

# SERVICE MANUAL

TASKalfa 308ci

**AK-5100 / DF-5100**

**FAX System II**

**JS-5100 / MT-5100**

**PF-5120 / PF-5130 / PF-5140**



## **CONFIDENTIAL**

FOR AUTHORIZED KYOCERA ENGINEERS ONLY. DO NOT DISTRIBUTE TO NON-AUTHORIZED PARTIES.

## **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.

## Revision history

Revision	Date	Pages	Revised contents

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# Safety precautions


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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 () 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. .... 



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# 1 Specifications

## 1 - 1 Specifications

### (1) Common function

Items		Description
Type		Desktop
Printing Method		Electrophotography by semiconductor laser
Paper Weight	Cassette	60 to 220 g/m <sup>2</sup>
	Multipurpose Tray	60 to 220 g/m <sup>2</sup> , 230 g/m <sup>2</sup> (Cardstock), 129 to 163 g/m <sup>2</sup> (Banner sheet)
Media types	Cassette	Plain, Rough, Recycled, Vellum, Preprinted, Bond, Color (Color), Prepunched, Letterhead, Thick, High Quality, Envelope, Custom 1 to 8(Duplex: Same as Simplex)
	Multipurpose Tray	Plain, Transparency (OHP film), Rough, Vellum, Labels, Recycled, Preprinted, Bond, Cardstock, Coated, Color, Prepunched, Letterhead, Envelope, Thick, High Quality, Custom 1 to 8
Paper Size	Cassette	A4, A5, A6, B5, Letter, Legal, B6, Folio, 216 × 340 mm, Statement, Executive, Oficio II, 16K, B5 (ISO), Envelope #10, Envelope #9, Envelope #6 3/4, Envelope Monarch, Envelope DL, Envelope C5, Youkei 4, Youkei 2, Custom (92 × 148 mm to 216 × 356 mm)
	Multipurpose Tray	A4, A5, A6, B5, Letter, Legal, B6, Folio, 216 × 340 mm, Statement, Executive, Oficio II, 16K, B5 (ISO), 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 mm to 216 × 356 mm)
Printable Area		Print margin for top, bottom and both sides is 4 mm
Warm-up Time (23°C/ 73.4°F, 60%)	Power on	20 seconds or less
	Low Power	10 seconds or less
	Sleep	17.6 seconds or less
Paper Capacity	Cassette	550 sheets(64g/m <sup>2</sup> ), 500 sheets(80g/m <sup>2</sup> )*1
	Multipurpose Tray	110 sheets (A4/Letter or smaller) (64g/m <sup>2</sup> ) 27 sheets (larger than A4/Letter) (64g/m <sup>2</sup> ) 100 sheets (A4/Letter or smaller) (80 g/m <sup>2</sup> ) 25 sheets (larger than A4/Letter) (80 g/m <sup>2</sup> )
Output Tray Capacity	Inner Tray	550 sheets(64g/m <sup>2</sup> ), 500 sheets(80g/m <sup>2</sup> )
Image Write System		Semiconductor laser and electrophotography
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		Touch down developing system Developer: 2-component Toner replenishing: Automatic from the toner container
Transfer system		Primary: Transfer belt method Secondary: Transfer roller method

Items		Description
<b>Separation system</b>		Small diameter separation, separation needle
<b>Cleaning system</b>	<b>Drum</b>	Counter blade
	<b>Primary transfer</b>	Fur brush cleaning + Pre-brush system
<b>Charge erasing system</b>		Exposure by cleaning lamp (LED)
<b>Fusing system</b>		Heat and pressure fusing with the fuser heat roller and the press roller Heat source: halogen heater Abnormally high temperature protection devices: thermostat
<b>Standard Memory (Max 2GB)</b>		1.5GB
<b>High capacity storage</b>	<b>Standard</b>	-
	<b>Option</b>	SSD 32 GB/128 GB
<b>Interface</b>	<b>Option</b>	USB Interface Connector: 1 (Hi-Speed USB) Network interface: 1 (10 BASE-T/100 BASE-TX/1000 BASE-T)
		Hi-Speed USB: 2 (USB Drive Slot)
		eKUIO: 1 (Upper slot) FAX: 1 (Lower slot)
<b>Operating Environment</b>	<b>Temperature</b>	10 to 32.5°C/50 to 90.5°F
	<b>Humidity</b>	10 to 80%
	<b>Altitude</b>	3,500 m/11,482 ft maximum
	<b>Brightness</b>	1,500 lux maximum
<b>Dimensions (W x D x H)</b>		21.66" x 19.99" x 29" / 550 x 507.5 x 736.6 mm (Including the Document Processor)
<b>Weight (without toner container)</b>		Approx. 109.4 lb/Approx. 49.6kg (Including the Document Processor)
<b>Space Required (W x D)</b>		31.82" x 19.97" / 808 x 507 mm (Using Multipurpose tray) 48.78" x 20.94" / 1239 x 532 mm (Using 3000-sheet finisher)
<b>Power source</b>		120 V AC, 60 Hz, 8.5 A 220 to 240 V AC, 50 Hz, 5.3 A
<b>The power consumption of the product in networked standby (If all network ports are connected)</b>		120 V AC: 1284W 220 to 240 V AC: 1354W

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

\*2: When one network interface is installed, only one fax line can be installed.

**(2) Copy Functions**

Items		Description
Copy Speed	B/W	A4 30 sheets/min Letter 32 sheets/min Legal 26 sheets/min B5 27 sheets/min A5 27 sheets/min A6 27 sheets/min
	Color	A4 30 sheets/min Letter 32 sheets/min Legal 26 sheets/min B5 27 sheets/min A5 27 sheets/min A6 27 sheets/min
First Copy Time (A4)	B/W	6.4 seconds or less
	Color	7.8 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: Legal/Folio)
Original Feed System		Fixed

**(3) Printer Functions**

Items		Description
Printing Speed		Same as Copying Speed.
First Print Time (A4)	B/W	7.0 seconds or less
	Color	8.0 seconds or less
Resolution		9600 dpi equivalent × 600 dpi 1200 × 1200 dpi
Operating System		Windows 10, Windows Server 2003, Windows Vista, Windows 7, Windows 8, Windows 8.1, Windows Server 2008/R2, Windows Server 2012/R2, Mac OS 10.5 or later
Interface		USB Interface Connector: 1 (Hi-Speed USB) Network interface: 1 (10 BASE-T/100 BASE-TX/1000 BASE-T) Optional Interface (Option): 2 (For IB-50/IB-51 mounting)
Page Description Language		PRESCRIBE
Emulations		PCL6 (PCL-XL, PCL5c), KPDL3 (PostScript3 compatible), PDF, XPS, OpenXPS

**(4) Scanner Functions**

Items	Description
<b>Resolution</b>	600 dpi, 400 dpi, 300 dpi, 200×400 dpi, 200 dpi, 200×100 dpi
<b>File Format</b>	TIFF (MMR/JPEG compression), JPEG, PDF (MMR/JPEG compression), XPS, PDF/A, High compressive PDF, Encrypted PDF, Open XPSG
<b>Scanning Speed*1 (A4, 300 dpi, Image quality: Text/ Photo original)</b>	1-sided: B/W 40 images/min Color 30 images/min 2-sided B/W 17 Images/min Color 13 images/min
<b>Interface</b>	Ethernet (10 BASE-T/100 BASE-TX/1000 BASE-T), USB
<b>Transmission System</b>	SMB, SMTP, FTP, FTP over SSL, USB, TWAIN*2, WIA*3, WSD

\*1 When using the document processor (Dual Scan DP) (except TWAIN and WIA scanning)

\*2 Available Operating System: Windows Vista/Windows Server 2003/Windows Server 2008/Windows Server 2008 R2/Windows 7/Windows 8/Windows 8.1/Windows Server 2012/Windows Server 2012 R2

\*3 Supported Operating Systems: Windows Vista/Windows Server 2008/Windows Server 2008 R2/Windows 7/Windows 8/Windows 8.1/Windows 10/Windows Server 2012/Windows Server 2012 R2

**(5) Document Processor: 30ppm model standard**

Items	Description
<b>Supported Original Types</b>	Sheet originals
<b>Document Size</b>	Maximum: Legal/Folio Minimum: Statement/A6
<b>Paper Weight</b>	1-sided: 50 to 120 g/m <sup>2</sup> 2-sided: 50 to 120 g/m <sup>2</sup>
<b>Loading Capacity</b>	75 sheets (50 to 80 g/m <sup>2</sup> ) maximum*1
<b>Dimensions (W) × (D) × (H)</b>	21.54" × 13.64" × 5.16" / 548 × 346.5 × 131 mm
<b>Weight</b>	Approx. 8.8 lbs / Approx. 4kg

\*1 Up to upper limit height line in the document processor.

**(6) Option****(6-1) Paper feeder (PF-5120)**

Items	Description
<b>Paper Supply Method</b>	Friction roller feeder (No. of sheets: 550, 64 g/m <sup>2</sup> , 1 cassette) (No. of sheets: 500, 80 g/m <sup>2</sup> , 1 cassette)
<b>Paper Size</b>	A4, A5, B5, A6, Letter, Legal, B6, Folio, 216 × 340 mm, Statement, Executive, Oficio II, 16K, B5 (ISO), Envelope #10, Envelope #9, Envelope #6 3/4, Envelope Monarch, Envelope DL, Envelope C5, youkei 4, youkei 2, Custom (105 × 148 to 216 × 356 mm)
<b>Supported Paper</b>	Paper weight: 60 to 220 g/m <sup>2</sup> Media types: Plain, Recycled, Material
<b>Dimensions (W) × (D) × (H)</b>	21.66" × 19.97" × 6.19" / 550 × 507 × 157 mm
<b>Weight</b>	Approx. 21.0 lbs / Approx. 9.5 kg

**(6-2) Paper feeder (PF-5130)**

Items	Description
<b>Paper Supply Method</b>	Friction roller feeder (No. Sheets: 550, 64 g/m <sup>2</sup> , 2 cassette/ No. Sheets: 500, 80 g/m <sup>2</sup> , 2 cassette)
<b>Paper Size</b>	A4, A5, B5, A6, Letter, Legal, B6, Folio, 216 × 340 mm, Statement, Executive, Oficio II, 16K, B5 (ISO), Envelope #10, Envelope #9, Envelope #6 3/4, Envelope Monarch, Envelope DL, Envelope C5, youkei 4, youkei 2, Custom (105 × 148 to 216 × 356 mm)
<b>Supported Paper</b>	Paper weight: 60 to 220 g/m <sup>2</sup> Media types: Plain, Recycled, Material
<b>Dimensions (W) × (D) × (H)</b>	21.66" × 19.97" × 13.51" / 550 × 507 × 343 mm
<b>Weight</b>	Approx. 39.7 lbs / Approx. 18 kg

**(6-3) Paper feeder (PF-5140)**

Items	Description
<b>Paper Supply Method</b>	Friction roller feeder (No. Sheets: 2,200, 64 g/m <sup>2</sup> /No. 2,000, 80 g/m <sup>2</sup> )
<b>Paper Size</b>	A4, Letter
<b>Supported Paper</b>	Paper weight: 60 to 220 g/m <sup>2</sup> Media types: Plain, Recycled, Material
<b>Dimensions (W) × (D) × (H)</b>	21.66" × 19.97" × 13.51" / 550 × 507 × 343 mm
<b>Weight</b>	Approx. 44.1 lbs / Approx. 20 kg

**(6-4) Inner finisher (DF-5100)**

Items	Description						
<b>Number of Trays</b>	1 tray						
<b>Paper Size(80 g/m<sup>2</sup>) Finisher tray (no stapling)</b>	Legal, Folio, 216 x 340 mm, Custom (70 x 298 to 210 x 1020 mm): 250 sheets equivalent or 42 mm height (Thick: 20 sheets (129 to 220 g/m <sup>2</sup> )) A4, A5, B5, A6, Letter, Legal, B6, Folio, 216×340 mm, Statement, Executive, Oficio II, 16K, B5 (ISO), Hagaki (Cardstock), Oufukuhagaki (Return postcard), Envelope #10, Envelope #9, Envelope #6 3/4, Envelope Monarch, Envelope DL, Envelope C5, youkei 4, youkei 2, Custom (70 x 148 to 210 x 297 mm): 300 sheets equivalent or 42 mm height (Thick: 20 sheets (129 to 220 g/m <sup>2</sup> ))						
<b>Stapling</b>	<table border="1"> <tr> <td><b>Number of sheets to limit</b></td> <td>Legal, Oficio II, 216 x340 mm</td> <td>30 sheets (60 to 90 g/m<sup>2</sup>) 20 sheets (91 to 105 g/m<sup>2</sup>) 2 cover sheet only (106 g/m<sup>2</sup> to 128 g/m<sup>2</sup>)</td> </tr> <tr> <td></td> <td>A4, B5, Letter, 16K</td> <td>50 sheets (60 to 90 g/m<sup>2</sup>) 40 sheets (91 to 105 g/m<sup>2</sup>) 2 cover sheet only (106 g/m<sup>2</sup> to 128 g/m<sup>2</sup>)</td> </tr> </table>	<b>Number of sheets to limit</b>	Legal, Oficio II, 216 x340 mm	30 sheets (60 to 90 g/m <sup>2</sup> ) 20 sheets (91 to 105 g/m <sup>2</sup> ) 2 cover sheet only (106 g/m <sup>2</sup> to 128 g/m <sup>2</sup> )		A4, B5, Letter, 16K	50 sheets (60 to 90 g/m <sup>2</sup> ) 40 sheets (91 to 105 g/m <sup>2</sup> ) 2 cover sheet only (106 g/m <sup>2</sup> to 128 g/m <sup>2</sup> )
<b>Number of sheets to limit</b>	Legal, Oficio II, 216 x340 mm	30 sheets (60 to 90 g/m <sup>2</sup> ) 20 sheets (91 to 105 g/m <sup>2</sup> ) 2 cover sheet only (106 g/m <sup>2</sup> to 128 g/m <sup>2</sup> )					
	A4, B5, Letter, 16K	50 sheets (60 to 90 g/m <sup>2</sup> ) 40 sheets (91 to 105 g/m <sup>2</sup> ) 2 cover sheet only (106 g/m <sup>2</sup> to 128 g/m <sup>2</sup> )					
	<b>Media types</b>	Plain, Recycled, Prepunched, Preprinted, Bond, Letterhead, Color, Coated, Thick, High Quality, Custom 1 to 8					

Items	Description
Dimensions (W) x (D) x (H) (when pulling out the tray)	25.08" x 15.60" x 6.23" / 637 x 396 x 158 mm
Weight	Approx. 26.5 lbs / Approx. 12 kg

**(6-5) Mailbox (MT-5100)**

Items	Description
Number of Trays	6 trays
Paper Size(80 g/m <sup>2</sup> )	Tray 1 (to 5) 216 x 340mm, Oficioll, Foolscap (8.5 x 13.5"), Legal, Folio: 50 sheets A4, B5, A5, Letter, Executive, 16K, Statement: 100 sheets Tray A 216 x 340 mm, Oficioll, Foolscap (8.5 x 13.5"), Legal, Folio, Custom (70 x 298 to 210 x 1220 mm): 250 sheets A4, B5, A5, B6, A6, Letter, Executive, 16K, Statement, B5 (ISO), Hagaki (Cardstock), Oufukuhagaki (Return postcard), Custom (70 x 148 to 210 x 297 mm): 500 sheets
Dimensions (W) x (D) x (H)	16.3" x 14.18" x 29.93" / 414 x 360 x 760 mm
Weight	Approx. 17.7 lbs / Approx. 8 kg

**(6-6) Job separator (JS-5100)**

Items	Description
Number of Trays	1 tray
Loadable sheets limit (80g/m <sup>2</sup> )	100 Sheets
Paper Size(80 g/m <sup>2</sup> )	A4, A5, B5, A6, Letter, Legal, B6, Folio, 216 x 340 mm, Statement, Executive, Oficio II, 16K, B5 (ISO), Envelope #10, Envelope #9, Envelope #6 3/4, Envelope Monarch, Envelope DL, Envelope C5, youkei 4, youkei 2, Hagaki (Cardstock), Oufukuhagaki (Return postcard), Custom (70 x 148 to 210 x 1220 mm)
Supported Paper	Paper weight: 60 to 220 g/m <sup>2</sup> Media types: Plain, Recycled, Material
Dimensions (W) x (D) x (H)	14.18" x 12.56" x 6.07" / 360 x 319 x 154 mm
Weight	Approx. 0.9 lbs / Approx. 0.4 kg

**(6-7) FAX System11**

FAX function

Items	Description
Compatibility	G3
Communication Line	Subscriber telephone line
Transmission Time	Less than 3 seconds (33600 bps, JBIG, ITU-T A4-R #1 chart)
Transmission Speed	33600/31200/28800/26400/24000/21600/19200/16800/14400/12000/ 9600/7200/4800/2400 bps
Coding Scheme	JBIG/MMR/MR/MH



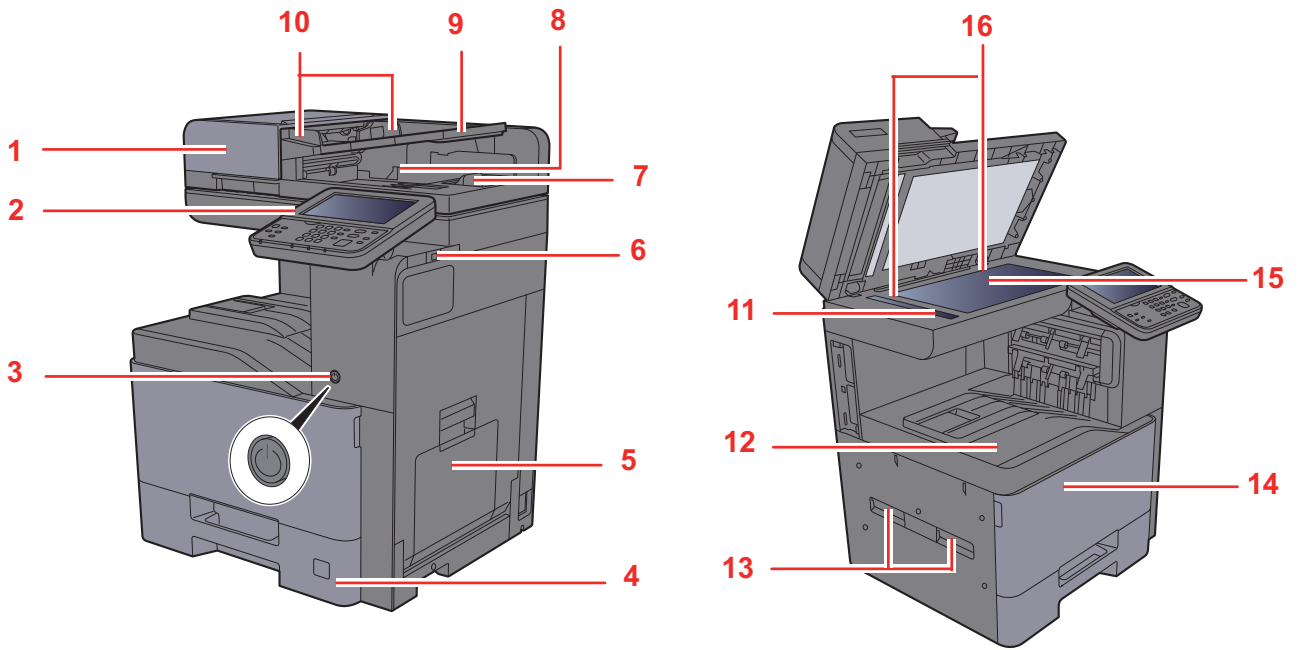
Items	Description
<b>Error Correction</b>	ECM
<b>Document Size</b>	Max. width: 8 1/2"/216 mm, Max. length: 14 1/32"/356 mm
<b>Number of originals to auto feed</b>	Max. 75 sheets (with document processor)
<b>Resolution</b>	Scan: 200 × 100 dpi Normal (8 dot/mm × 3.85 line/mm) 200 × 200 dpi Fine (8 dot/mm × 7.7 line/mm) 200 × 400 dpi Super (Super Fine) (8 dot/mm × 15.4 line/mm) 400 × 400 dpi Ultra (Ultra Fine) (16 dot/mm × 15.4 line/mm) Print: 600 × 600 dpi
<b>Gradations</b>	256 shades (Error diffusion)
<b>One Touch Key</b>	100 keys
<b>Multi-Station Transmission</b>	Max. 100 destinations
<b>Substitute Memory Reception</b>	256 sheets or more (when using ITU-T A4 #1)
<b>Image Memory Capacity</b>	3.5 MB (standard) (For fax transmission and reception)
<b>Report Output</b>	Send result report, FAX RX result report, Activity report, Status page
<b>Option</b>	-

## Network FAX functions

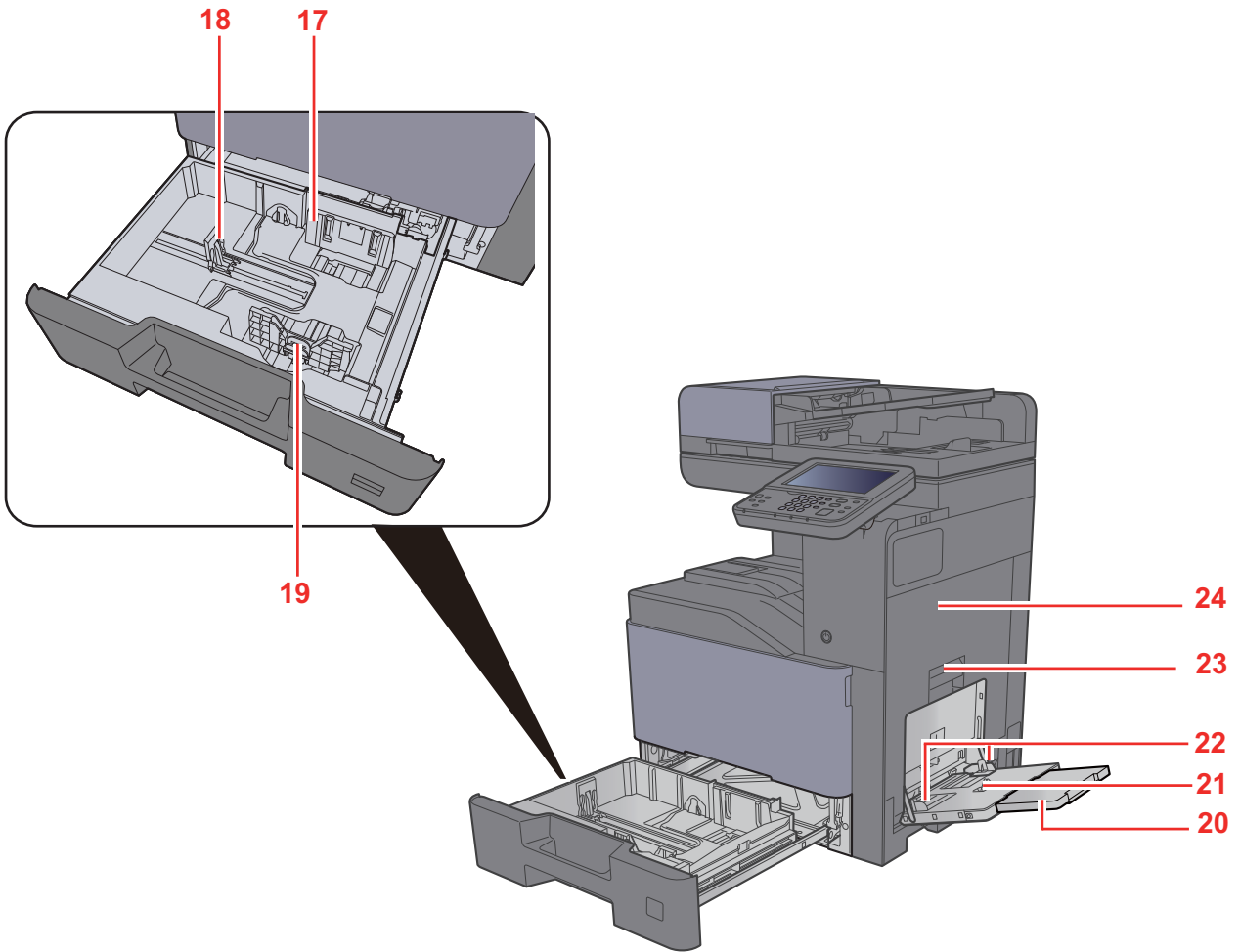
Items	Description
<b>Hardware</b>	IBM PC-AT compatible computer
<b>Interface</b>	10 BASE-T/100 BASE-TX/1000 BASE-T
<b>Operating system</b>	Windows 10, Windows Server 2003/2008/2008 R2/2012, Windows Vista, Windows 7, Windows 8 and Windows 8.1
<b>Transmission Resolution</b>	Ultra fine (400 × 400dpi), Fine (200 × 200dpi), Normal (100 × 200dpi)
<b>Document Size</b>	Letter, Legal, Statement, A4, A5, Folio, B5(JIS)
<b>Scheduled job</b>	Time setting by Network FAX driver (within 24 hours, 1 minute increments)
<b>Transmit and Print</b>	Fax transmission and print out at the machine is available
<b>Broadcast Transmission</b>	Max. 100 destinations
<b>Job Accounting</b>	Requires the input of a Login User Name and Password in the Network FAX Driver when User Login, is turn ON in the fax machine. Requires the input of an Account ID in the Network FAX Driver when Job Accounting, is turned ON in the fax machine.
<b>Cover Page</b>	A format can be selected using the Network FAX Driver or a template can be created.

# 1 - 2 Part Names

## (1) Machine Exterior



- |                        |                                   |
|------------------------|-----------------------------------|
| 1 Document processor   | 9 Original tray                   |
| 2 Operation Panel      | 10 Original Width Guides          |
| 3 Power switch         | 11 Slit glass                     |
| 4 Cassette 1           | 12 Inner Tray                     |
| 5 Multipurpose Tray    | 13 Handles                        |
| 6 USB Drive Slot       | 14 Front Cover                    |
| 7 Original Stopper     | 15 Platen                         |
| 8 Original Eject Table | 16 Original Size Indicator Plates |



17 Paper width guides

18 Paper length guide

19 Paper Width Adjusting Tab

20 Support Tray Section of the Multipurpose Tray

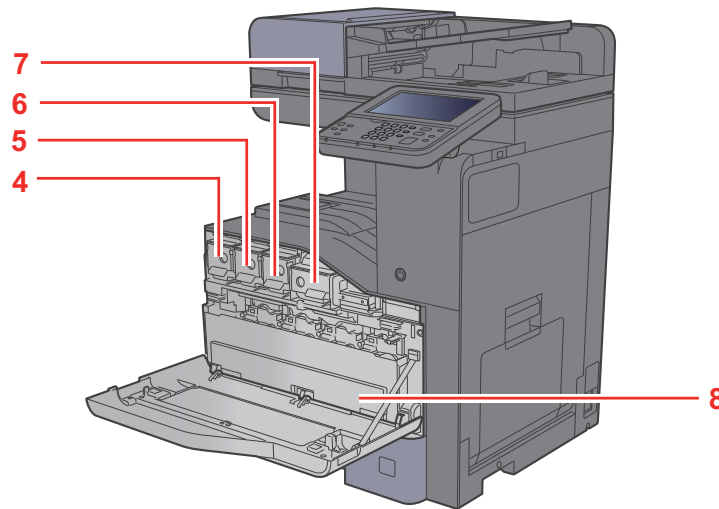
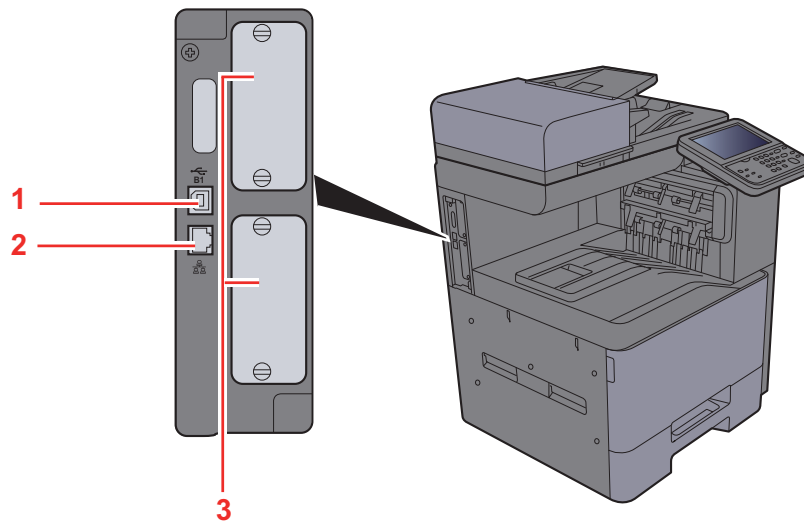
21 Multipurpose Tray

22 Paper Width Guides

23 Right Cover 1 Lever

24 Right Cover 1

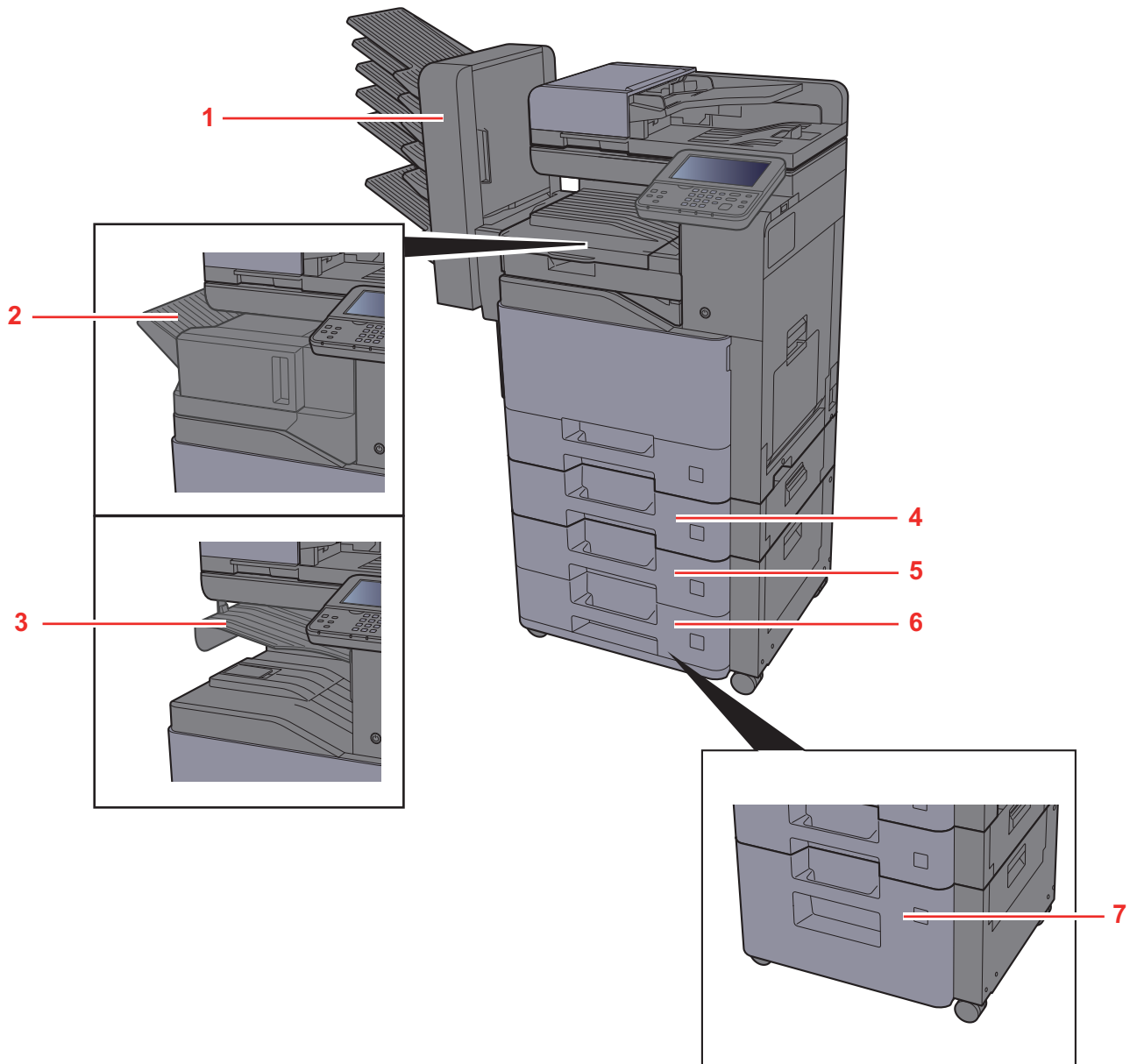
**(2) Connectors/Interior**



- 1 USB Interface Connector
- 2 Network Interface Connector
- 3 Option Interface Slot
- 4 Toner Container (Yellow)

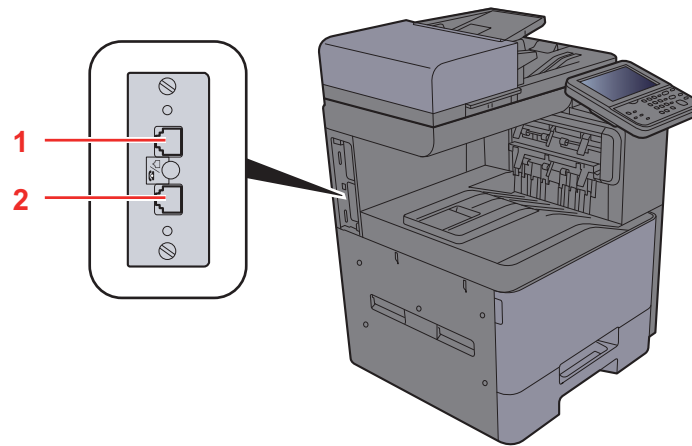
- 5 Toner Container (Cyan)
- 6 Toner Container (Magenta)
- 7 Toner Container (Black)
- 8 Waste Toner Box

**(3) With Optional Equipments Attached**



- |                            |  |
|----------------------------|--|
| 1 Mailbox (MT-5100)        | 5 Cassette3 (PF-5130)                  |
| 2 Inner finisher (DF-5100) | 6 Cassette4 (PF-5130)                  |
| 3 Job separator (JS-5100)  | 7 High capacity paper feeder (PF-5140) |
| 4 Cassette3 (PF-5120)      |  |

## (4) FAX System 11












1 LINE Connector

Connect the modular cords for telephone line.

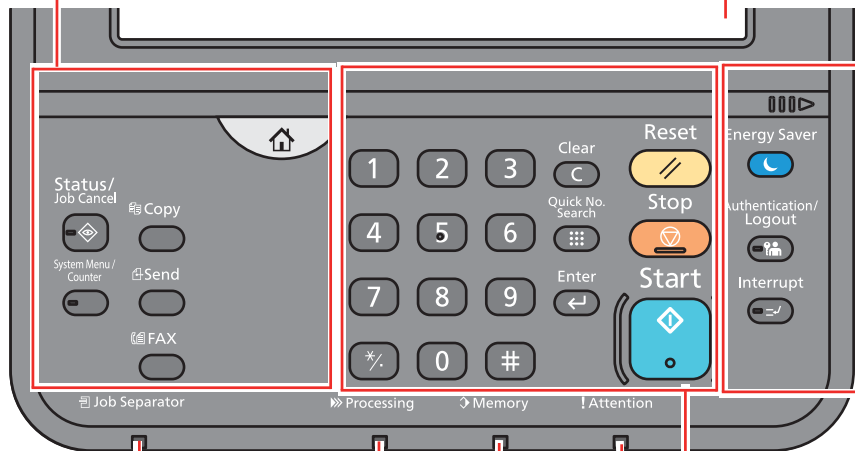
2 TEL Connector

When using an available telephone, connect it here.

### (5) Operation Panel Keys

	Displays the Home screen.			Puts the machine into Sleep Mode. Recovers from Sleep if in Sleep Mode.	
	Displays the Status screen.		Displays the Copy screen.		Authenticates user switching, and exits the operation for the current user (i.e. log out).
	Displays the System Menu screen.		Displays the screen for sending. You can change it to display the Address Book screen.		Displays the Interrupt Copy screen.
			Displays the FAX screen.		

Touch panel.  
Displays buttons for configuring machine settings.

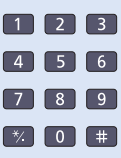








Lights when there is paper in the job separator tray.

Blinks while printing or sending/receiving.

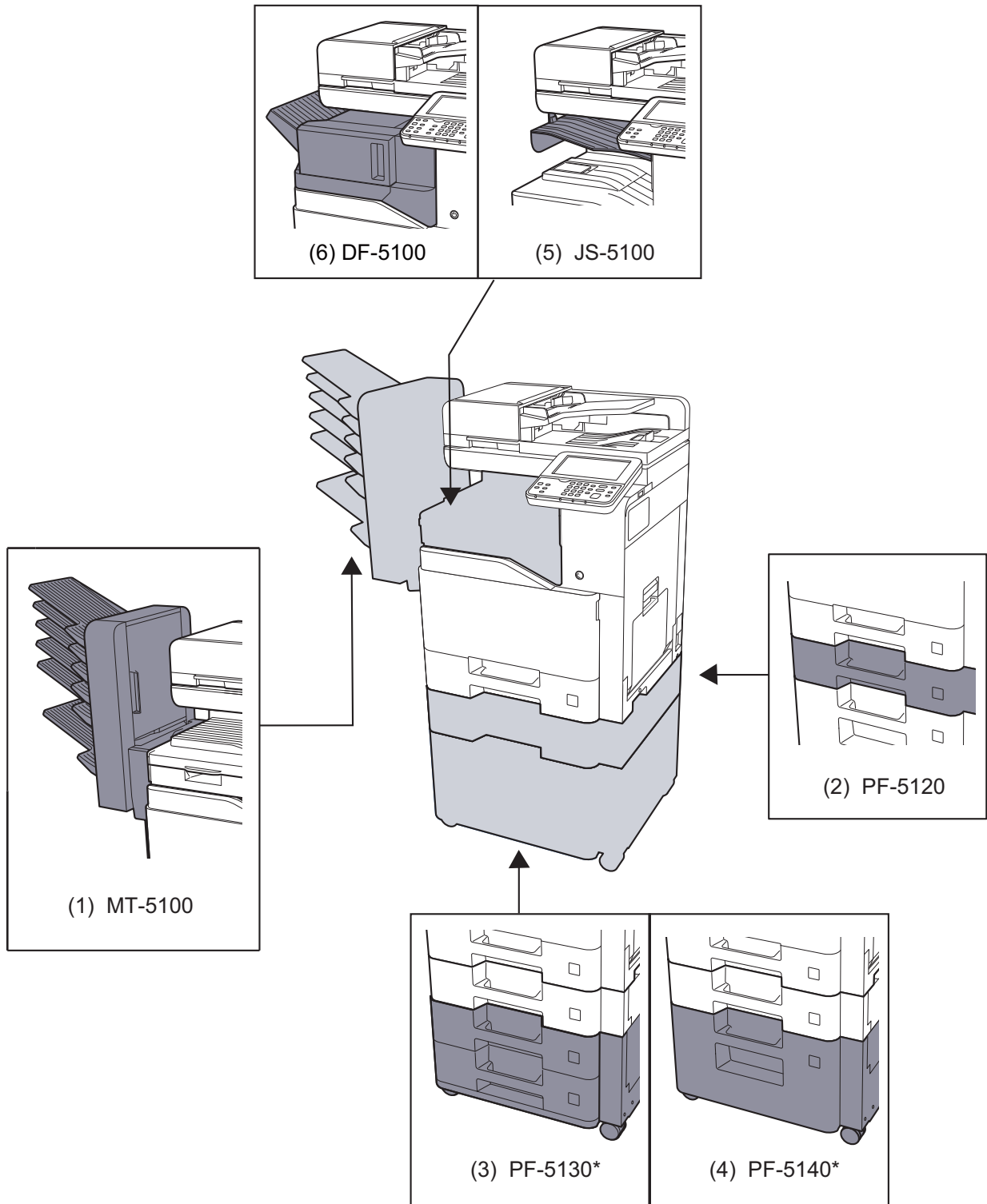
Blinks while the machine is accessing the hard disk, fax memory or USB memory (general purpose item).

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

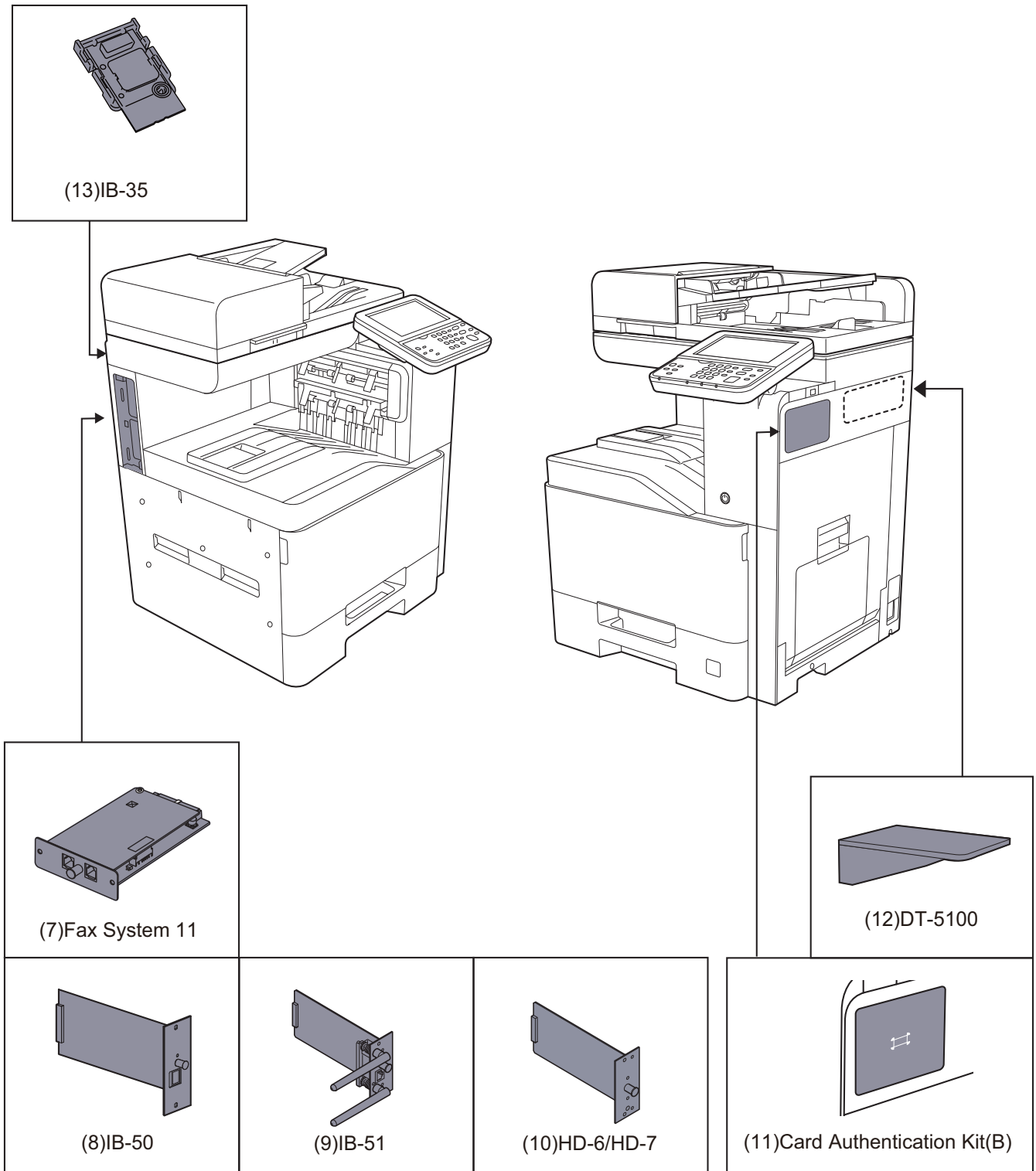
	Numeric keys. Enter numbers and symbols.		Clears entered numbers and characters.		Returns settings to their default states.
			Specifies registered information such as address numbers, user IDs and program numbers by number.		Cancels or pauses the job in progress.
			Finalizes numeric key entry, and 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

The following options are available for this machine.







Software option
(14) UG-33
(15) Data Security kit (E)
(16) USB Keyboard
(17) Expansion Memory
(18) SD/SDHC Memory Card

### **(1) MT-5100 "Mailbox"**

This equipment separates the paper output tray destination to easily sort documents. Installing this option adds 6 output trays. When multiple computer users share the printer, each user can print to a specified tray.

 **Note**

It is necessary to install AK-5100 when installing MT-5100.

### **(2) PF-5120 "Paper Feeder (500-sheet)"**

The number of sheets and setting method is same as for the standard cassette.

### **(3) PF-5130 "Paper Feeder (500-sheet x2)"**

The number of sheets and setting method is same as for the standard cassette.

### **(4) PF-5140 "Large Capacity Feeder (2,000-sheet)"**

In addition to the standard cassette, the high capacity feeder can be installed to load A4 or Letter 2,000 sheets of paper.

### **(5) JS-5100 "Job Separator"**

This equipment separates the paper output tray destination to easily sort documents. Specify as the output tray for copy or print jobs. Or, specify as the default output tray for printing from the copy or Document Box screen, printing from the PC, and printing of the received fax data.

 **Note**

Select the output tray at the copy screen or set the default setting to output documents to the job separator.

### **(6) DF-5100 "Inner Finisher"**

This equipment can stack high capacity paper and can offset each copy to sort. Sorted output documents can be stapled.

### **(7) FAX System 11 "FAX Kit"**

The FAX kit can be used as a FAX and network FAX that enables document transmission and reception from a PC.

### **(8) 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.

### **(9) IB-51 "Wireless Network Interface Kit"**

This is a wireless LAN interface card which supports the wireless LAN specifications IEEE802.11n (Max 300Mbps) and 11g/b. With the utilities supplied, settings are possible for a variety of OS and network protocols.

### **(10) HD-6/HD-7 "SSD"**

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

### **(11) Card Authentication Kit (B) "Card Authentication Kit"**

User login administration can be performed using ID cards. To do so, it is necessary to register ID card information on the previously registered local user list. Refer to the operation guide of the ID card authentication kit for how to register.

**(12) DT-5100 "Document Table"**

Place original or other documents when using the machine. And some of the options are installed on the platen table.

**(13) IB-35 "Wireless Network Interface Kit"**

This is a wireless LAN interface card which supports the wireless LAN specifications IEEE802.11n (max. 65 Mbps) and IEEE802.11 g/b. In addition, network printing is possible without using the wireless LAN router because Wi-Fi Direct is supported. IB-35 is standard in South America and North America.

**(14) UG-33 "ThinPrint Option"**

Direct printing without a printer driver is also available.

**(15) Data Security Kit (E) "Data Security Kit"**

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

**(16) USB Keyboard "USB Keyboard"**

A USB keyboard can be used to enter information into the text fields on the operation panel. A special mount is also available to install the keyboard on the machine. Please contact your dealer or service representative for information on keyboards that are compatible with your machine before you purchase one.

**(17) "Expansion Memory"**

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

**(18) "SD/SDHC Memory Card"**

SD/SDHC memory card is a micro chip card that can save optional fonts, macros, forms.

## 1 - 4 Unit Compatibility

Unit configuration of each model is as follows.

Unit	Machine Design
<b>Cassette, primary feed</b>	CASSETTE ASSY (302R45872_) PARTS PRIMARY FEED ASSY SP (302R49421_) Common module
<b>Conveying, Duplex</b>	PARTS CONVEYING ASSY SP (302R49406_) Common path line, 100% duplex productivity module
<b>Primary transfer</b>	TR-5205 (302V59305_) 4-color developer separation module with primary transfer belt
<b>Secondary transfer</b>	PARTS 2ND TRANS ASSY SP (302R49407_) Separation GND common module
<b>LSU</b>	LK-5195 (302R49315_) One-way single polygon motor with a single beam
<b>Exit</b>	PARTS EXIT ASSY SP (302R49405_) 500-sheet stack
<b>Drum</b>	DK-5205 (302R49305_) OPC drum module
<b>Developer</b>	DV-5195K (302R49307_) DV-5195M (302R49308_) DV-5195C (302R49309_) DV-5195Y (302R49310_)
<b>Fuser</b>	FK-5345 (302WL9301_): 240V FK-5347 (302WL9302_): 120V Twin heater module
<b>MPF</b>	PARTS MPF TABLE ASSY L SP (302R49409_) 100 stack (without size detection)
<b>ISU</b>	ISU ASSY L SP (302R49314_) All-in-one carriage module Polaris common CCD equipped
<b>Operation section</b>	PARTS OPERATION UNIT L SP (302R49410_) Tilttable 7inch color touch panel Color Touch Panel
<b>Container</b>	For 220-240 V model TK-5195K (1T02R40NL_) TK-5195M (1T02R4BNL_) TK-5195C (1T02R4CNL_) TK-5195Y (1T02R4ANL_)  For 120 V model TK-5197K (1T02R40US_) TK-5197M (1T02R4BUS_) TK-5197C (1T02R4CUS_) TK-5197Y (1T02R4AUS_)  For Australia TK-5199K (1T02R40AS_) TK-5199M (1T02R4BAS_) TK-5199C (1T02R4CAS_) TK-5199Y (1T02R4AAS_) Compatibility Toner capacity (K: 15K/CMY: 7K)

## 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:
 

110 V AC	60Hz	8.7 A or more
120 V AC	60Hz	8.5 A or more
220 to 240 V AC	50Hz	5.3 A 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.

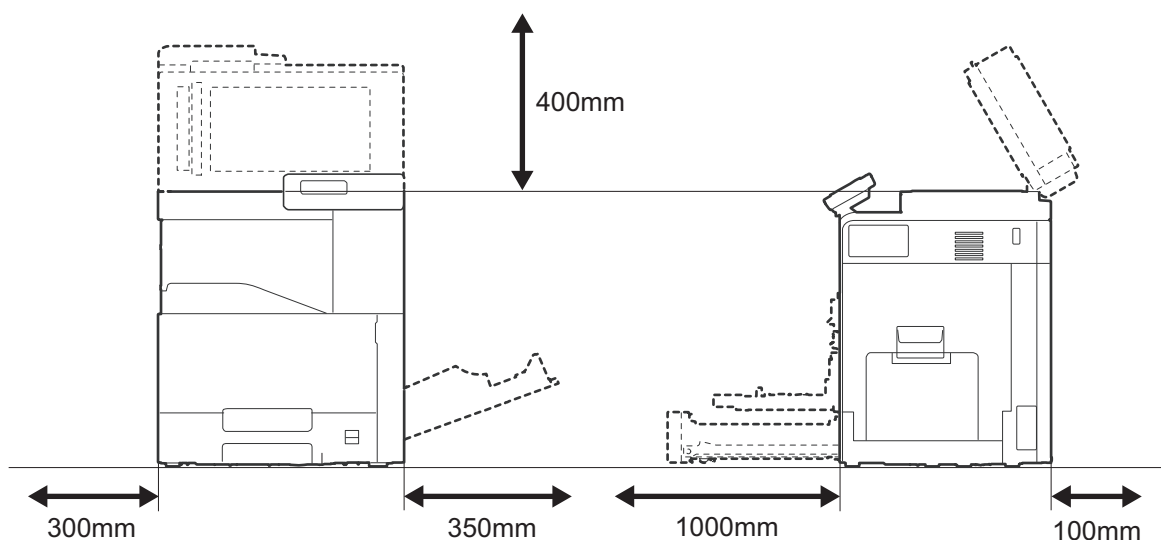
- Avoid locations near a window or with exposure to direct sunlight
- Avoid locations with vibrations
- Avoid locations with rapid temperature fluctuations
- Avoid locations with direct exposure to hot or cold air
- Avoid poorly ventilated locations

If the floor is delicate, when this machine is moved after installation, the floor material may be damaged by the casters.

During operation, some ozone is released, but the amount does not cause any ill effect to one's health.

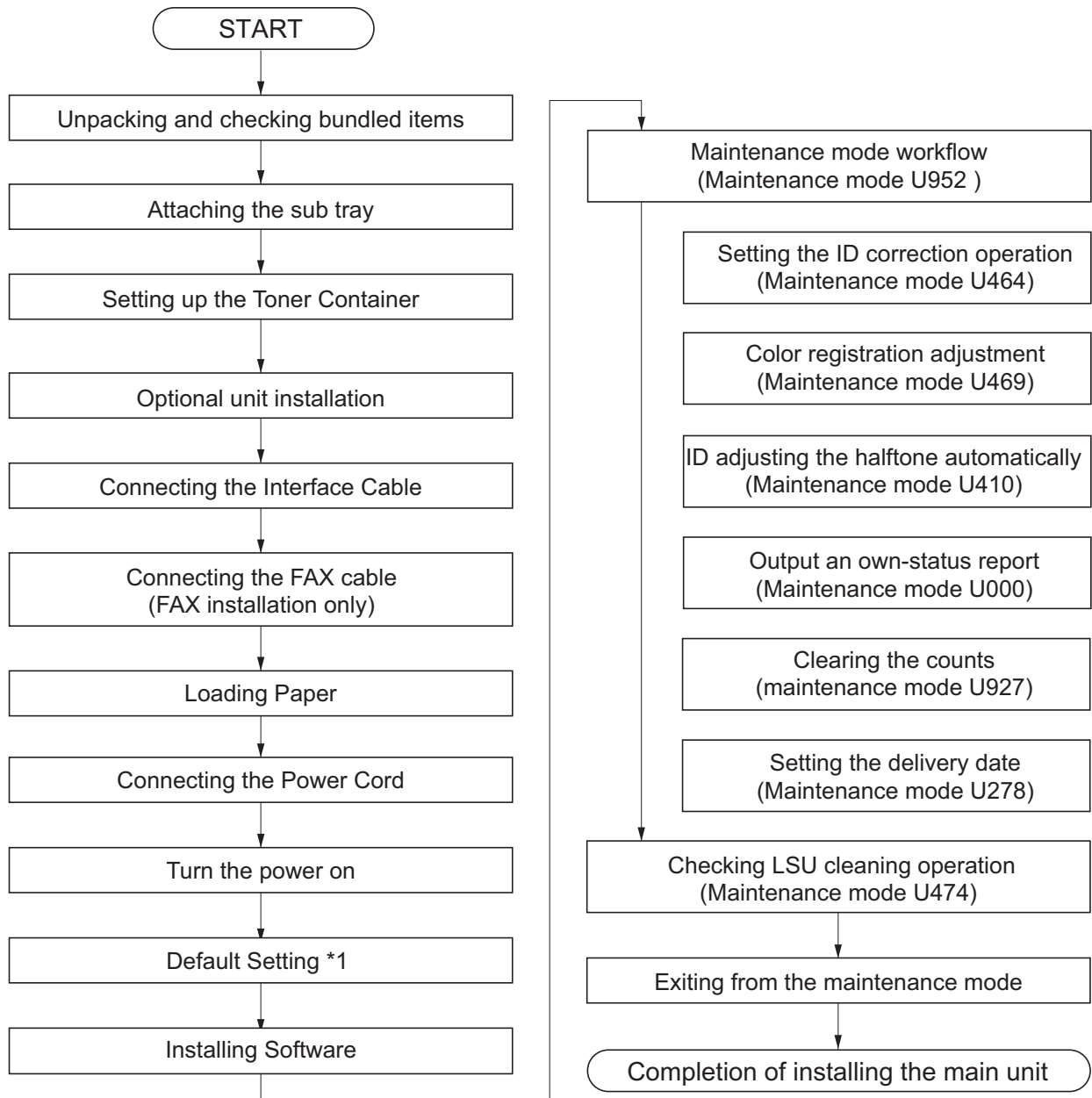
If, however, the machine is used over a long period of time in a poorly ventilated room or when making an extremely large number of copies, the smell may become unpleasant. To maintain the appropriate environment for copy work, it is suggested that the room be properly ventilated.

#### Installation space



## 2 - 2 Installing the main unit

### Installation procedures



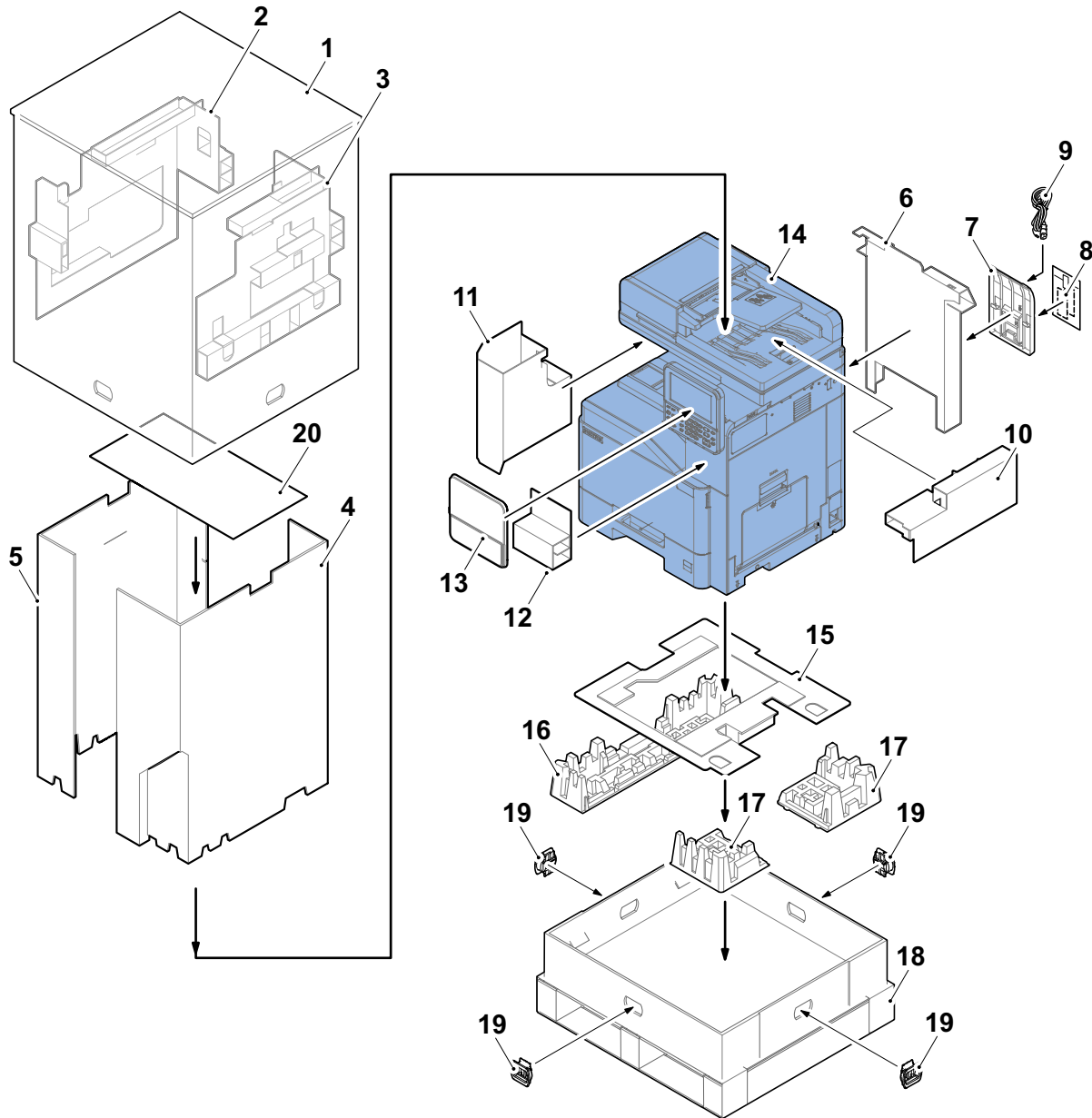
#### 🔍 Important

\*1: Default setting: It will take about 6 minutes for 30 ppm models since the drum initial setting is necessary. Do not execute the maintenance mode during the initial setting drive.

## (1) Unpacking and checking bundled items

Take out the main unit and accessories from the packing case.

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



- 1 Outer case
- 2 Left upper pad
- 3 Right upper pad
- 4 Right frame
- 5 Left frame
- 6 Accessories box
- 7 Inner tray

- 8 Size label
- 9 Power cord
- 10 Original tray pad
- 11 Left middle pad
- 12 Right front pad
- 13 Operation cover
- 14 Main unit

- 15 Bottom case
- 16 Left bottom pad
- 17 Right bottom pad
- 18 Skid
- 19 Hinge
- 20 Dp sheet

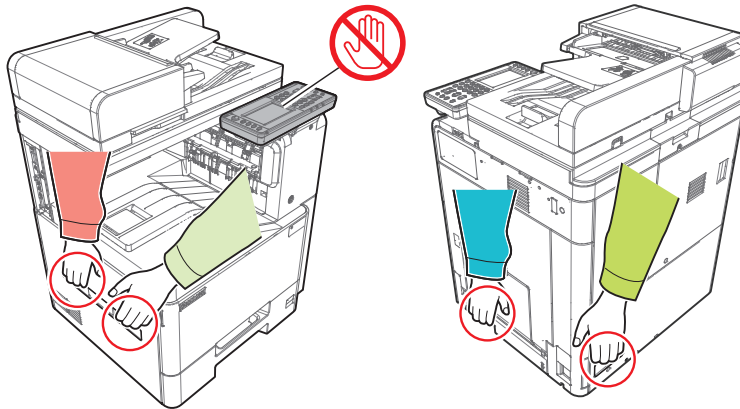


### Caution

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

## (2) Notes on main unit transportation

When transporting the main unit, lift the left and right of the lower part the main unit base (as marked by red circles) with four people as shown in the figure.  
Do not hold the operation unit because it will cause damage.

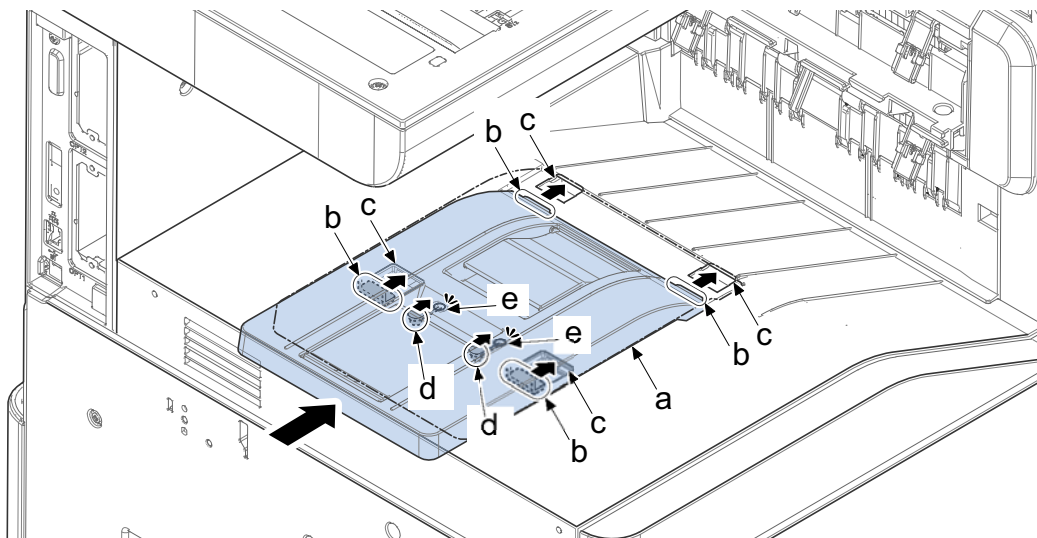


## (3) Attaching the sub tray

### 1 Attach the bundled sub tray to the inner tray.

No sub tray is required when installing the DF-5100 inner finisher.

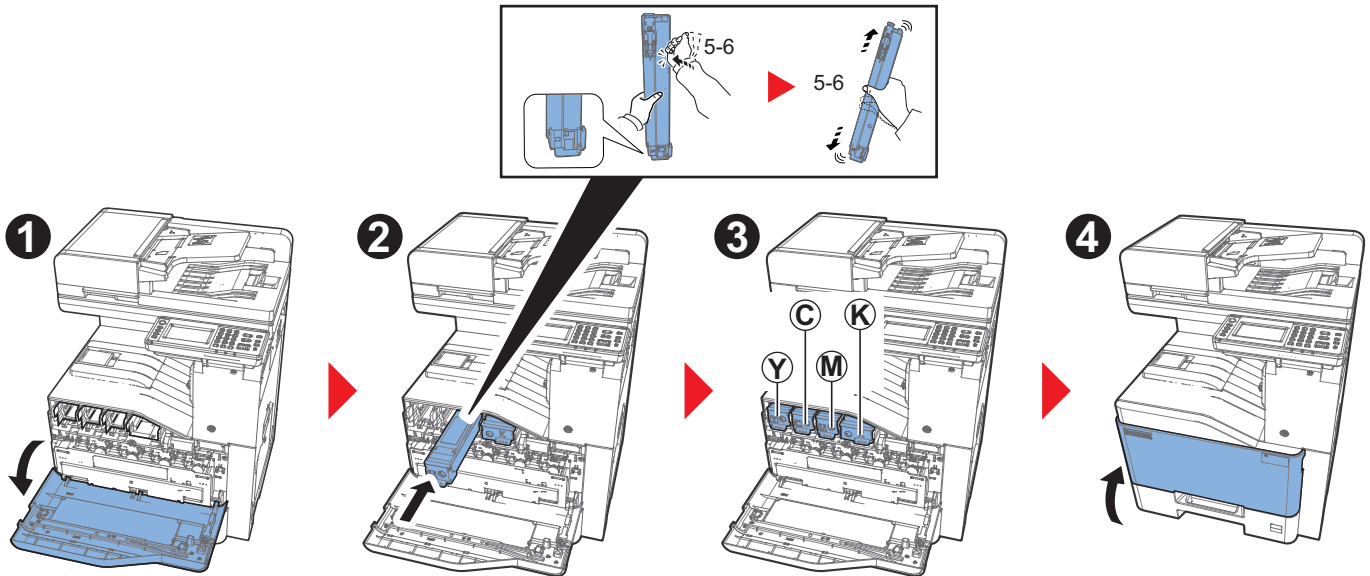
- 1 Slide the sub tray (a) and insert four protrusions (b) into four apertures (c) on the inner tray.
- 2 Check two projections (d) are locked at two apertures (e) of the inner tray.





## (4) Setting up the Toner Container

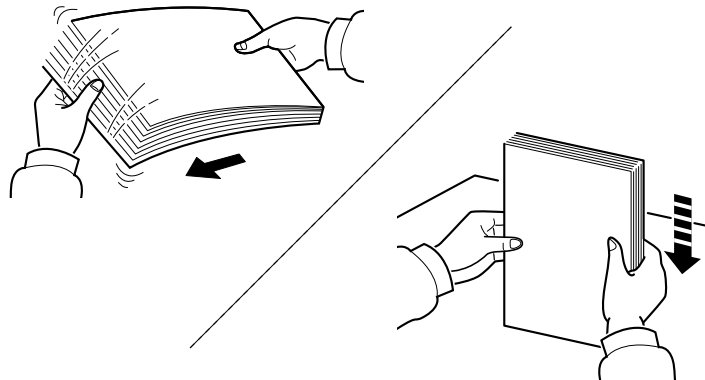
Set up 4 color toner containers of C, M, Y, and K. 0



## (5) Loading Paper

### (5-1) Precaution for Loading Paper

Before loading paper in the cassette, fan the paper taken from a new package to separate it in the procedures below.



Fan the paper and align the edges at the flat place.

In addition, note the following points.

- If the paper is curled or folded, straighten it before loading. Such paper may cause a jam.
- If paper is left under high temperature and high humidity after taking it out of the package, it may cause trouble with paper absorbing moisture. After setting paper in the cassette, seal the rest of the paper in the paper storage bag. Also, seal the paper remaining on the MP tray in the paper storage bag.
- If paper is left in the cassette for a long period, heat from the cassette heater may discolor it.
- 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 reuse paper already used for printing, remove staples or clips. Do not use paper with a staple or clip. This may cause poor image quality or malfunctions.

## (5-2) Set paper in the cassette

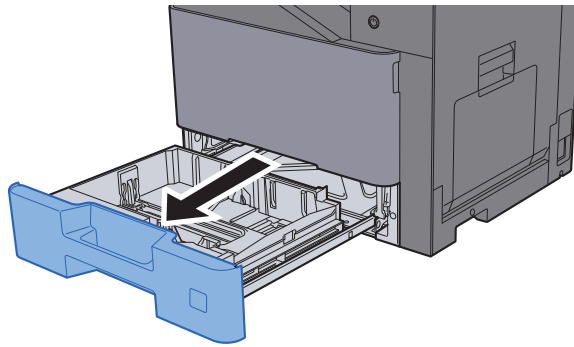
The cassettes can hold plain paper, recycled paper, color paper, etc.

The cassette can hold 550 sheets of plain paper (64g/m<sup>2</sup>) or 500 sheets of plain paper (80g/m<sup>2</sup>).

The cassette can hold paper with the weight of 60 to 220g/m<sup>2</sup>.

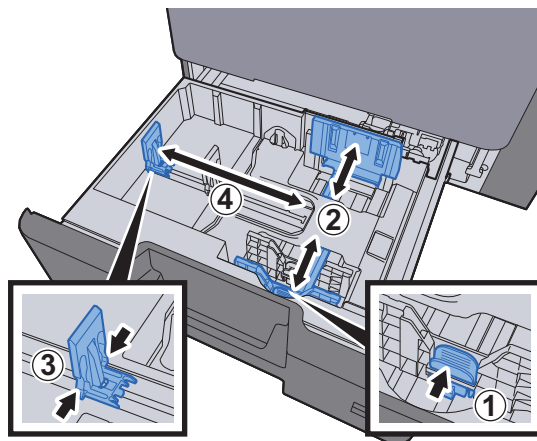
Do not hold paper heavier than 220g/m<sup>2</sup> in the cassette. Use the MP tray for a postcard of 230g/m<sup>2</sup> weight.

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



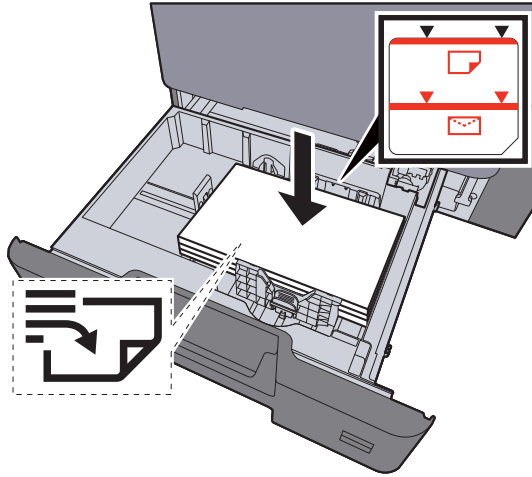
### 2 Adjust the position of the paper guides.

- 1 Adjust the paper width guides. Press the tab and slide the guides to the paper size to use.
- 2 Adjust the paper length guide. Press the tab and slide the guides to the paper size to use.



### 3 Load paper.

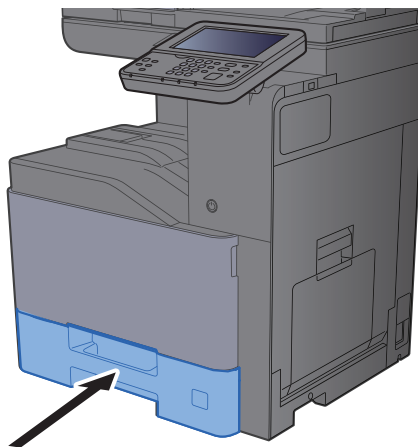
- 1 Fan the paper, then tap it on a level surface to align the edges.
- 2 Load the paper in the cassette after aligning its edges.



#### Note

- Load the paper with the print side facing up.
- Before loading paper in the cassette, fan the paper taken from a new package to separate it. (See page ,2-5)
- 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.



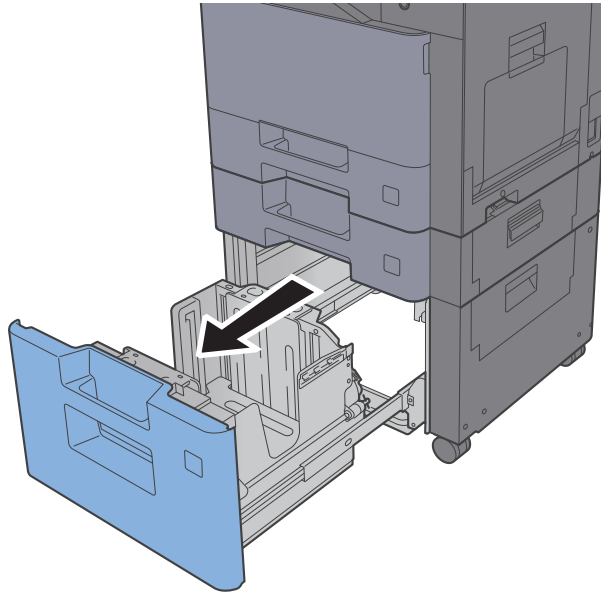
#### (5-3) Set paper in the high capacity feeder

The high capacity feeder can hold A4/Letter size plain paper, recycle paper or color paper.

The high capacity feeder can load 2,200 sheets of plain paper (64g/m<sup>2</sup>) or 2,000 sheets of plain paper (80g/m<sup>2</sup>).

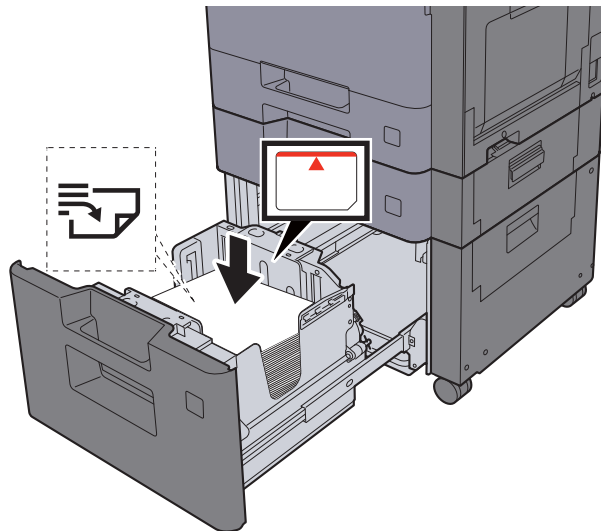
The cassette can hold paper with the weight of 60 to 220g/m<sup>2</sup>.

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



## 2 Load paper.

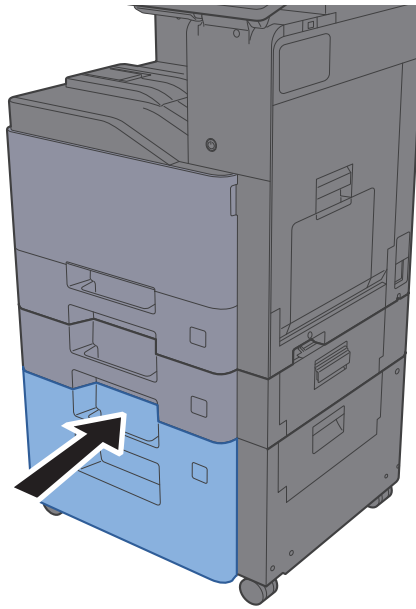
- 1 Fan the paper, then tap it on a level surface to align the edges.
- 2 Load the paper in the cassette after aligning its edges.



### Note

- Load the paper with the print side facing up.
- Before loading paper in the high capacity paper feeder, fan the paper taken from a new package to separate it. (See page ,2-5)
- 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.

### 3 Gently insert the high capacity feeder all the way.



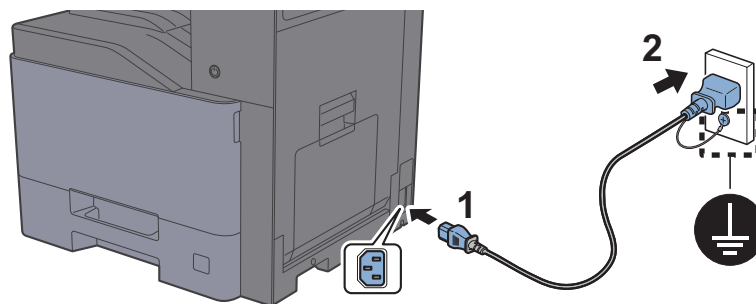
#### Caution

Do not pull out multiple cassettes at same time, when PF is installed.

## (6) Connecting the Power Cord

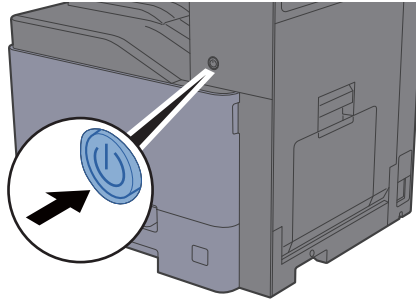
### 1 Connect one end of the supplied power cord to the main unit and the other end to a power outlet.

- Only use the power cord that comes with the main unit.
- 30ppm model due to its construction may indicate the operation display momentarily when connecting the power cord.



## (7) Turn the power on

### 1 Turn the power switch on.



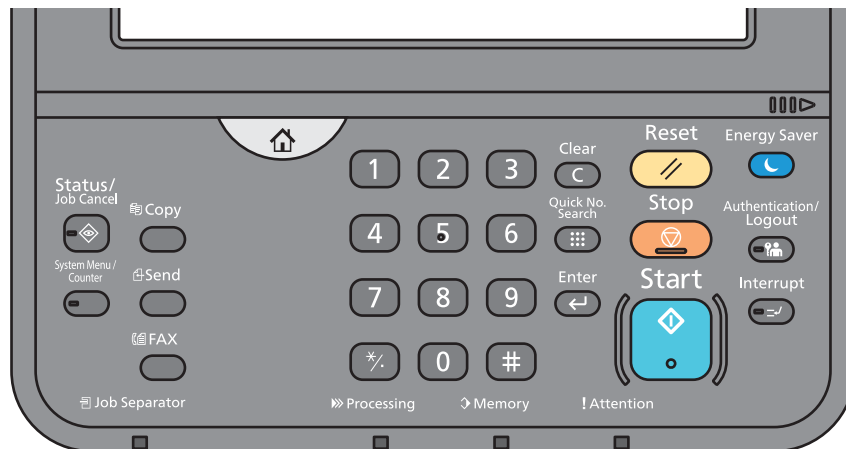
#### ✓ Important

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

Set up necessary items in the following procedures.

- The set-up wizard starts up at the first power-up.



### (8-1) Setting Date and Time

Follow the steps below to set the local date and time at the place of installation.

- Display the screen  
[System Menu/Counter] key or [System Menu] key > [Date/Timer/Energy Saver]
- Configure the settings  
Select [Time Zone] > [Date/Time] > [Date Format] in this order for settings.

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.

Item	Descriptions
Date/Time	Set the date and time for the location where you use the machine. 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 Western notation. 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 Select [System Menu/Counter] key or [System Menu] key > [System/Network] > [Network] > [TCP/IP Setting].
- 2 Select [IPv4] for setting.
- 3 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 address.

[Default Gateway]: Enter the address.

When setting Auto IP, set the IP address to 0.0.0.0.



#### Note

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

- Login User Name/Login Password: 3000 / 3000

## (8-3) Altitude Adjustment Setting

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

When the printing quality declines in the environment of an altitude higher than 1500m sea level, the setting of [Altitude Adjustment] mode can recover the printing quality.

## Maintenance mode U140

- 1 Input "140" using the numeric keys and press the [Start] key.
- 2 Select [Altitude Adjustment].
- 3 Select the altitude range of [1001 to 2000m], [2001 to 3000m] or [3001 to 3500m].
- 4 Press the [Start] key.
- 5 Press the [Stop] key.

### (8-4) Paper size and media type setting

- 1 Select [System Menu/Counter] key or [System Menu] key >[Cassette/MP tray Settings].
- 2 Select [Cassette Setting] > [Cassette 1 (- 4) ] or [MP Tray Setting].
- 3 Select [Paper Size] and [Media Type] to set them.

## (9) Installing Software

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) Maintenance mode workflow (Maintenance mode U952)

- 1 Input "10871087" using the numeric keys to enter the maintenance mode.
- 2 Input "952" using the numeric keys and press the [Start] key.
- 3 Select the place to save the data to execute.
- 4 Select the item to execute.
- 5 Press the [Start] key to execute the process.
- 6 Press the [Stop] key.
  - If not executing the U952, set it in the procedures below.

### (10-1) Setting the ID correction operation (Maintenance mode U464)

- 1 Input "464" using the numeric keys and press the [Start] key.
- 2 Select [Calib].
- 3 Select [Full].
- 4 Press the [Start] key.

Calibration starts.
- 5 Press the [Stop] key.



**(10-2) Color registration adjustment (Maintenance mode U469)**

- 1 Input "469" using the numeric keys and press the [Start] key.
- 2 Select [Auto]. Outputs the automatic adjustment chart.
- 3 Select [Execute].
- 4 Set the chart on the table and press the [Start] key.  
Execute the automatic adjustment. [OK] is indicated when adjustment is completed.
- 5 Press the [Stop] key.

**(10-3) Adjusting the halftone automatically (Maintenance mode U410)**

- 1 Input "410" with numeric keys.
- 2 Press the [Start] key.  
Display the execution information screen.  
Test chart 1, 2 and 3 are output on the A4/Letter paper.
- 3 Place the test chart 1 on to platen glass table with face down and arrow side far.  
Put approximately 20 sheets of white paper on to the chart.
- 4 Press the [Start] key.  
The 1st auto adjustment is executed.
- 5 Once [OK] comes up then continue with chart 2 and 3 repeating step 3 to 4.  
Test chart 4 is output on the A4/Letter paper.
- 6 Continue with chart 4 repeating step 3 to 4.
- 7 [Finish] appears after normal completion.  
An error code appears when an error occurs.
- 8 Press the [Stop] key.

**(10-4) Output an own-status report (Maintenance mode U000)**

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

**(10-5) Clearing the counts (maintenance mode U927)**

- 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.

### (10-6) Setting the delivery date (Maintenance mode U278)

- 1 Input "278" using the numeric keys and press the [Start] key.
- 2 Select [Today].
- 3 Press the [Start] key to set the delivery date.
- 4 Press the [Stop] key.

### (11) Checking LSU cleaning operation (Maintenance mode U474)

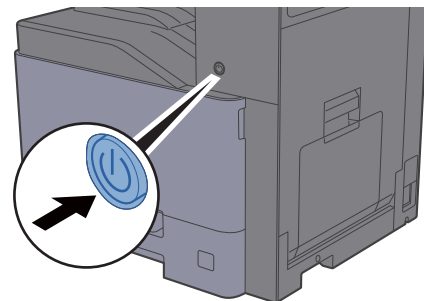
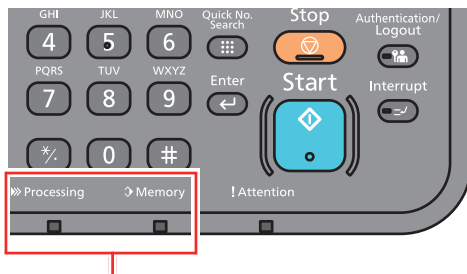
- 1 Input "474" using the numeric keys and press the [Start] key.
- 2 Select [Execute].
- 3 Press the [Start] key. Cleaning the LSU slit glass.
- 4 Press the [Stop] key.

### (12) Exiting from the maintenance mode

- 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 Make sure that each indicator is not flashing, and then turn the power switch off.



Check that the indicators are off.

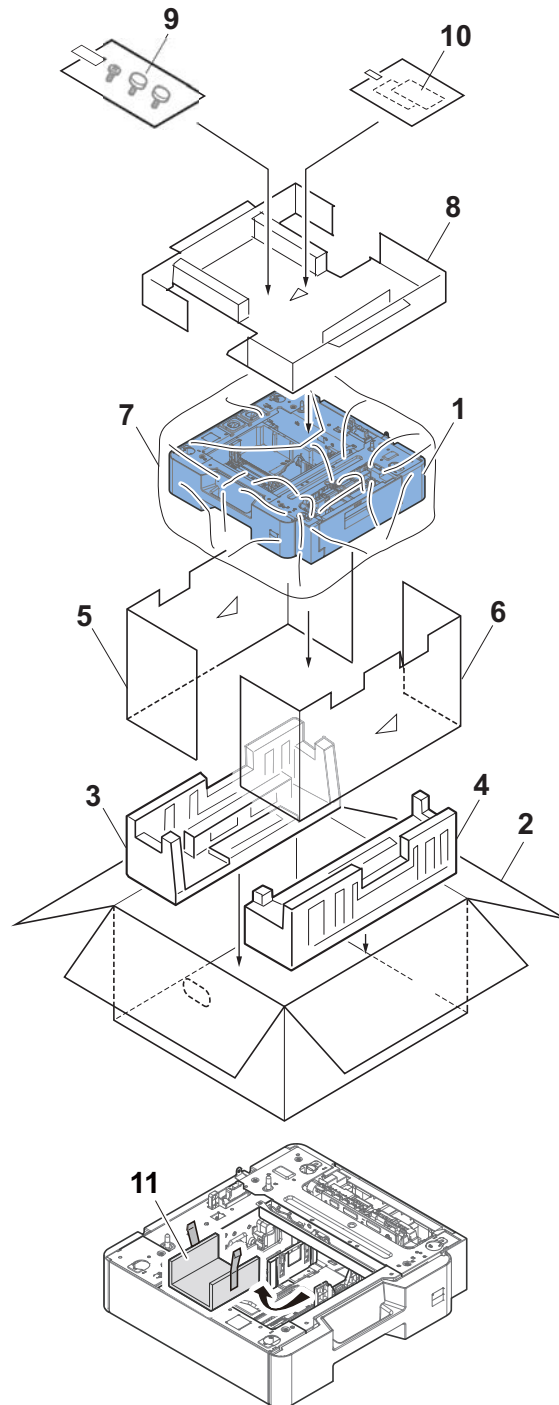
#### Important

When the "Processing" indicator or "Memory" indicator is lit up or blinking, the main unit is operating. Turning the power switch off while the main unit is operating may cause malfunctions.

## 2 - 3 Installing the optional devices

### (1) Unpacking and checking bundled items (option units)

#### (1-1) Paper Feeder (PF-5120)

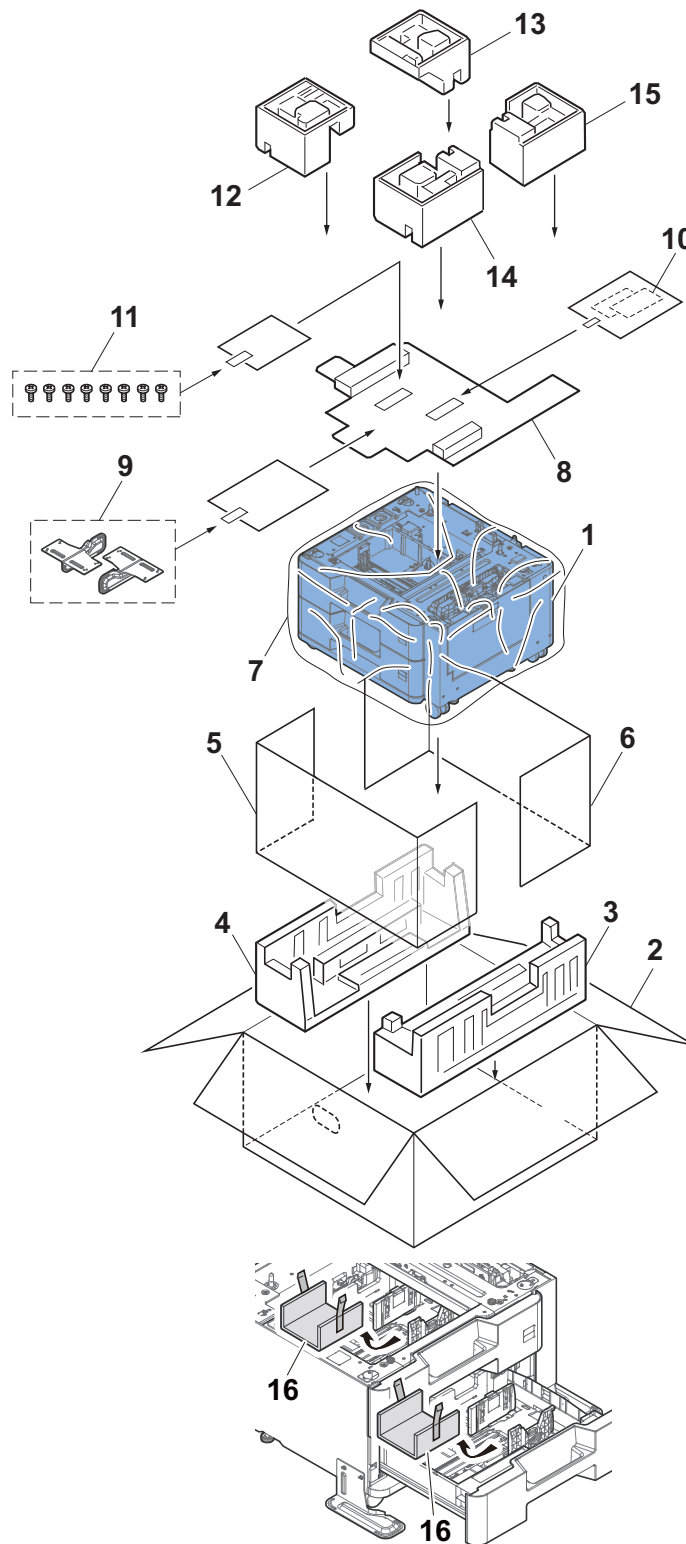


- 1 Main unit
- 2 Outer case
- 3 Left bottom pad
- 4 Right bottom pad

- 5 Left of the inner frame
- 6 Right of the inner frame
- 7 Main unit cover
- 8 Upper pad

- 9 Pin/Screw
- 10 Size label
- 11 Guide protection plate

**(1-2) Paper Feeder (PF-5130)**

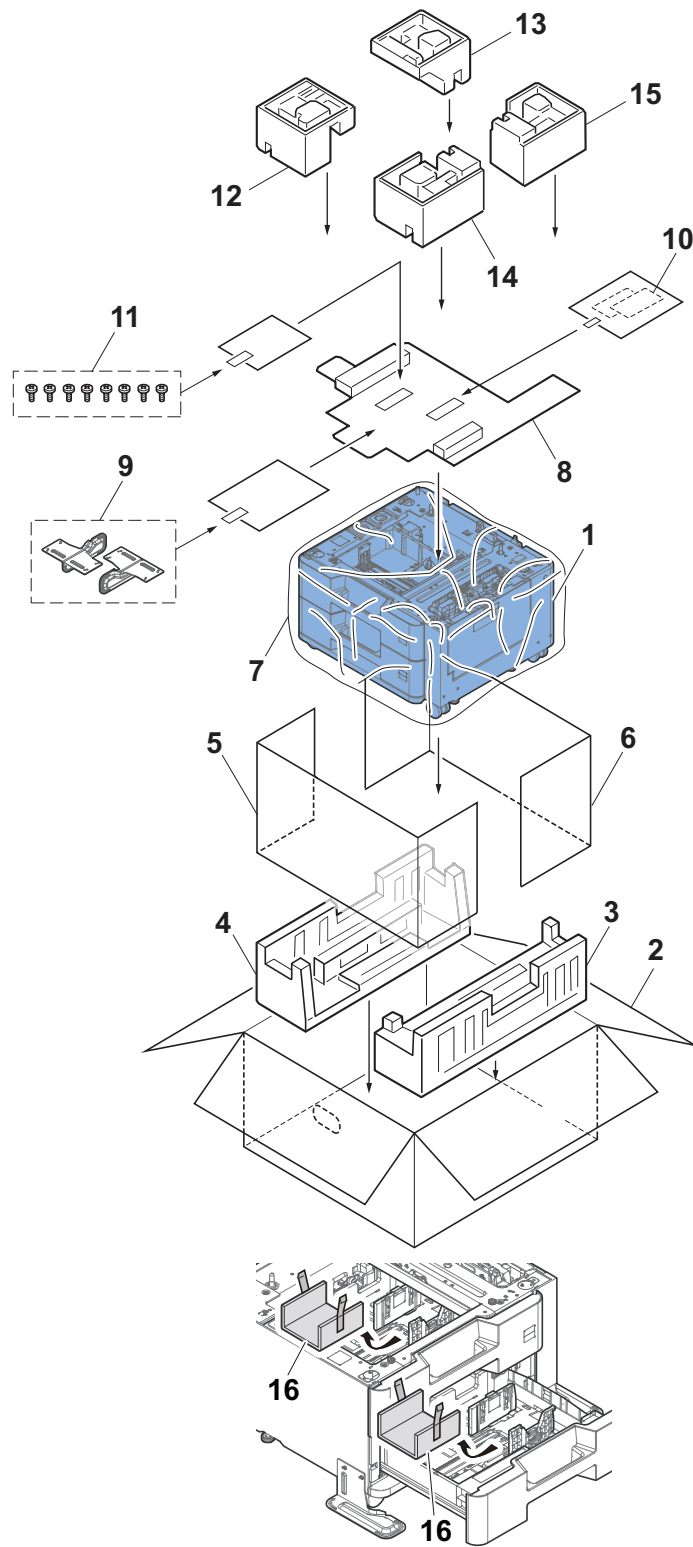


- 1 Main unit
- 2 Outer case
- 3 Left bottom pad
- 4 Right bottom pad
- 5 Front of the inner frame
- 6 Rear of the inner frame

- 7 Main unit cover
- 8 Upper pad
- 9 Reinforcement plate
- 10 Size label
- 11 Screw
- 12 Front left upper pad

- 13 Rear left upper pad
- 14 Front right upper pad
- 15 Rear right upper pad
- 16 Guide protection plate

**(1-3) Paper Feeder (PF-5140)**



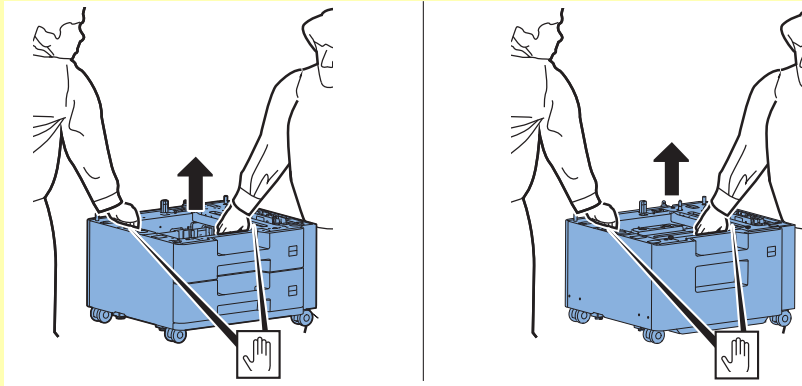
- 1 Main unit
- 2 Outer case
- 3 Left bottom pad
- 4 Right bottom pad
- 5 Front of the inner frame
- 6 Rear of the inner frame

- 7 Main unit cover
- 8 Upper pad
- 9 Reinforcement plate
- 10 Size label
- 11 Screw
- 12 Front left upper pad

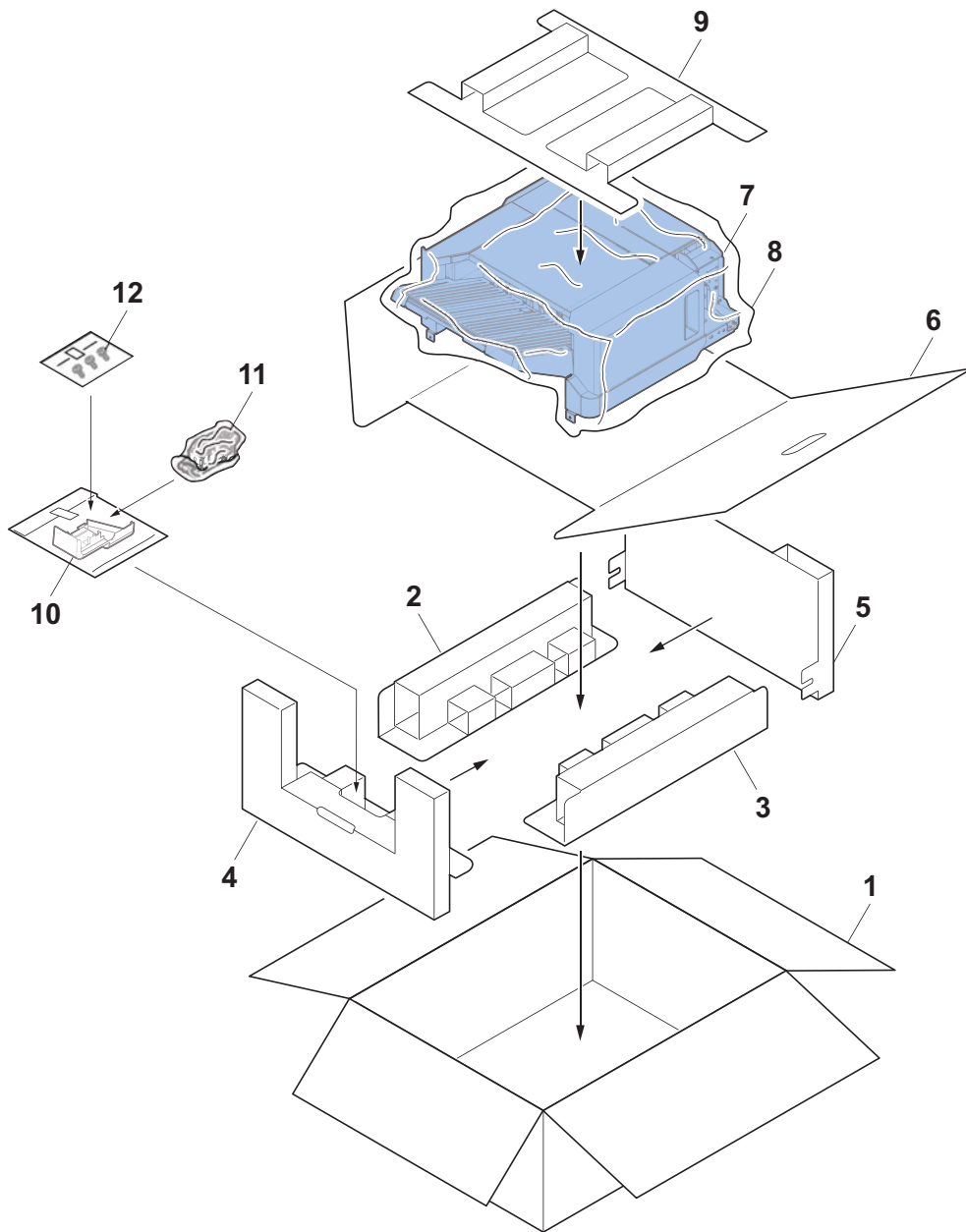
- 13 Rear left upper pad
- 14 Front right upper pad
- 15 Rear right upper pad
- 16 Guide protection plate
- 17 Cushion

**✔ Important**

Carry the paper feeder (PF-5130/5140) with two people by holding the parts as shown in the figure.

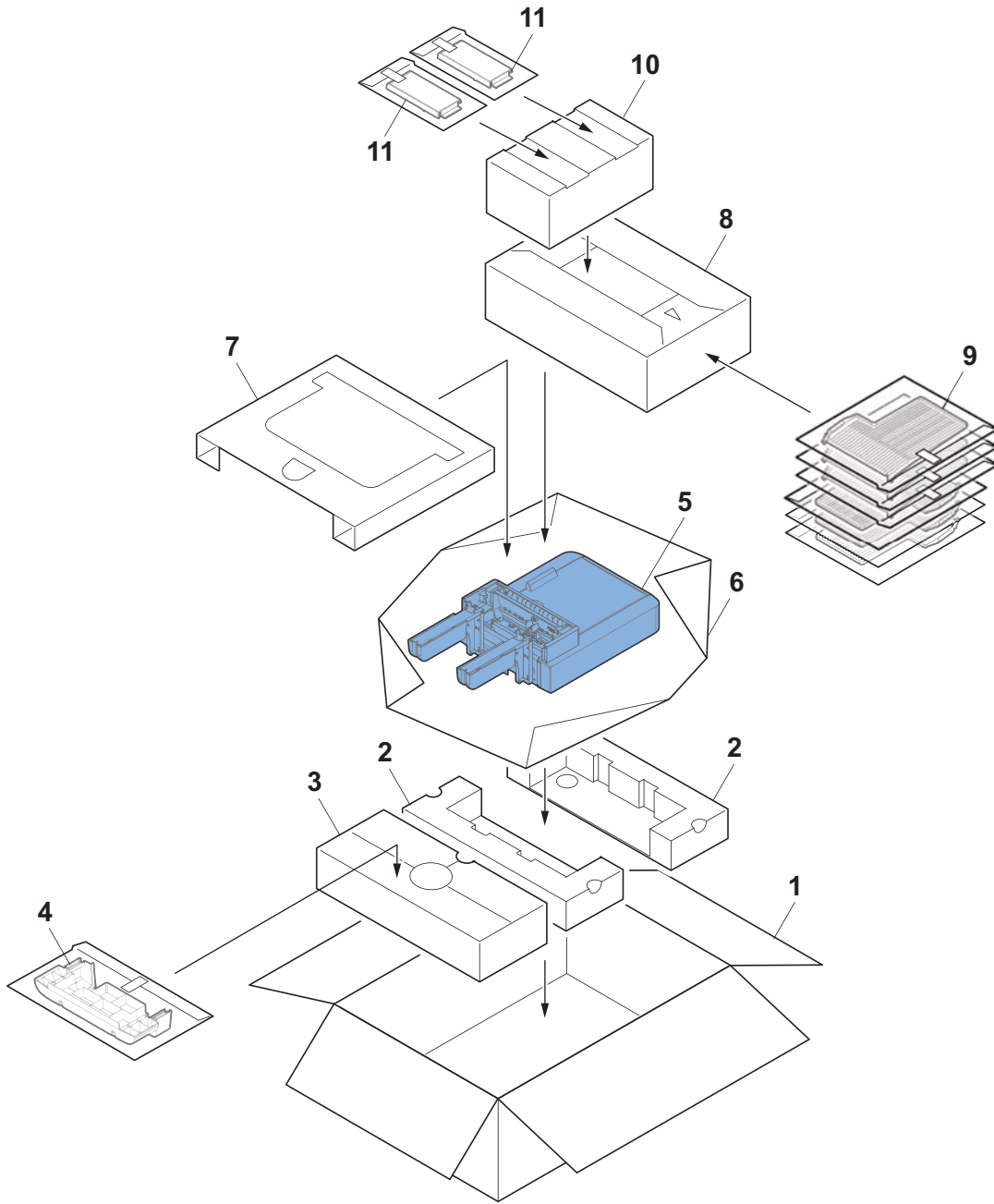


**(1-4) Inner Finisher (DF-5100)**



- |                    |                    |                      |
|--------------------|--------------------|----------------------|
| 1 Outer case       | 5 Right bottom pad | 9 Upper pad          |
| 2 Rear bottom pad  | 6 Main pad         | 10 Right front cover |
| 3 Front bottom pad | 7 Inner finisher   | 11 Cartridge         |
| 4 Left bottom pad  | 8 Main unit cover  | 12 Screw             |

**(1-5) Mailbox (MT-5100)**



- 1 Outer case
- 2 Right lower spacer
- 3 Left lower spacer
- 4 Lower cover

- 5 Mailbox
- 6 Poly sheet
- 7 Left upper spacer
- 8 Right upper spacer

- 9 Eject tray
- 10 Upper pad
- 11 Side cover



## (2) Optional unit installation

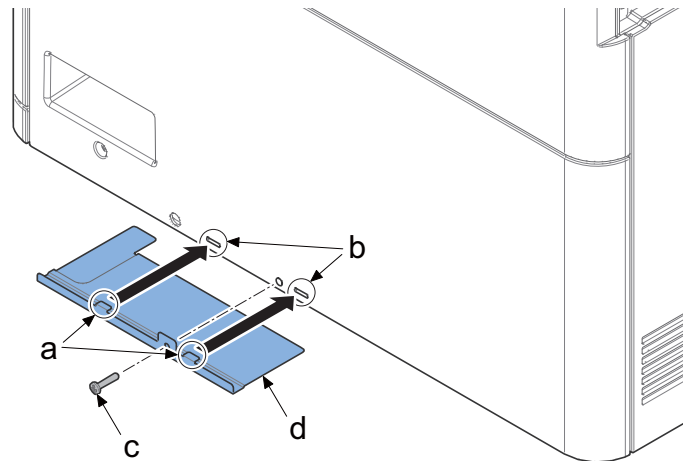
Install necessary optional units in the main unit by referring to the installation procedures.

	Product name	Refer to installation procedures
PF	PF-5120 "Paper Feeder (500-sheet, 1 cassette)"	PF-5120
	PF-5130 "Paper Feeder (500-sheet, 2 cassettes)"	PF-5130
	PF-5140 "Paper Feeder (20000-sheet)"	PF-5140
DF	DF-5100 "Inner Finisher"	DF-5100
MT	MT-5100 "Mailbox"	MT-5100
	AK-5100 "Bridge Unit"	AK-5100
JS	JS-5100 "Job Separator"	JS-5100
Fax kit	FAX System 11 "FAX Kit"	FAX System 11

### ✔ Important

When not in use of the optional paper feeder, attach the bundled shield plate as shown below.

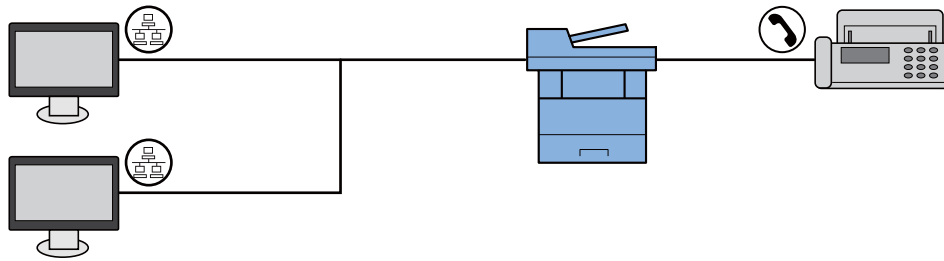
- 1 Fit two hooks (a) into two holes (b) on the rear lower cover.
- 2 Secure the shield plate (d) with the screw (c) (M4x20).



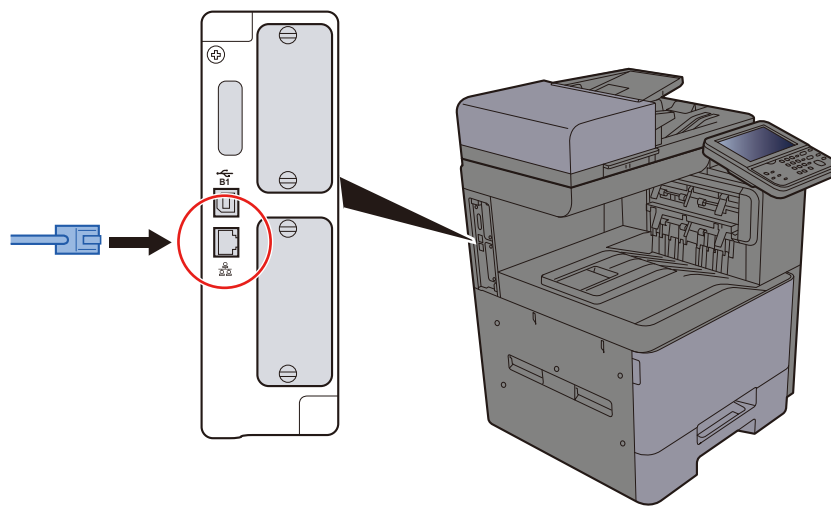
## (3) Connecting the Interface Cable

Connection environment	Functions	Necessary Cable
Connect a LAN cable to the main unit	Printer/Scanner/Network FAX	LAN cable (10Base-T, 100Base-TX or 100Base-T)
Connect a USB cable to the main unit	Printer/Scanner (TWAIN/WIA)	USB2.0 compatible cable (Hi-Speed USB compliant, Max. 5.0m long)

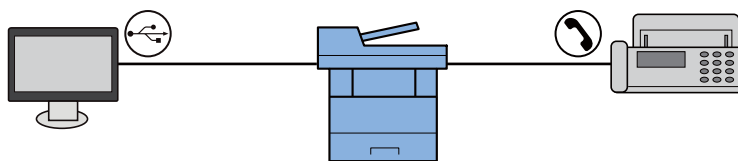
In the case of the LAN connection



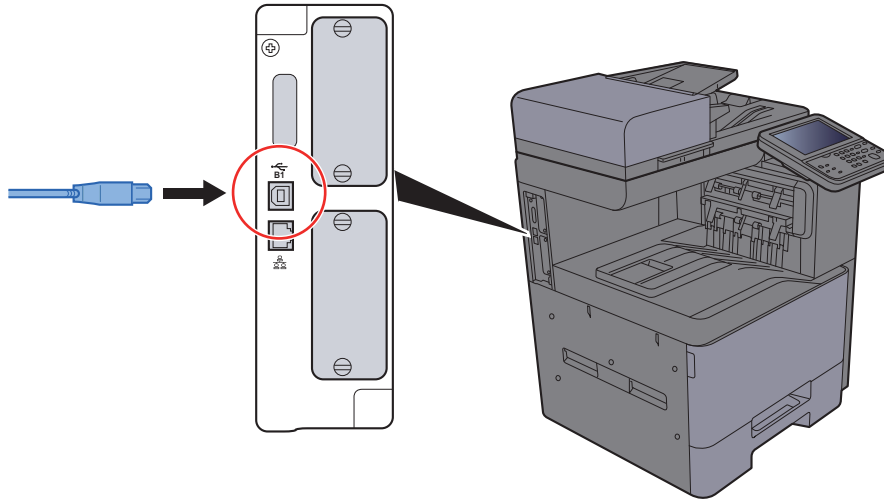
- 1 **Connect the LAN cable to the network interface connector.**
- 2 **Connect the other end of the cable to the hub.**



In the case of the USB connection



- 3 Remove interface connector seal and connect the **USB** cable to the **USB** interface connector located on the rear side of the main unit.
- 4 Connect the other end of the cable to the **PC**.



**(4) Connecting the FAX cable (FAX installation only)**

General FAX connection example

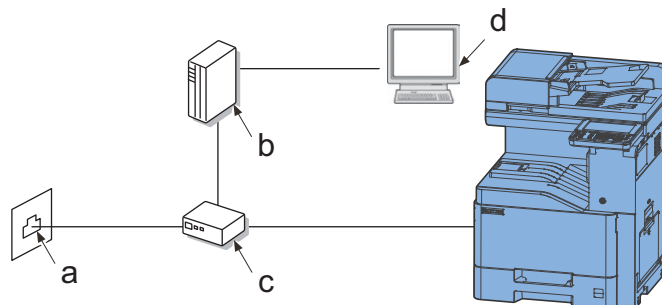
In the case of the general telephone line



a. Modular jack

**ADSL**

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

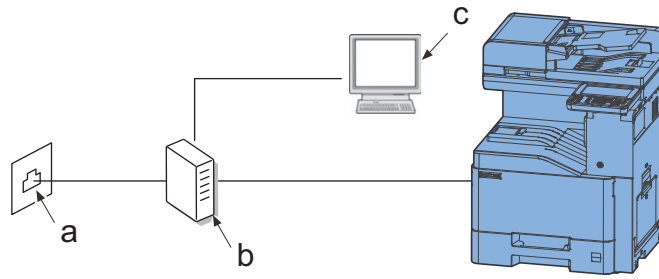


a. Modular jack  
b. ADSL modem

c. Splitter (PHONE port)  
d. PC

**ISDN**

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



a. Modular jack

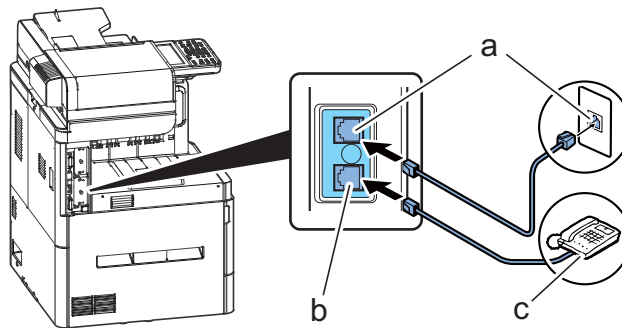
b. Terminal adapter (Analog port)

c. PC

## Modular cord connection

- 1 Connect a modular cord to the LINE connector of the main unit.

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

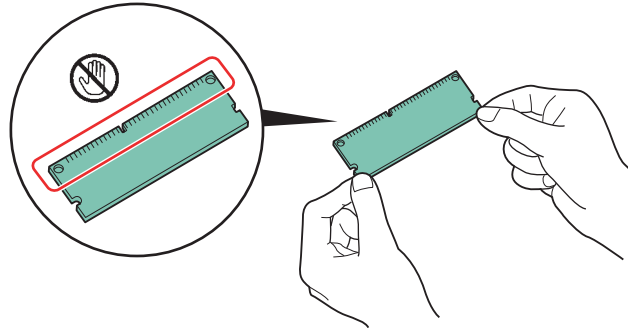


## 2 - 4 Installing the optional equipment

### (1) 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 (512 MB or 1024 MB).

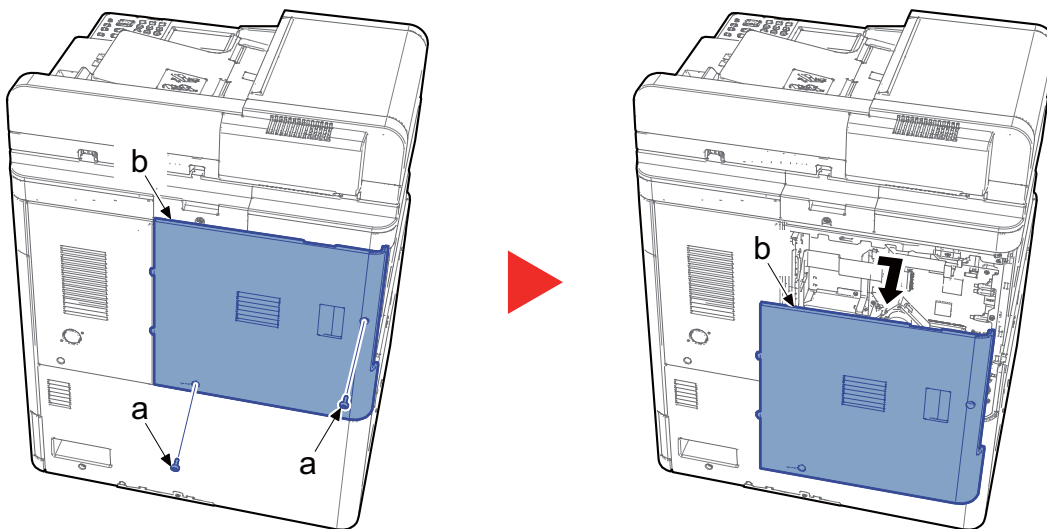
#### Precautions for Handling the Memory Modules



#### Important

Static electricity that accumulates in your body through clothing or carpets may damage memory. To protect a memory, discharge static electricity from your body by touching a water pipe (faucet) or other large metal object. Wear the anti-static wrist band on the wrist.

- 1 Turn off the main unit and disconnect the power cord and all interface cables.
- 2 Remove the two screws (a) (M3x8) and then remove the rear left cover (b).



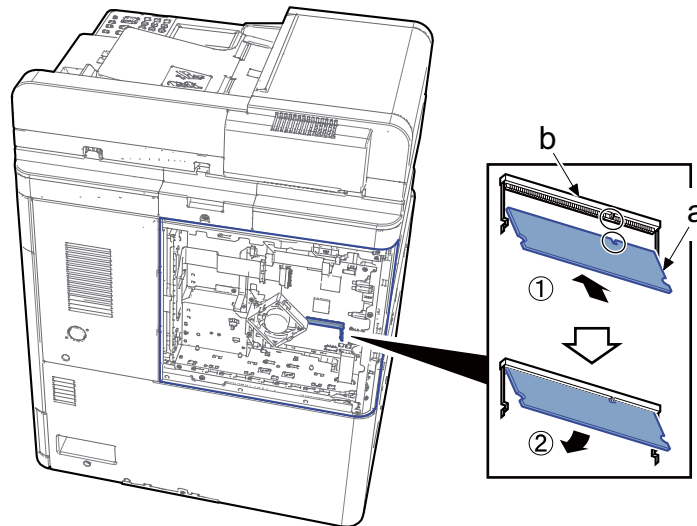
- 3 Remove the memory module (a) from it's package.

Attach the expansion memory

#### Important

Before inserting the memory module (a), make sure that the power switch is turned off.

- 1 With the memory (a) connection terminal pointing toward the socket (b), align the cut-out part with the socket terminal and insert it straight in on an angle.
- 2 Carefully press the inserted memory module toward the main unit.
- 3 Reattach the covers.

**Note****Removing the Memory Module**

To remove the memory module, remove the rear left 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.

**Verifying the Memory Module**

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

## (2) SD/SDHC Memory Card

### Reading the SD/SDHC memory Card

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

#### SD/SDHC memory card installation

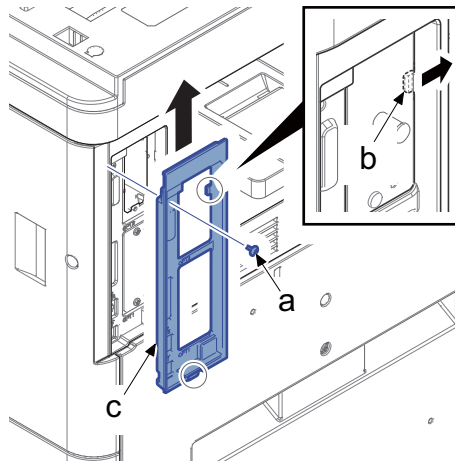
### 1 Turn off the main unit and disconnect the power cord and all interface cables.

#### ✔ Important

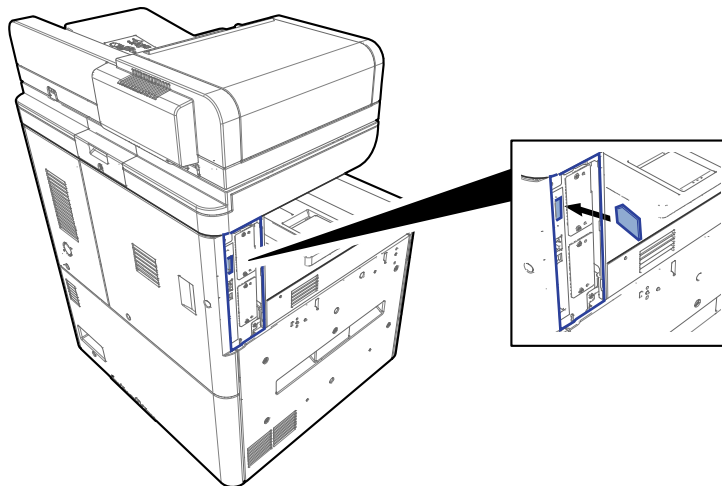
Before inserting the memory card, make sure that the power switch is turned off.

### 2 Remove the screw (a) (M3x8).

### 3 Release the hook (b) in the direction of the arrow and then remove the controller cover (c).




### 4 Install an SD/SDHC memory card (a) in the memory card slot (b).



### 5 Reattach the covers.

### Formatting an SD/SDHC Memory Card

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

 **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.

All models common

Format it with a PC or Prescribe command in advance.

 **Note**

30 ppm model can format it from [System Menu].

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

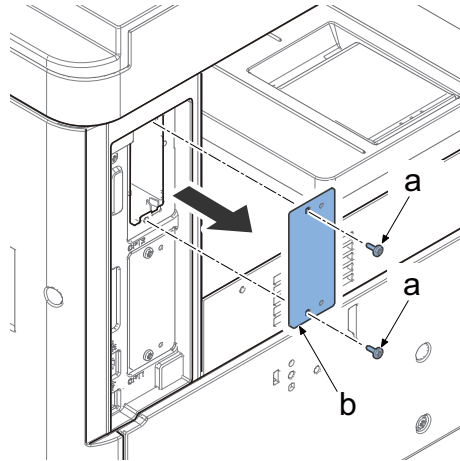
- Login User Name/Login Password (30ppm model): 3000 / 3000

- 1 **[System Menu/Counter] key > [Common Settings] > [Format SD Card]**
- 2 **Format the SD/SDHC memory card.**

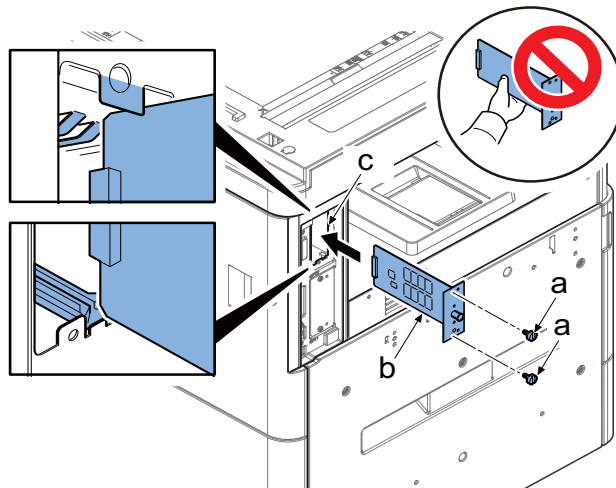


**(3) SSD (HD-6/HD-7)****(4) Gigabit Ethernet extension kit (IB-50)****(5) Wireless LAN interface (IB-51)**

- 1** Turn off the main unit and disconnect the power cord and all interface cables.
- 2** Remove two screws (a) (M3x8) and then remove the option slot cover (b).



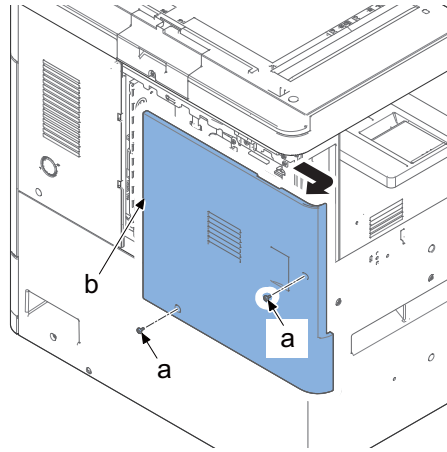
- 3** Insert the PWB unit (b) straight into the option slot (c).
- 4** Secure the PWB unit (b) with two screws (a) (M3x8) once removed.

**Note**

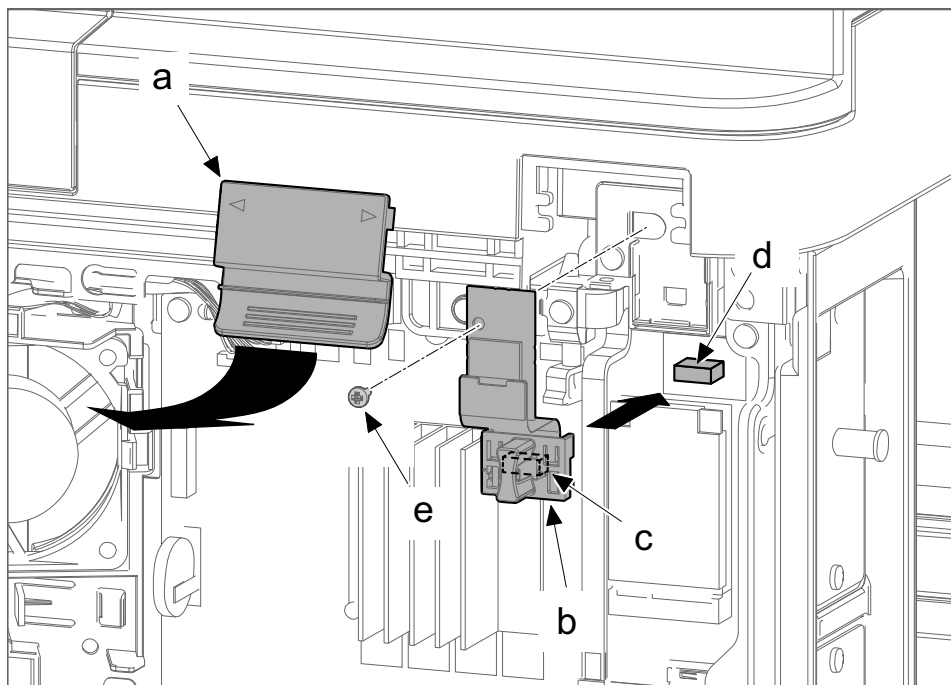
When installing a new SSD, it is automatically formatted at the first start-up.

**(6) Wireless LAN interface (IB-35) (Standard for 120V model)**

- 1** Turn the power off and, unplug the power cord and disconnect all the cables connected to the main unit.
- 2** Remove two screws (a) (M3x8) and slide the rear left cover (b) in the direction of the arrow to detach it.



- 3** Detach the rear upper cover (a).
- 4** Connect the connector (c) of the PWB unit (b) in the main PWB connector (d).
- 5** Fix the PWB unit (b) by the screw (e) (M3x8).



- 6** Reattach all the parts in the reverse procedures.

## Formatting an SSD

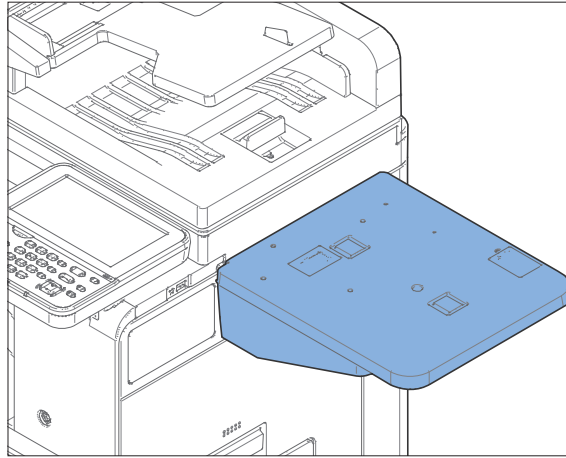
- 1 [System Menu/Counter] key > [Common Settings] > [Format SSD]
- 2 Format an optional SSD.

**Note**

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.

This setting does not appear if the optional security kit is installed.

**(7) Document table DT-5100**

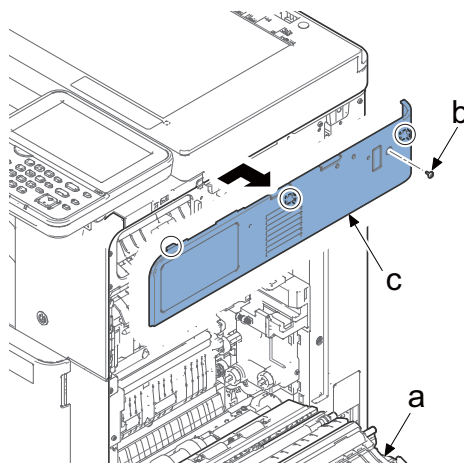
Document table installation requires the following parts:

Bundled parts of Document table DT-5100  
(1902R60UN1)

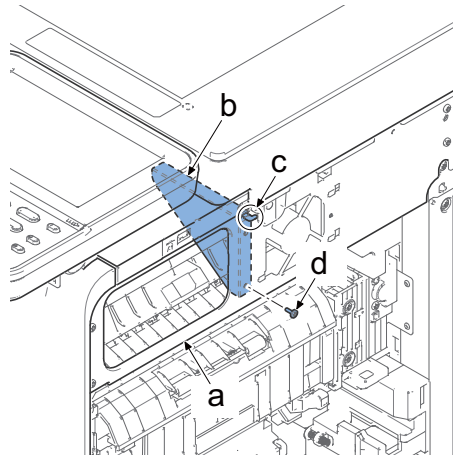
- |   |      |
|---|------|
| • Original tray                             | 1 pc |
| • Tray lower cover                          | 1 pc |
| • Tray mounting plate                       | 1 pc |
| • Reinforcement plate                       | 1 pc |
| • Hook-and-loop fastener *1                 | 2 pc |
| • Label                                     | 2 pc |
| • Edgings *1                                | 1 pc |
| • Wire saddles *1                           | 2 pc |
| • Screw (M3x8 screw with the binding head)  | 3 pc |
| • Screw (M3x20 screw with the binding head) | 2 pc |

\*1: Not used in this model.

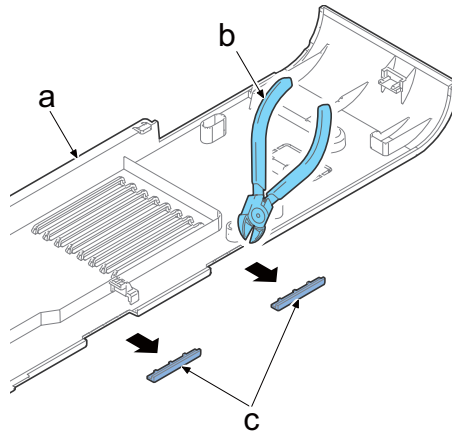
- 1 Remove the right cover (a).**
- 2 Remove the screw (b) (M3x8).**
- 3 Slide the right upper cover (c) in the direction of the arrow and detach it.**



- 4 Hang the hook (c) of the reinforcement plate (b) at the backside of the right upper stay (a) and secure it with the screw (d) (M3x8).

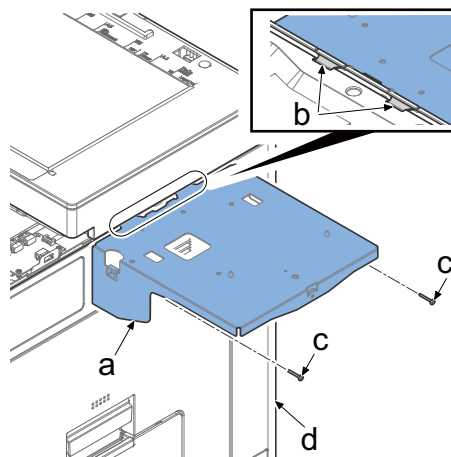


- 5 Cut out two cut-out pieces (c) from the right upper cover (a) with pliers (b).

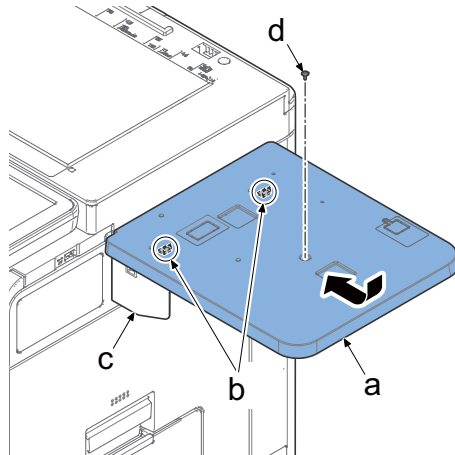


- 6 Reattach the right upper cover to the original position in the main unit.

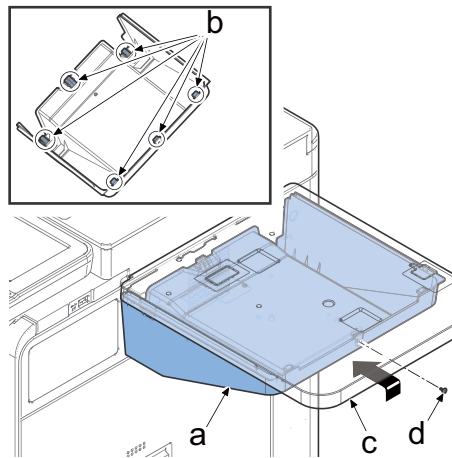
- 7 Hang two hooks (b) of the tray fixing plate (a) and secure it to the main unit (d) with two screws (c) (M3x20).



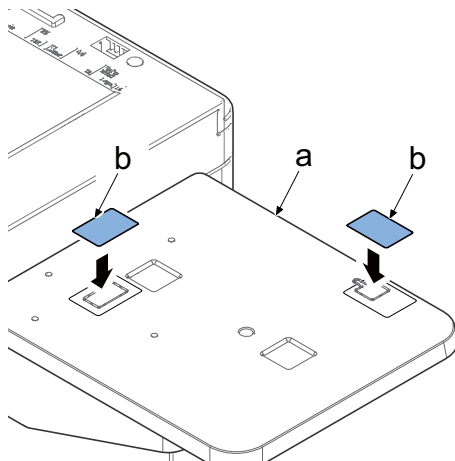
- 8 Hang two hooks (b) of the document tray (a) on the tray mounting plate (c) and secure it with the screw (d) (M3x8).

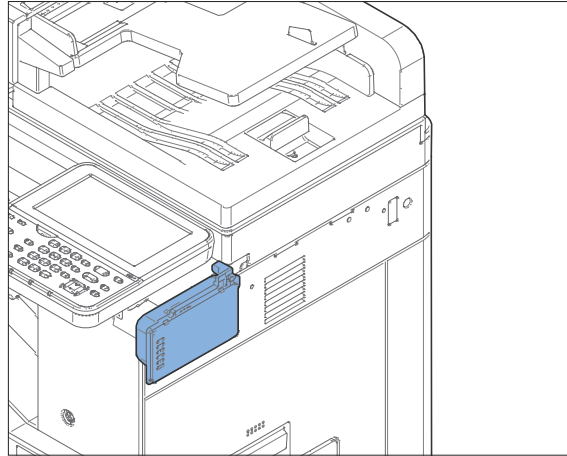


- 9 Hang six hooks of the tray lower cover (a) on the document tray (c) and secure it with the screw (d) (M3x8).



- 10 Affix the concealing labels (b) to two concaves of the document tray (a).



**(8) ID card reader**

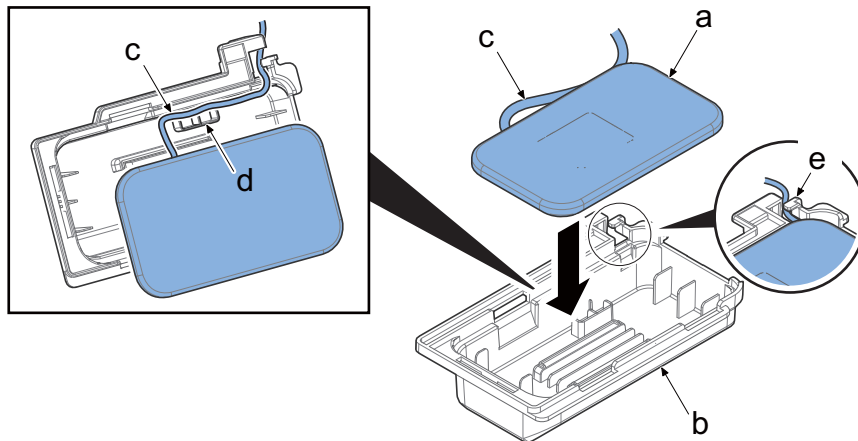
ID card reader installation requires the following parts:

- ID card reader holder (1702R60UN1) 1 pc

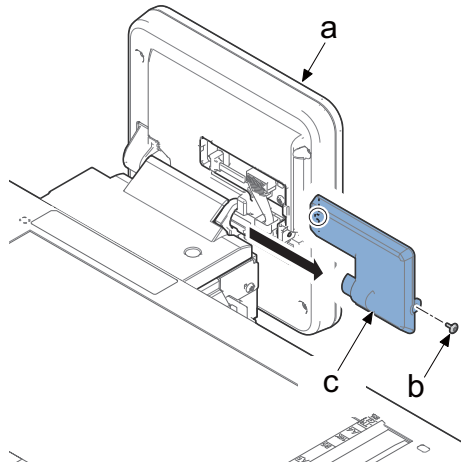
Supplied parts of ID card reader holder (1702R60UN1)

- ID card reader holder 1 pc
- ID card cover 1 pc
- Sponge 1 pc

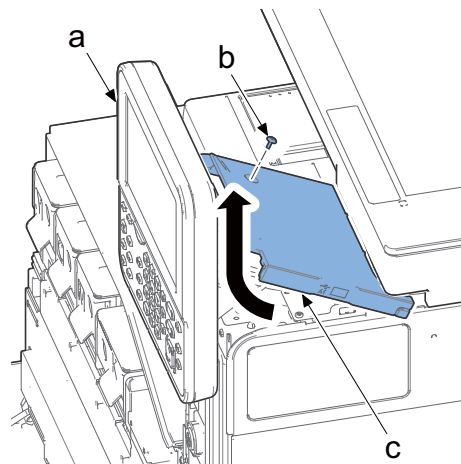
- 1 Turn the power switch off and disconnect the power plug.**
- 2 Attach the ID card reader (a) to the ID card reader holder (b) while aligning the USB cable (d) aligning the rib (d).**
- 3 Hung the USB cable (c) on the hook (e).**



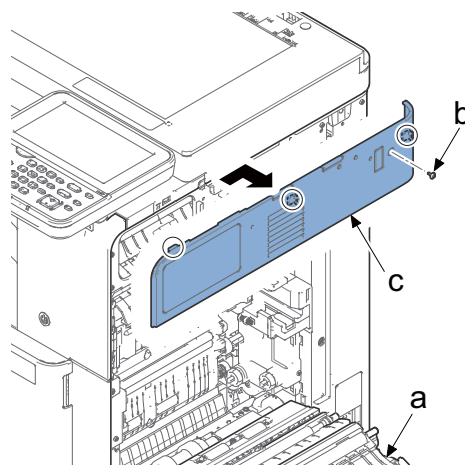
- 4 Pull up the operation unit (a).
- 5 Remove the screw (b) (M3x8).
- 6 Remove the operation lid (c) from the operation unit (a) in the direction of the arrow.



- 7 Remove one screw (b) (M3x8) and then remove the upper exit cover (c).

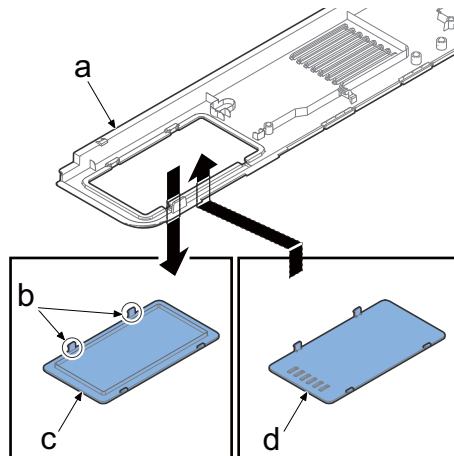


- 8 Remove the right cover (a).
- 9 Remove the screw (b) (M3x8).
- 10 Slide the right upper cover (c) in the direction of the arrow and detach it.

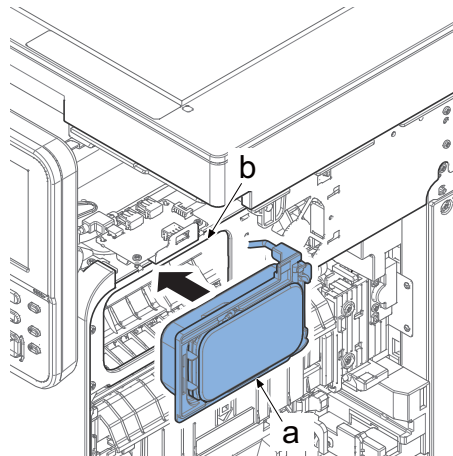




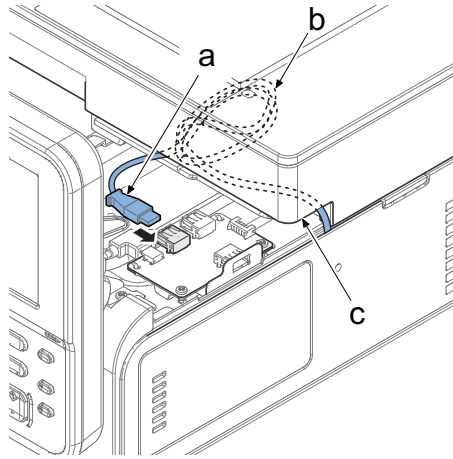
- 11 Release two hooks (b) and remove the auxiliary cover (c) from the right upper cover (a).
- 12 Attach the ID card cover (d) to the right upper cover (a).



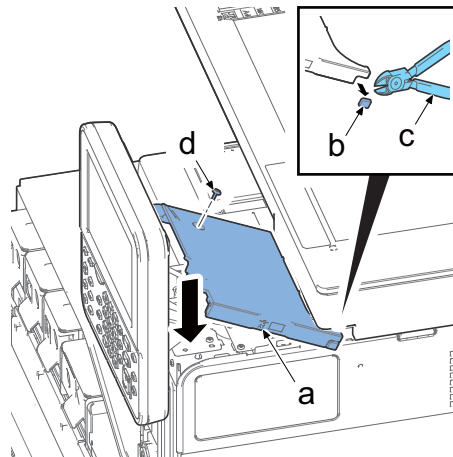
- 13 Insert the ID card reader holder (a) into the right upper stay (b) and attach it.



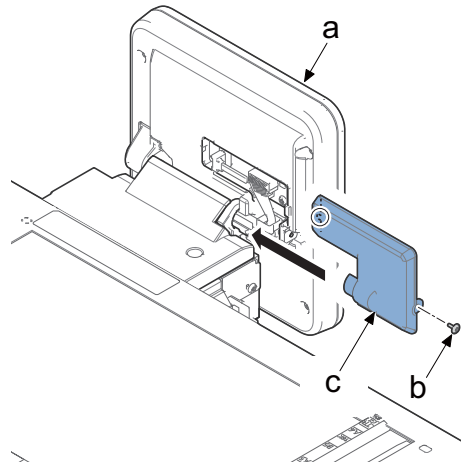
- 14 Reattach the right upper cover to the original position.
- 15 Close the right cover.
- 16 Connect the USB connector (a).
- 17 Wind the excess portion of the USB cable (b) and push it under the image scanner unit (c).



- 18 Cut out the cutout piece (b) on the upper eject cover (a) with pliers (c).
- 19 Reattach the upper eject cover (a) with the screw (d) (M3x8).



## 20 Reattach the operation lid (c) to the operation unit (a) with the screw (b) (M3x8).

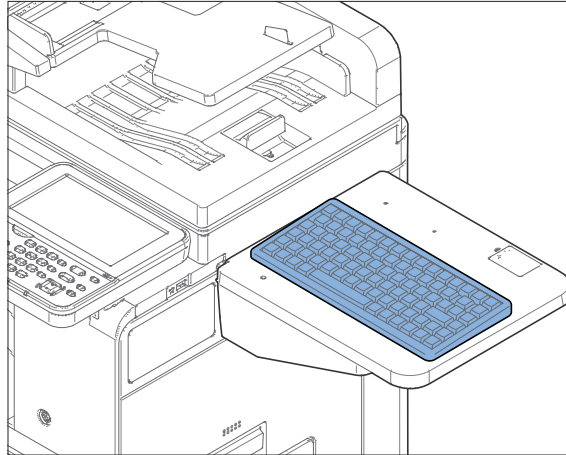


### Activating Card Authentication

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.

Refer to [2-4 Optional Application] when starting the trial. (See page 2-57)

## (9) USB Keyboard



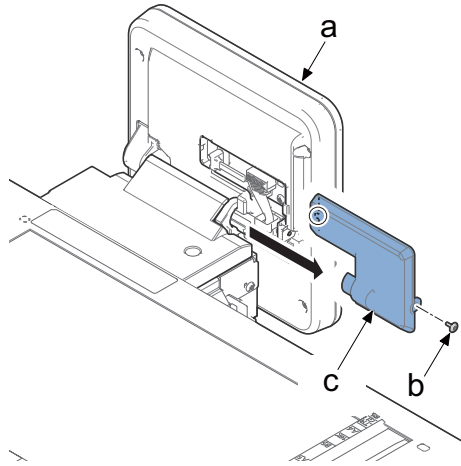
USB keyboard installation requires the following parts:

- Document table DT-5100 (1902R60UN1) 1 pc
- USB Keyboard 1 pc

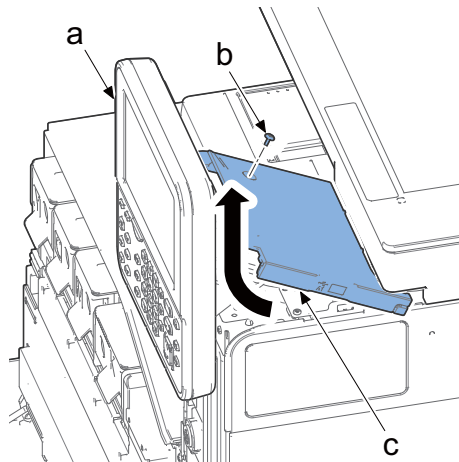
Bundled parts of Document table DT-5100  
(1902R60UN1)

- Original tray 1 pc
- Tray lower cover 1 pc
- Tray mounting plate 1 pc
- Reinforcement plate 1 pc
- Hook-and-loop fastener 2 pc
- Label 2 pc
- Edgings 1 pc
- Wire saddles 2 pc
- Screw (M3x8 screw with the binding head) 3 pc
- Screw (M3x20 screw with the binding head) 2 pc

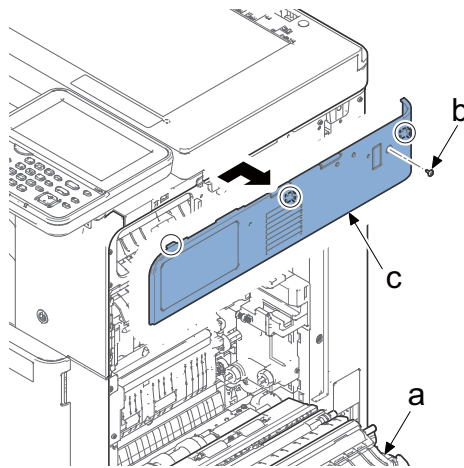
- 1 Turn the power switch off and disconnect the power plug.
- 2 Pull up the operation unit (a).
- 3 Remove the screw (b) (M3x8).
- 4 Remove the operation lid (c) from the operation unit (a) in the direction of the arrow.



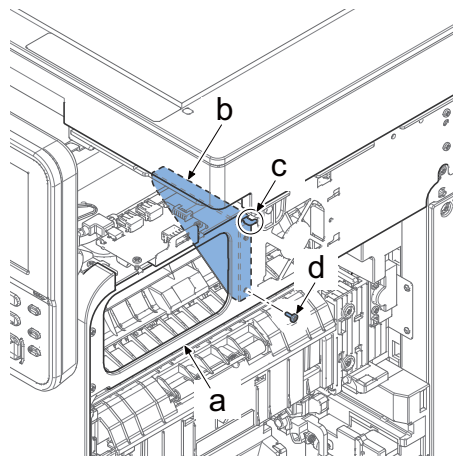
- 5 Remove one screw (b) (M3x8) and then remove the upper exit cover (c).



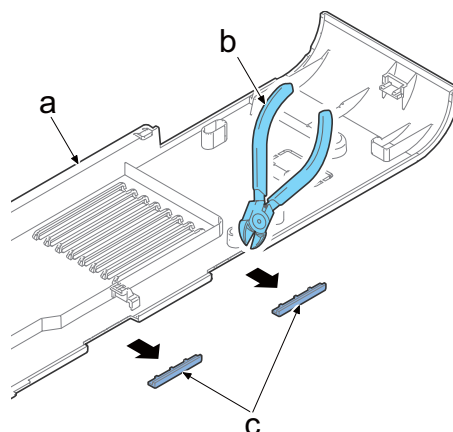
- 6 Remove the right cover (a).
- 7 Remove the screw (b) (M3x8).
- 8 Slide the right upper cover (c) in the direction of the arrow and detach it.



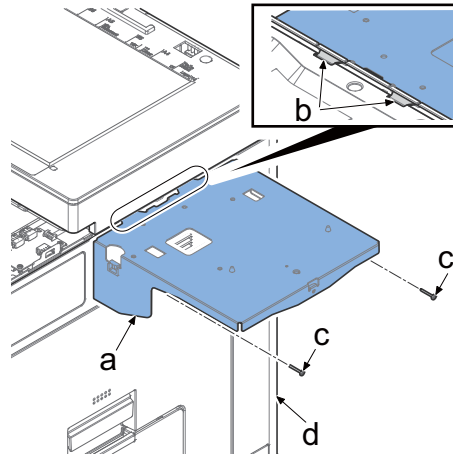
- 9 Hang the hook (c) of the reinforcement plate (b) at the backside of the right upper stay (a) and secure it with the screw (d) (M3x8).



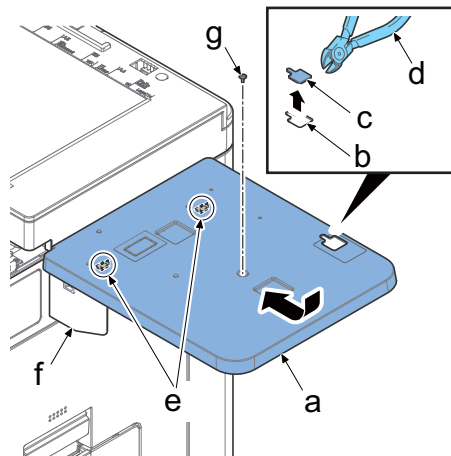
- 10 Cut out two cut-out pieces (c) from the right upper cover (a) with pliers (b).



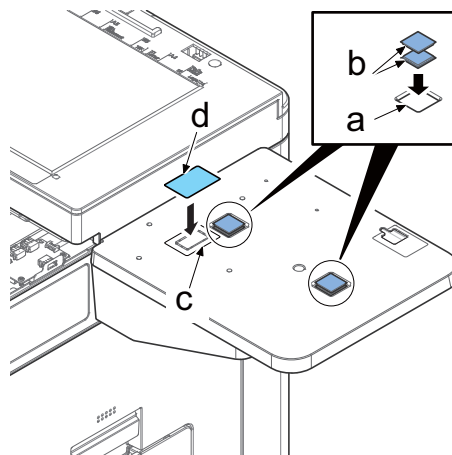
- 11 Reattach the right cover to the original position in the main unit.
- 12 Hang two hooks (b) of the tray fixing plate (a) and secure it to the main unit (d) with two screws (c) (M3x20).



- 13 Cut off the cut-off piece (c) for the aperture (b) of the document tray (a) with pliers (d).
- 14 Hang two hooks (e) of the document tray (a) on the tray mounting plate (f) and secure it with the screw (g) (M3x8).

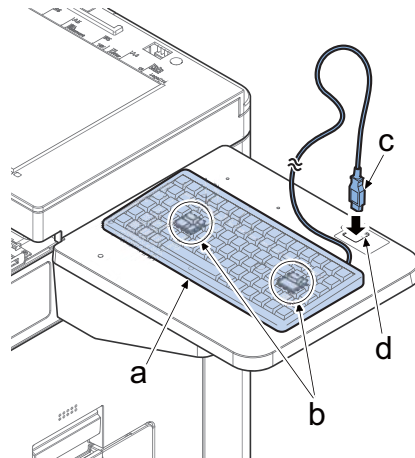


- 15 Affix a pair of hook-and-loop fasteners (b) to two concaves (a) of the document tray.
- 16 Affix the concealing label (d) over the apertures (c) of the document tray.



**17** Place the keyboard (a) on the hook-and-loop fastener (b) and press it to fix.

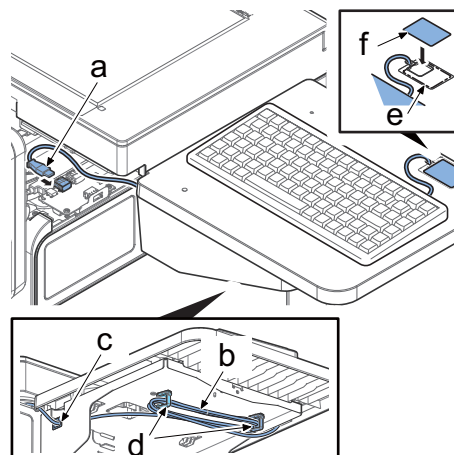
**18** Pass the USB connector (c) through the aperture (d) of the document tray.



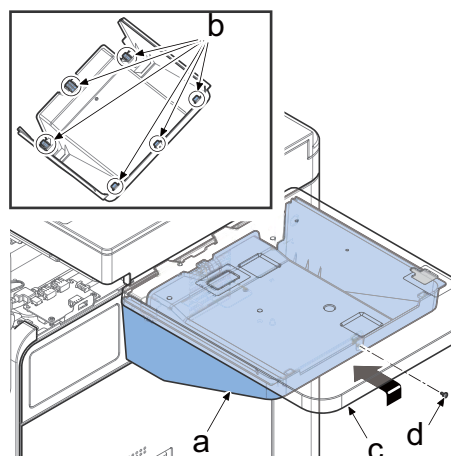
**19** Connect the USB connector (a) to the main unit.

**20** Align the USB cable (b) through the edging (c) and wind the excess cable to two wire saddles (d).

**21** Affix the concealing label (e) over the apertures (f) of the document tray.



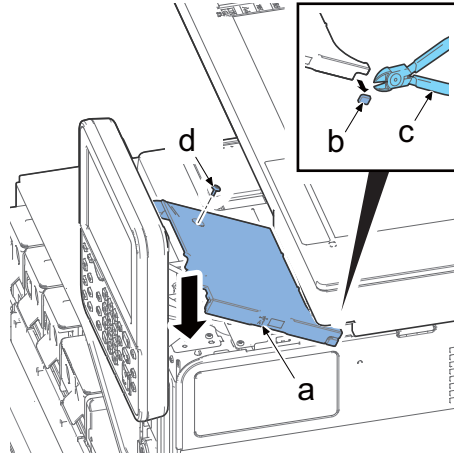
**22** Hang six hooks of the tray lower cover (a) on the document tray (c) and secure it with the screw (d) (M3x8).



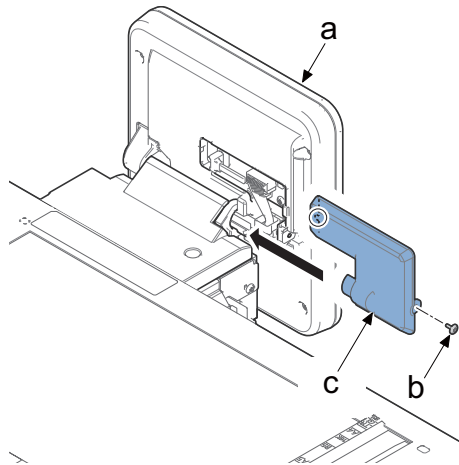


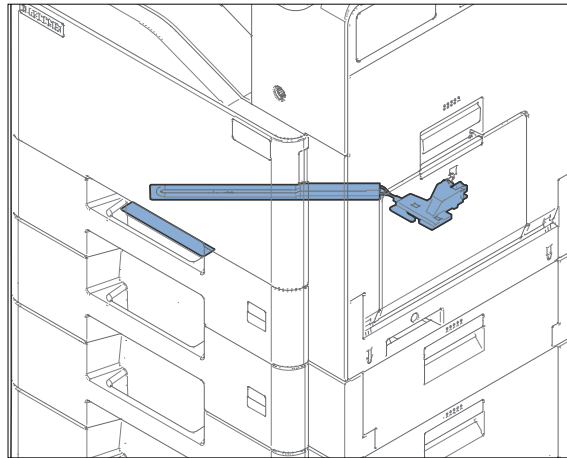
**23** Cut out the cutout piece (b) on the upper eject cover (a) with pliers (c).

**24** Reattach the upper eject cover (a) with the screw (d) (M3x8).



**25** Reattach the operation lid (c) to the operation unit (a) with the screw (b) (M3x8).



**(10) Cassette heater****(10-1) In case of the main unit cassette**

Cassette heater installation requires the following parts:

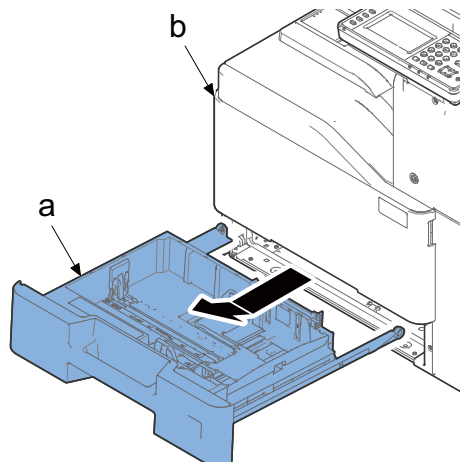
- Cassette heater 120 set (302R49402\_) 1 pc
- Cassette heater 240 set (302R49403\_) 1 pc

Bundled parts of cassette heater 120/240

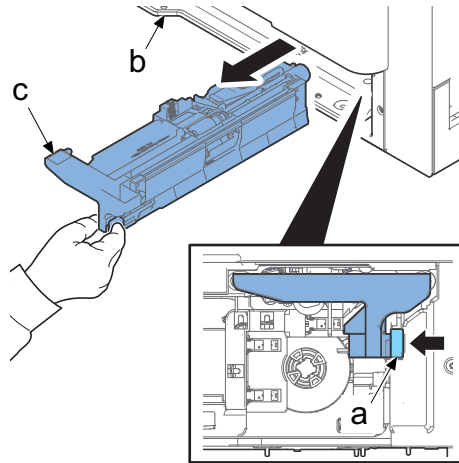
- Cassette heater 120 1 pc
- Cassette heater 240 1 pc
- High temperature caution label 1 pc
- Heater connector cover 1 pc
- Wire saddles 1 pc
- Screw (M3x4 screw with the binding head) 2 pc

**1** Turn the power switch off and disconnect the power plug.

**2** Pull out the cassette (a) from the main unit (b) and remove it in the direction of the arrow.



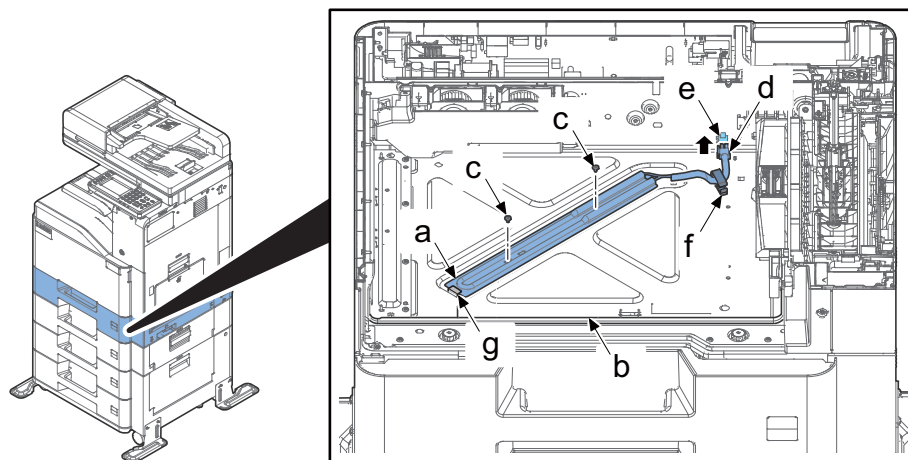
- 3** Press the lock lever (a) and pull out the primary feed unit (c) from the main unit (b).



- 4** Secure the cassette heater (a) to the base (b) with two screws (c) (M3x4).

- 5** Connect the heater connector (d) to the main machine side connector (e).

- 6** Attach the wire saddle (f) to the base (b) and secure the wire.

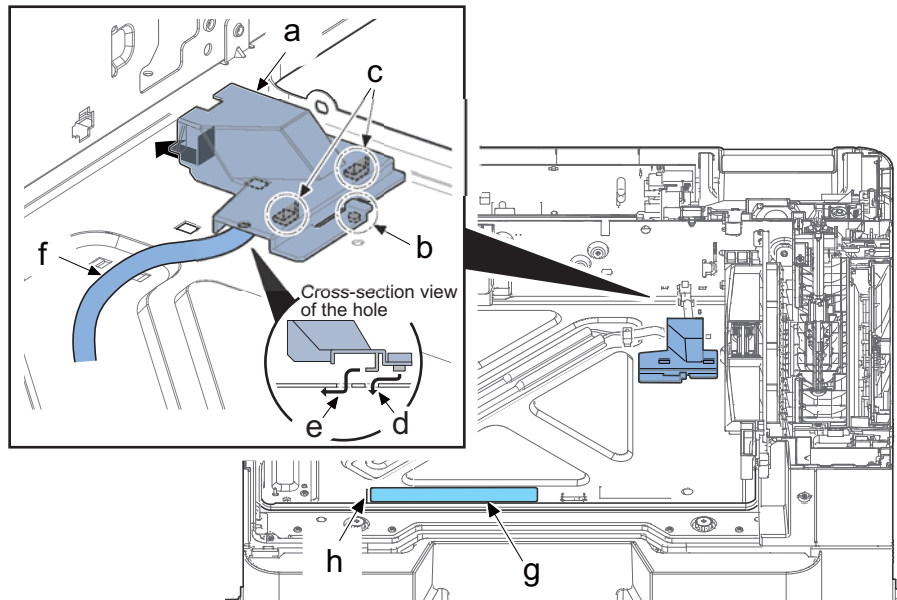


- 7** Insert two hooks (c) into the square hole (e) and attach the connector cover (a) by sliding it in the direction of the arrow.

- 8** Slide the protrusion (b) of the hook back and forth to check it is secured at the round hole (d).

Make sure the wire (f) does not float.

- 9 Affix the caution label (g), aligning it with the mark-off line (h) on the base.

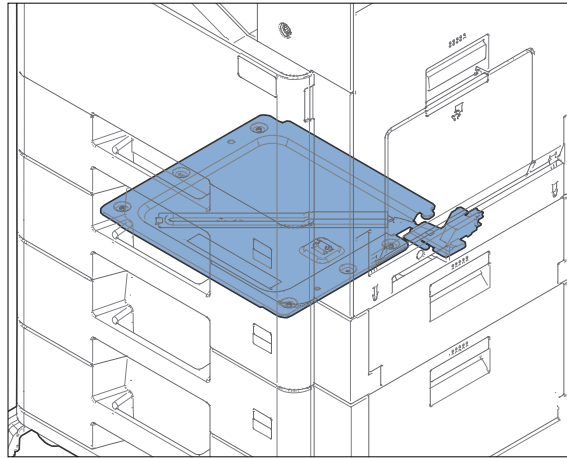


- 10 Reattach the parts in the original position.
- 11 Turn the power on and set maintenance mode U327 [Cassette heater On/Off] to [On].

✔ Important

When connecting the cassette heater, do not unplug the power cord. (Power is supplied when the power is switched off)

Also, if unplugged for a prolonged time, it may cause blurred images depending on the environment. In this case, execute [System Menu] > [Adjustment/Maintenance] > [Drum Refresh].

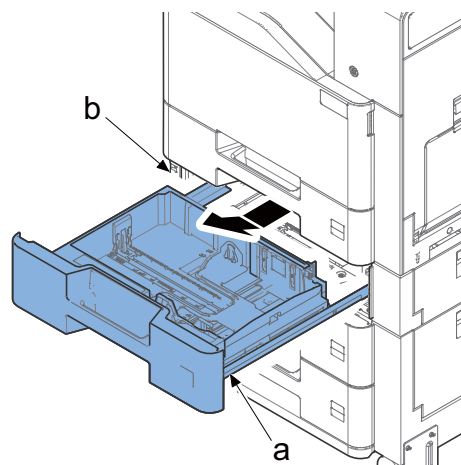
**(10-2) In case of paper feeder (PF-5120)****Cassette heater installation requires the following parts:**

- Cassette heater 120 set (303PS9402\_) 1 pc
- Cassette heater 240 set (303PS9403\_) 1 pc

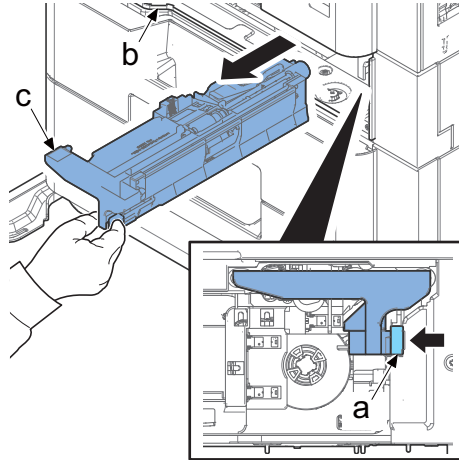
**Bundled parts of cassette heater 120/240**

- Cassette heater 120 set 1 pc
- Cassette heater 240 set 1 pc
- Heater connector cover 1 pc
- Wire saddles 1 pc
- Screw (M3x4 screw with the binding head) 4 pc

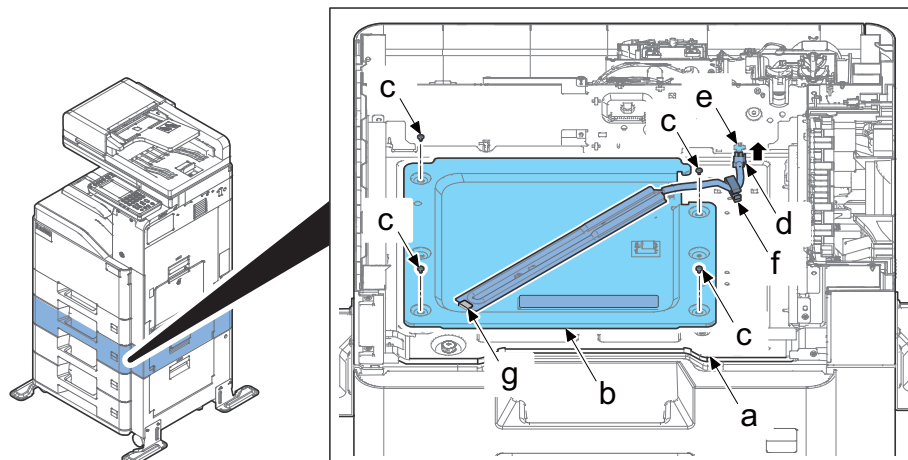
- 1 Turn the power switch off and disconnect the power plug.**
- 2 Pull out the cassette (a) from the paper feeder (b) and remove it in the direction of the arrow.**



- 3** Press the lock lever (a) and pull out the primary feed unit (c) from the paper feeder (b).

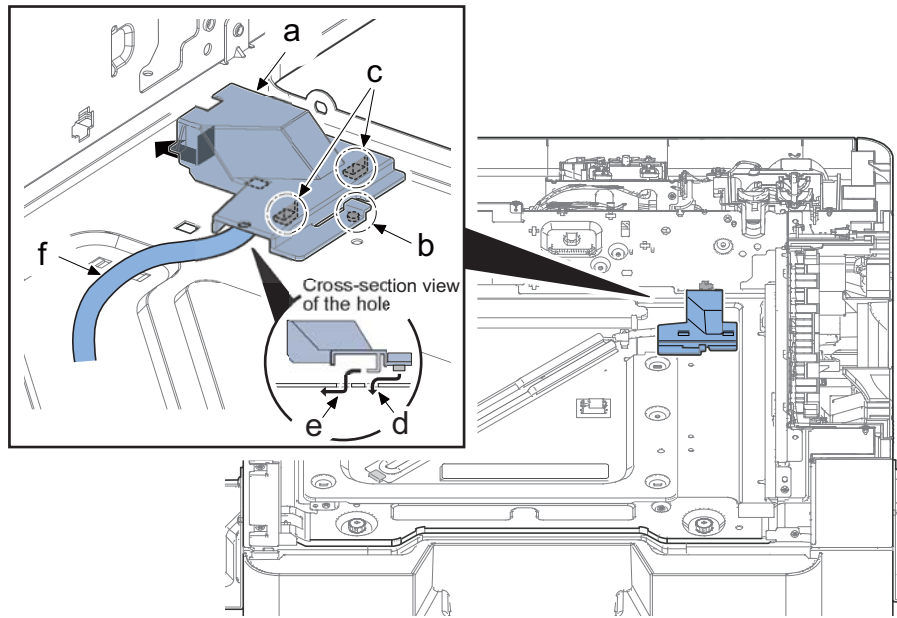


- 4** Insert the cassette heater set (b) into the lancing section (g) and secure it to the base (a) with four screws (c) (M3x4).
- 5** Connect the heater connector (d) to the main machine side connector (e).
- 6** Attach the wire saddle (f) to the base (a) and secure the wire.



- 7** Insert two hooks (c) into the square hole (e) and attach the connector cover (a) by sliding it in the direction of the arrow.
- 8** Slide the protrusion (b) of the hook back and forth to check it is secured at the round hole (d).

Make sure the wire (f) does not float.

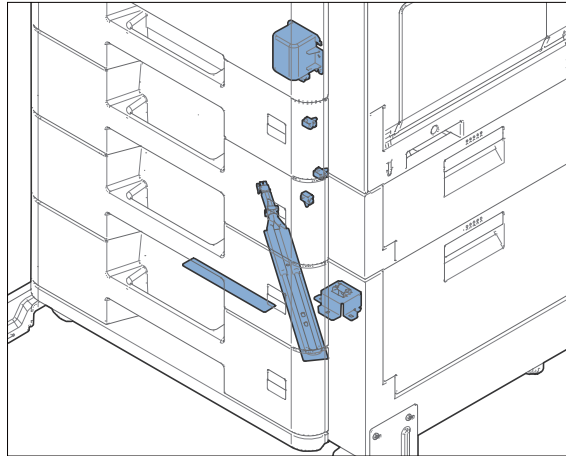


- 9 Reattach the parts in the original position.
- 10 Turn the power on and set maintenance mode U327 [Cassette heater On/Off] to [On].

✔ **Important**

When connecting the cassette heater, do not unplug the power cord. (Power is supplied when the power is switched off)

Also, if unplugged for a prolonged time, it may cause blurred images depending on the environment. In this case, execute [System Menu] > [Adjustment/Maintenance] > [Drum Refresh].

**(10-3) In case of paper feeder (PF-5130)**

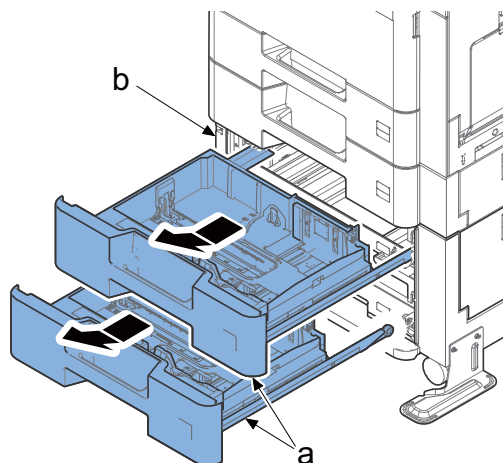
Cassette heater installation requires the following parts:

- Cassette heater 120 set (303PZ9402\_)
- Cassette heater 240 set (303PZ9403\_)

Bundled parts of cassette heater 120/240

- Cassette heater 120
- Cassette heater 240
- High temperature caution label 1 pc
- Heater connector cover 1 pc
- Cassette mounting plate set 1 pc
- Wire saddles 5 pc
- Screw (M3x8 screw with the binding head) 4 pc

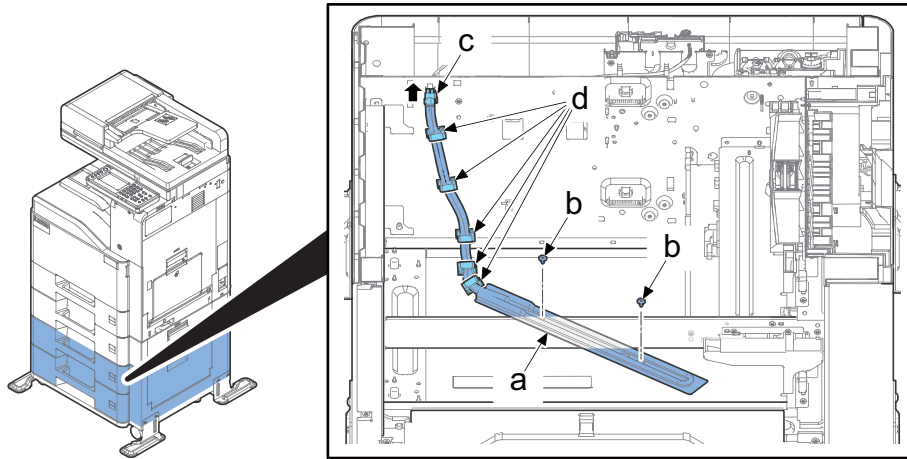
- 1 Turn the power switch off and disconnect the power plug.**
- 2 Pull out the upper cassette (a) from the paper feeder (b) and remove it in the direction of the arrow.**
- 3 Pull out the lower cassette (a) from the paper feeder (b) and remove it in the direction of the arrow.**



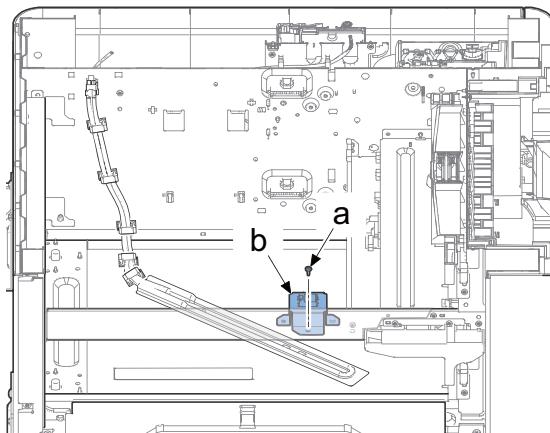


- 4 Secure the cassette heater (a) to the base with two screws (b) (M3x8).
- 5 Connect the heater connector (c) to the main unit side connector and secure the wire with five wire saddles (d).

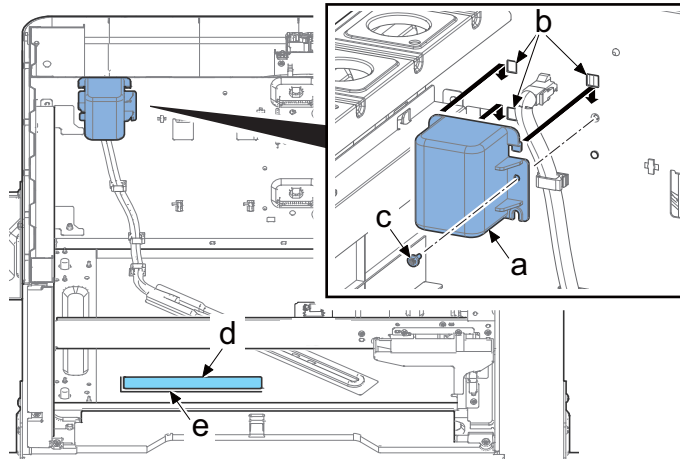
Make sure the wire does not float.



- 6 Secure the cassette mounting plate set (b) to the base with a screw (a) (M3x4).



- 7 Hang the three projections of the connector cover (a) on the square holes (b) of the side plate in the direction of the arrow.
- 8 Secure the connector cover (a) to the rear side plate with the screw (c) (M3x8).
- 9 Affix the caution label (f), aligning it with the mark-off line (g) on the base.



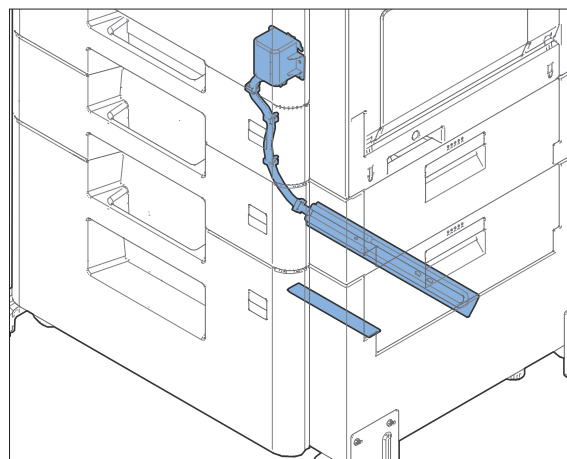
- 10 Reattach the parts in the original position.
- 11 Turn the power on and set maintenance mode U327 [Cassette heater On/Off] to [On].

 **Important**

When connecting the cassette heater, do not unplug the power cord. (Power is supplied when the power is switched off)

Also, if unplugged for a prolonged time, it may cause blurred images depending on the environment. In this case, execute [System Menu] > [Adjustment/Maintenance] > [Drum Refresh].

**(10-4) In case of paper feeder (PF-5140)**



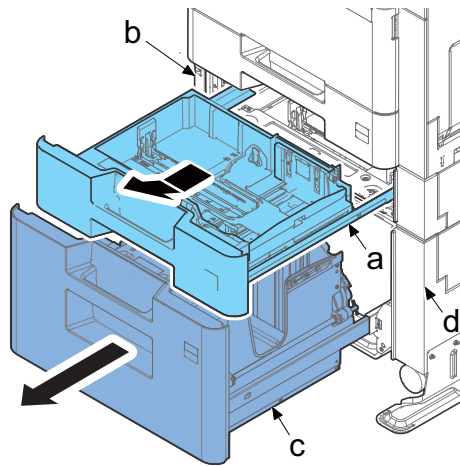
**Cassette heater installation requires the following parts:**

- Cassette heater 120 set (303PT9403\_) 1 pc
- Cassette heater 240 set (303PT9404\_) 1 pc

Bundled parts of cassette heater 120/240

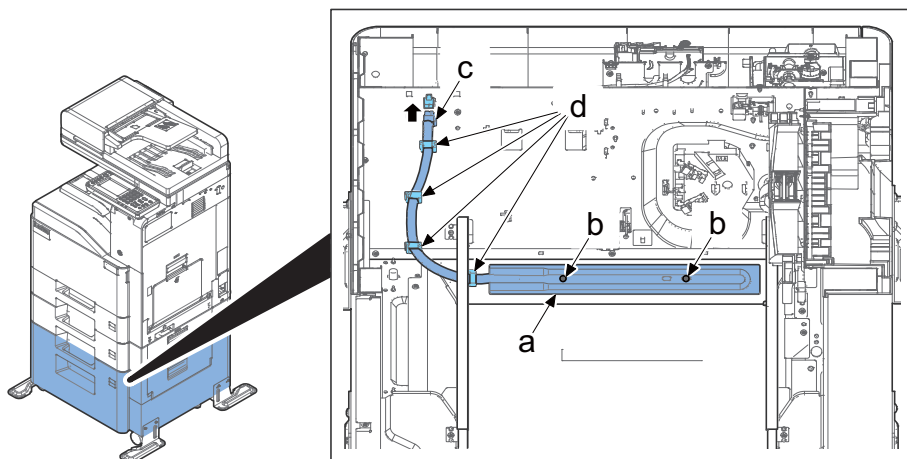
- Cassette heater 120 1 pc
- Cassette heater 240 1 pc
- High temperature caution label 1 pc
- Heater connector cover 1 pc
- Wire saddles 4 pc
- Screw (M3x8 screw with the binding head) 3 pc

- 1 Turn the power switch off and disconnect the power plug.
- 2 Remove the cassette (a) from the paper feeder (b).
- 3 Pull out the paper deck (c) from the paper feeder (d).

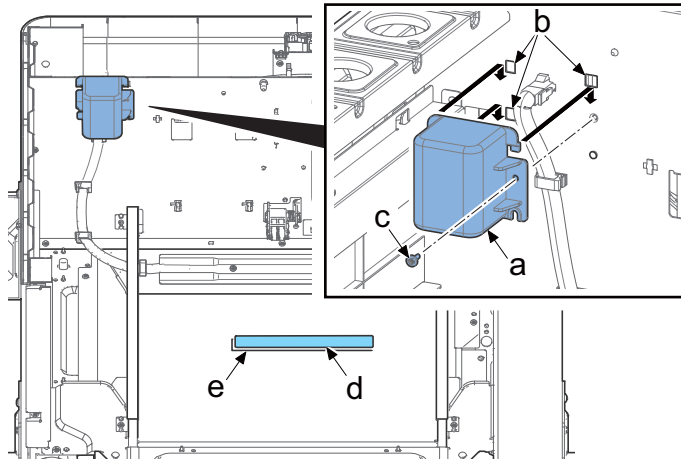


- 4 Secure the cassette heater (a) to the inclined portion of the end of the base with two screws (b) (M3x8).
- 5 Connect the heater connector (c) to the main unit side connector and secure the wire with four wire saddles (d).

Make sure the wire does not float.



- 6 Hang the three projections of the connector cover (a) on the square holes (b) of the side plate in the direction of the arrow.
- 7 Secure the connector cover (a) to the rear side plate with the screw (c) (M3x8).  
Hold the excess portion of wires in the connector cover (a).
- 8 Affix the caution label (d), aligning it with the mark-off line (e) on the base.



- 9 Reattach the parts in the original position.
- 10 Turn the power on and set maintenance mode U327 [Cassette heater On/Off] to [On].

✔ **Important**

When connecting the cassette heater, do not unplug the power cord. (Power is supplied when the power is switched off)

Also, if unplugged for a prolonged time, it may cause blurred images depending on the environment. In this case, execute [System Menu] > [Adjustment/Maintenance] > [Drum Refresh].

## 2 - 5 About Optional Applications

application	
Data Security Kit	
Card Authentication Kit <sup>*1</sup>	
ThinPrint Option <sup>*1</sup>	

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



#### Note

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

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

- 2 Select the desired application to start use and select [Activate].
  - You can view detailed information on the selected application by selecting [ ] or [Details].

Item
Function Name
License
Trial Counts
Date of Trial
Status

- 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.



#### Note

If you started the Security Kit or Thin Print option and entered the license key, turn the power OFF/ON. Icons of activated application are displayed in the Home screen.

## 2 - 6 Initializing procedures after installing the FAX system

- 1 Connect the power plug of the main unit to the outlet and turn the power on.
- 2 Input "10871087" using the numeric keys to enter the maintenance mode.
- 3 Input "600" using the numeric keys and press the [Start] key.
- 4 Select [Country Code] and enter a destination code using the numeric keys.  
Refer to the following destination code list.
- 5 Select [Execute].
- 6 Press the [Start] key to start data initialization.  
Press the [Stop] key to cancel the data initialization.

### Destination code list

Destination code	Destination	Destination code	Destination
000	Japan	253	CTR21 (European nations)
007	Argentina	↑	Italy
009	Australia	↑	Germany
022	Brazil	↑	Spain
038	China	↑	U.K.
080	Hong Kong	↑	Netherlands
084	Indonesia	↑	Sweden
088	Israel	↑	France
097	Korea	↑	Austria
181	U.S.A.	↑	Switzerland
250	Russia	↑	Belgium
108	Malaysia	↑	Denmark
115	Mexico	↑	Finland
126	New Zealand	↑	Portugal
136	Peru	↑	Ireland
137	Philippines	↑	Norway
152	Middle East	254	Taiwan
156	Singapore		
159	South Africa		
169	Thailand		

- 7 After completing installation, execute communication test to check if FAX normally operates.

#### Important

Note the following points when installing the FAX system in the line via ISDN or PBX.

Check if the line to connect supports the V.34 (Super G3) FAX communication.

Especially, when communicating between extensions in PBX (private line via TDM), only 14400bps or 9600bps of FAX communication speed is guaranteed and communication errors or TX/RX image failure may occur at V.34 communication in such a line.

## Corrective Measures

Set the following maintenance mode if the communication speed guaranteed on the line is 14400bps.

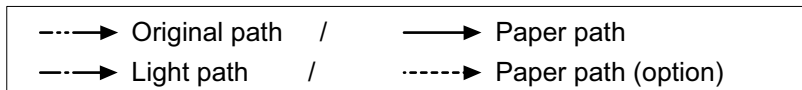
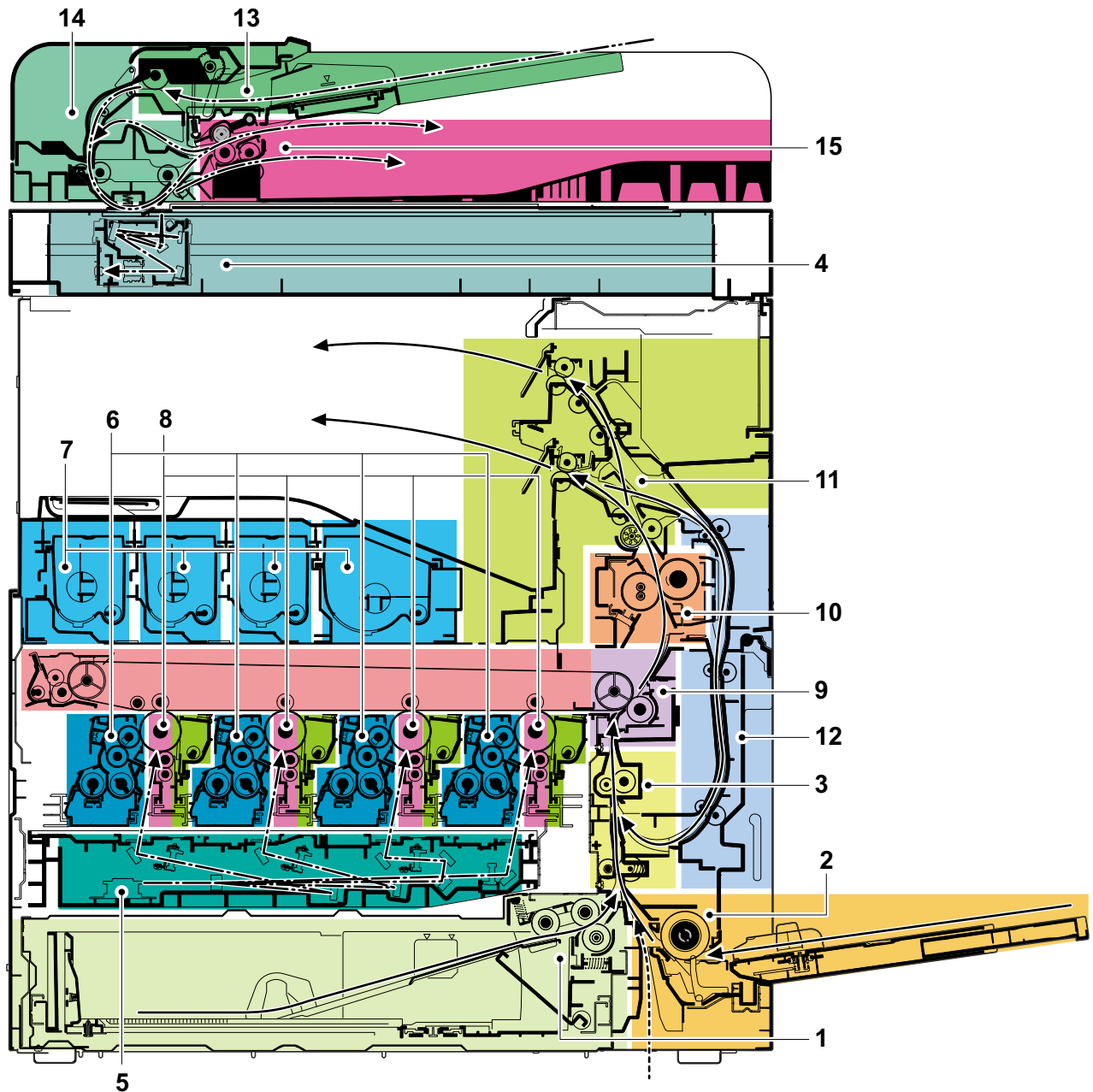
U633 [Enables or disables the V.34 communication]: Off (See page [6-183](#))

U630 [Setting TX speed and RX speed] (See page [6-178](#))

## 3 Machine Design

### 3 - 1 Mechanical Configuration

#### (1) Cross-section view

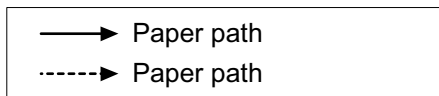
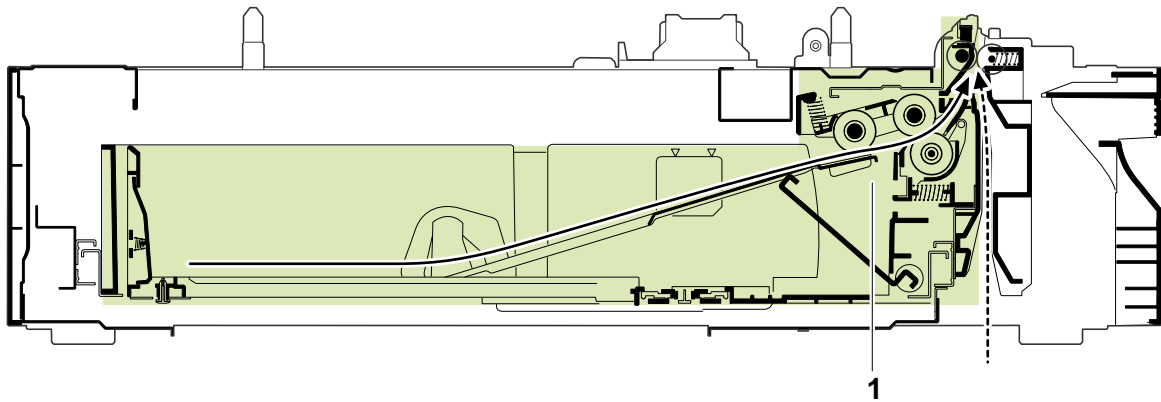


- |                               |                                   |  |
|-------------------------------|-----------------------------------|--|
| 1 Cassette paper feed section | 6 Developer unit                  | 11 Feedshift and exit section          |
| 2 MP paper feed section       | 7 Toner container                 | 12 Duplex conveying section            |
| 3 Paper conveying section     | 8 Drum unit                       | 13 DP document feed section            |
| 4 Image scanner unit          | 9 Transfer and separation section | 14 DP original conveying section       |
| 5 Laser scanner unit          | 10 Fuser section                  | 15 DP original reversing/eject section |



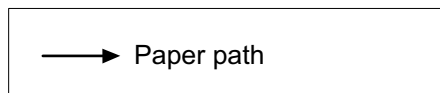
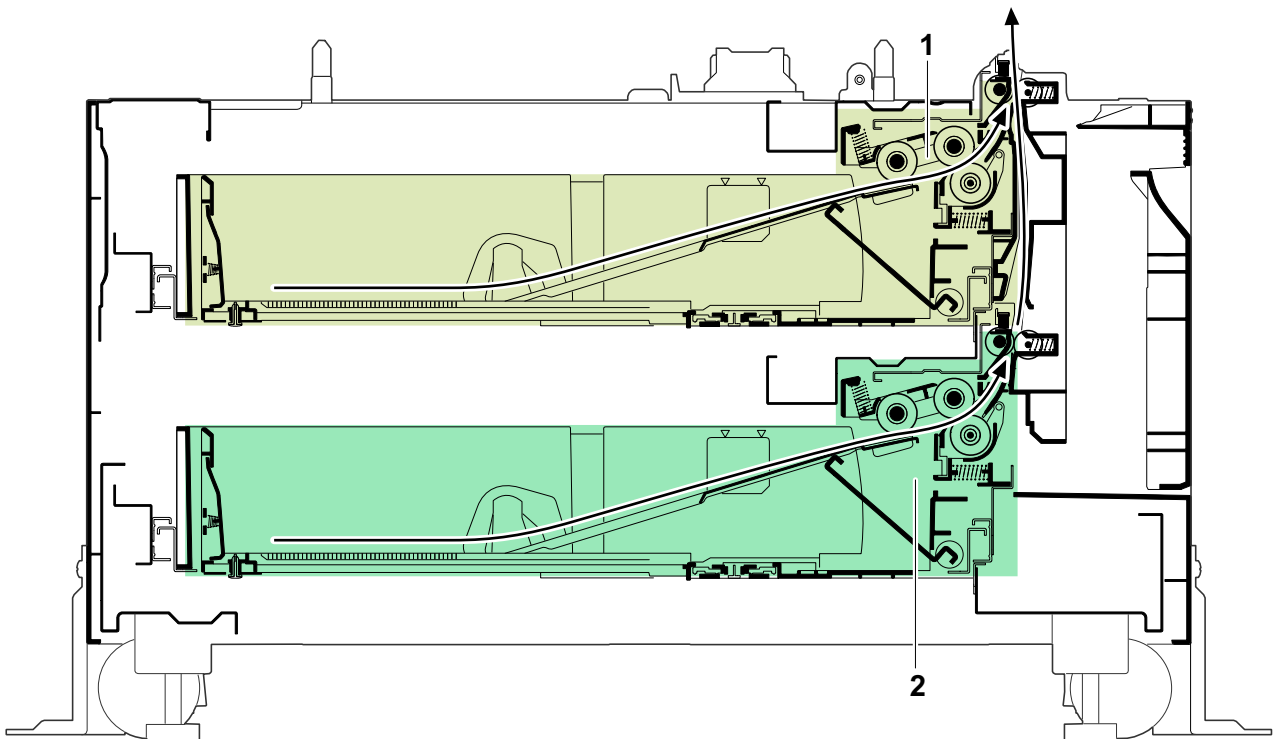
### 3 - 2 Extension device construction (option)

#### (1) Paper feeder cross-section view (PF-5120)



1 Cassette paper feed section

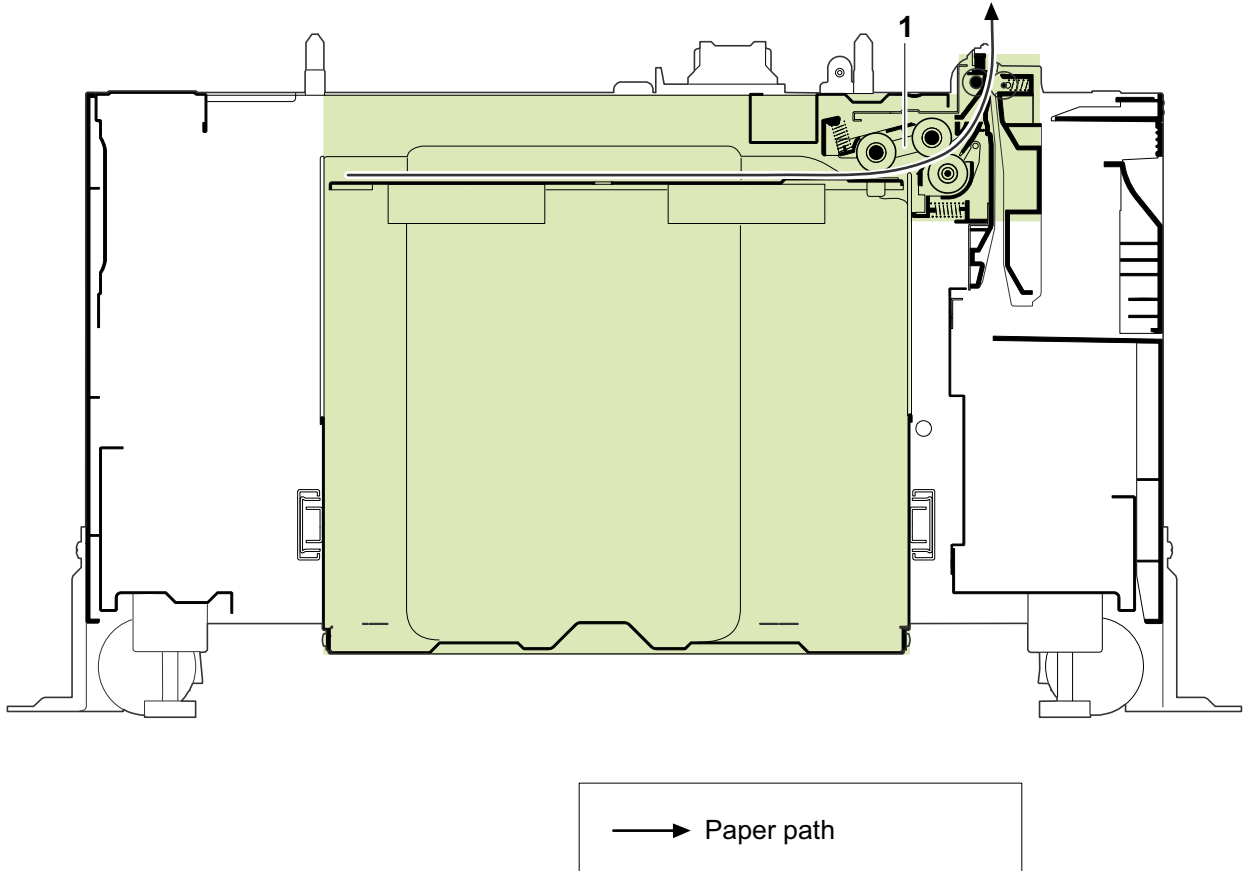
#### (2) Paper feeder cross-section view (PF-5130)



1 Upper cassette paper feed section

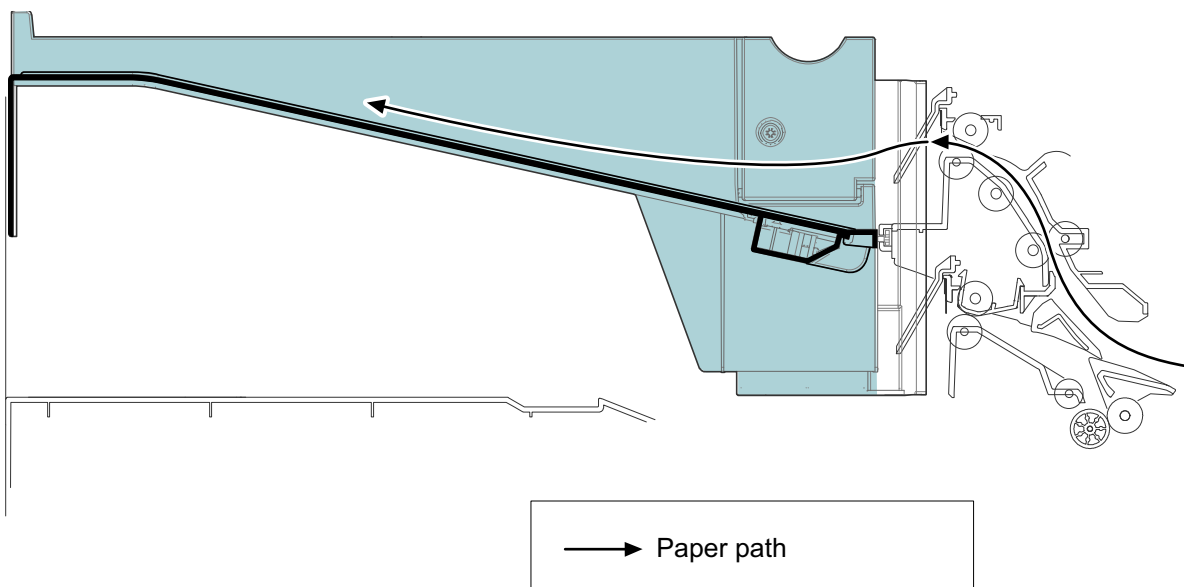
2 Lower cassette paper feed section

**(3) Paper feeder cross-section view (PF-5140)**

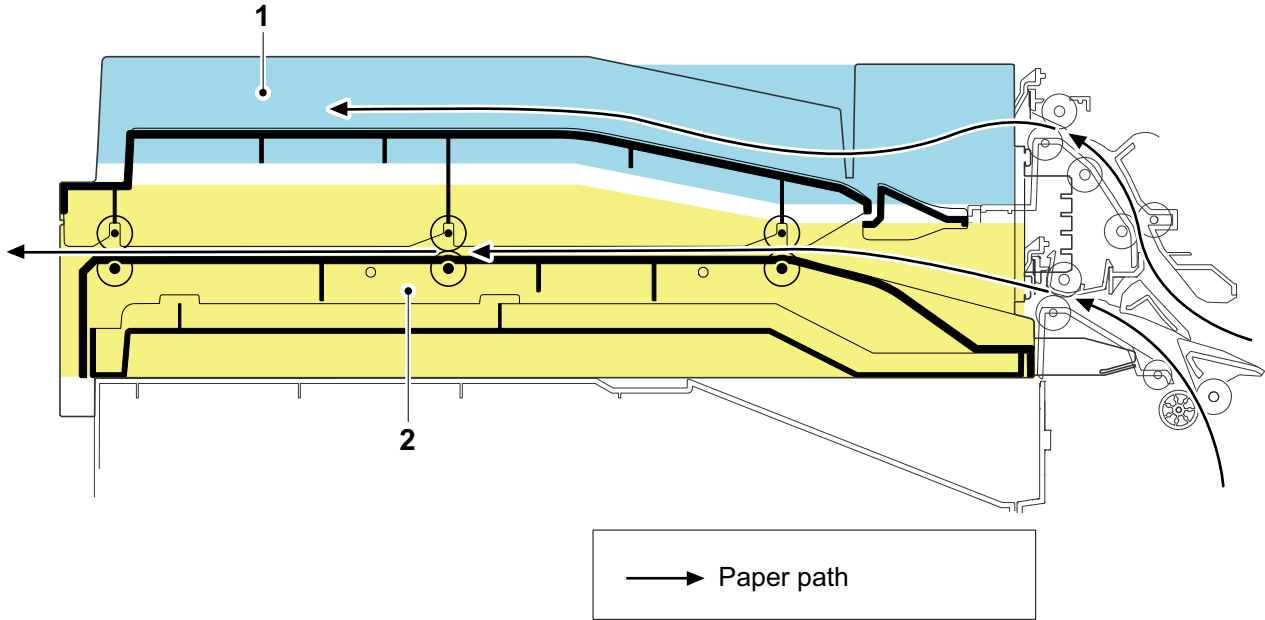


1 Paper deck feed section

**(4) Job separator cross-section view (JS-5100)**



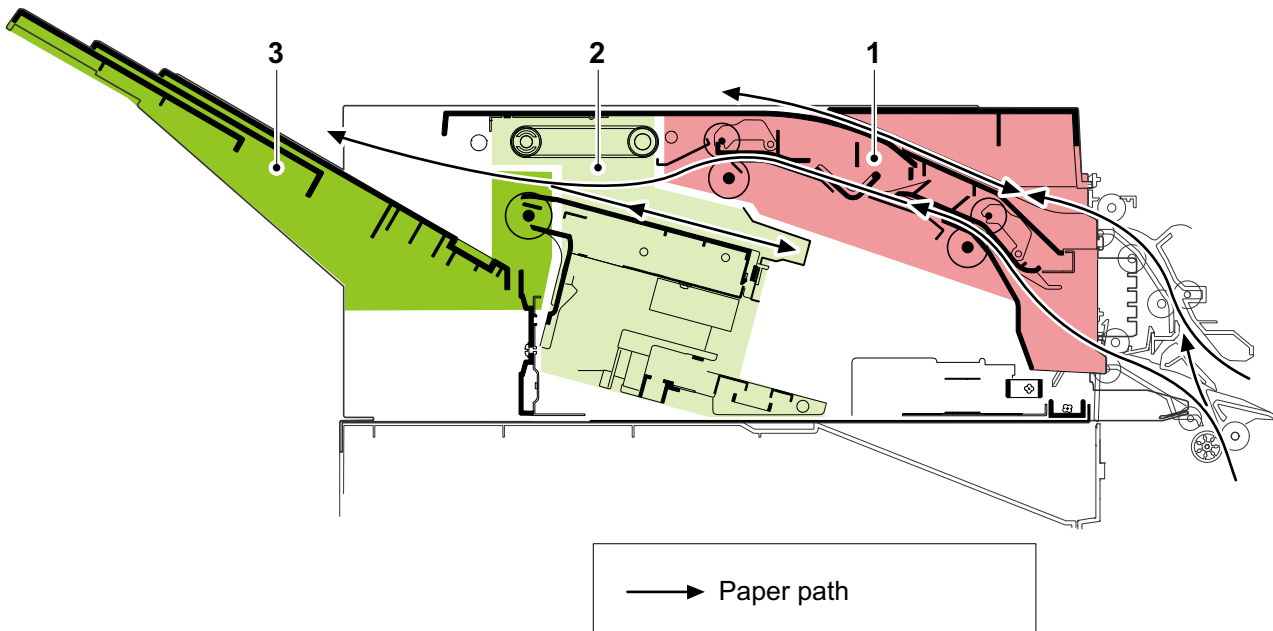
**(5) Attachment kit cross-section view (AK-5100)**



1 Exit section

2 Paper conveying section

**(6) Finisher cross-section view (DF-5100)**

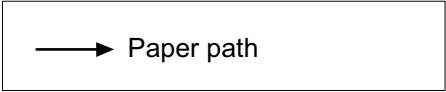
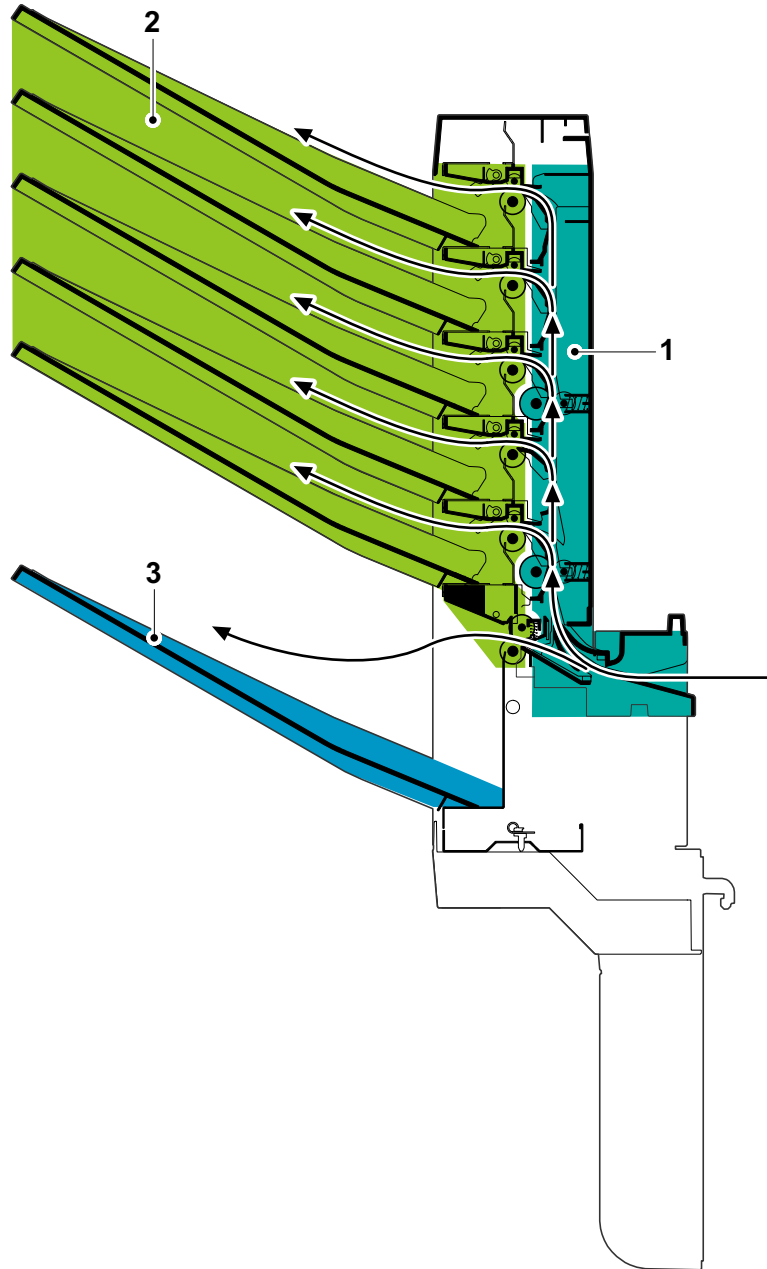


1 Paper conveying section

3 Exit section

2 Staple unit

**(7) Mailbox cross-section view (MT-5100)**



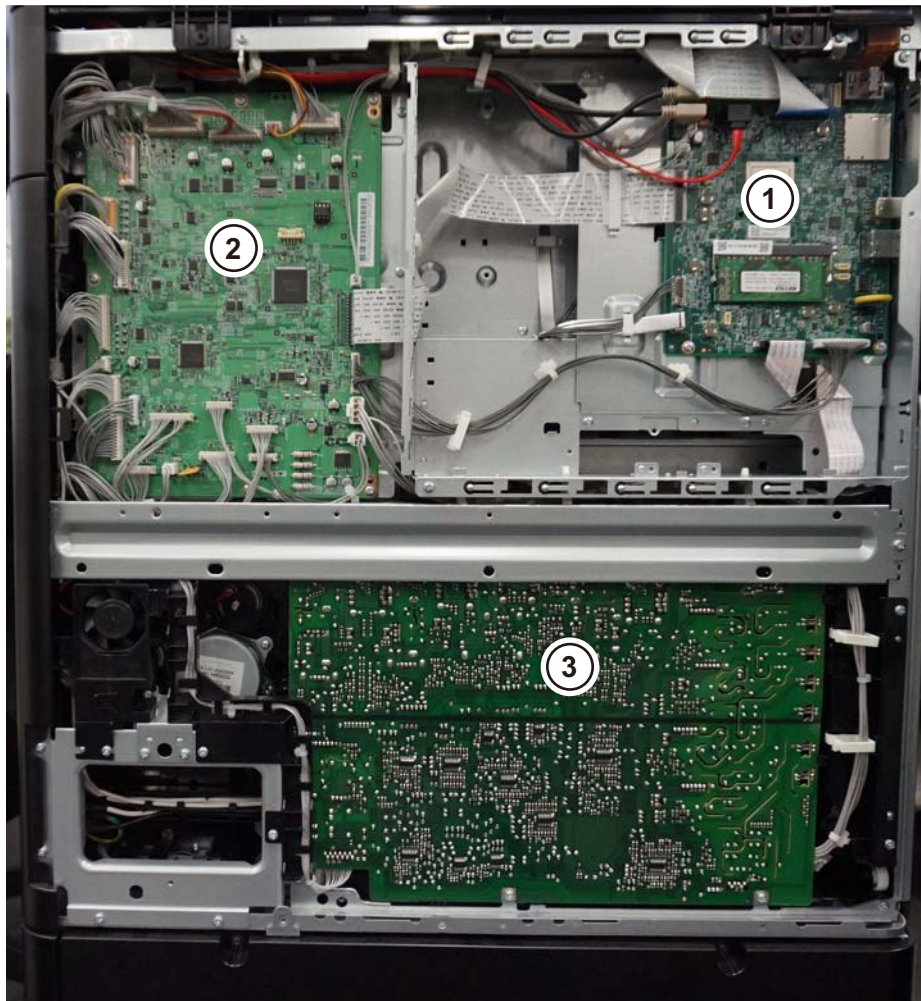
- 1 Paper conveying section
- 2 Exit section (mail tray)

- 3 Exit section (main tray)

### 3 - 3 Electric parts

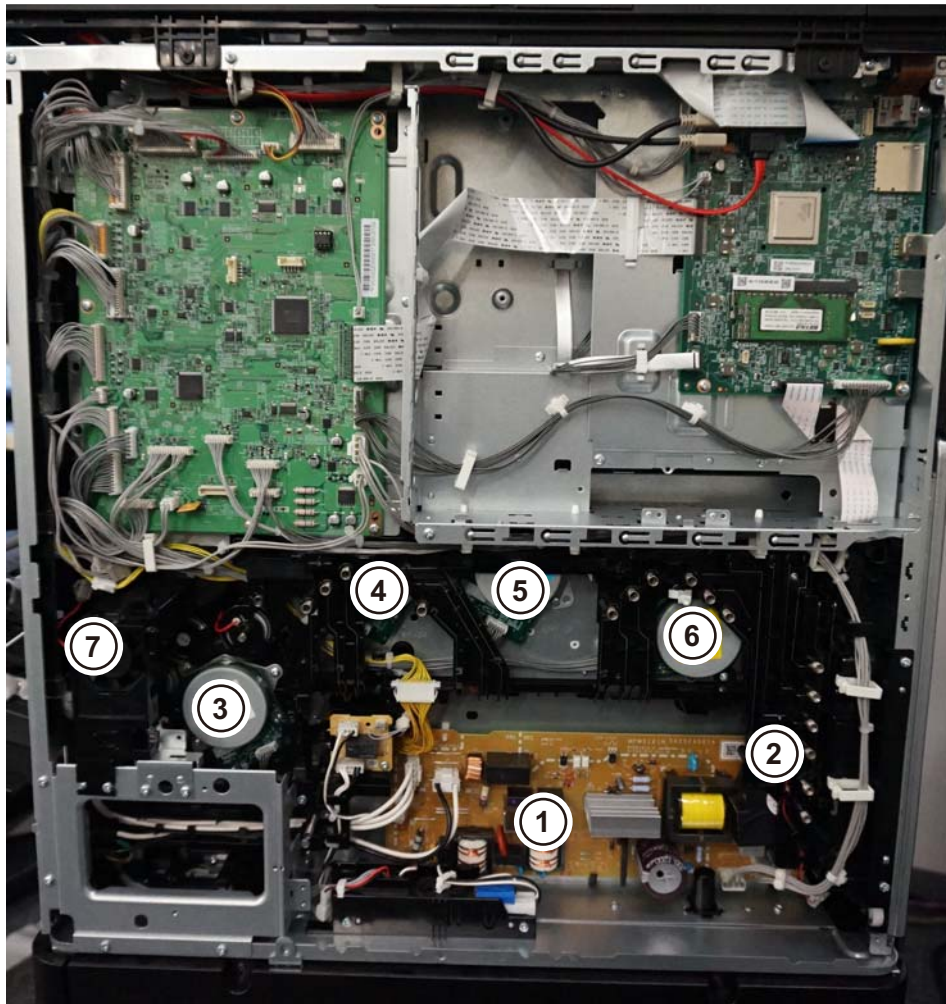
#### (1) Wire connection

#### (1-1) (Machine rear side)



- 1 Main PWB
- 2 Engine PWB

- 3 High-voltage PWB

**(1-2) Backside of the High-voltage PWB**

- |  |                       |
|--|-----------------------|
| 1 Power source PWB                     | 4 Drum motor K        |
| 2 Power source fan motor               | 5 Drum motor CMY      |
| 3 Developer motor K / Paper feed motor | 6 Developer motor CMY |
|  | 7 Clutch cooling fan  |

## (2) Descriptions about the major PWBs

### (2-1) Main PWB



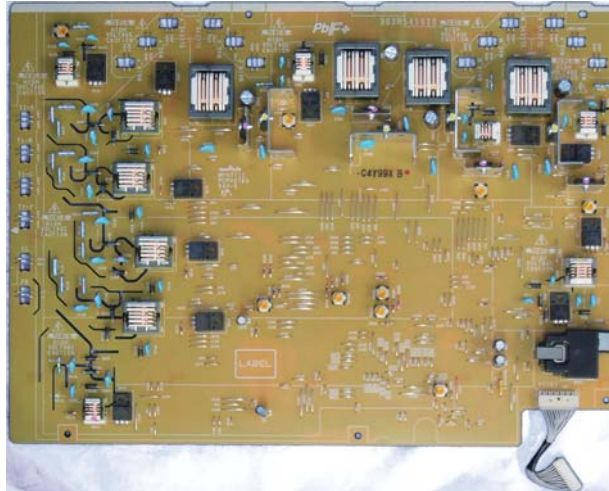
It controls the software for the interface and image data processing, and the hardware generating the image scanner unit and operation section.

### (2-2) Engine PWB



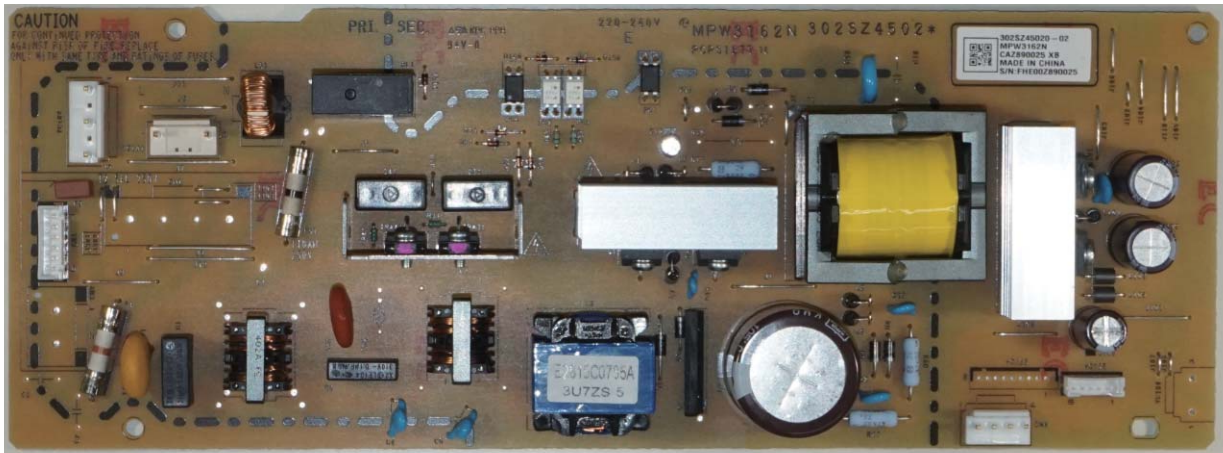
It controls the hardware for the generation of the high-voltage and the bias, and the paper conveying system.

### (2-3) High-voltage PWB



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

### (2-4) Power source PWB



The input voltage (AC) from the AC power supply is changed to DC such as DC24V, and it controls the fuser heater.



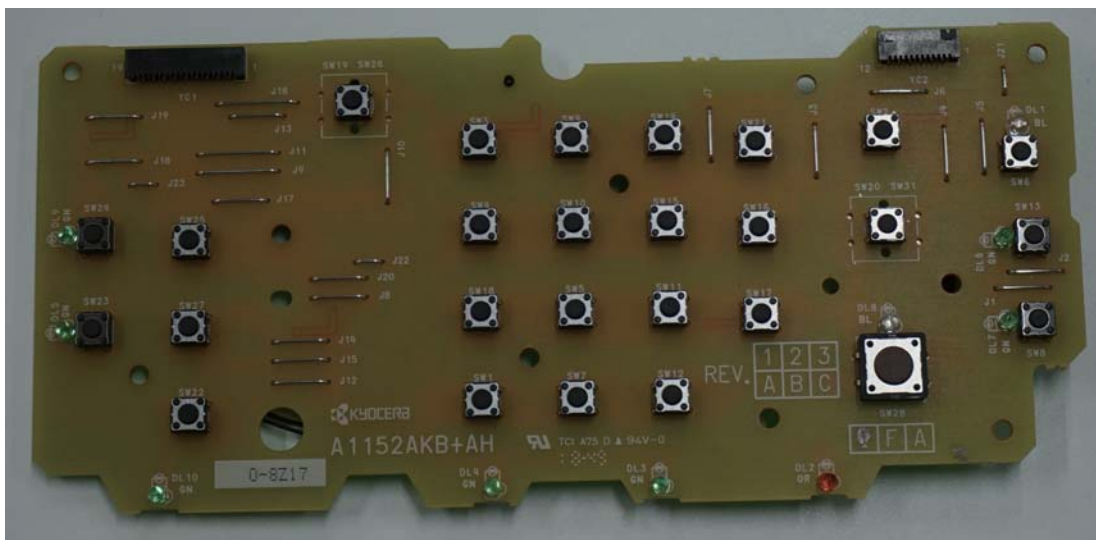
## (2-5) Operation panel PWB



It consists of the wiring relay circuit for the main PWB, the operation panel PWB and the LCD.

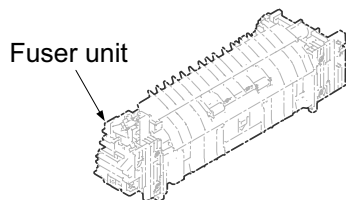
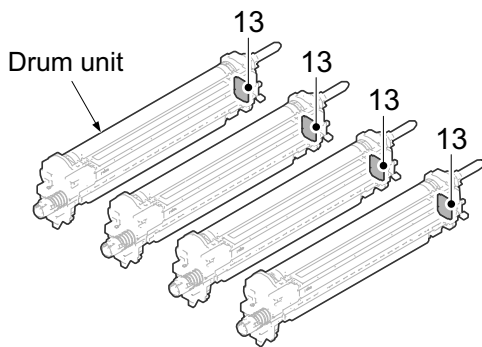
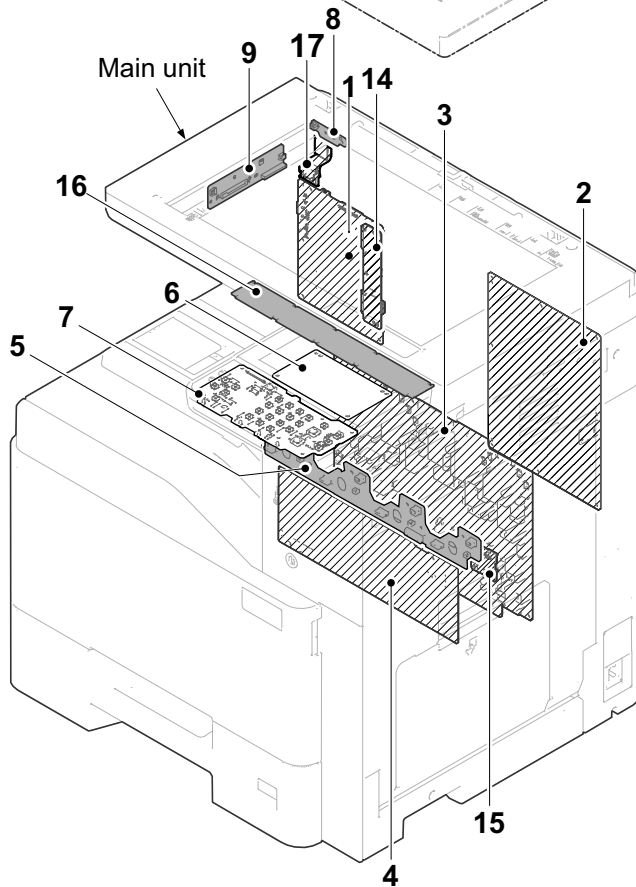
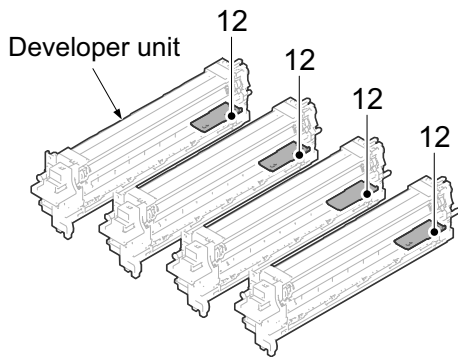
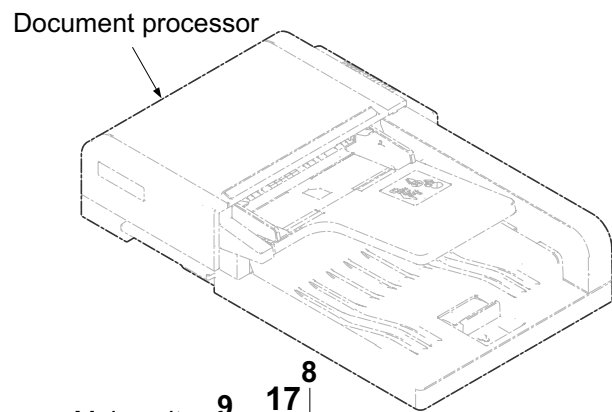
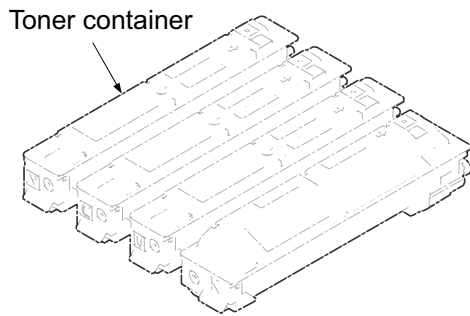
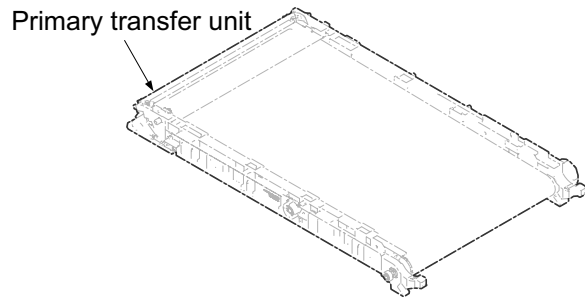
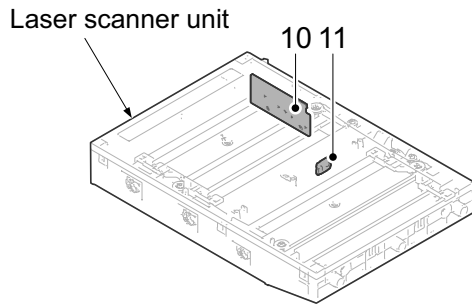
## (2-6) Operation panel sub PWB

It consists of the LED indicator and the key switches



### (3) PWBs

#### (3-1) Layout



1	Main PWB	Controlling the entire software to control the interface to the PC and network and image data process, etc. Controlling the entire hardware to control the image scanner unit and operation section.
2	Engine PWB	Controlling the hardware such as electric parts drive, high voltage, bias output, paper conveying, fuser temperature, etc.
3	High-voltage PWB	Generating the main charger high-voltage, the developer bias, the transfer bias and the separation bias.
4	Power source PWB	Rectifying the AC power input to the full-wave and converting it to DC24V. It controls the fuser heater.
5	Drum/Developer relay PWB	Consisting of the wiring relay circuit to the engine PWB, drum units and developer units.
6	Operation panel PWB	It consists of the wiring relay circuit for the main PWB, operation panel sub PWB and LCD.
7	Operation panel sub PWB	Consisting of the LED indicator and the key switches.
8	LED PWB	Controlling the LED.
9	CCD PWB	Scanning the original image.
10	APC PWB	Emitting and controlling the laser beam.
11	PD PWB	Controlling the synchronous lateral laser beam.
12	Developer PWB	Wiring relay to the electric parts inside developer unit.
13	Drum PWB	Wiring relay to the electric parts inside drum unit. Storing the drum unique data in an EEPROM.
14	KUIO relay PWB	Consisting of the relay circuit for the engine PWB, FAX PWB, network PWB, etc.
15	Cassette heater PWB	Consisting of the relay circuit for the engine PWB, power source PWB and option cassette heater.
16	RFID PWB	Reading the toner container information.
17	Wireless network interface PWB	Wireless LAN module

### (3-2) Part name table

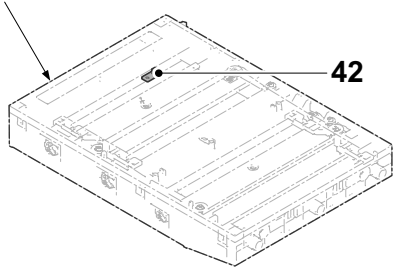
No.	Name used in service manual	Name used in parts list	Part.No.
1	Main PWB	PARTS PWB MAIN ASSY SP PARTS PWB MAIN ASSY EU SP	302WL9401_ 302WL9402_
2	Engine PWB	PARTS PWB ENGINE ASSY SP	302WL9403_
3	High-voltage PWB	PARTS UNIT HIGH VOLTAGE MAIN SP	302R59404_
4	Power source PWB	PARTS UNIT LOW VOLTAGE 100 SP PARTS UNIT LOW VOLTAGE 200 SP	302SZ9410_ 302SZ9411_
5	Drum/Developer relay PWB	PARTS PWB DRUM DLP CONNECT ASSY SP	302R69404_
6	Operation panel PWB	PARTS OPERATION UNIT L SP PARTS PWB PANEL MAIN ASSY SP	302WL9406_ 302WL9404_
7	Operation panel sub PWB	PARTS OPERATION UNIT L SP PARTS PWB OPERATION ASSY SP	302WL9406_ 302WL9405_
8	LED PWB	ISU ASSY L SP (PWB LED ASSY)	302R49314_ (3V2R60115_)

No.	Name used in service manual	Name used in parts list	Part.No.
9	CCD PWB	ISU ASSY L SP (P.W.BOARD ASSY CCD)	302R49314_ (3V2NM0107_)
10	APC PWB	LK-5195 (PWB APC ASSY)	302R49315_ (302R60112_)
11	PD PWB	LK-5195 (PWB PD ASSY)	302R49315_ (302NP0105_)
12	Developer PWB	DV-5195K DV-5195M DV-5195C DV-5195Y (PWB DLP K ASSY) (PWB DLP M ASSY) (PWB DLP C ASSY) (PWB DLP Y ASSY)	302R49307_ 302R49308_ 302R49309_ 302R49310_ (302R60121_) (302R60120_) (302R60119_) (302R60118_)
13	Drum PWB	DK-5195 (PWB DRUM ASSY)	302R49305_ (302K00107_)
14	KUIO relay PWB	PARTS PWB KUIO ASSY SP	302K99427_
15	Cassette heater PWB	PARTS PWB HEATER RELAY ASSY SP	302R69405_
16	RFID PWB	PARTS PWB RFID ASSY SP	302R69411_
17	Wireless network interface PWB	PARTS WIFI UNIT SP	303RR9401_

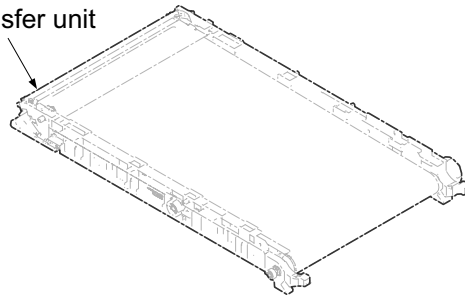
### (4) Sensors and Switches

#### (4-1) Layout

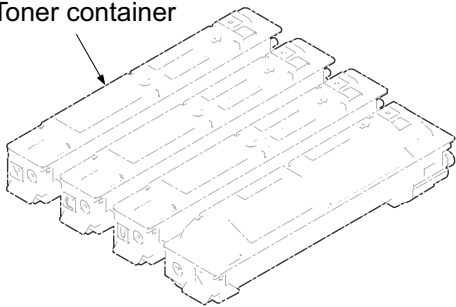
Laser scanner unit



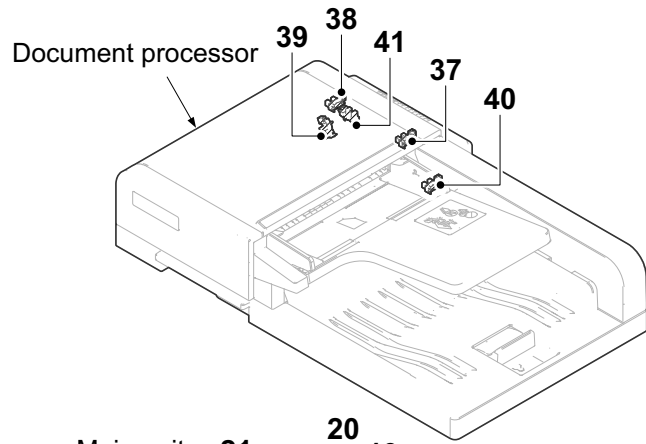
Primary transfer unit



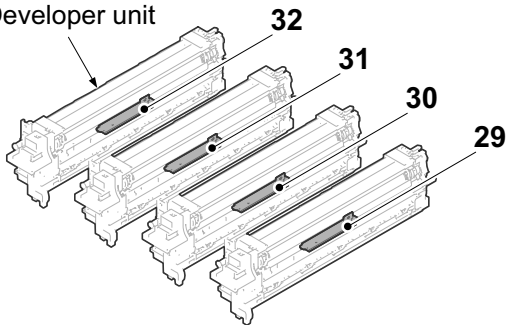
Toner container



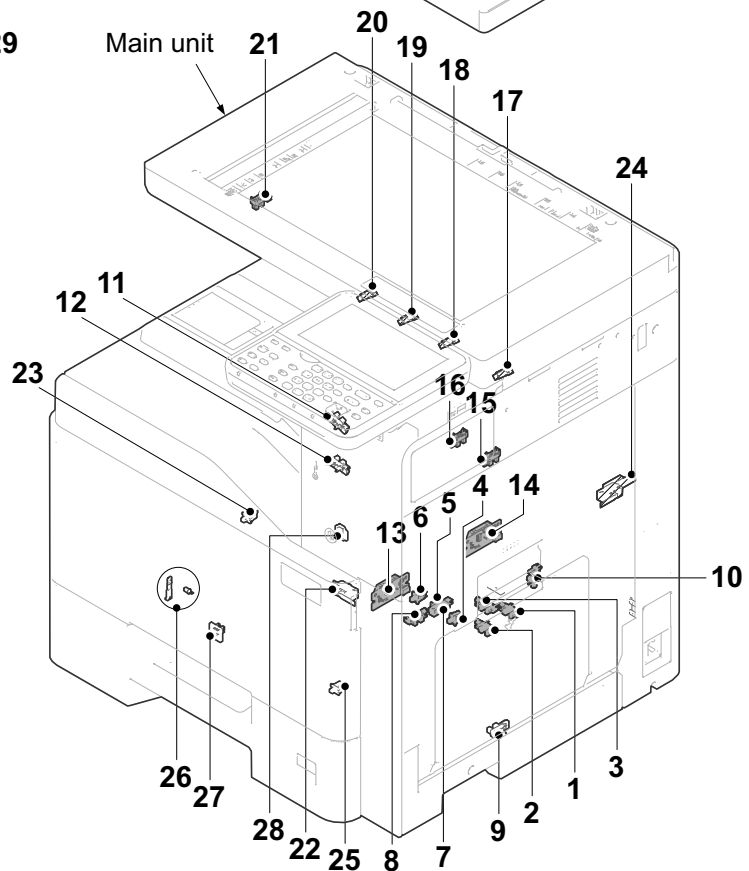
Document processor



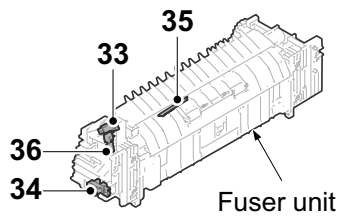
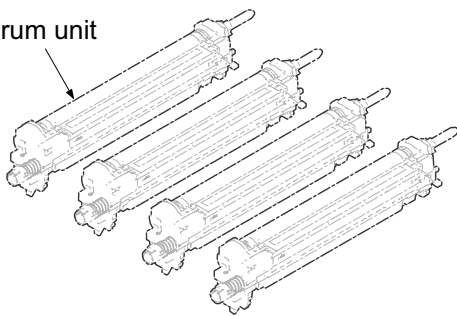
Developer unit



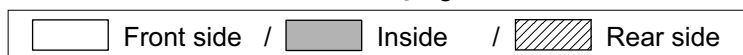
Main unit



Drum unit



Fuser unit



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1 Paper sensor	Detecting the presence of paper in the cassette.
2 Paper gauge sensor 1	Detecting the level of the remaining paper inside the cassette.
3 Paper gauge sensor 2	Detecting the level of the remaining paper inside the cassette.
4 Paper length sensor 1	Detecting the cassette paper size and presence of cassette.
5 Paper length sensor 2	Detecting the cassette paper size and presence of cassette.
6 Paper length sensor 3	Detecting the cassette paper size and presence of cassette.
7 Registration sensor	Controlling the timing to start the secondary paper feeding.
8 Lift sensor	Detecting the upper limit when lifting the bottom plate inside the cassette.
9 MP paper sensor	Detecting the presence of paper on the MP tray.
10 Duplex sensor	Detecting paper jam at the duplex section.
11 Upper exit full sensor	Detecting the paper-full on the job separator or attachment kit.
12 Lower exit full sensor	Detecting the paper-full on the inner tray.
13 Front ID sensor	Measuring the toner density at the calibration.
14 Rear ID sensor	Measuring the toner density at the calibration.
15 TC belt release sensor 1	Detecting the mode of the transfer belt.
16 TC belt release sensor 2	Detecting the mode of the transfer belt.
17 Container sensor K	Detecting the toner container rotation. (Black)
18 Container sensor M	Detecting the toner container rotation. (Magenta)
19 Container sensor C	Detecting the toner container rotation. (Cyan)
20 Container sensor Y	Detecting the toner container rotation. (Yellow)
21 Home position sensor	Detecting the position of the image scanner unit.
22 Front cover switch 1	Shutting off the 24V power supply line when the front cover is opened and reset. Interlock switch.
23 Front cover switch 2	Detecting the front cover (left side) open.
24 Right cover switch	Shutting off the 24V power supply line when the right cover is opened and reset. Interlock switch.
25 Waste toner box switch	Detecting presence of the waste toner box.
26 Waste toner sensor	Detecting the waste toner amount inside the waste toner box.
27 Temperature and humidity sensor	Detecting the temperature and humidity outside the main unit.
28 Power switch	Turning on and off the main/engine PWB, the engine relay PWB and the operation panel PWB, etc.
29 Toner sensor K	Detecting the toner amount inside developer unit. (Black)
30 Toner sensor M	Detecting the toner amount inside developer unit. (Magenta)
31 Toner sensor C	Detecting the toner amount inside developer unit. (Cyan)
32 Toner sensor Y	Detecting the toner amount inside developer unit. (Yellow)
33 Exit sensor	Detecting the paper jam at the fuser section.
34 Press-release sensor	Detecting the mode of the fuser pressure.

35 Fuser thermistor 1	Detecting the fuser heat roller temperature. (Center)
36 Fuser thermistor 2	Detecting the fuser heat roller temperature. (Edge)
37 DP original sensor	Detecting the presence of the original in the document processor.
38 DP feed sensor	Detects the primary feed timing of the document processor.
39 DP registration sensor	Detecting the timing to convey the original in the document processor.
40 DP feedshift sensor	Detecting the position of the feedshift guide in the document processor.
41 DP open/close sensor	Detecting the opening and closing of the document processor.
42 LSU thermistor	Detecting the LSU temperature.

**(4-2) Part name table**

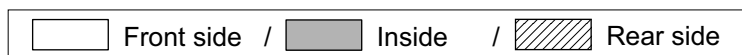
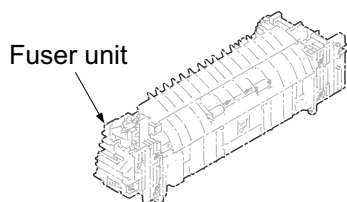
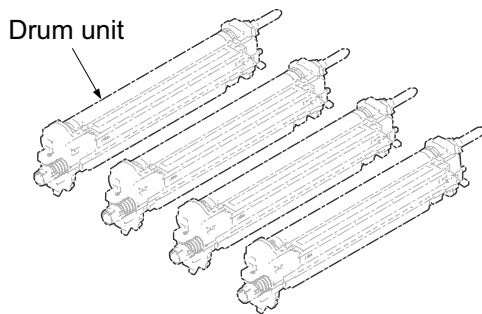
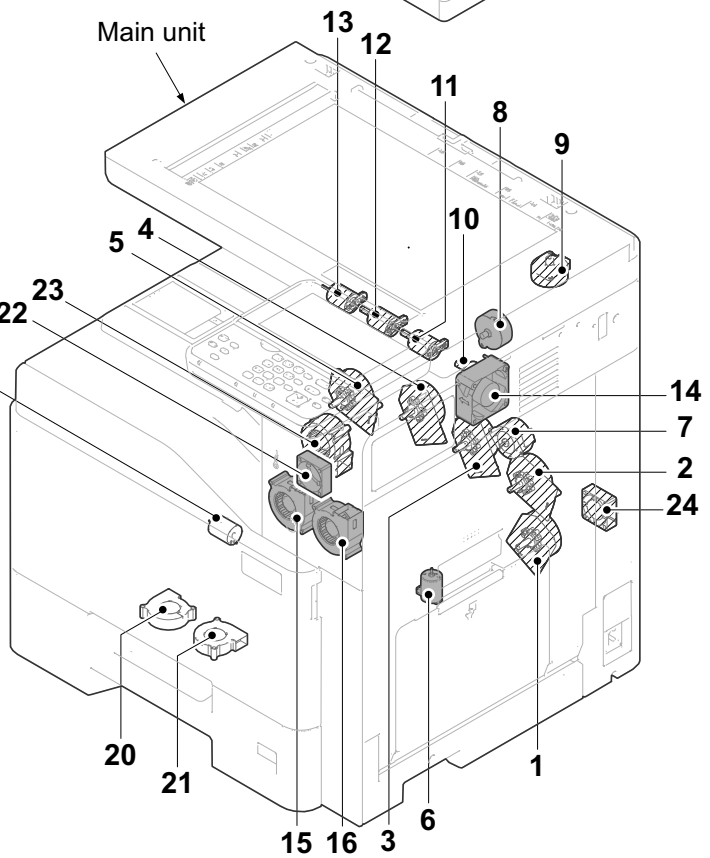
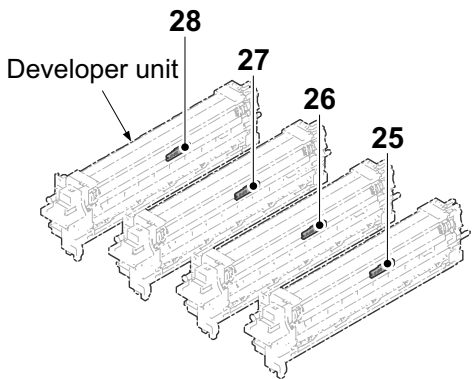
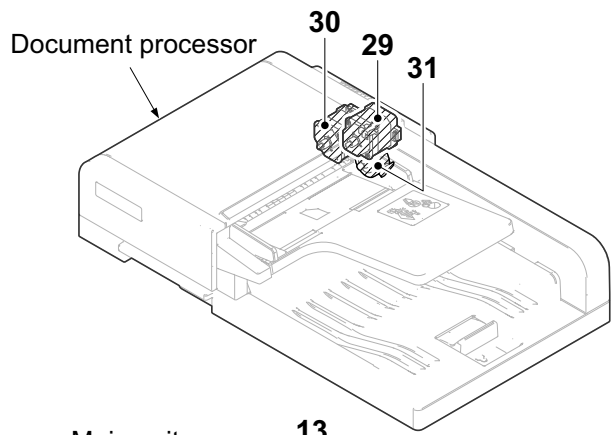
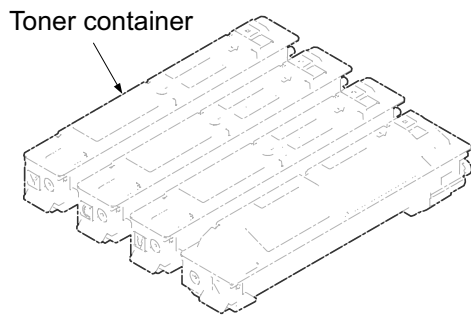
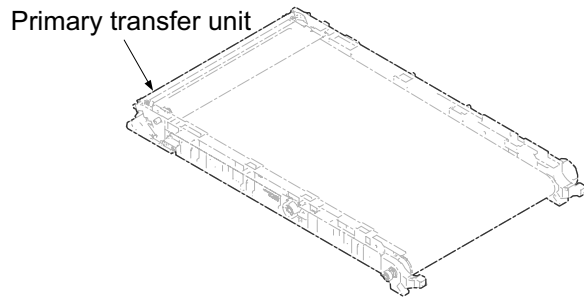
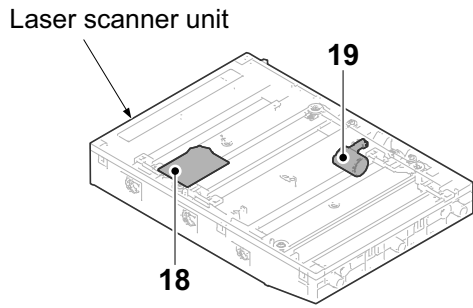
No.	Name used in service manual	Name used in parts list	Part.No.
1	Paper sensor	PARTS SENSOR OPT.SP	302P79401_
2	Paper gauge sensor 1	PARTS SENSOR OPT.SP	302P79401_
3	Paper gauge sensor 2	PARTS SENSOR OPT.SP	302P79401_
4	Paper length sensor 1	SW.PUSH	7SP01000004+H01
5	Paper length sensor 2	SW.PUSH	7SP01000004+H01
6	Paper length sensor 3	SW.PUSH	7SP01000004+H01
7	Registration sensor	PARTS SENSOR OPT.SP	303NW9404_
8	Lift sensor	PARTS SENSOR OPT.SP	302P79401_
9	MP paper sensor	PARTS SENSOR OPT.SP	302P79401_
10	Duplex sensor	PARTS SENSOR OPT.SP	302P79401_
11	Upper exit full sensor	PARTS SENSOR OPT.SP	302P79401_
12	Lower exit full sensor	PARTS SENSOR OPT.SP	302P79401_
13	Front ID sensor	PARTS ID SENSOR ASSY SP	302R69406_
14	Rear ID sensor	PARTS ID SENSOR ASSY SP	302R69406_
15	TC belt release sensor 1	PARTS SENSOR OPT.SP	302P79401_
16	TC belt release sensor 2	PARTS SENSOR OPT.SP	302P79401_
17	Container sensor K	PARTS SENSOR OPT.SP	302P79401_
18	Container sensor M	PARTS SENSOR OPT.SP	302P79401_
19	Container sensor C	PARTS SENSOR OPT.SP	302P79401_
20	Container sensor Y	PARTS SENSOR OPT.SP	302P79401_
21	Home position sensor	PARTS SENSOR OPT.SP	302P79401_
22	Front cover switch 1	INTER LOCK SWITCH	2FB27160
23	Front cover switch 2	SW.PUSH	7SP01000004+H01
24	Right cover switch	INTER LOCK SWITCH	2FB27160
25	Waste toner box switch	SW.PUSH	7SP01000004+H01
26	Waste toner sensor	SW.PUSH	7SP01000004+H01

No.	Name used in service manual	Name used in parts list	Part.No.
27	Temperature and humidity sensor	PARTS PWB THERMISTOR ASSY SP	302R69419_
28	Power switch	PARTS PWB SWITCH ASSY SP	302NG9430_
29	Toner sensor K	DV-5195K (TONER SENSOR ASSY K)	302R49307_
30	Toner sensor M	DV-5195N (TONER SENSOR ASSY M)	302R49308_
31	Toner sensor C	DV-5195C (TONER SENSOR ASSY C)	302R49309_
32	Toner sensor Y	DV-5195Y (TONER SENSOR ASSY Y)	302R49310_
33	Exit sensor	FK-5345 FK-5347 (SENSOR OPT.)	302WL9301_ 302WL9302_ 302R49313_
34	Press-release sensor	FK-5345 FK-5347 (SENSOR OPT.)	302WL9301_ 302WL9302_ 302R49313_
35	Fuser thermistor 1	FK-5345 FK-5347 (THERMISTOR ASSY)	302WL9301_ 302WL9302_ 302R49313_
36	Fuser thermistor 2	FK-5345 FK-5347 (THERMISTOR FUSER)	302WL9301_ 302WL9302_ 302R49313_
37	DP original sensor	DP ASSY SP (SENSOR OPT.)	302R49301_ (7NXSG2A241++H01)
38	DP feed sensor	DP ASSY SP (SENSOR OPT.)	302R49301_ (7NXSG2A241++H01)
39	DP registration sensor	DP ASSY SP (SENSOR OPT.)	302R49301_ (7NXSG2A241++H01)
40	DP feedshift sensor	DP ASSY SP (SENSOR OPT.)	302R49301_ (7NXSG2A241++H01)
41	DP open/close sensor	DP ASSY SP (SENSOR OPT.)	302R49301_ (7NXSG2A241++H01)
42	LSU thermistor	LK-5195 (PWB THERMISTOR ASSY)	302R49315_



**(5) Motors**

**(5-1) Layout**



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1 Developer motor K / Paper feed motor	Driving the paper feeding and developer unit K.
2 Transfer motor	Driving the primary transfer unit.
3 Drum motor K	Driving the drum unit. (Black)
4 Drum motor CMY	Driving the drum unit. (Color)
5 Developer motor CMY	Driving the developer units. (Color)
6 Lift motor	Operating the bottom plate inside the cassette.
7 Fuser motor	Driving the fuser section.
8 Exit motor	Driving the exit section.
9 Image scanner motor	Driving the optical section.
10 Toner motor K	Supplying the toner to developer unit. (Black)
11 Toner motor M	Supplying the toner to developer unit. (Magenta)
12 Toner motor C	Supplying the toner to developer unit. (Cyan)
13 Toner motor Y	Supplying the toner to developer unit. (Yellow)
14 Exit fan motor	Cooling the exit section.
15 Developer fan motor 1	Cooling the developer.
16 Developer fan motor 2	Cooling the developer.
17 Transfer release motor	Driving the primary transfer roller separation.
18 Polygon motor	Driving polygon mirror.
19 Cleaning motor	Driving the LSU glass cleaning mechanism.
20 Developer fan motor 3	Cooling the developer.
21 Developer fan motor 4	Cooling the developer.
22 Steam removal fan motor	Removing the steam.
23 PWB fan motor	Cooling the power source PWB and high-voltage PWB.
24 Clutch fan motor	Cooling the clutch.
25 Vibration motor K	Vibrating the developer unit K.
26 Vibration motor M	Vibrating the developer unit M.
27 Vibration motor C	Vibrating the developer unit C.
28 Vibration motor Y	Vibrating the developer unit Y.
29 DP feed motor	Driving the original feed section in the document processor.
30 DP conveying motor	Driving the original conveying section in the document processor
31 DP feedshift motor	Driving the original feed section in the document processor.

**(5-2) Part name table**

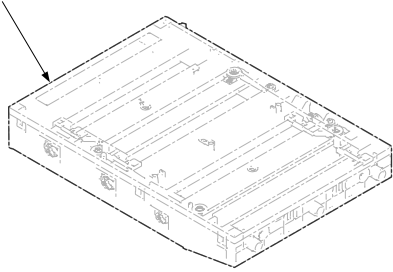
No.	Name used in service manual	Name used in parts list	Part.No.
1	Developer motor K / Paper feed motor	PARTS FEED DRIVE ASSY SP (MOTOR-BL W20)	302R49408_ (302K94414_)
2	Transfer motor	IMAGE DRIVE ASSY (MOTOR-BL W20)	302R45841_ (302K94414_)
3	Drum motor K	DR-5195 (MOTOR-BL W20 DRUM Z11)	302R49304_
4	Drum motor CMY	DR-5195 (MOTOR-BL W20 DRUM Z11)	302R49304_
5	Developer motor CMY	DR-5195 (MOTOR-BL W20)	302R49304_
6	Lift motor	PARTS LIFT MOTOR ASSY SP	302R49422_
7	Fuser motor	PARTS MOTOR-PM FUSER SP	302SZ9408_
8	Exit motor	PARTS EXIT ASSY SP (MOTOR EJECT)	302R49405_ (302P74407_)
9	Image scanner motor	PARTS MOTOR ISU SP	302LW9406_
10	Container motor K	PARTS DC MOTOR ASSY B SP	302R49420_
11	Container motor M	PARTS DC MOTOR ASSY B SP	302R49420_
12	Container motor C	PARTS DC MOTOR ASSY B SP	302R49420_
13	Container motor Y	PARTS DC MOTOR ASSY B SP	302R49420_
14	Exit fan motor	FAN LSU 60-25	302GR4408_
15	Developer fan motor 1	PARTS FAN COOLING LSU 60 SP	302LC9438_
16	Developer fan motor 2	PARTS FAN COOLING LSU 60 SP	302LC9438_
17	Transfer release motor	PARTS DC MOTOR ASSY B SP DC MOTOR ASSY B	302R49420_ 302R40005_
18	Polygon motor	LK-5195 (MOTOR POLYGON)	302R49315_
19	Cleaning motor	PARTS DC MOTOR ASSY B SP	302R49420_
20	Controller fan motor	PARTS,FAN COOLING CONVEYING SP	302FZ9442_
21	Developer fan motor 3	PARTS,FAN IMAGE SP	302FZ9466_
22	Developer fan motor 4	PARTS,FAN IMAGE SP	302FZ9466_
23	Steam removal fan motor	PARTS EXIT ASSY SP (FAN COOLING 40-15)	302R49405_ (302H04412_)
24	PWB fan motor	PARTS FAN COOLING LSU 60 SP	302LC9438_
25	Clutch fan motor	FAN COOLING 40-15	302H04412
26	Vibration motor K	DV-5195K (MOTOR VIBRATION)	302R49307_
27	Vibration motor M	DV-5195M (MOTOR VIBRATION)	302R49308_

No.	Name used in service manual	Name used in parts list	Part.No.
28	Vibration motor C	DV-5195C (MOTOR VIBRATION)	302R49309_
29	Vibration motor Y	DV-5195Y (MOTOR VIBRATION)	302R49310_
30	DP feed motor	DP ASSY SP (MOTOR-HB PAPER FEED)	302R49301_ (302NM4404_)
31	DP conveying motor	DP ASSY SP (MOTOR-HB PAPER FEED)	302R49301_ (302NM4404_)
32	DP feedshift motor	DP ASSY SP (MOTOR ROTARY)	302R49301_ (302KY4409_)

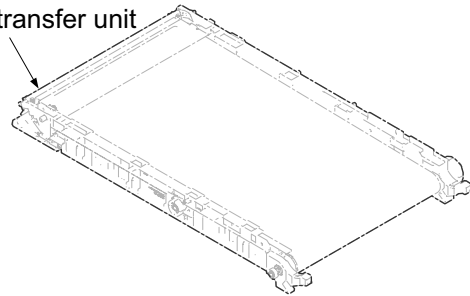
(6) Others

(6-1) Layout

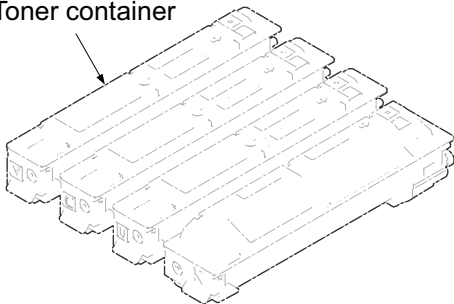
Laser scanner unit



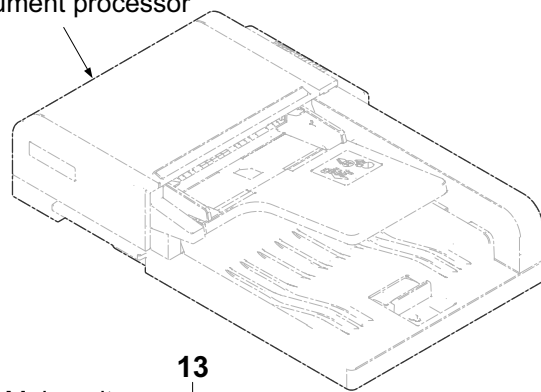
Primary transfer unit



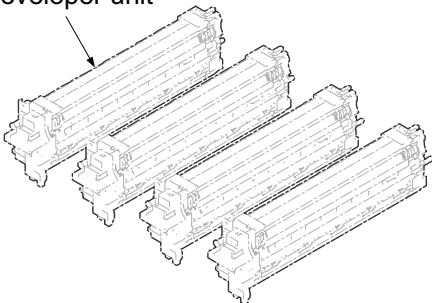
Toner container



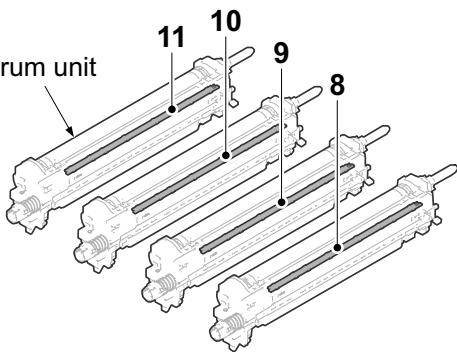
Document processor



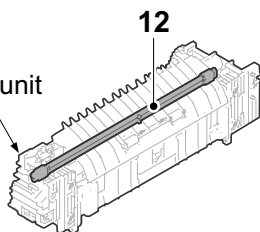
Developer unit



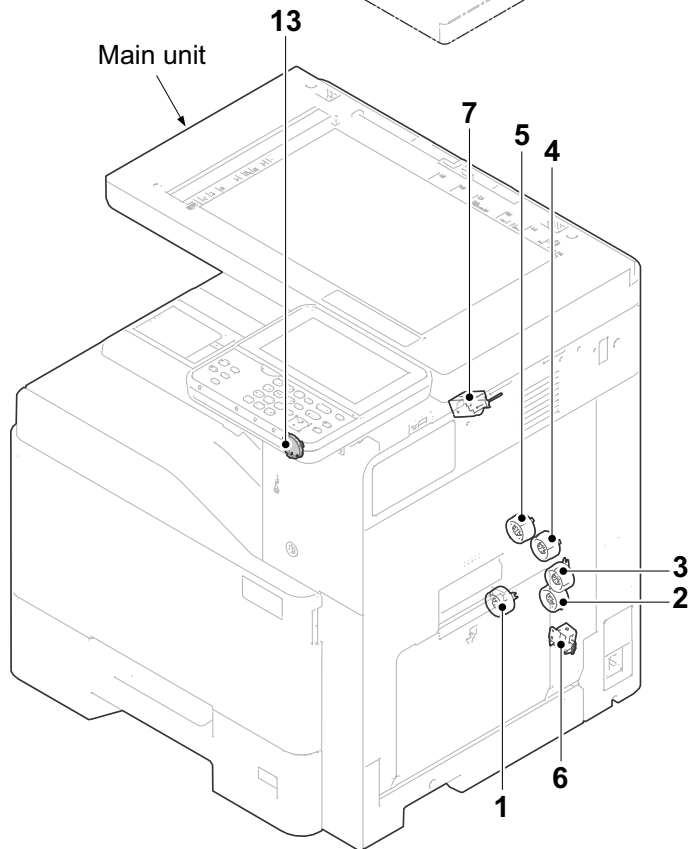
Drum unit



Fuser unit



Main unit



1	Paper feed clutch	Controlling the primary paper feeding from the cassette.
2	Middle clutch	Controlling the conveying section drive.
3	Duplex clutch	Controlling the duplex drive.
4	Registration clutch	Controlling the secondary paper feeding from the cassette.
5	Developer clutch	Controlling the drive to developer unit. (Black)
6	MP solenoid	Controlling the primary paper feeding from the MP tray.
7	Feedshift solenoid	Operates the feedshift guide.
8	Cleaning lamp K	Removing the remaining electric charge on the drum. (Black)
9	Cleaning lamp M	Removing the remaining electric charge on the drum. (Magenta)
10	Cleaning lamp C	Removing the remaining electric charge on the drum. (Cyan)
11	Cleaning lamp Y	Removing the remaining electric charge on the drum. (Yellow)
12	Fuser heater	Heating the heat roller.
13	Speaker	Outputting sounds.

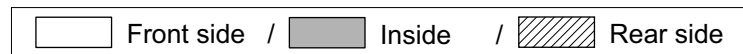
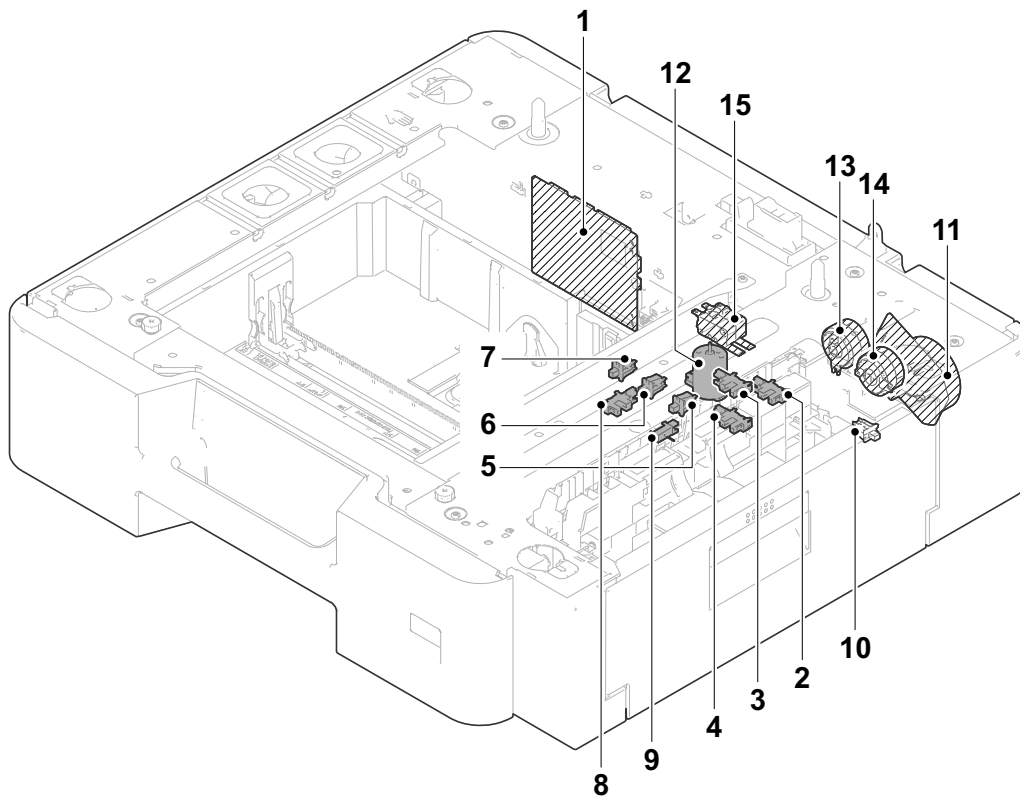
**(6-2) Part name table**

No.	Name used in service manual	Name used in parts list	Part.No.
1	Paper feed clutch	PARTS FEED DRIVE ASSY SP (CLUTCH 35 Z35R)	302R49408_ (302NR4404_)
2	Middle clutch	PARTS FEED DRIVE ASSY SP (CLUTCH 35 Z35R)	302R49408_ (302NR4404_)
3	Duplex clutch	PARTS FEED DRIVE ASSY SP (CLUTCH 35 Z35R)	302R49408_ (302NR4404_)
4	Registration clutch	PARTS FEED DRIVE ASSY SP (CLUTCH 35 Z35R)	302R49408_ (302NR4404_)
5	Developer clutch	PARTS FEED DRIVE ASSY SP (CLUTCH 35 Z35R)	302R49408_ (302NR4404_)
6	MP solenoid	PARTS FEED DRIVE ASSY SP (SOLENOID MPF)	302R49408_ (302HN4416_)
7	Feedshift solenoid	PARTS EXIT ASSY SP (SOLENOID PRIMARY FEED)	302R49405_ (302K94417_)
8	Cleaning lamp K	DK-5195 (PWB ERASER ASSY)	302R49305_
9	Cleaning lamp M	DK-5195 (PWB ERASER ASSY)	302R49305_
10	Cleaning lamp C	DK-5195 (PWB ERASER ASSY)	302R49305_
11	Cleaning lamp Y	DK-5195 (PWB ERASER ASSY)	302R49305_

No.	Name used in service manual	Name used in parts list	Part.No.
12	Fuser heater	FK-5345 FK-5347 HEATER LAMP 240 HEATER LAMP 120	302WL9301_ 302WL9302_
13	Speaker	PARTS SPEAKER SP	302ND9437_

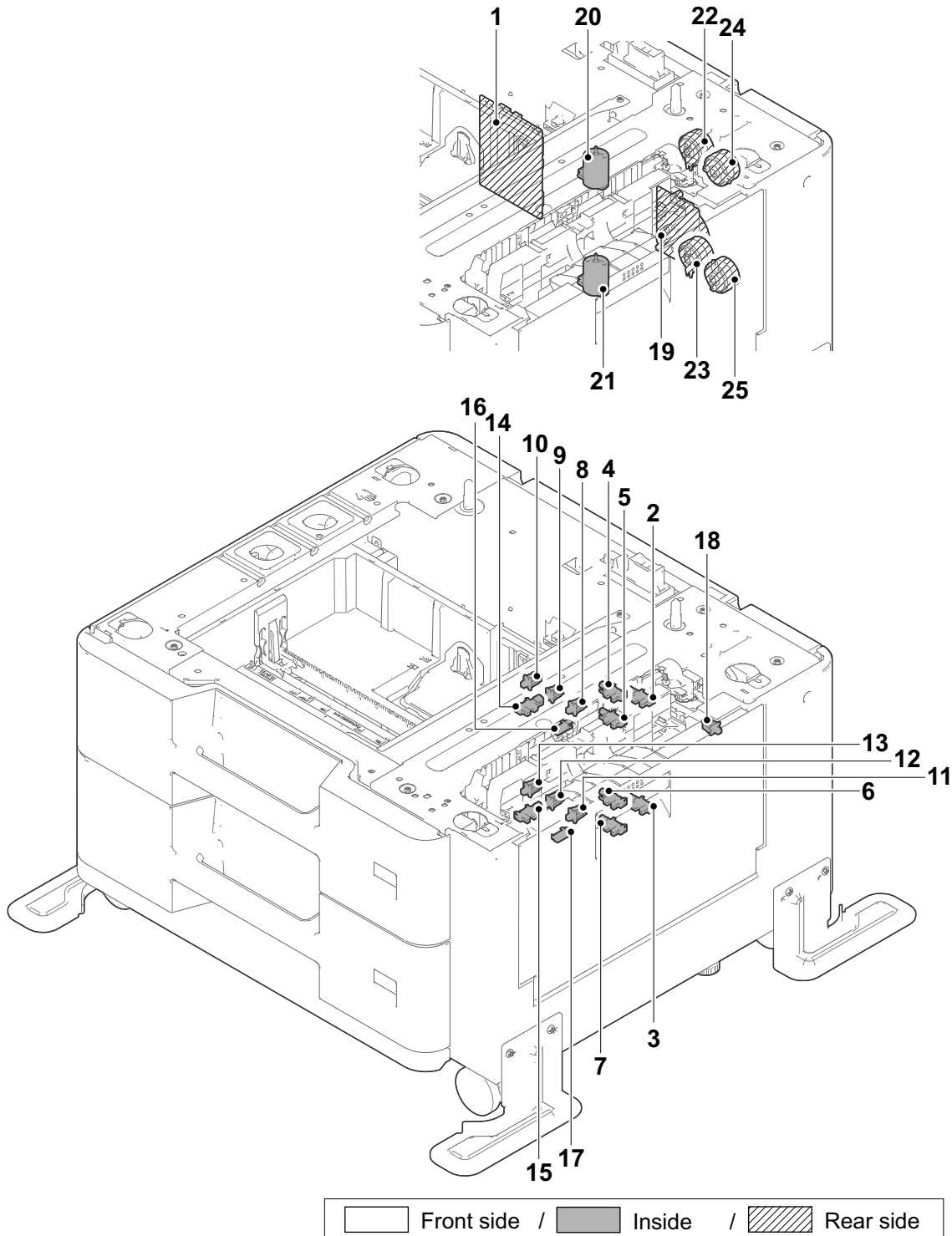
### 3 - 4 Electric parts (option)

#### (1) Paper feeder (PF-5120)



- |                            |  |
|----------------------------|--|
| 1 PF PWB                   | Controlling the electric parts in the PF.                                    |
| 2 PF paper sensor          | Detecting the presence of paper in the cassette.                             |
| 3 PF paper gauge sensor 1  | Detecting the level of the remaining paper inside the cassette.              |
| 4 PF paper gauge sensor 2  | Detecting the level of the remaining paper inside the cassette.              |
| 5 PF paper length switch 1 | Detecting the cassette paper size and presence of cassette.                  |
| 6 PF paper length switch 2 | Detecting the cassette paper size and presence of cassette.                  |
| 7 PF paper length switch 3 | Detecting the cassette paper size and presence of cassette.                  |
| 8 PF lift sensor           | Detecting the upper limit when lifting the bottom plate inside the cassette. |
| 9 PF conveying sensor      | Detecting the paper conveying after cassette feed.                           |
| 10 PF right cover switch   | Detecting the right cover open.  |
| 11 PF paper feed motor     | Driving the paper feeding system.  |
| 12 PF lift motor           | Operating the bottom plate inside the cassette.                              |
| 13 PF paper feed clutch    | Controlling the primary paper feeding from the cassette.                     |
| 14 PF conveying clutch     | Controlling the paper conveying section.                                     |
| 15 Cassette heater switch  | Interlock switch for the cassette heater.                                    |

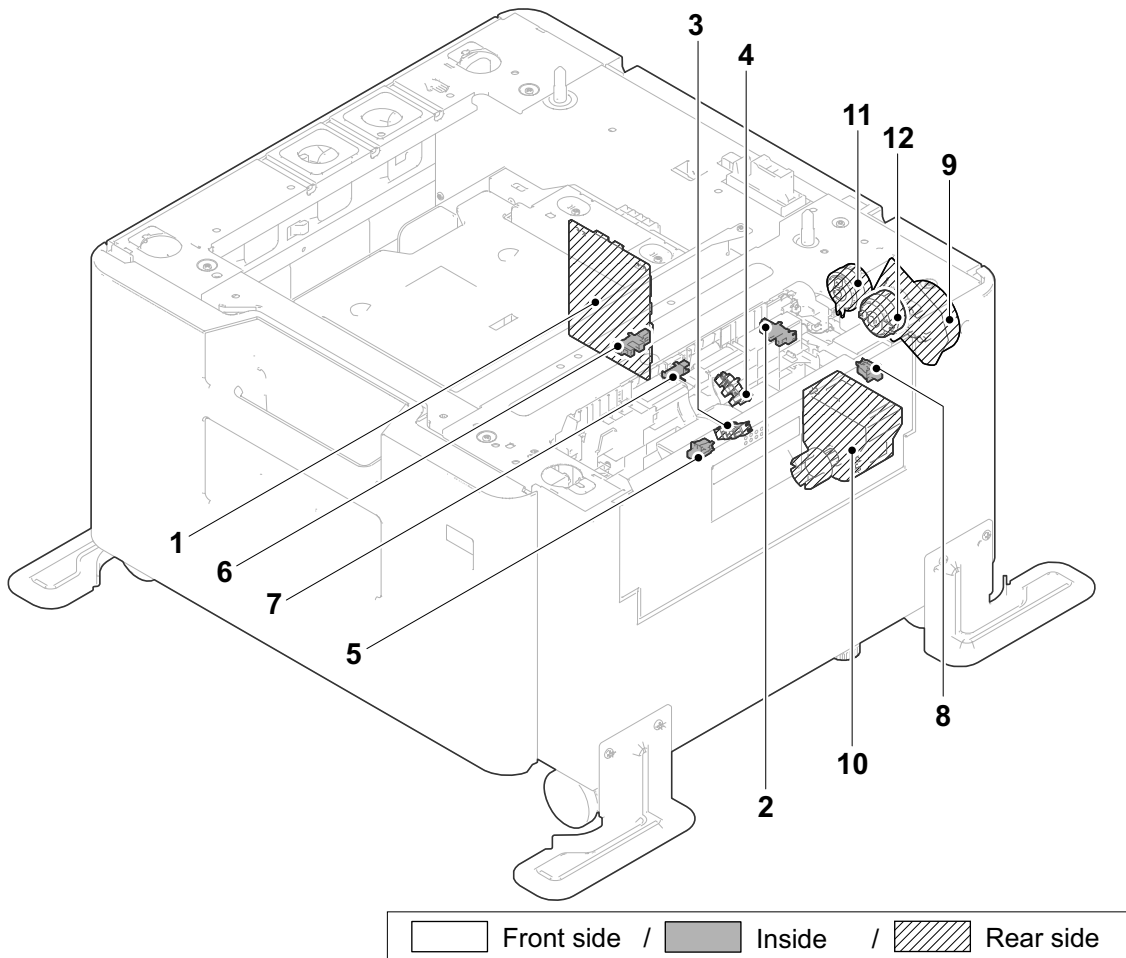


**(2) Paper feeder (PF-5130)**

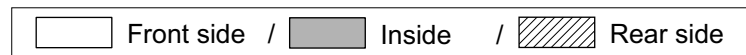
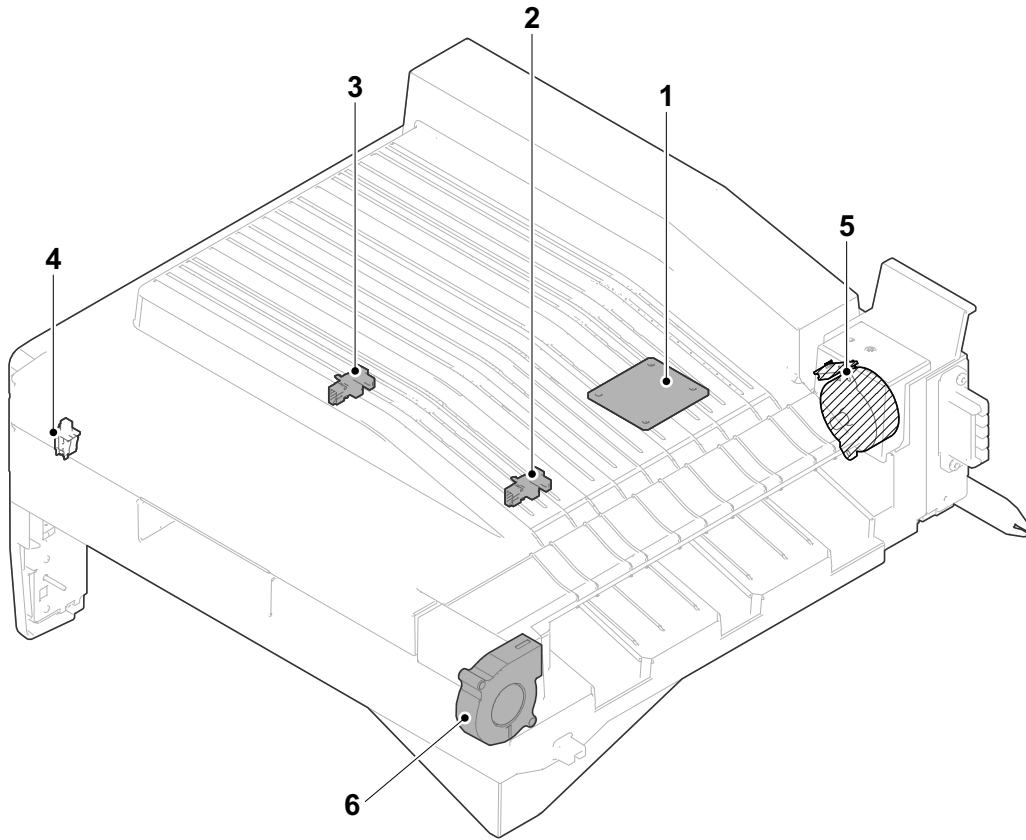
- |   |                         |   |
|---|-------------------------|---|
| 1 | PF PWB                  | Controlling the electric parts in the PF.                             |
| 2 | PF paper sensor 1       | Detecting presence of paper in the upper cassette.                    |
| 3 | PF paper sensor 2       | Detecting presence of paper in the lower cassette.                    |
| 4 | PF paper gauge sensor 1 | Detecting the level of the remaining paper inside the upper cassette. |
| 5 | PF paper gauge sensor 2 | Detecting the level of the remaining paper inside the upper cassette. |
| 6 | PF paper gauge sensor 3 | Detecting the level of the remaining paper inside the lower cassette. |
| 7 | PF paper gauge sensor 4 | Detecting the level of the remaining paper inside the lower cassette. |

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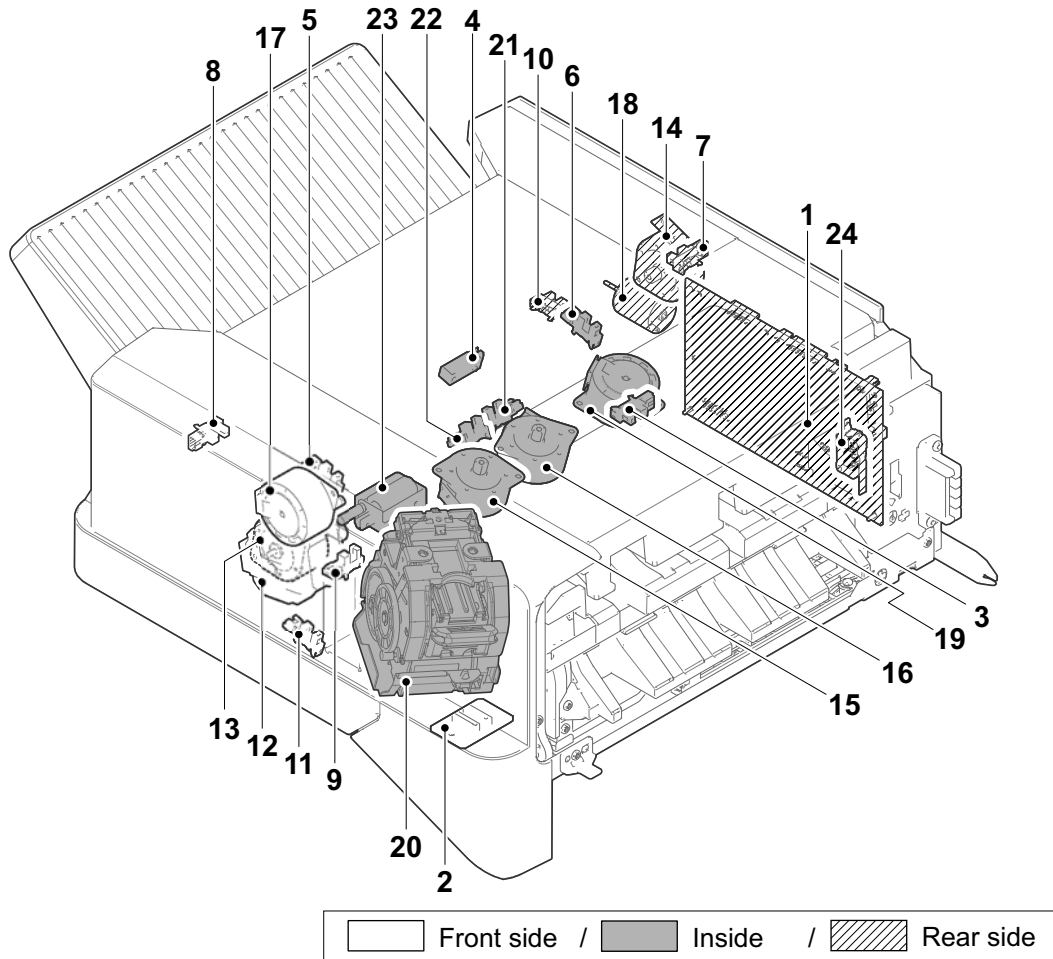
8 PF paper length switch 1	Detecting the cassette paper size and presence of upper cassette.
9 PF paper length switch 2	Detecting the cassette paper size and presence of upper cassette.
10 PF paper length switch 3	Detecting the cassette paper size and presence of upper cassette.
11 PF paper length switch 4	Detecting the cassette paper size and presence of lower cassette.
12 PF paper length switch 5	Detecting the cassette paper size and presence of lower cassette.
13 PF paper length switch 6	Detecting the cassette paper size and presence of lower cassette.
14 PF lift sensor 1	Detecting the upper limit when lifting the bottom plate inside the upper cassette.
15 PF lift sensor 2	Detecting the upper limit when lifting the bottom plate inside the lower cassette.
16 PF conveying sensor 1	Detecting the paper conveying after upper cassette feed.
17 PF conveying sensor 2	Detecting the paper conveying after lower cassette feed.
18 PF right cover switch	Detecting the right cover open.
19 PF paper feed motor	Driving the paper feeding system.
20 PF lift motor 1	Operating the bottom plate inside the upper cassette.
21 PF lift motor 2	Operating the bottom plate inside the lower cassette.
22 PF paper feed clutch 1	Controlling the primary paper feeding from the upper cassette.
23 PF paper feed clutch 2	Controlling the primary paper feeding from the lower cassette.
24 PF conveying clutch 1	Controlling the paper conveying section.
25 PF conveying clutch 2	Controlling the paper conveying section.

**(3) Paper feeder (PF-5140)**

- |    |                          |  |
|----|--------------------------|--|
| 1  | PF PWB                   | Controlling the electric parts in the PF.                                |
| 2  | PF paper sensor          | Detecting presence of paper in the paper deck.                           |
| 3  | PF paper gauge sensor 1  | Detecting the level of the remaining paper inside the deck.              |
| 4  | PF paper gauge sensor 2  | Detecting the level of the remaining paper inside the deck.              |
| 5  | PF deck detection switch | Detecting the PF deck installation.                                      |
| 6  | PF lift sensor           | Detecting the upper limit when lifting the bottom plate inside the deck. |
| 7  | PF conveying sensor      | Detecting the paper conveying after deck feed.                           |
| 8  | PF right cover switch    | Detecting the right cover open.  |
| 9  | PF paper feed motor      | Driving the paper feeding system.  |
| 10 | PF lift motor            | Operating the bottom plate inside the deck.                              |
| 11 | PF paper feed clutch     | Controlling the primary paper feeding from the deck.                     |
| 12 | PF conveying clutch      | Controlling the paper conveying section.                                 |

**(4) Attachment kit (AK-5100)**

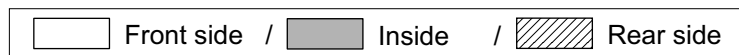
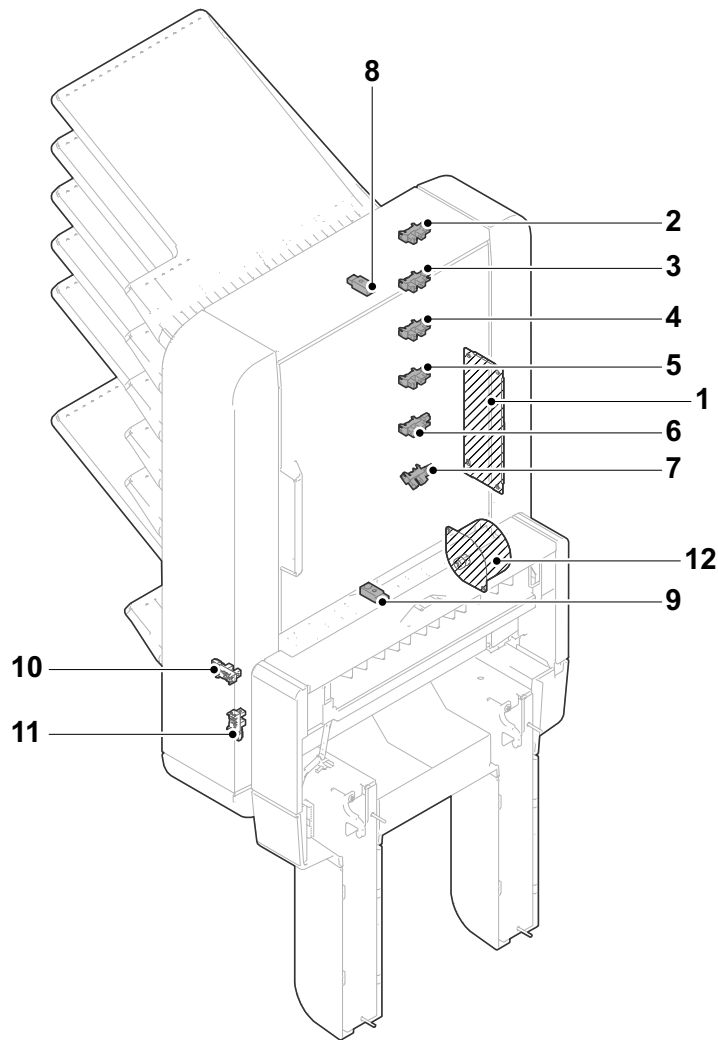
- |                         |  |
|-------------------------|--|
| 1 BR PWB                | Controlling the electric parts in the BR.      |
| 2 BR conveying sensor 1 | Detecting paper conveyed in the bridge.        |
| 3 BR conveying sensor 2 | Detecting paper conveyed in the bridge.        |
| 4 BR cover switch       | Detecting the bridge cover open.               |
| 5 BR conveying motor    | Controlling the paper conveying to the bridge. |
| 6 BR fan motor          | Cooling the paper conveyed in the bridge.      |

**(5) Inner finisher (DF-5100)**

- |                                 |   |
|---------------------------------|---|
| 1 DF PWB                        | Controlling the electric parts.                         |
| 2 DF staple relay PWB           | Relaying the staple unit control signals.               |
| 3 DF paper entry sensor         | Detecting presence of paper at the paper entry section. |
| 4 DF exit paper sensor          | Detecting presence of paper the exit section.           |
| 5 DF side registration sensor 1 | Detecting the adjusting plate front home position.      |
| 6 DF side registration sensor 2 | Detecting the adjusting plate rear home position.       |
| 7 DF adjusting sensor           | Detecting the paper guides home position.               |
| 8 DF bundle exit sensor         | Detecting the bundle exit unit position.                |
| 9 DF paddle sensor              | Detecting the paddle home position.                     |
| 10 DF tray sensor               | Detecting the exit tray lower limit.                    |
| 11 DF slide sensor              | Detecting the staple unit slide position.               |
| 12 DF middle motor              | Driving the middle roller.                              |
| 13 DF paddle motor              | Driving the paper guides.                               |
| 14 DF exit release motor        | Driving the bundle exit unit.                           |
| 15 DF side registration motor 1 | Driving the adjusting plate front.                      |
| 16 DF side registration motor 2 | Driving the adjusting plate rear.                       |

17 DF exit motor	Driving the exit roller.
18 DF tray motor	Ascending and descending the exit tray.
19 DF slide motor	Driving the staple unit.
20 DF staple unit	Paper stapler.
21 DF paper press sensor 1	Detecting the bundle exit paper pressure. (Upper limit)
22 DF paper press sensor 2	Detecting the bundle exit paper pressure. (Lower limit)
23 DF paper press solenoid	Switching the bundle paper pressure.
24 DF setting switch	Detecting the DF setting. (Interlock detection)

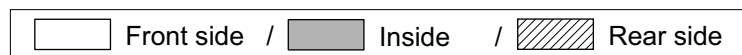
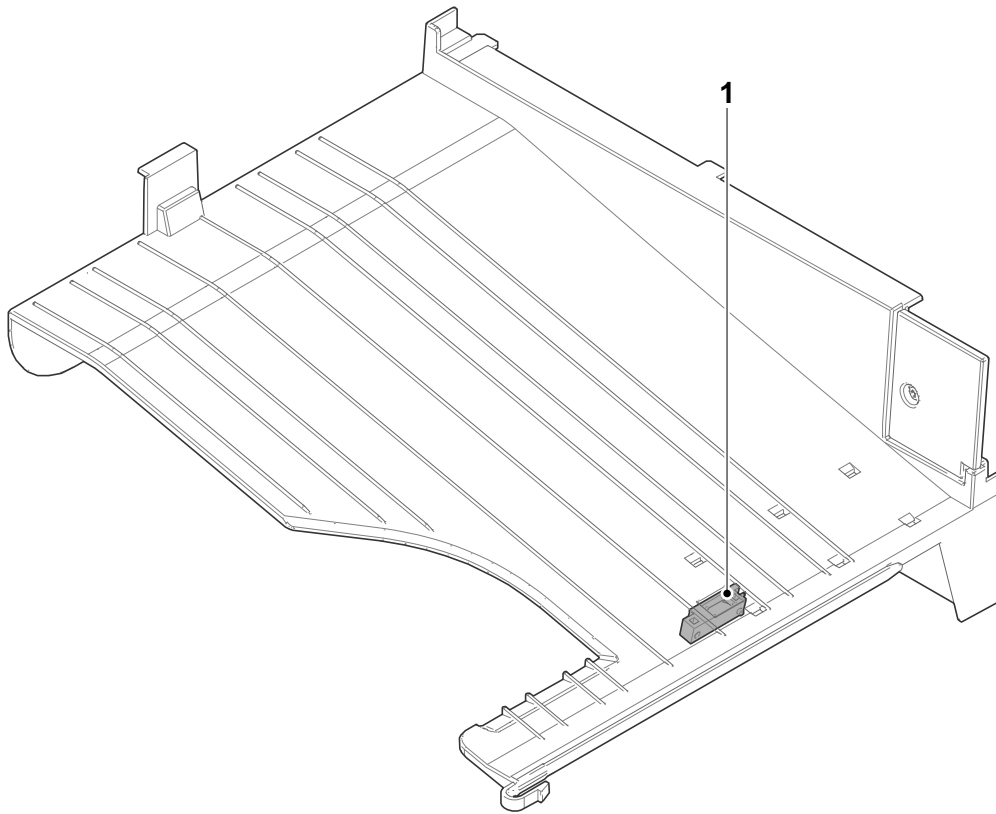
### (6) Mailbox cross-section view (MT-5100)



1 MT	Controlling electric parts of the mailbox.
2 MB overflow sensor 1	Detecting overflow of paper exited to the sub tray 1.
3 MB overflow sensor 2	Detecting overflow of paper exited to the sub tray 2.
4 MB overflow sensor 3	Detecting overflow of paper exited to the sub tray 3.

5 MB overflow sensor 4	Detecting overflow of paper exited to the sub tray 4.
6 MB overflow sensor 5	Detecting overflow of paper exited to the sub tray 5.
7 MB overflow sensor 6	Detecting overflow of paper exited to the main tray 6.
8 MT exit sensor 1	Detecting paper jam.
9 MT exit sensor 2	Emitting LED pulses.
10 MT home position sensor	Controlling the MT drive motor.
11 MT cover sensor	Detecting the mailbox cover open/close.
12 MT drive motor.	Driving the mailbox paper conveying.

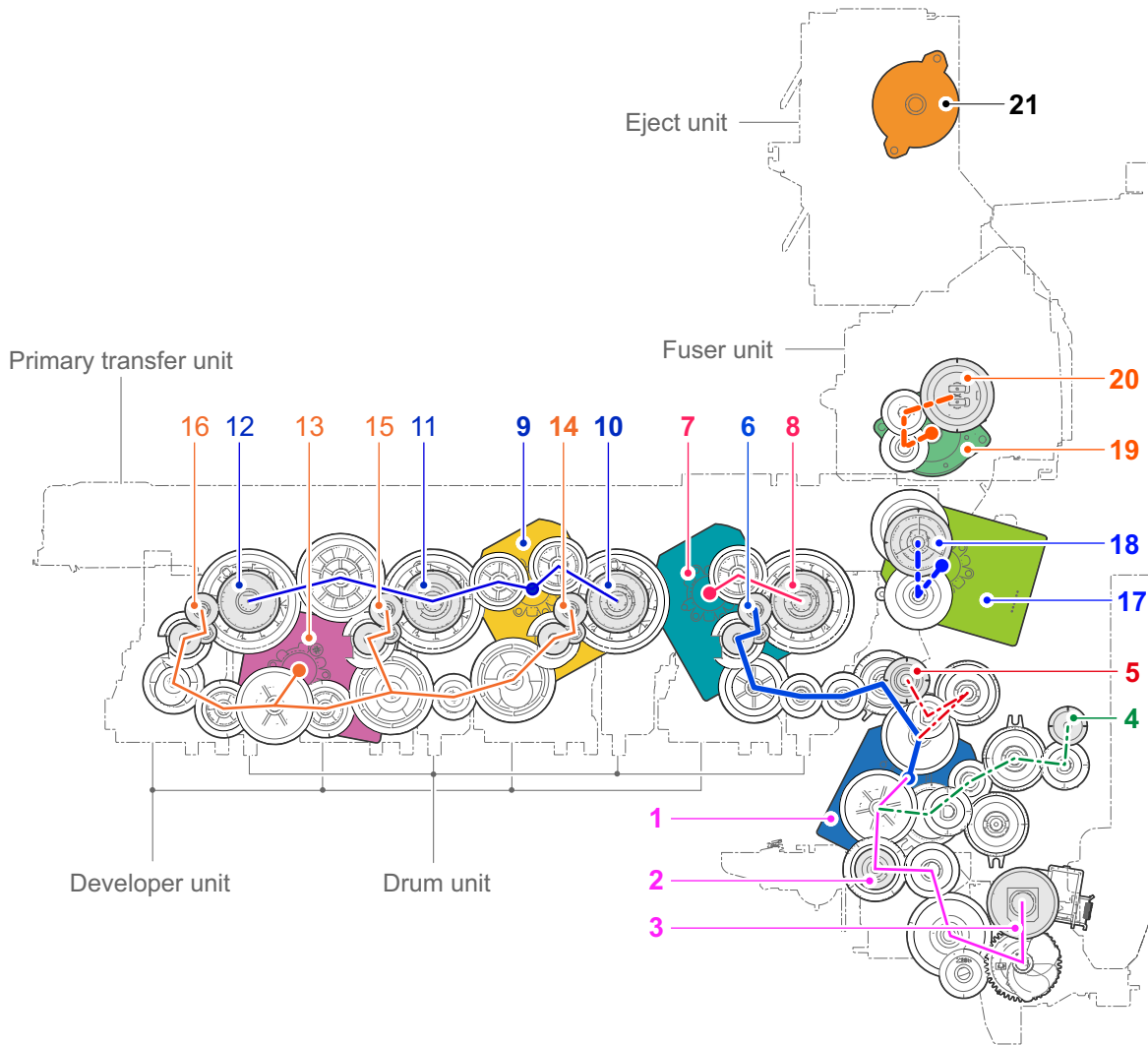
### (7) Job separator (JS-5100)



1 JS exit paper sensor	Detecting presence of the job tray paper.
------------------------	---

### 3 - 5 Drive system

#### (1) Drive system for the paper conveying





[Driving feed / developer K.](#)

- 1 Developer motor K / Paper feed motor
- 2 Paper feed roller
- 3 MP paper feed roller
- 4 DU conveying roller
- 5 registration roller
- 6 Developer sleeve roller unit.

[Driving drum K.](#)

- 7 Drum motor K
- 8 Drum K

[Driving drum CMY.](#)

- 9 Drum motor CMY
- 10 Drum M
- 11 Drum C
- 12 Drum Y

[Driving developer CMY](#)

- 13 Developer motor CMY
- 14 Developer sleeve roller M
- 15 Developer sleeve roller C
- 16 Developer sleeve roller Y

[Imaging/transfer drive](#)

- 17 Transfer motor
- 18 Transfer belt drive roller

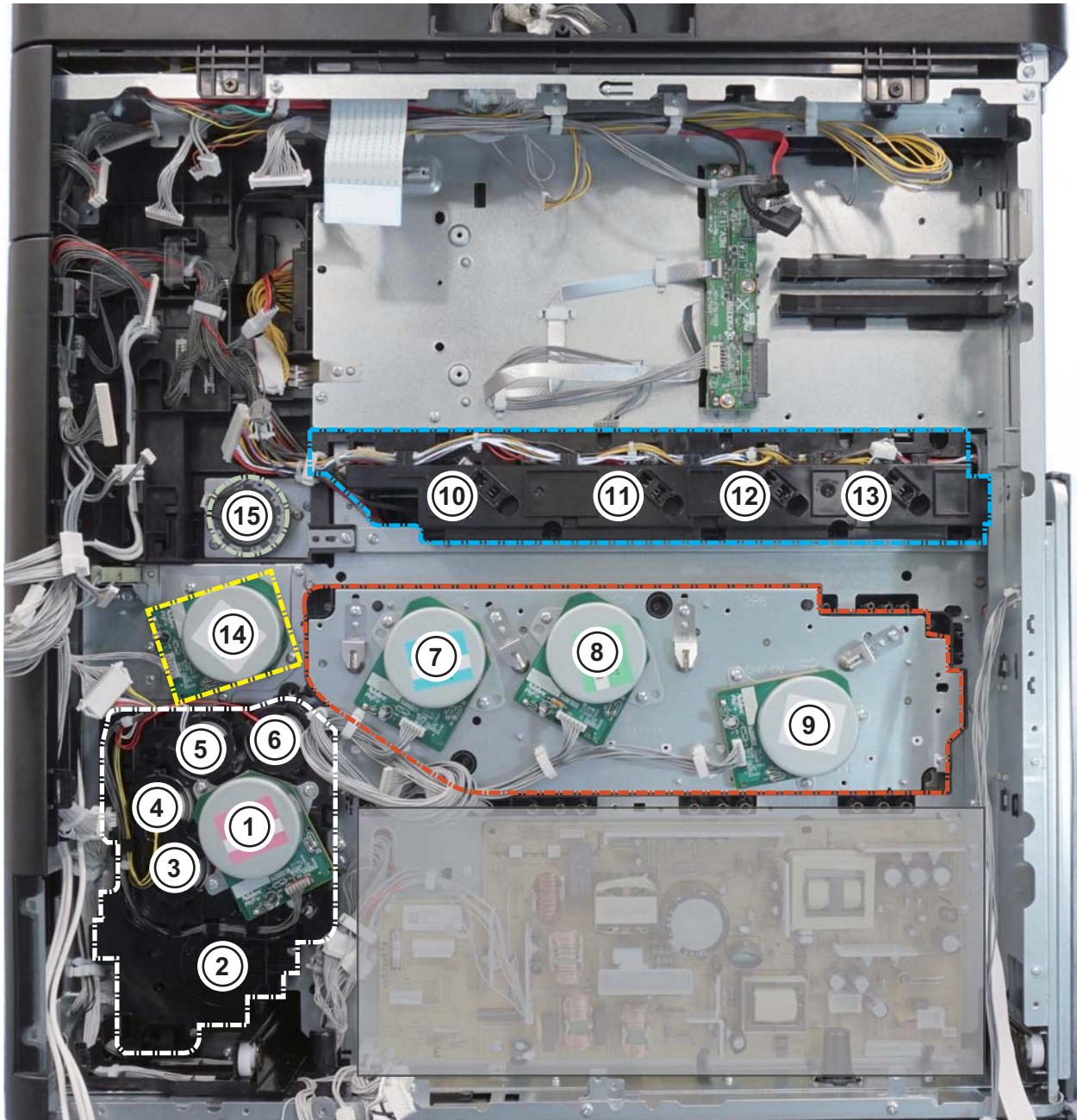
[Fuser drive](#)

- 19 Fuser motor
- 20 Fuser heat roller

[Exit drive](#)

- 21 Exit motor

## (2) Drive location



## Driving feed unit.

- 1 Developer motor K / Paper feed motor
- 2 Paper feed clutch
- 3 Middle clutch
- 4 Duplex clutch
- 5 Registration clutch
- 6 Developer clutch

## Main drive unit

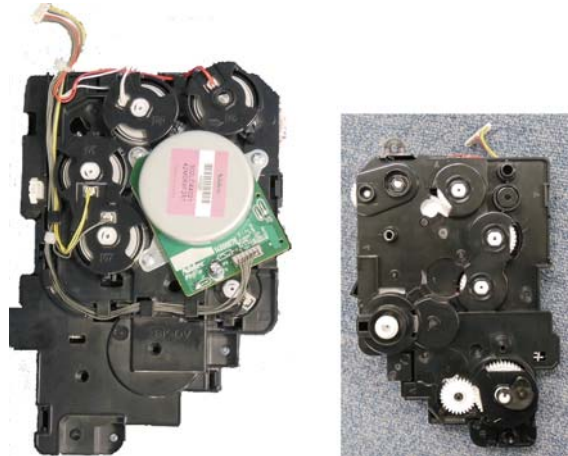
- 7 Drum motor K
- 8 Drum motor CMY
- 9 Developer motor CMY

## Toner supply drive unit

- 10 Toner motor K
- 11 Toner motor M
- 12 Toner motor C
- 13 Toner motor Y
- 14 Transfer motor
- 15 Fuser motor

### (3) Drive unit

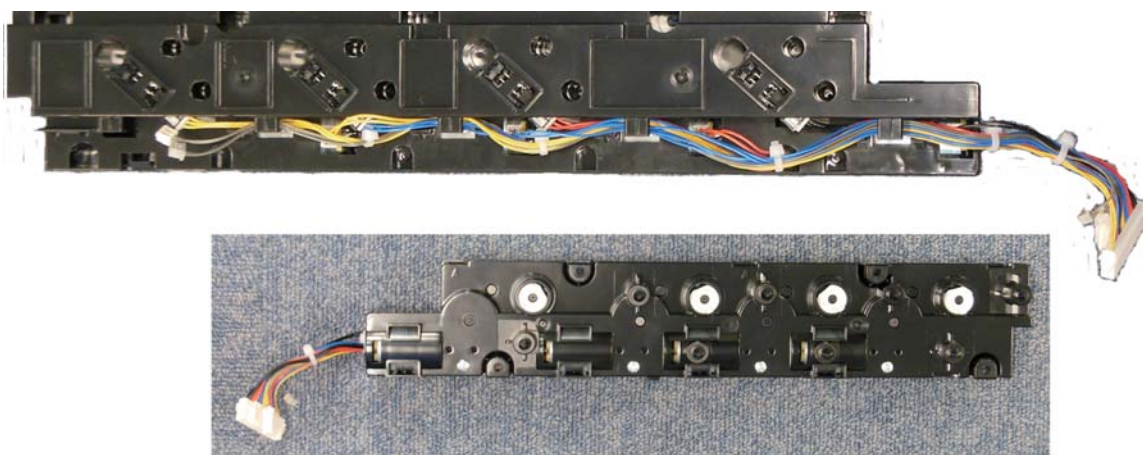
#### (3-1) Driving feed unit.



#### (3-2) Main drive unit



#### (3-3) Toner supply drive unit



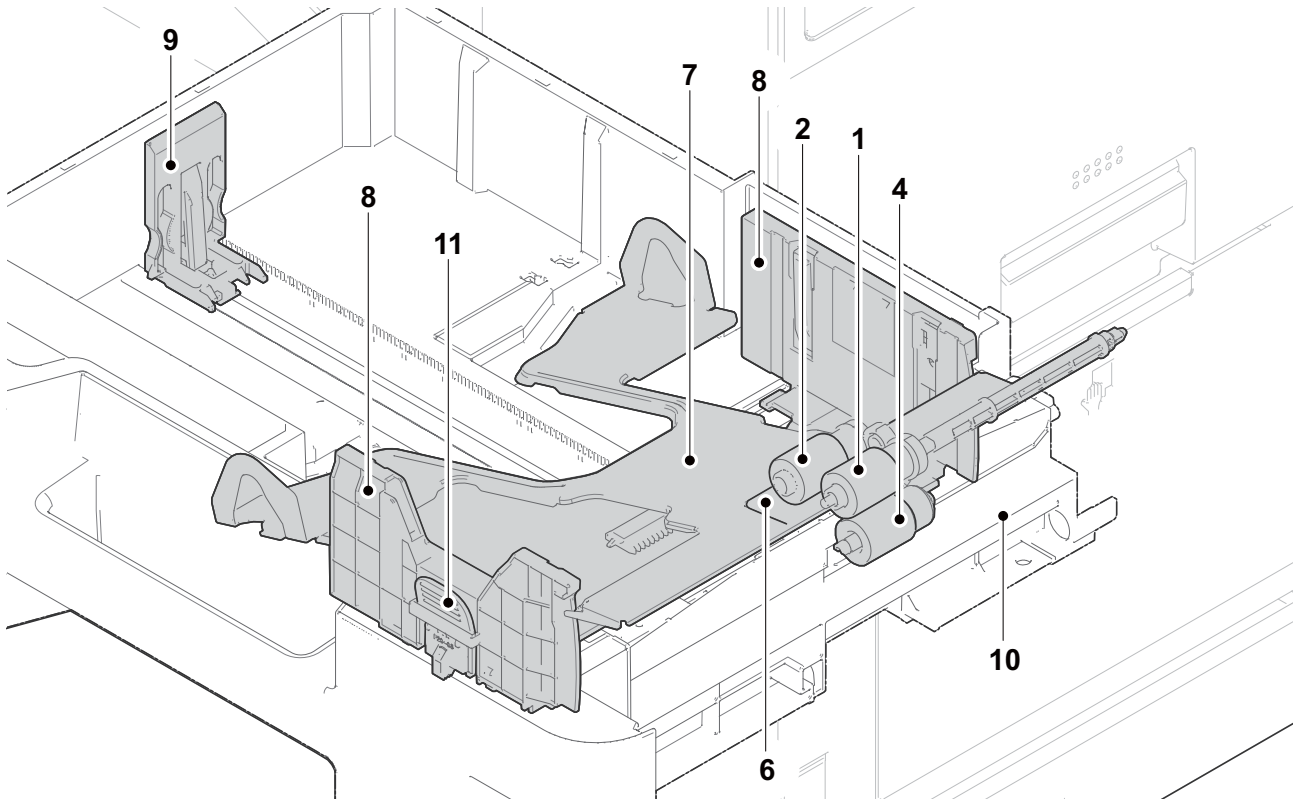
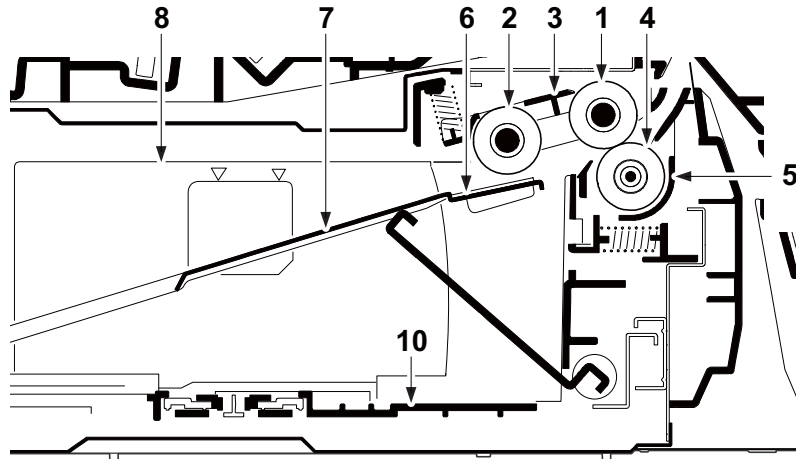
### 3 - 6 Mechanical construction

#### (1) 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 separate section.

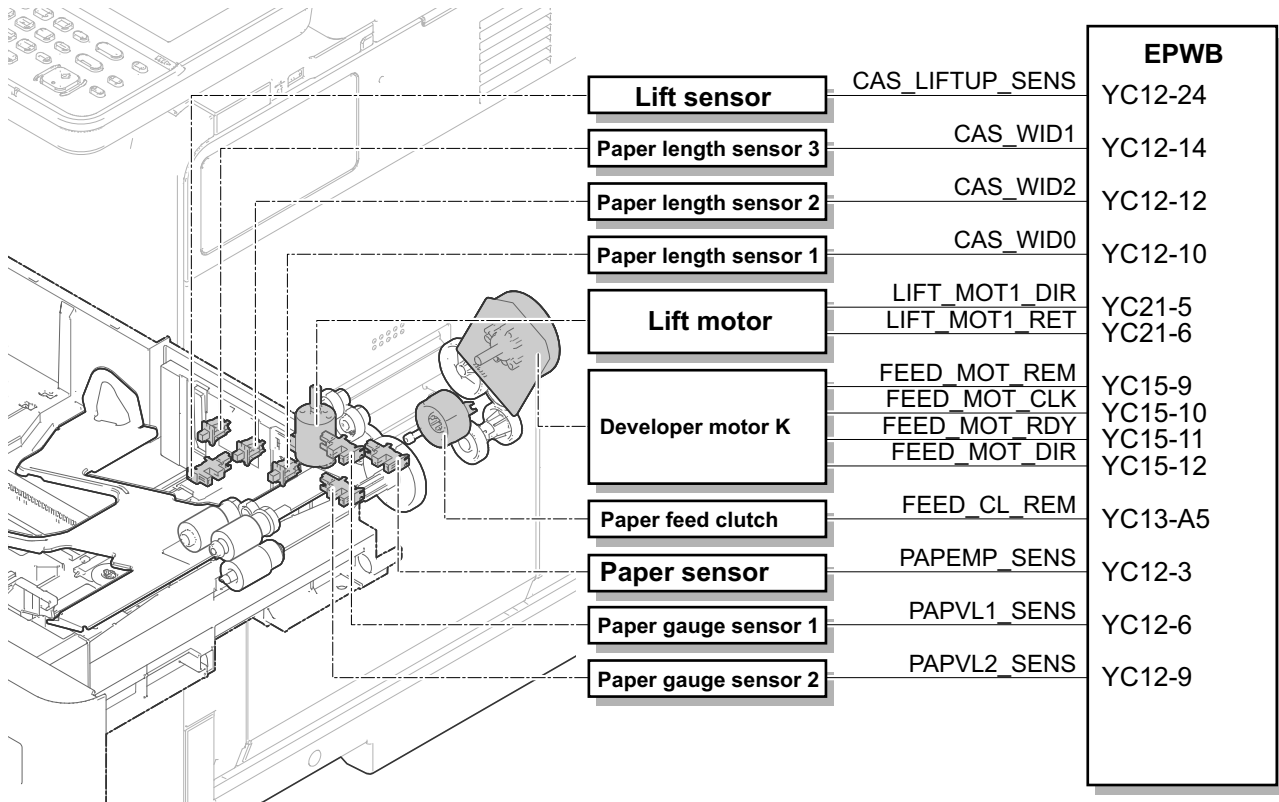
##### (1-1) Cassette paper feed section

The cassette can load 550 sheets paper (64g/m<sup>2</sup>) or 500 sheets paper (80g/m<sup>2</sup>). The cassette forwards paper by rotating the pickup roller and conveys it to the paper conveying section by rotating the paper feed roller. Multi-feeding is also prevented by the effect of the retard roller.



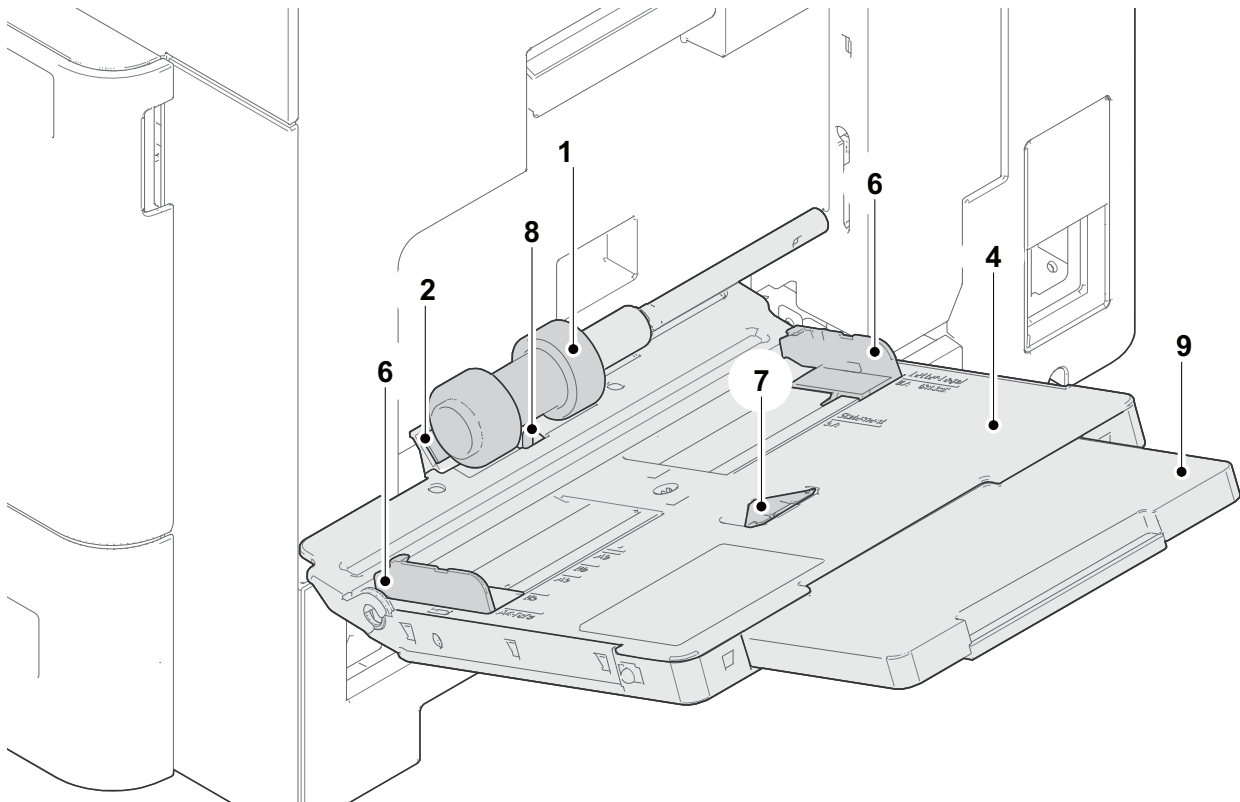
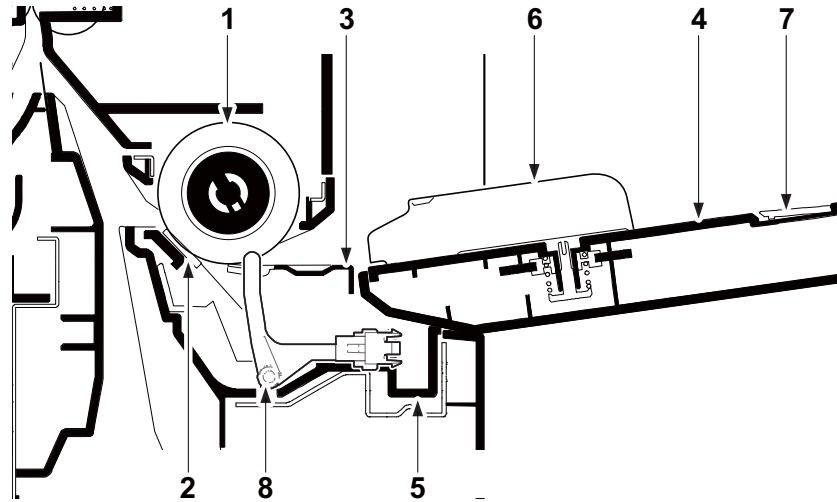
- |                     |                      |                              |
|---------------------|----------------------|------------------------------|
| 1 Paper feed roller | 5 Retard holder      | 9 Paper length guide         |
| 2 Pickup roller     | 6 Friction pad       | 10 Cassette base             |
| 3 Pickup holder     | 7 Lift plate         | 11 Width guide release lever |
| 4 Retard roller     | 8 Paper width guides |                              |

[Block diagram]



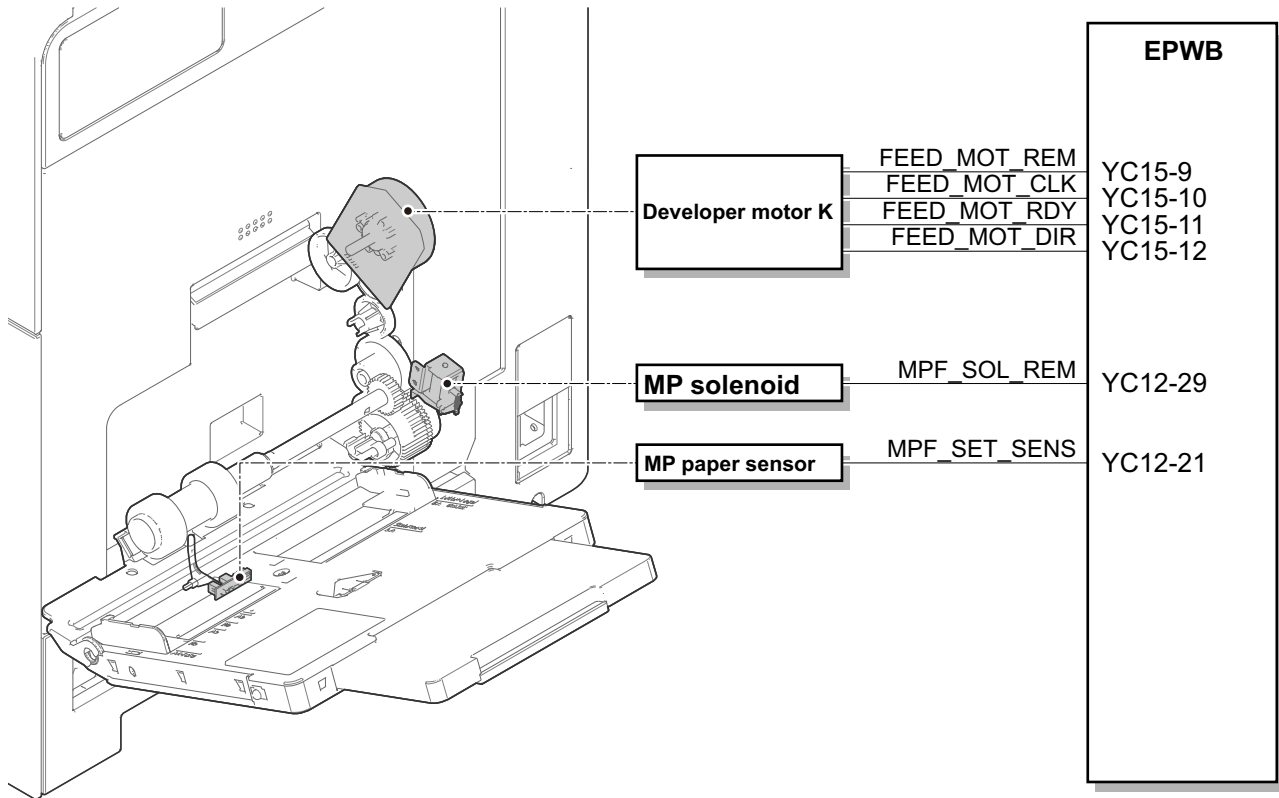
## (1-2) MP tray paper feed section

The MP tray can load 100 sheets paper (80g/m<sup>2</sup>). The paper on the MP tray is fed by rotating the MP paper feed roller while lifting up the MP lift plate by the MP solenoid. Multi-feeding is also prevented by the effect of the MP separation pad.



- |                        |                         |                              |
|------------------------|-------------------------|------------------------------|
| 1 MP paper feed roller | 4 MP tray               | 7 Paper stopper              |
| 2 MP separation pad    | 5 MP frame              | 8 Actuator (MP paper sensor) |
| 3 MP lift plate        | 6 MP paper width guides | 9 Sub tray                   |

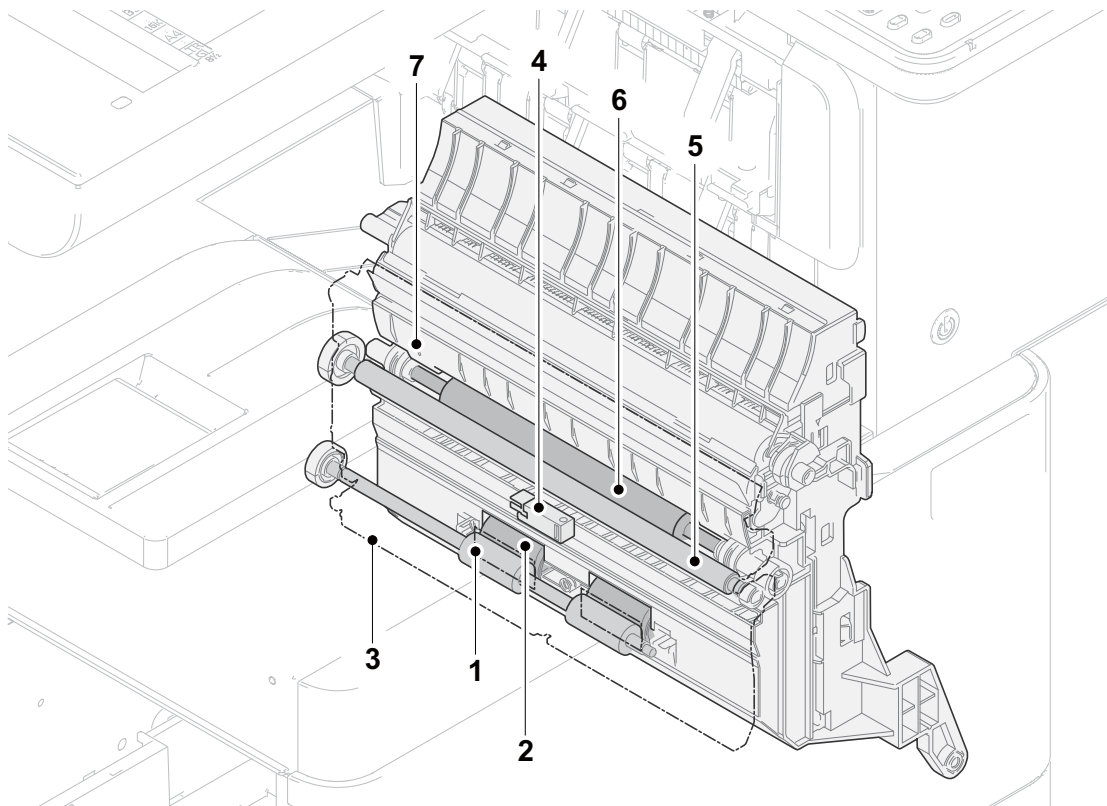
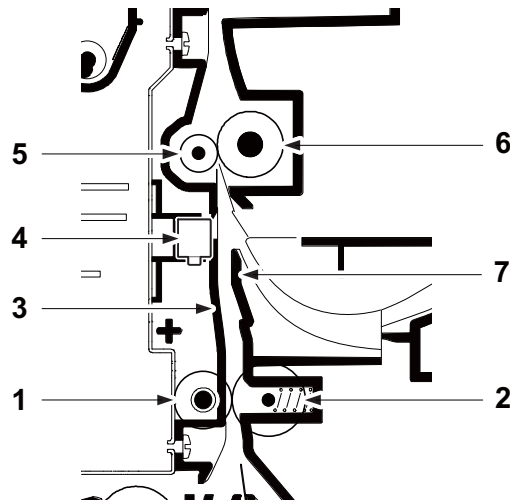
[Block diagram]





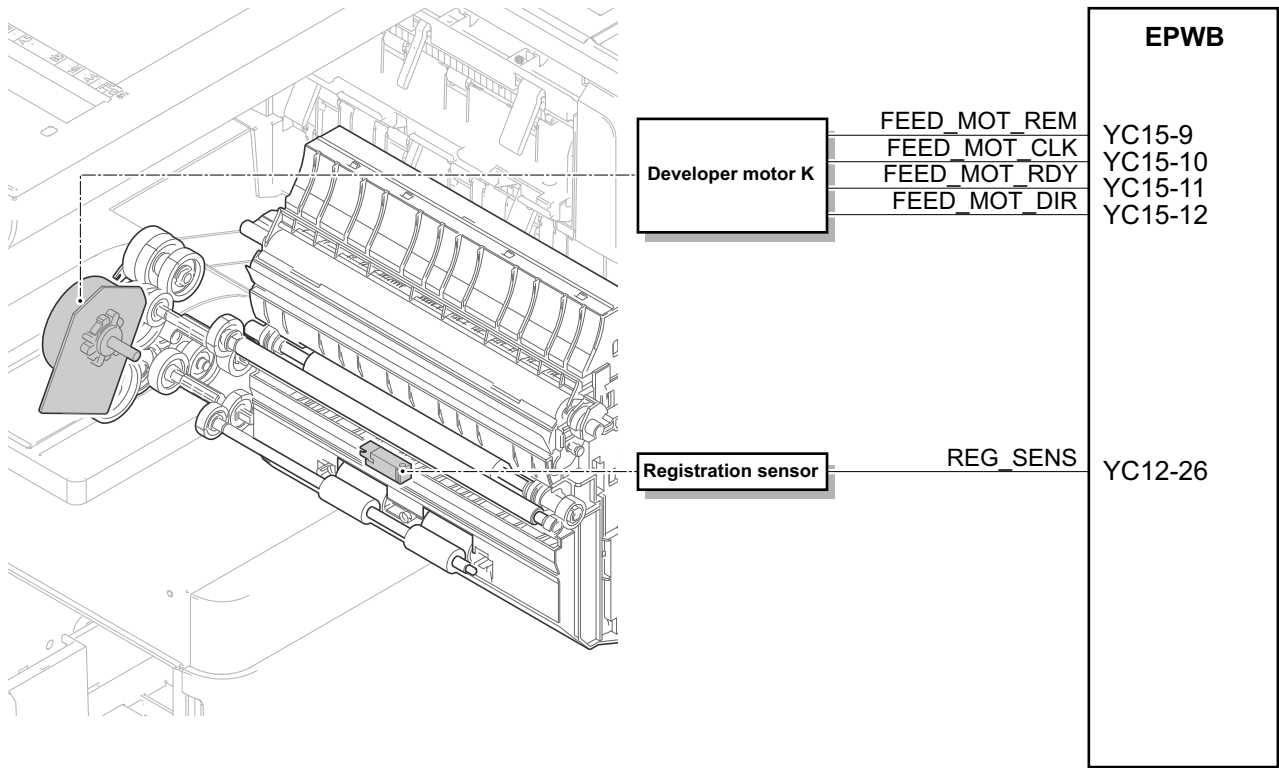
### (1-3) Paper conveying section

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.



- |                      |                             |                   |
|----------------------|-----------------------------|-------------------|
| 1 Middle roller      | 4 Registration sensor       | 7 Conveying guide |
| 2 Middle pulley      | 5 Registration roller left  |                   |
| 3 Registration guide | 6 Registration roller right |                   |

[Block diagram]



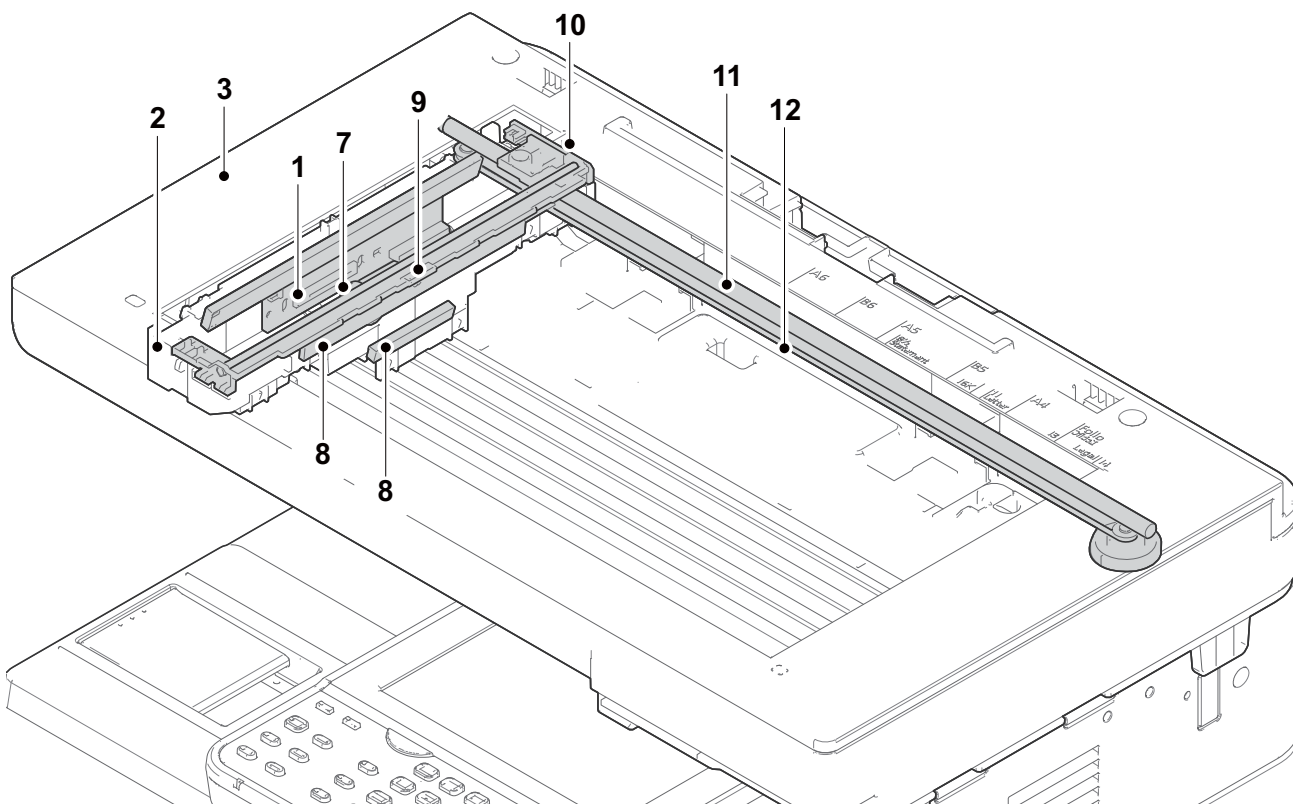
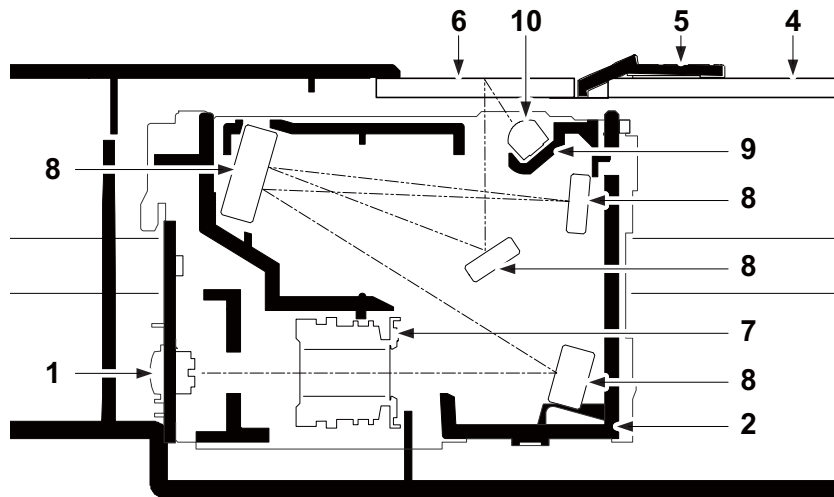
## (2) Optical section

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

### (2-1) Image scanner section

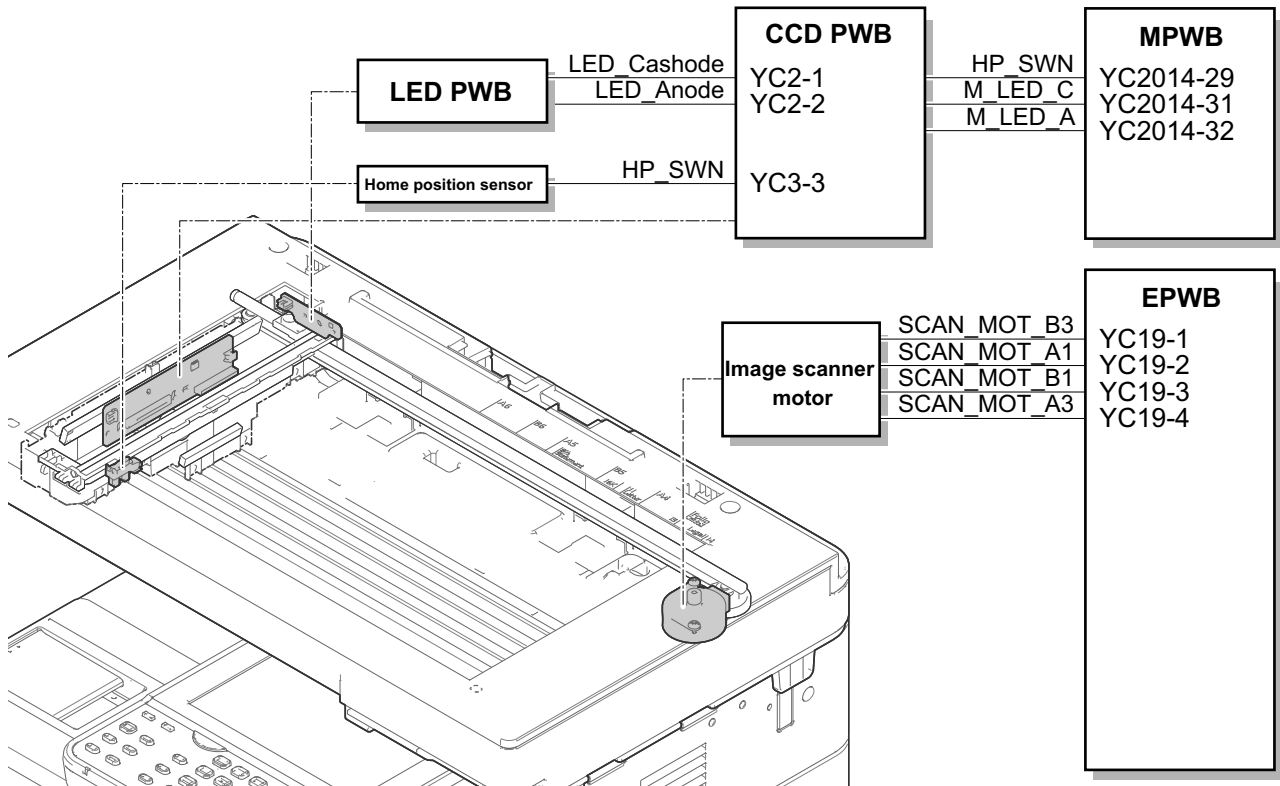
The image on the original is exposed by the exposure lamp and that reflection light is scanned by the CCD image sensor on the CCD PWB via three mirrors and the ISU lens to change the electric signal.

When using the document processor, the image scanner unit stops at the original scanning position (slit glass) and scan the original that the document processor conveys.



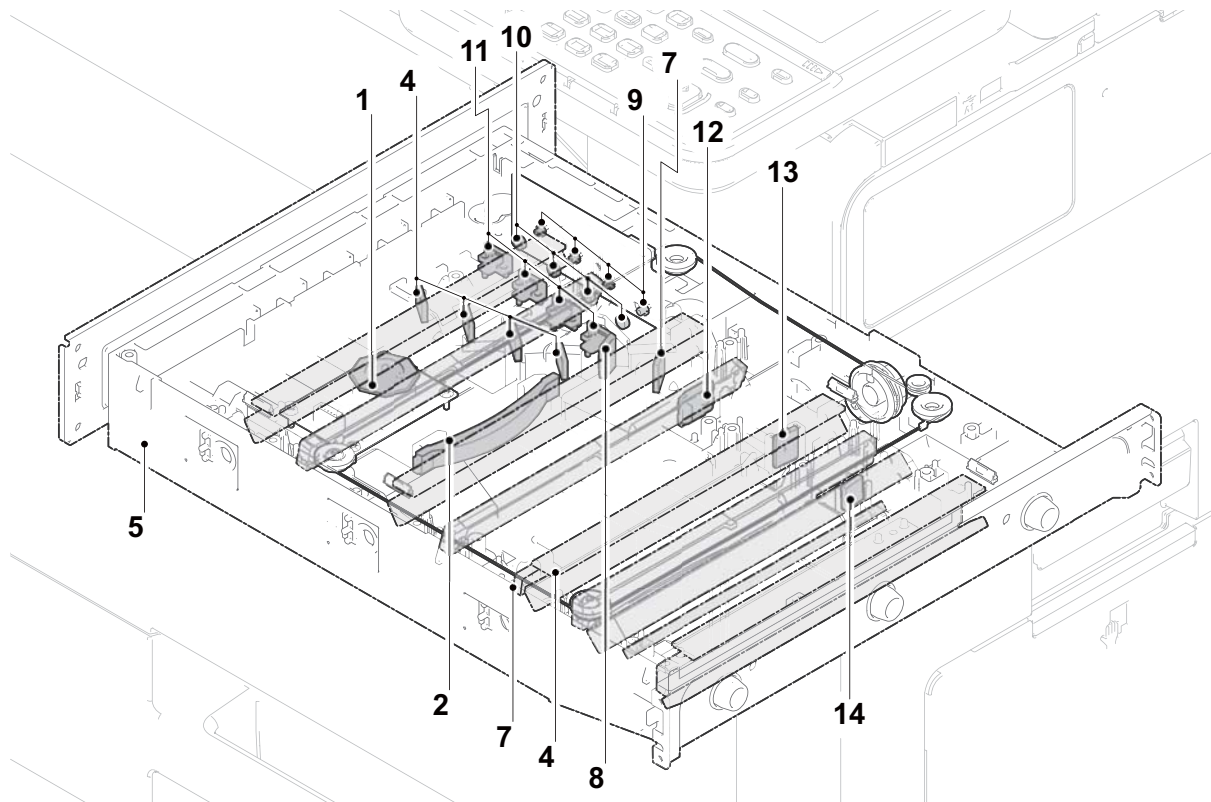
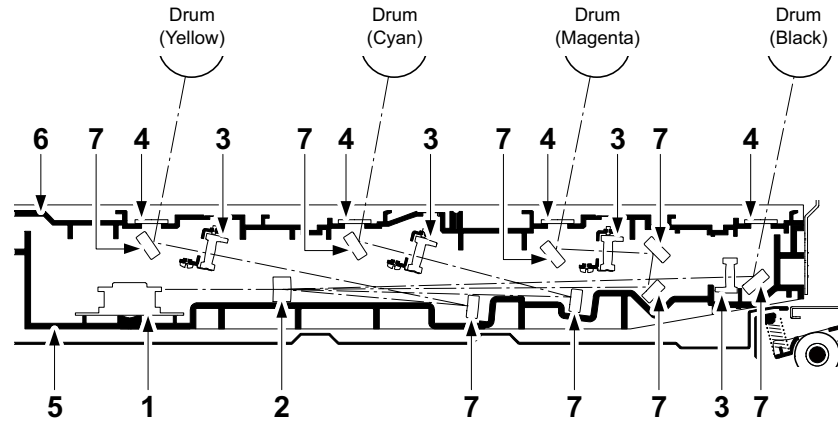
- |                    |                           |                  |
|--------------------|---------------------------|------------------|
| 1 CCD              | 5 Original size indicator | 9 Reflector      |
| 2 Scanner carriage | 6 Slit glass              | 10 Exposure lamp |
| 3 ISU frame        | 7 ISU lens                | 11 ISU shaft     |
| 4 Contact glass    | 8 Mirror                  | 12 Drive belt    |

[Block diagram]



## (2-2) 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.

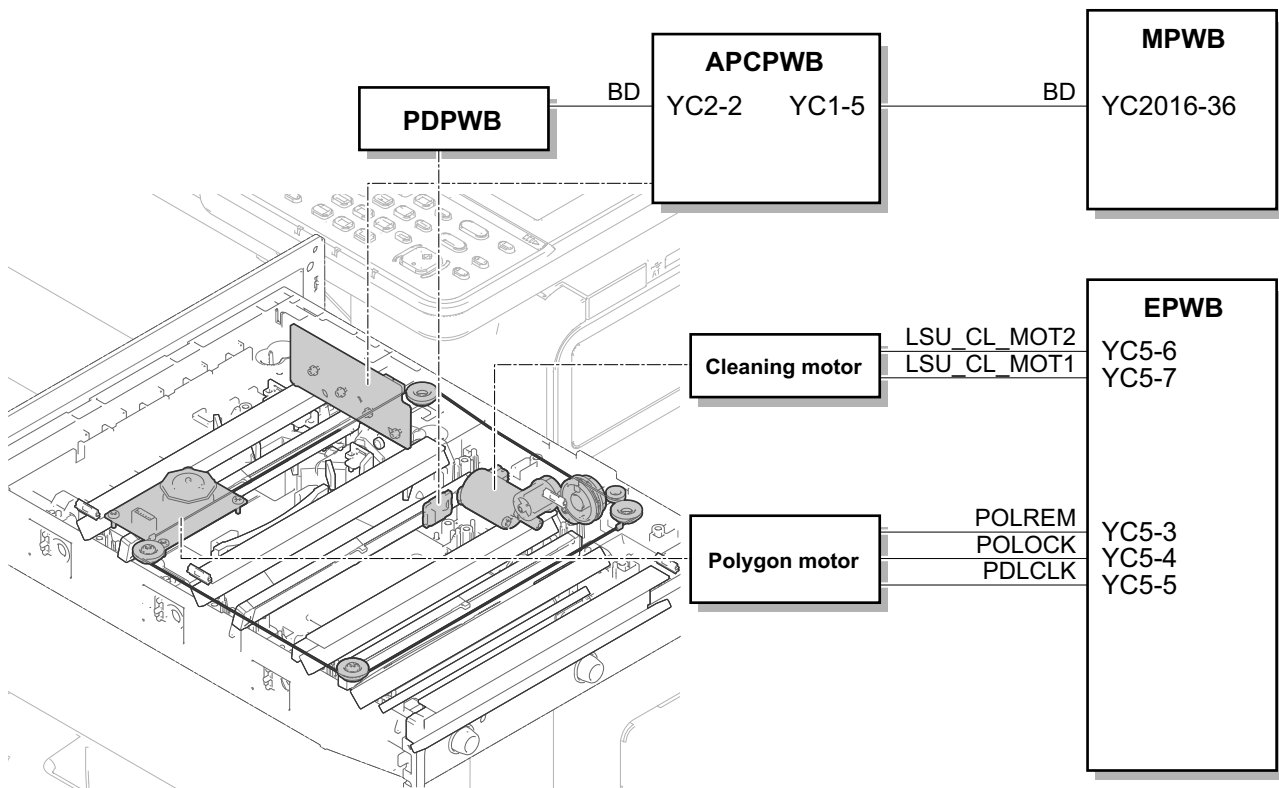


- 1 Polygon motor
- 2  $f\theta$  lens A
- 3  $f\theta$  lens B
- 4 LSU glass
- 5 LSU base

- 6 LSU cover
- 7 Mirror
- 8 Cylindrical lens
- 9 Laser emitting diode
- 10 Collimator lens

- 11 Slit glass plate
- 12 PD PWB
- 13 PD lens
- 14 PD mirror

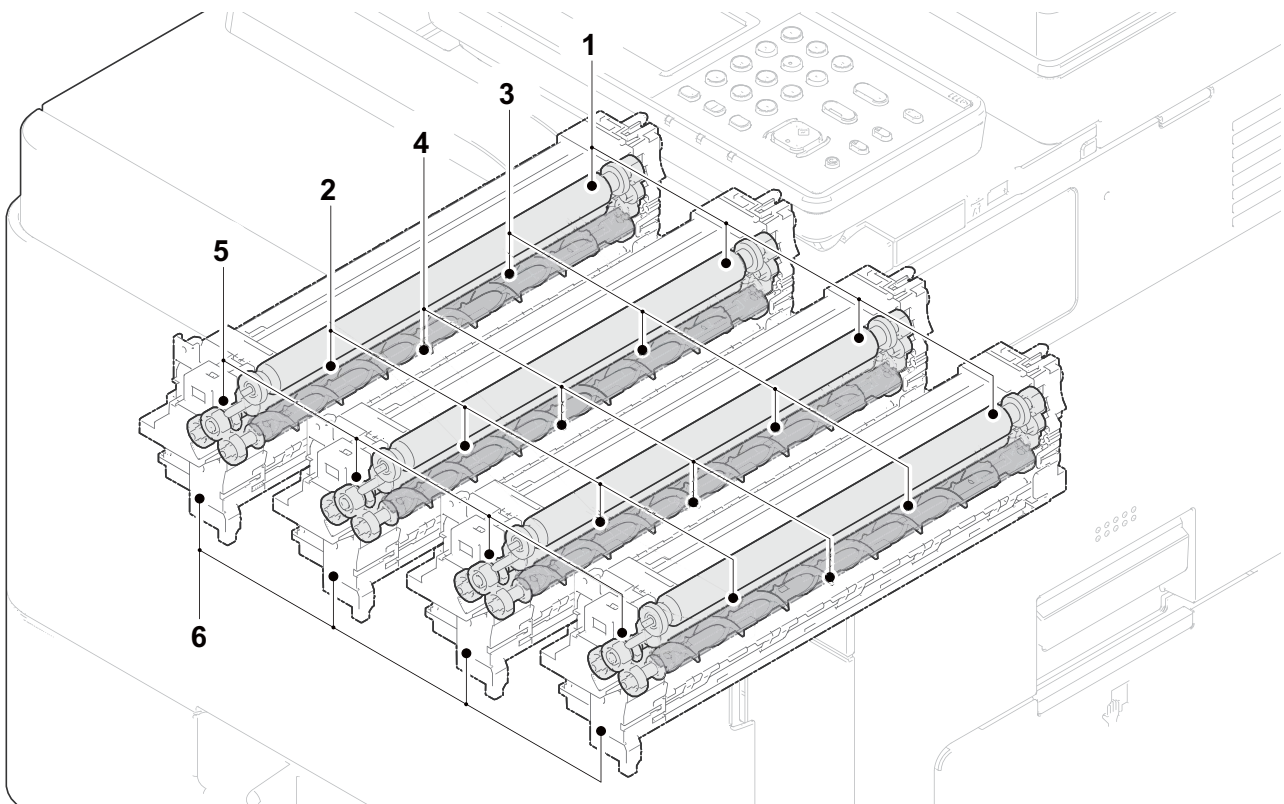
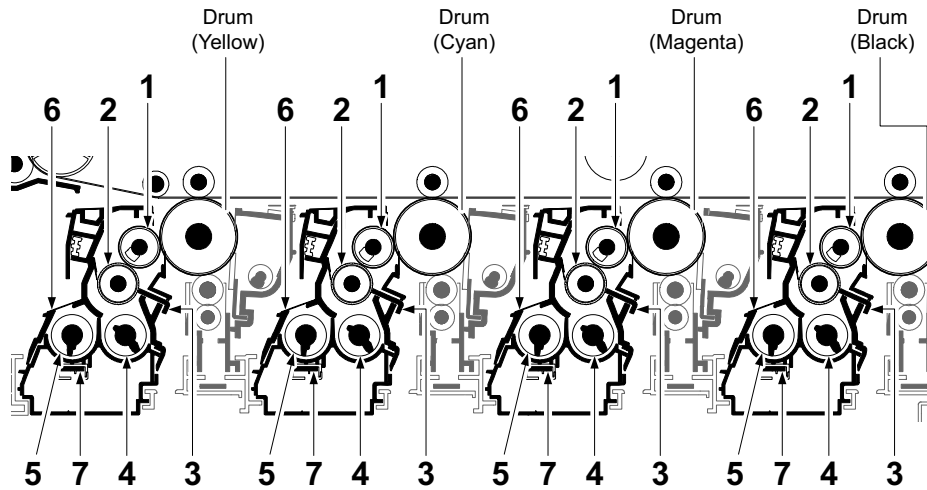
[Block diagram]



### (3) Developer section

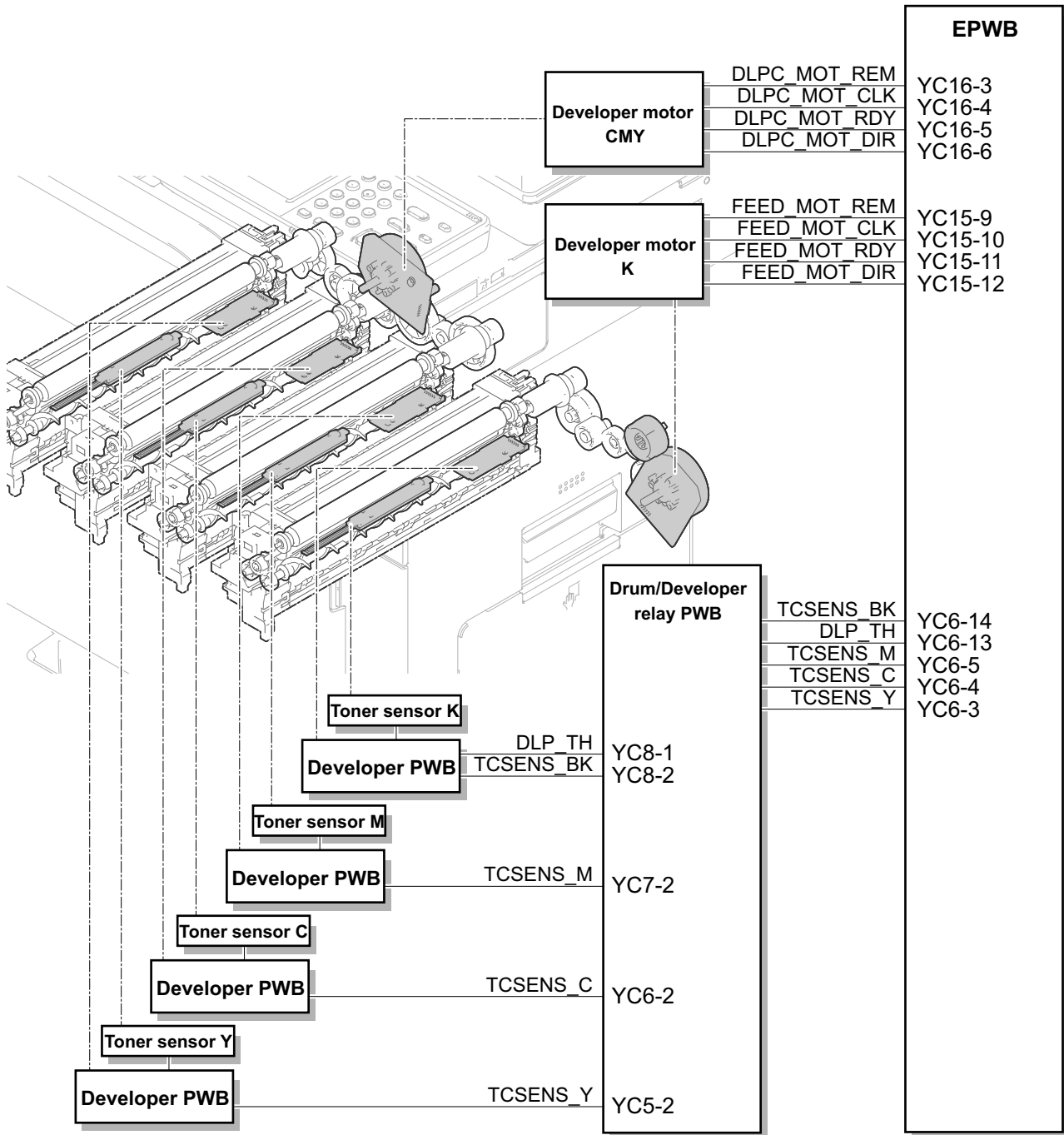
#### (3-1) Developer unit

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.



- |                   |                     |                |
|-------------------|---------------------|----------------|
| 1 Sleeve roller   | 4 Developer screw A | 7 Toner sensor |
| 2 Magnet roller   | 5 Developer screw B |                |
| 3 Developer blade | 6 Developer case    |                |

[Block diagram]



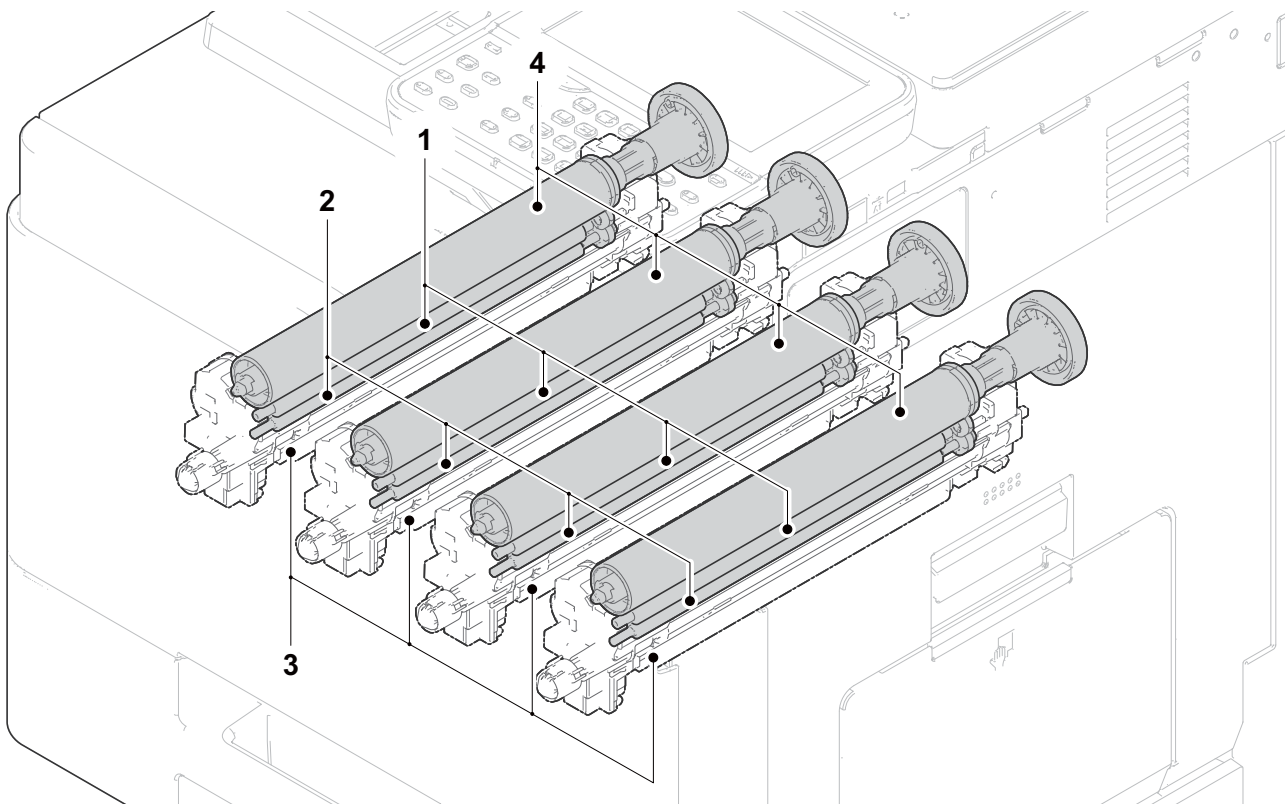
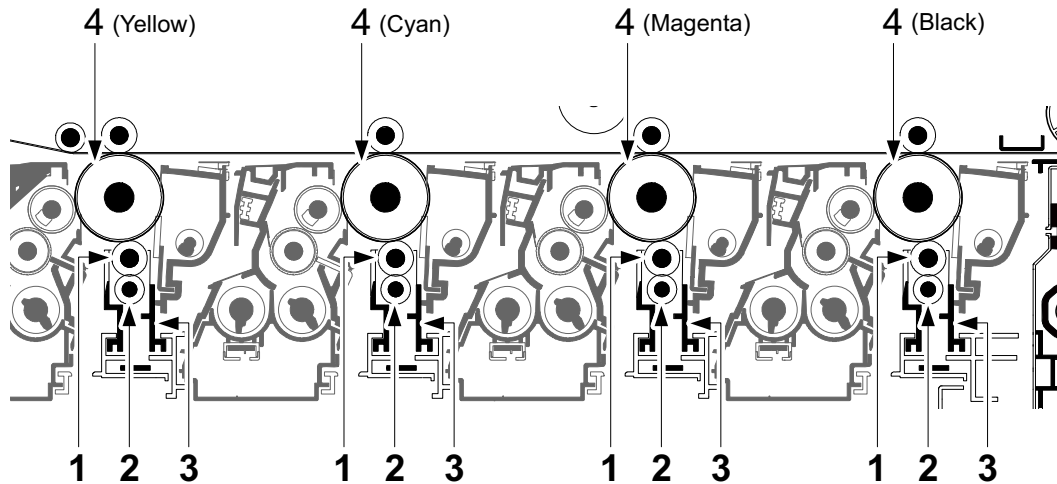


## (4) Drum section

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.

### (4-1) Charger roller unit

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



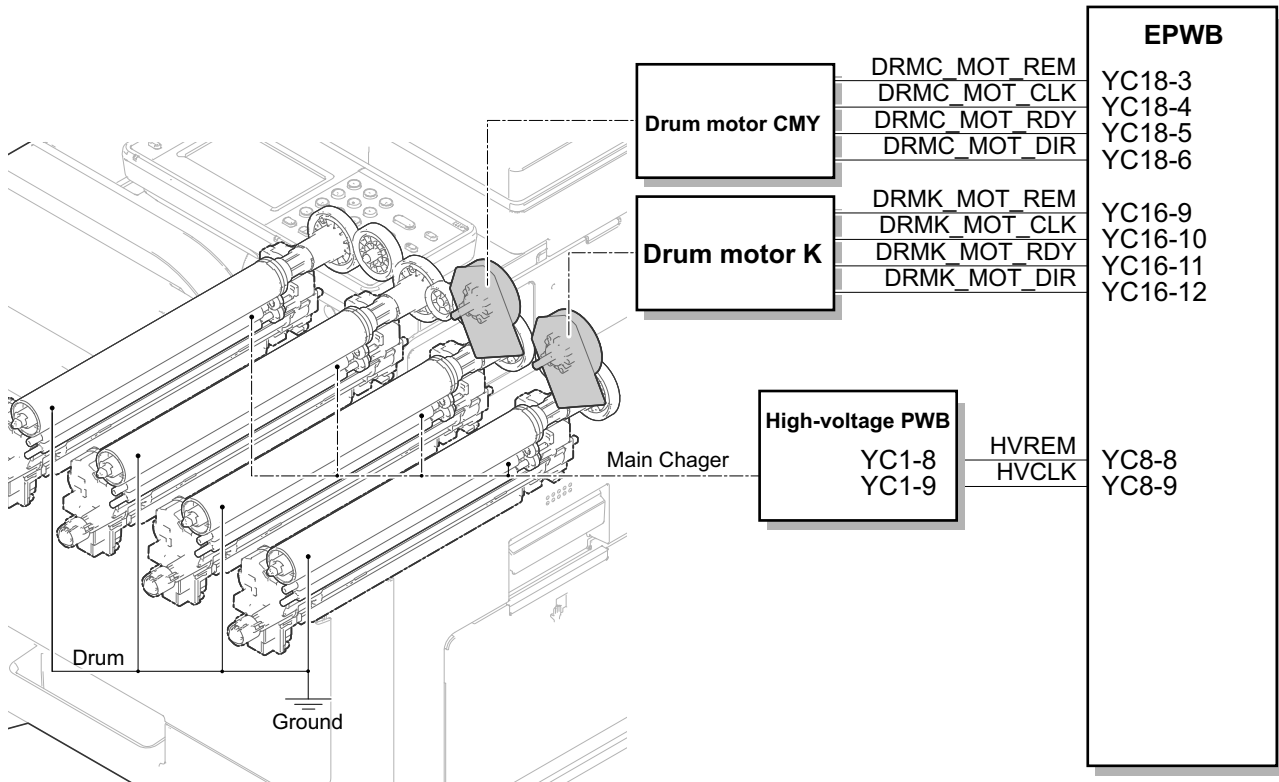
1 Charger roller

3 Charger case

4 Drum

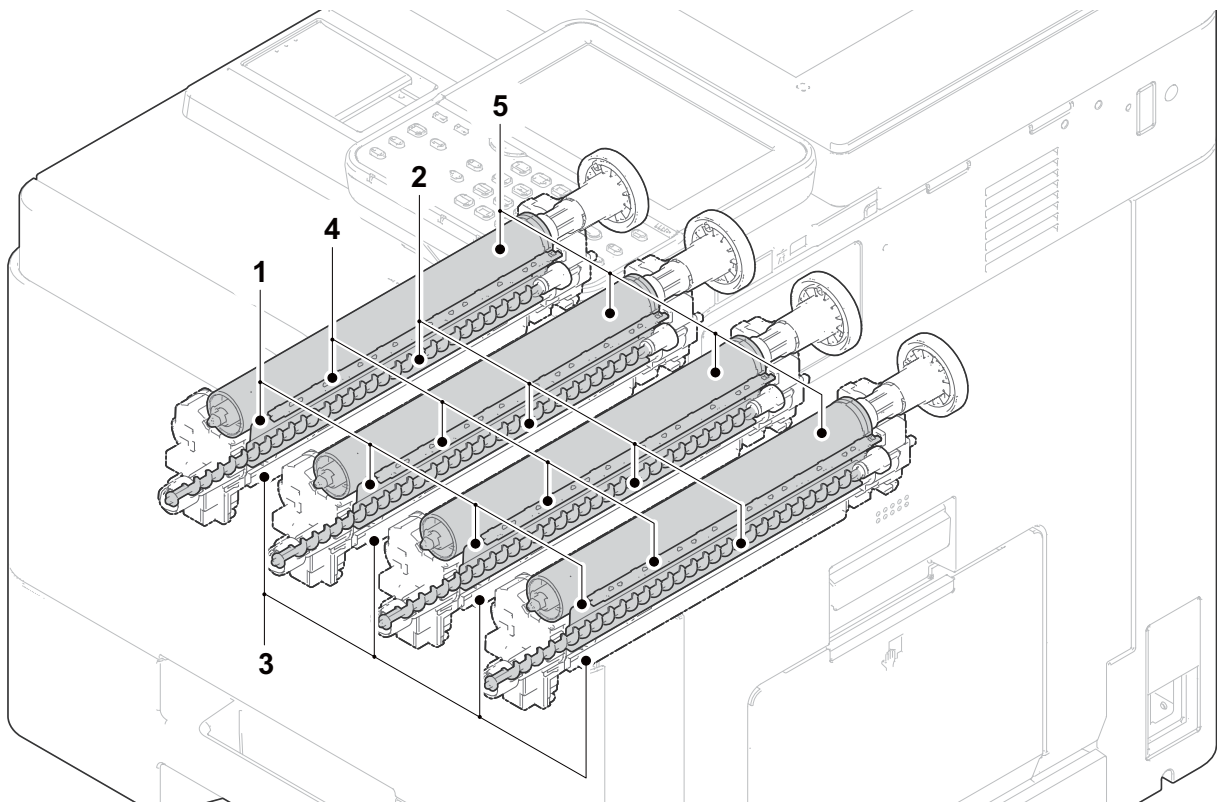
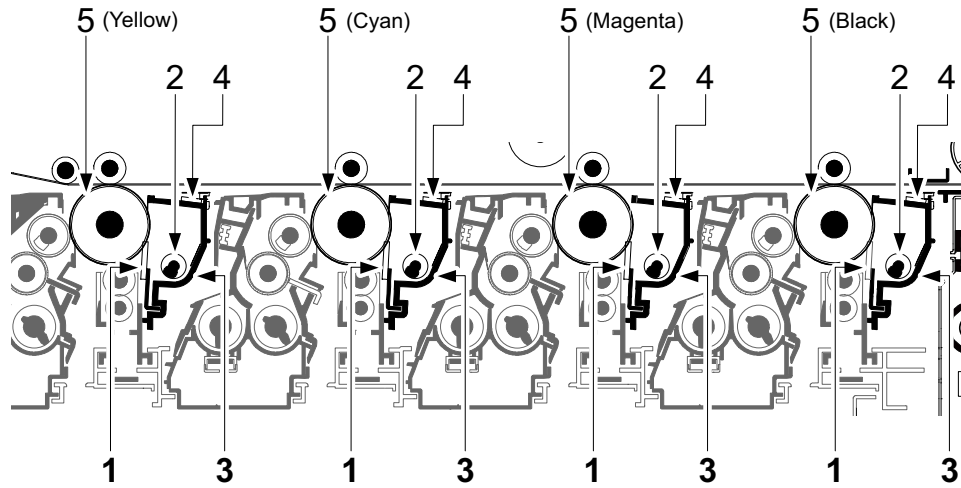
2 Charger cleaning roller

[Block diagram]



## (4-2) Cleaning

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.



1 Cleaning blade

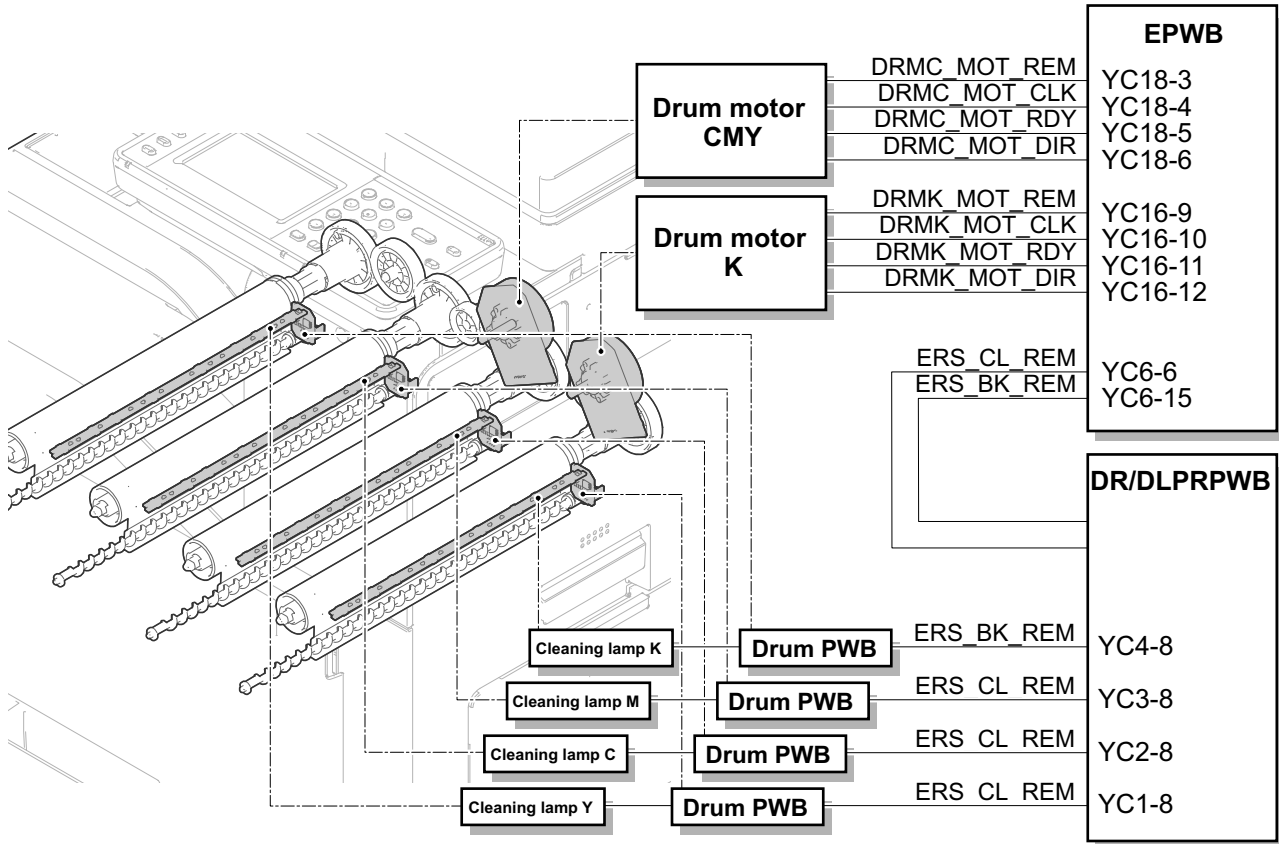
2 Drum screw

3 Drum frame

4 Cleaning lamp

5 Drum

[Block diagram]

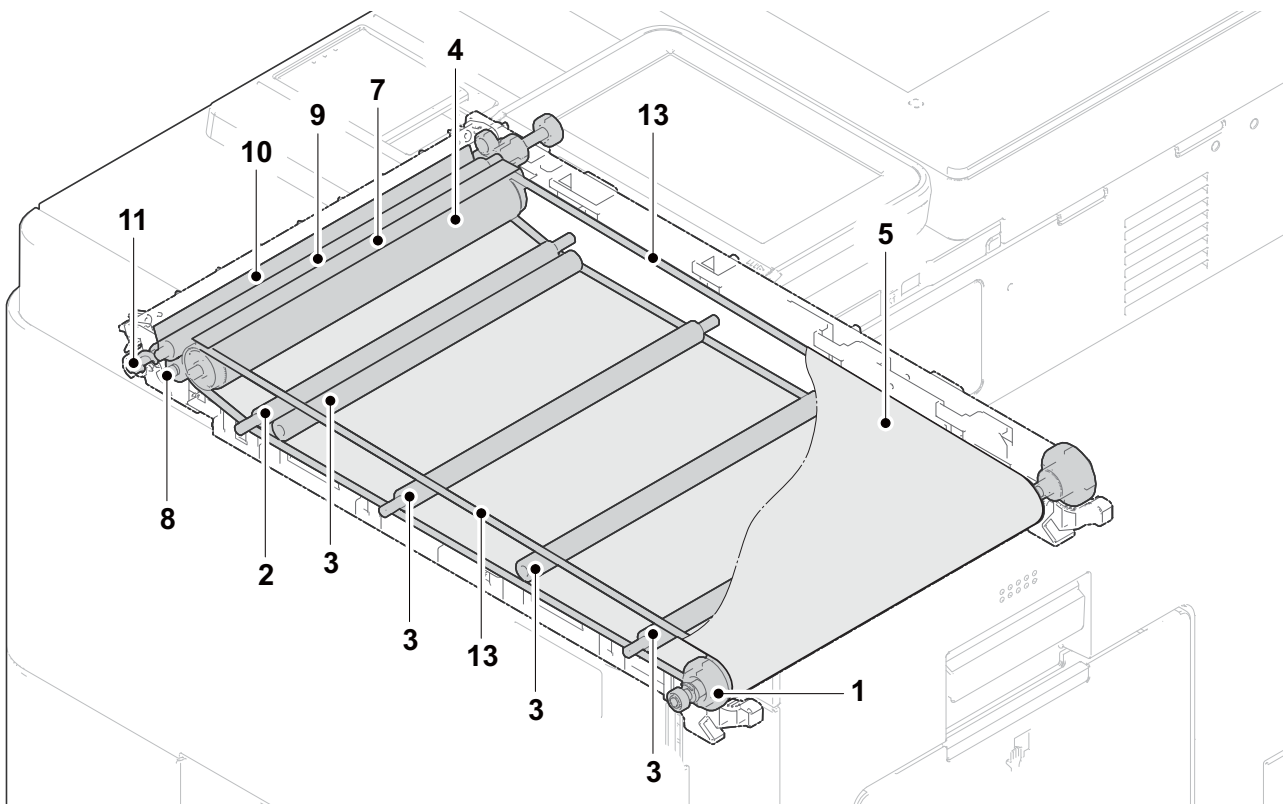
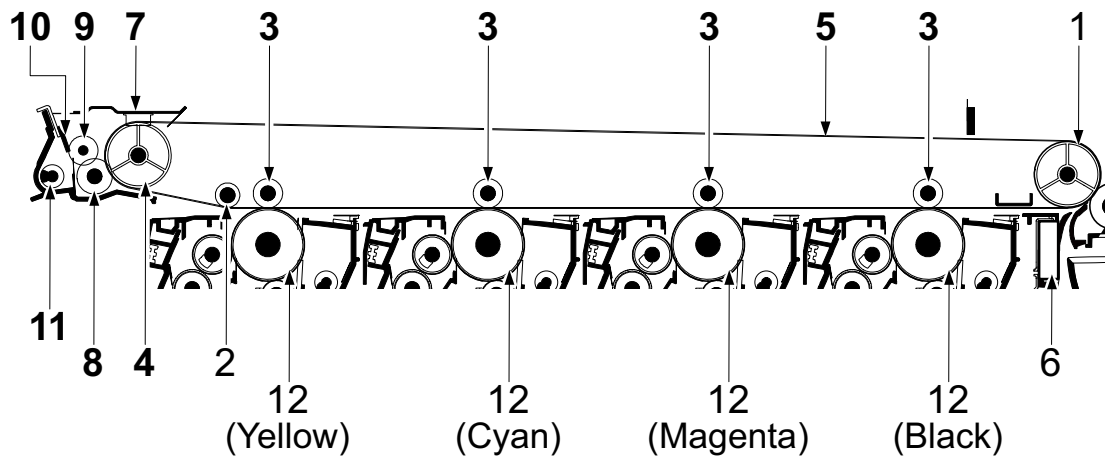


## (5) Transfer and separation section

### (5-1) Primary transfer unit

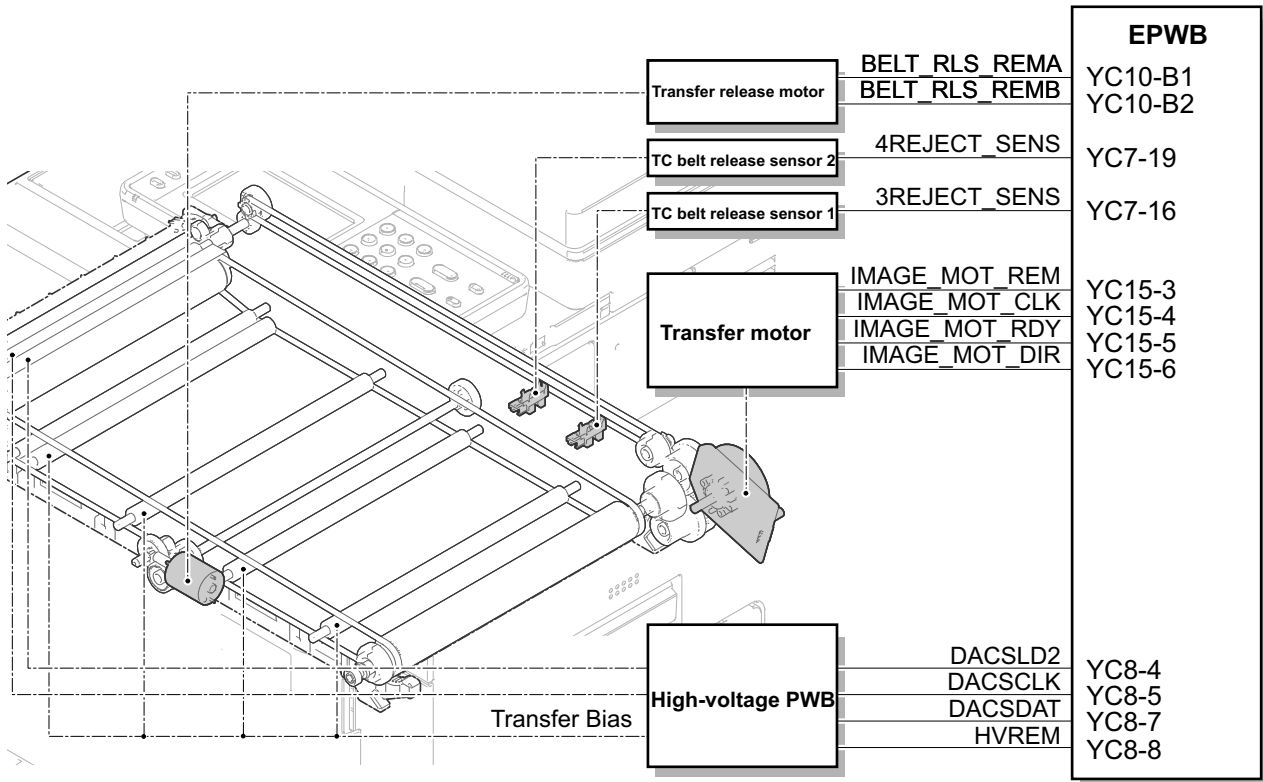
The primary transfer section consists of the transfer cleaning unit, the transfer belt and four primary transfer rollers facing each drum. When printing the color image, the toner image with a single color formed on each drum is repeatedly transferred on the transfer belt by impressing the bias to the 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.



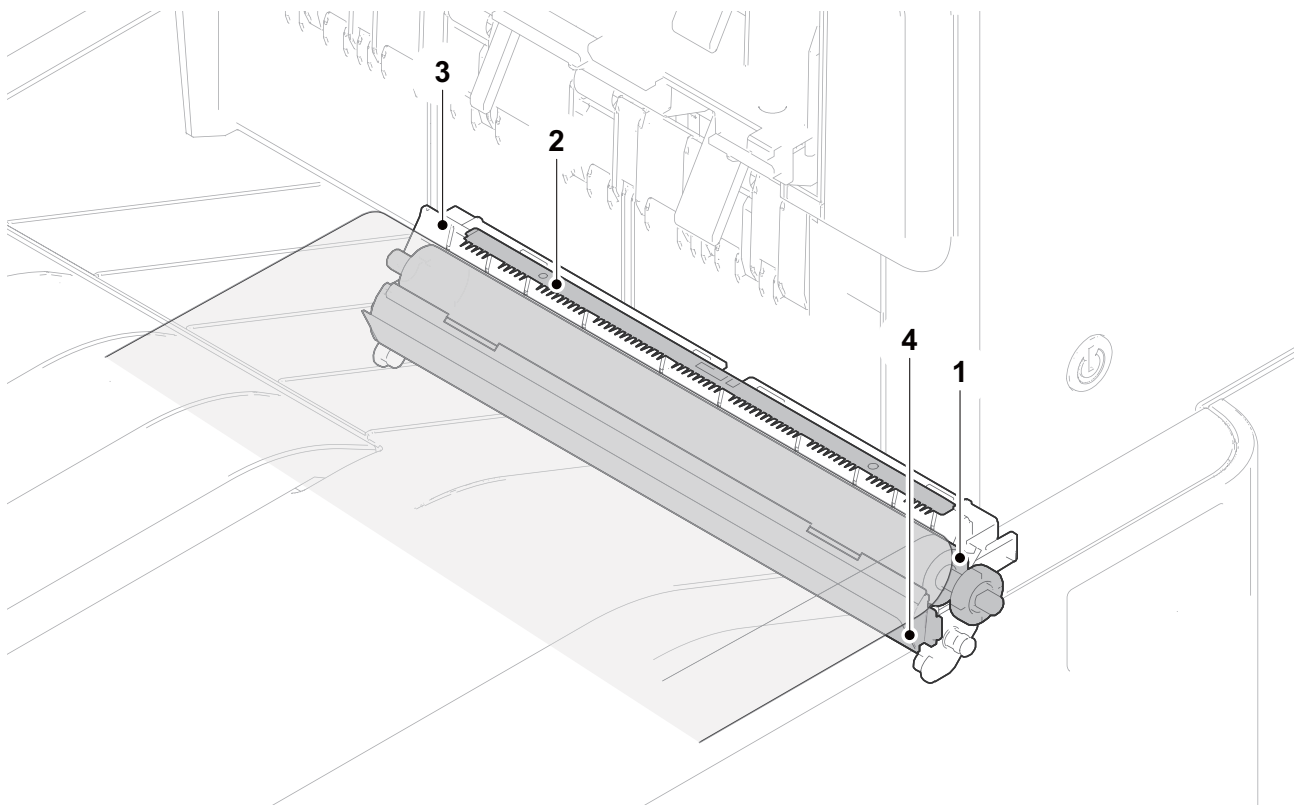
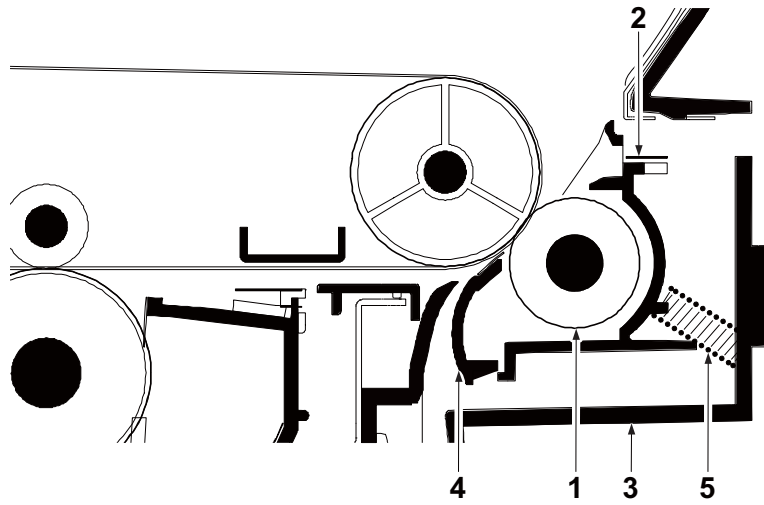
- |                           |                      |                         |
|---------------------------|----------------------|-------------------------|
| 1 Drive roller            | 6 ID sensor          | 11 Cleaning screw       |
| 2 Back up roller          | 7 Cleaning pre-brush | 12 Drum                 |
| 3 Primary transfer roller | 8 Cleaning fur brush | 13 Skew prevention belt |
| 4 Tension roller          | 9 Cleaning roller    |                         |
| 5 Transfer belt           | 10 Cleaning blade    |                         |

[Block diagram]



### (5-2) Secondary transfer unit

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.

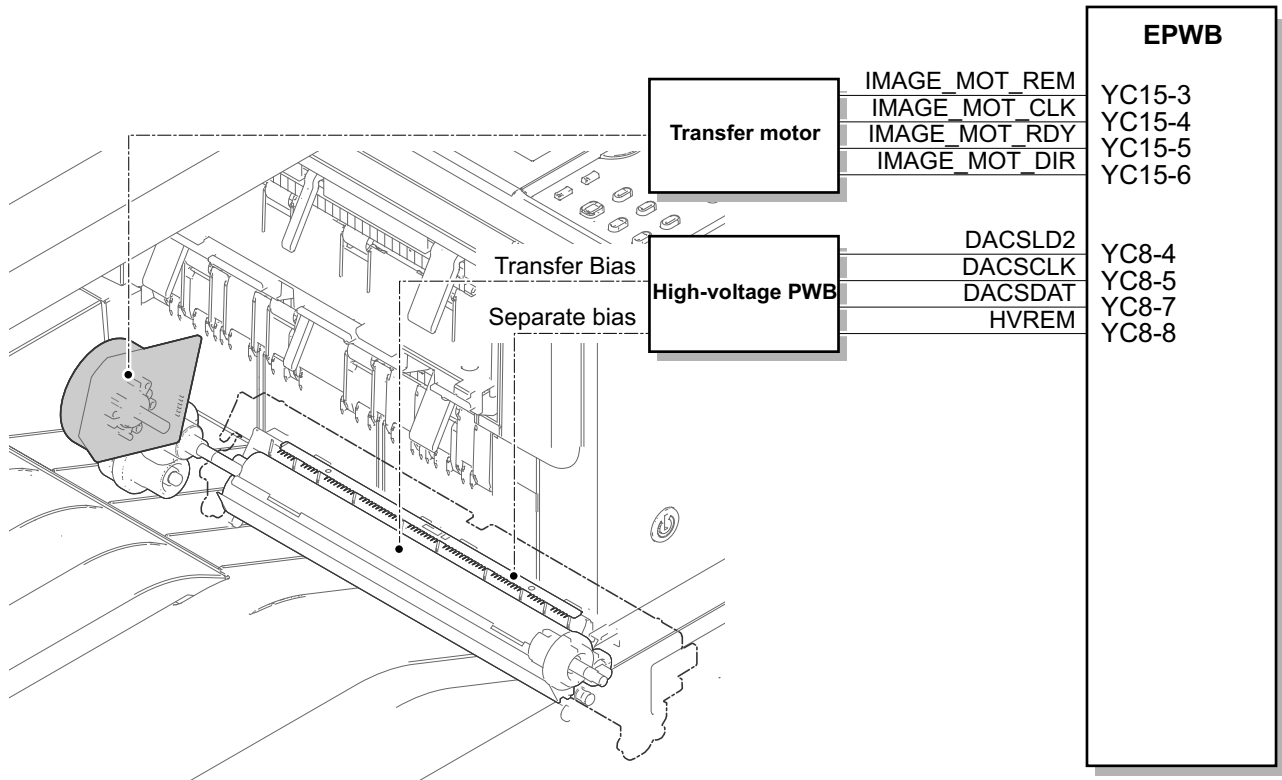


1 Secondary transfer roller  
2 Separation brush

3 Secondary transfer section  
4 Transfer front guide

5 Transfer spring

[Block diagram]



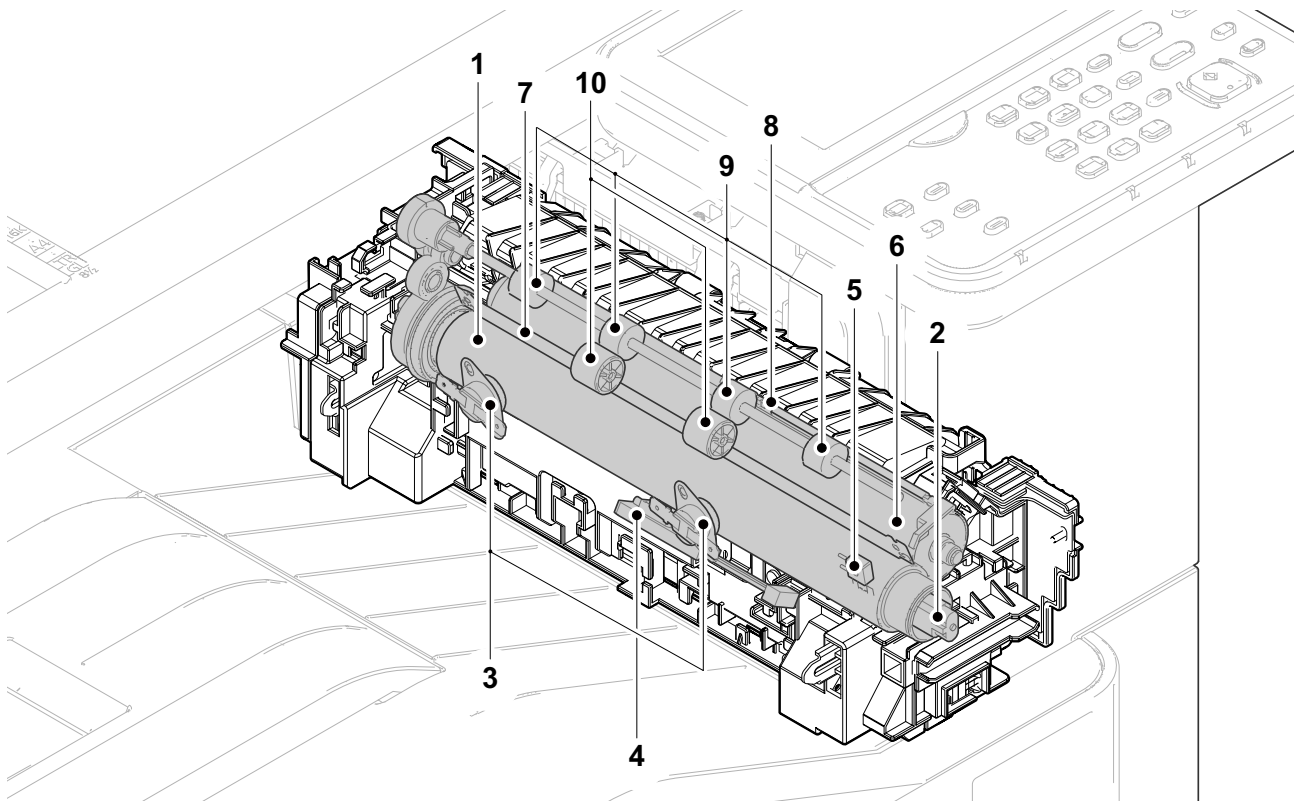
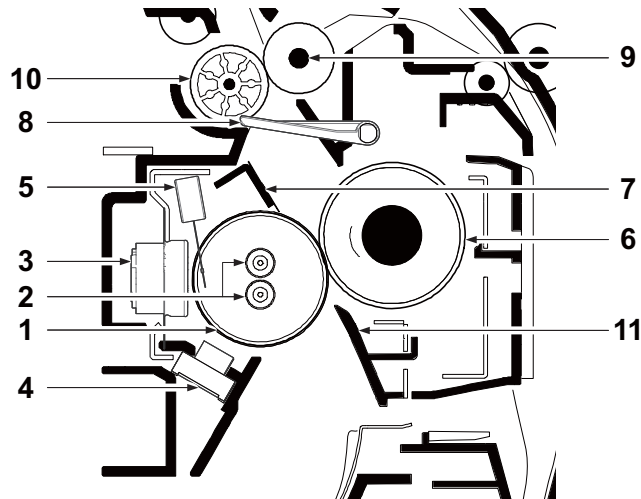


## (6) Fuser section

The paper from the transfer and separation section is pinched between the fuser heat roller and the press roller. The fuser 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.

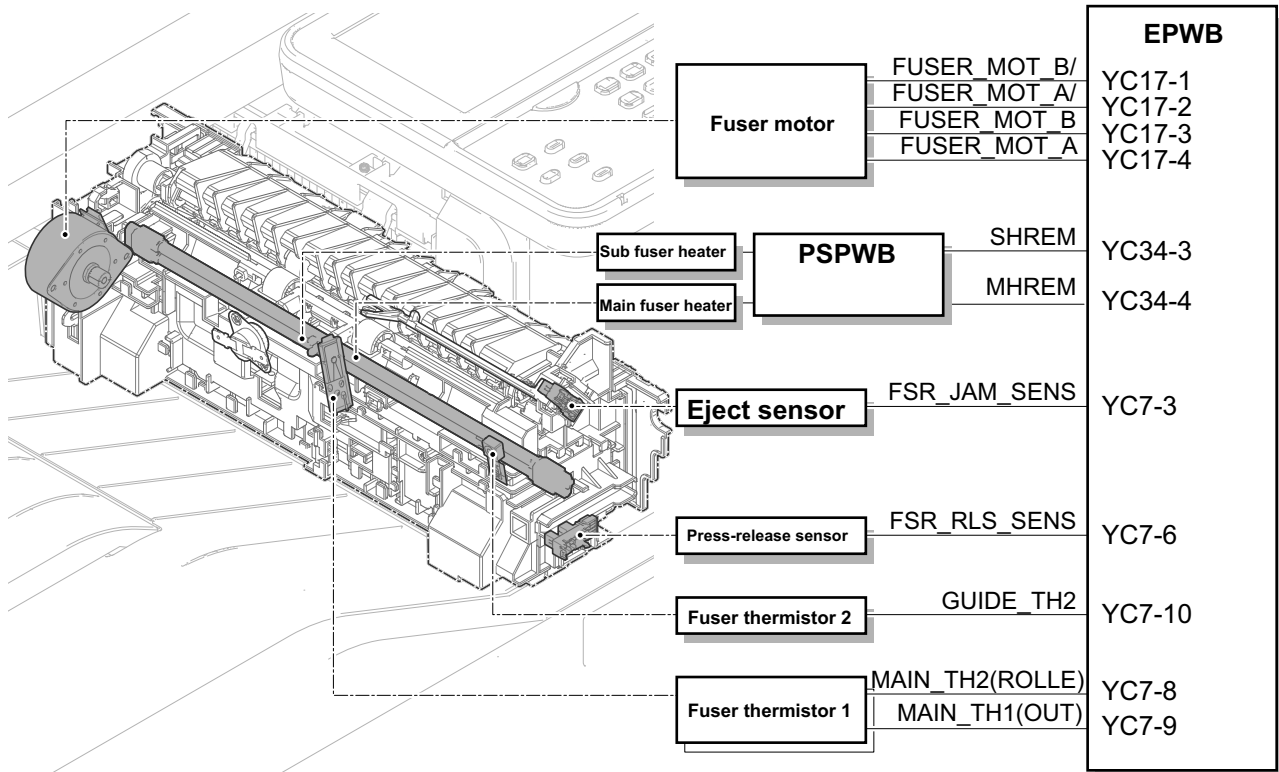
The surface temperature of the fuser heat roller is detected by the fuser thermistor and controlled by the Engine PWB. If the fuser section has abnormal temperature, the power supply line is shut off by switching the fuser thermostat and the fuser heater is turned off forcibly.

### (6-1) Fuser unit



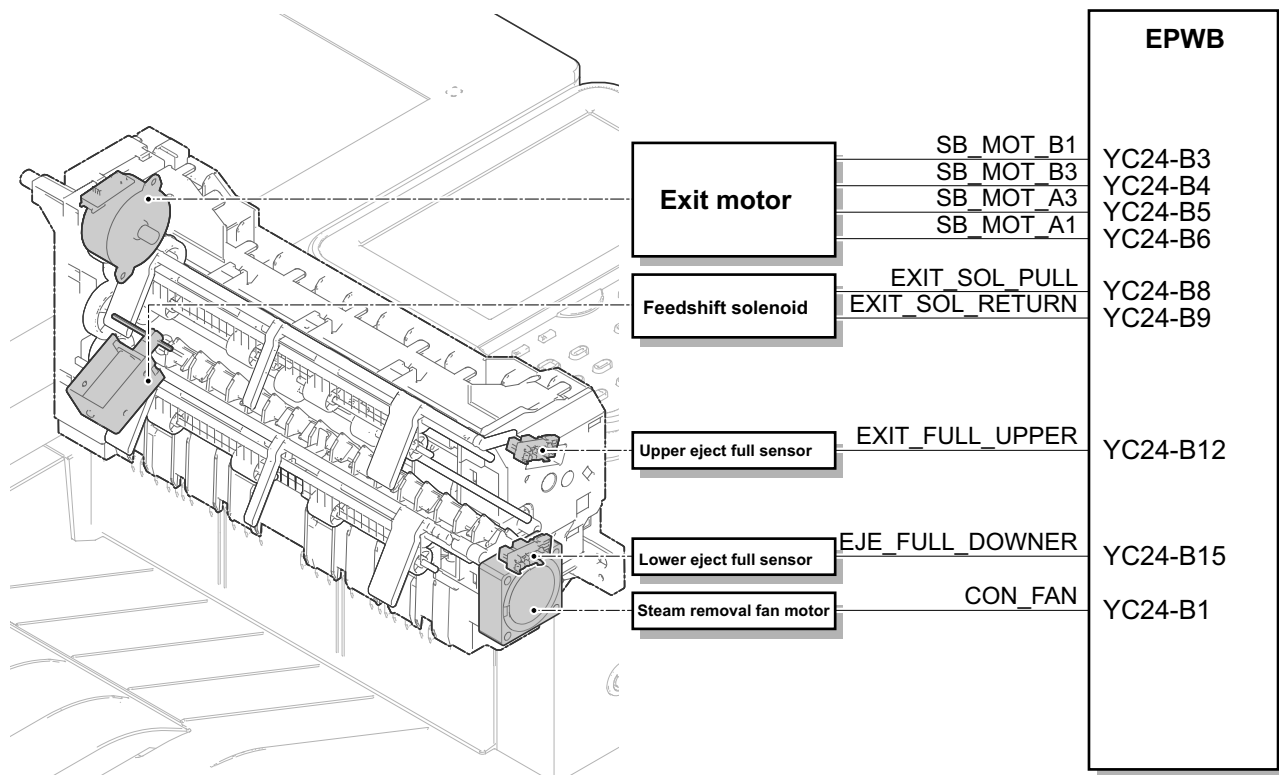
- |                      |                                 |                      |
|----------------------|---------------------------------|----------------------|
| 1 Fuser heat roller  | 5 Fuser thermistor 2            | 9 Fuser exit roller  |
| 2 Fuser heater       | 6 Press roller                  | 10 Fuser exit pulley |
| 3 Fuser thermostat   | 7 Separator                     | 11 Fuser front guide |
| 4 Fuser thermistor 1 | 8 Actuator sensor (Exit sensor) |                      |

[Block diagram]



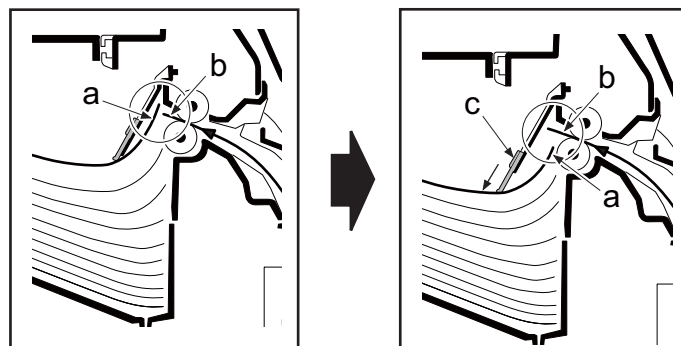


## Block diagram

**(7-2) Exit paper jam**

If paper exited is caught up by the paper previously exited, extend the length of the exit actuator.

- 1 If the leading edge (b) of the paper exited is caught up by the trailing edge (a) paper previously exited, slide the position of the exit actuator sub guide (c) to extend it.
- 2 Pushes down the trailing edge (a) of exit paper to prevent the (b) leading edge of next paper from being caught up.

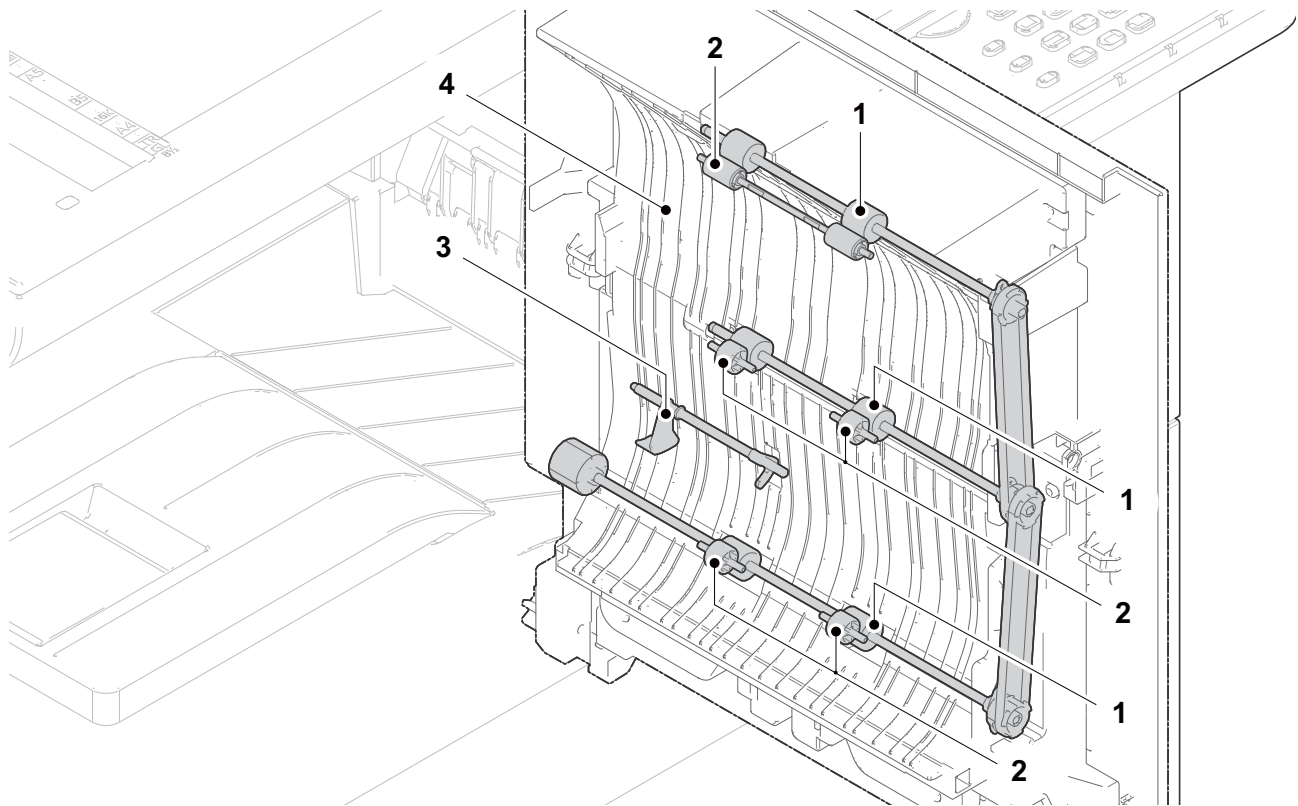
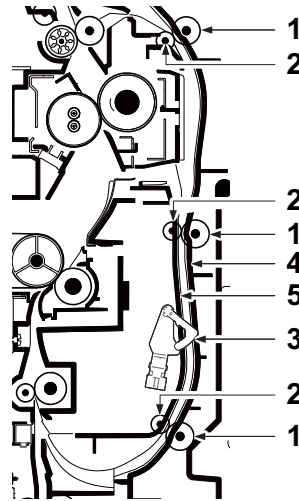




## (8) Duplex conveying section

### (8-1) 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.



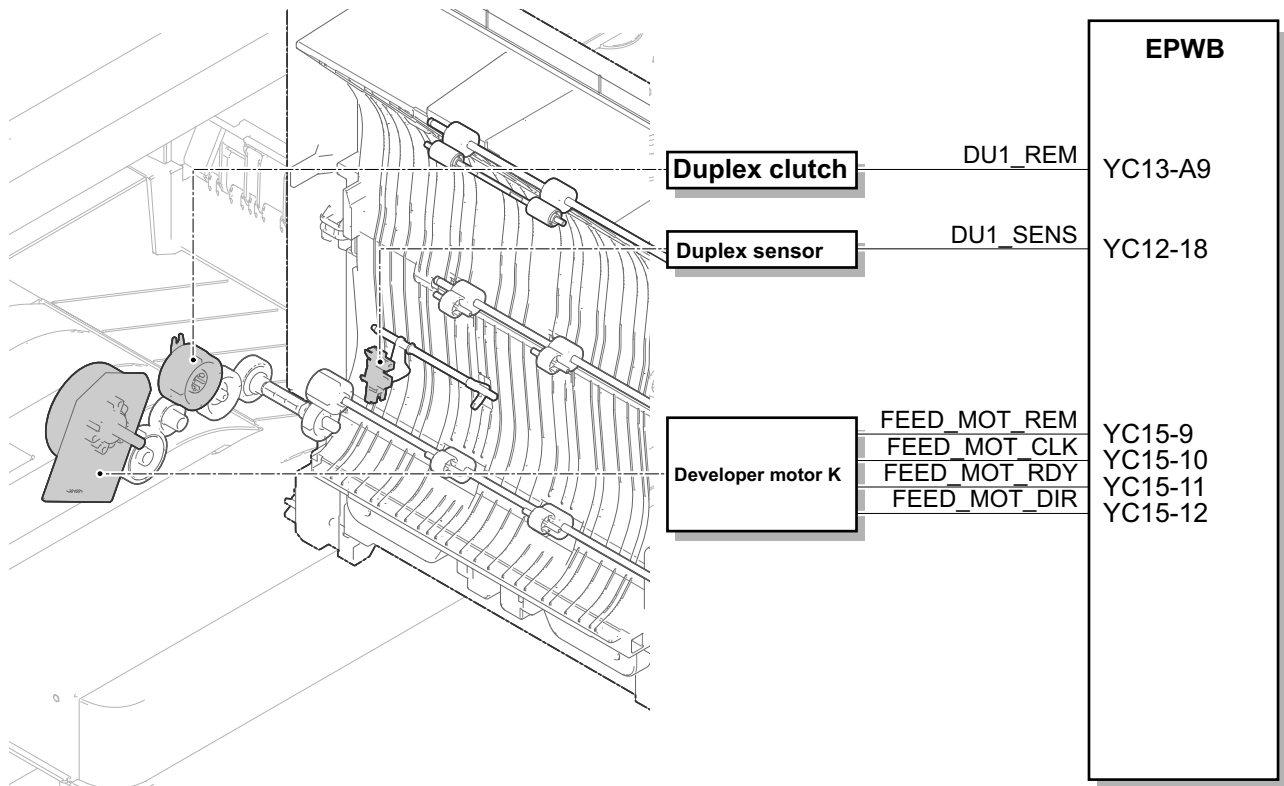
1 DU conveying roller  
2 DU conveying pulley

3 Actuator  
sensor)

(Duplex

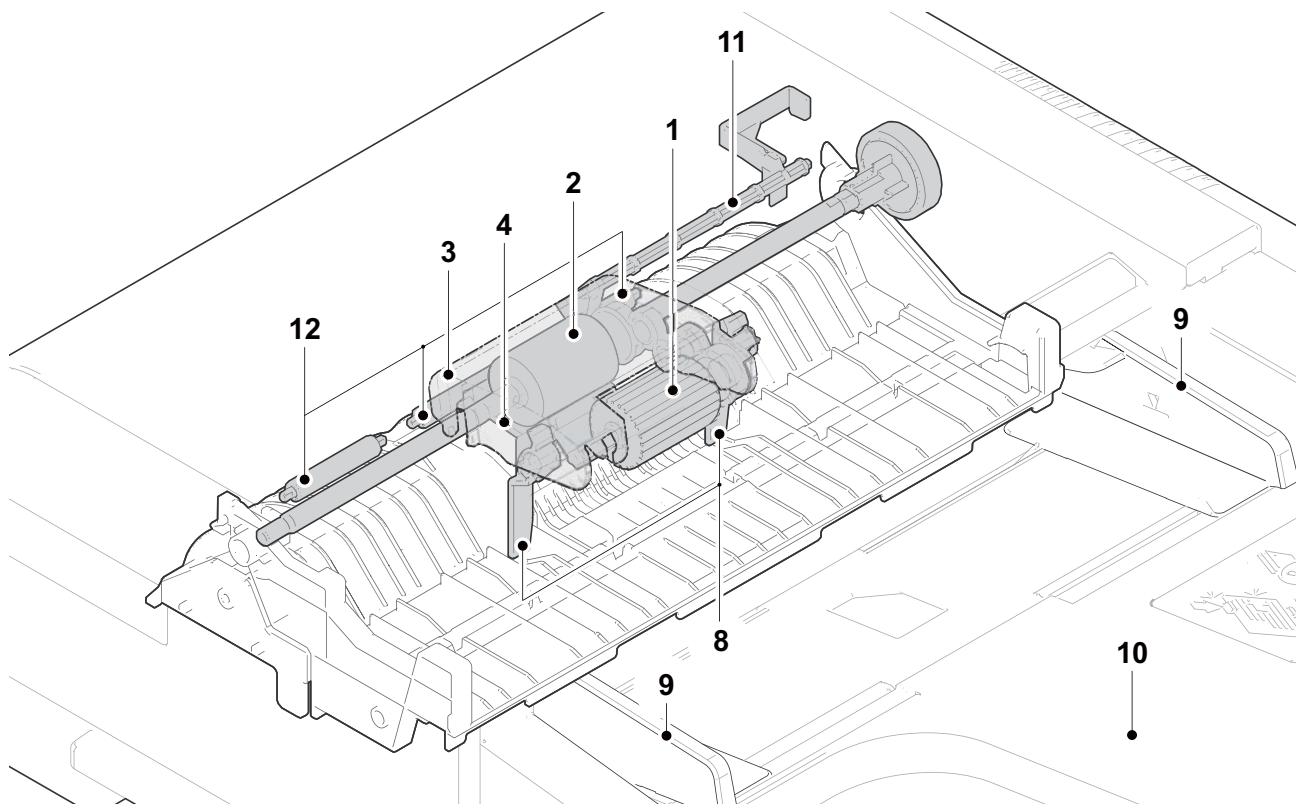
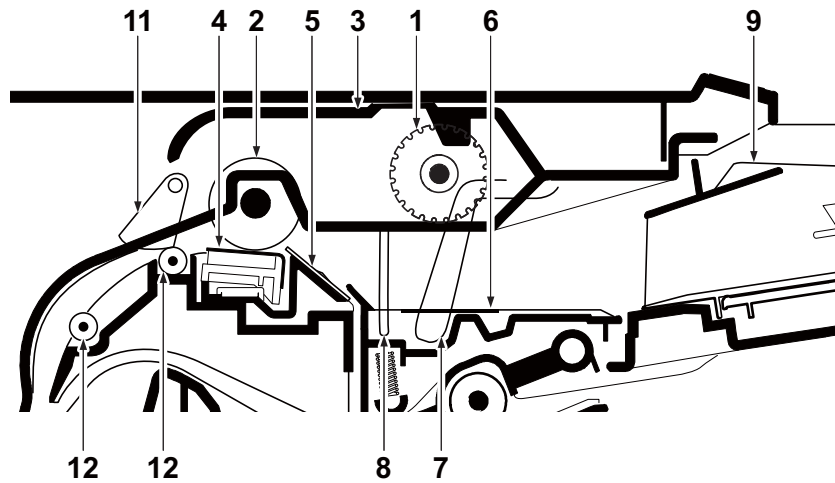
4 DU conveying base  
5 DU conveying guide

[Block diagram]



**(9) Document processor Original****(9-1) Paper feed section**

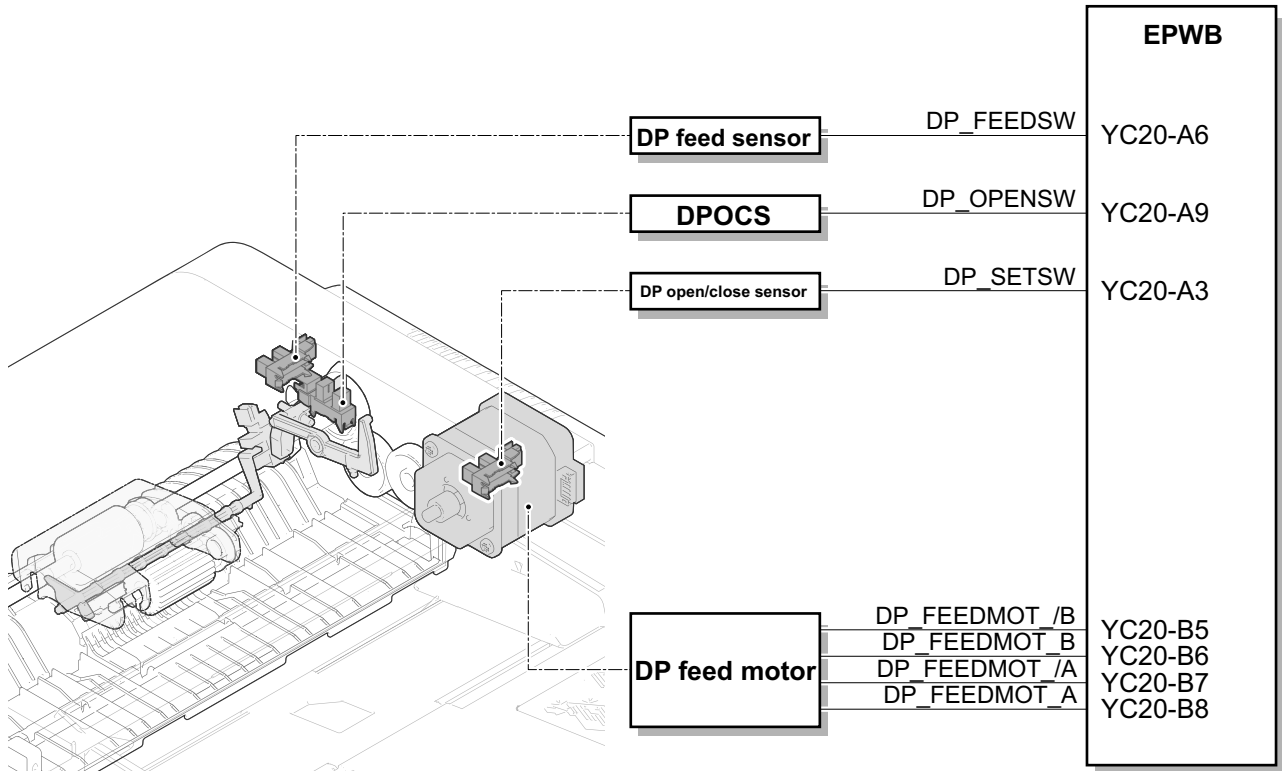
The original feed section consists of the parts in the figure, and conveys the original on the original tray to the original conveying section. The original is fed by rotating the DP forwarding pulley and the DP feed roller.



- |                        |                          |                           |
|------------------------|--------------------------|---------------------------|
| 1 DP forwarding pulley | 5 Front separation pad   | 9 DP original width guide |
| 2 DP feed roller       | 6 Friction pad           | 10 Original tray          |
| 3 DP feed holder       | 7 Actuator (DP original) | 11 Actuator (DP paper)    |
| 4 DP separation pad    | 8 DP original stopper    | 12 Conveying pulley       |
|                        |                          | feed sensor)              |



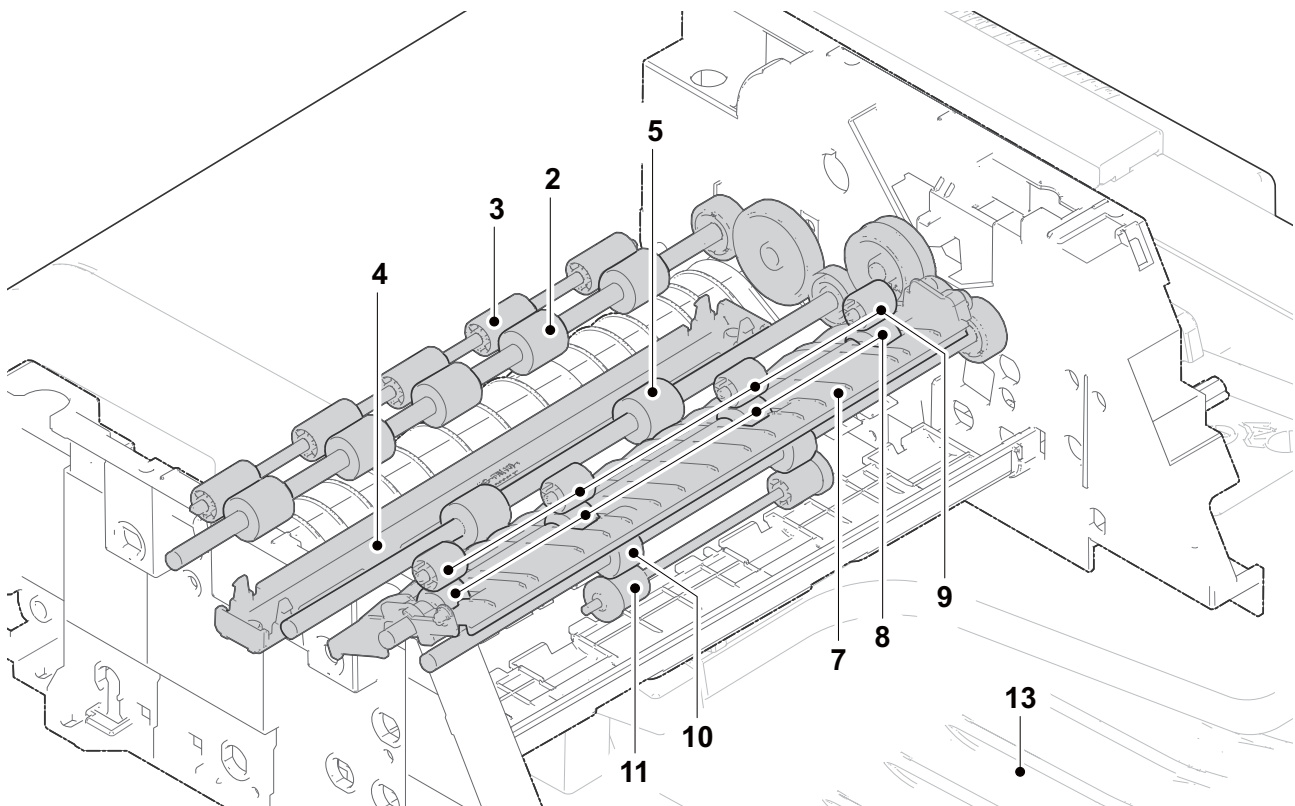
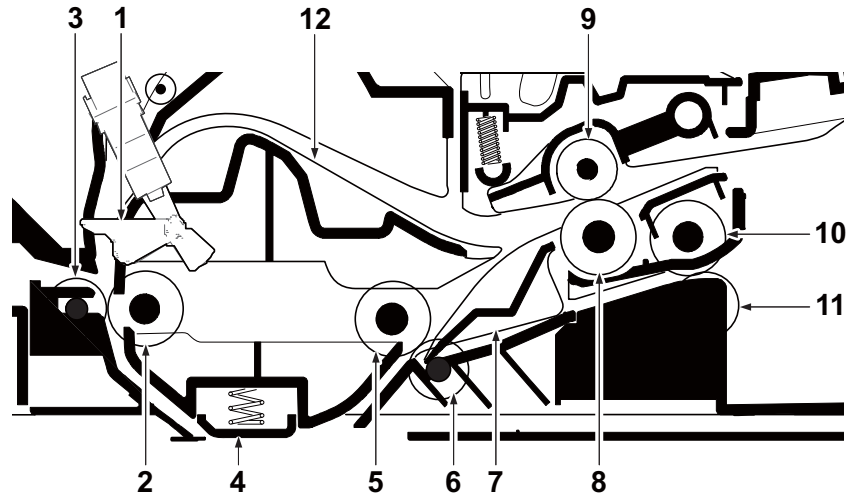
[Block diagram]



## (9-2) Original conveying section and Original switchback and exit section

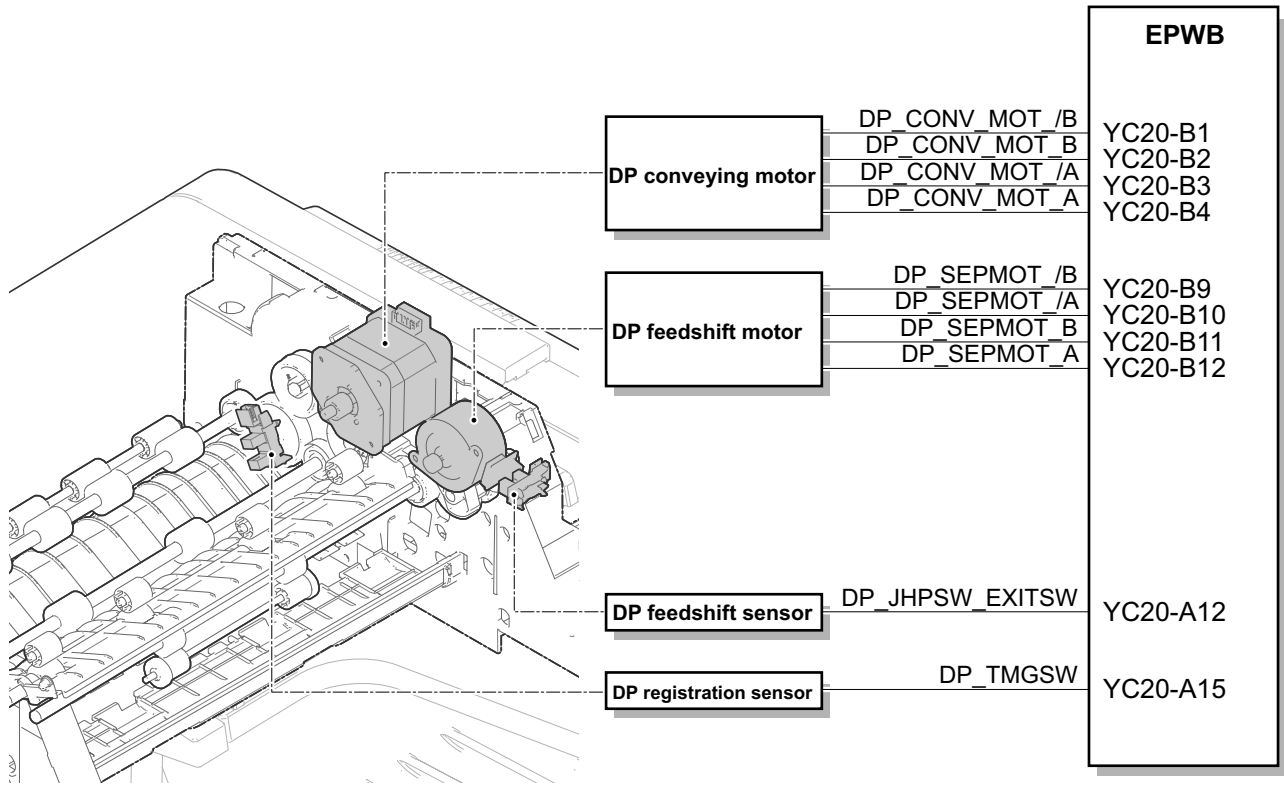
The original conveying section consists of the parts in the figure. Conveyed original is scanned by the optical section (CCD) of the main unit when passing through the slit glass.

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.



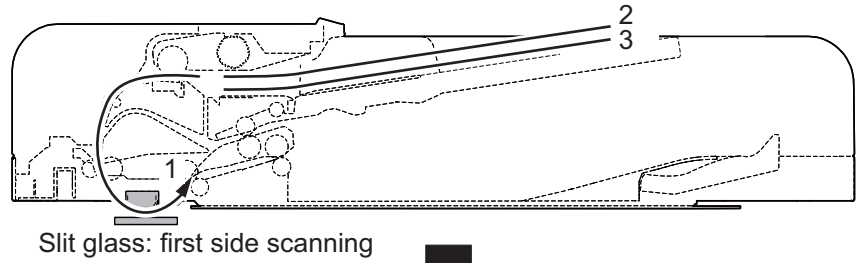
- |                                     |                       |                    |
|-------------------------------------|-----------------------|--------------------|
| 1 Actuator (DP registration sensor) | 5 DP conveying roller | 10 DP exit roller  |
| 2 DP registration roller            | 6 DP conveying pulley | 11 DP exit pulley  |
| 3 DP registration pulley            | 7 Feedshift guide     | 12 Reversing guide |
| 4 Scanner guide                     | 8 Switchback roller   | 13 Eject tray      |
|                                     | 9 Retard pulley       |                    |

[Block diagram]

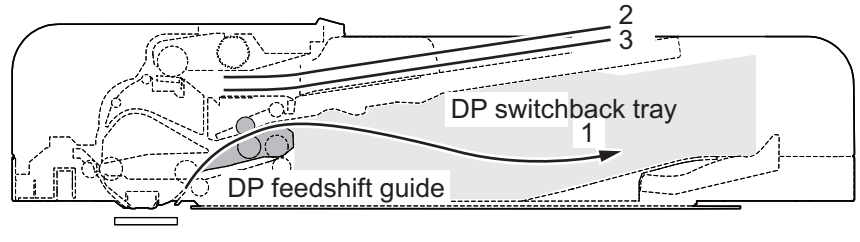


**(9-3) Reversing duplex scanning**

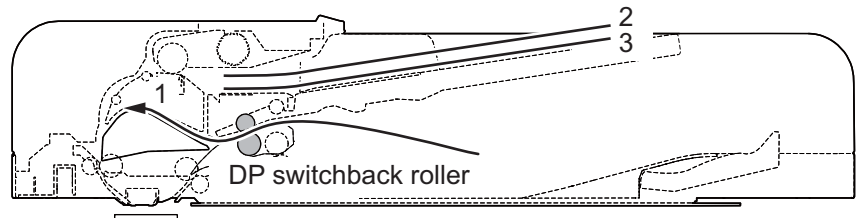
The first side of original is scanned at the slit glass (machine main body).



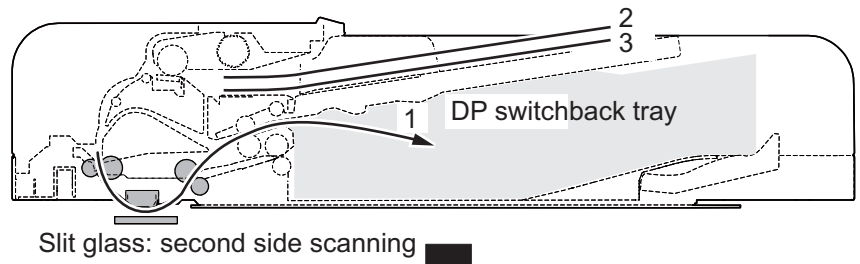
The first side of original is scanned at the slit glass (machine main body).



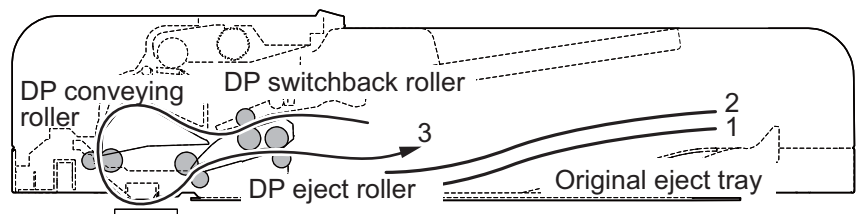
The original is reversed by the switchback roller.



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



Ejected to the original eject tray by the feedshift and eject rollers.

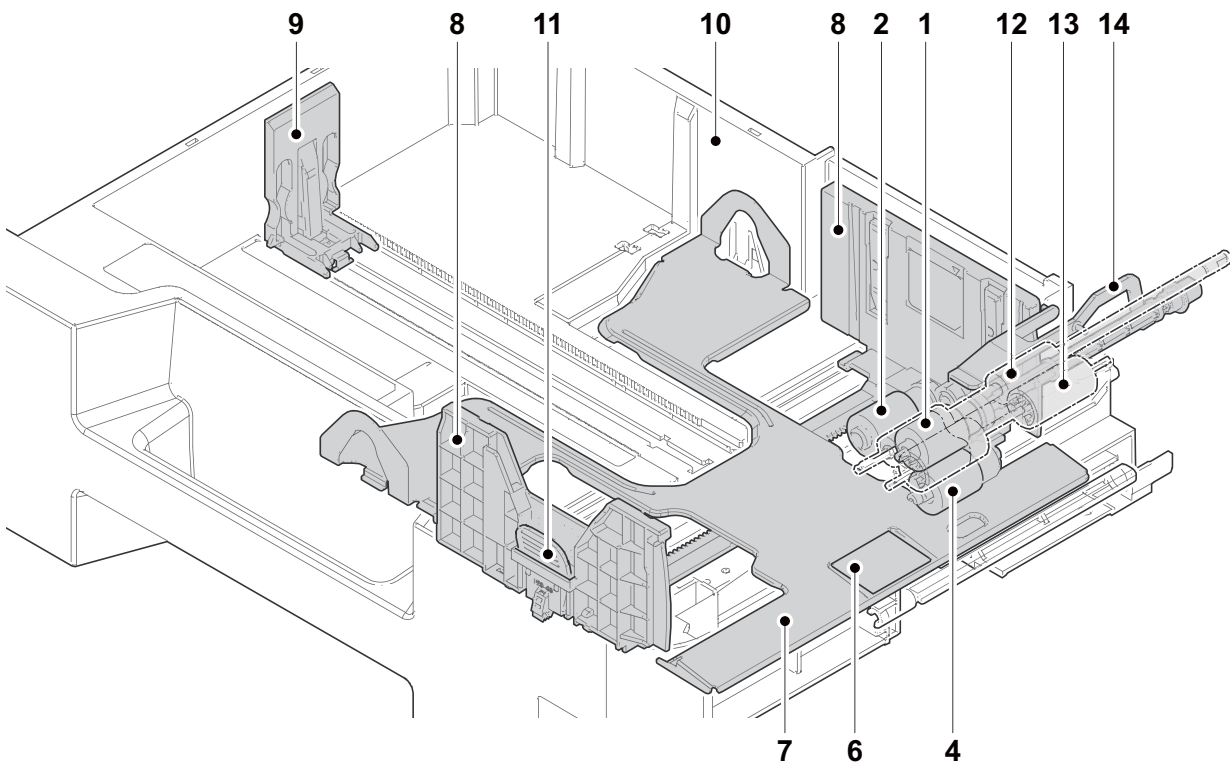
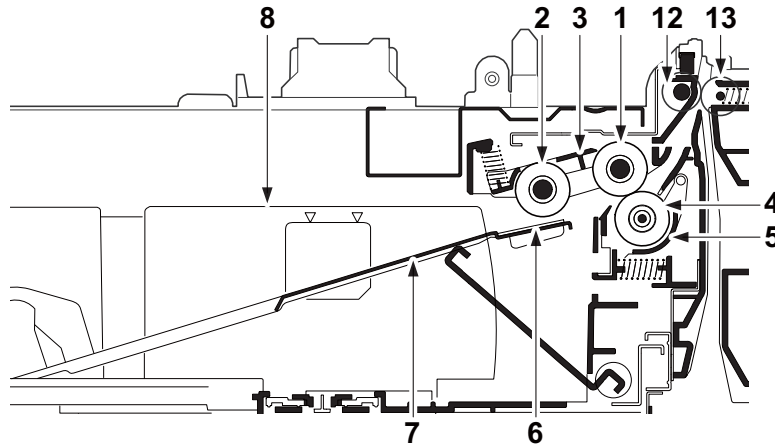


### 3 - 7 Extension device construction (option)

#### (1) Paper feeder (PF-5120)

##### (1-1) Cassette paper feed section

The cassette can load 550 sheets paper (64g/m<sup>2</sup>) or 500 sheets paper (80g/m<sup>2</sup>). Paper from the cassette is picked up by rotating the pickup roller and is conveyed to the main unit by rotating the paper feed roller. Multi-feeding is also prevented by the effect of the retard roller.

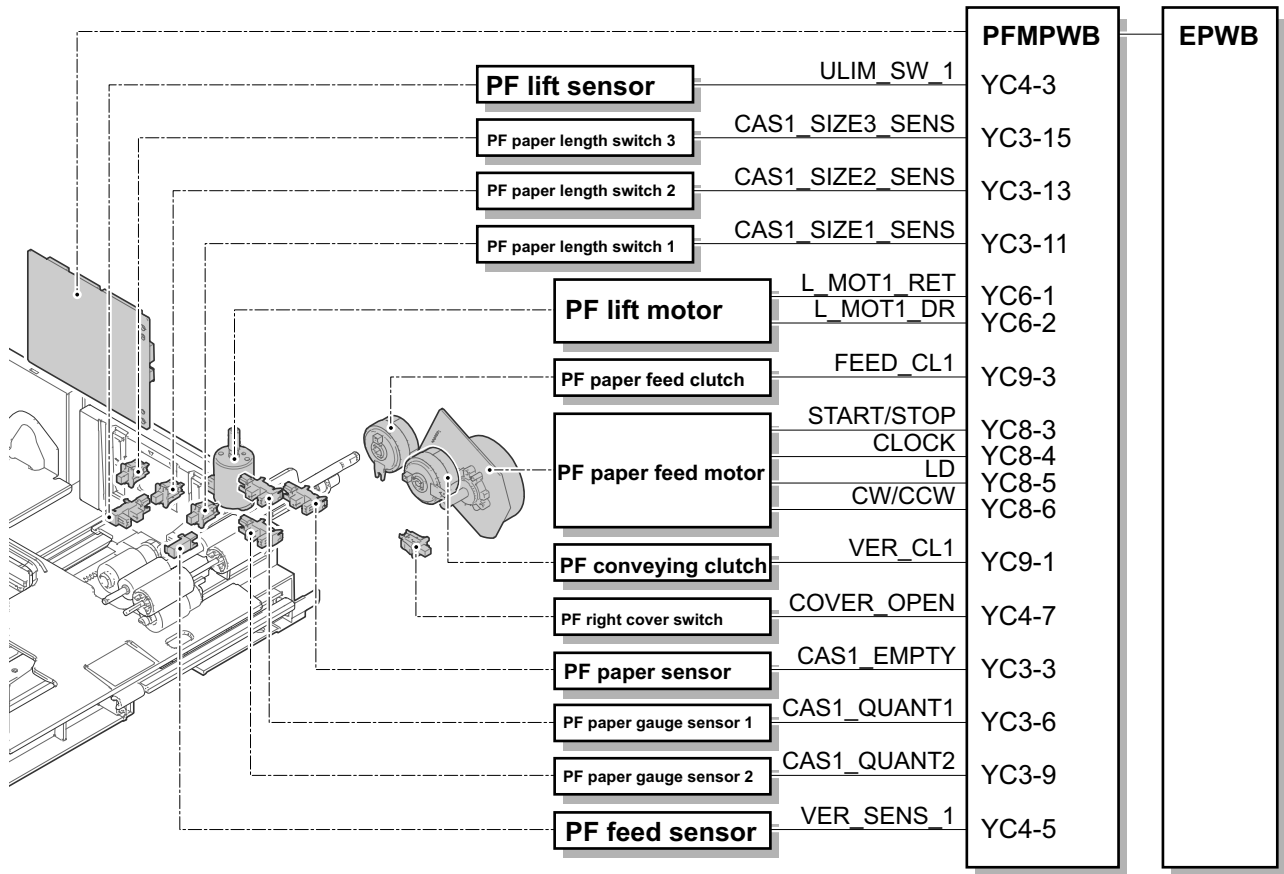


- 1 PF paper feed roller
- 2 PF pickup roller
- 3 PF pickup holder
- 4 PF retard roller
- 5 PF retard holder

- 6 PF friction pad
- 7 PF lift plate
- 8 PF paper width guides
- 9 PF paper length guide
- 10 PF cassette base

- 11 PF width guide release lever
- 12 PF feed roller
- 13 PF feed pulley
- 14 PF actuator paper sensor (PF)

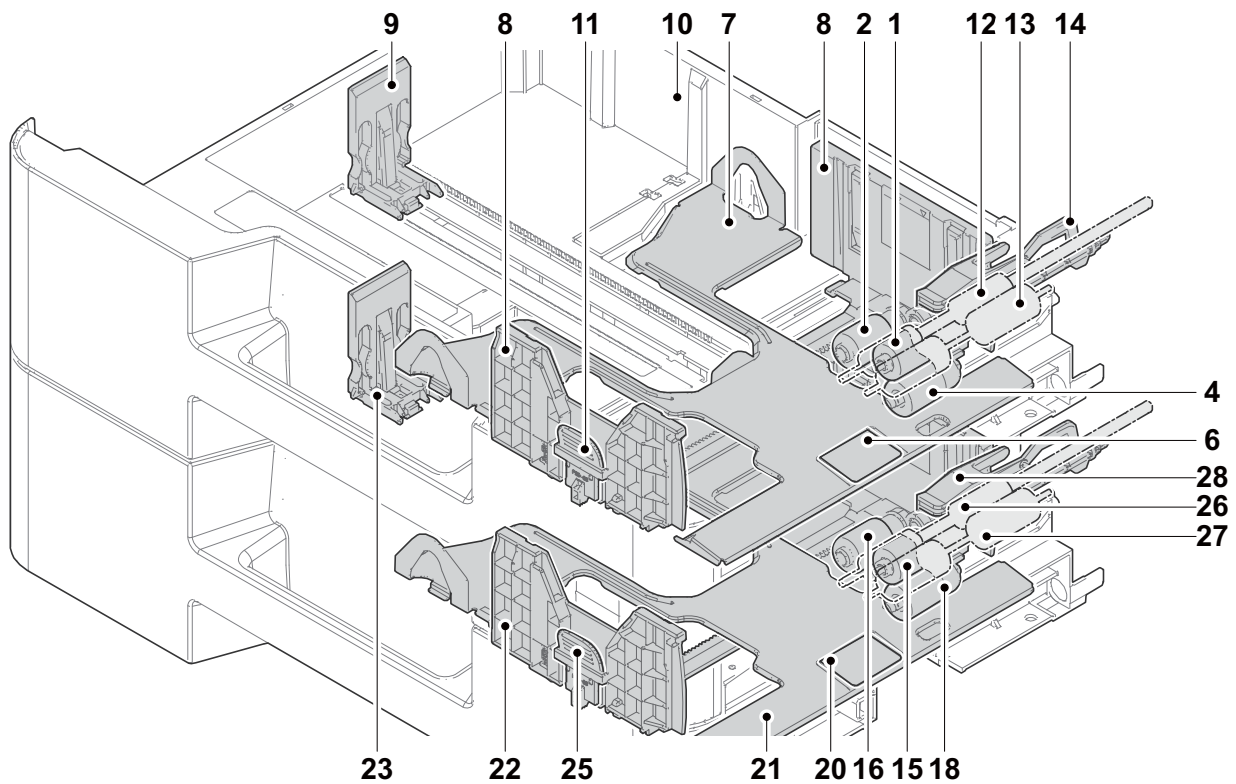
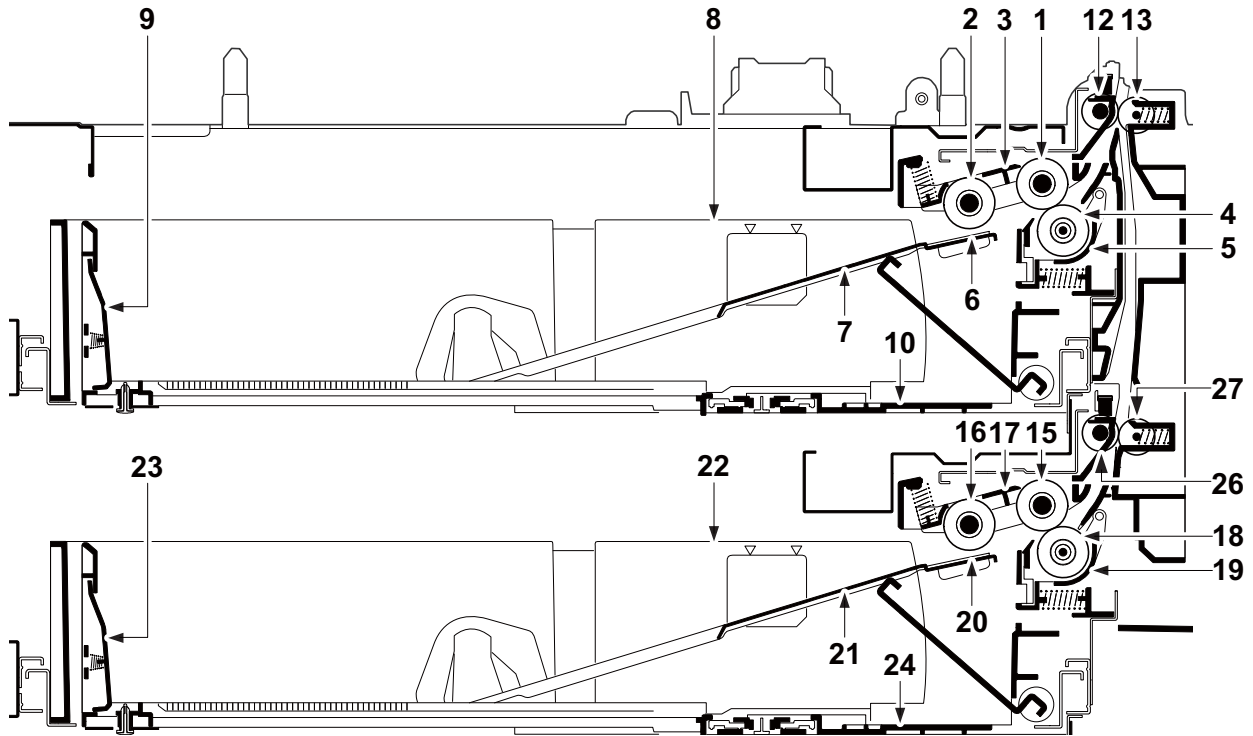
[Block diagram]



## (2) Paper feeder (PF-5130)

### (2-1) Cassette paper feed section

The paper feeder can load 550 sheets paper (64g/m<sup>2</sup>) or 500 sheets paper (80g/m<sup>2</sup>) and consists of two cassette. Paper from the cassette is picked up by rotating the pickup roller and is conveyed to the main unit by rotating the paper feed roller. Multi-feeding is also prevented by the effect of the retard roller.

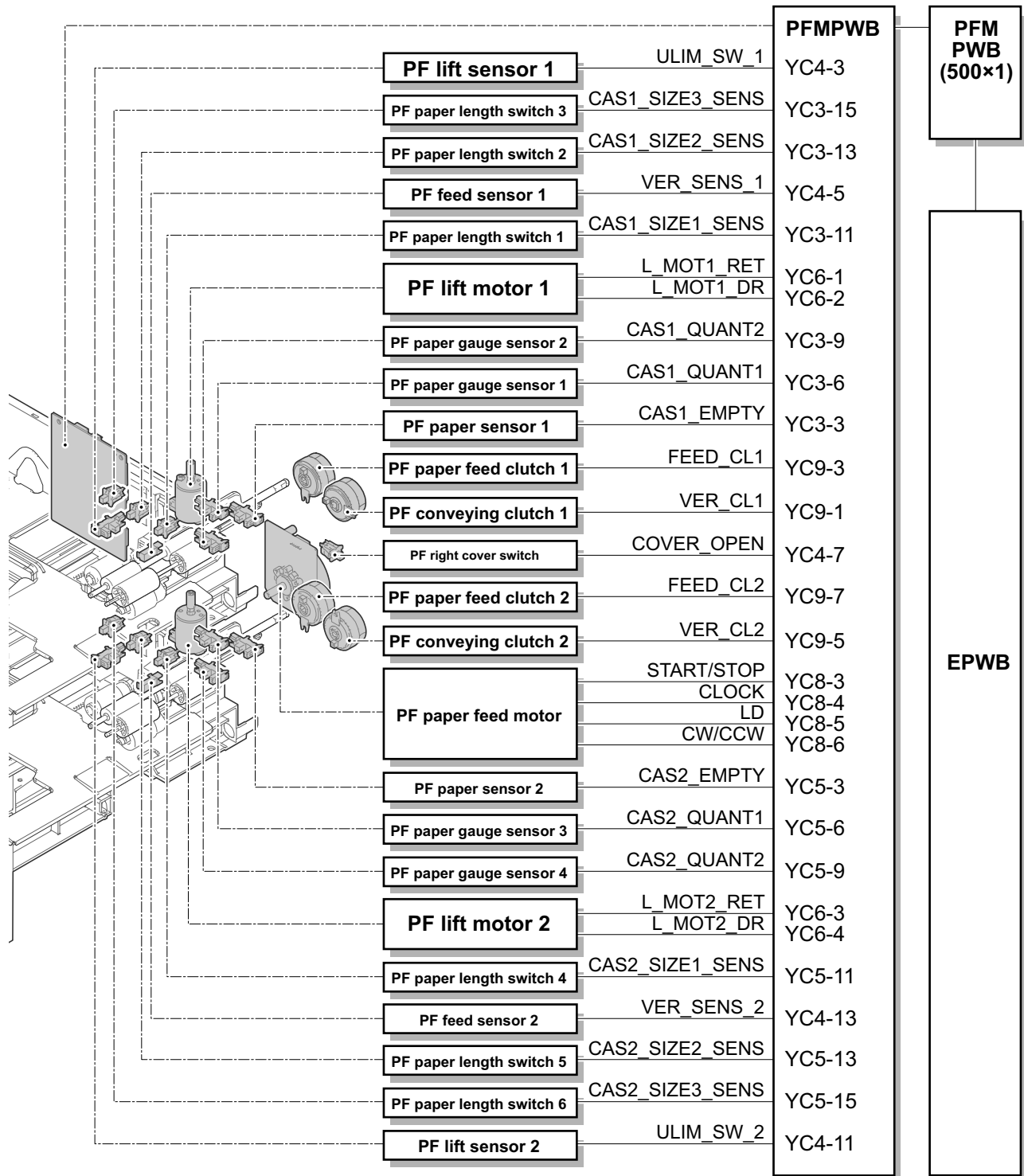


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1 PF paper feed roller 1	11 PF width guide release lever 1	20 PF friction pad 2
2 PF Pickup roller 1	12 PF feed roller 2	21 PF lift plate 2
3 PF Pickup holder 1	13 PF feed pulley 2	22 PF paper width guides 2
4 PF retard roller 1	14 PF actuator (PF paper sensor 1)	23 PF paper length guide 2
5 PF retard holder 1	15 PF paper feed roller 2	24 PF cassette base 2
6 PF friction pad 1	16 PF Pickup roller 2	25 PF width guide release lever 2
7 PF lift plate 1	17 PF Pickup holder 2	26 PF feed roller 3
8 PF paper width guides 1	18 PF retard roller 2	27 PF feed pulley 3
9 PF paper length guide 1	19 PF retard holder 2	28 PF actuator (PF paper sensor 2)
10 PF cassette base 1		



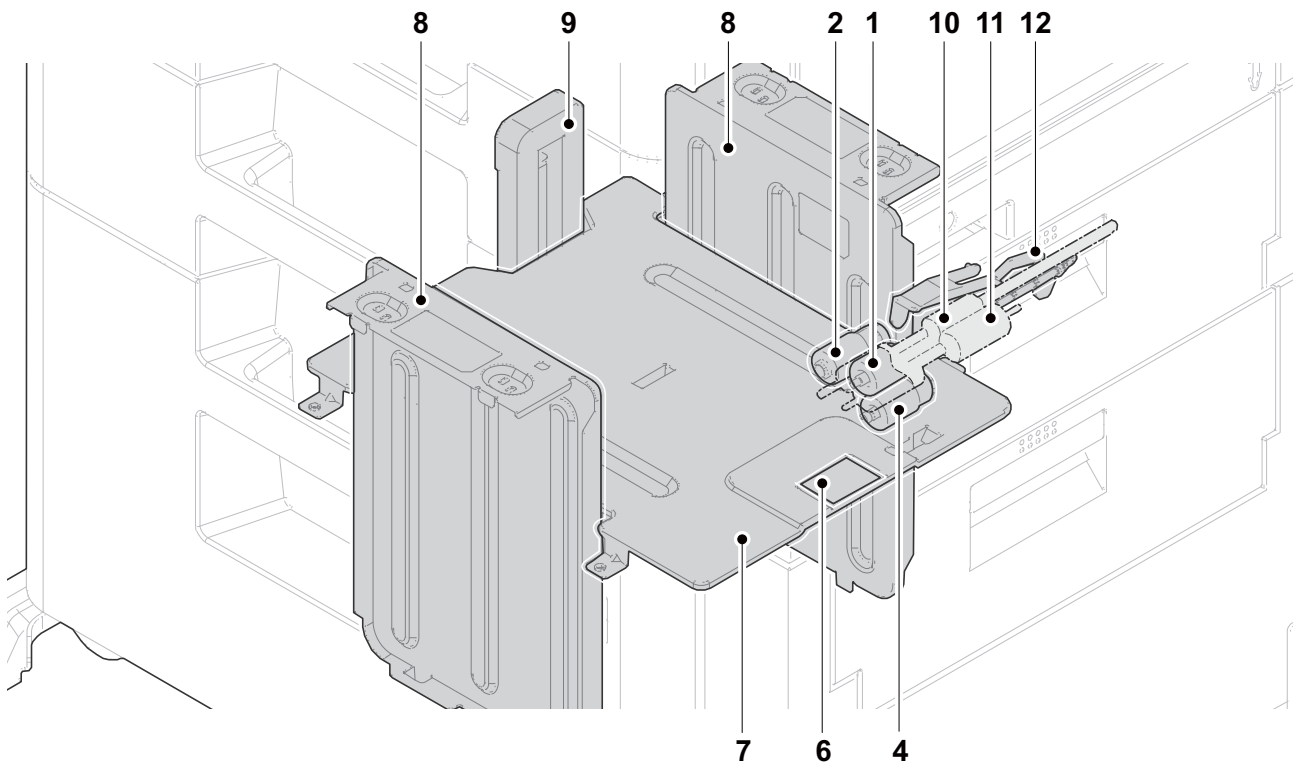
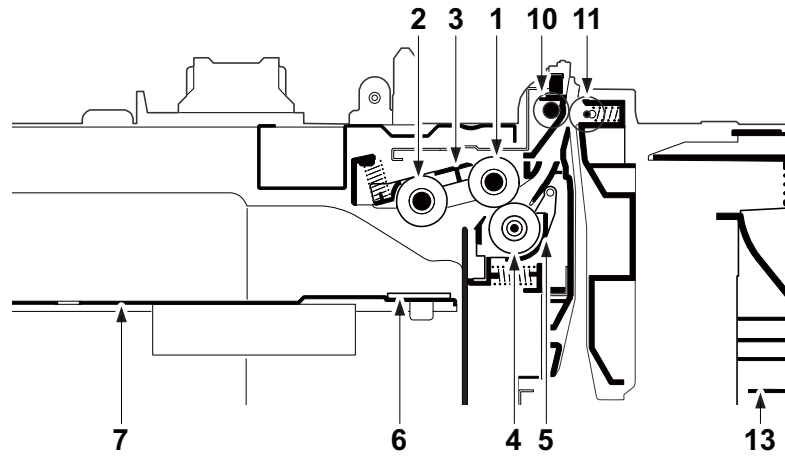
[Block diagram]



### (3) Paper feeder (PF-5140)

#### (3-1) Paper deck feed section

The deck can load 2200 sheets paper (64g/m<sup>2</sup>) or 2000 sheets paper (80g/m<sup>2</sup>). Paper from the deck is picked up by rotating the pickup roller and is conveyed to the main unit by rotating the paper feed roller. Multi-feeding is also prevented by the effect of the retard roller.



1 PF paper feed roller

2 PF pickup roller

3 PF pickup holder

4 PF retard roller

5 PF retard holder

6 PF friction pad

7 PF deck bottom plate

8 PF paper width guides

9 Paper length guide\*1

10 PF feed roller

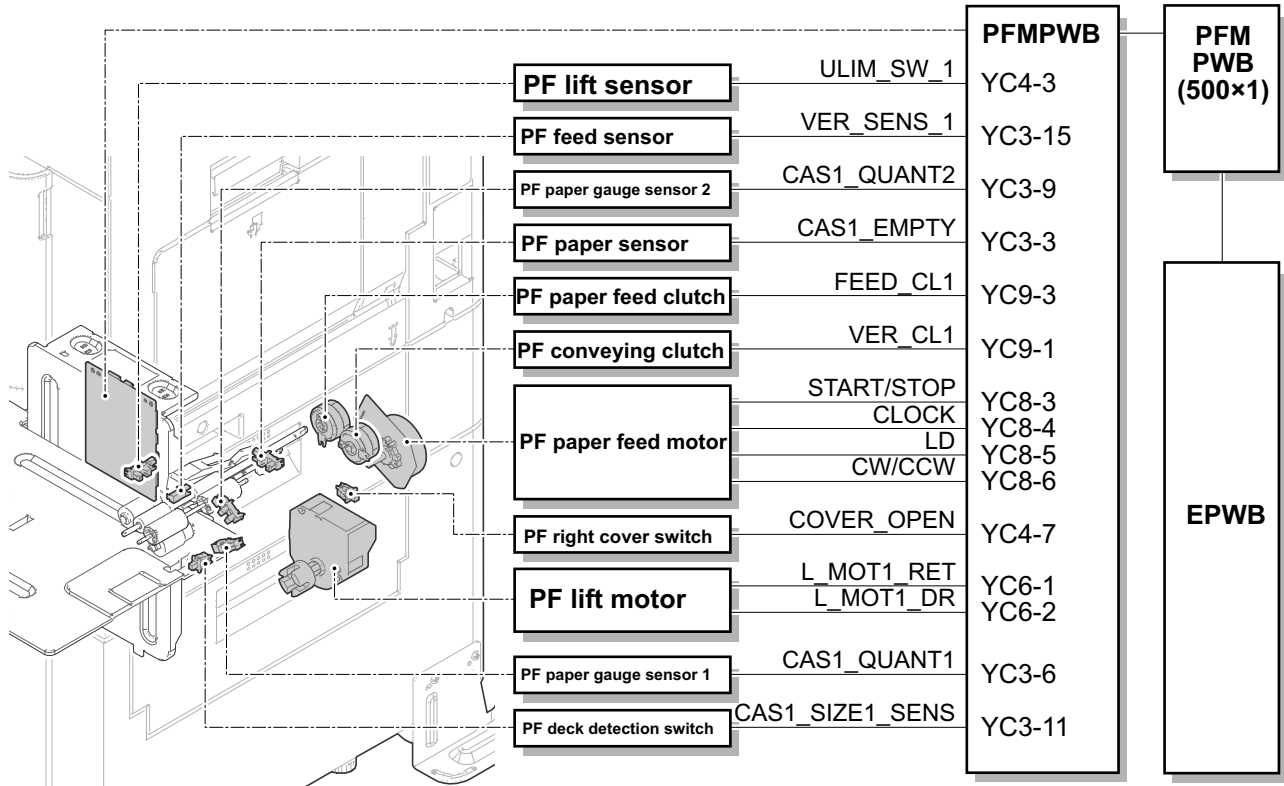
11 PF feed pulley

12 PF actuator  
(PF paper sensor)

13 Right cover

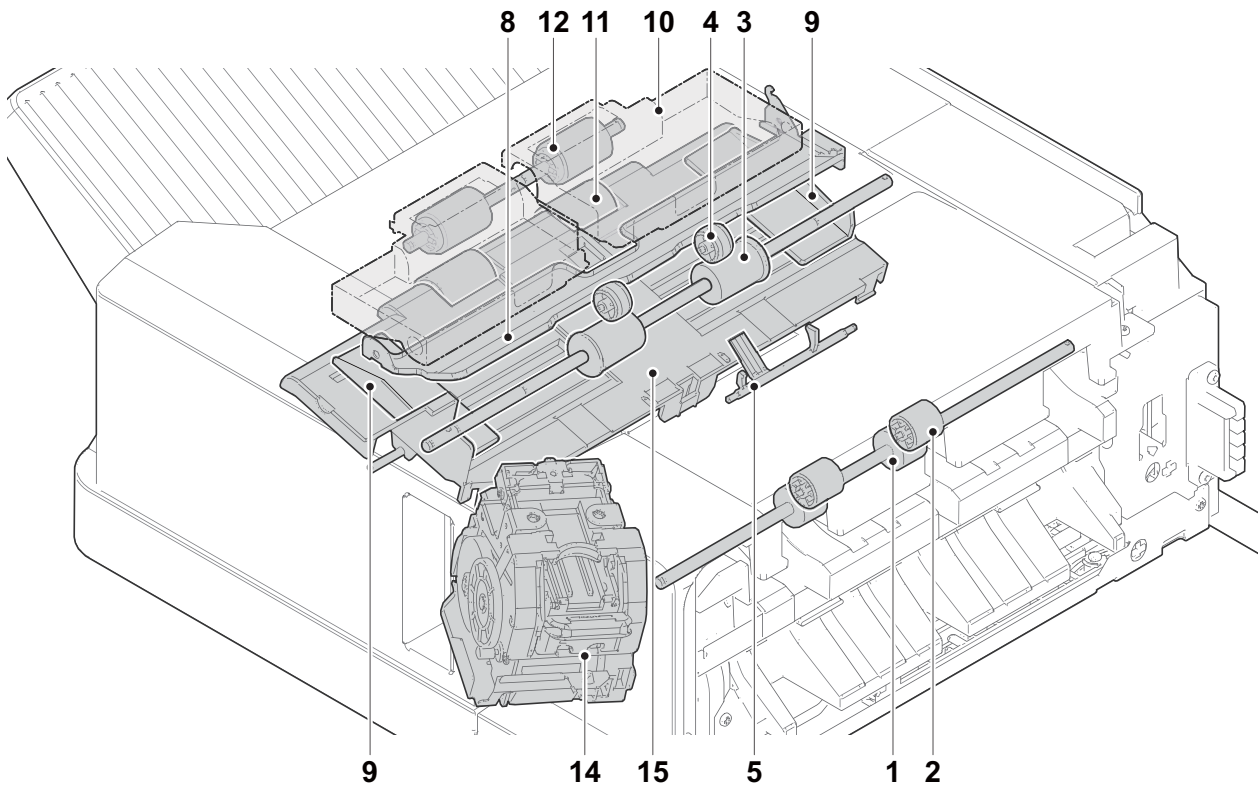
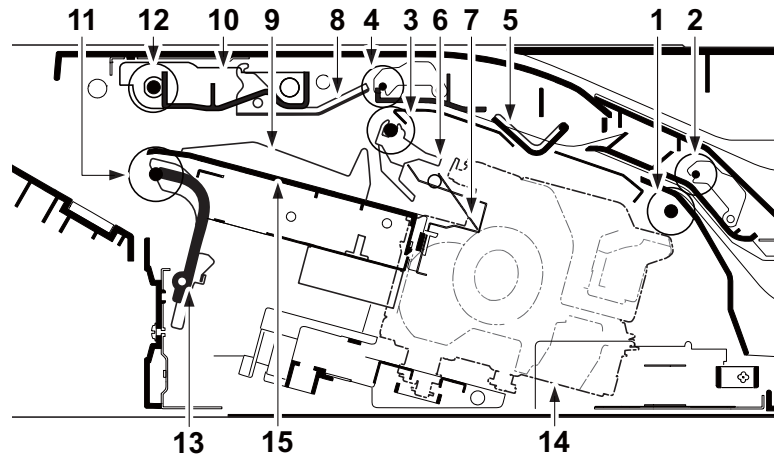
\*1: inch specification only

[Block diagram]



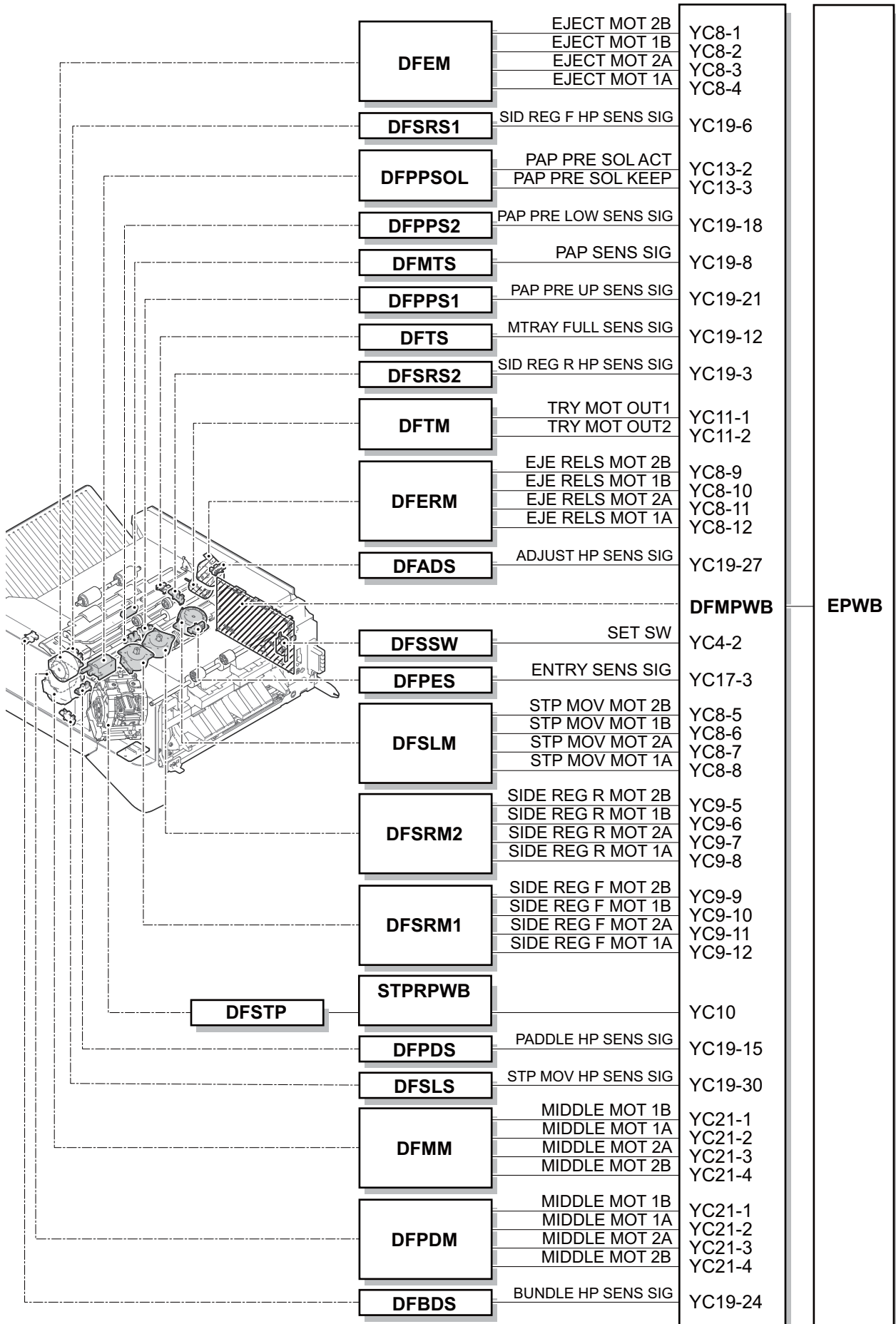
**(4) Inner finisher (DF-5100)****(4-1) Paper conveying section**

The conveying section consists of the parts as shown below. Paper on the middle tray is transferred after adjusting the side registration by moving the DF side registration guides in the staple and sort modes.



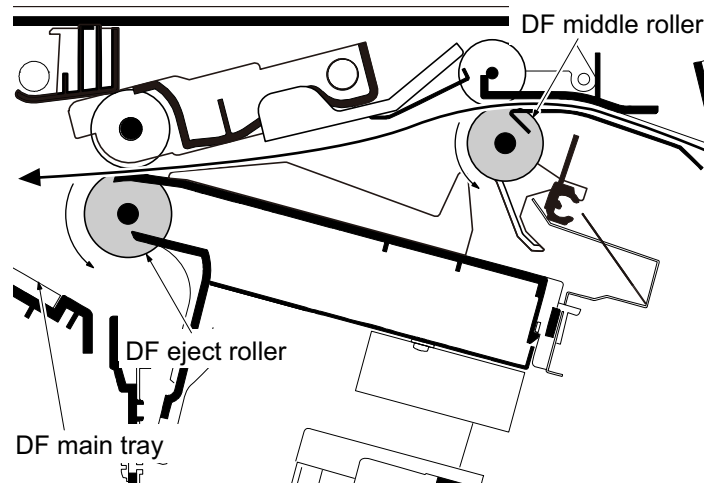
- 
- |  |                         |  |
|--|-------------------------|--|
| 1 DF paper entry roller                  | 6 DF paper stopper      | 11 DF exit roller                      |
| 2 DF entry pulley                        | 7 DF adjusting paddles  | 12 DF exit pulley                      |
| 3 DF Middle roller                       | 8 DF upper guide        | 13 DF Actuator<br>(paper press sensor) |
| 4 DF Middle pulley                       | 9 DF paper width guides | 14 DF stapler                          |
| 5 DF Actuator<br>paper entry sensor) (DF | 10 DF bundle exit unit  | 15 DF middle tray                      |

[Block diagram]

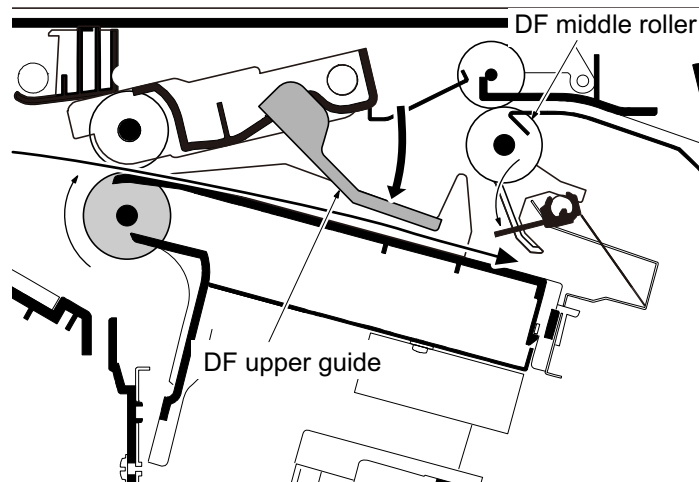


**(4-2) Bundle exit operation****1st sheet**

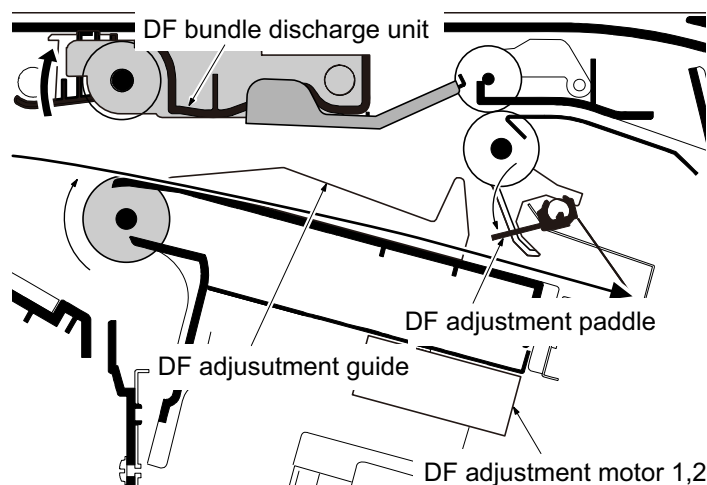
- 1 By rotating the DF entry roller and DF middle roller, paper is conveyed to the process section and then conveyed to the DF main tray by the DF exit roller.



- 2 The DF upper guide descends when the paper trailing edge passes the DF middle roller. Then, the DF exit roller is rotated reversely and paper is sent to the DF middle tray.

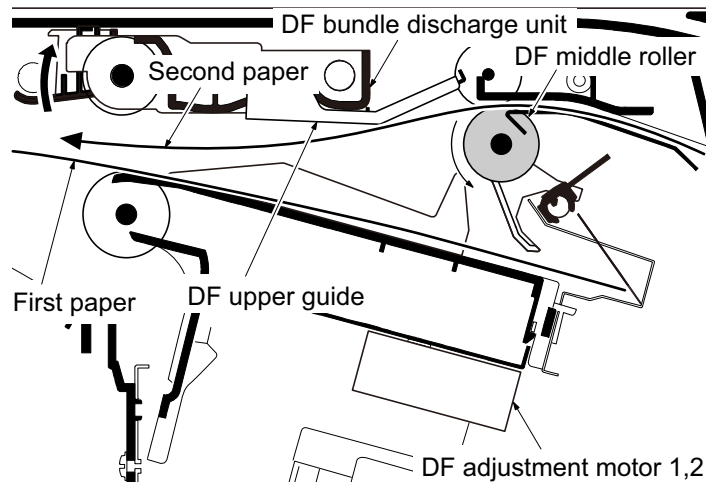


- 3 Then, the DF upper guide ascends and the DF bundle exit unit ascends by the DF exit release motor drive. By rotating the DF exit roller and DF adjusting paddles, paper is conveyed to the DF middle tray. The DF side registration motor 1,2 drive the DF side registration guides to adjust paper.

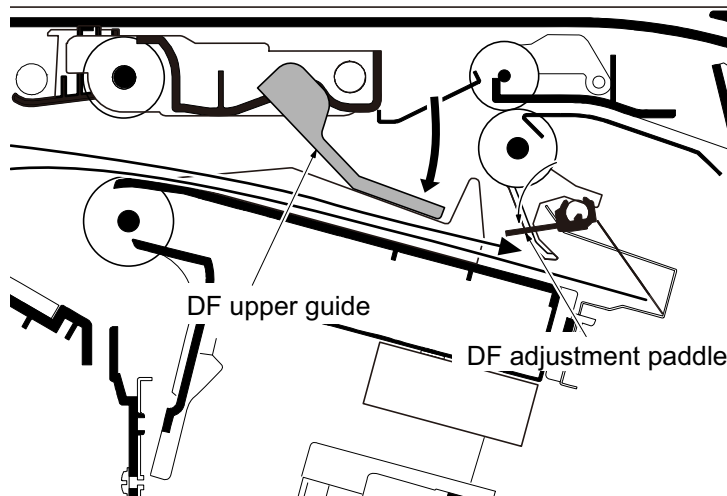


## 2nd sheet and after

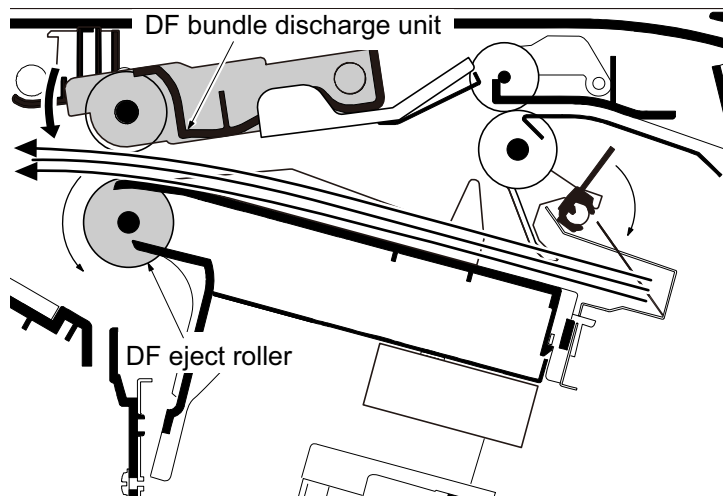
- 4 Paper is sent to the process section as well as the 1st sheet.



- 5 The DF upper guide descends when the paper trailing edge passes the DF middle roller. Then, by rotating the DF adjusting paddles, paper is conveyed to the DF middle tray. Paper is adjusted as well as the 1st sheet.



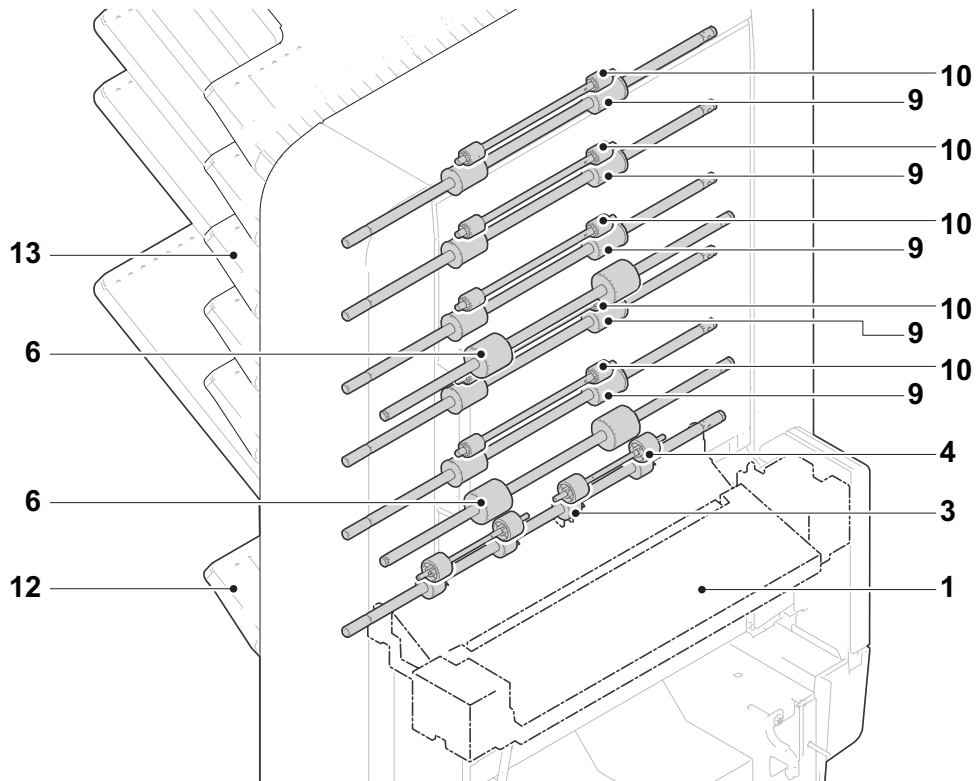
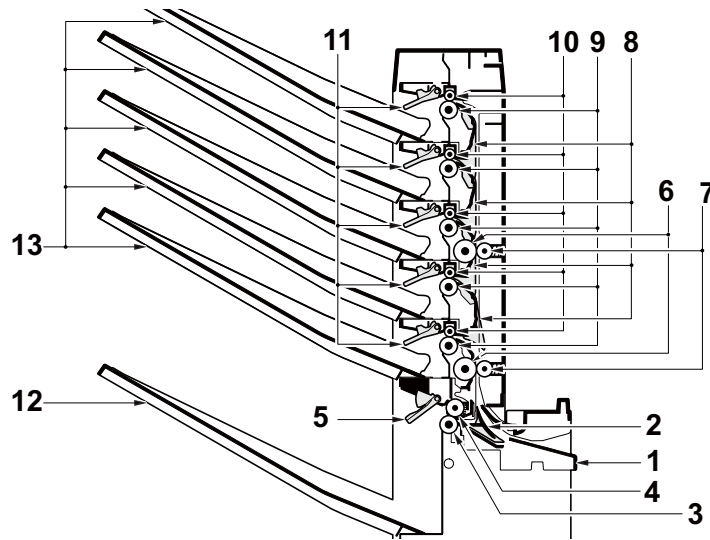
- 6 When completing to adjust the last sheet to bundle, the DF bundle exit unit descends and by rotating the DF exit roller, the paper bundle is exited to the DF main tray.





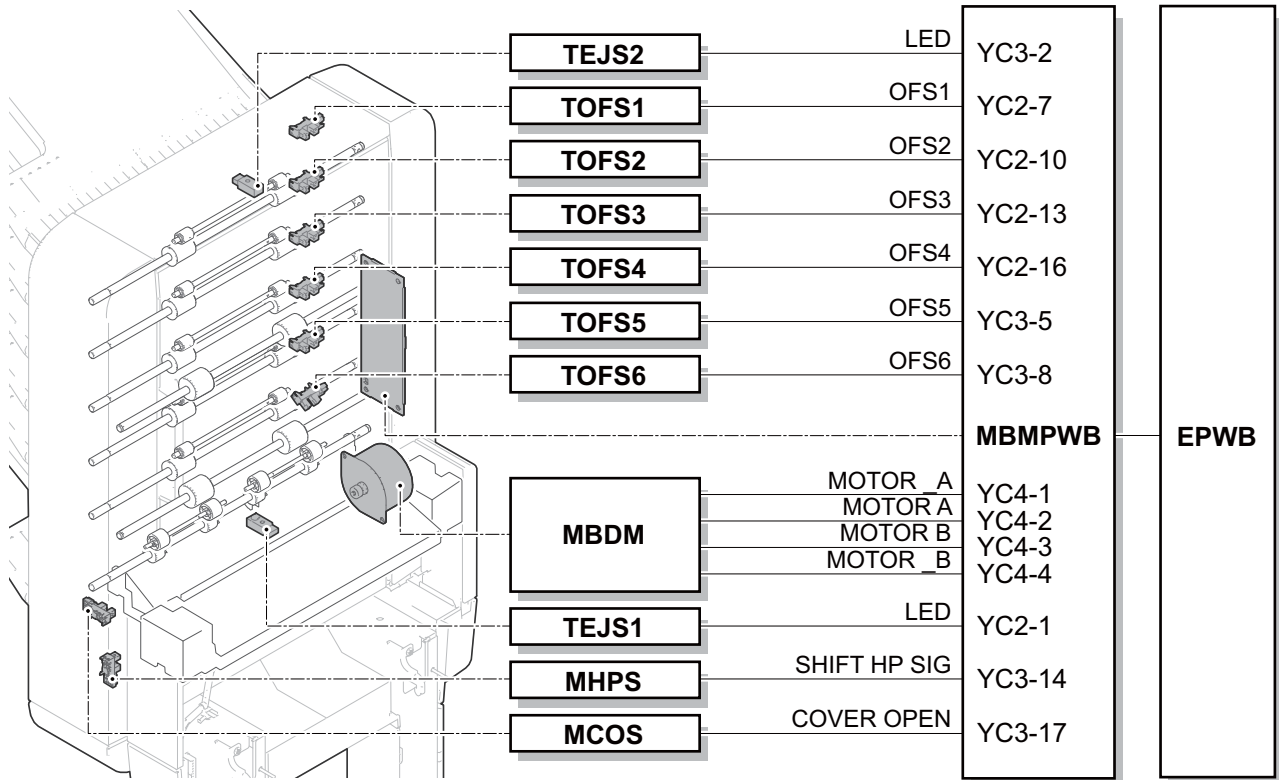
**(5) Mailbox cross-section view (MT-5100)**

The mailbox exits paper to the tray 1 to 6 designated to stack



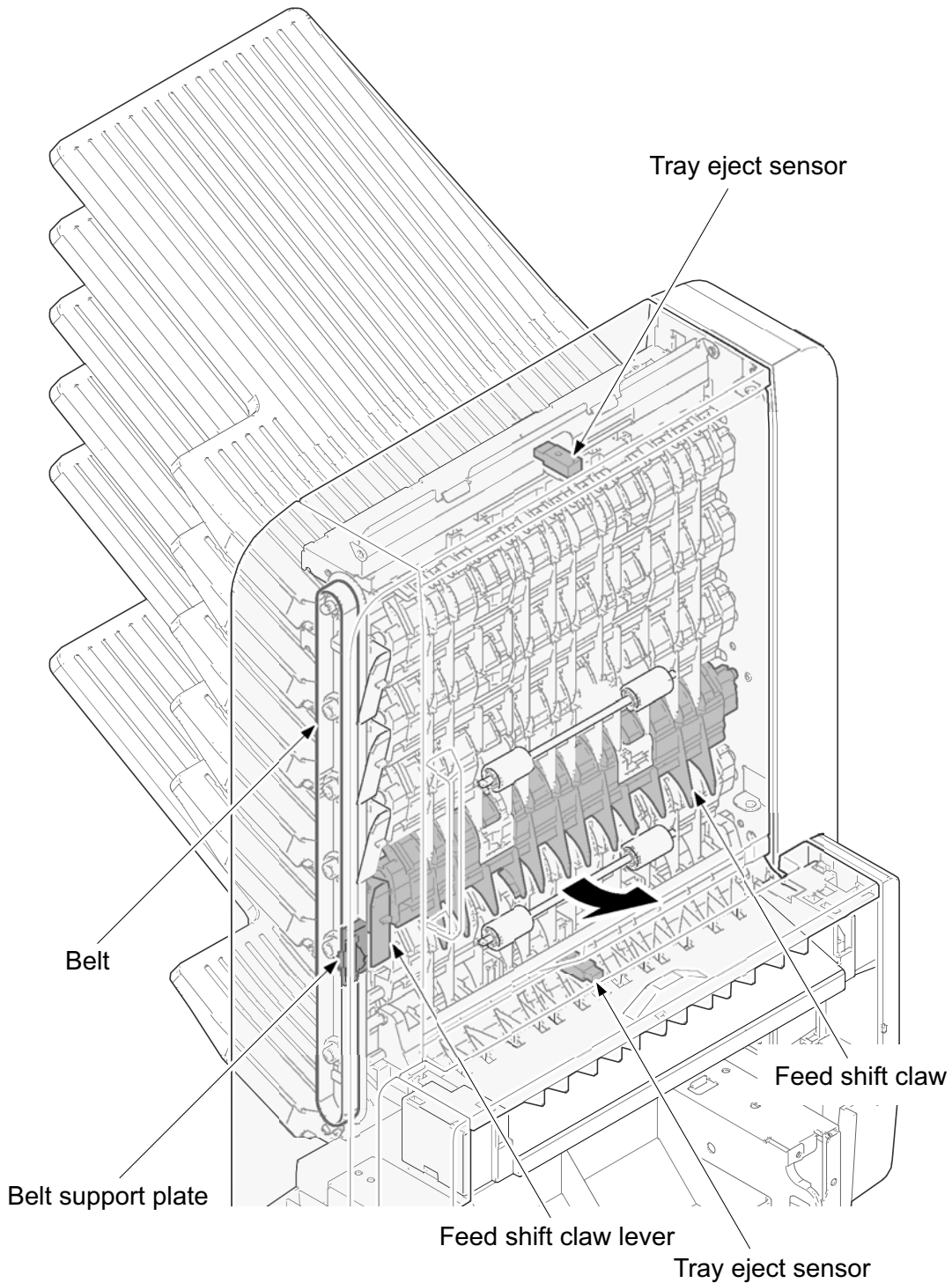
- |                                      |                        |                                       |
|--------------------------------------|------------------------|---------------------------------------|
| 1 MT entry guide                     | 6 MT conveying roller  | 11 MT actuator overflow sensor S) (MB |
| 2 MT Feedshift guide M               | 7 MT conveying pulley  |                                       |
| 3 MT exit roller M                   | 8 MT Feedshift guide S | 12 MT Main tray                       |
| 4 MT exit pulley M                   | 9 MT exit roller S     | 13 MT Sub tray                        |
| 5 MT actuator overflow sensor M) (MT | 10 MT exit pulley S    |                                       |

[Block diagram]



### (5-1) Exiting to the mailbox tray

If the belt support plate moving on the belt passes the feedshift nail lever, the feedshift nail is switches the conveying path to exit to each MT exit sensor. Also, the MT sensor detects paper jam.



## 4 Maintenance

### 4 - 1 Precautions for the maintenance

#### (1) Precautions

- Before disassembling the main unit, press the main power switch to turn the power off. Make sure that the power lamp on the operation panel is off and unplug the power cord from the wall outlet. Then, start the disassembly.
- 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.



#### Note

The operation panel might display the screen for a moment when the power cord is connected.

#### (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. Wait more than 5 seconds between the power off and on. 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

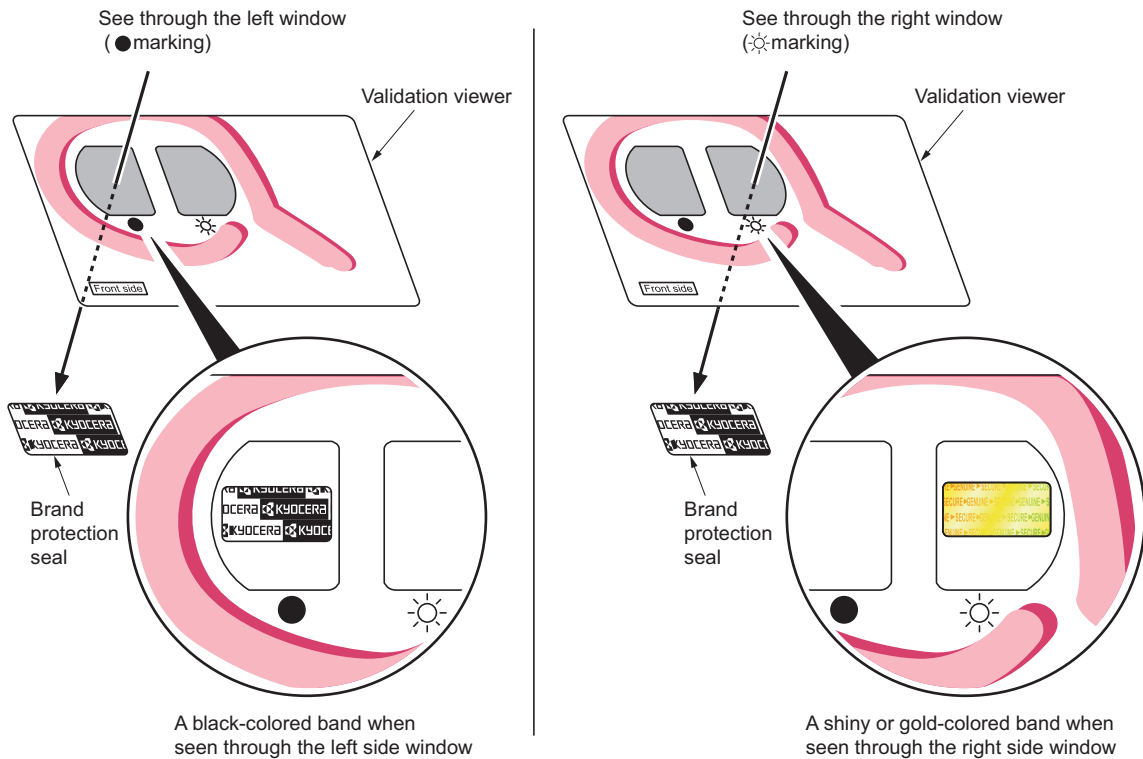
Look at the screening film on the brand protection seal affixed to the toner container through the windows of the validation viewer.

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

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

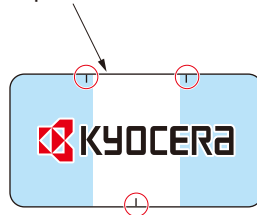
**A shiny or gold-colored band when seen through the anti-counterfeit film portion right side window (mark ☀).**

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



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

Three cut parts at the red circle section



## 4 - 2 Maintenance parts

### (1) Maintenance kits

Name used in service manual	Name used in parts list	Part No.
MK-533XA (200,000 images) (*1: 300,000 images)	MK-533XA MAINTENANCE KIT  ROLLER RETARD ASSY *1 DRUM K UNIT DLP K UNIT FUSER ASSY MIDDLE TRANSFER UNIT 2ND TRANS ASSY SP HOLDER PICK UP ASSY SP *1	1702WL8NL0/1702WL7US0
MK-5195B (200,000 images)	MK-5195B MAINTENANCE KIT  DRUM C/M/Y UNIT DLP C/M/Y UNIT	1702R40UN0

### (2) Maintenance kit for the document processor

30 ppm model standard DP

Name used in service manual	Name used in parts list	Part No.
MK-3140 (200,000 Sheets) SEPARATION PAD PAPER FEED PULLEY Pickup roller	MK-3140/MAINTENANCE KIT  PAD SEPARATION PULLEY PAPER FEED ASSY PULLEY PICKUP ASSY	1702P60UN0

**(3) Executing the maintenance mode after replacing the maintenance kit**

Execute the following maintenance modes after replacing the above maintenance kit.

Section	Mode No.	Maintenance item	MK-5***A	MK-5***B
Replacing settings	U119	Drum unit initial settings	○	○
	U930	Clear the main charger roller counts	○	○
	U469	Color registration adjustment	○	✕
	U127	Clearing the transfer count	○	✕
	U167	Clearing the fuser count	○	✕
	U251	Checking/clearing the maintenance counts	○	✕
Image adjustment	U464	ID correction operation setting (Calib)	○	○
	U469	Color registration adjustment (Auto)	○	○
	U464	ID correction operation setting (Calib)	○*1	○*1
	U410	Adjusting the halftone automatically	○	○
Maintenance	U251	Checking/clearing the maintenance counts	○	○

\*1: at the time of drum replacement only

**(4) Maintenance parts list**

Name used in service manual	Name used in parts list	Part No.
Regist cleaner	PARTS CLEANER REGIST ASSY SP	302R49412_
Paper feed roller	PARTS PRIMARY FEED ASSY SP	302R49421_
Pickup roller	PARTS HOLDER PICK UP ASSY SP	302R49417_
Retard roller	PARTS ROLLER RETARD ASSY SP	302SZ9407_
registration roller	PARTS ROLLER REGIST SP	302SZ9409_
MP paper feed roller	PARTS ROLLER MPF ASSY SP	302MV9402_
MP separation pad	PARTS HOLDER SEPARATION SP	302R49418_
Contact glass	PARTS ISU TOP SP	302R69401_
Slit glass	PARTS ISU TOP SP	302R69401_

## 4 - 3 Maintenance parts replacement procedures

Replacement of the maintenance kit is required after about 200,000 images. (Pickup roller, Paper feed roller and Retard roller are replaced at times 300,000 images.)

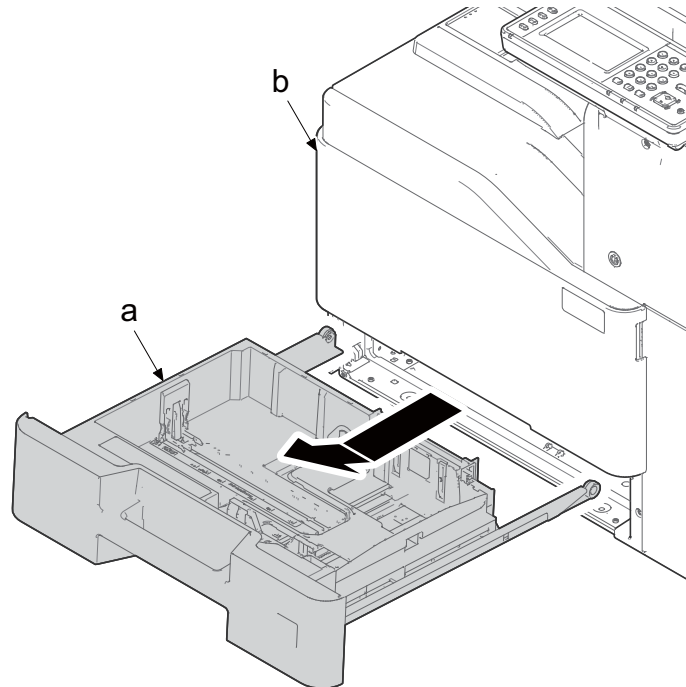
The message [Replace MK.] appears at the replacement timing.

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

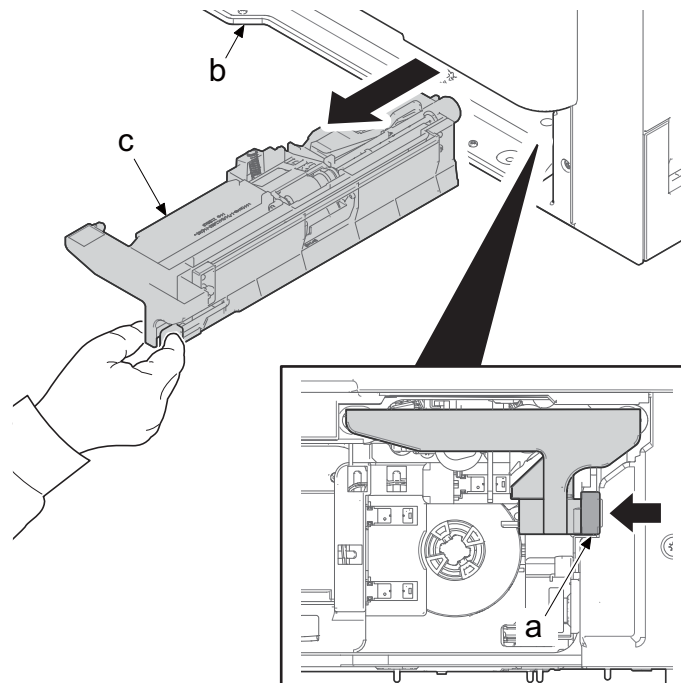
### (1) Cassette paper feed section

#### (1-1) Detaching and reattaching the pickup roller and paper feed roller

- 1 Pull out the cassette (a) from the main unit (b) and remove it in the direction of the arrow.

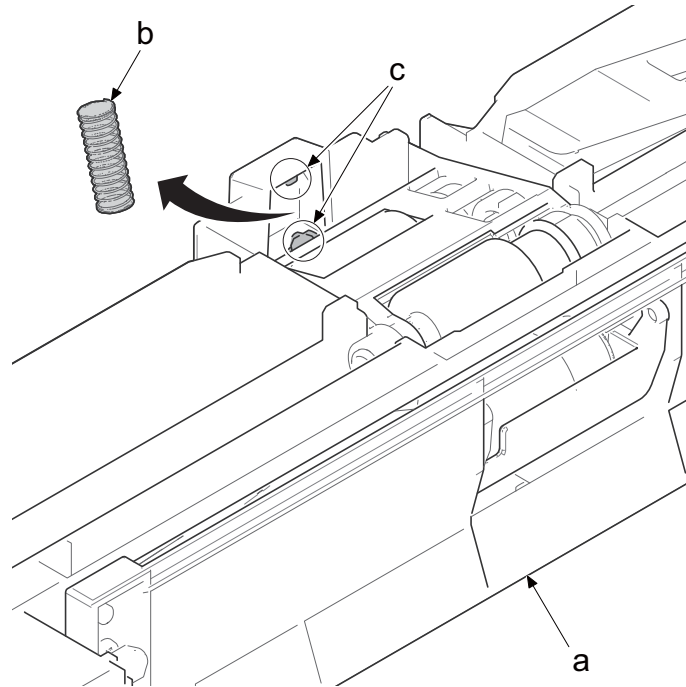


- 2 Pinch the lock lever (a) and pull the primary paper feed unit (c) from the main unit (b).





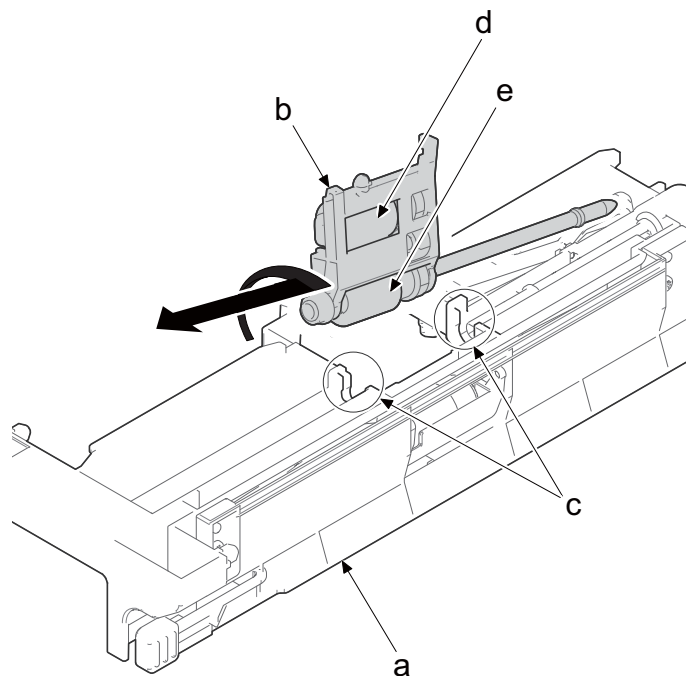
### 3 Remove the spring (b) from the primary paper feed unit (a).



 **Important**

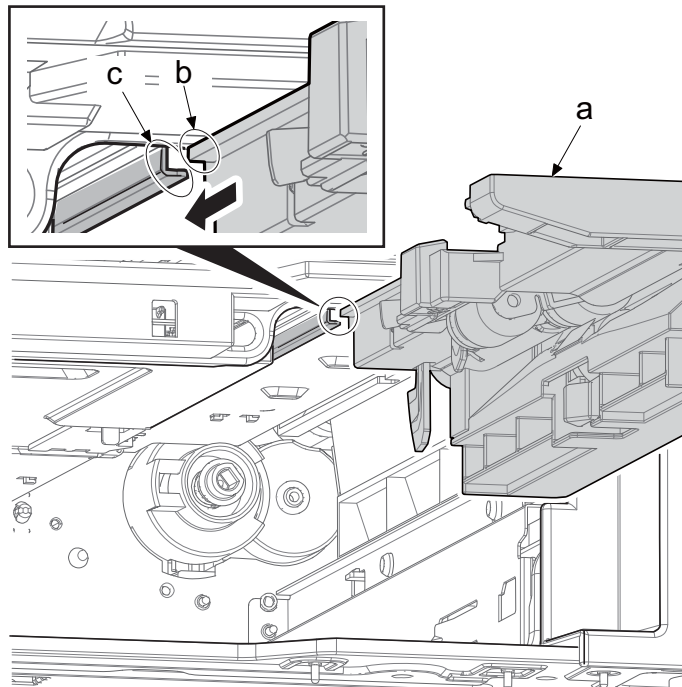
Check if the pressure spring (b) is securely in the protrusion (c) when reattaching it.

### 4 Tilt up the pickup holder (b) on the primary paper feed unit (a) and remove it from the bushing (c).

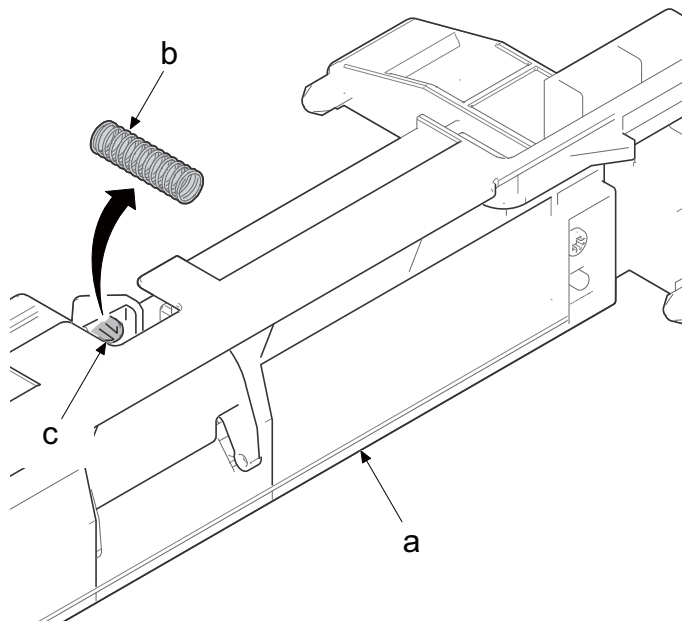


**✔ Important**

When attaching the primary paper feed unit (a), insert the protrusion (b) into the main unit side guide (c).

**(1-2) Detaching and reattaching the retard roller**

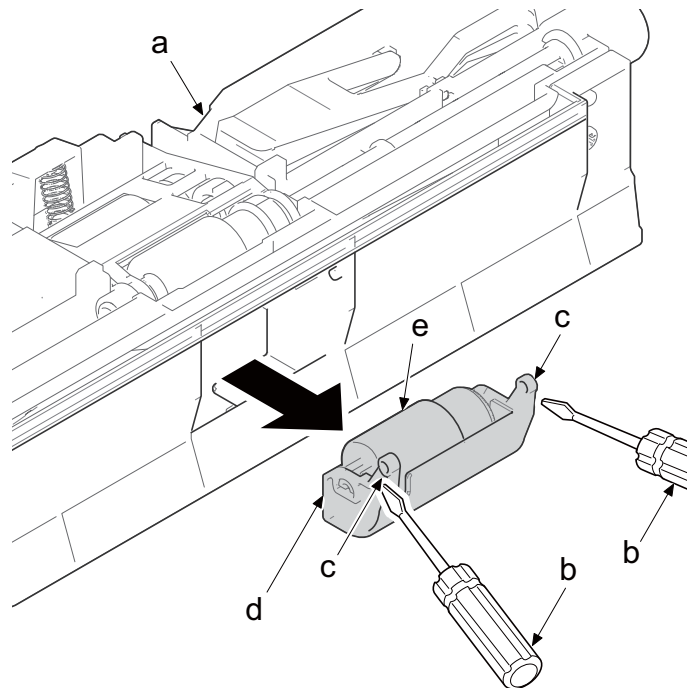
- 1** Turn over the primary paper feed unit (a).
- 2** Remove the spring (b).



**✔ Important**

Check if the pressure spring (b) is securely in the protrusion (c) when reattaching it.

- 3 Turn over the primary paper feed unit (a) again.
- 4 Remove the retard holder fulcrum (c) with the flat-blade screwdriver (b) and remove the retard holder (d).
- 5 Attach the new retard holder.
- 6 Attach the new pickup holder.
- 7 Reattach the parts in the original position.

**✔ Important**

When replacing the new pickup holder or retard holder, take care not to touch the roller surface.

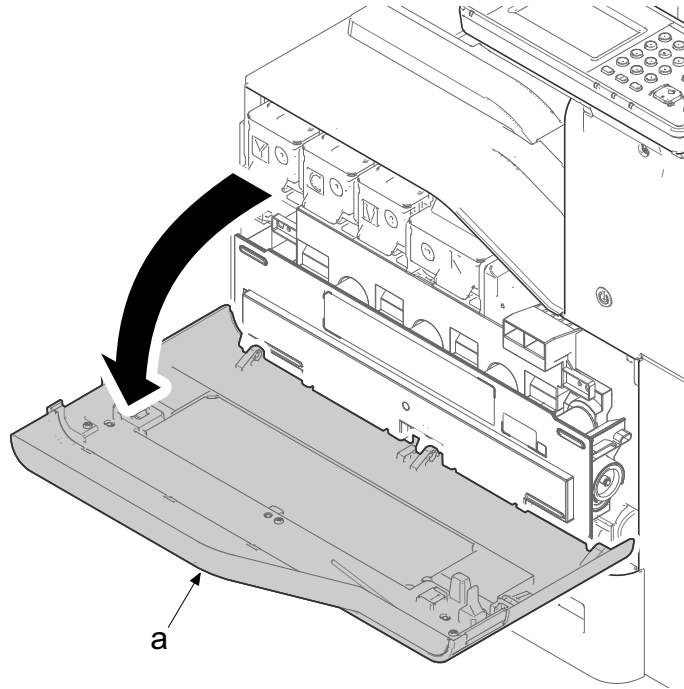
**Execute maintenance mode**

Execute the following setting after replacing the feed roller.

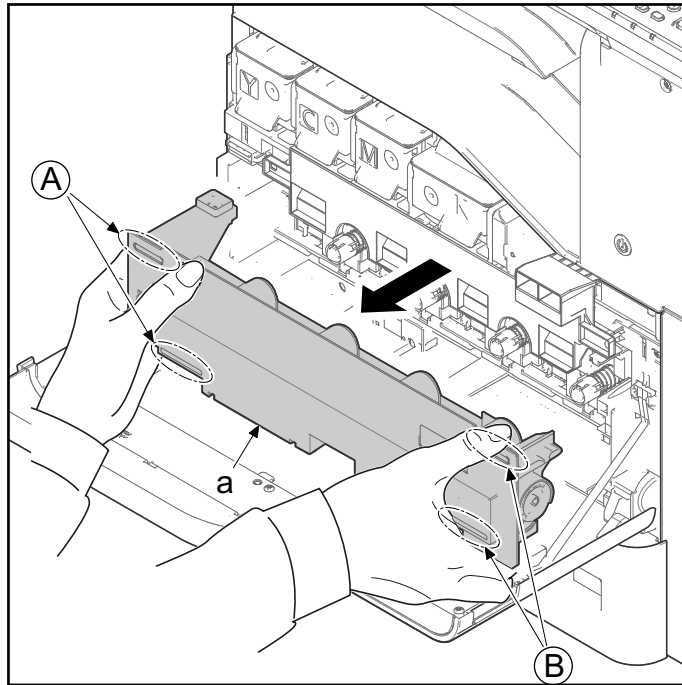
- Clearing the maintenance counts (maintenance mode U251): Clear

**(1-3) Detaching and reattaching the regist cleaner**

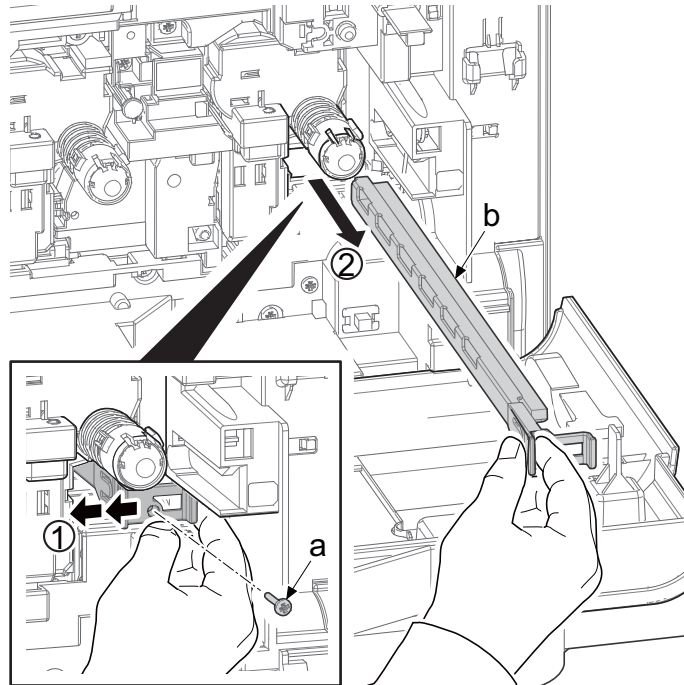
- 1** Open the front cover (a).



- 2** Hold A and B, and remove the waste toner box (a).

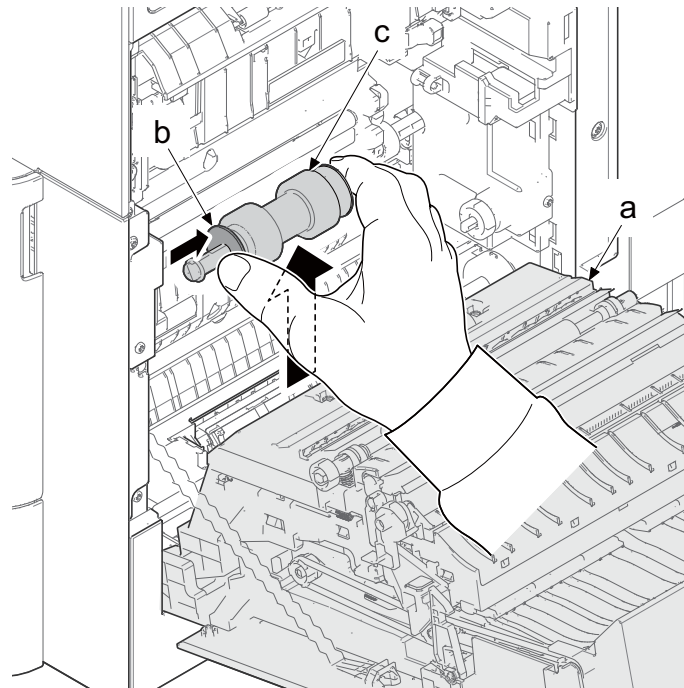


- 3 Remove the screw (a) (M3x12).
- 4 Slide the regist cleaner (b) in the direction of the arrow and release the lock.
- 5 Pinch the regist cleaner (b) and pull it out.
- 6 Check the sponge of the regist cleaner (b) and clean or replace it.
- 7 Reattach the parts in the original position.



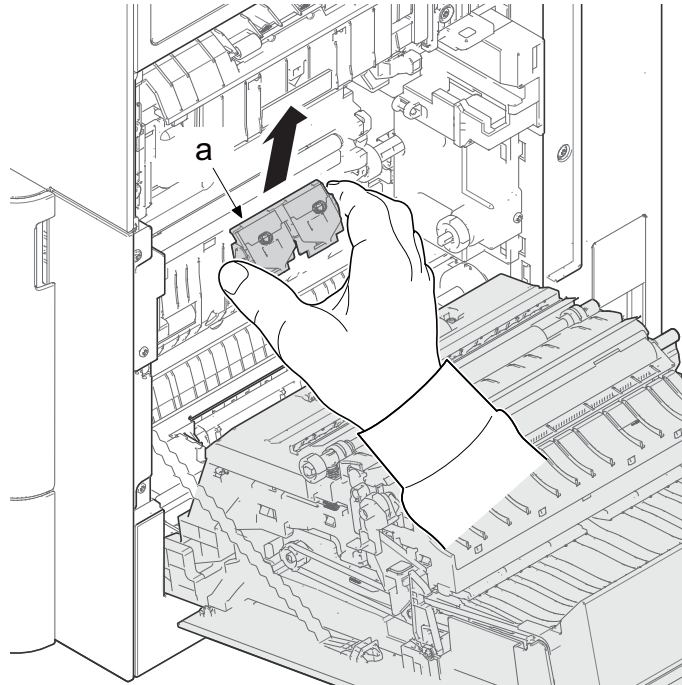
**(2) MP tray paper feed section****(2-1) Detaching and reattaching the MP paper feed roller**

- 1** Open the right cover (a).
- 2** Pinch the holder (b) and remove the MP feed roller (c) in the direction of the arrow.



**(2-2) Detaching and reattaching the MP separation pad**

- 1** Remove the MP separation pad (a) in the direction of the arrow.
- 2** Attach the new MP separation pad.
- 3** Attach the new MP paper feed roller.
- 4** Reattach the parts in the original position.

**✔ Important**

When replacing the new MP separation pad or MP paper feed roller, be careful not to touch the roller surface or the pad surface.

**Execute maintenance mode**

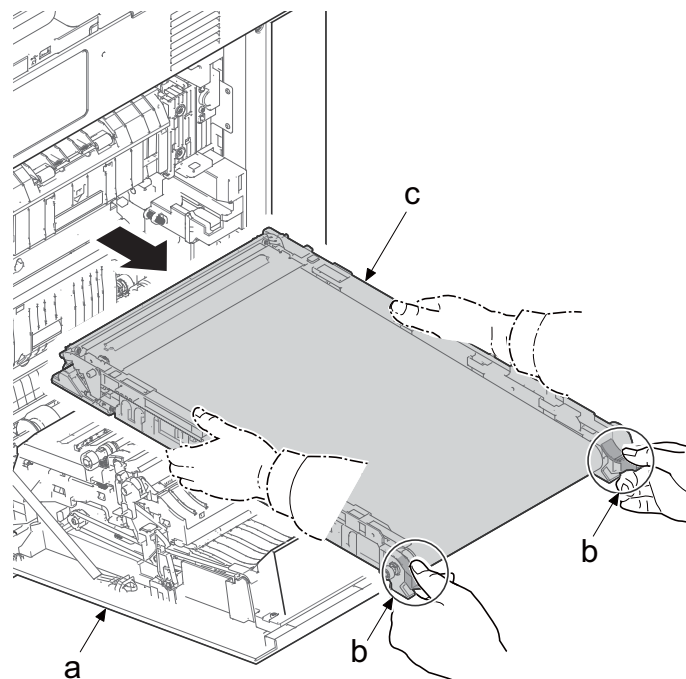
**Execute the following setting after replacing the MP paper feed roller.**

- Clearing the maintenance counts (maintenance mode U251): Clear

### (3) Transfer section

#### (3-1) Detaching and reattaching the primary transfer unit

- 1 Open the right cover (a).
- 2 Hold the handle (a) and pull out the primary transfer unit (c) in the direction of the arrow.
- 3 Check the primary transfer unit (c) and clean or replace it.
- 4 Reattach the parts in the original position.



 **Important**

When pulling out the primary transfer unit, hold the center of it on the way to avoid hitting it to the right cover (a).

#### Execute maintenance mode

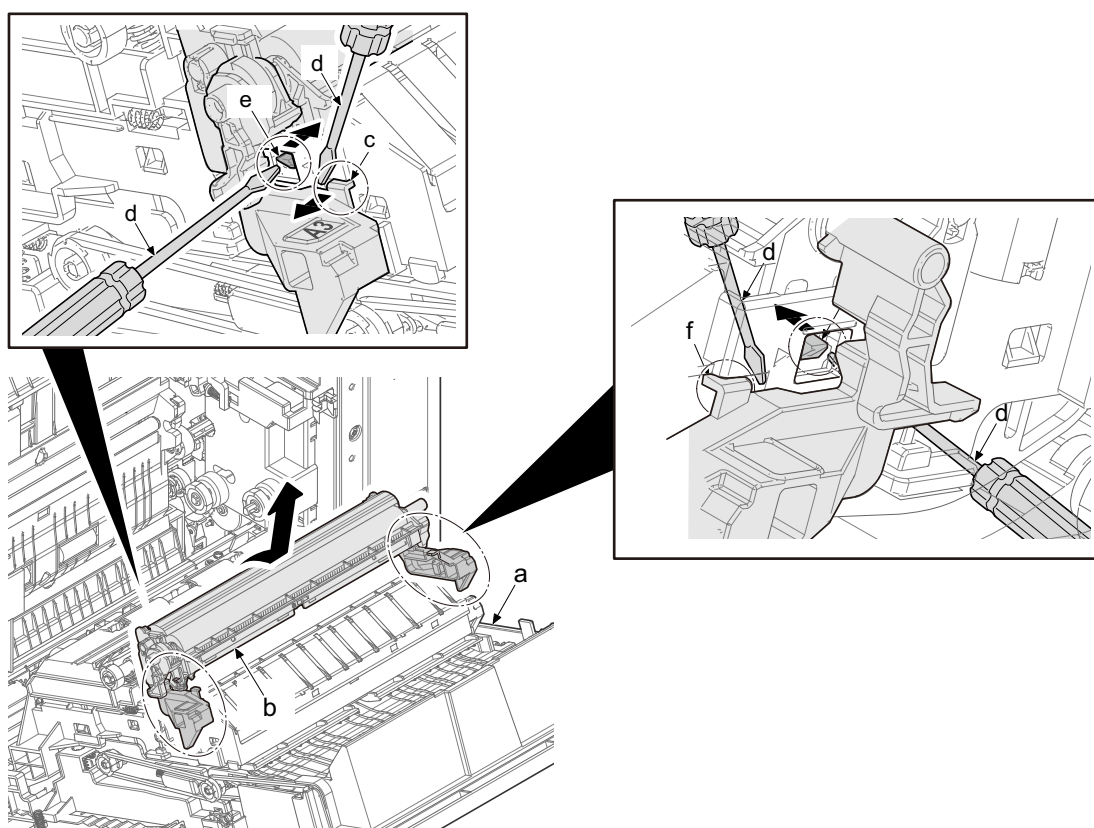
Execute the following setting after replacing the primary transfer unit.

- 1 **Checking/clearing the transfer counts (maintenance mode U127): Clear**
- 2 **ID correction operation setting (maintenance mode U464): Calib (Full)**
- 3 **Color registration adjustment (maintenance mode U469): Auto**
- 4 **Adjusting the halftone automatically (maintenance mode U410): Normal Mode**



**(3-2) Detaching and reattaching the secondary transfer roller unit**

- 1** Open the right cover (a).
- 2** Release the front lever hook (c) of the secondary transfer unit (b) toward you with a flat-blade screwdriver (d) and release the front lock (e) by pressing it with a flat-blade screwdriver (d).
- 3** Likewise, release the rear lever hook (f) and rear lock (g) with a flat-blade screwdriver (d).
- 4** Pull out the secondary transfer unit (b) in the direction of the arrow while rotating it toward you.
- 5** Check the secondary transfer unit (b) and clean or replace it.
- 6** Reattach the parts in the original position.

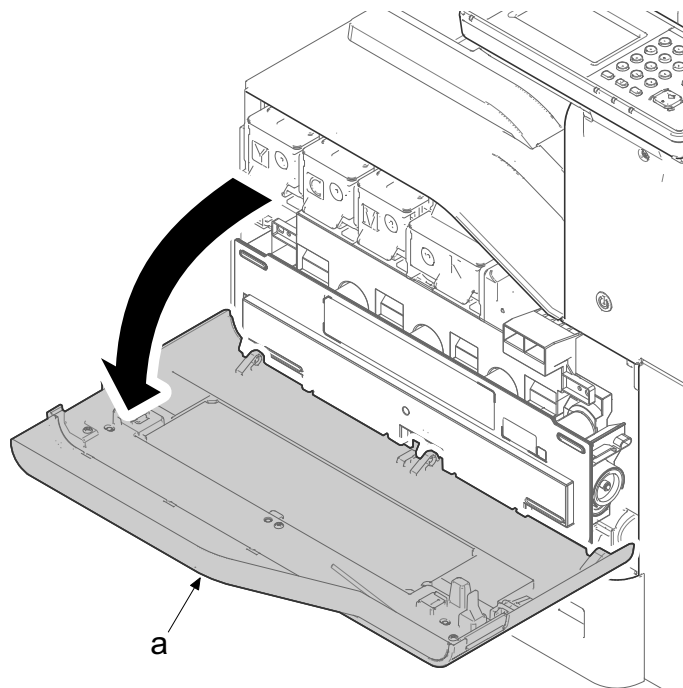
**Execute maintenance mode**

Execute the following setting after replacing the secondary transfer unit.

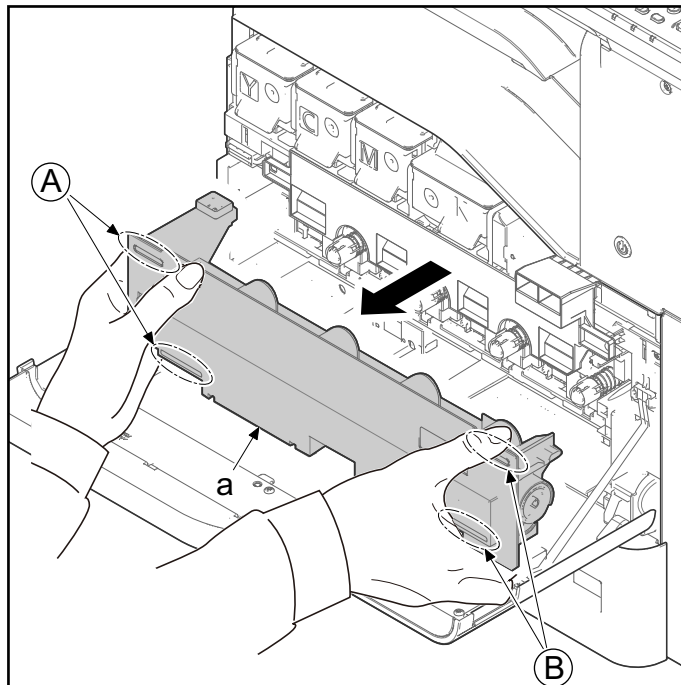
- 1** Checking/clearing the transfer counts (maintenance mode U127): Clear
- 2** ID correction operation setting (maintenance mode U464): Calib (Full)
- 3** Color registration adjustment (maintenance mode U469): Auto
- 4** Adjusting the halftone automatically (maintenance mode U410): Normal Mode

**(4) Drum section****(4-1) Detaching and reattaching the drum unit**

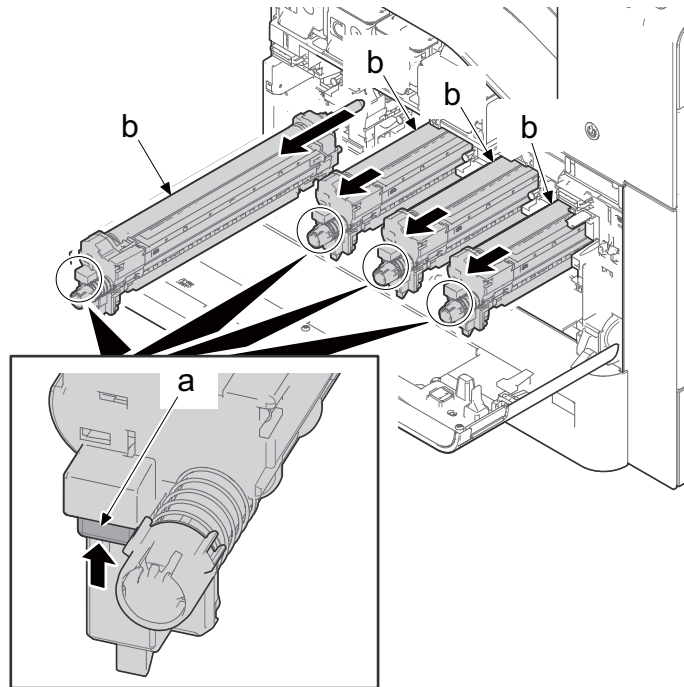
- 1** Open the front cover (a).



- 2** Hold A and B, and remove the waste toner box (a).



- 3 Push up the lock lever (a) and remove four drum units (b) (Y,C,M,K).
- 4 Attach the new drum units.
- 5 Reattach the parts in the original position.



#### Execute maintenance mode

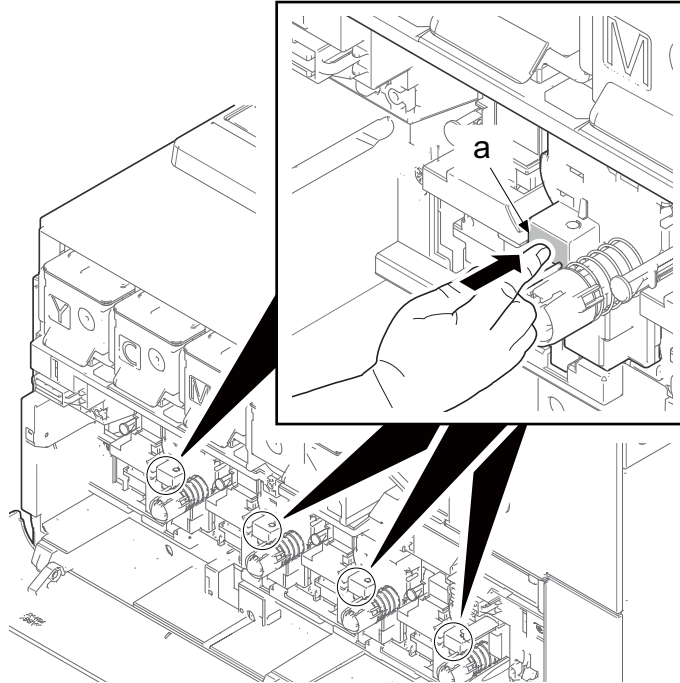
Execute the following setting after replacing the drum unit.

- 1 Clearing the main charger roller counts (maintenance mode U930): Clear
- 2 ID correction operation setting (maintenance mode U464): Calib (Full)
- 3 Color registration adjustment (maintenance mode U469): Auto
- 4 Adjusting the halftone automatically (maintenance mode U410): Normal Mode

**✔ Important**

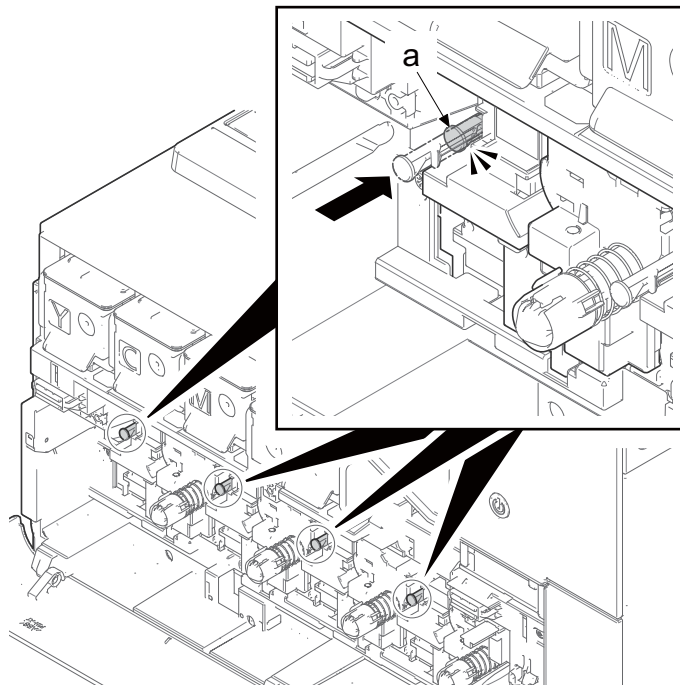
Note the following procedure when installing the drum unit.

- 1** When installing the drum unit, make sure to press the pressing part (a).



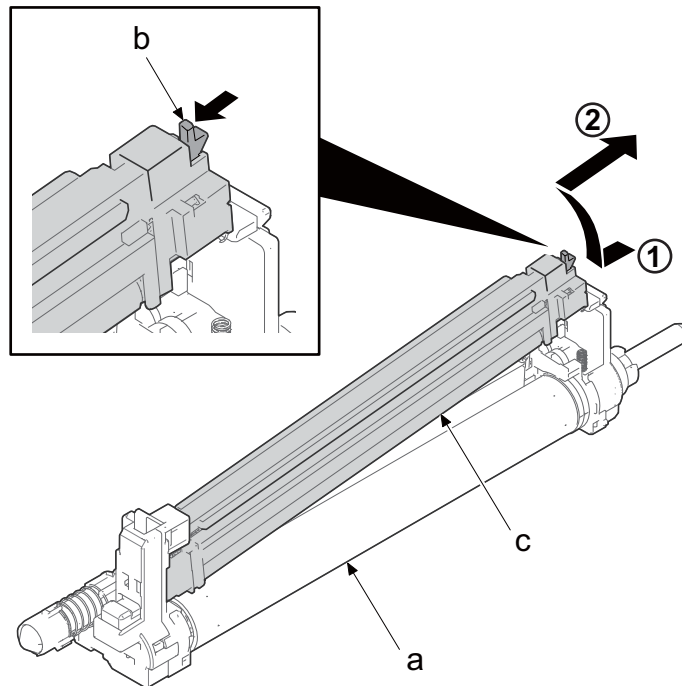
- 2** After inserting the drum unit, push the lock shaft (a) until it clicks.

Make sure to pull out the lock shaft (a) when inserting the drum unit. Otherwise, it causes the drum damage.



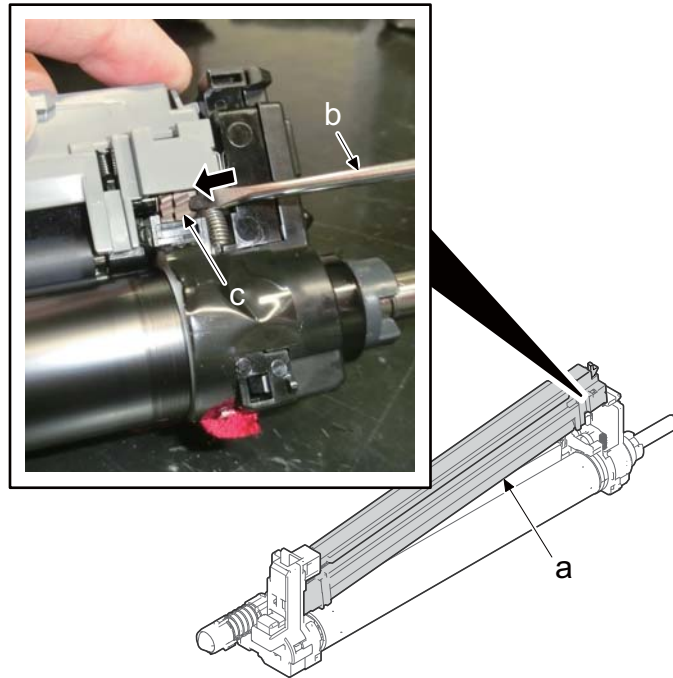
**(4-2) Detaching and reattaching the main charge roller unit**

- 1** Open the front cover (a).
- 2** Detach the waste toner box.
- 3** Detach the drum unit (a).
- 4** Turn over the drum unit (a).
- 5** Push the lock lever (b).
- 6** Pull up the main charge roller unit (c) while pressing it and remove it from the drum unit in the direction of the arrow.
- 7** Check the main charge roller unit (c) and clean or replace it.
- 8** Reattach the parts in the original position.



**✔ Important**

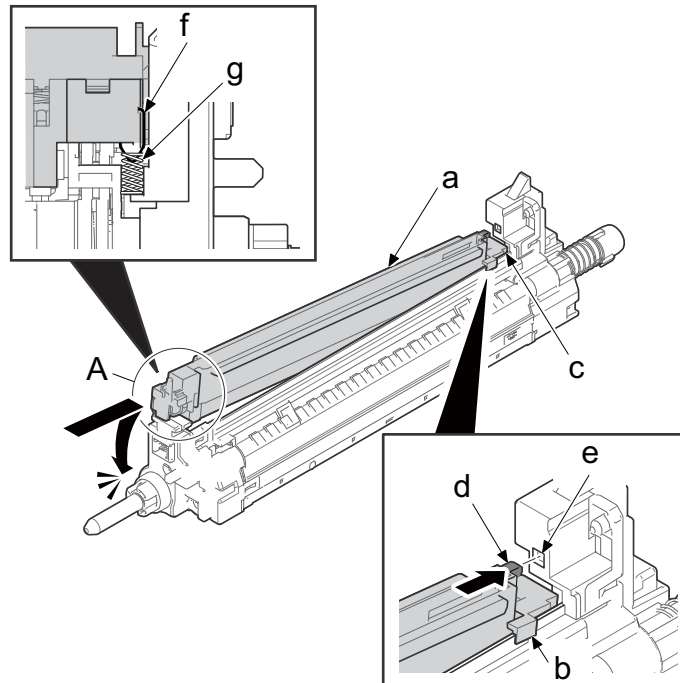
When detaching the main charge roller unit (a), remove it while pulling the gear (c) toward the center with a flat head screwdriver (b) or the like.



 **Important**

Note the following procedure when installing the charge roller unit.

- 1 **When attaching the main charge roller unit (a), align the insert guide (b) to the guide rib (c).**
- 2 **Insert the protrusion (d) into the positioning (e) and press down A portion to check it clicks to lock.**
- 3 **Check that the spring B (f) is inserted into the spring C (g).**



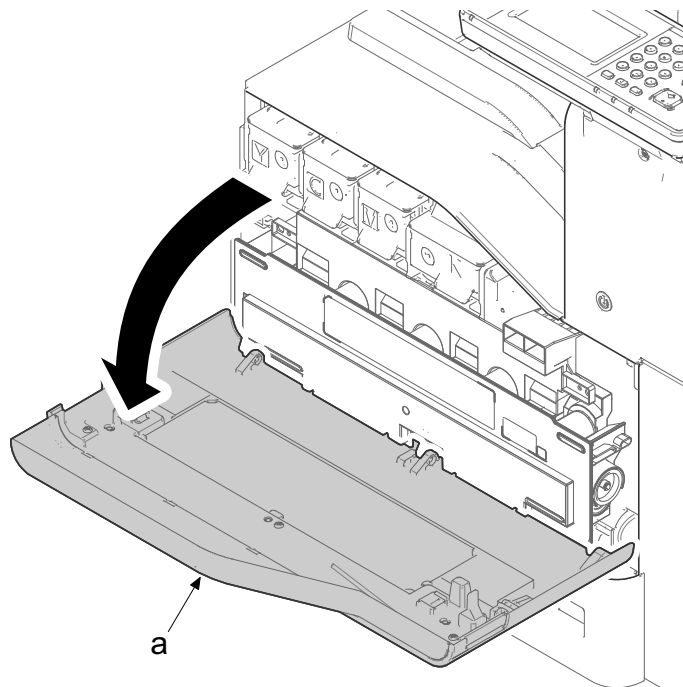
### Execute maintenance mode

Execute the following setting after replacing the main charge roller.

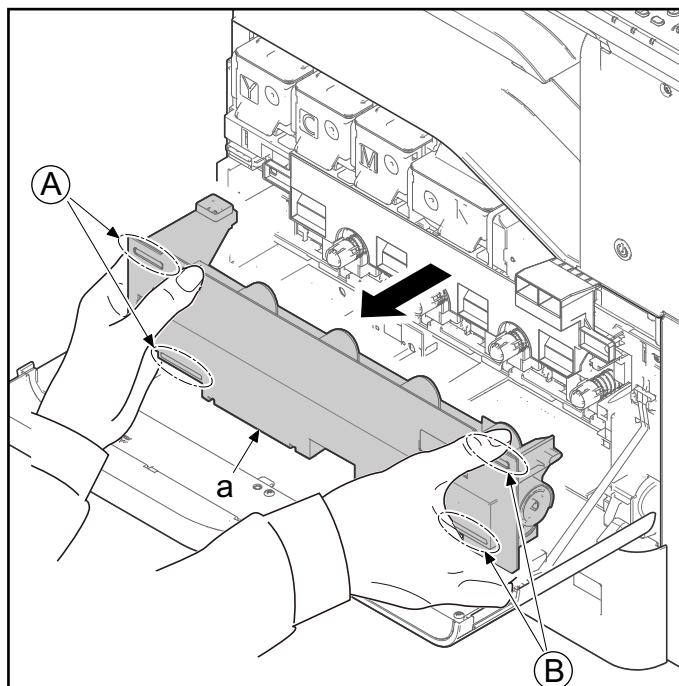
- 1 **Clearing the main charger roller counts (maintenance mode U930): Clear**
- 2 **ID correction operation setting (maintenance mode U464): Calib (Full)**
- 3 **Color registration adjustment (maintenance mode U469): Auto**
- 4 **Adjusting the halftone automatically (maintenance mode U410): Normal Mode**

**(5) Developer section****(5-1) Detaching and reattaching the developer unit**

- 1** Open the front cover (a).

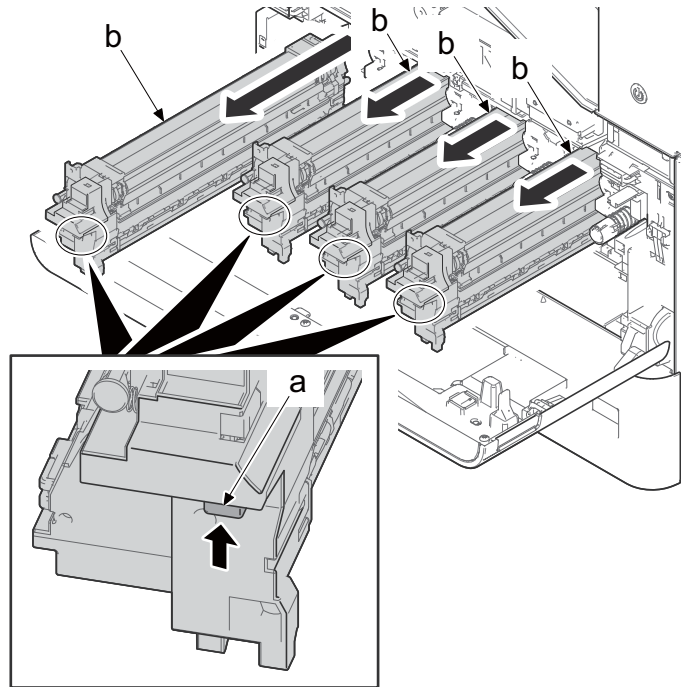


- 2** Hold A and B, and remove the waste toner box (a).





- 3 Push up the lock lever (a) and remove four developer units (b) (Y,C,M,K).
- 4 Attach the new developer units.
- 5 Reattach the parts in the original position.



#### Execute maintenance mode

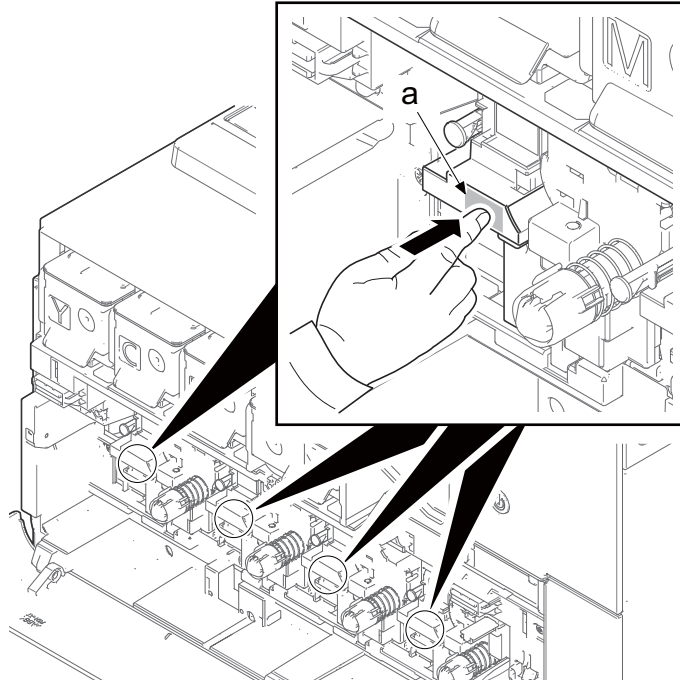
Execute the following setting after replacing the developer unit.

- 1 ID correction operation setting (maintenance mode U464): Calib (Full)
- 2 Color registration adjustment (maintenance mode U469): Auto
- 3 Adjusting the halftone automatically (maintenance mode U410): Normal Mode

**✔ Important**

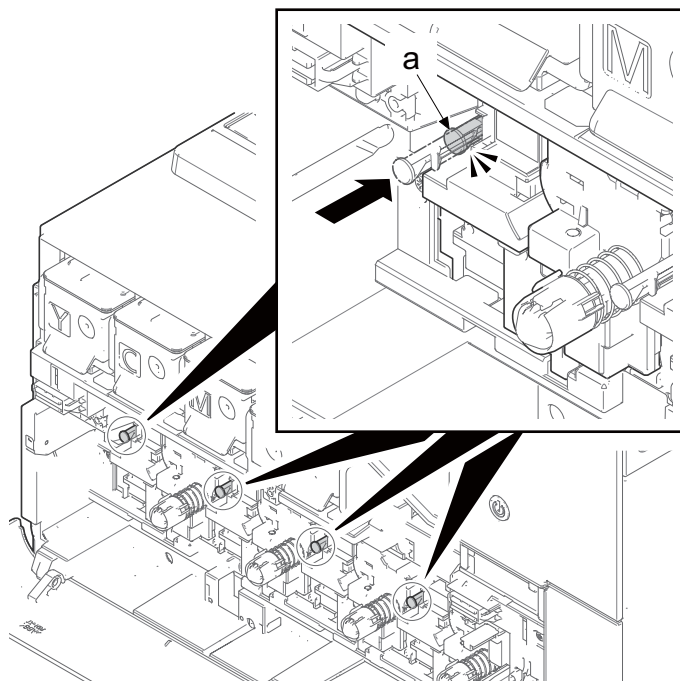
Note the following procedure when installing the developer unit.

- 1** When installing the developer unit, securely insert it by pressing the front side pressing part (a).



- 2** After inserting the developer unit, securely push the lock shaft (a).

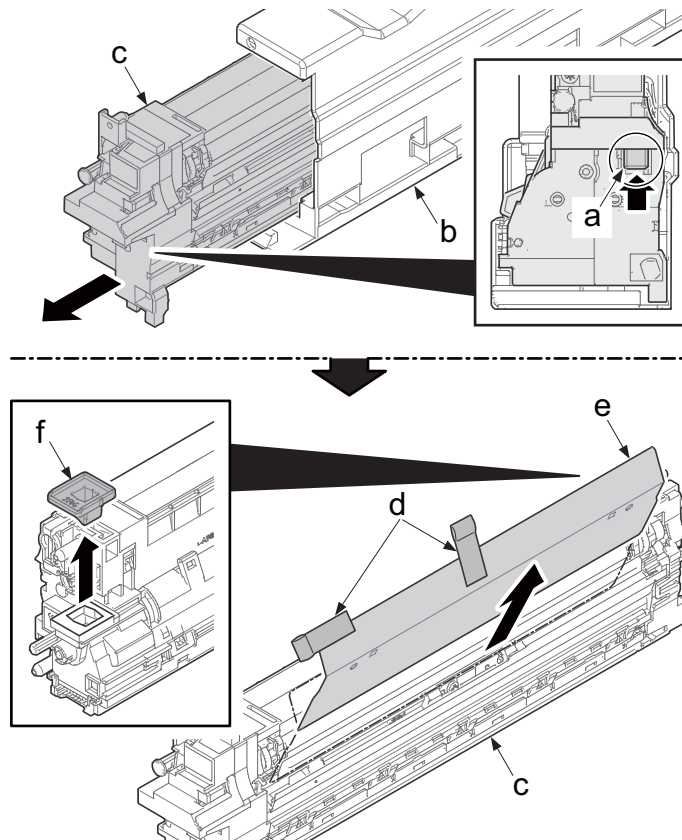
Make sure to pull out the lock shaft (a) when inserting the developer unit. Otherwise, it causes the drum damage.



## Unpacking the maintenance kit

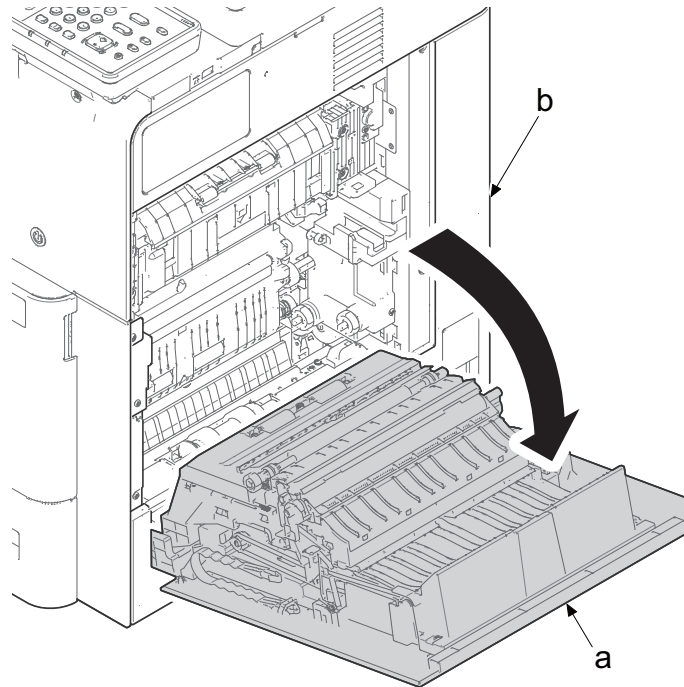
- 1 Push up the lock lever (a) and remove four developer units (c) from the unit protective cover (b).
- 2 Peel off two tapes (d) and pull out the protective sheet (e) straight from the developer unit (c).
- 3 Remove the toner supply cover (f) in the direction of the arrow.

Take care not to touch the lower blade, sleeve roller, etc. of the developer unit during the work.



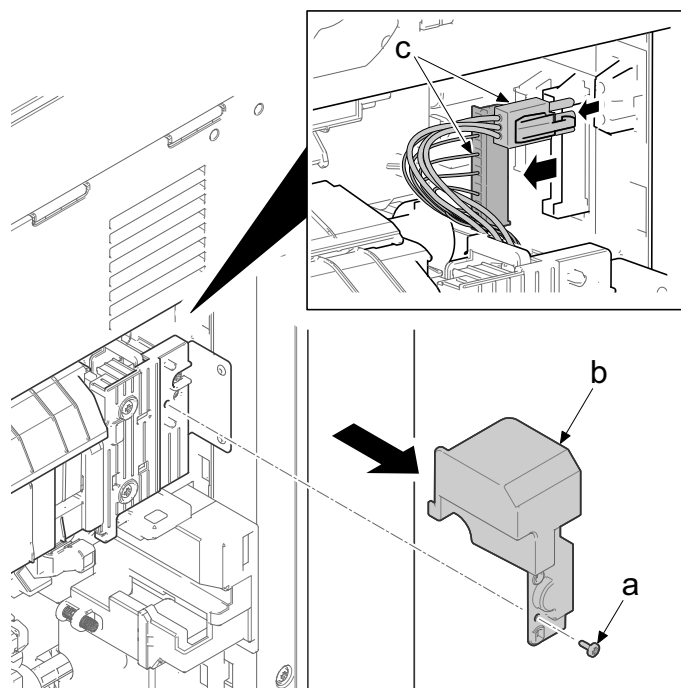
**(6) Fuser section****(6-1) Detaching and reattaching the fuser unit**

- 1** Open the right cover (a) of the main unit (b).

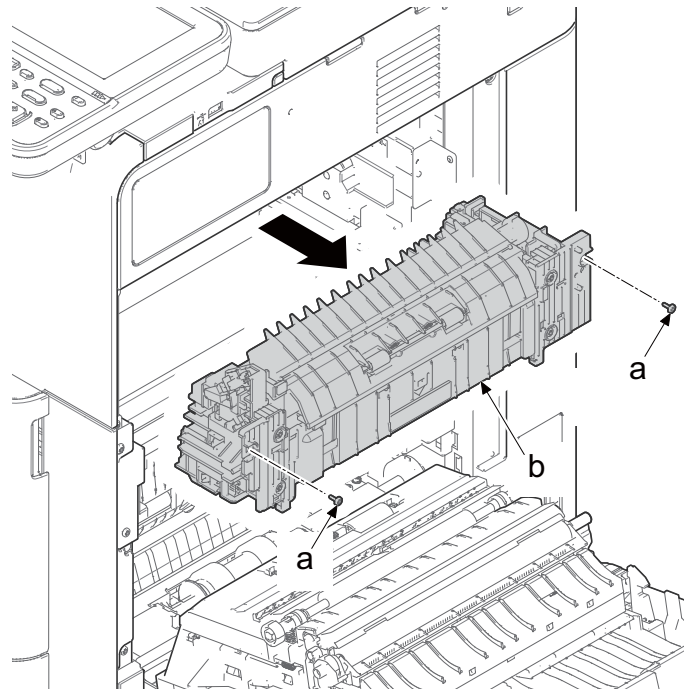


- 2** Remove the screw (a) (M3x8) and remove the fuser wire cover (b).

- 3** Disconnect two connectors (c) of the fuser unit.



- 4 Remove two screws (a) (M3x8) and remove the fuser unit (b).
- 5 Attach the new fuser unit.
- 6 Reattach the parts in the original position.



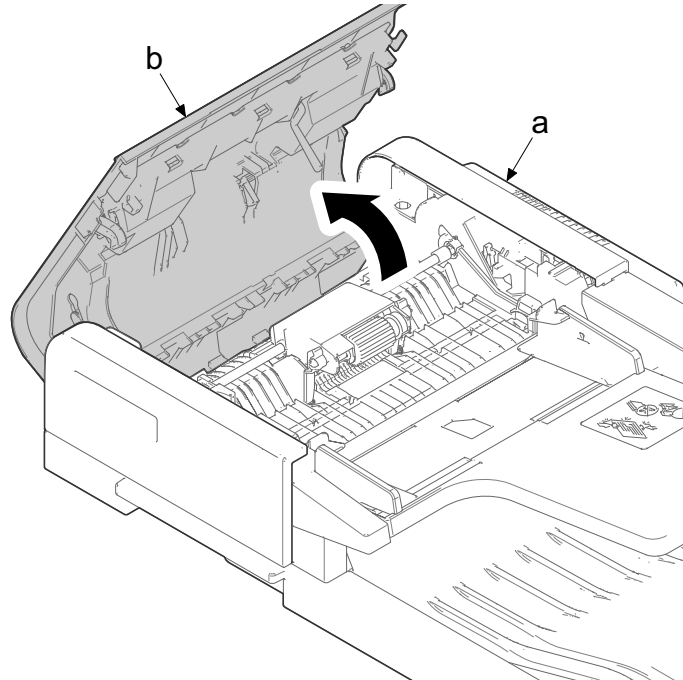
#### Execute maintenance mode

Execute the following setting after replacing the fuser unit.

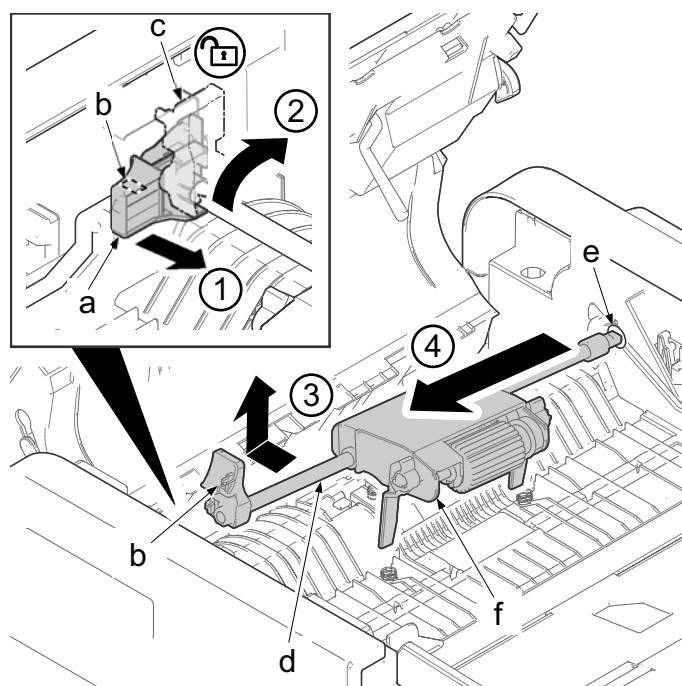
- 1 Checking/clearing the fuser counts (maintenance mode U167): Clear
- 2 ID correction operation setting (maintenance mode U464): Calib (Full)
- 3 Color registration adjustment (maintenance mode U469): Auto
- 4 Adjusting the halftone automatically (maintenance mode U410): Normal Mode

**(7) Document processor****(7-1) Detaching and reattaching the DP pickup pulley and DP paper feed roller**

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

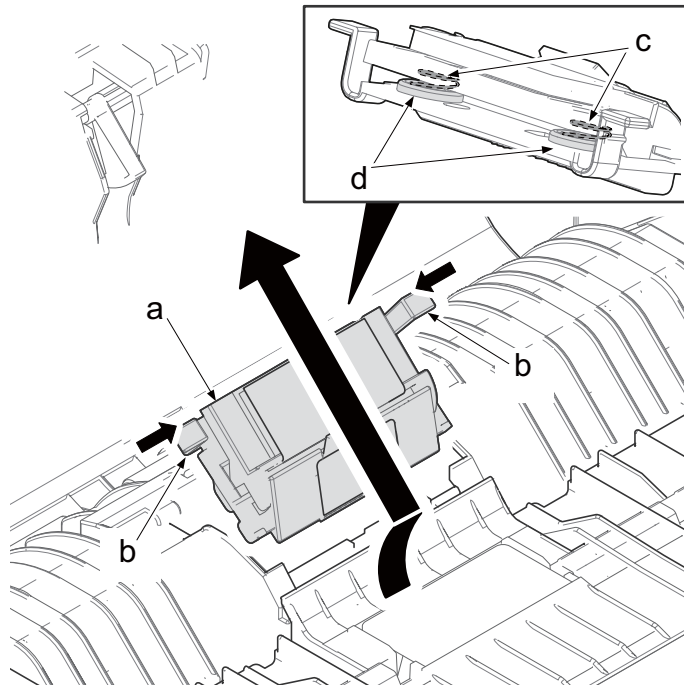


- 2** Push the lock lever (a) toward the machine rear side.
- 3** Release the hook (b).
- 4** Rotate the lock lever (a) to the release position (c).
- 5** Shift the machine front side of the DP paper feed roller shaft (d) toward the machine left side to remove it from the holding part (e).
- 6** Then,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



**(7-2) 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 securely in the protrusion (d) when reattaching it.
- 4** Attach the new DP paper feed roller unit.
- 5** Reattach the parts in the original position.

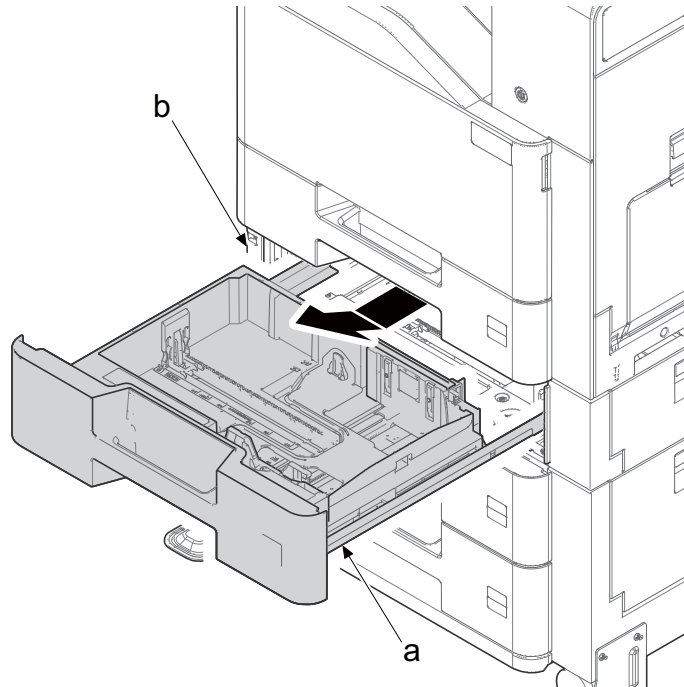


## 4 - 4 Maintenance parts replacement procedures (option)

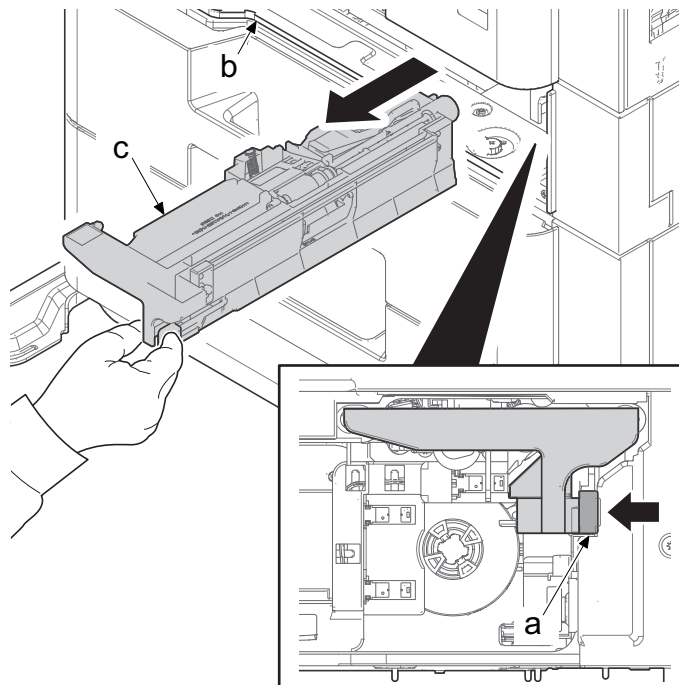
### (1) Paper feeder (PF-5120)

#### (1-1) Detaching and reattaching the pickup pulley and paper feed roller

- 1 Pull out the cassette (a) from the paper feeder (b) and remove it in the direction of the arrow.

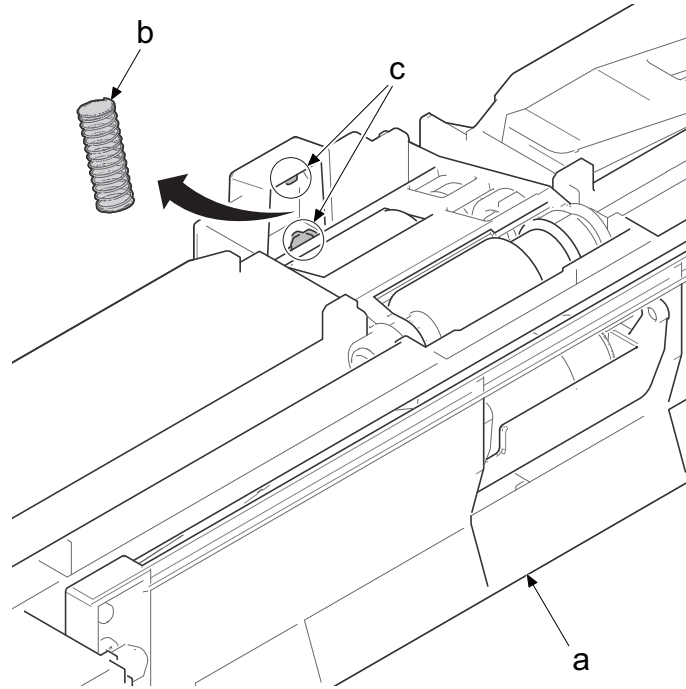


- 2 Press the lock lever (a) and pull out the primary feed unit (c) from the paper feeder (b).





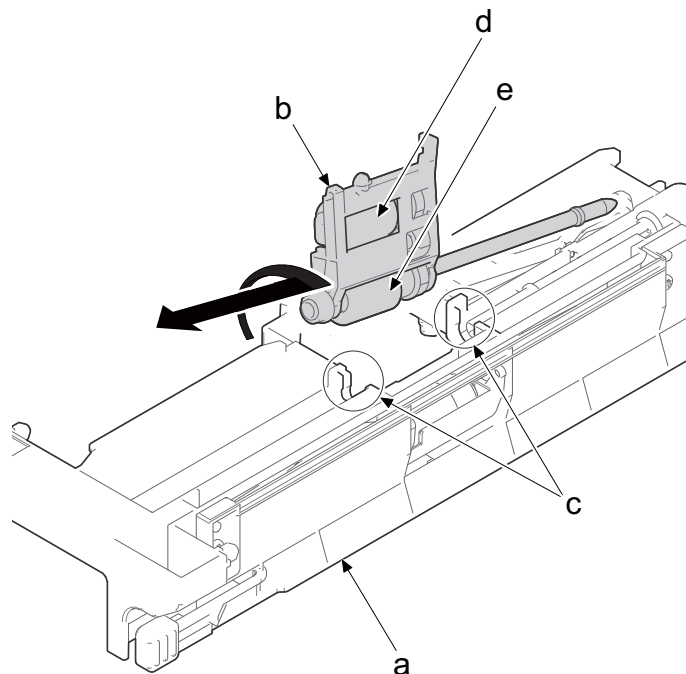
### 3 Remove the spring (b) from the primary paper feed unit (a).



#### ✔ Important

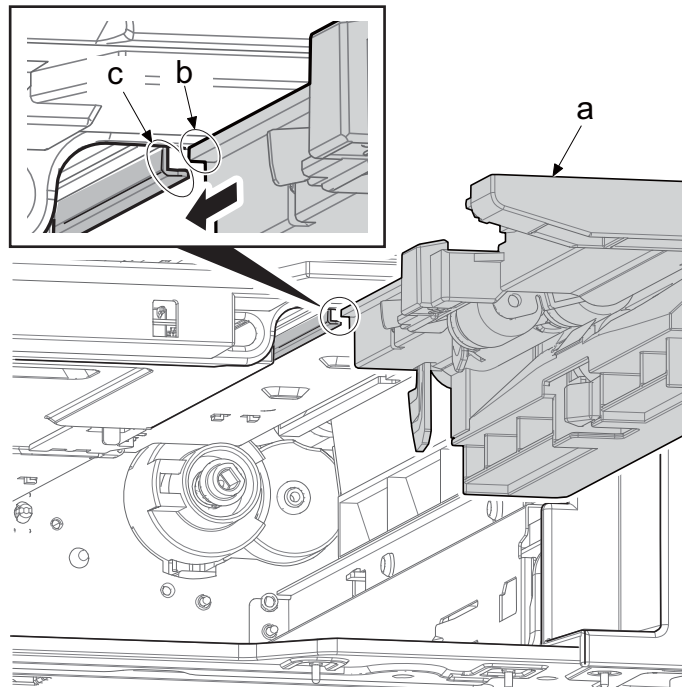
Check if the pressure spring (b) is securely in the protrusion (c) when reattaching it.

### 4 Tilt up the pickup holder (b) on the primary paper feed unit (a) and remove it from the bushing (c).



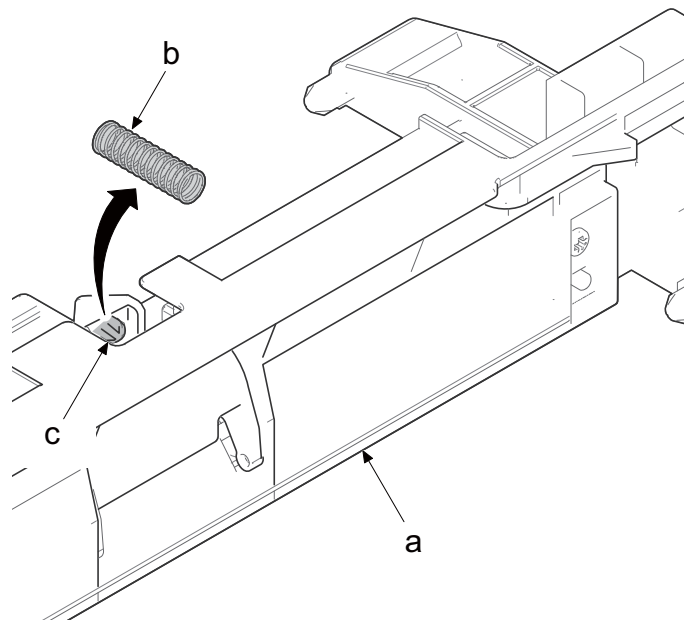
✔ **Important**

When attaching the primary paper feed unit (a), insert the protrusion (b) into the main unit side guide (c).



**(1-2) Detaching and reattaching the retard roller**

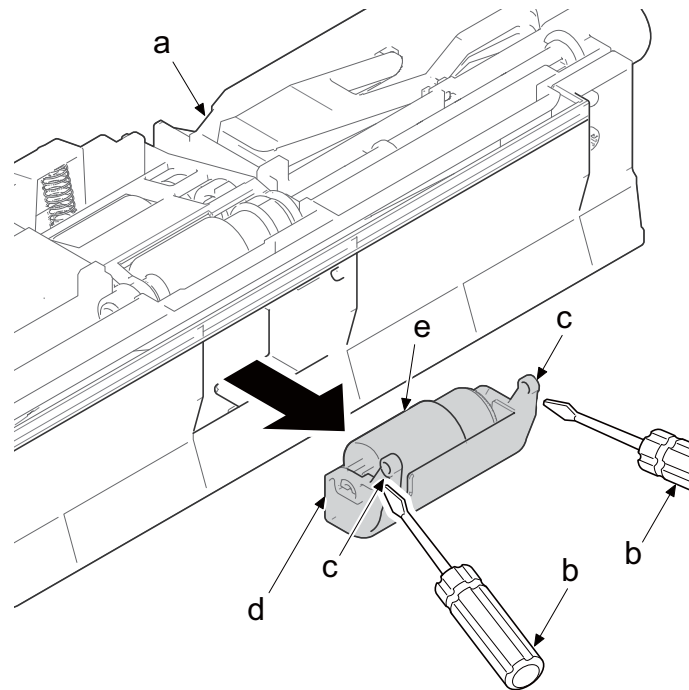
- 1 Turn over the primary paper feed unit (a).
- 2 Remove the spring (b).



✔ **Important**

Check if the pressure spring (b) is securely in the protrusion (c) when reattaching it.

- 3 Turn over the primary paper feed unit (a) again.
- 4 Remove the retard holder fulcrum (c) with the flat-blade screwdriver (b) and remove the retard holder (d).
- 5 Attach the new retard holder.
- 6 Attach the new pickup holder.
- 7 Reattach the parts in the original position.



 **Important**

When replacing the new pickup holder or retard holder, take care not to touch the roller surface.

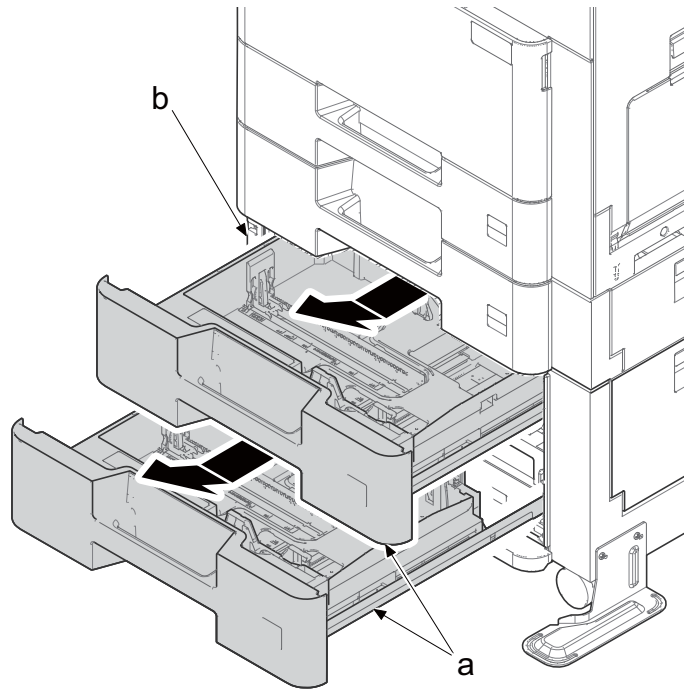
### Execute maintenance mode

Execute the following setting after replacing the feed roller.

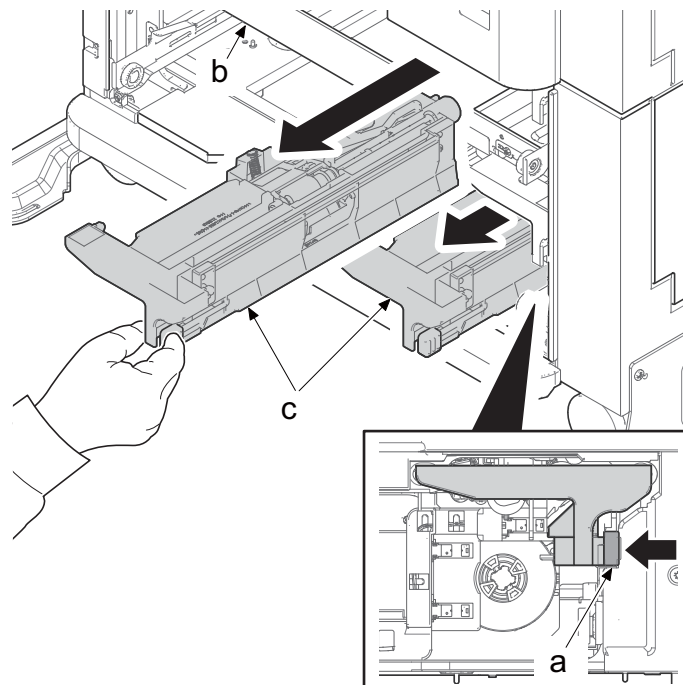
- Clearing the maintenance counts (maintenance mode U251): Clear

**(2) Paper feeder (PF-5130)****(2-1) Detaching and reattaching the pickup pulley and paper feed roller**

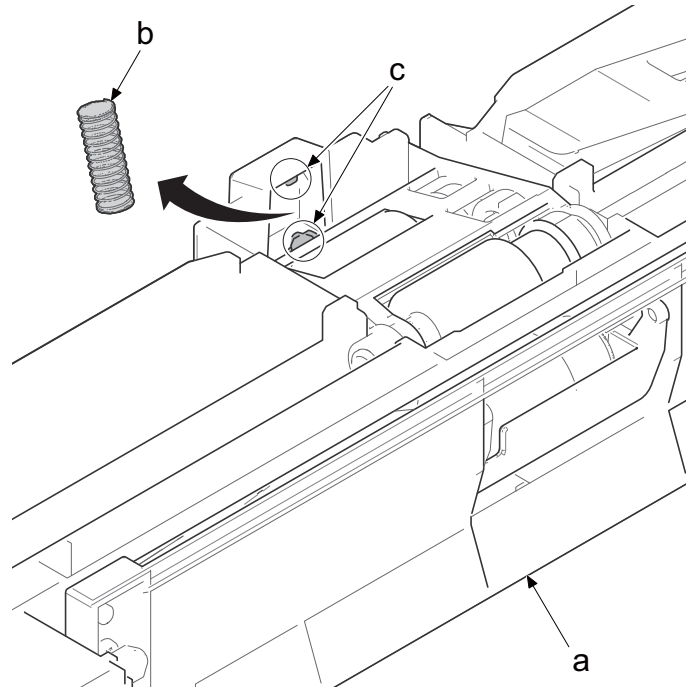
- 1** Pull out the upper cassette (a) from the paper feeder (b) and pull it out on an angle.
- 2** Pull out the lower cassette (a) from the paper feeder (b) and remove it in the direction of the arrow.



- 3** Pinch the lock lever (a) and pull the primary paper feed unit (c) from the upper stage of the paper feeder (b).
- 4** Pinch the lock lever (a) and pull the primary paper feed unit (c) from the lower stage of the paper feeder (b).



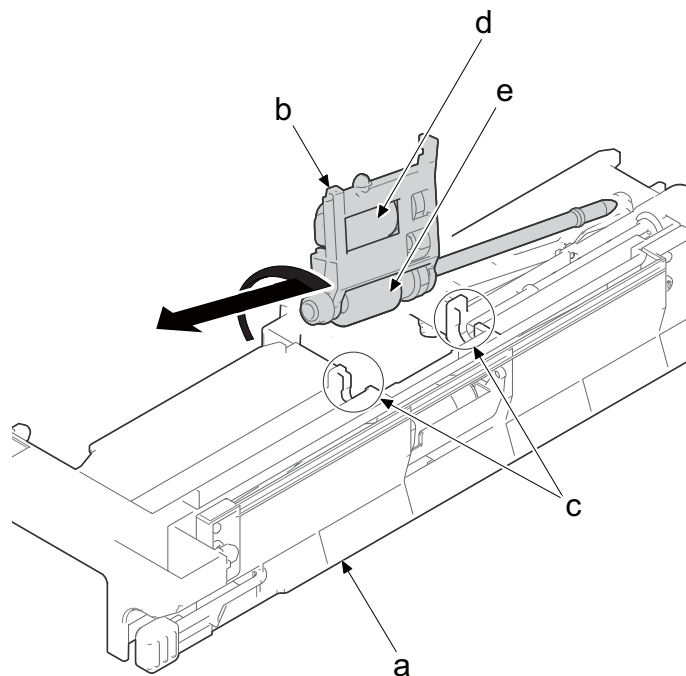
## 5 Remove the spring (b) from the primary paper feed unit (a).



### ✔ Important

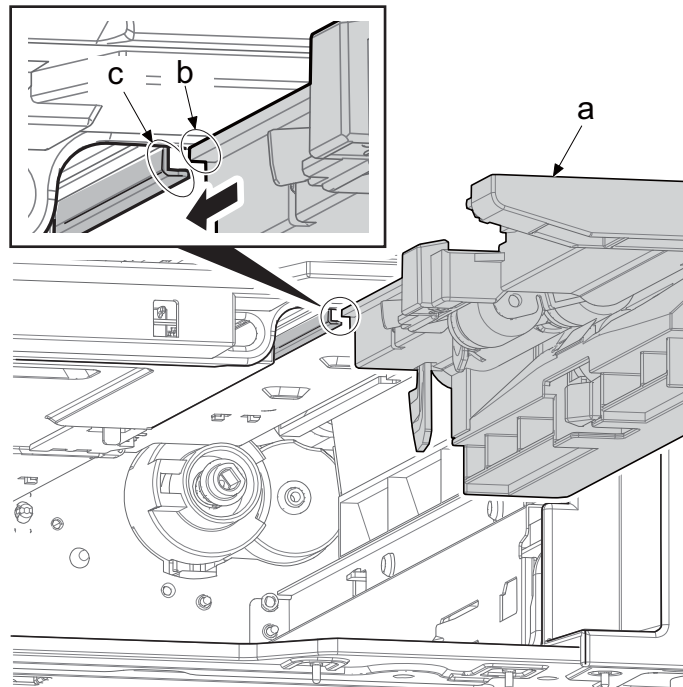
Check if the pressure spring (b) is securely in the protrusion (c) when reattaching it.

## 6 Tilt up the pickup holder (b) on the primary paper feed unit (a) and remove it from the bushing (c).

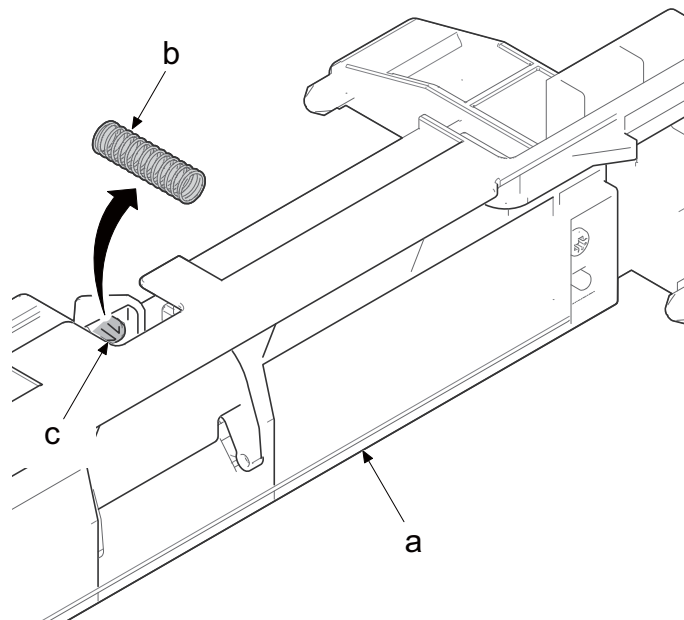


**✔ Important**

When attaching the primary paper feed unit (a), insert the protrusion (b) into the main unit side guide (c).

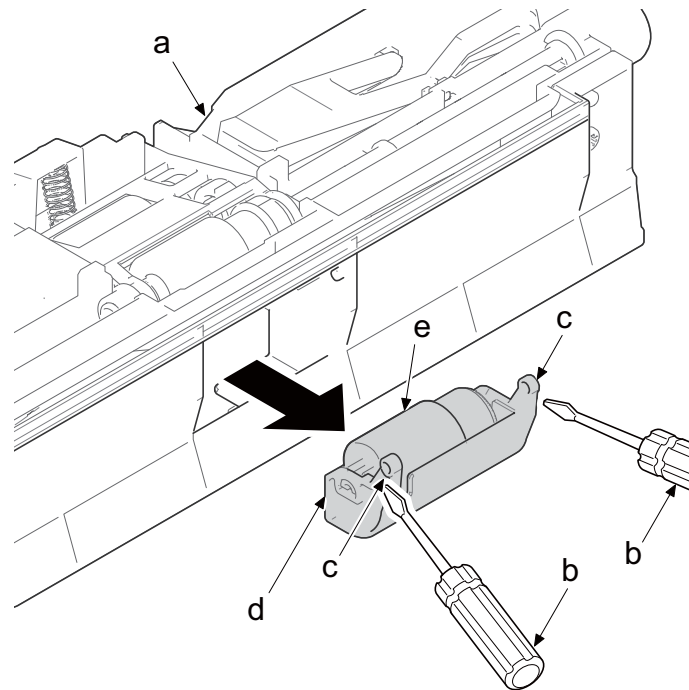
**(2-2) Detaching and reattaching the retard roller**


- 1 Turn over the primary paper feed unit (a).
- 2 Remove the spring (b).

**✔ Important**

Check if the pressure spring (b) is securely in the protrusion (c) when reattaching it.

- 3 Turn over the primary paper feed unit (a) again.
- 4 Remove the retard holder fulcrum (c) with the flat-blade screwdriver (b) and remove the retard holder (d).
- 5 Attach the new retard holder.
- 6 Attach the new pickup holder.
- 7 Reattach the parts in the original position.



 **Important**

When replacing the new pickup holder or retard holder, take care not to touch the roller surface.

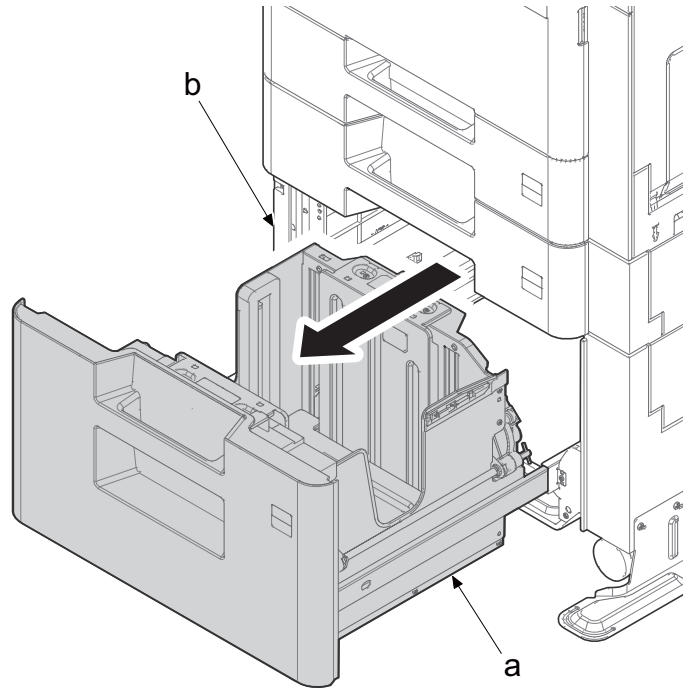
### Execute maintenance mode

Execute the following setting after replacing the feed roller.

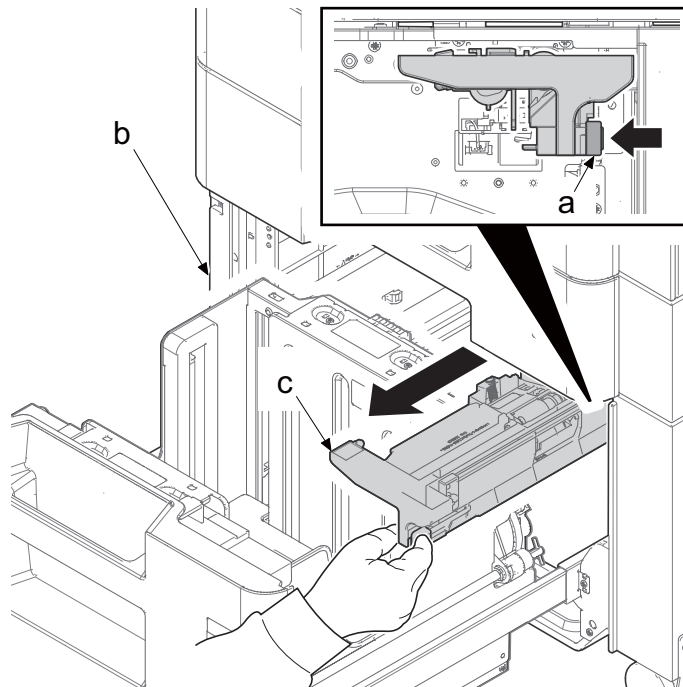
- Clearing the maintenance counts (maintenance mode U251): Clear

**(3) Paper feeder (PF-5140)****(3-1) Detaching and reattaching the pickup pulley and paper feed roller**

- 1** Pull out the paper deck (a) from the paper feeder (b).

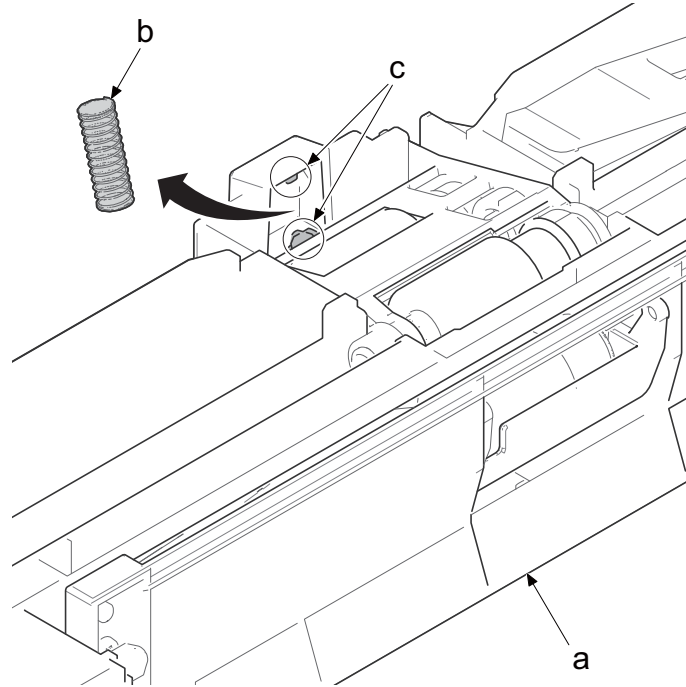


- 2** Press the lock lever (a) and pull out the primary feed unit (c) from the paper feeder (b).





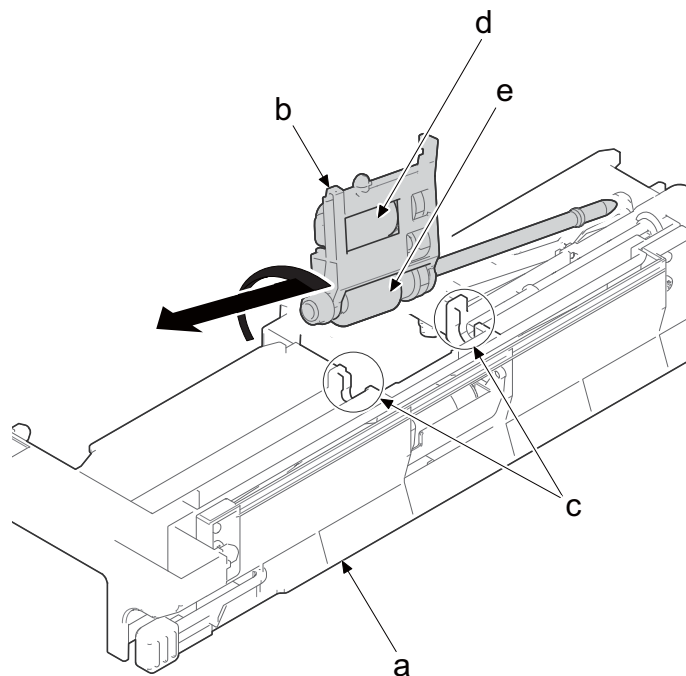
### 3 Remove the spring (b) from the primary paper feed unit (a).



#### ✔ Important

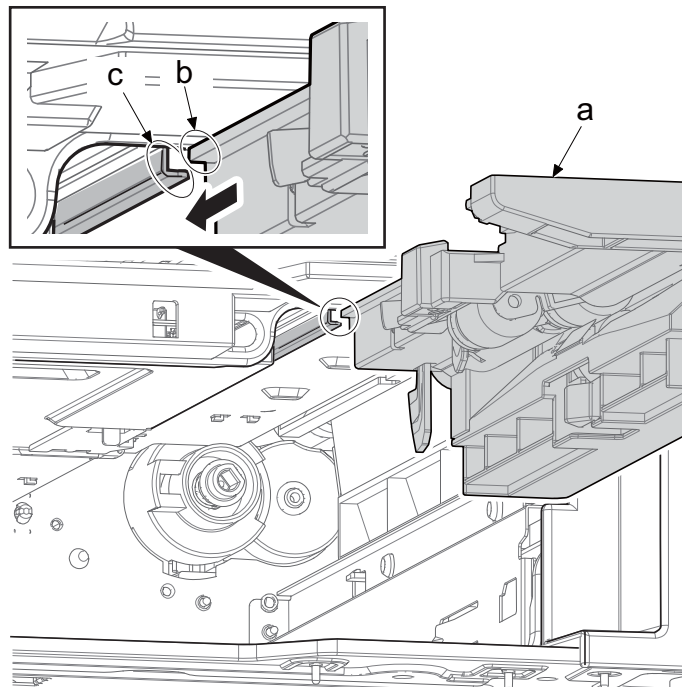
Check if the pressure spring (b) is securely in the protrusion (c) when reattaching it.

### 4 Tilt up the pickup holder (b) on the primary paper feed unit (a) and remove it from the bushing (c).

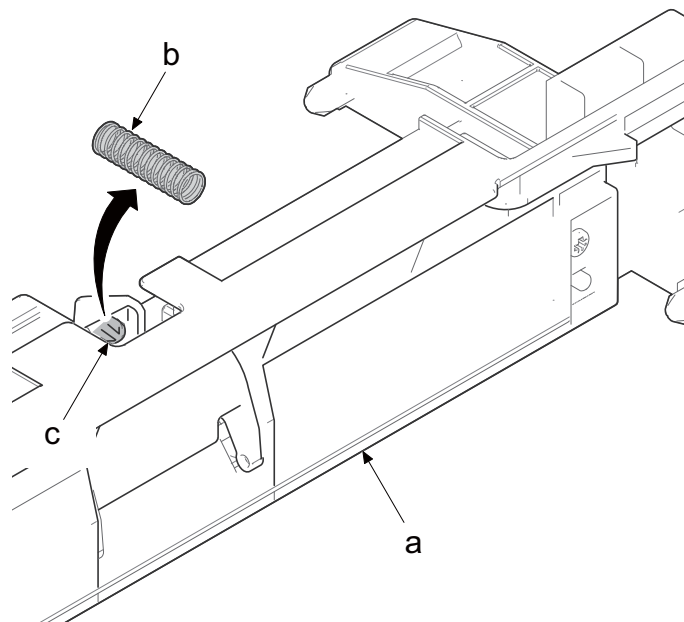


**✔ Important**

When attaching the primary paper feed unit (a), insert the protrusion (b) into the main unit side guide (c).

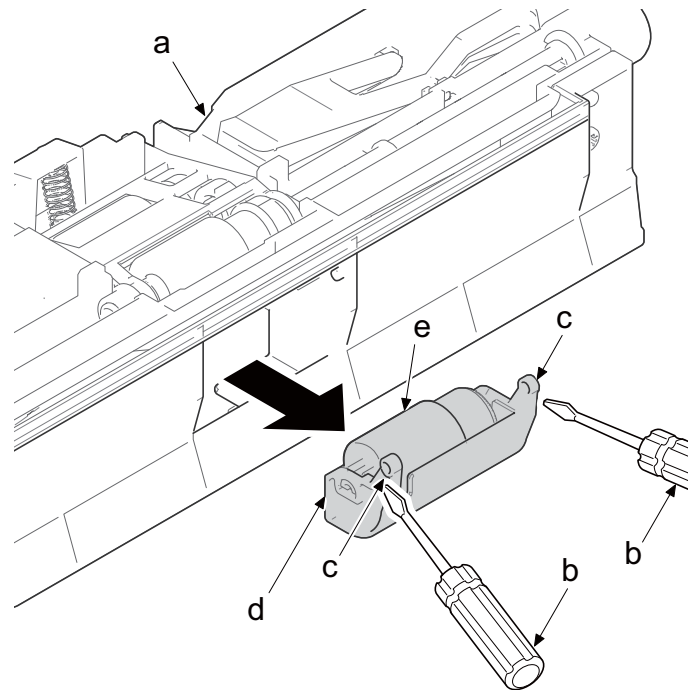
**(3-2) Detaching and reattaching the retard roller**

- 1 Turn over the primary paper feed unit (a).
- 2 Remove the spring (b).

**✔ Important**

Check if the pressure spring (b) is securely in the protrusion (c) when reattaching it.

- 3 Turn over the primary paper feed unit (a) again.
- 4 Remove the retard holder fulcrum (c) with the flat-blade screwdriver (b) and remove the retard holder (d).
- 5 Attach the new retard holder.
- 6 Attach the new pickup holder.
- 7 Reattach the parts in the original position.



✔ **Important**

When replacing the new pickup holder or retard holder, take care not to touch the roller surface.

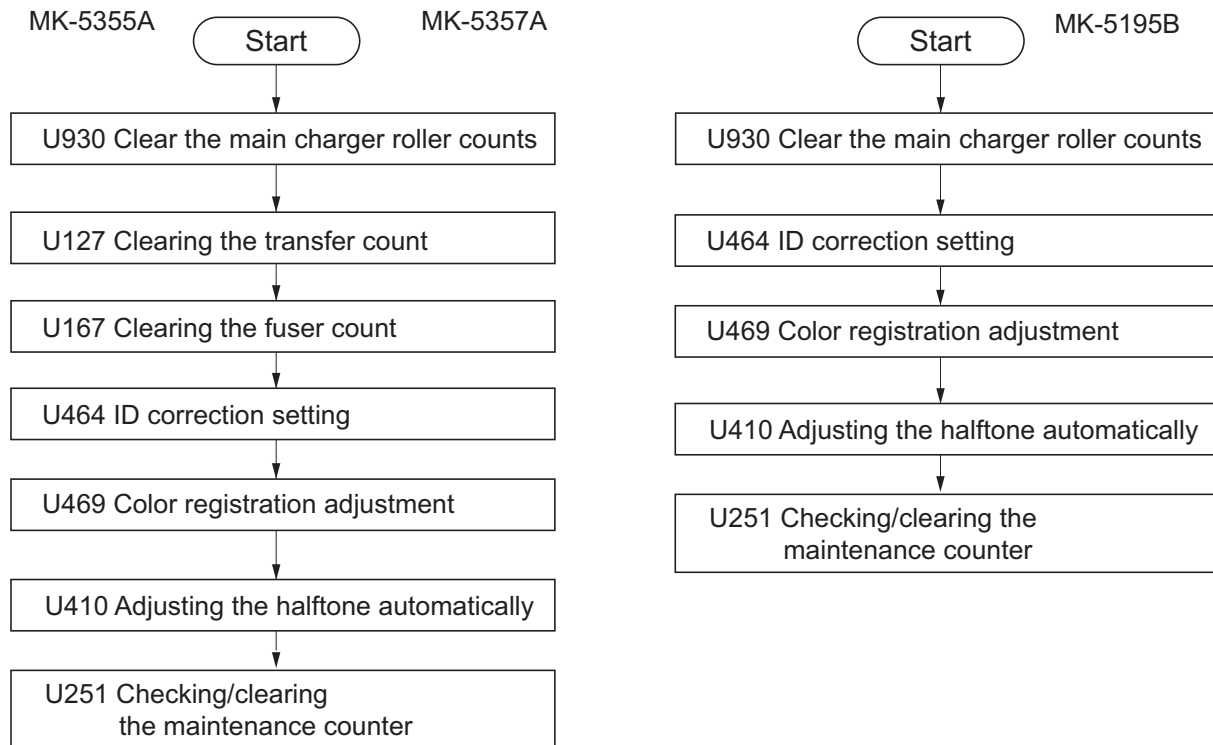
### Execute maintenance mode

Execute the following setting after replacing the feed roller.

- Clearing the maintenance counts (maintenance mode U251): Clear

## 4 - 5 Adjustment procedures after replacing the maintenance kit

Execute the following procedures after replacing the above maintenance kit.



Execute the following maintenance modes after replacing the maintenance kit.

Executable with the preset in the U952 maintenance mode workflow. (See page [6-209](#))

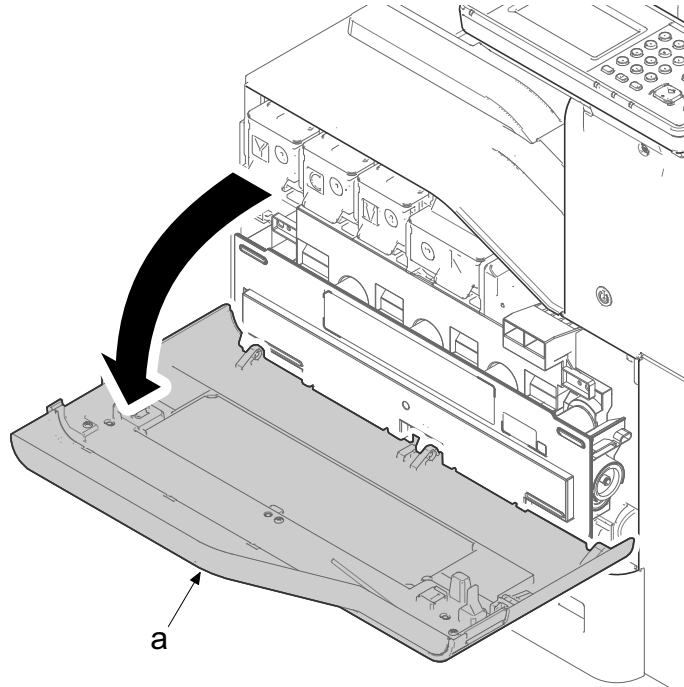
Maintenance kits	Maintenance item
MK-5355A MK-5357A	U930/ U127/ U167/ U464/ U469/ U410/ U251
MK-5195B	U930/ U464/ U469/ U410/ U251
MK-3140/5200	-

## 4 - 6 Disassembly and Reassembly

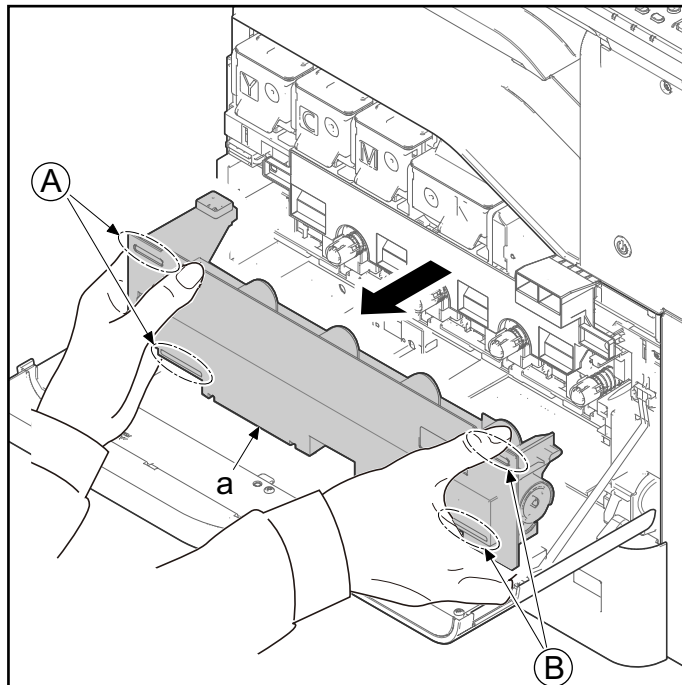
### (1) Outer covers

#### (1-1) Detaching and reattaching the front cover

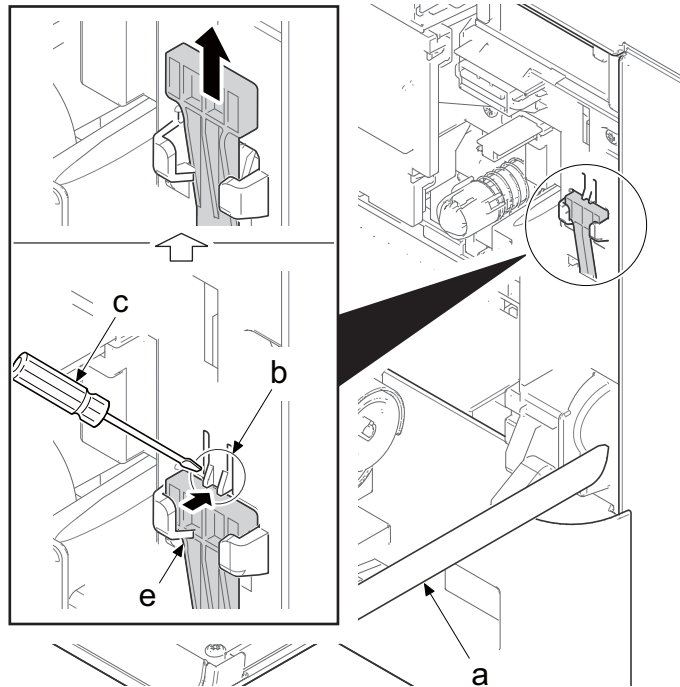
- 1 Open the front cover (a).



- 2 Hold A and B, and remove the waste toner box (a).

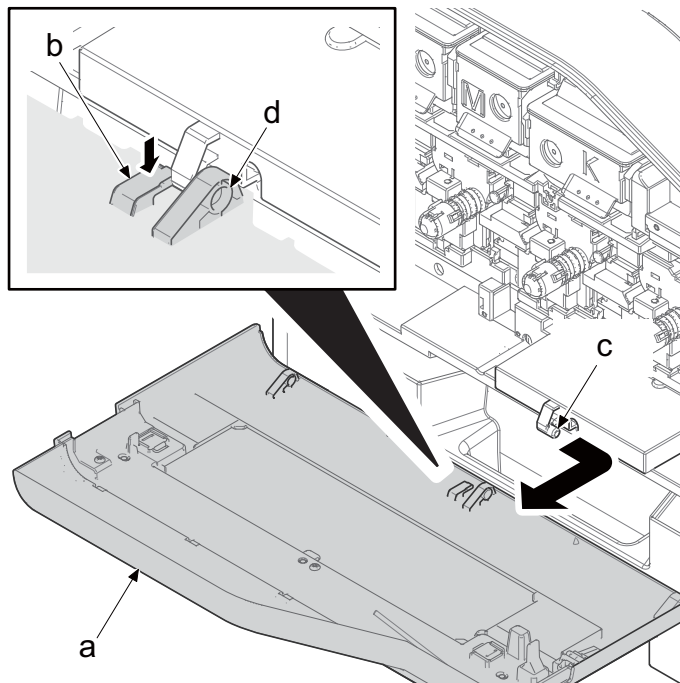


- 3** Release the hook (b) with the flat-blade screwdriver (c) and remove the strap (e) in the direction of the arrow.



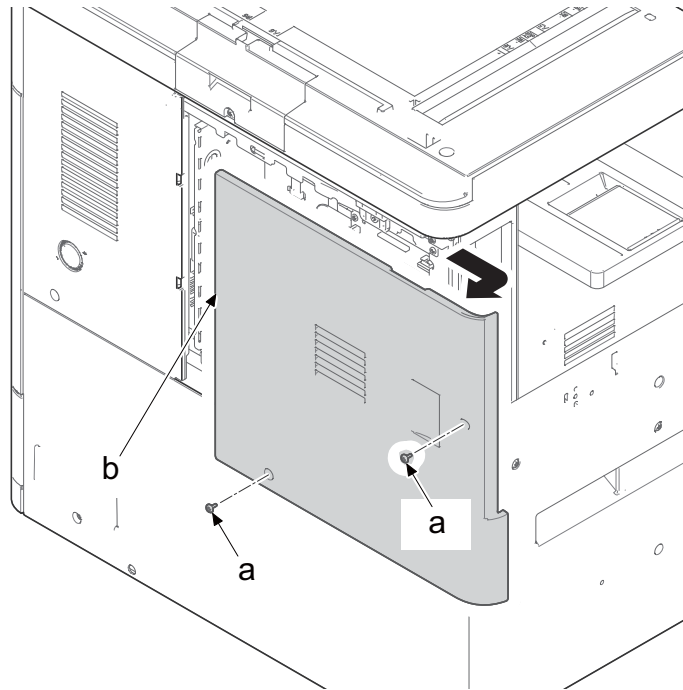
- 4** Push down the stopper (b) of the front cover (a).

- 5** Slide the front cover in the direction of the arrow and remove the fulcrum (d) from the fulcrum shaft (c).

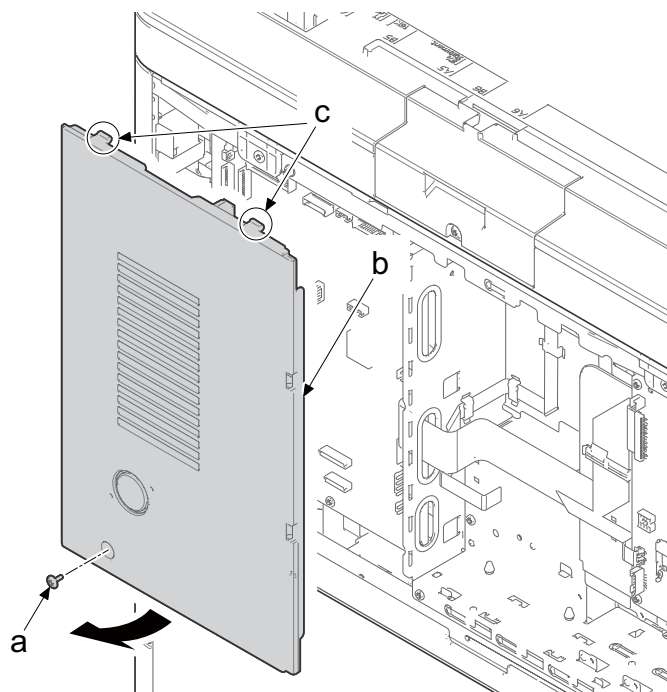


**(1-2) Detaching and reattaching the rear left cover, rear right cover, rear lower cover, right top cover and right rear cover**

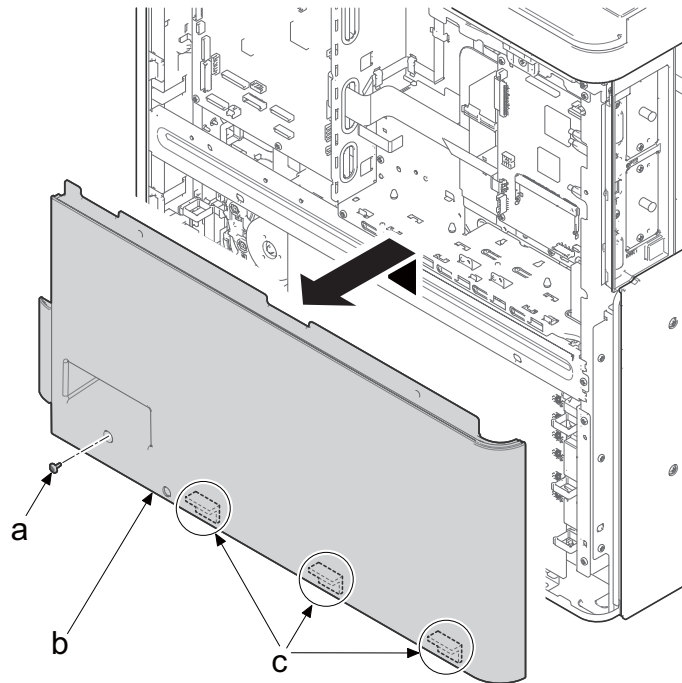
- 1 Remove two screws (a) (M3x8) and remove the rear left cover (b) by sliding it in the direction of the arrow.**



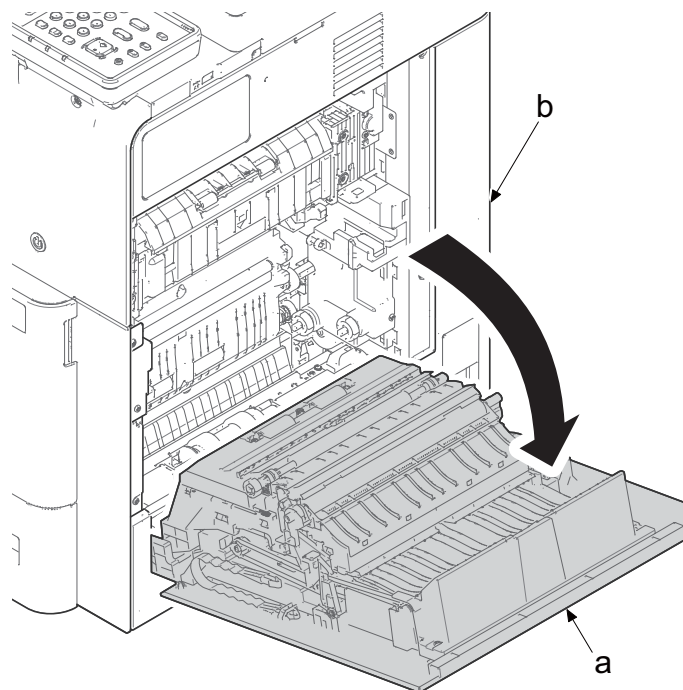
- 2 Remove the screw (a) (M3x8).**
- 3 Detach the rear right cover (b) while rotating it in the direction of the arrow making two hooks (c) as a fulcrum.**



- 4 Remove the screw (a) (M3x8).
- 5 Remove the rear lower cover (f) while removing the hook (c) in the direction of the arrow.

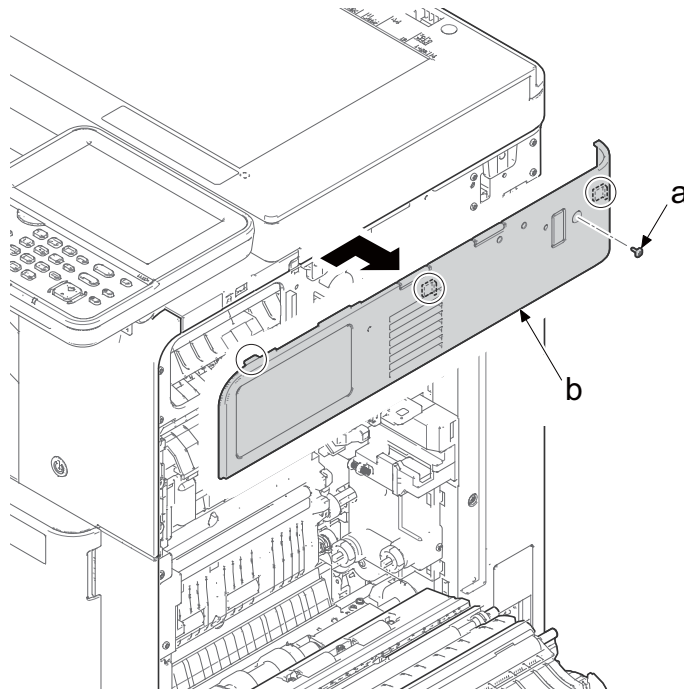


- 6 Open the right cover (a) of the main unit (b).

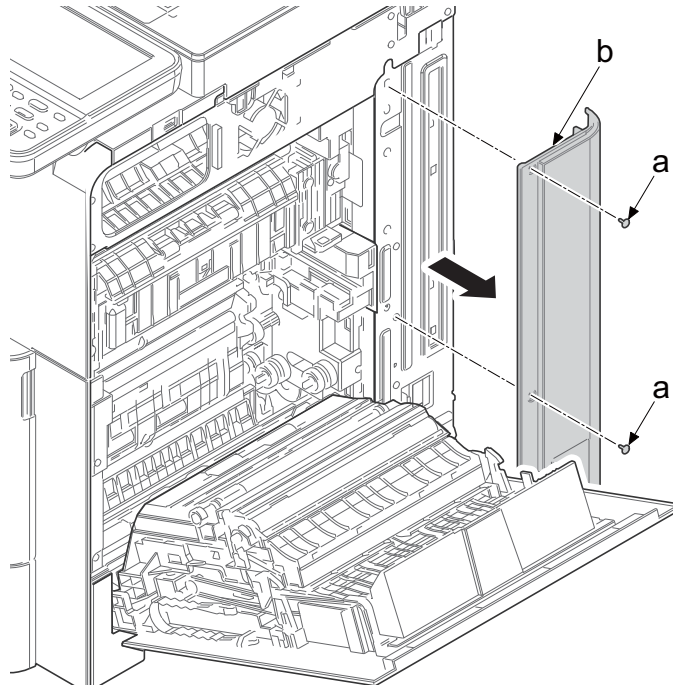




- 7 Remove the screw (a) (M3x8).
- 8 Slide the right upper cover (b) in the direction of the arrow and detach it.

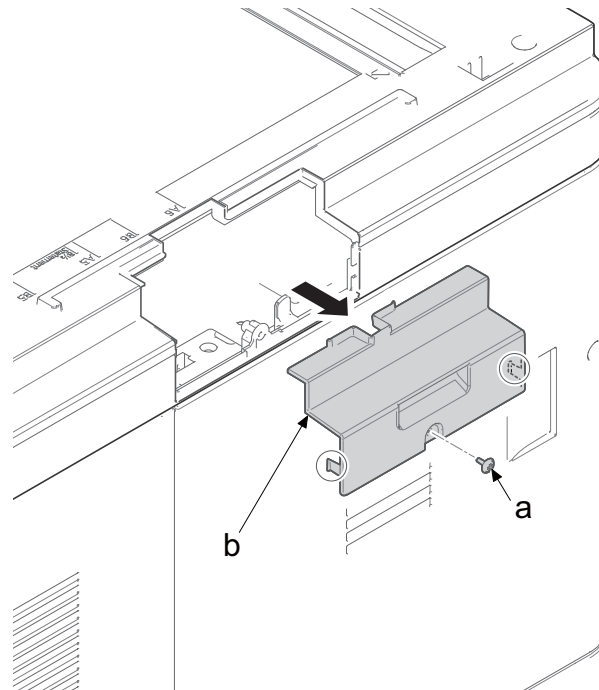


- 9 Remove two screws (a) (M3x8) and remove the rear right cover (b).

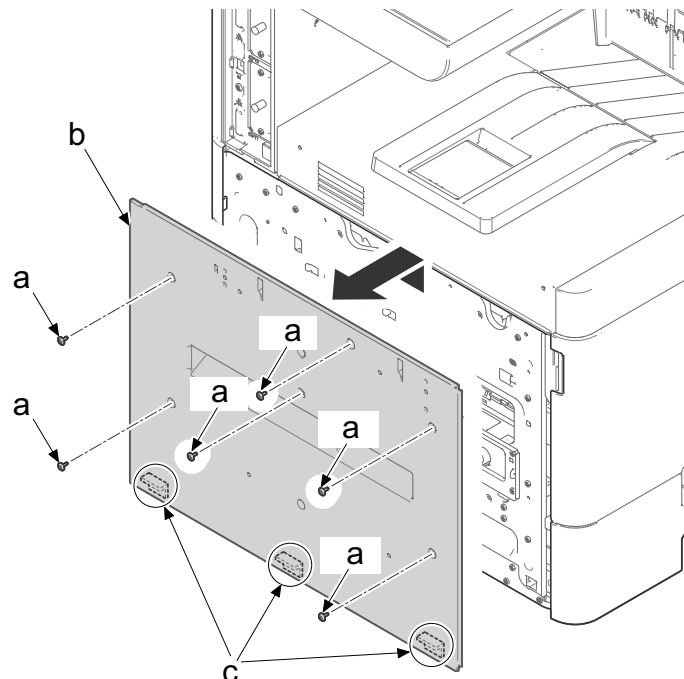


**(1-3) Detaching and reattaching the ISU rear cover**

- 1 Remove the screw (a) (M3x8).**
- 2 Detach the ISU rear cover (b) in the direction of the arrow.**

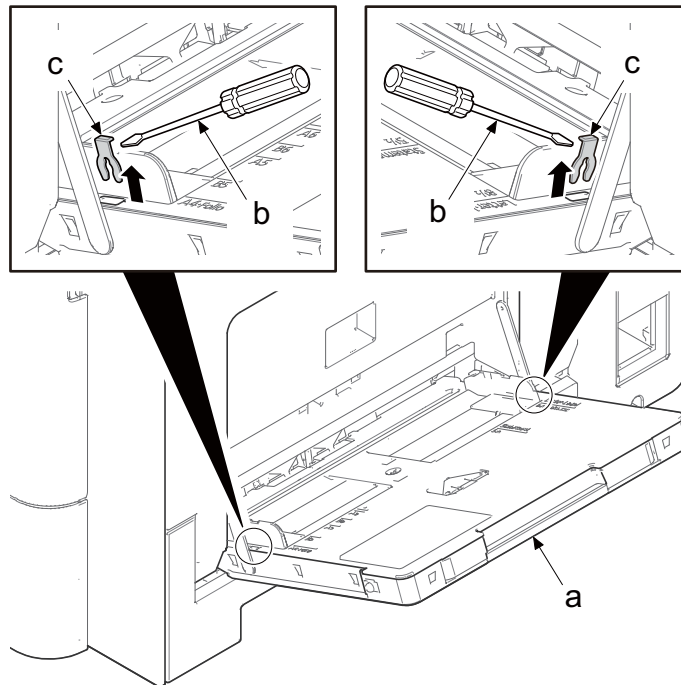
**(1-4) Detaching and reattaching the left cover**

- 1 Remove six screws (a) (M3x8).**
- 2 Release three hooks (c) and remove the left cover (b) in the direction of the arrow.**

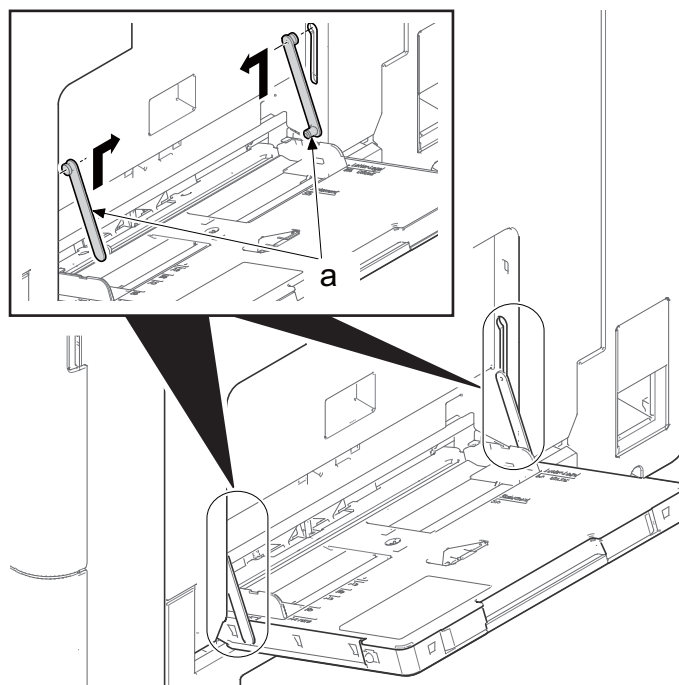


**(1-5) Detaching and reattaching the right cover assembly**

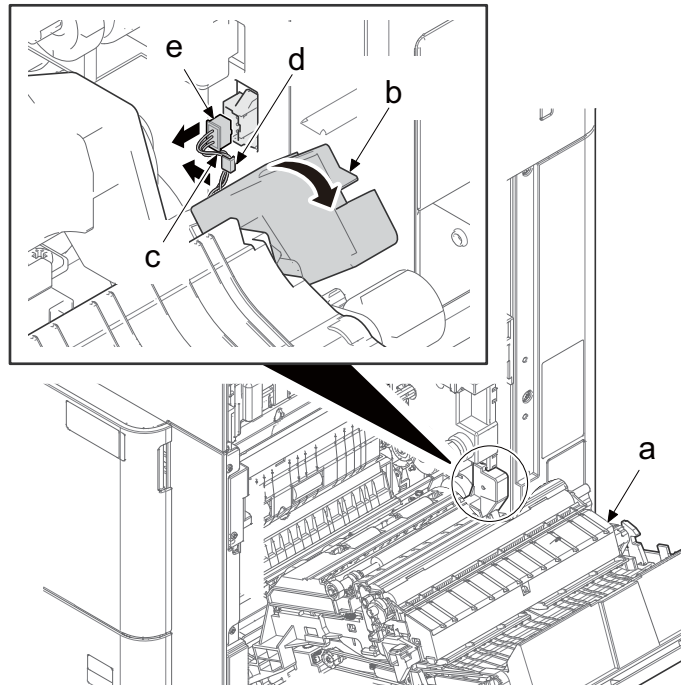
- 1** Open the manual feed table (a).
- 2** Remove two stop rings (c) with the flat-blade screwdriver (b).



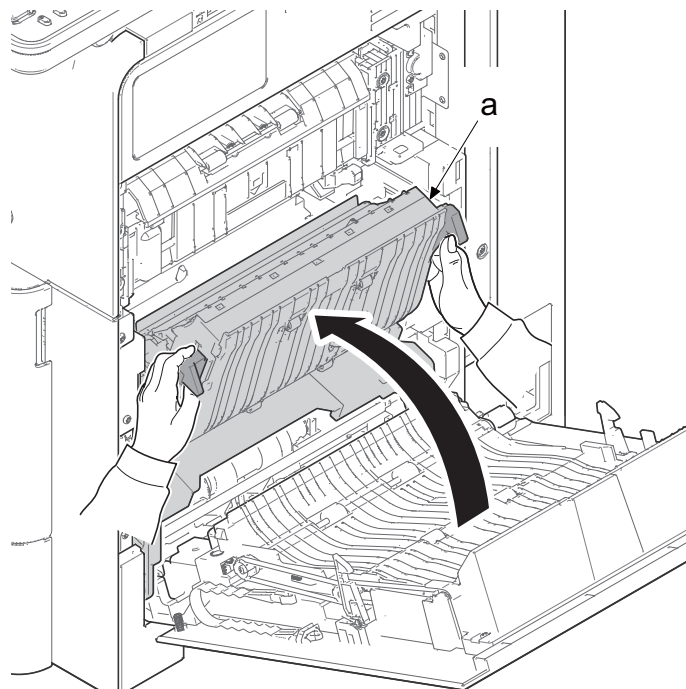
- 3** Remove two straps (a) in the direction of the arrow.



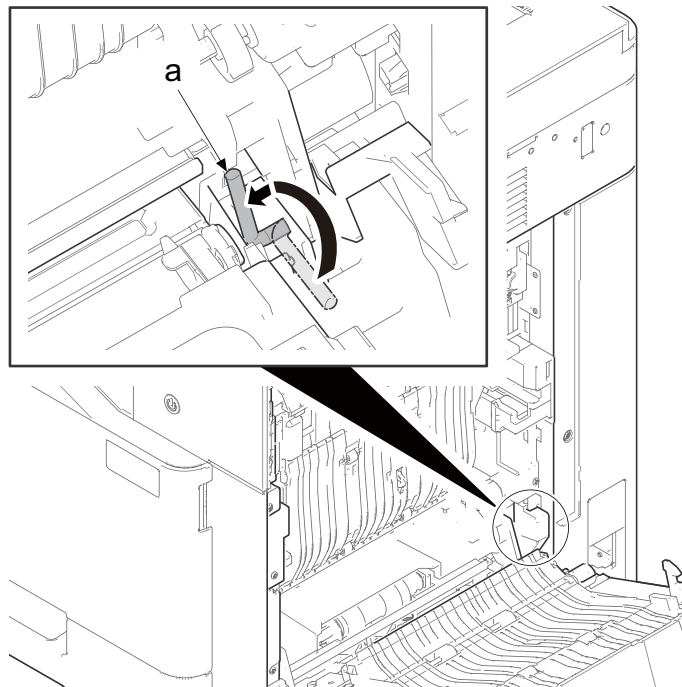
- 4 Open the right cover (a).
- 5 Rotate the wire cover (b).
- 6 Release the wire (c) from the hook (d) and disconnect the connector (a).



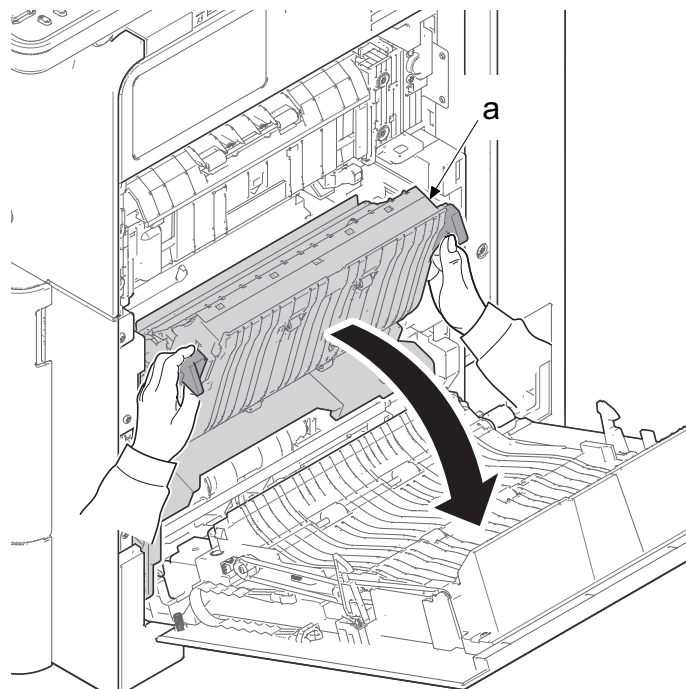
- 7 Close the conveying unit (a).



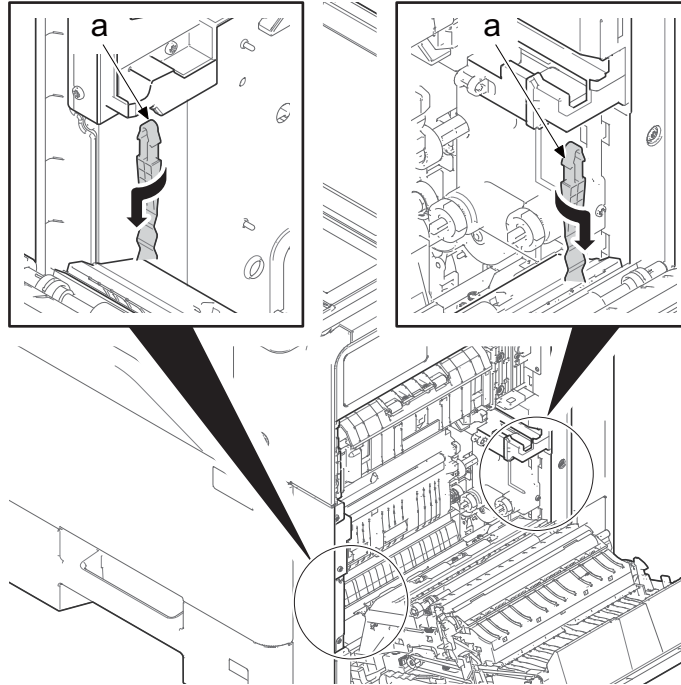
- 8 Tilt up the right cover shaft (a).
- 9 Slide the right cover shaft (a) in the direction of the arrow.



- 10 Open the conveying unit (a).

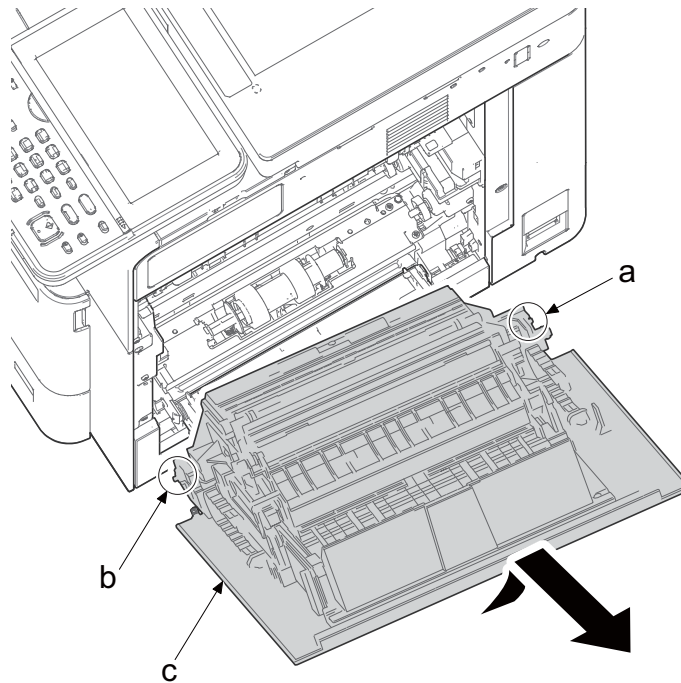


**11** Twist two straps (a) and detach them.

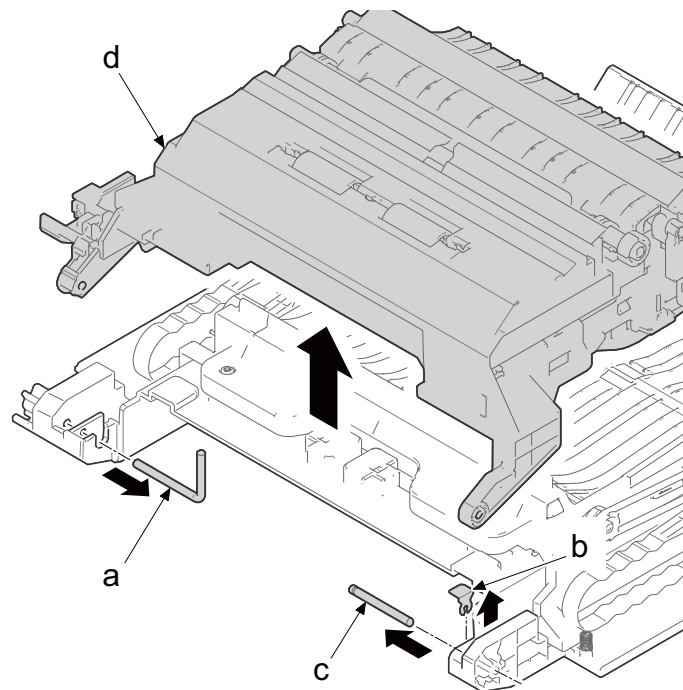


**12** Slide the rear side fulcrum (a) and pull out the shaft of the front side fulcrum (b).

**13** Tilt up the right cover assembly (c) and remove it in the direction of the arrow.



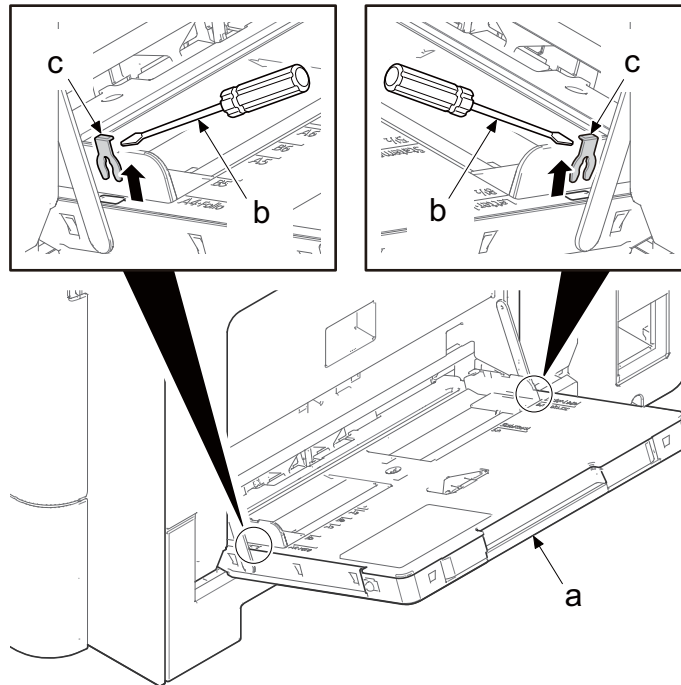
- 14 Pull out the right cover shaft (a).
- 15 Remove the stop ring (b) and pull out the fulcrum pin (c).
- 16 Detach the conveying unit in the direction of the arrow.



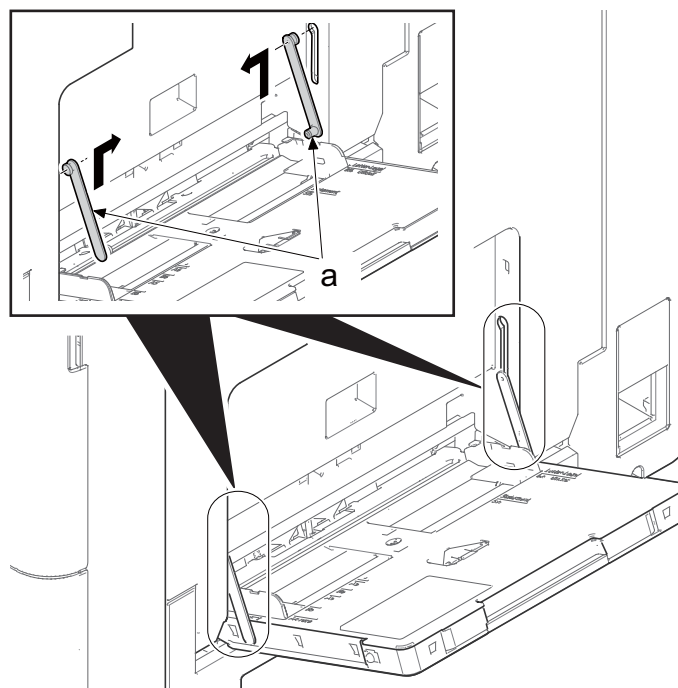
## (2) Optical section

### (2-1) Detaching and reattaching the LSU

- 1 Open the manual feed table (a).
- 2 Remove two stop rings (c) with the flat-blade screwdriver (b).

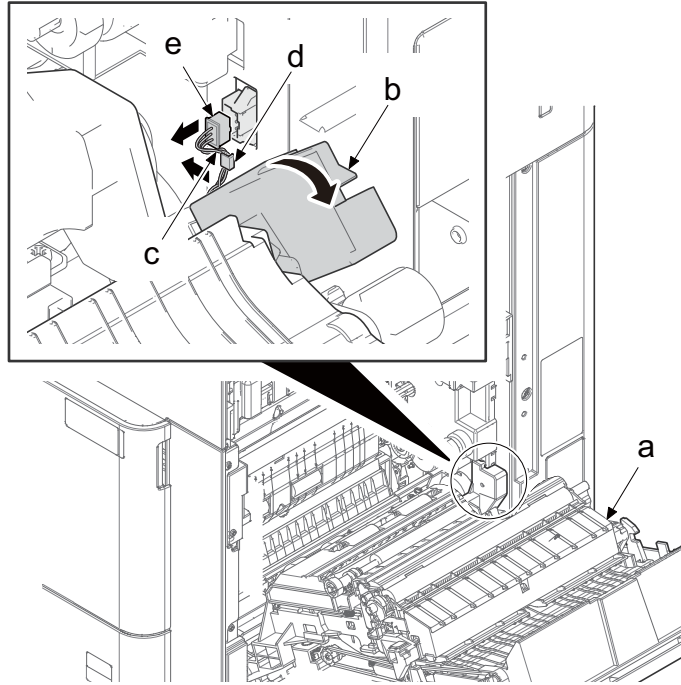


- 3 Remove two straps (a) in the direction of the arrow.

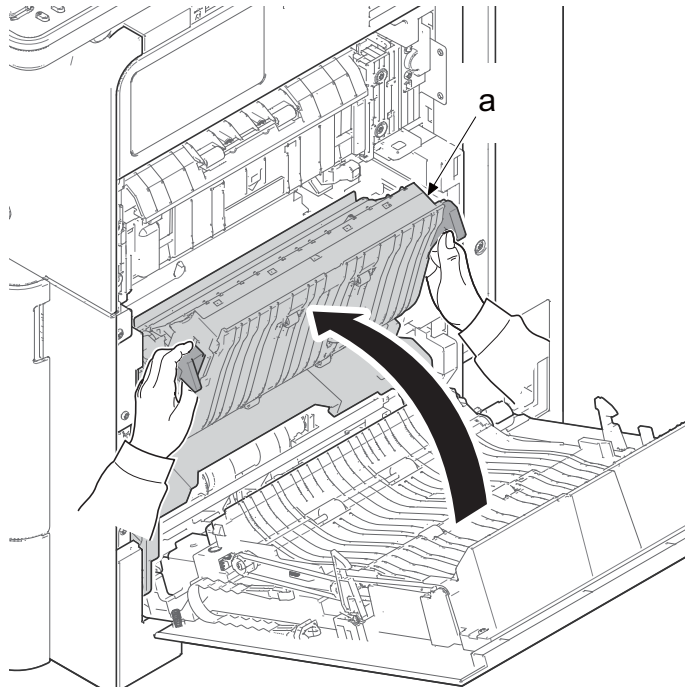




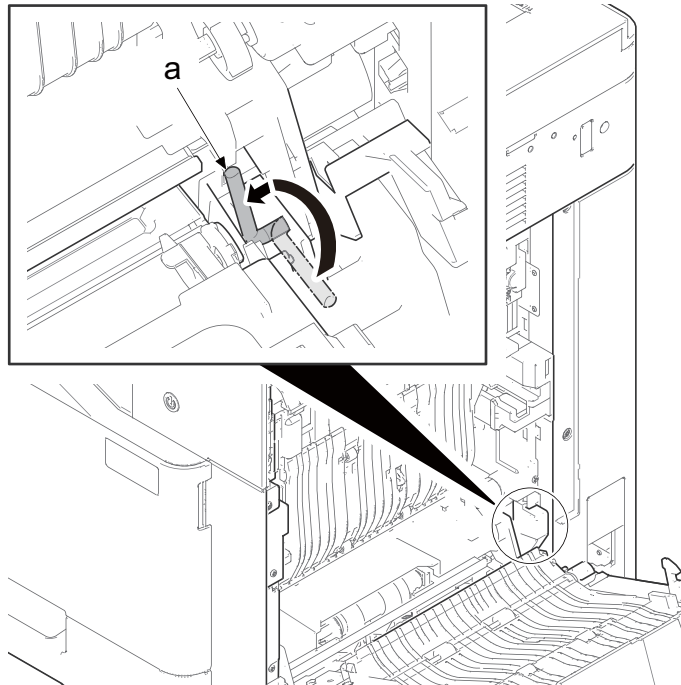
- 4 Open the right cover (a).
- 5 Rotate the wire cover (b).
- 6 Disconnect the connector (c).



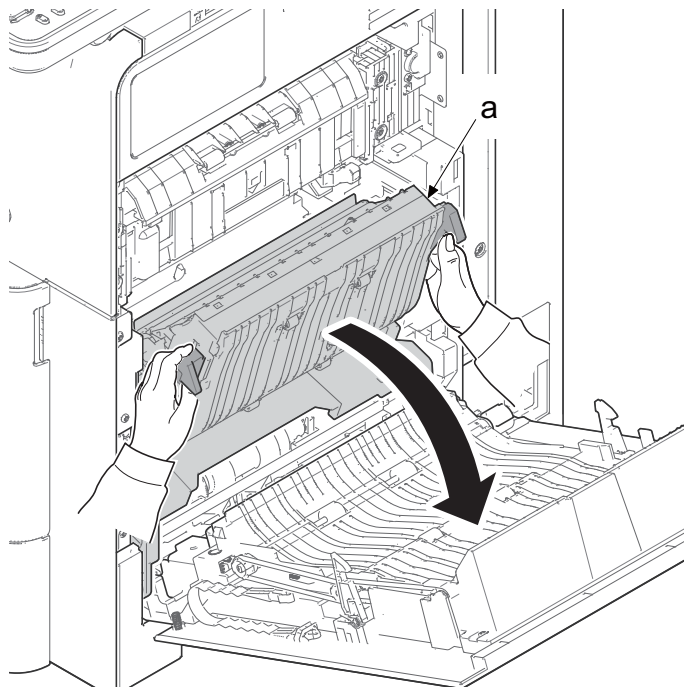
- 7 Close the conveying unit (a).

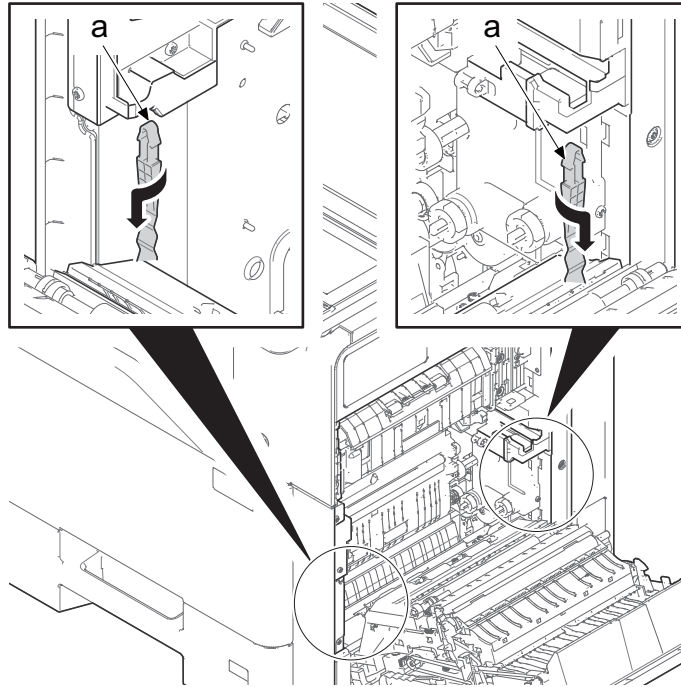
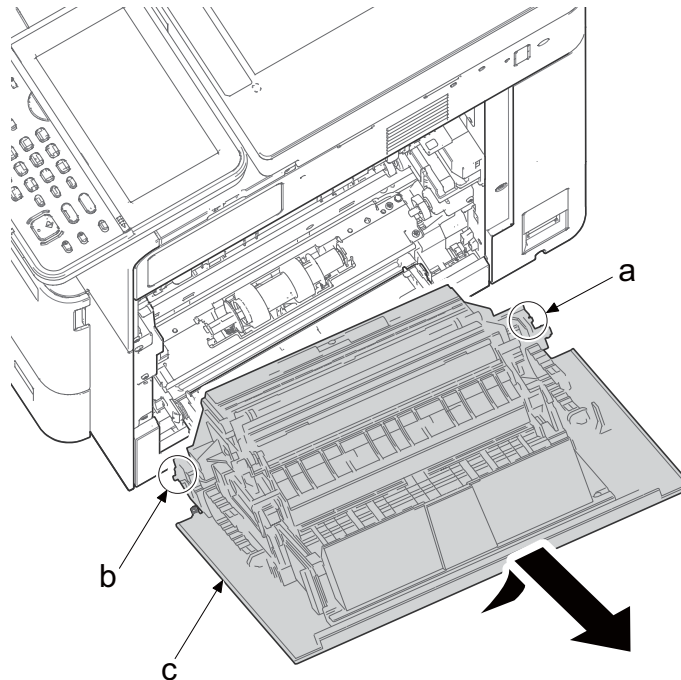


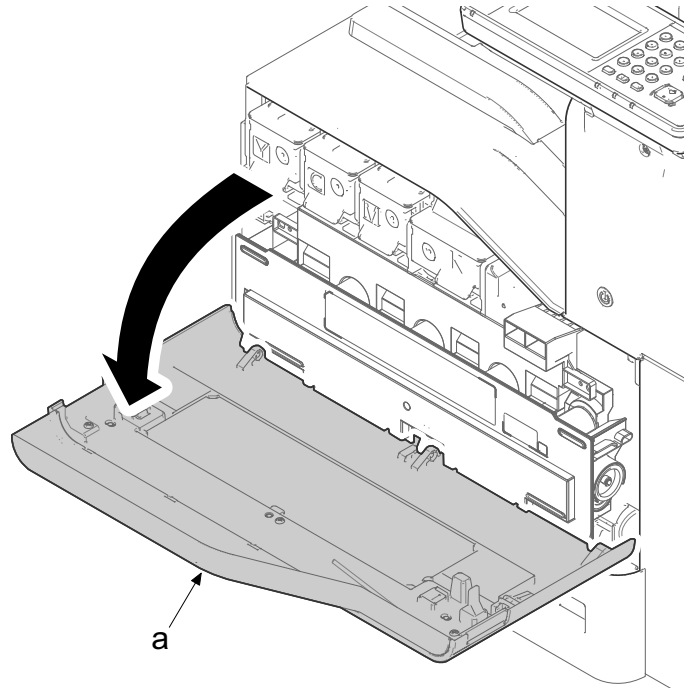
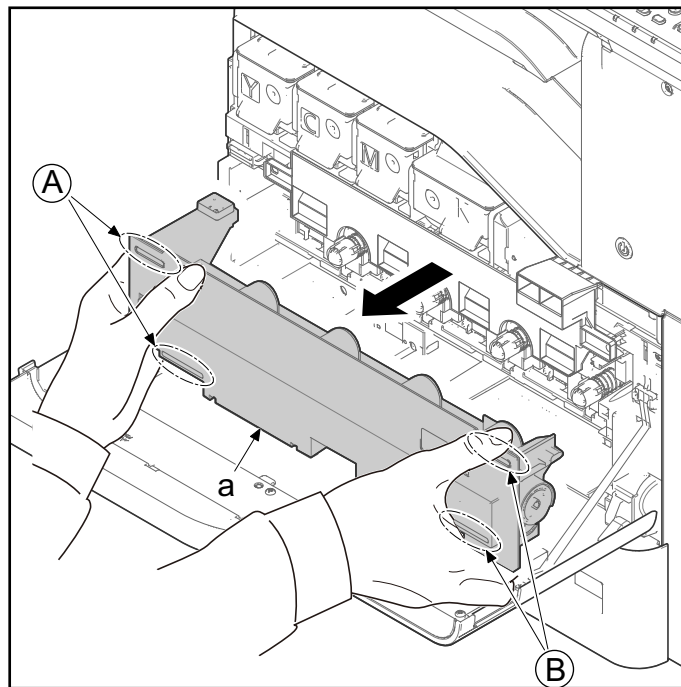
- 8 Tilt up the right cover shaft (a).
- 9 Slide the right cover shaft (a) in the direction of the arrow.



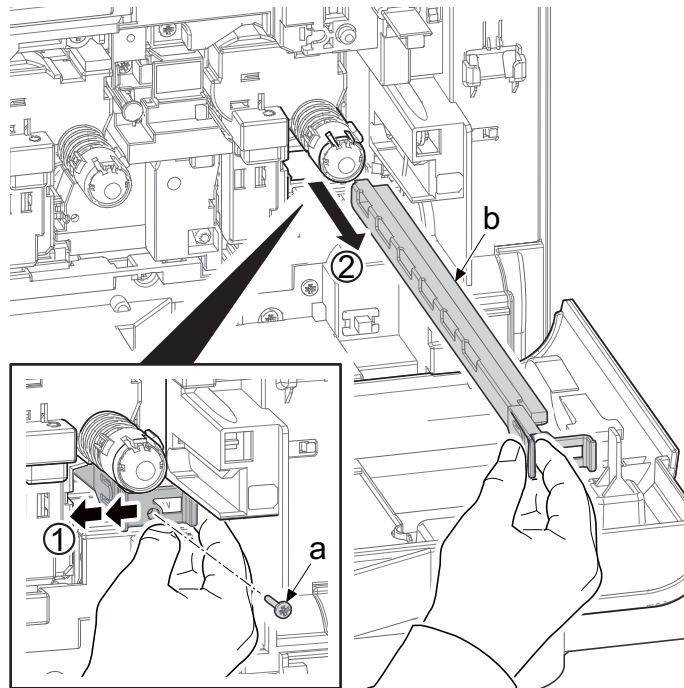
- 10 Open the conveying unit (a).



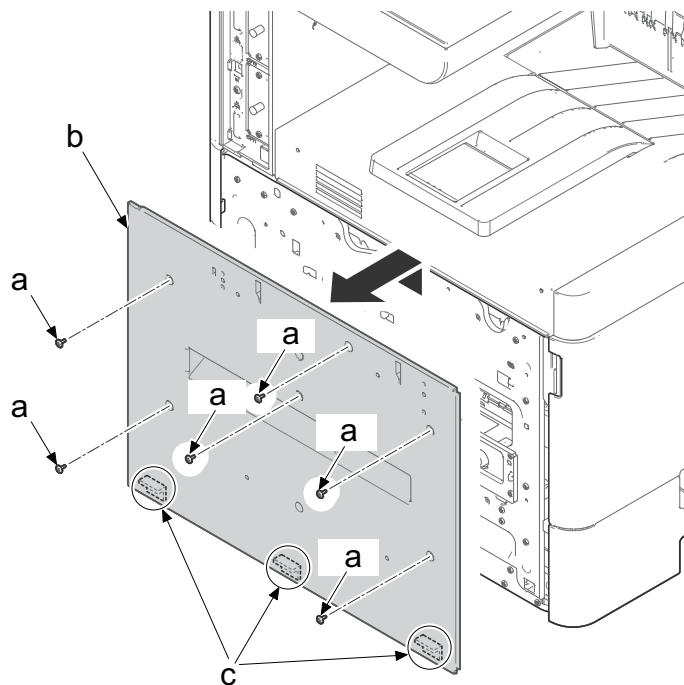
**11 Twist two straps (a) and detach them.****12 Slide the rear side fulcrum (a) and pull out the shaft of the front side fulcrum (b).****13 Tilt up the right cover assembly (c) and remove it in the direction of the arrow.**

**14** Open the front cover (a).**15** Hold A and B, and remove the waste toner box (a).

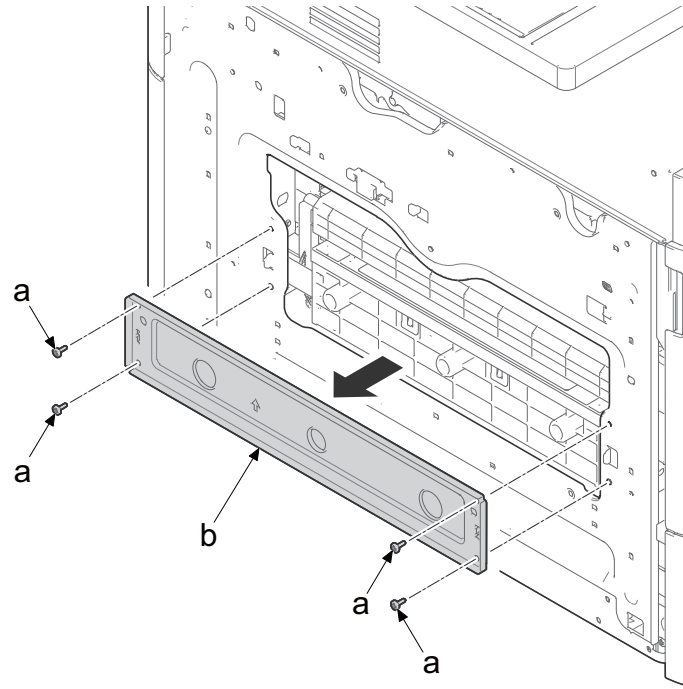
- 16 Remove the screw (a) (M3x8).
- 17 Slide the regist cleaner (b) in the direction of the arrow and release the lock.
- 18 Pinch the regist cleaner (b) and pull it out.



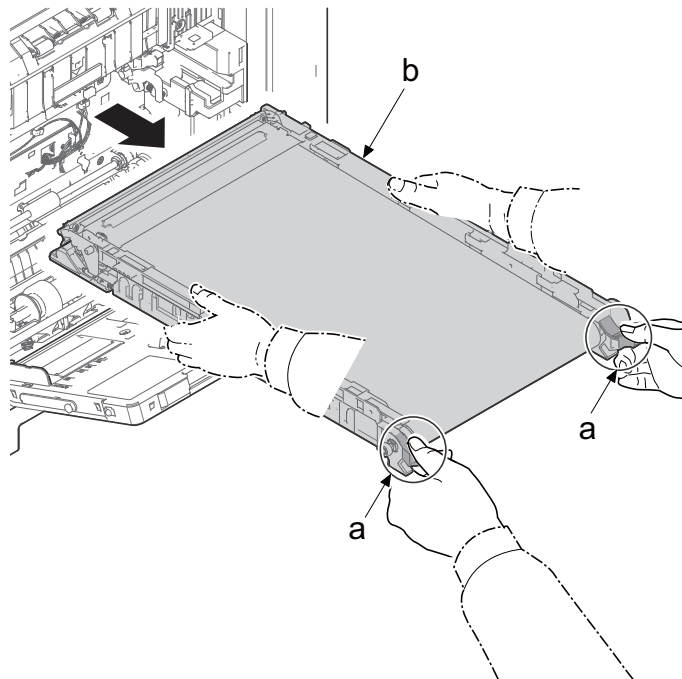
- 19 Remove six screws (a) (M3x8).
- 20 Release three hooks (c) and remove the left cover (b) in the direction of the arrow.



**21** Remove four screws (a) (M3x8) and remove the LSU left stay (b).

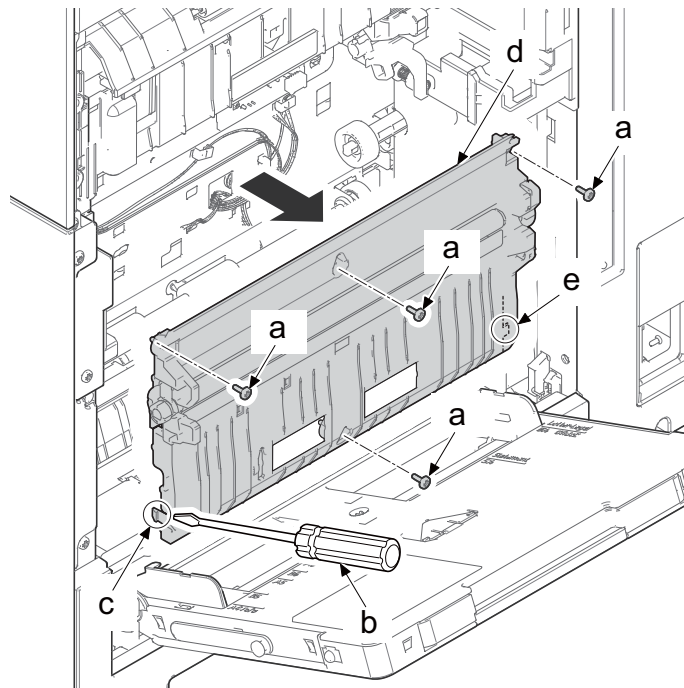


**22** Hold the handle (a) and pull out the primary transfer unit (b) in the direction of the arrow.



**23** Remove four screws (a) (M3x8).

**24** Release the hook (c) with the flat-blade screwdriver (b) and remove the regist guide assembly (d) in the direction of the arrow.

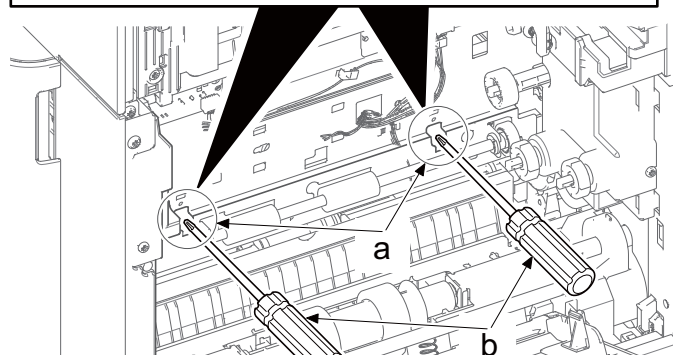
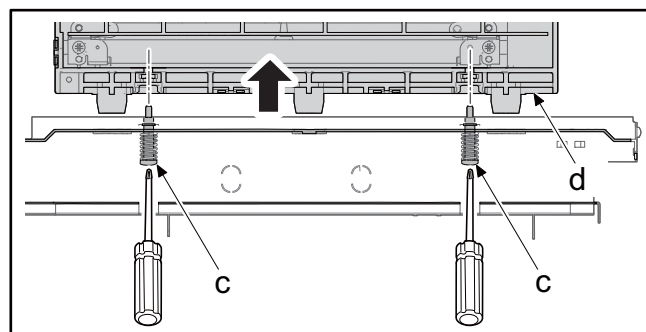


**Important**

Securely hang the hook (e) when attaching the regist guide assembly (d). Otherwise, it causes paper jams.

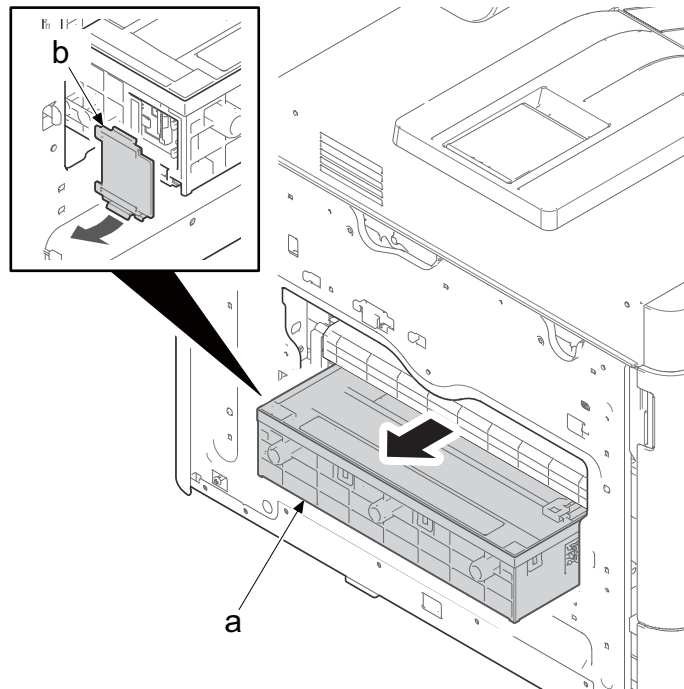
**25** Loosen the fixing screws (c) with a screwdriver (b) through the aperture (a) and remove the LSU (d).

The fixing screws (c) are not removed.



**26** Pull out the laser scanner unit (a) half way.

**27** Detach the FFC cover (b).

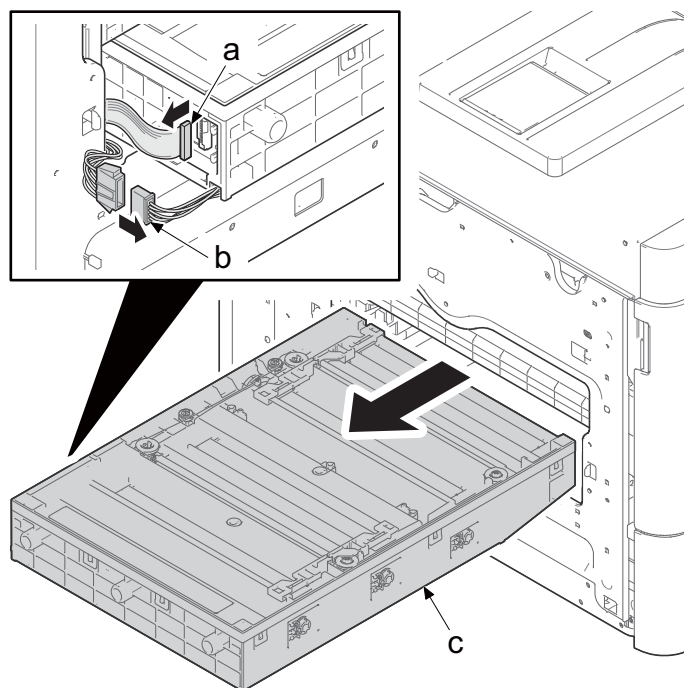


**28** Detach the FFC connector (a) and the FFC connector with a lock (b).

**29** Pull out the laser scanner unit (c).

**30** Check the laser scanner unit (c) and clean or replace it.

**31** Reattach the parts in the original position.



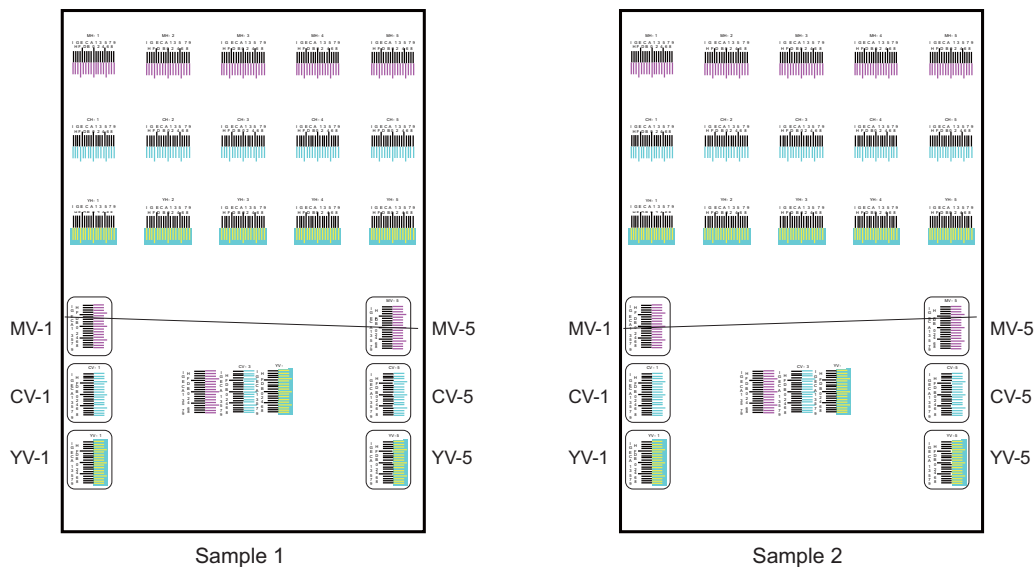
#### Notes when replacing the laser scanner unit

Execute the following adjustment after replacing the laser scanner unit.



## 1 Color registration adjustment (maintenance mode U469): Angle

- 1 Input "469" using the numeric keys and press the [Start] key.
- 2 Select [Manual].
- 3 Select [Print].
- 4 Press the [Start] key to output the manual adjustment chart.
- 5 Execute the following adjustment if the gap between V-1 and V-5 match scale position is 2 scales or more for each color.



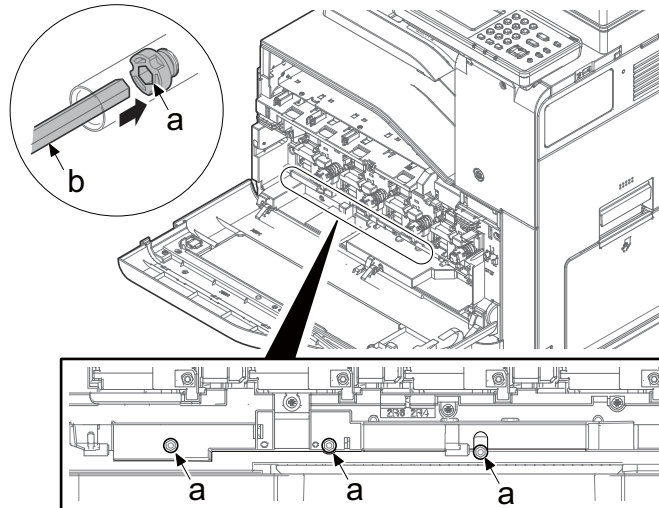
- 6 Open the front cover and pull out the waste toner box.
- 7 Rotate the hex hole (a) by using a hex wrench (5mm).
  - Direction of rotation

The gap between V-1 and V-5 match scale is 2 scales or more (sample 1): counter-clockwise  
 The gap between V-1 and V-5 match scale is -2 scales or more (sample 2): clockwise

- Number of rotation

The gap between V-1 and V-5 match scale multiplied by 4 clicks.

- 8 Reattach the waste toner box in the original position and close the front cover.
- 9 Output the adjustment chart to check it is within the range.
- 10 Press the [Stop] key.



## 2 Color registration adjustment (maintenance mode U469): Regist

- 1 Input "469" using the numeric keys and press the [Start] key.
- 2 Select [Auto].  
Output the automatic adjustment chart.
- 3 Select [Execute].
- 4 Set the chart on the table and press the [Start] key.  
Execute the automatic adjustment. When adjustment has normally completed, [OK] is displayed.
- 5 Press the [Stop] key.

## 3 ID correction operation setting (maintenance mode U464): Calib

- 1 Input "464" using the numeric keys and press the [Start] key.
- 2 Select [Calib].
- 3 Select [Full] and press the [Start] key.  
Calibration starts.
- 4 Press the [Stop] key.

## 4 Checking LSU cleaning operation (maintenance mode U474): Execute

- 1 Input "474" using the numeric keys and press the [Start] key.
- 2 Select [Execute].
- 3 Press the [Start] key.  
Cleaning of the LSU slit glass is executed.

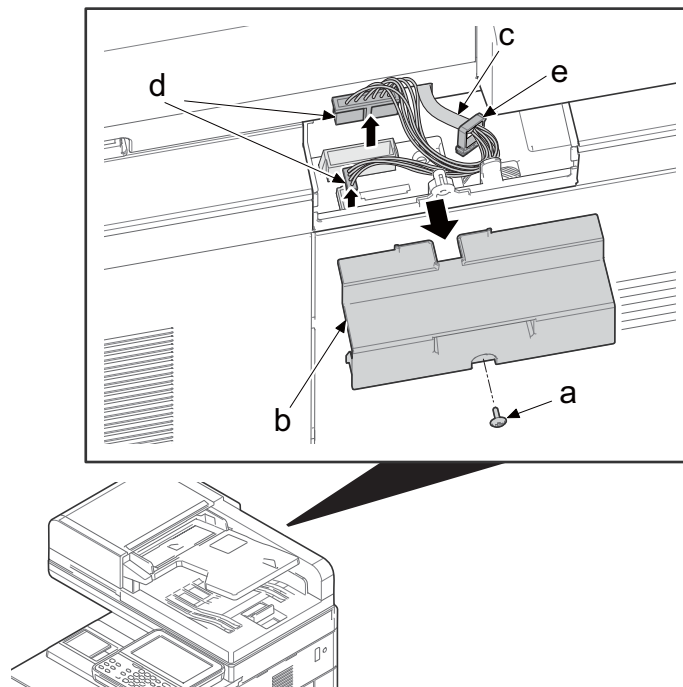
- 4 Press the [Stop] key.

## 5 Exiting from the maintenance mode

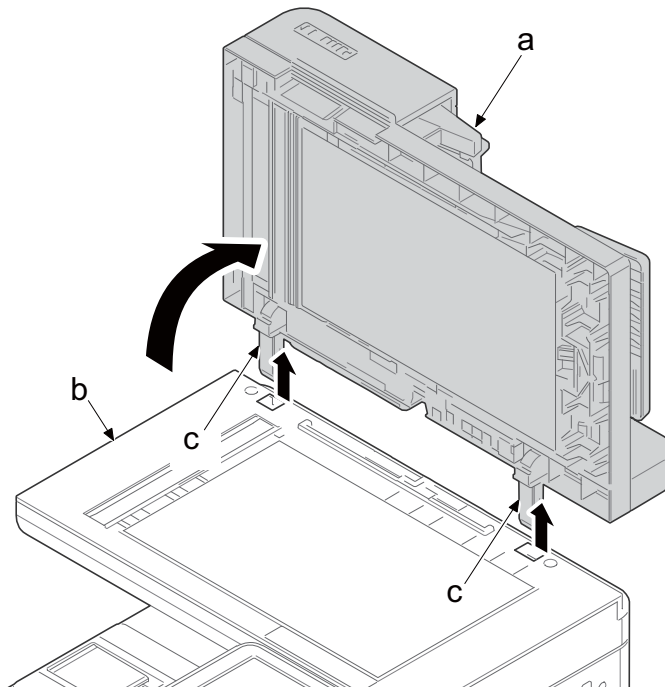
- 1 Input "001" using the numeric keys and press the [Start] key.  
The maintenance mode is exited.

### (2-2) Detaching and reattaching the image scanner unit (ISU)

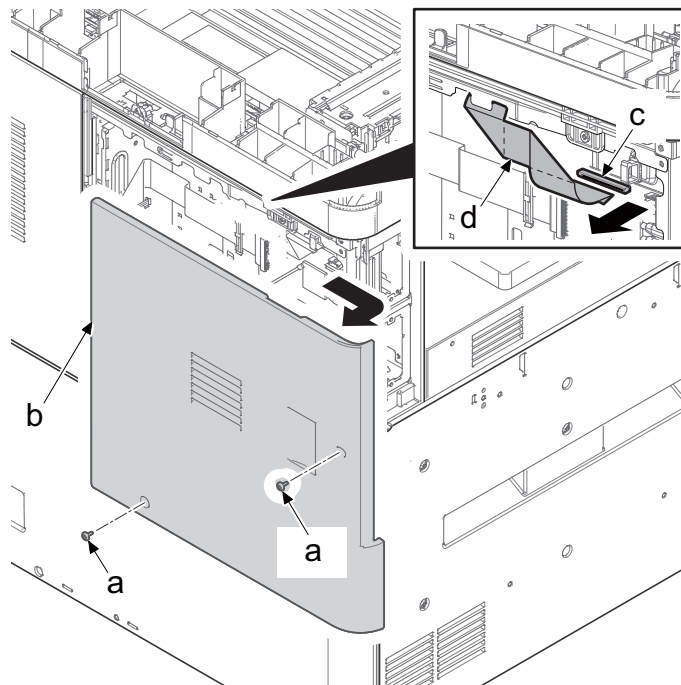
- 1 Remove the screw (a) (M3x8) and remove the rear right cover (b).
- 2 Release the DP interface wire (c) from the wire saddle (e) and remove it from the two connectors (d).



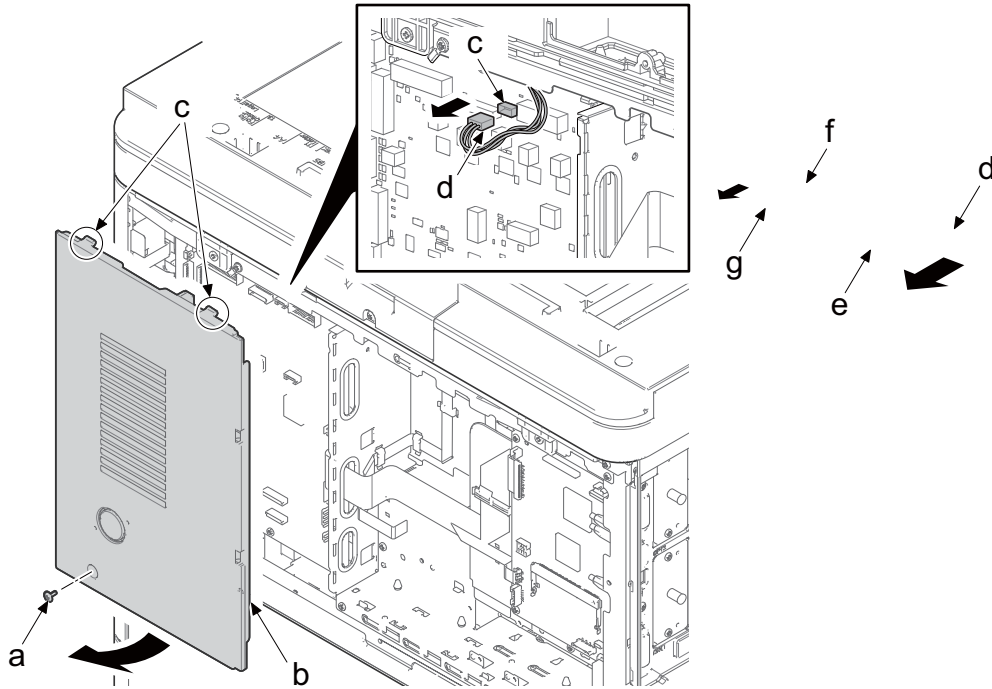
- 3 Open the document processor (a).
- 4 Lift up the document processor (a) in the direction of the arrow and remove the hinge (c) from the main unit (b).



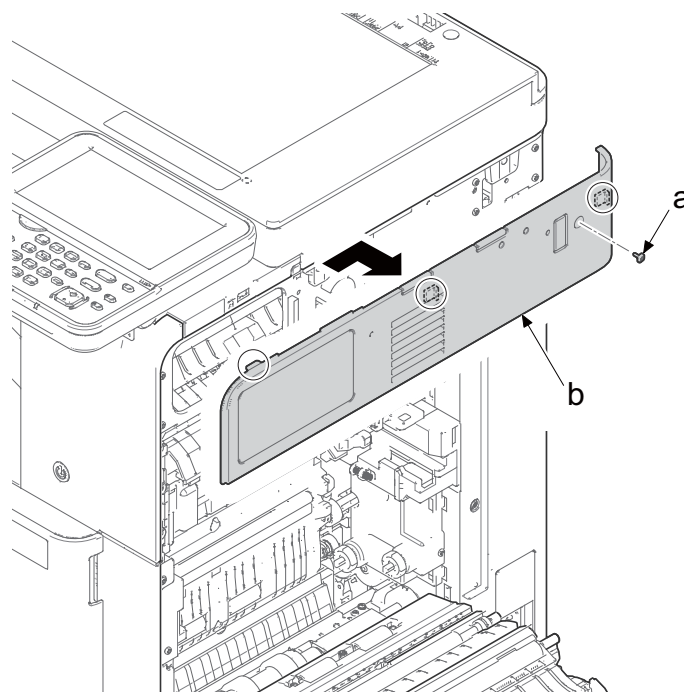
- 5 Remove two screws (a) (M3x8).
- 6 Slide the rear left cover (b) in the direction of the arrow and detach it.
- 7 Disconnect the FFC (d) from the main PWB connector (c).



- 8 Remove the screw (a) (M3x8).
- 9 Detach the rear right cover (b) while rotating it in the direction of the arrow making two hooks (c) as a fulcrum.
- 10 Disconnect the connector (d) from the engine PWB connector (c).



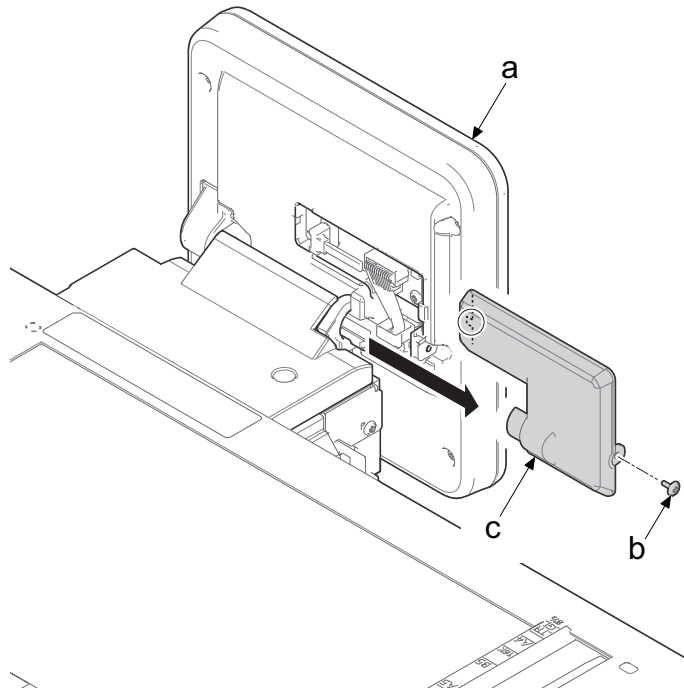
- 11 Open the right cover.
- 12 Remove the screw (a) (M3x8).
- 13 Slide the right upper cover (b) in the direction of the arrow and detach it.



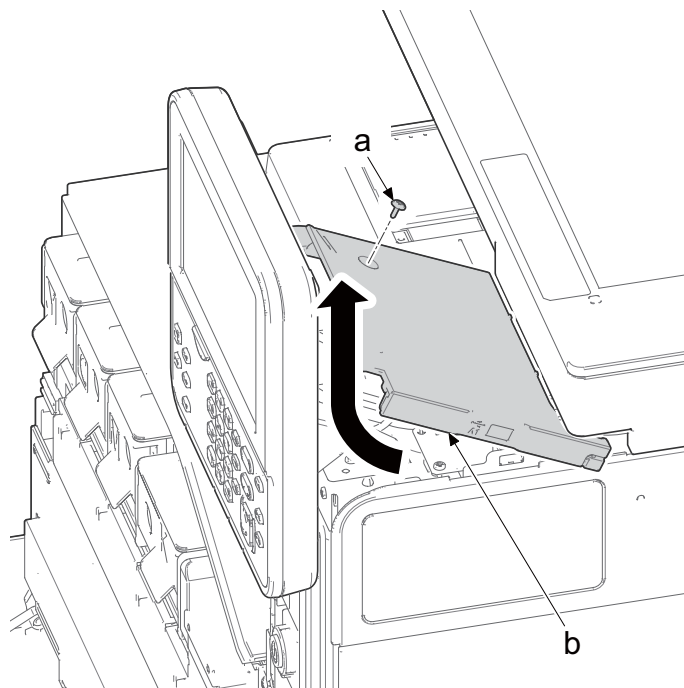
**14** Pull up the operation unit (a).

**15** Remove the screw (b) (M3x8).

**16** Remove the operation lid (c) from the operation unit (a) in the direction of the arrow.

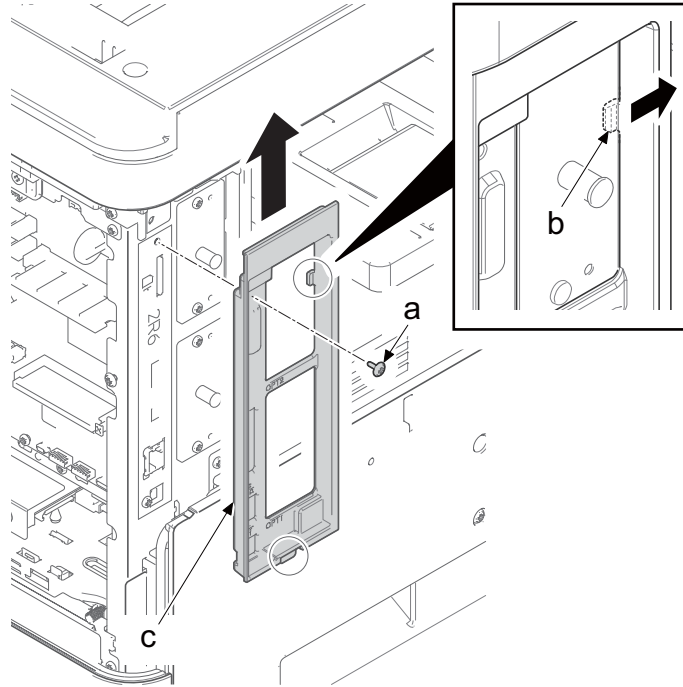


**17** Remove the screw (a) (M3x8) and remove the upper exit cover (b).



**18** Remove the screw (a) (M3x8).

**19** Release the hook (b) in the direction of the arrow and remove the left controller cover (c).



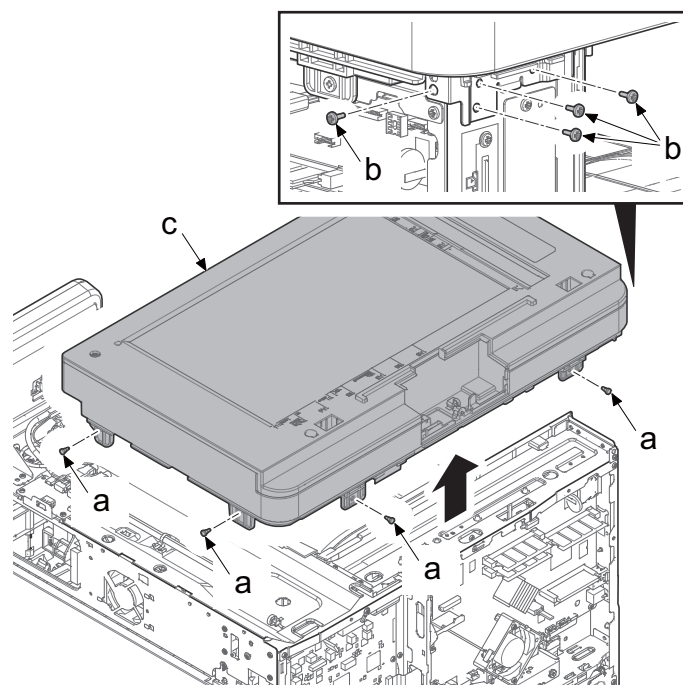
**20** Remove four pins (a) from the ISU.

**21** Remove four screws (b) (M3X8) of the unit fixing plate.

**22** Detach the ISU (c) in the direction of the arrow.

**23** Check the ISU (c) and clean or replace it.

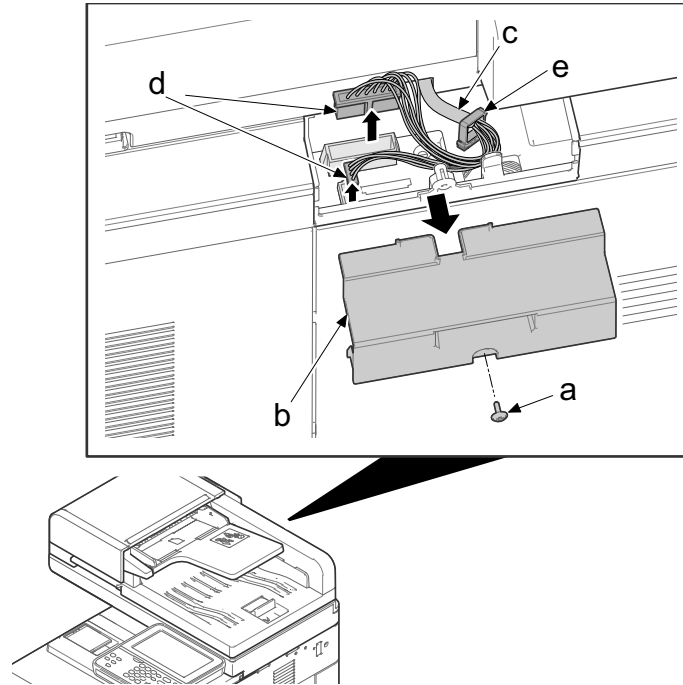
**24** Reattach the parts in the original position.



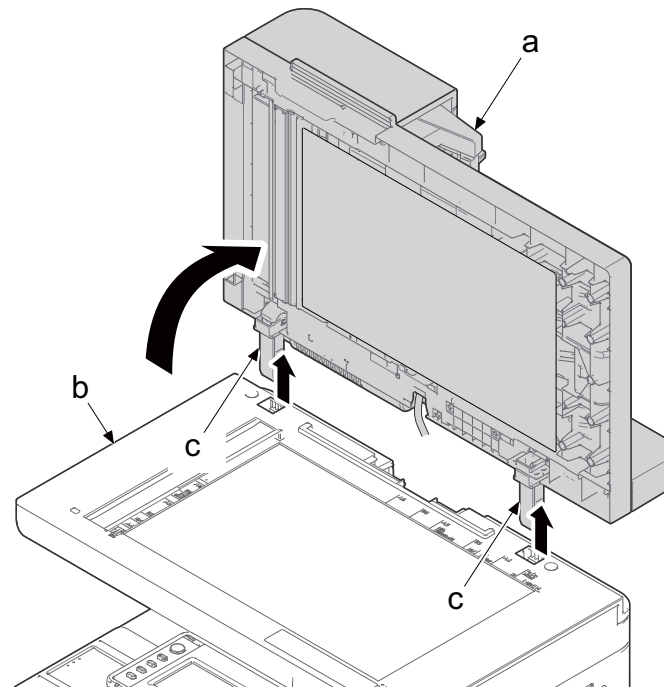
**(2-3) Detaching and reattaching the image scanner unit (ISU) upper assembly**

- 1** Remove the screw (a) (M3x8) and remove the rear right cover (b).
- 2** Release the DP interface wire (c) from the wire saddle (e) and remove it from the two connectors (d).

The number of connectors depends on the document processor to install.

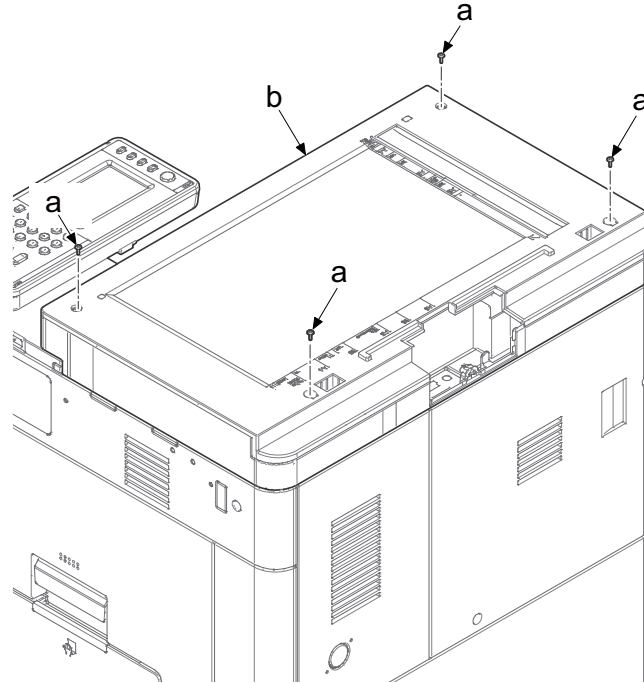


- 3** Open the document processor (a).
- 4** Lift up the document processor (a) in the direction of the arrow and remove two hinge (c) from the main unit (b).

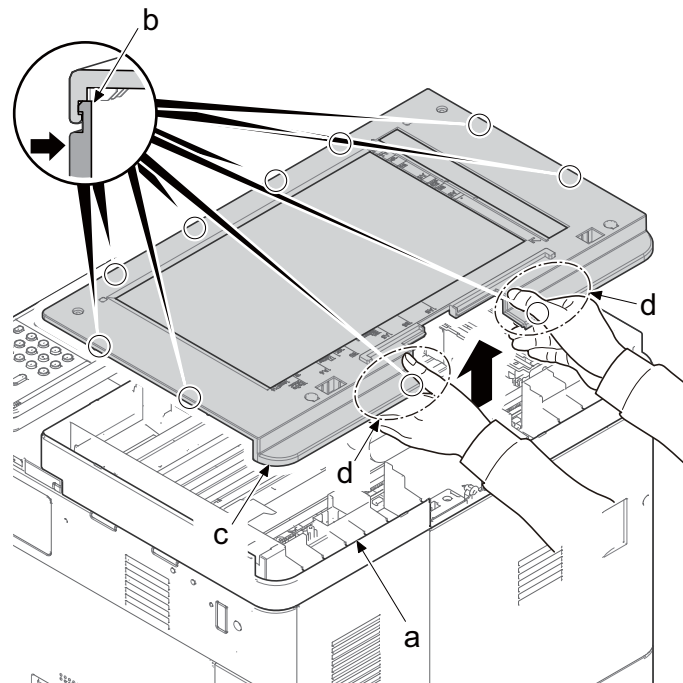




## 5 Remove four screws (a) (M3x8) from the ISU upper assembly (b).



## 6 Push the ISU bottom frame (a) to release the hook (b) and then detach the ISU upper assembly (c).

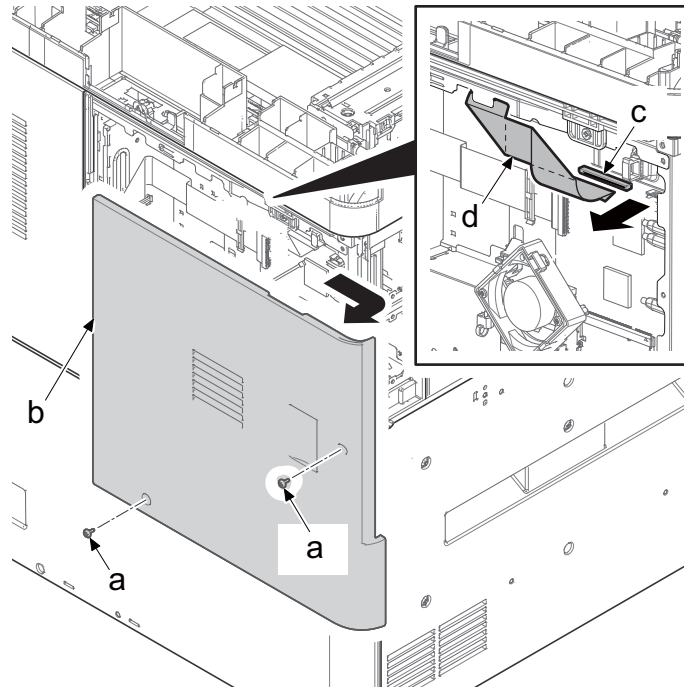


### ✔ Important

Lift up the ISU upper assembly (c) from the rear side (d) so that the glass does not peel.

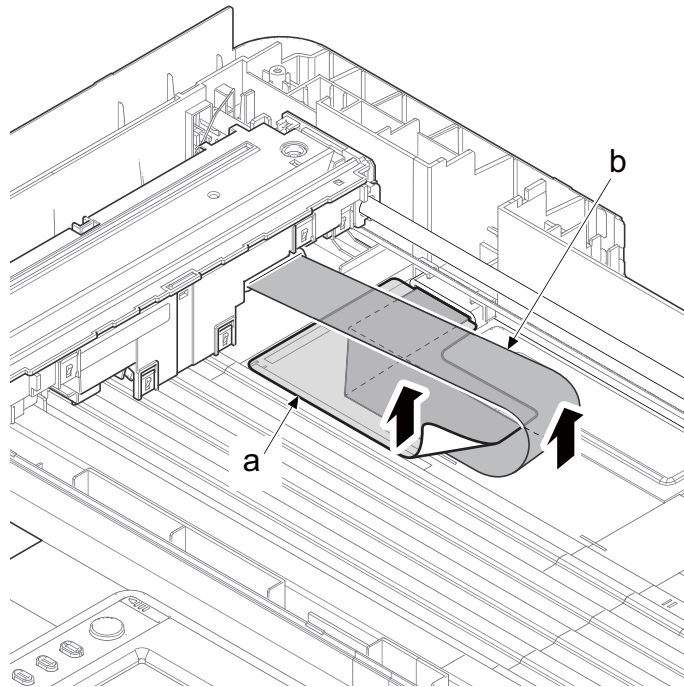
**(2-4) Detaching and reattaching the scanner carriage assembly**

- 1** Detach the document processor.
- 2** Detach the ISU upper assembly.
- 3** Remove two screws (a) (M3x8).
- 4** Slide the rear left cover (b) in the direction of the arrow and detach it.
- 5** Disconnect the FFC (d) from the main PWB connector (c).



6 Peel off the sheet (a).

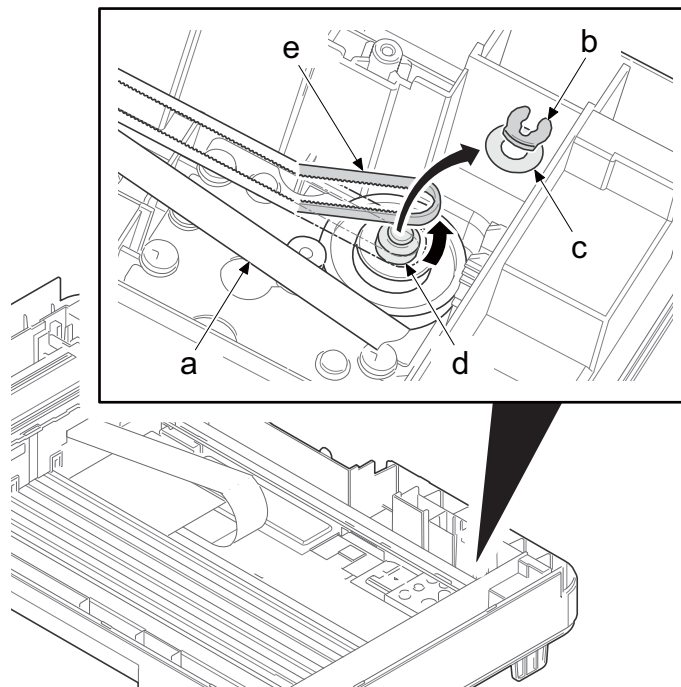
7 Peel off the FFC (b).



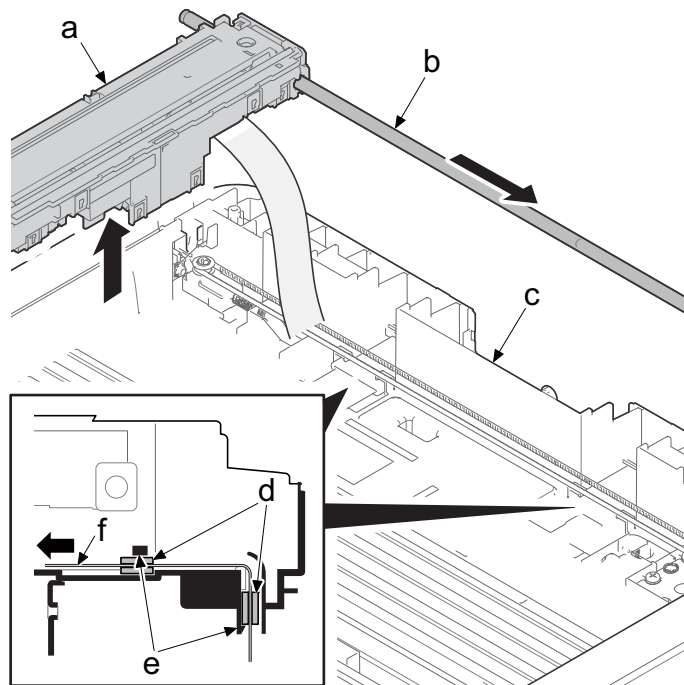
8 Shift the ISU shaft (a).

9 Remove the stop ring (b) and shim (c).

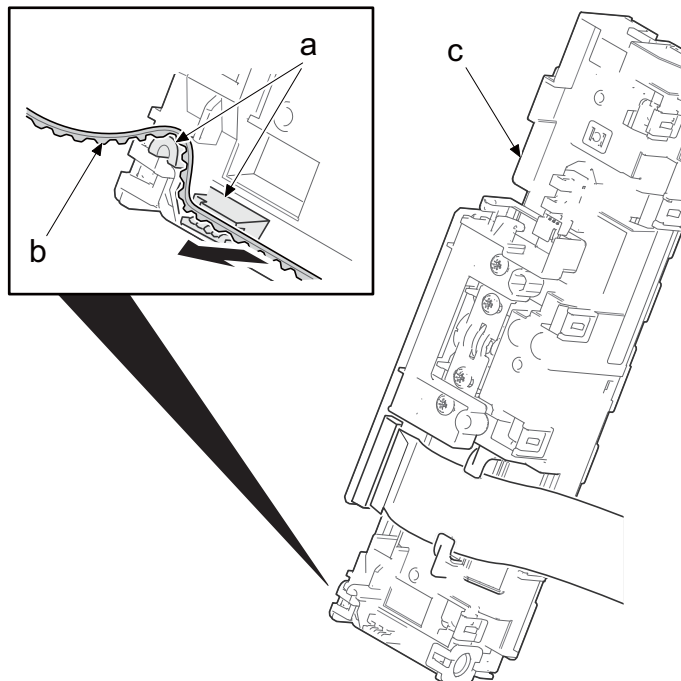
10 Remove the drive belt (e) from the two pulleys (d).



- 11 Remove the ferrite cores from the two holders (e) and remove the FFC (f).
- 12 Remove the scanner carriage (a) and ISU shaft (b) from the ISU lower assembly (c).
- 13 Pull out the ISU shaft (b) from the scanner carriage assembly (a).



- 14 Remove the drive belt (b) from the belt holder (a).
- 15 Check the scanner carriage (c) and clean or replace it.
- 16 Reattach the parts in the original position.



## Notes when attaching

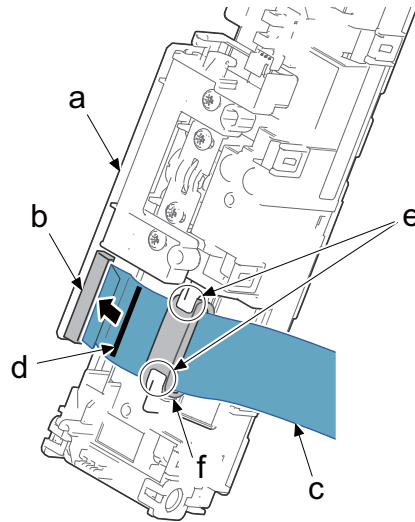
When attaching the scanner carriage, attach FFC in the following procedures.

- During the work, take care not to touch the CCD PWB or to give a shock.
- Take care not to touch the grease applied on the scanner carriage rail or to adhere dust and foreign objects.

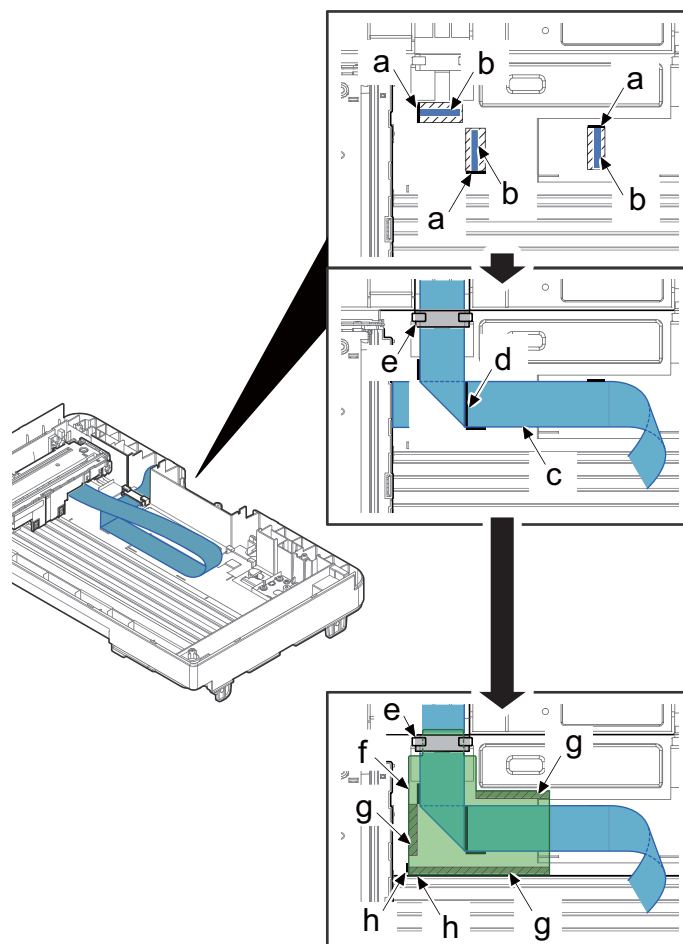
### 1 Pass FFC (c) through two hooks (e) on the bottom of the scanner carriage (a) and insert it into the ferrite core (f).

Pass FFC so that the marking (d) is on the surface.

### 2 Connect FFC (c) to the connector (b) of the CCD PWB.



- 3 Affix three double-adhesive tapes (b) within the three marking positions (a) on the base.
- 4 Peel off the back sheet of the double-adhesive tape, and affix FFC (c) so that it aligns with the marking.
- 5 Fold FFC (c) in right angle aligning with the marking (d) on FFC surface at the end position of the marking.
- 6 Insert FFC (c) into the ferrite core (e) and connect to the main PWB.
- 7 Peel off the back sheet of three double-adhesive tapes (g) of the FFC protective sheet.
- 8 Insert the FFC protection sheet (f) into the ferrite core (e), and then affix it on the base so that the end line of it align with the two projection step (h).
- 9 Insert the ISU shaft into the scanner carriage, and then reattach the parts in the original position.



### (3) PWBs



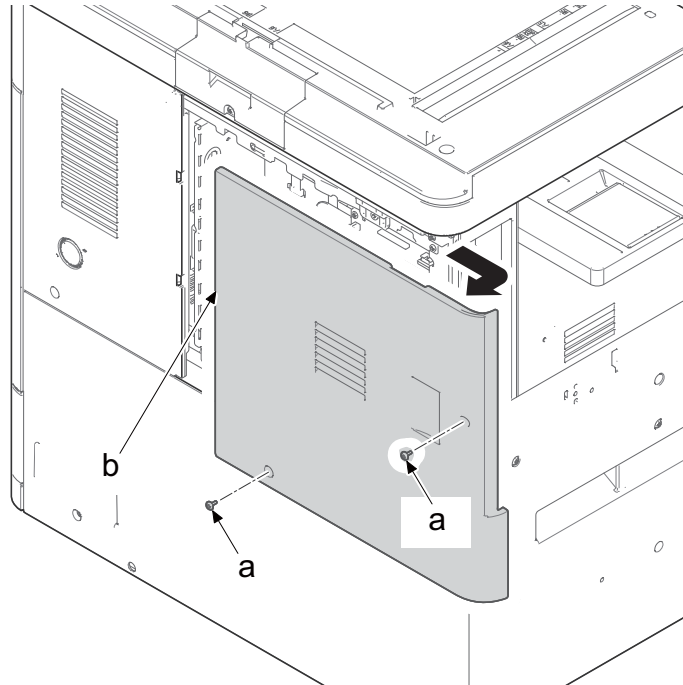
#### Caution

Before replacing the PWB, be sure to take the following procedures. Otherwise, The PWB may be damaged.

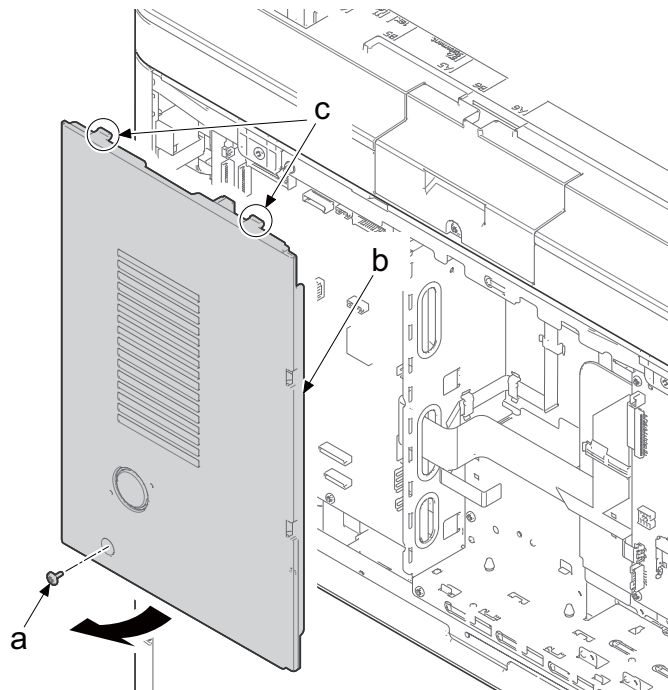
- Disconnect the power cord.
- Press the power switch one second or more to discharge the electric charge inside the main unit.

#### (3-1) Detaching and reattaching the engine PWB

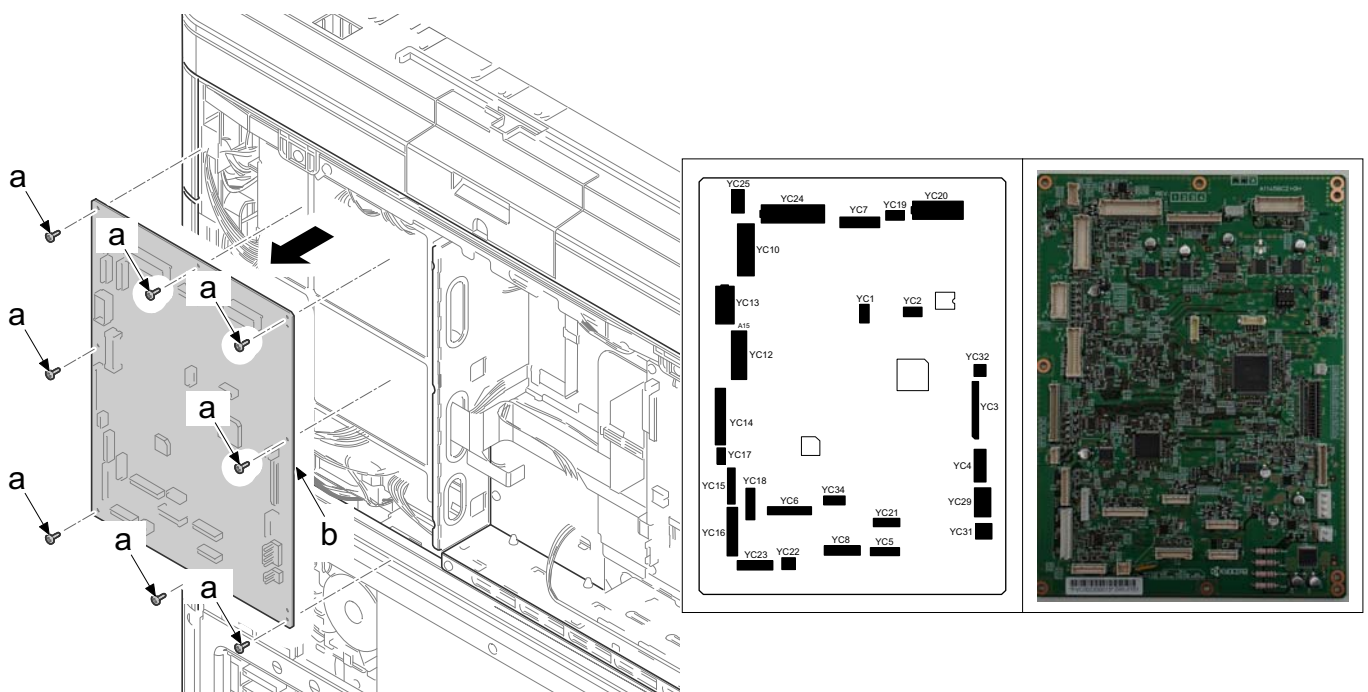
- 1 Remove two screws (a) (M3x8) and remove the rear left cover (b) by sliding it in the direction of the arrow.



- 2 Remove the screw (a) (M3x8).
- 3 Detach the rear right cover (b) while rotating it in the direction of the arrow making two hooks (c) as a fulcrum.



- 4 Disconnect all the connectors from the engine PWB (b).
- 5 Remove eight screws (a) (M3x8) and remove the engine PWB (b).
- 6 Check or replace the engine PWB (b), and then reattach the parts in the original position.

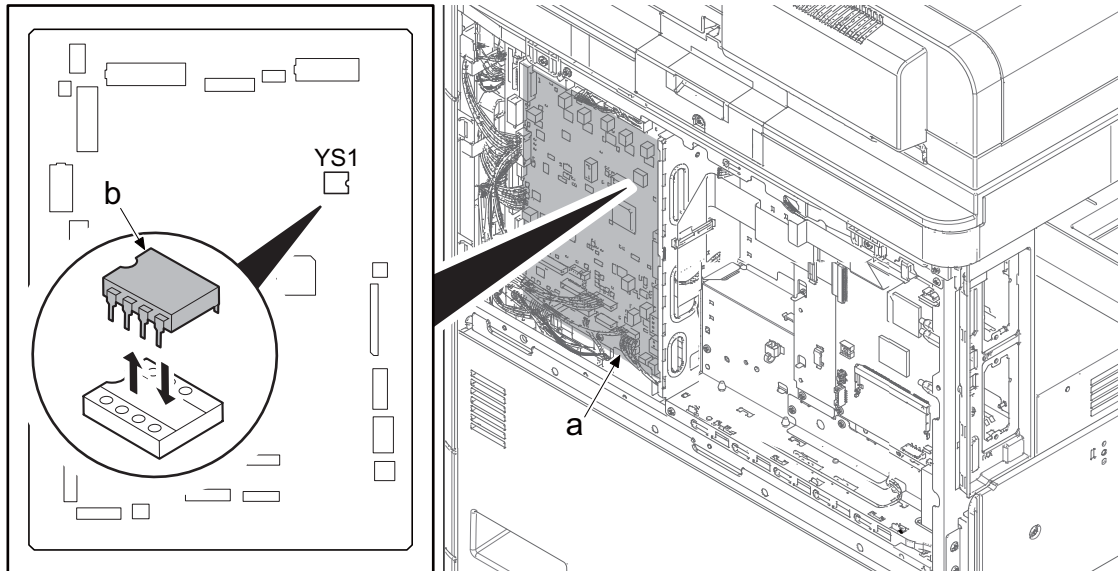




## Notes when replacing the engine PWB

 **Important**

When replacing the engine PWB (a), make sure to remove the EEPROM (b) (YS1) from the old board and install it in the new board.



Execute the following setting after replacing the engine PWB.

## 1 Machine No. (maintenance mode U004)

If the C0180 error occurs, execute U004 to match the serial numbers in the PWBs.

- 1 Input "004" using the numeric keys and press the [Start] key.
- 2 Select [Execute] and press the [Start] key.
- 3 Turn the power switch off then on. Wait more than 5 seconds between the power off and on.

## 2 Firmware update (See page 5-1)

Check the latest firmware and upgrade it.

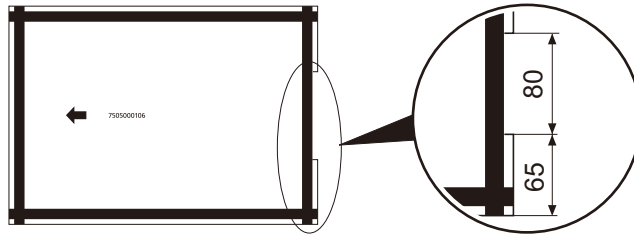
## 3 Adjusting the scanner automatically (maintenance mode U411)

### Adjusting the table scanning automatically

- 1 Set the specified original (P/N: 302NM94340) on the table.
- 2 Enter maintenance item U411.
- 3 Select [Target].
- 4 Press [Left/Right] cursor key or [#], [\*] key and select [Auto].
- 5 Press the [Up/Down] cursor key and select [Table (Chart A)].
- 6 Press the [Start] key to read the bar-code of the original chart and to start the automatic adjustment.
- 7 When automatic adjustment has normally completed, [OK] is displayed.

### DP 1st side scanning auto adjustment

- 1 Set the specified original (P/N: 302NM94330) face-up on the DP.  
Cut the trailing edge of the DP adjustment original (Chart B) as shown below.



- 2 Enter maintenance item U411.
- 3 Select [DP FU (Chart B)].
- 4 Press the [Start] key to start Auto adjustment.
- 5 When automatic adjustment has normally completed, [OK] is displayed.  
If there is a problem with the 2nd side timing after adjusting the scanner, execute [DP FD (Chart B)].  
Also, if there is a problem with the DP 1st side color, execute [DP FU (Chart A)].

## 4 ID correction operation setting (maintenance mode U464): Calib

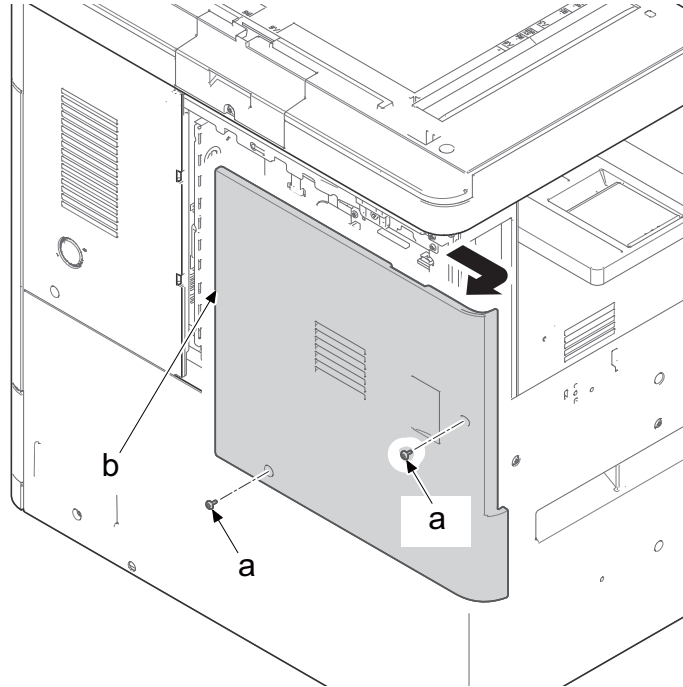
- 1 Input "464" using the numeric keys and press the [Start] key.
- 2 Select [Calib].
- 3 Select [Full] and press the [Start] key.  
Calibration starts.
- 4 Press the [Stop] key.

## 5 Adjusting the halftone automatically (maintenance mode U410)

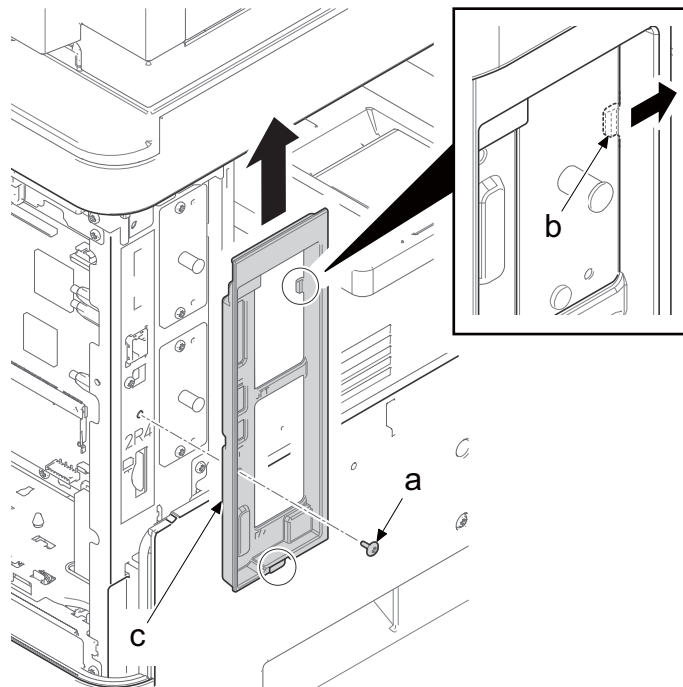
- 1 Input "410" using the numeric keys and press the [Start] key.
- 2 Press the [Start] key.  
Test pattern 1 and Test pattern 2 are output on A4 paper.
- 3 Set the output Test Pattern 1 as the original.  
Set test pattern 1 and place approximately 20 sheets of white paper on it.
- 4 Press the [Start] key.  
The 1st auto adjustment is executed.
- 5 Set the output Test Pattern 2 as the original.  
Set test pattern 2 and place approximately 20 sheets of white paper on it.
- 6 Press the [Start] key.  
The 2nd auto adjustment is executed.
- 7 [Finish] appears after normal completion.
- 8 Press the [Stop] key.

**(3-2) Detaching and reattaching the PF main PWB**

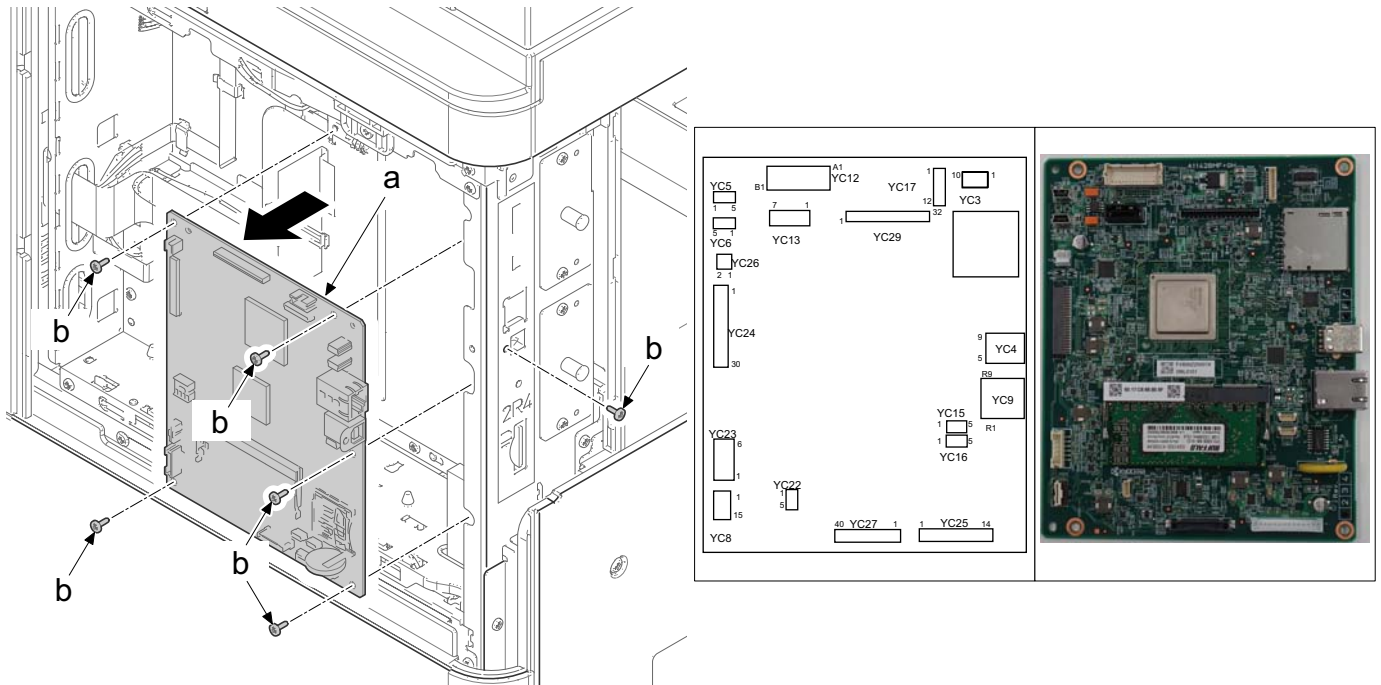
- 1 Remove two screws (a) (M3x8) and remove the rear left cover (b) by sliding it in the direction of the arrow.



- 2 Remove the screw (a) (M3x8).
- 3 Release the hook (b) in the direction of the arrow and remove the left controller cover (c) in the direction of the arrow.



- 4 **Disconnect all the connectors from the main PWB (a).**
- 5 **Remove six screws (b) (M3x8) and remove the main PWB (a).**
- 6 **Check the main PWB (a) and clean or replace it if necessary.**  
Replace the optional memory from the old PWB to the new one, if installed.
- 7 **Reattach the parts in the original position.**



### Notes when replacing the main PWB

- There is no EEPROM in the main PWB for 30 ppm model.
- When replacing the main PWB, in order to maintain the user information, insert a USB memory and execute U917 to export data. (See page 6-204)
- 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 setting after replacing the main PWB.

### 1 Machine No. (maintenance mode U004)

If the C0180 error occurs, execute U004 to match the serial numbers in the PWBs.

- 1 Input "004" using the numeric keys and press the [Start] key.
- 2 Select [Execute] and press the [Start] key.
- 3 Turn the power switch off then on. Wait more than 5 seconds between the power off and on.

### 2 Firmware update (See page 5-1)

Check the latest firmware and upgrade it.

### 3 Insert the USB memory and execute U917 to import data.

### 4 ID correction operation setting (maintenance mode U464): Calib

- 1 Input "464" using the numeric keys and press the [Start] key.
- 2 Select [Calib].
- 3 Select [Full] and press the [Start] key.  
Calibration starts.
- 4 Press the [Stop] key.

### 5 Adjusting the halftone automatically (maintenance mode U410)

- 1 Input "410" using the numeric keys and press the [Start] key.  
Displays the execution information screen.  
Test patterns 1 and 2 are output on the A4 paper.
- 2 Set the output Test Pattern 1 as the original.  
Set test pattern 1 and place approximately 20 sheets of white paper on it.
- 3 Press the [Start] key.  
The 1st auto adjustment is executed.
- 4 Set the output Test Pattern 2 as the original.
- 5 Press the [Start] key.  
The 2nd auto adjustment is executed.
- 6 [Finish] appears after normal completion.

### 6 Reactivating the license

Reactivate the license when equipping the license of the optional product.

- Card Authentication Kit (B)  
When using the SSFC card, execute maintenance mode U222 and set [SSFC].  
(See page 6-97)
- UG-33 (ThinPrint)
- Data Security Kit (E)  
Re-entering 4-digit encryption codes entered at setup is necessary.

### 7 Resetting the initial settings

Reset the user default setting and FAX default setting (e.g. the local FAX information) from the System Menu or Command Center.

### 8 Resetting the maintenance mode

Reset the following maintenance mode if necessary.

No.	Maintenance mode relating to the main unit	No.	Maintenance mode relating to the main unit
U250	Maintenance counter preset	U603	User data 1
U251	Checking/clearing the maintenance counts	U604	User data 2
U253	Switching the double/single counts	U610	System 1

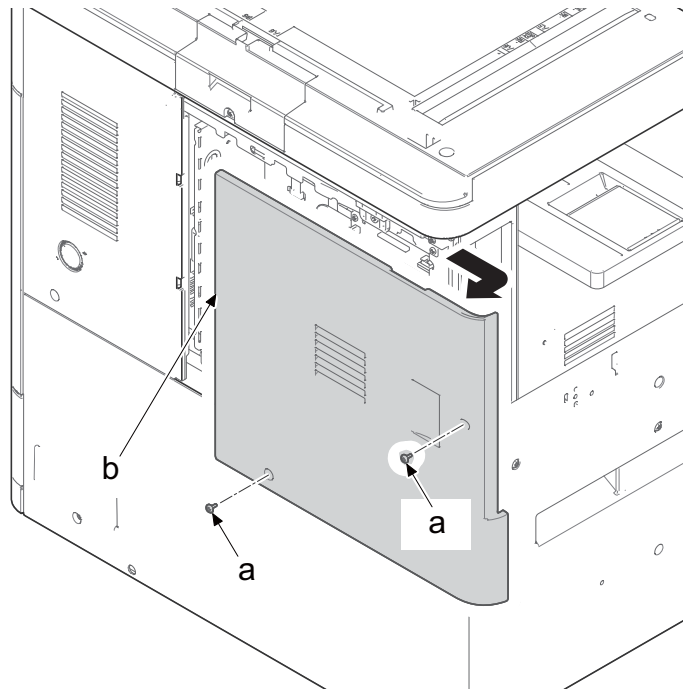
No.	Maintenance mode relating to the main unit	No.	Maintenance mode relating to the main unit
U260	Feed/eject counter switch	U611	System 2
U345	Setting the value for maintenance due indication	U612	System 3
U402	Adjusting the printing margins	U625	Communication settings
U403	Adjusting margins for scanning an original on the contact glass	U695	FAX function customization
U404	Adjusting margins for scanning an original from the document processor		
U425	Set Target		

## 9 Exiting from the maintenance mode

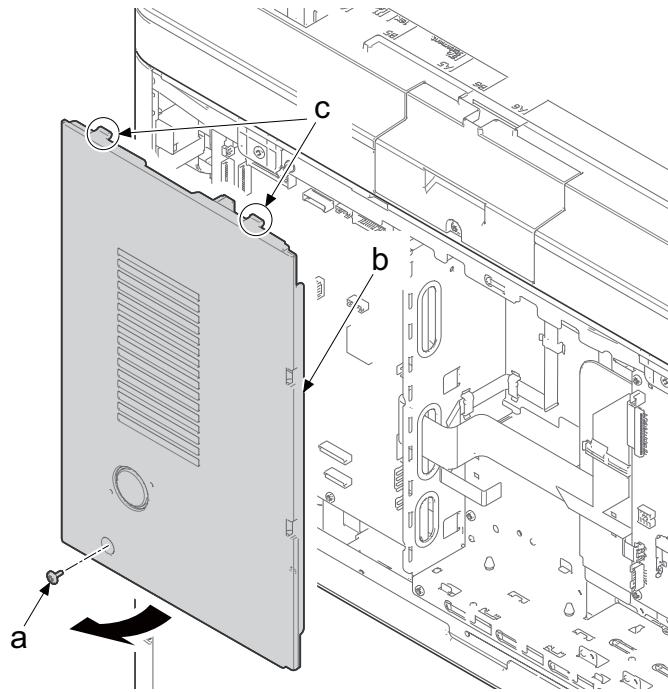
Input "001" using the numeric keys and press the [Start] key.

### (3-3) Detaching and reattaching the high voltage PWB

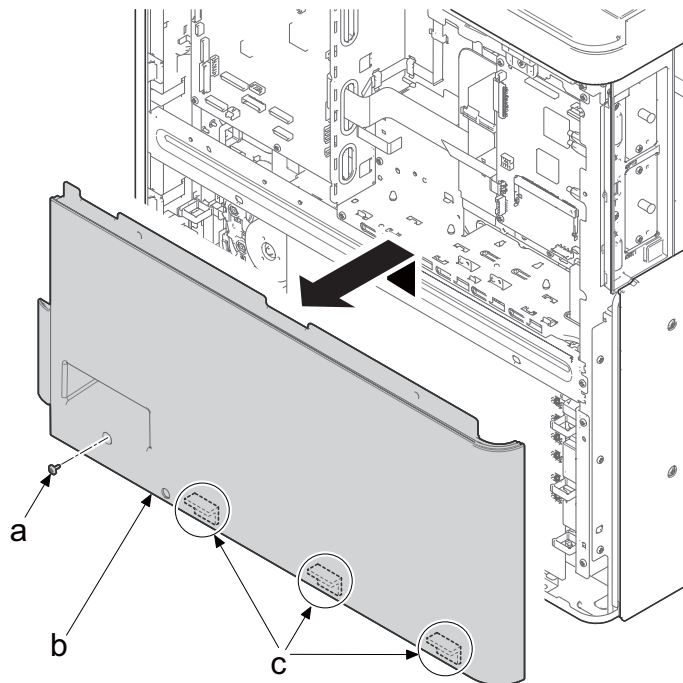
- 1 Remove two screws (a) (M3x8) and remove the rear left cover (b) by sliding it in the direction of the arrow.



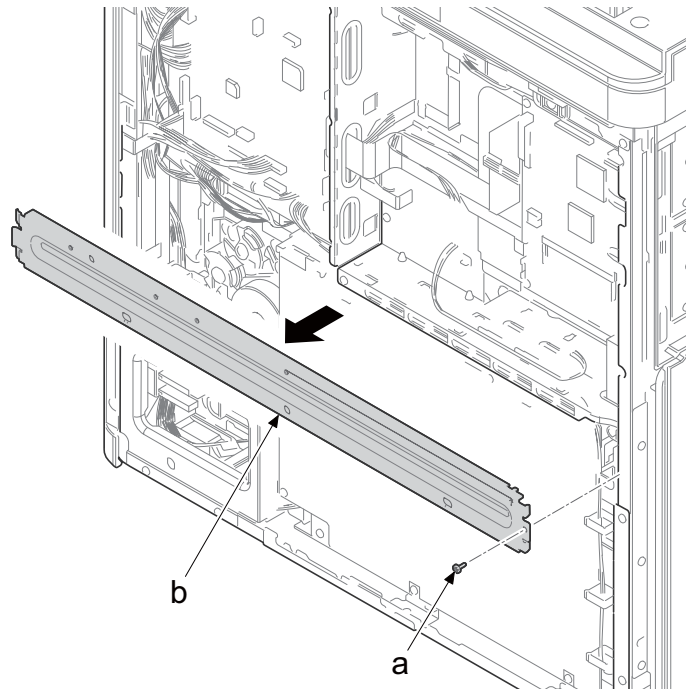
- 2 Remove the screw (a) (M3x8).
- 3 Detach the rear right cover (b) while rotating it in the direction of the arrow making two hooks (c) as a fulcrum.



- 4 Remove the screw (a) (M3x8) and remove the rear lower cover (b) in the direction of the arrow.



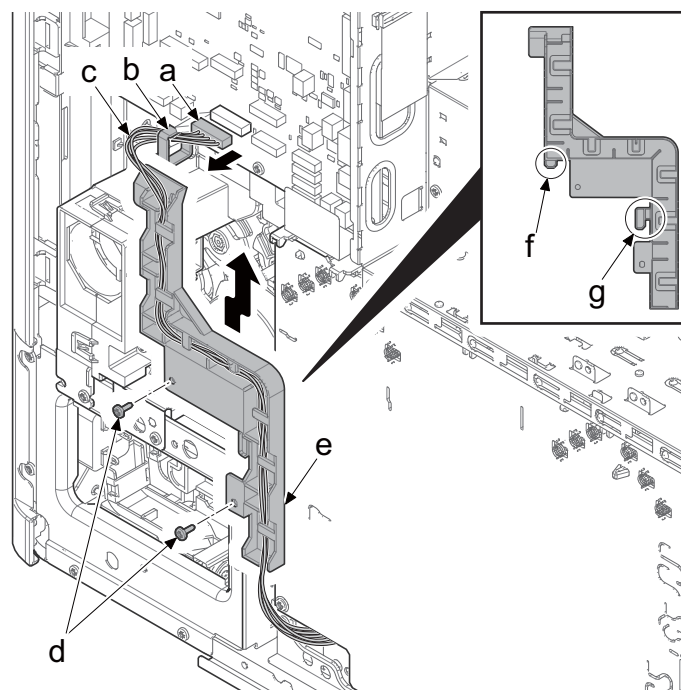
- 5** Remove the screw (a) (M3x8) and remove the rear middle stay (b).



- 6** Release the wire (c) from the wire saddle (b) and disconnect the connector (a).

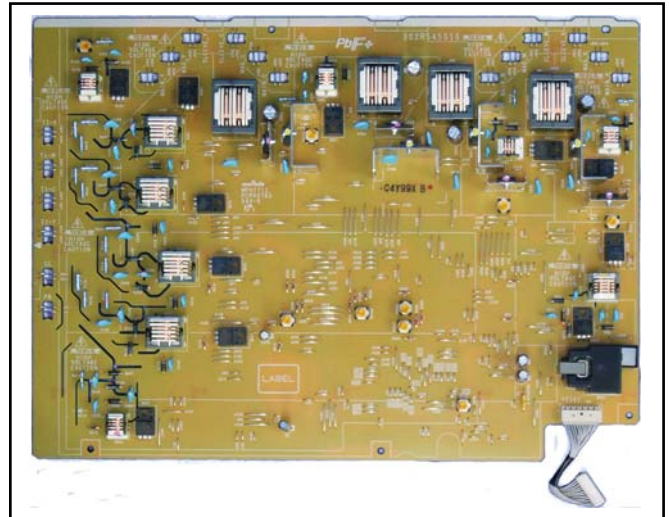
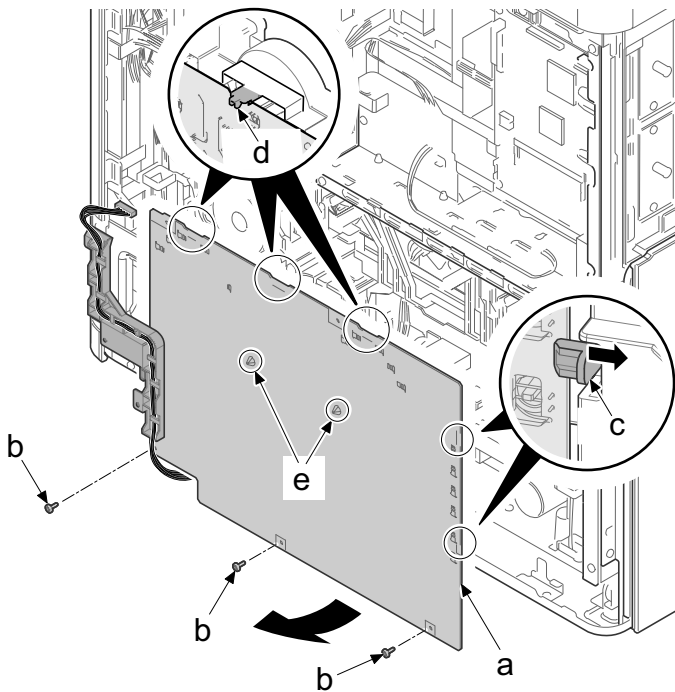
- 7** Remove two screws (d) (M3x8).

- 8** Remove the high voltage wire guide (e) in the direction of the arrow to release the protrusion (f) and hook (g).





- 9 Remove three screws (b) (M3x8).
- 10 Release two board supports (e).
- 11 Release two hooks (c).
- 12 Rotate the high voltage PWB (a) making the three hooks (d) into a fulcrum and detach it.
- 13 Check or replace the high voltage PWB (a), and then reattach the parts in the original position.

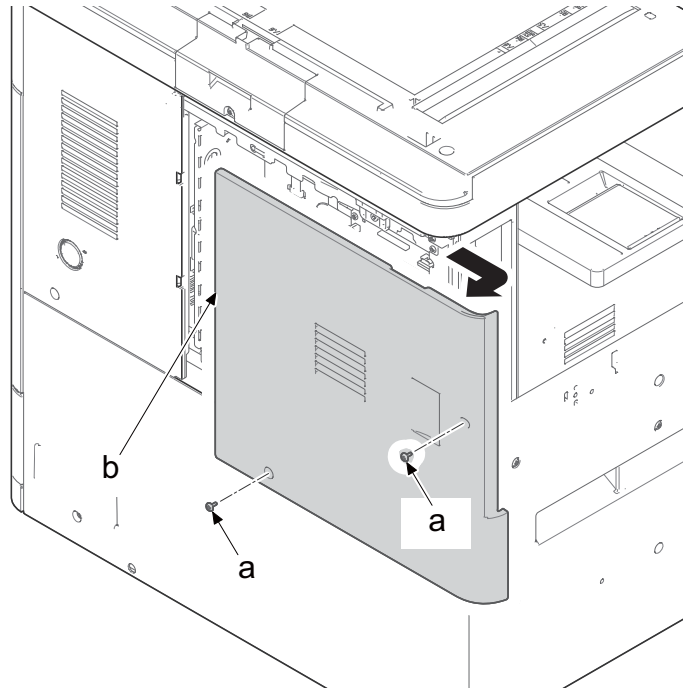


**(3-4) Detaching and reattaching the power source PWB****Caution**

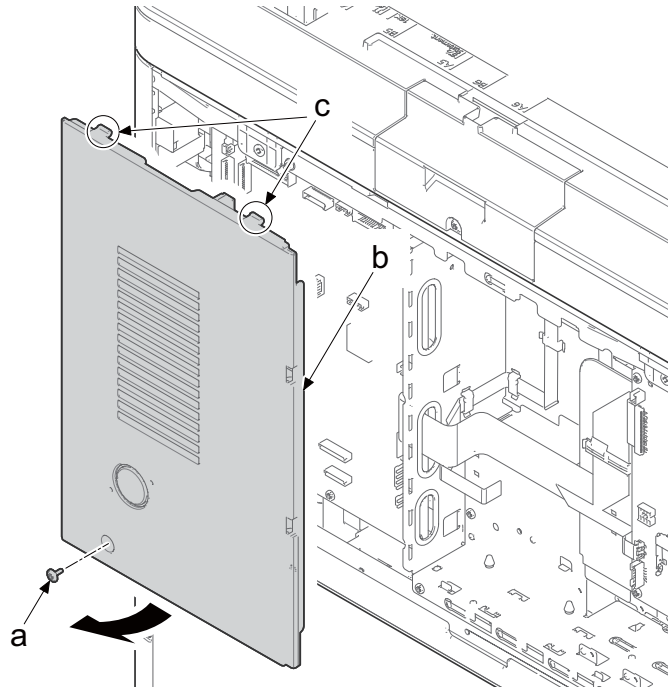
Before replacing the PWB, be sure to take the following procedures. Otherwise, The PWB may be damaged.

- Disconnect the power cord.
- Press the power switch one second or more to discharge the electric charge inside the main unit.

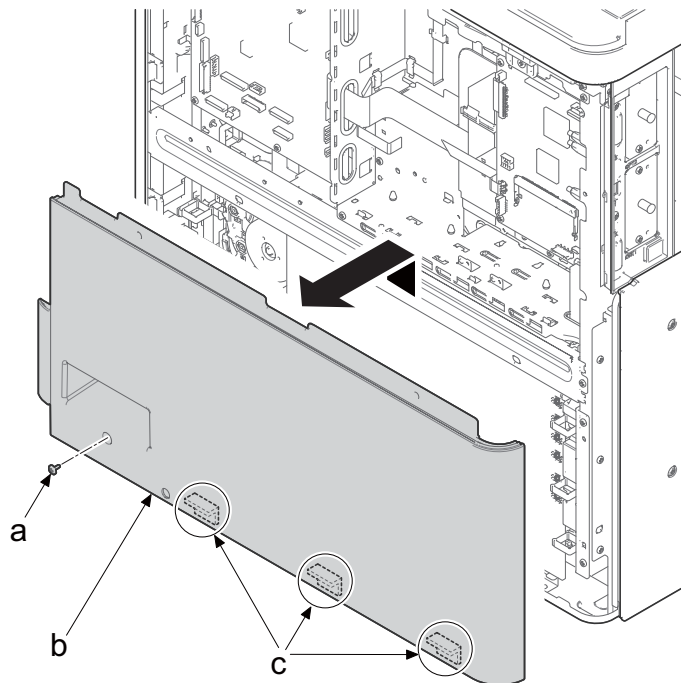
- 1** Remove two screws (a) (M3x8) and remove the rear left cover (b) by sliding it in the direction of the arrow.



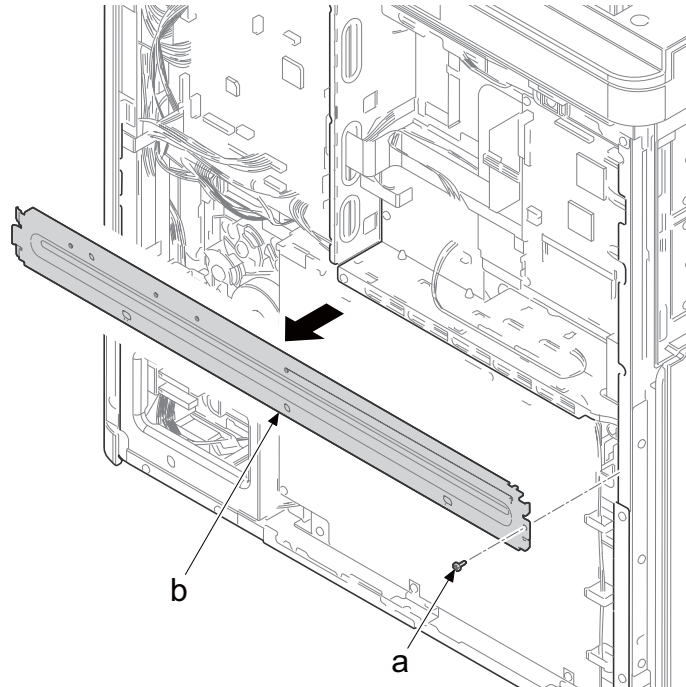
- 2 Remove the screw (a) (M3x8).
- 3 Detach the rear right cover (b) while rotating it in the direction of the arrow making two hooks (c) as a fulcrum.



- 4 Remove the screw (a) (M3x8) and remove the rear lower cover (b) in the direction of the arrow.



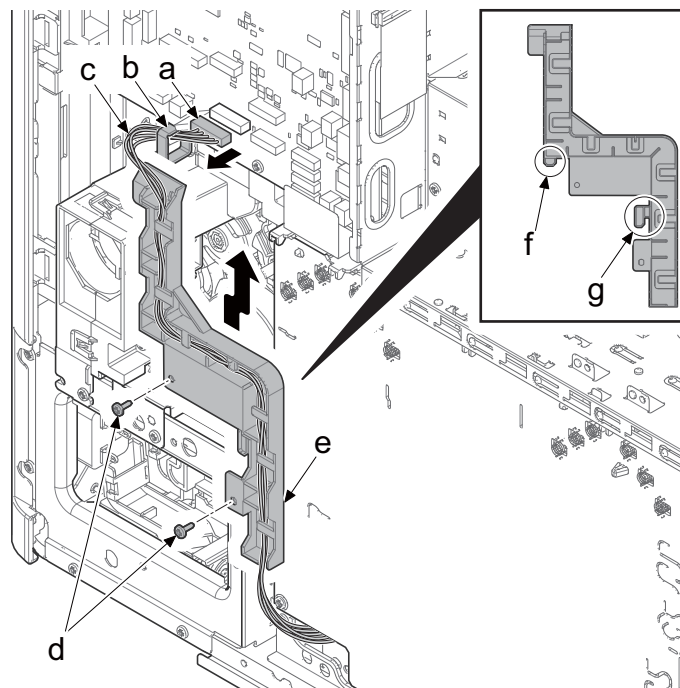
- 5** Remove the screw (a) (M3x8) and remove the rear middle stay (b).



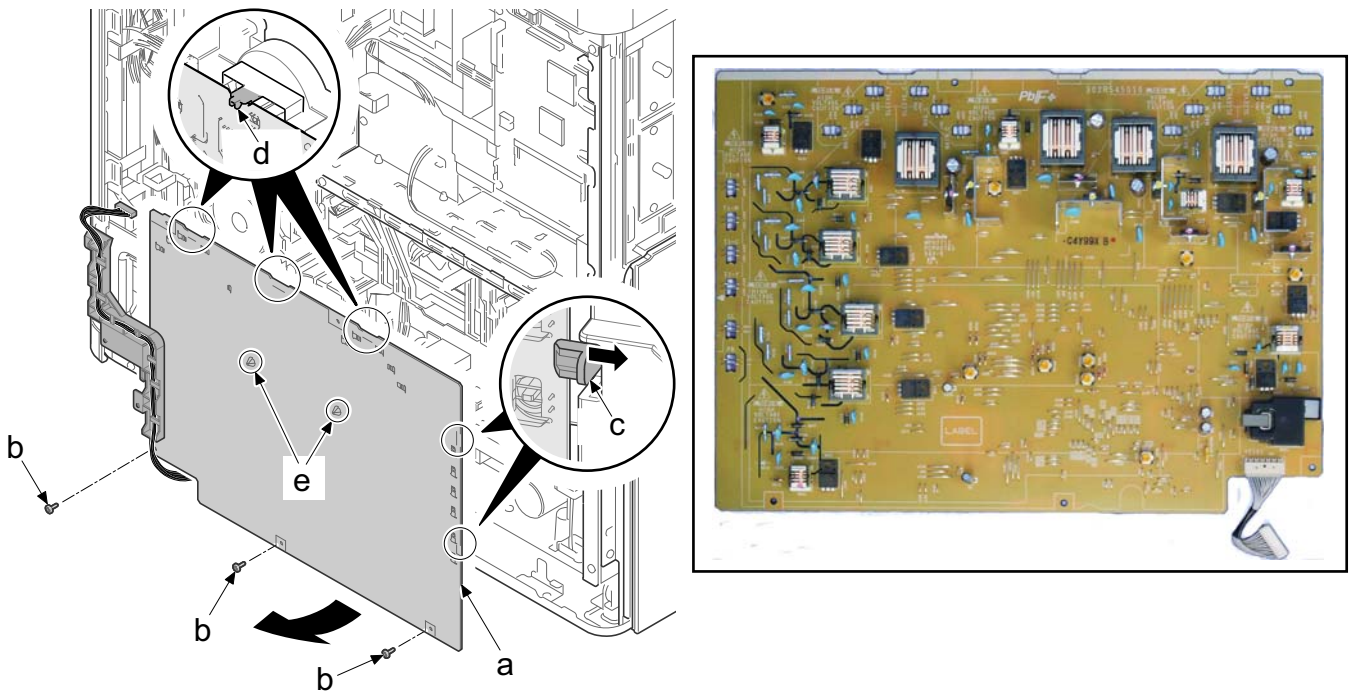
- 6** Release the wire (c) from the wire saddle (b) and disconnect the connector (a).

- 7** Remove two screws (d) (M3x8).

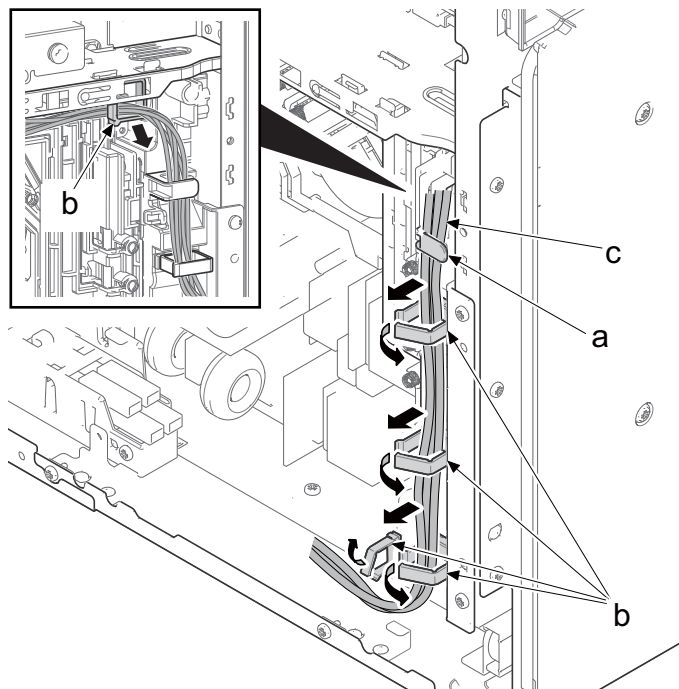
- 8** Remove the high voltage wire guide (e) in the direction of the arrow to release the protrusion (f) and hook (g).



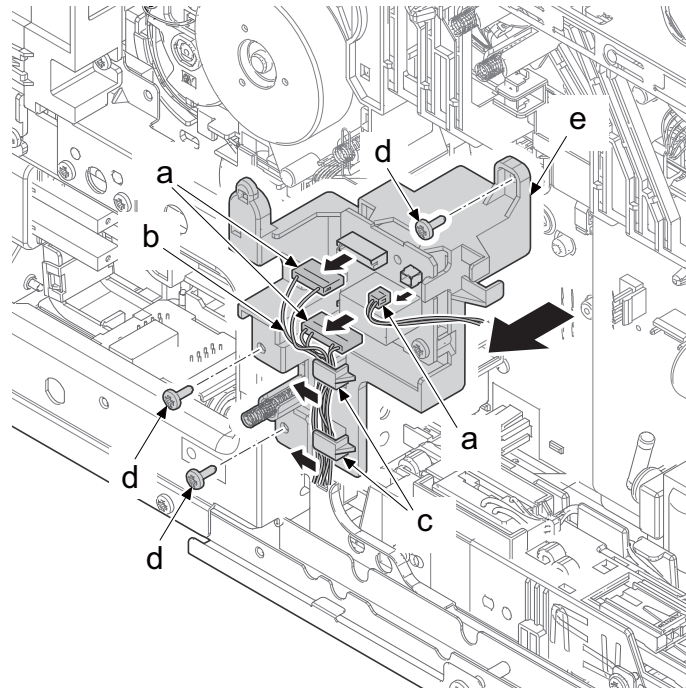
- 9 Remove three screws (b) (M3x8).
- 10 Release two board supports (e).
- 11 Release two hooks (c).
- 12 Rotate the high voltage PWB (a) making the three hooks (d) into a fulcrum and detach it.



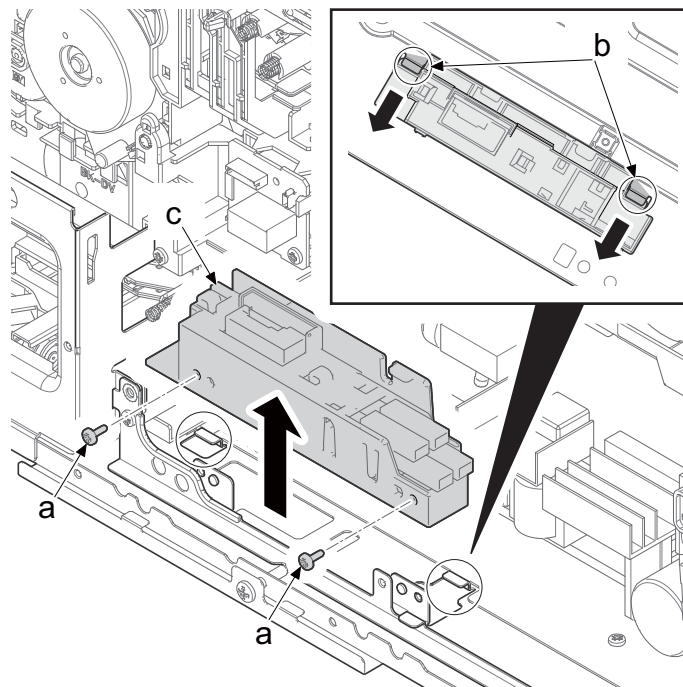
- 13 Release the wire (e) from the hook (a) and five wire saddles B (d).



- 14 Disconnect three connectors (a).
- 15 Remove the wire (b) from the two hooks (c).
- 16 Remove three screws (d) (M3x8) and remove the heater PWB holder plate (e).



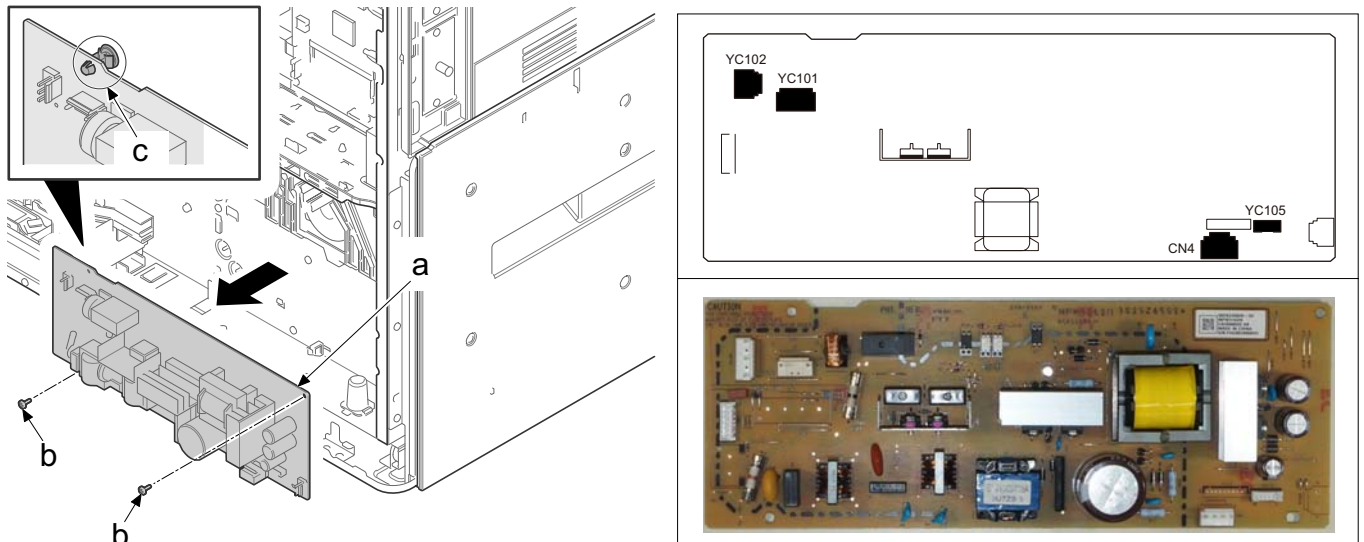
- 17 Remove two screws (a) (M3x8).
- 18 Remove the PF drawer holder (c) by sliding it to the front and removing it from the lancing (b).



 **Important**

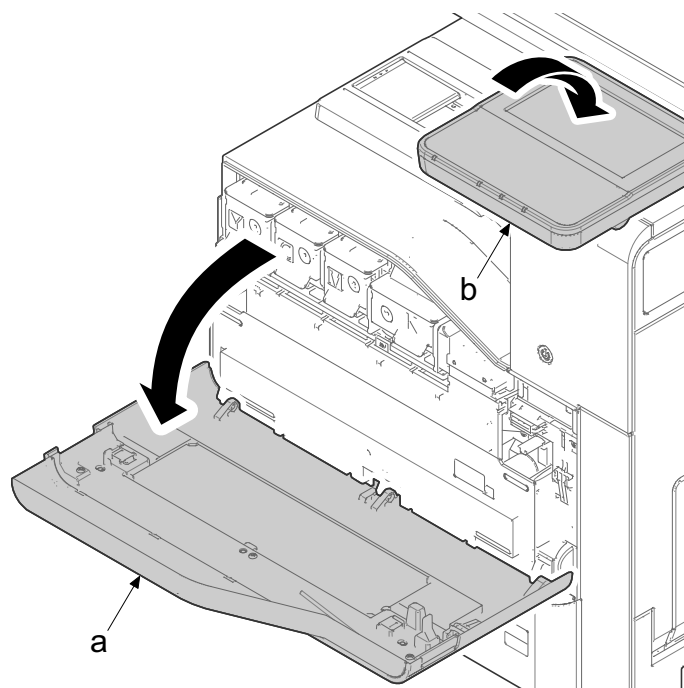
When attaching the PF drawer holder (c), make sure to hang it to the two lancements (b).

- 19 Disconnect all the connectors from the power source PWB (a).
- 20 Remove two screws (b) (M3x8).
- 21 Release the board support (c) and remove the power source PWB (a).
- 22 Check or replace the power source PWB (a), and then reattach the parts in the original position.

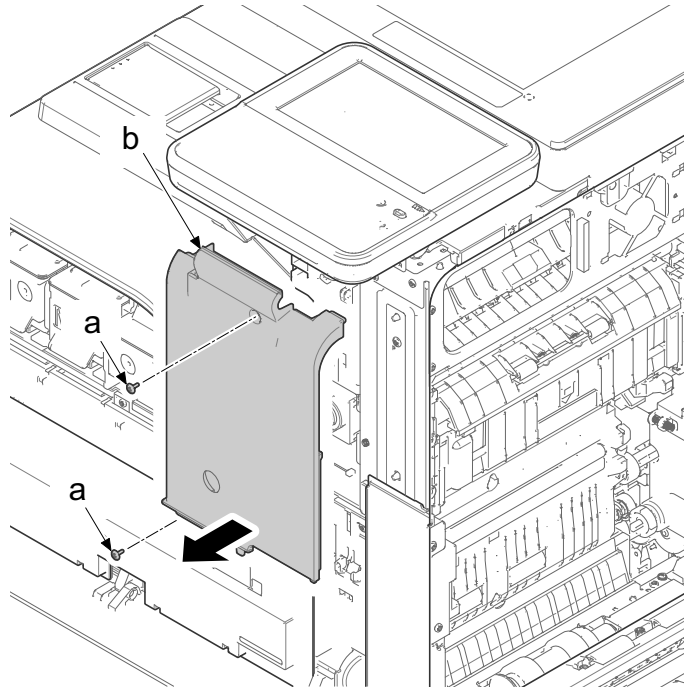


### (3-5) Detaching and reattaching the operation panel PWB

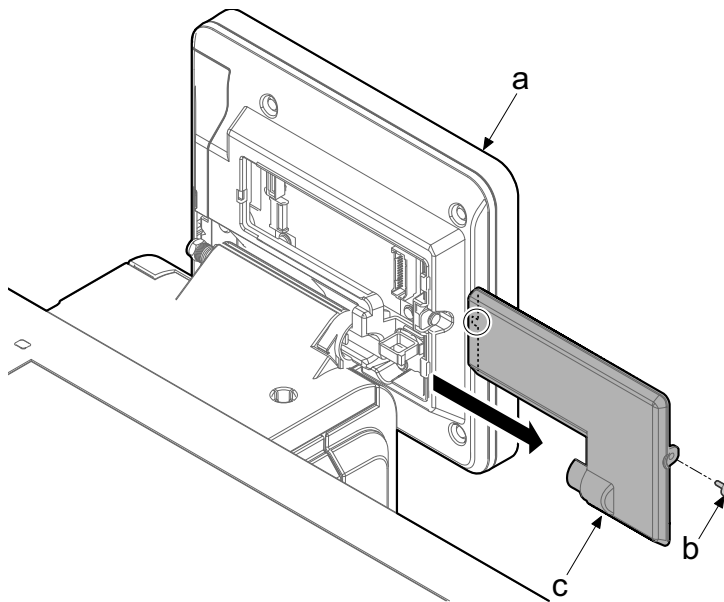
- 1 Open the front cover (a).
- 2 Turn down the operation panel (b)



- 3 Remove two screws (a)(M3x8).
- 4 Detach the eject front cover (b).

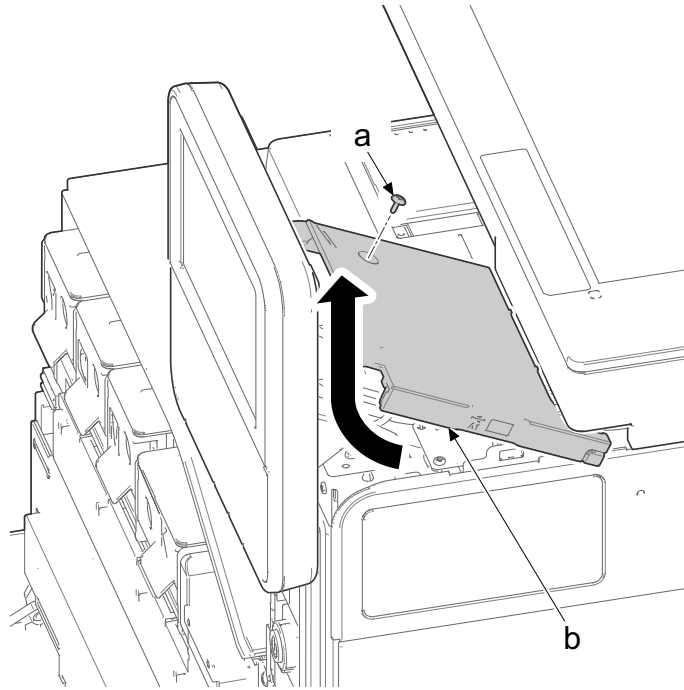


- 5 Pull up the operation unit (a).
- 6 Remove the screw (b) (M3x8).
- 7 Remove the operation lid (c) from the operation unit (a) in the direction of the arrow.



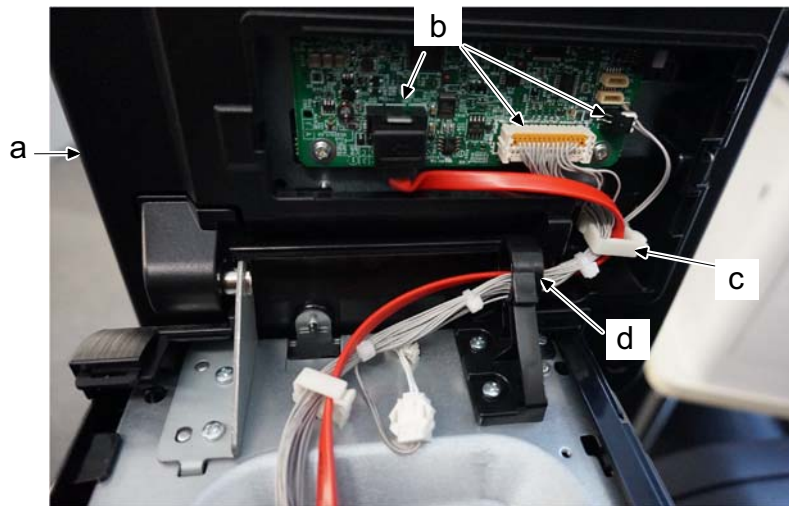


- 8** Remove the screw (a)(M3x8) and remove the upper exit cover (b).



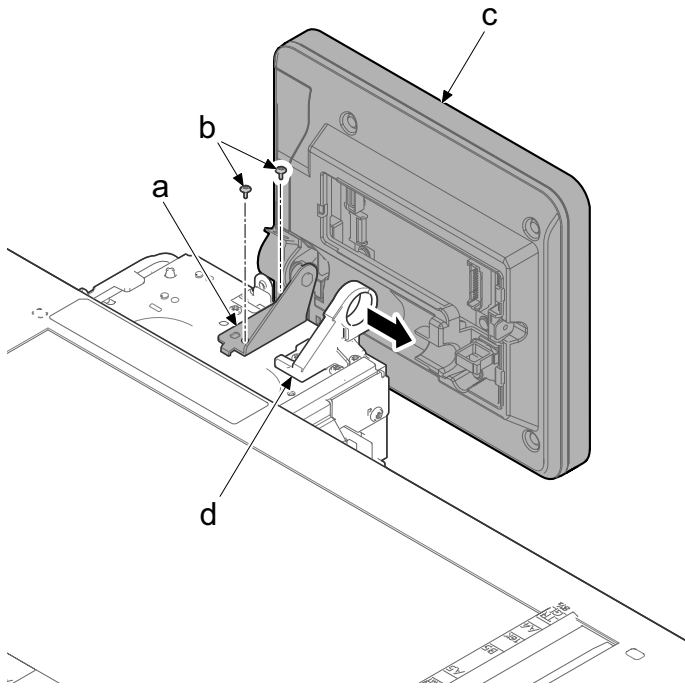
- 9** Disconnect 3 connectors (b) from the operation panel (a).

- 10** Release lock of wire saddle (c) and pull all wires out from (d).



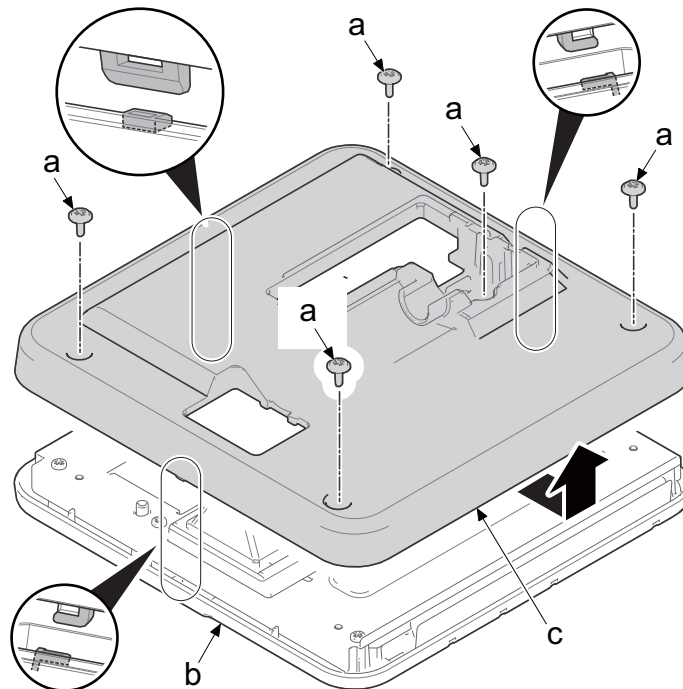
**11** Remove two screws (b)(M3x8) from the right hinge (a).

**12** Remove the operation unit (c) from the left hinge (d) in the direction of the arrow.

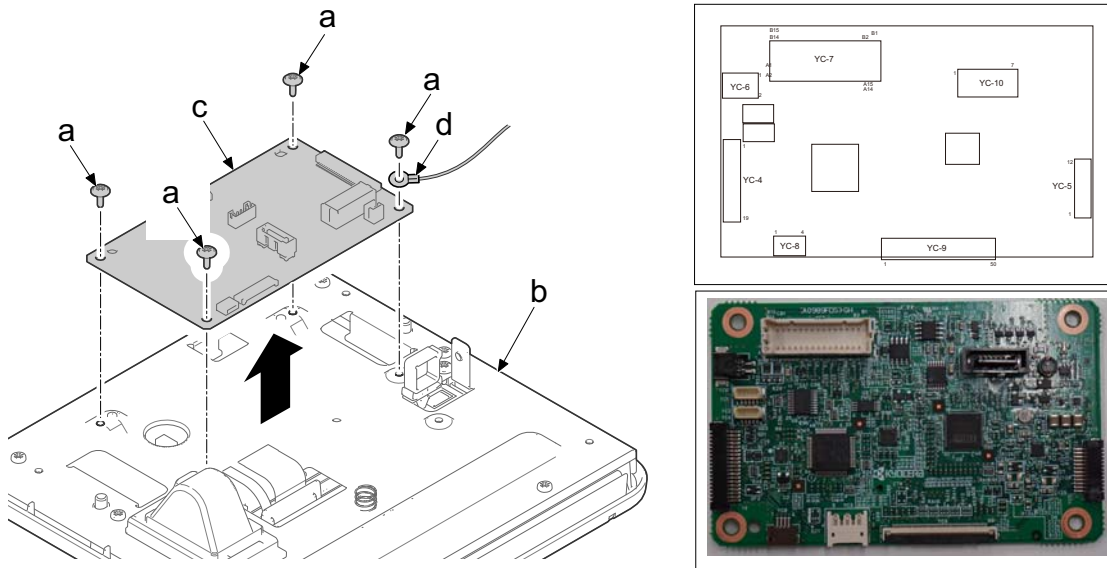


**13** Remove five screws (a) (M3x8).

**14** Remove the operation rear cover (c) from the operation cover (b).

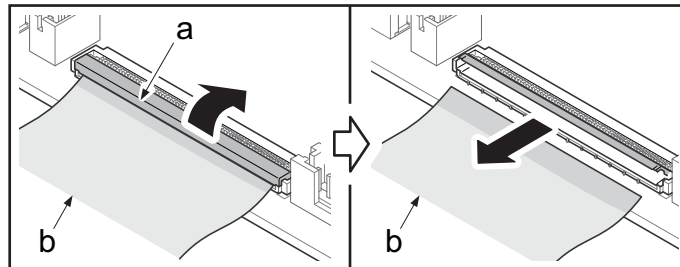


- 15 Disconnect all FFCs and the connectors from the operation PWB (c).
- 16 Remove four screws (a) (M3x8) and ground wire (d).
- 17 Remove the operation PWB (c) from the operation cover (b).



### Notes when detaching

In the case of the FFC connector with a lock, release the lock cover (a) and pull out the FFC (b).



## (4) Drive section



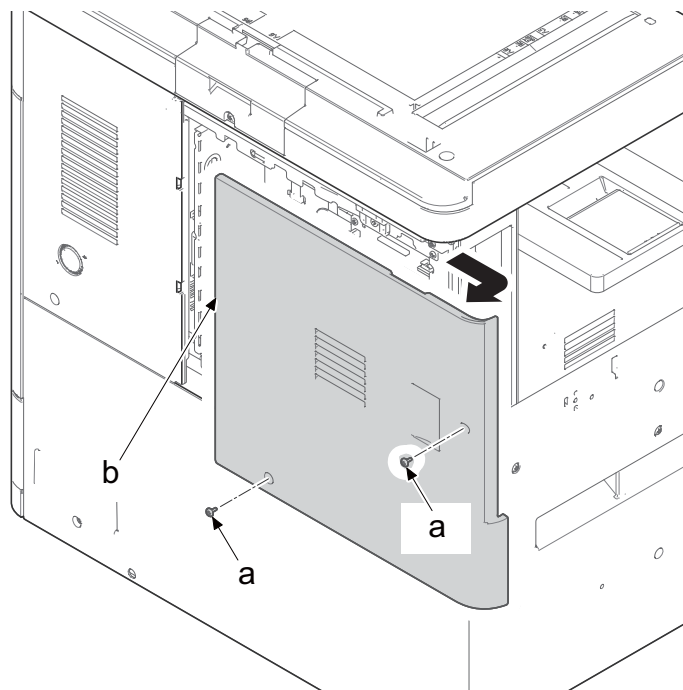
### Caution

Before replacing the PWB, be sure to take the following procedures. Otherwise, The PWB may be damaged.

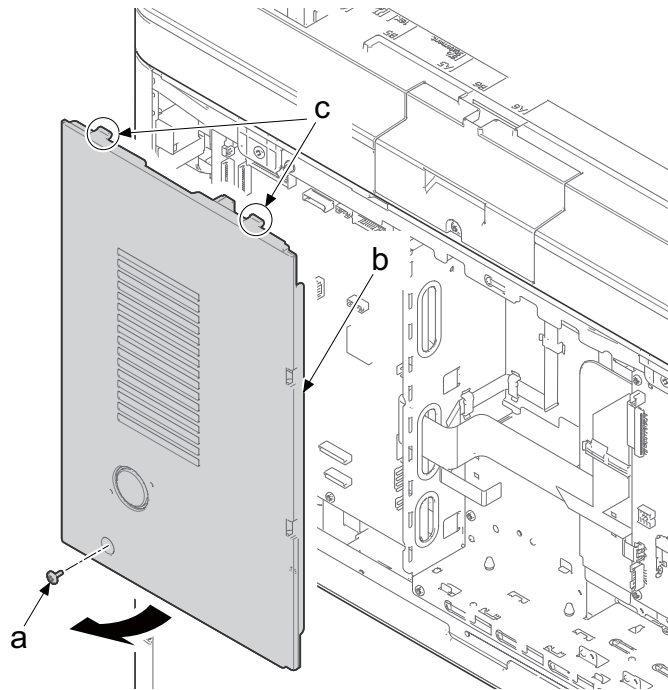
- Disconnect the power cord.
- Press the power switch one second or more to discharge the electric charge inside the main unit.

### (4-1) Detaching and reattaching the feed drive unit

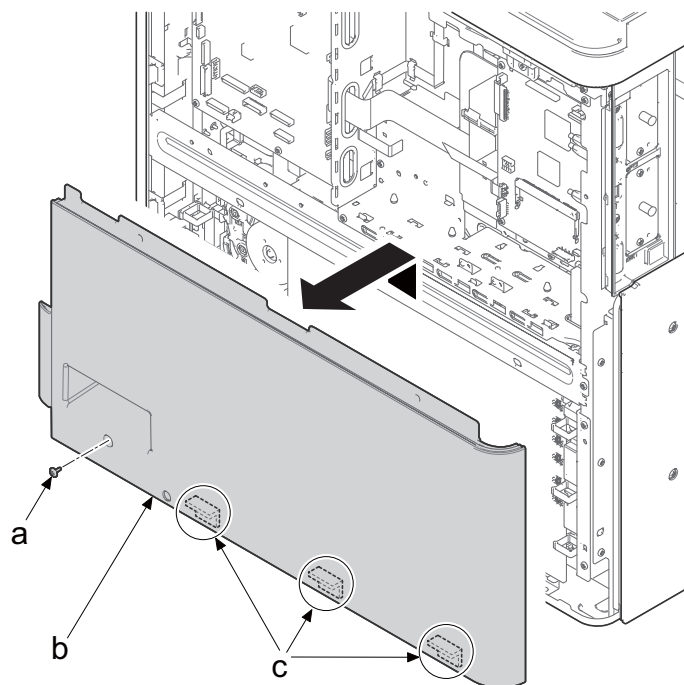
- 1 Remove two screws (a) (M3x8) and remove the rear left cover (b) by sliding it in the direction of the arrow.



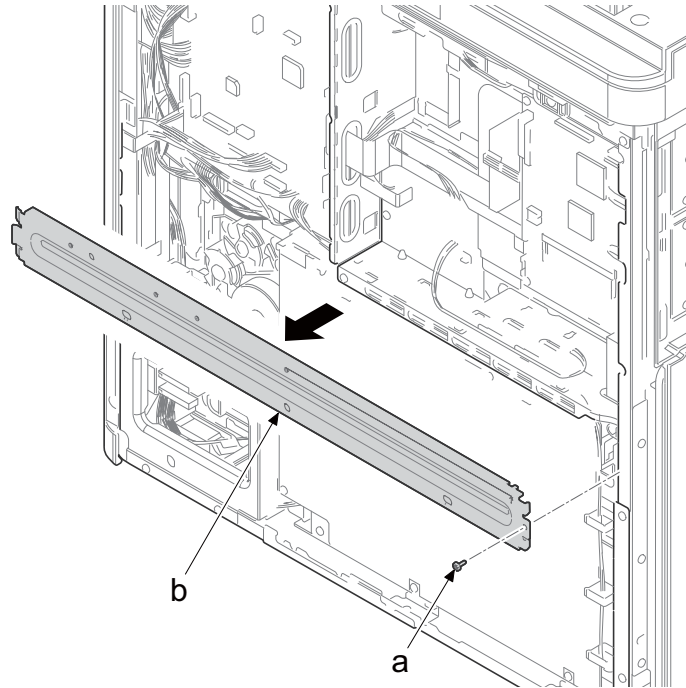
- 2 Remove the screw (a) (M3x8).
- 3 Detach the rear right cover (b) while rotating it in the direction of the arrow making two hooks (c) as a fulcrum.



- 4 Remove the screw (a) (M3x8).
- 5 Release three hooks (c) of the rear lower cover (b) and detach it in the direction of the arrow.



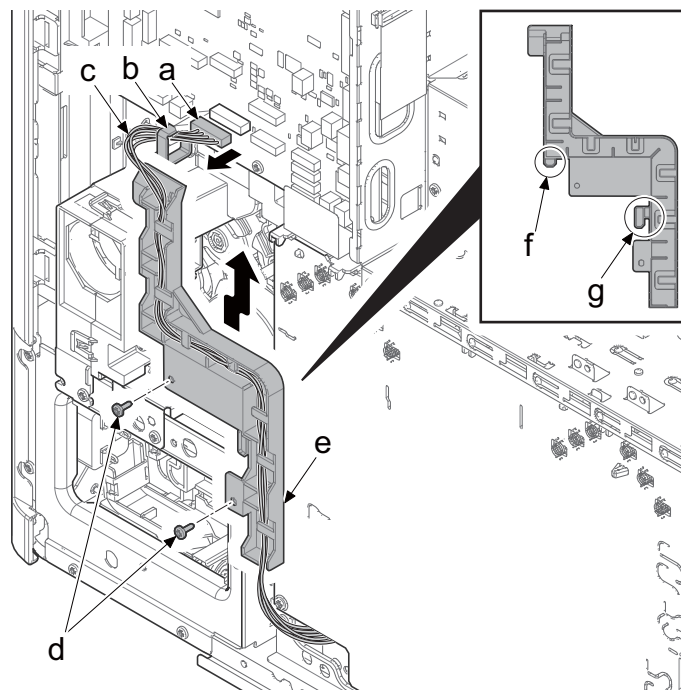
- 6** Remove the screw (a) (M3x8) and remove the rear middle stay (b).



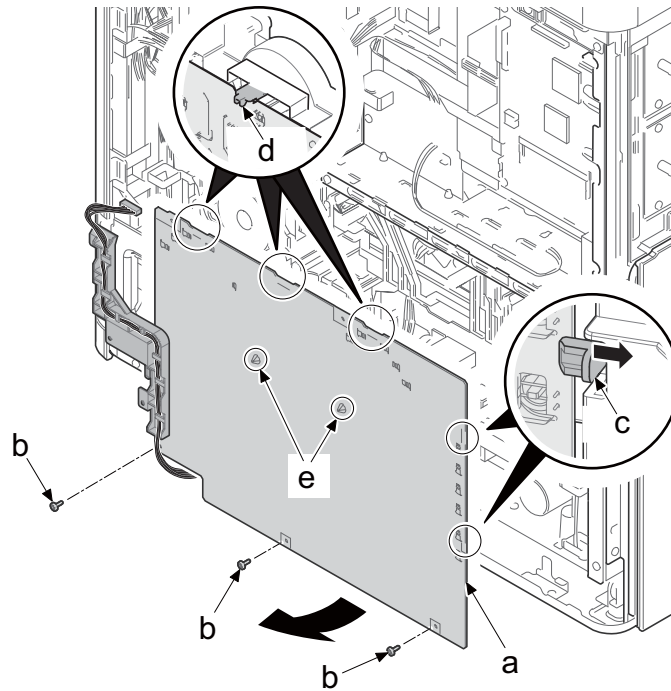
- 7** Release the wire (c) from the wire saddle (b) and disconnect the connector (a).

- 8** Remove two screws (d) (M3x8).

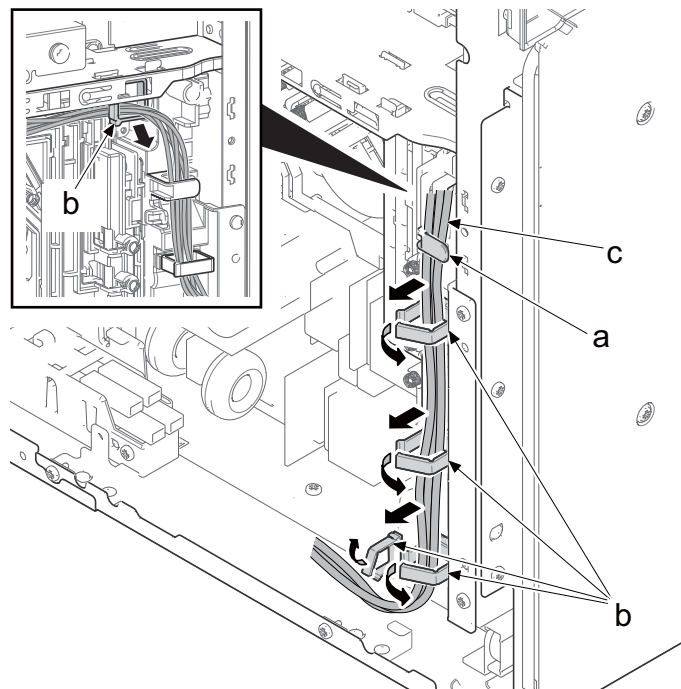
- 9** Remove the high voltage wire guide (e) in the direction of the arrow to release the protrusion (f) and hook (g).



- 10 Remove three screws (b) (M3x8).
- 11 Release two board supports (e).
- 12 Release two hooks (c).
- 13 Detach the high voltage PWB (a) while rotating it in the direction of the arrow making three hooks (d) as fulcrum.

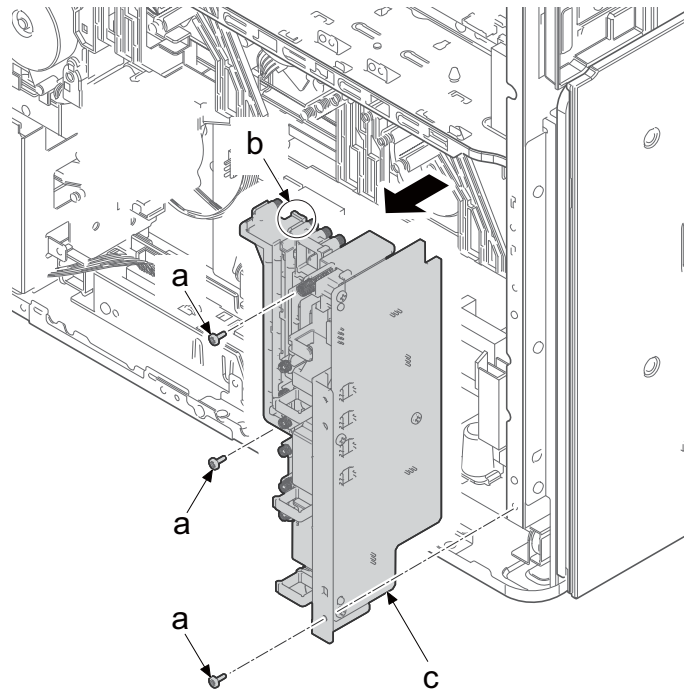


- 14 Release the wire (e) from the hook (a) and five wire saddles B (d).



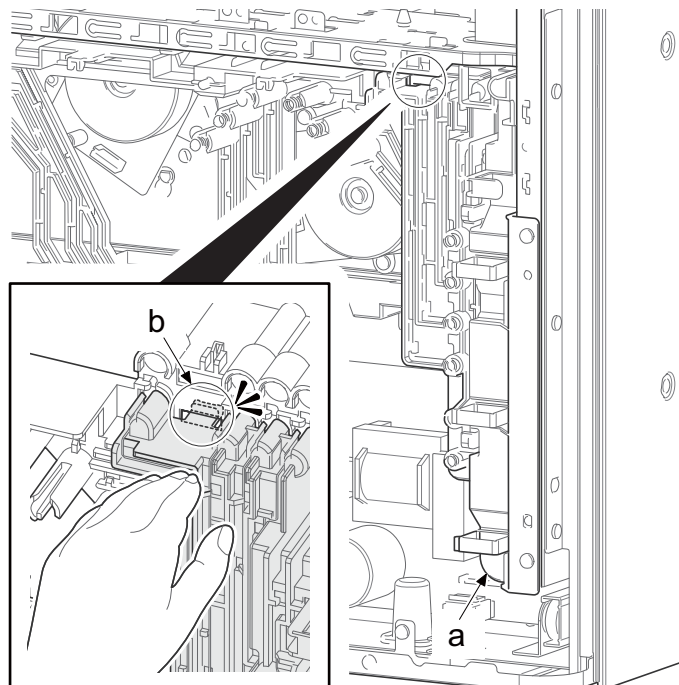
**15** Remove three screws (a) (M3x8).

**16** Release the hook (b) and remove the transfer high voltage assembly (c).



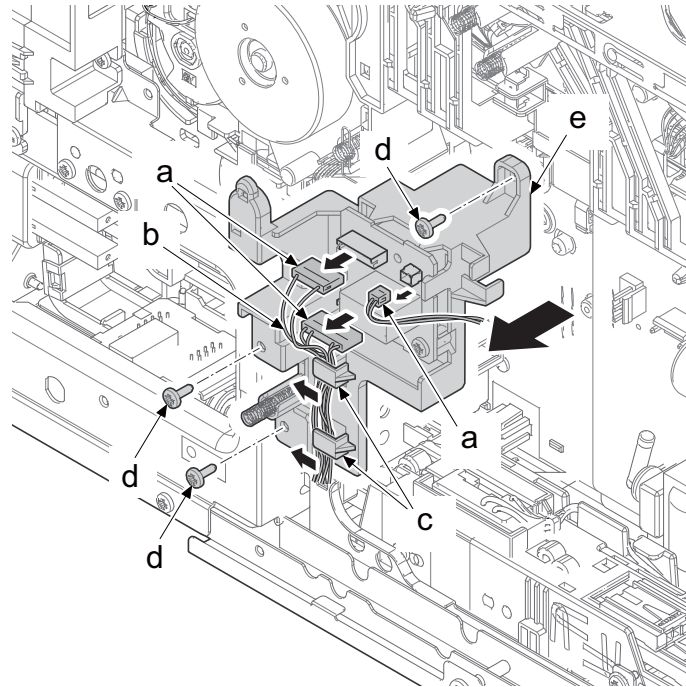
**Important**

When attaching the transfer high voltage assembly (a), check the hook (b) clicks.

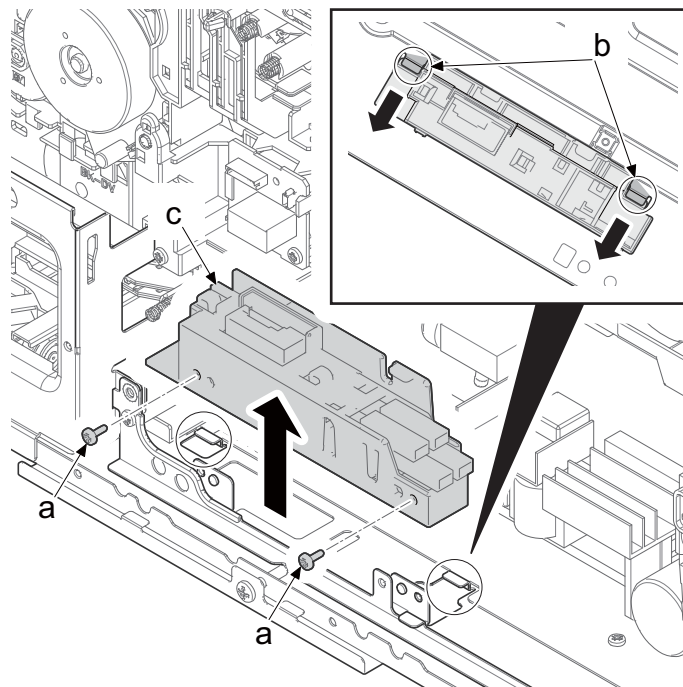




- 17 Disconnect three connectors (a).
- 18 Remove the wire (b) from the two hooks (c).
- 19 Remove three screws (d) (M3x8) and remove the heater PWB holder plate (e).



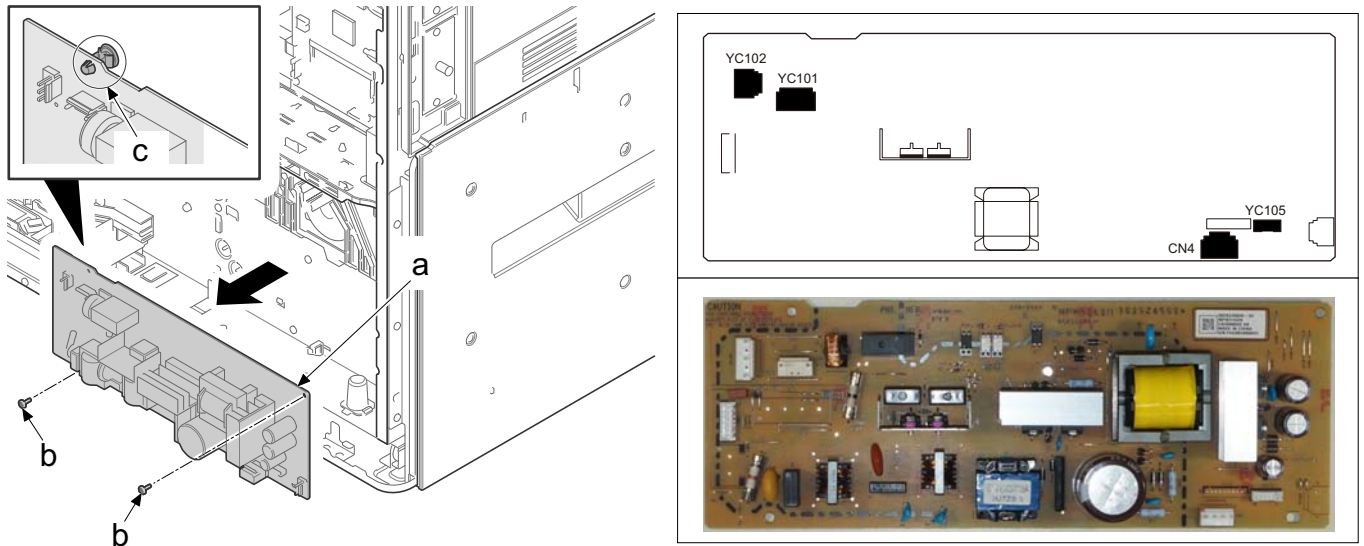
- 20 Remove two screws (a) (M3x8).
- 21 Remove the PF drawer holder (c) by sliding it to the front and removing it from the lancing (b).



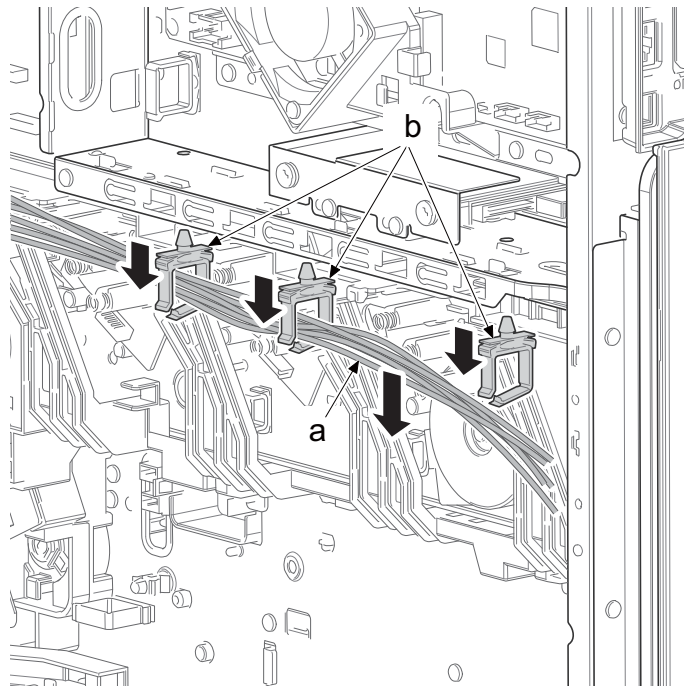
**Important**

When attaching the PF drawer holder (c), make sure to hang it to the two lancements (b).

- 22 Disconnect all the connectors from the power source PWB (a).
- 23 Remove two screws (b) (M3x8).
- 24 Release the board support (c) and remove the power source PWB (a).

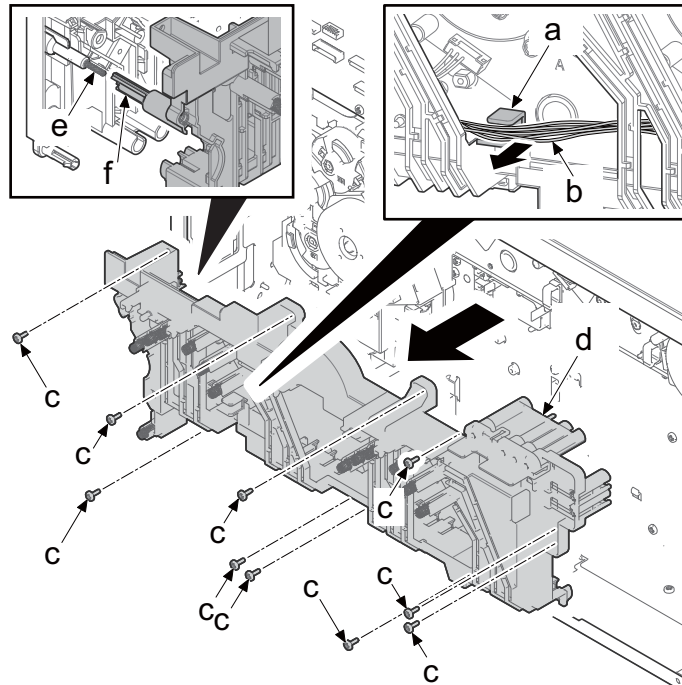


- 25 Remove the wire (a) from the three wire saddles (b).



**26** Remove the wire (b) from the hook (a).

**27** Remove ten screws (c) (M3x8) and remove the high voltage PWB holder (d) in the direction of the arrow.



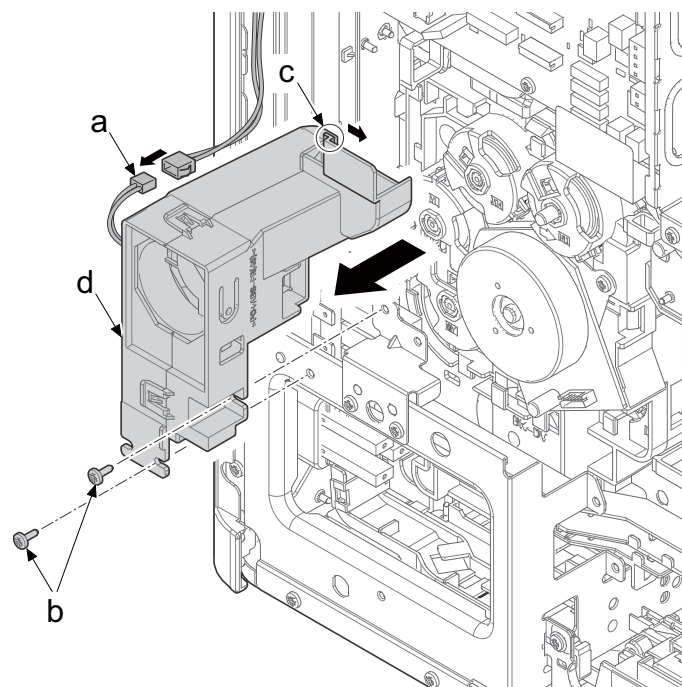
**Important**

When reattaching the high voltage PWB holder (d), check the spring terminal (e) is in the catch (f) of the holder.

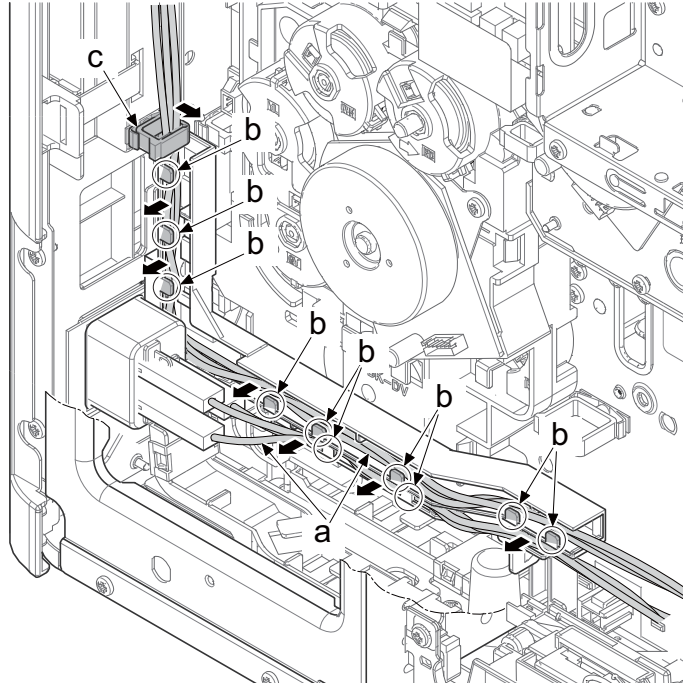
**28** Disconnect the fan connector (a).

**29** Remove two screws (b) (M3x8).

**30** Slide the hook (c) in the direction of the arrow and remove the clutch fan assembly (d).

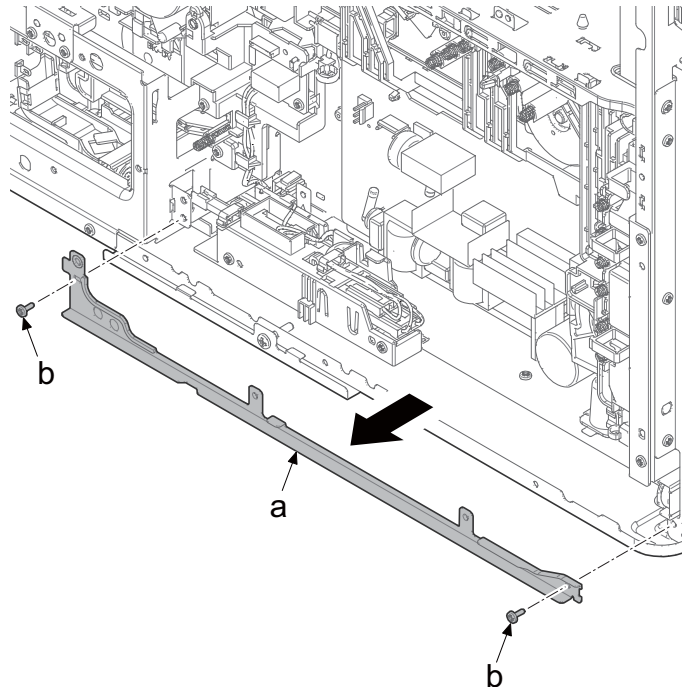


**31** Remove the wire (a) from the wire saddle (c) and ten hooks (b) of the wire holder.



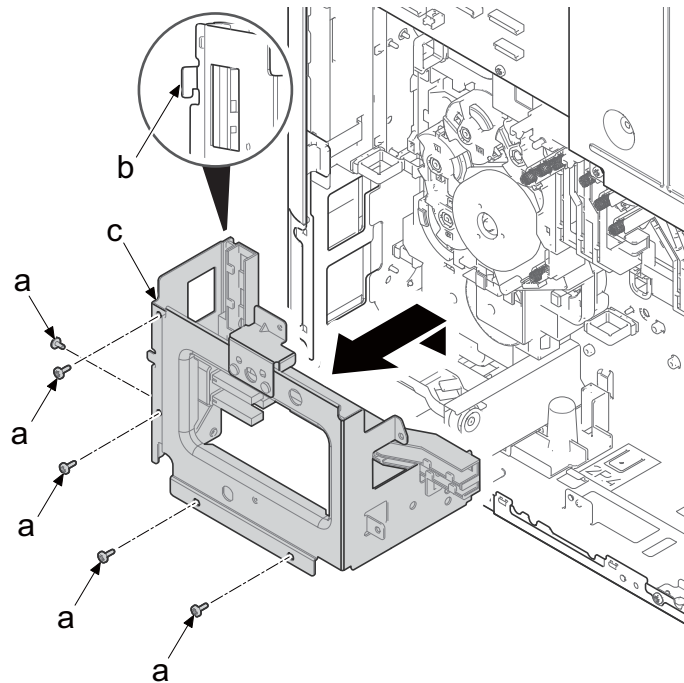
**32** Remove two screws (b) (M3x8).

**33** Detach the high voltage PWB holder plate (a).



**34** Remove five screws (a) (M3x8).

**35** Release the hook (b) and remove the inlet assembly (c).

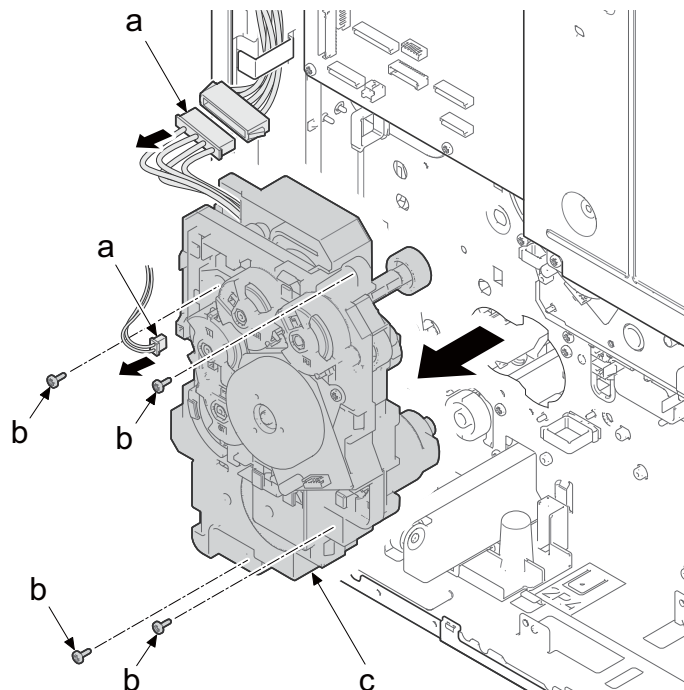


**36** Disconnect two connectors (a).

**37** Remove four screws (b) (M3x8) and remove the drive unit (c).

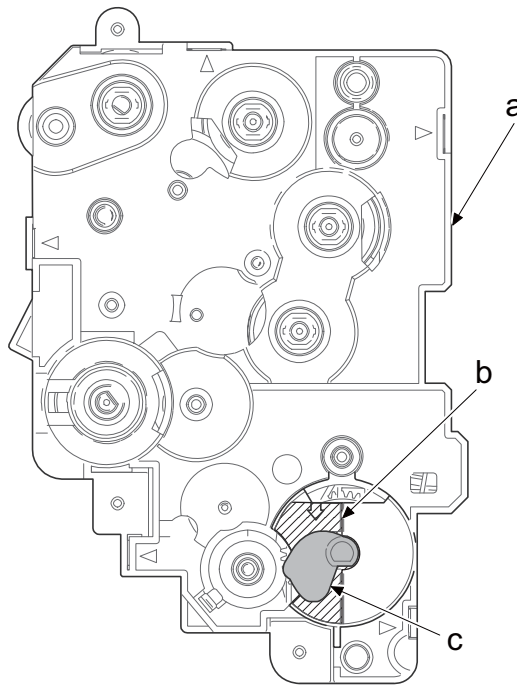
**38** Check the feed drive unit (c) and clean or replace it.

**39** Reattach the parts in the original position.

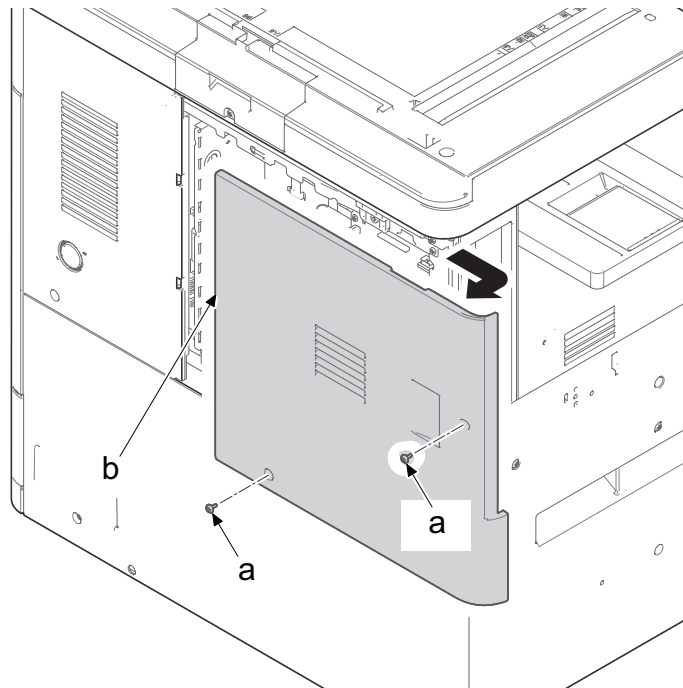


**✔ Important**

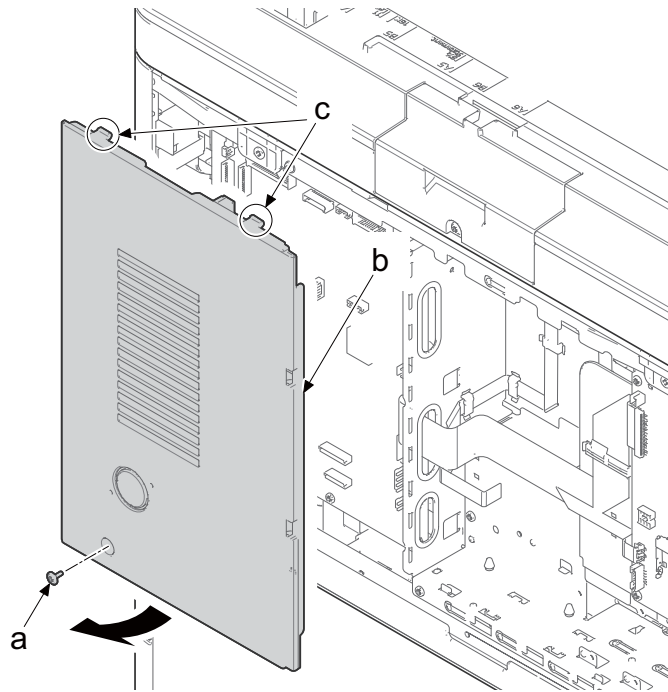
Check if the MP cam (c) is put on the shaded part (b) when attaching the feed drive unit (a).

**(4-2) Detaching and reattaching the main drive unit**

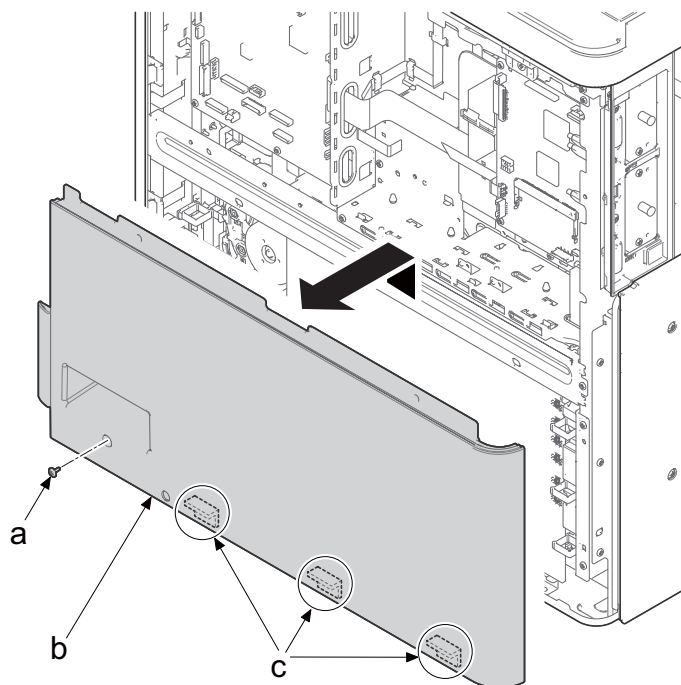
- 1 Remove two screws (a) (M3x8) and remove the rear left cover (b) by sliding it in the direction of the arrow.



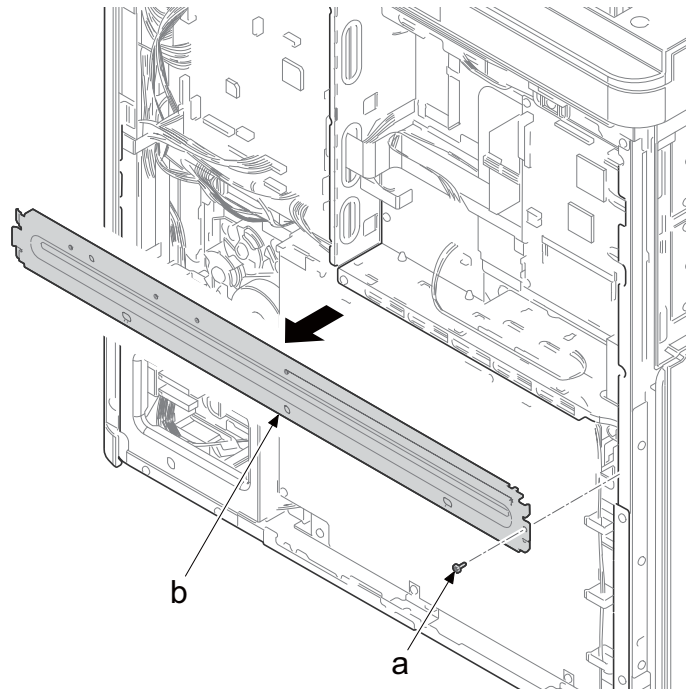
- 2 Remove the screw (a) (M3x8).
- 3 Detach the rear right cover (b) while rotating it in the direction of the arrow making two hooks (c) as a fulcrum.



- 4 Remove the screw (a) (M3x8).
- 5 Release three hooks (c) of the rear lower cover (b) and detach it in the direction of the arrow.



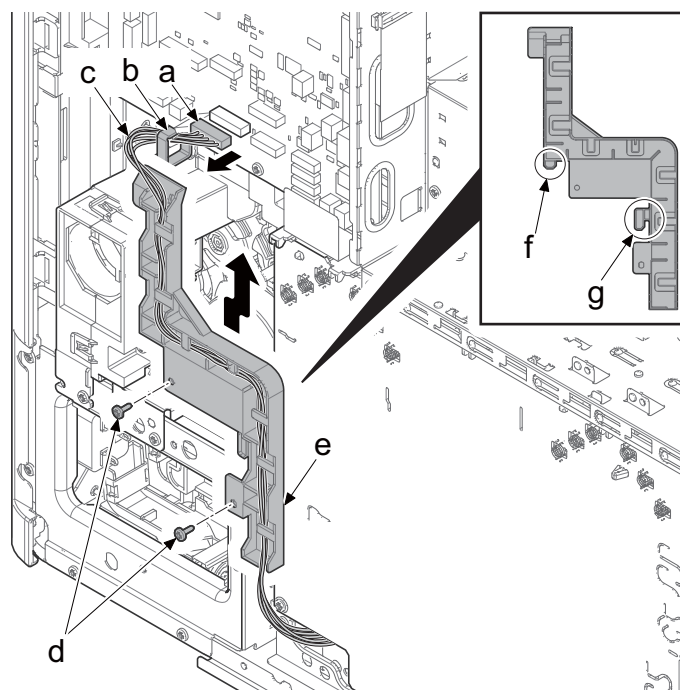
- 6** Remove the screw (a) (M3x8) and remove the rear middle stay (b).



- 7** Release the wire (c) from the wire saddle (b) and disconnect the connector (a).

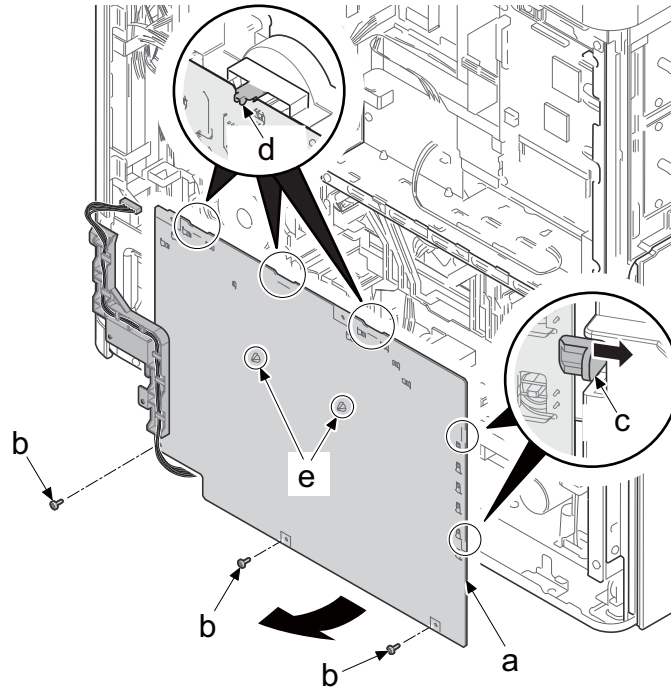
- 8** Remove two screws (d) (M3x8).

- 9** Remove the high voltage wire guide (e) in the direction of the arrow to release the protrusion (f) and hook (g).

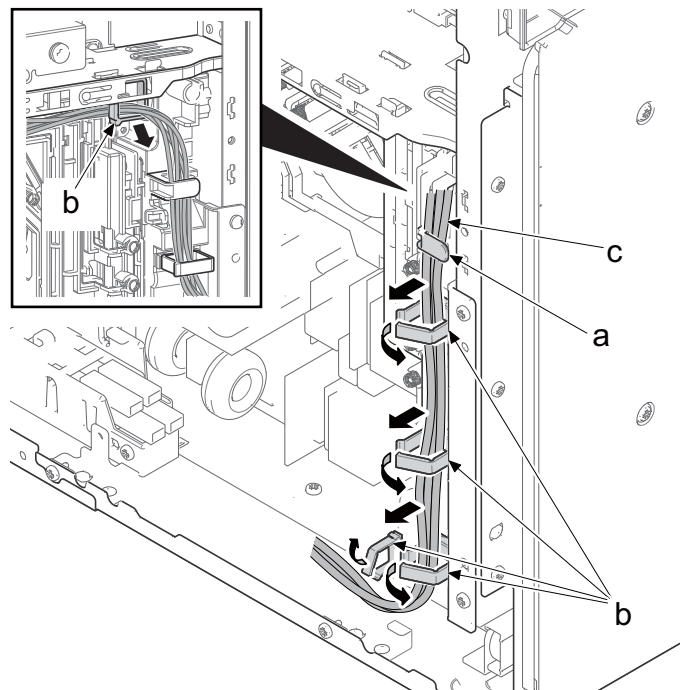




- 10 Remove three screws (b) (M3x8).
- 11 Release two board supports (e).
- 12 Release two hooks (c).
- 13 Rotate the high voltage PWB (a) making the three hooks (d) into a fulcrum and detach it.

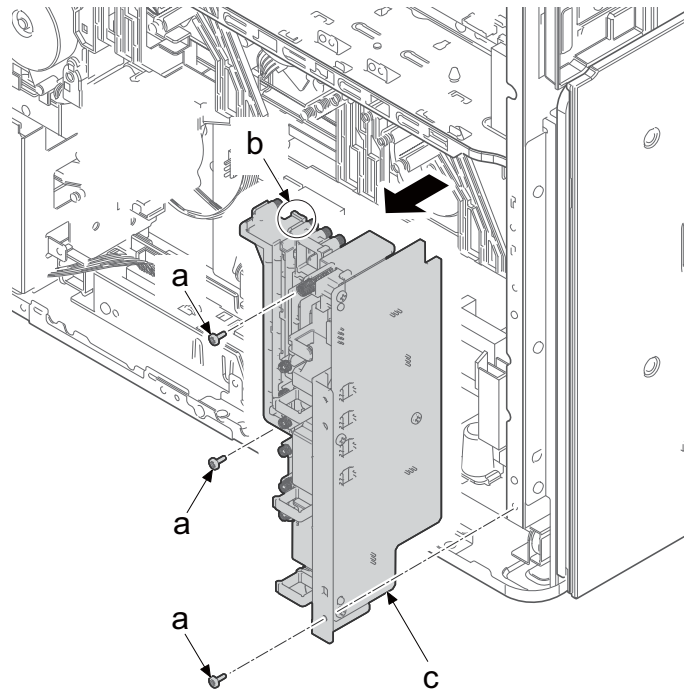


- 14 Release the wire (e) from the hook (a) and five wire saddles B (d).



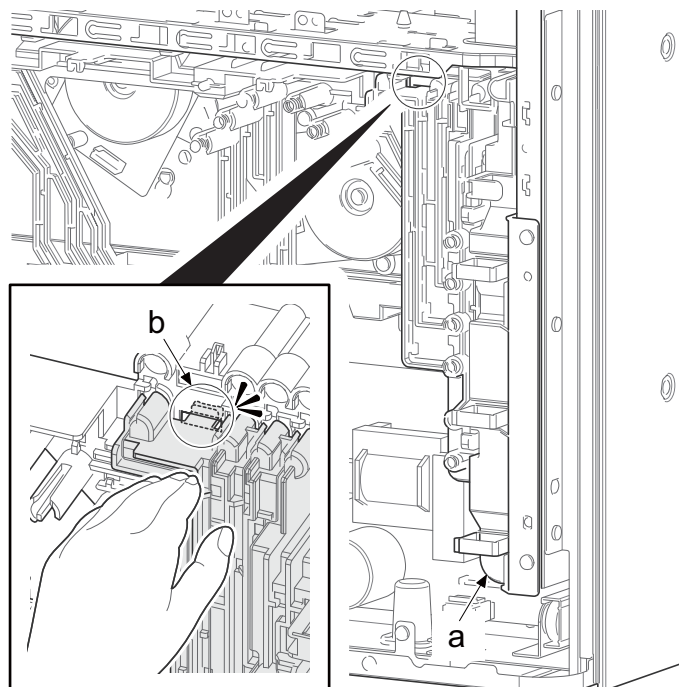
**15** Remove three screws (a) (M3x8).

**16** Release the hook (b) and remove the transfer high voltage assembly (c).

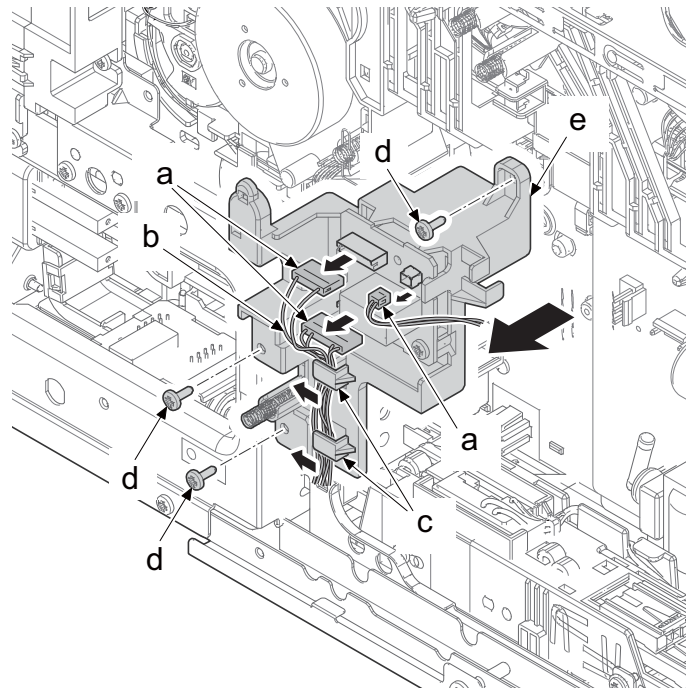


**✔ Important**

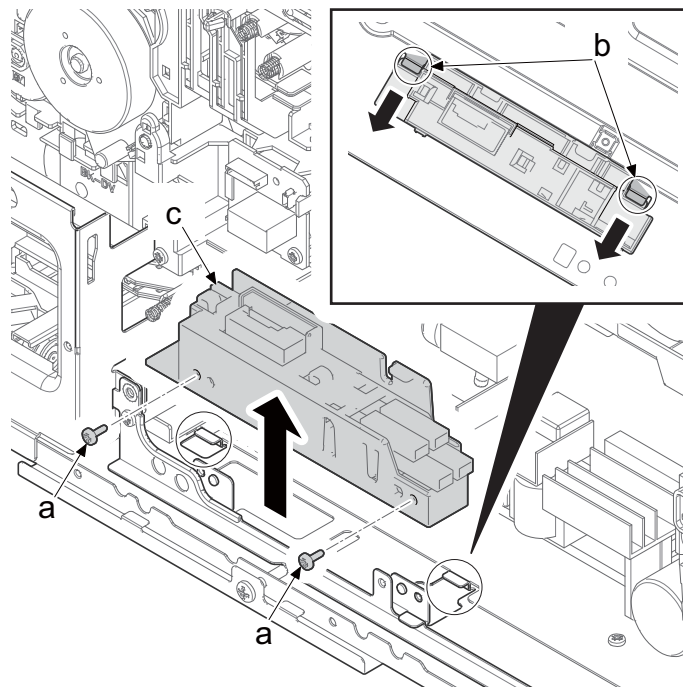
When attaching the transfer high voltage assembly (a), check the hook (b) clicks.



- 17 Disconnect three connectors (a).
- 18 Remove the wire (b) from the two hooks (c).
- 19 Remove three screws (d) (M3x8) and remove the heater PWB holder plate (e).



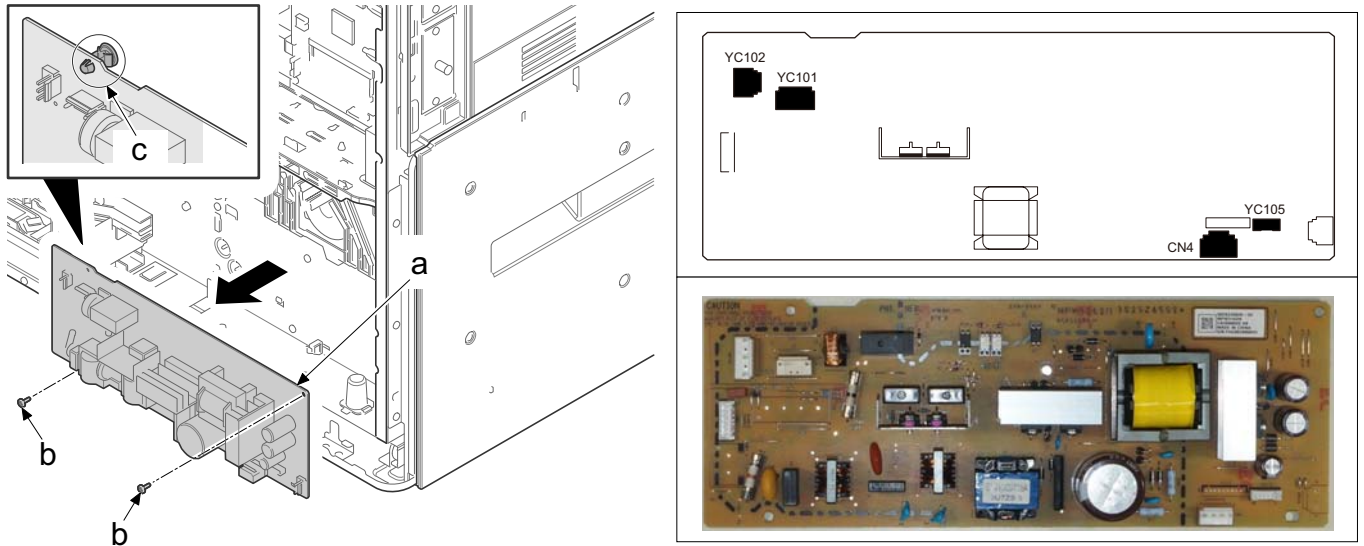
- 20 Remove two screws (a) (M3x8).
- 21 Remove the PF drawer holder (c) by sliding it to the front and removing it from the lancing (b).



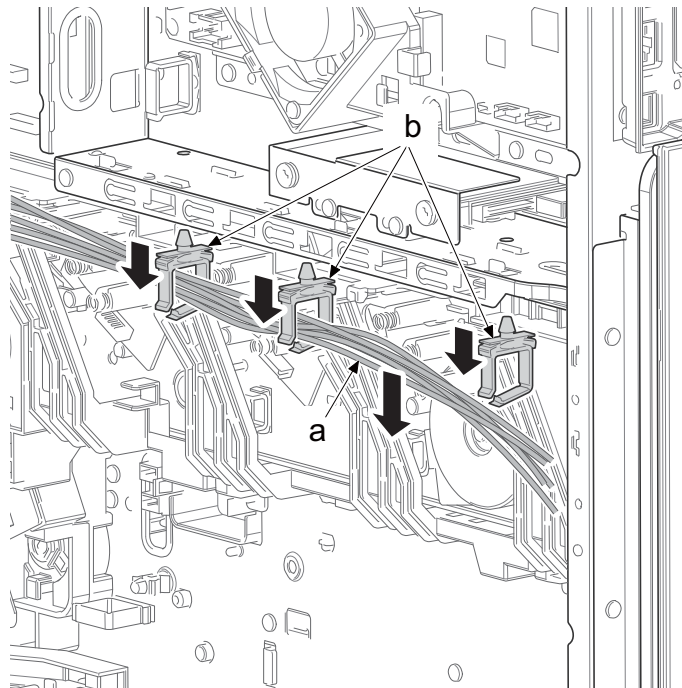
 **Important**

When attaching the PF drawer holder (c), make sure to hang it to the two lancing (b).

- 22 Disconnect all the connectors from the power source PWB (a).
- 23 Remove two screws (b) (M3x8).
- 24 Release the board support (c) and remove the power source PWB (a).

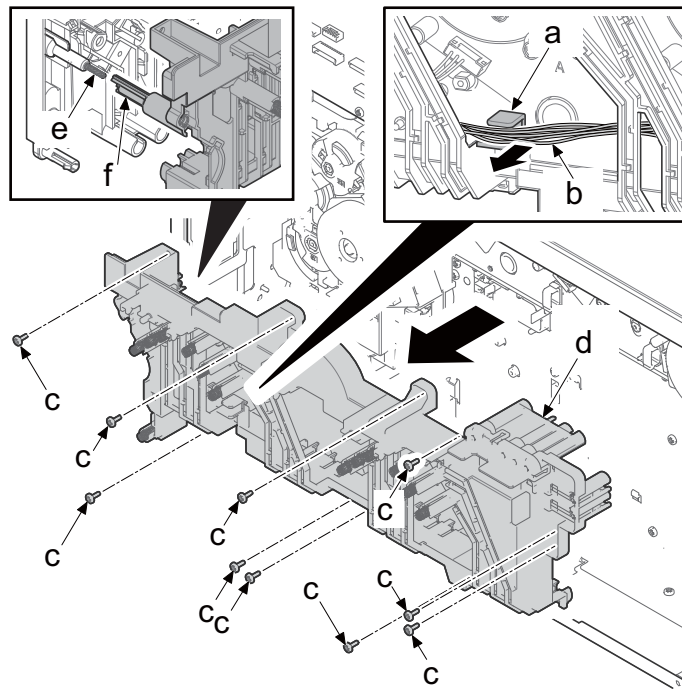


- 25 Remove the wire (a) from the three wire saddles (b).



**26** Remove the wire (b) from the hook (a).

**27** Remove ten screws (c) (M3x8) and remove the high voltage PWB holder (d) in the direction of the arrow.



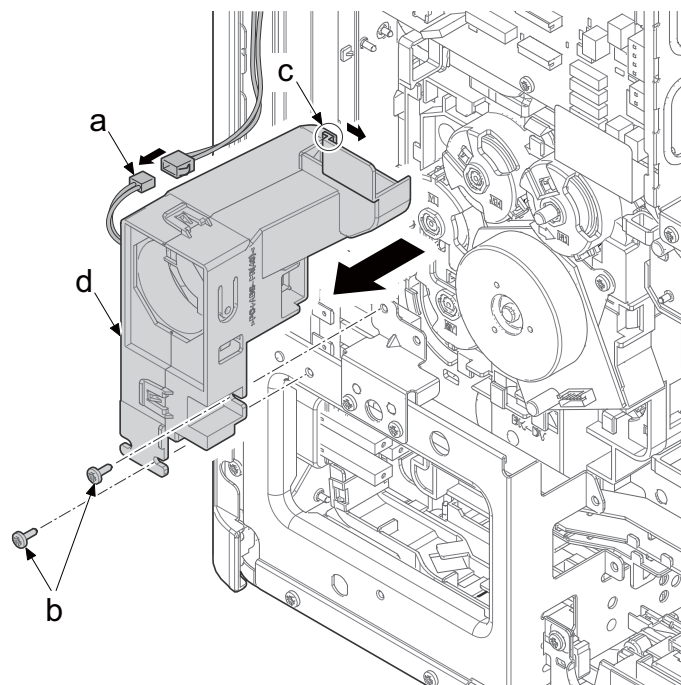
**Important**

When reattaching the high voltage PWB holder (d), check the spring terminal (e) is in the catch (f) of the holder.

**28** Disconnect the fan connector (a).

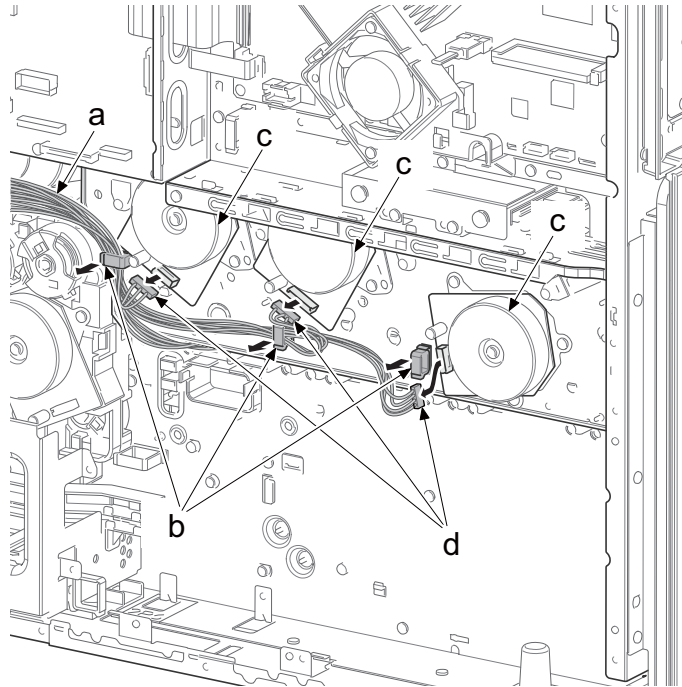
**29** Remove two screws (b) (M3x8).

**30** Slide the hook (c) in the direction of the arrow and remove the clutch fan assembly (d).



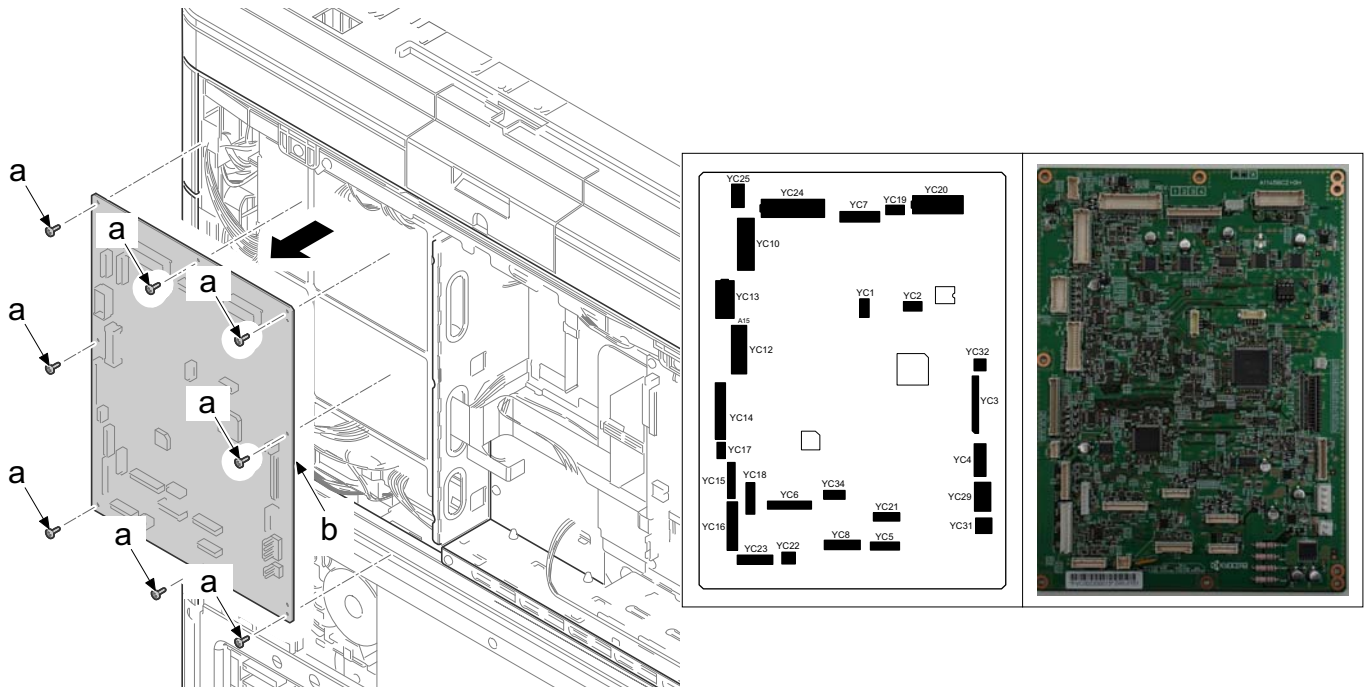
**31** Remove the wire (a) from the three wire saddles (b).

**32** Disconnect three connectors (d) of the motor (c).

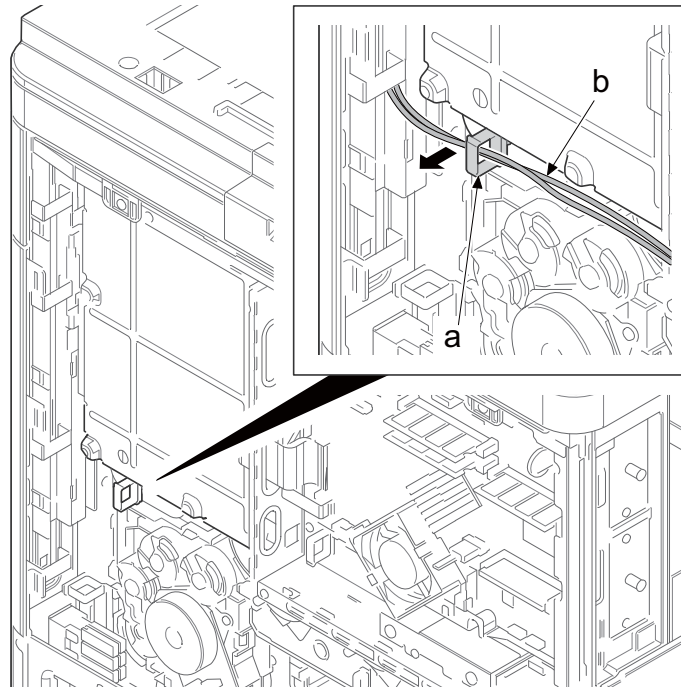


**33** Disconnect all the connectors from the engine PWB (b).

**34** Remove eight screws (a) (M3x8) and remove the engine PWB (b).

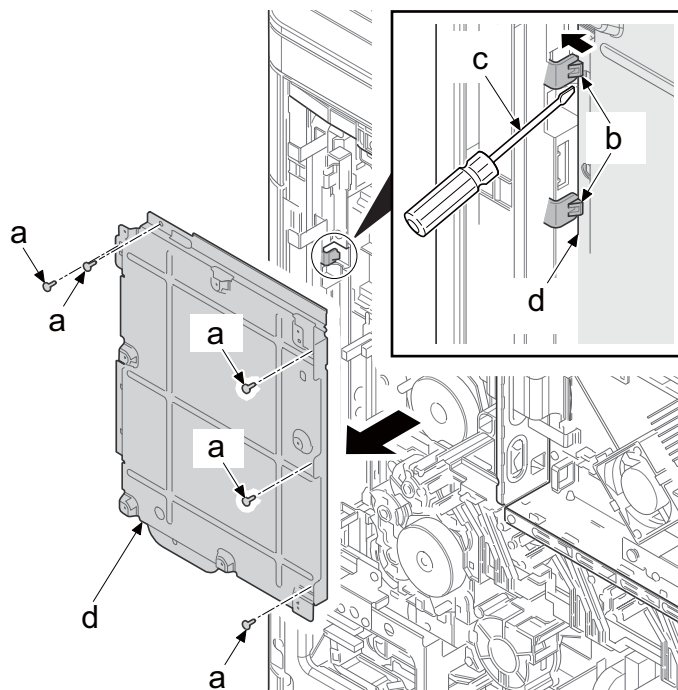


**35** Remove the wire (b) from the wire saddle (a).

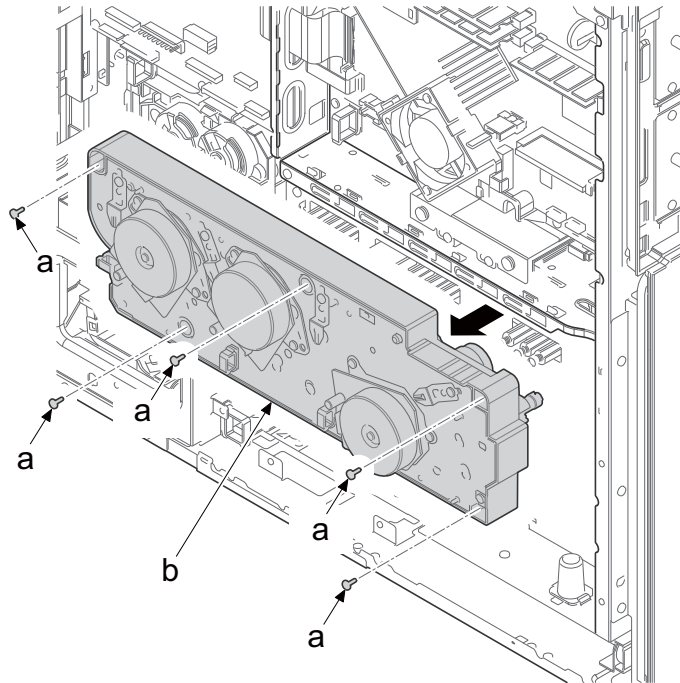


**36** Remove five screws (a) (M3x8).

**37** Release two hooks (b) with the flat-blade screwdriver (c) and remove the engine PWB mounting plate (d) in the direction of the arrow.

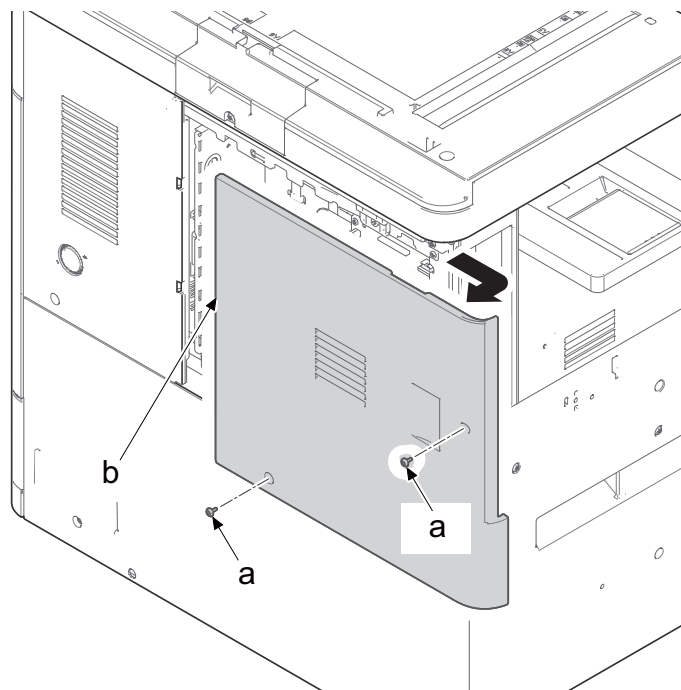


- 38 Remove five screws (a) (M3x8) and remove the main drive unit (b).
- 39 Check the main drive unit (b) and clean or replace it.
- 40 Reattach the parts in the original position.



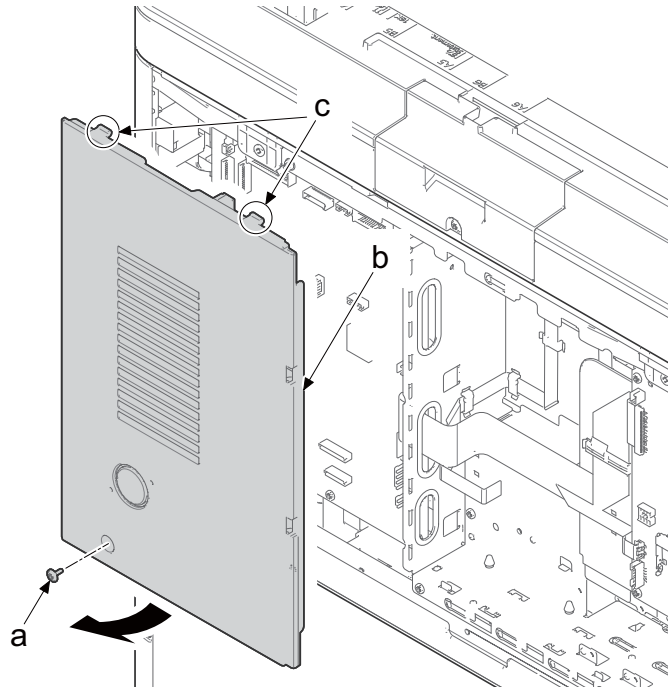
#### (4-3) Detaching and reattaching the transfer motor

- 1 Remove two screws (a) (M3x8) and remove the rear left cover (b) by sliding it in the direction of the arrow.

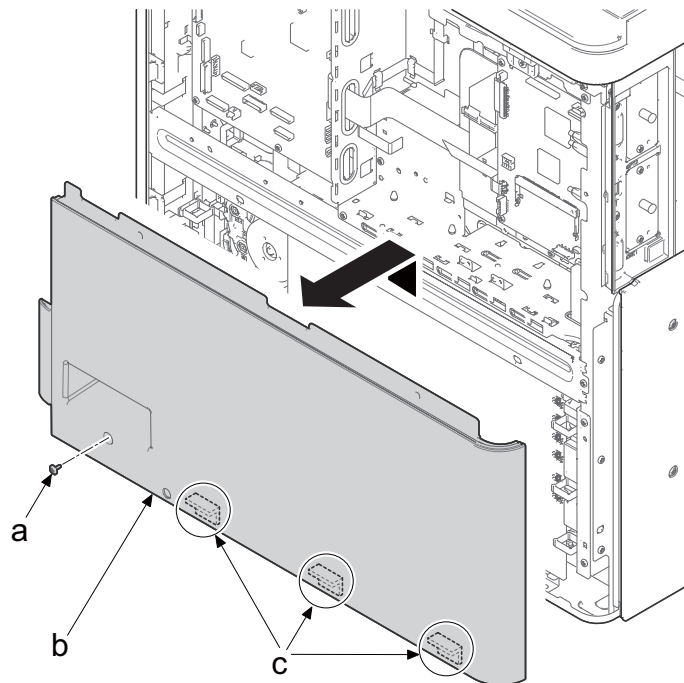




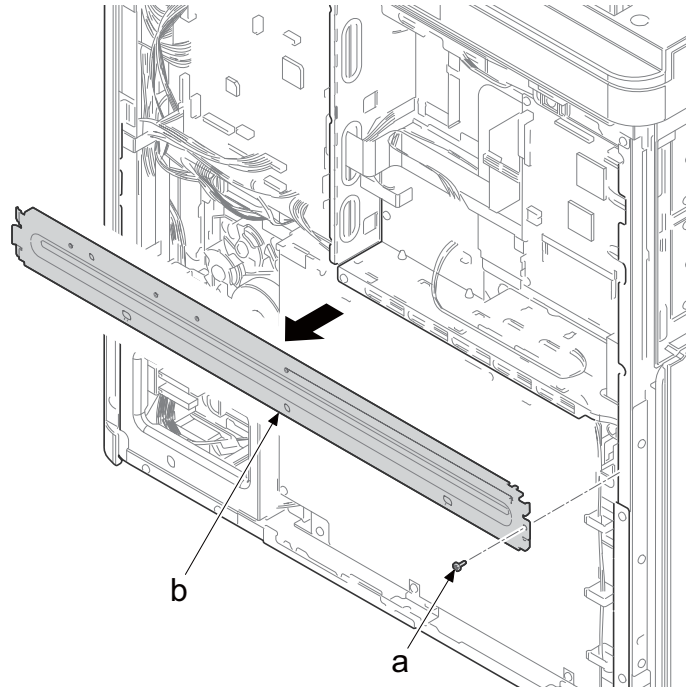
- 2 Remove the screw (a) (M3x8).
- 3 Detach the rear right cover (b) while rotating it in the direction of the arrow making two hooks (c) as a fulcrum.



- 4 Remove the screw (a) (M3x8).
- 5 Release three hooks (c) of the rear lower cover (b) and detach it in the direction of the arrow.



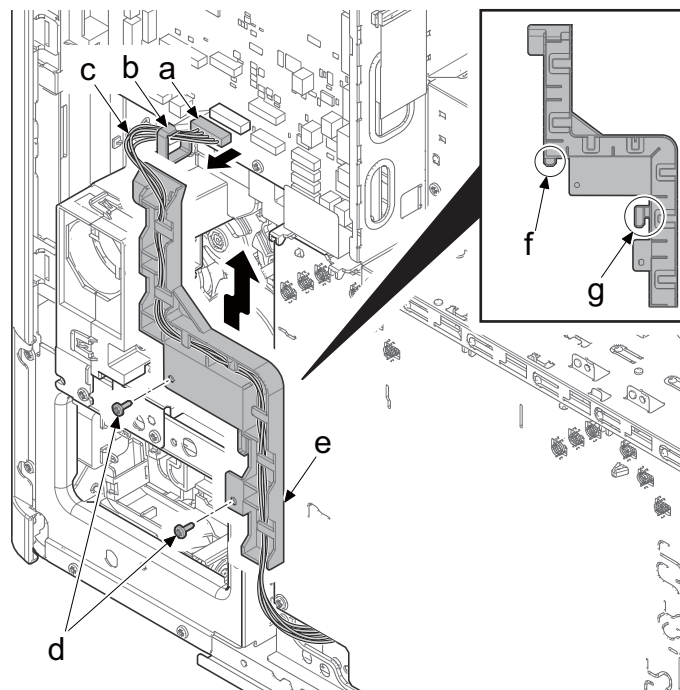
- 6** Remove the screw (a) (M3x8) and remove the rear middle stay (b).



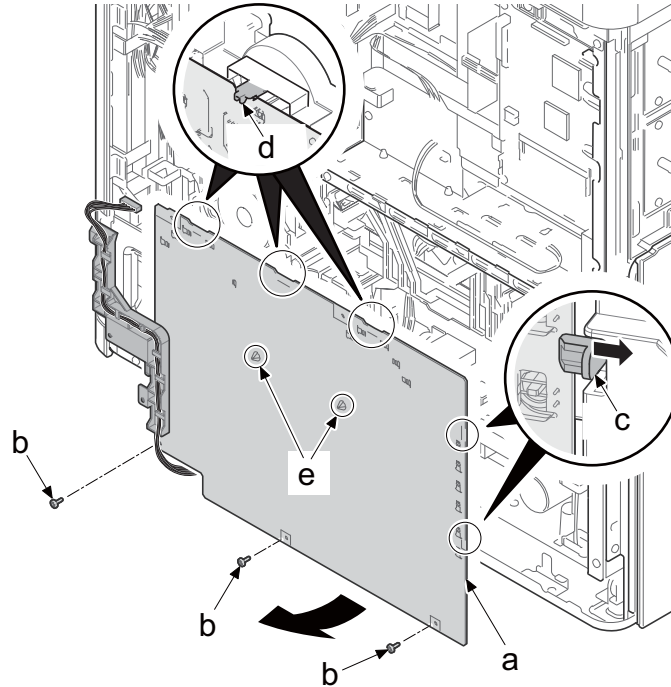
- 7** Release the wire (c) from the wire saddle (b) and disconnect the connector (a).

- 8** Remove two screws (d) (M3x8).

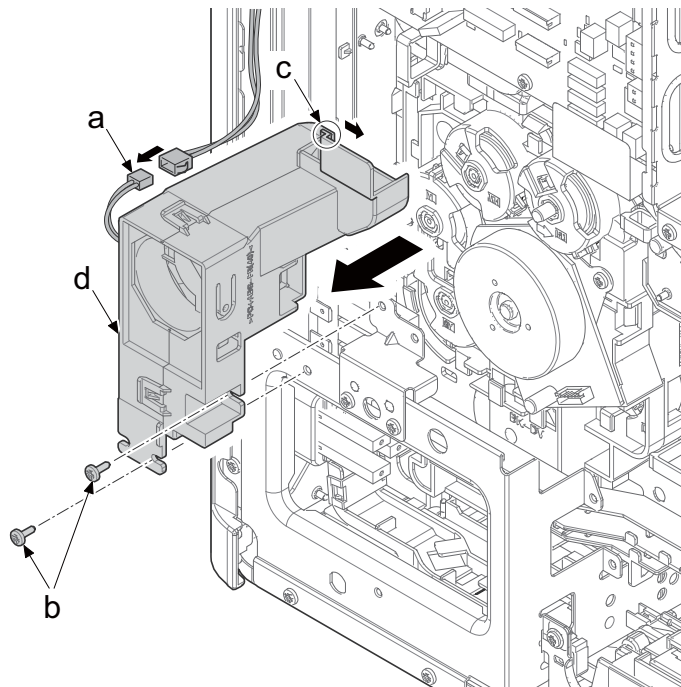
- 9** Remove the high voltage wire guide (e) in the direction of the arrow to release the protrusion (f) and hook (g).



- 10 Remove three screws (b) (M3x8).
- 11 Release two board supports (e).
- 12 Release two hooks (c).
- 13 Rotate the high voltage PWB (a) making the three hooks (d) into a fulcrum and detach it.

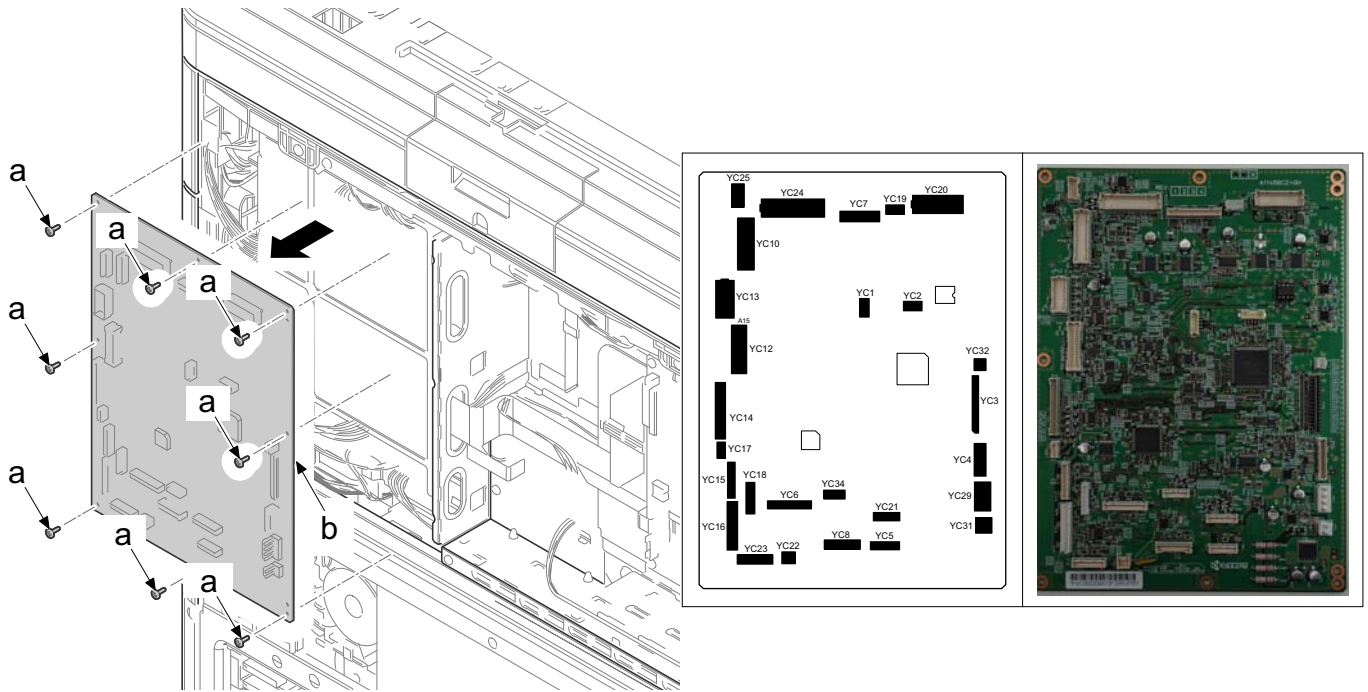


- 14 Disconnect the fan connector (a).
- 15 Remove two screws (b) (M3x8).
- 16 Slide the hook (c) in the direction of the arrow and remove the clutch fan assembly (d).

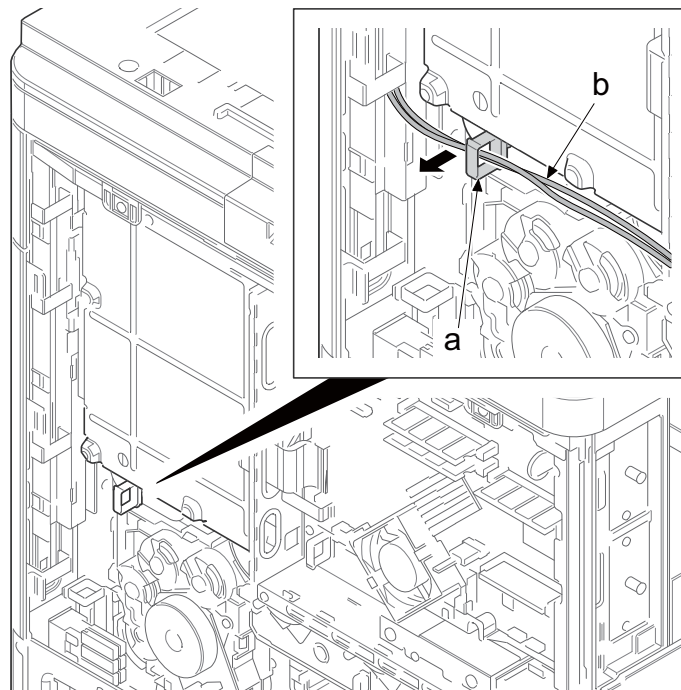


**17** Disconnect all the connectors from the engine PWB (b).

**18** Remove eight screws (a) (M3x8) and remove the engine PWB (b).

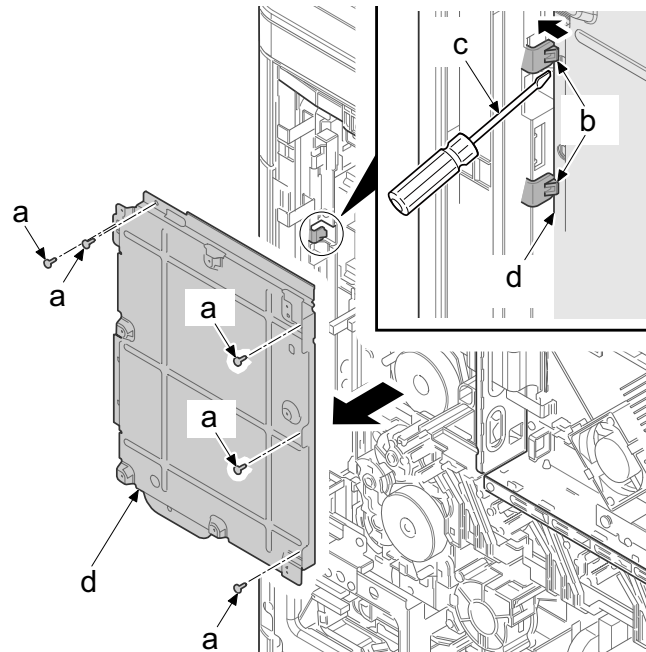


**19** Remove the wire (b) from the wire saddle (a).



**20** Remove five screws (a) (M3x8).

**21** Release two hooks (b) with the flat-blade screwdriver (c) and remove the engine PWB mounting plate (d) in the direction of the arrow.

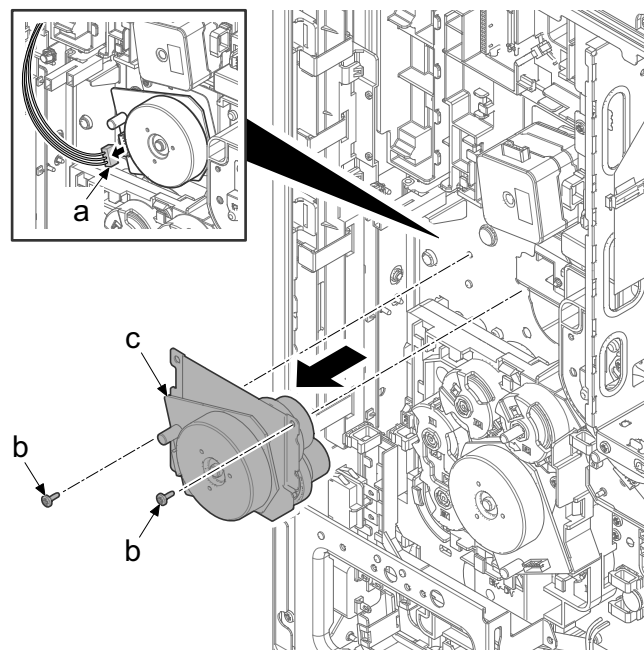


**22** Disconnect the connector (a).

**23** Remove two screws (b) (M3x8) and remove the transfer motor (c) in the direction of the arrow.

**24** Check the transfer motor (c) and clean or replace it.

**25** Reattach the parts in the original position.

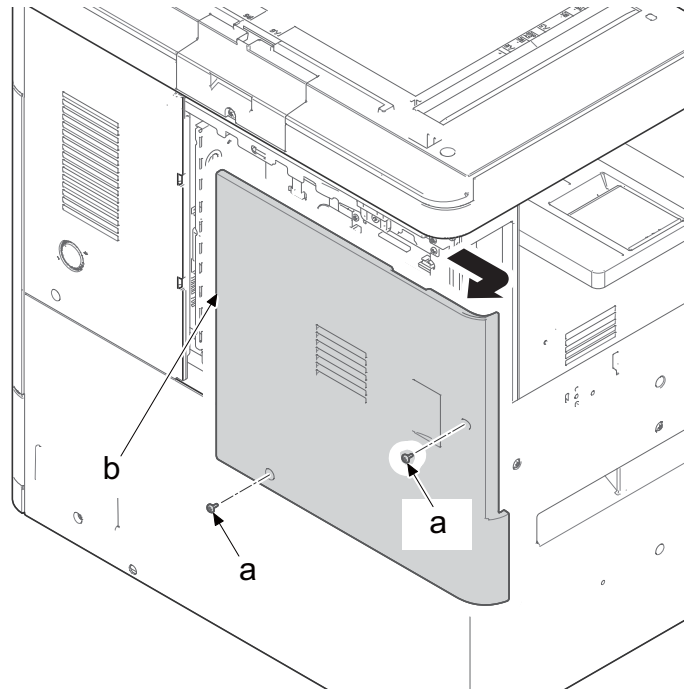


**Important**

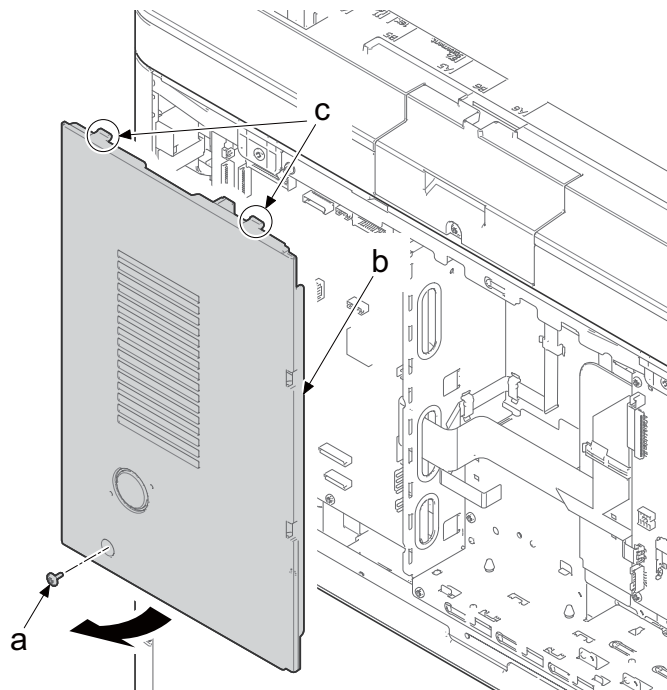
Apply grease as below to the drive gears when replacing them.  
EM-50LP(7BG010006H)

**(4-4) Detaching and reattaching the toner supply drive unit**

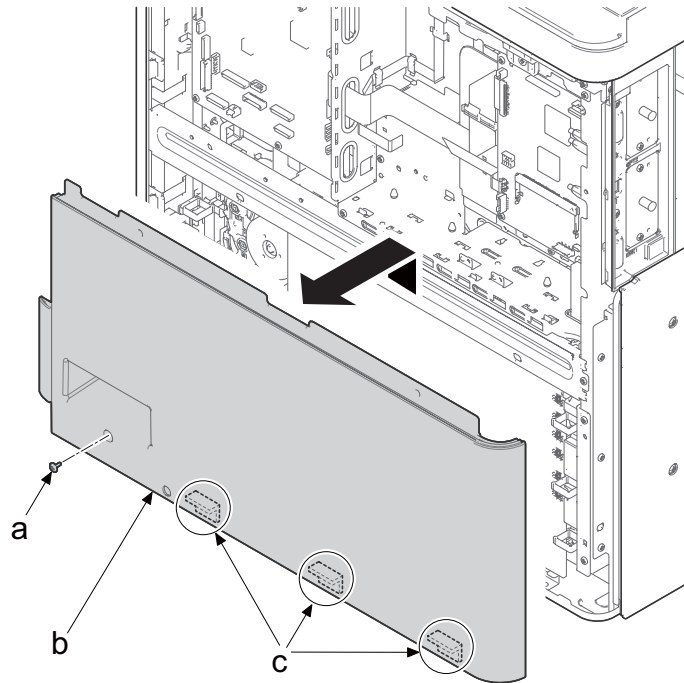
- 1** Remove two screws (a) (M3x8) and remove the rear left cover (b) by sliding it in the direction of the arrow.



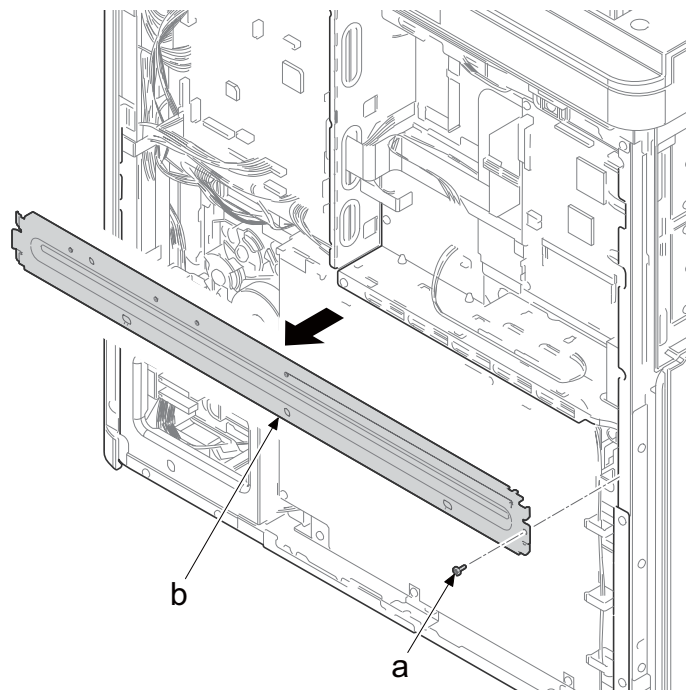
- 2** Remove the screw (a) (M3x8).
- 3** Detach the rear right cover (b) while rotating it in the direction of the arrow making two hooks (c) as a fulcrum.



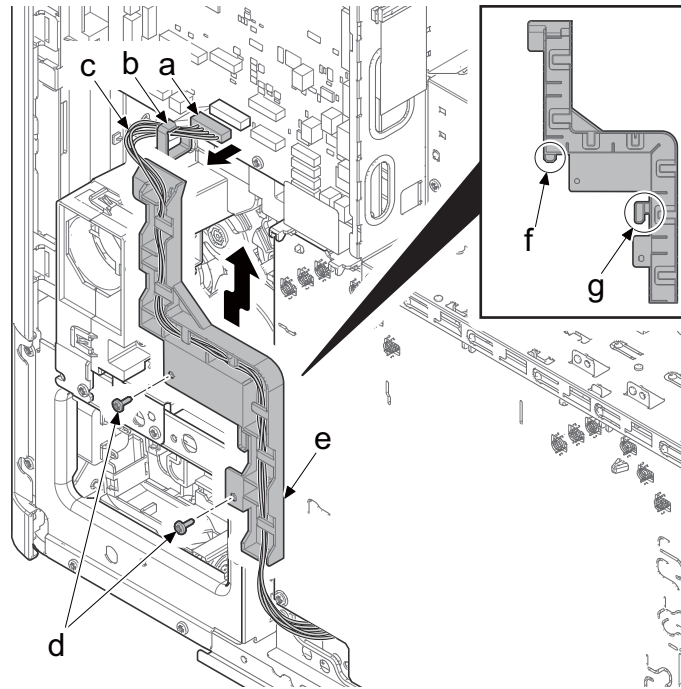
- 4 Remove the screw (a) (M3x8).
- 5 Release three hooks (c) of the rear lower cover (b) and detach it in the direction of the arrow.



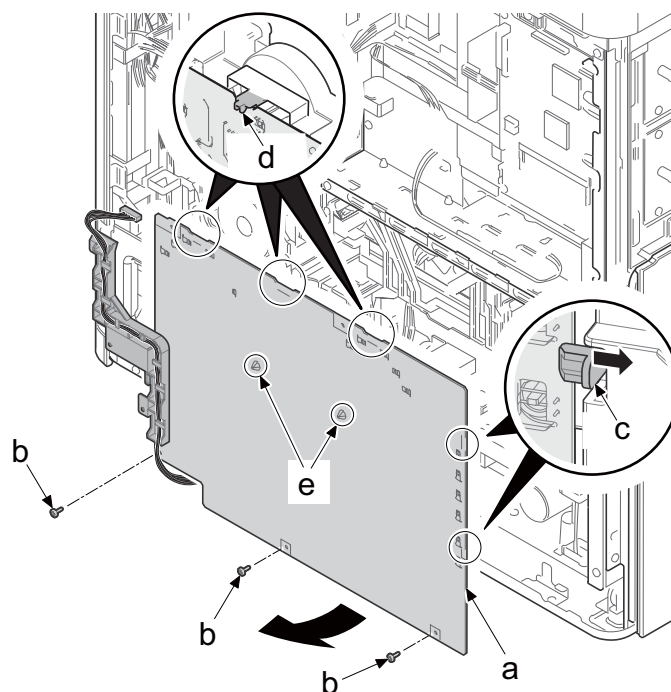
- 6 Remove the screw (a) (M3x8) and remove the rear middle stay (b).



- 7 Release the wire (c) from the wire saddle (b) and disconnect the connector (a).
- 8 Remove two screws (d) (M3x8).
- 9 Remove the high voltage wire guide (e) in the direction of the arrow to release the protrusion (f) and hook (g).

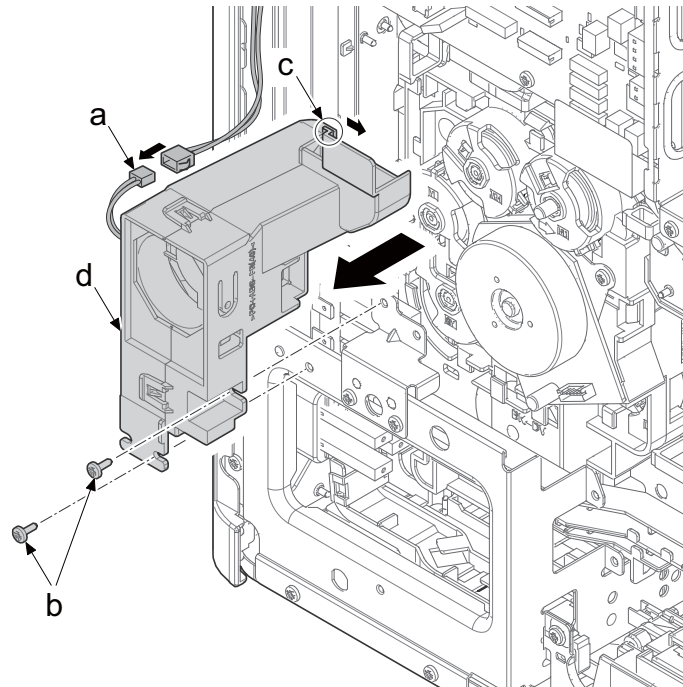


- 10 Remove three screws (b) (M3x8).
- 11 Release two board supports (e).
- 12 Release two hooks (c).
- 13 Rotate the high voltage PWB (a) making the three hooks (d) into a fulcrum and detach it.

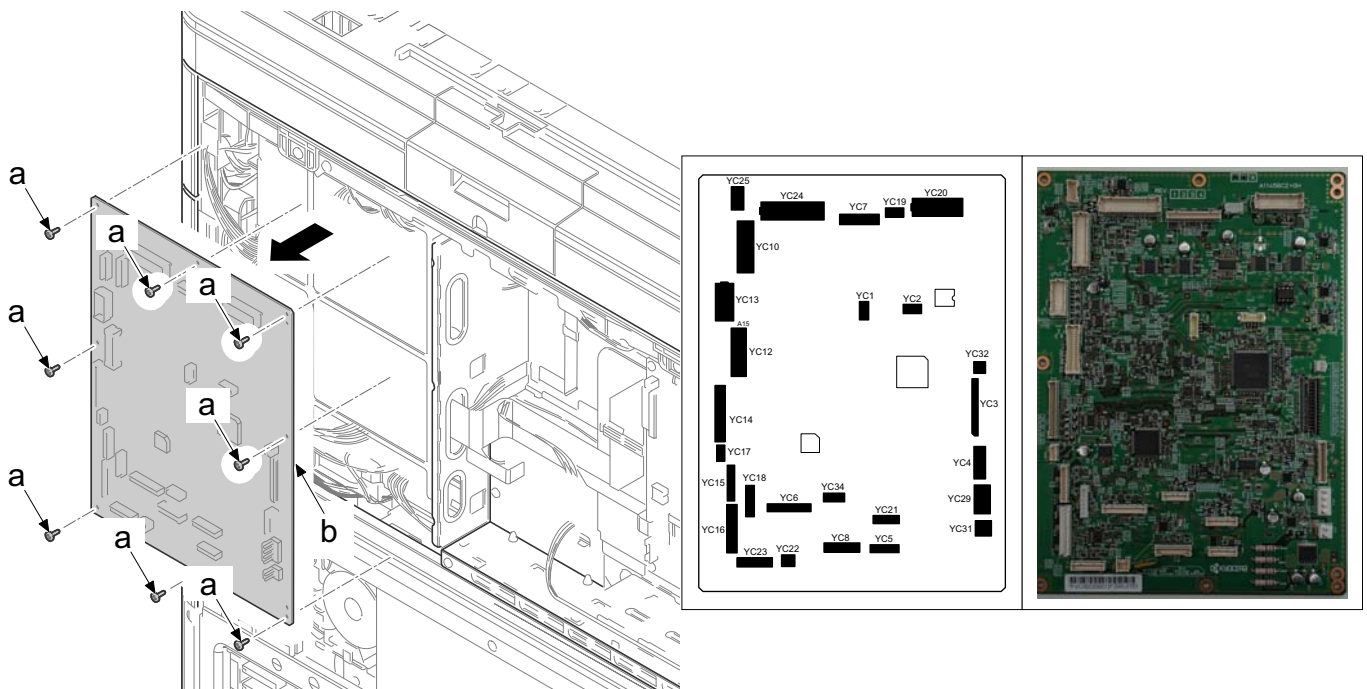




- 14 Disconnect the fan connector (a).
- 15 Remove two screws (b) (M3x8).
- 16 Slide the hook (c) in the direction of the arrow and remove the clutch fan assembly (d).

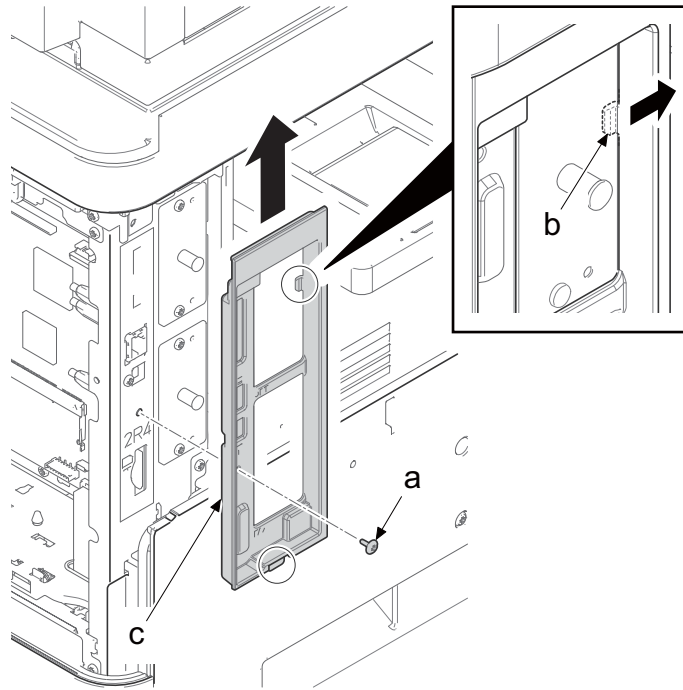


- 17 Disconnect all the connectors from the engine PWB (b).
- 18 Remove eight screws (a) (M3x8) and remove the engine PWB (b).



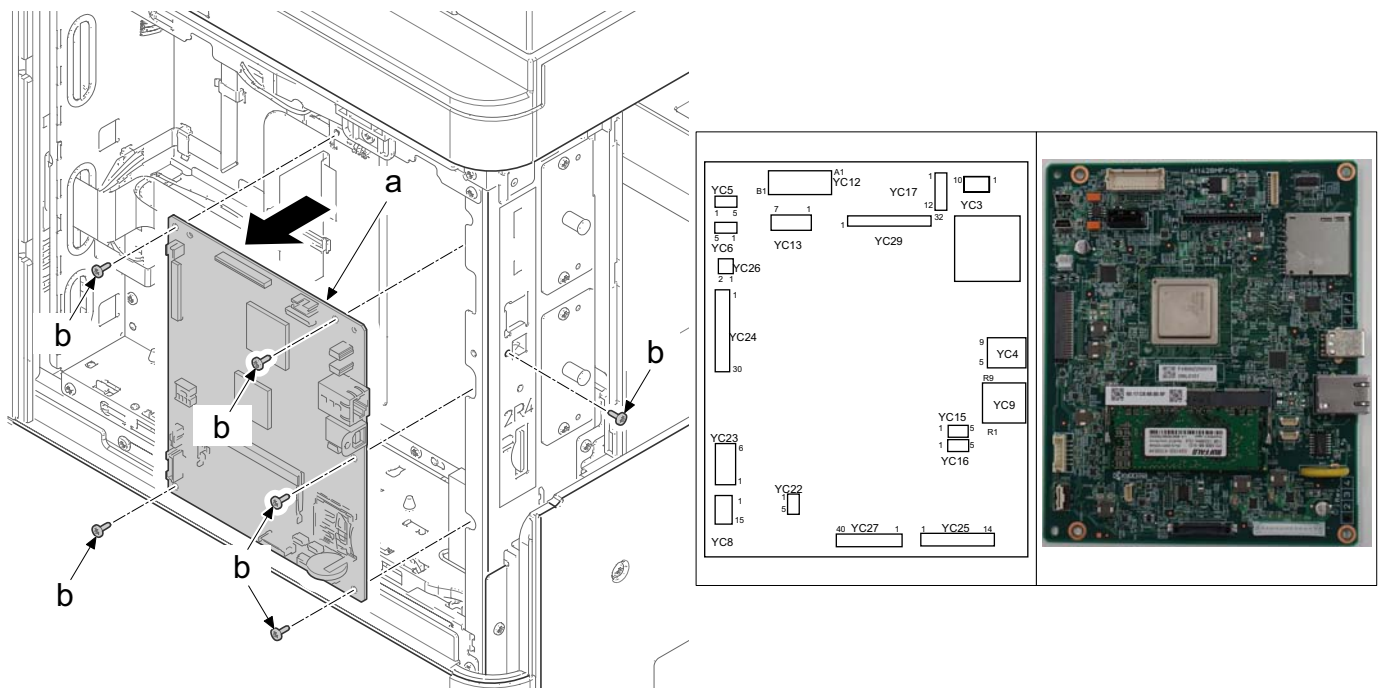
**19** Remove the screw (a) (M3x8).

**20** Release the hook (b) in the direction of the arrow and remove the left controller cover (c) in the direction of the arrow.

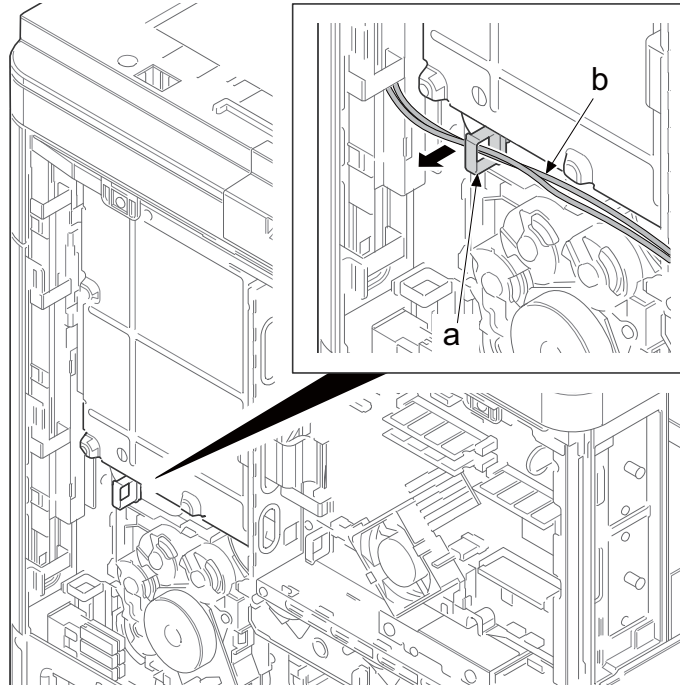


**21** Disconnect all the connectors from the main PWB (a).

**22** Remove six screws (b) (M3x8) and remove the main PWB (a).

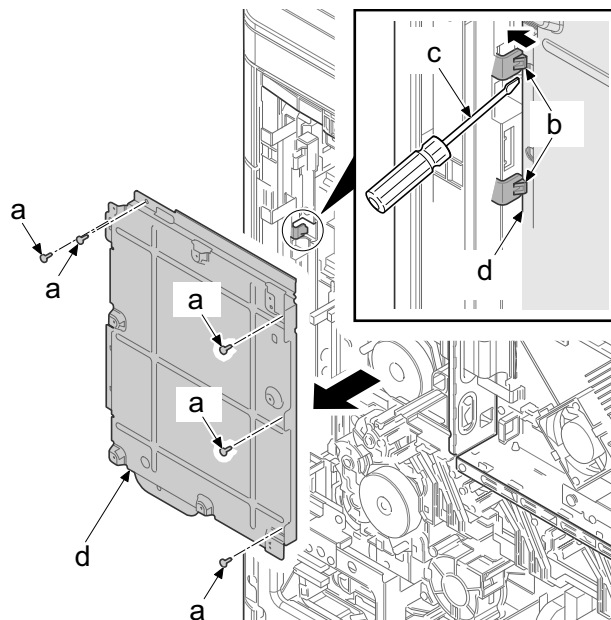


## 23 Remove the wire (b) from the wire saddle (a).



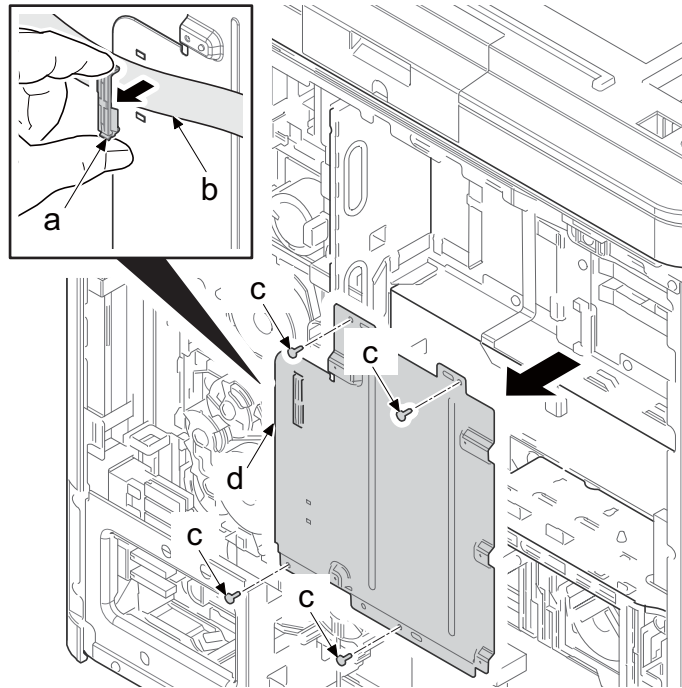
## 24 Remove five screws (a) (M3x8).

## 25 Release two hooks (b) with the flat-blade screwdriver (c) and remove the engine PWB mounting plate (d) in the direction of the arrow.



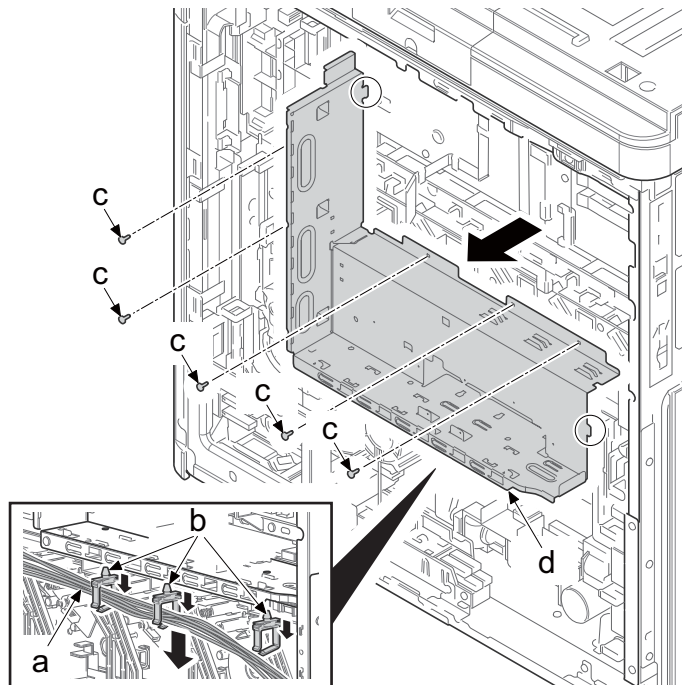
**26** Remove the holder (a) and remove FFC (b).

**27** Remove four screws (c) (M3x8) and remove the main PWB holder plate (d).

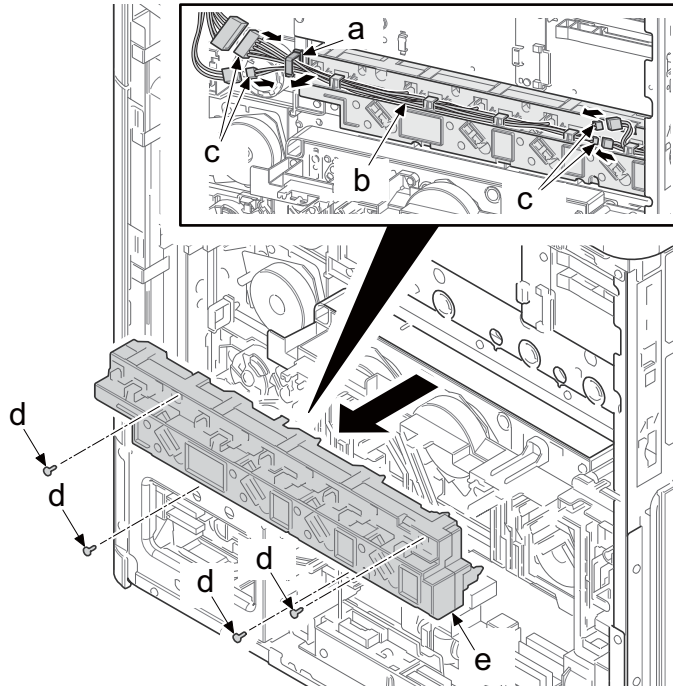


**28** Remove the wire (a) from the three wire saddles (b).

**29** Remove five screws (c) (M3x8) and remove the controller frame (d).



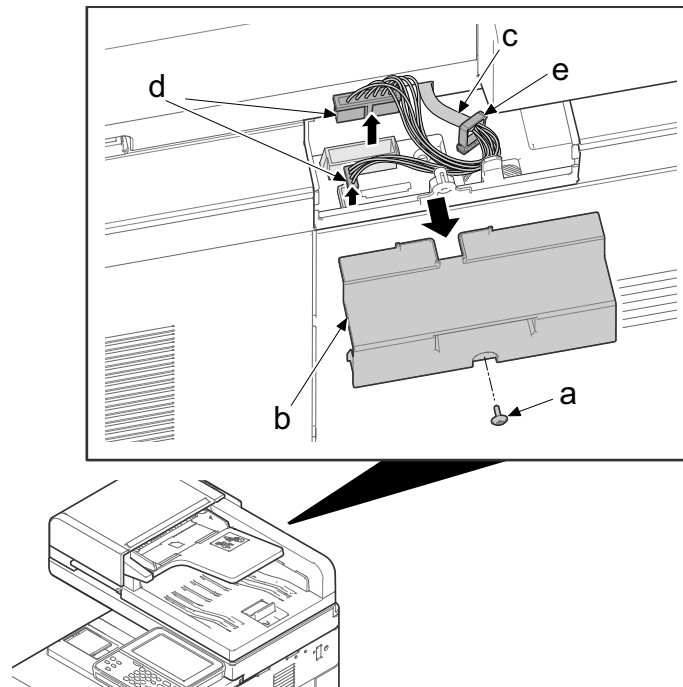
- 30 Remove the wire (b) from the wire saddle (a).
- 31 Disconnect four connectors (c).
- 32 Remove four screws (d) (M3x8) and remove the toner supply drive unit (e).
- 33 Check the toner supply drive unit (e) and clean or replace it.
- 34 Reattach the parts in the original position.



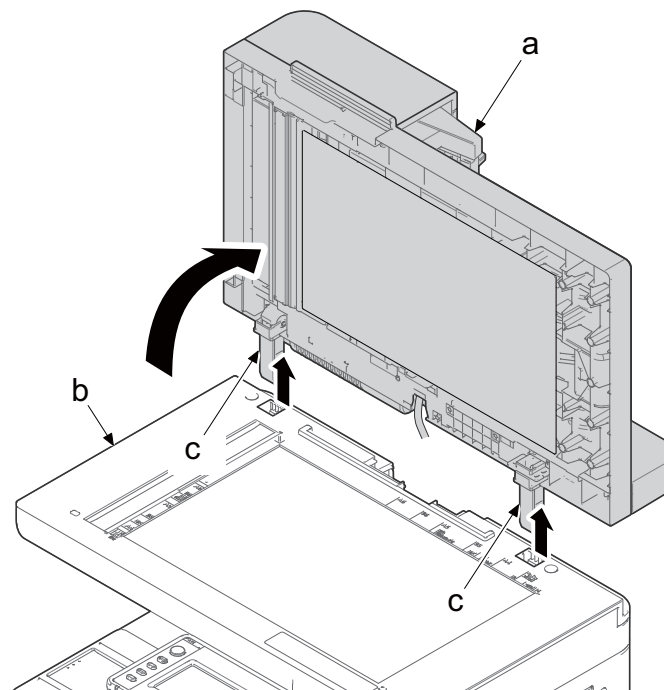
## (5) Document processor

### (5-1) Detaching and reattaching the document processor

- 1 Remove the screw (a) (M3x8) and remove the rear right cover (b).
- 2 Release the DP interface wire (c) from the wire saddle (e) and remove it from the two connectors (d).

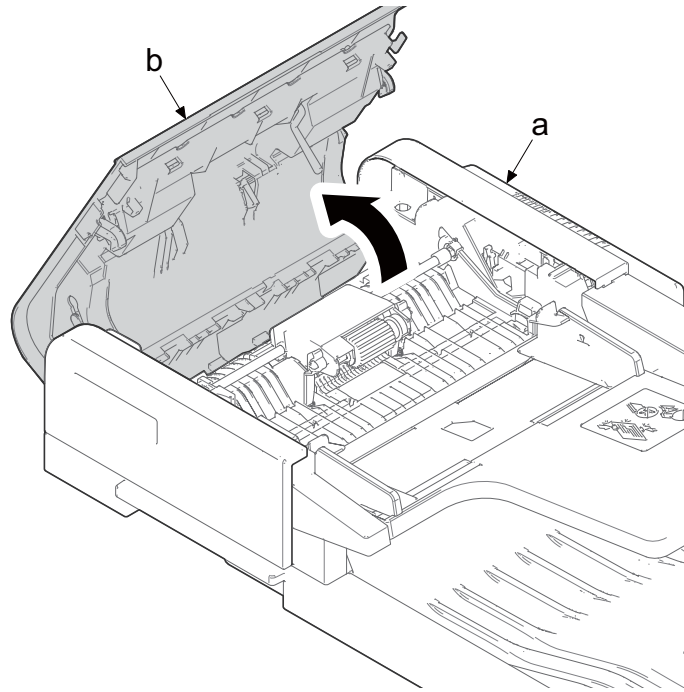


- 3 Open the document processor (a).
- 4 Lift up the document processor (a) in the direction of the arrow and remove the hinge (c) from the main unit (b).

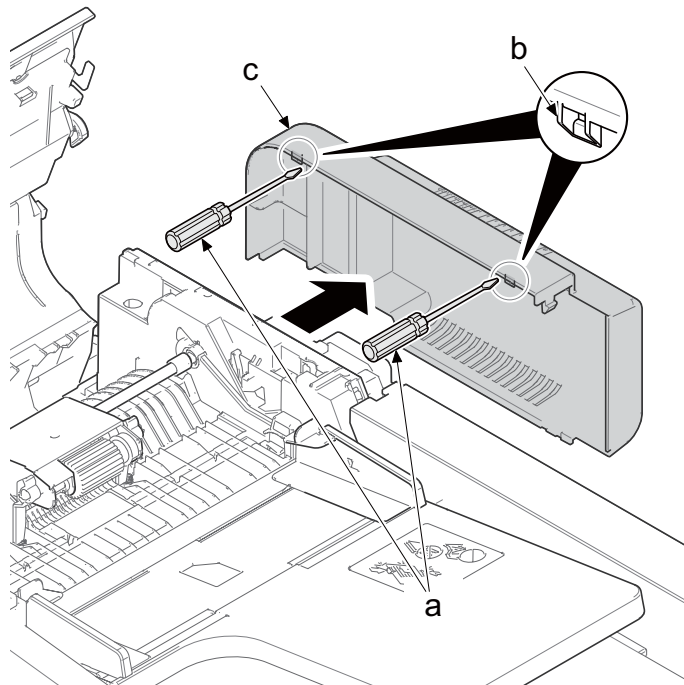


**(5-2) Detaching and reattaching the DP rear cover**

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

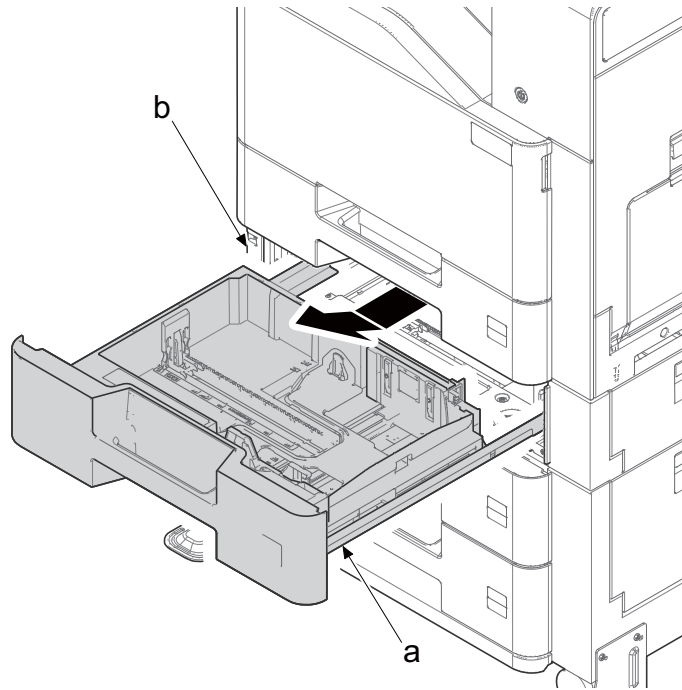


- 2** Release two hooks (b) with the flat-blade screwdriver (a) and remove the DP rear cover (d).

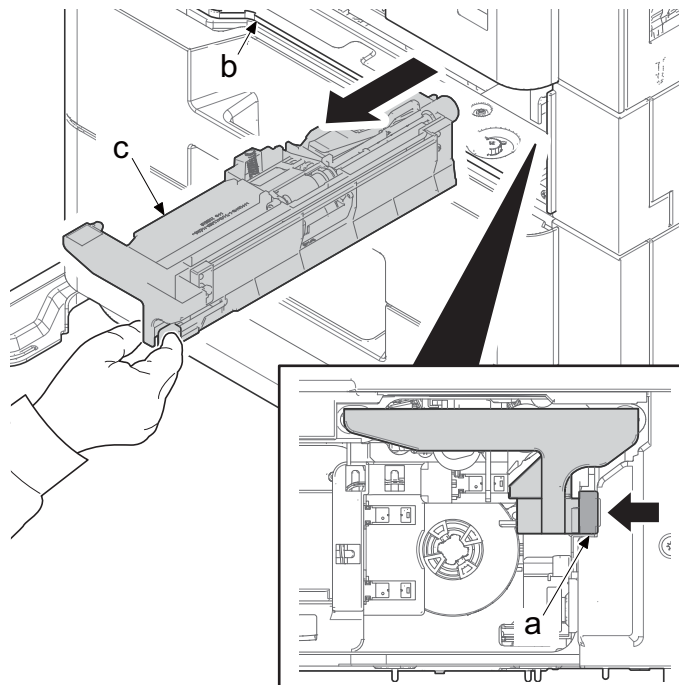


**(6) Others****(6-1) Detaching and reattaching the lift motor**

- 1** Pull out the cassette (a) from the paper feeder (b) and remove it in the direction of the arrow.

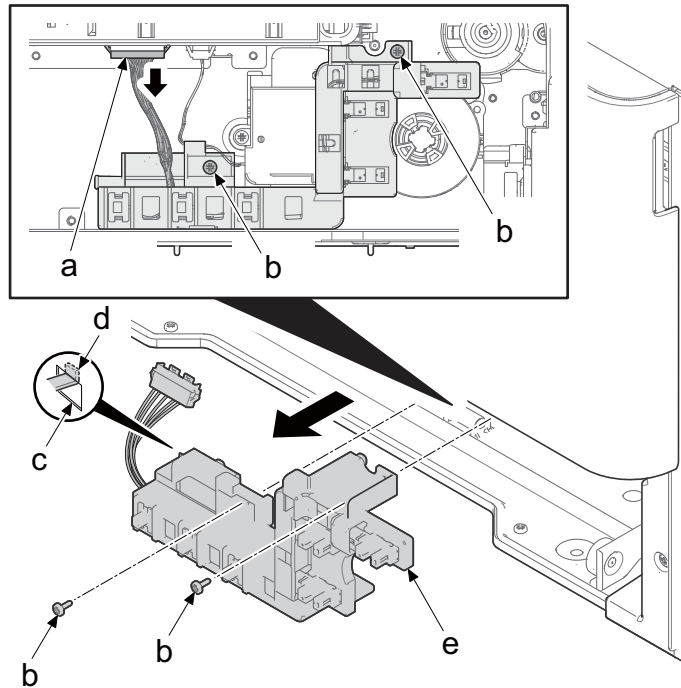


- 2** Press the lock lever (a) and pull out the primary feed unit (c) from the paper feeder (b).

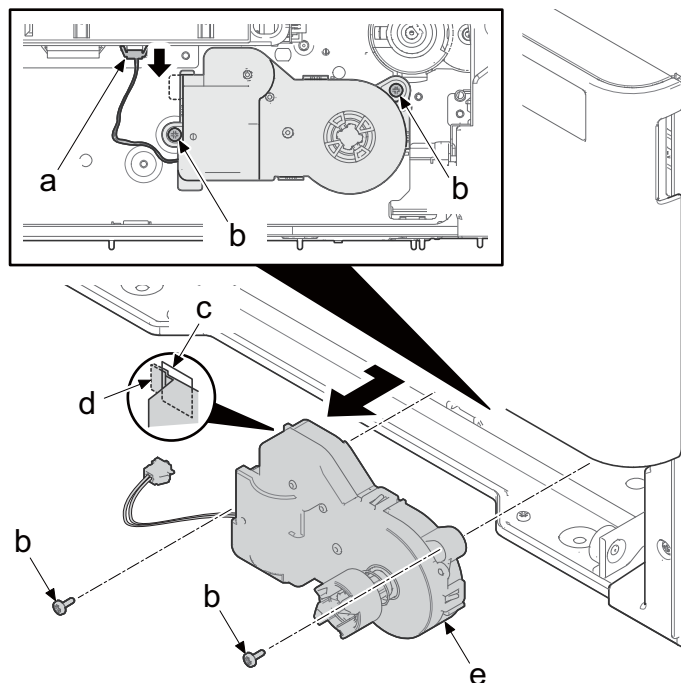




- 3 Remove the connector (a) and two screws (b) (M3x8).
- 4 Release the hook (d) from the square hole (c) of the side frame and remove the sensor holder (e).

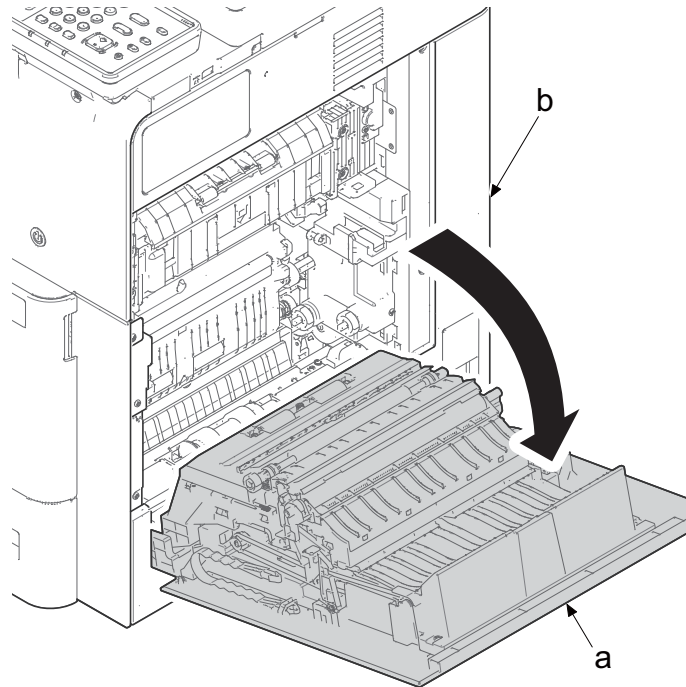


- 5 Remove the connector (a) and two screws (b) (M3x8).
- 6 Release the hook (d) from the square hole (c) of the side frame and remove the lift motor (e).
- 7 Check the lift motor (e) and clean or replace it.
- 8 Reattach the parts in the original position.



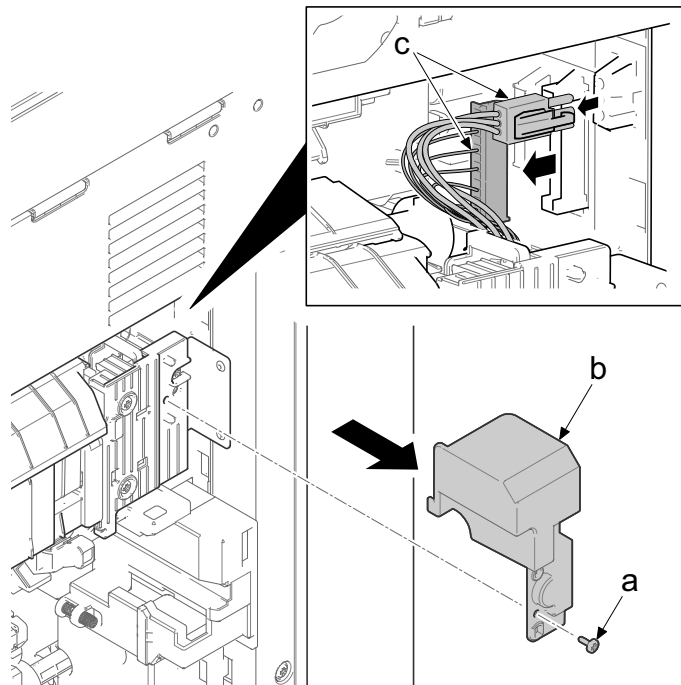
**(6-2) Detaching and reattaching the eject unit**

- 1** Open the right cover (a) of the main unit (b).

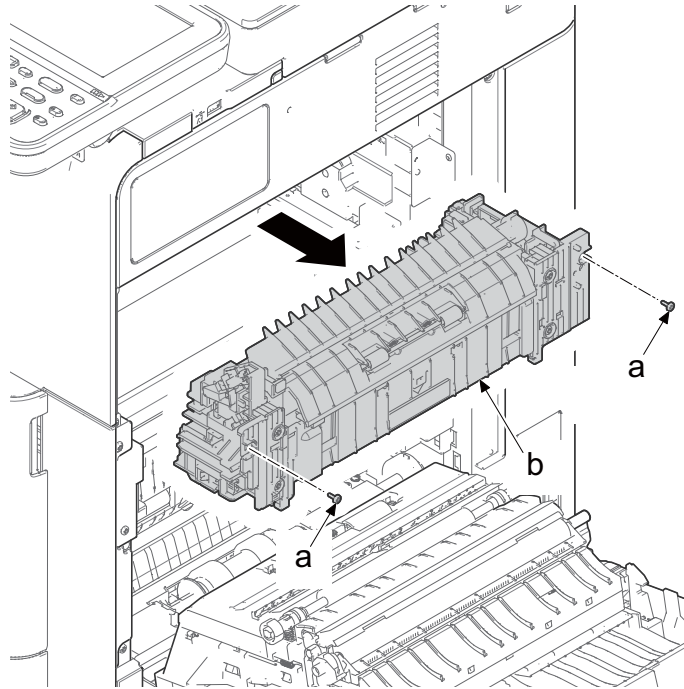


- 2** Remove the screw (a) (M3x8) and remove the fuser wire cover (b).

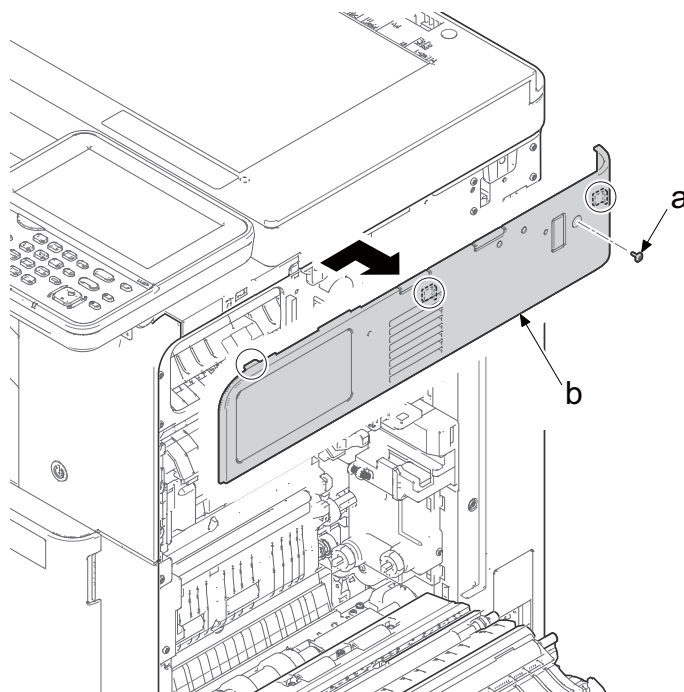
- 3** Disconnect two connectors (c) of the fuser unit.



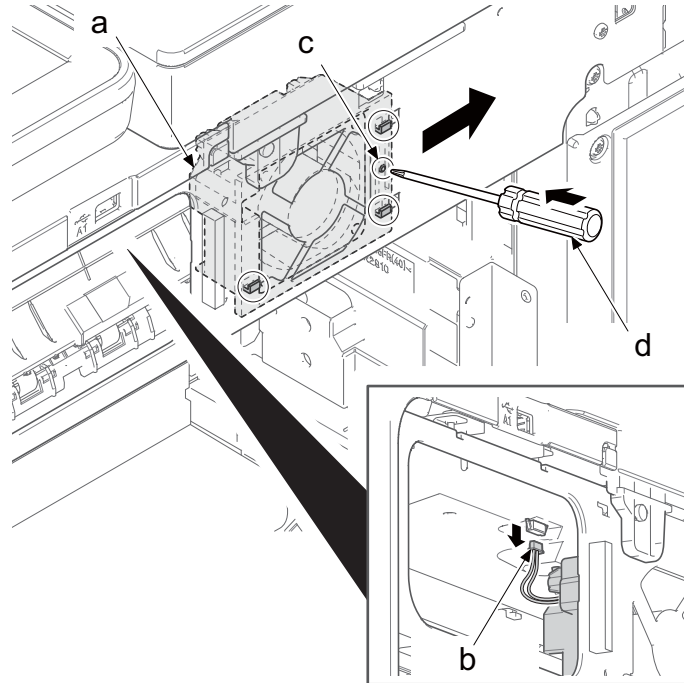
- 4 Remove two screws (a) (M3x8) and remove the fuser unit (b).
- 5 Attach the new fuser unit.
- 6 Reattach the parts in the original position.



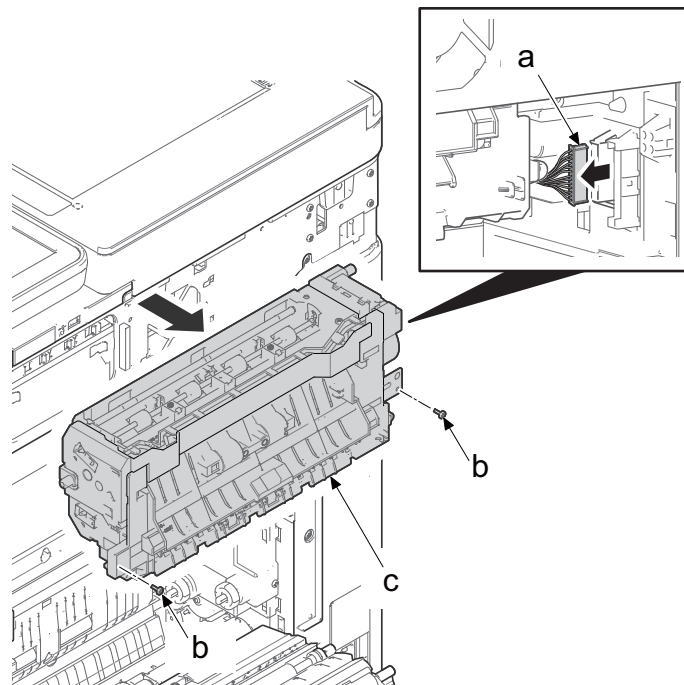
- 7 Remove the screw (a) (M3x8).
- 8 Slide the right upper cover (b) in the direction of the arrow and detach it.



- 9 Disconnect the connector (b) of the eject fan (a).
- 10 Push the protrusion (c) with a screwdriver tip (d), etc. and release the lock.
- 11 Slide the eject fan (a) in the direction of the arrow and detach it.

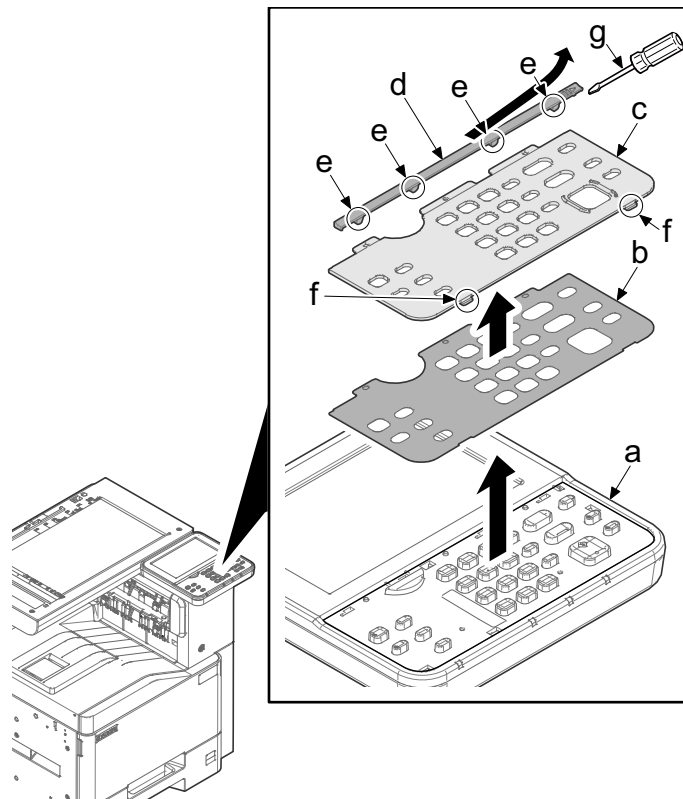


- 12 Disconnect the connector (a) of the eject unit.
- 13 Remove two screws (b) (M3x8) and detach the eject unit (c).
- 14 Check the eject unit (c) and clean or replace it.
- 15 Reattach the parts in the original position.



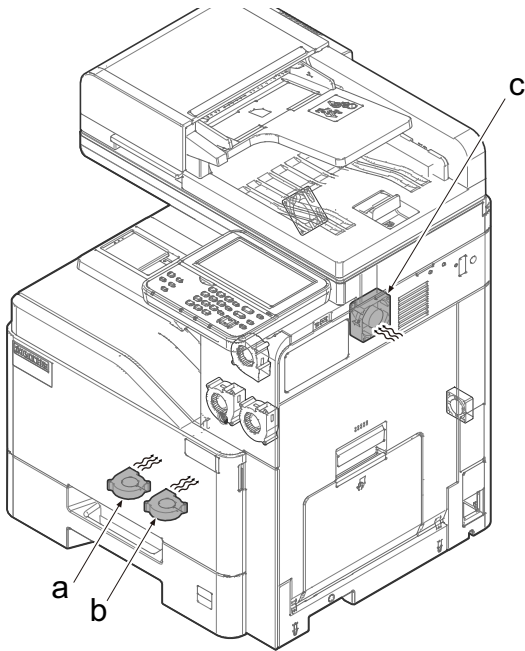
**(6-3) Replacing the language sheet**

- 1** Lift up and slide the leading edge of the operation panel cover (d) with the flat-blade screwdriver (g).
- 2** Release four hooks (e) and remove the operation panel cover (d).
- 3** Release two protrusions (f) and remove the clear panel (c) from the operation panel (a).
- 4** Remove the operation panel sheet (b).
- 5** Replace the operation panel sheet of the applicable language.
- 6** Reattach the clear panel (c) and operation panel cover (d) in the original position.

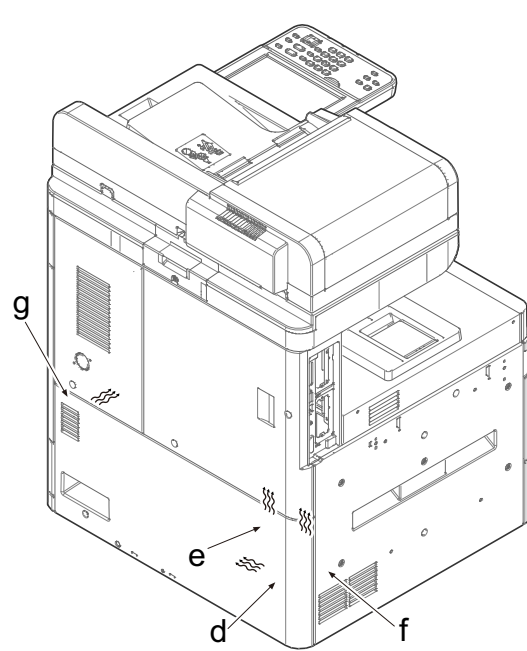


**(6-4) Fan motor attachment direction****✔ Important**

When reattaching the fan motor, be aware of the attachment direction (intake/exhaust).



- a Developer fan motor 3: intake \*1
- b Developer fan motor 4: intake \*1
- c Eject fan motor: intake \*2



- d PWB fan motor: intake \*3
- e Developer fan motor 2: intake \*3
- f Developer fan motor 1: intake \*3
- g Clutch fan motor: intake \*2

\*1: rating label side: top side

\*2: rating label side: inside

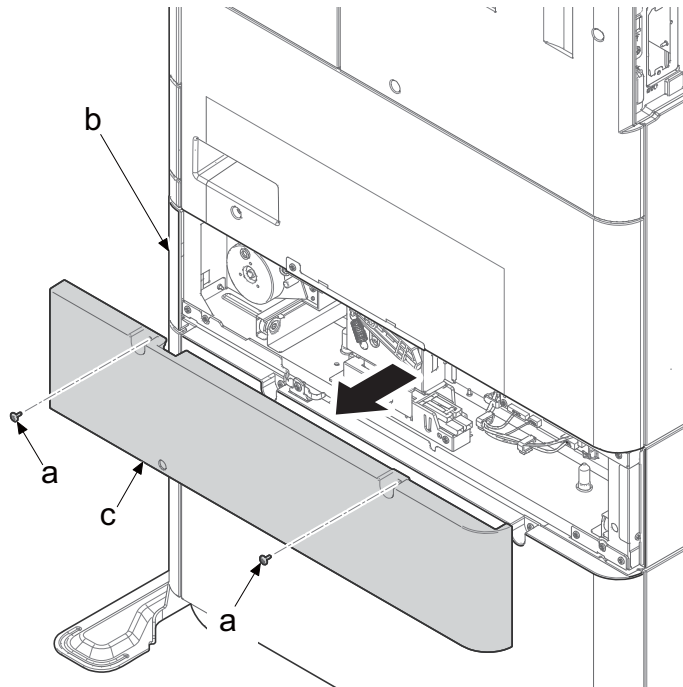
\*3: rating label side: outside

## 4 - 7 Disassembly & Reassembly (option)

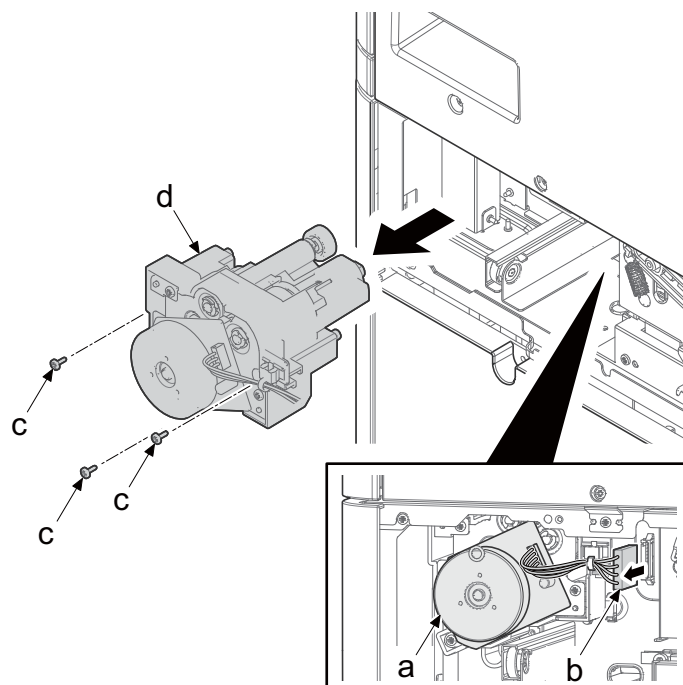
### (1) Paper feeder (PF-5120)

#### (1-1) Detaching and reattaching the PF drive unit

- 1 Remove two screws (a) (M3x8).
- 2 Remove PF rear cover (c) from the paper feed unit (b).

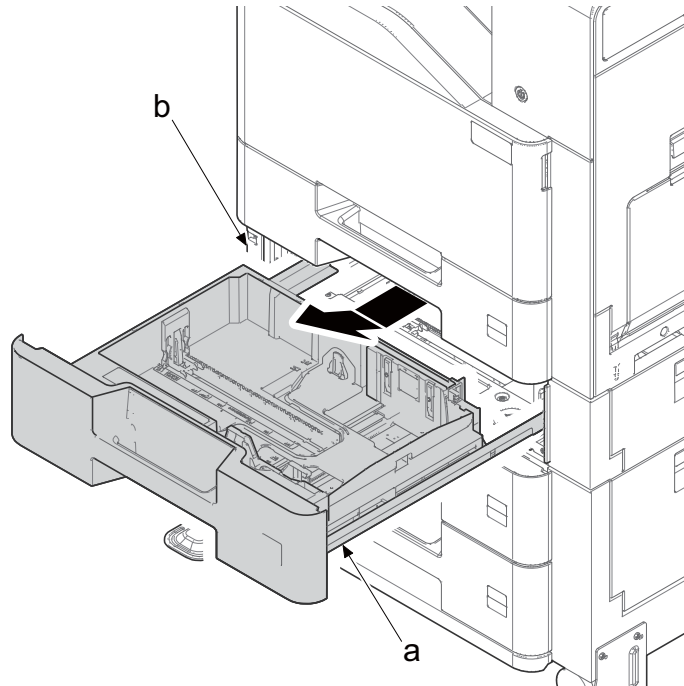


- 3 Disconnect the connector (b) of the motor (a).
- 4 Remove three screws (b) (M3x8) and remove the PF drive unit (d).
- 5 Check or replace the PF drive unit (d), and then reattach the parts in the original position.

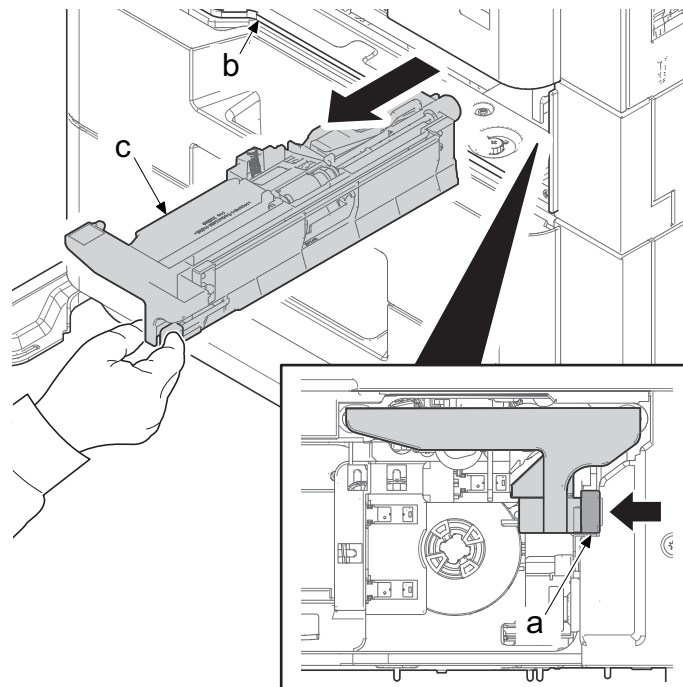


**(1-2) Detaching and reattaching the PF lift motor**

- 1** Pull out the cassette (a) from the paper feeder (b) and remove it in the direction of the arrow.

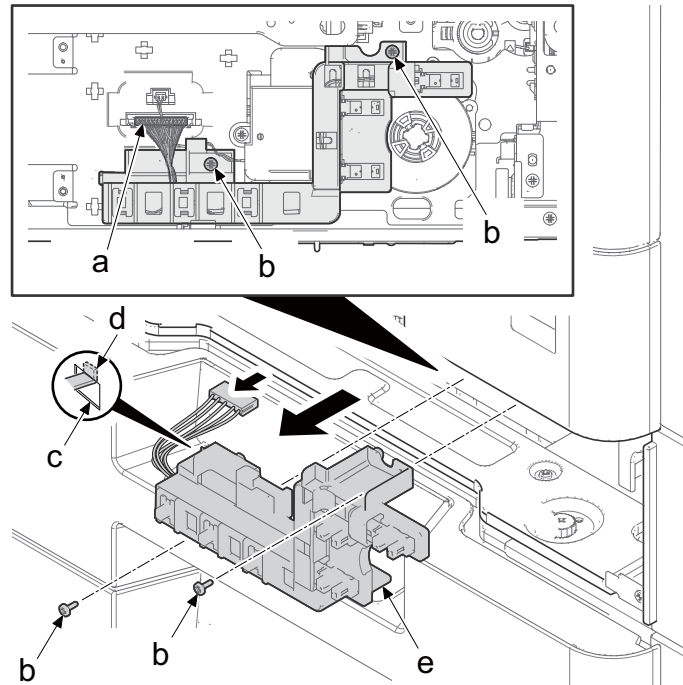


- 2** Pinch the lock lever (c) and pull the primary paper feed unit (d).

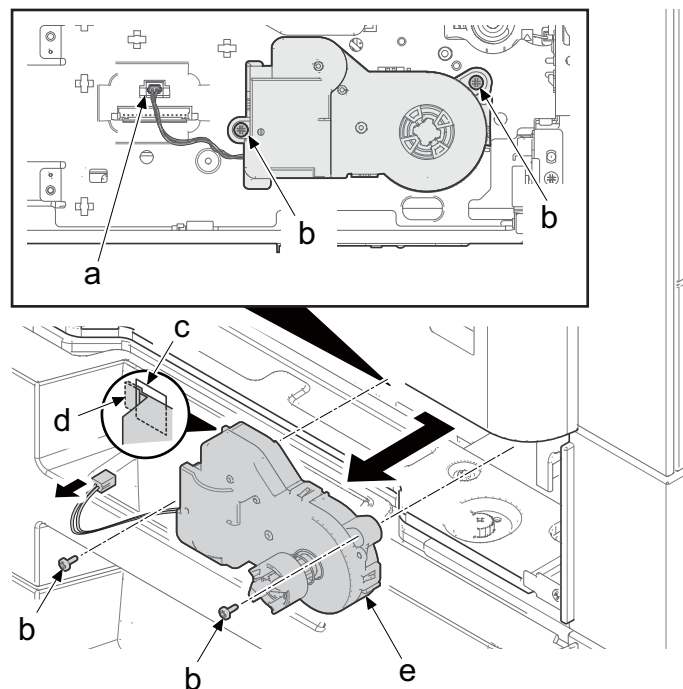




- 3 Remove the connector (a) and two screws (b) (M3x8).
- 4 Release the hook (d) from the square hole (c) of the side frame and remove the sensor holder (e).

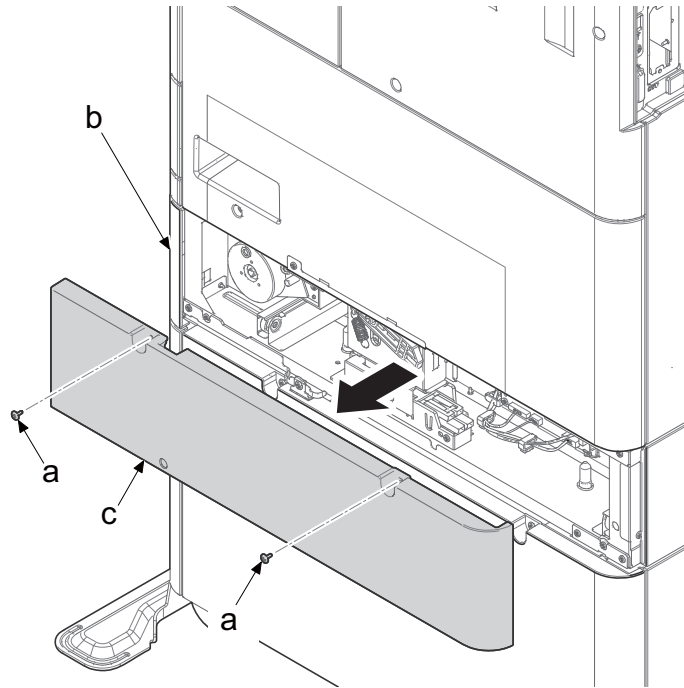


- 5 Remove the connector (a) and two screws (b) (M3x8).
- 6 Release the hook (d) from the square hole (c) of the side frame and remove the PF lift motor (e).
- 7 Check or replace the PF lift motor (e), and then reattach the parts in the original position.

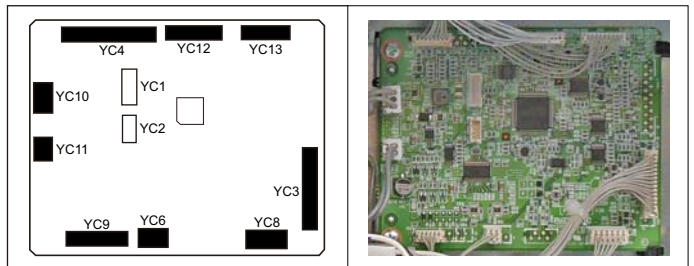
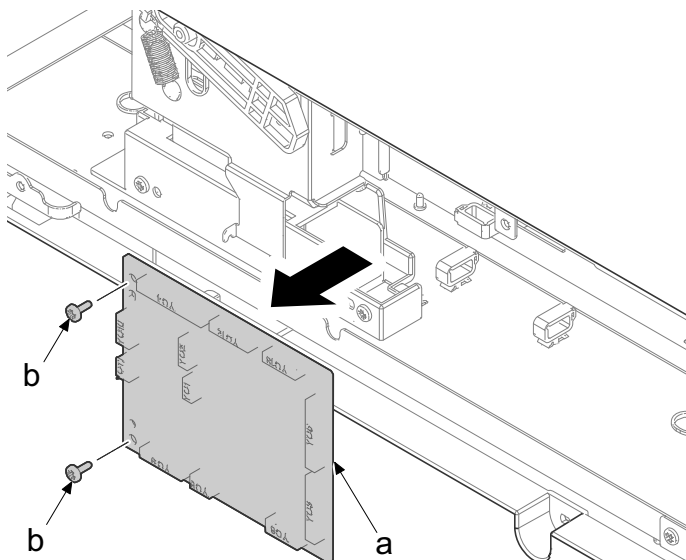


**(1-3) Detaching and reattaching the PF PWB**

- 1** Remove two screws (a) (M3x8).
- 2** Remove PF rear cover (c) from the paper feed unit (b).

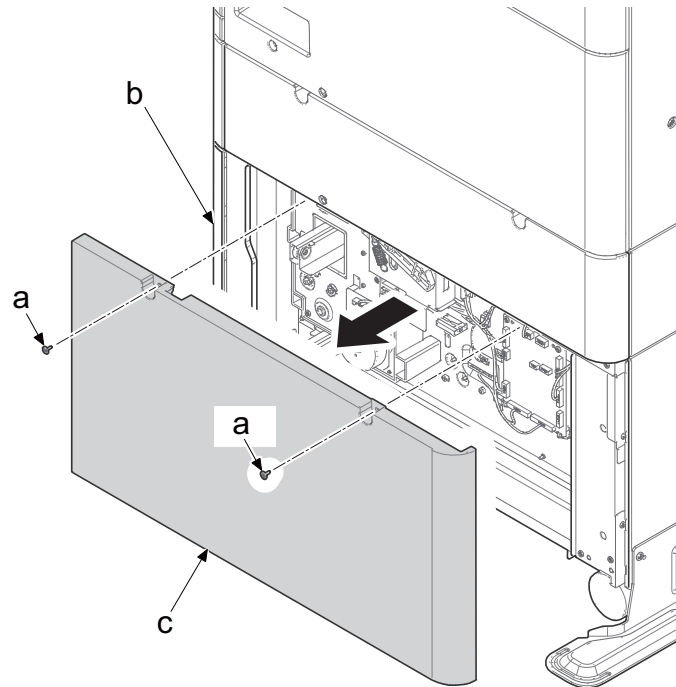


- 3** Disconnect all the connectors from the PF PWB (a).
- 4** Remove two screws (b) (M3x8) and remove the PF PWB (a).
- 5** Check or replace the PF PWB (a), and then reattach the parts in the original position.

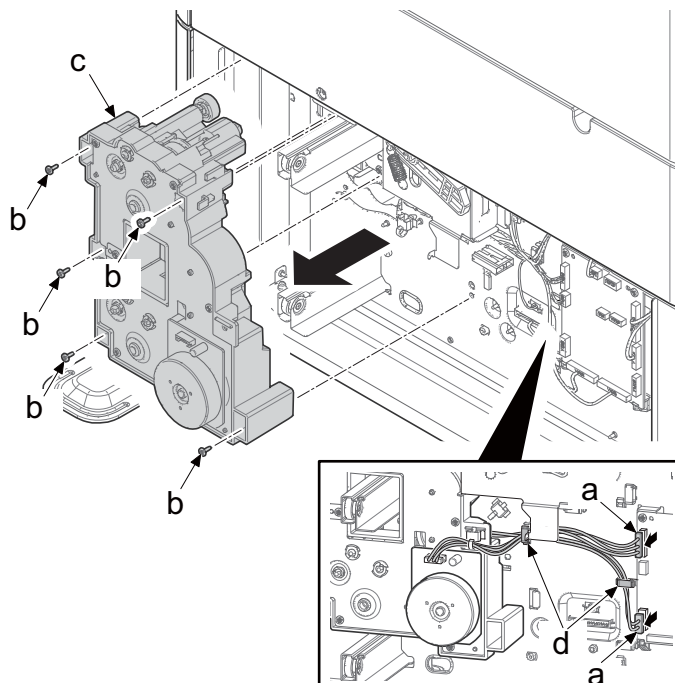


**(2) Paper feeder (PF-5130)****(2-1) Detaching and reattaching the PF drive unit**

- 1** Remove two screws (a) (M3x8).
- 2** Remove PF rear cover (c) from the paper feed unit (b).

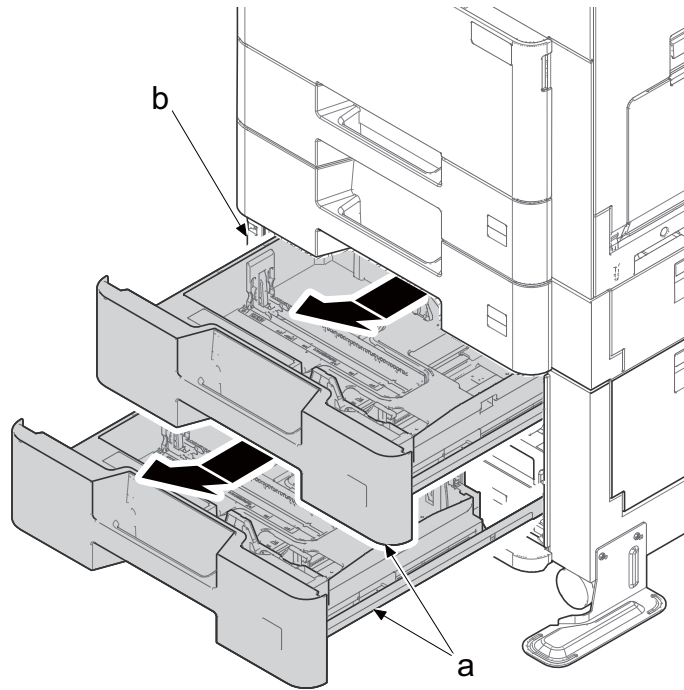


- 3** Release two wire saddles (d) and disconnect two connectors (a) of the PF drive unit.
- 4** Remove five screws (b) (M3x8) and remove the PF drive unit (c).
- 5** Check or replace the PF drive unit (c), and then reattach the parts in the original position.

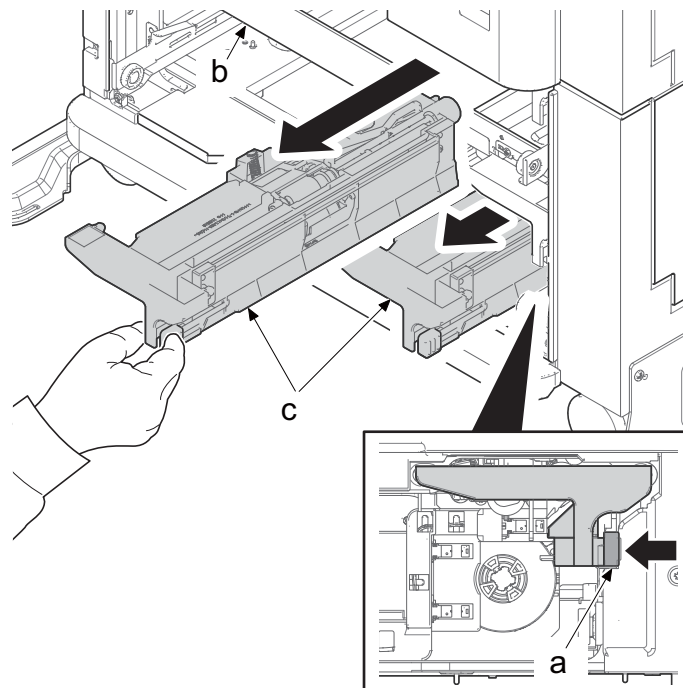


**(2-2) Detaching and reattaching the PF lift motor**

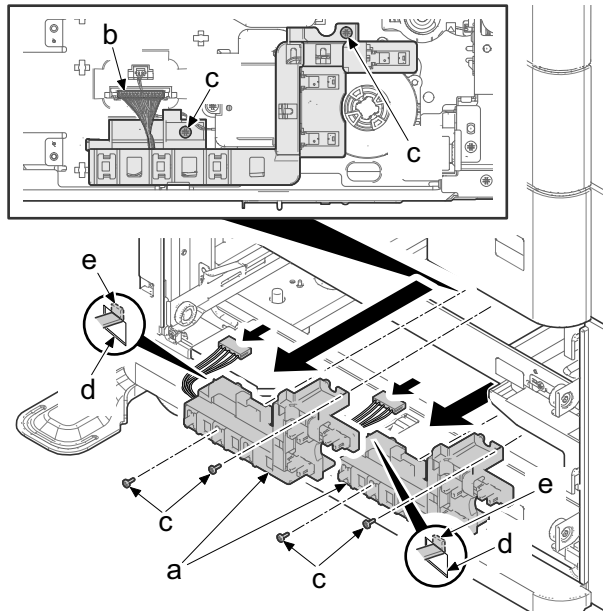
- 1** Pull out the upper cassette (a) from the paper feeder (b) and pull it out on an angle.
- 2** Pull out the lower cassette (a) from the paper feeder (b) and remove it in the direction of the arrow.



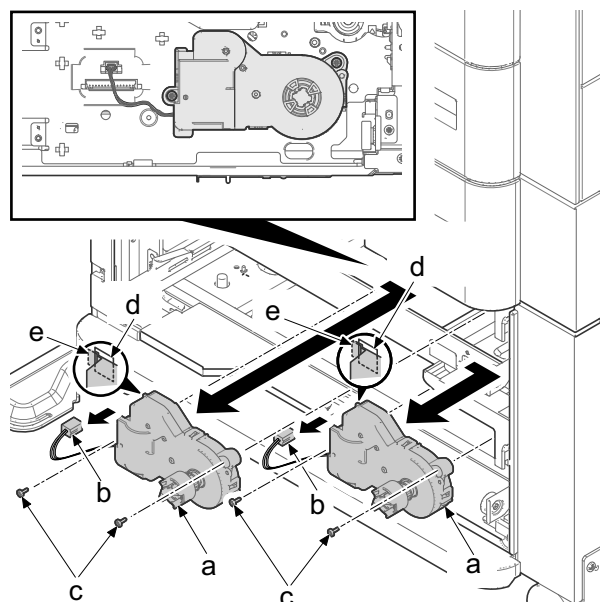
- 3** Pinch the lock lever (c) and pull the primary paper feed unit (d) from the upper stage.
- 4** Pinch the lock lever (c) and pull the primary paper feed unit (d) from the lower stage.



- 5 Disconnect the connector (b) of the upper sensor holder (a) and remove two screws (c) (M3X8).
- 6 Release the hook (e) from the square hole (c) of the side frame and remove the sensor holder (a).
- 7 Remove the sensor holder (a) of the lower stage as well.

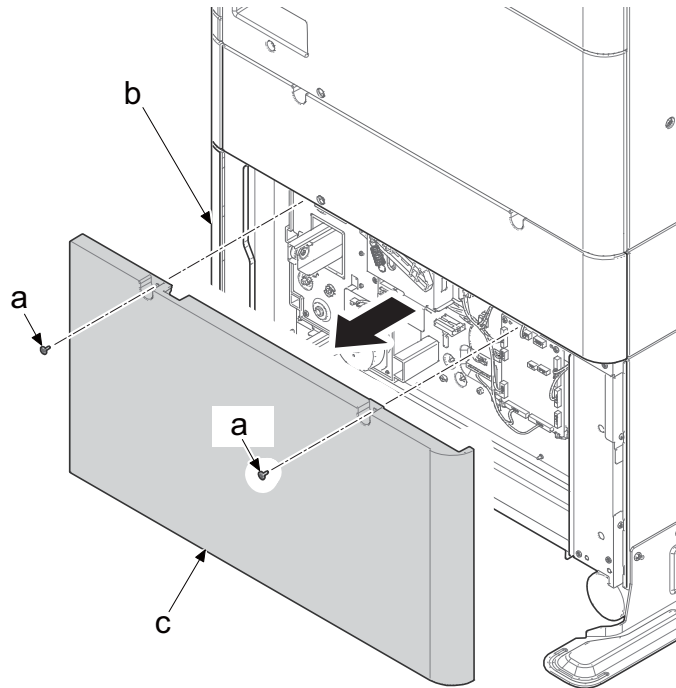


- 8 Disconnect the connector (b) and remove two screws (c) (M3X8) of the upper stage PF lift motor (a).
- 9 Release the hook (e) from the square hole (d) of the side frame and remove the PF lift motor (a).
- 10 Remove the PF lift motor (a) of the lower stage as well.
- 11 Check or replace the PF lift motor (a), and then reattach the parts in the original position.

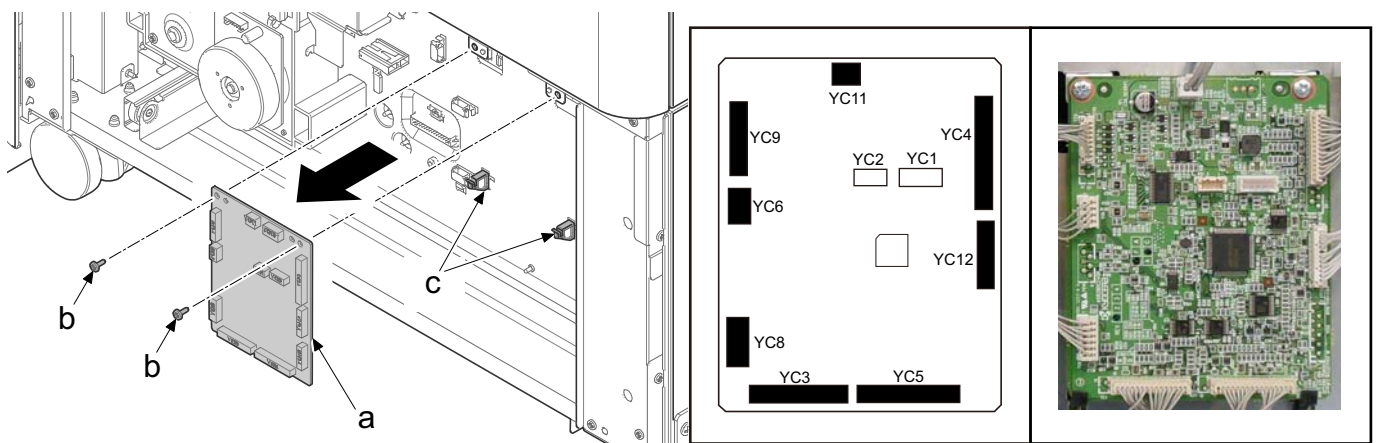


**(2-3) Detaching and reattaching the PF PWB**

- 1** Remove two screws (a) (M3x8).
- 2** Remove PF rear cover (c) from the paper feed unit (b).

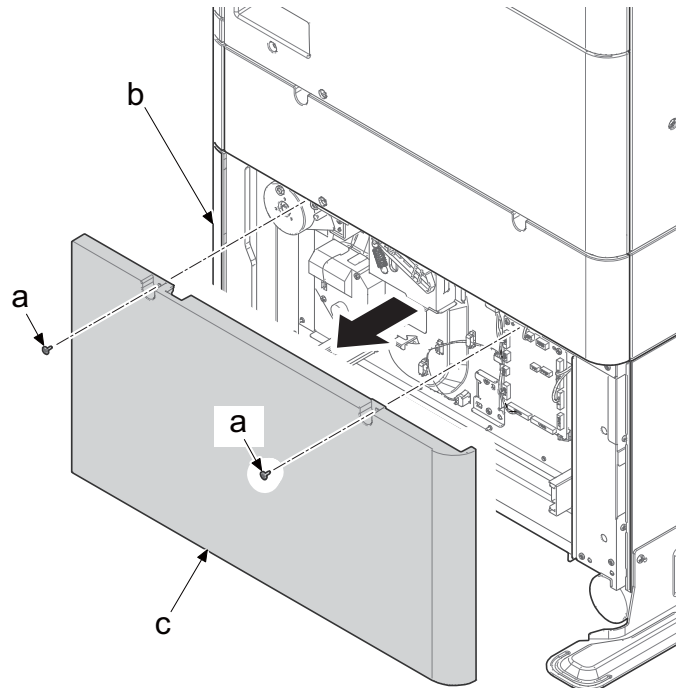


- 3** Disconnect all the connectors from the PF PWB (a).
- 4** Remove two screws (b) (M3x8).
- 5** Release two hooks (c) and remove the PF PWB (a).
- 6** Check or replace the PF PWB (a), and then reattach the parts in the original position.

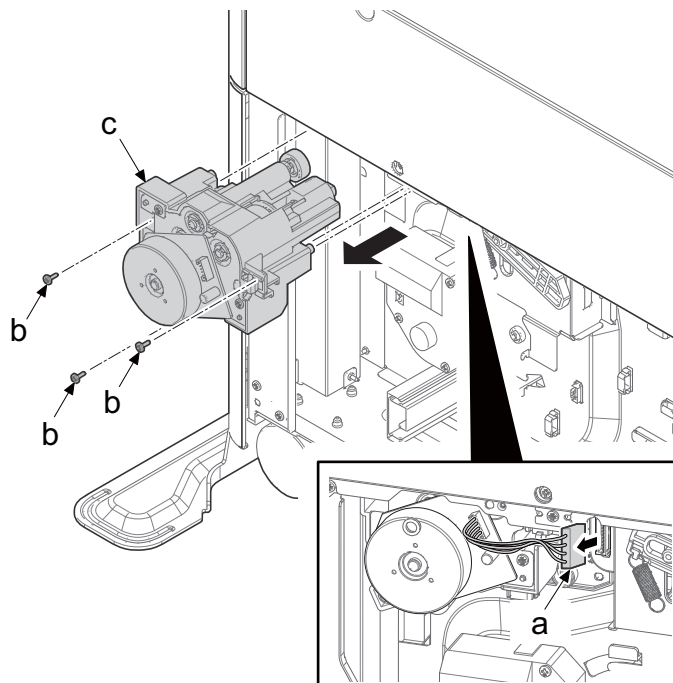


**(3) Paper feeder (PF-5140)****(3-1) Detaching and reattaching the PF drive unit**

- 1** Remove two screws (a) (M3x8).
- 2** Remove PF rear cover (c) from the paper feed unit (b).

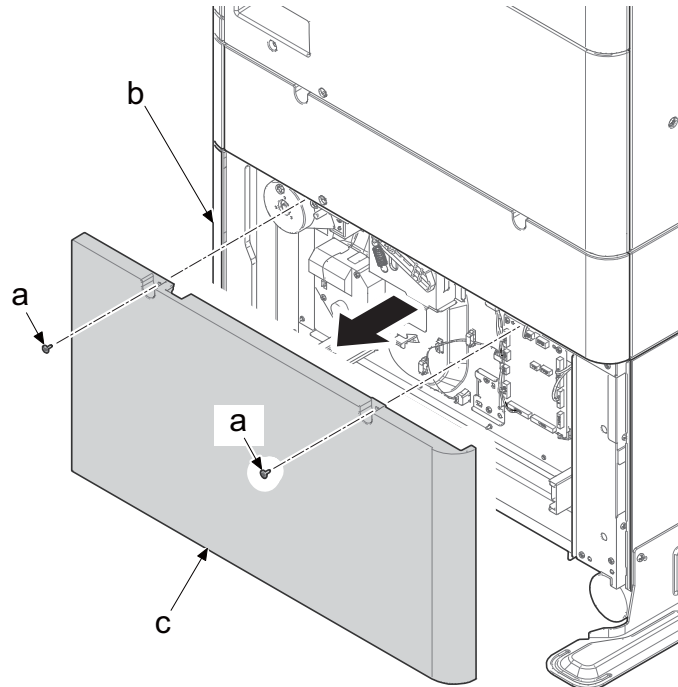


- 3** Remove the connector (a) of the motor.
- 4** Remove three screws (b) (M3x8) and remove the PF drive unit (c).
- 5** Check or replace the PF drive unit (c), and then reattach the parts in the original position.

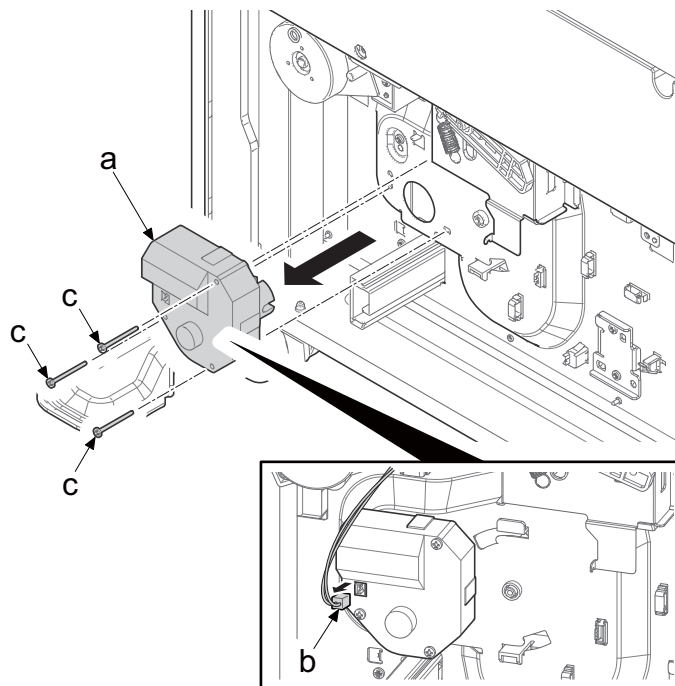


**(3-2) Detaching and reattaching the PF lift motor**

- 1** Remove two screws (a) (M3x8).
- 2** Remove PF rear cover (c) from the paper feed unit (b).



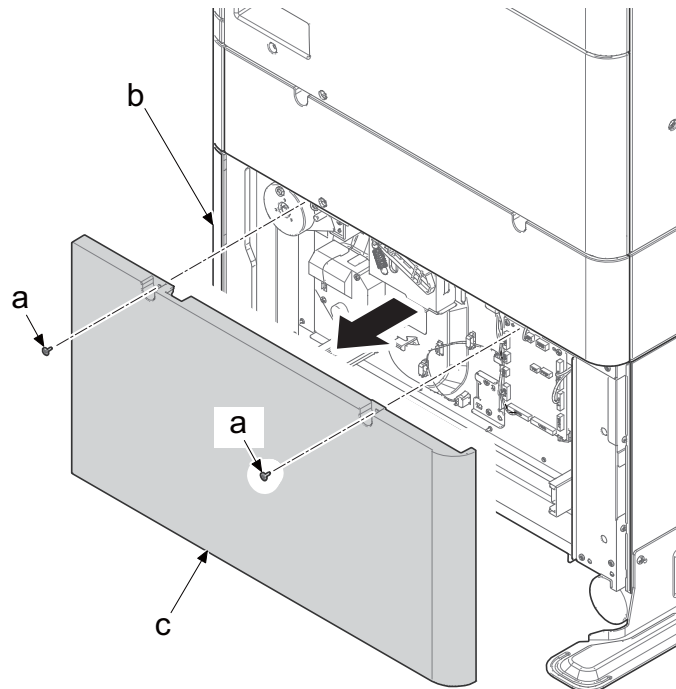
- 3** Disconnect the connector (b) of the PF lift motor (a).
- 4** Remove three screws (b) (M3x8) and remove the PF lift motor (a).
- 5** Check or replace the PF lift motor (a), and then reattach the parts in the original position.



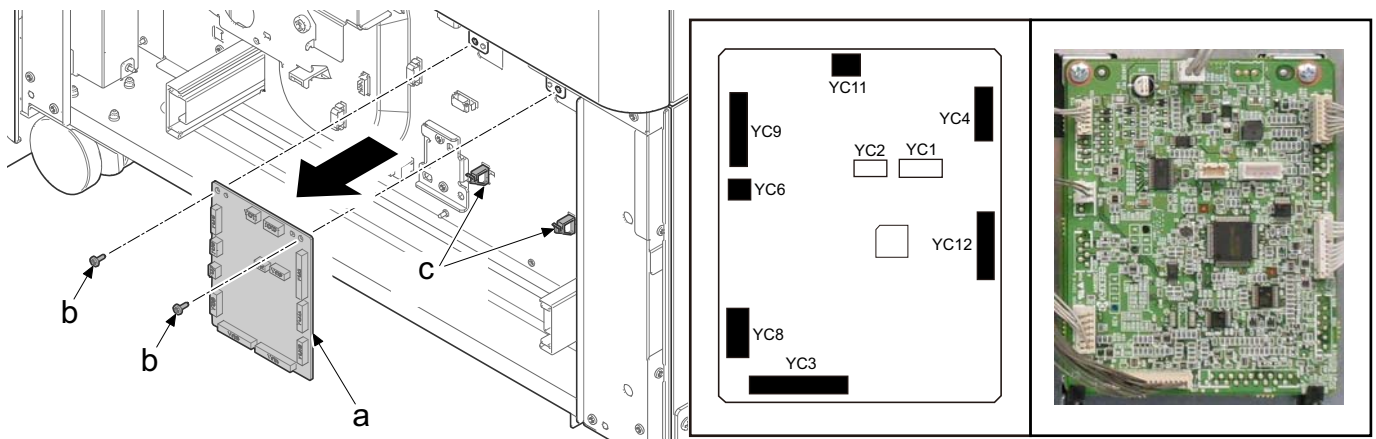


**(3-3) Detaching and reattaching the PF PWB**

- 1** Remove two screws (a) (M3x8).
- 2** Remove PF rear cover (c) from the paper feed unit (b).

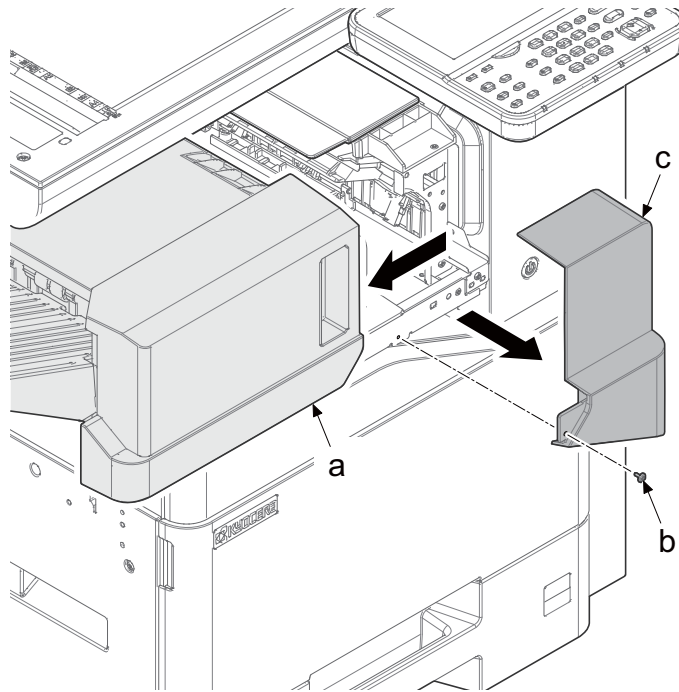


- 3** Disconnect all the connectors from the PF PWB (a).
- 4** Remove two screws (b) (M3x8).
- 5** Release two hooks (c) and remove the PF PWB (a).
- 6** Check or replace the PF PWB (a), and then reattach the parts in the original position.

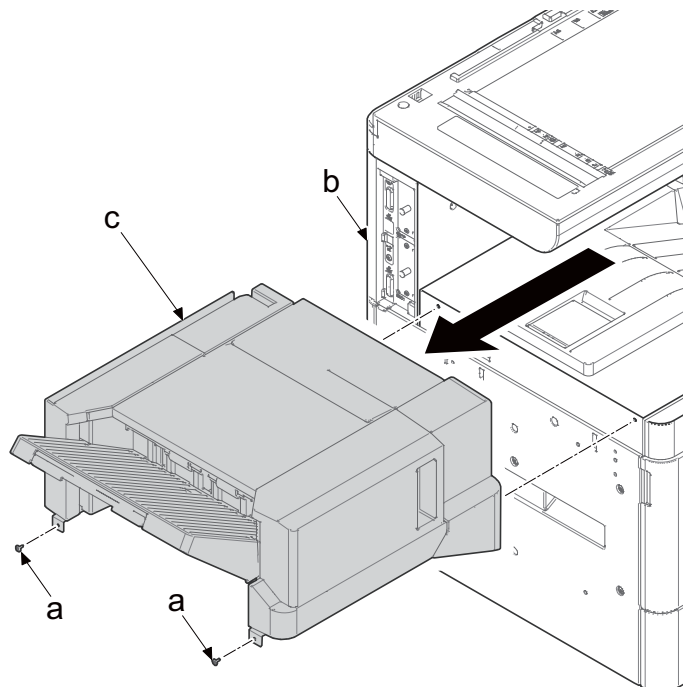


**(4) Finisher (DF-5100)****(4-1) Detaching and reattaching the DF PWB**

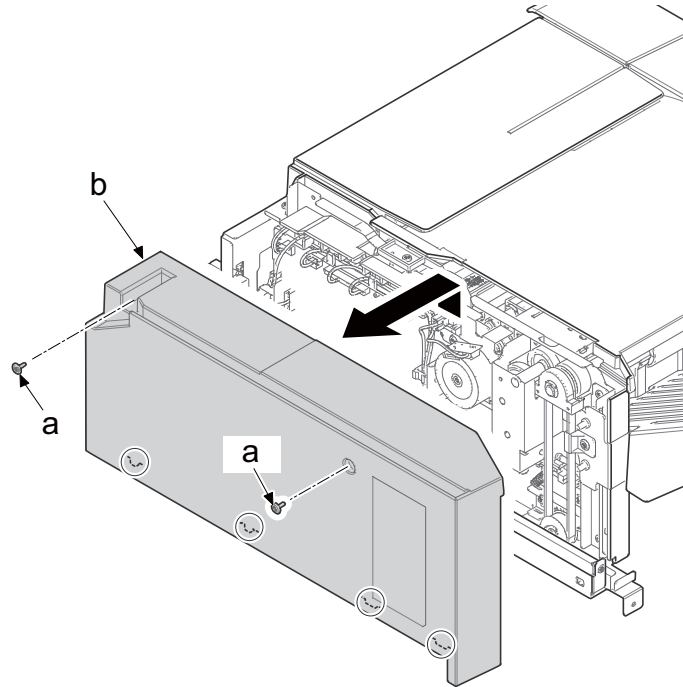
- 1** Slide the DF main unit (a) in the direction of the arrow.
- 2** Remove the screw (b) (M3x8) and remove the DF front right cover (c).



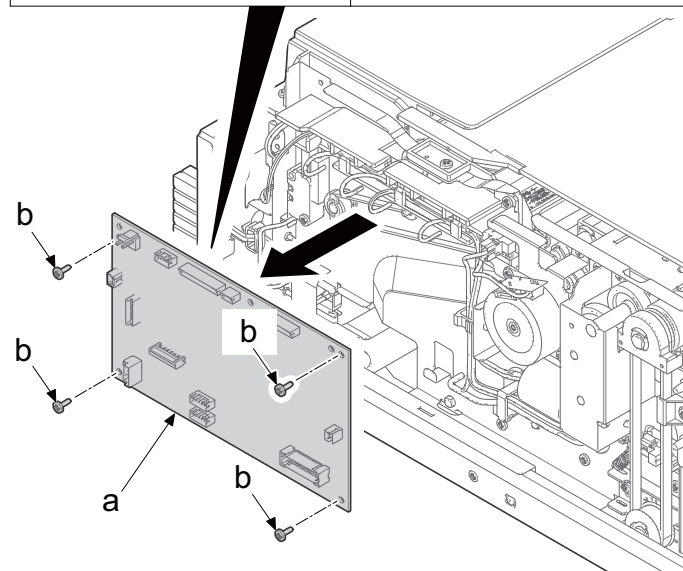
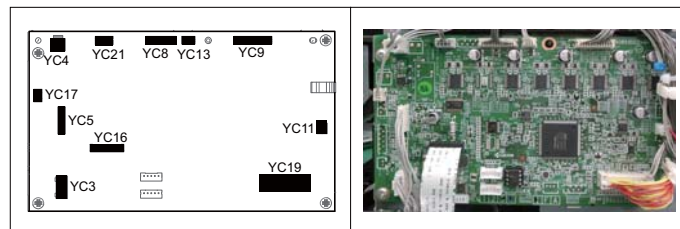
- 3** Remove two screws (a) (M3x8).
- 4** Detach the inner finisher (c) from the main unit (b).



- 5 Remove two screws (a) (M3x8).
- 6 Remove the DF rear cover (b) in the direction of the arrow.



- 7 Disconnect all the connectors from the DF PWB (a).
- 8 Remove four screws (b) (M3x8) and remove the DF PWB (a).
- 9 Check or replace the DF PWB (a), and then reattach the parts in the original position.



## 4 - 8 Periodic maintenance Procedures

Check the maintenance counts by the maintenance mode U901.

### (1) Main unit

CH: Check / CL: Clean / AD: Adjust / LU: Lubrication / RE: Replace

	Set Up	Call	PM maintenance (x1000 counts)			Remark
			200	400	600	
<b>Please do not use spray containing flammable gas for air-blow or air-brush purposes.</b>						
<Set Up>						
TONER (CARTRIDGE)						
WASTE TONER BOX WT-5190						
Image quality	CH AD	CH AD	CH AD	CH AD		
MK-5355A 1702WL8NLO			RE *1	RE *1		DRUM UNIT K, TRANSFER UNIT, DLP UNIT K, FUSER UNIT, 2ND TRANS ASSY SP (RE: 200K/400K)
MK-5357A 1702WL7US0			RE *1	RE *1		*1: HOLDER PICK UP ASSY SP, ROLLER RETARD ASSY (RE: 300K/600K)
MK-5195B 1702R40UN0			RE	RE		CMY DRUM UNIT,CMY DLP UNIT
INSIDE OF MACHINE		CL	CL	CL		VACUUM: Remove toner and paper dust especially at the paper conveying part and around the image formation part.
<Cover>						
OUTER COVERS	CH		CL	CL		Alcohol or dry cloth
<PF and Conveying section>						
PARTS CLEANER REGIST ASSY SP302R494120		CL	CL	CL		VACUUM: Remove paper dust.
PARTS PRIMARY FEED ASSY SP302R494210		CL				Alcohol or dry cloth
PARTS HOLDER PICK UP ASSY SP302R494170		CL				Alcohol or dry cloth
ROLLER RETARD ASSY 302SZ94070		CL				Alcohol or dry cloth
PARTS ROLLER MPF ASSY SP 302MV94020		CL	CH RE	CH RE		Alcohol or dry cloth if no replacement. CH: Performing U901 and check feeding count: Target to replace at 100K.
PARTS HOLDER SEPARATION SP 302R494180		CL	CH RE	CH RE		Alcohol or dry cloth if no replacement. CH: Performing U901 and check feeding count: Target to replace at 100K.

	Set Up	Call	PM maintenance (x1000 counts)			Remark
			200	400	600	
ROLLERS ,PULLEYS		CL	CL	CL		Alcohol or dry cloth
GUIDES		CL	CL	CL		Alcohol or dry cloth
<Exit and Duplex Section>						
ROLLERS ,PULLEYS		CL	CL	CL		Alcohol or dry cloth
GUIDES			CL	CL		Alcohol or dry cloth
<Image scanner section>						
CONTACT GLASS 302H917031	CL	CL	CL	CL		Slit glass for DP: Clean by dry cloth or alcohol. (attention: wet cloth is strictly prohibited.)
CONTACT GLASS DP 302H917040	CL	CL	CL	CL		When installing DP, clean with dry cloth. Contact glass for putting the original on: Dry cloth after cleaning with alcohol (FACE SIDE) Wipe the back side with dry cloth after cleaning with alcohol only when unusual image (line or stain) appears. (BACK SIDE)
<Drive and other section>						
CLUTCHS		CH RE	CH	CH		Check the copy registration and paper feed condition on registration and paper feed section.
SENSORS		CH	CH	CH		Dry cloth or air-blow if light reception part of photo sensor is dirt or paper dust.

**(2) Document Processor**

CH: Check / CL: Clean / AD: Adjust / LU: Lubrication / RE: Replace

	Set Up	Call	PM maintenance (x1000 counts)			Remark
			200	400	600	
Please do not use spray containing flammable gas for air-blow or air-brush purposes.						
<Set Up>						
Image quality ---	CH AD	CH AD	CH AD	CH AD		
<Cover>						
Outer covers ---		CL	CL	CL		CL: Alcohol
<PF and Conveying section>						
MK-3140 1702P60UN0			RE	RE		HOLDER PICKUP ASSY, HOLDER PAD ASSY
PARTS HOLDER PICKUP ASSY SP 303R394020		CL				CL: Alcohol (If necessary, replace the MK-3140)
PARTS HOLDER PAD ASSY SP 303R394030		CL				CL: Alcohol (If necessary, replace the MK-3140)
<Conveying and Reversing section>						
PARTS ROLLER CONVEYING A SP 303R394060		CL	CL	CL		Alcohol or dry cloth
PULLEY CONVEYING x5 3V2NM18240		CL	CL	CL		Alcohol or dry cloth
PULLEY GUIDE READING x4 303LL24190		CL	CL	CL		Alcohol or dry cloth
PARTS ROLLER LOOP SP 303R394090		CL	CL	CL		Alcohol or dry cloth
PULLEY CONVEYING BK x5 303M824210		CL	CL	CL		Alcohol or dry cloth
GUIDE READING 3V2NM18520		CL	CL	CL		Alcohol or dry cloth
<Other section>						
PLATE ORIGINAL 302H918021		CL	CL	CL		Alcohol or dry cloth
CONTACT GLASS DP 302H917040		CL	CL	CL		Slit glass for DP (Main body side) Alcohol or dry cloth (wet cloth is strictly prohibited.)

**(3) PF-5120 (Option)**

CH: Check / CL: Clean / AD: Adjust / LU: Lubrication / RE: Replace

	Set Up	Call	PM maintenance (x1000 counts)			Remark
			200	400	600	
Please do not use spray containing flammable gas for air-blow or air-brush purposes.						
<Set Up>						
PAPER LINE ---	CH AD					CH: check the center alignment gap. (check after center adjustment of copier)
<Cover>						
Outer covers ---		CL	CL			Alcohol or dry cloth
<Paper feed section>						
PARTS PRIMARY FEED ASSY SP 302R494210		CL				Alcohol or dry cloth
PARTS HOLDER PICK UP ASSY SP 302R494170		CL	CH RE			Alcohol or dry cloth if no replacement. CH: Performing U901 and check feeding count: Target to replace at 300K.
PARTS ROLLER RETARD ASSY SP 302SZ94070		CL	CH RE			Alcohol or dry cloth if no replacement. CH: Performing U901 and check feeding count: Target to replace at 300K.
<Paper conveying section>						
PARTS ROLLER CONVEYING VF SP 303PS94050		CL	CL			Alcohol or dry cloth
<Drive and other section>						
SENSORS ---		CH	CH			Dry cloth or air-blow if light reception part of photo sensor is dirt or paper dust.

**(4) PF-5130 (Option)**

CH: Check / CL: Clean / AD: Adjust / LU: Lubrication / RE: Replace

	Set Up	Call	PM maintenance (x1000 counts)			Remark
			200	400	600	
Please do not use spray containing flammable gas for air-blow or air-brush purposes.						
<Set Up>						
PAPER LINE ---	CH AD					CH: check the center alignment gap. (check after center adjustment of copier)
<Cover>						
Outer covers ---		CL	CL			Alcohol or dry cloth
<Paper feed section>						
PARTS PRIMARY FEED ASSY SP x2 302R494210		CL				Alcohol or dry cloth
PARTS HOLDER PICK UP ASSY SP x2 302R494170		CL	CH RE			Alcohol or dry cloth if no replacement. CH: Performing U901 and check feeding count: Target to replace at 300K.
PARTS ROLLER MPF ASSY SP x2 302SZ94070		CL	CH RE			Alcohol or dry cloth if no replacement. CH: Performing U901 and check feeding count: Target to replace at 300K.
<Paper conveying section>						
PARTS ROLLER CONVEYING VF SP x2 303PS94050		CL	CL			Alcohol or dry cloth
<Drive and other section>						
SENSORS ---		CH	CH			Dry cloth or air-blow if light reception part of photo sensor is dirt or paper dust.



**(5) PF-5140 (Option)**

CH: Check / CL: Clean / AD: Adjust / LU: Lubrication / RE: Replace

	Set Up	Call	PM maintenance (x1000 counts)			Remark
			200	400	600	
Please do not use spray containing flammable gas for air-blow or air-brush purposes.						
<Set Up>						
PAPER LINE ---	CH AD					CH: check the center alignment gap. (check after center adjustment of copier)
<Cover>						
Outer covers ---		CL	CL			Alcohol or dry cloth
<Paper feed section>						
PARTS PRIMARY FEED ASSY SP 302R494210		CL				Alcohol or dry cloth
PARTS HOLDER PICK UP ASSY SP 302R494170		CL	CH RE			Alcohol or dry cloth if no replacement. CH: Performing U901 and check feeding count: Target to replace at 300K.
PARTS ROLLER RETARD ASSY SP 302SZ94070		CL	CH RE			Alcohol or dry cloth if no replacement. CH: Performing U901 and check feeding count: Target to replace at 300K.
<Paper conveying section>						
PARTS ROLLER CONVEYING VF SP 303PS94050		CL	CL			Alcohol or dry cloth
<Drive and other section>						
SENSORS ---		CH	CH			Dry cloth or air-blow if light reception part of photo sensor is dirt or paper dust.

**(6) AK-5100 (Option)**

CH: Check / CL: Clean / AD: Adjust / LU: Lubrication / RE: Replace

	Set Up	Call	PM maintenance (x1000 counts)			Remark
			200	400	600	
						Please do not use spray containing flammable gas for air-blow or air-brush purposes.
Outer covers ---		CL	CL			Alcohol or dry cloth
PARTS ROLLER CONVEYING A SP 303PY94010		CL	CL			Alcohol
PARTS ROLLER CONVEYING B SP x2 303PY94020		CL	CL			Alcohol
PULLEY DU LOW x6 302F929260		CL	CL			Alcohol

**(7) JS-5100 (Option)**

CH: Check / CL: Clean / AD: Adjust / LU: Lubrication / RE: Replace

	Set Up	Call	PM maintenance (x1000 counts)			Remark
			200	400	600	
						Please do not use spray containing flammable gas for air-blow or air-brush purposes.
Outer covers ---		CL	CL			Alcohol or dry cloth
PARTS SENSOR OPT SP 303PX94030		CL	CL			CL: Airbrush or dry cloth

**(8) DF-5100 (Option)**

CH: Check / CL: Clean / AD: Adjust / LU: Lubrication / RE: Replace

	Set Up	Call	PM maintenance (x1000 counts)			Remark
			200	400	600	
Please do not use spray containing flammable gas for air-blow or air-brush purposes.						
<Cover>						
Outer covers, Tray ---			CL			Alcohol or dry cloth
<PF, Conveying and exit sections>						
ROLLER FEED 303PX24030			CL			Alcohol or dry cloth
PULLEY MIDDLE A x2 302H722760			CL			Alcohol or dry cloth
ROLLER MIDDLE 303PX36680			CL			Alcohol or dry cloth
PULLEY MIDDLE x2 303NB36661			CL			Alcohol or dry cloth
PULLEY PAPER FEED x2 3BR07040			CL			Alcohol or dry cloth
PULLEY EXIT x2 303RD36130			CL			Alcohol or dry cloth
PULLEY EXIT ONEWAYCLUTCH x2 303RD36180			CL			Alcohol or dry cloth
STATIC-ELIMINATOR EJECT CENTER x2 303NB36500			CH			CH: Remove paper dust at the end of brush
<Sensor>						
SENSOR OPT 7NXPSR11GD6MH01			CL			Airbrush
SENSOR OPT x6 7NXSG2A241++H01			CL			Airbrush

**(9) MT-5100 (Option)**

CH: Check / CL: Clean / AD: Adjust / LU: Lubrication / RE: Replace

	Set Up	Call	PM maintenance (x1000 counts)			Remark
			200	400	600	
<b>Please do not use spray containing flammable gas for air-blow or air-brush purposes.</b>						
<b>&lt;Cover&gt;</b>						
Outer covers, Tray ---			CL			Alcohol or dry cloth
<b>&lt;Conveying Section&gt;</b>						
ROLLER CONVEYING x2 303R024090			CL			Alcohol or dry cloth
PULLEY 15 MPF FEED x4 302H008220			CL			Alcohol or dry cloth
ROLLER EJECT A x5 303R024100			CL			Alcohol or dry cloth
PULLEY EJECT x10 303LW24060			CL			Alcohol or dry cloth
ROLLER EJECT C 303R024110			CL			Alcohol or dry cloth
PULLEY EJECT x4 303R024140			CL			Alcohol or dry cloth
STATIC ELIMINATOR x5 303LJ28040			CH			CH: Remove paper dust at the end of brush
STATIC-ELIMINATOR EJECT SIDE 303NB36490			CH			CH: Remove paper dust at the end of brush
STATIC-ELIMINATOR EJECT CENTER 303NB36500			CH			CH: Remove paper dust at the end of brush
<b>&lt;Sensor&gt;</b>						
SENSOR OPT x8 7NXSG2A241++H01			CL			Airbrush
SENSOR A,SEPARATION 303H327460			CL			Airbrush
SENSOR OPT 7NXKB1281AA2H01			CL			Airbrush

## 5 Firmware update

Execute the following to update the firmware below.

- The processing time is reduced with simultaneous processing by group.

### [GROUP1 UPDATE]

Target firmware	Master file name	Message
Optional language data (Optional language data for the controller)	DL_OPT.2SZ	OPT
Controller firmware	DL_CTRL.2SZ	CTRL
First color table data (Printer)	DL_PCLT1.2SZ	P-CLUT1
Second color table data (Printer)	DL_PCLT2.2SZ	P-CLUT2
First color table data (Copy)	DL_CCLT1.2SZ	C-CLUT1
Second color table data (Copy)	DL_CCLT2.2SZ	C-CLUT2

### [GROUP2 UPDATE]

Target firmware	Master file name	Message
FAX firmware	DL_FAX.2R4	FAX

### [GROUP3 UPDATE]

Target firmware	Master file name	Message
Mail Box	DL_03R0.2R6	MAIL-BOX
Inner DF	DL_03PX.2R6	INNER-DF
Firmware for the second PF (paper feeder)	DL_03PZ.2R6	PF2
Firmware for the first PF (paper feeder)	DL_03PZ.2R6	PF1
Engine firmware	DL_ENGN.2SZ	ENGN

[GROUP4 UPDATE]: No applicable firmware is available.

### [GROUP5 UPDATE]

Target firmware	Master file name	Message
Optional language data (Optional language data for the Panel)	DL_OPT.2SZ	OPT
Dictionary data	DL_DIC.2R4	DIC
Browser data	DL_BRWS.2R4	BRWS
Panel firmware	DL_PANL.2SZ	PANL

### 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
Controller data	2SZ_CTRL_sign.bin	2SZ_CTRL_cert.pem
Panel data	2SZ_PANL_sign.bin	2SZ_PANL_cert.pem
Optional language data	2SZ_OPT_sign.bin	2SZ_OPT_cert.pem

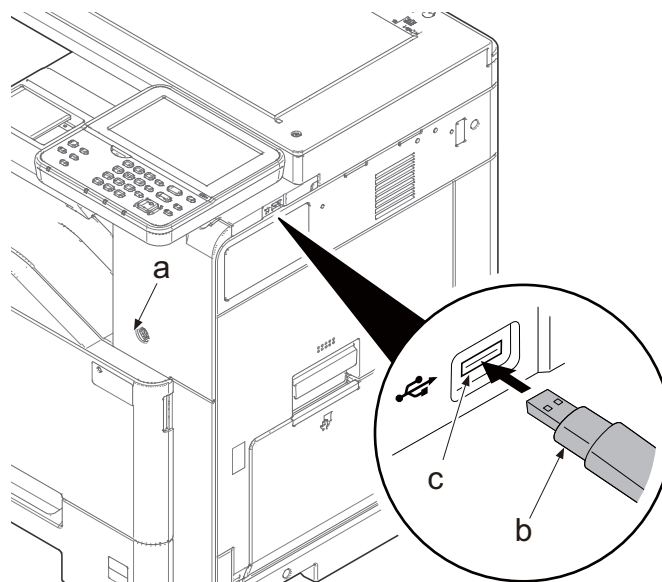
Target	Signature file name	Firmware certificate file name
Dictionary data	2R4_DIC_sign.bin	2R4_DIC_cert.pem
Browser data	2R4_BRWS_sign.bin	2R4_BRWS_cert.pem
First color table data for the printer	2SZ_PCLT1_sign.bin	2SZ_PCLT1_cert.pem
Second color table data for the printer	2SZ_PCLT2_sign.bin	2SZ_PCLT2_cert.pem
First color table data for the copy	2SZ_CCLT1_sign.bin	2SZ_CCLT1_cert.pem
Second color table data for the copy	2SZ_CCLT2_sign.bin	2SZ_CCLT2_cert.pem
FAX PWB	2R4_FAX_sign.bin	2R4_FAX_cert.pem
Engine PWB	2SZ_ENGN_sign.bin	2SZ_ENGN_cert.pem
PF	2R6_03PZ_sign.bin	2R6_03PZ_cert.pem
Inner DF	2R6_03PX_sign.bin	2R6_03PX_cert.pem
Mail Box	2R6_03R0_sign.bin	2R6_03R0_cert.pem

## Preparations

Unzip the file containing the downloaded firmware and then copy the firmware, high-speed master file (skip files: ES\_SKIP.ON) and the file for signature verification in the root folder of the USB memory.

- If the high-speed master file exists, the same version firmware update is skipped.

- 1 Turn the power switch (a) on and "Ready to copy" is displayed. After checking that 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.
- 3 Turn the power switch (a) on.



- FW-Update and the progress indicator is displayed.  
Several kinds of firmware updates are processed simultaneously.

```

FW-UPDATE ██████████
CTRL 100%    OPT
P-CLUT1     DIC
P-CLUT2     BRWS
C-CLUT1     PANL
C-CLUT2
FAX 20%
MAIL-BOX
INNER-DF 100%
PF2
PF1
ENGN 80%
    
```

- Completed is displayed when the firmware update is completed.  
Check if the new firmware versions are displayed.

```

FW - UPDATE Completed
CTRL 2R6_2000.001.003*  OPT No Change
P-CLUT1 No Change       DIC No Change
P-CLUT2 No Change       BRWS No Change
C-CLUT1 No Change       PANL No Change
C-CLUT2 No Change
FAX -----
MAIL-BOX No Change
INNERDF No Change
PF2 No Change
PF1 No Change
ENGN 2R4_1000.001.001
    
```

- 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 FAX PWB, optional equipment, etc. are not installed.
- The result of the signature verification is indicated as follows.

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

- Unplug the power cord and disconnect the USB memory.
- Plug in the power cord and turn the power switch (a) on.  
30ppm model due to its construction may indicate the operation display momentarily when connecting the power cord.
- Check that the "Home" screen is displayed and then turn the power switch (a) off.

 **Important**

Never turn the power switch (a) off or disconnect the USB memory (b) 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.

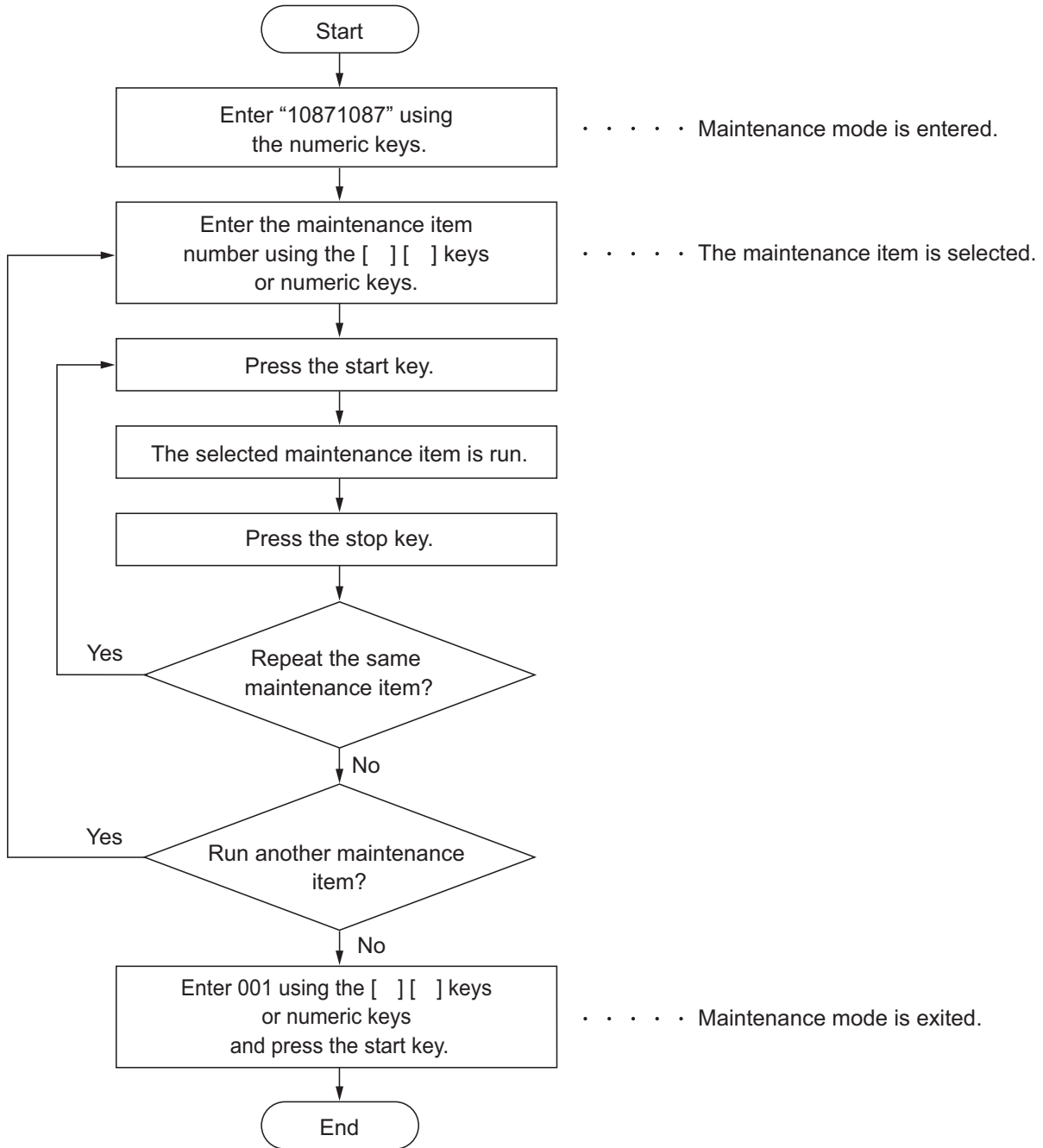
- The firmware update that was already completed before power shut-down is skipped.

## 6 Maintenance mode

### 6 - 1 Maintenance mode

#### (1) Executing the maintenance mode

The machine is equipped with a maintenance function which can be used to maintain and service the machine.





**(2) Maintenance modes list**

Section	No. Maintenance item	Outline
General	<a href="#">U000 Printing Maintenance Report</a>	Printing the reports and exporting them to a USB memory
	<a href="#">U001 Exiting the maintenance mode</a>	Exiting from the maintenance mode
	<a href="#">U002 Set Factory Default</a>	Initializing to the factory-default setting
	<a href="#">U003 Set tel number</a>	Set the telephone number of the service person
	<a href="#">U004 Machine serial number</a>	Display of the machine serial number and setting
	<a href="#">U010 Setting the maintenance mode ID</a>	Setting the maintenance mode ID
	<a href="#">U019 Firmware Version</a>	Display the firmware version of the PWB
Initialization	<a href="#">U021 Initializes Memory</a>	Initializing the backup RAM
	<a href="#">U025 Firmware update (S)</a>	Update the firmware
Drive Paper feed Conveying Cooling	<a href="#">U030 Motor operation check</a>	Drive the drive motor
	<a href="#">U031 Check the conveying switch</a>	Check the conveying switch On/Off
	<a href="#">U032 Clutch operation check</a>	Check the paper conveying clutch operation
	<a href="#">U033 Solenoid operation check</a>	Drive the paper conveying and toner supply solenoids
	<a href="#">U034 Paper timing adjustment</a>	Adjusting the leading edge timing and the center line
	<a href="#">U035 Folio size setting</a>	Set the Folio paper length and width
	<a href="#">U037 Fan motor operation check</a>	Drive each fan motor
	<a href="#">U051 Registration paper loop amount adjustment</a>	Adjust the paper loop amount between the rollers
	<a href="#">U053 Adjusting the motor speed</a>	Set each motor's speed correction
	<a href="#">U059 Fan mode setting</a>	Set the drive mode of the conveying fan motor
Optical	<a href="#">U065 Adjusting the magnification for table scanning</a>	Adjusting the magnification for table scanning
	<a href="#">U066 Adjusting the table scanning timing</a>	Adjusting the leading edge timing for table scanning
	<a href="#">U067 Adjusting the table scanning center line</a>	Adjusting the center line for table scanning
	<a href="#">U068 DP scanning position adjustment</a>	Adjusting the starting position for DP scanning
	<a href="#">U070 DP magnification adjustment</a>	Adjusting the magnification for DP scanning
	<a href="#">U071 Adjusting the DP leading edge Timing</a>	Adjusting the DP scanning timing
	<a href="#">U072 Adjusting the DP original center</a>	Adjusting the center line for DP scanning
	<a href="#">U089 MIP-PG pattern output</a>	Output MIP-PG pattern
High voltage system	<a href="#">U100 Main high voltage adjustment</a>	Adjust the drum surface potential
	<a href="#">U101 Primary transfer current adjustment</a>	Set high voltage except the main high voltage and outputs
	<a href="#">U106 Secondary transfer current adjustment</a>	Set the secondary transfer current correction
	<a href="#">U107 Primary transfer cleaning voltage adjustment</a>	Set the primary transfer belt cleaning current
	<a href="#">U110 Drum counter</a>	Display/set the drum counter
	<a href="#">U117 Drum unit number</a>	Display the drum number
	<a href="#">U118 Drum unit history</a>	Display the drum history
	<a href="#">U119 Setting the drum</a>	Set the initial LSU light intensity

Section	No. Maintenance item	Outline
	<a href="#">U120 Drum drive distance counter</a>	Display the drum drive distance counter
	<a href="#">U127 Clearing the transfer count</a>	Displaying the counts
	<a href="#">U128 Leading edge timing</a>	Adjust the transfer high-voltage output ON/OFF timing
Developer system	<a href="#">U132 Forcible toner supply operation</a>	Execute the toner supply in the toner control level
	<a href="#">U135 Checking the toner motor operation</a>	Drive the toner motor
	<a href="#">U136 Toner level detection setting</a>	Set the number of pages printable at toner near end
	<a href="#">U139 Temperature, humidity</a>	Display the machine inside and outside humidity
	<a href="#">U140 Developer bias adjustment</a>	Adjust the developer bias values or set the high altitude mode
	<a href="#">U147 Setting the toner applying mode</a>	Set the overcharge toner removal mode
	<a href="#">U148 Drum refresh mode setting</a>	Setting auto drum refresh
	<a href="#">U155 Toner sensor output</a>	Display the toner sensor output
	<a href="#">U156 Toner control level adjustment</a>	Display/adjust the toner supply level
	<a href="#">U157 Developer drive time</a>	Display/set the developer drive time
<a href="#">U158 Developer counter</a>	Display/set the developer counter	
Fuser	<a href="#">U161 Fuser temperature adjustment</a>	Set the fuser control temperature
	<a href="#">U167 Clearing the fuser count</a>	Displaying/clearing the counts
	<a href="#">U198 Set the fuser phase control</a>	Switch the fixing phase control
	<a href="#">U199 Fuser temperature</a>	Monitor the fuser temperature
Operation section Support equipment	<a href="#">U200 All LEDs lighting</a>	Light all the LEDs on the operation panel
	<a href="#">U201 Initializing the touch panel</a>	Correct the X and Y axis position of the touch panel
	<a href="#">U203 Check DP operation</a>	Checking the DP paper conveying operation with the DP alone
	<a href="#">U207 Operation key check</a>	Check the operation panel key operation
	<a href="#">U211 Enhancement unit connection setting</a>	Set the connection of the enhancement units
	<a href="#">U221 USB host lock function setting</a>	Set USB Host lock function ON/OFF
	<a href="#">U222 Setting the IC card type</a>	Set the ID card type
	<a href="#">U223 Operation panel lock</a>	Set On/Off of the operation unit lock
	<a href="#">U230 Optional device serial number</a>	Display the optional device serial number
	<a href="#">U240 Finisher operation check</a>	Check the drive operation
	<a href="#">U241 Finisher switch check</a>	Check the switch operation
	<a href="#">U243 Checking the DP motor</a>	Drive the PF motor and solenoid
	<a href="#">U244 DP switch check</a>	Drive the DP sensor
	<a href="#">U246 Finisher adjustment</a>	Set the finisher adjustment value
<a href="#">U247 Paper feed operation check</a>	Drive the PF motor and clutch	
Mode Setting	<a href="#">U250 Checking/clearing the maintenance cycle</a>	Change the preset value
	<a href="#">U251 Checking/clearing the maintenance counter</a>	Displaying/clearing/changing the counter value

Section	No. Maintenance item	Outline
	<a href="#">U252 Destination</a>	Set the machine operation and indication depending on the specification of the destination
	<a href="#">U253 Switching the double/single counts</a>	Set the counter by color mode
	<a href="#">U260 Switching the timing for copy counting</a>	Setting the count-up timing
	<a href="#">U265 Setting by destination</a>	Set the OEM code
	<a href="#">U276 Switching the copy count mode</a>	Set the single color copy count mode
	<a href="#">U278 Delivery date setting</a>	Register Delivery Date
Mode Setting	<a href="#">U283 Setting China Red</a>	Enable/Disable China Red setting
	<a href="#">U284 Setting the 2-color copy</a>	Switch the 2-color copy mode
	<a href="#">U285 Set Service Status Page</a>	Setting the print coverage report output
	<a href="#">U290 Setting the drive to save the HyPAS application</a>	Setting the print coverage report output
	<a href="#">U323 Abnormal temperature and humidity notification setting</a>	Switch the indication mode of the abnormal temperature and humidity detection
	<a href="#">U325 Paper interval setting</a>	Set the print interval at high coverage
	<a href="#">U326 Black line cleaning indication</a>	Switch the black line cleaning guidance indication
	<a href="#">U327 Cassette heater On/Off setting</a>	Select the cassette heater control setting
	<a href="#">U332 Adjusting the black coverage coefficient</a>	Setting the coefficient of the custom size
	<a href="#">U341 Printer cassette setting</a>	Set the cassette to printer output only
	<a href="#">U343 Duplex priority mode</a>	Switch the duplex printing priority mode
	<a href="#">U345 Setting the value for maintenance due indication</a>	Setting the maintenance timing display
	<a href="#">U346 Selecting Sleep Mode</a>	Setting the BAM related sleep mode
Image processing	<a href="#">U402 margin adjustment</a>	Adjust the scan image margins
	<a href="#">U403 Adjusting margins for scanning an original on the contact glass</a>	Adjust the margin for scanning originals
	<a href="#">U404 Adjusting margins for scanning an original from the document processor</a>	Adjust the margin for scanning originals
	<a href="#">U407 Adjusting the writing timing (Duplex/Reversal)</a>	Adjusting the writing timing when duplex printing
	<a href="#">U410 Adjusting the halftone automatically</a>	Acquiring the data for the automatic halftone adjustment and the ID correction
	<a href="#">U411 Scanner auto adjustment</a>	Adjusting the scanner and DP automatically
	<a href="#">U425 Set Target</a>	Input the Lab value printed on an adjustment original
	<a href="#">U429 Adjusting the color balance offset</a>	Adjust the color balance offset
	<a href="#">U464 ID correction setting</a>	Set the ID correction
	<a href="#">U465 ID correction data</a>	Display the light intensity control value after the ID correction
	<a href="#">U467 Color registration correction operation setting</a>	Set the color registration correction
	<a href="#">U468 Color registration correction data</a>	Display the color registration correction data
	<a href="#">U469 Color registration adjustment</a>	Correct the color registration

Section	No. Maintenance item	Outline
	<a href="#">U470 Setting the JPEG compression rate</a>	Set the JPEG compression rate
Image processing	<a href="#">U474 Checking the LSU cleaning</a>	Set the LSU cleaning operation check and cleaning cycle
	<a href="#">U485 Image process mode setting</a>	Set the image processing
	<a href="#">U486 Color/BW mode setting</a>	Set the image processing
TDRS	<a href="#">U520 TDRS setting</a>	Checking/setting the TDRS
FAX	<a href="#">U600 Initialize: All Data</a>	Initialize all data and image memory
	<a href="#">U601 Initialize: Keep data</a>	Initializing the software switches of other than the machine data
	<a href="#">U603 User data 1</a>	Make user settings to enable the use as a FAX
	<a href="#">U604 User data 2</a>	Make user settings to enable the use as a FAX
FAX	<a href="#">U605 Data clear</a>	Initializing the FAX communication data
	<a href="#">U610 System 1</a>	Set the number of lines to be ignored when receiving a FAX at 100% magnification and in the auto reduction mode
	<a href="#">U611 System 2</a>	Number of adjustment lines for automatic reduction
	<a href="#">U612 System 3</a>	Setting regarding the FAX communication operation
	<a href="#">U620 FAX system</a>	Set the signal detection method for remote switching
	<a href="#">U625 Communication settings</a>	Set the auto redialing interval and the number of times of auto redialing
	<a href="#">U630 Communication control procedures 1</a>	Setting the FAX communication
	<a href="#">U631 Communication control procedures 2</a>	Setting the FAX communication
	<a href="#">U632 Communication control procedures 3</a>	Setting the FAX communication
	<a href="#">U633 Communication control procedures 4</a>	Setting the FAX communication
	<a href="#">U635 Communication control procedures 5</a>	Set the acceptable error when judging the received TCF signal
	<a href="#">U640 Communication time setting 1</a>	Setting the detection time by remote switching mode
	<a href="#">U641 Communication time setting 2</a>	Set the time-out time for the fax communication
	<a href="#">U650 Modem 1</a>	Set the G3 transmission cable equalizer
	<a href="#">U651 Modem 2</a>	Set the modem output level
	<a href="#">U660 Ring setting</a>	Setting the NCU (network control unit)
	<a href="#">U670 List output</a>	Outputting the list of the FAX communication data
	<a href="#">U695 FAX function customization</a>	FAX batch transmission is set up
	<a href="#">U699 Software switch: Set</a>	Set the software switches individually
Others	<a href="#">U901 Clearing the counters by paper source</a>	Display/clear the counters by paper source
	<a href="#">U903 Clearing the jam counter</a>	Display/clear number of occurrence by jam trigger code
	<a href="#">U904 Clearing the service call error counter</a>	Display/clear the service call error and system error counts
	<a href="#">U905 Optional counter</a>	Displaying the counts
	<a href="#">U906 Resetting the partial operation</a>	Reset the partial operation
	<a href="#">U908 Total counter</a>	Display the FAX count
	<a href="#">U910 Black rate data</a>	Clearing the print coverage data and its period
	<a href="#">U911 Counter by media type</a>	Display/clear the counts by media type

Section	No. Maintenance item	Outline
	<a href="#">U917 Retrieve the backup data</a>	Reading/writing the backup data to a USB memory
	<a href="#">U920 Billing counter</a>	Display the billing count
	<a href="#">U927 Clearing all the billing/life counters</a>	Clearing the billing count and machine life count
	<a href="#">U928 Machine life counter</a>	Display the machine life count
	<a href="#">U930 Clear the main charger roller counts</a>	Displaying/setting the counts
	<a href="#">U952 Maintenance mode workflow</a>	Execute the maintenance flow with the WorkFlow data
	<a href="#">U964 Log check</a>	Transfer the log files to a USB memory
	<a href="#">U977 Setting the data capture mode</a>	Store the data sent to the main unit into a USB memory
	<a href="#">U984 Developer unit number</a>	Display the developer unit number
	<a href="#">U985 Developer unit history</a>	Display the developer unit number history
	<a href="#">U991 Scanner counter</a>	Display the scanner count

### (3) Content of the maintenance mode

#### U000 Printing Maintenance Report

##### Message: Mainte Report

##### Contents

Prints the list of the current settings of the maintenance items, paper jam and service call error occurrences. Output the event log and service status page.

Also, sends output data to a USB memory.

##### Purpose

Checks the current settings of the maintenance items, paper jam and service call error occurrences.

Before initializing or replacing the backup memory, print 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	Printing Maintenance Report
User Status	Output User Status Page
Service Status	Output Service Status Page
Event	Output the event log report
NW Status	Output Network Status Page
LLU Report	Output LLU report
All	All reports output

- 3 Turn it On/Off by the [<] [>] keys.
- 4 Press the [Start] key.  
Insert a USB memory into the USB memory slot to output to it.
- 5 Select the item to output.

Items	Output list
Print	A report is printed
USB(Text)	Destination: send to USB memory (text format)
USB(HTML)	Destination: send to USB memory (HTML format)

- 6 Press the [Start] key to output the list.  
If A4 paper is available, it is output with this size. If A4 paper is unavailable, select the paper source. Output status is displayed.  
The output data is sent to the USB memory.

##### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

Detail of event log

**Event Log**

**MFP**

**TASKalfa 308ci**

(1) Firmware version 2WL\_S000.003.037 2019.02.21

(6) XXXXXXXXXXXX  
 (2) 2019/02/21 15:15  
 (3) [XXXXXXXXXX] (4) [XXXXXXXXXX] (5) [XXXXXXXXXX]

(6) Machine No.:XXXXXXXXXX (7) Total Life Count:XXXXX (8) Color Life Count:XXXXX

**(9) Paper Jam Log**

#	Count.	Event Descriptions	Date and Time
12	5555555	0501.01.08.01.00	2019/02/12 17:30
11	4444444	4002.01.08.01.00	2019/02/12 17:30
10	3333333	0501.01.08.01.00	2019/02/12 17:30
9	2222222	4002.01.08.01.00	2019/02/12 17:30
8	1111111	0501.01.08.01.00	2019/02/12 17:30
7		0501.01.08.01.00	2019/02/12 17:30
6		0501.01.08.01.00	2019/02/12 17:30
5		0501.01.08.01.00	2019/02/12 17:30
4		0501.01.08.01.00	2019/02/12 17:30
3	5555555	4002.01.08.01	2019/02/12 17:30
2	4444444	0501.01.08.01.00	2019/02/12 17:30
1	1	4002.01.08.01.00	2019/02/12 17:30

0501.01.08.01.00  
 (a) (b) (c) (d) (e)

**(10) Service Call Log**

#	Count.	Service Code	Data and Time
8	1111111	01.6000	2019/02/12 17:30
7	9999999	01.2100	2019/02/12 17:30
6	8888888	01.4000	2019/02/12 17:30
5	7777777	01.6000	2019/02/12 17:30
4	6666666	01.2100	2019/02/12 17:30
3	5555555	01.4000	2019/02/12 17:30
2	4444444	01.6000	2019/02/12 17:30
1	1	01.2100	2019/02/12 17:30

**(11) Maintenance Log**

#	Count.	Item.	Data and Time
7	9999999	01.21	2019/02/12 17:30
6	8888888	01.40	2019/02/12 17:30
5	7777777	01.60	2019/02/12 17:30
4	6666666	01.21	2019/02/12 17:30
3	5555555	01.40	2019/02/12 17:30
2	4444444	01.60	2019/02/12 17:30
1	1	01.21	2019/02/12 17:30

**(12) toner Log**

#	Count.	Item.	Serial Number	Data and Time	Detail
5	1111111	01.00		2019/02/12 17:30	A.098
4	9999999	01.00		2019/02/12 17:30	A.098
3	8888888	01.00		2019/02/12 17:30	A.098
2	7777777	01.00		2019/02/12 17:30	A.098
1	6666666	01.00		2019/02/12 17:30	A.099

### Event Log

**MFP**  
**TASKalfa 308ci**

(1) Firmware version 2WL\_S000.003.037 2019.02.21

(6) XXXXXXXXXXXX  
(2) 2019/02/21 15:15  
(3) [XXXXXXXXXX] (4) [XXXXXXXXXX] (5) [XXXXXXXXXX]

(6) Machine No.:XXXXXXXXXX (7) Total Life Count:XXXXXX (8) Color Life Count:XXXXXX

#### (13) 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	C0011: 11
J1604: 1	C0012: 12
J1614: 1	C0013: 13
J4002: 1	C0014: 14
J4003: 1	C0015: 15
J4004: 1	C0016: 16
J4009: 1	C0017: 17
J4012: 1	C0018: 18
J4013: 1	C0019: 19
J4014: 1	C0020: 20
J4019: 1	C0021: 21
J4201: 1	C0022: 22
J4202: 0	C0023: 23
J4203: 1	
J4204: 1	(h) T00: 10
J4208: 0	M00: 20
J4209: 1	M02: 30
J4211: 11	
J4212: 222	
J4213: 1	
J4214: 2	
J4218: 1	
J4219: 2	
J4301: 1	



## Description of event log

No.	Contents			
(1)	System version			
(2)	System date			
(3)	Engine firmware version			
(4)	Engine boot version			
(5)	Operation panel firmware version			
(6)	Machine serial number			
(7)	Total counter			
(8)	Total counter (color)			
(9)	Paper Jam Log			
	#	Count	Event	Date and Time
	Remembers 1 to 16 th of occurrence. If the past paper jam occurrence is less than 16, all of them are indicated. The oldest log is deleted when exceeding 16 events.	The total page count at the time of a paper jam.	Log code (5 types in hexadecimal)  (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)			
	*Refer to (See page 7-44),for the detail of Cause of paper jam.			
	(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			

No.	Contents			
(9) cont.	(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	
	(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	
(10)	Service Call Log			
	#	Count	Service Code	Date and Time
	Remembers 1 to 8 th of occurrence of self diagnostics error.  If the occurrence of the previous self-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.	(See page 7-96)  Example: 01.6000 01: Self diagnostic error6000 : Self diagnostic error code number	Date and time of occurrence

No.	Contents			
(11)	Maintenance Log			
	#	Count	item	Date and Time
	Remembers 1 to 8 of occurrence of unknown toner detection. If the occurrence of the previous unknown toner detection is less than 8, all of the unknown toner detection are logged.	Total page count at the time of the replacement of the maintenance item.  The toner replacement log is triggered by toner empty. This record may contain such a reference as the toner container is inserted twice or a used toner container is inserted.	Maintenance item code (1-byte value to indicate 2 items)  First byte (Replacing item) 01: Toner container Second byte (Type of replacing item) 00: Black 01: Cyan 02: Magenta 03: Yellow  First byte (Replacing item) 02: Maintenance kit  Second byte (Type of replacing item) 01: MK-5355A/MK-5357A 02: MK-5195B	Date & Time of the replacement
(12)	Toner Log			
	#	Count	item	Serial Number
	The preservation number of a toner log specified from each model is displayed.  *A toner log is displayed by time series. (As those log number is large, it indicates that it is a new event.) *If the number of past the toner log is less than 32, logs for the number when a toner was replaced are shown. *If the number of past the toner log exceeds 32 logs will be deleted from the oldest ones.	Records the log (Total page) at the timing where the toner empty displays * After recording the log, if the toner empty occurs again within 100 sheets, the log will not be recorded.(Non-genuine only)	Unknown toner log code (1 byte, 2 categories)  First byte (Replacing item) 01: Genuine product 02: Non-genuine product  Second byte (Type of replacing item) 00: Black 01: Cyan 02: Magenta 03: Yellow	Serial number of the toner container  Date and Time Date & Time of the replacement

No.	Contents		
(13)	Counter Log Consist of three log counters of paper jams, self diagnostics errors, and maintenance replacement items.		
	(f) Paper jam	(g) Self diagnostic error	(h) Maintenance replacement item
	Indicates the log counter of paper jams depending on location. Refer to Paper Jam Log.  All instances including those not having occurred are displayed.	Indicates the log counter of self diagnostics errors depending on cause.  Example: C6000: 004 Self diagnostic error 6000 has happened four times.	Indicates the log counter depending on the maintenance replacing item.  T: Toner container 00: Black 01: Cyan 02: Magenta 03: Yellow  M: Maintenance kit 01: MK-5355A/MK-5357A 02: MK-5195B  Example: T00: 1 The toner container (Black) has been replaced once.  The toner replacement log is triggered by toner empty. This record may contain such a reference as the toner container is inserted twice or a used toner container is inserted.

## Detail of service status page

## Service Status Page

MFP

TASKalfa 308ci

(1) Firmware Version 2WL\_S000.003.037 2019.02.21

(6) XXXXXXXXXXXX

(2) 2019/02/21 15:15

(3)

(4)

(5)

[XXXXXXXXXX] [XXXXXXXXXX] [XXXXXXXXXX]

## Controller Information

## Memory status

Standard Size 1.0 GB  
 Option Slot 1.0 GB  
 (7) Total Size 2.0 GB

## Time

(8) Local Time Zone +01:00\_Tokyo  
 (9) Date and Time 10/30/2014 02:33  
 (10) Time Server 10.183.53.13

## Installed Options

(11) Paper Feeder2 Installed  
 (12) Paper Feeder3 Cassette(500×2)  
 (13) HDD Installed  
 (14) SD Card Not Installed  
 (15) SSD Not Installed  
 (16) Finisher Not Installed  
 (17) Mail box Not Installed  
 (18) Job separator Not Installed  
 (19) Card Authentication Kit (B) Installed  
 (20) Internet FAX Kit (A) Installed  
 (21) Security Kit (E) Not Installed  
 (22) Security Kit (F) Not Installed  
 (23) UG-33 Installed  
 (24) UG-34 Installed  
 (25) USB Keyboard Installed  
 (26) USB Keyboard Type US-English  
 (27) Scan extension kit(A) Not Installed

## FAX Information

(36) Rings (Normal) 3  
 (37) Rings (FAX/TEL) 3  
 (38) Rings (TAD) 3  
 (39) Option DIMM Size 16MB

## (40) FRPO Status

User Top Margin A1+A2/100 0.0  
 User Left Margin A3+A4/100 0.0

## Print Settings

(28) MP Tray Priority Auto Feed

e-MPS error control Y6 0

## (29) Print Coverage

Average(%) / Usage Page(A4/Letter Conversion)

(30) Total  
 K: 1.10 / 1111111.11  
 C: 2.20 / 2222222.22  
 M: 3.30 / 3333333.33  
 Y: 4.40 / 4444444.44

(31) Copy  
 K: 1.10 / 1111111.11  
 C: 2.20 / 2222222.22  
 M: 3.30 / 3333333.33  
 Y: 4.40 / 4444444.44

(32) Printer  
 K: 1.10 / 1111111.11  
 C: 2.20 / 2222222.22  
 M: 3.30 / 3333333.33  
 Y: 4.40 / 4444444.44

(33) FAX  
 K: 1.10 / 1111111.11

(34) Period (27/10/2010 - 03/11/2010 08:40)

(35) Last Page K/C/M/Y(%) 1.00 / 2.22 / 3.33 / 4.44

## RP Code

(41) 1234 5678 9012  
 (42) 5678 9012 3456  
 (43) 9012 3456 7890  
 (44) 3456 7890 1234

## (45) Altitude Adjustment

Status Normal



## Content of the service status page

No.	Items	Contents
(1)	Firmware Version	-
(2)	System date	-
(3)	Engine firmware version	-
(4)	Engine boot version	-
(5)	Operation panel firmware version	-
(6)	Machine serial number	-
(7)	Total memory size	-
(8)	Local time zone	-
(9)	Report output date	Day/Month/Year hour/minute
(10)	NTP server name	-
(11)	Availability of the paper feed unit 2	Installed/Not Installed
(12)	Availability of the paper feed unit 3	Cassette(500-sheet×2) / Cassette(2000-sheet) / Not Installed
(13)	Availability of the optional HDD	Installed/Not Installed
(14)	Availability of the SD memory card	Installed/Not Installed
(15)	Availability of the SSD	Installed/Not Installed
(16)	Availability of the finisher	1000-sheet finisher/inner finisher/ 3000-sheet finisher/not installed
(17)	Availability of Mailbox	Installed/Not Installed
(18)	Availability of job separator	Installed/Not Installed
(19)	Availability of the ID Card Authentication Kit	Introduced/ before introduction/trial
(20)	Availability of the Internet FAX Kit (A)	Introduced/ before introduction (not indicated for 30ppm model)
(21)	Availability of the Security Kit (E)	Installed/Not Installed
(22)	Availability of the Security Kit (F)	Introduced/ before introduction (not indicated for 30ppm model)
(23)	Availability of UG-33	Introduced/ before introduction/trial
(24)	Availability of UG-34	Introduced/ before introduction (not indicated for 30ppm model)
(25)	USB keyboard connection status	Connected/Not connected
(26)	Type of the USB keyboard	US-English/US-English with Euro symbol/German France
(27)	Availability of the Scan extension kit (A)	Introduced/ before introduction/trial (not indicated for 30ppm model)
(28)	MP tray priority setting	Off/Auto/Always
(29)	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
(30)	Entire average coverage	Black/Cyan/Magenta/Yellow
(31)	Average coverage for copy	Black/Cyan/Magenta/Yellow
(32)	Average printer coverage	Black/Cyan/Magenta/Yellow
(33)	Average coverage for FAX	Black/Cyan/Magenta/Yellow
(34)	Cleared date and output date	-
(35)	Coverage on the last output page	-

No.	Items	Contents
(36)	Number of rings	0 to 15
(37)	Number of rings before automatic switching	0 to 15
(38)	Number of rings before connecting to the answering machine	0 to 15
(39)	Optional DIMM size	-
(40)	FRPO setting	-
(41)	RP code	Coding the engine firmware version and the date of the latest update
(42)	RP code	Code the main software version and the date of the latest update
(43)	RP code	Coding the engine firmware version and the date of the previous update
(44)	RP code	Code the main software version and the date of the previous update
(45)	High altitude adjustment set data	Normal/1001-2000m/2001-3000m/3001-3500m
(46)	NVRAM version	<p>_ 1F3 1225 _ 1F3 1225</p> <p>(a) (b) (c) (d) (e) (f)</p> <p>(a) Consistency of the current firmware version and the database _ (underscore): OK * (Asterisk): NG</p> <p>(b) Database version</p> <p>(c) The oldest time stamp of database version</p> <p>(d) Consistency of the present software version and the ME firmware version _ (underscore): OK * (Asterisk): NG</p> <p>(e) ME firmware version</p> <p>(f) The oldest time stamp of the ME firmware version</p> <p>Normal if (a) and (d) are underscored, and (b) and (e) are identical with (c) and (f)</p>
(47)	FAX firmware version	-
(48)	Mac address	-
(49)	The last sent date and time	-
(50)	Transmission address	-
(51)	Destination information	-
(52)	Area information	-
(53)	Margin setting	Top margin/Left margin
(54)	L parameters	Top margin integer part/Top margin decimal part/Left margin integer part /Left margin decimal part
(55)	Life counter (cassette 1)	Machine life/MP tray/Cassette/Paper feeder 1/Paper feeder 2/ Paper feeder 3/Duplex
	Life counter (cassette 2)	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/Maintenance kit B



No.	Items	Contents
(56)	Panel lock information	F00: OFF F01: Partial lock1 F02: Partial lock2 F03: Partial lock3 F04: Full lock
(57)	USB information	U00: 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 330 mm length), Single counts
(61)	Black and white printing double count mode	0: All single counts 3: Folio (Less than 330 mm 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)	Asset Number	-
(68)	Job end judgment time-out time	-
(69)	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
(70)	Prescribe environment reset	0: Off 1: On
(71)	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
(72)	IO Calibration information	K/C/M/Y
(73)	Bias Calibration information	-
(74)	Sensor initial information	-
(75)	Calibration information	-
(76)	Calibration information	-
(77)	Calibration information	-
(78)	Calibration information	-

No.	Items	Contents
(79)	Calibration information	-
(80)	Paper loop correction shift amount	-
(81)	Paper loop correction interval	-
(82)	Paper loop correction patch amount	-
(83)	Calibration information	-
(84)	Calibration information	-
(85)	RFID information (K,C,M,Y)	-
(86)	RFID reader/writer version	-
(87)	Optional paper feeder firmware version	-
(88)	Color table version for printer	-
(89)	Color table 2 version for printer	-
(90)	Color table version for copy	-
(91)	Color table 2 version for copy	-
(92)	Maintenance information	-
(93)	MC correction	1 to 7
(94)	Configuring the toner coverage counters	0: Full-color count display 1: Color coverage count display
(95)	Low coverage setting	0.1 to 100.0
(96)	Middle coverage setting	0.1 to 100.0
(97)	Data sanitization information	FAX Board/Main Memory/Panel Memory/SSD/Executed time 1: Success 0: Fail - : Not performed or Not installed
(98)	Toner low setting	0: Disabled 1: Enabled
(99)	Toner low detection level	0 to 100 (%)
(100)	Full-page print mode	0: Normal mode (Factory setting) 1: Full-page mode
(101)	Wake-up mode	0: Off (Don't wake up) 1: On (Do wake up)
(102)	Wake-up timer	Display the wake-up time
(103)	BAM conformity mode setting	0: Non-conformity mode 1: Conformity Mode
(104)	Drum serial number	Black/Cyan/Magenta/Yellow
(105)	Developer serial number	Black/Cyan/Magenta/Yellow

## U001 Exiting the maintenance mode

### Message: Exit Mainte

#### Contents

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

#### Contents

Set the machine setting values to the factory default.

#### Purpose

Executes the machine settings when shipping from factory.

#### Method

- 1 Press the [Start] key.
- 2 Select [Mode1(All)].
- 3 Press the [Start] key.

Items	Contents
Mode1(All)	Setting the machine setting values to the factory default

- 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.

Wait more than 5 seconds between the power off and on.

#### Error codes

Items	Contents
0001	Controller (Entity error)
0002	Controller (Counter error)
0003	Controller (OS error)
0020	Engine error

## U003 Set tel number

### Message: Set Tel No.

#### Contents

Set the telephone number of the service person.

#### Setting

- 1 Press the [Start] key.
- 2 By using the numeric keys, enter the setting value.
- 3 Press the [Start] key to set the setting value.

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U004 Machine serial number

Message: Machine No.

### Contents

Set or display the machine serial number.

### Purpose

Check the machine serial 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 in the engine PWB matches the one in the main PWB,**

Items	Contents
Machine No.	Displaying the machine serial number

**When the machine serial number in the engine PWB does not match the one in the main PWB,**

Items	Contents
Machine No.(Main)	Displaying the machine serial number in the main PWB
Machine No.(Eng)	Displaying the machine serial number in the engine PWB

### Setting

**Execute if the serial numbers do not match.**

- 1 Select [Execute].
- 2 Press the [Start] key.  
The serial number writing starts.
- 3 Turn the power switch off then on. Wait more than 5 seconds between the power off and on.

### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U010 Setting the maintenance mode ID

### Message: Set Mainte ID

#### Contents

Change the maintenance mode ID for service.

#### Purpose

Modify maintenance mode ID for service for more security.

#### Method

- 1 Press the [Start] key.
- 2 Select the item to set.

Items	Contents
Change	Change the maintenance mode ID for service
Initialize	Initialize the maintenance mode ID for service

#### Method: Change

- 1 Select [New ID].
- 2 Press ten keys (0–9, \*, #) to enter a new 8-digit ID.  
Either [\*] or [#] must be included.
- 3 Press the [Start] key to set the setting value.
- 4 Select [New ID (Reconfirm)].
- 5 Press ten keys (0–9, \*, #) to re-enter the new 8-digit ID.

Items	Contents
New ID	Enter a new 8-digit maintenance ID
New ID (Reconfirm)	Enter a new 8-digit maintenance ID (to confirm)
Execute	Change the maintenance mode ID for service

- 6 Select [Execute].
- 7 Press the [Start] key to set the setting value.

#### Method: Initialize

- 1 Select [Initialize].
- 2 Select [Execute].
- 3 Press the [Start] key to initialize the maintenance mode ID.

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

**Error codes**

Items	Contents
0001	Do not include "#" or "*" in the ID
0002	ID does not match
0003	8-digit ID is not input

## U019 Firmware Version

### Message: Firm Version

#### Contents

Display the firmware version installed in each PWB.

#### Purpose

Check the firmware version installed in each PWB

#### Method

- 1 Press the [Start] key.  
The firmware version is displayed.
- 2 Change the screen using the [Up/Down cursor] key.

Items	Contents
Main	Main firmware
MMI	Operation firmware
Browser	Browser firmware
Engine	Engine firmware
Engine Boot	Engine boot
RFID	RFID
Dictionary	Dictionary firmware
Option Language	Optional language firmware
Color Table1(Copy)	Color table 1 firmware (copy)
Color Table2(Copy)	Color table 2 firmware (copy)
Color Table2(Prn)	Color table 1 firmware (printer)
Color Table2(Prn)	Color table 2 firmware (printer)
Cass2	Paper feeder 1 firmware
Cass2 Boot	Paper Feeder 1 boot
Cass3	Paper feeder 2 firmware
Cass3 Boot	Paper Feeder 2 boot
DF	finisher firmware
DF Boot	finisher boot
MT	mailbox Firmware
MT Boot	mailbox boot
Fax APL	Fax APL
Fax Boot	FAX Boot
Fax APL	Fax APL
HyPAS EMB API	HyPAS EMB API
Application Name 1	Application 1 software
Application Name 2	Application 2 software
Application Name 3	Application 3 software
Application Name 4	Application 4 software



Items	Contents
Application Name 5	Application 5 software
Application Name 6	Application 6 software
Application Name 7	Application 7 software
Application Name 8	Application 8 software
Application Name 9	Application 9 software
Application Name 10	Application 10 software
Application Name 11	Application 11 software
Application Name 12	Application 12 software
Application Name 13	Application 13 software
Application Name 14	Application 14 software
Application Name 15	Application 15 software
Application Name 16	Application 16 software

**Completion**

- 1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

## U021 Initializes Memory

### Message: Init Memory

#### Contents

Initializes all settings, except those pertinent to the type of machine, namely each counter, service call error history and mode setting. Also, initializes the backup RAM according to the area specification selected in the maintenance mode U252 (Setting the destination).

#### Purpose

Initialize the backup data except machine settings to the factory default in the field

#### Method

- 1 Press the [Start] key.
- 2 Select [Execute].

Items	Contents
Execute	Initialize data according to the destination information

- 3 Press the [Start] key.  
All data other than for adjustments is initialized by the destination setting.
- 4 Turn the power switch off then on. Wait more than 5 seconds between the power 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

Items	Contents
0001	Controller (Entity error)
0002	Controller (Counter error)
0020	Engine error
0040	Scanner error

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U025 Firmware update (S)

### Message: Firm Update (S)

#### Contents

Executes Firmware-Update from the USB memory 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 memory is inserted

#### Method

- 1 Press the [Start] key.
- 2 Select [Execute].

Items	Contents
Execute	Updates the firmware

- 3 Press the [Start] key.  
This is not executable when a USB memory is not installed.
- 4 After normal completion, turn the power switch off then on. Wait more than 5 seconds between the power off and on.

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U030 Motor operation check

### Message: Chk Motor

#### Contents

Drive each motor.

#### Purpose

Execute to check each motor's operation.

#### Method

- 1 Press the [Start] key.
- 2 Select the motor to operate.
- 3 Press the [Start] key.

Each operation starts.

Items	Contents
Feed	Operate the imaging motor
DLP(CMY)	Operate the DLP (CMY) motor
Fuser	Operate the fuser motor
SB(CW)	Drive the SB(CW) motor
SB(CCW)	Drive the SB(CCW) motor
Belt Release	Operate the bridge motor
Bridge	Operate the belt release
Fuser Release	Operate the fuser release

To stop the operation, press the [Stop] key.

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U031 Check the conveying switch

### Message: Chk Switch

#### Contents

Display the on/off status of each switch and sensor to detect paper on the paper conveying path.

#### Purpose

Execute to check the conveying switches and sensors are operating correctly.

#### Method

- 1 Press the [Start] key.
- 2 Check the switches and sensors by manually turning them on/off.
- 3 The switch indication is inversed when the switch is detected.

Items	Contents
Regist Sens	Displaying the regist sens switch state
Fuser	Displaying the fuser switch status
Bridge1 Feed	Displaying the bridge 1 feed switch state
Bridge2 Feed	Displaying the bridge 2 feed switch state
Exit Full	Displaying the exit full switch state
JobSepa Full	Displaying the job separator full switch state
JobSepa	Displaying the job separator switch state
Feed2	Displaying the cassette2 feed switch state
Feed3	Displaying the cassette3 feed switch state
Feed4	Displaying the cassette4 feed switch state
DU Sens	Displaying the DU sens switch state

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U032 Clutch operation check

### Message: Check Clutch Operation

#### Contents

Supply power to each clutch.

#### Purpose

Execute to check each clutch operation.

#### Method

- 1 Press the [Start] key.
- 2 Select the clutch to operate.
- 3 Press the [Start] key.  
Each operation starts.

Items	Contents
DLP	Operates the developer clutch (K)
Regist	Operate the registration clutch
Mid Roller	Operates the middle clutch
Dup	Operate the DU clutch
Feed1	Operates the paper feed1 clutch
Motor	Operate the motor

The clutch operation is available while the motor is operated.

- 4 To stop the operation, press the [Stop] key.

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U033 Solenoid operation check

### Message: Chk Solenoid

#### Contents

Supply power to each solenoid.

#### Purpose

Execute to check each solenoid's operation.

#### Method

- 1 Press the [Start] key.
- 2 Select the solenoid to operate.
- 3 Press the [Start] key.  
Each operation starts.

Items	Contents
Branch Exit	Operate the feed-shift solenoid
MPT	Operate the MP solenoid
Motor	Operate the motor

The solenoid operation is available while the motor is operated.

- 4 To stop the operation, press the [Stop] key.

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U034 Paper timing adjustment

### Message: Adj Paper Timing

#### Contents

Adjust the leading edge registration or center line.

#### Purpose

Executed if there is a regular error between the leading edges of the copy image and original.

Adjusted if there is a regular error 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	Contents
LSU Out Top Full	Adjust the leading edge registration (full speed)
LSU Out Top 3/4	Adjust the leading edge registration (3/4 speed)
LSU Out Top Half	Adjust the leading edge registration (half speed)
LSU Out Left	Adjust the center line

#### Adjustment: LSU Out Top

- 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.

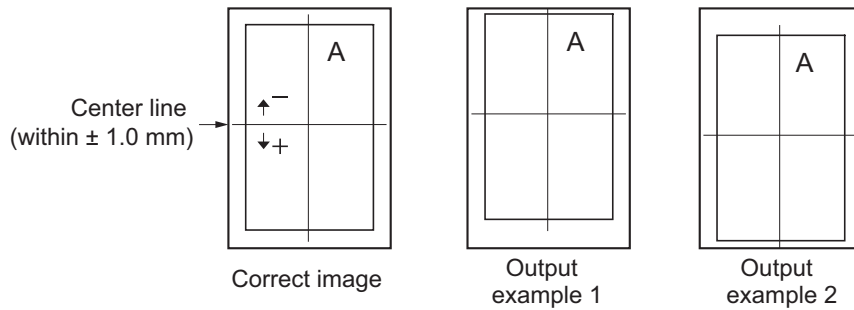
Items	Contents	Setting range	Initial setting	Data variation
MPT	Adjust the leading edge timing for the MP tray	-3.0 to 3.0	0	0.1mm
Cassette	Adjusts the leading edge timing for cassette feed	-3.0 to 3.0	0	0.1mm
PF*1	Adjust the leading edge timing for the paper feeder	-3.0 to 3.0	0	0.1mm
Dup	Adjusting the leading edge timing when duplex copying	-3.0 to 3.0	0	0.1mm

\*1: 500 x 1 cassette only

- 5 By using the [<] [>] keys or the numeric keys, change the setting value.  
For the test pattern 1, increase the value.  
For the 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.





6 Press the [Start] key to set the setting value.

 **Note**

- Check the copy image after the adjustment. If the image is still incorrect, adjust the following in the maintenance mode.
- U034 > U066(P.6-323)> U071(P.6-328)

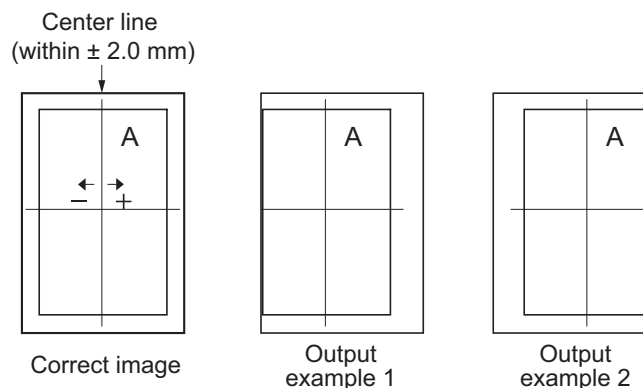
**Adjustment: LSU Out Left**

- 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	Contents	Setting range	Initial setting	Data variation
MPT	Adjust the center line for the MP tray	-3.0 to 3.0	0	0.1mm
Cass1	Adjust the center line for cassette 1 feed	-3.0 to 3.0	0	0.1mm
Cass2	Adjust the center line for cassette 2 (Optional unit) feed	-3.0 to 3.0	0	0.1mm
Cass3	Adjust the center line for cassette 3 (Optional unit) feed	-3.0 to 3.0	0	0.1mm
Cass4	Adjust the center line for cassette 4 (Optional unit) feed	-3.0 to 3.0	0	0.1mm
Duplex	Adjusting the center line when duplex copying (Back page)	-3.0 to 3.0	0	0.1mm

- 5 By using the [<] [>] keys or the numeric keys, change the setting value.  
For the test pattern 1, increase the value.  
For the 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.



- 6 Press the [Start] key to set the setting value.

**Note**

- Check the copy image after the adjustment. If the image is still incorrect, adjust the following in the maintenance mode.
- U034 < U067(P.6-324) < U072(P.6-331)

**Completion**

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U035 Folio size setting

### Message: Set FOLIO Size

#### Contents

Changes the printable area when copying with Folio paper.

#### Purpose

Setting the actual size of Folio to use prevents the image dropout at the trailing edge or right/left edges.

#### 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	Contents	Setting range	Initial setting	Data variation
Length	Set the Folio paper length	318 to 356 (mm)	330	1(mm)
Width	Set the Folio paper width	200 to 216 (mm)	210	1(mm)

- 4 Press the [Start] key to set the setting value.

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U037 Fan motor operation check

### Message: Chk Fan Motor

#### Contents

Drive each fan motor.

#### Contents

Execute to check each fan motor's operation.

#### Method

- 1 Press the [Start] key.
- 2 Select the fan motor to operate.
- 3 Press the [Start] key.

Each operation starts.

Items	Contents
All	Operate all the fan motors
DLP	Operate the developer fan motor 1
Exit Paper	Operate the exit paper fan motor
Exit Cooling	Operate the exit fan motor
LVU CL Fan	Operate the developer fan motor 2
WTNR Fan	Operates the toner suction motor
CON Fan	Operate the Controller fan motor

To stop the operation, press the [Stop] key.

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U051 Registration paper loop amount adjustment

### Message: Adj Paper Loop

#### Contents

Adjusts the paper loop amount.

#### Purpose

The leading edge of the image may drop, image position may shift irregularly or paper is folded in a Z-shape.

Use to check/adjust skew feed.

#### Method

- 1 Press the [Start] key.
- 2 Select the item to adjust.  
The screen for adjusting is displayed.

Items	Contents
Full	Paper loop amount adjustment at full speed
Half	Paper loop amount adjustment at half speed
3/4	Paper loop amount adjustment at 3/4 speed

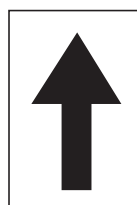
#### Adjustment

- 1 Select the item to adjust.
- 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.  
The screen for adjusting is displayed.

Items	Contents	Setting range	Initial setting	Data variation
MPT	MPT loop amount adjustment	-30 to 20	0/0/0	1mm
Cass1	Cassette 1 loop amount adjustment	-30 to 20	0/0/0	1mm
PF	PF (Cassette2,3,4) loop amount adjustment	-30 to 20	0/0/0	1mm
Dup	Duplex loop amount adjustment	-30 to 20	0/0/0	1mm

- 5 By using the [<] [>] keys or the numeric keys, change the setting value.  
For the copy example 1, increase the value.  
For the copy example 2, decrease the value.

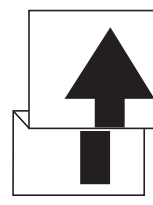
When the setting value is increased, the paper loop amount increase, and it decreases when the setting value is decreased.



Original



Copy example 1



Copy example 2

- 6 Press the [Start] key to set the setting value.

**Completion**

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U053 Adjusting the motor speed

### Message: Adj Motor Speed

#### Contents

Execute the motor speed fine tuning.

#### Purpose

No need to change the basic settings. Change the set value when an image failure occurs.

#### Method

- 1 Press the [Start] key.
- 2 Select the item to adjust.  
The screen for adjusting is displayed.

Items	Contents
Full	Full speed setting
Half	Half speed setting
3/4	3/4 speed setting

#### Setting

- 1 Select the item to adjust.  
The screen for adjusting is displayed.

Items	Contents	Setting range	Initial setting	Data variation
Drum (K)	Adjusting the drum motor K	-5000 to 5000	0/0/0	-
Drum (CMY)	Adjusting the drum motor CMY	-5000 to 5000	0/0/0	-
Drum Mono (K)	Adjusting the drum motor K at the time of monochrome printing	-5000 to 5000	0/0/0	-
Dev (K)	Adjusting the developer motor K	-5000 to 5000	0/0/0	-
Dev (CMY)	Adjusting the developer motor CMY	-5000 to 5000	0/0/0	-
Fixing	Adjusting the fuser motor (FUM)	-5000 to 5000	0/0/0	-
Trans Belt	Adjusting the transfer belt motor	-5000 to 5000	0/0/0	-
SB	Adjusting the DP feedshift motor rotation	-5000 to 5000	0/0/0	-
SB Reverse	Adjusting the DP feedshift motor reverse rotation	-5000 to 5000	0/0/0	-
Brg1	Adjusting the BR conveying motor	-5000 to 5000	0/0/0	-
PF2	Adjusting the PF paper feed motor	-5000 to 5000	0/0/0	-
PF3	Adjusting the PF paper feed motor	-5000 to 5000	0/0/0	-

- 2 By using the [<] [>] keys or the numeric keys, change the setting value.
- 3 Press the [Start] key to set the setting value.

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U059 Fan mode setting

### Message: Set Fan Mode

#### Contents

Set the conveying fan motor drive mode during paper conveying.

#### Purpose

A fan is added in the conveying unit so that the leading edge of paper is conveyed along with the conveying path to prevent paper creases.

#### Method

- 1 Press the [Start] key.
- 2 By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Contents	Setting range	Initial setting	Data variation
Cycle	Change the fan control timing cycle	0 to 10000		1000 sheets

- 3 Press the [Start] key to set the setting value.

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.



## U065 Adjusting the magnification for table scanning

### Message: Adj Scan

#### Contents

Adjust the magnification in the main and sub scanning direction of the table scanning.

#### Purpose

Adjusts the magnification in the main and sub scanning direction of the table scanning if the above 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 direction) (P.6-321)>U065((sub scanning direction) (P.6-321)

#### Method

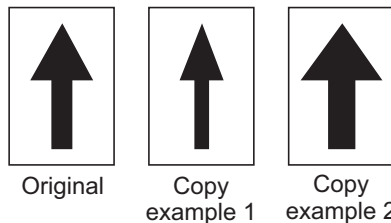
- 1 Press the [Start] key.
- 2 Press the [System Menu/Counter] key.
- 3 Place an original and press the [Start] key to make a test copy.
- 4 Press the [System Menu/Counter] key.
- 5 Select the item to adjust.

Items	Contents	Setting range	Initial setting	Data variation
Main Scan	Adjusting scanner magnification in the main scanning direction	-15 to 15	0	0.10%
Sub Scan	Adjusting scanner magnification in the sub-scanning direction	-25 to 25	0	0.10%

#### Adjustment: Main Scan

- 1 By using the [<] [>] keys or the numeric keys, change the setting value.  
For the copy example 1, increase the value.  
For the copy example 2, decrease the value.

When the setting value is increased, the image widens, and it narrows when the setting value is decreased.

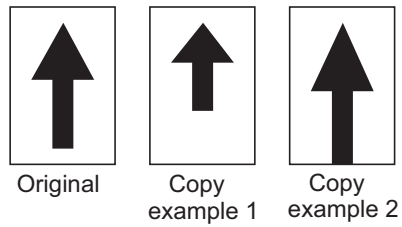


- 2 Press the [Start] key to set the setting value.

#### Adjustment: Sub Scan

- 1 By using the [<] [>] keys or the numeric keys, change the setting value.  
For the copy example 1, increase the value.  
For the copy example 2, decrease the value.

When the setting value is increased, the image get longer, and it shortens when the setting value is decreased.



- 2 Press the [Start] key to set the setting value.

### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U066 Adjusting the table scanning timing

### Message: Table Timing

#### Contents

Adjusts the leading edge timing for the table scanning.

#### Purpose

Executed if there is a regular error between the leading edges of the copy image and original.

#### Adjustment

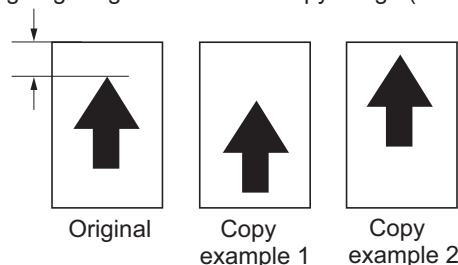
- 1 Press the [Start] key.
- 2 Press the [System Menu/Counter] key.
- 3 Place an original and press the [Start] key to make a test copy.
- 4 Press the [System Menu/Counter] key.
- 5 Select the item to adjust.

Items	Contents	Setting range	Initial setting	Data variation
Front	Adjusting the scanner leading edge timing	-45 to 45	0	0.085 mm

- 6 By using the [<] [>] keys or the numeric keys, change the setting value.  
For the copy example 1, increase the value.  
For the 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.

Leading edge registration of the copy image (+1.0/-1.5 mm or less)



- 7 Press the [Start] key to set the setting value.



#### Note

- Check the copy image after the adjustment. If the image is still incorrect, adjust the following in the maintenance mode.
- U034(P.6-312)> U065(P.6-321)> U066

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U067 Adjusting the table scanning center line

### Message: Table Center

#### Contents

Adjusts the center line for the table scanning.

#### Purpose

Adjusted if there is a regular error between the center lines of the copy image and original.

#### Adjustment

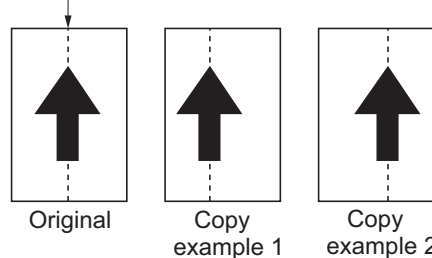
- 1 Press the [Start] key.
- 2 Press the [System Menu/Counter] key.
- 3 Place an original and press the [Start] key to make a test copy.
- 4 Press the [System Menu/Counter] key.
- 5 Select the item to adjust.

Items	Contents	Setting range	Initial setting	Data variation
Front	Adjusting the scanner center line	-40 to 40	0	0.085 mm

- 1 By using the [<] [>] keys or the numeric keys, change the setting value.  
For the copy example 1, decrease the value.  
For the 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.

Center line of the copy image (within  $\pm 2.0$  mm)



- 2 Press the [Start] key to set the setting value.

#### Note

- Check the copy image after the adjustment. If the image is still incorrect, adjust the following in the maintenance mode.
- U034(P.6-312)> U065(P.6-321)> U067

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U068 DP scanning position adjustment

### Message: DP Scn Start Pos

#### Contents

Adjusts the starting position for scanning originals from the DP.

Execute test copy at the four scanning positions after adjustment.

#### Purpose

Adjust if the image fogging occurs because the scanning position is not proper when the DP is used

Execute U071 to adjust the timing of the DP leading edge when the scanning position is changed.

#### Method

- 1 Press the [Start] key.
- 2 Select the item to adjust.

Items	Contents	Setting range	Initial setting	Data variation
DP Read	Adjusting the starting position for scanning originals	-33 to 33	0	0.158 mm
Black Line	Adjusting the 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 forward, and it moves backward when the setting value is decreased.
- 3 Press the [Start] key to set the setting value.

#### 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 set the setting value.
- 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 the 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

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U070 DP magnification adjustment

### Message: Adj DP Motor

#### Contents

Adjusting the magnification for DP scanning.

#### Purpose

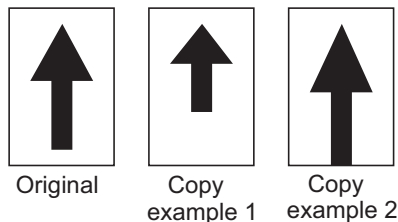
Adjusted if the magnification is incorrect in the auxiliary scanning direction when the DP is used

#### 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	Contents	Setting range	Initial setting	Data variation
SubScan(F)	Adjusting the magnification for table scanning	-25 to 25	-	0.1%
SubScan(B)	Adjusting the 2nd side magnification in the sub scanning direction when duplex scanning	-25 to 25	-	0.1%
Duplex 1side	Adjusting the 1st side magnification in the sub scanning direction when duplex scanning	-25 to 25	-3	0.1%

- 6 By using the [<] [>] keys or the numeric keys, change the setting value.  
For the copy example 1, increase the value.  
For the copy example 2, decrease the value.  
When the setting value is increased, the image get longer, and it shortens when the setting value is decreased.



- 7 Press the [Start] key to set the setting value.

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U071 Adjusting the DP leading edge Timing

### Message: DP Timing

#### Contents

Adjusts the DP original scanning timing.

#### Purpose

Adjusted 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

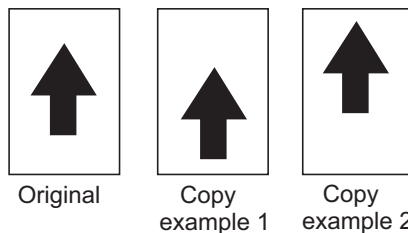
- 1 Press the [Start] key.
- 2 Press the [System Menu/Counter] key.
- 3 Place an original on the DP and press the [Start] key to make a test copy.  
Check the duplex scanning by setting [Duplex] when test copying.
- 4 Press the [System Menu/Counter] key.
- 5 Select the item to adjust.

Items	Contents	Setting range	Initial setting	Data variation
Front Head	Leading edge registration (Front page)	-32 to 32	0	0.245mm
Front Tail	Trailing edge registration (Front page)	-32 to 32	0	0.245mm
Back Head	Leading edge registration (Back page)	-32 to 32	0	0.245mm
Back Tail	Trailing edge registration (Back page)	-32 to 32	0	0.245mm

#### Adjustment: Front Head/Back Head

- 1 By using the [<] [>] keys or the numeric keys, change the setting value.  
For the copy example 1, increase the value.  
For the 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.



- 2 Press the [Start] key to set the setting value.

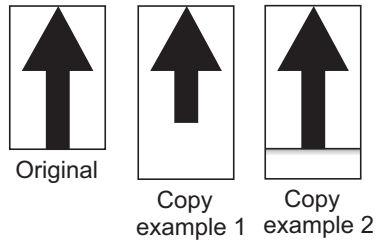
#### Note

- Check the 2nd side after adjusting the 1st side. Adjust if necessary.
- Check the copy image after the adjustment. If the image is still incorrect, adjust the following in the maintenance mode.
- U034(P.6-33)> U071

#### Adjustment: Front Tail/Back Tail

- 1 By using the [<] [>] keys or the numeric keys, change the setting value.  
For the copy example 1, increase the value.  
For the copy example 2, decrease the value.

When the setting value is increased, the image get longer, and it shortens when the setting value is decreased.



- 2 Press the [Start] key to set the setting value.

### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.



## U072 Adjusting the DP original center

### Message: DP Center

#### Contents

Adjusts the DP original center line.

#### Purpose

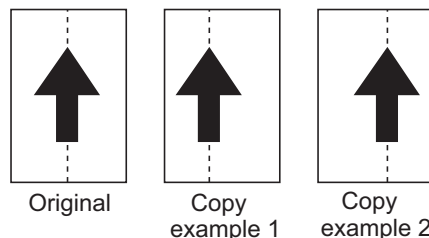
Adjusted if there is a regular error between the center lines of the original and the copy image when the DP is used

#### 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	Contents	Setting range	Initial setting	Data variation
Front	DP center line (Front page)	-40 to 40	-	0.085 mm
Back	DP center line (Back page)	-40 to 40	-	0.085 mm

- 6 By using the [<] [>] keys or the numeric keys, change the setting value.  
For the copy example 1, decrease the value.  
For the 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.



- 7 Press the [Start] key to set the setting value.

#### Note

- Check the 2nd side after adjusting the 1st side. Adjust if necessary.
- Check the copy image after the adjustment. If the image is still incorrect, adjust the following in the maintenance mode.
- U034(P.6-312)> U065(P.6-321)> U067(P.6-324)> U072

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U089 MIP-PG pattern output

### Message: Output MIP-PG

#### Contents

Select and output the MIP-PG pattern generated by the main unit.




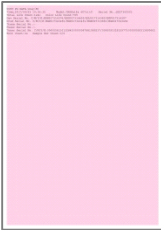
#### Purpose

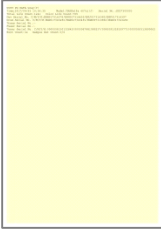



When adjusting the image scanning items, execute to check the machine status except the scanner section using the MIP-PG pattern output without image scanning process.

Test pages printed from the maintenance mode are not counted for the print coverage and page count displayed on the service status page.

#### Method

- 1 Press the [Start] key.
- 2 Select the MIP-PG pattern to output

Items	Contents
White	For drum quality check (Blank PG) 
White Color	Color for drum quality check (Blank PG) 
Gray (C)	For drum quality check (Cyan PG) 
Gray (M)	For drum quality check (Magenta PG) 

Items	Contents
Gray (Y)	For drum quality check (Yellow PG) 
Gray (K)	For drum quality check (Gray PG) 
Color Belt	PG for the developer status and engine ID check (four color PG) 
Mono Belt	Printing 64 gray scales to check 4 colors 
Sample Set	Outputs the following output patterns for the long life unit warranty application PG for the developer status and engine ID check (four color PG) For drum quality check (Yellow PG) For drum quality check (Cyan PG) For drum quality check (Magenta PG) For drum quality check (Gray PG)

- 3 Press the [System Menu/Counter] key.
- 4 Press the [Start] key to output a MIP-PG pattern.
- 5 Press the [System Menu/Counter] key.

### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U100 Main high voltage adjustment

### Message: Main HV Output

#### Contents

Adjust the surface potential by changing the voltage impressed to the main charge roller.

#### Purpose

Change the set value to adjust the image when an image failure (background image) occurs.

#### Method

1 Press the [Start] key.

2 Select the item to set.

The screen for setting is displayed.

Items	Contents
Set DC Bias	Displaying the main charge DC bias correction value for each color
Adj DC Bias	Adjusting the surface potential additional value
Set DC Bias Base	Displaying the main charge DC bias base value for each color (Adjusted value before correction)
Chk Current	Displaying the in-rush current (40 ppm/50 ppm model only)
Set Main HV	Setting the main high voltage mode
MCH	Setting MC correction

#### Setting: Set DC Bias

1 Display the current setting.

Items	Contents
DC1(C)	Cyan main charge DC bias correction value (Full speed)
DC1(M)	Magenta main charge DC bias correction value (Full speed)
DC1(Y)	Yellow main charge DC bias correction value (Full speed)
DC1(K)	Black main charge DC bias correction value (Full speed)

#### Setting: Adj DC Bias

1 Select the item to set.

2 By using the [<] [>] keys or the numeric keys, change the setting value.

When the setting value is increased, the image get thinner, and it gets thicker when the setting value is decreased.

Items	Contents	Setting range	Initial setting
DC2(C)	Cyan main charge DC bias additional value (Full speed)	-1000 to 1000	0
DC2 3/4(C)	Cyan main charge DC bias additional value (3/4 speed)	-1000 to 1000	0
DC2 Half(C)	Cyan main charge DC bias additional value (Half speed)	-1000 to 1000	0
DC2(M)	Magenta main charge DC bias additional value (Full speed)	-1000 to 1000	0
DC2 3/4(C)	Magenta main charge DC bias additional value (3/4 speed)	-1000 to 1000	0
DC2 Half(M)	Magenta main charge DC bias additional value (Half speed)	-1000 to 1000	0
DC2(Y)	Yellow main charge DC bias additional value (Full speed)	-1000 to 1000	0

Items	Contents	Setting range	Initial setting
DC2 3/4(Y)	Yellow main charge DC bias additional value (3/4 speed)	-1000 to 1000	0
DC2 Half(Y)	Yellow main charge DC bias additional value (Half speed)	-1000 to 1000	0
DC2(K)	Black main charge DC bias additional value (Full speed)	-1000 to 1000	0
DC2 3/4(K)	Black main charge DC bias additional value (3/4 speed)	-1000 to 1000	0
DC2 Half(K)	Black main charge DC bias additional value (Half speed)	-1000 to 1000	0

3 Press the [Start] key to set the setting value.

### Setting: Set DC Bias Base

1 Display the current setting.

Items	Contents
DC1 B(C)	Cyan main charge DC bias base value (Full speed)
DC1 B3/4(C)	Cyan main charge DC bias base value (3/4 speed)
DC1 B Half(C)	Cyan main charge DC bias base value (Half speed)
DC1 B(M)	Magenta main charge DC bias base value (Full speed)
DC1 B 3/4(M)	Magenta main charge DC bias base value (3/4 speed)
DC1 B Half(M)	Magenta main charge DC bias base value (Half speed)
DC1 B(Y)	Yellow main charge DC bias base value (Full speed)
DC1 B 3/4(Y)	Yellow main charge DC bias base value (3/4 speed)
DC1 B Half(Y)	Yellow main charge DC bias base value (Half speed)
DC1 B(K)	Black main charge DC bias base value (Full speed)
DC1 B 3/4(K)	Black main charge DC bias base value (3/4 speed)
DC1 B Half(K)	Black main charge DC bias base value (Half speed)

### Refer: Chk Current(40ppm/50ppm model only)

1 Display the current setting.

Items	Contents
C	Cyan inflow current
M	Magenta inflow current
Y	Yellow inflow current
K	Black inflow current

### Setting: Set Main HV

1 Select the item to set.

Items	Contents	Setting range	Initial setting
White Line	Switch On/Off the white streak prevention control	On/Off	Off
Agent Time	Aging time by surface speed gap	0 to 255 *1	0

\*1: The aging time of the set value 1 to 255 is 30 seconds.

2 Press the [Start] key to set the setting value.

### Setting: MCH

1 Select the item to set.

Items	Contents	Setting range	Initial setting
Value	MCH correction	1 to 7	4

2 Press the [Start] key to set the setting value.

### Completion

1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

## U101 Primary transfer current adjustment

### Message: 1st TC Output

#### Contents

Set the primary transfer control current

#### Purpose

Change setting if a failure such as faint image, etc. occurs.

#### Method

1 Press the [Start] key.

2 Select the item to set.

The screen for setting is displayed.

Items	Contents
Normal	Setting the primary transfer current
Add Color	Setting 2nd side additional value
Add Color 2nd	Setting 2nd side additional value
Surround Correct	Setting the environmental correction

#### Setting: Normal

1 Select the item to set.

2 By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Contents	Setting range	Initial setting	Data variation
Full	Yellow primary transfer current (full speed)	0 to 400	60	-
Half	Yellow primary transfer current (half speed)	0 to 400	40	-
3/4	Yellow primary transfer positive current (3/4 speed)	0 to 400	50	-

3 Press the [Start] key to set the setting value.

#### Setting: Add Color

1 Select the item to set.

2 By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Contents	Setting range	Initial setting	Data variation
C	Setting the additional value (Cyan)	-200 to 200	5	-
M	Setting the additional value (Magenta)	-200 to 200	5	-
Y	Setting the additional value (Yellow)	-200 to 200	0	-
K	Setting the additional value (Black)	-200 to 200	25	-
B/W	Monochrome mode (toner applying amount)	-200 to 200	-27	-

3 Press the [Start] key to set the setting value.

#### Setting: Add Color 2nd

1

1 Select the item to set.

2 By using the [&lt;] [&gt;] keys or the numeric keys, change the setting value.

Items	Contents	Setting range	Initial setting	Data variation
C	2nd side additional value (Cyan)	-200 to 200	-12	-
M	2nd side additional value (Magenta)	-200 to 200	-12	-
Y	2nd side additional value (Yellow)	-200 to 200	-10	-
K	2nd side additional value (Black)	-200 to 200	30	-

3 Press the [Start] key to set the setting value.

**Setting: Surround Correct**

1 Select the item to set.

2 By using the numeric keys, change the setting value.

Items	Contents	Setting range	Initial setting	Data variation
Mode	Environmental correction (On/Off)	0: On 1: Off	On	-
Rev Bias	Reverse bias cleaning	-200 to 200	30	-
High Altitude	High altitude correction control (2nd side correction)	-200 to 200	85	-

3 Press the [Start] key to set the setting value.

**Completion**

1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.



## U106 Secondary transfer current adjustment

### Message: 2nd TC Output

#### Contents

Set the secondary transfer control current for each media type.

#### Purpose

Change setting if a failure such as faint image, etc. occurs.

#### Method

1 Press the [Start] key.

2 Select the item to set.

The screen for setting is displayed.

Items	Contents
Light/Normal1	Transfer control value for Light and Normal1
Normal2/3	Transfer control value for Normal 2 / 3
Light/Normal123	Transfer control value for Light to Normal1,2,3
Heavy1	Transfer control value for Normal 1 / 3
Heavy2/3	Transfer control value for Heavy 2 / 3
OHP	Transfer control value for Transparency
Light-Normal3	Transfer control value for Light to Normal3
Bias	Bias setting
High Altitude	High altitude correction control setting (2nd side correction)
Paper End	Turning off the secondary transfer at the paper end

#### Setting: Light/Normal1

1 Select the item to set.

The screen for setting is displayed.

Items	Contents
1st	1st side transfer control value at full speed
2nd	2nd side transfer control value at full speed

2 Select the item to set.

3 By using the [<] [>] keys or the numeric keys, change the setting value.

#### 1st

Items	Contents	Setting range	Initial setting	Data variation
W<160	Setting paper width less than 160	0 to 2000	420	-
160<=W<210	Setting paper width of 160 or more and less than 210	0 to 2000	310	-

#### 2nd

Items	Contents	Setting range	Initial setting	Data variation
W<160	Setting paper width less than 160	0 to 2000	500	-
160<=W<210	Setting paper width of 160 or more and less than 210	0 to 2000	230	-

- 4 Press the [Start] key to set the setting value.

### Setting: Normal2/3

- 1 Select the item to set.

The screen for setting is displayed.

Items	Contents
1st	1st side transfer control value at full speed
2nd	2nd side transfer control value at full speed

- 2 Select the item to set.

- 3 By using the [<] [>] keys or the numeric keys, change the setting value.

#### 1st

Items	Contents	Setting range	Initial setting	Data variation
W<160	Setting paper width less than 160	0 to 2000	460	-
160<=W<210	Setting paper width of 160 or more and less than 210	0 to 2000	340	-

#### 2nd

Items	Contents	Setting range	Initial setting	Data variation
W<160	Setting paper width less than 160	0 to 2000	450	-
160<=W<210	Setting paper width of 160 or more and less than 210	0 to 2000	340	-

- 4 Press the [Start] key to set the setting value.

### Setting: Light/Normal123

- 1 Select the item to set.

The screen for setting is displayed.

Items	Contents
1st B/W	1st side transfer control value in monochrome mode
2nd B/W	2nd side transfer control value in monochrome mode

- 2 Select the item to set.

- 3 By using the [<] [>] keys or the numeric keys, change the setting value.

#### 1st B/W

Items	Contents	Setting range	Initial setting	Data variation
W<160	Setting paper width less than 160	0 to 2000	380	-
160<=W<210	Setting paper width of 160 or more and less than 210	0 to 2000	260	-

#### 2nd B/W

Items	Contents	Setting range	Initial setting	Data variation
W<160	Setting paper width less than 160	0 to 2000	300	-
160<=W<210	Setting paper width of 160 or more and less than 210	0 to 2000	220	-

4 Press the [Start] key to set the setting value.

### Setting: Heavy1

1 Select the item to set.

The screen for setting is displayed.

Items	Contents
1st 3/4	1st side transfer control value at 3/4 speed
2nd 3/4	2nd side transfer control value at 3/4 speed
1st Half	1st side transfer control value at half speed
2nd Half	2nd side transfer control value at half speed
1st 3/4 B/W	1st side transfer control value at 3/4 speed in monochrome mode
2nd 3/4 B/W	2nd side transfer control value at 3/4 speed in monochrome mode

2 Select the item to set.

3 By using the [<] [>] keys or the numeric keys, change the setting value.

#### 1st 3/4

Items	Contents	Setting range	Initial setting	Data variation
W<160	Setting paper width less than 160	0 to 2000	360	-
160<=W<210	Setting paper width of 160 or more and less than 210	0 to 2000	220	-

#### 2nd 3/4

Items	Contents	Setting range	Initial setting	Data variation
W<160	Setting paper width less than 160	0 to 2000	350	-
160<=W<210	Setting paper width of 160 or more and less than 210	0 to 2000	220	-

#### 1st Half

Items	Contents	Setting range	Initial setting	Data variation
W<160	Setting paper width less than 160	0 to 2000	240	-
160<=W<210	Setting paper width of 160 or more and less than 210	0 to 2000	150	-

#### 2nd Half

Items	Contents	Setting range	Initial setting	Data variation
W<160	Setting paper width less than 160	0 to 2000	240	-
160<=W<210	Setting paper width of 160 or more and less than 210	0 to 2000	150	-

#### 1st 3/4 B/W

Items	Contents	Setting range	Initial setting	Data variation
W<160	Setting paper width less than 160	0 to 2000	320	-
160<=W<210	Setting paper width of 160 or more and less than 210	0 to 2000	180	-

**2nd 3/4 B/W**

Items	Contents	Setting range	Initial setting	Data variation
W<160	Setting paper width less than 160	0 to 2000	340	-
160<=W<210	Setting paper width of 160 or more and less than 210	0 to 2000	180	-

4 Press the [Start] key to set the setting value.

**Setting: Heavy2/3**

1 Select the item to set.

The screen for setting is displayed.

Items	Contents
1st Half	1st side transfer control value at half speed
2nd Half	2nd side transfer control value at half speed
1st Half B/W	1st side transfer control value at half speed in monochrome mode
2nd Half B/W	2nd side transfer control value at half speed in monochrome mode

2 Select the item to set.

3 By using the [<] [>] keys or the numeric keys, change the setting value.

**1st Half**

Items	Contents	Setting range	Initial setting	Data variation
W<160	Setting paper width less than 160	0 to 2000	300	-
160<=W<210	Setting paper width of 160 or more and less than 210	0 to 2000	210	-

**2nd Half**

Items	Contents	Setting range	Initial setting	Data variation
W<160	Setting paper width less than 160	0 to 2000	360	-
160<=W<210	Setting paper width of 160 or more and less than 210	0 to 2000	180	-

**1st Half B/W**

Items	Contents	Setting range	Initial setting	Data variation
W<160	Setting paper width less than 160	0 to 2000	300	-
160<=W<210	Setting paper width of 160 or more and less than 210	0 to 2000	210	-

**2nd Half B/W**

Items	Contents	Setting range	Initial setting	Data variation
W<160	Setting paper width less than 160	0 to 2000	360	-
160<=W<210	Setting paper width of 160 or more and less than 210	0 to 2000	210	-

4 Press the [Start] key to set the setting value.

#### Setting: OHP

- 1 Select the item to set.
- 2 By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Contents	Setting range	Initial setting	Data variation
W<160	Setting paper width less than 160	0 to 2000	220	-
160<=W<210	Setting paper width of 160 or more and less than 210	0 to 2000	90	-

3 Press the [Start] key to set the setting value.

#### Setting: Light-Normal3

- 1 Select the item to set.  
The screen for setting is displayed.

Items	Contents
1st 3/4	1st side setting at 3/4 speed
2nd 3/4	2nd side setting at 3/4 speed
1st Half	1st side setting at half speed
2nd Half	2nd side setting at half speed

- 2 Select the item to set.
- 3 By using the [<] [>] keys or the numeric keys, change the setting value.

#### 1st 3/4

Items	Contents	Setting range	Initial setting	Data variation
W<160	Setting paper width less than 160	0 to 2000	340	-
160<=W<210	Setting paper width of 160 or more and less than 210	0 to 2000	250	-

#### 2nd 3/4

Items	Contents	Setting range	Initial setting	Data variation
W<160	Setting paper width less than 160	0 to 2000	400	-
160<=W<210	Setting paper width of 160 or more and less than 210	0 to 2000	200	-

**1st Half**

Items	Contents	Setting range	Initial setting	Data variation
W<160	Setting paper width less than 160	0 to 2000	220	-
160<=W<210	Setting paper width of 160 or more and less than 210	0 to 2000	170	-

**2nd Half**

Items	Contents	Setting range	Initial setting	Data variation
W<160	Setting paper width less than 160	0 to 2000	340	-
160<=W<210	Setting paper width of 160 or more and less than 210	0 to 2000	150	-

4 Press the [Start] key to set the setting value.

**Setting: Bias**

- 1 Select the item to set.
- 2 By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Contents	Setting range	Initial setting	Data variation
Reverse 2nd	Secondary transfer cleaning negative bias	-1 to 200	0	-
Cleaning 2nd	Secondary transfer cleaning positive bias	0 to 200	1000	-
Calb Cleaning	Calibration cleaning bias	0 to 200	100	-

3 Press the [Start] key to set the setting value.

**Setting: High Altitude**

- 1 Select the item to set.
- 2 By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Contents	Setting range	Initial setting	Data variation
Light/Normal1	Light and Normal1 setting	0 to 100	85	-
Normal2/3	Setting of Normal 1/2	0 to 100	80	-

3 Press the [Start] key to set the setting value.

**Setting: Paper End**

- 1 Select the item to set.
- 2 By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Contents	Setting range	Initial setting	Data variation
Heavy2/3	Setting for Thick2,3	0 to 100	65	-
Ext Heavy	Ext Heavy setting	0 to 100	90	-

- 3 Press the [Start] key to set the setting value.

### **Completion**

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U107 Primary transfer cleaning voltage adjustment

### Message: Adj 1st TC Clean

#### Contents

Set the transfer belt unit cleaning control current.

#### Purpose

Change the setting when offset images appear with the transfer belt cleaning failure.

#### Method

1 Press the [Start] key.

2 Select the item to set.

The screen for setting is displayed.

Items	Contents
Belt(A)	Belt A setting
Belt(B)	Belt B setting
Belt(C)	Belt C setting
Belt(D)	Belt D setting

#### Setting

1 Select the item to set.

2 By using the [<] [>] keys or the numeric keys, change the setting value.

#### Belt(A)

Items	Contents	Setting range	Initial setting	Data variation
Full	Full speed setting	0 to 300	50	-
Half	Half speed setting	0 to 300	40	-
3/4	3/4 speed setting	0 to 300	45	-

#### Belt(B)

Items	Contents	Setting range	Initial setting	Data variation
Full	Full speed setting	0 to 300	45	-
Half	Half speed setting	0 to 300	45	-
3/4	3/4 speed setting	0 to 300	45	-

#### Belt(C)

Items	Contents	Setting range	Initial setting	Data variation
Full	Full speed setting	0 to 300	60	-
Half	Half speed setting	0 to 300	60	-
3/4	3/4 speed setting	0 to 300	60	-



**Belt(D)**

Items	Contents	Setting range	Initial setting	Data variation
Full	Full speed setting	0 to 300	130	-
Half	Half speed setting	0 to 300	80	-
3/4	3/4 speed setting	0 to 300	100	-

3 Press the [Start] key to set the setting value.

**Completion**

1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

## U110 Drum counter

### Message: Drum Cnt

#### Contents

Display the drum counter values.

#### Purpose

Execute to check the drum usage status.

#### Method

- 1 Press the [Start] key.

The drum counter is displayed.

Items	Contents
C	Displaying the cyan drum counter
M	Displaying the magenta drum counter
Y	Displaying the yellow drum counter
K	Displaying the black drum counter

#### Completion

- 1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

## U117 Drum unit number

### Message: Drum No.

#### Contents

Display the drum number.

#### Purpose

Execute to check the drum number.

#### Method

- 1 Press the [Start] key.  
Display the drum number.

Items	Contents
C	Displaying the cyan drum number
M	Displaying the magenta drum number
Y	Displaying the yellow drum number
K	Displaying the black drum number

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U118 Drum unit history

### Message: Drum History

#### Contents

Display the machine serial number and drum counter history.

#### Purpose

Execute to check the machine serial number and drum counter values.

#### Method

- 1 Press the [Start] key.  
Select the item to refer to.

Items	Contents
C	Displaying the cyan drum history
M	Displaying the magenta drum history
Y	Displaying the yellow drum history
K	Displaying the black drum history

Display the machine serial number and 3 items of the drum counter history.

Items	Contents
Machine History1 to 3	Machine serial number history
Cnt History1 to 3	The drum counter history

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U119 Setting the drum

### Message: Set Drum

#### Contents

Set the drum sensitivity.

#### Purpose

Execute when the drum unit or laser scanner unit is replaced.

After completing, execute maintenance mode U464 [Calibration].

#### Method

- 1 Press the [Start] key.
- 2 Select [Execute].

Items	Contents
Execute	Transfer the drum sensitivity data from the EEPROM in the drum unit to the engine PWB to set the LSU light amount correction data

- 3 Press the [Start] key.  
Starts the drum setup operation.
- 4 Turn the power switch off then on. Wait more than 5 seconds between the power off and on.

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U120 Drum drive distance counter

### Message: Drum Drv Dist Cnt

#### Contents

Display the drum drive distance counter.

#### Purpose

Execute to display the drum drive distance counter.

#### Method

- 1 Press the [Start] key.

Display the count.

Items	Contents
C	Displaying the cyan drum drive distance counter
M	Displaying the magenta drum drive distance counter
Y	Displaying the yellow drum drive distance counter
K	Displaying the black drum drive distance counter

#### Completion

- 1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

## U127 Clearing the transfer count

### Message: Clr Trans Cnt

#### Contents

Display and clear the transfer counts for the transfer high-voltage output correction etc.

#### Purpose

Verify the primary/secondary transfer unit counts after replacing. Also, clear the counts after replacement.

#### Method

- 1 Press the [Start] key.

The transfer counter value appears.

Items	Contents
Mid(Cnt)	Displaying or Clear the primary transfer counter
2nd(Cnt)	Displaying or Clear the secondary transfer counter

#### Setting: Mid(Cnt)

**Clear only. This cannot be changed.**

- 1 Select [Clear].
- 2 Press the [Start] key to set the counter value.

#### 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.

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U128 Leading edge timing

### Message: Adj Trans Timing

#### Contents

Adjust On/Off timing of the transfer high voltage output.

#### Purpose

Prevent paper from being rolled up by the drum.

#### Method

1 Press the [Start] key.

2 Select the item to set.

The screen for setting is displayed.

Items	Contents
Timing 1st	Transfer On timing adjustment value (1st side)
Timing 2nd	Transfer On timing adjustment value (2nd side)

#### Setting: Timing 1st

1 Select the item to set.

2 By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Contents	Setting range	Initial setting	Data variation
On Timing	Transfer On timing adjustment value	-200 to 200	0	0.5mm
Off Timing	Transfer Off timing adjustment value	-200 to 200	0	0.5mm

3 Press the [Start] key to set the setting value.

#### Setting: Timing 2nd

1 Select the item to set.

2 By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Contents	Setting range	Initial setting	Data variation
1side < 60	Secondary transfer voltage on timing (1st side, weight less than 60gsm)	-200 to 200	0	0.5mm
1side >= 60	Secondary transfer voltage on timing (1st side, weight 60gsm or more)	-200 to 200	0	0.5mm
2side < 60	Secondary transfer voltage on timing (2nd side, weight less than 60gsm)	-200 to 200	0	0.5mm
2side >= 60	Secondary transfer voltage on timing (2nd side, weight 60gsm or more)	-200 to 200	0	0.5mm
Off Timing	Secondary transfer voltage off timing	-200 to 200	0	0.5mm

3 Press the [Start] key to set the setting value.

#### Completion

1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.



## U132 Forcible toner supply operation

### Message: Supply Toner

#### Contents

Toner is supplied forcibly until the toner sensor output value reaches the toner supply level.

#### Purpose

Execute if toner empty is often detected.

#### Method

- 1 Press the [Start] key.
- 2 Select [Execute].
- 3 Press the [Start] key.

Execute toner supply forcibly until the toner sensor output value reaches the toner supply level.

Items	Contents
Supply(C)	Cyan toner supply level
Supply(M)	Magenta toner supply level
Supply(Y)	Yellow toner supply level
Supply(K)	Black toner supply level
Sensor(C)	Cyan toner sensor output value
Sensor(M)	Magenta toner sensor output value
Sensor(Y)	Yellow toner sensor output value
Sensor(K)	Black toner sensor output value
Execute	Installs toner

- 4 To stop the operation, press the [Stop] key.

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U135 Checking the toner motor operation

### Message: Chk Toner Motor

#### Contents

Drives the toner motor.

#### Purpose

Execute to check the toner motor operation.



#### Note

If driven for a long time or several times repeatedly, the developer unit will be full of toner inside and it may lock up.

#### Method

- 1 Press the [Start] key.
- 2 Select [Toner].
- 3 Press the [Start] key.

The operation starts.

Items	Contents
Toner	Drives the toner motor(TM)

To stop the operation, press the [Stop] key.

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U136 Toner level detection setting

### Message: Set Toner Near End

#### Contents

Execute the level setting of printable pages between toner near end and toner empty.

#### Purpose

Change the timing of detecting toner near end earlier than the current setting if the interval between toner near end and toner empty is too short.

#### Setting

1 Press the [Start] key.

2 Select the item to set.

By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Contents	Setting range	Initial setting	Data variation
CMY	Black/Cyan/Magenta/Yellow toner level setting	0 to 9	3	-
K	Setting the black toner level	0 to 9	3	-

If the set value is increased, the time interval from the toner near end to the toner empty becomes longer.

If the set value is reduced, the time interval from toner near end to toner empty becomes shorter.

0: no toner near end detection

3 Press the [Start] key to set the setting value.

#### Completion

1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

## U139 Temperature, humidity

### Message: Temp/Humidity

#### Contents

Display the machine inside and outside temperature and machine outside humidity.

#### Purpose

Check the machine inside and outside temperature and machine outside humidity.

#### Method

- 1 Press the [Start] key.

Each value is displayed.

Items	Contents
Ext Temp	Displaying the machine outside temperature.
Ext Humidity	Displaying the machine outside humidity.
Dev Temp	Displaying the developer K temperature inside the machine.
LSU Temp(K)	Displaying the LSU K temperature inside the machine.

#### Completion

- 1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

## U140 Developer bias adjustment

### Message: Adj Dev Bias

#### Contents

Display/change the developer bias set values or Set 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 setting is displayed.

Items	Contents
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 Freq	Set the developer sleeve roller frequency.
Sleeve Duty	Set the developer sleeve roller duty.
Mag Duty	Set the developer magnet roller duty.
Altitude Adj	Set the altitude adjustment mode

#### Setting: Sleeve DC

1 Select the item to set.

2 By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Contents	Setting range	Initial setting	Data variation
C	Set the cyan	0 to 350	200	1V
M	Set the magenta	0 to 350	200	1V
Y	Set the yellow	0 to 350	200	1V
K	Set the black	0 to 350	200	1V

3 Press the [Start] key to set the setting value.

#### Setting: Sleeve AC

1 Select the item to set.

2 By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Contents	Setting range	Initial setting	Data variation
C	Set the cyan	100 to 175	140	1V
M	Set the magenta	100 to 175	140	1V
Y	Set the yellow	100 to 175	140	1V
K	Set the black	100 to 175	140	1V

- 3 Press the [Start] key to set the setting value.

### Setting: Mag DC

- 1 Select the item to set.
- 2 By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Contents	Setting range	Initial setting	Data variation
C	Set the cyan	0 to 750	470	1V
M	Set the magenta	0 to 750	470	1V
Y	Set the yellow	0 to 750	470	1V
K	Set the black	0 to 750	470	1V

- 3 Press the [Start] key to set the setting value.

### Setting: Sleeve Freq

- 1 Select the item to set.
- 2 By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Contents	Setting range	Initial setting	Data variation
Normal	Execute full speed setting	3600	3600	1Hz

- 3 Press the [Start] key to set the setting value.

### Setting: Sleeve Duty

- 1 Select the item to set.
- 2 By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Contents	Setting range	Initial setting	Data variation
Normal	Execute full speed setting	34	66	1%

- 3 Press the [Start] key to set the setting value.

### Setting: Mag Duty

- 1 Select the item to set.
- 2 By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Contents	Setting range	Initial setting	Data variation
Normal	Execute full speed setting	50 to 80	66	1%

- 3 Press the [Start] key to set the setting value.

### Setting: Altitude Adjustment

- 1 Select the item to set.

Items	Contents
Normal	Set 1000m or less
1001 to 2000m	Set at 1001 to 2000m

---

Items	Contents
2001 to 3000m	Set at 2001 to 3000m
3001 to 3500m	Set at 3001 to 3500m

Initial setting: Normal

- 2 Press the [Start] key to set the setting value.

### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U147 Setting the toner applying mode

### Message: Set Toner Apply

#### Contents

Mode selection for the operation to remove overcharged toner in the developer unit (Toner applying mode). Also, Set the operation to take toner accumulated on the developer blade back to the developer unit (vibration motor control).

#### Purpose

Change the setting to reduce the toner applying amount. Execute to change the vibration motor control frequency.

Density is lowered if overcharged toner stays in the developer unit.

#### Method

- 1 Press the [Start] key.
- 2 Select the item to set.  
The screen for setting is displayed.

Items	Contents
Mode	Set the toner applying mode.
Drum T7	Set the toner applying width at the cleaning mode.
Dev T7	Set the upper limit of the toner applying amount for each operation mode.
Motor	Set the vibration motor operation.

#### Setting: Mode

- 1 Select the item to set.

Items	Contents
On	Set the toner applying operation with the normal amount.
Off	Set the toner applying operation with less than the normal amount.

Initial setting: On

- 2 Press the [Start] key to set the setting value.

#### Setting: Drum T7

- 1 By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Contents	Setting range	Initial setting	Data variation
Value	Set the toner applying width at the cleaning mode	0 to 25	10	0.1mm

- 2 Press the [Start] key to set the setting value.

#### Setting: Developing T7

- 1 By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Contents	Setting range	Initial setting	Data variation
Value	Set the upper limit of the toner applying amount for each operation mode	0 to 25	20 (Indicated as 2.0)	1%

- 2 Press the [Start] key to set the setting value.

#### Setting: Motor



- 1 By using the [+] [-] keys or the numeric keys, change the setting value.

Items	Contents	Setting range	Initial setting	Data variation
Print(Normal)	Set the continuous printing (normal environment)	10 to 2550	-	10
Print(H/H)	Set continuous printing (high temperature, high humidity)	10 to 2550	-	10
Print End	Setting when completing printing	1 to 255	-	1

- 2 Press the [Start] key to set the setting value.

### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U148 Drum refresh mode setting

### Message: Set Drum Refresh

#### Contents

Set the mode to use the drum refresh in the user adjustment.

#### Purpose

Change the setting if the drum refresh is frequently operated.

#### Setting

- 1 Press the [Start] key.
- 2 By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Contents	Setting range	Initial setting	Data variation
Normal	Set Auto drum refresh	0: Off 1 to 3: Standard	1	-

- 3 Press the [Start] key to set the setting value.

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U155 Toner sensor output

### Message: Toner S Output

#### Contents

Display the toner sensor output

#### Purpose

Execute to check each color's output value when an image failure occurs.

#### Method

- 1 Press the [Start] key.
- 2 Select the item to refer to.  
Switched to each reference screen.

Items	Contents
Waste Toner	Displaying the toner sensor value
Toner	Displaying the toner sensor value and supply level value for each color

#### Method: Waste Toner

- 1 Check each sensor value.  
Display the waste toner sensor value.

Items	Contents
Full	Displaying the waste toner sensor value 1
Near Full	Displaying the waste toner sensor value 2

#### Method: Toner

- 1 Check each sensor value.  
Display the toner sensor value.

Items	Contents
Sensor (C)	Displaying the cyan toner sensor output value
Sensor (M)	Displaying the magenta toner sensor output value
Sensor (Y)	Displaying the yellow toner sensor output value
Sensor (K)	Displaying the black toner sensor output value
Supply (C)	Displaying the cyan toner supply level target value
Supply (M)	Displaying the magenta toner supply level target value
Supply (Y)	Displaying the yellow toner supply level target value
Supply (K)	Displaying the black toner supply level target value

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U156 Toner control level adjustment

Message: Adj Tnr Ctrl Lv

### Contents

Display the toner supply level for each color.

### Purpose

Execute displaying the toner supply level for each color.

### Setting

- 1 Press the [Start] key.
- 2 Select [Supply].

Items	Contents
Supply	Displaying the toner supply level

- 3 Display the toner supply level for each color.

Items	Contents
C	Displaying the cyan toner supply level
M	Displaying the magenta toner supply level
Y	Displaying the yellow toner supply level
K	Displaying the black toner supply level

### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U157 Developer drive time

### Message: Dev Time

#### Contents

Display 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.

Display the developer drive time.

Items	Contents
C	Displaying the Cyan developer unit drive time.
M	Displaying the Magenta developer unit drive time.
Y	Displaying the Yellow developer unit drive time.
K	Displaying the Black developer unit drive time.

#### Completion

- 1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

## U158 Developer counter

### Message: Dev Cnt

#### Contents

Display the developer counter

#### Purpose

Execute to check the developer unit usage status.

#### Method

- 1 Press the [Start] key.

The developer count is displayed.

Items	Contents
C	Displaying the cyan developer counter.
M	Displaying the magenta developer counter.
Y	Displaying the yellow developer counter.
K	Displaying the black developer counter.

#### Completion

- 1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

## U161 Fuser temperature adjustment

### Message: Adj Fuser Temp

#### Contents

Set the fuser temperature.

#### Purpose

Normally no need to change. However, change the setting as corrective measures for paper curl, creases and fusing failure on thick paper.

#### Method

1 Press the [Start] key.

2 Select the item to set.

The screen for setting is displayed.

Items	Contents
Center	Set the center thermistor temperature.
Edge	Set the edge thermistor control temperature.

#### Setting: Center

1 Select the item to set.

2 By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Contents	Setting range	Initial setting	Data variation
Press Start	Set the temperature to start pressing	0 to 200	30	1°C
Drive Start	Set the drive start temperature	0 to 200	100	1°C
Ready	Set the Ready temperature	100 to 200	145	1°C
Steady	Set the secondary stability temperature	100 to 200	150	1°C
Printing	Set the temperature during printing	100 to 200	170	1°C
Waiting	Set the standby temperature	100 to 200	160	1°C

3 Press the [Start] key to set the setting value.

#### Setting: Edge

1 Select the item to set.

2 By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Contents	Setting range	Initial setting	Data variation
Ready	Set the Ready temperature	100 to 200	110	1°C
Steady	Set the secondary stability temperature	100 to 200	130	1°C
Waiting	Set the standby temperature	100 to 200	150	1°C

3 Press the [Start] key to set the setting value.

#### Completion

1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

## U167 Clearing the fuser count

### Message: Clr Trans Cnt

#### Contents

Display and clear the fuser count.

#### Purpose

Verify the fuser count after replacement. Also, clear the counts after replacement.

#### Method

- 1 Press the [Start] key.

The fuser count is displayed.

Items	Contents
Cnt	Displaying the fuser count
Clear	Clear the fuser count

#### Method: Clear

- 1 Select [Clear].
- 2 Press the [Start] key.

Fuser unit counter is cleared.

#### Completion

- 1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

## U198 Set the fuser phase control

### Message: Set Phase Ctrl

#### Contents

Switching the fuser phase control

#### Purpose

Used for switching the fuser phase control against the measure of the flicker.

#### Method

1 Press the [Start] key.

2 Select [Flicker].

The screen for setting is displayed.

Items	Contents
Flicker	Set the mode for the measure of the flicker

#### Setting: Mode

1 Select the item to set.

Items	Contents
On	Make the mode for the measure of the flicker enable
Off	Make the mode for the measure of the flicker disable

Initial setting: On

2 Press the [Start] key to set the setting value.



## U199 Fuser temperature

### Message: Fuser Temp

#### Contents

Fuser temperature is displayed.

#### Purpose

Execute to check the fuser temperature.

#### Method

- 1 Press the [Start] key.

Fuser temperature is displayed.

Items	Contents
Heat Roller Edge	Displaying the fuser heat roller edge temperature (°C)
Heat Roller Center	Displaying the fuser heat roller center temperature (°C)

#### Completion

- 1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

## U200 All LEDs lighting

### Message: All LEDs ON

#### Contents

All the LEDs on the operation panel are lit.

#### Purpose

Execute to check the operation panel LED lighting.

#### Method

- 1 Press the [Start] key.

- 2 Select [Execute].

- 3 Press the [Start] key.

All the LEDs on the operation panel are blinking.

- 4 Press the [Stop] key to turn the display off.

#### Completion

- 1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

## U201 Initializing the touch panel

### Message: Init Touch Panel

#### Contents

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.

#### Method

- 1 Press the [Start] key.
- 2 Select the item to execute.

Items	Contents
Initialize	Automatically corrects the touch panel display position
Check	Checks the touch panel display position

- 3 Press the [Start] key.  
The screen for executing is displayed.

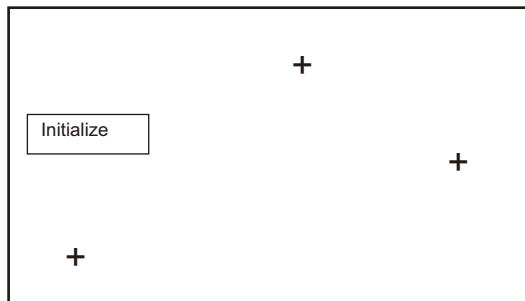
#### Method: Initialize

- 1 Press the center of "+".
- 2 Repeat 3 times.
- 3 After finishing setting, the [Check] screen is automatically displayed.



#### Method: Check

- 1 Press the indicated three "+", and then check the display position.  
If out of the specified value, select [Initialize] and press the [Start] key to return to Step.



#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U203 Check DP operation

### Message: Chk DP Ope

#### Contents

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	Contents
Normal Speed	Normal scanning (600dpi)
High Speed	High speed scanning

#### Method: Normal Speed/High Speed

- 4 Select the item to operate.

Items	Contents
CCD ADP	With paper, a single-sided original is fed to the CCD
CCD RADP	With paper, a double-sided original is fed to the CCD
CCD ADP (Non-P)	Without paper, a single-sided original is fed to the CCD (continuous operation)
CCD RADP (Non-P)	Without paper, a double-sided original is fed to the CCD (continuous operation)

- 5 Press the [Start] key.  
The operation starts.
- 6 To stop the operation, press the [Stop] key.

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U207 Operation key check

### Message: Chk Panel Key

#### Contents

Check the operation panel keys.

#### Purpose

Check the operation of all the keys and LEDs on the operation panel.

#### Method

- 1 Press the [Start] key to display execution window.
- 2 [Count 0] appears and the job separator LED is turned on.
- 3 When pressing the keys on the operation panel from the left upper side and each row in order, the count is counted up by one.
- 4 If pressing all the keys, all the LEDs are lit.

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U211 Enhancement unit connection setting

### Message: Set EH Connection

#### Contents

Execute the inner job separator installation setting.

#### Purpose

Execute when installing the inner job separator.

Make sure to set to [Off] to prevent wrong LED lighting when not installed.

#### Method

- 1 Press the [Start] key.
- 2 Select [Inner Job Separator].  
The screen for setting is displayed.

Items	Contents
Inner JobSepa	Job separator setting

#### Method

- 1 Select the item to set.

Items	Contents
On	The job separator is installed
Off	The job separator is not installed

Initial setting: Off

- 2 Press the [Start] key to set the setting value.
- 3 Turn the power switch off then on. Wait more than 5 seconds between the power off and on.

## U221 USB host lock function setting

### Message: Set USB Host Lock

#### Contents

Set ON/OFF of the USB Host lock function. When setting it to on, the device connected to the USB host is not recognized.

#### Purpose

Change the setting according to the user's request

#### Method

1 Press the [Start] key.

2 Select [Host Lock].

The screen for setting is displayed.

Items	Contents
Host Lock	Turns the USB Host lock function on/off

3 Select the item to set.

Items	Contents
On	The USB Host lock function is available
Off	The USB Host lock function is not available

Initial setting: Off

4 Press the [Start] key to set the setting value.

5 Turn the power switch off then on. Wait more than 5 seconds between the power off and on.

#### Completion

1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

## U222 Setting the IC card type

### Message: Set IC Card Type

#### Contents

Set the ID card type

#### Purpose

Change the type of ID card

#### Setting

- 1 Press the [Start] key.
- 2 Select the item to set.

Items	Contents
Other	Select when the ID card type is other than SSFC.
SSFC	When the ID card type is SSFC,

Initial setting: Other

- 3 Press the [Start] key to set the setting value.

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.



## U223 Operation panel lock

### Message: Lock Panel Ope

#### Contents

Execute setting the operation panel function.

#### Purpose

Execute to prohibit the system menu and job cancel operations from the operation panel by the users other than those with administrator privileges.

#### Setting

- 1 Press the [Start] key.
- 2 Select the item to set.

Items	Contents
Unlock	Unlock System Menu operation
Partial Lock 1	Lock System Menu operation and Input/Output setting
Partial Lock 2	Lock System Menu operation, Input/Output setting and Job execution setting
Partial Lock 3	Lock System Menu operation, Input/Output setting, Job execution setting and Paper settings
Lock	Lock System Menu operation and Job Cancel operation

Initial setting: Unlock

- 3 Press the [Start] key to set the setting value.

Operation item	Partial Lock 1	Lock
Entering the maintenance mode	Prohibition	Prohibition
Switching to System Menu	Prohibition	Prohibition
Send, Send from Document Box	Prohibition	Prohibition
Switches the Yellow developer On/Off setting	Prohibition	Prohibition
Switch to registration/editing Document Box	Prohibition	Prohibition
Pressing the [Stop] key	Permission	Prohibition
Pressing the [Status/Job Cancel] key	Permission	Prohibition
Disconnect the FAX line	Permission	Prohibition

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U230 Optional device serial number

### Message: Optional Device Serial No

#### Contents

Display the optional device serial number

#### Purpose

Specify the production lot from the serial number to help the investigation when a problem occurs.

#### Method

- 1 Press the [Start] key.  
Display the serial number.

Items	Contents
Finisher	Displaying the finisher serial number.
PF1	Displaying the PF1 serial number.
PF2	Displaying the PF2 serial number.

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U240 Finisher operation check

### Message: Chk Fin Ope

#### Contents

Turn the finisher's motors and solenoids on.

#### Purpose

Execute for the finisher's motors and solenoids operation check.

#### Method

- 1 Press the [Start] key.
- 2 Select the item to operate.  
The screen for setting is displayed.

Items	Contents
Motor	Finisher motor operation check
Solenoid	Finisher solenoid operation check
Mail Box	Mail Box motor operation check

#### Method: Motor

- 1 Select the item to operate.
- 2 Press the [Start] key.  
The operation starts.

Items	Contents
Middle(H)	Drive the DF middle motor at high speed.
Middle(L)	Drive the DF middle motor at low speed.
Eject Pull(H)	Drive the DF exit motor at high speed in the reversing direction.
Eject Pull(L)	Drive the DF exit motor at low speed in the reversing direction.
Eject Conv(H)	Drive the DF exit motor at high speed in the conveying direction.
Eject Conv(L)	Drive the DF exit motor at low speed in the conveying direction.
Tray	Drive the DF tray motor. Operation pattern: After descending to the lower limit, ascends and descends again when passing 1s after detecting the middle sensor off. Ascends again when detecting the middle sensor on and stops at the upper limit.
Staple	Drive the DF staple motor
Staple Move	Drive the DF slide motor
Width Test(A4R)	Drive the DF side registration motor 1,2
Width Test(LTR)	Drive the DF side registration motor 1,2
Beat	Drive the DF paddle motor
Eject Unlock(HP)	Drive the DF exit release motor at the home position
Eject Unlock(30)	Drive the DF exit release motor at the 30-sheet bundle position
Eject Unlock(50)	Drive the DF exit release motor at the 50-sheet bundle position
Eject Unlock(Fix)	Drive the DF exit release motor at the fixed position
Eject Unlock(Full)	Drive the DF exit release motor at the full open position

To stop the operation, press the [Stop] key.

**Method: Solenoid**

- 1 Select the item to operate.
- 2 Press the [Start] key.  
The operation starts.

Items	Contents
Press Paper	Turn the paper press solenoid

To stop the operation, press the [Stop] key.

**Method: Mail Box**

- 1 Select the item to operate.
- 2 Press the [Start] key.  
The operation starts.

Items	Contents
Conv	Drives the MT drive motor to convey paper
Branch	Drives the MT drive motor for feed-shift

To stop the operation, press the [Stop] key.

**Completion**

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U241 Finisher switch check

### Message: Chk Fin Switch

#### Contents

Display the status of finisher's switches and sensors operation.

#### Purpose

Execute for the finisher's switches and sensors operation check.

#### Method

- 1 Press the [Start] key.
- 2 Select the item to operate.  
The screen for setting is displayed.

Items	Contents
Finisher	Finisher switch sensor operation check
Mail Box	Mail Box switch sensor operation check

#### Method: Finisher

- 1 Check the switches and sensors by manually turning them on/off.  
The switch indication is inverted when the switch is detected.

Items	Contents
Tray L-Limit	DF tray sensor 4
HP	DF paper entry sensor
Middle Tray Eject	DF middle exit sensor (DFMES)
Staple HP	DF slide sensor
Middle Tray	DF main tray exit sensor
Width Front HP	DF side registration sensor 1
Width Tail HP	DF side registration sensor 2
Bundle Eject HP	DF bundle exit sensor
Match Paddle	DF adjusting sensor
Lead Paddle	DF paddle sensor
Press Paper Up	DF paper press sensor 1
Press Paper Down	DF paper press sensor 2
Set	DF setting switch

#### Method: Mail Box

- 1 Check the switches and sensors by manually turning them on/off.  
The switch indication is inverted when the switch is detected.

Items	Contents
Eject	MT exit sensor
Cover	MT cover open close switch
Over Flow1	MT overflow sensor 1
Over Flow2	MT overflow sensor 2

Items	Contents
Over Flow3	MT overflow sensor 3
Over Flow4	MT overflow sensor 4
Over Flow5	MT overflow sensor 5
Over FlowTA	MT overflow sensor tray A
Motor HP	MT paper entry sensor

### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U243 Checking the DP motor

### Message: Check DP Motor

#### Contents

Drive the motor or solenoid of the document processor.

#### Purpose

Check the operation of the motor or solenoid of the document processor.

#### Method

- 1 Press the [Start] key.
- 2 Select the item to operate.

Items	Contents
Feed Motor (CW)	Drive the DP feed motor
Feed Motor (CCW)	Reversely drives the DP feed motor
Conv Motor (CW)	Rotate the DP conveying motor
Conv Motor (CCW)	Rotate the DP conveying motor reversely
Rev Motor	Execute the automatic adjustment in the DP feedshift motor

- 3 Press the [Start] key. Each operation starts.  
To stop the operation, press the [Stop] key.

### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U244 DP switch check

### Message: Check DP SW

#### Contents

Display each switch and sensor status of the document processor.

#### Purpose

Execute to check the operation of switches and sensors of the document processor.

#### Method

- 1 Press the [Start] key.
- 2 Check the switches and sensors by manually turning them on/off.  
The switch indication is inverted when the switch is detected.

Items	Contents
Feed	Check the DP feed sensor.
Regist	Checks the DP registration sensor
Set	Checks the DP original sensor
Cover Open	Check the DP interlock switch
Open	Checks the DP open close switch

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U246 Finisher adjustment

### Message: Adj Fin

#### Contents

Execute adjustment for the finisher installation.

#### Purpose

Front/rear width adjuster home position adjustment

Adjust when the consistency of the side registration guides and paper is not good and paper jam occurs.

Front/rear staple home position adjustment

Adjust if the staple is not centered on the paper in the staple mode.

#### Method

- 1 Press the [Start] key.
- 2 Select [Finisher].  
The screen for setting is displayed.

Items	Contents
Finisher	Setting the finisher adjustment value

#### Method: Finisher

- 1 Select the item to set.

Items	Contents
Width Front HP	Front width adjuster home position adjustment
Width Tail HP	Rear width adjuster home position adjustment
Staple HP	Front/rear staple home position adjustment

#### Setting: Width Front HP / Width Tail HP

- 1 Select [Width Front HP].
- 2 By using the [<] [>] keys or the numeric keys, change the setting value.

Content to adjust	Setting range	Initial setting	Data variation
Front width adjuster home position adjustment	-30 to 30	0	0.973mm
Rear width adjuster home position adjustment	-30 to 30	0	0.973mm

- 3 Press the [Start] key to set the setting value.
- 4 Press the [Stop] key to return to the screen to select the maintenance item No.
- 5 Enter U240 and select [Motor] and then [Width Test(A4R)].  
The middle tray side registration guides move to A4R size position.
- 6 Insert paper into the side registration guides to check the consistence.
- 7 Repeat the above adjustment until the consistency is appropriate.

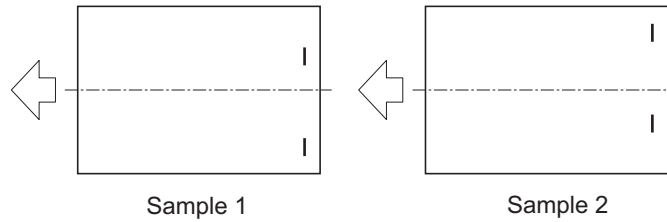


**Setting: Staple HP**

- 1 Select [Staple HP].
- 2 By using the [<] [>] keys or the numeric keys, change the setting value.

Content to adjust	Setting range	Initial setting	Data variation
Front/rear staple home position adjustment	-15 to 15	0	0.0972mm

Increase the set value if the staple position is shifted to the machine front side (sample1). Lower the set value if the staple position is shifted to the machine rear side (sample2).



- 3 Press the [Start] key to set the setting value.

**Completion**

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U247 Paper feed operation check

### Message: Chk Paper Feeder

#### Contents

Turn the motor and clutch power on for each feed unit.

#### Purpose

Execute to check motor and clutch operation of each feed unit.

#### Method

- 1 Press the [Start] key.
- 2 Select the item to operate.  
The screen for setting is displayed.

Items	Contents
PF	Operates 1-tray paper feeder
2PF	Operates 2-tray paper feeder
LCF	Operate the high capacity feeder

#### Setting: PF

- 1 Select the item to set.

Display		Contents
Motor	Off	PF paper feed motor OFF
	On	PF paper feed motor ON
Clutch	Feed2 Clutch	PF paper feed clutch ON
	V Feed2 Clutch	PF conveying clutch ON

- 2 Select [Execute].
- 3 Press the [Start] key. Starts the motor operation.  
To stop the operation of the motor, press the [Stop] key.

#### Setting: 2PF

- 1 Select the item to set.

Display		Contents
Mode	Off	PF paper feed motor OFF
	On	PF paper feed motor ON
Device	Feed3 Clutch	PF paper feed clutch 1 ON
	Feed4 Clutch	PF paper feed clutch 2 ON
	V Feed3 Clutch	PF conveying clutch 1 ON
	V Feed4 Clutch	PF conveying clutch 2 ON

- 2 Select [Execute].
- 3 Press the [Start] key. Starts the motor operation.  
To stop the operation of the motor, press the [Stop] key.

**Setting: LCF**

- 1 Select the item to set.

Display		Contents
Mode	Off	PF paper feed motor OFF
	On	PF paper feed motor ON
Device	Feed3 Clutch	PF paper feed clutch ON
	V Feed3 Clutch	PF conveying clutch ON

- 2 Select [Execute].
- 3 Press the [Start] key. Starts the motor operation.  
To stop the operation of the motor, press the [Stop] key.

**Completion**

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U250 Checking/clearing the maintenance cycle

### Message: Mnt Cnt Pre-set

#### Contents

Changes the pre-set values for the maintenance cycle and automatic gray scale adjustment.

#### Purpose

Change the timing to display the message for maintenance and automatic gray scale adjustment

#### 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	Contents	Setting range	Initial setting
M.Cnt A	Changes the maintenance counter (Kit A)	0 to 9999999	200000
M.Cnt B	Change the maintenance counter preset value (Kit B)	0 to 9999999	200000
M.Cnt HT	Change the maintenance counter preset value (HT adjustment)	0 to 9999999	0
Cassette1	Change the maintenance counter preset value (Cassette 1)	0 to 9999999	300000
Cassette2 *1	Change the maintenance counter preset value (Cassette 2)	0 to 9999999	300000
Cassette3 *2	Change the maintenance counter preset value (Cassette 3)	0 to 9999999	300000
Cassette4 *3	Change the maintenance counter preset value (Cassette 4)	0 to 9999999	300000

\*1: 500 PF only, \*2: 500×2/2000 PF only, \*3: 500×2 PF only

- 4 Press the [Start] key to set the setting value.

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U251 Checking/clearing the maintenance counter

### Message: Clr Mnt Cnt

#### Contents

Display, clear or change the maintenance count.

#### Purpose

Execute to check the maintenance count

Also, clear the count at the maintenance.

#### 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	Contents	Setting range
M.Cnt A	Maintenance cycle counter (Kit A)	0 to 9999999
M.Cnt B	Maintenance cycle counter (Kit B)	0 to 9999999
M.Cnt HT	Maintenance cycle counter (HT adjustment)	0 to 9999999
Cassette1	Maintenance cycle counter value (cassette 1)	0 to 9999999
Cassette2 *1	Maintenance cycle counter value (cassette 2)	0 to 9999999
Cassette3 *2	Maintenance cycle counter value (cassette 3)	0 to 9999999
Cassette4 *3	Maintenance cycle counter value (cassette 4)	0 to 9999999
Clear	Clear all the maintenance counts	0

\*1: 500 PF only, \*2: 500×2/2000 PF only, \*3: 500×2 PF only

#### Clearing

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

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U252 Destination

### Message: Set Dest

#### Contents

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	Contents
Europe Metric *2	Europe Metric
Inch *2	Inch
Asia Pacific *2	Asia Pacific
Japan Metric *1	Japan metric
Australia *2	Australia
China *2	China
Korea *2	Korea

\*1: 100 V model only, \*2: Except 100 V model

Initial setting: Destination

- 3 Press the [Start] key.  
Initializes according to the destination
- 4 Turn the power switch off then on. Wait more than 5 seconds between the power off and on.

## U253 Switching the double/single counts

### Message: Set D/S Count

#### Contents

Switches the count timing for the total counter and other counters by 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 [Color] or [B/W].

Items	Contents
Full Color	Switch the counter for full color mode (Single/Double Count)
Mono Color *1	Switch the counter for mono color mode (Single/Double Count)
B/W	Switch the counter for B/W mode (Single/Double Count)

\*1: Appears if U276 set to other than [Mode0]

- 3 Select [SGL(All)] or [DBL(Folio)].

Items	Contents
SGL (All)	Set single count for all the paper sizes
DBL (Legal)	Set double count for larger than Legal size
DBL (Folio)	Set double count for Folio size or larger *2

Initial setting: DBL(Legal)

\*2: The Folio length can be set to between 318 and 356 mm using maintenance mode U035. However, the double count will be applied when the set value is 330 mm (Initial value) or longer.

- 4 Press the [Start] key to set the setting value.

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U260 Switching the timing for copy counting

### Message: Set Count Mode

#### Contents

Switches the count timing for the total counter and other counters between paper feed and eject.

#### Purpose

Change the count timing according to the user's request

#### Setting

- 1 Press the [Start] key.
- 2 Selects the copy count timing.

Items	Contents
Feed	When secondary paper feed starts.
Eject	Selects the paper eject timing

Initial setting: Eject

- 3 Press the [Start] key to set the setting value.

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U265 Setting by destination

### Message: Set Model Dest

#### Contents

Set the OEM code.

#### Purpose

Execute when replacing the main PWB, etc.

#### Setting

- 1 Press the [Start] key.
- 2 By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Contents
No.	Displaying the OEM code

- 3 Press the [Start] key to set the setting value.
- 4 Turn the power switch off then on. Wait more than 5 seconds between the power off and on.

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.



## U276 Switching the copy count mode

### Message: Set Chg Count

#### Contents

Set the single color count mode

#### Purpose

Execute to change the billing counter to count up in the single color mode.

#### Setting

- 1 Press the [Start] key.
- 2 Select the item to set.

Items	Contents
Mode0	Count the single color count in the full color counter
Mode1	Count the single color count in the single color counter

Initial setting: Mode1

- 3 Press the [Start] key to set the setting value.

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U278 Delivery date setting

### Message: Set Delivery Date

#### Contents

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.  
Set the delivery date of the machine.

#### Clearing

- 1 Select [Clear].
- 2 Press the [Start] key.  
Clear the delivery date of the machine.

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U283 Setting China Red

### Message: Set CN Red

#### Contents

Set China Red.

#### Purpose

Change the setting according to the user's request

#### Setting

- 1 Press the [Start] key.
- 2 Select the item to set.

Item	Contents
On	Enable China Red.
Off	Disable China Red.

Initial setting: China: On/Other than China: Off

- 3 Press the [Start] key to set the setting value.

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U284 Setting the 2-color copy

### Message: Set 2 Color Copy

#### Contents

Set whether to use the 2-color copy.

#### Purpose

Change the setting according to the user's request

#### Setting

- 1 Press the [Start] key.
- 2 Select the item to set.

Items	Contents
On	2-color copy enabled
Off	2-color copy disabled

Initial setting: Off

- 3 Press the [Start] key to set the setting value.

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U285 Set Service Status Page

### Message: Set Svc Sts Page

#### Contents

Determines whether to display the digital dot coverage report on the report print.

#### Purpose

Change the setting according to the user's request

#### Setting

- 1 Press the [Start] key.
- 2 Select the item to set.

Items	Contents
On	Displaying the digital dot coverage.
Off	Not to display the digital dot coverage.

Initial setting: On

- 3 Press the [Start] key. Set the setting value.

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U290 Setting the drive to save the HyPAS application

### Message: Set Drive App

#### Contents

Set the drive to save the HyPAS application

Indicated when the HyPAS application is not installed in the SD card and SSD.

#### Purpose

Set to save to the SD card or optional SSD.

#### Setting

- 1 Press the [Start] key.
- 2 Select the item to set.

Items	Contents
SD Card	Set in the SD card
SSD	Set in the SSD

Initial setting: SD card (0)

- 3 Press the [Start] key. Set the setting value.
- 4 Turn the power switch off then on. Wait more than 5 seconds between the power off and on.

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.



## U323 Abnormal temperature and humidity notification setting

### Message: Warning Heat Hum

#### Contents

Set whether to indicate the notification when detecting abnormal temperature and humidity.

#### Purpose

Change the setting according to the user's request

#### Setting

- 1 Press the [Start] key.
- 2 Select the item to set.

Items	Contents
On	Indicate the abnormal temperature and humidity notification
Off	Do not indicate the abnormal temperature and humidity notification

Initial setting: On

- 3 Press the [Start] key. Set the setting value.

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U325 Paper interval setting

### Message: Set Paper Int

#### Contents

Set the print interval at high coverage.

#### Purpose

Changes the print interval at high coverage.

#### 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	Contents	Setting range	Initial setting
Interval	Set On/Off of print interval at high coverage.	On/Off	Off
Average	Set the average number of sheets (parameter)	1 to 255	100
Threshold	Set the coverage threshold to start lowering.	-	-
Rate	Displaying the down rate	-	-

- 4 Press the [Start] key to set the setting value.

#### Setting: Threshold

- 1 Select the item to set.
- 2 By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Contents	Setting range	Initial setting
C	Coverage threshold to start lowering for Cyan	1 to 100	15
M	Coverage threshold to start lowering for Magenta	1 to 100	15
Y	Coverage threshold to start lowering for Yellow	1 to 100	15
K	Coverage threshold to start lowering for Black	1 to 100	20

- 3 Press the [Start] key to set the setting value.

#### Method: Rate

Display each setting values.

Items	Contents	Setting range	Initial setting
C	Cyan down rate	50 to 100	0
M	Magenta down rate	50 to 100	100
Y	Yellow down rate	50 to 100	0
K	Black down rate	50 to 100	0

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U326 Black line cleaning indication

### Message: Set Clean Bk Line

#### Contents

Set whether to indicate the black lines cleaning guidance when detecting black lines.

#### Purpose

Display the cleaning guidance to reduce the service call with the black lines by dust on the contact glass when scanning from the document processor.

#### Method

1 Press the [Start] key.

2 Select the item to set.

The screen for setting is displayed.

Items	Contents
Black Line Mode	Set On/Off of the black line cleaning guidance indication

3 Select the item to set.

Items	Contents
On	Indicate the black lines cleaning guidance
Off	Black line cleaning guidance is not indicated

Initial setting: On

4 Press the [Start] key. Set the setting value.

#### Completion

1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

## U327 Cassette heater On/Off setting

### Message: Set Cass Heater

#### Contents

Selects the cassette heater control setting.

#### Purpose

Selects the cassette heater control setting.

Set the cassette heater for the optional cassette.

#### Method

- 1 Press the [Start] key.
- 2 Select the item to set.

Items	Contents
On	Set the cassette heater control On (installed).
Off	Set the cassette heater control Off (not installed).

Initial setting: Off

Drum refresh is not executed at power-up when the cassette heater control is [On].

- 3 Press the [Start] key. Set the setting value.

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.



## U332 Adjusting the black coverage coefficient

### Message: Adj Calc Rate

#### Contents

Set the coefficient of custom size with 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

#### 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	Contents	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
Mode	Switch full-color count and color coverage count display	0: Full color 1: by coverage	0
Level1	Set low coverage threshold value	0.1 to 99.8	10 (Indicated as 1.0)
Level2	Set middle coverage threshold value	0.2 to 99.9	25 (Indicated as 2.5)

- 4 Press the [Start] key to set the setting value.

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U341 Printer cassette setting

### Message: Set Prn Cass

#### Contents

Set the cassette to printer output only.

#### Purpose

Execute it when securing a cassette for printer. The cassette set to on is for printer only and it cannot be used for copy.

#### Setting

1 Press the [Start] key.

2 Select the item to set.

Multiple cassettes are selectable.

Items	Contents
Cass1	Setting cassette 1 to the printer paper source
Cass 2 *1	Setting cassette 2 to the printer paper source (paper feeder)
Cass 3 *2	Setting cassette 3 to the printer paper source (paper feeder)
Cass 4 *3	Setting cassette 4 to the printer paper source (paper feeder)

\*1: 500 PF only, \*2: 500×2/2000 PF only, \*3: 500×2 PF only

Initial setting: Off (Cassette1-4)

3 Press the [Start] key to set the setting value.

#### Completion

1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

## U343 Duplex priority mode

### Message: Set Dup PriMode

#### Contents

Switches between duplex or simplex copy for the initial copy mode.

#### Purpose

Sett the frequently used settings depending on the user's usage.

#### Setting

1 Press the [Start] key.

Select the item to set.

Items	Contents
On	Duplex copy
Off	Single-side copy

Initial setting: Off

2 Press the [Start] key to set the setting value.

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U345 Setting the value for maintenance due indication

### Message: Set Mnt Time Disp

#### Contents

Set when to display a message notifying that the time for maintenance is about to reach, by setting the number of prints that can be made before the current maintenance cycle reaches.

Display the maintenance precaution message when the page count reaches the set value before the maintenance count.

#### 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	Contents	Setting range	Initial setting
Cnt	Setting the 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 set the setting value.

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U346 Selecting Sleep Mode

### Message: Slct Sleep Mode

#### Contents

Changes the sleep mode settings.

#### Purpose

Changes the sleep mode settings.

#### Method

- 1 Press the [Start] key.
- 2 Select the item to set.  
The screen for setting is displayed.

Items	Contents
Timer/Sleep Level	BAM conformity country setting
Auto sleep	Switches Auto Sleep function setting

#### Setting: Timer/Sleep Level

- 1 Select the item to set.

Items	Contents
More Energy Save	BAM conformity setting On Sleep mode is disabled (Quick Recovery setting is disabled)
Less Energy Save	BAM conformity setting Off Set Sleep Level (Quick Recovery or Energy Saver)

Initial setting: More Energy Save

- 2 Press the [Start] key. Set the setting value.
- 3 Turn the power switch off then on. Wait more than 5 seconds between the power off and on.

#### Setting: Auto sleep

- 1 Select the item to set.

Items	Contents
On	The sleep mode is disabled from the system menu.
Off	The sleep mode is enabled from the system menu.

Initial setting: On

- 2 Press the [Start] key to set the setting value.

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U402 margin adjustment

### Message: Print Margin

#### Contents

Adjusts the scan image margins.

#### 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 bottom margin, when continuously printing, it may cause an image smudge on the second page.

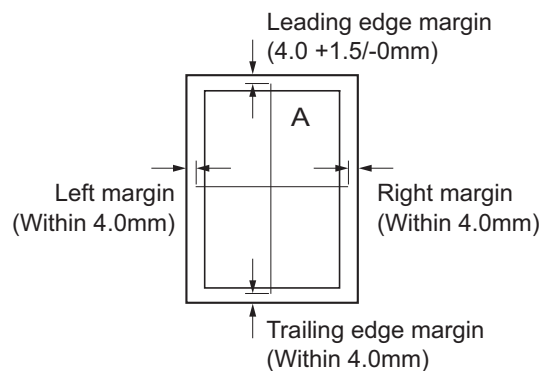
#### Adjustment

- 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	Contents	Setting range	Initial setting	Data variation
Lead	Adjusts the 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.



- 7 Press the [Start] key to set the setting value.

#### Note

Appropriate margins are not obtained after this adjustment, execute the following maintenance mode.  
U034(P.6-312)> U402

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U403 Adjusting margins for scanning an original on the contact glass

### Message: Scn Margin Tbl

#### Contents

Adjusts the margins for the table scanning.

#### Purpose

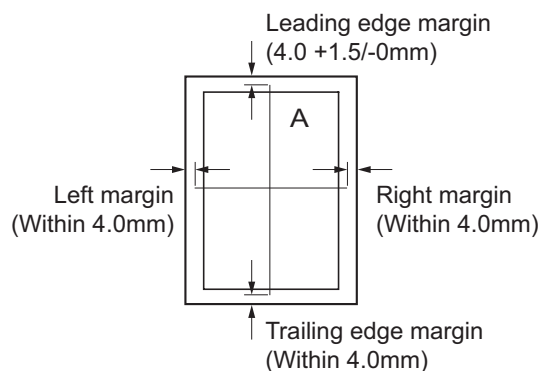
Make the adjustment if margins are incorrect

#### 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	Contents	Setting range	Initial setting	Data variation
A Margin	Adjusts the scanner left margin	0.0 to 10.0	2.0	0.5mm
B Margin	Adjusts the scanner leading edge margin.	0.0 to 10.0	2.0	0.5mm
C Margin	Adjusts the scanner right margin	0.0 to 10.0	2.0	0.5mm
D Margin	Adjusts the 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.



- 7 Press the [Start] key to set the setting value.

#### Note

Check the copy image after the adjustment. If the image is still incorrect, adjust the following in the maintenance mode.

U034(P.6-312) > U402(P.6-425) > U403

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U404 Adjusting margins for scanning an original from the document processor

### Message: Scn Margin DP

#### Contents

Adjusts the margins for DP scanning.

#### Purpose

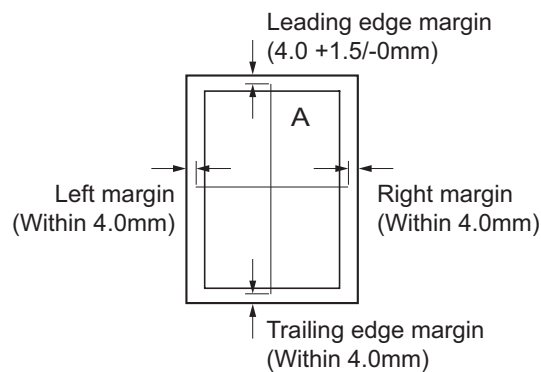
Make the adjustment if margins are incorrect

#### 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	Contents	Setting range	Initial setting	Data variation
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	Set 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

- 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.



- 7 Press the [Start] key to set the setting value.

#### Note

Check the copy image after the adjustment. If the image is still incorrect, adjust the following in the maintenance mode.

U034(P.6-312)> U402(P.6-425)> U403(P.6-427)> U404

#### Completion

- 1 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

#### Contents

Adjusts the writing timing when duplex printing.

#### Purpose

Adjusted when the back page image of duplex copying is printed in rotated 180 degrees from the scanner reading image (image on the memory)

#### Note

Adjust this after finishing the following maintenance modes.

U034(P.6-312)> U402(P.6-425)> U66(P.6-323)>

U403(P.6-427)> U71(P.6-328)> U404(P.6-428)> U407

#### Adjustment

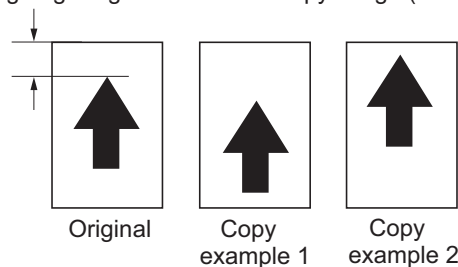
- 1 Press the [Start] key.
- 2 Press the [System Menu/Counter] key.
- 3 Place an original on the DP and press the [Start] key to make a test copy.
- 4 Press the [System Menu/Counter] key.
- 5 Select [Adj Data].

Items	Contents	Setting range	Initial setting	Data variation
Adj Data	Adjusts the leading edge timing when writing the image in the memory	-47 to 47	0	1dot

- 6 By using the [<] [>] keys or the numeric keys, change the setting value.  
For the copy example 1, increase the value.  
For the 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.

Leading edge registration of the copy image (+1.0/-1.5 mm or less)



- 7 Press the [Start] key to set the setting value.

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U410 Adjusting the halftone automatically

### Message: Adj Half Tone

#### Contents

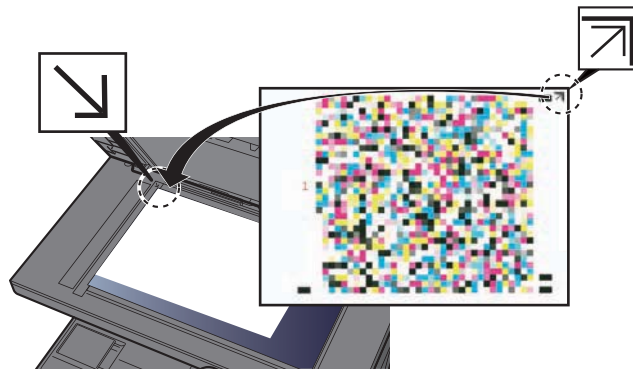
Acquires the data for the automatic halftone adjustment and ID correction.

#### Purpose

Execute when the quality of reproduced halftones has dropped

#### Adjustment

- 1 Input "410" with numeric keys.
- 2 Press the [Start] key.  
Display the execution information screen.  
Test chart 1, 2 and 3 are output on the A4/Letter paper.
- 3 Place the test chart 1 on to platen glass table with face down and arrow side far.  
Put approximately 20 sheets of white paper on to the chart.



- 4 Press the [Start] key.  
The 1st auto adjustment is executed.
- 5 Once [OK] comes up then continue with chart 2 and 3 repeating step 3 to 4.  
Test chart 4 is output on the A4/Letter paper.
- 6 Continue with chart 4 repeating step 3 to 4.
- 7 [Finish] appears after normal completion.  
An error code appears when an error occurs.

#### Error codes

Codes	Occurrence position	Contents
S001	Scanner	Original reference patch is not detected
S002		Original deviation is in excess in the main scanning direction
S003		Original deviation is in excess in the sub-scanning direction
S004		Original skew is in excess
S005		Original type error
SFFF		Other scanner error
E001	Engine	Engine status error

Codes	Occurrence position	Contents
E002		Adjustment result error
EEEE		Other engine error
C001	Controller	Pause status
C002		Adjustment result error
C110		Adjustment value (increase amount) value error (black)
C120		Adjustment value (increase amount) value error (cyan)
C140		Adjustment value (increase amount) value error (magenta)
C180		Adjustment value (increase amount) value error (yellow)
C210		Adjustment value (increase rate) error (black)
C220		Adjustment value (increase rate) value error (cyan)
C240		Adjustment value (increase rate) value error (magenta)
C280		Adjustment value (increase rate) value error (yellow)
CFFF		Other controller error

## U411 Scanner auto adjustment

### Message: Auto Adj Scn

#### Contents


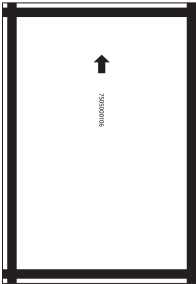
Uses the specified originals and automatically adjusts the following items in the scanner and the DP scanning sections.

Scanner section: Original size magnification, leading edge timing, center line, chromatic aberration in main/sub scanning direction, color/monochrome input gamma, color correction matrix automatic adjustment

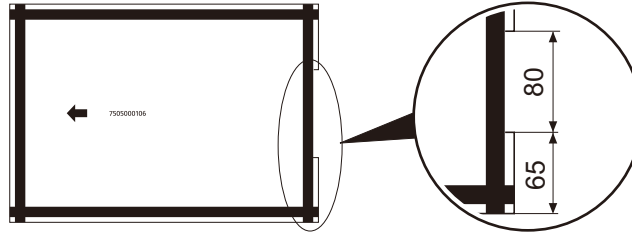
DP scanning section: Original size magnification, leading edge timing and center line, Input gamma, automatic adjustment of color correction matrix

#### Purpose

Automatically adjusts the scanner and the DP scanning sections.

Items	Contents	Original for adjustment (P/N)
Table (Chart A)	Automatically adjusts the table scanning.  Magnification in the sub-scanning direction 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	302NM94340  
DP FU(CharB) DP FD(CharB)	Execute the 1st side automatic adjustment in the DP scanning section. Execute the 2nd side automatic adjustment in the DP scanning section.  Magnification in the sub-scanning direction Leading edge timing Center line Trailing edge timing	302NM94330  
DP FU(CharA)	Execute the 1st side automatic adjustment in the DP scanning section. Input gamma in monochrome mode Input gamma in color mode Color correction matrix	302NM94340
All	Automatically adjusts the DP scanning after the automatic adjustment of the table scanning. Automatic adjustment in the scanning section.	302NM94340 302NM94330
Target	Set-up for obtaining the target value	302NM94340

Cut the trailing edge of the DP adjustment original (Chart B) as shown below.



### Method: Table (Chart A)

#### Automatic input of the target value

Usually, it adjusts here.

- 1 Set the specified original (P/N: 302NM94340) on the table.
- 2 Enter maintenance item U411.
- 3 Select [Target].
- 4 Press the [<] [>] keys, [#] or [\*] key to select [Auto].
- 5 Select [Table (Chart A)] using the [Up/Down cursor] key.
- 6 Press the [Start] key to read the bar-code 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 bar-code 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: 302NM94340) by executing the maintenance mode U425.
- 2 Set the specified original (P/N: 302NM94340) on the table.
- 3 Enter maintenance item U411.
- 4 Select [Target].
- 5 Press the [<] [>] keys, [#] or [\*] key to select [U425].
- 6 Select [Table (Chart A)] using the [Up/Down cursor] key.
- 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 Chart A. First, use Chart B (image position) to adjust it and then use Chart A (color).**

### Method: DP FU (Chart B)

Adjusting the first side of the DP duplex scanning

- 1 Set the specified original (P/N: 302NM94330) face-up on the DP.

- 2 Enter maintenance item U411.
- 3 Select [DP FU (Chart B)].
- 4 Press the [Start] key to start Auto adjustment.
- 5 When automatic adjustment has normally completed, [OK] is displayed.

**Method: DP FD (Chart B)**

Adjusting the second side of the DP duplex scanning

- 1 Set the specified original (P/N: 302NM94330) face-down on the DP.
- 2 Enter maintenance item U411.
- 3 Select [DP FD (Chart B)].
- 4 Press the [Start] key to start Auto adjustment.
- 5 When automatic adjustment has normally completed, [OK] is displayed.

**Method: DP FU (Chart A)****Automatic input of the target value**

- 1 Set the specified original (P/N: 302NM94340) face-up on the DP.
- 2 Enter maintenance item U411.
- 3 Select [Target].
- 4 Press the [<] [>] keys, [#] or [\*] key to select [Auto].
- 5 Select [DP FU (Chart A)] using the [Up/Down cursor] key.
- 6 Press the [Start] key to read the bar-code 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 bar-code 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: 302NM94340) by executing the maintenance mode U425.

- 2 Set the specified original (P/N: 302NM94340) face-up on the DP.
- 3 Enter maintenance item U411.
- 4 Select [Target].
- 5 Press the [<] [>] keys, [#] or [\*] key to select [U425].
- 6 Select [DP FU (Chart A)] using the [Up/Down cursor] key.
- 7 Press the [Start] key to start Auto adjustment.
- 8 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 error and execute the automatic adjustment again.

### Error codes

Codes	Contents	Corrective action
00	Automatic adjustment success	-
01	Black band detection error (Table scanning leading edge skew in the sub-scanning direction)	<ol style="list-style-type: none"> <li>1 Set the original correctly and execute the adjustment again.</li> <li>2 Check lighting of the lamp or replace it.</li> </ol>
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)	
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.
0f	Magnification error in the sub-scanning direction	<ol style="list-style-type: none"> <li>1 Turn the power switch off then on, and execute again.</li> <li>2 Adjust manually. (U065 to U067, U070 to U072)</li> </ol>
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	

Codes	Contents	Corrective action
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 off and on, and execute again.
15	DP skew error in the main scanning direction	Adjust manually. (U065 to U067, U070 to U072)
16	Magnification error in the main scanning direction	
17	Service call error	Turn the power off and 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. Is the bar code dirty? Is the original position correct? Is the bar code position correct?
1f	Lab value comparison error	Check the following and execute again. Is the acquired bar code the same? Is the original position correct? Is the bar code position correct?
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	
63	Completed to obtain the test RAW	-

### Completion

- 1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.



## U425 Set Target

### Message: Set Target

#### Contents

Enter the lab values which are shown on the back page of the adjustment original (P/N: 302NM94340).

#### 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	Contents
Chart A	Setting the adjustment value of the table scanning
Chart B	Set the adjustment value of the DP scanning

#### Method: Chart A

- 1 Press the [Start] key.
- 2 Select the item to set.

Items	Contents
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	Contents	Setting range	Initial setting	Data variation
L	L parameter setting	0.0 to 100.0	93.6	-
a	A value setting	-200.0 to 200.0	0.9	-
b	B value setting	-200.0 to 200.0	-0.4	-

- 3 Press the [Start] key to set the setting value.

**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	Contents	Setting range	Initial setting	Data variation
L	L parameter setting	0.0 to 100.0	10.6	-
a	A value setting	-200.0 to 200.0	-0.2	-
b	B value setting	-200.0 to 200.0	-0.7	-

- 3 Press the [Start] key to set the setting value.

**Setting: Gray 1**

- 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	Contents	Setting range	Initial setting	Data variation
L	L parameter setting	0.0 to 100.0	76.2	-
a	A value setting	-200.0 to 200.0	-0.2	-
b	B value setting	-200.0 to 200.0	1.2	-

- 3 Press the [Start] key to set the setting value.

**Setting: Gray 2**

- 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	Contents	Setting range	Initial setting	Data variation
L	L parameter setting	0.0 to 100.0	25.2	-
a	A value setting	-200.0 to 200.0	-0.2	-
b	B value setting	-200.0 to 200.0	-0.2	-

- 3 Press the [Start] key to set the setting value.

**Setting: Gray 3**

- 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	Contents	Setting range	Initial setting	Data variation
L	L parameter setting	0.0 to 100.0	51.3	-
a	A value setting	-200.0 to 200.0	-0.3	-
b	B value setting	-200.0 to 200.0	0.3	-

- 3 Press the [Start] key to set the setting value.

### 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	Contents	Setting range	Initial setting	Data variation
L	L parameter setting	0.0 to 100.0	72.6	-
a	A value setting	-200.0 to 200.0	-32.8	-
b	B value setting	-200.0 to 200.0	-11.5	-

- 3 Press the [Start] key to set the setting value.

### 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	Contents	Setting range	Initial setting	Data variation
L	L parameter setting	0.0 to 100.0	48.1	-
a	A value setting	-200.0 to 200.0	69.9	-
b	B value setting	-200.0 to 200.0	-6.1	-

- 3 Press the [Start] key to set the setting value.

### 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	Contents	Setting range	Initial setting	Data variation
L	L parameter setting	0.0 to 100.0	86.2	-
a	A value setting	-200.0 to 200.0	-18.6	-
b	B value setting	-200.0 to 200.0	81.7	-

- 3 Press the [Start] key to set the setting value.

### 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	Contents	Setting range	Initial setting	Data variation
L	L parameter setting	0.0 to 100.0	46.7	-
a	A value setting	-200.0 to 200.0	54.2	-
b	B value setting	-200.0 to 200.0	38.6	-

- 3 Press the [Start] key to set the setting value.

### 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	Contents	Setting range	Initial setting	Data variation
L	L parameter setting	0.0 to 100.0	67.8	-
a	A value setting	-200.0 to 200.0	-51.3	-
b	B value setting	-200.0 to 200.0	48.9	-

- 3 Press the [Start] key to set the setting value.

### 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	Contents	Setting range	Initial setting	Data variation
L	L parameter setting	0.0 to 100.0	38.8	-
a	A value setting	-200.0 to 200.0	25.3	-
b	B value setting	-200.0 to 200.0	-22.8	-

- 3 Press the [Start] key to set the setting value.

### Setting: Adjust Original

This setting is usually unnecessary.

Items	Contents	Setting range	Initial setting	Data variation
Lead	Set the adjustment value of the leading edge.	4.0 to 6.0	5.0	0.1mm
Main Scan	Set 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 distances A, B and C from the upper edge of black belt 1 to the lower edge of black belt 3 of the adjustment original.

Measurement procedure

1) Measure the distance "A", "B" and "C" between two points as follows. (A: 30mm from the left edge, B: 105mm from the left edge, C: 180mm from the left edge)

Measure the distance from the leading edge to the top edge of black belt 1.

2) Apply the following formula for the values obtained:  $((A+B+C)/3)$

4 Enter the value solved in "Lead" using the [<] [>] keys.

5 Press the [Start] key to set the setting value.

6 Measure the distance "F" from the left edge to the right edge of black belt 2 on the adjustment original.

Measurement procedure

Measure the distance "F" from the left edge at 21mm from the top edge of black belt 1 to the right edge of black belt 2.

7 Enter the values measured in "Main Scan" using the [<] [>] keys.

8 Press the [Start] key to set the setting value.

9 Measure the distance "D" and "E" from the top edge of black belt 1 to the bottom edge of black belt 3 on the adjustment original at two positions.

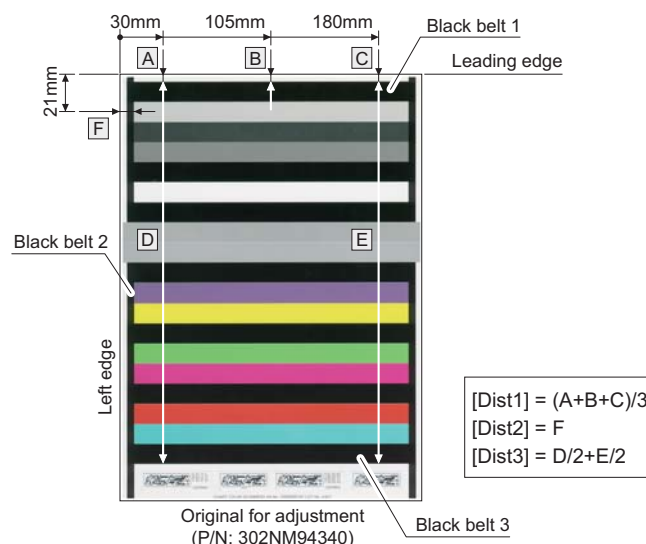
Measurement procedure

1) Measure the distance "D" and "E" between two points as follows. (D: Measure the distance from the leading edge to the trailing edge of black belt 3 on the adjustment original at 30mm of the left edge and deduct A. E: Measure the distance from the leading edge to the trailing edge of black belt 3 on the adjustment original at 180mm of the left edge and deduct C.)

2) Apply the following formula for the values obtained:  $(D/2+E/2)$

10 Enter the value solved in "Sub Scan" using the [<] [>] keys.

11 Press the [Start] key to set the setting value.

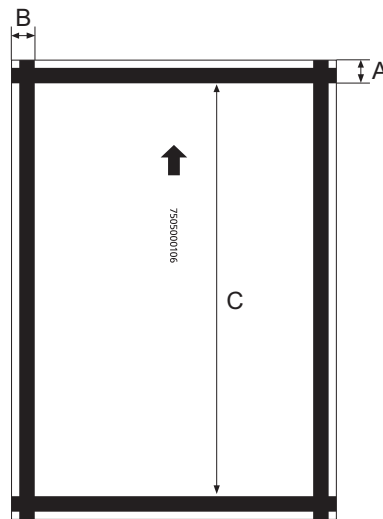


**Setting: DP (Chart B)**

This setting is usually unnecessary.

Items	Contents	Setting range	Initial setting	Data variation
Lead	Set the adjustment value of the leading edge.	14.0 to 16.0	15.0	0.1mm
Main Scan	Set 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 value solved 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 set the setting value.



Original for adjustment  
(P/N: 302NM94330)

**Completion**

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U429 Adjusting the color balance offset

### Message: Color Balance

#### Contents

Display/change the density of each color in various image quality mode.

#### Purpose

Execute to change each color's balance.

#### Method

- 1 Press the [Start] key.
- 1 Select the image mode to change the setting.  
The screen for setting is displayed.

Items	Contents
Text+Photo	Density of each color in the text + photo mode
Photo	Density of each color in the photo mode
Photo/Printout	Each color's density in the printed photo mode
Text	Density of each color in the text mode
Graphics/Map	Density of each color in the map mode
Copy/Printout	Each color's density in the printed document mode

#### Setting: Text+Photo

- 1 Select the item to set.
- 2 By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Contents	Setting range	Initial setting
C	Cyan color balance offset value	-5 to 5	0
M	Magenta color balance offset value	-5 to 5	0
Y	Yellow color balance offset value	-5 to 5	0
K	Black color balance offset value	-5 to 5	0

When the setting value is increased, the image gets thicker, and it is thinner when the setting value is decreased.

- 3 Press the [Start] key to set the setting value.

#### Setting: Photo

- 1 Select the item to set.
- 2 By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Contents	Setting range	Initial setting
C	Cyan color balance offset value	-5 to 5	0
M	Magenta color balance offset value	-5 to 5	0
Y	Yellow color balance offset value	-5 to 5	0
K	Black color balance offset value	-5 to 5	0

When the setting value is increased, the image gets thicker, and it is thinner when the setting value is decreased.

- 3 Press the [Start] key to set the setting value.

### Setting: Photo/Printout

- 1 Select the item to set.
- 2 By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Contents	Setting range	Initial setting
C	Cyan color balance offset value	-5 to 5	0
M	Magenta color balance offset value	-5 to 5	0
Y	Yellow color balance offset value	-5 to 5	0
K	Black color balance offset value	-5 to 5	0

When the setting value is increased, the image gets thicker, and it is thinner when the setting value is decreased.

- 3 Press the [Start] key to set the setting value.

### Setting: Text

- 1 Select the item to set.
- 2 By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Contents	Setting range	Initial setting
C	Cyan color balance offset value	-5 to 5	0
M	Magenta color balance offset value	-5 to 5	0
Y	Yellow color balance offset value	-5 to 5	0
K	Black color balance offset value	-5 to 5	0

When the setting value is increased, the image gets thicker, and it is thinner when the setting value is decreased.

- 3 Press the [Start] key to set the setting value.

### Setting: Graphics/Map

- 1 Select the item to set.
- 2 By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Contents	Setting range	Initial setting
C	Cyan color balance offset value	-5 to 5	0
M	Magenta color balance offset value	-5 to 5	0
Y	Yellow color balance offset value	-5 to 5	0
K	Black color balance offset value	-5 to 5	0

When the setting value is increased, the image gets thicker, and it is thinner when the setting value is decreased.

- 3 Press the [Start] key to set the setting value.



**Setting: Copy/Printout**

- 1 Select the item to set.
- 2 By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Contents	Setting range	Initial setting
C	Cyan color balance offset value	0 to 10	5
M	Magenta color balance offset value	0 to 10	5
Y	Yellow color balance offset value	0 to 10	5
K	Black color balance offset value	0 to 10	5

When the setting value is increased, the image gets thicker, and it is thinner when the setting value is decreased.

- 3 Press the [Start] key to set the setting value.

**Supplement**

Test copy of the original is available by pressing the [System Menu/Counter] key as interruption copy mode when executing this maintenance mode.

**Completion**

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U464 ID correction setting

### Message: Set ID Adj Mode

#### Contents

Set permission/prohibition of the ID correction operation (calibration). Executes each setting of the calibration.

#### Purpose

Execute the calibration setting when an image failure occurs or depending on the user's request.

Execute Calibration when replacing the maintenance kit.

#### Method

- 1 Press the [Start] key.
- 2 Select the item to set.  
The screen for setting is displayed.

Items	Contents]
Permission	Permit/Prohibit Calibration
Time Interval	Set the time interval to execute calibration after completing printing.
Mode	Color print mode setting
Leaving Time	Setting the time to determine whether to execute calibration when recovering from Sleep mode
Target Value	Setting the target sensor value for the thick layer calibration and light intensity calibration
Calib	Executing Calibration

#### Setting: Permission

- 1 Select [On] or [Off].

Items	Contents
On	Permitting Calibration
Off	Prohibiting Calibration

Initial setting: On

- 2 Press the [Start] key to set the setting value.

#### Setting: Time Interval

- 1 By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Contents	Setting range	Initial setting
Time(sec)	Calibration interval	0 to 9999	1200 (sec)

Setting is changeable in 10 count increments.

- 2 Press the [Start] key to set the setting value.

#### Setting: Mode

- 1 Select the item to set.

Items	Contents
Short	Color print mode setting: Short
Normal	Color print mode setting: Normal

Items	Contents
Long	Color print mode setting: Long
Auto	Color print mode setting: Auto

Initial setting: Normal

- Press the [Start] key to set the setting value.

### Setting: Leaving Time

- By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Contents	Setting range	Initial setting
Time(min)	Setting the sleep timer	0 to 1440	1080 (min)

- Press the [Start] key to set the setting value.

### Setting: Target Value

- Select the item to set.
- By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Contents	Setting range	Initial setting
Thickness (C)	Toner layer calibration (Cyan)	0 to 1000	680
Thickness (M)	Toner layer calibration (Magenta)	0 to 1000	625
Thickness (Y)	Toner layer calibration (Yellow)	0 to 1000	550
Thickness (K)	Toner layer calibration (Black)	0 to 1000	700
Gamma (C)	Light amount calibration (Cyan)	0 to 1000	445
Gamma (M)	Light amount calibration (Magenta)	0 to 1000	445
Gamma (Y)	Light amount calibration (Yellow)	0 to 1000	375
Gamma (K)	Light amount calibration (Black)	0 to 1000	465

- Press the [Start] key to set the setting value.

### Method: Calib

- Select the item to execute.
- Press the [Start] key.  
Calibration starts.  
Same operation as [System Menu] - [Adjustment/Maintenance] - [Calibration].

Items	Contents
Regist	Execute the registration correction calibration
Full	Executes Full Calibration

### Completion

- Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U465 ID correction data

### Message: ID Adj Data

#### Contents

Refers to the ID correction data.

#### Purpose

Execute for data check.

#### Method

1 Press the [Start] key.

2 Select [Laser Power].

The screen is switched.

Items	Contents
Laser Power	Display the light intensity control value

The current value is displayed.

Items	Contents
C	Display the Cyan light intensity control value.
M	Display the Magenta light intensity control value.
Y	Display the Yellow light intensity control value.
K	Display the Black light intensity control value.

#### Completion

1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

## U467 Color registration correction operation setting

### Message: Set Reg Adj Mode

#### Contents

Set the color registration correction operation.

Also, Set the execution condition of the color registration correction by the LSU temperature variation.

#### Purpose

If the color registration is unstable due to the sensor failure, etc., set it to off to temporarily fix the control value.

#### Method

1 Press the [Start] key.

2 Select the item to set.

The screen for setting is displayed.

Items	Contents
Color Regist	Set the color registration correction
Timing	Execute the color registration correction if the LSU temperature changes by the specified value after the previous correction

#### Setting: Color Regist

1 Select the item to set.

Items	Contents
On	Permitting the color registration correction operation
Off	Prohibiting the color registration correction operation

Initial setting: On

2 Press the [Start] key to set the setting value.

#### Setting: Timing

1 By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Contents	Setting range	Initial setting
LSU Temp	Execution condition by the LSU temperature variation	2 to 20	10

2 Press the [Start] key to set the setting value.

#### Completion

1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

## U468 Color registration correction data

### Message: Cor Reg Data

#### Contents

Display the color registration correction data.

#### Purpose

Execute for data check.

#### Method

- 1 Press the [Start] key.
- 2 Select the item to refer to.  
The screen is switched.

Items	Contents
Auto (C)	Displaying the automatic color registration correction value (Cyan)
Auto (M)	Displaying the automatic color registration correction value (Magenta)
Auto (Y)	Displaying the automatic color registration correction value (Yellow)
Manual (C)	Displaying the manual color registration correction value (Cyan)
Manual (M)	Displaying the manual color registration correction value (Magenta)
Manual (Y)	Displaying the manual color registration correction value (Yellow)
Initialize	Initializing the correction result

#### Refer: Auto (C) / Auto (M) / Auto (Y)

- 1 Select [Auto (C)], [Auto (M)] or [Auto (Y)].  
The current value is displayed.

Items	Contents
Main Scan	Automatic color registration adjustment value in the main scanning direction.
Sub Scan	Automatic color registration adjustment value in the sub scanning direction.
Mag	Automatic color registration correction value for magnification

#### Refer: Manual (C) / Manual (M) / Manual (Y)

- 1 Select [Manual (C)], [Manual (M)] or [Manual (Y)]  
The current value is displayed.

Items	Contents
Main Scan	Manual color registration adjustment value in the main scanning direction.
Sub Scan	Manual color registration adjustment in the sub scanning direction.
Mag1	Manual color registration correction value 1 for magnification
Mag2	Manual color registration correction value 2 for magnification
Mag3	Manual color registration correction value 3 for magnification
Mag4	Manual color registration correction value 4 for magnification

**Method: Initialize**

- 1 Select [Initialize].  
The operation is executed.

**Completion**

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U469 Color registration adjustment

### Message: Adj Cor Reg

#### Contents

Corrects the color registration data.

#### Purpose

Execute when replacing the laser scanner unit.

Make sure to execute U464 Calib before executing this maintenance mode.

#### Method

- 1 Press the [Start] key.
- 2 Select the item to set.
  - Select [Auto] to output the automatic adjustment chart.
  - Select [Manual] to enter the setting display.

Items	Contents
Auto	Adjust the color registration automatically
Manual	Adjust the color registration manually

#### Method: Auto

- 1 Select the item to execute.

Items	Contents
Print	Output the automatic adjustment chart.
Execute	Start scanning and execute the automatic adjustment.

#### Method: Print

- 1 Press the [Start] key.
  - Output the automatic adjustment chart.

#### Method: Execute

- 1 Place an original on the table and press the [Start] key.
  - Execute the automatic adjustment.
- 2 When adjustment has normally completed, [OK] is displayed.
  - An error code appears when there is an error.

#### Error codes list

Error codes	Place of occurrence	Factor
S001	Scanner	Original reference patch is not detected
S002		Scanned image position shifted in excess in the main scanning direction.
S003		Scanned image position shifted in excess in the sub scanning direction.
S004		Original skew is in excess
S005		Original type mismatch
SFFF		Other scanning error



Error codes	Place of occurrence	Factor
E001	Engine	Engine error
CFFF	Controller	Other errors

**Setting: Manual**

- Select the item to execute.  
The screen for setting is displayed.

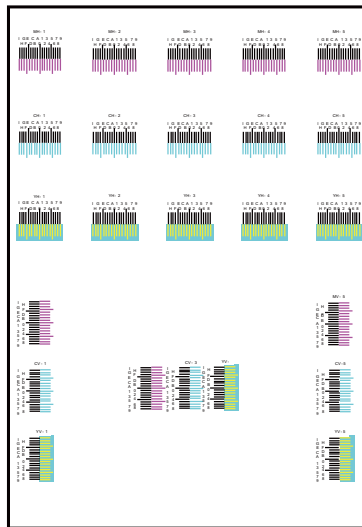
Items	Contents
Regist(CH)	Set the color registration adjustment value (CH)
Regist(MH)	Set the color registration adjustment value (MH)
Regist(YH)	Set the color registration adjustment value (YH)
Print	Output the manual adjustment chart.

**Method: Print**

- Press the [Start] key.  
Output the manual adjustment chart.

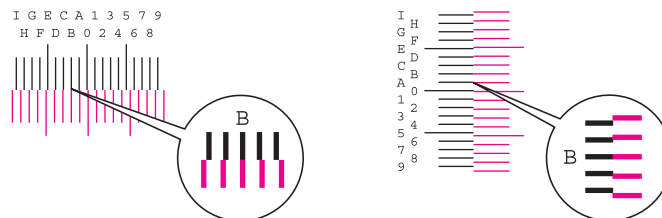
**Chart sample**

There are H-1 to 9 in the chart For each color of m, c and y (upper part).



Find the positions where two lines are best matched on 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.

**Method: Regist(CH)**

- Change the screen using the [Up/Down cursor] key.

- 2 Select the item to set.
- 3 By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Contents	Setting range	Initial setting
CH-1	CH-1 adjustment value	-9 to 9	-
CH-2	CH-2 adjustment value	-9 to 9	-
CH-3	CH-3 adjustment value	-9 to 9	-
CH-4	CH-4 adjustment value	-9 to 9	-
CH-5	CH-5 adjustment value	-9 to 9	-
CV-3	CV-3 adjustment value	-9 to 9	-

- 4 Press the [Start] key to set the setting value.

#### Method: Regist(MH)

- 1 Change the screen using the [Up/Down cursor] key.
- 2 Select the item to set.
- 3 By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Contents	Setting range	Initial setting
MH-1	MH-1 adjustment value	-9 to 9	-
MH-2	MH-2 adjustment value	-9 to 9	-
MH-3	MH-3 adjustment value	-9 to 9	-
MH-4	MH-4 adjustment value	-9 to 9	-
MH-5	MH-5 adjustment value	-9 to 9	-
MV-3	MV-3 adjustment value	-9 to 9	-

- 4 Press the [Start] key to set the setting value.

#### Method: Regist(YH)

- 1 Change the screen using the [Up/Down cursor] key.
- 2 Select the item to set.
- 3 By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Contents	Setting range	Initial setting
YH-1	YH-1 adjustment value	-9 to 9	-
YH-2	YH-2 adjustment value	-9 to 9	-
YH-3	YH-3 adjustment value	-9 to 9	-
YH-4	YH-4 adjustment value	-9 to 9	-
YH-5	YH-5 adjustment value	-9 to 9	-
YV-3	YV-3 adjustment value	-9 to 9	-

- 4 Press the [Start] key to set the setting value.

### **Completion**

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U470 Setting the JPEG compression rate

### Message: Adj JPEG Rate

#### Contents

Set the JPEG compression rate by image mode.

#### Purpose

Change the setting depending on the image desired by the user. Lower the set value to reduce the image roughness by changing the compression rate in case of 200% or more of the enlarged copy. If the set value is reduced, compression is high and image quality is lowered. If the set value is increased, image quality is improved but processing speed is slower.

#### Method

1 Press the [Start] key.

2 Select the item to set.

The screen for setting is displayed.

Items	Contents
Copy	Compression rate of the copy
Send	Compression rate of the Send
System	Compression rate of the temporary saving in the system

#### Method: Copy

1 Select the item to set.

The screen for setting is displayed.

Items	Contents
Photo	Compression rate of the photo mode
Text	Compression rate of the text mode

#### Setting: Photo

1 Select the item to set.

2 By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Contents	Setting range	Initial setting
Y	Compression rate of the brightness	1 to 100	90
CbCr	Compression rate of the color difference	1 to 100	90

3 Press the [Start] key to set the setting value.

**Setting: Text**

- 1 Select the item to set.
- 2 By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Contents	Setting range	Initial setting
Y	Compression rate of the brightness	1 to 100	90
CbCr	Compression rate of the color difference	1 to 100	90

- 3 Press the [Start] key to set the setting value.

**Method: Send**

- 1 Select the item to set.  
The screen for setting is displayed.

Items	Contents
Photo	Compression rate of the photo mode
Text	Compression rate of the text mode
HC-PDF(BG)	Set the compression rate for high compression PDF
HC-PDF(Char)	Set the compression rate for High compression PDF (text color).
HC-PDF(File Size)	Set the compression rate for High compression PDF (compression priority).

**Setting: Photo**

- 1 Select the item to set.
- 2 By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Contents	Setting range	Initial setting
Y1	Compression rate of the brightness	1 to 100	30(%)
Y2	Compression rate of the brightness	1 to 100	40(%)
Y3	Compression rate of the brightness	1 to 100	51(%)
Y4	Compression rate of the brightness	1 to 100	70(%)
Y5	Compression rate of the brightness	1 to 100	90(%)
CbCr1	Compression rate of the color difference	1 to 100	30(%)
CbCr2	Compression rate of the color difference	1 to 100	40(%)
CbCr3	Compression rate of the color difference	1 to 100	51(%)
CbCr4	Compression rate of the color difference	1 to 100	70(%)
CbCr5	Compression rate of the color difference	1 to 100	90(%)

- 3 Press the [Start] key to set the setting value.

**Setting: Text**

- 1 Select the item to set.
- 2 By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Contents	Setting range	Initial setting
Y1	Compression rate of the brightness	1 to 100	30(%)
Y2	Compression rate of the brightness	1 to 100	40(%)
Y3	Compression rate of the brightness	1 to 100	51(%)
Y4	Compression rate of the brightness	1 to 100	70(%)
Y5	Compression rate of the brightness	1 to 100	90(%)
CbCr1	Compression rate of the color difference	1 to 100	30(%)
CbCr2	Compression rate of the color difference	1 to 100	40(%)
CbCr3	Compression rate of the color difference	1 to 100	51(%)
CbCr4	Compression rate of the color difference	1 to 100	70(%)
CbCr5	Compression rate of the color difference	1 to 100	90(%)

- 3 Press the [Start] key to set the setting value.

**Setting: HC-PDF(BG)**

- 1 Select the item to set.
- 2 By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Contents	Setting range	Initial setting
Y1	Compression rate of the brightness	1 to 100	15(%)
Y2	Compression rate of the brightness	1 to 100	25(%)
Y3	Compression rate of the brightness	1 to 100	90(%)
CbCr1	Compression rate of the color difference	1 to 100	15(%)
CbCr2	Compression rate of the color difference	1 to 100	25(%)
CbCr3	Compression rate of the color difference	1 to 100	90(%)

- 3 Press the [Start] key to set the setting value.

**Setting: HC-PDF(Char)**

- 1 Select the item to set.
- 2 By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Contents	Setting range	Initial setting
Y1	Compression rate of the brightness	1 to 100	15(%)
Y2	Compression rate of the brightness	1 to 100	75(%)
Y3	Compression rate of the brightness	1 to 100	90(%)
CbCr1	Compression rate of the color difference	1 to 100	15(%)

Items	Contents	Setting range	Initial setting
CbCr2	Compression rate of the color difference	1 to 100	75(%)
CbCr3	Compression rate of the color difference	1 to 100	90(%)

3 Press the [Start] key to set the setting value.

#### Setting: HC-PDF(File Size)

1 Select the item to set.

2 By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Contents	Setting range	Initial setting
Y1	Compression rate of the brightness	1 to 100	15(%)
Y2	Compression rate of the brightness	1 to 100	25(%)
Y3	Compression rate of the brightness	1 to 100	75(%)
CbCr1	Compression rate of the color difference	1 to 100	15(%)
CbCr2	Compression rate of the color difference	1 to 100	25(%)
CbCr3	Compression rate of the color difference	1 to 100	75(%)

3 Press the [Start] key to set the setting value.

#### Setting: System

1 Select the item to set.

2 By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Contents	Setting range	Initial setting
Y	Compression rate of the brightness	1 to 100	90(%)
CbCr	Compression rate of the color difference	1 to 100	90(%)

3 Press the [Start] key to set the setting value.

#### Supplement

Test copy of the original is available by pressing the [System Menu/Counter] key as interruption copy mode when executing this maintenance mode.

#### Completion

1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

## U474 Checking the LSU cleaning

### Message: Chk LSU Cleaning

#### Contents

Execute the LSU cleaning by operating the LSI cleaning motor. Also, Set the cleaning operation interval.

#### Method

- 1 Press the [Start] key.
- 2 Select the item to execute.

Items	Contents
Execute	Execute the cleaning operation.
Cycle	Set the cleaning cycle.

#### Method: Execute

- 1 Press the [Start] key.  
The LSU slit glass is cleaned.

#### Setting: Cycle

- 1 Select the item to set.
- 2 By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Contents	Setting range	Initial setting
Cnt	Set the cleaning cycle.	0 to 5000 *1	1000

\*1: Set in 100 sheet increments

- 3 Press the [Start] key to set the setting value.

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.



## U485 Image process mode setting

### Message: Set Img Proc Mode

#### Contents

Set the PDF image rotation.

#### Purpose

Change the PDF image rotation setting.

#### Method

- 1 Press the [Start] key.
- 2 Select the item to set.  
The screen for setting is displayed.

Items	Contents
Mode	Set the image process mode

#### Setting: Mode

- 1 Select the item to set.

Items	Contents
PDF Rotation	Rotate the PDF image

- 2 By using the [<] [>] keys or the numeric keys, change the setting value.

setting	Contents
0	The image rotation is designated to the internal parameter
1	The image rotation is designated to the actual image
2	The image rotation is designated to the internal parameter (CTM rotation)

- 3 Press the [Start] key to set the setting value.

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U486 Color/BW mode setting

### Message: Set ACS mode

#### Contents

Set the operation mode after detecting color originals with color/BW mixed originals.

#### Purpose

Mode: To prioritize the productivity when copying color/BW mixed originals in ACS mode, change the setting to Mode3. However, if setting it to Mode3, even when monochrome originals come after color originals, C/M/Y developer maintenance counts are counted up.

Permission: set in case of color background image when printing an envelope in BW half speed mode processed as color printing.

#### Method

- 1 Press the [Start] key.
- 2 Select the item to set.

The screen for setting is displayed.

Items	Contents
Mode	Color/BW mode setting
Permission	Permit monochrome printing at half speed

#### Setting: Mode

- 1 Select the item to set.

Items	Contents
0: Mode1	For users mostly printing in monochrome mode and color/monochrome mixed mode is not high during continuous printing Monochrome printing remains in the color process speed after switching to color and other process is switched
1: Mode2	For users mostly printing in monochrome mode and color/monochrome mixed mode is high during continuous printing Even when receiving a monochrome print request during color printing, color printing operation is continued until 9 pages and color mode is switched to monochrome mode when starting printing of the 10th page (Color process is stopped)
2: Mode3	Appropriate for users who mostly print in color Once switched to the color mode, monochrome printing after that remains in the color process including the surface speed
3: Auto	Mode 1 to 3 is automatically selected depending on user's usage Select Mode 1 to 3 based on color print ratio and switch rate from the print volume during the specified period

Initial setting: 1 (Mode2)

- 2 Press the [Start] key to set the setting value.

#### Setting: Permission

- 1 Press the [Start] key.
- 2 Select the item to set.

Items	Contents
1: On	Permit: monochrome printing (three colors separated)
0: Off	Prohibit: color printing (four color process)

Initial setting: 0 (Off)

3 Press the [Start] key to set the setting value.

### **Completion**

1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

## U520 TDRS setting

### Message: Set TDRS

#### Contents

Checks/Set the TDRS

#### Purpose

Execute to check/set the TDRS

#### Method

- 1 Press the [Start] key.
- 2 Select the item to set.

Items	Contents
Registration	Changes to the TDRS Manager registration dialog
Information	Transition to the Device Agent description dialog
On/Off Config	Changes to the TDRS features setting dialog

#### Setting: Registration

- 3 Select the item to set.

Items	Contents
TDRS User	Registering process for user and password
Access Code	Register Access Code

#### Setting: Access Code

- 4 Select the item to set.

Items	Contents
Regist	Register in the TDRS Manager
TDRS Server	Set the TDRS server URL
TDRS User	Set the TDRS User name
Access Code	Set the TDRS access code
Proxy Server	Set the TDRS proxy server URL
Proxy Port	Set the TDRS proxy port number
Proxy User	Set the TDRS proxy user name
Text	Set the TDRS description

[Regist] is not executable if a USB memory is not installed.

When the USB memory is inserted, TDRS information is automatically retrieved and displayed.

After obtaining the TDRS information, select [Regist] and then register the TDRS information by pressing the [OK] or [Start] key.

After the normal completion, [Complete] is indicated in the status information of the item that was performed.

When an error occurs, the following numbers are indicated in the status information of the item that has been operated.

If [User/Processing Registration using a Password] is selected in the previous dialog, the "TDRS User" will be indicated.

If [Processing Registration using an Access Code] is selected, the "Access Code" will be indicated.

**Error codes**

Items	Contents	Items	Contents
e0001	HDD is unavailable.	t0001	Fatal error
e0002	The USB memory is unavailable.	t0002	Error in processing the network
e0003	The file to import does not exist in the USB memory.	t0003	An illegal parameter error
e0004	Reading from the USB memory has failed.	t0004	Insufficient resource
e0005	Unmounting the USB memory has failed.	t0005	Communication error
e0006	Moving or renaming the file has failed.	t0006	Error in processing communication.
e0007	Opening the file has failed.	t0007	Login error
e0008	Closing the file has failed.	t0008	External error
e0009	Error in reading the file	t0009	Authentication error
e000A	Copying the file has failed.	t000A	HTTP error: Request error
e000B	Opening the directory has failed.	t000B	HTTP error: Error due to the server
e000C	Creating the working directory has failed.	t000C	HTTP error: Error due to the client.
e000D	Deleting the working file has failed.		

**Setting: Information**

- 1 Select the item to set.

Items	Contents
Agent ID	Agent ID
Agent Type	Agent Type
Model	Refer to the model name
Serial No	Refer to the machine serial number
Offline	Refer to the TDRS connection state

**Setting: On/Off Config**

- 1 Select the item to set.

Items	Contents
On	Enable TDRS
Off	Disable TDRS

Initial setting: Off

- 2 Press the [Start] key to set the setting value.
- 3 Turn the power switch off then on. Wait more than 5 seconds between the power off and on.

**Completion**

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U600 Initialize: All Data

### Message: Init: All Data

#### Contents

Initializes software switches, and all data and image memory in the backup data on the FAX PWB according to the destination and OEM setting.

Initializes the file system and then initializes the communication record and the registered contents if the file system is checked and an error is detected there.

#### Purpose

Initialize the FAX PWB

#### Method

- 1 Press the [Start] key.  
The screen for entering the destination code and OEM code is displayed.
- 2 Select [Country Code] and enter a destination code using the numeric keys.  
Refer to the following destination code list.

Items	Contents
Country Code	Setting Destination code
OEM Code	Set the OEM code
Execute	Executing data initialization

No need to change the default value of [OEM Code].

- 3 Select [Execute].
- 4 Press the [Start] key to start data initialization.  
Press the [Stop] key to cancel the data initialization.
- 5 The firmware version is displayed after the data initialization.  
The firmware version of 3 types of application, boot and IPL is displayed.

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)

#### Destination code list

Destination code	Destination	Destination code	Destination
000	Japan	253	CTR21 (European nations)
007	Argentina	↑	Italy
009	Australia	↑	Germany
022	Brazil	↑	Spain
038	China	↑	U.K.
080	Hong Kong	↑	Netherlands
084	Indonesia	253	Sweden

Destination code	Destination	Destination code	Destination
088	Israel	↑	France
097	Korea	↑	Austria
181	U.S.A.	↑	Switzerland
250	Russia	↑	Belgium
108	Malaysia	↑	Denmark
115	Mexico	↑	Finland
126	New Zealand	↑	Portugal
136	Peru	↑	Ireland
137	Philippines	↑	Norway
152	Middle East	254	Taiwan
156	Singapore		
159	South Africa		
169	Thailand		

## U601 Initialize: Keep data

### Message: Init Keep Data

#### Contents

Initializes software switches other than the machine data on the FAX PWB according to the destination and OEM setting.

#### Purpose

Initialize the FAX PWB without changing the user registration data and the factory defaults

#### Method

- 1 Press the [Start] key.  
The screen for entering the destination code and OEM code is displayed.
- 2 Select [Country Code].
- 3 By using the [<] [>] keys or the numeric keys, change the setting value.  
Refer to the destination code list. (See page P.6-218)

Items	Contents
Country Code	Setting Destination code
OEM Code	Set the OEM code
Execute	Executing data initialization

No need to change the default value of [OEM Code].

- 4 Select [Execute].
- 5 Press the [Start] key to start data initialization.  
Press the [Stop] key to cancel the data initialization.
- 6 The firmware version is displayed after the data initialization.  
The firmware version of 3 types of application, boot and IPL is displayed.  
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)



**U603 User data 1****Message: User Data 1****Contents**

Set the line type for FAX use

**Purpose**

Execute as required

**Method**

- 1 Press the [Start] key.
- 2 Select [Line Type].

Items	Contents
Line Type	Line Type

- 3 Select the item to set.

Items	Contents
DTMF	DTMF
10PPS	10PPS
20PPS	20PPS

Initial setting: DTMF

- 4 Press the [Start] key to set the setting value.

**Completion**

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U604 User data 2

### Message: User Data 2

#### Contents

Set the number of rings for the automatic FAX/telephone switching for FAX use

#### Purpose

Adjust the number of rings to longer or shorter at the automatic FAX/telephone switching

#### 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	Contents	Setting range	Initial setting
Rings (F/T) #	Number of fax/telephone rings	0 to 15	0 (100 V model) 1 (220-240 V model) 2 (120 V model / Australia) 3 (New Zealand)

If the default is set to "0", the main unit will start FAX reception without any ringing.

- 4 Press the [Start] key to set the setting value.

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U605 Data clear

### Message: Clr Data

#### Contents

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 [Clear Com.Rec.].

Items	Contents
Comm Rec	Delete data of communication history and protocol list of displayed port

- 3 Press the [Start] key.

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U610 System 1

### Message: System Setting 1

#### Contents

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	Contents
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	Number of lines to be ignored when receiving 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 Letter R paper.

If the number of excess lines is below the setting, those lines are ignored. If 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.

Contents	Setting range	Initial setting	Data variation
Number of lines to be ignored when receiving in the A4R auto reduction mode	0 to 22	0	-

Increase the setting value if a page received in the reduction mode is reduced too much with the trailing edge margin.  
Decrease the value if there is dropout in received image.

- 2 Press the [Start] key to set the setting value.

#### Setting: Cut Line: 100%

Set 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.

Contents	Setting range	Initial setting	Data variation
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 value if there is dropout in received image.

- 2 Press the [Start] key to set the setting value.

### 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 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.

Contents	Setting range	Initial setting	Data variation
Number of lines to be ignored when receiving in the auto reduction mode	0 to 22	0	-

Increase the setting value if a page received in the reduction mode is reduced too much with the trailing edge margin.  
Decrease the value if there is dropout in received image.

- 2 Press the [Start] key to set the setting value.

### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U611 System 2

### Message: System Setting 2

#### Contents

Set the number of adjustment lines for automatic reduction.

#### Purpose

Set the number of adjustment lines for automatic reduction.

#### Method

- 1 Press the [Start] key.
- 2 Select the item to set.

Items	Contents
ADJ LINES	Set the number of adjustment lines for automatic reduction
ADJ LINES(A4)	Number of adjustment lines for automatic reduction when A4 paper is set
ADJ LINES(LT)	Number of adjustment lines for automatic reduction when letter size paper is set

#### Setting: ADJ LINES

Set the number of adjustment lines for automatic reduction.

- 1 By using the [<] [>] keys or the numeric keys, change the setting value.

Contents	Setting range	Initial setting	Data variation
Number of adjustment lines for automatic reduction	0 to 22	7	-

- 2 Press the [Start] key to set the setting value.

#### Setting: ADJ LINES(A4)

Set the number of adjustment lines for automatic reduction.

- 1 By using the [<] [>] keys or the numeric keys, change the setting value.

Contents	Setting range	Initial setting	Data variation
Number of adjustment lines for automatic reduction when A4 paper is set	0 to 22	22	-

- 2 Press the [Start] key to set the setting value.

#### Setting: ADJ LINES(LT)

Set 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.

Contents	Setting range	Initial setting	Data variation
Number of adjustment lines for automatic reduction when letter size paper is set	0 to 22	26	-

- 2 Press the [Start] key to set the setting value.

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U612 System 3

### Message: System Setting 3

#### Contents

Set the FAX operation and automatic printing of the protocol list.

#### Method

1 Press the [Start] key.

2 Select the item to set.

The screen for setting is displayed.

Items	Contents
Auto reduct	Select auto reduction in the sub-scanning direction
Protocol List	Set the automatic protocol list printing

#### Setting: Auto Reduct

Set whether to receive a long document by automatically reducing it in the sub-scanning direction or at 100% magnification.

1 Select the item to set.

Items	Contents
On	Auto reduction is executed 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 set the setting value.

#### Setting: Protocol List

Set the automatic protocol list printing.

1 Select the item to set.

Items	Contents
Off	The protocol list is not printed out automatically
Err	Automatically printed if a communication error occurs
On	Automatically printed out after communication

Initial setting: Off

2 Press the [Start] key to set the setting value.

#### Completion

1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

## U620 FAX system

### Message: FAX System

#### Contents

Set the signal detection method for remote switching.

Change the setting according to the type of telephone connected to the main unit.

#### Purpose

Set the remote switching conditions according to the user's telephone type, preference, etc.

#### Setting

- 1 Press the [Start] key.
- 2 Select [Remote Mode] and press the [Start] key.

Items	Contents
Remote Mode	Set the remote switching mode

- 3 Select the item to set.

Items	Contents
One	Set the one-shot type detection
Cont	Set the continuous type detection

Initial setting: One

- 4 Press the [Start] key to set the setting value.

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U625 Communication settings

### Message: Set Comm

#### Contents

Set the auto redialing interval and the number of times of auto redialing.

#### Purpose

FAX transmission may not be available if redialing interval is short. If long, it takes much time to complete transmission. Changes the setting to prevent the following problems.

#### Method

- 1 Press the [Start] key.
- 2 Select the item to set.

Items	Contents
Interval	Set the auto redialing interval
Times	Set the number of times of auto redialing

#### Setting: Interval

- 1 By using the [<] [>] keys or the numeric keys, change the setting value.

Contents	Setting range	Initial setting	Data variation
Set the redialing interval	1 to 9 minutes	3 minutes	-

- 2 Press the [Start] key to set the setting value.

#### Setting: Times

- 1 By using the [<] [>] keys or the numeric keys, change the setting value.

Contents	Setting range	Initial setting	Data variation
Set the number of times of redialing	0 to 15 times	3 times	-

- 2 Press the [Start] key to set the setting value.

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.



## U630 Communication control procedures 1

### Message: Comm Ctrl 1

#### Contents

Set the FAX communication.

#### Purpose

Set the following to correspond to field claims

Reducing the transmission time to improve the accuracy of reception when using a low quality line

Improving the accuracy of communication during the international communication

#### Method

1 Press the [Start] key.

2 Select the item to set.

The screen for setting is displayed.

Items	Contents
TX Speed	Set the communication starting speed
RX Speed	Set the reception speed
TX Echo	Set the waiting period to prevent echo problems at the sender
RX Echo	Set the reception speed

#### Setting: TX Speed

Set the transmission speed of the sender. 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	Contents
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 set the setting value.

#### Setting: RX Speed

Set the reception capacity to advise the transmitter by the DIS/NSF signal. When the destination unit has the V.34 capability, V.34 is selected for transmission regardless of this setting.

1 Select the reception speed.

Items	Contents
14400bps	V.17, V.33, V.29, V.27ter
9600bps	V.29, V.27ter
4800bps	V.27ter
2400bps	V.27ter (fall back only)

Initial setting: 14400bps

- 2 Press the [Start] key to set the setting value.

### Setting: TX Echo

Set the time to send the DCS signal after the DIS signal is received. Execute when an error occurs with echo at the transmitter side.

- 1 Select the item to set.

Items	Contents
500	Send the DCS 500 ms after receiving a DIS
300	Send the DCS 300 ms after receiving a DIS

Initial setting: 300

- 2 Press the [Start] key to set the setting value.

### Setting: RX Echo

Set the time to send the NSF, CSI or DIS signal after the CED signal is received. Execute when an error occurs with echo at the receiver side.

- 1 Select the item to set.

Items	Contents
500	Send the NSF, CSI or DIS 500ms after receiving the CED
75	Send the NSF, CSI or DIS 75ms after receiving the CED

Initial setting: 75

- 2 Press the [Start] key to set the setting value.

### Completion

- 1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

## U631 Communication control procedures 2

### Message: Comm Ctrl 2

#### Contents

Set the FAX communication.

#### Purpose

Set the transmission and reception of ECM

Set the CED frequency

#### Method

- 1 Press the [Start] key.
- 2 Select the item to set.  
The screen for setting is displayed.

Items	Contents
ECM TX	Set ECM transmission
ECM RX	Set 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.

Do not set it to Off when connecting to the IP telephone line.

- 1 Select the item to set.

Items	Contents
On	ECM transmission is enabled
Off	ECM transmission is disabled

Initial setting: On

- 2 Press the [Start] key. Set the setting value.

#### Setting: ECM RX

Set to OFF when the reduction of transmission costs is of higher priority than image quality.

Do not set it to Off when connecting to the IP telephone line.

- 1 Select the item to set.

Items	Contents
On	ECM reception is enabled
Off	ECM reception is disabled

Initial setting: On

- 2 Press the [Start] key to set the setting value.

#### Setting: CED Freq

Set the CED frequency. Execute it as one of the communication accuracy improvement measures for the international communication.

- 1 Select the item to set.

Items	Contents
2100	2100Hz
1100	1100Hz

Initial setting: 2100

- 2 Press the [Start] key to set the setting value.

### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U632 Communication control procedures 3

### Message: Comm Ctrl 3

#### Contents

Set the FAX communication.

#### Purpose

Reducing the error communication when using a low quality line

Corresponds to field claims when automatic FAX/telephone switching

#### Method

1 Press the [Start] key.

2 Select the item to set.

The screen for setting is displayed.

Items	Contents
DIS 4Byte	Set the DIS signal to 4 bytes
Num OF CNG(F/T)	Set the number of the CNG detection in the automatic FAX/telephone switching mode

#### Setting: DIS 4Byte

Set whether to send bit 33 and later bits of the DIS/DTC signal.

1 Select the item to set.

Items	Contents
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 set the setting value.

#### Setting: Num OF CNG(F/T)

Set the CNG detection times in the automatic FAX/telephone switching mode. Set the line type for FAX use

1 Select the item to set.

Items	Contents
1Time	Detect CNG once
2Time	Detect CNG twice

Initial setting: 1Time (100 V)/2Time (Others)

2 Press the [Start] key to set the setting value.

#### Completion

1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

## U633 Communication control procedures 4

### Message: Comm Ctrl 4

#### Contents

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 setting is displayed.

Items	Contents
V.34	Enable or disable the V.34 communication
V.34-3429Hz	Set the V.34 symbol speed (3429 Hz)
DIS 2Res	Set the number of times of DIS signal reception
RTN Check	Set the reference for the RTN signal output

#### Setting: V.34

Set whether to enable/disable the V.34 communication individually for transmission and reception.

1 Select the item to set.

Items	Contents
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 set the setting value.

#### Setting: V.34-3429Hz

Set if the V.34 symbol speed 3429 Hz is used.

1 Select the item to set.

Items	Contents
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 set the setting value.

#### Setting: DIS 2Res

Set the number of times to receive the DIS signal to once or twice. Execute it as one of the corrective measures for transmission errors and other problems.

- 1 Select the item to set.

Items	Contents
Once	Respond to the first signal
Twice	Respond to the second signal

Initial setting: Once

- 2 Press the [Start] key to set the setting value.

### Setting: RTN Check

Set the error line rate to be a reference to the RTN signal transmission. If transmission errors occur frequently due to the line quality, lower this setting to reduce them.

- 1 Select the item to set.

Items	Contents
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 set the setting value.

### Completion

- 1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

## U635 Communication control procedures 5

### Message: Comm Ctrl 5

#### Contents

Set the maximum number of error bytes judged acceptable when receiving a TCF signal. Execute it as one of measures to ease transmission conditions if transmission errors occur.

#### Purpose

Relax 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	Contents	Setting range	Initial setting
TCF Check	Set the allowed error bytes when detecting the TCF signal	1 to 255	0

- 4 Press the [Start] key to set the setting value.

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.



## U640 Communication time setting 1

### Message: Comm Time 1

#### Contents

Set the detection time when one-shot detection is selected for remote switching.

Set the detection time when continuous detection is selected for remote switching.

#### Purpose

Set the remote switching conditions according to the user's telephone type, preference, 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	Contents	Setting range	Initial setting
Time (One)	Set the one-shot detection time for remote switching	0 to 255	7 1 (New Zealand)
Time (Cont)	Set the continuous detection time for remote switching	0 to 255	80

- 4 Press the [Start] key to set the setting value.

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U641 Communication time setting 2

### Message: Comm Time 2

#### Contents

Set the time-out time for the fax communication.

#### Purpose

Mainly, executed to improve the accuracy of communication for international communication

#### Method

1 Press the [Start] key.

1 Select the item to set.

Items	Contents
T0 Time Out	Set the T0 time-out time
T1 Time Out	Set the T1 time-out time
T2 Time Out	Set the T2 time-out time
Ta Time Out	Set the Ta time-out time
Tb1 Time Out	Set the Tb1 time-out time
Tb2 Time Out	Set the Tb2 time-out time
Tc Time Out	Set the Tc time-out time
Td Time Out	Set the Td time-out time

#### Setting: T0 Time Out

Set the time before detecting a CED or DIS signal after a dialing signal is sent.

Set to prevent disconnection of a line that occurs depending on the quality of the exchange, or when the destination unit Set the auto switching function.

1 By using the [<] [>] keys or the numeric keys, change the setting value.

Contents	Setting range	Initial setting
Set the T0 time-out time	30 to 90 s	56 58 (100 V)

2 Press the [Start] key to set the setting value.

#### Setting: T1 Time Out

Set 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.

Contents	Setting range	Initial setting
Set the T1 time-out time	30 to 90 s	36 38 (100 V model)

2 Press the [Start] key to set the setting value.

**Setting: T2 Time Out**

The T2 time-out time is specified as follows.

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.

Contents	Setting range	Initial setting
Set the T2 time-out time	1 to 255	69

- 2 Press the [Start] key to set the setting value.

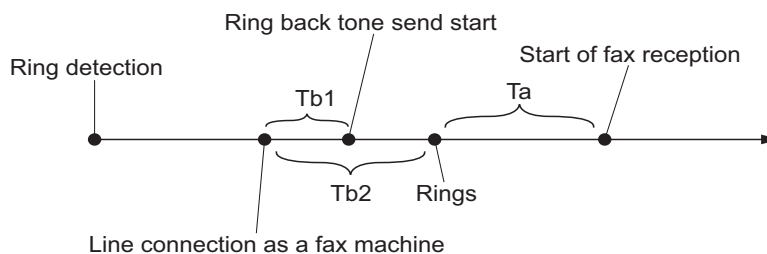
**Setting: Ta Time Out**

Set the time to start ringing for an operator through the external telephone after receiving a call in the FAX/telephone automatic switching mode. (See figure 1-3-18). If either receiving a FAX signal within this time or passing this time, the mode automatically switches to the FAX reception mode. Execute when a reception error occurs when in the automatic FAX/telephone switching.

- 1 By using the [<] [>] keys or the numeric keys, change the setting value.

Contents	Setting range	Initial setting
Set the Ta time-out time	1 to 255 s	30

- 2 Press the [Start] key to set the setting value.



Ta/Tb1/Tb2 time-out time

**Setting: Tb1 Time Out**

Set the time to start sending the ring back tone after receiving a call as a fax machine in the FAX/telephone automatic switching mode, (See figure 1-3-18). Execute when a reception error occurs when in the automatic FAX/telephone switching.

- 1 By using the [<] [>] keys or the numeric keys, change the setting value.

Contents	Setting range	Initial setting
Set the Tb1 time-out time	1 to 255	20

- 2 Press the [Start] key to set the setting value.

**Setting: Tb2 Time Out**

Set the time to start ringing for an operator through the external telephone after receiving a call in the FAX/telephone automatic switching mode. (See figure 1-3-27). Execute when a reception error occurs when in the automatic FAX/telephone switching.

- 1 By using the [<] [>] keys or the numeric keys, change the setting value.

Contents	Setting range	Initial setting
Set the Tb2 time-out time	1 to 255	80

- 2 Press the [Start] key to set the setting value.

### 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 handset receives a call. Unless switched to FAX reception during this period, operated as a normal phone after this.

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.

Contents	Setting range	Initial setting
Set the Tc time-out time	1 to 255 s	60

- 2 Press the [Start] key to set the setting value.

### Setting: Td Time Out

Set the length of time to determine silent status, 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.

Contents	Setting range	Initial setting
Set the Td time-out time	1 to 255	30 (100 V model) 6 (220-240 V model) 9 (120 V model)

- 2 Press the [Start] key to set the setting value.

### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U650 Modem 1

### Message: Modem 1

#### Contents

Set the G3 cable equalizer. Set the modem detection level.

#### Purpose

Adjusts the equalizer to be compatible with the line characteristics

Set to Improve the accuracy of communication when using a low quality line

#### Method

- 1 Press the [Start] key.
- 2 Select the item to set.

Items	Contents
Reg G3 TX Eqr	Set the G3 transmission cable equalizer
Reg G3 RX Eqr	Set the G3 reception cable equalizer
RX Mdm Level	Set 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 set the setting value.

#### Setting: Reg G3 RX Eqr

- 1 Select [0dB], [4dB], [8dB] or [12dB].  
Initial setting: 0dB
- 2 Press the [Start] key to set the setting value.

#### Setting: RX Mdm Level

- 1 Select [-33dBm], [-38dBm], [-43dBm] or [-48dBm].  
Initial setting: -43dBm
- 2 Press the [Start] key to set the setting value.

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U651 Modem 2

### Message: Modem 2

#### Contents

Set 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	Contents	Setting range	Initial setting
Sgl LVL Modem	Set the modem output level	-15 to 0	-10 (100 V model) -11 (220-240 V model/120 V model) -12 (Australia)
DTMF LEV (Cent)	DTMF output level (center value)	-15.0 to 0.0	-9 (100 V model) -8 (220-240 V model) -6 (120 V model) -7 (Australia) -8 (New Zealand)
DTMF LEV (Diff)	Set the DTMF output level (level difference)	0 to 5.5	2 1.5 (Australia) 1 (New Zealand)

- 4 Press the [Start] key to set the setting value.

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U660 Ring setting

### Message: Set Calls

#### Contents

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 setting is displayed.

Items	Contents
Exchange	Setting the PBX/PSTN connection
Dial Tone	Set the PSTN dial tone detection
Busy Tone	Set the busy tone detection
PBX Setting	Setting the PBX connection
DC Loop	Set the loop current detection before dialing

#### Setting: Exchange

Selects if the FAX is connected to either a PBX or public switched telephone network.

- 1 Select the item to set.

Items	Contents
PSTN	Connected to the public switched telephone network
PBX	Connecting to the PBX

Initial setting: PSTN

- 2 Press the [Start] key to set the setting value.

#### Setting: Dial Tone

Selects whether or not to check for a dial tone to check if the telephone is off the hook when a fax is connected to a public switched telephone network.

- 1 Select the item to set.

Items	Contents
On	The dial tone is detected
Off	The dial tone is not detected

Initial setting: On

Press the [Start] key to set the setting value.

#### Setting: Busy Tone

Set 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, when a FAX signal is sent

FAX transmission may fail due to incorrect busy tone detection. When setting it to OFF, this problem may be improved. 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	Contents
On	Detect the busy tone
Off	Does not detect the busy tone

Initial setting: On/Off (Australia)

- 2 Press the [Start] key to set the setting value.

### 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	Contents
Flash	Flashing mode
Loop	Code number mode

Initial setting: Loop

- 2 Press the [Start] key to set the setting value.

### Setting: DC Loop

Set if the loop current is detected before dialing.

- 1 Select the item to set.

Items	Contents
On	Detect the loop current before dialing
Off	Does not detect the loop current before dialing

Initial setting: On

- 2 Press the [Start] key to set the setting value.

### Completion

- 1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.



## U670 List output

### Message: Output List

#### Contents

Outputs the 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] is pressed to halt printing.

#### 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 Output selected list.

Items	Contents
Sys Conf Report	Print the list of software switches, local telephone number, confidential boxes, firmware versions and other information
Action List	Print the list of the error logs and communication lines
Self Sts Report	Print the list of FAX communication settings only in the maintenance mode (self-status report)
Protocol List	Output a list of communication procedures
Error List	Output the error list
Addr List(No.)	Output address book in the IDs order
Addr List(Idx)	Output address book in the order of names
One-touch List	Output a list of one-touch
Group List	Output the group list

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U695 FAX function customization

### Message: Customize FAX Func

#### Contents

FAX package transmission is set up. Changes print size priority when receiving small size.

#### Purpose

Execute as required

#### Method

- 1 Select the item to set.

Items	Contents
FAX Bulk TX	FAX batch transmission is set up
A5 Pt Pri Chg	Change of print size priority at the time of small size reception

#### Setting: FAX Bulk TX

- 1 By using the [<] [>] keys, select [On] or [Off].

Items	Contents
On	FAX batch transmission is enabled
Off	FAX batch transmission is disabled

Initial setting: On

- 2 Press the [Start] key to set the setting value.

#### Setting: A5 Pt Pri Chg

- 1 By using the [<] [>] keys, select [On] or [Off].

Items	Contents
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 set the setting value.

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U699 Software switch: Set

### Message: Set Soft SW

#### Contents

Set the software switches on the FAX PWB 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	Contents
SW No.	Specify the software switch number (2 to 3 digits)

- 4 Press the keys of bit 0 to 7 to switch each bit between 0 and 1.

Items	Contents
Bit	Set the software switch bit (8bit).

- 5 Press the [Start] key to set the setting value.

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

#### List of software switches which can be configured

##### Communication control procedures

No.	Bit	Contents
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

No.	Bit	Contents
	1	4800bps/V34
	0	2400bps/V34
41	3	FSK detection in V.8
42	4	4800 bps transmission when low-speed setting is active
	2	FIF length when transmitting DIS/DTC signal 4 times or more

**Communication time setting**

No.	Bit	Contents
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	Contents
89	76543	RX gain adjust

**NCU setting**

No.	Bit	Contents
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	Registering the access code for connection to PSTN
126	7654	Ring back tone ON/OFF cycle for the automatic FAX/telephone switching
68	76543210	Timeout for FSK detection start in V.8

**Calling time setting**

No.	Bit	Contents
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	Contents
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

#### Contents

Display and clear the counts by paper source.

#### Purpose

Check the maintenance parts replacement timing. Executes to clear counters when replacing the maintenance parts.

#### Method

- 1 Press the [Start] key.

Display the counts by paper source.

Items	Contents
MPT	Displaying/clearing the MP tray feed counter
Cass1	Displaying/clearing Cassette 1 count
Cass2 *1	Displaying Cassette 2 count
Cass3 *2	Displaying Cassette 3 count
Cass4 *3	Displaying Cassette 4 count
Dup	Displaying/clearing the duplex unit count

\*1: 500 PF only, \*2: 500×2/2000 PF only, \*3: 500×2 PF only

- 2 Select the counter to clear.

Unable to clear [Cass2], [Cass3] and [Cass4]

- 3 Press the [Start] key to clear the counter value.

#### Completion

- 1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

## U903 Clearing the jam counter

### Message: Clr Paper JAM Cnt

#### Contents

Display/clear the jam counter by paper jam type.

#### Purpose

Execute to check the paper jam status. Executes to clear counters when replacing the maintenance parts.

#### Method

- 1 Press the [Start] key.
- 2 Select the item to execute.

Items	Contents
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 Change the screen using the [Up/Down cursor] key.
- 3 Select [Clear] to clear the jam counts.  
Individual counters cannot be cleared.
- 4 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 [Up/Down cursor] key.  
Unable to clear the accumulated jam counter values.

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U904 Clearing the service call error counter

### Message: Clr Svc Call Cnt

#### Contents

Display/clear the number of times of service call errors by service call error type.

#### Purpose

Execute to check the service call error. Executes to clear counters when replacing the maintenance parts.

#### Method

- 1 Press the [Start] key.
- 2 Select the item to execute.

Items	Contents
Cnt	Displaying/clearing the service call counter
Total Cnt	Displaying 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 Change the screen using the [Up/Down cursor] key.
- 3 Select [Clear] to clear the service call error counter.  
Individual counters cannot be cleared.
- 4 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.
- 2 Change the screen using the [Up/Down cursor] key.  
Unable to clear the accumulated service call error counter values.

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U905 Optional counter

### Message: Option Cnt

#### Contents

Display the counter values of the document processor and inner finisher.

#### Purpose

Execute to check the usage status of the document processor or inner finisher.

#### Method

- 1 Press the [Start] key.
- 2 Select the device to check.  
Switched to the counter screen.

Items	Contents
DP	Displaying the document processor count
DF	Displaying the document finisher count

#### Method: DP

Each counter is displayed.

Items	Contents
ADP	Simplex original count is displayed
RADP	Duplex original count is displayed

#### Method: DF

Each counter is displayed.

Items	Contents
Sorter	Displaying the sorter counter
Staple	Displaying the staple counter

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.



## U906 Resetting the partial operation

### Message: Reset Dis Func

#### Contents

Release the service call error with partial operation.

#### Purpose

If the partial operation is executed with a broken cassette, etc., make sure to execute it after repairing the parts.

#### Method

- 1 Press the [Start] key.
- 2 Select [Execute].

Items	Contents
Execute	Reset the partial operation

- 3 Press the [Start] key to release the partial operation.
- 4 Turn the power switch off then on. Wait more than 5 seconds between the power off and on.

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U908 Total counter

### Message: Total Cnt

#### Contents

Display the total counter.

#### Purpose

Display the total counter for check.

#### Method

- 1 Press the [Start] key.  
Display the total count.

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U910 Black rate data

### Message: Clr Coverage Dat

#### Contents

Clear the accumulated data for the print coverage per A4 size paper and its period of time (as shown on the service status page).

#### Purpose

Clear data as required at the time such as maintenance

#### Method

- 1 Press the [Start] key.
- 2 Select [Execute].

Items	Contents
Execute	Clearing the print coverage data

- 3 Press the [Start] key to clear the print coverage data.

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U911 Counter by media type

### Message: Paper SZ Cnt

#### Contents

Display the paper feed counts by paper size.

#### Purpose

Display the counts to confirm when replacing the maintenance parts.

#### Method

- 1 Press the [Start] key.  
Display the paper feed counts by paper size.

Items	Contents
A4	Displaying A4 feed counts
B5	Displaying B5 feed counts
A5	Displaying A5 feed counts
Folio	Displaying Folio feed counts
Legal	Displaying Legal feed counts
Letter	Displaying Letter feed counts
Statement	Displaying Statement feed counts
ETC	Displaying paper feed counts of Other

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U917 Retrieve the backup data

### Message: R/W Bkup Data

#### Contents

Retrieves the backup data to a USB memory from the main unit, or writes the data from the USB memory 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 memory into the USB memory slot.
- 3 Turn the power switch on.  
Wait for about 10 seconds until the main unit recognizes a USB memory.
- 4 Enter maintenance mode U917.
- 5 Select [Export] or [Import], and press the [Start] key.

Items	Contents
Import	Importing data from the USB memory to the main unit
Export	Retrieving data from the main unit to the USB memory

- 6 Select the object item.  
Change the screen using the [Up/Down cursor] key.

Items	Contents	Depending data*
Address	Address book information	-
Job AcCnt	Job accounting information	-
One Touch	One-touch key information	Address book information
User	User management information	Job accounting information
Document	Document box information	Job accounting, User information
Shortcut	Short-cut information	Job accounting, User, Document Box information
Fax Fwd	FAX forward 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	FAX setting information	-
Program	Program information	Information of Address book, Job accounting, User management, Document box, FAX transfer and FAX setting
Panel Set	Panel setting information	Information of Address book, Job accounting, User management, Document box, FAX transfer, FAX setting and Program

Since data are dependent with each other, data other than selected are also retrieved or written.

- 7 Select the object item.
- 8 Press the [Start] key. Starts reading or writing.  
The progress of selected item is displayed in%.  
When an error occurs, the operation is canceled and an error code appears.
- 9 [Finish] appears after normal completion.
- 10 When selecting [Import], turn the power switch off then on, after completing writing. Wait more than 5 seconds between the power off and on.

### Error codes

Codes	Contents
e000	Unspecified error
e0001	Parameter error
e0002	Generating a dummy file has failed.
e0003	The XML file to import does not exist
e0004	The exported file does not exist
e0100 to e01ff	Error in handling address book
e0200 to e02ff	Error in handling One-touch
e0300 to e03ff	Error in handling user management
e0400 to e04ff	Error in handling panel program data
e0500 to e05ff	Error in handling forwarding FAX data
e0600 to e06ff	Error in handling the system configuration
e0700 to e07ff	Error in handling network parameters
e0800 to e08ff	Error in handling job accounting
e0900 to e09ff	Error in handling short-cuts
e0a00 to e0aff	Error in handling job information
e0b00 to e0bff	Error in handling FAX data
e0c00 to e0cff	Error in handling printer data
e0d00 to e0dff	Error in handling panel data
e0e00 to e0eff	Error in handling document boxes
e1000 to e1fff	Error in the device-related process
e2000 to e2fff	Error in handling SOAP IF
e3000 to e3fff	Error in handling KM-WSDL IF
e4000 to e4fff	Error in process for import (e4002) A file mandatory for importing is missing (e4008) Invalid file header
e5000 to e5fff	Error in the SOAP data rewriting process

### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U920 Billing counter

### Message: Chg Cnt

#### Contents

Display the billing count.

#### Purpose

Execute to check the current billing counts

#### Method

- 1 Press the [Start] key.  
Switched to each display screen.  
Change the screen using the [Up/Down cursor] key.

Items	Contents
Col Copy H	Color copy counts (Coverage: High)
Col Copy M	Color copy counts (Coverage: Middle)
Col Copy L	Color copy counts (Coverage: Low)
Mono Copy	Mono color copy count
B/W Copy	B/W copy count is displayed.
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 count is displayed
B/W FAX	FAX count
Simplex	Simplex print count is displayed
Duplex	Duplex print count is displayed
Comb(Off)	Combine print counts (Off) is displayed
Comb(2in1)	Combine print counts (2in1) is displayed
Comb(4in1)	Combine print counts (4in1) is displayed

#### Completion

- 1 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

#### Contents

Clear 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	Contents
Execute	Initialize the billing count and machine life count

- 3 Press the [Start] key.  
Clear all charge counts and machine life counts.

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U928 Machine life counter

### Message: Life Cnt

#### Contents

The current machine life counts is displayed.

#### Purpose

Executed to check the machine life count

#### Method

- 1 Press the [Start] key.  
The current machine life counts is displayed.

Items	Contents
Cnt	Displaying the machine life count
Color Cnt	Displaying the machine life count (color)
Clear	Clearing the count

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U930 Clear the main charger roller counts

### Message: Clr Chg Cnt

#### Contents

Display and clear the current main charger roller counts.

#### Purpose

To verify the main charger roller counts after replacing. Also, clear the counts after replacement.

#### Method

- 1 Press the [Start] key.

The main charge roller counter for each color is displayed.

Items	Contents
C	Displaying the current main charger roller count for C
M	Displaying the current main charger roller count for M
Y	Displaying the current main charger roller count for Y
K	Displaying the current main charger roller count for K

#### Method: Clear

- 1 Select the item to set.
- 1 Select [Clear].
- 2 Press the [Start] key to clear the counter value.

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U952 Maintenance mode workflow

### Message: Mainte Work Flow

#### Contents

Execute the maintenance items in the order of registration in the main unit or the USB memory.

#### Purpose

Execute to register regular maintenance items.

#### Method

- 1 Press the [Start] key.
- 2 Select the item to execute.  
The screen for executing is displayed.

Items	Contents
Continue	Resume interrupted workflow
Exec(USB)	Execute the workflow in a USB memory
Execute	Execute the workflow saved in the main unit
Entry(USB)	Execute the workflow in a USB memory to the main unit
Entry	Register the workflow in the main unit manually
Log	Display the latest workflow execution history

#### Method: Continue

- 1 Select maintenance item number to execute.
- 2 Press the [Start] key.  
Selected maintenance mode is executed.

#### Method: Execute (USB)

- 1 Check the LED display is off and turn the power switch off.
- 2 Insert a USB memory into the USB memory slot.
- 3 Turn the power switch on.
- 4 Enter maintenance item U952.
- 5 Select [Exec(USB)].
- 6 Select [workflow].

Items	Contents
WorkFlowData 01 - 07	Workflow data in a USB memory

- 7 Press the [Start] key.  
Execute the maintenance items in the order of registration in the workflow.

#### Method: Excute

- 1 Select the place to save the data to execute.



Items	Contents
Data 1 - 6	Workflow save area in the main unit

- 2 Select the item to execute.
- 3 Press the [Start] key to execute the process.

#### Method: Entry(USB)

- 1 Check the LED display is off and turn the power switch off.
- 2 Insert a USB memory into the USB memory slot.
- 3 Turn the power switch on.
- 4 Enter maintenance item U952.
- 5 Select [Entry(USB)].
- 6 Select [workflow].

Items	Contents
WorkFlowData 01 - 07	Workflow data in a USB memory

- 7 Select the workflow save area.

Items	Contents
Data 1 - 8	Workflow save area in the main unit

- 8 Select [Execute].  
Registers the workflow in a USB memory to the main unit.

#### Method: Entry

- 1 Select [Entry].
- 2 Select the workflow save area.

Items	Contents
Data 1 - 8	Workflow save area in the main unit

- 3 By using the [<] [>] keys or the numeric keys, enter the maintenance number to register in the workflow.

Items	Contents
Flow 1 - 14	Registered maintenance numbers

- 4 Press the [Start] key to set the setting value.
- 5 Press the [Start] key.  
Execute the maintenance items in the order of registration in the workflow.

#### e.g.

When inserting a USB memory the following items can be registered: commands, texts and maintenance numbers (variable).

File format: xxx.mwf

- 1, SET UP, 464, 469, 410, 000, 927, 278
- 2, WARRANTY, 089, 000
- 3, MK-A, 930, 127, 167, 464, 469, 410, 251
- 4, MK-B, 930, 464, 469, 410, 251
- 5, EH SETUP, 411, 034, 246, 211

### **Completion**

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U964 Log check

### Contents

- Transfer the log files save in the NAND to a USB memory.
- Transfer screen shots at log and log acquisition.

### Purpose

Transfer the log file saved in the NAND to a USB memory for investigation when a failure occurs.

### Method

- 1 Check the LED display is off and turn the power switch off.
- 2 Insert a USB memory into the USB memory slot.
- 3 Turn the power switch on.
- 4 Enter maintenance item U954.
- 5 Select [Execute].

Items	Contents
Execute	Transfer the log file

- 6 Press the [Start] key.
  - Starts transferring the log files saved in the NAND to a USB memory.
  - [Processing] is displayed. (About 3 to 5 minutes)
- 7 [Completed] appears after normal completion.
- 8 Turn the power switch off then on. Wait more than 5 seconds between the power off and on.
  - An error code appears when there is an error.

### Supplement

How to retrieve the log when the operation panel freezes

Log retrieving starts when pressing four keys on the operation panel (\*, 8, 6, Clear) for 3 to 6 seconds.

The memory lamp is blinking during retrieving and turns off when completed.

The log retrieved this way can be saved in a USB memory.

### Error codes

Display	Contents
No USB Storage	The USB memory is not installed
No File	No file
Mount Error	USB memory mount error
File Delete Error	Failed to delete existing files in the USB memory
Copy Error	NAND to USB memory copy failure
Unmount Error	USB memory unmount error
Other Error	Other error

### Completion

- 1 Press the [Stop] key.
  - The screen for selecting a maintenance item No. is displayed.

## U977 Setting the data capture mode

### Message: Set Data Capture

#### Contents

Stores the data sent to the main unit into a USB memory.

#### Purpose

Store the data sent to the main unit into a USB memory to check it.

#### Method

- 1 Press the [Start] key.
- 2 Select the item to set

Items	Contents
Execute	Store the data in a USB memory
Stop	Stop processing the data

#### Method: Execute

- 1 Select [Execute].
- 2 Press the [Start] key.  
When the operation is completed abnormally, an error code is displayed.

#### Method: Stop

- 1 Select [Stop]

#### Error codes

Items	Contents
1	USB memory is broken. USB memory was disconnected during data processing or is write-protected
4	USB memory is full
50	Other error occurs

#### Completion

- 1 Press the [Stop] key.  
The screen for selecting a maintenance item No. is displayed.

## U984 Developer unit number

### Message: Dev No.

#### Contents

Display the developer unit number.

#### Purpose

Execute to check the developer unit number.

#### Method

- 1 Press the [Start] key.

Display the developer unit number.

Items	Contents
C	Displaying the Cyan developer unit number
M	Displaying the Magenta developer unit number
Y	Displaying the Yellow developer unit number
K	Displaying the Black developer unit number

#### Completion

- 1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

## U985 Developer unit history

### Message: Dev History

#### Contents

Display the machine serial number and developer counter history.

#### Purpose

Display the machine serial number and developer count to check.

#### Method

- 1 Press the [Start] key.

Select color to refer to.

Items	Contents
C	Displaying the Cyan developer unit history
M	Displaying the Magenta developer unit history
Y	Displaying the Yellow developer unit history
K	Displaying the Black developer unit history

Display the machine serial number and 3 items of the developer counter history.

Items	Contents
Machine History 1 to 3	Machine serial number history
Cnt History1 to 3	Developer counter history

#### Completion

- 1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

## U991 Scanner counter

### Message: Scanner Counter

#### Contents

Display 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.

Items	Contents
Copy Scan	Displaying times of copy and scan operations
Fax Scan	Displaying times of FAX scan operations
Other Scan	Displaying times of other scan operations

#### Completion

- 1 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 copy

1. Press the System Menu Key.

System Menu:  
Quick Setup Wisard  
Language  
Report  
Counter

Cassette/MP Tray Setting  
Common Setting  
Home  
Copy

Send  
Document Box  
FAX \*1  
Application

Inter net  
Address Book/One touch  
User Login/Job Accounting  
Printer

System/Network  
Date/Timer/Energy Saver  
Adjustment/Maintenance

2. Select [Adjustment/Maintenance] using the [▲] [▼] keys.

3. Select [Service Setting] using the [▲] [▼] keys.

Adjustment/Maintenance:  
Laser Scanner Cleaning  
Service Setting

4. Select the item to be set.

Service Setting:  
FAX Country Code \*1  
FAX Call Settings \*1  
Alutitude Adjustment  
MC

DEV-CLN  
Memory Diagnostics

\*1: Displays only when the FAX kit is installed

#### Note

If the login user name entry screen appears during operations, enter a login user name and password, and select [Login]. Login with administrator privileges. The factory default login user name and login password are set as shown below.

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

**(2) Service mode list**

Items	Contents	Page
FAX country code *1	Initialize all data and image memory	<a href="#">P.6-217</a>
FAX recall setting *1	Set for connection	<a href="#">P.6-218</a>
Altitude Adjustment	Set the altitude adjustment mode	<a href="#">P.6-219</a>
MC	Set the main charger output	<a href="#">P.6-220</a>
DEV-CLN	Execute developer refreshing	<a href="#">P.6-220</a>
Memory diagnostics	Diagnose memory at power up (whether reading and writing are executable)	<a href="#">P.6-221</a>

\*1: For FAX kit installed model only

**(3) Descriptions of service modes****FAX country code****Contents**

Initializes software switches, and all data and image memory in the backup data on the FAX PWB according to the destination and OEM setting.

**Purpose**

To initialize the FAX PWB.

**Method**

- 1 Enter the Service Setting menu.
- 2 Using the [Up/Down cursor] key, select [FAX country code].
- 3 Press the [Start] key.
- 4 Enter the destination code using the numeric keys.
- 5 Press the [Start] key to set the setting value.
- 6 Press the [Start] key. Data initialization starts.



**Destination code list**

Destination code	Destination	Destination code	Destination
000	Japan	253	CTR21 (European nations)
007	Argentina	↑	Italy
009	Australia	↑	Germany
022	Brazil	↑	Spain
038	China	↑	U.K.
080	Hong Kong	↑	Netherlands
084	Indonesia	↑	Sweden
088	Israel	↑	France
097	Korea	↑	Austria
181	U.S.A.	↑	Switzerland
250	Russia	↑	Belgium
108	Malaysia	↑	Denmark
115	Mexico	↑	Finland
126	New Zealand	↑	Portugal
136	Peru	↑	Ireland
137	Philippines	↑	Norway
152	Middle East	254	Taiwan
156	Singapore		
159	South Africa		
169	Thailand		

**Completion**

- 1 Press the [Stop] key.

**FAX ringing setting****Contents**

Selects if the FAX is connected to either a PBX or public switched telephone network.

Selects the mode to connect an outside call when connected to a PBX.

Registering the access code for connection to PSTN

**Purpose**

Execute as required.

**Method**

- 1 Enter the Service Setting menu.

- 2 Using the [Up/Down cursor] key, select [FAX recall setting].
- 3 Press the [Start] key.

Items	Contents
Exchange selection	PBX/PSTN connection setting
PBX setting	PBX external connection setting
PSTN connection number setting	PSTN access code setting

#### Setting: Exchange selection

- 1 Using the [Up/Down cursor] key, select [Exchange selection].
- 2 Press the [Start] key.
- 3 Using the [Up/Down cursor] key, select [PBX] or [PSTN].
- 4 Press the [Start] key to set the setting value.

#### Setting: PBX setting

- 1 Using the [Up/Down cursor] key, select [PBX setting].
- 2 Press the [Start] key.
- 3 Using the [Up/Down cursor] key, select [Loop], [Flash] or [Earth].
- 4 Press the [Start] key to set the setting value.

#### Setting: PSTN access code setting

- 1 Using the [Up/Down cursor] key, select [PSTN connection number setting].
- 2 Press the [Start] key.
- 3 Enter the access code using the numeric keys. (0 to9, 00 to 99)
- 4 Press the [Start] key to set the setting value.

#### Completion

- 1 Press the [Stop] key.

## Altitude Adjustment

#### Contents

Set the main charger output.

Executable only when the altitude adjustment mode is set to "Normal".

#### Purpose

Execute when the image density declines, dirt of a background or an offset has occurred.

#### Method

- 1 Enter the Service Setting menu.

- 2 Using the [Up/Down cursor] key, select [MC].
- 3 Press the [Start] key.
- 4 Using the [Up/Down cursor] key, select the item to set.

Select the item to set.

Items	Contents
Normal	Set 1000m or less
1001 to 2000m	Set at 1001 to 2000m
2001 to 3000m	Set at 2001 to 3000m
3001 to 3500m	Set at 3001 to 3500m

#### Completion

- 1 Press the [Stop] key.

## MC

#### Contents

Set the main charger output.

Executable only when the altitude adjustment mode is set to "Normal".

#### Purpose

Execute when the image density declines, dirt of a background or an offset has occurred.

#### Method

- 1 Enter the Service Setting menu.
- 2 Using the [Up/Down cursor] key, select [MC].
- 3 Press the [Start] key.
- 4 Using the [Up/Down cursor] key, select the setting "1" to "7".
- 5 Press the [Start] key to set the setting value.

#### Completion

- 1 Press the [Stop] key.

## DEV-CLN

#### Contents

The laser output of the image data, exposure, developing and primary transfer is executed for ten pages equivalent. (Paper is not fed)

#### Purpose

Execute when the image failure or problem in the developer unit occurs

#### Method

- 1 Enter the Service Setting menu.

- 2 Using the [Up/Down cursor] key, select [DEV-CLN].
- 3 Press the [Start] key.  
Developer refresh is executed by forming image with toner on the primary transfer belt.

**Completion**

- 1 Press the [Stop] key.

## Memory diagnostics

**Contents**

Diagnose memory at power-up (whether reading and writing are executable).

**Purpose**

Check if the memory device is defective that may cause an unresolvable F-code error, locking or abnormal images. Checks the memory failure.

**Method**

- 1 Enter the Service Setting menu.
- 2 Using the [Up/Down cursor] key, select [Mem.Diagnostics].
- 3 Press [Start].
- 4 Turn the power switch off then on. Wait more than 5 seconds between the power off and on.

**Completion**

- 1 Press the [Stop] key.

## 7 Troubleshooting

### 7 - 1 Image formation problems

#### (1) Isolate the place of image failure

##### How to isolate the cause

- Print Test Page to check an image failure.

[System Menu] > [Adjustment/Maintenance] > [Service Setting]

Yes: Engine factor

No: Scanner factor

- Check if image failure is enlarged or reduced in the zoom mode.

Yes: Scanner factor

- 1 Scanner factor: Refer to [Image failure at Copy or Send] (See page 7-107).

(LED lamp for originals on the contact glass --> CCD failure at scanning factor)

##### Isolate with the original scanning position.

a. DP simplex (Main unit CCD scan)

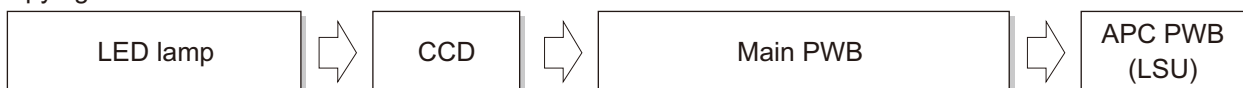
b. On the contact glass (scan by the main unit CCD)

- 2 Refer to image failure with engine factor (See page 7-134).

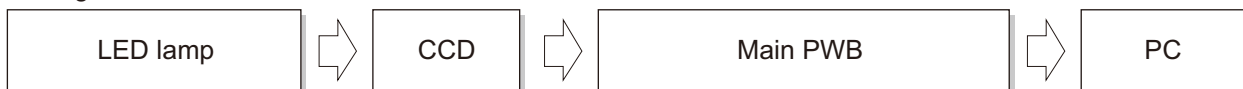
(Main charge --> Drum --> LSU --> Developer --> Primary transfer image formation process failure)

##### Image data flow

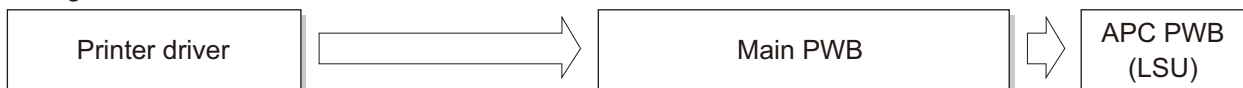
Copying :



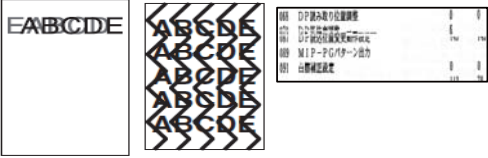


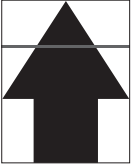
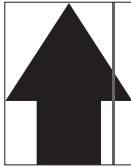



Sending :





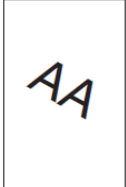

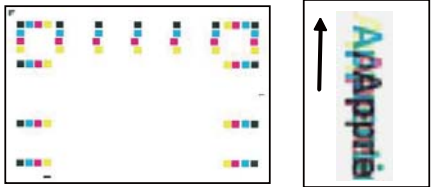
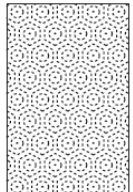



Printing data from PC :



**(2) Scanner Factors (When scanning the front side or back side through the DP)**

No.	Contents	Image sample
(2-1)	<a href="#">Abnormal image(7-4Page)</a>	
(2-2)	<a href="#">Background is colored(7-4Page)</a>	
(2-3)	<a href="#">Black dots or color dots(7-4Page)</a>	
(2-4)	<a href="#">Horizontal black streaks(7-5Page)</a>	
(2-5)	<a href="#">Vertical streaks or bands (black, color)(7-5Page)</a>	
(2-6)	<a href="#">Vertical streaks or bands (white)(7-6Page)</a>	
(2-7)	<a href="#">Entire blank image (white or black)(7-6Page)</a>	
(2-8)	<a href="#">Image is blurred(7-7Page)</a>	

No.	Contents	Image sample
(2-9)	<a href="#">Part of the image is not copied(7-7Page)</a>	
(2-10)	<a href="#">The entire image is light(7-7Page)</a>	
(2-11)	<a href="#">Mismatch of the center line between the original and copy image(7-8Page)</a>	
(2-12)	<a href="#">Regular mismatch of the leading edge between the original and copy image(7-9Page)</a>	
(2-13)	<a href="#">Skewed image(7-9Page)</a>	
(2-14)	<a href="#">Blurred characters(7-10Page)</a>	
(2-15)	<a href="#">Color shift(7-10Page)</a>	
(2-16)	<a href="#">Moire(7-11Page)</a>	
(2-17)	<a href="#">A part of the image is dark or light(7-11Page)</a>	

## Content of Scanner Factors

### (2-1) Abnormal image

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	FFC is not properly connected, or it is faulty.	Reconnect the following FFC. When the FFC terminals are peeled off, deformed or the FFC is broken, replace the FFC. • CCD PWB - Main PWB	
2	Replacing the scanner carriage	The CCD PWB is faulty.	Replace the scanner carriage and execute U411.	
3	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

### (2-2) Background is colored

Step	Check description	Assumed cause	Measures	Reference
1	Changing the settings	The Background Density Adjustment is not set.	Set [Background Adjustment] to [Auto].	
2	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.	
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)] if the same phenomenon occurs at the table scanning.	
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.	Reconnect the following FFC. When the FFC terminals are peeled off, deformed or the FFC is broken, replace the FFC. • CCD PWB - Main PWB	
8	Checking the slit glass	The slit glass is dirty or not properly attached.	Reattach or clean the slit glass.	
9	Replacing the document Processor	The DP frame is deformed or the DP hinges are faulty.	Replace the document processor.	
10	Replacing the scanner carriage	The CCD PWB is faulty.	Replace the scanner carriage and execute U411.	
11	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

### (2-3) 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 slit glass	The slit glass is dirty.	Clean the slit glass.	
3	Cleaning the scanner carriage	Dust adheres on the scanner carriage.	Clean the scanner carriage.	
4	Checking the connection	FFC is not properly connected, or it is faulty.	Reconnect the following FFC. When the FFC terminals are peeled off, deformed or the FFC is broken, replace the FFC. • CCD PWB - Main PWB	



Step	Check description	Assumed cause	Measures	Reference
5	Replacing the scanner carriage	The CCD PWB is faulty.	Replace the scanner carriage and execute U411.	
6	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

**(2-4) Horizontal black streaks**

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 back side of the size indication plate. (U072 [Front] adjustment value is not proper.)	Adjust the value at U072 [Front].	
4	Executing U411	The image at the backside of the size indication plate is scanned. (The adjustment value of [Table(ChartA)] at U411 is incorrect.)	Execute U411 [Table(ChartA)].	
5	Checking the connection	FFC is not properly connected, or it is faulty.	Reconnect the following FFC. When the FFC terminals are peeled off, deformed or the FFC is broken, replace the FFC. • CCD PWB - Main PWB	
6	Replacing the scanner carriage	The CCD PWB is faulty.	Replace the scanner carriage and execute U411.	
7	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

**(2-5) Vertical streaks or bands (black, color)**

Step	Check description	Assumed cause	Measures	Reference
1	Cleaning the slit glass and the DP original conveying guide	The slit glass is dirty.	Clean the slit glass and the DP conveying guide.	
2	Cleaning the contact glass	The contact glass or the shading plate at the backside of the contact glass is dirty.	Clean the contact glass and the shading plate at the backside of the contact glass.	
3	Cleaning the scanner carriage	Dust adheres on the scanner carriage.	Clean the scanner carriage.	
4	Replacing the original	The original is dirty.	Replace the original.	
5	Changing the settings	Actual original size and detected original size are mismatched.	Set the original paper size.	
6	Cleaning the platen cover	The original cover is dirty.	Clean the original cover.	
7	Executing U067	The center line settings are incorrect. (The streaks or bands appear out of the original image.)	Adjust the value at U071 [Front].	
8	Executing U411	The leading edge timing is incorrect. (Streaks or bands appear out of the original.)	Execute U411 [Table (Chart A)].	
9	Executing U068	The starting position for scanning an original on the DP is incorrect.	Adjust the value at U068 [DP Read].	

Step	Check description	Assumed cause	Measures	Reference
10	Executing U072	The center line settings are incorrect. (The streaks or bands appear out of the original image.)	Adjust the value at U072 [Front].	
11	Executing U411	The leading edge timing is incorrect. (Streaks or bands appear out of the original.)	Execute U411 [DP FU (Chart B)].	
12	Checking the connection	FFC is not properly connected, or it is faulty.	Reconnect the following FFC. When the FFC terminals are peeled off, deformed or the FFC is broken, replace the FFC. • CCD PWB - Main PWB	
13	Replacing the scanner carriage	The CCD PWB is faulty.	Replace the scanner carriage and execute U411.	
14	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

**(2-6) Vertical streaks or bands (white)**

Step	Check description	Assumed cause	Measures	Reference
1	Replacing the original	The original is dirty.	Replace the original.	
2	Checking the scanner carriage	Dust adheres on the scanner carriage.	Remove dust in the laser path of the scanner carriage.	
3	Cleaning the slit glass and the DP original conveying guide	The slit glass is dirty.	Clean the slit glass and the DP conveying guide.	
4	Checking the connection	FFC is not properly connected, or it is faulty.	Reconnect the following FFC. When the FFC terminals are peeled off, deformed or the FFC is broken, replace the FFC. • CCD PWB - Main PWB	
5	Replacing the scanner carriage	The CCD PWB is faulty.	Replace the scanner carriage and execute U411.	
6	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

**(2-7) 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	Reattaching the slit glass	The slit glass is not properly attached.	Reattach the slit glass.	
3	Executing U068	The starting position for scanning an original on the DP is incorrect.	Adjust the value 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.	Reconnect the following FFC. When the FFC terminals are peeled off, deformed or the FFC is broken, replace the FFC. • CCD PWB - Main 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.	

Step	Check description	Assumed cause	Measures	Reference
9	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

**(2-8) 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 (slit glass)	The slit glass has condensation.	Remove condensation on the slit glass.	
3	Removing condensation (scanner carriage)	The lens has condensation.	Remove condensation on the lens of the scanner carriage.	
4	Executing U411	Each auto adjustment of the scanner is incorrect.	Execute U411 [Table (Chart A)].	
5	Checking the main 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 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 PWB.	
6	Checking the 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 engine PWB, reconnect the connector of the wire, and reconnect the FFC terminal. If the wire or the FFC is faulty, repair or replace it. If not resolved, replace the engine PWB.	

**(2-9) Part of the image is not copied**

Step	Check description	Assumed cause	Measures	Reference
1	Reloading the original	The original is not set properly.	Reset the originals.	
2	Changing the settings	The original size and the paper side do not match on the operation panel. (The setting is incorrect.)	Set the original size manually.	
3	Cleaning the slit glass	The slit glass is dirty.	Clean the slit glass.	
4	Reattaching the slit glass	The slit glass is not properly attached.	Reattach the slit glass.	
5	Checking the connection	FFC is not properly connected, or it is faulty.	Reconnect the following FFC. When the FFC terminals are peeled off, deformed or the FFC is broken, replace the FFC. • CCD PWB - Main PWB	
6	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

**(2-10) The entire image is light**

Step	Check description	Assumed cause	Measures	Reference
1	Executing U068	The starting position for scanning an original on the DP is incorrect.	Adjust the value at U068 [DP Read].	
2	Cleaning the slit glass and the DP original conveying guide	The slit glass is dirty.	Clean the slit glass and the DP conveying guide.	
3	Reattaching the slit glass	The slit glass is not properly attached.	Reattach the slit glass.	

Step	Check description	Assumed cause	Measures	Reference
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.	
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 FU(ChartA)].	
11	Checking the connection	FFC is not properly connected, or it is faulty.	Reconnect the following FFC. When the FFC terminals are peeled off, deformed or the FFC is broken, replace the FFC. • CCD PWB - Main PWB	
12	Replacing the scanner carriage	The LED PWB or CCD PWB is faulty.	Replace the scanner carriage and execute U411.	
13	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

## (2-11) Mismatch of the center line between the original and copy image

(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	The center line when scanning the front page of the originals at the document processor is not adjusted.	Adjust the value at U072 [Front].	
3	Executing U411	The auto scanner adjustment when DP scanning is not executed.	Execute U411 [DP FU (Chart B)].	

(When scanning the back 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	The center line when scanning the back page of the originals at the document processor is not adjusted.	Adjust the value at U072 [Back].	
3	Executing U411	The auto scanner adjustment when DP scanning is not executed.	Execute U411 [DP FD (Chart B)].	

## (2-12) Regular mismatch of the leading edge between the original and copy image

(When scanning the front side through the DP)

Step	Check description	Assumed cause	Measures	Reference
1	Executing U071	The timing of scanning the original leading edge at the document processor is not properly set.	Adjust the value at U071 [Front Head].	
2	Executing U411	The starting position for scanning an original on the DP is incorrect.	Execute U411 [DP FU(ChartB)].	
3	Cleaning the DP conveying roller	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 applied to the drive gear.	Apply the grease to the DP drive gears.	
6	Checking the DP conveying motor	DP conveying motor is not properly attached. The connector is not properly connected or the DP conveying motor is faulty.	Reattach the DP conveying motor and reconnect the connector. Execute U243 [Conv Motor(CW)]. If it does not operate correctly, replace it.	

(When scanning the back side through the DP)

Step	Check description	Assumed cause	Measures	Reference
1	Executing U071	The timing of scanning the leading edge on the back page of the originals at the document processor is not properly set.	Adjust the value at U071 [Back Head].	
2	Executing U411	The starting position for scanning an original on the DP is incorrect.	Execute U411 [DP FD (Chart B)].	
3	Cleaning the DP conveying roller	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 applied to the drive gear.	Apply the grease to the DP drive gears.	
6	Checking the DP conveying motor	DP conveying motor is not properly attached. The connector is not properly connected or the DP conveying motor is faulty.	Reattach the DP conveying motor and reconnect the connector. Execute U243 [Conv Motor (CW)]. If it does not operate correctly, replace it.	

## (2-13) Skewed image

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	Resetting the DP original width guides	The original skews.	Relocate the original width guides.	

Step	Check description	Assumed cause	Measures	Reference
3	Cleaning the DP feed roller	The DP feed roller is dirty. (It can be removed by cleaning.)	Clean the DP feed roller.	
4	Executing U942	The original loop amount before registration is improper.	Adjust the original loop amount at U942.	
5	Replacing the DP feed roller	The DP feed roller is dirty. (It cannot be removed by cleaning.)	Replace the DP feed roller.	
6	Cleaning the DP registration roller	The DP registration roller is dirty.	Clean the DP registration roller.	
7	Reattaching the DP registration pulley	The operation of the DP registration pulley is faulty.	Reattach the DP registration pulley.	

**(2-14) Blurred characters**

Step	Check description	Assumed cause	Measures	Reference
1	Checking the original	The originals out of specification are used. (They are thick, thin, or smooth.)	Explain users to use the original within the specifications.	
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	The original conveying pulley does not rotate smoothly.	Reattach the DP conveying pulleys and the pressure springs.	
5	Reattaching the DP drive parts	The DP drive parts are not properly attached.	Reattach the DP 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 on the main unit.	Check the positioning of the document processor and tighten the screws again.	

**(2-15) Color shift**

Step	Check description	Assumed cause	Measures	Reference
1	Checking the original	The originals out of specification are used. (They are thick, thin, or smooth.)	Explain users to use the original within the specifications.	
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	The DP conveying roller or the bushing is dirty.	Clean the DP conveying roller and the bushing.	
4	Reattaching the DP conveying pulley	The original conveying pulley does not rotate smoothly.	Reattach the DP conveying pulley and the pressure spring.	
5	Reattaching the DP drive parts	The DP drive parts are not properly attached.	Reattach the DP 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 on the main unit.	Check the positioning of the document processor and tighten the screws again.	

Step	Check description	Assumed cause	Measures	Reference
8	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.	

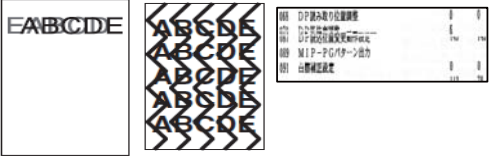


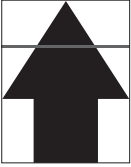
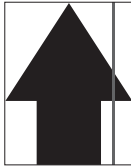



**(2-16) Moire**

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] in [System Menu/Counter] key > [Common Settings] > [Function Defaults].	
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.	





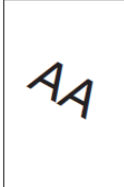
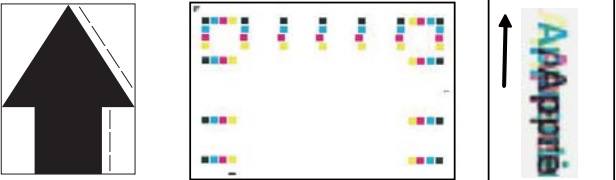
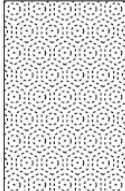

**(2-17) A part of the image is dark or light**

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.	

**(3) Scanner Factors (when scanning on the contact glass)**

No.	Contents	Image sample
(3-1)	<a href="#">Abnormal image(7-14Page)</a>	
(3-2)	<a href="#">Background is colored(7-14Page)</a>	
(3-3)	<a href="#">Black dots or color dots(7-14Page)</a>	
(3-4)	<a href="#">Horizontal black streaks(7-15Page)</a>	
(3-5)	<a href="#">Vertical streaks or bands (black, color)(7-15Page)</a>	
(3-6)	<a href="#">Vertical streaks or bands (white)(7-16Page)</a>	
(3-7)	<a href="#">Entire blank image (white or black)(7-16Page)</a>	
(3-8)	<a href="#">Image is blurred(7-16Page)</a>	



No.	Contents	Image sample
(3-9)	<a href="#">Part of the image is not copied(7-17Page)</a>	
(3-10)	<a href="#">The entire image is light(7-17Page)</a>	
(3-11)	<a href="#">Mismatch of the center line between the original and copy image(7-18Page)</a>	
(3-12)	<a href="#">Regular mismatch of the leading edge between the original and copy image(7-18Page)</a>	
(3-13)	<a href="#">Skewed image(7-19Page)</a>	
(3-14)	<a href="#">Blurred characters / Color Shift(7-19Page)</a>	
(3-15)	<a href="#">Moire(7-19Page)</a>	
(3-16)	<a href="#">A part of the image is dark or light(7-19Page)</a>	

Content of Scanner Factors (when scanning on the contact glass)

**(3-1) Abnormal image**

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	FFC is not properly connected, or it is faulty.	Reconnect the following FFC. When the FFC terminals are peeled off, deformed or the FFC is broken, replace the FFC. • CCD PWB - Main PWB	
2	Replacing the scanner carriage	The CCD PWB is faulty.	Replace the scanner carriage and execute U411.	
3	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

**(3-2) Background is colored**

Step	Check description	Assumed cause	Measures	Reference
1	Changing the settings	The Background Density Adjustment is not set.	Set [Background Adjustment] to [Auto].	
2	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.	
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 (Chart A)].	
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.	Reconnect the following FFC. When the FFC terminals are peeled off, deformed or the FFC is broken, replace the FFC. • CCD PWB - Main PWB	
8	Replacing the scanner carriage	The CCD PWB is faulty.	Replace the scanner carriage and execute U411.	
9	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

**(3-3) 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.	Reconnect the following FFC. When the FFC terminals are peeled off, deformed or the FFC is broken, replace the FFC. • CCD PWB - Main PWB	
4	Replacing the scanner carriage	The CCD PWB is faulty.	Replace the scanner carriage and execute U411.	
5	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

### (3-4) 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. (The adjustment value of [Front] at U066 is incorrect.)	Adjust the value at U071 [Front].	
4	Executing U411	The image at the backside of the size indication plate is scanned. (The adjustment value of [Table(ChartA)] at U411 is incorrect.)	Execute U411 [Table (Chart A)].	
5	Checking the connection	FFC is not properly connected, or it is faulty.	Reconnect the following FFC. When the FFC terminals are peeled off, deformed or the FFC is broken, replace the FFC. • CCD PWB - Main PWB	
6	Replacing the scanner carriage	The CCD PWB is faulty.	Replace the scanner carriage and execute U411.	
7	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

### (3-5) 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 value at U071 [Front].	
5	Executing U411	The leading edge timing is incorrect. (Streaks or bands appear out of the original.)	Execute U411 [Table (Chart A)].	
6	Cleaning the contact glass	The contact glass or the shading plate at the backside of the contact glass is dirty.	Clean the contact glass and the shading plate at the backside of the contact glass.	
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.	Reconnect the following FFC. When the FFC terminals are peeled off, deformed or the FFC is broken, replace the FFC. • CCD PWB - Main PWB	
9	Replacing the scanner carriage	The CCD PWB is faulty.	Replace the scanner carriage and execute U411.	
10	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

**(3-6) Vertical streaks or bands (white)**

Step	Check description	Assumed cause	Measures	Reference
1	Replacing the original	The original is dirty.	Replace the original.	
2	Checking the scanner carriage	Dust adheres in the scanner carriage light path.	Remove dust in the laser path of the scanner carriage.	
3	Cleaning the scanner carriage	Dust adheres on the scanner carriage.	Clean the scanner carriage.	
4	Checking the shading plate	The shading plate at the backside of the contact glass is dirty.	Execute U063 to change the scanner shading position.	
5	Checking the connection	FFC is not properly connected, or it is faulty.	Reconnect the following FFC. When the FFC terminals are peeled off, deformed or the FFC is broken, replace the FFC. • CCD PWB - Main PWB	
6	Replacing the scanner carriage	The CCD PWB is faulty.	Replace the scanner carriage and execute U411.	
7	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

**(3-7) 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.	Reconnect the following FFC. When the FFC terminals are peeled off, deformed or the FFC is broken, replace the FFC. • CCD PWB - Main 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	Checking the connection	FFC is not properly connected, or it is faulty.	Reconnect the following FFC. When the FFC terminals are peeled off, deformed or the FFC is broken, replace the FFC. • CCD PWB - Main PWB	
7	Replacing the scanner carriage	The CCD PWB is faulty.	Replace the scanner carriage and execute U411.	
8	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

**(3-8) 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 (scanner carriage)	The scanner carriage has condensation.	Remove condensation on the scanner carriage.	
4	Executing U411	Each auto adjustment of the scanner is incorrect.	Execute U411 [Table (Chart A)].	

Step	Check description	Assumed cause	Measures	Reference
5	Checking the connection	FFC is not properly connected, or it is faulty.	Reconnect the following FFC. When the FFC terminals are peeled off, deformed or the FFC is broken, replace the FFC. • CCD PWB - Main PWB	
6	Replacing the scanner carriage	The CCD PWB is faulty.	Replace the scanner carriage and execute U411.	
7	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

**(3-9) 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	Checking the original	A part of the original is not printed out where the light is reflected.	Remove the part reflecting the light from the original, and copy it.	
3	Reloading the original	The original is not set properly.	Reset the originals.	
4	Changing the settings	The original size and the paper side do not match on the operation panel. (The setting is incorrect.)	Set the original size manually.	
5	Changing the settings	The Border Erase function is not properly set. (Setting value is too large.)	Lower the setting of the Border Erase.	
6	Cleaning the contact glass	The original scanning side of the contact glass is dirty.	Clean the original scanning side of the contact glass.	
7	Cleaning the shading plate	The shading plate is dirty.	Clean the shading plate at the backside of the contact glass.	
8	Reattaching the contact glass	The contact glass is not properly attached.	Reattach the contact glass.	
9	Checking the connection	FFC is not properly connected, or it is faulty.	Reconnect the following FFC. When the FFC terminals are peeled off, deformed or the FFC is broken, replace the FFC. • CCD PWB - Main PWB	
10	Checking the scanner carriage	The scanner carriage is not properly attached or the CCD PWB is faulty.	Reattach the scanner carriage. If not repaired, replace it and execute U411.	
11	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

**(3-10) 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. ([Eco Print] is set to 'On'.)	Change [Eco Print] 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.	

Step	Check description	Assumed cause	Measures	Reference
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 (Chart A)].	
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.	Reconnect the following FFC. When the FFC terminals are peeled off, deformed or the FFC is broken, replace the FFC. • CCD PWB - Main PWB	
10	Replacing the scanner carriage	The LED lamp or the CCD PWB is faulty.	Replace the scanner carriage and execute U411.	
11	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

**(3-11) 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 value at U071 [Front].	
4	Executing U411	The automatic table scanning adjustment is not executed.	Execute U411 [Table (Chart A)].	

**(3-12) 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 properly placed. (The original leading edge is not aligned to the contact glass properly.)	Reset the originals.	
2	Executing U066	The scanner leading edge timing is incorrect.	Adjust the value at U066 [Front].	
3	Executing U411	The scanner leading edge timing is incorrect.	Execute U411 [Table (Chart A)].	
4	Reattaching the home position sensor	The home position sensor is not properly attached.	Reattach the home position sensor.	
5	Reattaching the scanner drive belt	The scanner drive belt is loose.	Reattach the scanner drive belt.	
6	Reattaching the scanner drive gear	The attachment of the scanner drive gear is loose.	Re-tighten the screw of the scanner drive gear.	

### (3-13) 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.	

### (3-14) Blurred characters / Color Shift

Step	Check description	Assumed cause	Measures	Reference
1	Removing foreign material	There is a load on the scanner movement since the foreign material adheres on the ISU shaft.	Remove foreign material on the ISU shaft.	
2	Reattaching the scanner carriage	There is a load on the scanner movement since the scanner carriage is not properly attached.	Reattach the scanner carriage.	
3	Adjusting the scanner motor belt tension.	A load is applied to the scanner movement since the belt tension is improper.	Adjust the scanner motor belt tension properly.	

### (3-15) 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] in [System Menu/Counter] key > [Common Settings] > [Function Defaults].	
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 U065	The ratio in the main scanning direction is large. (This problem occurs when the print ratio is set as 100%.)	Change the value at U065 [Main Scan] to reduce the scanner magnification in the main scanning direction.	
4	Executing U411	Each adjustment of the scanner section is incorrect.	Execute U411 [Table (Chart A)].	




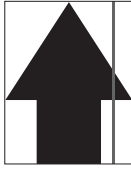




### (3-16) A part of the image is dark or light




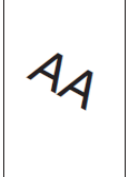


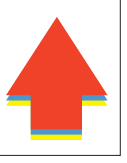

Step	Check description	Assumed cause	Measures	Reference
1	Changing the settings	Image quality is not properly adjusted. (Original type and image quality are mismatched.)	Set [Original Image] in [System Menu/Counter] key > [Common Settings] > [Function Defaults].	
2	Replacing the original	The original 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 original mat	The original mat shifts.	Reattach the original mat.	
5	Cleaning the contact glass	The contact glass is dirty.	Clean the contact glass.	
6	Reloading the booklet original	The contact glass is not properly attached.	Reattach the contact glass.	
7	Reloading the booklet original	Original is scanned on the bent contact glass.	Set the booklet original while not bending the contact glass.	


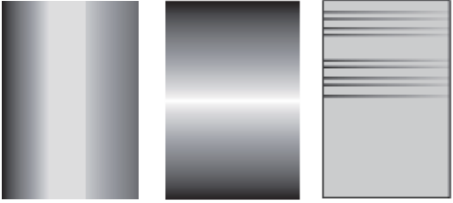



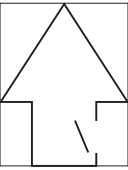
Step	Check description	Assumed cause	Measures	Reference
8	Checking the connection	FFC is not properly connected, or it is faulty.	Reconnect the following FFC. When the FFC terminals are peeled off, deformed or the FFC is broken, replace the FFC. • CCD PWB - Main PWB	
9	Replacing the scanner carriage	A part of the LED lamps dot not light, the scanner carriage ISU shaft contact part is deformed or the CCD PWB is faulty.	Replace the scanner carriage and execute U411.	
10	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	



**(4) Engine Factors (Paper conveying cause: Transfer, Fuser and Separation)**

No.	Contents	Image sample
(4-1)	Background is colored <a href="#">Background is colored(7-23Page)</a>	
(4-2)	Black dots or color dots <a href="#">Black dots or color dots(7-24Page)</a>	
(4-3)	Horizontal streaks or band (White, black, color) <a href="#">Horizontal streaks or band (White, black, color)(7-24Page)</a>	
(4-4)	Vertical streaks or bands (black, color) <a href="#">Vertical streaks or bands (black, color)(7-24Page)</a>	
(4-5)	Vertical streaks or bands (white) <a href="#">Vertical streaks or bands (white)(7-25Page)</a>	
(4-6)	Entire blank image (white) <a href="#">Entire blank image (white)(7-25Page)</a>	
(4-7)	Image is blurred <a href="#">Image is blurred(7-25Page)</a>	
(4-8)	The image is not partly printed (blank or white spots) <a href="#">The image is not partly printed (blank or white spots)(7-26Page)</a>	

No.	Contents	Image sample
(4-9)	The entire image is light <a href="#">The entire image is light(7-26Page)</a>	
(4-10)	Mismatch of the center line between the original and copy image <a href="#">Mismatch of the center line between the original and copy image(7-26Page)</a>	
(4-11)	Irregular mismatch between the original and copy image (paper leading edge timing variation) <a href="#">Irregular mismatch between the original and copy image (paper leading edge timing variation)(7-27Page)</a>	
(4-12)	Skewed image <a href="#">Skewed image(7-27Page)</a>	
(4-13)	Blurred characters <a href="#">Blurred characters(7-27Page)</a>	
(4-14)	Color shift in the main scanning direction <a href="#">Color shift in the main scanning direction(7-28Page)</a>	
(4-15)	Color shift in the sub scanning direction <a href="#">Color shift in the sub scanning direction(7-28Page)</a>	
(4-16)	Offset image <a href="#">Offset image(7-28Page)</a>	

No.	Contents	Image sample
(4-17)	Color reproduction is poor <a href="#">Color reproduction is poor(7-29Page)</a>	
(4-18)	Uneven transfer <a href="#">Uneven transfer(7-29Page)</a>	
(4-19)	Paper creases <a href="#">Paper creases(7-29Page)</a>	
(4-20)	Dirt with toner on the paper edge <a href="#">Dirt with toner on the paper edge(7-30Page)</a>	
(4-21)	Dirty reverse side <a href="#">Dirty reverse side(7-30Page)</a>	
(4-22)	Fusing failure <a href="#">Fusing failure(7-30Page)</a>	

Content of Engine Factors (Paper conveying cause: Transfer, Fuser and Separation)

**(4-1) 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	Checking the primary transfer bias contact	The primary transfer bias contact is deformed.	Correct the primary transfer bias contact so that it grounds securely.	
3	Checking 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.	

Step	Check description	Assumed cause	Measures	Reference
4	Checking the secondary transfer unit	The secondary transfer roller is dirty.	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.	

**(4-2) 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 has some scratches.	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	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.	

**(4-3) 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	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.	
3	Opening and reclosing the right cover	Only one side of the right cover (conveying unit) is closed, or the pressure spring is deformed.	Open and close the right cover (conveying unit).	
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.	

**(4-4) 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 claws.	
2	Changing the settings	The media type is not properly set.	Set the proper media type at [System Menu] > [Common Settings] > [Original/Paper Settings] > [Media Type].	
3	Cleaning the feed-shift guide	There is toner dirt or welding on the feed-shift guide.	Clean the feed-shift guide.	

Step	Check description	Assumed cause	Measures	Reference
4	Checking the separation 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	Surface of the transfer belt 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, is deformed or is worn down.	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.	
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.	

#### (4-5) Vertical streaks or bands (white)

Step	Check description	Assumed cause	Measures	Reference
1	Checking the primary transfer unit	Surface of the transfer belt 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 has some scratches.	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.	Check the paper loop amount when outputting the paper and reattach the feed-shift guide.	

#### (4-6) Entire blank image (white)

Step	Check description	Assumed cause	Measures	Reference
1	Opening and reclosing the right cover	The right cover (conveying unit) is not closed completely.	Check the lock of the right cover (conveying unit), and then open and close the right cover.	
2	Replacing the engine PWB	The ON signal of the secondary transfer high-voltage (3.3V to 0V) is not output from the engine PWB.	Replace the engine PWB.	

#### (4-7) Image is blurred

Step	Check description	Assumed cause	Measures	Reference
1	Replacing the paper	The paper is damp.	Replace with the dry paper.	
2	Checking the paper storage place	Paper is stored in the high humidity environment.	Install the cassette heater and set U327 to [On] if necessary. Ask users to store paper in a dry place.	

**(4-8) The image is not partly printed (blank or white spots)**

Step	Check description	Assumed cause	Measures	Reference
1	Checking the paper	The paper is damp.	Replace with the dry paper.	
2	Checking the paper storage place	The paper is stored in the high humidity environment.	Install the cassette heater and set U327 to [On] if necessary. Ask users to store paper in a dry place.	
3	Changing the settings	The media type is not properly set.	Set the proper media type at [System Menu] > [Common Settings] > [Original/Paper Settings] > [Media Type].	
4	Executing U161	The fuser temperature is shifted largely.	Reset the fuser temperature to the default value by executing U161.	
5	Checking the primary transfer unit	Surface of the transfer belt 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 has some scratches.	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.	

**(4-9) The entire image is light**

Step	Check description	Assumed cause	Measures	Reference
1	Checking the paper	The paper is damp.	Replace with the dry paper.	
2	Checking the paper storage place	Paper is stored in the high humidity environment.	Install the cassette heater and set U327 to [On] if necessary. Ask users to store paper in a dry place.	
3	Opening and reclosing the right cover	The transfer current cannot be impressed since the right cover (conveying unit) is not closed completely.	Open and close the right cover (conveying unit).	
4	Checking the secondary transfer unit	The secondary transfer roller does not contact the transfer belt or the contact is not enough.	When the secondary transfer roller shifts, correct the pressure position.	
5	Checking the secondary transfer bias contact	The secondary transfer bias cannot be impressed since the secondary transfer bias contact is dirty or deformed.	Clean the secondary transfer bias contact. Or, correct its shape so that it is grounded securely.	

**(4-10) 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].	

**(4-11) Irregular mismatch between the original and copy image (paper leading edge timing variation)**

Step	Check description	Assumed cause	Measures	Reference
1	Executing U034	The leading edge timing is not properly adjusted.	Adjust the leading edge timing by executing U034 [LSU Out Top]. Adjust it at 'Full' (for full-speed), '3/4' (for 3/4-speed) or 'Half' (for half-speed).	
2	Executing U051	The paper loop amount before registration is improper.	Execute U051 to adjust the paper loop amount before registration.	
3	Checking the connection	The feed conveying clutch connectors are not properly connected and they do not operate smoothly.	Reconnect the connectors of feed/conveying clutches.	
4	Reattaching the conveying	The feed conveying clutches are not properly connected and they do not operate smoothly.	Reattach the feed/conveying clutches.	
5	Replacing the feed drive unit	The feed/conveying clutches are faulty and smooth operation is not available.	Replace feed drive unit.	

**(4-12) Skewed 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	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	Executing U051	The paper loop amount before the secondary paper feeding is insufficient.	Execute U051 to adjust the paper loop amount before registration.	
4	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.	

**(4-13) Blurred characters**

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.	Set the proper media type at [System Menu] > [Common Settings] > [Original/Paper Settings] > [Media Type].	
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 forwarding guide is deformed or the fuser pressure is uneven.	Replace the fuser unit.	

**(4-14) 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 shutter and cleaning the ID sensor.	The ID sensor is dirty or the ID sensor shutter is not opened.	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.	

**(4-15) 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 shutter and cleaning the ID sensor.	The ID sensor is dirty or the ID sensor shutter is not opened.	Check the opening / closing operation of the ID sensor shutter and fix it if necessary. And, clean the ID sensor.	
3	Replacing 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 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 engine PWB, reconnect the connector of the wire, and reconnect the FFC terminal. If the wire or the FFC is faulty, repair or replace it. If not resolved, replace the engine PWB.	

**(4-16) Offset image**

Step	Check description	Assumed cause	Measures	Reference
1	Replacing paper and changing setting	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	Executing U161	The higher fuser temperature is set.	Reset the fuser temperature to the default value by executing U161.	
6	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.	
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 fuser unit	The fuser heat roller surface is scratched.	Replace the fuser unit.	



### (4-17) Color reproduction is poor

Step	Check description	Assumed cause	Measures	Reference
1	Replacing the paper	The paper is damp.	Replace with the dry paper.	
2	Checking the paper storage place	Paper is stored in the high humidity environment.	Install the cassette heater and set U327 to [On] if necessary. Ask users to store paper in a dry place.	
3	Replacing the paper	Rough paper for monochrome print is used.	Use the color paper with smooth surface that fits for color print.	
4	Executing U140	Installation environment is high altitude.	Execute [Altitude Adjustment] at U140, and select the most proper mode.	

### (4-18) Uneven transfer

Step	Check description	Assumed cause	Measures	Reference
1	Opening and reclosing the right cover	The right cover (conveying unit) is not closed completely.	Open and close the right cover (conveying unit).	
2	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.	
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	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 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.	

### (4-19) 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.	Install the cassette heater and set U327 to [On] if necessary. Ask users to store paper in a dry place.	
4	Reattaching 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 pressure springs at both sides of the registration roller.	

Step	Check description	Assumed cause	Measures	Reference
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.	

**(4-20) Dirt with toner on the paper edge**

Step	Check description	Assumed cause	Measures	Reference
1	Cleaning the machine inside	The conveying guide is dirty with toner.	Clean the conveying guide, developer unit and the developer duct.	




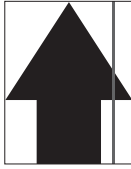




**(4-21) Dirty reverse side**


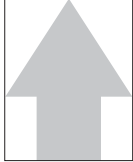
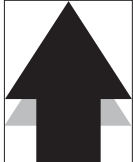
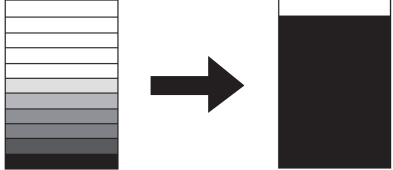

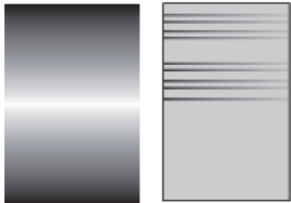
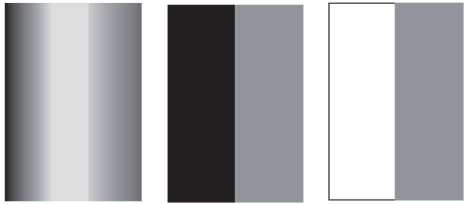
Step	Check description	Assumed cause	Measures	Reference
1	Checking the secondary transfer unit	The secondary transfer roller is dirty or has some scratches.	When the image failures appear in the secondary transfer roller diameter interval, clean the secondary transfer roller. If it is not resolved, replace the secondary transfer unit.	
2	Cleaning the fuser press roller and changing setting	The fuser pressure roller is dirty caused by the paper type setting.	Clean the fuser press roller. Set the proper media type at [System Menu] > [Common Settings] > [Original/Paper Settings] > [Media Type].	
3	Cleaning the machine inside	The conveying guide or developer unit is dirty.	Clean the conveying guide and developer unit.	

**(4-22) 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.	Set the proper media type at [System Menu] > [Common Settings] > [Original/Paper Settings] > [Media Type].	
3	Executing U161	The lower fuser temperature is set.	Reset the fuser temperature to the default value by executing U161.	
4	Firmware upgrade	The firmware is not the latest version.	Upgrade the firmware to the latest version.	
5	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) Engine Factors (Image forming cause)**

No.	Contents	Image sample
(5-1)	Background is colored <a href="#">Background is colored(7-33Page)</a>	
(5-2)	Black dots <a href="#">Black dots(7-33Page)</a>	
(5-3)	Horizontal streaks or band (White, black, color) <a href="#">Horizontal streaks or band (White, black, color)(7-34Page)</a>	
(5-4)	Entire blank image (black) <a href="#">Entire blank image (black)(7-34Page)</a>	
(5-5)	Vertical streaks or bands (white) <a href="#">Vertical streaks or bands (white)(7-35Page)</a>	
(5-6)	Vertical streaks and bands (black) <a href="#">Vertical streaks and bands (black)(7-35Page)</a>	
(5-7)	Entire blank image (white) <a href="#">Entire blank image (white)(7-35Page)</a>	
(5-8)	Image is blurred <a href="#">Image is blurred(7-36Page)</a>	

No.	Contents	Image sample
(5-9)	Part of the image is not copied <a href="#">Part of the image is not copied(7-36Page)</a>	
(5-10)	The entire image is light <a href="#">The entire image is light(7-36Page)</a>	
(5-11)	Offset image <a href="#">Offset image(7-37Page)</a>	
(5-12)	Color reproduction is poor <a href="#">Color reproduction is poor(7-37Page)</a>	
(5-13)	Poor grayscale reproduction <a href="#">Poor grayscale reproduction(7-38Page)</a>	
(5-14)	Irregular horizontal streaks and dots (white) <a href="#">Irregular horizontal streaks and dots (white)(7-38Page)</a>	
(5-15)	Horizontal uneven density <a href="#">Horizontal uneven density(7-38Page)</a>	
(5-16)	Vertical uneven density <a href="#">Vertical uneven density(7-39Page)</a>	

Content of Engine Factors (Image forming cause)

**(5-1) Background is colored**

Step	Check description	Assumed cause	Measures	Reference
1	Performing the items to improve the image quality	Uncharged toner increases due to the continuous high coverage printing in the high temperature environment. Or the developer bias in controlled at the higher level since the calibration was executed when the density was too light.	1. Execute [System Menu/Counter] key > [Adjustment/Maintenance] > [Service Settings] > [DEV-CLN]. 2. Execute [Calibration] at [Adjustment/Maintenance]. 3. Execute [System Menu/Counter] key > [Adjustment/Maintenance] > [Grayscale Adjustment].	
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 toner sensor output value	The toner sensor is faulty.	If the sensor output value is 100 or less at U155, reattach the developer unit. If not repaired, replace it.	
4	Checking the temperature inside the main unit	Temperature is low in the installation environment.	When the internal temperature indicated in U139 is 16°C / 60.8°F or less, request the user to change the installation environment where the room temperature is warmer than 16°C / 60.8°F.	
5	Checking the 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 .	
6	Changing the settings	The setting value of the main high voltage is incorrect.	If the setting values at U100 are not the default values, reset them to the default values.	
7	Checking the main charger unit	The main charger roller surface is dirty.	Clean the main charger roller surface. If it is not fixed, replace the main charger unit.	
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. • High voltage PWB - Engine PWB • Toner motor - Engine PWB	
9	Checking the toner motor	The toner motor is faulty.	Reattach the toner motor. If it is not repaired, replace it.	
10	Replacing the high voltage PWB	The high voltage contact of the high voltage PWB is dirty or deformed.	Replace the high voltage PWB.	
11	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

**(5-2) Black dots**

Step	Check description	Assumed cause	Measures	Reference
1	Checking the drum unit	The drum surface is dirty or has some scratches.	Execute the drum refresh. If not repaired, replace the drum unit.	
2	Replacing the main charger unit	The main charger roller surface is dirty.	Replace the main charger unit.	
3	Executing U140	Developer bias leaks.	Execute [Altitude Adjustment] at U140, and select the most proper mode.	
4	Checking the developer unit	The developer roller or the magnet roller is dirty, or is faulty.	Clean the developer roller. Or, replace the developer unit if not repaired after cleaning.	

**(5-3) Horizontal streaks or band (White, black, color)**

Step	Check description	Assumed cause	Measures	Reference
1	Specifying the faulty color	(Judgment of the abnormal color)	Execute U089 [Color Belt] to output the 4-color PG image, and then specify the fault color. (Go to the next step.)	
2	Checking 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 the developer bias 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	Replacing the main charger unit	The main charger roller surface is dirty or has some scratches.	When the image failure appears in the main charger roller diameter interval, 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 value at [System Menu/Counter] key > [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 certainly. If it is not fixed, replace the primary transfer unit.	
10	Checking the connection	The bias voltage is irregularly generated from the high voltage PWB due to the contact failure.	Reconnect the connector on the high voltage PWB.	
11	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.	

**(5-4) Entire blank image (black)**

Step	Check description	Assumed cause	Measures	Reference
1	Checking the 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 deformed.	Clean the high-voltage contact and correct it so that it grounds securely. Or, reattach the high-voltage PWB.	
5	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. • High voltage PWB - Engine PWB	
6	Replacing the high voltage PWB	The high voltage PWB is faulty.	Replace the high voltage PWB.	

Step	Check description	Assumed cause	Measures	Reference
7	Checking the connection	FFC is not properly connected, or it is faulty.	Reconnect the following FFC. If FFC terminal is deformed or FFC is damaged, replace FFC. • LSU(APC PWB) - Main PWB	
8	Replacing the LSU	APC PWB of LSU is faulty.	Replace the LSU.	
9	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	
10	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

**(5-5) 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.	Replace the developer unit with faulty 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	Checking the drum unit	The drum surface is dirty or has some scratches.	Execute the drum refresh. If not repaired, replace the drum unit.	
5	Checking the main charger unit	The main charger roller surface is dirty or has some scratches.	Clean the main charger roller surface. If it is not fixed, replace the main charger unit.	
6	Cleaning the eraser	The eraser is dirty.	Clean the eraser.	

**(5-6) Vertical streaks and bands (black)**

Step	Check description	Assumed cause	Measures	Reference
1	Executing Drum refresh	The drum surface is dirty.	Execute Drum refresh.	
2	Replacing the drum unit	The drum surface is worn down.	Replace the drum unit.	
3	Cleaning the main charger roller	The main charge roller surface is dirty in the shape of a streak.	Clean the main charge roller surface.	
4	Replacing the main charger unit	The main charge roller surface is deteriorated in the streak shape.	Replace the main charger unit.	
5	Checking the developer unit	Foreign objects are on the developer roller surface.	Clean the developer roller. Or, replace the developer unit if not repaired after cleaning.	

**(5-7) 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	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. • High voltage PWB - Engine PWB • Developer clutch - Engine PWB	

Step	Check description	Assumed cause	Measures	Reference
4	Checking the developer clutch	The developer clutch is not engaged or faulty.	Reattach the developer clutch. If not repaired, replace it.	
5	Replacing the feed drive unit	The drive parts such as drive gear, coupling, etc. are faulty.	Replace feed drive unit.	
6	Replacing the high voltage PWB	The high voltage PWB is faulty.	Replace the high voltage PWB.	
7	Checking the connection	FFC is not properly connected, or it is faulty.	Reconnect the following FFC. If FFC terminal is deformed or FFC is damaged, replace FFC. • LSU(APC PWB) - Main PWB	
8	Replacing the LSU	APC PWB of LSU is faulty.	Replace the LSU.	
9	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	
10	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

**(5-8) 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.	

**(5-9) 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.	

**(5-10) 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 [System Menu/Counter] key > [Adjustment/Maintenance] > [Service Settings] > [DEV-CLN]. Next, execute [Calibration] at [Adjustment/Maintenance] and [Halftone Auto Adjustment] at U410.	
4	Reinstalling the drum unit and developer unit	The drum unit or the developer unit is not properly attached, and so the developer roller does not contact the drum.	Reinstall the drum unit and the developer unit.	
5	Checking the developer bias contact	The developer bias contact is deformed.	Correct the developer bias contact so that it surely grounds.	
6	Cleaning the developer unit	The DS pulleys are dirty.	Clean the DS pulleys at both ends of the developer unit.	



Step	Check description	Assumed cause	Measures	Reference
7	Replacing the developer unit	The DS pulleys are faulty.	Replace the developer unit.	
8	Replacing the developer unit	The toner sensor has a fault and so toner is not supplied.	When 4-color PG image output by [Color Belt] at U089 is too light, check the output value of the toner sensor at U155. If the value is always low, replace the developer unit.	
9	Checking the drum unit	The drum surface has condensation or is worn down.	Execute the drum refresh. If not repaired, replace the drum unit.	
10	Checking the main charger roller contact	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	Replacing the drum unit	The eraser is faulty.	Reinsert the drum unit into the main unit all the way to reconnect the connector. If not resolved, replace the drum unit.	
13	Replacing the high voltage PWB	The high voltage PWB is faulty.	Replace the high voltage PWB.	
14	Checking the connection	FFC is not properly connected, or it is faulty.	Reconnect the following FFC. If FFC terminal is deformed or FFC is damaged, replace FFC. • LSU(APC PWB) - Main PWB	
15	Replacing the LSU	The LSU is dirty or faulty.	Clean the LSU. If not repaired, replace it.	
16	Checking the primary transfer bias contact	The primary transfer bias contact is deformed.	Correct the primary transfer bias contact so that it grounds securely.	
17	Replacing the primary transfer unit	The primary transfer roller is not attached properly or the transfer belt is deteriorated.	Replace the primary transfer unit.	
18	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. • Toner motor - Engine PWB	
19	Checking the toner motor	The toner motor is faulty.	Reattach the toner motor. If not repaired, replace it.	
20	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

**(5-11) Offset image**

Step	Check description	Assumed cause	Measures	Reference
1	Executing Drum refresh	The drum surface is dirty.	Execute Drum refresh.	
2	Replacing the drum unit	The drum surface is worn down or scratched.	Replace the drum unit.	
3	Cleaning the developer unit	The developer roller is dirty.	Clean the developer roller.	
4	Replacing the developer unit	The developer roller surface is worn down or scratched.	Replace the developer unit.	

**(5-12) Color reproduction is poor**

Step	Check description	Assumed cause	Measures	Reference
1	Adjusting the image	The half tone image cannot be reproduced.	Execute [Calibration] at [Adjustment/Maintenance] in the System Menu. Then, execute U410 to perform the automatic halftone adjustment.	

Step	Check description	Assumed cause	Measures	Reference
2	Executing Developer refresh	The developer powder in the developer unit is deteriorated.	Isolate the abnormal color and execute Developer Refresh for that color.	
3	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 or the drum unit that has poor reproduction.	
4	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.	
5	Changing the settings	Printer data is CYMK, but not RGB.	Change [Color conversion processing] of Print quality in KPDL to Image Quality prior mode.	
6	Checking the connection	FFC is not properly connected, or it is faulty.	Reconnect the following FFC. When the FFC terminals are peeled off, deformed or the FFC is broken, replace the FFC. • CCD PWB - Main PWB	
7	Replacing the scanner carriage	The full color cannot be reproduced since the CCD PWB is faulty. (Red images are output.)	Replace the scanner carriage and execute U411.	

### (5-13) 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].	

### (5-14) Irregular horizontal streaks and dots (white)

Step	Check description	Assumed cause	Measures	Reference
1	Checking the installation environment	The settings do not match the installation environment (High altitude exceeding 1,500m above sea-level).	Execute [Altitude Adjustment] at U140, and select the most proper mode.	
2	Checking 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	Checking the paper	Paper with the high surface resistance is used.	Replace with the recommended paper.	

### (5-15) 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 unit.	
2	Replacing the main charger unit	The charger cleaning roller is deformed.	Replace the main charger unit.	
3	Cleaning the developer unit	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.	

Step	Check description	Assumed cause	Measures	Reference
5	Checking the developer bias contact	The conduction is not stabilized due to the dirty developer bias contact.	Clean the developer bias contact.	
6	Checking the developer unit	The developer powder in the developer unit is deteriorated.	Execute the developer refresh. If not repaired, replace the developer unit.	
7	Executing Drum refresh	Toner smudges in the shape of a streak are on both ends of the drum surface.	Execute Drum refresh.	
8	Changing the settings	The electric charge remains on the drum surface due to insufficient discharging.	Lower the main charger output value at [System Menu/Counter] key > [Adjustment/Maintenance] > [Service Settings] > [MC].	
9	Replacing the drum unit	The drum surface is worn down.	Replace the drum unit.	
10	Replacing the LSU	The laser emission is uneven.	Replace the LSU.	
21	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

**(5-16) 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.	Clean the main charger roller surface. If it is not fixed, 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.	

## 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 caused by the conveying guide, paper entry guide or the feed-shift guide
(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 the conveying rollers or the paper feed 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 reclosing the paper conveying unit	The paper conveying unit is not aligned to the other exterior covers.	Check if the right cover (conveying unit) cannot be opened by slightly pulling. Then, open the right cover and reclose completely.	
2	Opening and reclosing the right cover	The right cover is not aligned to the other exterior covers.	Open and close the right cover (conveying unit).	
3	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.	
4	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.	
5	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.	
6	Re-loading paper	The paper is not properly loaded.	Paper set in the high capacity feeder cassette runs over the guide reset the paper so that the paper corner does not run over the bump in 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 the 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.	
2	Fuser temperature setting	The paper curls since the fuser temperature is improper.	Reset the fuser temperature to the default value at U161 when the paper curls.	

**(1-4) Paper jam caused by the conveying guide, paper entry guide or the feed-shift guide**

Step	Check description	Assumed cause	Measures	Reference
1	Checking the paper path	The paper is caught with a piece of paper, etc.	Remove any paper or foreign objects on the paper path and remove the burrs on the parts such as the guide or the actuator.	
2	Checking the guide	The guide is dirty.	If the guide or the separation needles are dirty with toner or paper dust, etc., clean them with a dry cloth or a brush.	
3	Checking the guide	The guide does not properly operate due to the incorrect attachment or a fault.	Check the guide, and remove any burrs. Also, if the guide does not operate smoothly manually, reattach the guide. Then, replace the guide if it is not fixed or if there is deformation or frictional wear.	
4	Checking the solenoid	The solenoid does not operate properly.	Execute U033 and check if the guide can move smoothly by the operation sounds. If the guide does not operate thoroughly or smoothly, reattach the guide. And, replace the solenoid if the issue is not resolved.	

**(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	The locations of the paper width guides do not fit with the paper size.	Relocate the paper width guides or the MP paper width guides along the paper size when the paper skew or the paper creases occur.	
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 the conveying rollers or the paper feed pulleys**

Step	Check description	Assumed cause	Measures	Reference
1	Cleaning the roller	The roller is 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.	

Step	Check description	Assumed cause	Measures	Reference
2	Checking the clutch	The clutch does not operate properly.	Execute U030, U240 (finisher), U243 (document processor) or U247 (paper feeder) to check if the related motor operates correctly. Then, execute U032 or U247 (paper feeder) to check the clutch operation. If the clutch does not operate correctly, go to the next step. (When the motor does not operate correctly, perform the measures for the applicable jam code.)	
3	Checking the clutch	The clutch is not properly attached, is not properly connected, or the foreign objects adhere on the clutch.	Check if the connector is securely connected to the clutch, the clutch is properly attached, and there are no foreign objects on the clutch. Then, perform the proper measures if necessary.	
4	Replacing the clutch	The clutch is faulty.	If the clutch does not operate properly after reattaching and reconnecting, or if the clutch is rusted, replace it. (Use the individual clutch or the unit containing the clutch.)	
5	Checking the bushing	The bushing is dirty.	Clean the roller's shaft or the bushing when the load is applied to the rotation of the conveying rollers due to dirt on them.	
6	Checking 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	The actuator or the returning spring are not attached properly.	Reattach the actuator or the return spring for the sensor if the actuator 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.	
3	Checking the sensor	The sensor is faulty.	Execute U031 (Main Unit/Paper Feeder), U241 (Finisher) or U244 (Document Processor) and check the sensor operation. If not operating normally, reattach the sensor. If not repaired, replace it.	

**(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 4.0mm(+1.5/-0.0mm), and, when there is no check line (fuser jam) on 20mm(+/-1mm) from the paper leading edge of the test pattern that is output at U034, adjust the leading margin by executing [Lead] at U402.	
2	Relocating the 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. (factor of multi feed jam or jam at DF section)	

Step	Check description	Assumed cause	Measures	Reference
3	Checking the settings	The media type is not properly set.	If the media type is not matched to 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/Paper 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	Installing the cassette heater	The paper is damp.	Install the cassette heater and set the cassette heater control to on at U327.	

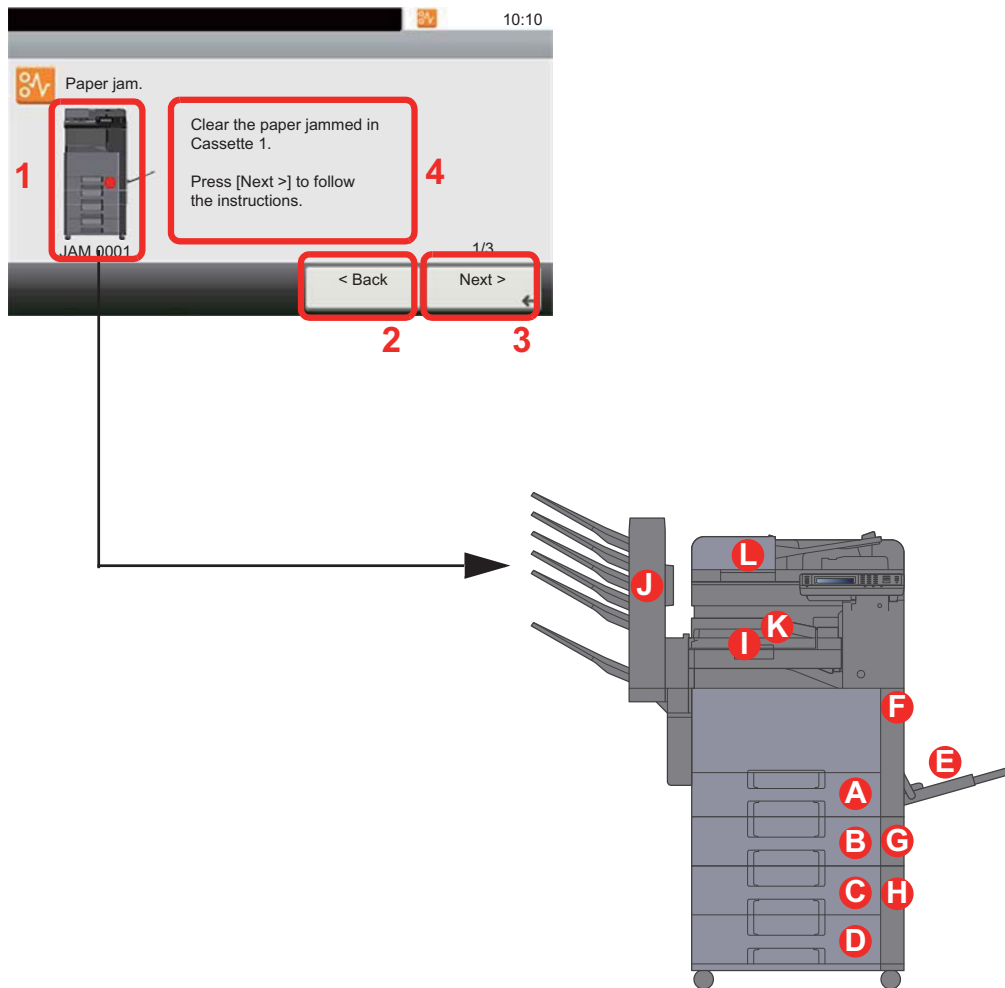
## (2) Paper misfeed detection

### (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 misfeed in the machine, pull out the cassette, open the front cover or paper conveying cover.

The locations are displayed on the operation panel when a paper jam has occurred.

#### Jam location indication



- 1 Shows the location of a paper jam.
- 2 Shows the previous step.
- 3 Shows the next step.
- 4 Shows the removal procedure.

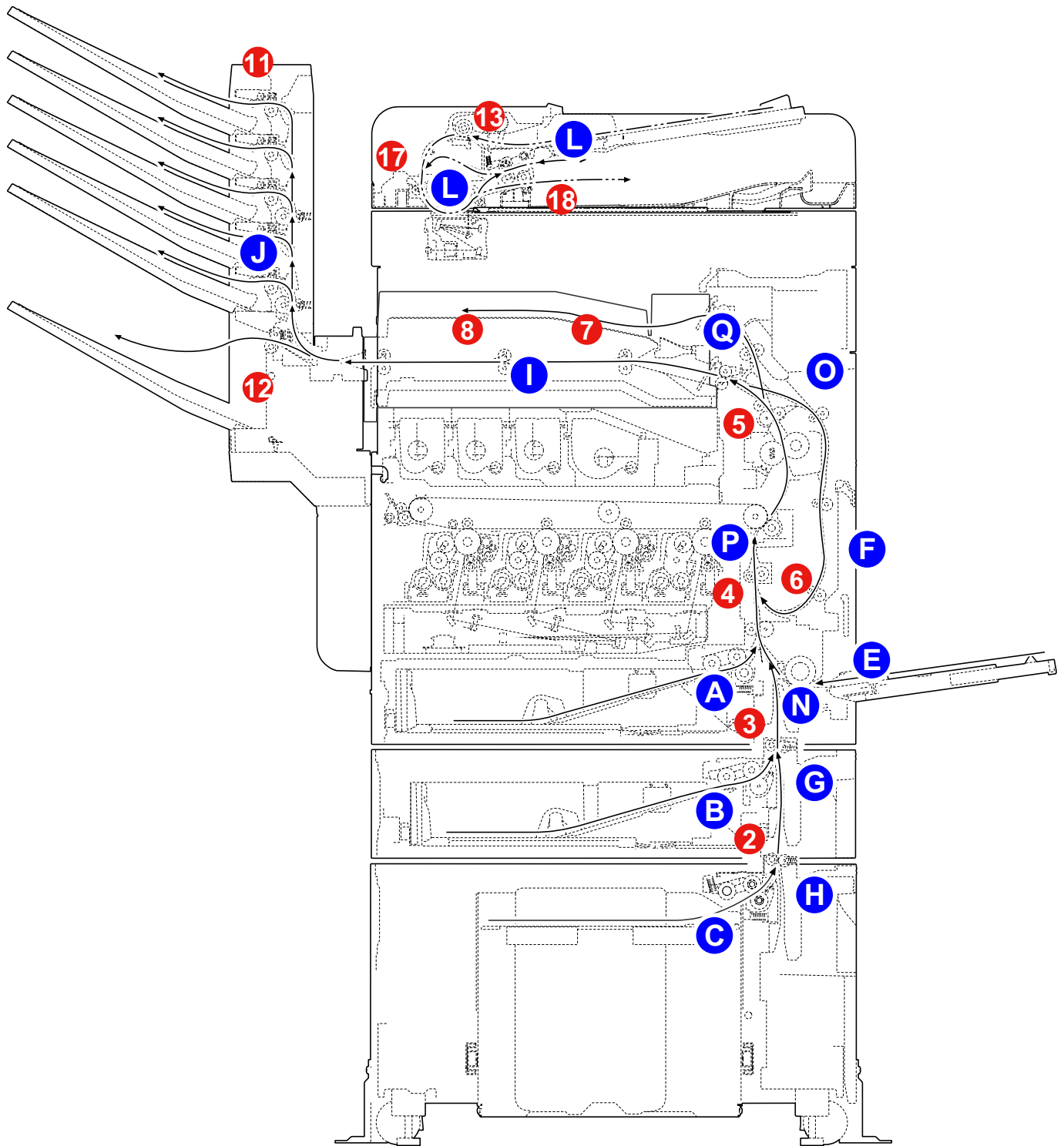
- A. Misfeed in the cassette 1
- B. Misfeed in the 500-sheet×1 cassette 2
- C. Misfeed in the 500-sheet×2 cassette 3
- D. Misfeed in the 500-sheet×2 cassette 4
- E. Misfeed in the MP tray
- F. Misfeed inside the right cover 1
- G. Misfeed inside the right cover 2

- H. Misfeed inside the right cover 3
- I. Misfeed in the bridge conveying section
- J. Misfeed in the mailbox
- K. Misfeed in the inner finisher
- L. Misfeed in the document processor

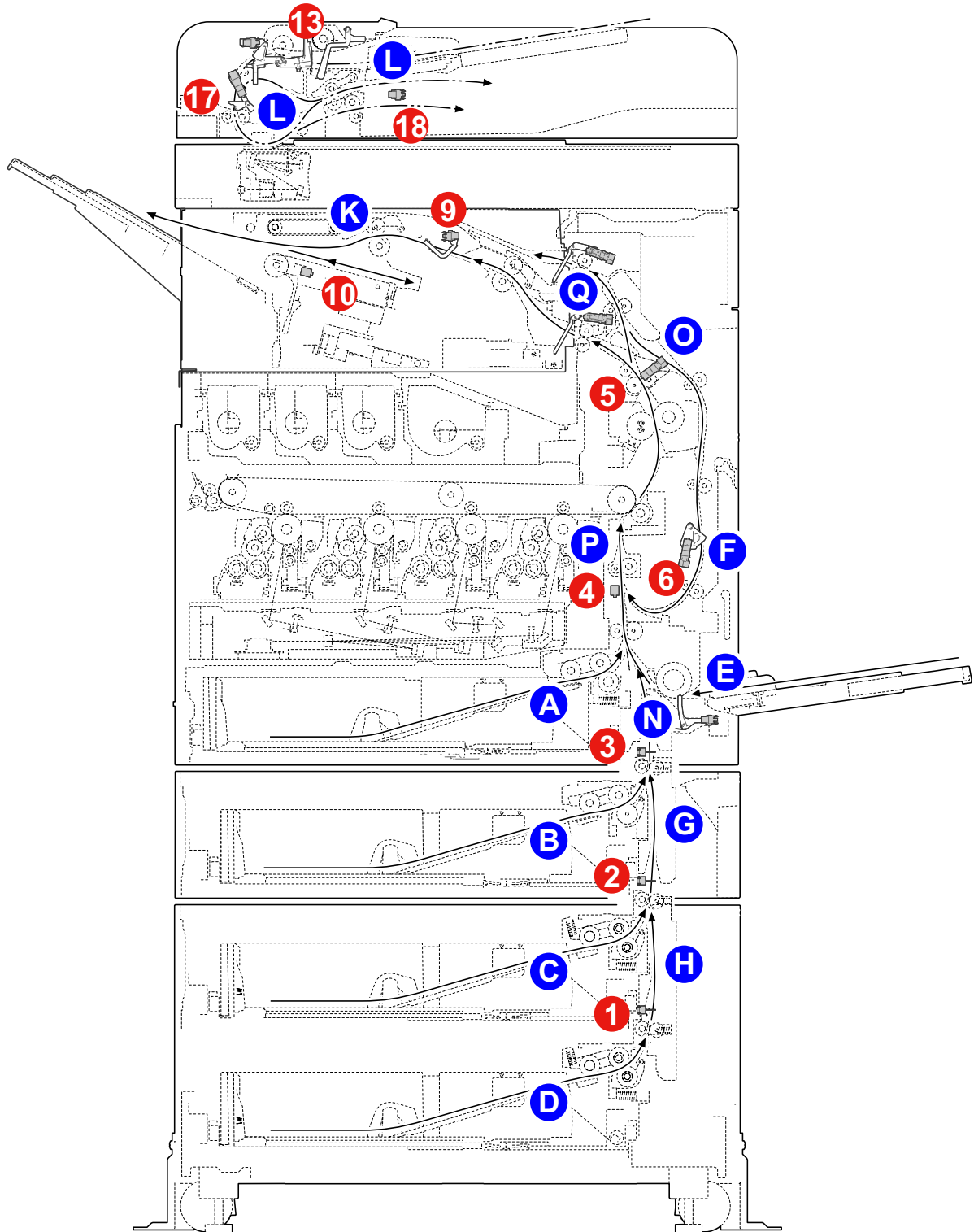


### (2-2) Paper misfeed detection condition

Main unit + PF-5120 + PF-5140 + AK-5100 + MT-5100



Main unit + PF-5120 + PF-5140 + AK-5100 + MT-5100



Jam location	Sensor (Paper conveying)
A.Misfeed in the cassette 1	1 PF feed sensor 1
B.Misfeed in the 500-sheet×1 cassette 2	2 PF feed sensor 2
C.Misfeed in the 500-sheet×2 cassette 3	3 PF feed sensor 3
D.Misfeed in the 500-sheet×2 cassette 4	4 Registration sensor
E.Misfeed in the MP tray	5 Exit sensor
F.Misfeed inside the right cover 1	6 DU sensor
G.Misfeed inside the right cover 2	7 BR conveying sensor 1
H.Misfeed inside the right cover 3	8 BR conveying sensor 2
I.Misfeed in the bridge conveying section	9 DF paper entry sensor
J.Misfeed in the mailbox	10 DF main tray exit sensor
K.Misfeed in the inner finisher	11 MT exit sensor 1
L.Misfeed in the document processor	12 MT exit sensor 2
M.Misfeed in the 3000-sheet finisher	13 DP feed sensor
N.Misfeed in the DU unit	14 DP registration sensor
O.Misfeed in the registration	15 DP feedshift sensor
P.Misfeed in the Job Separator	

Error code and JAM location

Error code	JAM location	Error code	JAM location	Error code	JAM location	Error code	JAM location
0000	-	1604	G	4901	Q	6002	K
0100	-	1614	N	4902	Q	6012	-
0101	-	4002	N	4903	Q	6102	K
0104	-	4003	N	4904	Q	6112	K
0105	-	4004	N	4908	Q	6412	K
0106	-	4012	P	4909	Q	6512	K
0107	-	4013	P	4911	I	6812	K
0110	-	4014	P	4912	I	6912	K
0111	-	4201	P	4913	I	7002	K
0114	-	4202	P	4914	I	7800	I
0211	-	4203	P	4918	I	7810	J
0212	-	4204	P	4919	I	7902	K
0213	-	4208	P	5001	I	9000	L
0300	-	4209	P	5002	I	9004	L
0501	A	4211	Q	5003	I	9009	L
0502	B	4212	Q	5004	I	9010	-
0503	C	4213	Q	5008	I	9011	-
0504	D	4214	Q	5009	I	9110	L
0508	F	4218	Q	5011	I	9200	L
0509	E	4219	Q	5012	I	9210	L
0511	P	4301	O	5013	I	9300	L
0512	N	4302	O	5014	I	9310	L
0513	N	4303	O	5018	I	9400	L
0514	N	4304	O	5019	I	9410	L
0518	P	4309	O	5013	I	9600	L
0519	P	4311	F	5014	I	9610	L
1403	C	4312	F	5018	I	9110	L
1404	H	4313	F	5019	I		
1413	H	4314	F				
1414	H	4319	F				

### (3) Jam Codes

Error code	Contents	note
J0000	Power ON jam	
J0107	Fuser temperature stabilization time-out	
J0100/J0101/J0104/ J0105/J0106	Paper jam caused by the firmware factor	
J0110/J0111/J0114	Cover open detection	J0110: Right cover open detection (right cover switch), J0111: Front cover open detection (Front cover switch), J0114: BR cover open detection (BR cover switch)
J0211/J0212/J0213	PF right cover open detection	Target: Paper feeder (550-sheet x 1), paper feeder (550-sheet x 2), large capacity feeder (2,200-sheet)
J0501/J0502/J0503/J0504	No paper feed from cassette 1 - 4	Advance checkpoints at no paper feed from the cassette
J0501	Cassette no feed	Condition: The paper does not arrive at the paper feed roller.
J0501	Cassette no feed	Condition: The paper stops at the paper feed roller.
J0501	Cassette no feed	Condition: The paper does not arrive at the registration section
J0501	Cassette no feed	Condition: The paper arrives at the registration section
J0502/J0503/J0504	No feed from cassette	Condition: Paper does not reach the feed roller. Target: Paper feeder (550-sheet x 1), paper feeder (550-sheet x 2), large capacity feeder (2,200-sheet)
J0502/J0503/J0504	No feed from cassette	Condition: The paper stops at the feed roller. Target: Paper feeder (500-sheetx1), paper feeder (500-sheetx2), large capacity paper feeder (2,000-sheet)
J0502/J0503/J0504	No feed from cassette	Condition: Paper does not reach the registration section. Target: Paper feeder (550-sheet x 1), paper feeder (550-sheet x 2), large capacity feeder (2,200-sheet)
J0502/J0503/J0504	No feed from cassette	Condition: Paper reaches the registration section. Target: Paper feeder (550-sheet x 1), paper feeder (550-sheet x 2), large capacity feeder (2,200-sheet)
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 (550-sheet x 1), paper feeder (550-sheet x 2), large capacity feeder (2,200-sheet)
J0518	Multi-feeding from the duplex section	
J0519	Multi-feeding from the MP tray	
J1403/J1404	PF conveying sensor non-arrival jam	Target: Paper feeder (500-sheet x 2), large capacity feeder (2,000-sheet)
J1413/J1414	PF conveying sensor stay jam	Target: Paper feeder (500-sheet x 2), large capacity feeder (2,000-sheet)
J1604	PF conveying sensor non-arrival jam	Target: Paper feeder (500-sheet x 2)
J1614	PF conveying sensor stay jam	Target: Paper feeder (500-sheet x 2)
J4002/J4003/J4004	Registration sensor non-arrival jam	Target: Paper feeder (550-sheet x 1), paper feeder (550-sheet x 2), large capacity feeder (2,200-sheet)
J4012/J4013/J4014	Registration sensor stay jam	Target: Paper feeder (550-sheet x 1), paper feeder (550-sheet x 2), large capacity feeder (2,200-sheet)
J4201/J4202/J4203/ J4204/J4208/J4209	Exit sensor non-arrival jam	Condition: Paper jam before the fuser unit
J4201/J4202/J4203/ J4204/J4208/J4209	Exit sensor non-arrival jam	Condition: Paper jam in the fuser unit (The paper leading margin is less than 4.0mm.)

Error code	Contents	note
J4201/J4202/J4203/ J4204/J4208/J4209	Exit sensor non-arrival jam	Condition: Paper jam in the fuser unit (The paper leading margin is 4.0mm or more.)
J4211/J4212/J4213/J4214/ J4218/J4219	Conveying sensor stay jam	Condition: Paper jam in the fuser unit (The paper leading margin is less than 4.0mm.)
J4211/J4212/J4213/J4214/ J4218/J4219	Conveying sensor stay jam	Condition: Paper jam in the fuser unit (The paper leading margin is 4.0mm or more.)
J4211/J4212/J4213/J4214/ J4218/J4219	Conveying sensor stay jam	Condition: Paper jam in the exit unit
J4301/J4302/J4303/ J4304/J4309	DU sensor non-arrival jam	
J4311/J4312/J4313/J4314/ J4319	DU sensor stay jam	
J4901/J4902/J4903/ J4904/J4908/J4909	BR conveying sensor 1 non-arrival jam	Target: 3,000-sheet finisher, 1,000-sheet finisher and the mail box
J4911/J4912/J4913/J4914/ J4918/J4919	BR conveying sensor 1 stay jam	Target: 3,000-sheet finisher, 1,000-sheet finisher and the mail box
J5001/J5002/J5003/ J5004/J5008/J5009	BR conveying sensor 2 non-arrival jam	Target: 3,000-sheet finisher, 1,000-sheet finisher and the mail box
J5011/J5012/J5013/J5014/ J5018/J5019	BR conveying sensor 2 stay jam	Target: 3,000-sheet finisher, 1,000-sheet finisher and the mail box
J6000/J6001/J6002	DF paper entry failure jam	Target: J6000 (3,000-sheet finisher), J6001 (1,000-sheet finisher) and J6002 (Inner finisher)
J6012	Inner DF open jam	Target: Inner finisher
J6020/J6021	DF front cover open jam	Target: J6020 (3,000-sheet finisher), J6021 (1,000-sheet finisher)
J6041	DF top cover open jam	Target: 1,000-sheet finisher
J6060	MT cover open jam	Target: Mail box
J6100/J6101/J6102	DF paper entry sensor non-arrival jam	Target: J6100 (3,000-sheet finisher), J6101 (1,000-sheet finisher) and J6102 (Inner finisher)
J6110/J6111/J6112	DF paper entry sensor stay jam	Target: J6110 (3,000-sheet finisher), J6111 (1,000-sheet finisher) and J6112 (Inner finisher)
J6200	DF sub exit sensor non-arrival jam	Target: 3,000-sheet finisher
J6210	DF sub exit sensor stay jam	Target: 3,000-sheet finisher
J6300/J6301	DF middle sensor non-arrival jam	Target: J6300 (3,000-sheet finisher), J6301 (1,000-sheet finisher)
J6310/J6311	DF middle sensor stay jam	Target: J6310 (3,000-sheet finisher), J6311 (1,000-sheet finisher)
J6400/J6401	DF exit paper sensor non-arrival jam	Target: J6400 (3,000-sheet finisher), J6401 (1,000-sheet finisher)
J6410/J6411/J6412	DF exit paper sensor stay jam	Target: J6410 (3,000-sheet finisher), J6411 (1,000-sheet finisher) and J6412 (Inner finisher) Remark: J6412 is not detected when feeding the OHP film.
J6510/J6511/J6512	DF exit paper sensor stay jam when outputting the paper bundle	Target: J6510 (3,000-sheet finisher), J6511 (1,000-sheet finisher) and J6512 (Inner finisher)
J6810/J6811/J6812	Front DF side registration jam	Target: J6810 (3,000-sheet finisher), J6811 (1,000-sheet finisher) and J6812 (Inner finisher)
J6910/J6911/J6912	Rear DF side registration jam	Target: J6910 (3,000-sheet finisher), J6911 (1,000-sheet finisher) and J6912 (Inner finisher)
J7000/J7001/J7002	DF staple jam	Target: J7000 (3,000-sheet finisher), J7001 (1,000-sheet finisher) and J7002 (Inner finisher)
J7800	Mail Box exit non-arrival jam	Target: Mail box
J7810	Mail Box exit stay jam	Target: Mail box
J7900/J7901/J7902	DF paddle jam	Target: J7900 (3,000-sheet finisher), J7901 (1,000-sheet finisher) and J7902 (Inner finisher)
J9000	No original feed from the DP	

Error code	Contents	note
J9004	DP registration sensor non-arrival jam during the original reversing	
J9010	Document processor open detection	
J9110	DP feed sensor multi-feeding jam	
J9120	DP original sensor initial jam	
J9200	DP registration sensor non-arrival jam	
J9210	DP registration sensor stay jam	
J9220	DP registration sensor initial jam	

## 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	Specifying the sensor	(Specify the sensor which is turned on)	Specify the sensor that displays ON at U031. (Go to the next step.)	
2	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 or the foreign objects adhere on the conveying path, or a burr in the parts such as the guide or the actuator, remove them.	
3	Checking the sensor	The sensor does not operate correctly.	Clean and reattach the sensor specified at U031, and reconnect the connector. If not repaired, replace it.	

### 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 unplug the power cord. After 5s passes, reconnect the power cord 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.	Set the proper media type at [System Menu] > [Common Settings] > [Original/Paper Settings] > [Media Type].	
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.	

### 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 unplug the power cord. After 5s passes, reconnect the power cord and turn on the power switch.	
2	Firmware upgrade	The firmware does not properly activate.	Upgrade the firmware to the latest version.	

J0110/J0111/J0114: Cover open detection

J0110: Right cover open detection (right cover switch), J0111: Front cover open detection (Front cover switch), J0114: BR cover open detection (BR cover switch)

The cover-open is detected during print.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the cover	The covers are not fitted.	Check if the cover is securely closed, and reattach it if necessary. Fix or replace it if it is deformed.	
2	Checking the connection	The connector is not properly connected.	Reconnect the cover switch connector.	
3	Reattaching the cover switch	The cover switch does not operate properly.	Reattach the cover switch if it is off.	
4	Replacing the cover switch	The cover switch is faulty.	Replace the cover switch.	

J0211/J0212/J0213: PF right cover open detection

Target: Paper feeder (550-sheet x 1), paper feeder (550-sheet x 2), large capacity feeder (2,200-sheet)

The PF right cover open is detected when printing paper fed from cassette 2-4.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the PF right cover	The PF right cover is not aligned to the other exterior covers.	Check if the PF right cover is securely closed, and reattach it if necessary. Fix or replace it if it is deformed.	
2	Checking the connection	The connector is not properly connected.	Reconnect the PF right cover switch connector.	
3	Reattaching the PF right cover switch	The PF right cover switch does not operate properly.	Reattach the PF right cover switch if it is off.	
4	Replacing the PF right cover switch	The PF right cover switch does not operate properly.	Replace the PF right cover switch if it is faulty.	

J0501/J0502/J0503/J0504: No paper feed from cassette 1 - 4

Advance checkpoints at no paper feed from the cassette

After the paper feed clutch turns on during paper feed from cassette 1-4, the next sensor does not turn on after passing the specific time.

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: The paper does not arrive at the paper feed roller.**

The paper leading edge does not come from the cassette or 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	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.	
2	Removing foreign material	The lift sensor is on but the lift plate does not go up to the upper limit position.	If there is paper tip or foreign objects adhere on the lift sensor actuator of the pickup holder, remove it.	
3	Checking the spring	The conveying function of the pickup pulley is not enough.	Reattach the spring for the pickup roller if it comes off. If deformed, replace it.	
4	Checking the pickup pulley	The conveying function of the pickup pulley is not enough.	Clean the pickup roller surface. If worn down, replace it.	
5	Checking the retard holder	The load increases since the retard holder is caught up.	Remove the retard holder and reattach it while the cassette is inserted. Or, replace the retard holder.	
6	Checking the paper feed shaft	The pickup roller does not rotate since the feed shaft of the feed roller is not properly attached.	Reattach the paper feed shaft. If deformed, replace it.	
7	Checking the driving parts	The roller does not rotate since the drive from the motor is not transmitted.	Check the drive parts of the feed drive unit and if it does not rotate normally, clean them and apply grease. If 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. • Feed clutch - Feed drive unit - Engine PWB	
9	Checking the paper feed clutch	The pickup roller does not rotate since the feed clutch is not properly attached or faulty.	Reattach the feed clutch and execute U032 [Feed1]. If it does not operate correctly, replace it.	
10	Firmware upgrade	The firmware is not latest version.	Upgrade the engine firmware to the latest version.	
11	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### J0501: Cassette no feed

**Condition: The paper stops at the paper feed roller.**

Paper does not stop at the feed roller and registration roller 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.	If paper tip or foreign objects adhere on the conveying path, remove it.	
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 press-release lever and the retard holder	The press-release lever and the retard holder are attached oppositely.	Reattach the press-release lever and the retard holder.	
4	Checking the driving parts	The roller does not rotate since the drive from the motor is not transmitted.	Check the drive parts of the feed drive unit and if it does not rotate normally, clean them and apply grease. If not repaired, replace it.	

Step	Check description	Assumed cause	Measures	Reference
5	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. • Feed clutch - Feed drive unit - Engine PWB	
6	Checking the paper feed clutch	The feed roller does not rotate since the feed clutch is not properly attached or faulty.	Reattach the feed clutch and execute U032 [Feed1]. If it does not operate correctly, replace it.	
7	Firmware upgrade	The firmware is not latest version.	Upgrade the engine firmware to the latest version.	
8	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### J0501: Cassette no feed

#### Condition: The paper does not arrive at the registration section

The paper leading edge comes from the cassette but 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	Checking the middle roller	The conveying force of the middle roller is insufficient.	Clean the middle roller surface. If worn down, replace it.	
3	Checking the press-release lever and the retard holder	The press-release lever and the retard holder are attached oppositely.	Reattach the press-release lever and the retard holder.	
4	(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.	
6	(When the paper skew occurs) Checking the paper path	The paper is caught with a piece of paper, etc.	If paper tip or foreign objects adhere on the conveying path, remove it.	
5	(In case paper skews) Checking the conveying guide	The paper is caught with the conveying guide.	Clean and reattach the conveying guide. If there are burrs on the conveying guide, remove them.	
7	Checking the driving parts	The roller does not rotate since the drive from the motor is not transmitted.	Check the drive parts of the feed drive unit and if it does not rotate normally, clean them and apply grease. If 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. • Middle clutch - Feed drive unit - Engine PWB	
9	Checking the middle clutch	The middle roller does not rotate since the middle clutch is not properly attached or faulty.	Reattach the middle clutch and execute U032 [Mid Roller]. If it does not operate correctly, replace it.	
10	Firmware upgrade	The firmware is not latest version.	Upgrade the engine firmware to the latest version.	
11	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### J0501: Cassette no feed

#### Condition: The paper arrives at the registration section

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	(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.	
2	(When the paper skew occurs) Checking the paper path	The paper is caught with a piece of paper, etc.	If paper tip or foreign objects adhere on the conveying path, remove it.	
3	(In case paper skews) Checking the conveying guide	The paper is caught with the conveying guide.	Clean and reattach the conveying guide. If there are burrs on the conveying guide, remove them.	
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. • Registration sensor - Relay connector - Engine PWB	
5	Checking the registration sensor	The registration sensor is not properly attached, or it is faulty.	Reattach the registration sensor and execute U031 [Regist Sens]. If it does not operate correctly, replace it.	
6	Firmware upgrade	The firmware is not latest version.	Upgrade the engine firmware to the latest version.	
7	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

**J0502/J0503/J0504: No feed from cassette**

**Condition: Paper does not reach the feed roller.**

**Target: Paper feeder (550-sheet x 1), paper feeder (550-sheet x 2), large capacity feeder (2,200-sheet)**

The paper leading edge does not come from the cassette and the PF conveying 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	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.	
2	Removing foreign material	The lift sensor is on but the lift plate does not go up to the upper limit position.	If there is paper tip or foreign objects adhere on the lift sensor actuator of the pickup holder, remove it.	
3	Checking the spring	The conveying function of the pickup pulley is not enough.	Reattach the spring for the pickup roller if it comes off. If deformed, replace it.	
4	Checking the pickup pulley	The conveying function of the pickup pulley is not enough.	Clean the pickup roller surface. If worn down, replace it.	
5	Checking the retard holder	The load increases since the retard holder is caught up.	Remove the retard holder and reattach it while the cassette is inserted. Or, replace the retard holder.	
6	Checking the paper feed shaft	The pickup roller does not rotate since the feed shaft of the feed roller is not properly attached.	Reattach the paper feed shaft. If deformed, replace it.	
7	Checking the driving parts	The roller does not rotate since the drive from the motor is not transmitted.	Check the drive parts of the PF drive unit and if it does not rotate normally, clean them and apply grease. If 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 feed clutch - Relay connector - PF PWB (500-sheetx1, 2,000-sheet) • PF feed clutch1, 2 - PF PWB (500-sheetx2)	

Step	Check description	Assumed cause	Measures	Reference
9	Checking the PF feed clutch	The pickup roller does not rotate since the PF feed clutch is not properly attached or faulty.	Reattach the PF feed clutch and execute U247 to check the operation. If it does not operate correctly, replace it.	
10	Replacing the PF PWB	The PF PWB is faulty.	Replace the PF PWB.	

**J0502/J0503/J0504: No feed from cassette**

Condition: The paper stops at the feed roller.

Target: Paper feeder (500-sheetx1), paper feeder (500-sheetx2), large capacity paper feeder (2,000-sheet)

Paper stops at the feed roller and the PF conveying 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.	If paper tip or foreign objects adhere on the conveying path, remove it.	
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 press-release lever and the retard holder	The press-release lever and the retard holder are attached oppositely.	Reattach the press-release lever and the retard holder.	
4	Checking the driving parts	The roller does not rotate since the drive from the motor is not transmitted.	Check the drive parts of the PF drive unit and if it does not rotate normally, clean them and apply grease. If not repaired, replace it.	
5	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"> <li>• PF feed clutch - Relay connector - PF PWB (500-sheetx1, 2,000-sheet)</li> <li>• PF feed clutch1, 2 - PF PWB (500-sheetx2)</li> </ul>	
6	Checking the PF feed clutch	The feed roller does not rotate since the PF feed clutch is not properly attached or faulty.	Reattach the PF feed clutch and execute U247 to check the operation. If it does not operate correctly, replace it.	
7	Replacing the PF PWB	The PF PWB is faulty.	Replace the PF PWB.	

**J0502/J0503/J0504: No feed from cassette**

Condition: Paper does not reach the registration section.

Target: Paper feeder (550-sheet x 1), paper feeder (550-sheet x 2), large capacity feeder (2,200-sheet)

The paper leading edge come from the cassette but the PF conveying 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	Checking the press-release lever and the retard holder	The press-release lever and the retard holder are attached oppositely.	Reattach the press-release lever and the retard holder.	

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 path	The paper is caught with a piece of paper, etc.	If paper tip or foreign objects adhere on the conveying path, remove it.	
5	(In case paper skews) Checking the conveying guide	The paper is caught with the conveying guide.	Clean and reattach the conveying guide. If there are burrs on the conveying guide, remove them.	
6	(When J0502 occurs) 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 conveying sensor - PF PWB • PF PWB - Drawer connector - Engine PWB	
7	(When J0503/J0504 occurs) 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 conveying sensor - PF PWB • PF PWB - Drawer connector - PF PWB (500-sheetx1) • PF PWB (500-sheetx1) - Drawer connector - Engine PWB	
8	Checking the PF conveying sensor	The PF conveying sensor is not attached properly, or it is faulty.	Reattach the PF conveying sensor and execute U030 [Feed2], [Feed3], or [Feed4]. If it does not operate correctly, replace it.	
9	Firmware upgrade	The firmware is not latest version.	Upgrade the engine firmware to the latest version.	
10	Replacing the PF PWB	The PF PWB is faulty.	Replace the PF PWB.	
11	(When J0503/J0504 occurs) Replacing the PF PWB (500-sheetx1)	The PF PWB is faulty.	Replace the PF PWB of the upper cassette (550-sheetx1).	
12	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

**J0502/J0503/J0504: No feed from cassette**

Condition: Paper reaches the registration section.

Target: Paper feeder (550-sheet x 1), paper feeder (550-sheet x 2), large capacity feeder (2,200-sheet)

The PF conveying sensor does not turn on after the feed clutch turns on when feeding from cassette 2-4.

Step	Check description	Assumed cause	Measures	Reference
1	(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.	
2	(When the paper skew occurs) Checking the paper path	The paper is caught with a piece of paper, etc.	If paper tip or foreign objects adhere on the conveying path, remove it.	
3	(In case paper skews) Checking the conveying guide	The paper is caught with the conveying guide.	Clean and reattach the conveying guide. If there are burrs on the conveying guide, remove them.	

Step	Check description	Assumed cause	Measures	Reference
4	(When J0502 occurs) 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. <ul style="list-style-type: none"> <li>• PF conveying sensor - PF PWB</li> <li>• PF PWB - Drawer connector - Engine PWB</li> </ul>	
5	(When J0503/J0504 occurs) 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. <ul style="list-style-type: none"> <li>• PF conveying sensor - PF PWB</li> <li>• PF PWB - Drawer connector - PF PWB (500-sheetx1)</li> <li>• PF PWB (500-sheetx1) - Drawer connector - Engine PWB</li> </ul>	
6	Checking the PF conveying sensor	The PF conveying sensor is not attached properly, or it is faulty.	Reattach the PF conveying sensor and execute U030 [Feed2], [Feed3], or [Feed4]. If it does not operate correctly, replace it.	
7	Firmware upgrade	The firmware is not latest version.	Upgrade the engine firmware to the latest version.	
8	Replacing the PF PWB	The PF PWB is faulty.	Replace the PF PWB.	
9	(When J0503/J0504 occurs) Replacing the PF PWB (500-sheetx1)	The PF PWB is faulty.	Replace the PF PWB of the upper cassette (550-sheetx1).	
10	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### J0508: No paper feed from the duplex section

During duplex print, the registration sensor does not turn on after the DU clutch turns on (paper switchback).

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.	
6	Replacing the paper	The paper curls or is wavy.	Replace the paper if it is damp.	
7	(When the paper skew occurs) Checking the paper path	The paper is caught with a piece of paper, etc.	If paper tip or foreign objects adhere on the conveying path, remove it.	
8	(In case paper skews) Checking the conveying guide	The paper is caught with the conveying guide.	Clean and reattach the conveying guide. If there are burrs on the conveying guide, remove them.	

Step	Check description	Assumed cause	Measures	Reference
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. • Registration sensor - Relay connector - Engine PWB	
10	Checking the registration sensor	The registration sensor is not properly attached, or it is faulty.	Reattach the registration sensor and execute U031 [Regist Sens]. If it does not operate correctly, replace it.	
11	Checking the DU clutch	The DU clutch is not attached properly, or it is faulty.	Reattach the DU clutch and execute U032 [Dup]. If it does not operate correctly, replace it.	
12	Reinstalling the conveying unit	The developer motor K drive is not conveyed to the DU conveying roller.	Reattach the paper conveying unit.	
13	Firmware upgrade	The firmware is not latest version.	Upgrade the engine firmware to the latest version.	
14	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### J0509: No paper feed from the MP tray

The registration sensor does not turn on 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	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.	
6	(When the paper skew occurs) Checking the paper path	The paper is caught with a piece of paper, etc.	If paper tip or foreign objects adhere on the conveying path, remove it.	
7	(In case paper skews) Checking the conveying guide	The paper is caught with the conveying guide.	Clean and reattach the conveying guide. If there are burrs on the conveying guide, remove them.	
8	(For the MP lift plate not ascending) checking the cam	The MP lift plate ascending cam does not operate normally.	Align the MP lift plate elevation cam and reattach it.	
9	(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.	
10	(For the MP lift plate not ascending) 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. • MP solenoid - Feed drive unit - Engine PWB	
11	(For the MP lift plate not ascending) checking the MP solenoid	The MP solenoid does not operate properly.	Reattach the MP solenoid and execute U033 [MP]. If it does not operate correctly, replace it.	

Step	Check description	Assumed cause	Measures	Reference
12	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.	
13	Checking the middle roller	The conveying force of the middle roller is insufficient.	Clean the middle roller surface. If worn down, replace it.	
14	Checking the driving parts	The roller does not rotate since the drive from the motor is not transmitted.	Check the drive parts of the feed drive unit and if it does not rotate normally, clean them and apply grease. If not repaired, replace it.	
15	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"> <li>• Middle clutch - Feed drive unit - Engine PWB</li> <li>• Registration sensor - Relay connector - Engine PWB</li> </ul>	
16	Checking the middle clutch	The middle roller does not rotate since the middle clutch is not properly attached or faulty.	Reattach the middle clutch and execute U032 [Mid Roller]. If it does not operate correctly, replace it.	
17	Checking the registration sensor	The registration sensor does not operate properly.	Reattach the registration sensor and execute U031 [Regist Sens]. If it does not operate correctly, replace it.	
18	Firmware upgrade	The firmware is not latest version.	Upgrade the engine firmware to the latest version.	
19	Replacing the engine PWB	The engine PWB is faulty.	Replace the 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.	
3	Checking the paper	foreign objects are on the paper.	Remove the paper with foreign objects.	
4	Checking the paper	The paper is damp.	Replace with dry paper. Install the cassette heater and set U327 to [On] if necessary.	
5	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.	
6	Checking the press-release lever and the retard holder	The press-release lever and the retard holder are attached oppositely.	Reattach the press-release lever and the retard holder.	
7	Reattaching the retard holder	The retard holder comes off.	Reattach the retard holder.	
8	Reattaching the retard pressure spring	The retard pressure spring comes off.	Reattach the retard pressure spring.	
9	Checking the driving parts	The roller does not rotate since the drive from the motor is not transmitted.	Check the drive parts of the feed drive unit and if it does not rotate normally, clean them and apply grease. If not repaired, replace it.	



Step	Check description	Assumed cause	Measures	Reference
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"> <li>• Registration sensor - Relay connector - Engine PWB</li> <li>• Registration clutch - Feed drive unit - Engine PWB</li> </ul>	
11	Checking the registration sensor	The registration sensor is not properly attached, or it is faulty.	Reattach the registration sensor and execute U031 [Regist Sens]. If it does not operate correctly, replace it.	
12	(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 and execute U032 [Regist]. If it does not operate correctly, replace it.	
13	Firmware upgrade	The firmware is not latest version.	Upgrade the engine firmware to the latest version.	
14	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### J0512/J0513/J0514: Multi feed from cassette

Target: Paper feeder (550-sheet x 1), paper feeder (550-sheet x 2), large capacity feeder (2,200-sheet)

The PF conveying sensor continues on and does not turn off when feeding 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 paper	The paper is damp.	Replace with dry paper. Install the cassette heater and set U327 to [On] if necessary.	
5	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.	
6	Checking the press-release lever and the retard holder	The press-release lever and the retard holder are attached oppositely.	Reattach the press-release lever and the retard holder.	
7	Checking the retard holder	The retard holder comes off.	Reattach the retard holder.	
8	Checking the retard pressure spring	The retard pressure spring comes off.	Reattach the retard pressure spring.	
9	(When J0512 occurs) 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. <ul style="list-style-type: none"> <li>• PF conveying sensor - PF PWB</li> <li>• PF PWB - Drawer connector - Engine PWB</li> </ul>	

Step	Check description	Assumed cause	Measures	Reference
10	(When J0513/J0514 occurs) 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. <ul style="list-style-type: none"> <li>• PF conveying sensor - PF PWB</li> <li>• PF PWB - Drawer connector - PF PWB (500-sheetx1)</li> <li>• PF PWB (500-sheetx1) - Drawer connector - Engine PWB</li> </ul>	
11	Checking the PF conveying sensor	The PF conveying sensor is not attached properly, or it is faulty.	Reattach the PF conveying sensor and execute U030 [Feed2], [Feed3], or [Feed4]. If it does not operate correctly, replace it.	
12	Firmware upgrade	The firmware is not latest version.	Upgrade the engine firmware to the latest version.	
13	Replacing the PF PWB	The PF PWB is faulty.	Replace the PF PWB.	
14	(When J0513/J0514 occurs) Replacing the PF PWB (500-sheetx1)	The PF PWB is faulty.	Replace the PF PWB of the upper cassette (550-sheetx1).	
15	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### J0518: Multi-feeding from the duplex section

During duplex print, the registration sensor does not turn off when passing the specified time after the DU clutch turns on.

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 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"> <li>• Registration sensor - Relay connector - Engine PWB</li> <li>• Registration clutch - Feed drive unit - Engine PWB</li> </ul>	
6	Checking the registration sensor	The registration sensor is not properly attached, or it is faulty.	Reattach the registration sensor and execute U031 [Regist Sens]. If it does not operate correctly, replace it.	
7	(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 and execute U032 [Regist]. If it does not operate correctly, replace it.	
8	Firmware upgrade	The firmware is not latest version.	Upgrade the engine firmware to the latest version.	
9	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### J0519: Multi-feeding from the MP tray

The registration 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 paper feed roller and the MP separation pad. Or, replace them.	
6	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.	
7	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"> <li>• Registration sensor - Relay connector - Engine PWB</li> <li>• Registration clutch - Feed drive unit - Engine PWB</li> <li>• Middle clutch - Feed drive unit - Engine PWB</li> </ul>	
8	Checking the registration sensor	The registration sensor is not properly attached, or it is faulty.	Reattach the registration sensor and execute U031 [Regist Sens]. If it does not operate correctly, replace it.	
9	(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 and execute U032 [Regist]. If it does not operate correctly, replace it.	
10	Checking the middle clutch	The middle roller rotation does not stop while the middle clutch continues engaging.	Reattach the middle clutch and execute U032 [Mid Roller]. If it does not operate correctly, replace it.	
11	Firmware upgrade	The firmware is not latest version.	Upgrade the engine firmware to the latest version.	
12	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### J1403/J1404: PF conveying sensor non-arrival jam

Target: Paper feeder (500-sheet x 2), large capacity feeder (2,000-sheet)

The PF conveying sensor of cassette 2 (550-sheet x 1) does not turn on when feeding from cassette 3, 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.	If paper tip or foreign objects adhere on the conveying path, remove 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	(In case paper skews) Checking the conveying guide	The paper is caught with the conveying guide.	Clean and reattach the conveying guide. If there are burrs on the conveying guide, remove them.	
4	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	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	Reinstalling the paper feeder	The paper feeder is not properly installed.	Reinstall the paper feeder.	
11	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. <ul style="list-style-type: none"> <li>• PF conveying sensor - PF PWB</li> <li>• PF PWB - Drawer connector - PF PWB (500-sheetx1)</li> <li>• PF PWB (500-sheetx1) - Drawer connector - Engine PWB</li> </ul>	
12	Checking the PF conveying sensor	The PF conveying sensor is not attached properly, or it is faulty.	Reattach the PF conveying sensor and execute U030 [Feed3] or [Feed4]. If it does not operate correctly, replace it.	
12	Firmware upgrade	The firmware is not latest version.	Upgrade the engine firmware to the latest version.	
13	Replacing the PF PWB	The PF PWB is faulty.	Replace the PF PWB.	
14	Replacing the PF PWB (500-sheetx1)	The PF PWB is faulty.	Replace the PF PWB of the upper cassette (550-sheetx1).	
15	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### J1413/J1414: PF conveying sensor stay jam

Target: Paper feeder (500-sheet x 2), large capacity feeder (2,000-sheet)

The PF conveying sensor of cassette 2 (550-sheet x 1) does not turn off when feeding from cassette 3, 4.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the paper path	The paper is caught with a piece of paper, etc.	If paper tip or foreign objects adhere on the conveying path, remove it.	
2	Checking the paper feed roller	Paper conveying capability is decreasing or slipping. (Rotation is not smooth)	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	(In case paper skews) Checking the conveying guide	The paper is caught with the conveying guide.	Clean and reattach the conveying guide. If there are burrs on the conveying guide, remove them.	
5	Checking the PF right cover	The PF right cover is deformed.	Check if the PF right cover is securely closed. Replace it if it is deformed and is not closed.	
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 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. <ul style="list-style-type: none"> <li>• PF conveying sensor - PF PWB</li> <li>• PF conveying clutch - PF PWB</li> <li>• PF PWB - Drawer connector - PF PWB (500-sheetx1)</li> <li>• PF PWB (500-sheetx1) - Drawer connector - Engine PWB</li> </ul>	
13	Checking the PF conveying sensor	The PF conveying sensor is not attached properly, or it is faulty.	Reattach the PF conveying sensor and execute U030 [Feed3] or [Feed4]. If it does not operate correctly, replace it.	
14	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 and execute U247 to check the operation. If it does not operate correctly, replace it.	
15	Firmware upgrade	The firmware is not latest version.	Upgrade the engine firmware to the latest version.	
16	Replacing the PF PWB	The PF PWB is faulty.	Replace the PF PWB.	
17	Replacing the PF PWB (500-sheetx1)	The PF PWB is faulty.	Replace the PF PWB of the upper cassette (550-sheetx1).	
18	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### J1604: PF conveying sensor non-arrival jam

#### Target: Paper feeder (500-sheet x 2)

Cassette 3 PF sensor 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.	If there is paper tip or foreign objects adhere on the conveying path, or parts such as the guide, etc. have burrs, remove them.	
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.	

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 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.	Clean and reattach the conveying guide. If there are burrs on the conveying guide, remove them.	
6	Checking the 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 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. <ul style="list-style-type: none"> <li>• PF conveying sensor - PF PWB</li> <li>• PF conveying clutch - PF PWB</li> <li>• PF PWB - Drawer connector - PF PWB (500-sheetx1)</li> <li>• PF PWB (500-sheetx1) - Drawer connector - Engine PWB</li> </ul>	
12	Checking the PF conveying sensor	The PF conveying sensor is not attached properly, or it is faulty.	Reattach the PF conveying sensor and execute U030 [Feed3]. If it does not operate correctly, replace it.	
13	Firmware upgrade	The firmware is not latest version.	Upgrade the engine firmware to the latest version.	
14	Replacing the PF PWB	The PF PWB is faulty.	Replace the PF PWB.	
15	Replacing the PF PWB (500-sheetx1)	The PF PWB is faulty.	Replace the PF PWB of the upper cassette (550-sheetx1).	
16	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

## J1614: PF conveying sensor stay jam

### Target: Paper feeder (500-sheet x 2)

Cassette 3 PF sensor 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.	If paper tip or foreign objects adhere on the conveying path, remove it.	
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.	

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	(In case paper skews) Checking the conveying guide	The paper is caught with the conveying guide.	Clean and reattach the conveying guide. If there are burrs on the conveying guide, remove them.	
5	(In case of paper conveying delay) Checking the PF right cover	The PF right cover is deformed.	Check if the PF right cover is securely closed. Replace it if it is deformed and is not closed.	
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 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. <ul style="list-style-type: none"> <li>• PF conveying sensor - PF PWB</li> <li>• PF conveying clutch - PF PWB</li> <li>• PF PWB - Drawer connector - PF PWB (500-sheetx1)</li> <li>• PF PWB (500-sheetx1) - Drawer connector - Engine PWB</li> </ul>	
12	Checking the PF conveying sensor	The PF conveying sensor is not attached properly, or it is faulty.	Reattach the PF conveying sensor and execute U030 [Feed3]. If it does not operate correctly, replace it.	
13	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 and execute U247 to check the operation. If it does not operate correctly, replace it.	
14	Firmware upgrade	The firmware is not latest version.	Upgrade the engine firmware to the latest version.	
15	Replacing the PF PWB	The PF PWB is faulty.	Replace the PF PWB.	
16	Replacing the PF PWB (500-sheetx1)	The PF PWB is faulty.	Replace the PF PWB of the upper cassette (550-sheetx1).	
17	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

**J4002/J4003/J4004: Registration sensor non-arrival jam**

Target: Paper feeder (550-sheet x 1), paper feeder (550-sheet x 2), large capacity feeder (2,200-sheet)

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.	If paper tip or foreign objects adhere on the conveying path, remove it.	
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.	
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. <ul style="list-style-type: none"> <li>• Registration sensor - Relay connector - Engine PWB</li> <li>• Registration clutch - Feed drive unit - Engine PWB</li> </ul>	
14	Checking the registration sensor	The registration sensor is not properly attached, or it is faulty.	Reattach the registration sensor and execute U031 [Regist Sens]. If it does not operate correctly, replace it.	
15	Checking the registration clutch	The registration clutch is not properly attached, or it is faulty.	Reattach the registration clutch and execute U032 [Regist]. If it does not operate correctly, replace it.	
16	Replacing the feed drive unit	The feed drive unit is faulty.	Replace feed drive unit.	
17	Firmware upgrade	The firmware is not latest version.	Upgrade the engine firmware to the latest version.	
18	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	



J4012/J4013/J4014: Registration sensor stay jam

Target: Paper feeder (550-sheet x 1), paper feeder (550-sheet x 2), large capacity feeder (2,200-sheet)

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.	If paper tip or foreign objects adhere on the conveying path, remove 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.	
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-feed occurs) Checking the paper feed roller	The paper fanning is not enough.	Clean or replace the feed roller.	
6	Checking the conveying rollers	The paper conveying force of the conveying rollers is insufficient.	Clean or replace the conveying related roller.	
7	(When the multi-feed occurs) 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"> <li>• Registration sensor - Relay connector - Engine PWB</li> <li>• Registration clutch - Feed drive unit - Engine PWB</li> </ul>	
13	Checking the registration sensor	The registration sensor is not properly attached, or it is faulty.	Reattach the registration sensor and execute U031 [Regist Sens]. If it does not operate correctly, replace it.	
14	Checking the registration clutch	The registration clutch is not properly attached, or it is faulty.	Reattach the registration clutch and execute U032 [Regist]. If it does not operate correctly, replace it.	
15	Replacing the feed drive unit	The feed drive unit is faulty.	Replace feed drive unit.	
16	Firmware upgrade	The firmware is not latest version.	Upgrade the engine firmware to the latest version.	
17	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

J4201/J4202/J4203/J4204/J4208/J4209: Exit sensor non-arrival jam

Condition: Paper jam before the fuser unit

The exit sensor does not turn on due to the paper jam before the fuser rollers during paper feed from cassette 1-4, the duplex section or 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 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 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.	
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 paper	The paper leading edge is bent.	Remove the bent paper.	
7	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.	
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	The paper curls.	Replace the paper if it is damp. (Replace with long grain paper.)	
11	Checking the settings	The actual paper and the paper settings (media type, paper size) do not match.	Set the proper media type at [System Menu] > [Common Settings] > [Original/Paper Settings] > [Media Type].	
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. • Fuser motor - Engine PWB	
13	Checking the fuser motor	The fuser motor is not properly attached, or it is faulty.	Reattach the fuser motor and execute U030 [Fuser]. If it does not operate correctly, replace it.	
14	Firmware upgrade	The firmware is not latest version.	Upgrade the engine firmware to the latest version.	
15	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

**J4201/J4202/J4203/J4204/J4208/J4209: Exit sensor non-arrival jam**

**Condition: Paper jam in the fuser unit (The paper leading margin is less than 4.0mm.)**

The exit sensor does not turn on due to the paper that is rolled up around the fuser rollers during paper feed from cassette 1-4, the 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 if the fuser separation plate is faulty.	
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	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. • Exit sensor - Fuser unit - Engine PWB	
17	Checking the exit sensor	The exit sensor is not attached properly, or it is faulty.	Reattach the exit sensor and execute U031 [Fuser]. If it does not operate correctly, replace it.	
18	Firmware upgrade	The firmware is not latest version.	Upgrade the engine firmware to the latest version.	
19	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

[J4201/J4202/J4203/J4204/J4208/J4209: Exit sensor non-arrival jam](#)

[Condition: Paper jam in the fuser unit \(The paper leading margin is 4.0mm or more.\)](#)

The exit sensor does not turn on due to the paper that is rolled up around the fuser rollers during paper feed from cassette 1-4, the duplex section or the MP tray.

Step	Check description	Assumed cause	Measures	Reference
1	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.	
2	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 if the fuser separation plate is faulty.	
3	Cleaning the machine inside	The machine inside is contaminated with toner.	Clean the machine inside.	
4	Checking the paper	The paper curls.	Replace with long grain paper.	
5	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. • Exit sensor - Fuser unit - Engine PWB	
6	Checking the exit sensor	The exit sensor is not attached properly, or it is faulty.	Reattach the exit sensor and execute U031 [Fuser]. If it does not operate correctly, replace it.	
7	Firmware upgrade	The firmware is not latest version.	Upgrade the engine firmware to the latest version.	
8	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### J4211/J4212/J4213/J4214/J4218/J4219: Conveying sensor stay jam

Condition: Paper jam in the fuser unit (The paper leading margin is less than 4.0mm.)

The exit sensor does not turn off due to the paper jam in the fuser unit during paper feed from cassette 1-4, the 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.	
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.	

Step	Check description	Assumed cause	Measures	Reference
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 if the fuser separation plate is faulty.	
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	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. • Exit sensor - Fuser unit - Engine PWB	
17	Checking the exit sensor	The exit sensor is not attached properly, or it is faulty.	Reattach the exit sensor and execute U031 [Fuser]. If it does not operate correctly, replace it.	
18	Firmware upgrade	The firmware is not latest version.	Upgrade the engine firmware to the latest version.	
19	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

**J4211/J4212/J4213/J4214/J4218/J4219: Conveying sensor stay jam**

**Condition: Paper jam in the fuser unit (The paper leading margin is 4.0mm or more.)**

The exit sensor does not turn off due to the paper jam in the fuser unit during paper feed from cassette 1-4, the duplex section or the MP tray.

Step	Check description	Assumed cause	Measures	Reference
1	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.	
2	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 if the fuser separation plate is faulty.	
3	Cleaning the machine inside	The machine inside is contaminated with toner.	Clean the machine inside.	
4	Checking the paper	The paper curls.	Replace with long grain paper.	
5	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. • Exit sensor - Fuser unit - Engine PWB	
6	Checking the exit sensor	The exit sensor is not attached properly, or it is faulty.	Reattach the exit sensor and execute U031 [Fuser]. If it does not operate correctly, replace it.	

Step	Check description	Assumed cause	Measures	Reference
7	Firmware upgrade	The firmware is not latest version.	Upgrade the engine firmware to the latest version.	
8	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### J4211/J4212/J4213/J4214/J4218/J4219: Conveying sensor stay jam

#### Condition: Paper jam in the exit unit

The exit sensor does not turn off due to the paper jam in the exit unit during paper feed from cassette 1-4, the duplex section or the MP tray.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the inner tray	There is a obstacle on the inner tray.	Remove the obstacle on the inner tray.	
2	Storing the paper stopper	The paper stopper on the inner tray is not stored.	Store the paper stopper.	
3	(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.	
4	(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.	
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	Reinstalling the fuser unit and the exit unit	The fuser unit or the exit unit is not properly installed.	Check the attachment of the fuser unit and the exit unit, and reattach the units if necessary.	
7	Checking the exit guide	Foreign objects such as toner are on the exit guide.	Clean the eject guide. If foreign objects cannot be removed, replace the eject guide.	
8	Checking the driving parts	The drive parts are faulty and the eject roller does not rotate.	If the drive gear is deformed, bushing is worn down, etc., replace the applicable parts. If not repaired, replace the eject unit.	
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. <ul style="list-style-type: none"> <li>• Exit motor - Exit unit - Engine PWB</li> <li>• Exit sensor - Fuser unit - Engine PWB</li> </ul>	
10	Checking the exit motor	The exit motor is not attached properly, or it is faulty.	Reattach the exit motor and execute U030 [SB(CW)]. If it does not operate correctly, replace it.	
11	Checking the exit sensor	The exit sensor is not attached properly, or it is faulty.	Reattach the exit sensor and execute U031 [Fuser]. If it does not operate correctly, replace it.	
12	Firmware upgrade	The firmware is not latest version.	Upgrade the engine firmware to the latest version.	
13	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### J4301/J4302/J4303/J4304/J4309: DU sensor non-arrival jam

The DU sensor does not turn on after the DU switch back when feeding from cassette 1-4 or MP tray.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the paper conveying parts	The parts such as the roller or the guide are not properly attached, or they are dirty, deformed or worn down.	Clean, correct and reattach the conveying parts such as roller and guide. If not repaired, replace it.	
2	Checking the connection	The connector at the paper conveying unit that connects to the main unit is not properly connected. (Loose connection, etc.)	Reconnect the connector between the paper conveying unit and the main unit.	
3	Checking the driving parts	The drive parts are faulty.	Correct the drive parts between developer motor K and DU conveying roller. If not repaired, replace them.	
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. <ul style="list-style-type: none"> <li>• DU sensor - Engine PWB</li> <li>• DU clutch - Feed drive unit - Engine PWB</li> </ul>	
5	Checking the DU sensor	The DU sensor is not attached properly, or it is faulty.	Reattach the DU sensor and execute U031 [DU Sens]. If it does not operate correctly, replace it.	
6	Checking the DU clutch	The DU clutch is not attached properly, or it is faulty.	Reattach the DU clutch and execute U032 [Dup]. If it does not operate correctly, replace it.	
7	Firmware upgrade	The firmware is not latest version.	Upgrade the engine firmware to the latest version.	
8	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### J4311/J4312/J4313/J4314/J4319: DU sensor stay jam

The DU sensor does not turn off after the DU switch back when feeding from cassette 1-4 or MP tray.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the paper conveying parts	The parts such as the roller or the guide are not properly attached, or they are dirty, deformed or worn down.	Clean, correct and reattach the conveying parts such as roller and guide. If not repaired, replace it.	
2	Checking the connection	The connector at the paper conveying unit that connects to the main unit is not properly connected. (Loose connection, etc.)	Reconnect the connector between the paper conveying unit and the main unit.	
3	Checking the driving parts	The drive parts are faulty.	Correct the drive parts between developer motor K and DU conveying roller. If not repaired, replace them.	
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. <ul style="list-style-type: none"> <li>• DU sensor - Engine PWB</li> <li>• DU clutch - Feed drive unit - Engine PWB</li> </ul>	
5	Checking the DU sensor	The DU sensor is not attached properly, or it is faulty.	Reattach the DU sensor and execute U031 [DU Sens]. If it does not operate correctly, replace it.	
6	Checking the DU clutch	The DU clutch is not attached properly, or it is faulty.	Reattach the DU clutch and execute U032 [Dup]. If it does not operate correctly, replace it.	

Step	Check description	Assumed cause	Measures	Reference
7	Firmware upgrade	The firmware is not latest version.	Upgrade the engine firmware to the latest version.	
8	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### J4901/J4902/J4903/J4904/J4908/J4909: BR conveying sensor 1 non-arrival jam

#### Target: 3,000-sheet finisher, 1,000-sheet finisher and the mail box

BR conveying sensor 1 does not turn on during paper feed from cassette 1-4, the duplex section or the MP tray.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the paper conveying parts	The parts such as the roller or the guide are not properly attached, or they are dirty, deformed or worn down.	Clean, correct and reattach the conveying parts such as roller and guide. If not repaired, replace it.	
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) 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	Checking the conveying guide	The foreign objects such as toner are on the conveying guide.	Clean or replace the conveying guide.	
6	Checking the paper conveying roller	The paper conveying roller does not rotate.	Replace the parts if the gear is deformed, the torque limiter is faulty, or the bushing is worn down.	
7	Reinstalling the bridge unit	The drawer connector between the relay conveying unit and main unit is not connected properly.	Reinstall the relay conveying unit.	
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"> <li>• BR conveying sensor 1 - BR PWB</li> <li>• Conveying motor - Engine PWB</li> </ul>	
9	Checking BR conveying sensor 1	BR conveying sensor 1 is not attached properly, or it is faulty.	Reattach BR conveying sensor 1 and execute U031 [Bridge1 Feed]. If it does not operate correctly, replace it.	
10	Checking the BR conveying motor	The BR conveying motor is not attached properly, or it is faulty.	Reattach the BR conveying motor and execute U030 [Brg]. If it does not operate correctly, replace it.	
11	Replacing the BR PWB	The BR PWB is faulty.	Replace the BR PWB.	
12	Firmware upgrade	The firmware is not latest version.	Upgrade the engine firmware to the latest version.	
13	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### J4911/J4912/J4913/J4914/J4918/J4919: BR conveying sensor 1 stay jam

#### Target: 3,000-sheet finisher, 1,000-sheet finisher and the mail box

BR conveying sensor 1 does not turn off during paper feed from cassette 1-4, the duplex section or the MP tray.



Step	Check description	Assumed cause	Measures	Reference
1	Checking the paper conveying parts	The parts such as the roller or the guide are not properly attached, or they are dirty, deformed or worn down.	Clean, correct and reattach the conveying parts such as roller and guide. If not repaired, replace it.	
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) 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	Checking the conveying guide	The foreign objects such as toner are on the conveying guide.	Clean or replace the conveying guide.	
6	Checking the paper conveying roller	The paper conveying roller does not rotate.	Replace the parts if the gear is deformed, the torque limiter is faulty, or the bushing is worn down.	
7	Reinstalling the bridge unit	The drawer connector between the relay conveying unit and main unit is not connected properly.	Reinstall the relay conveying unit.	
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. • BR conveying sensor 1 - BR PWB • Conveying motor - Engine PWB	
9	Checking BR conveying sensor 1	BR conveying sensor 1 is not attached properly, or it is faulty.	Reattach BR conveying sensor 1 and execute U031 [Bridge1 Feed]. If it does not operate correctly, replace it.	
10	Checking the BR conveying motor	The BR conveying motor is not attached properly, or it is faulty.	Reattach the BR conveying motor and execute U030 [Brg]. If it does not operate correctly, replace it.	
11	Replacing the BR PWB	The BR PWB is faulty.	Replace the BR PWB.	
12	Firmware upgrade	The firmware is not latest version.	Upgrade the engine firmware to the latest version.	
13	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

J5001/J5002/J5003/J5004/J5008/J5009: BR conveying sensor 2 non-arrival jam

Target: 3,000-sheet finisher, 1,000-sheet finisher and the mail box

BR conveying sensor 2 does not turn on during paper feed from cassette 1-4, the duplex section or the MP tray.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the paper conveying parts	The parts such as the roller or the guide are not properly attached, or they are dirty, deformed or worn down.	Clean, correct and reattach the conveying parts such as roller and guide. If not repaired, replace it.	
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) 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
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	Checking the conveying guide	The foreign objects such as toner are on the conveying guide.	Clean or replace the conveying guide.	
6	Checking the paper conveying roller	The paper conveying roller does not rotate.	Replace the parts if the gear is deformed, the torque limiter is faulty, or the bushing is worn down.	
7	Reinstalling the bridge unit	The drawer connector between the relay conveying unit and main unit is not connected properly.	Reinstall the relay conveying unit.	
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. • BR conveying sensor 2 - BR PWB • Conveying motor - Engine PWB	
9	Checking BR conveying sensor 2	BR conveying sensor 2 is not attached properly, or it is faulty.	Reattach BR conveying sensor 2 and execute U031 [Bridge2 Feed]. If it does not operate correctly, replace it.	
10	Checking the BR conveying motor	The BR conveying motor is not attached properly, or it is faulty.	Reattach the BR conveying motor and execute U030 [Brg]. If it does not operate correctly, replace it.	
11	Replacing the BR PWB	The BR PWB is faulty.	Replace the BR PWB.	
12	Firmware upgrade	The firmware is not latest version.	Upgrade the engine firmware to the latest version.	
13	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

**J5011/J5012/J5013/J5014/J5018/J5019: BR conveying sensor 2 stay jam**

Target: 3,000-sheet finisher, 1,000-sheet finisher and the mail box

BR conveying sensor 2 does not turn off during paper feed from cassette 1-4, the duplex section or the MP tray.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the paper conveying parts	The parts such as the roller or the guide are not properly attached, or they are dirty, deformed or worn down.	Clean, correct and reattach the conveying parts such as roller and guide. If not repaired, replace it.	
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) 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	Checking the conveying guide	The foreign objects such as toner are on the conveying guide.	Clean or replace the conveying guide.	
6	Checking the paper conveying roller	The paper conveying roller does not rotate.	Replace the parts if the gear is deformed, the torque limiter is faulty, or the bushing is worn down.	

Step	Check description	Assumed cause	Measures	Reference
7	Reinstalling the bridge unit	The drawer connector between the relay conveying unit and main unit is not connected properly.	Reinstall the relay conveying unit.	
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. • BR conveying sensor 2 - BR PWB • Conveying motor - Engine PWB	
9	Checking BR conveying sensor 2	BR conveying sensor 2 is not attached properly, or it is faulty.	Reattach BR conveying sensor 2 and execute U031 [Bridge2 Feed]. If it does not operate correctly, replace it.	
10	Checking the BR conveying motor	The BR conveying motor is not attached properly, or it is faulty.	Reattach the BR conveying motor and execute U030 [Brg]. If it does not operate correctly, replace it.	
11	Replacing the BR PWB	The BR PWB is faulty.	Replace the BR PWB.	
12	Firmware upgrade	The firmware is not latest version.	Upgrade the engine firmware to the latest version.	
13	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### J6000/J6001/J6002: DF paper entry failure jam

Target: J6000 (3,000-sheet finisher), J6001 (1,000-sheet finisher) and J6002 (Inner finisher)

Turning on of the DF paper entry sensor is detected before the paper output from the main unit.

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 DF paper entry sensor	The DF paper entry sensor is dirty.	Clean the DF paper entry sensor.	
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. • DF entry sensor - DF PWB	
4	Checking the DF paper entry sensor	The DF paper entry sensor is not attached properly, or it is faulty.	Reattach the DF paper entry sensor and execute U241 [Finisher] > [HP]. If it does not operate correctly, replace it.	
5	Replacing the DF PWB	The DF PWB is faulty.	Replace the DF PWB.	

### J6012: Inner DF open jam

Target: Inner finisher

The inner DF unit open is detected during the DF operation.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	The connector of the DF installation detective switch is not properly connected.	Reconnect the connector of the DF installation detective switch.	
2	Checking the DF installation detective switch	The DF installation detective switch is not properly attached, or it is faulty.	Reattach the DF installation detective switch and execute U241 [Finisher] > [Set]. If it does not operate correctly, replace it.	

### J6020/J6021: DF front cover open jam

Target: J6020 (3,000-sheet finisher), J6021 (1,000-sheet finisher)

The DF front cover open is detected during the DF operation.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the DF front cover	The DF front cover is not aligned to the other exterior covers.	Check if the DF front cover closes securely, and reattach it if necessary. Fix or replace it if it is deformed.	
2	Checking the connection	The connector of the DF front cover switch is not connected properly.	Reconnect the connector of the DF front cover switch.	
3	Checking the DF front cover switch	The DF front cover switch is not attached properly, or it is faulty.	Reattach the DF front cover switch and execute U241 [Finisher] > [Front Cover]. If it does not operate correctly, replace it.	

### J6041: DF top cover open jam

Target: 1,000-sheet finisher

The DF top cover open is detected during the DF operation.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the DF top cover	The DF top cover is not aligned to the other exterior covers.	Check if the DF top cover closes securely and reattach it if necessary. Fix or replace it if deformed.	
2	Checking the connection	The connector of the DF top cover switch is not connected properly.	Reconnect the connector of the DF top cover switch.	
3	Checking the DF top cover switch	The DF top cover switch is not attached properly, or it is faulty.	Reattach the DF top cover switch and execute U241 [Finisher] > [Top Cover]. If it does not operate correctly, replace it.	

### J6060: MT cover open jam

Target: Mail box

The MT cover open is detected during the paper conveying to the Mail Box.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the MT cover	The MT cover is not aligned with the other exterior covers.	Check if the MT cover is securely closed and reattached it if necessary. If the MT cover is deformed, repair or replace it.	
2	Checking the connection	The MT cover is not aligned with the other exterior covers.	Reconnect the connector of the MT cover switch.	
3	Checking the MT cover switch	The MT cover switch is not attached properly, or it is faulty.	Reattach the MT cover switch and execute U241 [Mail Box] > [Cover]. If it does not operate correctly, replace it.	

### J6100/J6101/J6102: DF paper entry sensor non-arrival jam

Target: J6100 (3,000-sheet finisher), J6101 (1,000-sheet finisher) and J6102 (Inner finisher)

- J6100/J6101: DF entry sensor does not turn on when passing the specified time after BR conveying sensor 2 turns on.
- J6102: DF entry sensor does not turn on when passing the specified time after the main unit exit sensor turns on.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the paper conveying parts	The parts such as the roller or the guide are not properly attached, or they are dirty, deformed or worn down.	Clean, correct and reattach the conveying parts such as roller and guide. If not repaired, replace it.	
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"> <li>• DF paper entry sensor - DF PWB</li> <li>• DF paper entry motor - DF PWB</li> <li>• DF paper entry motor - DF PWB (3,000/1,000-sheet finisher)</li> </ul>	
3	Checking the DF paper entry sensor	The DF paper entry sensor is not attached properly, or it is faulty.	Reattach the DF paper entry sensor and execute U241 [Finisher] > [HP]. If it does not operate correctly, replace it.	
4	(3,000/1,000-sheet finisher) Checking the DF paper entry motor	The DF paper entry motor is not attached properly, or it is faulty.	Reattach the DF paper entry motor and execute U240 [Motor] > [Feed In(H)]. If it does not operate correctly, replace it.	
5	Replacing the DF PWB	The DF PWB is faulty.	Replace the DF PWB.	

### J6110/J6111/J6112: DF paper entry sensor stay jam

Target: J6110 (3,000-sheet finisher), J6111 (1,000-sheet finisher) and J6112 (Inner finisher)

The DF paper entry sensor does not turn off after passing the specific time since it turned on.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the paper conveying parts	The parts such as the roller or the guide are not properly attached, or they are dirty, deformed or worn down.	Clean, correct and reattach the conveying parts such as roller and guide. If not repaired, replace it.	
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"> <li>• DF paper entry sensor - DF PWB</li> <li>• DF paper entry motor - DF PWB</li> <li>• DF paper entry motor - DF PWB (3,000/1,000-sheet finisher)</li> </ul>	
3	Checking the DF paper entry sensor	The DF paper entry sensor is not attached properly, or it is faulty.	Reattach the DF paper entry sensor and execute U241 [Finisher] > [HP]. If it does not operate correctly, replace it.	
4	(3,000/1,000-sheet finisher) Checking the DF paper entry motor	The DF paper entry motor is not attached properly, or it is faulty.	Reattach the DF paper entry motor and execute U240 [Motor] > [Feed In(H)]. If it does not operate correctly, replace it.	
5	Replacing the DF PWB	The DF PWB is faulty.	Replace the DF PWB.	

### J6200: DF sub exit sensor non-arrival jam

Target: 3,000-sheet finisher

The DF sub exit sensor does not turn on after passing the specific time since the DF paper entry sensor turned on.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the paper conveying parts	The parts such as the roller or the guide are not properly attached, or they are dirty, deformed or worn down.	Clean, correct and reattach the conveying parts such as roller and guide. If not repaired, replace it.	

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"> <li>• DF sub exit sensor - DF PWB</li> <li>• DF feed-shift solenoid - DF PWB</li> <li>• DF paper entry motor - DF PWB</li> <li>• DF exit motor - DF PWB</li> </ul>	
3	Checking the DF sub exit sensor	The DF sub exit sensor is not attached properly, or it is faulty.	Reattach the DF sub exit sensor and execute U241 [Finisher] > [Sub Tray Eject]. If it does not operate correctly, replace it.	
4	Checking the DF feed-shift solenoid	The DF feed-shift solenoid is not properly attached, or it is faulty.	Reattach the DF feed-shift solenoid and execute U240 [Solenoid] > [Sub Tray]. If it does not operate correctly, replace it.	
5	Checking the DF paper entry motor	The DF paper entry motor is not attached properly, or it is faulty.	Reattach the DF paper entry motor and execute U240 [Motor] > [Feed In(H)]. If it does not operate correctly, replace it.	
6	Checking the DF exit motor	The DF exit motor is not attached properly, or it is faulty.	Reattach the DF exit motor and execute U240 [Motor] > [Eject Conv(H)]. If it does not operate correctly, replace it.	
7	Replacing the DF PWB	The DF PWB is faulty.	Replace the DF PWB.	

### J6210: DF sub exit sensor stay jam

#### Target: 3,000-sheet finisher

The DF sub exit sensor does not turn off after passing the specific time since the DF sub exit sensor turned on.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the paper conveying parts	The parts such as the roller or the guide are not properly attached, or they are dirty, deformed or worn down.	Clean, correct and reattach the conveying parts such as roller and guide. If not repaired, replace it.	
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"> <li>• DF sub exit sensor - DF PWB</li> <li>• DF feed-shift solenoid - DF PWB</li> <li>• DF paper entry motor - DF PWB</li> <li>• DF exit motor - DF PWB</li> </ul>	
3	Checking the DF sub exit sensor	The DF sub exit sensor is not attached properly, or it is faulty.	Reattach the DF sub exit sensor and execute U241 [Finisher] > [Sub Tray Eject]. If it does not operate correctly, replace it.	
4	Checking the DF feed-shift solenoid	The DF feed-shift solenoid is not properly attached, or it is faulty.	Reattach the DF feed-shift solenoid and execute U240 [Solenoid] > [Sub Tray]. If it does not operate correctly, replace it.	
5	Checking the DF paper entry motor	The DF paper entry motor is not attached properly, or it is faulty.	Reattach the DF paper entry motor and execute U240 [Motor] > [Feed In(H)]. If it does not operate correctly, replace it.	
6	Checking the DF exit motor	The DF exit motor is not attached properly, or it is faulty.	Reattach the DF exit motor and execute U240 [Motor] > [Eject Conv(H)]. If it does not operate correctly, replace it.	
7	Replacing the DF PWB	The DF PWB is faulty.	Replace the DF PWB.	

### J6300/J6301: DF middle sensor non-arrival jam

Target: J6300 (3,000-sheet finisher), J6301 (1,000-sheet finisher)

The DF middle sensor does not turn on after passing the specific time since the DF paper entry sensor turned on.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the paper conveying parts	The parts such as the roller or the guide are not properly attached, or they are dirty, deformed or worn down.	Clean, correct and reattach the conveying parts such as roller and guide. If not repaired, replace it.	
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"> <li>• DF middle sensor - DF PWB</li> <li>• DF feed-shift solenoid - DF PWB (3,000-sheet finisher)</li> <li>• DF paper entry motor - DF PWB</li> <li>• DF middle motor - DF PWB</li> </ul>	
3	Checking the DF middle sensor	The DF middle sensor is not attached properly, or it is faulty.	Reattach the DF middle sensor. If it does not operate correctly, replace it.	
4	(3,000-sheet finisher) Checking the DF feed-shift solenoid	The DF feed-shift solenoid is not properly attached, or it is faulty.	Reattach the DF feed-shift solenoid and execute U240 [Solenoid] > [Sub Tray]. If it does not operate correctly, replace it.	
5	Checking the DF paper entry motor	The DF paper entry motor is not attached properly, or it is faulty.	Reattach the DF paper entry motor and execute U240 [Motor] > [Feed In(H)]. If it does not operate correctly, replace it.	
6	Checking the DF middle motor	The DF middle motor is not attached properly, or it is faulty.	Reattach the DF middle motor and execute U240 [Motor] > [Middle(H)]. If it does not operate correctly, replace it.	
7	Replacing the DF PWB	The DF PWB is faulty.	Replace the DF PWB.	

### J6310/J6311: DF middle sensor stay jam

Target: J6310 (3,000-sheet finisher), J6311 (1,000-sheet finisher)

The DF middle sensor does not turn off after passing the specific time since it turned on.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the paper conveying parts	The parts such as the roller or the guide are not properly attached, or they are dirty, deformed or worn down.	Clean, correct and reattach the conveying parts such as roller and guide. If not repaired, replace it.	
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"> <li>• DF middle sensor - DF PWB</li> <li>• DF exit clutch - DF PWB (3,000-sheet finisher)</li> <li>• DF exit motor - DF PWB</li> <li>• DF middle motor - DF PWB</li> </ul>	
3	Checking the DF middle sensor	The DF middle sensor is not attached properly, or it is faulty.	Reattach the DF middle sensor. If it does not operate correctly, replace it.	
4	(3,000-sheet finisher) Checking the DF exit clutch	The DF exit clutch is not attached properly, or it is faulty.	Reattach the DF exit clutch. If it does not operate correctly, replace it.	

Step	Check description	Assumed cause	Measures	Reference
5	Checking the DF exit motor	The DF exit motor is not attached properly, or it is faulty.	Reattach the DF exit motor and execute U240 [Motor] > [Eject Conv(H)]. If it does not operate correctly, replace it.	
6	Checking the DF middle motor	The DF middle motor is not attached properly, or it is faulty.	Reattach the DF middle motor and execute U240 [Motor] > [Middle(H)]. If it does not operate correctly, replace it.	
7	Replacing the DF PWB	The DF PWB is faulty.	Replace the DF PWB.	

**J6400/J6401: DF exit paper sensor non-arrival jam**

Target: J6400 (3,000-sheet finisher), J6401 (1,000-sheet finisher)

The DF exit paper sensor does not turn on after passing the certain time since the DF middle sensor turned on.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the paper conveying parts	The parts such as the roller or the guide are not properly attached, or they are dirty, deformed or worn down.	Clean, correct and reattach the conveying parts such as roller and guide. If not repaired, replace it.	
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"> <li>• DF middle sensor - DF PWB</li> <li>• DF exit paper sensor - DF PWB</li> <li>• DF exit motor - DF PWB</li> <li>• DF tray motor - DF PWB</li> </ul>	
3	Checking the DF middle sensor	The DF middle sensor is not attached properly, or it is faulty.	Reattach the DF middle sensor. If it does not operate correctly, replace it.	
4	Checking the DF exit paper sensor	The DF exit paper sensor is not attached properly, or it is faulty.	Reattach the DF exit paper sensor. If it does not operate correctly, replace it.	
5	Checking the DF exit motor	The DF exit motor is not attached properly, or it is faulty.	Reattach the DF exit motor and execute U240 [Motor] > [Eject Conv(H)]. If it does not operate correctly, replace it.	
6	Checking the DF tray motor	The DF tray motor is not attached properly, or it is faulty.	Reattach the DF tray motor and execute U240 [Motor] > [Tray]. If it does not operate correctly, replace it.	
7	Replacing the DF PWB	The DF PWB is faulty.	Replace the DF PWB.	

**J6410/J6411/J6412: DF exit paper sensor stay jam**

Target: J6410 (3,000-sheet finisher), J6411 (1,000-sheet finisher) and J6412 (Inner finisher)

Remark: J6412 is not detected when feeding the OHP film.

The DF exit paper sensor does not turn off after passing the certain time since it turned on.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the paper conveying parts	The parts such as the roller or the guide are not properly attached, or they are dirty, deformed or worn down.	Clean, correct and reattach the conveying parts such as roller and guide. If not repaired, replace it.	



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"> <li>• DF exit paper sensor - DF PWB</li> <li>• DF exit motor - DF PWB</li> <li>• DF tray motor - DF PWB</li> </ul>	
3	Checking the DF exit paper sensor	The DF exit paper sensor is not attached properly, or it is faulty.	Reattach the DF exit paper sensor. If it does not operate correctly, replace it.	
4	Checking the DF exit motor	The DF exit motor is not attached properly, or it is faulty.	Reattach the DF exit motor and execute U240 [Motor] > [Eject Conv(H)]. If it does not operate correctly, replace it.	
5	Checking the DF tray motor	The DF tray motor is not attached properly, or it is faulty.	Reattach the DF tray motor and execute U240 [Motor] > [Tray]. If it does not operate correctly, replace it.	
6	Replacing the DF PWB	The DF PWB is faulty.	Replace the DF PWB.	

### J6510/J6511/J6512: DF exit paper sensor stay jam when outputting the paper bundle

Target: J6510 (3,000-sheet finisher), J6511 (1,000-sheet finisher) and J6512 (Inner finisher)

The DF exit paper sensor does not turn off after starting the paper stack output.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the paper conveying parts	The parts such as the roller or the guide are not properly attached, or they are dirty, deformed or worn down.	Clean, correct and reattach the conveying parts such as roller and guide. If not repaired, replace it.	
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"> <li>• DF exit paper sensor - DF PWB</li> <li>• DF exit motor - DF PWB</li> <li>• DF tray motor - DF PWB</li> </ul>	
3	Checking the DF exit paper sensor	The DF exit paper sensor is not attached properly, or it is faulty.	Reattach the DF exit paper sensor. If it does not operate correctly, replace it.	
4	Checking the DF exit motor	The DF exit motor is not attached properly, or it is faulty.	Reattach the DF exit motor and execute U240 [Motor] > [Eject Conv(H)]. If it does not operate correctly, replace it.	
5	Checking the DF tray motor	The DF tray motor is not attached properly, or it is faulty.	Reattach the DF tray motor and execute U240 [Motor] > [Tray]. If it does not operate correctly, replace it.	
6	Replacing the DF PWB	The DF PWB is faulty.	Replace the DF PWB.	

### J6810/J6811/J6812: Front DF side registration jam

Target: J6810 (3,000-sheet finisher), J6811 (1,000-sheet finisher) and J6812 (Inner finisher)

DF side registration sensor 1 does not turn off after passing the specific time since DF side registration motor 1 turned on during the standby operation.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the front DF adjusting plate	The front DF adjusting plate is not properly attached, or it is dirty, deformed, or worn down.	Check if the DF front adjusting plate shifts manually. Clean and reattach it if it does not shift smoothly. Then, replace it if it is not fixed.	

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"> <li>• DF side registration sensor 1 - DF PWB</li> <li>• DF side registration motor 1 - DF PWB</li> </ul>	
3	Checking DF side registration sensor 1	DF side registration sensor 1 is not attached properly, or it is faulty.	Reattach DF side registration sensor 1 and execute U241 [Finisher] > [Width Tail HP]. If it does not operate correctly, replace it.	
4	Checking DF side registration motor 1	DF side registration motor 1 is not attached properly, or it is faulty.	Reattach DF side registration motor 1 and execute U240 [Motor] > [Width Test (A4R)] or [Width Test (LTR)]. If it does not operate correctly, replace it.	
5	Replacing the DF PWB	The DF PWB is faulty.	Replace the DF PWB.	

**J6910/J6911/J6912: Rear DF side registration jam**

**Target: J6910 (3,000-sheet finisher), J6911 (1,000-sheet finisher) and J6912 (Inner finisher)**

DF side registration sensor 2 does not turn off after passing the specific time since DF side registration motor 2 turned on during the standby operation.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the rear DF adjusting plate	The rear DF adjusting plate is not properly attached, or it is dirty, deformed, or worn down.	Check if the DF rear adjusting plate shifts manually. Clean and reattach it if it does not shift smoothly. Then, replace it if it is not fixed.	
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"> <li>• DF side registration sensor 2 - DF PWB</li> <li>• DF side registration motor 2 - DF PWB</li> </ul>	
3	Checking DF side registration sensor 2	DF width adjustment sensor 2 is not installed properly. Or, it is faulty.	Reattach DF side registration sensor 2 and execute U241 [Finisher] > [Width Tail HP]. If it does not operate correctly, replace it.	
4	Checking DF side registration motor 2	DF side registration motor 2 is not attached properly, or it is faulty.	Reattach DF side registration motor 2 and execute U240 [Motor] > [Width Test (A4R)] or [Width Test (LTR)]. If it does not operate correctly, replace it.	
5	Replacing the DF PWB	The DF PWB is faulty.	Replace the DF PWB.	

**J7000/J7001/J7002: DF staple jam**

**Target: J7000 (3,000-sheet finisher), J7001 (1,000-sheet finisher) and J7002 (Inner finisher)**

The DF staple home position cannot be detected after starting up DF slide motor. Or the motor lock-up is detected during DF staple motor (DF staple unit) operation.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the staple	Check if the upper BF registration guide shifts manually, and reattach it if it does not smoothly shift.	Check if the lower BF registration guide shifts manually, and reattach it if it does not smoothly shift.	
2	Checking the driving parts	The DF slide motor cannot rotate due to the excessive load.	Check if the DF slide motor rotates manually, and replace the DF staple unit if the motor does not rotate smoothly due to the faulty gear.	

Step	Check description	Assumed cause	Measures	Reference
3	Checking the DF staple unit	The DF staple table unit does not move normally.	If the DF staple unit is not shifted manually back and forth, repair the part that restricts the operation.	
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. <ul style="list-style-type: none"> <li>• DF slide motor - DF PWB</li> <li>• DF staple unit - DF staple relay PWB</li> <li>• DF staple relay PWB - DF PWB</li> </ul>	
5	Replacing the DF slide motor	The DF slide motor is faulty.	Execute U240 [Motor] > [Staple Move]. If the DF slide motor does not operate correctly, replace it.	
6	Replacing the DF staple unit	The DF staple unit is faulty.	Execute U240 [Motor] > [Staple]. If the DF staple motor does not operate correctly, replace the DF staple unit.	
7	Replacing the DF staple relay PWB	The DF staple relay PWB is faulty.	Replace the DF staple relay PWB.	
8	Replacing the DF PWB	The DF PWB is faulty.	Replace the DF PWB.	

### J7800: Mail Box exit non-arrival jam

#### Target: Mail box

MT tray exit sensor 1 does not turn on after passing the specific time since the paper is output from the main unit.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the belt	The belt and surrounding parts are not properly attached, are dirty, deformed or worn down.	Execute U240 [Mail Box] > [Conv] to check the belt operation. If the belt does not operate correctly, correct the belt and the neighboring parts (the feed-shift claw lever, guide, etc.). If not repaired, replace the parts.	
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"> <li>• MT tray exit sensor 1 - MT PWB</li> <li>• MT home position switch - MT PWB</li> <li>• MT drive motor - MT PWB</li> </ul>	
3	Checking MT tray exit sensor 1	MT tray exit sensor 1 is not attached properly, or it is faulty.	Reattach MT tray exit sensor 1. If it does not operate correctly, replace it.	
4	Checking the MT home position switch	The belt holding plate does not shift correctly since the MT home position switch is not attached properly, or it is faulty.	Reattach the MT home position sensor and execute U241 [Mail Box] > [Motor HP]. If it does not operate correctly, replace it.	
5	Checking the MT drive motor	The MT drive motor is not attached properly, or it is faulty.	Reattach the MT drive motor and execute U240 [Mail Box] > [Conv]. If it does not operate correctly, replace it.	
6	Replacing the MT PWB	The MT PWB is faulty.	Replace the MT PWB.	

### J7810: Mail Box exit stay jam

#### Target: Mail box

The MT tray exit sensor 1 does not turn off after passing the specific time since it turned on.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the belt	The belt and surrounding parts are not properly attached, are dirty, deformed or worn down.	Execute U240 [Mail Box] > [Conv] to check the belt operation. If the belt does not operate correctly, correct the belt and the neighboring parts (the feed-shift claw lever, guide, etc.). If not repaired, replace the parts.	
2	Reattaching the MT tray	The MT tray is not properly attached.	Reattach the MT tray.	
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"> <li>• MT tray exit sensor 1 - MT PWB</li> <li>• MT drive motor - MT PWB</li> </ul>	
4	Checking MT tray exit sensor 1	MT tray exit sensor 1 is not attached properly, or it is faulty.	Reattach MT tray exit sensor 1. If it does not operate correctly, replace it.	
5	Checking the MT drive motor	The MT drive motor is not attached properly, or it is faulty.	Reattach the MT drive motor and execute U240 [Mail Box] > [Conv]. If it does not operate correctly, replace it.	
6	Replacing the MT PWB	The MT PWB is faulty.	Replace the MT PWB.	

### J7900/J7901/J7902: DF paddle jam

Target: J7900 (3,000-sheet finisher), J7901 (1,000-sheet finisher) and J7902 (Inner finisher)

The DF paddle sensor on is not detected when passing 1s after starting up the DF paddle motor.

Step	Check description	Assumed cause	Measures	Reference
1	Removing the paper	The paper is jammed in the DF paddle.	Remove the jammed paper from the DF paddle.	
2	Checking the driving parts	The DF paddle does not rotate due to the excessive load.	Check if the DF paddle motor rotates manually. If the drive parts do not rotate smoothly due to damage, etc., 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. <ul style="list-style-type: none"> <li>• DF paddle sensor - DF PWB</li> <li>• DF paddle motor - DF PWB</li> </ul>	
4	Checking the DF paddle sensor	The DF paddle sensor is not attached properly, or it is faulty.	Reattach the DF paddle sensor and execute U241 [Finisher] > [Lead Paddle]. If it does not operate correctly, replace it.	
5	Checking the DF paddle motor	The DF paddle motor is not attached properly, or it is faulty.	Reattach the DF paddle motor and execute U240 [Motor] > [Beat]. If it does not operate correctly, replace it.	
6	Replacing the DF PWB	The DF PWB is faulty.	Replace the DF PWB.	

### J9000: No original feed from the DP

The DP feed sensor does not turn on after the specified times of retries of the original feed.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the original	The leading edge of the original is bent.	Remove the folded original.	
2	Checking the original	The original curls downward, or is wavy.	Correct or replace the original. If the original cannot be replaced, relocate the leading end of the original and the trailing end.	

Step	Check description	Assumed cause	Measures	Reference
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	Checking the paper path	The original is caught up by a piece of paper.	Remove paper strip or foreign objects adhering on the conveying path, or burrs on the parts such as guide, actuator, etc.	
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	Checking the actuator and the spring	The actuator does not operate properly.	The actuator or spring of the DP feed sensor is deformed or does not operate normally, 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. • DP feed sensor - DP PWB • DP feed motor - Relay connector - MT PWB	
9	Checking the DP feed sensor	The DP feed sensor is not attached properly, or it is faulty.	Reattach the DP feed sensor and execute U244 [Feed]. If it does not operate correctly, replace it.	
10	Checking the DP feed motor	The DP feed motor is not attached properly, or it is faulty.	Reattach the DP feed motor and execute U243 [Feed]. If it does not operate correctly, replace it.	
11	Replacing the DP PWB	The DP PWB is faulty.	Replace the DP PWB.	
12	Firmware upgrade	The firmware is not latest version.	Upgrade the engine firmware to the latest version.	
13	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### J9004: DP registration sensor non-arrival jam during the original reversing

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.	Remove paper strip or foreign objects adhering on the conveying path, or burrs on the parts such as guide, actuator, etc.	
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 the burrs are on the original conveying side of the DP feed-shift guide, remove them or replace the guide.	
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 bent.	Remove the folded original.	
7	Checking the original	The original curls downward, or is wavy.	Correct or replace the original. If the original cannot be replaced, relocate the leading end of the original and the trailing end.	

Step	Check description	Assumed cause	Measures	Reference
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 driving parts	The DP feed-shift guide does not switch since the DP feed-shift motor drive parts are faulty.	Check if the drive parts of the DP feedshift motor operate normally, clean and apply grease. If not repaired, replace it.	
11	Checking the actuator and the spring	The actuator does not operate properly.	The actuator or spring of the DP registration sensor is deformed or does not operate normally, replace it.	
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 registration sensor - DP PWB • DP feed-shift motor - Relay connector - MT PWB	
13	Checking the DP registration sensor	The DP registration sensor is not attached properly, or it is faulty.	Reattach the DP registration sensor and execute U244 [Regist]. If it does not operate correctly, replace it.	
14	Checking the DP feed-shift motor	The DP feed-shift motor is not attached properly, or it is faulty.	Reattach the DP feed-shift motor and execute U243 [Rev Motor]. If it does not operate correctly, replace it.	
15	Replacing the DP PWB	The DP PWB is faulty.	Replace the DP PWB.	
16	Firmware upgrade	The firmware is not latest version.	Upgrade the engine firmware to the latest version.	
17	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### J9010: Document processor open detection

The document processor open 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.	Reinsert the connector of the DP opening/closing sensor.	
3	Reattaching the DP opening/closing sensor	The DP opening/closing sensor comes off.	Reattach the DP opening/closing sensor.	
4	Replacing the DP opening/closing sensor	The DP opening/closing sensor is faulty.	Execute U244 [Open]. If the DP opening/closing sensor does not operate correctly, replace it.	

### J9110: DP feed sensor multi-feeding jam

The DP feed sensor does not turn off when passing the specified pulses after the DP registration sensor turns on.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the original	The leading edge of the original is bent.	Remove the folded original.	
2	Checking the original	The original curls downward, or is wavy.	Correct or replace the original. If the original cannot be replaced, relocate the leading end of the original and the trailing end.	
3	Checking the original	The original out of specification is used.	Explain users to use the original within the specifications.	

Step	Check description	Assumed cause	Measures	Reference
4	Checking the original	Foreign objects adhere on the original.	Remove the original with the foreign objects.	
5	Checking the DP retard roller	The paper separation force of the DP reverse roller is insufficient.	Clean the DP reverse roller surface. If worn down, replace it.	
6	Checking the DP feed-shift guide	The DP feed-shift guide comes off.	Reattach the DP feed-shift guide.	
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 actuator and the spring	The actuator does not operate properly.	The actuator or spring of the DP feed sensor is deformed or does not operate normally, replace it.	
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 feed sensor - DP PWB	
12	Checking the DP feed sensor	The DP feed sensor is dirty, is not attached properly, or is faulty.	Clean and reattach the DP feed sensor, and then execute U244 [Feed]. If it does not operate correctly, replace it.	
13	Replacing the DP PWB	The DP PWB is faulty.	Replace the DP PWB.	

### J9120: DP original sensor initial jam

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.	Execute U244 [Set]. If the DP original sensor does not operate correctly, replace it.	

### J9200: DP registration sensor non-arrival jam

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.	Remove paper strip or foreign objects adhering on the conveying path, or burrs on the parts such as guide, actuator, etc.	
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.	

Step	Check description	Assumed cause	Measures	Reference
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 burrs are on the original conveying surface of the DP conveying guide, remove burrs or replace the guide.	
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 bent.	Remove the folded original.	
8	Checking the original	The original curls downward, or is wavy.	Correct or replace the original. If the original cannot be replaced, relocate the leading end of the original and the trailing end, or reload the original upside down at the duplex scan.	
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 actuator and the spring	The actuator does not operate properly.	The actuator or spring of the DP registration sensor is deformed or does not operate normally, replace it.	
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 registration sensor - DP PWB • DP conveying motor - Relay connector - MT PWB	
13	Checking the DP registration sensor	The DP registration sensor is not attached properly, or it is faulty.	Reattach the DP registration sensor and execute U244 [Regist]. If it does not operate correctly, replace it.	
14	Checking the DP conveying motor	The DP conveying motor is not attached properly, or it is faulty.	Reattach the DP conveying motor and execute U243 [Conv Motor (CW)]. If it does not operate correctly, replace it.	
15	Replacing the DP PWB	The DP PWB is faulty.	Replace the DP PWB.	
16	Firmware upgrade	The firmware is not latest version.	Upgrade the engine firmware to the latest version.	
17	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### J9210: DP registration sensor stay jam

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.	Remove paper strip or foreign objects adhering on the conveying path, or burrs on the parts such as guide, actuator, etc.	
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.	



Step	Check description	Assumed cause	Measures	Reference
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 burrs are on the original conveying surface of the DP conveying guide, remove burrs or replace the guide.	
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 bent.	Remove the folded original.	
8	Checking the original	The original curls downward, or is wavy.	Correct or replace the original. If the original cannot be replaced, relocate the leading end of the original and the trailing end, or reload the original upside down at the duplex scan.	
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 actuator and the spring	The actuator does not operate properly.	The actuator or spring of the DP registration sensor is deformed or does not operate normally, replace it.	
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"> <li>• DP registration sensor - DP PWB</li> <li>• DP conveying motor - Relay connector - MT PWB</li> </ul>	
13	Checking the DP registration sensor	The DP registration sensor is not attached properly, or it is faulty.	Reattach the DP registration sensor and execute U244 [Regist]. If it does not operate correctly, replace it.	
14	Checking the DP conveying motor	The DP conveying motor is not attached properly, or it is faulty.	Reattach the DP conveying motor and execute U243 [Conv Motor(CW)]. If it does not operate correctly, replace it.	
15	Replacing the DP PWB	The DP PWB is faulty.	Replace the DP PWB.	
16	Firmware upgrade	The firmware is not latest version.	Upgrade the engine firmware to the latest version.	
17	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### J9220: DP registration sensor initial jam

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	Checking the actuator and the spring	The actuator does not operate properly.	The actuator or spring of the DP registration sensor is deformed or does not operate normally, replace it.	

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Step	Check description	Assumed cause	Measures	Reference
3	Cleaning the DP registration sensor	The DP registration sensor is dirty.	Clean the DP registration sensor.	
4	Checking the connection	The connector of the DP registration sensor is not properly connected.	Reinsert the DP registration sensor connector.	
5	Replacing the DP registration sensor	The DP registration sensor is faulty.	Execute U244 [Regist]. If the DP registration sensor does not operate correctly, replace it.	

**(4) Other Feeding/Conveying Failures**

No.	Contents	Condition
(4-1)	Original dog-ear	The leading edge of the original gets dog-ear when scanning the downward curl original through the DP.

**Content of Feeding/Conveying Failures**

**(4-1) Original dog-ear**


The leading edge of the original gets dog-ear when scanning the downward curl original through the DP.

Step	Check description	Assumed cause	Measures	Reference
1	Replacing the scanning guide	The leading edge of the original contacts the DP feed-shift guide.	Replace the scanning guide with the assembly with the sponge and film (302R39410_).	

## 7 - 3 Self Diagnostic

### (1) Self diagnostic function

This machine is equipped with a self-diagnostic function. When a problem is detected, the machine stops operating and displays an error message on the operation panel. An error message consists of a message prompting a contact to service personnel and a four-digit error code indicating the type of error.

 **Important**

- 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.
- 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.

### (2) Self diagnostic error codes

#### (2-1) 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	Engine EEPROM reading / writing error
C0160	EEPROM data error
C0170	Charger count error
C0180	Machine serial number mismatch
C0350	Panel PWB communication error (Electronic volume I2C communication 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	PC FAX Image data transmission error
C0920	FAX file system error
C0950	FAX job stay error
C0970	24V power interruption detection
C1010	Lift motor 1 error
C1020	PF lift motor 1 error
C1030	PF lift motor 2 error
C1040	PF lift motor 3 error
C1800	Paper Feeder communication error
C1810	Paper Feeder communication error
C1900	Paper Feeder EEPROM error
C1910	Paper feeder EEPROM error
C2101	Developer motor K error
C2102	Developer motor C/M/Y steady-state error

Error code	Contents
C2112	Developer motor C/M/Y startup error
C2201	Drum motor K steady-state error
C2202	Drum motor C/M/Y steady-state error
C2211	Drum motor K startup error
C2211	Drum motor C/M/Y startup error
C2500	Feed motor error
C2600	PF feed motor error
C2610	PF feed motor error
C2700	Full-color release error
C2760	Transfer motor startup error
C2820	Transfer motor steady-state error
C3100	Carriage error
C3200	LED lamp startup error
C3300	CCD AGC error
C3500	Communication error between the scanner and the ASIC
C3800	AFE error
C4001	Polygon motor startup error
C4011	Polygon motor steady-state error
C4101	BD initialization error K
C4102	BD initialization error C
C4103	BD initialization error M
C4104	BD initialization error Y
C4201	BD steady-state error
C4600	LSU cleaning motor error
C4700	VIDEO ASIC device error
C5101	Main high voltage error BK
C5102	Main high-voltage error C
C5103	Main high-voltage error M
C5104	Main high-voltage error Y
C6000	Fuser main heater broken
C6020	Fuser thermistor 1 high temperature error
C6030	Broken fuser thermistor 1 error
C6040	Fuser main heater error
C6050	Fuser thermistor 1 low temperature error
C6200	Fuser sub heater error
C6220	Fuser sub heater high temperature error
C6230	Broken fuser thermistor 2 error
C6250	Fuser thermistor 2 low temperature error
C6400	Zero-cross signal error
C6610	Fuser 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

Error code	Contents
C7103	Toner sensor M error
C7104	Toner sensor Y error
C7200	Internal thermistor error (Developer)
C7210	Inner thermistor short-circuited (developer)
C7221	Broken LSU thermistor error
C7231	LSU thermistor short-circuited
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	Front ID sensor error
C7602	Rear ID sensor error
C7611	Bias calibration read value error BK
C7612	Bias calibration read value error C
C7613	Bias calibration read value error M
C7614	Bias calibration read value error Y
C7620	Automatic color registration failure
C7800	Outer thermistor broken
C7810	Outer thermistor short-circuited
C7901	Drum unit K EEPROM error
C7902	Drum unit C EEPROM error
C7903	Drum unit M EEPROM error
C7904	Drum unit Y EEPROM error
C7911	Developer unit K EEPROM error
C7912	Developer unit C EEPROM error
C7913	Developer unit M EEPROM error
C7914	Developer unit Y EEPROM error
C8000	Incompatible finisher detection error
C8090	DF paddle motor error
C8100	DF exit release motor error
C8140	DF tray motor error 1
C8160	DF tray motor error 3
C8170	DF side registration motor 1 error (1)
C8180	DF side registration motor 1 error (2)
C8190	DF side registration motor 2 error (1)
C8200	DF side registration motor 2 error (2)
C8210	DF slide motor front/rear error
C8230	DF slide motor error 1
C8260	DF middle motor HP detection error
C8500	Main program error / Mail Box communication error
C8510	MB conveying motor error 1
C8520	MB conveying motor error 2
C8800	Main program error / Engine - DF communication error (DF)

Error code	Contents
C8900	DF backup error
C9180	DP feed-shift motor error
C9500	Image processing PWB error A
C9540	Backup data error

## (2-2) Content of Self Diagnostic

### C0030: FAX PWB system error

The FAX processing cannot be continued due to the FAX firmware error.

Step	Check description	Assumed cause	Measures	Reference
1	Reinstalling the FAX PWB	The FAX PWB does not operate properly.	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.	
2	Firmware upgrade	The firmware is faulty.	Reinstall the FAX firmware.	
3	Replacing the FAX PWB	The FAX PWB is faulty.	Replace the FAX 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	Firmware upgrade	The FAX firmware is faulty.	Reinstall the FAX firmware.	

### C0100: Backup memory device error

An 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 unplug the power cord. After 5s passes, reconnect the power cord and turn on the power switch.	
2	Checking the EEPROM	The EEPROM is not properly attached.	Reinstall the EEPROM on the main PWB.	
3	Checking the EEPROM	The EEPROM is faulty.	Replace the EEPROM. Then, execute U004 as service call error C0180 will appear after replacing the EEPROM.	
4	Checking the main 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 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 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 unplug the power cord. After 5s passes, reconnect the power cord and turn on the power switch.	

Step	Check description	Assumed cause	Measures	Reference
2	Checking the MAC address	The MAC address is incorrect.	Replace the main 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 unplug the power cord. After 5s passes, reconnect the power cord and turn on the power switch.	
2	Checking the main 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 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 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 unplug the power cord. After 5s passes, reconnect the power cord and turn on the power switch.	
2	Executing U021	The flash memory does not operate properly.	Execute U021.	
3	Checking the main 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 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 PWB.	

### C0150: Engine EEPROM reading / writing 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 unplug the power cord. After 5s passes, reconnect the power cord and turn on the power switch.	
2	Checking the EEPROM	The EEPROM is not properly attached.	Reattach the EEPROM on the engine PWB.	
3	Replacing the EEPROM	The EEPROM is faulty.	Replace the EEPROM on the engine PWB and execute U004.	
4	Checking the 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 engine PWB, reconnect the connector of the wire, and reconnect the FFC terminal. If the wire or the FFC is faulty, repair or replace it. If not resolved, replace the 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 unplug the power cord. After 5s passes, reconnect the power cord and turn on the power switch.	
2	Executing U021	The storage data in the EEPROM on the engine PWB is faulty.	Execute U021.	
3	Replacing the EEPROM	The EEPROM is faulty.	Replace the EEPROM on the 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	Checking the machine serial number	The main PWB for the different main unit is installed.	Check the machine serial Nos of MAIN and ENGINE at U004, and install the correct main PWB if the MAIN No. differs.	
2	Checking the machine serial number	The EEPROM for the different main unit is installed.	Check the machine serial Nos of MAIN and ENGINE at U004, and install the correct EEPROM on the engine PWB if the ENGINE machine serial No. differs.	
3	Replacing the main PWB	The main PWB is faulty.	When the MAIN machine serial No. differs at U004, replace the main PWB and execute U004.	
4	Checking the EEPROM	The EEPROM is faulty.	In case if the machine serial No. registered in the engine PWB is different in U004, reattach the EEPROM on the engine PWB. If it is not fixed, replace the EEPROM and execute U004.  Note: Be sure not to execute U004 if the machine serial No. is different from the machine serial No. indicated on the main unit. Otherwise, the different machine serial No. will be overwritten. (Don't select [Execute] and press the [Start] key.)	
5	Replacing the engine PWB	The engine PWB is faulty.	Replace the 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	Checking the machine serial number	The main PWB for the different main unit is installed.	Check the machine serial Nos of MAIN and ENGINE at U004, and install the correct main PWB if the MAIN No. differs.	
2	Checking the machine serial number	The EEPROM for the different main unit is installed.	Check the machine serial Nos of MAIN and ENGINE at U004, and install the correct EEPROM on the engine PWB if the ENGINE machine serial No. differs.	
3	Replacing the main PWB	The main PWB is faulty.	When the MAIN machine serial No. differs at U004, replace the main PWB and execute U004.	

Step	Check description	Assumed cause	Measures	Reference
4	Checking the EEPROM	The EEPROM is faulty.	In case if the machine serial No. registered in the engine PWB is different in U004, reattach the EEPROM on the engine PWB. If it is not fixed, replace the EEPROM and execute U004.  Note: Be sure not to execute U004 if the machine serial No. is different from the machine serial No. indicated on the main unit. Otherwise, the different machine serial No. will be overwritten. (Don't select [Execute] and press the [Start] key.)	
5	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C0350: Panel PWB communication error (Electronic volume I2C communication error)

Since NACK was received during the I2C communication, the retry was repeated 5 times and the initial command was transmitted, and then the retry was repeated 5 times again. After that, NACK was also received.

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	The operation of the operation panel PWB is faulty.	Turn off the power switch and unplug the power cord. After 5s passes, reconnect the power cord 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. • Operation panel PWB - Main PWB	
3	Replacing the operation panel PWB	The operation panel PWB is faulty.	Replace the operation panel PWB.	
4	Replacing the main PWB	The main PWB is faulty.	Replace the main 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 PWB does not properly operate.	Turn off the power switch and unplug the power cord. After 5s passes, reconnect the power cord and turn on the power switch.	
2	Checking the 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 engine PWB, reconnect the connector of the wire, and reconnect the FFC terminal. If the wire or the FFC is faulty, repair or replace it. If not resolved, replace the engine PWB.	

### C0640: Flash memory (SSD) error

The SSD I/O error is detected when accessing the file after the ready mode.

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	The SSD (HD-6 or HD-7) is faulty.	Turn off the power switch and unplug the power cord. After 5s passes, reconnect the power cord and turn on the power switch.	
2	Checking the SSD (HD-6 or HD-7)	The SSD (HD-6 or HD-7) is faulty.	Turn off the power switch and unplug the power cord. Then, reinstall the SSD (HD-6 or HD-7).	

Step	Check description	Assumed cause	Measures	Reference
3	Reconnecting the SSD (HD-6 or HD-7)	The connection with the main PWB is faulty.	Reconnect the KUIO connector on the main PWB and the SSD (HD-6 or HD-7).	
4	Initializing the SSD (HD-6 or HD-7)	The storage data in the SSD (HD-6 or HD-7) is faulty.	Initialize the SSD (HD-6 or HD-7) by executing U024.	
5	Replacing the SSD (HD-6 or HD-7)	The SSD (HD-6 or HD-7) is faulty.	Replace the SSD (HD-6 or HD-7).	
6	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

### C0800: Image processing error

The print sequence jam (J010x) was detected 2 times continuously.

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 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 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 PWB.	

### C0830: FAX PWB flash program area checksum error

The program stored in the flash memory on the FAX PWB is broken so it cannot perform.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is faulty.	Reinstall the FAX firmware.	
2	Reinstalling the FAX PWB	The FAX PWB does not operate properly.	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	Initializing the fax	The data in the FAX PWB is faulty.	Execute U600 to initialize the FAX.	
4	Replacing the FAX PWB	The FAX PWB is faulty.	Replace the FAX PWB.	

### C0840: RTC error ('Time for maintenance T' appears)

1. The normal communication is not available with the RTC device.
2. There is mismatch in the RTC data due to dead battery or short-circuit with metal parts.

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 main PWB	The main PWB is not properly attached.	Retighten the screws for the PWB.	
3	Checking the main 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 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 PWB.	

### C0870: PC FAX Image data transmission error

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 FAX PWB	The FAX PWB does not operate properly.	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.	
2	Initializing the fax	The data in the FAX PWB is faulty.	Execute U600 to initialize the FAX.	
3	Firmware upgrade	The FAX firmware is faulty.	Upgrade the fax firmware to the latest version.	
4	Replacing the FAX PWB	The FAX PWB is faulty.	Replace the FAX PWB.	

### C0920: FAX file system error

The backup data could not be stored since the file system of the flash memory is faulty.

Step	Check description	Assumed cause	Measures	Reference
1	Initializing the fax	FAX control values are incorrect.	Execute U600 to initialize the FAX.	
2	Reinstalling the FAX PWB	The FAX PWB does not operate properly.	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 faulty.	Reinstall the FAX firmware.	
4	Replacing the FAX PWB	The FAX PWB is faulty.	Replace the FAX PWB.	

### C0950: FAX job stay error

Print processing of the received FAX could not be executed and the job continues staying.

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	The printing process is not properly executed.	Turn off the power switch and unplug the power cord. After 5s passes, reconnect the power cord and turn on the power switch.	
2	Firmware upgrade	The firmware is faulty.	Upgrade the main firmware to the latest version.	

### C0970: 24V power interruption detection

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	The engine PWB does not operate properly.	Turn off the power switch and unplug the power cord. After 5s passes, reconnect the power cord and turn on the power switch.	
2	Checking the interlock switch	The interlock switch does not turn on.	Check if the interlock switch turns on by closing the front cover. If it does not turn on, reattach the interlock switch.	
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. • Lower voltage PWB - Engine PWB	
4	Replacing the low voltage PWB	The low voltage PWB is faulty.	Replace the low voltage PWB.	
5	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C1010: Lift motor 1 error

1. The lift sensor does not turn on if 12s passes after inserting the cassette.
2. The lift sensor does not turn on after passing 1s from ascending control since it turned off during the printing.

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 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. • Lift sensor - Engine PWB	
4	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.	
5	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.	
6	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version.	
7	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C1020: PF lift motor 1 error

#### Target: Paper feeder (500-sheet x 1)

1. The PF lift sensor does not turn on if 12s passes after inserting the cassette.
2. The PF lift sensor does not turn on after passing 1s from ascending control since it turned off during the printing.
3. The current of the PF lift motor exceeding the specified value is detected for 500ms or more continuously during the PF lift motor operation.

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 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 motor - PF PWB • PF lift sensor - PF PWB • PF PWB - Drawer connector - PF PWB (500-sheetx1) • PF PWB (500-sheetx1) - Drawer connector - Engine PWB	
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.	
7	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version.	
8	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C1030: PF lift motor 2 error

#### Target: Paper feeder (500-sheet x 2), large capacity feeder (2,000-sheet)

1. The PF lift sensor does not turn on if 12s (500-sheet feeder or 2 cassettes of 500-sheet feeder) or 17s (2000-sheet feeder) passes after inserting the cassette.
2. The PF lift sensor does not turn on after passing 1s from the ascending control since the it turned off during the printing.
3. The current of the PF lift motor exceeding the specified value is detected for 500ms or more continuously during the PF lift motor operation.

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 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. <ul style="list-style-type: none"> <li>• PF lift motor - PF PWB</li> <li>• PF lift sensor - PF PWB</li> <li>• PF PWB - Drawer connector - PF PWB (500-sheetx1)</li> <li>• PF PWB (500-sheetx1) - Drawer connector - Engine PWB</li> </ul>	
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.	
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.	
7	Replacing the PF PWB	The PF PWB is faulty.	Replace the PF PWB for the paper feeder (500-sheetx1).	
8	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version.	
9	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C1040: PF lift motor 3 error

#### Target: Paper feeder (500-sheet x 2)

1. The PF lift sensor does not turn on if 12s passes after inserting the cassette.

2. The PF lift sensor does not turn on after passing 1s from ascending control since it turned off during the printing.
3. The current of the PF lift motor exceeding the specified value is detected for 500ms or more continuously during the PF lift motor operation.

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 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. <ul style="list-style-type: none"> <li>• PF lift motor - PF PWB</li> <li>• PF lift sensor - PF PWB</li> <li>• PF PWB - Drawer connector - PF PWB (500-sheetx1)</li> <li>• PF PWB (500-sheetx1) - Drawer connector - Engine PWB</li> </ul>	
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.	
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.	
7	Replacing the PF PWB	The PF PWB is faulty.	Replace the PF PWB for the paper feeder (500-sheetx1).	
8	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version.	
9	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C1800: Paper Feeder communication error

#### Target: Paper feeder (500-sheet x 1)

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. <ul style="list-style-type: none"> <li>• PF PWB - Drawer connector - Engine PWB</li> </ul>	
3	Replacing the PF PWB	The PF PWB is faulty.	Replace the PF PWB.	
4	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version.	
5	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C1810: Paper Feeder communication error

Target: Paper feeder (500-sheet x 2), large capacity feeder (2,000-sheet)

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 PWB - Drawer connector - PF PWB (500-sheetx1) • PF PWB (500-sheetx1) - Drawer connector - Engine PWB	
3	Firmware upgrade	The firmware is faulty.	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 for the paper feeder (500-sheetx1).	
6	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C1900: Paper Feeder EEPROM error

Target: Paper feeder (500-sheet x 1)

For the internal count

The writing data and the reading data mismatch 3 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 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 PWB - Drawer connector - Engine PWB	
3	Replacing the PF PWB	The PF PWB is faulty.	Replace the PF PWB.	

### C1910: Paper feeder EEPROM error

Target: Paper feeder (500-sheet x 2), large capacity feeder (2,000-sheet)

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.	



Step	Check description	Assumed cause	Measures	Reference
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 PWB - Drawer connector - PF PWB (500-sheetx1)	
3	Replacing the PF PWB	The PF PWB is faulty.	Replace the PF PWB.	
4	Replacing the PF PWB	The PF PWB is faulty.	Replace the PF PWB for the paper feeder (500-sheetx1).	

### C2101: Developer motor K error

The steady signal turns off for 2s continuously after developer motor K is stabilized.

Step	Check description	Assumed cause	Measures	Reference
1	Replacing the gear	The gear does not rotate correctly.	Replace the developer unit drive gear if it is faulty.	
2	Replacing the developer unit	The developer roller does not rotate correctly.	Check if the developer roller rotates. If not, replace developer unit K.	
3	Checking the driving parts	The drive parts do not operate correctly.	Execute U030 [Feed] to check if the developer motor K drive gear rotates or has excessive load. Apply grease and repair the parts.	
4	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinsert the following wire connectors. If there is no continuity, replace the wire.  • Developer motor K - Engine PWB	
5	Checking developer motor K	Developer motor K is faulty.	Reattach developer motor K. If not repaired, replace it.	
6	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version.	
7	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C2102: Developer motor C/M/Y steady-state error

The steady signal turns off for 1s continuously after developer motor C/M/Y started up.

Step	Check description	Assumed cause	Measures	Reference
1	Replacing the gear	The gear does not rotate correctly.	Replace the developer unit drive gear if it is faulty.	
2	Replacing the developer unit	The developer roller does not rotate correctly.	Replace developer unit C, M or Y if the developer roller does not rotate.	
3	Checking the driving parts	The drive parts do not operate correctly.	Execute U030 [DLP(CMY)] to check if the developer motor C/M/Y drive gear rotates or has excessive load. Apply grease and repair the parts.	
4	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinsert the following wire connectors. If there is no continuity, replace the wire.  • Developer motor C/M/Y - Engine PWB	
5	Checking developer motor C/M/Y	Developer motor C/M/Y is faulty.	Reattach developer motor C/M/Y. If not repaired, replace it.	
6	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version.	
7	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C2112: Developer motor C/M/Y startup error

The steady signal does not turn on for 2s continuously after developer motor C/M/Y started up.

Step	Check description	Assumed cause	Measures	Reference
1	Replacing the gear	The gear does not rotate correctly.	Replace the developer unit drive gear if it is faulty.	
2	Replacing the developer unit	The developer roller does not rotate correctly.	Replace developer unit C, M or Y if the developer roller does not rotate.	
3	Checking the driving parts	The drive parts do not operate correctly.	Execute U030 [DLP(CMY)] to check if the developer motor C/M/Y drive gear rotates or has excessive load. Apply grease and repair the parts.	
4	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinsert the following wire connectors. If there is no continuity, replace the wire. • Developer motor C/M/Y - Engine PWB	
5	Checking developer motor C/M/Y	Developer motor C/M/Y is not attached properly, or it is faulty.	Reattach developer motor C/M/Y. If not repaired, replace it.	
6	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version.	
7	Checking the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C2201: Drum motor K steady-state error

The steady signal turns off for 1s continuously after drum motor K is stabilized.

Step	Check description	Assumed cause	Measures	Reference
1	Replacing the gear	The gear does not rotate correctly.	Replace the gears driving the drum unit if they are faulty.	
2	Replacing the drum unit	The drum does not rotate smoothly.	Check if the drum or the drum screw is rotated, and replace drum unit K if not rotated.	
3	Checking the driving parts	The drive parts do not operate correctly.	Execute U030 [Feed] to check if the drum motor K drive gear rotates or has excessive load. Apply grease and repair the parts.	
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. • Drum motor K - Engine PWB	
5	Checking drum motor K	Drum motor K is not properly attached, or it is faulty.	Reattach drum motor K. If not repaired, replace it.	
6	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version.	
7	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C2202: Drum motor C/M/Y steady-state error

The steady signal turns off for 1s continuously after drum motor C/M/Y started up.

Step	Check description	Assumed cause	Measures	Reference
1	Replacing the gear	The gear does not rotate correctly.	Replace the gears driving the drum unit if they are faulty.	
2	Replacing the drum unit	The drum does not rotate smoothly.	Check if the drum or the drum screw is rotated, and replace drum unit C/M/Y if not rotated.	

Step	Check description	Assumed cause	Measures	Reference
3	Checking the driving parts	The drive parts do not operate correctly.	Execute U030 [Feed] to check if the drum motor CMY drive gear rotates or has excessive load. Apply grease and repair the parts.	
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. • Drum motor C/M/Y - Engine PWB	
5	Checking drum motor C/M/Y	Drum motor C/M/Y is not properly attached, or it is faulty.	Reattach drum motor C/M/Y. If not repaired, replace it.	
6	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version.	
7	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C2211: Drum motor K startup error

The drum motor K is not in the steady state when passing 2s after the drive start.

Step	Check description	Assumed cause	Measures	Reference
1	Replacing the gear	The gear does not rotate correctly.	Replace the gears driving the drum unit if they are faulty.	
2	Replacing the drum unit	The drum does not rotate smoothly.	Check if the drum or the drum screw is rotated, and replace drum unit K if not rotated.	
3	Checking the driving parts	The drive parts do not operate correctly.	Execute U030 [Feed] to check if the drum motor K drive gear rotates or has excessive load. Apply grease and repair the parts.	
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. • Drum motor K - Engine PWB	
5	Checking drum motor K	Drum motor K is not properly attached, or it is faulty.	Reattach drum motor K. If not repaired, replace it.	
6	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version.	
7	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C2211: Drum motor C/M/Y startup error

The drum motor C/M/Y is not in the steady state when passing 2s after the drive start.

Step	Check description	Assumed cause	Measures	Reference
1	Replacing the gear	The gear does not rotate correctly.	Replace the gears driving the drum unit if they are faulty.	
2	Replacing the drum unit	The drum does not rotate smoothly.	Check if the drum or the drum screw is rotated, and replace drum unit C/M/Y if not rotated.	
3	Checking the driving parts	The drive parts do not operate correctly.	Execute U030 [Feed] to check if the drum motor CMY drive gear rotates or has excessive load. Apply grease and repair the parts.	
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. • Drum motor C/M/Y - Engine PWB	

Step	Check description	Assumed cause	Measures	Reference
5	Checking drum motor C/M/Y	Drum motor C/M/Y is not properly attached, or it is faulty.	Reattach drum motor C/M/Y. If not repaired, replace it.	
6	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version.	
7	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C2500: Feed motor error

- 1.The ready signal does not turn on when passing 2s after starting the feed motor drive.
2. The ready signal does not turn on for 1s continuously after the feed motor is in the steady state.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the driving parts	The drive parts do not operate correctly.	Execute U030 [Feed]. Check if the feed roller or drive gear rotates or has an excessive load. Apply grease and repair the parts.	
2	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinsert the following wire connectors. If there is no continuity, replace the wire. • Feed motor - Engine PWB	
3	Checking the feed motor	The feed motor is not attached properly, or it is faulty.	Reattach the feed motor. If not repaired, replace it.	
4	Replacing the feed drive unit	Parts in the feed drive unit are faulty.	Replace feed drive unit.	
5	Firmware upgrade	The firmware is faulty.	Upgrade the engine firmware to the latest version.	
6	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C2600: PF feed motor error

#### Target: Paper feeder (500-sheet x 1)

The ready signal does not turn on when passing 2s after starting up the PF feed motor.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the driving parts	The drive parts do not operate correctly.	Select U247 [PF] > [Motor] > [On] and execute it. Check if the PF feed roller or drive gear rotates correctly or has an excessive load. Apply grease and repaired the parts.	
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 connection	The paper feeder is not properly connected to the main unit, 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 PWB - Drawer connector - Engine PWB	
4	Checking the PF feed motor	The PF feed motor is not attached properly, or it is faulty.	Reattach the PF feed motor. If not repaired, replace it.	
5	Firmware upgrade	The firmware is faulty.	Upgrade the firmware to the latest version.	
6	Replacing the PF PWB	The PF PWB is faulty.	Replace the PF PWB.	

Step	Check description	Assumed cause	Measures	Reference
7	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

**C2610: PF feed motor error**

**Target: Paper feeder (500-sheet x 2), large capacity feeder (2,000-sheet)**

The ready signal does not turn on when passing 2s after starting up the PF feed motor.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the driving parts	The drive parts do not operate correctly.	Select U247 [2PF] or [LCF] > [Motor] > [On] and execute it. Check if the PF feed roller or drive gear rotates correctly or has an excessive load. Apply grease and repaired the parts.	
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	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 PWB - Drawer connector - PF PWB (500-sheetx1) • PF PWB (500-sheetx1) - Drawer connector - Engine PWB	
5	Checking the PF feed motor	The PF feed motor is not attached properly, or it is faulty.	Reattach the PF feed motor. If not repaired, replace it.	
6	Firmware upgrade	The firmware is faulty.	Upgrade the firmware to the latest version.	
7	Replacing the PF PWB	The PF PWB is faulty.	Replace the PF PWB.	
8	Replacing the PF PWB	The PF PWB is faulty.	Replace the PF PWB for the paper feeder (500-sheetx1).	
9	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

**C2700: Full-color release error**

The position signal does not change when passing 2s while the transfer belt release is changed.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the driving parts	The drive parts do not operate correctly.	Execute U030 [Belt Release]. Check if the drive gear rotates or has an excessive load. Apply grease and repair the parts.	
2	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinsert the following wire connectors. If there is no continuity, replace the wire. • TC belt release sensor 1, 2 - Engine PWB • Transfer release motor - Engine PWB	
3	Checking the TC belt release sensor	The TC belt release sensor comes off, or it is faulty.	Reattach TC belt release sensor 1, 2. If not repaired, replace them.	
4	Checking the transfer release motor	The transfer release motor is not attached properly, or it is faulty.	Reattach the transfer release motor. If not repaired, replace it.	

Step	Check description	Assumed cause	Measures	Reference
5	Replacing the primary transfer unit	The lift drive of the primary transfer roller is faulty.	Replace the primary transfer unit.	
6	Firmware upgrade	The engine firmware is faulty.	Upgrade the engine firmware to the latest version.	
7	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C2760: Transfer motor startup error

The ready signal does not turn on when passing 2s after starting up the motor.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the driving parts	The transfer motor drive parts are faulty.	Execute U030 [Feed]. Check if the drive gear rotates or has an excessive load. Apply grease and repair the parts.	
2	Replacing the primary transfer unit	The primary transfer unit drive parts are faulty, or the transfer belt is faulty.	Replace the primary transfer unit when the primary transfer unit drive parts are faulty or the transfer belt does not rotate correctly.	
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. • Transfer motor - Engine PWB	
4	Replacing the transfer motor	The transfer motor is faulty.	Reattach the transfer motor. If not repaired, replace it.	
5	Firmware upgrade	The firmware is faulty.	Upgrade the engine firmware to the latest version.	
6	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C2820: Transfer motor steady-state error

The steady state signal is off for 1s continuously after the transfer motor is in the steady state.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the driving parts	The drive transmission from the transfer motor is faulty.	Execute U030 [Feed]. Check if the drive gear rotates or has an excessive load. Apply grease and repair the parts.	
2	Replacing the primary transfer unit	The primary transfer unit drive parts are faulty, or the transfer belt is faulty.	Replace the primary transfer unit when the primary transfer unit drive parts are faulty or the transfer belt does not rotate correctly.	
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. • Transfer motor - Engine PWB	
4	Replacing the transfer motor	The transfer motor is faulty.	Reattach the transfer motor. If not repaired, replace it.	
5	Firmware upgrade	The firmware is faulty.	Upgrade the engine firmware to the latest version.	
6	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C3100: Carriage error

The position of the home position sensor (turning on / off) mismatches when turning the main power on or finishing the original scan by the scanner.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the scanner movement	A load is applied to the scanner movement.	If there is an excessive load to the scanner movement when manually shifting the scanner carriage, check if foreign material is on the scanner drive belt. Then, clean the scanner drive belt and apply the grease to the ISU shaft.	
2	Checking the tension of the drive belt	A load is applied to the scanner movement since the drive belt tension is improper.	Adjust the drive belt tension 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 reconnect the FFC. 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"> <li>• Home position sensor - CCD PWB</li> <li>• Scanner motor - Engine PWB</li> <li>• CCD PWB - Main PWB</li> <li>• Main PWB - Engine PWB</li> </ul>	
4	Checking the home position sensor	The home position sensor is not properly attached, or it is faulty.	Reattach the home position sensor. If not repaired, replace it.	
5	Checking the scanner motor	The scanner motor is not attached properly or faulty.	Reattach the scanner motor. If not repaired, replace it.	
6	Checking the scanner carriage	The CCD PWB is faulty.	Replace the scanner carriage and execute U411.	
7	Firmware upgrade	The firmware is faulty.	Upgrade the engine firmware to the latest version.	
8	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	
9	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C3200: LED lamp startup 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 LED lamp	The LED lamp does not light.	Execute U061 [CCD] to check the LED lamps light. If not, replace the scanner carriage and execute U411.	
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"> <li>• LED PWB - CCD PWB</li> </ul>	
3	Checking the connection	FFC is not properly connected, or it is faulty.	Reconnect the following FFC. When the FFC terminals are peeled off, deformed or the FFC is broken, replace the FFC.  <ul style="list-style-type: none"> <li>• CCD PWB - Main PWB</li> </ul>	
4	Replacing the scanner carriage	The CCD PWB is faulty.	Replace the scanner carriage and execute U411.	
5	Firmware upgrade	The firmware is faulty.	Upgrade the firmware to the latest version.	
6	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

### C3300: CCD AGC error

The brightness of the LED lamps is darker or brighter than anticipated when executing the AGC process for the CCD lamp.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the LED lamp	1 LED lamp is broken.	Execute U061 [CCD] to check the LED lamps light. If not, replace the scanner carriage and execute U411.	
2	Cleaning the backside of the contact glass	The white reference sheet is dirty.	Clean the contact glass backside.	2017/11/21
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. • LED PWB - CCD PWB	
4	Checking the connection	FFC is not properly connected, or it is faulty.	Reconnect the following FFC. When the FFC terminals are peeled off, deformed or the FFC is broken, replace the FFC. • CCD PWB - Main PWB	
5	Replacing the scanner carriage	The CCD PWB is faulty.	Replace the scanner carriage and execute U411.	
6	Firmware upgrade	The firmware is faulty.	Upgrade the firmware to the latest version.	
7	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

### C3500: Communication error between the scanner and the ASIC

The communication error was detected during the communication between the scanner ASIC and the engine CPU.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	FFC is not properly connected, or it is faulty.	Reconnect the following FFC. When the FFC terminals are peeled off, deformed or the FFC is broken, replace the FFC. • CCD PWB - Main PWB	
2	Replacing the scanner carriage	The CCD PWB is faulty.	Replace the scanner carriage and execute U411.	
3	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

### C3800: AFE error

The writing data and the reading data mismatch 3 times continuously when writing.

The response from AFE is not returned for 100ms.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	FFC is not properly connected, or it is faulty.	Reconnect the following FFC. When the FFC terminals are peeled off, deformed or the FFC is broken, replace the FFC. • CCD PWB - Main PWB	
2	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	
3	Replacing the scanner carriage	The CCD PWB is faulty.	Replace the scanner carriage and execute U411.	

### C4001: Polygon motor startup error

The polygon motor is not in the steady state for 15s or more after start-up

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinsert the following wire connectors. If there is no continuity, replace the wire. • LSU (Polygon motor) - Engine PWB	



Step	Check description	Assumed cause	Measures	Reference
2	Checking the polygon motor	The polygon motor does not rotate properly.	Check the rotation sound of the polygon motor, and reattach or replace the LSU if it does not rotate properly.	
3	Firmware upgrade	The engine firmware is faulty.	Upgrade the engine firmware to the latest version.	
4	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C4011: Polygon motor steady-state error

The speed is not stable when passing 15s after the polygon motor is in the steady state.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinsert the following wire connectors. If there is no continuity, replace the wire. • LSU (Polygon motor) - Engine PWB	
2	Checking the polygon motor	The polygon motor does not rotate properly.	Check the rotation sound of the polygon motor, and reattach or replace the LSU if it does not rotate properly.	
3	Firmware upgrade	The engine firmware is faulty.	Upgrade the engine firmware to the latest version.	
4	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C4101: BD initialization error K

A BD signal is not detected within 1s after the polygon motor drive starts.

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. • LSU - Main PWB	
2	Replacing the LSU	The LSU is faulty.	Replace the LSU.	
3	Firmware upgrade	The firmware is faulty.	Upgrade the firmware to the latest version.	
4	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

### C4102: BD initialization error C

A BD signal is not detected within 1s after the polygon motor drive starts.

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. • LSU - Main PWB	
2	Replacing the LSU	The LSU is faulty.	Replace the LSU.	
3	Firmware upgrade	The firmware is faulty.	Upgrade the firmware to the latest version.	
4	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

### C4103: BD initialization error M

A BD signal is not detected within 1s after the polygon motor drive starts.

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. • LSU - Main PWB	
2	Replacing the LSU	The LSU is faulty.	Replace the LSU.	
3	Firmware upgrade	The firmware is faulty.	Upgrade the firmware to the latest version.	
4	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

### C4104: BD initialization error Y

A BD signal is not detected within 1s after the polygon motor drive starts.

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. • LSU - Main PWB	
2	Replacing the LSU	The LSU is faulty.	Replace the LSU.	
3	Firmware upgrade	The firmware is faulty.	Upgrade the firmware to the latest version.	
4	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

### C4201: BD steady-state error

The BD signal is not detected during the laser lighting.

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. • LSU - Main PWB	
2	Replacing the LSU	The LSU is faulty.	Replace the LSU.	
3	Firmware upgrade	The firmware is faulty.	Upgrade the firmware to the latest version.	
4	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

### C4600: LSU cleaning motor error

1. The LSU cleaning motor operation time is shorter than the specified time.
2. The LSU cleaning parts continue shifting in the same direction for the specified time or more.

Step	Check description	Assumed cause	Measures	Reference
1	Cleaning the LSU	The LSU cleaning drive gear and the cleaning pad have the load and so they are not shifted smoothly.	Clean the LSU cleaning drive gear and the cleaning pad.	
2	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinsert the following wire connectors. If there is no continuity, replace the wire. • LSU cleaning motor - Engine PWB	

Step	Check description	Assumed cause	Measures	Reference
3	Checking the LSU cleaning motor	The LSU cleaning motor is not properly attached, or it is faulty.	Reattach the LSU cleaning motor. If not repaired, replace it.	
4	Replacing the LSU	The LSU cleaning drive gear, cleaning wire or the cleaning pad are deformed, or they are faulty.	Replace the LSU.	
5	Firmware upgrade	The firmware is not the latest version.	Upgrade the firmware to the latest version.	
6	Replacing the engine PWB	The engine PWB is faulty.	Replace the 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 unplug the power cord. After 5s passes, reconnect the power cord and turn on the power switch.	
2	Checking the connection	The connector is not properly connected.	Reinsert the connectors on the engine PWB all the way.	
3	Firmware upgrade	The firmware is not the latest version.	Upgrade the main firmware and the engine firmware to the latest version.	
4	Checking the 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 engine PWB, reconnect the connector of the wire, and reconnect the FFC terminal. If the wire or the FFC is faulty, repair or replace it. If not resolved, replace the engine PWB.	
5	Checking the main 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 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 PWB.	

### C5101: Main high voltage error BK

The inflow electric current K detected is less than the specified value during the Vpp adjustment.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the drum unit	The drum or the drum screw is not rotated properly due to the excessive load.	Check if the drum or the drum screw is rotated manually, and replace the drum unit if not rotated.	2017/11/21
2	Checking the drum motor	The drum motor does not properly rotate due to the excessive load.	Execute U030 [Feed] and check the drum motor K rotation. If it does not rotate correctly, replace it.	2017/11/21
3	Checking the main charger unit	The proper voltage is not applied since foreign material is adhering on the high-voltage contact of the main charger unit.	Clean the high-voltage contact of the main charger unit, and apply conductive grease to the roller shaft.	
4	Replacing the main charger unit	The proper voltage is not applied since the high-voltage contact of the main charger unit is deformed or damaged.	Replace the main charger unit and execute U930.	

Step	Check description	Assumed cause	Measures	Reference
5	Checking the wire	The wire is not properly connected or is faulty.	Reinsert the following wire connectors. If there is no continuity, replace the wire. • High voltage PWB - Engine PWB	
6	Replacing the high voltage PWB	The high voltage PWB is faulty.	Replace the high voltage PWB.	
7	Firmware upgrade	The firmware is not the latest version.	Upgrade the firmware to the latest version.	
8	Checking the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C5102: Main high-voltage error C

The inflow electric current C detected is less than the specified value during the Vpp adjustment.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the drum unit	The drum or the drum screw is not rotated properly due to the excessive load.	Check if the drum or the drum screw is rotated manually, and replace the drum unit if not rotated.	
2	Checking the drum motor	The drum motor does not properly rotate due to the excessive load.	Execute U030 [Feed] and check the drum motor C/M/Y rotation. If it does not rotate correctly, replace it.	
3	Checking the main charger unit	The proper voltage is not applied since foreign material is adhering on the high-voltage contact of the main charger unit.	Clean the high-voltage contact of the main charger unit, and apply conductive grease to the roller shaft.	
4	Replacing the main charger unit	The proper voltage is not applied since the high-voltage contact of the main charger unit is deformed or damaged.	Replace the main charger unit and execute U930.	
5	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinsert the following wire connectors. If there is no continuity, replace the wire. • High voltage PWB - Engine PWB	
6	Replacing the high voltage PWB	The high voltage PWB is faulty.	Replace the high voltage PWB.	
7	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version.	
8	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C5103: Main high-voltage error M

The inflow electric current M detected is less than the specified value during the Vpp adjustment.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the drum unit	The drum or the drum screw is not rotated properly due to the excessive load.	Check if the drum or the drum screw is rotated manually, and replace the drum unit if not rotated.	
2	Checking the drum motor	The drum motor does not properly rotate due to the excessive load.	Execute U030 [Feed] and check the drum motor C/M/Y rotation. If it does not rotate correctly, replace it.	
3	Checking the main charger unit	The proper voltage is not applied since foreign material is adhering on the high-voltage contact of the main charger unit.	Clean the high-voltage contact of the main charger unit, and apply conductive grease to the roller shaft.	

Step	Check description	Assumed cause	Measures	Reference
4	Replacing the main charger unit	The proper voltage is not applied since the high-voltage contact of the main charger unit is deformed or damaged.	Replace the main charger unit and execute U930.	
5	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinsert the following wire connectors. If there is no continuity, replace the wire. • High voltage PWB - Engine PWB	
6	Replacing the high voltage PWB	The high voltage PWB is faulty.	Replace the high voltage PWB.	
7	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version.	
8	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C5104: Main high-voltage error Y

The inflow electric current Y detected is less than the specified value during the Vpp adjustment.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the drum unit	The drum or the drum screw is not rotated properly due to the excessive load.	Check if the drum or the drum screw is rotated manually, and replace the drum unit if not rotated.	
2	Checking the drum motor	The drum motor does not properly rotate due to the excessive load.	Execute U030 [Feed] and check the drum motor C/M/Y rotation. If it does not rotate correctly, replace it.	
3	Checking the main charger unit	The proper voltage is not applied since foreign material is adhering on the high-voltage contact of the main charger unit.	Clean the high-voltage contact of the main charger unit, and apply conductive grease to the roller shaft.	
4	Replacing the main charger unit	The proper voltage is not applied since the high-voltage contact of the main charger unit is deformed or damaged.	Replace the main charger unit and execute U930.	
5	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinsert the following wire connectors. If there is no continuity, replace the wire. • High voltage PWB - Engine PWB	
6	Replacing the high voltage PWB	The high voltage PWB is faulty.	Replace the high voltage PWB.	
7	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version.	
8	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C6000: Fuser main heater broken

The temperature detected by fuser thermistor 1 (center) does not reach 100 °C / 212 °F in 20s during warm-up.

The temperature detected by thermistor 1 (center) does not reach the ready display temperature in 30s after reaching 100 °C / 212 °F

Step	Check description	Assumed cause	Measures	Reference
1	Removing a piece of paper	The fuser thermistor cannot detect normal temperature since paper tip resides in the fuser unit.	Remove a piece of paper remaining in the fuser unit.	
2	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version.	

Step	Check description	Assumed cause	Measures	Reference
3	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinsert the following wire connectors. If there is no continuity, replace the wire. • Fuser unit - Engine PWB • Low voltage PWB - Engine PWB	
4	Replacing the fuser unit	The fuser thermistor cannot detect normal temperature due to abnormal part in the fuser unit.	Replace the fuser unit.	
5	Replacing the low voltage PWB	The low voltage PWB is faulty.	Replace the low voltage PWB when the fuser heaters always turn on.	
6	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C6020: Fuser thermistor 1 high temperature error

Fuser thermistor 1 (center thermistor) detects 240°C / 464°F or more for 1s or more.

Step	Check description	Assumed cause	Measures	Reference
1	Reinstalling the fuser unit	The drawer connector of the fuser unit is not inserted securely.	Reinstall the fuser unit so that the drawer connector is connected securely.	
2	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinsert the following wire connectors. If there is no continuity, replace the wire. • Fuser unit - Engine PWB	
3	Replacing the fuser unit	The fuser thermistor cannot detect normal temperature due to abnormal part in the fuser unit.	Replace the fuser unit.	
4	Firmware upgrade	The firmware is faulty.	Upgrade the firmware to the latest version.	
5	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C6030: Broken fuser thermistor 1 error

Fuser thermistor 1 (center) detected low temperature for 1.6s when fuser thermistor 2 (edge) detected 30°C / 86°F or more.

Step	Check description	Assumed cause	Measures	Reference
1	Removing a piece of paper	The fuser thermistor cannot detect normal temperature since paper tip resides in the fuser unit.	Remove a piece of paper remaining in the fuser unit.	
2	Checking the drawer connector	The terminals of the drawer connectors between the main unit and the fuser unit have foreign material or are deformed.	Clean, or correct the terminals of the drawer connector at the fuser unit, and reconnect them.	
3	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinsert the following wire connectors. If there is no continuity, replace the wire. • Fuser unit - Engine PWB	
4	Replacing the fuser unit	The fuser thermistor cannot detect normal temperature due to abnormal part in the fuser unit.	Replace the fuser unit.	
5	Firmware upgrade	The firmware is faulty.	Upgrade the firmware to the latest version.	
6	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C6040: Fuser main heater error

1. Fuser thermistor 1 (center) input an abnormal value for 1s continuously.

The fuser unit detection port was at H level during all the operation mode.

Step	Check description	Assumed cause	Measures	Reference
1	Removing a piece of paper	The fuser thermistor cannot detect normal temperature since paper tip resides in the fuser unit.	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.	Reinsert the following wire connectors. If there is no continuity, replace the wire. <ul style="list-style-type: none"> <li>• Fuser unit - Engine PWB</li> <li>• Low voltage PWB - Engine PWB</li> </ul>	
3	Firmware upgrade	The firmware is faulty.	Upgrade the firmware to the latest version.	
4	Replacing the fuser unit	The fuser thermistor cannot detect normal temperature due to abnormal part in the fuser unit.	Replace the fuser unit.	
5	Replacing the low voltage PWB	The low voltage PWB is faulty.	Replace the low voltage PWB when the fuser heaters always turn on.	
6	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C6050: Fuser thermistor 1 low temperature error

Fuser thermistor 1 (center) detected 100 °C / 212 °F or less for 1s during standby or printing.

Fuser thermistor 1 (center) detected 70°C / 158°F or less for 1s during low power mode.

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.	
2	Removing a piece of paper	The fuser thermistor cannot detect normal temperature since paper tip resides in the fuser unit.	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.	Reinsert the following wire connectors. If there is no continuity, replace the wire. <ul style="list-style-type: none"> <li>• Fuser unit - Engine PWB</li> <li>• Low voltage PWB - Engine PWB</li> </ul>	
4	Firmware upgrade	The firmware is faulty.	Upgrade the firmware to the latest version.	
5	Replacing the fuser unit	The fuser thermistor cannot detect normal temperature due to abnormal part in the fuser unit.	Replace the fuser unit.	
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 engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C6200: Fuser sub heater error

1. The temperature detected by the thermistor does not reach 100 °C / 212 °F after turning the fuser heater on for 30s continuously during warm-up.

2. The temperature detected by the thermistor does not reach the specified value when turning the fuser heater on for 30s continuously after the temperature detected by the thermistor reaches 100 °C / 212 °F.

Step	Check description	Assumed cause	Measures	Reference
1	Removing a piece of paper	The fuser thermistor cannot detect normal temperature since paper tip resides in the fuser unit.	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.	Reinsert the following wire connectors. If there is no continuity, replace the wire. • Fuser unit - Engine PWB • Low voltage PWB - Engine PWB	
3	Firmware upgrade	The firmware is faulty.	Upgrade the firmware to the latest version.	
4	Replacing the fuser unit	The fuser thermistor cannot detect normal temperature due to abnormal part in the fuser unit.	Replace the fuser unit.	
5	Replacing the low voltage PWB	The low voltage PWB is faulty.	Replace the low voltage PWB when the fuser heaters always turn on.	
6	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C6220: Fuser sub heater high temperature error

Fuser thermistor 2 (edge thermistor) 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 normal temperature since paper tip resides in the fuser unit.	Remove a piece of paper remaining in the fuser unit.	
2	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version.	
3	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinsert the following wire connectors. If there is no continuity, replace the wire. • Fuser unit - Engine PWB • Low voltage PWB - Engine PWB	
4	Replacing the fuser unit	The fuser thermistor cannot detect normal temperature due to abnormal part in the fuser unit.	Replace the fuser unit.	
5	Replacing the low voltage PWB	The low voltage PWB is faulty.	Replace the low voltage PWB when the fuser heaters always turn on.	
6	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C6230: Broken fuser thermistor 2 error

Fuser thermistor 2 (edge thermistor) detects low temperature for 1.6s.

Step	Check description	Assumed cause	Measures	Reference
1	Removing a piece of paper	The fuser thermistor cannot detect normal temperature since paper tip resides in the fuser unit.	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.	Reinsert the following wire connectors. If there is no continuity, replace the wire. • Fuser unit - Engine PWB	



Step	Check description	Assumed cause	Measures	Reference
3	Replacing the fuser unit	The fuser thermistor cannot detect normal temperature due to abnormal part in the fuser unit.	Replace the fuser unit.	
4	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version.	
5	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C6250: Fuser thermistor 2 low temperature error

1.Fuser thermistor 2 (edge) detected 100 °C / 212 °F or less for 1s during standby or printing.

Fuser thermistor 2 (edge) detected 60°C/140°F or less for 1s.

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.	
2	Removing a piece of paper	The fuser thermistor cannot detect normal temperature since paper tip resides in the fuser unit.	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.	Reinsert the following wire connectors. If there is no continuity, replace the wire. • Fuser unit - Engine PWB • Low voltage PWB - Engine PWB	
4	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version.	
5	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	
6	Replacing the fuser unit	The fuser thermistor cannot detect normal temperature due to abnormal part in the fuser unit.	Replace the fuser unit.	
7	Replacing the low voltage PWB	The low voltage PWB is faulty.	Replace the low voltage PWB.	

### C6400: Zero-cross signal error

The zero-cross signal is not input for 1s continuously when the fusers heater turns on.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinsert the following wire connectors. If there is no continuity, replace the wire. • Low voltage PWB - Engine PWB	
2	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version.	
3	Checking the low voltage PWB	The low voltage PWB is faulty.	Replace the low voltage PWB.	
4	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C6610: Fuser press-release sensor error

1. The fuser press-release sensor does not turn on after passing 10s since the fuser motor rotated in the counter direction when the sensor turned off.

2. The fuser press-release sensor does not turn off after passing 10s since the fuser motor rotated in the counter direction when the sensor turned on.

Step	Check description	Assumed cause	Measures	Reference
1	Removing a piece of paper	The fuser thermistor cannot detect normal temperature since paper tip resides in the fuser unit.	Remove a piece of paper remaining in the fuser unit.	
2	Checking the fuser press-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 fuser press-release sensor	The fuser press-release sensor is not properly attached.	Check if the fuser press-release sensor is interrupted by the actuator at the fuser pressure decrease operation. If it is not interrupted, reattach the parts.	
4	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinsert the following wire connectors. If there is no continuity, replace the wire. • Fuser press-release sensor - Engine PWB • Fuser motor - Engine PWB	
5	Replacing the fuser motor	The fuser motor is faulty.	Execute U030 [Fuser]. If the fuser motor does not operate correctly, replace it.	
6	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version.	
7	Replacing the fuser unit	The internal parts of the fuser unit such as the fuser press-release sensor are faulty.	Replace the fuser unit.	
8	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C6910: Engine firmware unexpected error

1. The main charge, developer or transfer bias was impressed when the drum was stopped.
2. The developer bias on was detected 3340ms or more when the main charge was off.
3. Fuser thermistor 1 (center) or fuser thermistor 2 (edge) detected 240°C/464°F or more for 1.2s.

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	The power startup delays.	Turn off the power switch and unplug the power cord. After 5s passes, reconnect the power cord and turn on the power switch.	
2	Refixing the engine PWB	The engine PWB is not properly attached and grounding is not secured.	Re-tighten the fixing screws of the engine PWB.	
3	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version.	
4	Checking the 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 engine PWB, reconnect the connector of the wire, and reconnect the FFC terminal. If the wire or the FFC is faulty, repair or replace it. If not resolved, replace the engine PWB.	

### C7001: Toner motor K error

'Shake the toner container.' appears if the container rotation detection pulse signal does not change for 500ms continuously when turning the toner motor on.

properly, this message disappears by opening and closing the front cover. If the container rotation detection pulse signal does not change after repeating that operation 3 times, the service call error appears 3rd time.

Step	Check description	Assumed cause	Measures	Reference
1	Replacing the toner container	The spiral locks up (it does not rotate).	Replace toner container K if the spiral of the toner container cannot be rotated manually.	

Step	Check description	Assumed cause	Measures	Reference
2	Checking the toner container drive parts	The drive gear or the coupling do not properly rotate or the excessive load is applied to them.	Check if the coupling or the gears are not damaged. If damaged, replace the parts.	
3	Checking the toner supply drive unit	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 supply drive unit, and apply the grease to these parts.	
4	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinsert the following wire connectors. If there is no continuity, replace the wire. • Toner motor K - Engine PWB	
5	Checking the toner supply drive unit	The toner supply drive unit is not attached properly, or the drive parts are faulty.	Reattach the toner supply drive unit. If not repaired, replace it.	
6	Checking toner motor K	Toner motor K is faulty.	Reattach toner motor K. If not repaired, replace it.	
7	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version.	
8	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C7002: Toner motor C error

'Shake the toner container.' appears if the container rotation detection pulse signal does not change for 500ms continuously when turning the toner motor on.

properly, this message disappears by opening and closing the front cover. If the container rotation detection pulse signal does not change after repeating that operation 3 times, the service call error appears 3rd time.

Step	Check description	Assumed cause	Measures	Reference
1	Replacing the toner container	The spiral locks up (it does not rotate).	Replace toner container C if the spiral in the toner container cannot be rotated manually.	
2	Checking the toner container drive parts	The drive gear or the coupling do not properly rotate or the excessive load is applied to them.	Check if the coupling or the gears are not damaged. If damaged, replace the parts.	
3	Checking the toner supply drive unit	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 supply drive unit, and apply the grease to these parts.	
4	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinsert the following wire connectors. If there is no continuity, replace the wire. • Toner motor C - Engine PWB	
5	Checking the toner supply drive unit	The toner supply drive unit is not attached properly, or the drive parts are faulty.	Reattach the toner supply drive unit. If not repaired, replace it.	
6	Checking toner motor C	Toner motor C is faulty.	Reattach toner motor C. If not repaired, replace it.	
7	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version.	
8	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C7003: Toner motor M error

'Shake the toner container.' appears if the container rotation detection pulse signal does not change for 500ms continuously when turning the toner motor on.

properly, this message disappears by opening and closing the front cover. If the container rotation detection pulse signal does not change after repeating that operation 3 times, the service call error appears 3rd time.

Step	Check description	Assumed cause	Measures	Reference
1	Replacing the toner container	The spiral locks up (it does not rotate).	Replace toner container M if the spiral in the toner container cannot be rotated manually.	
2	Checking the toner container drive parts	The drive gear or the coupling do not properly rotate or the excessive load is applied to them.	Check if the coupling or the gears are not damaged. If damaged, replace the parts.	
3	Checking the toner supply drive unit	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 supply drive unit, and apply the grease to these parts.	
4	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinsert the following wire connectors. If there is no continuity, replace the wire. • Toner motor M - Engine PWB	
5	Checking the toner supply drive unit	The toner supply drive unit is not attached properly, or the drive parts are faulty.	Reattach the toner supply drive unit. If not repaired, replace it.	
6	Checking toner motor M	Toner motor M is faulty.	Reattach toner motor M. If not repaired, replace it.	
7	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version.	
8	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C7004: Toner motor Y error

'Shake the toner container.' appears if the container rotation detection pulse signal does not change for 500ms continuously when turning the toner motor on.

properly, this message disappears by opening and closing the front cover. If the container rotation detection pulse signal does not change after repeating that operation 3 times, the service call error appears 3rd time.

Step	Check description	Assumed cause	Measures	Reference
1	Replacing the toner container	The spiral locks up (it does not rotate).	Replace toner container Y if the spiral in the toner container cannot be rotated manually.	
2	Checking the toner container drive parts	The drive gear or the coupling do not properly rotate or the excessive load is applied to them.	Check if the coupling or the gears are not damaged. If damaged, replace the parts.	
3	Checking the toner supply drive unit	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 supply drive unit, and apply the grease to these parts.	
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. • Toner motor Y - Engine PWB	
5	Checking the toner supply drive unit	The toner supply drive unit is not attached properly, or the drive parts are faulty.	Reattach the toner supply drive unit. If not repaired, replace it.	
6	Checking toner motor Y	Toner motor Y is faulty.	Reattach toner motor Y. If not repaired, replace it.	
7	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version.	
8	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C7101: Toner sensor K error

The sensor output value is at the specified value or less, or more for a certain time.

Step	Check description	Assumed cause	Measures	Reference
1	Reinstalling the toner container	The toner container is not properly installed.	Reinstall toner container BK.	
2	Replacing the toner container	The toner supply opening of the toner container cannot open.	Replace toner container BK.	
3	Checking the toner container drive 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	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinstall developer unit K into the main unit all the way to reconnect the connector. Also, reinsert the following wire connectors. If there is no continuity, replace the wire. <ul style="list-style-type: none"> <li>• Developer unit K - Drum/developer relay PWB</li> <li>• Drum/developer relay PWB - Engine PWB</li> <li>• Toner motor K - Engine PWB</li> </ul>	
5	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.	
6	Checking the toner supply drive unit	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 supply drive unit, and apply the grease to these parts.	
7	Checking toner motor K	Toner motor K is not properly attached, or it is faulty.	Reattach toner motor K. If not repaired, replace it.	
8	Replacing the drum/developer relay PWB	The drum/developer relay PWB is faulty.	Replace the drum/developer relay PWB.	
9	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version.	
10	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C7102: Toner sensor C error

The sensor output value is at the specified value or less, or more for a certain time.

Step	Check description	Assumed cause	Measures	Reference
1	Reinstalling the toner container	The toner container is not properly installed.	Reinstall toner container C.	
2	Replacing the toner container	The toner supply opening of the toner container cannot open.	Replace toner container C.	
3	Checking the toner container drive 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.	

Step	Check description	Assumed cause	Measures	Reference
4	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinstall developer unit C into the main unit all the way to reconnect the connector. Also, reinsert the following wire connectors. If there is no continuity, replace the wire. <ul style="list-style-type: none"> <li>• Developer unit C - Drum/developer relay PWB</li> <li>• Drum/developer relay PWB - Engine PWB</li> <li>• Toner motor C - Engine PWB</li> </ul>	
5	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.	
6	Checking the toner supply drive unit	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 supply drive unit, and apply the grease to these parts.	
7	Checking toner motor C	Toner motor C is not properly attached, or it is faulty.	Reattach toner motor C. If not repaired, replace it.	
8	Replacing the drum/developer relay PWB	The drum/developer relay PWB is faulty.	Replace the drum/developer relay PWB.	
9	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version.	
10	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C7103: Toner sensor M error

The sensor output value is at the specified value or less, or more for a certain time.

Step	Check description	Assumed cause	Measures	Reference
1	Reinstalling the toner container	The toner container is not properly installed.	Reinstall toner container M.	
2	Replacing the toner container	The toner supply opening of the toner container cannot open.	Replace toner container M.	
3	Checking the toner container drive 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	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinstall developer unit M into the main unit all the way to reconnect the connector. Also, reinsert the following wire connectors. If there is no continuity, replace the wire. <ul style="list-style-type: none"> <li>• Developer unit M - Drum/developer relay PWB</li> <li>• Drum/developer relay PWB - Engine PWB</li> <li>• Toner motor M - Engine PWB</li> </ul>	
5	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.	
6	Checking the toner supply drive unit	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 supply drive unit, and apply the grease to these parts.	
7	Checking toner motor M	Toner motor M is not properly attached, or it is faulty.	Reattach toner motor M. If not repaired, replace it.	

Step	Check description	Assumed cause	Measures	Reference
8	Replacing the drum/developer relay PWB	The drum/developer relay PWB is faulty.	Replace the drum/developer relay PWB.	
9	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version.	
10	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C7104: Toner sensor Y error

The sensor output value is at the specified value or less, or more for a certain time.

Step	Check description	Assumed cause	Measures	Reference
1	Reinstalling the toner container	The toner container is not properly installed.	Reinstall toner container Y.	
2	Replacing the toner container	The toner supply opening of the toner container cannot open.	Replace toner container Y.	
3	Checking the toner container drive 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	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinstall developer unit Y into the main unit all the way to reconnect the connector. Also, reinsert the following wire connectors. If there is no continuity, replace the wire. <ul style="list-style-type: none"> <li>• Developer unit Y - Drum/developer relay PWB</li> <li>• Drum/developer relay PWB - Engine PWB</li> <li>• Toner motor Y - Engine PWB</li> </ul>	
5	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.	
6	Checking the toner supply drive unit	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 supply drive unit, and apply the grease to these parts.	
7	Checking toner motor Y	Toner motor Y is not properly attached, or it is faulty.	Reattach toner motor Y. If not repaired, replace it.	
8	Replacing the drum/developer relay PWB	The drum/developer relay PWB is faulty.	Replace the drum/developer relay PWB.	
9	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version.	
10	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C7200: Internal thermistor error (Developer)

The input sampling value of the sensor is more than the reference value. (It is controlled by 25°C / 77°F after detection.)

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinstall developer unit K into the main unit all the way to reconnect the connector. Also, reinsert the following wire connectors. If there is no continuity, replace the wire. <ul style="list-style-type: none"> <li>• Developer unit K - Drum/developer relay PWB</li> <li>• Drum/developer relay PWB - Engine PWB</li> </ul>	

Step	Check description	Assumed cause	Measures	Reference
2	Replacing developer unit K	The toner sensor (internal thermistor) is faulty.	Replace developer unit K.	
3	Replacing the drum/developer relay PWB	The drum/developer relay PWB is faulty.	Replace the drum/developer relay PWB.	
4	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version.	
5	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C7210: Inner thermistor short-circuited (developer)

The input sampling value of the sensor is at the reference value or less.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinstall developer unit K into the main unit all the way to reconnect the connector. Also, reinsert the following wire connectors. If there is no continuity, replace the wire. • Developer unit K - Drum/developer relay PWB • Drum/developer relay PWB - Engine PWB	
2	Replacing developer unit K	The toner sensor (internal thermistor) is faulty.	Replace developer unit K.	
3	Replacing the drum/developer relay PWB	The drum/developer relay PWB is faulty.	Replace the drum/developer relay PWB.	
4	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version.	
5	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C7221: Broken LSU thermistor error

The input sampling value of the LSU thermistor is more than the reference 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. • LSU - Main PWB	
2	Replacing the LSU	The LSU (LSU thermistor) is faulty.	Replace the LSU.	
3	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version.	
4	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

### C7231: LSU thermistor short-circuited

The input sampling value of the LSU thermistor is at the reference value or less.



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. • LSU - Main PWB	
2	Replacing the LSU	The LSU (LSU thermistor) is faulty.	Replace the LSU.	
3	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version.	
4	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

### C7401: Developer unit K type mismatch error

Developer unit K does not conform with the main unit.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinstall developer unit K into the main unit all the way to reconnect the connector. Also, reinsert the following wire connectors. If there is no continuity, replace the wire. • Developer unit K - Drum/developer relay PWB • Drum/developer relay PWB - Engine PWB	
2	Checking developer unit K	The different type of the developer unit is installed.	Install the correct developer unit.	
3	Replacing the drum/developer relay PWB	The drum/developer relay PWB is faulty.	Replace the drum/developer relay PWB.	
4	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version.	
5	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C7402: Developer unit C type mismatch error

Developer unit C mismatches with the main unit.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinstall developer unit C into the main unit all the way to reconnect the connector. Also, reinsert the following wire connectors. If there is no continuity, replace the wire. • Developer unit C - Drum/developer relay PWB • Drum/developer relay PWB - Engine PWB	
2	Checking developer unit C	The different type of the developer unit is installed.	Install the correct developer unit.	
3	Replacing the drum/developer relay PWB	The drum/developer relay PWB is faulty.	Replace the drum/developer relay PWB.	
4	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version.	
5	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C7403: Developer unit M type mismatch error

Developer unit M mismatches with the main unit.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinstall developer unit M into the main unit all the way to reconnect the connector. Also, reinsert the following wire connectors. If there is no continuity, replace the wire. • Developer unit M - Drum/developer relay PWB • Drum/developer relay PWB - Engine PWB	
2	Checking developer unit M	The different type of the developer unit is installed.	Install the correct developer unit.	
3	Replacing the drum/developer relay PWB	The drum/developer relay PWB is faulty.	Replace the drum/developer relay PWB.	
4	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version.	
5	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C7404: Developer unit Y type mismatch error

Developer unit Y mismatches with the main unit.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinstall developer unit Y into the main unit all the way to reconnect the connector. Also, reinsert the following wire connectors. If there is no continuity, replace the wire. • Developer unit Y - Drum/developer relay PWB • Drum/developer relay PWB - Engine PWB	
2	Checking developer unit Y	The different type of the developer unit is installed.	Install the correct developer unit.	
3	Replacing the drum/developer relay PWB	The drum/developer relay PWB is faulty.	Replace the drum/developer relay PWB.	
4	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version.	
5	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C7411: Drum unit K type mismatch error

The main unit and drum unit K mismatch.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinstall drum unit K into the main unit all the way to reconnect the connector. Also, reinsert the following wire connectors. If there is no continuity, replace the wire. • Drum unit K - Drum/developer relay PWB • Drum/developer relay PWB - Engine PWB	
2	Checking drum unit K	The different drum unit is installed.	Install the proper drum unit.	
3	Replacing the drum/developer relay PWB	The drum/developer relay PWB is faulty.	Replace the drum/developer relay PWB.	

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 engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C7412: Drum unit C type mismatch error

Drum unit C mismatches with the main unit.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinstall drum unit C into the main unit all the way to reconnect the connector. Also, reinsert the following wire connectors. If there is no continuity, replace the wire. • Drum unit C - Drum/developer relay PWB • Drum/developer relay PWB - Engine PWB	
2	Checking drum unit C	The different drum unit is installed.	Install the proper drum unit.	
3	Replacing the drum/developer relay PWB	The drum/developer relay PWB is faulty.	Replace the drum/developer relay PWB.	
4	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version.	
5	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C7413: Drum unit M type mismatch error

Drum unit M mismatches with the main unit.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinstall drum unit M into the main unit all the way to reconnect the connector. Also, reinsert the following wire connectors. If there is no continuity, replace the wire. • Drum unit M - Drum/developer relay PWB • Drum/developer relay PWB - Engine PWB	
2	Checking drum unit M	The different drum unit is installed.	Install the proper drum unit.	
3	Replacing the drum/developer relay PWB	The drum/developer relay PWB is faulty.	Replace the drum/developer relay PWB.	
4	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version.	
5	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C7414: Drum unit Y type mismatch error

Drum unit Y mismatches with the main unit.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinstall drum unit Y into the main unit all the way to reconnect the connector. Also, reinsert the following wire connectors. If there is no continuity, replace the wire. • Drum unit Y - Drum/developer relay PWB • Drum/developer relay PWB - Engine PWB	

Step	Check description	Assumed cause	Measures	Reference
2	Checking drum unit Y	The different drum unit is installed.	Install the proper drum unit.	
3	Replacing the drum/developer relay PWB	The drum/developer relay PWB is faulty.	Replace the drum/developer relay PWB.	
4	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version.	
5	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C7601: Front ID sensor error

The sensor output value is out of the specified range.

Step	Check description	Assumed cause	Measures	Reference
1	Cleaning the front ID sensor	The front ID sensor is dirty.	Clean the front ID sensor surface.	
2	Checking the ID sensor shutter	The ID sensor shutter does not operate properly.	Open the right cover and open/close the front cover while the primary transfer unit is detached to check if the ID sensor shutter opens/closes (slides to the machine front and rear side). If not operating correctly, reattach it.	
3	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinsert the following wire connectors. If there is no continuity, replace the wire. • Front ID sensor - Engine PWB	
4	Checking the front ID sensor	The front ID sensor is not attached properly, or it is faulty.	Reattach the front ID sensor and execute U464 [Calib] > [Full]. If an error is detected, replace it.	
5	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version.	
6	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C7602: Rear ID sensor error

The sensor output value is out of the specified range.

Step	Check description	Assumed cause	Measures	Reference
1	Cleaning the rear ID sensor	The rear ID sensor is dirty.	Clean the rear ID sensor surface.	
2	Checking the ID sensor shutter	The ID sensor shutter does not operate properly.	Open the right cover and open/close the front cover while the primary transfer unit is detached to check if the ID sensor shutter opens/closes (slides to the machine front and rear side). If not operating correctly, reattach it.	
3	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinsert the following wire connectors. If there is no continuity, replace the wire. • Rear ID sensor - Engine PWB	
4	Checking the rear ID sensor	The rear ID sensor is not attached properly, or it is faulty.	Reattach the rear ID sensor and execute U464 [Calib] > [Full]. If an error is detected, replace it.	
5	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version.	
6	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C7611: Bias calibration read value error BK

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 unplug the power cord. After 5s passes, reconnect the power cord and turn on the power switch.	
2	Checking the ID sensor shutter	The ID sensor shutter is not opened.	Open the right cover and open/close the front cover while the primary transfer unit is detached to check if the ID sensor shutter opens/closes (slides to the machine front and rear side). If not operating correctly, reattach it.	
3	Cleaning the ID sensors	The ID sensor is dirty.	Clean the ID sensor surface.	
4	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinsert the following wire connectors. If there is no continuity, replace the wire. • ID sensors - Engine PWB	
5	Executing Calibration	The last calibration failed.	Execute [Calibration] at [Adjustment/Maintenance] in the System Menu.	
6	Cleaning the transfer belt	The transfer belt surface is dirty. (removable by cleaning)	Check the service call log on the Event Log. If the service call repeatedly appears, clean the transfer belt surface.	
7	Replacing the primary transfer unit	The transfer belt surface is dirty. not (removable by cleaning)	Check the service call log on the Event Log. If the service call repeatedly appears, replace the primary transfer unit.	
8	(When the print is too light) Cleaning or replacing the drum unit / developer unit / LSU	The parts in the drum unit, developer unit or the LSU are dirty or worn down.	In case if the image is too light, clean the drum unit, developer unit and the LSU. Or, replace them.	
9	Firmware upgrade	The firmware is not the latest version.	Upgrade the firmware to the latest version.	
10	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

**C7612: Bias calibration read value error C**

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 unplug the power cord. After 5s passes, reconnect the power cord and turn on the power switch.	
2	Checking the ID sensor shutter	The ID sensor shutter is not opened.	Open the right cover and open/close the front cover while the primary transfer unit is detached to check if the ID sensor shutter opens/closes (slides to the machine front and rear side). If not operating correctly, reattach it.	
3	Cleaning the ID sensors	The ID sensor is dirty.	Clean the ID sensor surface.	
4	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinsert the following wire connectors. If there is no continuity, replace the wire. • ID sensors - Engine PWB	
5	Executing Calibration	The last calibration failed.	Execute [Calibration] at [Adjustment/Maintenance] in the System Menu.	
6	Cleaning the transfer belt	The transfer belt surface is dirty. (removable by cleaning)	Check the service call log on the Event Log. If the service call repeatedly appears, clean the transfer belt surface.	
7	Replacing the primary transfer unit	The transfer belt surface is dirty. not (removable by cleaning)	Check the service call log on the Event Log. If the service call repeatedly appears, replace the primary transfer unit.	

Step	Check description	Assumed cause	Measures	Reference
8	(When the print is too light) Cleaning or replacing the drum unit / developer unit / LSU	The parts in the drum unit, developer unit or the LSU are dirty or worn down.	In case if the image is too light, clean the drum unit, developer unit and the LSU. Or, replace them.	
9	Firmware upgrade	The firmware is not the latest version.	Upgrade the firmware to the latest version.	
10	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C7613: Bias calibration read value error M

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 unplug the power cord. After 5s passes, reconnect the power cord and turn on the power switch.	
2	Checking the ID sensor shutter	The ID sensor shutter is not opened.	Open the right cover and open/close the front cover while the primary transfer unit is detached to check if the ID sensor shutter opens/closes (slides to the machine front and rear side). If not operating correctly, reattach it.	
3	Cleaning the ID sensors	The ID sensor is dirty.	Clean the ID sensor surface.	
4	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinsert the following wire connectors. If there is no continuity, replace the wire. • ID sensors - Engine PWB	
5	Executing Calibration	The last calibration failed.	Execute [Calibration] at [Adjustment/Maintenance] in the System Menu.	
6	Cleaning the transfer belt	The transfer belt surface is dirty. (removable by cleaning)	Check the service call log on the Event Log. If the service call repeatedly appears, clean the transfer belt surface.	
7	Replacing the primary transfer unit	The transfer belt surface is dirty. not (removable by cleaning)	Check the service call log on the Event Log. If the service call repeatedly appears, replace the primary transfer unit.	
8	(When the print is too light) Cleaning or replacing the drum unit / developer unit / LSU	The parts in the drum unit, developer unit or the LSU are dirty or worn down.	In case if the image is too light, clean the drum unit, developer unit and the LSU. Or, replace them.	
9	Firmware upgrade	The firmware is not the latest version.	Upgrade the firmware to the latest version.	
10	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C7614: Bias calibration read value error Y

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 unplug the power cord. After 5s passes, reconnect the power cord and turn on the power switch.	
2	Checking the ID sensor shutter	The ID sensor shutter is not opened.	Open the right cover and open/close the front cover while the primary transfer unit is detached to check if the ID sensor shutter opens/closes (slides to the machine front and rear side). If not operating correctly, reattach it.	
3	Cleaning the ID sensors	The ID sensor is dirty.	Clean the ID sensor surface.	

Step	Check description	Assumed cause	Measures	Reference
4	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinsert the following wire connectors. If there is no continuity, replace the wire. • ID sensors - Engine PWB	
5	Executing Calibration	The last calibration failed.	Execute [Calibration] at [Adjustment/Maintenance] in the System Menu.	
6	Cleaning the transfer belt	The transfer belt surface is dirty. (removable by cleaning)	Check the service call log on the Event Log. If the service call repeatedly appears, clean the transfer belt surface.	
7	Replacing the primary transfer unit	The transfer belt surface is dirty. not (removable by cleaning)	Check the service call log on the Event Log. If the service call repeatedly appears, replace the primary transfer unit.	
8	(When the print is too light) Cleaning or replacing the drum unit / developer unit / LSU	The parts in the drum unit, developer unit or the LSU are dirty or worn down.	In case if the image is too light, clean the drum unit, developer unit and the LSU. Or, replace them.	
9	Firmware upgrade	The firmware is not the latest version.	Upgrade the firmware to the latest version.	
10	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C7620: Automatic color registration failure

1. The patch print position on the transfer belt is not within the readable area by the ID sensors.
2. The transfer belt surface is dirty, or the patch print density is too 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 unplug the power cord. After 5s passes, reconnect the power cord and turn on the power switch.	
2	Checking the ID sensor shutter	The ID sensor shutter is not opened.	Open the right cover and open/close the front cover while the primary transfer unit is detached to check if the ID sensor shutter opens/closes (slides to the machine front and rear side). If not operating correctly, reattach it.	
3	Cleaning the ID sensors	The ID sensor is dirty.	Clean the ID sensor surface.	
4	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinsert the following wire connectors. If there is no continuity, replace the wire. • ID sensors - Engine PWB	
5	Executing Calibration	The last calibration failed.	Execute [Calibration] at [Adjustment/Maintenance] in the System Menu.	
6	Cleaning the transfer belt	The transfer belt surface is dirty. (removable by cleaning)	Check the service call log on the Event Log. If the service call repeatedly appears, clean the transfer belt surface.	
7	Replacing the primary transfer unit	The transfer belt surface is dirty. not (removable by cleaning)	Check the service call log on the Event Log. If the service call repeatedly appears, replace the primary transfer unit.	
8	(When the print is too light) Cleaning or replacing the drum unit / developer unit / LSU	The parts in the drum unit, developer unit or the LSU are dirty or worn down.	In case if the image is too light, clean the drum unit, developer unit and the LSU. Or, replace them.	
9	(When the color registration occurs) Reinstalling the LSU and drum unit or replacing the LSU	The LSU or drum unit is not attached to the proper position or the LSU is faulty,	If the color registration shift occurs, attach the LSU and drum units to the regular position. If not repaired, replace the LSU.	
10	Firmware upgrade	The firmware is not the latest version.	Upgrade the firmware to the latest version.	

Step	Check description	Assumed cause	Measures	Reference
11	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C7800: Outer thermistor broken

The input sampling value of the temperature/humidity sensor (Outer thermistor) is more than the reference value.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinsert the following wire connectors. If there is no continuity, replace the wire. • Temperature/humidity sensor - Engine PWB	
2	Replacing the temperature/humidity sensor	The temperature/humidity sensor is faulty.	Replace the temperature/humidity sensor.	
3	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version.	
4	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C7810: Outer thermistor short-circuited

The input sampling value of the temperature/humidity sensor (Outer thermistor) is at the reference value or less.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinsert the following wire connectors. If there is no continuity, replace the wire. • Temperature/humidity sensor - Engine PWB	
2	Replacing the temperature/humidity sensor	The temperature/humidity sensor is faulty.	Replace the temperature/humidity sensor.	
3	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version.	
4	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C7901: Drum unit K EEPROM 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 data in drum unit K is faulty.	Turn off the power switch and unplug the power cord. After 5s passes, reconnect the power cord and turn on the power switch.	
2	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinstall drum unit K into the main unit all the way to reconnect the connector. Also, reinsert the following wire connectors. If there is no continuity, replace the wire. • Drum unit K - Drum/developer relay PWB • Drum/developer relay PWB - Engine PWB	
3	Replacing the drum unit	The EEPROM in drum unit K is faulty.	Replace drum unit K.	
4	Replacing the drum/developer relay PWB	The drum/developer relay PWB is faulty.	Replace the drum/developer relay PWB.	
5	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version.	



Step	Check description	Assumed cause	Measures	Reference
6	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C7902: Drum unit C EEPROM 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 data in drum unit C is faulty.	Turn off the power switch and unplug the power cord. After 5s passes, reconnect the power cord and turn on the power switch.	
2	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinstall drum unit C into the main unit all the way to reconnect the connector. Also, reinsert the following wire connectors. If there is no continuity, replace the wire. • Drum unit C - Drum/developer relay PWB • Drum/developer relay PWB - Engine PWB	
3	Replacing the drum unit	The EEPROM in drum unit C is faulty.	Replace drum unit C.	
4	Replacing the drum/developer relay PWB	The drum/developer relay PWB is faulty.	Replace the drum/developer relay PWB.	
5	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version.	
6	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C7903: Drum unit M EEPROM 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 data in drum unit M is faulty.	Turn off the power switch and unplug the power cord. After 5s passes, reconnect the power cord and turn on the power switch.	
2	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinstall drum unit M into the main unit all the way to reconnect the connector. Also, reinsert the following wire connectors. If there is no continuity, replace the wire. • Drum unit M - Drum/developer relay PWB • Drum/developer relay PWB - Engine PWB	
3	Replacing the drum unit	The EEPROM in drum unit M is faulty.	Replace drum unit M.	
4	Replacing the drum/developer relay PWB	The drum/developer relay PWB is faulty.	Replace the drum/developer relay PWB.	
5	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version.	
6	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C7904: Drum unit Y EEPROM 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 data in drum unit Y is faulty.	Turn off the power switch and unplug the power cord. After 5s passes, reconnect the power cord and turn on the power switch.	
2	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinstall drum unit Y into the main unit all the way to reconnect the connector. Also, reinsert the following wire connectors. If there is no continuity, replace the wire. • Drum unit Y - Drum/developer relay PWB • Drum/developer relay PWB - Engine PWB	
3	Replacing the drum unit	The EEPROM in drum unit Y is faulty.	Replace drum unit Y.	
4	Replacing the drum/developer relay PWB	The drum/developer relay PWB is faulty.	Replace the drum/developer relay PWB.	
5	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version.	
6	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C7911: Developer unit K EEPROM 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 data in developer unit K is faulty.	Turn off the power switch and unplug the power cord. After 5s passes, reconnect the power cord and turn on the power switch.	
2	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinstall developer unit K into the main unit all the way to reconnect the connector. Also, reinsert the following wire connectors. If there is no continuity, replace the wire. • Developer unit K - Drum/developer relay PWB • Drum/developer relay PWB - Engine PWB	
3	Replacing developer unit K	The EEPROM in developer unit K is faulty.	Replace developer unit K.	
4	Replacing the drum/developer relay PWB	The drum/developer relay PWB is faulty.	Replace the drum/developer relay PWB.	
5	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version.	
6	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C7912: Developer unit C EEPROM 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 data in developer unit C is faulty.	Turn off the power switch and unplug the power cord. After 5s passes, reconnect the power cord and turn on the power switch.	
2	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinstall developer unit C into the main unit all the way to reconnect the connector. Also, reinsert the following wire connectors. If there is no continuity, replace the wire. • Developer unit C - Drum/developer relay PWB • Drum/developer relay PWB - Engine PWB	
3	Replacing developer unit C	The EEPROM in developer unit C is faulty.	Replace the developer unit C.	
4	Replacing the drum/developer relay PWB	The drum/developer relay PWB is faulty.	Replace the drum/developer relay PWB.	
5	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version.	
6	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C7913: Developer unit M EEPROM 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 data in developer unit M is faulty.	Turn off the power switch and unplug the power cord. After 5s passes, reconnect the power cord and turn on the power switch.	
2	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinstall developer unit M into the main unit all the way to reconnect the connector. Also, reinsert the following wire connectors. If there is no continuity, replace the wire. • Developer unit M - Drum/developer relay PWB • Drum/developer relay PWB - Engine PWB	
3	Replacing developer unit M	The EEPROM in developer unit M is faulty.	Replace the developer unit M.	
4	Replacing the drum/developer relay PWB	The drum/developer relay PWB is faulty.	Replace the drum/developer relay PWB.	
5	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version.	
6	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C7914: Developer unit Y EEPROM 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 data in developer unit Y is faulty.	Turn off the power switch and unplug the power cord. After 5s passes, reconnect the power cord and turn on the power switch.	

Step	Check description	Assumed cause	Measures	Reference
2	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinstall developer unit Y into the main unit all the way to reconnect the connector. Also, reinsert the following wire connectors. If there is no continuity, replace the wire. • Developer unit Y - Drum/developer relay PWB • Drum/developer relay PWB - Engine PWB	
3	Replacing developer unit Y	The EEPROM in developer unit Y is faulty.	Replace the developer unit Y.	
4	Replacing the drum/developer relay PWB	The drum/developer relay PWB is faulty.	Replace the drum/developer relay PWB.	
5	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version.	
6	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C8000: Incompatible finisher detection error

#### Target: Inner finisher

The main unit and the finisher are mismatched.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the finisher	The finisher for other models is installed.	Install the correct finisher.	

### C8090: DF paddle motor error

#### Target: Inner finisher

- DF puddle sensor does not turn on when passing 1s during the DF puddle motor drive.
- DF puddle sensor does not turn off when driving for 1s during the DF bundle eject sensor on.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the DF paddle drive parts	The DF paddle drive parts are not attached properly, or they are faulty.	Reattach the DF paddle drive parts. If not repaired, replace them.	
2	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinsert the following wire connectors. If there is no continuity, replace the wire. • DF paddle motor - DF PWB • DF paddle sensor - DF PWB	
3	Replacing the DF paddle motor	The DF paddle motor is faulty.	Execute U240 [Motor] > [Beat]. If the DF paddle motor does not operate correctly, replace it.	
4	Checking the DF paddle sensor	The DF paddle sensor is not attached properly, or it is faulty.	Reattach the DF paddle sensor and execute U241 [Finisher] > [Lead Paddle]. If it does not operate correctly, replace it.	
5	Replacing the DF PWB	The DF PWB is faulty.	Replace the DF PWB.	

### C8100: DF exit release motor error

#### Target: Inner finisher

- DF bundle sensor does not turn on when passing 1s during the DF eject release motor drive.
- DF bundle eject sensor does not turn off when driving during the DF bundle eject sensor on.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the DF bundle exit unit	The exit guide in the DF bundle exit unit is deformed.	Repair the DF bundle exit unit.	
2	Checking the DF bundle exit unit drive parts	The DF bundle exit unit drive parts are not attached properly, or they are faulty.	Reattach the DF bundle exit unit drive parts. If not repaired, replace them.	
3	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinsert the following wire connectors. If there is no continuity, replace the wire. <ul style="list-style-type: none"> <li>• DF exit release motor - DF PWB</li> <li>• DF bundle exit sensor - DF PWB</li> </ul>	
4	Replacing the DF exit release motor	The DF exit release motor is faulty.	Execute U240 [Motor] > [Eject Unlock]. If the DF exit release motor does not operate correctly, replace it.	
5	Checking the DF bundle exit sensor	The DF bundle exit sensor is not attached properly, or it is faulty.	Reattach the DF bundle exit sensor and execute U241 [Finisher] > [Bundle Eject HP]. If it does not operate correctly, replace it.	
6	Replacing the DF PWB	The DF PWB is faulty.	Replace the DF PWB.	

### C8140: DF tray motor error 1

#### Target: Inner finisher

Change from DF paper holding sensor 1 or 2 turning on to off is not detected when passing 4s while ascending the DF main tray.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the DF main tray	The DF main tray is not assembled properly.	If the DF main tray does not move up and down manually, adjust the position where stacks.	
2	Checking the DF main tray drive parts	The DF main tray drive parts are not attached properly, or they are faulty.	Reattach the DF main tray drive parts. If not repaired, replace them.	
3	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinsert the following wire connectors. If there is no continuity, replace the wire. <ul style="list-style-type: none"> <li>• DF tray motor - DF PWB</li> <li>• DF paper holding sensor 1 - DF PWB</li> <li>• DF paper holding sensor 2 - DF PWB</li> </ul>	
4	Replacing the DF tray motor	The DF tray motor is faulty.	Execute U240 [Motor] > [Tray]. If the DF tray motor does not operate correctly, replace it.	
5	Checking DF paper holding sensors 1, 2	DF paper holding sensor 1, 2 is not attached properly, or it is faulty.	Reattach DF paper holding sensor 1, 2 and execute U241 [Finisher] > [Press Paper Up] or [Press Paper Down]. If it does not operate correctly, replace it.	
6	Replacing the DF PWB	The DF PWB is faulty.	Replace the DF PWB.	

### C8160: DF tray motor error 3

#### Target: Inner finisher

DF tray sensor turning on is not detected when passing 4s while descending the DF main tray.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the DF main tray	The DF main tray is not assembled properly.	If the DF main tray does not move up and down manually, adjust the position where stacks.	

Step	Check description	Assumed cause	Measures	Reference
2	Checking the DF main tray drive parts	The DF main tray drive parts are not attached properly, or they are faulty.	Reattach the DF main tray drive parts. If not repaired, replace them.	
3	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinsert the following wire connectors. If there is no continuity, replace the wire. • DF tray motor - DF PWB • DF tray sensor - DF PWB	
4	Checking the DF tray motor	The DF tray motor is faulty.	Execute U240 [Motor] > [Tray]. If the DF tray motor does not operate correctly, replace it.	
5	Checking the DF tray sensor	The DF tray sensor is not attached properly, or it is faulty.	Reattach the DF tray sensor and execute U241 [Finisher] > [Tray L-Limit]. If it does not operate correctly, replace it.	
6	Replacing the DF PWB	The DF PWB is faulty.	Replace the DF PWB.	

### C8170: DF side registration motor 1 error (1)

#### Target: Inner finisher

The home position cannot be detected when passing 3s while returning to the home position

Step	Check description	Assumed cause	Measures	Reference
1	Checking the front DF side registration guide	The front DF side registration guide is not assembled properly.	If the front DF side registration guide is not shifted manually, repair the part that restricts the operation.	
2	Checking the front DF side registration guide drive parts	The front DF side registration guide drive parts are not attached properly, or they are faulty.	Reattach the DF side registration front guide drive parts. If not repaired, replace them.	
3	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinsert the following wire connectors. If there is no continuity, replace the wire. • DF side registration motor 1 - DF PWB • DF side registration sensor 1 - DF PWB	
4	Checking DF side registration motor 1	DF side registration motor 1 is faulty.	Execute U240 [Motor] > [Width Test(A4R)] or [Width Test(LTR)]. If DF side registration motor 1 does not operate correctly, replace it.	
5	Checking DF side registration sensor 1	DF side registration sensor 1 is not attached properly, or it is faulty.	Reattach DF side registration sensor 1 and execute U241 [Finisher] > [Width Front HP]. If it does not operate correctly, replace it.	
6	Replacing the DF PWB	The DF PWB is faulty.	Replace the DF PWB.	

### C8180: DF side registration motor 1 error (2)

#### Target: Inner finisher

J6812 (Pre DF front width registration jam) is detected twice continuously.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the front DF side registration guide	The front DF side registration guide is not assembled properly.	If the front DF side registration guide is not shifted manually, repair the part that restricts the operation.	
2	Checking the front DF side registration guide drive parts	The front DF side registration guide drive parts are not attached properly, or they are faulty.	Reattach the DF side registration front guide drive parts. If not repaired, replace them.	

Step	Check description	Assumed cause	Measures	Reference
3	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinsert the following wire connectors. If there is no continuity, replace the wire. <ul style="list-style-type: none"> <li>• DF side registration motor 1 - DF PWB</li> <li>• DF side registration sensor 1 - DF PWB</li> </ul>	
4	Checking DF side registration motor 1	DF side registration motor 1 is faulty.	Execute U240 [Motor] > [Width Test (A4R)] or [Width Test (LTR)]. If DF side registration motor 1 does not operate correctly, replace it.	
5	Checking DF side registration sensor 1	DF side registration sensor 1 is not attached properly, or it is faulty.	Reattach DF side registration sensor 1 and execute U241 [Finisher] > [Width Front HP]. If it does not operate correctly, replace it.	
6	Replacing the DF PWB	The DF PWB is faulty.	Replace the DF PWB.	

### C8190: DF side registration motor 2 error (1)

Target: Inner finisher

The home position cannot be detected when passing 3s while returning to the home position

Step	Check description	Assumed cause	Measures	Reference
1	Checking the rear DF side registration guide	The rear DF side registration guide is not assembled properly.	If the rear DF side registration guide is not shifted manually, repair the part that restricts the operation.	
2	Checking the rear DF side registration guide drive parts	The rear DF side registration guide drive parts are not attached properly, or they are faulty.	Reattach the DF side registration rear guide drive parts. If not repaired, replace them.	
3	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinsert the following wire connectors. If there is no continuity, replace the wire. <ul style="list-style-type: none"> <li>• DF side registration motor 2 - DF PWB</li> <li>• DF side registration sensor 2 - DF PWB</li> </ul>	
4	Checking DF side registration motor 2	DF side registration motor 2 is faulty.	Execute U240 [Motor] > [Width Test (A4R)] or [Width Test (LTR)]. If DF side registration motor 2 does not operate correctly, replace it.	
5	Checking DF side registration sensor 2	DF width adjustment sensor 2 is not installed properly. Or, it is faulty.	Reattach DF side registration sensor 2 and execute U241 [Finisher] > [Width Front HP]. If it does not operate correctly, replace it.	
6	Replacing the DF PWB	The DF PWB is faulty.	Replace the DF PWB.	

### C8200: DF side registration motor 2 error (2)

Target: Inner finisher

J6812 (Post DF rear width registration jam) is detected twice continuously.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the rear DF side registration guide	The rear DF side registration guide is not assembled properly.	If the rear DF side registration guide is not shifted manually, repair the part that restricts the operation.	
2	Checking the rear DF side registration guide drive parts	The rear DF side registration guide drive parts are not attached properly, or they are faulty.	Reattach the DF side registration rear guide drive parts. If not repaired, replace them.	

Step	Check description	Assumed cause	Measures	Reference
3	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinsert the following wire connectors. If there is no continuity, replace the wire. • DF side registration motor 2 - DF PWB • DF side registration sensor 2 - DF PWB	
4	Checking DF side registration motor 2	DF side registration motor 2 is faulty.	Execute U240 [Motor] > [Width Test(A4R)] or [Width Test(LTR)]. If DF side registration motor 2 does not operate correctly, replace it.	
5	Checking DF side registration sensor 2	DF width adjustment sensor 2 is not installed properly. Or, it is faulty.	Reattach DF side registration sensor 2 and execute U241 [Finisher] > [Width Front HP]. If it does not operate correctly, replace it.	
6	Replacing the DF PWB	The DF PWB is faulty.	Replace the DF PWB.	

### C8210: DF slide motor front/rear error

#### Target: Inner finisher

The home position cannot be detected when passing 3s while returning to the home position at the initial operation.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the DF staple unit	The DF staple unit is not assembled properly.	If the DF staple unit is not shifted manually back and forth, repair the part that restricts the operation.	
2	Checking the DF staple unit drive parts	The DF staple unit drive parts are not attached properly, or they are faulty.	Reattach the DF staple unit drive parts. If not repaired, replace them.	
3	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinsert the following wire connectors. If there is no continuity, replace the wire. • DF slide motor - DF PWB • DF slide sensor - DF PWB	
4	Replacing the DF slide motor	The DF slide motor is faulty.	Execute U240 [Motor] > [Staple Move]. If the DF slide motor does not operate correctly, replace it.	
5	Checking the DF slide sensor	The DF slide sensor is not attached properly, or it is faulty.	Reattach the DF slide sensor and execute U241 [Finisher] > [Staple HP]. If it does not operate correctly, replace it.	
6	Replacing the DF PWB	The DF PWB is faulty.	Replace the DF PWB.	

### C8230: DF slide motor error 1

#### Target: Inner finisher

The DF staple jam was detected 2 times continuously.

(Detection condition of 2nd paper jam: The home position cannot be detected after passing 600ms since starting up the motor.)

Step	Check description	Assumed cause	Measures	Reference
1	Checking the DF staple unit	The DF staple unit is not assembled properly.	If the DF staple cannot operate manually without paper jam, repair the part that restricts the DF staple.	
2	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinsert the following wire connectors. If there is no continuity, replace the wire. • DF staple unit - DF PWB	
3	Replacing the DF staple unit	The DF staple unit is faulty.	Replace the DF staple unit.	
4	Replacing the DF PWB	The DF PWB is faulty.	Replace the DF PWB.	



### C8260: DF middle motor HP detection error

#### Target: Inner finisher

J7902 (DF paddle jam) is detected twice continuously.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the DF paddle drive parts	The DF paddle drive parts are not attached properly, or they are faulty.	Reattach the DF paddle drive parts. If not repaired, replace them.	
2	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinsert the following wire connectors. If there is no continuity, replace the wire. • DF middle motor - DF PWB • DF paddle sensor - DF PWB	
3	Replacing the DF middle motor	The DF middle motor is faulty.	Execute U240 [Motor] > [Middle(H)] or [Middle(L)]. If the DF middle motor does not operate correctly, replace it.	
4	Checking the DF paddle sensor	The DF paddle sensor is not attached properly, or it is faulty.	Reattach the DF paddle sensor and execute U241 [Finisher] > [Lead Paddle]. If it does not operate correctly, replace it.	
5	Replacing the DF PWB	The DF PWB is faulty.	Replace the DF PWB.	

### C8500: Main program error / Mail Box communication error

#### Target: Mail box

The communication failed after confirming the connection with the mail box.

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	The PWB malfunctions.	Turn off the power switch and unplug the power cord. After 5s passes, reconnect the power cord and turn on the power switch.	
2	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinsert the following wire connectors. If there is no continuity, replace the wire. • MT PWB - DF PWB	
3	Replacing the MT PWB	The MT PWB is faulty.	Replace the MT PWB.	

### C8510: MB conveying motor error 1

#### Target: Mail box

MT home position sensor turning on is not detected when passing 5s at the initial operation.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the MT conveying roller	The MT conveying roller is not assembled properly.	If the MT conveying roller is not rotated manually, repair the part that restricts the operation.	
2	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinsert the following wire connectors. If there is no continuity, replace the wire. • MT conveying motor - MT PWB • MT home position sensor - MT PWB	
3	Replacing the MT drive motor	The MT drive motor is faulty.	Execute U240 [Mail Box] > [Conv]. If the MT conveying motor does not operate correctly, replace it.	
4	Checking the MT home position sensor	The MT home position sensor is not attached properly, or it is faulty.	Reattach the MT home position sensor and execute U241 [Mail Box] > [Motor HP]. If it does not operate correctly, replace it.	
5	Replacing the MT PWB	The MT PWB is faulty.	Replace the MT PWB.	

## C8520: MB conveying motor error 2

### Target: Mail box

MT home position sensor turning on is not detected when passing 1s at the standby operation.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the MT conveying roller	The MT conveying roller is not assembled properly.	If the MT conveying roller is not rotated manually, repair the part that restricts the operation.	
2	Checking the MT conveying roller drive parts	The MT conveying roller drive parts are not attached properly.	Reattach the MT conveying roller drive parts. If not repaired, replace them.	
4	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinsert the following wire connectors. If there is no continuity, replace the wire. <ul style="list-style-type: none"> <li>• MT conveying motor - MT PWB</li> <li>• MT home position sensor - MT PWB</li> </ul>	
5	Replacing the MT drive motor	The MT drive motor is faulty.	Execute U240 [Mail Box] > [Conv]. If the MT conveying motor does not operate correctly, replace it.	
6	Checking the MT home position sensor	The MT home position sensor is not attached properly, or it is faulty.	Reattach the MT home position sensor and execute U241 [Mail Box] > [Motor HP]. If it does not operate correctly, replace it.	
7	Replacing the MT PWB	The MT PWB is faulty.	Replace the MT PWB.	

## C8800: Main program error / Engine - DF communication error (DF)

### Target: Inner finisher

1. The main program is fault when turning the main power on.
2. Engine- DF communication error is detected 10 times continuously.

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	The program does not start up properly.	Turn off the power switch and unplug the power cord. After 5s passes, reconnect the power cord and turn on the power switch.	
2	Firmware upgrade	The firmware is not the latest version.	Upgrade the DF firmware to the latest version.	
3	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinsert the following wire connectors. If there is no continuity, replace the wire. <ul style="list-style-type: none"> <li>• DF PWB - Engine PWB</li> </ul>	
4	Replacing the DF PWB	The DF PWB is faulty.	Replace the DF PWB.	
5	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version.	
6	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

## C8900: DF backup error

### Target: Inner finisher

#### For the internal count

The writing data and the reading data mismatch 3 times continuously.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinsert the following wire connectors. If there is no continuity, replace the wire. <ul style="list-style-type: none"> <li>• DF PWB - Engine PWB</li> </ul>	
2	Replacing the DF PWB	The DF PWB is faulty.	Replace the DF PWB.	

### C9180: DP feed-shift motor error

The home position cannot be detected even if executing the retry of the home position detection 3 times continuously.

[Note]

Home position detection: When shifting the DP feed-shift motor to the home position, the retry will be executed if the home position could not be detected after driving the DP feed-shift motor 1-round.

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	The DP feed-shift motor is not controlled correctly.	Turn off the power switch and unplug the power cord. After 5s passes, reconnect the power cord and turn on the power switch.	
2	Checking the DP feed-shift motor	The DP feed-shift motor is not rotated correctly. Or, there is an excess load.	Detach the DP feed-shift motor, and rotate the drive section manually to fix it. Then, reattach the motor.	
3	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinsert the following wire connectors. If there is no continuity, replace the wire. <ul style="list-style-type: none"> <li>• DP feed-shift motor - DP PWB</li> <li>• DP feed-shift sensor - DP PWB</li> <li>• DP PWB - Engine PWB</li> </ul>	
4	Replacing the DP feed-shift motor	The DP feed-shift motor is faulty.	Replace the DP feed-shift motor if it does not operate correctly when executing U243 [Rev Motor].	
5	Checking the DP feed-shift sensor	The DP feed-shift sensor is not attached properly or faulty.	Reattaching the DP feed-shift sensor. If not solved, replace it.	
6	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version.	
7	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### C9500: Image processing PWB error A

Step	Check description	Assumed cause	Measures	Reference
1	Checking the DP relay PWB	The DP relay PWB is not attached properly, or it is faulty.	Reattach the DP relay PWB. If not solved, replace it.	
2	Firmware upgrade	The firmware is faulty.	Upgrade the firmware to the latest version.	
3	Replacing the main PWB	The main PWB is faulty.	Replace the main 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. <ul style="list-style-type: none"> <li>• Related parts: Memory, each PWB</li> </ul>	
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. <ul style="list-style-type: none"> <li>• Replacing the drum unit or the developer unit</li> <li>• Relocating the drum units to other color's position inside a main unit</li> </ul>	

### (3) System Error (Fxxxx) Outline

#### (3-1) System Error code list

Error code	Contents
F000	Communication error between the main unit and CPU
F010	Program read error (SSD)
F020	System memory error (RAM reading/writing error or CPU memory error)
F040	Communication error between the main unit and CPU (Communication error between the controller and the print engine)
F050	Engine main program error

#### (3-2) Content of System Error (Fxxxx) Outline

##### F000: Communication error between the main unit and CPU

The panel cannot be detected since the CPU communication between the main PWB and the operation panel main PWB is unavailable.

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	The controller does not activate properly.	Turn off the power switch and unplug the power cord. After 5s passes, reconnect the power cord and turn on the power switch.	
2	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinsert the following wire connectors. If there is no continuity, replace the wire. • Operation panel PWB - Main PWB	
3	Checking the DDR memory	The DDR memory is not properly connected.	Remove the DDR memory on the main PWB. Then, clean the terminals and reinstall the DDR memory.	
4	Executing U021	The backup RAM data is faulty.	Execute U021 to initialize the backup RAM data.	
5	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	
6	Replacing the operation panel PWB	The operation panel PWB is faulty.	Replace the operation panel PWB.	

##### F010: Program read error (SSD)

The garbled 2bit data was detected during the program read from the flash memory.

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	The program does not start up properly.	Turn off the power switch and unplug the power cord. After 5s passes, reconnect the power cord and turn on the power switch.	
2	Checking the SSD (if lit after replacing the SSD)	An SSD out of specification is installed.	Install the SSD matching the memory capacity specification.	
3	Checking the connection	The connector is not properly connected or the wire is faulty.	Reinsert the following wire connectors. If there is no continuity, replace the wire. • Operation panel PWB - Main PWB	
4	Executing U021	The backup RAM data is faulty.	Execute U021 to initialize the backup RAM data.	
5	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

### F020: System memory error (RAM reading/writing error or CPU memory error)

The error appears during the reading/writing check of the RAM for the CPU when the main unit starts up.

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	The program does not start up properly.	Turn off the power switch and unplug the power cord. After 5s passes, reconnect the power cord and turn on the power switch.	
2	Executing U021	The backup RAM data is faulty.	Execute U021 to initialize the backup RAM data.	
3	Checking the main 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 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 PWB.	

### F040: Communication error between the main unit and CPU (Communication error between the controller and the print engine)

The communication between the main PWB and the engine PWB is not normal.

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 unplug the power cord. After 5s passes, reconnect the power cord and turn on the power switch.	
2	Checking the connection	FFC is not properly connected, or it is faulty.	Reconnect the following FFC. When the FFC terminals are peeled off, deformed or the FFC is broken, replace the FFC. • Main PWB - Engine PWB	
3	Firmware upgrade	The firmware is not the latest version.	Upgrade the main firmware and the engine firmware to the latest version.	
4	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	
5	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

### F050: Engine main program error

The engine program cannot start up.

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	The print engine ROM checksum is faulty.	Turn off the power switch and unplug the power cord. After 5s passes, reconnect the power cord and turn on the power switch.	
2	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version.	
3	Checking the EEPROM	The EEPROM is not properly attached.	Reattach the EEPROM.	
4	Checking the 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 engine PWB, reconnect the connector of the wire, and reconnect the FFC terminal. If the wire or the FFC is faulty, repair or replace it. If not resolved, replace the engine PWB.	

### (3-3) 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.

 **Important**

- 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.
- 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.

Number	Contents	Verification procedure & check point	Remarks
-	<p>It locks on a Welcome screen.</p> <p>It locks on a starting logo (Taskalfa/Ecosys) screen. (Even if time passes for a definite period of time in more than * notes, a screen does not change)</p> <p>Note: 30ppm model: 70sec.</p>	<p>(1) Check the harness of, and the connection state of a connector between Panel&lt;=&gt;Main boards, and perform an operation check.</p> <p>(2) Check contact of a DDR memory (extracting) and perform an operation check.</p> <p>If exchangeable, it will exchange and will perform an operation check.</p> <p>(3) U021 Controller backup initialization is carried out and an operation check is performed.</p> <p>(4) Exchange a Panel Main board and perform an operation check.</p> <p>(5) Exchange a Main board and perform an operation check.</p> <p>(6) It will get, if USBLOG is obtainable, and contact service headquarters.</p>	<p>(Main&lt;=&gt;Panel I/F) Main PWB: YC2011 Operation panel PWB: YC4</p>
F000	<p>CF000 will be displayed if * notes progress is carried out for a definite period of time with a Welcome screen.</p> <p>The communication fault between Panel-Main boards</p> <p>Communication fault between Panel Core-Main Core Notes 2</p> <p>Note: 30ppm model: 70sec.</p>	<p>(1) Check the harness of * (between Main board &lt;=&gt;SSD), and the connection state of a connector between Panel &lt;=&gt; Main boards, and perform an operation check.</p> <p>(2) Check contact of a DDR memory (extracting) and perform an operation check.</p> <p>If exchangeable, it will exchange and will perform an operation check.</p> <p>(3) U021 Controller backup initialization is carried out and an operation check is performed.</p> <p>(4) Exchange a Main board and perform an operation check.</p> <p>(5) Exchange a Panel Main board and perform an operation check.</p> <p>(6) It will get, if USBLOG is obtainable, and contact service headquarters.</p> <p>* Note 2: Only Dual Core CPU model</p>	<p>(Main &lt;=&gt; Panel I/F) Main PWB: YC2001 Operation panel PWB: YC4</p>

Num ber	Contents	Verification procedure & check point	Remarks
F12X	Abnormality detecting in a Scan control section	(1) Check the harness between Scan/DP <=> Main boards, and the connection state of a connector, and perform an operation check. (2) U021 Controller backup initialization is carried out and an operation check is performed. (3) Exchange a Scan/DP board and perform an operation check. (4) Exchange a Main board and perform an operation check. (5) Get USBLOG and contact service headquarters.	(Scan <=> Main) Main PWB: YC2014 CCD PWB: YC1
F13X	Abnormality detecting in a Panel control section	(1) Check the harness between Panel <=> Main boards, and the connection state of a connector, and perform an operation check. (2) U021 Controller backup initialization is carried out and an operation check is performed. (3) Exchange a Panel board and perform an operation check. (4) Exchange a Main board and perform an operation check. (5) Get USBLOG and contact service headquarters.	(Main <=> Panel I/F) Main PWB: YC2011 Operation panel PWB: YC4
F14X	Abnormality detecting in a FAX control part	(1) Check the harness between FAX <=> Main boards, and the connection state of a connector, and perform an operation check. (2) U021 Controller backup initialization is carried out and an operation check is performed. (3) Exchange a FAX board and perform an operation check. (4) Exchange a Main board and perform an operation check. (5) Get USBLOG and contact service headquarters.	(Main <=> KUIO I/F) Main PWB: YC6001,YC6002 KUIO PWB: YC3,YC4
F15X	Abnormality detecting in an authentication device control section	(1) Check the harness between authentication device <=> Main boards, and the connection situation of a connector, and perform an operation check. (2) Carry out U021 Main backup initialization and perform an operation check. (3) Exchange a Main board and perform an operation check. (4) Exchange SSD and perform an operation check. * (5) Get USBLOG and contact service headquarters.	Authentication device: Card reader etc.  (USB Cable) Main PWB: YC2007
F17X	Abnormality detecting in a printer data control part	(1) Carry out U021 Main backup initialization and perform an operation check. (2) Exchange a Main board and perform an operation check. (3) Exchange SSD and perform an operation check. * (4) Get USBLOG and contact service headquarters.	
F18X	Abnormality detecting in a Video control section	(1) Check the harness between Engine <=> Main boards, and the connection state of a connector, and perform an operation check. (2) U021 Controller backup initialization is carried out and an operation check is performed. (3) Exchange an Engine board and perform an operation check. (4) Exchange a Main board and perform an operation check. (5) Get USBLOG and contact service headquarters.	(Main <=> Engine I/F) Main PWB: YC6004 Engine PWB: YC3

Num ber	Contents	Verification procedure & check point	Remarks
F1DX	Abnormality detecting of the image memory Management Department	(1) Carry out U021 Main backup initialization and perform an operation check. (2) Exchange a Main board and perform an operation check. (3) Exchange SSD and perform an operation check. * (4) Get USBLOG and contact service headquarters.	* Poor arrangement of F1D4: Random Access Memory (1) Confirmation of U340 (2) Initialization of a set point (U021)
F21X F22X F23X	Abnormality detecting in an image-processing part	(1) Check contact of a DDR memory and perform an operation check. (2) Carry out U021 Main backup initialization and perform an operation check. (3) Exchange a Main board and perform an operation check. (4) Exchange SSD and perform an operation check. * (5) Get USBLOG and contact service headquarters.	
F24X	Abnormality detecting in the system Management Department	(1) Check contact of a DDR memory and perform an operation check. (2) Carry out U021 Main backup initialization and perform an operation check. (3) Exchange a Main board and perform an operation check. (4) Exchange SSD and perform an operation check. * (5) Get USBLOG and contact service headquarters.	* F248 is the abnormalities of a printer process. In recurring by specific printer data, please give me cooperation at acquisition of capture data and USBLOG.
F25X	Abnormality detecting in a network management department	(1) Check contact of a DDR memory and perform an operation check. (2) Carry out U021 Main backup initialization and perform an operation check. (3) Exchange a Main board and perform an operation check. (4) Exchange SSD and perform an operation check. * (5) Get USBLOG and contact service headquarters.	* It may occur according to a visitor's network environment.
F26X F27X F28X F29X F2AX	Abnormality detecting in the system Management Department	(1) Carry out U021 Main backup initialization and perform an operation check. (2) Exchange a Main board and perform an operation check. (3) Exchange SSD and perform an operation check. * (4) Get USBLOG and contact service headquarters.	
F2BX F2CX F2DX F2EX F2FX F30X F31X F32X	Abnormality detecting in a network control part	(1) Carry out U021 Main backup initialization and perform an operation check. (2) Exchange a Main board and perform an operation check. (3) Get USBLOG and packet capture and contact service headquarters.	



Num ber	Contents	Verification procedure & check point	Remarks
F33X	Abnormality detecting in the Scan Management Department	(1) Check the harness between Scan/DP <=> Main boards, and the connection state of a connector, and perform an operation check. (2) U021 Controller backup initialization is carried out and an operation check is performed. (3) Exchange a Scan/DP board and perform an operation check. (4) Exchange a Main board and perform an operation check. (5) Get USBLOG and contact service headquarters.	(Scan <=> Main) Engine PWB: YC2014 CCD PWB: YC1
F34X	Abnormality detecting in the Panel Management Department	(1) Check the harness between Panel <=> Main boards, and the connection state of a connector, and perform an operation check. (2) U021 Controller backup initialization is carried out and an operation check is performed. (3) Exchange a Panel board and perform an operation check. (4) Exchange a Main board and perform an operation check. (5) Get USBLOG and contact service headquarters.  * Note: A Dual Core CPU model and HyPAS model	(Main <=> Panel I/F) Main PWB: YC2011 Operation panel PWB: YC4
F35X	Abnormality detecting in the printing controlling Management Department	(1) Carry out U021 Main backup initialization and perform an operation check. (2) Exchange a Main board and perform an operation check. (3) Exchange SSD and perform an operation check. * (4) Get USBLOG and contact service headquarters.	
F37X	Abnormality detecting in the FAX Management Department	(1) Carry out U021 Main backup initialization and perform an operation check. (2) Exchange a Main board and perform an operation check. (3) Get USBLOG and contact service headquarters.	
F38X	Abnormality detecting in the authentication authorized Management Department	(1) Carry out U021 Main backup initialization and perform an operation check. (2) Exchange a Main board and perform an operation check. (3) Exchange SSD and perform an operation check. * (4) Get USBLOG and contact service headquarters.	
F3AX F3BX F3CX F3DX F3EX F3FX F40X F41X F42X F43X F44X F45X	Abnormality detecting in the Entity Management Department	(1) Carry out U021 Main backup initialization and perform an operation check. (2) Exchange a Main board and perform an operation check. (3) Exchange SSD and perform an operation check. * (4) Get USBLOG and contact service headquarters.	

Num ber	Contents	Verification procedure & check point	Remarks
F46X	Abnormality detecting of a printer rendering part	(1) Exchange boards and perform an operation check. (2) the acquisition wish of USBLOG -- carry out (Depending on the (2) case, it is print capture data acquisition)	* F46F is the abnormalities of a printer process. In recurring by specific printer data, please give me cooperation at acquisition of capture data and USBLOG.
F47X F48X F49X	Abnormality detecting of an image editing processing part	(1) Carry out U021 Main backup initialization and perform an operation check. (2) Exchange a Main board and perform an operation check. (3) Exchange SSD and perform an operation check. * (4) Get USBLOG and contact service headquarters.	
F4DX F4EX	Abnormality detecting in the Entity Management Department	(1) Carry out U021 Main backup initialization and perform an operation check. (2) Exchange a Main board and perform an operation check. (3) Exchange SSD and perform an operation check. * (4) Get USBLOG and contact service headquarters.	
F50X	Abnormality detecting in the FAX Management Department	(1) Carry out U021 Main backup initialization and perform an operation check. (2) Exchange a Main board and perform an operation check. (3) Exchange SSD and perform an operation check. * (4) Get USBLOG and contact service headquarters.	Since the USB log at the time of occurrence is needed for analysis, please give me cooperation of acquisition.
F51X F52X F53X F55X F56X F57X	Abnormality detecting in a JOB execution part	(1) Carry out U021 Main backup initialization and perform an operation check. (2) Exchange a Main board and perform an operation check. (3) Exchange SSD and perform an operation check. * (4) Get USBLOG and contact service headquarters.	Since the USB log at the time of occurrence is needed for analysis, please give me cooperation of acquisition.
F58X F59X F5AX F5BX F5CX F5DX F5EX	Abnormality detecting in the various-services Management Department	(1) Carry out U021 Main backup initialization and perform an operation check. (2) Exchange a Main board and perform an operation check. (3) Exchange SSD and perform an operation check. * (4) Get USBLOG and contact service headquarters.	Since the USB log at the time of occurrence is needed for analysis, please give me cooperation of acquisition.
F60X	Abnormality detecting in the maintenance mode/ Remote Service Management Department	(1) Initialize HDD and perform an operation check. (FULL of U024) * (2) Carry out U021 Main backup initialization and perform an operation check. (3) Exchange a Main board and perform an operation check. (4) Exchange HDD and perform an operation check. * (5) Get USBLOG and contact service headquarters. * Only HDD standard model	In case of F60A: 60A is occurred when device registered Remote Service detects off-line status with external system. Please check device Network Settings and Network environment which device is used (include Disconnection rule/status in night time and on weekends.)

Num ber	Contents	Verification procedure & check point	Remarks
F61X	Abnormality detecting in a report creation part	(1) Carry out U021 Main backup initialization and perform an operation check. (2) Exchange a Main board and perform an operation check. (3) Exchange SSD and perform an operation check. * (4) Get USBLOG and contact service headquarters.	Since the USB log at the time of occurrence is needed for analysis, please give me cooperation of acquisition.
F62X	Abnormality detecting in a service execution part	(1) Carry out U021 Main backup initialization and perform an operation check. (2) Exchange a Main board and perform an operation check. (3) Exchange SSD and perform an operation check. * (4) Get USBLOG and contact service headquarters.	Since the USB log at the time of occurrence is needed for analysis, please give me cooperation of acquisition.
F68X	Abnormality detecting in a storage device control section	(1) Carry out U021 Main backup initialization and perform an operation check. (2) Exchange a Main board and perform an operation check. (3) Exchange SSD and perform an operation check. * (4) Get USBLOG and contact service headquarters.	
F69X F6AX F6BX F6CX	Abnormality detecting in a HyPAS-E part	(1) Carry out U021 Main backup initialization and perform an operation check. (2) Exchange a Main board and perform an operation check. (3) Exchange SSD and perform an operation check. * (4) Get USBLOG and contact service headquarters.	
F6DX F6EX F6FX F70X F71X F72X F73X F74X F75X	Abnormality detecting in the external server Management Department	(1) Check an external server and perform an operation check. (2) Check connection with an external server and perform an operation check. (3) network setup is checked and an operation check is performed. (4) Exchange a Bridge board and perform an operation check. (5) Exchange a Main board and perform an operation check. (6) Get USBLOG and contact service headquarters.	

## 7 - 4 FAX Related Errors

### (1) FAX Related Errors

No.	Contents
(1-1)	C0030: FAX PWB system error
(1-2)	C0070: FAX PWB incompatible detection error
(1-3)	C0830: FAX PWB flash program area checksum error
(1-4)	C0870: PC FAX Image data transmission error
(1-5)	C0920: FAX file system error
(1-6)	C0950: FAX job stay error
(1-7)	FAX cannot be sent
(1-8)	The beep sounds when the copying or printing is finished
(1-9)	When the data of the A3 or B4 size originals is transmitted, all of it is transmitted as the A4 size data.

#### Content of FAX Related Errors

#### (1-1) C0030: FAX PWB system error

The FAX processing cannot be continued due to the FAX firmware error.

Step	Check description	Assumed cause	Measures	Reference
1	Reinstalling the FAX PWB	The FAX PWB does not operate properly.	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.	
2	Firmware upgrade	The firmware is faulty.	Reinstall the FAX firmware.	
3	Replacing the FAX PWB	The FAX PWB is faulty.	Replace the FAX 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	Firmware upgrade	The FAX firmware is faulty.	Reinstall the FAX firmware.	

#### (1-3) C0830: FAX PWB flash program area checksum error

The program stored in the flash memory on the FAX PWB is broken so it cannot perform.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is faulty.	Reinstall the FAX firmware.	
2	Reinstalling the FAX PWB	The FAX PWB does not operate properly.	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	Initializing the fax	The data in the FAX PWB is faulty.	Execute U600 to initialize the FAX.	
4	Replacing the FAX PWB	The FAX PWB is faulty.	Replace the FAX PWB.	

**(1-4) C0870: PC FAX Image data transmission error**

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 FAX PWB	The FAX PWB does not operate properly.	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.	
2	Initializing the fax	The data in the FAX PWB is faulty.	Execute U600 to initialize the FAX.	
3	Firmware upgrade	The FAX firmware is faulty.	Upgrade the fax firmware to the latest version.	
4	Replacing the FAX PWB	The FAX PWB is faulty.	Replace the FAX PWB.	

**(1-5) C0920: FAX file system error**

The backup data could not be stored since the file system of the flash memory is faulty.

Step	Check description	Assumed cause	Measures	Reference
1	Initializing the fax	FAX control values are incorrect.	Execute U600 to initialize the FAX.	
2	Reinstalling the FAX PWB	The FAX PWB does not operate properly.	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 faulty.	Reinstall the FAX firmware.	
4	Replacing the FAX PWB	The FAX PWB is faulty.	Replace the FAX PWB.	

**(1-6) C0950: FAX job stay error**

Print processing of the received FAX could not be executed and the job continues staying.

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	The printing process is not properly executed.	Turn off the power switch and unplug the power cord. After 5s passes, reconnect the power cord and turn on the power switch.	
2	Firmware upgrade	The firmware is faulty.	Upgrade the main firmware to the latest version.	

**(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	Checking the settings	The line settings are incorrect.	Correct the line settings. (Reduce the transmission speed, etc.)	
4	Checking the destination unit	The destination unit is busy.	Wait a while and then redial the number if busy tones are heard.	

Step	Check description	Assumed cause	Measures	Reference
5	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.	
6	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.	
7	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**

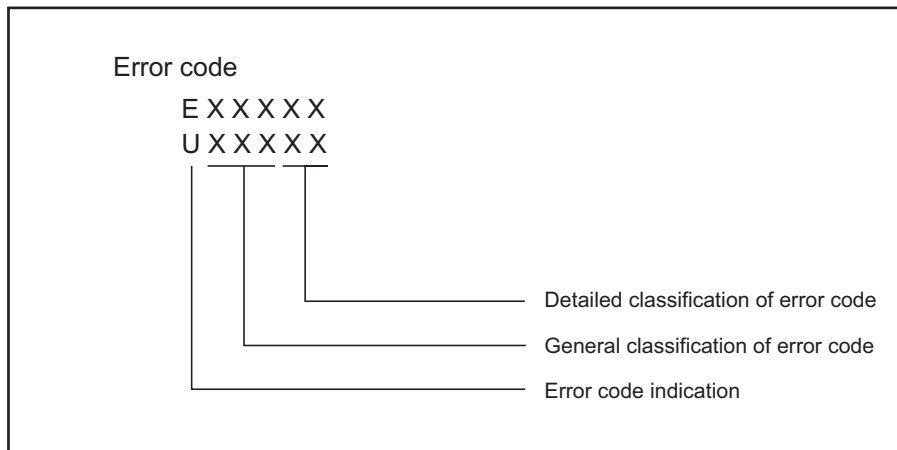
Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the fax firmware to the latest version.	

**(1-9) When the data of the A3 or B4 size originals is transmitted, all of it is transmitted as the A4 size data.**

Step	Check description	Assumed cause	Measures	Reference
1	Checking the settings	The receivable size in the destination unit is A4 / Letter.	Select [B4] or [A3/Ledger] according to the receivable size at the Address book registration display > [i-FAX] > [Paper size].	
2	Checking the settings	The receivable size in the destination unit is A4 / Letter.	Select the condition of the destination unit when transmitting the data, choose [B4] or [A3/Ledger] according to the receivable sizes.	

## (2) Communication Errors

Error codes are listed on the communication reports, activity report, etc. The codes consist of an error code indication followed by a 5-digit number. (The V.34 error is indicated with E of the error code and 5-digit number) Regarding the 5-digit number, upper 3 digits indicate error and large classification of cause, lower 2 digits small classification of cause. The lower 2 digits are 00 for the item not requiring the category.



### Error code

Error code	Contents
U00000/E00000	No response or busy after the set number 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.
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.

Error code	Contents
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.
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.



Error code	Contents
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.
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.	

Step	Check description	Assumed cause	Measures	Reference
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 transmission error occurred because of the reception of 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.	

Step	Check description	Assumed cause	Measures	Reference
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.	

Step	Check description	Assumed cause	Measures	Reference
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 MODEM 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 in U650 [REG. G3 RX EQR]. (Initial setting: 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.	

Step	Check description	Assumed cause	Measures	Reference
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 re transfers 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.	



Step	Check description	Assumed cause	Measures	Reference
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 MODEM 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 in U650 [REG. G3 RX EQR]. (Initial setting: 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 in U650 [REG. G3 RX EQR]. (Initial setting: 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.	

Step	Check description	Assumed cause	Measures	Reference
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.	



Step	Check description	Assumed cause	Measures	Reference
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
(1-1)	The sending error 2101 does not disappear even if changing the host name or the security software settings
(1-2)	Sending error 2203 does not disappear.
(1-3)	Scanned 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	Checking 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	Checking 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 check box.	

#### (1-3) Scanned data from the contact glass is automatically sent

Step	Check description	Assumed cause	Measures	Reference
1	Checking the settings	[Continuous Scan] is not set to [On].	Press [Send] key or [FAX] key, and select [On] in [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.	
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.	
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.	

Step	Check description	Assumed cause	Measures	Reference
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.	



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 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.	
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.	
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)	The paper direction is incorrect	
(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 displayed on the printer properties	The main unit is not ready to print
(11)	[Processing] lamp and [Memory] lamp are lit while the printer standby message is displayed	The main unit locks up.
(12)	Data is not printed out in Sleep mode due to the main unit startup error ([Processing] lamp and [Memory] lamp are lit)	The main unit locks up.
(13)	Print stops after printing several pages (machine lock-up) ([Processing] lamp and [Memory] lamp are lit.)	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 is faulty, or the network settings is not correct.
(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.
(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)	[Disconnection error] appears on the PC screen and the print job cannot be output due to this error. (Print is unavailable.)
(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, etc.) 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	Checking the 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 paper sensor	The actuator or the spring for the paper sensor is not properly attached. Or, the paper sensor does not properly operate due to their deformation.	Replace the actuator or the spring of the paper sensor if they are deformed or do not operate properly.	
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	Checking 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	Checking 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	Checking 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	Checking 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 settings	The print settings of PageMaker 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	Checking 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	Checking 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	Checking the paper	Paper quality causes the phenomenon.	Replace with smooth paper.	
7	Executing Calibration	Calibration is not executed properly.	Execute the calibration.	
8	Checking 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) The paper direction is incorrect

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, Word, etc. 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	Checking the printer driver	The printer driver is faulty.	Uninstall and reinstall the printer driver.	

#### (5) Paper is fed from the MP tray

The main unit MP tray setting is wrong

Step	Check description	Assumed cause	Measures	Reference
1	Checking 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	Checking 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.	

Step	Check description	Assumed cause	Measures	Reference
3	Checking the settings	The same media type is set between the main unit cassette and MP tray.	Set the different media types for the cassette and the MP tray at the main unit.	

### (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, Word, etc. 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	Checking the printer driver	The printer driver is faulty.	Uninstall and reinstall the printer driver.	

### (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	Checking 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	Checking 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	Checking 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 displayed 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.	

**(11) [Processing] lamp and [Memory] lamp are lit while the printer standby message is displayed**

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) Data is not printed out in Sleep mode due to the main unit startup error**

([Processing] lamp and [Memory] lamp are lit)

The main unit locks up.

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	Changing the sleep level	The sleep level is not set to Quick Recovery mode.	Turn off the power switch and unplug the power cord. After 5s passes, reconnect the power cord and turn on the power switch. After that, set the Sleep Level to Quick Recovery.	

**(13) Print stops after printing several pages (machine lock-up)**

([Processing] lamp and [Memory] lamp are lit.)

The image processing fails due to the insufficient memory, so the main unit locks up.

Step	Check description	Assumed cause	Measures	Reference
1	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.	

Step	Check description	Assumed cause	Measures	Reference
2	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.	
3	Checking 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.	
4	Firmware upgrade	The firmware is not the latest version.	Upgrade the main firmware to the latest version.	
5	Deleting the job	Processing fails.	Cancel the job in process and reprint in the main unit job status.	

**(14) Print out is not available from the network factor (1)**

The network is faulty, or the network settings is not correct.

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 if the internet is available. Improve the network connection if not available.	
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 cable	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	Checking 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	Checking 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	
2	Checking 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 if the internet is available. Improve the network connection if not available.	
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	Checking the settings	The application is not properly set.	Check if the other Excel / Word data, etc. can be output and change the setting of the application.	
4	Checking 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	Checking 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.	Check if the test print is output after the printer is ready, and restart up the main unit.	

### (19) Print out is not available from the network factor (6)

Condition:

- PC OS: Windows 7
- Print file: Test page
- Connecting 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	Checking 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 cable	The wire is not properly connected.	Check if there is problem with the cable connection on the network.	
3	Resetting the main power	The main unit does not start up properly.	Turn off the power switch and unplug the power cord. After 5s passes, reconnect the power cord and turn on the power switch.	
4	Checking the settings	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 system of the main unit is not set to the static IP address.	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
- Print file: Test page
- Connecting method: Wireless LAN

[Disconnection error] appears on the PC screen and the print job cannot be output due to this error. (Print is unavailable.)

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
- Print file: Test page
- Connecting 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 drive is faulty, or it is not the latest version.	Uninstall the printer driver and reinstall the latest printer driver.	
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 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	Checking 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	Checking 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, etc.) 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

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	The paper size is not set properly in the System Menu.	Register the custom size in [Cassette/MP Tray Setting] in the System Menu > [Paper Size] > [Size Entry].	
4	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 add paper message appears while the paper is loaded on the MP tray

### Content of Error Messages

#### (1) The add paper message appears while the paper is loaded on the MP tray

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. • MP paper sensor - Engine PWB	
2	Replacing the actuator	The actuator is deformed.	Replace the MP paper sensor actuator.	
3	Checking the MP paper sensor	The MP paper sensor is not properly attached or it is faulty.	Reattach the MP paper sensor, and replace it if it is not fixed.	
4	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	



## 7 - 8 Abnormal Noise

No.	Contents	Condition
(1)	Abnormal noise (Basic treatment)	
(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)	Fan rotating sounds are noisy.	
(7)	Abnormal sound from the primary paper feed section	Frictional wear, smudges / foreign objects adhesion, attachment failure of the primary paper feed section
(8)	Abnormal sound from the machine front side	Wear, dirtiness, foreign objects adhesion or attachment failure at the MP feed section
(9)	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
(10)	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
(11)	Abnormal sound from the fuser section	Smudges / foreign objects adhesion or the interference between the parts in the fuser section
(12)	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
(13)	Abnormal sound from inside the machine	Smudges / foreign objects adhesion or the toner condensation in the developer section
(14)	Abnormal sound from inside the machine	Frictional wear, smudges / foreign objects adhesion, or the waste toner clogging in the drum section
(15)	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
(16)	The driving sound is noisy during printing	The operation sounds in the drive section

### Content of Abnormal Noise

#### (1) Abnormal noise (Basic treatment)

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 bushing or the gear is dirty or foreign objects are on them.	Clean the bushings and the gears of the conveying related rollers, and apply grease.	
2	Cleaning and applying the grease	The inside of the pulley is worn down.	Clean the drive shaft of the conveying related pulley and apply grease.	

Step	Check description	Assumed cause	Measures	Reference
3	Cleaning and applying the grease	The gear tooth are dirty or foreign objects are on them.	Clean the drive gears of the conveying related rollers, and apply grease.	
4	Replacing the feed drive unit	The feed drive unit is faulty.	Replace feed 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.	Specify the faulty developer unit by executing [Feed] (developer motor (BK)), or [DLP(CMY)] (developer motor (M/C/Y)) at U030. Then, check if no developer powder leaks, the developer unit has no damage, and the roller can rotate manually. If necessary, fix them.	
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	Checking the bushing	The bushing is worn down.	Replace the bushing.	
3	Cleaning and applying the grease	The drive gear is dirty or foreign objects are on it.	Clean the drive gear for the DP conveying motor or the DP feed-shift motor, and then apply grease to the gears.	
4	Checking the motor	The DP conveying motor or the DP feedshift motor does not engage with the drive gear.	Reattach the DP conveying motor or the DP feed-shift motor.	

### (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 bushing or the gear is dirty or foreign objects are on them.	Clean the bushing and the gear of the exit roller and apply grease to them.	
2	Cleaning and applying the grease	The shaft is dirty or foreign objects are on it.	Clean the shaft of the exit pulley and apply grease to it.	
3	Checking the shaft of the feed-shift guide	The shaft is dirty or foreign objects are on it.	Clean the shaft of the feed-shift guide and apply grease to it.	

### (6) Fan rotating sounds are noisy.

Step	Check description	Assumed cause	Measures	Reference
1	Cleaning the fan motor	The blades of the fan motor are dirty.	Isolate the noisy fan motor by executing U037, and clean the fan.	
2	Replacing the fan motor	The fan motor is faulty.	Reattach the fan motor and reconnect the connector. If not repaired, replace it.	

### (7) 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 or the bushing is dirty or foreign objects are on them.	Clean the primary paper feed drive components such as the gear or the bushing and apply the grease to them.	
3	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 paper feed roller and apply the grease to them.	

### (8) 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	Reattach the MP lift plate.	The MP lift plate is not attached properly.	Reattach the MP lift plate.	

### (9) 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.	

### (10) 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.	

### (11) 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 press-release cam and the frame.	
5	Replacing the fuser unit	The fuser front guide is bent and it contacts the press roller.	Replace the fuser unit.	

### (12) 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 manually to fix the operation.	
2	Checking the toner remaining amount	The toner mixing paddle is bent or the toner amount in the toner container is little.	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.	

### (13) 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 for opening and closing of the toner supply opening is hooked with the other parts, or deformed.	Open and close the toner supply opening manually to fix the operation.	
2	Checking the developer unit	The shaft or the bushing of the developer roller is dirty or foreign objects are on them.	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.	

### (14) 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 cleaning 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	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.	

### (15) 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.	
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 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.	
4	Replacing the primary transfer unit	The primary transfer unit is faulty.	Replace the primary transfer unit.	

### (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.	Select [On] at [Adjustment/Maintenance] in the System Menu > 'Silent mode'.	

## 7 - 9 Malfunction

No.	Contents	Condition
(1)	The login fails with other than the ID card	
(2)	The main unit does not operate at all even if the power switch is turned on	
(3)	Toner drops over the paper conveying section.	(Final phenomenon: Toner adheres on the paper leading edge)

### Content of Malfunction

#### (1) 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 [System Menu] > [User Login/Job Accounting] > [Card Setting] > [Next] > [Keyboard Login] to [On].	

#### (2) The main unit does not operate at all even if the power switch is turned on

Step	Check description	Assumed cause	Measures	Reference
1	Measuring the input voltage	The power cord has no continuity.	Plug the power cord into another wall outlet.	
2	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.	
3	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.	
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. <ul style="list-style-type: none"> <li>• Power switch - Engine PWB</li> <li>• Low voltage PWB - Engine PWB</li> </ul>	
5	Replacing the low voltage PWB	The low voltage PWB is faulty.	Replace the low voltage PWB.	
6	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

#### (3) Toner drops over the paper conveying section.

(Final phenomenon: Toner adheres on the paper leading edge)

Step	Check description	Assumed cause	Measures	Reference
1	Cleaning the developer unit and drum unit	The developer unit or the drum unit is dirty.	Clean the developer unit and the drum unit.	
2	Executing Developer refresh	The toner is deteriorated.	Execute the developer refresh twice.	
3	Replacing the developer unit	The toner is deteriorated.	Replace the developer unit.	



**(1-3) Connector lists**

Connector	Pin	Signal	I/O	Voltage	Description
<b>YC2</b> <b>SD card connector</b>	1	CD/DAT3	I/O	DC0V/3.3V	Data signal
	2	CMD	I/O	DC0V/3.3V	Command signal
	3	Vss	O	-	GND
	4	Vdd	O	3.3V	Power supply
	5	CLK	O	DC0V/3.3V	Transfer clock
	6	Vss	O	-	GND
	7	DAT0	I/O	DC0V/3.3V	Data signal
	8	DAT1	I/O	DC0V/3.3V	Data signal
	9	DAT2	I/O	DC0V/3.3V	Data signal
	10	CD	I	DC0V/3.3V	Detect switch
	11	COMMON	I	-	Common connect (GND)
	12	WP	I	DC0V/3.3V	Light protect
	LP-1	LockPin(1)	-	-	Lock pin
	LP-2	LockPin(2)	-	-	Lock pin
	LP-3	LockPin(3)	-	-	Lock pin
LP-4	LockPin(4)	-	-	Lock pin	
<b>YC3</b> <b>Connect to the Wi-Fi module (IB-35)</b>	1	SD_D3	I/O	DC0V/3.3V	Data signal
	2	SD_D2	I/O	DC0V/3.3V	Data signal
	3	SD_CMD	I/O	DC0V/3.3V	Command signal
	4	GND	O	-	GND
	5	SD_CLK	O	DC0V/3.3V	Transfer clock
	6	GND	O	-	GND
	7	SD_D1	I/O	DC0V/3.3V	Data signal
	8	SD_D0	I/O	DC0V/3.3V	Data signal
	9	GND	O	-	GND
	10	VIO	O	3.3V	Power supply
	11	VBAT	O	3.3V	Power supply
	12	GND	O	-	GND
	13	PAVDD	O	3.3V	Power supply
	14	GND	O	-	GND
	15	HOSTWAKE	I	DC0V/3.3V	Interrupt signal
	16	GND	O	-	GND
	17	RESET	O	DC0V/3.3V	



Connector	Pin	Signal	I/O	Voltage	Description
<b>YC3</b>	18	DETECT	I	DC0V/3.3V	Detect switch
	19	USB_+	I/O		
	20	USB_-	I/O		
<b>YC4</b> <b>USB Device connection</b>	1	VBUS	O	DC0V/5V	VBUS
	2	D-	I/O	DC0V/0.4V (Pulse)	Data signal
	3	D+	I/O	DC0V/0.4V (Pulse)	Data signal
	4	GND	-	-	GND
	LP-1	LockPin(1)	-	-	Lock pin
	LP-2	LockPin(2)	-	-	Lock pin
<b>YC5</b> <b>Connect to the USB host of the IC card reader</b>	1	VBUS	O	DC0V/5V	VBUS
	2	D-	I/O	DC0V/0.4V (Pulse)	Data signal
	3	D+	I/O	DC0V/0.4V (Pulse)	Data signal
	4	NC	-	-	Not used
	5	GND	-	-	GND
	LP-1	LockPin(1)	-	-	Lock pin
	LP-2	LockPin(2)	-	-	Lock pin
	LP-3	LockPin(3)	-	-	Lock pin
<b>YC6</b> <b>Connect to the Front USB host</b>	1	VBUS	O	DC0V/5V	VBUS
	2	D-	I/O	DC0V/0.4V (Pulse)	Data signal
	3	D+	I/O	DC0V/0.4V (Pulse)	Data signal
	4	NC	-	-	Not used
	5	GND	-	-	GND
	LP-1	LockPin(1)	-	-	Lock pin
	LP-2	LockPin(2)	-	-	Lock pin
	LP-3	LockPin(3)	-	-	Lock pin
<b>YC8</b> <b>Connect to the eKUIO relay PWB</b>	1	VBUS1	O	DC0V/5V	VBUS
	2	USB_DN1	I/O	± 400mV (Pulse)	Data signal
	3	USB_DP1	I/O	± 400mV (Pulse)	Data signal
	4	GND	-	-	GND
	5	AUDIO1	-	-	Not used

Connector	Pin	Signal	I/O	Voltage	Description
<b>YC8</b>	6	WAKEUP1	I	DC0V/3.3V	Recovery request
	7	RESET1	O	DC0V/3.3V	Reset
	8	GND	-	-	GND
	9	VBUS0	O	DC0V/5V	VBUS
	10	USB_DN0	I/O	± 400mV (Pulse)	Data signal
	11	USB_DP0	I/O	± 400mV (Pulse)	Data signal
	12	GND	-	-	GND
	13	AUDIO0	I	Analog	FAX Audio
	14	WAKEUP0	I	DC0V/3.3V	Recovery request
	15	RESET0	O	DC0V/3.3V	Reset
	LP-1	LockPin(1)	-	-	Lock pin
LP-2	LockPin(2)	-	-	Lock pin	
<b>YC9</b>  <b>Wired LAN connection</b>	1	TD1+	I/O	(0, ±0.5, ±1.0) Pulse	Data signal
	2	TD1-	I/O	(0, ±0.5, ±1.0) Pulse	Data signal
	3	TD2+	I/O	(0, ±0.5, ±1.0) Pulse	Data signal
	4	TD2-	I/O	(0, ±0.5, ±1.0) Pulse	Data signal
	5	CT	-	-	Center tap
	6	CT	-	-	Center tap
	7	TD3+	I/O	(0, ±0.5, ±1.0) Pulse	Data signal
	8	TD3-	I/O	(0, ±0.5, ±1.0) Pulse	Data signal
	9	TD4+	I/O	(0, ±0.5, ±1.0) Pulse	Data signal
	10	TD4-	I/O	(0, ±0.5, ±1.0) Pulse	Data signal
<b>YC12</b>  <b>Connect to the operation panel main PWB</b>	A1	3.3V2_C_PANEL	-	DC3.3V	
	A2	FPRST	O	DC0V/3.3V	Panel reset
	A3	P2C_SDAT	I	DC0V/3.3V	Communication data
	A4	C2P_SDAT	O	DC0V/3.3V	Communication data
	A5	P2C_SDIR	I	DC0V/3.3V	Communication direction
	A6	P2C_SBSY	I	DC0V/3.3V	Communication permission
	A7	C2P_SCK	O	DC0V/3.3V	Communication clock

Connector	Pin	Signal	I/O	Voltage	Description
<b>YC12</b>	A8	DISPLAY_POWERON	O	DC0V/3.3V	Panel non-display request signal
	A9	INT_ANYKEY	I	DC0V/3.3V	ANY KEY Recovery signal
	A10	GND	-	-	GND
	A11	5.0V1_C1_PANEL	-	DC5V	Power supply
	A12	5.0V1_C1_PANEL	-	DC5V	Power supply
	A13	5.0V1_C1_PANEL	-	DC5V	Power supply
	B1	JOB_LED	O	DC0V/3.3V	Job separator LED
	B2	GND	-	-	GND
	B3	GND	-	-	GND
	B4	GND	-	-	GND
	B5	BEEP_POWERON	O	DC0V/3.3V	Leaving sound drive
	B6	LED MEMPRY	O	DC0V/3.3V	Memory LED lighting signal
	B7	LED_ATTENTION	O	DC0V/3.3V	Attention LED light signal
	B8	NC	-	-	Not used
	B9	AUDIO	O	Analog	FAX Audio
	B10	PNL_WKUP_REQ	O	DC0V/3.3V	Releasing Panel CPU slow mode
B11	INT_ENERGYSAVERKEY_N	I	DC0V/3.3V	Power saving key entry	
B12	POWER_SW	I	DC0V/3.3V	Power supply switch entry	
B13	GND	-	-	GND	
<b>Y13</b> <b>Connect to the operation panel main PWB</b>	1	GND	-	-	GND
	2	LCD_OFF	O	-	LCD conductivity
	3	LOCKN	I	-	Connection
	4	GND	-	-	GND
	5	TX0N	O	LVDS	LCD image data
	6	TX0P	O	LVDS	LCD image data
	7	GND	-	-	GND
	LP-1	LockPin(1)	-	-	Lock pin
	LP-2	LockPin(2)	-	-	Lock pin
<b>YC23</b> <b>Connect to the eKUIO relay PWB</b>	1	GND	-	-	GND
	2	5V_CUT0	O	DC5V	5V power supply (Shut off at the sleep mode)
	3	GND	-	-	GND
	4	5V	O	DC5V	5V power supply output

Connector	Pin	Signal	I/O	Voltage	Description
YC23	5	GND	-	-	GND
	6	5V_CUT1	O	DC5V	5V power supply (Shut off at the sleep mode)
YC24 Connect to the Engine PWB	1	JS_LED	I	DC0V/3.3V	Signal for the job separator
	2	HP_SWN	O	DC0V/3.3V	Signal for HP sensor
	3	DUTY_CONTROL	O	DC0V/3.3V	Power supply intermittent control signal for the sensor
	4	E2C_WKUP_RDY_N	I	DC0V/3.3V	Engine related Wakeup signal (Ready recovery)
	5	ENG_HLDN	O	DC0V/3.3V	Engine hold signal
	6	SCN_HLDN	O	DC0V/3.3V	Scan hold signal
	7	C2E_QUICK_START	O	DC0V/3.3V	Start-up status notification signal to the engine CPU
	8	E2C_WKUP_BGD_N	I	DC0V/3.3V	Engine related Wakeup signal (Background recovery)
	9	C2E_STBY_ASIC	O	DC0V/3.3V	ASIC(Monaco) access permission signal
	10	OVSYNCOMON_A	O	DC0V/3.3V	CCD sub scan Sub-scan valid section monitoring
	11	PAGEST_A	I	DC0V/3.3V	ISU sub-scan standard (VSYNC)
	12	SCAN_E2C_SEL	I	DC0V/3.3V	SCAN ASIC serial communication select
	13	SCAN_E2C_SCK	I	DC0V/3.3V	SCAN ASIC serial communication clock
	14	SCAN_C2E_SDATA	O	DC0V/3.3V	SCAN ASIC serial communication data
	15	SCAN_E2C_SDATA	I	DC0V/3.3V	SCAN ASIC serial communication data
	16	SCAN_C2E_RDY	O	DC0V/3.3V	SCAN ASIC serial communication ready
	17	C2E_SCK	O	DC0V/3.3V	G6 Communication clock
	18	C2E_SDAT	O	DC0V/3.3V	G6 Engine hold signal
	19	E2C_SDIR	I	DC0V/3.3V	Communication direction
	20	E2C_SDAT	I	DC0V/3.3V	G6 Engine send signal
	21	E2C_IRN	I	DC0V/3.3V	G6 Engine request signal
	22	E2C_SBSY	I	DC0V/3.3V	G6 Engine busy signal
	23	GND	-	-	GND
	24	EG_SCL	I	DC0V/3.3V	I2C
	25	EG_SDA	I/O	DC0V/3.3V	I2C
	26	GND	-	-	GND
	27	PVSYNC	I	DC0V/3.3V	Horizontal sync signal
	28	PSSLEEPN	O	DC0V/3.3V	Low voltage Sleep control
	29	GND	-	-	GND

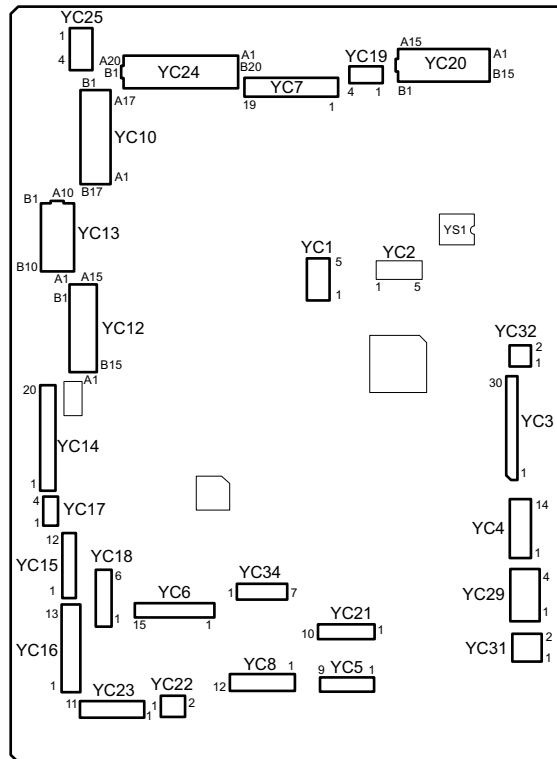
Connector	Pin	Signal	I/O	Voltage	Description
<b>YC24</b>	30	LSUTHERM	-	-	For thermistor
<b>YC25</b> <b>Connect to the Engine PWB</b>	1	+5V3_E_IL	-	DC5V	Power supply
	2	GND	-	-	GND
	3	+5V3_E	-	DC5V	Power supply
	4	GND	-	-	GND
	5	+3.3V1_C	-	DC3.3V	Power supply
	6	GND	-	-	GND
	7	+3.3V3_E	-	DC3.3V	Power supply
	8	+3.3V3_E	-	DC3.3V	Power supply
	9	GND	-	-	GND
	10	GND	-	-	GND
	11	+24V0	-	DC24V	Power supply
	12	+24V0	-	DC24V	Power supply
	13	GND	-	-	GND
	14	GND	-	-	GND
<b>YC26</b> <b>Connect to the Engine PWB</b>	1	GND	-	-	GND
	2	+24V3_E	I	DC24V	24V power supply output
<b>YC27</b> <b>Connect to the APC PWB</b>	1	GND	-	-	GND
	2	GND	-	-	GND
	3	LDERRN	O		Excess current detection signal
	4	PDMA	O	DC0V/3.3V	Axis unevenness adjustment signal
	5	GND	-	-	GND
	6	VDOY1P	O	DC0V/1.8V	VIDEO DATA
	7	VDOY1N	O	DC0V/1.8V	VIDEO DATA
	8	GND	-	-	GND
	9	OUTPEYN	O	DC0V/3.3V	Output unable signal
	10	SAMPLEY1N	O	DC0V/3.3V	Sample hold signal
	11	DPMB	O	DC0V/3.3V	Axis unevenness adjustment signal
	12	GND	-	-	GND
	13	VDOC1P	O	DC0V/1.8V	VIDEO DATA
	14	VDOC1N	O	DC0V/1.8V	VIDEO DATA
	15	GND	-	-	GND
	16	OUTPECN	O	DC0V/3.3V	Output unable signal

Connector	Pin	Signal	I/O	Voltage	Description
<b>YC27</b>	17	SAMPLEC1N	O	DCC0V/3.3V	Sample hold signal
	18	PDMC	O	DC0V/3.3V	Axis unevenness adjustment signal
	19	GND	-	-	GND
	20	VDOM1P	O	DC0V/1.8V	VIDEO DATA
	21	VDOM1N	O	DC0V/1.8V	VIDEO DATA
	22	GND	-	-	GND
	23	OUTPEMN	O	DC0V/3.3V	Output unable signal
	24	SAMPLEM1N	O	DC0V/3.3V	Sample hold signal
	25	PDMD	O	DC0V/3.3V	Axis unevenness adjustment signal
	26	GND	-	-	GND
	27	VDOK1P	O	DC0V/1.8V	VIDEO DATA
	28	VDOK1N	O	DC0V/1.8V	VIDEO DATA
	29	GND	-	-	GND
	30	OUTPEKN	O	DC0V/3.3V	Output unable signal
	31	SAMPLEK1N	O	DC0V/3.3V	Sample hold signal
	32	5V	-	DC5V	Power supply for LD
	33	5V	-	DC5V	Power supply for LD
	34	5V	-	DC5V	Power supply for LD
	35	5V	-	DC5V	Power supply for LD
	36	PDKN	I	DC0V/3.3V	BD Signal
37	LSUTHERM	I	-	Thermistor signal	
38	GND	-	-	GND	
39	GND	-	-	GND	
40	GND	-	-	GND	
<b>YC29</b> <b>Connect to the CCD PWB</b>	1	+12V3_E1	O	DC12V	+12V power supply output
	2	+12V3_E1	O	DC12V	+12V power supply output
	3	NC	-	-	NC
	4	+5.0V3_E2	O	DC5V	+5.0V power supply output
	5	+5.0V3_E2	O	DC5V	+5.0V power supply output
	6	NC	-	-	NC
	7	GND	-	-	GND
	8	CCDOSR	I	Analog	CCD analog signal Red
	9	GND	-	-	GND
	10	CCDOSG(EVEN)	I	Analog	CCD analog signal Green
	11	GND	-	-	GND

Connector	Pin	Signal	I/O	Voltage	Description
YC29	12	CCDOSB(ODD)	I	Analog	CCD analog signal Blue
	13	GND	-	-	GND
	14	CCDSW	O	DC0V/2.5V	CCD Mono/Color switch signal
	15	CCDSH	O	DC0V/2.5V	CCD Horizontal sync signal
	16	GND	-	-	GND
	17	GND	-	-	GND
	18	CCDPH1+	O	DC0V/1.8V	CCD clock signal 1+
	19	CCDPH1-	O	DC0V/1.8V	CCD clock signal 1-
	20	GND	-	-	GND
	21	CCDCP-	O	DC0V/1.8V	CCD clamp signal-
	22	CCDCP+	O	DC0V/1.8V	CCD clamp signal+
	23	GND	-	-	GND
	24	CCDRS+	O	DC0V/1.8V	CCD Reset signal+
	25	CCDRS-	O	DC0V/1.8V	CCD Reset signal-
	26	GND	-	-	GND
	27	NC	-	-	NC
	28	+3.3V3_E1	O	DC3.3V	+3.3V power supply output
29	HP_SWN	I	DC3.3V	Scanner carriage HP position detection signal	
30	GND	-	-	GND	
31	M_LED_C	I	-	LED_Cathode	
32	M_LED_A	O	-	LED_Anode	

## (2) Engine PWB

### (2-1) Connector position



### (2-2) PWB photograph





**(2-3) Connector lists**

Connector	Pin	Signal	I/O	Voltage	Description
<b>YC3</b>  <b>Connect to Main PWB</b>	1	LSUTHERM	I	Analog	LSU thermistor voltage
	2	GND	-	-	Ground
	3	PSLEEPN	I	DC0V/24V	Power sleep signal
	4	PVSYNC	O	DC0V/3.3V	Image area section signal
	5	GND	-	-	Ground
	6	EG_SDA	I/O	DC0V/3.3V (Pulse)	VIDEO serial communication data input/output signal
	7	EG_SCL	O	DC0V/3.3V (Pulse)	VIDEO serial communication clock output signal
	8	GND	-	-	Ground
	9	E2C_SBSY	O	DC0V/3.3V	G6 Serial communication Engine busy signal
	10	E2C_IRN	O	DC0V/3.3V	G6 Serial communication Engine interrupt signal
	11	E2C_SDAT	O	DC0V/3.3V (Pulse)	G6 serial communication data output signal
	12	E2C_SDIR	O	DC0V/3.3V	G6 Serial communication direction signal
	13	C2E_SDAT	I	DC0V/3.3V (Pulse)	G6 serial communication data input signal
	14	C2E_SCK	I	DC0V/3.3V (Pulse)	G6 Serial communication clock input signal
	15	SCAN_E2C_RDY	O	DC0V/3.3V	SCAN serial communication ready signal
	16	SCAN_E2C_SDAT	O	DC0V/3.3V (Pulse)	SCAN serial communication data output signal
	17	SCAN_C2E_SDAT	I	DC0V/3.3V (Pulse)	SCAN serial communication data input signal
	18	SCAN_E2C_SCK	O	DC0V/3.3V (Pulse)	SCAN serial communication clock output signal
	19	SCAN_E2C_SEL	O	DC0V/3.3V	SCAN serial communication select signal
	20	PAGEST	O	DC0V/3.3V	Sub-scan standard signal
	21	OVSYCMON	I	DC0V/3.3V	Sub-scan valid section monitoring signal
	22	C2E_STBY_ASIC	I	DC0V/3.3V	ASIC setting permission notice signal
	23	E2C_WKUP_BGD_N	O	DC0V/3.3V	Status change notice signal
	24	C2E_QUICK_START	I	DC0V/3.3V	Speed priority recovery notice signal
	25	SCN_HLDN	I	DC0V/3.3V	Scanner drive stop signal
	26	ENG_HLDN	I	DC0V/3.3V	Scanner drive stop signal
	27	E2C_WKUP_RDY_N	O	DC0V/3.3V	Status change notice signal

Connector	Pin	Signal	I/O	Voltage	Description
<b>YC3</b>	28	DUTY_CONTROL	I	DC0V/3.3V	Power supply control signal
	29	HP_SWN	I	DC0V/3.3V	Carriage HP signal
	30	JS_LED	I	DC0V/3.3V	Job separator LED drive
<b>YC4</b> <b>Connect to Main PWB</b>	1	GND	-	-	Ground
	2	GND	-	-	Ground
	3	+24V0	O	DC24V	DC24V power supply output to MPWB
	4	+24V0	O	DC24V	DC24V power supply output to MPWB
	5	GND	-	-	Ground
	6	GND	-	-	Ground
	7	+3.3V3_E	I	DC3.3V	DC3.3V power supply output to MPWB
	8	+3.3V3_E	I	DC3.3V	DC3.3V power supply output to MPWB
	9	GND	-	-	Ground
	10	+3.3V1_C	I	DC3.3V	DC3.3V power supply input from MPWB
	11	GND	-	-	Ground
	12	+5V3_E	I	DC5V	DC5V power supply input from MPWB
	13	GND	-	-	Ground
	14	+5V3_E_IL	O	DC5V	DC5V power supply output to MPWB
<b>YC5</b> <b>Polygon motor</b> <b>Connect to the cleaning motor</b>	1	+24V3_E	O	DC24V	DC24V power supply output to PM
	2	GND	-	-	Ground
	3	POLREM	O	DC0V/5V	PM remote signal
	4	POLRDYN	I	DC0V/3.3V	PM sync signal
	5	PDLCLK	O	DC0V/5V (Pulse)	PM clock signal
	6	LSU_CL_MOT2	O	DC0V/24V (Pulse)	CLM drive Control signal
	7	LSU_CL_MOT1	O	DC0V/24V (Pulse)	CLM drive Control signal
	8	NC	-	-	Not used
	9	NC	-	-	Not used
<b>YC6</b> <b>Connect to the Drum/ Developer relay PWB</b>	1	GND	-	-	Ground
	2	VIBR_MOT_REM	O	DC0V/3.3V	VIBM remote signal
	3	TCSSENS_Y	I	Analog	TS-Y detection signal
	4	TCSSENS_C	I	Analog	TS-C detection signal
	5	TCSSENS_M	I	Analog	TS-M detection signal
	6	ERS_CL_REM	O	DC0V/3.3V	Eraser CL remote signal

Connector	Pin	Signal	I/O	Voltage	Description
YC6	7	GND	-	-	Ground
	8	+3.3V3_E	O	DC3.3V	DC3.3V power supply output to DR/DLPPWB
	9	EEP_SCL	O	DC0V/3.3V (Pulse)	EEPROM clock signal
	10	EEP_SDA	I/O	DC0V/3.3V (Pulse)	EEPROM data input/output signal
	11	+24V3_E	O	DC24V	DC24V power supply output to DR/DLPPWB
	12	GND	-	-	Ground
	13	DLP_TH	I	Analog	Developer thermistor voltage
	14	TCSENS_Bk	I	Analog	TS-K detection signal
	15	ERS_Bk_REM	O	DC0V/3.3V	Eraser BK remote signal
YC7	1	+3.3V3_E_LED	O	DC3.3V	DC3.3V power supply output to ES
	2	GND	-	-	Ground
	3	FSR_JAM_SENS	I	DC0V/3.3V	ES: On/Off
	4	+3.3V3_E_LED	O	DC3.3V	DC3.3V power supply output to FUPRS
	5	GND	-	-	Ground
	6	FSR_RLS_SENS	I	DC0V/3.3V	FUPRS: On/Off
	7	GND	-	-	Ground
	8	MAIN_TH2	I	Analog	Non-contact thermistor voltage(detection)
	9	MAIN_TH1	I	Analog	Non-contact thermistor voltage(compensation)
	10	GUIDE_TH2	I	Analog	Contact thermistor voltage
	11	GND	-	-	Ground
	12	FUS_DET	I	DC0V/3.3V	Fuser unit connection signal
	13	GND	-	-	Ground
	14	+3.3V3_E_LED	O	DC3.3V	DC3.3V power supply output to TCBRS1
	15	GND	-	-	Ground
	16	3REJECT_SENS	I	DC0V/3.3V	TCBRS1: On/Off

Connector	Pin	Signal	I/O	Voltage	Description
<b>YC7</b>	17	+3.3V3_E_LED	O	DC3.3V	DC3.3V power supply output to TCBRS2
	18	GND	-	-	Ground
	19	4REJECT_SENS	I	DC0V/3.3V	TCBRS2: On/Off
<b>YC8</b>  <b>Connect to the high voltage PWB</b>	1	+24V3_E_IL	O	DC24V	24V power supply output
	2	+24V3_E_IL	O	DC24V	24V power supply output
	3	DACSLD1	O	DC0V/5V	DAC load signal1
	4	DACSLD2	O	DC0V/5V	DAC load signal2
	5	DACSCLK	O	DC0V/5V (Pulse)	DAC clock signal
	6	SGND	-	-	Ground
	7	DACSDI	O	DC0V/5V (Pulse)	DAC data signal
	8	HVREM	O	DC0V/24V	Secondary transfer (reverse)/PB remote signal
	9	HVCLK	O	DC0V/10V	Developer clock (SLV) signal
	10	MISENS	I	Analog	Electrical charge (K) current detection
	11	GND	-	-	Ground
	12	GND	-	-	Ground
<b>YC10</b>  <b>RFID, Eject fan motor, transfer release motor</b>  <b>Waste box switch, waste toner detection sensor</b>  <b>Connect to the temperature/humidity sensor, developer fan motor3/4</b>	A1	+5V3_E	O	DC5V	5V power supply output
	A2	+3.3V3_E	O	DC3.3V	3.3V power supply output
	A3	RFID_SCL	O	DC0V/3.3V (Pulse)	RFID communication clock signal
	A4	GND	-	-	Ground
	A5	RFID_SDA	I/O	DC0V/3.3V	RFID communication data signal
	A6	+3.3V3_E	O	DC3.3V	3.3V power supply output
	A7	GND	-	-	Ground
	A8	SUB_SDA	I/O	DC0V/3.3V (Pulse)	communication data signal
	A9	SUB_SCL	O	DC0V/3.3V (Pulse)	communication clock signal
	A10	NC	-	-	Not used
	A11	NC	-	-	Not used

Connector	Pin	Signal	I/O	Voltage	Description
<b>YC10</b>	A12	NC	-	-	Not used
	A13	NC	-	-	Not used
	A14	NC	-	-	Not used
	A15	NC	-	-	Not used
	A16	+24V3_E	O	DC24V	24V power supply output
	A17	EXIT_FAN	O	DC0V/24V	EFM: On/Off
	B1	BELT_RLS_REMA	O	DC0V/24V	TCBRM: On/Off
	B2	BELT_RLS_REMB	O	DC0V/24V	TCBRM: On/Off
	B3	GND	-	-	Ground
	B4	WTNR_SET_SENS	I	DC0V/3.3V	WTSSW: On/Off
	B5	WTNR_LED_3.3V2	O	DC3.3V	3.3V power supply output
	B6	WTNR_LED	O	DC0V/3.3V	WST(LED): On/Off
	B7	WTNR_TR_3.3V2	O	DC3.3V	3.3V power supply output
	B8	WTNR_TR	I	Analog	WST detection voltage
	B9	HUMCLK	O	DC0V/3.3V	TEMS clock signal
	B10	HUMOUT	I	Analog	TEMS (humidity) detection voltage
	B11	GND	-	-	Ground
B12	AIRTEMP	I	Analog	TEMS (temperature) detection voltage	
B13	DLP_FAN3	O	DC0V/24V	DLPFM3: On/Off	
B14	+24V3_E	O	DC24V	24V power supply output	
B15	DLP_FAN4	O	DC0V/24V	DLPFM4: On/Off	
B16	+24V3_E	O	DC24V	24V power supply output	
B17	NC	-	-	Not used	
<b>YC12</b>  <b>Paper detection sensor, paper remaining sensor1</b>  <b>Paper remaining sensor2, paper width detection sensor1</b>  <b>Paper width detection sensor2</b>  <b>Paper width detection sensor3, duplex sensor</b>	A1	+3.3V3_E_LED	O	DC3.3V	DC3.3V power supply output to PS
	A2	GND	-	-	Ground
	A3	PAPEMP_SENS	I	DC0V/3.3V	PS: On/Off
	A4	+3.3V3_E_LED	O	DC3.3V	DC3.3V power supply output to PGS1
	A5	GND	-	-	Ground

Connector	Pin	Signal	I/O	Voltage	Description
<b>YC12</b>  <b>MPF paper detection sensor, lift sensor</b>  <b>Connect to the regist sensor, MP solenoid</b>	A6	PAPVL1_SENS	I	DC0V/3.3V	PGS1: On/Off
	A7	+3.3V3_E_LED	O	DC3.3V	DC3.3V power supply output to PGS2
	A8	GND	-	-	Ground
	A9	PAPVL2_SENS	I	DC0V/3.3V	PGS2: On/Off
	A10	CAS_WID0	I	DC0V/3.3V	PLSW1: On/Off
	A11	GND	-	-	Ground
	A12	CAS_WID1	I	DC0V/3.3V	PLSW2: On/Off
	A13	GND	-	-	Ground
	A14	CAS_WID2	I	DC0V/3.3V	PLSW3: On/Off
	A15	GND	-	-	Ground
	B1	+3.3V3_E_LED	O	DC3.3V	DC3.3V power supply output to DUS
	B2	GND	-	-	Ground
	B3	DU1_SENS	I	DC0V/3.3V	DUS: On/Off
	B4	+3.3V3_E_LED	O	DC3.3V	DC3.3V power supply output to MPPS
	B5	GND	-	-	Ground
	B6	MPF_SET_SENS	I	DC0V/3.3V	MPPS: On/Off
	B7	+3.3V1_E_LED	O	DC3.3V	DC3.3V power supply output to LS
	B8	GND	-	-	Ground
	B9	CAS_LIFTUP_SENS	I	DC0V/3.3V	LS: On/Off
	B10	GND	-	-	Ground
B11	REG_SENS	I	DC0V/3.3V	RS: On/Off	
B12	+3.3V3_E_LED	O	DC3.3V	DC3.3V power supply output to RS	
B13	+24V3_E	O	DC24V	DC24V power supply output to MPSOL	
B14	MPF_SOL_REM	O	DC0V/24V	MPSOL: On/Off	
B15	NC	-	-	Not used	
<b>YC13</b>  <b>Developer clutch, Regist clutch</b>  <b>Primary feed clutch, Middle clutch</b>  <b>Duplex clutch, Front ID sensor</b>	A1	DEV_CL_REM	O	DC0V/24V	DLPCL-BK: On/Off
	A2	+24V3_E	O	DC24V	DC24V power supply output to DLPCL-BK
	A3	RESIST_CL_REM	O	DC0V/24V	RCL: On/Off
	A4	+24V3_E	O	DC24V	DC24V power supply output to RCL

Connector	Pin	Signal	I/O	Voltage	Description
<b>YC13</b>  <b>Connect to the rear ID sensor</b>	A5	FEED_CL_REM	O	DC0V/24V	FCL: On/Off
	A6	+24V3_E	O	DC24V	DC24V power supply output to FCL
	A7	MID_CL_REM	O	DC0V/24V	MCL: On/Off
	A8	+24V3_E	O	DC24V	DC24V power supply output to MCL
	A9	DU1_REM	O	DC0V/24V	DUCL: On/Off
	A10	+24V3_E	O	DC24V	DC24V power supply output to DUCL
	B1	+3.3V3_E	O	DC3.3V	DC3.3V power supply output to IDS1
	B2	REG_F_LED	O	Analog	IDS1 Control signal
	B3	GND	-	-	Ground
	B4	REG_SENS_F_P	I	Analog	IDS1 detection signal
	B5	REG_SENS_F_S	I	Analog	IDS1 detection signal
	B6	+3.3V3_E	O	DC3.3V	DC3.3V power supply output to IDS2
	B7	REG_R_LED	O	Analog	IDS2 Control signal
	B8	GND	-	-	Ground
B9	REG_SENS_R_P	I	Analog	IDS2 detection signal	
B10	REG_SENS_R_S	I	Analog	IDS2 detection signal	
<b>YC14</b>  <b>Transfer belt fan motor</b>  <b>Container motor (BK), Container motor (M)</b>  <b>Container motor (C), Container motor (Y)</b>  <b>Container sensor (BK), Container sensor (M)</b>  <b>Container sensor (C), Container sensor (Y)</b>	1	+24V3_E	O	DC24V	DC24V power supply output to TM(Y)
	2	TMOT_Y_DIR	O	DC0V/24V	TM(Y)drive control signal
	3	+24V3_E	O	DC24V	DC24V power supply output to TM(C)
	4	TMOT_C_DIR	O	DC0V/24V	TM(C)drive control signal
	5	+24V3_E	O	DC24V	DC24V power supply output to TM(M)
	6	TMOT_M_DIR	O	DC0V/24V	TM(M)drive control signal
	7	+24V3_E	O	DC24V	DC24V power supply output to TM( BK)
	8	TMOT_BK_DIR	O	DC0V/24V	TM(BK)drive control signal
	9	+3.3V3_E_LED	O	DC3.3V	DC3.3V power supply output to CS(Y)
	10	GND	-	-	Ground

Connector	Pin	Signal	I/O	Voltage	Description
<b>YC14</b>	11	PULSE_SENS_Y	I	DC0V/3.3V	CS(Y): On/Off
	12	+3.3V3_E_LED	O	DC3.3V	DC3.3V power supply output to CS(C)
	13	GND	-	-	Ground
	14	PULSE_SENS_C	I	DC0V/3.3V	CS(C): On/Off
	15	+3.3V3_E_LED	O	DC3.3V	DC3.3V power supply output to CS(M)
	16	GND	-	-	Ground
	17	PULSE_SENS_M	I	DC0V/3.3V	CS(M): On/Off
	18	+3.3V3_E_LED	O	DC3.3V	DC3.3V power supply output to CS( BK)
	19	GND	-	-	Ground
	20	PULSE_SENS_BK	I	DC0V/3.3V	CS(BK) On/Off
<b>YC15</b> <b>Connect to the transfer motor, Developer motor (BK)</b>	1	+24V3_E_IL	O	DC24V	DC24V power supply output to TCM
	2	GND	-	-	Ground
	3	IMAGE_MOT_REM	O	DC0V/5V	TCM remote signal
	4	IMAGE_MOT_CLK	O	DC0V/5V (Pulse)	TCM clock signal
	5	IMAGE_MOT_RDY	I	DC0V/3.3V	TCM sync signal
	6	IMAGE_MOT_DIR	O	DC0V/5V	TCM rotation switch signal
	7	+24V3_E_IL	O	DC24V	DC24V power supply output to DLPM( BK)
	8	GND	-	-	Ground
	9	FEED_MOT_REM	O	DC0V/5V	DLPM(BK)remote signal
	10	FEED_MOT_CLK	O	DC0V/5V (Pulse)	DLPM(BK)clock signal
	11	FEED_MOT_RDY	I	DC0V/3.3V	DLPM(BK)sync signal
	12	FEED_MOT_DIR	O	DC0V/5V	DLPM(BK)rotation switch signal
<b>YC16</b> <b>Connect to the developer motor(M/C/Y), Drum motor (BK)</b>	1	+24V3_E_IL	O	DC24V	DC24V power supply output to DLPM-M/C/Y
	2	GND	-	-	Ground
	3	DLPC_MOT_REM	O	DC0V/5V	DLPM-M/C/Y remote signal
	4	DLPC_MOT_CLK	O	DC0V/5V (Pulse)	DLPM-M/C/Y clock signal
	5	DLPC_MOT_RDY	I	DC0V/3.3V	DLPM-M/C/Y sync signal
	6	DLPC_MOT_DIR	O	DC0V/5V	DLPM-M/C/Y rotation switch signal
	7	+24V3_E_IL	O	DC24V	DC24V power supply output to DRM-BK
	8	GND	-	-	Ground



Connector	Pin	Signal	I/O	Voltage	Description
<b>YC16</b>	9	DRMK_MOT_REM	O	DC0V/5V	DRM- BK remote signal
	10	DRMK_MOT_CLK	O	DC0V/5V (Pulse)	DRM- BK clock signal
	11	DRMK_MOT_RDY	I	DC0V/3.3V	DRM- BK sync signal
	12	DRMK_MOT_DIR	O	DC0V/5V	DRM- BK rotation switch signal
	13	NC	-	-	Not used
<b>YC17</b> <b>Connect to the fuser motor</b>	1	FUSER_MOT_B/	O	DC0V/24V (Pulse)	FUM drive Control signal
	2	FUSER_MOT_A/	O	DC0V/24V (Pulse)	FUM drive Control signal
	3	FUSER_MOT_B	O	DC0V/24V (Pulse)	FUM drive Control signal
	4	FUSER_MOT_A	O	DC0V/24V (Pulse)	FUM drive Control signal
<b>YC18</b> <b>Connect to the drum motor(M/C/Y)</b>	1	+24V3_E_IL	O	DC24V	DC24V power supply output to DRM- M/C/Y
	2	GND	-	-	Ground
	3	DRMC_MOT_REM	O	DC0V/5V	DRM-M/C/Y remote signal
	4	DRMC_MOT_CLK	O	DC0V/5V (Pulse)	DRM-M/C/Y clock signal
	5	DRMC_MOT_RDY	I	DC0V/3.3V	DRM-M/C/Y sync signal
	6	DRMC_MOT_DIR	O	DC0V/5V	Drum-M/C/Y rotation switch signal
<b>YC19</b> <b>Connect to the scanner motor</b>	1	SCAN_MOT_B3	O	DC0V/24V (Pulse)	SM drive Control signal
	2	SCAN_MOT_A1	O	DC0V/24V (Pulse)	SM drive Control signal
	3	SCAN_MOT_B1	O	DC0V/24V (Pulse)	SM drive Control signal
	4	SCAN_MOT_A3	O	DC0V/24V (Pulse)	SM drive Control signal
<b>YC20</b> <b>DP original detection sensor, DP feed sensor</b> <b>DP regist sensor, DP cover open/close sensor</b> <b>DP feed shift sensor, DP feed motor, DP conveying motor</b> <b>Connect to the DP feed shift motor</b>	A1	+3.3V1_E_LED	O	DC3.3V	DC3.3V power supply output to DPOS
	A2	GND	-	-	Ground
	A3	DP_SET_SENS	I	DC0V/3.3V	DPOS: On/Off
	A4	+3.3V3_E_LED	O	DC3.3V	DC3.3V power supply output to DPFS
	A5	GND	-	-	Ground
	A6	DP_FEED_SENS	I	DC0V/3.3V	DPFS: On/Off

Connector	Pin	Signal	I/O	Voltage	Description
<b>YC20</b>	A7	+3.3V3_E_LED	O	DC3.3V	DC3.3V power supply output to DPRS
	A8	GND	-	-	Ground
	A9	DP_OPEN_SENS	I	DC0V/3.3V	DPRS: On/Off
	A10	+3.3V1_E_LED	O	DC3.3V	DC3.3V power supply output to DPCOCS
	A11	GND	-	-	Ground
	A12	DP_JHP_SENS	I	DC0V/3.3V	DPCOCS: On/Off
	A13	+3.3V3_E_LED	O	DC3.3V	DC3.3V power supply output to DPFSS
	A14	GND	-	-	Ground
	A15	DP_REG_SENS	I	DC0V/3.3V	DPFSS: On/Off
	B1	DP_CONVMOT_/B	O	DC0V/24V (Pulse)	DPOCM drive Control signal
	B2	DP_CONVMOT_B	O	DC0V/24V (Pulse)	DPOCM drive Control signal
	B3	DP_CONVMOT_/A	O	DC0V/24V (Pulse)	DPOCM drive Control signal
	B4	DP_CONVMOT_A	O	DC0V/24V (Pulse)	DPOCM drive Control signal
	B5	DP_FEEDMOT_/B	O	DC0V/24V (Pulse)	DPOFM drive Control signal
	B6	DP_FEEDMOT B	O	DC0V/24V (Pulse)	DPOFM drive Control signal
	B7	DP_FEEDMOT_/A	O	DC0V/24V (Pulse)	DPOFM drive Control signal
	B8	DP_FEEDMOT_A	O	DC0V/24V (Pulse)	DPOFM drive Control signal
	B9	DP_SEPMOT_/B	O	DC0V/24V (Pulse)	DPSPM drive Control signal
	B10	DP_SEPMOT_/A	O	DC0V/24V (Pulse)	DPSPM drive Control signal
	B11	DP_SEPMOT_B	O	DC0V/24V (Pulse)	DPSPM drive Control signal
B12	DP_SEPMOT_A	O	DC0V/24V (Pulse)	DPSPM drive Control signal	
B13	NC	-	-	Not used	
B14	NC	-	-	Not used	
B15	NC	-	-	Not used	
<b>YC21</b> <b>Developer fan motor1, developer fan motor2</b> <b>Lift motor, clutch fan motor</b> <b>Connect to the cassette heater PWB</b>	1	+24V3_E	O	DC24V	DC24V power supply output to DLPFM1
	2	DLP_FAN1	O	DC0V/24V	DLPFM1: On/Off
	3	+24V3_E	O	DC24V	DC24V power supply output to DLPFM2
	4	DLP_FAN2	O	DC0V/24V	DLPFM2: On/Off
	5	LIFT_MOT_DR	O	DC0V/24V	LM drive Control signal
	6	LIFT_MOT_RET	O	DC0V/24V	LM drive Control signal
	7	CL_FAN	O	DC0V/24V	CONTFM: On/Off

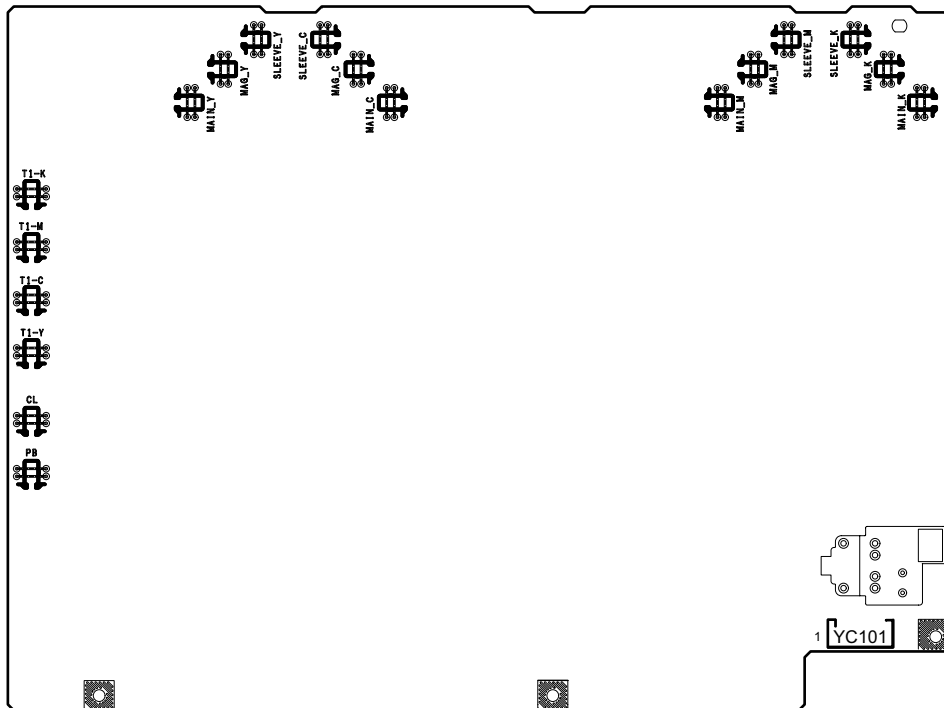
Connector	Pin	Signal	I/O	Voltage	Description
YC21	8	+24V3_E	O	DC24V	DC24V power supply output
	9	+5V3_E	O	DC5V	DC5V power supply output
	10	GND	-	-	Ground
YC22 Connect to the paper feeder	1	GND	-	-	Ground
	2	+24V3_E	O	DC24V	DC24V power supply output to PFPWB
YC23 Connect to the paper feeder	1	PF_CAS_OPEN	I	DC0V/3.3V	Cassette open/close signal output
	2	PAUSE	O	DC0V/3.3V	Pause Signal
	3	PF_SDO	O	DC0V/3.3V (Pulse)	Serial communication data signal
	4	PF_SDI	I	DC0V/3.3V (Pulse)	Serial communication data signal
	5	PF_RDY	I	DC0V/3.3V	Ready signal
	6	PF_CLK	O	DC0V/3.3V (Pulse)	Clock signal
	7	PF_SEL2	O	DC0V/3.3V	Cassette3 select signal
	8	PF_SEL1	O	DC0V/3.3V	Cassette2 select signal
	9	GND	-	-	Ground
	10	+3.3V1_E	O	DC3.3V	DC3.3V power supply output to PF
	11	PF_VER_SENS	I	DC0V/3.3V	PFCS1: On/Off
YC24 AK, Inner finisher, Mail box Eject motor, eject feed shift solenoid, upper eject full sensor Lower exit full sensor, steam removal fan motor Connect to the JS paper detection sensor, front cover open/close switch1	A1	BRIDGE_FAN	O	DC0V/3.3V	BRFM: On/Off
	A2	BRIDGE REM	O	DC0V/3.3V	Bridge motor remote signal
	A3	BRIDGE CLK	O	DC0V/3.3V (Pulse)	Bridge motor clock signal
	A4	BRIDGE_PH0	O	DC0V/3.3V	Bridge motor excitation switch signal 1
	A5	BRIDGE_PH1	O	DC0V/3.3V	Bridge motor excitation switch signal 2
	A6	BRIDGE_DET	I	DC0V/3.3V	Bridge presence detection signal
	A7	BRIDGE_SENS1	I	DC0V/3.3V	Bridge conveying detection signal 1
	A8	BRIDGE_SENS2	I	DC0V/3.3V	Bridge conveying detection signal 2
	A9	BREDGE_OPEN_SW	I	DC0V/3.3V	Bridge open detection signal

Connector	Pin	Signal	I/O	Voltage	Description
YC24	A10	GND	-	-	Ground
	A11	GND	-	-	Ground
	A12	+3.3V3_E	O	DC3.3V	DC3.3V power supply output to BRMPWB
	A13	+24V3_E	O	DC24V	DC24V power supply output to BRMPWB
	A14	DF_RDY	O	DC0V/3.3V	Ready signal
	A15	DF_SEL	O	DC0V/3.3V	Select signal
	A16	DF_SDO	O	DC0V/3.3V (Pulse)	Serial communication data signal
	A17	DF_SDI	I	DC0V/3.3V (Pulse)	Serial communication data signal
	A18	NC	-	-	Not used
	A19	DF_DET	I	DC0V/3.3V	Connection detection signal
	A20	DF_CLK	I	DC0V/3.3V (Pulse)	Clock signal
	B1	CON_FAN	O	DC0V/24V	SFM: On/Off
	B2	+24V3_E	O	DC24V	DC24V power supply output to SFM
	B3	SB_MOT_B1	O	DC0V/24V (Pulse)	EM drive Control signal
	B4	SB_MOT_B3	O	DC0V/24V (Pulse)	EM drive Control signal
	B5	SB_MOT_A3	O	DC0V/24V (Pulse)	EM drive Control signal
	B6	SB_MOT_A1	O	DC0V/24V (Pulse)	EM drive Control signal
	B7	+24V3_E	O	DC0V/24V	24V power supply output to FSSOL
	B8	EJE_SOL_PULL	O	DC0V/24V	FSSOL: On/Off(Suction)
	B9	EJE_SOL_RETURN	O	DC0V/24V	FSSOL: On/Off(Retention)
B10	+3.3V3_E_LED	O	DC3.3V	DC3.3V power supply output to EFS1	
B11	GND	-	-	Ground	
B12	EJE_FULL_UP	I	DC0V/3.3V	EFS1: On/Off	
B13	+3.3V3_E_LED	O	DC3.3V	DC3.3V power supply output to EFS2	
B14	GND	-	-	Ground	
B15	EJE_FULL_DOWN	I	DC0V/3.3V	EFS2: On/Off	
B16	+3.3V3_E_LED	O	DC3.3V	DC3.3V power supply output to EPS	
B17	GND	-	-	Ground	
B18	EXITUP_PAP_SENS	I	DC0V/3.3V	EPS: On/Off	
B19	FCOVOR_OPEN	I	DC0V/3.3V	FCSW2: On/Off	
B20	GND	-	-	Ground	
YC25 Connect to the mail box or inner finisher	1	GND	-	-	Ground
	2	GND	-	-	Ground

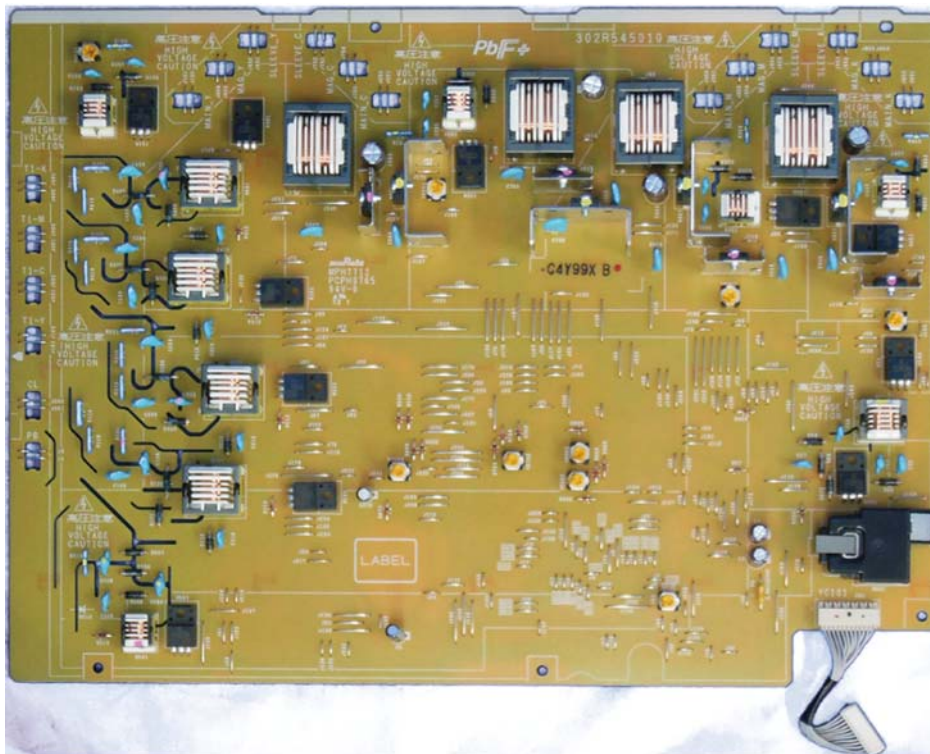
Connector	Pin	Signal	I/O	Voltage	Description
YC25	3	+24V3_E	O	DC24V	DC24V power supply output to MBMPWB
	4	+24V3_E	O	DC24V	DC24V power supply output to MBMPWB
YC29 Connect to the low voltage PWB	1	GND	-	-	Ground
	2	GND	-	-	Ground
	3	+24V0	I	DC24V	DC24V power supply input from PSPWB
	4	+24V0	I	DC24V	DC24V power supply input from PSPWB
YC31 Connect to the right cover open/close switch, front cover open/close switch1	1	+24V0	O	DC24V	DC24V power supply output to RCSW
	2	+24V3_E_IL	I	DC24V	DC24V power supply input from FCSW
YC32 Connect to Main PWB	1	+24V3_E	O	DC24V	DC24V power supply output to MPWB
	2	GND	-	-	Ground
YC34 Connect to the low voltage PWB	1	+24V3_E	O	DC24V	DC24V power supply output to PWBFM
	2	LVU_FAN	O	DC0V/24V	PWBFM: On/Off
	3	SHREM	O	DC0V/3.3V	Sub heater control
	4	MHREM	O	DC0V/3.3V	Main heater control
	5	RELAYREM	O	DC0V/3.3V	Power relay control signal
	6	ZCROSS	I	DC0V/3.3V (Pulse)	Zero cross signal
	7	LVU_SLEEP	O	DC0V/24V	Sleep signal
	8	+24V3_E_IL	O	DC24V	DC24V power supply output

### (3) High voltage PWB

#### (3-1) Connector position



#### (3-2) PWB photograph

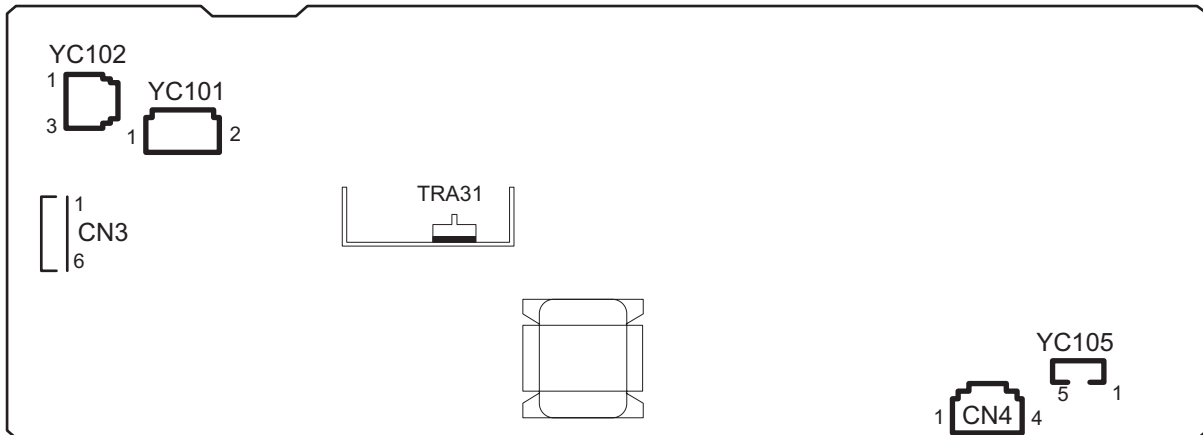


**(3-3) Connector lists**

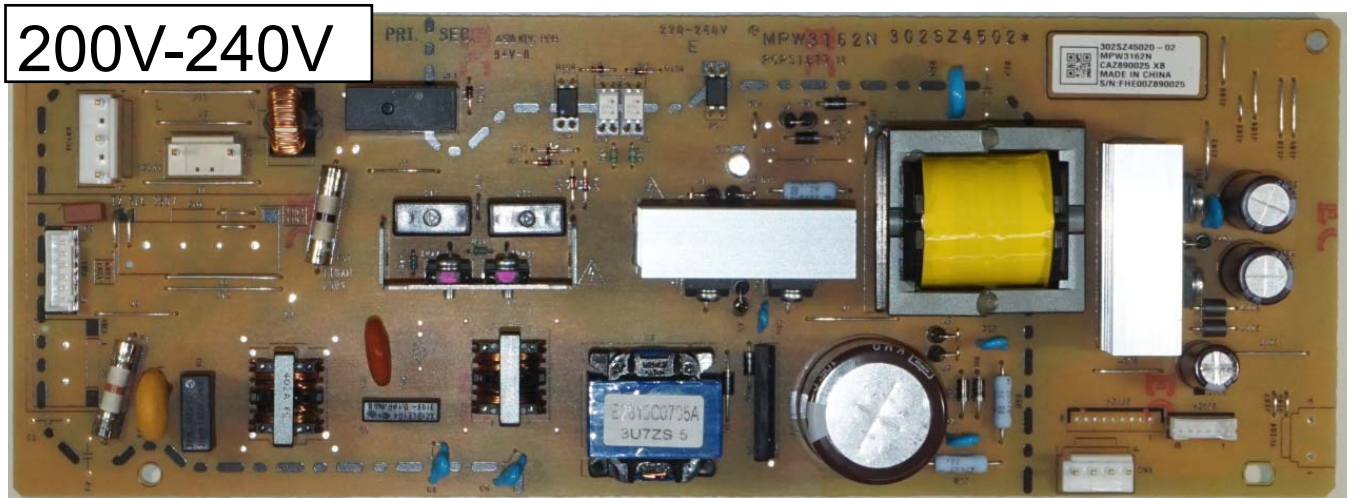
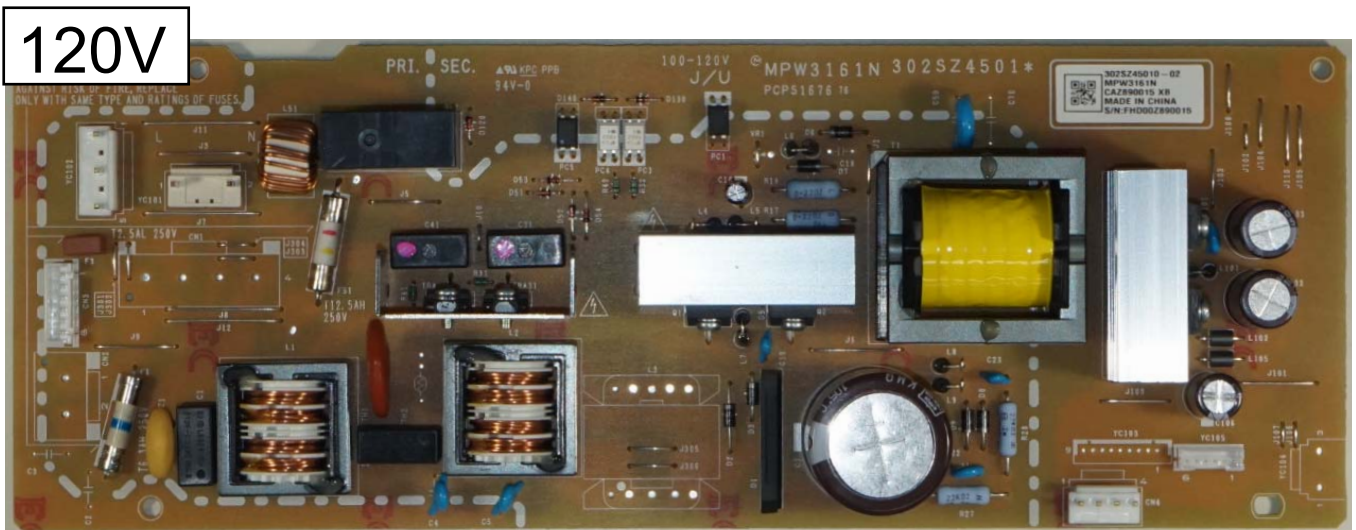
Connector	Pin	Signal	I/O	Voltage	Description
YC101 Connected to the engine PWB	1	+24V3	I	24 V DC	24 V DC power input
	2	+24V3	I	24 V DC	24 V DC power input
	3	DACSLD1	I	0/3.3 V DC	DAC load signal 1
	4	DACSLD2	I	0/3.3 V DC	DAC load signal 2
	5	DACCLK	I	0/3.3 V DC (pulse)	DAC clock signal
	6	SGND	-	-	Ground
	7	DACSDAT	I	0/3.3 V DC (pulse)	DAC data signal
	8	HVREM	I	0/3.3 V DC	Secondary transfer (reverse) / PB remote signal
	9	HVCLK	I	0/3.3 V DC	Developer clock (SLV) signal
	10	MISENS	O	Analog	Main charger K current detection
	11	PGND	-	-	Ground
	12	PGND	-	-	Ground

**(4) Power source PWB**

**(4-1) Connector position**



**(4-2) PWB photograph**



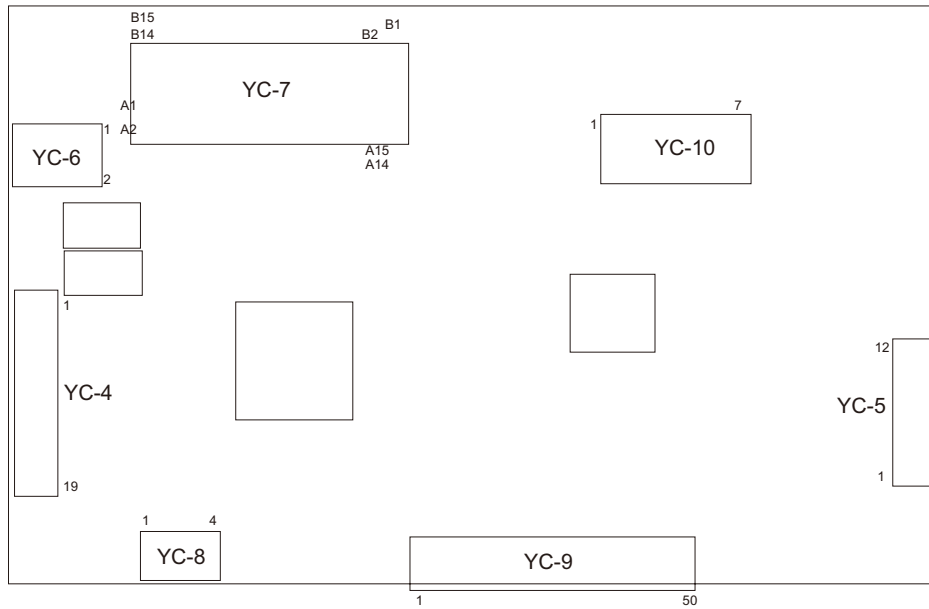


**(4-3) Connector lists**

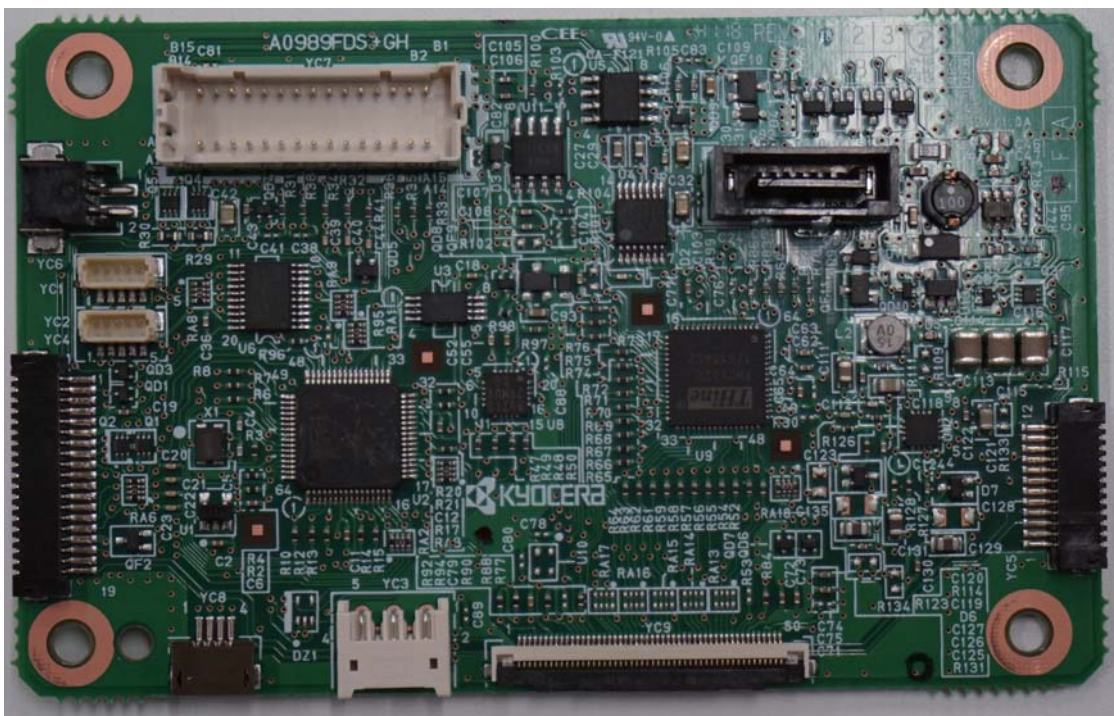
Connector	Pin	Signal	I/O	Voltage	Description
YC101  Connected to the inlet	1	LIVE	I	Commercial power supply voltage	AC power input
	2	NEUTRAL	I	Commercial power supply voltage	AC power input
YC102  Connected to the fuser heater	1	NEUTRAL1	O	Commercial power supply voltage	AC power output to FH
	2	NC	-	-	Not used
	3	LIVE	O	Commercial power supply voltage	AC power output to FH
	4	NC	-	-	Not used
	5	NEUTRAL2	O	Commercial power supply voltage	AC power output to FH
YC105  Connected to the engine PWB	1	SHREM	I	0/3.3 V DC	FH: On/Off
	2	MHREM	I	0/3.3 V DC	FH: On/Off
	3	RELAYREM	I	0/3.3 V DC	Power relay signal
	4	ZCROSS	O	0/3.3 V DC (pulse)	Zero cross signal
	5	PSLEEPN	I	0/24 V DC	Sleep signal
	6	24V3_IL	I	24 V DC	24 V DC power input from EPWB
CN3  Connected to the cassette heater	1	DH_LIVE	O	100 V AC	AC power output to CH
	2	DH_LIVE	O	100 V AC	AC power output to CH
	3	NC	-	-	Not used
	4	NC	-	-	Not used
	5	DH_NEUTRAL	O	Commercial power supply voltage	AC power output to CH
	6	DH_NEUTRAL	O	Commercial power supply voltage	AC power output to CH
CN4  Connected to the engine PWB	1	24V0	O	24 V DC	24 V DC power output to EPWB
	2	24V0	O	24 V DC	24 V DC power output to EPWB
	3	GND	-	-	Ground
	4	GND	-	-	Ground

**(5) Operation panel PWB**

**(5-1) Connector position**



**(5-2) PWB photograph**



**(5-3) Connector lists**

Connector	Pin	Signal	I/O	Voltage	Description
<b>YC4</b> <b>Connect to the key PWB</b>	1	ENERGSAVERY LED	O	DC0V/5V	Energy Saver LED lighting signal
	2	ENERGSAVERY KEY	I	DC0V/3.3V	Energy Saver key signal
	3	SCAN2	O	DC0V/3.3V (Pulse)	Scan signal 2
	4	ATTENTION	O	DC0V/5V	Attention LED light signal
	5	MEMORY	O	DC0V/5V	Memory LED lighting
	6	5V1	O	DC5V	DC5V power supply output
	7	SCAN4	O	DC0V/3.3V (Pulse)	Scan signal 4
	8	LED1	O	DC0V/5V (Pulse)	Operation section LED display drive signal 0
	9	KEY3	I	DC0V/3.3V (Pulse)	Operation section key scan return signal 3
	10	LED2	O	DC0V/5V (Pulse)	Operation section LED display drive signal 2
	11	SCAN3	O	DC0V/3.3V (Pulse)	Scan signal 3
	12	SCAN7	O	DC0V/3.3V (Pulse)	Scan signal 7
	13	SCAN6	O	DC0V/3.3V (Pulse)	Scan signal 6
	14	KEY2	I	DC0V/3.3V (Pulse)	Operation section key scan return signal 2
	15	KEY1	I	DC0V/3.3V (Pulse)	Operation section key scan return signal 1
	16	GND	-	-	Ground
	17	SCAN5	O	DC0V/3.3V (Pulse)	Scan signal 5
	18	PROCESSING	O	DC0V/5V	Processing LED lighting
	19	KEY0	I	DC0V/3.3V (Pulse)	Operation section key scan return signal 0
<b>YC5</b> <b>Connect to the key PWB</b>	1	GND	-	-	Ground
	2	SCAN0	O	DC0V/3.3V (Pulse)	Scan signal 0
	3	KEY0	I	DC0V/3.3V (Pulse)	Operation section key scan return signal 0
	4	NC	-	-	Not used
	5	KEY1	I	DC0V/3.3V (Pulse)	Operation section key scan return signal 1
	6	NC	-	-	Not used
	7	SCAN1	O	DC0V/3.3V (Pulse)	Scan signal 1
	8	SCAN2	O	DC0V/3.3V (Pulse)	Scan signal 2
	9	NC	-	-	Not used
	10	NC	-	-	Not used

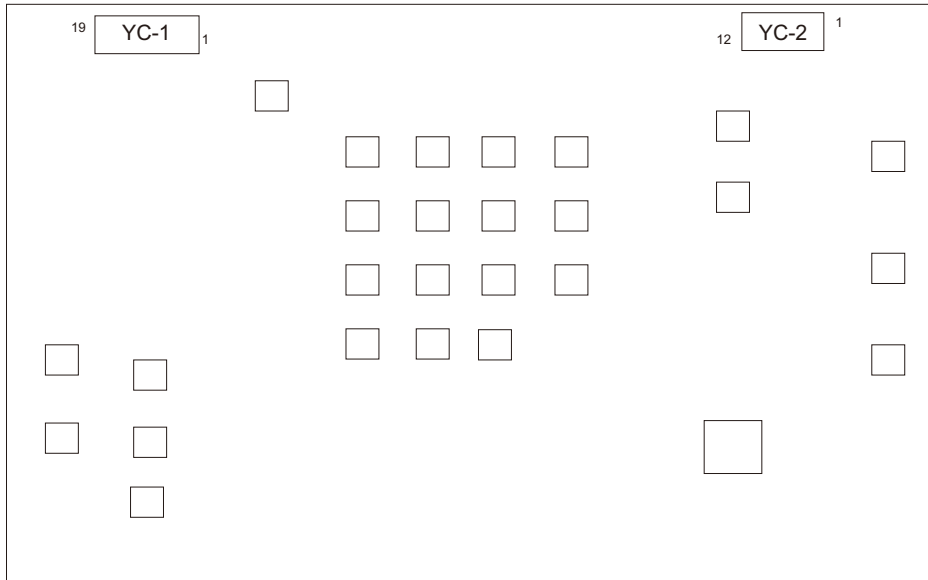
Connector	Pin	Signal	I/O	Voltage	Description
YC5	11	LED0	O	DC0V/5V (Pulse)	Operation section LED display drive signal 0
	12	JOB_LED	O	DC0V/5V (Pulse)	Job separator lighting signal
YC6 Connect to the speaker	1	SPEAKER_P	O	Analog	Speaker vocal signal (+)
	2	SPEAKER_N	O	Analog	Speaker vocal signal (-)
YC7 Connect to Main PWB	A1	5V1	I	DC5V	DC5V Input power
	A2	5V1	I	DC5V	DC5V Input power
	A3	5V1	I	DC5V	DC5V Input power
	A4	5V1	I	DC5V	DC5V Input power
	A5	GND	-	-	Ground
	A6	INT_ANYKEY	I	DC0V/3.3V	ANY KEY Recovery signal
	A7	DISPLAY_POWERON	I	DC0V/3.3V	Back light control signal: On/Off
	A8	C2P_SCK	I	DC0V/3.3V (Pulse)	Serial communication clock signal
	A9	P2C_SBSY	O	DC0V/3.3V	Serial communication busy signal
	A10	P2C_SDIR	O	DC0V/3.3V	Serial communication direction signal
	A11	C2P_SDAT	I	DC0V/3.3V (Pulse)	Serial communication data signal
	A12	P2C_SDAT	O	DC0V/3.3V (Pulse)	Serial communication data signal
	A13	FPRST	I	DC0V/3.3V	Reset signal
	A14	3.3V2_NFC	-	-	Not used
	A15	I2C_SCL_NFC	-	-	Not used
	B1	I2C_SDA_NFC	-	-	Not used
	B2	NIRQ	-	-	Not used
	B3	INT_ENERGYSAVEKEY_N	O	DC0V/3.3V	Energy Saver key: On/Off
	B4	PNL_WKUP_REQ	O	DC0V/3.3V	Energy saver recovery signal: On/Off
	B5	AUDIO	I	Analog	Sound output signal
	B6	NC	-	DC0V/3.3V	Not used
	B7	LED_ATTENTION	I	DC0V/3.3V	Attention LED control signal
	B8	LED_MEMORY	I	DC0V/3.3V	Memory LED control signal
	B9	BEEP_POWERON	I	DC0V/3.3V	Sound output: ON/Off
	B10	GND	-	-	Ground
	B11	GND	-	-	Ground
B12	GND	-	-	Ground	
B13	JOB_LED	I	DC0V/3.3V	JOB LED control signal (Built-in DF)	

Connector	Pin	Signal	I/O	Voltage	Description
<b>YC7</b>	B14	GND	-	-	Ground
	B15	NC	-	-	Not used
<b>YC8</b> <b>Connect to the touch panel</b>	1	XR	I	Analog	Touch panel Right position signal
	2	YB	I	Analog	Touch panel Bottom position signal
	3	XL	I	Analog	Touch panel Left position signal
	4	YT	I	Analog	Touch panel Top position signal
<b>YC9</b> <b>Connect to LCD</b>	1	NC	-	-	Not used
	2	NC	-	-	Not used
	3	GND	-	-	Ground
	4	DITH	O	DC0V/3.3V	Tethering setting
	5	VCOM	O	DC0V/3.3V	VCOM Voltage
	6	NC	-	-	Not used
	7	RSTB	O	DC0V/3.3V	Reset
	8	AVDD	O	DC0V/3.3V	AVDD Voltage
	9	VEEG	O	DC0V/-8V	Gate off Voltage
	10	VDDG	O	DC0V/18V	Gate on Voltage
	11	UPDN	O	DC0V/3.3V	Drawing start position setting Up/Down
	12	SHLR	O	DC0V/3.3V	Drawing start position setting Left/Right
	13	GND	-	-	Ground
	14	DCLK	O	DC0V/3.3V (Pulse)	LCD clock
	15	GND	-	-	Ground
	16	R0	O	DC0V/3.3V	Red data signal (LSB)
	17	R1	O	DC0V/3.3V	Red data signal
	18	R2	O	DC0V/3.3V	Red data signal
	19	R3	O	DC0V/3.3V	Red data signal
	20	R4	O	DC0V/3.3V	Red data signal
	21	R5	O	DC0V/3.3V	Red data signal
	22	R6	O	DC0V/3.3V	Red data signal
	23	R7	O	DC0V/3.3V	Red data signal (MSB)
	24	G0	O	DC0V/3.3V	Green data signal (LSB)
	25	G1	O	DC0V/3.3V	Green data signal
	26	G2	O	DC0V/3.3V	Green data signal
	27	G3	O	DC0V/3.3V	Green data signal
	28	G4	O	DC0V/3.3V	Green data signal

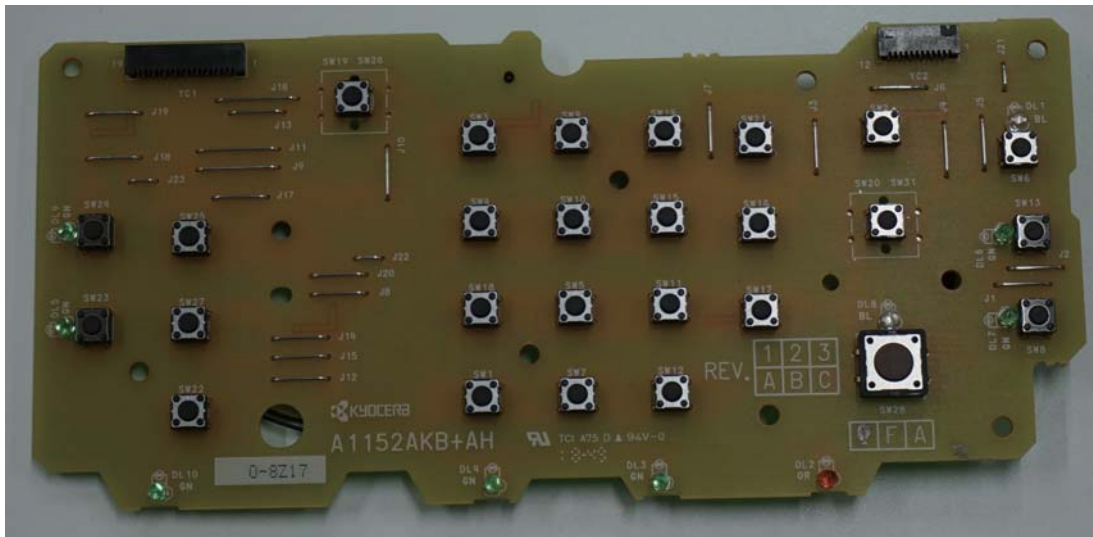
Connector	Pin	Signal	I/O	Voltage	Description
<b>YC9</b>	29	G5	O	DC0V/3.3V	Green data signal
	30	G6	O	DC0V/3.3V	Green data signal
	31	G7	O	DC0V/3.3V	Green data signal (MSB)
	32	B0	O	DC0V/3.3V	Blue data signal (LSB)
	33	B1	O	DC0V/3.3V	Blue data signal
	34	B2	O	DC0V/3.3V	Blue data signal
	35	B3	O	DC0V/3.3V	Blue data signal
	36	B4	O	DC0V/3.3V	Blue data signal
	37	B5	O	DC0V/3.3V	Blue data signal
	38	B6	O	DC0V/3.3V	Blue data signal
	39	B7	O	DC0V/3.3V	Blue data signal (MSB)
	40	HS	O	DC0V/3.3V	Horizontal sync signal
	41	VS	O	DC0V/3.3V	Vertical sync signal
	42	DE	O	DC0V/3.3V	LCD data permission signal
	43	MODE	O	DC0V/3.3V	DE/SYNC Mode Selection
	44	DVDD	O	DC3.3V	LCD 3.3V Power source
	45	VCOM	O	DC0V/3.3V	VCOM Voltage
	46	GND	-	-	Ground
	47	VLED-	O	DC0V	Back light LED cathode
	48	VLED-	O	DC0V	Back light LED cathode
49	VLED+	O	DC0V to 19V	Back light LED anode	
50	VLED+	O	DC0V to 19V	Back light LED anode	
<b>YC10</b> <b>Connect to Main PWB</b>	1	GND	-	-	Ground
	2	LCD_OFF	I	DC0V/3.3V	Control signal
	3	LOCKN	O	DC0V/3.3V	Lock signal
	4	GND	-	-	Ground
	5	RX0N	I	LVDS	Send data signal
	6	RX0P	I	LVDS	Send data signal
	7	GND	-	-	Ground

**(6) Operation panel sub PWB**

**(6-1) Connector position**



**(6-2) PWB photograph**



Connector	Pin	Signal	I/O	Voltage	Description
<b>YC1</b>  <b>Connect to the panel PWB</b>	1	JOB_LED	I	DC0V/3.3V	Job separator lighting signal
	2	LED0	I	DC0V/5V (Pulse)	Operation section LED display drive signal 0
	3	NC	-	-	Not used
	4	NC	-	-	Not used
	5	SCAN2	I	DC0V/3.3V (Pulse)	Scan signal 2
	6	SCAN1	I	DC0V/3.3V (Pulse)	Scan signal 1
	7	NC	-	-	Not used
	8	KEY1	O	DC0V/3.3V (Pulse)	Operation section key scan return signal 1
	9	NC	-	-	Not used
	10	KEY0	O	DC0V/3.3V (Pulse)	Operation section key scan return signal 0
	11	SCAN0	I	DC0V/3.3V (Pulse)	Scan signal 0
	12	GND	-	-	Ground
<b>YC2</b>  <b>Connect to the panel PWB</b>	1	KEY0	O	DC0V/3.3V (Pulse)	Operation section key scan return signal 0
	2	PROCESSING	I	DC0V/5V (Pulse)	Processing LED lighting signal
	3	SCAN5	I	DC0V/3.3V (Pulse)	Scan signal 5
	4	GND	-	-	Ground
	5	KEY1	O	DC0V/3.3V (Pulse)	Operation section key scan return signal 1
	6	KEY2	O	DC0V/3.3V (Pulse)	Operation section key scan return signal 2
	7	SCAN6	I	DC0V/3.3V (Pulse)	Scan signal 6
	8	SCAN7	I	DC0V/3.3V (Pulse)	Scan signal 7
	9	SCAN3	I	DC0V/3.3V (Pulse)	Scan signal 3
	10	LED2	I	DC0V/5V (Pulse)	Operation section LED display drive signal 2
	11	KEY3	O	DC0V/3.3V (Pulse)	Operation section key scan return signal 3
	12	LED1	O	DC0V/5V (Pulse)	Operation section LED display drive signal 1
	13	SCAN4	I	DC0V/3.3V (Pulse)	Scan signal 4
	14	+5V1	I	DC5V	DC5V Input power
	15	MEMORY	I	DC0V/5V (Pulse)	Memory LED lighting signal
	16	ATTENTION	I	DC0V/5V (Pulse)	Attention LED control signal
<b>YC2</b>	17	SCAN2	I	DC0V/3.3V (Pulse)	Scan signal 2



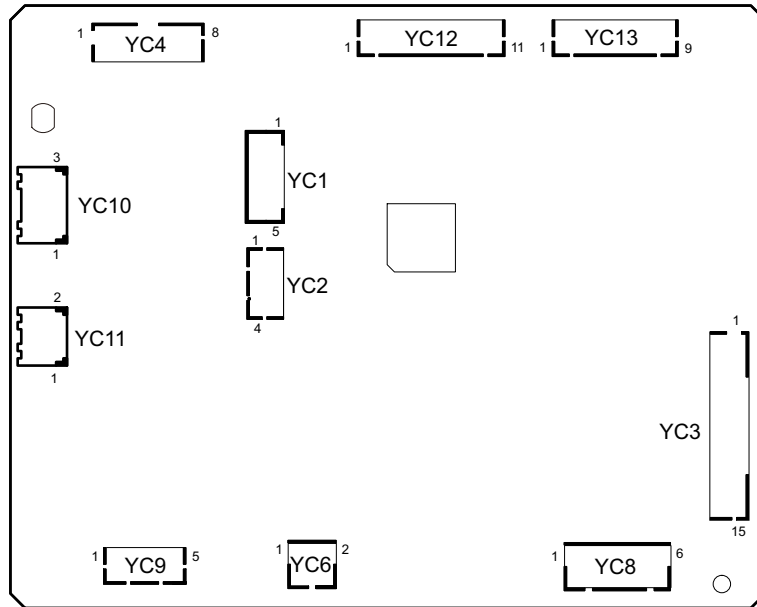
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Connector	Pin	Signal	I/O	Voltage	Description
	18	ENERGSAVERY KEY	O	DC0V/3.3V	Energy saver Key LED lighting signal
	19	ENERGY SAVER LED	I	DC0V/5V (Pulse)	Energy Saver LED lighting signal

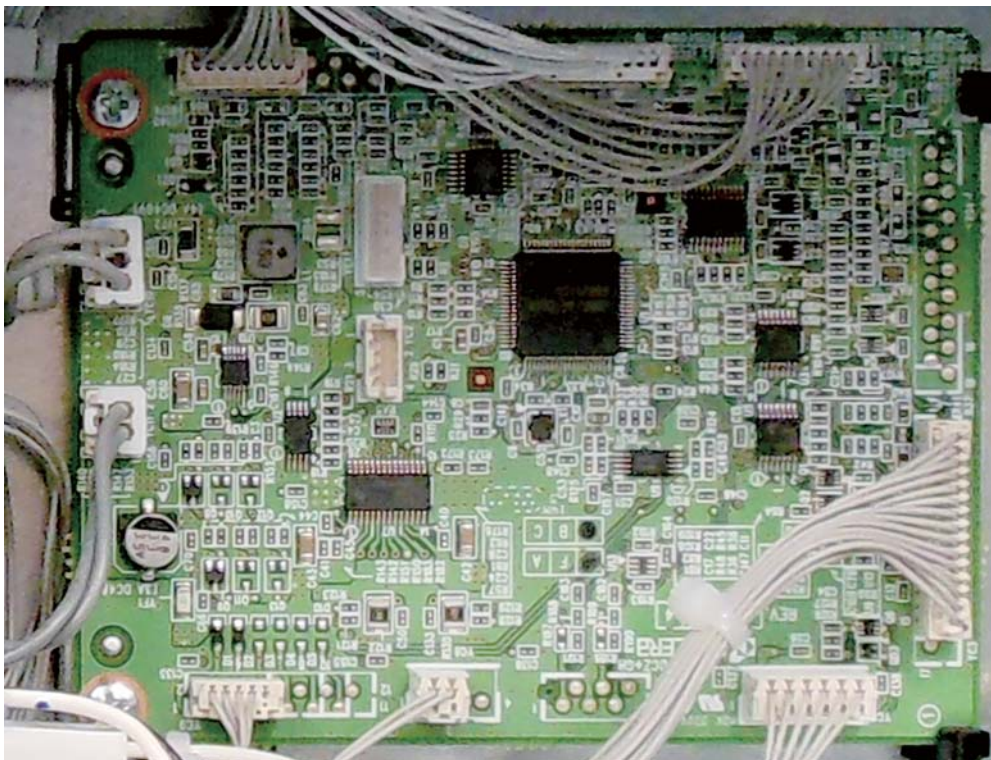
## 8 - 2 Description for PWB (OPTION)

### (1) PF PWB for PF-5120

#### (1-1) Connector position



#### (1-2) PWB photograph



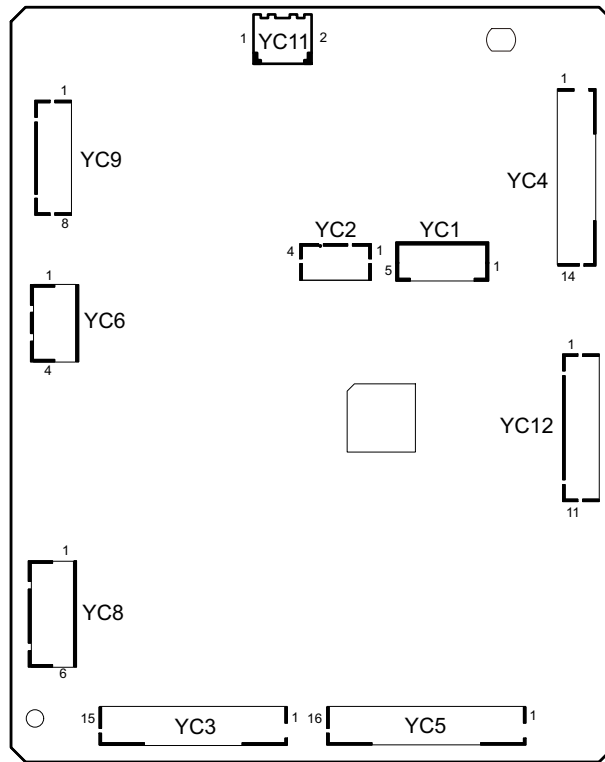
**(1-3) Connector lists**

Connector	Pin	Signal	I/O	Voltage	Description
YC3 Connected to the paper detection sensor, paper level sensor 1, paper level sensor 2, paper length detection sensor 1, paper length detection sensor 2, paper length detection sensor 3	1	3.3V4_LED	O	3.3 V DC	3.3 V DC power output to PFPS
	2	GND	-	-	Ground
	3	CAS1_EMPTY	I	0/3.3 V DC	PFPS: On/Off
	4	3.3V4_LED	O	3.3 V DC	3.3 V DC power output to PFPGS1
	5	GND	-	-	Ground
	6	CAS1_QUANT1	I	0/3.3 V DC	PFPGS1: On/Off
	7	3.3V4_LED	O	3.3 V DC	3.3 V DC power output to PFPGS2
	8	GND	-	-	Ground
	9	CAS1_QUANT2	I	0/3.3 V DC	PFPGS2: On/Off
	10	GND	-	-	Ground
	11	CAS1_SIZE1_SENS	I	0/3.3 V DC	PFPLSW1: On/Off
	12	GND	-	-	Ground
	13	CAS1_SIZE2_SENS	I	0/3.3 V DC	PFPLSW2: On/Off
	14	GND	-	-	Ground
	15	CAS1_SIZE3_SENS	I	0/3.3 V DC	PFPLSW3: On/Off
YC4 Connected to the lift upper limit sensor, feed sensor, right cover switch	1	3.3V4_LED	O	3.3 V DC	3.3 V DC power output to PFLS
	2	GND	-	-	Ground
	3	ULIM_SW_1	I	0/3.3 V DC	PFLS: On/Off
	4	3.3V4	O	3.3 V DC	3.3 V DC power output to PFFS
	5	VER_SENS_1	I	0/3.3 V DC	PFFS: On/Off
	6	GND	-	-	Ground
	7	COVER_OPEN	I	0/3.3 V DC	PFRCSW: On/Off
	8	GND	-	-	Ground
YC6 Connected to the lift motor	1	L_MOT1_RET	O	0 V DC	PFLM drive control signal
	2	L_MOT1_DR	O	0/24 V DC	PFLM drive control signal
YC8 Connected to the paper feed motor	1	+24V	O	DV24V	24 V DC power output to PFFM
	2	GND	-	-	Ground
	3	START/STOP	O	0/5 V DC	PFFM drive control signal
	4	CLOCK	O	0/5 V DC(pulse)	PFFM drive control signal
	5	LD	I	0/3.3 V DC	PFFM drive control signal
	6	CW/CCW	O	0/5 V DC	PFFM drive control signal
YC9	1	VER_CL1	O	0/24 V DC	PFCCL: On/Off

Connector	Pin	Signal	I/O	Voltage	Description
YC9 Connected to the conveying clutch and paper feed clutch	2	24V1	O	DV24V	24 V DC power output to PFCCL
	3	FEED_CL1	O	0/24 V DC	PFFCL: On/Off
	4	24V1	O	DV24V	24 V DC power output to PFFCL
	5	VER_CL2	-	-	Not used
YC10 Connected to the PF PWB	1	GND	-	-	Ground
	2	GND	-	-	Ground
	3	24V2	O	DV24V	24 V DC power output to PF
YC11 Connected to the engine PWB	1	24V1	I	24 V DC	24 V DC power input from the main unit
	2	GND	-	-	Ground
YC12 Connected to the engine PWB	1	VER_SENS	O	0/3.3 V DC	PFFS: On/Off
	2	3.3V3	I	3.3 V DC	3.3 V DC power input from the main unit
	3	GND	-	-	Ground
	4	PF_CAS1_SEL	I	0/3.3 V DC	Cassette select signal 1
	5	PF_CAS2_SEL	I	0/3.3 V DC	Cassette select signal 2
	6	EH_CLK	I	0/3.3 V DC (pulse)	Clock signal
	7	EH_RDY	O	0/3.3 V DC	Ready signal
	8	EH_SDO	O	0/3.3 V DC (pulse)	Serial communication data signal
	9	EH_SDI	I	0/3.3 V DC (pulse)	Serial communication data signal
	10	PF_PAU	I	0/3.3 V DC	Pause signal
	11	PF_CAS_OPEN	O	0/3.3 V DC	Cassette insertion and removal signal output
YC13 Connected to the PF PWB	1	AN_PF_CAS_OPEN	I	0/3.3 V DC	Cassette insertion and removal signal input
	2	AN_PF_PAUSE	O	0/3.3 V DC	Pause signal
	3	AN_PF_SDI	O	0/3.3 V DC (pulse)	Serial communication data signal
	4	AN_PF_SDO	I	0/3.3 V DC (pulse)	Serial communication data signal
	5	AN_PF_RDY	I	0/3.3 V DC	Ready signal
	6	AN_PF_CLK	O	0/3.3 V DC (pulse)	Clock signal
	7	PF_CAS2_SEL	O	0/3.3 V DC	Cassette select signal 4
	8	GND	-	-	Ground
	9	3.3V3	O	3.3 V DC	3.3 V DC power output to PF

## (2) PF PWB for PF-5130

### (2-1) Connector position



### (2-2) PWB photograph



**(2-3) Connector lists**

Connector	Pin	Signal	I/O	Voltage	Description
YC3 Connected to the paper sensor 1, paper level sensor 1, paper level sensor 2, paper length detection switch 1, paper length detection switch 2, paper length detection switch 3	1	3.3V4_LED	O	3.3 V DC	3.3 V DC power output to PFPS1
	2	GND	-	-	Ground
	3	CAS1_EMPTY	I	0/3.3 V DC	PFPS1: On/Off
	4	3.3V4_LED	O	3.3 V DC	3.3 V DC power output to PFPGS1
	5	GND	-	-	Ground
	6	CAS1_QUANT1	I	0/3.3 V DC	PFPGS1: On/Off
	7	3.3V4_LED	O	3.3 V DC	3.3 V DC power output to PFPGS2
	8	GND	-	-	Ground
	9	CAS1_QUANT2	I	0/3.3 V DC	PFPGS2: On/Off
	10	GND	-	-	Ground
	11	CAS1_SIZE1_SENS	I	0/3.3 V DC	PFPLSW1: On/Off
	12	GND	-	-	Ground
	13	CAS1_SIZE2_SENS	I	0/3.3 V DC	PFPLSW2: On/Off
	14	GND	-	-	Ground
	15	CAS1_SIZE3_SENS	I	0/3.3 V DC	PFPLSW3: On/Off
YC4 Connected to the lift upper limit sensor 1, feed sensor 1, right cover switch, lift upper limit sensor 2, feed sensor 2	1	3.3V4_LED	O	3.3 V DC	3.3 V DC power output to PFLS 1
	2	GND	-	-	Ground
	3	ULIM_SW_1	I	0/3.3 V DC	PFLS1: On/Off
	4	3.3V4	O	3.3 V DC	3.3 V DC power output to PFFS 1
	5	VER_SENS_1	I	0/3.3 V DC	PFFS1: On/Off
	6	GND	-	-	Ground
	7	COVER_OPEN	I	0/3.3 V DC	PFRCSW: On/Off
	8	GND	-	-	Ground
	9	3.3V5_LED	O	3.3 V DC	3.3 V DC power output to PFLS2
	10	GND	-	-	Ground
	11	ULIM_SW_2	I	0/3.3 V DC	PFLS2: On/Off
	12	3.3V5	O	3.3 V DC	3.3 V DC power output to PFFS2
	13	VER_SENS_2	I	0/3.3 V DC	PFFS2: On/Off
	14	GND	-	-	Ground

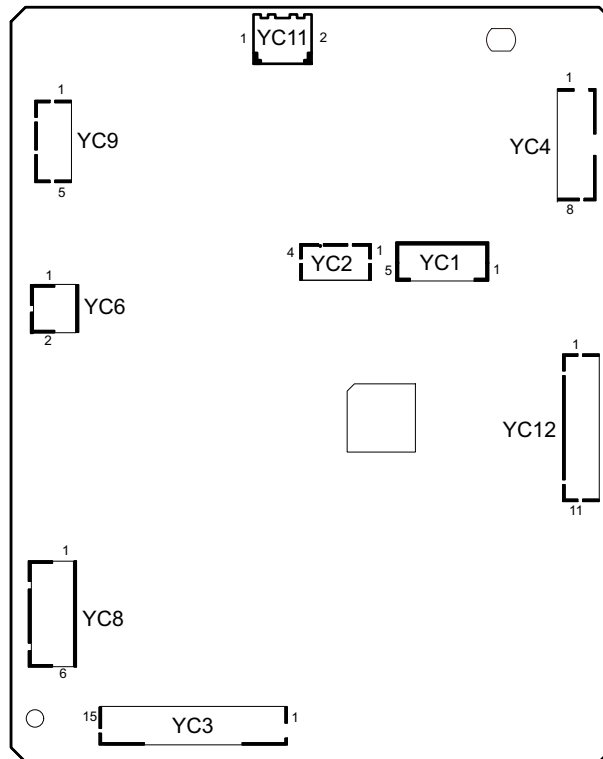
Connector	Pin	Signal	I/O	Voltage	Description
YC5 Connected to the paper sensor 2, paper sensor 3, paper sensor 4, paper length detection switch 4, paper length detection switch 5, paper length detection switch 6	1	3.3V5_LED	O	3.3 V DC	3.3 V DC power output to PFPS2
	2	GND	-	-	Ground
	3	CAS2_EMPTY	I	0/3.3 V DC	PFPS2: On/Off
	4	3.3V4_LED	O	3.3 V DC	3.3 V DC power output to PFPGS3
	5	GND	-	-	Ground
	6	CAS2_QUANT1	I	0/3.3 V DC	PFPGS3: On/Off
	7	3.3V4_LED	O	3.3 V DC	3.3 V DC power output to PFPGS4
	8	GND	-	-	Ground
	9	CAS2_QUANT2	I	0/3.3 V DC	PFPGS4: On/Off
	10	GND	-	-	Ground
	11	CAS2_SIZE1_SENS	I	0/3.3 V DC	PFPLSW4: On/Off
	12	GND	-	-	Ground
	13	CAS2_SIZE2_SENS	I	0/3.3 V DC	PFPLSW5: On/Off
	14	GND	-	-	Ground
	15	CAS2_SIZE3_SENS	I	0/3.3 V DC	PFPLSW6: On/Off
	16	GND	-	-	Not used
YC6 Connected to the lift motor 1, lift motor 2	1	L_MOT1_RET	O	0 V DC	PFLM1 drive control signal
	2	L_MOT1_DR	O	0/24 V DC	PFLM1 drive control signal
	3	L_MOT2_RET	O	0 V DC	PFLM2 drive control signal
	4	L_MOT2_DR	O	0/24 V DC	PFLM2 drive control signal
YC8 Connected to the paper feed motor	1	+24V	O	DV24V	24 V DC power output to PFFM
	2	GND	-	-	Ground
	3	START/STOP	O	0/5 V DC	PFFM drive control signal
	4	CLOCK	O	0/5 V DC(pulse)	PFFM drive control signal
	5	LD	I	0/3.3 V DC	PFFM drive control signal
	6	CW/CCW	O	0/5 V DC	PFFM drive control signal
YC9 Connected to the conveying clutch 1, paper feed clutch 1, conveying clutch 2, paper feed clutch 2	1	VER_CL1	O	0/24 V DC	PFCL1: On/Off
	2	24V1	O	DV24V	24 V DC power output to PFCL1
	3	FEED_CL1	O	0/24 V DC	PFFCL1: On/Off
	4	24V1	O	DV24V	24 V DC power output to PFFCL1
	5	VER_CL2	O	0/24 V DC	PFCL2: On/Off
	6	24V1	O	DV24V	24 V DC power output to PFCL2
	7	FEED_CL2	O	0/24 V DC	PFFCL2: On/Off
	8	24V1	O	DV24V	24 V DC power output to PFFCL2
YC11 Connected to the PF PWB (PF-5120)	1	24V1	I	24 V DC	24 V DC power input from PF
	2	GND	-	-	Ground

Connector	Pin	Signal	I/O	Voltage	Description
YC12 Connected to the PF PWB (PF-5120)	1	VER_SENS	O	0/3.3 V DC	PFFS1: On/Off
	2	3.3V3	I	3.3 V DC	3.3 V DC power input from PF
	3	GND	-	-	Ground
	4	PF_CAS1_SEL	I	0/3.3 V DC	Cassette select signal 4
	5	PF_CAS2_SEL	-	-	Not used
	6	EH_CLK	I	0/3.3 V DC (pulse)	Clock signal
	7	EH_RDY	O	0/3.3 V DC	Ready signal
	8	EH_SDO	O	0/3.3 V DC (pulse)	Serial communication data signal
	9	EH_SDI	I	0/3.3 V DC (pulse)	Serial communication data signal
	10	PF_PAU	I	0/3.3 V DC	Pause signal
	11	PF_CAS_OPEN	O	0/3.3 V DC	Cassette insertion and removal signal output



### (3) PF PWB for PF-5140

#### (3-1) Connector position



#### (3-2) PWB photograph



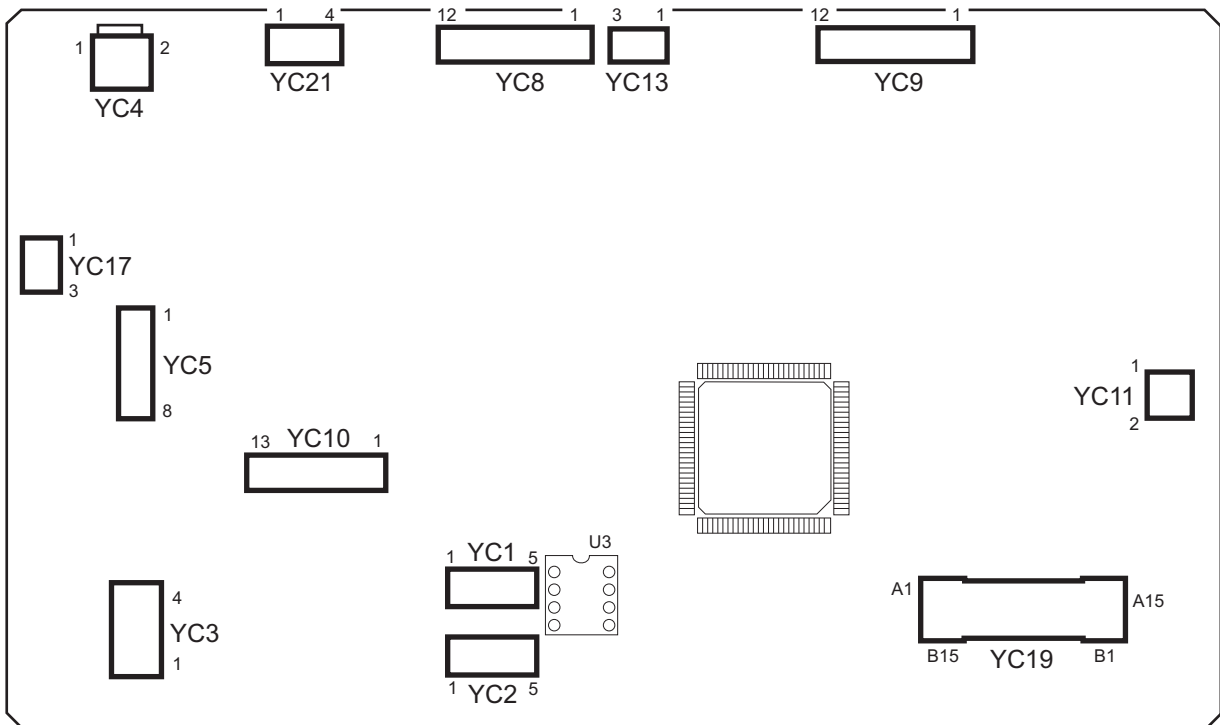
**(3-3) Connector lists**

Connector	Pin	Signal	I/O	Voltage	Description
YC3 Connected to the paper detection sensor, paper level sensor 1, paper level sensor 2, paper deck detection switch	1	3.3V4_LED	O	3.3 V DC	3.3 V DC power output to PFPS
	2	GND	-	-	Ground
	3	CAS1_EMPTY	I	0/3.3 V DC	PFPS: On/Off
	4	3.3V4_LED	O	3.3 V DC	3.3 V DC power output to PFPGS1
	5	GND	-	-	Ground
	6	CAS1_QUANT1	I	0/3.3 V DC	PFPGS1: On/Off
	7	3.3V4_LED	O	3.3 V DC	3.3 V DC power output to PFPGS2
	8	GND	-	-	Ground
	9	CAS1_QUANT2	I	0/3.3 V DC	PFPGS2: On/Off
	10	GND	-	-	Ground
	11	CAS1_SIZE1_SENS	I	0/3.3 V DC	PFDDSW1: On/Off
	12	GND	-	-	Not used
	13	CAS1_SIZE2_SENS	-	-	Not used
	14	GND	-	-	Not used
	15	CAS1_SIZE3_SENS	-	-	Not used
YC4 Connected to the lift upper limit sensor, feed sensor, right cover switch	1	3.3V4_LED	O	3.3 V DC	3.3 V DC power output to PFLS 1
	2	GND	-	-	Ground
	3	ULIM_SW_1	I	0/3.3 V DC	PFLS1: On/Off
	4	3.3V4	O	3.3 V DC	3.3 V DC power output to PFFS
	5	VER_SENS_1	I	0/3.3 V DC	PFFS: On/Off
	6	GND	-	-	Ground
	7	COVER_OPEN	I	0/3.3 V DC	PFRCSW: On/Off
	8	GND	-	-	Ground
YC6 Connected to the lift motor	1	L_MOT1_RET	O	0/24 V DC (pulse)	PFLM drive control signal
	2	L_MOT1_DR	O	0/24 V DC (pulse)	PFLM drive control signal
YC8 Connected to the paper feed motor	1	+24V	O	DV24V	24 V DC power output to PFFM
	2	GND	-	-	Ground
	3	START/STOP	O	0/5 V DC	PFFM drive control signal
	4	CLOCK	O	0/5 V DC	PFFM drive control signal
	5	LD	I	0/3.3 V DC	PFFM drive control signal
	6	CW/CCW	O	0/5 V DC	PFFM drive control signal
YC9	1	VER_CL1	O	0/24 V DC	PFCCL1: On/Off

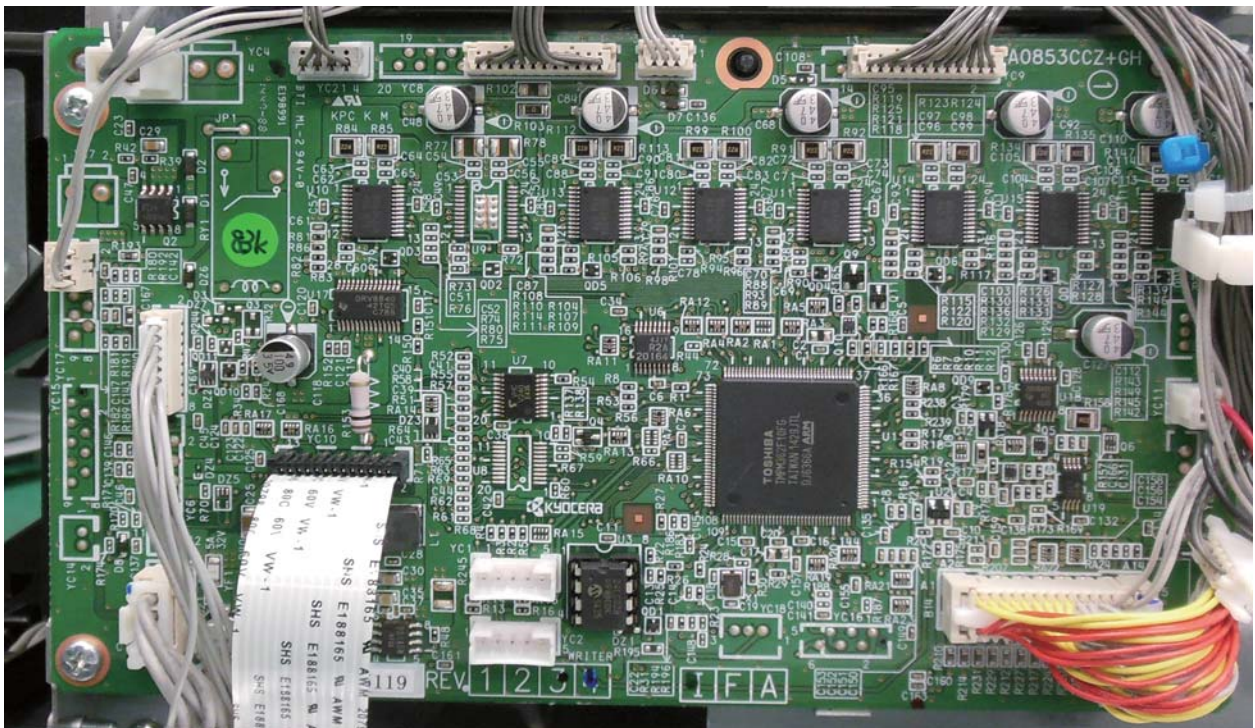
Connector	Pin	Signal	I/O	Voltage	Description
Connected to the conveying clutch and paper feed clutch	2	24V1	O	DV24V	24 V DC power output to PFCCL1
	3	FEED_CL1	O	0/24 V DC	PFFCL1: On/Off
	4	24V1	O	DV24V	24 V DC power output to PFFCL1
	5	VER_CL2	-	-	Not used
YC11	1	24V1	I	24 V DC	24 V DC power input from PF
Connected to the PF PWB (PF-5120)	2	GND	-	-	Ground
	YC12	1	VER_SENS	O	-
Connected to the PF PWB (PF-5120)	2	3.3V3	I	3.3 V DC	3.3 V DC power input from PF
	3	GND	-	-	Ground
	4	PF_CAS1_SEL	I	0/3.3 V DC	Cassette select signal 4
	5	PF_CAS2_SEL	-	-	Not used
	6	EH_CLK	I	0/3.3 V DC (pulse)	Clock signal
	7	EH_RDY	O	0/3.3 V DC	Ready signal
	8	EH_SDO	O	0/3.3 V DC (pulse)	Serial communication data signal
	9	EH_SDI	I	0/3.3 V DC (pulse)	Serial communication data signal
	10	PF_PAU	I	0/3.3 V DC	Pause signal
	11	PF_CAS_OPEN	O	0/3.3 V DC	Cassette insertion and removal signal output

**(4) DF PWB for DF-5100**

**(4-1) Connector position**



**(4-2) PWB photograph**



**(4-3) Connector lists**

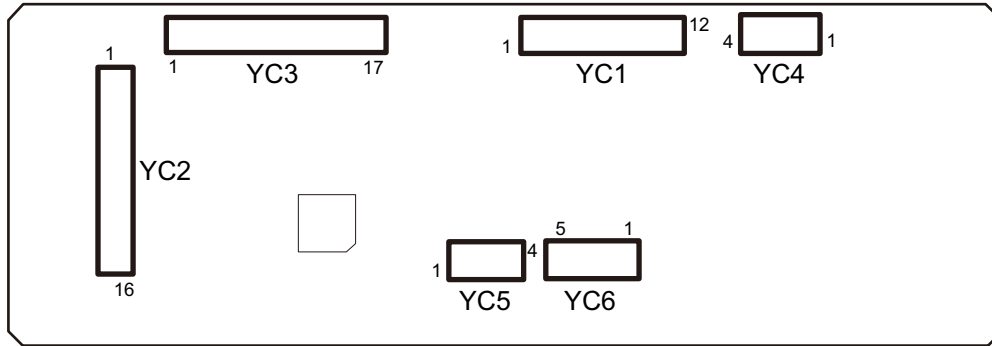
Connector	Pin	Signal	I/O	Voltage	Description
YC3 (30 ppm model) Engine PWB	1	GND	-	-	Ground
	2	GND	-	-	Ground
	3	24V1	I	24 V DC	24 V DC power input from the main unit
	4	24V1	I	24 V DC	24 V DC power input from the main unit
YC4 Connected to the DF set switch	1	24V1	O	24 V DC	24 V DC power output to DFSSW
	2	SET SW (INTERLOCK)	I	0/24 V DC	DFSSW: On/Off
YC5 Connected to the engine PWB	1	ENG RDY	O	0/3.3 V DC	Ready signal
	2	ENG SEL	I	0/3.3 V DC	Select signal
	3	ENG DI	I	0/3.3 V DC (pulse)	Serial communication data signal input
	4	ENG DO	O	0/3.3 V DC (pulse)	Serial communication data signal output
	5	ENG PAU	-	-	Not used
	6	DET	-	-	Ground
	7	ENG CLK	I	0/3.3 V DC (pulse)	Serial clock signal
	8	GND	-	-	Ground
YC8 Connected to the eject motor, slide motor, eject release motor	1	EJECT MOT 2B	O	0/24 V DC (pulse)	DFEM drive control signal
	2	EJECT MOT 1B	O	0/24 V DC (pulse)	DFEM drive control signal
	3	EJECT MOT 2A	O	0/24 V DC (pulse)	DFEM drive control signal
	4	EJECT MOT 1A	O	0/24 V DC (pulse)	DFEM drive control signal
	5	STP MOV MOT 2B	O	0/24 V DC (pulse)	DFSLM drive control signal
	6	STP MOV MOT 1B	O	0/24 V DC (pulse)	DFSLM drive control signal
	7	STP MOV MOT 2A	O	0/24 V DC (pulse)	DFSLM drive control signal
	8	STP MOV MOT 1A	O	0/24 V DC (pulse)	DFSLM drive control signal
	9	EJE RELS MOT 2B	O	0/24 V DC (pulse)	DFERM drive control signal
	10	EJE RELS MOT 1B	O	0/24 V DC (pulse)	DFERM drive control signal
	11	EJE RELS MOT 2A	O	0/24 V DC (pulse)	DFERM drive control signal
	12	EJE RELS MOT 1A	O	0/24 V DC (pulse)	DFERM drive control signal
YC9 Connected to the paddle motor, side registration motor 1, side registration motor 2	1	PADDLE MOT 2B	O	0/24 V DC (pulse)	DFPDM drive control signal
	2	PADDLE MOT 1B	O	0/24 V DC (pulse)	DFPDM drive control signal
	3	PADDLE MOT 2A	O	0/24 V DC (pulse)	DFPDM drive control signal
	4	PADDLE MOT 1A	O	0/24 V DC (pulse)	DFPDM drive control signal
	5	SIDE REG R MOT 2B	O	0/24 V DC (pulse)	DFSRM2 drive control signal
	6	SIDE REG R MOT 1B	O	0/24 V DC (pulse)	DFSRM2 drive control signal
	7	SIDE REG R MOT 2A	O	0/24 V DC (pulse)	DFSRM2 drive control signal
	8	SIDE REG R MOT 1A	O	0/24 V DC (pulse)	DFSRM2 drive control signal

Connector	Pin	Signal	I/O	Voltage	Description
YC9	9	SIDE REG F MOT 2B	O	0/24 V DC (pulse)	DFSRM1 drive control signal
	10	SIDE REG F MOT 1B	O	0/24 V DC (pulse)	DFSRM1 drive control signal
	11	SIDE REG F MOT 2A	O	0/24 V DC (pulse)	DFSRM1 drive control signal
	12	SIDE REG F MOT 1A	O	0/24 V DC (pulse)	DFSRM1 drive control signal
YC10 Connected to the stapler	1	STP MOT OUT1	O	0/24 V DC (pulse)	DFSTM drive control signal
	2	STP MOT OUT1	O	0/24 V DC (pulse)	DFSTM drive control signal
	3	STP MOT OUT1	O	0/24 V DC (pulse)	DFSTM drive control signal
	4	STP MOT OUT1	O	0/24 V DC (pulse)	DFSTM drive control signal
	5	STP MOT OUT2	O	0/24 V DC (pulse)	DFSTM drive control signal
	6	STP MOT OUT2	O	0/24 V DC (pulse)	DFSTM drive control signal
	7	STP MOT OUT2	O	0/24 V DC (pulse)	DFSTM drive control signal
	8	STP MOT OUT2	O	0/24 V DC (pulse)	DFSTM drive control signal
	9	GND	-	-	Ground
	10	LS	I	0/3.3 V DC	Staple unit LS signal
	11	READY	I	0/3.3 V DC	Staple unit READY signal
	12	5V	O	5 V DC	5 V DC power output
	13	HP	I	0/3.3 V DC	Staple unit HP signal
YC11 Connected to the tray motor	1	TRY MOT OUT2	O	0/24 V DC (pulse)	DFTM drive control signal
	2	TRY MOT OUT1	O	0/24 V DC (pulse)	DFTM drive control signal
YC13 Connected to the paper pressing solenoid	1	24V2	O	24 V DC	24 V DC power output
	2	PAP PRE SOL ACT	O	0/24 V DC	DFPPSOL: On/Off (actuate)
	3	PAP PRE SOL KEEP	O	0/24 V DC	DFPPSOL: On/Off (keep)
YC17 Connected to the paper entry sensor	1	ENTRY SENS A	O	5 V DC	5 V DC power output to DFPES
	2	GND	-	-	Ground
	3	ENTRY SENS SIG	I	0/3.3 V DC	DFPES: On/Off
YC19 Connected to the side registration sensor 1, side registration sensor 2, tray paper full sensor 1, tray paper full sensor 2, bundle eject sensor, adjustment sensor, slide sensor	1	SID REG R HP SENS A	O	5 V DC	5 V DC power output to DFSRS2
	2	GND	-	-	Ground
	3	SID REG R HP SENS SIG	I	0/3.3 V DC	DFSRS2: On/Off
	4	SID REG F HP SENS A	O	5 V DC	5 V DC power output to DFSRS1
	5	GND	-	-	Ground
	6	SID REG F HP SENS SIG	I	0/3.3 V DC	DFSRS1: On/Off
	7	GND	-	-	Ground
	8	PAP SENS SIG	I	0/3.3 V DC	DFMETS: On/Off
	9	3.3V	O	3.3 V DC	3.3 V DC power output

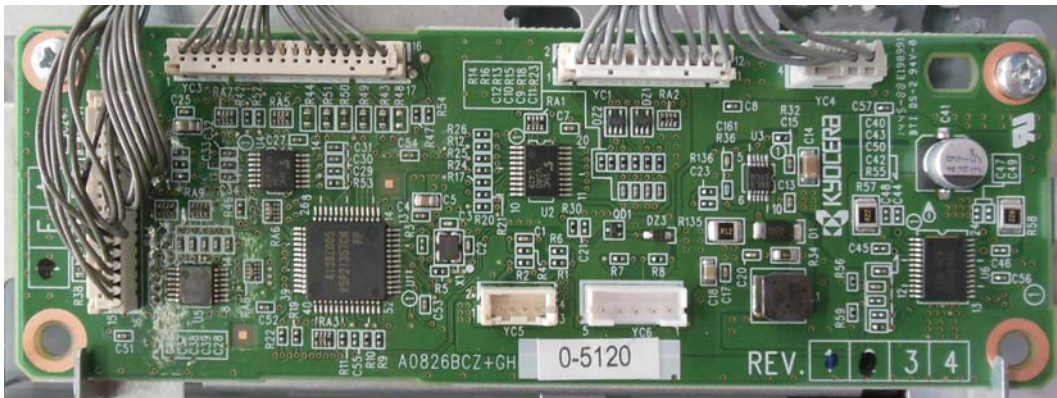
Connector	Pin	Signal	I/O	Voltage	Description
YC19	10	MTRY FULL SENS A	O	5 V DC	5 V DC power output to DFTS
	11	GND	-	-	Ground
	12	MTRY FULL SENS SIG	I	0/3.3 V DC	DFTS: On/Off
	13	Paddle HP SENS A	O	5 V DC	5 V DC power output to DFPDS
	14	GND	-	-	Ground
	15	PADDLE HP SENS SIG	I	0/3.3 V DC	DFPDS: On/Off
	16	PAP PRE LOW SENS A	O	5 V DC	5 V DC power output to DFPPS2
	17	GND	-	-	Ground
	18	PAP PRE LOW SENS SIG	I	0/3.3 V DC	DFPPS2: On/Off
	19	PAP PRE UP SENS A	O	5 V DC	5 V DC power output to DFPPS1
	20	GND	-	-	Ground
	21	PAP PRE UP SENS SIG	I	0/3.3 V DC	DFPPS1: On/Off
	22	BUNDLE HP SENS A	O	5 V DC	5 V DC power output to DFBDS
	23	GND	-	-	Ground
	24	BUNDLE HP SENS SIG	I	0/3.3 V DC	DFBDS: On/Off
	25	ADJUST HP SENS A	O	5 V DC	5 V DC power output to DFADS
	26	GND	-	-	Ground
	27	ADJUST HP SENS SIG	I	0/3.3 V DC	DFADS: On/Off
	28	STP MOV HP SENS A	O	5 V DC	5 V DC power output to DFSLS
	29	GND	-	-	Ground
30	STP MOV HP SENS SIG	I	0/3.3 V DC	DFSLS: On/Off	
YC21	1	MIDDLE MOT 1B	O	0/24 V DC (pulse)	DFMM drive control signal
Connected to the DF middle motor	2	MIDDLE MOT 1A	O	0/24 V DC (pulse)	DFMM drive control signal
	3	MIDDLE MOT 2A	O	0/24 V DC (pulse)	DFMM drive control signal
	4	MIDDLE MOT 2B	O	0/24 V DC (pulse)	DFMM drive control signal

**(5) MT PWB for MT-5100**

**(5-1) Connector position**



**(5-2) PWB photograph**



**(5-3) Connector lists**

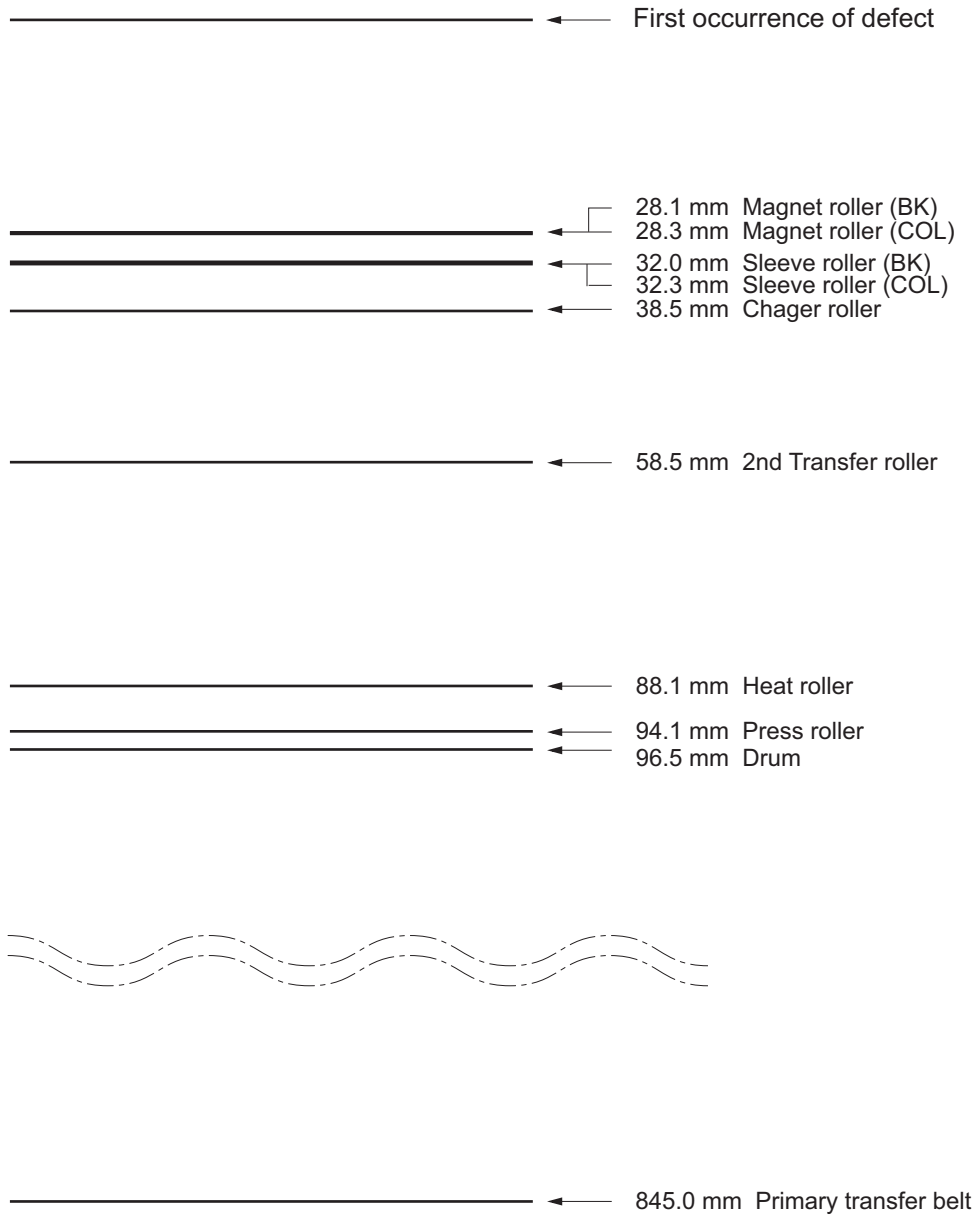
Connector	Pin	Signal	I/O	Voltage	Description
YC1 Connected to the engine PWB	1	READY	I	0/3.3 V DC	Mail box ready signal
	2	SELECT	I	0/3.3 V DC	Mail box select signal
	3	SDI	I	0/3.3 V DC (pulse)	Mail box serial communication data signal
	4	SDO	O	0/3.3 V DC (pulse)	Mail box serial communication data signal
	5	PAUSE	O	0/3.3 V DC	Mail box pause signal
	6	DETECT(GND)	-	-	Ground
	7	SCLK	I	0/3.3 V DC (pulse)	Mail box clock signal
	8	GND (to Engine)	-	-	Ground
	9	GND (to LVU)	-	-	Ground
	10	GND (to LVU)	-	-	Ground
	11	24V	I	24 V DC	24 V DC power input
	12	24V	I	24 V DC	24 V DC power input



Connector	Pin	Signal	I/O	Voltage	Description
YC2 Connected to the MT overflow sensor 1, 2, 3 and 4, MT eject sensor 1	1	LED	O	0/3.3 V DC	LED signal
	2	GND	-	-	Ground
	3	EJECT	I	0/3.3 V DC	TEJS: On/Off
	4	3.3V	O	3.3 V DC	3.3 V DC power output
	5	ANODE	O	3.3 V DC	3.3 V DC power output
	6	GND	-	-	Ground
	7	OFS1	I	0/3.3 V DC	TOFSW1: On/Off
	8	ANODE	O	3.3 V DC	3.3 V DC power output
	9	GND	-	-	Ground
	10	OFS2	I	0/3.3 V DC	TOFSW2: On/Off
	11	ANODE	O	3.3 V DC	3.3 V DC power output
	12	GND	-	-	Ground
	13	OFS3	I	0/3.3 V DC	TOFSW3: On/Off
	14	ANODE	O	3.3 V DC	3.3 V DC power output
	15	GND	-	-	Ground
	16	OFS4	I	0/3.3 V DC	TOFSW4: On/Off
YC3 Connected to the MT overflow sensor 5, MT overflow sensor 6, MT eject sensor 1, MT feedshift HP sensor, MT cover sensor	1	3.3V	O	3.3 V DC	3.3 V DC power output
	2	LED	O	0/3.3 V DC (pulse)	TEJS (photo transmitter)
	3	ANODE	O	3.3 V DC	3.3 V DC power output
	4	GND	-	-	Ground
	5	OFS5	I	0/3.3 V DC	TOFSW5: On/Off
	6	ANODE	O	3.3 V DC	3.3 V DC power output
	7	GND	-	-	Ground
	8	OFS6	I	0/3.3 V DC	TOFSW6: On/Off
	9	ANODE	-	-	Not used
	10	GND	-	-	Not used
	11	OFS7	-	-	Not used
	12	ANODE	O	3.3 V DC	3.3 V DC power output
	13	GND	-	-	Ground
	14	SHIFT HP SIG	I	0/3.3 V DC	MHPS: On/Off
	15	ANODE	O	3.3 V DC	3.3 V DC power output
	16	GND	-	-	Ground
	17	COVER OPEN	I	0/3.3 V DC	MCOS: On/Off
YC4 MT drive motor.	1	MOTOR_A	O	0/24 V DC (pulse)	MBDM drive control signal
	2	MOTOR A	O	0/24 V DC (pulse)	MBDM drive control signal
	3	MOTOR B	O	0/24 V DC (pulse)	MBDM drive control signal
	4	MOTOR_B	O	0/24 V DC (pulse)	MBDM drive control signal

## 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, 6; EXIT;

### FRPO parameters

Items	FRPO	Setting value	Factory setting
Top margin	A1	Integer value in inch	0
	A2	decimal value in 1/100 inch increments	0
Left margin	A3	Integer value in inch	0
	A4	decimal value in 1/100 inch increments	0
Page length	A5	Integer value in inch	13
	A6	decimal value in 1/100 inch increments	61
Page width	A7	Integer value in inch	13
	A8	decimal value in 1/100 inch increments	61
Default pattern resolution	B8	0: 300 dpi 1: 600 dpi	0
Page orientation	C1	0: Portrait 1: Landscape	0
Default font*	C2	Middle two digits of power-up font	0
	C3	Last two digits of power-up font	0
	C5	First two digits of power-up font	0
PCL font switching	C8	0: HP compatible mode 32: Compatibility mode	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

Items	FRPO	Setting value	Factory setting
Reduction (100 V model only)	J0	0: 100% 5: 70 % 6: 81 % 7: 86 % 8: 94 % 9: 98 %	0
Auto linefeed mode (100 V model only) (Japanese emulation only)	J7	0: Auto linefeed 1: No auto linefeed	0
Horizontal offset (100 V model only)	K0	-7 to +7 (Integer), unit: cm	0
	K1	-99 to +99 (Decimal), unit: 1/100 cm	0
Vertical offset (100 V model only)*	K2	-7 to +7 (Integer), unit: cm	0
	K3	-99 to +99 (Decimal), unit: 1/100 cm	0
Kanji font number setting (100 V model only)	K4	0: Same as V7 1: Mincho 40 dots 2: Gothic 40 dots 5: Mincho 48 dots 6: Gothic 48 dots	0
New/old JIS code switching	K6	0: JIS X 0208: 1990 1: JIS X 0208: 1978 8: JIS X 0213: 2004	0
Duplex printing mode selection	N4	0: OFF 1: Long-edge mode (long-edge bind) 2: Short-edge mode (Short-edge bind)	0
Sleep timer time-out time	N5	1 to 240 minutes	30 ppm model: 30
Ecoprint mode	N6	0: OFF 2: ON	0
Default emulation mode	P1	6: PCL6 (except PCL XL) 9: KPD L	6 9 (120 V model)
Carriage-return action	P2	0: Ignores 0x0d 1: CR 2: CR+LF	1
Linefeed action	P3	0: Ignores 0x0d 1: LF 2: CR+LF	1
KPD L auto switching	P4	0: None 1: Auto switching	0 1 (120 V model)
KPD L auto switching alternate emulation	P5	Same as P1 (except 9)	6

Items	FRPO	Setting value	Factory setting
AES option Page eject command and action when automatic emulation switching (AES) is triggered	P7	If the data is neither applicable to KPDL nor alternate emulation after the AES is started, it is processed in the alternate emulation. 0: All page eject commands 1: None 2: All page eject commands and Prescribe EXIT command 3: Prescribe EXIT command only 4: ^L command only 6: Prescribe EXIT command and ^L command If the data is neither applicable to KPDL nor alternate emulation after the AES is started, it is processed in KPDL. 10: Data other than KPDL print data is printed in the alternate emulation.	10 11(120 V model)
Command recognition character	P9	ASCII code of 33 to 126	82(R)
Stacker setting at start-up	R0	1: Inner tray 3: When the 1000-sheet finisher is installed 7: When the 3000-sheet finisher is installed	1
Paper size(start-up)	R2	0: Size of the default paper cassette (See R4.) 1: Envelope Monarch 2: Envelope #10 3: Envelope DL 4: Envelope C5 5: Executive 6: Letter 7: Legal 8: ISO A4 9: JIS B5 13: ISO A5 14: ISO A6 15: JIS B6 16: Envelope #9 17: Envelope #6-3/4 18: ISO B5 19: Custom 20: B4toA4(100 V model only) 21: A3toA4(100 V model only) 22: A4toA4[98%](100 V model only) 23: STKtoA4(100 V model only) 31: Hagaki 32: Oufuku Hagaki 33: Oficio II	0
		40: 16K 42: 8.5x13.5 50: Statement 51: Folio 52: Youkei type 2 53: Youkei type 4	

Items	FRPO	Setting value	Factory setting
Default paper source	R4	0: MP paper feed section 1: Cassette 1 2: Cassette 2 3: Cassette 3 4: Cassette 4	1
Sort pin full detection	S3	0: Stop at paper full detection 1: Output tray change at paper full detection	0
A4/Letter override	S4	0: OFF 1: ON	1
Host buffer size rate (H8 value and integration)	S5	0: 10KB 1: 100KB 2: 1MB	1
RAM disk size	S6	1 to 1024 MB	400
RAM disk mode	S7	0: OFF 1: ON	1
Wide A4	T6	0: OFF 1: ON	0
Line spacing	U0	Lines per inch (integer value)	6
	U1	Lines per inch (fraction value)	0
Character spacing	U2	Characters per inch (integer value)	10
	U3	Characters per inch (fraction value)	0
Country code of the resident fonts	U6	0: US 1: France 2: Germany 3: U.K. 4: Denmark 5: Sweden 6: Italy 7: Spain 8: Japan 9: US legal 10: IBM PC-850 (Multi-lingual) 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	41
Supported symbol Set	U7	0: Same as the default emulation mode (P1) 1: IBM 6: PCL	53
Default font pitch*	U8	Default font pitch/integer	10
	U9	Default font pitch/decimal	0

Items	FRPO	Setting value	Factory setting
ANK outline font size at start-up*	V0	Integer value of ANK outline font size at power-up Upper 2-digit/valid value: 00 to 09	0
	V1	Integer value of ANK outline font size at power-up Lower 2-digit/valid value: 00 to 99	12
	V2	Decimal value of ANK outline font size at power-up Valid value: 00, 25, 50, 75	0
ANK outline font name at start-up*	V3	ANK outline font name at power-up	Courier
Initial Kanji outline font size at start-up (100 V model only)*	V4	Upper 2-digit integer value of Kanji outline font size at start-up Valid value range: 00 to 09	0
	V5	2-digit integer value of the Kanji outline font size at start-up Valid value range: 00 to 99	10
	V6	2-digit decimal value of the Kanji outline font size at start-up Valid value: 00, 25, 50, 75	0
Initial Kanji outline font name (100 V model only)*	V7	Kanji outline font name at start-up	MTHSMINCH O-W3
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: BW 1: Color (CMYK color)	1
Gloss mode	W6	0: OFF 1: ON	0

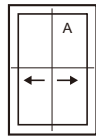
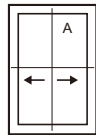
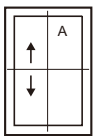
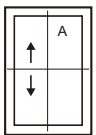
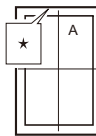
Items	FRPO	Setting value	Factory setting
Paper type for the MP tray	X0	1: Plain 2: Transparency 3: Preprinted 4: Labels 5: Bond 6: Recycled 7: Vellum 8: Rough (except 100 V model) 9: Letterhead 10: Color 11: Prepunched 12: Envelope 13: Hagaki 14: Coated 16: Thick 17: High quality 21 to 28: Custom 1 to Custom 8	1
Paper type (Paper cassettes 1)	X1	1: Plain 3: Preprinted 5: Bond 6: Recycled 7: Vellum 8: Rough (except 100 V model) 9: Letterhead 10: Color 11: Prepunched 12: Envelope 16: Thick 17: High quality 21 to 28: Custom 1 to Custom 8	1
Media types (Option paper cassette 2 to 4)	X2 X3 X4	1: Plain 3: Preprinted 5: Bond 6: Recycled 9: Letterhead 10: Color 11: Prepunched 17: High quality 21 to 28: Custom 1 to Custom 8	1
Cassette selection mode (PCL)	X1	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
Auto error clear at an error	Y0	0: OFF 1: ON	0
Auto error clear timeout time	Y1	Value in units of 5 seconds (0 to 99).	6

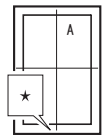
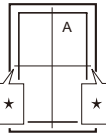
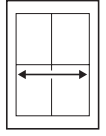
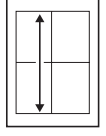
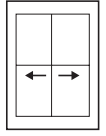
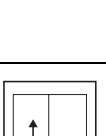


Items	FRPO	Setting value	Factory setting
Paper error detection at duplex printing Paper size and type error detection at fixed paper source	Y3	0: Not detected 127: Detected	63
Forced duplex printing setting (Media type is Preprinted, Prepunched and Letterhead only)	Y4	0: OFF 1: ON	0
PDF direct printing	Y5	0: Zoom depending on paper size 1: Loads paper which is the same size as the image 2: Loads Letter, A4 size paper depending on the image size Enlarges or reduces the image to fit in the current paper size 3: Loads Letter, A4 size paper depending on the image size 8: Printed in full magnification 9: Loads Letter, A4 size paper depending on the image size 10: Loads Letter, A4 size paper depending on the image size enlarges or reduces the image to fit in the current paper size 13 to 99: Same action as default value(0)	0
Job box error control	Y6	0: No error control 1: Output the error list 2: Display the error 3: Display the error and prints the error report	3

\*: Ignored depending on emulation

## 9 - 3 Chart of image adjustment procedures

Adjusting order	Item and adjust	Image	Maintenance mode		Page	Setting procedures		Remark
			No.	Mode		Method	Adjustment	
1	Adjusting the center line of the MP tray (printing adjustment)  Adjusting the LSU print start timing		U034	LSU Out Left	P.6-33 30 ppm model	<ol style="list-style-type: none"> <li>1 Press the start key.</li> <li>2 Select [Lsu Out Left].</li> <li>3 Press the system menu key.</li> <li>4 Press the start key. (output a test pattern)</li> <li>5 Press the system menu key.</li> <li>6 Select [MPT].</li> </ol>	<ol style="list-style-type: none"> <li>1 By using the [Left/Right] cursor, [ +/- ] cursor, or the numeric keys, change the setting value.</li> <li>2 Press the start key to set the setting value.</li> <li>3 Completion: Press the stop key.</li> </ol>	<p>*When the setting value is increased, the image moves leftward.</p> <p>*Adjustment selects [Duplex] at the time of duplex mode.</p>
2	Adjusting the center line of the cassettes (printing adjustment)  Adjusting the LSU print start timing		U034	LSU Out Left	P.6-33 30 ppm model	<ol style="list-style-type: none"> <li>1 Press the start key.</li> <li>2 Select [Lsu Out Left].</li> <li>3 Press the system menu key.</li> <li>4 Press the start key. (output a test pattern)</li> <li>5 Press the system menu key.</li> <li>6 Select [Cass1] to [Cass4].</li> </ol>	<ol style="list-style-type: none"> <li>1 By using the [Left/Right] cursor, [ +/- ] cursor, or the numeric keys, change the setting value.</li> <li>2 Press the start key to set the setting value.</li> <li>3 Completion: Press the stop key.</li> </ol>	<p>*When the setting value is increased, the image moves leftward.</p> <p>*Adjustment selects [Duplex] at the time of duplex mode.</p>
3	Adjusting the leading edge registration of the MP tray (printing adjustment)  Changes the secondary feed timing.		U034	LSU Out Top Full	P.6-33 30 ppm model	<ol style="list-style-type: none"> <li>1 Press the start key.</li> <li>2 Select [LSU Out Top Full].</li> <li>3 Press the system menu key.</li> <li>4 Press the start key. (output a test pattern)</li> <li>5 Press the system menu key.</li> <li>6 Select [MPT].</li> </ol>	<ol style="list-style-type: none"> <li>1 By using the [Left/Right] cursor, [ +/- ] cursor, or the numeric keys, change the setting value.</li> <li>2 Press the start key to set the setting value.</li> <li>3 Completion: Press the stop key.</li> </ol>	<p>*When the setting value is increased, the image moves downward.</p> <p>*Adjustment selects [Duplex] at the time of duplex mode.</p>
4	Adjusting the leading edge registration of the cassette (printing adjustment)  Changes the secondary feed timing.		U034	LSU Out Top Full	P.6-33 30 ppm model	<ol style="list-style-type: none"> <li>1 Press the start key.</li> <li>2 Select [LSU Out Top Full].</li> <li>3 Press the system menu key.</li> <li>4 Press the start key. (output a test pattern)</li> <li>5 Press the system menu key.</li> <li>6 Select [Cass].</li> </ol>	<ol style="list-style-type: none"> <li>1 By using the [Left/Right] cursor, [ +/- ] cursor, or the numeric keys, change the setting value.</li> <li>2 Press the start key to set the setting value.</li> <li>3 Completion: Press the stop key.</li> </ol>	<p>*When the setting value is increased, the image moves downward.</p> <p>*Adjustment selects [Duplex] at the time of duplex mode.</p>
5	Adjusting the leading edge margin (printing adjustment)  Changes the LSU illumination start timing.		U402	Lead	P.6-127 30 ppm model	<ol style="list-style-type: none"> <li>1 Press the start key.</li> <li>2 Press the system menu key.</li> <li>3 Press the start key. (output a test pattern)</li> <li>4 Press the system menu key.</li> <li>5 Select [Lead].</li> </ol>	<ol style="list-style-type: none"> <li>1 By using the [Left/Right] cursor, [ +/- ] cursor, or the numeric keys, change the setting value.</li> <li>2 Press the start key to set the setting value.</li> <li>3 Completion: Press the stop key.</li> </ol>	<p>*When the setting value is increased, the margin widens.</p>

Adjusting order	Item and adjust	Image	Maintenance mode		Page	Setting procedures		Remark
			No.	Mode		Method	Adjustment	
6	Adjusting the trailing edge margin (printing adjustment)  Changes the LSU illumination end timing.		U402	Trail	P.6-127 30 ppm model	<ol style="list-style-type: none"> <li>1 Press the start key.</li> <li>2 Press the system menu key.</li> <li>3 Press the start key. (output a test pattern)</li> <li>4 Press the system menu key.</li> <li>5 Select [Trail].</li> </ol>	<ol style="list-style-type: none"> <li>1 By using the [Left/Right] cursor, [ +/- ] cursor, or the numeric keys, change the setting value.</li> <li>2 Press the start key to set the setting value.</li> <li>3 Completion: Press the stop key.</li> </ol>	*When the setting value is increased, the margin widens.
7	Adjusting the left and right margins (printing adjustment)  Changes the LSU illumination start/end timing.		U402	A Margin C Margin	P.6-127	<ol style="list-style-type: none"> <li>1 Press the start key.</li> <li>2 Press the system menu key.</li> <li>3 Press the start key. (output a test pattern)</li> <li>4 Press the system menu key.</li> <li>5 Select [A Margin] or [C Margin].</li> </ol>	<ol style="list-style-type: none"> <li>1 By using the [Left/Right] cursor, [ +/- ] cursor, or the numeric keys, change the setting value.</li> <li>2 Press the start key to set the setting value.</li> <li>3 Completion: Press the stop key.</li> </ol>	*When the setting value is increased, the margin widens.
8	Adjusting magnification of the scanner in the main scanning direction  Processes data.		U065	Main Scan	P.6-42	<ol style="list-style-type: none"> <li>1 Press the start key.</li> <li>2 Press the system menu key.</li> <li>3 Place an original and press the start key to make a test copy. (Test copy output)</li> <li>4 Press the system menu key.</li> <li>5 Select [Main Scan].</li> </ol>	<ol style="list-style-type: none"> <li>1 By using the [Left/Right] cursor, [ +/- ] cursor, or the numeric keys, change the setting value.</li> <li>2 Press the start key to set the setting value.</li> <li>3 Completion: Press the stop key.</li> </ol>	U065: When using on the contact glass *When the setting value is increased, the image widens.
9	Adjusting magnification of the scanner in the sub scanning direction (scanning adjustment)  Changes the original scanning speed.		U065 U070	Sub Scan Sub Scan(F) Sub Scan(B) Sub Scan(CIS)	P.6-42 P.6-47 30 ppm model	<ol style="list-style-type: none"> <li>1 Press the start key.</li> <li>2 Press the system menu key.</li> <li>3 Place an original and press the start key to make a test copy. (Test copy output)</li> <li>4 Press the system menu key.</li> <li>5 Select the item to be adjusted. U065: [Sub Scan] or [Rotate] U070: [Sub Scan(F)], [Sub Scan(B)] or [Sub Scan(CIS)]</li> </ol>	<ol style="list-style-type: none"> <li>1 By using the [Left/Right] cursor, [ +/- ] cursor, or the numeric keys, change the setting value.</li> <li>2 Press the start key to set the setting value.</li> <li>3 Completion: Press the stop key.</li> </ol>	U065: When using on the contact glass *When the setting value is increased, the image widens.  U070: When using document processor *When the setting value is increased, the image get longer.
10	Adjusting the center line (scanning adjustment)  Scan data is processed.		U067 U072	Front Rotate  Front Back CIS	P.6-45 P.6-50 30 ppm model	<ol style="list-style-type: none"> <li>1 Press the start key.</li> <li>2 Press the system menu key.</li> <li>3 Place an original and press the start key to make a test copy. (Test copy output)</li> <li>4 Press the system menu key.</li> <li>5 Select the item to be adjusted. U067: [Front] or [Rotate] U072: [Front], [Back] or [CIS]</li> </ol>	<ol style="list-style-type: none"> <li>1 By using the [Left/Right] cursor, [ +/- ] cursor, or the numeric keys, change the setting value.</li> <li>2 Press the start key to set the setting value.</li> <li>3 Completion: Press the stop key.</li> </ol>	U067: When using on the contact glass *Adjustment at the time of rotate copy, select [Rotate]. *When the setting value is increased, the image moves leftward.  U072: When copying from the document processor *Back adjustment selects [Back] at the time of duplex mode. *When the setting value is increased, the image moves rightward.
11	Adjusting the leading edge registration (scanning adjustment)  Changes the original scan start timing.		U066 U071	Front Rotate  Front Head Back Head	P.6-44 P.6-48 30 ppm model	<ol style="list-style-type: none"> <li>1 Press the start key.</li> <li>1 Press the system menu key.</li> <li>2 Place an original and press the start key to make a test copy. (Test copy output)</li> <li>3 Press the system menu key.</li> <li>4 Select the item to be adjusted. U067: [Front] or [Rotate] U071: [Front Head] or [Back Head]</li> </ol>	<ol style="list-style-type: none"> <li>1 By using the [Left/Right] cursor, [ +/- ] cursor, or the numeric keys, change the setting value.</li> <li>2 Press the start key to set the setting value.</li> <li>3 Completion: Press the stop key.</li> </ol>	U066: When using on the contact glass *Adjustment at the time of rotate copy, select [Rotate]. *When the setting value is increased, the image moves forward.  U071: When using document processor *Back adjustment selects [Back Head] at the time of duplex mode. *When the setting value is increased, the image moves 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:

Scanner magnification adjustment in the sub scanning direction (U065)

Adjusts the scanner leading edge registration (U066)

Adjusting the scanner center line (U067)

Chromatic aberration in the main scanning direction

Chromatic aberration in the sub scanning direction

MTF correction

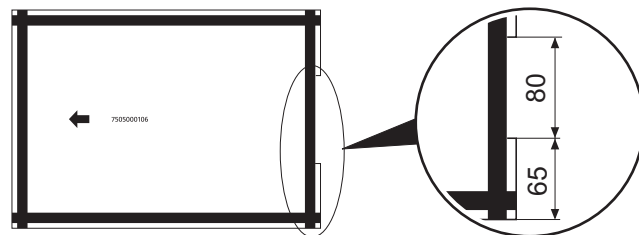
Input gamma in color mode

Color correction matrix

Input gamma in monochrome mode

When maintenance item U411 (Automatic adjustment in the scanner) 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.
- Cut the trailing edge of the DP adjustment original (ChartB) as shown below.



Adjusting the DP magnification (U070)

Adjusting the DP leading edge registration (U071)

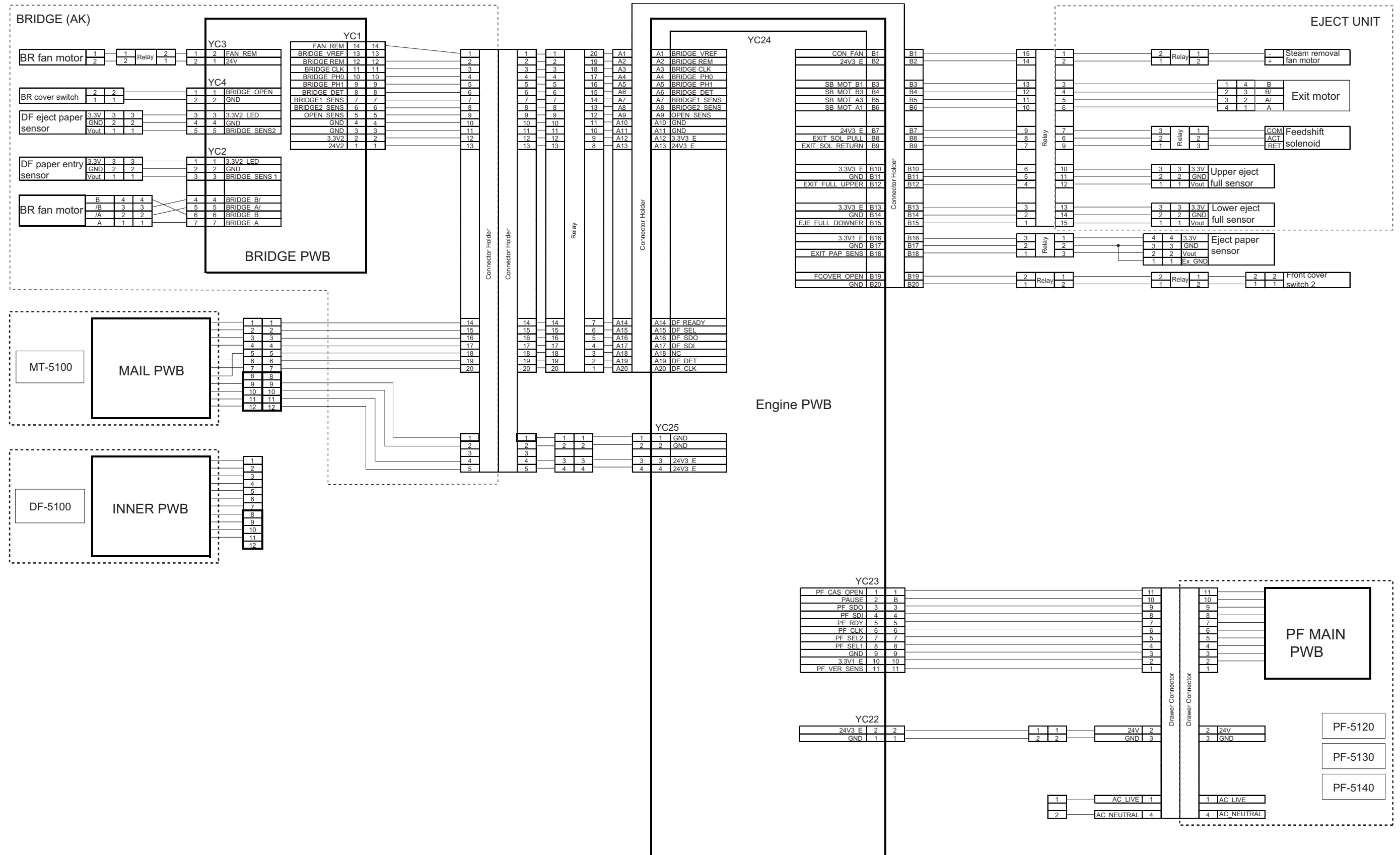
Adjusting the DP center line (U072)

**Image quality**

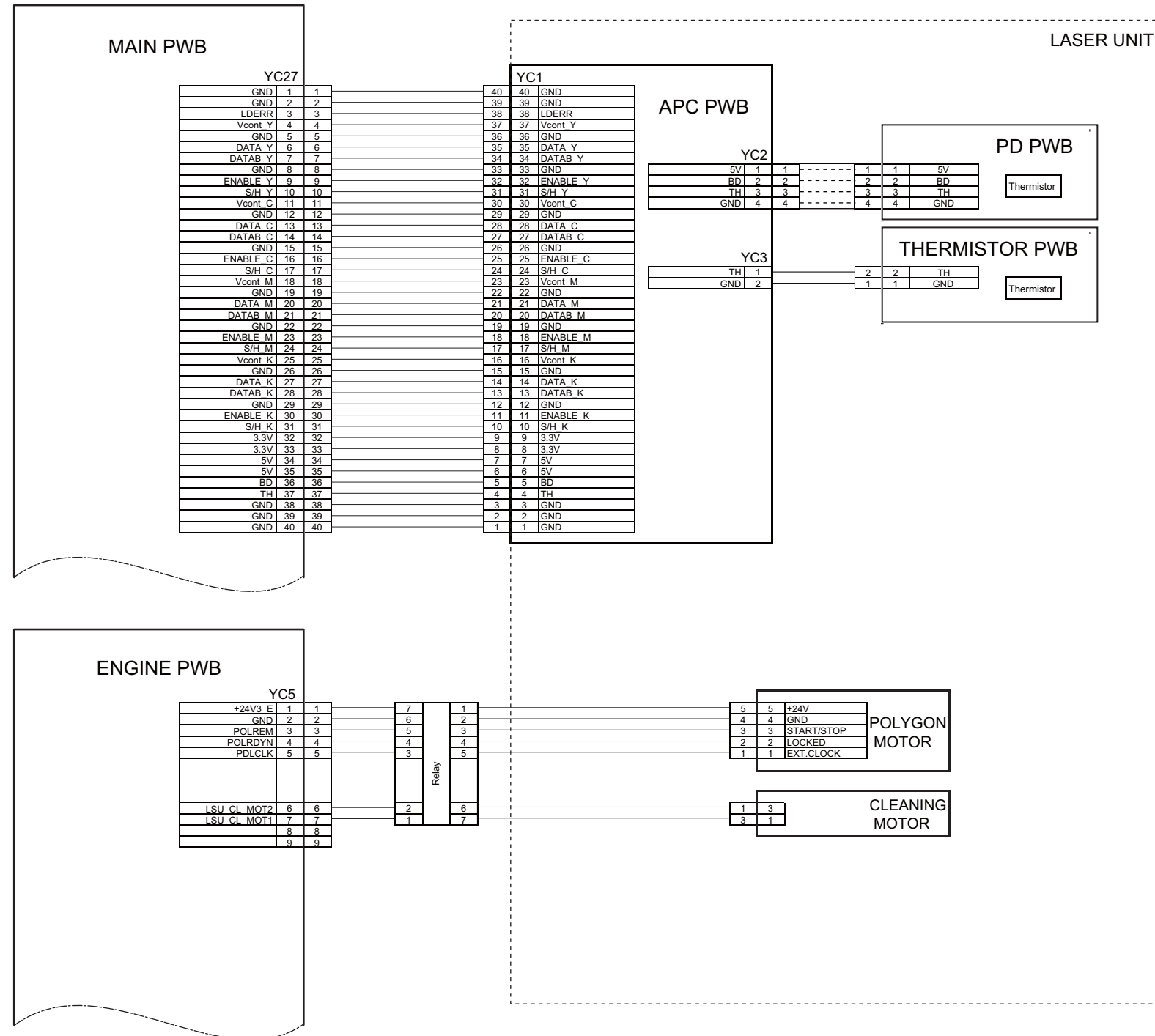
Items	Specifications
100% magnification	Printer: $\pm 0.8\%$ Copy: $\pm 1.5\%$ Using DP: $\pm 2.0\%$
Magnification	Copy: $\pm 2.0\%$ Using DP: $\pm 2.5\%$
Lateral squareness	Copy: $\pm 2.0\text{mm}/200\text{mm}$ Using DP: $\pm 2.5\text{mm}/200\text{mm}$
Leading edge timing	Print: 2.0 mm or less Copy: 2.0mm or less Using DP: 2.5mm or less
Skewed paper feed (left-right difference)	Print: 1.0mm /100mm or less Copy: 1.0mm /100mm or less (table) Using DP: 1.5mm /100mm or less
Lateral image shifting	Print: $\pm 2.0$ mm or less (cassette), $\pm 3.0\text{mm}$ or less (MP tray) Copy: $\pm 2.0\text{mm}$ or less (cassette), $\pm 3.0\text{mm}$ or less (MP tray) Using DP: $\pm 2.0\text{mm}$ or less (cassette), $\pm 3.0\text{mm}$ or less (MP tray)

# 9 - 4 Wiring diagram

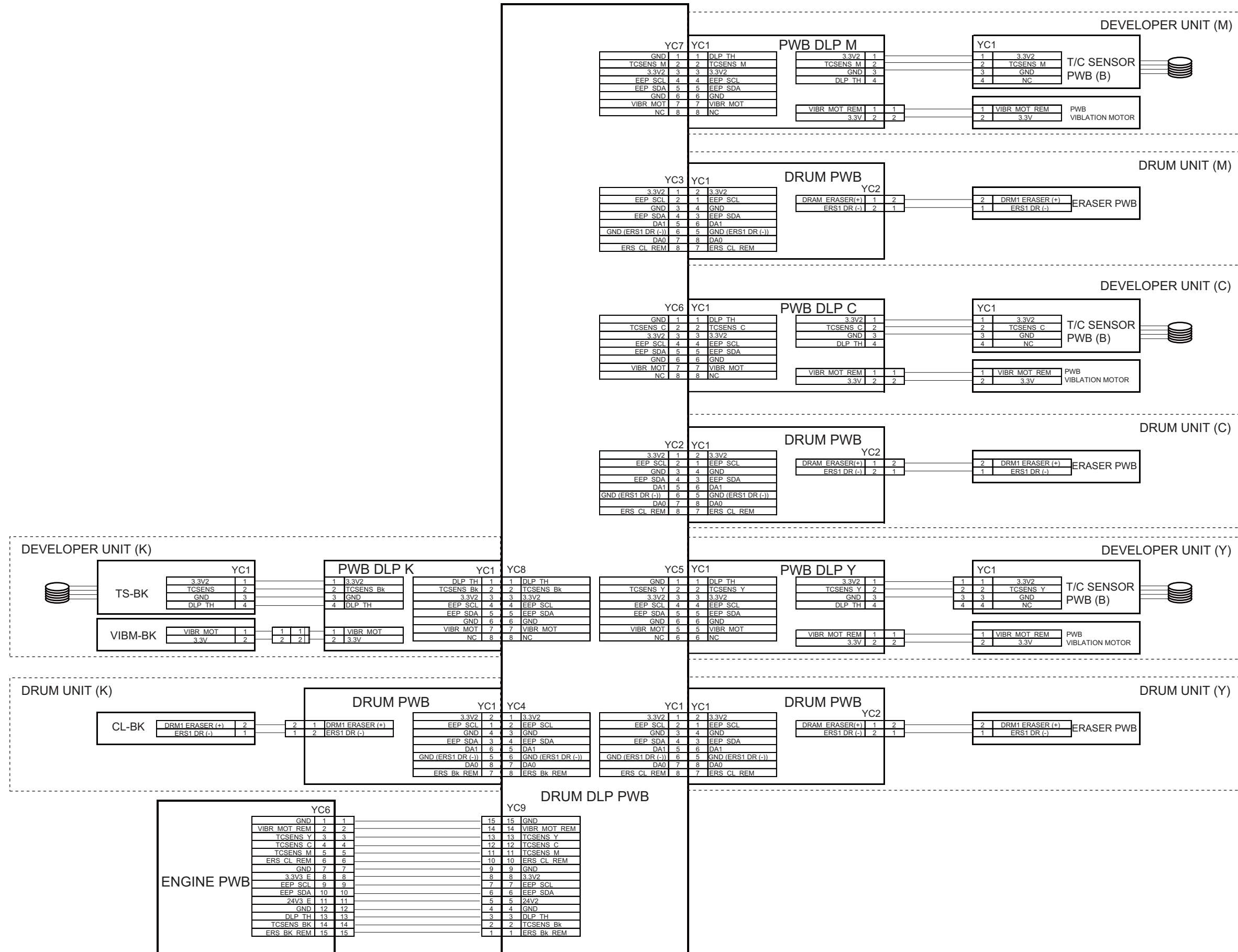
## (1) No.1



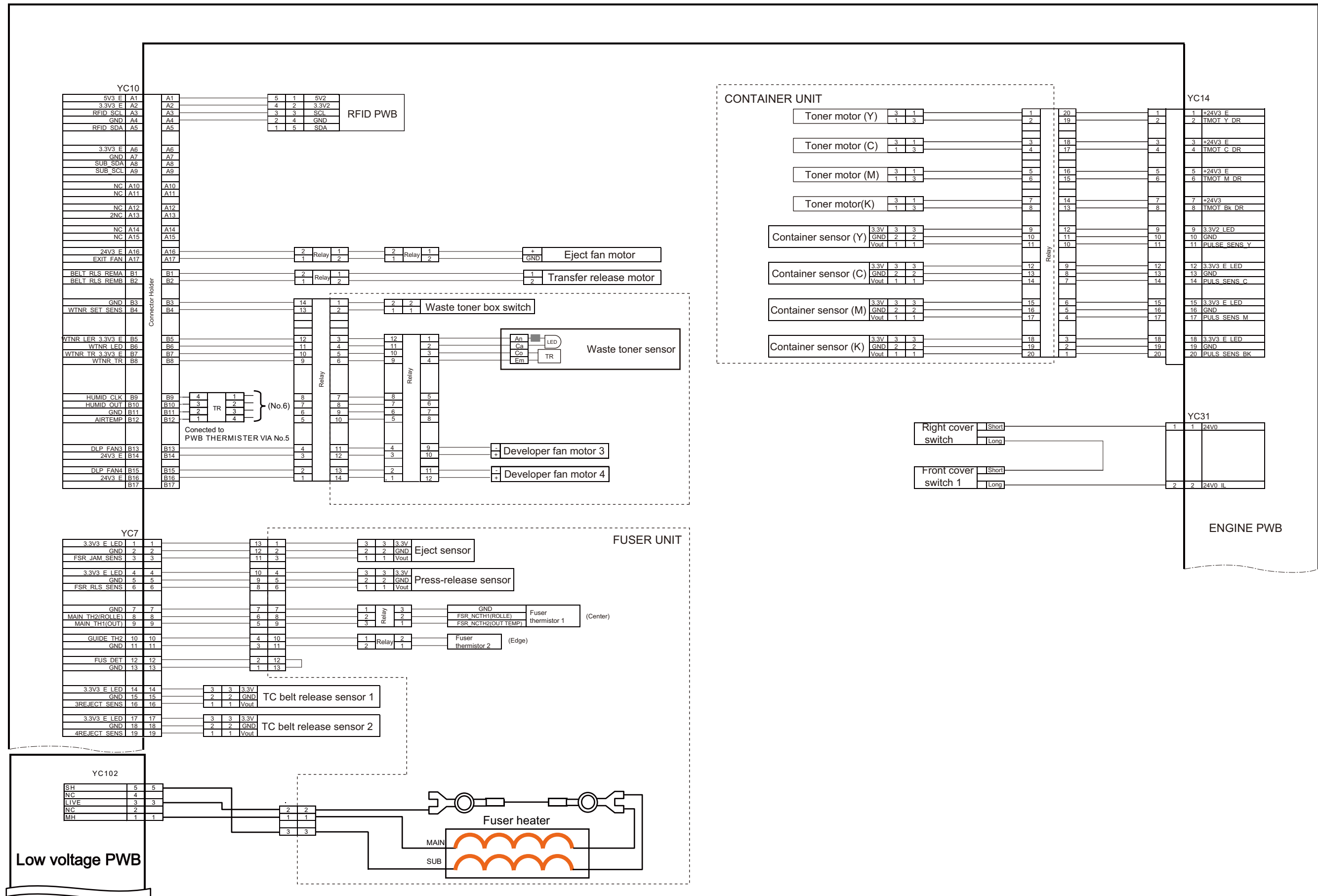
(2) No.2



(3) No.3

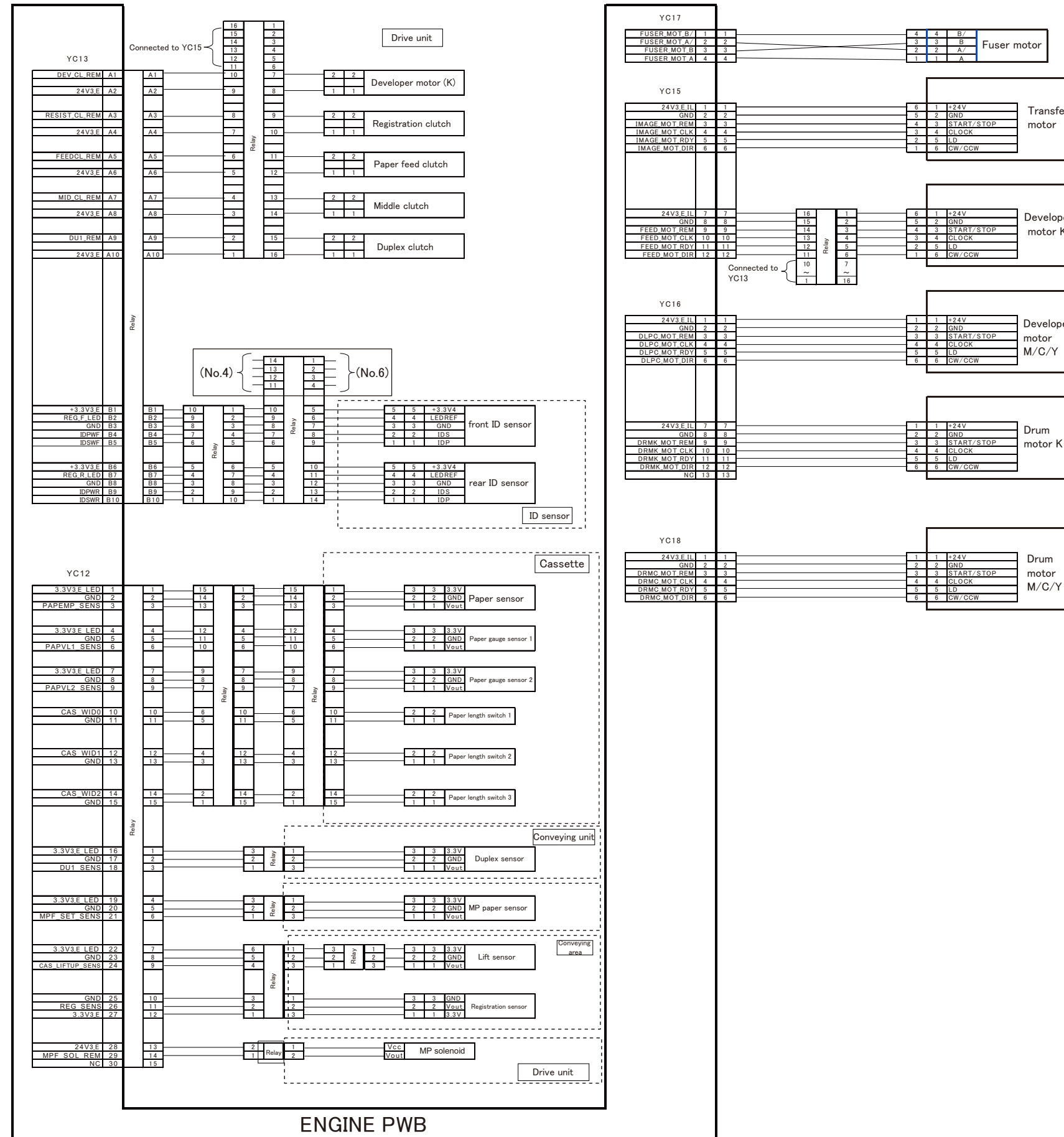


(4) No.4

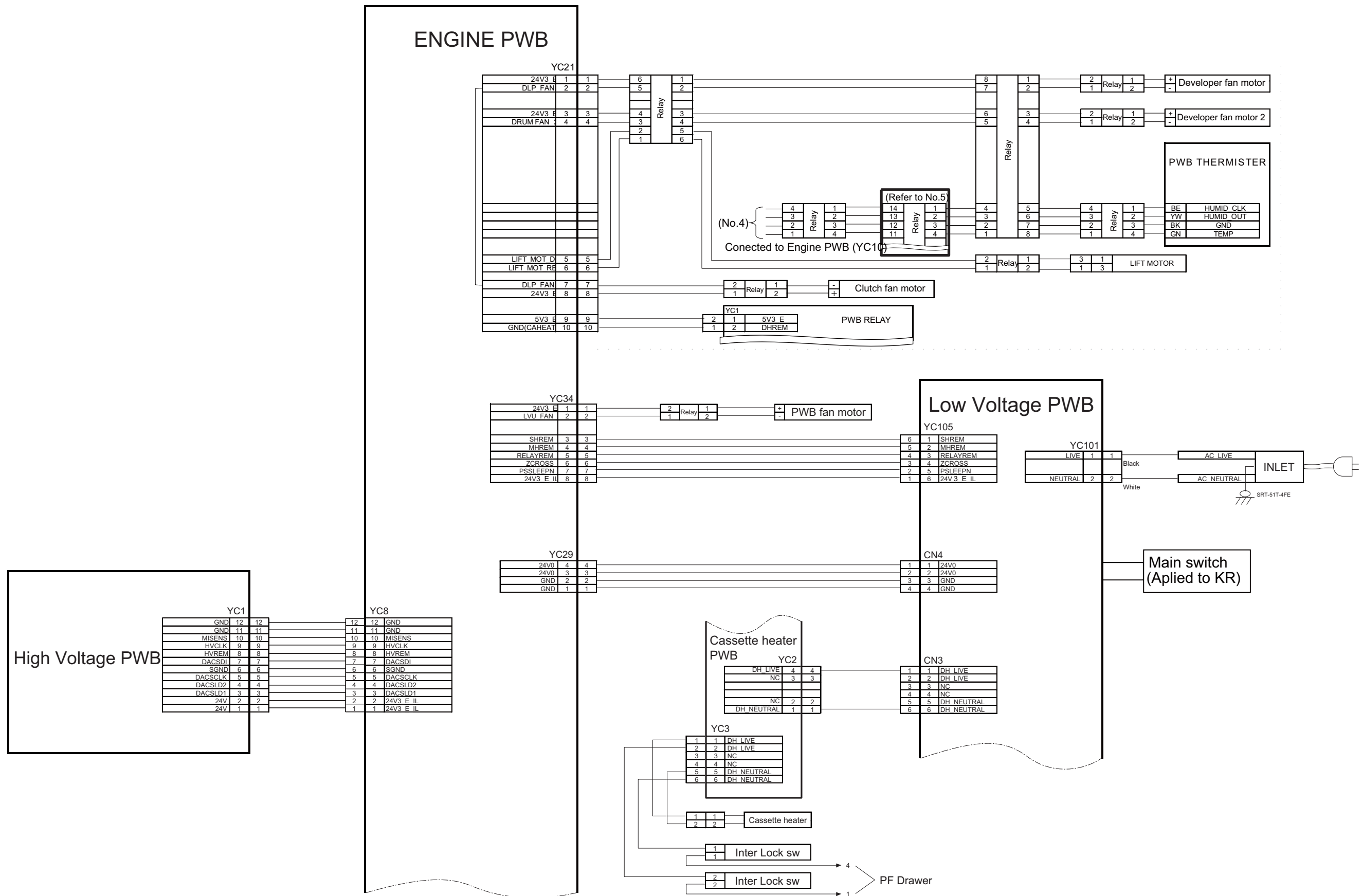




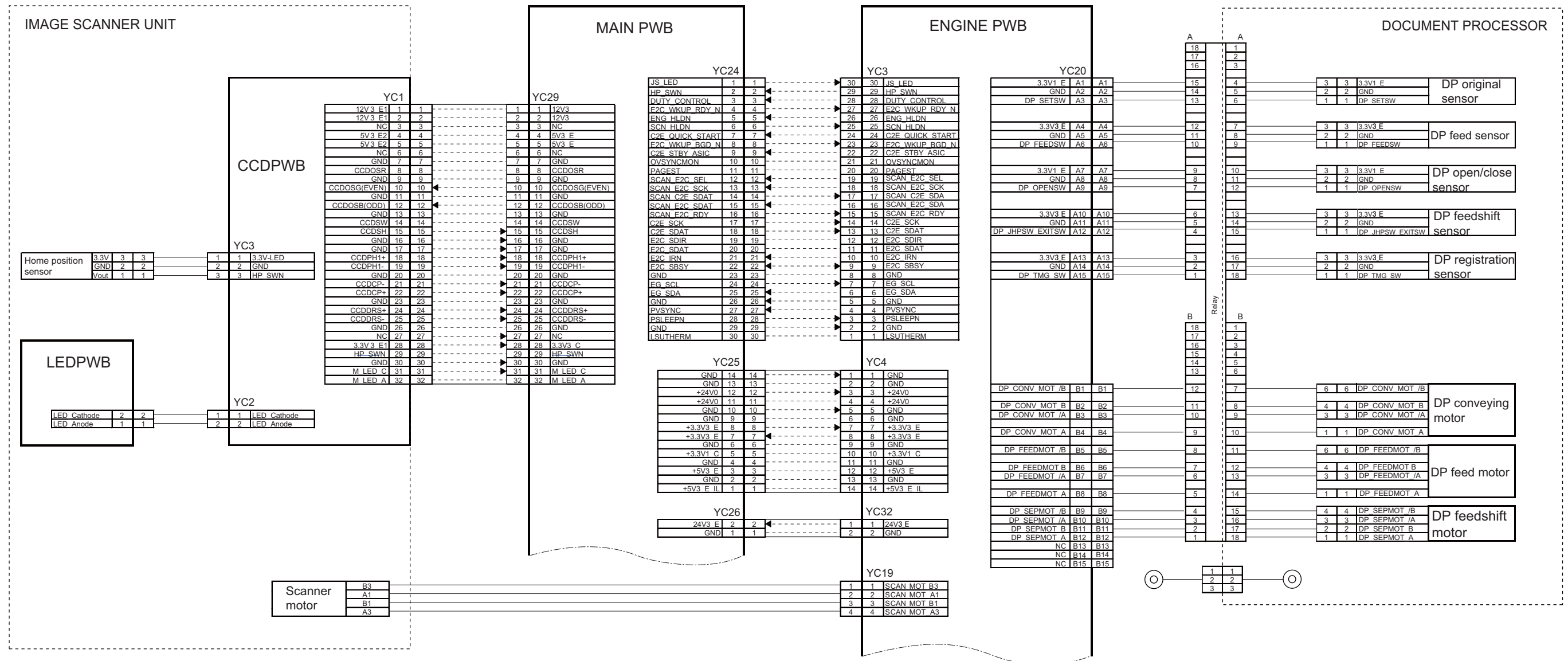
(5) No.5



(6) No.6



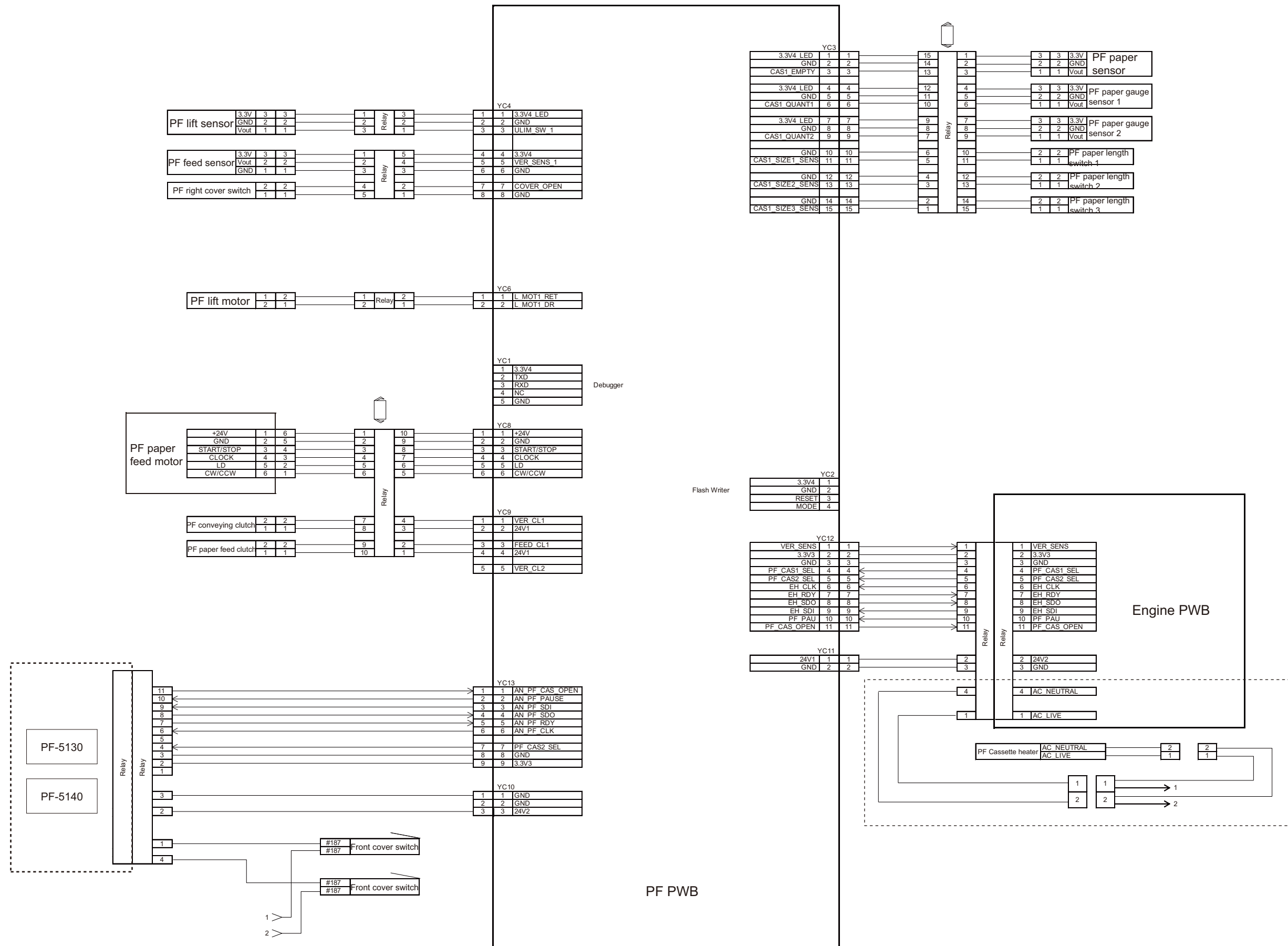
(7) No.7



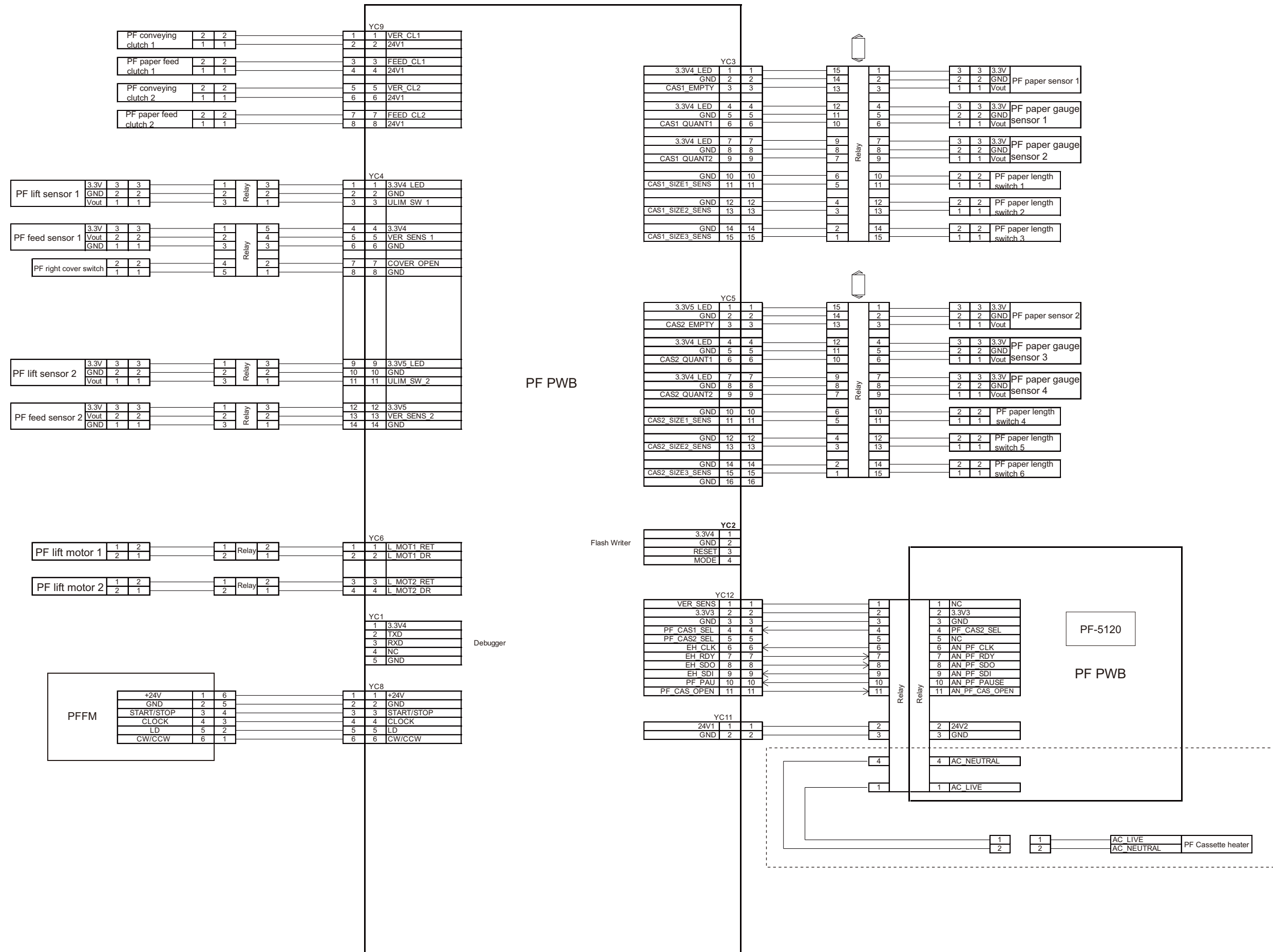


### 9 - 5 Wiring diagram (Options)

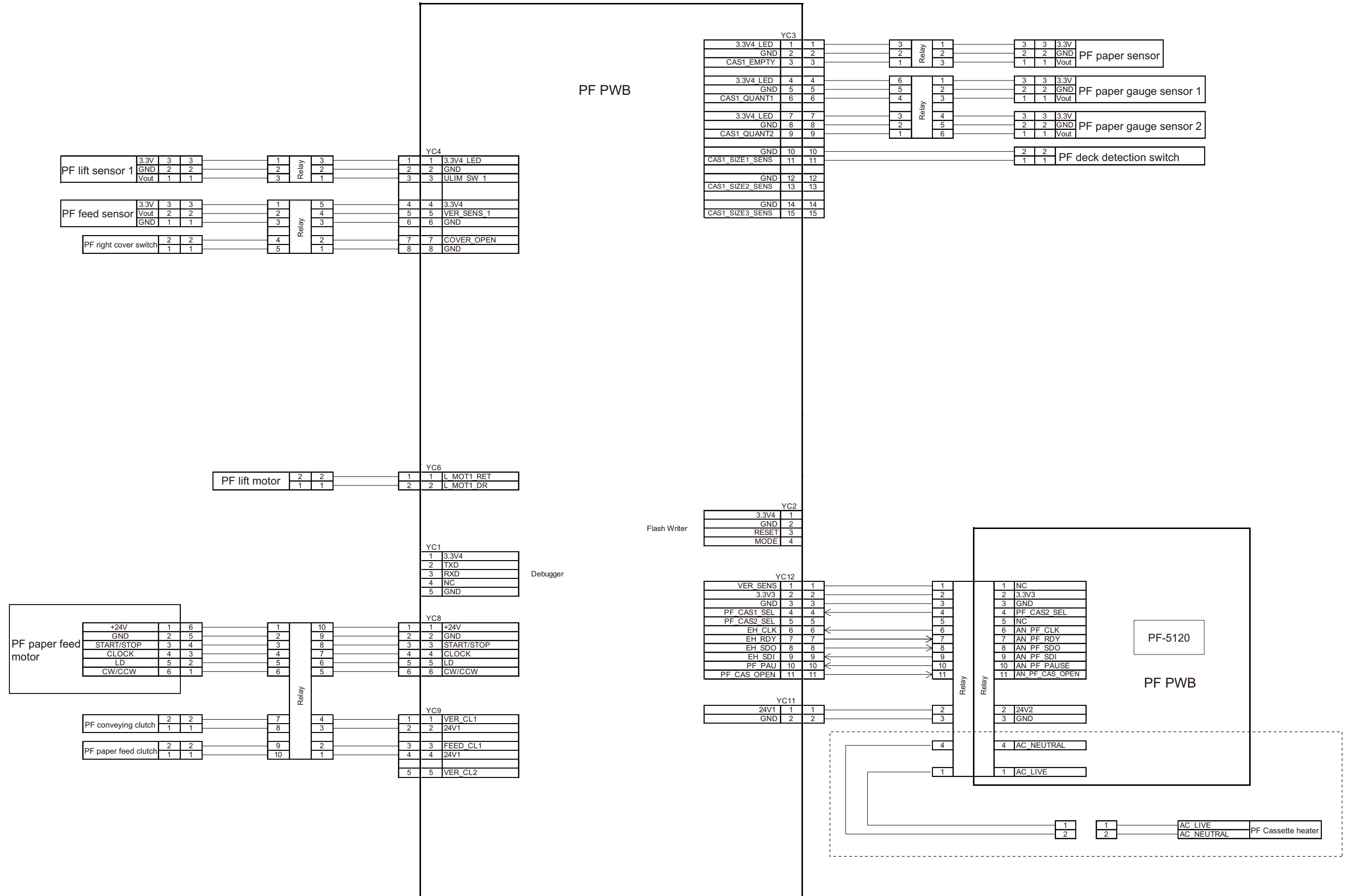
#### (1) Paper Feeder (PF-5120)



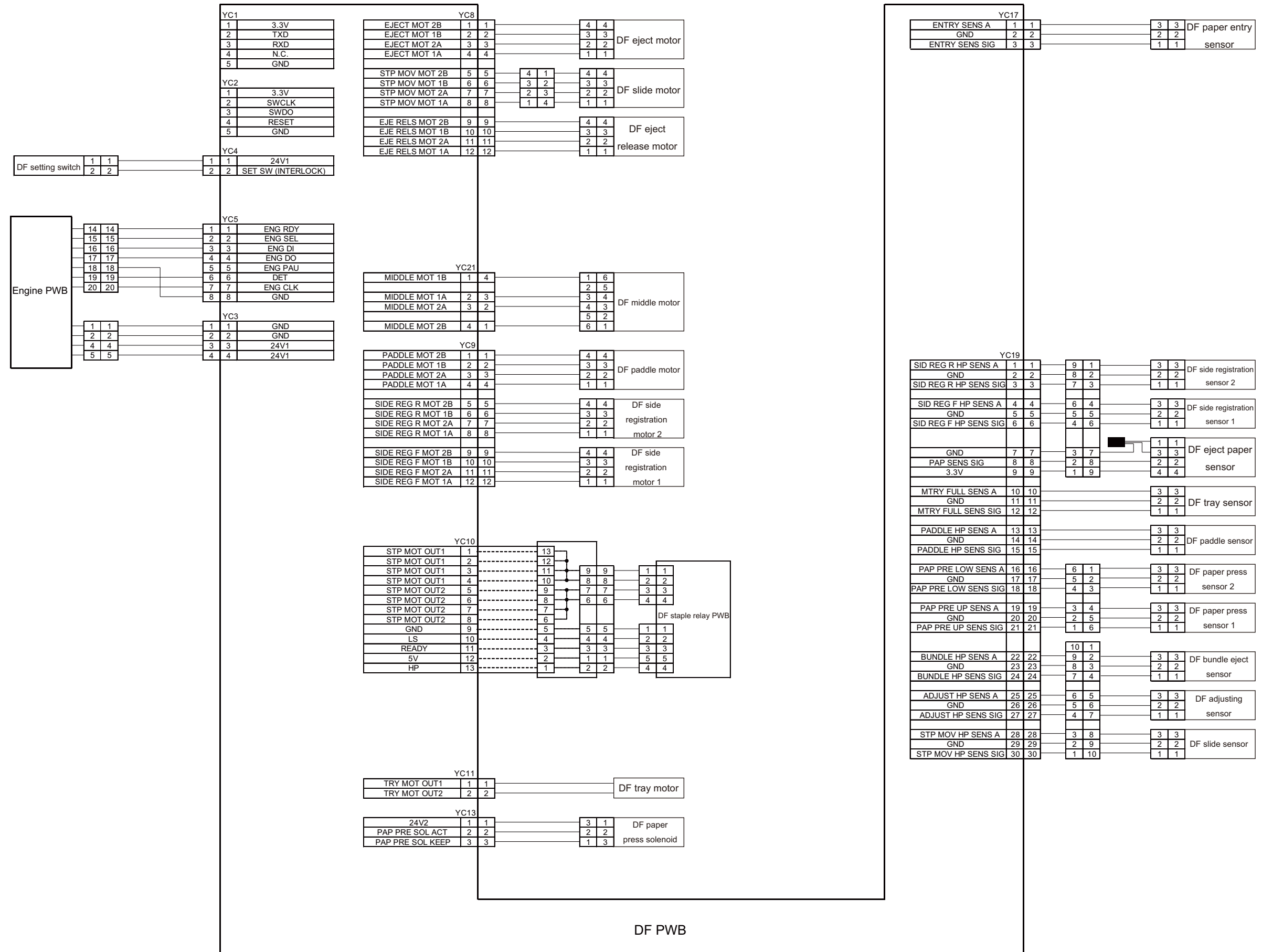
(2) Paper Feeder (PF-5130)



(3) Paper Feeder (PF-5140)

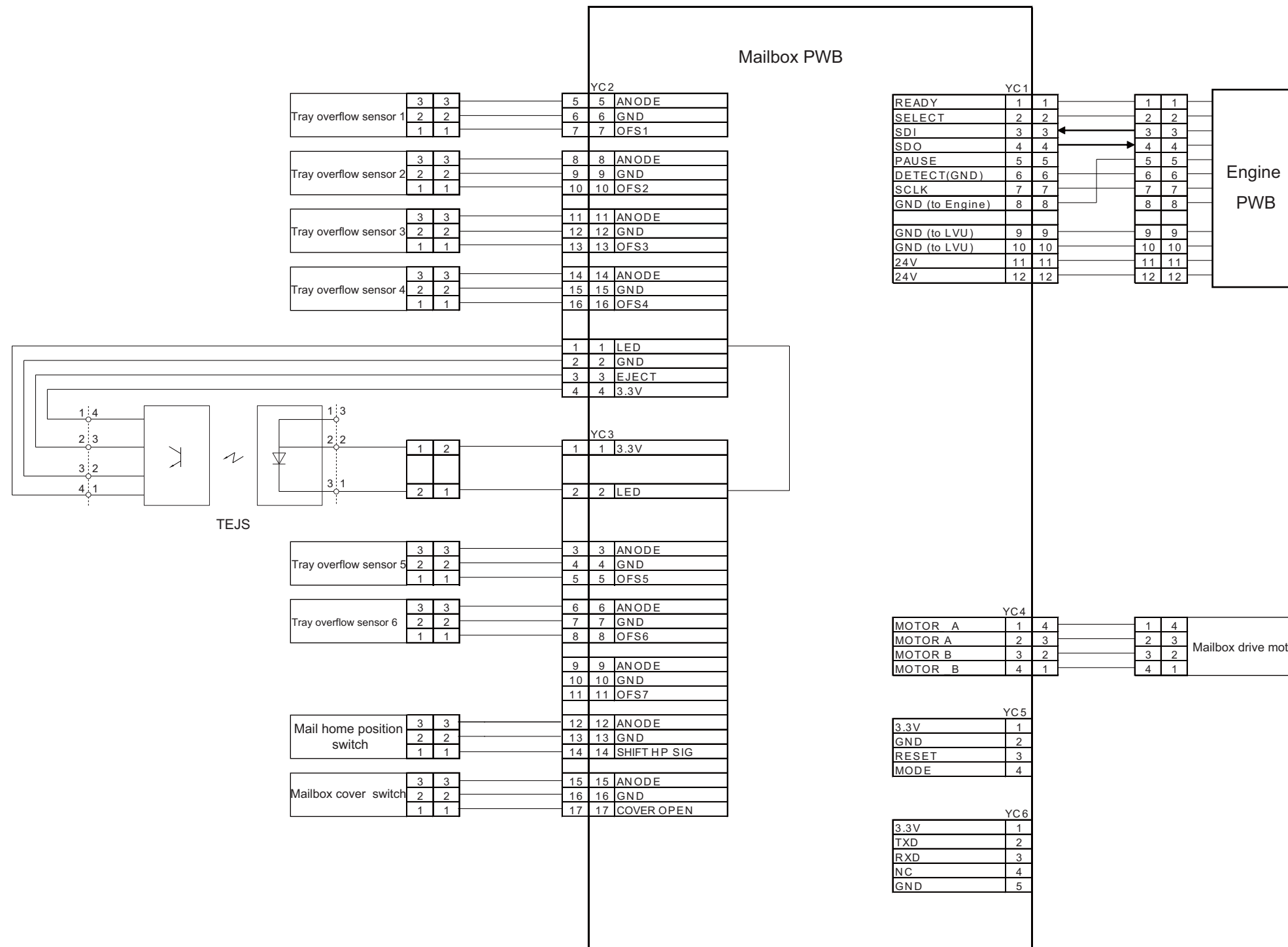


(4) Inner finisher (DF-5100)



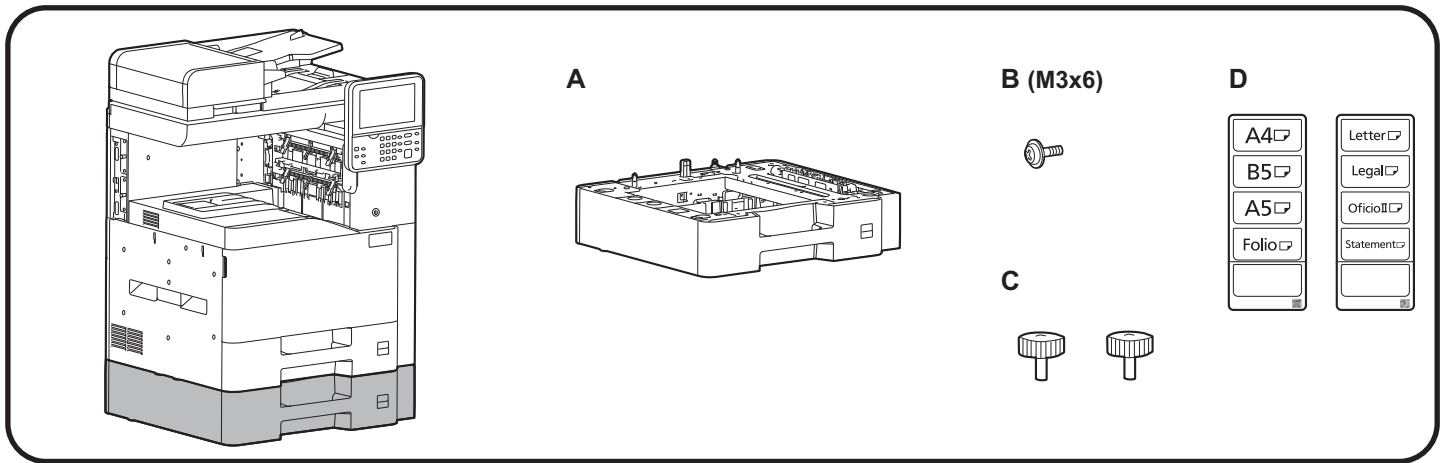


(5) Mailbox (MT-5100)

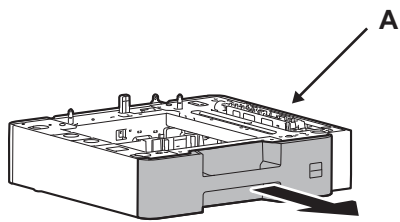


# **PF-5120**

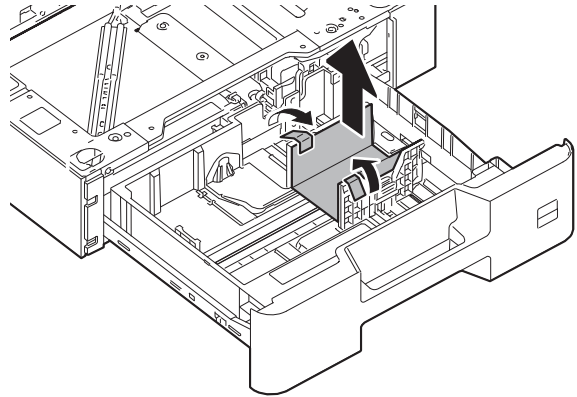
## **(500 sheets × 1 Paper Feeder) Installation Guide**



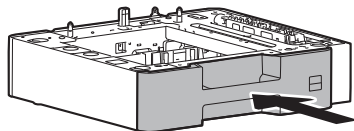
①



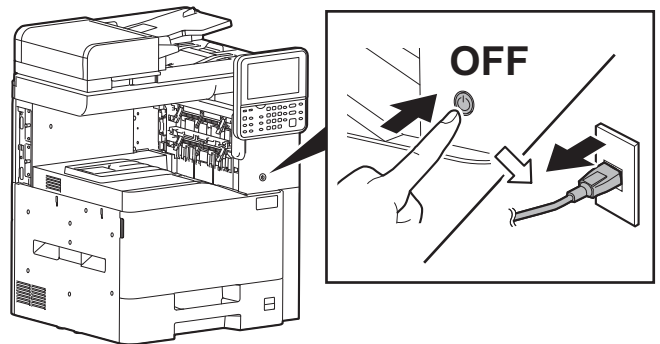
②



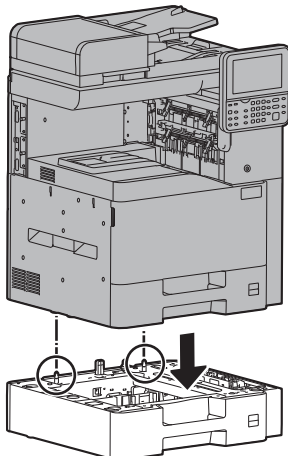
③



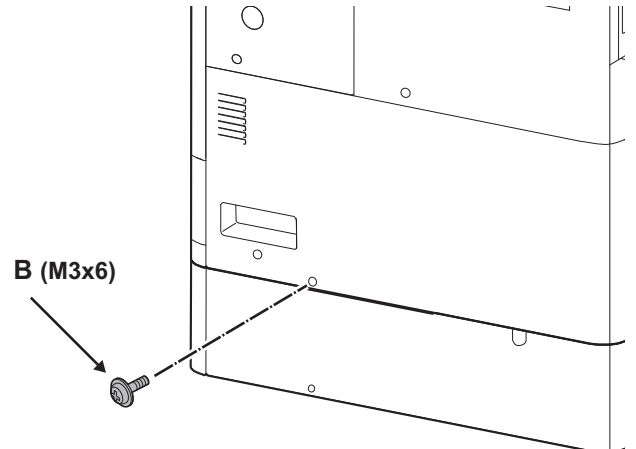
④

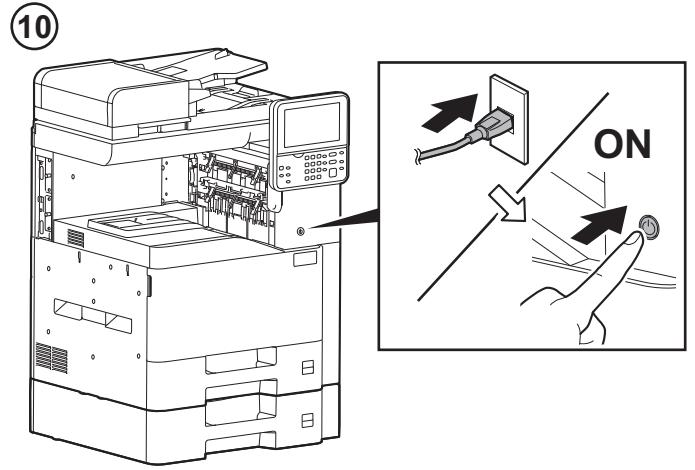
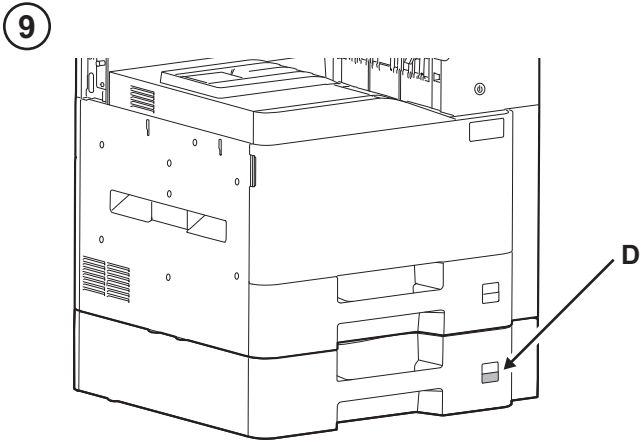
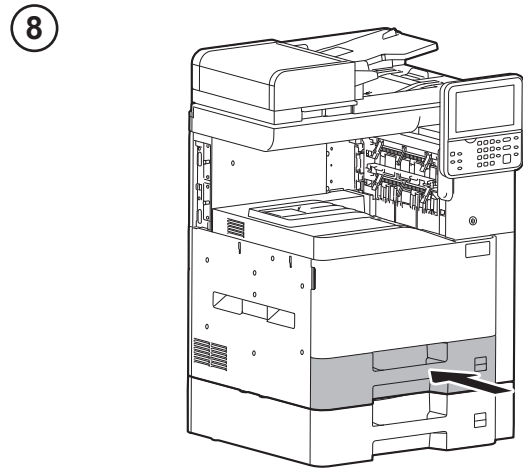
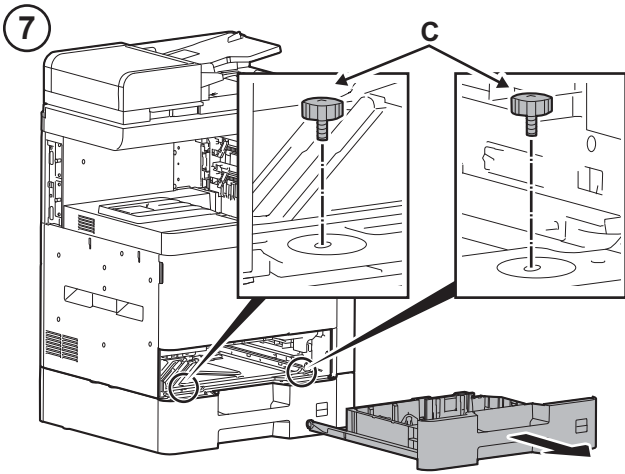


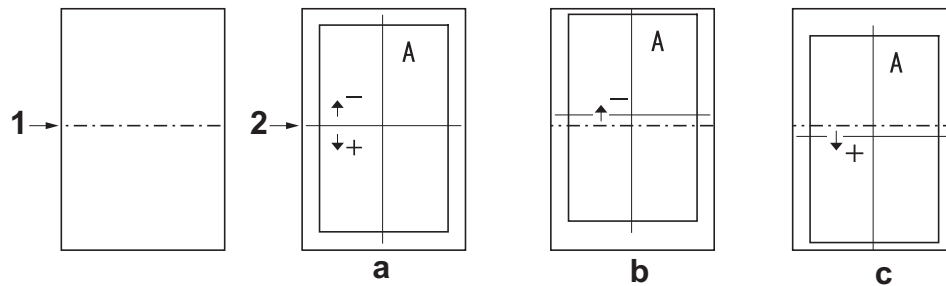
⑤



⑥







### English

#### Adjusting the leading edge timing

1. Check the gap between the paper center (1) and the line (2) of test pattern (a). If the gap exceeds the reference value, adjust the gap according to the following procedure.  
<Reference value> -0mm to +1.0mm
2. Set the maintenance mode U034 and select [LSU Out Top Full] > [PF].

### Français

#### Réglage de la synchronisation du bord de tête

1. Vérifier l'espace entre le centre du papier (1) et la ligne (2) du motif de (a). Si l'écart excède la valeur de référence, le régler selon la procédure suivante.  
<Valeur de référence> -0mm à +1,0mm
2. Passez en mode maintenance U034 et sélectionnez [LSU Out Top Full] > [PF].

### Español

#### Cómo ajustar la sincronización del borde superior

1. Compruebe el espacio entre el centro del papel (1) y la línea (2) del patrón de prueba (a). Si la separación supera el valor de referencia, ajústela siguiendo este procedimiento.  
<Valor de referencia> De -0mm a +1,0mm
2. Configure el modo de mantenimiento U034 y seleccione [LSU Out Top Full] > [PF].

### Deutsch

#### Einstellen des Vorderkanten-Timing

1. Überprüfen Sie den Abstand zwischen der Papiermitte (1) und der Linie (2) auf der Testseite (a). Wenn der Abstand größer als der Bezugswert ist, den Abstand mit dem folgenden Verfahren einstellen.  
<Bezugswert> -0 mm bis +1,0mm
2. Aktivieren Sie den Wartungsmodus U034 und wählen Sie [LSU Out Top Full] > [PF].

### Italiano

#### Regolazione della sincronizzazione del bordo principale

1. Controllare lo spazio tra il centro del foglio (1) e la linea (2) dello schema di prova (a). Se lo scostamento supera il valore di riferimento, regolare lo scostamento stesso seguendo questa procedura.  
<Valore di riferimento> da -0 mm a +1,0mm
2. Impostare la modalità manutenzione U034 e selezionare [LSU Out Top Full] > [PF].

### 简体中文

#### 前端对位调节

1. 确认纸张的中心 (1) 和测试样张 (a) 的线 (2) 之间的偏移值。如果偏移值超过标准值，则按照下列步骤进行调整。  
<标准值> -0mm ~ +1.0mm
2. 进入维修保养模式 U034，把 [LSU Out Top Full] > [PF]。

### 한국어

#### 선단 타이밍 조정

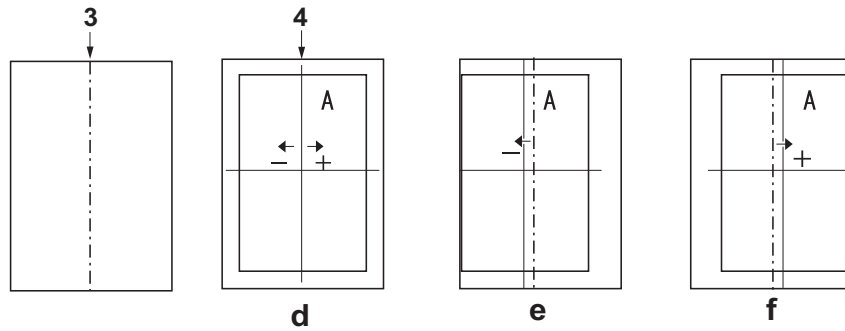
1. 용지 중앙 (1) 과 테스트 패턴 (a) 의 라인 (2) 사이의 격차를 확인하십시오. 차이가 기준치 외의 경우 다음의 순서대로 조정을 합니다.  
<기준치> -0mm ~ +1.0mm
2. 메인テナンス 모드 U034 를 설정하고 [LSU Out Top Full] > [PF] 를 선택합니다.

### 日本語

#### 先端タイミング調整

1. 紙のセンター(1)とテストパターン(a)の線(2)のずれを確認する。ずれが基準値外の場合、次の手順で調整をおこなう。  
<基準値> -0mm ~ +1.0mm
2. メンテナンスモードU034をセットし、[LSU Out Top Full] > [PF]を選択する。

- |   |  |
|---|--|
| <p>3. Adjust the values.<br/>           Test pattern (b) : Increase the setting value.<br/>           Test pattern (c) : Decrease the setting value.<br/>           Amount of change per step: 0.1mm</p> <p>4. Press the [Start] key to confirm the setting value.</p> <p>5. Print the test pattern.</p>  | <p>6. Repeat the steps 2 to 5 above until the gap of line (2) in test pattern (a) is within the reference.<br/>           &lt;Reference value&gt; -0mm to +1.0mm</p>   |
| <p>3. Régler les valeurs.<br/>           Mire d'essai (b) : Augmentez la valeur de réglage.<br/>           Mire d'essai (c) : Diminuez la valeur de réglage.<br/>           Changement par graduation d'échelle: 0,1mm</p> <p>4. Appuyer sur la touche de [Départ] pour confirmer la valeur de réglage.</p> <p>5. Imprimez le motif de test.</p>                | <p>6. Répéter les étapes 2 à 5 ci-dessus jusqu'à ce que l'espace de la ligne (2) dans le motif de test (a) soit dans la référence.<br/>           &lt;Valeur de référence&gt; -0mm à +1,0mm</p>                    |
| <p>3. Ajuste los valores.<br/>           Patrón de prueba (b) : Aumente el valor de configuración.<br/>           Patrón de prueba (c) : Reduzca el valor de configuración.<br/>           Magnitud del cambio por incremento: 0,1mm</p> <p>4. Pulse la tecla de [Inicio] para confirmar el valor de configuración.</p> <p>5. Imprima el patrón de prueba.</p>  | <p>6. Repita los pasos del 2 al 5 anteriores hasta que el espacio de línea (2) del patrón de prueba (a) esté dentro de los valores de referencia.<br/>           &lt;Valor de referencia&gt; De -0mm a +1,0mm</p>  |
| <p>3. Die Werte einstellen.<br/>           Testmuster (b) : Den Einstellwert erhöhen.<br/>           Testmuster (c) : Den Einstellwert verringern.<br/>           Änderung pro Schritt: 0,1mm</p> <p>4. Den Einstellwert durch Drücken der [Start]-Taste bestätigen.</p> <p>5. Drucken Sie die Testseite aus.</p>   | <p>6. Wiederholen Sie die Schritte 2 bis 5 solange, bis der Abstand der Linie (2) auf der Testseite (a) sich innerhalb der Referenz befindet.<br/>           &lt;Bezugswert&gt; -0 mm bis +1,0mm</p>               |
| <p>3. Regolare i valori.<br/>           Modello di prova (b) : Aumentare il valore dell'impostazione.<br/>           Modello di prova (c) : Diminuire il valore dell'impostazione.<br/>           Entità modifica per passo: 0,1mm</p> <p>4. Premere il tasto di [Avvio] per confermare il valore dell'impostazione.</p> <p>5. Stampare lo schema di prova.</p> | <p>6. Ripetere i punti da 2 a 5 sopra indicati fino a portare lo spazio della linea (2) nello schema di prova (a) all'interno del riferimento.<br/>           &lt;Valore di riferimento&gt; da -0 mm a +1,0 mm</p> |
| <p>3. 調整設定値。<br/>           测试图案 (b) : 调高设定值。<br/>           测试图案 (c) : 调低设定值。<br/>           设定值的一个调整单位变化量 : 0.1mm</p> <p>4. 按 [ 开始 ] 键, 以确定设定值。</p> <p>5. 打印测试图案。</p>   | <p>6. 重复步骤 2 ~ 5, 直至测试样张 (a) 的线 (2) 的偏移值达到标准值以内。<br/>           &lt; 标准值 &gt; -0mm ~ +1.0mm</p>  |
| <p>3. 설정치를 조정합니다 .<br/>           테스트 패턴 (b) : 설정치를 높입니다 .<br/>           테스트 패턴 (c) : 설정치를 내립니다 .<br/>           1 스텝당 변화량:0.1mm</p> <p>4. [ 복사 / 시작 ] 키를 누르고 설정치를 확인합니다 .</p> <p>5. 시험 패턴을 인쇄합니다 .</p>  | <p>6. 테스트 패턴 (a) 에서 라인 (2) 의 격차가 기준 이내가 될 때까지 2 단계 ~ 5 단계를 반복 수행합니다 .<br/>           &lt; 기준치 &gt; -0mm ~ +1.0mm</p>   |
| <p>3. 設定値を調整する。<br/>           テストパターン (b) : 設定値を上げる。<br/>           テストパターン (c) : 設定値を下げる。<br/>           1 ステップ当たりの変化量:0.1mm</p> <p>4. [ スタート ] キーを押し、設定値を確定する。</p> <p>5. テストパターンを出力する。</p>   | <p>6. テストパターン (a) の線 (2) のずれが基準値内になるまで手順 2 ~ 5 を繰り返す。<br/>           &lt; 基準値 &gt; -0mm ~ +1.0mm</p>   |



#### Adjusting the center line

1. Check the gap between the paper center (3) and the line (4) of test pattern (c). If the gap exceeds the reference value, adjust the gap according to the following procedure.  
<Reference value> within  $\pm 2,0$ mm.
2. Set the maintenance mode U034 and select [LSU Out Left] > [Cass2].

#### Réglage de l'axe

1. Vérifier l'espace entre le centre du papier (3) et la ligne (4) du motif de (c). Si l'écart excède la valeur de référence, le régler selon la procédure suivante.  
<Valeur de référence>  $\pm 2,0$  mm max.
2. Passez en mode maintenance U034 et sélectionnez [LSU Out Left] > [Cass2].

#### Ajuste de la línea central

1. Compruebe el espacio entre el centro del papel (3) y la línea (4) del patrón de prueba (c). Si la separación supera el valor de referencia, ajústela siguiendo este procedimiento.  
<Valor de referencia> Dentro de  $\pm 2,0$  mm.
2. Configure el modo de mantenimiento U034 y seleccione [LSU Out Left] > [Cass2].

#### Einstellen der Mittenlinie

1. Überprüfen Sie den Abstand zwischen der Papiermitte (3) und der Linie (4) auf der Testseite (c). Wenn der Abstand größer als der Bezugswert ist, den Abstand mit dem folgenden Verfahren einstellen.  
<Bezugswert> Innerhalb  $\pm 2,0$  mm.
2. Aktivieren Sie den Wartungsmodus U034 und wählen Sie [LSU Out Left] > [Cass2].

#### Regolazione della linea centrale

1. Controllare lo spazio tra il centro del foglio (3) e la linea (4) dello schema di prova (c). Se lo scostamento supera il valore di riferimento, regolare lo scostamento stesso seguendo questa procedura.  
<Valore di riferimento> Entro  $\pm 2,0$  mm.
2. Impostare la modalità manutenzione U034 e selezionare [LSU Out Left] > [Cass2].

#### 中心线调节

1. 确认纸张的中心 (3) 和测试样张 (c) 的线 (4) 之间的偏移值。如果偏移值超过标准值，则按照下列步骤进行调整。  
<标准值>  $\pm 2.0$ mm 以内
2. 进入维修保养模式 U034，把 [LSU Out Left] > [Cass2]。

#### 센터라인 조정

1. 용지 중앙 (3) 과 테스트 패턴 (c) 의 라인 (4) 사이의 격차를 확인하십시오. 차이가 기준치 외의 경우 다음의 순서대로 조정을 합니다.  
<기준치>  $\pm 2.0$ mm 이내
2. 메인テナンス 모드 U034 를 설정하고 [LSU Out Left] > [Cass2] 을 선택합니다.

#### センターライン調整

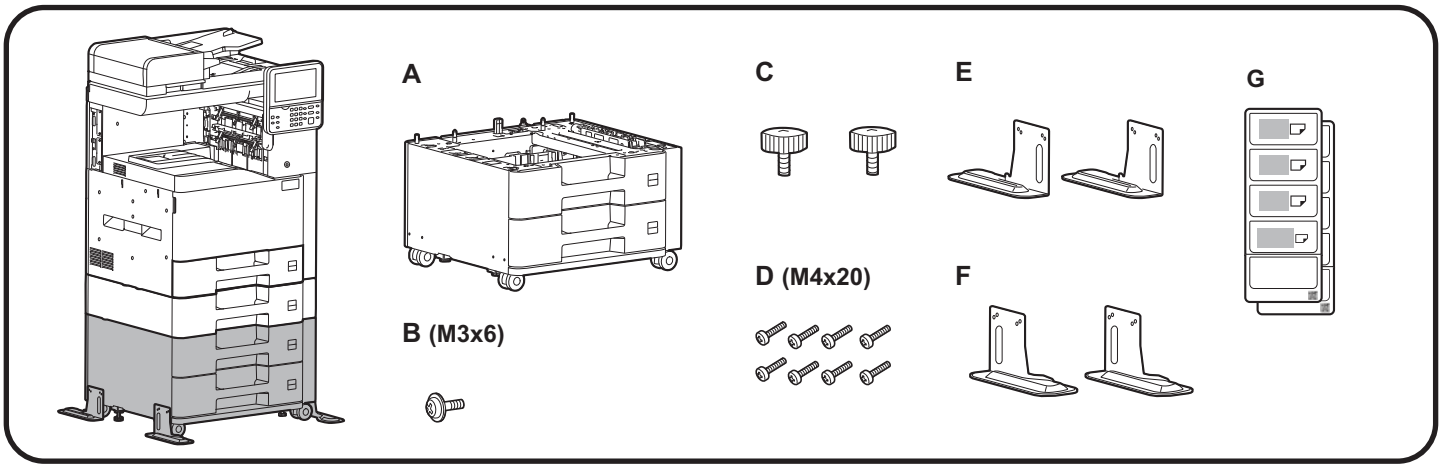
1. 紙のセンター(3) とテストパターン (d) の線 (4) のずれを確認する。ずれが基準値外の場合、次の手順で調整をおこなう。  
<基準値>  $\pm 2.0$ mm 以内
2. メンテナンスモード U034 をセットし、[LSU Out Left] > [Cass2] を選択する。

- |  |  |
|--|--|
| <p>3. Adjust the values.<br/>           Test pattern (e) : Increase the setting value.<br/>           Test pattern (f) : Decrease the setting value.<br/>           Amount of change per step: 0.1 mm</p> <p>4. Press the [Start] key to confirm the setting value.</p> <p>5. Print the test pattern.</p>  | <p>6. Repeat the steps 2 to 5 above until the gap of line (4) in test pattern (c) is within the reference.<br/>           &lt;Reference value&gt; within <math>\pm 2.0</math>mm.</p>   |
| <p>3. Régler les valeurs.<br/>           Mire d'essai (e) : Augmentez la valeur de réglage.<br/>           Mire d'essai (f) : Diminuez la valeur de réglage.<br/>           Changement par graduation d'échelle: 0,1 mm</p> <p>4. Appuyer sur la touche de [Départ] pour confirmer la valeur de réglage.</p> <p>5. Imprimez le motif de test.</p>                | <p>6. Répéter les étapes 2 à 5 ci-dessus jusqu'à ce que l'espace de la ligne (4) dans le motif de test (c) soit dans la référence.<br/>           &lt;Valeur de référence&gt; <math>\pm 2,0</math>mm max.</p>                      |
| <p>3. Ajuste los valores.<br/>           Patrón de prueba (e) : Aumente el valor de configuración.<br/>           Patrón de prueba (f) : Reduzca el valor de configuración.<br/>           Magnitud del cambio por incremento: 0,1 mm</p> <p>4. Pulse la tecla de [Inicio] para confirmar el valor de configuración.</p> <p>5. Imprima el patrón de prueba.</p>  | <p>6. Repita los pasos del 2 al 5 anteriores hasta que el espacio de línea (4) del patrón de prueba (c) esté dentro de los valores de referencia.<br/>           &lt;Valor de referencia&gt; dentro de <math>\pm 2,0</math>mm.</p> |
| <p>3. Die Werte einstellen.<br/>           Testmuster (e) : Den Einstellwert erhöhen.<br/>           Testmuster (f) : Den Einstellwert verringern.<br/>           Änderung pro Schritt: 0,1 mm</p> <p>4. Den Einstellwert durch Drücken der [Start]-Taste bestätigen.</p> <p>5. Drucken Sie die Testseite aus.</p>   | <p>6. Wiederholen Sie die Schritte 2 bis 5 solange, bis der Abstand der Linie (4) auf der Testseite (c) sich innerhalb der Referenz befindet.<br/>           &lt;Bezugswert&gt; Innerhalb <math>\pm 2,0</math>mm.</p>              |
| <p>3. Regolare i valori.<br/>           Modello di prova (e) : Aumentare il valore dell'impostazione.<br/>           Modello di prova (f) : Diminuire il valore dell'impostazione.<br/>           Entità modifica per passo: 0,1 mm</p> <p>4. Premere il tasto di [Avvio] per confermare il valore dell'impostazione.</p> <p>5. Stampare lo schema di prova.</p> | <p>6. Ripetere i punti da 2 a 5 sopra indicati fino a portare lo spazio della linea (4) nello schema di prova (c) all'interno del riferimento.<br/>           &lt;Valore di riferimento&gt; entro <math>\pm 2,0</math>mm</p>       |
| <p>3. 調整設定値。<br/>           测试图案 (e) : 调高设定值。<br/>           测试图案 (f) : 调低设定值。<br/>           设定值的一个调整单位变化量 : 0.1 mm</p> <p>4. 按 [ 开始 ] 键, 以确定设定值。</p> <p>5. 打印测试图案。</p>   | <p>6. 重复步骤 2 ~ 5, 直至测试样张 (c) 的线 (4) 的偏移值达到标准值以内。<br/>           &lt;标准值&gt; <math>\pm 2.0</math>mm 以内</p>  |
| <p>3. 설정치를 조정합니다 .<br/>           테스트 패턴 (e) : 설정치를 높입니다 .<br/>           테스트 패턴 (f) : 설정치를 내립니다 .<br/>           1 스텝당 변화량 : 0.1 mm</p> <p>4. [ 복사 / 시작 ] 키를 누르고 설정치를 확인합니다 .</p> <p>5. 시험 패턴을 인쇄합니다 .</p>  | <p>6. 테스트 패턴 (c) 에서 라인 (4) 의 격차가 기준 이내가 될 때까지 2 단계 ~ 5 단계를 반복 수행합니다 .<br/>           &lt; 기준치 &gt; <math>\pm 2.0</math>mm 이내</p>   |
| <p>3. 設定値を調整する。<br/>           テストパターン (e) : 設定値を上げる。<br/>           テストパターン (f) : 設定値を下げる。<br/>           1 ステップ当たりの変化量 : 0.1 mm</p> <p>4. [ スタート ] キーを押し、設定値を確定する。</p> <p>5. テストパターンを出力する。</p>   | <p>6. テストパターン (d) の線 (4) のずれが基準値内になるまで手順 2 ~ 5 を繰り返す。<br/>           &lt; 基準値 &gt; <math>\pm 2.0</math>mm 以内</p>   |

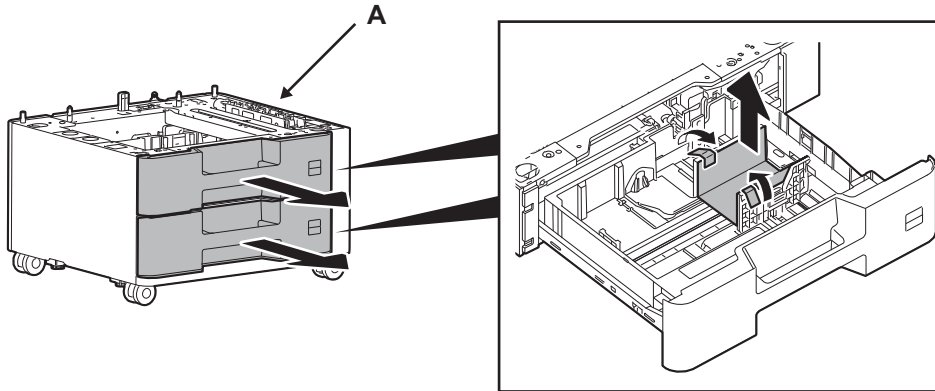


# **PF-5130**

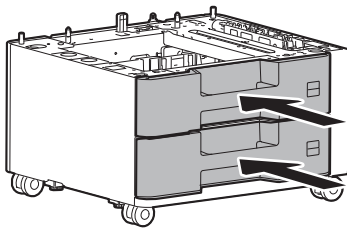
**(500 sheets × 2 Paper Feeder)  
Installation Guide**



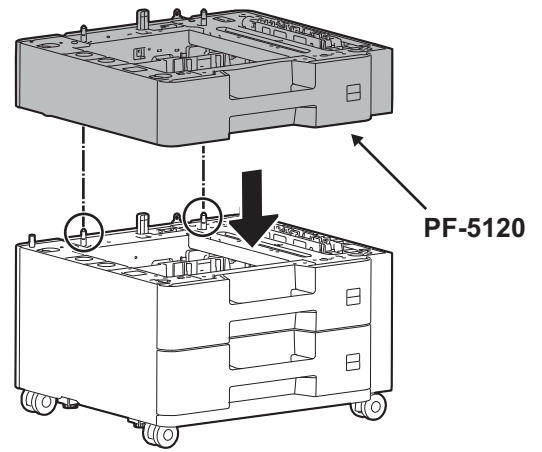
1



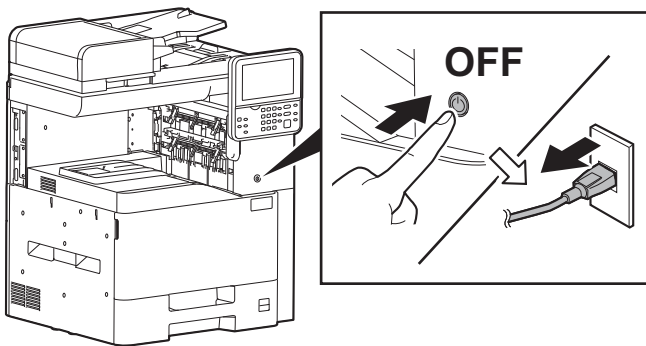
2



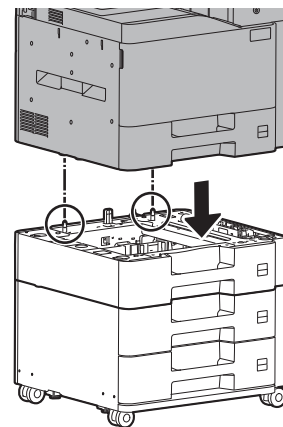
3

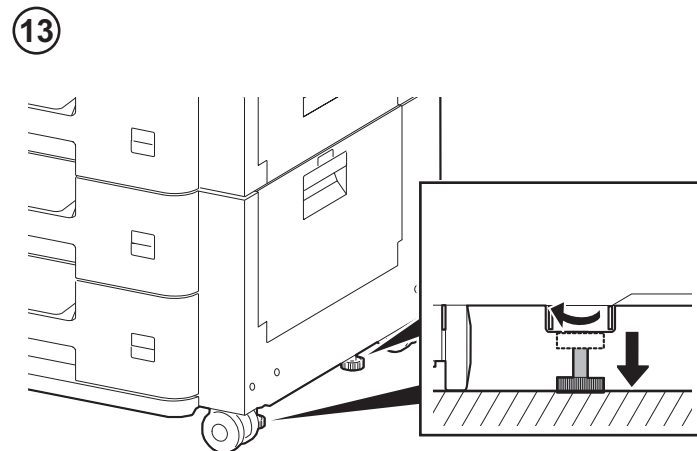
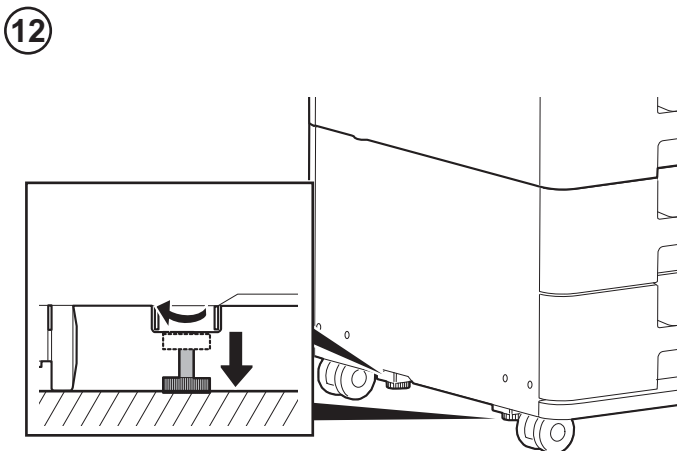
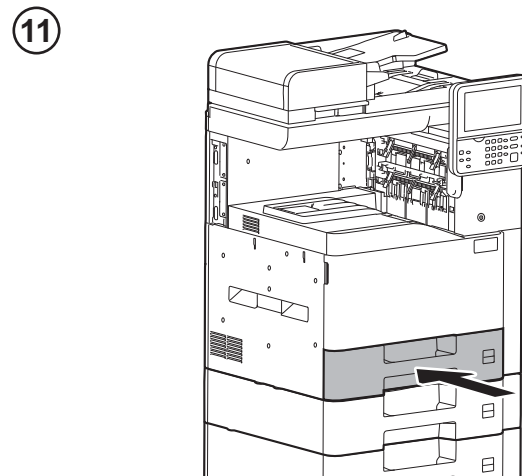
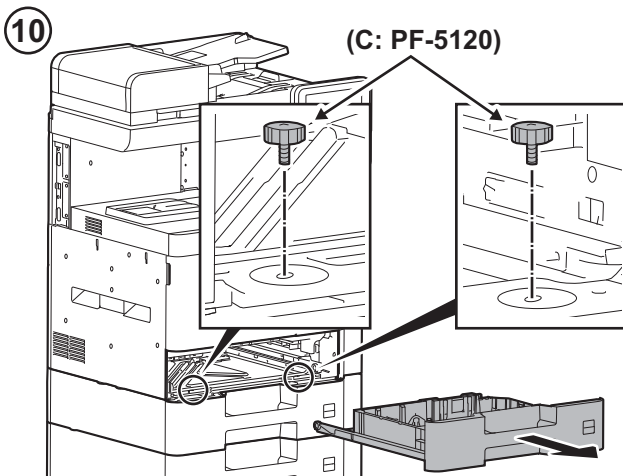
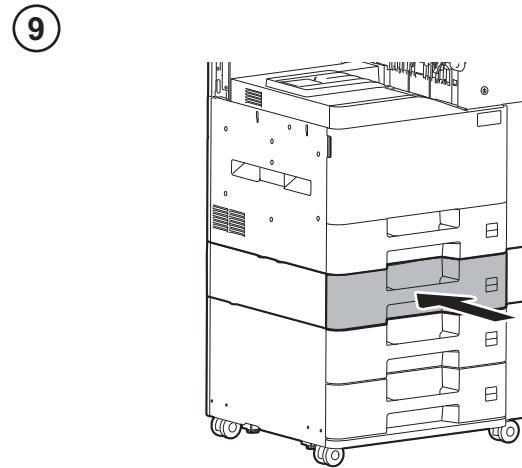
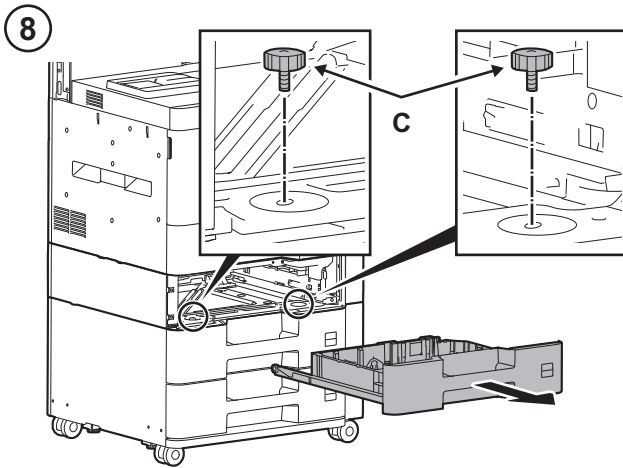
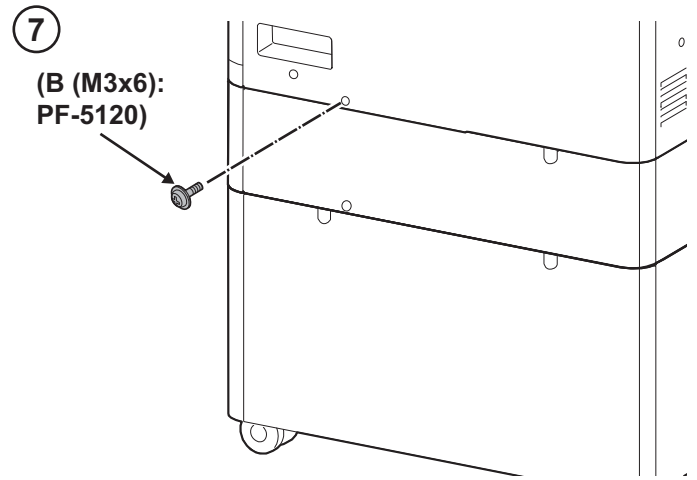
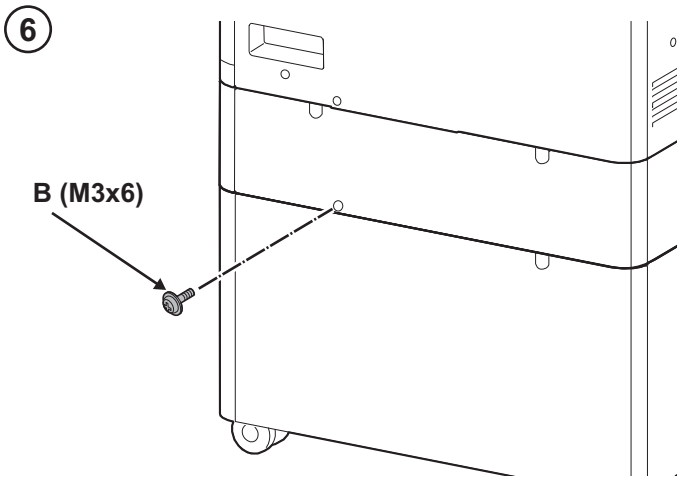


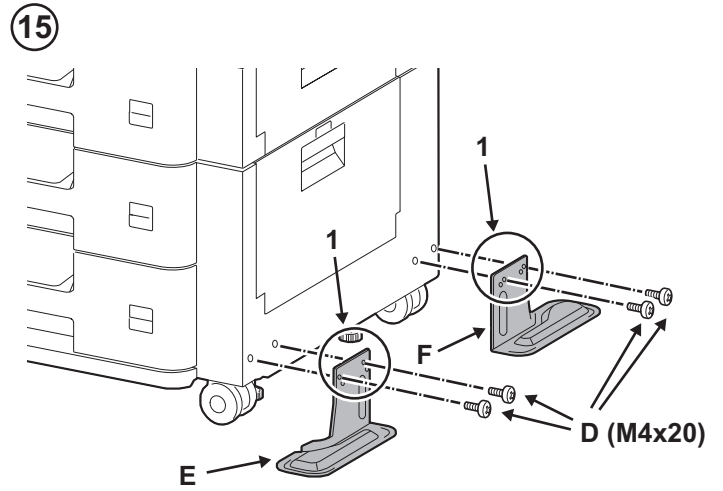
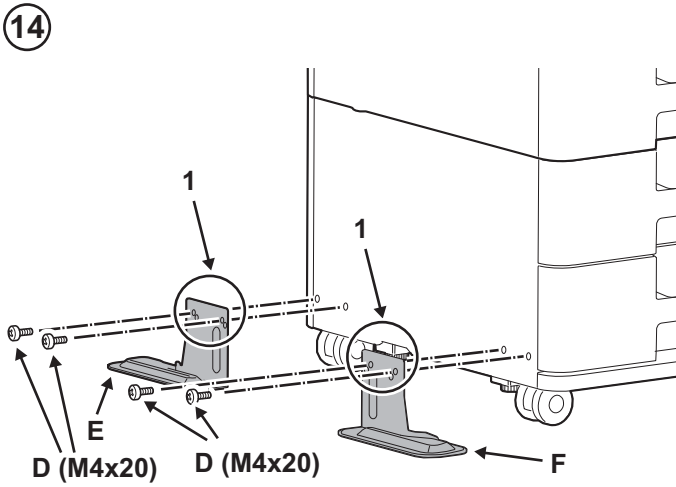
4



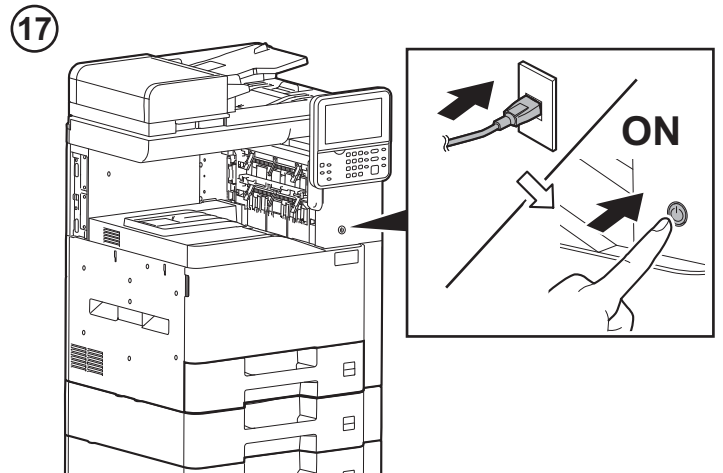
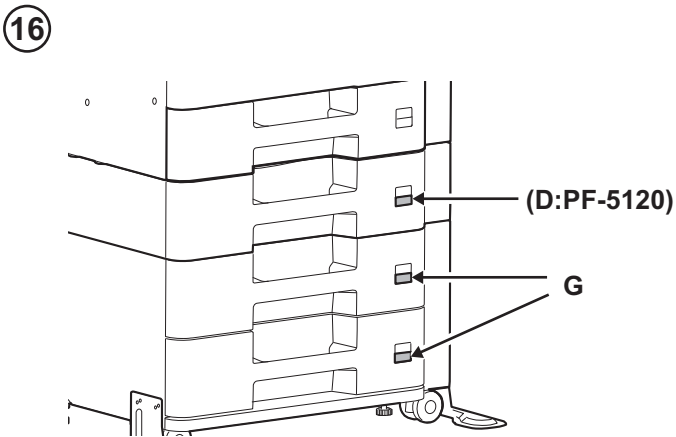
5

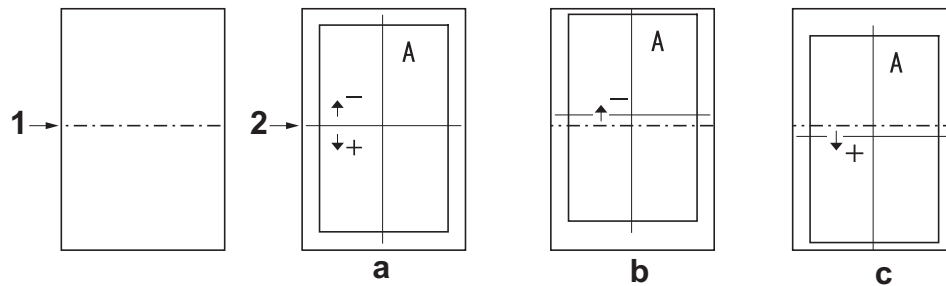






- Ⓔ Select holes (1) and install each stopper (E,F) with 2 S Tite screws M4 × 20 (D) so that the stoppers will be grounded on the floor.
- Ⓕ Sélectionner les trous (1) et installer chaque butée (E,F) avec 2 vis S Tite M4 × 20 (D) de sorte que les butées reposent sur le sol.
- Ⓖ Seleccione los orificios (1) e instale cada tope (E,F) con los 2 tornillos S Tite M4 × 20 (D) de manera que los topes se conecten a tierra en el suelo.
- Ⓗ Wählen Sie die Öffnungen (1) und befestigen Sie jeden Anschlag (E,F) mit den 2 S-Tite-Schrauben M4 × 20 (D) so an, dass die Anschläge am Boden aufsitzen.
- Ⓙ Selezionare i fori (1) ed installare ogni fermo (E,F) con le 2 viti S Tite M4 × 20 (D) in modo che i fermi siano posti a terra sul pavimento.
- Ⓚ 在孔 (1) 处各用 2 颗 M4×20 紧固型 S 螺丝 (D) 安装限位器 (E,F) , 使之和地板接触。
- Ⓛ 전도방지쇠 (E,F) 가 바닥면에 접지될 수 있도록 구멍 (1) 을 선택해 나사 M4×20 S 타이트 (D) 각 2 개로 설치합니다 .
- Ⓜ 転倒防止金具 (E,F) が床面に接地するように、穴 (1) を選択してビスM4×20 Sタイト (D) 各2本で取り付ける。





### English

#### Adjusting the leading edge timing

1. Check the gap between the paper center (1) and the line (2) of test pattern (a). If the gap exceeds the reference value, adjust the gap according to the following procedure.  
<Reference value> -0mm to +1.0mm
2. Set the maintenance mode U034 and select [LSU Out Top Full] > [PF].

### Français

#### Réglage de la synchronisation du bord de tête

1. Vérifier l'espace entre le centre du papier (1) et la ligne (2) du motif de (a). Si l'écart excède la valeur de référence, le régler selon la procédure suivante.  
<Valeur de référence> -0mm à +1,0mm
2. Passez en mode maintenance U034 et sélectionnez [LSU Out Top Full] > [PF].

### Español

#### Cómo ajustar la sincronización del borde superior

1. Compruebe el espacio entre el centro del papel (1) y la línea (2) del patrón de prueba (a). Si la separación supera el valor de referencia, ajústela siguiendo este procedimiento.  
<Valor de referencia> De -0mm a +1,0mm
2. Configure el modo de mantenimiento U034y seleccione [LSU Out Top Full] > [PF].

### Deutsch

#### Einstellen des Vorderkanten-Timing

1. Überprüfen Sie den Abstand zwischen der Papiermitte (1) und der Linie (2) auf der Testseite (a). Wenn der Abstand größer als der Bezugswert ist, den Abstand mit dem folgenden Verfahren einstellen.  
<Bezugswert> -0 mm bis +1,0mm
2. Aktivieren Sie den Wartungsmodus U034 und wählen Sie [LSU Out Top Full] > [PF].

### Italiano

#### Regolazione della sincronizzazione del bordo principale

1. Controllare lo spazio tra il centro del foglio (1) e la linea (2) dello schema di prova (a). Se lo scostamento supera il valore di riferimento, regolare lo scostamento stesso seguendo questa procedura.  
<Valore di riferimento> da -0 mm a +1,0mm
2. Impostare la modalità manutenzione U034 e selezionare [LSU Out Top Full] > [PF].

### 简体中文

#### 前端对位调节

1. 确认纸张的中心 (1) 和测试样张 (a) 的线 (2) 之间的偏移值。如果偏移值超过标准值，则按照下列步骤进行调整。  
<标准值> -0mm ~ +1.0mm
2. 进入维修保养模式 U034，把 [LSU Out Top Full] > [PF]。

### 한국어

#### 선단 타이밍 조정

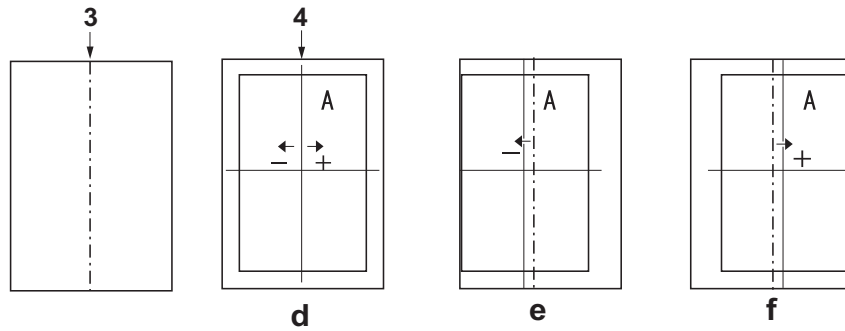
1. 용지 중앙 (1) 과 테스트 패턴 (a) 의 라인 (2) 사이의 격차를 확인하십시오. 차이가 기준치 외의 경우 다음의 순서대로 조정을 합니다.  
<기준치> -0mm ~ +1.0mm
2. 메인テナンス 모드 U034 를 설정하고 [LSU Out Top Full] > [PF] 를 선택합니다.

### 日本語

#### 先端タイミング調整

1. 紙のセンター(1)とテストパターン(a)の線(2)のずれを確認する。ずれが基準値外の場合、次の手順で調整をおこなう。  
<基準値> -0mm ~ +1.0mm
2. メンテナンスモードU034をセットし、[LSU Out Top Full] > [PF]を選択する。

- |   |  |
|---|--|
| <p>3. Adjust the values.<br/>           Test pattern (b) : Increase the setting value.<br/>           Test pattern (c) : Decrease the setting value.<br/>           Amount of change per step: 0.1mm</p> <p>4. Press the [Start] key to confirm the setting value.</p> <p>5. Print the test pattern.</p>  | <p>6. Repeat the steps 2 to 5 above until the gap of line (2) in test pattern (a) is within the reference.<br/>           &lt;Reference value&gt; -0mm to +1.0mm</p>   |
| <p>3. Régler les valeurs.<br/>           Mire d'essai (b) : Augmentez la valeur de réglage.<br/>           Mire d'essai (c) : Diminuez la valeur de réglage.<br/>           Changement par graduation d'échelle: 0,1mm</p> <p>4. Appuyer sur la touche de [Départ] pour confirmer la valeur de réglage.</p> <p>5. Imprimez le motif de test.</p>                | <p>6. Répéter les étapes 2 à 5 ci-dessus jusqu'à ce que l'espace de la ligne (2) dans le motif de test (a) soit dans la référence.<br/>           &lt;Valeur de référence&gt; -0mm à +1,0mm</p>                    |
| <p>3. Ajuste los valores.<br/>           Patrón de prueba (b) : Aumente el valor de configuración.<br/>           Patrón de prueba (c) : Reduzca el valor de configuración.<br/>           Magnitud del cambio por incremento: 0,1mm</p> <p>4. Pulse la tecla de [Inicio] para confirmar el valor de configuración.</p> <p>5. Imprima el patrón de prueba.</p>  | <p>6. Repita los pasos del 2 al 5 anteriores hasta que el espacio de línea (2) del patrón de prueba (a) esté dentro de los valores de referencia.<br/>           &lt;Valor de referencia&gt; De -0mm a +1,0mm</p>  |
| <p>3. Die Werte einstellen.<br/>           Testmuster (b) : Den Einstellwert erhöhen.<br/>           Testmuster (c) : Den Einstellwert verringern.<br/>           Änderung pro Schritt: 0,1mm</p> <p>4. Den Einstellwert durch Drücken der [Start]-Taste bestätigen.</p> <p>5. Drucken Sie die Testseite aus.</p>   | <p>6. Wiederholen Sie die Schritte 2 bis 5 solange, bis der Abstand der Linie (2) auf der Testseite (a) sich innerhalb der Referenz befindet.<br/>           &lt;Bezugswert&gt; -0 mm bis +1,0mm</p>               |
| <p>3. Regolare i valori.<br/>           Modello di prova (b) : Aumentare il valore dell'impostazione.<br/>           Modello di prova (c) : Diminuire il valore dell'impostazione.<br/>           Entità modifica per passo: 0,1mm</p> <p>4. Premere il tasto di [Avvio] per confermare il valore dell'impostazione.</p> <p>5. Stampare lo schema di prova.</p> | <p>6. Ripetere i punti da 2 a 5 sopra indicati fino a portare lo spazio della linea (2) nello schema di prova (a) all'interno del riferimento.<br/>           &lt;Valore di riferimento&gt; da -0 mm a +1,0 mm</p> |
| <p>3. 調整設定値。<br/>           测试图案 (b) : 调高设定值。<br/>           测试图案 (c) : 调低设定值。<br/>           设定值的一个调整单位变化量 : 0.1mm</p> <p>4. 按 [ 开始 ] 键, 以确定设定值。</p> <p>5. 打印测试图案。</p>   | <p>6. 重复步骤 2 ~ 5, 直至测试样张 (a) 的线 (2) 的偏移值达到标准值以内。<br/>           &lt; 标准值 &gt; -0mm ~ +1.0mm</p>  |
| <p>3. 설정치를 조정합니다 .<br/>           테스트 패턴 (b) : 설정치를 높입니다 .<br/>           테스트 패턴 (c) : 설정치를 내립니다 .<br/>           1 스텝당 변화량:0.1mm</p> <p>4. [ 복사 / 시작 ] 키를 누르고 설정치를 확인합니다 .</p> <p>5. 시험 패턴을 인쇄합니다 .</p>  | <p>6. 테스트 패턴 (a) 에서 라인 (2) 의 격차가 기준 이내가 될 때까지 2 단계 ~ 5 단계를 반복 수행합니다 .<br/>           &lt; 기준치 &gt; -0mm ~ +1.0mm</p>   |
| <p>3. 設定値を調整する。<br/>           テストパターン (b) : 設定値を上げる。<br/>           テストパターン (c) : 設定値を下げる。<br/>           1ステップ当たりの変化量:0.1mm</p> <p>4. [ スタート ] キーを押し、設定値を確定する。</p> <p>5. テストパターンを出力する。</p>  | <p>6. テストパターン (a) の線 (2) のずれが基準値内になるまで手順 2 ~ 5 を繰り返す。<br/>           &lt; 基準値 &gt; -0mm ~ +1.0mm</p>   |



#### Adjusting the center line

1. Check the gap between the paper center (3) and the line (4) of test pattern (c). If the gap exceeds the reference value, adjust the gap according to the following procedure.  
<Reference value> within  $\pm 2,0$ mm.
2. Set the maintenance mode U034 and select [LSU Out Left] > [Cass2] or [Cass3] or [Cass4].  
([Cass\*] : Display for 30 ppm model, [Cassette\*] : Display for 35 and 40 ppm model)

#### Réglage de l'axe

1. Vérifier l'espace entre le centre du papier (3) et la ligne (4) du motif de (c). Si l'écart excède la valeur de référence, le régler selon la procédure suivante.  
<Valeur de référence>  $\pm 2,0$  mm max.
2. Passez en mode maintenance U034 et sélectionnez [LSU Out Left] > [Cass2] ou [Cass3] ou [Cass4].

#### Ajuste de la línea central

1. Compruebe el espacio entre el centro del papel (3) y la línea (4) del patrón de prueba (c). Si la separación supera el valor de referencia, ajústela siguiendo este procedimiento.  
<Valor de referencia> Dentro de  $\pm 2,0$  mm.
2. Configure el modo de mantenimiento U034 y seleccione [LSU Out Left] > [Cass2] o [Cass3] o [Cass4].

#### Einstellen der Mittenlinie

1. Überprüfen Sie den Abstand zwischen der Papiermitte (3) und der Linie (4) auf der Testseite (c). Wenn der Abstand größer als der Bezugswert ist, den Abstand mit dem folgenden Verfahren einstellen.  
<Bezugswert> Innerhalb  $\pm 2,0$  mm.
2. Aktivieren Sie den Wartungsmodus U034 und wählen Sie [LSU Out Left] > [Cass2] oder [Cass3] oder [Cass4].

#### Regolazione della linea centrale

1. Controllare lo spazio tra il centro del foglio (3) e la linea (4) dello schema di prova (c). Se lo scostamento supera il valore di riferimento, regolare lo scostamento stesso seguendo questa procedura.  
<Valore di riferimento> Entro  $\pm 2,0$  mm.
2. Impostare la modalità manutenzione U034 e selezionare [LSU Out Left] > [Cass2] o [Cass3] o [Cass4].

#### 中心线调节

1. 确认纸张的中心 (3) 和测试样张 (c) 的线 (4) 之间的偏移值。如果偏移值超过标准值，则按照下列步骤进行调整。  
<标准值>  $\pm 2.0$ mm 以内
2. 进入维修保养模式 U034，把 [LSU Out Left] > [Cass2] 或 [Cass3] 或 [Cass4]。  
([Cass\*]: 在 30 张机器上的显示, [Cassette\*]: 在 35 张机器 / 40 张机器上的显示)

#### 센터라인 조정

1. 용지 중앙 (3) 과 테스트 패턴 (c) 의 라인 (4) 사이의 격차를 확인하십시오. 차이가 기준치 외의 경우 다음의 순서대로 조정을 합니다.  
<기준치>  $\pm 2.0$ mm 이내
2. 메인テナンス 모드 U034 를 설정하고 [LSU Out Left] > [Cass2] 또는 [Cass3] 또는 [Cass4]을 선택합니다.  
([Cass\*] : 30ppm 모델용 디스플레이, [Cassette\*] : 35ppm 및 40ppm 모델용 디스플레이)

#### センターライン調整

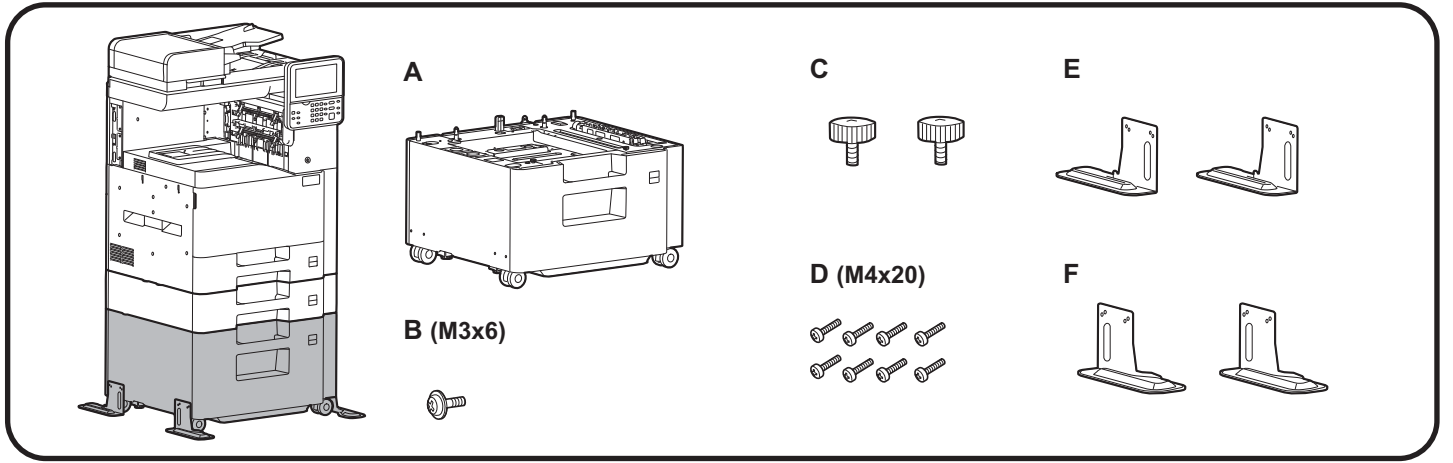
1. 紙のセンター(3)とテストパターン(d)の線(4)のずれを確認する。ずれが基準値外の場合、次の手順で調整をおこなう。  
<基準値>  $\pm 2.0$ mm 以内
2. メンテナンスモード U034 をセットし、[LSU Out Left] > [Cass2]または [Cass3]または [Cass4]を選択する。

- |   |   |
|---|---|
| <p>3. Adjust the values.<br/>           Test pattern (e) : Increase the setting value.<br/>           Test pattern (f) : Decrease the setting value.<br/>           Amount of change per step: 0.1mm</p> <p>4. Press the [Start] key to confirm the setting value.</p> <p>5. Print the test pattern.</p>  | <p>6. Repeat the steps 2 to 5 above until the gap of line (4) in test pattern (c) is within the reference.<br/>           &lt;Reference value&gt; within <math>\pm 2.0\text{mm}</math>.</p>   |
| <p>3. Régler les valeurs.<br/>           Mire d'essai (e) : Augmentez la valeur de réglage.<br/>           Mire d'essai (f) : Diminuez la valeur de réglage.<br/>           Changement par graduation d'échelle: 0,1mm</p> <p>4. Appuyer sur la touche de [Départ] pour confirmer la valeur de réglage.</p> <p>5. Imprimez le motif de test.</p>                | <p>6. Répéter les étapes 2 à 5 ci-dessus jusqu'à ce que l'espace de la ligne (4) dans le motif de test (c) soit dans la référence.<br/>           &lt;Valeur de référence&gt; <math>\pm 2,0\text{mm}</math> max.</p>                      |
| <p>3. Ajuste los valores.<br/>           Patrón de prueba (e) : Aumente el valor de configuración.<br/>           Patrón de prueba (f) : Reduzca el valor de configuración.<br/>           Magnitud del cambio por incremento: 0,1mm</p> <p>4. Pulse la tecla de [Inicio] para confirmar el valor de configuración.</p> <p>5. Imprima el patrón de prueba.</p>  | <p>6. Repita los pasos del 2 al 5 anteriores hasta que el espacio de línea (4) del patrón de prueba (c) esté dentro de los valores de referencia.<br/>           &lt;Valor de referencia&gt; dentro de <math>\pm 2,0\text{mm}</math>.</p> |
| <p>3. Die Werte einstellen.<br/>           Testmuster (e) : Den Einstellwert erhöhen.<br/>           Testmuster (f) : Den Einstellwert verringern.<br/>           Änderung pro Schritt: 0,1mm</p> <p>4. Den Einstellwert durch Drücken der [Start]-Taste bestätigen.</p> <p>5. Drucken Sie die Testseite aus.</p>   | <p>6. Wiederholen Sie die Schritte 2 bis 5 solange, bis der Abstand der Linie (4) auf der Testseite (c) sich innerhalb der Referenz befindet.<br/>           &lt;Bezugswert&gt; Innerhalb <math>\pm 2,0\text{mm}</math>.</p>              |
| <p>3. Regolare i valori.<br/>           Modello di prova (e) : Aumentare il valore dell'impostazione.<br/>           Modello di prova (f) : Diminuire il valore dell'impostazione.<br/>           Entità modifica per passo: 0,1mm</p> <p>4. Premere il tasto di [Avvio] per confermare il valore dell'impostazione.</p> <p>5. Stampare lo schema di prova.</p> | <p>6. Ripetere i punti da 2 a 5 sopra indicati fino a portare lo spazio della linea (4) nello schema di prova (c) all'interno del riferimento.<br/>           &lt;Valore di riferimento&gt; entro <math>\pm 2,0\text{mm}</math></p>       |
| <p>3. 調整設定値。<br/>           测试图案 (e) : 调高设定值。<br/>           测试图案 (f) : 调低设定值。<br/>           设定值的一个调整单位变化量 : 0.1mm</p> <p>4. 按 [开始] 键, 以确定设定值。</p> <p>5. 打印测试图案。</p>   | <p>6. 重复步骤 2 ~ 5, 直至测试样张 (c) 的线 (4) 的偏移值达到标准值以内。<br/>           &lt;标准值&gt; <math>\pm 2.0\text{mm}</math> 以内</p>  |
| <p>3. 설정치를 조정합니다.<br/>           테스트 패턴 (e) : 설정치를 높입니다.<br/>           테스트 패턴 (f) : 설정치를 내립니다.<br/>           1 스텝당 변화량 : 0.1mm</p> <p>4. [복사 / 시작] 키를 누르고 설정치를 확인합니다.</p> <p>5. 시험 패턴을 인쇄합니다.</p>   | <p>6. 테스트 패턴 (c) 에서 라인 (4) 의 격차가 기준 이내가 될 때까지 2 단계 ~ 5 단계를 반복 수행합니다.<br/>           &lt;기준치&gt; <math>\pm 2.0\text{mm}</math> 이내</p>  |
| <p>3. 設定値を調整する。<br/>           テストパターン (e) : 設定値を上げる。<br/>           テストパターン (f) : 設定値を下げる。<br/>           1 ステップ当たりの変化量: 0.1mm</p> <p>4. [スタート] キーを押し、設定値を確定する。</p> <p>5. テストパターンを出力する。</p>  | <p>6. テストパターン (d) の線 (4) のずれが基準値内になるまで手順 2 ~ 5 を繰り返す。<br/>           &lt;基準値&gt; <math>\pm 2.0\text{mm}</math> 以内</p>   |

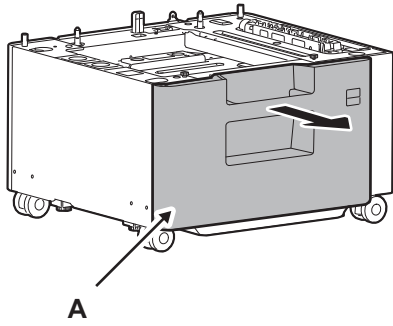


# **PF-5140**

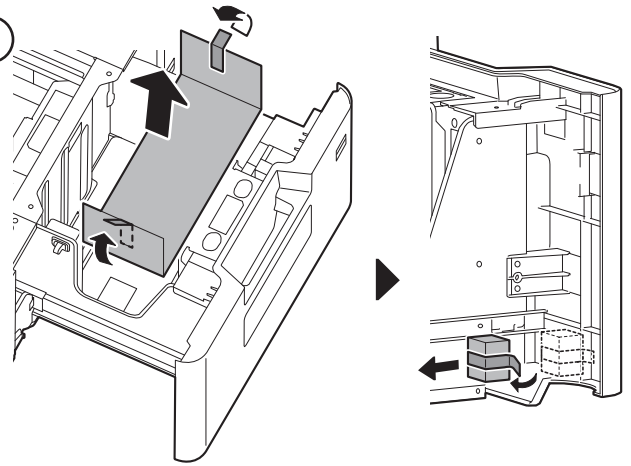
## **(2000 sheets Paper Feeder) Installation Guide**



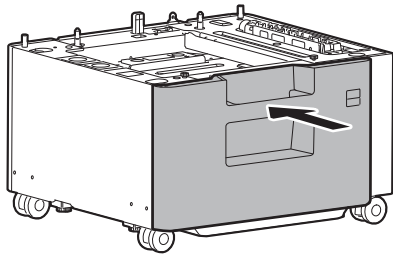
①



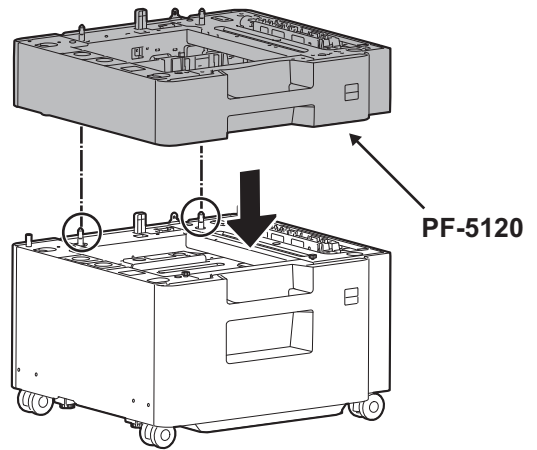
②



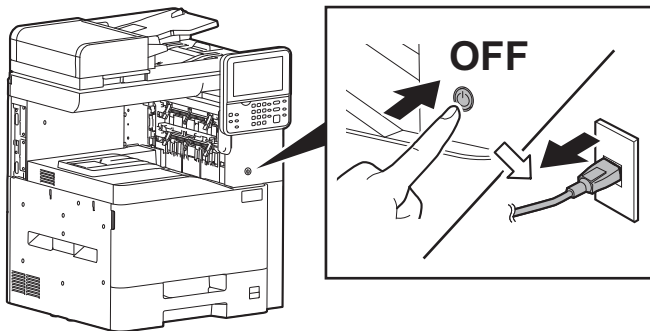
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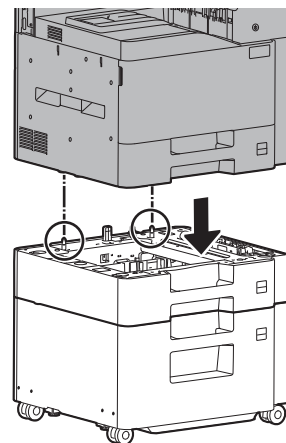
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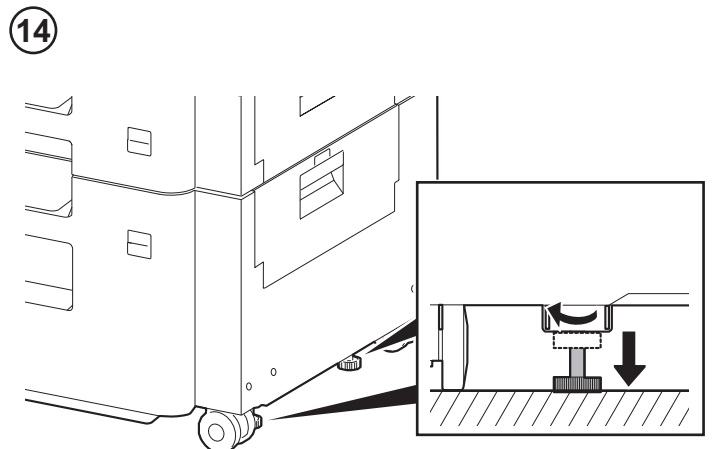
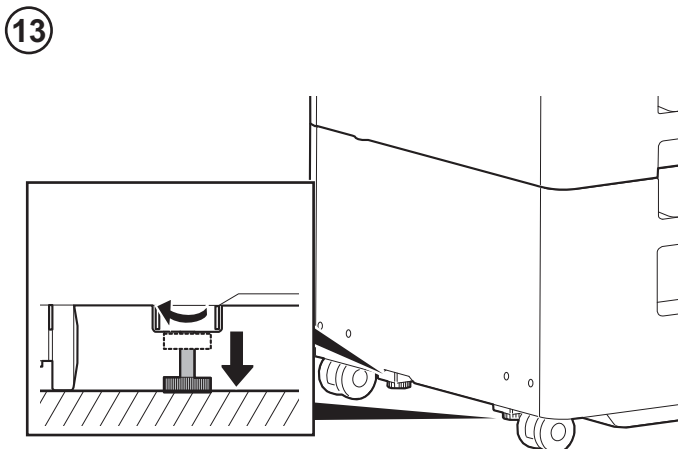
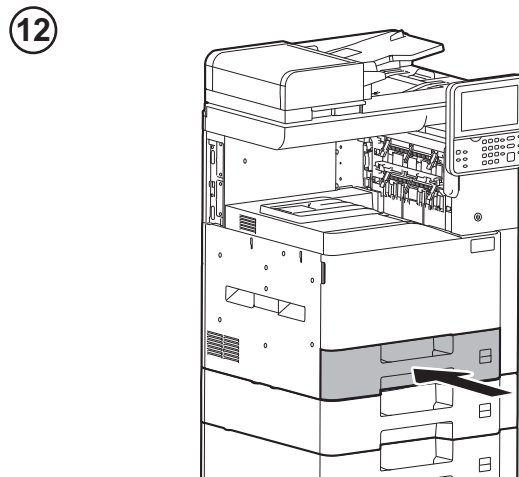
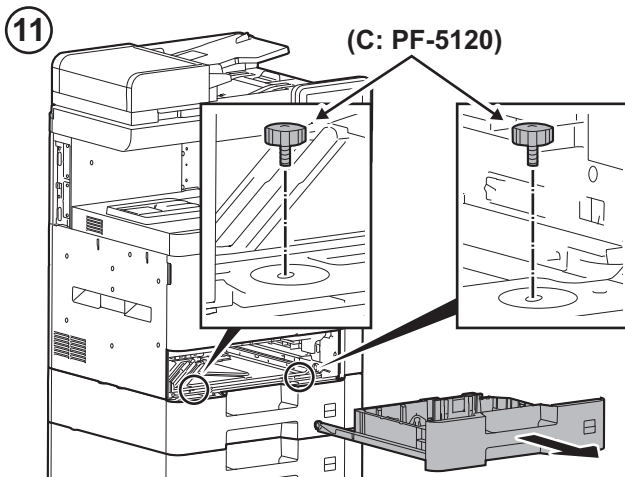
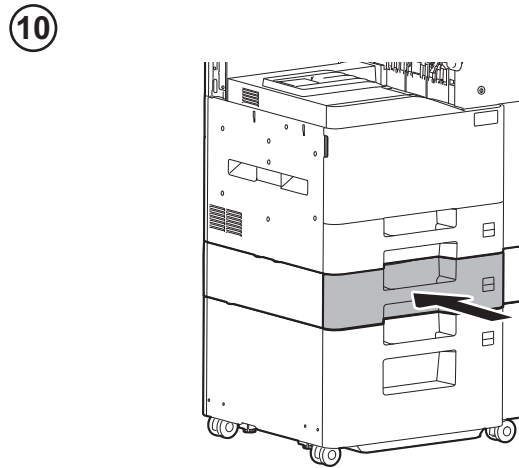
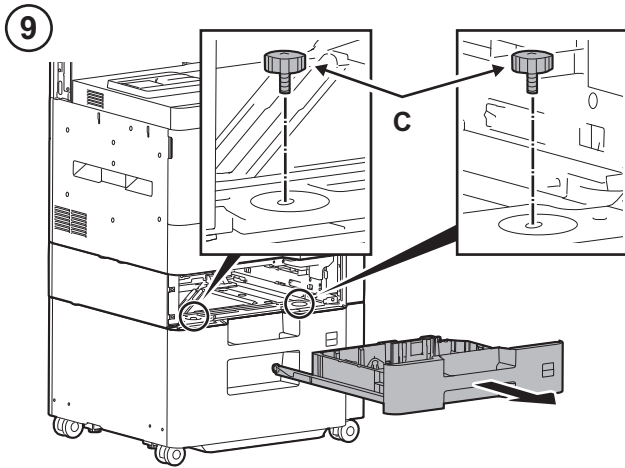
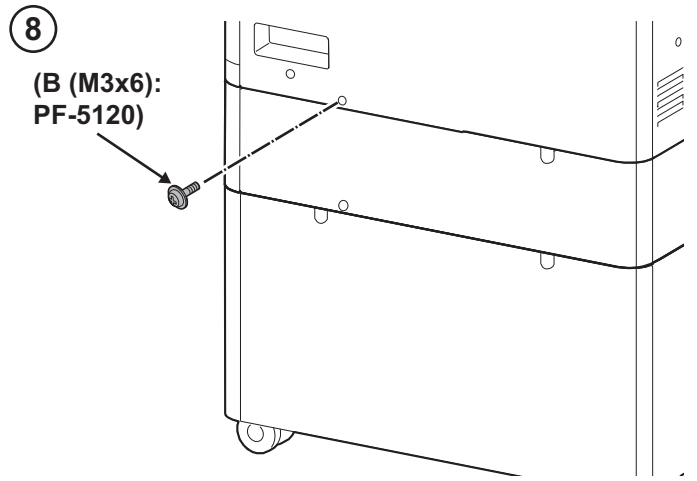
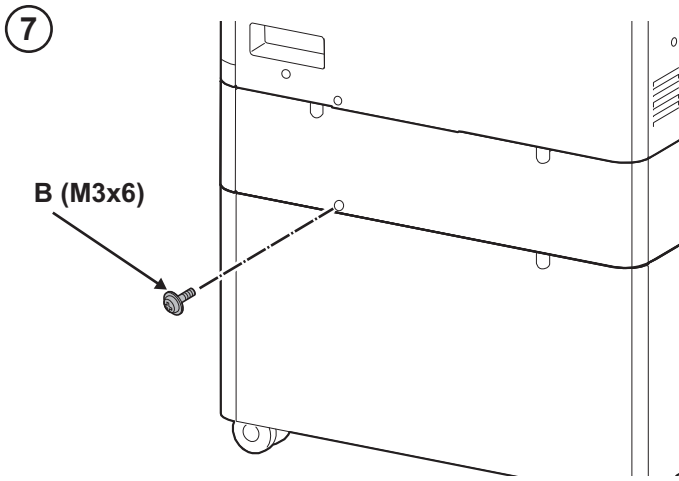


⑤

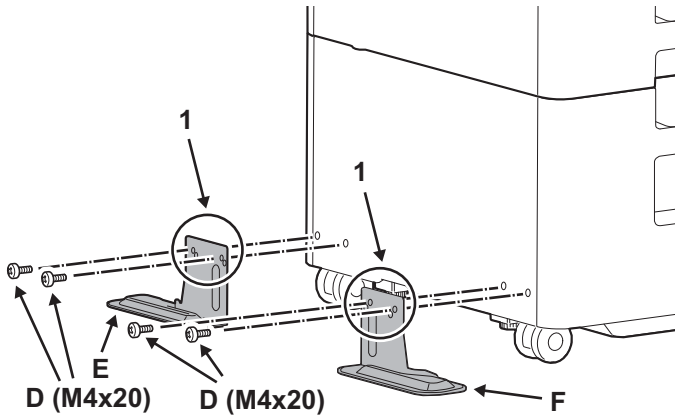


⑥

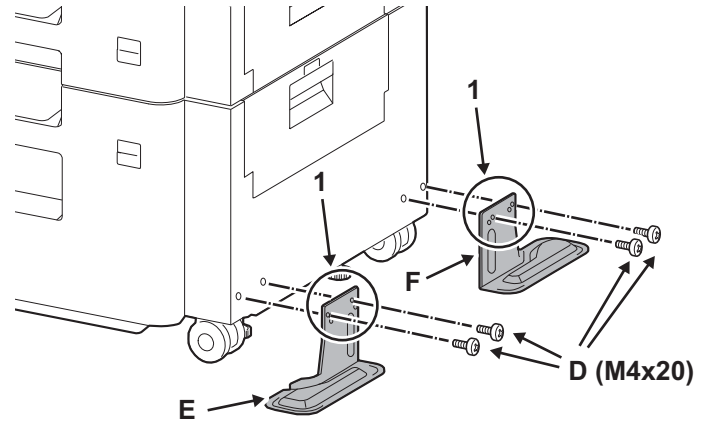




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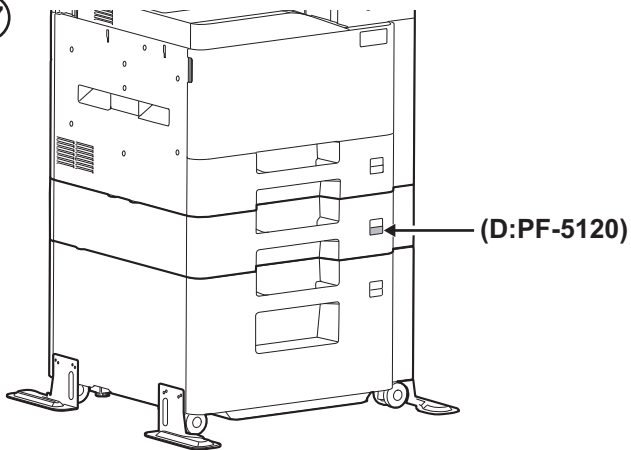


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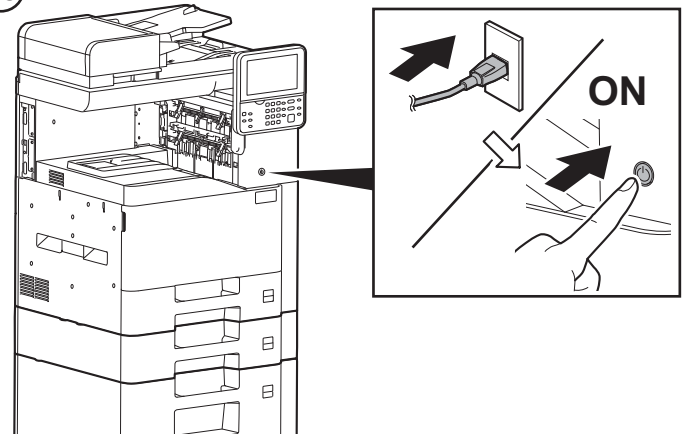


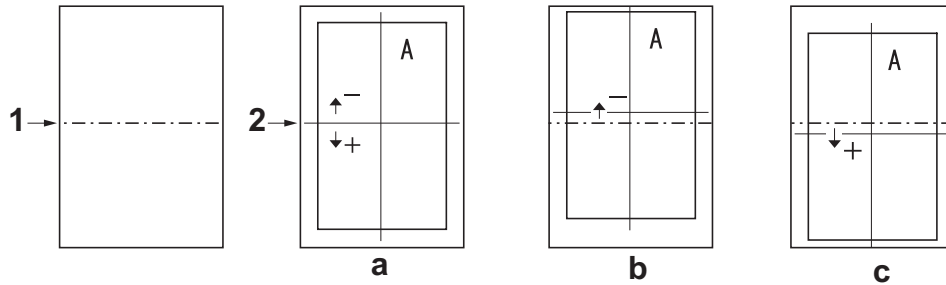
- ENG** Select holes (1) and install each stopper (E,F) with two S Tite screws M4 × 20 (D) so that the stoppers will be grounded on the floor.
- FR** Sélectionner les trous (1) et installer chaque butée (E,F) avec les deux vis S Tite M4 × 20 (D) de sorte que les butées reposent sur le sol.
- ES** Seleccione los orificios (1) e instale cada tope (E,F) con los dos tornillos S Tite M4 × 20 (D) de manera que los topes se conecten a tierra en el suelo.
- DE** Wählen Sie die Öffnungen (1) und befestigen Sie jeden Anschlag (E,F) mit die beiden S-Tite-Schrauben M4 × 20 (D) so an, dass die Anschläge am Boden aufsitzen.
- IT** Selezionare i fori (1) ed installare ogni fermo (E,F) con le due viti S Tite M4 × 20 (D) in modo che i fermi siano posti a terra sul pavimento.
- CN** 在孔 (1) 处各用 2 颗 M4×20 紧固型 S 螺丝 (D) 安装限位器 (E,F) , 使之和地板接触。
- KO** 전도방지쇠 (E,F) 가 바닥면에 접지될 수 있도록 구멍 (1) 을 선택해 나사 M4×20 S 타이트 (D) 각 2 개로 설치합니다 .
- JP** 転倒防止金具 (E, F) が床面に接地するように、穴 (1) を選択してビス M4×20 S タイト (D) 各 2 本で取り付けます。

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### English

#### Adjusting the leading edge timing

1. Check the gap between the paper center (1) and the line (2) of test pattern (a). If the gap exceeds the reference value, adjust the gap according to the following procedure.  
<Reference value> -0mm to +1.0mm
2. Set the maintenance mode U034 and select [LSU Out Top Full] > [PF].

### Français

#### Réglage de la synchronisation du bord de tête

1. Vérifier l'espace entre le centre du papier (1) et la ligne (2) du motif de (a). Si l'écart excède la valeur de référence, le régler selon la procédure suivante.  
<Valeur de référence> -0mm à +1,0mm
2. Passez en mode maintenance U034 et sélectionnez [LSU Out Top Full] > [PF].

### Español

#### Cómo ajustar la sincronización del borde superior

1. Compruebe el espacio entre el centro del papel (1) y la línea (2) del patrón de prueba (a). Si la separación supera el valor de referencia, ajústela siguiendo este procedimiento.  
<Valor de referencia> De -0mm a +1,0mm
2. Configure el modo de mantenimiento U034 y seleccione [LSU Out Top Full] > [PF].

### Deutsch

#### Einstellen des Vorderkanten-Timing

1. Überprüfen Sie den Abstand zwischen der Papiermitte (1) und der Linie (2) auf der Testseite (a). Wenn der Abstand größer als der Bezugswert ist, den Abstand mit dem folgenden Verfahren einstellen.  
<Bezugswert> -0 mm bis +1,0mm
2. Aktivieren Sie den Wartungsmodus U034 und wählen Sie [LSU Out Top Full] > [PF].

### Italiano

#### Regolazione della sincronizzazione del bordo principale

1. Controllare lo spazio tra il centro del foglio (1) e la linea (2) dello schema di prova (a). Se lo scostamento supera il valore di riferimento, regolare lo scostamento stesso seguendo questa procedura.  
<Valore di riferimento> da -0 mm a +1,0mm
2. Impostare la modalità manutenzione U034 e selezionare [LSU Out Top Full] > [PF].

### 简体中文

#### 前端对位调节

1. 确认纸张的中心(1)和测试样张(a)的线(2)之间的偏移值。如果偏移值超过标准值,则按照下列步骤进行调整。  
<标准值> -0mm ~ +1.0mm
2. 进入维修保养模式U034,把[LSU Out Top Full] > [PF]。

### 한국어

#### 선단 타이밍 조정

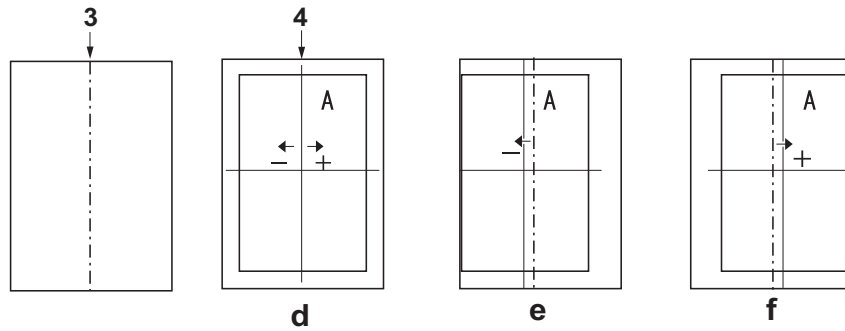
1. 용지 중앙(1)과 테스트 패턴(a)의 라인(2) 사이의 격차를 확인하십시오. 차이가 기준치 외의 경우 다음의 순서대로 조정을 합니다.  
<기준치> -0mm ~ +1.0mm
2. 메인テナンス 모드 U034를 설정하고 [LSU Out Top Full] > [PF]를 선택합니다.

### 日本語

#### 先端タイミング調整

1. 紙のセンター(1)とテストパターン(a)の線(2)のずれを確認する。ずれが基準値外の場合、次の手順で調整をおこなう。  
<基準値> -0mm ~ +1.0mm
2. メンテナンスモードU034をセットし、[LSU Out Top Full] > [PF]を選択する。

- |   |  |
|---|--|
| <p>3. Adjust the values.<br/>           Test pattern (b) : Increase the setting value.<br/>           Test pattern (c) : Decrease the setting value.<br/>           Amount of change per step: 0.1mm</p> <p>4. Press the [Start] key to confirm the setting value.</p> <p>5. Print the test pattern.</p>  | <p>6. Repeat the steps 2 to 5 above until the gap of line (2) in test pattern (a) is within the reference.<br/>           &lt;Reference value&gt; -0mm to +1.0mm</p>   |
| <p>3. Régler les valeurs.<br/>           Mire d'essai (b) : Augmentez la valeur de réglage.<br/>           Mire d'essai (c) : Diminuez la valeur de réglage.<br/>           Changement par graduation d'échelle: 0,1mm</p> <p>4. Appuyer sur la touche de [Départ] pour confirmer la valeur de réglage.</p> <p>5. Imprimez le motif de test.</p>                | <p>6. Répéter les étapes 2 à 5 ci-dessus jusqu'à ce que l'espace de la ligne (2) dans le motif de test (a) soit dans la référence.<br/>           &lt;Valeur de référence&gt; -0mm à +1,0mm</p>                    |
| <p>3. Ajuste los valores.<br/>           Patrón de prueba (b) : Aumente el valor de configuración.<br/>           Patrón de prueba (c) : Reduzca el valor de configuración.<br/>           Magnitud del cambio por incremento: 0,1mm</p> <p>4. Pulse la tecla de [Inicio] para confirmar el valor de configuración.</p> <p>5. Imprima el patrón de prueba.</p>  | <p>6. Repita los pasos del 2 al 5 anteriores hasta que el espacio de línea (2) del patrón de prueba (a) esté dentro de los valores de referencia.<br/>           &lt;Valor de referencia&gt; De -0mm a +1,0mm</p>  |
| <p>3. Die Werte einstellen.<br/>           Testmuster (b) : Den Einstellwert erhöhen.<br/>           Testmuster (c) : Den Einstellwert verringern.<br/>           Änderung pro Schritt: 0,1mm</p> <p>4. Den Einstellwert durch Drücken der [Start]-Taste bestätigen.</p> <p>5. Drucken Sie die Testseite aus.</p>   | <p>6. Wiederholen Sie die Schritte 2 bis 5 solange, bis der Abstand der Linie (2) auf der Testseite (a) sich innerhalb der Referenz befindet.<br/>           &lt;Bezugswert&gt; -0 mm bis +1,0mm</p>               |
| <p>3. Regolare i valori.<br/>           Modello di prova (b) : Aumentare il valore dell'impostazione.<br/>           Modello di prova (c) : Diminuire il valore dell'impostazione.<br/>           Entità modifica per passo: 0,1mm</p> <p>4. Premere il tasto di [Avvio] per confermare il valore dell'impostazione.</p> <p>5. Stampare lo schema di prova.</p> | <p>6. Ripetere i punti da 2 a 5 sopra indicati fino a portare lo spazio della linea (2) nello schema di prova (a) all'interno del riferimento.<br/>           &lt;Valore di riferimento&gt; da -0 mm a +1,0 mm</p> |
| <p>3. 调整设定值。<br/>           测试图案 (b) : 调高设定值。<br/>           测试图案 (c) : 调低设定值。<br/>           设定值的一个调整单位变化量 : 0.1mm</p> <p>4. 按 [开始] 键, 以确定设定值。</p> <p>5. 打印测试图案。</p>   | <p>6. 重复步骤 2 ~ 5, 直至测试样张 (a) 的线 (2) 的偏移值达到标准值以内。<br/>           &lt;标准值&gt; -0mm ~ +1.0mm</p>  |
| <p>3. 설정치를 조정합니다 .<br/>           테스트 패턴 (b) : 설정치를 높입니다 .<br/>           테스트 패턴 (c) : 설정치를 내립니다 .<br/>           1 스텝당 변화량:0.1mm</p> <p>4. [ 복사 / 시작 ] 키를 누르고 설정치를 확인합니다 .</p> <p>5. 시험 패턴을 인쇄합니다 .</p>  | <p>6. 테스트 패턴 (a) 에서 라인 (2) 의 격차가 기준 이내가 될 때까지 2 단계 ~ 5 단계를 반복 수행합니다 .<br/>           &lt; 기준치 &gt; -0mm ~ +1.0mm</p>   |
| <p>3. 設定値を調整する。<br/>           テストパターン (b) : 設定値を上げる。<br/>           テストパターン (c) : 設定値を下げる。<br/>           1ステップ当たりの変化量:0.1mm</p> <p>4. [ スタート ] キーを押し、設定値を確定する。</p> <p>5. テストパターンを出力する。</p>  | <p>6. テストパターン (a) の線 (2) のずれが基準値内になるまで手順 2 ~ 5 を繰り返す。<br/>           &lt;基準値&gt; -0mm ~ +1.0mm</p>   |



#### Adjusting the center line

1. Check the gap between the paper center (3) and the line (4) of test pattern (c). If the gap exceeds the reference value, adjust the gap according to the following procedure.  
<Reference value> within  $\pm 2,0$ mm.
2. Set the maintenance mode U034 and select [LSU Out Left] > [Cass2] or [Cass3].

#### Réglage de l'axe

1. Vérifier l'espace entre le centre du papier (3) et la ligne (4) du motif de (c). Si l'écart excède la valeur de référence, le régler selon la procédure suivante.  
<Valeur de référence>  $\pm 2,0$  mm max.
2. Passez en mode maintenance U034 et sélectionnez [LSU Out Left] > [Cass2] ou [Cass3].

#### Ajuste de la línea central

1. Compruebe el espacio entre el centro del papel (3) y la línea (4) del patrón de prueba (c). Si la separación supera el valor de referencia, ajústela siguiendo este procedimiento.  
<Valor de referencia> Dentro de  $\pm 2,0$  mm.
2. Configure el modo de mantenimiento U034 y seleccione [LSU Out Left] > [Cass2] o [Cass3].

#### Einstellen der Mittenlinie

1. Überprüfen Sie den Abstand zwischen der Papiermitte (3) und der Linie (4) auf der Testseite (c). Wenn der Abstand größer als der Bezugswert ist, den Abstand mit dem folgenden Verfahren einstellen.  
<Bezugswert> Innerhalb  $\pm 2,0$  mm.
2. Aktivieren Sie den Wartungsmodus U034 und wählen Sie [LSU Out Left] > [Cass2] oder [Cass3].

#### Regolazione della linea centrale

1. Controllare lo spazio tra il centro del foglio (3) e la linea (4) dello schema di prova (c). Se lo scostamento supera il valore di riferimento, regolare lo scostamento stesso seguendo questa procedura.  
<Valore di riferimento> Entro  $\pm 2,0$  mm.
2. Impostare la modalità manutenzione U034 e selezionare [LSU Out Left] > [Cass2] o [Cass3].

#### 中心线调节

1. 确认纸张的中心 (3) 和测试样张 (c) 的线 (4) 之间的偏移值。如果偏移值超过标准值，则按照下列步骤进行调整。  
<标准值>  $\pm 2.0$ mm 以内
2. 进入维修保养模式 U034，把 [LSU Out Left] > [Cass2] 或 [Cass3]。

#### 센터라인 조정

1. 용지 중앙 (3) 과 테스트 패턴 (c) 의 라인 (4) 사이의 격차를 확인하십시오 . 차이가 기준치 외의 경우 다음의 순서대로 조정을 합니다 .  
<기준치>  $\pm 2.0$ mm 이내
2. 메인テナンス 모드 U034 를 설정하고 [LSU Out Left] > [Cass2] 또는 [Cass3]을 선택합니다 .

#### センターライン調整

1. 紙のセンター(3) とテストパターン (d) の線 (4) のずれを確認する。ずれが基準値外の場合、次の手順で調整をおこなう。  
<基準値>  $\pm 2.0$ mm 以内
2. メンテナンスモード U034 をセットし、[LSU Out Left] > [Cass2]または [Cass3]を選択する。

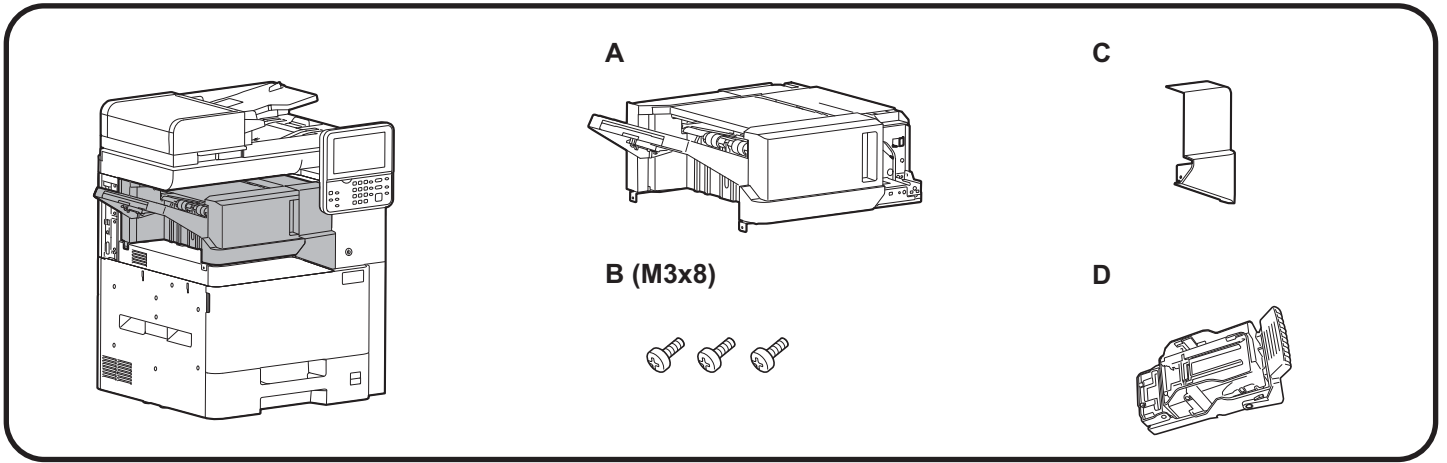
- |   |   |
|---|---|
| <p>3. Adjust the values.<br/>           Test pattern (e) : Increase the setting value.<br/>           Test pattern (f) : Decrease the setting value.<br/>           Amount of change per step: 0.1mm</p> <p>4. Press the [Start] key to confirm the setting value.</p> <p>5. Print the test pattern.</p>  | <p>6. Repeat the steps 2 to 5 above until the gap of line (4) in test pattern (c) is within the reference.<br/>           &lt;Reference value&gt; within <math>\pm 2.0\text{mm}</math>.</p>   |
| <p>3. Régler les valeurs.<br/>           Mire d'essai (e) : Augmentez la valeur de réglage.<br/>           Mire d'essai (f) : Diminuez la valeur de réglage.<br/>           Changement par graduation d'échelle: 0,1mm</p> <p>4. Appuyer sur la touche de [Départ] pour confirmer la valeur de réglage.</p> <p>5. Imprimez le motif de test.</p>                | <p>6. Répéter les étapes 2 à 5 ci-dessus jusqu'à ce que l'espace de la ligne (4) dans le motif de test (c) soit dans la référence.<br/>           &lt;Valeur de référence&gt; <math>\pm 2,0\text{mm}</math> max.</p>                      |
| <p>3. Ajuste los valores.<br/>           Patrón de prueba (e) : Aumente el valor de configuración.<br/>           Patrón de prueba (f) : Reduzca el valor de configuración.<br/>           Magnitud del cambio por incremento: 0,1mm</p> <p>4. Pulse la tecla de [Inicio] para confirmar el valor de configuración.</p> <p>5. Imprima el patrón de prueba.</p>  | <p>6. Repita los pasos del 2 al 5 anteriores hasta que el espacio de línea (4) del patrón de prueba (c) esté dentro de los valores de referencia.<br/>           &lt;Valor de referencia&gt; dentro de <math>\pm 2,0\text{mm}</math>.</p> |
| <p>3. Die Werte einstellen.<br/>           Testmuster (e) : Den Einstellwert erhöhen.<br/>           Testmuster (f) : Den Einstellwert verringern.<br/>           Änderung pro Schritt: 0,1mm</p> <p>4. Den Einstellwert durch Drücken der [Start]-Taste bestätigen.</p> <p>5. Drucken Sie die Testseite aus.</p>   | <p>6. Wiederholen Sie die Schritte 2 bis 5 solange, bis der Abstand der Linie (4) auf der Testseite (c) sich innerhalb der Referenz befindet.<br/>           &lt;Bezugswert&gt; Innerhalb <math>\pm 2,0\text{mm}</math>.</p>              |
| <p>3. Regolare i valori.<br/>           Modello di prova (e) : Aumentare il valore dell'impostazione.<br/>           Modello di prova (f) : Diminuire il valore dell'impostazione.<br/>           Entità modifica per passo: 0,1mm</p> <p>4. Premere il tasto di [Avvio] per confermare il valore dell'impostazione.</p> <p>5. Stampare lo schema di prova.</p> | <p>6. Ripetere i punti da 2 a 5 sopra indicati fino a portare lo spazio della linea (4) nello schema di prova (c) all'interno del riferimento.<br/>           &lt;Valore di riferimento&gt; entro <math>\pm 2,0\text{mm}</math></p>       |
| <p>3. 調整設定値。<br/>           测试图案 (e) : 调高设定值。<br/>           测试图案 (f) : 调低设定值。<br/>           设定值的一个调整单位变化量 : 0.1mm</p> <p>4. 按 [开始] 键, 以确定设定值。</p> <p>5. 打印测试图案。</p>   | <p>6. 重复步骤 2 ~ 5, 直至测试样张 (c) 的线 (4) 的偏移值达到标准值以内。<br/>           &lt;标准值&gt; <math>\pm 2.0\text{mm}</math> 以内</p>  |
| <p>3. 설정치를 조정합니다.<br/>           테스트 패턴 (e) : 설정치를 높입니다.<br/>           테스트 패턴 (f) : 설정치를 내립니다.<br/>           1 스텝당 변화량 : 0.1mm</p> <p>4. [복사 / 시작] 키를 누르고 설정치를 확인합니다.</p> <p>5. 시험 패턴을 인쇄합니다.</p>   | <p>6. 테스트 패턴 (c) 에서 라인 (4) 의 격차가 기준 이내가 될 때까지 2 단계 ~ 5 단계를 반복 수행합니다.<br/>           &lt;기준치&gt; <math>\pm 2.0\text{mm}</math> 이내</p>  |
| <p>3. 設定値を調整する。<br/>           テストパターン (e) : 設定値を上げる。<br/>           テストパターン (f) : 設定値を下げる。<br/>           1 ステップ当たりの変化量: 0.1mm</p> <p>4. [スタート] キーを押し、設定値を確定する。</p> <p>5. テストパターンを出力する。</p>  | <p>6. テストパターン (d) の線 (4) のずれが基準値内になるまで手順 2 ~ 5 を繰り返す。<br/>           &lt;基準値&gt; <math>\pm 2.0\text{mm}</math> 以内</p>   |



# **DF-5100**

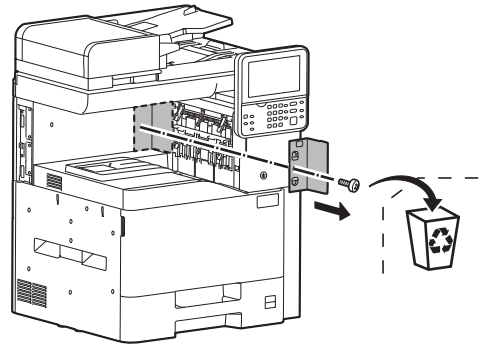
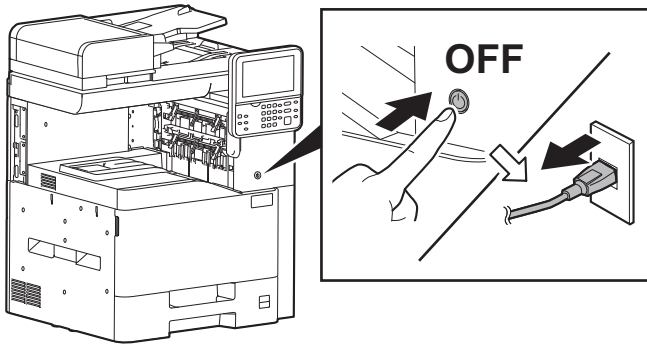
## **(Inner Finisher)**

### **Installation Guide**



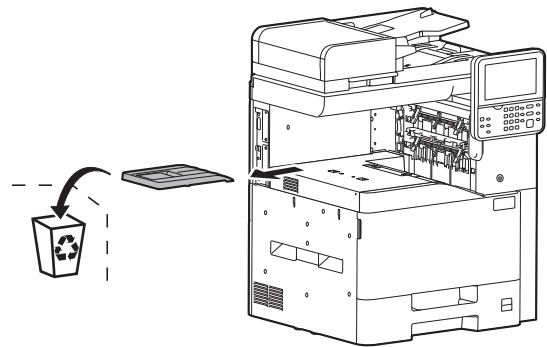
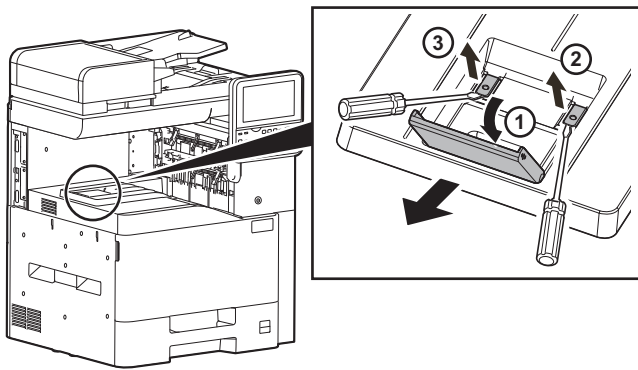
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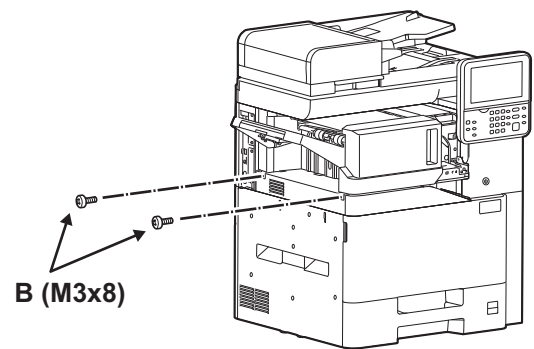
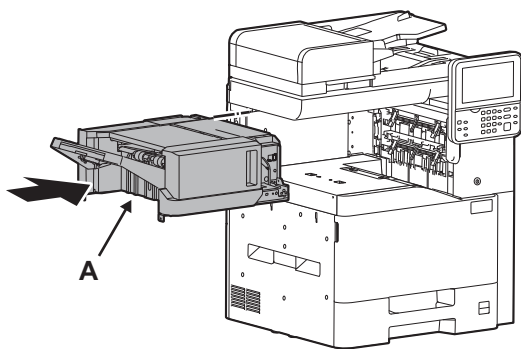
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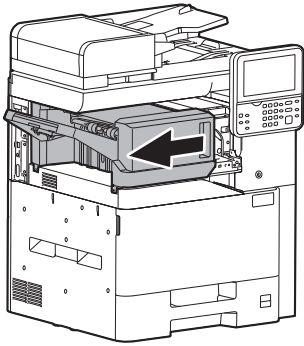


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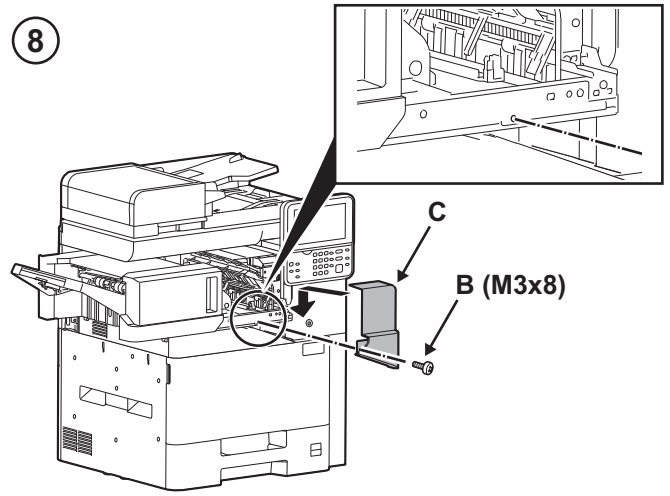
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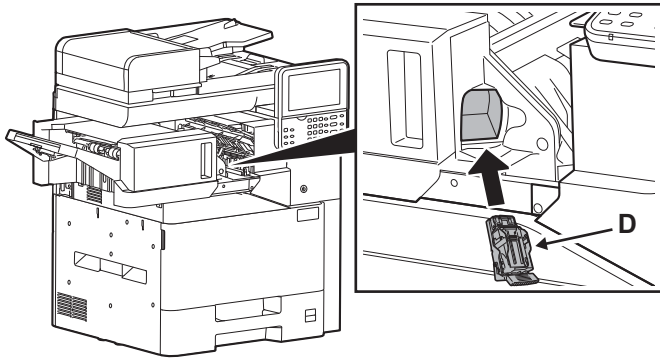
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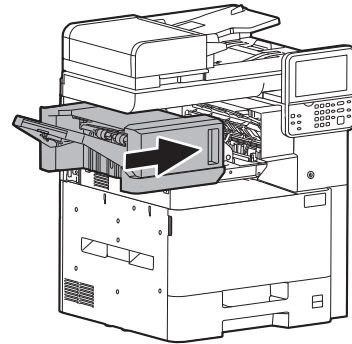
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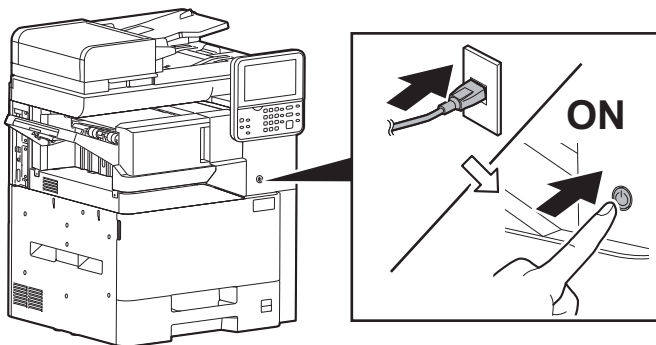
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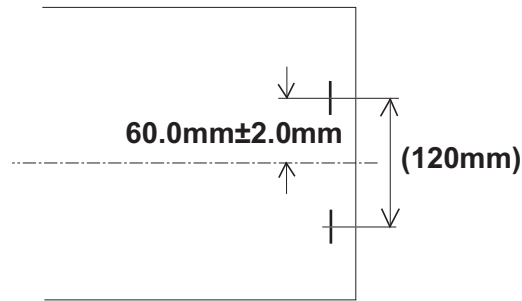


10



11





### English

#### Adjusting the stapling position

1. Connect the machine power plug to the wall outlet and turn the machine main power switch on.
2. Make a test copy using staple mode (double stapled).
3. Check whether the stapling position is off-center. If the staple position is off-center, follow the procedure below to adjust the position.  
<Reference value> 60.0 mm  $\pm$  2.0 mm from the center of the paper

### Français

#### Ajustement de la position d'agrafage

1. Insérer la fiche d'alimentation de la machine dans la prise murale et mettre la machine sous tension.
2. Procéder à une copie d'essai en mode agrafage (double agrafage).
3. Vérifier que la position d'agrafage n'est pas en décalage. Si la position d'agrafage est décalée, la régler en procédant de la manière suivante.  
<Valeur de référence> 60,0 mm  $\pm$  2,0 mm depuis le milieu de la feuille de papier

### Español

#### Ajuste de la posición de grapado

1. Conecte el enchufe de la máquina al receptáculo de pared y encienda el interruptor principal de la máquina.
2. Haga una copia de prueba en el modo de grapado (grapado doble).
3. Compruebe si la posición de grapado está descentrada. Si la posición de grapado está descentrada, realice el siguiente procedimiento para ajustar la posición.  
<Valor de referencia> 60,0 mm  $\pm$  2,0 mm del centro del papel

### Deutsch

#### Justage der Heftposition

1. Stecken Sie den Netzstecker des Geräts in die Wandsteckdose und schalten Sie das Gerät am Hauptschalter ein.
2. Erstellen Sie eine Probekopie im Heftmodus (doppelt geheftet).
3. Prüfen Sie, ob die Heftposition außermittig ist. Falls die Heftposition außermittig ist, müssen Sie sie wie folgend einstellen.  
<Bezugswert> 60,0 mm  $\pm$  2,0 mm von der Blattmitte

### Italiano

#### Regolazione della posizione di pinzatura

1. Collegare la spina alla presa di corrente a muro e accendere l'interruttore di alimentazione della macchina.
2. Eseguire una copia di prova utilizzando la modalità di spillatura con punti metallici (spillatura doppia).
3. Verificare che la posizione di spillatura non sia fuori centro. Se la posizione di spillatura è fuori centro, seguire la procedura riportata sotto per regolare la posizione.  
<Valore di riferimento> 60,0 mm  $\pm$  2,0 mm dal centro del foglio

### 简体中文

#### 调节装订位置

1. 将机器上的电源插头插入电源插座中，打开主电源开关。
2. 在装订模式（2点固定）下进行测试复印。
3. 确认装订位置的中心偏差。装订位置偏离中心时，按以下步骤进行调节。  
<基准值> 距离纸张中心 60.0mm  $\pm$  2.0mm

### 한국어

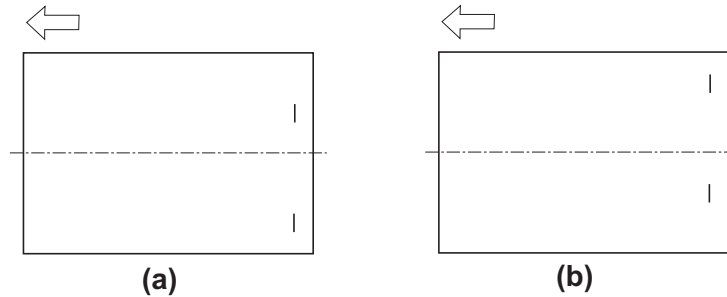
#### 스태플 위치 조정

1. 본체 전원플러그를 콘센트에 꽂고 주 전원 스위치를 ON으로 합니다.
2. 스타플 모드(2점 고정)에서 시험복사를 합니다.
3. 스타플 위치의 센터 어긋남을 확인합니다. 스타플 위치가 중심에서 벗어난 경우, 다음 순서로 조정을 합니다.  
<기준치> 용지 센터에서 60.0mm  $\pm$  2.0mm

### 日本語

#### ステーブル位置の調整

1. 機械本体の電源プラグをコンセントに差し込み、主電源スイッチをONにする。
2. ステーブルモード(2箇所止め)でテストコピーを行う。
3. ステーブル位置のセンターずれを確認する。ステーブル位置が中心からずれていた場合、次の手順で調整を行う。  
<基準値> 用紙センターより 60.0mm  $\pm$  2.0mm

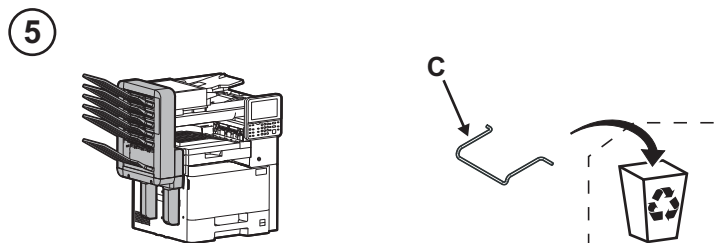
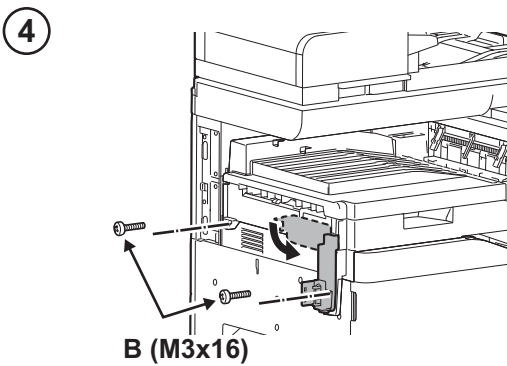
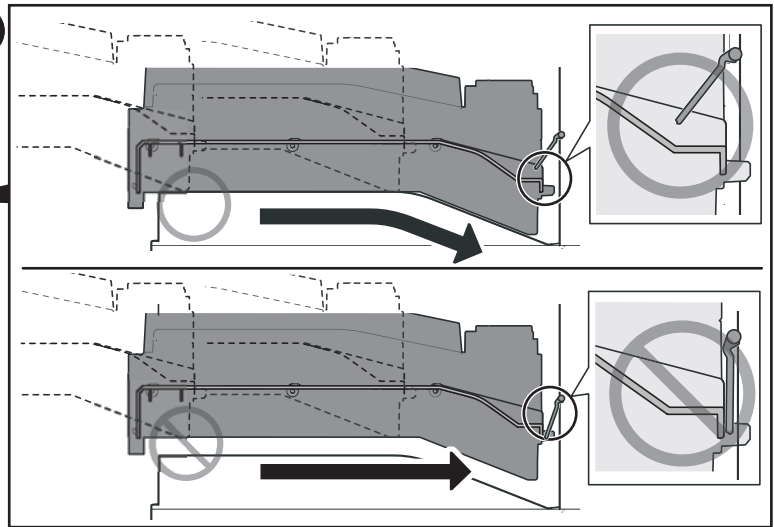
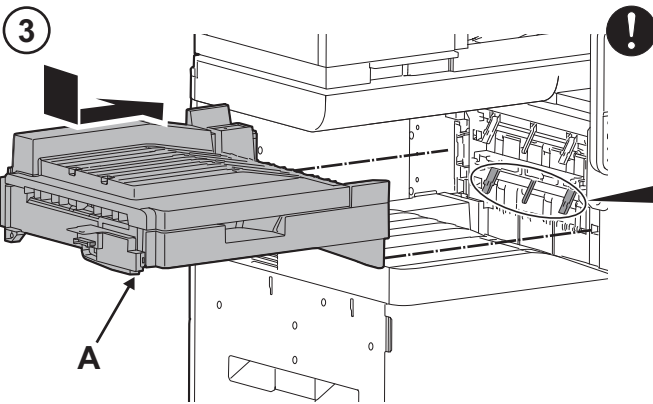
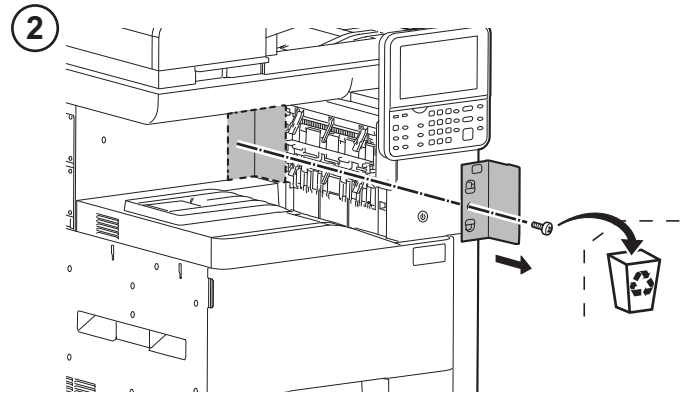
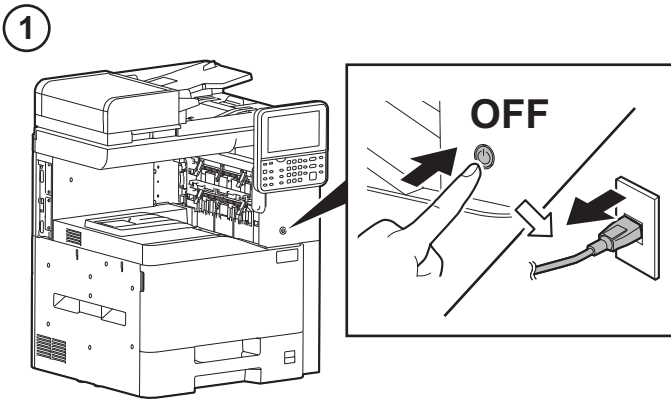
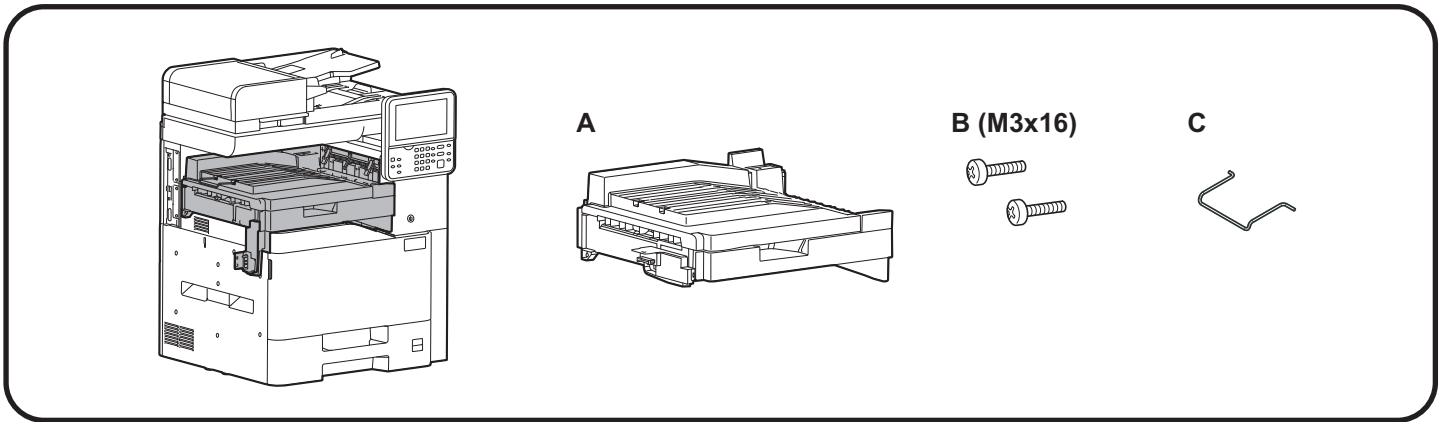


- |  |   |
|--|---|
| <p>4. Set the maintenance mode U246 and select [Finisher] &gt; [Staple HP].</p> <p>5. Adjust the values.<br/>If the paper is stapled too close to the front of the machine (a): Increase the setting value.<br/>If the paper is stapled too close to the rear of the machine (b): Decrease the setting value.<br/>Amount of change per step: 0.19 mm</p>   | <p>6. Press the [Start] key to confirm the setting value.</p> <p>7. Perform a test copy.</p> <p>8. Repeat steps 4 to 7 until the staple position is within the reference value.<br/>&lt;Reference value&gt; 60.0 mm <math>\pm</math> 2.0 mm from the center of the paper</p>  |
| <p>4. Passez en mode maintenance U246 et sélectionnez [Finisher] &gt; [Staple HP].</p> <p>5. Régler les valeurs.<br/>Si le papier est agrafé trop près de l'avant de la machine (a): augmenter la valeur de réglage.<br/>Si le papier est agrafé trop près de l'arrière de la machine (b): réduire la valeur de réglage.<br/>Changement par graduation d'échelle : 0,19 mm</p>   | <p>6. Appuyer sur la touche de [Départ] pour confirmer la valeur de réglage.</p> <p>7. Effectuer une copie de test.</p> <p>8. Recommencer les étapes 4 à 7 jusqu'à ce que la position d'agrafe soit conforme à la valeur de référence.<br/>&lt;Valeur de référence&gt; 60,0 mm <math>\pm</math> 2,0 mm depuis le milieu de la feuille de papier</p> |
| <p>4. Configure el modo de mantenimiento U246 y seleccione [Finisher] &gt; [Staple HP].</p> <p>5. Ajuste los valores.<br/>Si el grapado del papel se encuentra demasiado cerca del frente de la máquina (a): aumente el valor de configuración.<br/>Si el grapado del papel se encuentra demasiado cerca de la parte posterior de la máquina (b): disminuya el valor de configuración.<br/>Magnitud del cambio por incremento: 0,19 mm</p> | <p>6. Pulse la tecla de [Inicio] para confirmar el valor de configuración.</p> <p>7. Haga una copia de prueba.</p> <p>8. Repita los pasos 4 a 7 hasta que la posición de grapado se encuentre dentro del valor de referencia.<br/>&lt;Valor de referencia&gt; 60,0 mm <math>\pm</math> 2,0 mm del centro del papel</p>                              |
| <p>4. Aktivieren Sie den Wartungsmodus U246 und wählen Sie [Finisher] &gt; [Staple HP].</p> <p>5. Die Werte einstellen.<br/>Falls das Papier zu nahe am vorderen Rand des Geräts (a) abgestapelt wird: Vergrößern Sie den Stellwert.<br/>Falls das Papier zu nahe am hinteren Rand des Geräts (b) abgestapelt wird: Verkleinern Sie den Stellwert.<br/>Änderung pro Schritt: 0,19 mm</p>   | <p>6. Den Einstellwert durch Drücken der [Start]-Taste bestätigen.</p> <p>7. Eine Testkopie erstellen.</p> <p>8. Wiederholen Sie die Schritte 4 bis 7, bis die Heftposition im Bereich des Bezugswerts liegt.<br/>&lt;Bezugswert&gt; 60,0 mm <math>\pm</math> 2,0 mm von der Blattmitte</p>   |
| <p>4. Impostare la modalità manutenzione U246, quindi selezionare [Finisher] &gt; [Staple HP].</p> <p>5. Regolare i valori.<br/>Se il foglio viene spillato troppo vicino alla parte anteriore della macchina (a): Aumentare il valore di impostazione.<br/>Se il foglio viene spillato troppo vicino alla parte posteriore della macchina (b): Diminuire il valore di impostazione.<br/>Entità modifica per passo: 0,19 mm</p>            | <p>6. Premere il tasto di [Avvio] per confermare il valore dell'impostazione.</p> <p>7. Eseguire una copia di prova.</p> <p>8. Ripetere i passi 4 to 7 finché la posizione di spillatura risulta all'interno del valore di riferimento.<br/>&lt;Valore di riferimento&gt; 60,0 mm <math>\pm</math> 2,0 mm dal centro del foglio</p>                 |
| <p>4. 进入维修保养模式 U246, 把 [Finisher]&gt;[Staple HP] .</p> <p>5. 调整设定值。<br/>装订位置向机器前部偏移时 (a) : 调高设定值。<br/>装订位置向机器后部偏移时 (b) : 调低设定值。<br/>设定值的一个调整单位变化量 : 0.19mm</p>   | <p>6. 按 [ 开始 ] 键, 以确定设定值。</p> <p>7. 进行测试复印。</p> <p>8. 重复步骤 4 ~ 7, 直到装订位置在基准范围内为止。<br/>&lt;基准值&gt; 距离纸张中心 60.0mm <math>\pm</math> 2.0mm</p>  |
| <p>4. 메인テナンス 모드 U246 을 설정하고 [Finisher] &gt; [Staple HP] 를 선택합니다 .</p> <p>5. 설정치를 조정합니다 .<br/>스테이플 위치가 기기앞측으로 벗어난 경우 (a): 설정치를 높입니다 .<br/>스테이플 위치가 기기뒷측으로 벗어난 경우 (b): 설정치를 낮춥니다 .<br/>1 스텝당 변화량:0.19mm</p>  | <p>6. [ 복사 / 시작 ] 키를 누르고 설정치를 확인합니다 .</p> <p>7. 시험복사를 합니다 .</p> <p>8. 스테이플 위치가 기준치내가 될 때까지 순서 4 ~ 7 을 반복합니다 .<br/>&lt;기준치&gt; 용지 센터에서 60.0mm <math>\pm</math> 2.0mm</p>   |
| <p>4. メンテナンスモード U246 をセットし、[Finisher] &gt; [Staple HP] を選択する。</p> <p>5. 設定値を調整する。<br/>ステープル位置が機械前側にずれている場合 (a) : 設定値を上げる。<br/>ステープル位置が機械後側にずれている場合 (b) : 設定値を下げる。<br/>1 ステップ当たりの変化量:0.19mm</p>   | <p>6. [ スタート ] キーを押し、設定値を確定する。</p> <p>7. テストコピーを行う。</p> <p>8. ステープル位置が基準値内になるまで、手順 4 ~ 7 を繰り返す。<br/>&lt;基準値&gt; 用紙センターより 60.0mm <math>\pm</math> 2.0mm</p>  |

# **AK-5100**

## **(Bridge Unit)**

### **Installation Guide**

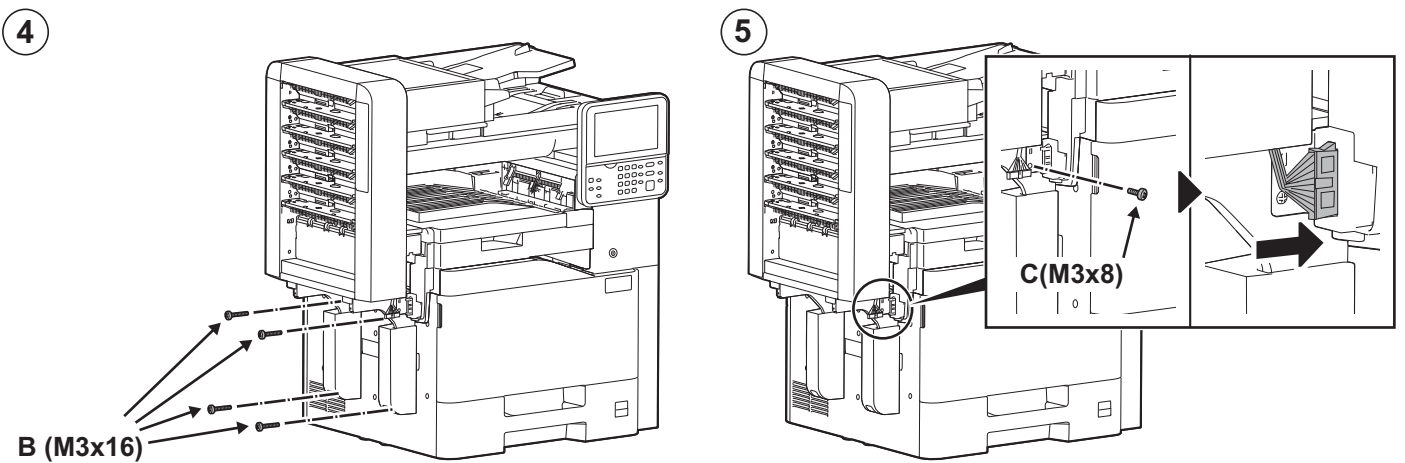
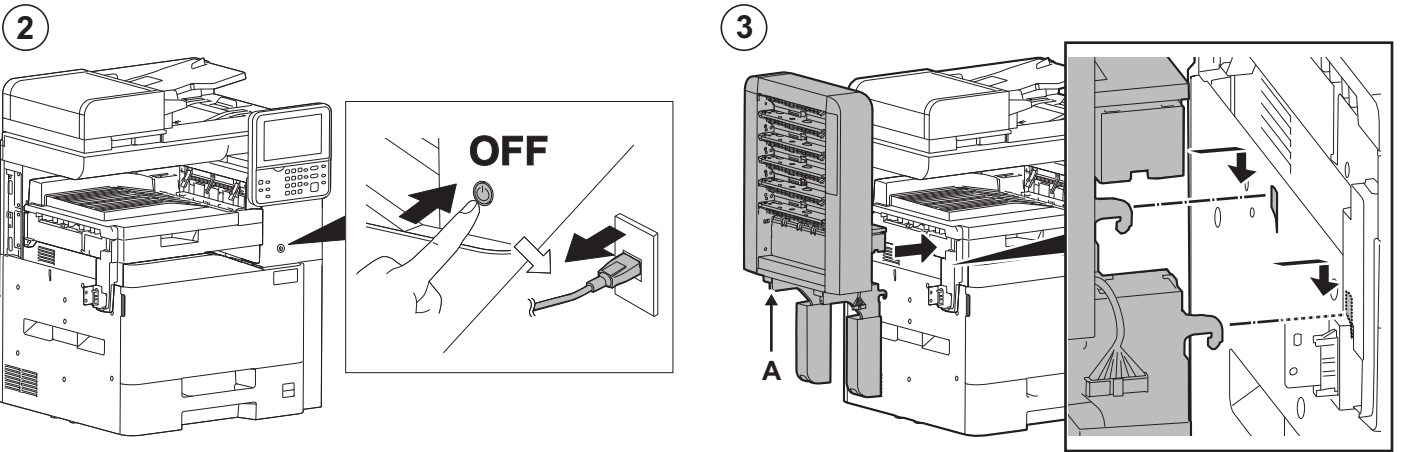
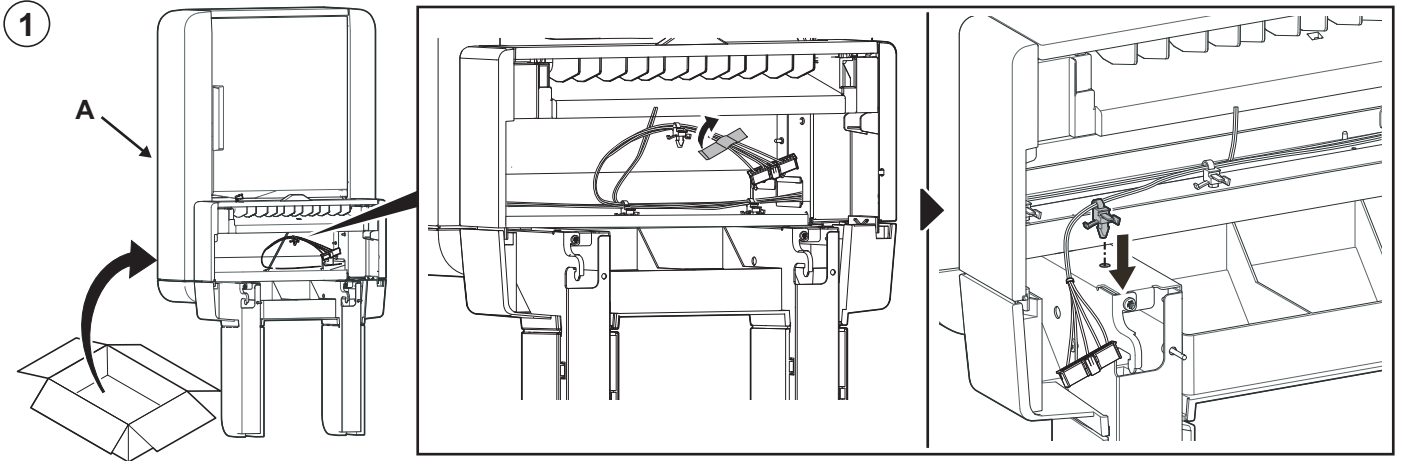
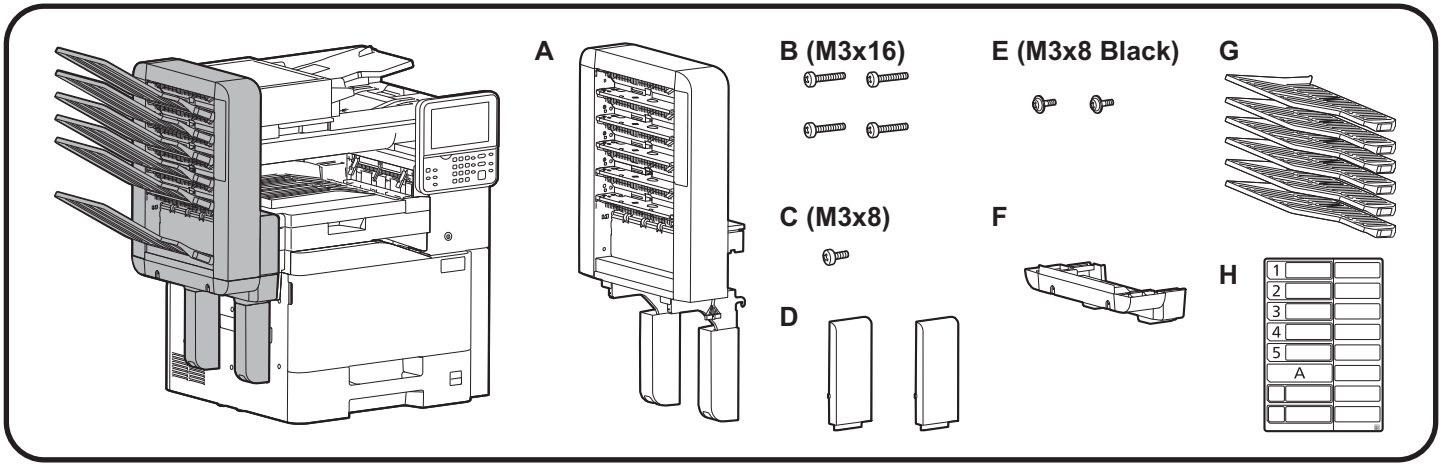


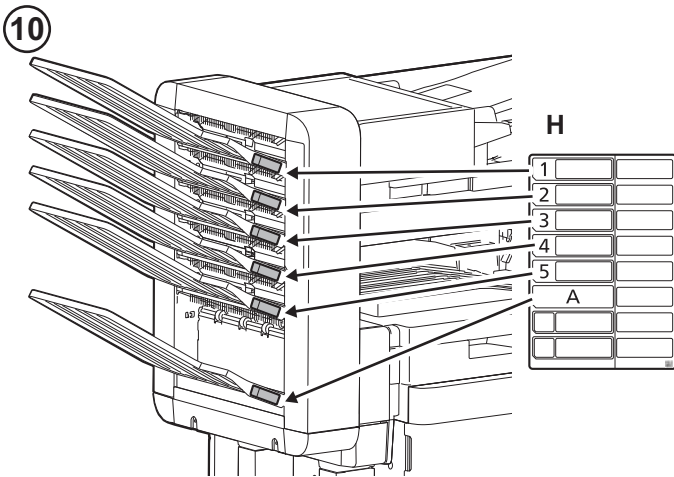
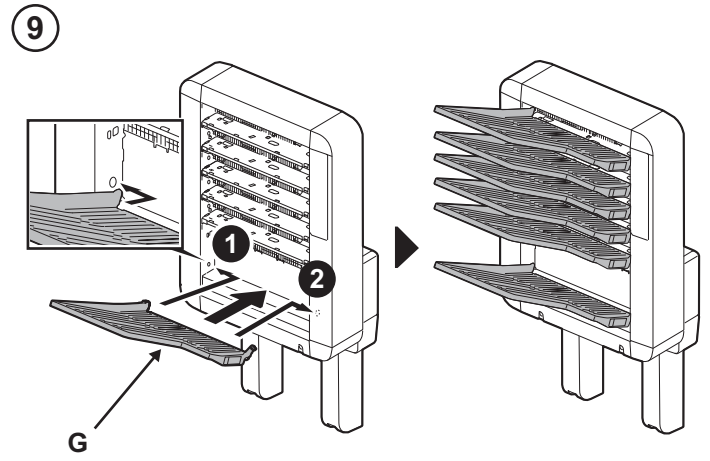
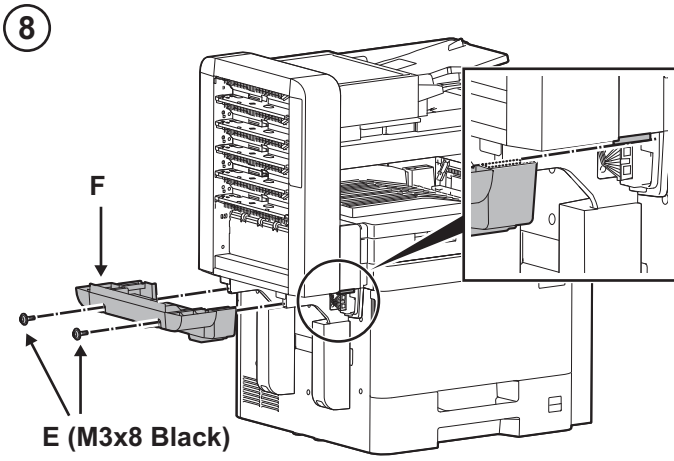
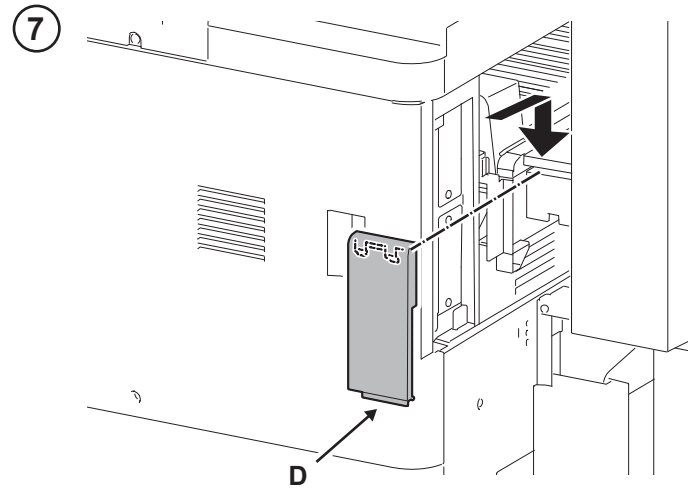
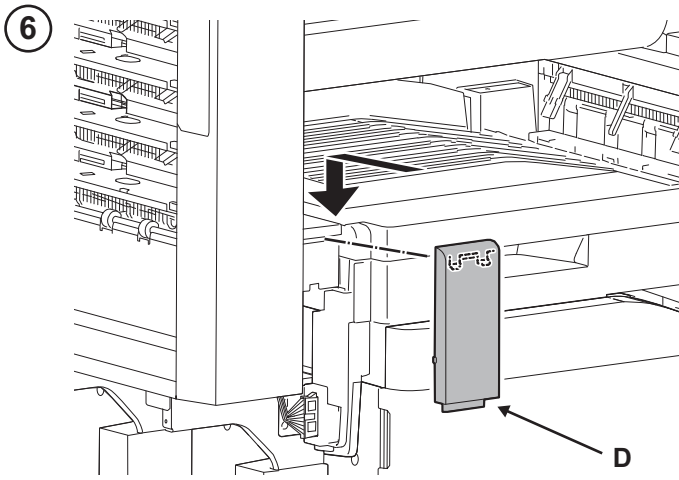
# **MT-5100**

## **(Mail Box)**

### **Installation Guide**



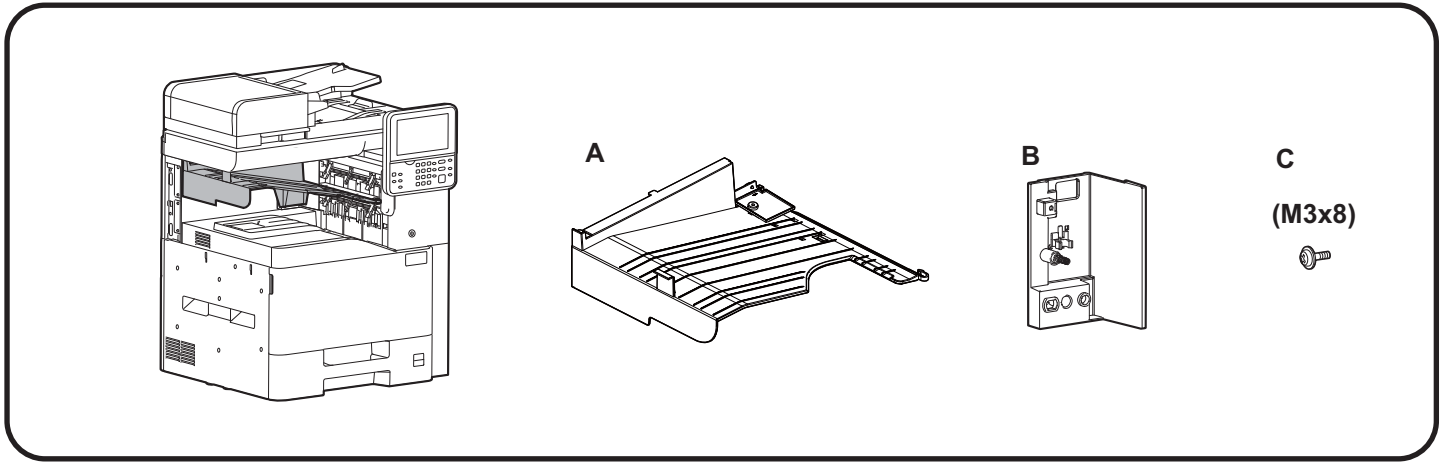




# **JS-5100**

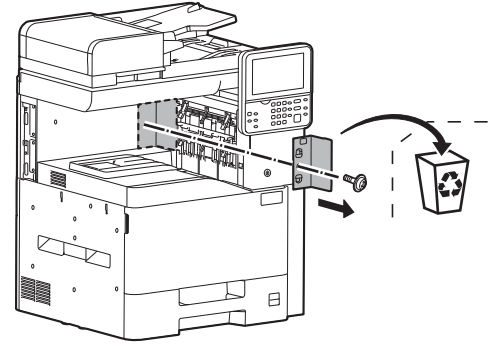
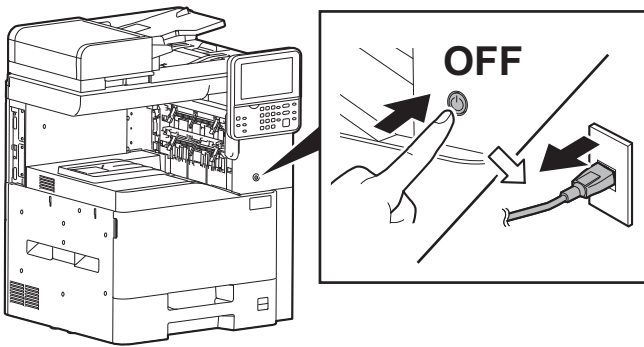
## **(Job separator)**

### **Installation Guide**



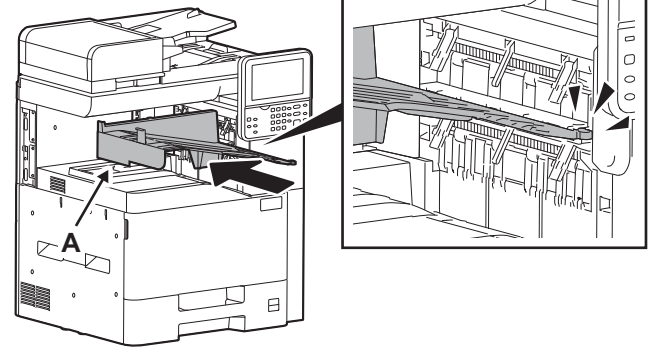
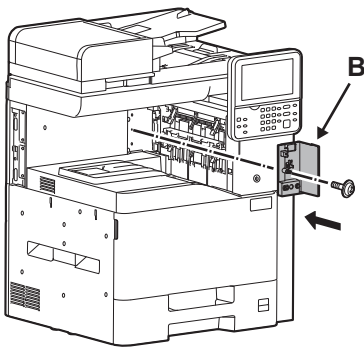
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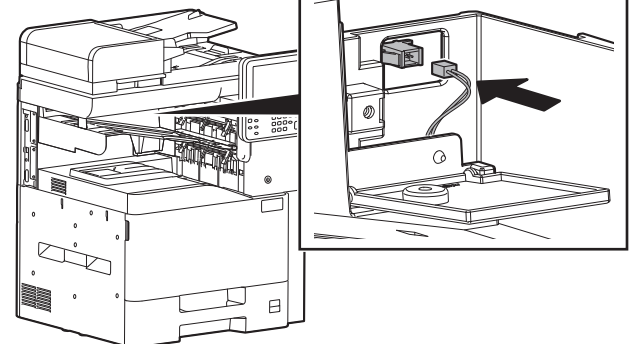
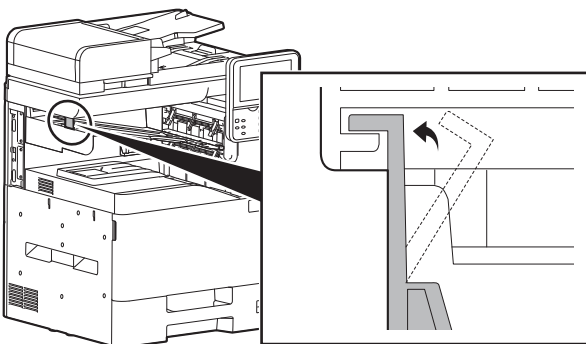
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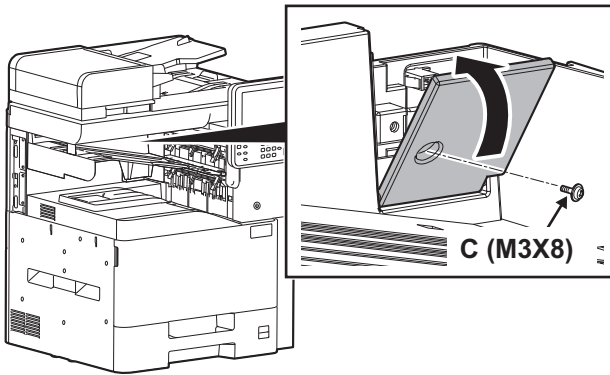


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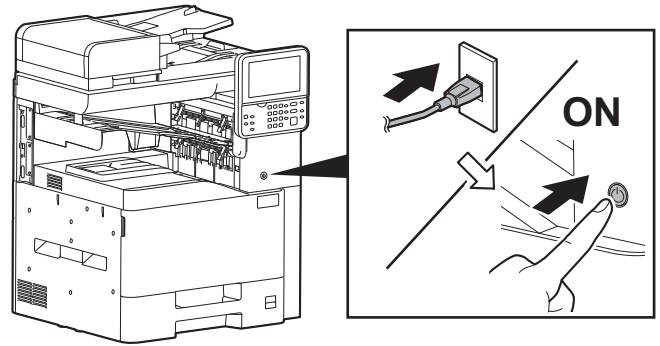
6



7



8



9

**(30ppm)**

- (EN) Set the maintenance mode U211, and set [Inner JobSepa] > [On].
- (FR) Passez en mode maintenance U211 et paramétrer [Inner JobSepa] > [On].
- (ES) Configure el modo de mantenimiento U211 y configure [Inner JobSepa] > [On] .
- (DE) Aktivieren Sie den U-Parameter U211 und [Inner JobSepa] > [On].
- (IT) Accedere al modo manutenzione U211, e selezionare [Inner JobSepa] > [On].
- (CN) 进入维修保养模式 U211, 把 [Inner JobSepa] > [On]。
- (KR) 메인テナンス 모드 U211 을 설정하고 [Inner JobSepa] > [On]를 설정합니다.
- (JP) メンテナンスモード U211 をセットし、[Inner JobSepa] > [On] を設定する。

**(35ppm/40ppm)**

- (EN) Set the maintenance mode U211, and set [Inner Job Separator] > [On].
- (FR) Passez en mode maintenance U211 et paramétrer [Inner Job Separator] > [On].
- (ES) Configure el modo de mantenimiento U211 y configure [Inner Job Separator] > [On] .
- (DE) Aktivieren Sie den U-Parameter U211 und [Inner Job Separator] > [On].
- (IT) Accedere al modo manutenzione U211, e selezionare [Inner Job Separator] > [On].
- (CN) 进入维修保养模式 U211, 把 [Inner Job Separator] > [On]。
- (KR) 메인テナンス 모드 U211 을 설정하고 [Inner Job Separator] > [On]를 설정합니다.
- (JP) メンテナンスモード U211 をセットし、[Inner Job Separator] > [On] を設定する。

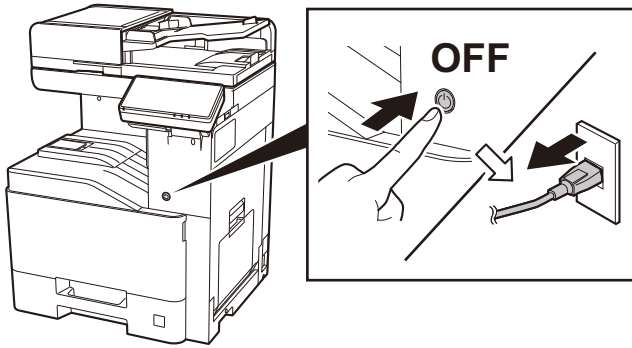
# **FAX System 11**

## **(FAX Kit)**

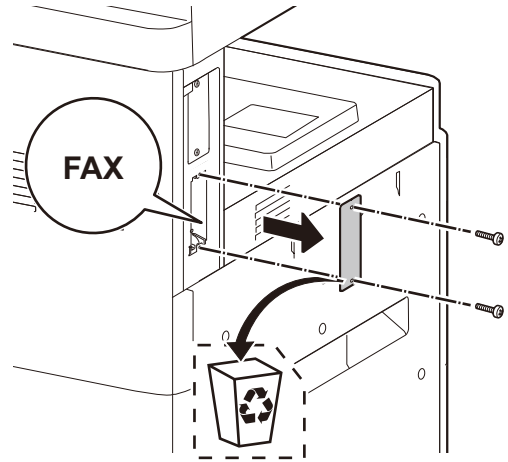
### **Installation Guide**

	<b>120V</b>	<b>230V</b>	<b>240V</b>	<b>110V</b>	<b>220V</b>	<b>220-240V</b>
	North America/Latin America	Europe	Australia/ New Zealand	Taiwan	China	Asia/Korea
<b>A</b>	1	1	1	1	1	1
<b>B</b>	1	-	1	-	1	-
<b>C</b>	-	-	1	-	-	-
<b>D</b>	1	1	1	1	1	1
<b>E</b>	-	-	1	-	-	-
<b>F</b>	-	-	-	-	1	-
<b>G</b>	-	-	-	-	1	-
<b>H</b>	-	-	-	-	1	-
<b>I</b>	-	-	-	1	-	-
<b>J</b>	-	-	-	-	1	-

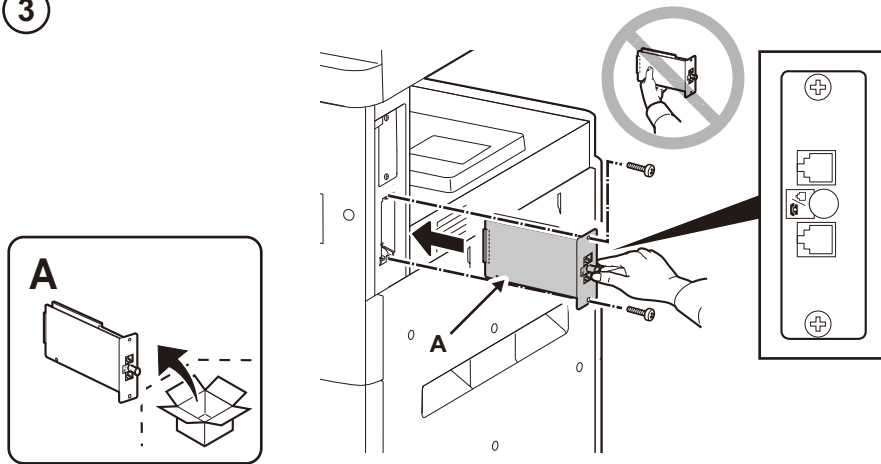
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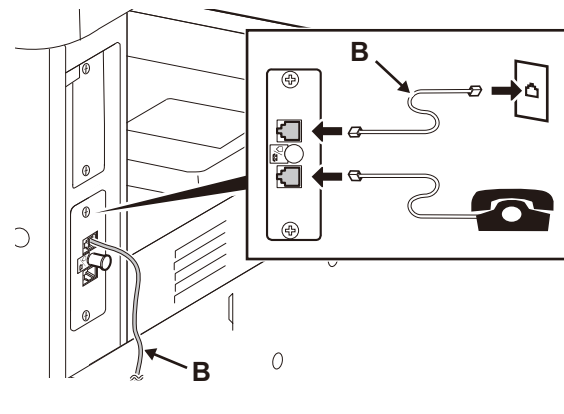
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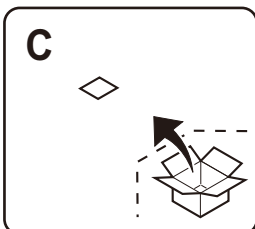
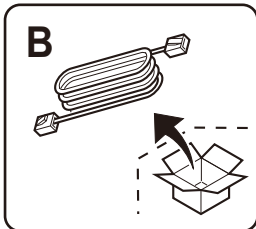
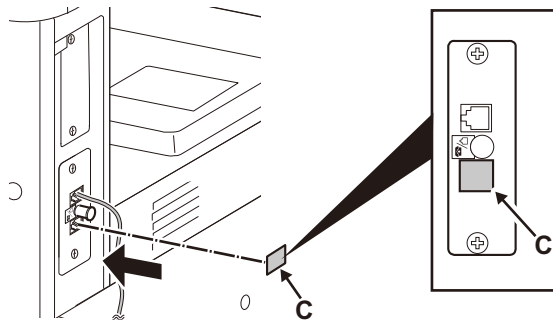
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④

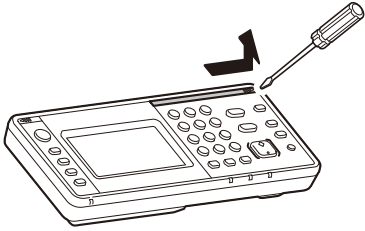


(EN) (For New Zealand model) (IT) (Per il modello Nuova Zelanda)  
 (FR) (Modèle pour la Nouvelle-Zélande) (ZHCN) (仅适用于新西兰型号)  
 (ES) (Para el modelo Nuevo Zelandés) (KO) (뉴질랜드 사양만)  
 (DE) (Für Neuseeland-Modell) (JA) (ニュージーランド仕様のみ)

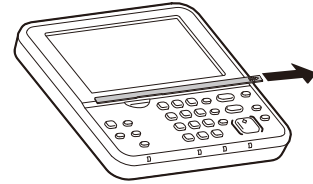
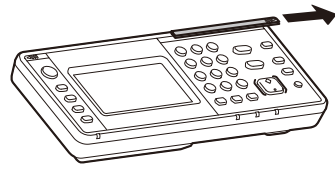




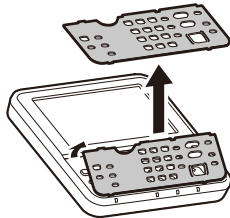
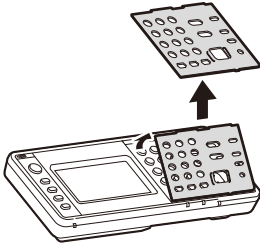
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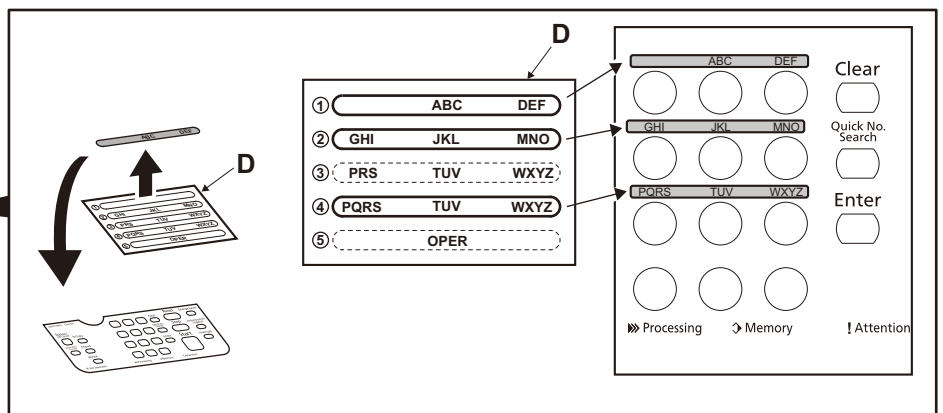
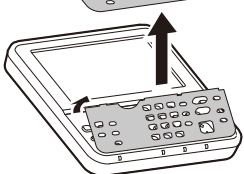
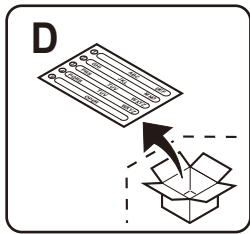
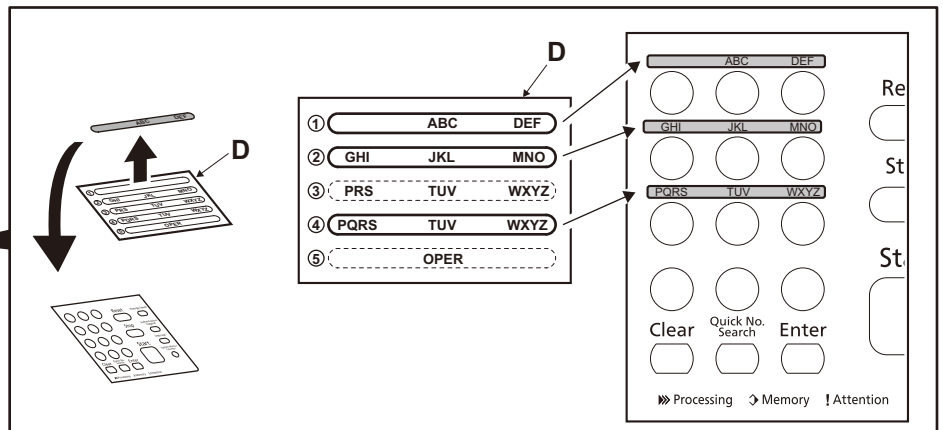
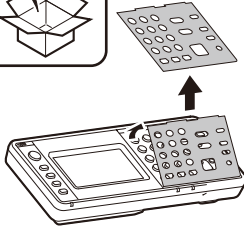
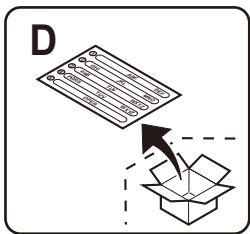
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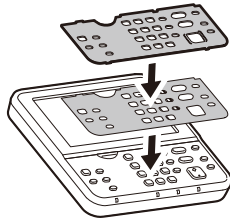
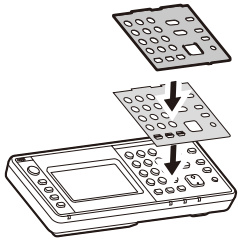
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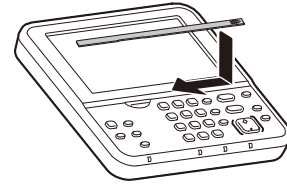
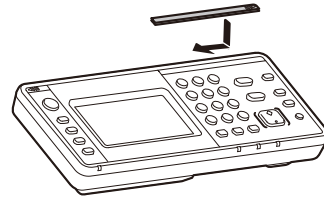
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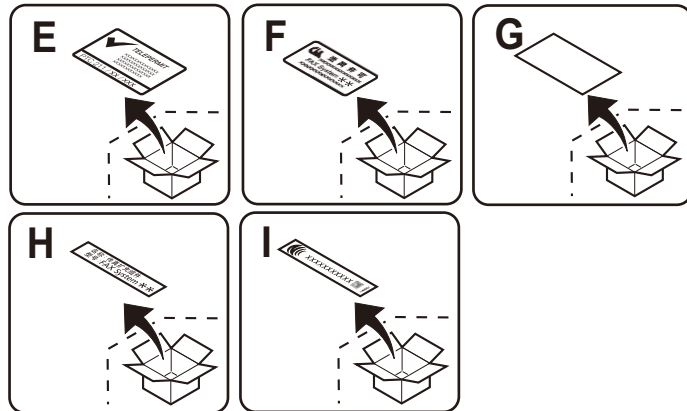
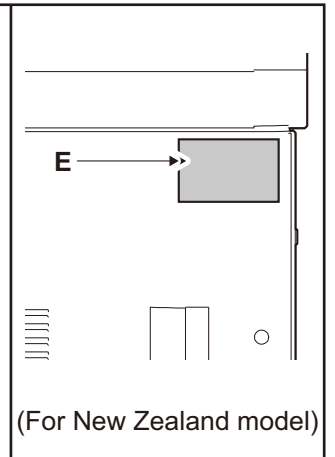
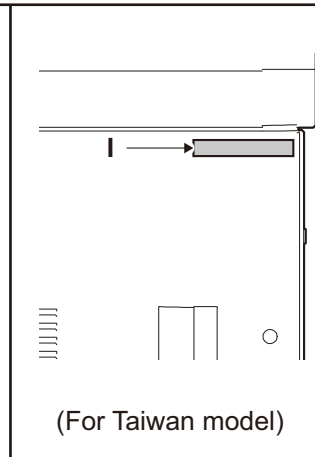
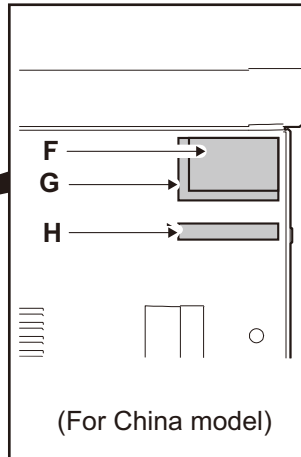
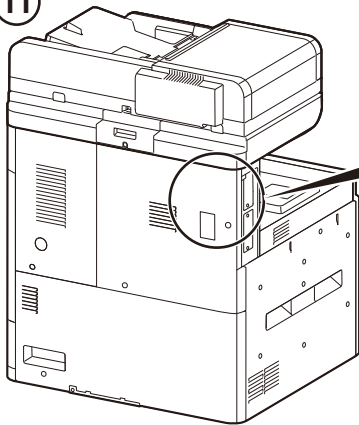
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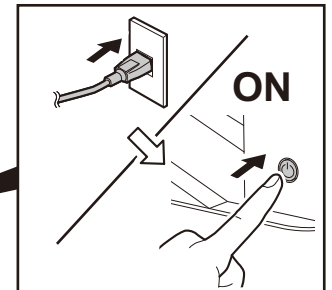
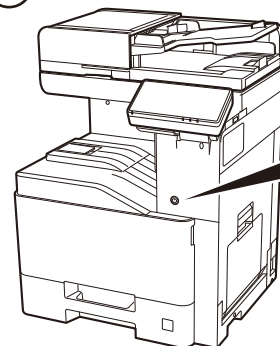
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11



12



13

(EN) **Initialize the FAX circuit board.**  
Perform the maintenance mode U600 to initialize the FAX PWBs.

(FR) **Initialiser la carte à circuits FAX.**  
Exécuter le mode maintenance U600 pour initialiser les cartes de circuit imprimé du fax.

(ES) **Inicialice la tarjeta de circuitos FAX.**  
Ejecute el modo de mantenimiento U600 para inicializar los FAX PWB.

(DE) **Initialisieren der FAX-Leiterplatte.**  
Führen Sie den Wartungsmodus U600 aus, um die FAX-Karte zu initialisieren.

(IT) **Inizializzare la scheda a circuiti FAX.**  
Eeguire il modo manutenzione U600 per inizializzare le schede FAX PWB.

(ZHCN) 传真电路板的初始化  
执行维修保养模式 U600，初始化传真电路板。

(KO) FAX 회로기판의 초기화  
메인テナンス 모드 U600을 수행하여 FAX 기판을 초기화합니다.

(JA) FAX 基板の初期化  
メンテナンスモード U600 を実行し、FAX 基板を初期化する。

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