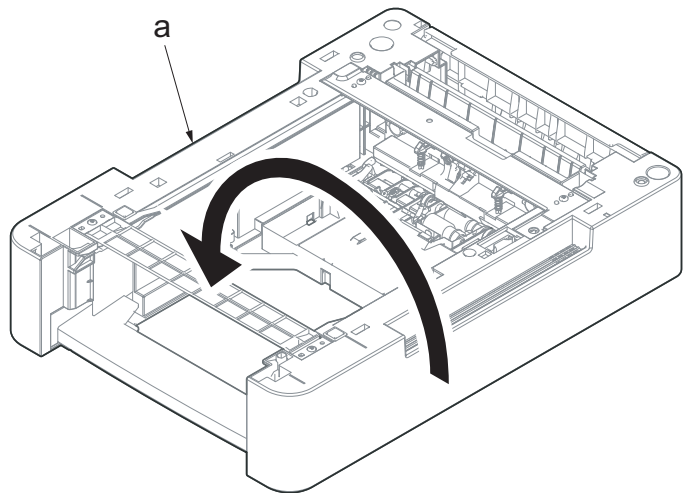


Figure 4-641

4. Push the lock lever (a).
5. Slide the feed roller pin (b) straight and release the lock.

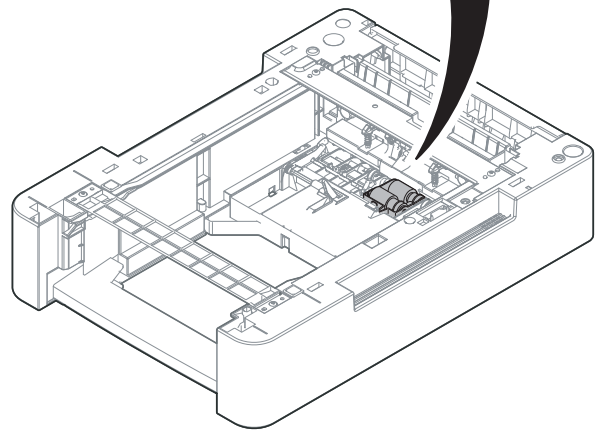
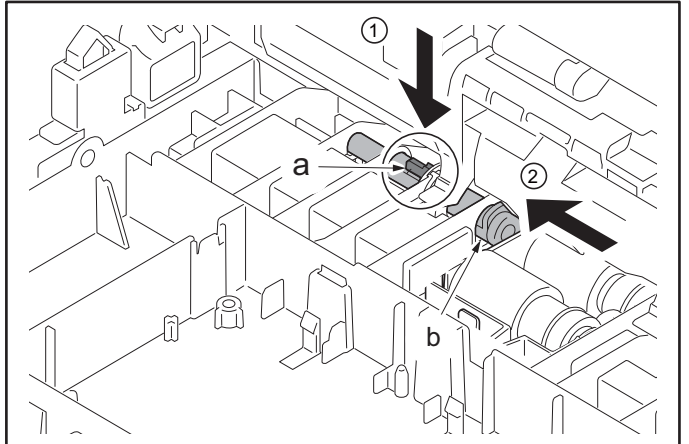


Figure 4-642

6. Push the lock lever B (a).
7. Detach the paper feed roller unit (b).
8. Check the paper feed roller or pick up roller and clean or replace it if necessary.
9. Reattach the parts in the original position.

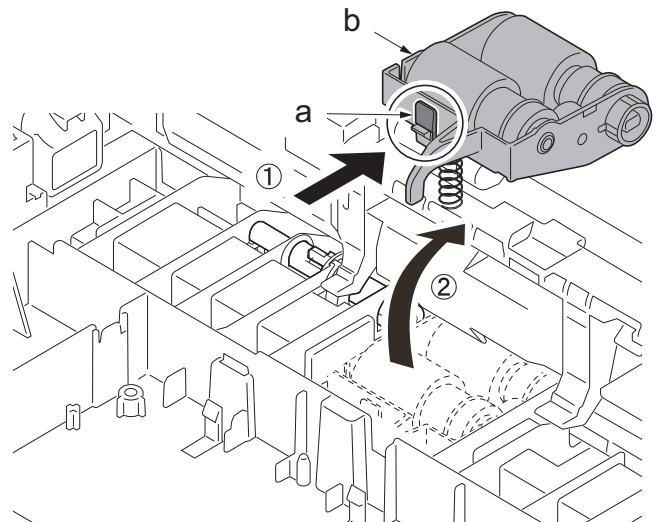


Figure 4-643

(3) Detaching and reattaching the PF main PWB

1. Remove the cassette (a) from the paper feeder (b).

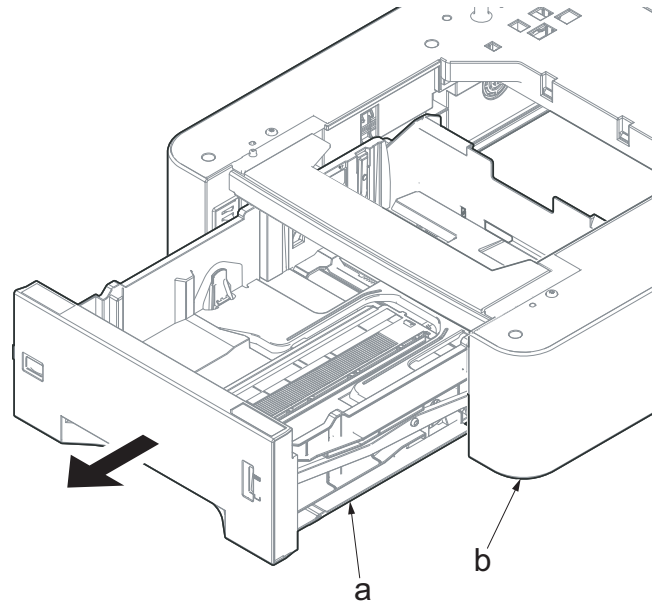


Figure 4-644

2. Place the paper feeder (a) while turning it over.

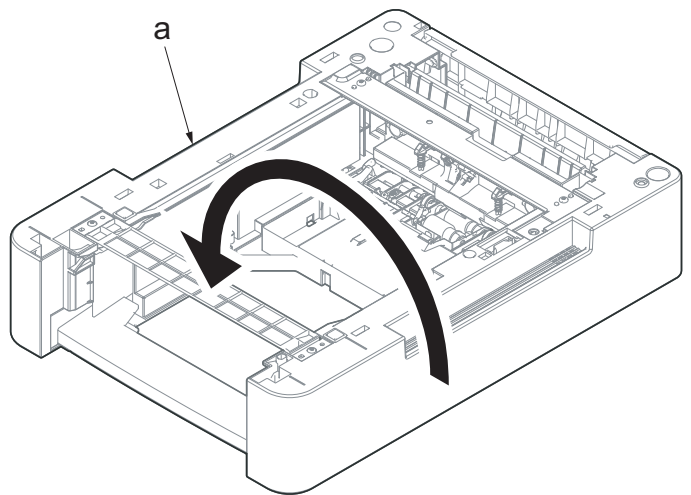


Figure 4-645

3. Release two hooks (b) of the PWB cover (a) using a flat-blade screwdriver (c).

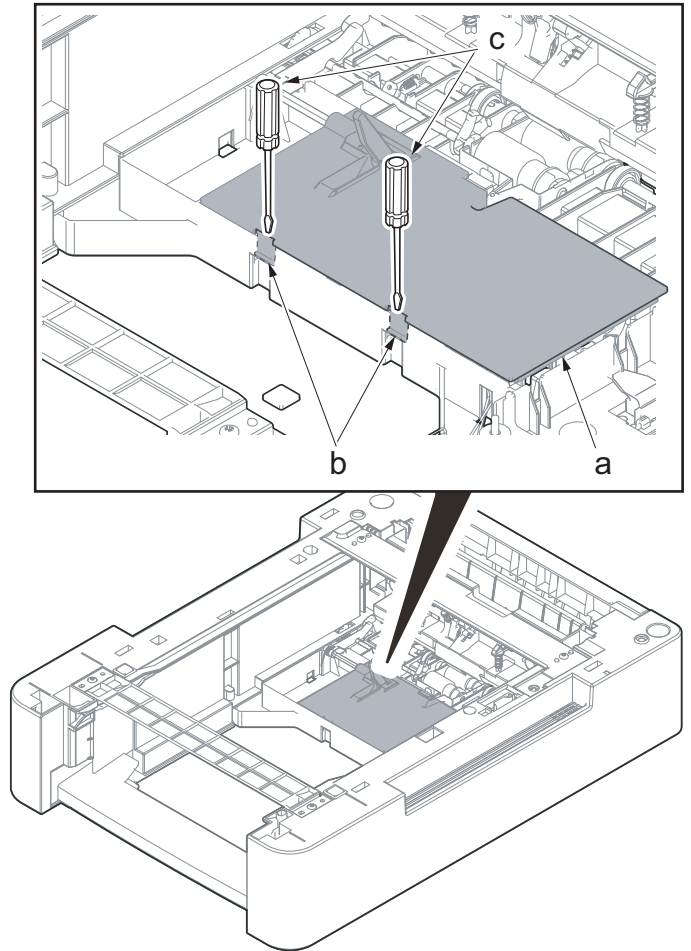


Figure 4-646

4. Detach the PWB cover (a).

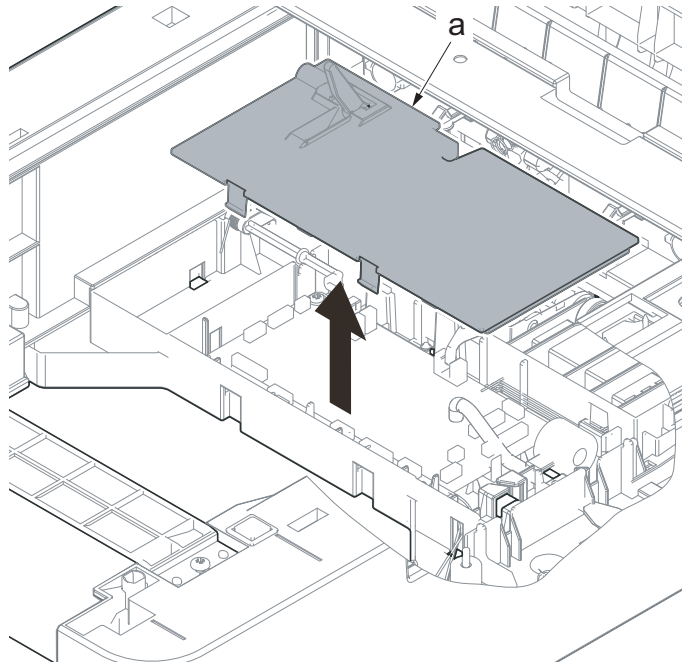


Figure 4-647

5. Remove the actuator (a) and spring (b).

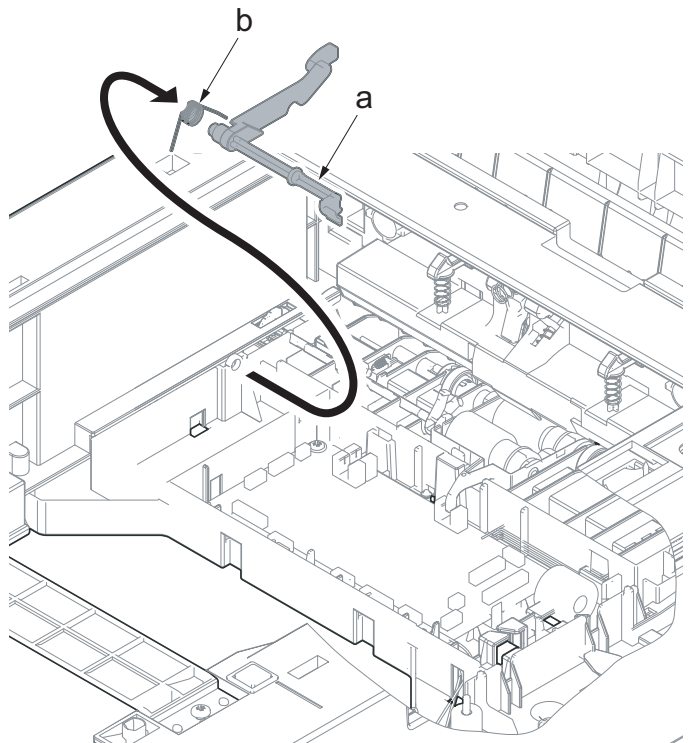


Figure 4-648

6. Disconnect all the connectors from the PF main PWB (a). (10 connectors)
*: YC10 connector is not used.

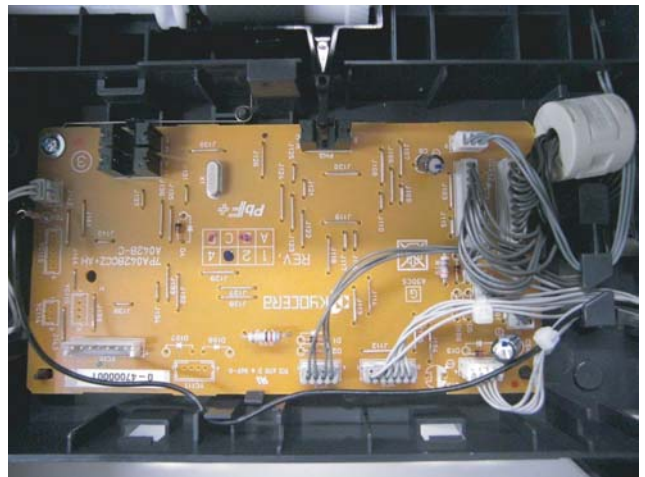
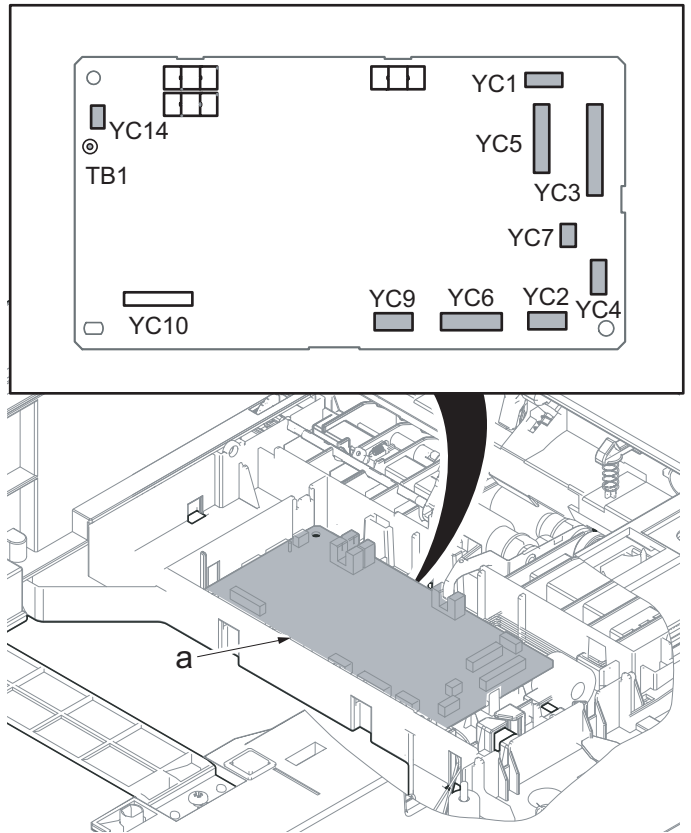


Figure 4-649

- 7. Push the lock lever B (a).
- 8. Lift up the feed roller unit (b) to release the lock.

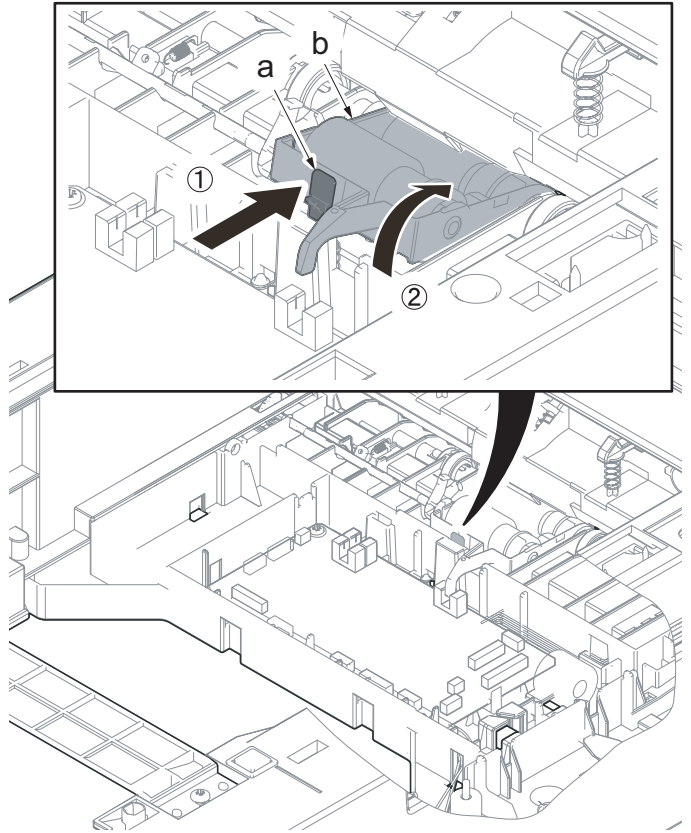


Figure 4-650

- 9. Remove the screw (a)(M3x8).

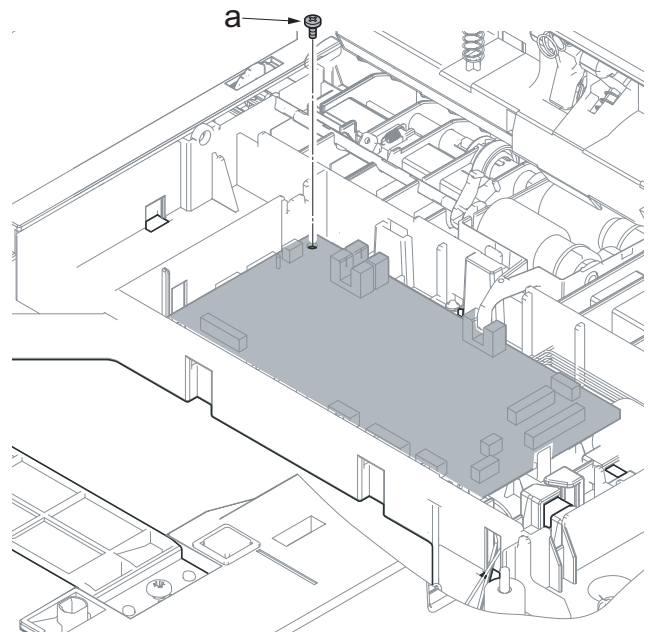


Figure 4-651

10. Remove four hooks (a) and then remove the PF main PWB (b).
11. Check the PF main PWB and clean or replace it if necessary.
12. Reattach the parts in the original position.

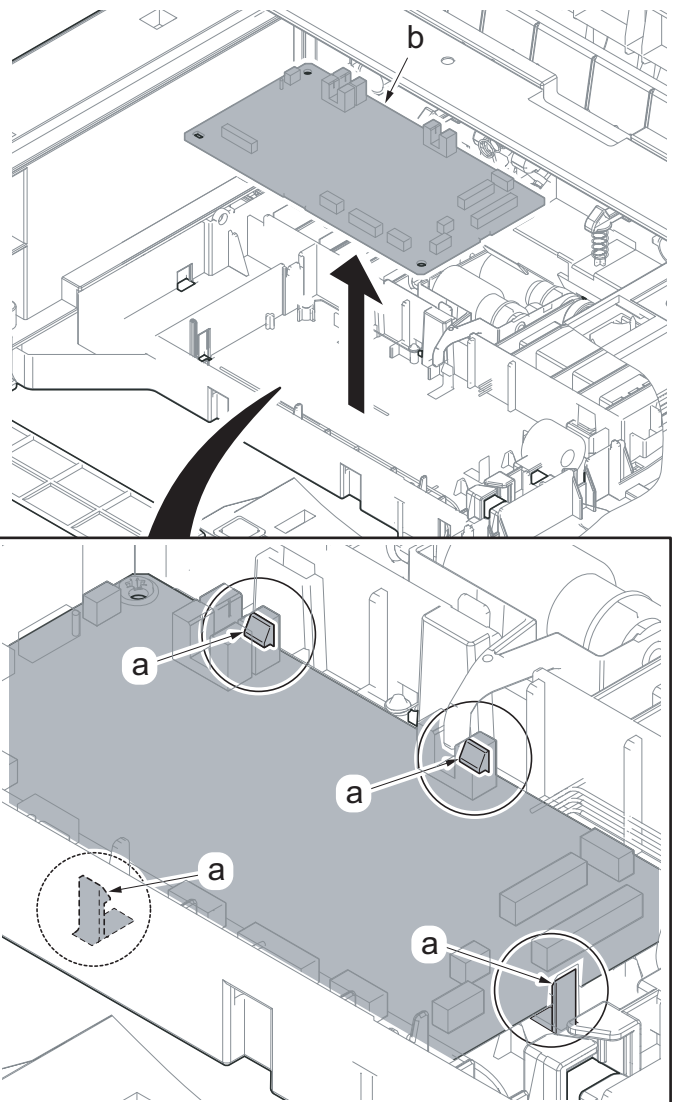


Figure 4-652

(4) Detaching and reattaching the PF drive unit

1. Remove the cassette (a) from the paper feeder (b).

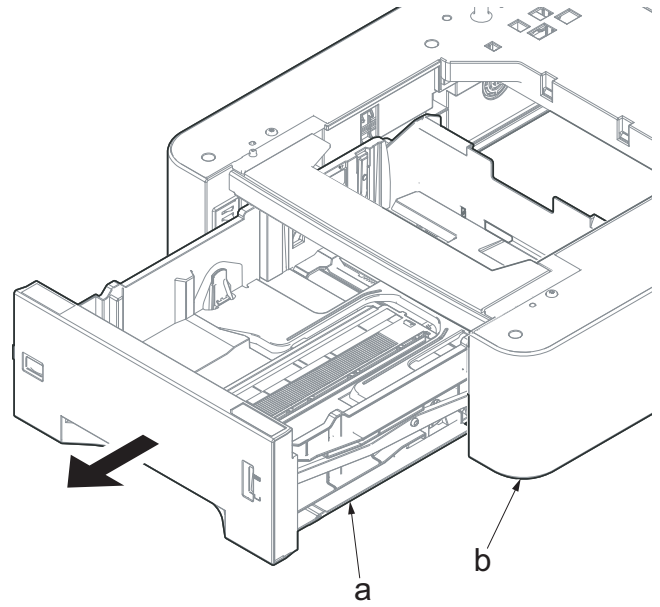


Figure 4-653

2. Remove eight screws (a)(M3x10)

IMPORTANT

Secure the screws in the order of the numbers.

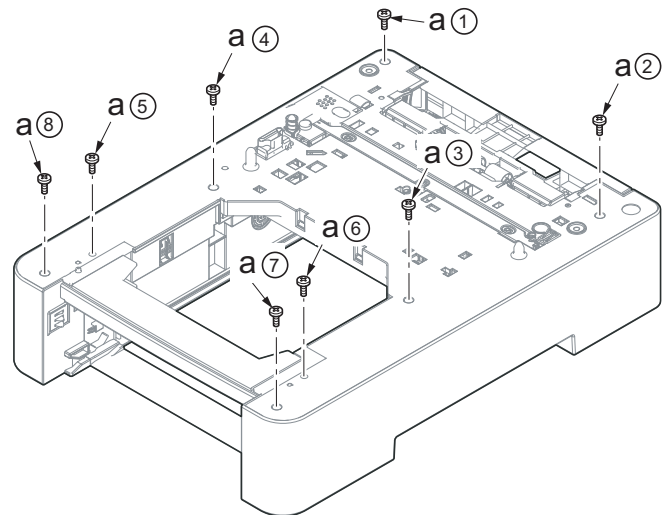


Figure 4-654

3. Place the paper feeder (a) while turning it over.

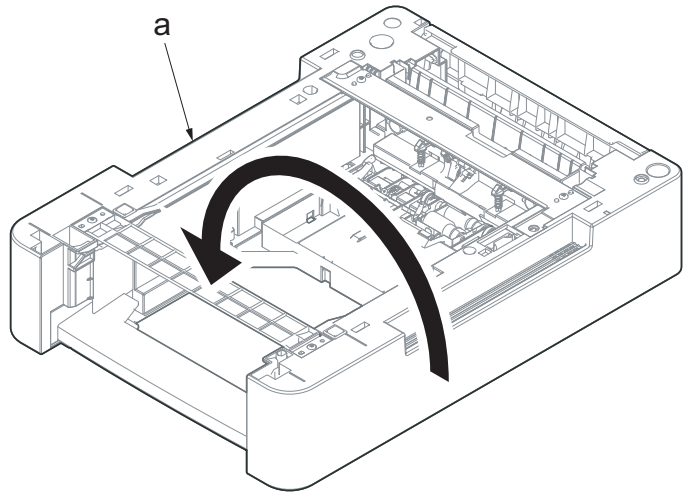


Figure 4-655

4. Release two hooks (b) of the PWB cover (a) using a flat-blade screwdriver (c).

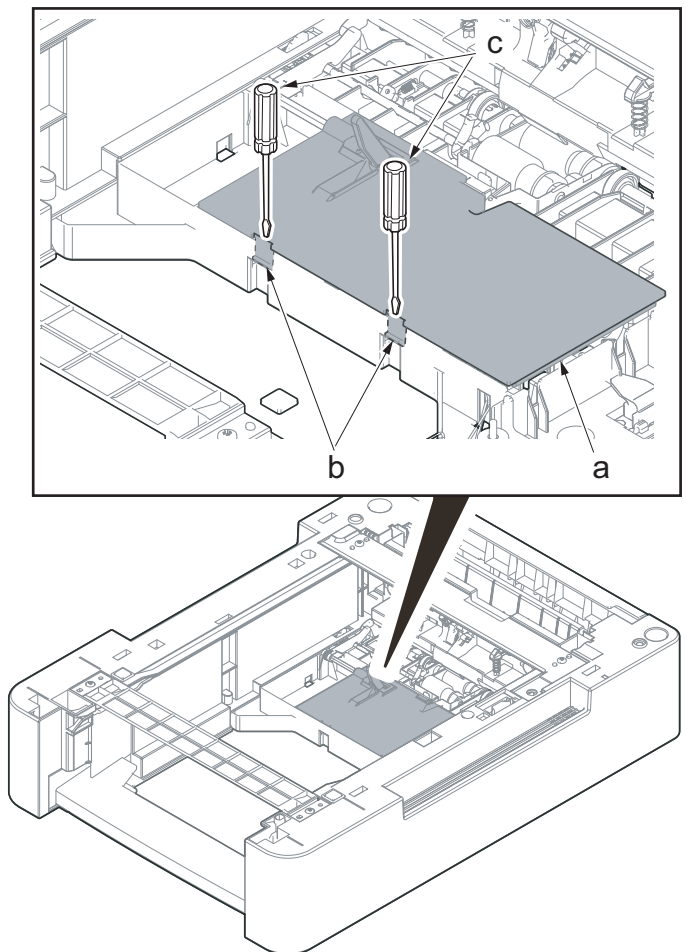


Figure 4-656

5. Detach the PWB cover (a).

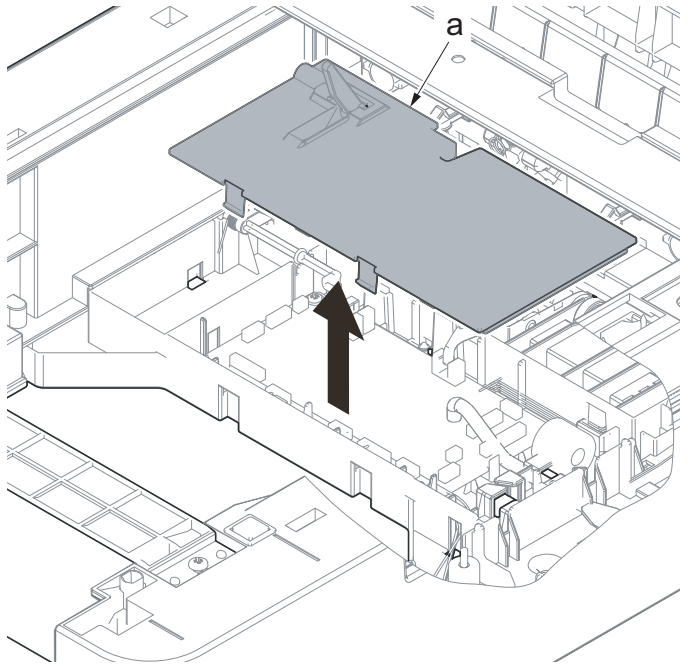


Figure 4-657

6. Remove the actuator (a) and spring (b).

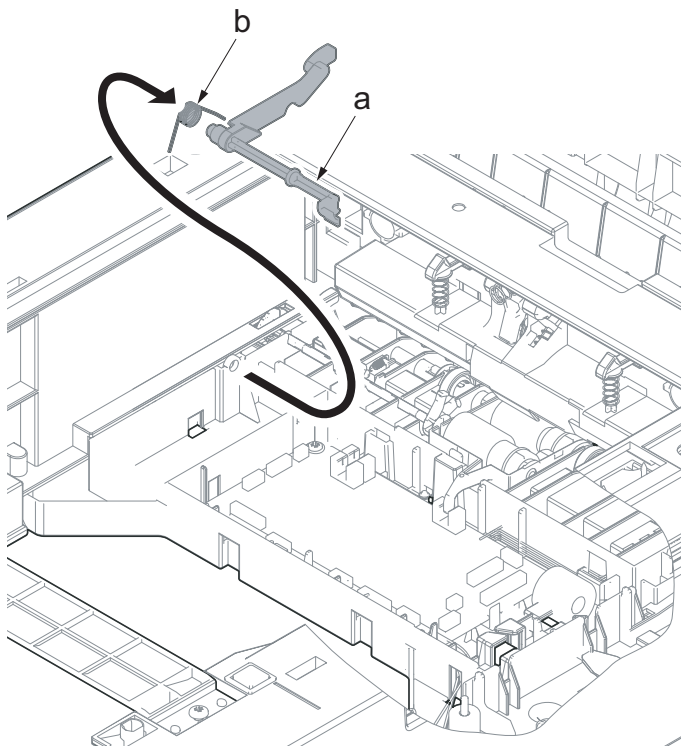


Figure 4-658

7. Disconnect nine connectors (b) from the PF main PWB (a).
YC1 to YC7, YC9, TB1

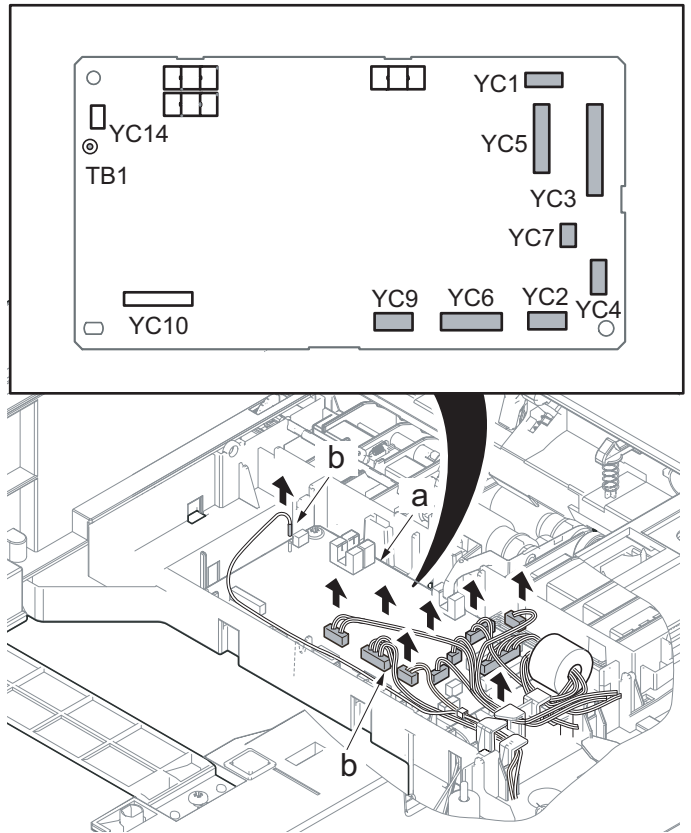


Figure 4-659

8. Remove the wire (a) from the hook (b).

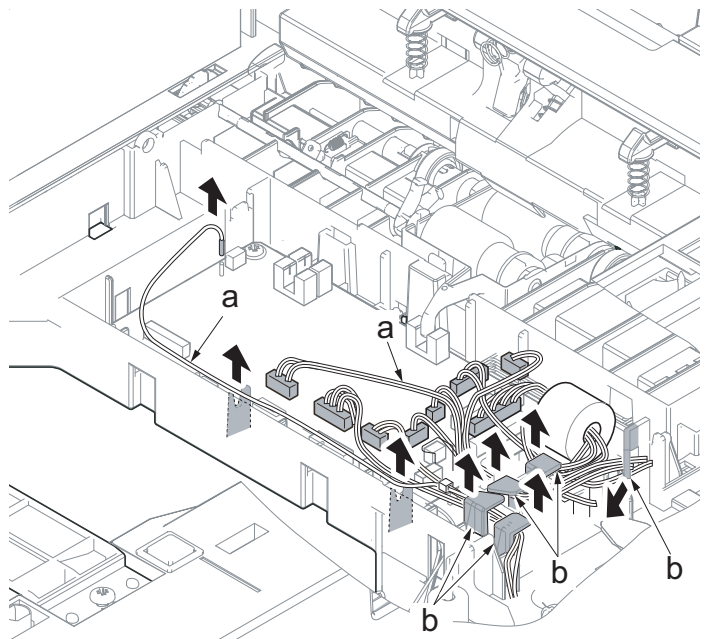


Figure 4-660

9. Place the paper feeder while turning it over.
Release the hook (a) using a flat-blade screwdriver (b).

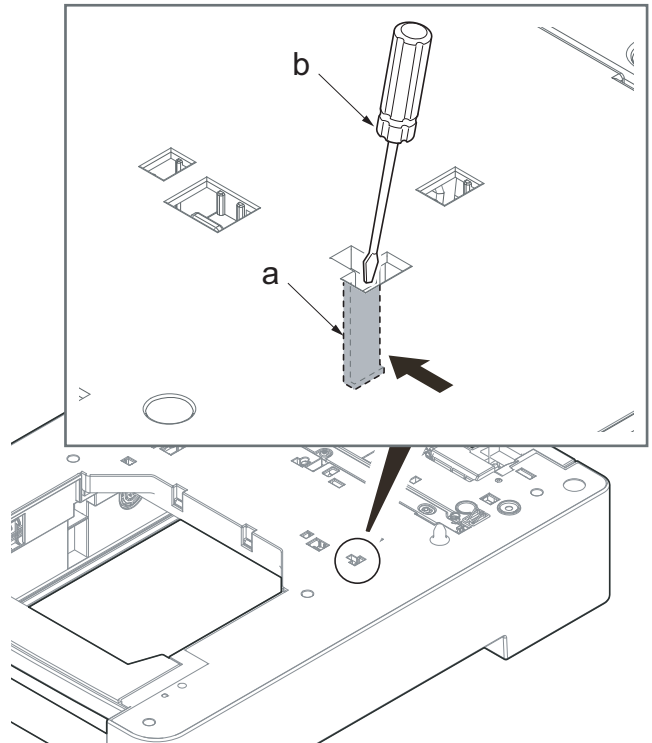


Figure 4-661

10. Place the paper feeder while turning it over.
Release the hook (a) using a flat-blade screwdriver (b).
*: Release it while widening the cover with a flat-blad screwdriver.

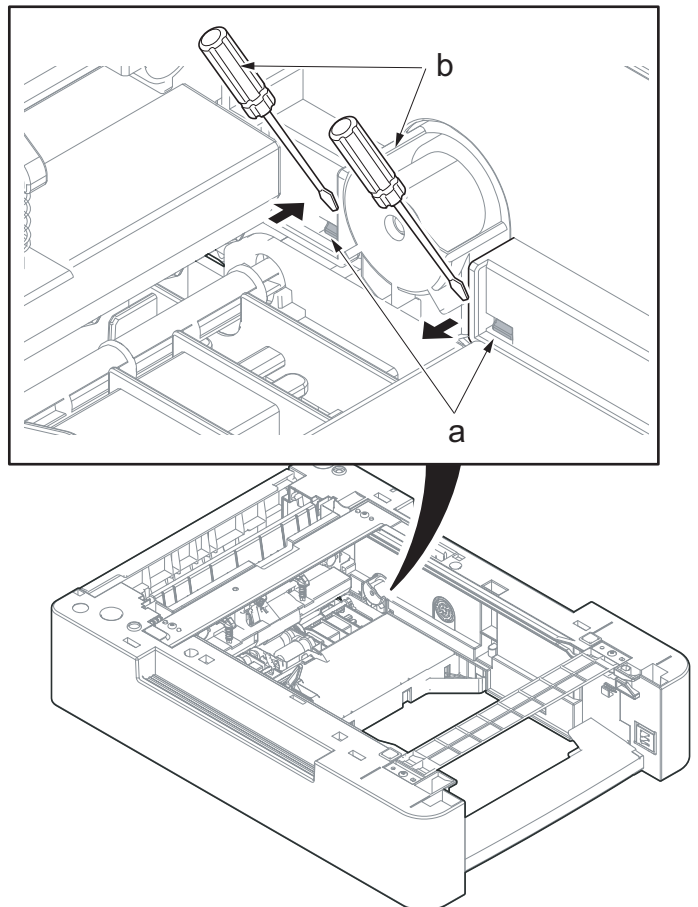


Figure 4-662

11. Lift up the paper feeder (b) and remove the upper cover (a).

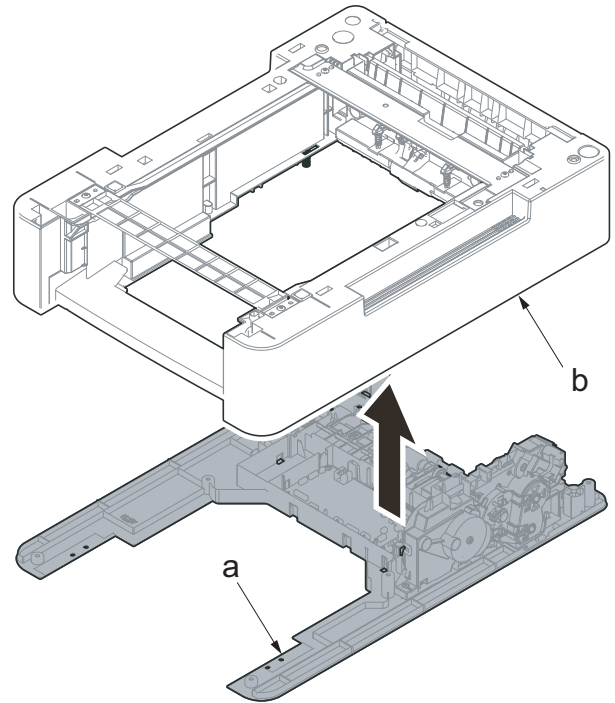


Figure 4-663

12. Push the lock lever (a).
13. Slide the feed roller pin (b) straight and release the lock.

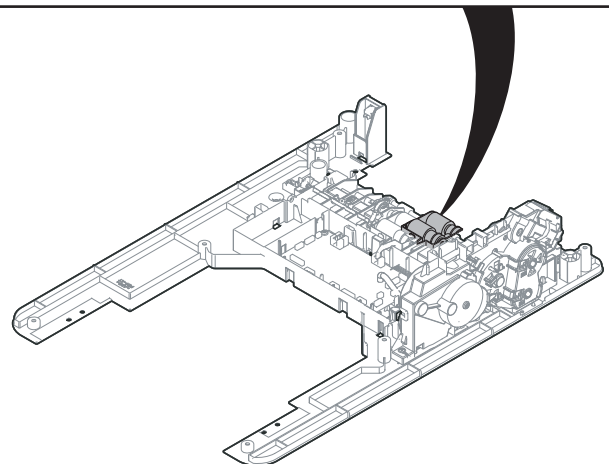
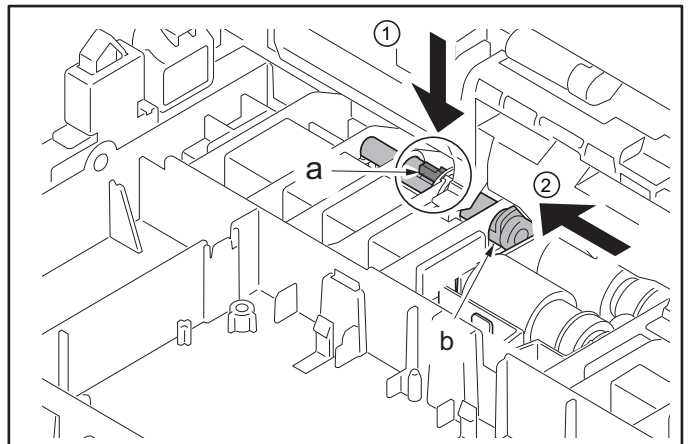


Figure 4-664

- 14. Push the lock lever B (a).
- 15. Detach the paper feed roller unit (b).

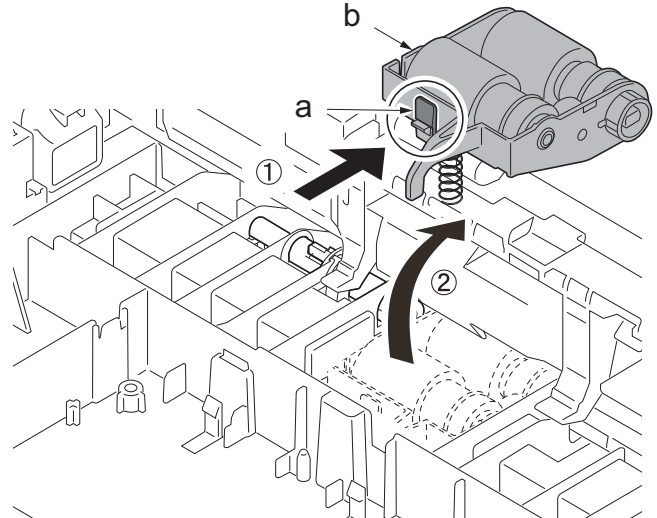


Figure 4-665

- 16. Slide the feed roller drive pin (a) and release it from the drive joint (b).

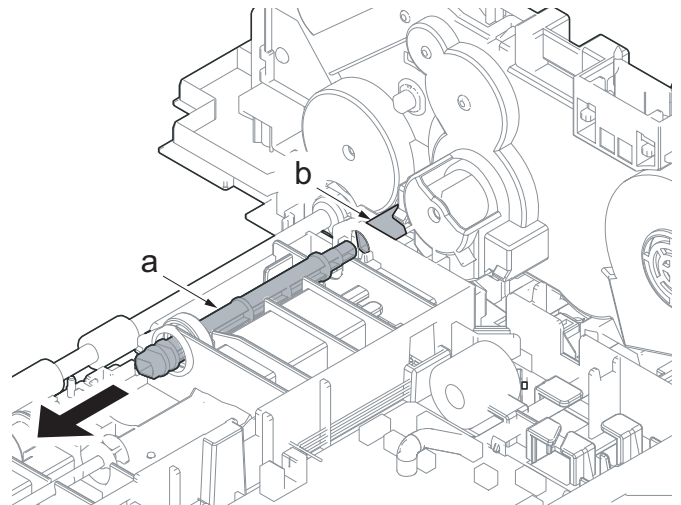


Figure 4-666

17. Remove two screws (a)(M3x8).

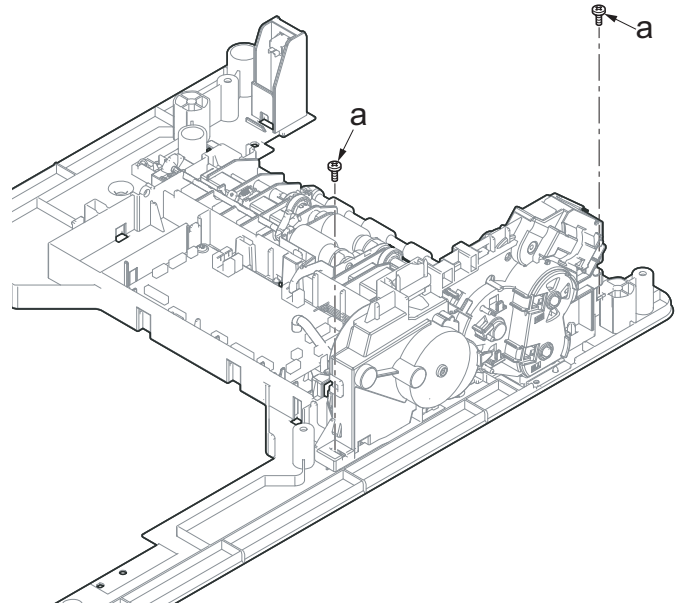


Figure 4-667

18. Release the hook (a) with a flat-blade screwdriver (b) and remove the PF drive unit (c).
19. Check the PF drive unit and clean or replace it if necessary.
20. Reattach the parts in the original position.

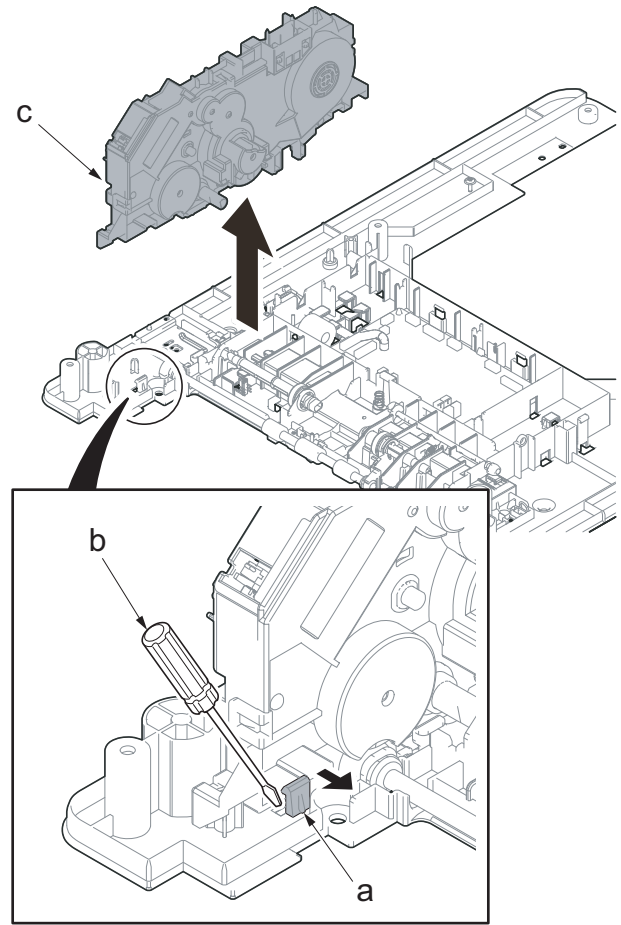


Figure 4-668

IMPORTANT

Before attaching the top cover (a), confirm the ground spring (b) is inserted in the hole on the main unit. Attach the spring with its projection facing down.

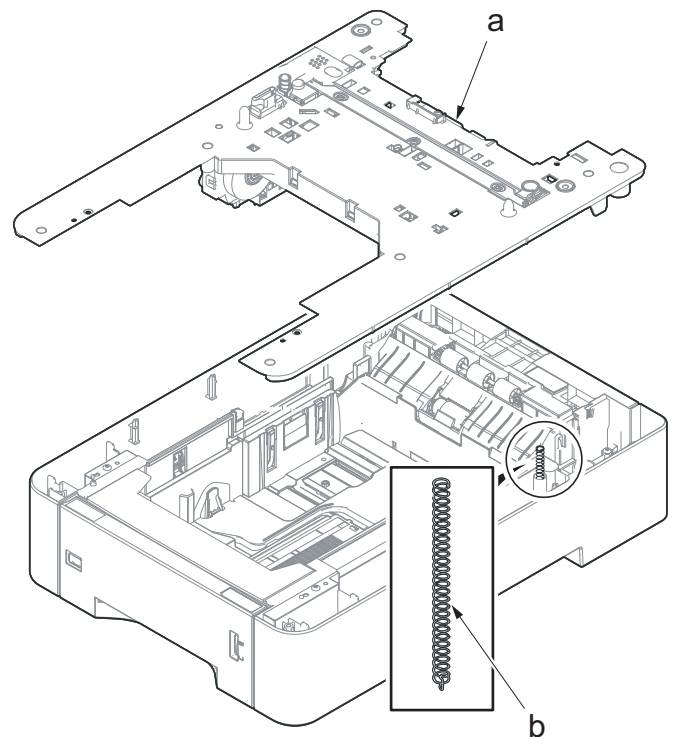


Figure 4-669

5 Firmware

5-1 Firmware update

Perform the following to update the firmware below.

*: The processing time is reduced with simultaneous processing by group.

[GROUP1 UPDATE]

UPDATE step	Target	Master file name	Message
1	Controller Package	DL_PKG_CTRL.2V0(3in1) DL_PKG_CTRL.2V1(4in1)	OPKG
	Product Line Platform	DL_CTRL_PLP.2V1	PLP
	Common Basic App	DL_CTRL_STDAP- P_CMN.2V1	CMN
	System Setting App	DL_CTRL_STDAP- P_SST.2V1	SST
	Maintenance App	DL_CTRL_STDAP- P_MNT.2V1	MNT
	Copy App	DL_CTRL_STDAP- P_CPY.2V1	CPY
	Print App	DL_CTRL_STDAP- P_PRT.2V1	PRT
	Send App	DL_CTRL_STDAP- P_SND.2V1	SND
	Box App	DL_CTRL_STDAPP_- BOX.2V1	BOX
	Fax App	DL_CTRL_STDAPP_- FAX.2V1 (4in1)	SFAX
	Web Page App	DL_CTRL_STDAP- P_WPG.2V1	WPG
	Auth App	DL_CTRL_STDAPP_- AUTH.2V1	AUTH
	Panel Control System App	DL_CTRL_STDAP- P_PCS.2V1	PCS
	Service Cooperation App	DL_CTRL_STDAP- P_SCO.2V1	SCO
	Extension Service Platform	DL_CTRL_EXSP.2V1	EXSP
	Package Version Info	DL_CTRL_VINF.2V0(3in1) DL_CTRL_VINF.2V1(4in1)	VINF
	Panel	DL_PANL.2V1	PANL
Browser	DL_BRWS.2V1	BRWS	
2	Option Language Data(1)	DL_OPT_xx.2V1 (*1)	OPT1
3	Option Language Data(2)		OPT2
4	Option Language Data(3)		OPT3

UPDATE step	Target	Master file name	Message
5	Option Language Data(4)		OPT4
6	Option Language Data(5)		OPT5
7	Option Language Data(Erase)	DL_OPT_ER.2V1	-
8	Color Table Data(Printer1)	DL_PCLT1.2V1	PCT1
9	Color Table Data(Printer2)	DL_PCLT2.2V1	PCT2
10	OCR Dictionary Data	DL_OCR.2P1	OCR

*1: "xx" contains alphanumeric characters depending on the option language.

*: When installing the OCR dictionary firmware, it is necessary that the SSD or the SD card has to be installed. Also, it is necessary to format the SSD / SD card at the system menu in the main unit.

[GROUP 2 UPDATE]: No applicable firmware is available.

[GROUP3 UPDATE]

UPDATE step	Target	Master file name	Message
1	Engine Firmware	DL_ENGN.2V1	ENGN
2	Paper Feeder	DL_03PK.2V1	PF

[GROUP4 UPDATE]

UPDATE step	Target	Master file name	Message
1	Sub Panel Board	DL_SPNL.2V1	SPNL

Verify the signature at firmware update

Verify the signature of the update file to prevent the firmware update with illegally falsified data.

File names of the signature and firmware certificate

Target	Signature file name	Firmware certificate file name
Product Line Platform	2V1_CTRL_PLP_sign.bin	2V1_CTRL_PLP_cert.pem
Common Basic App	2V1_CTRL_STDAPP_CMN_sign.bin	2V1_CTRL_STDAPP_CMN_cert.pem
System Setting App	2V1_CTRL_STDAPP_SST_sign.bin	2V1_CTRL_STDAPP_SST_cert.pem
Maintenance App	2V1_CTRL_STDAPP_MNT_sign.bin	2V1_CTRL_STDAPP_MNT_cert.pem
Copy App	2V1_CTRL_STDAPP_CPY_sign.bin	2V1_CTRL_STDAPP_CPY_cert.pem
Print App	2V1_CTRL_STDAPP_PRT_sign.bin	2V1_CTRL_STDAPP_PRT_cert.pem
Send App	2V1_CTRL_STDAPP_SND_sign.bin	2V1_CTRL_STDAPP_SND_cert.pem
Box App	2V1_CTRL_STDAPP_BOX_sign.bin	2V1_CTRL_STDAPP_BOX_cert.pem
Fax App	2V1_CTRL_STDAPP_FAX_- sign.bin(4in1)	2V1_CTRL_STDAPP_FAX_- _cert.pem(4in1)
Web Page App	2V1_CTRL_STDAPP_WPG_sign.bin	2V1_CTRL_STDAPP_WPG_cert.pem
Auth App	2V1_CTRL_STDAPP_AUTH_sign.bin	2V1_CTRL_STDAPP_AUTH_cert.pem

Target	Signature file name	Firmware certificate file name
Panel Control System App	2V1_CTRL_STDAPP_PCS_sign.bin	2V1_CTRL_STDAPP_PCS_cert.pem
Service Cooperation App	2V1_CTRL_STDAPP_SCO_sign.bin	2V1_CTRL_STDAPP_SCO_cert.pem
Extension Service Platform	2V1_CTRL_EXSP_sign.bin	2V1_CTRL_EXSP_cert.pem
Package Version Info	2V0_CTRL_VINF_sign.bin(3in1) 2V1_CTRL_VINF_sign.bin(4in1)	2V0_CTRL_VINF_cert.pem(3in1) 2V1_CTRL_VINF_cert.pem(4in1)
Panel	2V1_PANL_sign.bin	2V1_PANL_cert.pem
Browser	2V1_BRWS_sign.bin	2V1_BRWS_cert.pem
Option Language Data(1)	2V1_OPT_xx_sign.bin (*1)	2V1_OPT_xx_cert.pem (*1)
Option Language Data(2)		
Option Language Data(3)		
Option Language Data(4)		
Option Language Data(5)		
Option Language Data(Erase)	2V1_OPT_ER_sign.bin	2V1_OPT_ER_cert.pem
Color Table Data(Printer1)	2V1_PCLT1_sign.bin	2V1_PCLT1_cert.pem
Color Table Data(Printer2)	2V1_PCLT2_sign.bin	2V1_PCLT2_cert.pem
OCR Dictionary Data	2P1_OCR_sign.bin	2P1_OCR_cert.pem
Engine Firmware	2V1_ENGN_sign.bin	2V1_ENGN_cert.pem
Paper Feeder	2V1_03PK_sign.bin	2V1_03PK_cert.pem
Sub Panel Board	2V1_SPNL_sign.bin	2V1_SPNL_cert.pem

Note when upgrading the firmware

When using a USB memory requiring a long time to start up, the main unit starts up before executing the firmware upgrade and entering into the firmware upgrade fails.

Maintenance mode U025 firmware update (S): Execute the firmware upgrade at Firmware Update (Security).

Preparations

Unzip the file containing the downloaded firmware and then copy the firmware and high-speed master file (skip files: ES_SKIP.ON) in [FWUP_02V1] folder of the root folder of the USB memory.

*: If the high-speed master file exists, the same version firmware update is skipped.

1. After turning the power switch (a) on and the screen is properly displayed, turn the power switch (a) off.
2. Insert the USB memory (b) with the firmware into the USB memory slot (c) and turn the power switch (a) on.

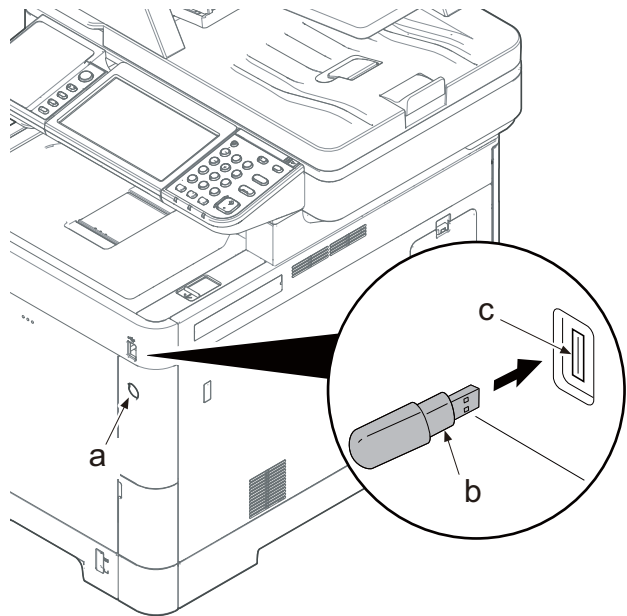
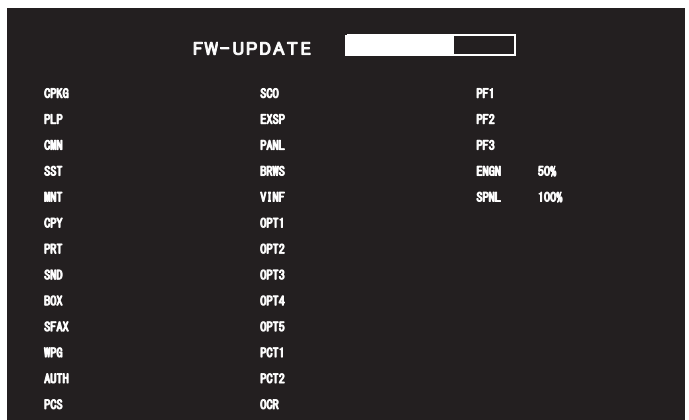


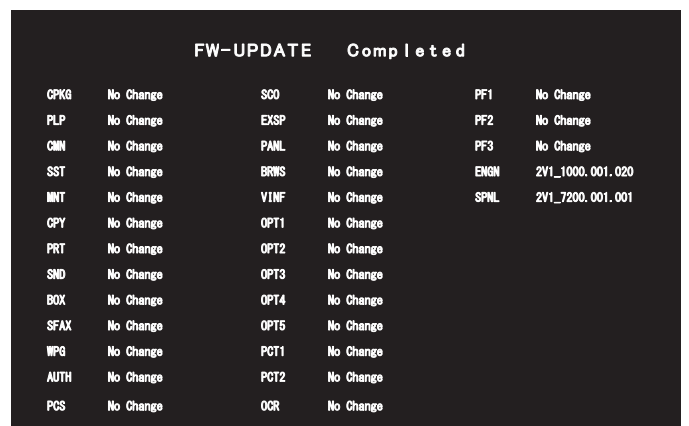
Figure 1-5-1

*: [FW-UPDATE] is parallelly processed and the progress is displayed.



*: Completed is displayed when the firmware update is completed.

*: Check if the new firmware versions are displayed.



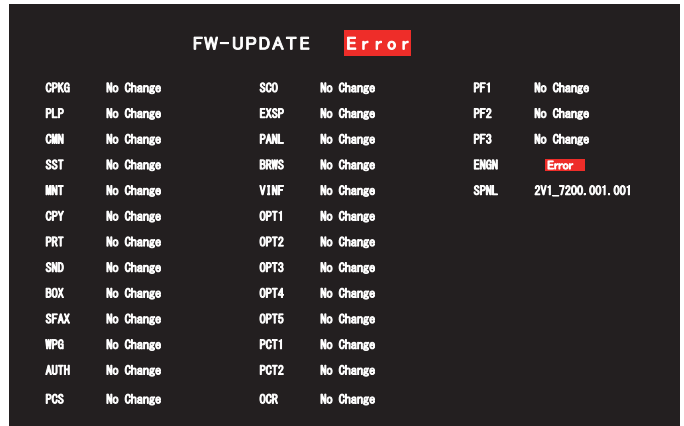
*: When there is no corresponding master file, "No Change" is displayed.

* is displayed after the firmware version update that has been skipped.

[-----] is displayed when the optional equipment is not installed.

For the case of an error

When an error occurs during the firmware upgrade, the process is immediately interrupted and the error code and error message are indicated.



Codes	Description	Codes	Description
0000	Others	S000	Other signature verification error *1
0100	No Master file	S001	Signature verification file is inadequate
0200	Version mismatch of the master file	N001	Network connection failed. *2 (There is no upgrade target interrupted)
03xx	No Download File (No.xx)		
04xx	File (No.xx) Checksum mismatch	N002	Network connection failed. *3 (There is an upgrade target interrupted)
05xx	File (No.xx) Preparation failure		
x6xx	File (No.xx) Oversize		
08xx	File (No.xx) Writing failure		

*1: Including the expired FM certificate.

*2: Automatically restarted for the normal start-up since the normal start-up is available next time.

*3: Transferred to the USB upgrade mode instead of the automatic restart since the normal start-up may not be available next time.

Indication of the signature verification result

Official signature verification file	Indicate the result
Both certificate and signature files exist and verification is successful.	Version number
Both certificate and signature files exist but verification is unsuccessful.	S000
Neither certificate nor signature files exist. Or either of them does not exist.	S001

3. Unplug the power cord and disconnect the USB memory.

4. Plug in the power cord and turn the power switch (a) on.

5. Check that the "Home" screen is displayed and then turn the power switch (a) off.

Note

Never turn the power switch off or disconnect the USB memory during the firmware update.

Safe-Update

When the firmware update was interrupted by power shut-off or disconnecting the USB memory during the firmware update, the firmware update is retried at the next power-on.

Turn the main power on again while the USB memory is installed.

*: The firmware update that was already completed before power shut-down is skipped.

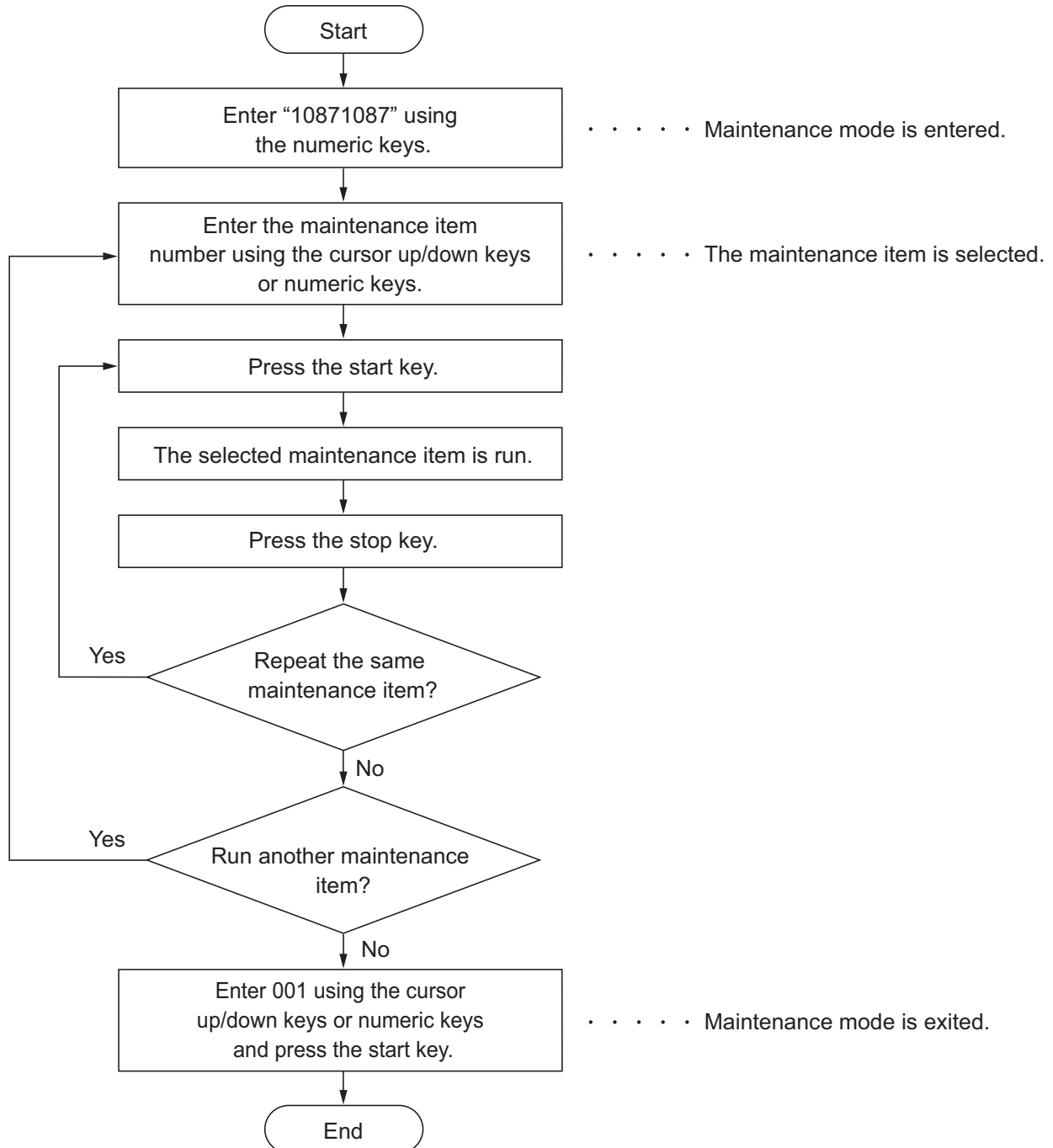
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6 Maintenance Mode

6-1 Maintenance Mode

The machine is equipped with a maintenance function which can be used to maintain and service the machine.

(1) Executing a maintenance mode



(2) Maintenance modes list

Section	No.	Content of maintenance item	Outline
General	U000	Output Maintenance Report	Printing the reports and exporting them to a USB Flash Drive
	U001	Exit Maintenance Mode	Canceling the maintenance mode
	U002	Set Factory Default	Initializing to the factory-default setting
	U004	Machine Number	Display of the machine serial number and setting
	U010	Set Maintenance Mode ID	Setting the maintenance mode ID
	U019	Firmware Version	Display of each PWB's firmware version
Initializa- tion	U021	Initializes Memory	Initializing the backup RAM
	U025	Firmware update(S)	Update of the firmware
Drive, paper feed, paper convey- ing and cooling system	U034	Paper timing data adjustment	Adjusting the leading edge timing and the center line
Optical	U065	Adjusting the magnification for table scanning	Adjusting the magnification for table scanning
	U066	Adjusting the table scanning timing	Adjusting the leading edge timing for table scanning
	U067	Adjusting the table scanning center line	Adjusting the center line for table scanning
	U068	DP scanning position adjustment	Adjusting the starting position for DP-scanning
	U070	DP magnification adjustment	Adjusting the magnification for DP-scanning
	U071	Adjusting the DP leading edge Timing	Adjusting the leading edge timing for DP-scanning
	U072	Adjusting the DP original center	Adjusting the center line for DP-scanning
	U091	White lines correction setting	Set the white lines detection threshold
High volt- age sec- tion	U110	Drum counter	Display the drum counter
	U117	Drum unit number	Display the drum number
	U120	Drum drive distance counter	Display the drum drive distance counter
	U127	Clearing the transfer count	Display of the maintenance counts
Devel- oper sec- tion	U136	Toner level detection setting	Set the number of pages printable at toner near-end
	U140	Developer bias adjustment	Adjust the developer bias values
	U157	Developer drive time	Display/set the developer drive time
	U158	Developer counter	Display/set the developer counter

Section	No.	Content of maintenance item	Outline
Fuser section	U167	Clearing the fuser count	Display of the maintenance counts and checking/clearing
	U198	Fuser phase control setting	Flicker countermeasure setting
Operation section Support equipment	U201	Initialize Touch Panel	Correction of the detection position of the touch panel
	U203	Check DP Operation	Checking the DP paper conveying operation on DP simple substance
	U222	Set IC Card Type	Setting the IC card type
Mode setting	U250	Change Maintenance Count Preset	Changing the preset value
	U251	Clear/Check the maintenance counter	Display of the maintenance counts and changing/clearing
	U252	Set Destination	Setting the operation and screen of the machine according to the destination
	U253	Set Double/Single Count	Setting the count methods by color mode
	U260	Feed/eject counter switch	Setting the count timing
Mode setting	U278	Delivery date setting	Register delivery date
	U283	Setting China Red	Enable/Disable China Red setting
	U285	Set Service Status Page	Setting the print coverage report output
	U287	Automatic recovery function	Set whether to automatically recover after error
	U290	Set Application storage drive	Setting the HyPAS application storage drive
	U326	Black line cleaning indication	Switch the black line cleaning guidance display
	U332	Adjust Coverage Size	Adjust Coverage Size (Message: Adj Calc Rate)
	U345	Set the maintenance time precaution display	Setting the number of sheets of a check close display till maintenance timing
	U346	Selecting Sleep Mode	Setting the sleep mode of BAM related
Image processing	U402	Print margin adjustment	Adjusting the margin of a leading edge, left edge, right edge and a trailing edge when writing
	U403	Scanning margin adjustment (table)	Adjusting the margin of the reading data by picture reading of table scanning
	U404	Scanning margin adjustment (DP)	Adjusting the margin of the reading data by picture reading of table scanning
	U407	Adjusting the writing timing (Duplex/Reversal)	Adjusting the writing timing when duplex printing
	U411	Scanner auto adjustment	Adjusting the scanner and DP automatically
	U425	Target adjustment	Inputting the Lab value printed on an adjustment original
Network	U520	Set TDRS	Performing TDRS settings and information views

Section	No.	Content of maintenance item	Outline
FAX	U600	Initialize: All Data	Initialize all data and image memory.
	U601	Initialize: Keep Data	Initializing the software switches of other than the machine data
	U603	User Data 1	Makes user settings to enable the use as a FAX
	U604	User Data 2	Makes user settings to enable the use as a FAX
	U605	Clear Data	Initializing all the data regarding the FAX communication
	U610	System 1	Setting the number of lines to ignore at 100% magnification and automatic reduction
	U611	System 2	Setting the number of adjustment lines for automatic reduction
	U612	System 3	Setting regarding the FAX communication operation
	U620	FAX System	Setting the remote change mode
	U625	Set Communication	Set the interval of a redial and the number of times
	U630	Communication control 1	Setting regarding the FAX communication
	U631	Communication Control 2	Setting regarding the FAX communication
	U632	Communication Control 3	Setting regarding the FAX communication
	U633	Communication Control 4	Setting regarding the FAX communication
	U634	Communication Control 5	Set the TCF judgment standard
	U640	Communication Time 1	Setting the detection time by remote switching mode
	U641	Communication Time 2	Set the timeout time for the FAX communication
	U650	Modem 1	Set the G3 cable equalizer
	U651	Modem 2	Set the modem output level
	U660	Ring setting	Set NCU (network control unit)
	U670	Output List	Output the list of the data regarding the fax communication
U695	Fax function customization	Set On/Off the FAX batch transmission	
U699	Set: Soft SW	Set the individual software switches on the FAX PWB	
Others	U901	Clearing the counters by paper source	Displays/clears the counters by paper source
	U903	Clearing the jam counter	Displays/clears number of occurrence by jam trigger code
	U904	Clearing the service call error counter	Displays/clears the service call error and system error counts
	U905	Optional counter	Displays the counts
	U908	Total counter	Displays the total counts
	U910	Black rate data	Clearing the print coverage data and its period

Section	No.	Content of maintenance item	Outline
Others	U911	Counter by media type	Displays the counts by media type
	U917	Read/Write Backup Data	Reading/writing of backup data to USB Flash Drive
	U920	Billing counter	Display and clear the billing counts
	U927	Clearing all the billing/life counters	Clear the billing counts and machine life counts
	U928	Machine life counter	Display the machine life counts
	U930	Checking/clearing the main charger roller count	Display and set the main charger roller counts
	U977	Setting the data capture mode	Store the data sent to the MFP into a USB Flash Drive
	U984	Developer unit number	Displays the developer unit number
	U991	Scanner counter	Displays the scanner count

(3) Content of the maintenance mode

U000	Output Maintenance Report (Message: Mainte Report)
-------------	---

Description

Check the current settings of the maintenance items, paper jam and service call error occurrences. Output the service status page.

Also, send output data to a USB Flash Drive.

Purpose

Check the current settings of the maintenance items, paper jam and service call error occurrences

: Before initializing or replacing the backup RAM, output the list of the current settings of the maintenance items to reenter the settings after initialization or replacement.

Method

1. Press the [Start] key.
2. Select the item to output.

Items	Output list
Maintenance	Maintenance report
User Status	User Status report
Svc Status	Service Status report
Event	Event log report
NW Status	Network status report
Fax Sys Conf*1	Prints the list of local telephone number and confidential boxes.
Fax Act List*1	Prints the list of the error logs and communication lines.
Fax Self Sts*1	Maintenance mode setting, Fax communication setting output.
Fax Pcl List*1	Outputs a list of communication procedures.
Fax Err List*1	Output the error list.
LLU Report	LLU Report
All	All kind of report

*4 in 1 model

3. Press the [Start] key to output the list.

* :When A4/Letter paper is available, a report of this size is output. If not, specify the paper feed location. Output status is displayed.

Method: When sending output data to the USB Flash Drive

1. Press the [Start] key.
2. Insert a USB Flash Drive in the USB Flash Drive slot of the main unit.
3. Select the item to send.
4. Select [USB(Text)] or [USB(HTML)].

Items	Output list
Print	A report is printed.
USB(Text)	Destination: send to USB Flash Drive (text format)
USB(HTML)	Destination: send to USB Flash Drive (HTML format)

5. Press the [Start] key.

* :The output data is sent to the USB Flash Drive.

* :LLU Report data can not be transfered to the USB memory. Only print output is possible.

Completion

Press the [Stop] key.

* :The screen for selecting a maintenance item No. is displayed.

Detail of event log (1)

Event Log

MFP
ECOSYS M6635cidn

ZA66600100
(2) 2017/09/19 15:15
[XXXXXXXX] [XXXXXXXX] [XXXXXXXX]
(3) (4) (5)

(1) Firmware version 2V1_S000.001.260 2017.09.04

(6) Machine No.:ZA66600100 (7) Total Life Count:2188 (8) Color Life Count:2188

(9) Paper Jam Log

#	Count.	Event Descriptions	Date and Time
12	5555(5558)	0501.01.08.01.00	2014/02/12 17:30
11	4444(4448)	4002.01.08.01.00	2014/02/12 17:30
10	3333(3338)	0501.01.08.01.00	2014/02/12 17:30
9	2222(2228)	4002.01.08.01.00	2014/02/12 17:30
8	1111(1118)	0501.01.08.01.00	2014/02/12 17:30
7	999(998)	4002.01.08.01.00	2014/02/12 17:30
6	88(88)	0501.01.08.01.00	2014/02/12 17:30
5	77(77)	4002.01.08.01.00	2014/02/12 17:30
4	66(66)	0501.01.08.01.00	2014/02/12 17:30
3	55(55)	4002.01.08.01.00	2014/02/12 17:30
2	44(44)	0501.01.08.01.00	2014/02/12 17:30
1	333(338)	4002.01.08.01.00	2014/02/12 17:30

(11) Maintenance Log

#	Count.	Item.	Data and Time
2	4444(5558)	02.01	2014/02/12 17:30
1	2222(5558)	02.02	2014/02/12 17:30

0501.01.08.01.00 (a) (b) (c) (d) (e)
--

(10) Service Call Log

#	Count.	Service Code	Date and Time
8	9999(9998)	01.00.0100	2014/07/05 10:00
7	8888(8888)	02.01.0100	2014/07/04 10:00
6	7777(7778)	01.01.0000	2014/06/26 10:00
5	6666(6668)	01.00.0000	2014/05/01 10:00
4	5555(5558)	01.01.0000	2014/04/05 10:00
3	4444(4448)	02.00.0000	2014/02/21 10:00
2	3333(3338)	02.00.0000	2013/11/30 10:00
1	2222(2228)	01.00.0000	2013/11/24 10:00

(12) Toner Log

#	Count.	Item	Serial Number	Date and Time
5	9999(9998)	01.00	0123456789ABCDEF	2014/05/01 10:00
4	8888(8888)	01.00	0123456789ABCDEF	2014/04/05 10:00
3	7777(7778)	01.00	0123456789ABCDEF	2014/02/21 10:00
2	6666(6668)	01.00	0123456789ABCDEF	2013/11/30 10:00
1	5555(5558)	01.00	0123456789ABCDEF	2013/11/24 10:00


1

Figure 6-6

Detail of event log (2)

Event Log

MFP
ECOSYS M6635cidn
Firmware version 2V1_S000.001.260 2017.09.04


Z2P7400100
2017/09/19 15:15
[XXXXXXXX] [XXXXXXXX] [XXXXXXXX]

Machine No.:Z2P7400100Total Life Count:2188Color Life Count:2188

(12) Counter Log

(f) J0000: 0	J4302: 0
J0100: 1	J4303: 1
J0101: 11	J4304: 11
J0104: 222	J4309: 2
J0105: 1	J9000: 1
J0106: 1	J9004: 0
J0107: 1	J9010: 1
J0110: 1	J9060: 1
J0111: 1	J9061: 2
J0211: 1	J9062: 1
J0212: 1	J9110: 1
J0213: 999	J9120: 0
J0501: 1	J9200: 1
J0502: 1	J9210: 1
J0503: 1	J9220: 2
J0504: 1	
J0508: 1	(g) C0000: 0
J0509: 1	C0001: 1
J0511: 1	C0002: 2
J0512: 1	C0003: 3
J0513: 1	C0004: 4
J0514: 1	C0005: 5
J0518: 1	C0006: 6
J0519: 1	C0007: 7
J1403: 1	C0008: 8
J1404: 1	C0009: 9
J1413: 1	C0010: 10
J1414: 1	CF245: 11(0)
J1604: 1	CF248: 12(0)
J1614: 1	CF345: 13(0)
J4002: 1	(h) T00: 10
J4003: 1	M00: 20
J4004: 1	M02: 30
J4009: 1	
J4012: 1	
J4013: 1	
J4014: 1	
J4019: 1	
J4201: 1	
J4202: 0	
J4203: 1	
J4204: 1	
J4208: 0	
J4209: 1	
J4211: 11	
J4212: 222	
J4213: 1	
J4214: 2	
J4218: 1	
J4219: 2	
J4301: 1	

2

Figure 6-7

Description of event log

No.	Description			
(1)	System version			
(2)	System date			
(3)	Engine software version			
(4)	Engine boot version			
(5)	Operation panel firmware version			
(6)	Machine serial number			
(7)	Total life counter			
(8)	Color life counter			
(9)	Paper Jam Log			
	#	Count.	Event	Date and Time
	Remembers 1 to 16 of occurrence. : If the occurrence of the previous diagnostic error is 16 or less, all of the diagnostics errors are logged. The oldest log is deleted when exceeding 16 events.	The total page count at the time of paper jam. (xxxxx): total color page count.	Log code (hexadecimal, 5 categories) (a) Cause of paper jam (b) Paper source (c) Paper size (d) Paper type (e) Paper eject	Date and time of occurrence
	(a) Detail of Cause of paper jam (Hexadecimal)			
	: For the detail of cause of paper jam, refer to " Paper Mis feed Detection". (P.7-81)			
	(b) Detail of paper source (Hexadecimal)			
	00: MP tray 01: Cassette 1 02: Cassette 2 (paper feeder) 03: Cassette 3 (paper feeder) 04: Cassette 4 (paper feeder) 05 to 09: Reserved			
	(c) Detail of paper size (Hexadecimal)			
	00: Not specified 01: Monarch 02: Business 03: International DL 04: International C5 05: Executive 06: Letter-R 86: Letter-E 07: Legal 08: A4R 88: A4E 09: B5R 89: B5E 0A: A3	0B: B4 0C: Ledger 0D: A5R 0E: A6 0F: B6 10: Commercial #9 11: Commercial #6 12: ISO B5 13: Custom size 1E: C4 1F: Hagaki 20: Oufuku Hagaki 21: Oficio II	22: Special 1 23: Special 2 24: A3 wide 25: Ledger wide 26: Full bleed paper (12 x 8) 27: 8K 28: 16K-R A8: 16K-E 32: Statement-R B2: Statement-E 33: Folio 34: Youkei type 2 35: Youkei type 4	

No.	Description				
(9) cont.	Paper Jam Log				
	(d) Detail of paper type (Hexadecimal)				
	01: Plain 02: Transparency 03: Preprinted 04: Labels 05: Bond 06: Recycled 07: Vellum 08: Rough 09: Letterhead	0A: Color 0B: Prepunched 0C: Envelope 0D: Cardstock 0E: Coated 0F: 2nd side 10: Media 16 11: High quality	15: Custom 1 16: Custom 2 17: Custom 3 18: Custom 4 19: Custom 5 1A: Custom 6 1B: Custom 7 1C: Custom 8		
	(e) Output tray (hexadecimal)				
	01: Face-down tray (FD)				
(10)	Service Call Log				
	#	Count.	Service Code	Date and Time	
Remembers 1 to 8 of occurrence. : If the occurrence of the previous diagnostic error is 8 or less, all of the diagnostics errors are logged.	The total page count at the time of the self diagnostic error. (xxxxx): total color page count.	The first two digits (identification) 01: Service call / System error 02: Unit replacement Next two digits (Auto reboot information) 00: Without auto reboot 01: Auto reboot execution Last four digits Self diagnostic error code (See page P.7-136) (Example) 01.00.6000 01 indicates Self diagnostic error, 00 without auto reboot and 6000 Self diagnostic error code. U287 sets the auto reboot function.	Date and time of occurrence		

No.	Description			
(11)	Maintenance Log			
	#	Count.	item	Date and Time
Remembers 1 to 8 of occurrence. *: If the occurrence of the previous replacement of the maintenance replacing item is 8 or less, all of the occurrences of replacement are logged.	Total page count at the time of the replacement of the maintenance replacement item. (xxxxx): total color page count. : The toner replacement log is triggered by toner empty. This record may contain such a reference as the toner container is inserted.	Maintenance item code (1-byte value to indicate 2 items) First byte (Replacing item) 02: Maintenance kit Second 1 byte (Replacing item type) 01: MK-5140/5142/5144 (30 ppm model) MK-5155/5157/5159 (35 ppm model)	Date and time of occurrence	
(12)	Toner Log			
	#	Count.	item. Serial Number	Date and Time
Record 1 to 32 occurrence of the past unknown toner detection. If number of the past unknown toner detection is less than 32, all of them are described.	When using the non-genuine toner container, record the log at occurrence of the toner container replacement (total page count). (xxxxx): total color page count.	log code First 1byte(Replacing item) 01: Genuine product 02: Non-genuine product Next 1byte (type of replacement item) 00: Black 01: Cyan 02: Magenta 03: Yellow Last 16 digits Display the serial number of the toner container.	Date and time of occurrence	

No.	Description			
(13)	Counter Log			
	<p>(f) Paper jam</p> <p>Indicates the log counter of paper jams depending on location. Refer to Paper Jam Log.</p> <p>: All instances including those not having occurred are displayed.</p>	<p>(g) Self diagnostic error</p> <p>Indicate the log counter of the self diagnostics errors depending on cause.</p> <p>The number of auto reboot is also displayed at the service call/system error.</p> <p>Example: C6000: 4 Self diagnostic error 6000 occurred four times.</p>	<p>(h) Maintenance replacement item</p> <p>Indicate the log counter depending on the maintenance replacement item.</p> <p>T: Toner container 00: Black 01: Cyan 02: Magenta 03: Yellow</p> <p>M: Maintenance kit 01: MK-5140/5142/5144 (30 ppm model) MK-5155/5157/5159 (35 ppm model)</p> <p>Example: T00: 1 The toner container (Black) has been replaced once.</p> <p>The toner replacement log is triggered by toner empty. This record may contain such a reference as the toner container is inserted.</p>	<p>Consist of three log counters of paper jams, self diagnostics errors, and maintenance replacement items.</p>

Detail of service status page



Service Status Page

MFP
ECOSYS M6635cidn

(2) Z2P7400043

(3) 01/08/2017 14:30

(4)(5) [2.1.6] [2V1_ xxxx.xxx.xxx]

(1) Firmware Version 2V1_S000.001.260 2017.09.01

(6) [2V1_1000.001.020] [2V1_1000.001.020] [2V1_1100.001.001]

(7) (8)

Paper Feeder 2

Controller Information

Memory Status

- (9) Standard Size 1.0 GB
- (10) Option Slot 0 MB
- (11) Total Size 1.0 GB

Time

- (12) Local Time Zone
GMT Greenwich Mean Time: Dublin, Edinburgh, Lisbon, London
- (13) Date and Time 04/08/2016 01:46
- (14) Time Server

Installed Options

- (15) Document Processor Dual Scan
- (16) Paper Feeder 2 Not Installed
- (17) Paper Feeder 3 Not Installed
- (18) Paper Feeder 4 Not Installed
- (19) SD Card Not Installed
- (20) SSD Not Installed
- (21) Card Authentication Kit (B) Not Installed
- (22) Data Security Kit (E) Not Installed
- (23) UG-33 Not Installed
- (24) USB Keyboard Not Connected
- (25) USB Keyboard Type US-English
- (26) Scan extension kit(A) Not Installed

(27) Print Coverage

Average (%) / Usage Page(A4/Letter Conversion)

- (28) Total
 - K(Total): 0.00 / 0.00
 - K(Color) : 0.00 / 0.00
 - K(B&W): 0.00 / 0.00
 - C: 0.00 / 0.00
 - M: 0.00 / 0.00
 - Y: 0.00 / 0.00
- (29) Copy
 - K(Total): 0.00 / 0.00
 - K(Color) : 0.00 / 0.00
 - K(B&W): 0.00 / 0.00
 - C: 0.00 / 0.00
 - M: 0.00 / 0.00
 - Y: 0.00 / 0.00
- (30) Printer
 - K(Total): 0.00 / 0.00
 - K(Color): 0.00 / 0.00
 - K(B&W): 0.00 / 0.00
 - C: 0.00 / 0.00
 - M: 0.00 / 0.00
 - Y: 0.00 / 0.00

- (31) FAX
 - K(Total): 0.00 / 0.00

(32) Period (2017/06/23 - 2017/07/03 01:46)

- (33) Last Page (%) 0.00
- (34) Last Job (%) 0.00
- Total K (%) 0.00
- Color K/C/M/Y (%) 0.00 / 0.00 / 0.00 / 0.00
- B&W K (%) 0.00

FAX Information

- (35) Rings (Normal) 2
- (36) Rings (FAX/TEL) 2
- (37) Rings (TAD) 10

(38) FRPO Status

Reserved	B0	00
Default Pattern Switch	B8	00
Page Orientation	C1	00
Default Font Number	C5*10000+C2*100+C3	00000
PCL Font Switch	C8	00
Reserved	D6	03
Host Buffer Size	H8	05
FF Time Out	H9	06

Reserved	I5	01
Reserved	I6	00
KIR Mode	N0	02
Duplex mode	N4	00
Sleep Timer	N5	120
EcoPrint Mode	N6	00
Reserved	N7	00
Print Resolution	N8	01
Default Emulation	P1	06
CR/LF Action	P2/P3	1/1
AES Mode	P4	00
AES Option 1/2	P7	10
Command Recognition	P9	82
Default Paper Output	R0	01
Default Paper Size	R2	00
Reserved	R3	00
Default Paper Source	R4	01
MP Tray Paper Size	R7	01
Override A4/LT	S4	01
Host Buffer Size Rate	S5	01
RAM Disk Size	S6	128
RAM Disk Mode	S7	01
Wide A4	T6	00
Default Line Spacing	U0+U1/100	6.00
Default Character Spacing	U2+U3/100	10.00
Reserved	U4	01
Country Code/Symbol Set	U6/U7	41/53
Default Pitch	U8+U9/100	10.00
Default Font Height	V0*100+V1+V2/100	12.00
Default Font Name	V3	Courier
Courier/LetterGothic	V9	05
MP Tray Paper Type	X0	01
Cassette 1 Paper Type	X1	01
Cassette 2 Paper Type	X2	01
Cassette 3 Paper Type	X3	01
Cassette 4 Paper Type	X4	01
PCL Paper Source	X9	00
Auto Error Clear	Y0	00
Error Clear Timer	Y1	06
Finishing error	Y3	127
Special Type Act Mode	Y4	00
PDF mode	Y5	00
e-MPS error control	Y6	03

RP Code


- (39) 0008 01E2 3177
- (40) 0008 027A C873
- (41) FFFF FFFF FFFF
- (42) 0008 01E2 31F5

Figure 6-8

Detail of service status page (2)

Service Status Page

MFP
ECOSYS M6635cidn



(2) Z2P7400006
(3) 01/09/2017 14:30
(4)(5) [2.1.6] [2V1_xxxx.xxx.xxx]
(6) [2V1_1000.001.020] [2V1_1100.001.001] [2V1_1100.001.001]
(7) (8)

Controller Information		Engine Information	
Print Settings		(46) NVRAM Version	_Cb26630_Cb26630
(43) MP Tray Priority	Off	(47) MAC Address	00:17:C8:16:84:04
(44) Altitude Adjustment Status	Normal	(48) DP Counters	
		Total	0

(45) System Firmware(Details)

- 2V1_Q000.001.146
- 2V1_QA00.001.146
- 2V1_R000.001.146
- 2V1_R100.001.146
- 2V1_R200.001.146
- 2V1_R300.001.146
- 2V1_R400.001.146
- 2V1_R500.001.146
- 2V1_R600.001.146
- 2V1_R700.001.146
- 2V1_R800.001.146
- 2V1_R900.001.146
- 2V1_RB00.001.146
- 2V1_RD00.001.146
- 2V1_S100.001.146

2

Figure 6-9

Detail of service status page (3)

Service Status Page

MFP
ECOSYS M6635cidn

(1) Firmware Version 2V1_S000.001.260 2017.09.01

(2) Z2P7400012
(3) 01/09/2017 14:30
(4)(5) [2.1.6] [2V1_xxxx.xxx.xxx]
(6) [2V1_1000.001.020] [2V1_1100.001.001] [2V1_1100.001.001]
(7) (8)

(49)(50) 1/4
 (51) 600/600
 (52) 0/0/0/0/0/0/
 (53) 0/0/0/6/0/0/
 (54) 0/50/0/50/
 (55) 0002173/0002173/0000000/0001887////0000286/
 0000000/0000000/0000000/0000000/0000000/0000000/
 0000000/0000000/0000000/0000000/0000000/0000000/0000000/
 (56)-(75) F00/U00/0/1/0/0/1/28/25/45/65/0/0/0/5/1/0/1/3/
 (76) 2010/9000/4010/5000/3010/2010/4000/4010/3010/2010/5000/6000/
 5010/2010/2010/2010/2010/2010/2010/2010/2010/2010/
 (77) 00000000/00000000/00000000000000000000000000000000/00000000000000000000000000000000/0000/00/00
 00000000/00000000/00000000000000000000000000000000/00000000000000000000000000000000/0000/00/00
 00000000/00000000/00000000000000000000000000000000/00000000000000000000000000000000/0000/00/00
 00000000/00000000/00000000000000000000000000000000/00000000000000000000000000000000/0000/00/00
 00000000/00000000/00000000000000000000000000000000/00000000000000000000000000000000/0000/00/00
 00000000/00000000/00000000000000000000000000000000/00000000000000000000000000000000/0000/00/00
 00000000/00000000/00000000000000000000000000000000/00000000000000000000000000000000/0000/00/00
 (78) 00000000/00000000/00000000000000000000000000000000/00000000000000000000000000000000/0000/00/00
 00000000/00000000/00000000000000000000000000000000/00000000000000000000000000000000/0000/00/00
 00000000/00000000/00000000000000000000000000000000/00000000000000000000000000000000/0000/00/00
 00000000/00000000/00000000000000000000000000000000/00000000000000000000000000000000/0000/00/00
 00000000/00000000/00000000000000000000000000000000/00000000000000000000000000000000/0000/00/00
 (79) /0/
 (80) [][][]
 (81) [][][][][]
 (82) [][]
 (83) 0258000000/0258000000/0000-----/-----/-----00/000000002E/C3694B6---/-----/-----/---0000000/
 0-----/-----/-----/-----0/0000000---/-----/-----00A00A8/
 C00360000-/-----/-----/-----0000000/0-----/-----00000/000-----/
 ---96AF961/43C14-----/---000493E/0-----0/000000000/249F0000249F00000000-/-----000/0000000000/
 0000000000/000000000-/0202-----/-----/-----/-----/-----000/000000
 -----/-----/-----/-----/-----/-----/-----000/000000

(84)(85) 0/4/
 (86)-(89) 1/0/5.0/12.0
 -/-/-/
 (90)(91) 0/5/
 (92) 1/
 (93)-(95) 1/0/1/
 (96) EZJ00Z400033/
 (97) EZK00Z400016/

3

Figure 6-10

No.	Items	Description
(1)	Firmware Version	-
(2)	Machine serial number	
(3)	System date	-
(4)	HyPAS API version	
(5)	Browser version	
(6)	Engine software version	-
(7)	Engine boot version	-
(8)	Operation panel software version	-
(9)	Standard memory size	-
(10)	Optional memory size	-
(11)	Total memory size	-
(12)	Local time zone	-
(13)	Report output date	Day/Month/Year hour:minute
(14)	NTP server name	-
(15)	Document processor type	
(16)	Availability of the optional paper feeder 2	Installed/Not Installed
(17)	Availability of the optional paper feeder 3	Installed/Not Installed
(18)	Availability of the optional paper feeder 4	Installed/Not Installed
(19)	Availability of the SD card	Installed/Not Installed
(20)	Availability of the SSD	Installed/Not Installed
(21)	Availability of the UG-33	Installed/Not Installed/Trial
(22)	Availability of the Security Kit(E)	Installed/Not Installed
(23)	Availability of the UG-33	Installed/Not Installed/Trial
(24)	Availability of the USB Keyboard	Installed/Not Installed
(25)	Type of the USB keyboard	US-English/US-English with Euro symbol
(26)	Scan extension kit(A)	Installed/Not Installed/Trial
(27)	Page count converted to the A4/Letter size	Print Coverage provides a close-matching reference of toner consumption and will not match the actual toner consumption.
(28)	Average coverage for total	Black/Cyan/Magenta/Yellow
(29)	Average coverage for copy	Black/Cyan/Magenta/Yellow
(30)	Average coverage for printer	Black/Cyan/Magenta/Yellow
(31)	Average coverage for FAX	Black/Cyan/Magenta/Yellow
(32)	Cleared date and output date	-
(33)	Coverage on the last output page	-

No.	Items	Description
(34)	Coverage on the last output job	-
(35)	Number of rings	0 to 15
(36)	Number of rings before automatic switching	0 to 15
(37)	Number of rings before connecting to the answering machine	0 to 15
(38)	FRPO setting	-
(39)	RP code	Code the engine firmware version and the date of the latest update.
(40)	RP code	Code the main firmware version and the date of the latest update.
(41)	RP code	Code the engine firmware version and the date of the previous update.
(42)	RP code	Code the main firmware version and the date of the previous update.
(43)	MP tray priority setting	Off: No setting Auto: Auto paper feed Always: All times
(44)	Altitude Adjustment	Normal/1001-2000m/2001-3000m/3001-3500m
(45)	System Firmware (detail)	-
(46)	NVRAM version	<p>_ 1F3 1225 _ 1F3 1225 (a)(b)(c)(d)(e)(f) (a) Consistency of the current firmware version and the database _ (underscore): OK * (Asterisk): NG (b) Database version (c) The oldest time stamp of database version (d) Consistency of the current firmware version and the ME firmware version _ (underscore): OK * (Asterisk): NG (e) ME firmware version (f) The oldest time stamp of the ME firmware version Normal if (a) and (d) are underscored, and (b) and (e) are identical with (c) and (f).</p>
(47)	Mac address	-
(48)	DP counter	Display the number of times of DP feeding.
(49)	Destination information	-
(50)	Area information	-
(51)	Margin setting	Top margin/Left margin
(52)	Top offset for each cassette	MP tray Top offset/ Paper feeder 2 Top offset/ Paper feeder 3 Top offset/ Paper feeder 4 Top offset/ Duplex Top offset Rotation copy Top offset

No.	Items	Description
(53)	Left offset for each cassette	MP tray Left offset/ Paper feeder 2 Left offset/ Paper feeder 3 Left offset/ Paper feeder 4 Left offset/ Duplex Left offset / Rotation copy Left offset
(54)	L parameters	Top margin integer part/Top margin decimal part/Left margin integer part /Left margin decimal part
(55)	Life counter (The first line)	Machine life/MP tray/Paper feeder 1/Paper feeder 2/ Paper feeder 3/Paper feeder 4/Duplex
	Life counter (The second line)	Drum unit K/Drum unit C/Drum unit M/Drum unit Y/Primary transfer unit/Developer unit K/Developer unit C/ Developer unit M/Developer unit Y/Maintenance kit A
(56)	Panel lock information	F00: OFF F01: Partial lock1 F02: Partial lock2 F03: Partial lock3 F04: Full lock
(57)	USB information	U00: Connected/Not Connected U01: Full speed U02: Hi speed
(58)	Paper handling information	0: Paper source select 1: Paper source fixed
(59)	Auto cassette change	0: OFF 1: ON (Default)
(60)	Color printing double count mode	0: All single counts 3: Folio (Less than 330mm length), Single counts
(61)	Black and white printing double count mode	0: All single counts 3: Folio (Less than 330mm length), Single counts
(62)	Billing counts timing	0: When secondary paper feed starts 1: When the paper is ejected
(63)	Temperature (machine inside)	-
(64)	Temperature (machine outside)	-
(65)	Relative humidity (machine outside)	-
(66)	Absolute humidity (machine outside)	-
(67)	Machine inside humidity	-
(68)	LSU1 temperature information	-
(69)	LSU2 temperature information	-
(70)	DRT information	-
(71)	Fixed assets number	-
(72)	Job end judgment time-out time	-
(73)	Job end detection mode	0: Detects as one job, even if contained multiple jobs 1: Detects as individual job, dividing multiple jobs at a break in job

No.	Items	Description
(74)	Prescribe environment reset	0: Off 1: On
(75)	Scan to SMB mode setting	0: Off 1: On
(76)	Media type attributes 1 to 28 (Not used: 18, 19, 20) *: For details on settings, refer to MDAT command in "Prescribe Commands Reference Manual".	Weight settings Fuser settings 0: Light 0: High 1: Normal 1 1: Middle 2: Normal 2 2: Low 3: Normal 3 3: Vellum 4: Heavy 1 5: Heavy 2 Duplex settings 6: Heavy 3 0: Disable 7: Extra Heavy 1: Enable
(77)	Calibration information	-
(78)	RFID information	-
(79)	Toner install mode information	0: Off 1: On
(80)	Paper feeder firmware version	-
(81)	Optional message version	-
(82)	Color table version	-
(83)	Maintenance information	-
(84)	Altitude adjustment mode	
(85)	MC correction	1 to 7
(86)	Auto judgment of the color conversion processing	
(87)	Configuring the toner coverage count- ers	0: Full-color count display 1: Color coverage count display
(88)	Low coverage setting	0.1 to 100.0
(89)	Middle coverage setting	0.1 to 100.0
(90)	Toner low setting	0: Disabled 1: Enabled
(91)	Toner low detection level	5 to 100 (%)
(92)	Shift regulation for a single original	0: disable (shift regulation off) 1: enable (shift regulation on)
(93)	ErP applied mode setting	0: ErP non-applied mode 1: ErP applied mode
(94)	Full-page print mode	0: Normal mode (Factory setting) 1: Full-page mode
(95)	Wake-up mode	0: OFF (Don't wake up) 1: On (Do wake up)
(96)	Drum serial number	Black/Cyan/Magenta/Yellow
(97)	Developer serial number	Black/Cyan/Magenta/Yellow

U001	Exit Maintenance Mode (Message: Exit Mainte)
------	---

Description

Exits the maintenance mode and returns to the normal copy mode.

Purpose

Exit the maintenance mode

Method

1. Press the [Start] key.
2. The normal copy mode is entered.

U002	Set Factory Default (Message: Set Factory Def)
-------------	---

Description

Restores the machine conditions to the factory default settings.

Purpose

Executes the machine initial settings when shipping from factory.

Method

- 1.Press the [Start] key.
- 2.Select [Mode1(All)].

Items	Description
Mode1(All)	Sets the machine initial setting values to the factory default.

- 3.Press the [Start] key.

- 4.Turn the power switch off.

* :An error code is displayed in case of the initialization error.

When errors occur, turn the power switch off then on, and execute initialization using maintenance mode U002.

Take interval more than 5 seconds between Off and On.

Error codes

Codes	Description
0002	Setting information initialization failure
0003	Address book information initialization failure
0004	Job accounting information initialization failure
0005	Event log/Fax log/Job log information initialization failure
0006	Fax memory forward/panel program information initialization failure
0007	Short-cut key information initialization failure
0008	Fax reserve information initialization failure
0009	Account information initialization failure
0010	RP code backup execution failure
0011	Event log counter information/Accounting/Maintenance category initialization failure
0012	Coverage counter information initialization failure
0013	Life counter information initialization failure
0014	Engine information initialization failure
0015	Scanner information initialization failure
0016	Log audit (inspection log) initialization failure
0017	Device information initialization failure
0018	Unit log information initialization failure

U004	Machine Number (Message: Machine No.)
-------------	--

Description

Sets or displays the machine number.

Purpose

Check or set the machine number

After the main/engine PWB replacement, execute if the "C0180 machine number mismatch" occurs.

Method

1.Press the [Start] key.

When the machine serial number of the engine PWB matches with that of the main PWB.

Items	Description
Machine serial number	Displays the machine serial number.

When the machine serial number of the engine PWB does not match with that of the main PWB.

Items	Description
Machine No.(Main)	Displays the serial number of the main PWB.
Machine No.(Eng)	Displays the serial number of the engine PWB.

Setting

Execute if the serial number does not match.

1.Select [Execute].

2.Press the [Start] key.

* :Writing of serial number starts.

3.Turn the power switch off then on. Take interval more than 5 seconds between Off and On.

Completion

Press the [Stop] key.

* :The screen for selecting a maintenance item No. is displayed.

U010	Set Maintenance Mode ID (Message: Set Mainte ID)
-------------	---

Description

Set the maintenance mode ID for service.

Purpose

Modify maintenance mode ID for service for more security. Modify maintenance mode ID for service for more security.

Method

1. Press the [Start] key.
 2. Select the item to set.
- The screen for setting is displayed.

Items	Description
Change	Changes the maintenance mode ID for service.
Initialize	Initializes the maintenance mode ID for service.

Setting: Change

1. Select [New ID].

Items	Description
New ID	Enter a new 8-digit ID
New ID(Reconfirm)	Enter a new 8-digit ID (to confirm)
Execute	Changes the maintenance mode ID

2. Press ten keys (0–9, *, #) to enter a new 8-digit ID.
* : Either [*] or [#] must be included.
3. Select [New ID(Reconfirm)].
4. Press ten keys (0–9, *, #) to re-enter the new 8-digit ID.
5. Select [Execute].
6. Press the [Start] key to confirm the setting.

Method: Initialize

1. Select [Execute].

Items	Description
Execute	Initializes the maintenance mode ID.

2. Press the [Start] key to initialize the maintenance mode ID.

Completion

Press the [Stop] key.
* : The screen for selecting a maintenance item No. is displayed.

Error codes

Codes	Description
0001	[*] or [#] is not included in ID.
0002	ID does not match.
0003	8-digit ID is not input.

U019	Firmware Version (Message: Firm Version)
-------------	---

Description

Display the firmware version installed in each PWB.

Purpose

Check the firmware version installed in each PWB

Method

1. Press the [Start] key.
* :The firmtware version are displayed.
2. Change the screen using the [▲] [▼] key.

Items	Description
Controller	Main firmware
CMN App	CMN App firmware
SST App	SST App firmware
MNT App	MNT App firmware
CPY App	CPY App firmware
PRT App	PRT App firmware
SND App	SND App firmware
BOX App	BOX App firmware
FAX App*1	FAX App firmware
WPG App	WPG App firmware
AUTH App	AUTH App firmware
PCS App	PCS App firmware
SCO App	SCO App firmware
PLP	PLP firmware
EXSP	EXSP firmware
Version Info	Version Info firmware
MMI	Operation panel firmware
Browser	Browser firmware
Option Language1	Optional language1 firmware
Option Language2	Optional language2 firmware
Option Language3	Optional language3 firmware
Option Language4	Optional language4 firmware
Option Language5	Optional language5 firmware
OCR	OCR firmware
Color Table1(Prn)	Color table 1 firmware
Color Table2(Prn)	Color table 2 firmware
Sub MMI	Panel firmware
Sub MMI Boot	Panel boot

Items	Description
Engine	Engine firmware
Engine Boot	Engine Boot
Cass2	Cassette 2 firmware
Cass3	Cassette 3 firmware
Cass4	Cassette 4 firmware
HyPAS EMB API	HyPAS EMB API firmware
Application Name1	Application 1 software
Application Name2	Application 2 software
Application Name3	Application 3 software
Application Name4	Application 4 software
Application Name5	Application 5 software
Application Name6	Application 6 software
Application Name7	Application 7 software
Application Name8	Application 8 software
Application Name9	Application 9 software
Application Name10	Application 10 software
Application Name11	Application 11 software
Application Name12	Application 12 software
Application Name13	Application 13 software
Application Name14	Application 14 software
Application Name15	Application 15 software
Application Name16	Application 16 software

*1: FAX installed machine

Completion

Press the [Stop] key.

* :The screen for selecting a maintenance item No. is displayed.

U021	Initializes Memory (Message: Init Memory)
-------------	--

Description

Initialize all settings, except those pertinent to the type of machine, namely each counter, service call error history and mode setting. Also, initialize the backup RAM according to the area specification selected in the maintenance mode U252 (Setting the destination).

Purpose

Initialize the machine settings to the factory default at the market

Method

- 1.Press the [Start] key.
- 2.Select [Execute].

Items	Description
Execute	Initialize data according to the destination information.

- 3.Press the [Start] key.

* :All data other than the ones for adjustments due to variations between machines is initialized based on the destination setting.

- 4.Turn the power switch off then on. Take interval more than 5 seconds between Off and On.

* :An error code is displayed in case of the initialization error.

When errors occur, turn the power switch off then on, and execute initialization using maintenance mode U021.

Error codes

Codes	Description
0002	Setting information initialization failure
0003	Address book information initialization failure
0004	Job accounting information initialization failure
0005	Event log/Fax log/Job log information initialization failure
0006	Fax memory forward/panel program information initialization failure
0007	Short-cut key information initialization failure
0008	Fax reserve information initialization failure
0009	Account information initialization failure
0010	RP code backup execution failure
0011	Event log counter information/Accounting/Maintenance category initialization failure
0012	Coverage counter information initialization failure
0013	Life counter information initialization failure
0014	Engine information initialization failure
0015	Scanner information initialization failure
0016	Log audit (inspection log) initialization failure
0017	Device information initialization failure
0018	Unit log information initialization failure

Completion

Press the [Stop] key.

* :The screen for selecting a maintenance item No. is displayed.

U025	Firmware update(S) (Message: Firm Update(S))
-------------	---

Description

Execute Firmware-Update from the USB Flash Drive while "Very High" is selected in the Security Level settings under the System Menu.

Supplement

Initiate the firmware upgrade by a service person by executing U025 while a USB Flash Drive is inserted

Method

1.Press the [Start] key.

2.Select [Execute].

Items	Description
Execute	Executes the firmware-update.

3.Press the [Start] key.

* :This is not executable when a USB Flash Drive is not installed.

4.After normal completion, turn the power switch off then on. Take interval more than 5 seconds between Off and On.

Completion

Press the [Stop] key.

* :The screen for selecting a maintenance item No. is displayed.

U034	Paper timing data adjustment (Message: Adj Paper Timing)
-------------	---

Description

Adjust the leading edge registration or center line.

Purpose

Make the adjustment if there are regular errors between the leading edges of the copy image and original
Make the adjustment if there are regular errors between the center lines of the copy image and original

Method

1. Press the [Start] key.
 2. Select the item to adjust.
- * :The screen for adjusting is displayed.

Items	Description
LSU Out Top	Adjust the leading edge registration
LSU Out Left	Adjust the center line
LSU Out Top half	Adjust the leading edge registration (Half speed).
LSU Out Top 1/4	Adjust the leading edge registration (1200dpi speed).

Adjustment: LSU Out Top/LSU Out Top Half/LSU Out Top 1/4

1. Select the item to adjust.
2. Press the [System Menu/Counter] key.
3. Press the [Start] key to output a test pattern.
4. Press the [System Menu/Counter] key.

Items	Description	Setting range	Initial setting	Change in value per step
MPT	Paper feed from MP tray	-3 to 3	0	0.1mm
Cass	Paper feed from cassette	-3 to 3	0	0.1mm
Duplex	Duplex mode (Back page)	-3 to 3	0	0.1mm

5. By using the [<] [>] keys or the numeric keys, change the setting value.

For a test pattern 1, increase the value.

For a test pattern 2, decrease the value.

* :When the setting value is increased, the image moves backward and it moves forward when the setting value is decreased.

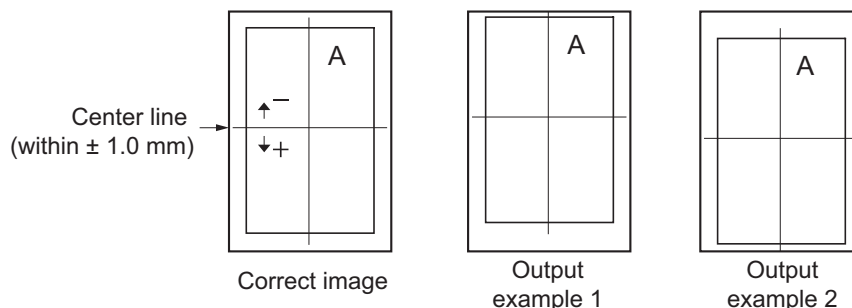


Figure 6-11

6. Press the [Start] key to confirm the setting.

IMPORTANT

Check the copy image after the adjustment. If the image is still incorrect, adjust the following in the maintenance mode.

U034 > U066(P.6-34) > U071(P.6-38)

Adjustment: LSU Out Left

1. Select the item to adjust.
2. Press the [System Menu/Counter] key.
3. Press the [Start] key to output a test pattern.
4. Press the [System Menu/Counter] key.

Items	Description	Setting range	Initial setting	Change in value per step
MPT	Paper feed from MP tray	-3 to 3	0	0.1mm
Cass1	Paper feed from cassette 1	-3 to 3	0	0.1mm
Cass2	Paper feed from optional cassette 2	-3 to 3	-0.5	0.1mm
Cass3	Paper feed from optional cassette 3	-3 to 3	-0.5	0.1mm
Cass4	Paper feed from optional cassette 4	-3 to 3	-0.5	0.1mm
Duplex	Duplex mode (Back page)	-3 to 3	0	0.1mm

5. By using the [<] [>] keys or the numeric keys, change the setting value.

For a test pattern 1, increase the value.

For a test pattern 2, decrease the value.

* :When the setting value is increased, the image moves to right, and it moves to left when the setting value is decreased.

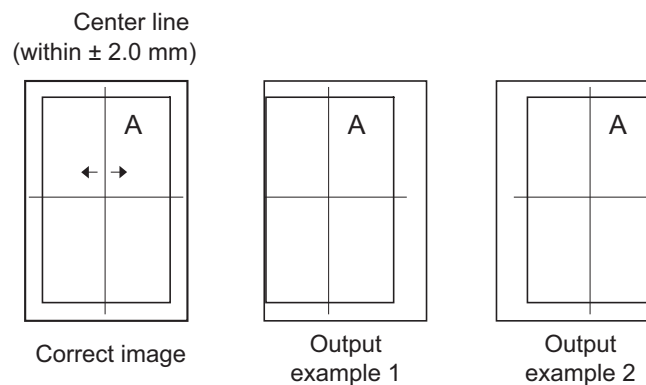


Figure 6-12

6. Press the [Start] key to confirm the setting.

IMPORTANT

Check the copy image after the adjustment. If the image is still incorrect, adjust the following in the maintenance mode.

U034 > U066(P.6-35) > U071(P.6-40)

Completion

Press the [Stop] key.

* :The screen for selecting a maintenance item No. is displayed.

U065	Adjusting the magnification for table scanning (Message: Adj Scn)
-------------	--

Description

Adjust the magnification in the main and auxiliary scanning direction of the table scanning.

Purpose

Make the adjustment if the magnification in the main and auxiliary scanning direction of the table scanning are incorrect

Note

The magnification adjustment in the main scanning direction could cause black streaks depending on the content of the original document.

Adjust the magnification of the scanner in the following order.

U065(main scanning)(P.6-32) > U065(sub-scanning)(P.6-32)

Method

- 1.Press the [Start] key.
- 2.Press the [System Menu/Counter] key.
- 3.Place an original and press the [Start] key to make a test copy.
- 4.Press the [System Menu/Counter] key.
- 5.Select the item to adjust.

Items	Description	Setting range	Initial setting	Change in value per step
Main Scan	Scanner magnification in the main scanning direction	-15 to 15	0	0.1%
Sub Scan	Scanner magnification in the sub-scanning direction	-25 to 25	0	0.1%

Adjustment: Main Scan

- 1.By using the [<] [>] keys or the numeric keys, change the setting value.

For copy example 1, increase the value.

For copy example 2, decrease the value.

* :When the setting value is increased, the image widens, and it narrows when the setting value is decreased.

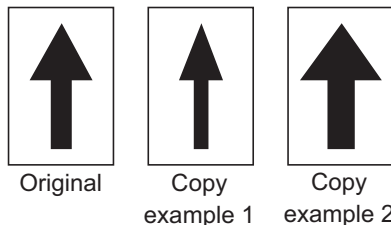


Figure 6-13

- 2.Press the [Start] key to confirm the setting.

Adjustment: Sub Scan

1.By using the [<] [>] keys or the numeric keys, change the setting value.

For copy example 1, increase the value.

For copy example 2, decrease the value.

* :When the setting value is increased, the image gets longer, and it shortens when the setting value is decreased.

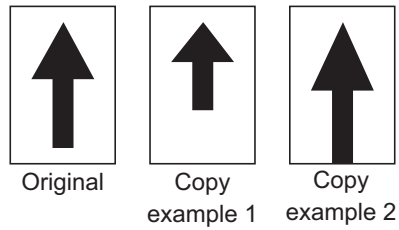


Figure 6-14

2.Press the [Start] key to confirm the setting.

Completion

Press the [Stop] key.

* :The screen for selecting a maintenance item No. is displayed.

U066	Adjusting the table scanning timing (Message: Table Timing)
-------------	--

Description

Adjusts the scanner leading edge registration of the table scanning.

Purpose

Make the adjustment if there are regular errors between the leading edges of the copy image and original

Adjustment

1. Press the [Start] key.
2. Press the [System Menu/Counter] key.
3. Place an original and press the [Start] key to make a test copy.
4. Press the [System Menu/Counter] key.

Items	Description	Setting range	Initial setting	Change in value per step
Front	Scanner leading edge registration.	-45 to 45	0	0.085 mm

5. By using the [<] [>] keys or the numeric keys, change the setting value.

For copy example 1, increase the value.

For copy example 2, decrease the value.

* :When the setting value is increased, the image moves forward and it moves backward when the setting value is decreased.

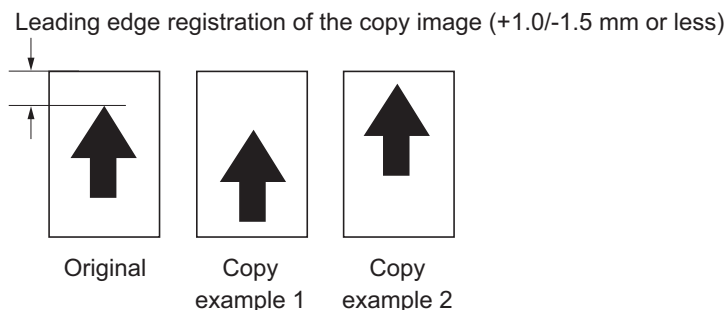


Figure 6-15

6. Press the [Start] key to confirm the setting.

IMPORTANT

Check the copy image after the adjustment. If the image is still incorrect, adjust the following in the maintenance mode.

U034(P.6-29) > U065(P.6-32) > U066

Completion

Press the [Stop] key.

* :The screen for selecting a maintenance item No. is displayed.

U067	Adjusting the table scanning center line (Message: Table Center)
-------------	---

Description

Adjusts the scanner center line of the table scanning.

Purpose

Make the adjustment if there are regular errors between the center lines of the copy image and original

Adjustment

1. Press the [Start] key.
2. Press the [System Menu/Counter] key.
3. Place an original and press the [Start] key to make a test copy.
4. Press the [System Menu/Counter] key.
- 5.

Items	Description	Setting range	Initial setting	Change in value per step
Front	Scanner center line	-40 to 40	0	0.085 mm

1. By using the [<] [>] keys or the numeric keys, change the setting value.

For copy example 1, decrease the value.

For copy example 2, increase the value.

* :When the setting value is increased, the image moves to left, and it moves to right when the setting value is decreased.

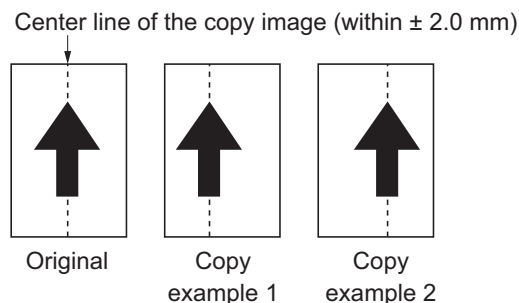


Figure 6-16

2. Press the [Start] key to confirm the setting.

IMPORTANT

Check the copy image after the adjustment. If the image is still incorrect, adjust the following in the maintenance mode.

U034(P.6-29) > U065(P.6-32) > U067

Completion

Press the [Stop] key.

* :The screen for selecting a maintenance item No. is displayed.

U068	DP scanning position adjustment (Message: DP Scn Start Pos)
-------------	--

Description

Adjusts the starting position for scanning originals from the DP.
Performs the test copy at the four scanning positions after adjusting.

Purpose

Make the adjustment if the image fogging occurs because the scanning position is not proper when the DP is used :

* :Execute U071 to adjust the timing of DP leading edge when the scanning position is changed.

Method

- 1.Press the [Start] key.
- 2.Select the item to adjust.

Items	Description	Setting range	Initial setting	Change in value per step
DP Read	Starting position adjustment for scanning originals.	-33 to 33	0	0.085 mm
Black Line	Scanning position for the test copy originals.	0 to 3	0	-

Adjustment: DP Read

- 1.Select [DP Read].
- 2.By using the [<] [>] keys or the numeric keys, change the setting value.
* :When the setting value is increased, the image moves backward and it moves forward when the setting value is decreased.
- 3.Press the [Start] key to confirm the setting.

Adjustment: Black Line

- 1.Select [Black Line].
- 2.By using the [<] [>] keys or the numeric keys, change the setting value.
- 3.Press the [Start] key to confirm the setting.
- 4.Set the original (the one of which density is known) in the DP and press the [System Menu/Counter] key.
- 5.Press the [Start] key to execute a test copy.
- 6.Perform the test copy at each scanning position with the setting value from 0 to 3 and check that no black line appears and the image is normally scanned.

Completion

- Press the [Stop] key.
* :The screen for selecting a maintenance item No. is displayed.

U070	DP magnification adjustment (Message: Adj DP Motor)
-------------	--

Description

Adjusting the magnification for DP scanning.

Purpose

Make the adjustment if the magnification is incorrect in the auxiliary scanning direction when the DP is used.

Adjustment

- 1.Press the [Start] key.
- 2.Press the [System Menu/Counter] key.
- 3.Place an original on the DP and press the [Start] key to make a test copy.
* :Check the duplex scanning by setting [Duplex] when test copying.
- 4.Press the [System Menu/Counter] key.
- 5.Select the item to adjust.

Items	Description	Setting range	Initial setting	Change in value per step
SubScan(F)	Adjustment of the magnification in the sub-scanning direction.(Front page)	-25 to 25	0	0.1%
SubScan(B) *1	Adjustment of the magnification in the sub-scanning direction.(Back page)	-25 to 25	0	0.1%
Main Scan CIS*2	Adjust the second (back) page magnification in the main scanning direction at duplex scan (DP CIS).	-25 to 25	0	0.1 %
Sub Scan CIS*2	Adjust the second (back) page magnification in the subscanning direction at duplex scan (DP CIS).	-25 to 25	0	0.1 %

*1: 30 ppm mosel

*2: 35 ppm mosel

- 6.By using the [<] [>] keys or the numeric keys, change the setting value.

For copy example 1, increase the value.

For copy example 2, decrease the value.

* :When the setting value is increased, the image gets longer, and it shortens when the setting value is decreased.

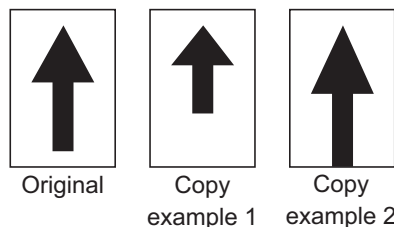


Figure 6-17

- 7.Press the [Start] key to confirm the setting.

Completion

Press the [Stop] key.

* :The screen for selecting a maintenance item No. is displayed.

U071	Adjusting the DP leading edge Timing (Message: DP Timing)
-------------	--

Description

Adjusts the DP original scanning timing.

Purpose

Make the adjustment if there is a regular error between the leading or trailing edges of the original and the copy image when the DP is used

Method

1. Press the [Start] key.
2. Press the [System Menu/Counter] key.
3. Place an original on the DP and press the [Start] key to make a test copy.
* :Check the duplex scanning by setting [Duplex] when test copying.
4. Press the [System Menu/Counter] key.
5. Select the item to adjust.

Items	Description	Setting range	Initial setting	Change in value per step
Front Head	Leading edge registration. (Front page)	-32 to 32	0	0.245mm* 1 0.264mm* 2
Front Tail	Trailing edge registration. (Front page)	-32 to 32	0	0.245mm* 1 0.264mm* 2
Back Head*1	Leading edge registration. (Back page)	-32 to 32	0	0.245mm
Back Tail*1	Trailing edge registration. (Back page)	-32 to 32	0	0.245mm
CIS Head*2	Adjust the leading edge registration. (DP CIS scanning)	-32 to 32	0	0.264mm
CIS Tail*2	Adjust the trailing edge registration. (DP CIS scanning)	-32 to 32	0	0.264mm

*1: 30 ppm mosel

*2: 35 ppm mosel

Adjustment: Front Head/Back Head/CIS Head

1. By using the [<] [>] keys or the numeric keys, change the setting value.
For copy example 1, increase the value.
For copy example 2, decrease the value.

* :When the setting value is increased, the image moves forward and it moves backward when the setting value is decreased.

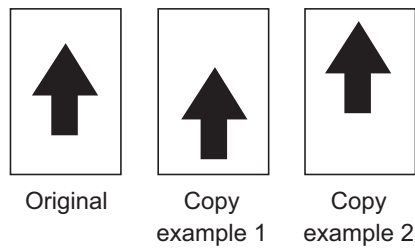


Figure 6-18

2.Press the [Start] key to confirm the setting.

Note

If the first (front) page is adjusted, check the second (back) page. If adjustment is required, carry out the adjustment.
Check the copy image after the adjustment. If the image is still incorrect, adjust the following in the maintenance mode.
U034(P.6-29) > U071

Adjustment: Front Tail/Back Tail/CIS Tail

1.By using the [<] [>] keys or the numeric keys, change the setting value.

For copy example 1, increase the value.

For copy example 2, decrease the value.

* :When the setting value is increased, the image gets longer, and it shortens when the setting value is decreased.

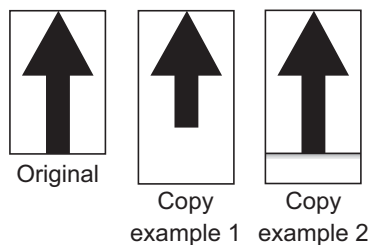


Figure 6-19

2.Press the [Start] key to confirm the setting.

Completion

Press the [Stop] key.

* :The screen for selecting a maintenance item No. is displayed.

U072	Adjusting the DP original center (Message: DP Center)
-------------	--

Description

Adjusts the DP original center line.

Purpose

Make the adjustment if there is a regular error between the center lines of the original and the copy image when the DP is used

Adjustment

1. Press the [Start] key.
2. Press the [System Menu/Counter] key.
3. Place an original on the DP and press the [Start] key to make a test copy.
* :Check the duplex scanning by setting [Duplex] when test copying.
4. Press the [System Menu/Counter] key.
5. Select the item to adjust.

Items	Description	Setting range	Initial setting	Change in value per step
Front	DP center line. (Front page)	-40 to 40	0	0.085 mm
Back*1	DP center line. (Back page)	-40 to 40	0	0.085 mm
CIS*2	Adjust the DP CIS center line.	-20 to 20	0	0.085 mm

*1: 30 ppm mosel

*2: 35 ppm mosel

6. By using the [<] [>] keys or the numeric keys, change the setting value.

For copy example 1, decrease the value.

For copy example 2, increase the value.

* :When the setting value is increased, the image moves to right, and it moves to left when the setting value is decreased.

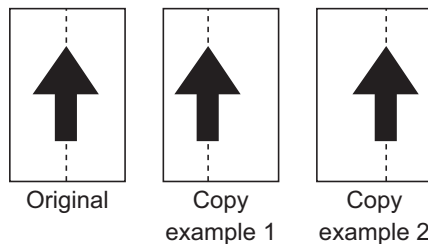


Figure 6-20

7. Press the [Start] key to confirm the setting.

Note

If the first (front) page is adjusted, check the second (back) page. If adjustment is required, carry out the adjustment.

Check the copy image after the adjustment. If the image is still incorrect, adjust the following in the maintenance mode.

U034(P.6-29) > U065(P.6-32) > U067(P.6-35) > U072

Completion

Press the [Stop] key.

* :The screen for selecting a maintenance item No. is displayed.

U091	White lines correction setting (Message: White L Cor)
-------------	--

Description

Set the white lines correction.

Purpose

Set the error detection threshold for white lines correction and display the abnormal pixel count.
Execute when replacing the DP CIS or DP CIS roller.

Setting

1. Press the [Start] key.
2. Select the item to set.
3. By using the [<] [>] keys or the numeric keys, change the setting value.

Item	Description	Setting range	Initial setting	Change in value per step
Coeff(R)	Display the red pixel error counts	0 to 8191	-	-
Coeff(G)	Display the green pixel error counts	0 to 8191	-	-
Coeff(B)	Display the Blue pixel error counts	0 to 8191	-	-
Threshold	Set the error detection threshold	0 to 255	112	-
Threshold(Ab)	Set the abnormal pixel threshold setting	0 to 8191	75	-
Mode	Set the white lines correction mode	0: No correction 1: Correction 2: Test mode	0	-
Execute	Execute retaining the white reference data	-	-	-

- * :Normally do not change the threshold from the initial value of 112.
Increase the value if white lines appear while the CIS roller/glass is not dirty.
Reduce the value if thin lines disappear depending on the original to use.
Set in the range of 50 to 200. (In the case of out of range, it may affect the image output)

4. Press the [Start] key to confirm the setting.

Method: Execute

1. Select [Execute].
2. Press the [Start] key.
* :Start retaining the white reference data.
3. Press the [System Menu/Counter] key.
4. Set the gray original face-down on the document processor and set paper in the cassette.
* :Match the original and paper size.
5. Press the [Start] key.
* :Outputs 2-sheet test pattern.
1st sheet: black band of about 60mm width
2nd sheet: blank (or may be gray band of about 60mm width)
6. Setting is correctly completed if no vertical line is observed on both sheets.
If vertical black streaks in blank sheet (gray band) or vertical white streaks in black band appear in the

same position, clean the DP CIS roller or DP CIS glass section and then perform the white line correction again.

White line correction is completed if both sheets have vertical black lines or vertical whitelines. However, check the engine since there are factors of vertical lines at the engine side.

7. Press the [System Menu/Counter] key.

* :Mode is set to [1].

How to check the test copy

Blank paper	Black band	Factor	Corrective Action
No lines	No lines	-	Completion
Black line	White line	DP CIS roller/ glass contami- nation	After cleaning the DP CIS roller/glass, execute the U091.
Black line	No lines	Engine PWB	Check engine PWB after completing U091.
No lines	White lines	Engine PWB	Check engine PWB after completing U091.

Completion

Press the [Stop] key.

* :The screen for selecting a maintenance item No. is displayed.

U110	Drum counter (Message: Drum Cnt)
-------------	---

Description

Displays the drum counter values.

Purpose

Execute to check the drum usage status.

Method

1. Press the [Start] key.

* :The drum counter is displayed.

Item	Description
C	Displays the cyan drum counter
M	Displays the magenta drum counter
Y	Displays the yellow drum counter
K	Displays the black drum counter

Completion

Press the [Stop] key.

* :The screen for selecting a maintenance item No. is displayed.

U117	Drum unit number (Message: Drum No.)
-------------	---

Description

Displays the drum number.

Purpose

Execute to check the drum number.

Method

1. Press the [Start] key.

* :Displays the drum number.

Item	Description
C	Displays the cyan drum number
M	Displays the magenta drum number
Y	Displays the yellow drum number
K	Displays the black drum number

Completion

Press the [Stop] key.

* :The screen for selecting a maintenance item No. is displayed.

U120	Drum drive distance counter (Message: Drum Drv Dist Cnt)
-------------	---

Description

Displays the drum drive distance counter.

Purpose

Displays the drum drive distance counter that is used instead of the conventional drum drive time counter.

Method

1. Press the [Start] key.

* :Displays the count.

Item	Description
C	Displays the cyan drum drive distance counter
M	Displays the magenta drum drive distance counter
Y	Displays the yellow drum drive distance counter
K	Displays the black drum drive distance counter

Completion

Press the [Stop] key.

* :The screen for selecting a maintenance item No. is displayed.

U127	Clearing the transfer count (Message: Clr Trans Cnt)
-------------	---

Description

Display, and change or clear the transfer counts.

Purpose

Verify the primary/secondary transfer unit counts after replacing. Also, clear the transfer counts after replacement.

Method

1. Press the [Start] key.
- * :The transfer count is displayed.

Items	Description
Mid(Cnt)	Display or clear the primary transfer counts.
2nd(Cnt)	Display, change or clear the primary transfer counts.

Setting: Mid(Cnt)

1. By pressing [◀] [▶] key or [*] key, [#] key, the value is switched to [0] or "Current value".
2. When clearing the counter value, select [0] and then press the [Start] key.

Setting: 2nd(Cnt)

1. By using the [<] [>] keys or the numeric keys, change the setting value.
2. Press the [Start] key to set the counter value.

Method: Clear

1. Select [Clear].
2. Press the [Start] key to clear all transfer counts value.

Completion

- Press the [Stop] key.
- * :The screen for selecting a maintenance item No. is displayed.

U136	Toner level detection setting (Message: Set Toner NearEnd)
-------------	---

Description

Setting the detection of the toner near end.

Purpose

Execute when changing the toner near end display.

Setting

- 1.Press the [Start] key.
- 2.Select the item to set.

Items	Description
CMY	Cyan/Magenta/Yellow toner level setting
K	Black toner level setting

Setting

- 1.Select [On] or [Off].

Items	Description
On	Toner near end setting
Off	No toner near end setting

* :Initial setting: On

- 2.Press the [Start] key to confirm the setting.

Completion

Press the [Stop] key.

* :The screen for selecting a maintenance item No. is displayed.

U140	Developer bias adjustment (Message: Adj Dev Bias)
-------------	--

Description

Displays/changes the developer bias set values or sets high altitude mode.

Purpose

Execute to check/change the developer bias set values.

Method

1. Press the [Start] key.
 2. Select the item to set.
- * :The screen for executing is displayed.

Item	Description
Sleeve DC	Set the developer sleeve roller DC bias.
Sleeve AC	Set the developer sleeve roller AC bias.
Mag DC	Set the developer magnet roller DC bias.
Sleeve Duty	Set the developer sleeve roller duty.

Setting: Sleeve DC

1. Select the item to set.
2. By using the [<] [>] keys or the numeric keys, change the setting value.

Item	Description	Setting range	Initial setting	Change in value per step
C	Cyan developer sleeve DC/AC bias setting	0 to 350	220*	1V
M	Magenta developer sleeve DC/AC bias setting	0 to 350	220	
Y	Yellow developer sleeve DC/AC bias setting	0 to 350	220*2 200*1	
K	Black developer sleeve DC/AC bias setting	0 to 350	220*2 200*1	

*1: 30 ppm model, *2: 35 ppm model

3. Press the [Start] key to confirm the setting.

Setting: Sleeve AC

1. Select the item to set.
2. By using the [<] [>] keys or the numeric keys, change the setting value.

Item	Description	Setting range	Initial setting	Change in value per step
C	Cyan developer sleeve DC/AC bias setting	0 to 1750	1500	1V
M	Magenta developer sleeve DC/AC bias setting	0 to 1750	1500	
Y	Yellow developer sleeve DC/AC bias setting	0 to 1750	1500	
K	Black developer sleeve DC/AC bias setting	0 to 1750	1500	

3. Press the [Start] key to confirm the setting.

Setting: Mag DC

1. Select the item to set.
2. By using the [<] [>] keys or the numeric keys, change the setting value.

Item	Description	Setting range	Initial setting	Change in value per step
C	Cyan developer magnet roller DC bias setting	0 to 580	490	1V
M	Magenta developer magnet roller DC bias setting	0 to 580	490	
Y	Yellow developer magnet roller DC bias setting	0 to 580	490*2 470*1	
K	Black developer magnet roller DC bias setting	0 to 580	490*2 470*1	

*1: 30 ppm model, *2: 35 ppm model

3. Press the [Start] key to confirm the setting.

Setting: Sleeve Duty

1. Select the item to set.
2. By using the [<] [>] keys or the numeric keys, change the setting value.

Item	Description	Setting range	Initial setting	Change in value per step
C	Developer C sleeve roller duty	0 to 100	30	1%
M	Developer M sleeve roller duty	0 to 100	30	
Y	Developer Y sleeve roller duty	0 to 100	30	
K	Developer K sleeve roller duty	0 to 100	30	

3. Press the [Start] key to confirm the setting.

4. Select [Execute].
5. Press the [Start] key. Executing AC Calibration.
6. Turn the power switch off then on. Take interval more than 5 seconds between Off and On.
* :An error code is indicated when an error occurs.

Completion

- Press the [Stop] key.
* :The screen for selecting a maintenance item No. is displayed.

U157	Developer drive time (Message: Dev Time)
-------------	---

Description

Displays the developer drive time to be a reference for the toner density control correction.

Purpose

Execute to check the developer drive time since replacing the developer unit.

Method

1. Press the [Start] key.

* :Displays the developer drive time.

Item	Description
C	Displays the Cyan developer unit drive time.
M	Displays the Magenta developer unit drive time.
Y	Displays the Yellow developer unit drive time.
K	Displays the Black developer unit drive time.

Completion

Press the [Stop] key.

* :The screen for selecting a maintenance item No. is displayed.

U158	Developer counter (Message: Dev Cnt?)
-------------	--

Description

Displays the developer counter

Purpose

Execute to check the developer unit usage status.

Method

1.Press the [Start] key.

* :The developer count is displayed.

Item	Description
C	Displays the cyan developer counter.
M	Displays the magenta developer counter.
Y	Displays the yellow developer counter.
K	Displays the black developer counter.

Completion

Press the [Stop] key.

* :The screen for selecting a maintenance item No. is displayed.

U167	Clearing the fuser count (Message: Clr Fuser Cnt)
-------------	--

Description

Displays and clears the fuser count.

Purpose

Verify the fuser count after replacement. Also, clear the counts after replacing.

Method

1.Press the [Start] key.

* :The fuser count is displayed.

Item	Description
Cnt	Displays the fuser count
Clear	Clears the fuser count

Setting: Cnt

1.Select [Cnt].

2.By using the [<] [>] keys or the numeric keys, change the setting value.

3.Press the [Start] key to confirm the setting.

Method: Clear

1.Select [Clear].

2.Press the [Start] key.

Clears the fuser unit count

Completion

Press the [Stop] key.

* :The screen for selecting a maintenance item No. is displayed.

U198	Fuser phase control setting (Message: Set Phase Ctrl)
-------------	--

Description

Switch to fixed phase control.

Purpose

Sets when flickering occurs.

Setting

- 1.Press the [Start] key.
- 2.Select the item to set.

Items	Description
Flicker	Flicker countermeasure setting

Setting

- 1.Select [On] or [Off].

Items	Description
On	Flicker countermeasure mode
Off	No Flicker countermeasure mode

* :Initial setting: On

- 2.Press the [Start] key to confirm the setting.

Completion

Press the [Stop] key.

* :The screen for selecting a maintenance item No. is displayed.

U201	Initialize Touch Panel (Message: Init Touch Panel)
-------------	---

Description

Adjusts touch panel detecting positions.

Purpose

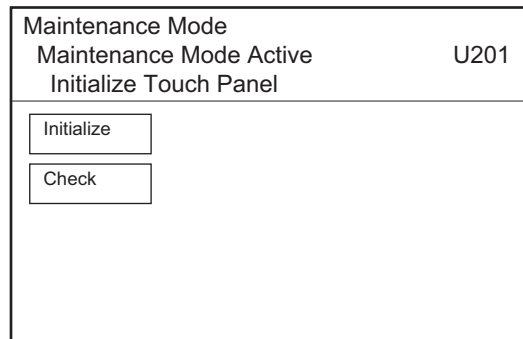
Correct and confirm the touch panel detecting positions, when the panel PWB or the operation panel is replaced or if the detecting positions are not aligned

* :When unable to press the software numeric keys due to the touch screen press position error and unable to enter the maintenance mode, press and old [Home], [Stop] and [Reset] keys 3 seconds to start up U201.

Method

- 1.Press the [Start] key.
- 2.Select the item to execute.
- 3.Press the [Start] key.

* :The screen for executing is displayed.



Items	Description
Initialize	Automatic correction of the touch panel display position
Check	Confirmation of the touch panel display position

Method: Initialize

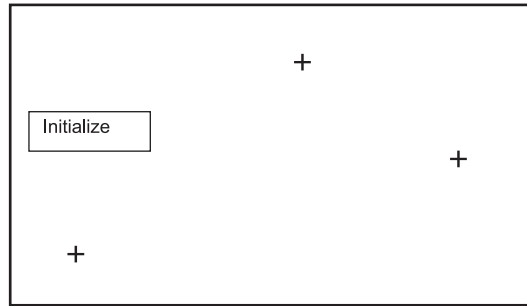
- 1.Press the center of "+".
- 2.Repeat three times.



- 3.After complete setting, move to the [Check] screen automatically.

Method: Check

1. Press the indicated three "+", and then check the display position.



2. If out of the specified value, select [Initialize] and press the [Start] key to return to Step.1.

Completion

Press the [Stop] key.

* :The screen for selecting a maintenance item No. is displayed.

U203	Check DP Operation (Message: Chk DP Ope)
-------------	---

Description

Simulate the original conveying operation separately in the DP.

Purpose

Check the DP operation

Method

1. Press the [Start] key.
2. Place an original in the DP if running this simulation with paper.
3. Select the scan speed

Items	Description
Normal Speed	Normal reading (600dpi)
High Speed	High-speed reading

Method: Normal Speed/High Speed

4. Select the item to operate.

Items	Description
CCD ADP	With paper, single-sided original of CCD
CCD RADP*1	With paper, double-sided original of CCD
CIS*2	With paper, double-sided original of CIS
CCD ADP(Non-P)	Without paper, single-sided original of CCD (continuous operation)
CCD RADP(Non-P)*1	Without paper, double-sided original of CCD (continuous operation)
CIS(Non-P)*2	Without paper, double-sided original of CIS (continuous operation)

*1: 30 ppm mosel

*2: 35 ppm mosel

5. Press the [Start] key.

* :The operation starts.

6. To stop the operation, press the [stop] key.

Completion

Press the [Stop] key.

*The screen for selecting a maintenance item No. is displayed.

U222	Set IC Card Type (Message: Set IC Card Type)
-------------	---

Description

Sets the type of ID card.

Purpose

Change the type of ID card

Setting

- 1.Press the [Start] key.
- 2.Select the item to set.

Items	Description
Other	When the type of ID card is not SSFC.
SSFC	When the type of ID card is SSFC.

- * :Initial setting: Other
 - * :SSFC: Shared Security Formats Cooperation
- 3.Press the [Start] key to confirm the setting.

Completion

Press the [Stop] key.

- * :The screen for selecting a maintenance item No. is displayed.

U250	Change Maintenance Count Preset (Message: Mnt Cnt Pre-set?)
-------------	--

Description

Changes pre-set values for maintenance cycle and automatic grayscale adjustment.

Purpose

Change the time when the message to acknowledge to conduct maintenance adjustment and automatic grayscale adjustment is periodically displayed

Setting

1. Press the [Start] key.
2. Select the item to set.
3. By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Description	Setting range
M.Cnt A	Pre-set values for maintenance cycle (Kit A)	0 to 9999999
Clear	Clearing of maintenance counts	0

4. Press the [Start] key to confirm the setting.

Clearing

1. Select [Clear].
2. Press the [Start] key to clear the setting value.

Completion

Press the [Stop] key.

* :The screen for selecting a maintenance item No. is displayed.

U251	Clear/Check the maintenance counter (Message: Clr Mnt Cnt)
-------------	---

Description

Display, clear and change the maintenance count.

Purpose

Check the maintenance count

Also, clear the count during maintenance service.

Setting

1.Press the [Start] key.

2.Select the item to set.

3.By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Description	Setting range
M.Cnt A	Count values for maintenance cycle (Kit A)	0 to 9999999
Clear	Clearing of maintenance counts	0

Clearing

1.Select [Clear].

2.Press the [Start] key to clear the setting value.

Completion

Press the [Stop] key.

* :The screen for selecting a maintenance item No. is displayed.

U252	Set Destination (Message: Set Dest)
-------------	--

Description

Switch the operations and screens of the main unit according to the destination.

Purpose

Execute after initializing the backup RAM, in order to return the setting to the value before replacement or initialization

Method

- 1.Press the [Start] key.
- 2.Select the item to set.

Items	Description
Japan Metric ^{*1}	Japan Metric
Inch ^{*2}	Inch
Europe Metric ^{*2}	Europe Metric
Asia Pacific ^{*2}	Asia Pacific
Australia ^{*2}	Australia
China ^{*2}	China
Korea ^{*2}	Korea

*1: 100 V model only, *2: Except 100 V model

3.Press the [Start] key.

* :Initialize software switches and all data in the backup data, according to the destination.

4.Turn the power switch off then on. Take interval more than 5 seconds between Off and On.

U253	Set Double/Single Count (Message: Set D/S Count)
-------------	---

Description

Switch the count system for the total counter and other counters for every color mode.

Purpose

Select, according to user's request (copy service provider), if the maximum size paper is to be counted as one sheet (single count) or two sheets (double count)

Setting

- 1.Press the [Start] key.
- 2.Select the item to set.

Items	Description
Full Color	Single or Double Count for full color mode
B/W	Single or Double Count for monochrome mode

- 3.Select [SGL(All)] or [DBL(Folio)].

Items	Description
SGL(All)	Single count for all size paper
DBL(Legal)	Double count for Legal (356mm) size or larger.
DBL(Folio)	Double count for Folio size or larger.

* :Initial setting: SGL(All) (100V model), DBL(Folio) (120V/ 220-240V model)

- 4.Press the [Start] key to confirm the setting.

Completion

Press the [Stop] key.

* :The screen for selecting a maintenance item No. is displayed.

U260	Feed/eject counter switch (Message: Set Count Mode)
-------------	--

Description

Switch the count system for the total counter and other counters.

Purpose

Change the count timing according to user request

Setting

- 1.Press the [Start] key.
- 2.Select the copy count timing.

Items	Description
Feed	When secondary paper feed starts.
Eject	When the paper is ejected

* :Initial setting: Eject

- 3.Press the [Start] key to confirm the setting.

Completion

Press the [Stop] key.

* :The screen for selecting a maintenance item No. is displayed.

U278	Delivery date setting (Message: Set Delivery Date)
------	---

Description

Registers the date of delivery of the machine.

Purpose

Execute when installing the machine. Execute to check the delivery date of the machine.

Method

- 1.Press the [Start] key.
- 2.Select [Today].
- 3.Press the [Start] key.
- 4.Sets the delivery date of the machine.

Clearing

- 1.Select [Clear].
- 2.Press the [Start] key.
- 3.Clears the delivery date of the machine.

Completion

Press the [Stop] key.

* :The screen for selecting a maintenance item No. is displayed.

U283	Setting China Red (Message: Set CN Red)
-------------	--

Description

Set China Red.

Purpose

Change the setting according to user's request

Setting

- 1.Press the [Start] key.
- 2.Select the item to set.

Items	Description
On	Enable China Red.
Off	Disable China Red.

- * :Initial setting: China: On/Other than China: Off
3.Press the [Start] key to confirm the setting.

Completion

Press the [Stop] key.

- * :The screen for selecting a maintenance item No. is displayed.

U285	Set Service Status Page (Message: Set Svc Sts Page)
-------------	--

Description

Determines displaying the digital dot coverage report on reporting.

Purpose

Change the setting according to user's request

Setting

1. Press the [Start] key.
2. Select the item to set.

Items	Description
Coverage	Setting the print coverage report display
Rep Permit	Setting the permitting for the service report output

Setting: Coverage

1. Select [On] or [Off].

Items	Description
On	Displays the digital dot coverage.
Off	Not to display the digital dot coverage.

- * :Initial setting: On
2. Press the [Start] key to confirm the setting.

Setting: Rep Permit

1. Select [On] or [Off].

Items	Description
On	Permit the service report output
Off	Not permit the service report output

- * :Initial setting: On
2. Press the [Start] key to confirm the setting.

Completion

Press the [Stop] key.

- * :The screen for selecting a maintenance item No. is displayed.

U287	Automatic recovery function (Message: Set Reset Func)
-------------	--

Description

Sets whether to enable the automatic recovery function after the service call error

Purpose

Sets whether to enable the automatic recovery function after the service call error or system error

Setting

1. Press the [Start] key.
2. Select the item to set.
3. By using the[<] [>] keys change the setting value.

Item	Description	Setting range	Initial setting
C0XXX	Sets whether to enable the automatic recovery function after the C0xxx code service call error	On/Off	Off
C1XXX	Sets whether to enable the automatic recovery function after the C1xxx code service call error	On/Off	Off
C2XXX	Sets whether to enable the automatic recovery function after the C2xxx code service call error	On/Off	Off
C3XXX	Sets whether to enable the automatic recovery function after the C3xxx code service call error	On/Off	Off
C4XXX	Sets whether to enable the automatic recovery function after the C4xxx code service call error	On/Off	Off
C5XXX	Sets whether to enable the automatic recovery function after the C5xxx code service call error	On/Off	Off
C6XXX	Sets whether to enable the automatic recovery function after the C6xxx code service call error	On/Off	Off
C7XXX	Sets whether to enable the automatic recovery function after the C7xxx code service call error	On/Off	Off
C8XXX	Sets whether to enable the automatic recovery function after the C8xxx code service call error	On/Off	Off
C9XXX	Sets whether to enable the automatic recovery function after the C9xxx code service call error	On/Off	Off
CFXXX	Sets whether to enable the automatic recovery function after the CFxxx code service call error	On/Off	On

4. Press the [Start] key to confirm the setting.

Completion

Press the [Stop] key.

* :The screen for selecting a maintenance item No. is displayed.

U290	Set Application storage drive (Message: Set Drive App)
-------------	---

Description

Set the HyPAS application storage drive.

Purpose

Set it when storing in the SD card or optional SSD.

Setting

- 1.Press the [Start] key.
- 2.Select [SD Card] or [SSD].

Items	Description
SD Card	Set it to the SD card.
SSD	Set it to the SSD.

- * :35 ppm model only
 - * :Initial setting: SD Card(0)
- 3.Press the [Start] key to confirm the setting.

Completion

Press the [Stop] key.

- * :The screen for selecting a maintenance item No. is displayed.

U326	Black line cleaning indication (Message: Set Clean Bk Line)
-------------	--

Description

Sets whether to indicate the black lines cleaning guidance when detecting black lines.

Purpose

Displays the cleaning guidance to reduce the service call with the black lines by dust on the contact glass when scanning from the document processor.

Setting

- 1.Press the [Start] key.
- 2.Select the item to set.
* :The screen for executing is displayed.

Items	Description
Black Line Mode	Sets On/Off of the black line cleaning guidance indication

- 3.Press the [Start] key to confirm the setting.

Items	Description
On	Indicate the black lines cleaning guidance
Off	Black line cleaning guidance is not indicated

Initial setting: On

Completion

- Press the [Stop] key.
* :The screen for selecting a maintenance item No. is displayed.

U332	Adjust Coverage Size (Message: Adj Calc Rate)
-------------	--

Description

Set the coefficient of custom sizes in relation to the A4/Letter size. The coefficient set here is used to convert the black ratio in relation to the A4/Letter size and to display the result in the service status page.

Purpose

Set the coefficient for converting the black ratio for custom sizes in relation to the A4/Letter size

Method

- 1.Press the [Start] key.
- 2.Select the item to set.

Items	Description
Rate	Set the coefficient for converting the black ratio for custom sizes in relation to the A4/Letter size
Mode	Switch full-color count and color coverage count display
Level1	Low coverage threshold value
Level2	Middle coverage threshold value

Setting: Rate

- 1.By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Description	Setting range	Initial setting
Rate	Set the coefficient for converting the black ratio for custom sizes in relation to the A4/Letter size	0.1 to 3.0	1.0

- 2.Press the [Start] key to confirm the setting.

Setting: Mode

- 1.Select the mode.

Items	Description
0	Full-color count display
1	Color coverage count display

* :Initial setting: 0

- 2.Press the [Start] key to confirm the setting.

Setting: Level1,2

- 1.Select the item to set.
- 2.By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Description	Setting range	Initial setting
Level1	Low coverage threshold value	0.1 to 100	1.0
Level2	Middle coverage threshold value	0.1 to 100	2.5

- 3.Press the [Start] key to confirm the setting.

Completion

Press the [Stop] key.

* :The screen for selecting a maintenance item No. is displayed.

U345	Set the maintenance time precaution display (Message: Set Mnt Time Disp)
-------------	---

Description

Set when to display a message notifying that the time for maintenance is about to be reached, by setting the number of prints that can be made before the current maintenance cycle reaches.

Display the message when the difference between the number of prints of the maintenance cycle and that of the maintenance count reaches the set value.

Purpose

Change the time for maintenance precaution display

Setting

1. Press the [Start] key.
2. Select the item to set.
3. By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Description	Setting range	Initial setting
Cnt	Maintenance time precaution display (Remaining number of prints that can be made before the current maintenance cycle reaches)	0 to 9999	0

4. Press the [Start] key to confirm the setting.

Completion

Press the [Stop] key.

* :The screen for selecting a maintenance item No. is displayed.

U346	Selecting Sleep Mode (Message: Slct Sleep Mode)
-------------	--

Description

Changes the sleep mode-related setting.

Purpose

Change the sleep mode-related setting

Method

1. Press the [Start] key.
 2. Select the item to set.
- * :The screen for setting is displayed.

Items	Description
Timer/Sleep Level	BAM conformity country setting
Auto sleep	On/Off setting of the AutoSleep function

Setting: Timer/Sleep Level

1. Select [More Energy Save] or [Less Energy Save].

Items	Description
More Energy Save	BAM conformity setting On Sleep setting is disabled (Quick Recovery setting is disabled)
Less Energy Save	BAM conformity setting Off Sleep level can be set (Quick Recovery or Energy Saver)

- * :Initial setting: More Energy Save
2. Press the [Start] key. Press the [Start] key to confirm the setting.
 3. Turn the power switch off then on. Take interval more than 5 seconds between Off and On.

Setting: Auto sleep

1. Set [On] or [Off].

Items	Description
On	Transition to sleep mode is deactivated from the system menu.
Off	Transition to sleep mode is activated from the system menu.

- * :Initial setting: On
- * :Peel off the energy saver label when setting it to off
2. Press the [Start] key to confirm the setting.

Completion

Press the [Stop] key.

- * :The screen for selecting a maintenance item No. is displayed.

U402	Print margin adjustment (Message: Print Margin)
-------------	--

Description

Adjust margins when writing.

Purpose

Make the adjustment if margins are incorrect

* :If the leading edge margin is less than the specified value, it may cause jam at the fuser.

* :If there is no rear margin, when continuously printing, it may cause of image smudge on the second page.

Adjustment

- 1.Press the [Start] key.
- 2.Press the [System Menu/Counter] key.
- 3.Press the [Start] key to output a test pattern.
- 4.Press the [System Menu/Counter] key.
- 5.Select the item to set.

Items	Description	Setting range	Initial setting	Change in value per step
Lead	Printer leading edge margin	0.0 to 10.0	4.0	0.1 mm
A Margin	Printer left margin	0.0 to 10.0	3.0	0.1 mm
C Margin	Printer right margin	0.0 to 10.0	3.0	0.1 mm
Trail	Printer trailing edge margin	0.0 to 10.0	3.9	0.1 mm

- 6.By using the [<] [>] keys or the numeric keys, change the setting value.

* :When the setting value is increased, the margin widens, and it narrows when the setting value is decreased.

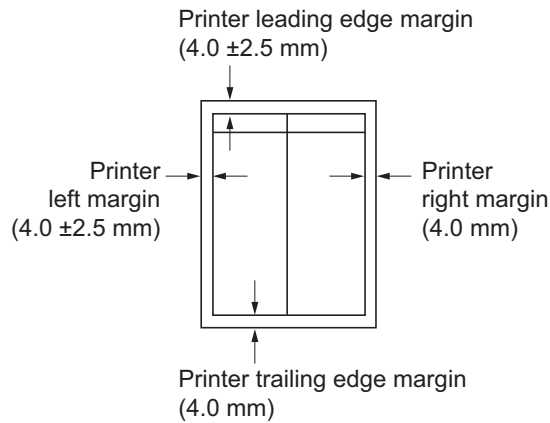


Figure 6-21

- 7.Press the [Start] key to confirm the setting.

Note

Check the copy image after the adjustment. If the image is still incorrect, adjust the following in the maintenance mode.

U034(P.6-29) > U402

Completion

Press the [Stop] key.

* :The screen for selecting a maintenance item No. is displayed.

U403	Scanning margin adjustment (table) (Message: Scan Margin Tbl)
-------------	--

Description

Adjusts the margins for table scanning.

Purpose

Make the adjustment if margins are incorrect

Adjustment

1. Press the [Start] key.
2. Press the [System Menu/Counter] key.
3. Place an original and press the [Start] key to make a test copy.
4. Press the [System Menu/Counter] key.
5. Select the item to adjust.

Items	Description	Setting range	Initial setting	Change in value per step
A Margin	Scanner left margin	0.0 to 10.0	2.0	0.5mm
B Margin	Scanner leading edge margin	0.0 to 10.0	2.0	0.5mm
C Margin	Scanner right margin	0.0 to 10.0	2.0	0.5mm
D Margin	Scanner trailing edge margin	0.0 to 10.0	2.0	0.5mm

6. By using the [<] [>] keys or the numeric keys, change the setting value.

* :When the setting value is increased, the margin widens, and it narrows when the setting value is decreased.

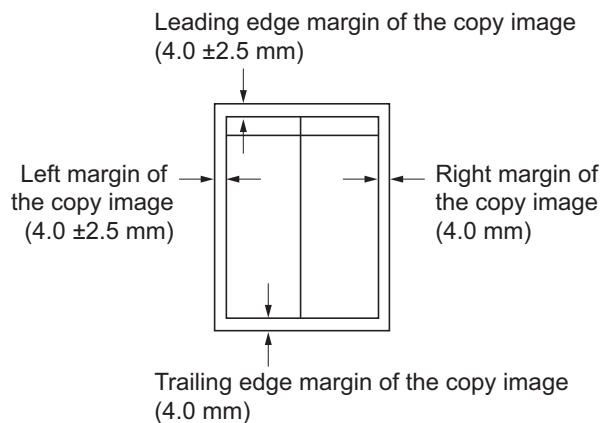


Figure 6-22

7. Press the [Start] key to confirm the setting.

Note

Check the copy image after the adjustment. If the image is still incorrect, adjust the following in the maintenance mode.

U034(P.6-29) > U402(P.6-72) > U403

Completion

Press the [Stop] key.

* :The screen for selecting a maintenance item No. is displayed.

U404	Scanning margin adjustment (DP) (Message: Scan Margin DP)
-------------	--

Description

Adjusts the margins for DP scanning.

Purpose

Make the adjustment if margins are incorrect

Adjustment

1. Press the [Start] key.
2. Press the [System Menu/Counter] key.
3. Place an original on the DP and press the [Start] key to make a test copy.
4. Press the [System Menu/Counter] key.
5. Select the item to adjust.

Items	Description	Setting range	Initial setting	Change in value per step
A Margin	Adjusts the DP left margin	0.0 to 10.0	3.0	0.5mm
B Margin	Adjusts the DP leading edge margin	0.0 to 10.0	2.5	0.5mm
C Margin	Adjusts the DP right margin	0.0 to 10.0	3.0	0.5mm
D Margin	Adjusts the DP trailing edge margin	0.0 to 10.0	4.0	0.5mm
A Margin(B)*1	Adjusts the DP left margin (second side)	0.0 to 10.0	3.0	0.5mm
B Margin(B)*1	Adjusts the DP leading edge margin (second side)	0.0 to 10.0	2.5	0.5mm
C Margin(B)*1	Adjusts the DP right margin (second side)	0.0 to 10.0	3.0	0.5mm
D Margin(B)*1	Adjusts the DP trailing edge margin (second side)	0.0 to 10.0	4.0	0.5mm

*1: 35 ppm model

6. By using the [<] [>] keys or the numeric keys, change the setting value.

* :When the setting value is increased, the margin widens, and it narrows when the setting value is decreased.

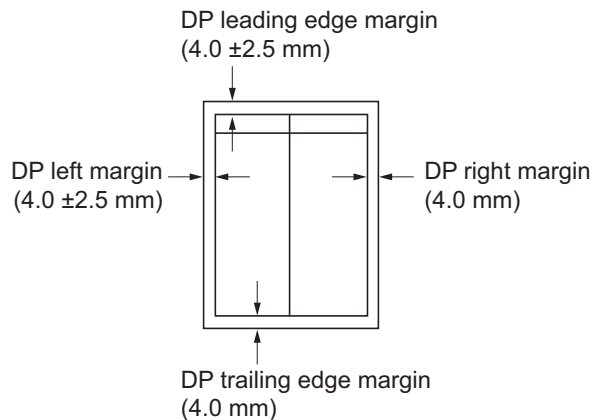


Figure 6-23

7. Press the [Start] key to confirm the setting.

Note

Check the copy image after the adjustment. If the image is still incorrect, adjust the following in the maintenance mode.

U034(P.6-29) > U402(P.6-72) > U403(P.6-73) > U404

Completion

Press the [Stop] key.

* :The screen for selecting a maintenance item No. is displayed.

U407	Adjusting the writing timing (Duplex/ Reversal) (Message: WR DR Timing)
-------------	--

Description

Adjusts the writing timing when printing in duplex.

Purpose

Make the adjustment when the back page image of double-sided copying is printed in rotated 180 degrees against the scanner reading image (image on the memory)

IMPORTANT

Proceed this adjustment after finishing the following maintenance modes.

U034(P.6-29) > U402(P.6-72) > U066(P.6-34) >
U403(P.6-73) > U071(P.6-38) > U404(P.6-74) > U407

Adjustment

- 1.Press the [Start] key.
- 2.Press the [System Menu/Counter] key.
- 3.Place an original on the DP and press the [Start] key to make a test copy.
- 4.Press the [System Menu/Counter] key.
- 5.Select [Adj Data].

Items	Description	Setting range	Initial setting	Data variation
Adj Data	The timing of leading edge when writing the image on memory	-47 to 47	0	1dot

- 6.By using the [<] [>] keys or the numeric keys, change the setting value.

For copy example 1, increase the value.

For copy example 2, decrease the value.

* :When the setting value is increased, the image moves forward and it moves backward when the setting value is decreased.

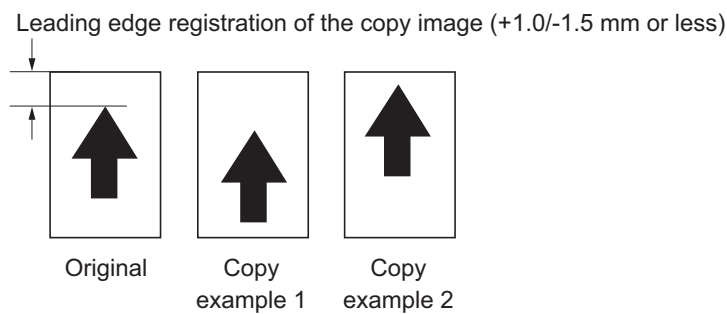


Figure 6-24

- 7.Press the [Start] key to confirm the setting.

Completion

Press the [Stop] key.

* :The screen for selecting a maintenance item No. is displayed.

U411	Scanner auto adjustment (Message: Auto Adj Scn)
-------------	--

Description

Uses the specified originals and automatically adjusts the following items in the scanner and the DP scanning sections.

Scanner section: Original size magnification, leading edge timing, center line, input gamma, input gamma in monochrome mode and matrix.

DP scanning section: Original size magnification, leading edge timing and center line.

Purpose


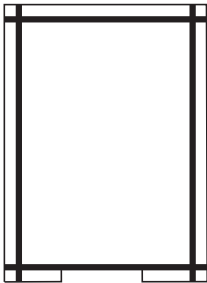
Perform the automatic adjustment of various items in the scanner and the DP scanning sections

Method

1.Press the [Start] key.

2.Select the item to execute.

* :The screen for executing is displayed.

Items	Use	Description	Original for adjustment (P/N)
Table(chartA)	In case of losing adjustment data, differing from the color tone extremely, ISU(CCD unit), Optical LED lamp, Engine EEPROM, when replacing DP CIS Use when setting up DP or executing U021 initialization	Perform the automatic adjustment in the table scanning. LED light intensity Leading edge timing Center line Chromatic aberration in the main scanning direction Input gamma in monochrome mode Input gamma in color mode Color correction matrix	302NM9434_ 
DP FU(CharA) DP FD(CharA)	Use when setting up DP or executing U021 initialization	Execute the first (front) side automatic adjustment in the DP scanning section. Execute the second (back) side automatic adjustment in the DP scanning section.	
DP FU(CharB) DP FD(CharB)		Execute the first (front) side automatic adjustment in the DP scanning section. Execute the second (back) side automatic adjustment in the DP scanning section. Magnification in the sub-scanning direction Leading edge timing Center line Trailing edge timing	302NM9433_ 
Target		Set-up for obtaining the target value	302NM9434_ 302NM9433_

Items	Use	Description	Original for adjustment (P/N)
Debug *1		Adjusting the document processor scanning section with the chart output by the local machine Magnification in the sub-scanning direction Leading edge timing Center line Trailing edge timing	Without Chart B, executed in a simplified manner.

*1: when the USB memory is installed

Method: Table(chartA)

Automatic input of the target value

* :Usually, it adjusts here.

- 1.Set the specified original (P/N: 302NM9434_) on the table.
- 2.Enter maintenance item U411.
- 3.Select [Target].
- 4.Using [<] [>] key or [*] key, [#] key, select [Auto], and press the [Start] key.
- 5.Select [Table(ChartA)].
- 6.Press the [Start] key to read the barcode of the original chart and to start the automatic adjustment.
- 7.When automatic adjustment has normally completed, [OK] is displayed.

* :When the error code "1e" or "1f" is displayed during the automatic adjustment in the table scanning and the barcode is not read, perform the adjustments in the following procedure after manual of input the target value.

Manual input of the target value

- 1.Enter the target values which are shown on the lower part of the front page of the adjustment original (P/N: 302NM9434_) by executing the maintenance mode U425.
- 2.Set the specified original (P/N: 302NM9434_) on the table.
- 3.Enter maintenance item U411.
- 4.Select [Target].
- 5.Using [<] [>] key, select [U425] and press the [Start] key.
- 6.Select [Table(ChartA)].
- 7.Press the [Start] key to start auto adjustment.
- 8.When automatic adjustment has normally completed, [OK] is displayed.

* :If the image position is shifted largely at the DP adjustment below, an error might occur when adjusting it with ChartA. First, use ChartB (image position) to adjust it and then use ChartA (color).

Method: DP FU (ChartA)

Automatic input of the target value

- 1.Set the specified original (P/N: 302NM94330) on the DP face-up.
- 2.Enter maintenance item U411.
- 3.Select [Target].
- 4.Using [<] [>] key or [*] key, [#] key, select [Auto], and press the [Start] key.
- 5.Select [DP FU(ChartA)].
- 6.Press the [Start] key to read the barcode of the original chart and to start the automatic adjustment.
- 7.When automatic adjustment has normally completed, [OK] is displayed.

* :When the error code "1e" or "1f" is displayed during the automatic adjustment in the DP scanning and the barcode is not read, adjust the following after manually inputting the target value.

Manual input of the target value

- 1.Enter the target values which are shown on the lower part of the front page of the adjustment original (P/N: 302NM9434_) by executing the maintenance mode U425.
- 2.Set the specified original (P/N: 302NM9434_) on the table.
- 3.Enter maintenance item U411.
- 4.Select [Target].
- 5.Using [<] [>] key, select [U425] and press the [Start] key.
- 6.Select [Table(ChartA)].
- 7.Press the [Start] key to start auto adjustment.
- 8.When automatic adjustment has normally completed, [OK] is displayed.

Method: DP FU (ChartB)

* :To adjust the front page of the DP scanning

- 1.Set the specified original (P/N: 302NM94330) on the DP face-up.
- 2.Enter maintenance item U411.
- 3.Select [DP FU(ChartB)].
- 4.Press the [Start] key to start auto adjustment.

5. When automatic adjustment has normally completed, [OK] is displayed.

Method: DP FD(ChartB)

* :Adjust the back page of the DP scanning

1. Set the specified original (P/N: 302NM9433_) on the DP face-down.
2. Enter maintenance item U411.
3. Select [DP FD(ChartB)].
4. Press the [Start] key to start auto adjustment.
5. When automatic adjustment has normally completed, [OK] is displayed.

* :If an error occurs during auto adjustment, error code "NGXX" is displayed and operation stops. In this case, check the details of the error and repeat the automatic adjustment procedure from the beginning.

Error code

Codes	Description	Corrective Action	
00	Automatic adjustment success	-	
01	Black band detection error (Table scanning leading edge skew in the sub-scanning direction)	Align the original to the upper left corner to set it and execute the auto adjustment. Check the lamp light and replace it if it does not light.	
04	Black band is not detected (Table leading edge in the sub-scanning direction)		
05	Black band is not detected (Table far end in the main scanning direction)		
06	Black band is not detected (Table near end in the main scanning direction)		
07	Black band is not detected (Table trailing edge in the sub-scanning direction)		
08	Black band is not detected (DP far end in the main scanning direction)		Check the attachment position of DP. Check lighting of the lamp or replace it. Check the back and front of the adjustment original.
09	Black band is not detected (DP near end in the main scanning direction)		
0a	Black band is not detected (DP leading edge in the sub-scanning direction)		
0b	Black band is not detected (Original check of DP leading edge in the sub-scanning direction)		
0c	Black band is not detected (DP trailing edge in the sub-scanning direction)		
0d	White band is not detected (DP trailing edge in the sub-scanning direction)		
0e	DMA time out	Turn the power switch off then on, and execute again.	

Codes	Description	Corrective Action
0f	Magnification error in the sub-scanning direction	Turn the power switch off then on, and execute again. Manually adjust the items below. (U065 to U067, U070 to U072)
10	Leading edge error in the sub-scanning direction	
11	Trailing edge error in the sub-scanning direction	
12	DP skew error in the sub-scanning direction	
13	Maintenance request error	Turn the power switch off then on, and execute again.
14	Center line error in the main scanning direction	Turn the power switch off then on, and execute again. Manually adjust the items below. (U065 to U067, U070 to U072)
15	DP skew error in the main scanning direction	
16	Magnification error in the main scanning direction	
17	Service call error	Turn the power switch off then on, and execute again.
18	DP paper jam error	Set the original correctly and execute again.
19	PWB replacement error	-
1a	Original error	Clean the contact glass and slit glass. Exchange the adjustment original.
1b	Input gamma adjustment original error	Set the original correctly and execute again.
1c	Matrix adjustment original error	
1d	Original for the white reference correction coefficient error	
1e	Lab value detection error	Check the following and execute again. Bar code is dirty or not ? Position of the original is correct or not ? Position of the bar code is correct or not ?
1f	Lab value comparing error	Check the following and execute again. The acquired bar code is the same or not ? Position of the original is correct or not ? Position of the bar code is correct or not ?

Codes	Description	Corrective Action
20	Input gamma correction coefficient error	Set the original correctly and execute again.
21	Color correction matrix coefficient error	
30	Chromatic aberration adjustment original error	
40	Black dot detection error at the linearity correction (Point A)	Align the original to the upper left corner to set it and execute the auto adjustment. Check the lamp light and replace it if it does not light.
41	Black dot detection error at the linearity correction (Point B)	
42	Black dot detection error at the linearity correction (Point C)	
43	Black dot detection error at the linearity correction (Point D)	
44	Black dot detection error at the linearity correction (Point E)	
45	Black dot detection error at the linearity correction (Point F)	
46	Black dot detection error at the linearity correction (Point G)	
47	Black dot detection error at the linearity correction (Point H)	
48	Black dot detection error at the linearity correction (Point I)	
49	Black dot detection error at the linearity correction (Point J)	
4a	Black dot detection error at the linearity correction (Point K)	
4b	Black dot detection error at the linearity correction (Point L)	
4c	Black dot detection error at the linearity correction (Point M)	
4d	Black dot detection error at the linearity correction (Point N)	
4e	Black dot detection error at the linearity correction (Point O)	
4f	Linearity correction, Point P black band no detection error.	
50	White reference plate correction ratio error.	Place the adjustment original and execute it again.
99	Completed to obtain a test RAW	-

Completion

Press the [Stop] key.

* :The screen for selecting a maintenance item No. is displayed.

U425	Target adjustment (Message: Set Target)
-------------	--

Description

Enter the lab values which are shown on the back page of the adjustment original (P/N: 302NM9434_).

Purpose

Enter data in order to correct for differences in originals during the automatic adjustment

Method

- 1.Press the [Start] key.
- 2.Select the item to set.

Items	Description
ChartA	Setting the adjustment value of the table scanning
ChartB	Setting the adjustment value of the DP scanning

Method: ChartA/ChartB

- 1.Press the [Start] key.
- 2.Select the item to set.

Items	Description
White	Setting the white patch for the adjustment original
Black	Setting the black patch for the adjustment original
Gray1	Setting the Gray1 patch for the adjustment original
Gray2	Setting the Gray2 patch for the adjustment original
Gray3	Setting the Gray3 patch for the adjustment original
C	Setting the cyan patch for the adjustment original
M	Setting the magenta patch for the adjustment original
Y	Setting the yellow patch for the adjustment original
R	Setting the red patch for the adjustment original
G	Setting the green patch for the adjustment original
B	Setting the blue patch for the adjustment original
Adjust Original	Setting the main scanning and sub-scanning directions

Setting: White

- 1.Select the item to set.
- 2.By using [<] [>] keys or the numeric keys, enter the values which are shown on the back page of the adjustment original.

Items	Description	Setting range	Initial setting	Data variation
L	Setting the L value	0.0 to 100	93.6	1dot
a	Setting the a value	-200 to 200	0.9	
b	Setting the b value	-200 to 200	-0.4	

- 3.Press the [Start] key to confirm the setting.

Setting: Black

1. Select the item to set.
2. By using [<] [>] keys or the numeric keys, enter the values which are shown on the back page of the adjustment original.

Items	Description	Setting range	Initial setting	Data variation
L	Setting the L value	0.0 to 100	10.6	1dot
a	Setting the a value	-200 to 200	-0.2	
b	Setting the b value	-200 to 200	-0.7	

3. Press the [Start] key to confirm the setting.

Setting: Gray1

1. Select the item to set.
2. By using [<] [>] keys or the numeric keys, enter the values which are shown on the back page of the adjustment original.

Items	Description	Setting range	Initial setting	Data variation
L	Setting the L value	0.0 to 100	76.2	1dot
a	Setting the a value	-200 to 200	-0.2	
b	Setting the b value	-200 to 200	1.2	

3. Press the [Start] key to confirm the setting.

Setting: Gray2

1. Select the item to set.
2. By using [<] [>] keys or the numeric keys, enter the values which are shown on the back page of the adjustment original.

Items	Description	Setting range	Initial setting	Data variation
L	Setting the L value	0.0 to 100	25.2	1dot
a	Setting the a value	-200 to 200	-0.2	
b	Setting the b value	-200 to 200	-0.2	

3. Press the [Start] key to confirm the setting.

Setting: Gray3

1. Select the item to set.
2. By using [<] [>] keys or the numeric keys, enter the values which are shown on the back page of the adjustment original.

Items	Description	Setting range	Initial setting	Data variation
L	Setting the L value	0.0 to 100	51.3	1dot
a	Setting the a value	-200 to 200	-0.3	
b	Setting the b value	-200 to 200	-0.3	

3. Press the [Start] key to confirm the setting.

Setting: C

1. Select the item to set.
2. By using [<] [>] keys or the numeric keys, enter the values which are shown on the back page of the adjustment original.

Items	Description	Setting range	Initial setting	Data variation
L	Setting the L value	0.0 to 100	72.6	1dot
a	Setting the a value	-200 to 200	-32.8	
b	Setting the b value	-200 to 200	-11.5	

3. Press the [Start] key to confirm the setting.

Setting: M

1. Select the item to set.
2. By using [<] [>] keys or the numeric keys, enter the values which are shown on the back page of the adjustment original.

Items	Description	Setting range	Initial setting	Data variation
L	Setting the L value	0.0 to 100	48.1	1dot
a	Setting the a value	-200 to 200	69.9	
b	Setting the b value	-200 to 200	-6.1	

3. Press the [Start] key to confirm the setting.

Setting: Y

1. Select the item to set.
2. By using [<] [>] keys or the numeric keys, enter the values which are shown on the back page of the adjustment original.

Items	Description	Setting range	Initial setting	Data variation
L	Setting the L value	0.0 to 100	86.2	1dot
a	Setting the a value	-200 to 200	-18.6	
b	Setting the b value	-200 to 200	81.7	

3. Press the [Start] key to confirm the setting.

Setting: R

1. Select the item to set.
2. By using [<] [>] keys or the numeric keys, enter the values which are shown on the back page of the adjustment original.

Items	Description	Setting range	Initial setting	Data variation
L	Setting the L value	0.0 to 100	46.7	1dot
a	Setting the a value	-200 to 200	54.2	
b	Setting the b value	-200 to 200	38.6	

3. Press the [Start] key to confirm the setting.

Setting: G

1. Select the item to set.
2. By using [<] [>] keys or the numeric keys, enter the values which are shown on the back page of the adjustment original.

Items	Description	Setting range	Initial setting	Data variation
L	Setting the L value	0.0 to 100	67.8	1dot
a	Setting the a value	-200 to 200	-51.3	
b	Setting the b value	-200 to 200	48.9	

3. Press the [Start] key to confirm the setting.

Setting: B

1. Select the item to set.
2. By using [<] [>] keys or the numeric keys, enter the values which are shown on the back page of the adjustment original.

Items	Description	Setting range	Initial setting	Data variation
L	Setting the L value	0.0 to 100	38.8	1dot
a	Setting the a value	-200 to 200	25.3	
b	Setting the b value	-200 to 200	-22.8	

3. Press the [Start] key to confirm the setting.

Setting: Adjust Original(ChartA)

* :This setting is usually unnecessary.

Items	Description	Setting range	Initial setting	Data variation
Lead	Set the adjustment value of a leading edge.	4.0 to 6.0	5.0	0.1mm

Items	Description	Setting range	Initial setting	Data variation
Main Scan	Sets the adjustment value of the left edge.	9.0 to 11.0	10.0	0.1mm
Sub Scan	Set the adjustment value of the trailing edge.	265.0 to 267.0	266.0	0.1mm

- Measure the distance from the leading edge to the top edge of black belt 1 on the adjustment original at three positions.
Measurement procedure
1) Measure the distance of "A", "B" and "C" at the following three positions. (A: 30mm from the left edge, B: 105mm from the left edge, C: 180mm from the left edge)
Measure the distance to the leading edge of the black band
2) Apply the following formula for the values obtained: $(A+B+C)/3$
- Enter the value solved in "Lead" using the the [\leftarrow] [\rightarrow] keys.
- Press the [Start] key to confirm the setting.
- Measure the distance from the left edge to the right edge of black belt 2 on the adjustment original.
Measurement procedure
1) Measure the distance "F" from the left edge to the right edge of black belt 2 on the adjustment original at 21mm from the top edge of black belt 1.
- Enter the values measured in "Main Scan" using the [\leftarrow] [\rightarrow] keys.
- Press the [Start] key to confirm the setting.
- Measure the distance from the top edge of black belt 1 to the bottom edge of black belt 3 on the adjustment original at two positions.
Measurement procedure
1) Measure the distance of "D" and "E" at the following two positions. (D: Measure the distance from the leading edge to the bottom edge of black belt 3 on the adjustment original at 30mm from the left edge and deduct the value of A. E: Measure the distance from the leading edge to the bottom edge of black belt 3 on the adjustment original at 180mm from the left edge and deduct the value of C.)
2) Apply the following formula for the values obtained: $(D/2+E/2)$
- Enter the value solved in "Sub Scan" using the using [\leftarrow] [\rightarrow] keys.
- Press the [Start] key to confirm the setting.

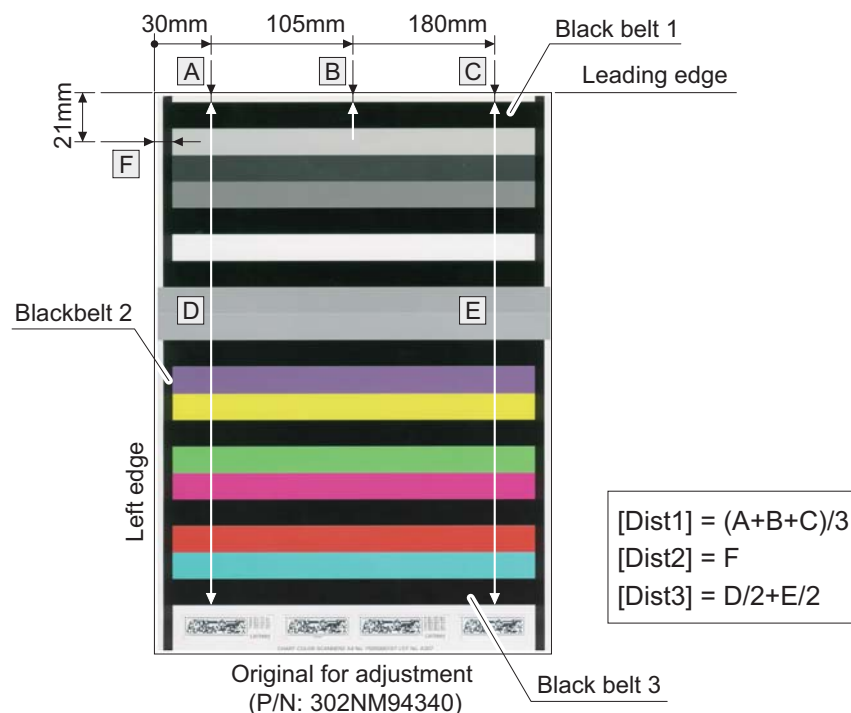


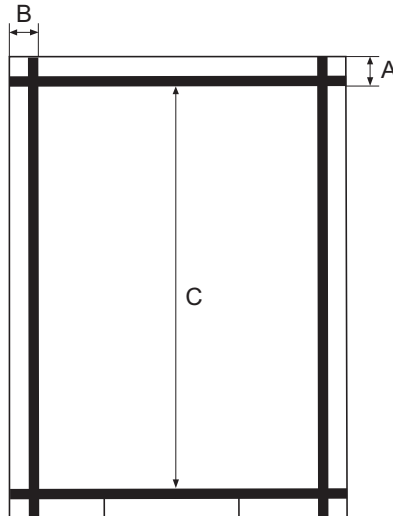
Figure 6-25

Setting: Adjust Original (ChartB)

* :This setting is usually unnecessary.

Items	Description	Setting range	Initial setting	Data variation
Lead	Set the adjustment value of a leading edge.	14.0 to 16.0	15.0	0.1mm
Main Scan	Sets the adjustment value of the left edge.	14.0 to 16.0	15.0	0.1mm
Sub Scan	Set the adjustment value of the trailing edge.	265.0 to 269.0	267.0	0.1mm

1. Measure the distance "A" from the leading edge to the black belt (inside) on the adjustment original.
2. Enter the values measured in "Lead" using the [<] [>] keys.
3. Measure the distance "B" from the left edge to the black belt (inside) on the adjustment original.
4. Enter the values measured in "Main Scan" using the [<] [>] keys.
5. Measure the distance "C" from the leading black belt (inside) to the trailing black belt (inside) on the adjustment original.
6. Enter the values measured in "Sub Scan" using the [<] [>] keys.
7. Press the [Start] key to confirm the setting.



Original for adjustment (P/N: 302NM94330)

Figure 6-26

Completion

Press the [Stop] key.

* :The screen for selecting a maintenance item No. is displayed.

U520	Set TDRS (Message: Set TDRS)
-------------	---

Description

Performs TDRS settings and information views.

Purpose

Perform the TDRS settings and information views

Method

1. Press the [Start] key.
2. Select [On/Off Config].

Items	Description
On/Off Config	Transition to the TDRS features setting dialog

3. Select the item to set.

Items	Description
On	Enable TDRS
Off	Disable TDRS

4. Press the [Start] key to confirm the setting.
5. Turn the power switch off then on. Take interval more than 5 seconds between Off and On.

Completion

Press the [Stop] key.

* :The screen for selecting a maintenance item No. is displayed.

U600	Initialize: All Data (Message: Init All Data)
-------------	--

Description

Initialize software switches and all data and image memory in the backup data on the FAX control PWB, according to the destination and OEM setting.

Execute check of the file system when abnormality of the file system is detected, initialize the file system and then initializes the communication record and the registering contents.

Purpose

Initialize the FAX control PWB

Setting: Country Code / Method: Execute

1. Press the [Start] key.
 - * :The screen for entering the country code and OEM code is displayed.
2. Select [Country Code] and enter a country code using the numeric keys.
 - * :Refer to the following country code list.
 - * :No operation of "OEM code" is necessary.

Items	Description
Country Code	Setting for Country Code
OEM Code	Setting the OEM Code
Execute	Executing data initialization

3. Select [Execute] and press the [Start] key.
 - * :Data initialization starts.
 - To cancel the data initialization, press the [Stop] key.
4. After the data initialization, the firmware version is displayed.

- * :When initialization is successful, "Completed" is displayed during one second.
- * :Where an irregular value is input, when it initializes, the following errors are displayed.

Kind of error
Unknown Country (When Country Code is unknown)
Unknown OEM (When OEM Code is unknown)
Unknown Country (When both are unknown)

Country code list

country code	Destination	country code	Destination
000	Japan	007	South America ^{*3}
156	Asian nations ^{*1}	253	European nations ^{*4}
254	Taiwan	250	Russia
097	Korea	009	Australia
038	China	126	New Zealand ^{*5}
181	North America ^{*2}		

*1: Applied for Sales company competent Singapore, India, Thailand, Hong Kong.

*2: Applied for Sales company competent USA, Canada, Mexico, Brazil.

*3: Applied for Sales company competent Bolivia, Chile, Peru, Argentina.

*4: Applied for Sales company competent Italy, Germany, Spain, U.K., Netherlands, Sweden, France, Austria, Switzerland, Belgium, Denmark, Finland, Portugal, Ireland, Norway, Saudi Arabia, Turkey.

*5: Change the country code when selling in New Zealand. The country code to input is 126.

U601	Initialize: Keep Data (Message: Init Keep Data)
-------------	--

Description

Initializes software switches other than the machine data on the FAX control PWB according to the destination and OEM setting.

Purpose

Initialize the FAX control PWB without changing the user registration data and the factory defaults

Setting: Country Code / Method: Execute

1. Press the [Start] key.

* :The screen for entering the country code and OEM code is displayed.

2. Select [Country Code] and enter a country code using the numeric keys.

* :Refer to the country code list. (See page P.6-91)

Items	Description
Country Code	Setting for Country Code
OEM Code	Setting the OEM Code
Execute	Executing data initialization

* :No operation of "OEM code" is necessary.

3. Select [Execute] and press the [Start] key.

* :Data initialization starts.

To cancel the data initialization, press the [Stop] key.

4. After the data initialization, the firmware version is displayed.

U603	User Data 1 (Message: User Data 1)
-------------	---

Description

Sets the type of line to enable the use of the main unit as a fax.

Purpose

Execute as required

Method

- 1.Press the [Start] key.
- 2.Select [Line Type].

Items	Description
Line Type	Line Type

- 3.Select the item to set.

Items	Description
DTMF	DTMF
10PPS	10PPS
20PPS	20PPS

* :Initial setting: DTMF

- 4.Press the [Start] key to confirm the setting.

* :"" is displayed on the set item.

Completion

Press the [Stop] key.

* :The screen for selecting a maintenance item No. is displayed.

U604	User Data 2 (Message: User Data 2)
-------------	---

Description

Adjust the number of rings of fax/telephone automatic switching to enable the use of the machine as a fax.

Purpose

Adjust the number of rings to longer (or shorter) that occur before the main unit switches into fax receiving mode according to the user's requirement

Method

- 1.Press the [Start] key.
- 2.Select [Rings(F/T)#].
- 3.By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Description	Setting range	Initial setting
Rings (F/T) #	Number of fax/telephone rings	0 to 15	-

- * :If the default is set to "0", the main unit will start fax reception without any ringing.
- 4.Press the [Start] key to confirm the setting.

Completion

Press the [Stop] key.

* :The screen for selecting a maintenance item No. is displayed.

U605	Clear Data (Message: Clr Data)
-------------	---

Description

Initializes data related to the fax transmission such as transmission history or various ID.

Purpose

Clear the communication history

Method

- 1.Press the [Start] key.
- 2.Select [Comm Rec].

Items	Description
Comm Rec	Delete data of communication history and protocol list of display port

- 3.Press the [Start] key.

* :When initialization is successful, "Completed" is displayed during one second.

Completion

Press the [Stop] key.

* :The screen for selecting a maintenance item No. is displayed.

U610	System 1 (Message: System Setting 1)
-------------	---

Description

Set the number of lines to be ignored when receiving a fax at 100% magnification and in the auto reduction mode.

Method

1. Press the [Start] key.
2. Select the item to set.

Items	Description
Cut Line: A4	Set the number of lines to be ignored when receiving a fax (A4R/LetterR) in the auto reduction mode.
Cut Line: 100%	Set the number of lines to be ignored when receiving a fax at 100% magnification.
Cut Line: Auto	Set the number of lines to be ignored when receiving a fax in the auto reduction mode.

Setting: Cut Line: A4

Set the maximum number of lines to be ignored if the received data volume exceeds the recording capacity when the data is recorded in the auto reduction mode onto A4R or LetterR paper.

If the number of excess lines is below the setting, those lines are ignored. If it is over the setting, the entire data on a page is further reduced so that it can be recorded on the same page.

1. By using the [<] [>] keys or the numeric keys, change the setting value.

Description	Setting range	Initial setting	Change in value per step
Set the number of lines to be ignored when receiving a fax (A4R/LetterR) in the auto reduction mode.	0 to 22	0	-

* :Increase the setting value if a page received in the reduction mode is over-reduced and too much trailing edge margin is left. Decrease the setting value if the received image does not include the entire transmitted data.

2. Press the [Start] key to confirm the setting.

Setting: Cut Line: 100%

Sets the maximum number of lines to be ignored if the received data volume exceeds the recording capacity when recording the data at 100% magnification.

If the number of excess lines is below the setting, those lines are ignored. If it is over the setting, they are recorded on the next page.

1. By using the [<] [>] keys or the numeric keys, change the setting value.

Description	Setting range	Initial setting	Change in value per step
Set the number of lines to be ignored when receiving a fax at 100% magnification.	0 to 22	3	-

- * :Increase the setting value if a blank second page is output in the full magnification reception. Decrease the setting value if the received image does not include the entire transmitted data.
- 2.Press the [Start] key to confirm the setting.

Setting: Cut Line:Auto

Set the maximum number of lines to be ignored if the received data volume exceeds the recording capacity when the data is recorded in the auto reduction mode.

If the number of excess lines is below the setting, those lines are ignored. If it is over the setting, the entire data on a page is further reduced so that it can be recorded on the same page.

- 1.By using the [<] [>] keys or the numeric keys, change the setting value.

Description	Setting range	Initial setting	Change in value per step
Set the number of lines to be ignored when receiving a fax in the auto reduction mode.	0 to 22	0	-

- * :Increase the setting value if a page received in the reduction mode is over-reduced and too much trailing edge margin is left. Decrease the setting value if the received image does not include the entire transmitted data.
- 2.Press the [Start] key to confirm the setting.

Completion

Press the [Stop] key.

- * :The screen for selecting a maintenance item No. is displayed.

U611	System 2 (Message: System Setting 2)
-------------	---

Description

Sets the number of adjustment lines for automatic reduction.

Purpose

Sets the number of adjustment lines for automatic reduction.

Method

1. Press the [Start] key.
2. Select the item to set.

Items	Description
ADJ LINES	Sets the number of adjustment lines for automatic reduction.
ADJ LINES(A4)	Sets the number of adjustment lines for automatic reduction when A4 paper is set.
ADJ LINES(LT)	Sets the number of adjustment lines for automatic reduction when letter size paper is set.

Setting: ADJ LINES

Sets the number of adjustment lines for automatic reduction.

1. By using the [<] [>] keys or the numeric keys, change the setting value.

Description	Setting range	Initial setting	Change in value per step
Sets the number of adjustment lines for automatic reduction.	0 to 22	7	-

2. Press the [Start] key to confirm the setting.

Setting: ADJ LINES(A4)

Sets the number of adjustment lines for automatic reduction.

1. By using the [<] [>] keys or the numeric keys, change the setting value.

Description	Setting range	Initial setting	Change in value per step
Sets the number of adjustment lines for automatic reduction when A4 paper is set.	0 to 22	22	-

2. Press the [Start] key to confirm the setting.

Setting: ADJ LINES(LT)

Sets the number of adjustment lines for automatic reduction when letter size paper is set.

1.By using the [<] [>] keys or the numeric keys, change the setting value.

Description	Setting range	Initial setting	Change in value per step
Sets the number of adjustment lines for automatic reduction when letter size paper is set.	0 to 22	26	-

2.Press the [Start] key to confirm the setting.

Completion

Press the [Stop] key.

* :The screen for selecting a maintenance item No. is displayed.

U612	System 3 (Message: System Setting 3)
-------------	---

Description

Sets the fax transmission operation and automatic printing of the protocol list.

Method

1. Press the [Start] key.
2. Select the item to set.

Items	Description
Auto reduce	Selects if auto reduction in the auxiliary direction is to be performed.
Protocol List	Sets the automatic printing of the protocol list.

Setting: Auto Reduce

Sets whether to receive a long document by automatically reducing it in the auxiliary direction or at 100% magnification.

1. By using the [<] [>] keys, select the item to set.

Items	Description
On	Auto reduction is performed if the received document is longer than the fax paper.
Off	Auto reduction is not performed.

- * :Initial setting: On
- 2. Press the [Start] key to confirm the setting.
- * : "*" is displayed on the set item.

Setting: Protocol List

Sets if the protocol list is automatically printed out.

1. Select the item to set.

Items	Description
Err	The protocol list is automatically printed out after communication only if a communication error occurs.
On	The protocol list is automatically printed out after communication.
Off	The protocol list is not printed out automatically.

- * :Initial setting: Off
- 2. Press the [Start] key to confirm the setting.
- * : "*" is displayed on the set item.

Completion

Press the [Stop] key.

- * :The screen for selecting a maintenance item No. is displayed.

U620	FAX System (Message: FAX System)
-------------	---

Description

Sets the signal detection method for remote switching.
Change the setting according to the type of telephone connected to the main unit.

Purpose

Set the decision system of a remote switching to compensate for a user's telephone classification, peculiarity, etc

Setting

- 1.Press the [Start] key.
- 2.Select [Remote Mode].

Items	Description
Remote Mode	Setting the remote switching mode

- 3.By using the [<] [>] keys, select the item to set.

Items	Description
One	One-shot type detection
Cont	Continuous type detection

- * :Initial setting: One
- 4.Press the [Start] key to confirm the setting.
- * :"" is displayed on the set item.

Completion

- Press the [Stop] key.
- * :The screen for selecting a maintenance item No. is displayed.

U625	Set Communication (Message: Set Comm)
-------------	--

Description

Sets the auto redialing interval and the number of times of auto redialing.

Purpose

Changes the setting to prevent the following problems. Fax transmission is not possible due to too short redial interval, or fax transmission takes too much time to complete due to too long redial interval.

Method

1. Press the [Start] key.
2. Select the item to set.

Items	Description
Interval	Setting the auto redialing interval
Times	Setting the number of times of auto redialing

Setting: Interval

1. By using the [<] [>] keys or the numeric keys, change the setting value.

Description	Setting range	Initial setting	Change in value per step
Setting the auto redialing interval	1 to 9 minutes	3 minutes	

2. Press the [Start] key to confirm the setting.

Setting: Times

1. By using the [<] [>] keys or the numeric keys, change the setting value.

Description	Setting range	Initial setting	Change in value per step
Setting the number of times of auto redialing	0 to 15 times	3 times	

2. Press the [Start] key to confirm the setting.

Completion

Press the [Stop] key.

* :The screen for selecting a maintenance item No. is displayed.

U630	Communication control 1 (Message: Comm Ctrl 1)
-------------	---

Description

Set the fax communication.

Purpose

Corresponding to the event of a request from a user
Reducing the transmission time to improve the accuracy of reception when using a low quality line
Improving the accuracy of communication at the international communication

Method

1. Press the [Start] key.
 2. Select the item to set.
- * :The screen for executing is displayed.

Items	Description
TX Speed	Sets the communication starting speed.
RX Speed	Sets the reception speed.
TX Echo	Sets the waiting period to prevent echo problems at the sender.
RX Echo	Sets the reception speed.

Setting: TX Speed

Sets the initial communication speed when starting transmission. When the destination unit has the V.34 capability, V.34 is selected for transmission regardless of this setting.

1. Select the communication speed.

Items	Description
14400bps/V17	V.17 14400bps
9600bps/V29	V.29 9600bps
4800bps/V27ter	V.27ter 4800bps
2400bps/V27ter	V.27ter 2400bps

- * :Initial setting: 14400bps/V17
2. Press the [Start] key to confirm the setting.
- * : "*" is displayed on the set item.

Setting: RX Speed

Sets the reception speed which will be shown to the sender unit in the DIS / NSF signal. When the destination unit has V.34 capability, V.34 is selected for transmission regardless of this setting.

1. Select the reception speed.

Items	Description
14400bps	V.17, V.33, V.29, V.27ter
9600bps	V.29, V.27ter
4800bps	V.27ter
2400bps	V.27ter (fallback only)

- * :Initial setting: 14400bps

2. Press the [Start] key to confirm the setting.
* : "*" is displayed on the set item.

Setting: TX Echo

Sets the period before a DCS signal is sent after a DIS signal is received. Used when problems occur due to echoes at the sender.

1. Select the item to set.

Items	Description
500	Sends a DCS after 500 ms from receiving a DIS.
300	Sends a DCS after 300 ms from receiving a DIS.

* : Initial setting: 300

2. Press the [Start] key to confirm the setting.
* : "*" is displayed on the set item.

Setting: RX Echo

Sets the period before an NSF, CSI or DIS signal is sent after a CED signal is received. Used when problems occur due to echoes at the receiver.

1. Select the item to set.

Items	Description
500	Sends an NSF, CSI or DIS after 500 ms from receiving a CED.
75	Sends an NSF, CSI or DIS after 75 ms from receiving a CED.

* : Initial setting: 75

2. Press the [Start] key to confirm the setting.
* : "*" is displayed on the set item.

Completion

Press the [Stop] key.

* : The screen for selecting a maintenance item No. is displayed.

U631	Communication Control 2 (Message: Comm Ctrl 2)
-------------	---

Description

Set the fax communication.

Purpose

Sets the transmission and reception of ECM

Sets the frequency of CED

Method

1.Press the [Start] key.

2.Select the item to set.

* :The screen for executing is displayed.

Items	Description
ECM TX	Sets ECM transmission.
ECM RX	Sets ECM reception.
CED Freq	The frequency of CED is set up.

Setting: ECM TX

Set to OFF when the reduction of transmission costs is of higher priority than image quality.

* :This should not be set to OFF when connecting to the IP (Internet Protocol) telephone line.

1.Select the item to set.

Items	Description
On	ECM transmission is enabled.
Off	ECM transmission is disabled.

* :Initial setting: On

2.Press the [Start] key to confirm the setting.

* :"" is displayed on the set item.

Setting: ECM RX

Set to OFF when the reduction of transmission costs is of higher priority than image quality.

* :This should not be set to OFF when connecting to the IP (Internet Protocol) telephone line.

1.Select the item to set.

Items	Description
On	ECM reception is enabled.
Off	ECM reception is disabled.

* :Initial setting: On

2.Press the [Start] key to confirm the setting.

* :"" is displayed on the set item.

Setting: CED Freq

Set the frequency of CED. Perform it as one of the communication accuracy improvement measures for the international communication.

1. Select the item to set.

Items	Description
2100	2100Hz
1100	1100Hz

* :Initial setting: 2100

2. Press the [Start] key to confirm the setting.

* : "*" is displayed on the set item.

Completion

Press the [Stop] key.

* : The screen for selecting a maintenance item No. is displayed.

U632	Communication Control 3 (Message: Comm Ctrl 3)
-------------	---

Description

Set the fax communication.

Purpose

Reducing the error communication when using a low quality line
Corresponding to the event of a request from a user in the fax/telephone automatic switching

Method

- 1.Press the [Start] key.
 - 1.Select the item to set.
- * :The screen for executing is displayed.

Items	Description
DIS 4Byte	Sets the DIS signal to 4 bytes.
Num OF CNG(F/T)	Sets the number of the CNG detection in the automatic FAX/telephone switching mode.

Setting: DIS 4Byte

Sets wheter to send bit 33 and later bits of the DIS/DTC signal

- 1.Select the item to set.

Items	Description
On	Bit 33 and later bits of the DIS/DTC signal are not sent.
Off	Bit 33 and later bits of the DIS/DTC signal are sent.

- * :Initial setting: Off
- 2.Press the [Start] key to confirm the setting.
- * :"" is displayed on the set item.

Setting: Num OF CNG(F/T)

Sets the CNG detection times in the fax/telephone automatic switching mode.

- 1.Select the item to set.

Items	Description
1Time	Detects CNG once.
2Time	Detects CNG twice.

- * :Initial setting: 1Time
- 2.Press the [Start] key to confirm the setting.
- * :"" is displayed on the set item.

Completion

Press the [Stop] key.

- * :The screen for selecting a maintenance item No. is displayed.

U633	Communication Control 4 (Message: Comm Ctrl 4)
-------------	---

Description

Set the fax communication.

Purpose

Reducing the error communication when using a low quality line

Method

1. Press the [Start] key.
 2. Select the item to set.
- * :The screen for executing is displayed.

Items	Description
V.34	Enables or disables the V.34 communication.
V.34-3429Hz	Sets the V.34 symbol speed (3429 Hz).
DIS 2Res	Sets the number of times of DIS signal reception.
RTN Check	Sets the reference for RTN signal output.

Setting: V.34

Sets whether to enable/disable the V.34 communication for transmission and reception.

1. Select the item to set.

Items	Description
On	V.34 communication is enabled for both transmission and reception.
TX	V.34 communication is enabled for transmission only.
RX	V.34 communication is enabled for reception only.
Off	V.34 communication is disabled for both transmission and reception.

- * :Initial setting: On
2. Press the [Start] key to confirm the setting.
- * : "*" is displayed on the set item.

Setting: V.34-3429Hz

Sets if the V.34 symbol speed 3429 Hz is used.

1. Select the item to set.

Items	Description
On	V.34 symbol speed 3429 Hz is used.
Off	V.34 symbol speed 3429 Hz is not used.

- * :Initial setting: On
2. Press the [Start] key to confirm the setting.
- * : "*" is displayed on the set item.

Setting: DIS 2Res

Sets the number of times to receive the DIS signal to once or twice. Perform it as one of the correction measures for transmission errors and other problems.

1. Select the item to set.

Items	Description
Once	Responds to the first signal.
Twice	Responds to the second signal.

* :Initial setting: Once

1. Press the [Start] key to confirm the setting.

* : "*" is displayed on the set item.

Setting: RTN Check

Sets the error line rate as the reference for RTN signal output. If transmission errors occur frequently due to the quality of the line, they can be reduced by lowering this setting.

1. Select the item to set.

Items	Description
5%	Error line rate of 5%
10%	Error line rate of 10%
15%	Error line rate of 15%
20%	Error line rate of 20%

* :Initial setting: 15%

2. Press the [Start] key to confirm the setting.

* : "*" is displayed on the set item.

Completion

Press the [Stop] key.

* : The screen for selecting a maintenance item No. is displayed.

U634	Communication Control 5 (Message: Comm Ctrl 5)
-------------	---

Description

Sets the maximum number of error bytes judged acceptable when receiving a TCF signal. Perform it as one of measures to ease transmission conditions if transmission errors occur.

Purpose

* :Alleviating the communication conditions

Setting

- 1.Press the [Start] key.
- 2.Select [TCF Check].
- 3.By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Description	Setting range	Initial setting	Change in value per step
TCF Check	Number of allowed error bytes when detecting TCF	0 to 255s	0	1

- 4.Press the [Start] key to confirm the setting.

Completion

Press the [Stop] key.

* :The screen for selecting a maintenance item No. is displayed.

U640	Communication Time 1 (Message: Comm Time 1)
-------------	--

Description

Sets the detection time when one-shot detection is selected for remote switching.
Sets the detection time when continuous detection is selected for remote switching.

Purpose

Set the decision system of a remote switching to compensate for a user's telephone classification, peculiarity, etc

Method

1. Press the [Start] key.
2. Select the item to set.
3. By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Description	Setting range	Initial setting	Change in value per step
Time(One)	Sets the one-shot detection time for remote switching.	0 to 255	7	1
Time(Cont)	Sets the continuous detection time for remote switching.	0 to 255	80	1

4. Press the [Start] key to confirm the setting.

Completion

Press the [Stop] key.

* :The screen for selecting a maintenance item No. is displayed.

U641	Communication Time 2 (Message: Comm Time 2)
-------------	--

Description

Sets the time-out time for the fax communication.

Purpose

Mainly improving the accuracy of communication at the international communication

Method

1. Press the [Start] key.
1. Select the item to set.

Items	Description
T0 TIME OUT	Sets the T0 time-out time.
T1 TIME OUT	Sets the T1 time-out time.
T2 TIME OUT	Sets the T2 time-out time.
Ta TIME OUT	Sets the Ta time-out time.
Tb1 TIME OUT	Sets the Tb1 time-out time.
Tb2 TIME OUT	Sets the Tb2 time-out time.
Tc TIME OUT	Sets the Tc time-out time.
Td TIME OUT	Sets the Td time-out time.

Setting: T0 Time Out

Sets the time before detecting a CED or DIS signal after a dialing signal is sent.

Change the setting to prevent the problem of disconnecting a line that occurs depending on the quality of the exchanger, or when the destination unit sets the auto switching function.

1. By using the [<] [>] keys or the numeric keys, change the setting value.

Description	Setting range	Initial setting	Change in value per step
Sets the T0 time-out time.	30 to 90 s	56	1

2. Press the [Start] key to confirm the setting.

Setting: T1 Time Out

Sets the time before receiving the correct signal after call reception.

*This setting is usually unnecessary.

1. By using the [<] [>] keys or the numeric keys, change the setting value.

Description	Setting range	Initial setting	Change in value per step
Sets the T1 time-out time.	30 to 90 s	36	1

2. Press the [Start] key to confirm the setting.

Setting: T2 Time Out

The T2 time-out time decides the following.
 From CFR signal output to image data reception
 From image data reception to the next signal reception
 In ECM, from RNR signal detection to the next signal reception

1.By using the [<] [>] keys or the numeric keys, change the setting value.

Description	Setting range	Initial setting	Change in value per step
Sets the T2 time-out time.	1 to 255 s	69	1

2.Press the [Start] key to confirm the setting.

Setting: Ta Time Out

In the fax/telephone automatic switching mode, sets the time of ringing an operator through the connected telephone after receiving a call as a fax machine (see figure 1-3-18). If either receiving a fax signal within this time or passed this period, the mode automatically switches to fax reception mode. In the fax/telephone automatic switching mode, change the setting when fax reception is unsuccessful or a telephone fails to receive a call.

1.By using the [<] [>] keys or the numeric keys, change the setting value.

Description	Setting range	Initial setting	Change in value per step
Sets the Ta time-out time.	1 to 255 s	30	1

2.Press the [Start] key to confirm the setting.

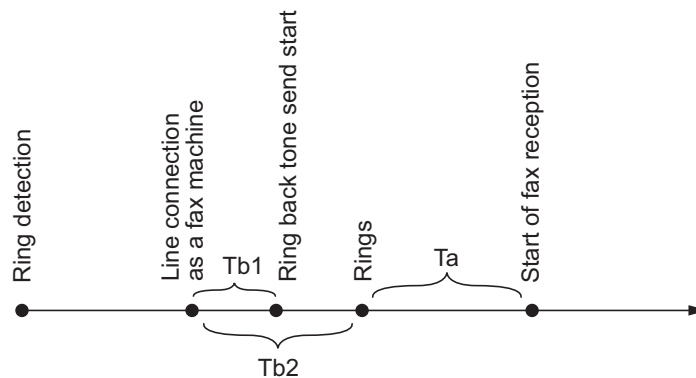


Figure 6-27 Ta/Tb1/Tb2 time-out time

Setting: Tb1 Time Out

In the fax/telephone automatic switching mode, sets the time to start sending the ring back tone after receiving a call as a fax machine (see figure 1-3-18). In the fax/telephone automatic switching mode, change the setting when fax reception is unsuccessful or a telephone fails to receive a call.

1.By using the [<] [>] keys or the numeric keys, change the setting value.

Description	Setting range	Initial setting	Change in value per step
Sets the Tb1 time-out time.	1 to 255 s	20	1

2.Press the [Start] key to confirm the setting.

Setting: Tb2 Time Out

In the fax/telephone automatic switching mode, sets the time to start ringing an operator through the connected telephone after receiving a call as a fax machine (see figure 1-3-27). In the fax/telephone automatic switching mode, change the setting when fax reception is unsuccessful or a telephone fails to receive a call.

1.By using the [<] [>] keys or the numeric keys, change the setting value.

Description	Setting range	Initial setting	Change in value per step
T2 time-out time	1 to 255 s	80 ms	1

2.Press the [Start] key to confirm the setting.

Setting: Tc Time Out

In the TAD mode, set the time to check if there are any triggers for shifting to fax reception after a connected telephone receives a call. Only the telephone function is available if shifting is not made within the set Tc time.

In the TAD mode, change the setting when fax reception is unsuccessful or a telephone fails to receive a call.

1.By using the [<] [>] keys or the numeric keys, change the setting value.

Description	Setting range	Initial setting	Change in value per step
Sets the Tc time-out time.	1 to 255 s	60	1

2.Press the [Start] key to confirm the setting.

Setting: Td Time Out

Sets the length of the time required to determine silent status (fax), one of the triggers for Tc time check. In the TAD mode, change the setting when fax reception is unsuccessful or a telephone fails to receive a call. Be sure not to set too short, otherwise the mode may be switched to fax while the unit is being used as a telephone.

1.By using the [<] [>] keys or the numeric keys, change the setting value.

Description	Setting range	Initial setting	Change in value per step
Sets the Td time-out time.	1 to 255	9	1

2.Press the [Start] key to confirm the setting.

Completion

Press the [Stop] key.

* :The screen for selecting a maintenance item No. is displayed.

U650	Modem 1 (Message: Modem 1)
-------------	---

Description

Sets G3 cable equalizer. Sets the modem detection level.

Purpose

Adjust to make the equalizer compatible with the line characteristics
Improve the accuracy of communication when using a low quality line

Method

- 1.Press the [Start] key.
- 2.Select the item to set.

Items	Description
Reg G3 TX Eqr	Sets the G3 transmission cable equalizer.
Reg G3 RX Eqr	Sets the G3 reception cable equalizer.
RX Mdm Level	Sets the modem detection level.

Setting: Reg G3 TX Eqr

- 1.Select [0dB], [4dB], [8dB] or [12dB].
* :Initial setting: 0dB
- 2.Press the [Start] key to confirm the setting.

Setting: Reg G3 RX Eqr

- 1.Select [0dB], [4dB], [8dB] or [12dB].
* :Initial setting: 0dB
- 2.Press the [Start] key to confirm the setting.

Setting: RX Mdm Level

- 1.Select [-33dBm], [-38dBm], [-43dBm] or [-48dBm].
* :Initial setting: 43dBm
- 2.Press the [Start] key to confirm the setting.

Completion

- Press the [Stop] key.
* :The screen for selecting a maintenance item No. is displayed.

U651	Modem 2 (Message: Modem 2)
-------------	---

Description

Sets the modem output level.

Purpose

Adjust to make the equalizer compatible with the line characteristics when installing the main unit

Setting

1. Press the [Start] key.
2. Select the item to set.
3. By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Description	Setting range	Initial setting	Change in value per step
Sgl LV Mdm	Modem output level	-15 to 0	9	1
DTMF LV(C)	DTMF output level (center value)	-15 to 0	5	0.5
DTMF LEV(D)	DTMF output level (level difference)	0 to 5.5	2	0.5

4. Press the [Start] key to confirm the setting.

Completion

Press the [Stop] key.

* :The screen for selecting a maintenance item No. is displayed.

U660	Ring setting (Message: Set Calls)
-------------	--

Description

Set the NCU (network control unit).

Purpose

Execute as required

Method

1. Press the [Start] key.
 2. Select the item to set.
- * :The screen for executing is displayed.

Items	Description
Exchange	Sets the connection to PBX/PSTN.
Dial Tone	Sets PSTN dial tone detection.
Busy Tone	Sets busy tone detection.
PBX Setting	Setting for a PBX.
DC Loop	Sets the loop current detection before dialing.

Setting: Exchange

Selects if a fax is connected to either a PBX or public switched telephone network.

1. Select the item to set.

Items	Description
PSTN	Connected to the public switched telephone network.
PBX	Connected to a PBX.

- * :Initial setting: PSTN
2. Press the [Start] key to confirm the setting.
- * : "*" is displayed on the set item.

Setting: Dial Tone

Selects if the dial tone is detected to check the telephone is off the hook when a fax is connected to a public switched telephone network.

1. Select the item to set.

Items	Description
On	Detects the dial tone.
Off	Does not detect the dial tone.

- * :Initial setting: On
2. Press the [Start] key to confirm the setting.
- * : "*" is displayed on the set item.

Setting: Busy Tone

When a fax signal is sent, sets whether the line is disconnected immediately after a busy tone is detected, or the busy tone is not detected and the line remains connected until T0 time-out time.
Fax transmission may fail due to incorrect busy tone detection. When set to OFF, this problem may be prevented. However, the line is not disconnected within the T0 time-out time even if the destination line is busy.

1. Select the item to set.

Items	Description
On	Detects the busy tone.
Off	Does not detect the busy tone.

* :Initial setting: Off

2. Press the [Start] key to confirm the setting.

* : "*" is displayed on the set item.

Setting: PBX Setting

Selects the mode to connect an outside call when connected to a PBX.

*According to the type of the PBX connected, select the mode to connect an outside call.

1. Select the item to set.

Items	Description
Flash	Flashing mode
Loop	Code number mode

* :Initial setting: Loop

2. Press the [Start] key to confirm the setting.

* : "*" is displayed on the set item.

Setting: DC Loop

Sets if the loop current is detected before dialing.

1. Select the item to set.

Items	Description
On	Detect loop current before dialing.
Off	Loop current is not detected before dialing.

* :Initial setting: On

2. Press the [Start] key to confirm the setting.

* : "*" is displayed on the set item.

Completion

Press the [Stop] key.

* :The screen for selecting a maintenance item No. is displayed.

U670	Output List (Message: Output List)
-------------	---

Description

Outputs a list of fax communication data.

*Printing a list is disabled either when a job is remaining in the buffer or when [Pause All Print Jobs]

Purpose

Check conditions of use, settings and transmission procedures of the fax.

Method

- 1.Press the [Start] key.
- 2.Select the item to execute.
- 3.Press the [Start] key.
- 4.The selected list is output.

Items	Description
Sys Conf Report	Outputs a list of software switches, self telephone number, confidential boxes etc..
Action List	Outputs a list of error history, transmission line details and other information.
Self Sts Report	Outputs a list of settings in maintenance mode (self-status report) regarding fax communication only.
Protocol List	Outputs a list of communication procedures.
Error List	Outputs a list of error.
Addr List(No.)	Outputs address book in the IDs order
Addr List(Idx)	Outputs address book in the order of names.
One-touch List	Outputs a list of one-touch.
Group List	Outputs a list of group.

Completion

Press the [Stop] key.

* :The screen for selecting a maintenance item No. is displayed.

U695	Fax function customization (Message: Custom FAX Func)
-------------	--

Description

FAX package transmission is set up. Change of print size priority at the time of small size reception.

Purpose

Execute as required

Method

1. Select the item to set.

Items	Description
FAX Bulk TX	Set On/Off the FAX batch transmission
A5 Pt Pri Chg	Change of print size priority at the time of small size reception.

Setting: FAX Bulk TX

1. By using [<] [>] keys, select [On] or [Off].

Items	Description
On	Fax batch transmission is enabled.
Off	Fax batch transmission is disabled.

* :Initial setting: On

2. Press the [Start] key to confirm the setting.

* :"" is displayed on the set item.

Setting: A5 Pt Pri Chg

1. By using [<] [>] keys, select [On] or [Off].

Items	Description
On	At the time of A5 size reception: A5 >B5 >A4 >B4 >A3
Off	At the time of A5 size reception: A5 >A4 >B5 >A3 >B4

* :Initial setting: Off

2. Press the [Start] key to confirm the setting.

* :"" is displayed on the set item.

Completion

Press the [Stop] key.

* :The screen for selecting a maintenance item No. is displayed.

U699	Set: Soft SW (Message: Set Soft SW)
-------------	--

Description

Sets the FAX software switches individually.

Purpose

Change the setting when a problem such as split output of received originals occurs

*Since the communication performance is largely affected, normally this setting need not be changed.

Method

- 1.Press the [Start] key.
- 2.Select [SW No.].
- 3.Enter the desired software switch number (3 digits) using the numeric keys and press the [Start] key.

Items	Description
SW No.	Specifies the soft switch number (2 to 3 digits)

- 4.Press the keys of bit 0 to 7 to switch each bit between 0 and 1.

Items	Description
Bit	Set the soft switch (8 digits).

- 5.Press the [Start] key to confirm the setting.

Completion

Press the [Stop] key.

* :The screen for selecting a maintenance item No. is displayed.

**List of Soft Switches of which the setting can be changed
Communication control procedures**

No.	Bit	Description
36	7654	Coding format in transmission
	3210	Coding format in reception
37	5	33600bps/V34
	4	31200bps/V34
	3	28800bps/V34
	2	26400bps/V34
	1	24000bps/V34
	0	21600bps/V34
38	7	19200bps/V34
	6	16800bps/V34
	5	14400bps/V34
	4	12000bps/V34
	3	9600bps/V34
	2	7200bps/V34
	1	4800bps/V34
	0	2400bps/V34

No.	Bit	Description
41	3	FSK detection in V.8
42	4	4800 bps transmission when low-speed setting is active
	2	FIF length in transmission of 4 times or more of DIS/ DTC signal

Communication time setting

No.	Bit	Description
53	76543210	T3 timeout setting
54	76543210	T4 timeout setting (auto transmission)
55	76543210	T5 timeout setting
60	76543210	Time before transmission of CNG (1100 Hz) signal
63	76543210	T0 timeout setting (manual transmission)
64	7	Phase C timeout in ECM reception
66	76543210	Timeout 1 in countermeasures against echo
68	76543210	Timeout for FSK detection start in V.8

Modem setting

No.	Bit	Description
89	76543	RX gain adjust

NCU setting

No.	Bit	Description
121	7654	Dial tone/busy tone detection pattern
122	7654	Busy tone detection pattern
	1	Busy tone detection in FAX/TEL automatic switching
125	76543210	Access code registration for connection to PSTN
126	7654	FAX/TEL automatic switching ringback tone ON/OFF cycle
68	76543210	Timeout for FSK detection start in V.8

Calling time setting

No.	Bit	Description
133	76543210	DTMF signal transmission time
134	76543210	DTMF signal pause time
141	76543210	Ringer detection cycle (minimum)
142	76543210	Ringer detection cycle (maximum)
143	76543210	Ringer ON time detection
144	76543210	Ringer OFF time detection
145	76543210	Ringer OFF time undetected
147	76543210	Dial tone detection time (continuous tone)
148	76543210	Allowable dial tone interruption time

No.	Bit	Description
149	76543210	Time for transmitting selection signal after closing the DC circuit
151	76543210	Ringer frequency detection invalid time

U901	Clearing the counters by paper source (Message: Clr Paper FD Cnt)
-------------	--

Description

Displays and clears the counts by paper source.

Purpose

Check the maintenance parts replacement timing. Also, executes to clear counters when replacing the maintenance parts.

Method

1. Press the [Start] key.
Displays the counts by paper source.

Items	Description
MPT	Displays/clears the MP tray feed counter
Cass1	Displays/clears Cassette 1 count
Cass2	Displays/clears Cassette 2 count
Cass3	Displays Cassette 3 count
Cass4	Displays Cassette 5 count
Dup	Displays/clears the duplex unit count

2. Select the counter to clear.
* :Unable to clear [Cassette 2] [Cassette 3] [Cassette 4]
3. Press the [Start] key to clear the counter value.

Completion

- Press the [Stop] key.
* :The screen for selecting a maintenance item No. is displayed.

U903	Clearing the jam counter (Message: Clear Paper Misfeed Counter)
-------------	--

Description

Displays/clears the jam counter by paper jam type.

Purpose

Execute to check the paper jam status. Also, executes to clear counters when replacing the maintenance parts.

Method

- 1.Press the [Start] key.
- 2.Select the item to execute.

Item	Description
Cnt	Displaying/clearing the jam counts
Total Cnt	Displaying the accumulate jam counts

Method: Cnt

- 1.Select [Cnt].
 - * :Number of occurrence is displayed by jam code.
Code of no occurrence is not indicated.
- 2.Select [Clear] to clear the jam counts.
 - * :Individual counters cannot be cleared.
- 3.Press the [Start] key to clear the counter value.

Method: Total Cnt

- 1.Select [Total Cnt].
 - * :Accumulate number of occurrence is displayed by jam code.
- 2.Change the screen using the [^] [V] key.
 - * :Unable to clear the accumulated jam counter values.

Completion

- Press the [Stop] key.
 - * :The screen for selecting a maintenance item No. is displayed.

U904	Clearing the service call error counter (Message: Clear Service Call Counter)
-------------	--

Description

Displays/clears the number of times of service call errors by service call error type.

Purpose

Executes to check the service call error. Also, executes to clear counters when replacing the maintenance parts.

Method

- 1.Press the [Start] key.
- 2.Select the item to execute.

Item	Description
Cnt	Displays/clears the service call counter.
Total Cnt	Displays accumulate service call error counts.

Method: Cnt

- 1.Select [Cnt].
 - * :Number of occurrence is displayed by service call error.
Code of no occurrence is not indicated.
- 2.Select [Clear] to clear the service call error counter.
 - * :Individual counters cannot be cleared.
- 3.Press the [Start] key to clear the counter value.

Method: Total Cnt

- 1.Select [Total Cnt].
 - * :Accumulate number of occurrence is displayed by service call error.
Unable to clear the accumulated service call error counter values.

Completion

- Press the [Stop] key.
- * :The screen for selecting a maintenance item No. is displayed.

U905	Optional counter (Message: Option Cnt)
-------------	---

Description

Displays the document processor count.

Purpose

Execute to check the usage status of the document processor.

Method

- 1.Press the [Start] key.
- 2.Select the device to check.
* :Switched to the counter screen.

Item	Description
DP	Displays the document processor count.

Method: DP

* :Each counter is displayed.

Item	Description
ADP	Simplex original count is displayed.
RADP*1	Duplex original count is displayed.
CIS*2	Displays the count of simultaneous duplex scanning

*1: 30 ppm model, *2: 35 ppm model

Completion

Press the [Stop] key.

* :The screen for selecting a maintenance item No. is displayed.

U908	Total counter (Message: Total Counter)
-------------	---

Description

Displays the total counter.

Purpose

Displays the total counter for check.

Method

1.Press the [Start] key.

* :Displays the total count.

Completion

Press the [Stop] key.

* :The screen for selecting a maintenance item No. is displayed.

U910	Black rate data (Message: Clr Coverage Dat)
-------------	--

Description

Clears the accumulated data for the print coverage per A4 size paper and its period of time (as shown on the service status page).

Purpose

Clears data as required at the time such as maintenance service

Method

- 1.Press the [Start] key.
- 2.Select [Execute].

Items	Description
Execute	The print coverage data is cleared.

- 3.Press the [Start] key to clear the print coverage data.

Completion

Press the [Stop] key.

* :The screen for selecting a maintenance item No. is displayed.

U911	Counter by media type (Message: Paper SZ Cnt)
-------------	--

Description

Display the counts to confirm when replacing the maintenance parts.

Purpose

Displays the counts to confirm when replacing the maintenance parts .

Method

- 1.Press the [Start] key.

* :Displays the paper feed counts by paper size.

Item	Description
A4 *1	Displays A4 feed counts
B5 *1	Displays B5 feed counts
A5 *1	Displays A5 feed counts
Folio *1	Displays Folio feed counts
Legal *2	Displays Legal feed counts
Letter *2	Displays Letter feed counts
Statement *2	Displays Statement feed counts
ETC	Displays Other paper feed counts.

*1: *1: metric specification, *2: inch specification

Completion

Press the [Stop] key.

* :The screen for selecting a maintenance item No. is displayed.

U917	Read/Write Backup Data (Message: R/W Bkup Data)
-------------	--

Description

Retrieves the backup data to a USB Flash Drive from the main unit, or writes the data from the USB Flash Drive to the main unit.

Purpose

Makes a back up of the main unit information, and import or export to restore the main unit information

Method

1. Turn the power switch off.
2. Insert a USB Flash Drive in the USB Flash Drive slot of the main unit.
3. Turn the power switch on.
* :Wait for 10 seconds to allow the main unit to recognize the USB Flash Drive.
4. Enter maintenance item U917.
5. Select [Export] or [Import].
* :The screen for executing is displayed.

Items	Description
Import	Writing data from the USB Flash Drive to the main unit.
Export	Retrieving data from the main unit to the USB Flash Drive.

6. Select the object item.

Items	Description	Depending data*
Address	Address book information	-
Job Acct	Job accounting information	-
One Touch	One-touch key information	Address book information
User	User managements information	Job accounting information
Document	Document box information	Job accounting, User information
Shortcut	Short-cut information	Job accounting, User, Document Box information
Fax Fwd *1	FAX transfer information	Job accounting, User, Document Box information
System	System setting information	-
Network	Network setting information	-
Job Set	Job setting information	-
Printer	Printer setting information	-
Fax Set *1	Fax setting information	-
Program	Program information	Address book, Job accounting, User management, Document box, Fax transfer, Fax setting information

Items	Description	Depending data*
Panel Set	Panel setting information	Address book, Job accounting, User management, Document box, Fax transfer, Fax setting, Program information

* :FAX installed machine only

* :Since data are dependent with each other, data other than those assigned are also retrieved or written in.

7.By using [<] [>] keys, select [On].

8.Press the [Start] key to start the reading or writing.

* :The progress of selected item is displayed in %.

* :When an error occurs, the operation is canceled and an error code is displayed.

9.When normally completed, [Fin] is displayed.

10.When selecting [Import], turn the power switch off then on, after completing writing. Take interval more than 5 seconds between Off and On.

Error codes

Codes	Description
e0001	Internal processing error
e0002	File access error (Inability to access the USB memory, etc.)
e0003	The file necessary for Import does not exist.
e0004	The file incompatible with Import is directed.
e0005	The file is broken (Unzipping the file to import failed).
e0100 to eFFF	Data processing error when executing Import/Export.

Completion

Press the [Stop] key.

* :The screen for selecting a maintenance item No. is displayed.

U920	Billing counter (Message: Chg Cnt)
-------------	---

Description

Displays the charge counts.

Purpose

To verify the current charge counts

Method

1. Press the [Start] key.

1. Select the item.

* :The current charge counts are displayed.

Items	Description
Col Copy H	Color copy counts (Coverage: High)
Col Copy M	Color copy counts (Coverage: Middle)
Col Copy L	Color copy counts (Coverage: Low)
B/W Copy	B/W Copy counts
Col Prn H	Color print counts (Coverage: High)
Col Prn M	Color print counts (Coverage: Middle)
Col Prn L	Color print counts (Coverage: Low)
B/W Prn	B/W print counts
B/W Fax	FAX counts
Simplex	Simplex print counts
Duplex	Duplex print counts
Comb(Off)	Combine print counts (Off)
Comb(2in1)	Combine print counts (2in1)
Comb(4in1)	Combine print counts (4in1)

Completion

Press the [Stop] key.

* :The screen for selecting a maintenance item No. is displayed.

U927	Clearing all the billing/life counters (Message: Clr Chg/Life Cnt)
-------------	---

Description

Clears all charge counts and machine life counts.

Supplement

The total charge counts and the machine life counts can be cleared only once if all count values are 1000 or less.

Method

- 1.Press the [Start] key.
- 2.Select [Execute].

Items	Description
Execute	Executes the initializing of charge counts and machine life counts.

- 3.Press the [Start] key.

* :Clears all charge counts and machine life counts.

Completion

Press the [Stop] key.

* :The screen for selecting a maintenance item No. is displayed.

U928	Machine life counter (Message: Life Cnt)
-------------	---

Description

The current machine life counts is displayed.

Purpose

To check the machine life counts

Method

1. Press the [Start] key.

* :The current machine life counts is displayed.

Items	Description
Cnt	Machine life counts
Color Cnt	Displays the machine life count (color)

Completion

Press the [Stop] key.

* :The screen for selecting a maintenance item No. is displayed.

U930	Checking/clearing the main charger roller count (Message: Clr Chg Cnt)
-------------	---

Description

Displays and clears the current main charger roller counts.

Purpose

To verify the main charger roller counts after replacing. Also, clear the counts after replacing.

Method

1.Press the [Start] key.

* :The current main charger roller counts are displayed. (C,M,Y and K)

Item	Description
C	Display the MC roller counter value for Cyan.
M	Display the MC roller counter value for Magenta.
Y	Display the MC roller counter value for Yellow.
K	Display the MC roller counter value for Black.

Method: Clear

1.Select [Clear].

Press the [Start] key to clear the counter value.

Completion

Press the [Stop] key.

* :The screen for selecting a maintenance item No. is displayed.

U977	Setting the data capture mode (Message: Set Data Capture)
-------------	--

Description

Stores the data sent to the main unit into USB Flash Drive.

Purpose

To store the data sent to the main unit into USB Flash Drive, and check

Method

- 1.Press the [Start] key.
- 2.Select [Execute].

Items	Description
Execute	Stores the data into USB Flash Drive.

- 3.Press the [Start] key.

* :When the operation is completed abnormally, an error code is displayed.

Error codes

Items	Description
1	The USB Flash Drive is broken, was disconnected during data processing, or cannot be overwritten.
4	The USB Flash Drive does not have enough free space.
#	Other error

Completion

Press the [Stop] key.

* :The screen for selecting a maintenance item No. is displayed.

U984	Developer unit number (Message:Dev No.)
-------------	--

Description

Displays the developer unit number.

Purpose

Execute to check the developer unit number.

Method

1.Press the [Start] key.

* :Displays the developer unit number.

Item	Description
C	Displays the Cyan developer unit number.
M	Displays the Magenta developer unit number.
Y	Indicates the Yellow developer unit number.
K	Displays the Black developer unit number.

Completion

Press the [Stop] key.

* :The screen for selecting a maintenance item No. is displayed.

U991	Scanner counter (Message: Scn Cnt?)
-------------	--

Description

Displays the scanner operation counts.

Purpose

Display the number of scanner operation to check the usage status.

Method

1. Press the [Start] key.

* :Current number of operation is displayed.

Item	Description
Copy Scan	Displays times of copy and scan operations.
Fax Scan	Displays times of FAX scan operations.
Other Scan	Displays times of other scan operations.

Completion

Press the [Stop] key.

* :The screen for selecting a maintenance item No. is displayed.

6-2 Service mode

The machine is equipped with a maintenance function which can be used to maintain and service the machine.

(1) Executing the service mode

[Message Display]

Ready to print.

1. Press the [System Menu/Counter] key.

System Menu:
Quick Setup Wizard
Language
Report
Counter

Cassette/MP Tray Settings
Common Settings
Home
Copy

Send
Document Box
FAX
Application

Internet
Address Book/One Touch
User Login/Job Accounting
Printer

System/Network
Date/Timer/Energy Saver
Adjustment/Maintenance

3. Select [Service Setting]
using the cursor up/down keys.

Adjustment/Maintenance:
Laser Scanner Cleaning
Service Settings

2. Select [Adjustment/Maint.]
using the cursor up/down keys.

4. Select the setting item.

Service Settings:
Test Page
Event log
LLU PRT
FAX Country Code

Altitude Adjustment
MC
DEV-CLN
Formatting the SD card

Formatting the SSD
Memory Diagnostics

Service setting

Items	Description	Page
Test Page	The test page is printed with halftones.	P.6-141
Event log	Output the event log report	P.6-142
LLU PRT	Output the LLU report	P.6-142
FAX Country Code	Initialize all data and image memory.	P.6-143
Altitude Adjustment	Sets the altitude adjustment mode.	P.6-144
MC	Sets the main charger output.	P.6-144
DEV-CLN	Perform developer refreshing.	P.6-144
Formatting the SD card*1	Format the SD card.	P.6-145
Formatting the SSD*1	Format the SSD.	P.6-145
Memory Diagnostics	Diagnose memory at power-up (whether reading and writing are executable).	P.6-146

*1: Displays only when it is installed

(2) Descriptions of service modes

Test Page

Description

Outputs the test page which is printed in four colors respectively with halftones of three different levels.

Purpose

To output the test page to judge which is the cause of the image error, the engine-side or the scanner-side.

Method

1. Enter the Service Setting menu.
2. Using the [^] [V] keys, select [Test Page].
3. Press the [OK] key.
4. Test page will be printed.

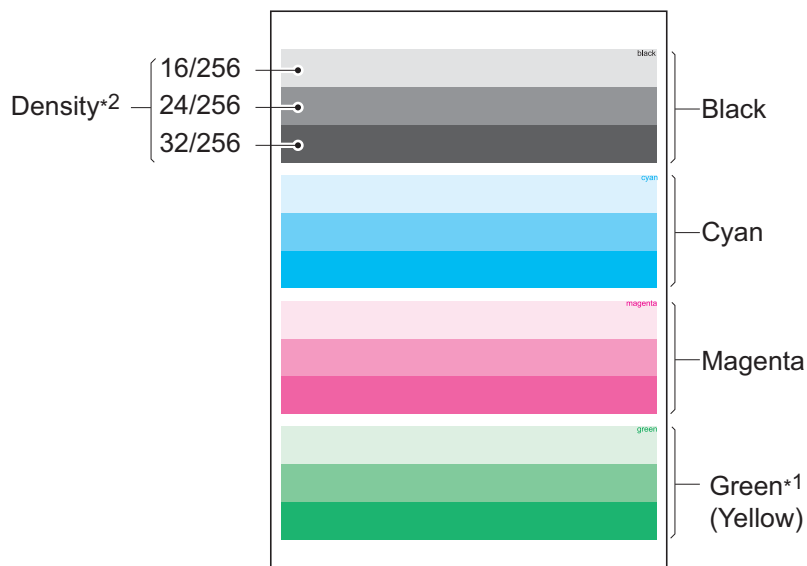


Figure 6-28

*1: Since focusing in yellow is hardly readable, yellow is mixed with cyan for more readability, resulting in green.

*2: Four colors are printed respectively with halftones of three different levels (bands). If focus is excessively lost, dots are not recognizable with the 16/256 band, resulting in uneven density. It also results in vertical streaks (white or black) in the 24/256 and/or 32/256 bands.

Completion

Press the [System Menu/Counter] key.

Printing the event log

Description

Prints a history list of occurrences of paper jam, self-diagnostics, toner replacements, etc.

Purpose

To allow machine malfunction analysis based on the history list of occurrences.

* :For details, refer to U000 (P.6-6).

Method

1. Enter the Service Setting menu.
2. Select [Service Status Page].
3. Press the [OK] key.
4. Select [Yes].
5. Event log is printed.

Completion

Press the [System Menu/Counter] key.

LLU PRT

Description

Event log, Unit history report and test page are printed.

Purpose

Output the data for applying LLU.

For details, refer to U000 (P.6-6).

Method

1. Enter the Service Setting menu.
2. Select [LLU PRT].
3. Press the [OK] key.
4. Select [Yes].
5. LLU report is printed.

Completion

Press the [System Menu/Counter] key.

FAX Country Code

Description

Initializes software switches, and all data and image memory in the backup data on the FAX control PWB according to the destination and OEM setting.

Purpose

To initialize the FAX control PWB.

Method

1. Enter the Service Setting menu.
2. Using the [Λ] [V] keys, select [FAX Country Code].
3. Press the [Start] key.
4. Enter the country code using the numeric keys.
5. Press the [OK] key to set the setting.
6. Press the [OK] key. Data initialization starts.

Country code list

country code	Destination	country code	Destination
000	Japan	007	South America*3
156	Asian nations*1	253	European nations*4
254	Taiwan	250	Russia
097	Korea	009	Australia
038	China	126	New Zealand*5
181	North America*2		

*1: Applied for Sales company competent Singapore, India, Thailand, Hong Kong.

*2: Applied for Sales company competent USA, Canada, Mexico, Brazil.

*3: Applied for Sales company competent Bolivia, Chile, Peru, Argentina.

*4: Applied for Sales company competent Italy, Germany, Spain, U.K., Netherlands, Sweden, France, Austria, Switzerland, Belgium, Denmark, Finland, Portugal, Ireland, Norway, Saudi Arabia, Turkey.

*5: Change the country code when selling in New Zealand. The country code to input is 126.

Completion

Press the [System Menu/Counter] key.

Altitude Adjustment

Description

Sets the altitude adjustment mode.

Purpose

Execute if the print quality is low at the usage environment of 1001 meter or more altitude.

Method

1. Enter the Service Setting menu.
2. Using the [^] [V] keys, select [Altitude Adj.].
3. Press the [Start] key.
4. Using the [^] [V] keys, select [Normal], [1001 - 2000m], [2001 - 3000m] or [3001 - 3500m].
5. Press the [OK] key to confirm the setting.

Completion

Press the [System Menu/Counter] key.

MC

Description

Sets the main charger output.

Purpose

To perform when the image density declines, dirt of a background or an offset has occurred.

Method

1. Enter the Service Setting menu.
2. Using the [^] [V] keys, select [MC].
3. Press the [Start] key.
4. Using the [^] [V] keys, select the setting "1 to 7".

Completion

Press the [System Menu/Counter] key.

DEV-CLN

Description

The laser output of the image data for developer refreshing is carried out, and the operation of exposure, developing and primary transfer is performed, for ten pages equivalent. (paper is not fed).

Purpose

Execute when the image density deteriorates or a problem in the developer unit occurs.

Method

1. Enter the Service Setting menu.
2. Using the [^] [V] keys, select [DEV-CLN].
3. Press the [OK] key.
4. Developer refreshing is performed. Press [OK].

Completion

Press the [System Menu/Counter] key.

Formatting the SD card

Description

Format the SD card.

Purpose

Execute when installing an optional SD card for the first time in the main body. Or, when initializing the SD card.

Method

1. Enter the Service Setting menu.
2. Using the [^] [V] keys, select [Format SD Card]
3. Press [OK].
Format the SD card.

* :When an optional SSD is inserted into the main unit for the first time, it must be formatted before use.

IMPORTANT

Formatting will delete all existing data on the SD card.

Completion

Press the [System Menu/Counter] key.

Formatting the SSD

Description

Format an optional SSD.

Purpose

Execute when installing an optional SSD for the first time in the main body. Or, when initializing the SSD.

Method

1. Enter the Service Setting menu.
2. Using the [^] [V] keys, select [Format SSD].
3. Press [OK].
Format an optional SSD.

* :When an optional SSD is inserted into the main unit for the first time, it must be formatted before use.

IMPORTANT

Formatting will delete all existing data on an SSD.

Completion

Press the [System Menu/Counter] key.

Memory Diagnostics

Description

Diagnose memory at power-up (whether reading and writing are executable).

Purpose

A memory device defect is considered as one of factors of the case where the F-code error, lock-up or abnormal image occurs and is not cleared. Check the memory failure

Method

1. Enter the Service Setting menu.
2. Using the [Λ] [V] keys, select [Mem.Diagnostics].
3. Press [OK]. Press [OK].
4. Turn the power switch off then on. Take interval more than 5 seconds between Off and On.

Completion

Press the [System Menu/Counter] key.

7 Troubleshooting

7-1 Image formation problems

(1) Isolate the component an image defect has occurred from.

A guide to isolate the component of the cause

Print a test page, and check if an image defect has occurred.

(System Menu > Adjustment/Maintenance > Service setting)

YES: Main unit as the cause of defect

No : Scanner as the cause of defect

Perform enlarged or reduced copying and verify if the defective images are enlarged or reduced, accordingly.

YES: Scanner as the cause of defect

1. Scanner as the cause of defect: If the defect occurs with copying or sending, (see page 7-2).
(Defects caused by a reading error that occurs at the original (glass) LED lamp to CCD.)

Isolate the problem at the location that the originals are scanned.

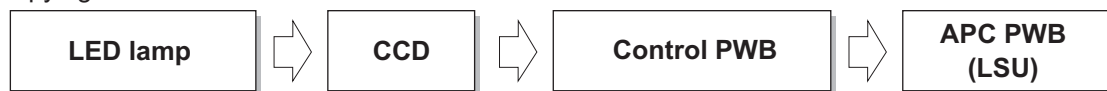
Single side DP (read by Main CCD)

On the contact glass (read by Main CCD)

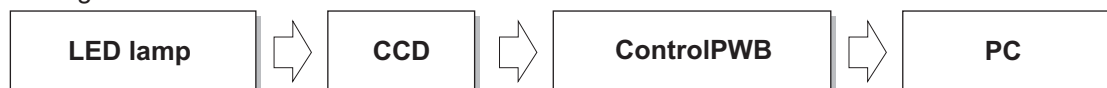
2. Main unit as the cause of defect: (see page 7-40).
(A defect of image forming occurs from the rendering process that involves charging, drum, LSU, developer, and primary transferring.)

Flow of image data

Copying :




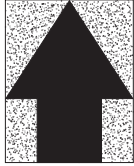
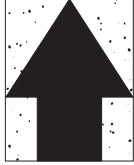
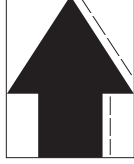


Sending :

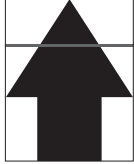
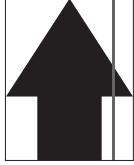



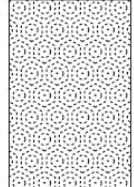
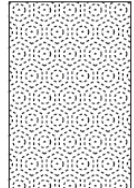






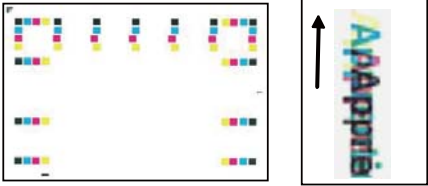
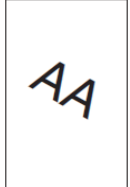

Printing data from PC :



(2) Scanner Factors (when scanning the first side (front side) through DP, or scanning the second side (back side) through the reverse automatic DP)

No.	Contents	Image sample
(2-1)	Abnormal image	
(2-2)	Background is colored	
(2-3)	Black dots or color dots	
(2-4)	Blurred characters	
(2-5)	Mismatch of the center line between the original and copy image (1st side)	
(2-6)	Mismatch of the center line between the original and copy image (2nd side)	

No.	Contents	Image sample
(2-7)	Horizontal black streaks	
(2-8)	Vertical streaks or bands (black, color)	
(2-9)	Irregular mismatch of the leading edge between the original and copy image (1st side)	
(2-10)	Irregular mismatch of the leading edge between the original and copy image (2nd side)	
(2-11)	Vertical streaks or bands (white)	
(2-12)	moiré (front side)	
(2-13)	moiré (back side)	

No.	Contents	Image sample
(2-14)	Entire blank image (white or black)	
(2-15)	A part of the image is dark or light	
(2-16)	Image is blurred	
(2-17)	Part of the image is not copied	
(2-18)	Color shift	
(2-19)	Skewed image	
(2-20)	The entire image is light	

Content of Scanner Factors

(2-1) Abnormal image

(When scanning the first side (front side) through DP, or scanning the second side (back side) through the reverse automatic DP)

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	FFC is not properly connected, or it is faulty.	Clean the following FFC terminal of the FFC and reconnect. If the FFC terminal is deformed or FFC is short circuited, replace FFC. • CCD PWB - Main/engine PWB	

(2-2) Background is colored

(When scanning the first side (front side) through DP, or scanning the second side (back side) through the reverse automatic DP)

Step	Check description	Assumed cause	Measures	Reference
1	Changing the settings	The Background Density Adjustment is not set.	Set [Background Density] to [Auto] at [System Menu/Counter] > [Common Settings] > [Function Defaults]	
2	Changing the settings	The background density is dark.	Set [Background Density] to [Manual] to adjust the density at [System Menu/Counter] > [Common Settings] > [Function Defaults]	
3	Reloading the original	The original is raised at scanning.	Set the original during pressing.	
4	Cleaning the shading plate	The shading plate is dirty.	Clean the shading plate at the backside of the contact glass.	
5	Executing U411	The image is not adjusted.	When the same phenomenon occurs at the table scanning too, execute U411 [Table(ChartA)].	
6	Reattaching the home position sensor	The home position sensor is not properly attached.	Reattach the home position sensor.	
7	Checking the connection	FFC is not properly connected, or it is faulty.	Clean the following FFC terminal of the FFC and reconnect. If the FFC terminal is deformed or FFC is short circuited, replace FFC. • CCD PWB - Main/engine PWB	
8	Checking the slit glass	The slit glass is dirty or not properly attached.	Reattach or clean the slit glass.	

Step	Check description	Assumed cause	Measures	Reference
9	Replacing the DP hinge	The DP hinge is faulty.	Replace the DP hinges.	
10	Replacing the document processor	The DP frame is deformed	Replace the document processor.	
11	Replacing the scanner carriage	The LED PWB or CCD PWB is faulty.	Replace the scanner carriage and execute U411	
12	Replacing the main/engine PWB	The main/engine PWB is faulty.	Replace the main/engine PWB.	

(2-3) Black dots or color dots

(When scanning the first side (front side) through DP, or scanning the second side (back side) through the reverse automatic DP)

Step	Check description	Assumed cause	Measures	Reference
1	Replacing the original	The original is dirty.	Replace the original.	
2	Cleaning the slit glass	The slit glass is dirty.	Clean the slit glass.	

(2-4) Blurred characters

(When scanning the first side (front side) through DP, or scanning the second side (back side) through the reverse automatic DP)

Step	Check description	Assumed cause	Measures	Reference
1	Checking the original	The originals out of specification are used. (They are thick, thin, or smooth.)	Ask a user to use the specified paper.	
2	Correcting the original	The leading edge of the original is bent.	Stretch the bending or the paper creases of the original.	
3	Cleaning the DP conveying roller and the bushings	The DP conveying roller or the bushing is dirty.	Clean the DP conveying roller and bushing	
4	Reattaching the DP conveying pulley and pressure spring	The original conveying pulley does not rotate smoothly.	Reattach the DP conveying pulleys and the pressure springs.	
5	Reattaching the DP conveying roller drive parts	The DP conveying roller does not rotate normally	Reattach the DP conveying roller drive parts	
6	Replacing the scanning guide	The scanning guide is deformed.	Replace the scanning guide.	
7	Reinstalling the document processor	The document processor is not properly installed in the main unit.	Check the positioning of the document processor and tighten the screws again.	

(2-5) Mismatch of the center line between the original and copy image (1st side)

(When scanning the front side through the DP)

Step	Check description	Assumed cause	Measures	Reference
1	Reloading the original	The originals are not properly set on the original tray.	Reset the originals.	
2	Executing U072	DP front side center line is not adjusted	Adjust the DP front side center line at U072 [Front]	
3	Executing U411	The auto scanner adjustment when DP scanning is not executed.	Execute U411 [DP FU(CharB)]	

(2-6) Mismatch of the center line between the original and copy image (2nd side)

Target: 30ppm model

(Scanning the second side (back side) through the reverse automatic DP)

Step	Check description	Assumed cause	Measures	Reference
1	Reloading the original	The originals are not properly set on the original tray.	Reset the originals.	
2	Executing U072	DP back side center line is not adjusted	Adjust the DP back side center line at U072 [Back]	

(2-7) Horizontal black streaks

(When scanning the first side (front side) through DP, or scanning the second side (back side) through the reverse automatic DP)

Step	Check description	Assumed cause	Measures	Reference
1	Replacing the original	The original is dirty.	Replace the original.	
2	Cleaning the slit glass	The slit glass is dirty.	Clean the slit glass.	
3	Executing U072	The image at the backside of the original size direction plate is scanned. (The adjustment value at U072 [Front] is not proper.)	Adjust the DP front side center line at U072 [Front]	

(2-8) Vertical streaks or bands (black, color)

(When scanning the first side (front side) through DP, or scanning the second side (back side) through the reverse automatic DP)

Step	Check description	Assumed cause	Measures	Reference
1	Replacing the original	The original is dirty.	Replace the original.	
2	Changing the settings	Actual original size and detected original size are mismatched.	Set the original paper size.	
3	Cleaning the original mat	The original mat is dirty.	Clean the original mat.	
4	(For 1st side scanning) execute U072	The center line settings are incorrect. (The streaks or bands appear out of the original image.)	Adjust the DP front side center line at U072 [Front]	
5	(For 1st side scanning) execute U411	The leading edge timing is not set properly. (The streaks or bands appear at the position of outside of the original)	Execute U411 [DP FU(ChartB)]	
6	(For 2nd side scanning) execute U072	The center line settings are incorrect. (The streaks or bands appear out of the original image.)	Adjust the DP back side center line at U072 [Back]	
7	(For 2nd side scanning) execute U411	The leading edge timing is not set properly. (The streaks or bands appear at the position of outside of the original)	Execute U411 [DP FD(ChartB)]	
8	Executing U068	The original scanning start position is not proper	Adjust the original scanning start position at U068 [DP Read]	
9	Cleaning the contact glass and shading plate	The contact glass or the shading plate is dirty.	Clean the contact glass and shading plate at the back-side.	
10	Cleaning the contact glass and DP conveying guide	The slit glass is dirty.	Clean the slit glass and DP conveying guide	
11	Cleaning the CCD PWB	Dust is on the CCD PWB.	Clean the CCD PWB using an air-blower.	
12	Checking the connection	FFC is not properly connected, or it is faulty.	Clean the following FFC terminal of the FFC and reconnect. If the FFC terminal is deformed or FFC is short circuited, replace FFC. • CCD PWB - Main/engine PWB	
13	Replacing the scanner carriage	The CCD PWB is faulty.	Replace the scanner carriage and execute U411	

Step	Check description	Assumed cause	Measures	Reference
14	Replacing the main/engine PWB	The main/engine PWB is faulty.	Replace the main/engine PWB.	

(2-9) Irregular mismatch of the leading edge between the original and copy image (1st side)

(When scanning the front side through the DP)

Step	Check description	Assumed cause	Measures	Reference
1	Executing U068	The original scanning start position is not proper	Execute U068 [DP Read]	
2	Executing U071	The timing of scanning the original leading edge at the document processor is not properly set.	Adjust the DP front side leading edge timing at U071 [Front Head]	
3	Cleaning the DP conveying roller and the bushings	The DP conveying roller or the bushing is dirty.	Clean the DP conveying roller and bushing	
4	Replacing the DP conveying roller	The DP conveying roller is worn down.	Replace the DP conveying roller.	
5	Applying the grease	The DP conveying motor rotates irregularly, and so the excessive load is given to the DP drive gear.	Apply the grease to the DP drive gears.	
6	Checking the DP conveying motor	The DP conveying motor is abnormal and the rotation is uneven	Reattach the DP conveying motor and reinsert the connector. If not repaired, replace it.	

(2-10) Irregular mismatch of the leading edge between the original and copy image (2nd side)

Target: 30ppm model

(Scanning the second side (back side) through the reverse automatic DP)

Step	Check description	Assumed cause	Measures	Reference
1	Executing U071	The leading edge timing is not set properly	Adjust the back side leading edge timing at U071 [Back Head]	

(2-11) Vertical streaks or bands (white)

(When scanning the first side (front side) through DP, or scanning the second side (back side) through the reverse automatic DP)

Step	Check description	Assumed cause	Measures	Reference
1	Replacing the original	The original is dirty.	Replace the original.	
2	Eliminating the dust	Dust adheres on the scanner carriage.	Remove dust in the laser path of the scanner carriage.	
3	Cleaning the contact glass and DP conveying guide	The slit glass is dirty.	Clean the slit glass and DP conveying guide	
4	Checking the connection	FFC is not properly connected, or it is faulty.	Clean the following FFC terminal of the FFC and reconnect. If the FFC terminal is deformed or FFC is short circuited, replace FFC. • CCD PWB - Main/engine PWB	
5	Replacing the scanner carriage	The LED PWB or CCD PWB is faulty.	Replace the scanner carriage and execute U411	
6	Replacing the main/engine PWB	The main/engine PWB is faulty.	Replace the main/engine PWB.	

(2-12) moiré (front side)

(When scanning the front side through the DP)

Step	Check description	Assumed cause	Measures	Reference
1	Changing the settings	The original imaging quality is not properly set. (Moiré changes depending on the print quality.)	Set [Original Image] at [System Menu/Counter] > [Common Settings] > [Function Defaults]	
2	Reloading the original	The original is not set properly. (moiré appears in the original scanning direction.)	Rotate the originals in 90 degrees and reset them.	

(2-13) moiré (back side)

Target: 30ppm model

(Scanning the second side (back side) through the reverse automatic DP)

Step	Check description	Assumed cause	Measures	Reference
1	Changing the settings	The original imaging quality is not properly set. (Moire changes depending on the print quality.)	Set [Original Image] at [System Menu/Counter] > [Common Settings] > [Function Defaults]	
2	Executing U411	Each adjustment of the scanner section is incorrect	Execute U411 [DP FD(ChartB)]	

(2-14) Entire blank image (white or black)

(When scanning the first side (front side) through DP, or scanning the second side (back side) through the reverse automatic DP)

Step	Check description	Assumed cause	Measures	Reference
1	Reloading the original	The originals were set upside down.	Reset the original to correct the front and back direction.	
2	Reattaching the slit glass	The slit glass is not properly attached.	Reattach the slit glass.	
3	Executing U068	The original scanning start position is not proper	Adjust the original scanning start position at U068 [DP Read]	
4	Reattaching the home position sensor	The home position sensor is not properly attached.	Reattach the home position sensor.	
5	Checking the connection	FFC is not properly connected, or it is faulty.	Clean the following FFC terminal of the FFC and reconnect. If the FFC terminal is deformed or FFC is short circuited, replace FFC. • CCD PWB - Main/engine PWB	
6	Reattaching the scanner drive belt	The scanner drive belt comes off.	Reattach the scanner drive belt.	
7	Reattaching the scanner drive gear	The scanner drive gear is not properly attached.	Reattach the scanner drive gear.	
8	Replacing the scanner carriage	The CCD PWB is faulty.	Replace the scanner carriage and execute U411	
9	Replacing the main/engine PWB	The main/engine PWB is faulty.	Replace the main/engine PWB.	

(2-15) A part of the image is dark or light

(When scanning the first side (front side) through DP, or scanning the second side (back side) through the reverse automatic DP)

Step	Check description	Assumed cause	Measures	Reference
1	Checking the situation	The table scanning of originals is faulty.	Check if the same phenomenon occurs when scanning on the contact glass, perform the process of [the part of the image is dark or bright (when scanning on the contact glass)].	
2	Cleaning the slit glass	The slit glass is dirty.	Clean the slit glass.	
3	Reattaching the slit glass	The slit glass is bent.	Reattach the slit glass.	
4	Reattaching the scanning guide	The scanning guide is not properly attached.	Reattach the scanning guide.	

(2-16) Image is blurred

(When scanning the first side (front side) through DP, or scanning the second side (back side) through the reverse automatic DP)

Step	Check description	Assumed cause	Measures	Reference
1	Checking the original	The original is wavy.	Make the originals flat, or replace it if possible.	
2	Removing condensation	The slit glass has condensation.	Remove condensation on the slit glass.	

(2-17) Part of the image is not copied

(When scanning the first side (front side) through DP, or scanning the second side (back side) through the reverse automatic DP)

Step	Check description	Assumed cause	Measures	Reference
1	Reloading the original	The original is not set properly.	Reset the originals.	
2	Cleaning the slit glass	The slit glass is dirty.	Clean the slit glass.	
3	Reattaching the slit glass	The slit glass is not properly attached.	Reattach the slit glass.	

(2-18) Color shift

(When scanning the first side (front side) through DP, or scanning the second side (back side) through the reverse automatic DP)

Step	Check description	Assumed cause	Measures	Reference
1	Checking the original	The originals out of specification are used. (They are thick, thin, or smooth.)	Ask a user to use the specified paper.	
2	Correcting the original	The leading edge of the original is bent.	Stretch the bending or the paper creases of the original.	
3	Reattaching the original mat	The original mat shifts.	Reattach the original mat.	
4	Cleaning the DP conveying roller and the bushings	The DP conveying roller or the bushing is dirty.	Clean the DP conveying roller and bushing	
5	Reattaching the DP conveying pulley and pressure spring	The original conveying pulley does not rotate smoothly.	Reattach the DP conveying pulleys and the pressure springs.	
6	Reattaching the DP conveying roller drive parts	The DP conveying roller does not rotate normally	Reattach the DP conveying roller drive parts	
7	Replacing the scanning guide	The scanning guide is deformed.	Replace the scanning guide.	
8	Reinstalling the document processor	The document processor is not properly installed in the main unit.	Check the positioning of the document processor and tighten the screws again.	
9	Replacing the DP hinge	The DP hinges are faulty. (The hinge's vertical motion is unsmooth, the opened DP cannot be held, and the DP is skewed horizontally.)	Replace the DP hinges.	

(2-19) Skewed image

(When scanning the first side (front side) through DP, or scanning the second side (back side) through the reverse automatic DP)

Step	Check description	Assumed cause	Measures	Reference
1	Correcting the original	The originals are bent or creased.	Stretch the bending or the paper creases of the original.	
2	Reattaching the DP original guide	The original skews.	Reset the DP original guide	
3	Cleaning the DP feed roller	The DP feed roller is dirty. (It can be removed by cleaning.)	Clean the DP feed roller.	
4	Replacing the DP feed roller	The DP feed roller is dirty. (It cannot be removed by cleaning.)	Replace the DP feed roller.	
5	Cleaning the DP registration roller	The DP registration roller is dirty.	Clean the DP registration roller.	
6	Reattaching the DP registration pulley	The DP registration pulley does not rotate normally	Reattach the DP registration pulley.	


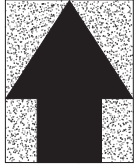
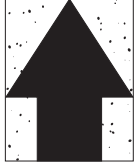
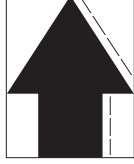

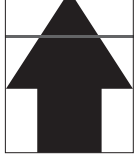
(2-20) The entire image is light

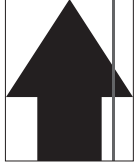


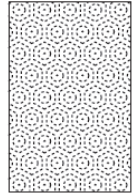

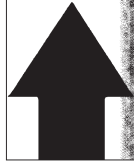

(When scanning the first side (front side) through DP, or scanning the second side (back side) through the reverse automatic DP)


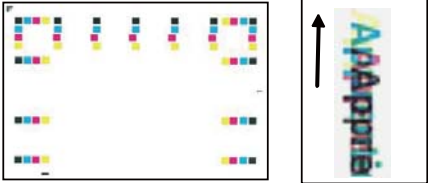
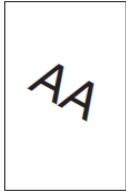

Step	Check description	Assumed cause	Measures	Reference
1	Executing U068	The original scanning start position is not proper	Adjust the original scanning start position at U068 [DP Read]	
2	Cleaning the contact glass and DP conveying guide	The slit glass is dirty.	Clean the slit glass and DP conveying guide	
3	Reattaching the slit glass	The slit glass is not properly attached.	Reattach the slit glass.	
4	Changing the settings	The density is not properly adjusted. (The original type and image quality differs.)	Set the image quality according to the originals.	
5	Changing the settings	The density is not properly adjusted. ([EcoPrint] is set to 'On'.)	Change [EcoPrint] to [Off] in [System Menu/Counter] > [Common Settings] > [Function Defaults].	
6	Changing the settings	The density is not properly adjusted. (The density setting is too light.)	Set the density setting to be dark.	
7	Changing the settings	The density is not properly adjusted. ([Background density] is set to 'Off'.)	Set [Manual] in the Background Density Adjustment to make dark.	

Step	Check description	Assumed cause	Measures	Reference
8	Changing the settings	[Prevent Bleed-thru] setting is [On]	Change to [Off] at [System Menu/Counter] > [Common Setting] > [Function Defaults] > [Prevent Bleed-thru]	
9	Cleaning the shading plate	The shading plate is dirty.	Clean the shading plate at the backside of the contact glass.	
10	Executing U411	The scanner image is not adjusted.	Execute U411 [DP FD(CharB)] and [DP FU(CharB)]	
11	Reattaching the home position sensor	The home position sensor is not properly attached.	Reattach the home position sensor.	
12	Checking the connection	FFC is not properly connected, or it is faulty.	Clean the following FFC terminal of the FFC and reconnect. If the FFC terminal is deformed or FFC is short circuited, replace FFC. • CCD PWB - Main/engine PWB	
13	Replacing the scanner carriage	The LED PWB or CCD PWB is faulty.	Replace the scanner carriage and execute U411	
14	Replacing the main/engine PWB	The main/engine PWB is faulty.	Replace the main/engine PWB.	

(3) Scanner Factors (scanning the second side (back side) through the reverse automatic DP)

No.	Contents	Image sample
(3-1)	Abnormal image	
(3-2)	Background is colored	
(3-3)	Black dots or color dots	
(3-4)	Blurred characters	
(3-5)	Center of the original and output image is inconsistent	
(3-6)	Horizontal black streaks	

No.	Contents	Image sample
(3-7)	Vertical streaks or bands (black, color)	
(3-8)	Regular inconsistency in the leading edge image between the original and output	
(3-9)	Vertical streaks or bands (white)	
(3-10)	Moire	
(3-11)	Entire blank image (white or black)	
(3-12)	A part of the image is dark or light	
(3-13)	Image is blurred	

No.	Contents	Image sample
(3-14)	Part of the image is not copied	
(3-15)	Color shift	
(3-16)	Skewed image	
(3-17)	The entire image is light	

Content of Scanner Factors

(3-1) Abnormal image

Target: 35ppm model

(Scanning the second side (back side) through the reverse automatic DP)

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	The connector or FFC is not connected properly. Or, the wire or FFC is faulty.	Reconnect the following wire connectors and clean the FFC and reconnect. If there is no continuity, replace the wire. If the FFC terminal section is deformed or FFC is broken, replace the FFC. • DPCIS - DPCIS relay PWB • DPCIS relay PWB - Main/Engine PWB	
2	Replacing the DPCIS	The DPCIS is faulty.	Replace the DPCIS and execute U411.	
3	Replacing the main/engine PWB	The main/engine PWB is faulty.	Replace the main/engine PWB.	

(3-2) Background is colored

Target: 35ppm model

(Scanning the second side (back side) through the reverse automatic DP)

Step	Check description	Assumed cause	Measures	Reference
1	Changing the settings	The original background density is dark. The background density adjustment is dark.	Set [Background Adjustment] to [Manual] to adjust the background density	
2	Executing U411	The DPCIS image adjustment (U411 [DP FU(CharA)]) is not executed.	Execute U411 [DP FD(CharA)]	
3	Cleaning the DP conveying roller A	The DP conveying roller A is dirty.	Clean the DP conveying roller A.	
4	Reattaching the DP conveying roller drive section	The DP conveying roller A does not properly rotate.	Reattach the DP conveying roller A drive section.	

Step	Check description	Assumed cause	Measures	Reference
5	Checking the connection	The connector or FFC is not connected properly. Or, the wire or FFC is faulty.	Reconnect the following wire connectors and clean the FFC and reconnect. If there is no continuity, replace the wire. If the FFC terminal section is deformed or FFC is broken, replace the FFC. • DPCIS - DPCIS relay PWB • DPCIS relay PWB - Main/Engine PWB	
6	Replacing the DPCIS	The DPCIS is faulty.	Replace the DPCIS and execute U411.	
7	Replacing the main/engine PWB	The main/engine PWB is faulty.	Replace the main/engine PWB.	

(3-3) Black dots or color dots

Target: 35ppm model

(Scanning the second side (back side) through the reverse automatic DP)

Step	Check description	Assumed cause	Measures	Reference
1	Replacing the original	The original is dirty.	Replace the original.	
2	Replacing the DPCIS	The DPCIS is faulty.	Replace the DPCIS and execute U411.	
3	Replacing the main/engine PWB	The main/engine PWB is faulty.	Replace the main/engine PWB.	

(3-4) Blurred characters

Target: 35ppm model

(Scanning the second side (back side) through the reverse automatic DP)

Step	Check description	Assumed cause	Measures	Reference
1	Checking the situation	The DP scanning process is faulty.	Check if the same phenomenon occurs when scanning the first page (front page) with DP, perform the process of [Blurred letters (When scanning the first side (front side) through DP, or scanning the second side (back side) through the reverse automatic DP)]	
2	Reattaching the DP conveying roller A and B	The originals are conveyed without contacting the DP conveying roller A, B.	Reattach the DP conveying roller A, B.	
3	Reattaching the DPCIS	The originals are away from the DPCIS glass.	Reattach the DPCIS.	

(3-5) Center of the original and output image is inconsistent

Target: 35ppm model

(Scanning the second side (back side) through the reverse automatic DP)

Step	Check description	Assumed cause	Measures	Reference
1	Reloading the original	The originals are not properly set on the original tray.	Reload the original properly.	
2	Executing U072	The DP scanning position is not adjusted.	Adjust the CIS center line at U072 [CIS]	
3	Executing U411	The DP scanning position is not adjusted.	Execute U411 [DP FD(ChartB)]	

(3-6) Horizontal black streaks

Target: 35ppm model

(Scanning the second side (back side) through the reverse automatic DP)

Step	Check description	Assumed cause	Measures	Reference
1	Replacing the original	The original is dirty.	Replace the original.	
2	Cleaning the DPCIS glass and the DP conveying guide	The DPCIS glass is dirty.	Clean the DPCIS glass and the DP conveying guide.	
3	Replacing the DPCIS	The DPCIS is faulty.	Replace the DPCIS and execute U411.	

Step	Check description	Assumed cause	Measures	Reference
4	Replacing the main/engine PWB	The main/engine PWB is faulty.	Replace the main/engine PWB.	

(3-7) Vertical streaks or bands (black, color)

Target: 35ppm model

(Scanning the second side (back side) through the reverse automatic DP)

Step	Check description	Assumed cause	Measures	Reference
1	Executing U071	The leading edge timing is improperly adjusted. (Streaks or bands appear on the image outside the original.)	Adjust the back side leading edge timing at U071 [Back Head]	
2	Executing U411	The leading edge timing is improperly adjusted. (Streaks or bands appear on the image outside the original.)	Execute U411 [DP FD(ChartB)]	
3	Cleaning the DPCIS glass	The DPCIS glass is dirty.	Clean the DPCIS glass.	
4	Cleaning the DP conveying guide	The DP conveying guide is dirty	Clean the DP conveying guide	
5	Cleaning the DP conveying roller A	The DP conveying roller A is dirty.	Clean the DP conveying roller A.	
6	Replacing the DPCIS	The DPCIS is faulty.	Replace the DPCIS and execute U411.	
7	Replacing the main/engine PWB	The main/engine PWB is faulty.	Replace the main/engine PWB.	

(3-8) Regular inconsistency in the leading edge image between the original and output

Target: 35ppm model

(Scanning the second side (back side) through the reverse automatic DP)

Step	Check description	Assumed cause	Measures	Reference
1	Executing U071	The DP scanning position is not adjusted.	Adjust the back side leading edge timing at U071 [Back Head]	
2	Executing U411	The DP scanning position is not adjusted.	Execute U411 [DP FD(ChartB)]	

(3-9) Vertical streaks or bands (white)

Target: 35ppm model

(Scanning the second side (back side) through the reverse automatic DP)

Step	Check description	Assumed cause	Measures	Reference
1	Cleaning the DP conveying roller A	The DP conveying roller A is dirty.	Clean the DP conveying roller A.	
2	Cleaning the DPCIS glass and the DP conveying guide	The DPCIS glass is dirty.	Clean the DPCIS glass and the DP conveying guide.	
3	Replacing the DPCIS	The DPCIS is faulty.	Replace the DPCIS and execute U411.	
4	Replacing the main/engine PWB	The main/engine PWB is faulty.	Replace the main/engine PWB.	

(3-10) Moire

Target: 35ppm model

(Scanning the second side (back side) through the reverse automatic DP)

Step	Check description	Assumed cause	Measures	Reference
1	Changing the settings	The image quality mode is set improperly.	Change the image quality mode.	
2	Reloading the original	The original is not properly set. (Moire appears in the original scanning direction.)	Rotate the originals in 90 degrees and reset them.	
3	Executing U411	The automatic scanner adjustment is not executed.	Execute U411 [DP FD(CharA)]	

(3-11) Entire blank image (white or black)

Target: 35ppm model

(Scanning the second side (back side) through the reverse automatic DP)

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	The connector or FFC is not connected properly. Or, the wire or FFC is faulty.	Reconnect the following wire connectors and clean the FFC and reconnect. If there is no continuity, replace the wire. If the FFC terminal section is deformed or FFC is broken, replace the FFC. • DPCIS - DPCIS relay PWB • DPCIS relay PWB - Main/Engine PWB	
2	Replacing the DPCIS	The DPCIS is faulty.	Replace the DPCIS and execute U411.	
3	Replacing the main/engine PWB	The main/engine PWB is faulty.	Replace the main/engine PWB.	

(3-12) A part of the image is dark or light

Target: 35ppm model

(Scanning the second side (back side) through the reverse automatic DP)

Step	Check description	Assumed cause	Measures	Reference
1	Changing the settings	Image quality is not properly adjusted. (Original type and image quality are mismatched.)	Set the image quality according to the originals.	
2	Replacing the original	The original is dirty.	Replace the original.	
3	Correcting the original	The originals are bent or creased.	Stretch the bending or the paper creases of the original.	
4	Reattaching the DP conveying roller drive section	The DP conveying roller A does not properly rotate.	Reattach the DP conveying roller A drive section.	
5	Cleaning the DPCIS glass and the DP conveying guide	The DPCIS glass is dirty.	Clean the DPCIS glass and the DP conveying guide.	
6	Replacing the DPCIS	The DPCIS is faulty.	Replace the DPCIS and execute U411.	
7	Replacing the main/engine PWB	The main/engine PWB is faulty.	Replace the main/engine PWB.	

(3-13) Image is blurred

Target: 35ppm model

(Scanning the second side (back side) through the reverse automatic DP)

Step	Check description	Assumed cause	Measures	Reference
1	Removing condensation	The DPCIS glass has condensation.	Remove condensation on the DPCIS glass.	
2	Cleaning the DPCIS glass and the DP conveying guide	The DPCIS glass is dirty.	Clean the DPCIS glass and the DP conveying guide.	
3	Reattaching the DPCIS glass	The DPCIS glass is bent.	Reattach the DPCIS glass.	
4	Replacing the DPCIS glass	The DPCIS glass has some scratches.	Replace the DPCIS glass.	
5	Reattaching the DP conveying roller drive section	The DP conveying roller A, B do not properly rotate.	Reattach the DP conveying roller A, B drive section.	
6	Executing U411	The automatic scanner adjustment is not executed.	Execute U411 [DP FD(CharA)]	
7	Reattaching the DPCIS	The DPCIS is not properly attached.	Reattach the DPCIS.	
8	Replacing the DPCIS	The DPCIS is faulty.	Replace the DPCIS and execute U411.	

(3-14) Part of the image is not copied

Target: 35ppm model

(Scanning the second side (back side) through the reverse automatic DP)

Step	Check description	Assumed cause	Measures	Reference
1	Reloading the original	The originals are not properly set on the original tray.	Reload the original properly.	
2	Changing the settings	Actual original size and detected original size are mismatched.	Set the original size manually.	
3	Checking the connection	The connector or FFC is not connected properly. Or, the wire or FFC is faulty.	Reconnect the following wire connectors and clean the FFC and reconnect. If there is no continuity, replace the wire. If the FFC terminal section is deformed or FFC is broken, replace the FFC. • DPCIS - DPCIS relay PWB • DPCIS relay PWB - Main/Engine PWB	
4	Replacing the DPCIS	The DPCIS is faulty.	Replace the DPCIS and execute U411.	

Step	Check description	Assumed cause	Measures	Reference
5	Replacing the main/engine PWB	The main/engine PWB is faulty.	Replace the main/engine PWB.	

(3-15) Color shift

Target: 35ppm model

(Scanning the second side (back side) through the reverse automatic DP)

Step	Check description	Assumed cause	Measures	Reference
1	Checking the situation	The DP scanning process is faulty.	Check if the same phenomenon occurs when scanning the first page (front page) with DP, perform the process of [Color misalignment (When scanning the first side (front side) through DP, or scanning the second side (back side) through the reverse automatic DP)]	
2	Reattaching the DP conveying roller A and B	The originals are conveyed without contacting the DP conveying roller A, B.	Reattach the DP conveying roller A, B.	
3	Reattaching the DPCIS	The DPCIS is not properly attached.	Reattach the DPCIS.	

(3-16) Skewed image

Target: 35ppm model

(Scanning the second side (back side) through the reverse automatic DP)

Step	Check description	Assumed cause	Measures	Reference
1	Checking the situation	The DP scanning process is faulty.	Check if the same phenomenon occurs when scanning the first page (front page) with DP, perform the process of [Skewed image (When scanning the first side (front side) through DP)]	
2	Reattaching the DPCIS	The DPCIS is not properly attached.	Reattach the DPCIS.	

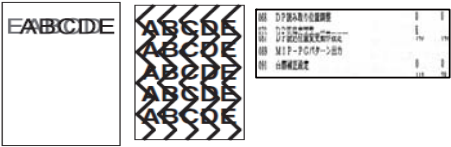




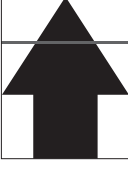

(3-17) The entire image is light



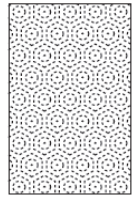

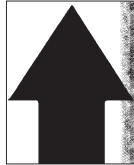


Target: 35ppm model

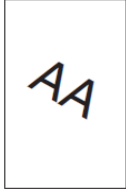

(Scanning the second side (back side) through the reverse automatic DP)

Step	Check description	Assumed cause	Measures	Reference
1	Checking the situation	The table scanning of originals is faulty.	Check if the same phenomenon occurs when scanning on the contact glass, perform the process of [the whole part of the image is light (when scanning on the contact glass)].	
2	Executing U411	U411 [DP FD(ChartA)] is not executed.	Execute U411 [DP FD(ChartA)]	
3	Cleaning the DP conveying roller A, B	The DP conveying roller A, B are dirty.	Clean the DP conveying roller A, B.	
4	Reattaching the DP conveying roller drive section	The DP conveying roller A, B do not properly rotate.	Reattach the DP conveying roller A, B drive section.	
5	Reattaching the DPCIS	The DPCIS is not properly attached.	Reattach the DPCIS.	
6	Checking the connection	The connector or FFC is not connected properly. Or, the wire or FFC is faulty.	Reconnect the following wire connectors and clean the FFC and reconnect. If there is no continuity, replace the wire. If the FFC terminal section is deformed or FFC is broken, replace the FFC. • DPCIS - DPCIS relay PWB • DPCIS relay PWB - Main/Engine PWB	
7	Replacing the DPCIS	The DPCIS is faulty.	Replace the DPCIS and execute U411.	
8	Replacing the main/engine PWB	The main/engine PWB is faulty.	Replace the main/engine PWB.	

(4) Scanner Factors (when scanning on the contact glass)

No.	Contents	Image sample
(4-1)	Abnormal image	
(4-2)	Background is colored	
(4-3)	Black dots or color dots	
(4-4)	Blurred characters / Color Shift	
(4-5)	Mismatch of the center line between the original and copy image	
(4-6)	Horizontal black streaks	
(4-7)	Vertical streaks or bands (black, color)	

No.	Contents	Image sample
(4-8)	Regular mismatch of the leading edge between the original and copy image	
(4-9)	Vertical streaks or bands (white)	
(4-10)	Moire	
(4-11)	Entire blank image (white or black)	
(4-12)	A part of the image is dark or light	
(4-13)	Image is blurred	
(4-14)	Part of the image is not copied	

No.	Contents	Image sample
(4-15)	Skewed image	
(4-16)	The entire image is light	

Content of Scanner Factors (when scanning on the contact glass)

(4-1) Abnormal image

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	FFC is not properly connected, or it is faulty.	Clean the following FFC terminal of the FFC and reconnect. If the FFC terminal is deformed or FFC is short circuited, replace FFC. • CCD PWB - Main/engine PWB	
2	Replacing the scanner carriage	The CCD PWB is faulty.	Replace the scanner carriage and execute U411	
3	Replacing the main/engine PWB	The main/engine PWB is faulty.	Replace the main/engine PWB.	

(4-2) Background is colored

Step	Check description	Assumed cause	Measures	Reference
1	Changing the settings	The Background Density Adjustment is not set.	Set [Background Density] to [Auto] at [System Menu/Counter] > [Common Settings] > [Function Defaults]	
2	Changing the settings	The background density is dark.	Set [Background Density] to [Manual] to adjust the density at [System Menu/Counter] > [Common Settings] > [Function Defaults]	
3	Reloading the original	The original is raised at scanning.	Set the original during pressing.	
4	Cleaning the shading plate	The shading plate is dirty.	Clean the shading plate at the backside of the contact glass.	
5	Executing U411	The image is not adjusted.	Execute U411 [Table(ChartA)]	
6	Reattaching the home position sensor	The home position sensor is not properly attached.	Reattach the home position sensor.	
7	Checking the connection	FFC is not properly connected, or it is faulty.	Clean the following FFC terminal of the FFC and reconnect. If the FFC terminal is deformed or FFC is short circuited, replace FFC. • CCD PWB - Main/engine PWB	
8	Replacing the scanner carriage	The CCD PWB is faulty.	Replace the scanner carriage and execute U411	
9	Replacing the main/engine PWB	The main/engine PWB is faulty.	Replace the main/engine PWB.	

(4-3) Black dots or color dots

Step	Check description	Assumed cause	Measures	Reference
1	Replacing the original	The original is dirty.	Replace the original.	
2	Cleaning the contact glass	The contact glass is dirty.	Clean the contact glass.	
3	Checking the connection	FFC is not properly connected, or it is faulty.	Clean the following FFC terminal of the FFC and reconnect. If the FFC terminal is deformed or FFC is short circuited, replace FFC. • CCD PWB - Main/engine PWB	
4	Replacing the scanner carriage	The CCD PWB is faulty.	Replace the scanner carriage and execute U411	
5	Replacing the main/engine PWB	The main/engine PWB is faulty.	Replace the main/engine PWB.	

(4-4) Blurred characters / Color Shift

Step	Check description	Assumed cause	Measures	Reference
1	Reattaching the scanner carriage	There is a load on the scanner movement since the scanner carriage is not properly attached.	Reattach the scanner carriage.	
2	Checking the scanner movement	A load is applied to the scanner movement.	If there is an excessive load when manually operating the scanner carriage, check if foreign matter is on the drive belt. Then, clean the drive belt and apply the grease to the ISU shaft.	

(4-5) Mismatch of the center line between the original and copy image

Step	Check description	Assumed cause	Measures	Reference
1	Reloading the original	The original is not properly set on the contact glass.	Reset the originals.	
2	Reattaching the contact glass	The contact glass is not properly attached.	Reattach the contact glass.	
3	Executing U067	The scanner center line is not adjusted.	Adjust the scanner center line at U067 [Front]	
4	Executing U411	The automatic table scanning adjustment is not executed.	Execute U411 [Table(ChartA)]	

(4-6) Horizontal black streaks

Step	Check description	Assumed cause	Measures	Reference
1	Replacing the original	The original is dirty.	Replace the original.	
2	Cleaning the contact glass	The contact glass is dirty.	Clean the contact glass.	
3	Executing U066	The image at the backside of the size direction plate is scanned. (U066 [Front] adjustment is improper)	Adjust the scanner leading edge timing at U066 [Front]	
4	Executing U411	The image at the backside of the size direction plate is scanned. (U411 [Table(ChartA)] adjustment is improper)	Execute U411 [Table(ChartA)]	
5	Checking the connection	FFC is not properly connected, or it is faulty.	Clean the following FFC terminal of the FFC and reconnect. If the FFC terminal is deformed or FFC is short circuited, replace FFC. • CCD PWB - Main/engine PWB	
6	Replacing the main/engine PWB	The main/engine PWB is faulty.	Replace the main/engine PWB.	????????? ????????? ?CCD??? LED????? ???

(4-7) Vertical streaks or bands (black, color)

Step	Check description	Assumed cause	Measures	Reference
1	Replacing the original	The original is dirty.	Replace the original.	
2	Changing the settings	Actual original size and detected original size are mismatched.	Set the original paper size.	
3	Cleaning the original mat	The original mat is dirty.	Clean the original mat.	
4	Executing U067	The center line settings are incorrect. (The streaks or bands appear out of the original image.)	Adjust the scanner center line at U067 [Front]	
5	Executing U411	The leading edge timing is not set properly. (The streaks or bands appear at the position of outside of the original)	Execute U411 [Table(ChartA)]	
6	Cleaning the contact glass and shading plate	The contact glass or the shading plate is dirty.	Clean the contact glass and shading plate at the back-side.	
7	Cleaning the CCD PWB	Dust is on the CCD PWB.	Clean the CCD PWB using an air-blower.	
8	Checking the connection	FFC is not properly connected, or it is faulty.	Clean the following FFC terminal of the FFC and reconnect. If the FFC terminal is deformed or FFC is short circuited, replace FFC. • CCD PWB - Main/engine PWB	
9	Replacing the scanner carriage	The CCD PWB is faulty.	Replace the scanner carriage and execute U411	
10	Replacing the main/engine PWB	The main/engine PWB is faulty.	Replace the main/engine PWB.	

(4-8) Regular mismatch of the leading edge between the original and copy image

Step	Check description	Assumed cause	Measures	Reference
1	Reloading the original	The original is not set properly. (The leading edge of the original is not set on the contact glass properly)	Reset the originals.	
2	Executing U066	The scanner leading edge timing is incorrect	Adjust the scanner leading edge timing at U066 [Front]	
3	Executing U411	The scanner leading edge timing is incorrect	Execute U411 [Table(ChartA)]	
4	Reattaching the home position sensor	The home position sensor is not properly attached.	Reattach the home position sensor.	
5	Refix the scanner drive gear	The attachment of the scanner drive gear is loose.	Retighten the screw of the scanner drive gear.	

(4-9) Vertical streaks or bands (white)

Step	Check description	Assumed cause	Measures	Reference
1	Checking the original	The original is dirty.	Replace the original.	
2	Eliminating the dust	Dust adheres on the scanner carriage.	Remove dust in the laser path of the scanner carriage.	
3	Checking the connection	FFC is not properly connected, or it is faulty.	Clean the following FFC terminal of the FFC and reconnect. If the FFC terminal is deformed or FFC is short circuited, replace FFC. • CCD PWB - Main/engine PWB	
4	Replacing the scanner carriage	The CCD PWB is faulty.	Replace the scanner carriage and execute U411	
5	Replacing the main/engine PWB	The main/engine PWB is faulty.	Replace the main/engine PWB.	

(4-10) Moire

Step	Check description	Assumed cause	Measures	Reference
1	Changing the settings	The original imaging quality is not properly set. (Moire changes depending on the print quality.)	Set [Original Image] at [System Menu/Counter] > [Common Settings] > [Function Defaults]	
2	Reloading the original	The original is not set properly. (moiré appears in the original scanning direction.)	Rotate the originals in 90 degrees and reset them.	
3	Executing U065	The ratio in the main scanning direction is large. (This problem occurs when the print ratio is set as 100%.)	Change the magnification in the main scanning direction to reduction at U65 [Main Scan]	
4	Executing U411	Each adjustment of the scanner section is incorrect	Execute U411 [Table(ChartA)]	

(4-11) Entire blank image (white or black)

Step	Check description	Assumed cause	Measures	Reference
1	Reloading the original	The originals were set upside down.	Reset the original to correct the front and back direction.	
2	Checking the connection	FFC is not properly connected, or it is faulty.	Clean the following FFC terminal of the FFC and reconnect. If the FFC terminal is deformed or FFC is short circuited, replace FFC. • CCD PWB - Main/engine PWB	
3	Reattaching the home position sensor	The home position sensor is not properly attached.	Reattach the home position sensor.	
4	Reattaching the scanner drive belt	The scanner drive belt comes off.	Reattach the scanner drive belt.	
5	Reattaching the scanner drive gear	The scanner drive gear is not properly attached.	Reattach the scanner drive gear.	
6	Replacing the scanner carriage	The CCD PWB is faulty.	Replace the scanner carriage and execute U411	
7	Replacing the main/engine PWB	The main/engine PWB is faulty.	Replace the main/engine PWB.	

(4-12) A part of the image is dark or light

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the original (when scanning the book original)	Original is scanned on the bent contact glass.	Set the booklet original while not bending the contact glass.	
2	Changing the settings	Image quality is not properly adjusted. (Original type and image quality are mismatched.)	Set [Original Image] at [System Menu/Counter] > [Common Settings] > [Function Defaults]	
3	Replacing the original	The original is dirty.	Replace the original.	
4	Correcting the original	The original is bent or creased.	Stretch the bending or the paper creases of the original.	
5	Reattaching the original mat	The original mat shifts.	Reattach the original mat.	
6	Cleaning the contact glass	The contact glass is dirty.	Clean the contact glass.	
7	Reattaching the contact glass	The contact glass is not properly attached.	Reattach the contact glass.	
8	Checking the connection	FFC is not properly connected, or it is faulty.	Clean the following FFC terminal of the FFC and reconnect. If the FFC terminal is deformed or FFC is short circuited, replace FFC. • CCD PWB - Main/engine PWB	
9	Replacing the scanner carriage	The LED PWB or CCD PWB is faulty. The parts of the scanner carriage where the ISU shaft contacts is deformed.	Replace the scanner carriage and execute U411	
10	Replacing the main/engine PWB	The main/engine PWB is faulty.	Replace the main/engine PWB.	

(4-13) Image is blurred

Step	Check description	Assumed cause	Measures	Reference
1	Checking the original	The original is wavy.	Make the originals flat, or replace it if possible.	
2	Removing condensation (contact glass)	The contact glass has condensation.	Remove the condensation on the contact glass.	
3	Removing condensation (CCD PWB)	The glass of the CCD PWB has condensation.	Remove the condensation on the CCD PWB glass using a blower brush	
4	Executing U411	Each auto adjustment of the scanner is incorrect.	Execute U411 [Table(ChartA)]	

Step	Check description	Assumed cause	Measures	Reference
5	Checking the connection	FFC is not properly connected, or it is faulty.	Clean the following FFC terminal of the FFC and reconnect. If the FFC terminal is deformed or FFC is short circuited, replace FFC. • CCD PWB - Main/engine PWB	
6	Replacing the scanner carriage	The CCD PWB is faulty.	Replace the scanner carriage and execute U411	
7	Replacing the main/engine PWB	The main/engine PWB is faulty.	Replace the main/engine PWB.	

(4-14) Part of the image is not copied

Step	Check description	Assumed cause	Measures	Reference
1	Changing the settings	Marked part by highlighter pen on the original cannot be scanned.	Set [Highlight] to [On] at [System Menu/Counter] > [Common Settings] > [Function Defaults] > [Original Image]	
2	Scanning the original	A part of the original is not printed out where the light is reflected.	Scan the original by excluding the shining area	
3	Reloading the original	The original is not set properly.	Reset the originals.	
4	Cleaning the contact glass	The original scanning side of the contact glass is dirty.	Clean the original scanning side of the contact glass.	
5	Cleaning the shading plate	The shading plate is dirty.	Clean the shading plate at the backside of the contact glass.	
6	Reattaching the contact glass	The contact glass is not properly attached.	Reattach the contact glass.	
7	Checking the connection	FFC is not properly connected, or it is faulty.	Clean the following FFC terminal of the FFC and reconnect. If the FFC terminal is deformed or FFC is short circuited, replace FFC. • CCD PWB - Main/engine PWB	
8	Reattaching the scanner carriage	The scanner carriage is not properly attached.	Reattach the scanner carriage and execute U411	
9	Replacing the scanner carriage	The CCD PWB is faulty.	Replace the scanner carriage and execute U411	
10	Replacing the main/engine PWB	The main/engine PWB is faulty.	Replace the main/engine PWB.	

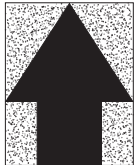
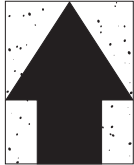

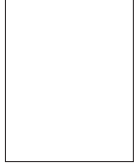


(4-15) Skewed image

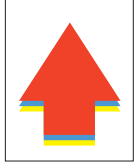
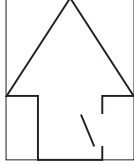

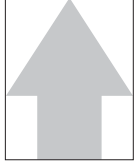


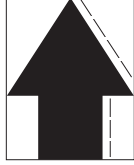
Step	Check description	Assumed cause	Measures	Reference
1	Reloading the original	The original is not properly set. (The original is skewed.)	Reset the originals.	
2	Reattaching the scanner carriage	The scanner carriage is not properly attached.	Reattach the scanner carriage and execute U411	

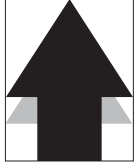

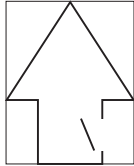
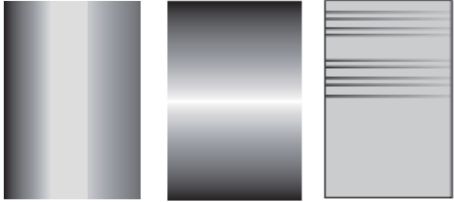


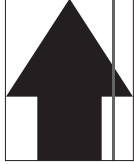
(4-16) The entire image is light

Step	Check description	Assumed cause	Measures	Reference
1	Changing the settings	The density is not properly adjusted. (The original type and image quality differs.)	Set the image quality according to the originals.	
2	Changing the settings	The density is not properly adjusted. ([EcoPrint] is set to 'On'.)	Change [EcoPrint] to [Off] in [System Menu/Counter] > [Common Settings] > [Function Defaults].	
3	Changing the settings	The density is not properly adjusted. (The density setting is too light.)	Set the density setting to be dark.	
4	Changing the settings	The density is not properly adjusted. ([Background density] is set to 'Off'.)	Set [Manual] in the Background Density Adjustment to make dark.	
5	Changing the settings	[Prevent Bleed-thru] setting is [On]	Change to [Off] at [System Menu/Counter] > [Common Setting] > [Function Defaults] > [Prevent Bleed-thru]	
6	Cleaning the shading plate	The shading plate is dirty.	Clean the shading plate at the backside of the contact glass.	
7	Executing U411	The image is not adjusted.	Execute U411 [Table(ChartA)]	
8	Reattaching the home position sensor	The home position sensor is not properly attached.	Reattach the home position sensor.	
9	Checking the connection	FFC is not properly connected, or it is faulty.	Clean the following FFC terminal of the FFC and reconnect. If the FFC terminal is deformed or FFC is short circuited, replace FFC. • CCD PWB - Main/engine PWB	
10	Replacing the scanner carriage	The LED PWB or CCD PWB is faulty.	Replace the scanner carriage and execute U411	
11	Replacing the main/engine PWB	The main/engine PWB is faulty.	Replace the main/engine PWB.	

(5) Engine Factors (Paper conveying cause: Transfer, Fuser and Separation)

No.	Contents	Image sample
(5-1)	Background is colored	
(5-2)	Black dots or color dots	
(5-3)	The image is not partly printed (blank or white spots)	
(5-4)	Entire blank image (white)	
(5-5)	Mismatch of the center line between the original and copy image	
(5-6)	Color shift in the main scanning direction	

No.	Contents	Image sample
(5-7)	Color shift in the sub scanning direction	
(5-8)	Paper creases	
(5-9)	Dirty reverse side	
(5-10)	The entire image is light	
(5-11)	Horizontal streaks or band (White, black, color)	
(5-12)	Irregular mismatch of the leading edge between the original and copy image	
(5-13)	Blurred characters (transfer shift)	

No.	Contents	Image sample
(5-14)	Offset image	
(5-15)	Color reproduction is poor	
(5-16)	Fusing failure	
(5-17)	Uneven transfer	
(5-18)	Image is blurred	
(5-19)	Vertical streaks or bands (white)	
(5-20)	Vertical streaks or bands (black, color)	

Content of Engine Factors (Paper conveying cause: Transfer, Fuser and Separation)

(5-1) Background is colored

Step	Check description	Assumed cause	Measures	Reference
1	Checking the primary transfer unit	The transfer belt surface is dirty.	If the image failure occurs at the outer pitch (long period that spans between papers) of the transfer belt, clean the transfer belt. After cleaning, in case if not resolved even performing the calibration and color adjustment, replace the primary transfer unit.	
2	Correcting the primary transfer bias contact	The primary transfer bias contact is deformed.	Correct the primary transfer bias contact so that it grounds securely.	
3	Correcting the secondary transfer bias contact	The secondary transfer bias contact is deformed.	Correct the secondary transfer bias contact so that it grounds the shaft of the secondary transfer roller securely.	
4	Checking the secondary transfer unit	The secondary transfer roller is dirty.	In the case where image failure occurs at the circumferential pitch of the secondary transfer roller, clean it or replace the secondary transfer unit.	

(5-2) Black dots or color dots

Step	Check description	Assumed cause	Measures	Reference
1	Checking the primary transfer unit	There is long cycle dirt and scratches straddling between papers at the outer peripheral pitch of the transfer belt.	If the image failure occurs at the outer pitch (long period that spans between papers) of the transfer belt, clean the transfer belt. If it is not improved, replace the primary transfer unit.	
2	Checking the secondary transfer unit	The secondary transfer roller is dirty or scratched.	In the case where image failure occurs at the circumferential pitch of the secondary transfer roller, clean it or replace the secondary transfer unit.	
3	Checking the fuser unit	The fuser heat roller is dirty or scratched	In the case where image failure occurs at the circumferential pitch of the fuser heat roller, clean it. If not resolved, replace the fuser unit.	

(5-3) The image is not partly printed (blank or white spots)

Step	Check description	Assumed cause	Measures	Reference
1	Replacing the paper	The paper is damp.	Replace with the dry paper.	
2	Checking the primary transfer unit	The transfer belt surface is dirty or scratched	If the image failure occurs at the outer pitch (long period that spans between papers) of the transfer belt, clean the transfer belt. After cleaning, in case if not resolved even performing the calibration and color adjustment, replace the primary transfer unit.	
3	Checking the secondary transfer unit	The secondary transfer roller is dirty or scratched.	When the image failures appear in the secondary transfer roller diameter interval, clean the secondary transfer roller. If it is not resolved, replace the secondary transfer unit.	
4	Changing the settings	The media type is not properly set.	Select the proper media type in the system menu.	

(5-4) Entire blank image (white)

Step	Check description	Assumed cause	Measures	Reference
1	Opening and closing the rear cover	The rear cover is not closed.	Check the lock of the conveying unit, and open and close the rear cover.	
2	Checking the connection	FFC is not properly connected, or it is faulty.	Clean the following FFC terminal of the FFC and reconnect. If the FFC terminal is deformed or FFC is short circuited, replace FFC. • High voltage PWB - Main/engine PWB	
3	Replacing the high voltage PWB	The secondary transfer bias output from the high voltage PWB is faulty.	Replace the high voltage PWB.	
4	Replacing the main/engine PWB	The ON signal of the secondary transferring and high-voltage (3.3V to 0V) is not output from the main/engine PWB.	Replace the main/engine PWB.	

(5-5) Mismatch of the center line between the original and copy image

Step	Check description	Assumed cause	Measures	Reference
1	Relocating the paper width guides or the MP paper width guides	The locations of the paper width guides or the MP paper width guides do not match the paper size.	Relocate the paper width guides or the MP paper width guides to match the paper size.	
2	Executing U034	The center line when image writing the data is incorrect.	Adjust the center line at U034 [LSU Out Left].	

(5-6) Color shift in the main scanning direction

Step	Check description	Assumed cause	Measures	Reference
1	Adjusting the color registration	Color Registration was executed without executing Calibration.	Execute Calibration and then execute Color Registration.	
2	Checking the ID sensor and the ID sensor shutter	The ID sensor is dirty, or the ID sensor shutter opens.	Check the opening / closing operation of the ID sensor shutter and fix it if necessary. And, clean the ID sensor.	
3	Replacing the LSU	The LSU is faulty.	Replace the LSU.	

(5-7) Color shift in the sub scanning direction

Step	Check description	Assumed cause	Measures	Reference
1	Adjusting the color registration	Color Registration was executed without executing Calibration.	Execute Calibration and then execute Color Registration.	
2	Checking the ID sensor and the ID sensor shutter	The ID sensor is dirty, or the ID sensor shutter opens.	Check the opening / closing operation of the ID sensor shutter and fix it if necessary. And, clean the ID sensor.	
3	Checking the primary transfer unit	Transfer belt is worn out.	Check if the color registration patches appear twice at the both edge of the transfer belt. If it does not appear twice, replace the primary transfer unit.	
4	Checking the main/engine PWB	The connector and FFC are not connected properly or the wire, FFC or PWB is faulty.	Clean the terminal of the connectors on the main/engine PWB, reconnect the connector of the wire, and reconnect the FFC terminal. If the wire or the FFC is faulty, repair or replace them. If not resolved, replace the main/engine PWB.	

(5-8) Paper creases

Step	Check description	Assumed cause	Measures	Reference
1	Relocating the paper width guides or the MP paper width guides	The locations of the paper width guides or the MP paper width guides do not match the paper size.	Relocate the paper width guides or the MP paper width guides to match the paper size.	
2	Replacing the paper	The paper curls or is wavy.	Replace the paper.	
3	Checking the paper storage place	Paper is stored in the high humidity environment.	Ask users to store paper in a dry place. Put the dry paper into the plastic bag and seal the bag to prevent moisture from getting in.	
4	Checking the pressure spring	The pressure springs are not attached properly at both ends of the registration roller, so the pressure balance is uneven.	Reattach the springs at both ends of the registration roller.	
5	Replacing the fuser unit	The pressure springs at the machine front and rear ends of the fuser unit are not properly attached.	Check the pressure balance of both ends of the fuser unit by checking the nipped pressure on the solid image. If the balance is uneven, replace the fuser unit.	

(5-9) Dirty reverse side

Step	Check description	Assumed cause	Measures	Reference
1	Checking the secondary transfer unit	The secondary transfer roller is dirty or scratched.	When the image failures appear in the secondary transfer roller diameter interval, clean the secondary transfer roller. If it is not resolved, replace the secondary transfer unit.	
2	Cleaning the fuser press roller	The fuser pressure roller is dirty caused by the paper type setting.	Clean the fuser press roller and set the proper paper weight at the system menu	
3	Cleaning the conveying guide and the developer unit	The conveying guide or developer unit is dirty.	Clean the conveying guide and developer unit.	

(5-10) The entire image is light

Step	Check description	Assumed cause	Measures	Reference
1	Checking the paper	The paper is damp.	Replace the paper.	
2	Opening and closing the rear cover	The paper conveying unit is not closed completely, so the transfer current is not impressed.	Open the rear cover and securely close it.	
3	Checking the secondary transfer unit	The secondary transfer roller does not contact the transfer belt or contact pressure is weak	When the secondary transfer roller shifts, correct the pressure position.	
4	Checking the secondary transfer bias contact	The secondary transfer bias is not impressed since the contact is dirty or deformed	Clean the secondary transfer bias contact. Or, correct its shape so that it is grounded securely.	
5	Replacing the high voltage PWB	The secondary transfer bias output from the high voltage PWB is faulty.	Replace the high voltage PWB.	

(5-11) Horizontal streaks or band (White, black, color)

Step	Check description	Assumed cause	Measures	Reference
1	Cleaning the transfer belt	The transfer belt surface is dirty.	If the image failure occurs at the outer pitch (long period that spans between papers) of the transfer belt, clean the transfer belt.	
2	Checking the fuser heat roller	The fuser heat roller is dirty	Clean the fuser heat roller if an image failure appears in the circumference interval	
3	Opening and closing the rear cover	Only the one side of the rear cover is closed, or the pressure spring is deformed.	Close the rear cover.	
4	Checking the secondary transfer unit	The pressure spring is not properly attached or deformed.	Reattach the pressure spring. If it is not fixed, replace the secondary transfer unit.	
5	Replacing the primary transfer unit	The transfer belt surface is faulty.	Replace the primary transfer unit.	
6	Replacing the fuser unit	The fuser heat roller surface is scratched	Replace the fuser unit.	

(5-12) Irregular mismatch of the leading edge between the original and copy image

Step	Check description	Assumed cause	Measures	Reference
1	Executing U034	The leading edge timing is not properly adjusted.	Adjust the leading edge timing at U034 [LSU Out Top].	
2	Checking the conveying related clutches	The connector of the conveying related clutch is not properly connected. The conveying related clutch is not properly attached, or it is faulty.	Reattach the conveying clutches and re-insert the connector. If not repaired, replace it.	

(5-13) Blurred characters (transfer shift)

Step	Check description	Assumed cause	Measures	Reference
1	Replacing the paper	Unspecified papers are used.	Replace with the paper within the specification.	
2	Changing the settings	The media type is not properly set.	Select the proper media type in the system menu.	
3	Applying the grease	The drives from the conveying motors are not smoothly transmitted.	Apply the grease to the gear.	
4	Replacing the conveying guide	The conveying guide is deformed.	Replace the conveying guide.	
5	Replacing the fuser unit	The fuser exit guide is deformed or the fuser pressure is uneven	Replace the fuser unit.	

(5-14) Offset image

Step	Check description	Assumed cause	Measures	Reference
1	Checking the paper	Unspecified papers are used.	Replace with the paper within the specification, or change to the media type setting closest to the specified paper.	
2	Changing the settings	The media type is not properly set.	Change the settings according to the media type (paper weight).	
3	Cleaning the transfer belt	The transfer belt surface is dirty.	If the image failure occurs at the outer pitch (long period that spans between papers) of the transfer belt, clean the transfer belt.	
4	Cleaning the secondary transfer roller	The secondary transfer roller is dirty.	When the image failure appears with the secondary transfer roller pitch, clean the secondary transfer roller.	
5	Cleaning the fuser heat roller	The fuser heat roller is dirty	Clean the fuser heat roller if an image failure appears in the circumference interval	
6	Checking the primary transfer cleaning bias contact	The primary transfer cleaning bias contact smudges or is deformed.	Clean the primary transfer cleaning bias contact. Or, correct its shape so that it is securely grounded.	
7	Replacing the primary transfer unit	Transfer cleaning voltage is not applied due to the broken wire in the primary transfer unit.	Replace the primary transfer unit.	
8	Replacing the high voltage PWB	The high voltage PWB is faulty.	Replace the high voltage PWB.	

(5-15) Color reproduction is poor

Step	Check description	Assumed cause	Measures	Reference
1	Replacing the paper	The paper is damp.	Replace the paper.	
2	Checking the paper	Rough paper for mono-chrome print is used.	Use the color paper with smooth surface that fits for color print.	
3	Changing the settings	Installation environment is high altitude.	Set the optimal mode at [System Menu/Counter] > [Adjustment/Maintenance] > [Service Settings] > [High Altitude]	
4	Adjusting the image	The half tone image cannot be reproduced.	Execute [Calibration] in [System Menu/Counter] key > [Adjustment/Maintenance].	
5	Executing Developer refresh	The developer powder in the developer unit is deteriorated.	Isolate the abnormal color and execute Developer Refresh for that color.	
6	Reinstalling the drum unit and the main charger unit	The drum unit or the main charger roller unit is not properly installed.	Reattach the charger roller unit and the drum unit that has poor reproduction of the color.	
7	Changing the settings	The proper color reproduction mode is not selected in the [Imaging] tab in the print settings at the PC.	Change [Color reproduction] in the [Imaging] tab in the print settings at the PC.	
8	Changing the settings	Printer data is CYMK, but not RGB.	Change [Color conversion processing] of Print quality in KPD to Image Quality prior mode.	

(5-16) Fusing failure

Step	Check description	Assumed cause	Measures	Reference
1	Replacing the paper	Unspecified papers are used.	Replace with the proper paper.	
2	Changing the settings	The media type is not properly set.	Select the proper media type in the system menu.	
3	Replacing the fuser unit	The nipped pressure (width) to the solid image is low and fuser pressure setting (spring) is too weak.	Replace the fuser unit.	

(5-17) Uneven transfer

Step	Check description	Assumed cause	Measures	Reference
1	Checking the conveying section	The conveying section is not closed completely.	Open the paper conveying section once, and close it firmly.	
2	Correcting the primary transfer cleaning bias contact	The primary transfer cleaning bias contact smudges or is deformed.	Clean the primary transfer cleaning bias contact. Or, correct its shape so that it is securely grounded.	
3	Cleaning the transfer belt	The transfer belt surface is dirty.	If the image failure occurs at the outer pitch (long period that spans between papers) of the transfer belt, clean the transfer belt.	
4	Cleaning the secondary transfer roller	The secondary transfer roller is dirty.	When the image failure appears with the secondary transfer roller pitch, clean the secondary transfer roller.	
5	Checking the secondary transfer unit	The secondary transfer roller is faulty. Or, the pressure spring is deformed.	Correct the pressure spring deformed. If it is not fixed, replace the secondary transfer unit.	
6	Replacing the primary transfer unit	The transfer belt surface is scratched	Replace the primary transfer unit.	
7	Replacing the primary transfer unit and the high voltage PWB	The primary transfer cleaning bias contact is faulty.	Replace the primary transfer unit or high voltage PWB	
8	Replacing the fuser unit	The roller, or the parts in the drive section or the fuser press-release section are deformed or worn down.	Replace the fuser unit.	

(5-18) Image is blurred

Step	Check description	Assumed cause	Measures	Reference
1	Replacing the paper	The paper is damp.	Replace with the dry paper.	

(5-19) Vertical streaks or bands (white)

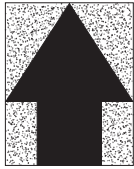
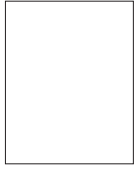
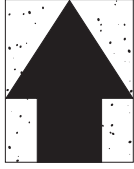


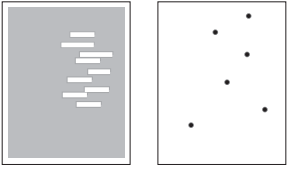
Step	Check description	Assumed cause	Measures	Reference
1	Checking the primary transfer unit	The transfer belt surface is dirty or scratched	If the image failure occurs at the outer pitch (long period that spans between papers) of the transfer belt, clean the transfer belt. If it is not improved, replace the primary transfer unit.	
2	Checking the secondary transfer unit	The secondary transfer roller is dirty or scratched.	When the image failures appear in the secondary transfer roller diameter interval, clean the secondary transfer roller. If it is not resolved, replace the secondary transfer unit.	
3	Reattaching the feed-shift guide	The paper is hitting the feed-shift guide strongly.	Reattach the feedshift guide.	


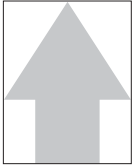

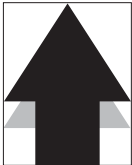
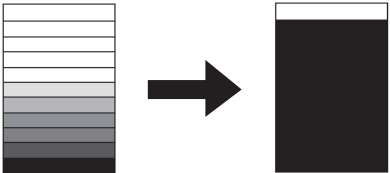

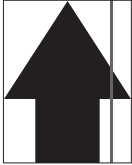
(5-20) Vertical streaks or bands (black, color)

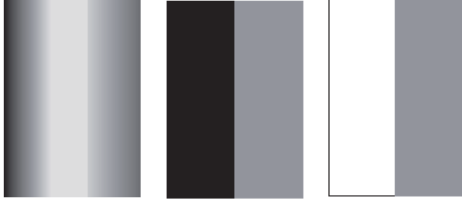
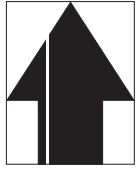
Step	Check description	Assumed cause	Measures	Reference
1	Cleaning the fuser separation claws	The fuser separation nails are dirty with toner	Clean the fuser separation nails	
2	Changing the settings	The media type is not properly set.	Select the proper media type in the system menu.	
3	Cleaning the feed-shift guide	There is toner dirt or welding on the feed-shift guide.	Clean the feed-shift guide.	
4	Cleaning the discharger brush	The separation brush is dirty with paper dust or toner.	Clean the discharger brush by using the cleaning brush, etc.	
5	Checking the primary transfer unit	The transfer belt surface is dirty or scratched	If the image failure occurs at the outer pitch (long period that spans between papers) of the transfer belt, clean the transfer belt. If it is not improved, replace the primary transfer unit.	
6	Checking the secondary transfer unit	The secondary transfer roller is dirty or scratched.	When the image failures appear in the secondary transfer roller diameter interval, clean the secondary transfer roller. If it is not resolved, replace the secondary transfer unit.	

Step	Check description	Assumed cause	Measures	Reference
7	Checking the primary transfer cleaning bias contact	The primary transfer cleaning bias contact smudges or is deformed.	Clean the primary transfer cleaning bias contact. Or, correct its shape so that it is securely grounded.	
8	Replacing the high voltage PWB	The cleaning bias is not generated from the high voltage PWB.	Replace the high voltage PWB.	

(6) Engine Factors (Image forming cause)

No.	Contents	Image sample
(6-1)	Background is colored	
(6-2)	Entire blank image (white)	
(6-3)	Black dots	
(6-4)	Entire blank image (black)	
(6-5)	Horizontal streaks or bands (white or black)	
(6-6)	Irregular horizontal streaks and dots (white)	

No.	Contents	Image sample
(6-7)	Horizontal uneven density	
(6-8)	The entire image is light	
(6-9)	Part of the image is not copied	
(6-10)	Offset image	
(6-11)	Poor grayscale reproduction	
(6-12)	Image is blurred	
(6-13)	Vertical streaks and bands (black)	

No.	Contents	Image sample
(6-14)	Vertical uneven density	
(6-15)	Vertical streaks or bands (white)	

Content of Engine Factors (Image forming cause)

(6-1) Background is colored

Step	Check description	Assumed cause	Measures	Reference
1	Performing the items to improve the image quality	Uncharged toner is increasing due to the high density continuous printing in the high temperature environment.	Execute [DEV-CLN] in [System Menu/Counter] key > [Adjustment/Maintenance] > [Service settings]. Next, execute [Calibration] in [Adjustment/Maintenance].	
2	Checking the developer bias contact	The developer bias contact is dirty or deformed.	Clean the developer bias contact, or correct its shape so that it grounds securely.	
3	Checking the temperature inside the main unit	Temperature is low in the installation environment.	When the internal temperature is 16 °C / 60.8 °F or less, request user to relocate the main unit to the environment where the room temperature is warmer than 16 °C / 60.8 °F.	
4	reinstalling the main charger unit and drum unit	The drum unit does not ground.	Reattach the main charger unit to the drum unit and reinstall the drum unit into the main unit to ensure secure contact .	
5	Checking the main charger unit	The main charger roller surface is dirty or scratched	Clean the main charger roller if an image failure appears in the circumference interval. If not repaired, replace the main charger unit.	
6	Checking the connection	The connector or FFC is not connected properly. Or, the wire or FFC is faulty.	Reconnect the following wire connectors and clean the FFC and reconnect. If there is no continuity, replace the wire. If the FFC terminal section is deformed or FFC is broken, replace the FFC. <ul style="list-style-type: none"> • High voltage PWB - Main/engine PWB • Toner motor - Engine relay PWB • Engine relay PWB - Main/engine PWB 	
7	Replacing the high voltage PWB	The high voltage contact for the high-voltage PWB is deformed.	Replace the high voltage PWB.	
8	Replacing the engine relay PWB	The engine relay PWB is faulty.	Replace the engine relay PWB.	

Step	Check description	Assumed cause	Measures	Reference
9	Replacing the main/engine PWB	The main/engine PWB is faulty.	Replace the main/engine PWB.	
10	Checking the toner motor	The toner motor is properly attached, or it is faulty.	Reattach the toner motor. If it is not repaired, replace it.	

(6-2) Entire blank image (white)

Step	Check description	Assumed cause	Measures	Reference
1	Checking the developer bias contact	The developer bias contact is dirty or deformed.	Clean the developer bias contact, or correct its shape so that it grounds securely.	
2	Replacing the developer unit	The developer drive gear is faulty.	Replace the developer unit.	
3	Checking the connection	FFC is not properly connected, or it is faulty.	Clean the following FFC terminal of the FFC and reconnect. If the FFC terminal is deformed or FFC is short circuited, replace FFC. • High voltage PWB - Main/engine PWB	
4	Checking the connection	The connector or FFC is not connected properly. Or, the wire or FFC is faulty.	Reconnect the following wire connectors and clean the FFC and reconnect. If there is no continuity, replace the wire. If the FFC terminal section is deformed or FFC is broken, replace the FFC. • Conveying developer motor - Engine relay PWB • Engine relay PWB - Main/engine PWB • LSU - Main/engine PWB	
5	Checking the conveying developer motor	The conveying developer motor is not properly attached, or it is faulty.	Reattach the conveying developer motor. If it is not repaired, replace it.	
6	Checking the conveying drive unit	The drive parts do not normally rotate, or they are faulty.	Check the drive parts in the conveying drive unit and clean and apply the grease of excessive load is given. If not repaired, replace them.	
7	Checking the primary transfer bias contact	The primary transfer bias contact is dirty or deformed.	Clean the primary transfer bias contact. Or, correct its shape so that it grounds securely.	
8	Replacing the high voltage PWB	The high voltage PWB is faulty.	Replace the high voltage PWB.	
9	Replacing the LSU	The LSU is faulty.	Replace the LSU.	
10	Replacing the main/engine PWB	The main/engine PWB is faulty.	Replace the main/engine PWB.	

(6-3) Black dots

Step	Check description	Assumed cause	Measures	Reference
1	Executing Drum refresh	The drum surface is dirty.	Execute Drum refresh.	
2	Replacing the drum unit	There are some scratches on the drum surface.	Replace the drum unit.	
3	Checking the main charger unit	The main charger roller surface is dirty or scratched	Clean the main charger roller if an image failure appears in the circumference interval. If not repaired, replace the main charger unit.	
4	Changing the settings	Developer bias leaks.	Set the proper mode at [Adjustment/Maintenance] > [Service Settings] > [Altitude Adjustment] via the System Menu.	
5	Checking the developer unit	The developer roller is dirty or faulty.	Clean the developer roller if an image failure appears in the circumference interval. If not repaired, replace the developer unit.	

(6-4) Entire blank image (black)

Step	Check description	Assumed cause	Measures	Reference
1	reinstalling the main charger unit and drum unit	The drum unit or the main charger unit is not properly installed.	Reattach the main charger unit to the drum unit and reinstall the drum unit into the main unit to ensure secure contact .	
2	Checking the main charger roller contact	The main charger roller contact is dirty or deformed	Clean the main charger roller contact and correct its shape so it is grounded securely.	
3	Checking the developer bias contact	The developer bias contact is dirty or deformed.	Clean the developer bias contact, or correct its shape so that it grounds securely.	
4	Checking the high voltage contact	The high voltage contact of the high voltage PWB is dirty or scratched	Clean the high voltage contact and correct its shape so that it grounds securely. Or, reattach the high-voltage PWB.	
5	Checking the connection	The connector or FFC is not connected properly. Or, the wire or FFC is faulty.	Reconnect the following wire connectors and clean the FFC and reconnect. If there is no continuity, replace the wire. If the FFC terminal section is deformed or FFC is broken, replace the FFC. • High voltage PWB - Main/engine PWB • LSU - Main/engine PWB	
6	Replacing the high voltage PWB	The high voltage PWB is faulty.	Replace the high voltage PWB.	
7	Replacing the LSU	The LSU is faulty.	Replace the LSU.	
8	Replacing the main/engine PWB	The main/engine PWB is faulty.	Replace the main/engine PWB.	

(6-5) Horizontal streaks or bands (white or black)

Step	Check description	Assumed cause	Measures	Reference
1	Specifying the faulty color	(Judgment of the abnormal color)	Print out the test page in the service setting menu to isolate the abnormal color. (Go to next step)	
2	Cleaning the developer unit	Both ends of the developer roller are dirty and it causes the developer bias leakage.	Clean both ends of the developer roller and main charger contact.	
3	Executing Developer refresh	The last image remains on the developer roller surface.	Execute the developer refresh.	
4	Replacing the developer unit	Both ends of the developer roller and the developer bias contact are deteriorated and it causes the developer bias leakage.	Replace the developer unit.	
5	Executing Drum refresh	The drum surface is dirty.	Execute Drum refresh.	
6	Replacing the drum unit	There are some scratches on the drum surface.	Replace the drum unit.	
7	Checking the main charger unit	The main charger roller surface is dirty or scratched	Clean the main charger roller if an image failure appears in the circumference interval. If not repaired, replace the main charger unit.	
8	Changing the settings	The electric charge remains on the drum surface due to insufficient discharging.	Lower the main charger output at [System Menu/Counter] > [Adjustment/Maintenance] > [Service Settings] > [MC]	
9	Checking the primary transfer bias contact	The primary transfer bias contact is dirty or deformed	Clean the primary transfer bias contact. Or, correct its shape so that it grounds securely.	
10	Replacing the primary transfer unit	The primary transfer bias contact is deformed or damaged	Replace the primary transfer unit.	
11	Checking the connection	FFC is not properly connected, or it is faulty.	Clean the following FFC terminal of the FFC and reconnect. If the FFC terminal is deformed or FFC is short circuited, replace FFC. • High voltage PWB - Main/engine PWB	

Step	Check description	Assumed cause	Measures	Reference
12	Replacing the high voltage PWB	The bias voltage is generated unevenly from the high voltage PWB since the PWB is faulty.	Replace the high voltage PWB.	

(6-6) Irregular horizontal streaks and dots (white)

Step	Check description	Assumed cause	Measures	Reference
1	Changing the settings	The settings do not match the installation environment (High altitude exceeding 1,500m above sea-level).	Set the optimal mode at [System Menu/Counter] > [Adjustment/Maintenance] > [Service Settings] > [High Altitude]	
2	Correcting the main charger roller contact	The main charger roller contact does not ground.	Correct the main charger roller contact so that it grounds securely.	
3	Reinstalling the drum unit	The drum unit is not properly installed, so it does not ground the drum drive shaft.	Reinstall the drum unit.	
4	Replacing the paper	Paper with the high surface resistance is used.	Replace with the recommended paper.	

(6-7) Horizontal uneven density

Step	Check description	Assumed cause	Measures	Reference
1	Reinstalling the main charger unit	The main charge roller rotates irregularly.	Reattach the main charger roller unit.	
2	Replacing the main charger unit	The charger cleaning roller is deformed.	Replace the main charger roller unit.	
3	Cleaning the DS pulley	The DS pulleys are dirty.	Clean the DS pulleys at both ends of the developer unit.	
4	Replacing the developer unit	The DS pulleys are faulty.	Replace the developer unit.	
5	Cleaning the developing bias contact	The conduction is not stabilized due to the dirty developer bias contact.	Clean the developer bias contact.	
6	Executing Developer refresh	The developer powder in the developer unit is deteriorated.	Execute the developer refresh.	
7	Replacing the developer unit	The developer powder in the developer unit is deteriorated.	Replace the developer unit.	
8	Executing Drum refresh	Toner smudges in the shape of a streak are on both ends of the drum surface.	Execute Drum refresh.	
9	Changing the settings	The electric charge remains on the drum surface due to insufficient discharging.	Lower the main charger output at [System Menu/Counter] > [Adjustment/Maintenance] > [Service Settings] > [MC]	
10	Replacing the drum unit	The drum surface is worn down.	Replace the drum unit.	
11	Replacing the LSU	The laser emission is uneven.	Replace the LSU.	

(6-8) The entire image is light

Step	Check description	Assumed cause	Measures	Reference
1	Reinstalling the toner container	Toner is collected on one side.	Sufficiently shake the toner container and reinstall it to the main unit.	
2	Replacing the toner container	The toner supply opening does not open.	Replace the toner container.	
3	Performing the items to improve the image quality	Toner is deteriorated due to frequent low coverage printing.	Execute [DEV-CLN] in [System Menu/Counter] key > [Adjustment/Maintenance] > [Service settings]. Next, execute [Calibration] in [Adjustment/Maintenance].	
4	Reinstalling the drum unit and developer unit	The drum unit or the developer unit is not properly attached, so that the developer roller does not contact the drum.	Reinstall the drum unit and the developer unit.	
5	Correcting the developer bias contact	The developer bias contact is deformed.	Correct the developer bias contact so that it grounds securely.	
6	Checking the DS pulley	The DS pulleys are dirty or faulty.	Clean the DS pulleys at both ends of the developer unit. Also, if the DS pulleys are faulty, replace the developer unit.	
7	Checking the developer unit	The toner sensor has a fault and so toner is not supplied.	Execute Developer Refresh when the four-color PG image output as test page is too light.	
8	Executing Drum refresh	The drum surface has condensation.	Execute Drum refresh.	
9	Replacing the drum unit	The drum surface is worn down.	Replace the drum unit.	
10	Cleaning the main charger roller	The voltage applied to the main charger roller contact is too high.	Correct the main charger roller contact so that it grounds securely.	
11	Cleaning the eraser	The eraser is dirty.	Clean the eraser.	
12	Checking the drum unit and the developer unit	The eraser is faulty.	Insert the unit all the way to reconnect the connector. If the issue is not resolved, replace the drum unit.	
13	Correcting the primary transfer bias contact	The primary transfer bias contact is deformed.	Correct the primary transfer bias contact so that it grounds securely.	

Step	Check description	Assumed cause	Measures	Reference
14	Replacing the primary transfer unit	The primary transfer roller comes off or transfer belt is deteriorated	Replace the primary transfer unit.	
15	Checking the connection	The connector or FFC is not connected properly. Or, the wire or FFC is faulty.	Reconnect the following wire connectors and clean the FFC and reconnect. If there is no continuity, replace the wire. If the FFC terminal section is deformed or FFC is broken, replace the FFC. <ul style="list-style-type: none"> • High voltage PWB - Main/engine PWB • Toner motor - Engine relay PWB • Engine relay PWB - Main/engine PWB 	
16	Replacing the high voltage PWB	The high voltage PWB is faulty.	Replace the high voltage PWB.	
17	Replacing the LSU	The LSU is dirty or faulty.	Replace the LSU.	
18	Checking the toner motor	The toner motor is properly attached, or it is faulty.	Reattach the toner motor. If it is not repaired, replace it.	
19	Replacing the engine relay PWB	The engine relay PWB is faulty.	Replace the engine relay PWB.	
20	Replacing the main/engine PWB	The main/engine PWB is faulty.	Replace the main/engine PWB.	

(6-9) Part of the image is not copied

Step	Check description	Assumed cause	Measures	Reference
1	Executing Drum refresh	The drum surface is dirty.	Execute Drum refresh.	
2	Replacing the primary transfer unit	The primary transfer roller is dirty or deformed	Replace the primary transfer unit.	

(6-10) Offset image

Step	Check description	Assumed cause	Measures	Reference
1	Checking the primary transfer cleaning bias contact	The primary transfer cleaning bias contact smudges or is deformed.	Clean the primary transfer cleaning bias contact. Or, correct its shape so that it is securely grounded.	
2	Executing Drum refresh	The drum surface is dirty.	Execute Drum refresh.	
3	Replacing the drum unit	The drum surface is worn down or scratched.	Replace the drum unit.	
4	Cleaning the developer roller	The developer roller is dirty	Clean the developer roller.	
5	Replacing the developer unit	The developer roller surface is worn down or scratched.	Replace the developer unit.	

(6-11) Poor grayscale reproduction

Step	Check description	Assumed cause	Measures	Reference
1	Adjusting the image	Calibration is not executed properly	Execute [Calibration] in [System Menu/Counter] key > [Adjustment/Maintenance]. Then, execute U410 to perform half tone auto adjustment.	

(6-12) Image is blurred

Step	Check description	Assumed cause	Measures	Reference
1	Executing Drum refresh	The drum surface has condensation.	Execute Drum refresh.	
2	Executing the Laser Scanner Cleaning	The LSU glass is dirty.	Execute Laser Scanner Cleaning.	
3	Replacing the LSU	The LSU glass is deteriorated.	Replace the LSU.	

(6-13) Vertical streaks and bands (black)

Step	Check description	Assumed cause	Measures	Reference
1	Checking the primary transfer cleaning bias contact	The primary transfer cleaning bias contact smudges or is deformed.	Clean the primary transfer cleaning bias contact. Or, correct its shape so that it is securely grounded.	
2	Executing Drum refresh	The drum surface is dirty.	Execute Drum refresh.	
3	Replacing the drum unit	The drum surface is worn down.	Replace the drum unit.	
4	Checking the main charger unit	The main charge roller surface is dirty in the shape of a streak. Or, the main charge roller surface is deteriorated in the streak shape.	Clean the main charger roller if an image failure appears in the circumference interval. If not repaired, replace the main charger unit.	
5	Checking the developer unit	Foreign objects are on the developer roller surface.	Clean the developer roller if an image failure appears in the circumference interval. If not repaired, replace the developer unit.	

(6-14) Vertical uneven density

Step	Check description	Assumed cause	Measures	Reference
1	Replacing the LSU	LSU emits the laser unevenly. (Inner mirror comes off.)	Replace the LSU.	
2	Reinstalling the primary transfer unit	The transfer belt is not contact with the drum. (The primary transfer roller does not press evenly the transfer belt against the drum).	Reattach the primary transfer unit.	
3	Replacing the primary transfer unit	The transfer belt is not contact with the drum uniformly.	Replace the primary transfer unit.	
4	Executing Drum refresh	The drum surface has condensation.	Execute Drum refresh.	
5	Checking the main charger unit	The main charge roller surface is dirty in the shape of a streak. Or, the main charge roller surface is deteriorated in the streak shape.	Clean the main charger roller if an image failure appears in the circumference interval. If not repaired, replace the main charger unit.	
6	Replacing the drum unit	The drum surface is worn down.	Replace the drum unit.	
7	Checking the developer unit	The toner layer on the developer roller is uneven.	Execute the developer refresh. If not repaired, replace the developer unit.	

(6-15) Vertical streaks or bands (white)

Step	Check description	Assumed cause	Measures	Reference
1	Executing the Laser Scanner Cleaning	The LSU glass is dirty.	Execute Laser Scanner Cleaning.	
2	Replacing the developer unit	Foreign objects are in the developer unit.	Print out the test page to isolate the abnormal color and replace the developer unit of the applicable color.	
3	Checking the laser path	There are foreign objects on the laser path of the LSU.	Remove foreign objects on the frame or sealing material between the developer unit and the drum unit.	
4	Executing Drum refresh	The drum surface is dirty.	Execute Drum refresh.	
5	Replacing the drum unit	There are some scratches on the drum surface.	Replace the drum unit.	

Step	Check description	Assumed cause	Measures	Reference
6	Checking the main charger unit	The main charger roller surface is dirty or scratched	Clean the main charger roller if an image failure appears in the circumference interval. If not repaired, replace the main charger unit.	
7	Cleaning the eraser	The eraser is dirty.	Clean the eraser.	

7-2 Feeding/Conveying Failures

(1) Prior standard check items

No.	Contents
(1-1)	Paper jam due to the cover-open detection
(1-2)	Paper jam due to the wave or curl in the fuser section of the damp paper
(1-3)	Paper jam due to the dog-ear, paper skew, paper creases, fusing failure or the paper curl
(1-4)	Paper jam due to the guide factor
(1-5)	Paper jam caused by improperly loaded paper in the cassette
(1-6)	Paper jam due to the inferior paper
(1-7)	Paper jam caused by conveying rollers and pulleys
(1-8)	Paper jam due to the sensor
(1-9)	Paper jam due to the setting / detection failure
(1-10)	Paper jam due to the static electricity
(1-11)	Paper jam caused by the installation environment (Papers inside the cassette are always damp.)

Content of Feeding/Conveying Failures

(1-1) Paper jam due to the cover-open detection

Step	Check description	Assumed cause	Measures	Reference
1	Opening and closing the rear cover	The rear cover is not aligned to the other exterior covers	Open the rear cover and securely close it. (Checking the interlock switch's position)	
2	Checking the paper	The paper fanning is not enough or the cutting edge of loaded paper is damaged.	Fan the paper well and load it by reversing the paper direction. Correct or replace paper if a dog-ear is found.	
3	Checking the paper	The paper is wavy.	Correct or replace paper. If you cannot get user agreement about the paper replacement, relocate the leading end of paper and the trailing end or reload paper upside down.	
4	Checking the paper	Unspecified paper is used or foreign objects are on the paper.	Ask a user to use the specified paper type. Or, remove the paper with foreign objects.	
5	Re-loading paper	The paper is not properly loaded.	When the paper is loaded over the guide in the cassette, reload the paper so the paper edge is not on the corner of the cassette.	

(1-2) Paper jam due to the wave or curl in the fuser section of the damp paper

Step	Check description	Assumed cause	Measures	Reference
1	Re-loading paper	The paper curls.	Reload paper upside down.	
2	Re-loading paper	The paper fanning is not enough.	Fan the paper well and load it by reversing the paper direction	
3	Replacing the paper	The paper is damp.	Replace with the dry paper.	

(1-3) Paper jam due to the dog-ear, paper skew, paper creases, fusing failure or the paper curl

Step	Check description	Assumed cause	Measures	Reference
1	Checking the paper path and the paper	The paper is caught with a piece of paper, etc. Or the leading edge of the sheet is bent.	When the dog-ear occurs, check if a piece of torn paper, foreign objects or the burrs on the part do not exist on the paper path, and remove them.	

(1-4) Paper jam due to the guide factor

Step	Check description	Assumed cause	Measures	Reference
1	Checking the paper path	The paper is caught with a piece of paper, etc.	Remove paper strip or foreign objects adhering on the conveying path, or burrs on the parts such as guide, actuator, etc.	
2	Checking the guide and separation needle	The guide and separation needle are dirty.	If the guide or separation needle is dirty with toner or paper dust, clean it with a cleaning cloth or brush.	
3	Checking the guide	The guide is not properly attached, or it is faulty.	Check the guide and remove the burrs, etc. if there are any. And, if the guide does not smoothly move manually, reattach it. If not repaired, deformed or worn down, replace it.	
4	Checking the solenoid	The guide is not properly attached. The solenoid does not operate normally.	Check if the guide moves by turning the solenoid on. If the guide does not move at all or smoothly, reattach it. If not repaired, replace the solenoid.	

(1-5) Paper jam caused by improperly loaded paper in the cassette

Step	Check description	Assumed cause	Measures	Reference
1	Relocating the paper width guides or the MP paper width guides	The locations of the paper width guides or the MP paper width guides do not match the paper size.	When the skew feed, crease or paper jam occurs, reset the paper width guide or MP paper width guide matching to the paper size.	
2	Checking the paper	The paper fanning is not enough.	Fan paper and reload it in the paper source. If a part of the paper is bent, remove it.	

(1-6) Paper jam due to the inferior paper

Step	Check description	Assumed cause	Measures	Reference
1	Checking the paper	Unspecified papers are used.	Explain to the user to use the paper within the specifications.	

(1-7) Paper jam caused by conveying rollers and pulleys

Step	Check description	Assumed cause	Measures	Reference
1	Checking the conveying rollers and pulleys	The conveying rollers and pulleys are dirty	Check if the conveying rollers or the pulleys have no paper dust, toner, foreign objects, diameter change or frictional wear and clean their surface. If they have a diameter change or frictional wear, replace the parts.	
2	Cleaning the bushing	The bushing is dirty.	If the load is given to the rotation of the conveying roller as the roller shaft and the bearing are dirty, clean the bearing and the roller shaft.	
3	Reattaching the spring	The spring comes off.	Check if the spring came off, or if it adequately presses the roller or the pulley, and reattach it if necessary.	

(1-8) Paper jam due to the sensor

Step	Check description	Assumed cause	Measures	Reference
1	Reattaching the actuator and spring	The sensor does not detect normally	Reattach the actuator or the spring if the actuator of the sensor is caught up or comes off.	
2	Cleaning the sensor	The sensor is dirty.	When the sensor surface or photoreceptor black felt is dirty by paper dust, etc., clean them.	

(1-9) Paper jam due to the setting / detection failure

Step	Check description	Assumed cause	Measures	Reference
1	Checking the paper leading edge margin	The leading edge margin is not enough.	When there is no margin from the paper leading edge to 4.0+1.5/-1.0mm, and, when there is no check line (fuser jam) on 20mm+/-1mm from the paper leading edge of the test pattern that is output in U034, adjust the leading margin in U402.	
2	Relocating the paper width guides or the MP paper width guides	The paper size is misdetected.	Relocate the paper width guides or the MP paper width guides along the paper size to properly detect the paper size.	
3	Changing the settings	The media type is not properly set.	If the media type setting does not matched the actual paper weight (the paper jam occurs due to the paper separation failure), set the media type at [System Menu/Counter] key > [Common Settings] > [Original Settings] > [Media Type].	

(1-10) Paper jam due to the static electricity

Step	Check description	Assumed cause	Measures	Reference
1	Checking the ground	The static electricity accumulates.	When the main unit is installed in the low humidity environment where the static electricity easily accumulates on the conveying guide during the continuous printing, check if the discharge sheet in the exit section and the metal guide in the transfer section are grounded securely. If necessary, reattach the parts.	

(1-11) Paper jam caused by the installation environment (Papers inside the cassette are always damp.)

Step	Check description	Assumed cause	Measures	Reference
1	Checking the paper storage place	Papers have been stored in the improper place.	Ask users to store paper in a dry place.	

(2) Paper misfeed detection

(2-1) Paper misfeed indication

When a paper misfeed occurs, the machine immediately stops printing and displays the paper misfeed message on the operation panel. To remove paper misfed in the machine, pull out the cassette, open the paper conveying unit or paper conveying cover.

The locations are displayed on the operation panel when a paper jam has occurred.

Jam location indicators

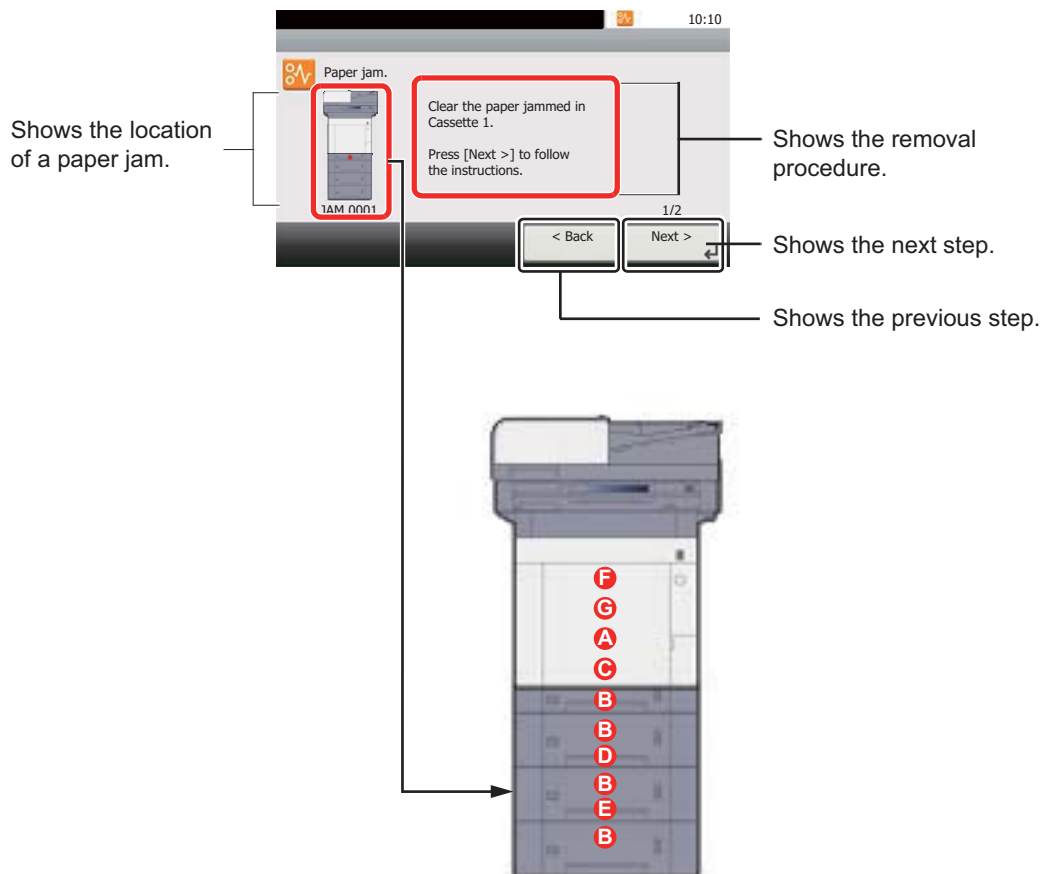


Figure 7-29

- | | |
|---|--------------------------------------|
| A. Misfeed in MP tray | E. Misfeed inside the rear cover 3 |
| B. Misfeed in the cassette 1 to 4 | F. Misfeed inside the rear cover 1 |
| C. Misfeed inside the rear cover 1 (Feed) | G. Misfeed in the duplex unit |
| D. Misfeed inside the rear cover 2 | H. Misfeed in the document processor |

(3) Paper misfeed detection condition

Machine + PF (Option)

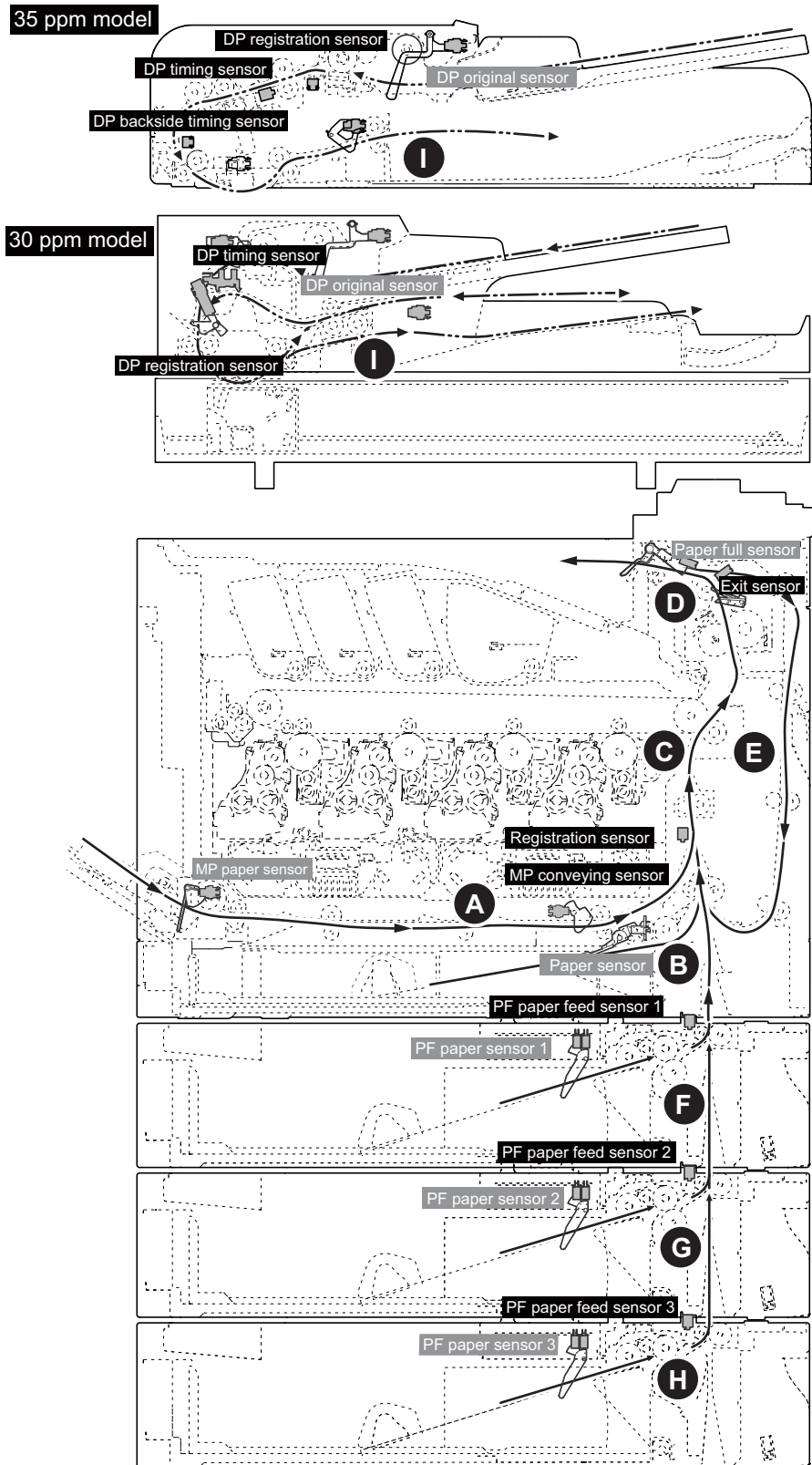


Figure 7-30

List of JAM Code

Code	JAM Position	Code	JAM Position	Code	JAM Position	Code	JAM Position	Code	JAM Position
J0000	-	J0508	E	J4004	C	J4218	C	J9310*2	I
J0100	-	J0509	A	J4009	C	J4219	C	J9400*2	I
J0101	-	J0511	C	J4012	C	J9000	I	J9410*2	I
J0104	-	J0512	C	J4013	C	J9001*2	I	J9600*2	I
J0105	-	J0513	C	J4014	C	J9002*2	I	J9610*2	I
J0106	-	J0514	C	J4019	C	J9004*1	I		
J0107	-	J0518	C	J4201	D	J9010	I		
J0110	-	J0519	A	J4202	D	J9060*1	I		
J0111	-	J1403	F	J4203	D	J9061*1	I		
J0211	-	J1404	F	J4204	D	J9062*1	I		
J0212	-	J1413	F	J4208	D	J9110	I		
J0213	-	J1414	F	J4209	D	J9120*1	I		
J0501	B	J1604	G	J4211	D	J9200*1	I		
J0502	F	J1614	G	J4212	D	J9210*1	I		
J0503	G	J4002	C	J4213	D	J9220*1	I		
J0504	H	J4003	C	J4214	D	J9300*2	I		

*1: 30ppm model, *2: 35 ppm model

(4) Jam Codes

Error code	Contents	note
J0000	Power ON jam	
J0100/J0101/J0104/ J0105/J0106	Paper jam caused by the firmware factor	
J0107	Fuser temperature stabiliza- tion time-out	
J0110/J0111	Cover open detection	J0110: Rear cover 1 open (Interlock switch) J0111: Inner tray open (Tray switch)
J0211/J0212/J0213	PF rear cover open detection	Target: paper feeder (1 to 3) J0211: Rear cover 2 open J0212: Rear cover 3 open J0213: Rear cover 4 open (PF rear cover switch)
J0501/J0502/J0503/ J0504	No paper feed from cassette 1 - 4	Remark: prior check point when no cassette feed occurs
J0501	Cassette no feed	Condition: No marks of paper feed at the paper leading edge and the lift plate does not ascend
J0501	Cassette no feed	Condition: No marks of paper feed at the paper leading edge and the lift plate ascends but paper feed drive does not start
J0501	Cassette no feed	Condition: The paper stops at the paper feed roller.
J0501	Cassette no feed	Condition: The leading edge comes out from the cassette
J0502/J0503/J0504	No feed from cassette	Target: paper feeder (1 to 3) Condition: There is no paper feeding mark on the leading edge of paper and the lift plate does not goes up.
J0502/J0503/J0504	No feed from cassette	Target: paper feeder (1 to 3) Condition: There is no paper feeding mark on the leading edge of paper and the lift plate goes up but the feed drive does not start.
J0502/J0503/J0504	No feed from cassette	Target: paper feeder (1 to 3) Condition: Paper is stopped at feed roller.
J0502/J0503/J0504	No feed from cassette	Target: paper feeder (1 to 3) Condition: The leading edge of paper is come out of cassette.
J0508	No paper feed from the duplex section	
J0509	No paper feed from the MP tray	
J0511	Multi feed jam	
J0512/J0513/J0514	Multi feed from cassette	Target: paper feeder (1 to 3)

Error code	Contents	note
J0518	Multi-feeding from the duplex section	
J0519	Multi-feeding from the MP tray	
J1403/J1404	PF paper feed sensor 2 non-arrival jam	Target: paper feeder (2, 3)
J1413/J1414	PF paper feed sensor 2 stay jam	Target: paper feeder (2, 3)
J1604	PF paper feed sensor 3 non-arrival jam	Target: Paper feeder (3rd)
J1614	PF paper feed sensor 3 stay jam	Target: Paper feeder (3rd)
J4002/J4003/J4004	Registration sensor non-arrival jam	Target: paper feeder (1 to 3)
J4009	Registration sensor non-arrival jam	
J4012/J4013/J4014	Registration sensor stay jam	Target: paper feeder (1 to 3)
J4019	Registration sensor stay jam	
J4201/J4202/J4203/ J4204/J4208/J4209	Exit sensor non-arrival jam	
J4211/J4212/J4213/ J4214/J4218/J4219	Conveying sensor stay jam	
J9000	No original feed from the DP	
J9001	DP small size original jam	Target: 35ppm model
J9002	Jam detected when starting the original conveying	Target: 35ppm model
J9004	DP registration sensor non-arrival jam during the original reversing	Target: 30ppm model
J9010	Document processor open detection	
J9060	DP feed motor rotation error	Target: 30ppm model
J9061	DP conveying motor rotation error	Target: 30ppm model
J9062	DP reversing motor rotation error	Target: 30ppm model
J9110	DP original sensor multi feed jam	
J9120	DP original sensor initial jam	Target: 30ppm model
J9200	DP registration sensor non-arrival jam	Target: 30ppm model
J9210	DP registration sensor stay jam	Target: 30ppm model

Error code	Contents	note
J9220	DP registration sensor initial jam	Target: 30ppm model
J9300	DP backside timing sensor non-arrival jam	Target: 35ppm model
J9310	DP backside timing sensor stay jam	Target: 35ppm model
J9400	DP timing sensor non-arrival jam	Target: 35ppm model
J9410	DP timing sensor stay jam	Target: 35ppm model
J9600	DP exit sensor non-arrival jam	Target: 35ppm model
J9610	DP exit sensor stay jam	Target: 35ppm model

Content of Jam Code

J0000: Power ON jam

The power was turned on while the unspecified conveying sensor turns on.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the paper path	The paper is caught with a piece of paper, etc.	Remove paper strip or foreign objects adhering on the conveying path, or burrs on the parts such as guide, actuator, etc.	
2	Cleaning the sensor	The sensor is dirty.	Clean the conveying related sensor.	
3	Checking the connection	The sensor connector is not connected properly	Reinsert the connector of the conveying related sensor.	
4	Replacing the sensor	The sensor is faulty.	Replace the conveying related sensor.	

J0100/J0101/J0104/J0105/J0106: Paper jam caused by the firmware factor

The firmware does not properly activate.

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	The controller does not activate properly.	Turn off the power switch and pull out the power plug. After passing 5s, reinsert the power plug and turn on the power switch.	
2	Firmware upgrade	The firmware does not properly activate.	Upgrade the firmware to the latest version.	

J0107: Fuser temperature stabilization time-out

The fuser temperature does not achieve to the paper feed-able temperature within the specified time.

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	The controller does not activate properly.	Turn off the power switch and pull out the power plug. After passing 5s, reinsert the power plug and turn on the power switch.	
2	Checking the installation environment	The electric power supply fluctuates or the electric voltage reduces.	Plug the power cord into another wall outlet.	
3	Changing the settings	The actual paper and the paper settings (media type, paper size) do not match.	Select the proper media type in the system menu.	
4	Firmware upgrade	The firmware does not properly activate.	Upgrade the firmware to the latest version.	
5	Replacing the fuser unit	The fuser heater is faulty.	Replace the fuser unit.	

J0110/J0111: Cover open detection

J0110: Rear cover 1 open (Interlock switch)

J0111: Inner tray open (Tray switch)

The cover-open is detected during print.

Step	Check description	Assumed cause	Measures	Reference
1	Opening/closing the cover	The covers are not fitted.	Check if the cover is securely closed, and then repair or replace it when the cover is deformed.	
2	Checking the cover-open detection switch	The connector of the cover-open detection switch does not connect properly. Or, the cover-open detection switch is disconnected.	Re-insert the connector of the cover open detection switch. If the cover-open detection switch is disconnected, reattach it.	
3	Replacing the cover-open detection switch	The cover-open detection switch is faulty.	Replace the cover-open detection switch.	

J0211/J0212/J0213: PF rear cover open detection

Target: paper feeder (1 to 3)

J0211: Rear cover 2 open

J0212: Rear cover 3 open

J0213: Rear cover 4 open

(PF rear cover switch)

The cover-open is detected during print.

Step	Check description	Assumed cause	Measures	Reference
1	Opening/closing the cover	The covers are not fitted.	Check if the cover is securely closed, and then repair or replace it when the cover is deformed.	
2	Checking the PF rear cover switch	The connector of the PF rear cover switch does not connect properly. Or, the PF rear cover switch is come off.	Re-insert the connector of the PF rear cover switch. If the PF rear cover switch is disconnected, reattach it.	
3	Replacing the PF rear cover switch	The PF rear cover switch is faulty.	Replace the PF rear cover switch.	

J0501/J0502/J0503/J0504: No paper feed from cassette 1 - 4

Remark: prior check point when no cassette feed occurs

The next sensor does not turn on after the feed clutch turns on when feeding from cassette 1- 4.

Step	Check description	Assumed cause	Measures	Reference
1	Re-loading paper	The cut-end of the paper is crushed.	Fan the paper well and load it by reversing the paper direction	
2	Checking the paper	The paper leading edge is bent.	Remove the bent paper.	
3	Checking the paper	The paper is curled downward or wavy.	Correct or replace paper. If you cannot get user agreement about the paper replacement, relocate the leading end of paper and the trailing end or reload paper upside down.	
4	Checking the paper	Unspecified papers are used.	Explain to the user to use the paper within the specifications.	
5	Checking the paper	foreign objects are on the paper.	Remove the paper with foreign objects.	

J0501: Cassette no feed

Condition: No marks of paper feed at the paper leading edge and the lift plate does not ascend

During paper feed from cassette 1, the leading edge does not come out from the cassette (no mark of paper feed at the leading edge).

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	The connector or FFC is not connected properly. Or, the wire or FFC is faulty.	Reconnect the following wire connectors and clean the FFC and reconnect. If there is no continuity, replace the wire. If the FFC terminal section is deformed or FFC is broken, replace the FFC. • Lift motor - Engine relay PWB • Engine relay PWB - Main/engine PWB	
2	Checking the driving parts	The lift motor drive is not transmitted to the lift plate drive parts because of the engagement failure.	If there are any problems such as breakage or biting of foreign objects in the joints of the gears, couplings etc. of the motor, clean or replace them.	
3	Checking the lift motor	The lift motor is not properly attached, or it is faulty.	Reattach the lift motor. If it is not repaired, replace it.	
4	Replacing the lift plate	The lift plate is damaged or deformed.	Replace the lift plate.	
5	Replacing the engine relay PWB	The engine relay PWB is faulty.	Replace the engine relay PWB.	
6	Firmware upgrade	The firmware is faulty.	Upgrade the engine firmware to the latest version	
7	Replacing the main/engine PWB	The main/engine PWB is faulty.	Replace the main/engine PWB.	

J0501: Cassette no feed

Condition: No marks of paper feed at the paper leading edge and the lift plate ascends but paper feed drive does not start

During paper feed from cassette 1, the leading edge does not come out from the cassette (no mark of paper feed at the leading edge).

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	The connector or FFC is not connected properly. Or, the wire or FFC is faulty.	Reconnect the following wire connectors and clean the FFC and reconnect. If there is no continuity, replace the wire. If the FFC terminal section is deformed or FFC is broken, replace the FFC. <ul style="list-style-type: none"> • Feed clutch - Engine relay PWB • Conveying developer motor - Engine relay PWB • Engine relay PWB - Main/engine PWB 	
2	Checking the paper feed shaft and the pin	Feed roller does not rotate as feed shaft and feed pin of the feed roller is not attach properly.	Reattach the feed shaft and feed pin. If there is deformation, etc., replace them.	
3	Checking the paper feed clutch	The paper feed clutch is not connected, so the paper feed roller does not rotate.	Reattach the feed clutch. If it is not repaired, replace it.	
4	Removing the foreign objects and checking the operation of the actuator	The lift sensor is on but the lift plate does not go up to the upper limit position.	Remove the piece of paper or the foreign objects. And, check the actuator of the lift sensor turns on by rising the lift plate. Reattach the actuator if necessary.	
5	Checking the drive gear	The drive from the conveying developer motor is not transmitted.	Replace the faulty drive parts in the conveying drive unit such as a gear.	
6	Checking the conveying developer motor	The conveying developer motor is not driven and feed roller does not rotate	Reattach the conveying developer motor. If it is not repaired, replace it.	
7	Replacing the engine relay PWB	The engine relay PWB is faulty.	Replace the engine relay PWB.	
8	Firmware upgrade	The firmware is faulty.	Upgrade the engine firmware to the latest version	
9	Replacing the main/engine PWB	The main/engine PWB is faulty.	Replace the main/engine PWB.	

J0501: Cassette no feed

Condition: The paper stops at the paper feed roller.

The registration sensor does not turn on after the feed clutch turns on when feeding from cassette 1.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the paper path	The paper is caught with a piece of paper, etc.	Remove paper strip or foreign objects adhering on the conveying path, or burrs on the parts such as guide, actuator, etc.	
2	Checking the paper feed roller	The conveying function of the paper feed roller is not enough.	Clean the paper feed roller surface. If worn down, replace it.	
3	Checking the connection	The connector or FFC is not connected properly. Or, the wire or FFC is faulty.	Reconnect the following wire connectors and clean the FFC and reconnect. If there is no continuity, replace the wire. If the FFC terminal section is deformed or FFC is broken, replace the FFC. • Feed clutch - Engine relay PWB • Engine relay PWB - Main/engine PWB	
4	Checking the paper feed clutch	The paper feed clutch is not connected, so the paper feed roller does not rotate.	Reattach the feed clutch and reinsert the connector. If it is not repaired, replace it.	
5	Replacing the engine relay PWB	The engine relay PWB is faulty.	Replace the engine relay PWB.	
6	Firmware upgrade	The firmware is faulty.	Upgrade the engine firmware to the latest version	
7	Replacing the main/engine PWB	The main/engine PWB is faulty.	Replace the main/engine PWB.	

J0501: Cassette no feed

Condition: The leading edge comes out from the cassette

The registration sensor does not turn on after the feed clutch turns on when feeding from cassette 1.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the paper feed roller	The conveying function of the paper feed roller is not enough.	Clean the paper feed roller surface. If worn down, replace it.	
2	(When the paper skew occurs) Relocating the paper width guides	The locations of the paper width guides do not fit with the paper size.	Relocate the paper width guides to fit them with the paper size.	

Step	Check description	Assumed cause	Measures	Reference
3	(When the paper skew occurs) Checking the actuator and the spring	The actuator does not operate properly.	The actuator or the spring is deformed. If the actuator does not properly operate, replace it.	
4	(In case paper skews) Checking the conveying guide	The paper is caught with the conveying guide.	Reattach the conveying guide. Remove the burrs on the conveying guide surface or replace the conveying guide if there are burrs on it.	
5	(When the paper skew occurs) Checking the paper path	The paper is caught with a piece of paper, etc.	Remove paper strip or foreign objects adhering on the conveying path, or burrs on the parts such as guide, actuator, etc.	
6	(For marks of paper warpage) checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • Registration sensor - Main/engine PWB	
7	(When there is a paper loop mark) Checking the registration sensor	The registration sensor is not properly attached, or it is faulty.	Reattach the regist sensor. If it is not repaired, replace it.	
8	Checking the connection	The connector or FFC is not connected properly. Or, the wire or FFC is faulty.	Reconnect the following wire connectors and clean the FFC and reconnect. If there is no continuity, replace the wire. If the FFC terminal section is deformed or FFC is broken, replace the FFC. • Middle clutch - Engine relay PWB • Engine relay PWB - Main/engine PWB	
9	Checking the middle clutch	The middle roller does not rotate due to no engagement of the middle clutch.	Reattach the middle clutch. If it is not repaired, replace it.	
10	Replacing the engine relay PWB	The engine relay PWB is faulty.	Replace the engine relay PWB.	
11	Firmware upgrade	The firmware is faulty.	Upgrade the engine firmware to the latest version	
12	Replacing the main/engine PWB	The main/engine PWB is faulty.	Replace the main/engine PWB.	

J0502/J0503/J0504: No feed from cassette

Target: paper feeder (1 to 3)

Condition: There is no paper feeding mark on the leading edge of paper and the lift plate does not goes up.

The leading edge of paper does not come out when feeding from cassette 2 to 4. (there is no feeding mark on the leading edge of paper)

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	The connector is not properly connected or the wire is faulty.	Reconnect the connector following wire. If there is no continuity, replace the wire. • PF lift motor - PF PWB	
2	Checking the driving parts	Because of the connection failure, the drive is not transmitted from the PF lift motor to the lift plate drive parts.	If there are any problems such as breakage or biting of foreign objects in the joints of the gears, couplings etc. of the motor, clean or replace them.	
3	Checking the PF lift motor	PF lift motor is not attached properly or faulty.	Reattach the PF lift motor. If it is not repaired, replace it.	
4	Replacing the lift plate	The lift plate is damaged or deformed.	Replace the lift plate.	
5	Replacing the PF PWB	The PF PWB is faulty.	Replace the PF PWB.	

J0502/J0503/J0504: No feed from cassette

Target: paper feeder (1 to 3)

Condition: There is no paper feeding mark on the leading edge of paper and the lift plate goes up but the feed drive does not start.

The leading edge of paper does not come out when feeding from cassette 2 to 4. (there is no feeding mark on the leading edge of paper)

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	The connector is not properly connected or the wire is faulty.	Reconnect the connector following wire. If there is no continuity, replace the wire. • PF feed clutch - PF PWB • PF feed motor - PF PWB	
2	Checking the paper feed shaft and the pin	Feed roller does not rotate as feed shaft and feed pin of the feed roller is not attach properly.	Reattach the feed shaft and feed pin. If there is deformation, etc., replace them.	
3	Checking the PF feed clutch	Since the PF feed clutch is not connected, the feed roller does not rotate.	Reattach the PF feed clutch. If it is not repaired, replace it.	

Step	Check description	Assumed cause	Measures	Reference
4	Removing the foreign objects and checking the operation of the actuator	The PF lift sensor is on but the lift plate does not go up to the upper limit position.	Remove the piece of paper or the foreign objects. And, check the actuator of the PF lift sensor turns on by rising the lift plate. If not, reattach the actuator.	
5	Checking the drive gear	The PF feed motor drive is not transmitted.	Replace the faulty drive parts in the PF drive unit such as a gear.	
6	Checking the PF feed motor	The PF feed motor does not drive and feed roller does not rotate	Reattach the PF feed motor. If it is not repaired, replace it.	
7	Replacing the PF PWB	The PF PWB is faulty.	Replace the PF PWB.	

J0502/J0503/J0504: No feed from cassette

Target: paper feeder (1 to 3)

Condition: Paper is stopped at feed roller.

The next sensor does not turn on after the PF feed clutch turns on when feeding from cassette 2- 4.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the paper path	The paper is caught with a piece of paper, etc.	Remove paper strip or foreign objects adhering on the conveying path, or burrs on the parts such as guide, actuator, etc.	
2	Checking the paper feed roller	The conveying function of the paper feed roller is not enough.	Clean the paper feed roller surface. If worn down, replace it.	
3	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • PF feed clutch - PF PWB	
4	Checking the PF feed clutch	Since the PF feed clutch is not connected, the feed roller does not rotate.	Reattach the PF feed clutch. If it is not repaired, replace it.	
5	Replacing the PF PWB	The PF PWB is faulty.	Replace the PF PWB.	

J0502/J0503/J0504: No feed from cassette

Target: paper feeder (1 to 3)

Condition: The leading edge of paper is come out of cassette.

The PF feed sensor does not turn on after the PF feed clutch turns on when feeding from cassette 2- 4.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the paper feed roller	The conveying function of the paper feed roller is not enough.	Clean the paper feed roller surface. If worn down, replace it.	
2	(When the paper skew occurs) Relocating the paper width guides	The locations of the paper width guides do not fit with the paper size.	Relocate the paper width guides to fit them with the paper size.	
3	(When the paper skew occurs) Checking the actuator and the spring	The actuator does not operate properly.	The actuator or the spring is deformed. If the actuator does not properly operate, replace it.	
4	(In case paper skews) Checking the conveying guide	The paper is caught with the conveying guide.	Reattach the conveying guide. Remove the burrs on the conveying guide surface or replace the conveying guide if there are burrs on it.	
5	(When the paper skew occurs) Checking the paper path	The paper is caught with a piece of paper, etc.	Remove paper strip or foreign objects adhering on the conveying path, or burrs on the parts such as guide, actuator, etc.	
6	(For marks of paper warpage) checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • PF feed sensor - PF PWB	
7	(For marks of paper warpage) checking the PF feed sensor	The PF feed sensor is not properly attached, or it is faulty.	Reattach the PF feed sensor. If it is not repaired, replace it.	
8	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • PF conveying clutch - PF PWB	
9	Checking the PF conveying clutch	The PF conveying clutch is not connected and PF feed roller does not rotate	Reattach the PF conveying clutch. If it is not repaired, replace it.	
10	Replacing the PF PWB	The PF PWB is faulty.	Replace the PF PWB.	

J0508: No paper feed from the duplex section

(35/40 ppm models) The registration sensor does not turn on after the middle clutch turns on.

(30 ppm models) The registration sensor does not turn on after the duplex exit motor reversal turns on.

Step	Check description	Assumed cause	Measures	Reference
1	Performing the prior standard check items	There is a mechanical cause such as the dirty guide, etc.	Perform the prior standard check items.	
2	Checking the paper path	The paper is caught with a piece of paper, etc.	Remove paper strip or foreign objects adhering on the conveying path, or burrs on the parts such as guide, actuator, etc.	
3	Replacing the paper	The paper curls or is wavy.	Replace with the dry paper.	
4	Checking the DU conveying roller	Conveying capability of the DU conveying roller is not enough.	Clean the surface of the DU conveying roller L and S. If worn down, replace it.	
5	Replacing the actuator and spring	The actuator does not operate properly.	If the actuator or the spring of the registration sensor is deformed or not operating correctly, replace them.	
6	Checking the connection	The connector or FFC is not connected properly. Or, the wire or FFC is faulty.	Reconnect the following wire connectors and clean the FFC and reconnect. If there is no continuity, replace the wire. If the FFC terminal section is deformed or FFC is broken, replace the FFC. <ul style="list-style-type: none"> • Registration sensor - Main/engine PWB • Conveying developer motor - Engine relay PWB • Engine relay PWB - Main/engine PWB 	
7	Checking the registration sensor	The registration sensor is not properly attached, or it is faulty.	Reattach the regist sensor. If it is not repaired, replace it.	
8	Reattaching the conveying unit	The conveying developer motor drive is not transmitted to the duplex roller	Reattach the paper conveying unit.	
9	Replacing the engine relay PWB	The engine relay PWB is faulty.	Replace the engine relay PWB.	
10	Firmware upgrade	The firmware is faulty.	Upgrade the engine firmware to the latest version	
11	Replacing the main/engine PWB	The main/engine PWB is faulty.	Replace the main/engine PWB.	

J0509: No paper feed from the MP tray

The MP conveying sensor does not turn on after the MP solenoid turns on when feeding from the MP tray.

Step	Check description	Assumed cause	Measures	Reference
1	(For the MP lift plate not ascending) checking the cam	The cam does not operate properly	Align the MP lift plate elevation cam and reattach it.	
2	(For the MP lift plate not ascending) checking the MP lift plate	The MP lift plate is not attached properly.	Reattach the MP lift plate.	
3	(For the MP lift plate not ascending) checking the connection	The connector or FFC is not connected properly. Or, the wire or FFC is faulty.	Reconnect the following wire connectors and clean the FFC and reconnect. If there is no continuity, replace the wire. If the FFC terminal section is deformed or FFC is broken, replace the FFC. • MP solenoid - Engine relay PWB • Engine relay PWB - Main/engine PWB	
4	(For the MP lift plate not ascending) checking the MP solenoid	The MP solenoid does not operate properly.	Reattach the MP solenoid. If it is not repaired, replace it.	
5	Re-loading paper	The cut-end of the paper is crushed.	Fan the paper well and load it by reversing the paper direction	
6	Checking the paper	The paper leading edge is bent.	Remove the bent paper.	
7	Checking the paper	The paper is curled downward or wavy.	Correct or replace paper. If you cannot get user agreement about the paper replacement, relocate the leading end of paper and the trailing end or reload paper upside down.	
8	Checking the paper	Unspecified papers are used.	Explain to the user to use the paper within the specifications.	
9	Checking the paper	foreign objects are on the paper.	Remove the paper with foreign objects.	
10	Checking the paper path	The paper is caught with a piece of paper, etc.	Remove paper strip or foreign objects adhering on the conveying path, or burrs on the parts such as guide, actuator, etc.	
11	Checking the MP paper feed roller	The paper conveying performance of the MP feed roller is not enough.	Clean the MP paper feed roller surface. If worn down, replace it.	

Step	Check description	Assumed cause	Measures	Reference
12	Checking the MP conveying roller	The paper conveying performance of the MP conveying roller is not enough.	Clean the surface of the MP conveying roller. If worn down, replace it.	
13	Replacing the actuator and spring	The actuator does not operate properly.	If the actuator or the spring of the MP conveying sensor is deformed or, does not operate correctly, replace them.	
14	Reattaching the MP conveying unit	The conveying developer motor drive is not transmitted to the MP conveying roller	Reattach the MP conveying unit	
15	Checking the connection	The connector or FFC is not connected properly. Or, the wire or FFC is faulty.	Reconnect the following wire connectors and clean the FFC and reconnect. If there is no continuity, replace the wire. If the FFC terminal section is deformed or FFC is broken, replace the FFC. <ul style="list-style-type: none"> • MP conveying sensor - Engine relay PWB • MP conveying clutch - Engine relay PWB • Engine relay PWB - Main/engine PWB 	
16	Checking the MP conveying sensor	The MP conveying sensor is not properly attached, or it is faulty.	Reattach the MP conveying sensor. If it is not repaired, replace it.	
17	Checking the MP conveying clutch	The MP conveying clutch is not properly attached, or it is faulty.	Reattach the MP conveying clutch. If it is not repaired, replace it.	
18	Replacing the engine relay PWB	The engine relay PWB is faulty.	Replace the engine relay PWB.	
19	Firmware upgrade	The firmware is faulty.	Upgrade the engine firmware to the latest version	
20	Replacing the main/engine PWB	The main/engine PWB is faulty.	Replace the main/engine PWB.	

J0511: Multi feed jam

When feeding from cassette 1, registration sensor is kept ON and does not turn off.

Step	Check description	Assumed cause	Measures	Reference
1	Re-loading paper	The cut-end of the paper is crushed.	Fan the paper well and load it by reversing the paper direction	
2	Checking the paper	The paper leading edge is bent.	Remove the bent paper.	

Step	Check description	Assumed cause	Measures	Reference
3	Checking the paper	foreign objects are on the paper.	Remove the paper with foreign objects.	
4	Checking the retard roller	The paper separation force of the retard roller is not enough.	Clean the retard roller surface. If worn down, replace it.	
5	Checking the retard cover	The retard cover comes off.	Reattach the retard cover.	
6	Checking the retard pressure spring	The retard pressure spring comes off.	Reattach the retard pressure spring.	
7	Replacing the actuator and spring	The actuator does not operate properly.	If the actuator or the spring of the registration sensor is deformed or not operating correctly, replace them.	
8	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • Registration sensor - Main/engine PWB	
9	Checking the registration sensor	The registration sensor is not properly attached, or it is faulty.	Reattach the regist sensor. If it is not repaired, replace it.	
10	Checking the connection	The connector or FFC is not connected properly. Or, the wire or FFC is faulty.	Reconnect the following wire connectors and clean the FFC and reconnect. If there is no continuity, replace the wire. If the FFC terminal section is deformed or FFC is broken, replace the FFC. • Registration clutch - Main/engine PWB • Feed clutch - Engine relay PWB • Engine relay PWB - Main/engine PWB	
11	(In case of no mark of paper loop) Checking the registration clutch	The registration clutch continues linkage and the registration roller rotation does not stop.	Reattach the registration clutch. If it is not repaired, replace it.	
12	Checking the paper feed clutch	The rotation of the feed roller does not stop while the feed clutch remains engaged.	Reattach the feed clutch. If it is not repaired, replace it.	
13	Replacing the engine relay PWB	The engine relay PWB is faulty.	Replace the engine relay PWB.	

Step	Check description	Assumed cause	Measures	Reference
14	Firmware upgrade	The firmware is faulty.	Upgrade the engine firmware to the latest version	
15	Replacing the main/engine PWB	The main/engine PWB is faulty.	Replace the main/engine PWB.	

J0512/J0513/J0514: Multi feed from cassette

Target: paper feeder (1 to 3)

The PF paper feed sensor does not turn off during paper feed from cassette 2-4.

Step	Check description	Assumed cause	Measures	Reference
1	Re-loading paper	The cut-end of the paper is crushed.	Fan the paper well and load it by reversing the paper direction	
2	Checking the paper	The paper leading edge is bent.	Remove the bent paper.	
3	Checking the paper	foreign objects are on the paper.	Remove the paper with foreign objects.	
4	Checking the retard roller	The paper separation force of the retard roller is not enough.	Clean the retard roller surface. If worn down, replace it.	
5	Checking the retard cover	The retard cover comes off.	Reattach the retard cover.	
6	Checking the retard pressure spring	The retard pressure spring comes off.	Reattach the retard pressure spring.	
7	Replacing the actuator and spring	The actuator does not operate properly.	If the actuator or the spring of the PF feed sensor is deformed or, does not operate correctly, replace them.	
8	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. <ul style="list-style-type: none"> • PF feed sensor - PF PWB • PF conveying clutch - PF PWB • PF feed clutch - PF PWB 	
9	Checking the PF paper feed sensor	The PF feed sensor is not properly attached, or it is faulty.	Reattach the PF feed sensor. If it is not repaired, replace it.	
10	(In case of no mark of paper loop) Checking the PF conveying clutch	The PF conveying clutch continues linkage and the PF conveying roller rotation does not stop.	Reattach the PF conveying clutch. If it is not repaired, replace it.	

Step	Check description	Assumed cause	Measures	Reference
11	Checking the PF feed clutch	The PF feed clutch is connected and feed roller rotation does not stop	Reattach the PF feed clutch. If it is not repaired, replace it.	
12	Replacing the PF PWB	The PF PWB is faulty.	Replace the PF PWB.	

J0518: Multi-feeding from the duplex section

The registration sensor does not turn off during paper feed from the duplex section.

Step	Check description	Assumed cause	Measures	Reference
1	Re-loading paper	The cut-end of the paper is crushed.	Fan the paper well and load it by reversing the paper direction	
2	Checking the paper	The paper leading edge is bent.	Remove the bent paper.	
3	Checking the paper	foreign objects are on the paper.	Remove the paper with foreign objects.	
4	Checking the paper	The paper is wavy or curls due to the moisture.	Correct or replace paper. If you cannot get user agreement about the paper replacement, relocate the leading end of paper and the trailing end or reload paper upside down.	
5	Checking the connection	The connector or FFC is not connected properly. Or, the wire or FFC is faulty.	Reconnect the following wire connectors and clean the FFC and reconnect. If there is no continuity, replace the wire. If the FFC terminal section is deformed or FFC is broken, replace the FFC. <ul style="list-style-type: none"> • Registration clutch - Main/engine PWB • Registration sensor - Main/engine PWB • Middle clutch - Engine relay PWB • Engine relay PWB - Main/engine PWB 	
6	(In case paper reached the registration roller but no mark of paper loop) Checking the registration clutch	The registration clutch continues linkage and the registration roller rotation does not stop.	Reattach the registration clutch. If it is not repaired, replace it.	
7	Checking the registration sensor	The registration sensor is not properly attached, or it is faulty.	Reattach the regist sensor. If it is not repaired, replace it.	

Step	Check description	Assumed cause	Measures	Reference
8	Checking the middle clutch	The middle clutch is not properly attached, or it is faulty.	Reattach the middle clutch. If it is not repaired, replace it.	
9	Replacing the engine relay PWB	The engine relay PWB is faulty.	Replace the engine relay PWB.	
10	Firmware upgrade	The firmware is faulty.	Upgrade the engine firmware to the latest version	
11	Replacing the main/engine PWB	The main/engine PWB is faulty.	Replace the main/engine PWB.	

J0519: Multi-feeding from the MP tray

The MP conveying sensor does not turn off during paper feed from the MP tray.

Step	Check description	Assumed cause	Measures	Reference
1	Re-loading paper	The cut-end of the paper is crushed.	Fan the paper well and load it by reversing the paper direction	
2	Checking the paper	The paper leading edge is bent.	Remove the bent paper.	
3	Checking the paper	foreign objects are on the paper.	Remove the paper with foreign objects.	
4	Checking the paper	The paper curls or is wavy.	Correct or replace paper. If you cannot get user agreement about the paper replacement, relocate the leading end of paper and the trailing end or reload paper upside down.	
5	Checking the MP feed roller and the MP separation pad	The paper separation force of the MP separation pad is insufficient.	Clean the MP feed roller and MP separation pad, or replace them	
6	Checking the actuator and the spring	The actuator does not operate properly.	If the actuator or the spring of the MP conveying sensor is deformed or, does not operate correctly, replace them.	

Step	Check description	Assumed cause	Measures	Reference
7	Checking the connection	The connector or FFC is not connected properly. Or, the wire or FFC is faulty.	Reconnect the following wire connectors and clean the FFC and reconnect. If there is no continuity, replace the wire. If the FFC terminal section is deformed or FFC is broken, replace the FFC. • MP conveying sensor - Engine relay PWB • MP conveying clutch - Engine relay PWB • Engine relay PWB - Main/engine PWB	
8	Checking the MP conveying sensor	The MP conveying sensor is not properly attached, or it is faulty.	Reattach the MP conveying sensor. If it is not repaired, replace it.	
9	Checking the MP conveying clutch	The MP conveying clutch is not properly attached, or it is faulty.	Reattach the MP conveying clutch. If it is not repaired, replace it.	
10	Replacing the engine relay PWB	The engine relay PWB is faulty.	Replace the engine relay PWB.	
11	Firmware upgrade	The firmware is faulty.	Upgrade the engine firmware to the latest version	
12	Replacing the main/engine PWB	The main/engine PWB is faulty.	Replace the main/engine PWB.	

J1403/J1404: PF paper feed sensor 2 non-arrival jam

Target: paper feeder (2, 3)

The PF feed sensor of cassette 2 does not turn on when feeding from cassette 3 and 4.

Step	Check description	Assumed cause	Measures	Reference
1	(When the paper skew occurs) Checking the paper path	The paper is caught with a piece of paper, etc.	Remove paper strip or foreign objects adhering on the conveying path, or burrs on the parts such as guide, actuator, etc.	
2	(When the paper skew occurs) Checking the paper feed roller	The conveying function of the paper feed roller is not enough.	Clean the paper feed roller surface. If worn down, replace it.	
3	(When the paper skew occurs) Relocating the paper width guides	The locations of the paper width guides do not fit with the paper size.	Relocate the paper width guides to fit them with the paper size.	
4	(When the paper skew occurs) Checking the actuator and the spring	The actuator does not operate properly.	The actuator or the spring is deformed. If the actuator does not properly operate, replace it.	

Step	Check description	Assumed cause	Measures	Reference
5	(In case paper skews) Checking the conveying guide	The paper is caught with the conveying guide.	Reattach the conveying guide. Remove the burrs on the conveying guide surface or replace the conveying guide if there are burrs on it.	
6	(When the paper conveying was delayed) Checking the paper feed roller	The conveying function of the paper feed roller is not enough.	Clean the paper feed roller surface. If worn down, replace it.	
7	Re-loading paper	The cut-end of the paper is crushed.	Fan the paper well and load it by reversing the paper direction	
8	Checking the paper	The paper leading edge is bent.	Remove the bent paper.	
9	Checking the paper	The paper is curled downward or wavy.	Correct or replace paper. If you cannot get user agreement about the paper replacement, relocate the leading end of paper and the trailing end or reload paper upside down.	
10	Checking the paper	Unspecified papers are used.	Explain to the user to use the paper within the specifications.	
11	Checking the paper	foreign objects are on the paper.	Remove the paper with foreign objects.	
12	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • PF feed sensor - PF PWB (1st paper feeder)	
13	Checking the PF paper feed sensor	The PF feed sensor is not properly attached, or it is faulty.	Reattach the PF feed sensor in the 1st paper feeder. If it is not repaired, replace it.	
14	Replacing the PF PWB	The PF PWB is faulty.	Replace the PF PWB of paper feeder 1	

J1413/J1414: PF paper feed sensor 2 stay jam

Target: paper feeder (2, 3)

The PF feed sensor of cassette 2 does not turn off when feeding from cassette 3 and 4.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the paper path	The paper is caught with a piece of paper, etc.	Remove paper strip or foreign objects adhering on the conveying path, or burrs on the parts such as guide, actuator, etc.	
2	Checking the paper feed roller	The conveying function of the paper feed roller is not enough.	Clean the paper feed roller surface. If worn down, replace it.	
3	(When the paper skew occurs) Relocating the paper width guides	The locations of the paper width guides do not fit with the paper size.	Relocate the paper width guides to fit them with the paper size.	
4	(When the paper skew occurs) Checking the actuator and the spring	The actuator does not operate properly.	The actuator or the spring is deformed. If the actuator does not properly operate, replace it.	
5	(In case paper skews) Checking the conveying guide	The paper is caught with the conveying guide.	Reattach the conveying guide. Remove the burrs on the conveying guide surface or replace the conveying guide if there are burrs on it.	
6	Checking the PF cover	The PF cover is deformed.	Check if the PF cover is closed securely. If not closed due to deformation, replace it.	
7	Re-loading paper	The cut-end of the paper is crushed.	Fan the paper well and load it by reversing the paper direction	
8	Checking the paper	The paper leading edge is bent.	Remove the bent paper.	
9	Checking the paper	The paper is curled downward or wavy.	Correct or replace paper. If you cannot get user agreement about the paper replacement, relocate the leading end of paper and the trailing end or reload paper upside down.	
10	Checking the paper	Unspecified papers are used.	Explain to the user to use the paper within the specifications.	
11	Checking the paper	foreign objects are on the paper.	Remove the paper with foreign objects.	

Step	Check description	Assumed cause	Measures	Reference
12	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • PF feed sensor - PF PWB (1st paper feeder) • PF conveying clutch - PF PWB	
13	Checking the PF paper feed sensor	The PF feed sensor is not properly attached, or it is faulty.	Reattach the PF feed sensor in the 1st paper feeder. If it is not repaired, replace it.	
14	Checking the PF conveying clutch	The PF conveying clutch is not properly attached, or it is faulty.	Reattach the PF conveying clutch. If it is not repaired, replace it.	
15	Replacing the PF PWB	The PF PWB is faulty.	Replace the PF PWB of paper feeder 1	
16	Replacing the PF PWB	The PF PWB is faulty.	Replace the PF PWB.	

J1604: PF paper feed sensor 3 non-arrival jam

Target: Paper feeder (3rd)

The PF feed sensor of cassette 3 does not turn on when feeding from cassette 4.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the paper path	The paper is caught with a piece of paper, etc.	Remove paper strip or foreign objects adhering on the conveying path, or burrs on the parts such as guide, actuator, etc.	
2	Checking the paper feed roller	The conveying function of the paper feed roller is not enough.	Clean the paper feed roller surface. If worn down, replace it.	
3	(When the paper skew occurs) Relocating the paper width guides	The locations of the paper width guides do not fit with the paper size.	Relocate the paper width guides to fit them with the paper size.	
4	(When the paper skew occurs) Checking the actuator and the spring	The actuator does not operate properly.	The actuator or the spring is deformed. If the actuator does not properly operate, replace it.	
5	(In case paper skews) Checking the conveying guide	The paper is caught with the conveying guide.	Reattach the conveying guide. Remove the burrs on the conveying guide surface or replace the conveying guide if there are burrs on it.	

Step	Check description	Assumed cause	Measures	Reference
6	Re-loading paper	The cut-end of the paper is crushed.	Fan the paper well and load it by reversing the paper direction	
7	Checking the paper	The paper leading edge is bent.	Remove the bent paper.	
8	Checking the paper	The paper is curled downward or wavy.	Correct or replace paper. If you cannot get user agreement about the paper replacement, relocate the leading end of paper and the trailing end or reload paper upside down.	
9	Checking the paper	Unspecified papers are used.	Explain to the user to use the paper within the specifications.	
10	Checking the paper	foreign objects are on the paper.	Remove the paper with foreign objects.	
11	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • PF feed sensor - PF PWB (2nd paper feeder)	
12	Checking the PF paper feed sensor	The PF feed sensor is not properly attached, or it is faulty.	Reattach the PF feed sensor in the 2nd paper feeder. If it is not repaired, replace it.	
13	Replacing the PF PWB	The PF PWB is faulty.	Replace the PF PWB of paper feeder 2.	

J1614: PF paper feed sensor 3 stay jam

Target: Paper feeder (3rd)

The PF feed sensor of cassette 3 does not turn off when feeding from cassette 4.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the paper path	The paper is caught with a piece of paper, etc.	Remove paper strip or foreign objects adhering on the conveying path, or burrs on the parts such as guide, actuator, etc.	
2	Checking the paper feed roller	The conveying function of the paper feed roller is not enough.	Clean the paper feed roller surface. If worn down, replace it.	
3	(When the paper skew occurs) Relocating the paper width guides	The locations of the paper width guides do not fit with the paper size.	Relocate the paper width guides to fit them with the paper size.	

Step	Check description	Assumed cause	Measures	Reference
4	(When the paper skew occurs) Checking the actuator and the spring	The actuator does not operate properly.	The actuator or the spring is deformed. If the actuator does not properly operate, replace it.	
5	(In case paper skews) Checking the conveying guide	The paper is caught with the conveying guide.	Reattach the conveying guide. Remove the burrs on the conveying guide surface or replace the conveying guide if there are burrs on it.	
6	(In case paper conveying delays) Checking the PF cover	The PF cover is deformed.	Check if the PF cover is closed securely. If not closed due to deformation, replace it.	
7	Re-loading paper	The cut-end of the paper is crushed.	Fan the paper well and load it by reversing the paper direction	
8	Checking the paper	The paper leading edge is bent.	Remove the bent paper.	
9	Checking the paper	The paper is curled downward or wavy.	Correct or replace paper. If you cannot get user agreement about the paper replacement, relocate the leading end of paper and the trailing end or reload paper upside down.	
10	Checking the paper	Unspecified papers are used.	Explain to the user to use the paper within the specifications.	
11	Checking the paper	foreign objects are on the paper.	Remove the paper with foreign objects.	
12	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. <ul style="list-style-type: none"> • PF feed sensor - PF PWB (2nd paper feeder) • PF conveying clutch - PF PWB 	
13	Checking the PF paper feed sensor	The PF feed sensor is not properly attached, or it is faulty.	Reattach the PF feed sensor in the 2nd paper feeder. If it is not repaired, replace it.	
14	Replacing the PF PWB	The PF PWB is faulty.	Replace the PF PWB of paper feeder 2.	
15	Checking the PF conveying clutch	The PF conveying clutch is not properly attached, or it is faulty.	Reattach the PF conveying clutch. If it is not repaired, replace it.	

Step	Check description	Assumed cause	Measures	Reference
16	Replacing the PF PWB	The PF PWB is faulty.	Replace the PF PWB.	

J4002/J4003/J4004: Registration sensor non-arrival jam

Target: paper feeder (1 to 3)

The registration sensor does not turn on during paper feed from cassette 2-4.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the paper path	The paper is caught with a piece of paper, etc.	Remove paper strip or foreign objects adhering on the conveying path, or burrs on the parts such as guide, actuator, etc.	
2	(When the paper skew occurs) Checking the paper feed roller	The conveying function of the paper feed roller is not enough.	Clean the paper feed roller surface. If worn down, replace it.	
3	(When the paper skew occurs) Relocating the paper width guides	The locations of the paper width guides do not fit with the paper size.	Relocate the paper width guides to fit them with the paper size.	
4	(When the paper skew occurs) Checking the actuator and the spring	The actuator does not operate properly.	The actuator or the spring is deformed. If the actuator does not properly operate, replace it.	
5	(In case paper skews) Checking the conveying guide	The paper is caught with the conveying guide.	Reattach the conveying guide. Remove the burrs on the conveying guide surface or replace the conveying guide if there are burrs on it.	
6	(When the paper conveying was delayed) Checking the paper feed roller	The conveying function of the paper feed roller is not enough.	Clean the paper feed roller surface. If worn down, replace it.	
7	(In case paper conveying delays) Checking the PF cover	The PF cover is deformed.	Check if the PF cover is closed securely. If not closed due to deformation, replace it.	
8	Re-loading paper	The cut-end of the paper is crushed.	Fan the paper well and load it by reversing the paper direction	
9	Checking the paper	The paper leading edge is bent.	Remove the bent paper.	
10	Checking the paper	The paper is curled downward or wavy.	Correct or replace paper. If you cannot get user agreement about the paper replacement, relocate the leading end of paper and the trailing end or reload paper upside down.	

Step	Check description	Assumed cause	Measures	Reference
11	Checking the paper	Unspecified papers are used.	Explain to the user to use the paper within the specifications.	
12	Checking the paper	foreign objects are on the paper.	Remove the paper with foreign objects.	
13	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • Registration sensor - Main/engine PWB • Registration clutch - Main/engine PWB	
14	Checking the registration sensor	The registration sensor is not properly attached, or it is faulty.	Reattach the regist sensor. If it is not repaired, replace it.	
15	Checking the registration clutch	The registration clutch is not properly attached, or it is faulty.	Reattach the registration clutch. If it is not repaired, replace it.	
16	Firmware upgrade	The firmware is faulty.	Upgrade the engine firmware to the latest version	
17	Replacing the main/engine PWB	The main/engine PWB is faulty.	Replace the main/engine PWB.	

J4009: Registration sensor non-arrival jam

The registration sensor does not turn on during paper feed from the MP tray.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the paper path	The paper is caught with a piece of paper, etc.	Remove paper strip or foreign objects adhering on the conveying path, or burrs on the parts such as guide, actuator, etc.	
2	Checking the MP paper feed roller	The paper conveying performance of the MP feed roller is not enough.	Clean or replace the MP feed roller	
3	Resetting the MP paper width guides	The locations of the MP paper width guides do not match the paper size.	Reset the MP paper width guides to match the paper size.	
4	Checking the actuator and the spring	The actuator does not operate properly.	The actuator or the spring is deformed. If the actuator does not properly operate, replace it.	

Step	Check description	Assumed cause	Measures	Reference
5	Checking the MP conveying guide	The paper hooks with the MP conveying guide.	Reattach the MP conveying guide. Also, remove the burrs on the paper conveying face.	
6	Checking the MP conveying guide	The MP conveying guide is deformed.	Check if the MP conveying guide is closed securely. Then, replace it if it is deformed.	
7	Re-loading paper	The cut-end of the paper is crushed.	Fan the paper well and load it by reversing the paper direction	
8	Checking the paper	The paper leading edge is bent.	Remove the bent paper.	
9	Checking the paper	The paper is curled downward or wavy.	Correct or replace paper. If you cannot get user agreement about the paper replacement, relocate the leading end of paper and the trailing end or reload paper upside down.	
10	Checking the paper	Unspecified papers are used.	Explain to the user to use the paper within the specifications.	
11	Checking the paper	foreign objects are on the paper.	Remove the paper with foreign objects.	
12	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. <ul style="list-style-type: none"> • Registration sensor - Main/engine PWB • Registration clutch - Main/engine PWB 	
13	Checking the registration sensor	The registration sensor is not properly attached, or it is faulty.	Reattach the regist sensor. If it is not repaired, replace it.	
14	Checking the registration clutch	The registration clutch is not properly attached, or it is faulty.	Reattach the registration clutch. If it is not repaired, replace it.	
15	Firmware upgrade	The firmware is faulty.	Upgrade the engine firmware to the latest version	
16	Replacing the main/engine PWB	The main/engine PWB is faulty.	Replace the main/engine PWB.	

J4012/J4013/J4014: Registration sensor stay jam

Target: paper feeder (1 to 3)

The registration sensor does not turn off during paper feed from cassette 2-4.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the paper path	The paper is caught with a piece of paper, etc.	Remove paper strip or foreign objects adhering on the conveying path, or burrs on the parts such as guide, actuator, etc.	
2	(When the paper skew occurs) Relocating the paper width guides	The locations of the paper width guides do not fit with the paper size.	Relocate the paper width guides to fit them with the paper size.	
3	(When the paper skew occurs) Checking the actuator and the spring	The actuator does not operate properly.	The actuator or the spring is deformed. If the actuator does not properly operate, replace it.	
4	(In case paper skews) Checking the conveying guide	The paper is caught with the conveying guide.	Reattach the conveying guide. Remove the burrs on the conveying guide surface or replace the conveying guide if there are burrs on it.	
5	(When the multi-feeding occurred) Checking the paper feed roller and the separation pad	The paper fanning is not enough.	Clean the feed roller and the separation pad. Or, replace them.	
6	Checking the conveying rollers	The paper conveying force of the conveying rollers is insufficient.	Clean or replace the conveying related rollers.	
7	(In case multiple paper is fed) Reloading paper	The cut-end of the paper is crushed.	Fan the paper well and load it by reversing the paper direction	
8	Checking the paper	The paper leading edge is bent.	Remove the bent paper.	
9	Checking the paper	The paper is curled downward or wavy.	Correct or replace paper. If you cannot get user agreement about the paper replacement, relocate the leading end of paper and the trailing end or reload paper upside down.	
10	Checking the paper	Unspecified papers are used.	Explain to the user to use the paper within the specifications.	
11	Checking the paper	foreign objects are on the paper.	Remove the paper with foreign objects.	

Step	Check description	Assumed cause	Measures	Reference
12	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • Registration sensor - Main/engine PWB • Registration clutch - Main/engine PWB	
13	Checking the registration sensor	The registration sensor is not properly attached, or it is faulty.	Reattach the regist sensor. If it is not repaired, replace it.	
14	Checking the registration clutch	The registration clutch is not properly attached, or it is faulty.	Reattach the registration clutch. If it is not repaired, replace it.	
15	Firmware upgrade	The firmware is faulty.	Upgrade the engine firmware to the latest version	
16	Replacing the main/engine PWB	The main/engine PWB is faulty.	Replace the main/engine PWB.	

J4019: Registration sensor stay jam

The registration sensor does not turn off during paper feed from the MP tray.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the paper path	The paper is caught with a piece of paper, etc.	Remove paper strip or foreign objects adhering on the conveying path, or burrs on the parts such as guide, actuator, etc.	
2	(When the paper skew occurs) Relocating the MP paper width guides	The locations of the MP paper width guides do not match the paper size.	Reset the MP paper width guides to match the paper size.	
3	(When the paper skew occurs) Checking the actuator and the spring	The actuator does not operate properly.	The actuator or the spring is deformed. If the actuator does not properly operate, replace it.	
4	(When the paper skew occurs) Checking the MP conveying guide	The paper hooks with the MP conveying guide.	Reattach the MP conveying guide. Also, remove the burrs on the paper conveying face.	
5	(When the multi-feeding occurred) Checking the MP paper feed roller and the MP separation pad	The paper fanning is not enough.	Clean the MP feed roller and MP separation pad, or replace them	
6	(When the multi-feeding occurred) Checking the MP conveying roller	The paper conveying performance of the MP conveying roller is not enough.	Clean or replace the MP conveying roller	

Step	Check description	Assumed cause	Measures	Reference
7	(In case multiple paper is fed) Reloading paper	The cut-end of the paper is crushed.	Fan the paper well and load it by reversing the paper direction	
8	Checking the paper	The paper leading edge is bent.	Remove the bent paper.	
9	Checking the paper	The paper is curled downward or wavy.	Correct or replace paper. If you cannot get user agreement about the paper replacement, relocate the leading end of paper and the trailing end or reload paper upside down.	
10	Checking the paper	Unspecified papers are used.	Explain to the user to use the paper within the specifications.	
11	Checking the paper	foreign objects are on the paper.	Remove the paper with foreign objects.	
12	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. <ul style="list-style-type: none"> • Registration sensor - Main/engine PWB • Registration clutch - Main/engine PWB 	
13	Checking the registration sensor	The registration sensor is not properly attached, or it is faulty.	Reattach the regist sensor. If it is not repaired, replace it.	
14	Checking the registration clutch	The registration clutch is not properly attached, or it is faulty.	Reattach the registration clutch. If it is not repaired, replace it.	
15	Firmware upgrade	The firmware is faulty.	Upgrade the engine firmware to the latest version	
16	Replacing the main/engine PWB	The main/engine PWB is faulty.	Replace the main/engine PWB.	

J4201/J4202/J4203/J4204/J4208/J4209: Exit sensor non-arrival jam

The paper is wrapped around the fuser roller and the exit sensor does not turn on during paper feed from cassette 1-4, duplex section or the MP tray.

Step	Check description	Assumed cause	Measures	Reference
1	Adjusting the paper leading edge timing	The margin at the paper leading edge is incorrect.	If each margin shift is regular, execute U034 to adjust the leading edge timing .	

Step	Check description	Assumed cause	Measures	Reference
2	(When the paper skew occurs) Checking the paper path	The paper is caught with a piece of paper, etc.	Remove paper strip or foreign objects adhering on the conveying path, or burrs on the parts such as guide, actuator, etc.	
3	(When the paper skew occurs) Relocating the paper width guides	The locations of the paper width guides do not fit with the paper size.	Relocate the paper width guides to fit them with the paper size.	
4	(When the paper skew occurs) Checking the paper feed roller	The conveying function of the paper feed roller is not enough.	Clean the paper feed roller surface. If worn down, replace it.	
5	(When the paper skew occurs) Checking the actuator and the spring	The actuator does not operate properly.	The actuator or the spring is deformed. If the actuator does not properly operate, replace it.	
6	(In case paper skews) Checking the conveying guide	The paper is caught with the conveying guide.	Reattach the conveying guide. Remove the burrs on the conveying guide surface or replace the conveying guide if there are burrs on it.	
7	(When the paper skew occurs) Checking the conveying rollers	The paper conveying force of the conveying rollers is insufficient.	Clean the middle roller or the registration roller. If worn down, replace it.	
8	Checking the paper	The paper leading edge is bent.	Remove the bent paper.	
9	Checking the paper	The paper is wavy.	Correct or replace paper. If you cannot get user agreement about the paper replacement, relocate the leading end of paper and the trailing end or reload paper upside down.	
10	Checking the paper	Unspecified papers are used.	Explain to the user to use the paper within the specifications.	
11	Checking the paper	foreign objects are on the paper.	Remove the paper with foreign objects.	
12	Checking the fuser unit	Foreign objects adhere to the fuser press roller or fuser heat roller	Clean the fuser press roller or replace the fuser unit	
13	Checking the fuser separation plate	Foreign objects such as toner are on the fuser separation plate. Or, the fuser separation plate is deformed or improperly attached.	Replace the fuser unit.	

Step	Check description	Assumed cause	Measures	Reference
14	Cleaning the machine inside	The machine inside is contaminated with toner.	Clean the machine inside.	
15	Checking the paper	The paper curls.	Replace with long grain paper.	
16	Changing the settings	The actual paper and the paper settings (media type, paper size) do not match.	Select the proper media type in the system menu.	
17	Checking the connection	The connector or FFC is not connected properly. Or, the wire or FFC is faulty.	Reconnect the following wire connectors and clean the FFC and reconnect. If there is no continuity, replace the wire. If the FFC terminal section is deformed or FFC is broken, replace the FFC. <ul style="list-style-type: none"> • Exit sensor (Exit PWB) - Main/engine PWB • Fuser motor - Engine relay PWB • Engine relay PWB - Main/engine PWB 	
18	Checking the exit PWB	The exit PWB is not properly attached, or it is faulty.	Reattach the exit PWB. If it is not repaired, replace it.	
19	Checking the fuser motor	The fuser motor is not properly attached, or it is faulty.	Reattach the fuser motor. If it is not repaired, replace it.	
20	Replacing the engine relay PWB	The engine relay PWB is faulty.	Replace the engine relay PWB.	
21	Firmware upgrade	The firmware is faulty.	Upgrade the engine firmware to the latest version	
22	Replacing the main/engine PWB	The main/engine PWB is faulty.	Replace the main/engine PWB.	

J4211/J4212/J4213/J4214/J4218/J4219: Conveying sensor stay jam

The paper jam occurs inside the fuser unit and the exit sensor does not turn off during paper feed from cassette 1-4, duplex section or the MP tray.

Step	Check description	Assumed cause	Measures	Reference
1	Adjusting the paper leading edge timing	The margin at the paper leading edge is incorrect.	If each margin shift is regular, execute U034 to adjust the leading edge timing .	
2	(When the paper skew occurs) Checking the paper path	The paper is caught with a piece of paper, etc.	Remove paper strip or foreign objects adhering on the conveying path, or burrs on the parts such as guide, actuator, etc.	

Step	Check description	Assumed cause	Measures	Reference
3	(When the paper skew occurs) Relocating the paper width guides	The locations of the paper width guides do not fit with the paper size.	Relocate the paper width guides to fit them with the paper size.	
4	(When the paper skew occurs) Checking the paper feed roller	The conveying function of the paper feed roller is not enough.	Clean the paper feed roller surface. If worn down, replace it.	
5	(When the paper skew occurs) Checking the actuator and the spring	The actuator does not operate properly.	The actuator or the spring is deformed. If the actuator does not properly operate, replace it.	
6	(In case paper skews) Checking the conveying guide	The paper is caught with the conveying guide.	Reattach the conveying guide. Remove the burrs on the conveying guide surface or replace the conveying guide if there are burrs on it.	
7	(When the paper skew occurs) Checking the conveying rollers	The paper conveying force of the conveying rollers is insufficient.	Clean the middle roller or the registration roller. If worn down, replace it.	
8	Checking the paper	The paper leading edge is bent.	Remove the bent paper.	
9	Checking the paper	The paper is wavy.	Correct or replace paper. If you cannot get user agreement about the paper replacement, relocate the leading end of paper and the trailing end or reload paper upside down.	
10	Checking the paper	Unspecified papers are used.	Explain to the user to use the paper within the specifications.	
11	Checking the paper	foreign objects are on the paper.	Remove the paper with foreign objects.	
12	Checking the fuser unit	Foreign objects adhere to the fuser press roller or fuser heat roller	Clean the fuser press roller or replace the fuser unit	
13	Checking the fuser separation plate	Foreign objects such as toner are on the fuser separation plate. Or, the fuser separation plate is deformed or improperly attached.	Replace the fuser unit.	
14	Cleaning the machine inside	The machine inside is contaminated with toner.	Clean the machine inside.	
15	Checking the paper	The paper curls.	Replace with long grain paper.	

Step	Check description	Assumed cause	Measures	Reference
16	Changing the settings	The actual paper and the paper settings (media type, paper size) do not match.	Select the proper media type in the system menu.	
17	Checking the connection	The connector or FFC is not connected properly. Or, the wire or FFC is faulty.	Reconnect the following wire connectors and clean the FFC and reconnect. If there is no continuity, replace the wire. If the FFC terminal section is deformed or FFC is broken, replace the FFC. <ul style="list-style-type: none"> • Exit sensor (Exit PWB) - Main/engine PWB • Fuser motor - Engine relay PWB • Engine relay PWB - Main/engine PWB 	
18	Checking the exit PWB	The exit PWB is not properly attached, or it is faulty.	Reattach the exit PWB. If it is not repaired, replace it.	
19	Checking the fuser motor	The fuser motor is not properly attached, or it is faulty.	Reattach the fuser motor. If it is not repaired, replace it.	
20	Replacing the engine relay PWB	The engine relay PWB is faulty.	Replace the engine relay PWB.	
21	Firmware upgrade	The firmware is faulty.	Upgrade the engine firmware to the latest version	
22	Replacing the main/engine PWB	The main/engine PWB is faulty.	Replace the main/engine PWB.	

J9000: No original feed from the DP

The DP original sensor does not turn on after the original feed was retried for 5 times.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the original	The leading edge of the original is folded.	Remove the folded original.	
2	Checking the original	The original is curled downward or wavy.	Correct or replace the original. if difficult to replace, switch the top and bottom end and reload it.	
3	Checking the original	The original out of specification is used.	Explain users to use the original within the specifications.	
4	Checking the original	Foreign objects adhere on the original.	Remove the original with the foreign objects.	

Step	Check description	Assumed cause	Measures	Reference
5	Checking the paper path	The original is caught up by a piece of paper.	If a piece of paper, the foreign objects are on the conveying path, or a burr in the parts such as the guide or the actuator, remove them.	
6	Checking the DP feed roller	The paper conveying force of the DP feed roller is insufficient.	Clean the DP feed roller surface. If worn down, replace it.	
7	Replacing the DP front separation pad assy	The film of the DP front separation pad assy is peeling off.	Replace the DP front separation pad assy (including the film).	
8	Checking the actuator and the spring	The actuator does not operate properly.	Reattach the actuator and the spring of the DP feed sensor. If it does not operate correctly due to the deformation, etc., repair or replace them.	
9	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • DP original sensor - Main/engine PWB • DP feed motor - Main/engine PWB	
10	Checking the DP original sensor	The DP original sensor does not operate correctly.	Reattach the DP original sensor. If it is not repaired, replace it.	
11	Checking the DP feed motor	The DP feed motor does not operate properly.	Reattach the DP feed motor. If it is not repaired, replace it.	
12	Firmware upgrade	The firmware is faulty.	Upgrade the engine firmware to the latest version	
13	Replacing the main/engine PWB	The main/engine PWB is faulty.	Replace the main/engine PWB.	

J9001: DP small size original jam

Target: 35ppm model

1. Right after the DP timing sensor turned on, the DP timing sensor turned off.
2. When secondary feed starts, the DP original sensor or the DP registration sensor turned off.
3. When the DP timing sensor is on, the DP original sensor or the DP registration sensor turned off.
4. When the DP registration sensor is off, the original of the secondary feed does not reach to the DP timing sensor.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the original	The original out of specification is fed.	Explain users to use the original within the specifications.	

Step	Check description	Assumed cause	Measures	Reference
2	Checking the actuator and the spring	The actuator does not operate properly.	Remove the sponge for silencing the operation of the actuator for the DP registration sensor. And also, if the actuator or the spring of the DP registration sensor or the DP timing sensor does not operate correctly due to the deformation, etc., replace them.	
3	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. <ul style="list-style-type: none"> • DP registration sensor - Main/engine PWB • DP timing sensor - Main/engine PWB 	
4	Checking the DP registration sensor	The DP registration sensor does not operate correctly.	Reattach the DP registration sensor. If it is not repaired, replace it.	
5	Checking the DP timing sensor	The DP timing sensor does not operate properly.	Reattach the DP timing sensor. If it is not repaired, replace it.	
6	Replacing the main/engine PWB	The main/engine PWB is faulty.	Replace the main/engine PWB.	

J9002: Jam detected when starting the original conveying

Target: 35ppm model

The unspecified DP conveying sensor turns on when starting conveying

Step	Check description	Assumed cause	Measures	Reference
1	Checking the paper path	There is a piece of paper remaining on paper conveying route to turn on the sensor.	If a piece of paper, the foreign objects are on the conveying path, or a burr in the parts such as the guide or the actuator, remove them.	
2	Cleaning the sensor	The sensor is dirty.	Clean the DP conveying sensors	
3	Checking the connection	The sensor connector is not connected properly	Reinsert the DP conveying sensor connectors	
4	Replacing the sensor	The sensor is faulty.	Replace the DP conveying sensors	

J9004: DP registration sensor non-arrival jam during the original reversing

Target: 30ppm model

The DP registration sensor does not turn on after passing the specific pulse since the reverse operation started.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the paper path	The original is caught up by a piece of paper.	If a piece of paper, the foreign objects are on the conveying path, or a burr in the parts such as the guide or the actuator, remove them.	
2	(When the original is skewed) Checking the DP conveying roller	The paper conveying performance of the DP conveying roller is insufficient.	Clean the DP conveying roller surface. If worn down, replace it.	
3	(When the original is skewed) Relocating the original width guides	The location of the original width guides and the original size are mismatched.	Align the original width guides to the original size.	
4	(When the original is skewed) Checking the DP feed-shift guide	The original is hooked with the DP feed-shift guide.	Reattach the DP feed-shift guide. If there is a burr on the conveying surface of the DP branch guide, remove or replace it.	
5	(When the original conveying delays) Checking the DP reverse roller	The paper conveying force of the DP reverse roller is insufficient.	Clean the DP reverse roller surface. If worn down, replace it.	
6	Checking the original	The leading edge of the original is folded.	Remove the folded original.	
7	Checking the original	The original is curled downward or wavy.	Correct or replace the original. if difficult to replace, switch the top and bottom end and reload it.	
8	Checking the original	The original out of specification is used.	Explain users to use the original within the specifications.	
9	Checking the original	Foreign objects adhere on the original.	Remove the original with the foreign objects.	
10	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. <ul style="list-style-type: none"> • DP registration sensor - Main/engine PWB • DP reverse motor - Main/engine PWB 	
11	Checking the DP registration sensor	The DP registration sensor does not operate correctly.	Reattach the DP registration sensor. If it is not repaired, replace it.	

Step	Check description	Assumed cause	Measures	Reference
12	Checking the DP reverse motor	The DP reverse motor does not operate correctly.	Reattach the DP reverse motor. If it is not repaired, replace it.	
13	Replacing the main/engine PWB	The main/engine PWB is faulty.	Replace the main/engine PWB.	

J9010: Document processor / DP top cover open detection

The document processor open or the DP top cover open (for 35 ppm model only) is detected during the original conveying.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the DP	The document processor is not properly installed, or it is faulty.	Check if the document processor is securely closed, and reinstall it if necessary. Fix or replace the DP covers if it is deformed.	
2	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • DP opening/closing sensor - Main/engine PWB	
3	Checking the DP opening/closing sensor	The DP opening/closing sensor does not operate properly.	Reattach the DP opening/closing sensor. If it is not repaired, replace it.	
4	(For 35 ppm model) Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • DP top cover switch - Main/engine PWB	
5	(For 35 ppm model) Checking the DP top cover switch	The DP top cover switch does not operate properly.	Reattach the DP top cover switch. If not repaired, replace with the new one.	
6	Replacing the main/engine PWB	The main/engine PWB is faulty.	Replace the main/engine PWB.	

J9060: DP feed motor rotation error

Target: 30ppm model

The DP feed motor keeps rotating. Or, the firmware does not properly operate.

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	The controller does not activate properly.	Turn off the power switch and pull out the power plug. After passing 5s, reinsert the power plug and turn on the power switch.	
2	Firmware upgrade	The firmware does not properly activate.	Upgrade the firmware to the latest version.	

J9061: DP conveying motor rotation error

Target: 30ppm model

The DP conveying motor rotates continuously. Or, the firmware does not operate correctly.

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	The controller does not activate properly.	Turn off the power switch and pull out the power plug. After passing 5s, reinsert the power plug and turn on the power switch.	
2	Firmware upgrade	The firmware does not properly activate.	Upgrade the firmware to the latest version.	

J9062: DP reversing motor rotation error

Target: 30ppm model

The DP reverse motor rotates continuously. Or, the firmware does not operate correctly.

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	The controller does not activate properly.	Turn off the power switch and pull out the power plug. After passing 5s, reinsert the power plug and turn on the power switch.	
2	Firmware upgrade	The firmware does not properly activate.	Upgrade the firmware to the latest version.	

J9110: DP original sensor multi feed jam

The DP original sensor does not turn off even a certain pulse has passed after the DP timing sensor turns on.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the original	The leading edge of the original is folded.	Remove the folded original.	
2	Checking the original	The original is curled downward or wavy.	Correct or replace the original. if difficult to replace, switch the top and bottom end and reload it.	
3	Checking the original	The original out of specification is used.	Explain users to use the original within the specifications.	
4	Checking the original	Foreign objects adhere on the original.	Remove the original with the foreign objects.	
5	(30ppm model) checking the DP reversing roller	The paper separation force of the DP reverse roller is insufficient.	Clean the DP reverse roller surface. If worn down, replace it.	
6	(30ppm model) checking the DP reversing cover	The DP reverse cover comes off.	Reattach the DP reverse cover.	
7	(When the original is skewed) Checking the DP feed roller	The paper conveying force of the DP feed roller is insufficient.	Clean the DP feed roller surface. If worn down, replace it.	
8	(When the original is skewed) Relocating the original width guides	The location of the original width guides and the original size are mismatched.	Align the original width guides to the original size.	
9	(When the original is skewed) Checking the DP feed belt	The original is hooked with the DP feed guide.	Reattach the DP feed guide. If the burrs are on the original conveying side of the DP feed guide, remove them or replace the DP feed guide.	
10	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • DP original sensor - Main/engine PWB	
11	(35ppm model) checking the DP feed clutch	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • DP feed clutch - Main/engine PWB	
12	Checking the DP feed sensor	The DP feed sensor is not properly attached. It is dirty or faulty.	Clean and reattach the DP feed sensor. If not repaired, replace it.	

Step	Check description	Assumed cause	Measures	Reference
13	(35ppm model) checking the connection	The rotation of the DP feed roller does not stop while the DP feed clutch remains engaged.	Reattach the DP feed clutch. If it is not repaired, replace it.	
14	Replacing the main/engine PWB	The main/engine PWB is faulty.	Replace the main/engine PWB.	

J9120: DP original sensor initial jam

Target: 30ppm model

Scanning the original has started under the condition that the original is remaining in the conveying path after turning on the power.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the paper path	The paper is caught with a piece of paper, etc.	Remove paper strip or foreign objects adhering on the conveying path, or burrs on the parts such as guide, actuator, etc.	
2	Cleaning the DP feed clutch	The DP original sensor is dirty.	Clean the DP original sensor	
3	Checking the connection	The connector of the DP original sensor is not properly connected.	Reinsert the DP original sensor connector	
4	Replacing the DP original sensor	The DP original sensor is faulty.	Replace the DP original sensor.	

J9200: DP registration sensor non-arrival jam

Target: 30ppm model

The DP registration sensor does not turn on after passing the specific pulse since the DP feed sensor turned on.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the paper path	The original is caught up by a piece of paper.	If a piece of paper, the foreign objects are on the conveying path, or a burr in the parts such as the guide or the actuator, remove them.	
2	(When the original is skewed) Checking the DP feed roller	The paper conveying force of the DP feed roller is insufficient.	Clean the DP feed roller surface. If worn down, replace it.	
3	(When the original is skewed) Relocating the original width guides	The location of the original width guides and the original size are mismatched.	Align the original width guides to the original size.	

Step	Check description	Assumed cause	Measures	Reference
4	(When the original is skewed) Checking the DP conveying guide	The original is hooked with the DP conveying guide.	Reattach the DP conveying guide. If there is a burr on the conveying surface of the DP conveying guide, remove or replace it.	
5	(When the original conveying delays) Checking the DP conveying roller	The paper conveying performance of the DP conveying roller is insufficient.	Clean the DP conveying roller surface. If worn down, replace it.	
6	(When the original conveying delays) Checking the DP top cover	The DP top cover is deformed.	Check if the DP top cover is securely closed. If it cannot be closed due to the deformation, replace it.	
7	Checking the original	The leading edge of the original is folded.	Remove the folded original.	
8	Checking the original	The original is curled downward or wavy.	Correct or replace the original. If it is difficult to replace, switch the leading edge and the trailing edge of paper, and reset. Or, when scanning duplex, flip paper upside down and reset them.	
9	Checking the original	The original out of specification is used.	Explain users to use the original within the specifications.	
10	Checking the original	Foreign objects adhere on the original.	Remove the original with the foreign objects.	
11	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. <ul style="list-style-type: none"> • DP registration sensor - Main/engine PWB • DP conveying motor - Main/engine PWB 	
12	Checking the DP registration sensor	The DP registration sensor does not operate correctly.	Reattach the DP registration sensor. If it is not repaired, replace it.	
13	Checking the DP conveying motor	The DP conveying motor does not operate correctly.	Reattach the DP conveying motor. If it is not repaired, replace it.	
14	Replacing the main/engine PWB	The main/engine PWB is faulty.	Replace the main/engine PWB.	

J9210: DP registration sensor stay jam

Target: 30ppm model

The DP registration sensor does not turn off after passing the specific pulse since the DP feed sensor turned on.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the paper path	The original is caught up by a piece of paper.	If a piece of paper, the foreign objects are on the conveying path, or a burr in the parts such as the guide or the actuator, remove them.	
2	(When the original is skewed) Checking the DP feed roller	The paper conveying force of the DP feed roller is insufficient.	Clean the DP feed roller surface. If worn down, replace it.	
3	(When the original is skewed) Relocating the original width guides	The location of the original width guides and the original size are mismatched.	Align the original width guides to the original size.	
4	(When the original is skewed) Checking the DP conveying guide	The original is hooked with the DP conveying guide.	Reattach the DP conveying guide. If there is a burr on the conveying surface of the DP conveying guide, remove or replace it.	
5	(When the original conveying delays) Checking the DP conveying roller	The paper conveying performance of the DP conveying roller is insufficient.	Clean the DP conveying roller surface. If worn down, replace it.	
6	(When the original conveying delays) Checking the DP top cover	The DP top cover is deformed.	Check if the DP top cover is securely closed. If it cannot be closed due to the deformation, replace it.	
7	Checking the original	The leading edge of the original is folded.	Remove the folded original.	
8	Checking the original	The original is curled downward or wavy.	Correct or replace the original. If it is difficult to replace, switch the leading edge and the trailing edge of paper, and reset. Or, when scanning duplex, flip paper upside down and reset them.	
9	Checking the original	The original out of specification is used.	Explain users to use the original within the specifications.	
10	Checking the original	Foreign objects adhere on the original.	Remove the original with the foreign objects.	

Step	Check description	Assumed cause	Measures	Reference
11	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • DP registration sensor - Main/engine PWB • DP conveying motor - Main/engine PWB	
12	Checking the DP registration sensor	The DP registration sensor does not operate correctly.	Reattach the DP registration sensor. If it is not repaired, replace it.	
13	Checking the DP conveying motor	The DP conveying motor does not operate correctly.	Reattach the DP conveying motor. If it is not repaired, replace it.	
14	Replacing the main/engine PWB	The main/engine PWB is faulty.	Replace the main/engine PWB.	

J9220: DP registration sensor initial jam

Target: 30ppm model

Scanning the original has started under the condition that the original is remaining in the conveying route after turning on the power.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the paper path	The paper is caught with a piece of paper, etc.	Remove paper strip or foreign objects adhering on the conveying path, or burrs on the parts such as guide, actuator, etc.	
2	Cleaning the DP registration sensor	The DP registration sensor is dirty.	Clean the DP registration sensor	
3	Checking the connection	The connector of the DP registration sensor is not properly connected.	Reinsert the DP registration sensor connector	
4	Replacing the DP registration sensor	The DP registration sensor is faulty.	Replacing the DP registration sensor	

J9300: DP backside timing sensor non-arrival jam

Target: 35ppm model

The DP back side timing sensor does not turn on even a certain pulse has passed after the DP original sensor turns on.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the paper path	The original is caught up by a piece of paper.	If a piece of paper, the foreign objects are on the conveying path, or a burr in the parts such as the guide or the actuator, remove them.	
2	(When the original is skewed) Checking the DP feed roller	The paper conveying force of the DP feed roller is insufficient.	Clean the DP feed roller surface. If worn down, replace it.	
3	(When the original is skewed) Relocating the original width guides	The location of the original width guides and the original size are mismatched.	Align the original width guides to the original size.	
4	(When the original is skewed) Checking the DP conveying guide	The original is hooked with the DP conveying guide.	Reattach the DP conveying guide. If there is a burr on the conveying surface of the DP conveying guide, remove or replace it.	
5	(When the original conveying delays) Checking the DP conveying roller	The paper conveying performance of the DP conveying roller is insufficient.	Clean the DP conveying roller surface. If worn down, replace it.	
6	(When the original conveying delays) Checking the DP top cover	The DP top cover is deformed.	Check if the DP top cover is securely closed. If it cannot be closed due to the deformation, replace it.	
7	Checking the original	The leading edge of the original is folded.	Remove the folded original.	
8	Checking the original	The original is curled downward or wavy.	Correct or replace the original. If it is difficult to replace, switch the leading edge and the trailing edge of paper, and reset. Or, when scanning duplex, flip paper upside down and reset them.	
9	Checking the original	The original out of specification is used.	Explain users to use the original within the specifications.	
10	Checking the original	Foreign objects adhere on the original.	Remove the original with the foreign objects.	

Step	Check description	Assumed cause	Measures	Reference
11	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • DP backside timing sensor - Main/engine PWB • DP conveying motor - Main/engine PWB	
12	Checking the DP backside timing sensor	The DP back side timing sensor does not operate properly.	Reattach the DP backside timing sensor. If it is not repaired, replace it.	
13	Checking the DP conveying motor	The DP conveying motor does not operate correctly.	Reattach the DP conveying motor. If it is not repaired, replace it.	
14	Replacing the main/engine PWB	The main/engine PWB is faulty.	Replace the main/engine PWB.	

J9310: DP backside timing sensor stay jam

Target: 35ppm model

The DP back side timing sensor does not turn off even a certain pulse has passed after the DP original sensor turns off.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the paper path	The original is caught up by a piece of paper.	If a piece of paper, the foreign objects are on the conveying path, or a burr in the parts such as the guide or the actuator, remove them.	
2	(When the original is skewed) Checking the DP feed roller	The paper conveying force of the DP feed roller is insufficient.	Clean the DP feed roller surface. If worn down, replace it.	
3	(When the original is skewed) Relocating the original width guides	The location of the original width guides and the original size are mismatched.	Align the original width guides to the original size.	
4	(When the original is skewed) Checking the DP conveying guide	The original is hooked with the DP conveying guide.	Reattach the DP conveying guide. If there is a burr on the conveying surface of the DP conveying guide, remove or replace it.	
5	(When the original conveying delays) Checking the DP conveying roller	The paper conveying performance of the DP conveying roller is insufficient.	Clean the DP conveying roller surface. If worn down, replace it.	

Step	Check description	Assumed cause	Measures	Reference
6	(When the original conveying delays) Checking the DP top cover	The DP top cover is deformed.	Check if the DP top cover is securely closed. If it cannot be closed due to the deformation, replace it.	
7	Checking the original	The leading edge of the original is folded.	Remove the folded original.	
8	Checking the original	The original is curled downward or wavy.	Correct or replace the original. If it is difficult to replace, switch the leading edge and the trailing edge of paper, and reset. Or, when scanning duplex, flip paper upside down and reset them.	
9	Checking the original	The original out of specification is used.	Explain users to use the original within the specifications.	
10	Checking the original	Foreign objects adhere on the original.	Remove the original with the foreign objects.	
11	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • DP backside timing sensor - Main/engine PWB • DP conveying motor - Main/engine PWB	
12	Checking the DP backside timing sensor	The DP back side timing sensor does not operate properly.	Reattach the DP backside timing sensor. If it is not repaired, replace it.	
13	Checking the DP conveying motor	The DP conveying motor does not operate correctly.	Reattach the DP conveying motor. If it is not repaired, replace it.	
14	Replacing the main/engine PWB	The main/engine PWB is faulty.	Replace the main/engine PWB.	

J9400: DP timing sensor non-arrival jam

Target: 35ppm model

The DP timing sensor does not turn on even a certain pulse has passed after the DP original sensor or the DP registration sensor turns on.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the paper path	The original is caught up by a piece of paper.	If a piece of paper, the foreign objects are on the conveying path, or a burr in the parts such as the guide or the actuator, remove them.	

Step	Check description	Assumed cause	Measures	Reference
2	(When the original is skewed) Checking the DP feed roller	The paper conveying force of the DP feed roller is insufficient.	Clean the DP feed roller surface. If worn down, replace it.	
3	(When the original is skewed) Relocating the original width guides	The location of the original width guides and the original size are mismatched.	Align the original width guides to the original size.	
4	(When the original is skewed) Checking the DP conveying guide	The original is hooked with the DP conveying guide.	Reattach the DP conveying guide. If there is a burr on the conveying surface of the DP conveying guide, remove or replace it.	
5	(When the original conveying delays) Checking the DP conveying roller	The paper conveying performance of the DP conveying roller is insufficient.	Clean the DP conveying roller surface. If worn down, replace it.	
6	(When the original conveying delays) Checking the DP top cover	The DP top cover is deformed.	Check if the DP top cover is securely closed. If it cannot be closed due to the deformation, replace it.	
7	Checking the original	The leading edge of the original is folded.	Remove the folded original.	
8	Checking the original	The original is curled downward or wavy.	Correct or replace the original. If it is difficult to replace, switch the leading edge and the trailing edge of paper, and reset. Or, when scanning duplex, flip paper upside down and reset them.	
9	Checking the original	The original out of specification is used.	Explain users to use the original within the specifications.	
10	Checking the original	Foreign objects adhere on the original.	Remove the original with the foreign objects.	
11	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. <ul style="list-style-type: none"> • DP timing sensor - Main/engine PWB • DP conveying motor - Main/engine PWB 	
12	Checking the DP timing sensor	The DP timing sensor does not operate properly.	Reattach the DP timing sensor. If it is not repaired, replace it.	
13	Checking the DP conveying motor	The DP conveying motor does not operate correctly.	Reattach the DP conveying motor. If it is not repaired, replace it.	

Step	Check description	Assumed cause	Measures	Reference
14	Replacing the main/engine PWB	The main/engine PWB is faulty.	Replace the main/engine PWB.	

J9410: DP timing sensor stay jam

Target: 35ppm model

The DP timing sensor does not turn off even a certain pulse has passed after the DP original sensor or the DP registration sensor turns off.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the paper path	The original is caught up by a piece of paper.	If a piece of paper, the foreign objects are on the conveying path, or a burr in the parts such as the guide or the actuator, remove them.	
2	(If the thin original with low stiffness is used) Replacing the release lever.	The gap at the time of separation of the DP reversing roller is narrow, and the second original (first side) can't enter between the DP reversing rollers when reversing the first original	Replace the release lever in order to widen the gap at the time of DP reverse roller separation. (LEVER DU PRESS: 303R70730_, the last digit 1 or newer).	
3	(When the original is skewed) Checking the DP feed roller	The paper conveying force of the DP feed roller is insufficient.	Clean the DP feed roller surface. If worn down, replace it.	
4	(When the original is skewed) Relocating the original width guides	The location of the original width guides and the original size are mismatched.	Align the original width guides to the original size.	
5	(When the original is skewed) Checking the DP conveying guide	The original is hooked with the DP conveying guide.	Reattach the DP conveying guide. If there is a burr on the conveying surface of the DP conveying guide, remove or replace it.	
6	(When the original conveying delays) Checking the DP conveying roller	The paper conveying performance of the DP conveying roller is insufficient.	Clean the DP conveying roller surface. If worn down, replace it.	
7	(When the original conveying delays) Checking the DP top cover	The DP top cover is deformed.	Check if the DP top cover is securely closed. If it cannot be closed due to the deformation, replace it.	
8	Checking the original	The leading edge of the original is folded.	Remove the folded original.	

Step	Check description	Assumed cause	Measures	Reference
9	Checking the original	The original is curled downward or wavy.	Correct or replace the original. If it is difficult to replace, switch the leading edge and the trailing edge of paper, and reset. Or, when scanning duplex, flip paper upside down and reset them.	
10	Checking the original	The original out of specification is used.	Explain users to use the original within the specifications.	
11	Checking the original	Foreign objects adhere on the original.	Remove the original with the foreign objects.	
12	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • DP timing sensor - Main/engine PWB • DP conveying motor - Main/engine PWB	
13	Checking the DP timing sensor	The DP timing sensor does not operate properly.	Reattach the DP timing sensor. If it is not repaired, replace it.	
14	Checking the DP conveying motor	The DP conveying motor does not operate correctly.	Reattach the DP conveying motor. If it is not repaired, replace it.	
15	Replacing the main/engine PWB	The main/engine PWB is faulty.	Replace the main/engine PWB.	

J9600: DP exit sensor non-arrival jam

Target: 35ppm model

The DP exit sensor does not turn on after passing the specific pulse since the DP timing sensor turned on.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the paper path	The original is caught up by a piece of paper.	If a piece of paper, the foreign objects are on the conveying path, or a burr in the parts such as the guide or the actuator, remove them.	
2	(When the original is skewed) Checking the DP conveying guide	The original is hooked with the DP conveying guide.	Reattach the DP conveying guide. If there is a burr on the conveying surface of the DP conveying guide, remove or replace it.	

Step	Check description	Assumed cause	Measures	Reference
3	(When the original conveying delays) Checking the DP conveying roller	The paper conveying performance of the DP conveying roller is insufficient.	Clean the DP conveying roller surface. If worn down, replace it.	
4	(For the original conveying delay) adjusting the hinge height	The height of the DP hinges is improper.	Adjust the height of the DP hinges.	
5	(When the original conveying delays) Checking the opening/closing motion of the document processor	The opening/closing operation of the document processor is faulty.	Check if the document processor is securely closed. If it cannot be closed due to the DP frame deformation, replace the document processor.	
6	Checking the original	The leading edge of the original is folded.	Remove the folded original.	
7	Checking the original	The original is curled downward or wavy.	Correct or replace the original. If it is difficult to replace, switch the leading edge and the trailing edge of paper, and reset. Or, when scanning duplex, flip paper upside down and reset them.	
8	Checking the original	The original out of specification is used.	Explain users to use the original within the specifications.	
9	Checking the original	Foreign objects adhere on the original.	Remove the original with the foreign objects.	
10	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • DP exit sensor - Main/engine PWB • DP conveying motor - Main/engine PWB	
11	Checking the DP exit sensor	The DP exit sensor does not operate correctly.	Reattach the DP exit sensor. If it is not repaired, replace it.	
12	Checking the DP conveying motor	The DP conveying motor does not operate correctly.	Reattach the DP conveying motor. If it is not repaired, replace it.	
13	Replacing the main/engine PWB	The main/engine PWB is faulty.	Replace the main/engine PWB.	

J9610: DP exit sensor stay jam

Target: 35ppm model

The DP exit sensor does not turn off after passing the specific pulse since the DP timing sensor turned off.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the paper path	The original is caught up by a piece of paper.	If a piece of paper, the foreign objects are on the conveying path, or a burr in the parts such as the guide or the actuator, remove them.	
2	(When the original is skewed) Checking the DP conveying guide	The original is hooked with the DP conveying guide.	Reattach the DP conveying guide. If there is a burr on the conveying surface of the DP conveying guide, remove or replace it.	
3	(When the original conveying delays) Checking the DP exit roller	The paper conveying force of the DP exit roller is insufficient.	Clean the DP exit roller surface. If worn down, replace it.	
4	(For the original conveying delay) adjusting the hinge height	The height of the DP hinges is improper.	Adjust the height of the DP hinges.	
5	(When the original conveying delays) Checking the opening/closing motion of the document processor	The opening/closing operation of the document processor is faulty.	Check if the document processor is securely closed. If it cannot be closed due to the DP frame deformation, replace the document processor.	
6	Checking the original	The leading edge of the original is folded.	Remove the folded original.	
7	Checking the original	The original is curled downward or wavy.	Correct or replace the original. If it is difficult to replace, switch the leading edge and the trailing edge of paper, and reset. Or, when scanning duplex, flip paper upside down and reset them.	
8	Checking the original	The original out of specification is used.	Explain users to use the original within the specifications.	
9	Checking the original	Foreign objects adhere on the original.	Remove the original with the foreign objects.	
10	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. <ul style="list-style-type: none"> • DP exit sensor - Main/engine PWB • DP conveying motor - Main/engine PWB 	

Step	Check description	Assumed cause	Measures	Reference
11	Checking the DP exit sensor	The DP exit sensor does not operate correctly.	Reattach the DP exit sensor. If it is not repaired, replace it.	
12	Checking the DP conveying motor	The DP conveying motor does not operate correctly.	Reattach the DP conveying motor. If it is not repaired, replace it.	
13	Replacing the main/engine PWB	The main/engine PWB is faulty.	Replace the main/engine PWB.	

7-3Self diagnostic

If the parts of the failure cause is not supplied, replace the unit that includes it.
Before attempting to check the fuser unit and the low voltage power supply PWB, be sure to turn the power switch off and unplug the machine from power. (Allow at least 5 s before starting to conduct service until the capacitors on the circuit boards have been completely discharged.)

(1) Self diagnostic codes

(1-1) Error codes list

Error code	Contents
C0030	FAX PWB system error
C0070	FAX PWB incompatible detection error
C0100	Backup memory device error
C0120	MAC address data error
C0130	Backup memory reading/writing error
C0140	Backup memory data error
C0150	EEPROM writing / reading error
C0160	EEPROM data error
C0170	Charger count error
C0180	Machine serial number mismatch
C0190	Backup memory device error
C0360	Communication error between the engine PWB and ASIC
C0640	Hard Disk (SSD) error
C0800	Image processing error
C0830	FAX PWB flash program area checksum error
C0840	RTC error ('Time for maintenance T' appears)
C0870	Image data transmission error to FAX PWB
C0920	FAX file system error
C1010	Lift motor error
C1020	PF lift motor 1 error
C1030	PF lift motor 2 error
C1040	PF lift motor 3 error
C1810	Paper Feeder communication error
C1820	Paper feeder communication error
C1830	Paper feeder communication error
C1900	Paper Feeder EEPROM error
C1910	Paper feeder EEPROM error
C1920	Paper feeder EEPROM error
C2101	Developer motor steady state error
C2111	Developer motor start-up error
C2201	Drum motor 2 steady-state error
C2202	Drum motor 1 steady-state error
C2211	Drum motor 2 standby error
C2212	Drum motor 1 standby error
C2500	Conveying developer motor error

Error code	Contents
C2600	PF feed motor error
C2610	PF feed motor error
C2620	PF feed motor error
C2760	Primary transfer motor startup error
C2820	Primary transfer motor steady-state error
C3100	Scanner carriage error
C3200	LED lamp error
C3210	CIS lamp error
C3500	Communication error between the scanner and ASIC
C4001	Polygon motor KM startup error
C4002	Polygon motor CY startup error
C4011	Polygon motor KM stabilization error
C4012	Polygon motor CY stabilization error
C4101	Laser error (Black)
C4102	Laser error (Cyan)
C4103	Laser error (Magenta)
C4104	Laser error (Yellow)
C4201	Laser BD steady-state error (Black)
C4202	Laser BD steady-state error (Cyan)
C4203	Laser BD steady-state error (Magenta)
C4204	Laser BD steady-state error (Yellow)
C4600	LSU cleaning motor error
C4700	VIDEO ASIC device error
C5101	Charger error (Black)
C5102	Charger error (Cyan)
C5103	Charger error (Magenta)
C5104	Charger error (Yellow)
C6000	Broken fuser heater 1 error
C6020	Fuser thermistor 2 high temperature error
C6030	Broken fuser thermistor 1 error
C6040	Fuser heater error
C6050	Fuser thermistor 2 low temperature error
C6200	Fuser heater 1 error
C6200	Fuser heater 2 error
C6220	Fuser heater high temperature error
C6230	Broken fuser thermistor 1 error
C6250	Fuser thermistor 1 low temperature error

Error code	Contents
C6400	Zero-cross signal error
C6610	Press-release sensor error
C6910	Engine firmware unexpected error
C7001	Toner motor K error
C7002	Toner motor C error
C7003	Toner motor M error
C7004	Toner motor Y error
C7101	Toner sensor K error
C7102	Toner sensor C error
C7103	Toner sensor M error
C7104	Toner sensor Y error
C7200	Developer thermistor error
C7221	LSU thermistor K error
C7222	LSU thermistor C error
C7401	Developer unit K type mismatch error
C7402	Developer unit C type mismatch error
C7403	Developer unit M type mismatch error
C7404	Developer unit Y type mismatch error
C7411	Drum unit K type mismatch error
C7412	Drum unit C type mismatch error
C7413	Drum unit M type mismatch error
C7414	Drum unit Y type mismatch error
C7601	ID sensor 1 error (Machine left side)
C7602	ID sensor 2 error (Machine right side)
C7611	Bias calibration read value error (Black)
C7612	Bias calibration read value error (Cyan)
C7613	Bias calibration read value error (Magenta)
C7614	Bias calibration read value error (Yellow)
C7620	Automatic color registration failure
C7800	Outer thermistor error
C7901	Drum unit EEPROM error (Black)
C7902	Drum unit EEPROM error (Cyan)
C7903	Drum unit EEPROM error (Magenta)
C7904	Drum unit EEPROM error (Yellow)
C7911	Developer unit EEPROM error (Black)
C7912	Developer unit EEPROM error (Cyan)
C7913	Developer unit EEPROM error (Magenta)

Error code	Contents
C7914	Developer unit EEPROM error (Yellow)
C9180	DP reverse motor error
C9540	Backup data error

C0030: FAX PWB system error

The FAX processing cannot be continued due to the firmware error.

Step	Check description	Assumed cause	Measures	Reference
1	Reinstalling the firmware	The firmware is faulty.	Reinstall the firmware.	
2	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • FAX PWB - Main/engine PWB	
3	Replacing the FAX PWB	The FAX PWB is faulty.	Replace the FAX PWB.	
4	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C0070: FAX PWB incompatible detection error

Abnormal detection of FAX control PWB incompatibility in the initial communication with the FAX control PWB, any normal communication command is not transmitted.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the FAX PWB	The incompatible FAX PWB is installed.	Install the FAX PWB for the applicable model.	
2	Reinstalling the firmware	The firmware is faulty.	Reinstall the firmware.	

C0100: Backup memory device error

The abnormal status is output from the flash memory.

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	The EEPROM does not operate properly.	Turn off the power switch and pull out the power plug. After passing 5s, reinsert the power plug and turn on the power switch.	
2	Reinstalling the EEPROM	The EEPROM is not properly attached.	Reattach the EEPROM on the main/engine PWB.	

Step	Check description	Assumed cause	Measures	Reference
3	Replacing the EEPROM	The EEPROM is faulty.	Replace the EEPROM on the main/engine PWB and execute U004 when C0180 appears	
4	Checking the main/engine PWB	The connector and FFC are not connected properly or the wire, FFC or PWB is faulty.	Clean the terminal of the connectors on the main/engine PWB, reconnect the connector of the wire, and reconnect the FFC terminal. If the wire or the FFC is faulty, repair or replace them. If not resolved, replace the main/engine PWB.	

C0120: MAC address data error

MAC address data was incorrect data.

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	The flash memory does not operate properly.	Turn off the power switch and pull out the power plug. After passing 5s, reinsert the power plug and turn on the power switch.	
2	Main/engine PWB replacement	The MAC address is incorrect.	Replace the main/engine PWB when the MAC address is not indicated on the network status page.	

C0130: Backup memory reading/writing error

The reading or writing into the flash memory is unavailable.

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	The flash memory does not operate properly.	Turn off the power switch and pull out the power plug. After passing 5s, reinsert the power plug and turn on the power switch.	
2	Checking the main/engine PWB	The connector and FFC are not connected properly or the wire, FFC or PWB is faulty.	Clean the terminal of the connectors on the main/engine PWB, reconnect the connector of the wire, and reconnect the FFC terminal. If the wire or the FFC is faulty, repair or replace them. If not resolved, replace the main/engine PWB.	

C0140: Backup memory data error

The data read from the flash memory is judged as abnormal at the startup.

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	The flash memory does not operate properly.	Turn off the power switch and pull out the power plug. After passing 5s, reinsert the power plug and turn on the power switch.	
2	Executing U021	The flash memory does not operate properly.	Execute U021.	
3	Checking the main/engine PWB	The connector and FFC are not connected properly or the wire, FFC or PWB is faulty.	Clean the terminal of the connectors on the main/engine PWB, reconnect the connector of the wire, and reconnect the FFC terminal. If the wire or the FFC is faulty, repair or replace them. If not resolved, replace the main/engine PWB.	

C0150: EEPROM writing / reading error

1. No response from the device is detected for 5ms or more 5 times continuously when reading / writing the data.
2. The reading data of 2 points mismatches 8 times continuously.
3. The reading data and the writing data mismatch 8 times continuously.

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	The EEPROM does not operate properly.	Turn off the power switch and pull out the power plug. After passing 5s, reinsert the power plug and turn on the power switch.	
2	Reinstalling the EEPROM	The EEPROM is not properly attached.	Reattach the EEPROM on the main/engine PWB.	
3	Replacing the EEPROM	The EEPROM is faulty.	Replace the EEPROM on the main/engine PWB and execute U004.	
4	Checking the main/engine PWB	The connector and FFC are not connected properly or the wire, FFC or PWB is faulty.	Clean the terminal of the connectors on the main/engine PWB, reconnect the connector of the wire, and reconnect the FFC terminal. If the wire or the FFC is faulty, repair or replace them. If not resolved, replace the main/engine PWB.	

C0160: EEPROM data error

The data read from the EEPROM is judged as abnormal.

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	The EEPROM does not operate properly.	Turn off the power switch and pull out the power plug. After passing 5s, reinsert the power plug and turn on the power switch.	
2	Executing U021	The data stored in the EEPROM on the main/engine PWB is faulty.	Execute U021.	
3	Replacing the EEPROM	The EEPROM is faulty.	Replace the EEPROM on the main/engine PWB and execute U004.	

C0170: Charger count error

The values in one of the billing counters, life counter or the scanner counter mismatch between the main side and the engine side.

Step	Check description	Assumed cause	Measures	Reference
1	Reinstalling the EEPROM	The EEPROM for the different main unit is installed.	Execute U004 to check machine serial number at MAIN and ENGINE. If different numbers are displayed, attach the proper EEPROM to the main/engine PWB	
2	Replacing the EEPROM	The EEPROM is faulty.	Replace the EEPROM on the main/engine PWB and execute U004 when C0180 appears	
3	Checking the main/engine PWB	The connector and FFC are not connected properly or the wire, FFC or PWB is faulty.	Clean the terminal of the connectors on the main/engine PWB, reconnect the connector of the wire, and reconnect the FFC terminal. If the wire or the FFC is faulty, repair or replace them. If not resolved, replace the main/engine PWB.	

C0180: Machine serial number mismatch

The machine serial Nos. in the main PWB and the EEPROM on the engine PWB mismatch when turning the power on.

Step	Check description	Assumed cause	Measures	Reference
1	Reinstalling the EEPROM	The EEPROM for the different main unit is installed.	Execute U004 to check machine serial number at MAIN and ENGINE. If different numbers are displayed, attach the proper EEPROM to the main/engine PWB	
2	Replacing the EEPROM	The EEPROM is faulty.	Replace the EEPROM on the main/engine PWB and execute U004 when C0180 appears	

C0190: Backup memory device error

Data from the FRAM cannot be read at start-up (3 times retries)

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	FRAM (main/engine PWB) is faulty.	Turn off the power switch and pull out the power plug. After passing 5s, reinsert the power plug and turn on the power switch.	
2	Checking the main/engine PWB	The connector and FFC are not connected properly or the wire, FFC or PWB is faulty.	Clean the terminal of the connectors on the main/engine PWB, reconnect the connector of the wire, and reconnect the FFC terminal. If the wire or the FFC is faulty, repair or replace them. If not resolved, replace the main/engine PWB.	

C0360: Communication error between the engine PWB and ASIC

The checksum error appears or the video signal is not reversed when checking the read-back data after transmitting the data. (Successive failure 10 times)

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	The main/engine PWB does not operate correctly.	Turn off the power switch and pull out the power plug. After passing 5s, reinsert the power plug and turn on the power switch.	

Step	Check description	Assumed cause	Measures	Reference
2	Checking the engine relay PWB	The connector and FFC are not connected properly or the wire, FFC or PWB is faulty.	Clean the terminal of the connectors on the engine relay PWB, reconnect the connector of the wire, and reconnect the FFC terminal. If the wire or the FFC is faulty, repair or replace them. If not resolved, replace the engine relay PWB.	
3	Checking the main/engine PWB	The connector and FFC are not connected properly or the wire, FFC or PWB is faulty.	Clean the terminal of the connectors on the main/engine PWB, reconnect the connector of the wire, and reconnect the FFC terminal. If the wire or the FFC is faulty, repair or replace them. If not resolved, replace the main/engine PWB.	

C0640: Hard Disk (SSD) error

The SSD I/O error is detected when accessing the file after the ready mode. (SSD format error after restart such as the system initialization, Sanitization or encrypted format after introducing the security kit)

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	The main/engine PWB does not operate correctly.	Turn off the power switch and pull out the power plug. After passing 5s, reinsert the power plug and turn on the power switch.	
2	Reinstalling HD-6/7 (SSD)	The HD-6/7 (SSD) is not connected to the KUIO connector of the main/engine PWB	Turn the power switch off and disconnect the power cord. Check the HD-6/7 (SSD) is connected to the KUIO connector of the main/engine PWB properly and reinstalled the HD-6/7 (SSD).	
3	Initializing HD-6/7 (SSD)	HD-6 or HD-7 (SSD) does not operate correctly.	Initialize the HD-6/7 (SSD) at [System Menu/Counter] key > [Adjustment/Maintenance] > [Service Settings] > [SSD Format].	
4	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C0800: Image processing error

The print sequence jam (J010x) is detected 2 times in succession.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the image data	The image data is faulty.	When this issue occurs only when handling the certain image data, check if the image data is faulty.	
2	Checking the situation	The printing operation of the certain file is faulty.	Acquire the job's log if the phenomenon can be reproduced by specifying the job when the error was detected.	
3	Checking the main/engine PWB	The connector and FFC are not connected properly or the wire, FFC or PWB is faulty.	Clean the terminal of the connectors on the main/engine PWB, reconnect the connector of the wire, and reconnect the FFC terminal. If the wire or the FFC is faulty, repair or replace them. If not resolved, replace the main/engine PWB.	

C0830: FAX PWB flash program area checksum error

The program stored in the flash memory is broken so it cannot perform.

Step	Check description	Assumed cause	Measures	Reference
1	Reinstalling the firmware	The firmware is faulty.	Reinstall the firmware.	
2	Initializing the fax	The FAX data is faulty.	Execute U600 to initialize the FAX.	
3	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • FAX PWB - Main/engine PWB	
4	Replacing the FAX PWB	The FAX PWB is faulty.	Replace the FAX PWB.	
5	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C0840: RTC error ('Time for maintenance T' appears)

[Check at start-up]

- RTC values are old.
- Power has not been turned on for over 5 years.
- RTC value is older than 2000/1/1 00:01.

[Periodic check per 5 minutes after start-up]

- RTC values are older than the ones at the last check.

- Partial operation by power reset after C840 error and 'Time for Maintenance T' is indicated.

Step	Check description	Assumed cause	Measures	Reference
1	Setting the RTC	RTC is not properly set.	Set the RTC in the System Menu.	
2	Checking the life of the backup battery	The backup battery has run out.	If the same service call error appears after resetting the power, check the backup battery. If it has run out, replace the backup battery on the main/engine PWB.	
3	Reattaching the main/engine PWB	The main/engine PWB is not properly attached.	Retighten the screws for the main/engine PWB.	
4	Checking the main/engine PWB	The connector and FFC are not connected properly or the wire, FFC or PWB is faulty.	Clean the terminal of the connectors on the main/engine PWB, reconnect the connector of the wire, and reconnect the FFC terminal. If the wire or the FFC is faulty, repair or replace them. If not resolved, replace the main/engine PWB.	

C0870: Image data transmission error to FAX PWB

Data was not properly transmitted even if the specified times of retry were made when the large volume data is transmitted into the FAX PWB

Step	Check description	Assumed cause	Measures	Reference
1	Reinstalling the firmware	The firmware is faulty.	Reinstall the firmware.	
2	Initializing the fax	The FAX data is faulty.	Execute U600 to initialize the FAX.	
3	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • FAX PWB - Main/engine PWB	
4	Replacing the FAX PWB	The FAX PWB is faulty.	Replace the FAX PWB.	
5	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C0920: FAX file system error

The backup data cannot be stored in the flash memory device due to the file system error

Step	Check description	Assumed cause	Measures	Reference
1	Reinstalling the firmware	The firmware is faulty.	Reinstall the firmware.	

Step	Check description	Assumed cause	Measures	Reference
2	Initializing the fax	The FAX data is faulty.	Execute U600 to initialize the FAX.	
3	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • FAX PWB - Main/engine PWB	
4	Replacing the FAX PWB	The FAX PWB is faulty.	Replace the FAX PWB.	
5	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C1010: Lift motor error

After installing cassette 1, either of the following 1 to 4 is detected 5 times continuously.

1. The lift motor excess current is detected for 80ms.
2. The lift sensor does not turn on when passing 10s after installing the cassette.
3. During printing, after detecting the lift sensor off, the lift sensor does not turn on when passing 1s after the ascending control.
4. During motor operation, the lock signal is detected for 1s continuously and it is detected 5 times continuously.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the lift plate	The lift plate does not operate properly.	If the lift plate does not ascend or descend, correct it or replace it.	
2	Checking the drive gear	The drive gear does not rotate properly.	Check if MP lift plate elevation drive gears rotate or have no excessive load. And apply the grease to the frictional parts and repair the related parts so that they can rotate properly.	
3	Checking the connection	The connector or FFC is not connected properly. Or, the wire or FFC is faulty.	Reconnect the following wire connectors and clean the FFC and reconnect. If there is no continuity, replace the wire. If the FFC terminal section is deformed or FFC is broken, replace the FFC. • Lift sensor - Engine relay PWB • Engine relay PWB - Main/engine PWB	
4	Checking the lift motor	The lift motor is not properly attached, or it is faulty.	Reattach the lift motor. If it is not repaired, replace it.	

Step	Check description	Assumed cause	Measures	Reference
5	Checking the lift sensor	The lift sensor is not properly attached, or it is faulty.	Reattach PF lift upper limit sensor. If not repaired, replace it.	
6	Replacing the engine relay PWB	The engine relay PWB is faulty.	Replace the engine relay PWB.	
7	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
8	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C1020: PF lift motor 1 error

Target: Paper feeder (1st)

After installing the cassette, either of the following 1 to 3 is detected 5 times continuously.

1. The PF lift motor excess current is detected for 80ms.
2. The PF lift sensor does not turn on when passing 10s after installing the cassette.
3. During printing, after detecting the PF lift sensor off, the PF lift sensor does not turn on when passing 1s after the ascending control.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the lift plate	The lift plate does not operate properly.	If the lift plate does not ascend or descend, correct it or replace it.	
2	Checking the drive gear	The drive gear does not rotate properly.	Check if MP lift plate elevation drive gears rotate or have no excessive load. And apply the grease to the frictional parts and repair the related parts so that they can rotate properly.	
3	Reinstalling the paper feeder	The paper feeder is not properly installed.	Reinstall the paper feeder	
4	Checking the connection	The connector is not connected properly or, the wire or drawer connector is faulty.	Check the following wire connection, and correct the terminals and reconnect the connectors all the way. If the wire has no continuity or the drawer connector is faulty, replace them. • PF lift sensor - PF PWB • PF lift motor - PF PWB • PF PWB - Drawer connector • Drawer connector - PF PWB (2nd paper feeder)	
5	Checking the PF lift motor	PF lift motor is not attached properly or faulty.	Reattach the PF lift motor. If it is not repaired, replace it.	

Step	Check description	Assumed cause	Measures	Reference
6	Checking the PF lift sensor	The PF lift motor is not properly attached, or it is faulty.	Reattach the PF lift sensor. If it is not repaired, replace it.	
7	Replacing the PF PWB	The PF PWB is faulty.	Replace the PF PWB.	
8	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
9	Replacing the engine relay PWB	The engine relay PWB is faulty.	Replace the engine relay PWB.	

C1030: PF lift motor 2 error

Target: Paper feeder (2nd)

After installing the cassette, either of the following 1 to 3 is detected 5 times continuously.

1. The PF lift motor excess current is detected for 80ms.
2. The PF lift sensor does not turn on when passing 10s after installing the cassette.
3. During printing, after detecting the PF lift sensor off, the PF lift sensor does not turn on when passing 1s after the ascending control.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the lift plate	The lift plate does not operate properly.	If the lift plate does not ascend or descend, correct it or replace it.	
2	Checking the drive gear	The drive gear does not rotate properly.	Check if MP lift plate elevation drive gears rotate or have no excessive load. And apply the grease to the frictional parts and repair the related parts so that they can rotate properly.	
3	Reinstalling the paper feeder	The paper feeder is not properly installed.	Reinstall the paper feeder	
3	Checking the connection	The connector is not connected properly or, the wire or drawer connector is faulty.	Check the following wire connection, and correct the terminals and reconnect the connectors all the way. If the wire has no continuity or the drawer connector is faulty, replace them. • PF lift sensor - PF PWB • PF lift motor - PF PWB • PF PWB - Drawer connector • Drawer connector - PF PWB (2nd paper feeder)	
4	Checking the PF lift motor	PF lift motor is not attached properly or faulty.	Reattach the PF lift motor. If it is not repaired, replace it.	

Step	Check description	Assumed cause	Measures	Reference
5	Checking the PF lift sensor	The PF lift motor is not properly attached, or it is faulty.	Reattach the PF lift sensor. If it is not repaired, replace it.	
6	Replacing the PF PWB	The PF PWB is faulty.	Replace the PF PWB.	

C1040: PF lift motor 3 error

Target: Paper feeder (3rd)

After installing the cassette, either of the following 1 to 3 is detected 5 times continuously.

1. The PF lift motor excess current is detected for 80ms.
2. The PF lift sensor does not turn on when passing 10s after installing the cassette.
3. During printing, after detecting the PF lift sensor off, the PF lift sensor does not turn on when passing 1s after the ascending control.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the lift plate	The lift plate does not operate properly.	If the lift plate does not ascend or descend, correct it or replace it.	
2	Checking the drive gear	The drive gear does not rotate properly.	Check if MP lift plate elevation drive gears rotate or have no excessive load. And apply the grease to the frictional parts and repair the related parts so that they can rotate properly.	
3	Reinstalling the paper feeder	The paper feeder is not properly installed.	Reinstall the paper feeder	
4	Checking the connection	The connector is not connected properly or, the wire or drawer connector is faulty.	Check the following wire connection, and correct the terminals and reconnect the connectors all the way. If the wire has no continuity or the drawer connector is faulty, replace them. • PF lift sensor - PF PWB • PF lift motor - PF PWB • PF PWB - Drawer connector • Drawer connector - PF PWB (2nd paper feeder)	
5	Checking the PF lift motor	PF lift motor is not attached properly or faulty.	Reattach the PF lift motor. If it is not repaired, replace it.	
6	Checking the PF lift sensor	The PF lift motor is not properly attached, or it is faulty.	Reattach the PF lift sensor. If it is not repaired, replace it.	
7	Replacing the PF PWB	The PF PWB is faulty.	Replace the PF PWB.	

C1810: Paper Feeder communication error

Target: Paper feeder (1st)

The communication error was detected 10 times continuously.

Step	Check description	Assumed cause	Measures	Reference
1	Reinstalling the paper feeder	The paper feeder is not properly installed.	Reinstall the paper feeder	
2	Checking the connection	The connector is not connected properly or, the wire or drawer connector is faulty.	Check the following wire connection, and correct the terminals and reconnect the connectors all the way. If the wire has no continuity or the drawer connector is faulty, replace them. • PF lift sensor - PF PWB • PF lift motor - PF PWB • PF PWB - Drawer connector • Drawer connector - PF PWB (2nd paper feeder)	
3	Firmware upgrade	The firmware is not the latest version.	Upgrade the firmware to the latest version.	
4	Replacing the PF PWB	The PF PWB is faulty.	Replace the PF PWB.	
5	Replacing the engine relay PWB	The engine relay PWB is faulty.	Replace the engine relay PWB.	

C1820: Paper feeder communication error

Target: Paper feeder (2nd)

The communication error was detected 10 times continuously.

Step	Check description	Assumed cause	Measures	Reference
1	Reinstalling the paper feeder	The paper feeder is not properly installed.	Reinstall the paper feeder	
2	Checking the connection	The connector is not connected properly or, the wire or drawer connector is faulty.	Check the following wire connection, and correct the terminals and reconnect the connectors all the way. If the wire has no continuity or the drawer connector is faulty, replace them. • PF lift sensor - PF PWB • PF lift motor - PF PWB • PF PWB - Drawer connector • Drawer connector - PF PWB (2nd paper feeder)	
3	Firmware upgrade	The firmware is not the latest version.	Upgrade the firmware to the latest version.	
4	Replacing the PF PWB	The PF PWB is faulty.	Replace the PF PWB.	

Step	Check description	Assumed cause	Measures	Reference
5	Replacing the PF PWB	The PF PWB is faulty.	Replace the PF PWB in the 1st paper feeder.	

C1830: Paper feeder communication error

Target: Paper feeder (3rd)

The communication error was detected 10 times continuously.

Step	Check description	Assumed cause	Measures	Reference
1	Reinstalling the paper feeder	The paper feeder is not properly installed.	Reinstall the paper feeder	
2	Checking the connection	The connector is not connected properly or, the wire or drawer connector is faulty.	Check the following wire connection, and correct the terminals and reconnect the connectors all the way. If the wire has no continuity or the drawer connector is faulty, replace them. • PF lift sensor - PF PWB • PF lift motor - PF PWB • PF PWB - Drawer connector • Drawer connector - PF PWB (2nd paper feeder)	
3	Firmware upgrade	The firmware is not the latest version.	Upgrade the firmware to the latest version.	
4	Replacing the PF PWB	The PF PWB is faulty.	Replace the PF PWB.	
5	Replacing the PF PWB	The PF PWB is faulty.	Replace the PF PWB in the 2nd paper feeder.	

C1900: Paper Feeder EEPROM error

Target: Paper feeder (1st)

For the internal count

The writing data and the reading data mismatch 4 times continuously when writing.

Step	Check description	Assumed cause	Measures	Reference
1	Reinstalling the paper feeder	The paper feeder is not properly installed.	Reinstall the paper feeder	
2	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinsert the connectors into all the connectors on the PF PWB. Also, if there is no continuity, replace the wire.	
3	Replacing the PF PWB	The PF PWB is faulty.	Replace the PF PWB.	

C1910: Paper feeder EEPROM error

Target: Paper feeder (2nd)

For the internal count

The writing data and the reading data mismatch 4 times continuously when writing.

Step	Check description	Assumed cause	Measures	Reference
1	Reinstalling the paper feeder	The paper feeder is not properly installed.	Reinstall the paper feeder	
2	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinsert the connectors into all the connectors on the PF PWB. Also, if there is no continuity, replace the wire.	
3	Replacing the PF PWB	The PF PWB is faulty.	Replace the PF PWB.	

C1920: Paper feeder EEPROM error

Target: Paper feeder (3rd)

For the internal count

The writing data and the reading data mismatch 4 times continuously when writing.

Step	Check description	Assumed cause	Measures	Reference
1	Reinstalling the paper feeder	The paper feeder is not properly installed.	Reinstall the paper feeder	
2	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinsert the connectors into all the connectors on the PF PWB. Also, if there is no continuity, replace the wire.	
3	Replacing the PF PWB	The PF PWB is faulty.	Replace the PF PWB.	

C2101: Developer motor steady state error

The steady signal turns off for 2s continuously after the motor is stabilized.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the developer unit	The developer roller is faulty.	Replace developer unit C, M or Y if the developer roller does not rotate.	
2	Checking the driving parts	The developer motor drive is not transmitted correctly.	Check if the drive gear rotates smoothly and has no excessive load. And apply the grease to the frictional parts and repair the related parts so that the drive gear rotates smoothly.	

Step	Check description	Assumed cause	Measures	Reference
3	Checking the connection	The connector or FFC is not connected properly. Or, the wire or FFC is faulty.	Reconnect the following wire connectors and clean the FFC and reconnect. If there is no continuity, replace the wire. If the FFC terminal section is deformed or FFC is broken, replace the FFC. • Developer motor - Engine relay PWB • Engine relay PWB - Main/engine PWB	
4	Checking the developer motor	The developer motor is not properly attached, or it is faulty.	Reattach the developer motor. If it is not repaired, replace it.	
5	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
6	Replacing the engine relay PWB	The engine relay PWB is faulty.	Replace the engine relay PWB.	
7	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C2111: Developer motor start-up error

The steady signal does not turn on after passing 3s since the motor started up

Step	Check description	Assumed cause	Measures	Reference
1	Checking the developer unit	The developer roller is faulty.	Replace developer unit C, M or Y if the developer roller does not rotate.	
2	Checking the driving parts	The developer motor drive is not transmitted correctly.	Check if the drive gear rotates smoothly and has no excessive load. And apply the grease to the frictional parts and repair the related parts so that the drive gear rotates smoothly.	
3	Checking the connection	The connector or FFC is not connected properly. Or, the wire or FFC is faulty.	Reconnect the following wire connectors and clean the FFC and reconnect. If there is no continuity, replace the wire. If the FFC terminal section is deformed or FFC is broken, replace the FFC. • Developer motor - Engine relay PWB • Engine relay PWB - Main/engine PWB	

Step	Check description	Assumed cause	Measures	Reference
4	Checking the developer motor	The developer motor is not properly attached, or it is faulty.	Reattach the developer motor. If it is not repaired, replace it.	
5	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
6	Replacing the engine relay PWB	The engine relay PWB is faulty.	Replace the engine relay PWB.	
7	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C2201: Drum motor 2 steady-state error

The steady signal turns off for 2s continuously after the motor is stabilized.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the drum unit and the developer unit	The drum does not rotate smoothly.	Check if the drum and the drum cleaning screw rotates manually. If it locks up, replace drum unit C or Y.	
2	Checking the driving parts	The drum motor 2 drive is not transmitted correctly.	Check if the drive gear rotates smoothly and has no excessive load. And apply the grease to the frictional parts and repair the related parts so that the drive gear rotates smoothly.	
3	Checking the connection	The connector or FFC is not connected properly. Or, the wire or FFC is faulty.	Reconnect the following wire connectors and clean the FFC and reconnect. If there is no continuity, replace the wire. If the FFC terminal section is deformed or FFC is broken, replace the FFC. • Drum motor 2 - Engine relay PWB • Engine relay PWB - Main/engine PWB	
4	Checking drum motor 2	Drum motor 2 is not properly attached, or it is faulty.	Reattach drum motor 2. If it is not repaired, replace it.	
5	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
6	Replacing the engine relay PWB	The engine relay PWB is faulty.	Replace the engine relay PWB.	
7	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C2202: Drum motor 1 steady-state error

The steady signal turns off for 2s continuously after the motor is stabilized.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the drum unit and the developer unit	The drum does not rotate smoothly.	Check if the drum and the drum cleaning screw rotates manually. If it locks up, replace drum unit K or M.	
2	Checking the driving parts	The drum motor 1 drive is not transmitted correctly.	Check if the drive gear rotates smoothly and has no excessive load. And apply the grease to the frictional parts and repair the related parts so that the drive gear rotates smoothly.	
3	Checking the connection	The connector or FFC is not connected properly. Or, the wire or FFC is faulty.	Reconnect the following wire connectors and clean the FFC and reconnect. If there is no continuity, replace the wire. If the FFC terminal section is deformed or FFC is broken, replace the FFC. • Drum motor 1 - Engine relay PWB • Engine relay PWB - Main/engine PWB	
4	Checking drum motor 1	Drum motor 1 is not properly attached, or it is faulty.	Reattach drum motor 1. If it is not repaired, replace it.	
5	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
6	Replacing the engine relay PWB	The engine relay PWB is faulty.	Replace the engine relay PWB.	
7	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C2211: Drum motor 2 standby error

The steady signal does not turn on after passing 3s since the motor started up

Step	Check description	Assumed cause	Measures	Reference
1	Checking the drum unit and the developer unit	The drum does not rotate smoothly.	Check if the drum and the drum cleaning screw rotates manually. If it locks up, replace drum unit C or Y.	

Step	Check description	Assumed cause	Measures	Reference
2	Checking the driving parts	The drum motor 2 drive is not transmitted correctly.	Check if the drive gear rotates smoothly and has no excessive load. And apply the grease to the frictional parts and repair the related parts so that the drive gear rotates smoothly.	
3	Checking the connection	The connector or FFC is not connected properly. Or, the wire or FFC is faulty.	Reconnect the following wire connectors and clean the FFC and reconnect. If there is no continuity, replace the wire. If the FFC terminal section is deformed or FFC is broken, replace the FFC. • Drum motor 2 - Engine relay PWB • Engine relay PWB - Main/engine PWB	
4	Checking drum motor 2	Drum motor 2 is not properly attached, or it is faulty.	Reattach drum motor 2. If it is not repaired, replace it.	
5	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
6	Replacing the engine relay PWB	The engine relay PWB is faulty.	Replace the engine relay PWB.	
7	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C2212: Drum motor 1 standby error

The steady signal does not turn on after passing 3s since the motor started up

Step	Check description	Assumed cause	Measures	Reference
1	Checking the drum unit and the developer unit	The drum does not rotate smoothly.	Check if the drum and the drum cleaning screw rotates manually. If it locks up, replace drum unit K or M.	
2	Checking the driving parts	The drum motor 1 drive is not transmitted correctly.	Check if the drive gear rotates smoothly and has no excessive load. And apply the grease to the frictional parts and repair the related parts so that the drive gear rotates smoothly.	

Step	Check description	Assumed cause	Measures	Reference
3	Checking the connection	The connector or FFC is not connected properly. Or, the wire or FFC is faulty.	Reconnect the following wire connectors and clean the FFC and reconnect. If there is no continuity, replace the wire. If the FFC terminal section is deformed or FFC is broken, replace the FFC. • Drum motor 1 - Engine relay PWB • Engine relay PWB - Main/engine PWB	
4	Checking drum motor 1	Drum motor 1 is not properly attached, or it is faulty.	Reattach drum motor 1. If it is not repaired, replace it.	
5	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
6	Replacing the engine relay PWB	The engine relay PWB is faulty.	Replace the engine relay PWB.	
7	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C2500: Conveying developer motor error

The steady signal does not turn on after passing 3s since the motor started up or the steady signal turns off for 2s continuously after the motor is stabilized

Step	Check description	Assumed cause	Measures	Reference
1	Checking the driving parts	The conveying developer motor drive is not transmitted correctly.	Check if the paper conveying roller and the drive gear rotate smoothly and have no excessive load. And apply the grease to the frictional parts and repair the related parts so that the drive gear rotates smoothly.	
2	Checking the connection	The connector or FFC is not connected properly. Or, the wire or FFC is faulty.	Reconnect the following wire connectors and clean the FFC and reconnect. If there is no continuity, replace the wire. If the FFC terminal section is deformed or FFC is broken, replace the FFC. • Conveying developer motor - Engine relay PWB • Engine relay PWB - Main/engine PWB • LSU - Main/engine PWB	
3	Checking the conveying developer motor	The conveying developer motor is not properly attached, or it is faulty.	Reattach the conveying developer motor. If it is not repaired, replace it.	

Step	Check description	Assumed cause	Measures	Reference
4	Replacing the conveying drive unit	The conveying drive unit is faulty.	Replace the conveying drive unit.	
5	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
6	Replacing the engine relay PWB	The engine relay PWB is faulty.	Replace the engine relay PWB.	
7	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C2600: PF feed motor error

Target: Paper feeder (1st)

The steady signal does not turn on for 5s continuously when the motor drives

Step	Check description	Assumed cause	Measures	Reference
1	Checking the driving parts	The PF feed motor drive is not transmitted correctly.	Check if the PF feed roller or the drive gear rotates or have no excessive load. And apply the grease to the frictional parts and repair the related parts so that the drive gear rotates properly.	
2	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • PF feed motor - PF PWB	
3	Checking the PF feed motor	The PF feed motor is not properly attached, or it is faulty.	Reattach the PF feed motor. If it is not repaired, replace it.	
4	Replacing the PF PWB	The PF PWB is faulty.	Replace the PF PWB.	

C2610: PF feed motor error

Target: Paper feeder (2nd)

The steady signal does not turn on for 5s continuously when the motor drives

Step	Check description	Assumed cause	Measures	Reference
1	Checking the driving parts	The PF feed motor drive is not transmitted correctly.	Check if the PF feed roller or the drive gear rotates or have no excessive load. And apply the grease to the frictional parts and repair the related parts so that the drive gear rotates properly.	

Step	Check description	Assumed cause	Measures	Reference
2	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • PF feed motor - PF PWB	
3	Checking the PF feed motor	The PF feed motor is not properly attached, or it is faulty.	Reattach the PF feed motor. If it is not repaired, replace it.	
4	Replacing the PF PWB	The PF PWB is faulty.	Replace the PF PWB.	

C2620: PF feed motor error

Target: Paper feeder (3rd)

The steady signal does not turn on for 5s continuously when the motor drives

Step	Check description	Assumed cause	Measures	Reference
1	Checking the driving parts	The PF feed motor drive is not transmitted correctly.	Check if the PF feed roller or the drive gear rotates or have no excessive load. And apply the grease to the frictional parts and repair the related parts so that the drive gear rotates properly.	
2	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • PF feed motor - PF PWB	
3	Checking the PF feed motor	The PF feed motor is not properly attached, or it is faulty.	Reattach the PF feed motor. If it is not repaired, replace it.	
4	Replacing the PF PWB	The PF PWB is faulty.	Replace the PF PWB.	

C2760: Primary transfer motor startup error

The steady signal does not turn on after passing 3s since the motor started up

Step	Check description	Assumed cause	Measures	Reference
1	Checking the driving parts	The primary transfer motor drive is not transmitted correctly.	Check if the excessive load is given by rotating the drive gears, roller and the transfer belt, and clean the drive section for the primary transfer unit.	

Step	Check description	Assumed cause	Measures	Reference
2	Checking the connection	The connector or FFC is not connected properly. Or, the wire or FFC is faulty.	Reconnect the following wire connectors and clean the FFC and reconnect. If there is no continuity, replace the wire. If the FFC terminal section is deformed or FFC is broken, replace the FFC. • Primary transfer motor - Engine relay PWB • Engine relay PWB - Main/engine PWB	
3	Checking the primary transfer motor	The primary transfer motor is not properly attached, or it is faulty.	Reattach the primary transfer motor. If it is not repaired, replace it.	
4	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
5	Replacing the engine relay PWB	The engine relay PWB is faulty.	Replace the engine relay PWB.	
6	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C2820: Primary transfer motor steady-state error

The steady signal turns off for 2s continuously after the motor is stabilized.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the driving parts	The primary transfer motor drive is not transmitted correctly.	Check if the excessive load is given by rotating the drive gears, roller and the transfer belt, and clean the drive section for the primary transfer unit.	
2	Checking the connection	The connector or FFC is not connected properly. Or, the wire or FFC is faulty.	Reconnect the following wire connectors and clean the FFC and reconnect. If there is no continuity, replace the wire. If the FFC terminal section is deformed or FFC is broken, replace the FFC. • Primary transfer motor - Engine relay PWB • Engine relay PWB - Main/engine PWB	
3	Checking the primary transfer motor	The primary transfer motor is not properly attached, or it is faulty.	Reattach the primary transfer motor. If it is not repaired, replace it.	
4	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	

Step	Check description	Assumed cause	Measures	Reference
5	Replacing the engine relay PWB	The engine relay PWB is faulty.	Replace the engine relay PWB.	
6	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C3100: Scanner carriage error

The home position is not correct when the power is turned on or at the end of a reading process of the table or document processor.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the scanner carriage	A load is applied to the scanner movement.	If there is an excessive load when manually operating the scanner carriage, check if foreign objects is on the drive belt. Then, clean the drive belt and after that, apply the grease to the ISU shaft.	
2	Checking the connection	The connector or FFC is not connected properly. Or, the wire or FFC is faulty.	Reconnect the following wire connectors and clean the FFC and reconnect. If there is no continuity, replace the wire. If the FFC terminal section is deformed or FFC is broken, replace the FFC. <ul style="list-style-type: none"> • Scanner motor - Engine relay PWB • Engine relay PWB - Main/engine PWB 	
3	Checking the home position sensor	The home position sensor is not properly attached, or it is faulty.	Reattach the home position sensor. If it is not repaired, replace it.	
4	Checking the scanner motor	The scanner motor is not attached properly or faulty.	Reattach the scanner motor. If it is not repaired, replace it.	
5	Replacing the scanner carriage	The CCD PWB is faulty.	Replace the scanner carriage.	
6	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C3200: LED lamp error

The white reference data retrieved by lighting the lamp at the initial operation is at the specified value or less.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	FFC is not properly connected, or it is faulty.	Clean the following FFC terminal of the FFC and reconnect. If the FFC terminal is deformed or FFC is short circuited, replace FFC. • CCD PWB - Main/engine PWB	
2	Replacing the scanner carriage	The LED is faulty if the LED lamp does not turn on. Or, the CCD PWB is faulty.	Replace the scanner carriage.	
4	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C3210: CIS lamp error

Target: Dual scan DP (For 35ppm model)

The white reference data obtained by turning the lamp on at initialization is less than the specified value.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	The connector or FFC is not connected properly. Or, the wire or FFC is faulty.	Reconnect the following wire connectors and clean the FFC and reconnect. If there is no continuity, replace the wire. If the FFC terminal section is deformed or FFC is broken, replace the FFC. • DPCIS - DPCIS relay PWB • DPCIS relay PWB - Main/Engine PWB	
2	(When the CIS lamp does not turn on) Replacing the DPCIS	The DPCIS is faulty.	Replace the DPCIS.	
3	(When the CIS lamp does not turn on) Replacing the DPCIS relay PWB	The DPCIS relay PWB is faulty.	Replace the DPCIS relay PWB.	
4	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C3500: Communication error between the scanner and ASIC

The communication error was detected during communication

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	FFC is not properly connected, or it is faulty.	Clean the following FFC terminal of the FFC and reconnect. If the FFC terminal is deformed or FFC is short circuited, replace FFC. • CCD PWB - Main/engine PWB	
2	Replacing the scanner carriage	The CCD PWB is faulty.	Replace the scanner carriage.	
3	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C4001: Polygon motor KM startup error

The steady signal of the motor does not turn on after passing 6s since the polygon motor starts up

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • LSU(KM) - Main/engine PWB	
2	LSU replacement	The LSU is faulty.	Replace the LSU (KM).	
3	Firmware upgrade	The firmware is faulty.	Upgrade the engine firmware to the latest version	
4	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C4002: Polygon motor CY startup error

The steady signal of the motor does not turn on after passing 6s since the polygon motor starts up

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • LSU(CY) - Main/engine PWB	
2	LSU replacement	The LSU is faulty.	Replace the LSU (CY).	
3	Firmware upgrade	The firmware is faulty.	Upgrade the engine firmware to the latest version	

Step	Check description	Assumed cause	Measures	Reference
4	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C4011: Polygon motor KM stabilization error

The steady signal of the motor turns off for 6s in succession after the polygon motor was stabilized

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • LSU(KM) - Main/engine PWB	
2	LSU replacement	The LSU is faulty.	Replace the LSU (KM).	
3	Firmware upgrade	The firmware is faulty.	Upgrade the engine firmware to the latest version	
4	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C4012: Polygon motor CY stabilization error

The steady signal of the motor turns off for 6s in succession after the polygon motor was stabilized

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • LSU(CY) - Main/engine PWB	
2	LSU replacement	The LSU is faulty.	Replace the LSU (CY).	
3	Firmware upgrade	The firmware is faulty.	Upgrade the engine firmware to the latest version	
4	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C4101: Laser error (Black)

The laser is not received for 1s since the light emission of the laser (Black) was started.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • LSU(KM) - Main/engine PWB	
2	LSU replacement	The LSU is faulty.	Replace the LSU (KM).	
3	Firmware upgrade	The firmware is faulty.	Upgrade the engine firmware to the latest version	
4	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C4102: Laser error (Cyan)

The laser is not received for 1s since the light emission of the laser (Cyan) was started.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • LSU(CY) - Main/engine PWB	
2	LSU replacement	The LSU is faulty.	Replace the LSU (CY).	
3	Firmware upgrade	The firmware is faulty.	Upgrade the engine firmware to the latest version	
4	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C4103: Laser error (Magenta)

The laser is not received for 1s since the light emission of the laser (Magenta) was started.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • LSU(KM) - Main/engine PWB	
2	LSU replacement	The LSU is faulty.	Replace the LSU (KM).	

Step	Check description	Assumed cause	Measures	Reference
3	Firmware upgrade	The firmware is faulty.	Upgrade the engine firmware to the latest version	
4	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C4104: Laser error (Yellow)

The laser is not received for 1s since the light emission of the laser (Yellow) was started.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • LSU(CY) - Main/engine PWB	
2	LSU replacement	The LSU is faulty.	Replace the LSU (CY).	
3	Firmware upgrade	The firmware is faulty.	Upgrade the engine firmware to the latest version	
4	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C4201: Laser BD steady-state error (Black)

The black BD signal is not detected during the polygon motor steady rotation

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • LSU(KM) - Main/engine PWB	
2	LSU replacement	The LSU is faulty.	Replace the LSU (KM).	
3	Firmware upgrade	The firmware is faulty.	Upgrade the engine firmware to the latest version	
4	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C4202: Laser BD steady-state error (Cyan)

The black Cyan signal is not detected during the polygon motor steady rotation

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • LSU(CY) - Main/engine PWB	
2	LSU replacement	The LSU is faulty.	Replace the LSU (CY).	
3	Firmware upgrade	The firmware is faulty.	Upgrade the engine firmware to the latest version	
4	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C4203: Laser BD steady-state error (Magenta)

The black Magenta signal is not detected during the polygon motor steady rotation

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • LSU(KM) - Main/engine PWB	
2	LSU replacement	The LSU is faulty.	Replace the LSU (KM).	
3	Firmware upgrade	The firmware is faulty.	Upgrade the engine firmware to the latest version	
4	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C4204: Laser BD steady-state error (Yellow)

The Yellow Magenta signal is not detected during the polygon motor steady rotation

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • LSU(CY) - Main/engine PWB	
2	LSU replacement	The LSU is faulty.	Replace the LSU (CY).	

Step	Check description	Assumed cause	Measures	Reference
3	Firmware upgrade	The firmware is faulty.	Upgrade the engine firmware to the latest version	
4	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C4600: LSU cleaning motor error

Excess current was detected for 5s continuously during the LSU cleaning motor operation

Step	Check description	Assumed cause	Measures	Reference
1	Executing the Laser Scanner Cleaning	The LSU cleaning drive gear or the cleaning spiral does not smoothly rotate due to the load.	Execute Laser Scanner Cleaning.	
2	Cleaning the LSU	The LSU cleaning drive gear or the cleaning spiral does not smoothly rotate due to the load.	Clean the LSU cleaning drive gear and the cleaning spiral, and then apply grease to these parts.	
3	LSU replacement	The LSU cleaning drive gear or the cleaning spiral is deformed or there is a fault in them.	Replace the LSU.	
4	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • LSU cleaning motor - Engine relay PWB	
5	Checking the LSU cleaning motor	The LSU cleaning motor is not properly attached, or it is faulty.	Reattach the LSU cleaning motor. If it is not repaired, replace it.	
6	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
7	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C4700: VIDEO ASIC device error

1. The communication with VIDEO ASIC failed 5 times continuously.

2. After writing the data to VIDEO ASIC, the value mismatching error repeated 8 times continuously by trying to read the data from the same address.

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	The ASIC operation on the PWB is faulty.	Turn off the power switch and pull out the power plug. After passing 5s, reinsert the power plug and turn on the power switch.	
2	Firmware upgrade	The firmware is not the latest version.	Upgrade the main firmware and the engine firmware to the latest version.	
3	Checking the main/engine PWB	The connector and FFC are not connected properly or the wire, FFC or PWB is faulty.	Clean the terminal of the connectors on the main/engine PWB, reconnect the connector of the wire, and reconnect the FFC terminal. If the wire or the FFC is faulty, repair or replace them. If not resolved, replace the main/engine PWB.	

C5101: Charger error (Black)

Target: 40ppm model

The rush-in current to drum unit K is less at the Vpp adjustment for the main charge adjustment

Step	Check description	Assumed cause	Measures	Reference
1	Checking the drum unit and the developer unit	The drum or drum screw does not rotate normally	Replace the drum unit if the drum or the drum screw does not rotate smoothly.	
2	Checking the main charger unit	The main charger unit is not attached properly	Reinstall the main charger unit on the drum unit properly. If it is not resolved, replace the main charger unit.	
3	Checking the connection	FFC is not properly connected, or it is faulty.	Clean the following FFC terminal of the FFC and reconnect. If the FFC terminal is deformed or FFC is short circuited, replace FFC. • High voltage PWB - Main/engine PWB	
4	Replacing the high voltage PWB	The high voltage PWB is faulty.	Replace the high voltage PWB.	
5	Firmware upgrade	The firmware is not the latest version.	Upgrade the main firmware and the engine firmware to the latest version.	
6	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C5102: Charger error (Cyan)

Target: 40ppm model

The rush-in current to drum unit C is less at the Vpp adjustment for the main charge adjustment

Step	Check description	Assumed cause	Measures	Reference
1	Checking the drum unit and the developer unit	The drum or drum screw does not rotate normally	Replace the drum unit if the drum or the drum screw does not rotate smoothly.	
2	Checking the main charger unit	The main charger unit is not attached properly	Reinstall the main charger unit on the drum unit properly. If it is not resolved, replace the main charger unit.	
3	Checking the connection	FFC is not properly connected, or it is faulty.	Clean the following FFC terminal of the FFC and reconnect. If the FFC terminal is deformed or FFC is short circuited, replace FFC. • High voltage PWB - Main/engine PWB	
4	Replacing the high voltage PWB	The high voltage PWB is faulty.	Replace the high voltage PWB.	
5	Firmware upgrade	The firmware is not the latest version.	Upgrade the main firmware and the engine firmware to the latest version.	
6	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C5103: Charger error (Magenta)

Target: 40ppm model

The rush-in current to drum unit M is less at the Vpp adjustment for the main charge adjustment

Step	Check description	Assumed cause	Measures	Reference
1	Checking the drum unit and the developer unit	The drum or drum screw does not rotate normally	Replace the drum unit if the drum or the drum screw does not rotate smoothly.	
2	Checking the main charger unit	The main charger unit is not attached properly	Reinstall the main charger unit on the drum unit properly. If it is not resolved, replace the main charger unit.	

Step	Check description	Assumed cause	Measures	Reference
3	Checking the connection	FFC is not properly connected, or it is faulty.	Clean the following FFC terminal of the FFC and reconnect. If the FFC terminal is deformed or FFC is short circuited, replace FFC. • High voltage PWB - Main/engine PWB	
4	Replacing the high voltage PWB	The high voltage PWB is faulty.	Replace the high voltage PWB.	
5	Firmware upgrade	The firmware is not the latest version.	Upgrade the main firmware and the engine firmware to the latest version.	
6	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C5104: Charger error (Yellow)

Target: 40ppm model

The rush-in current to drum unit Y is less at the Vpp adjustment for the main charge adjustment

Step	Check description	Assumed cause	Measures	Reference
1	Checking the drum unit and the developer unit	The drum or drum screw does not rotate normally	Replace the drum unit if the drum or the drum screw does not rotate smoothly.	
2	Checking the main charger unit	The main charger unit is not attached properly	Reinstall the main charger unit on the drum unit properly. If it is not resolved, replace the main charger unit.	
3	Checking the connection	FFC is not properly connected, or it is faulty.	Clean the following FFC terminal of the FFC and reconnect. If the FFC terminal is deformed or FFC is short circuited, replace FFC. • High voltage PWB - Main/engine PWB	
4	Replacing the high voltage PWB	The high voltage PWB is faulty.	Replace the high voltage PWB.	
5	Firmware upgrade	The firmware is not the latest version.	Upgrade the main firmware and the engine firmware to the latest version.	
6	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C6000: Broken fuser heater 1 error

1. During warm-up, the temperature detected by fuser thermistor 2 does not reach 100°C / 212°F when passing 20s.
2. During warm-up, when passing 30s after the temperature detected by fuser thermistor 2 reaches 100°C / 212°F, the ready state temperature is not reached.

Step	Check description	Assumed cause	Measures	Reference
1	Removing a piece of paper	The fuser thermistor cannot detect the normal temperature with paper strip	Remove a piece of paper remaining in the fuser unit.	
2	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. <ul style="list-style-type: none"> • Fuser unit (fuser thermistor) - Exit PWB • Exit PWB - Main/engine PWB • Low voltage PWB - Main/engine PWB 	
3	Replacing the fuser unit	The normal temperature cannot be detected with the fuser heater not being turned on, broken fuser thermostat wire, etc.	Replace the fuser unit.	
4	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
5	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	
6	Replacing the low voltage PWB	The low voltage PWB is faulty.	Replace the low voltage PWB when the fuser heaters always turn on.	
7	Replacing the exit PWB	The exit PWB is faulty.	Replace the exit PWB.	

C6020: Fuser thermistor 2 high temperature error

Fuser thermistor 2 detects 240°C / 464°F or more for 1s.

Step	Check description	Assumed cause	Measures	Reference
1	Removing a piece of paper	The fuser thermistor cannot detect the normal temperature with paper strip	Remove a piece of paper remaining in the fuser unit.	

Step	Check description	Assumed cause	Measures	Reference
2	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. <ul style="list-style-type: none"> • Fuser unit (fuser thermistor) - Exit PWB • Exit PWB - Main/engine PWB • Low voltage PWB - Main/engine PWB 	
3	Replacing the fuser unit	The fuser thermistor cannot detect correct temperature due to foreign objects adhering to the fuser heat roller or fuser press roller, short-circuit of the fuser thermistor, etc.	Replace the fuser unit.	
4	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
5	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	
6	Replacing the low voltage PWB	The low voltage PWB is faulty.	Replace the low voltage PWB when the fuser heaters always turn on.	
7	Replacing the exit PWB	The exit PWB is faulty.	Replace the exit PWB.	

C6030: Broken fuser thermistor 1 error

Fuser thermistor 2 detects the low temperature for 1.6s when the fuser thermistor 1 detects 30 °C / 86 °F or more.

Step	Check description	Assumed cause	Measures	Reference
1	Removing a piece of paper	The fuser thermistor cannot detect the normal temperature with paper strip	Remove a piece of paper remaining in the fuser unit.	
2	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. <ul style="list-style-type: none"> • Fuser unit (fuser thermistor) - Exit PWB • Exit PWB - Main/engine PWB 	

Step	Check description	Assumed cause	Measures	Reference
3	Replacing the fuser unit	The normal temperature cannot be detected with the fuser heater not being turned on, broken fuser thermostat wire, etc.	Replace the fuser unit.	
4	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
5	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	
6	Replacing the exit PWB	The exit PWB is faulty.	Replace the exit PWB.	

C6040: Fuser heater error

The input from fuser thermistor 2 is abnormal for 1s continuously.

Step	Check description	Assumed cause	Measures	Reference
1	Removing a piece of paper	The fuser thermistor cannot detect the normal temperature with paper strip	Remove a piece of paper remaining in the fuser unit.	
2	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. <ul style="list-style-type: none"> • Fuser unit (fuser thermistor) - Exit PWB • Exit PWB - Main/engine PWB 	
3	Replacing the fuser unit	The normal temperature cannot be detected with the fuser heater not being turned on, broken fuser thermostat wire, etc.	Replace the fuser unit.	
4	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
5	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	
6	Replacing the exit PWB	The exit PWB is faulty.	Replace the exit PWB.	

C6050: Fuser thermistor 2 low temperature error

During standby or printing, the fuser thermistor 2 detected 100°C / 212°F or less for 1s continuously.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the power supply voltage	The power supply voltage reduces.	Connect the power cord to a different wall outlet if the power supply voltage descends by 10% or more of the rated voltage, or multiple devices use the same outlet.	
2	Removing a piece of paper	The fuser thermistor cannot detect the normal temperature with paper strip	Remove a piece of paper remaining in the fuser unit.	
3	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. <ul style="list-style-type: none"> • Fuser unit (fuser thermistor) - Exit PWB • Exit PWB - Main/engine PWB • Low voltage PWB - Main/engine PWB 	
4	Replacing the fuser unit	The normal temperature cannot be detected with the fuser heater not being turned on, broken fuser thermostat wire, etc.	Replace the fuser unit.	
5	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
6	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	
7	Replacing the low voltage PWB	The low voltage PWB is faulty.	Replace the low voltage PWB when the fuser heaters always turn on.	
8	Replacing the exit PWB	The exit PWB is faulty.	Replace the exit PWB.	

C6200: Fuser heater 1 error

Target: 30ppm model

1. During warm-up, the fuser thermistor 1 does not detect 100°C / 212°F if turning the fuser heater 1 on for 30s continuously.
2. During warm-up, if turning the fuser heater 1 on for 30s continuously after the temperature detected by the fuser thermistor 1 reaches 100°C / 212°F , the fuser thermistor 1 does not detect the ready state temperature.

Step	Check description	Assumed cause	Measures	Reference
1	Removing a piece of paper	The fuser thermistor cannot detect the normal temperature with paper strip	Remove a piece of paper remaining in the fuser unit.	
2	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. <ul style="list-style-type: none"> • Fuser unit (fuser thermistor) - Exit PWB • Exit PWB - Main/engine PWB • Low voltage PWB - Main/engine PWB 	
3	Replacing the fuser unit	The normal temperature cannot be detected with the fuser heater not being turned on, broken fuser thermostat wire, etc.	Replace the fuser unit.	
4	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
5	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	
7	Replacing the low voltage PWB	The low voltage PWB is faulty.	Replace the low voltage PWB when the fuser heaters always turn on.	
8	Replacing the exit PWB	The exit PWB is faulty.	Replace the exit PWB.	

C6200: Fuser heater 2 error

Target: 35/40ppm model

1. During warm-up, fuser thermistor 1 does not detect 100°C / 212°F if turning the fuser heater 2 on for 30s continuously.
2. During warm-up, if turning the fuser heater 2 on for 30s continuously after the temperature detected by the fuser thermistor 1 reaches 100°C / 212°F , fuser thermistor 1 does not detect the ready state temperature.

Step	Check description	Assumed cause	Measures	Reference
1	Removing a piece of paper	The fuser thermistor cannot detect the normal temperature with paper strip	Remove a piece of paper remaining in the fuser unit.	

Step	Check description	Assumed cause	Measures	Reference
2	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. <ul style="list-style-type: none"> • Fuser unit (fuser thermistor) - Exit PWB • Exit PWB - Main/engine PWB • Low voltage PWB - Main/engine PWB 	
3	Replacing the fuser unit	The normal temperature cannot be detected with the fuser heater not being turned on, broken fuser thermostat wire, etc.	Replace the fuser unit.	
4	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
5	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	
7	Replacing the low voltage PWB	The low voltage PWB is faulty.	Replace the low voltage PWB when the fuser heaters always turn on.	
8	Replacing the exit PWB	The exit PWB is faulty.	Replace the exit PWB.	

C6220: Fuser heater high temperature error

Fuser thermistor 1 detected 240 °C / 464 °F for 1s continuously

Step	Check description	Assumed cause	Measures	Reference
1	Removing a piece of paper	The fuser thermistor cannot detect the normal temperature with paper strip	Remove a piece of paper remaining in the fuser unit.	
2	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. <ul style="list-style-type: none"> • Fuser unit (fuser thermistor) - Exit PWB • Exit PWB - Main/engine PWB • Low voltage PWB - Main/engine PWB 	

Step	Check description	Assumed cause	Measures	Reference
3	Replacing the fuser unit	The normal temperature cannot be detected with the fuser heater not being turned on, broken fuser thermostat wire, etc.	Replace the fuser unit.	
4	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
5	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	
6	Replacing the low voltage PWB	The low voltage PWB is faulty.	Replace the low voltage PWB when the fuser heaters always turn on.	

C6230: Broken fuser thermistor 1 error

Fuser thermistor 1 detected low temperature for 1.6s continuously

Step	Check description	Assumed cause	Measures	Reference
1	Removing a piece of paper	The fuser thermistor cannot detect the normal temperature with paper strip	Remove a piece of paper remaining in the fuser unit.	
2	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. <ul style="list-style-type: none"> • Fuser unit (fuser thermistor) - Exit PWB • Exit PWB - Main/engine PWB 	
3	Replacing the fuser unit	The normal temperature cannot be detected with the fuser heater not being turned on, broken fuser thermostat wire, etc.	Replace the fuser unit.	
4	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
5	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	
6	Replacing the exit PWB	The exit PWB is faulty.	Replace the exit PWB.	

C6250: Fuser thermistor 1 low temperature error

Fuser thermistor 1 detects a temperature lower than 100 °C / 212 °F for 1s in succession during ready or print

Step	Check description	Assumed cause	Measures	Reference
1	Checking the power supply voltage	The power supply voltage reduces.	Connect the power cord to a different wall outlet if the power supply voltage descends by 10% or more of the rated voltage, or multiple devices use the same outlet.	
2	Removing a piece of paper	The fuser thermistor cannot detect the normal temperature with paper strip	Remove a piece of paper remaining in the fuser unit.	
3	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. <ul style="list-style-type: none"> • Fuser unit (fuser thermistor) - Exit PWB • Exit PWB - Main/engine PWB • Low voltage PWB - Main/engine PWB 	
4	Replacing the fuser unit	The normal temperature cannot be detected with the fuser heater not being turned on, broken fuser thermostat wire, etc.	Replace the fuser unit.	
5	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
6	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	
7	Replacing the low voltage PWB	The low voltage PWB is faulty.	Replace the low voltage PWB when the fuser heaters always turn on.	
8	Replacing the exit PWB	The exit PWB is faulty.	Replace the exit PWB.	

C6400: Zero-cross signal error

The zero-cross signal is not input for 1s continuously when the fuser heater turns on and the 24V broken wire is not detected.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • Low voltage PWB - Main/ engine PWB	
2	Replacing the low voltage PWB	The low voltage PWB is faulty.	Replace the low voltage PWB when the fuser heaters always turn on.	
3	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
4	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C6610: Press-release sensor error

The press-release sensor does not turn on or off after passing 30s from the start of the fuser compression or decompression.

Step	Check description	Assumed cause	Measures	Reference
1	Removing a piece of paper	The fuser thermistor cannot detect the normal temperature with paper strip	Remove a piece of paper remaining in the fuser unit.	
2	Checking the fuser pressure release operation	The fuser press-release does not operate properly.	Check if the pressure can be reduced by reverse-rotating the fuser gear	
3	Checking the press-release sensor	The press-release sensor is not properly attached.	Check if the press-release sensor is interrupted by the actuator during the decompression operation.	

Step	Check description	Assumed cause	Measures	Reference
4	Checking the connection	The connector or FFC is not connected properly. Or, the wire or FFC is faulty.	Reconnect the following wire connectors and clean FFC and reconnect. If there is no continuity, replace the wire. If the FFC terminal section is deformed or FFC is broken, replace the FFC. <ul style="list-style-type: none"> • Press-release sensor - Exit PWB • Exit PWB - Main/engine PWB • Fuser motor - Engine relay PWB • Engine relay PWB - Main/engine PWB 	
5	Checking the fuser motor	The fuser motor is not properly attached, or it is faulty.	Reattach the fuser motor. If it is not repaired, replace it.	
6	Replacing the fuser unit	The parts such as the press-release sensor in the fuser unit are faulty.	Replace the fuser unit.	
7	Replacing the exit PWB	The exit PWB is faulty.	Replace the exit PWB.	
8	Replacing the engine relay PWB	The engine relay PWB is faulty.	Replace the engine relay PWB.	
9	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
10	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C6910: Engine firmware unexpected error

1. The drum motor drive continued for 60 min. or more while not printing.
2. The developer bias turns on while the main charger bias is off. (On for 3,263ms or more continuously)
3. The high voltage remote or main charger DC bias turns on while the drum motor is stopped. (On for 270ms or more continuously)
4. The periodic writing process to the EEPROM locked for 30s. (The EEPROM writing is not processed for 30s or other priority process occupies (locks) to have no process for the EEPROM.)

Step	Check description	Assumed cause	Measures	Reference
1	Reset the main power	The main power start-up is slow.	Turn the power switch off and unplug the power plug. After 5s, reconnect the power plug and turn the power switch on.	
2	Upgrade the firmware	The firmware is not the latest version.	Upgrade the engine firmware to the latest version.	
3	Check Main/Engine PWB	Main/Engine PWB is not attached and connected properly.	Fix Main/Engine PWB with screws and reconnect the connectors so that the ground is secured.	
4	Replace Main/Engine PWB	Main/Engine PWB is faulty.	Replace Main/Engine PWB.	

C7001: Toner motor K error

The excess current signal was detected for 5s continuously

Step	Check description	Assumed cause	Measures	Reference
1	Replacing toner container K	The spiral locks up. (It does not rotate.)	Replace toner container K.	
2	Checking the driving parts	The drive gear or the coupling do not properly rotate or the excessive load is applied to them.	Clean the drive gears and the couplings in the toner motor unit and apply the grease to them.	
3	Checking the connection	The connector or FFC is not connected properly. Or, the wire or FFC is faulty.	Reconnect the following wire connectors and clean FFC and reconnect. If there is no continuity, replace the wire. If the FFC terminal section is deformed or FFC is broken, replace the FFC. • Toner motor K - Engine relay PWB • Engine relay PWB - Main/engine PWB	
4	Checking toner motor K	Toner motor K is not properly attached, or it is faulty.	Reattach toner motor K. If it is not repaired, replace it.	
5	Replacing the toner motor unit	The toner motor unit is faulty.	Replace the toner motor unit.	
6	Replacing the engine relay PWB	The engine relay PWB is faulty.	Replace the engine relay PWB.	
7	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
8	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C7002: Toner motor C error

The excess current signal was detected for 5s continuously

Step	Check description	Assumed cause	Measures	Reference
1	Replacing toner container C	The spiral locks up. (It does not rotate.)	Replace toner container C.	
2	Checking the driving parts	The drive gear or the coupling do not properly rotate or the excessive load is applied to them.	Clean the drive gears and the couplings in the toner motor unit and apply the grease to them.	

Step	Check description	Assumed cause	Measures	Reference
3	Checking the connection	The connector or FFC is not connected properly. Or, the wire or FFC is faulty.	Reconnect the following wire connectors and clean the FFC and reconnect. If there is no continuity, replace the wire. If the FFC terminal section is deformed or FFC is broken, replace the FFC. • Toner motor C - Engine relay PWB • Engine relay PWB - Main/engine PWB	
4	Checking toner motor K	Toner motor C is not properly attached, or it is faulty.	Reattach toner motor C. If it is not repaired, replace it.	
5	Replacing the toner motor unit	The toner motor unit is faulty.	Replace the toner motor unit.	
6	Replacing the engine relay PWB	The engine relay PWB is faulty.	Replace the engine relay PWB.	
7	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
8	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C7003: Toner motor M error

The excess current signal was detected for 5s continuously

Step	Check description	Assumed cause	Measures	Reference
1	Replacing toner container M	The spiral locks up. (It does not rotate.)	Replace toner container M.	
2	Checking the driving parts	The drive gear or the coupling do not properly rotate or the excessive load is applied to them.	Clean the drive gears and the couplings in the toner motor unit and apply the grease to them.	
3	Checking the connection	The connector or FFC is not connected properly. Or, the wire or FFC is faulty.	Reconnect the following wire connectors and clean the FFC and reconnect. If there is no continuity, replace the wire. If the FFC terminal section is deformed or FFC is broken, replace the FFC. • Toner motor M - Engine relay PWB • Engine relay PWB - Main/engine PWB	
4	Checking toner motor K	Toner motor M is not properly attached, or it is faulty.	Reattach toner motor M. If it is not repaired, replace it.	
5	Replacing the toner motor unit	The toner motor unit is faulty.	Replace the toner motor unit.	

Step	Check description	Assumed cause	Measures	Reference
6	Replacing the engine relay PWB	The engine relay PWB is faulty.	Replace the engine relay PWB.	
7	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
8	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C7004: Toner motor Y error

The excess current signal was detected for 5s continuously

Step	Check description	Assumed cause	Measures	Reference
1	Replacing toner container Y	The spiral locks up. (It does not rotate.)	Replace toner container Y.	
2	Checking the driving parts	The drive gear or the coupling do not properly rotate or the excessive load is applied to them.	Clean the drive gears and the couplings in the toner motor unit and apply the grease to them.	
3	Checking the connection	The connector or FFC is not connected properly. Or, the wire or FFC is faulty.	Reconnect the following wire connectors and clean the FFC and reconnect. If there is no continuity, replace the wire. If the FFC terminal section is deformed or FFC is broken, replace the FFC. • Toner motor Y - Engine relay PWB • Engine relay PWB - Main/engine PWB	
4	Checking toner motor K	Toner motor Y is not properly attached, or it is faulty.	Reattach toner motor Y. If it is not repaired, replace it.	
5	Replacing the toner motor unit	The toner motor unit is faulty.	Replace the toner motor unit.	
6	Replacing the engine relay PWB	The engine relay PWB is faulty.	Replace the engine relay PWB.	
7	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
8	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C7101: Toner sensor K error

The sensor output value is 0.1v and less or 3.2v or more during a certain time.

Step	Check description	Assumed cause	Measures	Reference
1	Reinstalling toner container K	The toner container is not properly installed.	Reinstall toner container K.	

Step	Check description	Assumed cause	Measures	Reference
2	Replacing toner container K	The toner supply opening of the toner container cannot be opened by operating the lever.	Replace toner container K.	
3	Checking the driving parts	The drive gear or the coupling do not properly rotate or the excessive load is applied to them.	Clean the drive gear and the coupling and apply the grease to them.	
4	Correcting the toner supply opening	The toner supply opening on the primary transfer unit is not opened even when installing toner container K.	Correct the toner supply opening at the upper part of the primary transfer unit so that it is opened by the lever operation.	
5	Checking the primary transfer unit	Toner is clogged at the toner supply path in the primary transfer unit	Clean the inside of the primary transfer unit. If not resolved, replace it.	
6	Checking the connection	The connector or FFC is not connected properly. Or, the wire or FFC is faulty.	Reconnect the following wire connectors and clean the FFC and reconnect. If there is no continuity, replace the wire. If the FFC terminal section is deformed or FFC is broken, replace the FFC. <ul style="list-style-type: none"> • Developer unit K - Drum relay PWB • Drum relay PWB - Main/engine PWB • Toner motor K - Engine relay PWB • Engine relay PWB - Main/engine PWB 	
7	Replacing developer unit K	The gear or spiral does not rotate in the developer unit, or toner sensor K is faulty.	Replace developer unit K.	
8	Checking toner motor K	Toner motor K is not properly attached, or it is faulty.	Reattach toner motor K. If it is not repaired, replace it.	
9	Replacing the drum relay PWB	The drum relay PWB is faulty.	Replace the drum relay PWB.	
10	Replacing the engine relay PWB	The engine relay PWB is faulty.	Replace the engine relay PWB.	
11	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
12	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C7102: Toner sensor C error

The sensor output value is 0.1v and less or 3.2v or more during a certain time.

Step	Check description	Assumed cause	Measures	Reference
1	Reinstalling toner container C	The toner container is not properly installed.	Reinstall toner container C.	
2	Replacing toner container C	The toner supply opening of the toner container cannot be opened by operating the lever.	Replace toner container C.	
3	Checking the driving parts	The drive gear or the coupling do not properly rotate or the excessive load is applied to them.	Clean the drive gear and the coupling and apply the grease to them.	
4	Correcting the toner supply opening	The toner supply opening on the primary transfer unit is not opened even when installing toner container C.	Correct the toner supply opening at the upper part of the primary transfer unit so that it is opened by the lever operation.	
5	Checking the primary transfer unit	Toner is clogged at the toner supply path in the primary transfer unit	Clean the inside of the primary transfer unit. If not resolved, replace it.	
6	Checking the connection	The connector or FFC is not connected properly. Or, the wire or FFC is faulty.	Reconnect the following wire connectors and clean the FFC and reconnect. If there is no continuity, replace the wire. If the FFC terminal section is deformed or FFC is broken, replace the FFC. <ul style="list-style-type: none"> • Developer unit C - Drum relay PWB • Drum relay PWB - Main/engine PWB • Toner motor C - Engine relay PWB • Engine relay PWB - Main/engine PWB 	
7	Replacing developer unit C	The gear or spiral does not rotate in the developer unit, or toner sensor C is faulty.	Replace the developer unit C.	
8	Checking toner motor C	Toner motor C is not properly attached, or it is faulty.	Reattach toner motor C. If it is not repaired, replace it.	
9	Replacing the drum relay PWB	The drum relay PWB is faulty.	Replace the drum relay PWB.	
10	Replacing the engine relay PWB	The engine relay PWB is faulty.	Replace the engine relay PWB.	
11	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	

Step	Check description	Assumed cause	Measures	Reference
12	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C7103: Toner sensor M error

The sensor output value is 0.1v and less or 3.2v or more during a certain time.

Step	Check description	Assumed cause	Measures	Reference
1	Reinstalling toner container M	The toner container is not properly installed.	Reinstall toner container M.	
2	Replacing toner container M	The toner supply opening of the toner container cannot be opened by operating the lever.	Replace toner container M.	
3	Checking the driving parts	The drive gear or the coupling do not properly rotate or the excessive load is applied to them.	Clean the drive gear and the coupling and apply the grease to them.	
4	Correcting the toner supply opening	The toner supply opening on the primary transfer unit is not opened even when installing toner container M.	Correct the toner supply opening at the upper part of the primary transfer unit so that it is opened by the lever operation.	
5	Checking the primary transfer unit	Toner is clogged at the toner supply path in the primary transfer unit	Clean the inside of the primary transfer unit. If not resolved, replace it.	
6	Checking the connection	The connector or FFC is not connected properly. Or, the wire or FFC is faulty.	Reconnect the following wire connectors and clean the FFC and reconnect. If there is no continuity, replace the wire. If the FFC terminal section is deformed or FFC is broken, replace the FFC. <ul style="list-style-type: none"> • Developer unit M - Drum relay PWB • Drum relay PWB - Main/engine PWB • Toner motor M - Engine relay PWB • Engine relay PWB - Main/engine PWB 	
7	Replacing developer unit M	The gear or spiral does not rotate in the developer unit, or toner sensor M is faulty.	Replace the developer unit M.	
8	Checking toner motor M	Toner motor M is not properly attached, or it is faulty.	Reattach toner motor M. If it is not repaired, replace it.	

Step	Check description	Assumed cause	Measures	Reference
9	Replacing the drum relay PWB	The drum relay PWB is faulty.	Replace the drum relay PWB.	
10	Replacing the engine relay PWB	The engine relay PWB is faulty.	Replace the engine relay PWB.	
11	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
12	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C7104: Toner sensor Y error

The sensor output value is 0.1v and less or 3.2v or more during a certain time.

Step	Check description	Assumed cause	Measures	Reference
1	Reinstalling toner container Y	The toner container is not properly installed.	Reinstall toner container Y.	
2	Replacing toner container Y	The toner supply opening of the toner container cannot be opened by operating the lever.	Replace toner container Y.	
3	Checking the driving parts	The drive gear or the coupling do not properly rotate or the excessive load is applied to them.	Clean the drive gear and the coupling and apply the grease to them.	
4	Correcting the toner supply opening	The toner supply opening on the primary transfer unit is not opened even when installing toner container Y.	Correct the toner supply opening at the upper part of the primary transfer unit so that it is opened by the lever operation.	
5	Checking the primary transfer unit	Toner is clogged at the toner supply path in the primary transfer unit	Clean the inside of the primary transfer unit. If not resolved, replace it.	
6	Checking the connection	The connector or FFC is not connected properly. Or, the wire or FFC is faulty.	Reconnect the following wire connectors and clean the FFC and reconnect. If there is no continuity, replace the wire. If the FFC terminal section is deformed or FFC is broken, replace the FFC. <ul style="list-style-type: none"> • Developer unit Y - Drum relay PWB • Drum relay PWB - Main/engine PWB • Toner motor Y - Engine relay PWB • Engine relay PWB - Main/engine PWB 	

Step	Check description	Assumed cause	Measures	Reference
7	Replacing developer unit Y	The gear or spiral does not rotate in the developer unit, or toner sensor Y is faulty.	Replace the developer unit Y.	
8	Checking toner motor Y	Toner motor Y is not properly attached, or it is faulty.	Reattach toner motor Y. If it is not repaired, replace it.	
9	Replacing the drum relay PWB	The drum relay PWB is faulty.	Replace the drum relay PWB.	
10	Replacing the engine relay PWB	The engine relay PWB is faulty.	Replace the engine relay PWB.	
11	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
12	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C7200: Developer thermistor error

The sensor input sampling exceeds the reference value. (After detection, controlled at 25 °C / 77.0 °F)

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinsert developer unit K into the main unit all the way to reconnect the connector. Also, if the wire is faulty, replace it. • Developer unit K - Drum relay PWB • Drum relay PWB - Main/engine PWB	
2	Replacing developer unit K	Toner sensor K is faulty.	Replace developer unit K.	
3	Replacing the drum relay PWB	The drum relay PWB is faulty.	Replace the drum relay PWB.	
4	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
5	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C7221: LSU thermistor K error

The sensor input sampling exceeds the reference value. (After detection, controlled at 25 °C / 77.0 °F)

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • LSU(KM) (LSU thermistor K) - Main/engine PWB	
2	LSU replacement	The LSU is faulty.	Replace the LSU (KM).	
3	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
4	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C7222: LSU thermistor C error

The sensor input sampling exceeds the reference value. (After detection, controlled at 25 °C / 77.0 °F)

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • LSU(CY) (LSU thermistor C) - Main/engine PWB	
2	LSU replacement	The LSU is faulty.	Replace the LSU (CY).	
3	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
4	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C7401: Developer unit K type mismatch error

The main unit and developer unit K is not matched.

Step	Check description	Assumed cause	Measures	Reference
1	Checking developer unit K	The different type of the developer unit is installed.	Install the correct developer unit.	

C7402: Developer unit C type mismatch error

The main unit and developer unit C is not matched.

Step	Check description	Assumed cause	Measures	Reference
1	Checking developer unit C	The different type of the developer unit is installed.	Install the correct developer unit.	

C7403: Developer unit M type mismatch error

The main unit and developer unit M is not matched.

Step	Check description	Assumed cause	Measures	Reference
1	Checking developer unit M	The different type of the developer unit is installed.	Install the correct developer unit.	

C7404: Developer unit Y type mismatch error

The main unit and developer unit Y is not matched.

Step	Check description	Assumed cause	Measures	Reference
1	Checking developer unit Y	The different type of the developer unit is installed.	Install the correct developer unit.	

C7411: Drum unit K type mismatch error

The main unit and drum unit K is not matched.

Step	Check description	Assumed cause	Measures	Reference
1	Checking drum unit K	The different drum unit is installed.	Install the proper drum unit.	

C7412: Drum unit C type mismatch error

The main unit and drum unit C is not matched.

Step	Check description	Assumed cause	Measures	Reference
1	Checking drum unit C	The different drum unit is installed.	Install the proper drum unit.	

C7413: Drum unit M type mismatch error

The main unit and drum unit M is not matched.

Step	Check description	Assumed cause	Measures	Reference
1	Checking drum unit M	The different drum unit is installed.	Install the proper drum unit.	

C7414: Drum unit Y type mismatch error

The main unit and drum unit Y is not matched.

Step	Check description	Assumed cause	Measures	Reference
1	Checking drum unit Y	The different drum unit is installed.	Install the proper drum unit.	

C7601: ID sensor 1 error (Machine left side)

The measurement value of the ID sensor apply either of the following.

1. The P-wave of the light potential is lower than the p-wave of the dark potential +0.5V.
2. The S-wave of the light potential is lower than the S-wave of the dark potential.
3. The P/S-wave is more than 0.8V, or lower than 0.15V.

Step	Check description	Assumed cause	Measures	Reference
1	Cleaning the ID sensors	ID sensor 1 is dirty.	Clean ID sensor 1 surface.	
2	Reattaching the ID sensor	ID sensor 1 is not properly attached.	Reattach ID sensor 1.	
3	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • ID sensor 1 - Main/engine PWB	
4	Replacing the ID sensor	ID sensor 1 is faulty, so the error is detected when executing Calibration.	Replace ID sensor 1.	
5	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
6	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C7602: ID sensor 2 error (Machine right side)

The measurement value of the ID sensor apply either of the following.

1. The P-wave of the light potential is lower than the p-wave of the dark potential +0.5V.
2. The S-wave of the light potential is lower than the S-wave of the dark potential.
3. The P/S-wave is more than 0.8V, or lower than 0.15V.

Step	Check description	Assumed cause	Measures	Reference
1	Cleaning the ID sensors	ID sensor 2 is dirty.	Clean ID sensor 2 surface.	
2	Reattaching the ID sensor	ID sensor 2 is not properly attached.	Reattach ID sensor 2.	

Step	Check description	Assumed cause	Measures	Reference
3	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • ID sensor 2 - Main/engine PWB	
4	Replacing the ID sensor	ID sensor 2 is faulty, so the error is detected when executing Calibration.	Replace ID sensor 2.	
5	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
6	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C7611: Bias calibration read value error (Black)

The ID sensor cannot read the patch image density on the transfer belt normally when executing Calibration.

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	The ID sensor does not operate properly.	Turn off the power switch and pull out the power plug. After passing 5s, reinsert the power plug and turn on the power switch.	
2	Cleaning the ID sensors	The ID sensor is dirty.	Clean the surface of ID sensor 1, 2.	
3	Reexecuting Calibration	Calibration failed last time.	Execute [Calibration] in [System Menu/Counter] key > [Adjustment/Maintenance].	
4	Checking the ID sensor shutter	The ID sensor shutter is not opened.	Check if the ID sensor shutter opens and closes according to the paper tray opening and closing. If it does not open properly, repair it.	
5	Checking the primary transfer unit	The transfer belt surface is dirty or scratched	Clean the transfer belt surface. Or, replace the primary transfer unit.	
6	(When the image is too light) Checking the drum unit and developer unit	The drum unit or developer unit parts are dirty or worn down.	Clean drum unit K and developer unit K. If the parts are worn down, replace the unit.	
7	Reattaching the ID sensor	The ID sensor is not attached properly	Reattach ID sensor 1, 2.	

Step	Check description	Assumed cause	Measures	Reference
8	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • ID sensor 1, 2 - Main/engine PWB	
9	Replacing the ID sensor	ID sensor 1, 2 are abnormal and an error is detected when executing Calibration.	Replace ID sensor 1, 2.	
10	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
11	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C7612: Bias calibration read value error (Cyan)

The ID sensor cannot read the patch image density on the transfer belt normally when executing Calibration.

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	The ID sensor does not operate properly.	Turn off the power switch and pull out the power plug. After passing 5s, reinsert the power plug and turn on the power switch.	
2	Cleaning the ID sensors	The ID sensor is dirty.	Clean the surface of ID sensor 1, 2.	
3	Reexecuting Calibration	Calibration failed last time.	Execute [Calibration] in [System Menu/Counter] key > [Adjustment/Maintenance].	
4	Checking the ID sensor shutter	The ID sensor shutter is not opened.	Check if the ID sensor shutter opens and closes according to the paper tray opening and closing. If it does not open properly, repair it.	
5	Checking the primary transfer unit	The transfer belt surface is dirty or scratched	Clean the transfer belt surface. Or, replace the primary transfer unit.	
6	(When the image is too light) Checking the drum unit and developer unit	The drum unit or developer unit parts are dirty or worn down.	Clean drum unit C and developer unit C. If the parts are worn down, replace the unit.	
7	Reattaching the ID sensor	The ID sensor is not attached properly	Reattach ID sensor 1, 2.	

Step	Check description	Assumed cause	Measures	Reference
8	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • ID sensor 1, 2 - Main/engine PWB	
9	Replacing the ID sensor	ID sensor 1, 2 are abnormal and an error is detected when executing Calibration.	Replace ID sensor 1, 2.	
10	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
11	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C7613: Bias calibration read value error (Magenta)

The ID sensor cannot read the patch image density on the transfer belt normally when executing Calibration.

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	The ID sensor does not operate properly.	Turn off the power switch and pull out the power plug. After passing 5s, reinsert the power plug and turn on the power switch.	
2	Cleaning the ID sensors	The ID sensor is dirty.	Clean the surface of ID sensor 1, 2.	
3	Reexecuting Calibration	Calibration failed last time.	Execute [Calibration] in [System Menu/Counter] key > [Adjustment/Maintenance].	
4	Checking the ID sensor shutter	The ID sensor shutter is not opened.	Check if the ID sensor shutter opens and closes according to the paper tray opening and closing. If it does not open properly, repair it.	
5	Checking the primary transfer unit	The transfer belt surface is dirty or scratched	Clean the transfer belt surface. Or, replace the primary transfer unit.	
6	(When the image is too light) Checking the drum unit and developer unit	The drum unit or developer unit parts are dirty or worn down.	Clean drum unit M and developer unit M. If the parts are worn down, replace the unit.	
7	Reattaching the ID sensor	The ID sensor is not attached properly	Reattach ID sensor 1, 2.	

Step	Check description	Assumed cause	Measures	Reference
8	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • ID sensor 1, 2 - Main/engine PWB	
9	Replacing the ID sensor	ID sensor 1, 2 are abnormal and an error is detected when executing Calibration.	Replace ID sensor 1, 2.	
10	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
11	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C7614: Bias calibration read value error (Yellow)

The ID sensor cannot read the patch image density on the transfer belt normally when executing Calibration.

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	The ID sensor does not operate properly.	Turn off the power switch and pull out the power plug. After passing 5s, reinsert the power plug and turn on the power switch.	
2	Cleaning the ID sensors	The ID sensor is dirty.	Clean the surface of ID sensor 1, 2.	
3	Reexecuting Calibration	Calibration failed last time.	Execute [Calibration] in [System Menu/Counter] key > [Adjustment/Maintenance].	
4	Checking the ID sensor shutter	The ID sensor shutter is not opened.	Check if the ID sensor shutter opens and closes according to the paper tray opening and closing. If it does not open properly, repair it.	
5	Checking the primary transfer unit	The transfer belt surface is dirty or scratched	Clean the transfer belt surface. Or, replace the primary transfer unit.	
6	(When the image is too light) Checking the drum unit and developer unit	The drum unit or developer unit parts are dirty or worn down.	Clean drum unit Y and developer unit Y. If the parts are worn down, replace the unit.	
7	Reattaching the ID sensor	The ID sensor is not attached properly	Reattach ID sensor 1, 2.	

Step	Check description	Assumed cause	Measures	Reference
8	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • ID sensor 1, 2 - Main/engine PWB	
9	Replacing the ID sensor	ID sensor 1, 2 are abnormal and an error is detected when executing Calibration.	Replace ID sensor 1, 2.	
10	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
11	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C7620: Automatic color registration failure

The image patch position on the transfer belt is outside the range of the ID sensor reading. The transfer belt surface is dirty or image patch density is light.

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	The ID sensor does not operate properly.	Turn off the power switch and pull out the power plug. After passing 5s, reinsert the power plug and turn on the power switch.	
2	Cleaning the ID sensors	The ID sensor is dirty.	Clean the surface of ID sensor 1, 2.	
3	Reexecuting Calibration	Calibration failed last time.	Execute [Calibration] in [System Menu/Counter] key > [Adjustment/Maintenance].	
4	Checking the ID sensor shutter	The ID sensor shutter is not opened.	Check if the ID sensor shutter opens and closes according to the paper tray opening and closing. If it does not open properly, repair it.	
5	Checking the primary transfer unit	The transfer belt surface is dirty or scratched	Clean the transfer belt surface. Or, replace the primary transfer unit.	
6	(When the image is too light) Checking the drum unit, developer unit and LSU	The parts for the drum unit, developer unit and LSU is dirty or worn out.	Clean drum unit Y, developer unit Y and the LSU. If the parts are worn down, replace the unit.	
7	(When the color shift occurs) Checking the LSU and the drum unit	The LSU or drum unit is not installed in the proper position. The LSU is faulty.	Reinstall the LSU and the drum unit. If it is not resolved, replace the LSU.	

Step	Check description	Assumed cause	Measures	Reference
8	Reattaching the ID sensor	The ID sensor is not attached properly	Reattach ID sensor 1, 2.	
8	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • ID sensor 1, 2 - Main/engine PWB	
9	Replacing the ID sensor	ID sensor 1, 2 are abnormal and an error is detected when executing Calibration.	Replace ID sensor 1, 2.	
10	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
11	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C7800: Outer thermistor error

The sensor input sampling exceeds the reference value. (After detection, controlled at 25 °C / 77.0 °F)

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • Outer temperature sensor - Main engine PWB	
2	Checking the outer temperature sensor	The outer temperature sensor is not properly attached, or it is faulty.	Reattach the outer temperature sensor. If it is not repaired, replace it.	
3	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
4	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C7901: Drum unit EEPROM error (Black)

1. No response from the device is detected for 5ms or more 5 times continuously when reading / writing the data.
2. The reading data of 2 points mismatches 8 times continuously.

3. The reading data and the writing data mismatch 8 times continuously.

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	The EEPROM data in drum unit K is faulty.	Turn off the power switch and pull out the power plug. After passing 5s, reinsert the power plug and turn on the power switch.	
2	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinsert drum unit K into the main unit all the way to reconnect the connector. Also, if the wire is faulty, replace it. • Drum unit K - Drum relay PWB • Drum relay PWB - Main/engine PWB	
3	Replacing drum unit K	The EEPROM in drum unit K is faulty.	Replace drum unit K.	
4	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
5	Replacing the drum relay PWB	The drum relay PWB is faulty.	Replace the drum relay PWB.	
6	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C7902: Drum unit EEPROM error (Cyan)

1. No response from the device is detected for 5ms or more 5 times continuously when reading / writing the data.
2. The reading data of 2 points mismatches 8 times continuously.
3. The reading data and the writing data mismatch 8 times continuously.

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	The EEPROM data in drum unit C is faulty.	Turn off the power switch and pull out the power plug. After passing 5s, reinsert the power plug and turn on the power switch.	
2	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinsert drum unit C into the main unit all the way to reconnect the connector. Also, if the wire is faulty, replace it. • Drum unit C - Drum relay PWB • Drum relay PWB - Main/engine PWB	
3	Replacing drum unit C	The EEPROM in drum unit C is faulty.	Replace drum unit C.	

Step	Check description	Assumed cause	Measures	Reference
4	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
5	Replacing the drum relay PWB	The drum relay PWB is faulty.	Replace the drum relay PWB.	
6	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C7903: Drum unit EEPROM error (Magenta)

1. No response from the device is detected for 5ms or more 5 times continuously when reading / writing the data.
2. The reading data of 2 points mismatches 8 times continuously.
3. The reading data and the writing data mismatch 8 times continuously.

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	The EEPROM data in drum unit M is faulty.	Turn off the power switch and pull out the power plug. After passing 5s, reinsert the power plug and turn on the power switch.	
2	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinsert drum unit M into the main unit all the way to reconnect the connector. Also, if the wire is faulty, replace it. • Drum unit M - Drum relay PWB • Drum relay PWB - Main/engine PWB	
3	Replacing drum unit M	The EEPROM in drum unit M is faulty.	Replace drum unit M.	
4	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
5	Replacing the drum relay PWB	The drum relay PWB is faulty.	Replace the drum relay PWB.	
6	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C7904: Drum unit EEPROM error (Yellow)

1. No response from the device is detected for 5ms or more 5 times continuously when reading / writing the data.
2. The reading data of 2 points mismatches 8 times continuously.

3. The reading data and the writing data mismatch 8 times continuously.

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	The EEPROM data in drum unit Y is faulty.	Turn off the power switch and pull out the power plug. After passing 5s, reinsert the power plug and turn on the power switch.	
2	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinsert drum unit Y into the main unit all the way to reconnect the connector. Also, if the wire is faulty, replace it. • Drum unit Y - Drum relay PWB • Drum relay PWB - Main/engine PWB	
3	Replacing drum unit Y	The EEPROM in drum unit Y is faulty.	Replace drum unit Y.	
4	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
5	Replacing the drum relay PWB	The drum relay PWB is faulty.	Replace the drum relay PWB.	
6	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C7911: Developer unit EEPROM error (Black)

1. No response from the device is detected for 5ms or more 5 times continuously when reading / writing the data.
2. The reading data of 2 points mismatches 8 times continuously.
3. The reading data and the writing data mismatch 8 times continuously.

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	The EEPROM data in developer unit K is faulty.	Turn off the power switch and pull out the power plug. After passing 5s, reinsert the power plug and turn on the power switch.	
2	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinsert developer unit K into the main unit all the way to reconnect the connector. Also, if the wire is faulty, replace it. • Developer unit K - Drum relay PWB • Drum relay PWB - Main/engine PWB	
3	Replacing developer unit K	The EEPROM in developer unit K is faulty.	Replace developer unit K.	

Step	Check description	Assumed cause	Measures	Reference
4	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
5	Replacing the drum relay PWB	The drum relay PWB is faulty.	Replace the drum relay PWB.	
6	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C7912: Developer unit EEPROM error (Cyan)

1. No response from the device is detected for 5ms or more 5 times continuously when reading / writing the data.
2. The reading data of 2 points mismatches 8 times continuously.
3. The reading data and the writing data mismatch 8 times continuously.

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	The EEPROM data in developer unit C is faulty.	Turn off the power switch and pull out the power plug. After passing 5s, reinsert the power plug and turn on the power switch.	
2	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinsert developer unit C into the main unit all the way to reconnect the connector. Also, if the wire is faulty, replace it. <ul style="list-style-type: none"> • Developer unit C - Drum relay PWB • Drum relay PWB - Main/engine PWB 	
3	Replacing developer unit C	The EEPROM in developer unit C is faulty.	Replace the developer unit C.	
4	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
5	Replacing the drum relay PWB	The drum relay PWB is faulty.	Replace the drum relay PWB.	
6	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C7913: Developer unit EEPROM error (Magenta)

1. No response from the device is detected for 5ms or more 5 times continuously when reading / writing the data.
2. The reading data of 2 points mismatches 8 times continuously.

3. The reading data and the writing data mismatch 8 times continuously.

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	The EEPROM data in developer unit M is faulty.	Turn off the power switch and pull out the power plug. After passing 5s, reinsert the power plug and turn on the power switch.	
2	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinsert developer unit M into the main unit all the way to reconnect the connector. Also, if the wire is faulty, replace it. • Developer unit M - Drum relay PWB • Drum relay PWB - Main/engine PWB	
3	Replacing developer unit M	The EEPROM in developer unit M is faulty.	Replace the developer unit M.	
4	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
5	Replacing the drum relay PWB	The drum relay PWB is faulty.	Replace the drum relay PWB.	
6	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C7914: Developer unit EEPROM error (Yellow)

1. No response from the device is detected for 5ms or more 5 times continuously when reading / writing the data.
2. The reading data of 2 points mismatches 8 times continuously.
3. The reading data and the writing data mismatch 8 times continuously.

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	The EEPROM data in developer unit Y is faulty.	Turn off the power switch and pull out the power plug. After passing 5s, reinsert the power plug and turn on the power switch.	
2	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinsert developer unit Y into the main unit all the way to reconnect the connector. Also, if the wire is faulty, replace it. • Developer unit Y - Drum relay PWB • Drum relay PWB - Main/engine PWB	
3	Replacing developer unit Y	The EEPROM in developer unit Y is faulty.	Replace the developer unit Y.	

Step	Check description	Assumed cause	Measures	Reference
4	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
5	Replacing the drum relay PWB	The drum relay PWB is faulty.	Replace the drum relay PWB.	
6	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C9180: DP reverse motor error

Target: 30ppm model

For the internal count

The home position cannot be detected at 3 time of retries.

.*HP (home position) detection: Retry is executed if HP is not detected after driving the DP reversing motor for one round when moving to HP.

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	The DP reverse motor is not controlled normally.	Turn off the power switch and pull out the power plug. After passing 5s, reinsert the power plug and turn on the power switch.	
2	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • DP reverse motor - Main/engine PWB • DP reverse sensor - Main/engine PWB	
3	Checking the DP reverse motor	The DP reverse motor does not normally rotate, or it is faulty.	Remove the DP reverse motor and fix it by rotating the drive parts manually. Then, reattach it. If not fixed, replace it.	
4	Checking the DP reverse sensor	The DP reverse sensor is not properly attached, or it is faulty.	Reattach the DP reverse sensor. If it is not repaired, replace it.	
5	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
6	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

C9540: Backup data error

When multiple parts are replaced at the same time, the internal data is changed and it interferes with the machine operation. Consequently, the main unit cannot recover.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the PWB	Multiple PWBs were replaced at the same time.	Recover to the original, if 2 or more of the following related parts were replaced at the same time. • Related parts: Memory, each PWB	
2	Checking the unit	Multiple units were replaced at the same time.	Be sure not to perform the following works at the same time when the memory or each PWB is replaced. • Replacing the drum unit or the developer unit	

(2) System Error (Fxxxx) Outline

Error code	Contents
F000	Communication error between the main/engine PWB and the operation panel PWB
F010	Program ready error
F020	RAM checksum error
F040	Communication error between the controller and the print engine
F050	Print engine main program error
F14D	An error in the FAX control section is detected.

Content of System Error (Fxxxx) Outline

F000 : Communication error between the main/engine PWB and the operation panel PWB

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	The communication is faulty between the main/engine PWB and the operation panel PWB.	Turn off the power switch and pull out the power plug. After passing 5s, reinsert the power plug and turn on the power switch.	
2	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • Main/engine PWB - Operation panel PWB	
3	Executing U021	The backup RAM data is faulty.	Execute U021 to initialize the backup RAM data.	
4	Replacing the main/engine PWB	The main/engine PWB is faulty.	Replace the main/engine PWB.	
5	Replacing the operation panel PWB	The operation panel PWB is faulty.	Replace the operation panel PWB.	

F010 : Program ready error

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	The checksum in the main/engine PWB is faulty.	Turn off the power switch and pull out the power plug. After passing 5s, reinsert the power plug and turn on the power switch.	

Step	Check description	Assumed cause	Measures	Reference
2	Checking the main/engine PWB	The connector and FFC are not connected properly or the wire, FFC or PWB is faulty.	Clean the terminal of the connectors on the main/engine PWB, reconnect the connector of the wire, and reconnect the FFC terminal. If the wire or the FFC is faulty, repair or replace them. If not resolved, replace the main/engine PWB.	

F020 : RAM checksum error

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	The checksum in the main/engine PWB is faulty.	Turn off the power switch and pull out the power plug. After passing 5s, reinsert the power plug and turn on the power switch.	
2	Checking the main/engine PWB	The connector and FFC are not connected properly or the wire, FFC or PWB is faulty.	Clean the terminal of the connectors on the main/engine PWB, reconnect the connector of the wire, and reconnect the FFC terminal. If the wire or the FFC is faulty, repair or replace them. If not resolved, replace the main/engine PWB.	

F040: Communication error between the controller and the print engine

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	The communication between the controller and the print engine is faulty.	Turn off the power switch and pull out the power plug. After passing 5s, reinsert the power plug and turn on the power switch.	
2	Checking the main/engine PWB	The connector and FFC are not connected properly or the wire, FFC or PWB is faulty.	Clean the terminal of the connectors on the main/engine PWB, reconnect the connector of the wire, and reconnect the FFC terminal. If the wire or the FFC is faulty, repair or replace them. If not resolved, replace the main/engine PWB.	

F050 : Print engine main program error

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
2	Resetting the main power	The print engine ROM checksum is faulty.	Turn off the power switch and pull out the power plug. After passing 5s, reinsert the power plug and turn on the power switch.	
3	Reinstalling the EEPROM	The EEPROM is not properly attached.	Reattach the EEPROM on the main/engine PWB.	
4	Checking the main/engine PWB	The connector and FFC are not connected properly or the wire, FFC or PWB is faulty.	Clean the terminal of the connectors on the main/engine PWB, reconnect the connector of the wire, and reconnect the FFC terminal. If the wire or the FFC is faulty, repair or replace them. If not resolved, replace the main/engine PWB.	

F14D : An error in the FAX control section is detected.

Step	Check description	Assumed cause	Measures	Reference
1	Reinstalling the firmware	The firmware is faulty.	Reinstall the firmware.	
2	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • FAX PWB - Main/engine PWB	
3	Replacing the FAX PWB	The FAX PWB is faulty.	Replace the FAX PWB.	
4	Replacing the main/engine PWB	The main/engine PWB is faulty.	Replace the main/engine PWB.	

(2-1) System Error (Fxxxx) Outline

The document is described for the outline of the factors of the Fxxx errors that are not described in the self-diagnosis error code list.

Please utilize it as the measures when the system is not recovered after power off/on or it frequently occurs.

*: Power is partially supplied to this machine when the power is turned off.

Unplug the power plug and check if the F-code error is not released when passing one minute or more after turning the power off and then on.

*: Please initially check the following when the error (Fxxx) is indicated.

- Check the DIMM (DDR memory) and neighboring parts: Check the contact on the control PWB by releasing and reinserting the DIMM.

If the error repeats after that, replace the DIMM.

Code	Content	Check procedure & check point	Remark (Common)
-	Lock-up at Welcome display (TASKalfa/Ecosys) (The display unchanges after a certain time (Note))	<ol style="list-style-type: none"> 1. Check the wire or connector between Operation panel PWB and Main/engine PWB and correct it if necessary. (Reconnect the connector or replace the wire) Check the operation after that. 2. Execute U021 (Init memory) and check function. 3. Replace the operation panel PWB and check function. 4. Replace the main/engine PWB and check function. 5. Retrieve the USBLOG and contact the Service Administrative Division. 	
F000	F000 appears in a certain time (Note) after the Welcome display continues Operation panel- Main board communication error	<ol style="list-style-type: none"> 1. Check the wire or connector between Operation panel PWB and Main/engine PWB and correct it if necessary. (Reconnect the connector or replace the wire) Check the operation after that. 2. Execute U021 (Init memory) and check function. 3. Replace the operation panel PWB and check function. 4. Replace the main/engine PWB and check function. 5. Retrieve the USBLOG and contact the Service Administrative Division. 	
F12X	An error is detected at scan control section	<ol style="list-style-type: none"> 1. Check the wire or connector between Scan/DP PWB (CCD PWB or DP relay PWB) and Main/engine PWB and correct it if necessary. (Reconnect the connector or replace the wire) Check the operation after that. 2. Execute U021 (Init memory) and check function. 3. Replace the CCD PWB or DP relay PWB and check function. 4. Replace the main/engine PWB and check function. 5. Retrieve the USBLOG and contact the Service Administrative Division. 	Authentication device: Card Reader, etc.
F14X	An error is detected at the FAX control section	<ol style="list-style-type: none"> 1. Check the wire or connector between FAX PWB, IO replay PWB and Main/engine PWB and correct it if necessary. (Reconnect the connector or replace the wire) Check the operation after that. 2. Execute U021 (Init memory) and check function. 3. Replace the FAX PWB and check function. 4. Replace the main/engine PWB and check function. 5. Retrieve the USBLOG and contact the Service Administrative Division. 	[Checking the FAX connector connection] FAX exclusive I/F (It is not the eKUIO)

Code	Content	Check procedure & check point	Remark (Common)
F15X	An error is detected at the authentication device control section	<ol style="list-style-type: none"> 1. Check the wire or connector between the authentication device and Main/engine PWB and correct it if necessary. (Reconnect the connector or replace the wire) Check the operation after that. 2. Execute U021 (Init memory) and check function. 3. Replace the main/engine PWB and check function. 4. Retrieve the USBLOG and contact the Service Administrative Division. 	Authentication device: Card Reader, etc.
F17X	An error is detected at the print data control section	<ol style="list-style-type: none"> 1. Execute U021 (Init memory) and check function. 2. Replace the main/engine PWB and check function. 3. Retrieve the USBLOG and contact the Service Administrative Division. 	
F18X	An error is detected at the Video control section	<ol style="list-style-type: none"> 1. Execute U021 (Init memory) and check function. 2. Replace the main/engine PWB and check function. 3. Retrieve the USBLOG and contact the Service Administrative Division. 	
F1DX	An error is detected at the Image memory management section	<ol style="list-style-type: none"> 1. Execute U021 (Init memory) and check function. 2. Replace the main/engine PWB and check function. 3. Retrieve the USBLOG and contact the Service Administrative Division. 	* Poor arrangement of F1D4:Random Access Memory (1) Confirmation of U340 (2) Initialization of a set point (U021)
F21X F22X F23X	An error is detected at the Image processing section	<ol style="list-style-type: none"> 1. Check contact of the DIMM by releasing and reinserting, and check the function. Replace DIMM if available, and check function. 2. Execute U021 (Init memory) and check function. 3. Replace the main/engine PWB and check function. 4. Retrieve the USBLOG and contact the Service Administrative Division. 	
F24X	An error is detected at the System management section	<ol style="list-style-type: none"> 1. 1. Check contact of the DIMM by releasing and reinserting, and check the function. Replace DIMM if available, and check function.??? 2. Execute U021 (Init memory) and check function. 3. Replace the main/engine PWB and check function. 4. Retrieve the USBLOG and contact the Service Administrative Division. 	F248 error is printer process error. If it repeats with a certain print data, retrieve the capture data and USBLOG.
F25X	Abnormality detecting in a network management department	<ol style="list-style-type: none"> 1. Execute U021 (Init memory) and check function. 2. Replace the main/engine PWB and check function. 3. Retrieve the USBLOG and contact the Service Administrative Division. 	[Main body to External network] Ethernet connector

Code	Content	Check procedure & check point	Remark (Common)
F26X F27X F28X F29X F2AX	An error is detected at the System management section	<ol style="list-style-type: none"> 1. Execute U021 (Init memory) and check function. 2. Replace the main/engine PWB and check function. 3. Retrieve the USBLOG and contact the Service Administrative Division. 	
F2BX F2CX F2DX F2EX F2FX F30X F31X F32X	Abnormality detecting in a network control part	<ol style="list-style-type: none"> 1. Execute U021 (Init memory) and check function. 2. Replace the main/engine PWB and check function. 3. Retrieve the USBLOG and contact the Service Administrative Division. 	[Main body to External network] Ethernet connector
F33X	An error is detected at the Scan management section	<ol style="list-style-type: none"> 1. Check the wire or connector between Scan/DP PWB (CCD PWB or DP relay PWB) and Main/engine PWB and correct it if necessary. (Reconnect the connector or replace the wire) Check the operation after that. 2. Execute U021 (Init memory) and check function. 3. Replace the operation panel PWB and check function. 4. Replace the main/engine PWB and check function. 5. Retrieve the USBLOG and contact the Service Administrative Division. 	
F34X	An error is detected at the Panel management section	<ol style="list-style-type: none"> 1. Check the wire and the connection of the connectors between the operation panel PWB and the main/engine PWB, and check function. (For HyPAS model only)?? 2. Execute U021 (Init memory) and check function. 3. Replace the operation panel PWB and check function. (For HyPAS model only) 4. Replace the main/engine PWB and check function. 5. Retrieve the USBLOG and contact the Service Administrative Division. 	The error inside of the panel process (Command response wait timeout, etc.) * Possible hardware factors are connector disconnection of harness between the Panel and the Main PWB, etc.)
F35X	An error is detected at the Print control section	<ol style="list-style-type: none"> 1. Execute U021 (Init memory) and check function. 2. Replace the main/engine PWB and check function. 3. Retrieve the USBLOG and contact the Service Administrative Division. 	
F37X	An error is detected at the FAX management section	<ol style="list-style-type: none"> 1. Execute U021 (Init memory) and check function. 2. Replace the main/engine PWB and check function. 3. Retrieve the USBLOG and contact the Service Administrative Division. 	

Code	Content	Check procedure & check point	Remark (Common)
F38X	An error is detected at the Authentication/ permit management section	1. Execute U021 (Init memory) and check function. 2. Replace the main/engine PWB and check function. 3. Retrieve the USBLOG and contact the Service Administrative Division.	
F3AX F3BX F3CX F3DX F3EX F3FX F40X F41X F43X F44X F45X	An error is detected at the Entity control section	1. Execute U021 (Init memory) and check function. 2. Replace the main/engine PWB and check function. 3. Retrieve the USBLOG and contact the Service Administrative Division.	
F46X	An error is detected at the Print image process section	1. Replace the main/engine PWB and check function. 2. Retrieve the USBLOG and contact the Service Administrative Division. (or retrieve the print capture data by case)	F46F error is printer process error. If it repeats with a certain print data, retrieve the capture data and USBLOG.
F47X F48X	An error is detected at the Image edit process control section	1. Execute U021 (Init memory) and check function. 2. Replace the main/engine PWB and check function. 3. Retrieve the USBLOG and contact the Service Administrative Division.	
F4DX	An error is detected at the Entity control section	1. Execute U021 (Init memory) and check function. 2. Replace the main/engine PWB and check function. 3. Retrieve the USBLOG and contact the Service Administrative Division.	
F50X	An error is detected at the FAX control section	1. Execute U021 (Init memory) and check function. 2. Replace the main/engine PWB and check function. 3. Retrieve the USBLOG and contact the Service Administrative Division.	The USB log is necessary for analysis. Please cooperate in retrieving it
F52X F53X F55X F56X F57X	An error is detected at the Job control section	1. Execute U021 (Init memory) and check function. 2. Replace the main/engine PWB and check function. 3. Retrieve the USBLOG and contact the Service Administrative Division.	F56E: OCR dictionary detection error (Occurs if the dictionary in the SD card or the SSD can't be detected)
F63X	An error is detected at the Device control section	1. Execute U021 (Init memory) and check function. 2. Replace the main/engine PWB and check function. 3. Retrieve the USBLOG and contact the Service Administrative Division.	

Code	Content	Check procedure & check point	Remark (Common)
F68X	An error is detected at the Storage device control section	1. Execute U021 (Init memory) and check function. 2. Replace the main/engine PWB and check function. 3. Retrieve the USBLOG and contact the Service Administrative Division.	
F90X	Abnormality detecting in the extension application service part	1. Execute U021 (Init memory) and check function. 2. Replace the main/engine PWB and check function. 3. Retrieve the USBLOG and contact the Service Administrative Division.	The USB log is necessary for analysis. Please cooperate in retrieving it
F93X	Abnormality detecting in the extension application management part	1. Execute U021 (Init memory) and check function. 2. Replace the main/engine PWB and check function. 3. Retrieve the USBLOG and contact the Service Administrative Division.	The USB log is necessary for analysis. Please cooperate in retrieving it
F9FX	Abnormality detecting in the extension application various service part	1. Execute U021 (Init memory) and check function. 2. Replace the main/engine PWB and check function. 3. Retrieve the USBLOG and contact the Service Administrative Division.	The USB log is necessary for analysis. Please cooperate in retrieving it
FC0X	Abnormality detecting in system application	1. Execute U021 (Init memory) and check function. 2. Replace the main/engine PWB and check function. 3. Retrieve the USBLOG and contact the Service Administrative Division.	The USB log is necessary for analysis. Please cooperate in retrieving it
FC5X	Abnormality detecting in Copy application	1. Execute U021 (Init memory) and check function. 2. Replace the main/engine PWB and check function. 3. Retrieve the USBLOG and contact the Service Administrative Division.	The USB log is necessary for analysis. Please cooperate in retrieving it
FCAX	Abnormality detecting in Print application	1. Execute U021 (Init memory) and check function. 2. Replace the main/engine PWB and check function. 3. Retrieve the USBLOG and contact the Service Administrative Division.	The USB log is necessary for analysis. Please cooperate in retrieving it
FCFX	Abnormality detecting in Send application	1. Execute U021 (Init memory) and check function. 2. Replace the main/engine PWB and check function. 3. Retrieve the USBLOG and contact the Service Administrative Division.	The USB log is necessary for analysis. Please cooperate in retrieving it
FD4X	Abnormality detecting in Box application	1. Execute U021 (Init memory) and check function. 2. Replace the main/engine PWB and check function. 3. Retrieve the USBLOG and contact the Service Administrative Division.	The USB log is necessary for analysis. Please cooperate in retrieving it

Code	Content	Check procedure & check point	Remark (Common)
FD9X	Abnormality detecting in FAX application	<ol style="list-style-type: none"> 1. Execute U021 (Init memory) and check function. 2. Replace the main/engine PWB and check function. 3. Retrieve the USBLOG and contact the Service Administrative Division. 	The USB log is necessary for analysis. Please cooperate in retrieving it
FDEX	Abnormality detecting in maintenance application	<ol style="list-style-type: none"> 1. Execute U021 (Init memory) and check function. 2. Replace the main/engine PWB and check function. 3. Retrieve the USBLOG and contact the Service Administrative Division. 	The USB log is necessary for analysis. Please cooperate in retrieving it
FF7X	Abnormality detecting in a report creation part	<ol style="list-style-type: none"> 1. Execute U021 (Init memory) and check function. 2. Replace the main/engine PWB and check function. 3. Retrieve the USBLOG and contact the Service Administrative Division. 	[Controller failure] Only turn off/on the power to solve the problem. It is necessary to provide USBLOG for the investigation.

7-4 FAX Related Errors

(1) FAX Related Errors

No.	Contents
(1)	C0030: FAX PWB system error
(2)	C0070: FAX PWB incompatible detection error
(3)	C0830: FAX PWB flash program area checksum error
(4)	C0870: Image data transmission error to FAX PWB
(5)	C0920: FAX file system error
(6)	F14D
(7)	FAX cannot be sent
(8)	The beep sounds when the copying or printing is finished

Content of FAX Related Errors

(1-1) C0030: FAX PWB system error

The FAX processing cannot be continued due to the firmware error.

Step	Check description	Assumed cause	Measures	Reference
1	Reinstalling the firmware	The firmware is faulty.	Reinstall the firmware.	
2	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • FAX PWB - Main/engine PWB	
3	Replacing the FAX PWB	The FAX PWB is faulty.	Replace the FAX PWB.	
4	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

(1-2) C0070: FAX PWB incompatible detection error

Abnormal detection of FAX control PWB incompatibility in the initial communication with the FAX control PWB, any normal communication command is not transmitted.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the FAX PWB	The incompatible FAX PWB is installed.	Install the FAX PWB for the applicable model.	
2	Reinstalling the firmware	The firmware is faulty.	Reinstall the firmware.	

(1-3) C0830: FAX PWB flash program area checksum error

The program stored in the flash memory is broken so it cannot perform.

Step	Check description	Assumed cause	Measures	Reference
1	Reinstalling the firmware	The firmware is faulty.	Reinstall the firmware.	
2	Initializing the fax	The FAX data is faulty.	Execute U600 to initialize the FAX.	
3	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • FAX PWB - Main/engine PWB	
4	Replacing the FAX PWB	The FAX PWB is faulty.	Replace the FAX PWB.	
5	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

(1-4) C0870: Image data transmission error to FAX PWB

Data was not properly transmitted even if the specified times of retry were made when the large volume data is transmitted into the FAX PWB

Step	Check description	Assumed cause	Measures	Reference
1	Reinstalling the firmware	The firmware is faulty.	Reinstall the firmware.	
2	Initializing the fax	The FAX data is faulty.	Execute U600 to initialize the FAX.	
3	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • FAX PWB - Main/engine PWB	
4	Replacing the FAX PWB	The FAX PWB is faulty.	Replace the FAX PWB.	
5	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

(1-5) C0920: FAX file system error

The backup data cannot be stored in the flash memory device due to the file system error

Step	Check description	Assumed cause	Measures	Reference
1	Reinstalling the firmware	The firmware is faulty.	Reinstall the firmware.	
2	Initializing the fax	The FAX data is faulty.	Execute U600 to initialize the FAX.	

Step	Check description	Assumed cause	Measures	Reference
3	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • FAX PWB - Main/engine PWB	
4	Replacing the FAX PWB	The FAX PWB is faulty.	Replace the FAX PWB.	
5	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

(1-6) F14D

An error in the FAX control section is detected.

Step	Check description	Assumed cause	Measures	Reference
1	Reinstalling the firmware	The firmware is faulty.	Reinstall the firmware.	
2	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • FAX PWB - Main/engine PWB	
3	Replacing the FAX PWB	The FAX PWB is faulty.	Replace the FAX PWB.	
4	Main/engine PWB replacement	The main/engine PWB is faulty.	Replace the main/engine PWB.	

(1-7) FAX cannot be sent

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection of the modular cable	The modular cable disconnects.	Reconnect the modular cable.	
2	Changing the connection	If the adapter and the switching device or the like is connected to the telephone line, it is affected.	Directly connect the main unit to the telephone line.	
3	Setting the country code	The country code is not properly set.	Set the proper Country Code from 'FAX Country Code' in the Service Settings.	
4	Checking the settings	The line settings are incorrect.	Correct the line settings. (Reduce the transmission speed, etc.)	

Step	Check description	Assumed cause	Measures	Reference
5	Checking the destination unit	The destination unit is busy.	Wait a while and then redial the number if busy tones are heard.	
6	Checking the destination unit	The modular cable is disconnected in the destination unit if the destination unit does not receive the calling.	Request the destination unit to reconnect the modular cable.	
7	Checking the setting in the destination unit	The manual reception is set in the destination unit if the destination unit does not receive the calling.	Ask the destination unit to change the reception settings.	
8	Checking the sending content	When transmitting the data to the other country, the communication line is automatically cut.	Input a pause at the last of the destination FAX number.	

(1-8) The beep sounds when the copying or printing is finished

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the firmware to the latest version.	

(2) FAX error code

Error codes are listed on the communication reports, activity report, etc. The codes consist of an error code indication U followed by a 5-digit number. (Error codes for V34 communication errors start with an E indication, followed by five digits.)

The upper three of the five digits indicate general classification of the error and its cause, while the lower two indicate the detailed classification. Items for which detailed classification is not necessary have 00 as the last two digits.

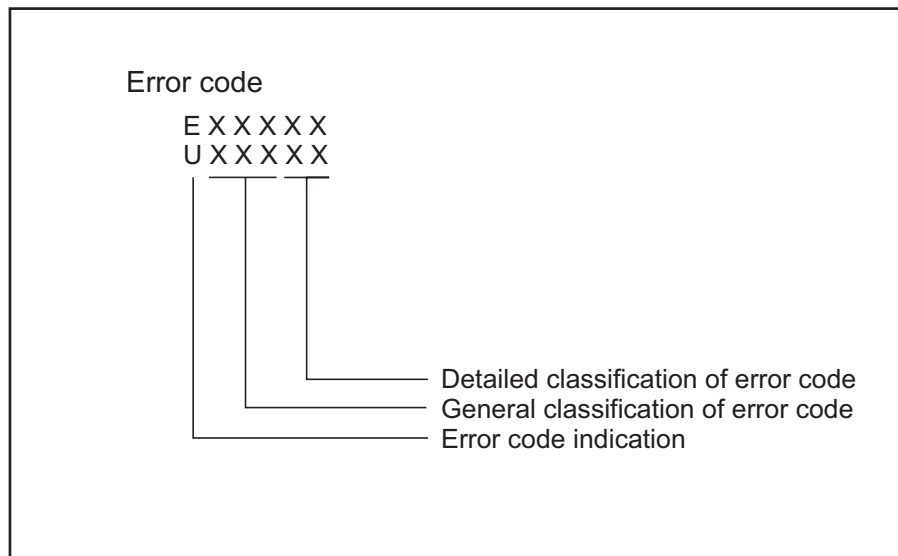


Figure 7-31

Error code	Contents
U00000/E00000	No response or busy after the set times of redials.
U00100/E00100	Transmission was interrupted by a press of the stop/clear key.
U00200/E00200	Reception was interrupted by a press of the [Stop] key.
U00300/E00300	Recording paper on the destination unit has run out during transmission.
U00430/E00430	Polling request was received but interrupted because of a mismatch in permitted number. Or, sub address-based bulletin board transmission request was received but interrupted because of a mismatch in permitted ID in the transmitting unit.
U00431/E00431	An sub address bulletin board transmission was interrupted because the specified sub address password was not registered.
U00432/E00432	A sub address bulletin board transmission was interrupted because the sub address password did not match.
U00433/E00433	A sub address bulletin board transmission request was received but data was not present in the sub address box.
U00440/E00440	Sub address confidential reception was interrupted because the specified sub address password was not registered.
U00450/E00450	The reception was interrupted because the permitted ID and FAX number did not match in the restricted transmission (password check transmission) in the destination unit.
U00460/E00460	The encryption reception was interrupted because the specified encryption box number was not registered.

Error code	Contents
U00462/E00462	Encrypted reception was interrupted because the encryption key for the specified encryption box was not registered.
U00601/E00601	1. The original feed jam occurs. 2. The original length exceeds the maximum allowed.
U00613/E00613	Image writing section error
U00656/E00656	The data was not transmitted due to an error in the modem.
U00690/E00690	System error
U00800/E00800	A page transmission error occurred because of the reception of an RTN or PIN signal.
U00811/E00811	A page reception error remained after retry of transmission in the ECM mode.
U00900/E00900	An RTN or PIN signal was transmitted because of a page reception error.
U01000/E01000	An FTT signal was received for a set number of times after TCF signal transmission at 2400 bps. Or, an RTN signal was received in response to a Q signal (excluding EOP) after transmission at 2400 bps.
U01001/E01001	Function as indicated by DIS signal is not consistent with the one of own machine.
U01016/E01016	T1 timeout occurs since MBF signal is received but DIS signal is not after sending EOM signal.
U01019/E01019	Command send retrial times exceeds since significant signal is not received after sending CNC signal. (between own machines)
U01020/E01020	Command send retrial times exceeds since significant signal is not received after sending CTC signal. (ECM)
U01021/E01021	Command send retry time has exceeded since message signal is not received after sending EOR•Q signal. (ECM)
U01022/E01022	Command send retrial times exceeds since significant signal is not received after sending RR signal. (ECM)
U01028/E01028	T5 timeout is detected when sending in ECM (ECM)
U01052/E01052	DCN signal is received after sending RR signal (ECM)
U01080/E01080	PIP signal is received after sending PPS and NULL signals.
U01092/E01092	Communication is stopped since there are impossible combination of symbol speed and communication speed at V.34 sending.
U01093/E01093	A DCN or other inappropriate signal was received during phase B of transmission.
U01094/E01094	DCS/NSS signal send retrial time is exceeded at phase B during transmission.
U01095/E01095	Command send retrial time is exceeded since significant signal is not received after sending (PPS) Q signal at phase D during transmission.
U01096/E01096	DCN signal or invalid command is received at phase D during transmission.
U01097/E01097	The preset number of command retransfers was exceeded after transmission of an RR signal or no response.
U01100/E01100	Function indicated by DCS signal is not consistent with the one of own machine.
U01101/E01101	Function indicated by NSS signal except communication type is not consistent with the one of own machine.
U01102/E01102	DTC (NSC) signal is received while own machine has no transmission data.

Error code	Contents
U01110/E01110	No response is received after sending DIS signal.
U01111/E01111	No response is received after sending DTC (NSC) signal.
U01113/E01113	No response after transmitting an FTT signal.
U01125/E01125	No response after transmitting a CNS signal. (Between the units of our make)
U01129/E01129	No response after transmitting an SPA signal. (Short protocol)
U01141/E01141	DCN signal is received after sending DTC signal.
U01143/E01143	DCN signal is received after sending FTT signal.
U01155/E01155	DCN signal is received after sending SPA signal. (simplified protocol)
U01160/E01160	Maximum transmission time per line is exceeded while receiving message.
U01162/E01162	Reception was aborted due to a modem malfunction during message reception.
U01191/E01191	Communication is stopped with error during image data receipt sequence at V.34.
U01193/E01193	No response, DCN signal or invalid command is received at phase C/D during reception.
U01194/E01194	DCN signal is received at phase B during reception.
U01195/E01195	No message is received at phase C during reception.
U01196/E01196	Error line control overflow and decoding error occurred in messages during reception.
U01400/E01400	An invalid one-touch key was specified during communication.
U01500/E01500	A communication error occurred when calling in V.8 mode.
U01600/E01600	A communication error occurred when called in V.8 mode.
U01700/E01700	A communication error occurred in phase 2 (line probing).
U01720/E01720	The communication error appears at phase 4 (replacing the modem parameter).
U01721/E01721	The communication was interrupted because there is no communication speed commonly used with the destination unit.
U01800/E01800	A communication error occurred in phase 2 (line probing).
U01810/E01810	A communication error occurred in phase 3 (primary channel equivalent device training).
U01820/E01820	The communication error appears at phase 4 (replacing the modem parameter).
U01821/E01821	The communication was interrupted because there is no communication speed commonly used with the destination unit.
U03000/E03000	No document was present in the destination unit when polling reception started.
U03200/E03200	In interoffice sub address bulletin board reception, the data was not stored in the box specified by the destination unit.
U03300/E03300	In polling reception from a unit of our own model, operation was interrupted due to a mismatch in permitted ID or telephone number. Or, in interoffice sub address-based bulletin board reception, operation was interrupted due to a mismatch in permitted ID or telephone number.
U03400/E03400	Polling reception was interrupted because of a mismatch in individual numbers (destination unit is either of our make or by another manufacturer).
U03500/E03500	In interoffice sub address bulletin board reception, the specified sub address password was not registered in the destination unit.
U03600/E03600	An interoffice sub address bulletin board reception was interrupted because of a mismatch in the specified sub address password.

Error code	Contents
U03700/E03700	Interoffice sub address bulletin board reception failed because the destination unit had no sub address bulletin board transmission capability, or data was not stored in any sub address box in the destination unit.
U04000/E04000	In interoffice sub address transmission mode, the specified sub address password was not registered in the destination unit.
U04100/E04100	The destination unit had no sub address reception capability while the sub address transmission was executed.
U04200/E04200	In encrypted transmission, the specified encryption box was not registered in the destination unit.
U04300/E04300	The encryption transmission was carried out, but there is no encryption function at the other machine.
U04400/E04400	Encrypted transmission was interrupted because encryption keys did not agree.
U04500/E04500	Encrypted reception was interrupted because of a mismatch in encryption keys.
U05100/E05100	The transmission was interrupted because the permitted ID and FAX number did not match in the restricted transmission (password check transmission).
U05200/E05200	Restricted reception (Password check reception) was interrupted because the permitted FAX number / ID did not match, the rejected FAX number matched, or the destination unit did not return its phone number.
U05300/E05300	The destination unit set the restricted reception (Password check reception). Consequently, the transmission was interrupted because the permitted FAX number / ID did not match, the rejected FAX number matched, or the own unit did not return its phone number.
U14000/E14000	Memory overflowed during the sub address confidential reception.
U14100/E14100	In interoffice sub address transmission, memory overflowed in the destination unit.
U19000/E19000	Memory overflowed during memory reception.
U19100/E19100	Memory overflowed in the destination unit while transmitting the data.
U19300/E19300	Transmission failed because an error appeared during JBIG encoding.

Content of Communication Errors

U00000/E00000

Step	Check description	Assumed cause	Measures	Reference
1	Resending	The status is Busy.	Check if the destination unit can receive the data and resend the data if there is no particular problem.	

U00100/E00100

Step	Check description	Assumed cause	Measures	Reference
1	Resending	Transmission was interrupted by a press of the stop/clear key.	Resend.	

U00200/E00200

Step	Check description	Assumed cause	Measures	Reference
1	Request for resending	Reception was interrupted by a press of the [Stop] key.	Suspend resending from the destination unit or request the destination unit to resend the data.	

U00300/E00300

Step	Check description	Assumed cause	Measures	Reference
1	Request to the destination unit	Recording paper on the destination unit has run out during transmission.	Request the destination unit to set the recording papers.	

U00430/E00430

Step	Check description	Assumed cause	Measures	Reference
1	Checking the permitted number	Polling or sub address bulletin board transmission were requested, but the communication was interrupted because the permitted ID did not match. (It occurs in the transmitting unit.)	Register a valid permitted number	

U00431/E00431

Step	Check description	Assumed cause	Measures	Reference
1	Checking the destination unit	An sub address bulletin board transmission was interrupted because the specified sub address password was not registered.	Register the sub address password in the destination unit.	

U00432/E00432

Step	Check description	Assumed cause	Measures	Reference
1	Checking the sub address password	A sub address bulletin board transmission was interrupted because the sub address password did not match.	Send by using correct the sub address password.	

U00433/E00433

Step	Check description	Assumed cause	Measures	Reference
1	Checking the sub address box	A sub address bulletin board transmission request was received but data was not present in the sub address box.	Set data in the sub address box.	

U00440/E00440

Step	Check description	Assumed cause	Measures	Reference
1	Checking the sub address password	Sub address confidential reception was interrupted because the specified sub address password was not registered.	Register the sub address password.	

U00450/E00450

Step	Check description	Assumed cause	Measures	Reference
1	Checking the permitted number	The reception was interrupted because the permitted ID and FAX number did not match in the restricted transmission (password check transmission) in the destination unit.	Register the permitted number to be consistent at own machine side.	

U00460/E00460

Step	Check description	Assumed cause	Measures	Reference
1	Checking the encryption key	The encryption reception was interrupted because the specified encryption box number was not registered.	Register an encrypted box number.	

U00462/E00462

Step	Check description	Assumed cause	Measures	Reference
1	Checking the encryption key	Encrypted reception was interrupted because the encryption key for the specified encryption box was not registered.	Register an encryption key.	

U00601/E00601

Step	Check description	Assumed cause	Measures	Reference
1	Checking the original	Original jam	Clear original feed jam and resend.	
2	Checking the original	The original length exceeds the maximum allowed.	Check if the original length does not exceed 1.6 meter and resend.	

U00613/E00613

Step	Check description	Assumed cause	Measures	Reference
1	Checking the service call error record	Image writing section error	Check the service call error record and perform the corrective actions.	

U00656/E00656

Step	Check description	Assumed cause	Measures	Reference
1	Resending	Transmission was interrupted because there was an error in the modem.	Resend.	
2	Resetting the main power and reinstalling the FAX PWB	Transmission was interrupted because there was an error in the modem.	Turn off the power switch and pull out the power plug. After passing 5s, reattach the FAX PWB and reinsert the power plug. Then, turn on the power switch.	
3	Firmware upgrade	The firmware is not the latest version.	Upgrade the fax firmware to the latest version.	
4	Initializing the fax	The FAX initial value was changed.	Execute U600 to initialize the FAX.	
5	Checking the FAX PWB	The FAX PWB is faulty.	Replace the FAX PWB.	

U00690/E00690

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	System error	Turn off the power switch and unplug the power cord. After 5s passes, reconnect the power cord and turn on the power switch.	
2	Measures for the system error	System error in the main unit	Perform the corrective actions for the system error in the main unit.	

U00800/E00800

Step	Check description	Assumed cause	Measures	Reference
1	Checking the transmit start speed	A page was not correctly transmitted because of the receiving an RTN or PIN signal during communication.	In case pages are not properly sent and resending does not solve it, reduce transmit start speed and resend the data.	

U00811/E00811

Step	Check description	Assumed cause	Measures	Reference
1	Resending	A page reception error remained after retry of transmission in the ECM mode.	In case pages are not properly sent and resending does not solve it, reduce transmit start speed and resend the data.	

U00900/E00900

Step	Check description	Assumed cause	Measures	Reference
1	Resending	An RTN or PIN signal was transmitted because of a page reception error.	Resend the page if there is a page not transmitted properly.	

U01000/E01000

Step	Check description	Assumed cause	Measures	Reference
1	Resending	An FTT signal was received for a set number of times after TCF signal transmission at 2400 bps. Or, an RTN signal was received in response to a Q signal (excluding EOP) after transmission at 2400 bps.	Resend.	
2	Checking the transmit start speed	Line condition is poor. (Destination unit)	Reduce transmit start speed by executing [TX Speed] at U630, and then resend the data.	
3	Changing the initial value	Line condition is poor. (Own machine)	Change the transmit start speed by executing U630 [TX Speed].	

U01001/E01001

Step	Check description	Assumed cause	Measures	Reference
1	Resending	Function as indicated by DIS signal is not consistent with the one of own machine.	Resend.	
2	Checking the transmit start speed	Line condition is poor. (Destination unit)	Reduce transmit start speed by executing [TX Speed] at U630, and then resend the data.	
3	Changing the initial value	Line condition is poor. (Own machine)	Change the transmit start speed by executing U630 [TX Speed].	

U01016/E01016

Step	Check description	Assumed cause	Measures	Reference
1	Resending	T1 timeout occurs since MBF signal is received but DIS signal is not after sending EOM signal.	Resend.	
2	Checking the transmit start speed	Line condition is poor. (Destination unit)	Reduce transmit start speed by executing [TX Speed] at U630, and then resend the data.	
3	Changing the initial value	Line condition is poor. (Own machine)	Change the transmit start speed by executing U630 [TX Speed].	

U01019/E01019

Step	Check description	Assumed cause	Measures	Reference
1	Resending	Command send retrial times exceeds since significant signal is not received after sending CNC signal. (between own machines)	Resend.	
2	Checking the transmit start speed	Line condition is poor. (Destination unit)	Reduce transmit start speed by executing [TX Speed] at U630, and then resend the data.	
3	Changing the initial value	Line condition is poor. (Own machine)	Change the transmit start speed by executing U630 [TX Speed].	

U01020/E01020

Step	Check description	Assumed cause	Measures	Reference
1	Resending	Command send retrial times exceeds since significant signal is not received after sending CTC signal. (ECM)	Resend.	
2	Checking the transmit start speed	Line condition is poor. (Destination unit)	Reduce transmit start speed by executing [TX Speed] at U630, and then resend the data.	
3	Changing the initial value	Line condition is poor. (Own machine)	Change the transmit start speed by executing U630 [TX Speed].	

U01021/E01021

Step	Check description	Assumed cause	Measures	Reference
1	Resending	Command send retry time has exceeded since message signal is not received after sending EOR·Q signal. (ECM)	Resend.	
2	Checking the transmit start speed	Line condition is poor. (Destination unit)	Reduce transmit start speed by executing [TX Speed] at U630, and then resend the data.	
3	Changing the initial value	Line condition is poor. (Own machine)	Change the transmit start speed by executing U630 [TX Speed].	

U01022/E01022

Step	Check description	Assumed cause	Measures	Reference
1	Resending	Command send retrial times exceeds since significant signal is not received after sending RR signal. (ECM)	Resend.	
2	Checking the transmit start speed	Line condition is poor. (Destination unit)	Reduce transmit start speed by executing [TX Speed] at U630, and then resend the data.	
3	Changing the initial value	Line condition is poor. (Own machine)	Change the transmit start speed by executing U630 [TX Speed].	

U01028/E01028

Step	Check description	Assumed cause	Measures	Reference
1	Resending	T5 timeout is detected when sending in ECM (ECM)	Resend.	
2	Checking the transmit start speed	Line condition is poor. (Destination unit)	Reduce transmit start speed by executing [TX Speed] at U630, and then resend the data.	
3	Changing the initial value	Line condition is poor. (Own machine)	Change the transmit start speed by executing U630 [TX Speed].	

U01052/E01052

Step	Check description	Assumed cause	Measures	Reference
1	Resending	DCN signal is received after sending RR signal (ECM)	Resend.	
2	Checking the transmit start speed	Line condition is poor. (Destination unit)	Reduce transmit start speed by executing [TX Speed] at U630, and then resend the data.	
3	Changing the initial value	Line condition is poor. (Own machine)	Change the transmit start speed by executing U630 [TX Speed].	

U01080/E01080

Step	Check description	Assumed cause	Measures	Reference
1	Resending	PIP signal is received after sending PPS and NULL signals.	Resend.	
2	Checking the transmit start speed	Line condition is poor. (Destination unit)	Reduce transmit start speed by executing [TX Speed] at U630, and then resend the data.	
3	Changing the initial value	Line condition is poor. (Own machine)	Change the transmit start speed by executing U630 [TX Speed].	

U01092/E01092

Step	Check description	Assumed cause	Measures	Reference
1	Resending	Communication is stopped since there are impossible combination of symbol speed and communication speed at V.34 sending.	Resend.	
2	Checking the transmit start speed	Line condition is poor. (Destination unit)	Reduce transmit start speed by executing [TX Speed] at U630, and then resend the data.	
3	Changing the initial value	Line condition is poor. (Own machine)	Change the transmit start speed by executing U630 [TX Speed].	

U01093/E01093

Step	Check description	Assumed cause	Measures	Reference
1	Checking the settings	The modem is not detected since the received signal is attenuated with its frequency response.	Set the modem detection level at U650 [RX Mdm Level]. (Initial setting: -43dBm)	
2	Checking the settings	The modem is not detected since the received signal is attenuated with its frequency response.	Set the G3 reception cable equalizer by executing U650 [Reg G3 RX Eqr]. (Initial value: 0dBm)	

U01094/E01094

Step	Check description	Assumed cause	Measures	Reference
1	Resending	DCS/NSS signal send retrial time is exceeded at phase B during transmission.	Resend.	
2	Checking the transmit start speed	Line condition is poor. (Destination unit)	Reduce transmit start speed by executing [TX Speed] at U630, and then resend the data.	
3	Changing the initial value	Line condition is poor. (Own machine)	Change the transmit start speed by executing U630 [TX Speed].	

U01095/E01095

Step	Check description	Assumed cause	Measures	Reference
1	Resending	Command send retrial time is exceeded since significant signal is not received after sending (PPS) Q signal at phase D during transmission.	Resend.	
2	Checking the transmit start speed	Line condition is poor. (Destination unit)	Reduce transmit start speed by executing [TX Speed] at U630, and then resend the data.	
3	Changing the initial value	Line condition is poor. (Own machine)	Change the transmit start speed by executing U630 [TX Speed].	

U01096/E01096

Step	Check description	Assumed cause	Measures	Reference
1	Resending	DCN signal or invalid command is received at phase D during transmission.	Resend.	
2	Checking the transmit start speed	Line condition is poor. (Destination unit)	Reduce transmit start speed by executing [TX Speed] at U630, and then resend the data.	
3	Changing the initial value	Line condition is poor. (Own machine)	Change the transmit start speed by executing U630 [TX Speed].	

U01097/E01097

Step	Check description	Assumed cause	Measures	Reference
1	Resending	The preset number of command retransfers was exceeded after transmission of an RR signal or no response.	Resend.	
2	Checking the transmit start speed	Line condition is poor. (Destination unit)	Reduce transmit start speed by executing [TX Speed] at U630, and then resend the data.	
3	Changing the initial value	Line condition is poor. (Own machine)	Change the transmit start speed by executing U630 [TX Speed].	

U01100/E01100

Step	Check description	Assumed cause	Measures	Reference
1	Request for resending	Function indicated by DCS signal is not consistent with the one of own machine.	Request resending.	
2	Changing the initial value	Line condition is poor. (Own machine)	Change the reception speed by executing U630 [RX Speed].	

U01101/E01101

Step	Check description	Assumed cause	Measures	Reference
1	Request for resending	Function indicated by NSS signal except communication type is not consistent with the one of own machine.	Request resending.	
2	Changing the initial value	Line condition is poor. (Own machine)	Change the reception speed by executing U630 [RX Speed].	

U01102/E01102

Step	Check description	Assumed cause	Measures	Reference
1	Request for resending	DTC (NSC) signal is received while own machine has no transmission data.	Request resending.	
2	Changing the initial value	Line condition is poor. (Own machine)	Change the reception speed by executing U630 [RX Speed].	

U01110/E01110

Step	Check description	Assumed cause	Measures	Reference
1	Request for resending	No response is received after sending DIS signal.	Request resending.	
2	Changing the initial value	Line condition is poor. (Own machine)	Change the reception speed by executing U630 [RX Speed].	

U01111/E01111

Step	Check description	Assumed cause	Measures	Reference
1	Request for resending	No response is received after sending DTC (NSC) signal.	Request resending.	
2	Changing the initial value	Line condition is poor. (Own machine)	Change the reception speed by executing U630 [RX Speed].	

U01113/E01113

Step	Check description	Assumed cause	Measures	Reference
1	Checking the settings	The modem is not detected since the received signal is attenuated with its frequency response.	Set the modem detection level at U650 [RX Mdm Level]. (Initial setting: -43dBm)	
2	Checking the settings	The modem is not detected since the received signal is attenuated with its frequency response.	Set the G3 reception cable equalizer by executing U650 [Reg G3 RX Eqr]. (Initial value: 0dBm)	

U01125/E01125

Step	Check description	Assumed cause	Measures	Reference
1	Request for resending	No response after transmitting a CNS signal. (Between the units of our make)	Request resending.	
2	Changing the initial value	Line condition is poor. (Own machine)	Change the reception speed by executing U630 [RX Speed].	

U01129/E01129

Step	Check description	Assumed cause	Measures	Reference
1	Request for resending	No response after transmitting an SPA signal. (Short protocol)	Request resending.	
2	Changing the initial value	Line condition is poor. (Own machine)	Change the reception speed by executing U630 [RX Speed].	

U01141/E01141

Step	Check description	Assumed cause	Measures	Reference
1	Request for resending	DCN signal is received after sending DTC signal.	Request resending.	
2	Changing the initial value	Line condition is poor. (Own machine)	Change the reception speed by executing U630 [RX Speed].	

U01143/E01143

Step	Check description	Assumed cause	Measures	Reference
1	Checking the settings	DCN signal is received after sending FTT signal.	Set the G3 reception cable equalizer by executing U650 [Reg G3 RX Eqr]. (Initial value: 0dBm)	

U01155/E01155

Step	Check description	Assumed cause	Measures	Reference
1	Request for resending	DCN signal is received after sending SPA signal. (simplified protocol)	Request resending.	
2	Changing the initial value	Line condition is poor. (Own machine)	Change the reception speed by executing U630 [RX Speed].	

U01160/E01160

Step	Check description	Assumed cause	Measures	Reference
1	Request for resending	Maximum transmission time per line is exceeded while receiving message.	Request resending.	
2	Changing the initial value	Line condition is poor. (Own machine)	Change the reception speed by executing U630 [RX Speed].	

U01162/E01162

Step	Check description	Assumed cause	Measures	Reference
1	Request for resending	Maximum transmission time per line is exceeded while receiving message.	Request resending.	
2	Changing the initial value	Line condition is poor. (Own machine)	Change the reception speed by executing U630 [RX Speed].	

U01191/E01191

Step	Check description	Assumed cause	Measures	Reference
1	Request for resending	Communication is stopped with error during image data receipt sequence at V.34.	Request resending.	
2	Changing the initial value	Line condition is poor. (Own machine)	Change the reception speed by executing U630 [RX Speed].	

U01193/E01193

Step	Check description	Assumed cause	Measures	Reference
1	Checking the settings	No response, DCN signal or invalid command is received at phase C/D during reception.	Extend T2 time-out time at U641 [T2 Time Out]. (Change from the initial setting 69 to 150.)	
2	Checking the settings	Line condition is poor.	Set the corrective measures for echoes at the reception in U630 [RX Echo]. (Initial setting: 75)	
3	Changing the transmit start timing	Line condition is poor.	Change the reception starting speed to '9600bps' or less.	

U01194/E01194

Step	Check description	Assumed cause	Measures	Reference
1	Request for resending	DCN signal is received at phase B during reception.	Request resending.	
2	Changing the initial value	Line condition is poor. (Own machine)	Change the reception speed by executing U630 [RX Speed].	

U01195/E01195

Step	Check description	Assumed cause	Measures	Reference
1	Checking the settings	No message is received at phase C during reception.	Extend T2 time-out time at U641 [T2 Time Out]. (Change from the initial setting 69 to 150.)	
2	Checking the settings	Line condition is poor.	Set the corrective measures for echoes at the reception in U630 [RX Echo]. (Initial setting: 75)	
3	Changing the transmit start timing	Line condition is poor.	Change the reception starting speed to '9600bps' or less.	

U01196/E01196

Step	Check description	Assumed cause	Measures	Reference
1	Resending	Error line control overflow and decoding error occurred in messages during reception.	Resend.	
2	Changing the initial value	Line condition is poor. (Own machine)	Change the reception speed by executing U630 [RX Speed].	

U01400/E01400

Step	Check description	Assumed cause	Measures	Reference
1	Checking the telephone number	'#' exists in advance of 'x' on the phone numbers of the destination unit, so it is processed as the invalid dial line.	Delete '#' from the registered numbers if '#' exists in advance of 'x' on the phone numbers of the destination unit.	

U01500/E01500

Step	Check description	Assumed cause	Measures	Reference
1	Checking the transmit start speed	The communication line is the poor condition.	Reduce transmit start speed by executing [TX Speed] at U630, and then resend the data.	
2	Checking the transmit start speed	The communication line condition is poor and an error frequently occurs.	Change the transmit start speed by executing U630 [TX Speed].	

U01600/E01600

Step	Check description	Assumed cause	Measures	Reference
1	Checking the destination unit	The communication line is the poor condition.	Request the destination unit to resend the data after reducing the transmit start speed.	
2	Changing the transmit start timing	The communication line condition is poor and an error frequently occurs.	Request the destination unit to resend the data after lowering the reception start speed.	

U01700/E01700

Step	Check description	Assumed cause	Measures	Reference
1	Resending	A communication error occurred in phase 2 (line probing).	Resend.	
2	Checking the transmit start speed	Line condition is poor. (Destination unit)	Reduce transmit start speed by executing [TX Speed] at U630, and then resend the data.	
3	Changing the initial value	Line condition is poor. (Own machine)	Change the transmit start speed by executing U630 [TX Speed].	

U01720/E01720

Step	Check description	Assumed cause	Measures	Reference
1	Resending	The communication error appears at phase 4 (replacing the modem parameter).	Resend.	
2	Checking the transmit start speed	Line condition is poor. (Destination unit)	Reduce transmit start speed by executing [TX Speed] at U630, and then resend the data.	
3	Changing the initial value	Line condition is poor. (Own machine)	Change the transmit start speed by executing U630 [TX Speed].	

U01721/E01721

Step	Check description	Assumed cause	Measures	Reference
1	Resending	The communication was interrupted because there is no communication speed commonly used with the destination unit.	Resend.	
2	Checking the transmit start speed	Line condition is poor. (Destination unit)	Reduce transmit start speed by executing [TX Speed] at U630, and then resend the data.	
3	Changing the initial value	Line condition is poor. (Own machine)	Change the transmit start speed by executing U630 [TX Speed].	

U01800/E01800

Step	Check description	Assumed cause	Measures	Reference
1	Request for resending	A communication error occurred in phase 2 (line probing).	Request the destination unit to resend the data after reducing the transmit start speed.	
2	Changing the initial value	Line condition is poor. (Own machine)	Change the reception speed by executing U630 [RX Speed].	

U01810/E01810

Step	Check description	Assumed cause	Measures	Reference
1	Request for resending	A communication error occurred in phase 3 (primary channel equivalent device training).	Request the destination unit to resend the data after reducing the transmit start speed.	
2	Changing the initial value	Line condition is poor. (Own machine)	Change the reception speed by executing U630 [RX Speed].	

U01820/E01820

Step	Check description	Assumed cause	Measures	Reference
1	Request for resending	A communication error occurred in phase 3 (primary channel equivalent device training).	Request the destination unit to resend the data after reducing the transmit start speed.	
2	Changing the initial value	Line condition is poor. (Own machine)	Change the reception speed by executing U630 [RX Speed].	

U01821/E01821

Step	Check description	Assumed cause	Measures	Reference
1	Request for resending	The communication was interrupted because there is no communication speed commonly used with the destination unit.	Request the destination unit to resend the data after reducing the transmit start speed.	
2	Changing the initial value	Line condition is poor. (Own machine)	Change the reception speed by executing U630 [RX Speed].	

U03000/E03000

Step	Check description	Assumed cause	Measures	Reference
1	Checking the destination unit	No document was present in the destination unit when polling reception started.	Request the destination unit to set the originals.	

U03200/E03200

Step	Check description	Assumed cause	Measures	Reference
1	Checking the destination unit	There is no data in the sub address box in the main unit that are specified from the destination unit.	Request the destination unit to store the original data in the sub address box.	

U03300/E03300

Step	Check description	Assumed cause	Measures	Reference
1	Checking the destination unit	The permitted ID and FAX number registered in the destination unit are incorrect.	Request the destination unit to register the own ID and the own FAX number as the permitted ID and the permitted FAX number.	

U03400/E03400

Step	Check description	Assumed cause	Measures	Reference
1	Checking the destination unit	In polling reception, the operation was interrupted because the password input in the destination unit and the own FAX number in the receiver did not match.	Revise it so that the password input at the destination machine is consistent with the receiver's own FAX ID to receive again.	

U03500/E03500

Step	Check description	Assumed cause	Measures	Reference
1	Checking the destination unit	In polling reception, the operation was interrupted because the password input in the destination unit and the own FAX number in the receiver did not match.	Revise it so that the password input at the destination machine is consistent with the receiver's own FAX ID to receive again.	

U03600/E03600

Step	Check description	Assumed cause	Measures	Reference
1	Checking the destination unit	Sub address bulletin board reception was interrupted because the specified sub address password did not match.	Resend the data after inputting the sub address password registered in the destination unit.	

U03700/E03700

Step	Check description	Assumed cause	Measures	Reference
1	Checking the setting in the destination unit	Destination machine has no sub address bulletin board communication function or no originals are stored in any original delivery box (sub address box).	Check if the destination unit has a sub address bulletin board communication function. If available, request the destination unit to save the original data in the sub address box.	

U04000/E04000

Step	Check description	Assumed cause	Measures	Reference
1	Checking the setting in the destination unit	The original was transmitted to the sub address box, but the specified box was not registered in the destination unit that is our own model.	Register the sub address password in the destination unit.	
2	Checking the sub address of the FAX transmission condition	The original was transmitted to the sub address box in the destination unit that is our own model, but the sub address of the transmission condition did not match.	Match the sub address in the FAX forward condition	

U04100/E04100

Step	Check description	Assumed cause	Measures	Reference
1	Checking the setting in the destination unit	The destination unit had no sub address reception capability while the sub address transmission was executed.	Transmit the data according to the reception function in the destination unit.	

U04200/E04200

Step	Check description	Assumed cause	Measures	Reference
1	Checking the setting in the destination unit	In encrypted transmission, the specified encryption box was not registered in the destination unit.	Request the destination unit to register the encrypted box.	

U04300/E04300

Step	Check description	Assumed cause	Measures	Reference
1	Checking the setting in the destination unit	The encryption transmission was carried out, but there is no encryption function at the other machine.	Transmit the data according to the reception function in the destination unit.	

U04400/E04400

Step	Check description	Assumed cause	Measures	Reference
1	Checking the encryption key	Encrypted transmission was interrupted because encryption keys did not agree.	Request resending after checking the encryption key registered in the receiving and sending machines.	

U04500/E04500

Step	Check description	Assumed cause	Measures	Reference
1	Checking the encryption key	Encrypted transmission was interrupted because encryption keys did not agree.	Request resending after checking the encryption key registered in the receiving and sending machines.	

U05100/E05100

Step	Check description	Assumed cause	Measures	Reference
1	Checking the permitted number	The transmission was interrupted because the permitted ID and FAX number did not match in the restricted transmission (password check transmission).	Resend after confirming the authorization number that has been registered.	

U05200/E05200

Step	Check description	Assumed cause	Measures	Reference
1	Checking the settings	The number does not match a permitted FAX number / ID, or it matches a rejected FAX number.	Change the restricted reception settings.	
2	Checking the setting in the destination unit	The own telephone number is not informed from the destination unit.	Request the destination unit to register the own telephone number.	

U05300/E05300

Step	Check description	Assumed cause	Measures	Reference
1	Checking the setting in the destination unit	The number does not match a permitted FAX number / ID, or it matches a rejected FAX number.	Ask the destination unit to change the restricted reception settings.	
2	Checking the settings	The main unit did not acknowledge its phone number in question .	Request the destination unit to register the own telephone number.	

U14000/E14000

Step	Check description	Assumed cause	Measures	Reference
1	Checking the memory	The reception to the FAX box was interrupted due to memory overflow in its unit.	Release memory by printing originals stored in memory or cancel FAX box reception.	

U14100/E14100

Step	Check description	Assumed cause	Measures	Reference
1	Checking the destination unit	Transmission was interrupted due to the memory overflow in the destination unit when transmitting into the sub address box.	Request the destination unit to release memory.	

U19000/E19000

Step	Check description	Assumed cause	Measures	Reference
1	Checking the memory	The reception was interrupted due to the memory overflow in the main unit during memory reception.	Release memory by printing originals stored in memory.	

U19100/E19100

Step	Check description	Assumed cause	Measures	Reference
1	Resending	The transmission was interrupted because there is an error in the data during transmission.	Resend.	
2	Resetting the main power and reinstalling the FAX PWB	The transmission was interrupted because there is an error in the data during transmission.	Turn off the power switch and pull out the power plug. After passing 5s, reattach the FAX PWB and reinsert the power plug. Then, turn on the power switch.	

U19300/E19300

Step	Check description	Assumed cause	Measures	Reference
1	Resending	The transmission was interrupted because there is an error in the data during transmission.	Resend.	
2	Resetting the main power and reinstalling the FAX PWB	The transmission was interrupted because there is an error in the data during transmission.	Turn off the power switch and pull out the power plug. After passing 5s, reattach the FAX PWB and reinsert the power plug. Then, turn on the power switch.	
3	Firmware upgrade	The firmware is not the latest version.	Upgrade the fax firmware to the latest version.	
4	Initializing the fax	The FAX initial value was changed.	Execute U600 to initialize the FAX.	
5	Replacing the FAX PWB	The FAX PWB is faulty.	Replace the FAX PWB.	

7-5 Send Related Errors

(1) Send Related Errors

No.	Contents
(1)	The sending error 2101 does not disappear even if changing the host name or the security software settings
(2)	Sending error 2203 does not disappear.
(3)	The scanning data from the contact glass is automatically sent

Content of Send Related Errors

(1-1) The sending error 2101 does not disappear even if changing the host name or the security software settings

Step	Check description	Assumed cause	Measures	Reference
1	Changing the settings	The incorrect port number has been set.	Change the SMB port number from '139' to '445'.	

(1-2) Sending error 2203 does not disappear.

Step	Check description	Assumed cause	Measures	Reference
1	Changing the settings	The Windows Fire Wall is not properly set. (Windows Vista / 7 / 8)	Select [Allow a program or feature through Windows Firewall] at [Control Panel] > [System and Security] > [Windows Firewall] and check [File and Printer Sharing] and also check the right side checkbox	

(1-3) The scanning data from the contact glass is automatically sent

Step	Check description	Assumed cause	Measures	Reference
1	Changing the settings	[Continuous Scan] is not set to [On].	Enter from [Scan] or [FAX], [Function List] and [Continuous Scan] and select [On].	
2	Changing the settings	[Continuous Scan] is not set to [On].	Select [On] at [Functions] > [Continuous scan]	

(2) Sending Errors (Error Codes)

(2-1) Scan to E-mail Error Codes

Error code	Contents
1101	SMTP/POP3 server does not exist on the network.
1102	Login to the SMTP/POP3 server has failed.
1104	Destination address domain is restricted and transmission is denied.
1105	Invalid SMTP protocol
1106	The sender address is not set.
2101	Connection to the SMTP/POP3 server has failed.
2102	Connection to the SMTP/POP3 server has failed. (Connection timeout)
2103	The server cannot establish communication.
2201	Communication to the SMTP/POP3 server has failed.
2202	Communication to the SMTP/POP3 server has failed. (Connection timeout)
2204	The size of scanning exceeded its limit.
3101	SMTP/POP3 server responded with an error.
3201	No SMTP authentication is found.
4803	Failed to establish the SSL session.

Content of Scan to E-mail Error Codes

Scan to E-mail error code: 1101

SMTP/POP3 server does not exist on the network.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the SMTP/POP3 server name	SMTP / POP3 server name is incorrect.	Correct the SMTP / POP3 server name at [Function Settings] > [E-mail] via the command center.	
2	Checking the settings	The network settings are incorrect.	Correct the settings in the Network Settings via the Command Center.	
3	Checking the settings	The network settings that the main unit is connected to are incorrect.	Correct the network settings that the main unit is connected to.	

Scan to E-mail error code: 1102

Login to the SMTP/POP3 server has failed.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the SMTP/POP3 server name	The user name or the password is incorrect.	Correct the SMTP / POP3 user name or password at [Function Settings] > [E-mail] via the command center.	
2	Checking the SMTP/POP3 server	The SMTP/POP3 server settings are incorrect.	Correct the protocol in the Network Settings via the Command Center.	

Scan to E-mail error code: 1104

Destination address domain is restricted and transmission is denied.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the settings	Destination address domain is restricted and transmission is denied.	Correct the settings in the Network Settings via the Command Center.	

Scan to E-mail error code: 1105

Invalid SMTP protocol

Step	Check description	Assumed cause	Measures	Reference
1	Checking the settings	Invalid SMTP protocol	Correct the protocol in the Network Settings via the Command Center.	

Scan to E-mail error code: 1106

The sender address is not set.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the settings	The sender address is not set.	Correct the protocol in the Network Settings via the Command Center.	

Scan to E-mail error code: 2101

Connection to the SMTP/POP3 server has failed.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the SMTP/POP3 server name	SMTP / POP3 server name is incorrect.	Correct the SMTP / POP3 server name at [Function Settings] > [E-mail] via the command center.	

Step	Check description	Assumed cause	Measures	Reference
2	Checking the LAN cable	The LAN cable is not connected to the main unit.	Connect the LAN cable to the main unit.	
3	Checking the SMTP/POP3 port No.	The port number is incorrect.	Correct the SMTP/POP3 port number.	
4	Checking the settings	The network settings are incorrect.	Correct the settings in the Network Settings via the Command Center.	
5	Checking the settings	The network settings that the main unit is connected to are incorrect.	Correct the network settings that the main unit is connected to.	
6	Checking the settings	The SMTP/POP3 server settings are incorrect.	Correct the protocol in the Network Settings via the Command Center.	

Scan to E-mail error code: 2102

Connection to the SMTP/POP3 server has failed. (Connection timeout)

Step	Check description	Assumed cause	Measures	Reference
1	Checking the SMTP/POP3 server name	SMTP / POP3 server name is incorrect.	Correct the SMTP / POP3 server name at [Function Settings] > [E-mail] via the command center.	
2	Checking the SMTP/POP3 port No.	The port number is incorrect.	Correct the SMTP/POP3 port number.	
3	Checking the settings	The network settings are incorrect.	Correct the settings in the Network Settings via the Command Center.	
4	Checking the settings	The network settings that the main unit is connected to are incorrect.	Correct the network settings that the main unit is connected to.	
5	Checking the settings	The SMTP/POP3 server settings are incorrect.	Correct the protocol in the Network Settings via the Command Center.	

Scan to E-mail error code: 2103

The server cannot establish communication.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the SMTP/POP3 server name	SMTP / POP3 server name is incorrect.	Correct the SMTP / POP3 server name at [Function Settings] > [E-mail] via the command center.	
2	Checking the SMTP/POP3 port No.	The port number is incorrect.	Correct the SMTP/POP3 port number.	

Step	Check description	Assumed cause	Measures	Reference
3	Checking the settings	The network settings are incorrect.	Correct the settings in the Network Settings via the Command Center.	
4	Checking the settings	The network settings that the main unit is connected to are incorrect.	Correct the network settings that the main unit is connected to.	
5	Checking the settings	The SMTP/POP3 server settings are incorrect.	Correct the protocol in the Network Settings via the Command Center.	

Scan to E-mail error code: 2201

Communication to the SMTP/POP3 server has failed.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the settings	The network settings are incorrect.	Correct the settings in the Network Settings via the Command Center.	
2	Checking the settings	The network settings that the main unit is connected to are incorrect.	Correct the network settings that the main unit is connected to.	

Scan to E-mail error code: 2202

Communication to the SMTP/POP3 server has failed. (Connection timeout)

Step	Check description	Assumed cause	Measures	Reference
1	Checking the settings	The network settings are incorrect.	Correct the settings in the Network Settings via the Command Center.	
2	Checking the settings	The network settings that the main unit is connected to are incorrect.	Correct the network settings that the main unit is connected to.	

Scan to E-mail error code : 2204

The size of scanning exceeded its limit.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the settings	The network settings are incorrect.	Correct the settings in the Network Settings via the Command Center.	

Scan to E-mail error code: 3101

SMTP/POP3 server responded with an error.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the settings	The network settings are incorrect.	Correct the settings in the Network Settings via the Command Center.	
2	Checking the settings	The network settings that the main unit is connected to are incorrect.	Correct the network settings that the main unit is connected to.	
3	Checking the settings	The SMTP/POP3 server settings are incorrect.	Correct the protocol in the Network Settings via the Command Center.	

Scan to E-mail error code: 3201

No SMTP authentication is found.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the settings	The SMTP server settings are incorrect.	Set the correct SMTP Authentication Protocol at [Function Settings] > [E-mail] via the command center.	

Scan to E-mail error code: 4803

Failed to establish the SSL session.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the self-signed certificate	The self-signed certificate of the device is incorrect.	Correct the certificates in the Security Settings via the Command Center.	
2	Checking the settings	The service certificate settings are incorrect.	Correct the certificates in the Security Settings via the Command Center.	
3	Checking the settings	The SMTP/POP3 settings are incorrect.	Correct the protocol in the Network Settings via the Command Center.	

(2-2) Scan to FTP Error Codes

Error code	Contents
1101	FTP server does not exist on the network.
1102	Login to the FTP server has failed.
1105	FTP protocol is not enabled.
1131	Initializing TLS has failed.
1132	TLS negotiation has failed.
2101	Connection to the FTP server has failed.
2102	Connection with the FTP server has failed. (Timeout)
2103	The server cannot establish communication.
2201	Communication with the FTP server has failed.
2202	Communication with the FTP server has failed. (Timeout)
2203	No response from the server during a certain period of time.
2231	Communication with the FTP server has failed. (FTPS communication)
3101	FTP server responded with an error.

Content of Scan to FTP Error Codes

Scan to FTP error code : 1101

FTP server does not exist on the network.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the FTP host name	The FTP host name is incorrect.	Correct the FTP host name via the Command Center.	
2	Checking the settings	The network settings are incorrect.	Correct the settings in the Network Settings via the Command Center.	
3	Checking the settings	The network settings that the main unit is connected to are incorrect.	Correct the network settings that the main unit is connected to.	

Scan to FTP error code : 1102

Login to the FTP server has failed.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the FTP host name	The user name or the password is incorrect.	Correct the user name and the password.	
2	Checking the FTP server	FTP server is improper.	Correct the protocol in the Network Settings via the Command Center.	

Scan to FTP error code : 1105

FTP protocol is not enabled.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the settings	FTP protocol is not enabled.	Correct the protocol in the Network Settings via the Command Center.	

Scan to FTP error code : 1131

Initializing TLS has failed.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the settings	The security settings of the device are incorrect.	Correct the settings in the Security Settings via the Command Center.	

Scan to FTP error code : 1132

TLS negotiation has failed.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the settings	The security settings of the device are incorrect.	Correct the settings in the Security Settings via the Command Center.	
2	Checking the settings	The FTP server settings are incorrect.	Correct the protocol in the Network Settings via the Command Center.	

Scan to FTP error code : 2101

Connection to the FTP server has failed.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the FTP host name	The FTP host name is incorrect.	Correct the FTP host name via the Command Center.	
2	Checking the LAN cable	The LAN cable is not connected to the main unit.	Connect the LAN cable to the main unit.	
3	Checking the FTP port number	The port number is incorrect.	Correct the FTP port number.	
4	Checking the settings	The network settings are incorrect.	Correct the settings in the Network Settings via the Command Center.	
5	Checking the settings	The FTP server settings are incorrect.	Correct the protocol in the Network Settings via the Command Center.	

Scan to FTP error code : 2102

Connection with the FTP server has failed. (Timeout)

Step	Check description	Assumed cause	Measures	Reference
1	Checking the FTP host name	The FTP host name is incorrect.	Correct the FTP host name via the Command Center.	
2	Checking the FTP port number	The port number is incorrect.	Correct the FTP port number.	
3	Checking the settings	The network settings are incorrect.	Correct the settings in the Network Settings via the Command Center.	
4	Checking the settings	The network settings that the main unit is connected to are incorrect.	Correct the network settings that the main unit is connected to.	
5	Checking the settings	The FTP server settings are incorrect.	Correct the protocol in the Network Settings via the Command Center.	

Scan to FTP error code : 2103

The server cannot establish communication.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the FTP host name	The FTP host name is incorrect.	Correct the FTP host name via the Command Center.	
2	Checking the FTP port number	The port number is incorrect.	Correct the FTP port number.	
3	Checking the settings	The network settings are incorrect.	Correct the settings in the Network Settings via the Command Center.	
4	Checking the settings	The network settings that the main unit is connected to are incorrect.	Correct the network settings that the main unit is connected to.	
5	Checking the settings	The FTP server settings are incorrect.	Correct the protocol in the Network Settings via the Command Center.	

Scan to FTP error code : 2201

Communication with the FTP server has failed.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the settings	The network settings are incorrect.	Correct the settings in the Network Settings via the Command Center.	
2	Checking the settings	The network settings that the main unit is connected to are incorrect.	Correct the network settings that the main unit is connected to.	

Step	Check description	Assumed cause	Measures	Reference
3	Checking the destination folder name	The destination folder name is incorrect.	Set the correct destination folder.	
4	Checking the settings	The FTP server settings are incorrect.	Correct the protocol in the Network Settings via the Command Center.	

Scan to FTP error code : 2202

Communication with the FTP server has failed. (Timeout)

Step	Check description	Assumed cause	Measures	Reference
1	Checking the settings	The network settings are incorrect.	Correct the settings in the Network Settings via the Command Center.	
2	Checking the settings	The network settings that the main unit is connected to are incorrect.	Correct the network settings that the main unit is connected to.	

Scan to FTP error code : 2203

No response from the server during a certain period of time.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the settings	The network settings are incorrect.	Correct the settings in the Network Settings via the Command Center.	
2	Checking the settings	The network settings that the main unit is connected to are incorrect.	Correct the network settings that the main unit is connected to.	

Scan to FTP error code : 2231

Communication with the FTP server has failed. (FTPS communication)

Step	Check description	Assumed cause	Measures	Reference
1	Checking the settings	The network settings are incorrect.	Correct the settings in the Network Settings via the Command Center.	
2	Checking the settings	The network settings that the main unit is connected to are incorrect.	Correct the network settings that the main unit is connected to.	

Scan to FTP error code : 3101

FTP server responded with an error.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the settings	The network settings are incorrect.	Correct the settings in the Network Settings via the Command Center.	
2	Checking the settings	The network settings that the main unit is connected to are incorrect.	Correct the network settings that the main unit is connected to.	
3	Checking the settings	The FTP server settings are incorrect.	Correct the protocol in the Network Settings via the Command Center.	

(2-3) Scan to SMB Error Codes

Error code	Contents
1101	Destination host does not exist on the network.
1102	Login to the host has failed.
1103	Destination host, folder, and/or file names are invalid.
1105	SMB protocol is not enabled.
2101	Login to the host has failed.
2201	Writing scanned data has failed.
2203	No response from the host during a certain period of time.

Content of Scan to SMB Error Codes

Scan to SMB error code : 1101

Destination host does not exist on the network.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the destination host name	The destination host name is incorrect.	Correct the destination host name.	
2	Checking the settings	The network settings are incorrect.	Correct the settings in the Network Settings via the Command Center.	
3	Checking the settings	The network settings that the main unit is connected to are incorrect.	Correct the network settings that the main unit is connected to.	

Scan to SMB error code : 1102

Login to the host has failed.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the user name and the password	The user name or the password is incorrect.	Correct the user name and the password.	
2	Checking the settings	The network settings are incorrect.	Correct the settings in the Network Settings via the Command Center.	
3	Checking the settings	The sharing settings of the destination host / folder are incorrect.	Correct the sharing settings of the destination host / folder.	

Scan to SMB error code : 1103

Destination host, folder, and/or file names are invalid.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the host name, destination folder name and the file name	The host name, destination folder name, or the file name contains the invalid character.	Revise invalid characters in destination host name, destination folder name and file name properly.	
2	Checking the destination folder name and the file name	The destination folder name or the file name is incorrect.	Revise the destination folder and file name according to the naming rules.	
3	Checking the destination host and the destination folder	The destination host name or the destination folder name is incorrect.	Revise the destination host and destination folder properly.	

Scan to SMB error code : 1105

SMB protocol is not enabled.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the settings	The settings of the SMP protocol are incorrect.	Correct the protocol in the Network Settings via the Command Center.	

Scan to SMB error code : 2101

Login to the host has failed.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the destination host name	The destination host name is incorrect.	Correct the destination host name.	
2	Checking the LAN cable	The LAN cable is not connected to the main unit in the transmission (Scan to SMB).	Connect the LAN cable to the main unit.	

Step	Check description	Assumed cause	Measures	Reference
3	Checking the SMB port No.	The port number is incorrect.	Correct the SMB port number.	
4	Checking the settings	The network settings are incorrect.	Correct the settings in the Network Settings via the Command Center.	
5	Checking the settings	The network settings that the main unit is connected to are incorrect.	Correct the network settings that the main unit is connected to.	

Scan to SMB error code : 2201

Writing scanned data has failed.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the scanning file name	The sending file name is incorrect.	Correct the scanning file name.	
2	Checking the settings	The network settings are incorrect.	Correct the settings in the Network Settings via the Command Center.	
3	Checking the settings	The network settings that the main unit is connected to are incorrect.	Correct the network settings that the main unit is connected to.	

Scan to SMB error code : 2203

No response from the host during a certain period of time.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the settings	The network settings are incorrect.	Correct the settings in the Network Settings via the Command Center.	
2	Checking the settings	The network settings that the main unit is connected to are incorrect.	Correct the network settings that the main unit is connected to.	
3	Checking the LAN cable	The LAN cable is not connected to the main unit in the transmission (Scan to SMB).	Connect the LAN cable to the main unit.	

7-6 Print Errors

No.	Contents	Condition
(1)	The paper loading message appears	
(2)	The data is output with color from Excel even if the monochrome mode is set	
(3)	Color tone of the printed photo is different	The settings of Imaging / PDL are incorrect.
(4)	Orientation is different	
(5)	Paper is fed from the MP tray	The main unit MP tray setting is wrong
(6)	Garbled characters	The printer driver was not properly installed.
(7)	Data is output in monochrome	Photos printed from a PC are monochrome instead of color. (Print from Windows Photo Viewer)
(8)	Paper is not fed from the MP tray	The media types of each paper source defined in the printer driver and the main unit are mismatched.
(9)	The same data is printed out endlessly	A PC (spooler) does not properly operate.
(10)	PC window shows [Print job error], [Standby] or [Printer unavailable] is indicated on the printer properties	The main unit is not ready to print
(11)	Processing and Memory lamps are lit while the printer standby message is indicated	The main unit locks up.
(12)	Unable to output at sleep mode due to the start-up failure of the machine. ([Processing] or [Memory] lamp turns on the operation panel.)	The main unit locks up.
(13)	Print stops after printing few sheets (operation lock). ([Processing] or [Memory] lamp turns on the operation panel.)	The image processing fails due to the insufficient memory, so the main unit locks up.
(14)	Print out is not available from the network factor (1)	The network has some troubles or the network setting is incorrect.
(15)	Print out is not available from the network factor (2)	The cable between the main unit and the PC is not properly connected.
(16)	Print out is not available from the network factor (3)	The access point (router or hub) in the network does not operate properly.
(17)	Print out is not available from the network factor (4)	The router is faulty, or the router settings are incorrect.
(18)	Print out is not available from the network factor (5)	'Offline' appears and the print function is unavailable.
(19)	Print out is not available from the network factor (6)	Only one among installed PCs is unable to print. No error is displayed and if directing print, it is on hold.

No.	Contents	Condition
(20)	Print out is not available from the network factor (7)	The main unit IP address is changed.
(21)	Print out is not available from the printer driver setting factor (1)	[Not connected] is displayed on PC and print job can't be performed due to the error. (Can't print)
(22)	Print out is not available from the printer driver setting factor (2)	'Please wait' is displayed at the main unit. The Job is retained without outputting printed materials.
(23)	Print out is not available from the printer driver setting factor (3)	A PC does not recognize the main unit.
(24)	Print out is not available from the printer driver setting factor (4)	PC operation does not stabilize.
(25)	Print out is not available from the printer driver setting factor (5)	Check if the issue occurs when printing the data from all PCs in the network or from a certain PC. Then, print out the data from another PC if it occurs at a certain PC.
(26)	Print out is not available from the printer driver setting factor (6)	The incorrect printer driver was selected.
(27)	Print out is not available from the printer driver setting factor (7)	Installed printer driver shows 'Deleting' and it remains when reinstalling it
(28)	A part of the image is missing	The image data processing with a certain application (Excel, PDF) is faulty.
(29)	'Paper Mismatch Error' appears	The paper size is not detected properly.

Content of Print Errors

(1) The paper loading message appears

Step	Check description	Assumed cause	Measures	Reference
1	Changing paper	The size of the loaded paper did not match the paper size set in the printer properties.	Load the paper of the paper size defined at "Paper size" in the [Basic] tab in the print settings at the PC to the cassette.	
2	Checking the paper size	The paper size on the operation panel and the one set for the paper source do not match.	Check if the paper size on the operation panel and the one set for the paper source do not match	
3	Relocating the paper width guides or the MP paper width guides	The locations of the paper width guides or the MP paper width guides do not match the paper size.	Relocate the paper width guides or the MP paper width guides to match the paper size.	
4	Checking the actuator and the spring	The actuator or the spring for paper sensor does not operate properly.	Reattach the actuator and the spring for the paper sensor. If not repaired, replace them.	

Step	Check description	Assumed cause	Measures	Reference
5	Checking the situation	The print data created by a certain application (Word, etc.) is faulty.	Check if the print data generated by other than a certain application (Word, etc.) is output properly. If the phenomenon occurs with the application only, change the application setting.	
6	Changing the settings	Orientation is not properly set in the print page setting on a certain application (Word, etc.).	Check the orientation with preview before printing and reset the orientation at the print setting on a certain application (Word, etc.).	
7	Checking the settings	The paper size and the media type detected at the main unit did not match with the paper size and the media type set in the printer driver.	Check if the paper size detected on the MP tray and the media type of the MP tray set via the System Menu (for the main unit) matched to the paper size and the media type at [Imaging] > [Basic] in the printer properties at the PC.	
8	Changing the settings	The MP tray setting does not match between the main unit and printer driver	Select 'MP tray' at [Source] in the [Basic] tab in the print settings at the PC.	

(2) The data is output with color from Excel even if the monochrome mode is set

Step	Check description	Assumed cause	Measures	Reference
1	Changing the settings	Excel is not properly set up.	Select 'Black & White' at [Color Mode] in the [Imaging] tab in the print settings at the PC. Next, overwrite the Excel data and close the window. And then, restart it up.	

(3) Color tone of the printed photo is different

The settings of Imaging / PDL are incorrect.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the situation	A file created on a certain application makes error.	When the phenomenon occurs with a certain file only, check if there is an abnormality in the image data.	

Step	Check description	Assumed cause	Measures	Reference
2	Changing the settings	Print quality is not properly set up.	Select 'Quality priority' at [Color conversion] in the [Imaging] tab in the print settings at the PC.	
3	Checking the situation	The print settings of Page-Maker or Illustrator, etc. are incorrect.	Check if the phenomenon occurs with the file generated by a certain application such as PageMaker or Illustrator, and refer to Help display.	
4	Changing the settings	The PDL settings or the imaging settings of [Basic] are incorrect.	Change [PDL Settings] from [PCL XL] to [KPD] in the print settings at the PC and change [Color reproduction] at the [Imaging] tab.	
5	Changing the settings	PDL or Color conversion processing is not properly set.	Change [PDL Settings] from [PCL XL] to [KPD] in the print settings at the PC and select 'Quality priority' at [Color conversion] in the [Imaging] tab. (When the image data is CMYK, not RGB.)	
6	Replacing the paper	Paper quality causes the phenomenon.	Replace with smooth paper.	
7	Executing Calibration	Calibration is not executed properly	Execute [Calibration] in [System Menu/Counter] key > [Adjustment/Maintenance].	
8	Changing the settings	The settings in the [Imaging] tab in the print settings at the PC are incorrect.	Select 'Text and Photos' at [Color reproduction] in the [Imaging] tab in the print settings at the PC.	

(4) Orientation is different

Step	Check description	Assumed cause	Measures	Reference
1	Checking the paper size	Paper same as the output size is not set in the paper source.	Check on the operation panel if paper of the same size as the output paper size selected on the printer driver is set. ([Status/Job Cancel] key > [Paper status]). If not, set paper in any of the drawer and specify the paper source.	

Step	Check description	Assumed cause	Measures	Reference
2	(When feeding from MP tray) Resetting the MP paper width guides	Paper is not properly set at the MP tray.	Pull out the sub tray from the MP tray and set the MP paper width guide match to the paper width and after that, confirm if the paper size displays on the operation panel properly. ([Status/Job Cancel] key > [Paper status]). Paper size is not displayed properly, reset the MP paper width guide. If displays properly, move to the next step [Change settings]	
3	Changing the settings	The printer driver is not set correctly.	Set [Orientation] properly at the [Basic setting] of the printer driver.	
4	Reinstalling the printer driver	The printer driver was not properly installed.	Uninstall and reinstall the printer driver.	
5	Changing the settings	The print setting at the application software side has the priority.	Set the print setting at the application software side properly.	

(5) Paper is fed from the MP tray

The main unit MP tray setting is wrong

Step	Check description	Assumed cause	Measures	Reference
1	Changing the settings	The Auto Cassette Change is [On].	To prevent paper from feeding in case no paper is available in cassette which is selected, change [Auto Cassette Switching] to [Off]. ([System Menu/Counter] key > [Printer] > [Auto Cassette Switching] > [Off].)	
2	Changing the settings	'Media type' in the [Basic] tab in the print settings at the PC differs from the media type of the cassette that is set in the main unit.	Check the media type set on the main unit cassette and MP tray and set the media type for the main unit in the [Basic] tab in the print settings at the PC.	
3	Changing the settings	The same media type is set between the main unit cassette and MP tray	Set different media types between the main unit cassette and MP tray	

(6) Garbled characters

The printer driver was not properly installed.

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	There is a communication error.	Confirm there are no jobs in process in the PC and the main unit. Then, turn off the power switch and unplug the power cord. After 5s later, reconnect the power cord and turn on the power switch.	
2	Checking the font list	Font for special data is not resident.	After checking output from Excel and Word is normal, print the font list to check if a font for special data is resident.	
3	Selecting the bitmap font	The bitmap font (default setting) is unselected.	Select the bitmap font (default setting) and print the data.	
4	Reinstalling the printer driver	The printer driver is faulty.	Uninstall the printer driver and reinstall the latest version	

(7) Data is output in monochrome

Photos printed from a PC are monochrome instead of color. (Print from Windows Photo Viewer)

Step	Check description	Assumed cause	Measures	Reference
1	Changing the settings	The [Color Mode] setting in the [Imaging] tab in the print settings at the PC is incorrect.	Check the color mode in the [Imaging tab] in the print settings at the PC and change to 'Full color' if the color mode was set to 'Black'.	
2	Changing the settings	The option or printer properties are not properly set up	Change the color mode to 'Full Color' at the page settings of the unique application or Excel.	
3	Changing the printing method	The application is incompatible.	Directly print JPEG data instead of pasting it on Excel.	

(8) Paper is not fed from the MP tray

The media types of each paper source defined in the printer driver and the main unit are mismatched.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the settings	The paper size and the media type detected at the main unit did not match with the paper size and the media type set in the printer driver.	Check if the paper size detected on the MP tray and the media type of the MP tray set via the System Menu (for the main unit) matched to the paper size and the media type at [Imaging] > [Basic] in the printer properties at the PC.	
2	Changing the settings	The MP tray setting does not match between the main unit and printer driver	Select 'MP tray' at [Source] in the [Basic] tab in the print settings at the PC.	

(9) The same data is printed out endlessly

A PC (spooler) does not properly operate.

Step	Check description	Assumed cause	Measures	Reference
1	Deleting the job	The generated data is faulty.	Delete the print job spooled in the PC and print it out again.	

(10) PC window shows [Print job error], [Standby] or [Printer unavailable] is indicated on the printer properties

The main unit is not ready to print

Step	Check description	Assumed cause	Measures	Reference
1	Clearing the error	The main unit is not ready to print	Check if the error appears on the operation panel or the error lamp blinks. Then if there is, cancel it.	
2	Checking the main unit	The main unit is not ready to print	Resolve the problem at the main unit if any	

(11) Processing and Memory lamps are lit while the printer standby message is indicated

The main unit locks up.

Step	Check description	Assumed cause	Measures	Reference
1	Clearing the error	The main unit is not ready to print	After confirming no error is indicated on the main unit's operation panel, cancel all PC print jobs. Then, turn off the power switch and unplug the power cord. After passing 5s, reconnect the power cord and turn on the power switch.	

(12) Unable to output at sleep mode due to the start-up failure of the machine.

([Processing] or [Memory] lamp turns on the operation panel.)

The main unit locks up.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the firmware	The firmware is not the latest version.	Upgrade the firmware to the latest version.	
2	Changing the settings	The sleep level is not set to Quick Recovery mode.	Turn off the power switch and pull out the power plug. After passing 5s, reinsert the power plug and turn on the power switch. Then, set [Quick Recovery] in the Sleep Level setting.	

(13) Print stops after printing few sheets (operation lock).

([Processing] or [Memory] lamp turns on the operation panel.)

The image processing fails due to the insufficient memory, so the main unit locks up.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the situation	The data processing in a certain PC is faulty.	Check if the issue occurs when printing the data from all PCs in the network or from a certain PC. Then, print out the data from another PC if it occurs at a certain PC.	
2	Changing the settings	The application is not properly set.	Check if a problem occurring from a certain application and file (big data like CAD data) and change application setting and refer to application's help.	

Step	Check description	Assumed cause	Measures	Reference
3	Firmware upgrade	The firmware is not the latest version.	Upgrade the main firmware to the latest version.	
4	Deleting the job	Processing fails.	Cancel the job in process and reprint in the main unit job status	
5	Resetting the main power	The main unit locks up.	If the operation panel or the buttons are not active, turn off the power switch and unplug the power cord. After passing 5s, reconnect the power cord and turn on the power switch.	

(14)Print out is not available from the network factor (1)

The network has some troubles or the network setting is incorrect.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the network	There is trouble in the network.	Check if the memory LED on the operation panel of the main unit is blinking after printing out from the PC. If not blinking, cancel the processing job and reprint out.	
2	Checking the network	There is trouble in the network.	When the printing error appears on the operation panel or the PC screen, clear the error caused by the toner or paper jam, etc.	
3	Checking the network	There is trouble in the network.	Check the main unit IP Address in the status page, etc. and then check if Command Center can be opened using that IP Address. If not, reconfigure the network again.	
4	Checking the network	There is trouble in the network.	Check the internet connection and restore the network connection if necessary	
5	Checking the network	There is trouble in the network.	Check the cable and reset the router or HUB.	
6	Restarting up	The PC or the main unit locks up.	Restart the PC or the main unit, and print out again.	

(15)Print out is not available from the network factor (2)

The cable between the main unit and the PC is not properly connected.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	The cable between the main unit and the PC is not properly connected.	Check the cable connection between the main unit and the PC.	
2	Restarting up	The main unit or the PC does not properly start up.	Restart the main unit and then restart the PC.	
3	Replacing the Ethernet cable	The Ethernet cable is faulty.	Replace the Ethernet cable.	
4	Changing the connection	Another network is faulty.	Directly connect the main unit to the PC with the cross cable and then check if the same data can be printed out.	

(16)Print out is not available from the network factor (3)

The access point (router or hub) in the network does not operate properly.

Step	Check description	Assumed cause	Measures	Reference
1	Restarting up	The router or the hub does not properly activate.	Check if the link lamp of the router or hub (concentrator) turns on and restart it.	
2	Checking the Ethernet cable	The Ethernet cable is not properly connected.	In case the link lamp is off, once disconnect the Ethernet cable from the router and reconnect it to check the link lamp is lit.	
3	Checking the Ethernet cable	The Ethernet cable is faulty.	Replace the Ethernet cable.	
4	Restarting up	The router, hub, PC or main unit does not start up normally	In case of no connection while the link lamp is lit, restart the router or hub and then restart up the PC and the main unit	

(17)Print out is not available from the network factor (4)

The router is faulty, or the router settings are incorrect.

Step	Check description	Assumed cause	Measures	Reference
1	Changing the settings	The IP address is not properly set.	Check if the main unit IP Address indicated in the status page is the same as the IP Address in the [Port] tab of [Printer Properties] at the PC. If not, correct the IP address at the PC	

Step	Check description	Assumed cause	Measures	Reference
2	Changing the settings	The printer host name is not properly set.	Check the printer host name by printing out the status report when there is a server environment. Then, check the printer host name at the [Port] tab in the printer properties at a PC. If they differ, correct the printer host name.	

(18)Print out is not available from the network factor (5)

'Offline' appears and the print function is unavailable.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the network	There is trouble in the network.	Check the internet connection and restore the network connection if necessary	
2	Restarting up	The PC malfunctions.	When 'Offline' appears on the printer driver, check if it is used in the pause or offline. Then, restart up the PC.	
3	Changing the settings	The application is not properly set.	Check if the other Excel / Word data can be output and change the setting of the application.	
4	Correcting the IP address	The IP address is not properly set.	Check if the main unit IP Address indicated in the status page is the same as the IP Address in the [Port] tab of [Printer Properties] at the PC. If not, correct the IP address at the PC	
5	Reconfiguring the IP address	The IP address is not properly set.	Check if communication via command center or PING is available with IP address set up. Set up IP address again and restart the main unit if necessary.	
6	Changing the settings	The port settings in the printer properties at the PC are incorrect.	Remove the checks at the dual-directional support and the SNMP status in the [Port] tab of the printer properties in a PC. Then, restart up the main unit and the PC.	
7	Restarting up	The main unit does not start up properly.	After the printer is ready, check if the test sheet can be output and restart the main unit.	

(19)Print out is not available from the network factor (6)

[Condition]

PC OS: Windows 7

Printing file: Kyocera test page

Connection method: Wireless LAN

Only one among installed PCs is unable to print. No error is displayed and if directing print, it is on hold.

Step	Check description	Assumed cause	Measures	Reference
1	Restarting up	The main unit or the PC does not properly start up.	Restart up the main unit or the PC.	
2	Checking the cable	The cable is not properly connected.	Check the cable connection (Check if the network connection is available.)	
3	Correcting the IP address	The IP address is not properly set.	Check if the ID address is properly set, and correct it if incorrect.	
4	Checking the network	There is trouble in the network.	Check if access via command center or PING is available and then check the hub or router.	
5	Changing the settings	The printer port IP address, the SNMP of the printer driver, or the bi-directional support is not properly set.	Correct the IP address and remove the checks at the SNMP status and the dual-directional support in the [Port] tab of the printer properties at a PC. Then, restart up the main unit and the PC.	
6	Uninstalling the security software or setting the exception	The restriction of the security software causes the phenomenon.	Check if the printer is available by uninstalling the security software. Or, set the exception setting.	

(20)Print out is not available from the network factor (7)

The main unit IP address is changed.

Step	Check description	Assumed cause	Measures	Reference
1	Restarting up	There is trouble in the network.	Check if a problem occurs with output from all PCs on the network and restart up hub or router.	
2	Checking the connection	The connector of the cable is not connected properly	Check if there is problem with the cable connection on the network.	

Step	Check description	Assumed cause	Measures	Reference
3	Restarting the main unit	The main unit does not start up properly.	Turn off the power switch and pull out the power plug. After passing 5s, reinsert the power plug and turn on the power switch.	
4	Correcting the IP address	IP address was changed.	Check if the main unit IP Address indicated in the status page is the same as the IP Address in the [Port] tab of [Printer Properties] at the PC. If not, correct the IP address at the PC	
5	Changing the settings	The static IP Address is not set in the System Menu	Set the static IP Address in the System Menu	

(21)Print out is not available from the printer driver setting factor (1)

[Condition]

PC OS: Windows 7

Printing file: Kyocera test page

Connection method: Wireless LAN

[Not connected] is displayed on PC and print job can't be performed due to the error. (Can't print)

Step	Check description	Assumed cause	Measures	Reference
1	Deleting the job	The faulty print job is remaining.	Check if the print job remains in the printer driver and delete the remaining.	

(22)Print out is not available from the printer driver setting factor (2)

[Condition]

PC OS: Windows 7

Printing file: Kyocera test page

Connection method: Wireless LAN

'Please wait' is displayed at the main unit. The Job is retained without outputting printed materials.

Step	Check description	Assumed cause	Measures	Reference
1	Deleting the job	The faulty print job is remaining.	Check if the print job remains in the printer driver and delete the remaining.	

(23)Print out is not available from the printer driver setting factor (3)

A PC does not recognize the main unit.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the settings	The printer driver is not properly set.	Check if the printer icon of PC is [Ready]. (Right click the printer icon and execute the trouble shooting)	
2	Reinstalling the printer driver	The printer driver is faulty.	Uninstall the printer driver and reinstall the latest version	
3	Restarting the PC	The PC does not start up properly.	Restart up the PC.	

(24)Print out is not available from the printer driver setting factor (4)

PC operation does not stabilize.

Step	Check description	Assumed cause	Measures	Reference
1	Restarting the PC	The printer driver is not properly set.	Restart PC. (In case if many application software are running or the free space of the PC memory /HDD is low)	

(25)Print out is not available from the printer driver setting factor (5)

Check if the issue occurs when printing the data from all PCs in the network or from a certain PC. Then, print out the data from another PC if it occurs at a certain PC.

Step	Check description	Assumed cause	Measures	Reference
1	Correcting the IP address	The IP address is not properly set.	Check if the IP Address indicated in the main unit status report and system menu is same as the IP address in the port setting of [Printer Properties] at the PC. If not, correct the IP address at the port setting	

(26)Print out is not available from the printer driver setting factor (6)

The incorrect printer driver was selected.

Step	Check description	Assumed cause	Measures	Reference
1	Installing the printer driver	The incorrect printer driver is selected.	Select the correct printer driver. If it is not in the PC, install the printer driver for the destination unit in the PC.	

(27)Print out is not available from the printer driver setting factor (7)

Installed printer driver shows 'Deleting' and it remains when reinstalling it

Step	Check description	Assumed cause	Measures	Reference
1	Deleting the job	The print jobs remain in the spool inside the printer driver.	Delete all print jobs spooling inside the printer driver.	
2	Uninstalling the printer driver	There is the unused printer driver.	Delete the unused printer driver.	
3	Restarting the print	The system is pausing.	Right click the pausing printer icon and select [Print resuming]. Then, check the ready port.	
4	Checking the settings	The host name or the IP address is not properly set.	When the main unit connects to a local network, check the host name and the IP address on the status report of the main unit.	
5	Adding the Standard TCP/IP port	There is no main unit IP Address in the Standard TCP/IP Port	Add the main unit IP address in Standard TCP/IP port and print Test Page	

(28)A part of the image is missing

The image data processing with a certain application (Excel, PDF) is faulty.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the application	The image data processing with a certain application (Excel, PDF, etc.) is faulty.	When the phenomenon occurs with a certain file only, check if there is an abnormality in the image data.	
2	Checking the application	The data processing with a certain application (Excel, PDF, etc.) is faulty.	Check if the image does not drop out on the print preview, and refer to the Help in the application if necessary.	
3	Changing the settings	The PDL settings is incorrect.	Select 'GDI compatible mode' at [PDL settings] in the print settings at the PC.	
4	Firmware upgrade	The firmware is not the latest version.	Upgrade the main firmware to the latest version.	

(29)Paper Mismatch Error' appears

Condition: MP tray feed start

The paper size is not detected properly.

Step	Check description	Assumed cause	Measures	Reference
1	Changing the settings	The paper size for the MP tray is not properly set.	Adjust the MP tray paper size	
2	Resetting the MP paper width guides	The locations of the MP paper width guides do not match the paper size.	Reset the MP paper width guides to match the paper size.	
3	Changing the settings	Paper Mismatch Error is set to [Ignore].	Set [Ignore] at [Common Settings] > [Error Handlings] > [Paper Mismatch Error] via the System Menu.	

7-7 Error Messages

No.	Contents
(1)	The cover-open message appears even if closing the rear cover (pressing the interlock switch)
(2)	Paper add message appears while loading paper on the MP tray

Content of Error Messages

(1) The cover-open message appears even if closing the rear cover (pressing the interlock switch)

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	The connector is not properly connected or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • Interlock switch - Low voltage PWB	
2	Replacing the interlock switch	The interlock switch is faulty.	Replace the interlock switch.	

(2) Paper add message appears while loading paper on the MP tray

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	The connector or FFC is not connected properly. Or, the wire or FFC is faulty.	Reconnect the following wire connectors and clean the FFC and reconnect. If there is no continuity, replace the wire. If the FFC terminal section is deformed or FFC is broken, replace the FFC. • MP paper sensor - Engine relay PWB • Engine relay PWB - Main/engine PWB	
2	Replacing the actuator	The actuator is deformed.	Replace the MP paper sensor actuator.	
3	Replacing the MP paper sensor	The MP paper sensor is not properly attached or it is faulty.	Reattach the MP paper sensor. If it is not repaired, replace it.	
4	Replacing the engine relay PWB	The engine relay PWB is faulty.	Replace the engine relay PWB.	

Step	Check description	Assumed cause	Measures	Reference
5	Replacing the main/engine PWB	The main/engine PWB is faulty.	Replace the main/engine PWB.	

7-8 Abnormal Noise

No.	Contents	Condition
(1)	Abnormal noise (Basic measures)	
(2)	Abnormal sounds from the paper conveying section	Frictional wear, smudges / foreign objects adhesion on the conveying rollers, pulleys and the gears
(3)	Abnormal sound from the developer section	Caused by the developer unit.
(4)	Abnormal sound from the document processor	The frictional wear, affixing the smudges or the foreign objects, improperly attaching of the part
(5)	Abnormal sound from the exit section	Smudges / foreign objects adhesion in the exit section
(6)	Abnormal sound from the primary paper feed section	Frictional wear, smudges / foreign objects adhesion, attachment failure of the primary paper feed section
(7)	Abnormal sound from the machine front side	Wear, dirtiness, foreign objects adhesion or attachment failure at the MP feed section
(8)	Abnormal sound from the lower side than the fuser exit section	Rubbing sound between the bushing and the stop ring of the fuser exit roller due to the smudges / foreign objects adhesion
(9)	Abnormal sound from the upper side of the fuser exit section	Rubbing sound between the fuser exit pulley and the shaft due to the smudges / foreign matter adhesion
(10)	Abnormal sound from the fuser section	Smudges / foreign objects adhesion or the interference between the parts in the fuser section
(11)	Abnormal sound from inside the machine	Open and close operation failure of the toner supply opening of the toner container, the lack of toner amount, or the toner condensation
(12)	Abnormal sound from inside the machine	Smudges / foreign objects adhesion or the toner condensation in the developer section
(13)	Abnormal sound from inside the machine	Frictional wear, smudges / foreign objects adhesion, or the waste toner clogging in the drum section
(14)	Abnormal sound from inside the machine (jumping sounds)	Opening/closing operation failure, dirtiness, smudges / foreign objects adhesion of the waste toner vent of the primary transfer section
(15)	The rotation sound of the fan is noisy	
(16)	The driving sound is noisy during printing	The operation sounds in the drive section

Content of Abnormal Noise

(1) Abnormal noise (Basic measures)

Step	Check description	Assumed cause	Measures	Reference
1	Applying the grease	The grease on each gear or bushing is not enough.	Check the rotation of the roller, pulley and the gears, and apply the grease to the gears and the bushings if not rotating smoothly.	
2	Checking the gear and the bushing	The parts such as each gear or bushing are not properly attached.	Reattach the gear or the bushing.	

(2) Abnormal sounds from the paper conveying section

Frictional wear, smudges / foreign objects adhesion on the conveying rollers, pulleys and the gears

Step	Check description	Assumed cause	Measures	Reference
1	Cleaning and applying the grease	The bearings or gears are dirty or the foreign objects adhere.	Clean the conveying roller bushing and drive gear and apply grease	
2	Cleaning and applying the grease	The inside of the pulley is worn down.	Clean the conveying pulley drive shaft and apply grease	
3	Checking the conveying drive unit	The conveying drive unit is faulty.	Replace the conveying drive unit.	

(3) Abnormal sound from the developer section

Caused by the developer unit.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the developer unit	The developer unit drive is faulty.	Isolate the abnormal developer unit, and check if the developer powder does not leak from the developer unit, there is no damage, or the roller rotates manually. And, repair the parts if necessary.	
2	Replacing the developer unit	The developer unit is faulty.	Replace the developer unit with faulty color.	

(4) Abnormal sound from the document processor

The frictional wear, affixing the smudges or the foreign objects, improperly attaching of the part

Step	Check description	Assumed cause	Measures	Reference
1	Cleaning and applying the grease	The bushing or the gear is dirty or foreign objects are on them.	Clean the bushing and the shaft of the DP conveying roller and apply the grease to them.	
2	Replacing the bushing	The bushing is worn down.	Replace the bearing of the DP conveying roller.	
3	Cleaning and applying the grease	The drive gear is dirty or the foreign object is adhered.	Clean the drive gear of the DP conveying motor or DP reversing motor (30ppm model) and apply grease	
4	Checking the motor	The drive gear of the DP conveying motor or DP reversing motor (30ppm model) is not engaged	Reattach the DP conveying motor or DP reversing motor (30ppm model)	

(5) Abnormal sound from the exit section

Smudges / foreign objects adhesion in the exit section

Step	Check description	Assumed cause	Measures	Reference
1	Cleaning and applying the grease	The bearings or gears are dirty or the foreign objects adhere.	Clean the bushing and the gear of the exit roller and apply grease to them.	
2	Cleaning and applying the grease	The bearings are dirty or the foreign objects adhere.	Clean the shaft of the exit pulley and apply grease to it.	
3	Checking the shaft of the feed-shift guide	The bearings are dirty or the foreign objects adhere.	Clean the shaft of the feed-shift guide and apply grease to it.	

(6) Abnormal sound from the primary paper feed section

Frictional wear, smudges / foreign objects adhesion, attachment failure of the primary paper feed section

Step	Check description	Assumed cause	Measures	Reference
1	Checking the gear and the clutch	The parts such as the gear or the clutch are not properly attached.	Reattach the primary paper feed drive components such as the gear or the clutch if they are not properly attached.	
2	Cleaning and applying the grease	The gear, bushing, etc. is dirty or foreign objects adhere to it	Clean the primary paper feed drive components such as the gear or the bushing and apply the grease to them.	

Step	Check description	Assumed cause	Measures	Reference
3	Cleaning and applying the grease	The shaft, bushing, etc. is dirty or foreign objects adhere to it	Clean the shaft and the bushing of the paper feed roller and apply the grease to them.	
4	Checking the separation pad	The separation pad surface is dirty or worn down.	Clean the separation pad, or replace it if necessary.	

(7) Abnormal sound from the machine front side

Wear, dirtiness, foreign objects adhesion or attachment failure at the MP feed section

Step	Check description	Assumed cause	Measures	Reference
1	Checking the gear and the clutch	The parts such as the gear or the clutch are not properly attached.	When the gears or the clutch in the MP paper feed drive section are not properly attached, reattach them.	
2	Cleaning and applying the grease	The shaft or the bushing is dirty or foreign objects are on them.	Clean the shaft and the bushing of the MP paper feed roller and apply the grease to them.	
3	Checking the MP separation pad	The surface of the MP separation pad is dirty or worn down.	Clean the MP separation pad. Then, replace it if necessary.	
4	Checking the MP conveying belt	The MP conveying belt is not attached properly or is loosened	Reattach the MP conveying belt. Then, replace it if not repaired.	
5	Reattach the MP lift plate.	The MP lift plate is not attached properly.	Reattach the MP lift plate.	

(8) Abnormal sound from the lower side than the fuser exit section

Rubbing sound between the bushing and the stop ring of the fuser exit roller due to the smudges / foreign objects adhesion

Step	Check description	Assumed cause	Measures	Reference
1	Cleaning and applying the grease	The fuser exit roller, bushing or the stop ring are dirty, or foreign objects are on them.	Clean the fuser exit roller, bushing and the stop ring and apply the lubricant to them.	
2	Replacing the fuser unit	The fuser unit is faulty.	Replace the fuser unit.	

(9) Abnormal sound from the upper side of the fuser exit section

Rubbing sound between the fuser exit pulley and the shaft due to the smudges / foreign matter adhesion

Step	Check description	Assumed cause	Measures	Reference
1	Cleaning and applying the grease	The pulley or the shaft is dirty, or foreign matter is on them.	Clean the fuser exit pulley and the shaft and apply the lubricant to them.	
2	Replacing the fuser unit	The fuser unit is faulty.	Replace the fuser unit.	

(10) Abnormal sound from the fuser section

Smudges / foreign objects adhesion or the interference between the parts in the fuser section

Step	Check description	Assumed cause	Measures	Reference
1	Cleaning and applying the grease	The bushing or the gear is dirty or foreign objects are on them.	Clean the bushing and gear of the fuser heat roller and fuser press roller, and apply grease	
2	Cleaning and applying the grease	The shaft is dirty or foreign objects are on it.	Clean the fuser exit pulley and the shaft and apply the lubricant to them.	
3	Cleaning and applying the grease	The gear is dirty or foreign objects are on it.	Clean the fuser drive gear and apply the grease to it.	
4	Applying the grease	The grease is not enough.	Apply the grease to the pressure release cam and the frame.	
5	Replacing the fuser unit	The fuser forwarding guide is bent and contacts the fuser pressure roller.	Replace the fuser unit.	

(11) Abnormal sound from inside the machine

Open and close operation failure of the toner supply opening of the toner container, the lack of toner amount, or the toner condensation

Step	Check description	Assumed cause	Measures	Reference
1	Checking the toner supply opening	The spring for opening and closing of the toner supply opening is hooked with the other parts, or deformed.	Open and close the toner supply opening of the toner container to correct	
2	Checking the toner remaining amount	The agitating paddle is bent or toner amount is small in the toner container	Check the toner remaining amount and replace the toner container if necessary.	
3	Checking the toner container	The torque increases due to the toner condensation.	Shake the toner container enough and reinstall it. Or, replace it.	

(12)Abnormal sound from inside the machine

Smudges / foreign objects adhesion or the toner condensation in the developer section

Step	Check description	Assumed cause	Measures	Reference
1	Checking the toner supply opening	The spring to open/close the toner shutter is caught up or deformed.	Open and close the toner supply opening of the developer unit to correct	
2	Checking the developer roller	The original roller shat and bushing are dirty or foreign objects adhere	Check if the developer roller rotates. If not rotating smoothly, clean the shaft or the bushing of the developer roller.	
3	Checking the developer unit	The torque inside the developer unit increased due to the toner condensation, etc.	Clean the developer unit. Then, replace it if the issue is not resolved.	

(13)Abnormal sound from inside the machine

Frictional wear, smudges / foreign objects adhesion, or the waste toner clogging in the drum section

Step	Check description	Assumed cause	Measures	Reference
1	Executing Drum refresh	Toner is not enough on the drum.	Execute the drum refresh to supply the toner to the cleaning unit.	
2	Checking the drum screw	The drum screw does not properly rotate.	Check if the drum screw rotates. If not rotating smoothly, clean it. If it locks up, replace the drum unit.	
3	Cleaning and applying the grease	Foreign objects are on the tooth of the drum drive gear, or the grease is not enough.	Clean the tooth of the drum drive gear and apply the grease to them.	
4	Checking the drum unit and the developer unit	The torque inside the drum unit increased due to the waste toner clogging, etc.	Execute the drum refresh. If not repaired, replace the drum unit.	

(14)Abnormal sound from inside the machine (jumping sounds)

Opening/closing operation failure, dirtiness, smudges / foreign objects adhesion of the waste toner vent of the primary transfer section

Step	Check description	Assumed cause	Measures	Reference
1	Checking the shutter of the toner waste vent	The shutter of the waste toner vent is not properly opened and closed.	Check the opening and closing operation of the shutter of the toner waste vent in the transfer cleaning unit, and fix the parts if necessary.	

Step	Check description	Assumed cause	Measures	Reference
2	Checking the cleaning screw	The cleaning screw does not properly rotate.	Check if the cleaning screw in the transfer cleaning unit rotates smoothly, and clean it if not rotating smoothly.	
3	Cleaning the transfer cleaning unit	The transfer cleaning unit is dirty.	Clean the inside of the transfer cleaning unit.	
4	Cleaning and applying the grease	The drive gear or the bushing is dirty, or foreign objects are on them.	Clean the parts in the primary transfer unit such as the drive gear and the bushing, and apply the grease to them.	
5	Replacing the primary transfer unit	The primary transfer unit is faulty.	Replace the primary transfer unit.	

(15)The rotation sound of the fan is noisy

Step	Check description	Assumed cause	Measures	Reference
1	Cleaning the fan motor	The fan section of the fan motor is dirty	Isolate the fan motor with the noisy sounds and clean the fans.	
2	Checking the fan motor	The fan motor is not properly attached, or it is faulty.	Reattach the fan motor and reinsert the connector. If not repaired, replace it.	

(16)The driving sound is noisy during printing

The operation sounds in the drive section

Step	Check description	Assumed cause	Measures	Reference
1	Changing the settings	The Quiet Mode is off.	Set [On] at [Adjustment/Maintenance] > [Quiet Mode] via the System Menu.	

7-9 Malfunction

No.	Contents	Condition
(1)	The main unit does not operate at all even if the power switch is turned on	
(2)	The paper jam occurs in the feed section, the conveying section or the exit section at the same time as turning on the power switch.	
(3)	Paper skew	
(4)	Toner drops over the paper conveying section.	
(5)	The login fails with other than the ID card	
(6)	Unavailable of searching texts from the output PDF (OCR Text Recognition is invalid)	

Content of Malfunction

(1) The main unit does not operate at all even if the power switch is turned on

Step	Check description	Assumed cause	Measures	Reference
1	Changing the external power source	The power cord has no continuity.	Plug the power cord into another wall outlet.	
2	Replacing the power cord	The power plug of the power cord is faulty.	Replace the power cord when the power plug is deformed, or it is faulty.	
3	Replacing the power cord	The power cord is faulty.	Check the continuity in the power cord, and replace the power cord if there is no continuity.	
4	Replacing the power switch	The power switch is faulty.	Check the continuity between the contacts of the power switch. Then, replace the power switch if there is no continuity.	
5	Checking the low voltage PWB	The connector is not connected properly. The wire or the PWB is faulty.	Clean the terminal of the connectors on the low voltage PWB, then reconnect the wire connector. If the wire is faulty, repair or replace it. If not repaired, replace the low voltage PWB.	

(2) The paper jam occurs in the feed section, the conveying section or the exit section at the same time as turning on the power switch.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the paper path	The paper is caught on a piece of paper, foreign objects or the burrs on the parts in the conveying path.	Remove paper strip or foreign objects adhering on the conveying path, or burrs on the parts such as guide, actuator, etc.	
2	Checking the sensor	There is a fault in each sensor on the paper path.	Reattach the sensor where the paper jam occurred and reconnect the connector. If not repaired, replace it.	

(3) Paper skew

Step	Check description	Assumed cause	Measures	Reference
1	Relocating the paper width guides or the MP paper width guides	The locations of the paper width guides or the MP paper width guides do not match the paper size.	Relocate the paper width guides or the MP paper width guides to match the paper size.	
2	Reattaching the paper width guides or MP paper width guides	The paper width guides or the MP paper width guides are not properly attached.	Reattach the paper width guides or MP paper width guides	
3	Replacing the paper width guides or MP paper width guides	The paper width guides or the MP paper width guides are faulty.	Replace the paper width guides or the MP paper width guides.	

(4) Toner drops over the paper conveying section.

Step	Check description	Assumed cause	Measures	Reference
1	Cleaning the developer unit and drum unit	The developer unit or drum unit is dirty.	Clean the developer unit and drum unit.	

(5) The login fails with other than the ID card

Step	Check description	Assumed cause	Measures	Reference
1	Checking the settings	[User/Job Account] is valid while the card authentication kit is not installed.	Set [Permit] at [User/Job Account] > [ID Card Settings] > [Key Login] via the System Menu.	

(6) Unavailable of searching texts from the output PDF (OCR Text Recognition is invalid)

Step	Check description	Assumed cause	Measures	Reference
1	Installing the scan extension kit	The scan extension kit is not installed.	Install the scan extension kit.	
2	Installing the OCR dictionary software	The OCR dictionary software is not installed.	Install the OCR dictionary software.	
3	Changing the settings	The file format is not properly set.	Change [PDF] > 'OCR Text Recognition' to [On] at the file format setting.	

8 PWBs

8-1 Description for PWB

(1) Main/Engine PWB

(1-1) PWB photograph

30 ppm model

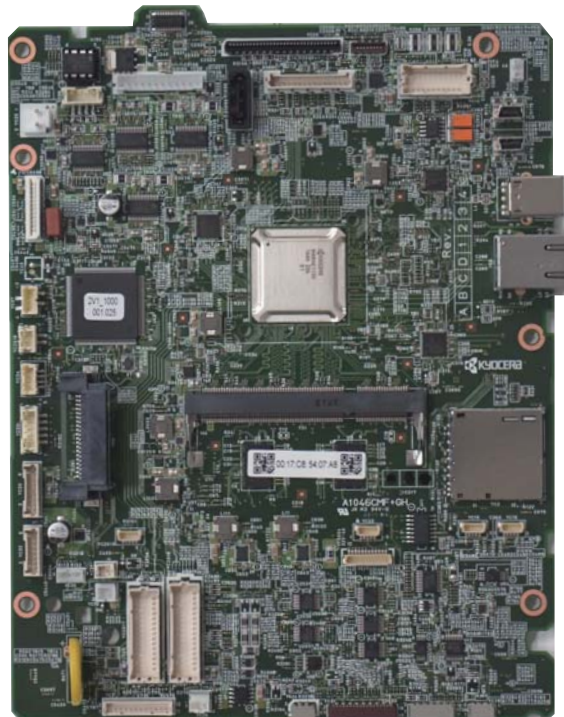


Figure 8-32

35 ppm model



Figure 8-33

(1-2) Connector position

30 ppm model

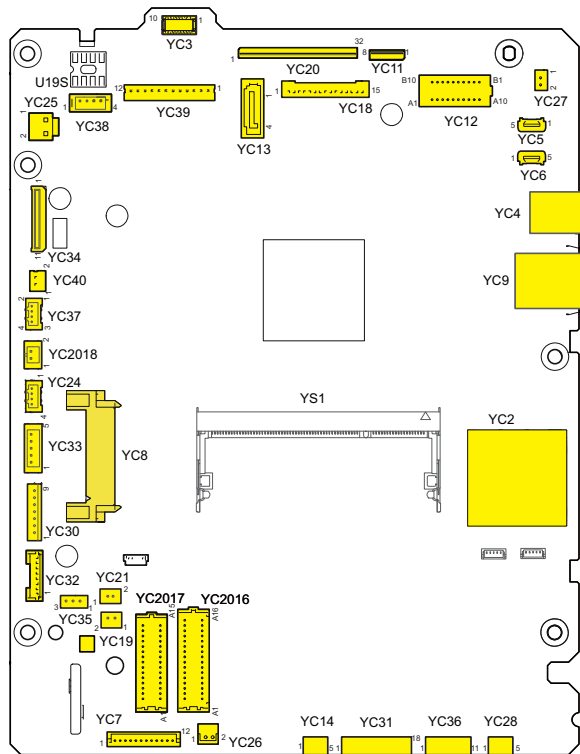


Figure 8-34

35 ppm model

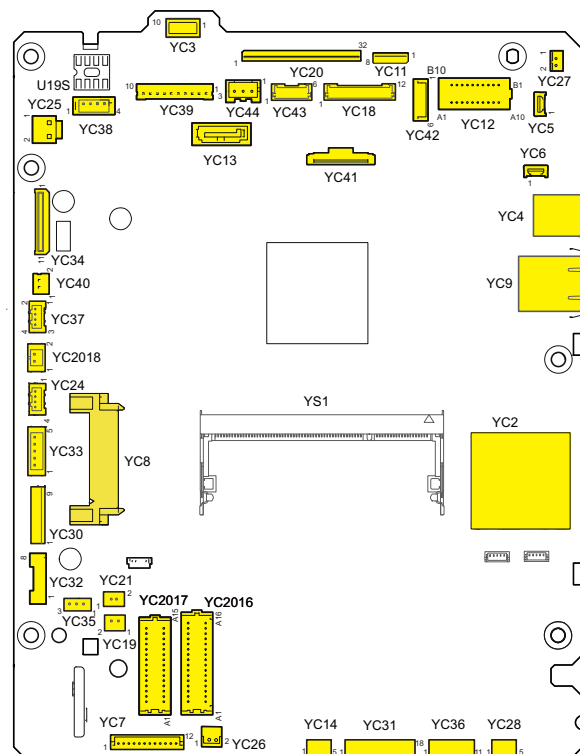


Figure 8-35

(1-3) Connector lists

Connector access point

YC2:SD card
YC3:WiFi(IB-36)(Option)
YC4:USB device
YC5:USB host(Rear)
YC6:USB host(Front)
YC7:FAX PWB
YC8:eKUIO PWB
YC9:Ethernet
YC11: Exit PWB
YC12: Operation panel PWB
YC13: Operation panel PWB
YC14: ID sensor 2
YC18: DP original sensor, DP registration sensor, DP opening/closing sensor, DP reversing sensor, DP timing sensor: 30 ppm model
YC18: DP original sensor, DP opening/closing sensor, DP exit sensor, DP timing sensor: 35 ppm model
YC19: Power supply fan motor
YC20: CCD PWB
YC21: Registration clutch
YC24: Outer temperature sensor
YC25: Manual stapler
YC26: FAX PWB
YC27: Speaker
YC28: ID sensor 1
YC30: Power supply PWB
YC31: Engine relay PWB
YC32: Engine relay PWB
YC33: Power supply PWB
YC34: High-voltage PWB
YC35: Registration sensor
YC36: Drum relay PWB
YC37: Toner container switch, Tray switch
YC38: Image scanner motor
YC39: DP conveying motor, DP feedshift motor, DP feed motor: 30 ppm model
YC39: DP conveying motor, DP feed motor, DP feed clutch: 35 ppm model
YC41: CIS relay PWB: 35 ppm model
YC42: CIS relay PWB: 35 ppm model
YC43: DP registration sensor, DP second page timing sensor(35 ppm model)
YC44: DP top cover switch(35 ppm model)
YC2016: APC PWB K, APC PWB M, and Polygon motor KM
YC2017: APC PWB C, APC PWB Y, and Polygon motor CY
YC2018: Power switch

Connector	Pin	Signal	I/O	Voltage	Description
YC2	1	CD/DAT3	IO	3.3 V DC (pulse)	Data[3]
	2	CMD	IO	3.3 V DC (pulse)	Command
	3	VSS	O	-	Ground
	4	VDD	O	3.3 V DC	Power output
	5	CLK	O	3.3 V DC (pulse)	Transfer clock
	6	VSS	O	-	Ground
	7	DAT0	IO	3.3 V DC (pulse)	Data[0]
	8	DAT1	IO	3.3 V DC (pulse)	Data[1]
	9	DAT2	IO	3.3 V DC (pulse)	Data[2]
	10	CD	I	3.3 V DC	Detecting switch
	11	COMMON	I	-	Common connection (Ground)
	12	WP	I	3.3 V DC	Write-Protect
YC3	1	SD_D3	I/O	0/3.3 V DC	Serial data I/O signal
	2	SD_D2	I/O	0/3.3 V DC	Serial data I/O signal
	3	SD_CMD	I/O	0/3.3 V DC	Serial data command I/O signal
	4	GND	-	-	Ground
	5	SD_CLK	O	0/3.3 V DC	Serial data CLK I/O signal
	6	GND	-	-	Ground
	7	SD_D1	I/O	0/3.3 V DC	Serial data I/O signal
	8	SD_D0	I/O	0/3.3 V DC	Serial data I/O signal
	9	GND	-	-	Ground
	10	VIO	O	3.3 V DC	3.3 V DC power output
	11	VBAT	O	3.3 V DC	3.3 V DC power output
	12	GND	-	-	Ground
	13	PAVDD	O	3.3 V DC	3.3 V DC power output
	14	GND	-	-	Ground
	15	HOST WAKE	I	0/3.3 V DC	WakeUp signal
	16	GND	-	-	Ground
	17	N.C	-	-	Not used
	18	DETECT	I	0/3.3 V DC	Device detecting signal
	19	N.C	-	-	Not used
	20	N.C	-	-	Not used

Connector	Pin	Signal	I/O	Voltage	Description
YC4	1	VBUS	O	0/3.3 V DC (pulse)	VBUS
	2	D-	IO	0.4 V DC (pulse)	Data (-)
	3	D+	IO	0.4 V DC (pulse)	Data (+)
	4	GND	-	-	Ground
	5	STDB_SSTX-	IO	-	Not used
	6	STDB_SSTX+	IO	-	Not used
	7	GND	-	-	Ground
	8	STDB_SSRX-	IO	-	Not used
	9	STDB_SSRX+	IO	-	Not used
YC5	1	VBUS	O	24 V DC	VBUS
	2	DATA-	IO	24 V DC	Data (-)
	3	DATA+	IO	-	Data (+)
	4	ID	-	-	Not used
	5	SHEELD-G	O	-	Ground
YC6	1	VBUS	O	24 V DC	VBUS
	2	DATA-	IO	24 V DC	Data (-)
	3	DATA+	IO	-	Data (+)
	4	ID	-	-	Not used
	5	SHEELD-G	O	-	Ground
YC7	1	+24V2F	O	24 V DC	24 V DC power output
	2	GND	-	-	Ground
	3	+3.3V	O	3.3 V DC	3.3 V DC power output
	4	RESB	O	0/3.3 V DC	Reset signal
	5	GND	-	-	Ground
	6	HSCCLK	O	0/3.3 V DC	SP1 clock signal
	7	HSD	I	0/3.3 V DC	SPI data signal
	8	GND	-	-	Ground
	9	HSAD	O	0/3.3 V DC	SPI address, data signal
	10	HSCCSB	O	0/3.3 V DC	Chip select signal
	11	GND	-	-	Ground
	12	HINT	I	0/3.3 V DC	Interrupt input signal

Connector	Pin	Signal	I/O	Voltage	Description
YC8	1	VBUS1	O	5 V DC	VBUS
	2	USB_DN1	IO	-400 to +400 mV (pulse)	Data (-)
	3	USB_DP1	IO	-400 to +400 mV (pulse)	Data (+)
	4	AUDIO1	-	-	Not used
	5	WAKEUP1	I	3.3 V DC	Recovery request
	6	RESET1	O	5 V DC	Reset
	7	GND	-	-	Ground
	8	GND	-	-	Ground
	9	GND	-	-	Ground
	10	GND	-	-	Ground
	11	GND	-	-	Ground
	12	NC	-	-	Not used
	13	DC5V2_C2	O	5 V DC	Power output
	14	DC5V2_C2	O	5 V DC	Power output
	15	DC5V2_C2	O	5 V DC	Power output
	16	DC5V2_C2	O	5 V DC	Power output
	17	DC5V2_C2	O	5 V DC	Power output
	18	DC5V2_C2	O	5 V DC	Power output
	19	DC5V2_C2	O	5 V DC	Power output
	20	DC5V1_C	O	5 V DC	Power output
	21	DC5V1_C	O	5 V DC	Power output
	22	DC5V1_C	O	5 V DC	Power output
	23	NC	-	-	Not used
	24	GND	-	-	Ground
	25	GND	-	-	Ground
	26	GND	-	-	Ground
	27	GND	-	-	Ground
	28	VBUS0	O	5 V DC	VBUS
	29	USB_DN0	IO	-400 to +400 mV (pulse)	Data (-)
	30	USB_DP0	IO	-400 to +400 mV (pulse)	Data (+)
	31	AUDIO0	I	Analog	FAX Audio
	32	WAKEUP0	I	3.3 V DC	Recovery request
	33	RESET0	O	5 V DC	Reset

Connector	Pin	Signal	I/O	Voltage	Description
YC9	R1	TD1+	IO	-1.0 to +1.0 (pulse)	Data
	R2	TD2-	IO	-1.0 to +1.0 (pulse)	Data
	R3	TD1+	IO	-1.0 to +1.0 (pulse)	Data
	R4	TD2-	IO	-1.0 to +1.0 (pulse)	Data
	R5	CT1	-	-	Center tap
	R6	CT2	-	-	Center tap
	R7	TD3+	IO	-1.0 to +1.0 (pulse)	Data
	R8	TD3-	IO	-1.0 to +1.0 (pulse)	Data
	R9	TD4+	IO	-1.0 to +1.0 (pulse)	Data
	R10	TD4-	IO	-1.0 to +1.0 (pulse)	Data
	L1	YWLED_A	O	3.3 V DC	LED anode (Power supply output)
	L2	YWLED_K	I	-	LED cathode (Ground)
	L3	GRLED_K	I	-	LED cathode (Ground)
	L4	GRLED_A	O	3.3 V DC	LED anode (Power supply output)
YC11 (30 ppm model)	1	NCTHCOM	-	Not used	
	2	FTHERM1	I	Analog	Fuser thermistor 1 detecting voltage
	3	NCTHDET	I	Analog	Fuser thermistor 2 detecting voltage
	4	+3.3V3_E	O	3.3 V DC	3.3 V DC power output
	5	PDIRN	I	0/3.3 V DC	Press-release sensor: On/Off
	6	PDFULL	I	0/3.3 V DC	Paper full sensor: On/Off
	7	FUSJAM	I	0/3.3 V DC	Exit sensor: On/Off
	8	GND	-	-	Ground
YC11 (35 ppm model)	1	NCTHCOM	I	Analog	NC compensating voltage
	2	FTHERM1	I	Analog	Fuser thermistor 1 detecting voltage
	3	FCTHDET	I	Analog	NC detecting voltage
	4	+3.3V3_E	O	3.3 V DC	3.3 V DC power output
	5	PDIRN	I	0/3.3 V DC	Press-release sensor: On/Off
	6	PDFULL	I	0/3.3 V DC	Paper full sensor: On/Off
	7	FUSJAM	I	0/3.3 V DC	Exit sensor: On/Off
	8	GND	-	-	Ground
YC12	A1	P2C_SDAT	I	0/3.3 V DC	Serial communication data signal
	A2	C2P_SDAT	O	0/3.3 V DC	Serial communication data signal
	A3	P2C_SDIR	I	0/3.3 V DC	Serial communication direction signal
	A4	P2C_SBSY	I	0/3.3 V DC	Serial communication busy signal
	A5	C2P_SCK	O	0/3.3 V DC	Serial communication clock signal
	A6	INT_ANYKEY	I	0/3.3 V DC	ANYKEY return notification signal
	A7	GND	-	-	Ground

Connector	Pin	Signal	I/O	Voltage	Description
YC12	A8	+5V1	O	5 V DC	5 V DC power output
	A9	+5V1	O	5 V DC	5 V DC power output
	A10	+5V1	O	5 V DC	5 V DC power output
	B1	GND	-	-	Ground
	B2	GND	-	-	Ground
	B3	GND	-	-	Ground
	B4	3.3V2_C	O	3.3 V DC	3.3 V DC power output
	B5	BEEP_POWERON	O	0/3.3 V DC	Alert sound control signal
	B6	LED_MEMORY	O	0/3.3 V DC	MEMORY LED drive signal
	B7	LED_ATTENTION	O	0/3.3 V DC	ATTENTION LED drive signal
B8	PNL_WAKEUP_REQ	O	0/3.3 V DC	WakeUp signal	
B9	INT_ENERGYSAVERKEY	I	0/3.3 V DC	ENERGYSAVER KEY notification signal	
B10	FPRST	O	0/3.3 V DC	Reset signal	
YC13	1	GND	-	-	Ground
	2	LCD_OFF	O	0/3.3 V DC	LCD ON/OFF signal
	3	LOCKN	I	0/3.3 V DC	LOCK detecting signal
	4	GND	-	-	Ground
	5	TX0N	O	CML	CML serial output signal
	6	TX0P	O	CML	CML serial output signal
	7	GND	-	-	Ground
YC14	1	VOPR	I	Analog	ID sensor 2 S signal input
	2	VOSR	I	Analog	ID sensor 2 P signal input
	3	GND	-	-	Ground
	4	LEDREFR	O	Analog	ID sensor 2 reference signal output
	5	+3.3V3_E	O	3.3 V DC	3.3 V DC power output
YC18 (30 ppm model)	1	+3.3V3_E_LED	O	3.3 V DC	SENSOR LED power
	2	GND	-	-	Ground
	3	DPSET	I	0/3.3 V DC	DP original set detecting input signal
	4	+3.3V3_E_LED	O	3.3 V DC	SENSOR LED power
	5	GND	-	-	Ground
	6	DPREG	I	0/3.3 V DC	DP registration detecting input signal

Connector	Pin	Signal	I/O	Voltage	Description
YC18 (30 ppm model)	7	+3.3V3_E_LED	O	3.3 V DC	SENSOR LED power
	8	GND	-	-	Ground
	9	DPCOVOPN	I	0/3.3 V DC	DP cover opening/closing detecting input signal
	10	+3.3V3_E_LED	O	3.3 V DC	SENSOR LED power
	11	GND	-	-	Ground
	12	DPJHPSW	I	0/3.3 V DC	DP reversing motor home positing detecting input signal
	13	+3.3V3_E_LED	O	3.3 V DC	SENSOR LED power
	14	GND	-	-	Ground
	15	DPTIMING	I	0/3.3 V DC	DP conveying timing detecting input signal
YC18 (35 ppm model)	1	+3.3V3_LED	O	3.3 V DC	SENSOR LED power
	2	GND	-	-	Ground
	3	DP_SETSW	I	0/3.3 V DC	DP original set detecting input signal
	4	+3.3V3_LED	O	3.3 V DC	SENSOR LED power
	5	GND	-	-	Ground
	6	DP_OPENSW	I	0/3.3 V DC	DP cover opening/closing detecting input signal
	7	+3.3V3_LED	O	3.3 V DC	SENSOR LED power
	8	GND	-	-	Ground
	9	DP_EXITSW	I	0/3.3 V DC	DP paper exit detecting input signal
	10	+3.3V3_E	O	3.3 V DC	3.3 V DC power output
	11	DP_TMGSW	I	0/3.3 V DC	DP conveying timing detecting input signal
	12	GND	-	-	Ground
YC19	1	+24V0	O	24 V DC	24 V DC power output
	2	LVUFANDRVN	O	0/12/24 V DC	Power source fan motor: full speed/half speed/Off
YC20	1	12V3	O	12 V DC	12 V DC power output
	2	12V3	O	12 V DC	12 V DC power output
	3	N.C.	-	-	Not used
	4	+5.0V3	O	5 V DC	5 V DC power output
	5	+5.0V3	O	5 V DC	5 V DC power output
	6	N.C.	-	-	Not used
	7	GND	-	-	Ground
	8	CCDOSR	I	Analog	Image analog signal RED

Connector	Pin	Signal	I/O	Voltage	Description	
YC20	9	GND	-	-	Ground	
	10	CCDOSG(EVEN)	I	Analog	Image analog signal GREEN	
	11	GND	-	-	Ground	
	12	CCDOSB(ODD)	I	Analog	Image analog signal BLUE	
	13	GND	-	-	Ground	
	14	CCDSW	O	0/3.3 V DC	CCD color/BW switching signal	
	15	CCDSH	O	0/3.3 V DC	Shift gate signal	
	16	GND	-	-	Ground	
	17	GND	-	-	Ground	
	18	CCDPH1P	O	LVDS	CCD shift register clock signal	
	19	CCDPH1N	O	LVDS	CCD shift register clock signal	
	20	GND	-	-	Ground	
	21	CCDCPN	O	LVDS	CCD clamp signal	
	22	CCDCPP	O	LVDS	CCD clamp signal	
	23	GND	-	-	Ground	
	24	CCDRSP	O	LVDS	CCD reset signal	
	25	CCDRSN	O	LVDS	CCD reset signal	
	26	GND	-	-	Ground	
	27	N.C.	-	-	Not used	
	28	+3.3V3_E	O	3.3 V DC	3.3 V DC power output	
	29	HP SWN	I	0/3.3 V DC	HPS: On/Off	
	30	GND	-	-	Ground	
	31	M LED C	I	0 to 2V DC	LED cathode	
	32	M LED A	O	3 V DC	LED anode	
	YC21	1	+24V3_IL	O	24 V DC	24 V DC power output
		2	REGCLDRVN	O	0/24 V DC	Registration clutch: On/Off
	YC24	1	AIRTEMP	I	Analog	Outer temperature sensor detecting voltage (temperature)
		2	+3.3V3_E	O	3.3 V DC	3.3 V DC power output
		3	HUMOUT	I	Analog	Outer temperature sensor detecting voltage (humidity)
		4	HUMCLK	O	0/3.3 V DC(pulse)	Outer temperature sensor clock signal
	YC25	1	GND	-	-	Ground
		2	+24V2_E	O	24 V DC	24 V DC power output
YC26	1	SPIN	I	Ground	Speaker AUDIO signal	
	2	SPIN	I	Analog	Speaker AUDIO signal	

Connector	Pin	Signal	I/O	Voltage	Description
YC27	1	SPOUT	O	Analog	Speaker AUDIO signal
	2	SPOUT	O	Ground	Speaker AUDIO signal
YC28	1	VOPL	I	Analog	ID sensor 1 S signal input
	2	VOSL	I	Analog	ID sensor 1 P signal input
	3	GND	-	-	Ground
	4	LEDREFL	O	Analog	ID sensor 1 reference signal output
	5	+3.3V3_E	O	3.3 V DC	3.3 V DC power output
YC30	1	+24V0	O	24 V DC	24 V DC power output
	2	+24V0	O	24 V DC	24 V DC power output
	3	GND	-	-	Ground
	4	GND	-	-	Ground
	5	GND	-	-	Ground
	6	GND	-	-	Ground
	7	+24V0_IL	O	24 V DC	24 V DC power output
	8	+24V0_IL	O	24 V DC	24 V DC power output
	9	+24V0_IL	O	24 V DC	24 V DC power output
YC31	1	EGASSDI	I	0/3.3 V DC(pulse)	Serial communication data input
	2	GND	-	-	Ground
	3	EGASCS	O	0/3.3 V DC	Serial communication chip select signal
	4	EGASEN	I	0/3.3 V DC	Serial communication enable signal
	5	+3.3V1_C/ DUTY_CON- TROL	O	3.3 V DC	3.3 V DC power output
	6	EGASSDO	O	0/3.3 V DC(pulse)	Serial communication data output
	7	+3.3V3_E	O	3.3 V DC	3.3 V DC power output
	8	EGASSCK	O	0/3.3 V DC(pulse)	Serial communication clock signal
	9	WAKEUPINTN	I	0/3.3 V DC	Engine CPU return signal
	10	FRAM2SDA/ 1WIRE	I/O	0/3.3 V DC	Security communication data
	11	ERRTEMP	O	0/3.3 V DC	Abnormal high temperature detecting signal
	12	FRAM2SCL	O	0/3.3 V DC(pulse)	Security communication clock
	13	+3.3V3_E	O	3.3 V DC	3.3 V DC power output
	14	OPSDO	O	0/3.3 V DC(pulse)	Option serial data output
	15	OPRDYN	I	0/3.3 V DC	Option ready signal
	16	OPSDI	I	0/3.3 V DC(pulse)	Option serial data input
	17	GND	-	-	Ground
	18	OPSCK	O	0/3.3 V DC(pulse)	Option serial clock signal

Connector	Pin	Signal	I/O	Voltage	Description
YC32	1	+24V0	I	24 V DC	24 V DC power input
	2	GND	-	-	Ground
	3	GND	-	-	Ground
	4	GND	-	-	Ground
	5	GND	-	-	Ground
	6	+24V3_IL	I	24 V DC	24 V DC power input
	7	+24V3_IL	I	24 V DC	24 V DC power input
	8	+24V3_IL	I	24 V DC	24 V DC power input
YC33	1	PSSLEEPN	O	0/24 V DC	Sleep mode signal: On/Off
	2	ZCROSSN	I	0/3.3 V DC(pulse)	Zero cross signal
	3	RELAYON	O	0/3.3 V DC	Power relay signal: On/Off
	4	HEATREM1	O	0/3.3 V DC	Fuser heater 1: On/Off
	5	HEATREM2*1	O	0/3.3 V DC	Fuser heater 2: On/Off
YC34	1	+24V3_IL	O	24 V DC	24 V DC power output
	2	+24V3_IL	O	24 V DC	24 V DC power output
	3	DACSLD1	O	0/3.3 V DC(pulse)	DAC1 load signal
	4	DACSLD2	O	0/3.3 V DC(pulse)	DAC2 load signal
	5	DACSCLK	O	0/3.3 V DC(pulse)	DAC clock signal
	6	SGND	-	-	Ground
	7	DACSDO	I/O	0/3.3 V DC(pulse)	DAC data signal
	8	HVREMN	O	0/3.3 V DC	Primary/Secondary transfer remote signal
	9	HVCLKK	O	0/3.3 V DC	Developer clock signal
	10	MISENS	I	Analog	Main charger current detecting output
	11	PGND	-	-	Ground
	12	PGND	-	-	Ground
YC35	1	GND	-	-	Ground
	2	REGPAP	I	0/3.3 V DC	Registration sensor: On/Off
	3	+3.3V3_E	O	3.3 V DC	3.3 V DC power output
YC36	1	GND	-	-	Ground
	2	PTSCL	O	0/3.3 V DC(pulse)	E2PROM communication clock signal
	3	+3.3V3_E	O	3.3 V DC	3.3 V DC power output
	4	PTSDA	I/O	0/3.3 V DC(pulse)	E2PROM communication data signal
	5	TNSENC	I	Analog	Toner sensor remaining level signal (C)
	6	TNSENY	I	Analog	Toner sensor remaining level signal (Y)

Connector	Pin	Signal	I/O	Voltage	Description
YC36	7	TNSENK	I	Analog	Toner sensor remaining level signal (K)
	8	TNSENM	I	Analog	Toner sensor remaining level signal (M)
	9	DRMHEATDR	O	24 V DC	24 V DC power output
	10	DLP THERM	I	Analog	Developer thermistor
	11	ERASE	O	24 V DC	Eraser (BK) ON signal
YC37	1	GND	-	-	Ground
	2	TCON TERRN	I	0/3.3 V DC	Toner container switch: On/Off
	3	GND	-	-	Ground
	4	TOPOP N	I	0/3.3 V DC	Top cover opening/closing determination switch: On/Off
YC38	1	SCMOTB2	O	0/24 V DC(pulse)	Image scanner motor drive control signal
	2	SCMOTA1	O	0/24 V DC(pulse)	Image scanner motor drive control signal
	3	SCMOTB1	O	0/24 V DC(pulse)	Image scanner motor drive control signal
	4	SCMOTA2	O	0/24 V DC(pulse)	Image scanner motor drive control signal
YC39 (30 ppm model)	1	CONVMOTB2	O	0/24 V DC	DP conveying motor B2 drive control signal
	2	CONVMOTB1	O	0/24 V DC	DP conveying motor B1 drive control signal
	3	CONVMOTA2	O	0/24 V DC	DP conveying motor A2 drive control signal
	4	CONVMOTA1	O	0/24 V DC	DP conveying motor A1 drive control signal
	5	JNCMOTB2	O	0/24 V DC	DP reversing motor B2 drive control signal
	6	JNCMOTA2	O	0/24 V DC	DP reversing motor A2 drive control signal
	7	JNCMOTB1	O	0/24 V DC	DP reversing motor B1 drive control signal
	8	JNCMOTA1	O	0/24 V DC	DP reversing motor A1 drive control signal
	9	FEEDMOTB2	O	0/24 V DC	DP feed motor B2 drive control signal
	10	FEEDMOTB1	O	0/24 V DC	DP feed motor B1 drive control signal
	11	FEEDMOTA2	O	0/24 V DC	DP feed motor A2 drive control signal
	12	FEEDMOTA1	O	0/24 V DC	DP feed motor A1 drive control signal
YC39 (35 ppm model)	1	DP_FEED_CL	O	0/24 V DC	DP feed clutch control signal
	2	+24V3_E_IL	O	24 V DC	24 V DC power output
	3	DPFEDMTA1	O	0/24 V DC	DP feed motor A1 drive control signal
	4	DPFEDMTA2	O	0/24 V DC	DP feed motor A2 drive control signal
	5	DPFEDMTB1	O	0/24 V DC	DP feed motor B1 drive control signal
	6	DPFEDMTB2	O	0/24 V DC	DP feed motor B2 drive control signal
	7	DPCNVMTA1	O	0/24 V DC	DP conveying motor A1 drive control signal
	8	DPCNVMTA2	O	0/24 V DC	DP conveying motor A2 drive control signal
	9	DPCNVMTB1	O	0/24 V DC	DP conveying motor B1 drive control signal
	10	DPCNVMTB2	O	0/24 V DC	DP conveying motor B2 drive control signal

Connector	Pin	Signal	I/O	Voltage	Description
YC41 (35 ppm model)	1	GND	-	-	Ground
	2	TR	O	0/3.3 V DC	CIS start pulse signal
	3	VREF	O	Analog	CIS reference voltage
	4	GND	-	-	Ground
	5	MCK	O	0/3.3 V DC	CIS clock signal
	6	GND	-	-	Ground
	7	OS5	I	Analog	Analog signal
	8	GND	-	-	Ground
	9	OS6	I	Analog	Analog signal
	10	GND	-	-	Ground
	11	OS7	I	Analog	Analog signal
	12	GND	-	-	Ground
	13	OS8	I	Analog	Analog signal
	14	GND	-	-	Ground
	15	OS9	I	Analog	Analog signal
	16	GND	-	-	Ground
	17	OS10	I	Analog	Analog signal
	18	GND	-	-	Ground
	19	OS11	I	Analog	Analog signal
	20	GND	-	-	Ground
	21	OS12	I	Analog	Analog signal
	22	GND	-	-	Ground
	23	OS1	I	Analog	Analog signal
	24	GND	-	-	Ground
	25	OS2	I	Analog	Analog signal
	26	GND	-	-	Ground
	27	OS3	I	Analog	Analog signal
	28	GND	-	-	Ground
	29	OS4	I	Analog	Analog signal
	30	GND	-	-	Ground
YC42 (35 ppm model)	1	LEDR	I	DC6.5V	RED LED cathode signal
	2	LEDB	O	DC6.5V	BLUE LED cathode signal
	3	LEDA	I	DC6.5V	LED anode signal
	4	LEDG	I	DC6.5V	GREEN LED cathode signal
	5	+3.3V3 CIS	O	3.3 V DC	3.3 V DC power output
	6	GND	-	-	Ground

Connector	Pin	Signal	I/O	Voltage	Description
YC43 (35 ppm model)	1	GND	-	-	Ground
	2	CIS TMGSW	I	0/3.3 V DC	Second page CIS timing detecting signal
	3	+3.3V3_E	O	3.3 V DC	3.3 V DC power output
	4	+3.3V3_E	O	3.3 V DC	3.3 V DC power output
	5	DP_REGSW	I	0/3.3 V DC	DP registration detecting signal
	6	GND	-	-	Ground
YC44 (35 ppm model)	1	+24V3_E	O	24 V DC	24 V DC power output
	2	GND	-	-	Ground
	3	+24V3_E_IL	O	24 V DC	24 V DC power output
YC2016	A1	POLKMREMNI	O	0/5 V DC	Polygon motor KM drive signal
	A2	POLKMRDYN	I	0/3.3 V DC	Polygon motor KM ready signal
	A3	POLKMCLK	O	0/5 V DC	Polygon motor KM clock signal
	A4	N.C	-	-	Not used
	A5	PDMN	I	0/3.3 V DC	BD (M) detecting signal
	A6	+3.3V3_E	O	3.3 V DC	3.3 V DC power output
	A7	VDOM1P	O	LVDS	Video 1 differential signal P (M)
	A8	VDOM1N	O	LVDS	Video 1 differential signal N (M)
	A9	GND	-	-	Ground
	A10	VDOM2P	O	LVDS	Video 2 differential signal P (M)
	A11	VDOM2N	O	LVDS	Video 2 differential signal N (M)
	A12	SAMPLEM1N	O	0/3.3 V DC	Sample hold 1 signal (M)
	A13	SAMPLEM2N	O	0/3.3 V DC	Sample hold 2 signal (M)
	A14	OUTPEMN	O	0/3.3 V DC	Output enable signal (M)
	A15	VREFM	O	Analog	Reference voltage (M)
	A16	+5.0V3	O	5 V DC	5 V DC power output
	B1	+5.0V3	O	5 V DC	5 V DC power output
	B2	VREFK	O	Analog	Reference voltage (K)
	B3	OUTPEKN	O	0/3.3 V DC	Output enable signal (K)
	B4	SAMPLEK2N	O	0/3.3 V DC	Sample hold 2 signal (K)
	B5	SAMPLEK1N	O	0/3.3 V DC	Sample hold 1 signal (K)
	B6	VDOK2N	O	LVDS	Video 2 differential signal N (K)
	B7	VDOK2P	O	LVDS	Video 2 differential signal P (K)
	B8	GND	-	-	Ground
B9	VDOK1N	O	LVDS	Video 1 differential signal N (K)	
B10	VDOK1P	O	LVDS	Video 1 differential signal P (K)	
B11	+3.3V3_E	O	3.3 V DC	3.3 V DC power output	
B12	PDKN	I	0/3.3 V DC	BD (K) detecting signal	

Connector	Pin	Signal	I/O	Voltage	Description	
YC2016	B13	LSUTHMK	I	Analog	LSU thermistor signal	
	B14	N.C	-	-	Not used	
	B15	+24V3_IL	O	24 V DC	24 V DC power output	
	B16	GND	-	-	Ground	
YC2017	A1	POLCYREMNI	O	0/5 V DC	Polygon motor CY drive signal	
	A2	POLCYRDYNI	I	0/3.3 V DC	Polygon motor CY ready signal	
	A3	POLCYCLK	O	0/5 V DC	Polygon motor CY clock signal	
	A4	PDYNI	I	0/3.3 V DC	BD (Y) detecting signal	
	A5	+3.3V3_E	O	3.3 V DC	3.3 V DC power output	
	A6	VDOY1P	O	LVDS	Video 1 differential signal P (Y)	
	A7	VDOY1N	O	LVDS	Video 1 differential signal N (Y)	
	A8	GND	-	-	Ground	
	A9	VDOY2P	O	LVDS	Video 2 differential signal P (Y)	
	A10	VDOY2N	O	LVDS	Video 2 differential signal N (Y)	
	A11	SAMPLEY1N	O	0/3.3 V DC	Sample hold 1 signal (Y)	
	A12	SAMPLEY2N	O	0/3.3 V DC	Sample hold 2 signal (Y)	
	A13	OUTPEYN	O	0/3.3 V DC	Output enable signal (Y)	
	A14	VREFY	O	Analog	Reference voltage (Y)	
	A15	+5.0V3	O	5 V DC	5 V DC power output	
	B1	+5.0V3	O	5 V DC	5 V DC power output	
	B2	VREFC	O	Analog	Reference voltage (C)	
	B3	OUTPECN	O	0/3.3 V DC	Output enable signal (C)	
	B4	SAMPLEC2N	O	0/3.3 V DC	Sample hold 2 signal (C)	
	B5	SAMPLEC1N	O	0/3.3 V DC	Sample hold 1 signal (C)	
	B6	VDOC2N	O	LVDS	Video 2 differential signal N (C)	
	B7	VDOC2P	O	LVDS	Video 2 differential signal P (C)	
	B8	GND	-	-	Ground	
	B9	VDOC1N	O	LVDS	Video 1 differential signal N (C)	
	B10	VDOC1P	O	LVDS	Video 1 differential signal P (C)	
	B11	+3.3V3_E	O	3.3 V DC	3.3 V DC power output	
	B12	PDCN	I	0/3.3 V DC	BD (C) detecting signal	
	B13	LSUTHMC	I	Analog	LSU thermistor signal	
	B14	+24V3_IL	O	24 V DC	24 V DC power output	
	B15	GND	-	-	Ground	
	YC2018	1	POWER_SW	I	0/3.3 V DC	Power switch detecting signal
		2	GND	-	-	Ground

*1: 35 ppm model only

(2) Engine relay PWB
(2-1) PWB photograph

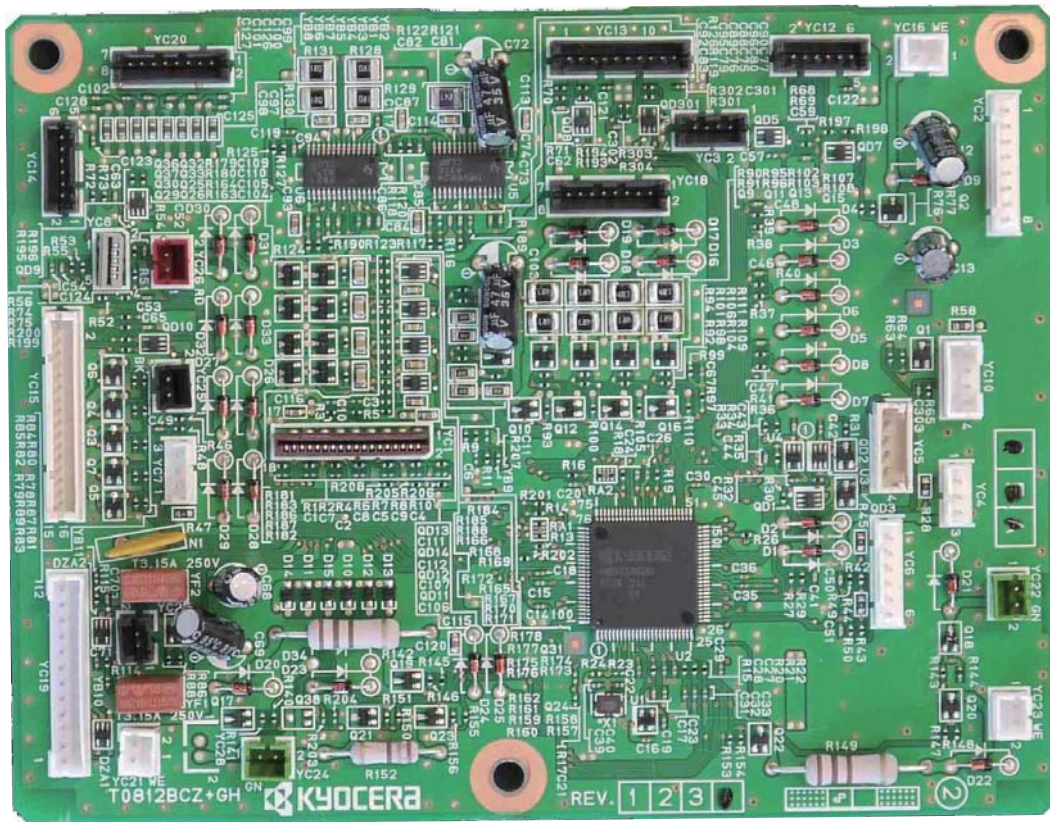


Figure 8-36

(2-2) Connector position

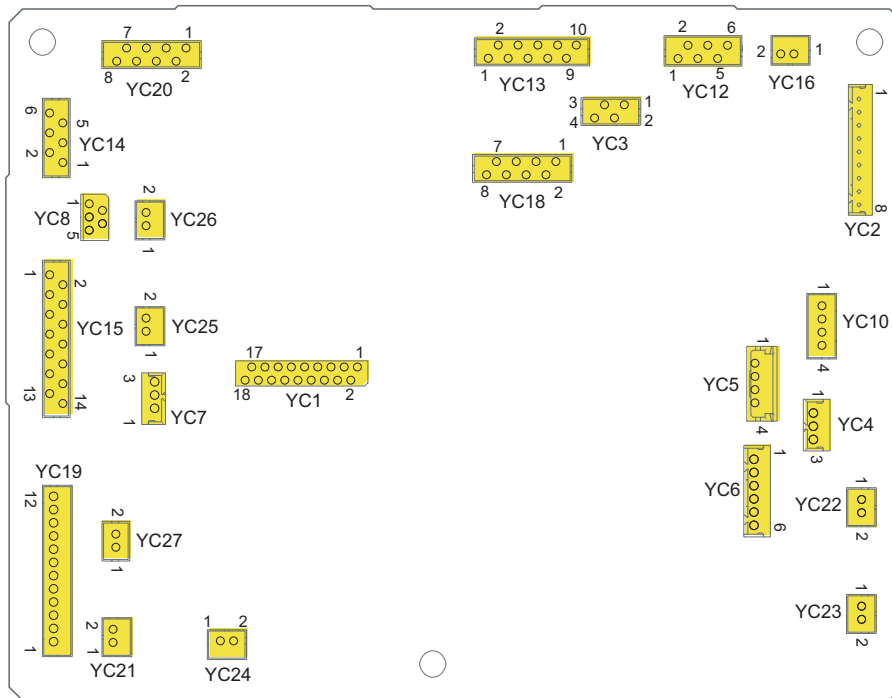


Figure 8-37

(2-3) Connector lists

Connector access point

- YC1: Main/engine PWB
- YC2: Main/engine PWB
- YC3: Toner container relay PWB
- YC4: Waste toner cover sensor
- YC5: Cassette size switch
- YC6: MP paper sensor, MP conveying sensor
- YC8: Cassette PWB
- YC10: Waste toner sensor
- YC12: Developer motor
- YC13: Drum motor 1, Drum motor 2
- YC14: Primary transfer motor
- YC15: Paper conveying and developer motor, Developer clutch, Middle clutch, MP conveying clutch, Paper feed clutch
- YC16: MP solenoid
- YC18: Toner motor Y, C, M, K
- YC19: Paper feeder
- YC20: Fuser motor, Duplex exit motor
- YC21: LSU fan motor 1
- YC22: Transfer fan motor
- YC23: LSU fan motor 2
- YC24: Container fan motor
- YC25: Lift motor
- YC26: LSU cleaning motor
- YC27: Exit fan motor

Connector	Pin	Signal	I/O	Voltage	Description
YC1	1	EGASSDI	I	0/3.3 V DC(pulse)	Serial communication data input
	2	GND	-	-	Ground
	3	EGASCS	O	0/3.3 V DC	Serial communication chip select signal
	4	EGASEN	I	0/3.3 V DC	Serial communication enable signal
	5	+3.3V1	O	3.3 V DC	3.3 V DC power output
	6	EGASSDO	O	0/3.3 V DC(pulse)	Serial communication data output
	7	+3.3V3_E	O	3.3 V DC	3.3 V DC power output
	8	EGASSCK	O	0/3.3 V DC(pulse)	Serial communication clock signal
	9	WAKEUPINTN	I	0/3.3 V DC	Engine CPU return signal
	10	FRAM2SDA	I/O	0/3.3 V DC	Security communication data
	11	ERRTEMP	O	0/3.3 V DC	Abnormal high temperature detection signal
	12	FRAM2SCL	O	0/3.3 V DC(pulse)	Security communication clock
	13	+3.3V3_E	O	3.3 V DC	3.3 V DC power output
	14	OPSDO	O	0/3.3 V DC(pulse)	Option serial data output
	15	OPDYN	I	0/3.3 V DC	Option ready signal
	16	OPSDI	I	0/3.3 V DC(pulse)	Option serial data input
	17	GND	-	-	Ground
	18	OPSCK	O	0/3.3 V DC(pulse)	Option serial clock signal
YC2	1	+24V3_IL	O	24 V DC	24 V DC power output
	2	+24V3_IL	O	24 V DC	24 V DC power output
	3	+24V3_IL	O	24 V DC	24 V DC power output
	4	GND	-	-	Ground
	5	GND	-	-	Ground
	6	GND	-	-	Ground
	7	GND	-	-	Ground
	8	+24V1	O	24 V DC	24 V DC power output
YC3	1	-	-	-	-
	2	+3.3V3	O	3.3 V DC	3.3 V DC power output
	3	CMDATA	I/O	0/3.3 V DC	FRAMTS data signal
	4	GND	-	-	Ground
YC4	1	+3.3V1_LED1	O	3.3 V DC	3.3 V DC power output
	2	GND	-	-	Ground
	3	WSTOPN	I	0/3.3 V DC	Waste toner cover sensor: On/Off
YC5	1	CAS2	I	0/3.3 V DC	Cassette size switch(SW2): On/Off
	2	CAS1	I	0/3.3 V DC	Cassette size switch(SW1): On/Off
	3	COM	-	-	Ground
	4	CAS0	I	0/3.3 V DC	Cassette size switch(SW0): On/Off

Connector	Pin	Signal	I/O	Voltage	Description
YC6	1	+3.3V3_LED1	O	3.3 V DC	3.3 V DC power output
	2	GND	-	-	Ground
	3	MPFPAP	I	0/3.3 V DC	MP paper sensor: On/Off
	4	+3.3V3_LED2	O	3.3 V DC	3.3 V DC power output
	5	GND	-	-	Ground
	6	MPFJAM	I	0/3.3 V DC	MP conveying sensor: On/Off
YC8	1	GND	-	-	Ground
	2	PAPVOL2	I	0/3.3 V DC	-
	3	PAPVOL1	I	0/3.3 V DC	Paper sensor : On/Off
	4	LIFTSEN	I	0/3.3 V DC	Lift sensor : On/Off
	5	+3.3V3	O	3.3 V DC	3.3 V DC power output
YC10	1	LEDA	O	3.3 V DC	3.3 V DC power output
	2	LEDK	O	0/3.3 V DC(pulse)	Waste toner sensor emission signal
	3	PTRE	I	Analog	Waste toner sensor detection signal
	4	PTRC	O	3.3 V DC	3.3 V DC power output
YC12	1	MOTREV	O	0/3.3 V DC	Developer motor forward/reverse control signal
	2	DLPCMTRDYN	I	0/24 V DC	Developer motor ready signal
	3	DLPCMTCLK	O	0/24 V DC(pulse)	Developer motor clock signal
	4	DLPCMTREMNI	O	0/24 V DC	Developer motor: On/Off
	5	GND	-	-	Ground
	6	+24V3	O	24 V DC	24 V DC power output
YC13	1	DRMMTRDYN	I	0/24 V DC	Drum motor 1 ready signal
	2	DRMMTCLK	O	0/24 V DC(pulse)	Drum motor 1 clock signal
	3	DRMMTREMNI	O	0/24 V DC	Drum motor 1: On/Off
	4	GND	-	-	Ground
	5	+24V3	O	24 V DC	24 V DC power output
	6	DRMMT2RDYN	I	0/24 V DC	Drum motor 2 ready signal
	7	DRMMT2CLK	O	0/24 V DC(pulse)	Drum motor 2 clock signal
	8	DRMMT2REMNI	O	0/24 V DC	Drum motor 2: On/Off
YC13	9	GND	-	-	Ground
	10	+24V3	O	24 V DC	24 V DC power output
YC14	1	IMGCCW	I	0/3.3 V DC	CCW fixed control
	2	IMGMTRDYN	I	0/24 V DC	Primary transfer motor ready signal
	3	IMGMTCLK	O	0/24 V DC(pulse)	Primary transfer motor clock signal
	4	IMGMTREMNI	O	0/24 V DC	Primary transfer motor: On/Off
	5	GND	-	-	Ground
	6	+24V3	O	24 V DC	24 V DC power output

Connector	Pin	Signal	I/O	Voltage	Description
YC15	1	FEMOTREV	O	0/3.3 V DC	Paper conveying and developer motor forward/reverse control signal
	2	FEDMTRDYN	I	0/24 V DC	Paper conveying and developer motor ready signal
	3	FEDMTCLK	O	0/24 V DC(pulse)	Paper conveying and developer motor clock signal
	4	FEDMTREMN	O	0/24 V DC	Paper conveying and developer motor: On/Off
	5	GND	-	-	Ground
	6	+24V3	O	24 V DC	24 V DC power output
	7	DLPKCLDRN	O	0/24 V DC	Developer clutch: On/Off
	8	+24V3	O	24 V DC	24 V DC power output
	9	MIDCLDRN	O	0/24 V DC	Middle clutch: On/Off
	10	+24V3	O	24 V DC	24 V DC power output
	11	MPFCLDRN	O	0/24 V DC	MP conveying clutch: On/Off
	12	+24V3	O	24 V DC	24 V DC power output
	13	FEDCLDRN	O	0/24 V DC	Paper feed clutch: On/Off
	14	+24V3	O	24 V DC	24 V DC power output
YC16	1	+24V3	O	24 V DC	24 V DC power output
	2	MPFSOLDRVN	O	0/24 V DC	MP solenoid: On/Off
YC18	1	TNMYDRVN	O	0/24 V DC(pulse)	Toner motor Y drive control signal
	2	+24V3	O	24 V DC	24 V DC power output
	3	TNMCDRVN	O	0/24 V DC(pulse)	Toner motor C drive control signal
	4	+24V3	O	24 V DC	24 V DC power output
	5	TNMMDRVN	O	0/24 V DC(pulse)	Toner motor M drive control signal
	6	+24V3	O	24 V DC	24 V DC power output
	7	TNMKDRVN	O	0/24 V DC(pulse)	Toner motor K drive control signal
	8	+24V3	O	24 V DC	24 V DC power output
YC19	1	+3.3V3	O	3.3 V DC	3.3 V DC power output
	2	-	-	-	N.C
	3	OPSEL2	O	0/3.3 V DC	Paper feeder select signal
	4	OPSEL1	O	0/3.3 V DC	Paper feeder select signal
	5	OPSEL0	O	0/3.3 V DC	Paper feeder select signal
	6	GND	-	-	Ground
	7	GND	-	-	Ground
	8	OPSD0	O	0/3.3 V DC(pulse)	Paper feeder serial communication data signal output
	9	OPSDI	I	0/3.3 V DC(pulse)	Paper feeder serial communication data signal input

Connector	Pin	Signal	I/O	Voltage	Description
YC19	10	OPRDYN	I	0/3.3 V DC	Paper feeder ready signal
	11	OPSCLK	O	0/3.3 V DC(pulse)	Paper feeder clock signal
	12	+24V3	O	24 V DC	24 V DC power output
YC20	1	STDUPB1	O	0/24 V DC(pulse)	Duplex exit motor B1 drive control signal
	2	STDUPB3	O	0/24 V DC(pulse)	Duplex exit motor B3 drive control signal
	3	STDUPA3	O	0/24 V DC(pulse)	Duplex exit motor A3 drive control signal
	4	STDUPA1	O	0/24 V DC(pulse)	Duplex exit motor A1 drive control signal
	5	STFUSBN	O	0/24 V DC(pulse)	Fuser motor BN drive control signal
	6	STFUSAN	O	0/24 V DC(pulse)	Fuser motor AN drive control signal
	7	STFUSB	O	0/24 V DC(pulse)	Fuser motor B drive control signal
	8	STFUSA	O	0/24 V DC(pulse)	Fuser motor A drive control signal
YC21	1	+24V1	O	24 V DC	24 V DC power output
	2	LSUKMFANDRN	O	0/24 V DC	LSU fan motor 1: On/Off
YC22	1	+24V1	O	24 V DC	24 V DC power output
	2	IMGFANDRN	O	0/24 V DC	Transfer fan motor: On/Off
YC23	1	+24V1	O	24 V DC	24 V DC power output
	2	LSUCYFANDRN	O	0/24 V DC	LSU fan motor 2: On/Off
YC24	1	+24V1	O	24 V DC	24 V DC power output
	2	TCONTFANDRN	O	0/24 V DC	Container fan motor: On/Off
YC25	1	LIFTMTB	O	0/24 V DC(pulse)	Lift motor B drive control signal
	2	LIFTMTA	O	0/24 V DC(pulse)	Lift motor A drive control signal
YC26	1	LSUMTB	O	0/24 V DC(pulse)	LSU cleaning motor B drive control signal
	2	LSUMTA	O	0/24 V DC(pulse)	LSU cleaning motor A drive control signal
YC27	1	+24V3	O	24 V DC	24 V DC power output
	2	EXITFANDRN	O	0/24 V DC	Exit fan motor: On/Off

(3) High-voltage PWB

(3-1) PWB photograph

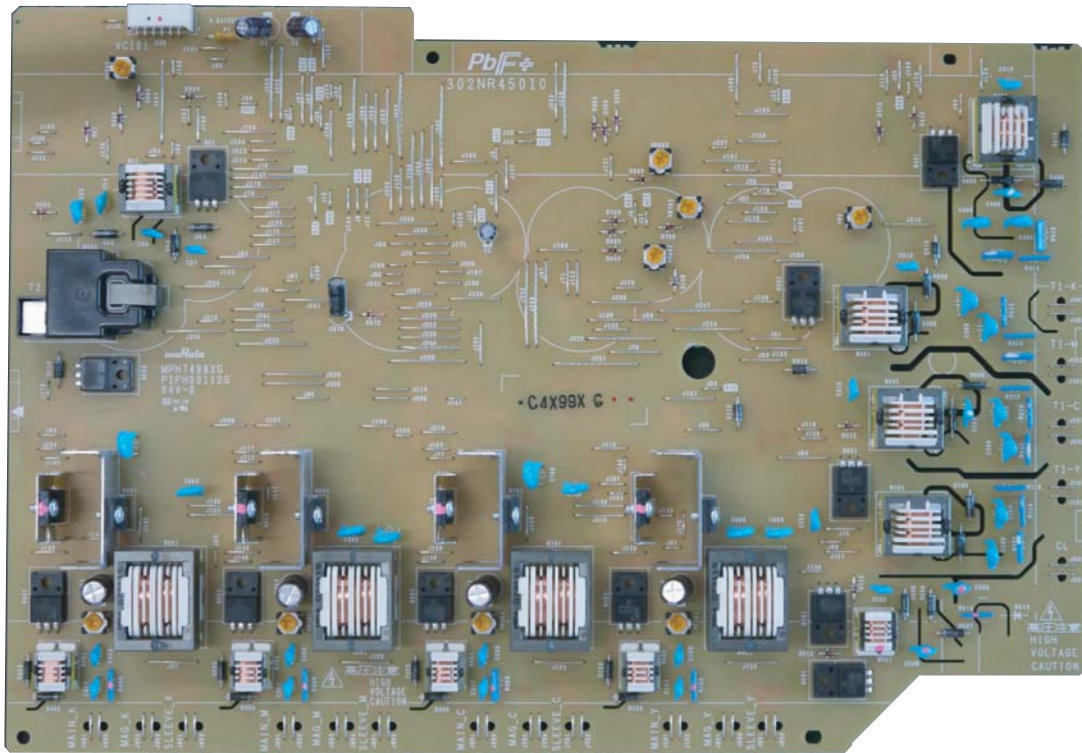


Figure 8-38

(3-2) Connector position

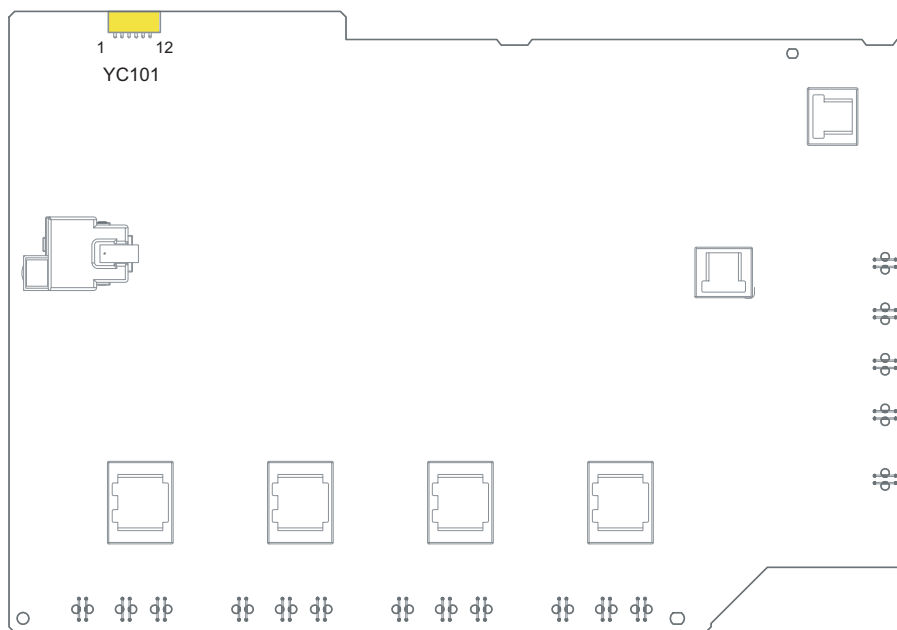


Figure 8-39

(3-3) Connector lists

Connector access point

YC10: Main/engine PWB

Connector	Pin	Signal	I/O	Voltage	Description
YC101	1	+24V3_IL	I	24 V DC	24 V DC power input
	2	+24V3_IL	I	24 V DC	24 V DC power input
	3	DACSLD1	I	0/3.3 V DC(pulse)	DAC1 load signal
	4	DACSLD2	I	0/3.3 V DC(pulse)	DAC2 load signal
	5	DACSCLK	I	0/3.3 V DC(pulse)	DAC clock signal
	6	GND	-	-	Ground
	7	DACSDO	I/O	0/3.3 V DC(pulse)	DAC data signal
	8	HVREMNI	I	0/3.3 V DC	Primary/Secondary transfer remote signal
	9	HVCLKK	I	0/3.3 V DC	Developer clock signal
	10	MISENS	O	Analog	Main charger current detection output
	11	PGND	-	-	Ground
	12	PGND	-	-	Ground

(4) Power supply PWB

(4-1) PWB photograph

30 ppm model

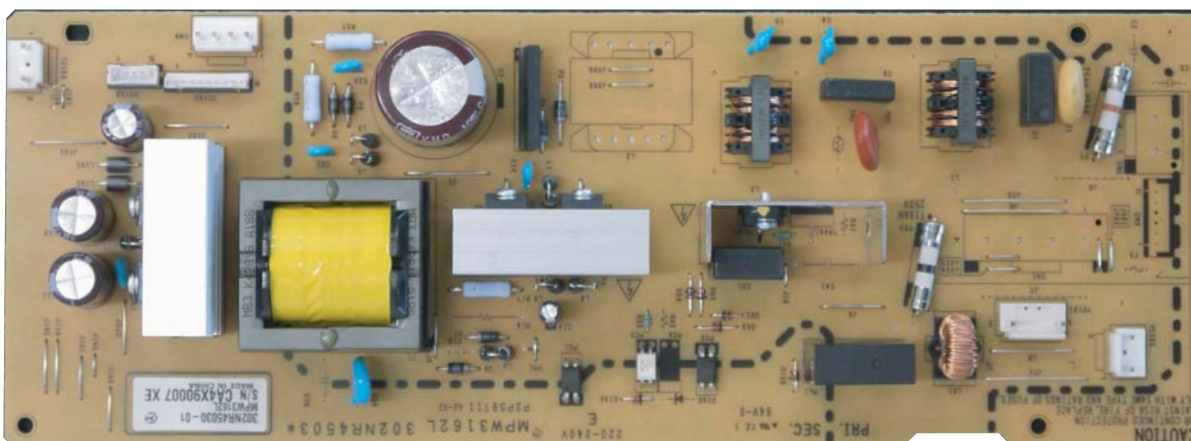


Figure 8-40

35 ppm model

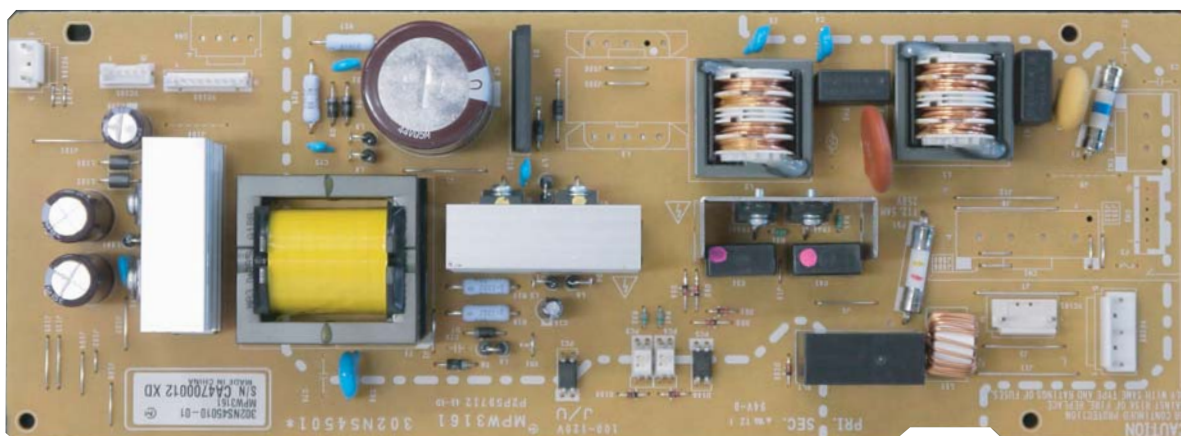


Figure 8-41

(4-2) Connector position

30 ppm model

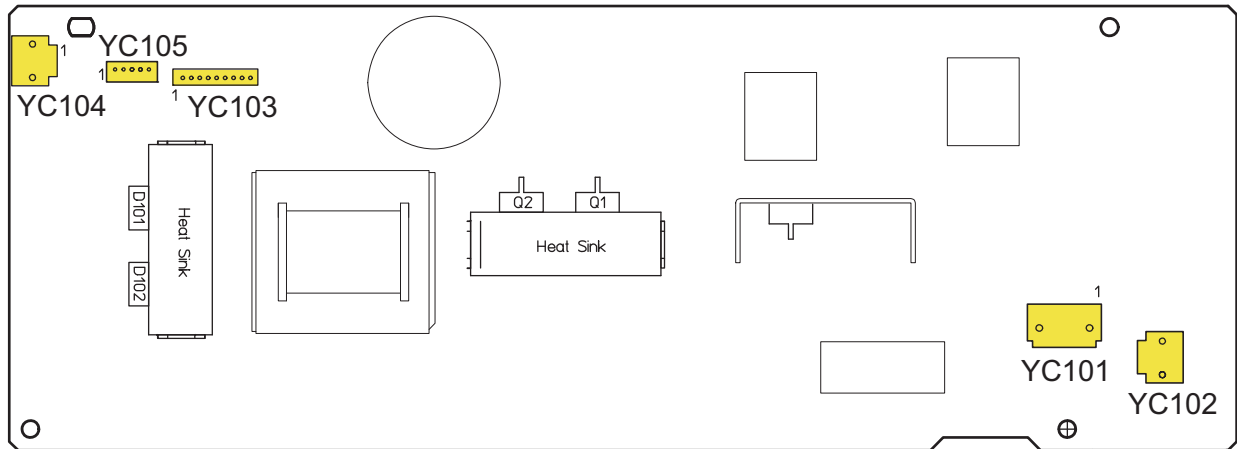


Figure 8-42

35 ppm model

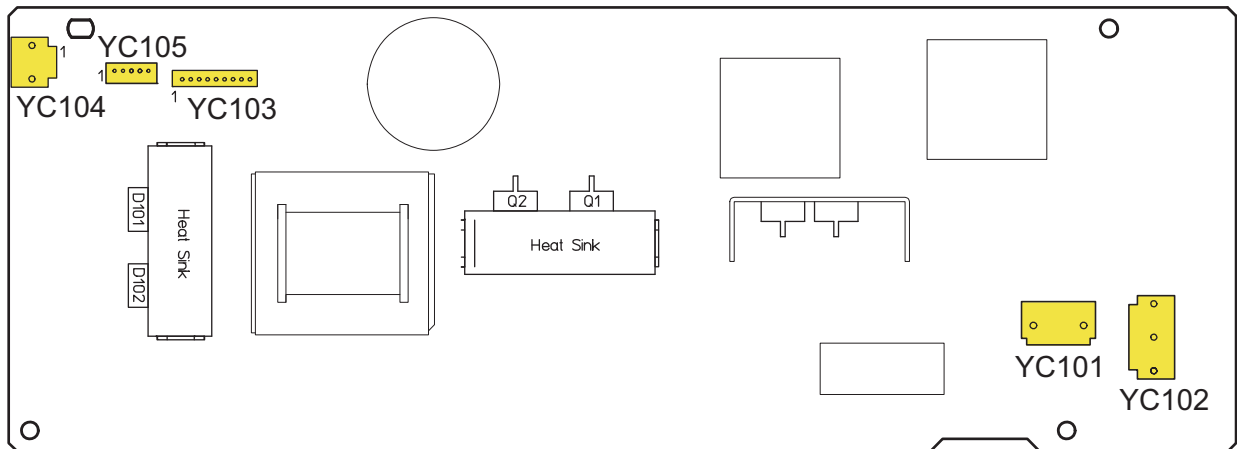


Figure 8-43

(4-3) Connector lists

Connector access point

- YC101: Outlet
- YC102: Fuser unit
- YC103: Main/engine PWB
- YC104: Interlock switch
- YC105: Main/engine PWB

Connector	Pin	Signal	I/O	Voltage	Description
YC101	1	LIVE	I	120 V AC 220-240 V AC	AC power input
	2	NEUTRAL	I	120 V AC 220-240 V AC	AC power input
YC102	1	NEUTRAL1	-	120 V AC 220-240 V AC	Fuser heater 1
	3	LIVE	-	120 V AC 220-240 V AC	AC power input
	5	NEUTRAL2*1	-	120 V AC 220-240 V AC	Fuser heater 2
YC103	1	+24V0_IL	O	24 V DC	24 V DC power output
	2	+24V0_IL	O	24 V DC	24 V DC power output
	3	+24V0_IL	O	24 V DC	24 V DC power output
	4	GND	-	-	Ground
	5	GND	-	-	Ground
	6	GND	-	-	Ground
	7	GND	-	-	Ground
	8	+24V0	O	24 V DC	24 V DC power output
	9	+24V0	O	24 V DC	24 V DC power output
YC104	1	+24V0_IL	I	24 V DC	24 V DC power input from Interlock switch
	2	N.C.	-	-	Not used
	3	+24V0	O	24 V DC	24 V DC power output to Interlock switch
YC105 (30 ppm model)	1	HEATREM1	I	0/3.3 V DC	Fuser heater 1: On/Off
	2	RELAYON	I	0/3.3 V DC	Power relay signal: On/Off
	3	ZCROSSN	O	0/3.3 V DC (pulse)	Zero cross signal
	4	PSSLEEPN	I	0/24 V DC	Sleep mode signal: On/Off
	5	N.C.	-	-	Not used
YC105 (35 ppm model)	1	HEATREM2	I	0/3.3 V DC	Fuser heater 2: On/Off
	2	HEATREM1	I	0/3.3 V DC	Fuser heater 1: On/Off
	3	RELAYON	I	0/3.3 V DC	Power relay signal: On/Off
	4	ZCROSSN	O	0/3.3 V DC (pulse)	Zero cross signal
	5	PSSLEEPN	I	0/24 V DC	Sleep mode signal: On/Off

*1: 35 ppm model only

(5) Operation panel PWB

(5-1) PWB photograph

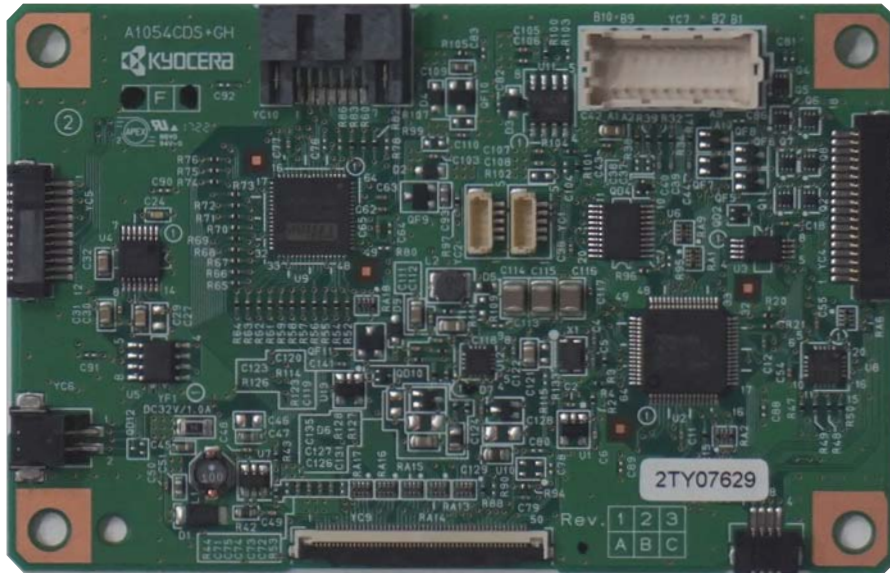


Figure 8-44

(5-2) Connector position

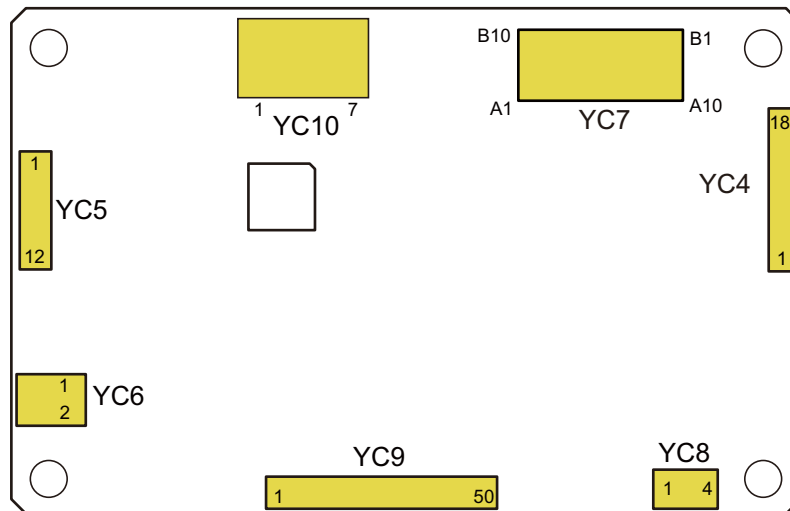


Figure 8-45

(5-3) Connector lists

Connector access point

- YC4: Panel-R PWB
- YC5: Panel-L PWB
- YC6: Speaker
- YC7: Main/Engine PWB
- YC8: Touch panel
- YC9: LCD
- YC10: Main/Engine PWB

Connector	Pin	Signal	I/O	Voltage	Description
YC4	1	KEY0	I	0/3.3 V DC	KEY signal 0
	2	PROCESSING	O	0/5 V DC	PROCESSING LED drive signal
	3	SCAN5	O	0/3.3 V DC	SCAN signal 5
	4	GND	-	-	Ground
	5	KEY1	I	0/3.3 V DC	KEY signal 1
	6	KEY2	I	0/3.3 V DC	KEY signal 2
	7	SCAN6	O	0/3.3 V DC	SCAN signal 6
	8	SCAN7	O	0/3.3 V DC	SCAN signal 7
	9	SCAN3	O	0/3.3 V DC	SCAN signal 3
	10	LED2	O	0/5 V DC	LED signal 2
	11	KEY3	I	0/3.3 V DC	KEY signal 3
	12	LED1	O	0/5 V DC	LED signal 1
	13	SCAN4	O	0/3.3 V DC	SCAN signal 4
	14	ENER- GYSAVER KEY	I	0/3.3 V DC	ENERGYSAVER KEY input signal
	15	MEMORY	O	0/5 V DC	MEMORY LED drive signal
	16	ATTENTION	O	0/5 V DC	ATTENTION LED drive signal
	17	SCAN2	O	0/3.3 V DC	SCAN signal 2
	18	ENER- GYSAVER LED	O	0/5 V DC	ENERGYSAVER LED drive signal
YC5	1	GND	-	-	Ground
	2	SCAN0	O	0/3.3 V DC	SCAN signal 0
	3	KEY0	I	0/3.3 V DC	KEY signal 0
	4	NC	-	-	-
	5	KEY1	I	0/3.3 V DC	KEY signal 1
	6	NC	-	-	-
	7	SCAN1	O	0/3.3 V DC	SCAN signal 1
	8	SCAN2	O	0/3.3 V DC	SCAN signal 2
	9	NC	-	-	-
	10	NC	-	-	-
	11	LED0	O	0/5 V DC	LED signal 0

Connector	Pin	Signal	I/O	Voltage	Description
YC5	12	NC	-	-	-
YC6	1	SPEAKER_P	O	0/5 V DC	Speaker output signal+
	2	SPEAKER_N	O	0/5 V DC	Speaker output signal-
YC7	A1	+5V1	I	5 V DC	5 V DC power output
	A2	+5V1	I	5 V DC	5 V DC power output
	A3	+5V1	I	5 V DC	5 V DC power output
	A4	GND	-	-	Ground
	A5	INT_ANYKEY	O	0/3.3 V DC	ANYKEY return notification signal
	A6	C2P_SCK	I	0/3.3 V DC	Serial communication clock signal
	A7	P2C_SBSY	O	0/3.3 V DC	Serial communication busy signal
	A8	P2C_SDIR	O	0/3.3 V DC	Serial communication direction signal
	A9	C2P_SDAT	O	0/3.3 V DC	Serial communication data signal
	A10	P2C_SDAT	I	0/3.3 V DC	Serial communication data signal
	B1	FPRST	I	0/3.3 V DC	Reset signal
	B2	INT_ENERGYSAVERKEY	O	0/3.3 V DC	ENERGYSAVER KEY notification signal
	B3	PNL_WKUP_REQ		0/3.3 V DC	WakeUp signal
	B4	LED_ATTENTION	I	0/3.3 V DC	ATTENTION LED drive signal
	B5	LED_MEMORY	I	0/3.3 V DC	MEMORY LED drive signal
	B6	BEEP_POWERON	I	0/3.3 V DC	Alert sound control signal
	B7	3.3V2_C	I	3.3 V DC	3.3 V DC power output
B8	GND	-	-	Ground	
B9	GND	-	-	Ground	
B10	GND	-	-	Ground	
YC8	1	XR	I	0/1.5 V DC	Touch screen control signal
	2	YB	I	0/1.5 V DC	Touch screen control signal
	3	XL	I	0/1.5 V DC	Touch screen control signal
	4	YT	I	0/1.5 V DC	Touch screen control signal
YC9	1	VLED+	O	0/5 V DC	Back light LED drive signal
	2	VLED+	O	0/5 V DC	Back light LED drive signal
	3	VLED-	O	0/5 V DC	Back light LED drive signal
	4	VLED-	O	0/5 V DC	Back light LED drive signal
	5	GND	-	-	Ground
	6	VCOM	O	0/3.3 V DC	Common voltage
	7	DVDD	O	3.3 V DC	3.3 V DC power output
	8	MODE	O	0/3.3 V DC	Mode signal

Connector	Pin	Signal	I/O	Voltage	Description
YC9	9	DE	O	0/3.3 V DC	Data enable signal
	10	VS	O	0/3.3 V DC	Vertical synchronizing signal
	11	HS	O	0/3.3 V DC	Horizontal synchronizing signal
	12	B7	O	0/3.3 V DC	Blue Data
	13	B6	O	0/3.3 V DC	Blue Data
	14	B5	O	0/3.3 V DC	Blue Data
	15	B4	O	0/3.3 V DC	Blue Data
	16	B3	O	0/3.3 V DC	Blue Data
	17	B2	O	0/3.3 V DC	Blue Data
	18	B1	O	0/3.3 V DC	Blue Data
	19	B0	O	0/3.3 V DC	Blue Data
	20	G7	O	0/3.3 V DC	Green Data
	21	G6	O	0/3.3 V DC	Green Data
	22	G5	O	0/3.3 V DC	Green Data
	23	G4	O	0/3.3 V DC	Green Data
	24	G3	O	0/3.3 V DC	Green Data
	25	G2	O	0/3.3 V DC	Green Data
	26	G1	O	0/3.3 V DC	Green Data
	27	G0	O	0/3.3 V DC	Green Data
	28	R7	O	0/3.3 V DC	Red Data
	29	R6	O	0/3.3 V DC	Red Data
	30	R5	O	0/3.3 V DC	Red Data
	31	R4	O	0/3.3 V DC	Red Data
	32	R3	O	0/3.3 V DC	Red Data
	33	R2	O	0/3.3 V DC	Red Data
	34	R1	O	0/3.3 V DC	Red Data
	35	R0	O	0/3.3 V DC	Red Data
	36	GND	-	-	Ground
	37	DCLK	O	0/3.3 V DC	Clock input signal
	38	GND	-	-	Ground
	39	SHLR	O	3.3 V DC	Left/Right select signal
	40	UPDN	O	0 V DC	Up/Down select signal
	41	VDDG	O	18 V DC	Gate on voltage
	42	VEEG	O	DC-8V	Gate off voltage
	43	AVDD	O	10 V DC	12 V DC power output
44	RSTB	O	0/3.3 V DC	Reset signal	
45	NC	-	-	-	

Connector	Pin	Signal	I/O	Voltage	Description
YC9	46	VCOM	O	0/3.3 V DC	Common voltage
	47	DITH	O	3.3 V DC	Dithering function enable signal
	48	GND	-	-	Ground
	49	NC	-	-	-
	50	NC	-	-	-
YC10	1	GND	-	-	Ground
	2	LCD_OFF	I	0/3.3 V DC	LCD ON/OFF signal
	3	LOCKN	O	0/3.3 V DC	LOCK detecting signal
	4	GND	-	-	Ground
	5	TX0N	O	CML	CML serial input signal
	6	TX0P	O	CML	CML serial input signal
	7	GND	-	-	Ground

(6) Drum relay PWB

(6-1) PWB photograph



Figure 8-46

(6-2) Connector position

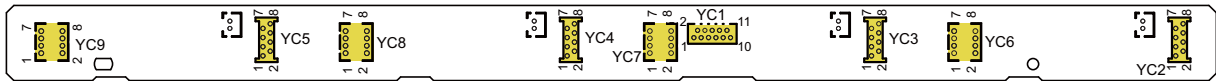


Figure 8-47

(6-3) Connector lists

Connector access point

- YC1: Main/engine PWB
- YC2: Drum PWB K
- YC3: Drum PWB M
- YC4: Drum PWB C
- YC5: Drum PWB Y
- YC6: Developer PWB K
- YC7: Developer PWB M
- YC8: Developer PWB C
- YC9: Developer PWB Y

Connector	Pin	Signal	I/O	Voltage	Description
YC1	1	GND	-	-	Ground
	2	PTSCL	O	0/3.3 V DC(pulse)	E2PROM communication clock signal
	3	+3.3V3	O	3.3 V DC	3.3 V DC power output
	4	PTSDA	I/O	0/3.3 V DC(pulse)	E2PROM communication data signal
	5	TNSENC	I	Analog	Toner sensor remaining level signal (C)
	6	TNSENY	I	Analog	Toner sensor remaining level signal (Y)
	7	TNSENK	I	Analog	Toner sensor remaining level signal (K)
	8	TNSENM	I	Analog	Toner sensor remaining level signal (M)
	9	DRMHEATDR	O	24 V DC	24 V DC power output
	10	DLPTHERM	I	Analog	Developer thermistor
	11	ERASEDR	O	24 V DC	Eraser (BK) ON signal
YC2	1	GND	-	-	Ground
	2	PTSCL	O	0/3.3 V DC(pulse)	EEPROM clock signal
	3	ERASEK	O	0/24 V DC	Cleaning lamp K: On/Off
	4	PTSDA	I/O	0/3.3 V DC(pulse)	EEPROM data signal
	5	N.C	-	-	-
	6	3.3V2	O	3.3 V DC	3.3 V DC power output
	7	DA0	O	3.3 V DC	3.3 V DC power output
	8	DA1	O	3.3 V DC	3.3 V DC power output
YC3	1	GND	-	-	Ground
	2	PTSCL	O	0/3.3 V DC(pulse)	EEPROM clock signal
	3	ERASECOL	O	0/24 V DC	Cleaning lamp M: On/Off
	4	PTSDA	I/O	0/3.3 V DC(pulse)	EEPROM data signal
	5	N.C	-	-	-
	6	3.3V2	O	3.3 V DC	3.3 V DC power output
	7	DA0	O	3.3 V DC	3.3 V DC power output
	8	DA1	-	-	Ground
YC4	1	GND	-	-	Ground
	2	PTSCL	O	0/3.3 V DC(pulse)	EEPROM clock signal
	3	ERASECOL	O	0/24 V DC	Cleaning lamp C: On/Off
	4	PTSDA	I/O	0/3.3 V DC(pulse)	EEPROM data signal
	5	N.C	-	-	-
	6	3.3V2	O	3.3 V DC	3.3 V DC power output
	7	DA0	-	-	Ground
	8	DA1	O	3.3 V DC	3.3 V DC power output

Connector	Pin	Signal	I/O	Voltage	Description
YC5	1	GND	-	-	Ground
	2	PTSCL	O	0/3.3 V DC(pulse)	EEPROM clock signal
	3	ERASEYDR	O	0/24 V DC	Cleaning lamp Y: On/Off
	4	PTSDA	I/O	0/3.3 V DC(pulse)	EEPROM data signal
	5	N.C	-	-	-
	6	3.3V2	O	3.3 V DC	3.3 V DC power output
	7	DA0	-	-	Ground
	8	DA1	-	-	Ground
YC6	1	GND	-	-	Ground
	2	3.3V2	O	3.3 V DC	3.3 V DC power output
	3	TNSENSK	I	Analog	Toner sensor K detection signal
	4	PTSCL	O	0/3.3 V DC(pulse)	EEPROM clock signal
	5	DLPTH	I	Analog	Developer thermistor (K) output
	6	PTSDA	I/O	0/3.3 V DC(pulse)	EEPROM data signal
	7	DA0	O	0/24 V DC	Cleaning lamp K: On/Off
	8	DA1	-	-	Ground
YC7	1	GND	-	-	Ground
	2	3.3V2	O	3.3 V DC	3.3 V DC power output
	3	TNSENSK	I	Analog	Toner sensor M detection signal
	4	PTSCL	O	0/3.3 V DC(pulse)	EEPROM clock signal
	5	DLPTH	I	Analog	Developer thermistor (M) output
	6	PTSDA	I/O	0/3.3 V DC(pulse)	EEPROM data signal
	7	DA0	O	0/24 V DC	Cleaning lamp M: On/Off
	8	DA1	O	3.3 V DC	3.3 V DC power output
YC8	1	GND	-	-	Ground
	2	3.3V2	O	3.3 V DC	3.3 V DC power output
	3	TNSENSK	I	Analog	Toner sensor C detection signal
	4	PTSCL	O	0/3.3 V DC(pulse)	EEPROM clock signal
	5	DLPTH	I	Analog	Developer thermistor (C) output
	6	PTSDA	I/O	0/3.3 V DC(pulse)	EEPROM data signal
	7	DA0	O	0/24 V DC	Cleaning lamp C: On/Off
	8	DA1	-	-	Ground

Connector	Pin	Signal	I/O	Voltage	Description
YC9	1	GND	-	-	Ground
	2	3.3V2	O	3.3 V DC	3.3 V DC power output
	3	TNSENSK	I	Analog	Toner sensor Y detection signal
	4	PTSCL	O	0/3.3 V DC(pulse)	EEPROM clock signal
	5	DLPTH	I	Analog	Developer thermistor (Y) output
	6	PTSDA	I/O	0/3.3 V DC(pulse)	EEPROM data signal
	7	DA0	O	0/24 V DC	Cleaning lamp Y: On/Off
	8	DA1	O	3.3 V DC	3.3 V DC power output

(7) PF main PWB (Optional Paper Feeder)

(7-1) PWB photograph

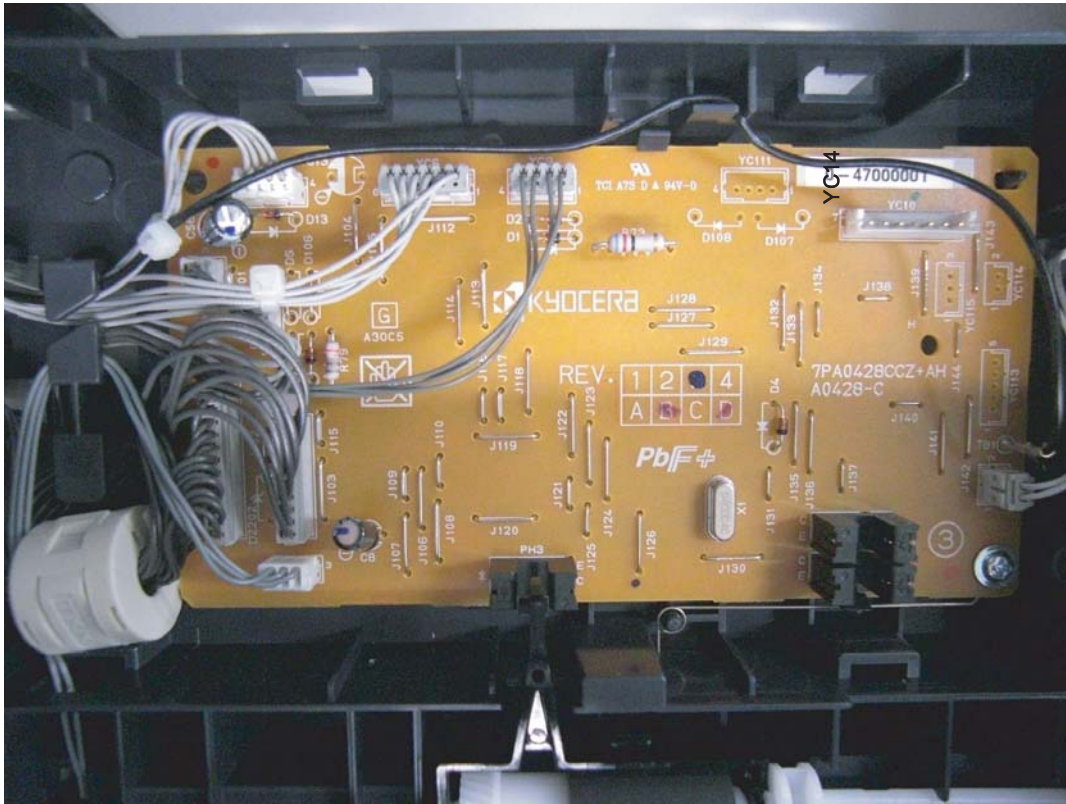


Figure 8-48

(7-2) Connector position

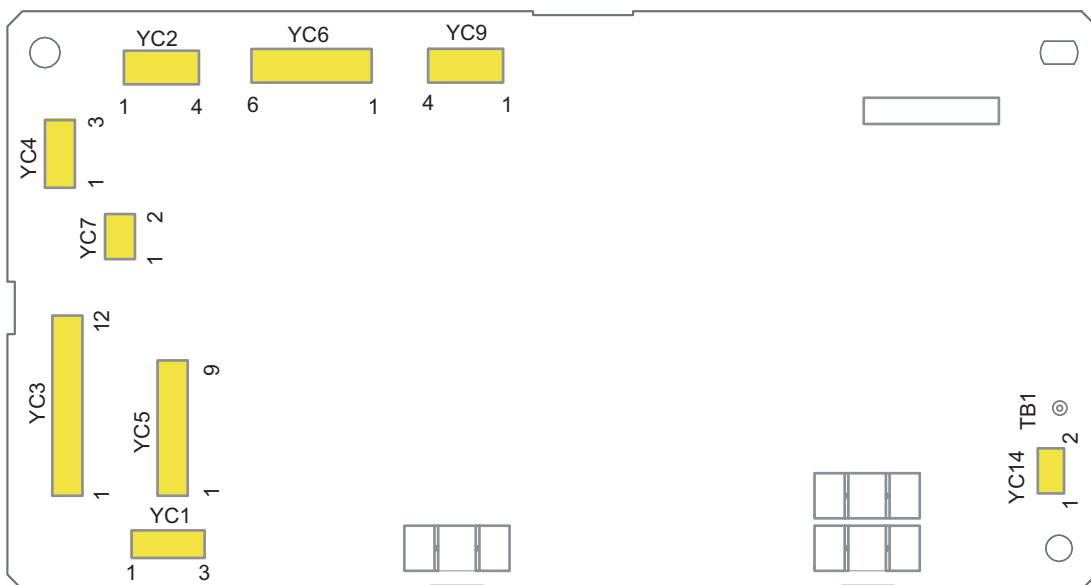


Figure 8-49

(7-3) Connector lists

Connector access point

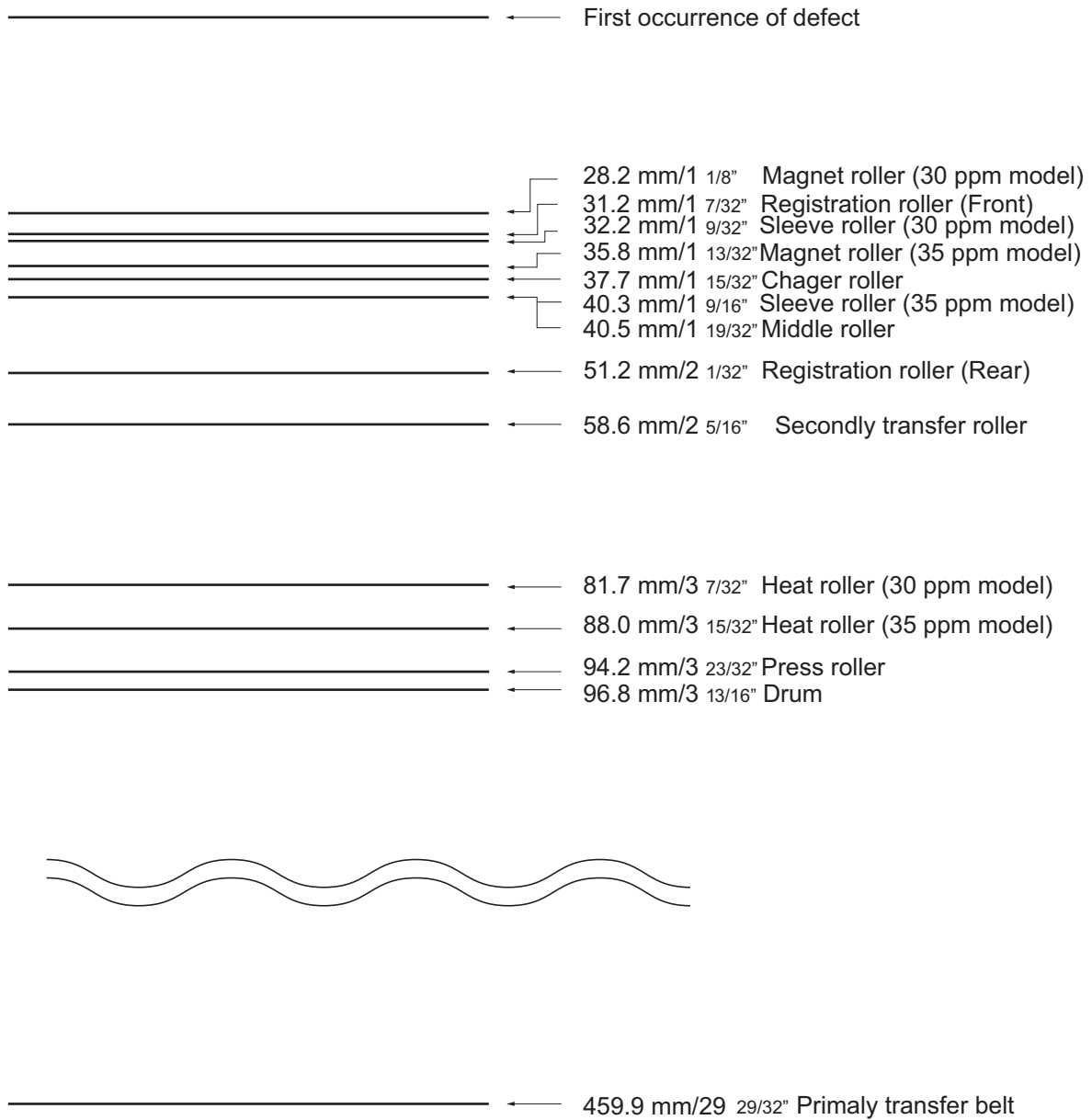
- YC1: PF paper feed sensor
- YC2: PF cassette size switch
- YC3: Interface connector
- YC4: Interface connector
- YC5: Interface connector
- YC6: PF paper feed motor
- YC7: PF lift motor
- YC9: PF paper feed clutch, PF conveying clutch
- YC14: PF rear cover switch

Connector	Pin	Signal	I/O	Voltage	Description
YC1	1	+3.3V	O	3.3 V DC	3.3 V DC power output
	2	GND	-	-	Ground
	3	OUT	I	0/3.3 V DC	PF paper feed sensor: On/Off
YC2	1	PAPSIZE0	I	0/3.3 V DC	PF cassette size switch: On/Off
	2	PAPSIZE1	I	0/3.3 V DC	PF cassette size switch: On/Off
	3	GND	-	-	Ground
	4	PAPSIZE2	I	0/3.3 V DC	PF cassette size switch: On/Off
YC3	1	GND	-	-	Ground
	2	OPCLK	I	0/3.3 V DC(pulse)	Serial communication clock signal
	3	OPRDYN	O	0/3.3 V DC	Ready signal
	4	OPSDI	O	0/3.3 V DC(pulse)	Serial communication data signal
	5	OPSDO	I	0/3.3 V DC(pulse)	Serial communication data signal
	6	+3.3V	I	0/3.3 V DC	3.3 V DC power
	7	GND	-	-	Ground
	8	OPSEL0	I	0/3.3 V DC	Paper feeder select signal
	9	OPSEL1	I	0/3.3 V DC	Paper feeder select signal
	10	OPSEL2	I	0/3.3 V DC	Paper feeder select signal
	11	PAPSIZE	O	0/3.3 V DC	PF cassette size switch: On/Off
YC4	1	+24V	O	24 V DC	24 V DC power
	2	PAPSIZE	I	0/3.3 V DC	PF cassette size switch: On/Off
	3	GND	-	-	Ground
YC5	1	GND	-	-	Ground
	2	OPCLK	O	0/3.3 V DC(pulse)	Serial communication clock signal
	3	OPRDYN	I	0/3.3 V DC	Ready signal
	4	OPSDI	I	0/3.3 V DC(pulse)	Serial communication data signal
	5	OPSDO	O	0/3.3 V DC(pulse)	Serial communication data signal
	6	+3.3V	O	0/3.3 V DC	3.3 V DC power

Connector	Pin	Signal	I/O	Voltage	Description
YC5	7	OPSEL1	O	0/3.3 V DC	Paper feeder select signal
	8	OPSEL2	O	0/3.3 V DC	Paper feeder select signal
	9	OPSEL0	O	0/3.3 V DC	Paper feeder select signal
YC6	1	TMDIR	O	0/3.3 V DC	PF paper feed motor control signal
	2	TMLOCK	I	0/3.3 V DC	PF paper feed motor Clock signal
	3	TMCLK	O	0/3.3 V DC(pulse)	PF paper feed motor clock signal
	4	#TMDRY	O	0/3.3 V DC	PF paper feed motor: On/Off
	5	GND	-	-	Ground
	6	+24V	O	24 V DC	24 V DC power
YC7	1	LMOT+	O	24/0/0 V DC	PF lift motor: forward/-/Off
	2	LMOT-	O	0/24/0 V DC	PF lift motor:-/reverse/Off
YC9	1	TRANSCLN	O	0/24 V DC	PF conveying clutch: On/Off
	2	+24V	O	24 V DC	24 V DC power
	3	FEEDCLN	O	0/24 V DC	PF paper feed clutch: On/Off
	4	+24V	O	24 V DC	24 V DC power
YC14	1	COV_SW	O	0/3.3 V DC	PF rear cover switch: On/Off
	2	GND	O	-	Ground

9 Appendixes

9-1 Repetitive defects gauge



*: The repetitive marks interval may vary depending on operating conditions.

9-2 Firmware environment commands

The printer maintains a number of printing parameters in its memory. These parameters may be changed permanently with the FRPO (Firmware RePrOgram) commands.

This section provides information on how to use the FRPO command and its parameters using examples.

Using FRPO commands for reprogramming the firmware

The current settings of the FRPO parameters are listed as the optional values on the service status page.

Note: Before changing any FRPO parameters, print out a service status page, so you will know the parameter values before the changes are made. To return FRPO parameters to their factory default values, send the FRPO INIT (FRPO-INITialize) command.(!R! FRPO INIT; EXIT;)

The FRPO command is sent to the printer in the following sequence:

!R! FRPO parameter, value; EXIT;

Example: Changing emulation mode to PC-PR201/65A

!R! FRPO P1, 11; EXIT;

FRPO parameters

Item	FRPO	Setting values	Factory setting
Default pattern resolution	B8	0: 300 dpi 1: 600 dpi	0
Copy count	C0	Number of copies to print:1-999	1
Page orientation	C1	0: Portrait 1: Landscape	0
Default font No.	C2 C3 C5	Middle two digits of power-up font Last two digits of power-up font First two digits of power-up font	0 0 0
PCL font switch	C8	0:HP compatibility mode (Characters higher than 127 are not printed.) 32:Conventional mode (Characters higher than 127 are printed. Supported symbol sets: ISO-60 Norway [00D], ISO-15 Italian [00I], ISO-11 Sweden [00S], ISO-6 ASCII [00U], ISO-4 U.K. [01E], ISO-69 France [01F], ISO-21 Germany [01G], ISO-17 Spain [02S], Symbol [19M])	0
Total host buffer size	H8	0 to 99 in units of the size defined by FRPO S5	5
Form feed time-out value	H9	Value in units of 5 seconds (0 to 99).	6
Duplex binding	N4	0: Off 1: Long edge 2: Short edge	0
Sleep timer time-out time	N5	1 to 240 minutes	1

Item	FRPO	Setting values	Factory setting
Ecoprint level	N6	0: Off 2: On	0
Default emulation mode	P1	6 : PCL6 (except PCL XL) 9 : KPDL	9(U.S.A) or 6(Euro and other)
Carriage-return action *	P2	0: Ignores 0x0d 1: Carriage-return 2: Carriage-return+linefeed	1
Linefeed action *	P3	0: Ignores 0x0d 1: Linefeed 2: Carriage-return+linefeed	1
Automatic emulation sensing (For KPDL3)	P4	0: AES disabled 1: AES enabled	1(U.S.A) or 0(Euro and other)
Automatic emulation switching trigger (For KPDL3)	P7	0: Page eject commands 1: None 2: Page eject and PRESCRIBE EXIT 3: PRESCRIBE EXIT 4: Formfeed (^L) 6: Page eject, PRESCRIBE EXIT and formfeed 10: Page eject commands; if AES fails, resolves to KPDL	11(U.S.A) or 10(Euro and other)
Command recognition character	P9	ASCII code of 33 to 126	82 (R)

Item	FRPO	Setting values	Factory setting
Default paper size	R2	0: Size of the default paper cassette (See R4.) 1: Monarch (3-7/8 × 7-1/2 inches) 2: Business (4-1/8 × 9-1/2 inches) 3: International DL (11 × 22 cm) 4: International C5 (16.2 × 22.9 cm) 5: Executive (7-1/4 × 10-1/2 inches) 6: US Letter (8-1/2 × 11 inches) 7: US Legal (8-1/2 × 14 inches) 8: A4 (21.0 × 29.7 cm) 9: JIS B5 (18.2 × 25.7 cm) 13: ISO A5 14: A6 (10.5 × 14.8 cm) 15: JIS B6 (12.8 × 18.2 cm) 16: Commercial #9 (3-7/8 × 8-7/8 inches) 17: Commercial #6 (3-5/8 × 6-1/2 inches) 18: ISO B5 (17.6 × 25 cm) 19: Custom (11.7 × 17.7 inches) 31: Hagaki (10 × 14.8 cm) 32: Ofuku-hagaki (14.8 × 20 cm) 33: Officio II 40: 16K 42: 216x340 50: Statement 51: Folio 52: Youkei 2 53: Youkei 4	0
Default cassette	R4	0: MP tray 1: Cassette 1 2: Cassette 2 3: Cassette 3 4: Cassette 4	1
MP tray paper size	R7	Same as the R2 values except: 0	6 (U.S.A) or 8 (Euro and other)
A4/letter equation	S4	0: Off 1: On	1
Host buffer size rate	S5	0: 10kB (x H8) 1: 100kB (x H8) 2: 1024kB (x H8)	1
RAM disk size	S6	1 to 1024 MB	128
RAM disk mode	S7	0: Off 1: On	1

Item	FRPO	Setting values	Factory setting
Wide A4	T6	0: Off 1: On	0
Line spacing	U0	Lines per inch (integer value)	6
Line spacing	U1	Lines per inch (fraction value)	0
Character spacing	U2	Characters per inch (integer value)	10
Character spacing	U3	Characters per inch (fraction value)	0
Country code	U6	0: US-ASCII 1: France 2: Germany 3: UK 4: Denmark 5: Sweden 6: Italy 7: Spain 8: Japan 9: US Legal 10: IBM PC-850 (Multilingual) 11: IBM PC-860 (Portuguese) 12: IBM PC-863 (Canadian French) 13: IBM PC-865 (Norwegian) 14: Norway 15: Denmark 2 16: Spain 2 17: Latin America 21: US ASCII (U7 = 50 SET) 77: HP Roman-8 (U7 = 52 SET)	41
Code set at power up in daisy-wheel emulation	U7	0: Same as the default emulation mode (P1) 1: IBM 6: IBM PC-8 50: US ASCII (U6 = 21 SET) 52: HP Roman-8 (U6 = 77 SET)	53
Font pitch for fixed pitch scalable font	U8	Integer value in cpi: 0 to 99	10
	U9	Fraction value in 1/100 cpi: 0 to 99	0

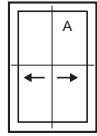
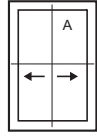
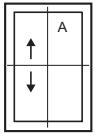
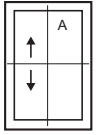
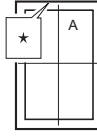
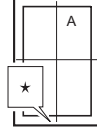
Item	FRPO	Setting values	Factory setting
Font height for the default scalable font	V0	Integer value in 100 points: 0 to 9	0
	V1	Integer value in points: 0 to 99	12
	V2	Fraction value in 1/100 points: 0, 25, 50, 75	0
Default scalable font	V3	Name of typeface of up to 32 characters, enclosed with single or double quotation marks	Courier
Default weight (courier and letter Gothic)	V9	0: Courier = darkness Letter Gothic = darkness 1: Courier = regular Letter Gothic = darkness 4: Courier = darkness Letter Gothic = regular 5: Courier = regular Letter Gothic = regular	5
Color mode	W1	0: Monochrome 1: Color (CMYK color)	1
Gloss mode	W6	0: Low (Normal Print) 1: High	0
Paper type for the MP tray	X0	1: Plain 2: Transparency 3: Preprinted 4: Label 5: Bond 6: Recycle 7: Vellum 8: Rough 9: Letterhead 10: Color 11: Prepunched 12: Envelope 13: Cardstock 14: Coated 16: Thick 17: High quality 21: Custom1 22: Custom2 23: Custom3 24: Custom4 25: Custom5 26: Custom6 27: Custom7 28: Custom8	1

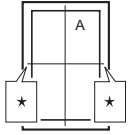
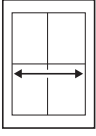
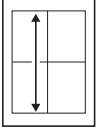
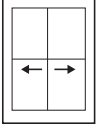
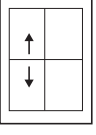
Item	FRPO	Setting values	Factory setting
Paper type for paper cassettes 1	X1	1: Plain 3: Preprinted 5: Bond 6: Recycled 7: Vellum 8: Rough 9: Letterhead 10: Color 11: Prepunched 16: Thick 17: High quality 21: Custom1 22: Custom2 23: Custom3 24: Custom4 25: Custom5 26: Custom6 27: Custom7 28: Custom8	1
Paper type for paper cassettes 2 to 4	X2 X3 X4	1: Plain 3: Preprinted 4: Label 5: Bond 6: Recycled 7: Vellum 8: Rough 9: Letterhead 10: Color 11: Prepunched 12: Envelope 14: Coated 16: Thick 17: High quality 21: Custom1 22: Custom2 23: Custom3 24: Custom4 25: Custom5 26: Custom6 27: Custom7 28: Custom8	1
PCL paper source	X9	0: Paper selection depending on an escape sequence compatible with HP-LJ5Si. 2: Paper selection depending on an escape sequence compatible with HP-LJ8000.	0
Automatic continue for 'Press GO'	Y0	0: Off 1: On	0

Item	FRPO	Setting values	Factory setting
Automatic continue timer	Y1	Number from 0 to 99 in increments of 5 seconds	6 (30 seconds)
Error message for device error	Y3	0 to 255	33
Duplex operation for specified paper type (Prepunched, Preprinted and Letterhead)	Y4	0: Off 1: On	0
Default operation for PDF direct printing	Y5	0: Enlarges or reduces the image to fit in the current paper size. Loads paper from the current paper cassette. 1: Through the image. Loads paper which is the same size as the image. 2: Enlarges or reduces the image to fit in the current paper size. Loads Letter, A4 size paper depending on the image size. 3: Through the image. Loads Letter, A4 size paper depending on the image size. 8: Through the image. Loads paper from the current paper cassette. 9: Through the image. Loads Letter, A4 size paper depending on the image size. 10: Enlarges or reduces the image to fit in the current paper size. Loads Letter, A4 size paper depending on the imagesize.	0
e-MPS error	Y6	0: Does not print the error report and display the error message. 1: Prints the error report. 2: Displays the error message. 3: Prints the error report and displays the error message.	3

*: Ignored depending on emulation.

9-3 Chart of image adjustment procedures

Adjusting order	Item	Image	Maintenance mode		Page	Setting procedure		Remarks
			Item No.	Mode		Method	Setting	
1	Adjusting the center line of the MP tray (printing adjustment) Adjusting the LSU print start timing		U034	LSU Out Left	P.6-29	<ol style="list-style-type: none"> 1. Press the start key. 2. Select [Lsu Out Left] to be adjusted. 3. Press the start key. 4. Press the system menu key. 5. Press the start key. (output a test pattern) 6. Press the system menu key. 7. Select [MPT] to be adjusted. 	<ol style="list-style-type: none"> 1. Change the setting value using the cursor +/- or numeric keys. 2. Press the start key. The value is set. <p>Completion: Press the stop key.</p>	If a preset value is raised, a picture will move to the left. To make an adjustment for duplex copying, select [Dup].
2	Adjusting the center line of the cassettes (printing adjustment) Adjusting the LSU print start timing		U034	LSU Out Left	P.6-29	<ol style="list-style-type: none"> 1. Press the start key. 2. Select [Lsu Out Left] to be adjusted. 3. Press the start key. 4. Press the system menu key. 5. Press the start key. (output a test pattern) 6. Press the system menu key. 7. Select the item to be adjusted. [Cassette1] to [Cassette4] 	<ol style="list-style-type: none"> 1. Change the setting value using the cursor +/- or numeric keys. 2. Press the start key. The value is set. <p>Completion: Press the stop key.</p>	If a preset value is raised, a picture will move to the left. To make an adjustment for duplex copying, select [Dup].
3	Adjusting the leading edge registration of the MP tray (printing adjustment) secondary paper feed start timing		U034	LSU Out Top	P.6-29	<ol style="list-style-type: none"> 1. Press the start key. 2. Select [Lsu Out Top] to be adjusted. 3. Press the start key. 4. Press the system menu key. 5. Press the start key. (output a test pattern) 6. Press the system menu key. 7. Select [MPT(L)] or [MPT(S)] to be adjusted. 	<ol style="list-style-type: none"> 1. Change the setting value using the cursor +/- or numeric keys. 2. Press the start key. The value is set. <p>Completion: Press the stop key.</p>	If a preset value is raised, a picture will move downward. To make an adjustment for duplex copying, select [Dup].
4	Adjusting the leading edge registration of the cassette (printing adjustment) secondary paper feed start timing		U034	LSU Out Top	P.6-29	<ol style="list-style-type: none"> 1. Press the start key. 2. Select [Lsu Out Top] to be adjusted. 3. Press the start key. 4. Press the system menu key. 5. Press the start key. (output a test pattern) 6. Press the system menu key. 7. Select [Cassette(L)] or [Cassette(S)] to be adjusted. 	<ol style="list-style-type: none"> 1. Change the setting value using the cursor +/- or numeric keys. 2. Press the start key. The value is set. <p>Completion: Press the stop key.</p>	If a preset value is raised, a picture will move downward. To make an adjustment for duplex copying, select [Dup].
5	Adjusting the leading edge margin (printing adjustment) LSU illumination start timing		U402	Lead	P.6-72	<ol style="list-style-type: none"> 1. Press the start key. 2. Press the system menu key. 3. Press the start key. (output a test pattern) 4. Press the system menu key. 5. Select [Lead] to be adjusted. 	<ol style="list-style-type: none"> 1. Change the setting value using the cursor +/- or numeric keys. 2. Press the start key. The value is set. <p>Completion: Press the stop key.</p>	A margin will become large if a preset value is raised.
6	Adjusting the trailing edge margin (printing adjustment) LSU illumination end timing		U402	Trail	P.6-72	<ol style="list-style-type: none"> 1. Press the start key. 2. Press the system menu key. 3. Press the start key. (output a test pattern) 4. Press the system menu key. 5. Select [Trail] to be adjusted. 	<ol style="list-style-type: none"> 1. Change the setting value using the cursor +/- or numeric keys. 2. Press the start key. The value is set. <p>Completion: Press the stop key.</p>	A margin will become large if a preset value is raised.

Adjusting order	Item	Image	Maintenance mode		Page	Setting procedure		Remarks
			Item No.	Mode		Method	Setting	
7	Adjusting the left and right margins (printing adjustment) LSU illumination start/end timing		U402 (Original:test pattern)	A Margin C Margin	P.6-72	1. Press the start key. 2. Press the system menu key. 3. Press the start key. (output a test pattern) 4. Press the system menu key. 5. Select [A Margin] or [C Margin] to be adjusted.	1. Change the setting value using the cursor +/- or numeric keys. 2. Press the start key. The value is set. Completion: Press the stop key.	A margin will become large if a preset value is raised.
8	Adjusting magnification of the scanner in the main scanning direction (scanning adjustment) Data processing		U065 U070 (Original:test pattern)	Main Scan Convey Speed	P.6-32 P.6-37	1. Press the start key. 2. Press the system menu key. 3. Set aoriginal and then press the start key. (output a test copy) 4. Press the system menu key. 5. Select [Main Scan] to be adjusted.	1. Change the setting value using the cursor +/- or numeric keys. 2. Press the start key. The value is set. Completion: Press the stop key.	U065: When using on the contact glass If a preset value is raised, a picture will spread. U070: When using document processor A picture will become long if a preset value is raised.
9	Adjusting magnification of the scanner in the auxiliary scanning direction (scanning adjustment) Original scanning speed		U065 (Original:test pattern)	Sub Scan	P.6-32	1. Press the start key. 2. Press the system menu key. 3. Set aoriginal and then press the start key. (output a test copy) 4. Press the system menu key. 5. Select [Sub Scan] to be adjusted.	1. Change the setting value using the cursor +/- or numeric keys. 2. Press the start key. The value is set. Completion: Press the stop key.	U065: When using on the contact glass If a preset value is raised, a picture will spread.
10	Adjusting the center line (scanning adjustment) Adjusting the original scan data (image adjustment)		U067 U072 (Original:test pattern)	Front Front Back	P.6-35 P.6-40	1. Press the start key. 2. Press the system menu key. 3. Set aoriginal and then press the start key. (output a test copy) 4. Press the system menu key. 5. Select the item to be adjusted. U067: [Front] U072: [Front] or [Back]	1. Change the setting value using the cursor +/- or numeric keys. 2. Press the start key. The value is set. Completion: Press the stop key.	U067: When using on the contact glass If a preset value is raised, a picture will move to the left. U072: When using document processor Back adjustment selects [Back] at the time of duplex mode. If a preset value is raised, a picture will move to the right.
11	Adjusting the leading edge registration (scanning adjustment) Original scan start timing		U066 U071 (Original:test pattern)	Front Front Head Back Head	P.6-34 P.6-38	1. Press the start key. 2. Press the system menu key. 3. Set aoriginal and then press the start key. (output a test copy) 4. Press the system menu key. 5. Select the item to be adjusted. U066: [Front] U071: [Front Head] or [Back Head]	1. Change the setting value using the cursor +/- or numeric keys. 2. Press the start key. The value is set. Completion: Press the stop key.	U066: When using on the contact glass If a preset value is raised, a picture will move forward. U071: When using document processor Back adjustment selects [Back Head] at the time of duplex mode.If a preset value is raised, a picture will move forward.

When maintenance item U411 (Automatic adjustment in the scanner) is run using the specified original (P/N 302NM94340) the following adjustments are automatically made:
 Adjusting the scanner magnification (U065)
 Adjusting the scanner leading edge registration (U066)
 Adjusting the scanner center line (U067)

When maintenance item U411 (Automatic adjustment in the DP) is run using the specified original (P/N 302NM94330) the following adjustments are automatically made:

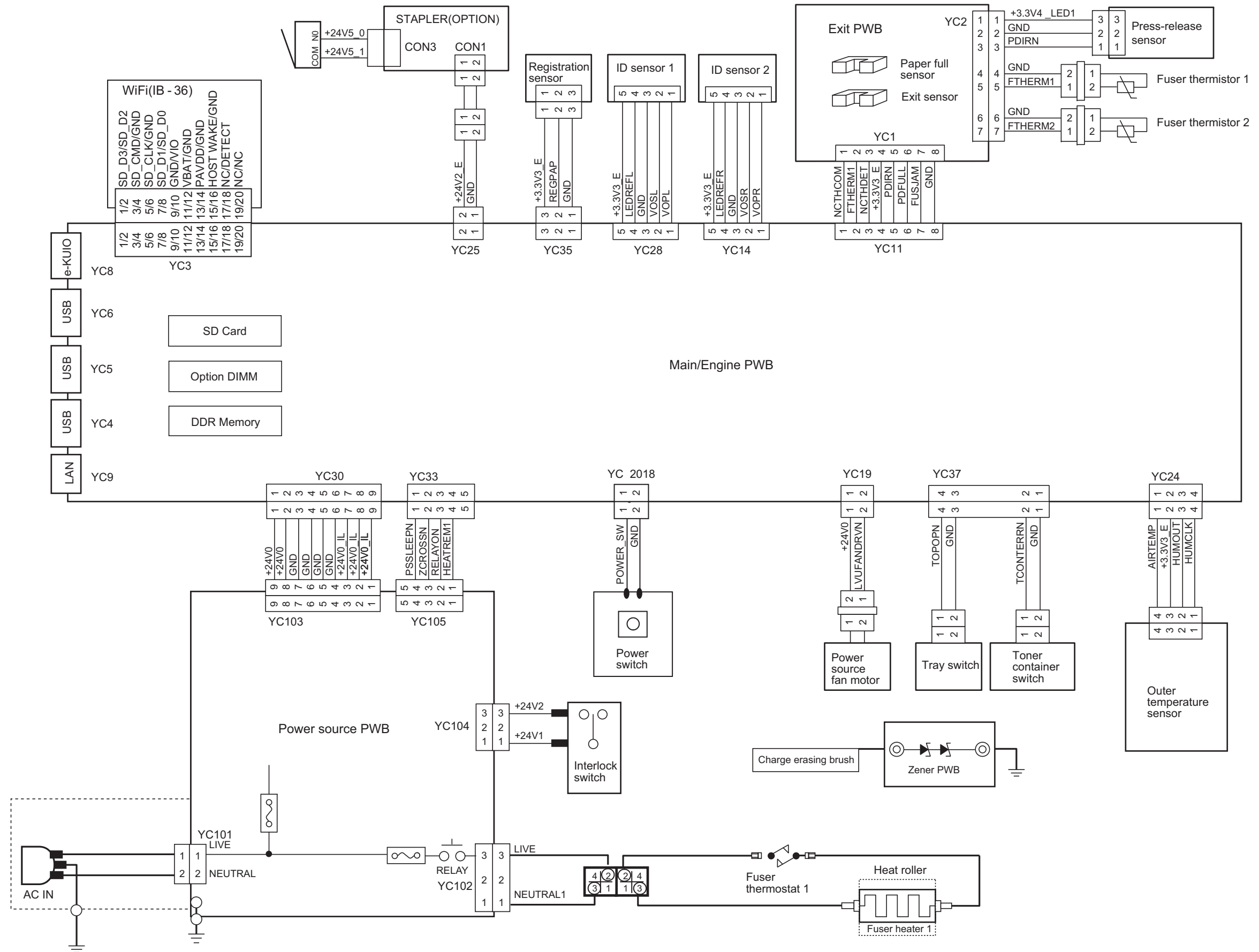
* : When running this test chart, you first must clean the feed rollers with alcohol and ensure the DP width guides are correctly positioned against the original.

Adjusting the DP magnification (U070)
 Adjusting the DP leading edge registration (U071)
 Adjusting the DP center line (U072)

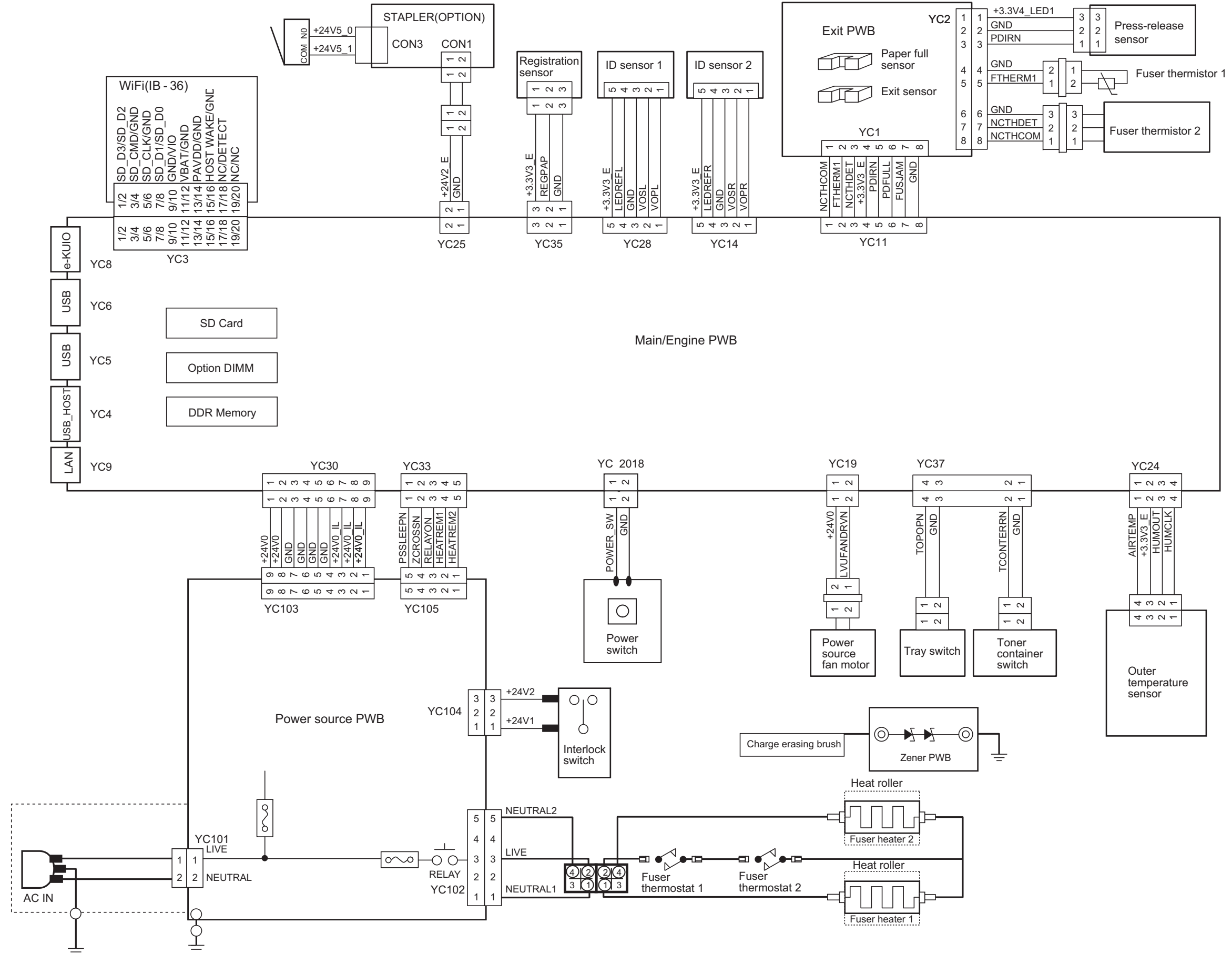
Image quality

Item	Specifications
100% magnification	Print: $\pm 0.8\%$ Copy: $\pm 1.5\%$ Using DP: $\pm 2.0\%$
Enlargement/reduction	Copy: $\pm 2.0\%$ Using DP: $\pm 2.5\%$
Lateral squareness	Copy: $\pm 2.0\text{mm}/200\text{mm}$ Using DP: $\pm 2.5\text{mm}/200\text{mm}$
Leading edge registration	Print: 2.0 mm or less Copy: 2.0mm or less Using DP: 2.5mm or less
Skewed paper feed (left-right difference)	Print: 1mm /100mm or less Copy: 1mm /100mm or less Using DP: 1.5mm /100mm or less
Lateral image shifting	Print: 2.0 mm or less Copy: 2.0mm or less Using DP: 2.0mm or less

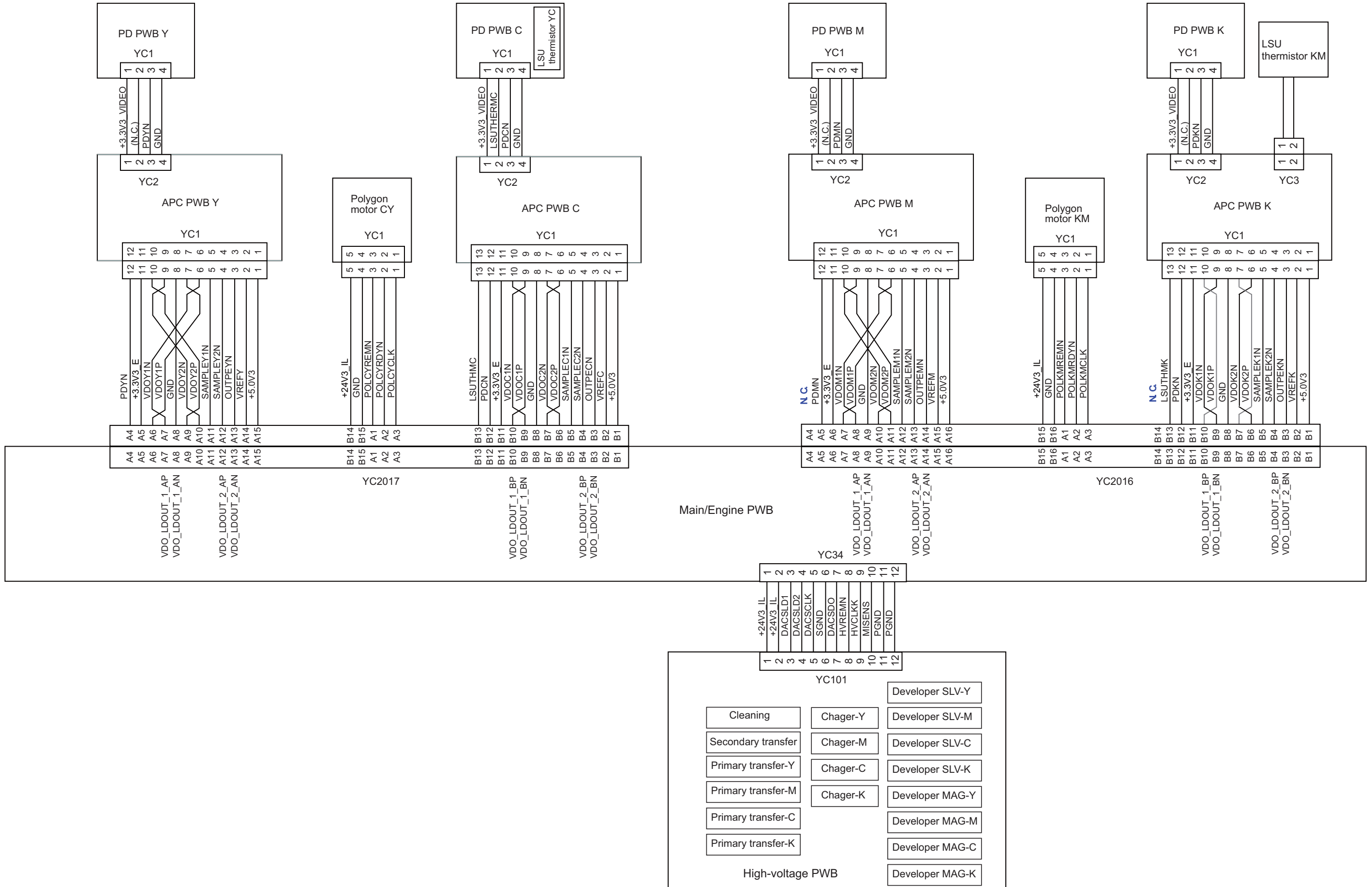
9-4 Wiring diagram
No.1 (30 ppm model)



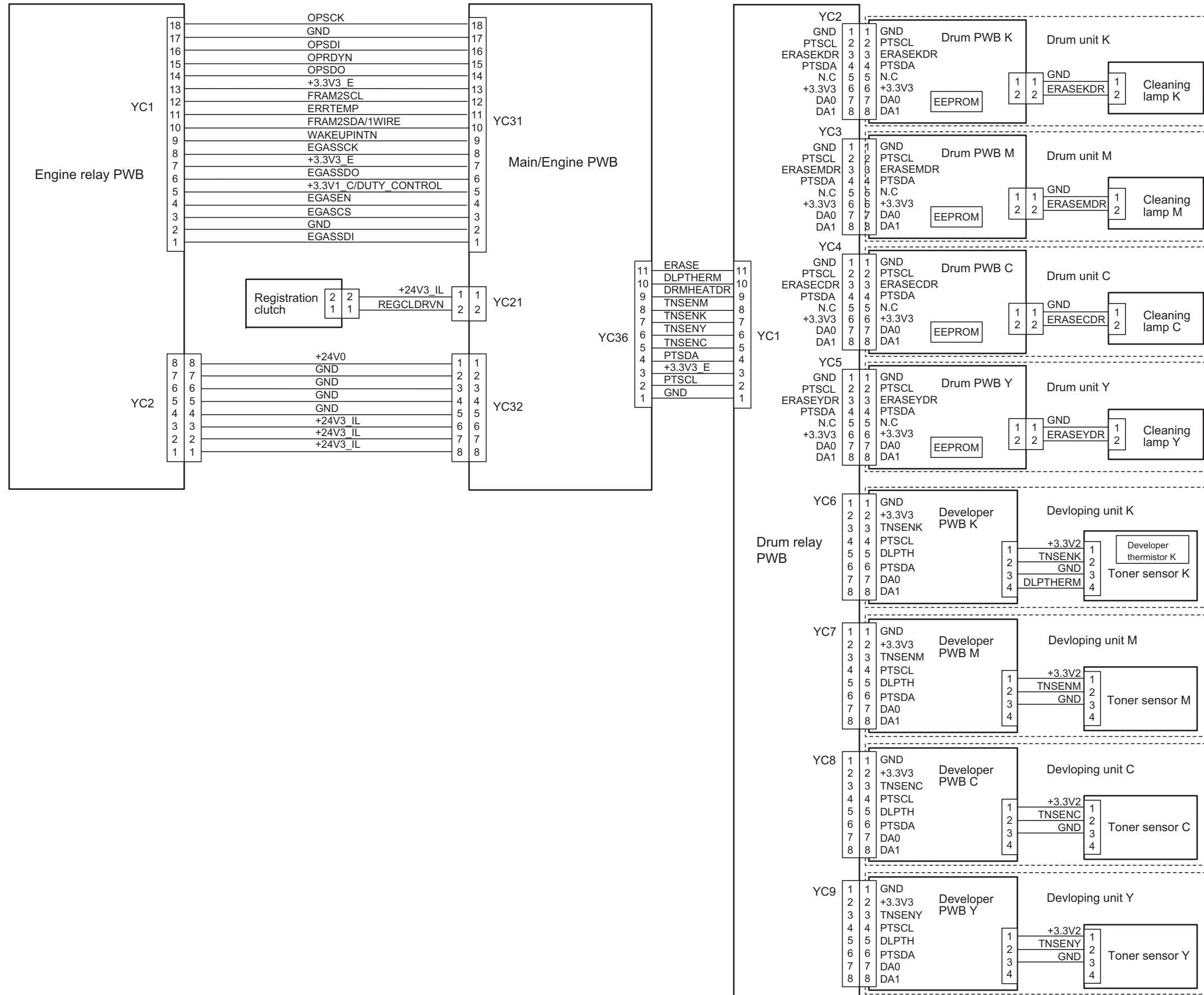
No.1 (35 ppm model)



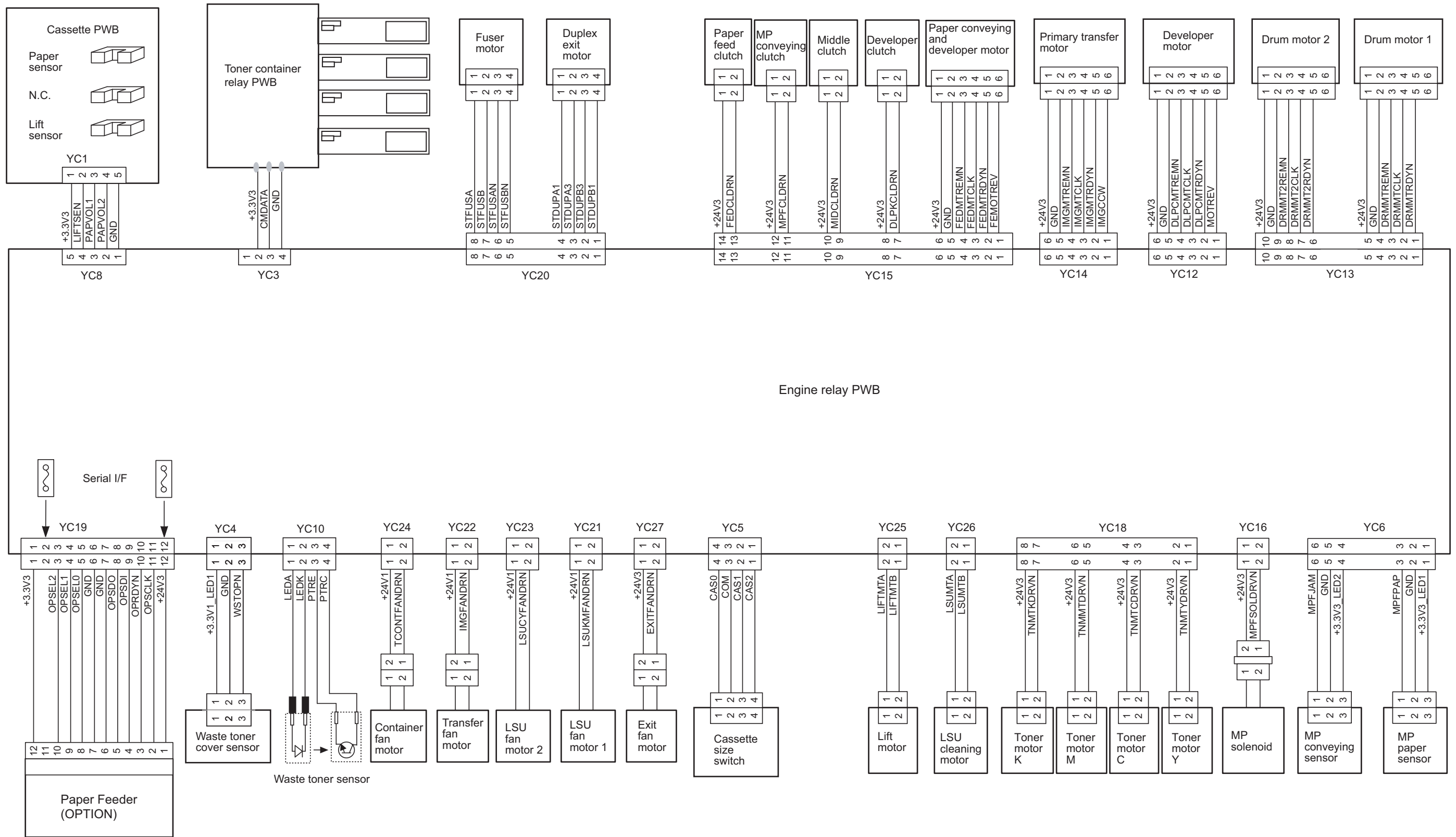
No.2



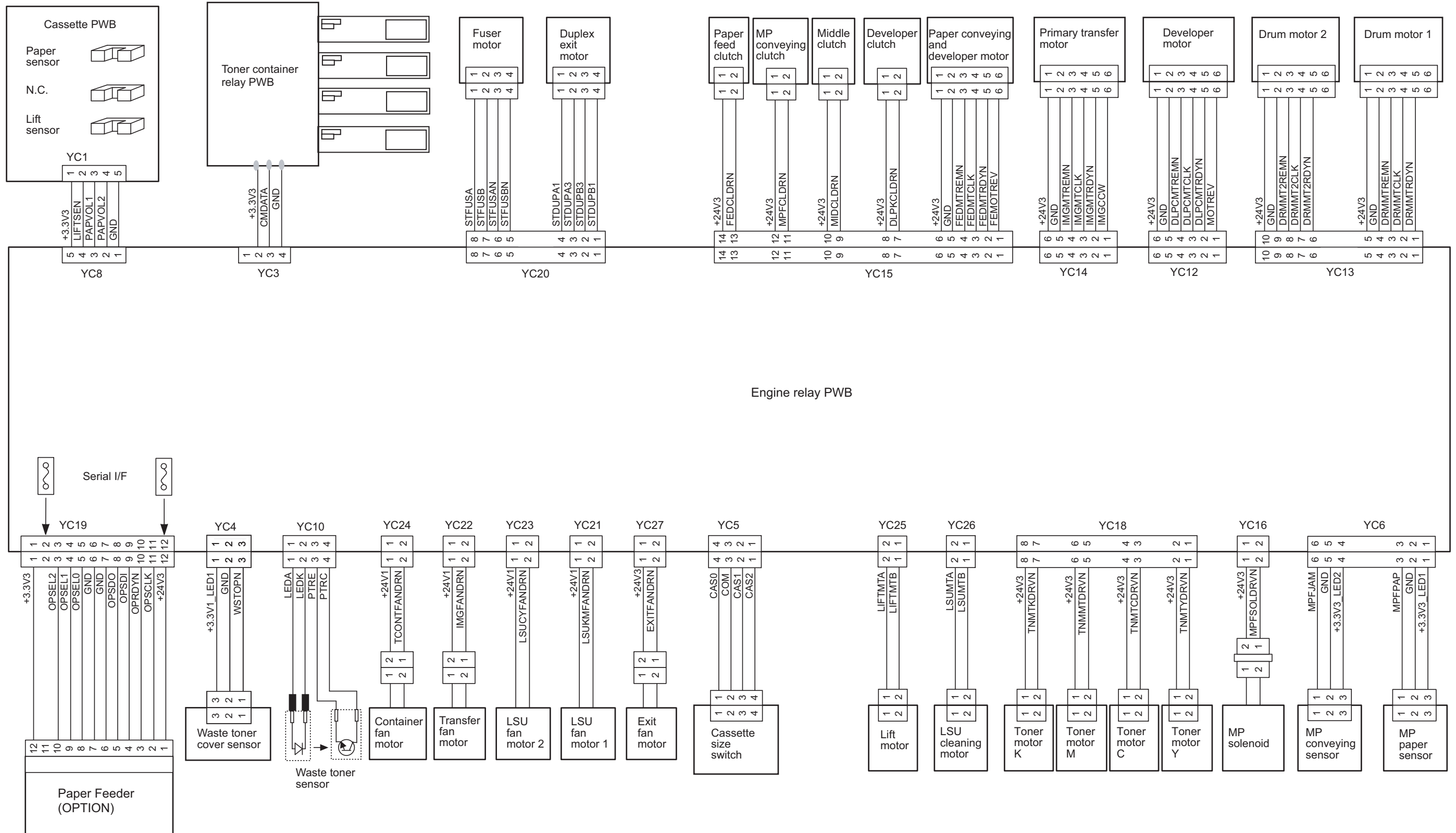
No.3



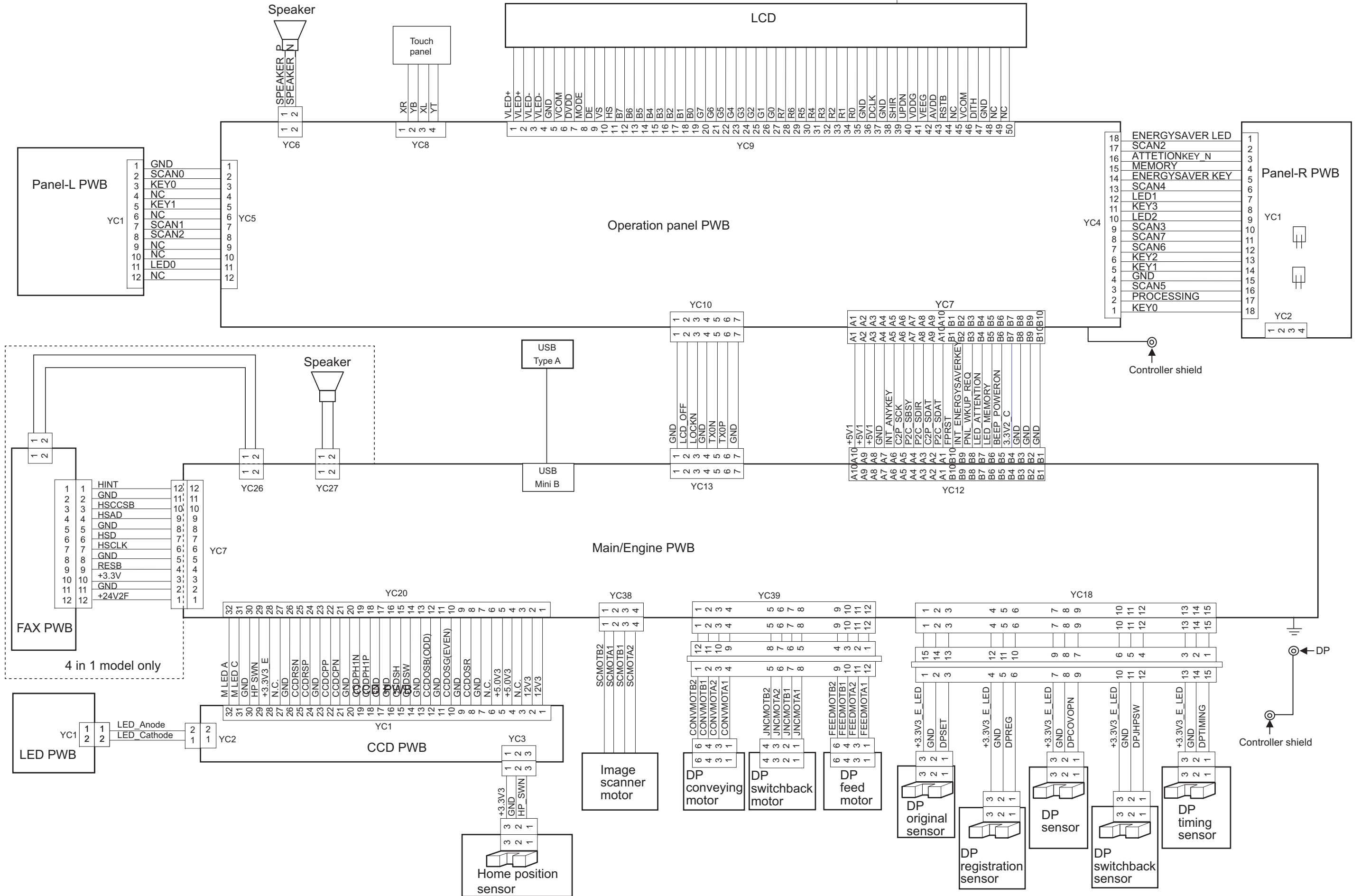
No.4 (30 ppm model)



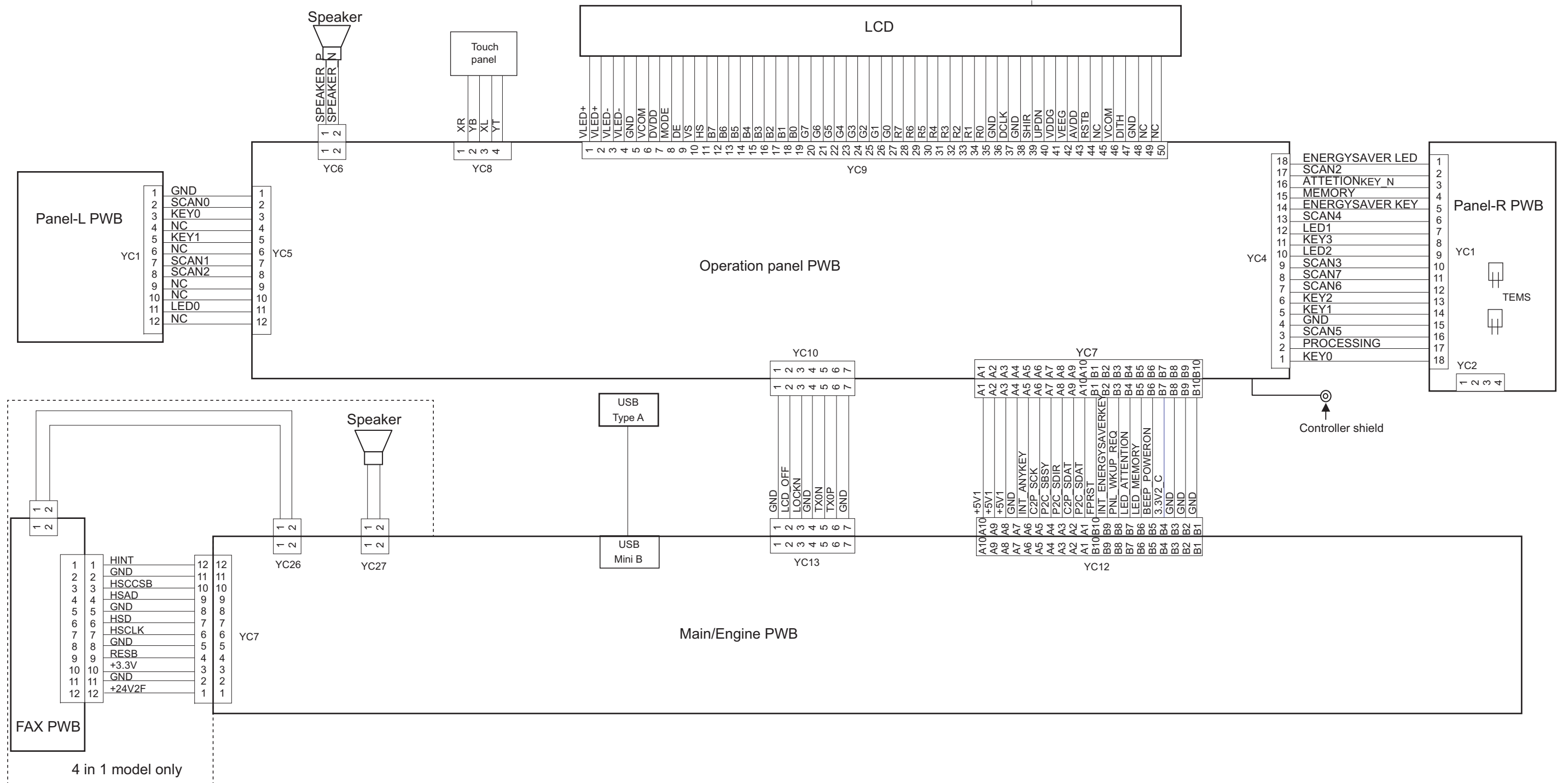
No.4 (35 ppm model)



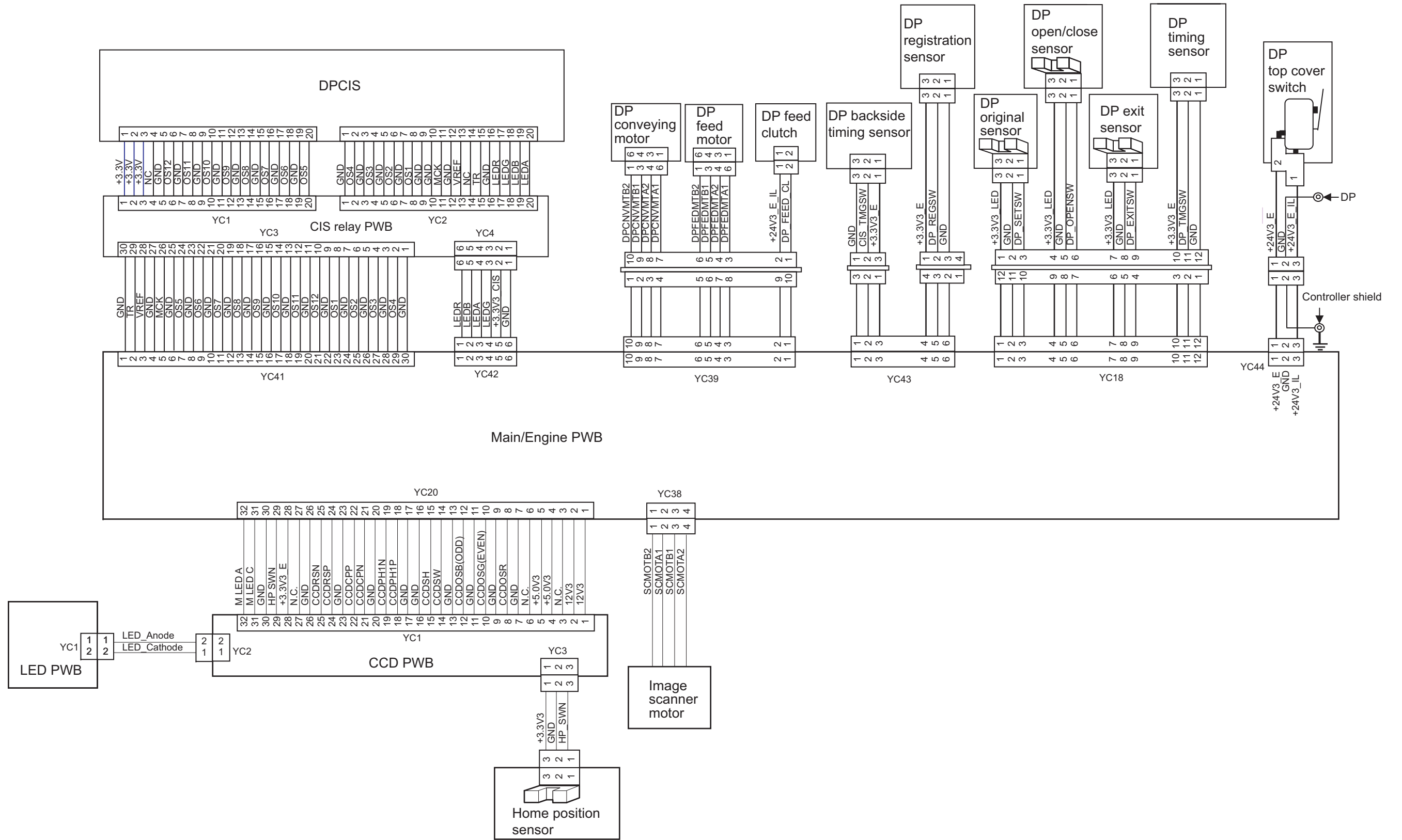
No.5 (30 ppm model)



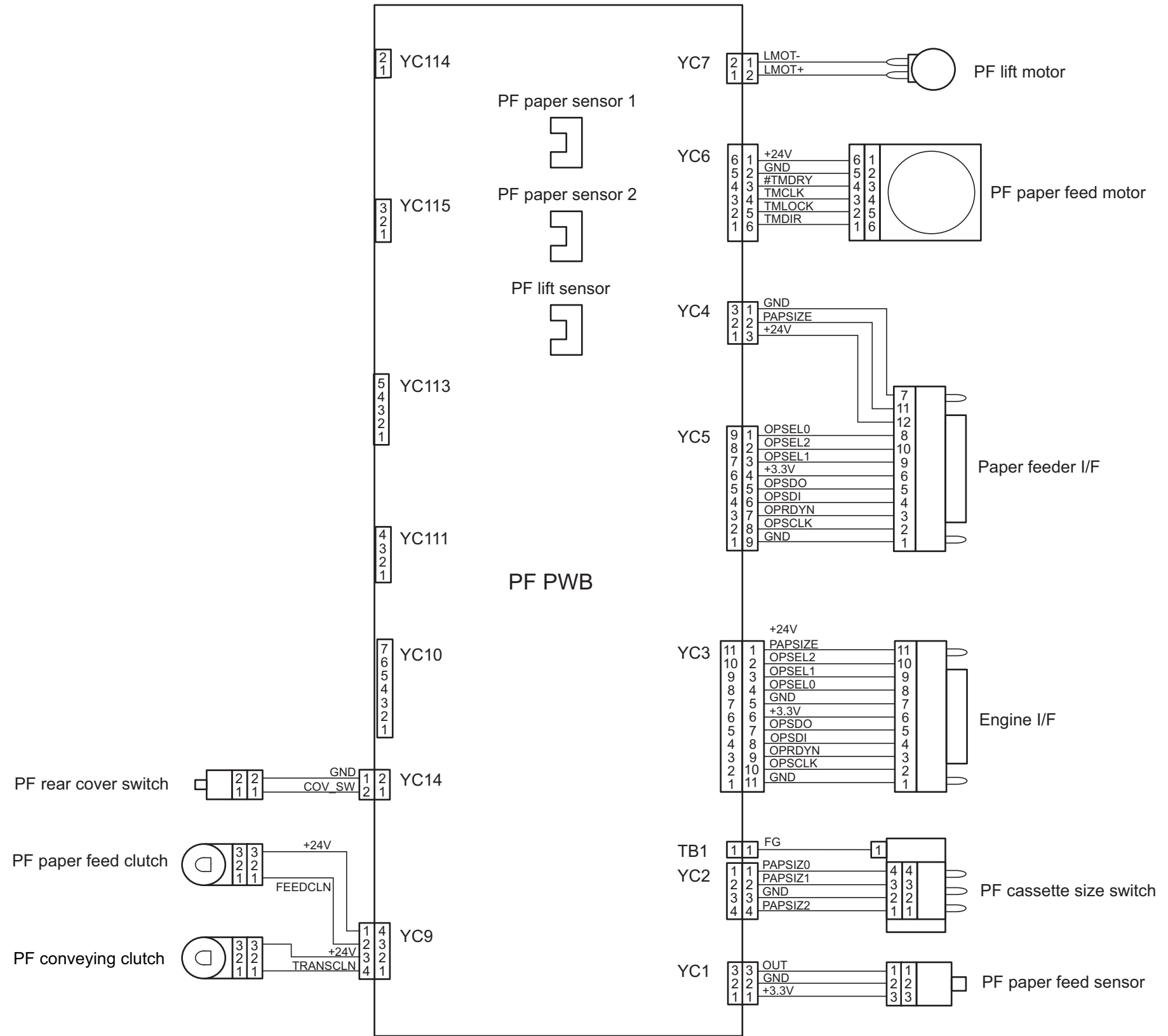
No.5 (35 ppm model)



No.6 (35 ppm model)



9-5 Wiring diagram (Option)
Paper Feeder (PF-5100)



9-6 Installation Guide

(1) PF-5100 installation guide

PF-5100



Installation Guide

Installationsanleitung

Guide d'installation

Guida all'installazione

Guía de instalación

Руководство по установке

安裝手冊

설치안내서

インストールガイド

For U.S.A.:

To install the optional paper feeder unit, contact your service representative.

This unit is for use only with Models ECOSYS M6035cdn, ECOSYS M6535cdn, ECOSYS M6030cdn, ECOSYS M6530cdn, ECOSYS P6035cdn, ECOSYS P7040cdn and ECOSYS P6130cdn.

For Canada:

CAN ICES-3B/NMB-3B

Installation of PF-5100 安裝PF-5100
Installation von PF-5100 PF-5100설치
Installation de PF-5100 PF-5100의設置
Installazione di PF-5100
Instalación de PF-5100
Установка PF-5100

1

2

Adjustment of paper size
Justage des Papierformats
Ajustement de format papier
Registrazione del formato carta
Ajuste del tamaño del papel
Регулировка размера бумаги
調整紙張尺寸
용지 크기의 조정
用紙サイズの調整

1

2

3

A4

A4

Loading paper
Ladenpapier
Papier de chargement
Carta da caricamento
Papel del cargamento
Загрузка бумаги
裝入紙張
용지 적재
用紙のセット

1

2

3

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