KYOCERA

ECOSYS M8130cidn
ECOSYS M8124cidn
PF-470/PF-471
AK-470/DF-470
FAX System 13

SERVICE MANUAL

Published in June 2019
Rev.4

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 REMPLACEE PAR UN MODELE DE TYPE INCORRECT. METTRE AU REBUT LES BATTERIES UTILISEES SELON LES INSTRUCTIONS DONNEES.

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

Notation of products in the manual

For the purpose of this service manual, products are identified by print speed at A4.

Product name	Print speed	display size	Scanning method	100 V	120 V	220-240 V	Australia
ECOSYS M8130cidn	30sheets/ min	7 in	CCD	-	○	○	○
TASKalfa 2470ci	24sheets/ min			○	-	-	-
ECOSYS M8124cidn		4.3 in	CIS	-	○	○	○
TASKalfa 2460ci				○	-	-	-

Revision history

Revision	Date	Pages	Revised contents
1	2017/10/23	2-4Page	Delete warranty card
		2-28Page	Correction from PWB unit (b) to PWB unit (a)/from screws (a) to screws (b)
		3-5Page	Correction parts number in the drawing from 6 to 7 from 7 to 8 from 8 to 6
		3-5Page	Correction parts name from「reversing」to「feed-shift」
		3-20Page	Correction parts name from「reversing」to「feed-shift」
		3-21Page	Correction parts name from「reversing」to「feed-shift」
		4-5Page	Correction maintenance period From「300,000」to「200,000」
		4-55Page 4-55Page 4-55Page	Correction spelling from「lump」to「lamp」(3 places)
		4-66Page	Correction spelling from「lump」to「lamp」(2 places)
		4-66Page	
		7-49Page	Translation Japanese sentence into English
2	2018/1/29	1-1Page	Correction specification about paper
		1-6Page	Correction specification about paper.　52 ～ 163g/m^2 → 60 ～ 256g/m^2 (2 places)
		1-6Page	Complement lack of information.　23.23" × 23.19" × 13.86" /　(2 places)
		1-10Page	Complement lack of information
		2-36Page 5-1Page	Add information about OCR
		2-37Page	Correction of Country Code list
		3-1Page 3-2Page	Complement lack of information (2 places)
		3-42Page 3-44Page 3-46Page 3-50Page 3-51Page	Translation Japanese sentence into English (5 Pages)
		4-4Page	Correction from primary transfer unit to secondary transfer roller unit
		4-10Page 4-11Page 4-15Page 4-16Page 4-19Page	Matching information about related pages information
		4-1Page 4-102Page 4-118Page 4-131Page	Add information how to discharge the electric charge inside the main unit

Revision	Date	Pages	Revised contents
2	2018/1/29	5-1Page	Complement lack of information
		6-5Page	Correction Clerical errors [FAX count] to [total count]
		6-37Page	Correction unit of data variation (3 places)
		6-38Page	Correction unit of data variation (5 places)
		6-121Page	Complement lack of information for [Setting range]/ [Initial setting] (6 places)
		6-6Page 6-209Page	Complement lack of information　Add: U933
		6-161Page	Correction of Country Code list
		6-220Page	Correction of Country Code list
		6-223Page	Correction Clerical errors [Start] to [Yes] (2 places)
			Add about CIS model
		7-14Page	(3-1) Step1
		7-14Page	(3-3) Step3
		7-16Page	(3-6) Step5
		7-16Page	(3-7) Step1
		7-17Page	(3-6) Step6
		7-18Page	(3-11) Step2
		7-18Page	(3-12) Step9
		7-19Page	(3-13) Step5
		7-19Page	(3-14) Step9
			Correction misdescription / Changing operation / Adding operation
		7-19Page	(3-14) Step10
		7-32Page	(5-1) Step6
		7-33Page	(5-3) Step5
		7-34Page	(5-3) Step7
		7-35Page	(5-6) Step5
		7-35Page	(5-6) Step8
		7-36Page	(5-8) Step11
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		7-40Page	(5-18) Step5
		7-40Page	(5-19) Step5
		7-41Page	(5-20) Step6
		7-42Page	(1-1) Step4
		7-85Page	C3200: LED error Step5
		7-85Page	C3200: CIS error Step4
		7-85Page	C3300: CCD AGC error Step6
		7-86Page	C3300: CIS AGC error Step5
3	2019/4/26	6-212Page	Delete supplement
4	2019/6/17	7-122Page	Addition: F60X

KYOCERA

Safety precautions

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

Safety warnings and precautions

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

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

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

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

Symbols

The triangle (△) 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. .....

- Advice customers that they must always follow the safety warnings and precautions in the copier's instruction handbook. .....

2. Precautions for Maintenance

⚠ WARNING

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

⚠ CAUTION

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

- Do not remove the ozone filter, if any, from the copier except for routine replacement. .....

- Do not pull on the AC power cord or connector wires on high-voltage components when removing them; always hold the plug itself. .....

- Do not route the power cable where it may be stood on or trapped. If necessary, protect it with a cable cover or other appropriate item. .....

- Treat the ends of the wire carefully when installing a new charger wire to avoid electric leaks. .....

- Remove toner completely from electronic components. .....

- Run wire harnesses carefully so that wires will not be trapped or damaged. .....

- After maintenance, always check that all the parts, screws, connectors and wires that were removed, have been refitted correctly. Special attention should be paid to any forgotten connector, trapped wire and missing screws. .....

- Check that all the caution labels that should be present on the machine according to the instruction handbook are clean and not peeling. Replace with new ones if necessary. .....

- Handle greases and solvents with care by following the instructions below: .....
  · Use only a small amount of solvent at a time, being careful not to spill. Wipe spills off completely.
  · Ventilate the room well while using grease or solvents.
  · Allow applied solvents to evaporate completely before refitting the covers or turning the power switch on.
  · Always wash hands afterwards.

- Never dispose of toner or toner bottles in fire. Toner may cause sparks when exposed directly to fire in a furnace, etc. .....

- Should smoke be seen coming from the copier, remove the power plug from the wall outlet immediately. .....

3. Miscellaneous

⚠ WARNING

- Never attempt to heat the drum or expose it to any organic solvents such as alcohol, other than the specified refiner; it may generate toxic gas. .....

- Keep the machine away from flammable liquids, gases, and aerosols. A fire or an electric shock might occur. .....

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1 Specification 1

- 1 Specifications

⑴ Common function

Item		Description		
		30 ppm model	24 ppm model	
		7 inch LCD		4.3 inch LCD
Type		Desktop		
Printing Method		Laser dry-developing static transfer system, quadruple tandem intermediate transfer system		
Paper Weight	**Cassette**	60 to 256 g/m^2		
	Multi Purpose Tray	60 to 256 g/m^2		
Media type	**Cassette**	Plain, Vellum, Recycled, Prepunched, Bond, Color, Preprinted, Letterhead, Envelope, Thick, High Quality, Custom1 to 8(Duplex: Same as Simplex)		
	Multi Purpose Tray	Plain, Transparency (OHP film), Vellum, Labels, Recycled,Preprinted, Bond, Hagaki (Cardstock), Color, Prepunched, Letterhead, Envelope, Thick, Coated, High Quality, Index Tab Dividers, Custom 1 to 8		
Paper Size	**Cassette**	A3, A4, A5, A6, B4, B5, 216 × 340 mm, Ledger, Letter, Legal, Statement, Oficio II, Folio, 8K, 16K		
	Multi Purpose Tray	A3, A4, A5, A6, B4, B5, B6, 216 × 340 mm, Ledger, Letter, Legal, Statement, Executive, Oficio II, Folio, 8K, 16K, Envelope #10, Envelope #9, Envelope #6, Envelope Monarch, Envelope DL, Envelope C5, Envelope C4, Hagaki (Cardstock), Oufuku Hagaki (Return postcard), Youkei 4, Youkei 2, Custom (98 × 148 to 297 × 432 mm / 3.86" × 5.83" to 11.69" × 17")		
Printable Area		3mm leading edge margin, 3mm trailing edge margin, 4mm each left and right margin		
Warm-up Time (23℃/73.4°F, 60%)	**Power on**	30 sec or less		
	Low Power	10 sec or less		
	Sleep	10 sec or less		
Paper Capacity	**Cassette**	500 sheets (80 g/m2)*1		
	Multi Purpose Tray	100 sheets (A4/Letter or smaller)(80 g/m^2) 25 sheets (lager than A4/Letter)(80 g/m^2)		
Output Tray Capacity	**Inner tray**	250 sheets (80 g/m^2)		
	Job separator	30 sheets (80 g/m^2)		
Image Write System		2 beam semiconductor laser	1 beam semiconductor laser	
Light source		White LED		Tri-color LED
Scanning method		Flat surface scanning by the CCD image sensor		Flat surface scanning by the CIS image sensor
Photoconductor		OPC drum (diameter 30 mm)		
Charging system		DC MC roller system		
Developer system		Non-magnetic interactive touch-down developing system Developer: Dual-component Toner replenishing: Automatic from the toner container		

Item		Description		
		30 ppm model	24 ppm model	
		7 inch LCD		4.3 inch LCD
Transfer system		Primary: Transfer belt method Secondary: Transfer roller method		
Separation system		Small diameter separation and separation needle (Impressing DC voltage)		
Cleaning system		Counter blade		
Charge erasing system		Exposure by cleaning lamp (LED)		
Fusing system		Sliding belt system (Fuser belt + Fuser press roller) Heat source: IH inverter heating Abnormally high temperature protection devices: thermostat		
Memory		Standard : 1536 MB (On-Boad +512MB DIMM) Maximum : 3072 MB (On-Boad +2048MB DIMM)		
Large capacity storage		SSD 32 GB / 128 GB		
Interface	**Standard**	Hi-Speed USB : 1 Hi-Speed USB Host : 2 Network interface: 1 (1000Base-T/100Base-Tx/10BASE-T)		
	Option	eKUIO: 2 (FAX can be installed in the Slot1 only) Wireless LAN: IB-36		
Operating Environment	**Temperature**	10 to 32.5°C/50 to 90.5°F		
	Humidity	10 to 80 %		
	Altitude	3500 m/11482 ft maximum		
	Brightness	1500 lux maximum		
Dimension (W × D × H)		590 × 590 × 753 mm / 23.23" × 23.23" × 29.65"		
Weight (without toner container)		Approx. 79 kg / Approx. 174.2 lbs		Approx. 77 kg / Approx. 169.8 lbs
Space Required (W × D)		873 × 590 mm / 34.37" × 23.23" (Using multi purpose tray)		
Power source		100V AC, 50/60Hz, 15.0A 120V AC, 60Hz, 12.0A 220-240V AC, 50Hz, 7.2A		

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

⑵ Copy Functions

Item		Description			
		30 ppm model		24 ppm model	
		Black and White	Color	Black and White	Color
Copy Speed	A4/Letter	30 sheets/min	30 sheets/min	24 sheets/min	24 sheets/min
	A4-R/Letter-R	21 sheets/min	21 sheets/min	17 sheets/min	17 sheets/min
	A3/Ledger	15 sheets/min	15 sheets/min	12 sheets/min	12 sheets/min
	B4/Legal	15 sheets/min	15 sheets/min	12 sheets/min	12 sheets/min
	B5	30 sheets/min	30 sheets/min	24 sheets/min	24 sheets/min
	B5-R	21 sheets/min	21 sheets/min	17 sheets/min	17 sheets/min
	A5-R	15 sheets/min	15 sheets/min	12 sheets/min	12 sheets/min
First Copy Time (A4, place on the platen, feed from Cassette)		6.5 seconds or less	8.3 seconds or less	7.6 seconds or less	9.8 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		Fine1200dpi / 600dpi			
Supported Original Types		Sheet, Book, 3-dimensional objects (maximum original size: A3/Ledger)			
Original Feed System		Fixed			

(3) Printer Functions

Item		Description			
		30 ppm model		24 ppm model	
		Black and White	Color	Black and White	Color
Printing Speed	A4/Letter	30 sheets/min	30 sheets/min	24 sheets/min	24 sheets/min
	A4-R/Letter-R	21 sheets/min	21 sheets/min	17 sheets/min	17 sheets/min
	A3/Ledger	15 sheets/min	15 sheets/min	12 sheets/min	12 sheets/min
	B4/Legal	15 sheets/min	15 sheets/min	12 sheets/min	9 sheets/min
	B5	30 sheets/min	30 sheets/min	24 sheets/min	24 sheets/min
	B5-R	21 sheets/min	21 sheets/min	17 sheets/min	17 sheets/min
	A5-R	15 sheets/min	15 sheets/min	12 sheets/min	12 sheets/min
First Print Time (A4, place on the platen, feed from Cassette)		6.5 seconds or less	8.3 seconds or less	7.5 seconds or less	10.2 seconds or less
Resolution		Fine1200dpi / 600dpi			
Operating System		Windows Vista, Windows 7, Windows 8, Windows 8.1, Windows 10, Windows Server 2008/R2, Windows Server 2012/R2, Windows Server 2016, Mac OS X v10.5 or later			
Interface		USB Interface Connector: 1 (Hi-Speed USB) Network interface: 1 (1000 BASE-T/100 BASE-TX/10 BASE-T (IPv6, IPv4, IPSec), 302.3az supported) Optional Interface (Option): 2 (For IB-50/IB-51 mounting) Wireless LAN (Option): 1 (For IB-35 mounting)			
Page Description Language		PRESCRIBE			
Emulations		PCL6 (PCL-XL/PCL-5e), KPDL3 (PostScript3 compatible), PDF, XPS, Open XPS			

⑷ Scanner Functions

Item		Description	
		30 ppm model	24 ppm model
		7 inch LCD	4.3 inch LCD
Resolution		300dpi x 300dpi (Default), 200dpi x 200dpi , 200dpi x 100dpi 600dpi x 600dpi , 400dpi x 400dpi , 200dpi x 400dpi	
File Format		TIFF(MMR compression), PDF, PDF(high compression), Encrypted PDF, PDF-A, XPS, JPEG	
Scanning Speed *1 **(A4, 300 dpi, Image quality: Text/Photo original)**	**Single sided monochrome**	300 × 300 dpi: 50ipm 600 × 600 dpi: 36ipm	300 × 300 dpi: 50ipm 600 × 600 dpi: 36ipm
	Single sided color	300 × 300 dpi: 50ipm 600 × 600 dpi: 36ipm	300 × 300 dpi: 50ipm 600 × 600 dpi: 30ipm
Interface		Ethernet (10 BASE-T/100 BASE-TX/1000 BASE-T)	
Transmission System		SMB, SMTP, SMTPoverSSL, FTP, FTPoverSSL, TWAIN *2, WIA*3, WSD	

*1 When using the document processor (except TWAIN and WIA scanning)

*2 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, Windows Server 2016

*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, Windows Server 2016

⑸ Document Processor

Item	Description
Document Processor system	Automatic feed system (pickup pulley system + torque limiter system)
Original type	Sheet originals
Paper Size	Maximum: A3/Ledger (297 × 432 mm) Minimum: A6-R/Statement-R (105 × 148 mm)
Paper Weight	1-sided: 45 to 160 g/m^2 2-sided: 50 to 120 g/m^2
Loading Capacity	50 sheets (50 to 80 g/m^2)*1

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

⑹ Option

⑹-1 500 sheets × 1 Paper Feeder (PF-470)

Item	Description
Paper Supply Method	Friction roller feeder
Paper weight	60 to 256 g/m^2
Media type	Plain, Recycled, Color
Paper Size	A3 ,A4R ,A4 ,A5R ,B4 ,B5R ,B5 ,Folio ,Ledger ,Legal ,LetterR ,Letter ,Statement ,Executive ,Oficio II ,8K ,16KR ,16K
Paper Capacity	(No. Sheets: 550(64 g/m^2)×1 cassette / 500(80g/m^2)× 1 cassette)
Dimension (W × D × H)	23.23" × 23.19" × 13.86" / 590 × 589 × 352 mm
Weight	Approx. 21 kg / Approx. 46.3 lbs
Power source	Supply from the main unit

⑹-2 500 sheets × 2 Paper Feeder (PF-471)

Item	Description
Paper Supply Method	Friction roller feeder
Paper weight	60 to 256g/m^2
Media type	Plain, Recycled, Color
Paper Size	A3 ,A4R ,A4 ,A5R ,B4 ,B5R ,B5 ,Folio ,Ledger ,Legal ,LetterR ,Letter ,Statement ,Executive ,Oficio II ,8K ,16KR ,16K
Paper Capacity	No. Sheets: 550(64 g/m^2)×2 cassettes / 500(80g/m^2)× 2 cassettes
Dimension (W × D × H)	23.23" × 23.19" × 13.86" / 590 × 589 × 352 mm
Weight	Approx. 21 kg / Approx. 46.3 lbs
Power source	Supply from the main unit

⑹-3⑶ 500 sheets Finisher (DF-470) : 30ppm model only

Item		Description
Type		Hunger type
Number of Trays		1 tray
Paper weight		52 to 256 g/m2
Number of sheets and size storage limit	**no stapling**	A3, B4, Ledger, Legal, OficioII, 216×340mm, 8K : 250 sheets A4, A4R, B5, B5R, Letter, LetterR, ExcutiveR, 16K : 500 sheets
	Stapling **When stapling 2 to 10 sheets**	A3, B4, Ledger, Legal, 8K : 22 sets A4R, LetterR : 40 sets A4, B5, Letter, 16K : 45 sets
	Stapling **When stapling 11 to 20 sheets**	A3, B4, Ledger, Legal, 8K : 11 sets A4R, LetterR : 20 sets A4, B5, Letter, 16K : 22 sets
	Stapling **When stapling 21 to 30 sheets**	A3, B4, Ledger, Legal, 8K : 9 sets A4, A4R, B5, Letter, LetterR, 16K : 15 sets
	Stapling **When stapling 31 to 50 sheets**	A4, A4R, B5, Letter, LetterR, 16K : 9 sets
Number of sheets staple limit **Paper Weight 90 g/m² or less**		A3, B4, Ledger, Legal, 216×340mm, 8K : 25 sheets
Dimension (W × D × H)		416 × 521 × 275.5 mm　16.38 × 20.51 × 10.85 “
Weight		Approx. 12 kg / Approx. 26.4lb or less

⑹-4⑴ FAX System (FAX System 13)

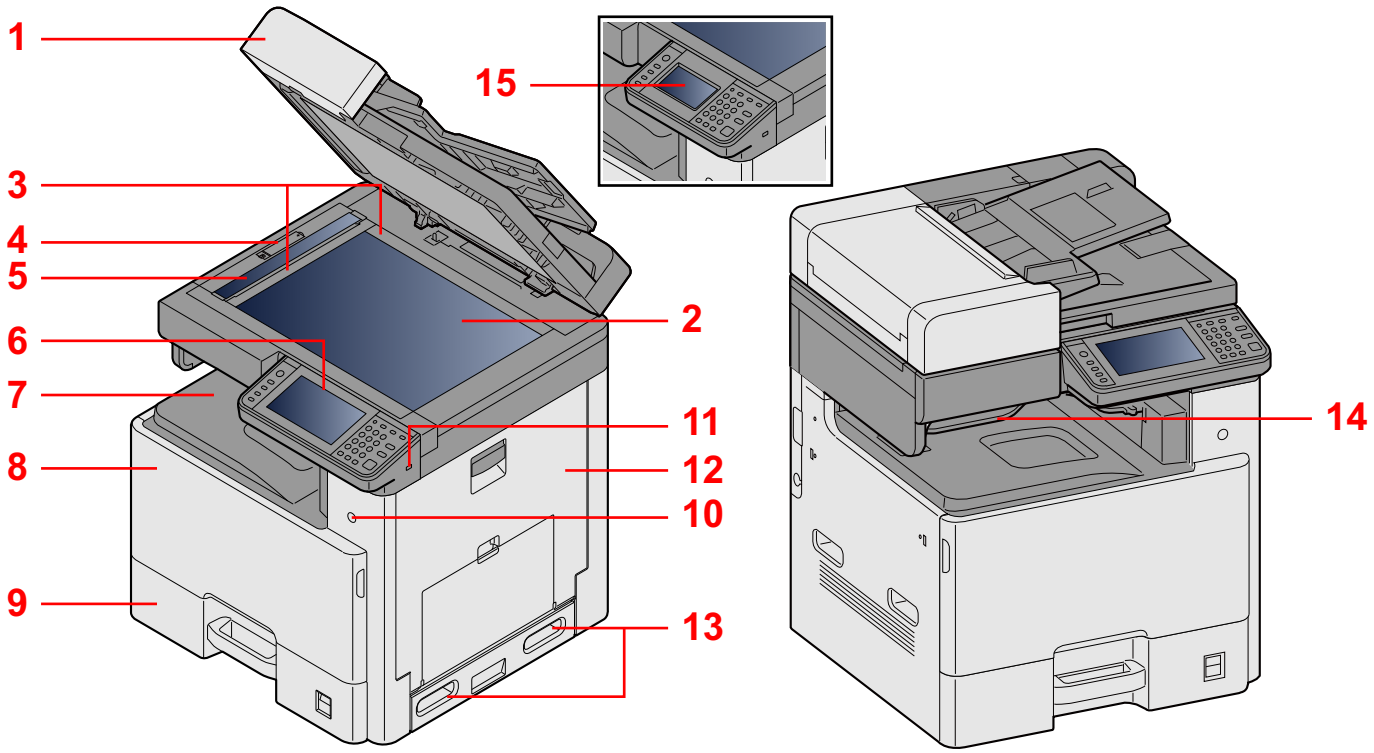
Item	Description
Compatibility	G3
Communication Line	Subscriber telephone line
Transmission Time	Less than 3 seconds (33600 bps, JBIG, ITU-T A4-R #1 chart)
Transmission Speed	33600/31200/28800/26400/24000/21600/19200/16800/14400/12000/9600/7200/4800/2400 bps
Coding Scheme	JBIG/MMR/MR/MH
Error Correction	ECM
Original Size	Max. width: 297 mm/11", Max. length: 1,600 mm/63"
Number of originals to auto feed	Max. 270 sheets (When using the document processor)
Resolution	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
Gradations	256 shades (Error diffusion)
One Touch Key	100 keys
Multi-Station Transmission	Max. 100 destinations
Substitute Memory Reception	700 sheets or more (when using ITU-T A4 #1)
Image Memory Capacity	Standard memory (12MB) (for FAX transmission/reception)
Report Output	Send result report, FAX RX result report, Activity report, Status page
Option	Handset

Note

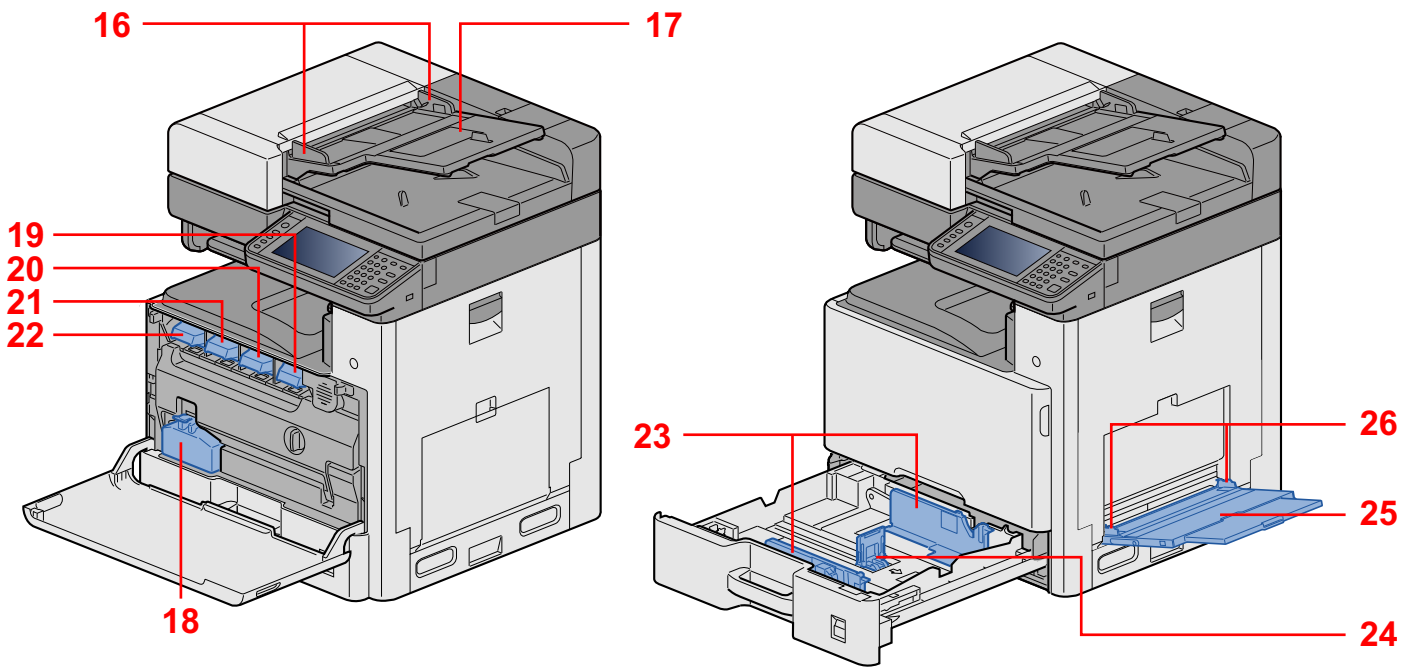
Specification subject to change for improvement of performance without notice

1 - 2 Part Names

(1) Main unit exterior

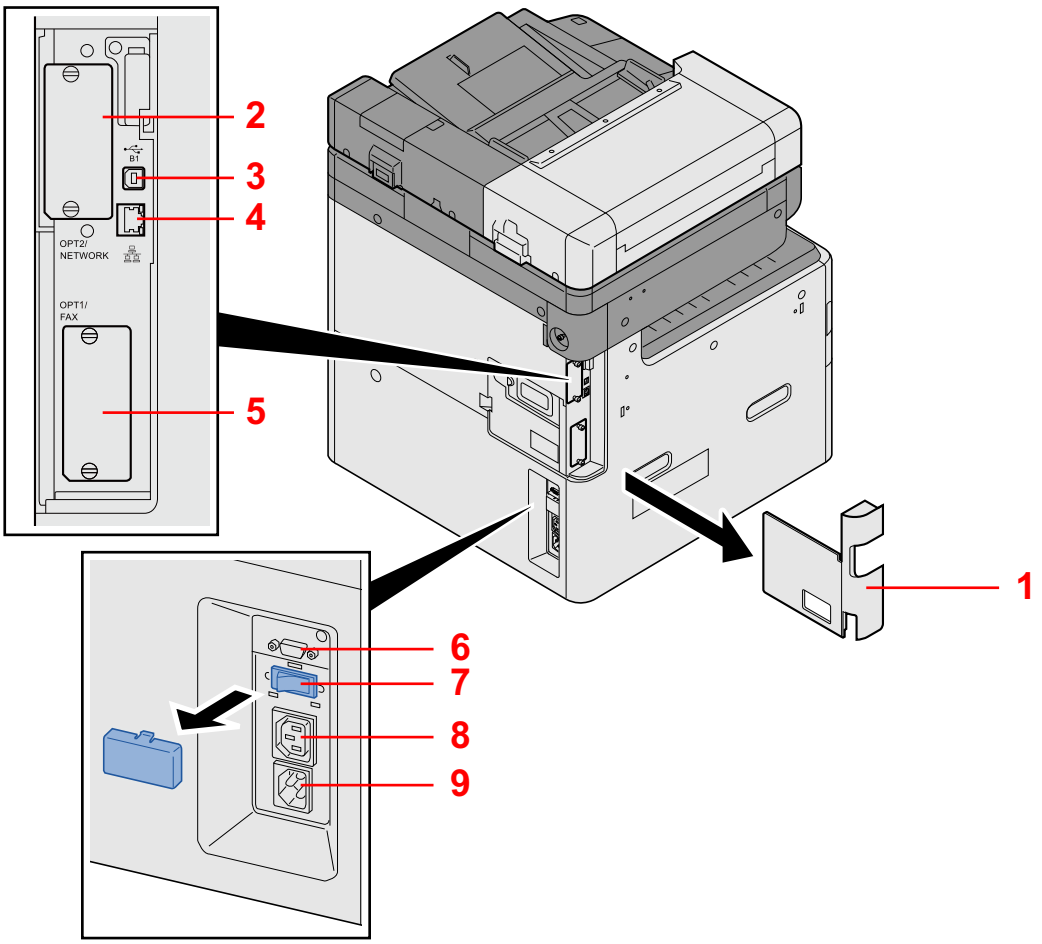


1 Document Processor
2 Platen
3 Original size indicator
4 scanner lock cover
5 Slit glass
6 Operation panel PWB (7-inch panel model)
7 Inner tray
8 Front Cover
9 Cassette 1
10 Power switch
11 USB Memory Slot
12 Right cover 1
13 Handles
14 JS tray
15 Operation panel PWB (4.3-inch panel model)



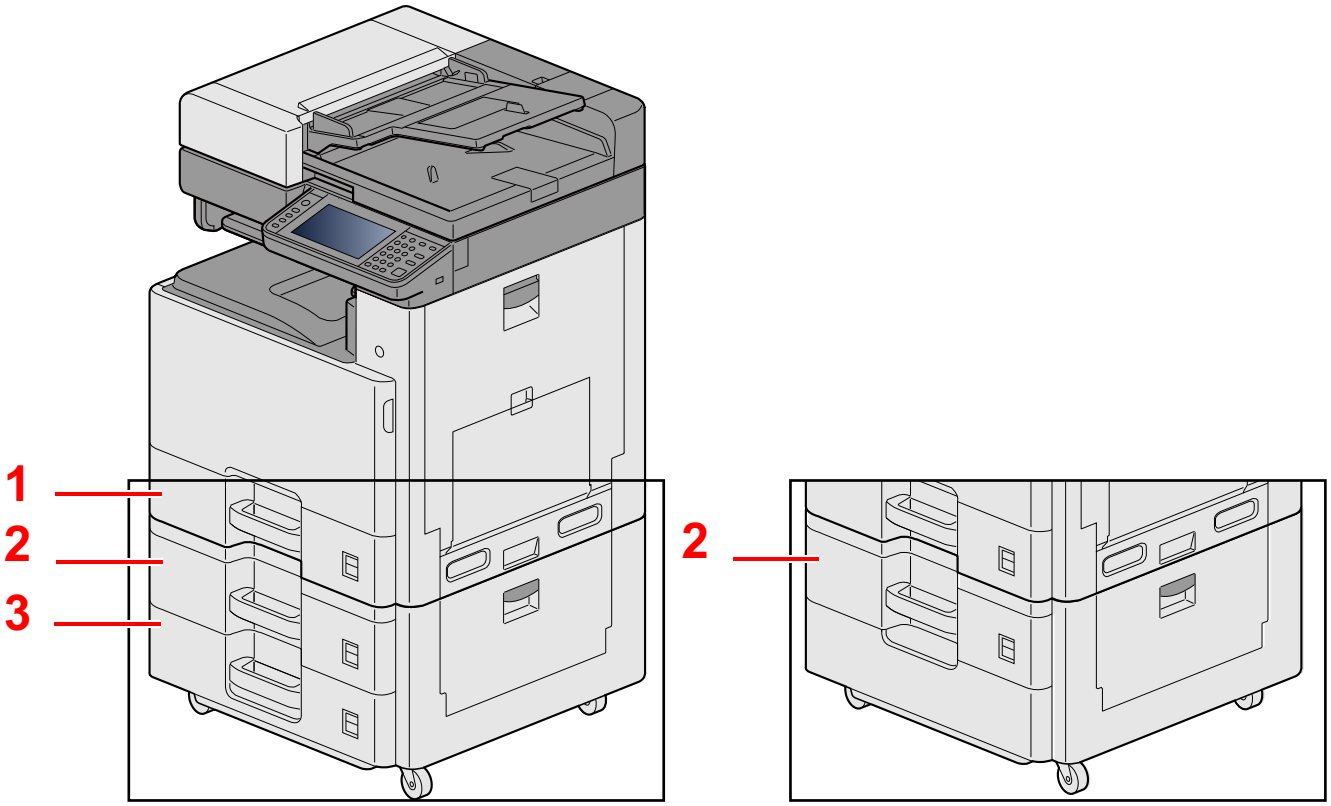
16 DP original width guide
17 DP original tray
18 Waste Toner Box
19 Toner container K
20 Toner container M
21 Toner container C
22 Toner container Y
23 Waste punch box
24 Paper width guides
25 Paper length guide
26 MP tray
27 MP paper width guides

(2) Connector

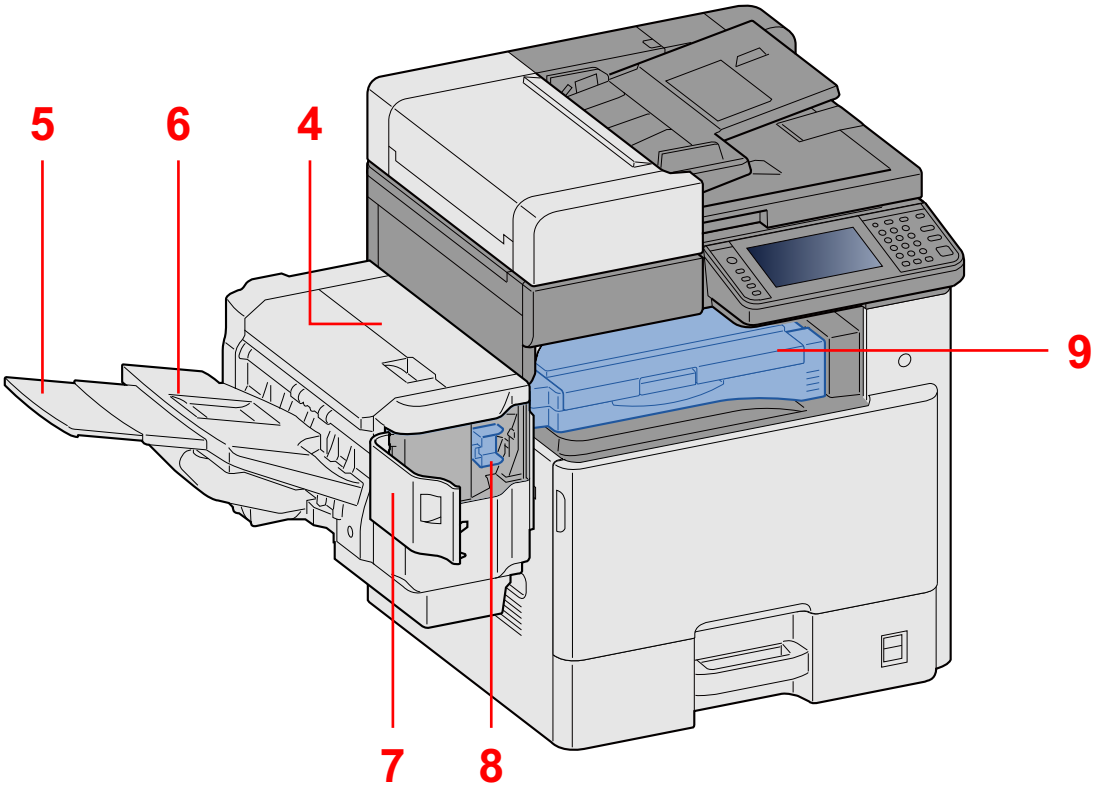


1 Control box cover
2 Option interface (Slot 1)
3 USB Interface Connector
4 Network Interface Connector
5 Option interface (Slot 2)
6 DF Interface connector (30 ppm model only)
7 Cassette heater switch
8 Outlet connector (30 ppm model only)
9 Inlet connector

(3) With Optional Equipments Attached

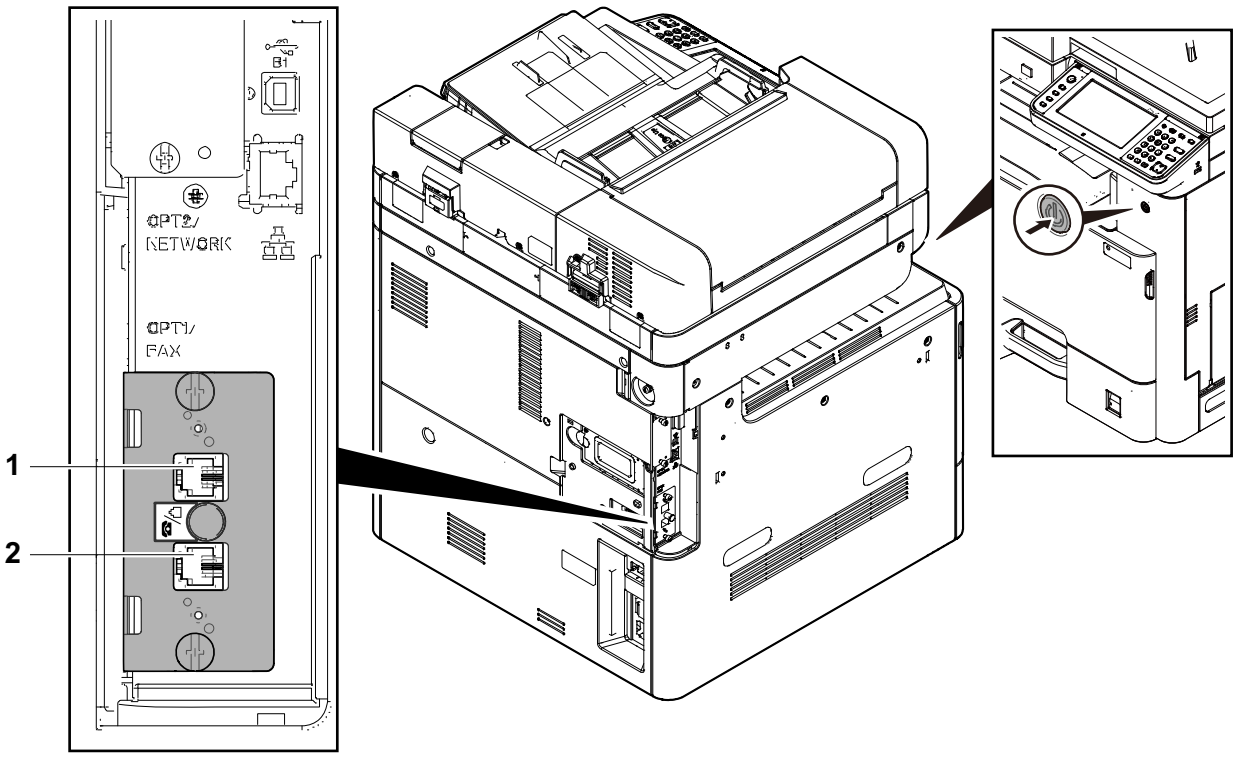


1 Cassette 1
2 Cassette 2
3 Cassette 3



4 DP top cover (30 ppm model only)
5 DF sub tray (30 ppm model only)
6 DF tray (30 ppm model only)
7 DP staple cartridge cover (30 ppm model only)
8 Staple cartridge holder (30 ppm model only)
9 BR conveying section (30 ppm model only)

(4) FAX System



1 LINE Connector (L1)
Connect the modular cords for telephone line.

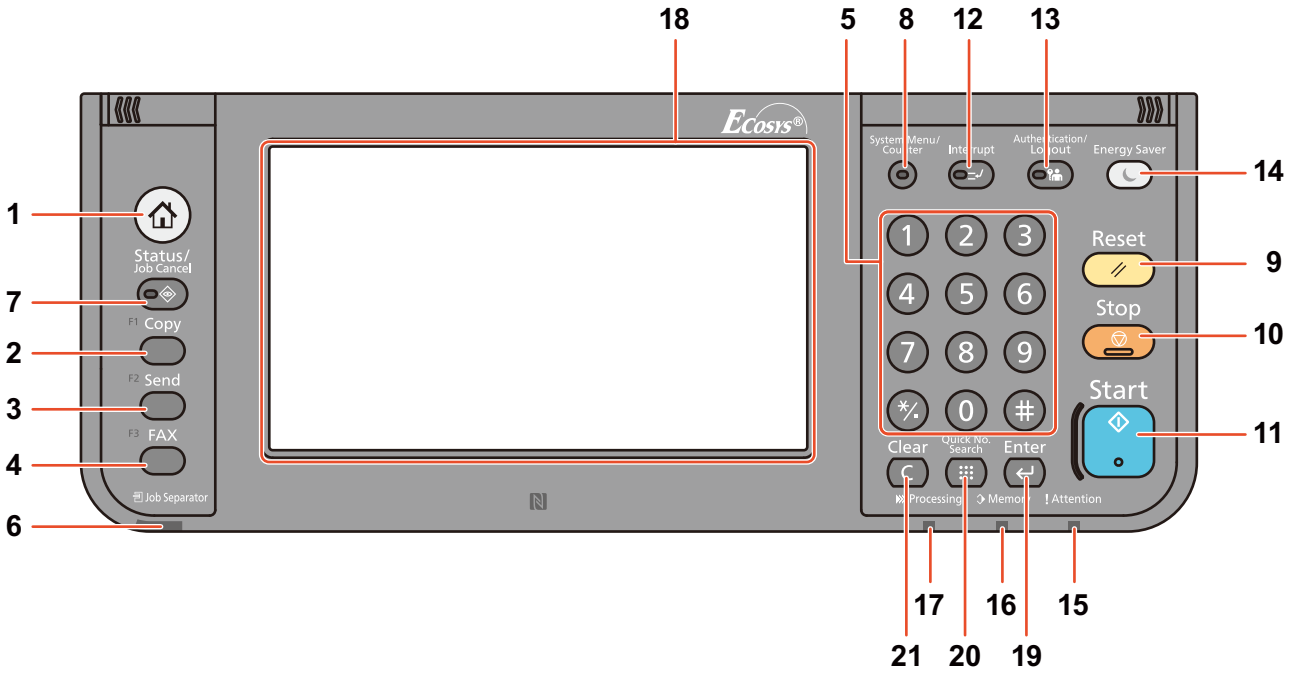
2 TEL Connector (T1)
When using an optional handset or available telephone, connect it here.

Note

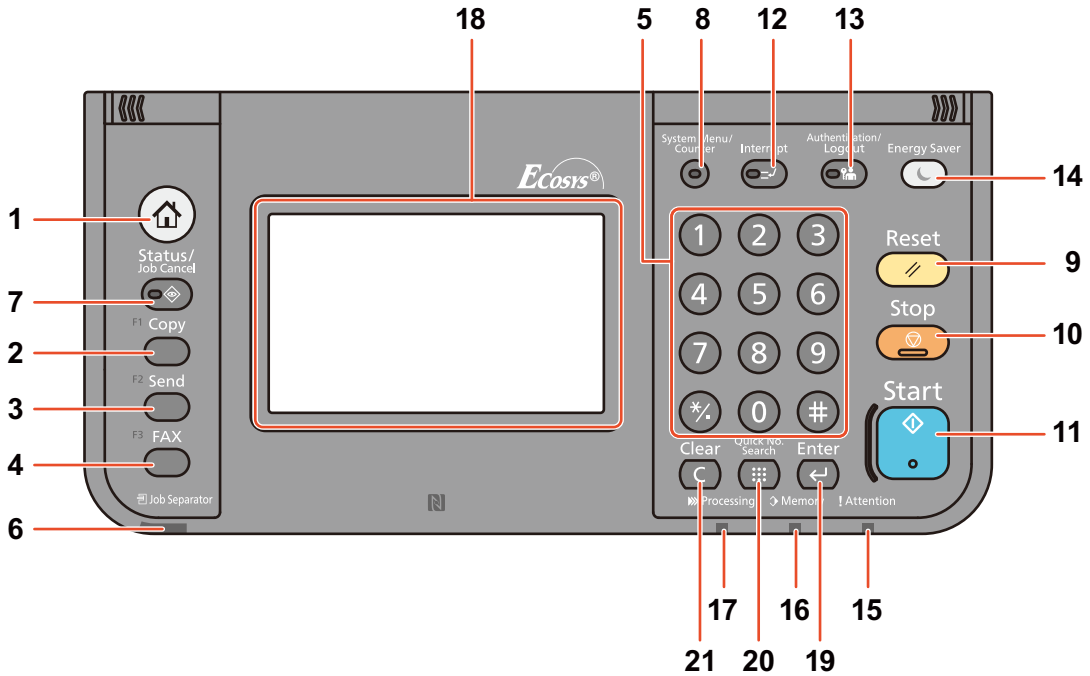
Specification subject to change for improvement of performance without notice

⑸ Operation Panel Keys

7-inch panel model



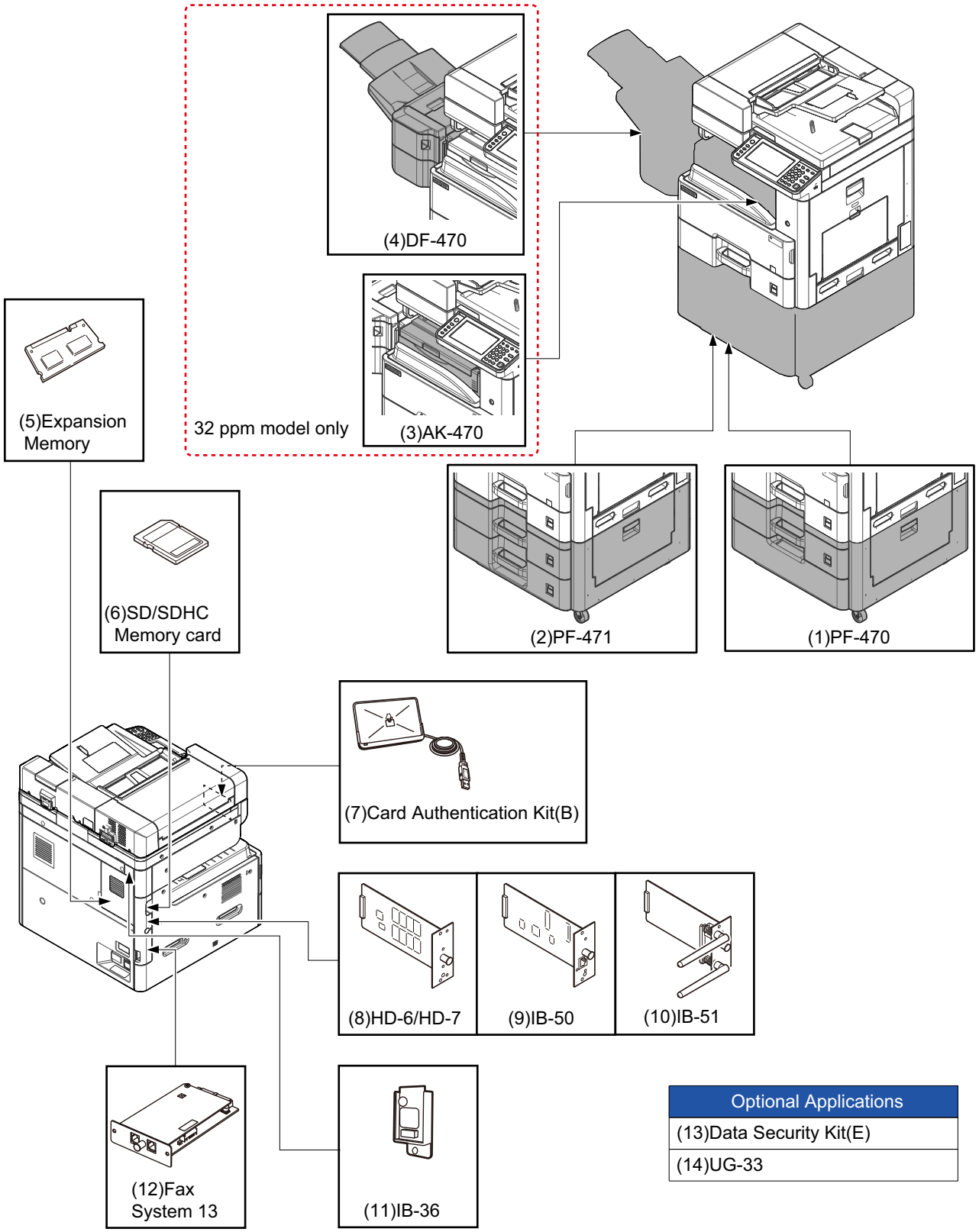
4.3-inch panel model



No.	Product name	Description
1	[Home] key	Shift the function setting value to the default and move to the home screen
2	Function Key (1)	These keys enable various functions and applications to be registered.
3	Function Key (2)	These keys enable various functions and applications to be registered.
4	Function Key (3)	These keys enable various functions and applications to be registered.
5	[Numeric Keypad] key	Key to input the value in the panel
6	Job separator, LED	Blinking when operating the job separator
7	[Status / Job Cancel] key / LED	Transitions to the screens of copy and print job processing, each transmission processing status check, stop, and job priority processing (interruption).
8	[System Menu] key / Counter / LED	Displays on the LCD screen the transition to the system menu screen and total counter values (scan, print, etc.) inside the system.
9	[Reset] key	Transitions the function setting value to the default and displays the basic screen in each of the functions.
10	[Stop] key	Cancels or pauses the job in progress.
11	[Start] key / LED	Starts copying and scanning operations and processing for setting operations.
12	[Interrupt] key / LED	Displays the Interrupt Copy screen.
13	[Logout] key / LED	Authenticates user switching, and exits the operation for the current user
14	[Energy Saver] key / LED	Recovers from Sleep if in Sleep Mode.
15	Attention, LED	Lights or blinks when an error occurs.
16	Memory, LED	Blinks while the machine is accessing the hard disk or USB memory (general purpose item).
17	Processing, LED	Blinks during print processing, Fax transmission, i-Fax transmission, scan transmission, Fax reception, i-Fax reception and print data reception.
18	Touch panel	Full color 7 inch LCD, Full color 4.3 inch LCD
19	[Enter] key	Confirm the numeric key input or on-going function setting. Links to [OK] on the touch panel.
20	[Quick No. Search] key	Direct the registration contents by number such as the address number, user ID, etc.
21	[Clear] key	Erases number or character input.

1 - 3 Optional Equipment

The following options are available for this machine.



Optional Applications
(13)Data Security Kit(E)
(14)UG-33

⑴ PF-470 <500 sheets x1 Paper Feeder>

One additional cassette identical to the machine's cassette can be installed in the machine. Paper capacity and loading method are the same as the standard cassettes.

⑵ PF-471 <500 sheets X 1 Paper Feeder>

Two additional cassettes identical to the machine's cassette can be installed in the machine. Paper capacity and loading method are the same as the standard cassettes.

⑶ AK-470 <Attachment kit > (30 ppm model only)

Paper conveying unit from main unit exit to the finisher entry guide

⑷ DF-470 <500 sheets Finisher> (30 ppm model only)

This equipment can stack high capacity paper and can offset each copy to sort.

Sorted output documents can be stapled.

⑸ Expansion memory

Expanding memory enables more complex printing and speeds up print job processing. The optional Expansion Memoryprovides an additional 2048 MB of memory, allowing expansion up to 3072 MB.

⑹ SD/SDHC memory card

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

⑺ 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.

⑻ HD-6/HD-7 <SSD>

With SSD installed in the machine, received data can be rasterized and stored on this Hard Disk. This enables high-speed printing of multiple copies using an electric sort function. Also, the document box function can be used.

⑼ IB-50 <Network Interface Kit>

The Network Interface Kit provides a high-speed connection for the Gigabit-per-second interface. IB-50 supports traditional protocols such as AppleTalk, Netware and so on.

Only supports minimum function of standard utilities.

⑽ IB-51 <Wireless Network Interface Kit>

This is a wireless LAN interface card which supports the wireless LAN specifications IEEE802.11n (Max 300 Mbps) and 11 g/b. IB-51 supports traditional protocols such as AppleTalk, Netware and so on.

Only supports minimum function of standard utilities.

The IB-51 setup utility is compatible with a Windows OS and Mac OSX.

⑾ IB-36 <Wireless Network Interface Kit>

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

(12) FAX System 13 <FAX Kit>

By installing the FAX kit, fax send/receive is enabled. Also, it is possible to use it as a network fax, by using it with a computer. Refer to the Fax operation guide for details.

(13) 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.

(14) UG-33 <ThinPrint Option>

This application allows print data to be printed directly without a print driver.

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:

AC100V	50/60Hz	15A or more
AC110V	60Hz	13A or more
AC120V	60Hz	12A or more
AC220 to 240V	50Hz	7.2A 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.

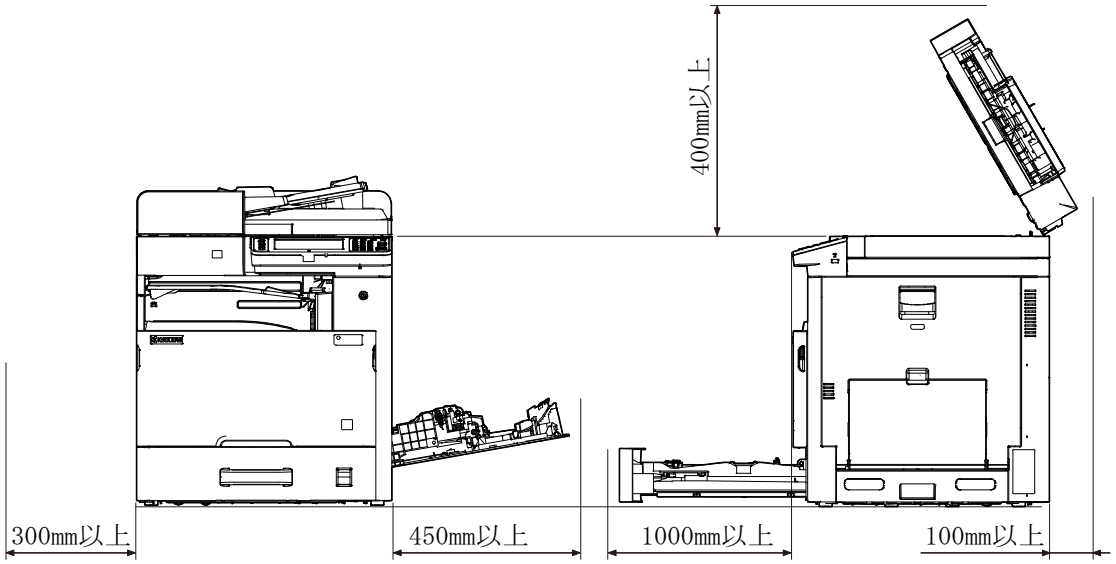
- Avoid locations near a window or with exposure to direct sunlight
- Avoid locations with vibrations
- Avoid locations with rapid temperature fluctuations
- Avoid locations with direct exposure to hot or cold air
- Avoid poorly ventilated locations

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.

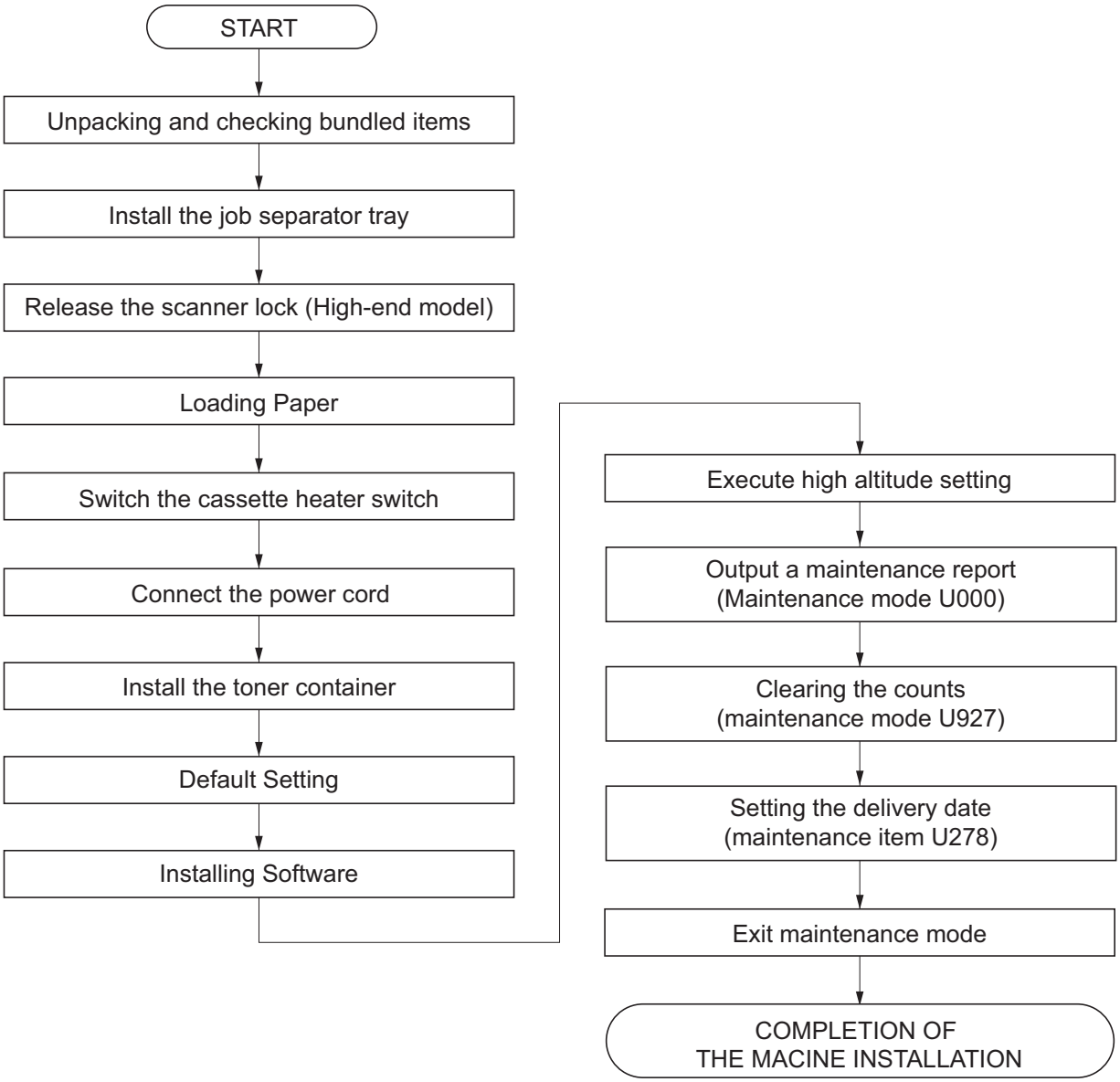
If, however, the machine is used over a long period of time in a poorly ventilated room or when making an extremely large number of copies, the smell may become unpleasant. To maintain the appropriate environment for copy work, it is suggested that the room be properly ventilated.

Installation space



2 - 2 Installing the main unit

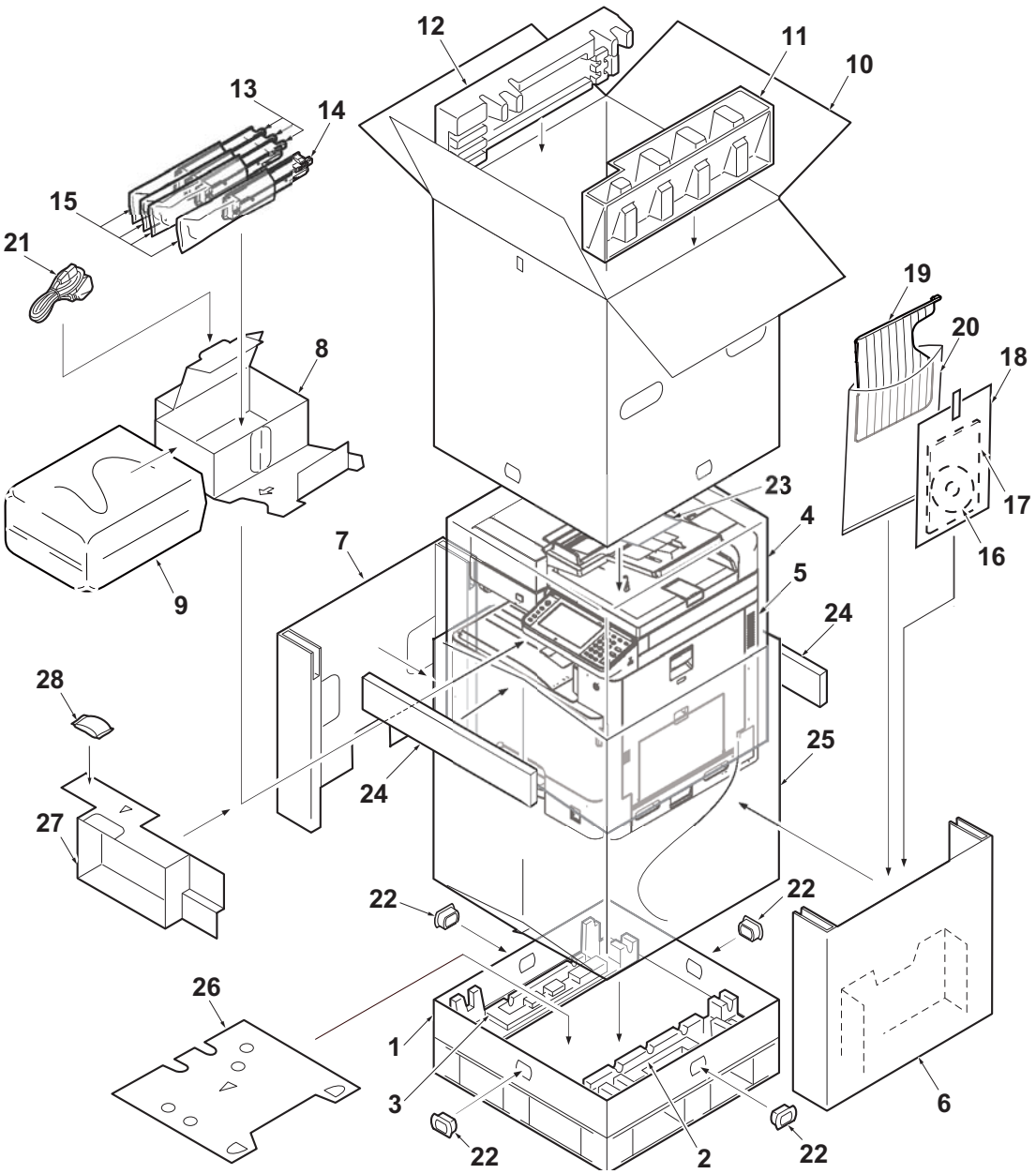
Installation procedures



(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.



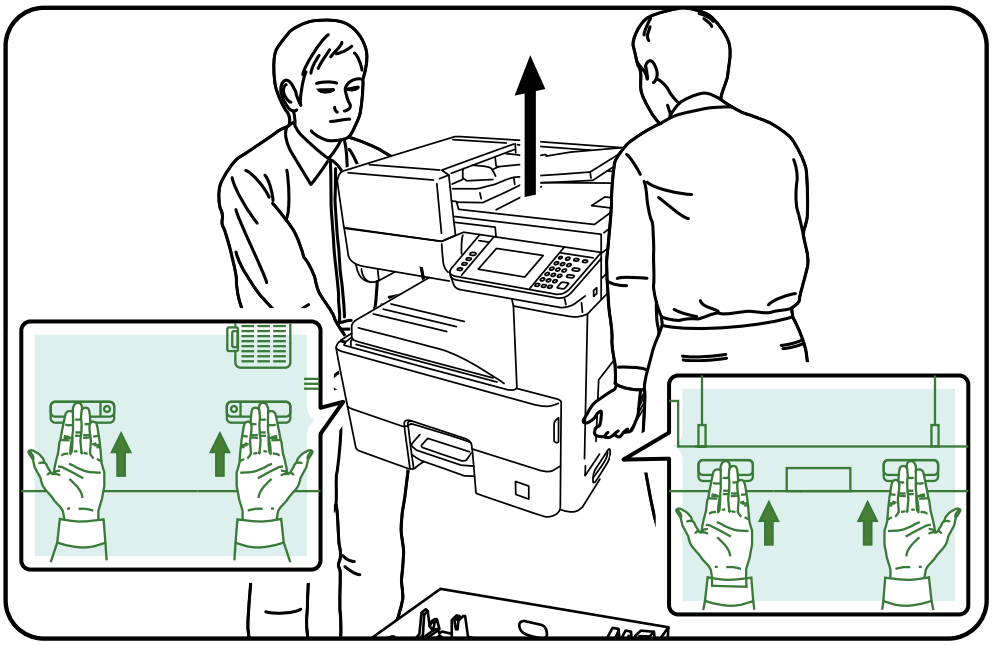
1 Bottom case	9 Plastic bag (540x950)	16 DVD	24 Stay
2 Bottom pad R	10 Outer case	17 Installation guide, etc.	25 Plastic bag (for vacuum pack)
3 Bottom pad L	11 Upper pad R	18 Plastic bag	26 Lower pad
4 Machine cover	12 Upper pad L	19 JS tray	27 Front pad
5 Main unit	13 Toner container YCM	20 Plastic bag (400x600)	28 Desiccant
6 Inner case R	14 Toner container K	21 Power cord	
7 Inner case L	15 Plastic bag (250x650)	22 Hinge	
8 Spacer A		23 Setup guide	

Caution

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

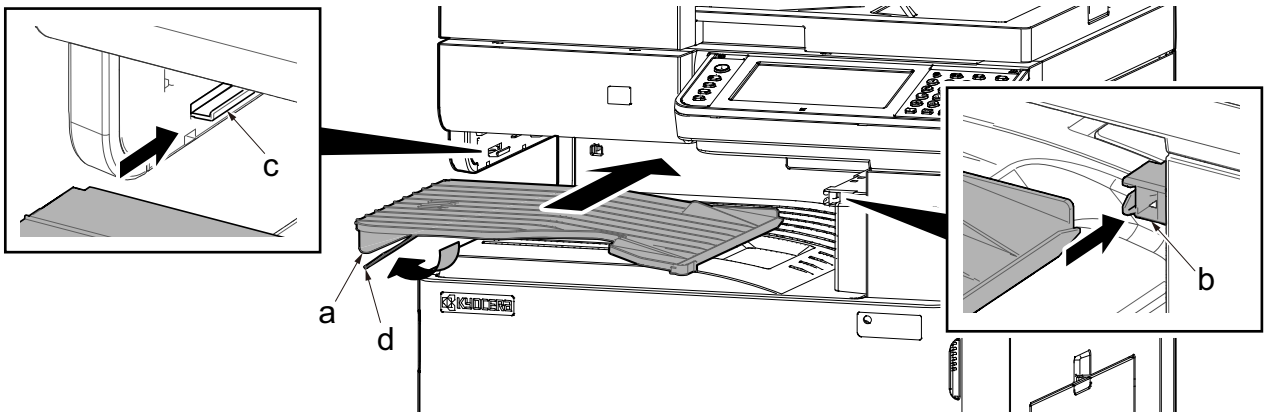
⑵ Notes on main unit transportation

When transporting the main unit, lift the front and rear handle of the lower part of the main unit with two persons as shown in the figure.
Do not hold the operation unit because it will cause damage.



⑶ Attaching the job separator tray

1 Turn the paper stopper (d) of job separator tray and attach the job separator tray (a) by inserting it while aligning to the right guide (b) and the left guide (c).



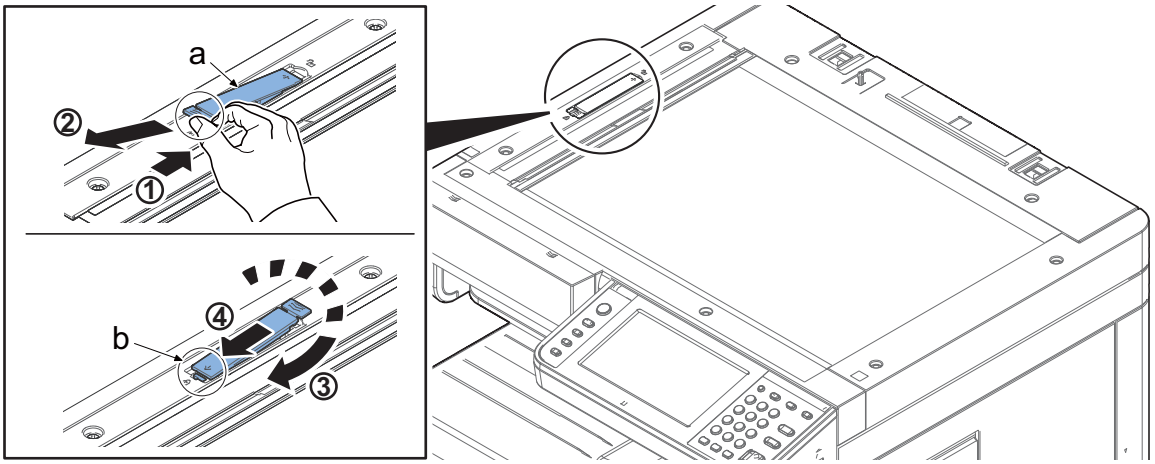
⑷ Unlocking the scanner mirror frame (CCD model only)

1 Unlock the lock of the scanner mirror frame.

1 Raise the triangle mark side of the optical lock cover (b) with a flat-blade screwdriver (a) and slide it in the direction of the arrow to remove it.

2 Place it reversely and put the optical lock cover (b) into the aperture of the hook (c) to fit in the direction of the arrow.

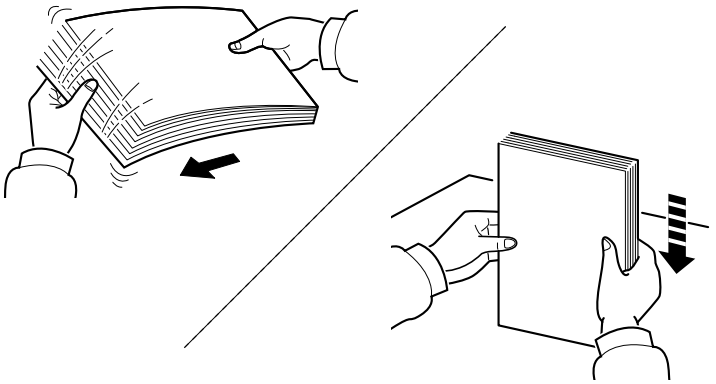
- In case of omitting to unlock, C3100 occurs.



⑸ Loading Paper

⑸-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

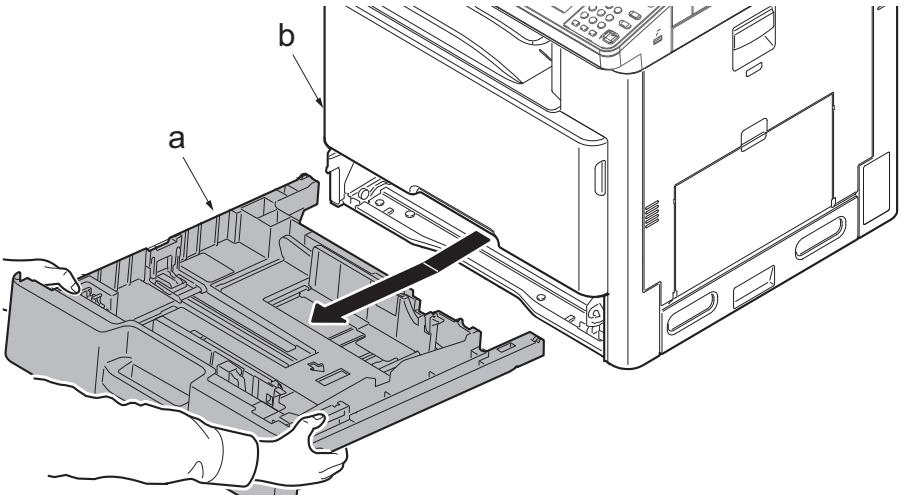
If you reuse paper already used for printing, remove staples or clips. Do not use paper with a staple or clip. This may cause poor image quality or malfunctions.

⑸-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^2) or 500 sheets of plain paper (80g/m^2).

1 Pull the cassette completely out of the main unit.

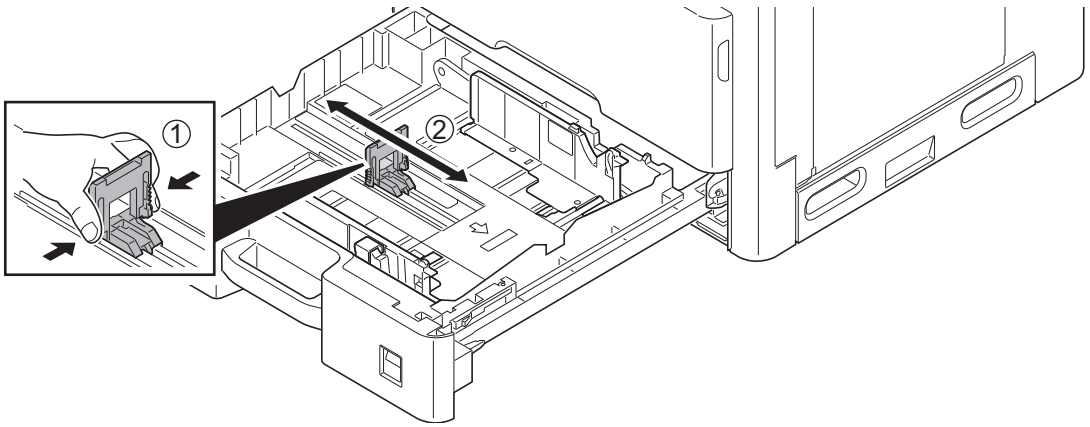


Note

In case of PF installed do not pull out multiple cassettes simultaneously.

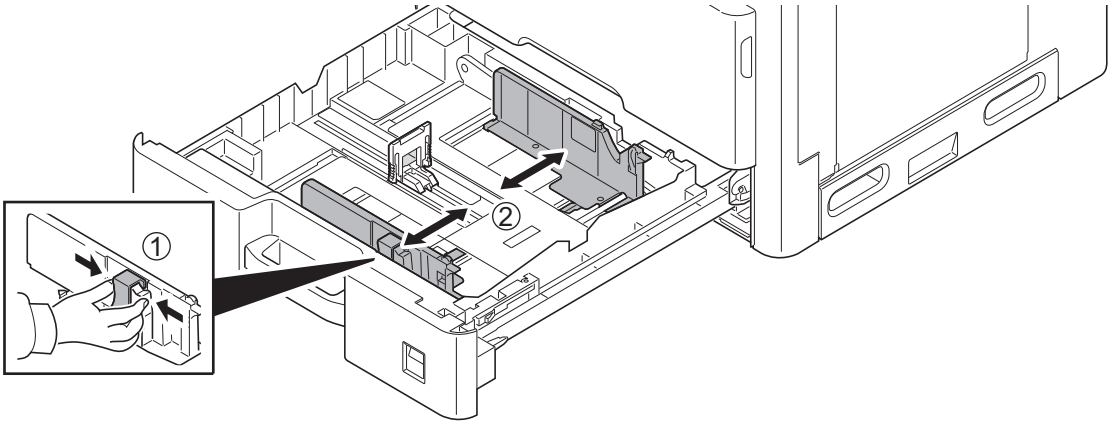
2 Adjust the position of the paper length guide.

1 Press the tab and slide the guides to the paper size to use.



3 Adjust the position of the paper width guides.

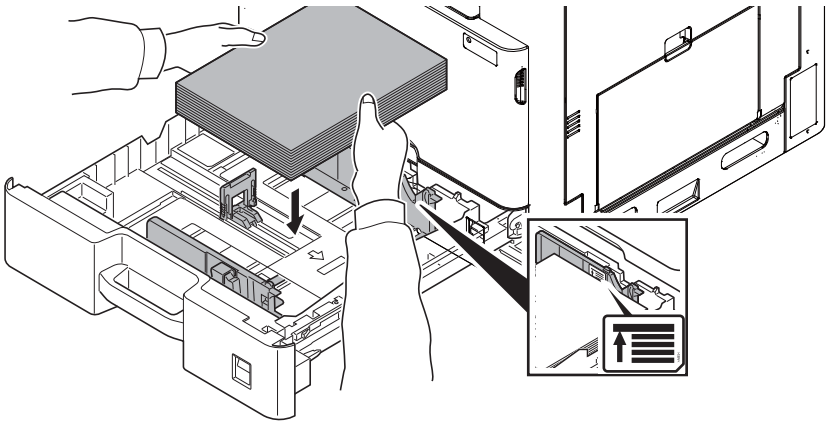
1 Press the tab and slide the guides to the paper size to use.



4 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.

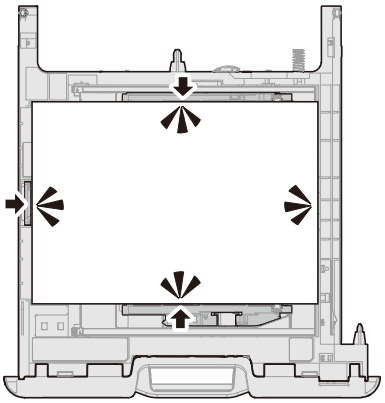


Important

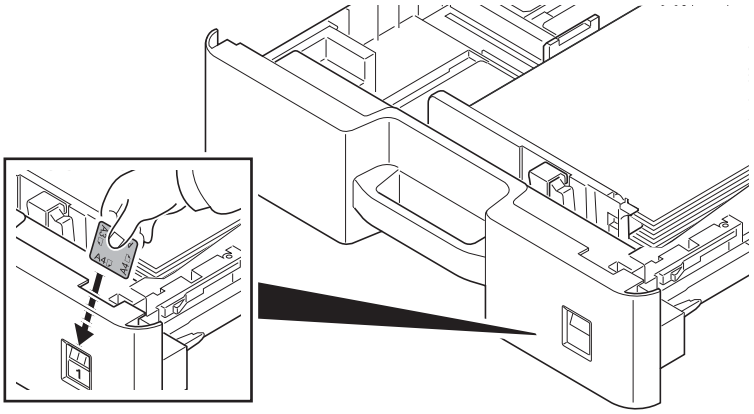
- Load the paper with the print side facing up.
- Before loading paper in the cassette, fan the paper taken from a new package to separate it. (2-7pageSee page)
- Before loading the paper, be sure that it is not curled or folded. Such paper may cause paper jams.
- Make sure that the loaded paper does 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.

5 **Check the paper length guide and paper width guide are securely aligned to the paper.**

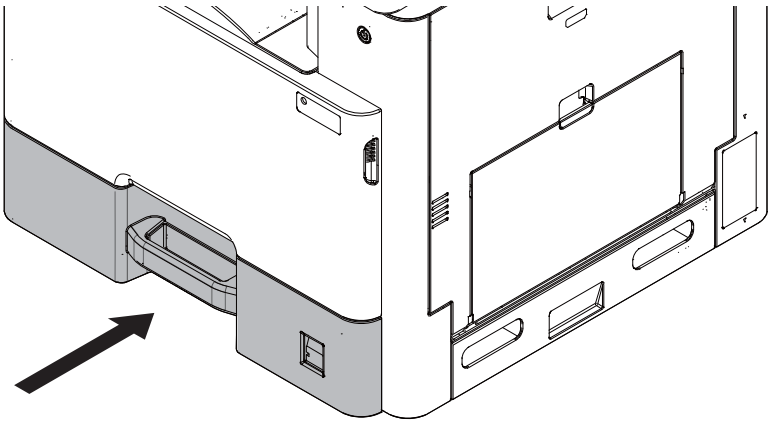
Re-align the paper length guide or paper width guide if gaps are observed.



6 **Insert the paper size sheet.**



7 **Gently insert the cassette all the way into the main unit.**



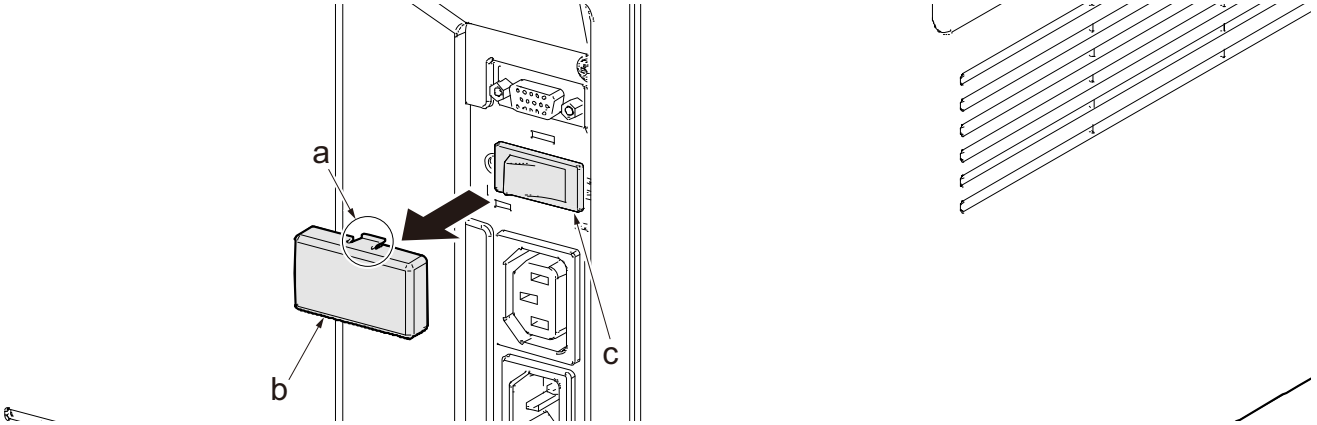
⑹ Switching the cassette heater switch

1 Switch the cassette heater switch.

1 Release the hook (a) and remove the cassette heater switch cover (b).

2 Switch the cassette heater switch (C).

3 Reattach the cassette heater switch cover (b) in the original position.



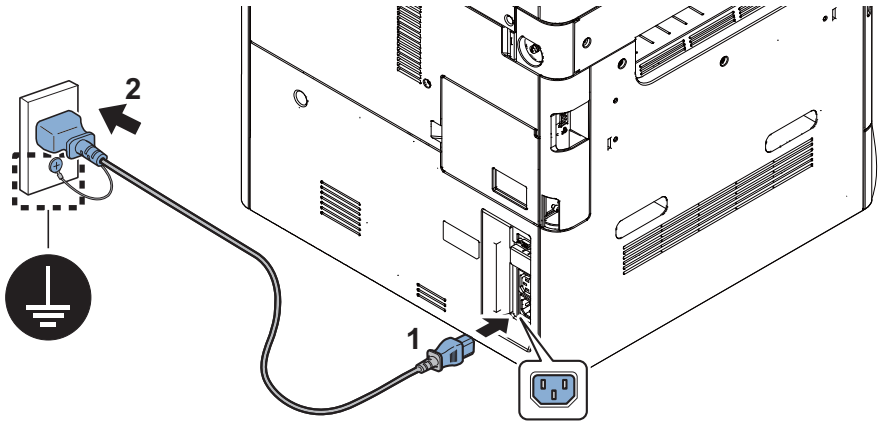
Note

Turn on, only when using the cassette heater.

⑺ Connecting the Power Cord

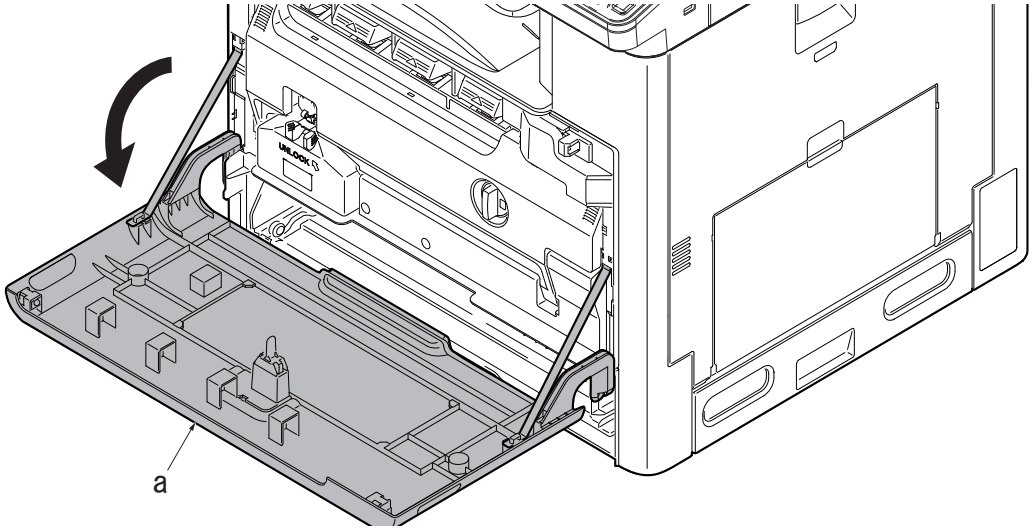
1 Connect one end of the supplied power cord to the main unit and the other end to a power outlet.

- Power is supplied when connecting the power cord.
- Only use the power cord that comes with the main unit.

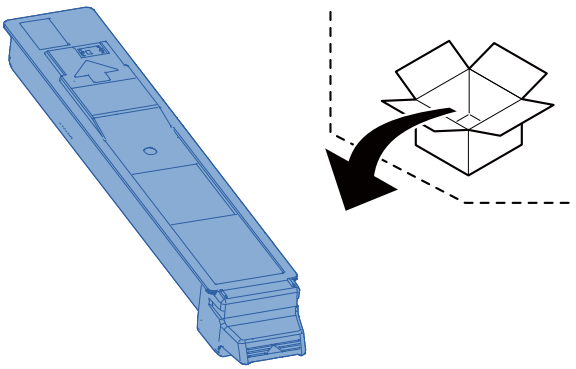


⑻ Setting up the Toner Container

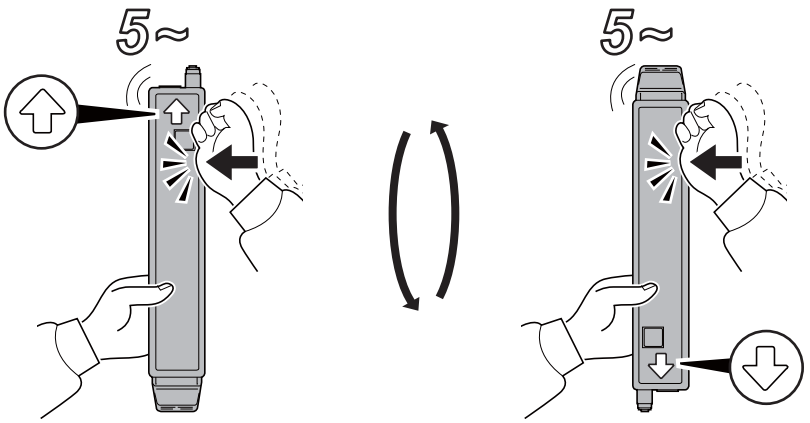
1 Open the front cover.



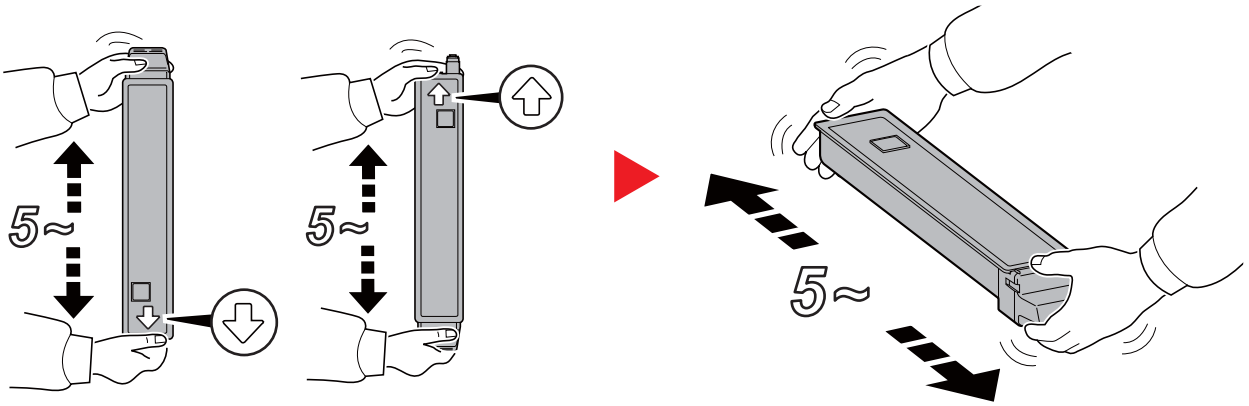
2 Take out the new toner container.



3 Slightly tap the toner container.

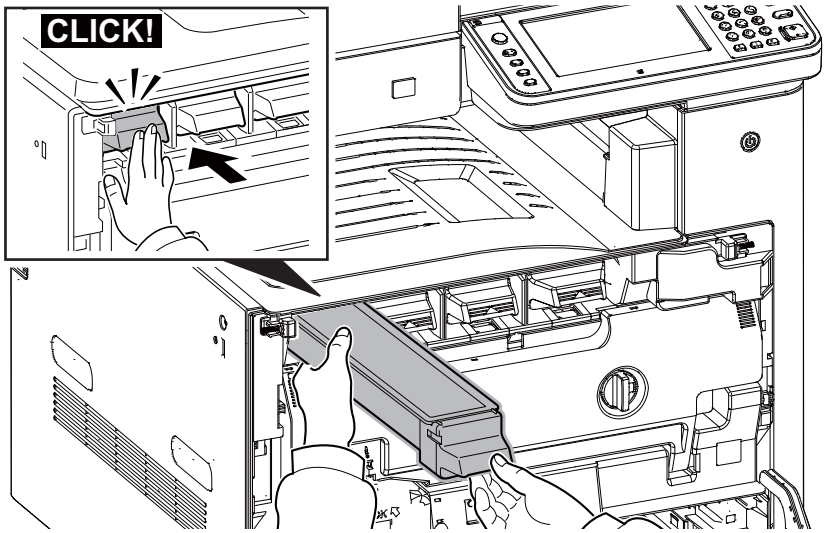


4 Shake the toner container.

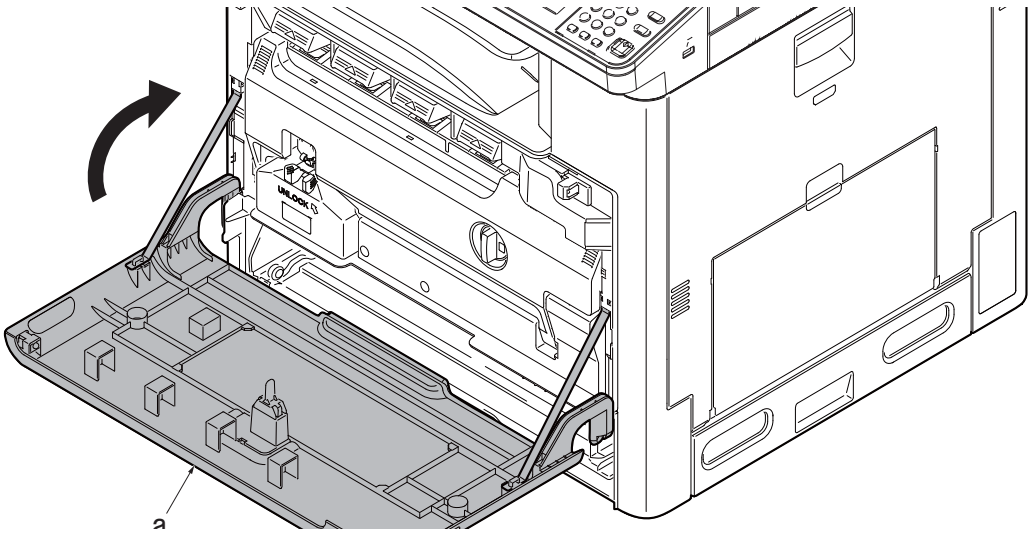


5 Install the toner container.

Push the toner container all the way into the main unit until it locks in place.

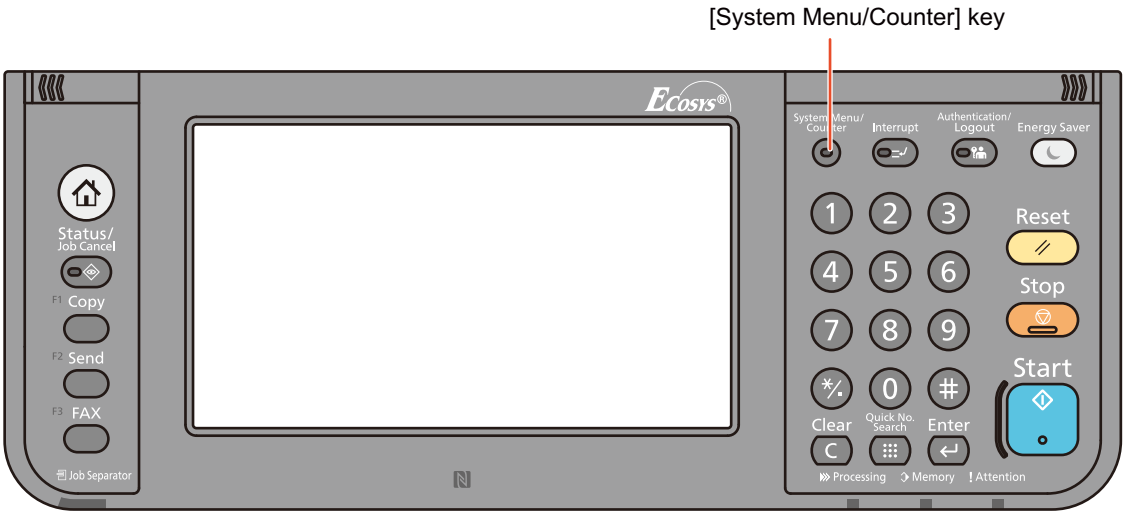


6 Close the front cover.



⑼ Default Setting

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



⑼-1 Setting Date and Time

1 Display the screen.

[System Menu/Counter] key or [System Menu] > [Date/Timer/Energy Saver]

2 Configure the settings.

[Time Zone] > [Date/Time] > [Date Format]

Item	Description
Time Zone	Set the time difference from GMT. Choose the nearest listed location from the list. If you select a region that utilizes summer time, configure settings for summer time.
Date/Time	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:

(9-2) 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] > [System/Network] > [Network] > [TCP/IP Setting].

Note

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

- Login User Name/Login Password (24ppm model): 2400 / 2400
- Login User Name/Login Password (30ppm model): 3000 / 3000 (except 100V model)

2 Select [IPv4] for setting.

Important

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

When using DHCP server

[DHCP]: Set to [On].

When setting the static IP address

[DHCP]: Set to [Off].

[IP Address]: Enter the address.

[Subnet Mask]: Enter the address.

[Default Gateway]: Enter the address.

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

(9-3) Paper size and media type setting

1 Select [System Menu/Counter] key > [Cassette/MP tray Settings].

2 Select [Cassette Setting] > [Cassette 1 (- 3)] or [MP Tray Setting].

3 Select [Paper Size] and [Media Type] to set them.

(10) 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)

(11) Setup at high altitude

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

When the printing quality declines in the environment of an altitude higher than 1000m sea level, the setting of [Altitude Adjustment] mode can recover the printing quality.

1 Enter [Service Settings] menu.

2 By pressing [Λ] [V] key, select [Altitude Adjustment].

3 Press the [Start] key.

4 By pressing [Λ] [V] key, s elect the altitude range of [Normal], [1001 to 2000m], [2001 to 3000m] or [3001 to 3500m].

5 Press the [Start] key to set the setting value.

6 Press the [Stop] key.

(12) Output Maintenance Report (Execute 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 maintenance report.

3 Press the [Stop] key.

(13) 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.

(14) 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.

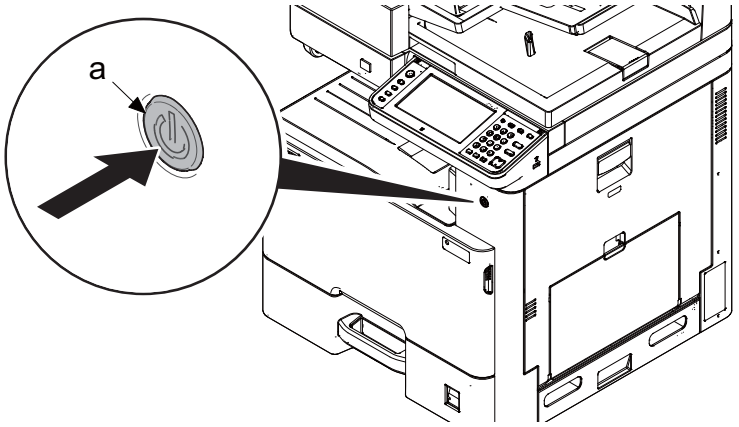
(15) Exiting from the maintenance mode

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

- The maintenance mode is exited.

(16) Completion of installing the main unit

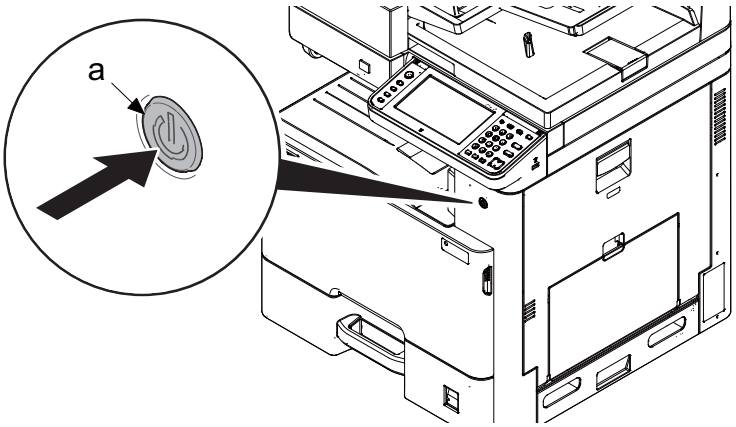
1 Make sure that each indicator is not flashing, and then push the power switch (a). (OFF)



2 Select [Yes] in the confirmation screen.

- It takes a few minutes for power off.

3 Push the power switch (a). (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.

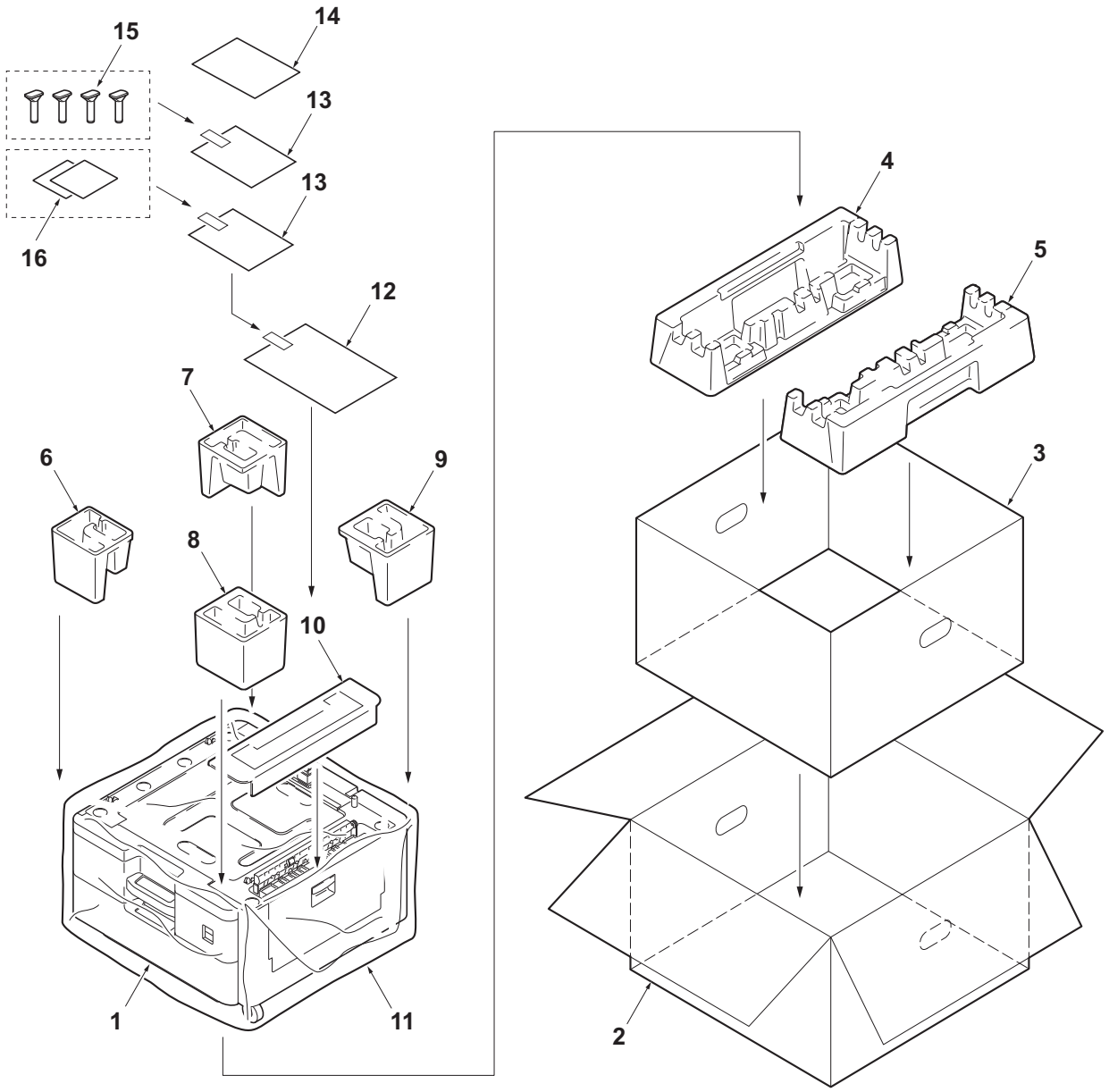
2 - 3 Installing the optional devices

(1) Unpacking and checking bundled items

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

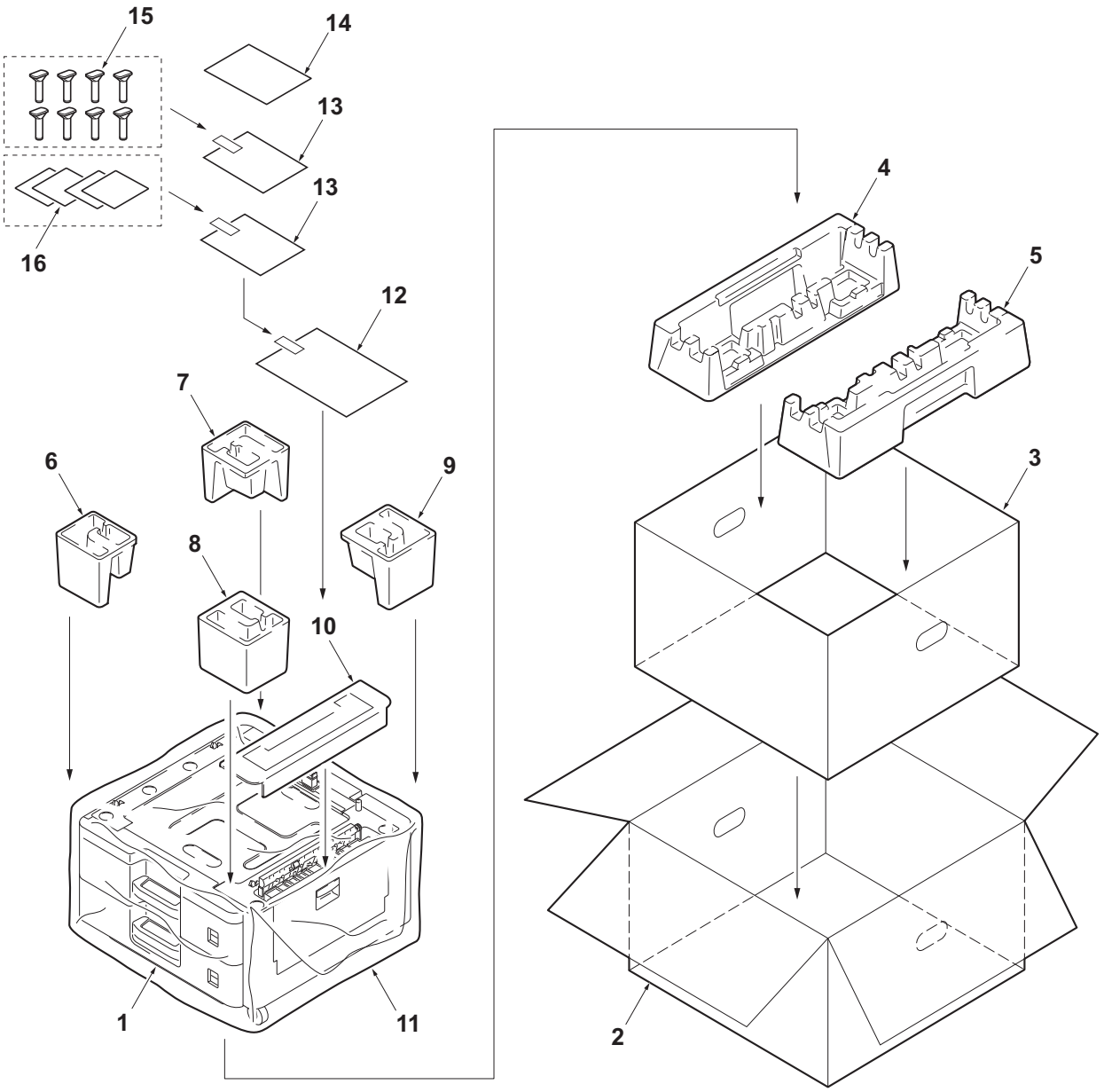
Remove the tape and cushioning materials for packing from the optional unit.

(1-1) Paper Feeder (PF-470) (Option)



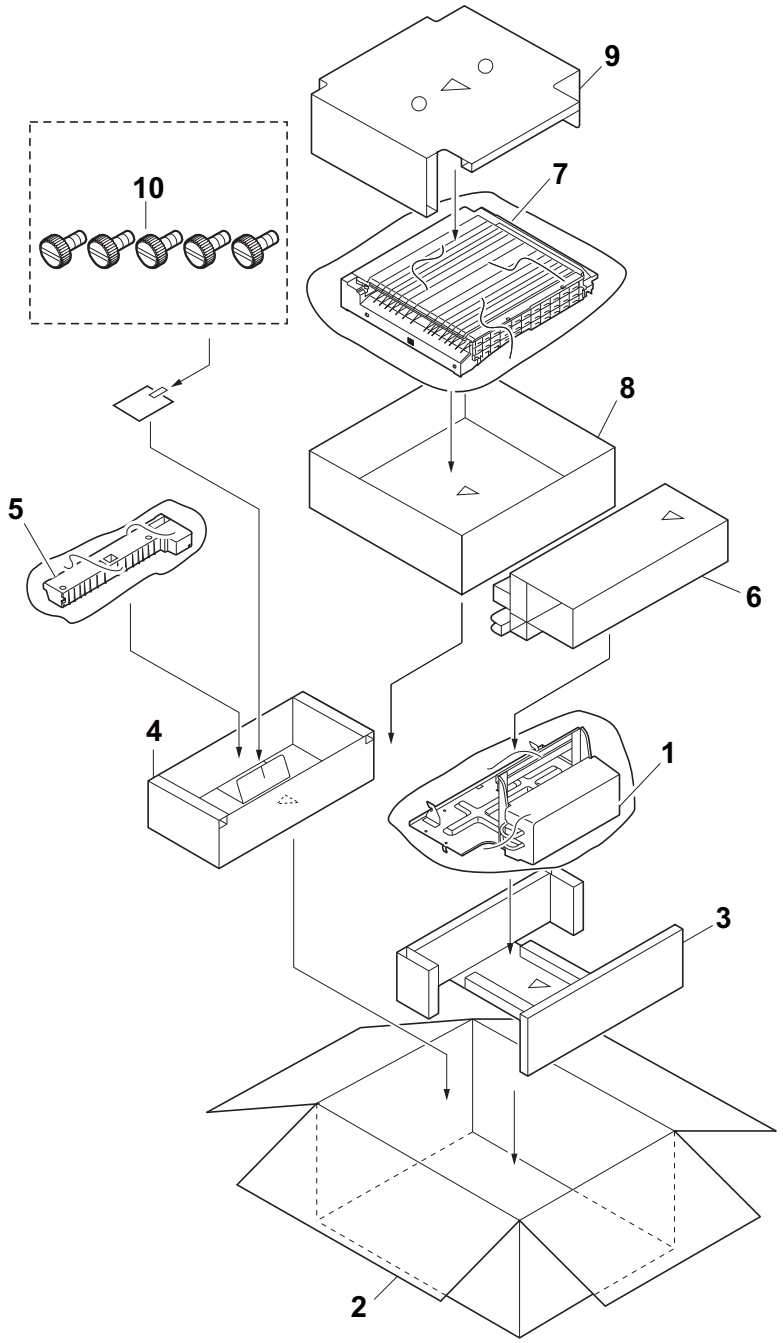
1 Paper Feeder	7 Paper Feeder	13 Plastic bag (70x110)
2 Outer case	8 Outer case	14 Installation guide
3 Inner case	9 Inner case	15 Cursor pins
4 Bottom left cushioning material	10 Bottom left cushioning material	16 Paper size plate
5 Bottom right cushioning material	11 Bottom right cushioning material	
6 Upper left front cushioning material	12 Upper left front cushioning material	

⑴-2) Paper Feeder (PF-471) (Option)



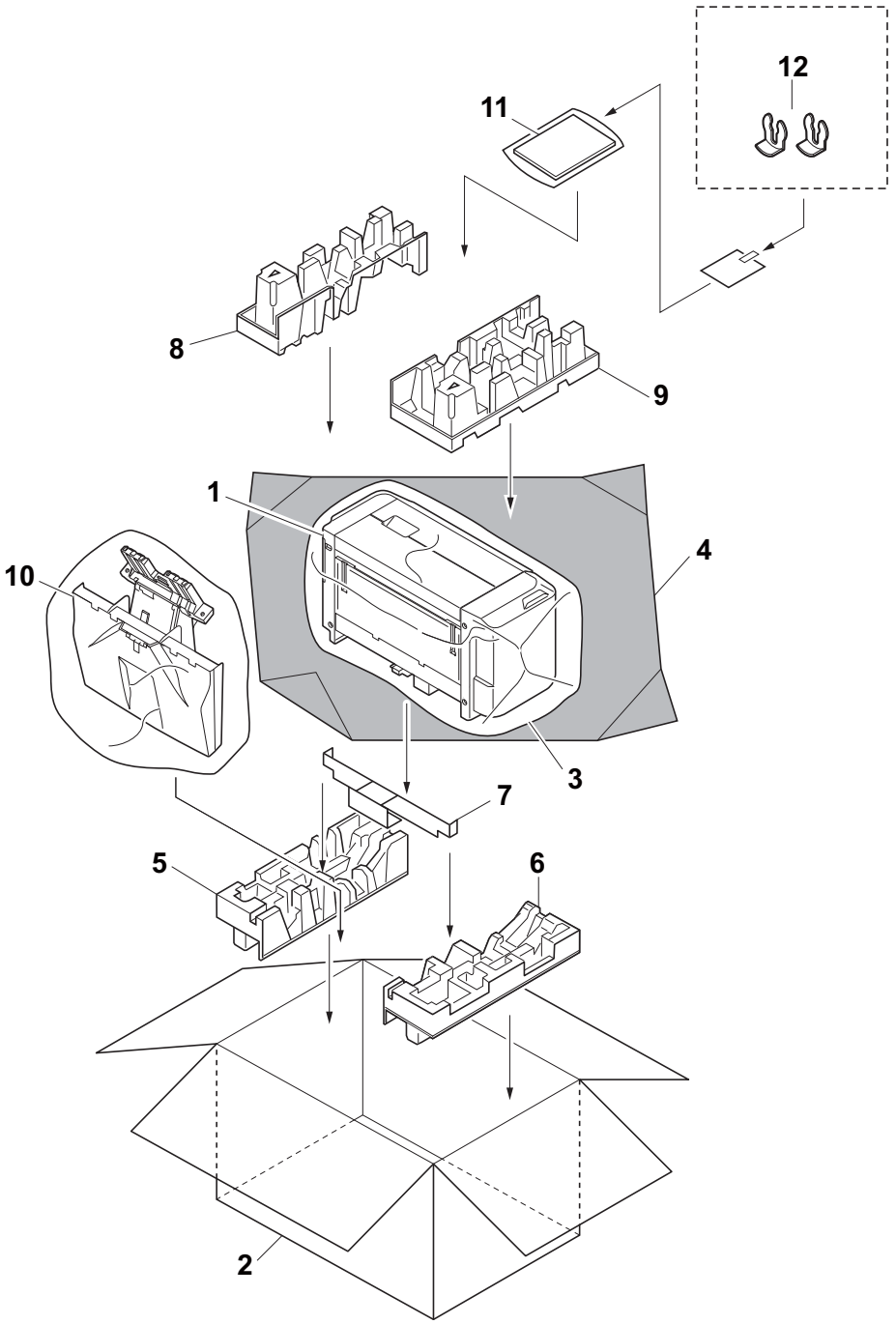
1 Paper Feeder
2 Outer case
3 Inner case
4 Bottom left cushioning material
5 Bottom right cushioning material
6 Upper left front cushioning material
7 Upper left rear cushioning material
8 Upper right front cushioning material
9 Upper right rear cushioning material
10 Top spacer
11 Poly sheet
12 Plastic bag (240x350)
13 Plastic bag (70x110)
14 Installation guide
15 Cursor pins
16 Paper size plate

⑴-3⑶ Attachment kit (AK-470) (Option)



1 BR power supply unit
2 Outer case
3 Main pad
4 Bottom spacer
5 BR lower right guide
6 Top spacer
7 BR conveying unit
8 Tray bridge
9 Upper pad
10 Pins

(1-4) 500-sheet Finisher (DF-470) (Option)



1 Finisher main body
2 Outer case
3 Protect sheet
4 Poly sheet
5 Bottom pad L
6 Bottom pad R
7 Spacer
8 Upper pad L
9 Upper pad R
10 DF exit tray
11 Installation guide
12 Stop rings

⑵ Optional unit installation

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

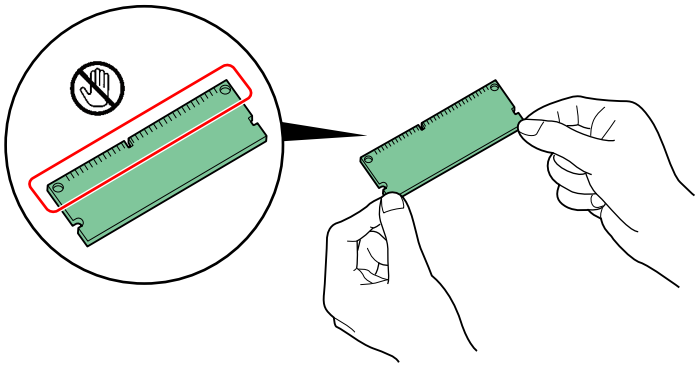
	Product name	24 ppm model	30 ppm model (Except 100V model)	Installation guide link
Network	IB-50 (Network Interface Kit)	○	○	IB-50
	IB-51 (Wireless Network Interface Kit)	○	○	IB-51
	IB-36 (Wireless Network Interface Kit)	○	○	IB-36
PF	PF-470 (500-sheet x1 Paper Feeder)	○	○	PF-470/PF-471
	PF-471 (500-sheet x2 Paper Feeder)	○	○	
DF	AK-470 (Attachment Kit)	○	×	AK-470/DF-470
	DF-470 (500-sheet Finisher)	○	×	
FAX kit	FAX System 13	○	○	Fax System 13

2 - 4 Installing the optional parts

(1) Expansion memory

The machine can perform more multiple jobs simultaneously by adding more memory. The memory can increase up to maximum 3072MB by attaching the optional expansion memory (2048MB).

Precautions for Handling the Memory



Important

Static electricity that accumulates in your body through clothing or carpets may damage a 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.

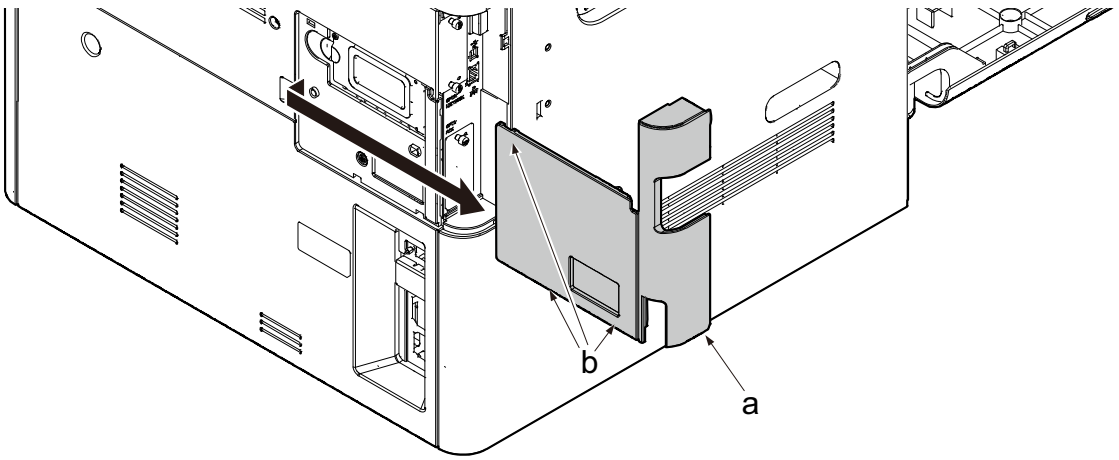
1 Remove the control box cover.

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

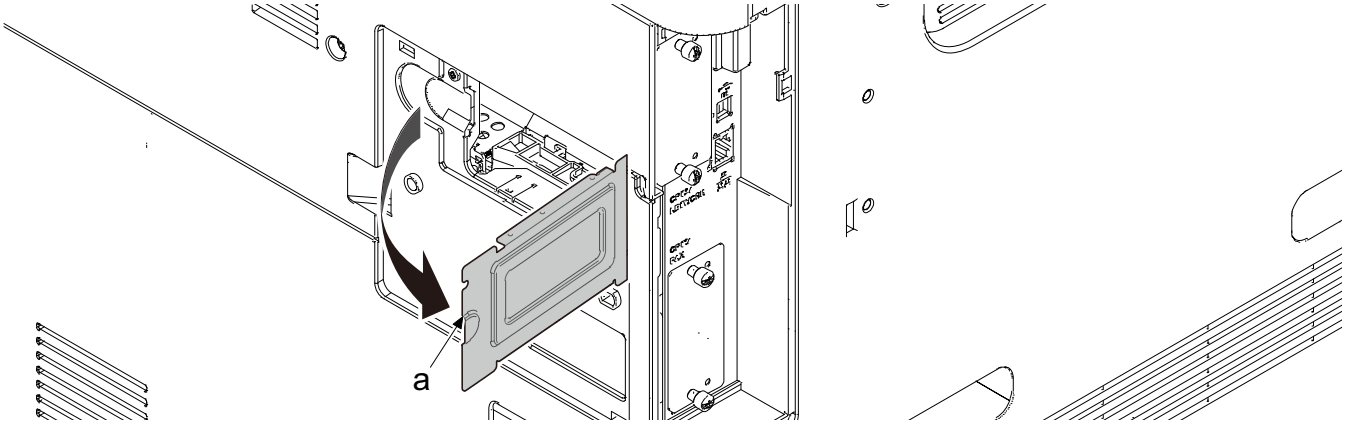
Note

The shutdown confirmation screen is displayed. It might take about three minutes to shut down.

2 Release the three hooks (b) in the direction of the arrow and remove the controller box cover (a).



2 Open the memory slot cover (a) in the direction of the arrow.

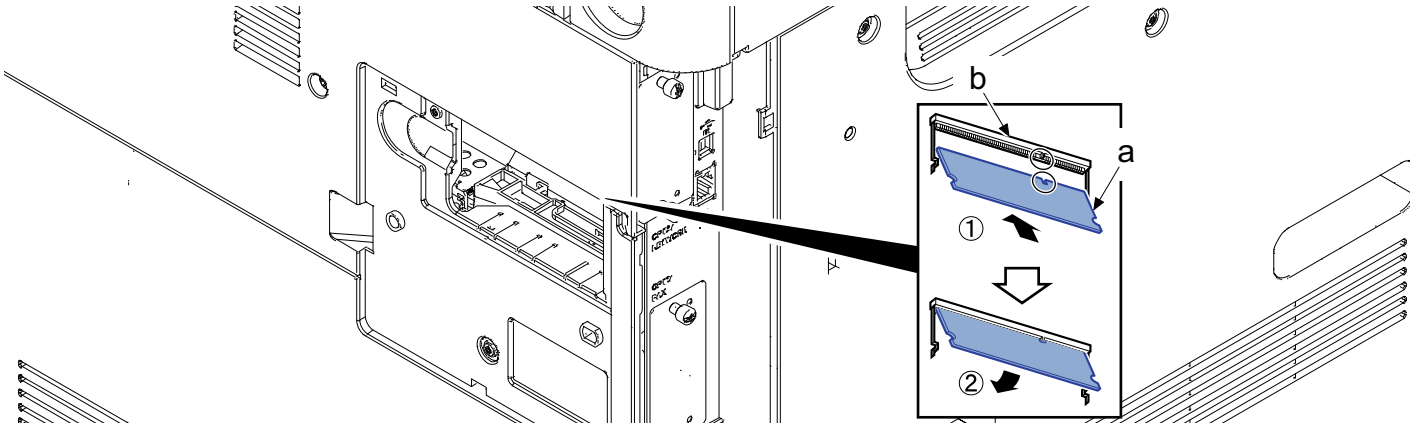


3 Attach the expansion memory.

1 Align the terminal section of the expansion memory (a) to the socket (b) side and align the cut-out section with the protruding section of the socket, and insert it diagonally and straight.

2 Carefully press the inserted memory module toward the main unit.

3 Reattach the covers.



Note

Detaching the expansion memory

To detach the expansion memory, remove the rear left cover from the main unit. Then, carefully push the two stoppers so that the expansion memory pops up from the socket.

Checking the expansion memory

In order to verify if the expansion memory is installed properly, print out a status page and check its content.

⑵ 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.

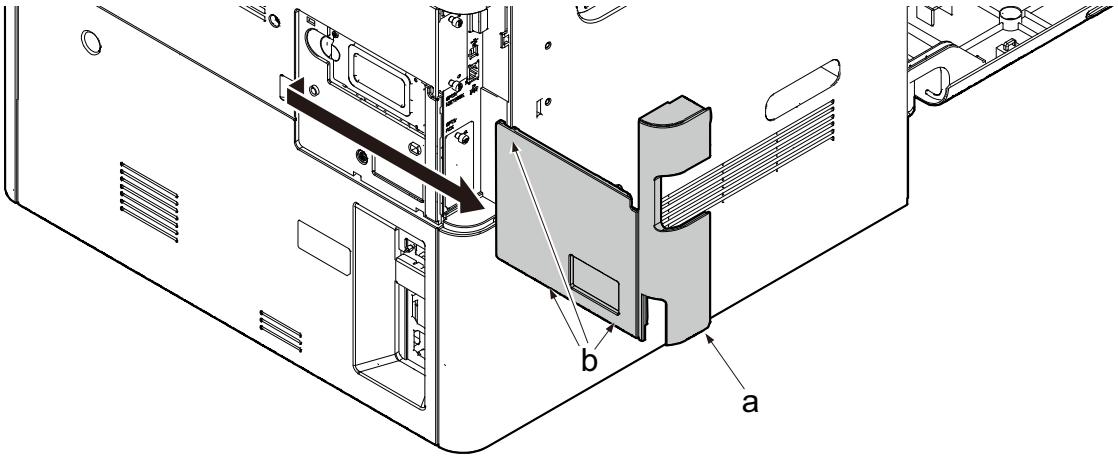
1 Remove the control box cover.

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

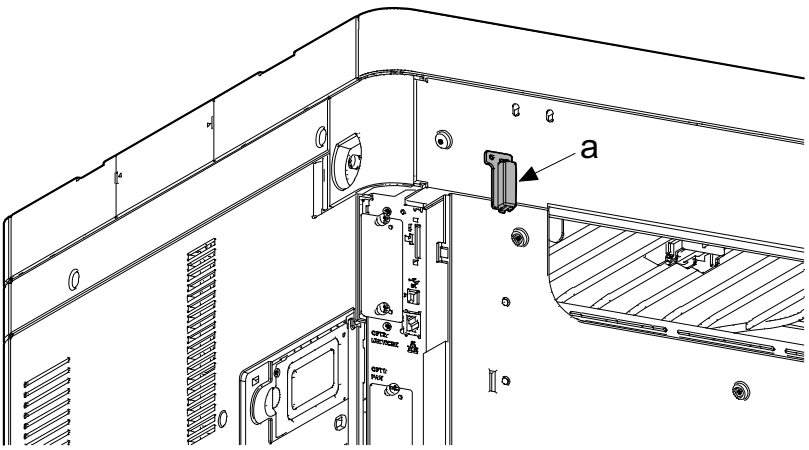
Note

The shutdown confirmation screen is displayed. It might take about three minutes to shut down.

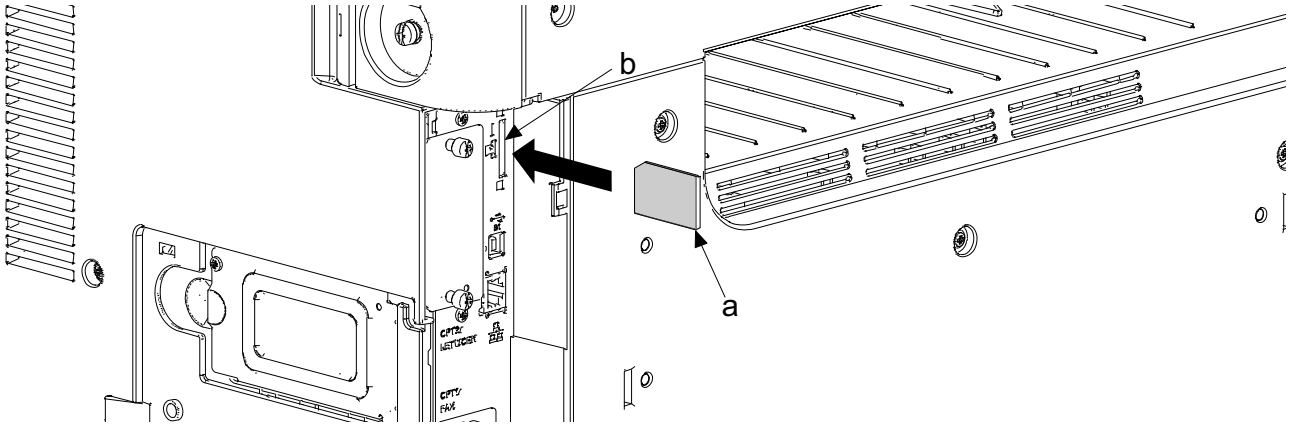
2 Release the three hooks (b) in the direction of the arrow and remove the controller box cover (a).



2 Detach the SD cover (a).



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



4 Reattach the covers.

Formatting the SD/SDHC Memory Card

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

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. Format it with a PC or Prescribe command in advance.

Format procedure in the system menu

1 Press [System Menu/Counter] key.

2 By pressing [Λ] [V] key, select [Adjustment/Maintenance] > [Service Settings] > Enter the Login User Name and the Login Password > [Format SD Card].

Note

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

- Login User Name/Login Password (24ppm model): 2400 / 2400
- Login User Name/Login Password (30ppm model): 3000 / 3000 (except 100V model)

3 Select [Yes] to execute the initialization.

4 Press the [Stop] key.

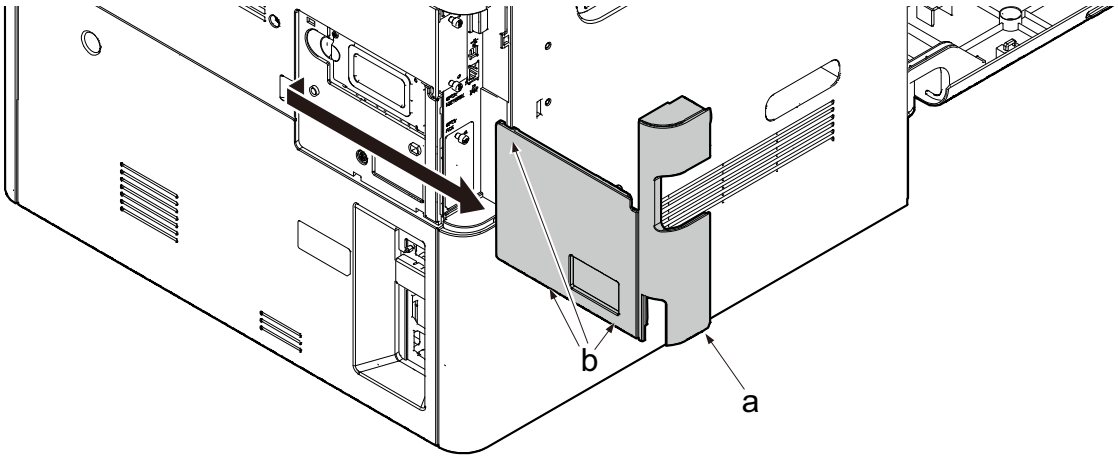
⑶ SSD (HD-6/HD-7)

1 Remove the control box cover.

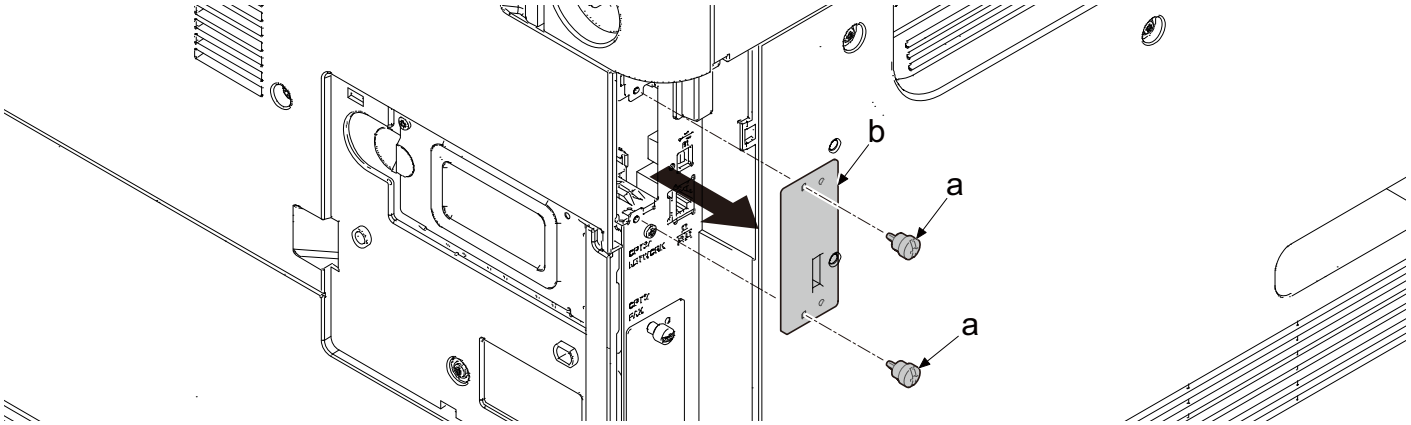
1 Turn off the main unit and disconnect the power cord and all interface cables.

> **Note**
> The shutdown confirmation screen is displayed. It might take about three minutes to shut down.

2 Release the three hooks (b) in the direction of the arrow and remove the controller box cover (a).



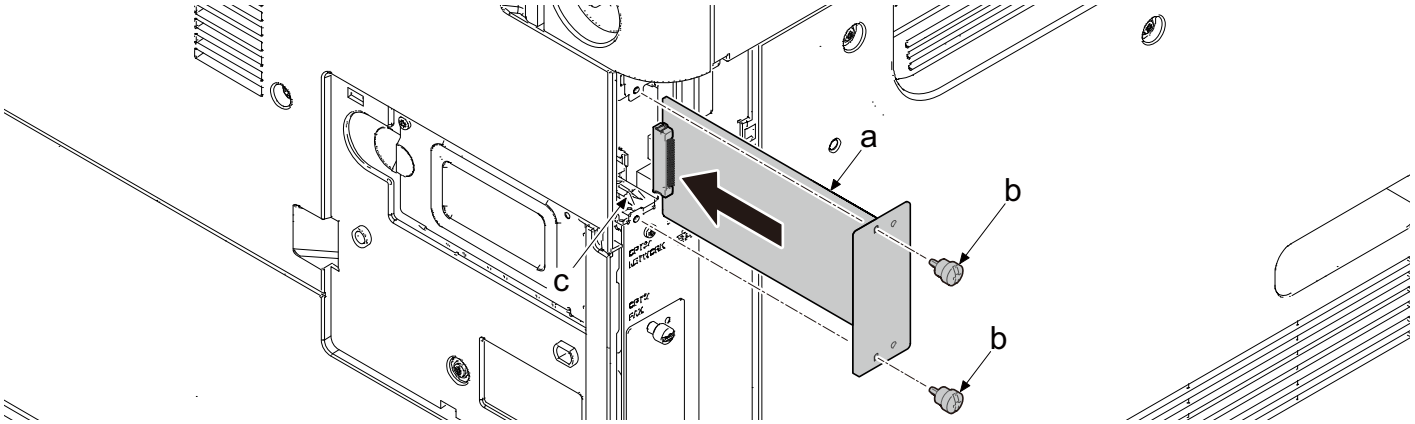
2 Remove two screws (a)(M3x8) and then remove the option slot cover (b).



3 Attach the SSD to the main unit.

1 Insert the PWB unit (b) straight into the option slot (c).

2 Secure the PWB unit (b) to the upper slot (Slot 2) with two screws (a) (M3x8) once removed.



4 Reattach the covers.

- When installing a new SSD, the guidance to format will be displayed at the first startup.
- The memory LED blinks when forming a preview image in an SSD after restart if data exists in the FAX box.

Formatting the SSD

When an optional SSD is inserted into the main unit for the first time, it must be formatted before use.

Formatting will delete all existing data on the SSD.

Format procedure in the system menu

1 Press [System Menu/Counter] key.

2 By pressing [Λ] [V] key, select [Adjustment/Maintenance] > [Service Settings] > Enter the Login User Name and the Login Password > [Format SSD].

Note

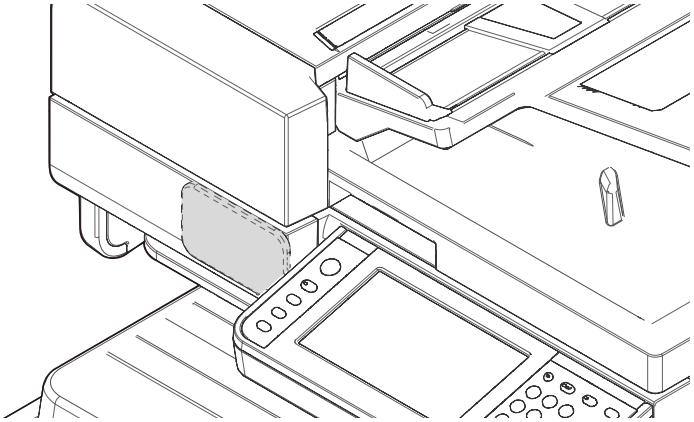
The factory default login user name and login password are set as shown below.

- Login User Name/Login Password (24ppm model): 2400 / 2400
- Login User Name/Login Password (30ppm model): 3000 / 3000 (except 100V model)

3 Select [Yes] to execute the initialization.

4 Turn the power switch off then on. Wait more than 5 seconds between the power off and on.

⑷ Card reader



Card reader installation requires the following parts (bundled in the main unit).

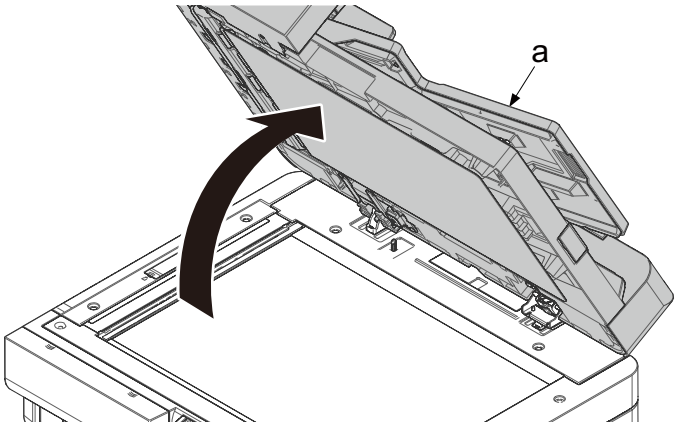
- Sponge *1 2 pcs
- Hook-and-loop fastener 2 pairs

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

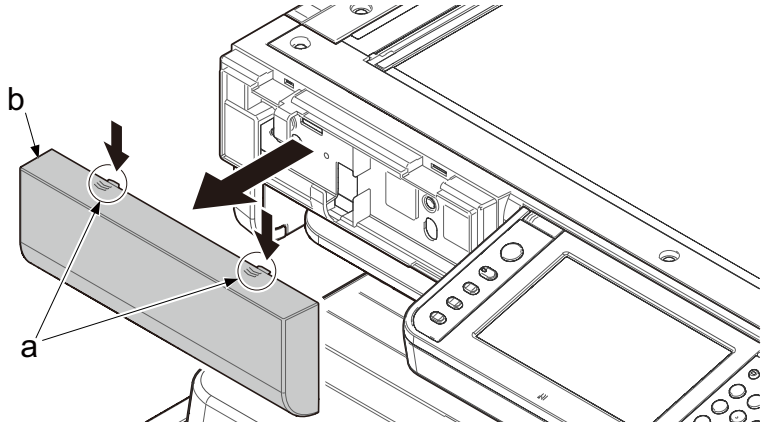
Note

The shutdown confirmation screen is displayed. It might take about three minutes to shut down.

2 Open the document processor (a).



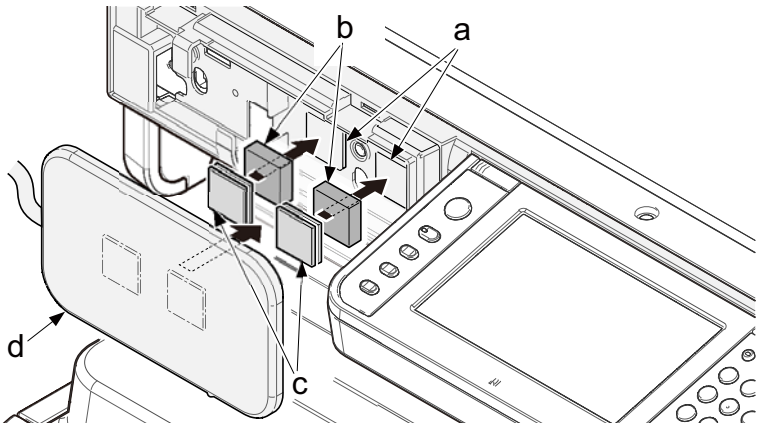
3 Release two hooks (c) downwards and remove the card reader cover (b) in the direction of the arrow.



4 Affix the hook-and-loop fastener to the back side of the card reader.

1 Affix the sponge (b) * 1 and a pair of hook-and-loop fasteners (c) to each of the protrusions (a) of the ISU front cover.

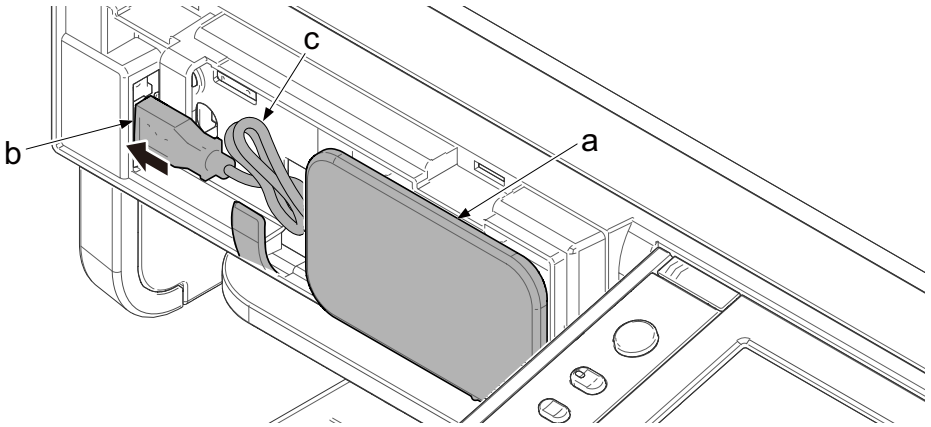
2 Affix the card reader (d) aligning to the position of the affixed hook-and-loop fasteners (c).



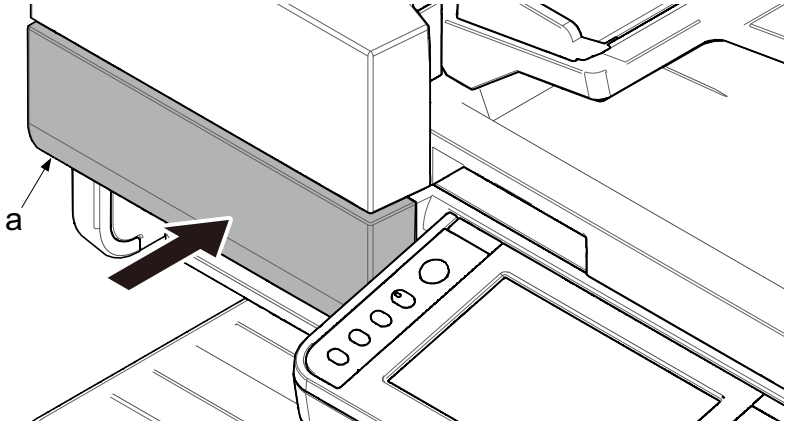
5 Attach the card reader.

1 Connect the USB connector (b) to the main body connector.

2 Bundle the surplus length of the cable (c) and attach the card reader (a).

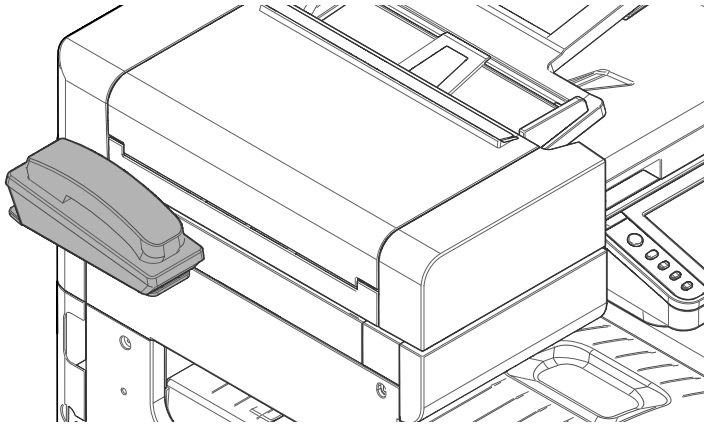


6 Reattach the card reader cover (a) in the original position and close the document processor.



*1: 100V specification only

⑸ Handset (100V model only)



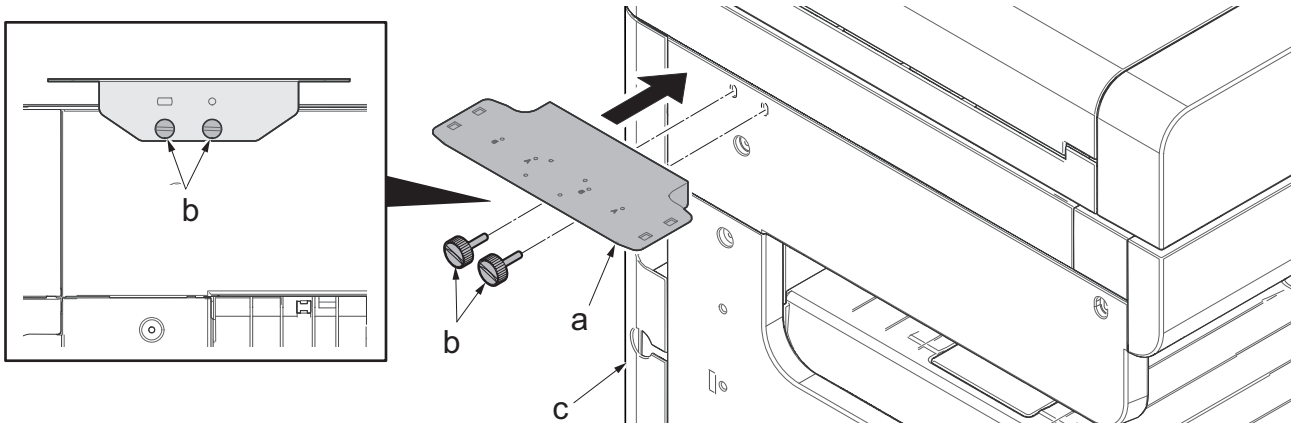
Handset installation requires the following parts:

Handset (1909AG9JP0)	1 pc
(Bundled parts)	
• Handset	1 pc
• Handset holder	1 pc
• Handset mounting plate	1 pc
• Protection cover	1 pc
• Pins	2 pcs
• Telephone wire	1 pc
• Modular cord	1 pc
• Nuts	2 pcs

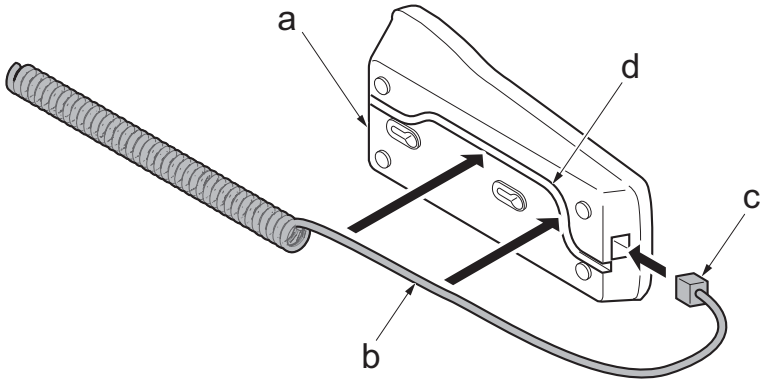
1 Turn the power switch off and disconnect the power plug.

2 Attach the handset mounting plate (a) to the upper left portion of the main unit (c) with two pins (b).

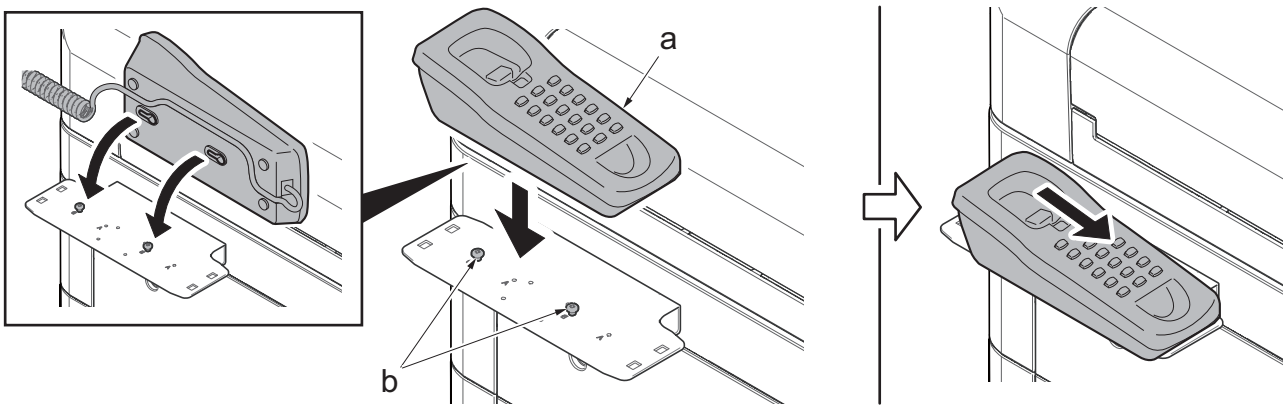
- Use the screw at the lower hole of the handset mounting plate.



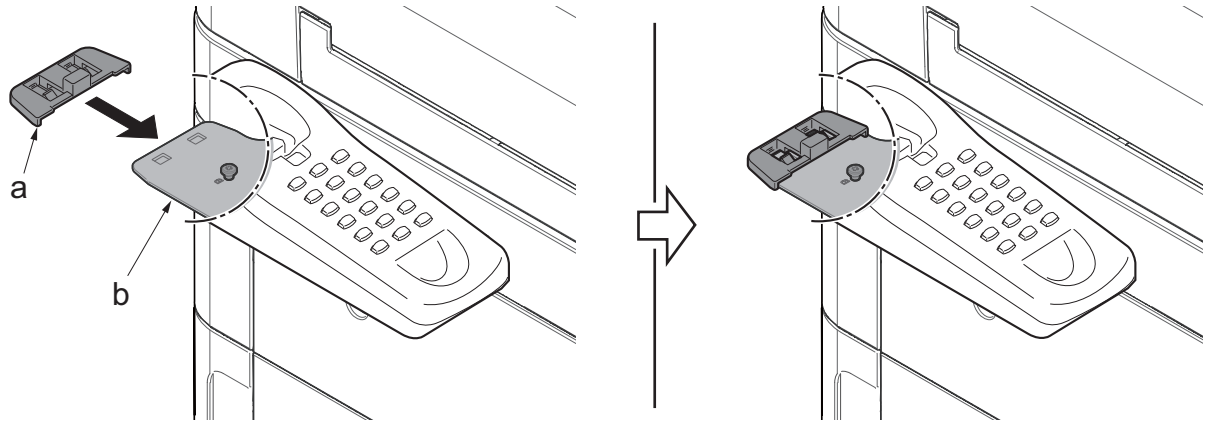
3 **Connect the connector (c) of the telephone cable (b) to the handset holder (a) and insert it into the cable guide (d) while extending the telephone cable (b).**



4 **Put the pins (b) into the two catches at the back side of the handset holder (a) and slide it toward you to fix it.**

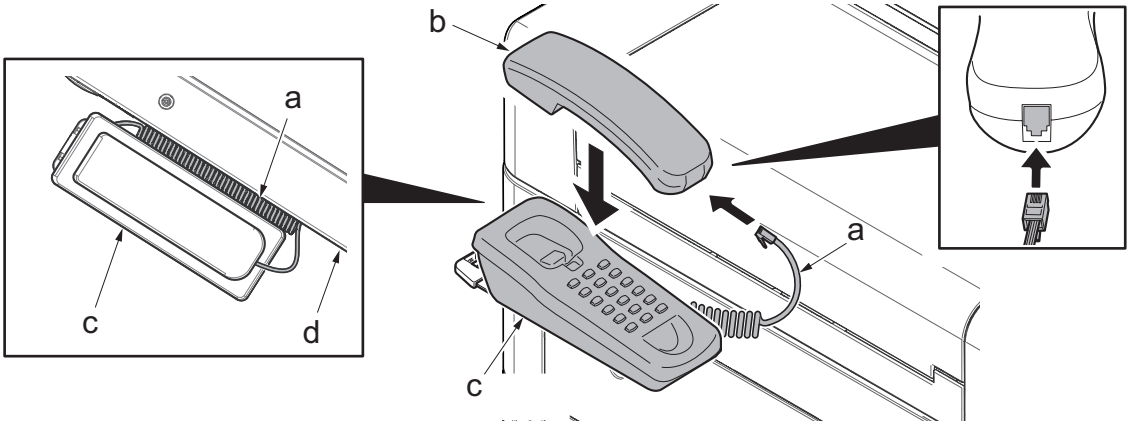


5 **Attach the protection cover (a) to the handset mounting plate (b).**

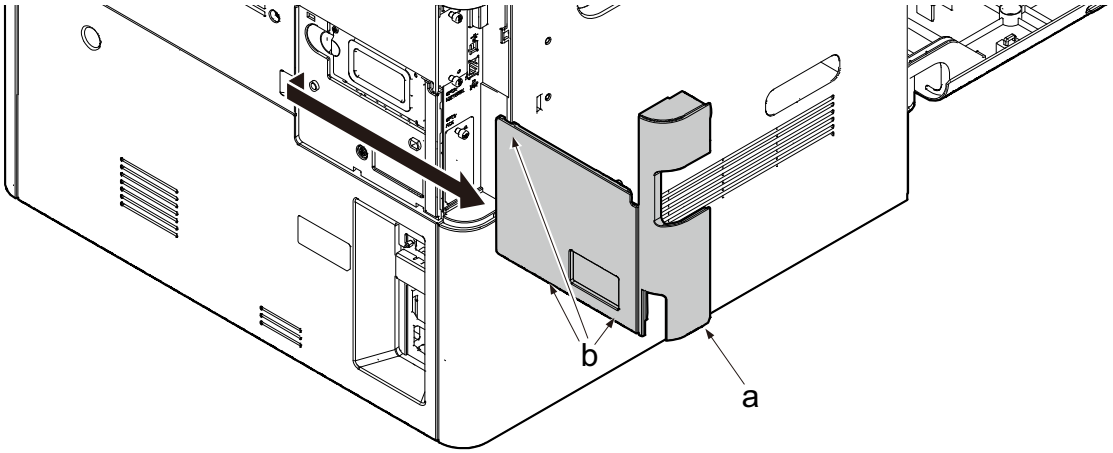


6 Connect the telephone cable (a) to the handset (b).

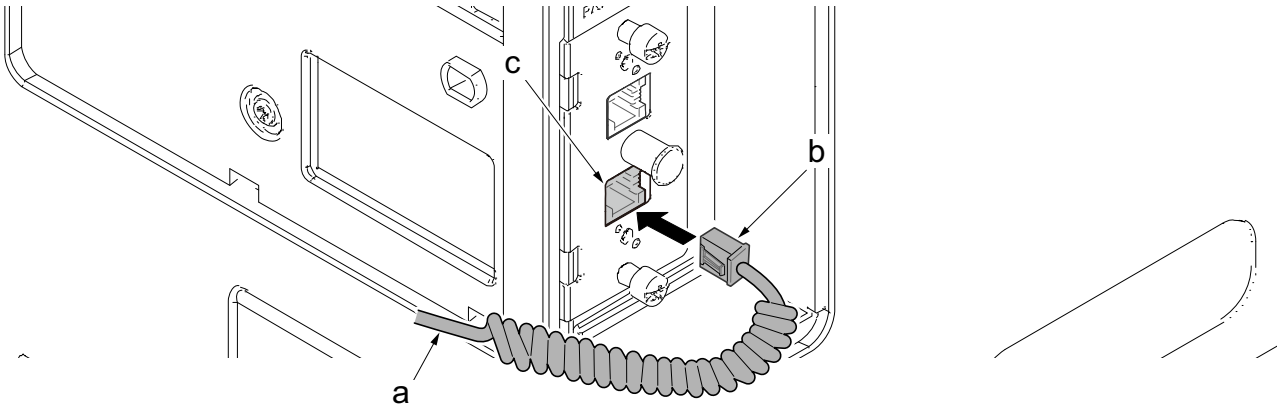
- Insert the telephone cable (a) into between the handset holder (c) and the main body (d).



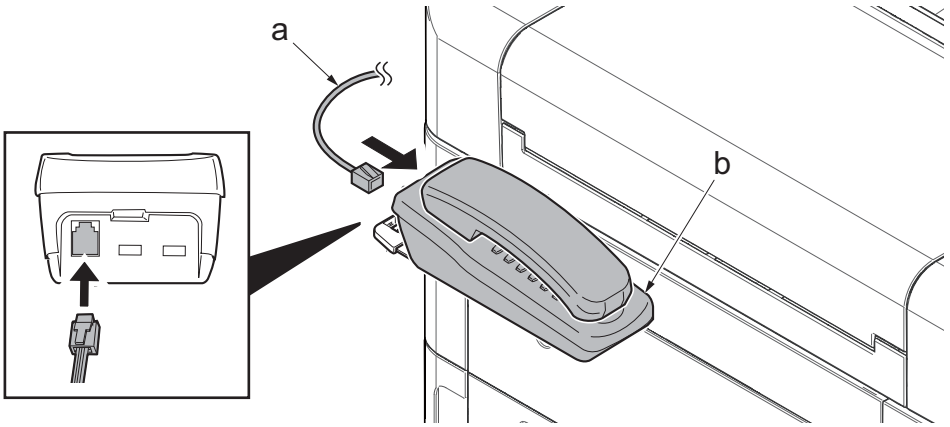
7 Release the three hooks (b) in the direction of the arrow and remove the controller box cover (a).



8 Connect the connector (b) of the modular cord (a) to the TEL terminal (c) of the FAX PWB and reattach the removed controller box cover.



9 **Connect the other end of the modular cord (a) to the handset holder (b).**



2 - 5 About Optional Applications

application	
Data Security Kit	ThinPrint Option*1
Card Authentication Kit*1	OCR extension kit*1

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

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

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

Starting Use of an Application

Use the procedure below to start using an application.

1 Select [System Menu/Counter] key > [System/Network] > Enter the Login User Name and the Login Password> [Optional Function].

Note

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

- Login User Name/Login Password (24ppm model): 2400 / 2400
- Login User Name/Login Password (30ppm model): 3000 / 3000 (except 100V model)

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
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.

Installing OCR dictionary

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

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

*: It is necessary to format the SSD / SD card at the system menu in the main unit. (See page 6-223page)

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 Country 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.

Country Code list

Country code	Destination	Country code	Destination
000	Japan	181	North America[2*]
156	Asian nations[1*]	181	South America[3*]
254	Taiwan	253	European nations[4*]
097	Korea	009	Australia
038	China	126	New Zealand[5*]

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

*2 Applied for Sales company competent USA、Canada.

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

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

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

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.

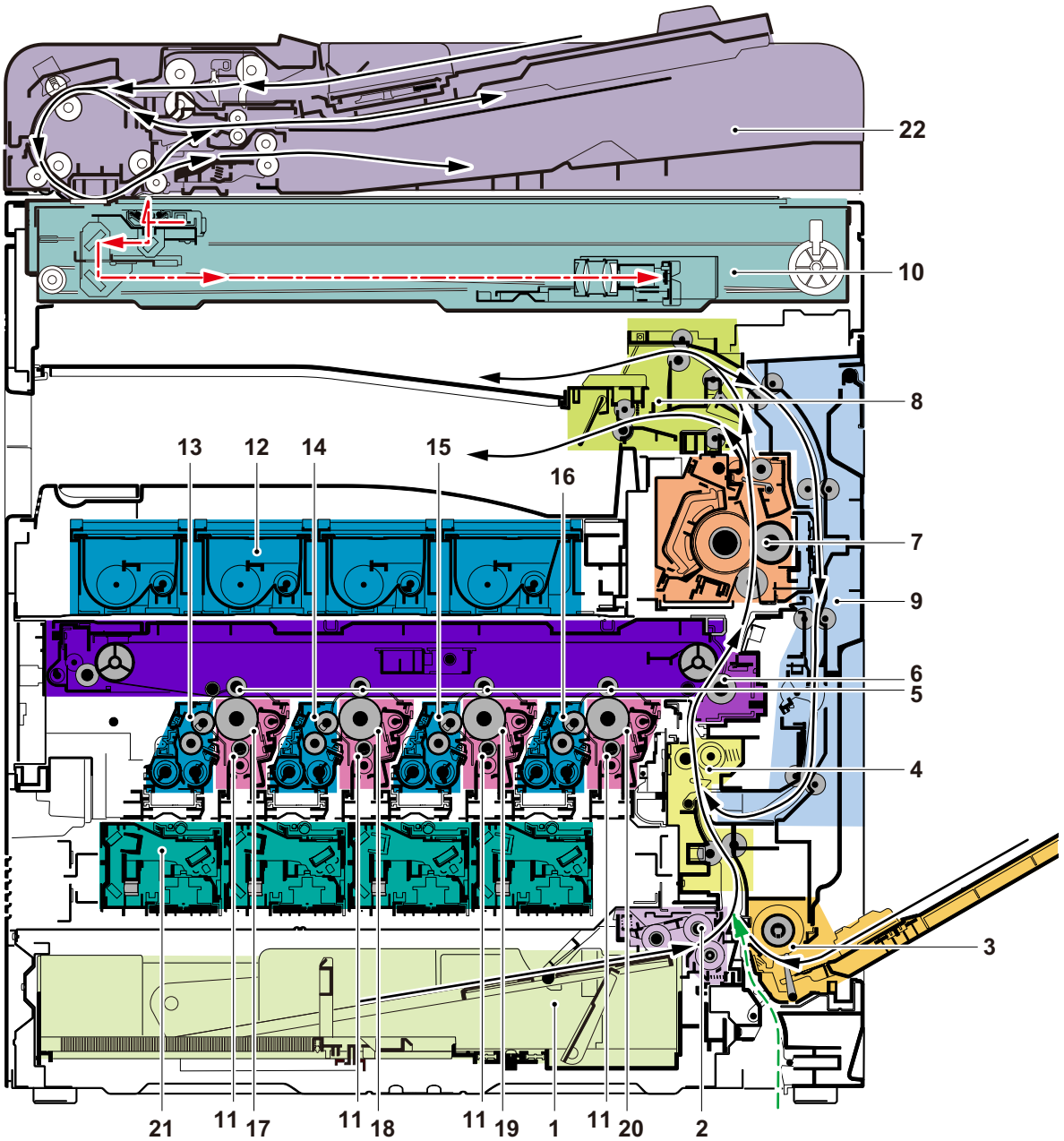
U633 [Enables or disables the V.34 communication]: Off (See page , 6-180page)

U630 [Setting TX speed and RX speed] (See page 6-175page)

3 Machine Design

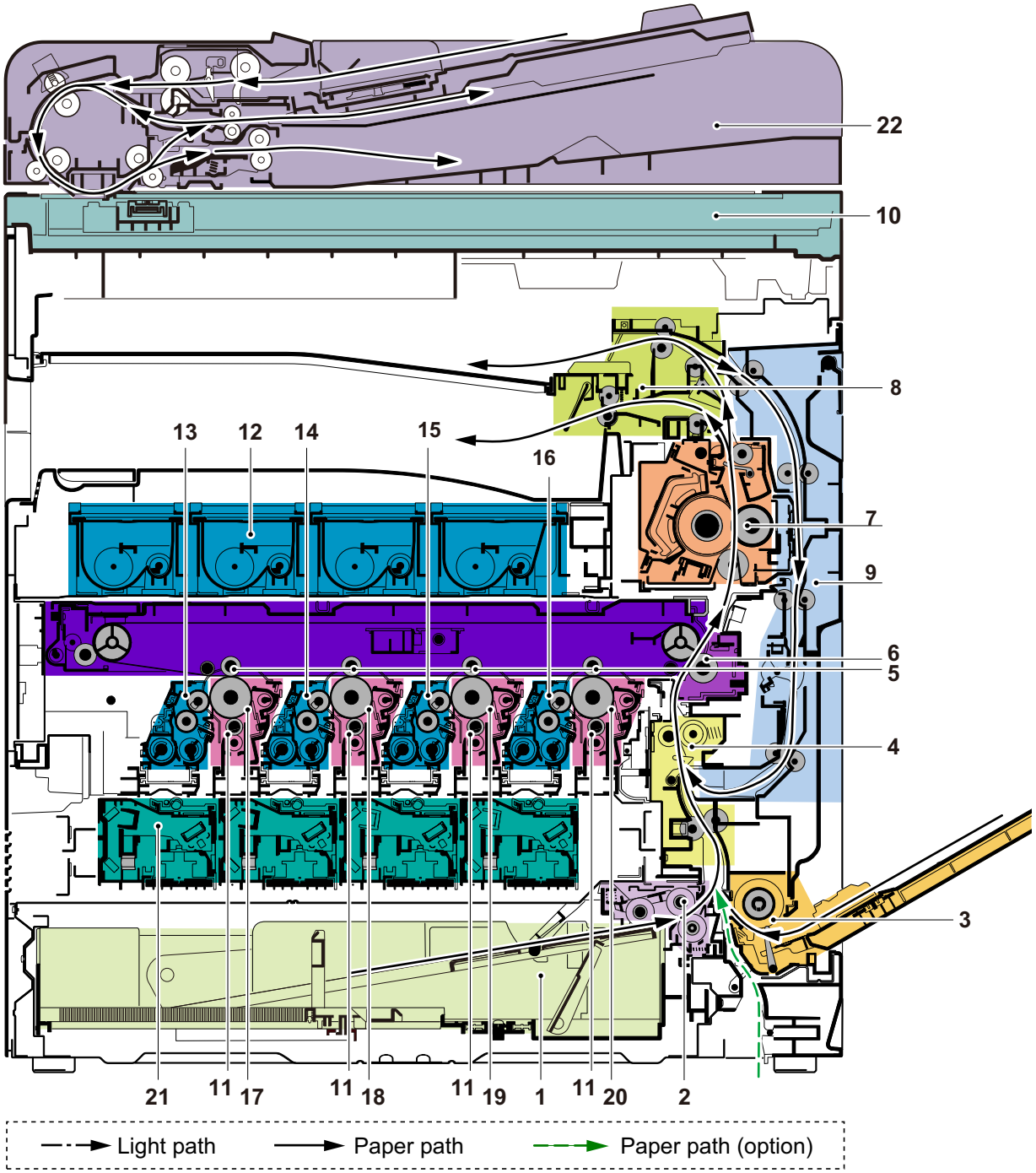
3 - 1 Mechanical Configuration

(1) Cross-section view (CCD model)



1 Cassette
2 Cassette paper feed section
3 MP paper feed section
4 Paper conveying section
5 Primary transfer section
6 Secondary transfer and separation section
7 Fuser section
8 Exit section
9 Duplex conveying section
10 Image scanner unit
11 Charger roller unit
12 Toner container Y/C/M/K
13 Developer unit Y
14 Developer unit C
15 Developer unit M
16 Developer unit K
17 Drum unit Y
18 Drum unit C
19 Drum unit M
20 Drum unit K
21 Laser scanner unit Y/C/M/K
22 Document Processor

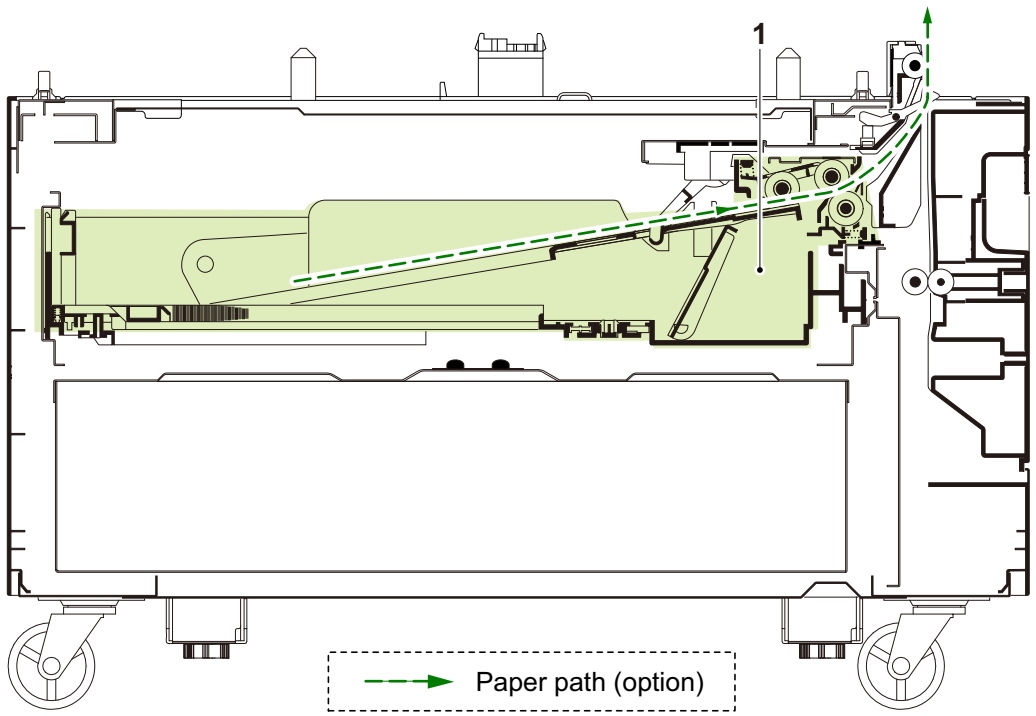
(2) Cross-section view (CIS model)



1 Cassette
2 Cassette paper feed section
3 MP paper feed section
4 Paper conveying section
5 Primary transfer section
6 Secondary transfer and separation section
7 Fuser section
8 Exit section
9 Duplex conveying section
10 Image scanner unit
11 Charger roller unit
12 Toner container Y/C/M/K
13 Developer unit Y
14 Developer unit C
15 Developer unit M
16 Developer unit K
17 Drum unit Y
18 Drum unit C
19 Drum unit M
20 Drum unit K
21 Laser scanner unit Y/C/M/K
22 Document Processor

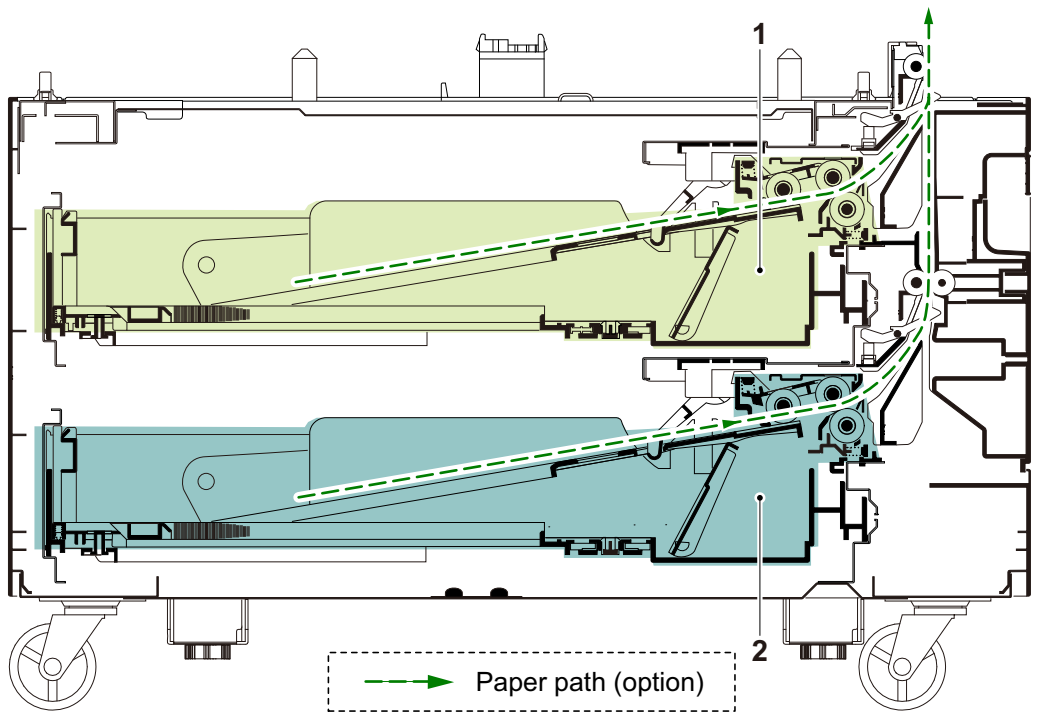
3 - 2 Extension device construction (option)

⑴ 500-sheet x1 Paper Feeder cross-section view (PF-470)



1 Cassette paper feed section (Cassette 2)

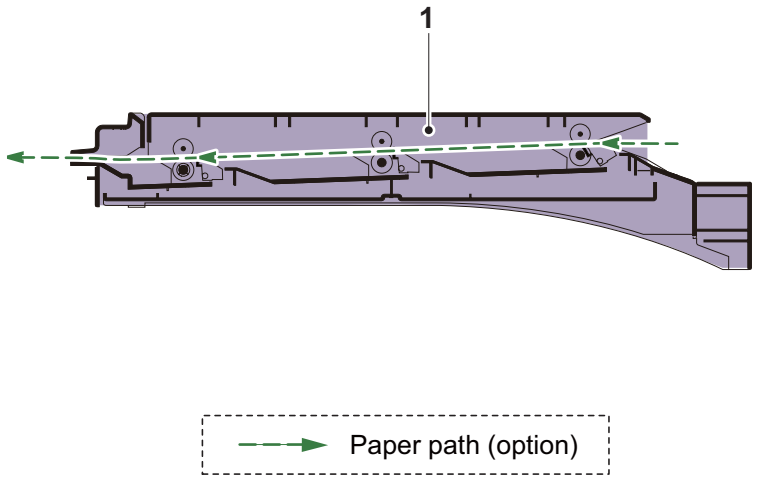
⑵ 500-sheet x2 Paper Feeder cross-section view (PF-471)



1 Upper paper feed section (Cassette 2)

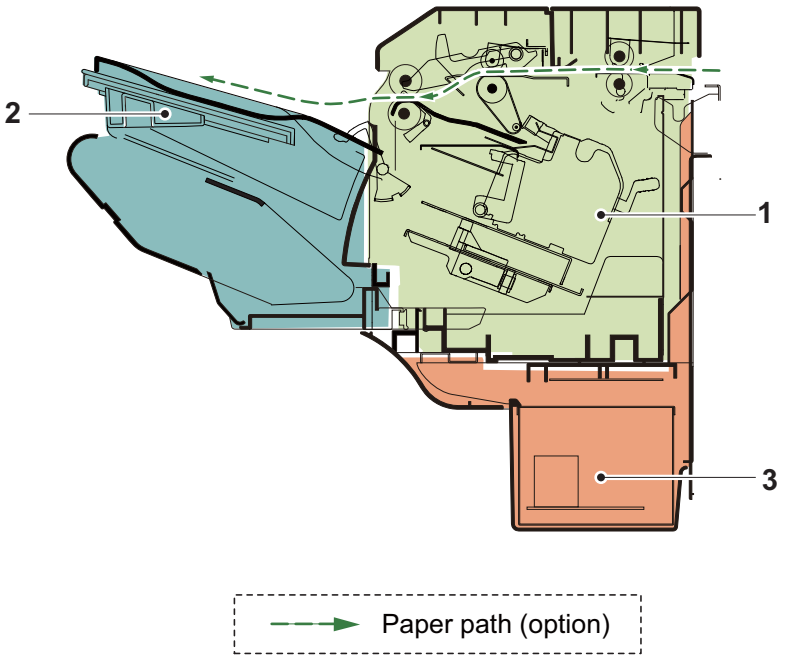
2 Lower paper feed section (Cassette 3)

⑶ Attachment kit cross-section view (AK-470)



1 BR paper conveying section

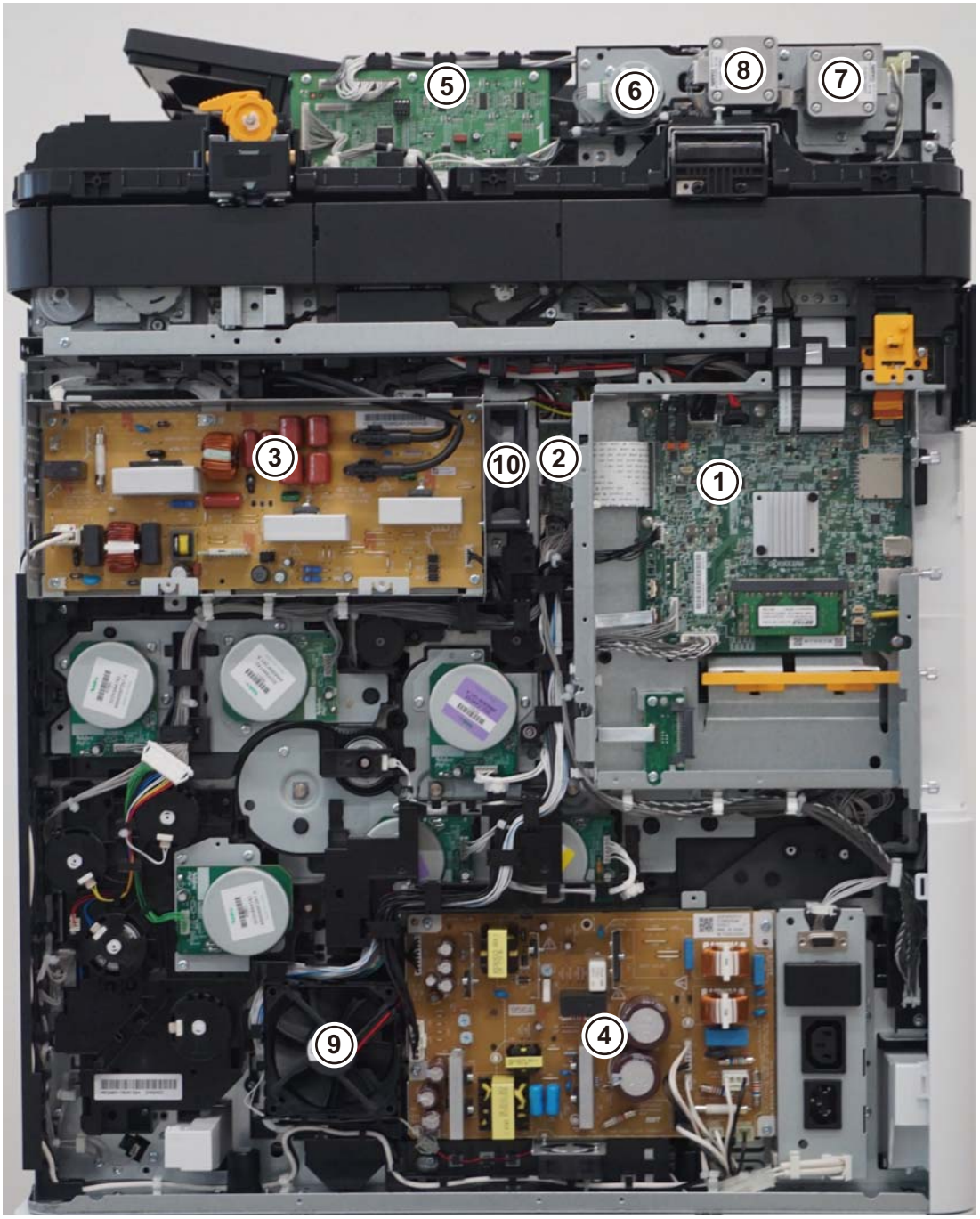
⑷ 5000-sheet Finisher cross-section view (DF-470)



1 Finisher process section
2 Exit tray section
3 Power supply unit section

3 - 3 Electric parts

(1) Electric parts layout

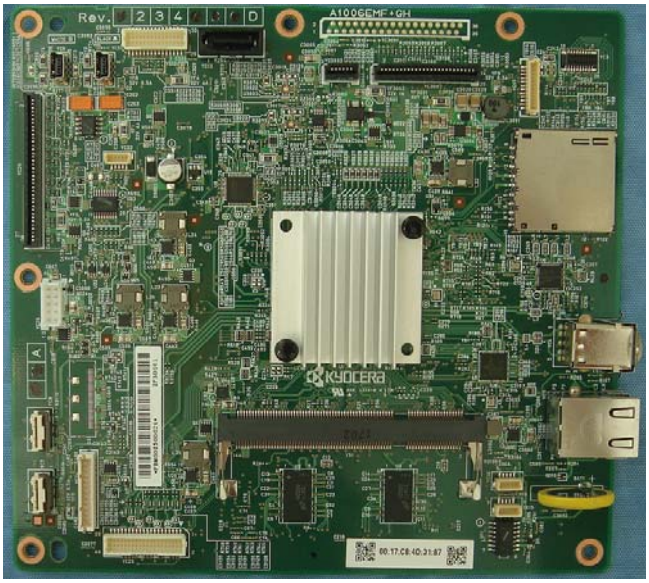


1	Main PWB	6	DP feed-shift motor
2	Engine PWB	7	DP conveying motor
3	IH PWB	8	DP feed motor
4	Low voltage PWB	9	Image forming fan motor
5	DP PWB	10	IH fan motor

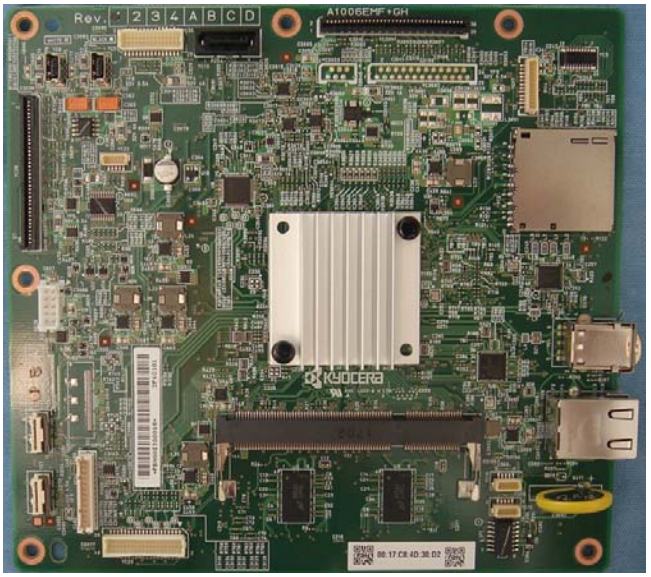
(2) Descriptions about the major PWBs

(2-1) Main PWB

High Model

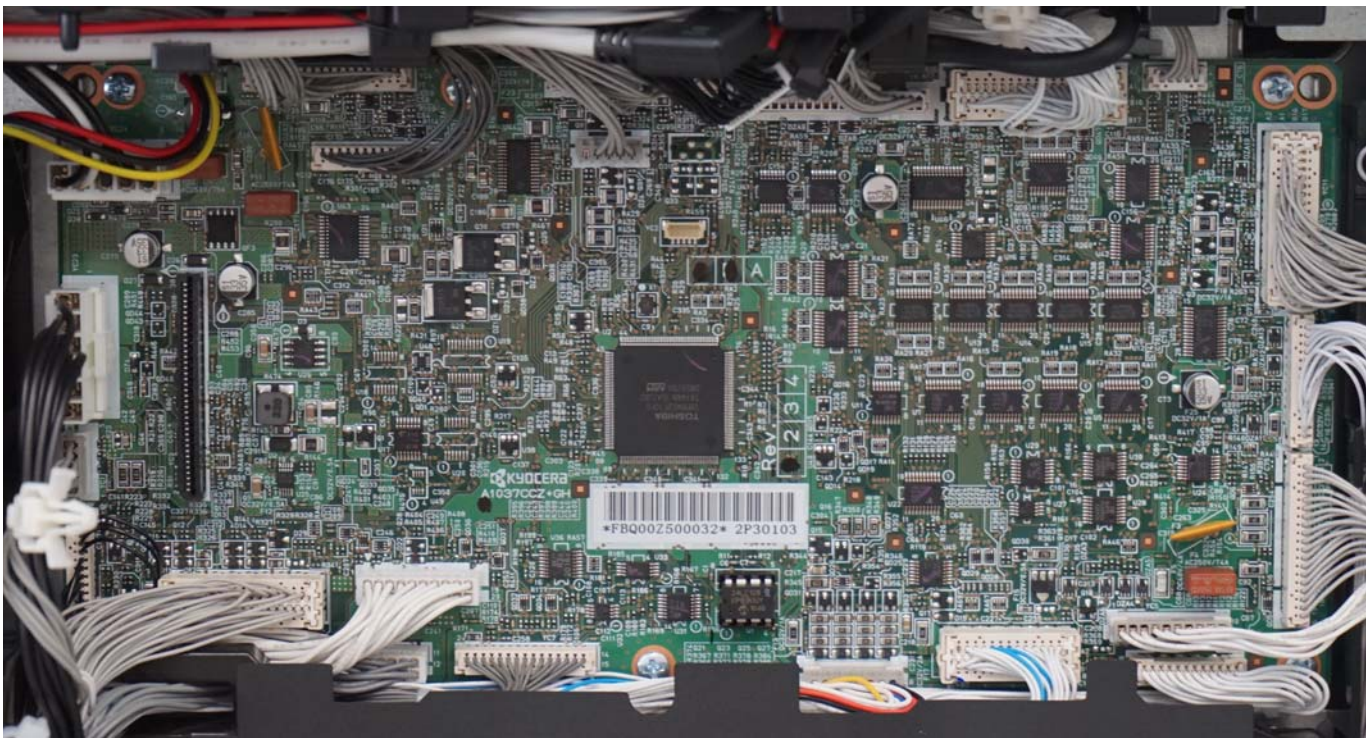


Low Model



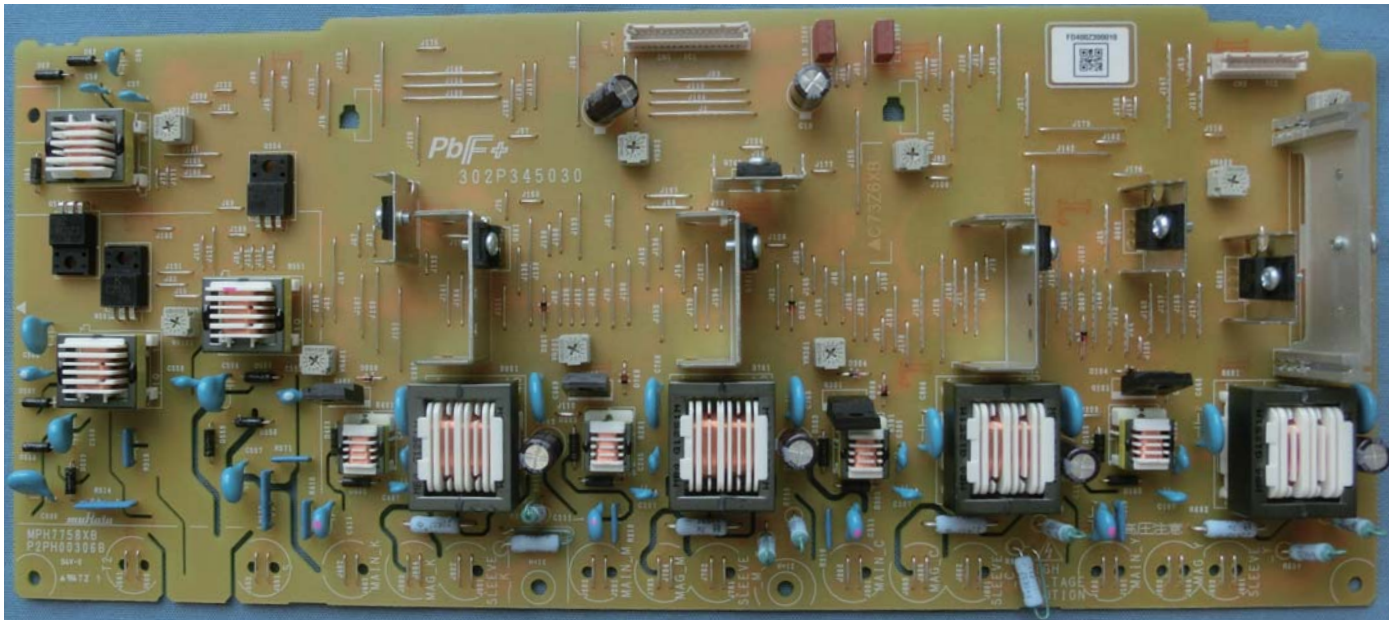
Control the entire software for the interface to the PC and network and image data processing, etc.

(2-2) Engine PWB



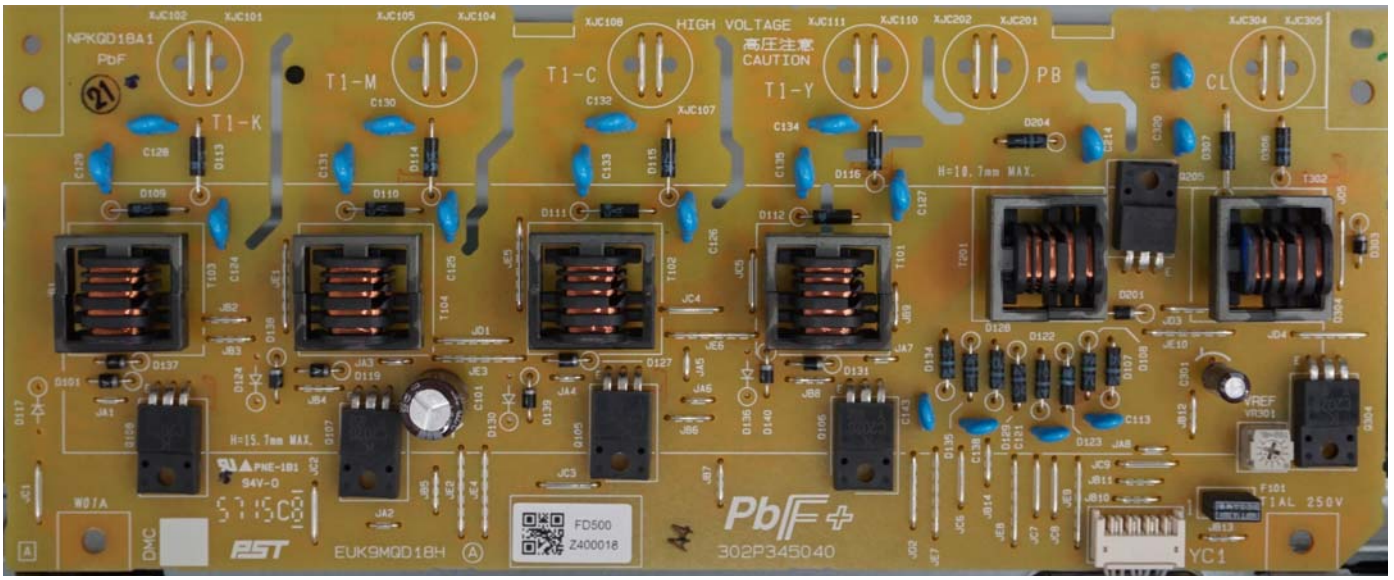
It controls the hardware for the generation of the high-voltage and the bias, the image scanner unit, and the paper conveying system.

(2-3) High voltage PWB 1



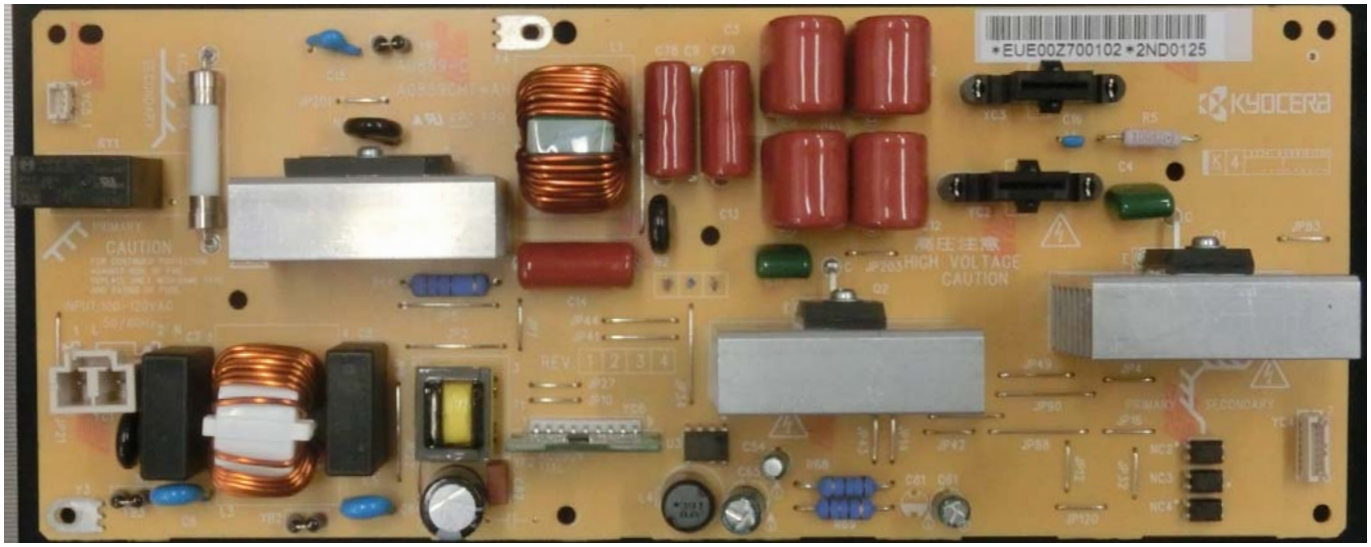
Output the main high-voltage, the developer bias and the transfer bias.

(2-4) High voltage PWB 2

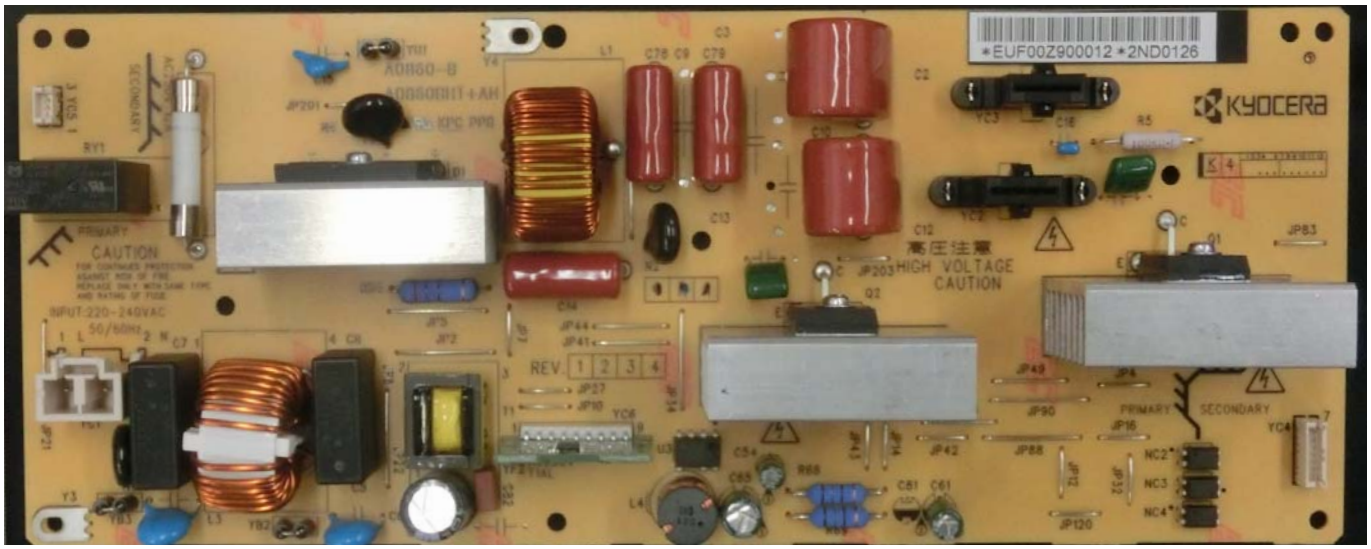


(2-5) IH PWB

100V-120V



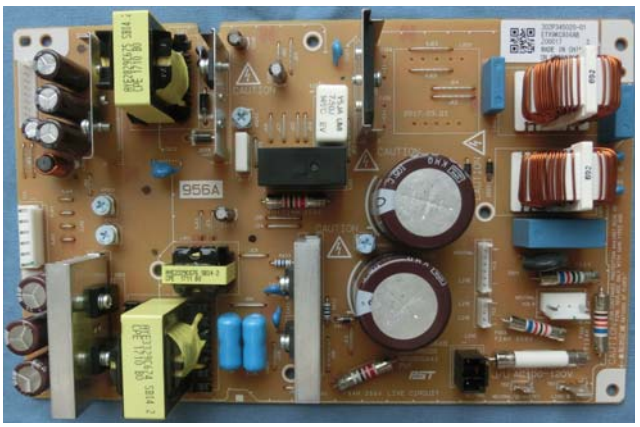
220V-240V



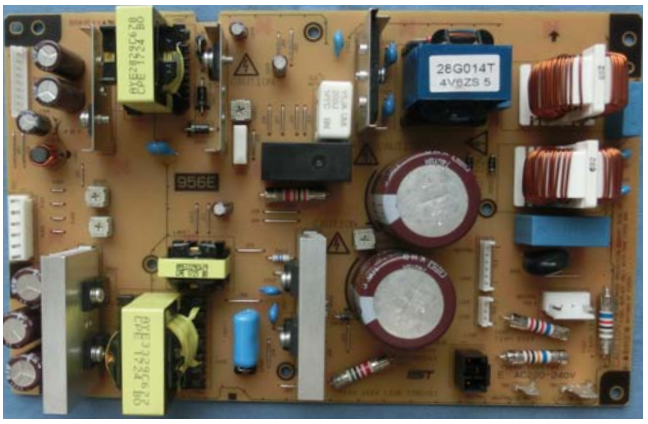
Controling the IH coil heating the fuser heat belt

(2-6) Low voltage PWB

100-120V



220-240V



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

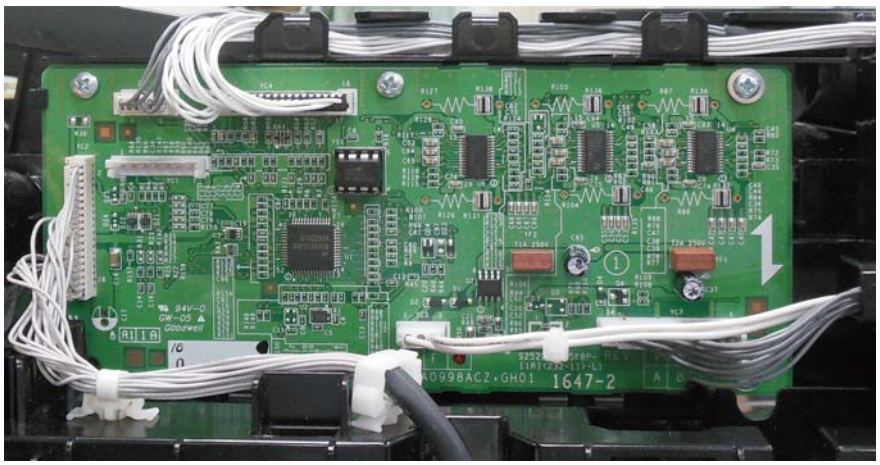
⑵-7 Operation panel main PWB

CCD Model

CIS Model

Control the LCD, the LED indicators and the key switches.

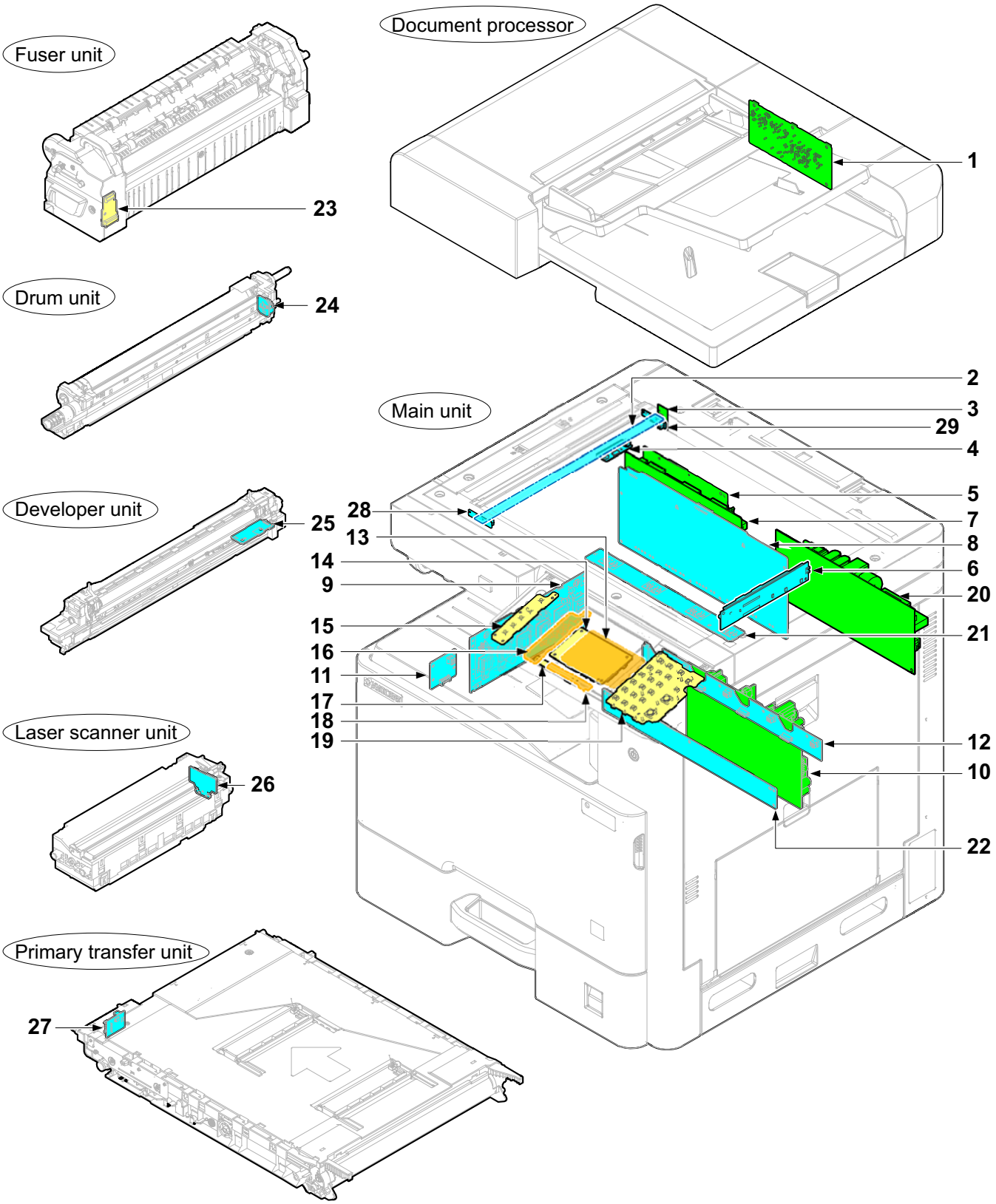
⑵-8 DF PWB



Control the driver circuit of the motors and clutches, and the electric parts.

(3) PWBs

(3-1) Layout



1	DP PWB	Controlling the driver circuit of the motors and clutches, and the electric parts.
2	CIS PWB *1	Front side original scanning
3	Wi-Fi PWB	Sending and receiving the wireless data.
4	LED drive PWB *2	Controlling the LED
5	Main PWB	Controlling the entire software for the interface to the PC and network and image data processing, etc.
6	CCD PWB *2	Original image scanning
7	Engine PWB	Controlling of the entire hardware to generate the high-voltage and the bias, and for the paper conveying system and the fuser temperature, etc.
8	High voltage PWB 1	Generating the main charger high-voltage, the developer bias and the transfer bias
9	High voltage PWB 2	5V output control during standby
10	Low voltage PWB	Rectifying the AC power input to the full-wave, convert it to DC24V by switched mode and output it. Controlling the fuser heater.
11	Primary transfer relay PWB	Configuring the primary transfer PWB and the engine PWB wiring relay circuit.
12	Drum/developer relay PWB	Configuring the engine PWB, the drum PWB and the developer PWB wiring relay circuit.
13	Operation panel PWB *3	Controlling the LCD, the LED indicator and the key switches.
14	Operation panel PWB *4	Controlling the LCD, the LED indicator and the key switches.
15	Panel key PWB L *4	Configuring the LED indicator and the key switches.
16	Panel key PWB L *3	Configuring the LED indicator and the key switches.
17	NFC PWB *4	Antenna circuit for wireless communication.
18	NFC PWB *3	Antenna circuit for wireless communication.
19	Panel key PWB R	Configuring the LED indicator and the key switches.
20	IH PWB	Controling the IH coil heating the fuser heat belt
21	RFID PWB	Reading the toner container information.
22	LSU relay PWB	Configuring the main PWB, the engine PWB and the LSU wiring relay circuit.
23	Fuser PWB	Wiring relay to the electric parts inside fuser unit Individual fuser information storage by EEPROM
24	Drum PWB Y/C/M/K	Wiring relay to the electric parts inside drum unit Individual drum information storage by EEPROM
25	Developer PWB Y/C/M/K	Wiring relay to the electric parts inside developer unit Individual developer information storage by EEPROM
26	APC PWB	Emitting and controlling the laser beam
27	Primary transfer PWB	Wiring relay to the electric parts inside primary transfer unit Individual primary transfer information storage by EEPROM
28	LED PWB F*2	Emitting the LED
29	LED PWB R*2	Emitting the LED

*1: CIS model only, *2: CCD model only, *3: 4.3-inch panel model only, *4 7-inch panel model only

⑶-2⑵ Part name table (PWB)

No.	Name used in service manual	Name used in parts list	Part. No.
1	DP PWB	PARTS PWB DP MAIN ASSY SP (PARTS DP UNIT SP)	302P19418_ (302P19310_)
2	CIS PWB *1	- (PARTS CIS ASSY SP)	- (302P29301_)
3	Wi-Fi PWB	PARTS WIFI UNIT SP	302P19413_
4	LED drive PWB *2	- (PARTS MOUNT LED ASSY)	- (302P19311_)
5	Main PWB	PARTS PWB MAIN ASSY SP PARTS PWB MAIN ASSY SP EU PARTS PWB MAIN ASSY SP PARTS PWB MAIN ASSY SP EU	302P39412_ *6 302P39413_ *6 302P49402_ *5 302P49403_ *5
6	CCD PWB *2	PARTS ISU SP	302P19312_
7	Engine PWB	PARTS PWB ENGINE ASSY SP PARTS PWB ENGINE ASSY SP	302P39415_ 302P49404_
8	High voltage PWB 1	PARTS UNIT HIGH VOLTAGE 1 SP	302K39414_
9	High voltage PWB 2	PARTS UNIT HIGH VOLTAGE 2 SP	302P39411_
10	Low voltage PWB	PARTS UNIT LOW VOLTAGE 100V SP PARTS UNIT LOW VOLTAGE 200V SP	302P39408_ 302P39409_
11	Primary transfer relay PWB	PWB TRANSFER CONNECT ASSY	302K00112_
12	Drum/developer relay PWB	PARTS PWB DRUM DLP CONNECT ASSY SP	302P39417_
13	Operation panel PWB *3	PARTS PWB PANEL MAIN ASSY SP (PARTS OPERATION UNIT SP)	302P29405_ (302P29401_)
14	Operation panel PWB *4	PARTS PWB PANEL MAIN ASSY SP (PARTS OPERATION UNIT SP) (PARTS OPERATION UNIT J SP)	302P19416_ (302P19407_) *6 (302P29402_) *5
15	Panel key PWB L *4	- (PARTS OPERATION UNIT SP) (PARTS OPERATION UNIT J SP)	- (302P19407_) *6 (302P29402_) *5
16	Panel key PWB L *3	- (PARTS OPERATION UNIT SP)	- (302P29401_)
17	NFC PWB *4	- (PARTS OPERATION UNIT SP) (PARTS OPERATION UNIT J SP)	- (302P19407_) *6 (302P29402_) *5
18	NFC PWB *3	- (PARTS OPERATION UNIT SP)	- (302P29401_)
19	Panel key PWB R	- (PARTS OPERATION UNIT SP) (PARTS OPERATION UNIT SP) (PARTS OPERATION UNIT J SP)	- (302P29401_) *3 (302P19407_) *4, *6 (302P29402_) *4, *5
20	IH PWB	PARTS PWB IH 100 ASSY SP PARTS PWB IH 200 ASSY SP	302ND9430_ 302ND9431_

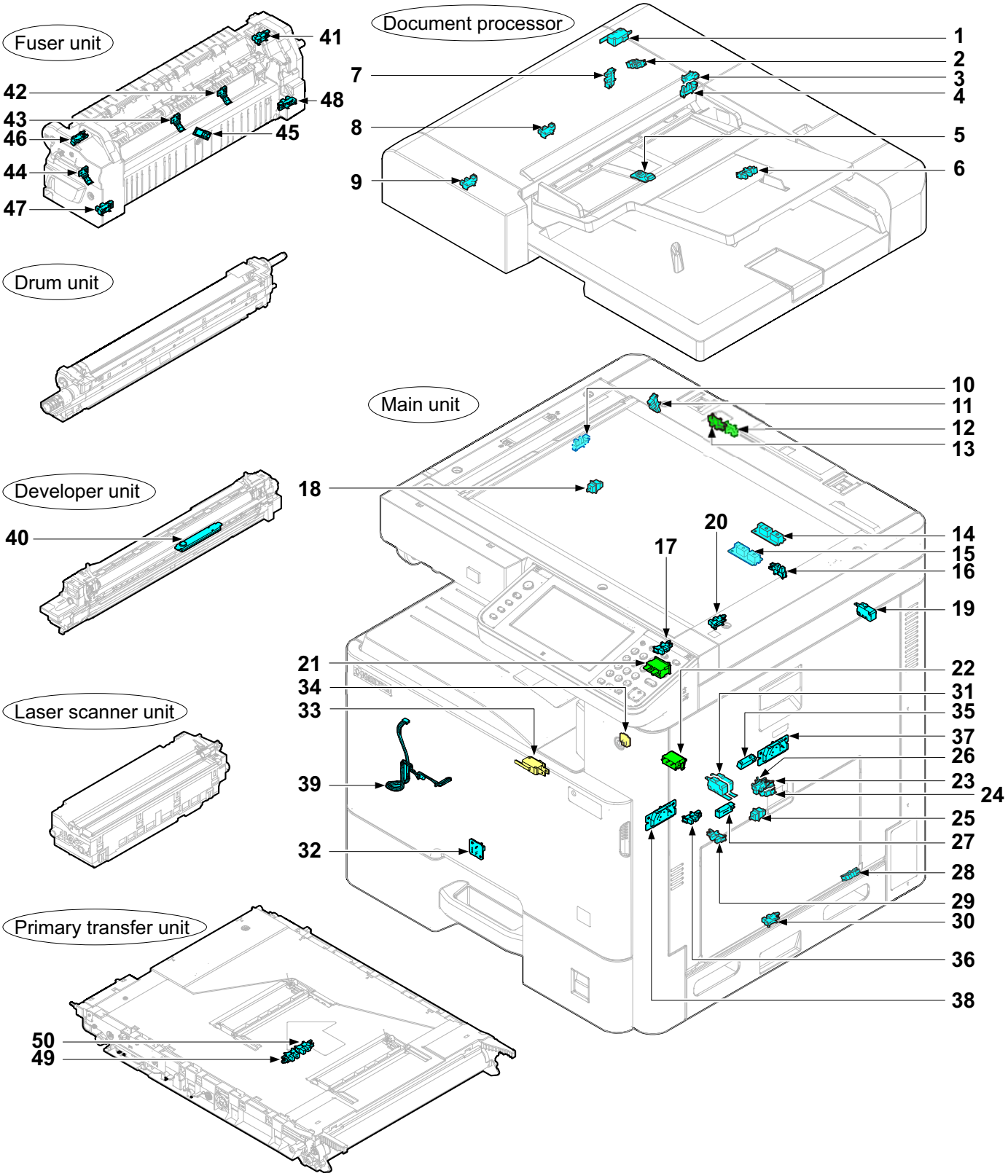
No.	Name used in service manual	Name used in parts list	Part. No.
21	RFID PWB	PWB CONTAINER CONNECT ASSY SP	302P39416_
22	LSU relay PWB	PARTS PWB LSU CONNECT ASSY SP PARTS PWB LSU CONNECT ASSY SP	302P39407_ 302P49401_
23	Fuser PWB	- (FK-8115)	- (302P39307_)
24	Drum PWB Y/C/M/K	- (DK-8115)	- (302P39306_)
25	Developer PWB Y/C/M/K	- (DV-8115C) (DV-8115C(J)) (DV-8115K) (DV-8115K(J)) (DV-8115M) (DV-8115M(J)) (DV-8115Y) (DV-8115Y(J))	- (302P39302_) (302P39J02_) (302P39303_) (302P39J03_) (302P39304_) (302P39J04_) (302P39305_) (302P39J05_)
26	APC PWB	- (LK-8115) (LK-8116)	- (302P39311_) (302P39312_)
27	Primary transfer PWB	- (TR-8115A)	- (302P39310_)
28	LED PWB F*2	- (PARTS MOUNT LED ASSY)	- (302P19311_)
29	LED PWB R*2	- (PARTS MOUNT LED ASSY)	- (302P19311_)

*1: CIS model only, *2: CCD model only, *3: 4.3-inch panel model only, *4 7-inch panel model only

*5: 24 ppm model only, *6: 30 ppm model only

(4) Sensors and Switches

(4-1) Layout



Front side: ▭ / Inside: ▭ / Back side: ▭

1	DF top cover switch	Configuring the safety circuit when the top cover open/close, and resetting the original jam.
2	DP feed sensor	Original jam detection at the primary feed.
3	DP reversing sensor	Reversing guide position detection
4	DP original sensor	Original set detection
5	DP original width sensor	Original width detection
6	DP original length sensor	Original length detection
7	DP registration sensor	Secondary paper feed timing detection
8	DP timing sensor	Original scan timing detection
9	DP open/close switch	DP open/close detection
10	Home position sensor *1	ISU home position detection
11	Home position sensor *2	ISU home position detection
12	Original size timing sensor *1	Original size sensor operation
13	Original size timing sensor *2	Original size sensor operation
14	Original size sensor *1	Original size detection
15	Original size sensor *2	Original size detection
16	JS full sensor	Job separator tray paper full detection
17	Paper full sensor	Main tray paper full detection
18	BR switch	Bridge detection
19	Right cover switch	24V power supply line shutoff when the right cover is open
20	JS paper sensor	Paper detection in the job separator section
21	Cassette heater switch	Cassette heater power supply on/off
22	Paper length switch	Cassette paper size (length) detection
23	Upper paper level sensor	Cassette paper level detection
24	Lower paper level sensor	Cassette paper level detection
25	Paper width switch	Cassette paper size (width) detection
26	DU sensor	Duplex conveying timing control and paper jam detection
27	Registration sensor	Secondary paper feed timing control
28	Conveying sensor	Paper jam detection at the vertical conveying section
29	Lift sensor	Cassette lift plate upper limit detection
30	MP paper sensor	Paper detection in the MP tray
31	PF connection switch	PF connection detection
32	Temperature/humidity sensor	Machine inside temperature and absolute humidity detection
33	Front cover switch	24V power supply line shutoff when the front cover is open
34	Power switch	Power supply on/off to the main PWB, engine PWB, operation panel PWB, etc.
35	Belt roll-up sensor	Paper jam detection before fuser

36 ID shutter sensor	ID shutter position detection
37 Rear ID sensor	Measuring the toner density at the calibration.
38 Front ID sensor	Measuring the toner density at the calibration.
39 Waste toner sensor	Waste toner detection in the waste toner box
40 Toner sensor	Toner density detection in the toner container
41 Exit sensor	Paper jam detection at the fuser section
42 Fuser middle thermistor	Fuser heat belt temperature detection (rear)
43 Fuser center thermistor	Fuser heat belt temperature detection (center)
44 Fuser edge thermistor	Fuser heat belt temperature detection (front)
45 Fuser press roller thermistor	Fuser press roller temperature detection
46 Fuser pressure release sensor	Fuser pressure mode detection
47 Front fuser heat belt sensor	Fuser heat belt rotation detection
48 Rear fuser heat belt sensor	Fuser heat belt rotation detection
49 Transfer belt sensor 1	Primary transfer belt position detection
50 Transfer belt sensor 2	Primary transfer belt position detection

*1: CIS model only, *2: CCD model only

(4-2) Part name table (Sensors and Switches)

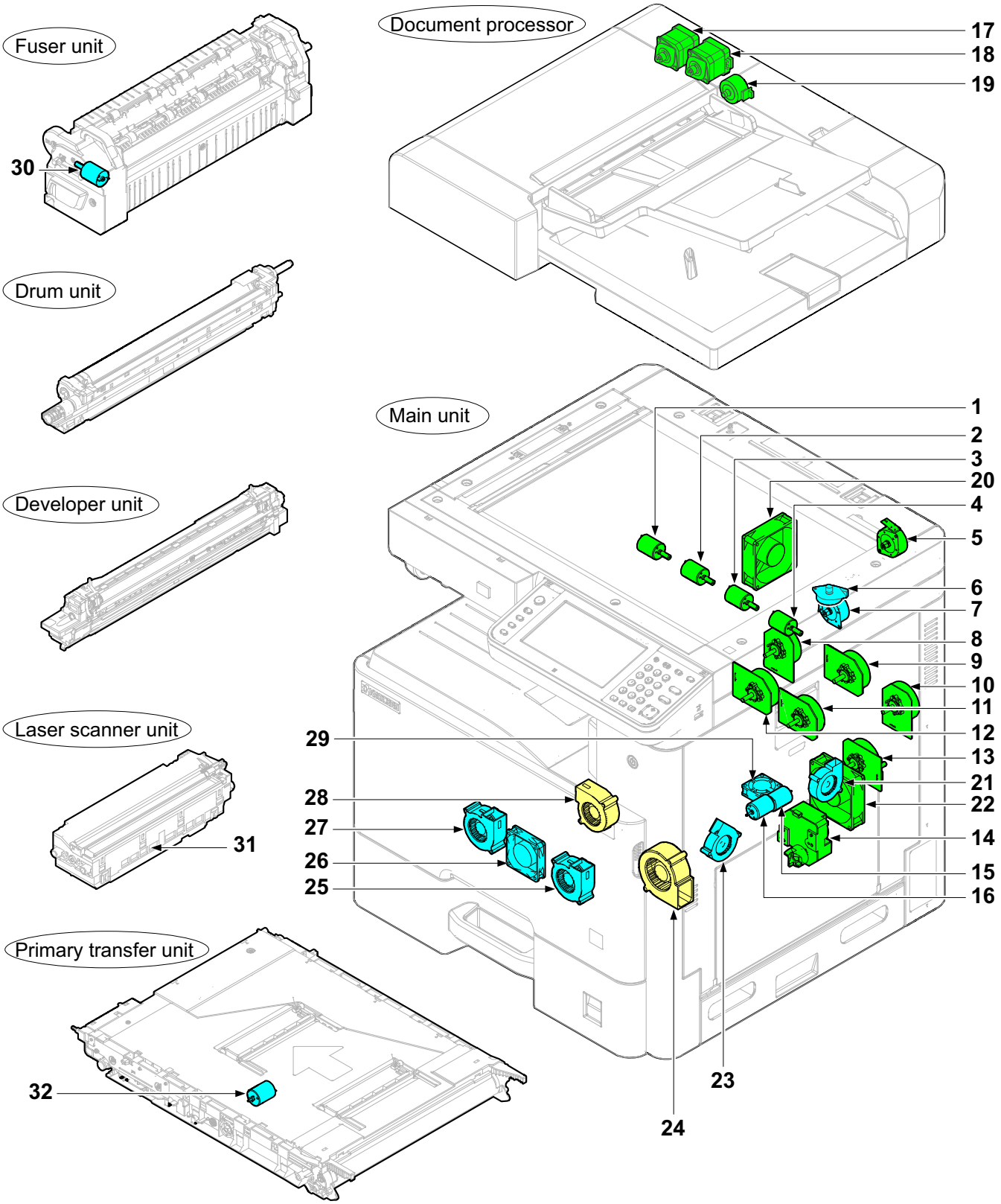
No.	Name used in service manual	Name used in parts list	Part. No.
1	DF top cover switch	INTER LOCK SWITCH (PARTS DP UNIT SP)	2FB2716_ (302P19310_)
2	DP feed sensor	PARTS SENSOR OPT SP (PARTS DP UNIT SP)	303M89426_ (302P19310_)
3	DP reversing sensor	PARTS SENSOR OPT SP (PARTS DP UNIT SP)	303M89426_ (302P19310_)
4	DP original sensor	PARTS SENSOR OPT SP (PARTS DP UNIT SP)	303M89426_ (302P19310_)
5	DP original width sensor	PARTS PWB PAPER SIZE SENSOR ASSY SP (PARTS TABLE ASSY SP) (PARTS DP UNIT SP)	303R39405_ (302P19402_) (302P19310_)
6	DP original length sensor	PARTS SENSOR OPT SP (PARTS TABLE ASSY SP) (PARTS DP UNIT SP)	303M89426_ (302P19402_) (302P19310_)
7	DP registration sensor	PARTS SENSOR OPT SP (PARTS DP UNIT SP)	303M89426_ (302P19310_)
8	DP timing sensor	PARTS SENSOR OPT SP (PARTS DP UNIT SP)	303M89426_ (302P19310_)
9	DP open/close switch	PARTS SENSOR OPT SP (PARTS DP UNIT SP)	303M89426_ (302P19310_)
10	Home position sensor *1	PARTS SENSOR OPT SP	303M89426_

No.	Name used in service manual	Name used in parts list	Part. No.
11	Home position sensor *2	SENSOR OPT.	7NXGP1S173LCH01
12	Original size timing sensor *1	PARTS SENSOR OPT SP	303M89426_
13	Original size timing sensor *2	SENSOR OPT.	7NXGP1S173LCH01
14	Original size sensor *1	- (PARTS SENSOR OPT SP)	- (302ND9480_)
15	Original size sensor *2	- (PARTS SENSOR OPT SP)	- (302ND9480_)
16	JS full sensor	SENSOR OPT.	7NXGP1S173LCH01
17	Paper full sensor	SENSOR OPT.	7NXGP1S173LCH01
18	BR switch	SW.PUSH	7SP01000001+H01
19	Right cover switch	SW.MICRO	7SM010104+++H01
20	JS paper sensor	SENSOR OPT.	7NXGP1S173LCH01
21	Cassette heater switch	SW.SEESAW	7SC010105+++H01
22	Paper length switch	SW.PUSH	7SP03090001+H01
23	Upper paper sensor	SENSOR OPT.	7NXGP1S173LCH01
24	Lower paper sensor	SENSOR OPT.	7NXGP1S173LCH01
25	Paper width switch	SW.PUSH	7SP01000001+H01
26	DU sensor	SENSOR OPT.	7NXGP1S173LCH01
27	Registration sensor	SENSOR CONVEYING	3H32741_
28	Conveying sensor	SENSOR OPT.	7NXGP1S173LCH01
29	Lift sensor	SENSOR OPT.	7NXGP1S173LCH01
30	MP paper sensor	SENSOR OPT. (PARTS MPF UNIT)	7NXGP1S173LCH01 (302K39450_)
31	PF connection switch	INTER LOCK SWITCH	2FB2716_
32	Temperature/humidity sensor	(P.W.BOARD ASSY THERMISTOR)	302KV0118_
33	Front cover switch	SW.MICRO	7SM010303+++H01
34	Power switch	PARTS PWB SWITCH ASSY SP	302NG9430_
35	Belt roll-up sensor	SENSOR CONVEYING	3H32741_
36	ID shutter sensor	SENSOR OPT.	7NXGP1S173LCH01
37	Rear ID sensor	ID SENSOR ASSY SP	302P39405_
38	Front ID sensor	ID SENSOR ASSY SP	302P39405_
39	Waste toner sensor	- (TONER FULL DETECT ASSY SP)	- (302K09428_)

No.	Name used in service manual	Name used in parts list	Part. No.
40	Toner sensor	- (DV-8115C) (DV-8115C(J)) (DV-8115K) (DV-8115K(J)) (DV-8115M) (DV-8115M(J)) (DV-8115Y) (DV-8115Y(J))	- (302P39302_) (302P39J02_) (302P39303_) (302P39J03_) (302P39304_) (302P39J04_) (302P39305_) (302P39J05_)
41	Exit sensor	- (FK-8115)	- (302P39307_)
42	Fuser middle thermistor	- (FK-8115)	- (302P39307_)
43	Fuser center thermistor	- (FK-8115)	- (302P39307_)
44	Fuser edge thermistor	- (FK-8115)	- (302P39307_)
45	Fuser press roller thermistor	- (FK-8115)	- (302P39307_)
46	Fuser pressure release sensor	- (FK-8115)	- (302P39307_)
47	Front fuser heat belt sensor	- (FK-8115)	- (302P39307_)
48	Rear fuser heat belt sensor	- (FK-8115)	- (302P39307_)
49	Transfer belt sensor 1	- (TR-8115A)	- (302P39310_)
50	Transfer belt sensor 2	- (TR-8115A)	- (302P39310_)

(5) Motors

(5-1) Layout



Front side: ▭ / Inside: ▭ / Back side: ▭

1	Toner motor Y	Supplying the toner to developer unit Y.
2	Toner motor C	Supplying the toner to developer unit C.
3	Toner motor M	Supplying the toner to developer unit M.
4	Toner motor K	Supplying the toner to developer unit K.
5	Scanner motor *2	ISU wire drive
6	Scanner motor *1	ISU belt drive
7	Exit motor	Exit system drive
8	Drum motor CMY	Drum unit C/M/Y drive
9	Developer K/Primary transfer belt motor	Developer unit K drive Primary transfer belt drive
10	Fuser motor	Fuser system drive
11	Drum motor K	Drum unit K drive
12	Developer motor CMY	Developer unit C/M/Y drive
13	Paper feed motor	Paper feed and conveying system drive
14	Lift motor	Cassette lift plate operation
15	LSU cleaning motor	LSU dust-proof glass cleaning system drive
16	ID shutter motor	ID sensor cleaning system drive
17	DP conveying motor	Original reversing and exit section drive
18	DP feed motor	DP forwarding pulley and DP feed roller drive
19	DP feed-shift motor	Original feed section drive
20	IH fan motor	IH PWB cooling
21	Conveying fan motor	Paper cooling in duplex conveying
22	Image forming fan motor	Imaging forming section cooling
23	Fuser fan motor	Paper cooling after fusing
24	Developer fan motor	Toner absorption fan motor
25	Developer fan motor M/K	Developer unit M/K cooling
26	LSU fan motor	Laser scanner unit cooling
27	Developer fan motor Y/C	Developer unit Y/C cooling
28	Toner container/IH coil fan motor	Toner container section and IH coil cooling
29	Power source fan motor	Power source fan motor
30	Fuser pressure release motor	Fuser pressure release drive
31	Polygon motor	Polygon mirror drive
32	Primary transfer belt release motor	Primary transfer belt release system drive

*1: CIS model only, *2: CCD model only

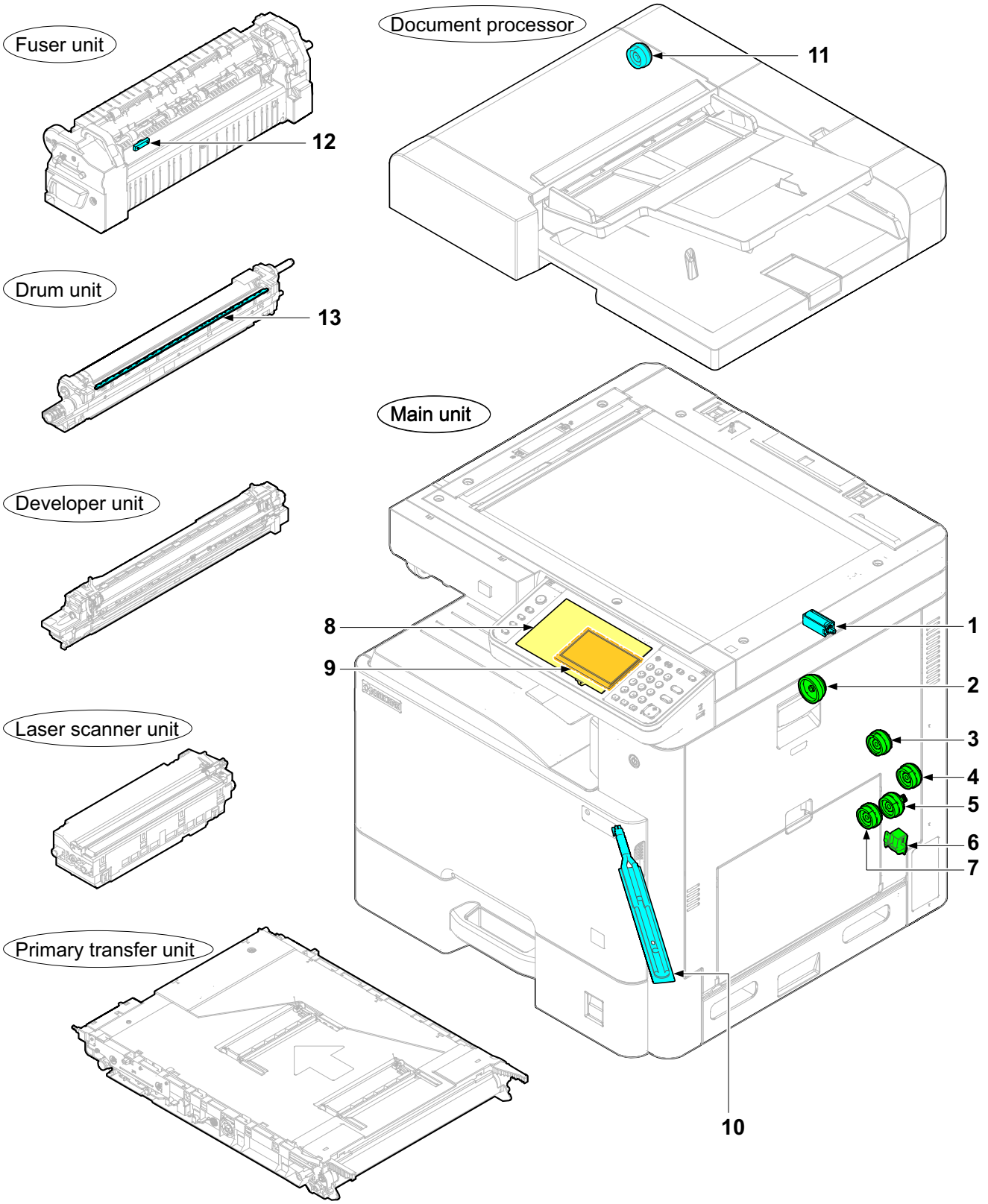
⑸-2⑵ Part name table (motor)

No.	Name used in service manual	Name used in parts list	Part. No.
1	Toner motor Y	PARTS DC MOTOR SP	302K09410_
2	Toner motor C	PARTS DC MOTOR SP	302K09410_
3	Toner motor M	PARTS DC MOTOR SP	302K09410_
4	Toner motor K	PARTS DC MOTOR SP	302K09410_
5	Scanner motor *2	PARTS MOTOR ISU SP	302NG9421_
6	Scanner motor *1	MOTOR REVERSE	302HN4410_
7	Exit motor	MOTOR REVERSE	302HN4410_
8	Drum motor CMY	PARTS MOTOR-BL W20 DRUM SP	302LC9430_
9	Developer K/Primary transfer belt motor	PARTS MOTOR-BL W20 SP	302K99432_
10	Fuser motor	PARTS MOTOR-BL W20 SP	302K99432_
11	Drum motor K	PARTS MOTOR-BL W20 DRUM SP	302LC9430_
12	Developer motor CMY	PARTS MOTOR-BL W30 SP	302K99433_
13	Paper feed motor	PARTS MOTOR-BL W20 SP	302K99432_
14	Lift motor	PARTS MOTOR LIFT ASSY SP	302K39419_
15	LSU cleaning motor	PARTS MOTOR-DC ASSY C SP	302K09409_
16	ID shutter motor	MOTOR IMAGE	302K09410_
17	DP conveying motor	PARTS MOTOR PAPER FEED SP (PARTS DP UNIT SP)	303R49404_ (302P19310_)
18	DP feed motor	PARTS MOTOR PAPER FEED SP (PARTS DP UNIT SP)	303R49404_ (302P19310_)
19	DP feed-shift motor	MOTOR ROTARY (PARTS DP UNIT SP)	302KY4409_ (302P19310_)
20	IH fan motor	PARTS FAN MOTOR SP	302K09430_
21	Fuser fan motor 1	FAN MOTOR	302HN4421_
22	Image forming fan motor	PARTS FAN MOTOR SP	302NG9422_
23	Fuser fan motor 2	FAN MOTOR	302HN4421_
24	Developer fan motor	PARTS,FAN COOLING DLP 70 SP	302FZ9438_
25	Developer fan motor M/K	PARTS FAN COOLING LSU 60 SP	302LC9438_
26	LSU fan motor	PARTS,FAN COOLING CONVEYING SP	3302FZ9442_
27	Developer fan motor Y/C	PARTS FAN COOLING LSU 60 SP	302LC9438_
28	Toner container/IH coil fan motor	PARTS FAN COOLING LSU 60 SP	302LC9438_
29	Power source fan motor	FAN MOTOR PS40	302HG4412_
30	Fuser pressure release motor	- (FK-8115)	- (302P39307_)

No.	Name used in service manual	Name used in parts list	Part. No.
31	Polygon motor	- (LK-8115) (LK-8116)	- (302P39311_) (302P39301_)
32	Primary transfer belt release motor	- (TR-8115A)	- (302P39310_)

⑹ Other parts

⑹-1 Layout



Front side: ▭ / Inside: ▭ / Back side: ▭

1	Feedshift solenoid	Paper output destination switching by operation of the feedshift guide.
2	Developer clutch	Developer section drive control

3	Registration clutch	Secondary paper feed drive control
4	DU clutch	Duplex conveying control
5	Middle clutch	Vertical conveying section drive control
6	MP solenoid:	MP lift plate control
7	Feed clutch	Primary paper feed control from the cassette
8	LCD *2	Operation panel display
9	LCD *1	Operation panel display
10	Cassette heater	Cassette section dehumidification
11	DP registration clutch	DP secondary paper feed control
12	Thermal cut-out	Fuser heater power supply shutoff when the fuser heat roller temperature is abnormally high.
13	Eraser	Removing the remaining electric charge on the drum.

1: 4.3-inch panel model only, *2: 7-inch panel model only

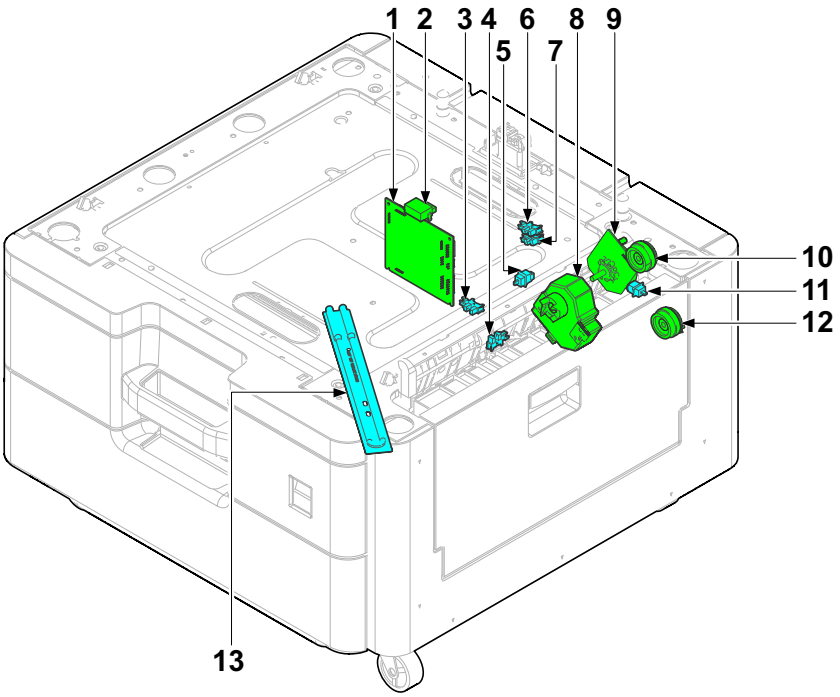
⑹-2) Part name table

No.	Name used in service manual	Name used in parts list	Part. No.
1	Feedshift solenoid	SOLENOID FEED SHIFT SP	303LJ9415_
2	Developer clutch	PARTS CLUTCH 50 Z45L SP	302K09432_
3	Registration clutch	- DR-895C	- 302K09314_
4	DU clutch	- DR-895C	- 302K09314_
5	Middle clutch	- DR-895C	- 302K09314_
6	MP solenoid:	- DR-895C	- 302K09314_
7	Feed clutch	- DR-895C	- 302K09314_
8	LCD *2	PARTS TABLET OPERATION SP (PARTS OPERATION UNIT SP) (PARTS OPERATION UNIT J SP)	302NM9412_ (302P19407_) *4 (302P29402_) *3
9	LCD *1	PARTS TABLET OPERATION SP (PARTS OPERATION UNIT SP)	302R49431_ (302P29401_)
10	Cassette heater	HEATER DEHUMIDIFIER 100 HEATER DEHUMIDIFIER 120 HEATER DEHUMIDIFIER 240	302K30242_ 302K30243_ 302K30244_
11	DP registration clutch	CLUTCH 50 Z35R (PARTS DP UNIT SP)	302KV4404_ (302P19310_)
12	Thermal cut-out	- (FK-8115)	- (302P39307_)
13	Eraser	- (DK-8115)	- (302P39306_)

3 - 4 Electric parts (Optional unit)

(1) Paper feeder (PF-470)

(1-1) Layout



Front side: ▭ / Inside: ▭ / Back side: ▭

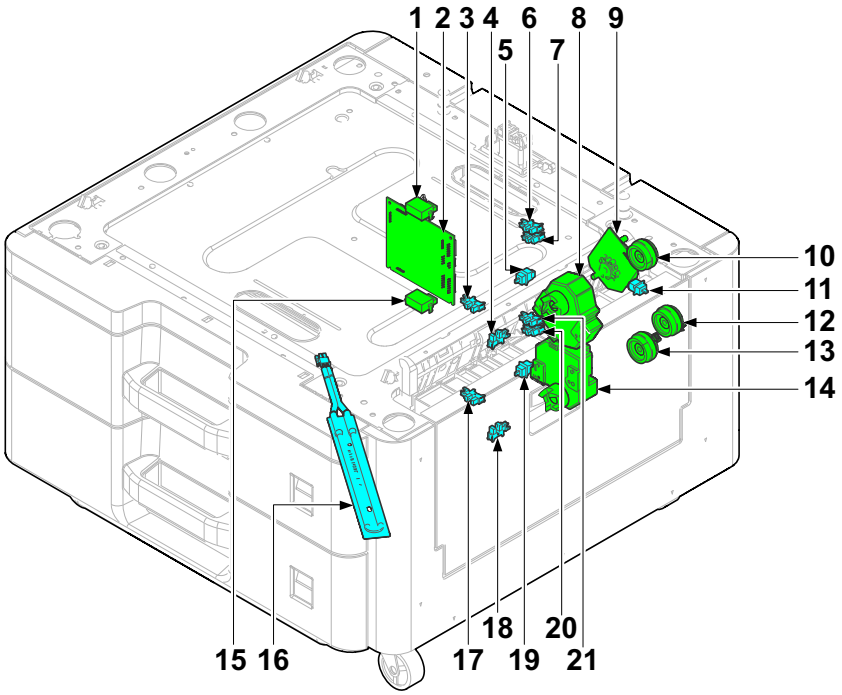
1	PF PWB	Each electrical parts control in the paper feeder and serial communication with the main body
2	PF paper length sensor 1	Paper length detection in the cassette 2
3	PF lift sensor 1	Upper limit detection when lifting the lift plate in the cassette 2
4	PF conveying sensor 1	Paper jam detection
5	PF paper width sensor 1	Paper width detection in the cassette 2
6	PF upper paper sensor 1	Detecting the remaining paper level in the cassette2.
7	PF lower paper sensor 1	Detecting the remaining paper level in the cassette2.
8	PF lift motor 1	Cassette 2 lift plate operation
9	PF motor	Paper feed system drive
10	PF feed clutch 1	Feed roller and pickup roller drive
11	PF right cover sensor	Configuring the safety circuit at the right cover open/close.
12	PF conveying clutch	Conveying roller drive
13	PF cassette heater	Paper dehumidification

(1-2) Part name table

No.	Name used in service manual	Name used in parts list	Part. No.
1	PF PWB	PARTS PWB PF MAIN ASSY SP	303NN9401_
2	PF paper length sensor 1	PUSH SWITCH 03 SN /SW-192 N	5ESP03090001+01
3	PF lift sensor 1	SENSOR OPT.	7NXGP1S173LCH01
4	PF conveying sensor 1	SENSOR OPT.	7NXGP1S173LCH01
5	PF paper width sensor 1	SW.PUSH	7SP01000001+H01
6	PF upper paper sensor 1	SENSOR OPT.	7NXGP1S173LCH01
7	PF lower paper sensor 1	SENSOR OPT.	7NXGP1S173LCH01
8	PF lift motor 1	PARTS MOTOR LIFT ASSY SP	302K39419_
9	PF motor	PARTS MOTOR-BL W10 SP (PARTS DRIVE ASSY SP)	303NN9402_ (303NP9401_)
10	PF feed clutch 1	- (PARTS DRIVE ASSY SP)	- (303NP9401_)
11	PF right cover sensor	SW.PUSH	7SP01000001+H01
12	PF conveying clutch	- (PARTS DRIVE ASSY SP)	- (303NP9401_)
13	PF cassette heater	HEATER DEHUMIDIFIER 100 HEATER DEHUMIDIFIER 120 HEATER DEHUMIDIFIER 240	302K30242_ 302K30243_ 302K30244_

⑵ Paper feeder (PF-471)

⑵-1) Layout



1	PF paper length sensor 1	Paper length detection in the cassette 2
2	PF main PWB	Each electrical parts control in the paper feeder and serial communication with the main body
3	PF lift sensor 1	Upper limit detection when lifting the lift plate in the cassette 2
4	PF conveying sensor 1	Paper jam detection
5	PF paper width sensor 1	Paper width detection in the cassette 2
6	PF upper paper sensor 1	Detecting the remaining paper level in the cassette2.
7	PF lower paper sensor 1	Detecting the remaining paper level in the cassette2.
8	PF lift motor 1	Cassette 2 lift plate operation
9	PF motor	Paper feed system drive
10	PF feed clutch 1	Feed roller and pickup roller drive in the cassette 2
11	PF right cover sensor	Configuring the safety circuit at the right cover open/close.
12	PF conveying clutch	Conveying roller drive
13	PF feed clutch 2	Feed roller and pickup roller drive in the cassette 3
14	PF lift motor 2	Cassette 3 lift plate operation
15	PF paper length sensor 2	Paper length detection in the cassette 3
16	PF cassette heater	Paper dehumidification
17	PF lift sensor 2	Upper limit detection when lifting the lift plate in the cassette 3
18	PF conveying sensor 2	Paper jam detection
19	PF paper width sensor 2	Paper width detection in the cassette 3

20 PF lower paper sensor 2 Detecting the remaining paper level in the cassette3.

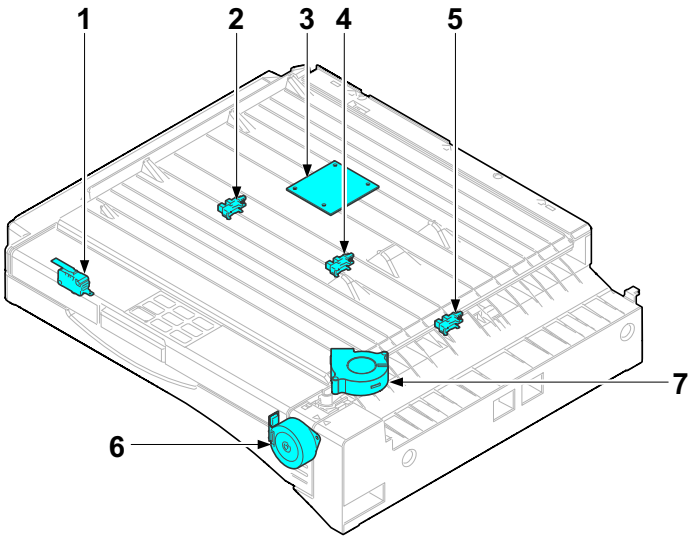
21 PF upper paper sensor 2 Detecting the remaining paper level in the cassette3

⑵-2⑵ Part name table

No.	Name used in service manual	Name used in parts list	Part. No.
1	PF paper length sensor 1	PUSH SWITCH 03 SN /SW-192 N	5ESP03090001+01
2	PF main PWB	PARTS PWB PF MAIN ASSY SP	303NN9401_
3	PF lift sensor 1	SENSOR OPT.	7NXGP1S173LCH01
4	PF conveying sensor 1	SENSOR OPT.	7NXGP1S173LCH01
5	PF paper width sensor 1	SW.PUSH	7SP01000001+H01
6	PF upper paper sensor 1	SENSOR OPT.	7NXGP1S173LCH01
7	PF lower paper sensor 1	SENSOR OPT.	7NXGP1S173LCH01
8	PF lift motor 1	PARTS MOTOR LIFT ASSY SP	302K39419_
9	PF motor	PARTS MOTOR-BL W10 SP (PARTS DRIVE ASSY SP)	303NN9402_ (303NP9401_)
10	PF feed clutch 1	- (PARTS DRIVE ASSY SP)	- (303NP9401_)
11	PF right cover sensor	SW.PUSH	7SP01000001+H01
12	PF conveying clutch	- (PARTS DRIVE ASSY SP)	- (303NP9401_)
13	PF feed clutch 2	- (PARTS DRIVE ASSY SP)	- (303NP9401_)
14	PF lift motor 2	PARTS MOTOR LIFT ASSY SP	302K394190
15	PF paper length sensor 2	PUSH SWITCH 03 SN /SW-192 N	5ESP03090001+01
16	PF cassette heater	HEATER DEHUMIDIFIER 100	302K30242_
17	PF lift sensor 2	PARTS MOTOR LIFT ASSY SP	302K39419_
18	PF conveying sensor 2	SENSOR OPT.	7NXGP1S173LCH01
19	PF paper width sensor 2	SW.PUSH	7SP01000001+H01
20	PF lower paper sensor 2	SENSOR OPT.	7NXGP1S173LCH01
21	PF upper paper sensor 2	SENSOR OPT.	7NXGP1S173LCH01

(3) Attachment kit (AK-470)

(3-1) Layout



Front side: ▭ / Inside: ▭ / Back side: ▭

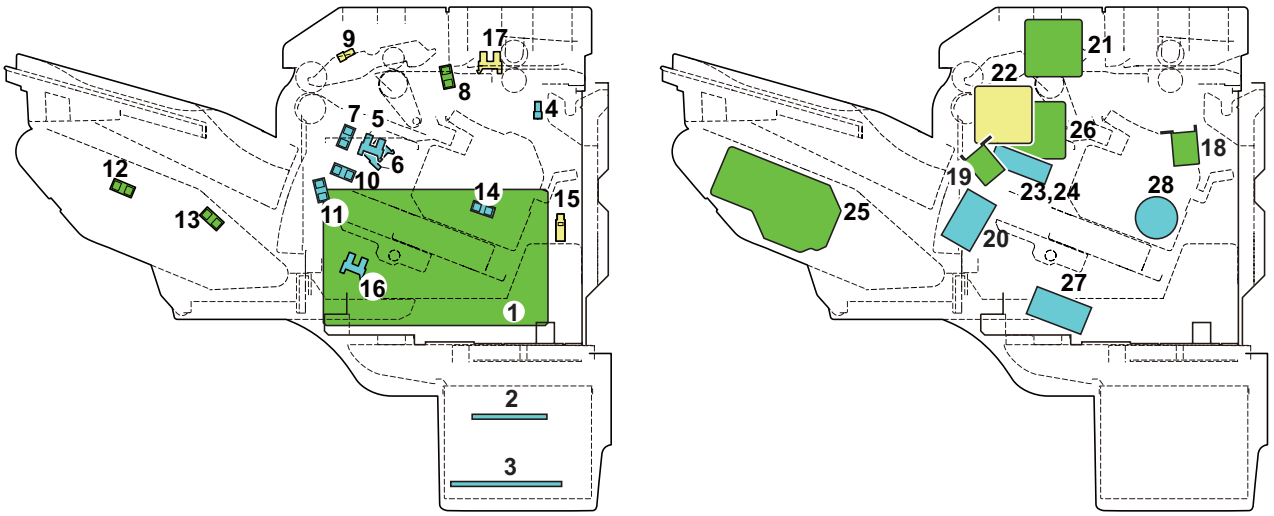
1	BR cover sensor	Configuring the safety circuit at the bridge cover open/close.
2	BR conveying sensor 3	Conveying paper detection in the bridge. (left side)
3	BR PWB	Paper conveying system control in the bridge.
4	BR conveying sensor 2	Conveying paper detection in the bridge. (center)
5	BR conveying sensor 1	Conveying paper detection in the bridge. (right side)
6	BR motor	Paper conveying drive control in the bridge.
7	BR fan motor	Cooling inside the bridge.

(3-2) Part name table

No.	Name used in service manual	Name used in parts list	Part. No.
1	BR cover sensor	INTER LOCK SWITCH	2FB2716_
2	BR conveying sensor 3	SENSOR OPT.	7NXGP1S173LCH01
3	BR PWB	PARTS PWB BRIDGE MAIN ASSY SP	303NS9401_
4	BR conveying sensor 2	SENSOR OPT.	7NXGP1S173LCH01
5	BR conveying sensor 1	SENSOR OPT.	7NXGP1S173LCH01
6	BR motor	MOTOR REVERSE	302HN4410_
7	BR fan motor	PARTS,FAN IMAGE SP	302FZ9466_

⑷ 500-sheet Finisher (DF-470)

⑷-1 Layout



Front side: / Inside: / Back side:

1	DF PWB	Each electrical parts operation control
2	DF relay PWB	Configuring the engine PWB, DF PWB, BR PWB, and DF power source PWB wiring relay circuit.
3	DF power source PWB	Rectifying the AC power input to the full-wave, convert it to DC24V by switched mode and output it.
4	DF conveying sensor	Paper jam detection at the process section
5	DF adjusting sensor 1	Adjusting plate F home position detection
6	DF adjusting sensor 2	Adjusting plate R home position detection
7	DF exit sensor	Paper detection in the exit section
8	DF belt sensor	Bundle exit belt position detection
9	DF roller sensor	Bundle exit unit position detection
10	DF paper sensor 1	Paper holding lever position detection
11	DF paper sensor 2	Paper holding lever position detection
12	DF tray upper limit sensor	Exit tray upper limit detection
13	DF tray lower limit sensor	Exit tray lower limit detection
14	DF slide sensor	Staple unit slide position detection
15	DF staple cover sensor	Staple cover open/close detection
16	DF staple position sensor	Staple unit position detection at the process section
17	DF top cover sensor	DF top cover open/close detection
18	DF belt solenoid	Bundle exit belt operation

19 DF paddle solenoid	Paddle rotation
20 DF paper solenoid	Paper holding lever operation
21 DF conveying motor	Conveying roller drive
22 DF bundle exit motor	Bundle exit unit drive
23 DF adjusting motor1	Adjusting plate F drive
24 DF adjusting motor 2	Adjusting plate R drive
25 DF tray motor	Exit tray ascending and descending drive
26 DF roller motor	Exit roller drive
27 DF slide motor	Staple unit drive
28 DF staple motor	Staple operation

⑷-2) Part name table

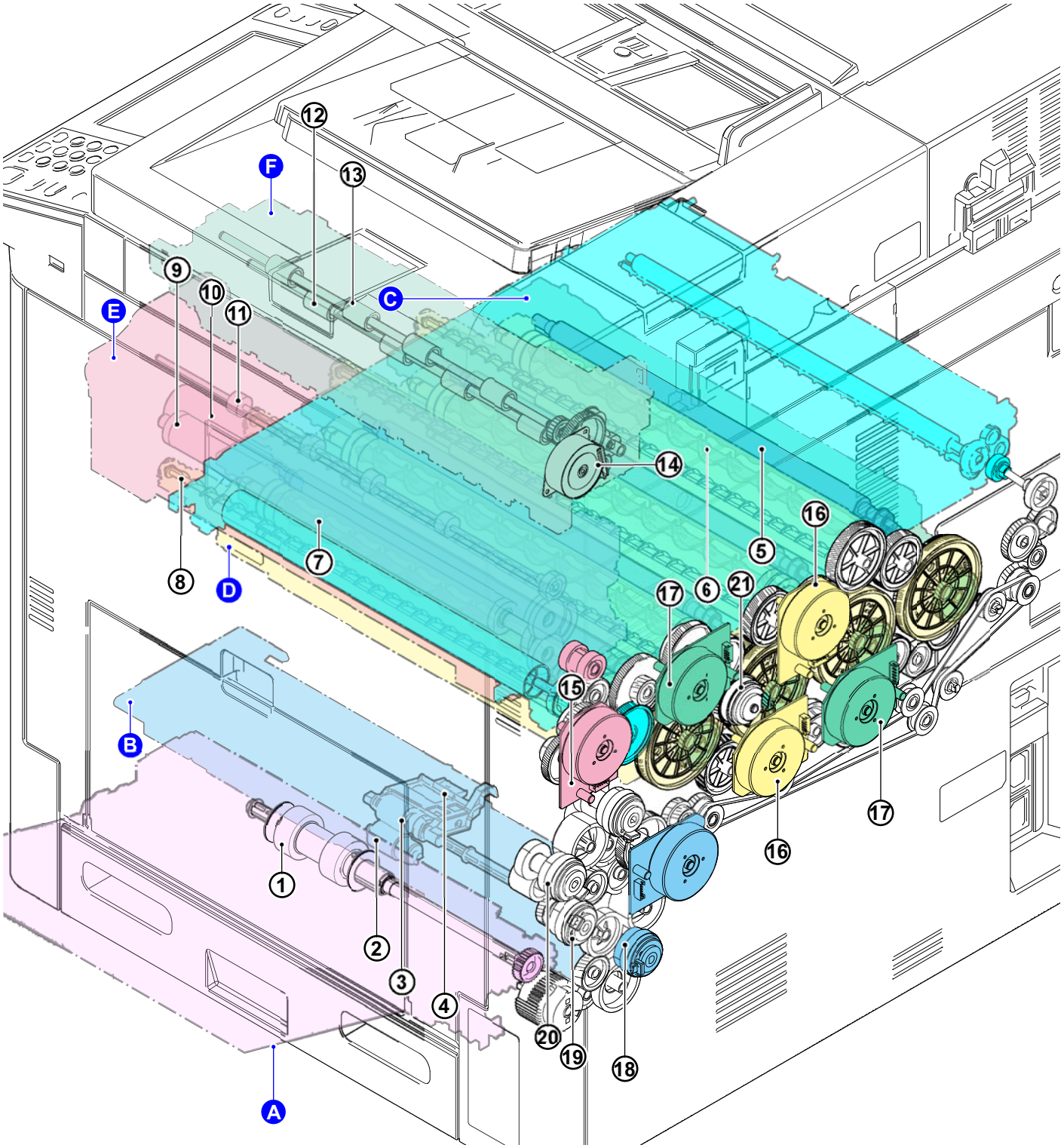
No.	Name used in service manual	Name used in parts list	Part. No.
1	DF PWB	PWB:PBA-CONTROL	305JS7026_
2	DF relay PWB	PARTS PWB BRIDGE CONNECT ASSY SP (PARTS LVU BOX ASSY SP)	303NS9402_ (303NS9413_)
3	DF power source PWB	- (PARTS LVU BOX ASSY SP)	- (303NS9413_)
4	DF conveying sensor	LVR-FE-SEN-ENT	305JA7088_
5	DF adjusting sensor 1	GP1S73P2J00F	305JA7007_
6	DF adjusting sensor 2	GP1S73P2J00F	305JA7007_
7	DF exit sensor	GP1S73P2J00F	305JA7007_
8	DF belt sensor	GP1S73P2J00F	305JA7007_
9	DF roller sensor	GP1S73P2J00F	305JA7007_
10	DF paper sensor 1	GP1S73P2J00F	305JA7007_
11	DF paper sensor 2	GP1S73P2J00F	305JA7007_
12	DF tray upper limit sensor	GP1S73P2J00F	305JA7007_
13	DF tray lower limit sensor	GP1S73P2J00F	305JA7007_
14	DF slide sensor	GP1S73P2J00F	305JA7007_
15	DF staple cover sensor	DE2L-FJ15	305JA7006_
16	DF staple position sensor	GP1S73P2J00F	305JA7007_
17	DF top cover sensor	GP1S73P2J00F	305JA7007_
18	DF belt solenoid		
19	DF paddle solenoid	SOLENOID:SOL-TDS-F12G-67A	305JS7027_
20	DF paper solenoid	- (SOLENOID:ASY-YO-SOL)	- (305JS7027_)
21	DF conveying motor		
22	DF bundle exit motor	MOT-17PM-J343-P3VS	305JA7049_

No.	Name used in service manual	Name used in parts list	Part. No.
23	DF adjusting motor1	MOT-PM42M-048-NSE3	305JA7151_
24	DF adjusting motor 2	MOT-PM42M-048-NSF0	305JA7152_
25	DF tray motor	MOTOR:MOTOR,DC GEARED (TRAY:ASY-S/P-TRY-S)	305JS7024_ (305JS7029_)
26	DF roller motor	MOT-17PM-J343-P3VS	305JA7049_
27	DF slide motor	MOT-PM42L-048-NSE4	305JA7150_
28	DF staple motor	- (STAPLER EH590)	- (303JY4401_)

3 - 5 Drive system

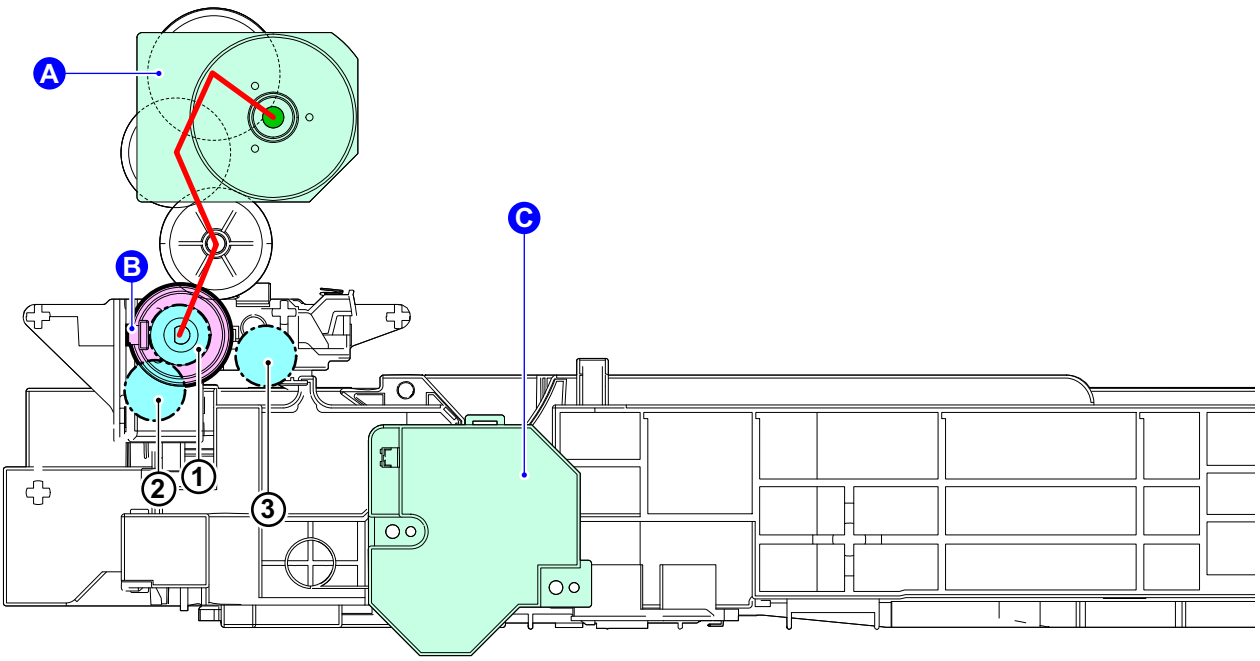
(1) Drive configuration

Entire drive



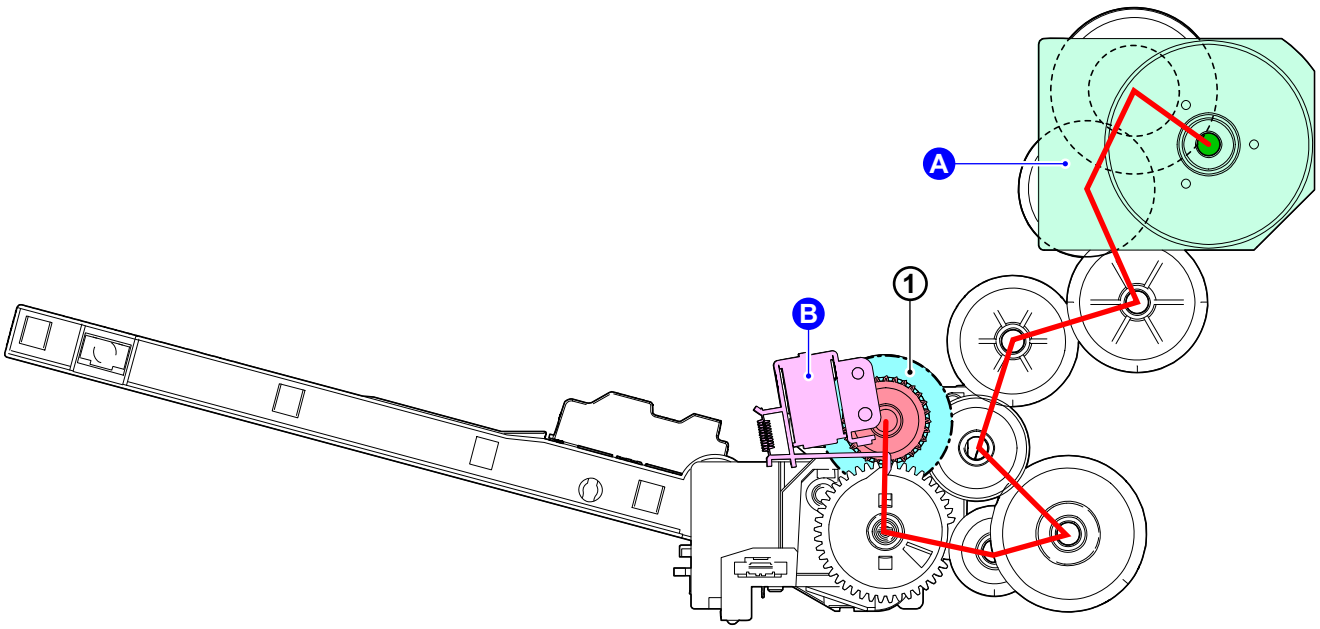
A	MP paper feed section	E	Fuser section	17	Paper feed motor
1	MP feed roller	9	Fuser press roller	18	Fuser motor
		10	Fuser heat belt	19	Drum motor K
B	Cassette paper feed section	11	Fuser exit roller	20	Drum motor CMY
2	Retard roller			21	Developer K/Primary transfer belt motor
3	Feed roller	F	Exit section	22	Developer motor CMY
4	Pickup roller	12	Exit roller	23	Feed clutch
		13	JS exit roller	24	Middle clutch
C	Developer section	14	Exit motor	25	DU clutch
5	Developer roller			26	Registration clutch
6	Agitation roller	G	Primary transfer section	27	Developer clutch
		15	Primary transfer belt drive roller		
D	Drum section	16	Cleaning roller		
7	Drum				
8	Sweep roller				

Cassette drive



A	Paper feed motor	1	Feed roller
B	Feed clutch	2	Retard roller
C	Lift motor	3	Pickup roller

MP drive

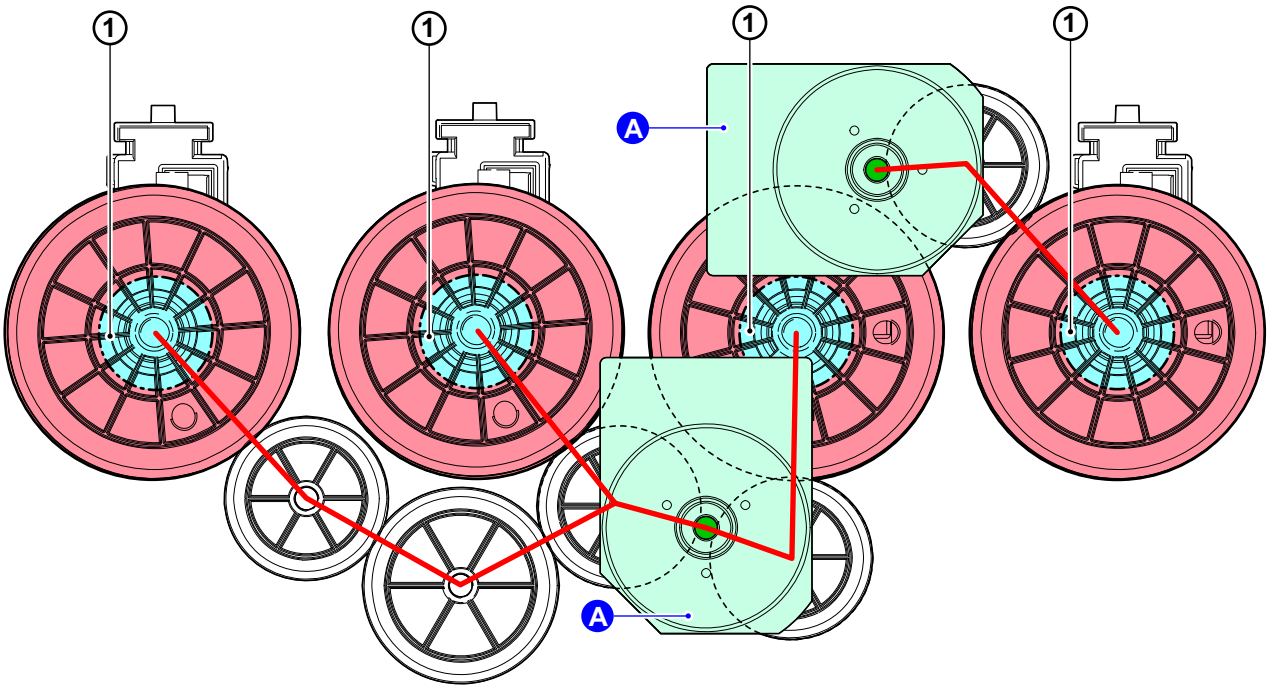


A Paper feed motor

B MP solenoid:

1 MP feed roller

Drum drive

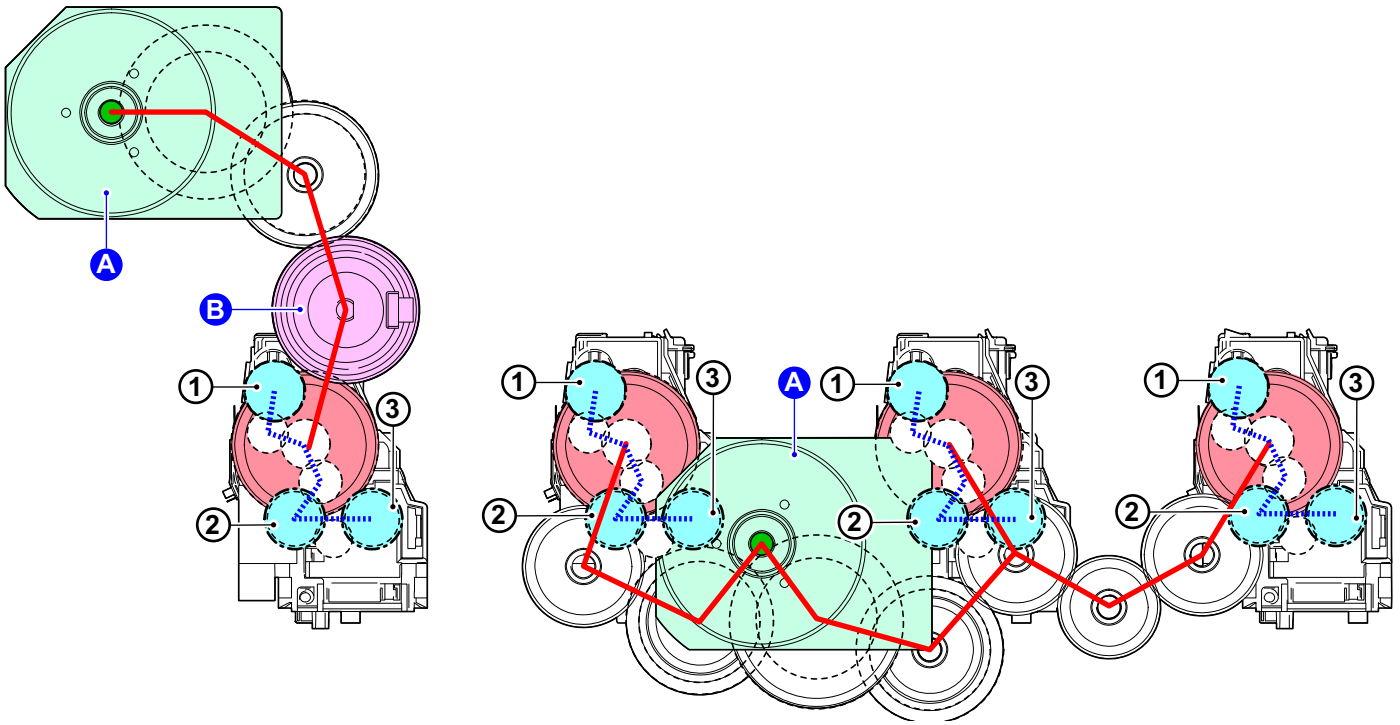


A Drum motor K

B Drum motor CMY

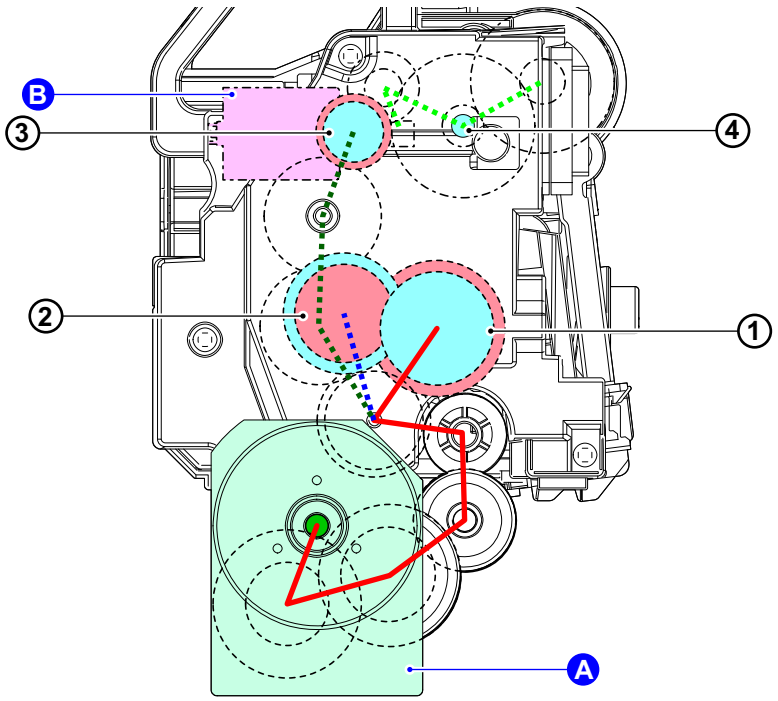
1 Drum

Developer drive



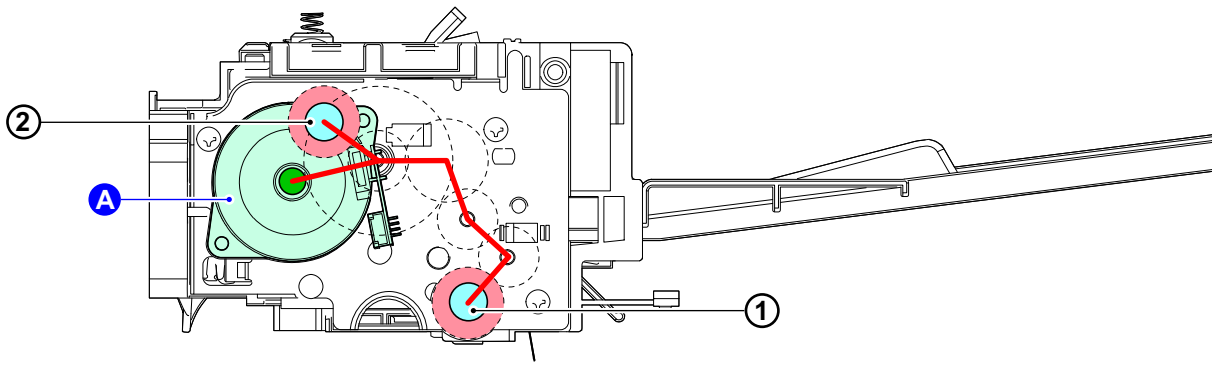
A	Developer K/Primary transfer belt motor	1	Developer sleeve roller
B	Developer motor CMY	2	Developer spiral roller A
C	Developer clutch	3	Developer spiral roller B

Fuser drive



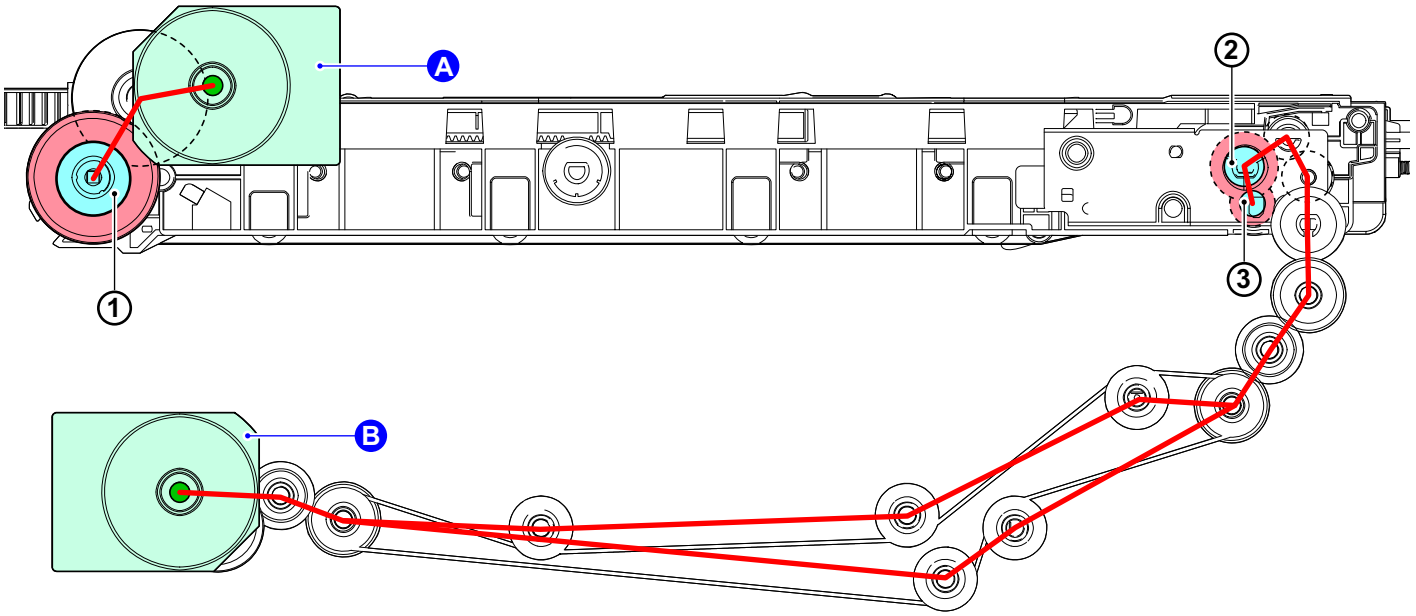
A	Fuser motor	1	Fuser heat belt
B	Fuser pressure release motor	2	Fuser press roller
		3	Fuser exit roller
		4	Fuser pressure release cam shaft

Exit/duplex drive



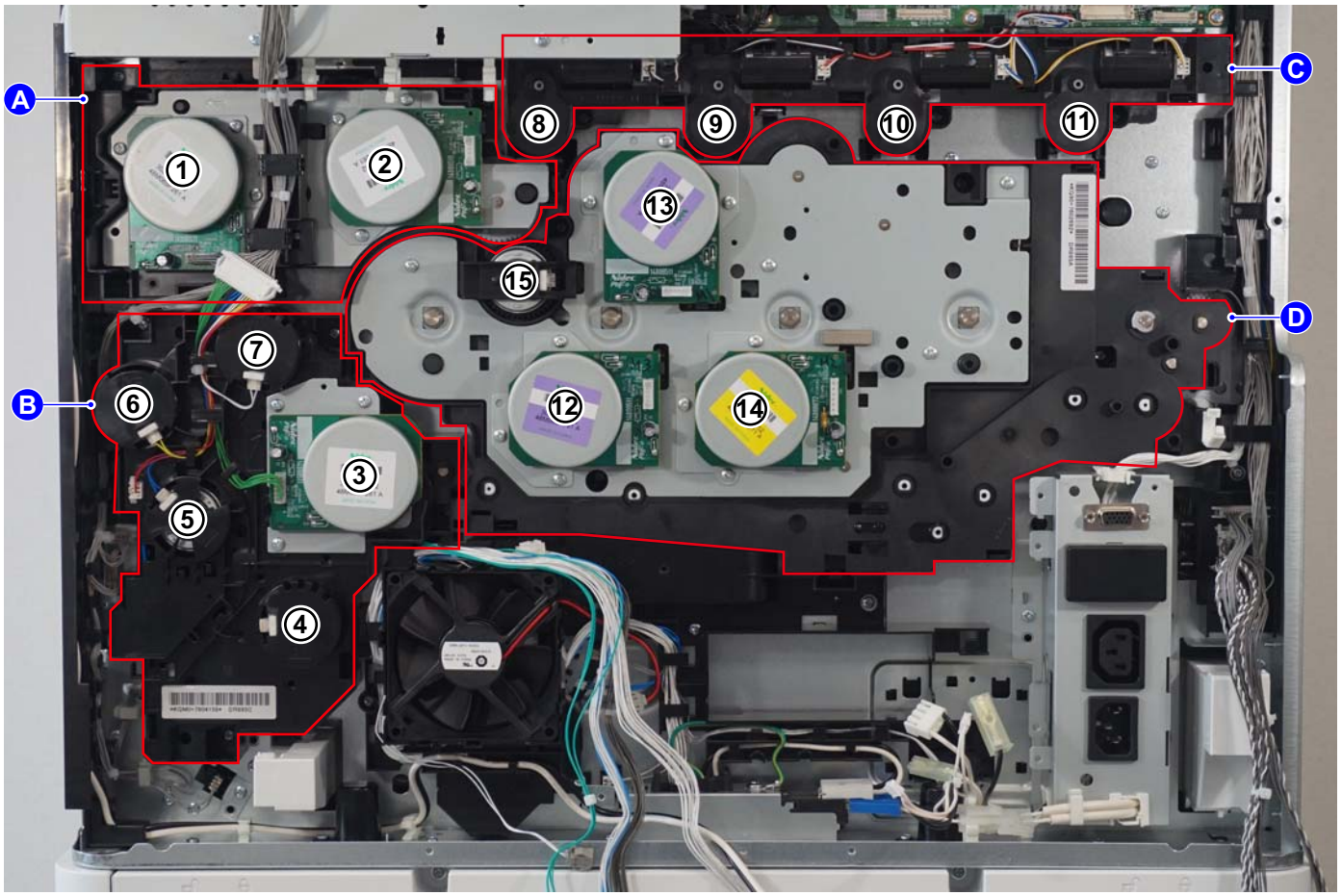
A	Exit motor	1	Lower exit roller
		2	Upper exit roller

Primary transfer drive



A	Developer K/Primary transfer belt motor	1	Primary transfer belt drive roller
B	Paper feed motor	2	Cleaning roller
		3	Cleaning screw

(2) Drive location



A: Fuser/Developer K drive unit

1 Fuser motor

2 Developer K/Primary transfer belt motor

B: Feed drive unit

3 Paper feed motor

4 Feed clutch

5 Middle clutch

6 DU clutch

7 Registration clutch

C: Toner supply drive unit

8 Toner motor K

9 Toner motor M

10 Toner motor C

11 Toner motor Y

D: Main drive unit

12 Drum motor K

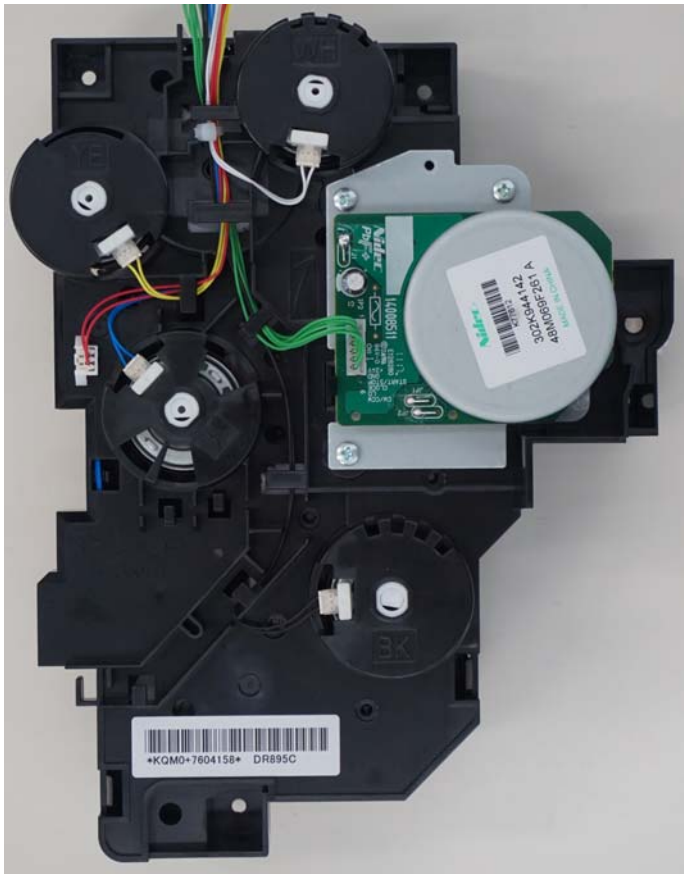
13 Drum motor CMY

14 Developer motor CMY

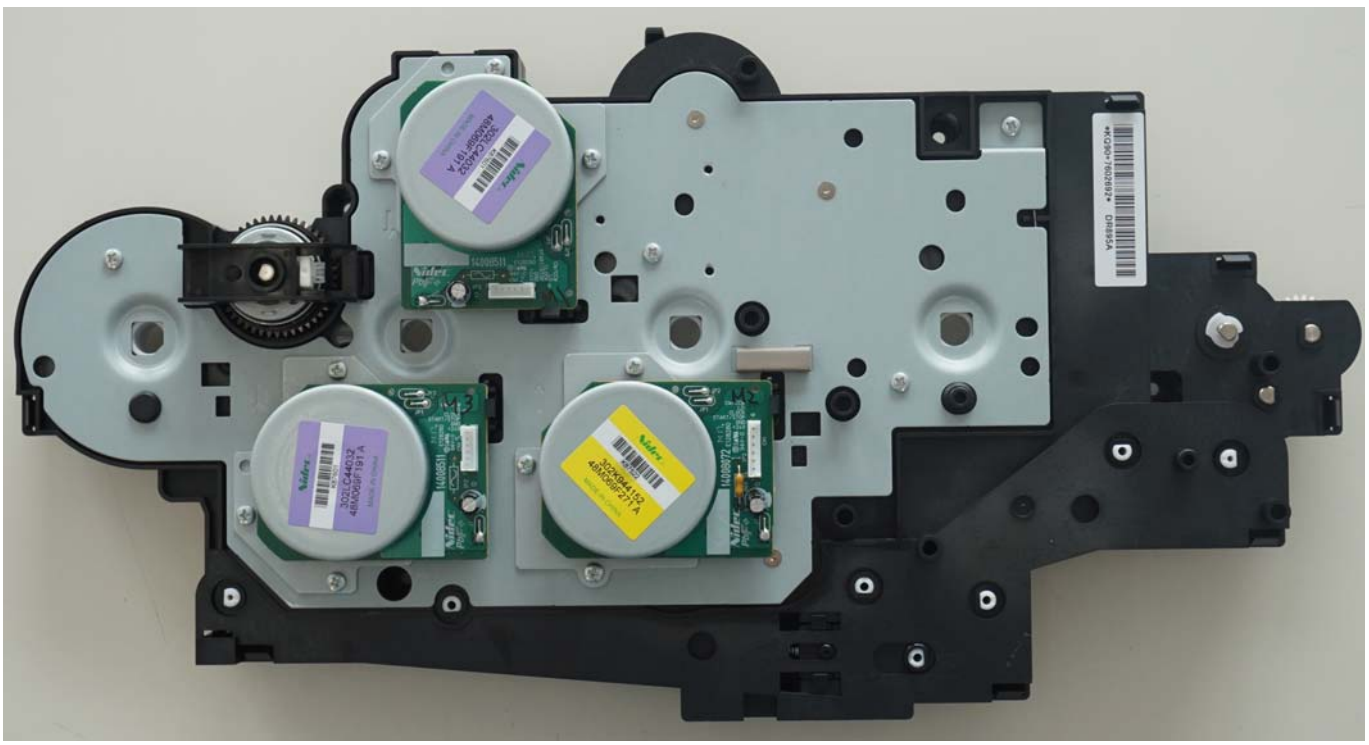
15 Developer clutch

⑶ Drive unit exterior

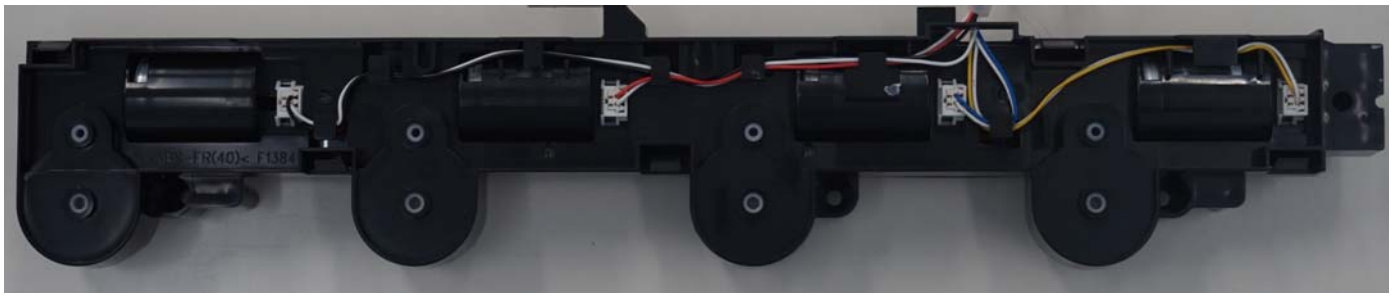
⑶-1 Feed drive unit



⑶-2 Main drive unit



(3-3) Toner supply drive unit



(3-4) Fuser, Developer K/Primary transfer belt drive unit

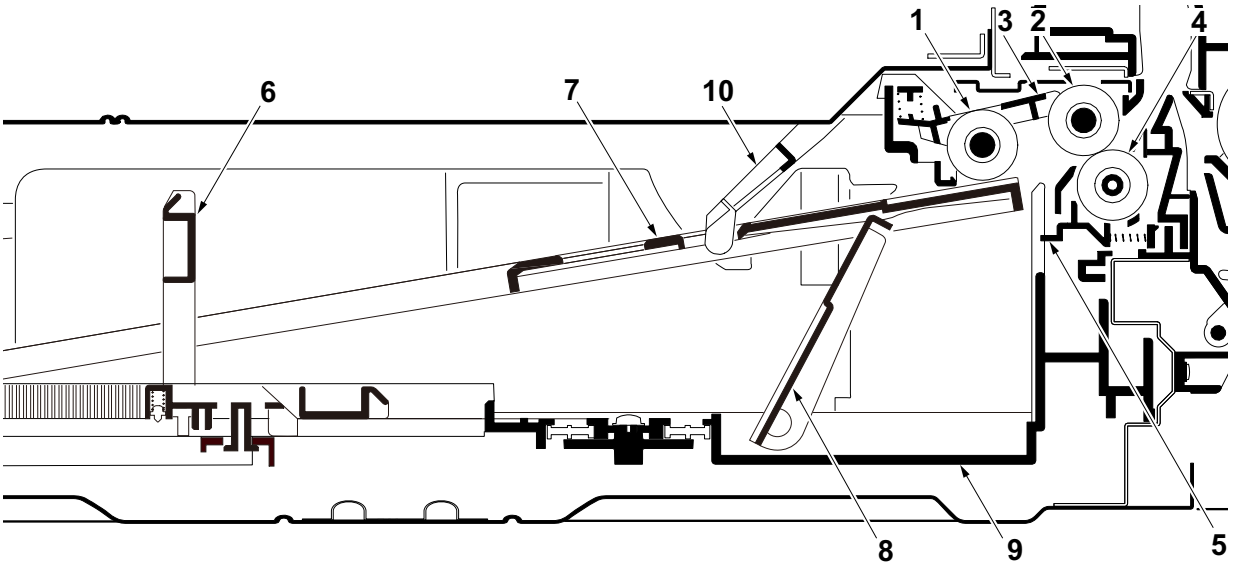
3 - 6 Mechanical construction

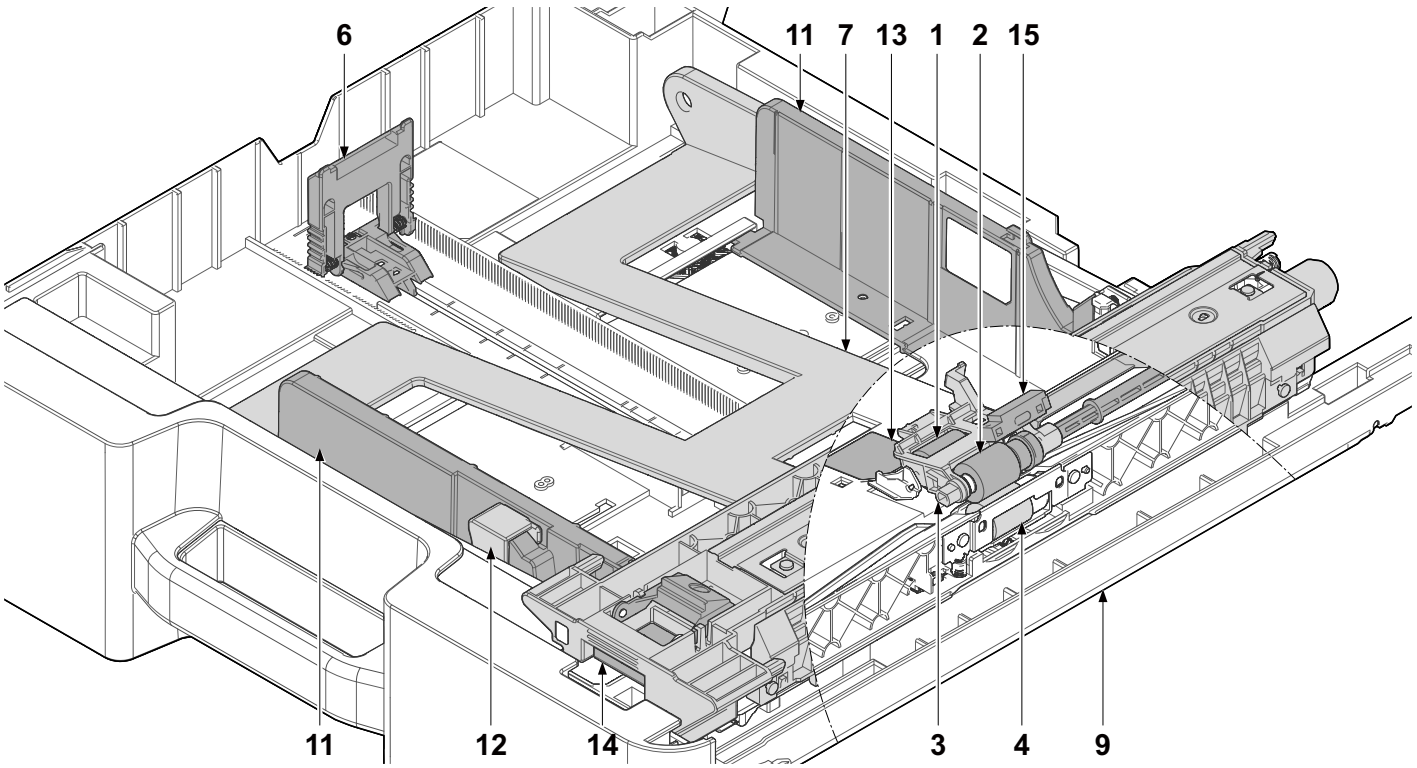
(1) Paper feed section

The paper feed section consists of the cassette paper feed section and the MP tray paper feed section.

(1-1) Cassette paper feed section

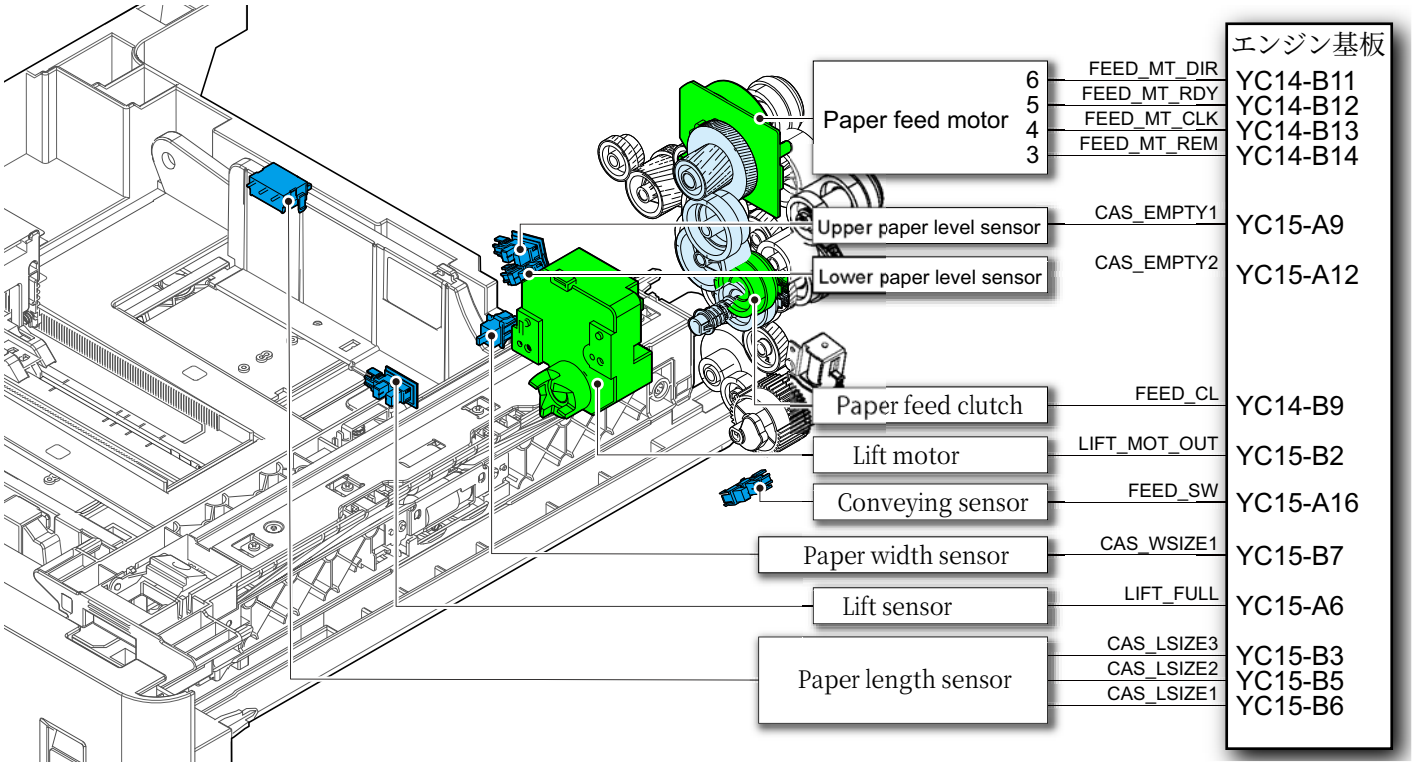
The cassette can load 550 sheets paper (64g/m^2) or 500 sheets paper (80g/m^2). The cassette forwards paper by rotating the pickup roller and conveys it to the paper conveying section by rotating the paper feed roller. Multi-feeding is also prevented by the effect of the retard roller.





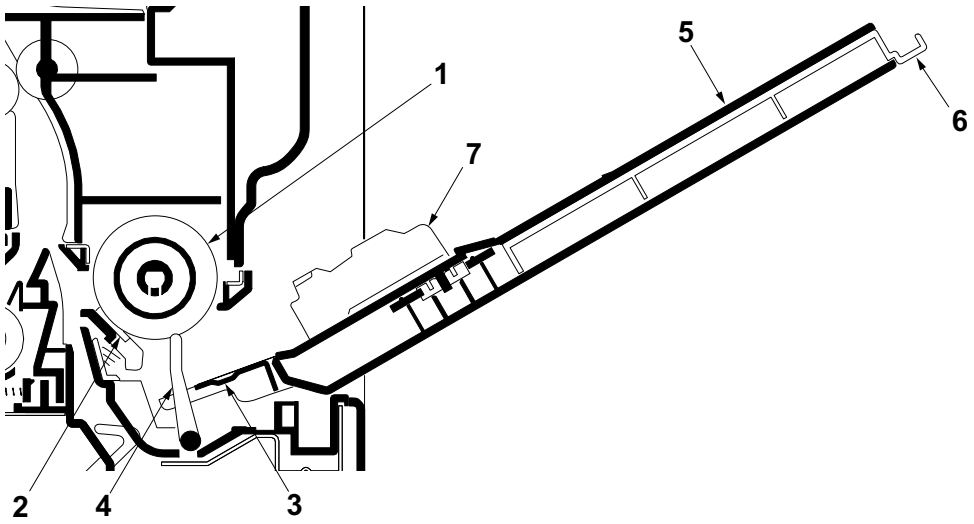
1 Pickup roller
2 Feed roller
3 Feed holder
4 Retard roller
5 Retard holder
6 Paper length guide
7 Lift plate
8 Lift operation plate
9 Cassette base
10 Actuator (Lift sensor)
11 Paper width guides
12 Width guide release tab
13 Friction pad
14 Unit release lever
15 Paper conveying sensor

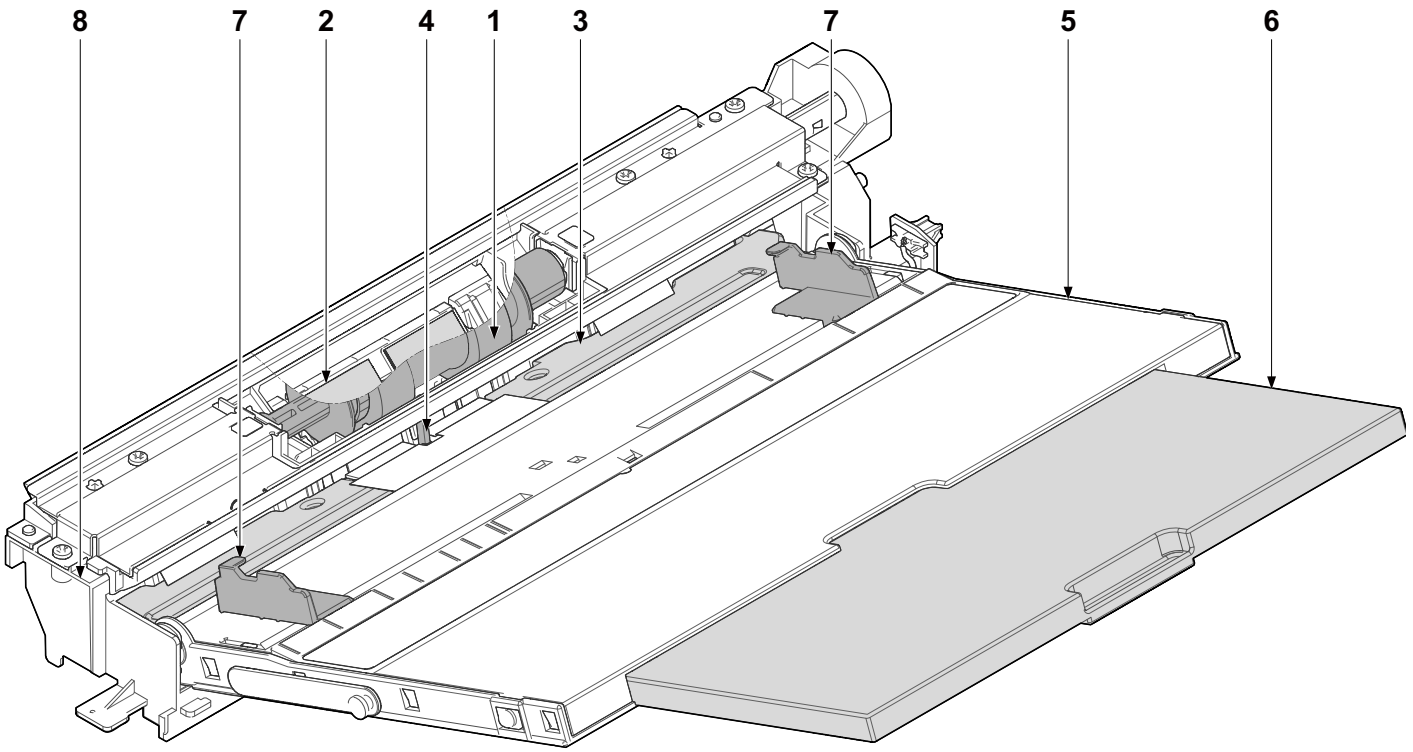
Block diagram



(1-2) MP paper feed section

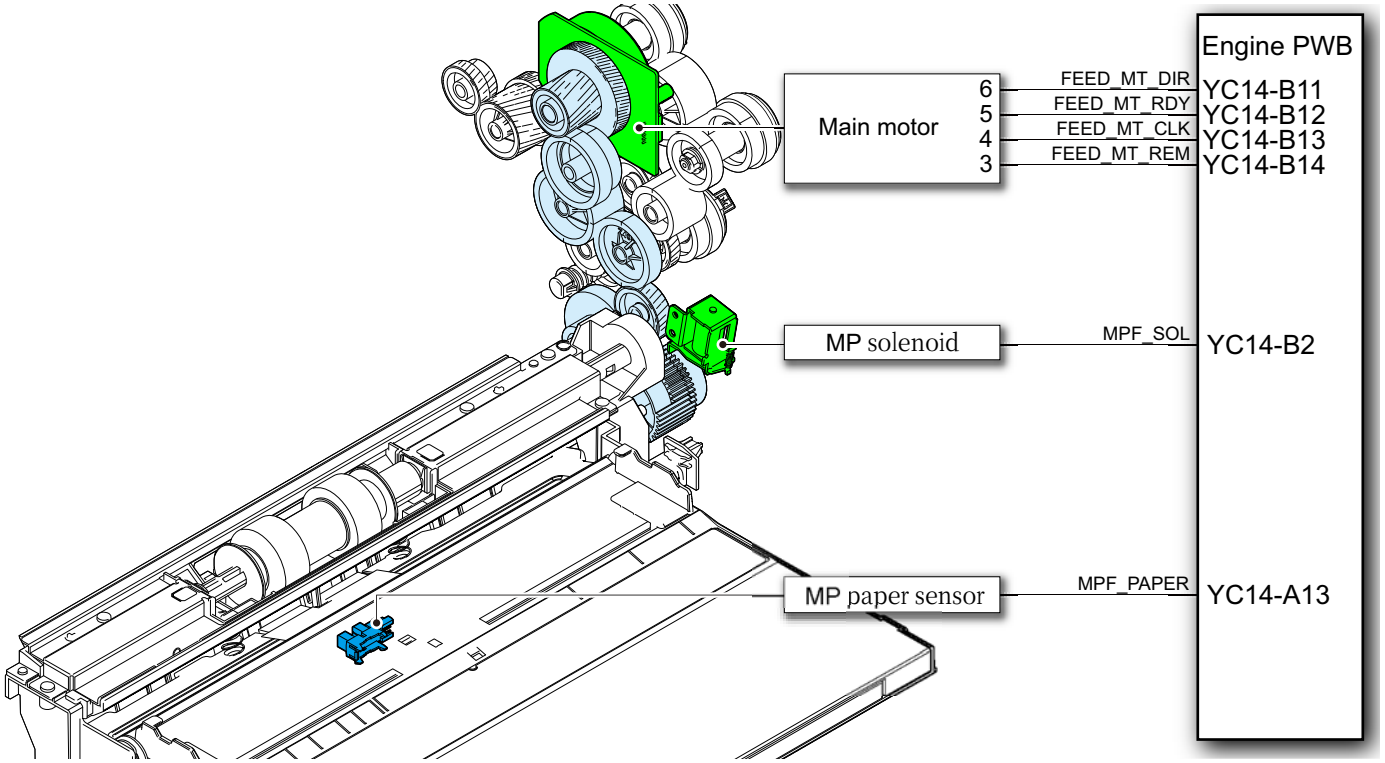
The MP tray can load 100 sheets paper (80g/m^2). The paper on the MP tray is fed by rotating the MP paper feed roller while lifting up the MP bottom plate by the MP solenoid. Multi-feeding is also prevented by the effect of the MP retard roller.





1 MP feed roller
2 MP separation pad
3 MP lift plate
4 Actuator (MP paper sensor)
5 MP tray
6 MP sub tray
7 MP paper width guides
8 MP base

Block diagram



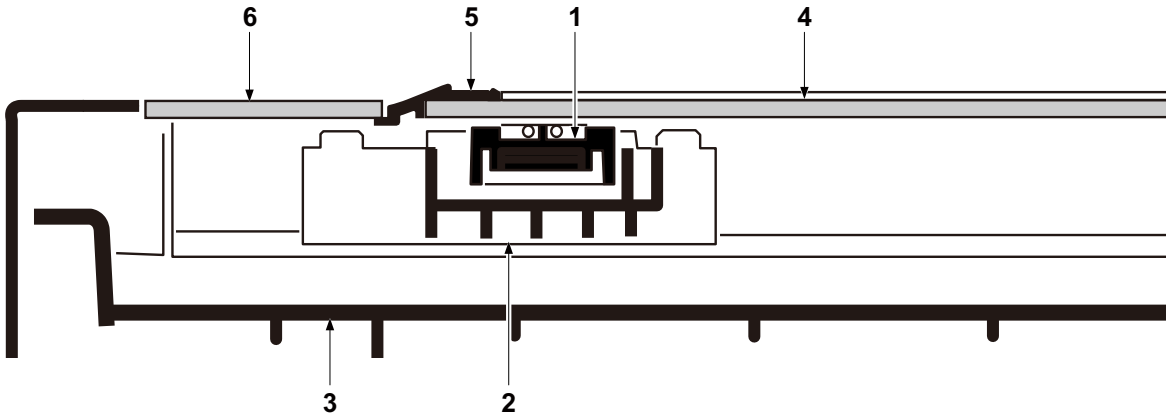
(2) Optical section

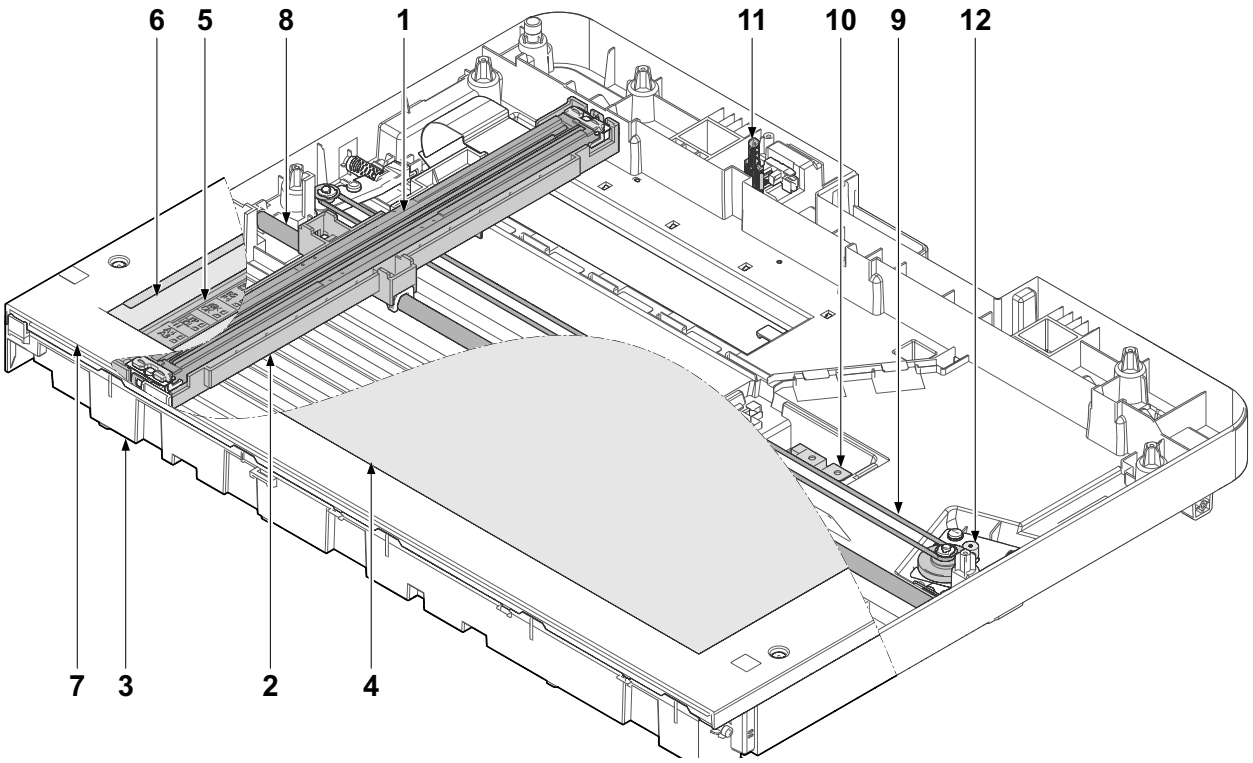
The optical section consists of the image scanner section for scanning the original and the laser scanner section to write the image.

(2-1) Image scanner unit (CIS model)

The image on the original is exposed by the exposure lamp (LED) and the reflection light is scanned by the CIS to change the electric signal.

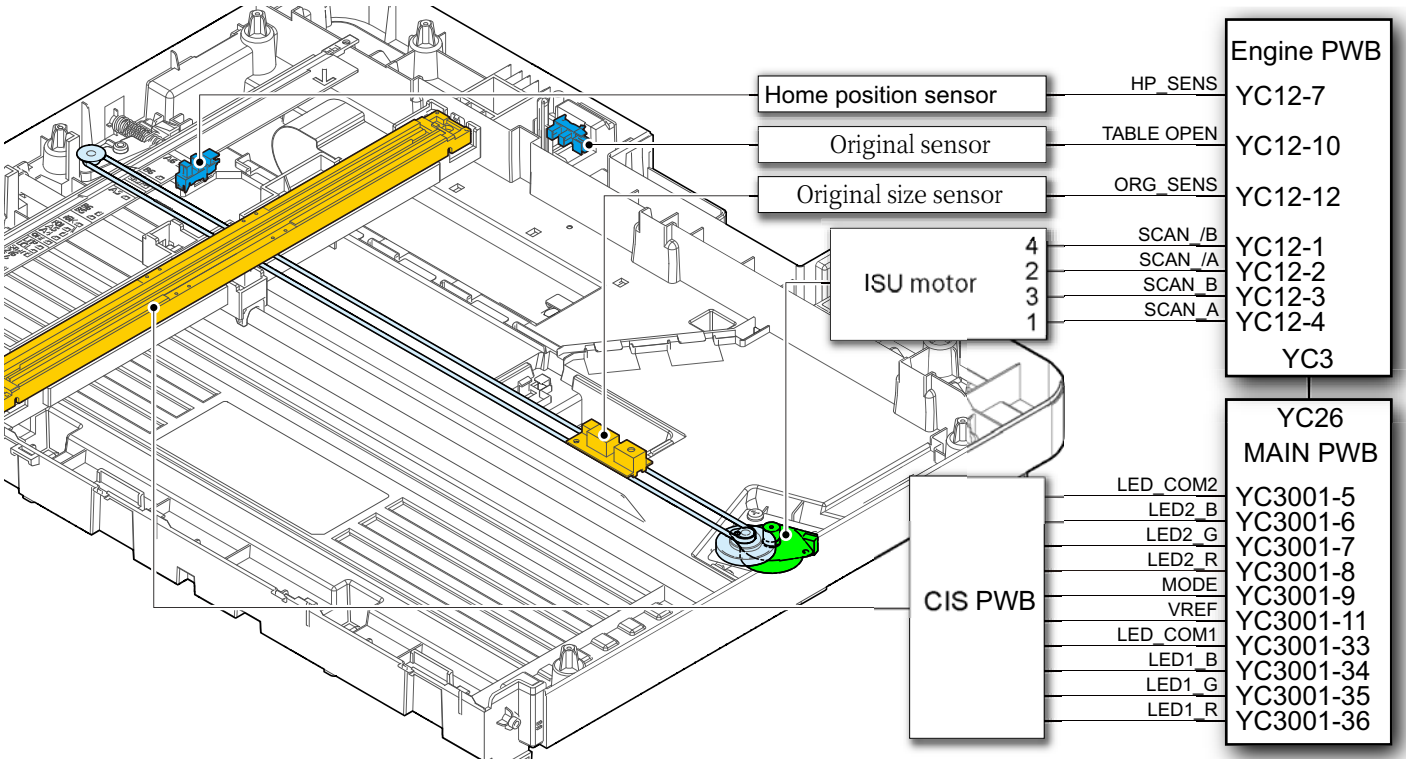
When using the document processor, the image scanner unit (ISU) stops at the original scanning position (slit glass) and scans the image from the original conveyed in the document processor.





1 CIS	5 Original size indicator	9 ISU drive belt
2 CIS carriage	6 Slit glass	10 Original size sensor
3 ISU frame	7 ISU upper frame	11 Actuator (Original sensor)
4 Contact glass	8 Scanner shaft	12 ISU motor

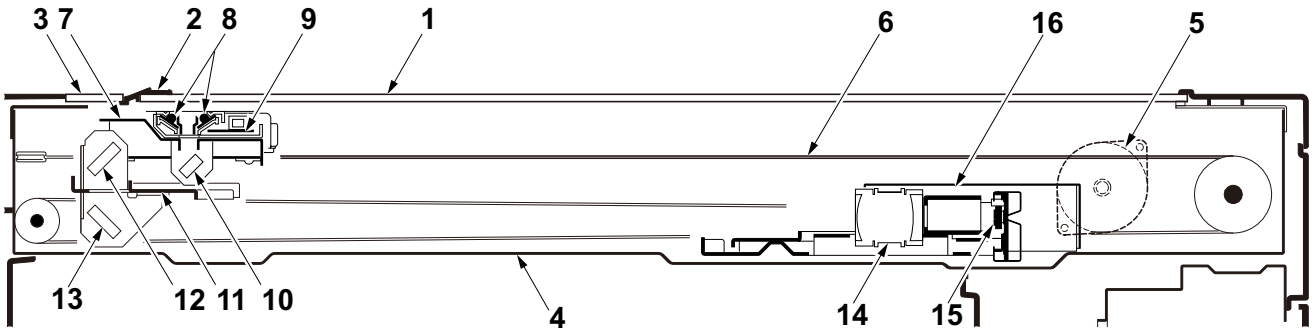
Block diagram

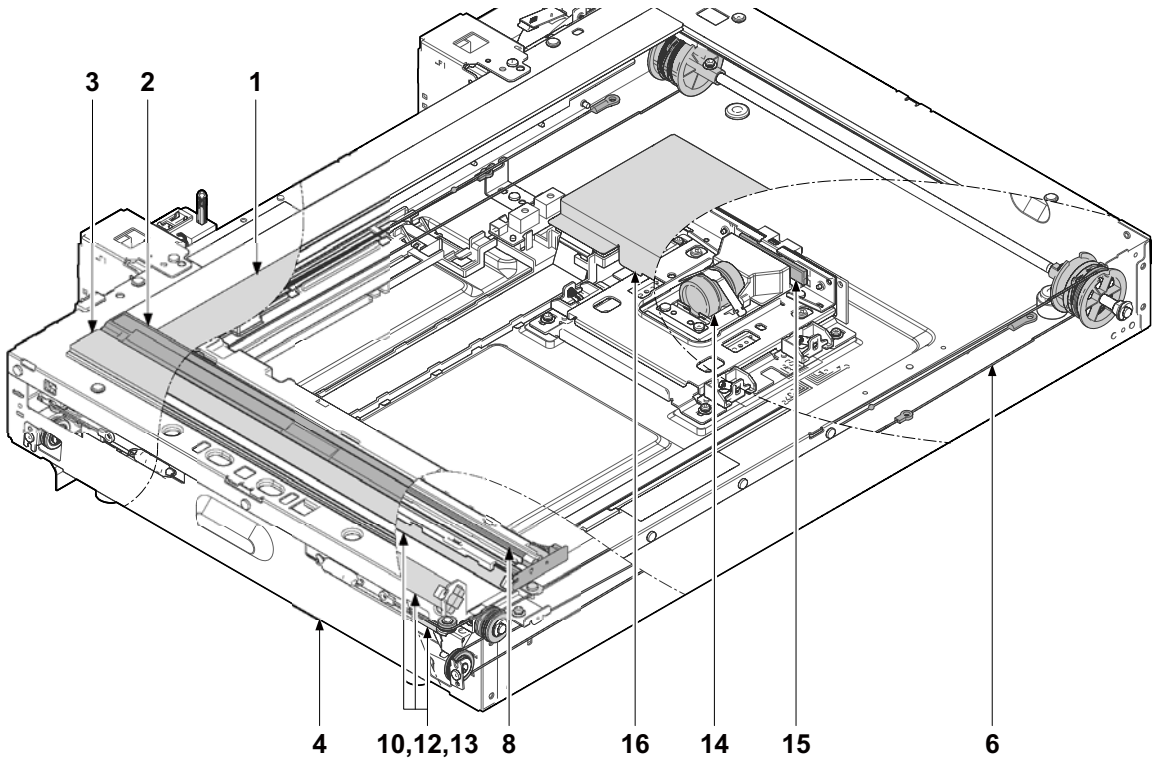


⑵-2⑵ Image scanner unit (CCD model)

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.

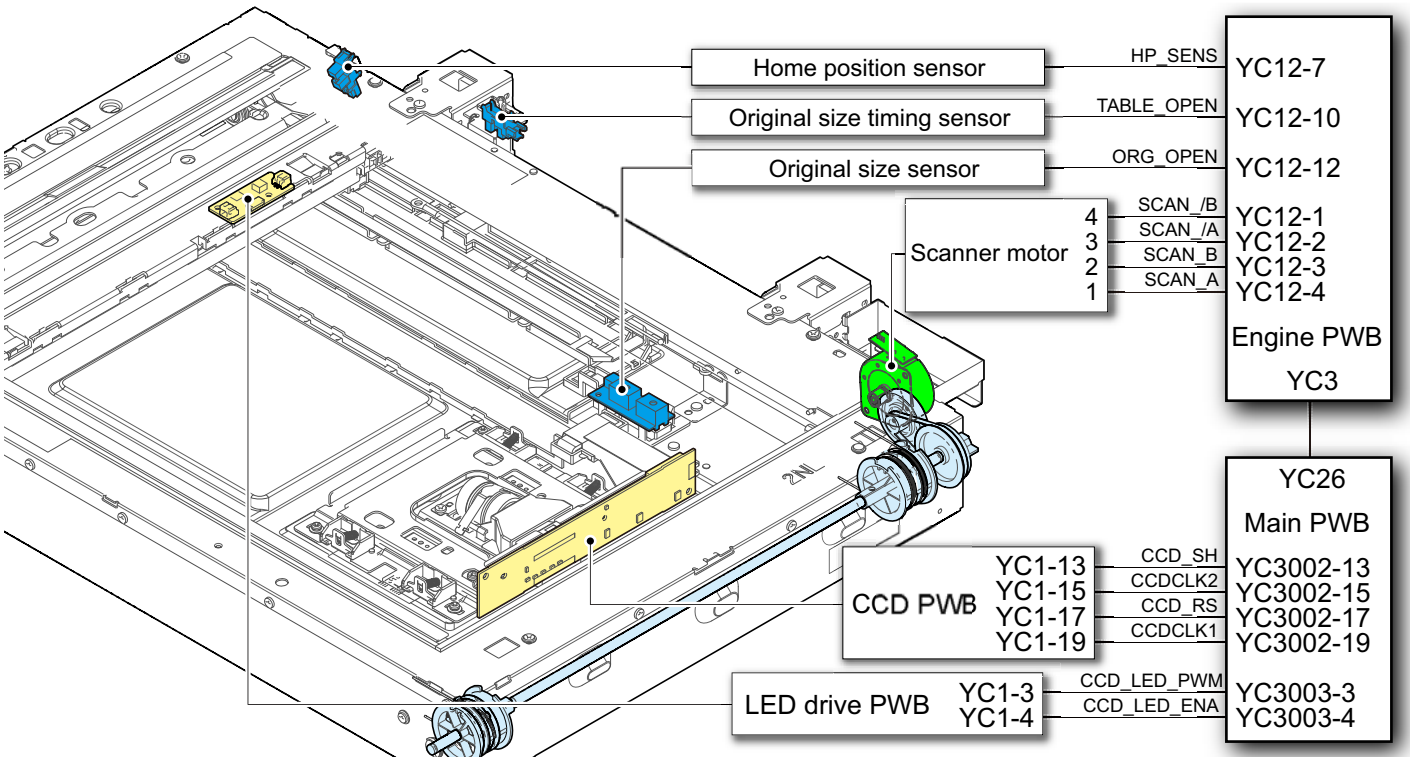
When using the document processor, the mirror frame A stops at the original scanning position (slit glass) and scans the image from the original conveyed in the document processor.





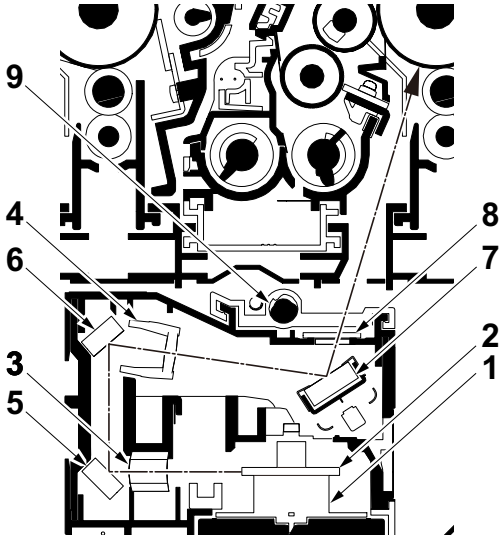
1 Contact glass	7 Mirror frame A	13 Mirror C
2 Original size indicator	8 Light guide	14 ISU lens
3 Slit glass	9 LED drive PWB	15 CCD PWB
4 ISU frame	10 Mirror A	16 Lens unit cover
5 ISU motor	11 Mirror frame B	
6 ISU wire	12 Mirror B	

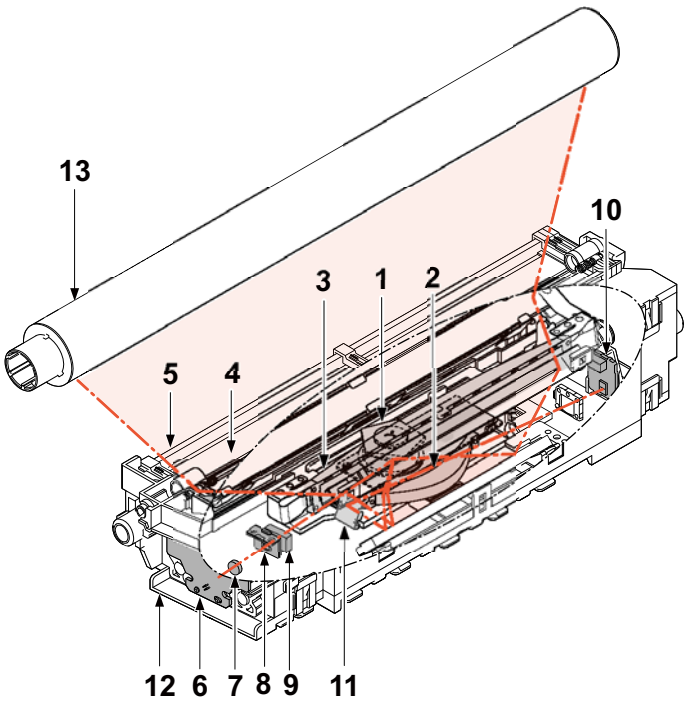
Block diagram



(2-3) Laser scanner unit

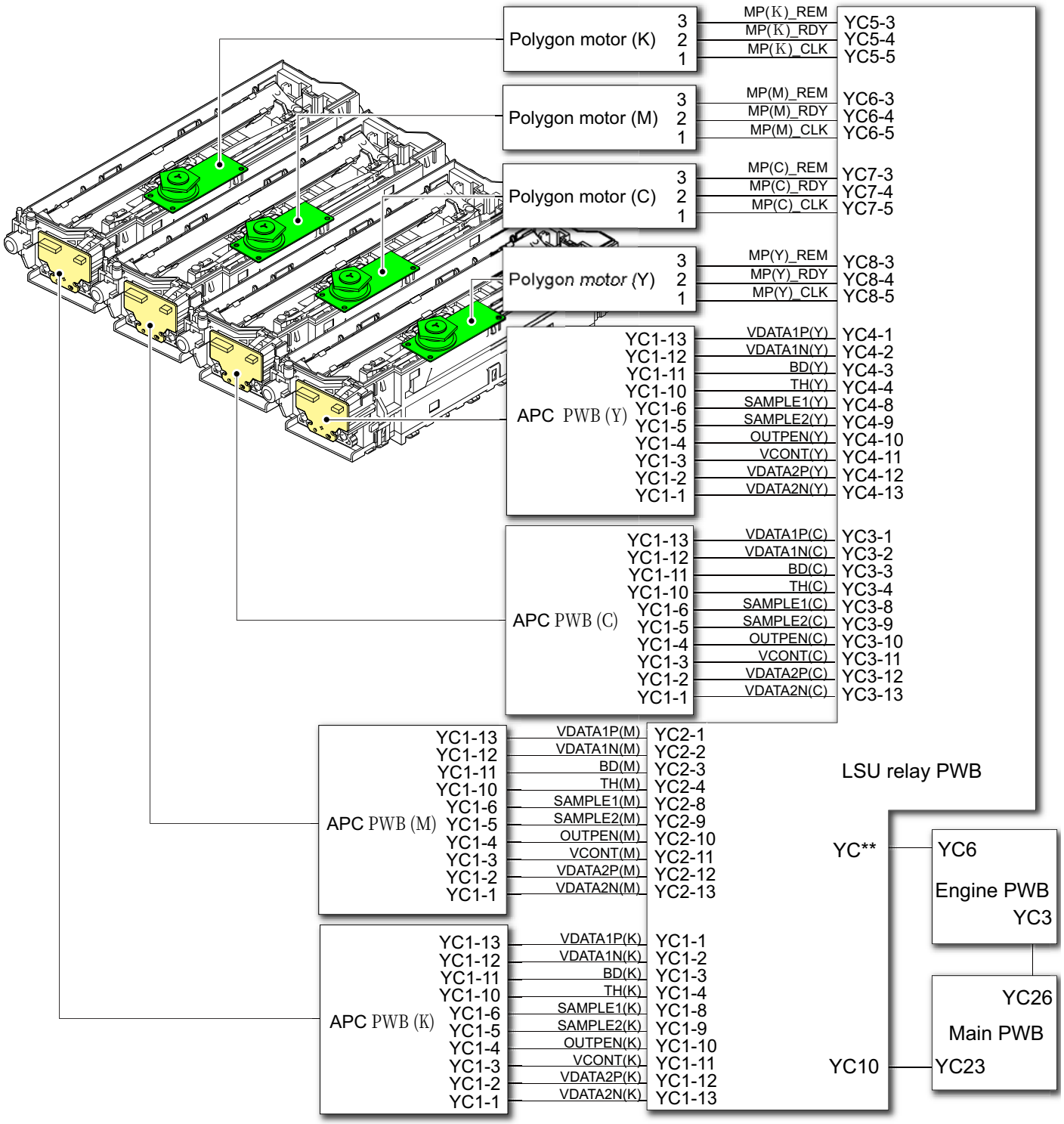
The charged drum surface is scanned by the laser emitted from the laser scanner units. The laser reflects to the polygon mirrors by rotating the polygon motor so that the laser scans horizontally to the image. The laser scanner unit has some lenses and mirrors, that adjust the diameter of the laser to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



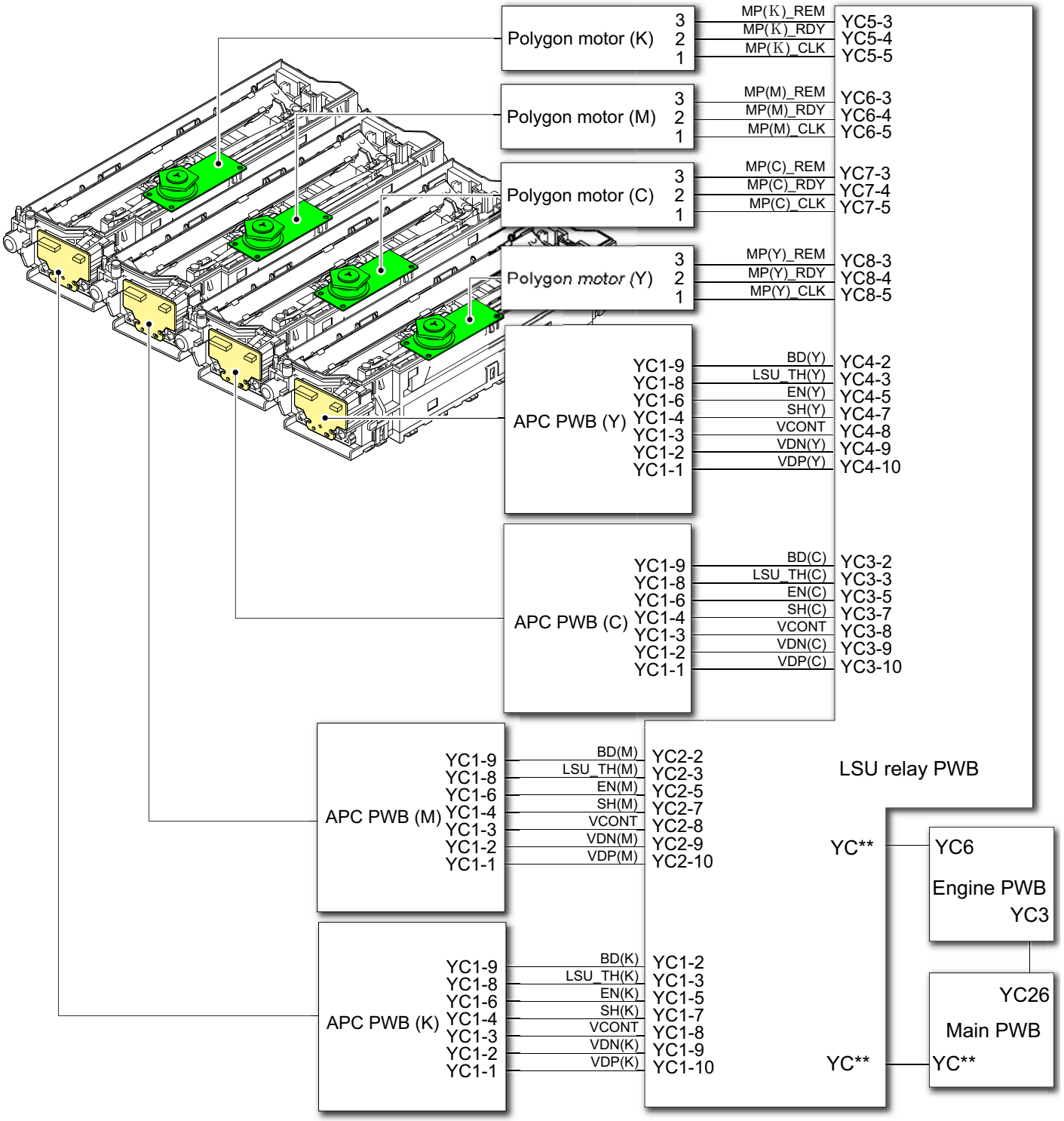


1 Polygon motor (PM)	6 Mirror B	11 Collimator lens
2 Polygon mirror	7 Mirror C	12 LD slit glass plate
3 fθ lens A	8 LSU dust-proof glass	13 LD mirror
4 fθ lens B	9 LSU cleaning spiral	14 LSU base
5 Mirror A	10 APC PWB	15 Drum

Block diagram (CCD model)

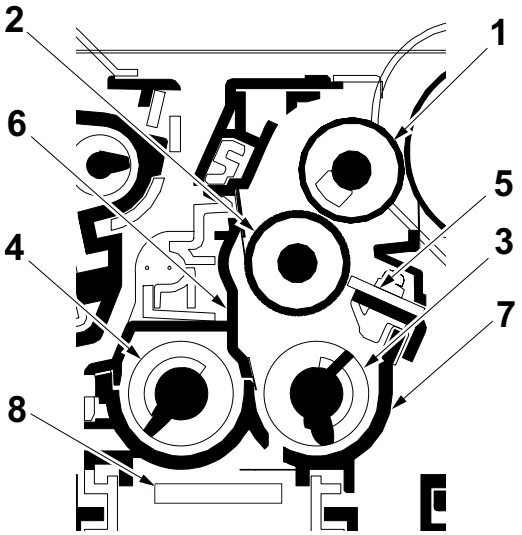


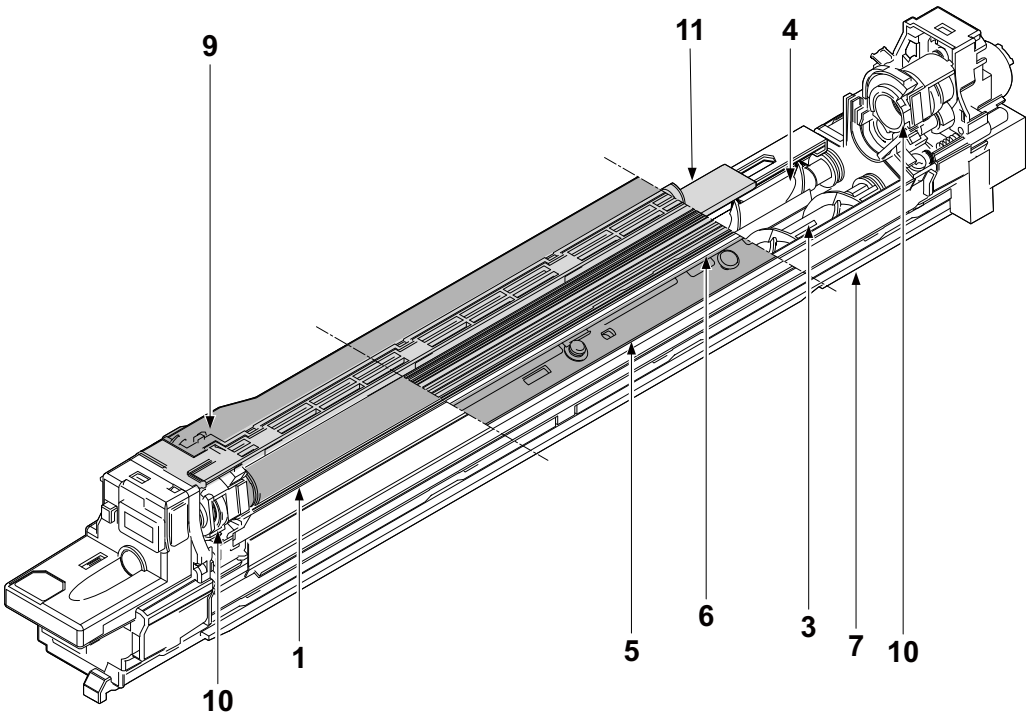
Block diagram (CIS model)



⑶ Developer section

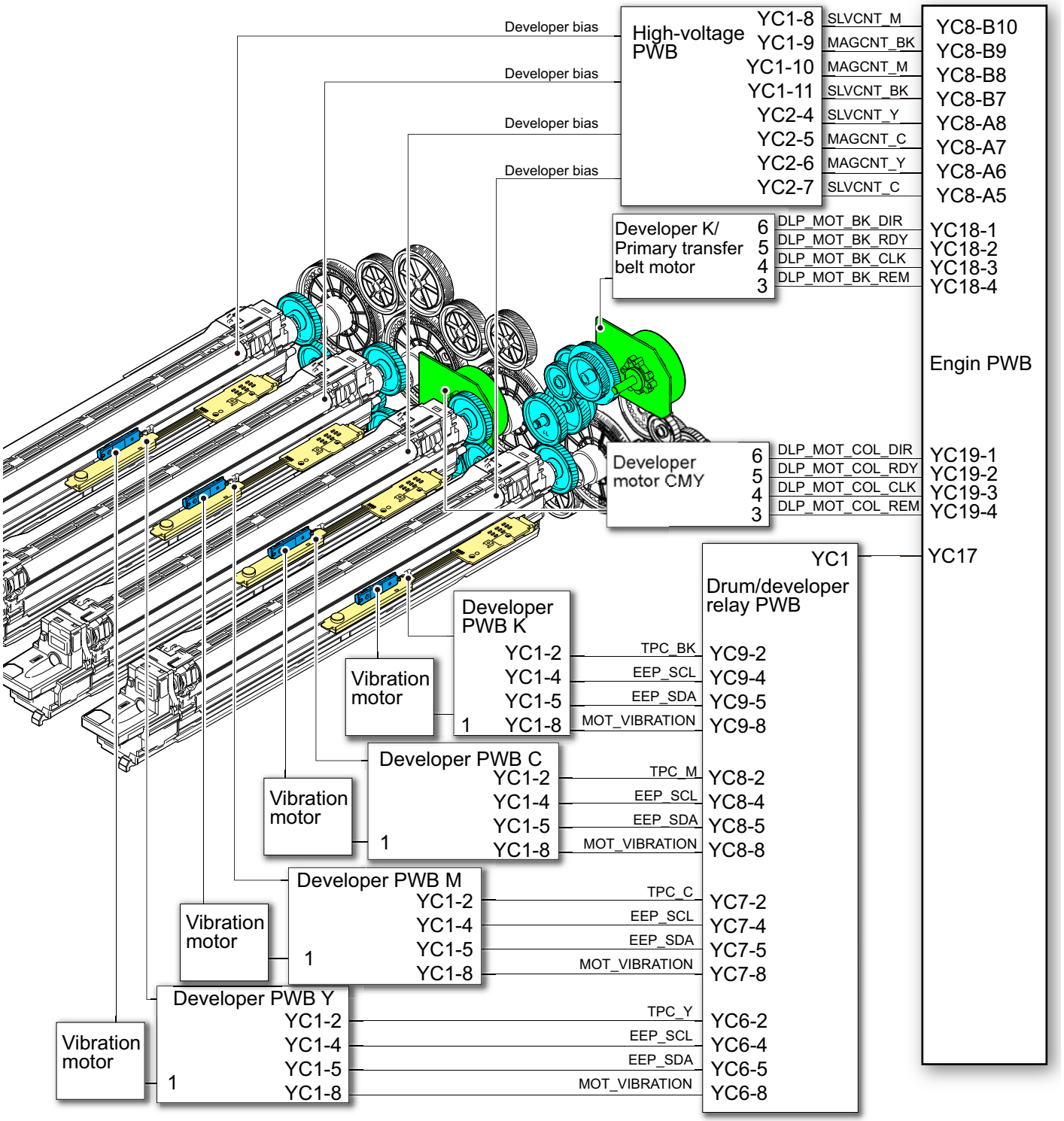
The developer section consists of the magnet roller forming the magnetic brush, the sleeve roller forming the thin layer by replacing the toner, the developer blade, and the developer screw mixing up the toner. The toner density is adjusted by impressing the bias to the magnet roller and the sleeve roller.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





1 Developer roller	5 Developer blade	9 Upper developer cover
2 Magnet roller	6 Developer case	10 DS pulley
3 Developer screw A	7 Developer base	11 Supply shutter
4 Developer screw B	8 Toner sensor	

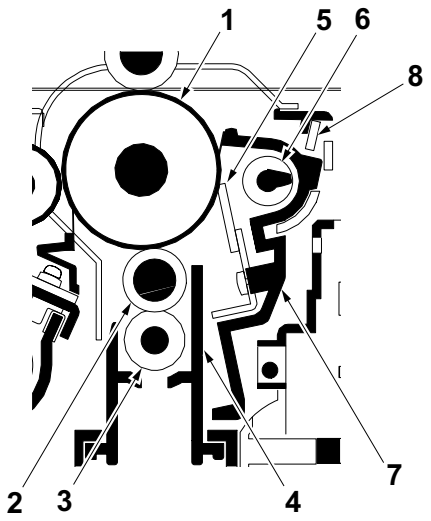
Block diagram

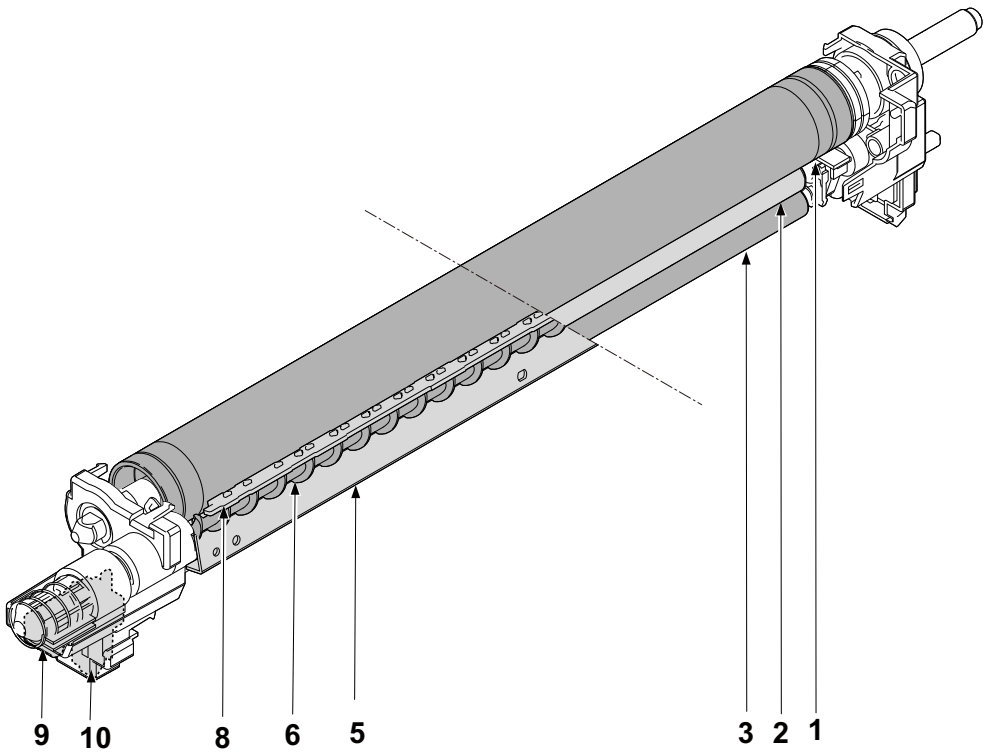


⑷ Drum section

In the main charger section, the main charger roller with the electric charge contacts the drum surface and rotates to charge the drum evenly.

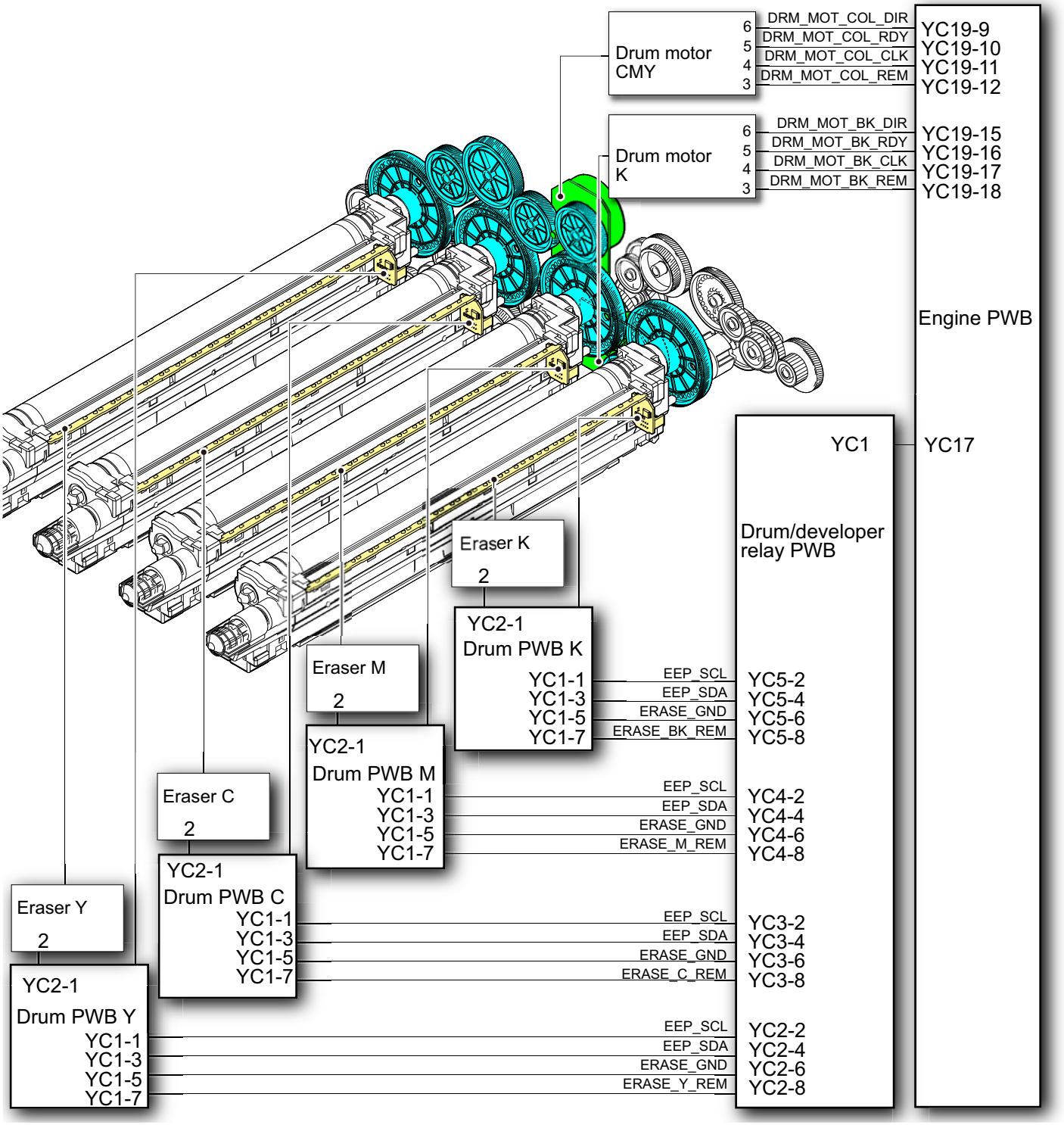
In the cleaning section, toner remaining on the drum surface after transferring is removed by the cleaning blade, and collected to the waste toner box by the drum screw. The eraser consists of the LED lamp, and it removes the electric charge remaining on the drum before the main charge.





1 Drum
2 Charger roller
3 Charger cleaning roller
4 Main charger case
5 Cleaning blade
6 Sweep roller
7 Drum frame
8 Eraser
9 Unit release lever
10 Unit lock hook

Block diagram



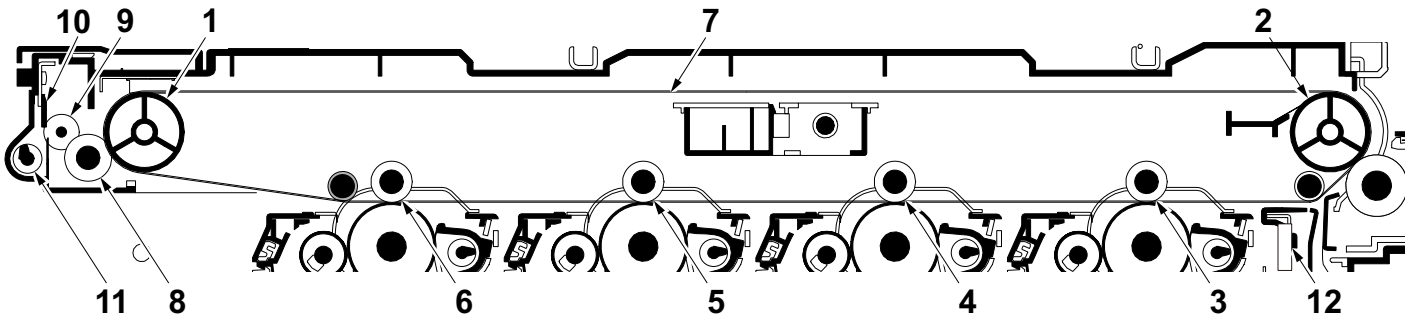
⑸ Transfer and separation section

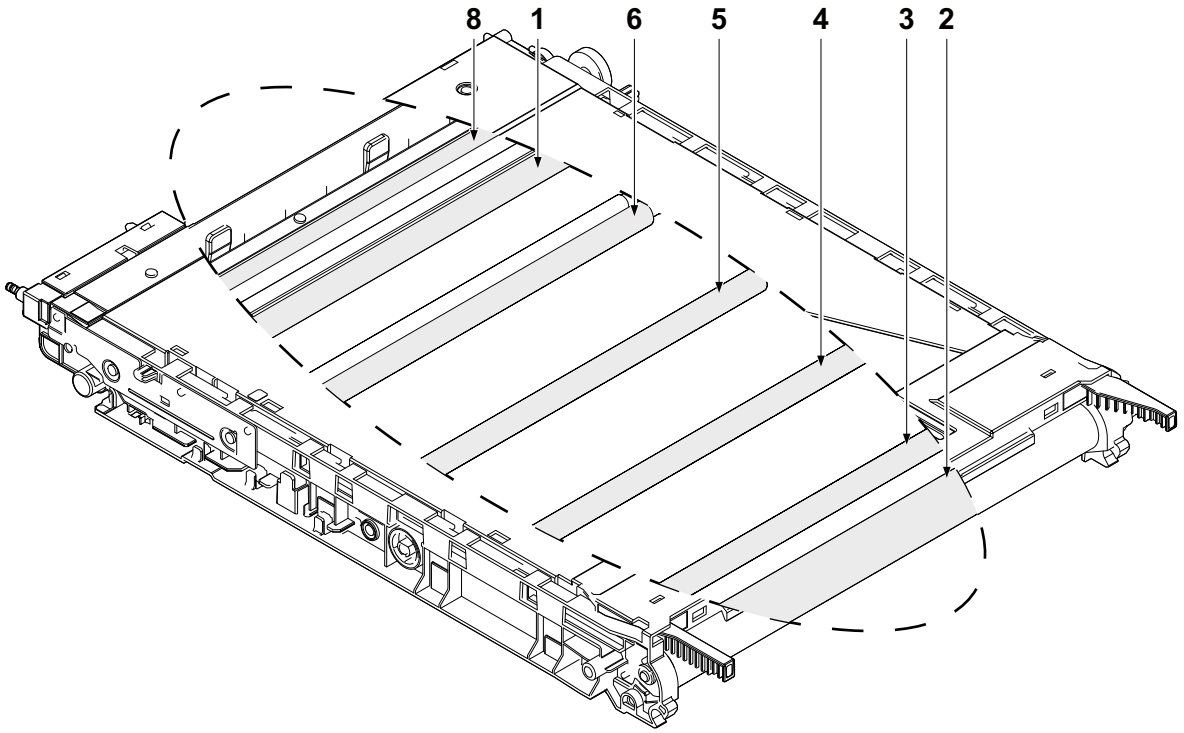
The transfer/separation section consists of the primary transfer unit and secondary transfer roller.

⑸-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 and then transfered on the paper to form the full color toner image. Also, the ID sensor attached to the main unit frame measures the toner density on the transfer belt.

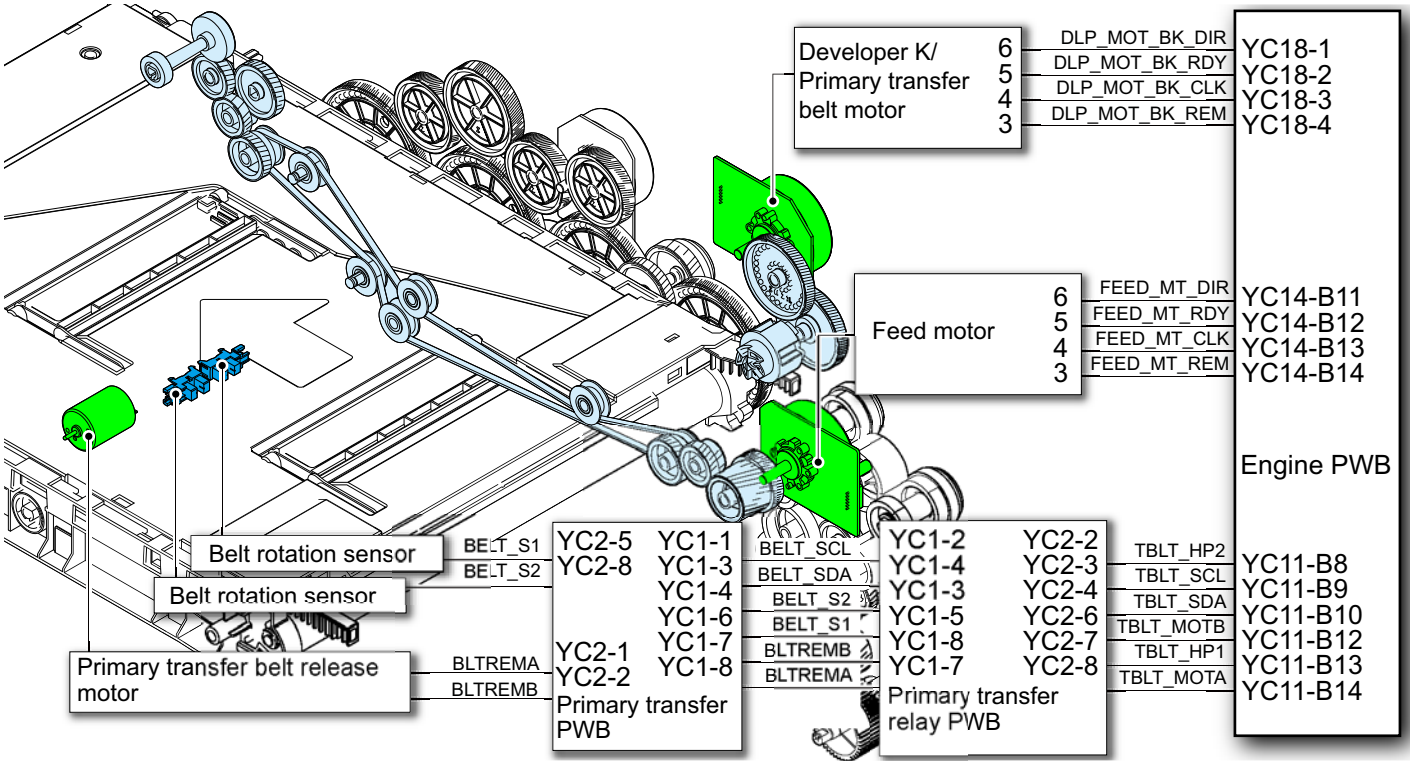
The transfer cleaning unit collects the remaining toner on the transfer belt after the secondary transferring, and forwards it to the waste toner box as waste toner.





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

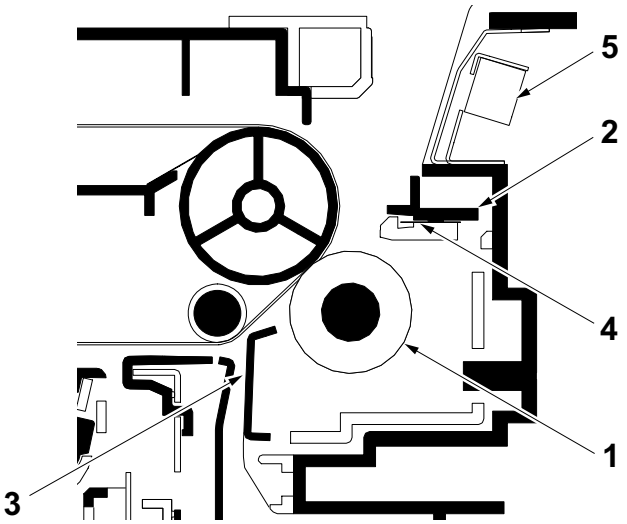
Block diagram

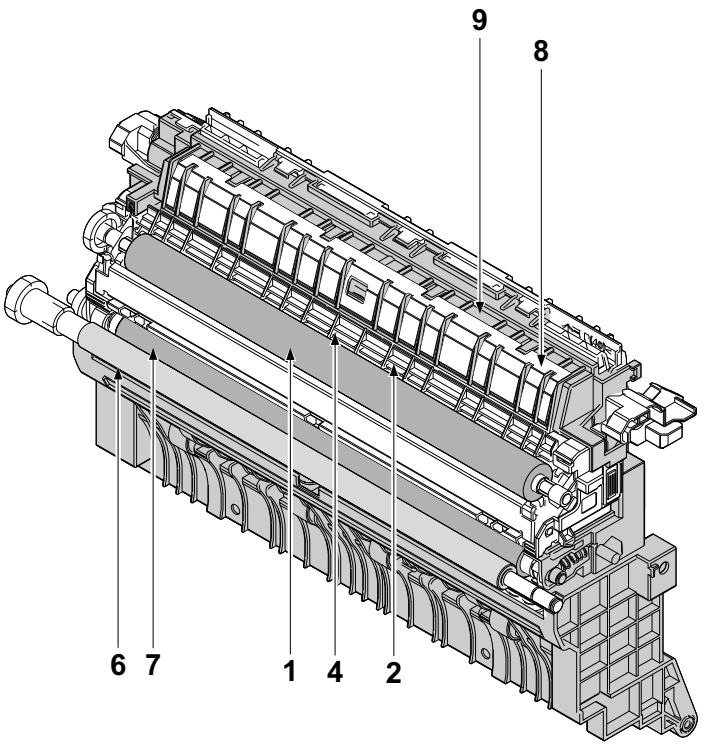


⑸-2 Secondary transfer roller section

The secondary transfer roller section consists of the secondary transfer roller attached to the paper conveying unit, and the separation brush.

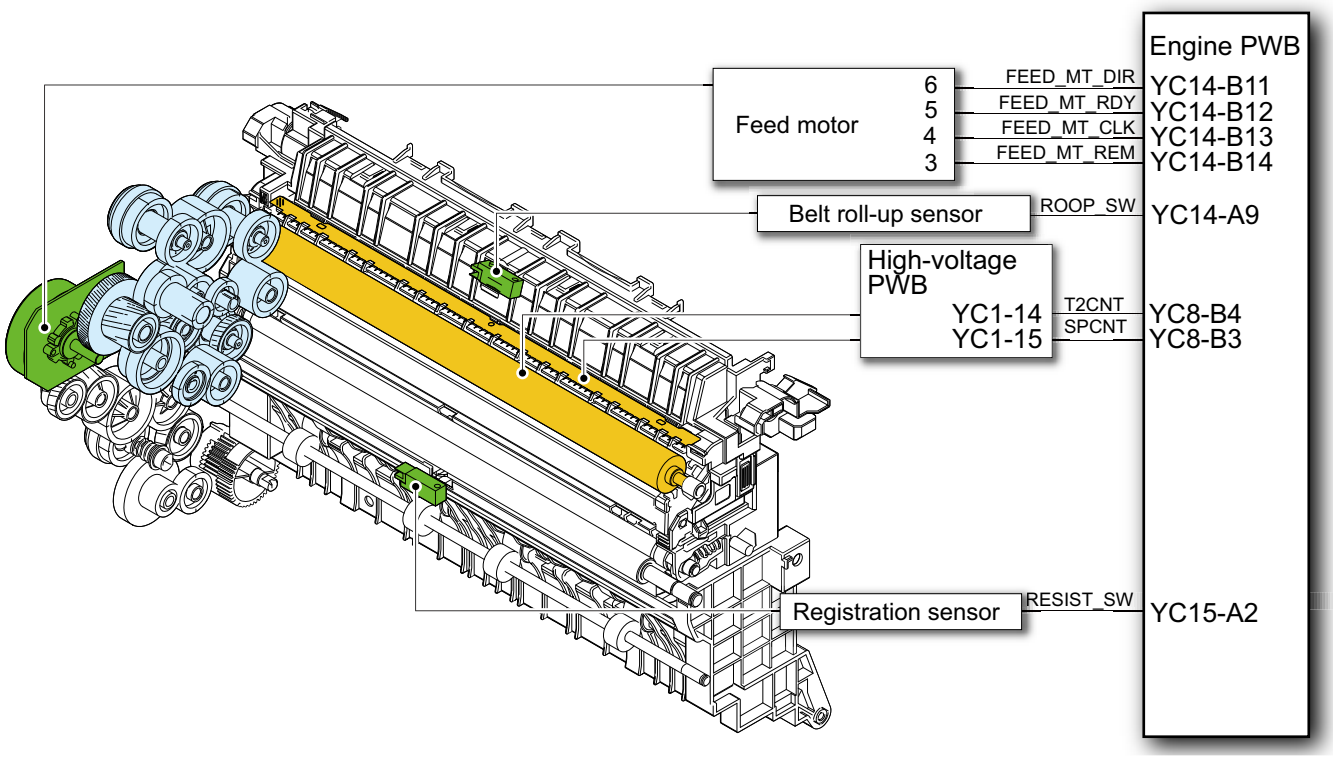
The DC bias from the high-voltage PWB is impressed to the secondary transfer roller, and the toner image formed on the transfer belt is transfered to the paper by the potential gap. Paper after transferring is separated from the drum by impressing the separator high-voltage output from the high-voltage PWB to the separation brush.





1 Secondary transfer roller
2 Separation needle holder
3 Paper chute guide
4 Separation needle
5 Belt roll-up sensor
6 Registration roller L
7 Registration roller R
8 Conveying guide
9 Conveying base

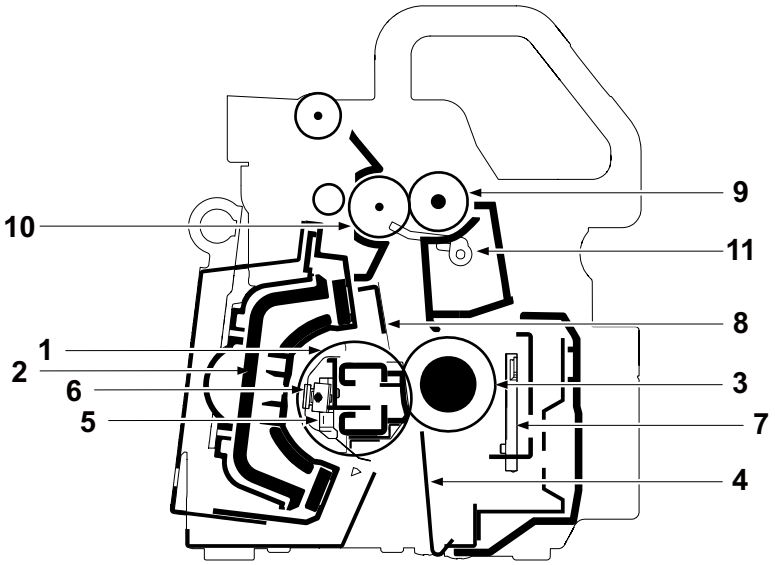
Block diagram

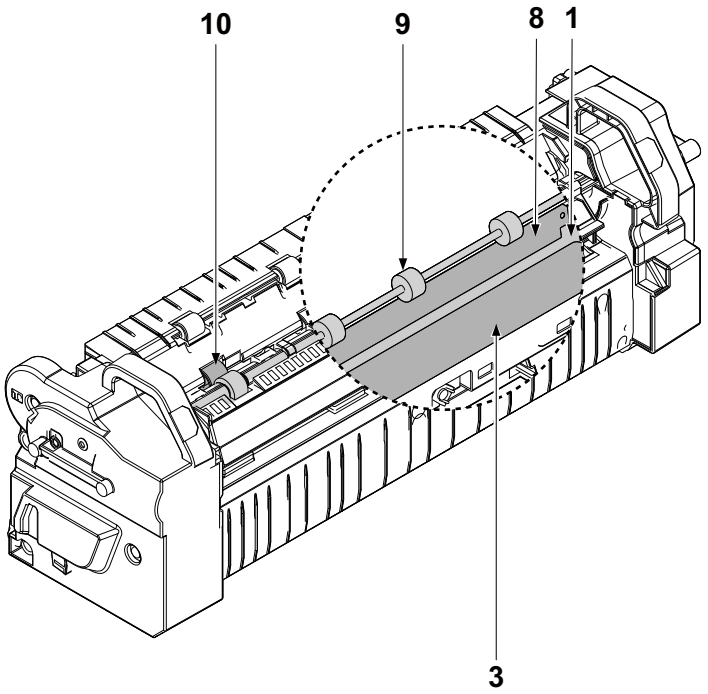


⑹ Fuser section

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

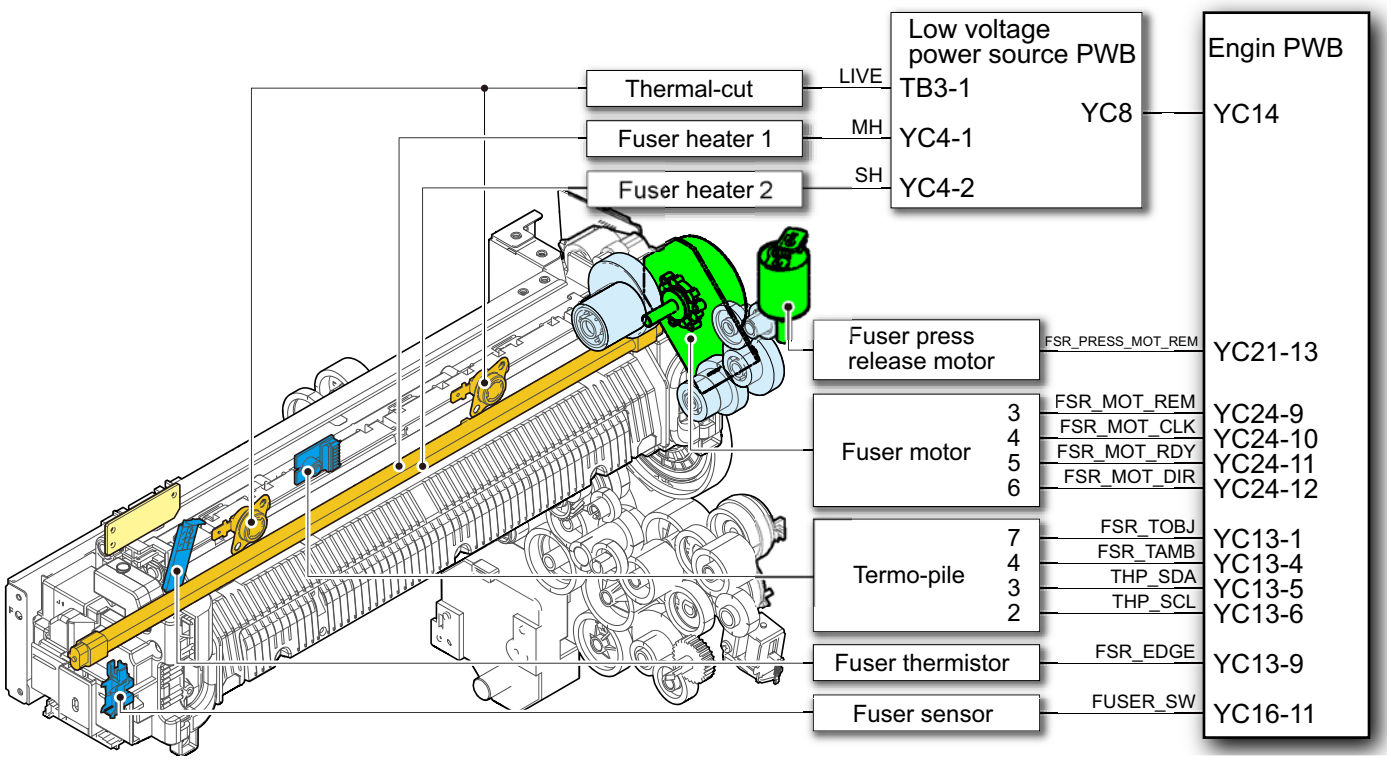
The surface temperature of the fuser heat belt is detected by the fuser thermistor and controlled by the engine PWB. If the temperature at the fuser section is extremely high, the power line is shut off by the thermostat operation and the fuser heater is forced to turn off.





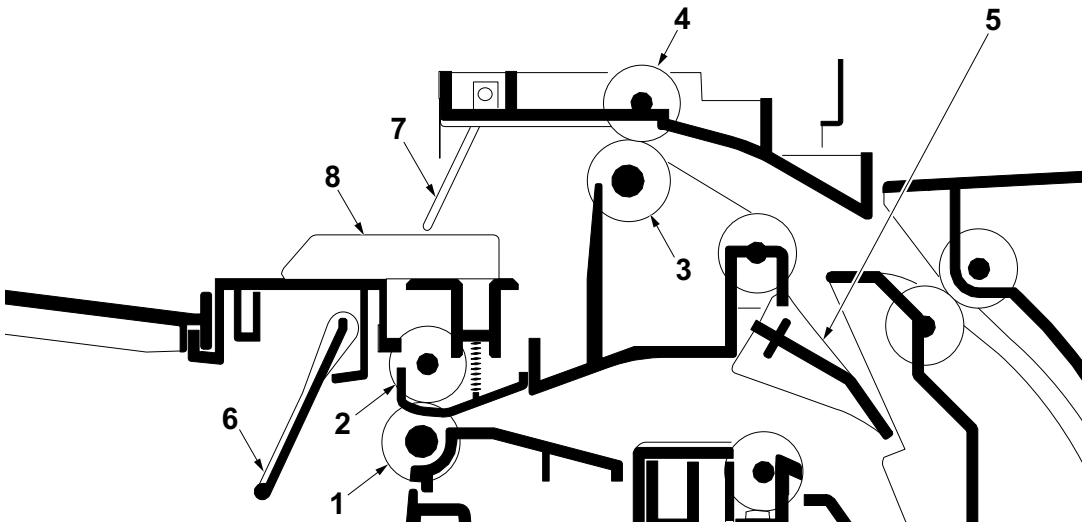
1 Fuser heat belt
2 IH core
3 Fuser press roller
4 Fuser front guide
5 Fuser belt thermistor
6 Fuser thermostat
7 Fuser press roller thermistor
8 Separator
9 Fuser exit roller
10 Fuser exit pulley
11 Actuator (Exit sensor)

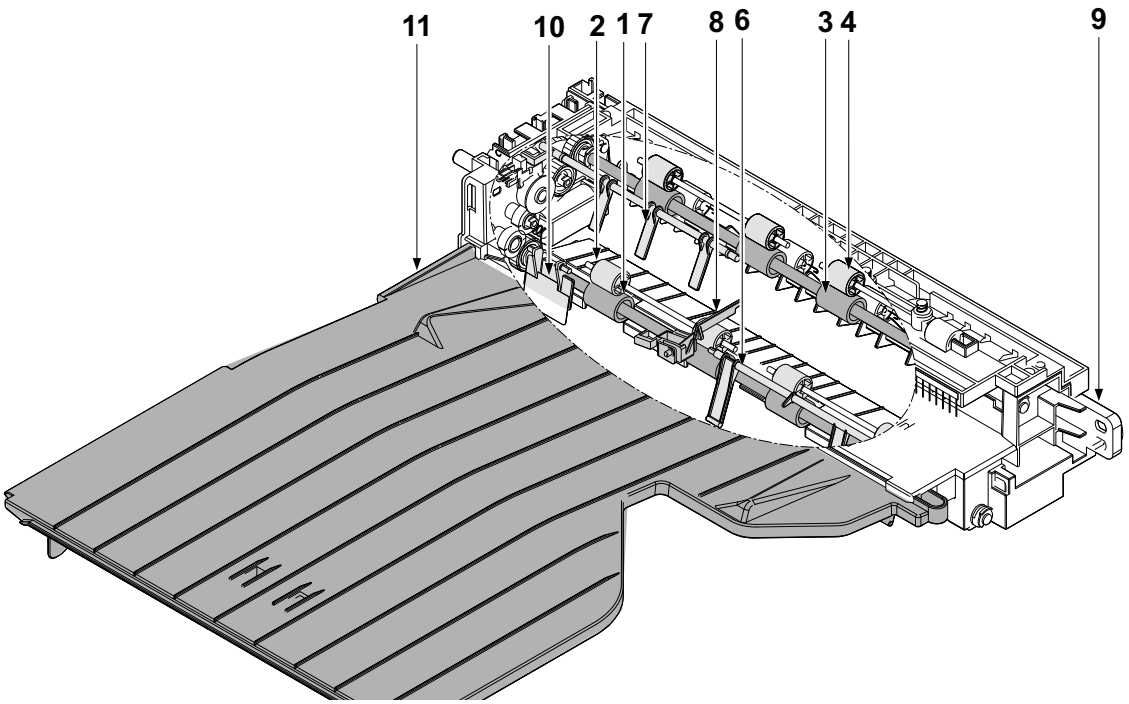
Block diagram



(7) Exit and feedshift section

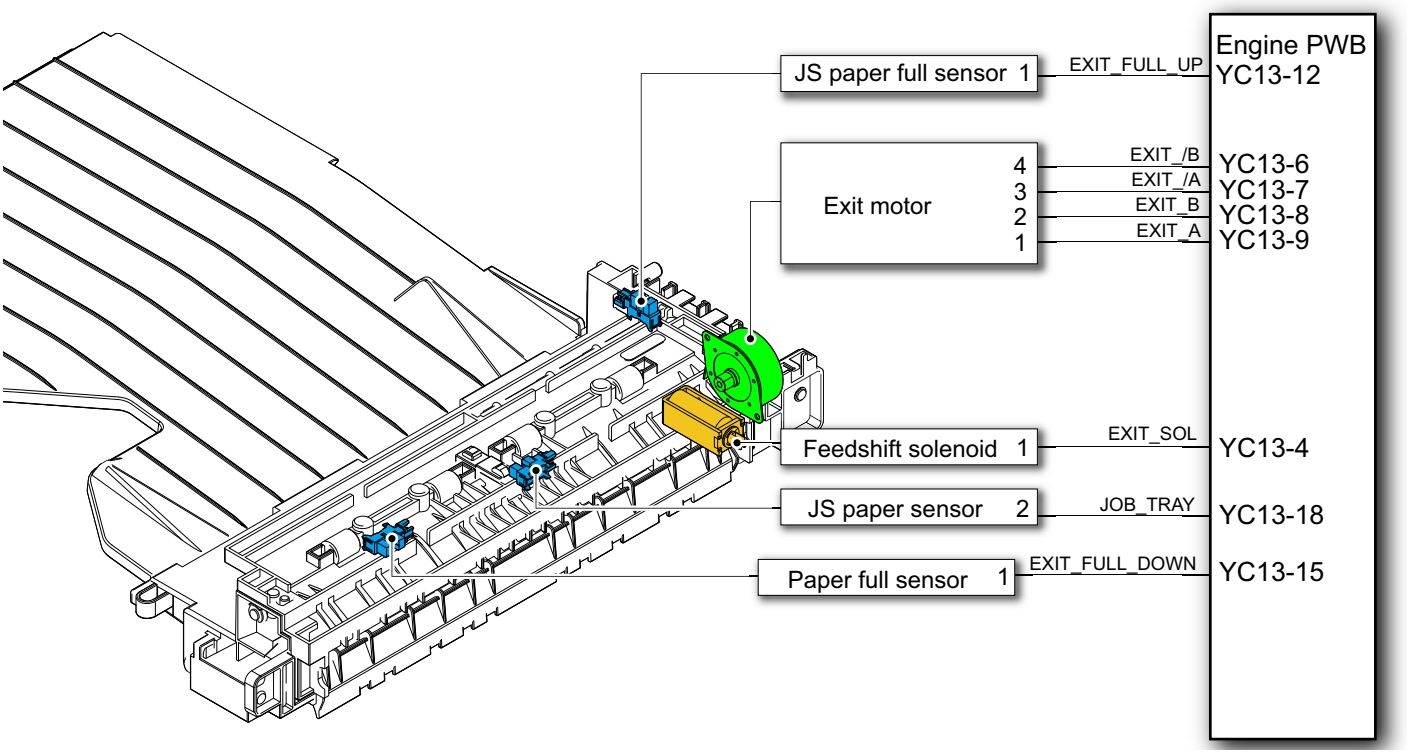
The exit and feedshift section consists of the paper path from the fuser section to the main tray, the job separator or the duplex conveying section.





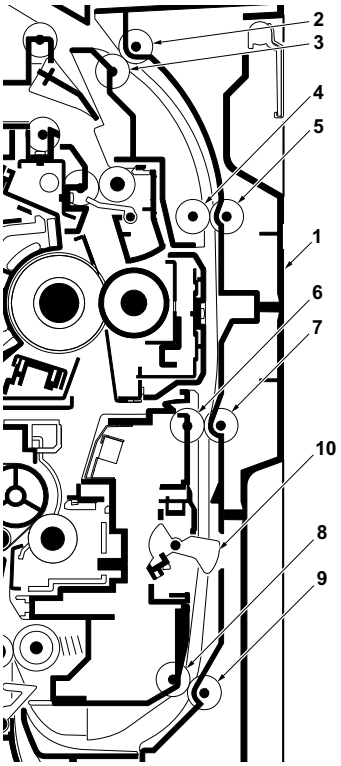
1 Exit roller
2 Exit pulley
3 JS exit roller
4 JS exit pulley
5 Feedshift guide
6 Actuator (Paper full sensor)
7 Actuator (JS paper full sensor)
8 Actuator (JS exit sensor)
9 Exit conveying base
10 Upper JS paper guide
11 JS exit tray

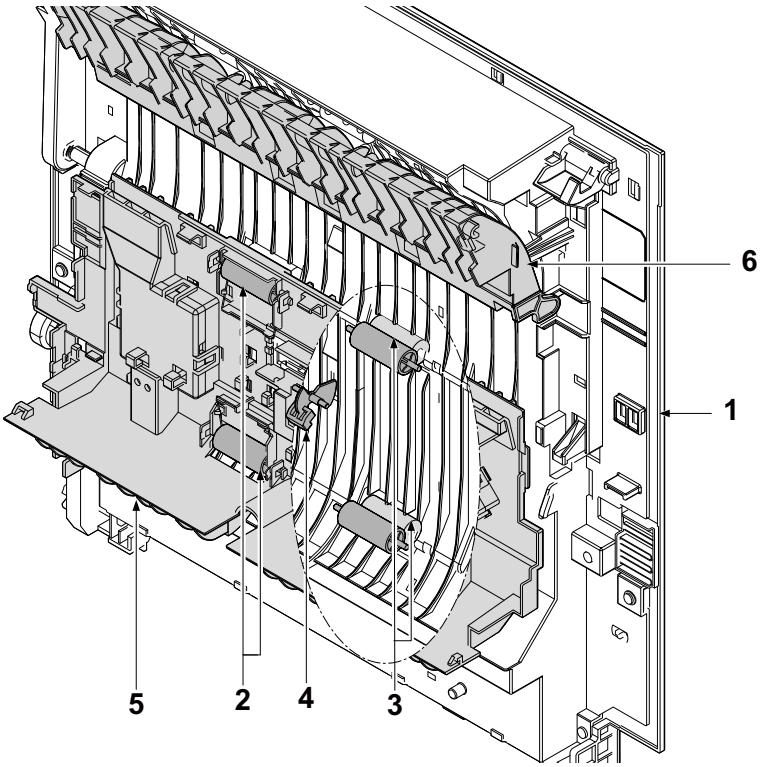
Block diagram



⑻ Duplex conveying section

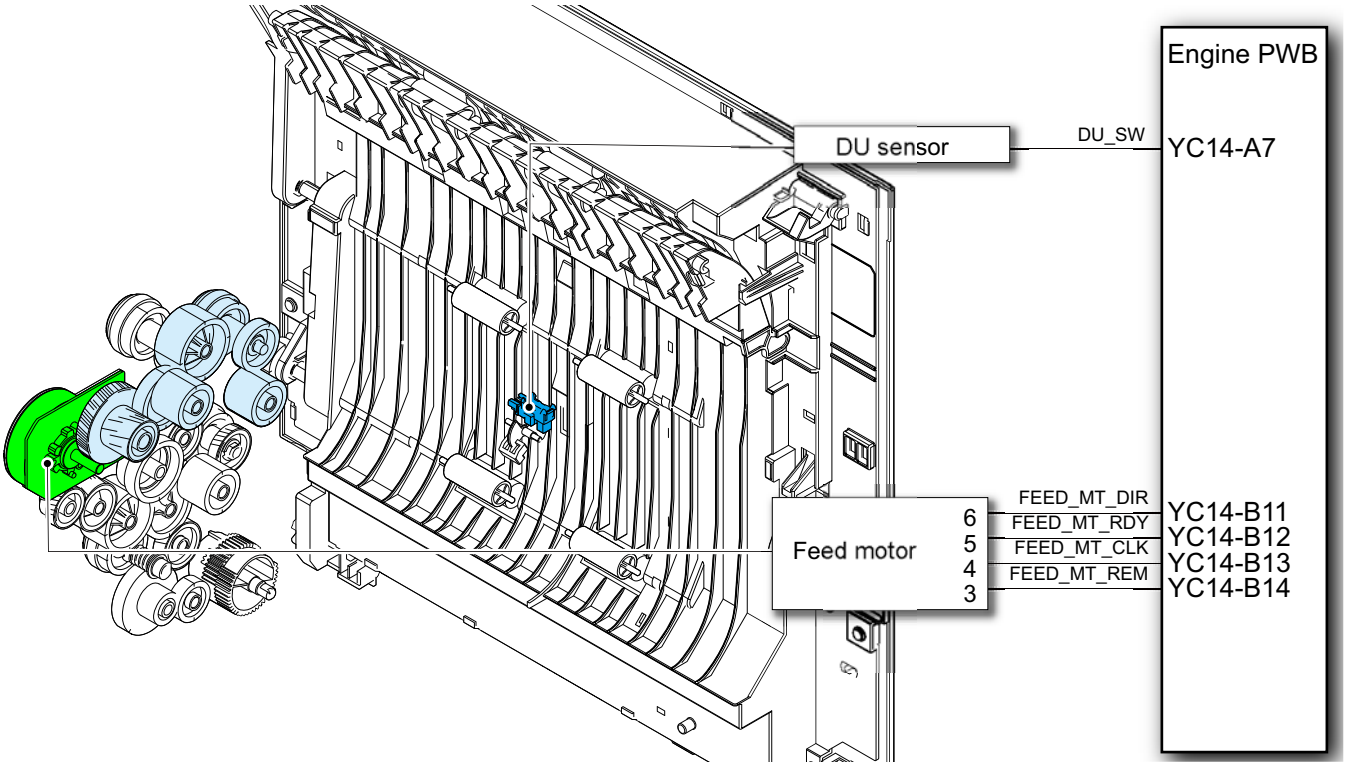
The duplex conveying section consists of the paper conveying path to forward the paper from the exit and feedshift section to the paper conveying section in the duplex print.





1 Right Cover 1
2 DU conveying roller A
3 DU conveying pulley A
4 DU conveying roller B
5 DU conveying pulley B
6 DU conveying roller C
7 DU conveying pulley C
8 DU conveying roller D
9 DU conveying pulley D
10 Actuator (DU sensor)

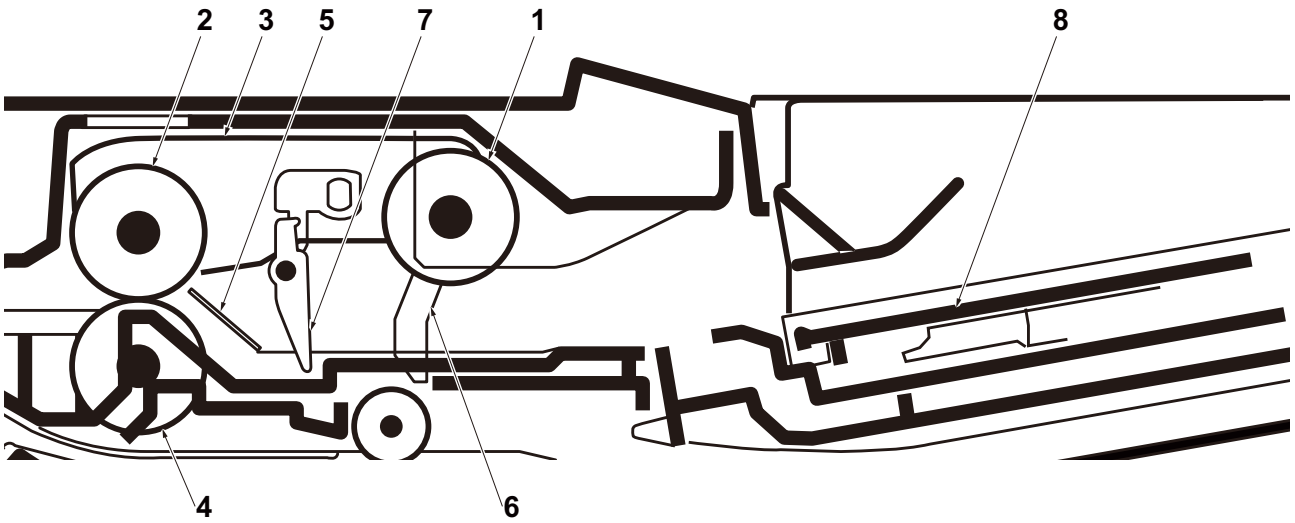
Block diagram



⑼ Document Processor

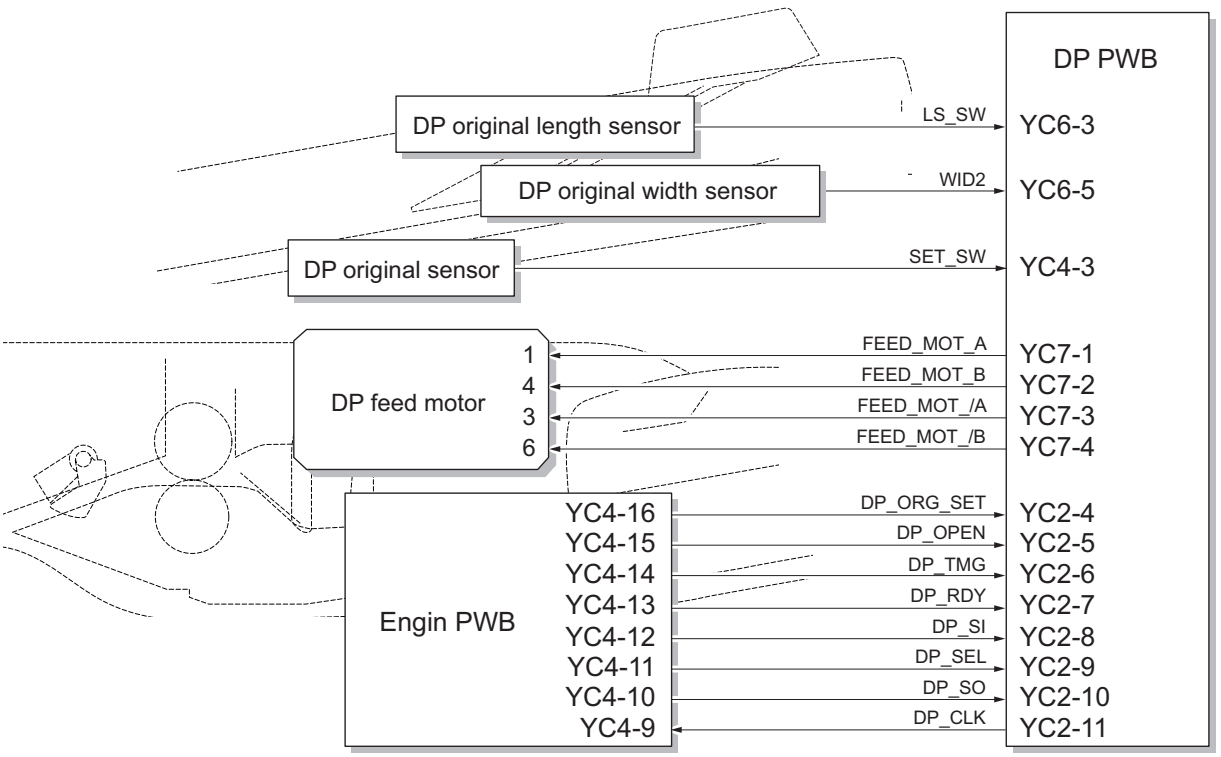
⑼-1 Original paper feed section

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



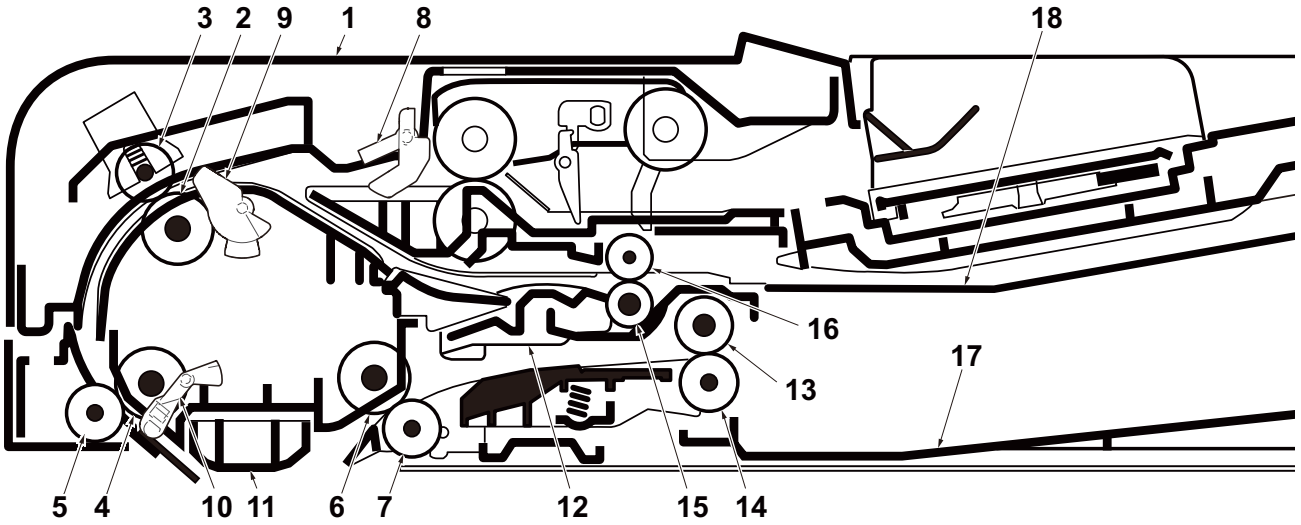
1 DP pickup roller
2 DP feed roller
3 DP feed holder
4 DF separation pulley
5 DP front separation pad
6 Actuator (DP original sensor)
7 DP stopper
8 DP original tray

Block diagram



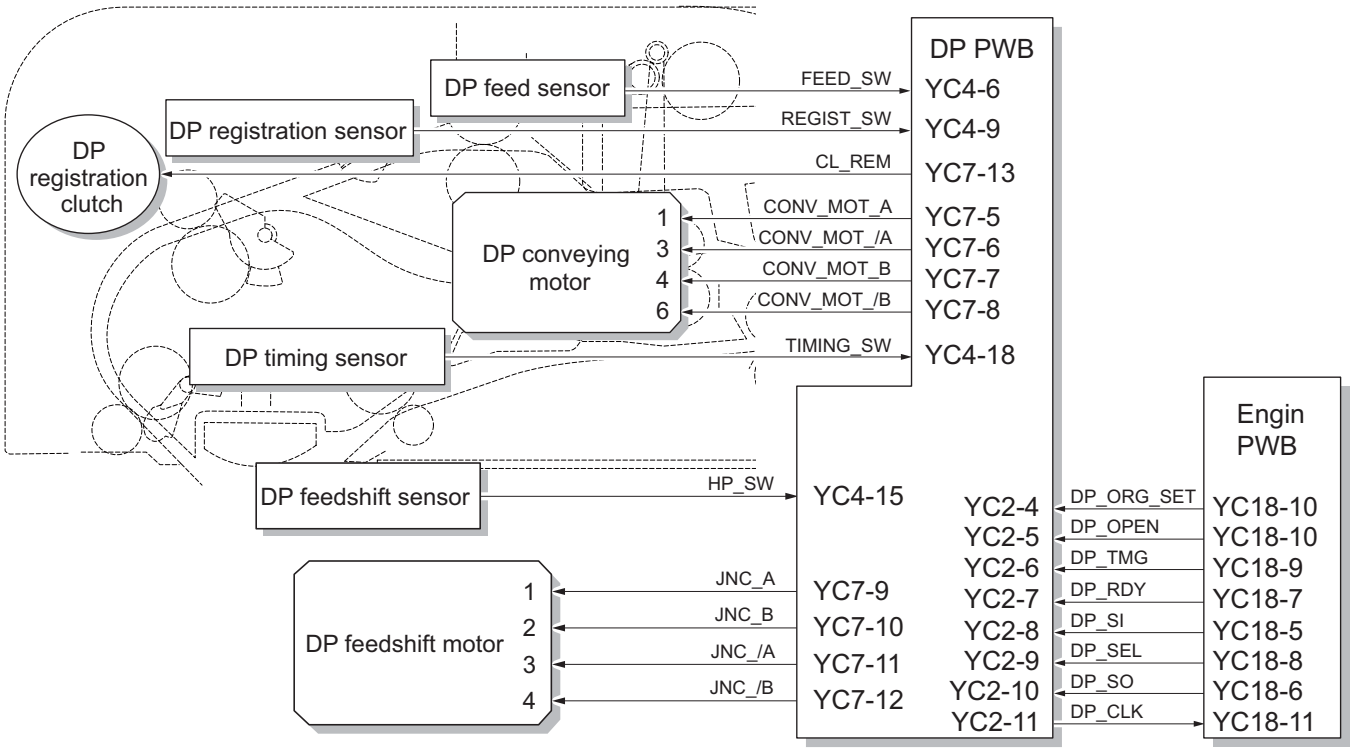
⑼-2 Original conveying section, original reversing and exit section

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



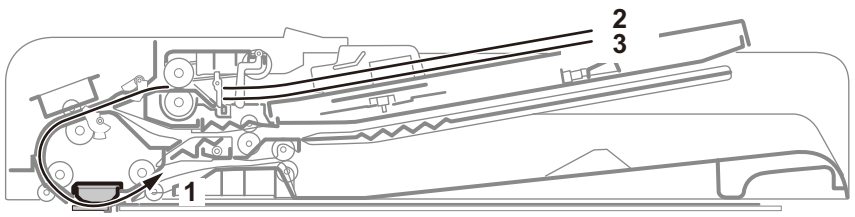
1 DP top cover
2 DP registration roller
3 DP registration pulley
4 DP conveying roller A
5 DP conveying pulley A
6 DP conveying roller B
7 DP conveying pulley B
8 Actuator (DP feed sensor)
9 Actuator (DP registration sensor)
10 Actuator (DP timing sensor)
11 DP scanner guide
12 DP feedshift guide
13 DP exit roller
14 DP exit pulley
15 DP reversing roller
16 DP reversing pulley
17 DP original eject table
18 DP switchback tray

Block diagram



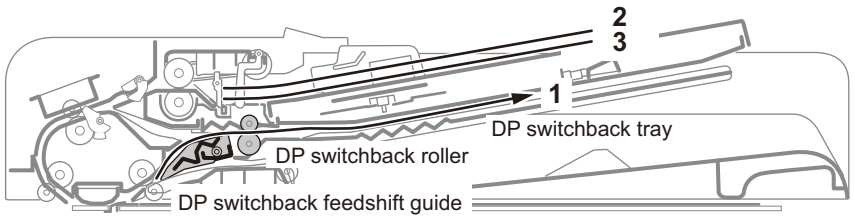
⑼-3⑶ Reversing duplex scanning

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

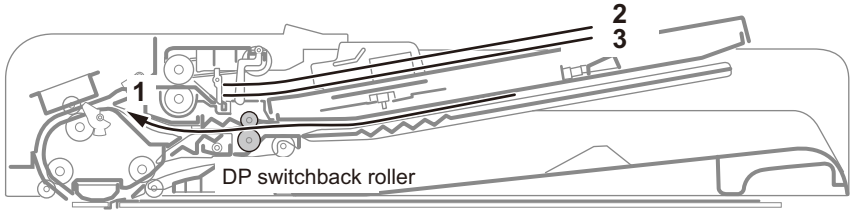


Slit glass: first side scanning

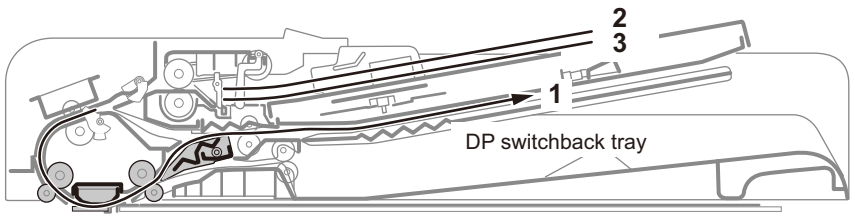
Conveyed to the DP reversing section by the DP reversing feedshift guide / DP reversing roller.



The original is reversed by the reverse rotation of the DP reversing roller.

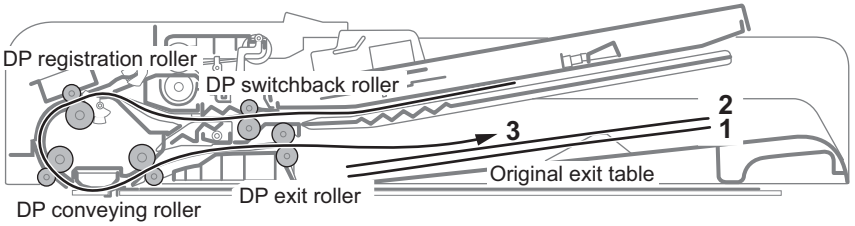


The second side of original is scanned at the slit glass (main unit) and the original is conveyed to the DP reversing section.



Slit glass: second side scanning

Ejected to the DP exit tray by the DP reversing, DP feedshift and DP exit rollers.

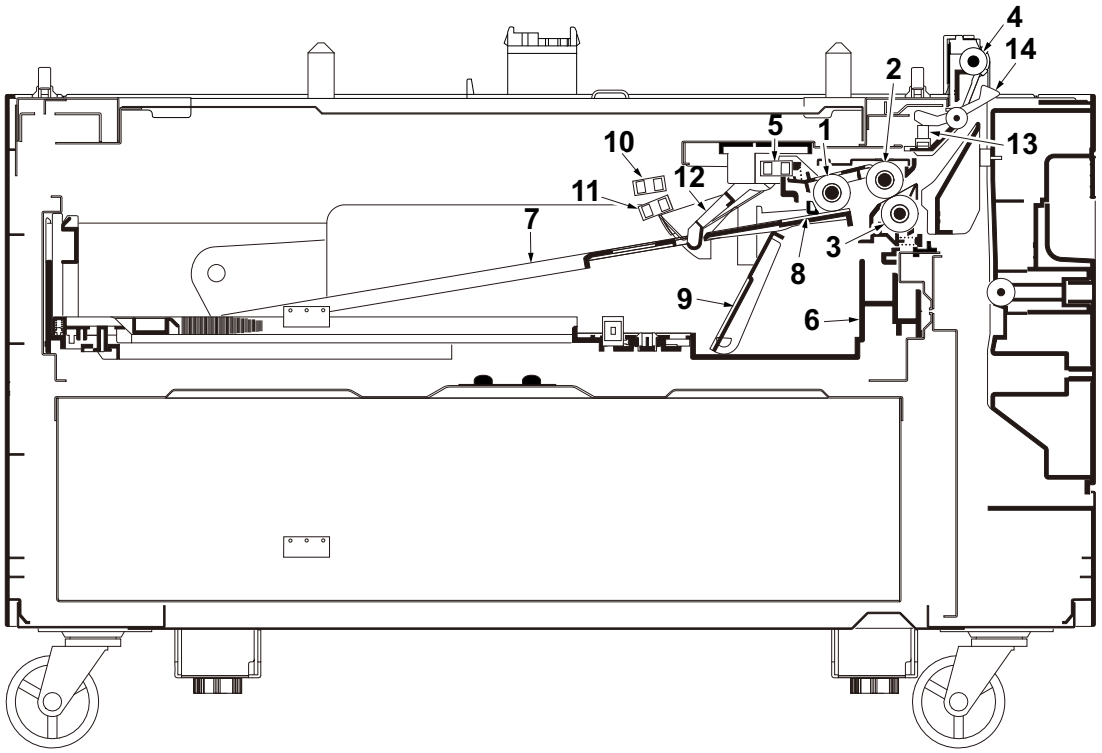


3 - 7 Mechanical construction (option)

(1) Paper feeder (PF-470)

The paper feeder can load 550 sheets paper (64g/m^2) or 500 sheets paper (80g/m^2) and consists of one cassette. The cassette picks up paper by rotating the PF pickup roller and conveys it by rotating the PF feed roller. Multi-feed of paper is also prevented by the effect of the PF retard roller.

Fed paper is conveyed to the main unit by the PF conveying roller.

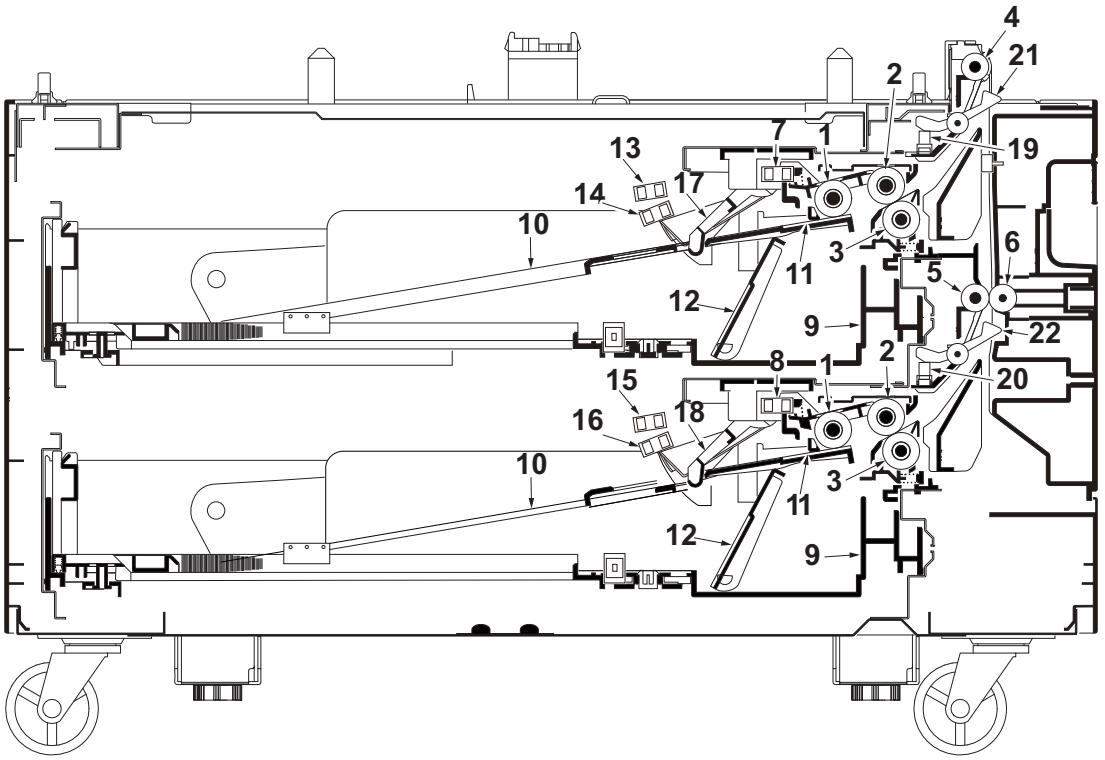


1 PF pickup roller
2 PF feed roller
3 PF retard roller
4 PF feed roller 1
5 PF lift sensor 1
6 PF cassette base
7 PF lift plate
8 PF friction pad
9 PF lift operating plate
10 PF paper sensor 1(U)
11 PF paper sensor 1(L)
12 Actuator (PF paper sensor 1)
13 PF feed sensor 1
14 Actuator (PF feed sensor 1)

⑵ Paper feeder (PF-471)

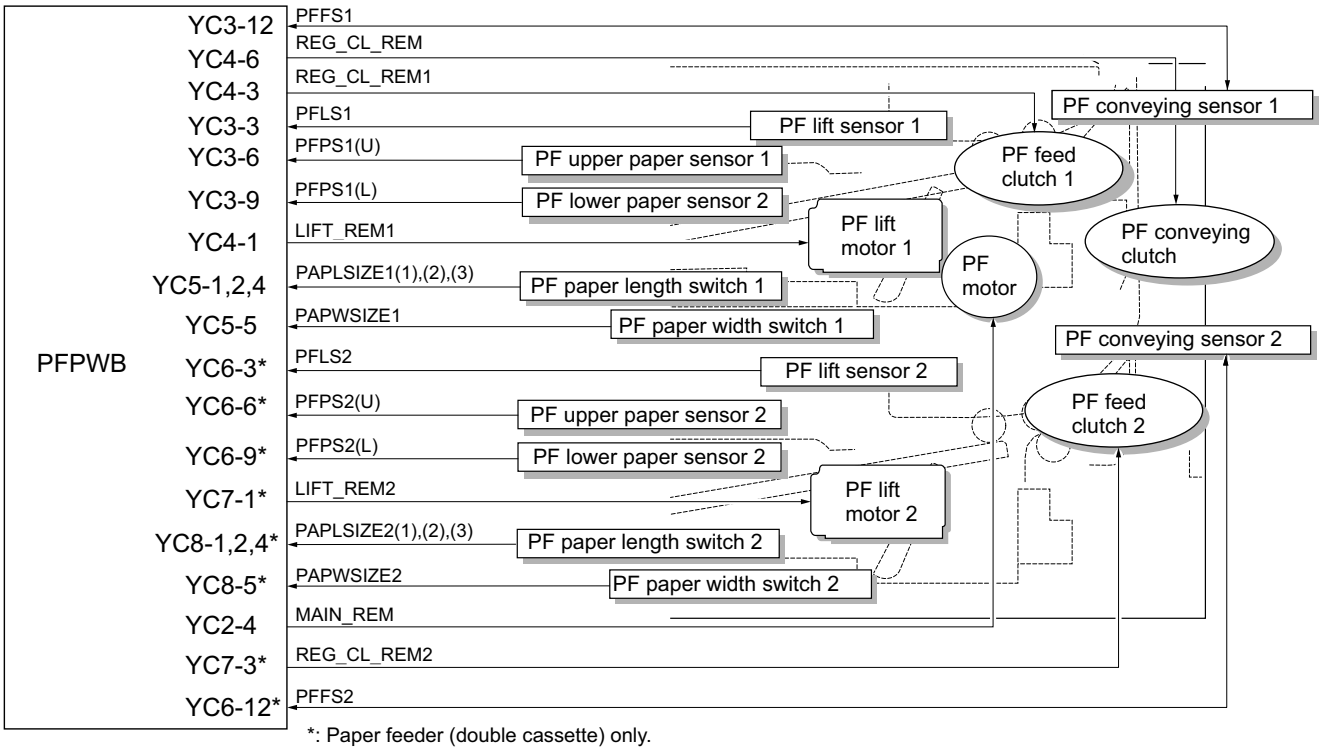
The paper feeder can load 550 sheets paper (64g/m^2) or 500 sheets paper (80g/m^2) and consists of two cassette. The cassette picks up paper by rotating the PF pickup roller and conveys it by rotating the PF feed roller. Multi-feed of paper is also prevented by the effect of the PF retard roller.

Fed paper is conveyed to the main unit by the PF conveying roller.



1 PF pickup roller
2 PF feed roller
3 PF retard roller
4 PF feed roller 1
5 PF feed roller 2
6 PF feed pulley
7 PF lift sensor 1
8 PF lift sensor 2
9 PF cassette base
10 PF lift plate
11 PF friction pad
12 PF lift operating plate
13 PF paper sensor 1(U)
14 PF paper sensor 1(L)
15 PF paper sensor 2(U)
16 PF paper sensor 2(L)
17 Actuator (PF paper sensor 1)
18 Actuator (PF paper sensor 2)
19 PF feed sensor 1
20 PF feed sensor 2
21 Actuator (PF feed sensor 1)
22 Actuator (PF feed sensor 2)

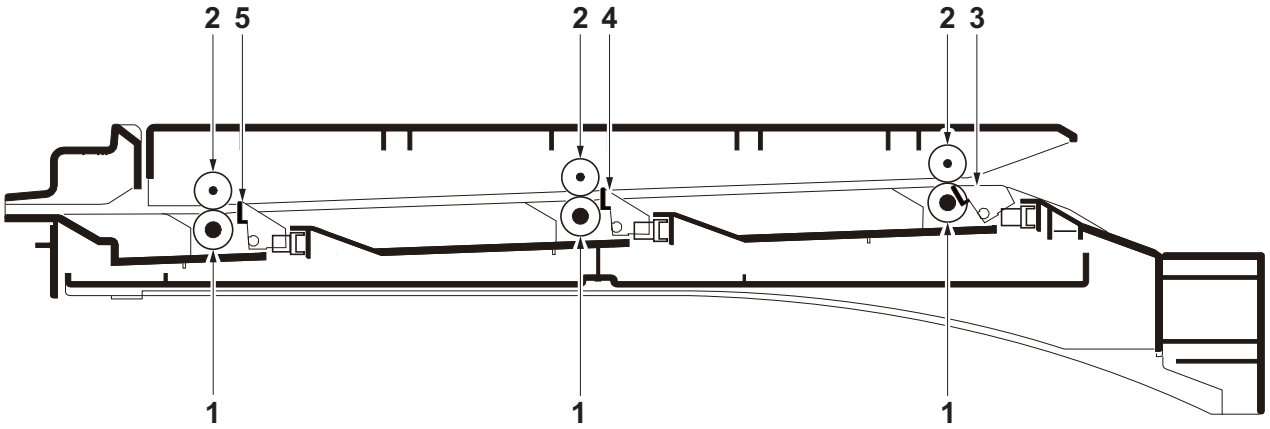
Block diagram



*: Paper feeder (double cassette) only.

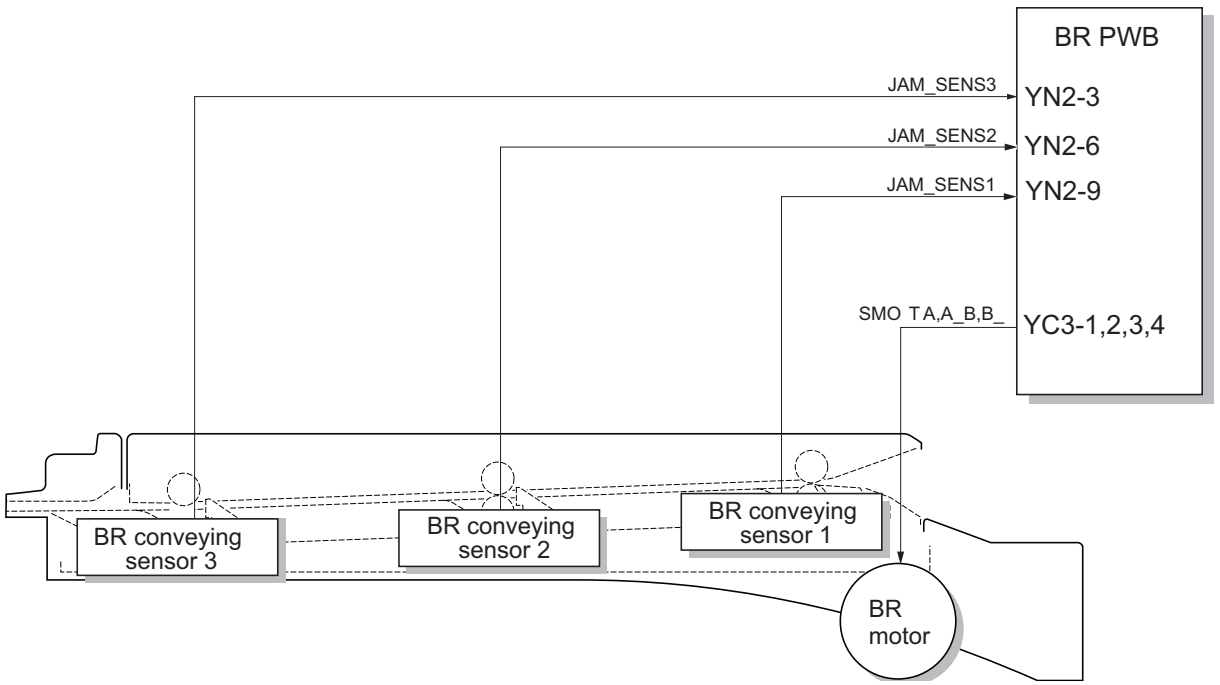
⑶ Attachment kit (AK-470)

The bridge unit section consists of the parts shown in the figure below. Paper exiting from the main unit is conveyed to the finishing section by the BR conveying roller.



1 BR conveying roller
2 BR conveying pulley
3 Actuator (BR conveying sensor 1)
4 Actuator (BR conveying sensor 2)
5 Actuator (BR conveying sensor 3)

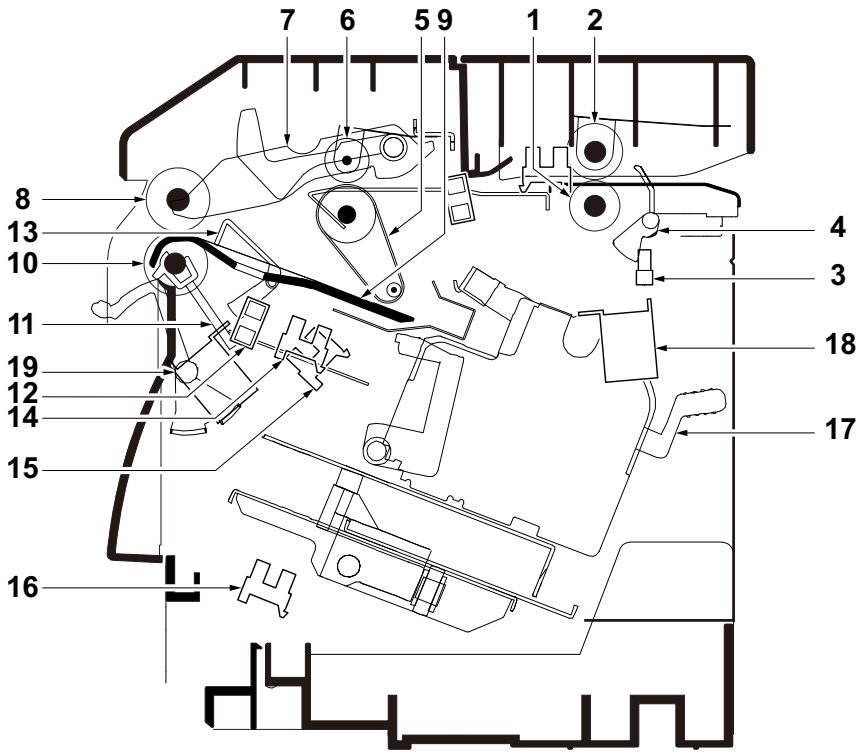
Block diagram



⑷ 500-sheet Finisher (DF-470)

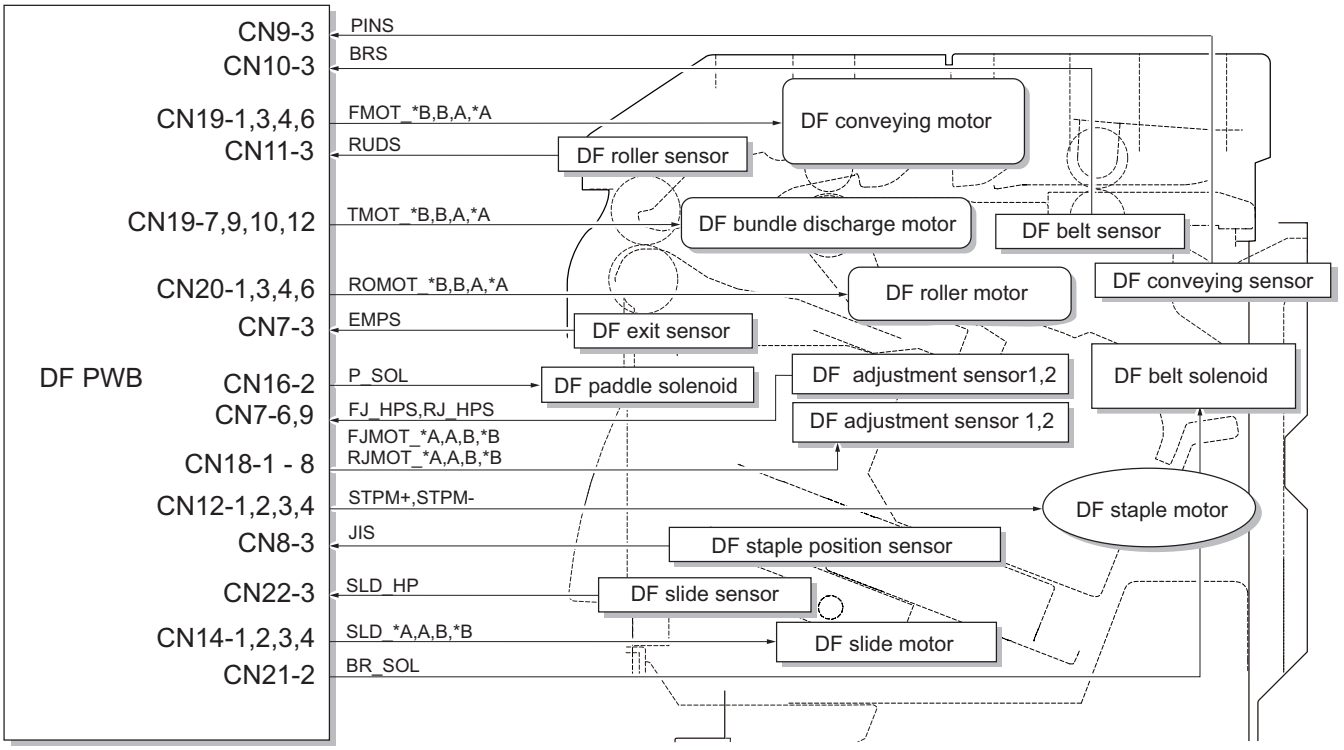
⑷-1 Finishing section

The finishing section consists of the parts below and the paper conveyed from the bridge unit is output to the DF tray. Also this section performs processing in the bundle exit mode and the staple mode.



1 DF conveying roller
2 DF conveying pulley
3 DF conveying sensor
4 DF actuator
5 DF bundle exit belt
6 DF conveying pulley
7 DF bundle exit unit
8 DF exit roller
9 DF adjusting tray
10 DF exit pulley
11 DF paddle
12 DF exit sensor
13 Actuator
(DF exit sensor)
14 DF adjusting sensor 1
15 DF adjusting sensor 2
16 DF slide sensor
17 DF staple unit
18 DF belt solenoid
19 DF paddle solenoid

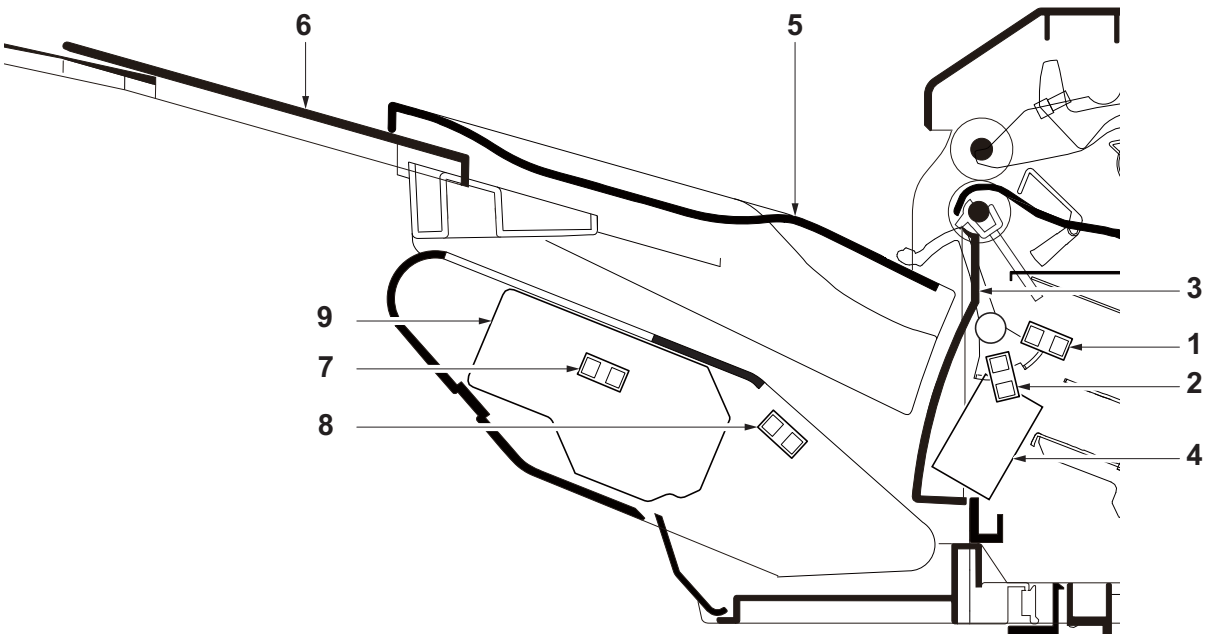
Block diagram



(4-2) Exit tray section

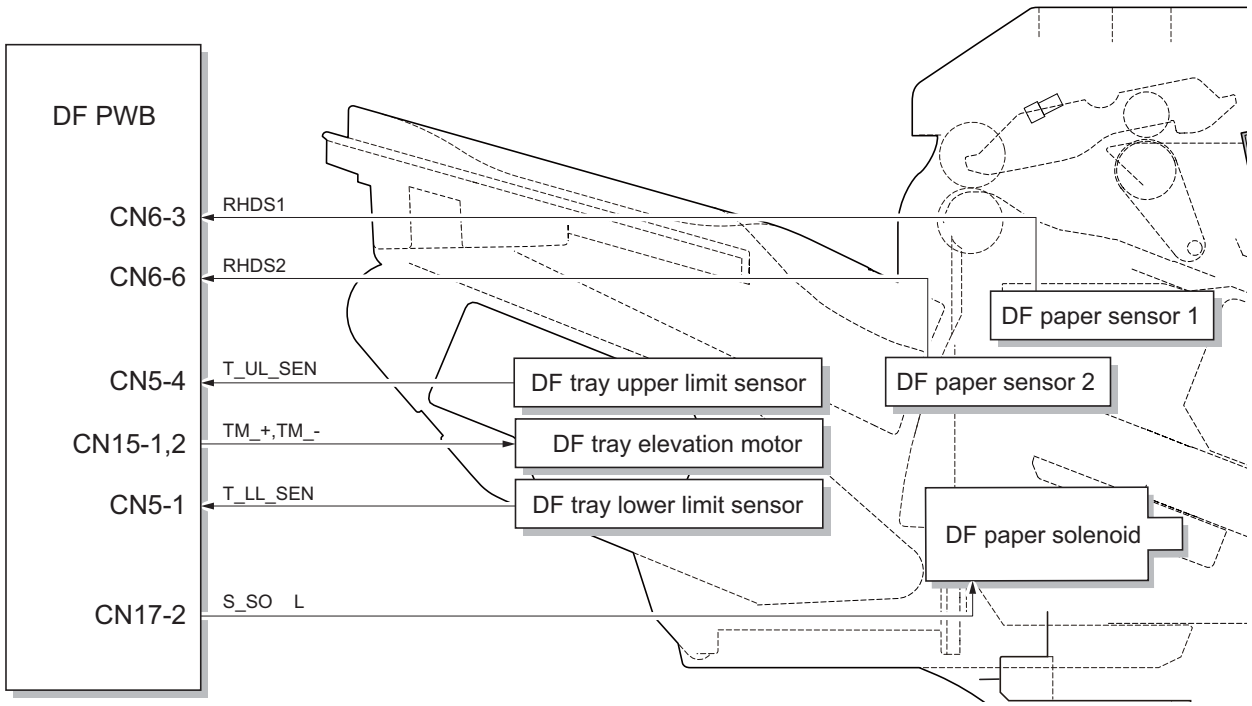
The DF tray section consists of the parts shown in figure below and stocks the paper exit from the processing section. The upper limit position and the lower limit position of the DF tray are detected with the DF tray upper limit sensor and the DF tray lower limit sensor.

Also, the paper stock quantity is detected with the DF paper sensor 1, 2.



1 DF paper sensor 1
2 DF paper sensor 2
3 DF paper holding lever
4 DF paper solenoid
5 DF tray
6 DF sub tray
7 DF tray upper limit sensor
8 DF tray lower limit sensor
9 DF tray motor

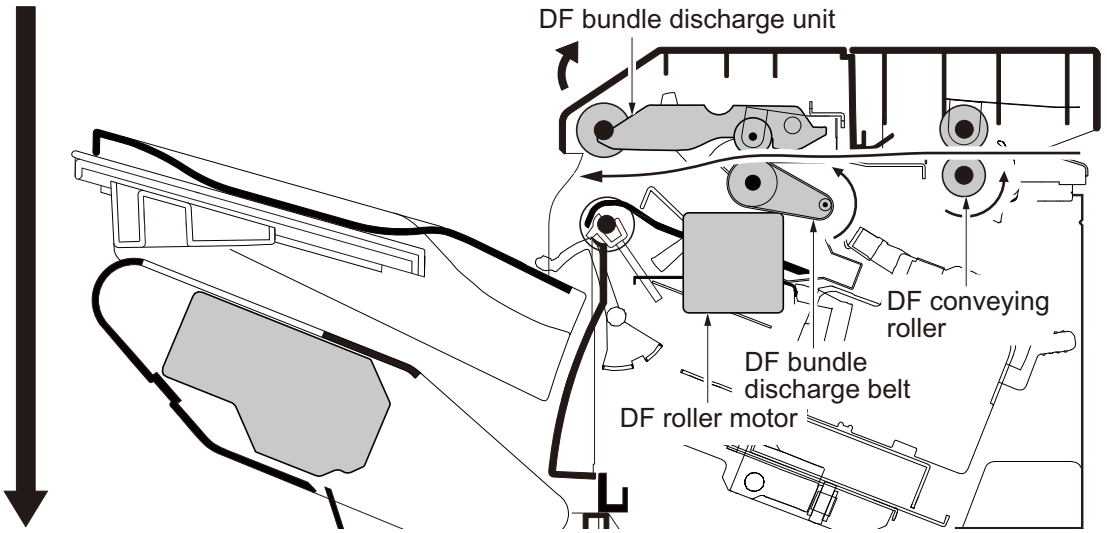
Block diagram



⑷-3⑶ Bundle exit operation

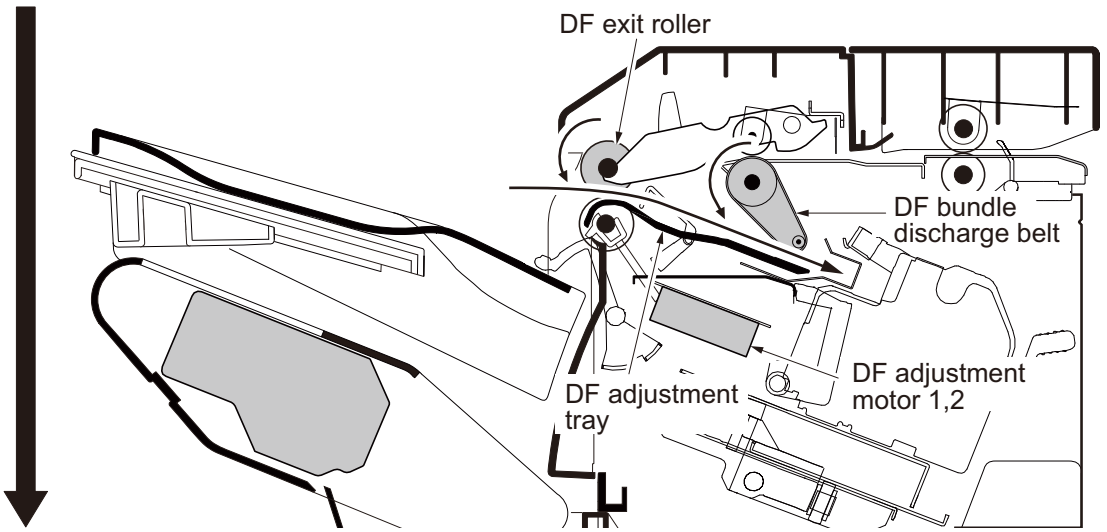
Paper is fed to the processing section by rotation of the DF conveying roller and the DF bundle exit belt.

When the paper is conveyed into the processing section, the DF roller motor is driven to lift up the DF bundle exit unit.

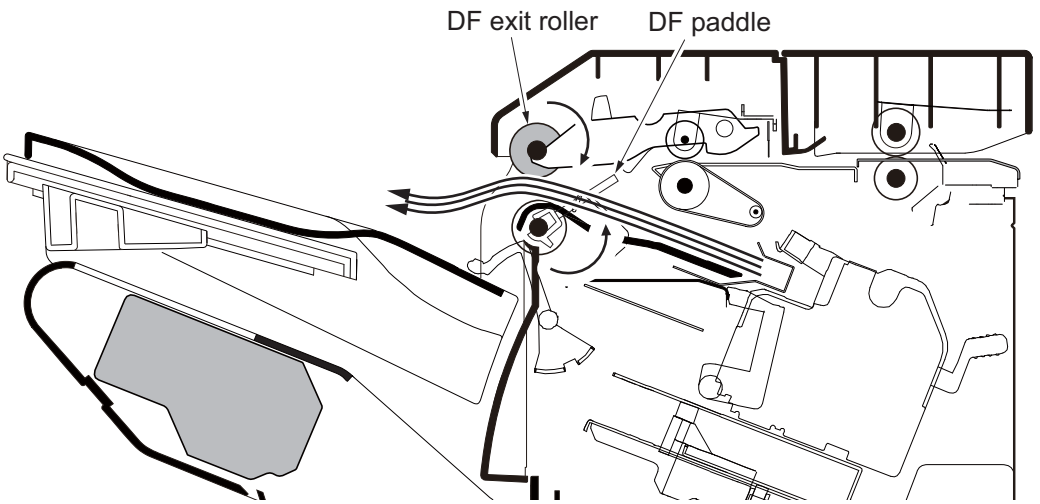


When the trailing edge of paper passes through the DF bundle exit belt, the DF bundle exit unit is lifted down and the paper is fed to the DF adjusting tray by the DF eject roller and the DF bundle exit belt.

The DF adjusting motor 1,2 drive the DF adjusting guides to adjust paper.



When adjustment of the last sheet of the bundle is completed, the DF exit roller and the DF paddle rotates to exit the bundle of paper to the DF tray.



4 Maintenance

4 - 1 Precautions for the maintenance

⑴ 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.

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.

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.

⑵ 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.

⑶ Storage of the toner container

Store the toner container in a cool, dark place.

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

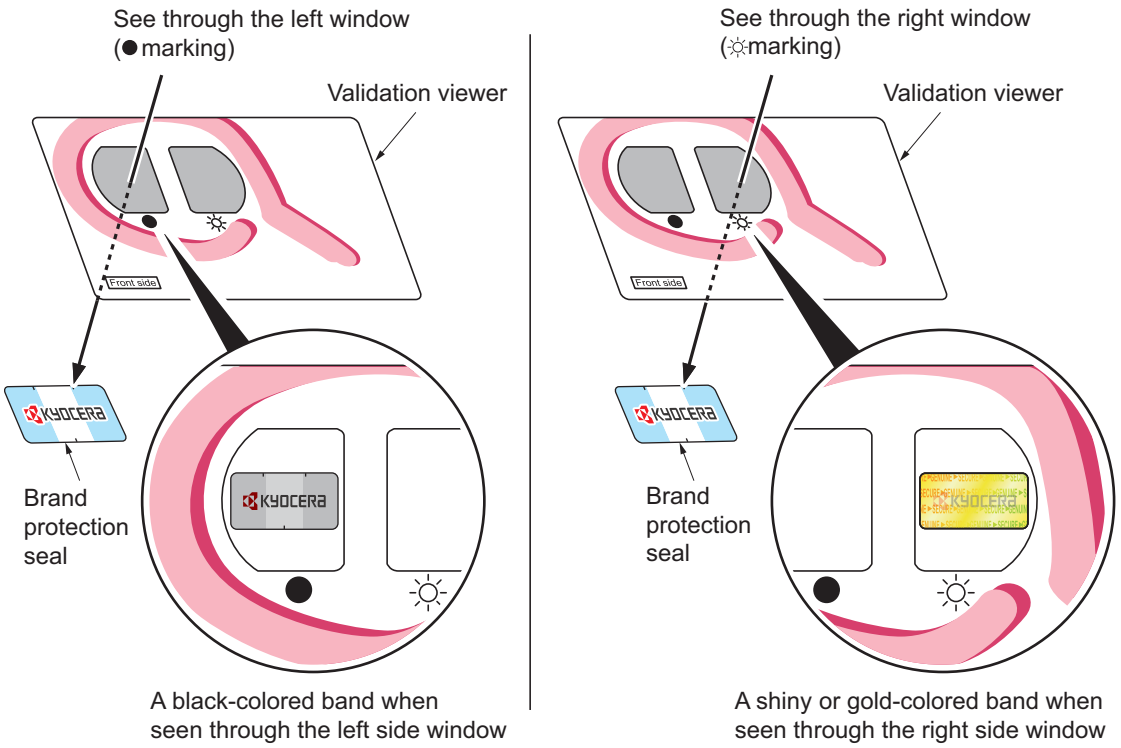
(4) Screening of the toner container

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

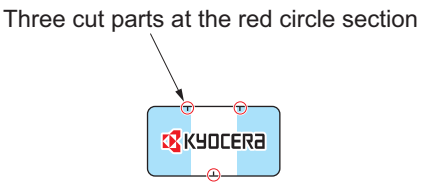
Look at the screening film through two windows to check the genuineness.

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

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



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



4 - 2 Maintenance parts

(1) Maintenance kits

For main unit

Service manual	Name used in parts list	Quantity	Part No.
MK-8115A	MK-8115A/MAINTENANCE KIT		1702P30JP0 *1
MK-8115A	MK-8115A/MAINTENANCE KIT		1702P30UN0 *2
(200,000 images)	• DRUM UNIT	1	
	• DLP UNIT K	1	
	• FUSER UNIT	1	
	• PRIMARY TRANSFER UNIT	1	
	• PRIMARY FEED UNIT	1	
	• MP PULLEY FEED	1	
	• MP PAD SEPERATION	1	
	• REGISTRATION ROLLER CLEANER	1	
	• SECONDARY TRANSFER ROLLER UNIT	1	
MK-8115B	MK-8115B/MAINTENANCE KIT		1702P30JP1 *1
MK-8115B	MK-8115B/MAINTENANCE KIT		1702P30UN1 *2
(200,000 images)	• DRUM UNIT	1	
	• DLP UNIT C	1	
	• DLP UNIT M	1	
	• DLP UNIT Y	1	

*1: 100V (KDJ)

*2: 120V (KDA)/220-240V (KDE)/240V (KDAU)

For document processor

Service manual	Name used in parts list	Quantity	Part No.	Alternative parts No.
MK-6110	MK-6110/MAINTENANCE KIT		1702P10UN0	072P10UN
(300,000 images)	• PULLEY FEED	1		
	• GUIDE RETARD	1		
	• ROLLER RETARD	1		

⑵ Executing the maintenance mode after replacing the maintenance kit

⑵-1 Execute the following maintenance modes after replacing the maintenance kit.

Section	Mode No.	Maintenance item
Replacing settings	U251	Maintenance counter clear (Clear)
Image adjustment	U410	Adjusting the halftone automatically

⑵-2 Maintenance mode to execute after replacing the unit

Drum unit

Section	Mode No.	Maintenance item
Image adjustment	U410	Adjusting the halftone automatically

Developer unit

Section	Mode No.	Maintenance item
Image adjustment	U410	Adjusting the halftone automatically

Secondary transfer roller unit

Section	Mode No.	Maintenance item
Replacing settings	U127	Clearing the transfer count (Clear)
Image adjustment	U410	Adjusting the halftone automatically

Feed roller / MP feed roller

Section	Mode No.	Maintenance item
Replacing settings	U901	Clearing the counters by paper source (Clear)

4 - 3 Maintenance parts replacement procedures

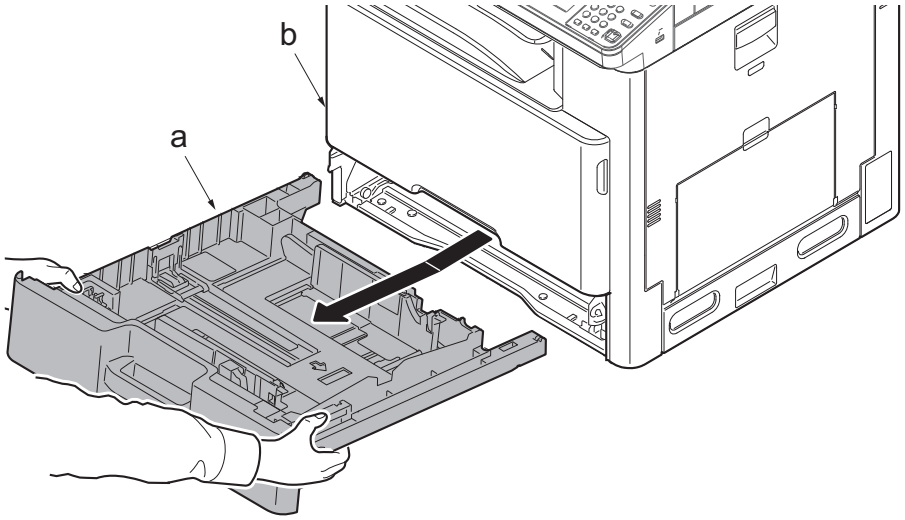
Replacement of the maintenance kit is required after about 200,000 images. The message [Replace MK.] appears at the replacement timing.

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

(1) Cassette paper feed section

(1-1) Detaching and reattaching the feed unit

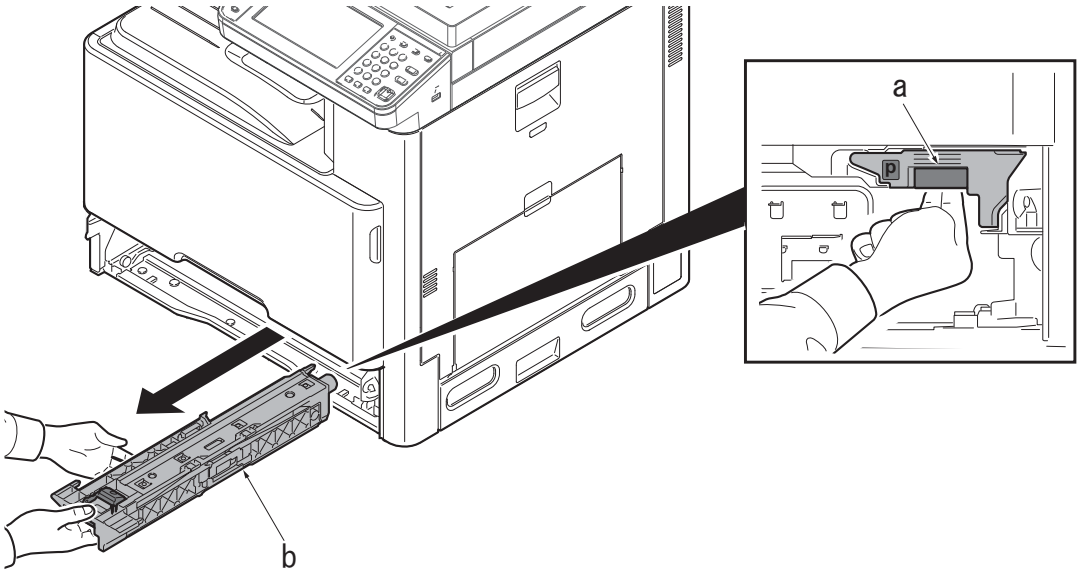
1 Pull out the cassette (a) from the main unit (b) and remove it in the direction of the arrow.



2 Detach the feed unit (a).

1 Release the feed unit lock lever (a) and detach the feed unit (b).

2 Check or replace the feed unit (b), and then reattach the parts in the original position.

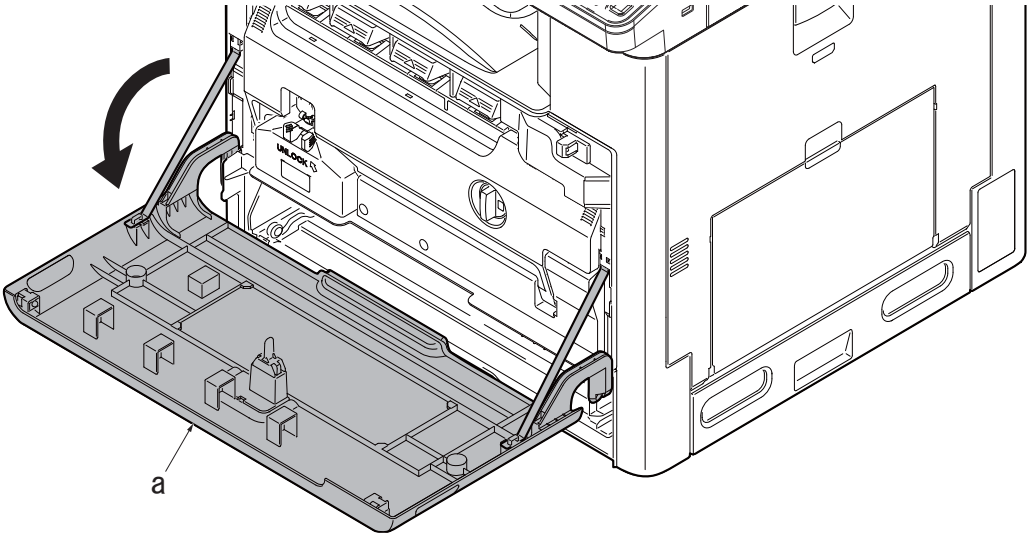


Execute the following setting after replacing the feed roller.

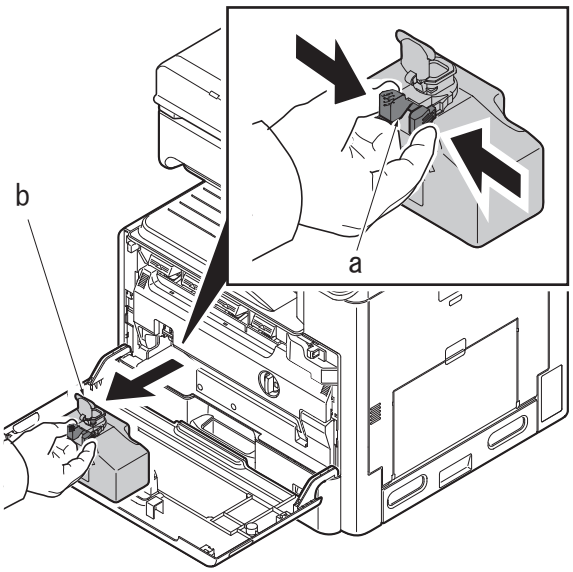
- Clearing the maintenance counts (Maintenance mode U251): Clear

(1-2) Detaching and reattaching the regist cleaner

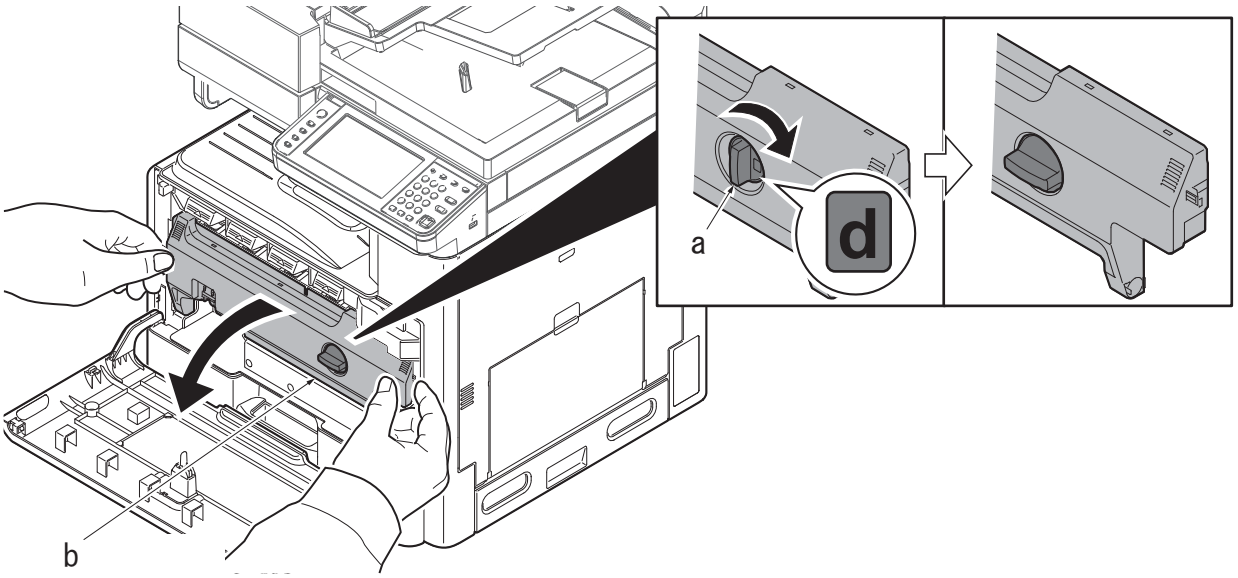
1 Open the front cover (a).



2 **Release the lock lever (a) and detach the waste toner box (b).**



3 Rotate the lock lever (a) in the direction of the arrow and open the duct cover (b).

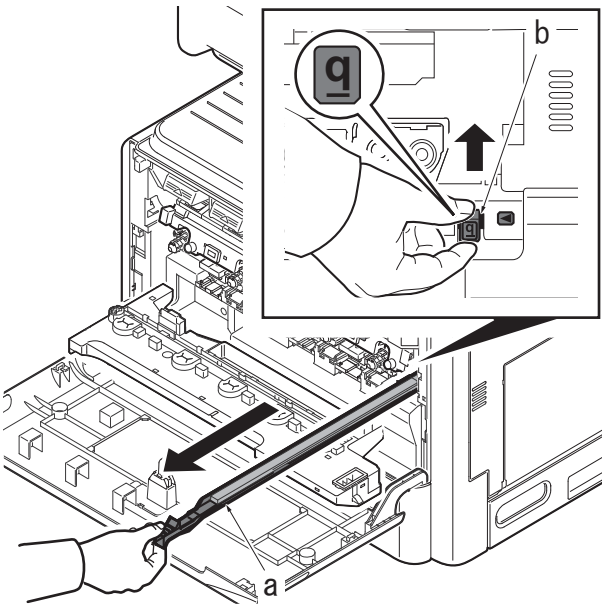


4 Detach the regist cleaner.

1 Pull out the regist cleaner (a) by holding the lever (b) of it.

2 Check the sponge of the regist cleaner (a) and clean or replace it.

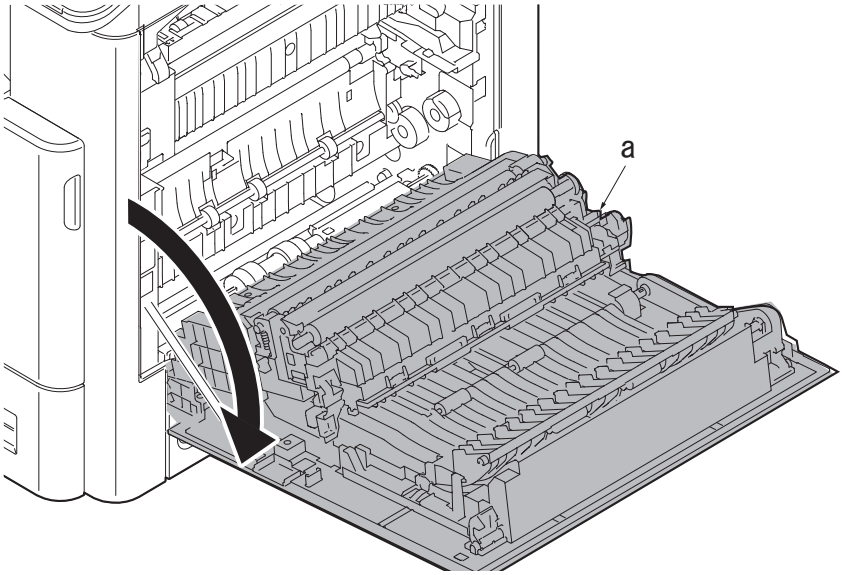
3 Reattach the parts in the original position.



(2) MP feed section

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

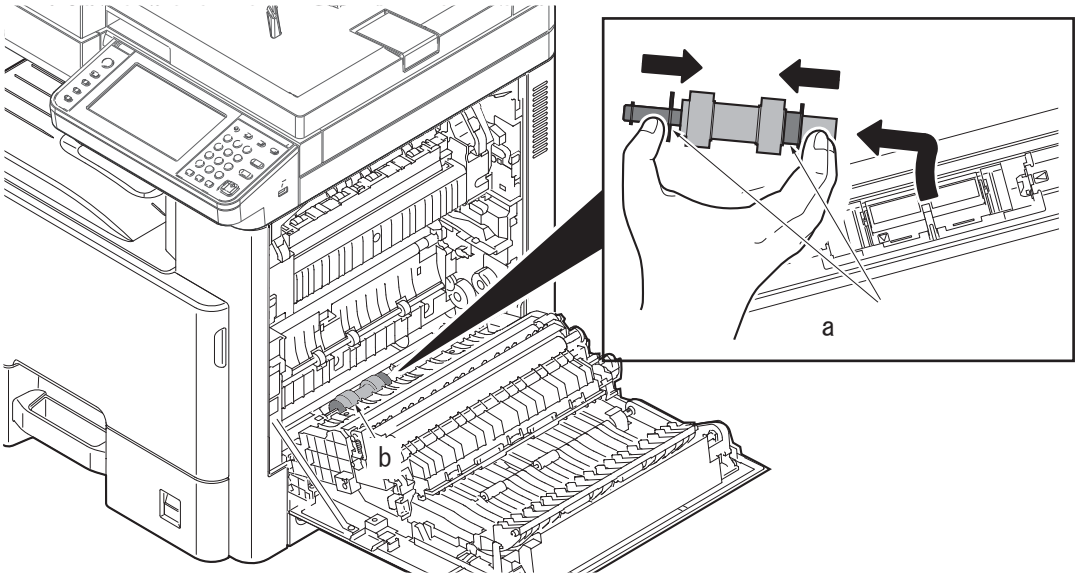
1 Open the right cover 1 (a).



2 Detach the new MP feed roller.

1 Push the holder (a) inside and remove the MP feed roller (b).

2 Check or replace the MP feed roller and then reattach the parts in the original position.

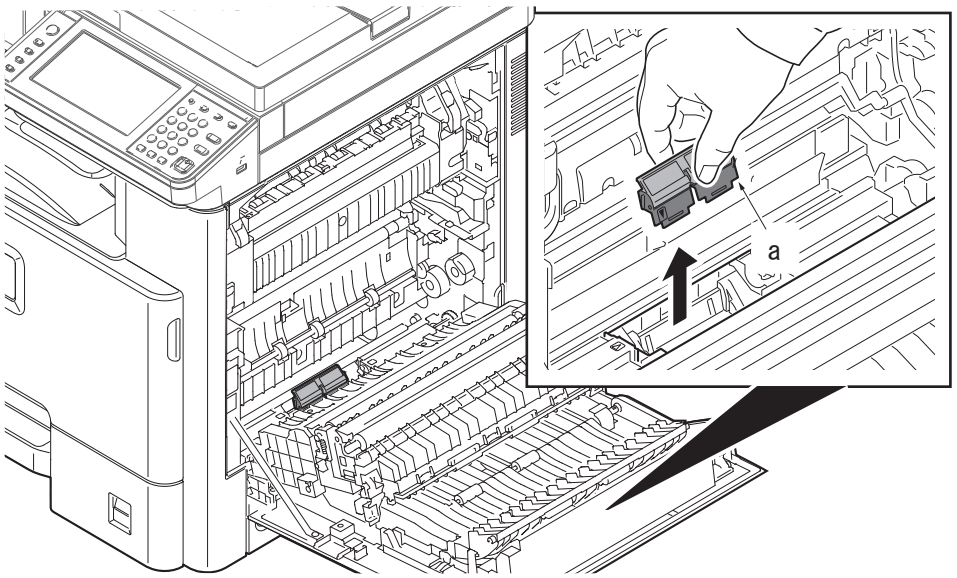


(2-2) Detaching and reattaching the MP separation pulley

1 Detach the MP separation pulley.

1 Tilt the MP separation pad (a) toward you and detach it in the direction of the arrow.

2 Check or replace the MP separation pad, and then reattach the parts in the original position.



Important

When replacing the new MP separation pulley or MP paper feed roller, take care not to touch the roller surface.

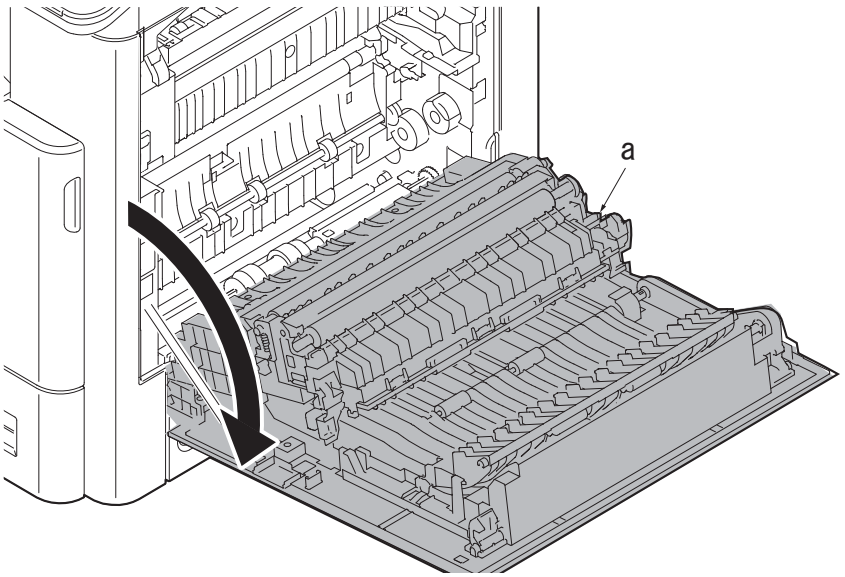
Execute the following setting after replacing the MP paper feed roller.

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

(3) Transfer and separation section

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

1 Open the right cover 1 (a).

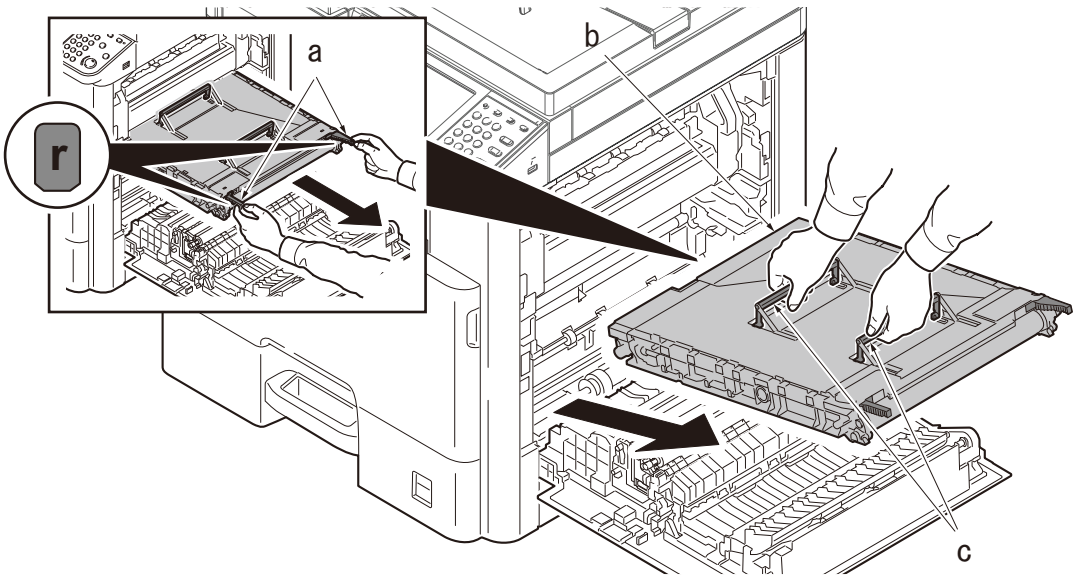


2 Detach the primary transfer unit.

1 Hold two tabs (a) and pull out the primary transfer unit toward you.

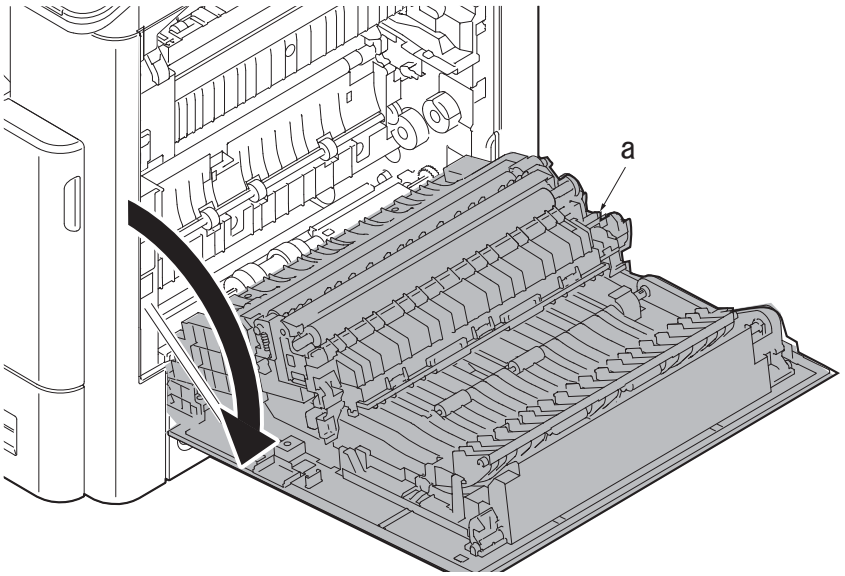
2 Hold two handles (a) and detach the primary transfer unit.

3 Check or replace the primary transfer unit, and then reattach the parts in the original position.



⑶-2 Detaching and reattaching the secondary transfer roller unit

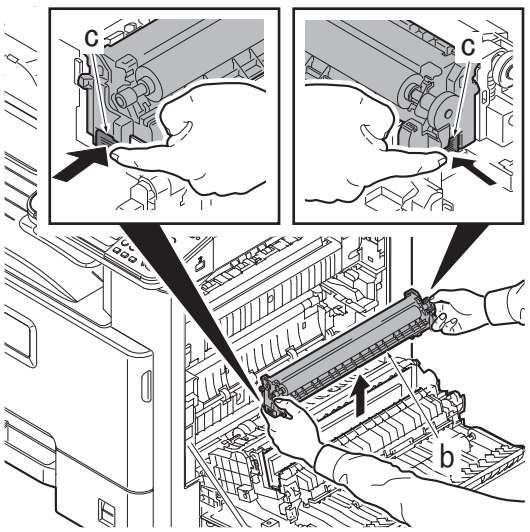
1 Open the right cover 1 (a).



2 Detach the secondary transfer roller unit (b).

1 Release two lock lever (c) and detach the secondary transfer unit (b).

2 Check or replace the secondary transfer unit (b), and then reattach the parts in the original position.



Important

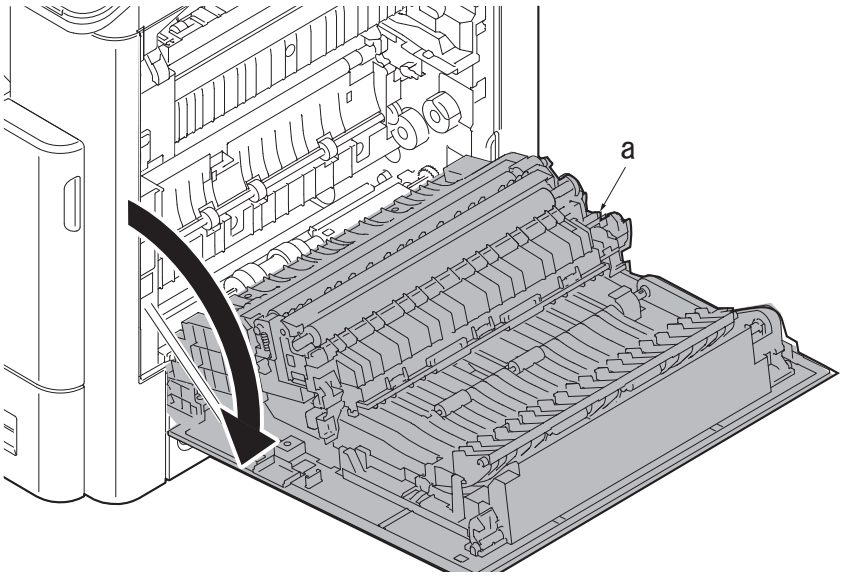
When reattaching the secondary transfer unit, insert it until it clicks.

Execute the following setting after replacing the secondary transfer roller unit.

- Checking/clearing the transfer counts (Maintenance mode U127): Clear
- Adjusting the halftone automatically (Maintenance mode U410)

⑶-3⑶ Detaching and reattaching the registration roller R

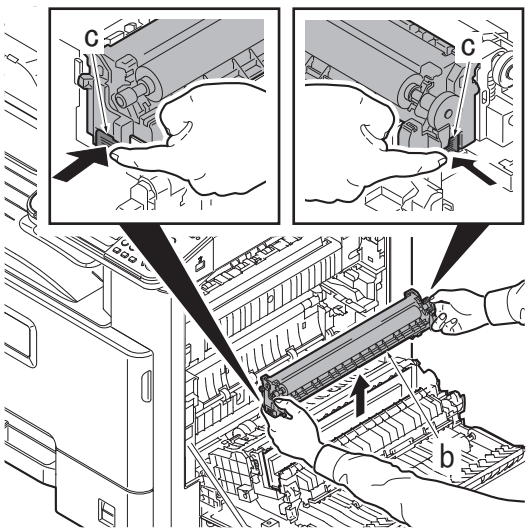
1 Open the right cover 1 (a).



2 Detach the secondary transfer roller unit (b).

1 Release two lock lever (c) and detach the secondary transfer unit (b).

2 Check or replace the secondary transfer unit (b), and then reattach the parts in the original position.



Important

When reattaching the secondary transfer unit, insert it until it clicks.

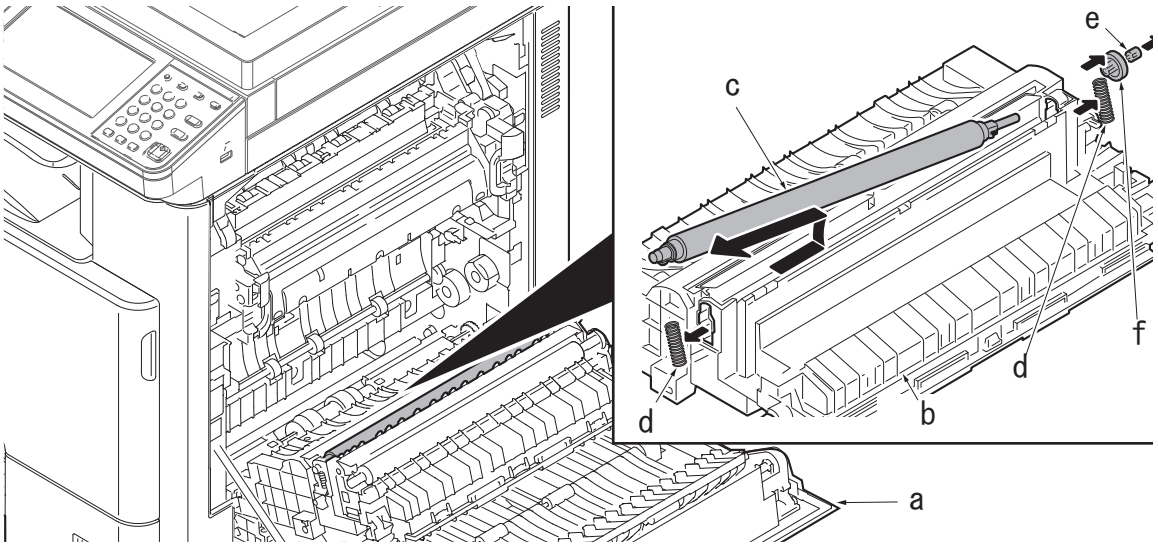
3 Detach the registration roller R (C).

1 Remove two springs (d) at the front and back of the registration roller R (c).

2 Detach the cap (e) and then gear (f).

3 Slide the registration roller R (c) and detach it.

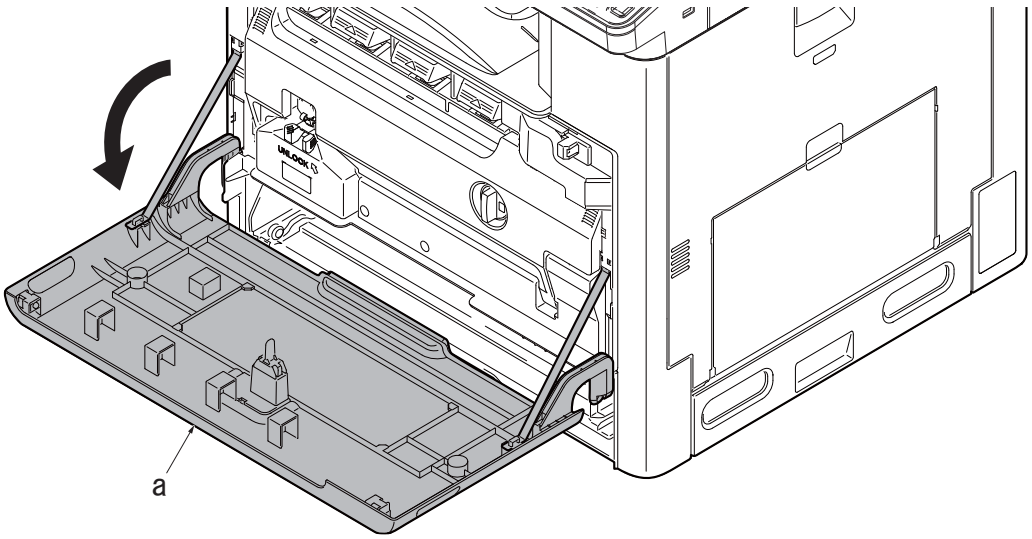
4 Check or replace the registration roller R (c), and then reattach the parts in the original position.



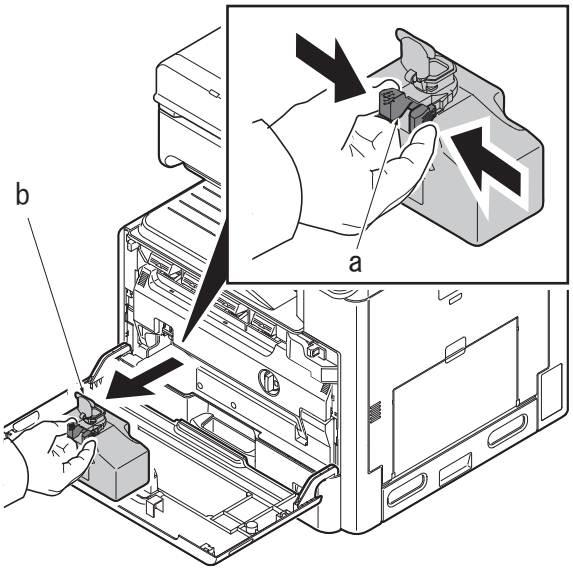
(4) Drum section

(4-1) Detaching and reattaching the drum unit

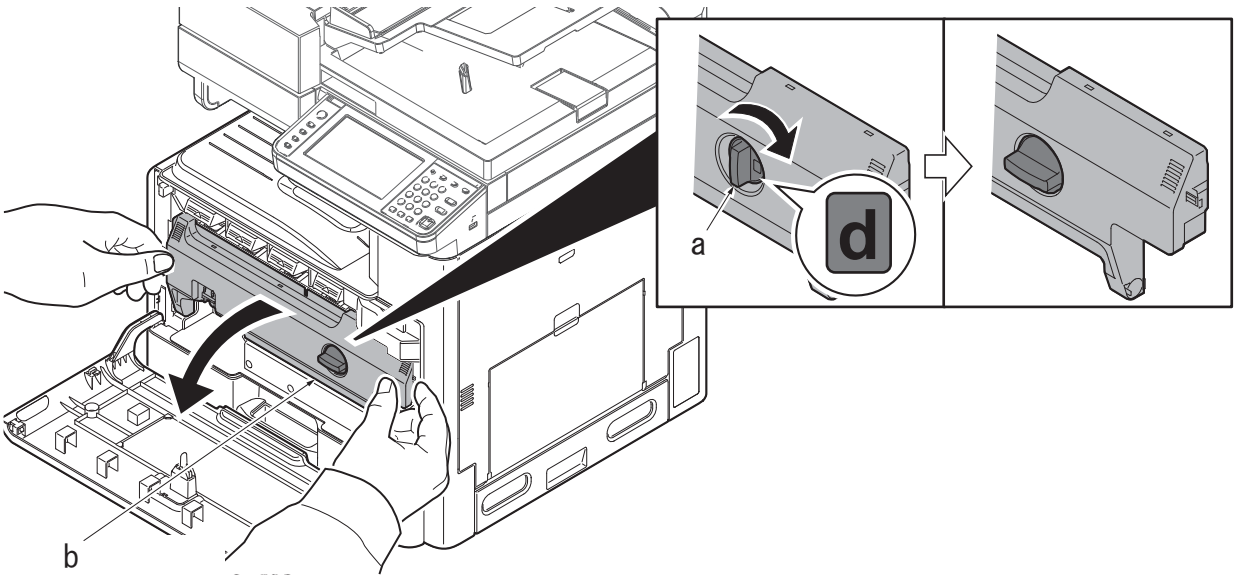
1 Open the front cover (a).



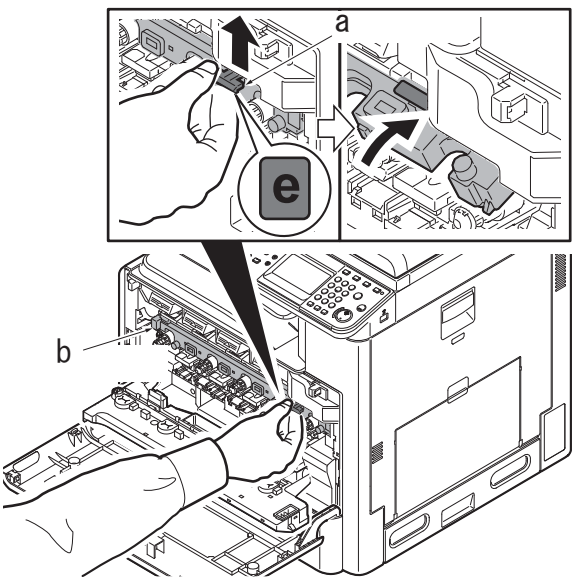
2 **Release the lock lever (a) and remove the waste toner box (b).**



3 **Rotate the lock lever (a) in the direction of the arrow and open the duct cover (b).**



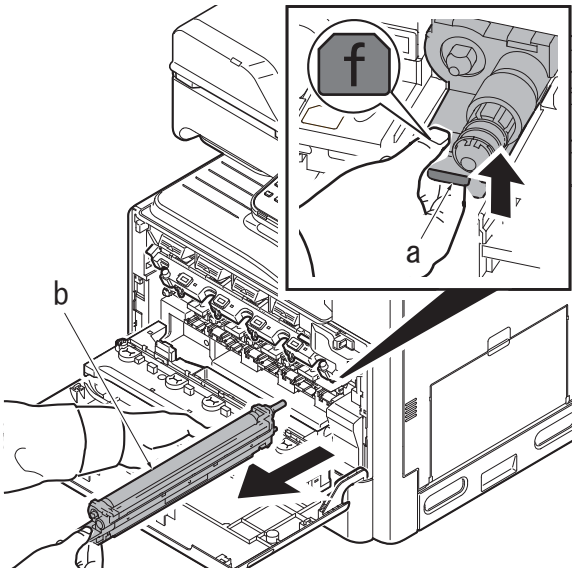
4 **Release the lever (a) and open the duct holder (b).**



5 Detach the drum unit.

1 Release the lock lever (a) , Detach the drum unit (b).

2 Check or replace the drum unit (b), and then reattach the parts in the original position.



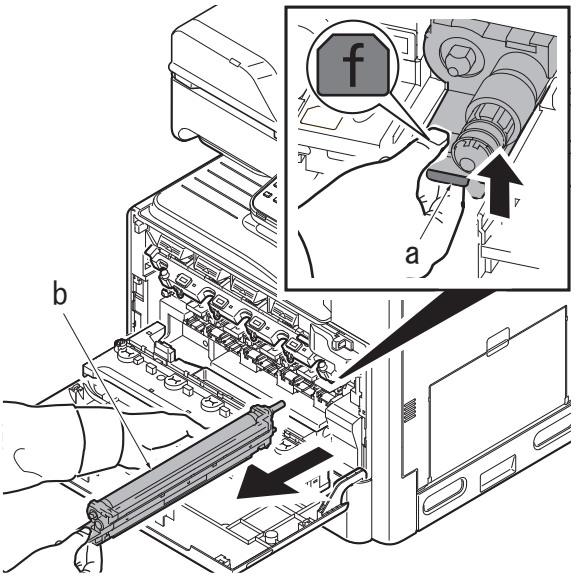
Execute the following setting after replacing the drum unit.

- Adjusting the halftone automatically (Maintenance mode U410)

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

1 Detach the drum unit.

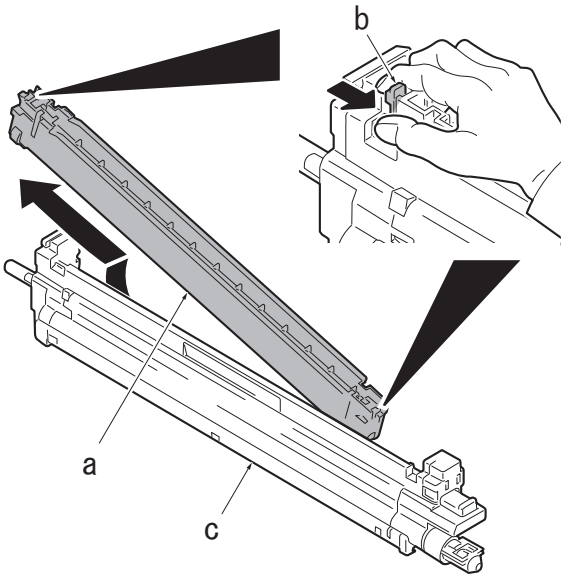
1 Release the lock lever (a) , Detach the drum unit (b).



2 Detach the MC roller unit.

1 Release two lock levers (b) and detach the MC roller unit (a) from the drum unit (c).

2 Check or replace the MC roller unit (a), and then reattach the parts in the original position.



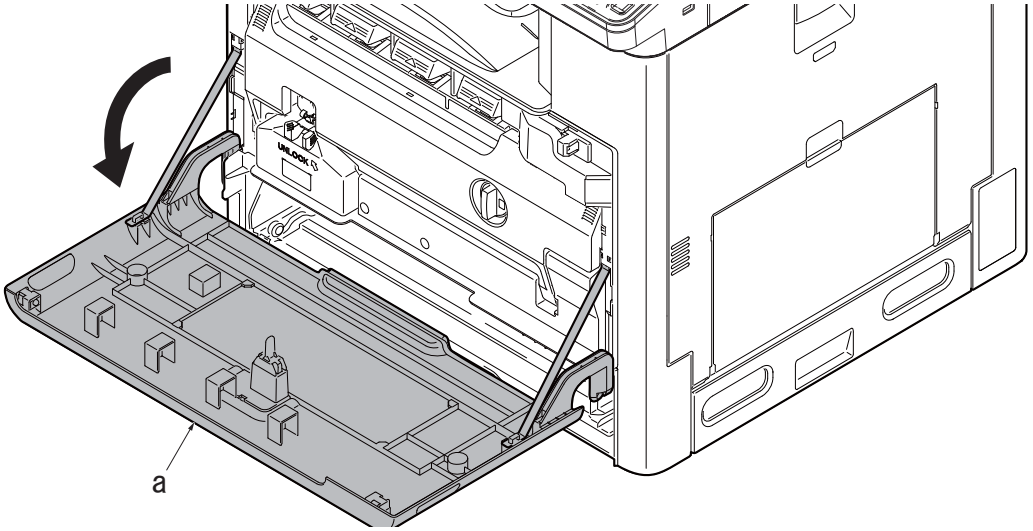
Execute the following setting after replacing the main charge roller.

- Adjusting the halftone automatically (Maintenance mode U410)

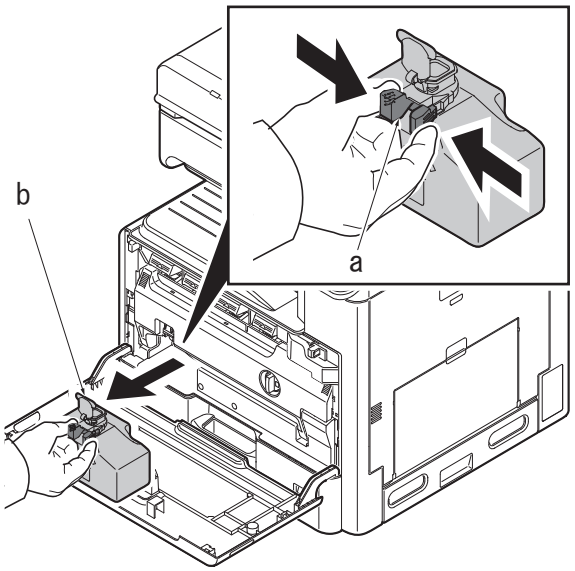
⑸ Developer section

Detaching and reattaching the developer unit

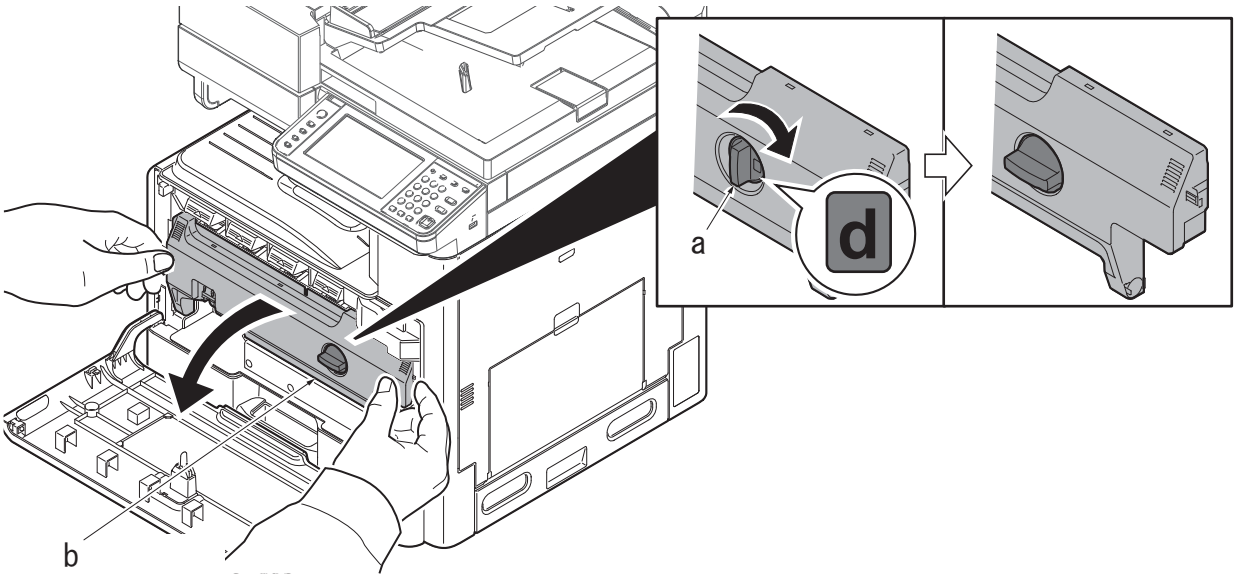
1 Open the front cover (a).



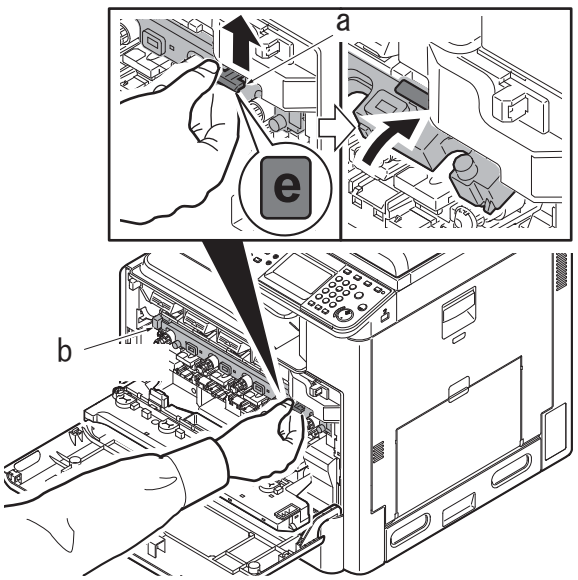
2 Release the lock lever (a) and detach the waste toner box (b).



3 **Rotate the lock lever (a) in the direction of the arrow and open the duct cover (b).**



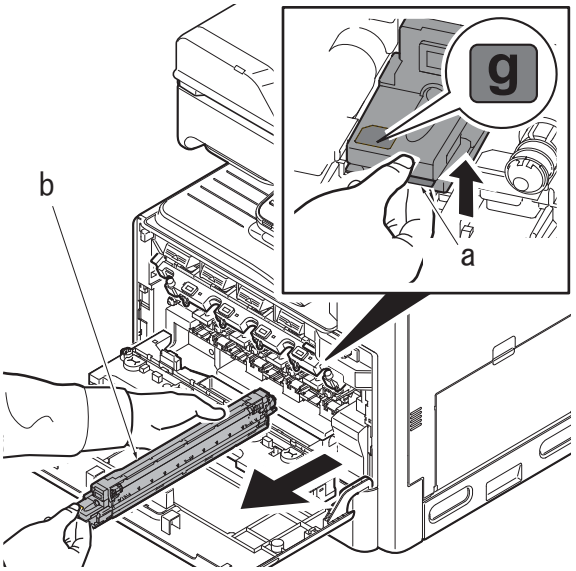
4 **Release the lever (a) and open the duct holder (b).**



5 Detach the developer unit.

1 Release the lock lever (a) and detach the developer unit (b).

2 Check or replace the developer unit (b), and then reattach the parts in the original position.



Important

- When relocating the developer units and the main unit, keep them horizontally without shock or vibration.
- Do not store or transport the developer units while placing aslant or lengthways.

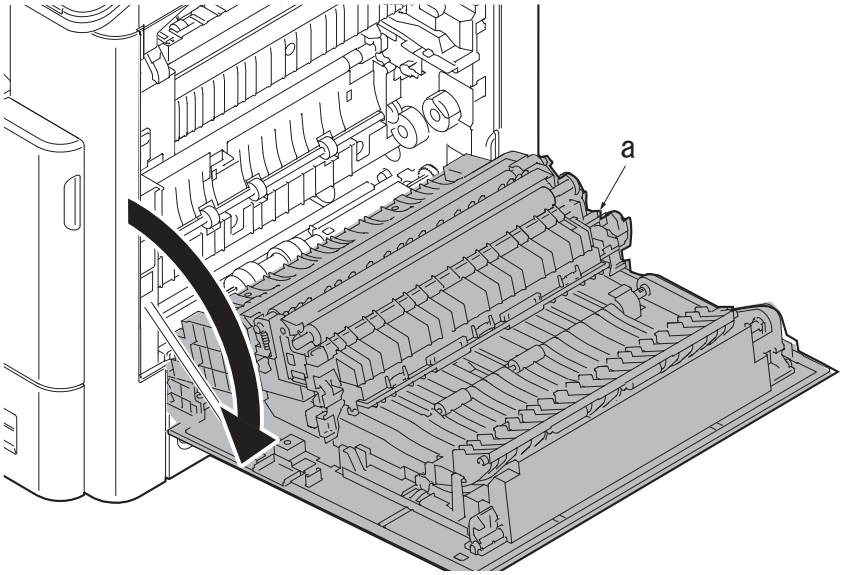
Execute the following setting after replacing the developer unit.

- Adjusting the halftone automatically (Maintenance mode U410)

⑹ Fuser section

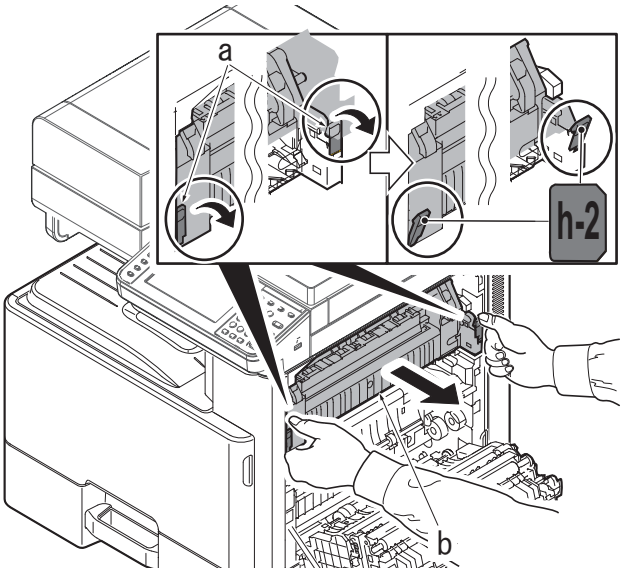
Detaching and reattaching the fuser unit

1 Open the right cover 1 (a).



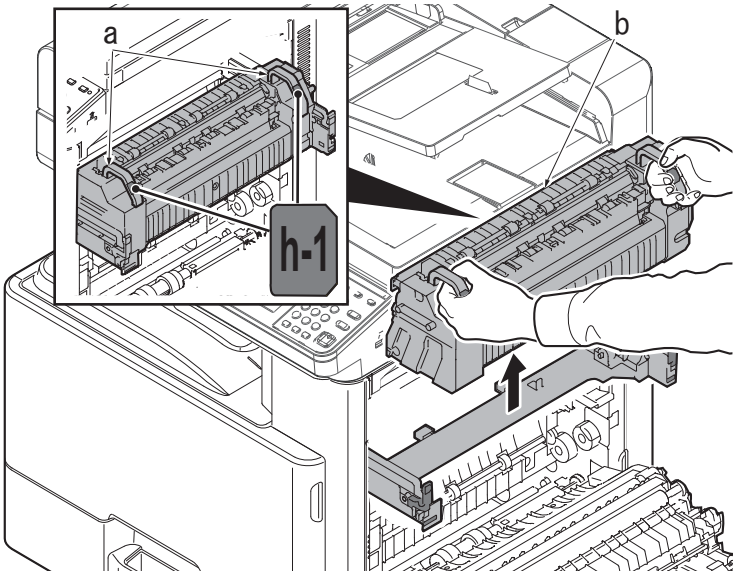
2 Detach the fuser unit.

1 Release two mount levers (a) and then pull out the fuser unit toward you.



2 Hold two handles (a) of the fuser unit (b) and lift the fuser unit upwards and then detach it.

3 Check or replace the fuser unit, and then reattach the parts in the original position.



Important

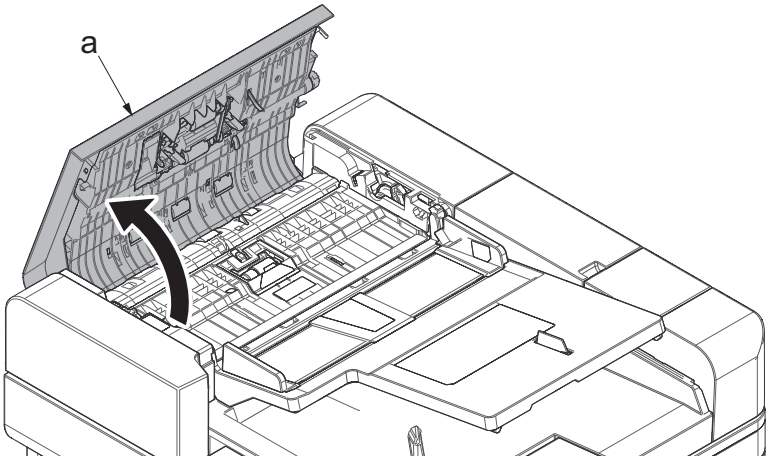
Insufficient lock will cause the phenomenon below when installing the fuser unit.

- Rear side lock failure (This will cause the C6600 fuser belt rotation failure without drive at the rear side.)
- Front side lock failure (This will cause the image squareness failure due to skew feed.)

(7) Document Processor

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

1 Open the DP top cover (a).

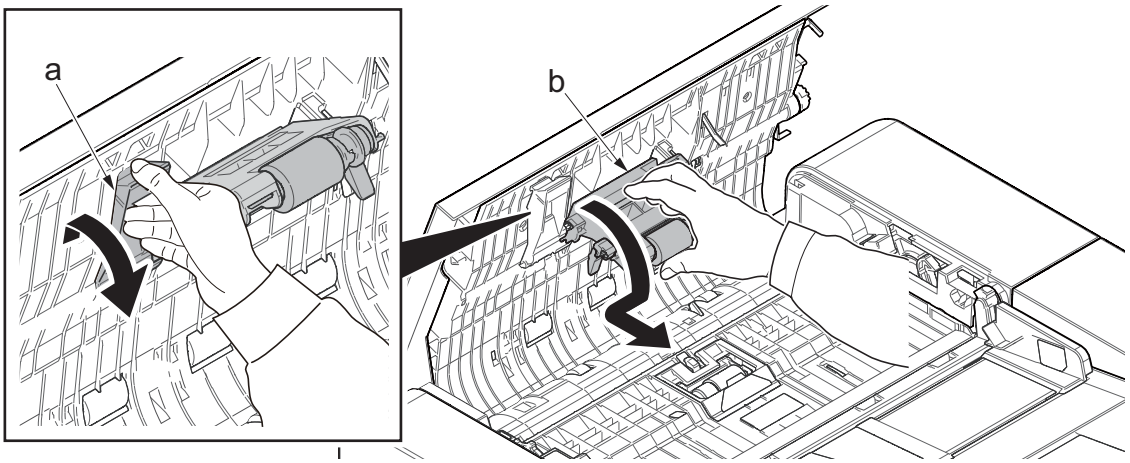


2 Detach the DP feed roller.

1 Push up and open the DP feed lever (a).

2 Pull down the DP feed roller (b) toward you and detach it in the direction of the arrow.

3 Check or replace the DP feed roller (b), and then reattach the parts in the original position.

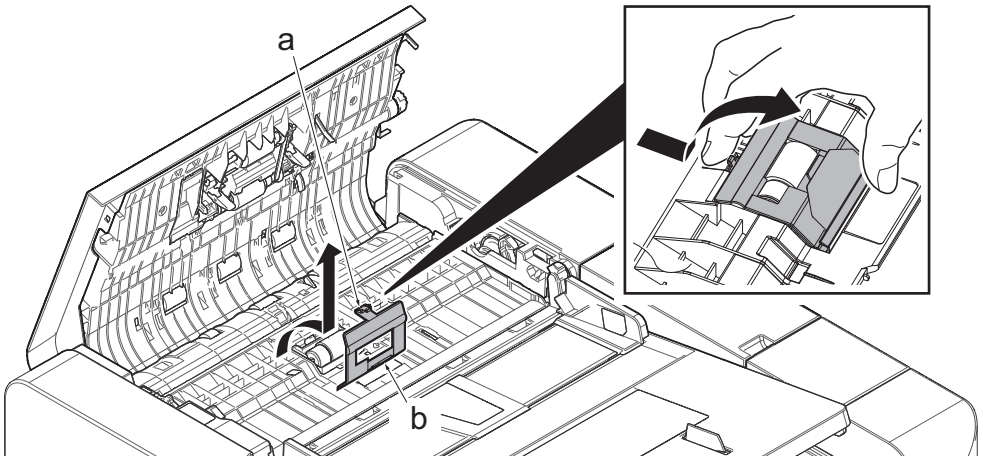


(7-2) Detaching and reattaching the DP separation pulley

1 Detach the DP separation pulley cover.

1 Release the hook (a) and raise the DP separation pulley cover (b) in the direction of the arrow.

2 Remove the DP separation pulley cover (b) in the direction of the arrow.

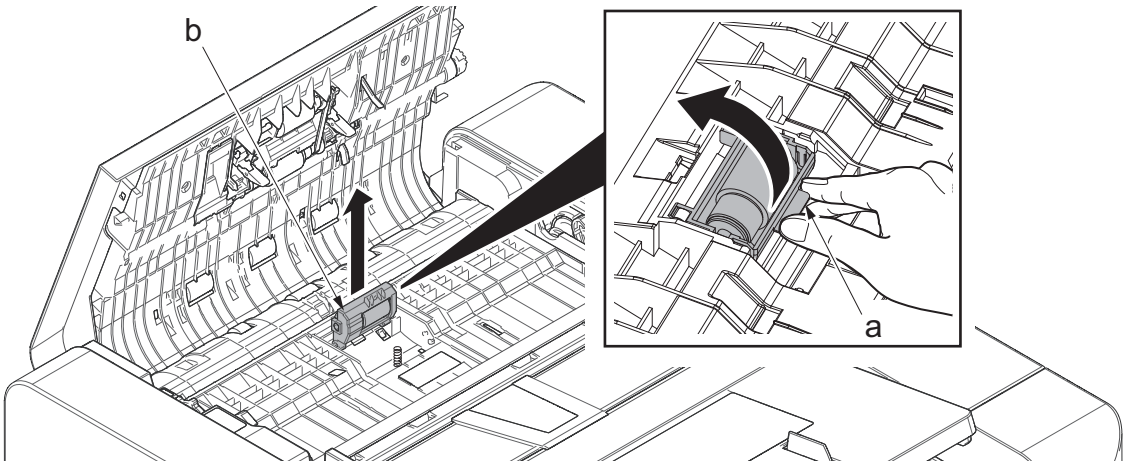


2 Detach the DP separation pulley.

1 Raise the tab (a) of the DP separation pulley holder.

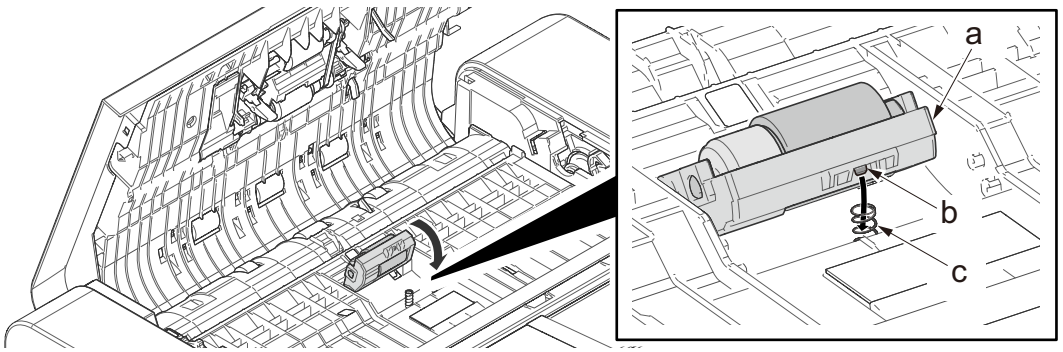
2 Remove the DP separation pulley (b) in the direction of the arrow.

3 Check or replace the DP separation pulley (b), and then reattach the parts in the original position.



Notes when attaching

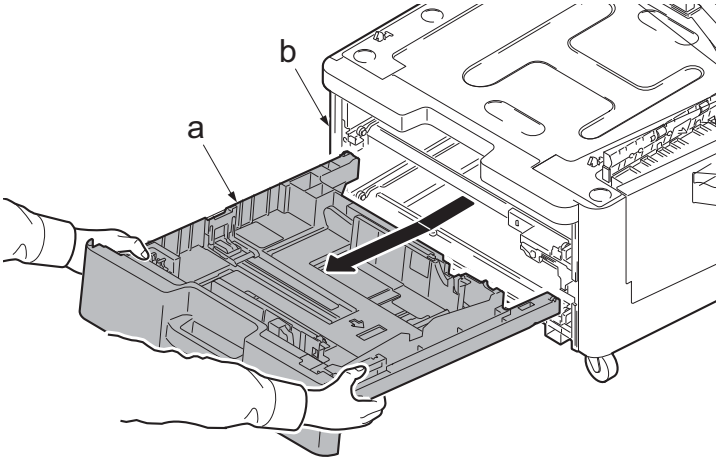
1 When attaching the DP separation pulley holder (a) and pulling it down, make sure to check the protrusion (b) is inserted into the spring (c).



4 - 4 Maintenance parts replacement procedures (option)

Paper feeder (PF-470/PF-471) Detaching and reattaching the feed unit

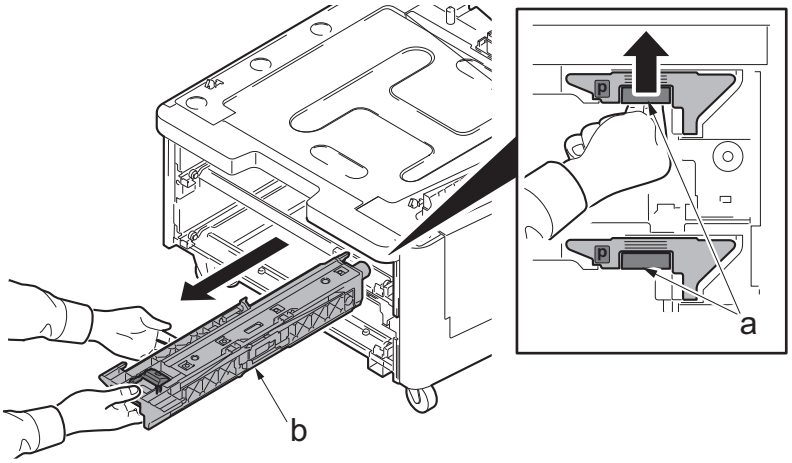
1 Pull out the cassette (a) from the paper feeder (b) and pull it out on an angle.



2 Detach the feed unit (a).

1 Release the feed unit lock lever (a) and detach the feed unit (b).

2 Check or replace the feed unit (b), and then reattach the parts in the original position.



Important

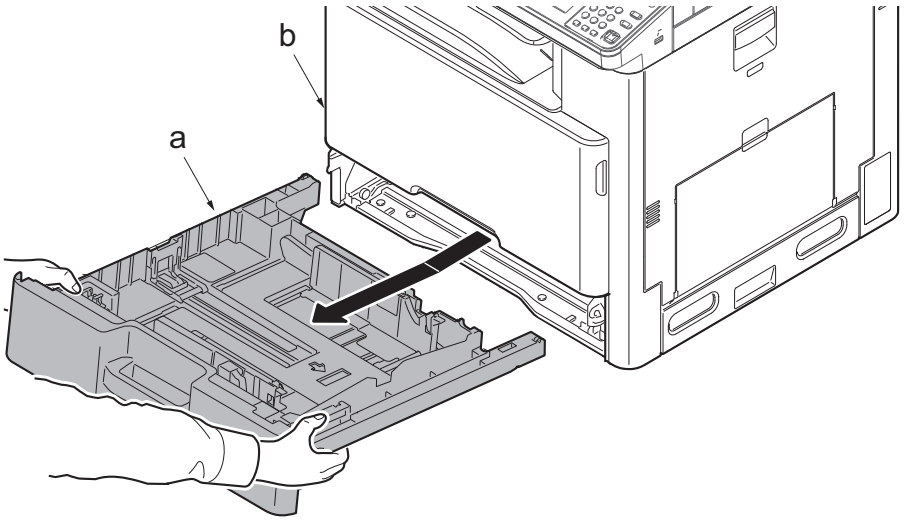
When replacing the new pickup holder or retard holder, take care not to touch the roller surface.

4 - 5 Disassembly and Reassembly procedures

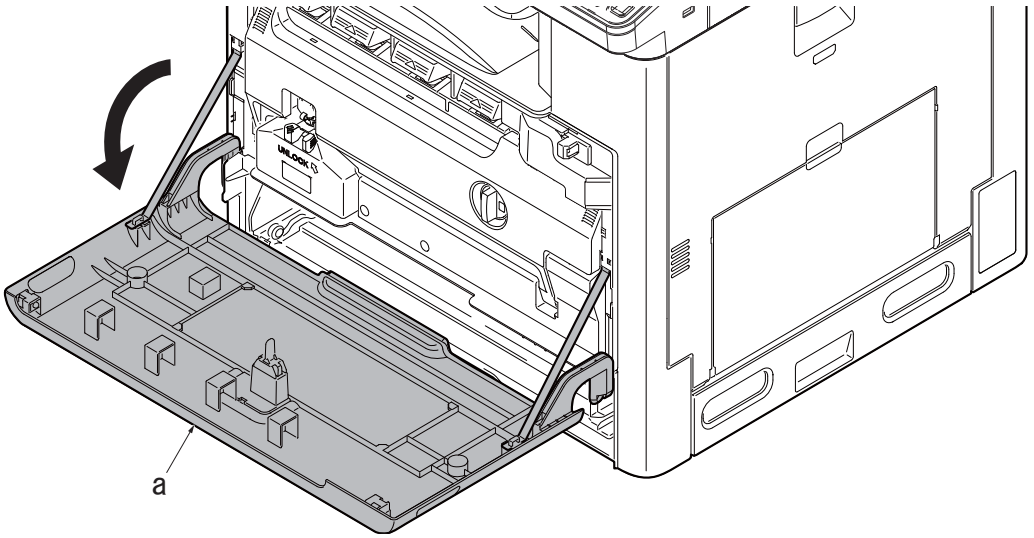
(1) OUTER COVERS

(1-1) Detaching and reattaching the front cover

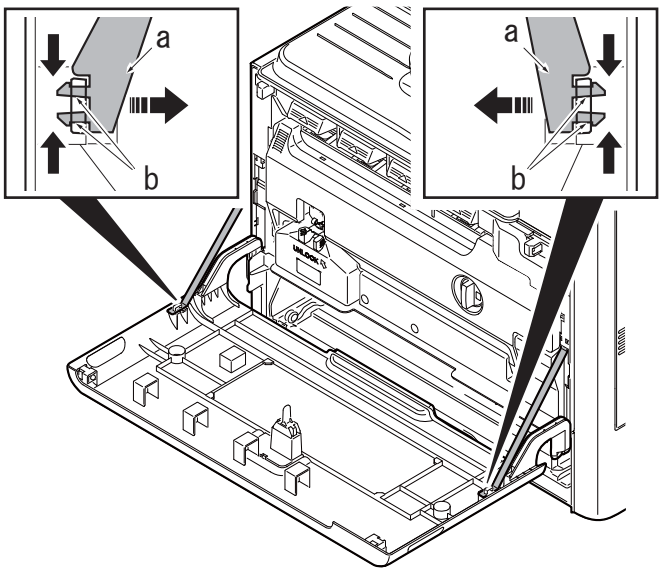
1 Pull out the cassette (a) from the main unit (b) and remove it in the direction of the arrow.



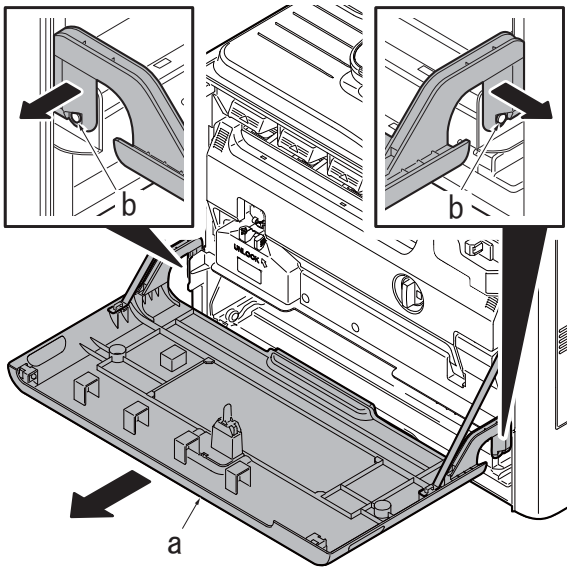
2 Open the front cover (a).



3 **Detach two hooks (b) of the straps (a).**

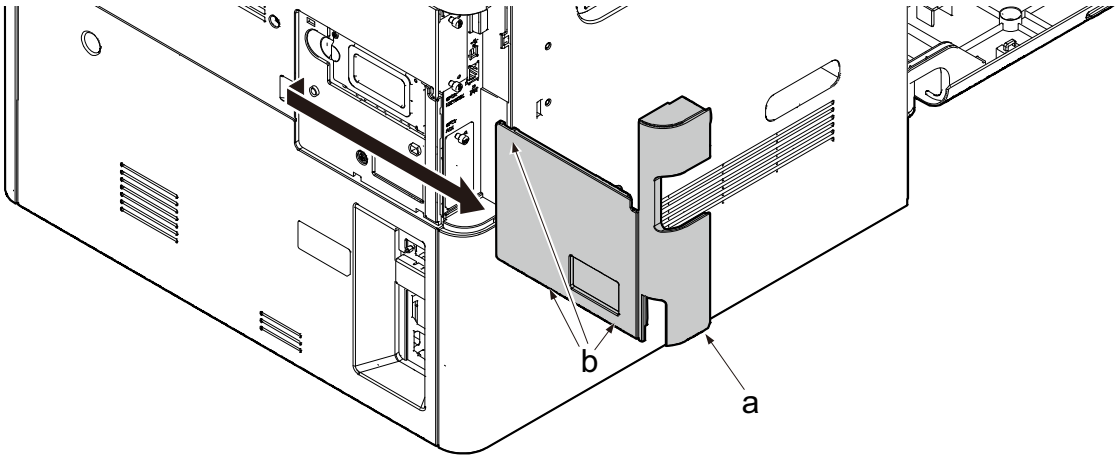


4 **Release the left and right fulcrums and detach the front cover (a).**



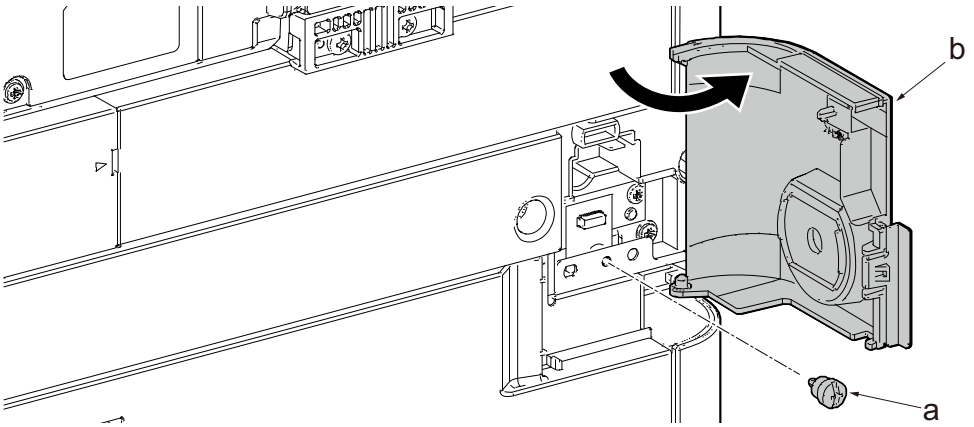
(1-2) Detaching and reattaching the control box cover

1 **Release three hooks (b) in the direction of the arrow and remove the controller box cover (a).**



(1-3) Detaching and reattaching the rear cover

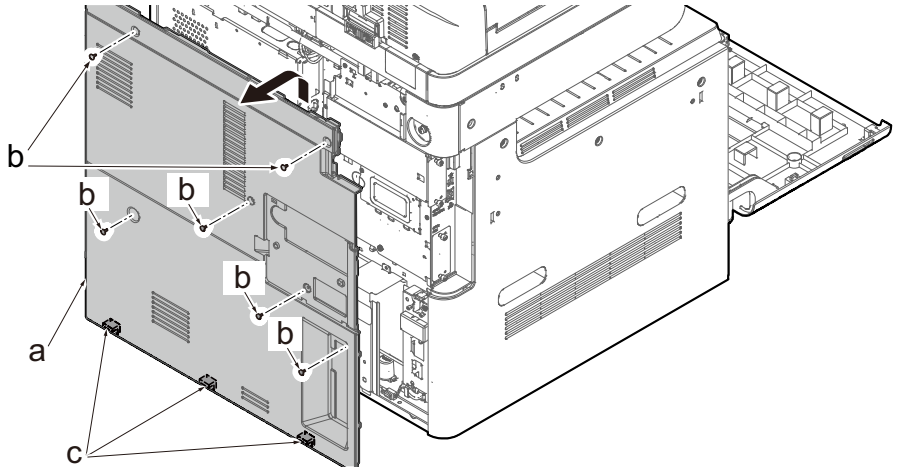
1 **Remove the lock screw (b) and open the Wi-Fi cover (b) in the direction of the arrow.**



2 Detach the rear cover.

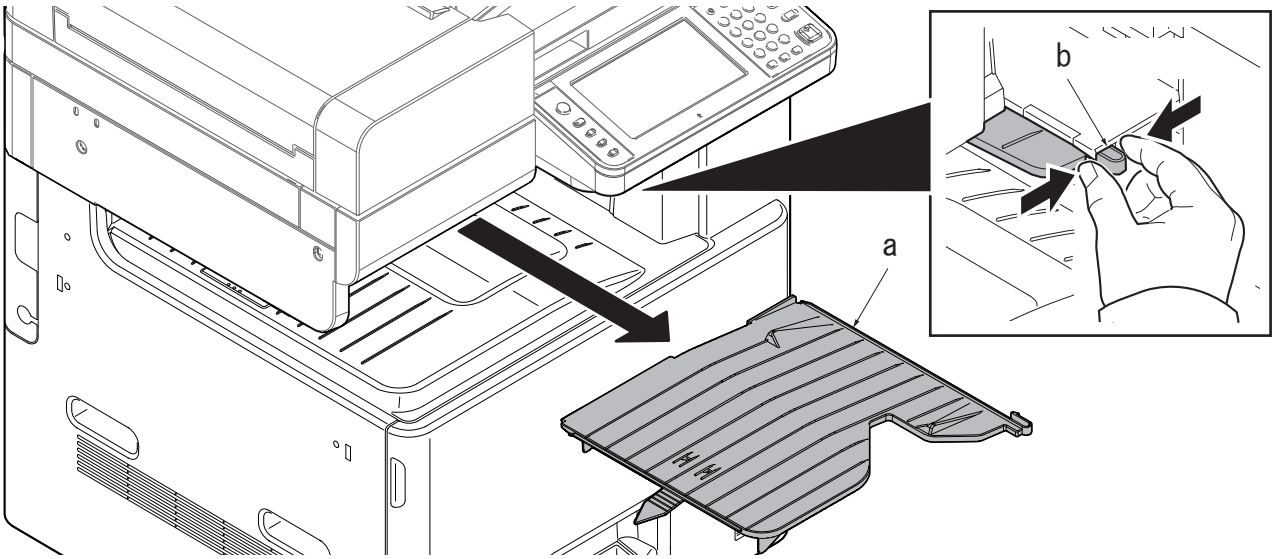
1 Remove six screws (b)(M3x8).

2 To detach the rear cover, align it upward and release three hooks (c).

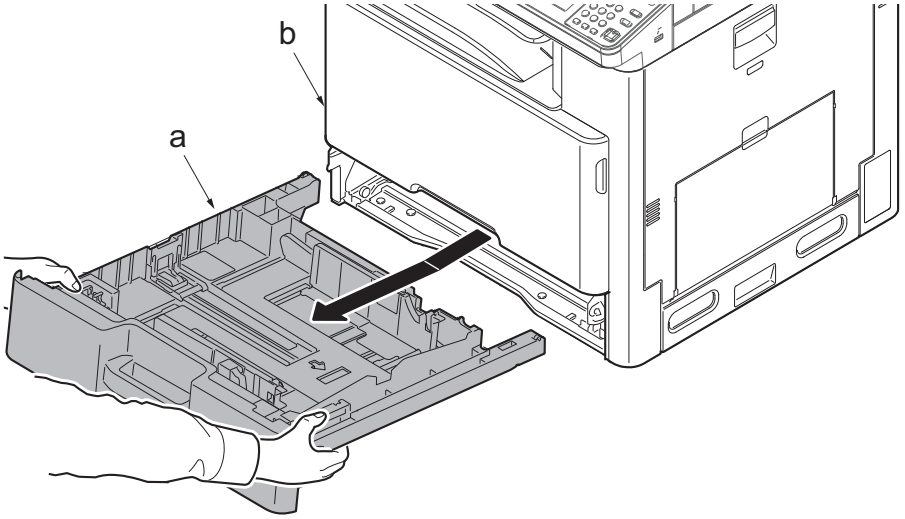


(1-4) Detaching and reattaching the inner tray

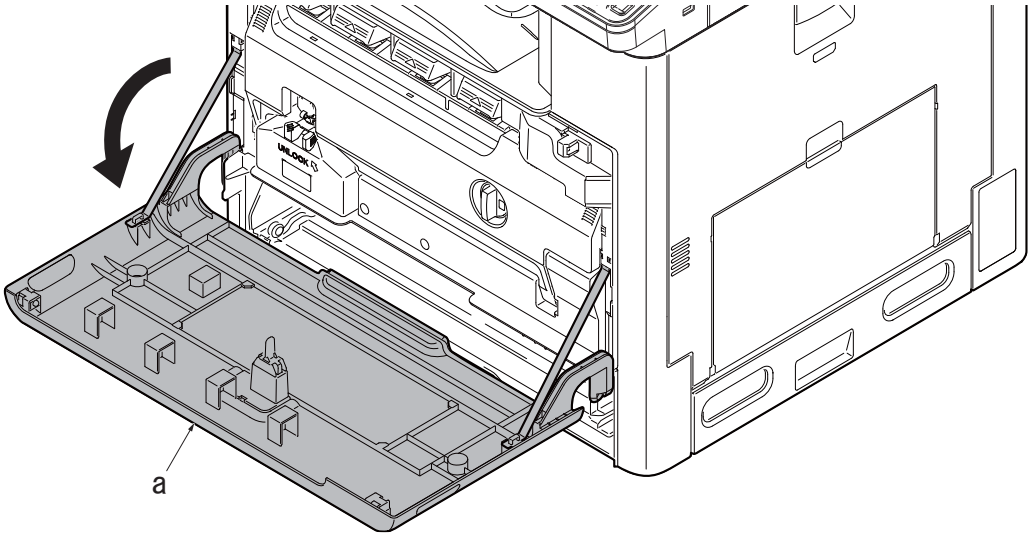
1 Release the lock lever (b) and JS tray (a) in the direction of the arrow.



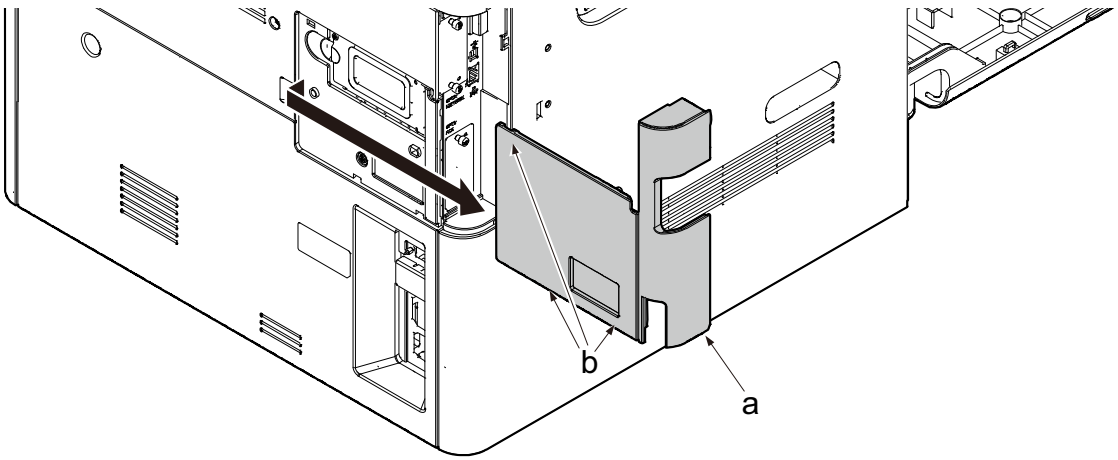
2 **Pull out the cassette (a) from the main unit (b) and remove it in the direction of the arrow.**



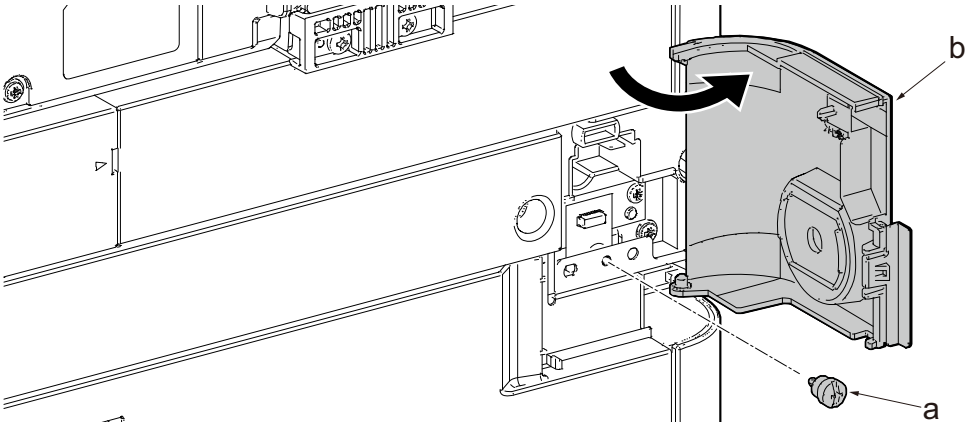
3 **Open the front cover (a).**



4 **Release three hooks (b) in the direction of the arrow and remove the controller box cover (a).**



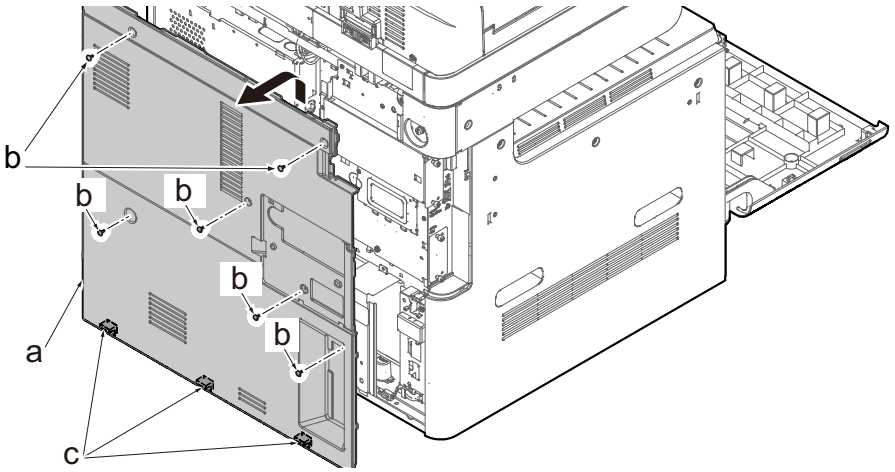
5 Remove the lock screw (b) and open the Wi-Fi cover (b) in the direction of the arrow.



6 Detach the rear cover.

1 Remove six screws (b)(M3x8).

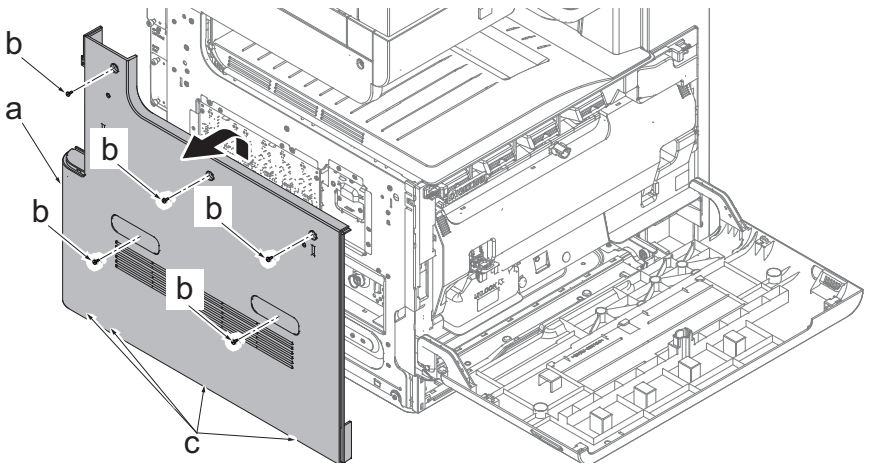
2 To detach the rear cover, align it upward and release three hooks (c).



7 Remove the left lower cover.

1 Remove five screws (b)(M3×8TP).

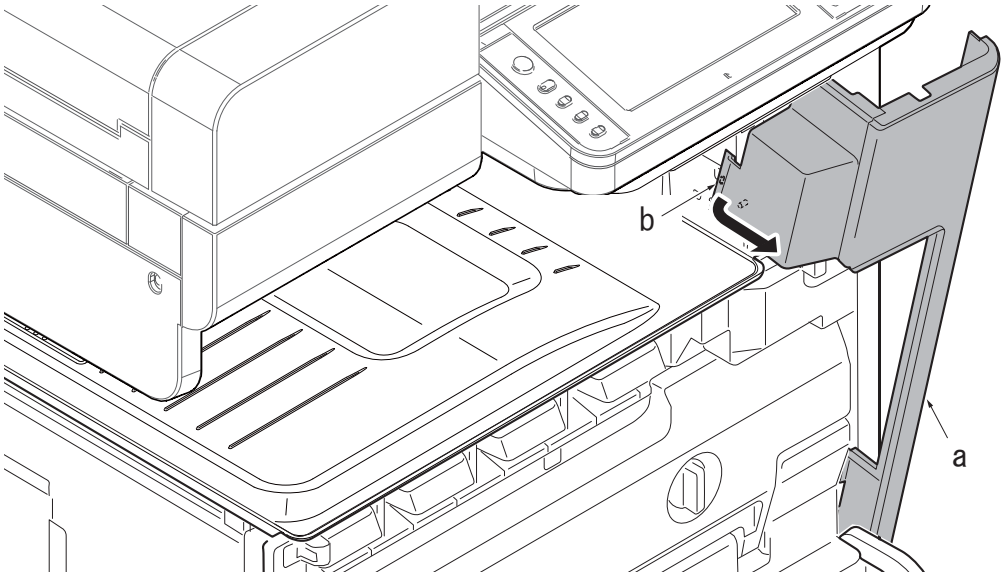
2 To detach the left lower cover (b), align it upward and release four hooks (c).



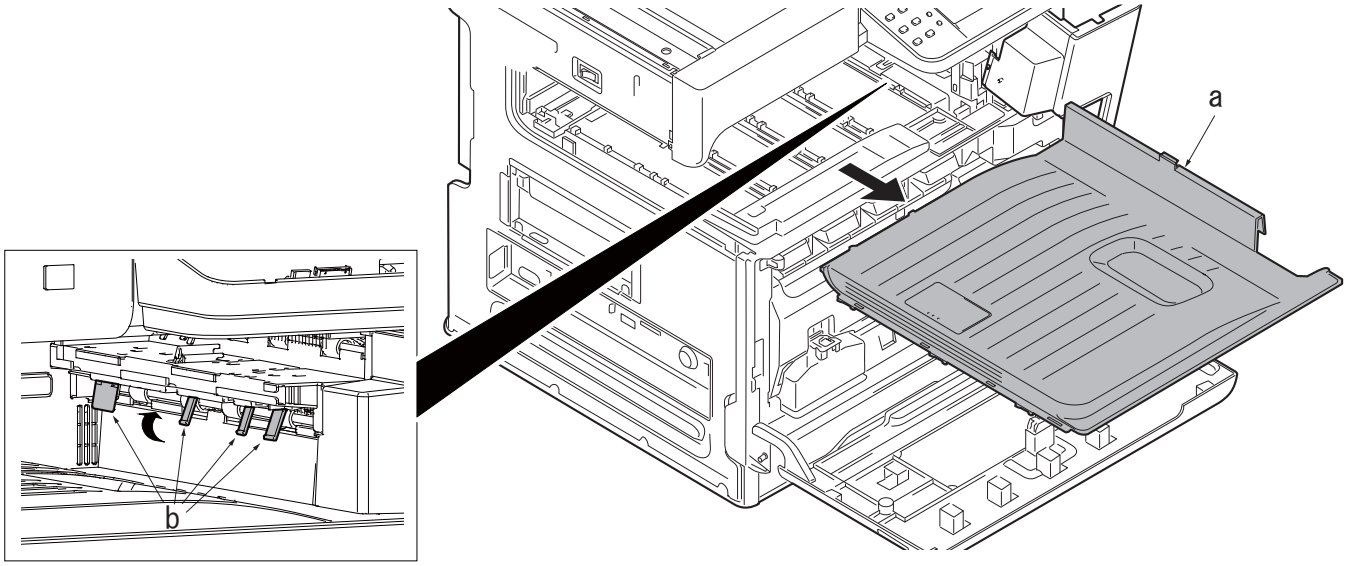
8 Detach the front top cover.

1 Release two hooks (b) of front top cover (a).

2 Tilt the front top cover (a) toward you.



9 Detach the inner tray.



Note

When attaching the inner tray, raise the paper holding lever (b) in the direction of the arrow.

(1-5) Detaching and reattaching the MP tray

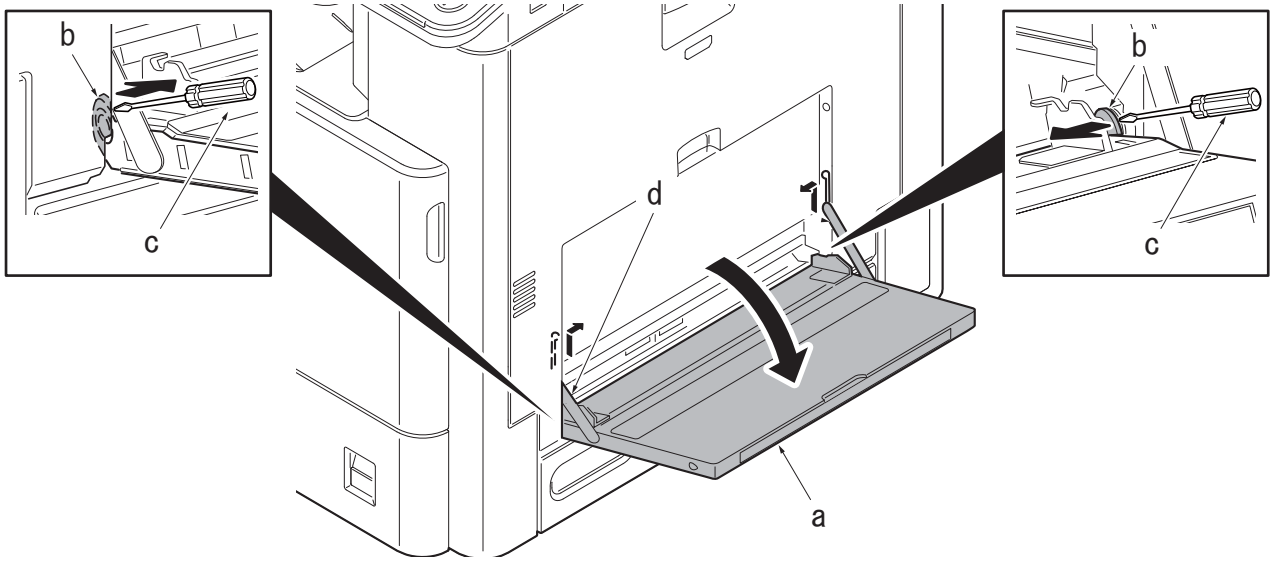
1 Detach the MP tray

1 Open the MP tary (a).

2 Release two fulcrums (b) of front and rear with a flat-blade screwdriver(c).

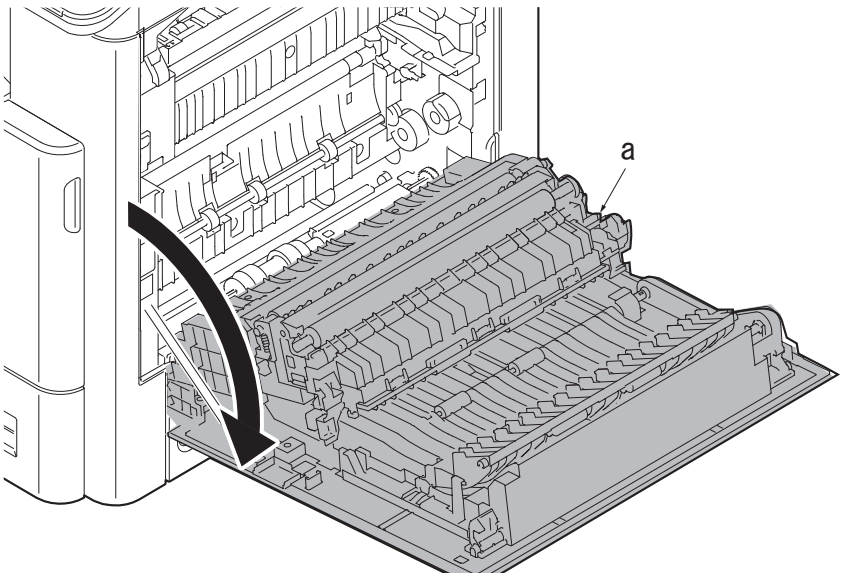
3 Detach two straps (d) while aligning them upward.

4 Detach the MP tray (a).



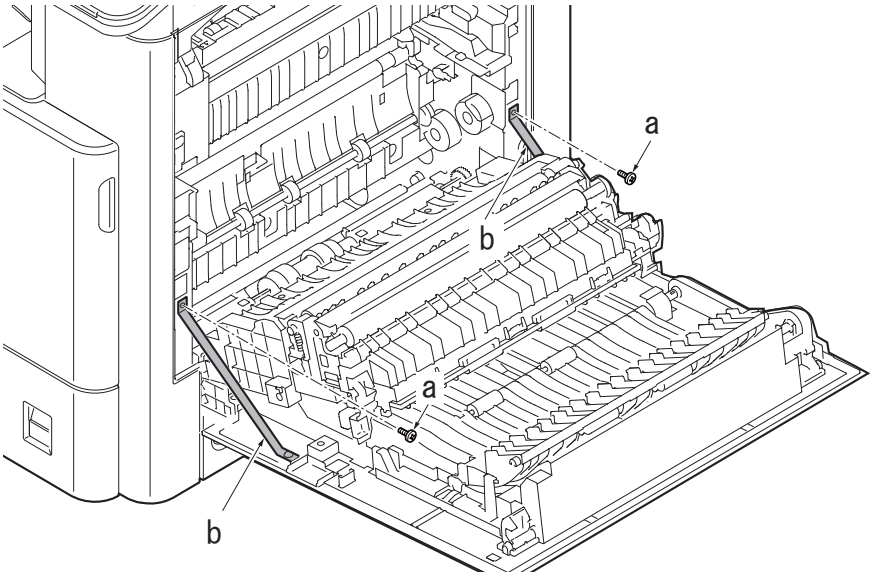
(1-6) Detaching and reattaching the right cover 1

1 Open the right cover 1 (a).



2 Remove the strap.

1 Remove two screws (b) and detach two strap (b).



3 Detach the right cover 1.

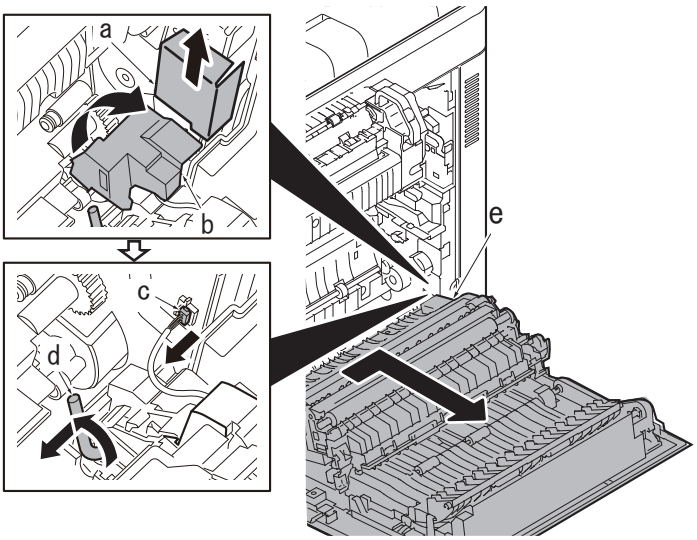
1 Detach the wire cover (a).

2 Rotate the wire cover (b).

3 Remove the connector (c).

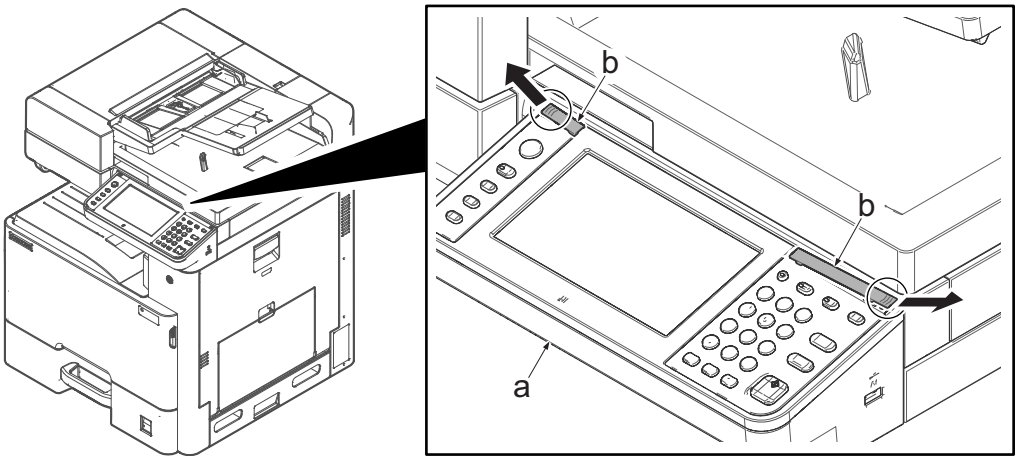
4 Rotate the shaft (d), and slide it in the direction of the arrow.

5 Detach the right cover 1 (e) while aligning it in the direction of the arrow.



(1-7) Detaching and attaching the language sheet.

1 Lift up two points of the leading edge of the operation panel cover (b), slide them in the direction of the arrow and then detach the operation panel cover from the operation panel (a).

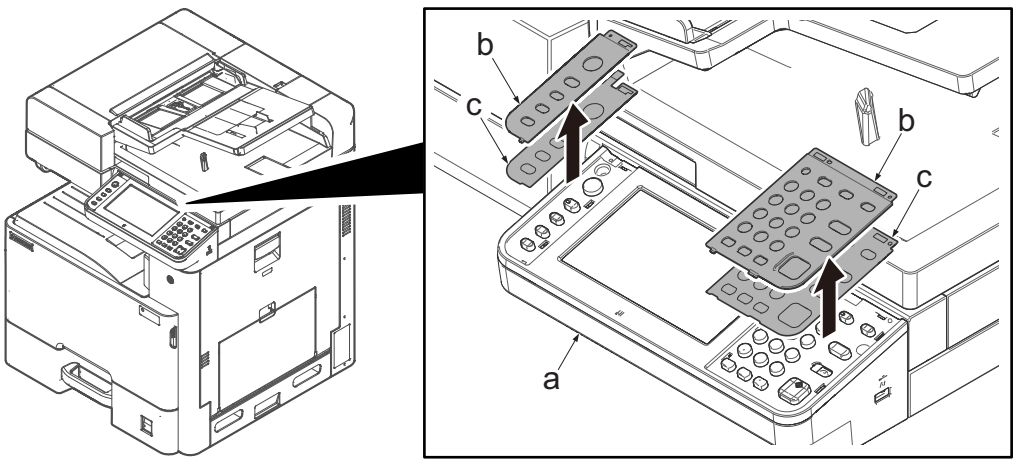


2 Detach the language sheet.

1 Detach two clear panels (b) from the operation panel (a).

2 Detach two language sheets.

3 Check or replace the language sheet, and then reattach the parts in the original position.

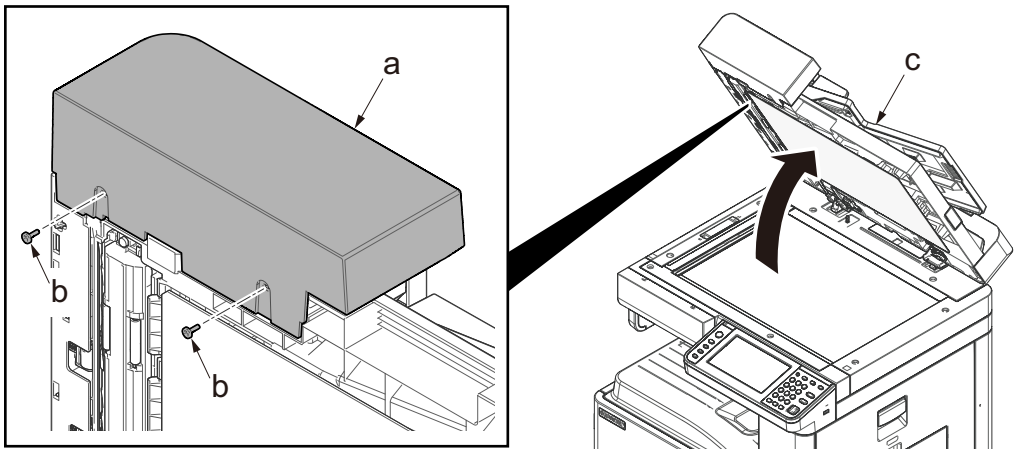


(1-8) Detaching and reattaching the DP front cover

1 Remove the screw of the front cover.

1 Open the document processor (d).

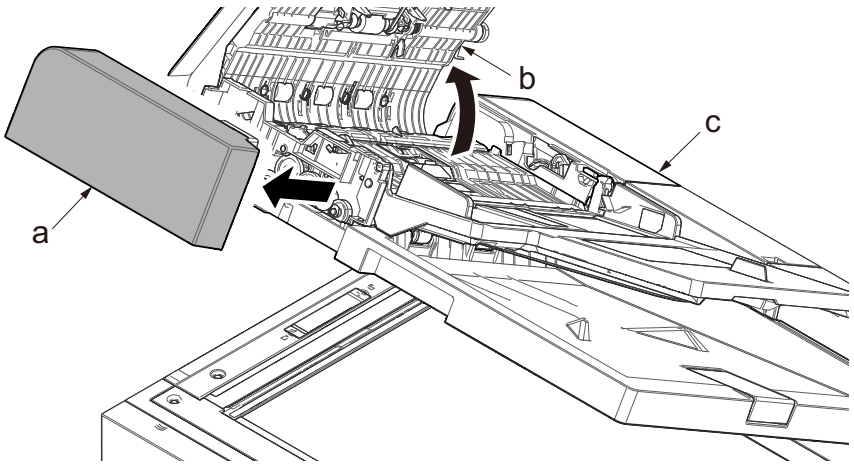
2 Remove two screws (b)(M3×8TP) of the DP front cover (a).



2 Detach the DP front cover.

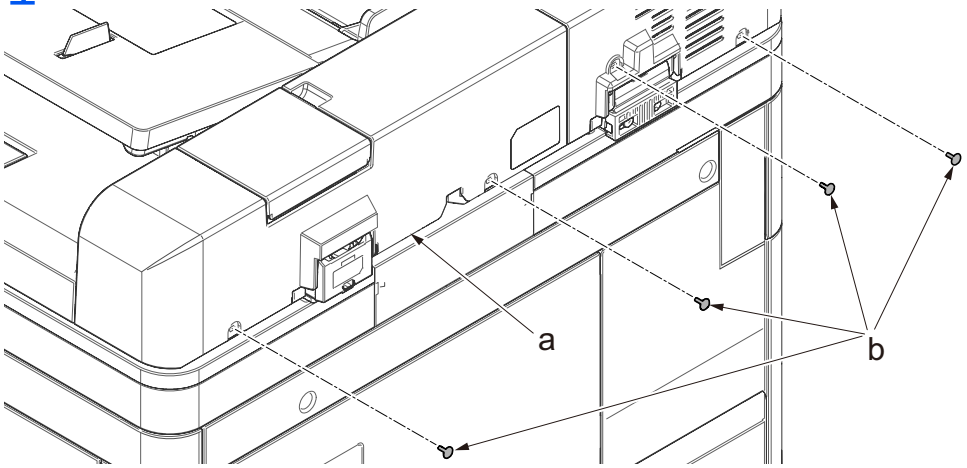
1 Open the DP top cover (b).

2 Detach the DP front cover (a) from the document processor (c).



(1-9) Detaching and reattaching the DP rear cover

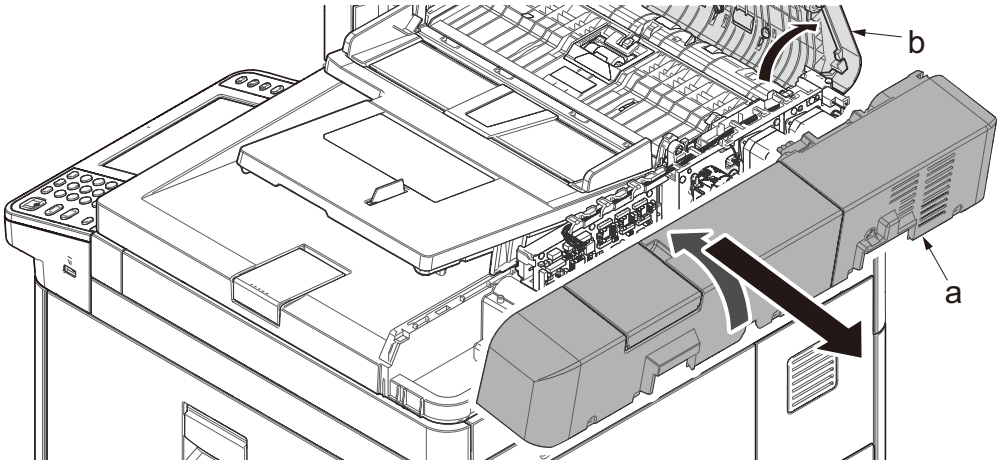
1 Remove four screws (b) (M3×8TP) from the document processor (a).



2 Detach the DP rear cover.

1 Open the DP top cover (b).

2 Detach the DP original tray (a) while twisting it.

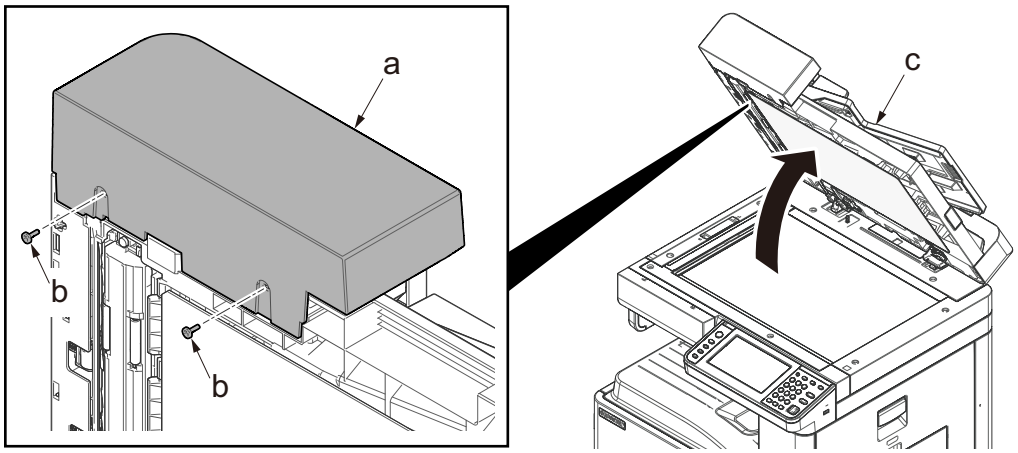


(1-10) Detaching and reattaching the DP original tray

1 Remove the screw of the front cover.

1 Open the document processor (c).

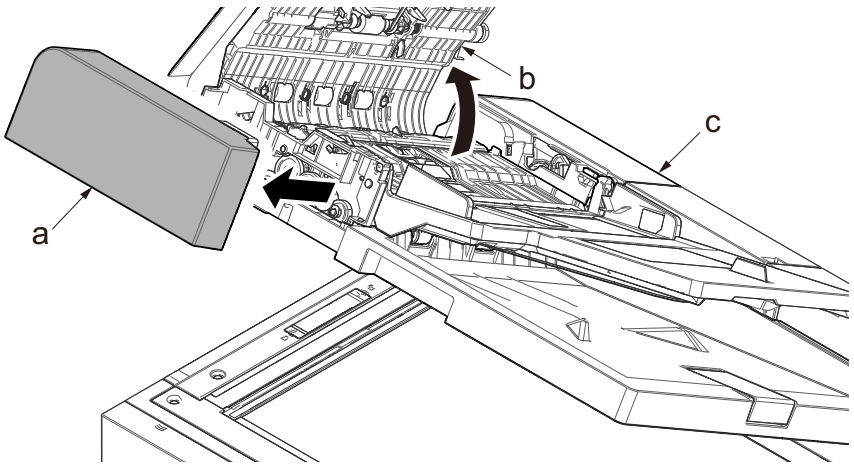
2 Remove two screws (b)(M3×8TP) of the DP front cover (a).



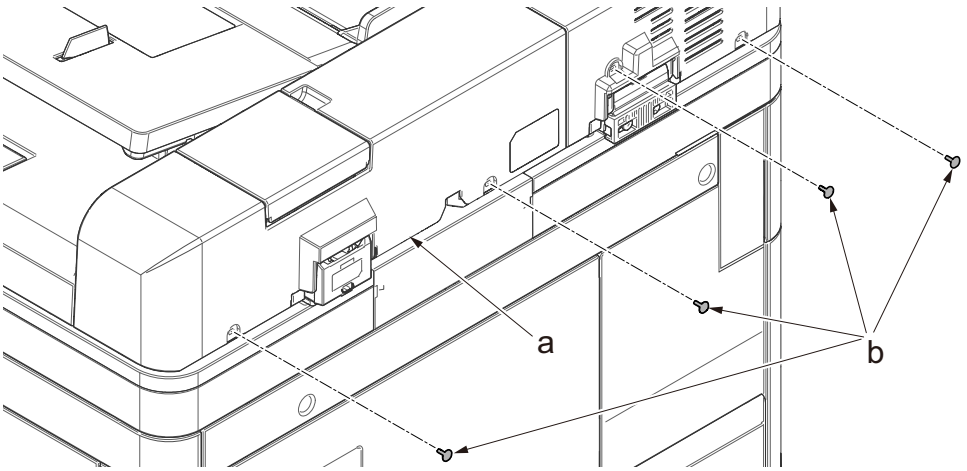
2 Detach the DP front cover.

1 Open the DP top cover (b).

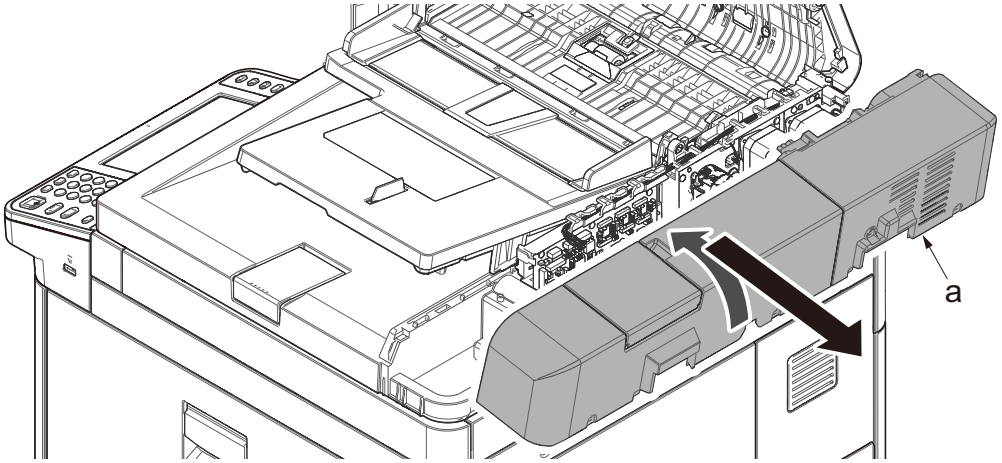
2 Detach the DP front cover (a) from the document processor (c).



3 Remove four screws (b) (M3×8TP) from the document processor (a).



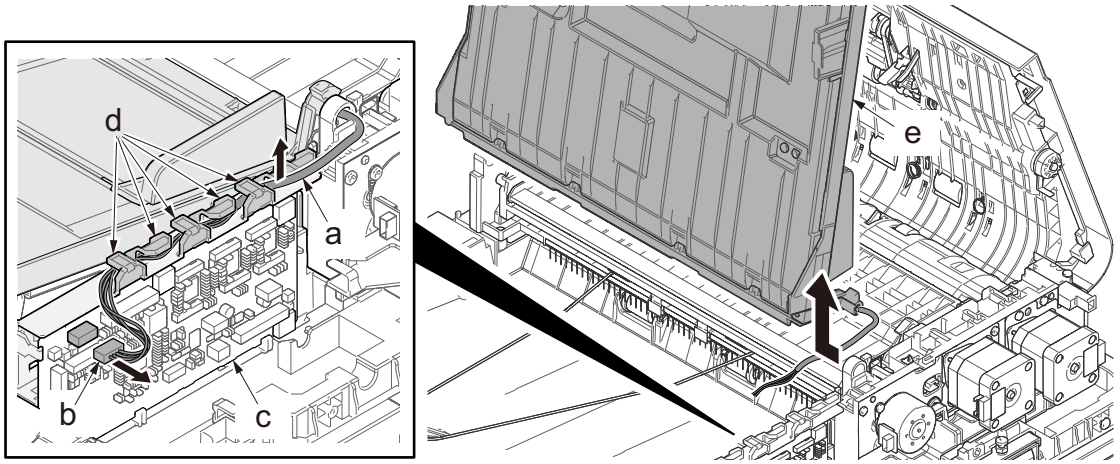
4 Detach the DP original tray (a) while twisting it.



5 Detach the DP original tray.

1 Remove the connector (b) from the DP PWB (c) and remove the cables (a) from five wire guides (d) .

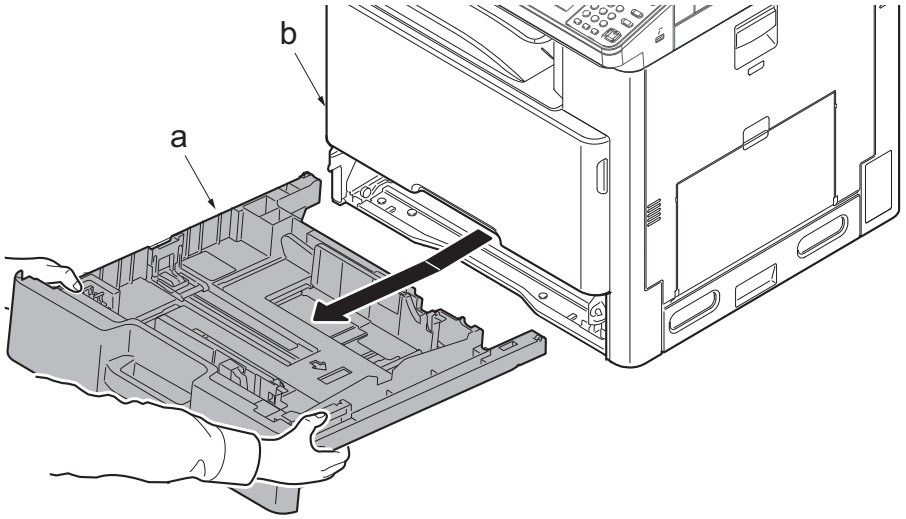
2 Raise the DP original tray (e) and detach it in the direction of the arrow.



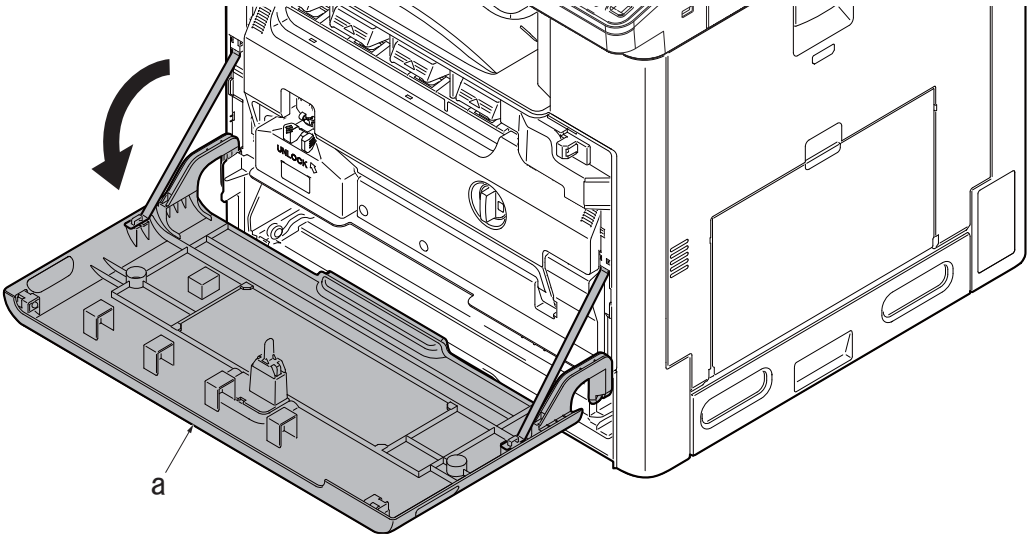
⑵ Optical section

⑵-1 Detaching and reattaching the LSU

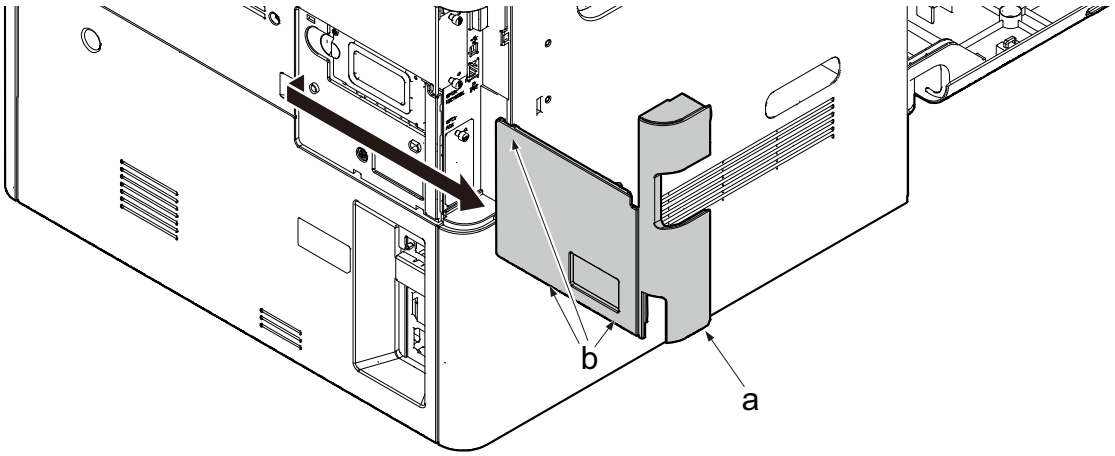
1 **Pull out the cassette (a) from the main unit (b) and remove it in the direction of the arrow.**



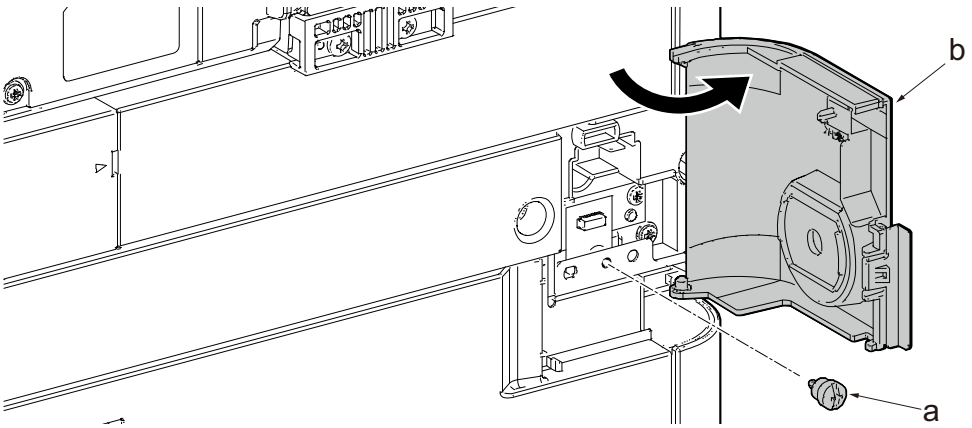
2 **Open the front cover (a).**



3 Release three hooks (b) in the direction of the arrow and remove the controller box cover (a).



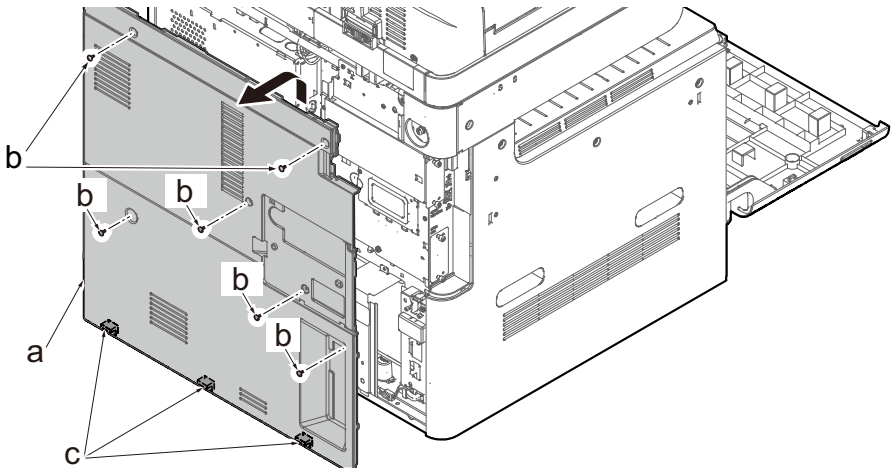
4 Remove the lock screw (b) and open the Wi-Fi cover (b) in the direction of the arrow.



5 Detach the rear cover.

1 Remove six screws (b)(M3x8).

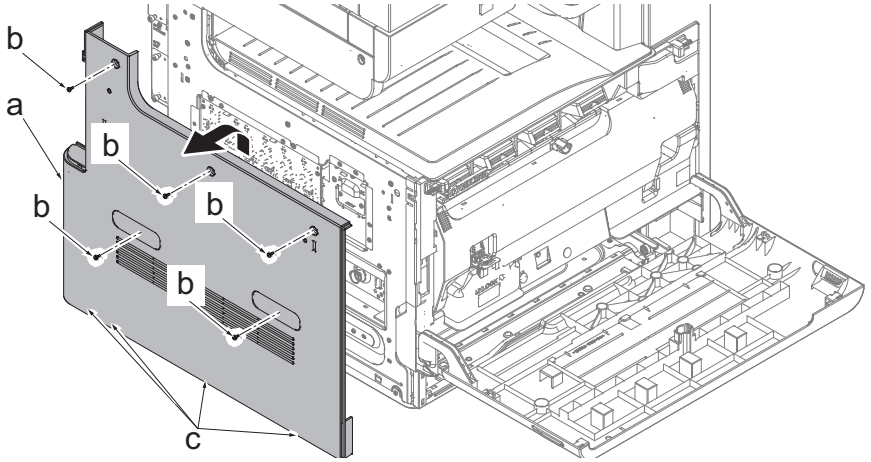
2 To detach the rear cover, align it upward and release three hooks (c).



6 Remove the left lower cover.

1 Remove five screws (b)(M3×8TP).

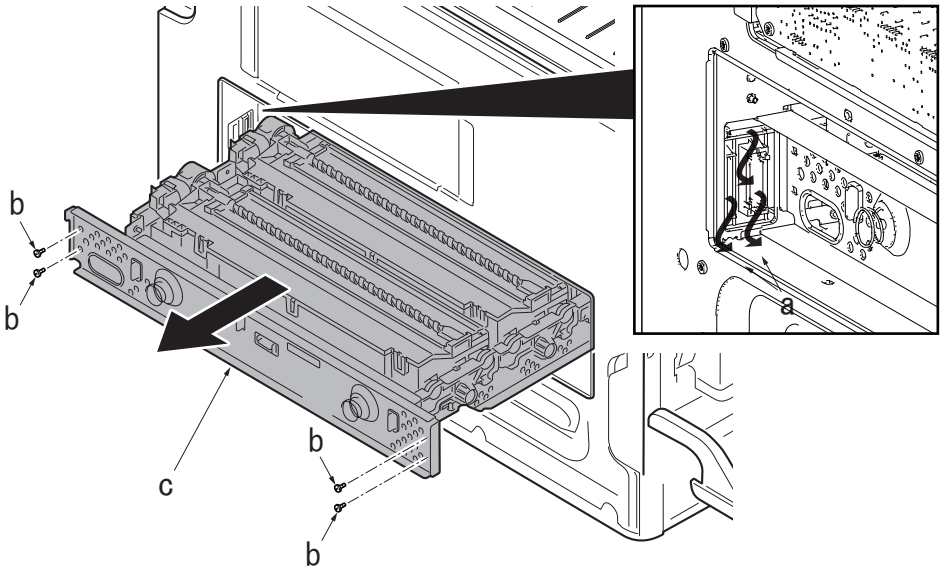
2 To detach the left lower cover (b), align it upward and release four hooks (c).



7 Detach the laser scanner unit.

1 Disconnect three connectors (a).

2 Remove four screws (b)(M3x8) and detach the laser scanner unit (c).



8 Detach the laser scanner unit (C/M/Y/K).

1 Release the clamp (a) and then disconnect the FFC (b) and the connector.

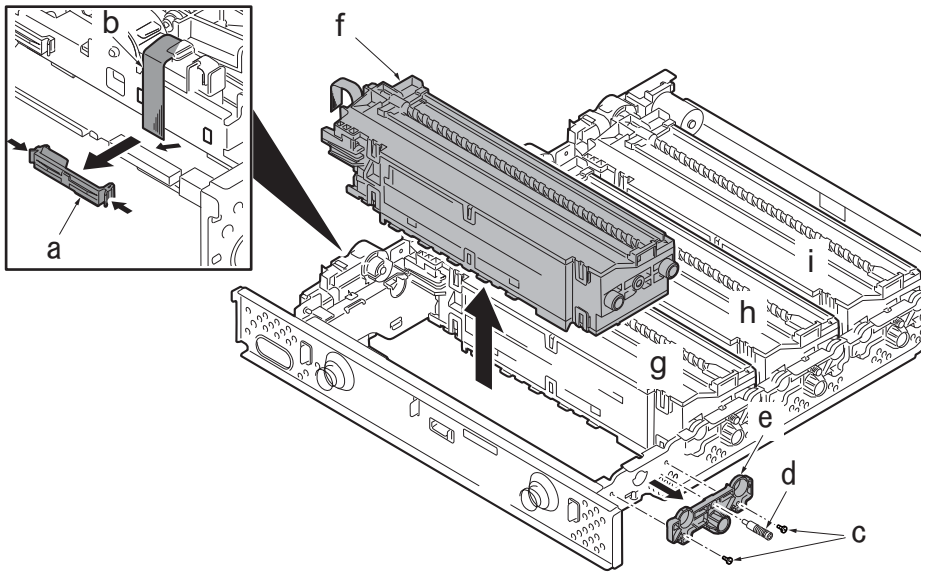
2 Remove two screws (c)(M3x8).

3 Remove the pin and spring (b) and then remove the unit holder Y (e).

4 Detach the laser scanner unit Y (f).

5 Similarly, remove the laser scanner unit C/M/K (g)(h)(i).

6 Check or replace the laser scanner unit, and then reattach the parts in the original position.



Important

- Wear the antistatic band at your wrist to prevent damage to the LSU. Do not touch terminals of the FFC and APC PWB.
- When reconnecting the FFC, be sure to insert the FFC all the way into the FFC connector. An error occurring after reassembling the disassembled part causes a long time work for another disassembling and assembling.

Notes when replacing the laser scanner unit

Execute the following adjustment after replacing the laser scanner unit.

When replacing the LSU K, execute the step 1 and after below. When replacing the other LSU (Y/C/M), execute the step 2 and after.

1 Check and adjust the LSU assembly frame.

1 Execute maintenance mode U034 (Paper timing data adjustment).

2 Select [LSU OUT TOP] or [LSU OUT LEFT].

- The screen for adjusting is displayed.

3 Press the [System Menu/Counter] key.

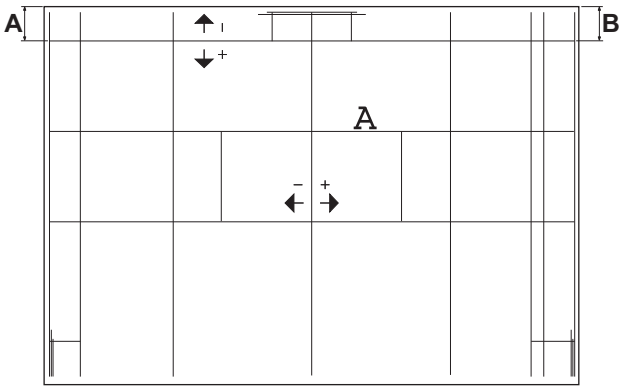
4 Press the [Start] key to output a test pattern.

5 Press the [System Menu/Counter] key.

6 Measure two length of A and B in the outputted test pattern.

7 When measuring the size of two places A and B, if the difference of sizes is 1.5mm or less, it is the completion of adjustment.

- If the difference of size is more than 1.5mm, proceed to the next step.



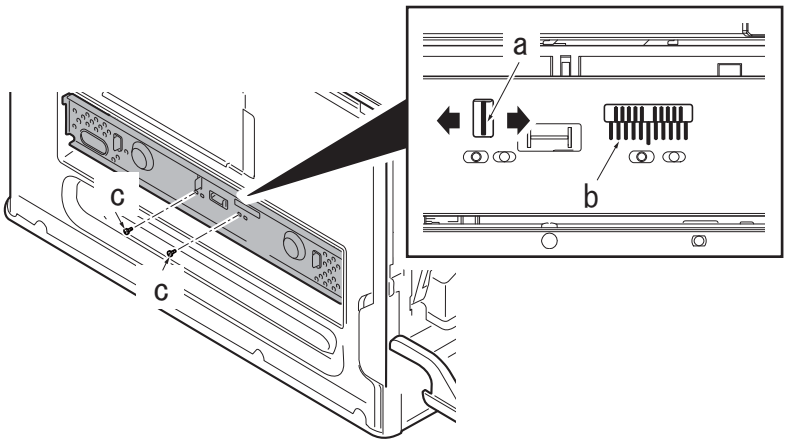
8 Loosen two screws (c).

9 Adjust the scale (b) for reference using the adjustment knob (a).

- In the measured value B<A, move the adjustment knob (a) to leftward.
- In the measured value A<B, move the adjustment knob (a) to rightward.

10 Fasten two screws (c).

- Repeat steps 3 through 10.



2 Color registration adjustment

Execute when the laser scanner unit is replaced.

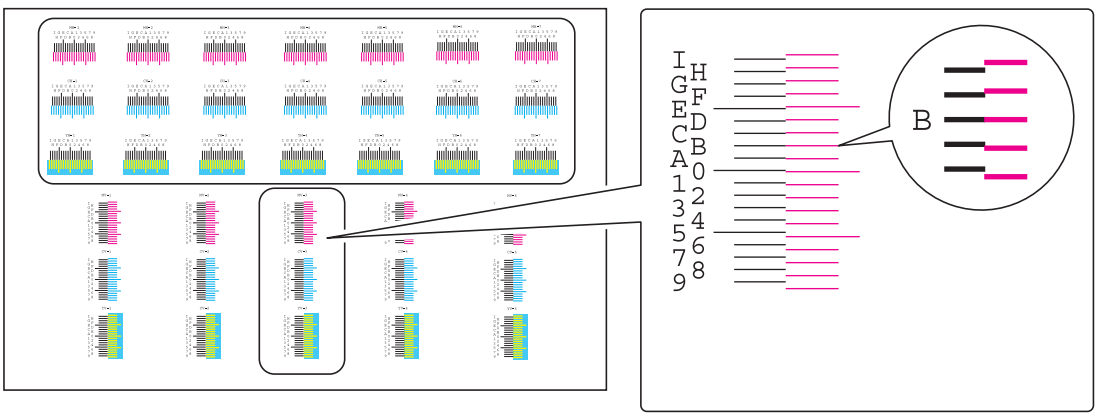
1 Press the [System Menu/Counter] key.

2 Press [Adjustment/Maintenance], [Color Registration], [Manual] and then [Print Chart]. The reference chart is printed.

3 Press [Registration] and select the correction chart.

Read figures at MH-1 to 7/CH-1 to 7/YH-1 to 7 and MV-3/CV-3/YV-3 of the reference chart and enter the figure marked at the scale which the K fine line is in line with the M/C/Y fine lines, using the +/- keys.

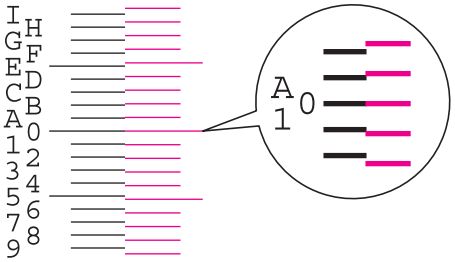
4 Press [Start] after all values have been entered. Color registration begins.



5 Press [Print Chart] again to output the reference chart.

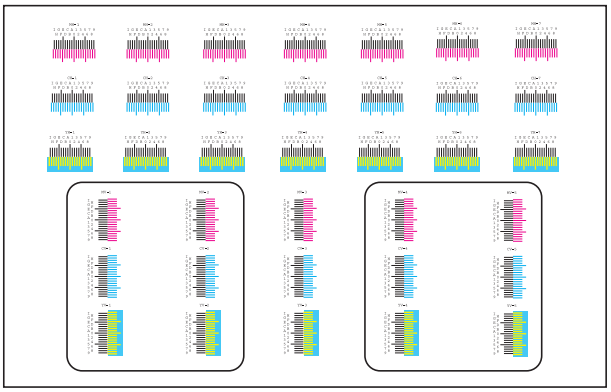
6 Verify that each scale is within the range of 1to A.

- If they are within the range, proceed to step 7.
- If scales are out of range, repeat steps 3 through 6.



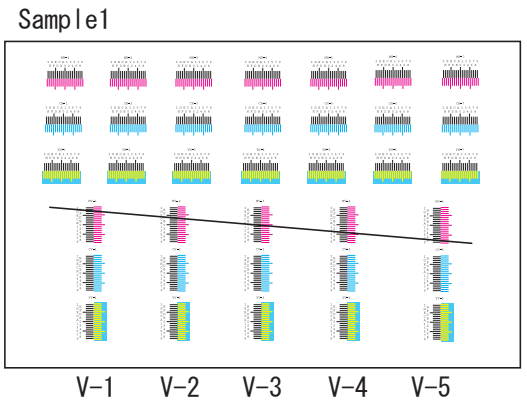
7 Verify that scales of MV-1,2,4,5/CV-1,2,4,5/YV-1,2,4,5 coincide within the range of 1 to A.

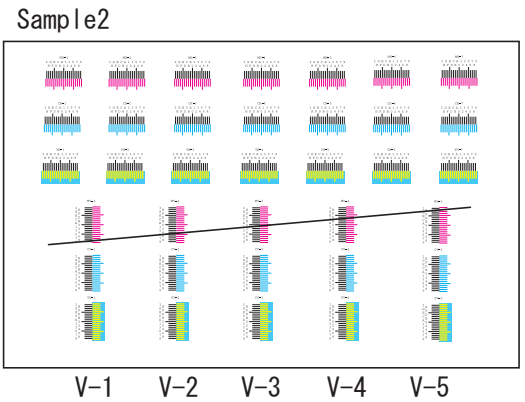
- If they are within the range, adjustment is complete.
- If they are out of range, proceed to the next step.



If the color registration adustment has failed.

8 If the balance between V-1 and V-5 is 2 scales or more (sample 1) or -2 scales or less (sample 2), execute the following procedure.





9 Open the front cover and then remove the waste toner box. (see page 1-5-14)

10 Peel off three concealing labels.

11 Rotate the hex hole 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 less (sample 2): clockwise

- Number of rotation

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

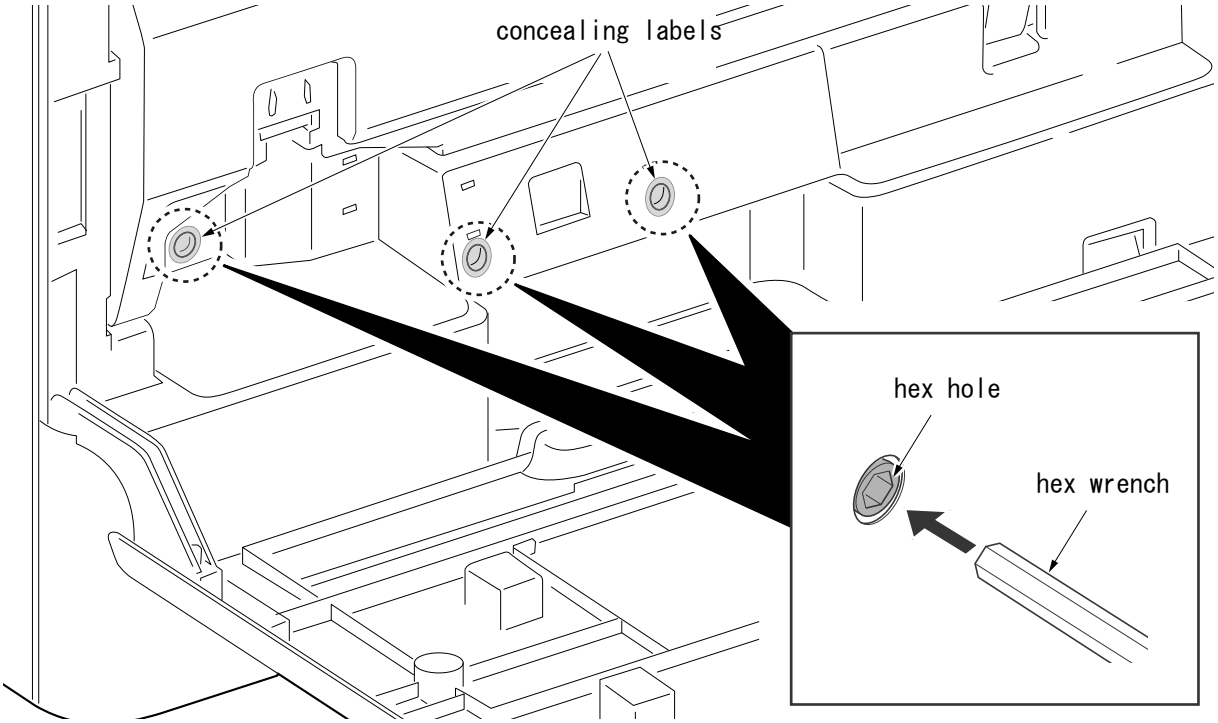
12 Reattach the waste toner box as before and then close the front cover.

13 Turn the power switch off then on. Auto registration starts.

14 Print the reference chart and verify the result.

Important

After the adjustment for the angle of the mirror, execute maintenance mode U464 [Calibration]. (6-147page)



3 Execute maintenance mode U464 [Calibration]. (see page 1-3-87)

4 Execute [Grayscale adjustment] from [System Menu].

Adjusting the halftone automatically (Maintenance mode U410)

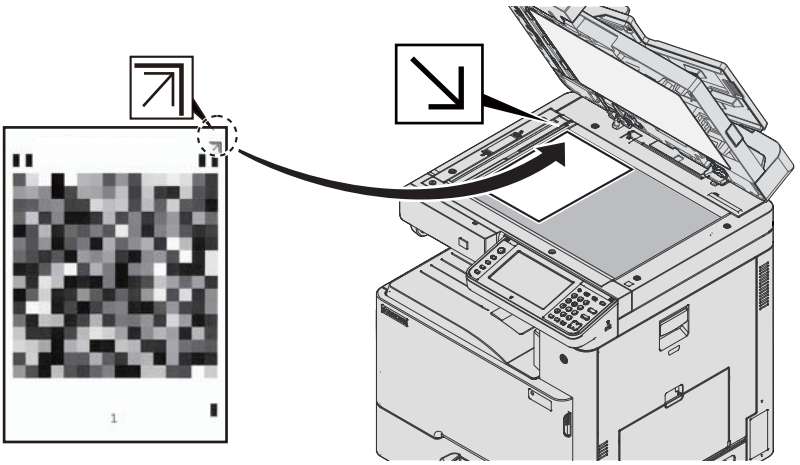
1 Input "410" using the numeric keys.

2 Press the [Start] key.

- Displays the execution information screen.
- Test pattern 1 and Test pattern 2 are output on the A4 paper.

3 Set the output test pattern 1 as original, in the back side which the direction of the arrow is, looking down the side which is printing to the original glass.

- Load about 20 sheets of the blank paper on Test Pattern 1.



4 Press the [Start] key.

- The first 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 second auto adjustment is executed.

7 [Finish] appears after normal completion.

Exiting from the maintenance mode

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

- The maintenance mode is exited.

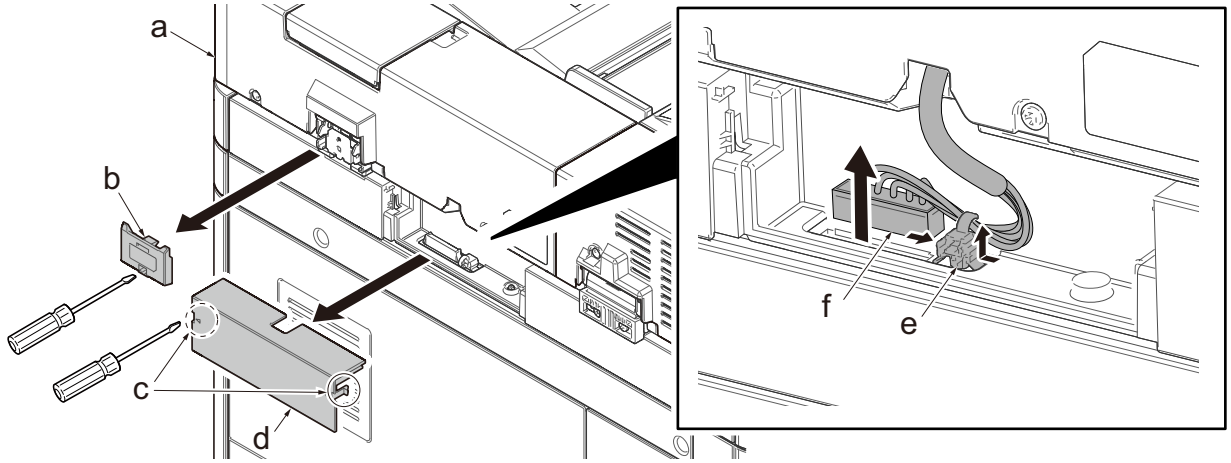
(2-2) Detaching and reattaching the document processor

1 Detach the DP connector of the document processor from the main unit.

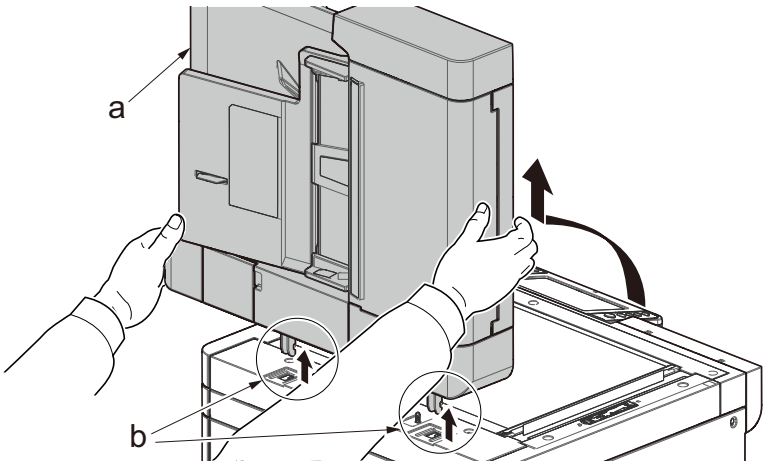
1 Release the hook with a flat-blade screwdriver from the document processor (a) and detach the angle regulating plate (b).

2 Release two hooks (c) with a flat-blade screwdriver, detach the DP Connector cover (d).

3 Remove the wire saddles (e) and the DP connector cover (f).



2 Open the document processor (a) to upright and detach the hinge (b) in the direction of the arrow.



⑵-3⑵ Detaching and reattaching the image scanner unit (CCD model)

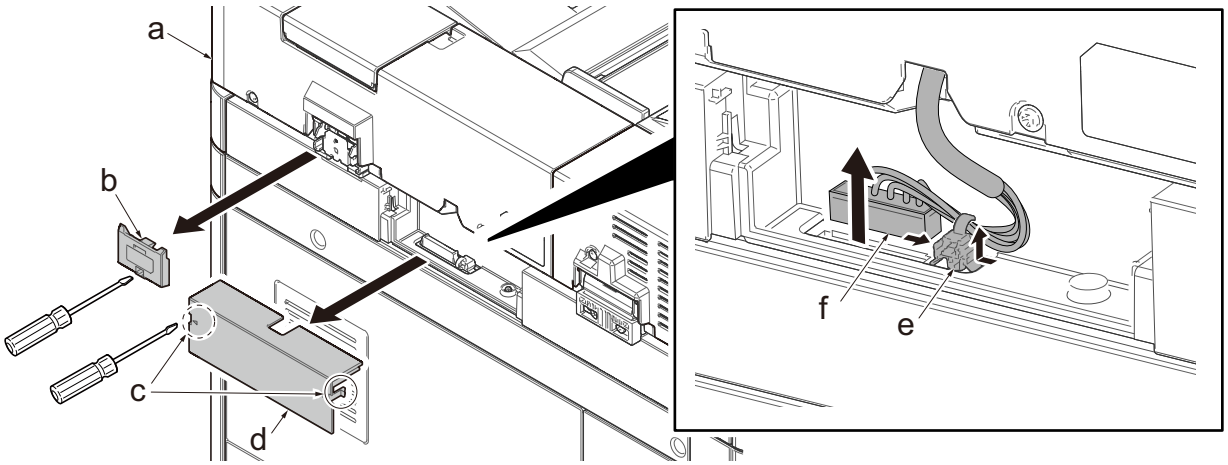
Detaching and reattaching the lens unit

1 Detach the DP connector of the document processor from the main unit.

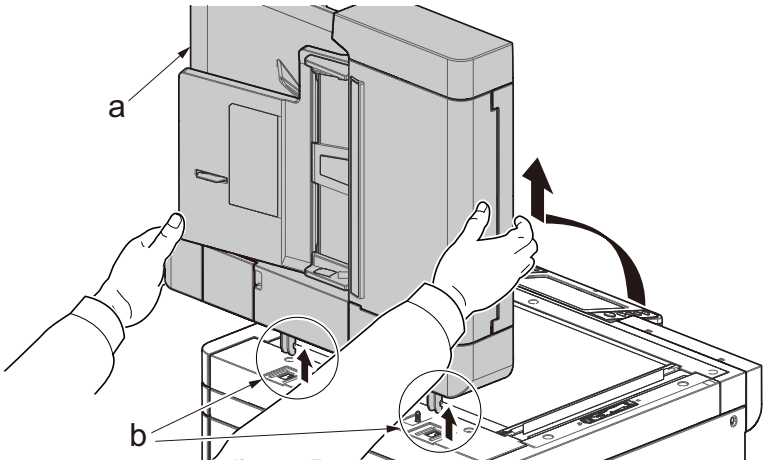
1 Release the hook with a flat-blade screwdriver from the document processor (a) and detach the angle regulating plate (b).

2 Release two hooks (c) with a flat-blade screwdriver, detach the DP Connector cover (d).

3 Remove the wire saddles (e) and the DP connector cover (f).

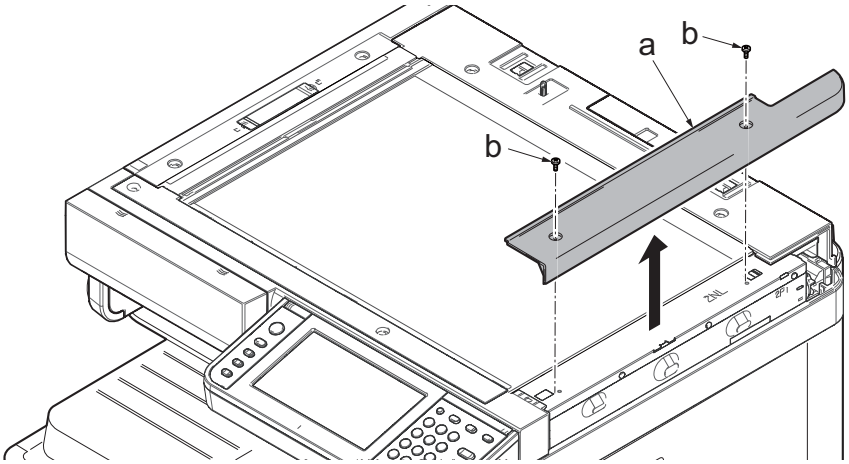


2 Open the document processor (a) to upright and detach the hinge (b) in the direction of the arrow.

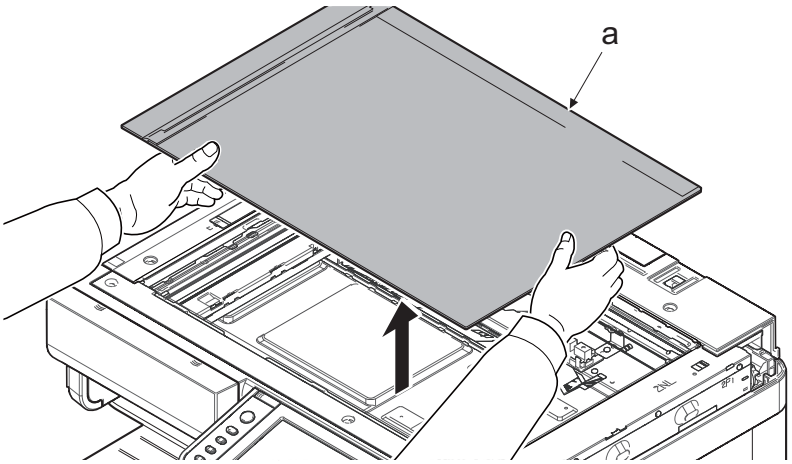


3 **Remove two screws (b)(M3×8TP) and then detach the ISU right cover (a).**

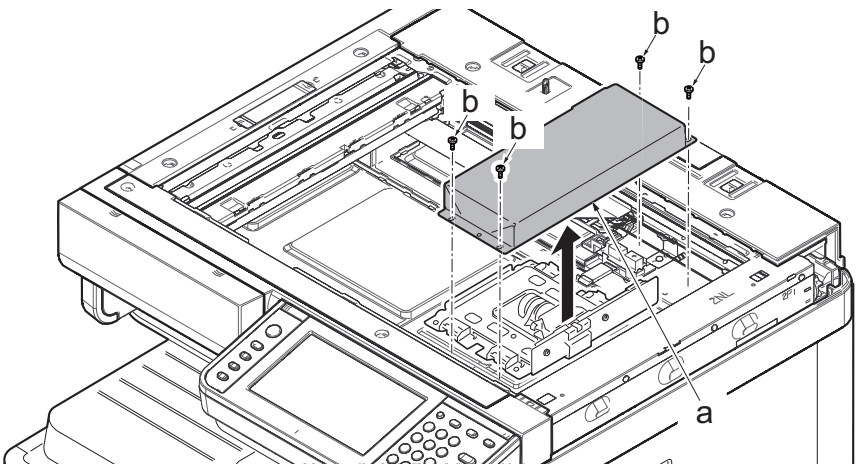
- Reattach it while aligning it to the contact glass side.



4 **Detach the contact glass (a).**



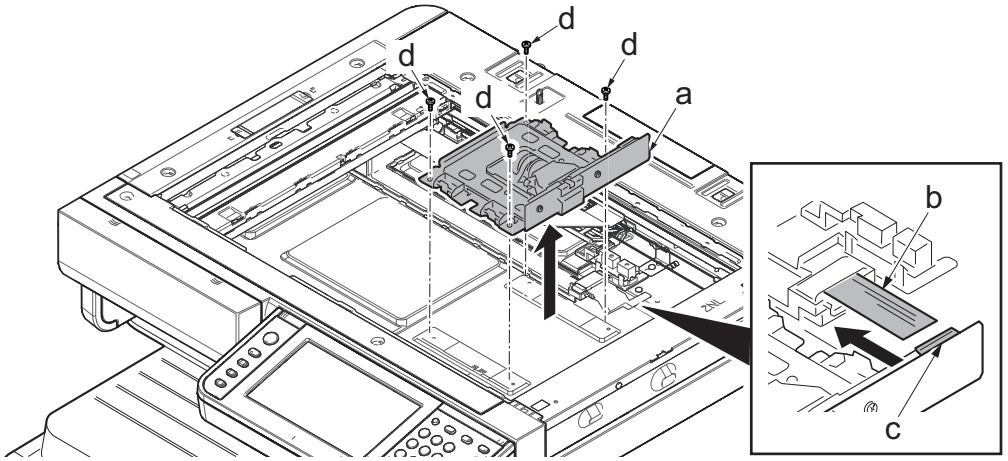
5 **Remove four screws (b)(M3×8) and then detach the lens unit cover (a).**



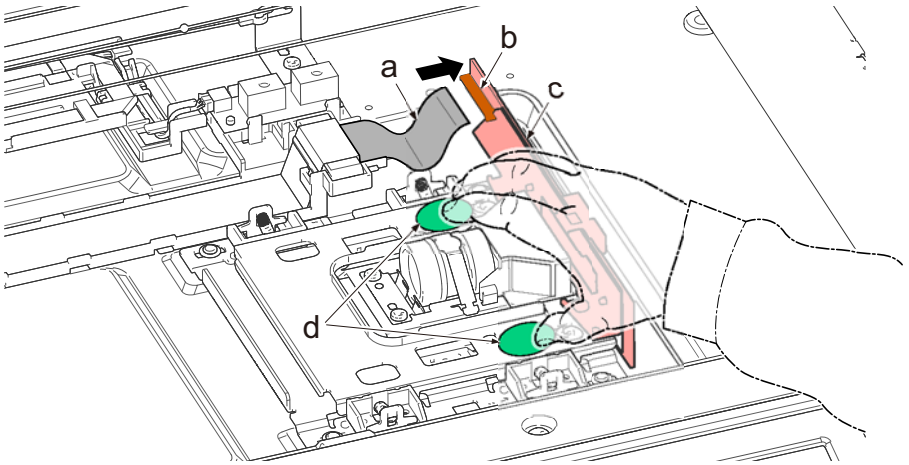
6 Detach the lens unit.

1 Remove the FFC (b) from the connector (c).

2 Remove four screws (d)(M3×8) and then detach the lens unit (a).



Note on disconnecting and connecting the FFC



Important

To avoid the damage to the CCD PWB, do not touch the CCD PWB (c) but hold it at the directed part (d).when disconnecting and connecting the FFC (a) from/to the connector (b).

Notes when attaching the lens unit

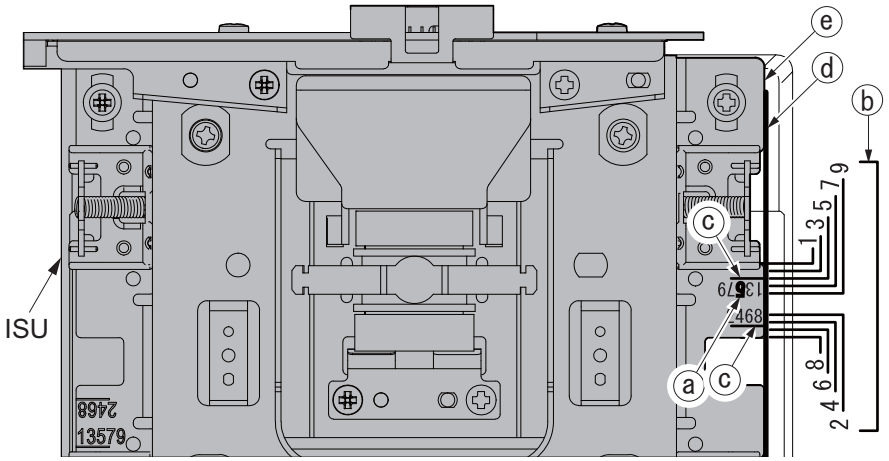
1 When reattaching it, fix it to the original position by aligning it to the scale.

2 When replacing it, decide the fixing position of the ISU as follows.

- The right and left of machine: Confirm the number (a) marked and align the ISU line (c) to the positioning line (b) at the frame with the same number. (Line (c) is at the applicable number marking side from two lines)
- The rear and front of machine: Align the edge (e) of the ISU to the positioning line (d) of the frame.

3 Fix the ISU as originally with four screws.

4 Check or replace the lens unit, and then reattach the parts in the original position.



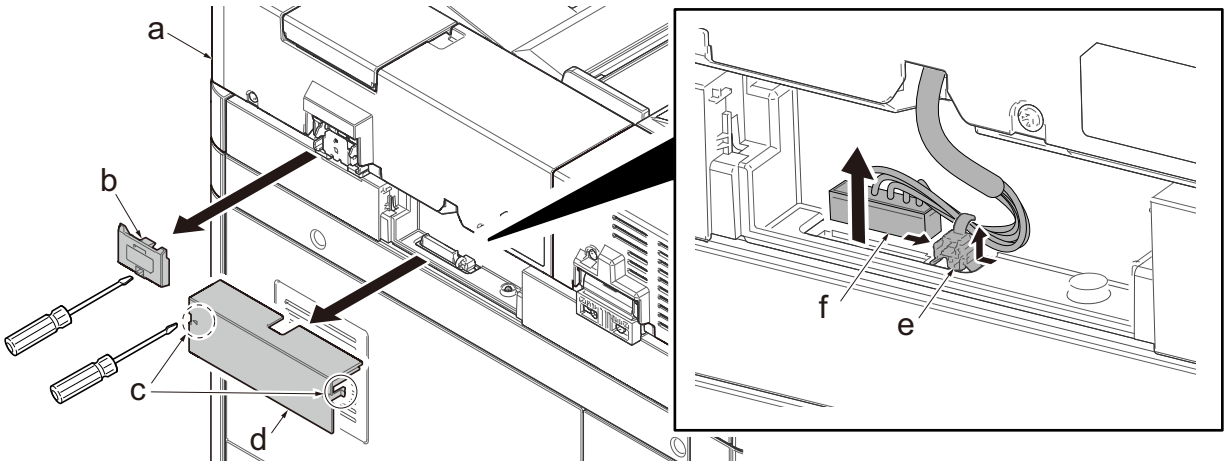
Detaching and reattaching the lamp unit

1 Detach the DP connector of the document processor from the main unit.

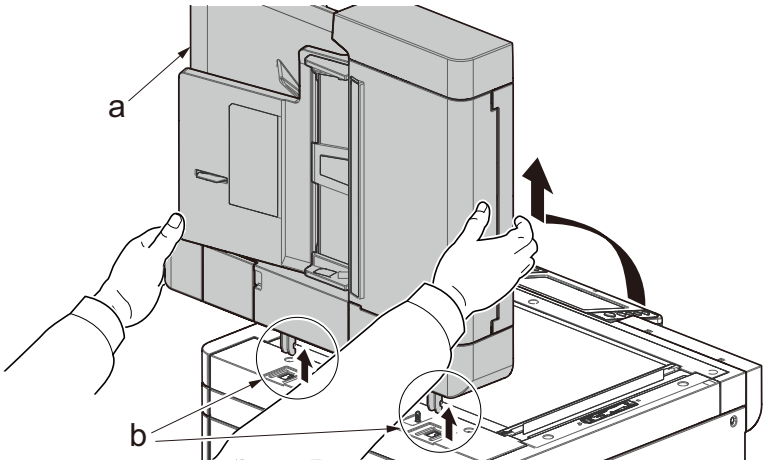
1 Release the hook with a flat-blade screwdriver from the document processor (a) and detach the angle regulating plate (b).

2 Release two hooks (c) with a flat-blade screwdriver, detach the DP Connector cover (d).

3 Remove the wire saddles (e) and the DP connector cover (f).

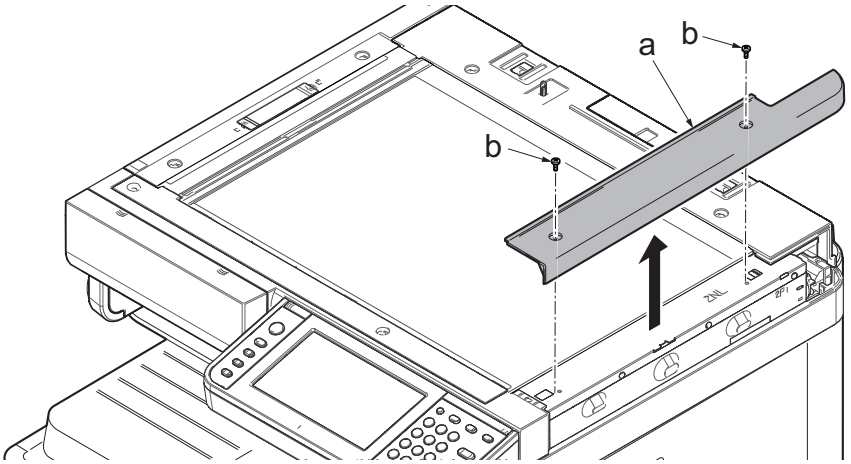


2 **Open the document processor (a) to upright and detach the hinge (b) in the direction of the arrow.**

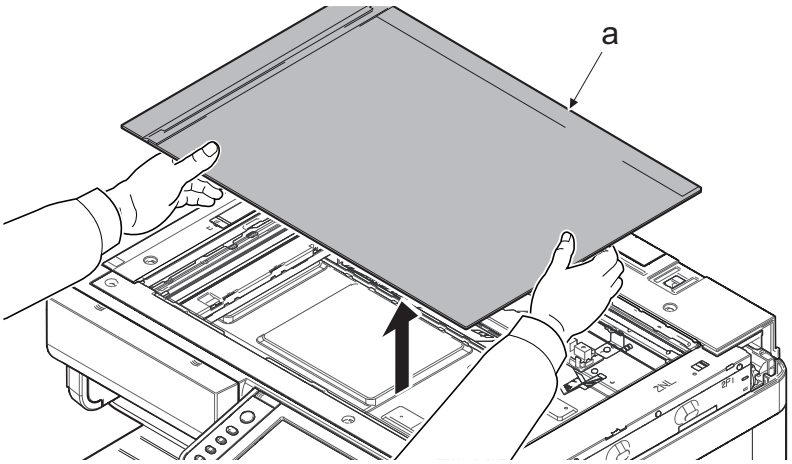


3 **Remove two screws (b)(M3×8TP) and then detach the ISU right cover (a).**

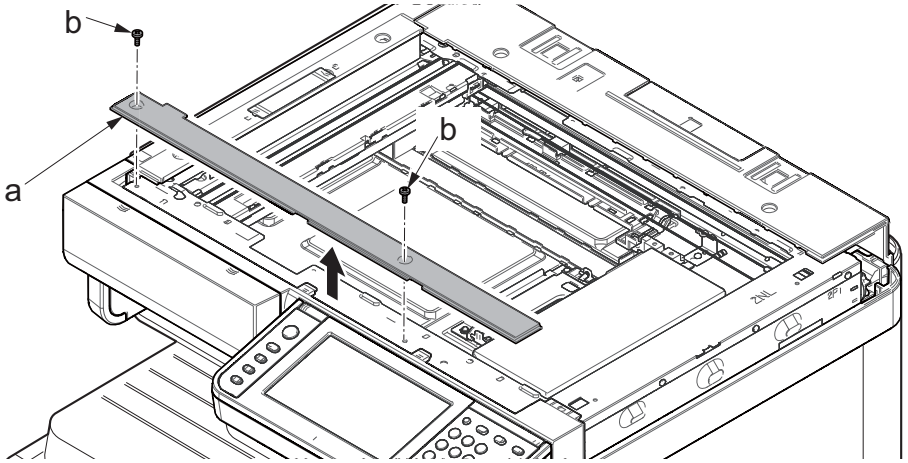
- Reattach it while aligning it to the contact glass side.



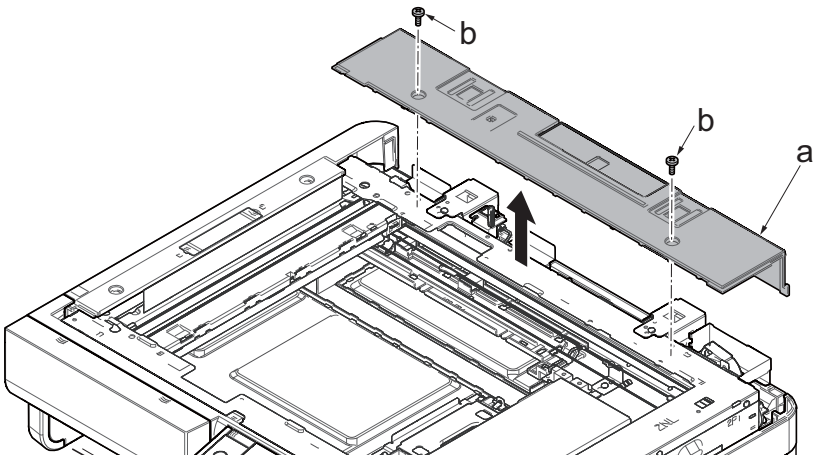
4 **Detach the contact glass (a).**



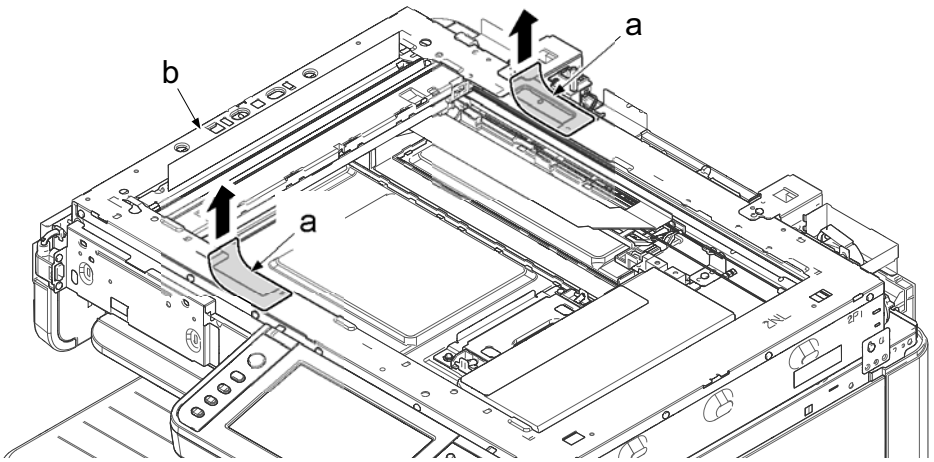
5 **Remove two screws (b)(M3×8TP) and then detach the ISU upper right cover (a).**



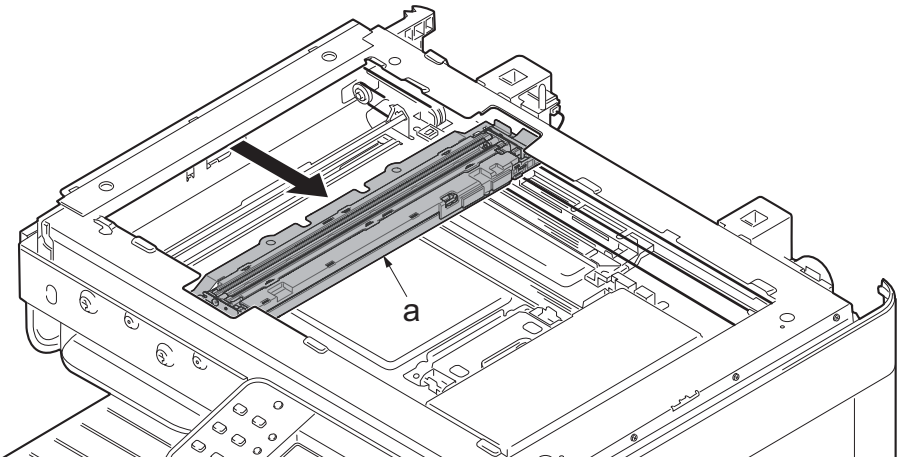
6 **Remove two screws (b)(M3×8TP) and then detach the ISU rear cover (a).**



7 **Detach the two transparent sheets (a) from the ISU frame (b).**



8 Move the scanner carriage (a) to the cut-out.

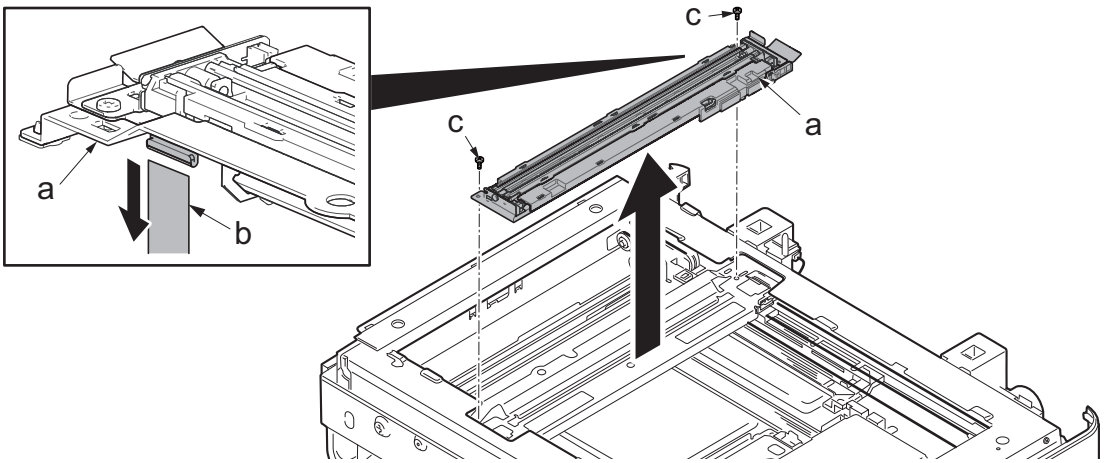


9 Detach the lamp unit.

1 Remove the FFC (b) from the connector.

2 Remove two screws (b) and detach the lamp unit (a).

3 Check or replace the lamp unit (a), and then reattach the parts in the original position.



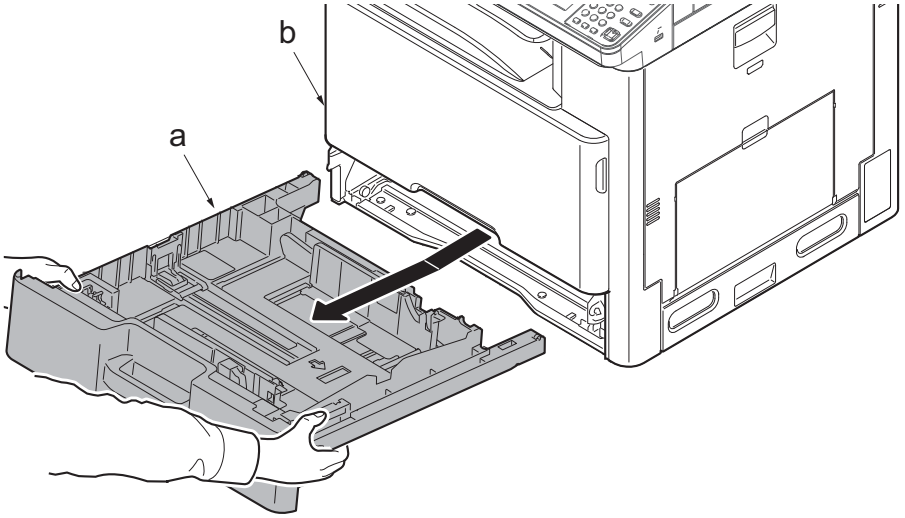
Important

Use an air blower brush when cleaning the light guide of the lamp unit. Clean not to leave a hair dust.

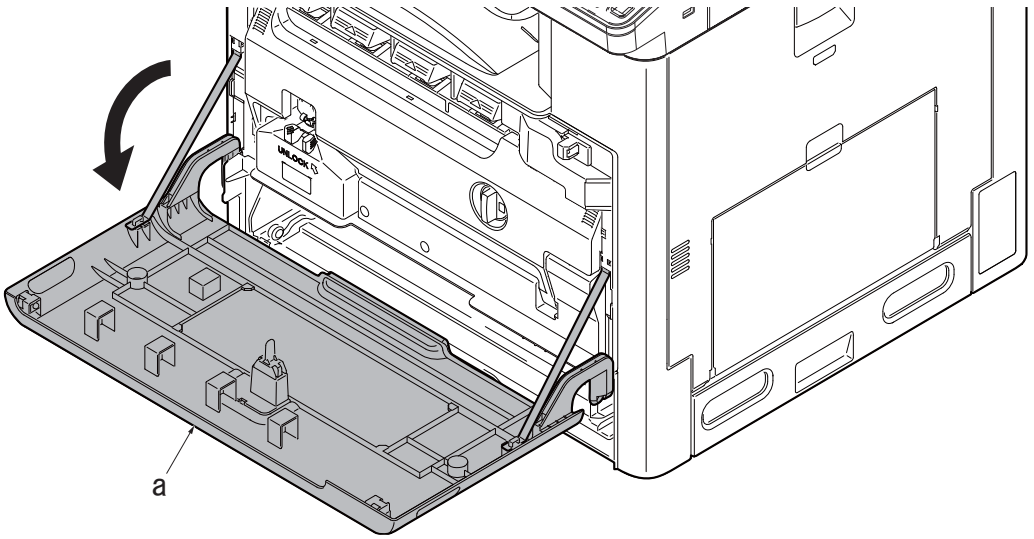
Detach the scanner wire

Execute it when the scanner wire is broken or is replaced.

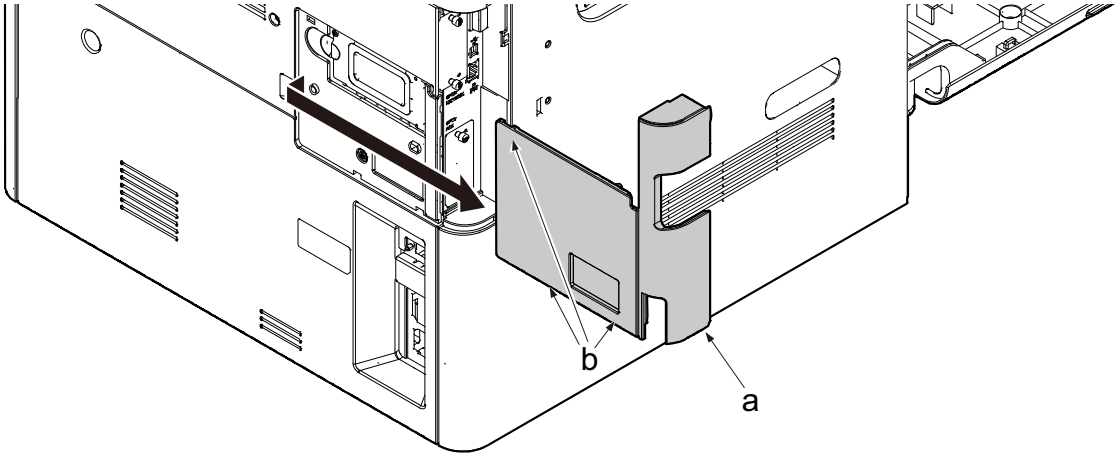
1 **Pull out the cassette (a) from the main unit (b) and remove it in the direction of the arrow.**



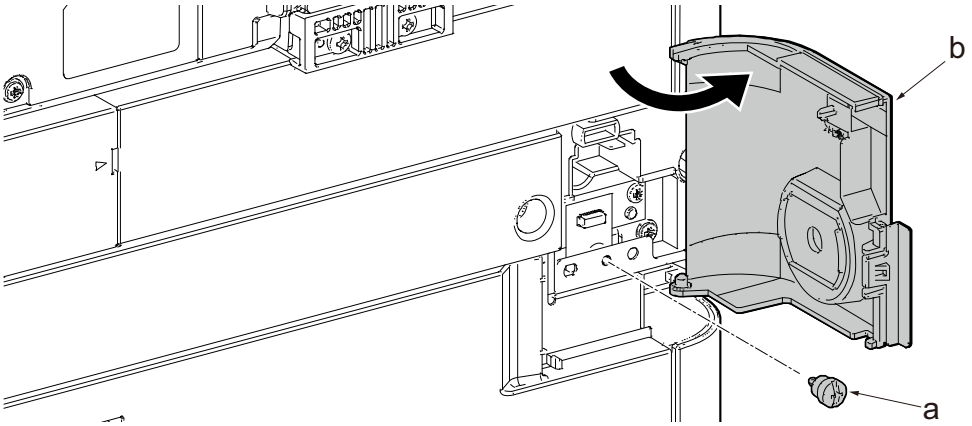
2 **Open the front cover (a).**



3 Release three hooks (b) in the direction of the arrow and remove the controller box cover (a).



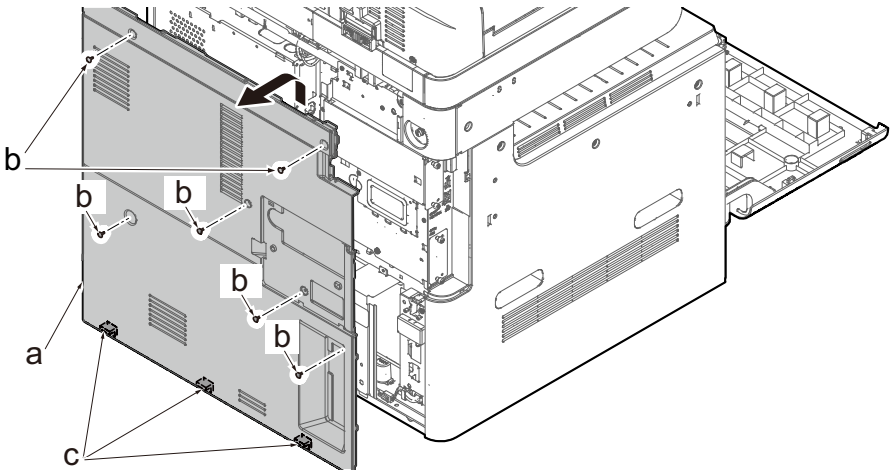
4 Remove the lock screw (b) and open the Wi-Fi cover (b) in the direction of the arrow.



5 Detach the rear cover.

1 Remove six screws (b)(M3×8TP).

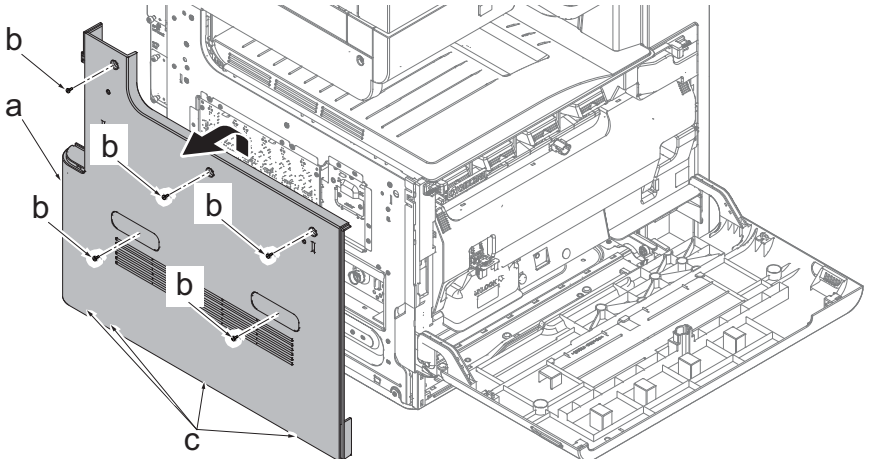
2 To detach the rear cover, align it upward and release three hooks (c).



6 Remove the left lower cover.

1 Remove five screws (b)(M3×8TP).

2 To detach the left lower cover (b), align it upward and release four hooks (c).

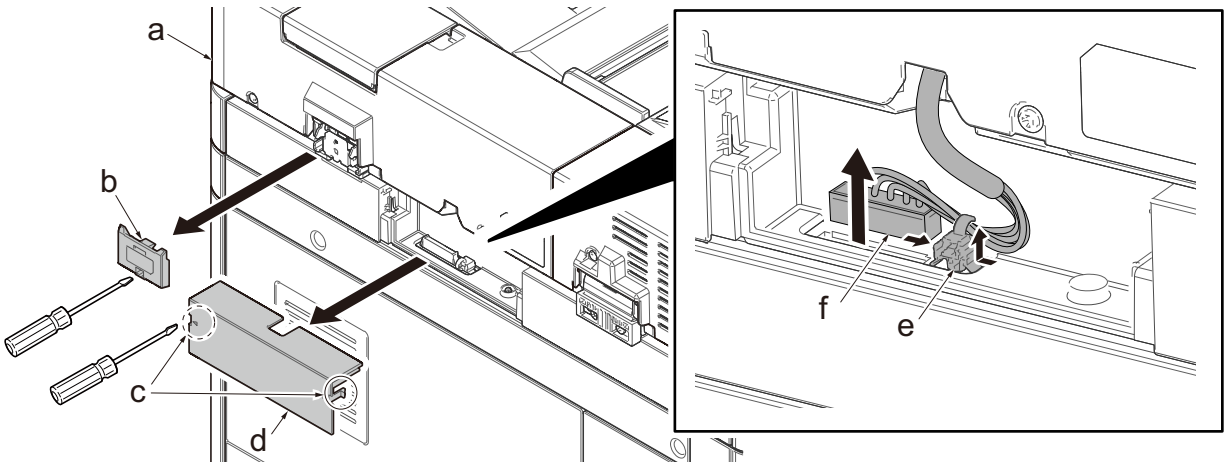


7 Detach the DP connector of the document processor from the main unit.

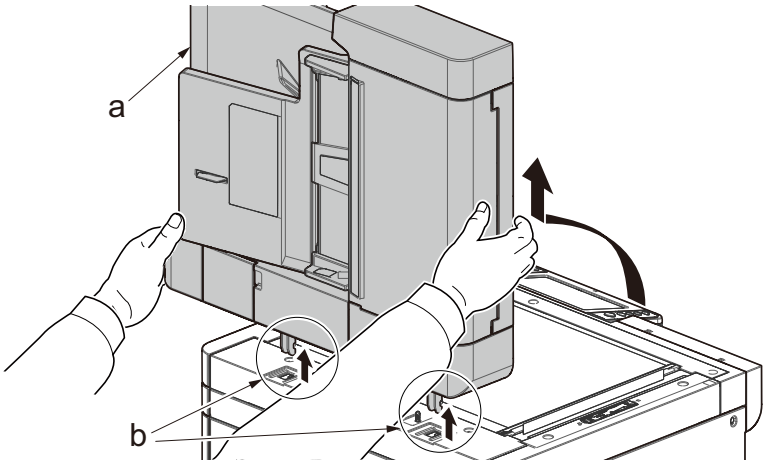
1 Release the hook with a flat-blade screwdriver from the document processor (a) and detach the angle regulating plate (b).

2 Release two hooks (c) with a flat-blade screwdriver, detach the DP Connector cover (d).

3 Remove the wire saddles (e) and the DP connector cover (f).



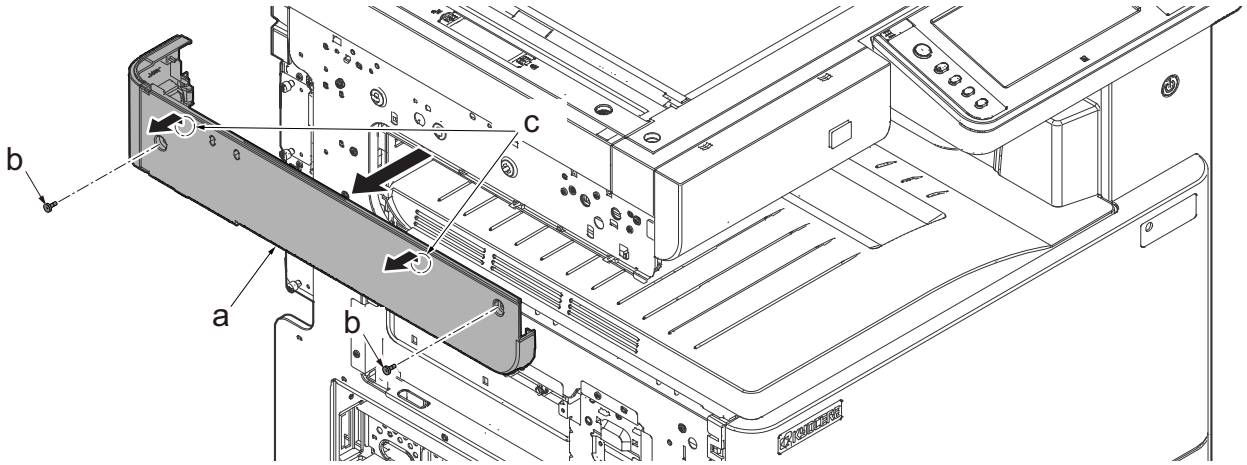
8 Open the document processor (a) to upright and detach the hinge (b) in the direction of the arrow.



9 Detach the left top cover.

1 Remove two screws (b)(M3×8TP).

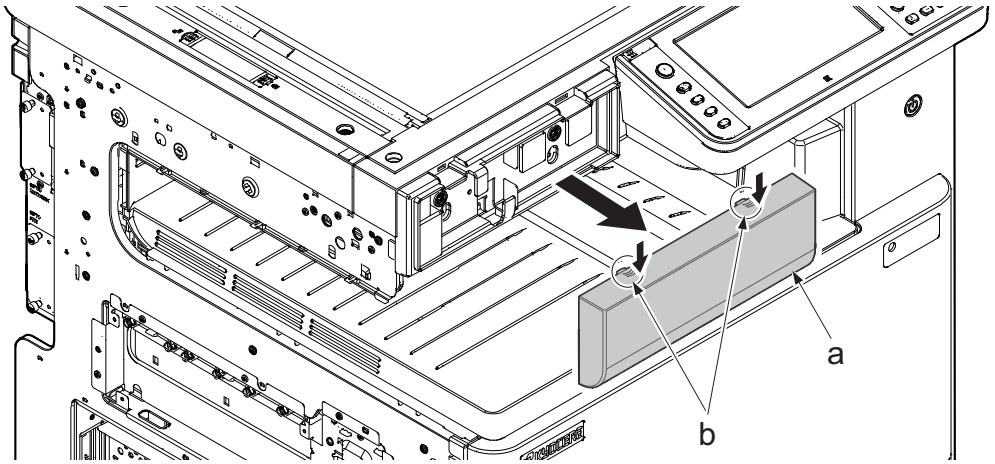
2 Release the two hooks (c) upward and detach the upper left cover (a).



10 Detach the IC card reader cover.

1 Release two hooks (b) downwards.

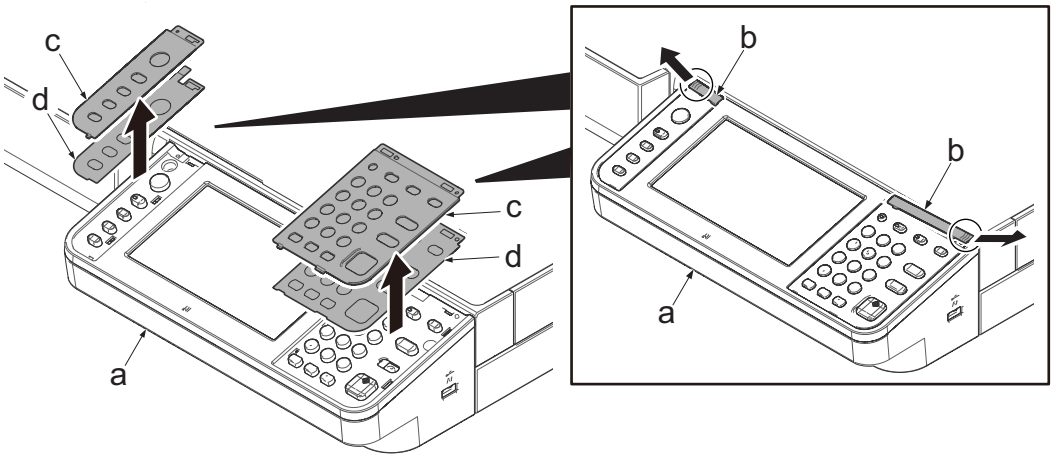
2 Detach the IC card reader cover (a) in the direction of the arrow.



11 Detach the language sheet.

1 Lift up two points of the leading edge of the operation panel cover (b), slide them in the direction of the arrow and then detach the operation panel cover from the operation panel (a).

2 Detach two clear panels (b) from the operation panel (a) and detach the language sheet (c).

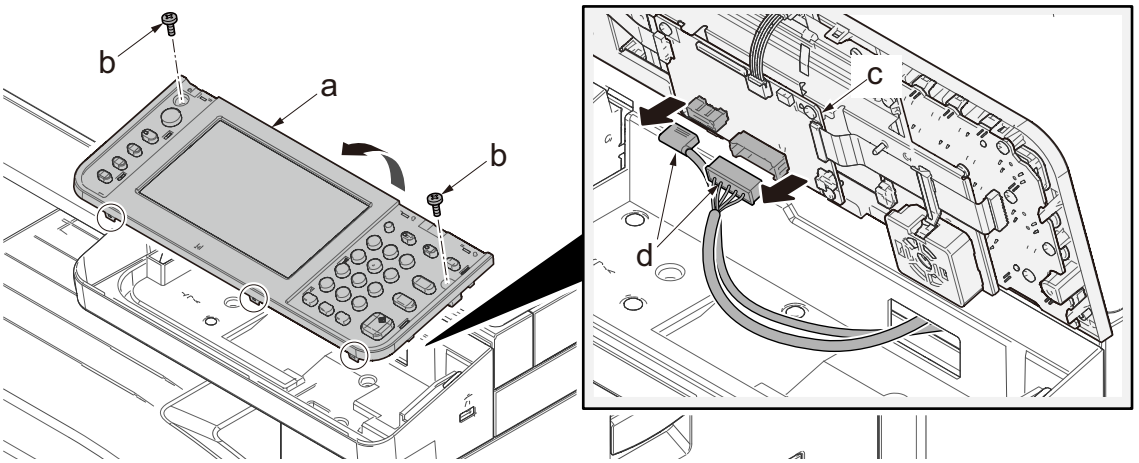


12 Detach the operation top unit.

1 Remove two screws (b).

2 Disconnect two connectors (d) of the operation panel PWB (c).

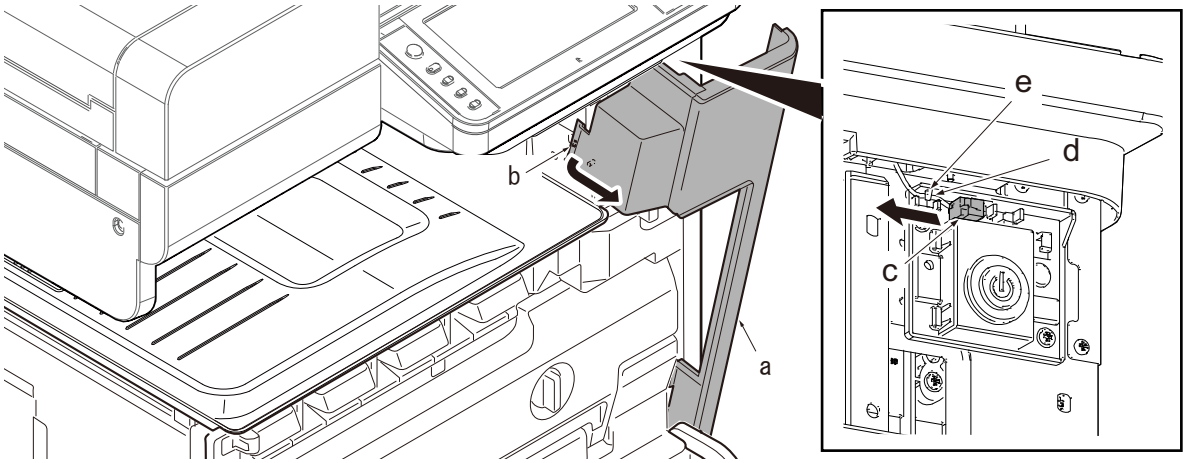
3 Detach the operation top unit (a).



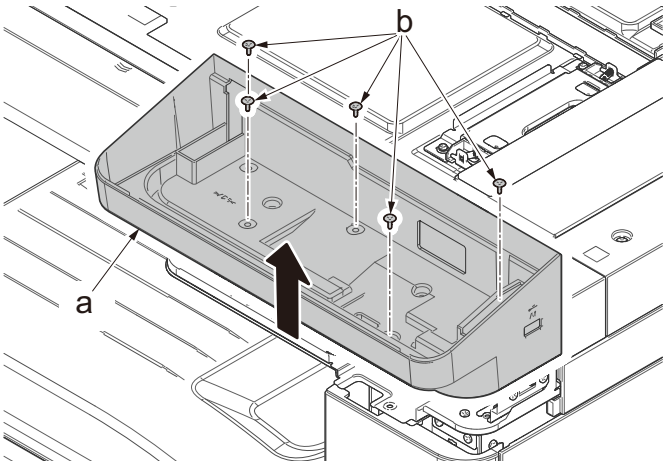
13 Remove the wire of the power switch.

1 Release two hooks (b) of front top cover (a) and tilt it toward you.

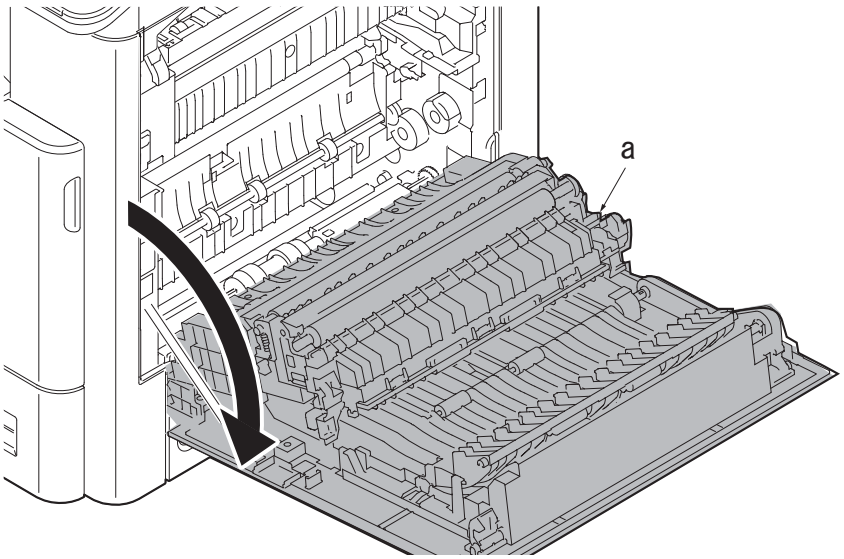
2 Remove the connector (c) and remove the wire (d) from hook (e).



14 Remove five screws (b)(M3×8TP) and then detach the operation lower cover (a).

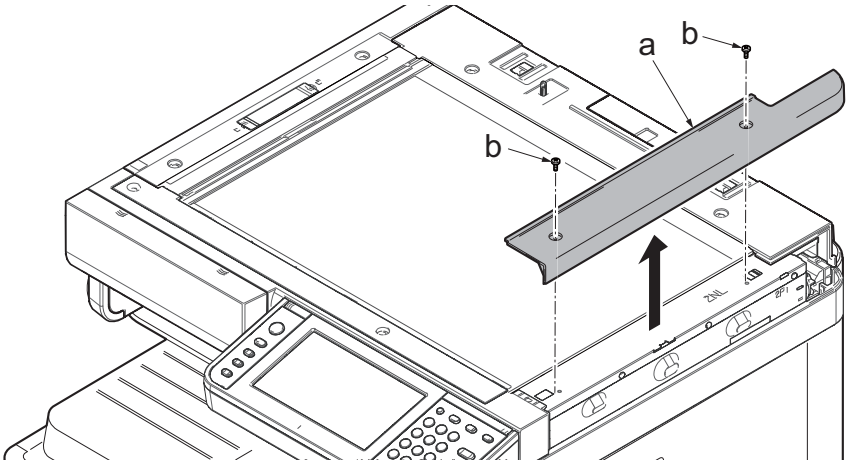


15 Open the right cover 1 (a).

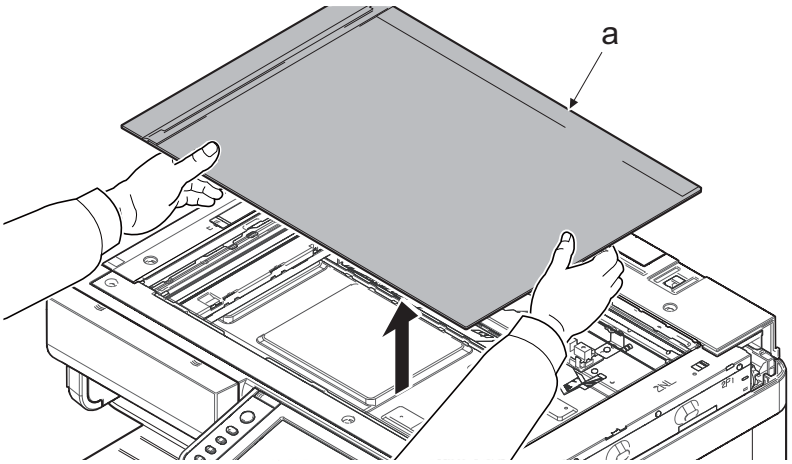


16 Remove two screws (b)(M3×8TP) and then detach the ISU right cover (a).

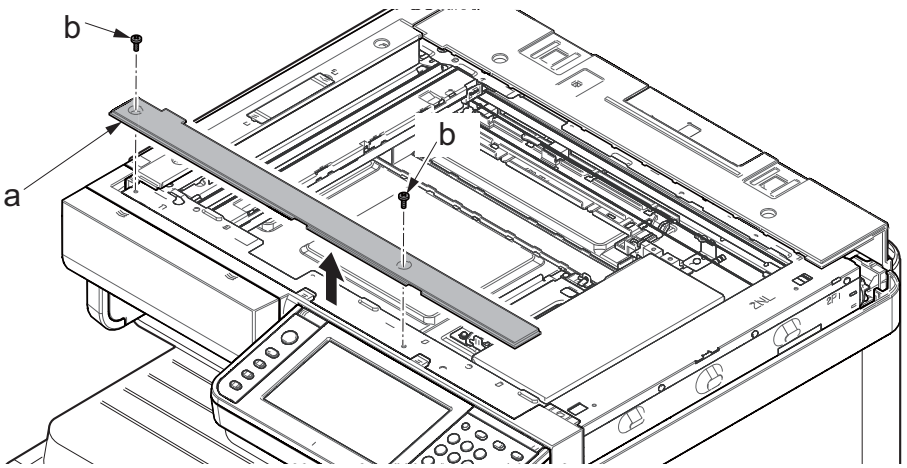
- Reattach it while aligning it to the contact glass side.



17 Detach the contact glass (a).



18 Remove two screws (b)(M3×8TP) and then detach the ISU upper right cover (a).

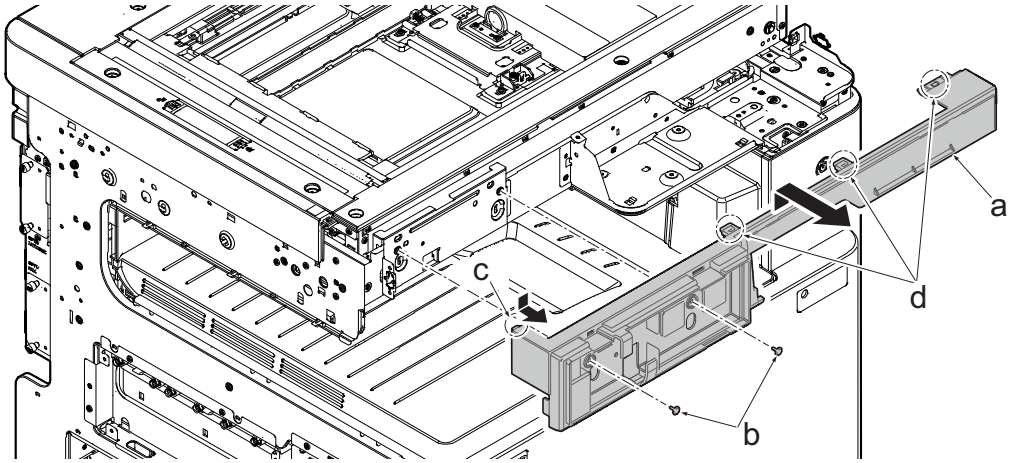


19 Detach the ISU front cover (a).

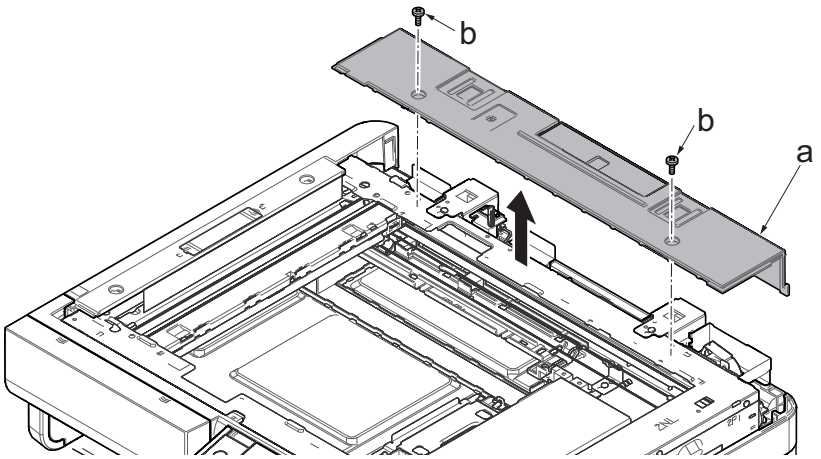
1 Remove two screws (b)(M3×8TP).

2 Release the hook(c) and three protrusions (d).

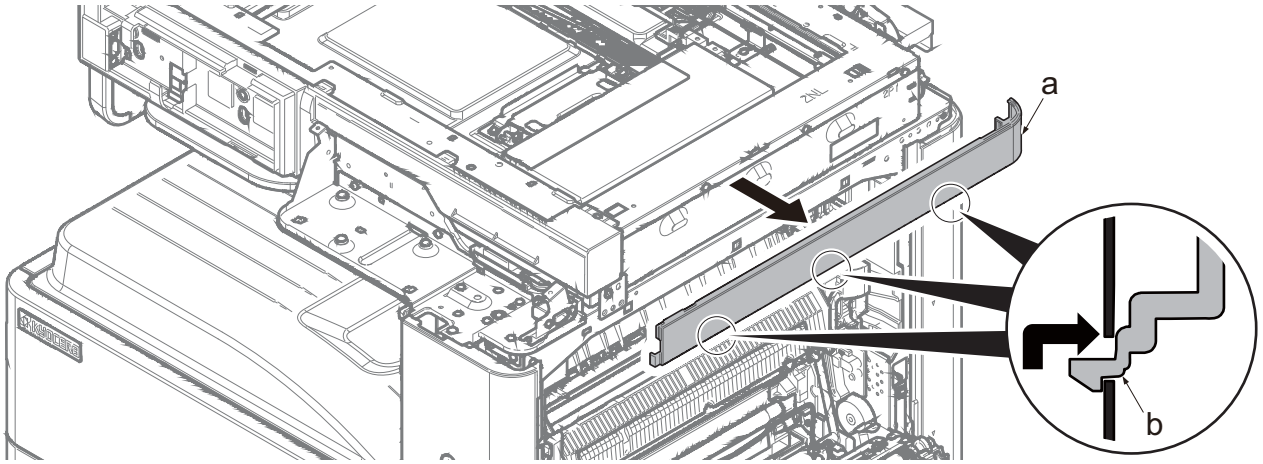
3 Detach the ISU front cover (a) in the direction of the arrow.



20 Remove two screws (b)(M3×8TP) and then detach the ISU rear cover (a).



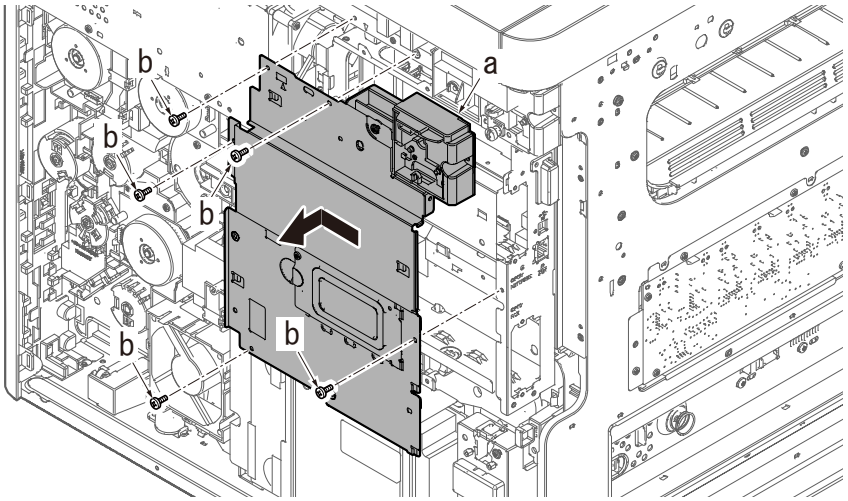
21 Release three hooks (b) in the direction of the arrow and detach the right top cover (a).



22 Remove the control box cover.

1 Remove five screws (b)(M3x8).

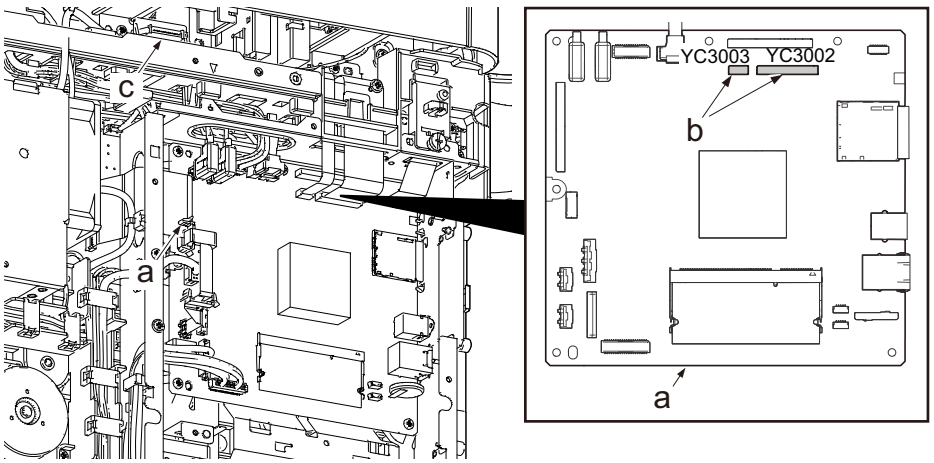
2 Slide the controller box cover (a) in the direction of the arrow and detach it.



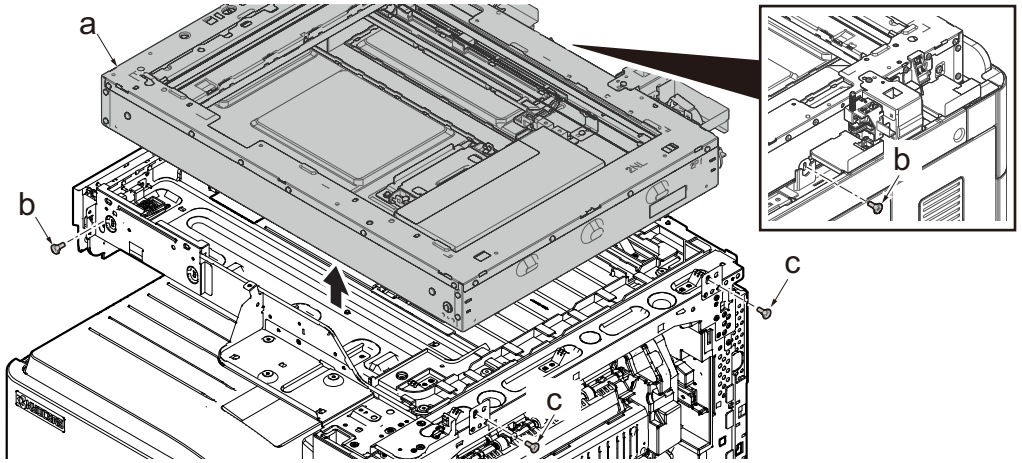
23 Disconnect the connector.

1 Disconnect two FFCs (b) from the main PWB (a).

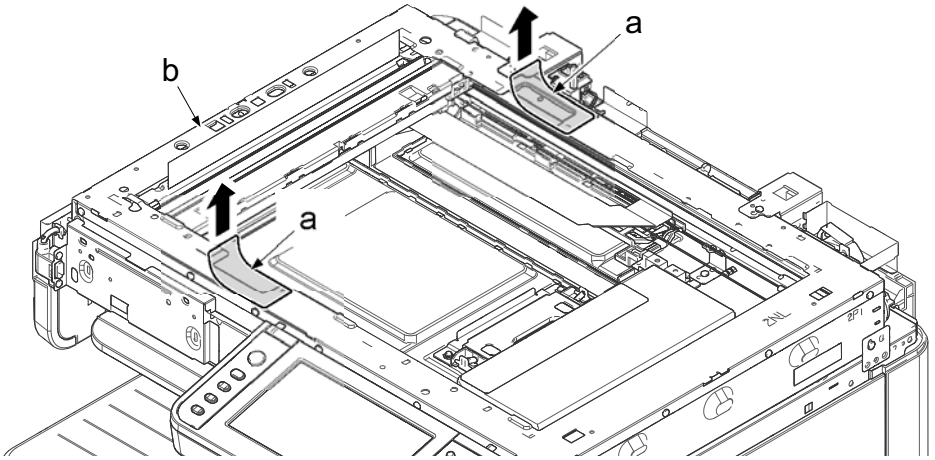
2 Disconnect the connector (c) from the main unit.



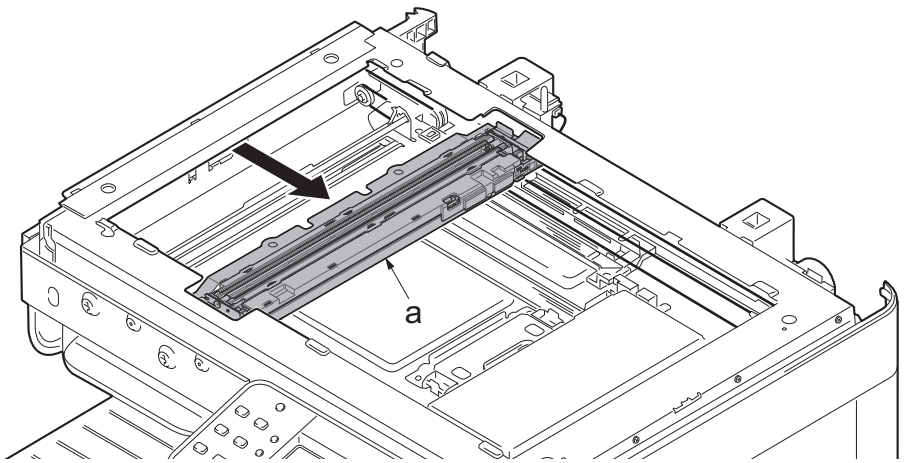
24 Remove two screws (b) (M3x8TP) and two header pins (c), and detach the scanner unit (a) upward.



25 Detach the two transparent sheets (a) from the ISU frame (b).



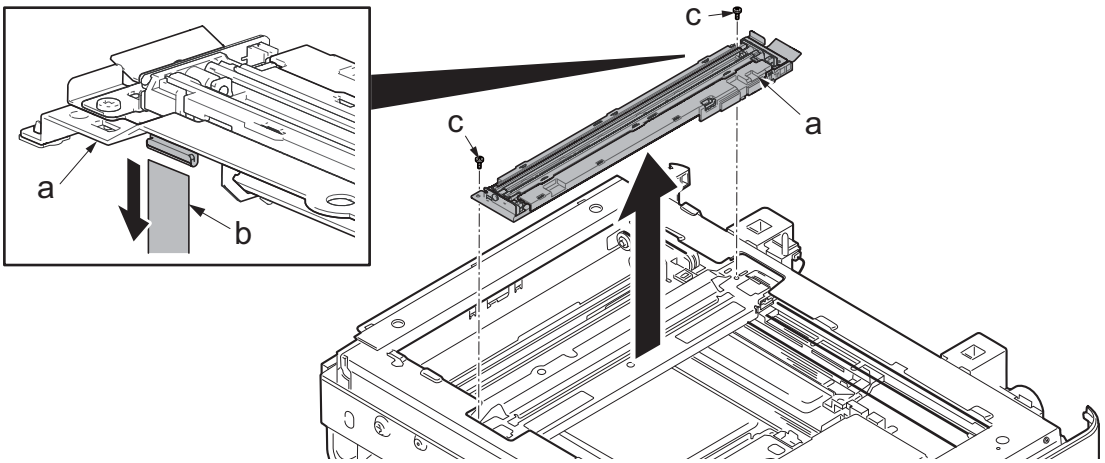
26 Move the scanner carriage (a) to the cut-out.



27 Detach the lamp unit.

1 Remove the FFC (b) from the connector.

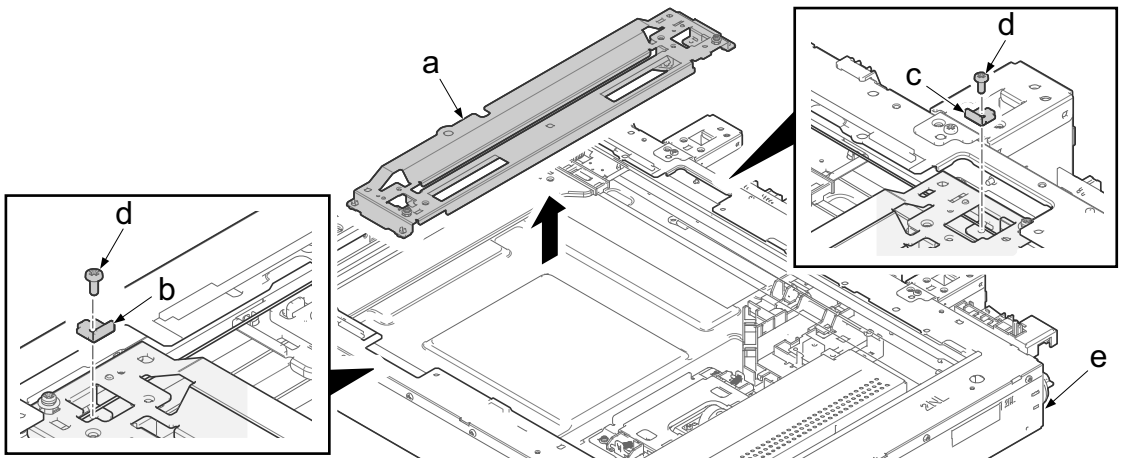
2 Remove two screws (b) and detach the lamp unit (a).



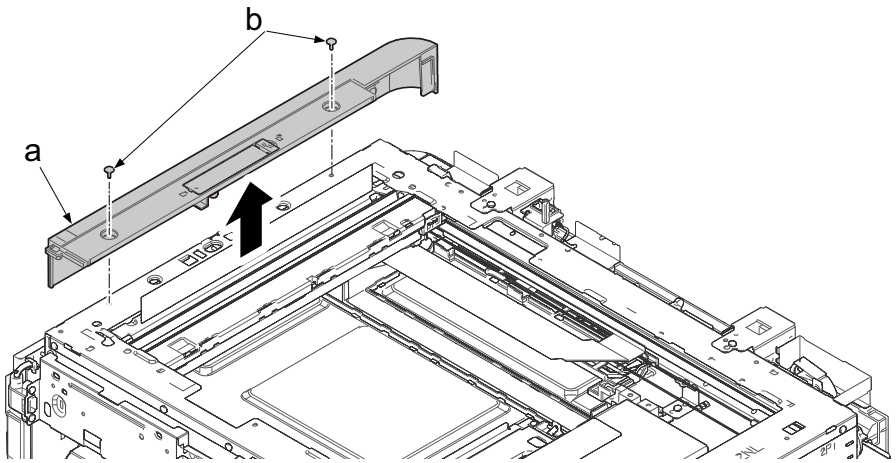
28 Detach the Mirror frame A.

1 Remove one each screw (d)(M3×8TP) that secures the front wire keep plate (b) and rear wire keep plate (c).

2 Detach the mirror frame A(a) from scanner unit(e).



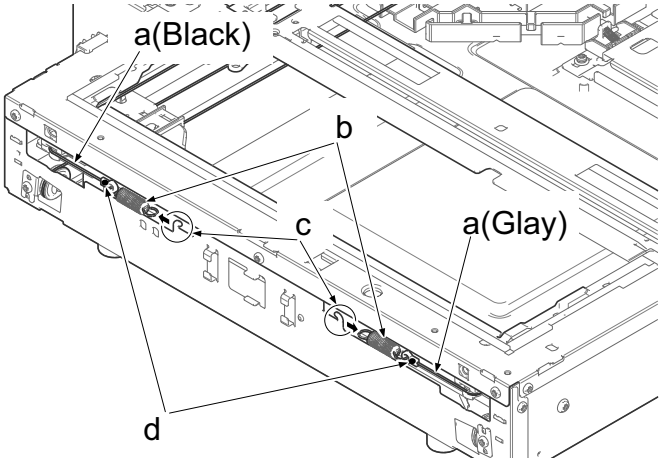
29 Remove two screws (b)(M3×8TP) and then detach the ISU left cover (a).



30 Detach the scanner wire.

1 Detach the scanner wire spring (b) from hook(c).

2 Detach the scanner wire (a) and detach the scanner wire springs (b) from the round terminals (black marking) (d).



Reattach the scanner wire.

Important

<Precautions>

When fitting the scanner wires, be sure to use those specified below.

Machine front side (P/N: 302K317150(gray))

Machine rear side(P/N: 302K317140(black))

<Fitting requires the following tools>

Two frame securing tools (P/N: 302FZ1710_)

Two scanner wire stoppers (P/N: 302RH9401_)

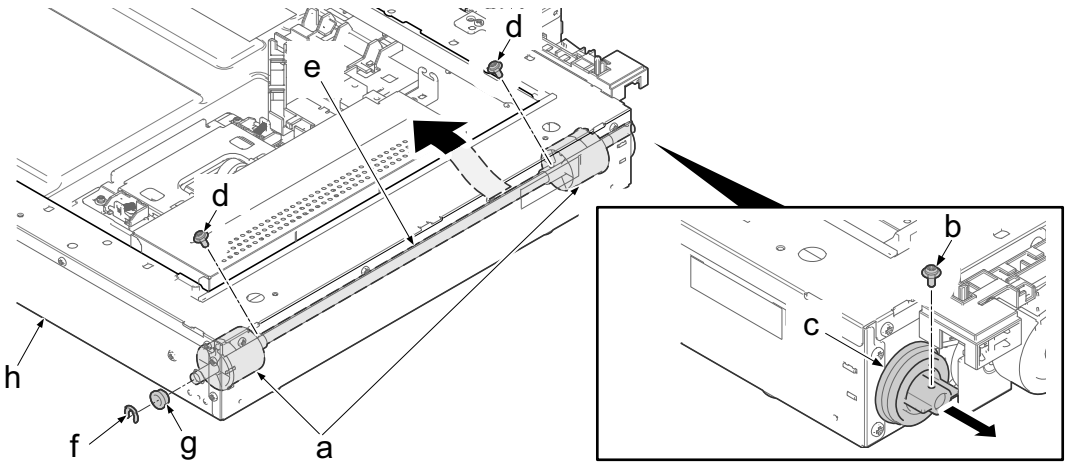
1 Detach the scanner wire drum assy.

1 Remove the screw (b) and detach the scanner wire drum gear (c).

2 Detach two screws (d) of scanner wire drum (a).

3 Detach the stop ring (f) and bushing (g) from the front side of the scanner wire drum shaft (e).

4 Detach the scanner wire drum (a) and the bushing (e) from scanner unit (h).

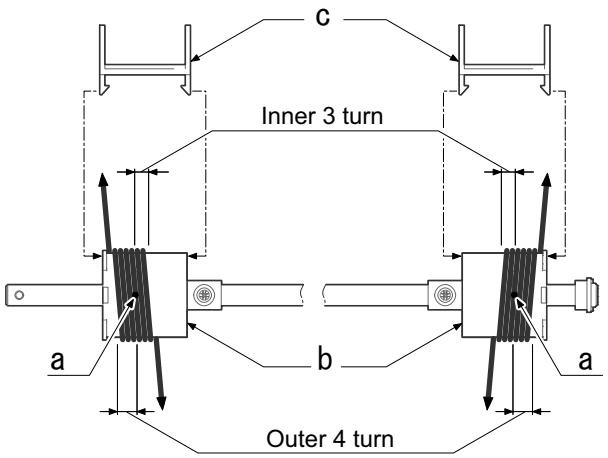


2 Fix the scanner wire.

1 Pass the ball (a) of the scanner wire through the hole of the scanner wire drum and wind the wire three times inside, and four times outside.

- Shorter from small ball (a) of the scanner wire is wound to come outside.

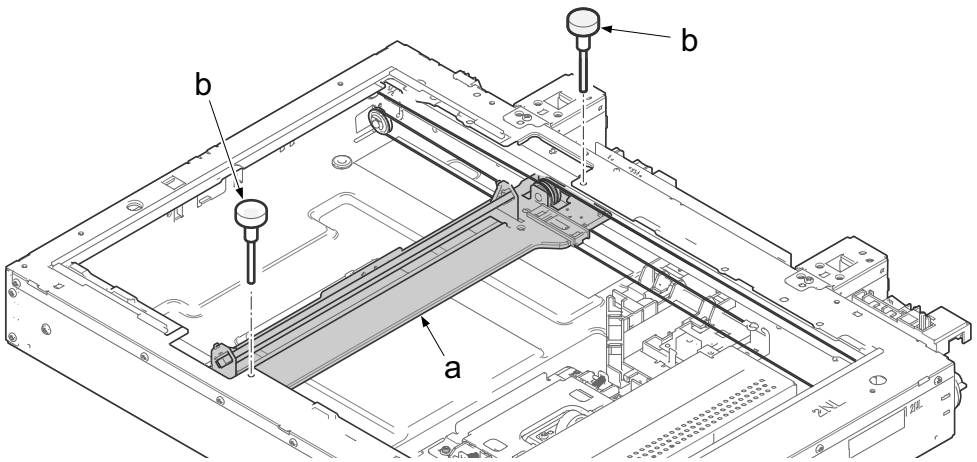
2 Secure the scanner wires (c) using the scanner wire stoppers (d).



3 Fix the position of the mirror frame B.

1 Reattach the scanner wire drum and the shaft to the scanner unit as originally.

2 Pass the mirror frame fixing parts (b) through the front and rear positioning holes for the scanner unit and fix the mirror frame B (a).



4 Reattach the scanner wire.

1 Hook the scanner wire at the out side of the main unit on the out side groove of the pulley of the mirror frame B. ••••(1)

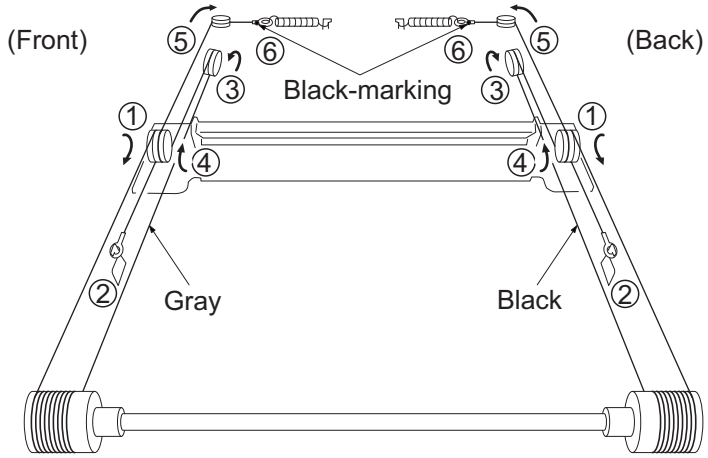
2 Hook the round terminals to the catches inside the scanner unit. ••••••••••••••(2)

3 Wind the inner scanner wires around the grooves in the pulleys at the left of the scanner unit from below to above.•• (3)

4 Wind the scanner wires around the inside grooves in the pulleys of the mirror frame B from below to above. ••••••••••••••(4)

5 Wind the scanner wires around the grooves in the pulleys at the left of the scanner unit. ••••••••••••••(5)

6 Hook the round terminal on the scanner wire spring. ••••••••••••••(6)



5 Adjust the mirror frame position.

1 Detach the scanner wire stoppers and the frame securing tools (c).

2 Focusing on the locating ball of the wire drum, align the scanner wires to the inside.

3 Move the mirror frame B from side to side to correctly locate the wires in position.

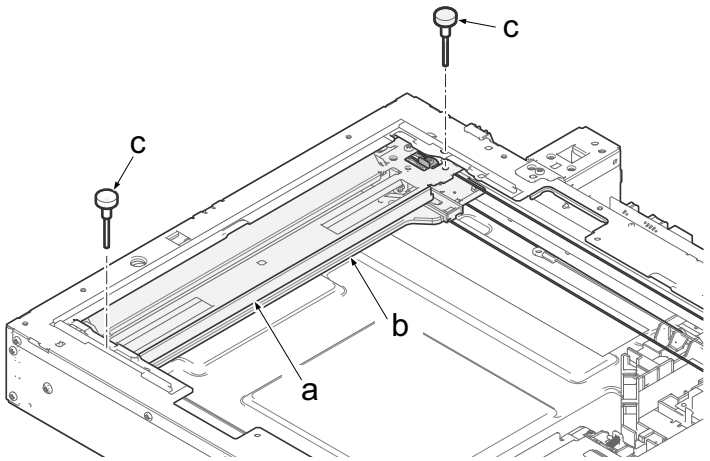
4 Refit the mirror frame A in the main unit.

5 Move the mirror frames A (a) and the mirror frames B (b) to the machine left, and insert two frame securing tools (c) into the positioning holes at the front and rear of the scanner unit to secure the mirror frame A (a) and the mirror frame B (b) in position.

6 Attach the front wire holder plate and rear wire holder plate to the mirror frame A with each screw while holding the wire with the plates.

7 Detach the frame securing tools (c).

8 Reattach the parts in the original position.



(2-4) Detaching and reattaching the image scanner unit (CIS model)

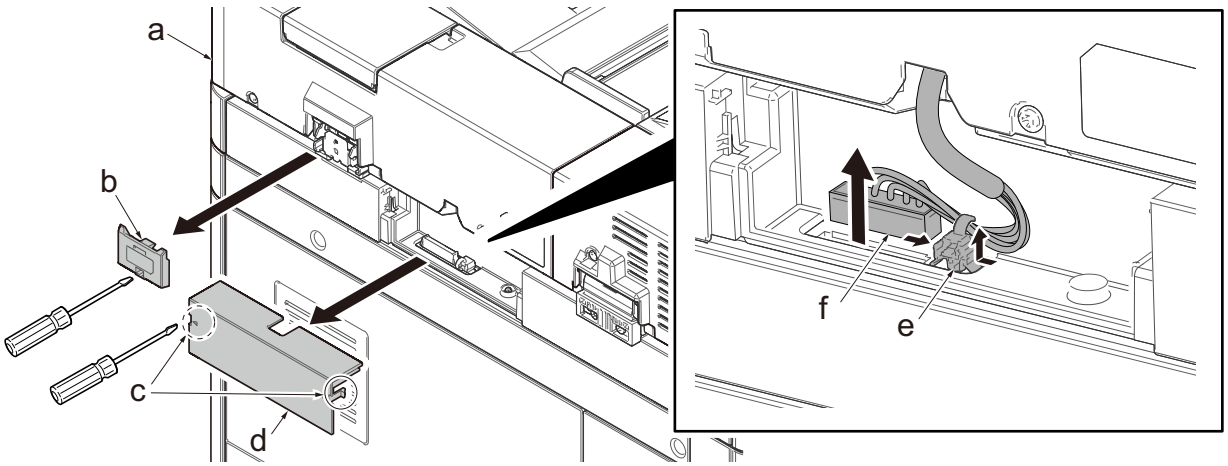
Detaching and reattaching the CIS unit

1 Detach the DP connector of the document processor from the main unit.

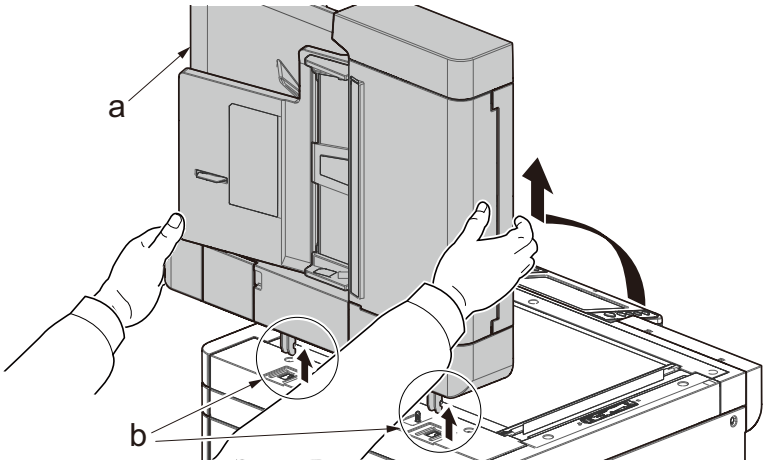
1 Release the hook with a flat-blade screwdriver from the document processor (a) and detach the angle regulating plate (b).

2 Release two hooks (c) with a flat-blade screwdriver, detach the DP Connector cover (d).

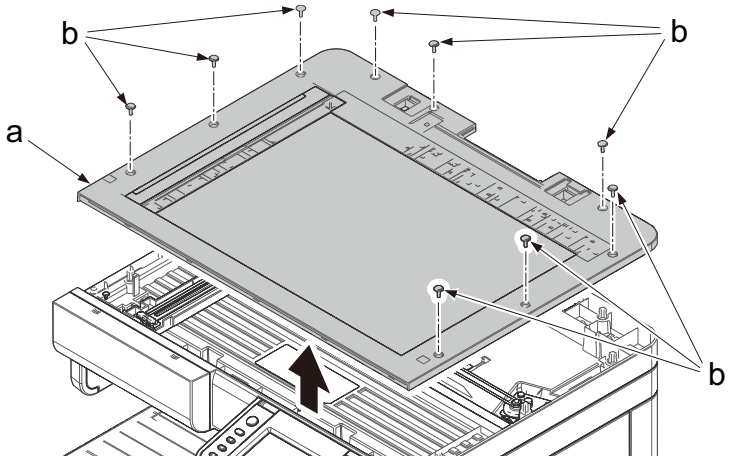
3 Remove the wire saddles (e) and the DP connector cover (f).



2 Open the document processor (a) to upright and detach the hinge (b) in the direction of the arrow.



3 Remove nine screws (b)(M3x8) and detach the contact glass (a).



4 Detach the scanner carriage.

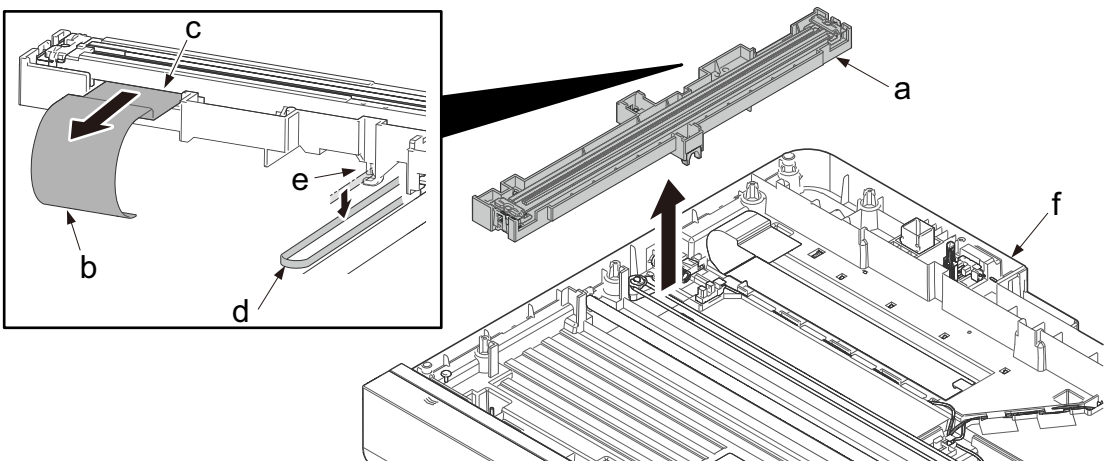
1 Remove the FFC (b) from the connector (c) of scanner carriage (a).

2 Detach the drive belt (d) from the fixing part (e) of the scanner carriage.

3 Detach the scanner carriage (a) from ISU lower frame (f).

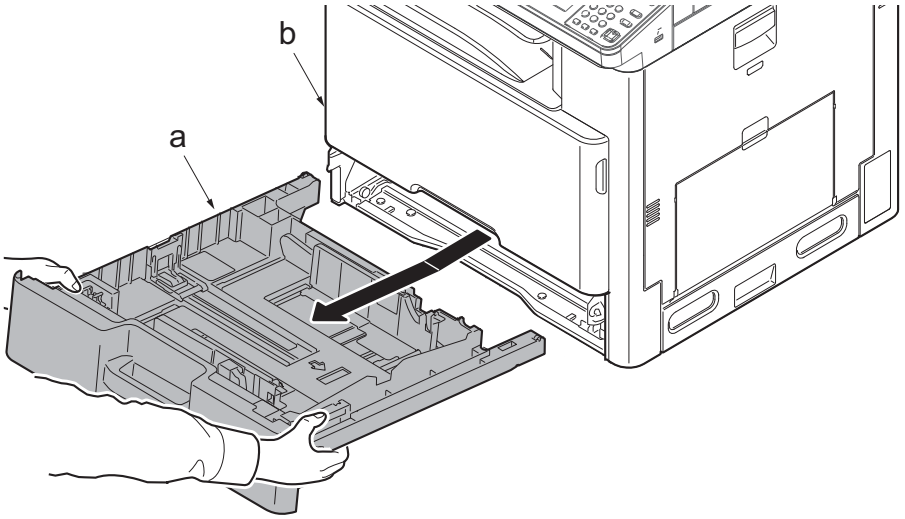
4 Check the scanner carriage (a) and clean or replace it.

5 Reattach the parts in the original position.

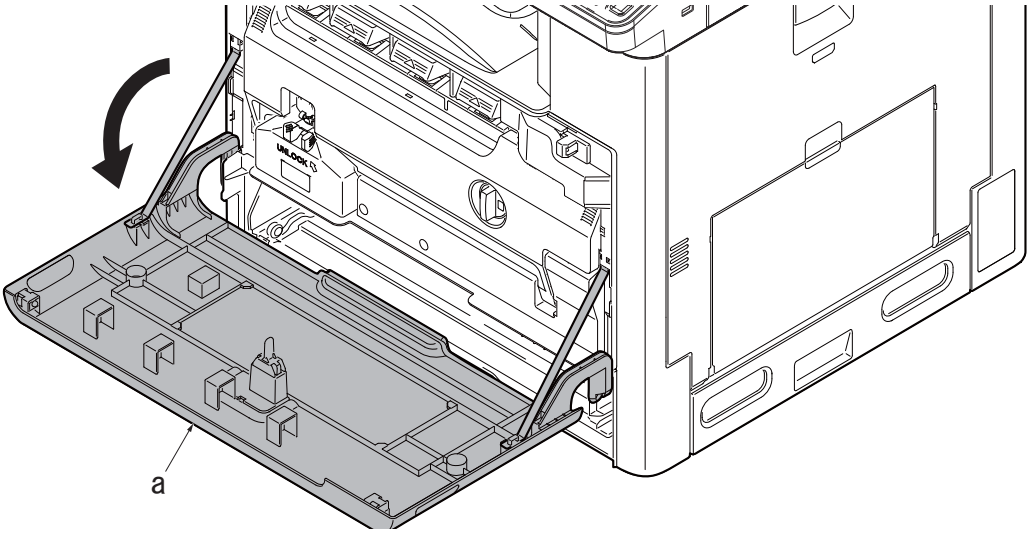


Detaching and reattaching the image scanner unit

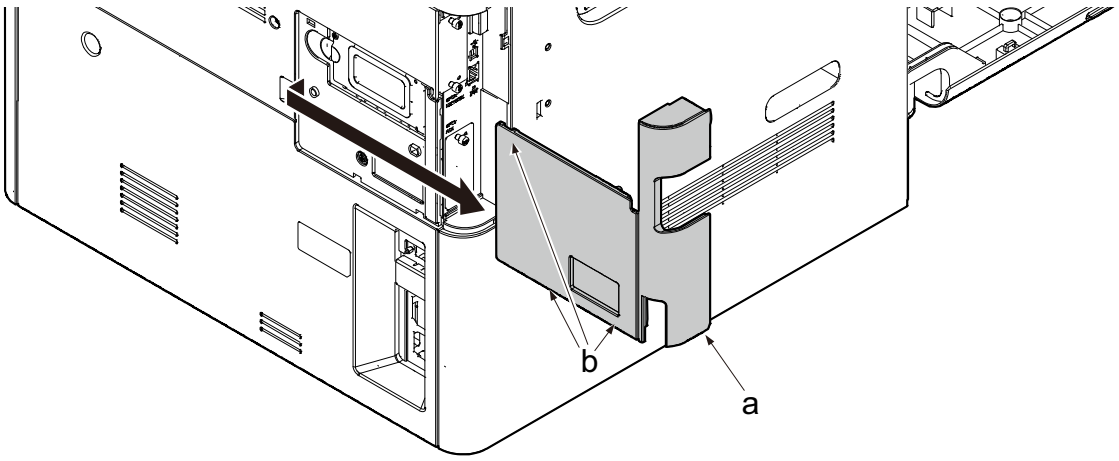
1 **Pull out the cassette (a) from the main unit (b) and remove it in the direction of the arrow.**



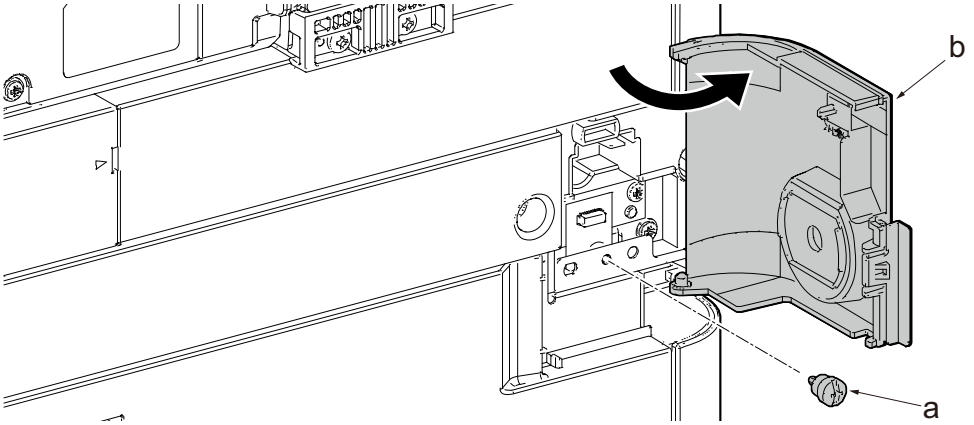
2 **Open the front cover (a).**



3 **Release three hooks (b) in the direction of the arrow and remove the controller box cover (a).**



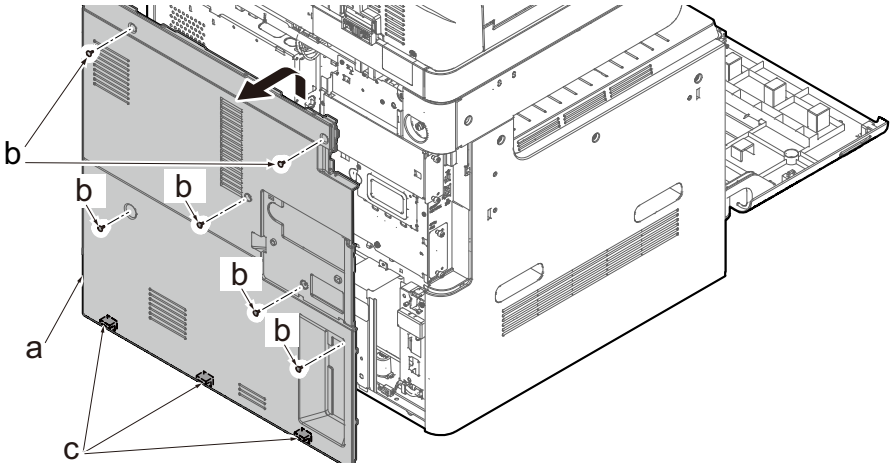
4 Remove the lock screw (b) and open the Wi-Fi cover (b) in the direction of the arrow.



5 Detach the rear cover.

1 Remove six screws (b)(M3x8).

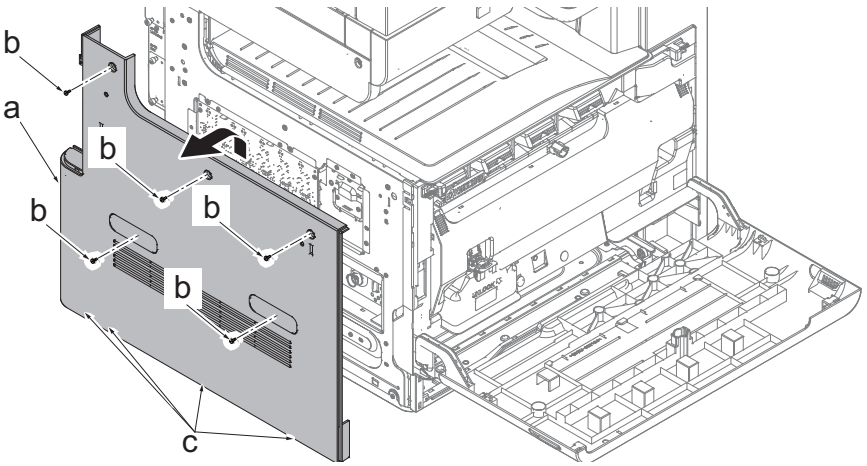
2 To detach the rear cover, align it upward and release three hooks (c).



6 Remove the left lower cover.

1 Remove five screws (b)(M3×8TP).

2 To detach the left lower cover (b), align it upward and release four hooks (c).

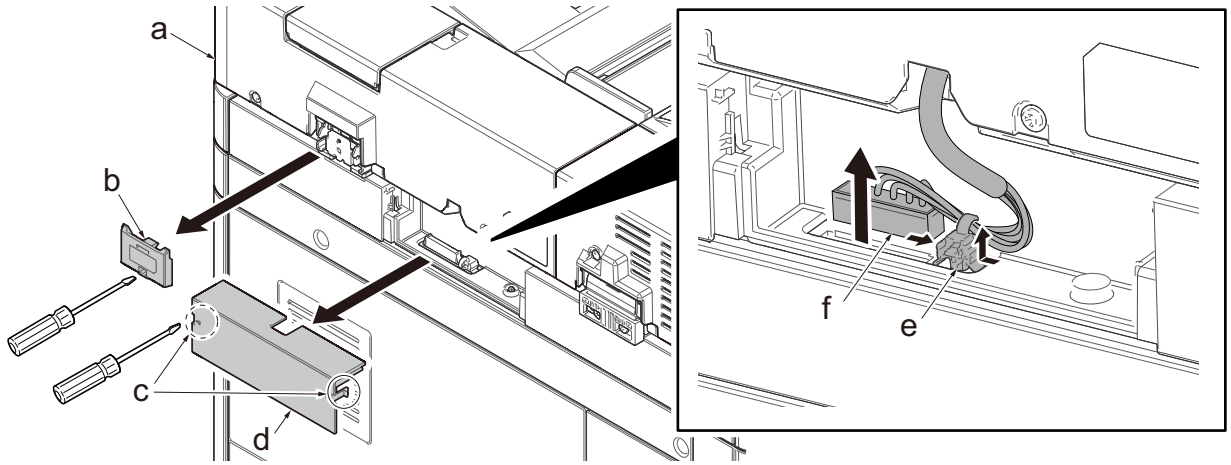


7 Detach the DP connector of the document processor from the main unit.

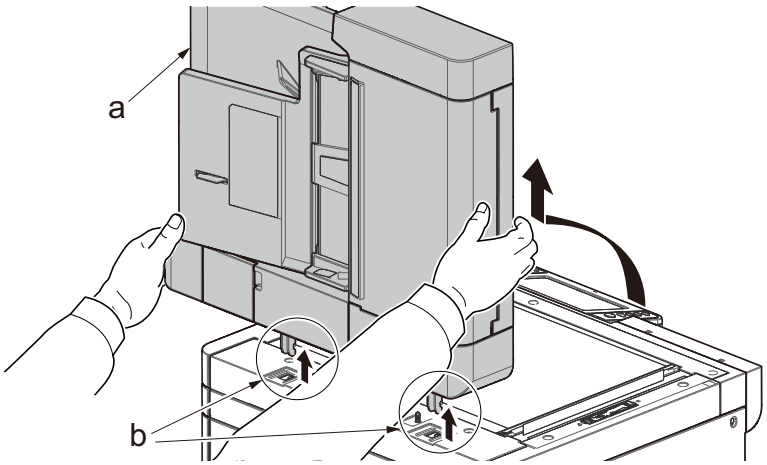
1 Release the hook with a flat-blade screwdriver from the document processor (a) and detach the angle regulating plate (b).

2 Release two hooks (c) with a flat-blade screwdriver, detach the DP Connector cover (d).

3 Remove the wire saddles (e) and the DP connector cover (f).



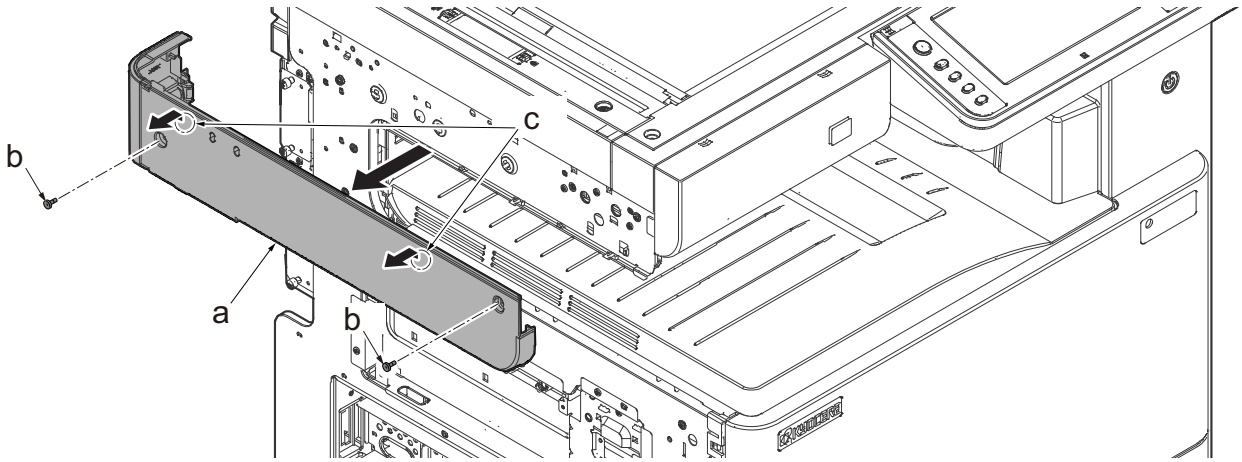
8 Open the document processor (a) to upright and detach the hinge (b) in the direction of the arrow.



9 Detach the left top cover.

1 Remove two screws (b).

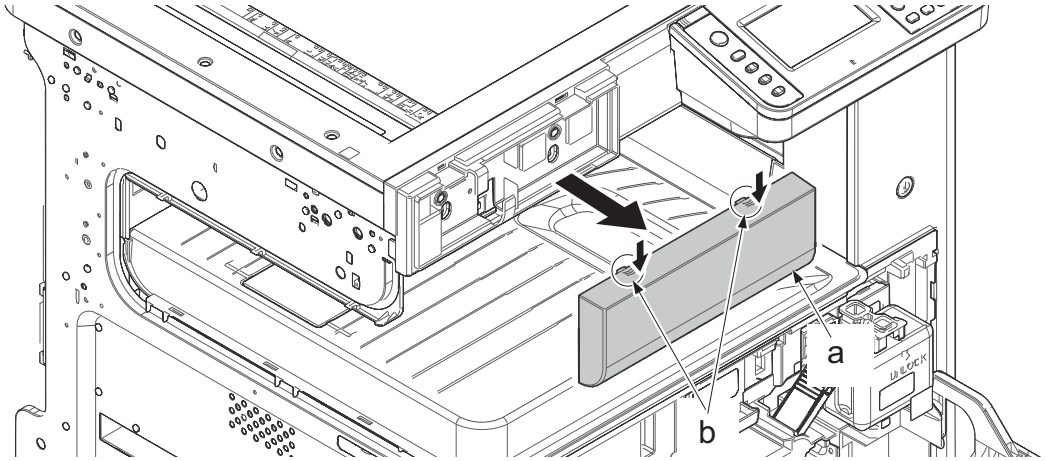
2 Release the two hooks (c) upward and detach the upper left cover (a).



10 Detach the IC card reader cover.

1 Release two hooks (b) downwards.

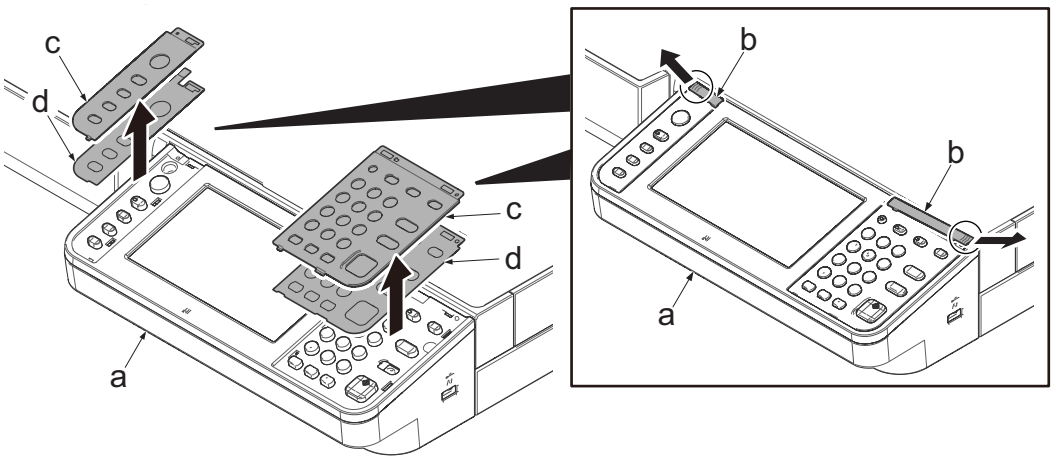
2 Detach the IC card reader cover (a) in the direction of the arrow.



11 Detach the language sheet.

1 Lift up two points of the leading edge of the operation panel cover (b), slide them in the direction of the arrow and then detach the operation panel cover from the operation panel (a).

2 Detach two clear panels (b) from the operation panel (a) and detach the language sheet (c).

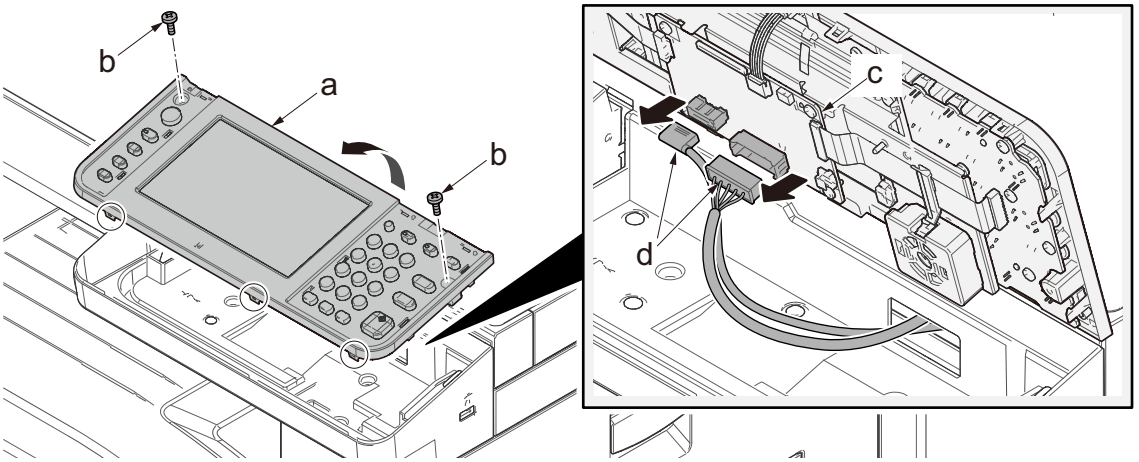


12 Detach the operation top unit.

1 Remove two screws (b).

2 Disconnect two connectors (d) of the operation panel PWB (c).

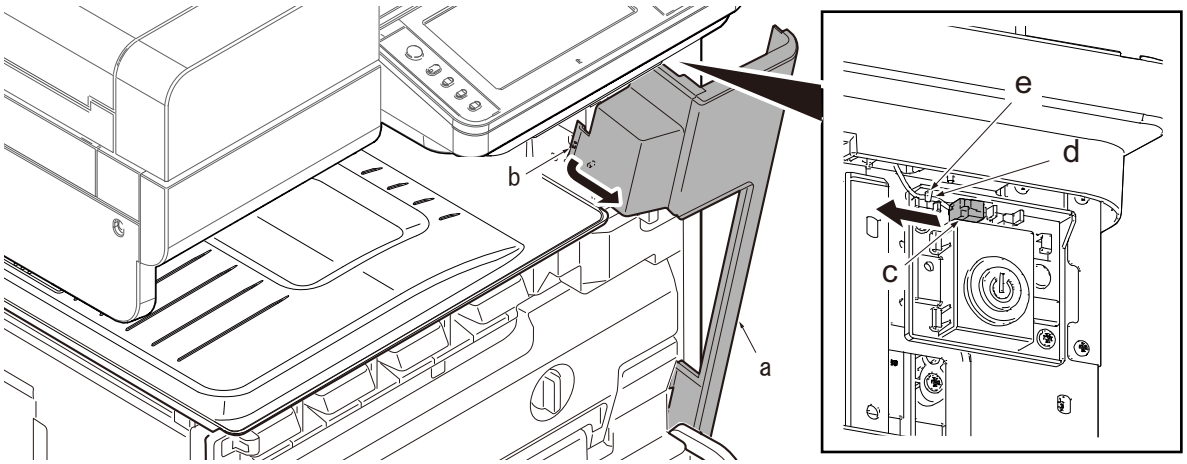
3 Detach the operation top unit (a).



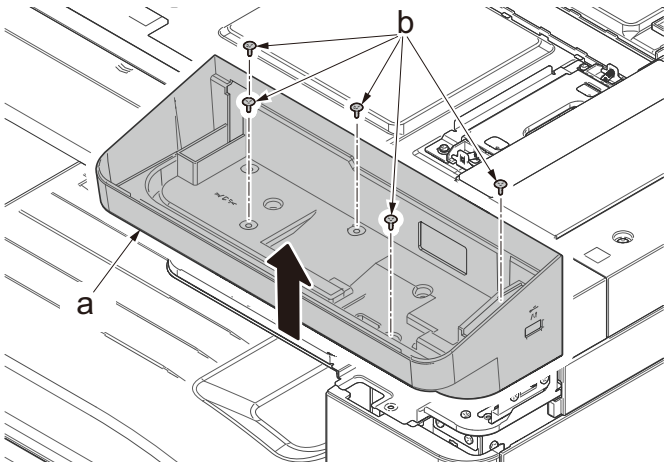
13 Remove the wire of the power switch.

1 Release two hooks (b) of front top cover (a) and tilt it toward you.

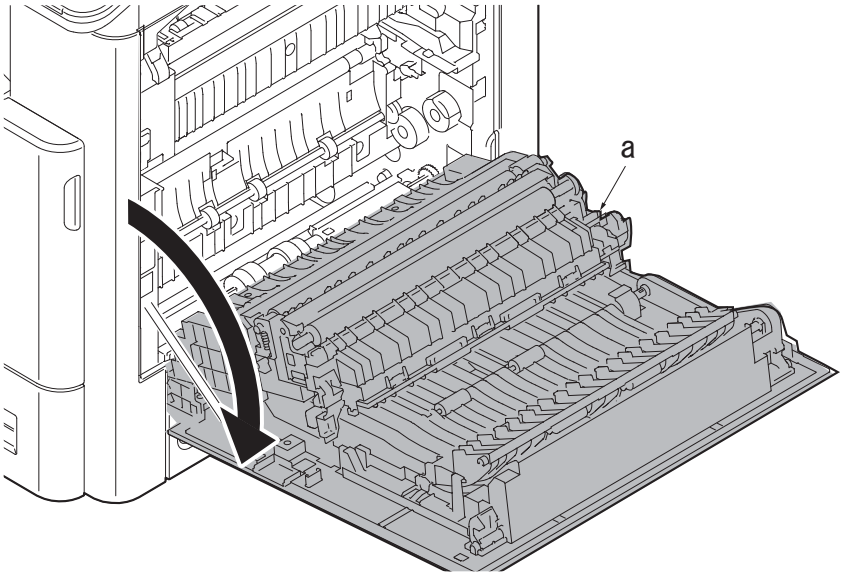
2 Remove the connector (c) and remove the wire (d) from hook (e).



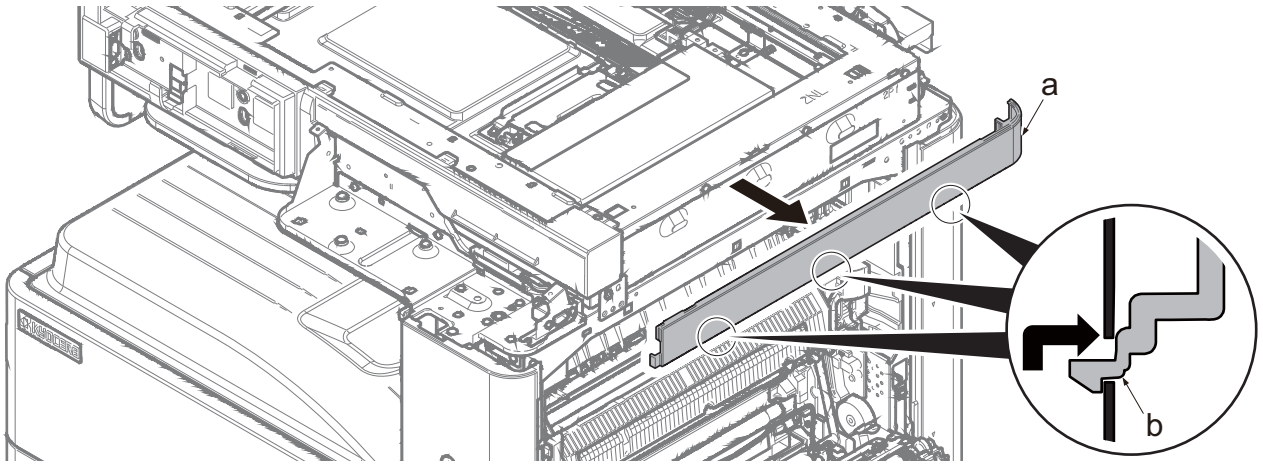
14 Remove five screws (b)(M3×8TP) and then detach the operation lower cover (a).



15 Open the right cover 1 (a).



16 Release three hooks (b) in the direction of the arrow and detach the right top cover (a).

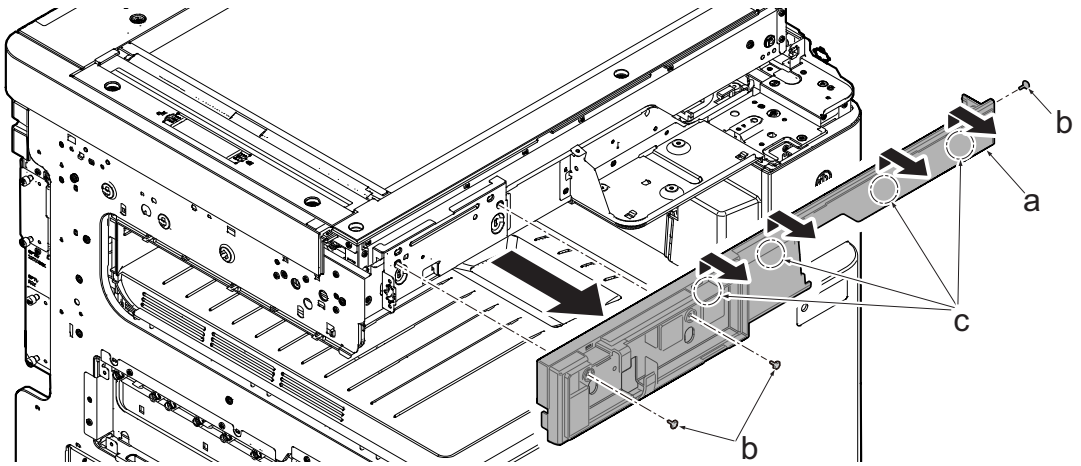


17 Release three protrusions (b) upward and detach the ISU front cover (a).

1 Remove three screws (b).

2 Release the four hooks (c) in the direction of the arrow.

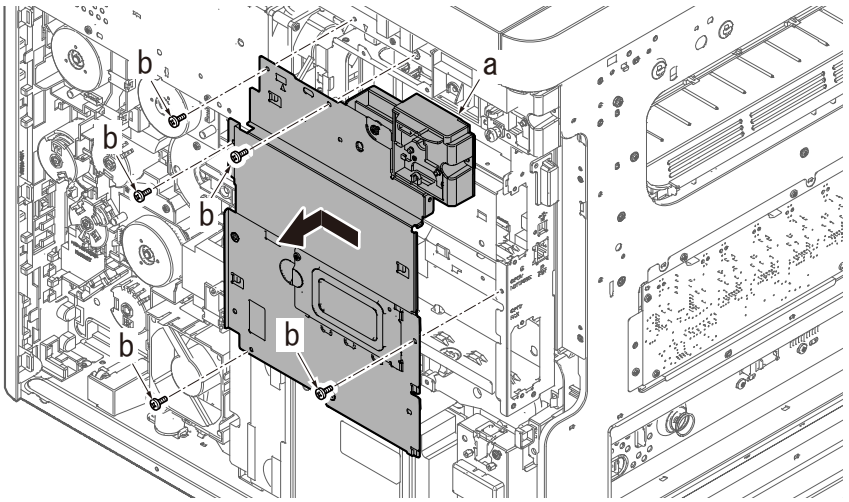
3 Detach the ISU front cover (a).



18 Remove the control box cover.

1 Remove five screws (b)(M3x8).

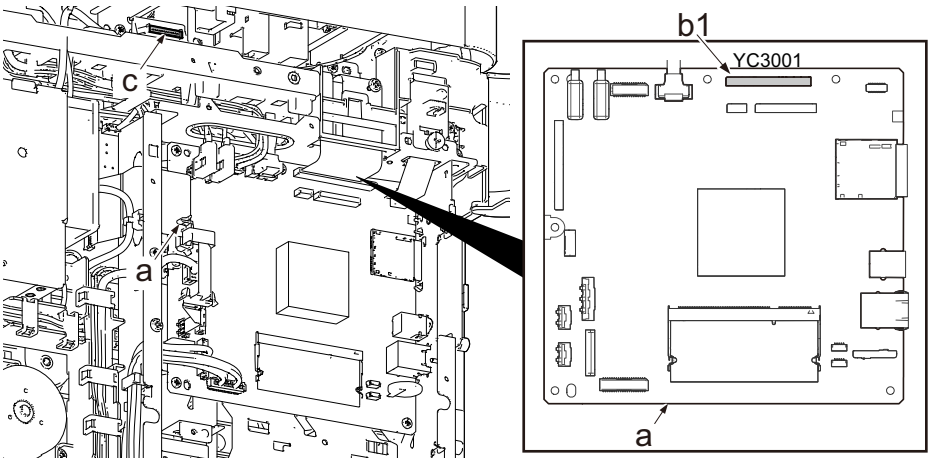
2 Slide the controller box cover (a) in the direction of the arrow and detach it.



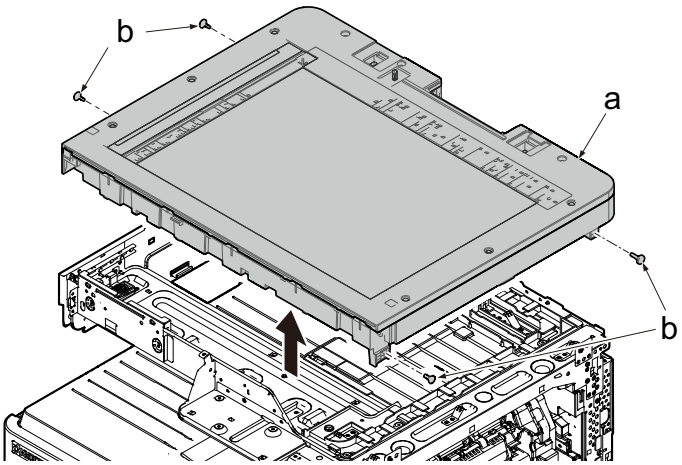
19 Disconnect the connector.

1 Disconnect the FFC (b) from the main PWB (a).

2 Disconnect the connector (c) from the main unit.



20 Remove four screws (b) and detach the scanner unit (a) in the direction of the arrow.



(3) PWBs

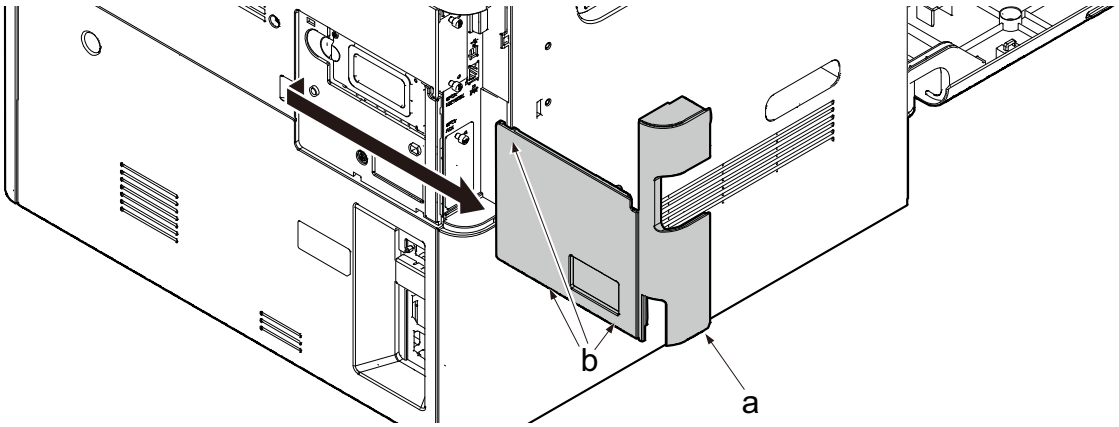
Caution

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.

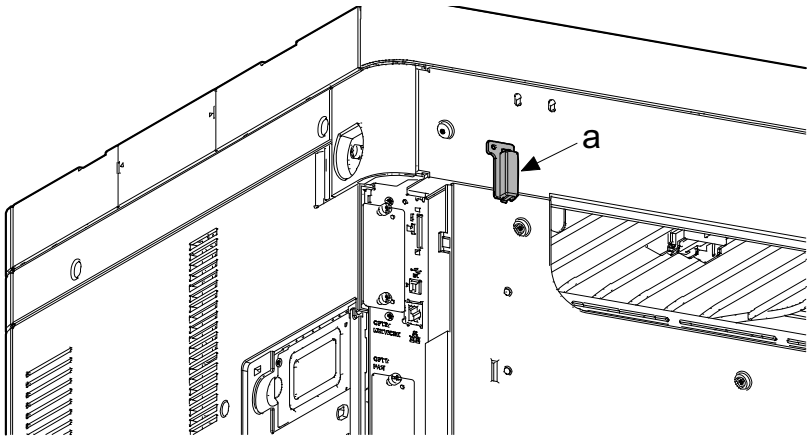
(3-1) Detaching and reattaching the main PWB

1 Release three hooks (b) in the direction of the arrow and remove the controller box cover (a).

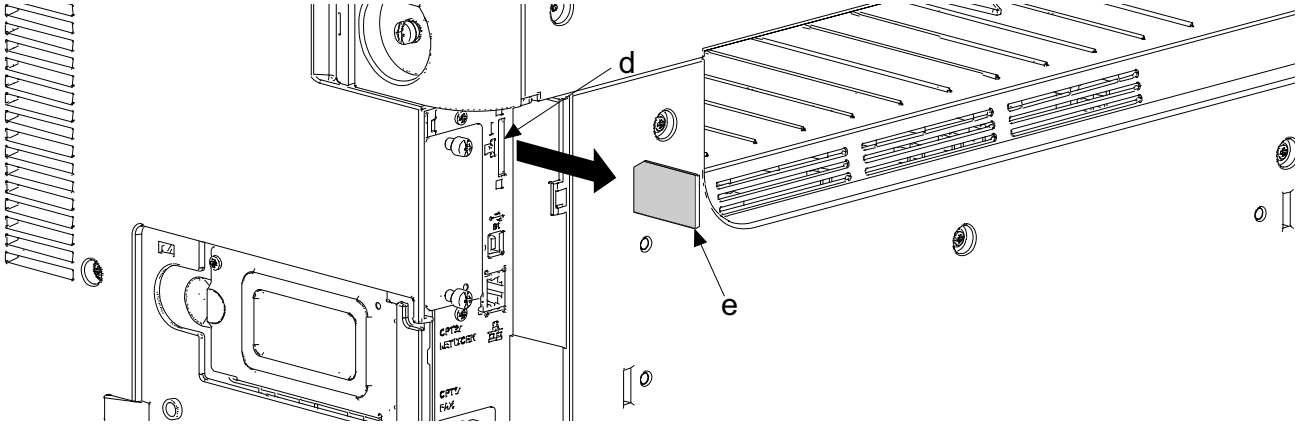


2 Remove the SD/SDHC memory card if installed.

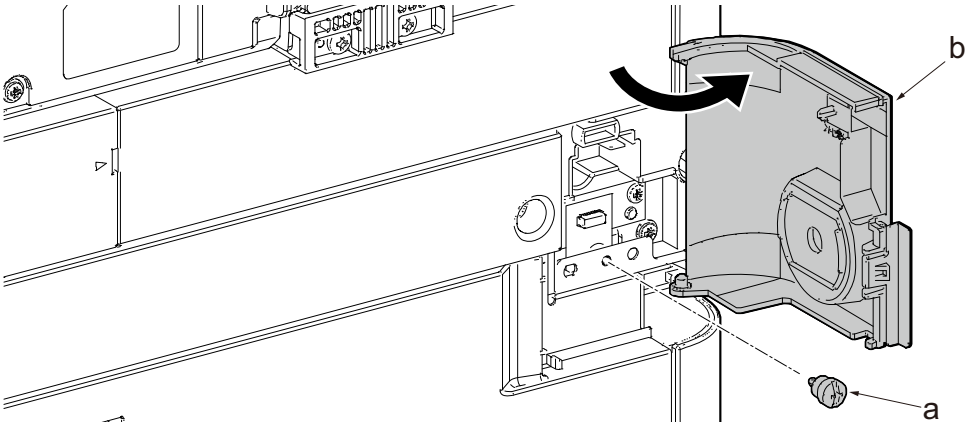
1 Detach the SD cover (a).



3 Detach an SD/SDHC memory card (e) in the memory card slot (d).



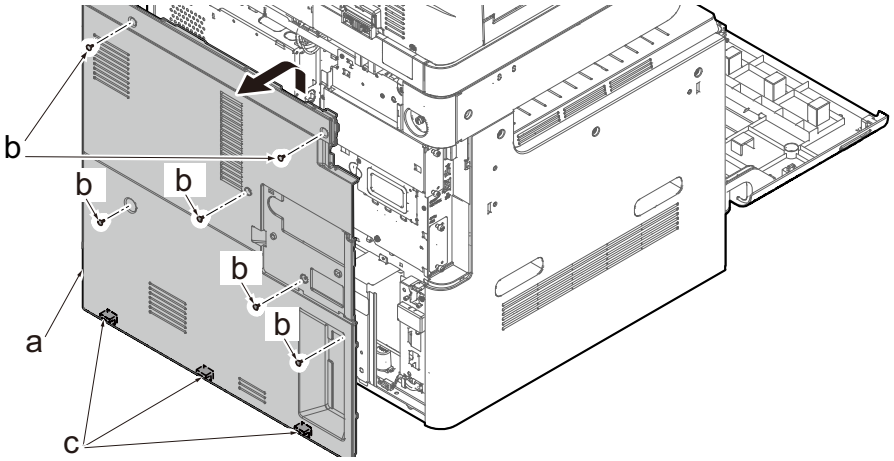
4 Remove the lock screw (b) and open the Wi-Fi cover (b) in the direction of the arrow.



5 Detach the rear cover.

1 Remove six screws (b)(M3x8).

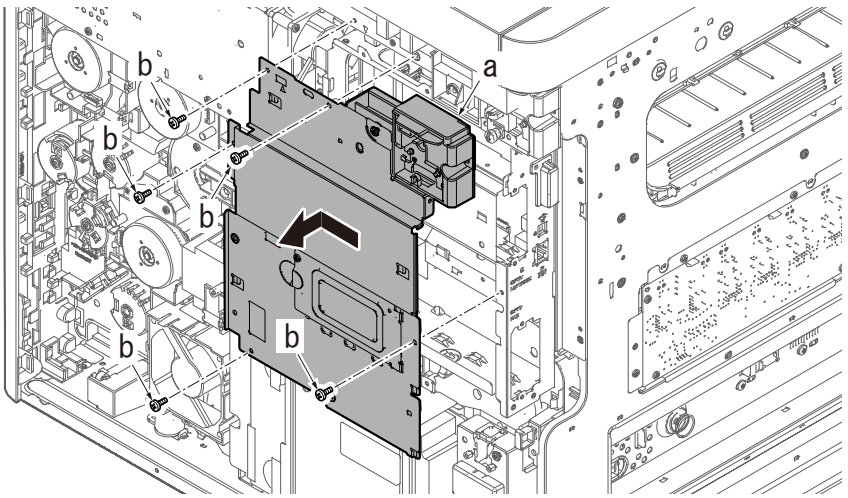
2 To detach the rear cover, align it upward and release three hooks (c).



6 Remove the control box cover.

1 Remove five screws (b)(M3x8).

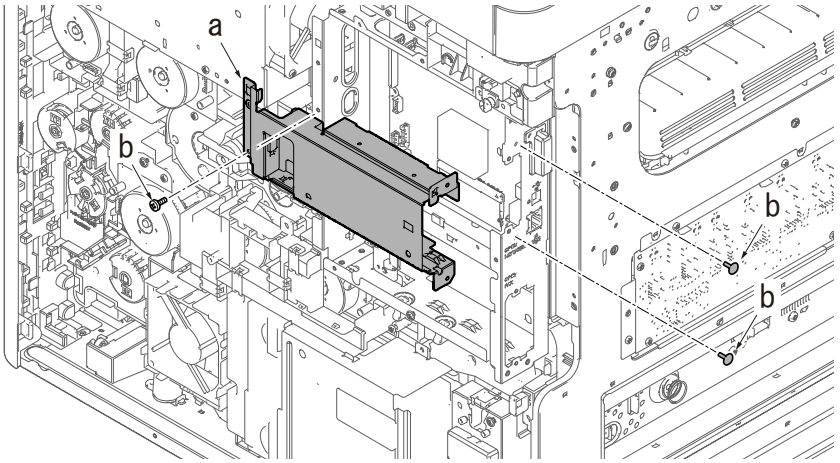
2 Slide the controller box cover (a) in the direction of the arrow and detach it.



7 Detach the rail mounting plate.

1 Detach the FFC.

2 Remove three screws (b) and detach the rail mounting plate (a)S.

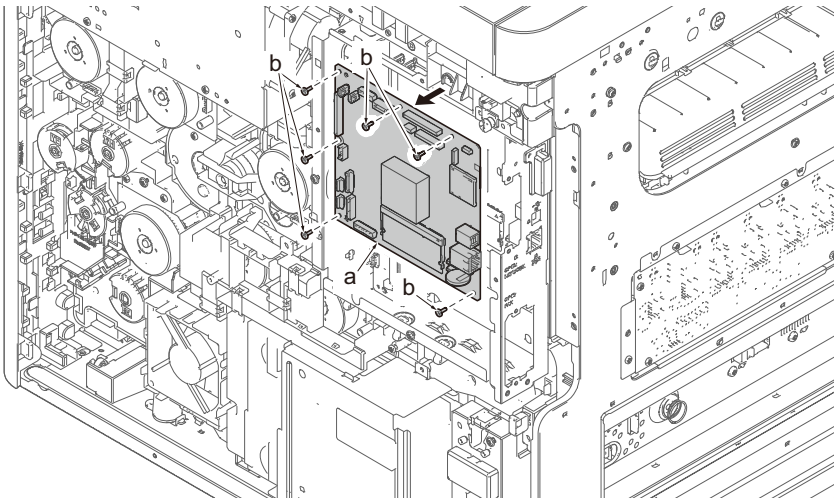


8 Detach the main PWB.

1 Disconnect all the connectors and the FFCs from the main PWB (a).

2 Remove five screws (b) and detach the main PWB.

3 Check or replace the main PWB, and then reattach the parts in the original position.



Important

When replacing the main PWB, refer to the following and reset the maintenance mode.

Resetting the maintenance mode when replacing the main PWB.

1 To clear C0180 [Machine number mismatch], execute maintenance mode U004 to set the machine number.

2 Execute the scan image adjustment.

Input the scanner automatic adjustment original data in maintenance mode U425.

Execute maintenance mode U411 by using the scanner automatic adjustment original.

Execute [Grayscale adjustment] from [System Menu].

3 If the optional item license was activated, reactivate it.

If the card authentication kit (B) was activated, reactivate it.

If the card type was set up, use maintenance mode U222 to set it up.

4 Import the data if it was exported in maintenance mode U917 from the main unit to replace the main PWB. (Also, available at KM-Net Viewer)

5 Reset the user default setting and FAX default setting from the System Menu or Command Center.

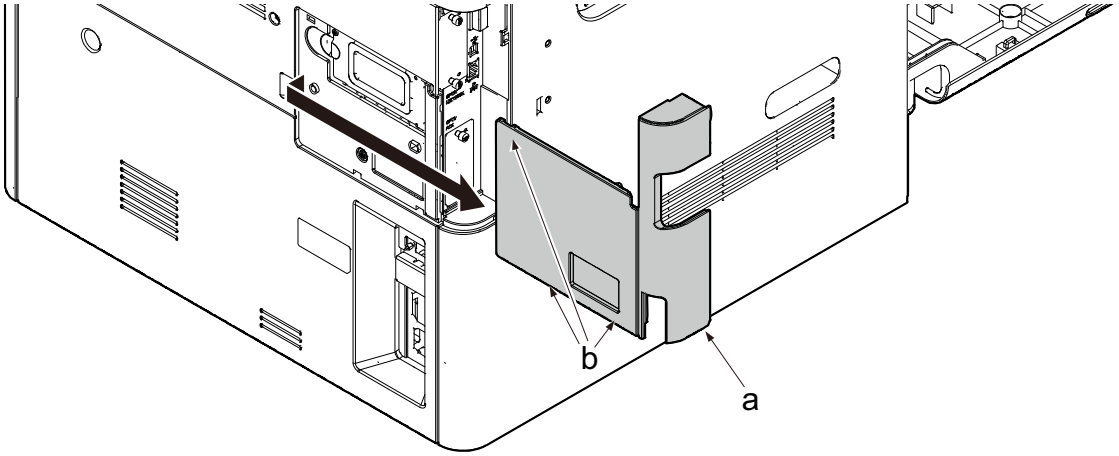
6 Reset the following maintenance mode if necessary.

No.	Maintenance mode relating to the main unit
U250	Maintenance counter preset
U251	Clearing the maintenance counter
U253	Switching the double/single counts
U260	Switching the timing for copy counting
U326	Black line cleaning indication
U341	Printer cassette setting
U343	Duplex priority mode
U345	Maintenance timing pre-caution setting
U402	Print margin adjustment
U403	Scanning margin adjustment (table)
U404	Scanning margin adjustment (DP)
U407	Adjusting the writing timing (Duplex/ Reversal)
U425	Target adjustment
U470	Setting the JPEG compression rate

No.	Maintenance mode relating to the FAX unit
U603	User data 1
U604	User data 2
U610	System 1
U611	System 2
U612	System 3
U615	System 6
U625	Communication Setting
U695	FAX function customization

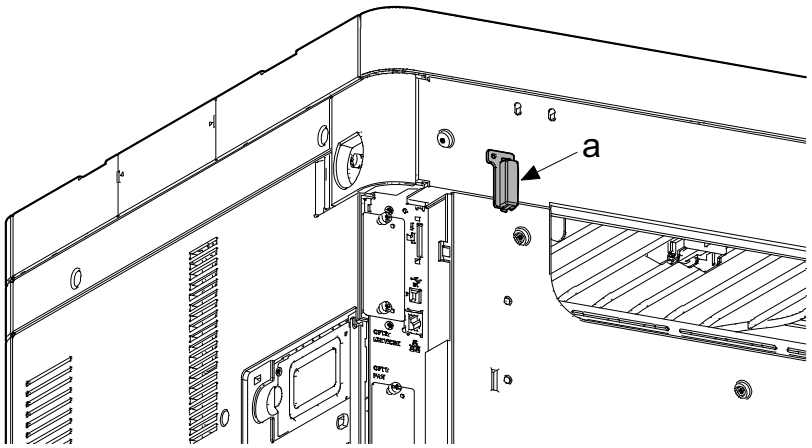
⑶-2 Detaching and reattaching the engine PWB

1 Release three hooks (b) in the direction of the arrow and remove the controller box cover (a).

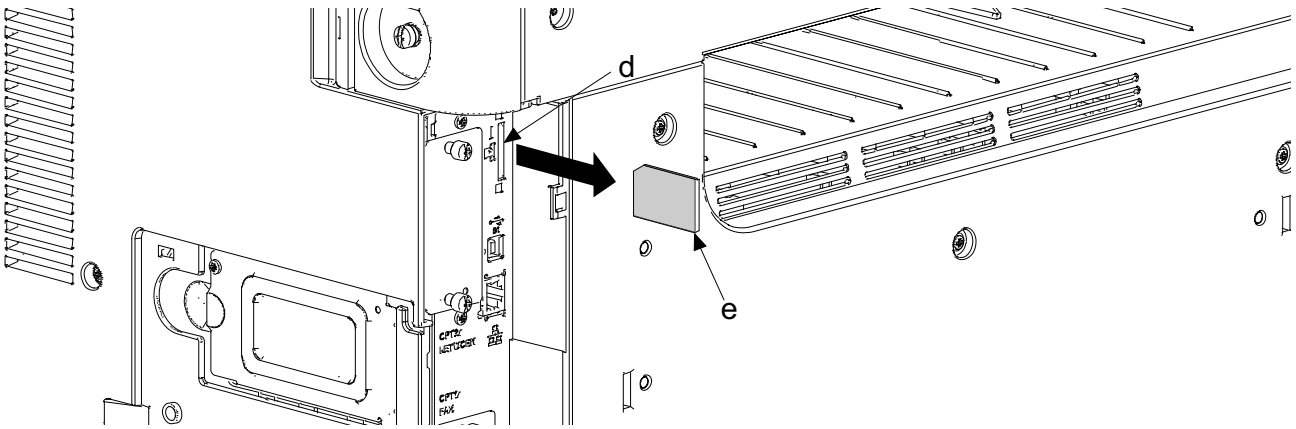


2 Remove the SD/SDHC memory card if installed.

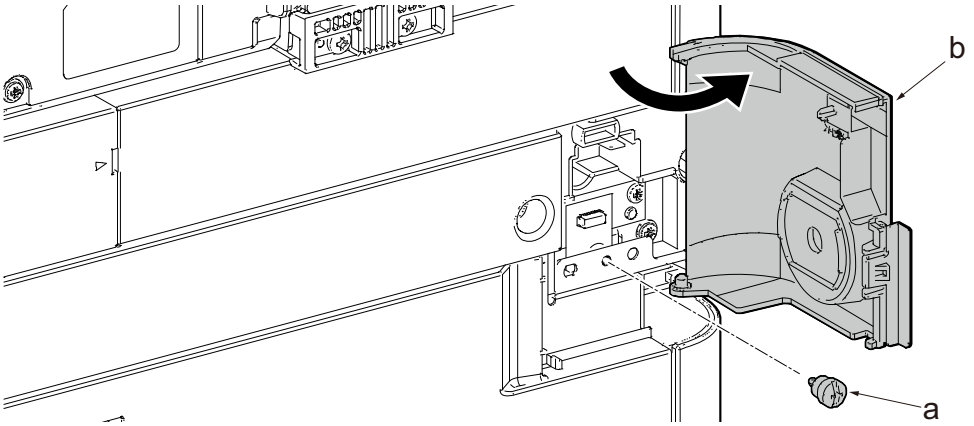
1 Detach the SD cover (a).



3 Detach an SD/SDHC memory card (e) in the memory card slot (d).



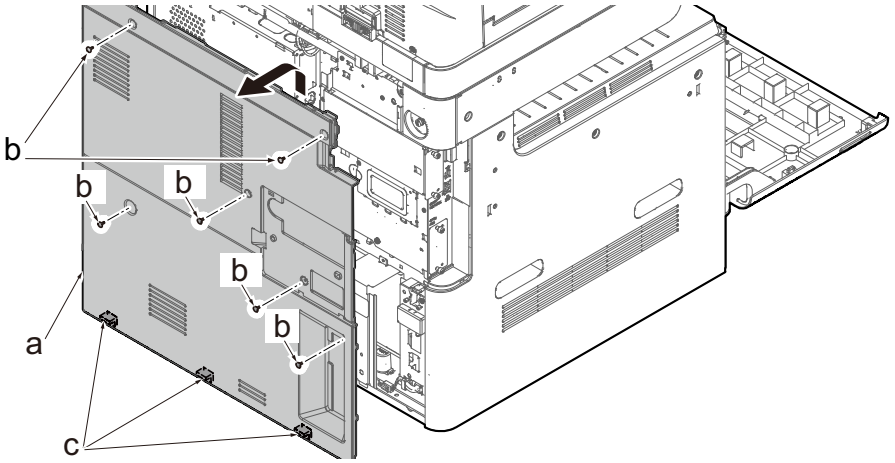
4 Remove the lock screw (b) and open the Wi-Fi cover (b) in the direction of the arrow.



5 Detach the rear cover.

1 Remove six screws (b)(M3x8).

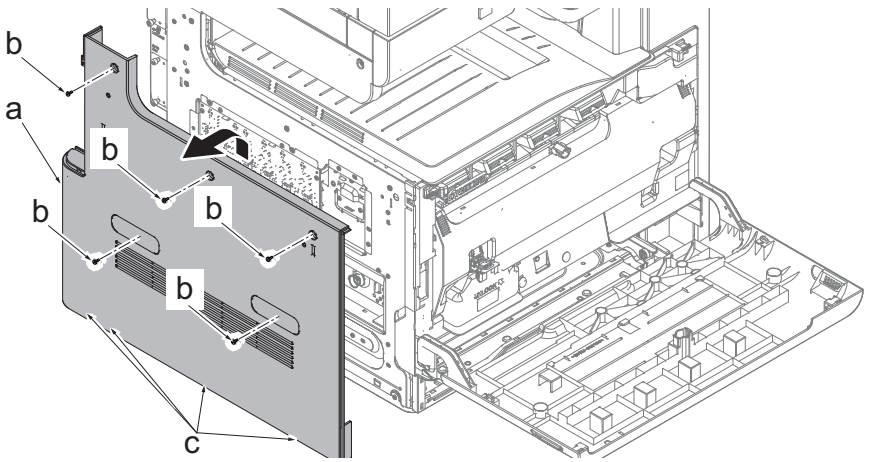
2 To detach the rear cover, align it upward and release three hooks (c).



6 Remove the left lower cover.

1 Remove five screws (b)(M3×8TP).

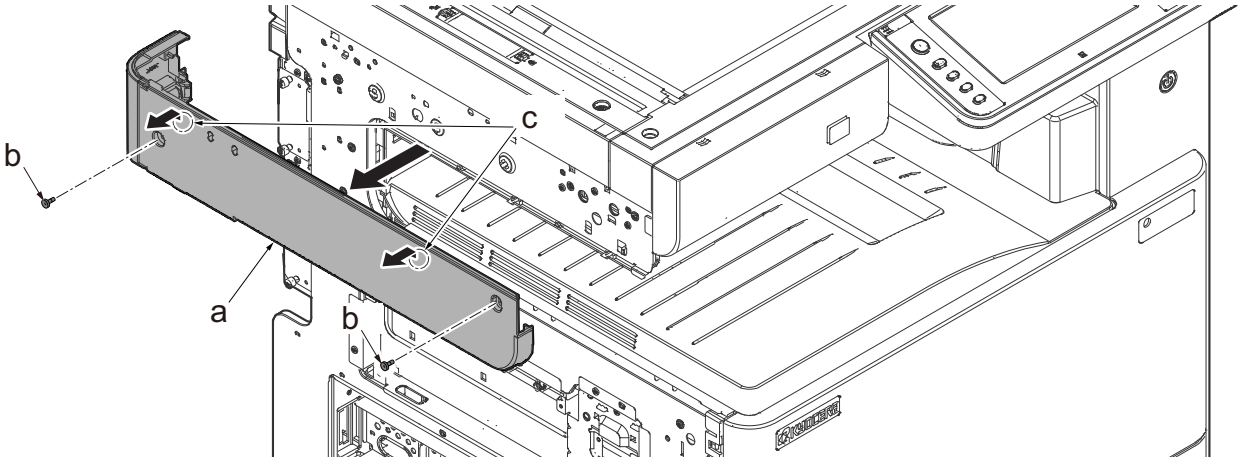
2 To detach the left lower cover (b), align it upward and release four hooks (c).



7 Detach the left top cover.

1 Remove two screws (b).

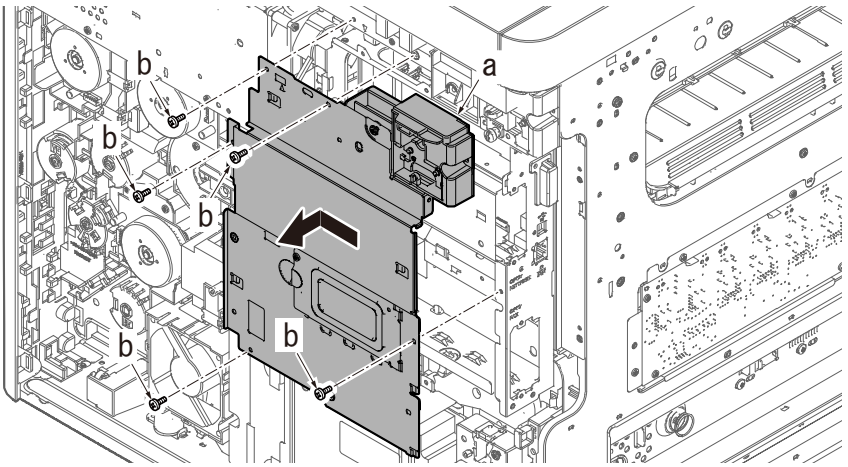
2 Release the two hooks (c) upward and detach the upper left cover (a).



8 Remove the control box cover.

1 Remove five screws (b)(M3x8).

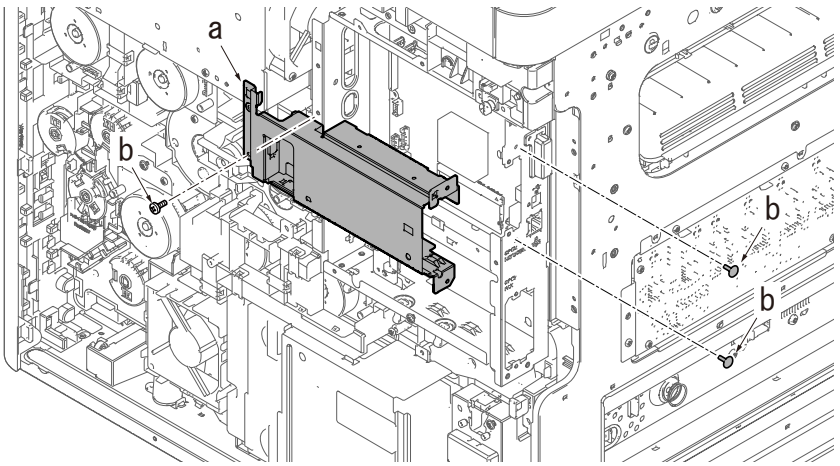
2 Slide the controller box cover (a) in the direction of the arrow and detach it.



9 Detach the rail mounting plate.

1 Detach the FFC.

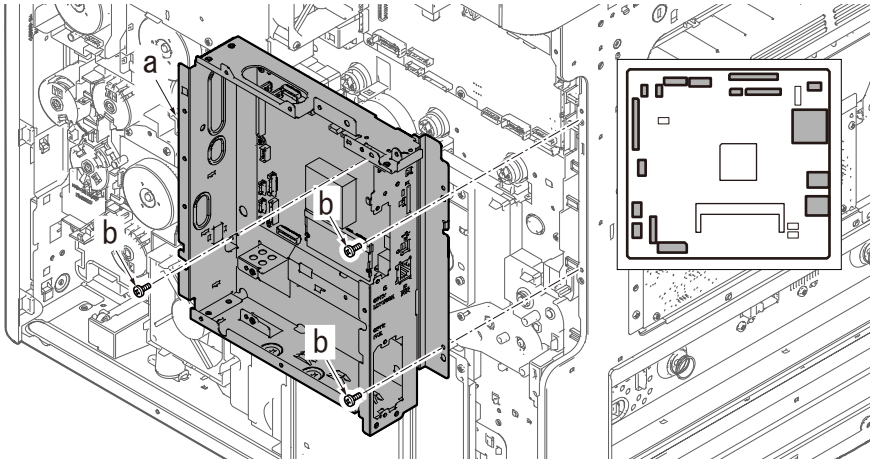
2 Remove three screws (b) and detach the rail mounting plate.



10 Detach the main PWB mounting plate.

1 Disconnect all the connectors and the FFCs from the main PWB (a).

2 Remove three screws (b) and detach the main PWB mounting plate.

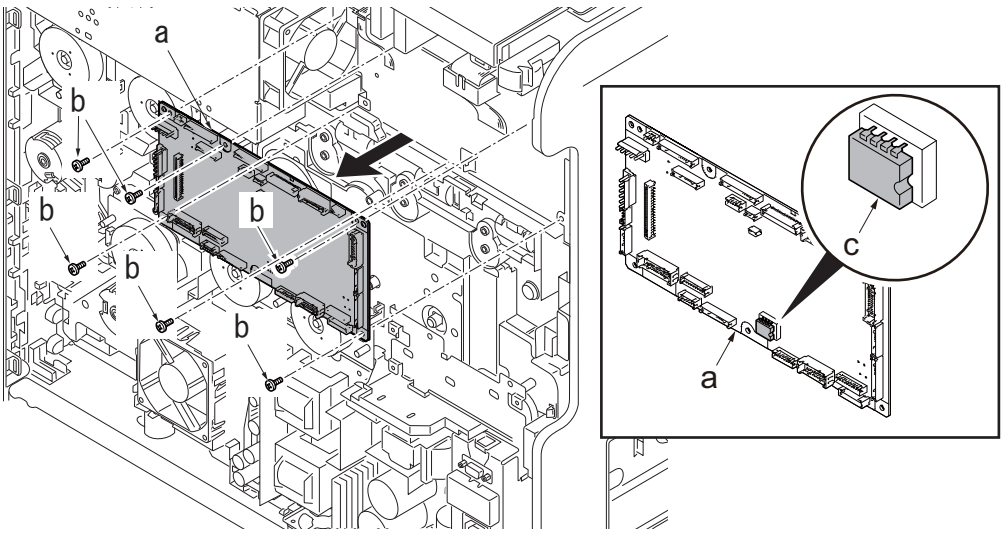


11 Detach the engine PWB.

1 Disconnect all the connectors and the FFCs from the engine PWB (a).

2 Remove six screws (b) and detach the engine PWB (a).

3 Check or replace the engine PWB (a), and then reattach the parts in the original position.

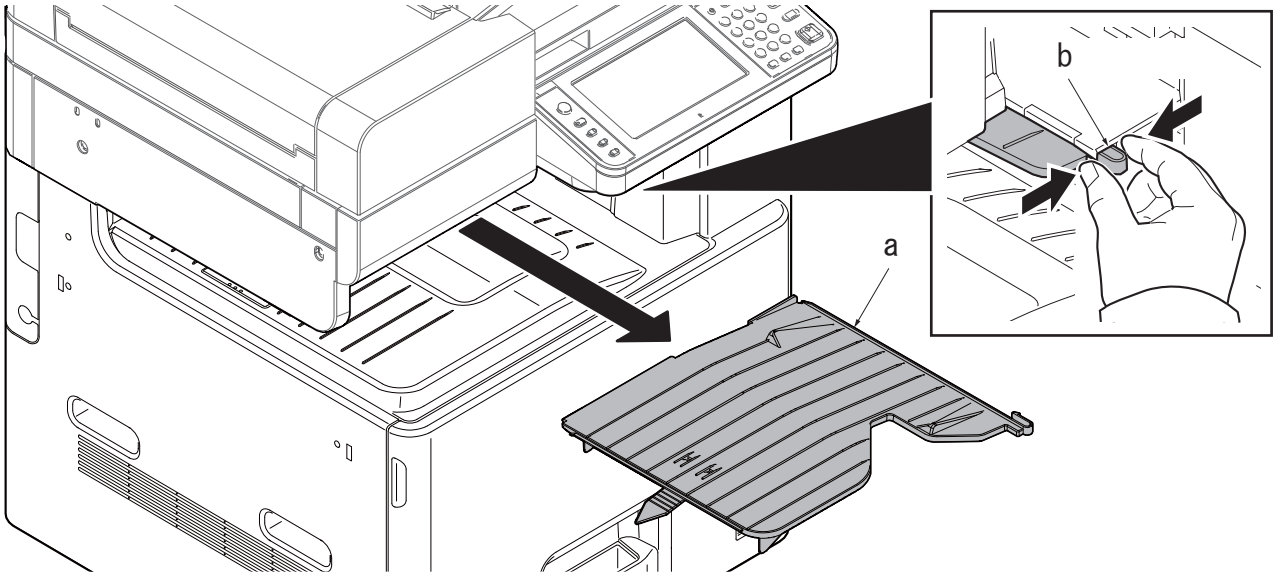


Important

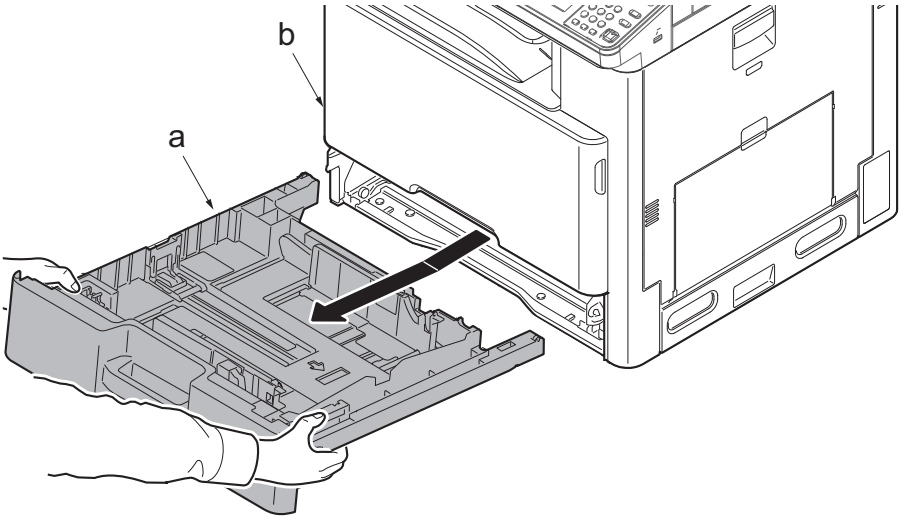
When replacing the engine PWB (a), make sure to remove the EEPROM (U12)(c) from the old PWB and install it in the new PWB.

⑶-3⑶ Detaching and reattaching the high-voltage PWB

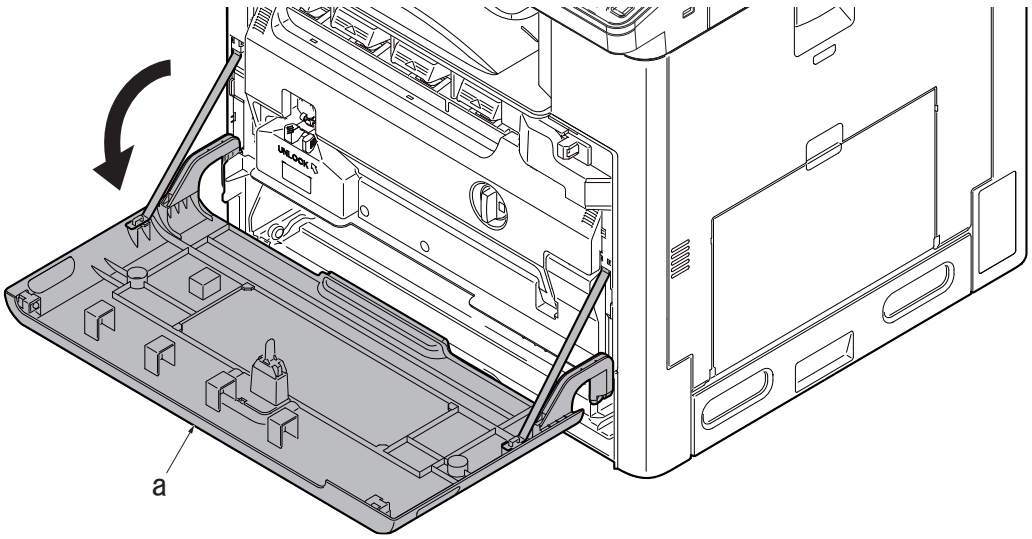
1 **Release the lock lever (b) and JS tray (a) in the direction of the arrow.**



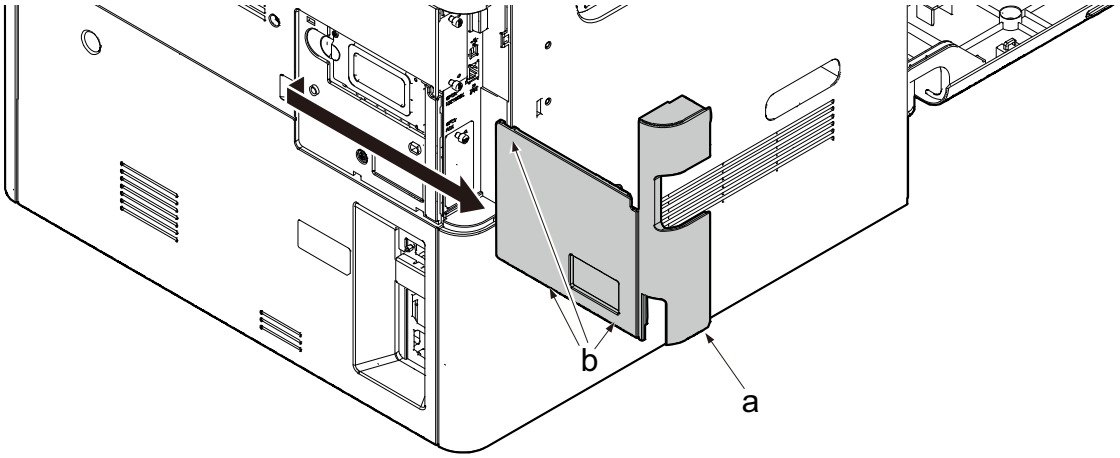
2 **Pull out the cassette (a) from the main unit (b) and remove it in the direction of the arrow.**



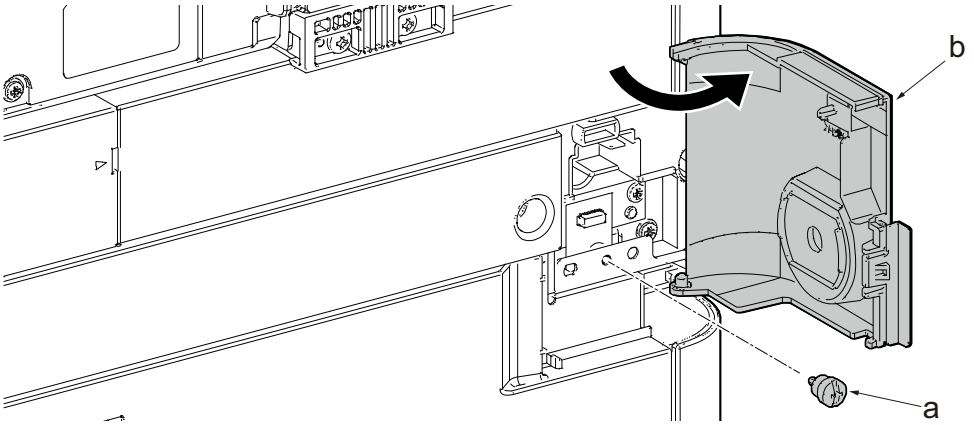
3 **Open the front cover (a).**



4 Release three hooks (b) in the direction of the arrow and remove the controller box cover (a).



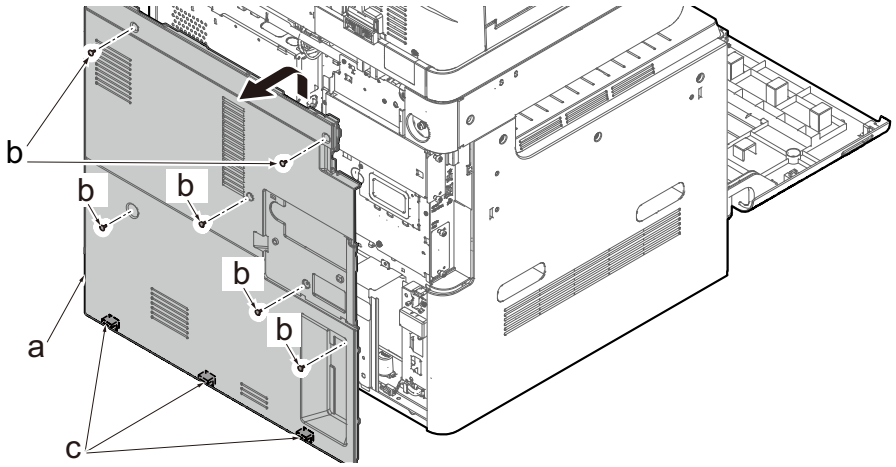
5 Remove the lock screw (b) and open the Wi-Fi cover (b) in the direction of the arrow.



6 Detach the rear cover.

1 Remove six screws (b)(M3x8).

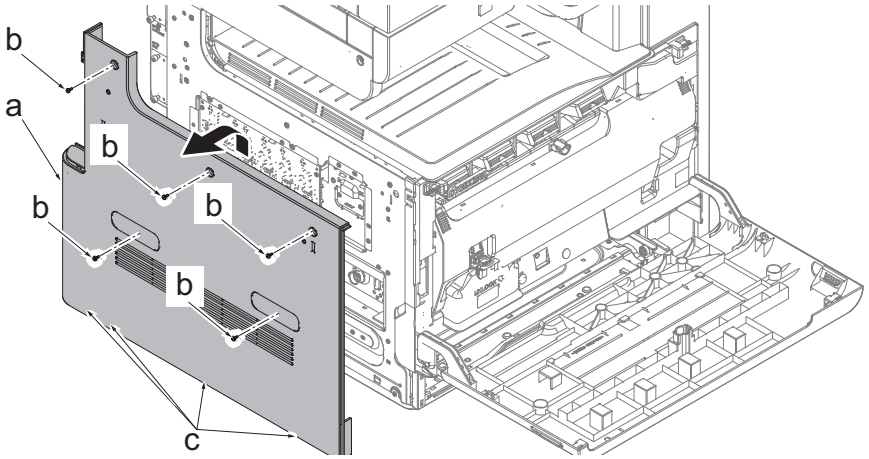
2 To detach the rear cover, align it upward and release three hooks (c).



7 Remove the left lower cover.

1 Remove five screws (b)(M3×8TP).

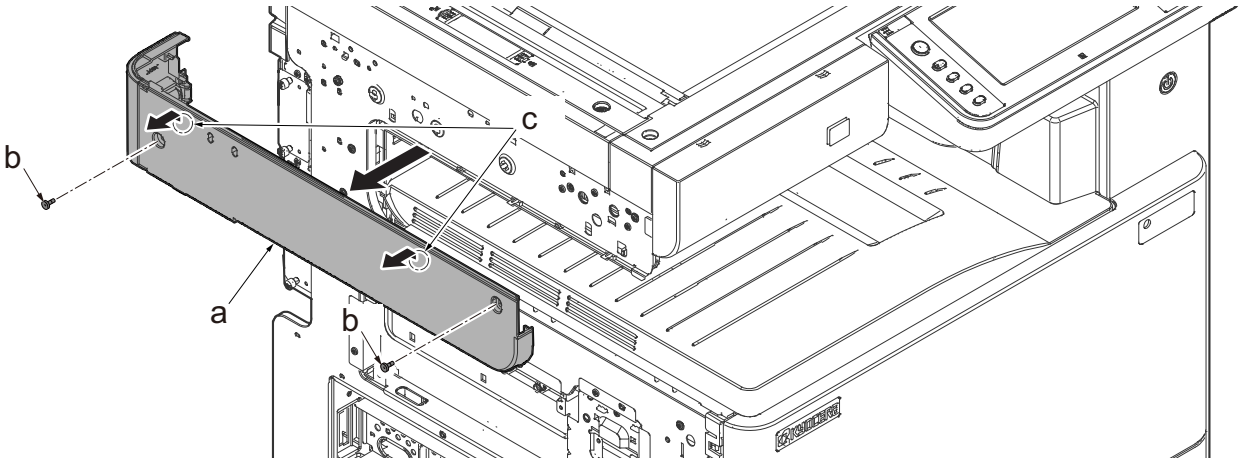
2 To detach the left lower cover (b), align it upward and release four hooks (c).



8 Detach the left top cover.

1 Remove two screws (b).

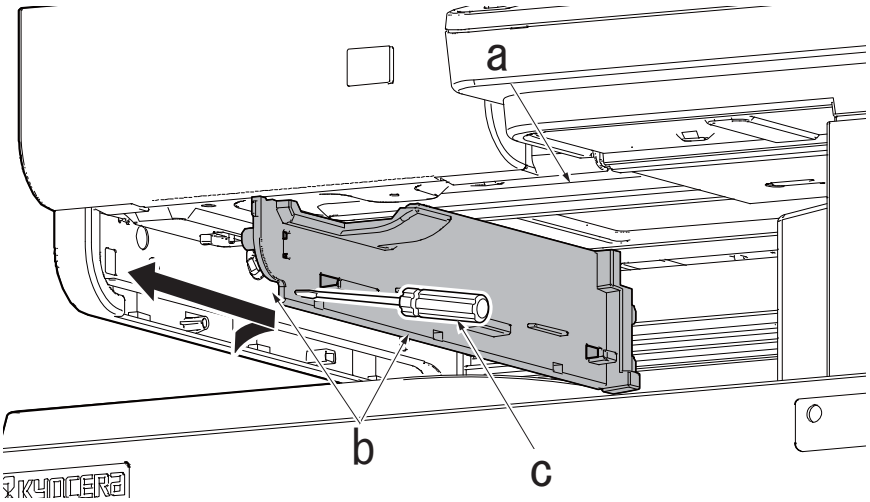
2 Release the two hooks (c) upward and detach the upper left cover (a).



9 Detach the tray left cover.

1 Release two hooks (b) with a flat-blade screwdriver (c).

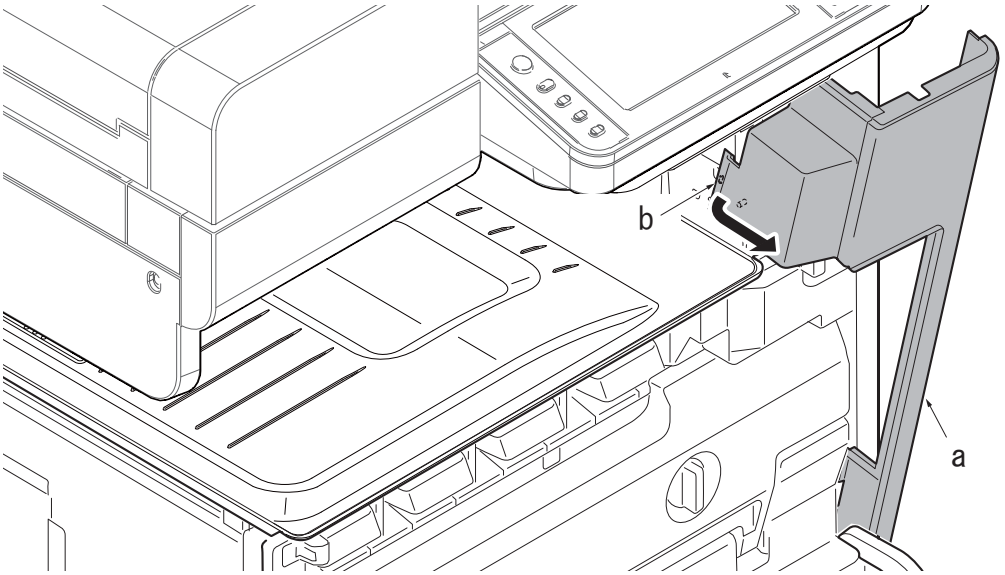
2 Detach the tray left cover (a) while avoiding the tray rear cover (d).



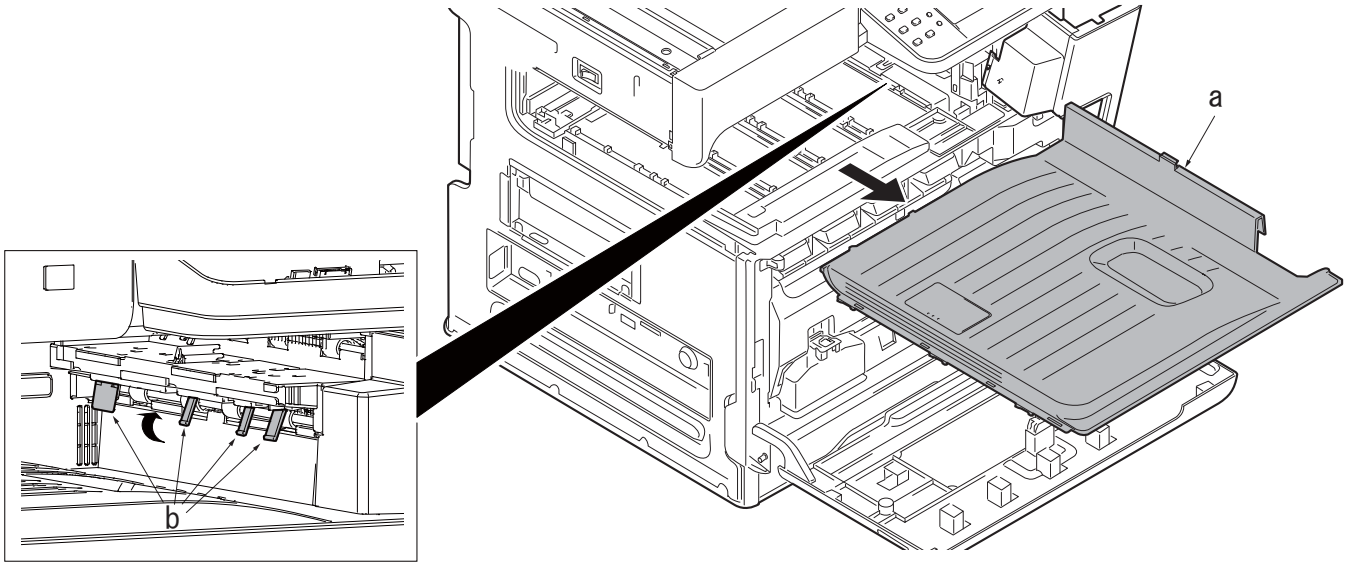
10 Detach the front top cover.

1 Release two hooks (b) of front top cover (a).

2 Tilt the front top cover (a) toward you.



11 Detach the inner tray.



Note

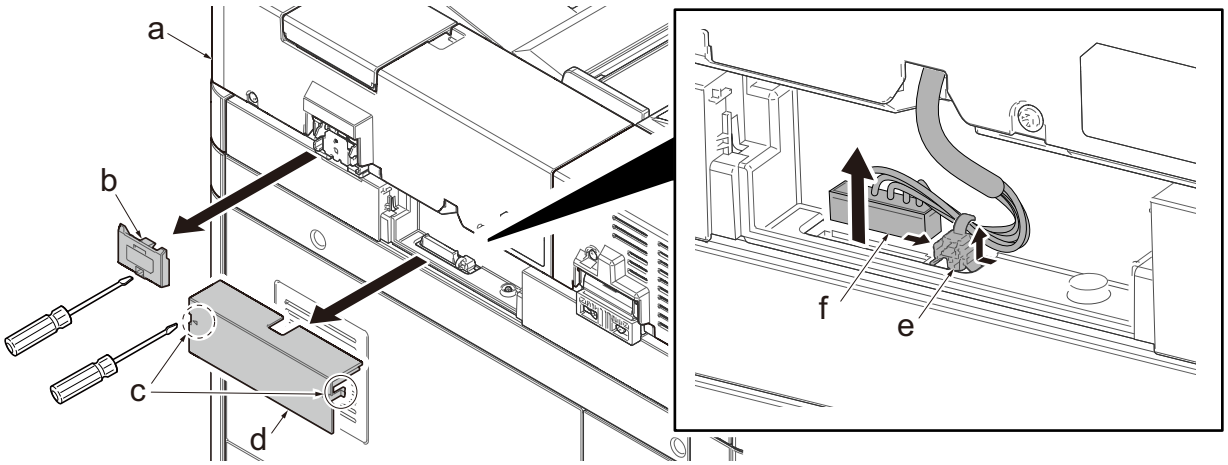
When installing the inner tray, lift the paper holding lever (b) in the direction of the arrow.

12 Detach the DP connector of the document processor from the main unit.

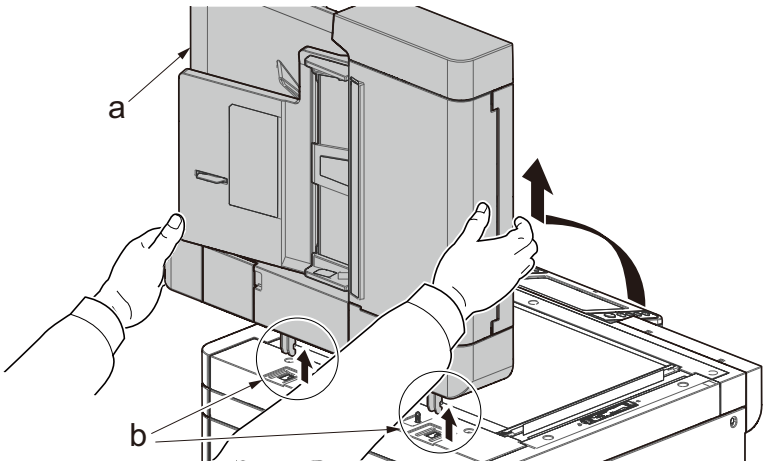
1 Release the hook with a flat-blade screwdriver from the document processor (a) and detach the angle regulating plate (b).

2 Release two hooks (c) with a flat-blade screwdriver, detach the DP Connector cover (d).

3 Remove the wire saddles (e) and the DP connector cover (f).



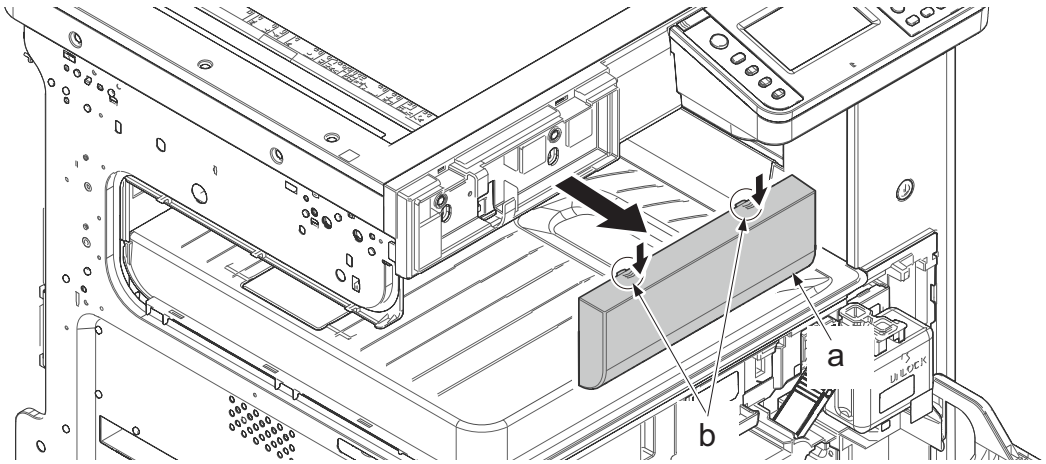
13 Open the document processor (a) to upright and detach the hinge (b) in the direction of the arrow.



14 Detach the IC card reader cover.

1 Release two hooks (b) downwards.

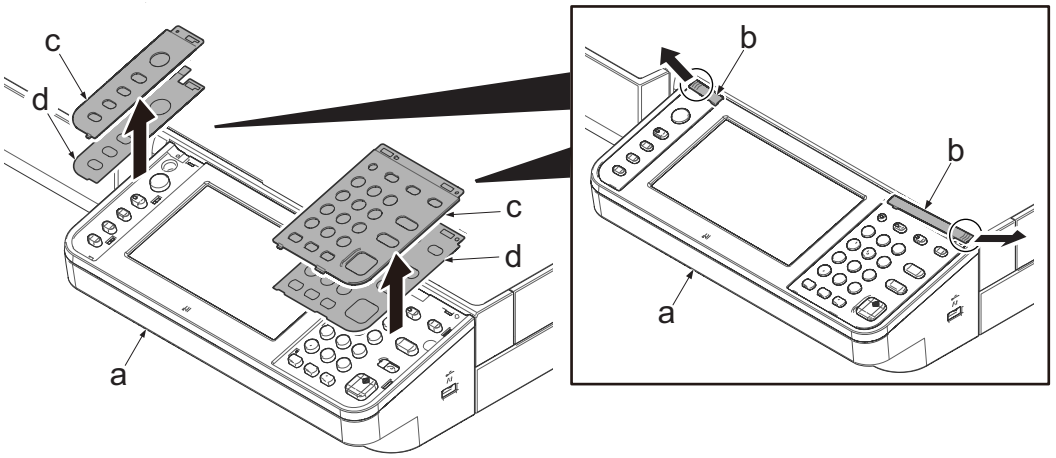
2 Detach the IC card reader cover (a) in the direction of the arrow.



15 Detach the language sheet.

1 Lift up two points of the leading edge of the operation panel cover (b), slide them in the direction of the arrow and then detach the operation panel cover from the operation panel (a).

2 Detach two clear panels (b) from the operation panel (a) and detach the language sheet (c).

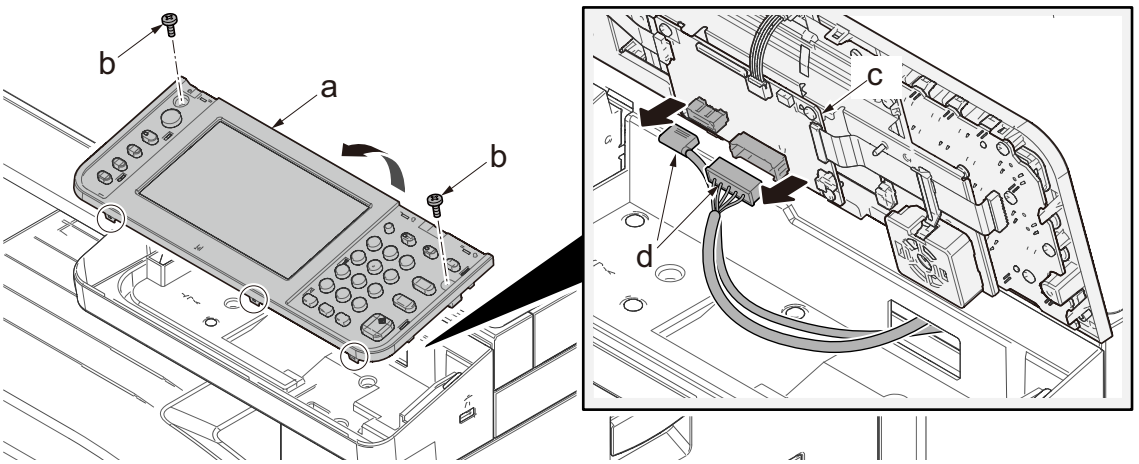


16 Detach the operation top unit.

1 Remove two screws (b).

2 Disconnect two connectors (d) of the operation panel PWB (c).

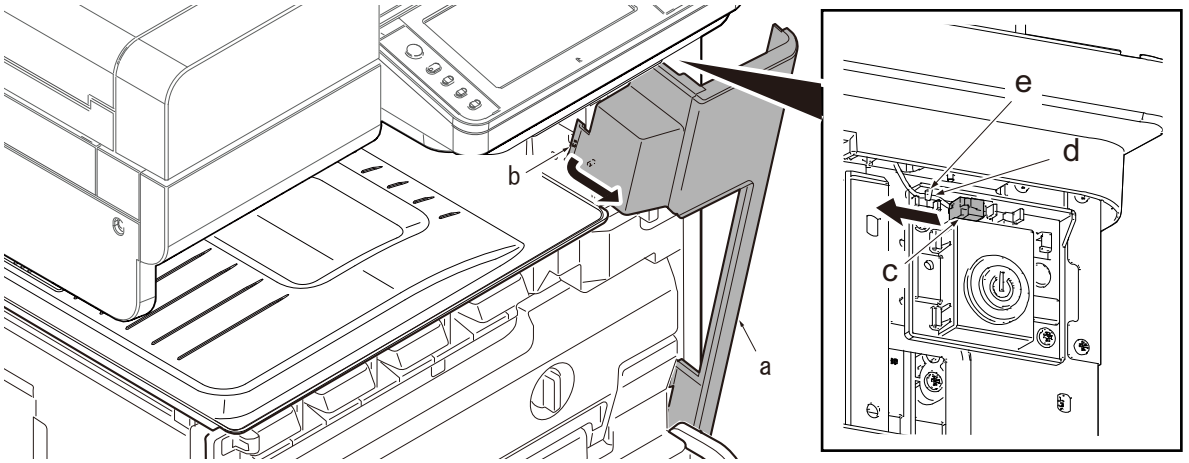
3 Detach the operation top unit (a).



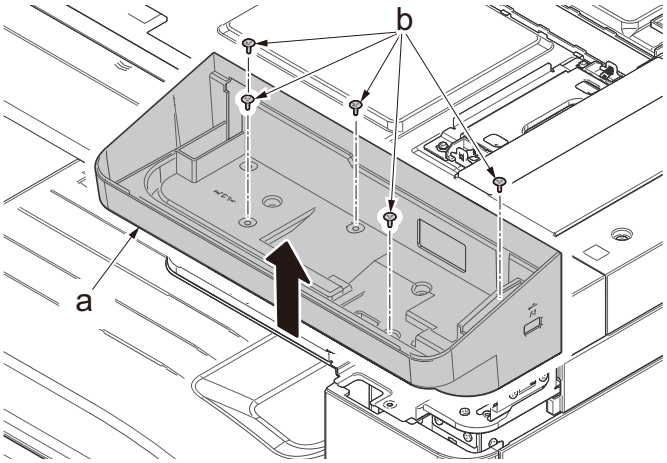
17 Remove the wire of the power switch.

1 Release two hooks (b) of front top cover (a) and tilt it toward you.

2 Remove the connector (c) and remove the wire (d) from hook (e).

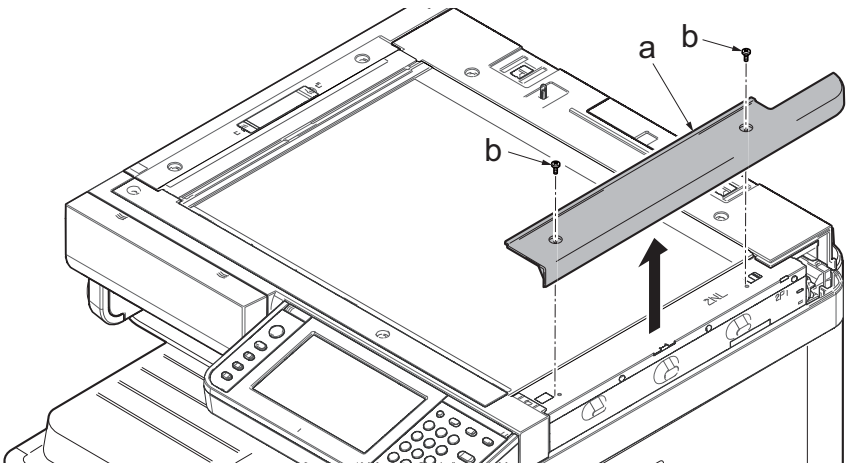


18 Remove five screws (b)(M3×8TP) and then detach the operation lower cover (a).

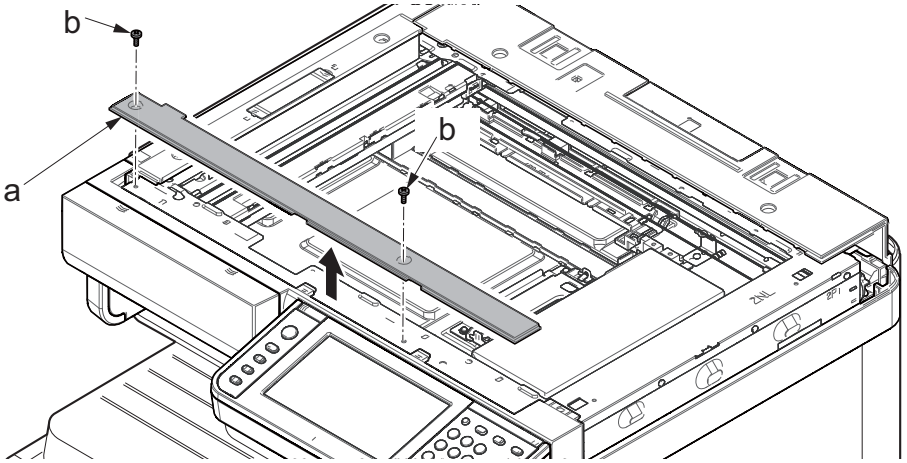


19 Remove two screws (b) and then remove the ISU right cover (a). (CCD model only)

- Reattach it while aligning it to the contact glass side.



20 Remove two screws (b)(M3×8TP) and then detach the ISU upper right cover (a). (CCD model only)



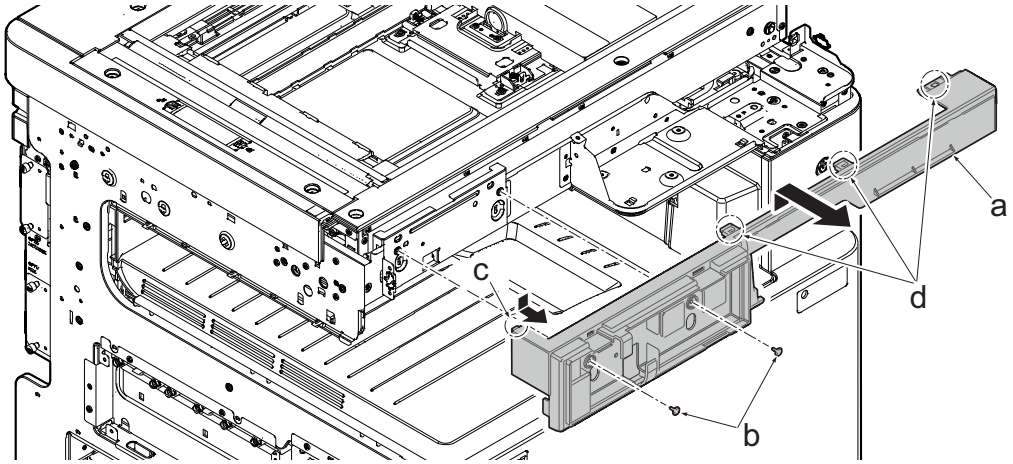
21 Release three protrusions (b) upward and detach the ISU front cover (a).

CCD model

1 Remove two screws (b).

2 Release the hook(c) and three protrusions (d).

3 Detach the ISU front cover (a) in the direction of the arrow.

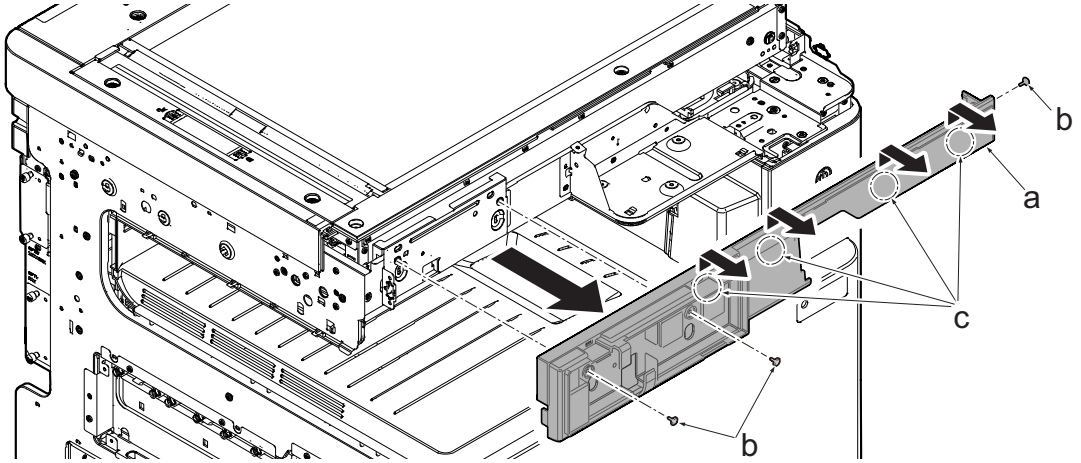


CIS model

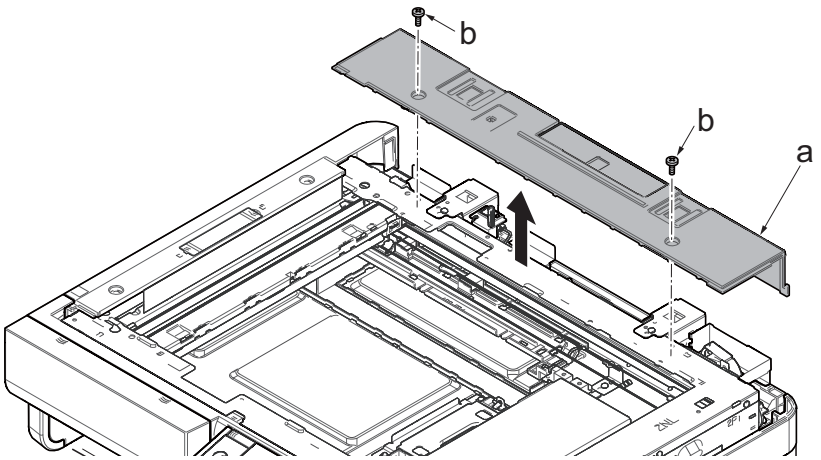
1 Remove three screws (b).

2 Release the four hooks (c) in the direction of the arrow.

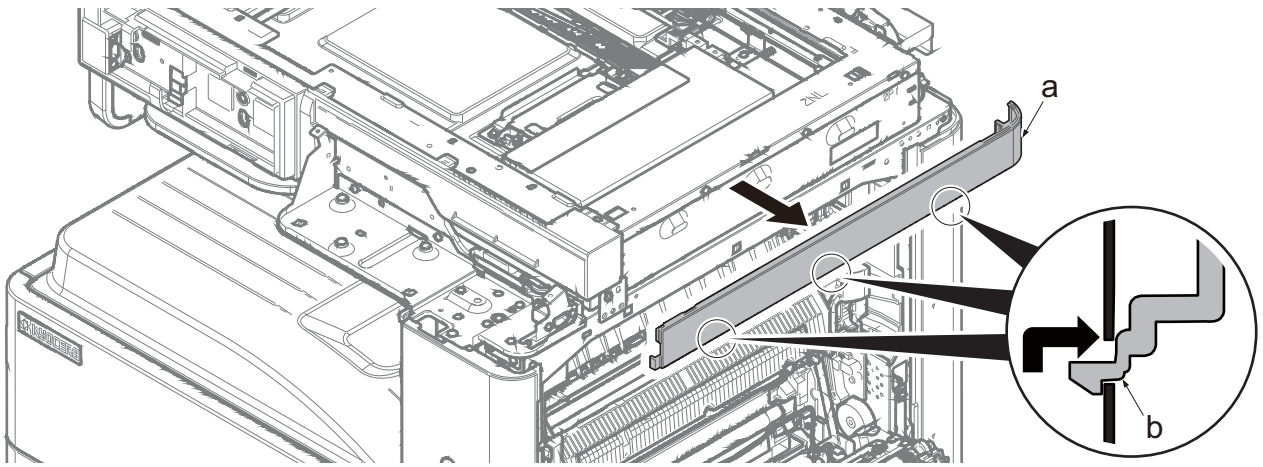
3 Detach the ISU front cover (a).



22 Remove two screws (b) and then detach the ISU rear cover (a). (CCD model only)



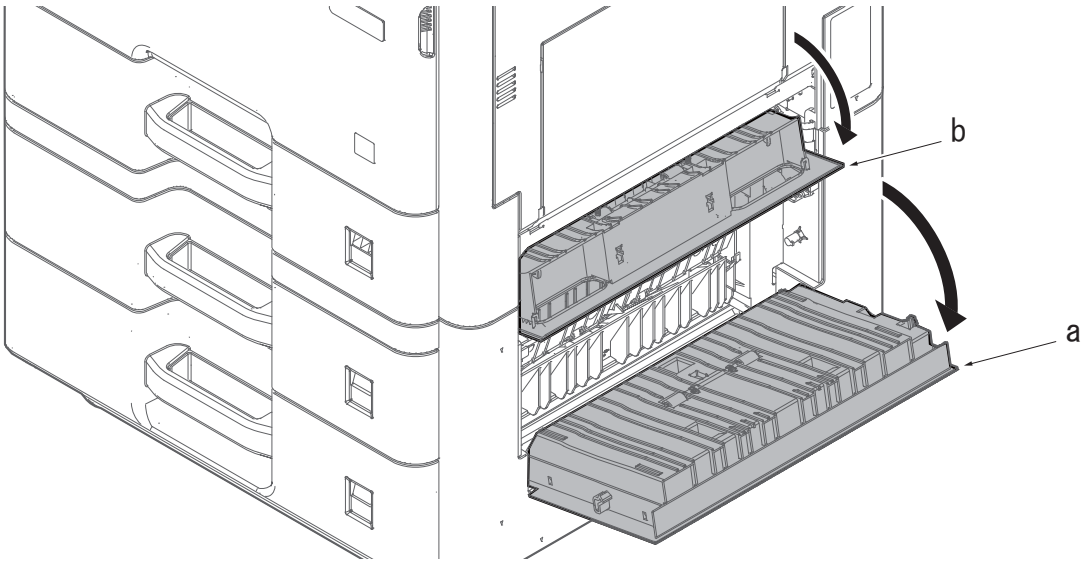
23 Release three hooks (b) in the direction of the arrow and detach the right top cover (a).



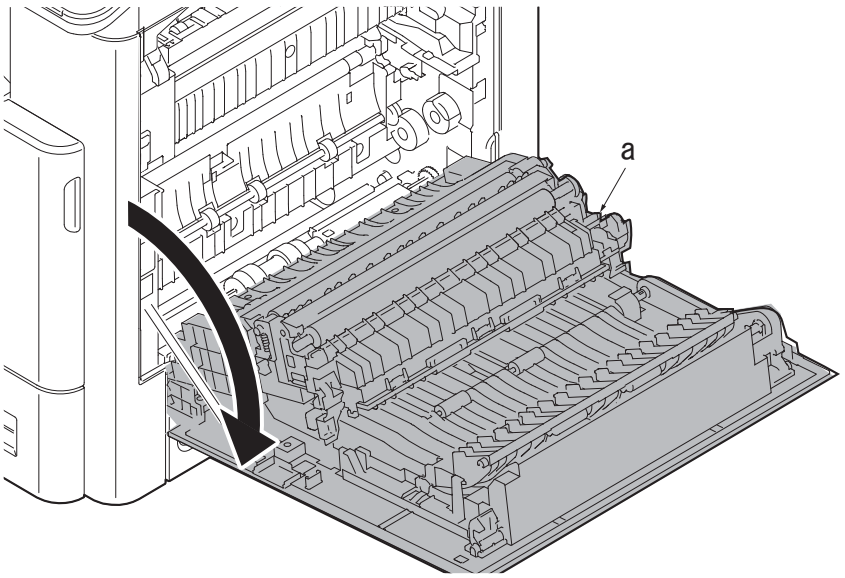
24 Open the right cover 2.

1 Open the PF right cover (a). (PF installed machine)

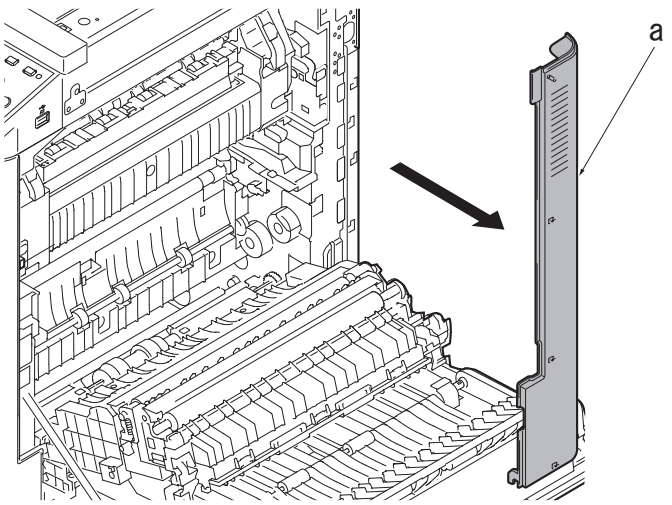
2 Open the right cover 2 (b).



25 Open the right cover 1 (a).



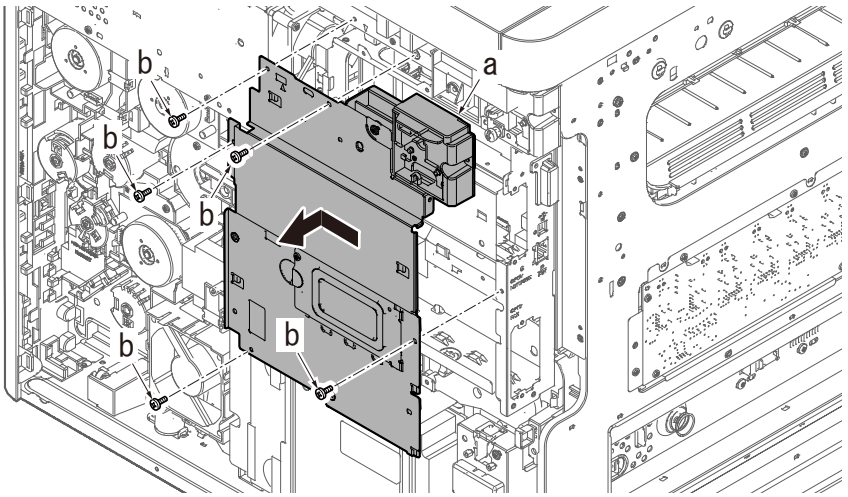
26 Detach the right rear cover (a).



27 Remove the control box cover.

1 Remove five screws (b)(M3x8).

2 Slide the controller box cover (a) in the direction of the arrow and detach it.

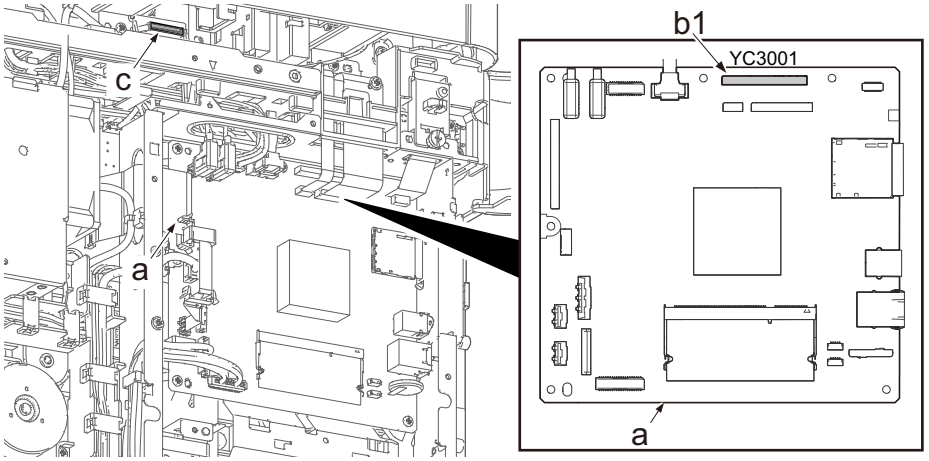


28 Disconnect the connector.

1 Disconnect the FFC from the main PWB (a).

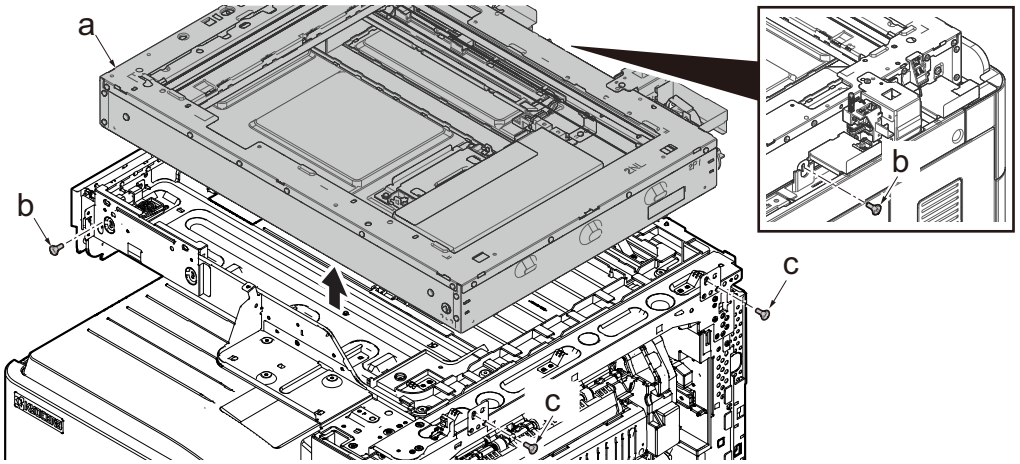
- CCD model: two FFC (b2)
- CIS model: one FFC (b1)

2 Disconnect the connector (c) from the main unit.

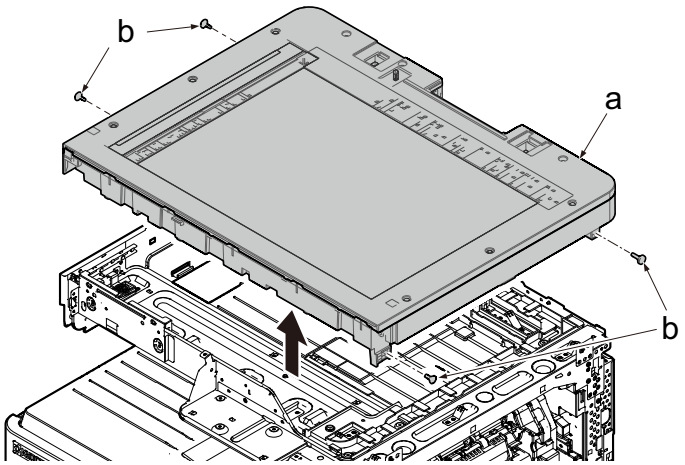


29 Remove two screws (b) (M3x8TP) and two header pins (c), and detach the scanner unit (a) upward.

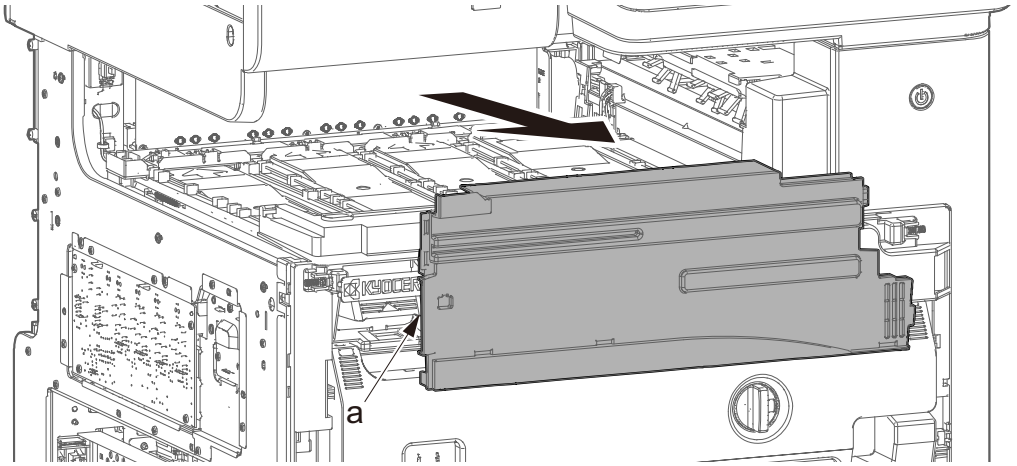
CCD model



CIS model

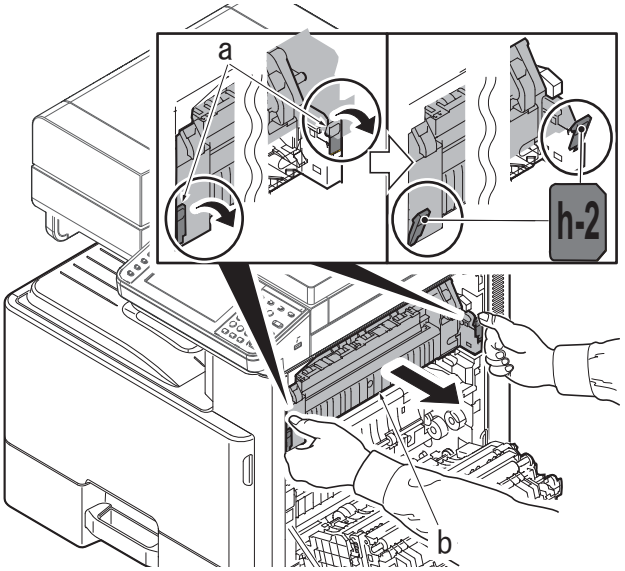


30 Detach the tray rear cover (b).



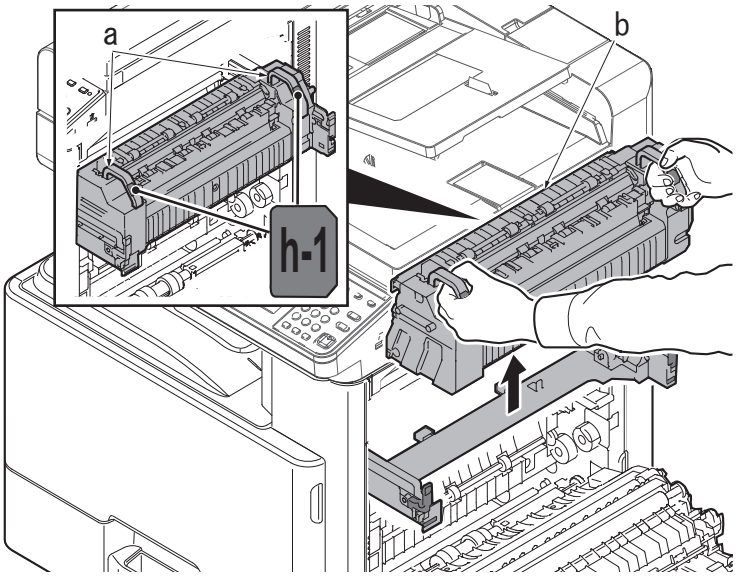
31 Detach the fuser unit.

1 Release two mount levers (a) and then pull out the fuser unit (b) toward you.



2 Hold two knobs (a) of the fuser unit (b) and lift the fuser unit upwards and then detach it.

3 Check or replace the fuser unit, and then reattach the parts in the original position.

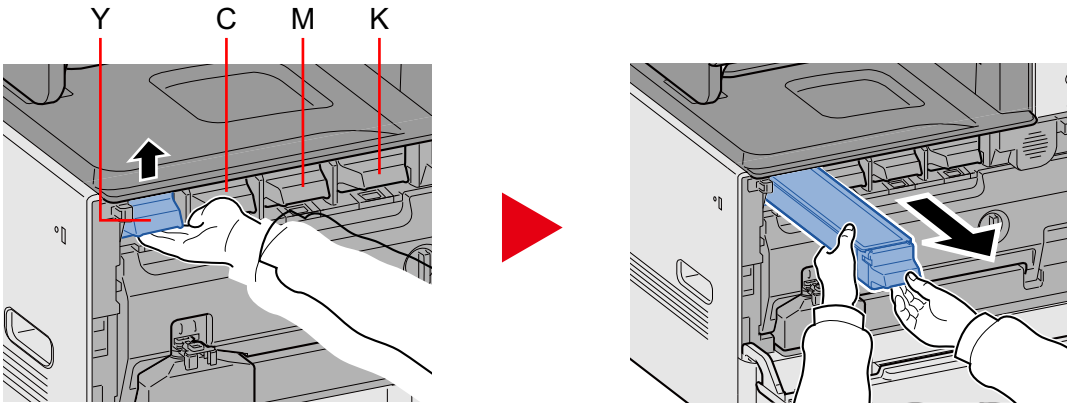


Important

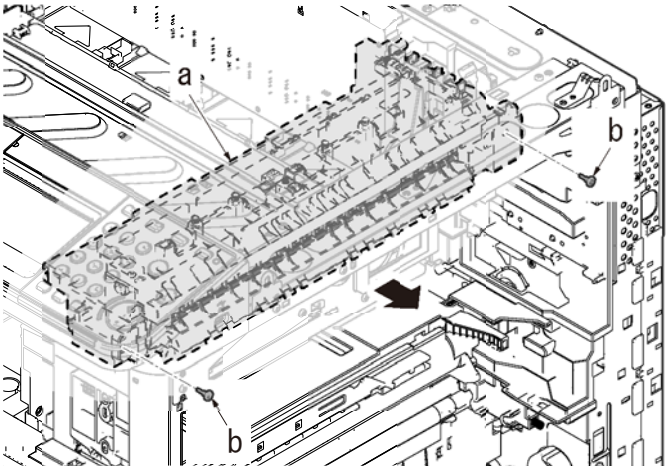
Insufficient lock will cause the phenomenon below when installing the fuser unit.

- Rear side lock failure (This will cause the C6600 fuser belt rotation failure without drive at the rear side.)
- Front side lock failure (This will cause the image squareness failure due to skew feed.)

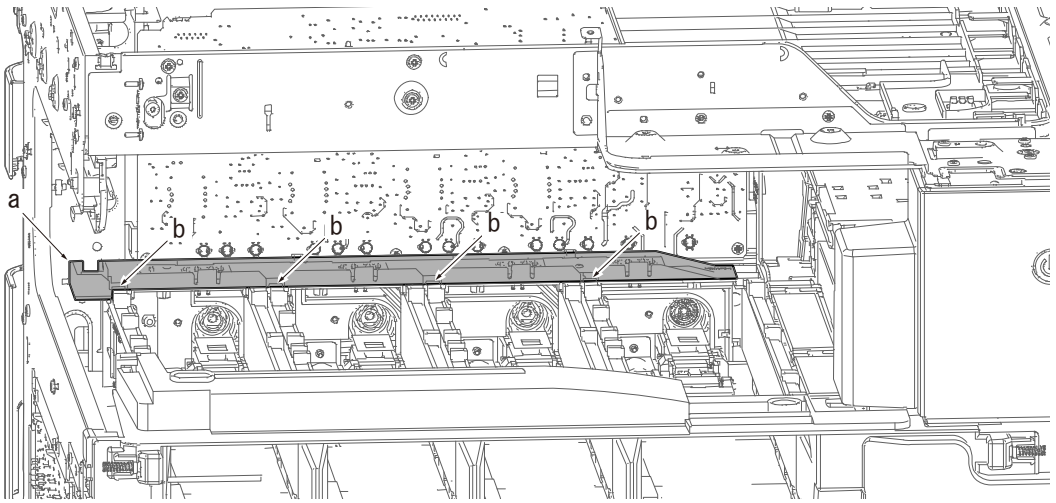
32 Take out the toner container Y/C/M/K from the main unit.



33 Remove two screws (b) and then slide the exit unit (a) to the right.

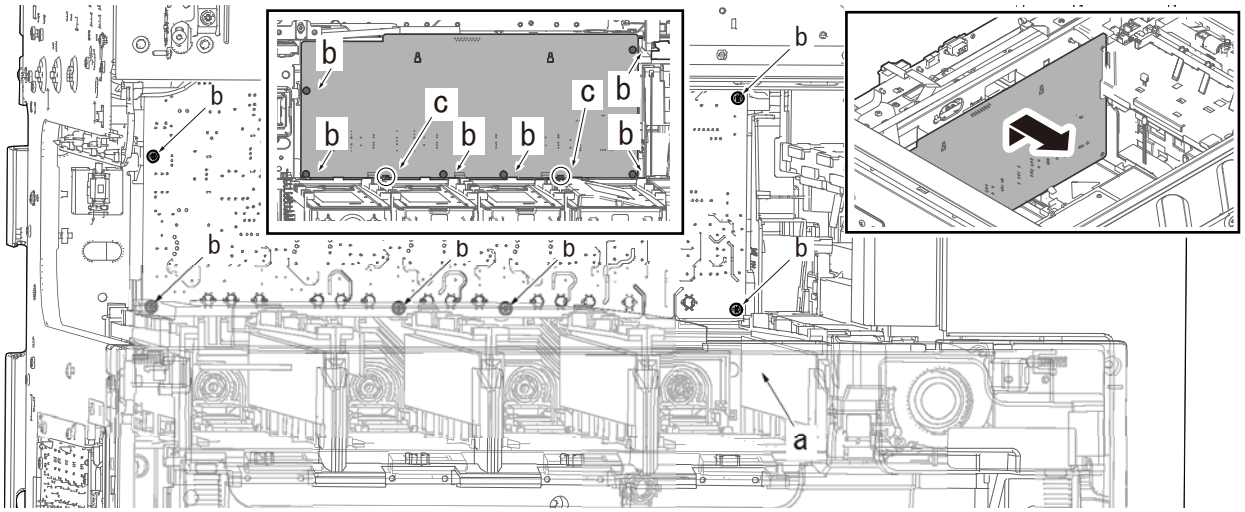


34 Release four hooks (b) and detach the PWB holder (a) from the main unit.



35 Detach the high-voltage PWB.

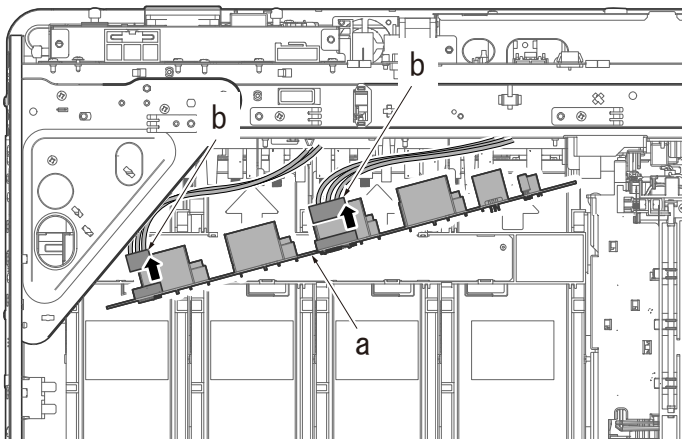
1 Remove six screws (b) and release two hooks (c) and then shift the high-voltage PWB (a) upwards.



2 Disconnect two connectors (b) from the high-voltage PWB (b).

3 Detach the high-voltage PWB (a).

4 Check or replace the high-voltage PWB (a), and then reattach the parts in the original position.



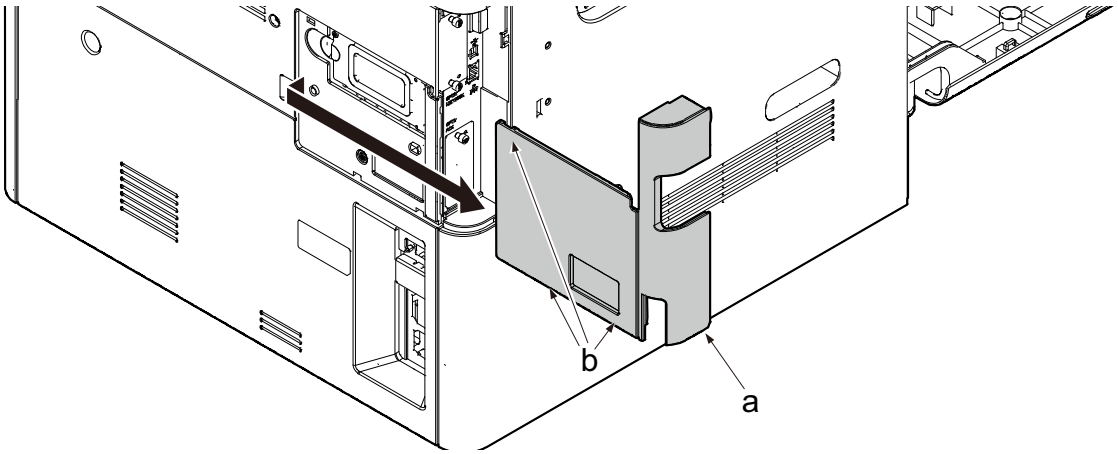
⑶-4⑵ Detaching and reattaching the low-voltage PWB

Caution

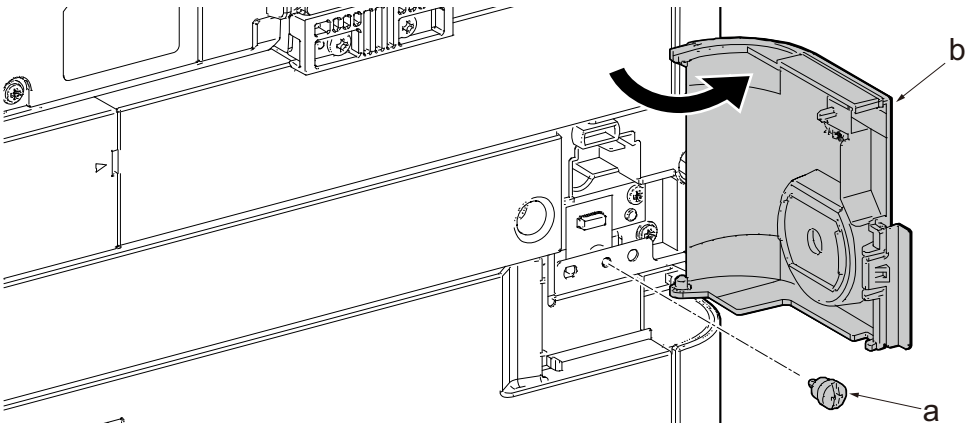
Before replacing the PWB, be sure to take the following procedures. Otherwise, The PWB may be damaged.

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

1 Release three hooks (b) in the direction of the arrow and remove the controller box cover (a).



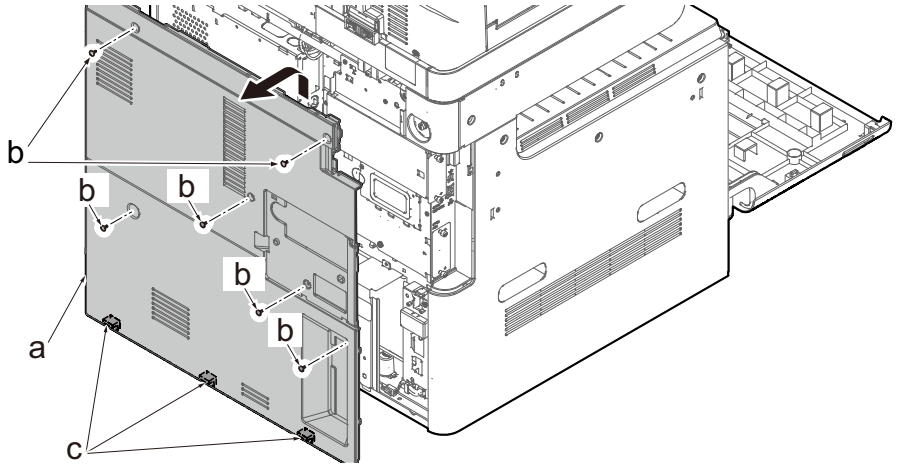
2 Remove the lock screw (b) and open the Wi-Fi cover (b) in the direction of the arrow.



3 Detach the rear cover.

1 Remove six screws (b)(M3x8).

2 To detach the rear cover, align it upward and release three hooks (c).



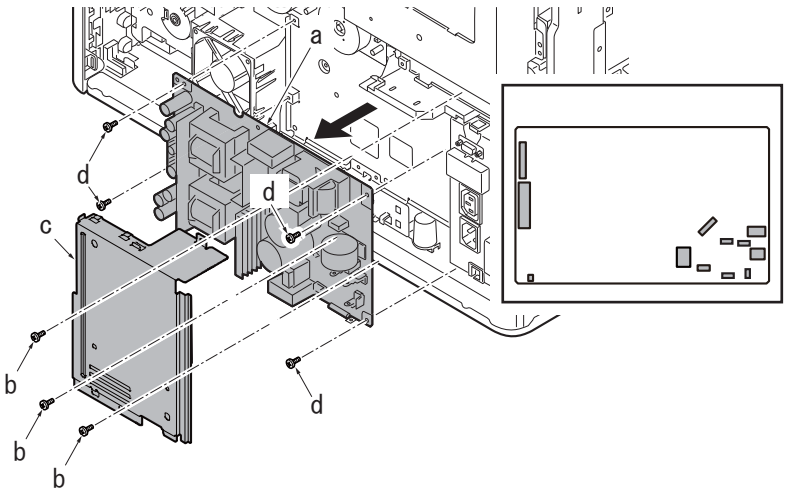
4 Detach the low-voltage PWB.

1 Remove three screws (b) and remove the low-voltage PWB cover (c).

2 Disconnect all the connectors from the low-voltage PWB.

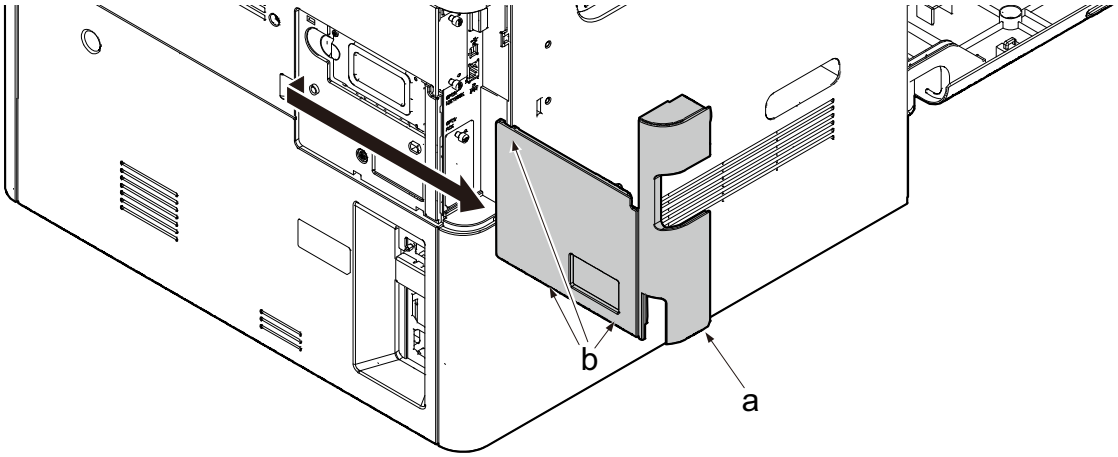
3 Remove four screws (b) and remove the low-voltage PWB (a).

4 Check or replace the low-voltage PWB, and then reattach the parts in the original position.

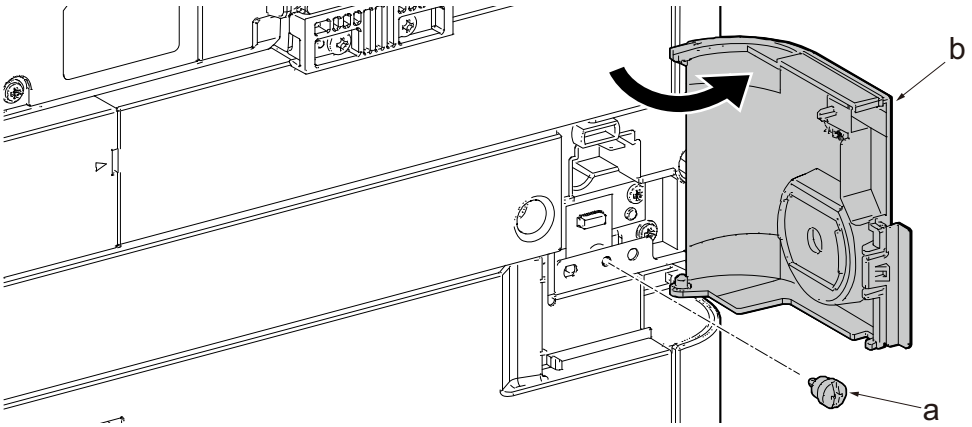


⑶-5⑸ Detaching and reattaching the IH PWB

1 Release three hooks (b) in the direction of the arrow and remove the controller box cover (a).



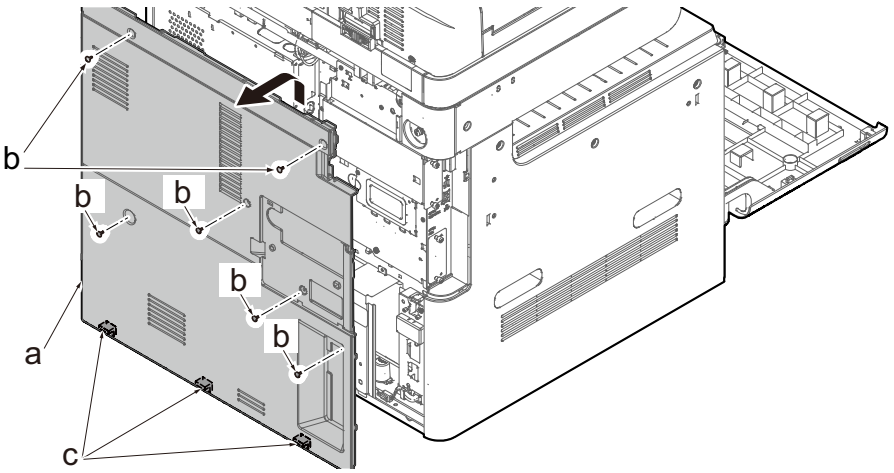
2 Remove the lock screw (b) and open the Wi-Fi cover (b) in the direction of the arrow.



3 Detach the rear cover.

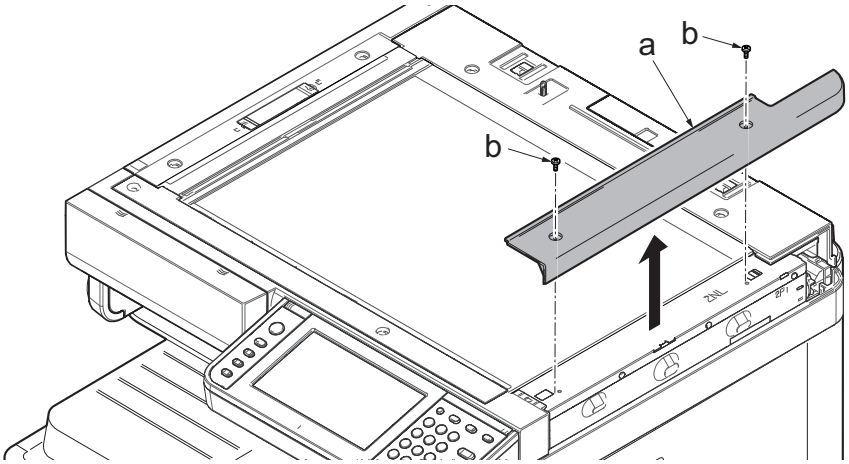
1 Remove six screws (b)(M3x8).

2 To detach the rear cover, align it upward and release three hooks (c).

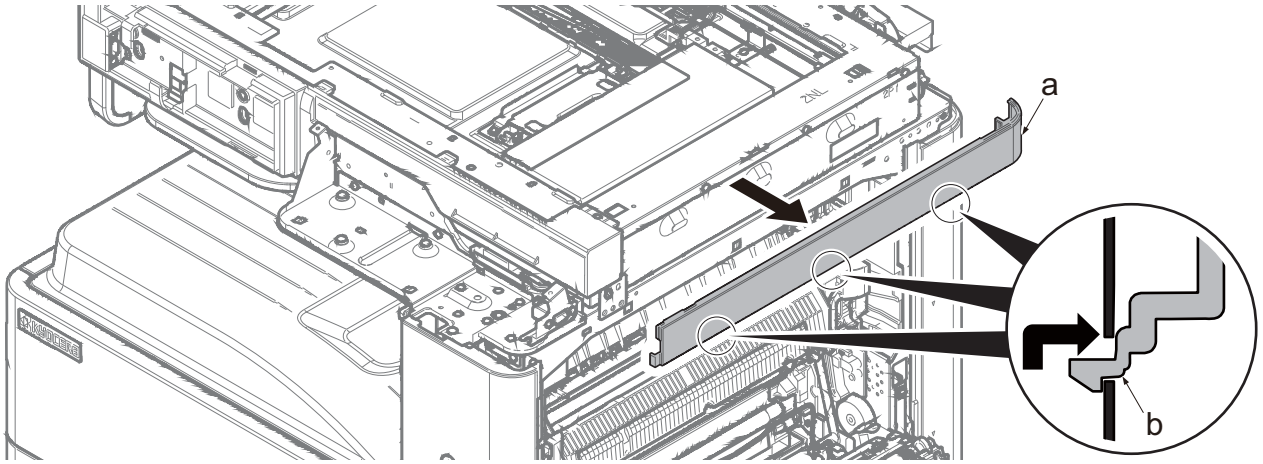


4 **Remove two screws (b) and then remove the ISU right cover (a). (CCD model only)**

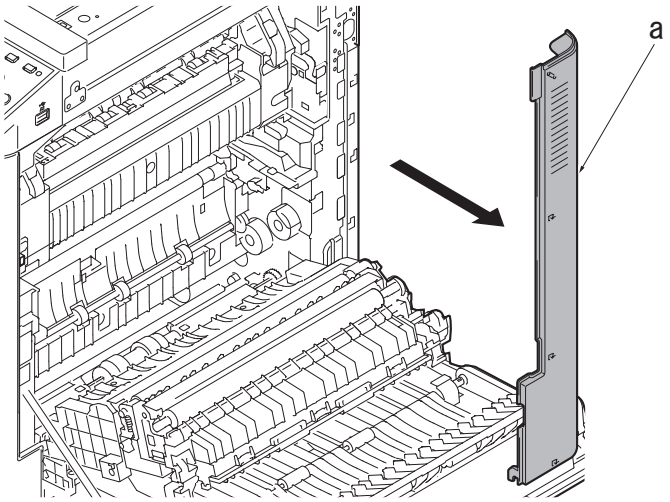
- Reattach it while aligning it to the contact glass side.



5 **Release three hooks (b) in the direction of the arrow and detach the right top cover (a).**



6 **Detach the right rear cover (a).**



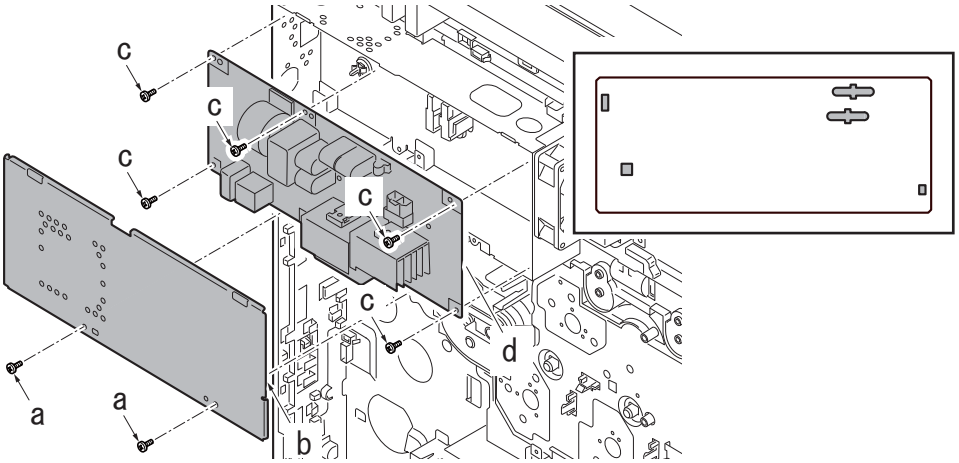
7 Detach the IH PWB.

1 Remove two screws (a) and then remove the IH box cover (b).

2 Disconnect all connectors from the IH PWB (d).

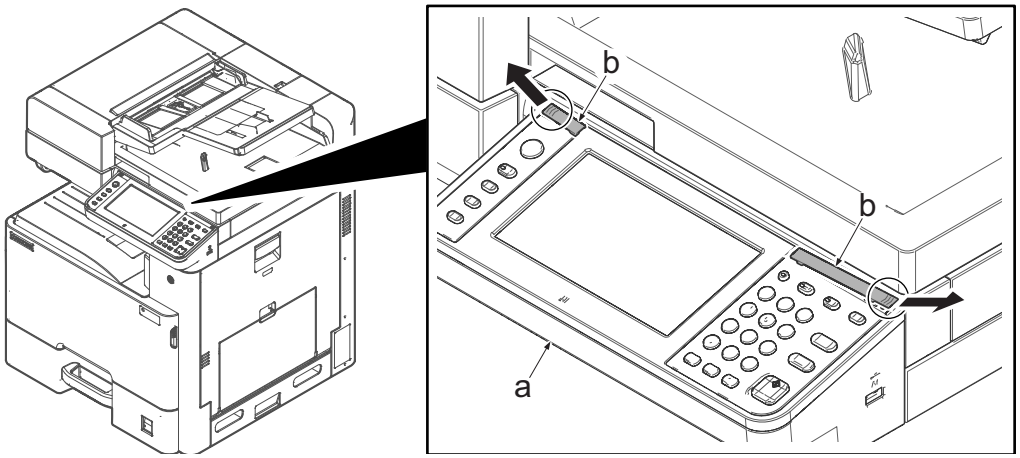
3 Remove five screws (c) and then detach the IH PWB (d).

4 Check or replace the IH PWB, and then reattach the parts in the original position.



⑶-6⑵ Detaching and reattaching the operation panel PWB

1 Lift up two points of the leading edge of the operation panel cover (b), slide them in the direction of the arrow and then detach the operation panel cover from the operation panel (a).

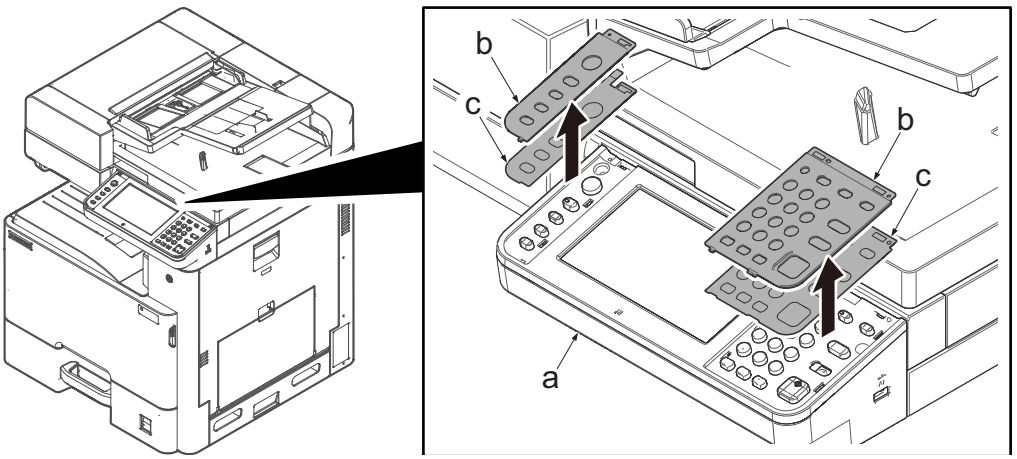


2 Detach the language sheet.

1 Detach two clear panels (b) from the operation panel (a).

2 Detach two language sheets.

3 Check or replace the language sheet, and then reattach the parts in the original position.

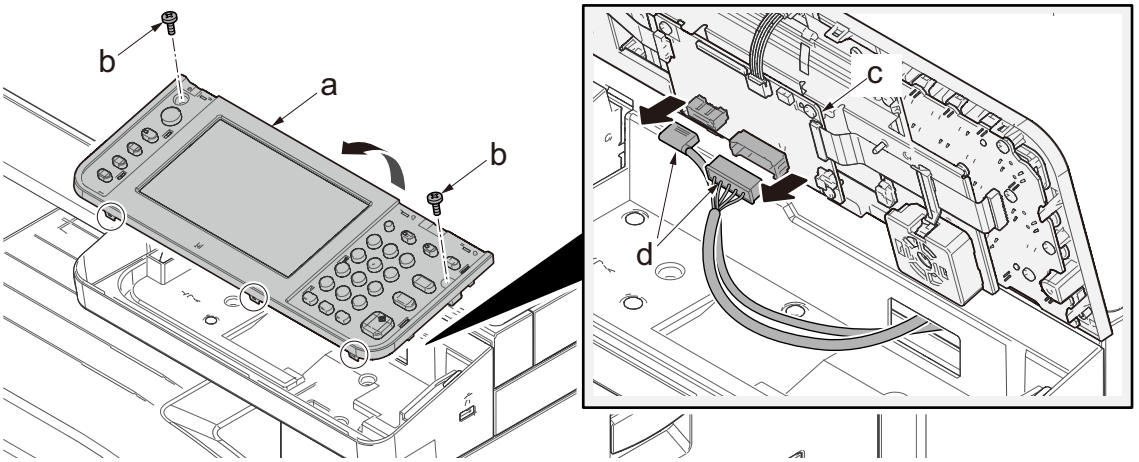


3 Detach the operation top unit.

1 Remove two screws (b).

2 Disconnect two connectors (d) of the operation panel PWB (c).

3 Detach the operation top unit (a).



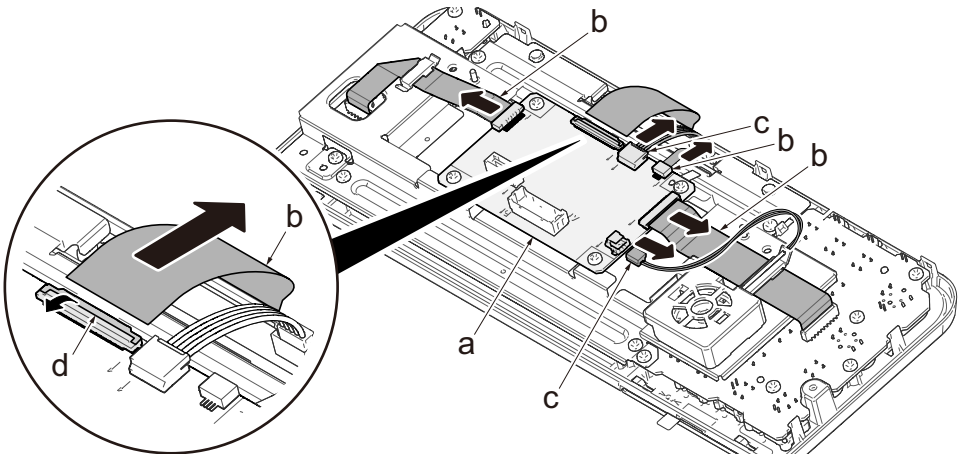
4 Disconnect the wire from the operation panel PWB.

1 Disconnect five FFCs (b) from the operation panel PWB (a).

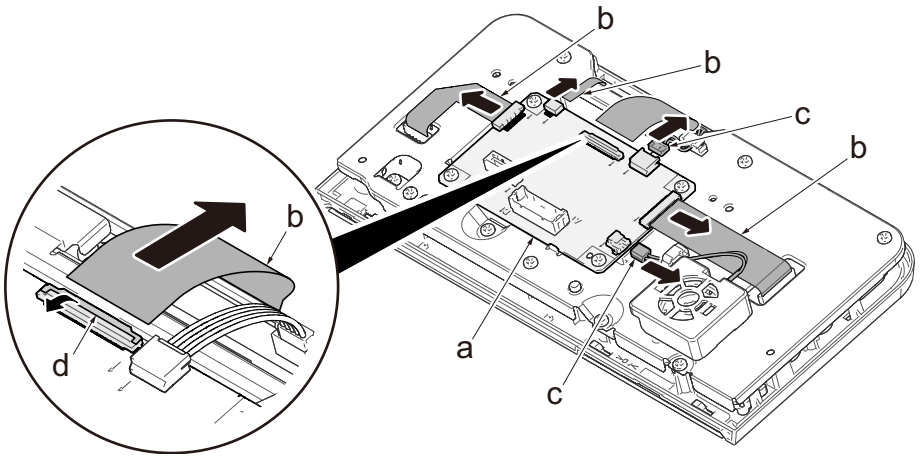
- The connector (d) has a lock.

2 Disconnect two connectors (c) from the operation panel PWB (a).

7-inch panel model



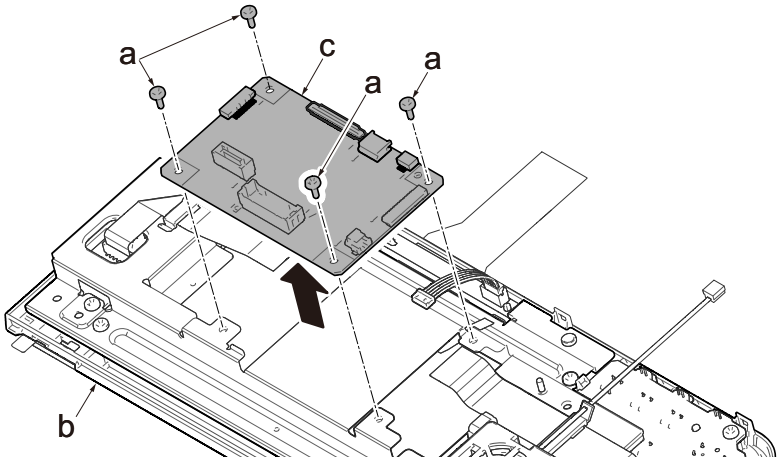
4.3-inch panel model



5 Distach the operation panel PWB.

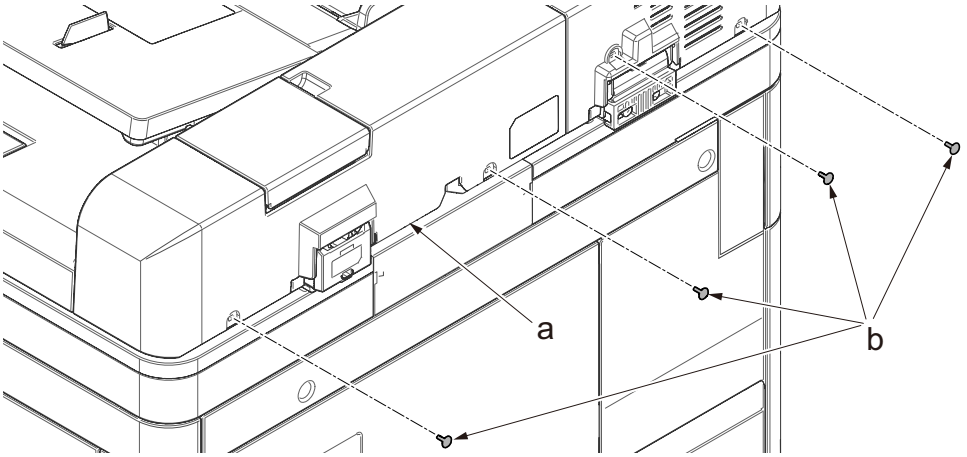
1 Remove four screws (a) and detach the operation panel PWB (c) from the operation top unit (b).

2 Check or replace the operation panel PWB (c), and then reattach the parts in the original position.



(3-7) Detaching and reattaching the DP PWB

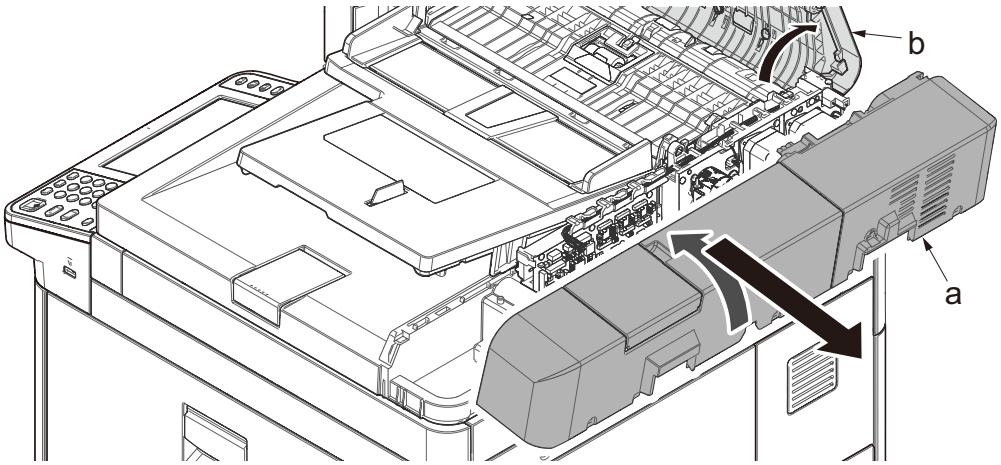
1 Remove four screws (b) from the document processor (a).



2 Detach the DP rear cover.

1 Open the DP top cover (b).

2 Detach the DP original tray (a) while twisting it.

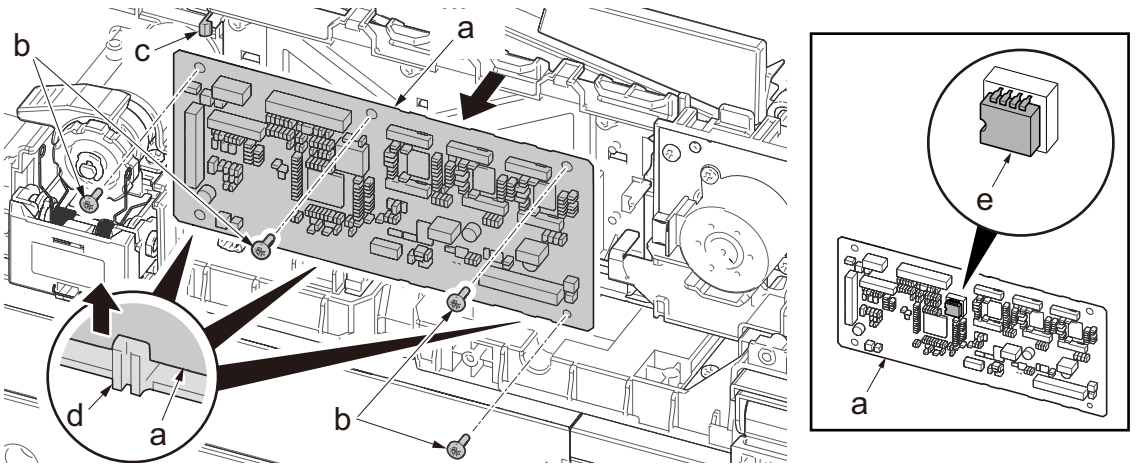


3 Detach the DP PWB.

1 Disconnect all the connectors from the DP PWB (a).

2 Remove four screws (b).

3 Release the hook A (c), release three hooks (d) in the direction of the arrow and detach the DP PWB (a).



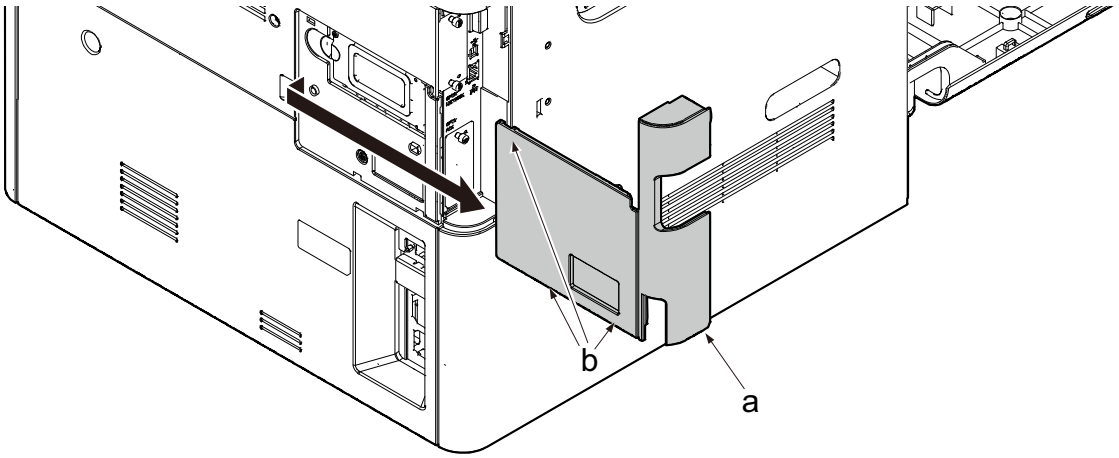
Important

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

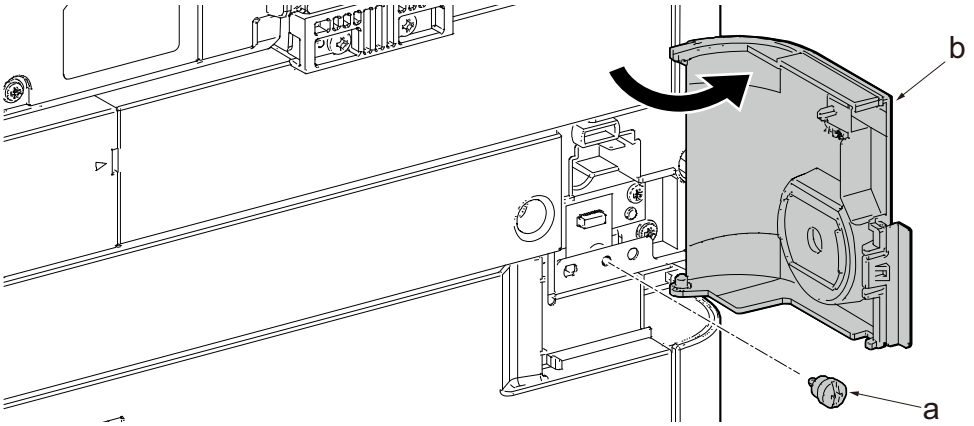
⑷ Drive section

⑷-1 Detaching and reattaching the feed drive unit

1 Release three hooks (b) in the direction of the arrow and remove the controller box cover (a).



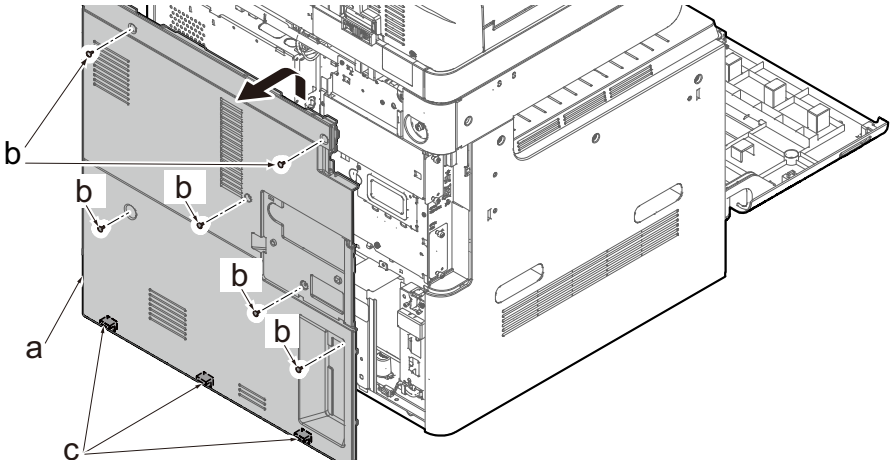
2 Remove the lock screw (b) and open the Wi-Fi cover (b) in the direction of the arrow.



3 Detach the rear cover.

1 Remove six screws (b)(M3x8).

2 To detach the rear cover, align it upward and release three hooks (c).

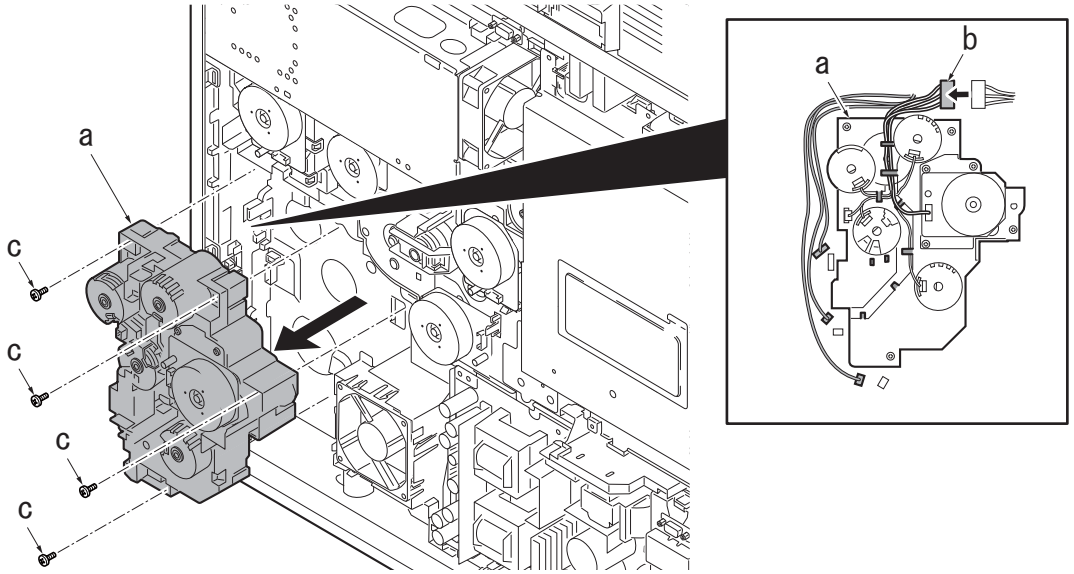


4 Detach the feed drive unit.

1 Disconnect the connector (b).

2 Remove four screws (c) and detach the feed drive unit (a).

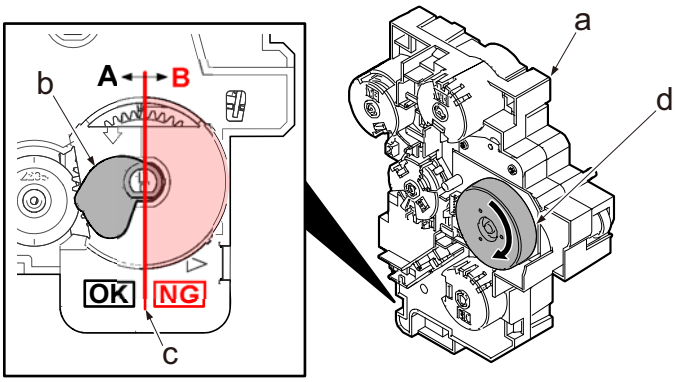
3 Check or replace the feed drive unit, and then reattach in the original position.



Notes when attaching the drive unit.

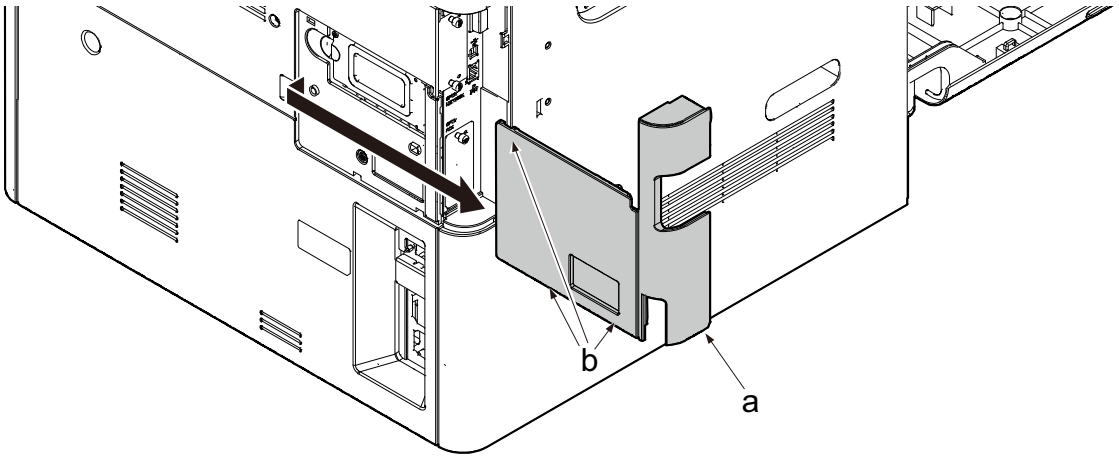
Check the position of the elevation cam (b) of the MP bottom plate at the backside of the drive unit (a).

If it is at the B side than the reference line (c), rotate the main motor (d) manually to move the position of the elevation cam (b).

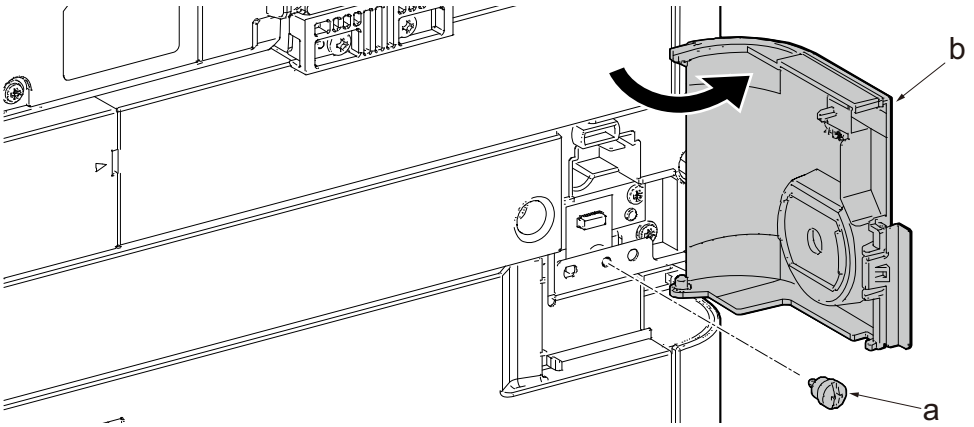


(4-2) Detaching and reattaching the conveying motor

1 Release three hooks (b) in the direction of the arrow and remove the controller box cover (a).



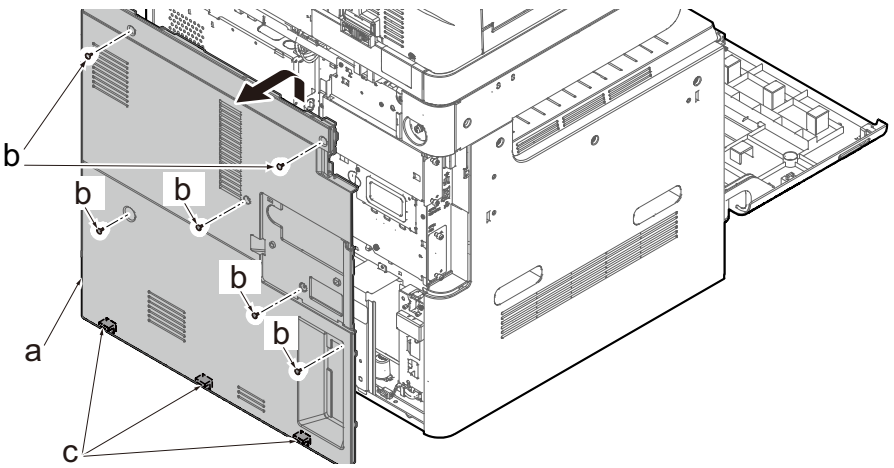
2 Remove the lock screw (b) and open the Wi-Fi cover (b) in the direction of the arrow.



3 Detach the rear cover.

1 Remove six screws (b)(M3x8).

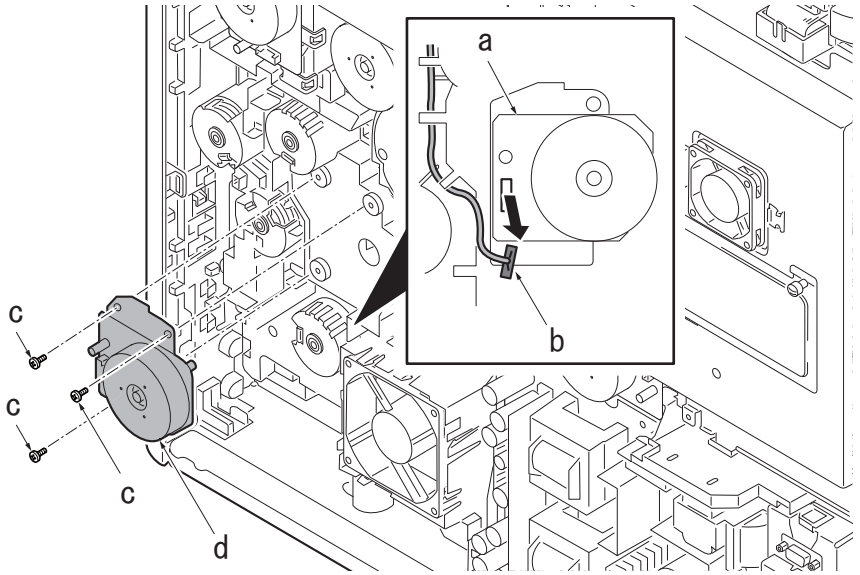
2 To detach the rear cover, align it upward and release three hooks (c).



4 Remove three screws (b) and detach the conveying motor (a).

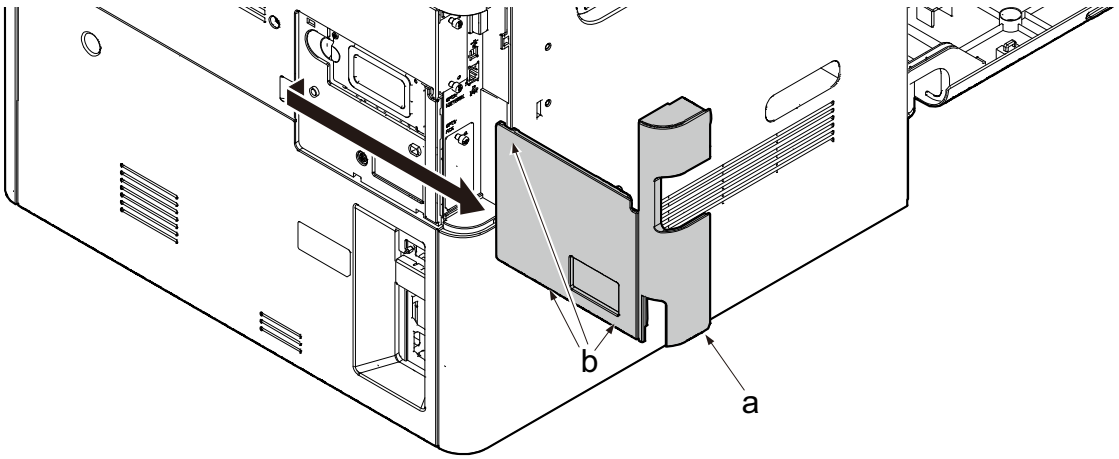
1 Disconnect the connector (b) from the conveying motor PWB (a).

2 Remove three screws (c) and detach the conveying motor (d).

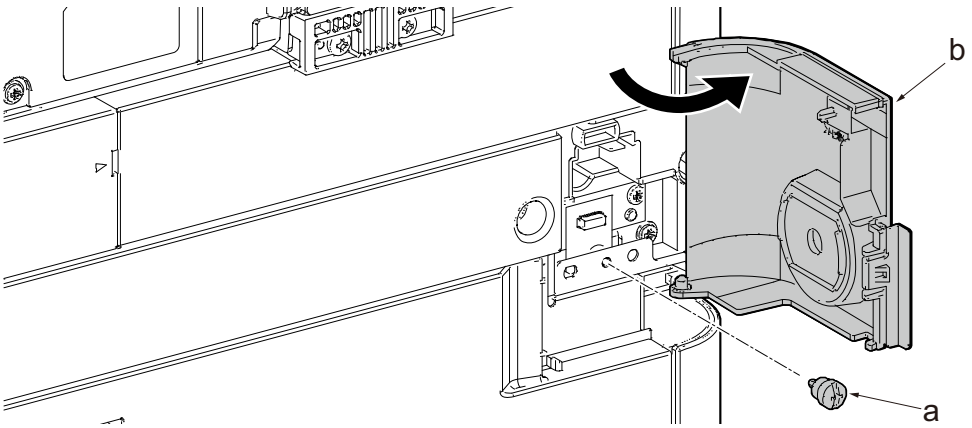


⑷-3 Detaching and reattaching the Fuser, Developer K/Primary transfer belt drive unit

1 Release three hooks (b) in the direction of the arrow and remove the controller box cover (a).



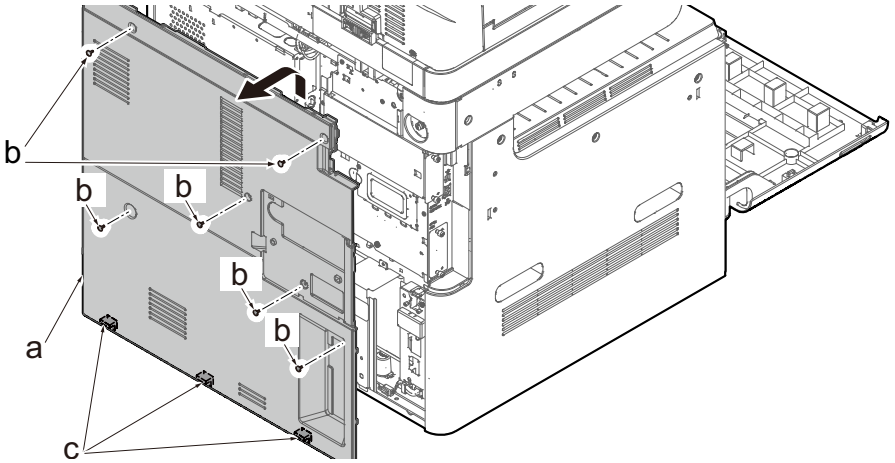
2 Remove the lock screw (b) and open the Wi-Fi cover (b) in the direction of the arrow.



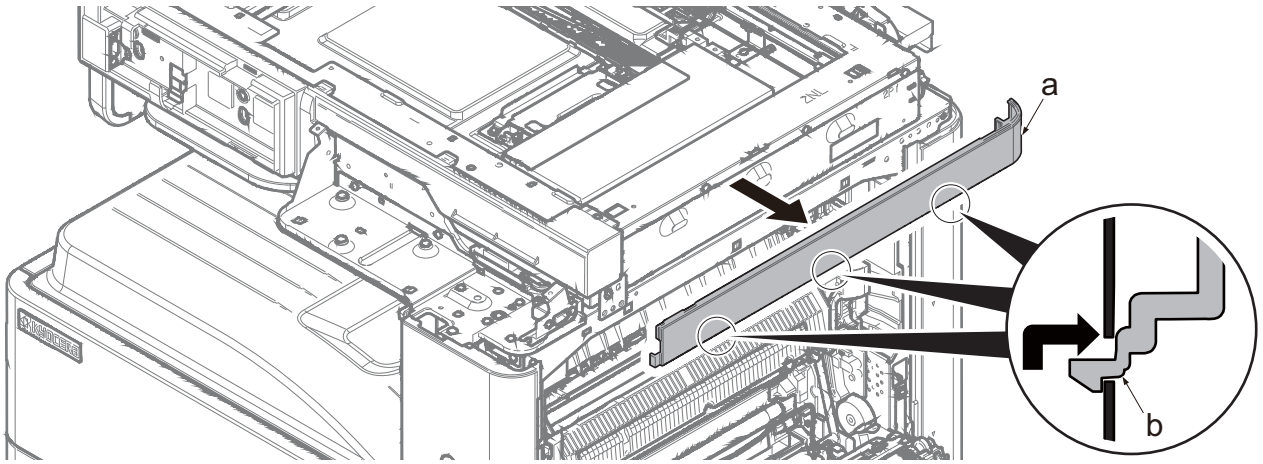
3 Detach the rear cover.

1 Remove six screws (b)(M3x8).

2 To detach the rear cover, align it upward and release three hooks (c).



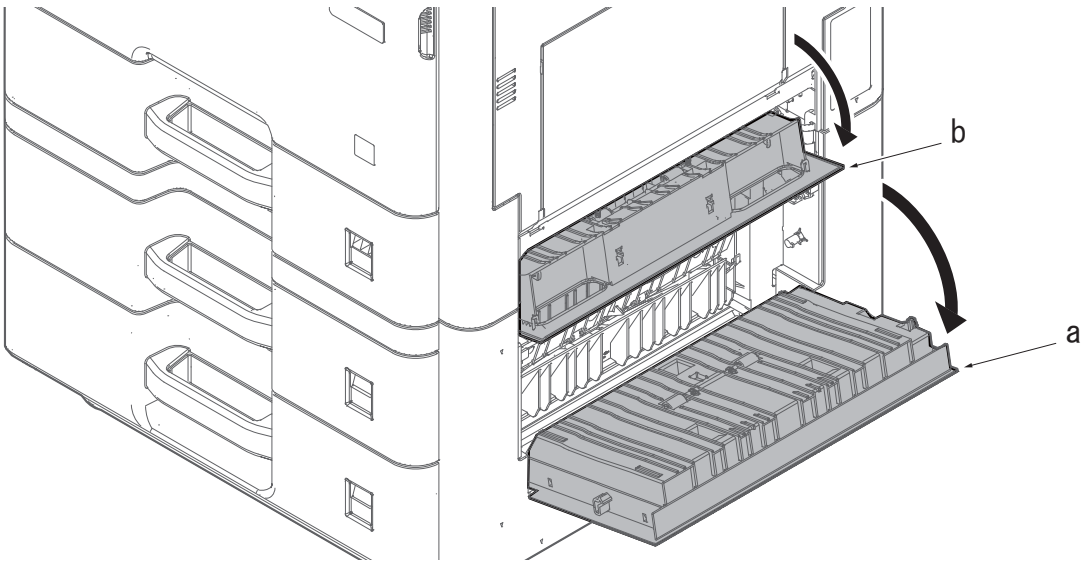
4 Release three hooks (b) in the direction of the arrow and detach the right top cover (a).



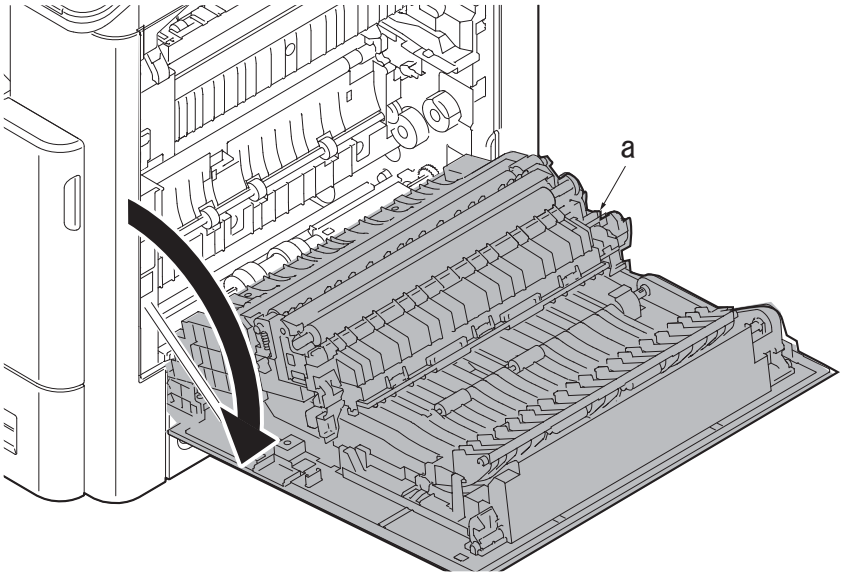
5 Open the right cover 2.

1 Open the PF right cover (a). (PF installed machine)

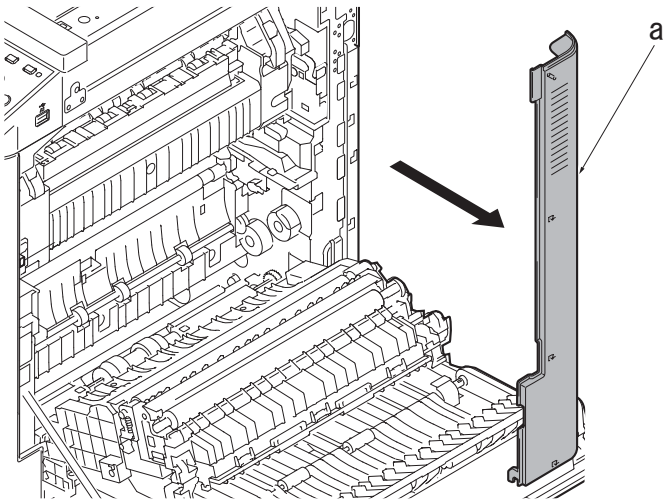
2 Open the right cover 2 (b).



6 **Open the right cover 1 (a).**



7 **Detach the right rear cover (a).**



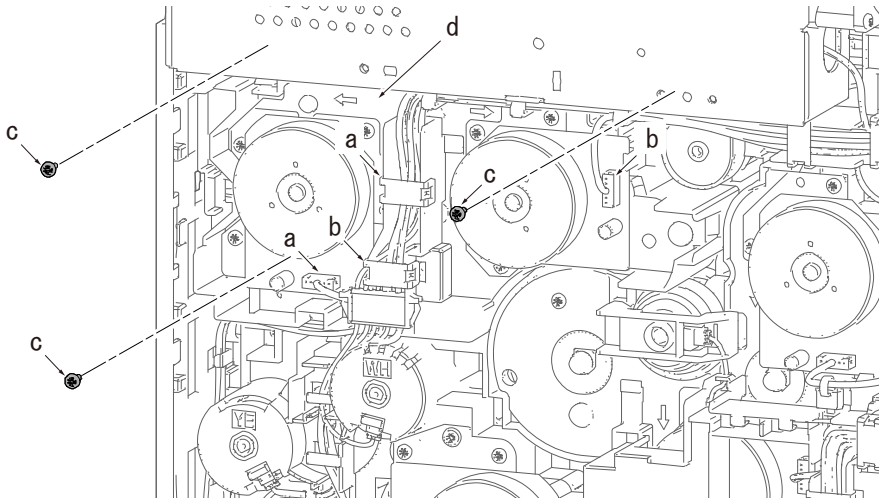
8 Detach the fuser, developer K/primary transfer belt drive unit.

1 Remove two wire stoppers (a).

2 Disconnect two connectors (b).

3 Remove three screws (b) and detach the fuser, developer K/primary transfer belt drive unit (d).

4 Check or replace the fuser, developer K/primary transfer belt drive unit, and then reattach in the original position.



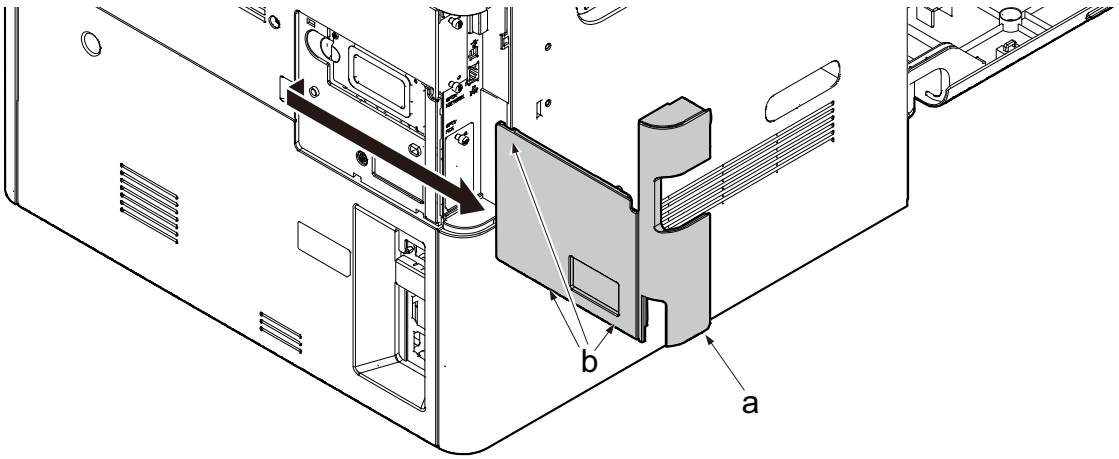
⑷-4 Detaching and reattaching the main drive unit

Caution

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

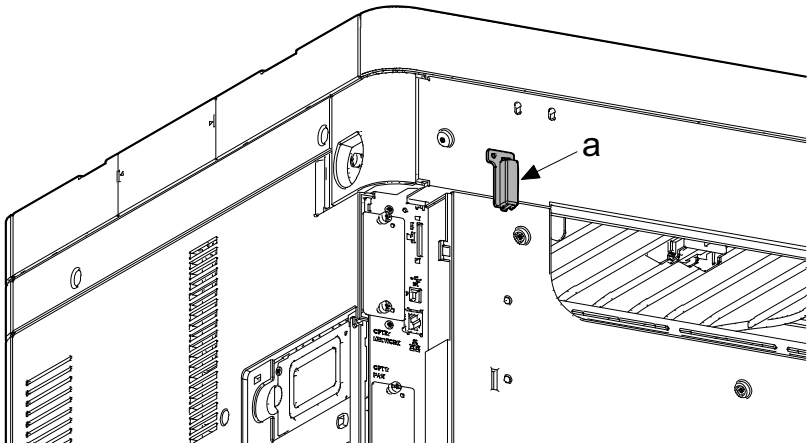
- Disconnect the power cord.
- Press the power switch one second or more to discharge the electric charge inside the main unit.

1 Release three hooks (b) in the direction of the arrow and remove the controller box cover (a).

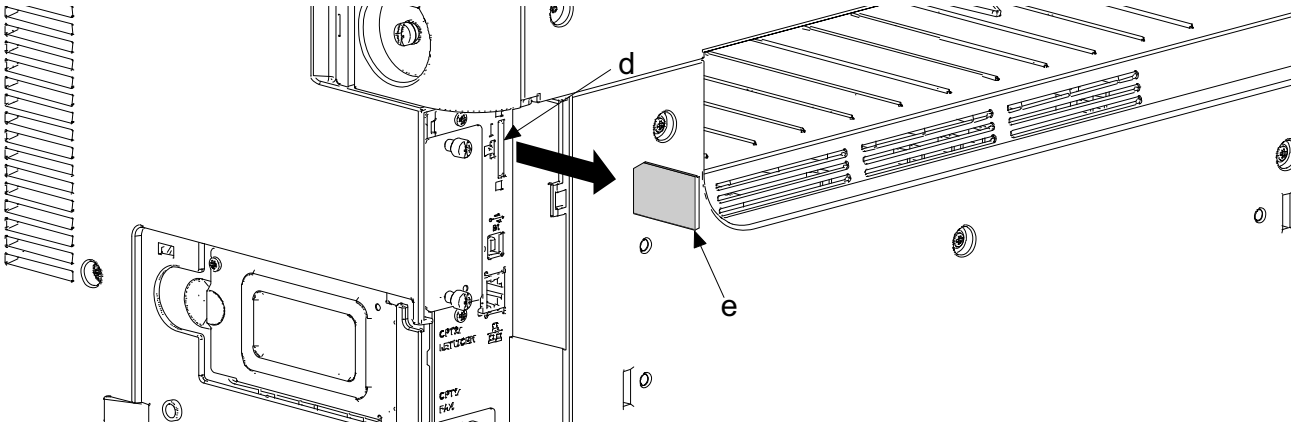


2 Remove the SD/SDHC memory card if installed.

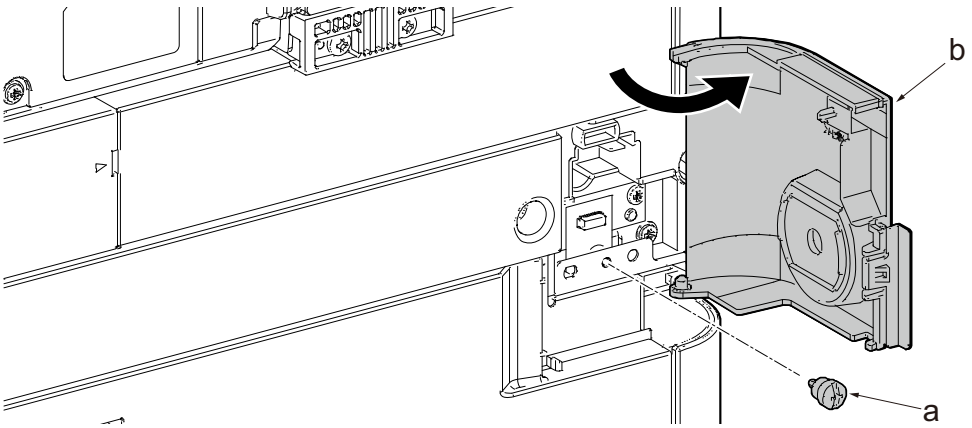
1 Detach the SD cover (a).



3 Detach an SD/SDHC memory card (e) in the memory card slot (d).



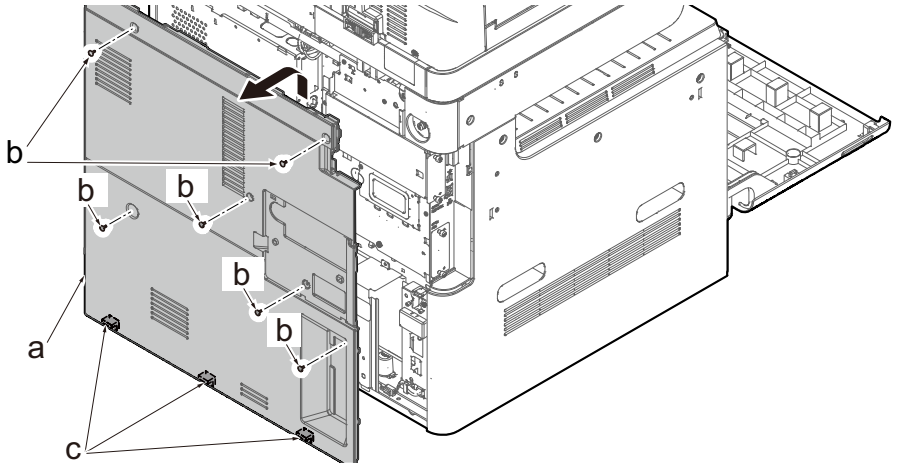
4 Remove the lock screw (b) and open the Wi-Fi cover (b) in the direction of the arrow.



5 Detach the rear cover.

1 Remove six screws (b)(M3x8).

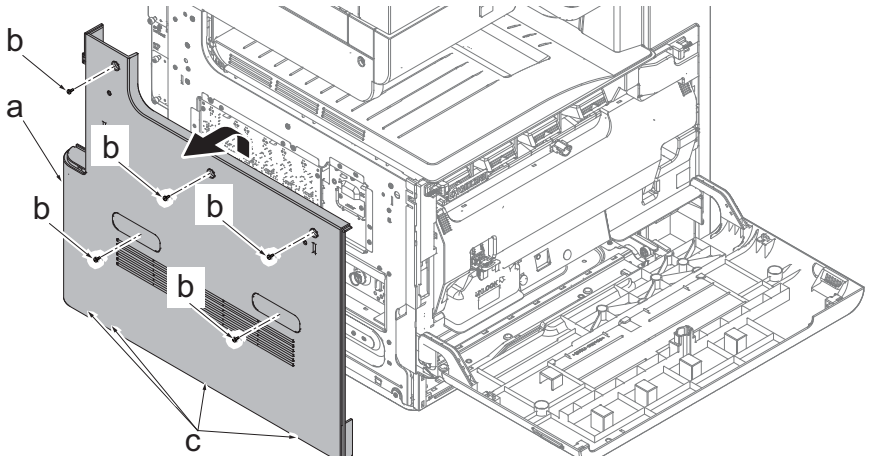
2 To detach the rear cover, align it upward and release three hooks (c).



6 Remove the left lower cover.

1 Remove five screws (b)(M3×8TP).

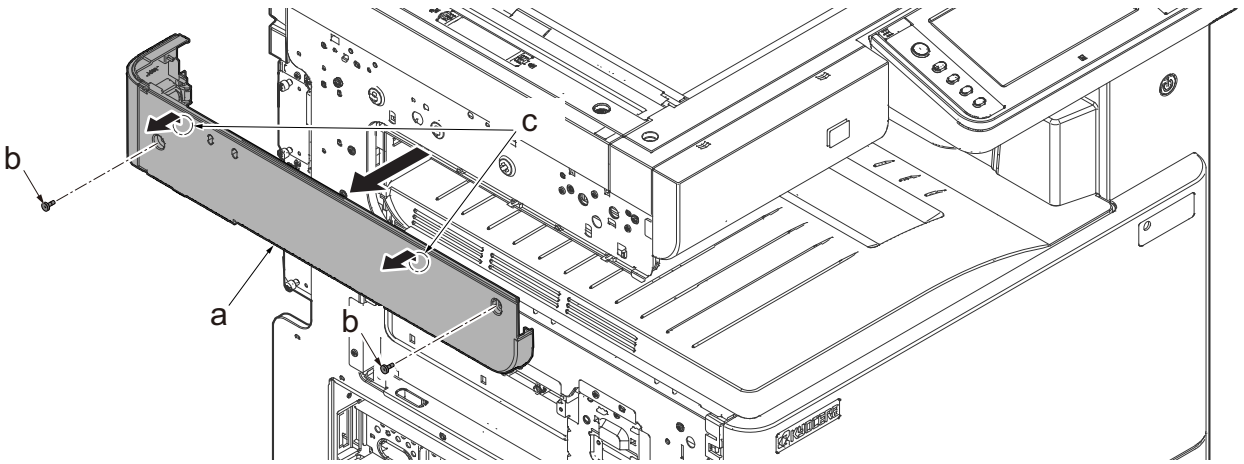
2 To detach the left lower cover (b), align it upward and release four hooks (c).



7 Detach the left top cover.

1 Remove two screws (b).

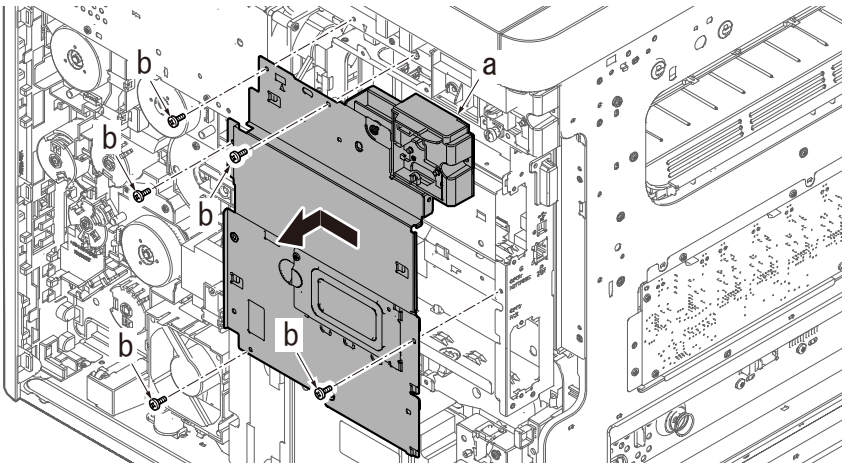
2 Release the two hooks (c) upward and detach the upper left cover (a).



8 Remove the control box cover.

1 Remove five screws (b)(M3x8).

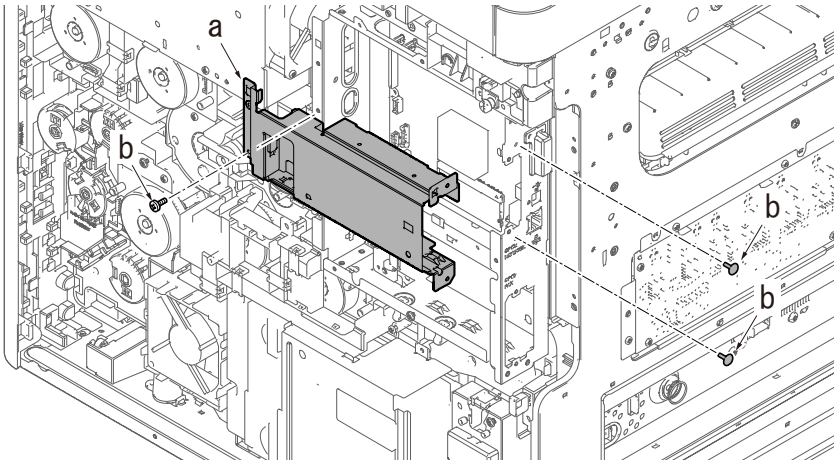
2 Slide the controller box cover (a) in the direction of the arrow and detach it.



9 Detach the rail mounting plate.

1 Detach the FFC.

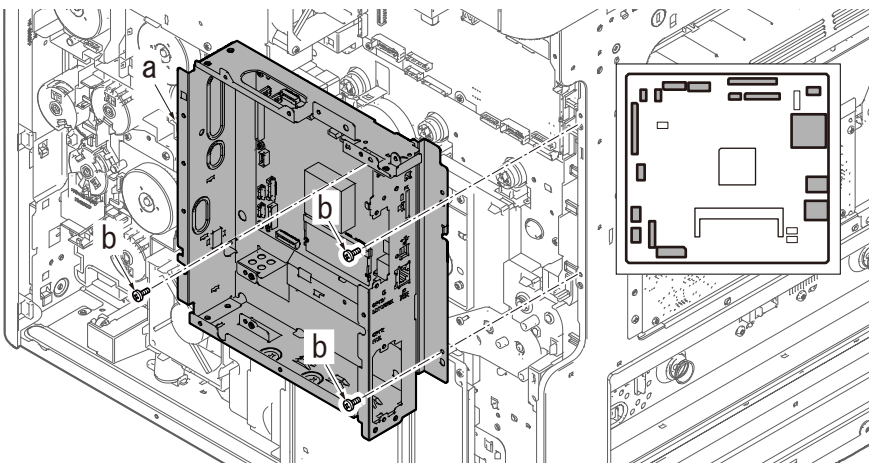
2 Remove three screws (b) and detach the rail mounting plate.



10 Detach the main PWB mounting plate.

1 Disconnect all the connectors and the FFCs from the main PWB (a).

2 Remove three screws (b) and detach the main PWB mounting plate.



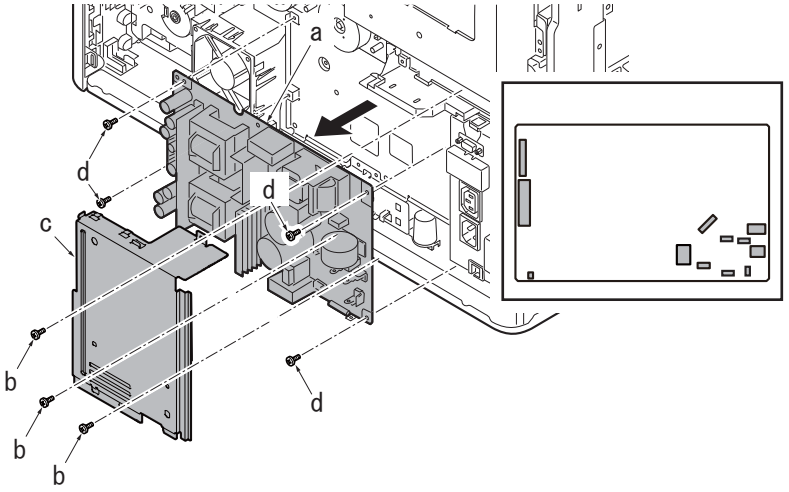
11 Detach the low-voltage PWB.

1 Remove three screws (b) and remove the low-voltage PWB cover (c).

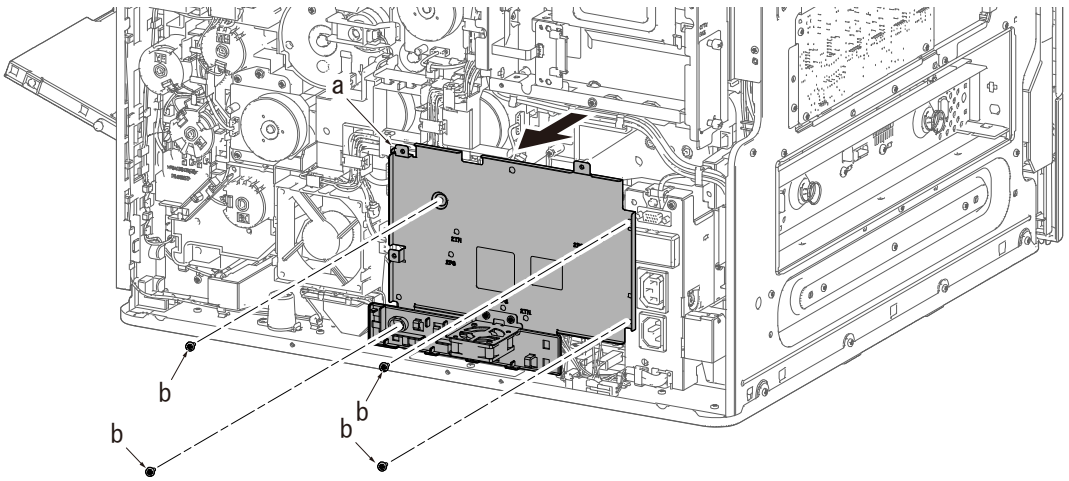
2 Disconnect all the connectors from the low-voltage PWB.

3 Remove four screws (b) and remove the low-voltage PWB (a).

4 Check or replace the low-voltage PWB, and then reattach the parts in the original position.



12 Remove four screws (b) and detach the low-voltage PWB mounting plate (a).

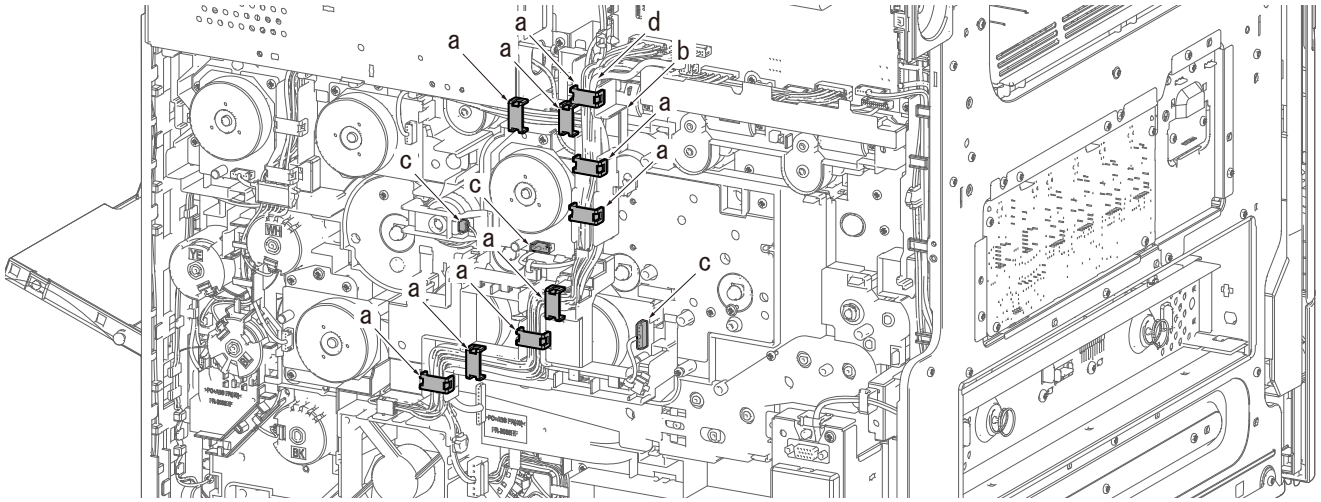


13 Take out the wire from the wire guide.

1 Remove nine wire stoppers (a) from the wire guide (b).

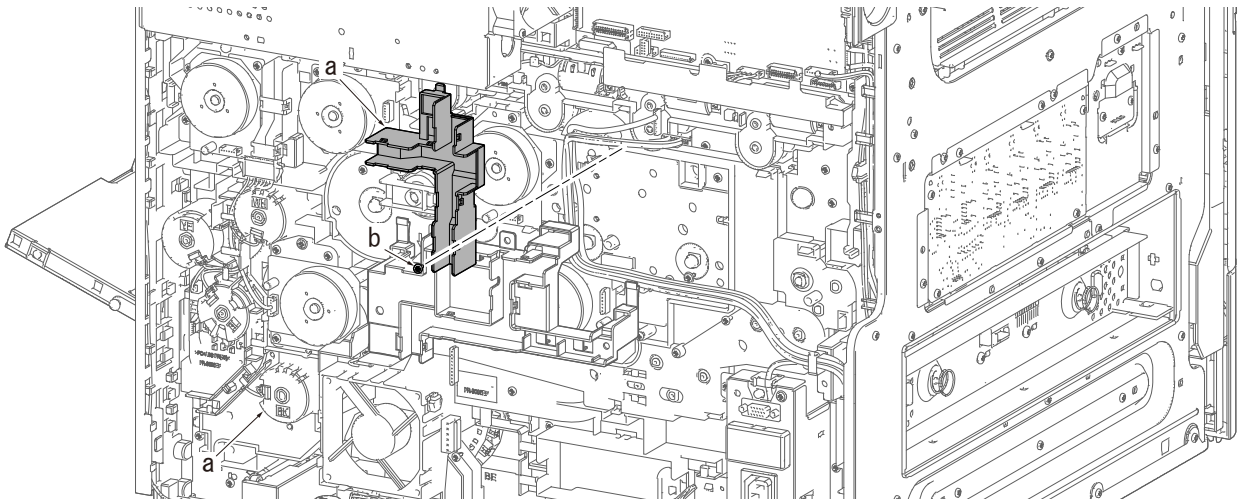
2 Disconnect three connectors (c).

3 Take out the wire (d) from the wire guide.



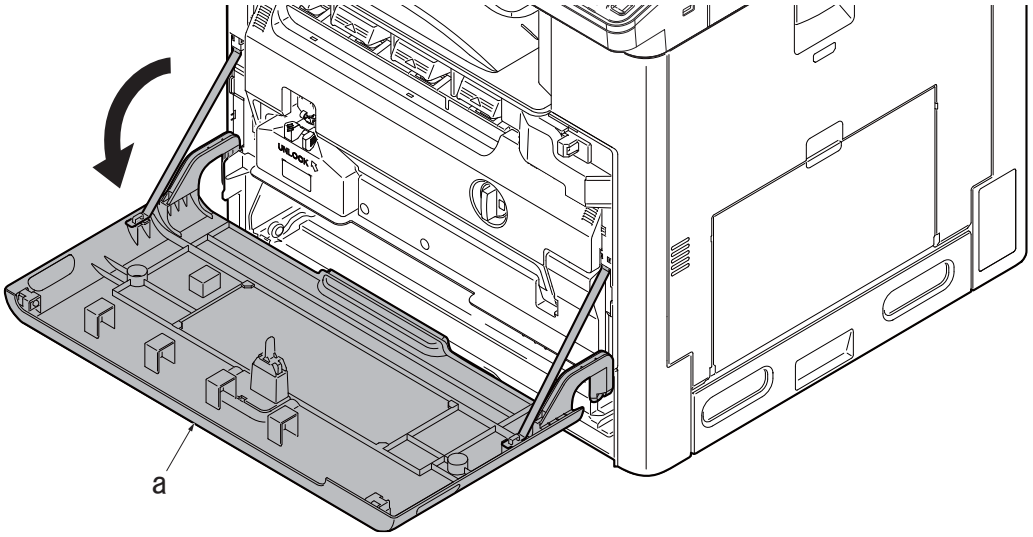
14 Detach the wire guide.

1 Remove the screw (b) and detach the wire guide 2(a).

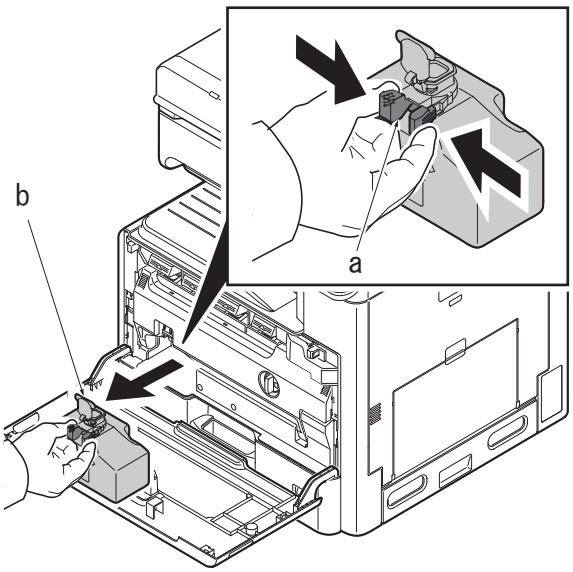


15 Slide the drum unit and developer unit toward you.

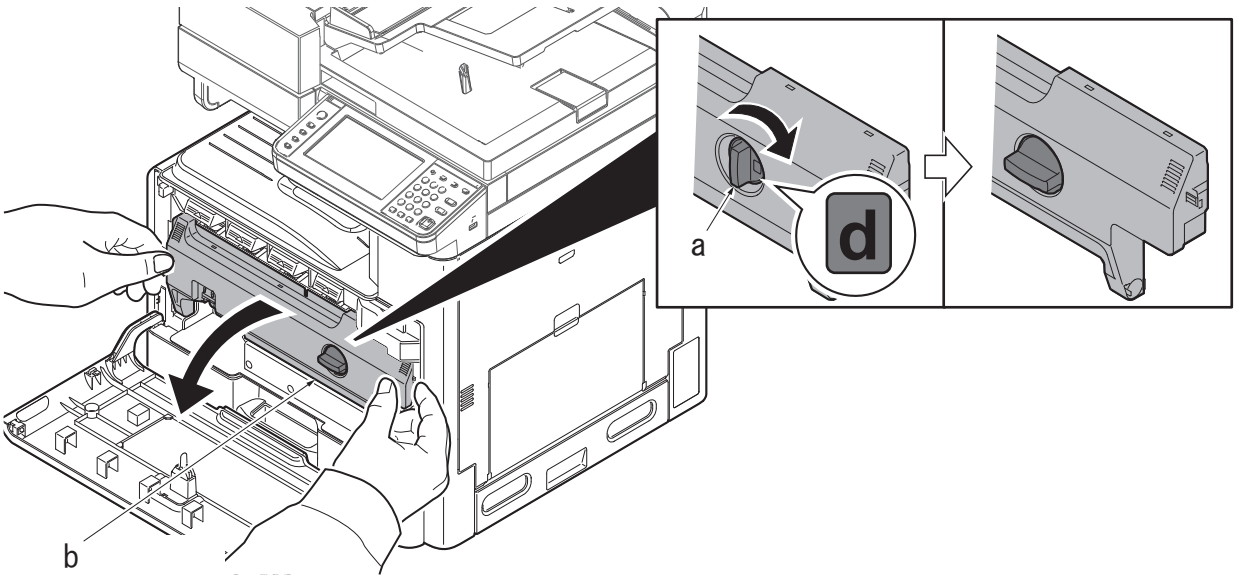
1 Open the front cover (a).



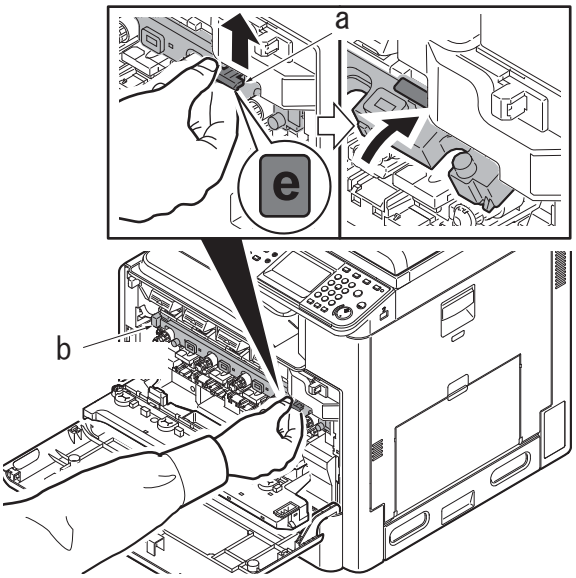
2 Release the lock lever (a) and detach the waste toner box (b).



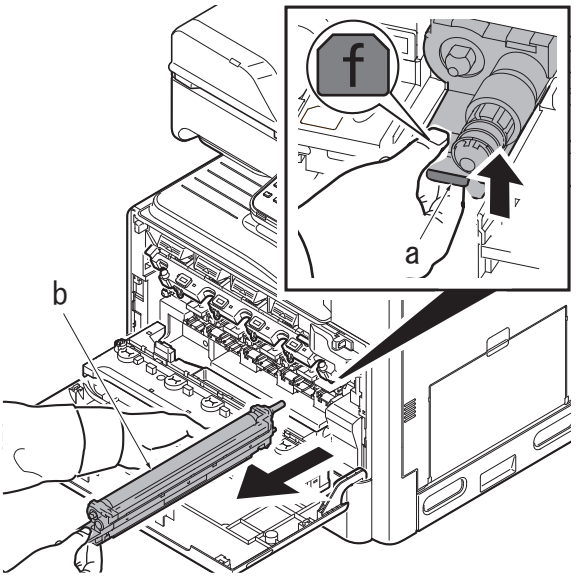
3 Release the lock lever (a) and open the duct cover (b).



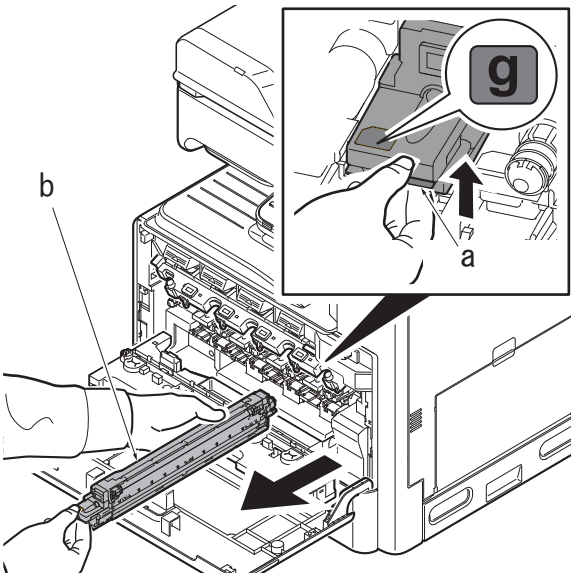
4 Release the lever (a) and open the duct holder (b).



5 Release the lock lever (a) and slide all drum units (b) toward you.



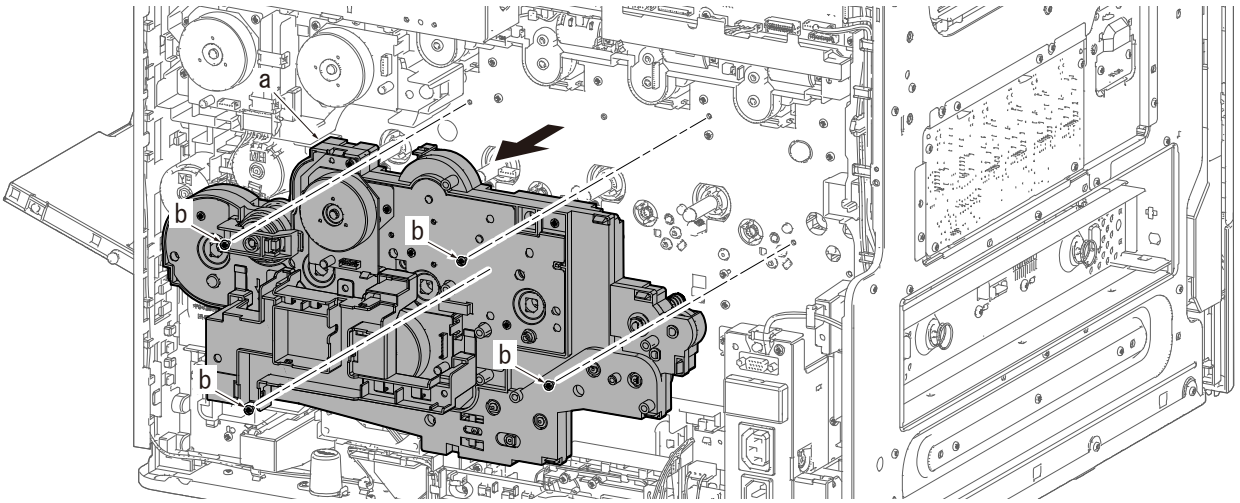
6 Release the lock lever (a) and slide all developer units (b) toward you.



16 Detach the main drive unit.

1 Remove four screws (b) and detach the main drive unit (a).

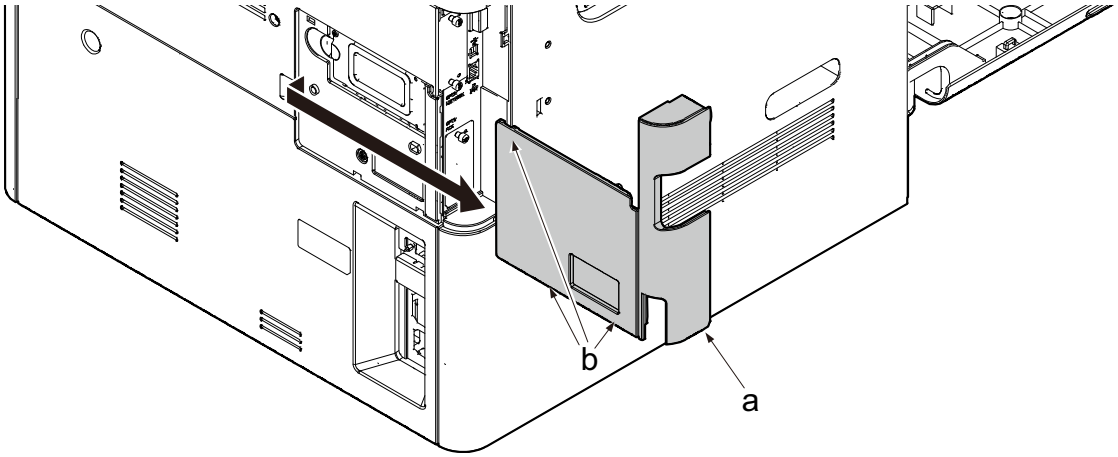
2 Check or replace the main drive unit, and then reattach in the original position.



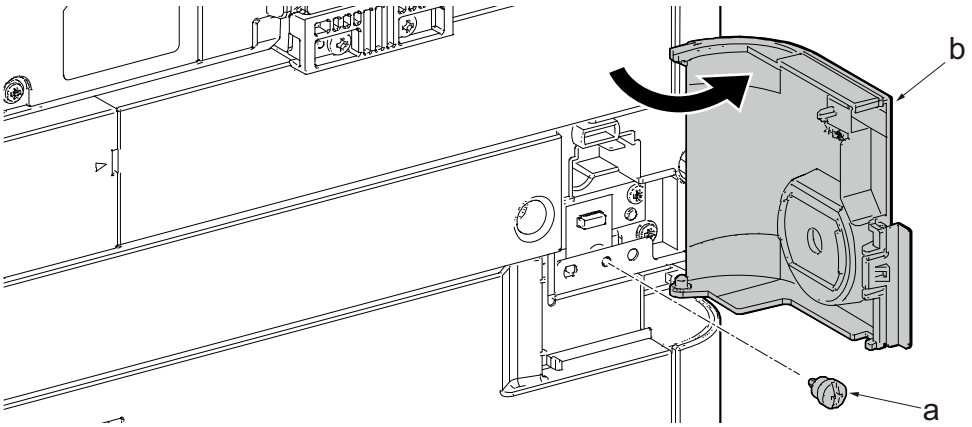
⑸ Detaching and attaching the other parts.

⑸-1 Detaching and reattaching the IH fan motor.

1 Release three hooks (b) in the direction of the arrow and remove the controller box cover (a).



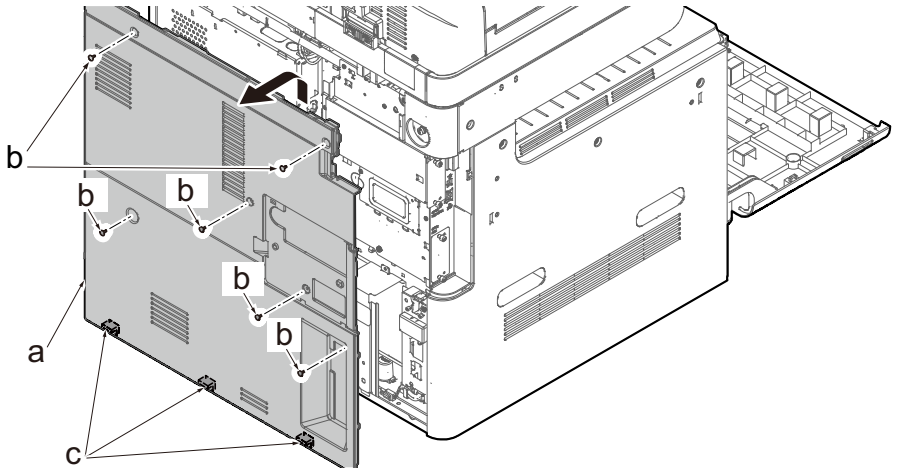
2 Remove the lock screw (b) and open the Wi-Fi cover (b) in the direction of the arrow.



3 Detach the rear cover.

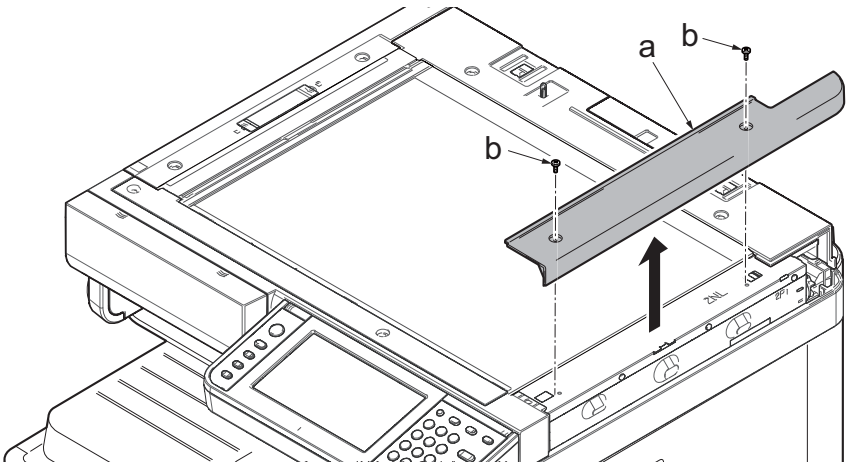
1 Remove six screws (b)(M3x8).

2 To detach the rear cover, align it upward and release three hooks (c).

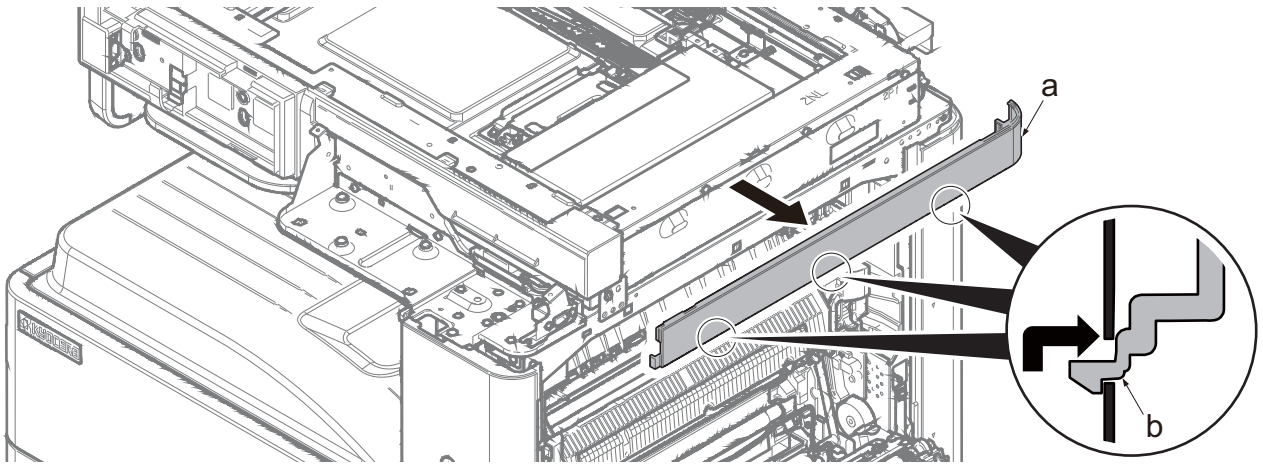


4 Remove two screws (b) and then remove the ISU right cover (a). (CCD model only)

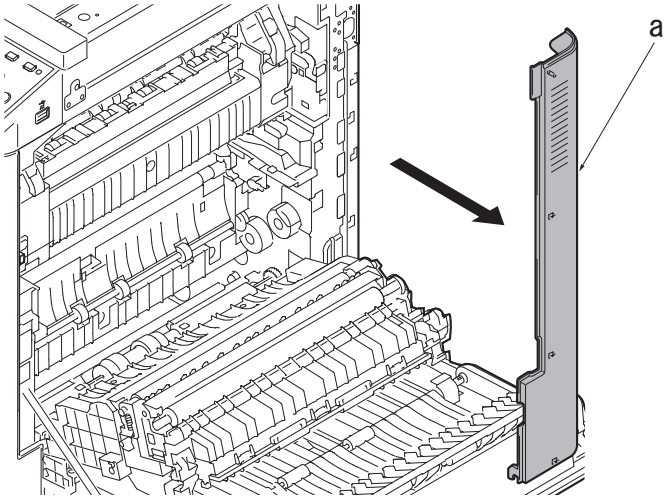
- Reattach it while aligning it to the contact glass side.



5 Release three hooks (b) in the direction of the arrow and detach the right top cover (a).



6 Detach the right rear cover (a).



7 Detach the IH fan motor.

1 Remove two screws (a) and then remove the IH box cover (b).

2 Disconnect all connectors from the IH PWB (c).

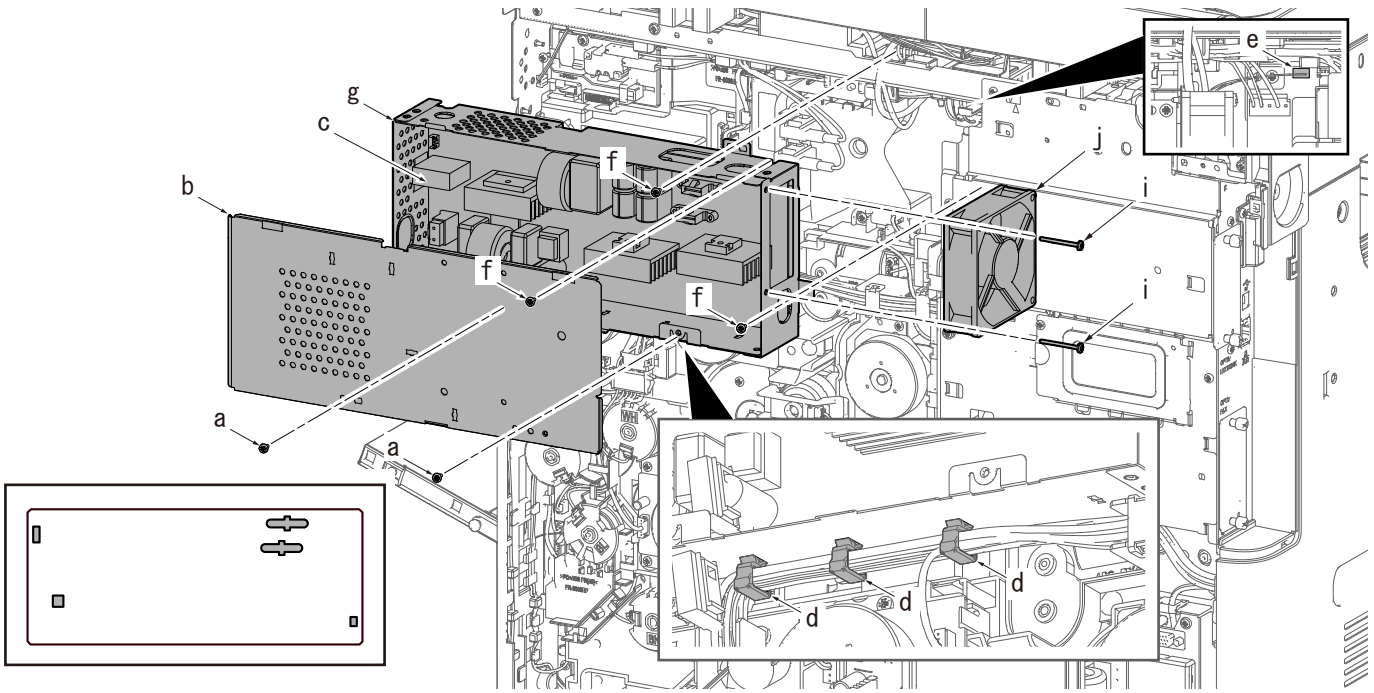
3 Release three wire saddles (d) and take out the wire from wire saddles.

4 Disconnect the connector (e).

5 Remove three screws (f) and then detach the IH PWB mounting plate (g).

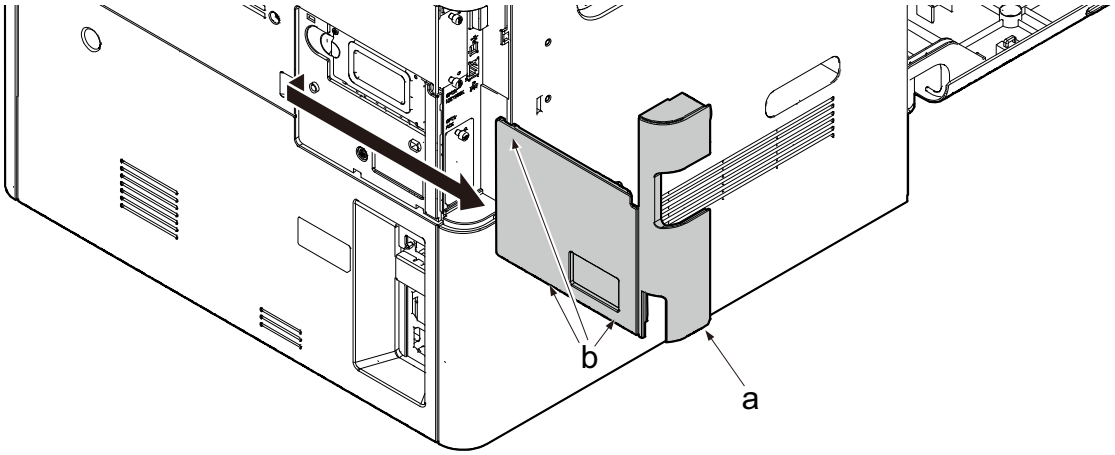
6 Remove two screws (i) and then detach the IH fan motor (j) from the IH PWB mounting plate (g).

7 Check or replace the IH fan motor, and then reattach the parts in the original position.

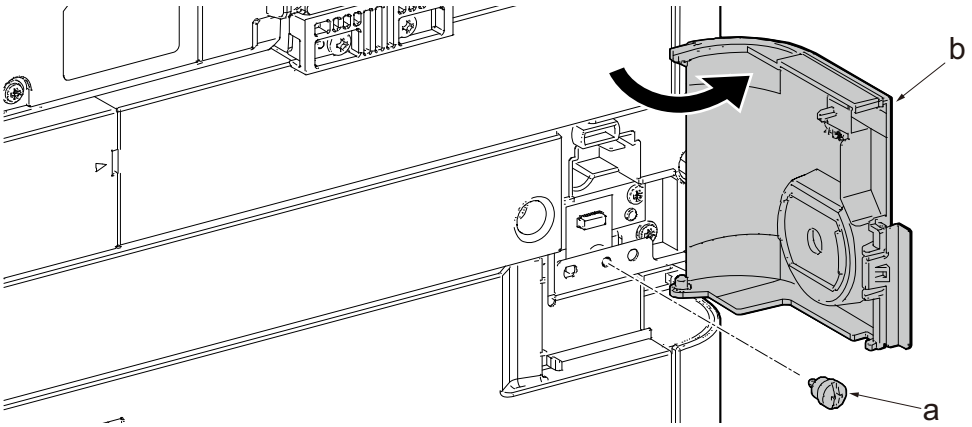


⑸-2 Detaching and reattaching the image forming fan motor

1 Release three hooks (b) in the direction of the arrow and remove the controller box cover (a).



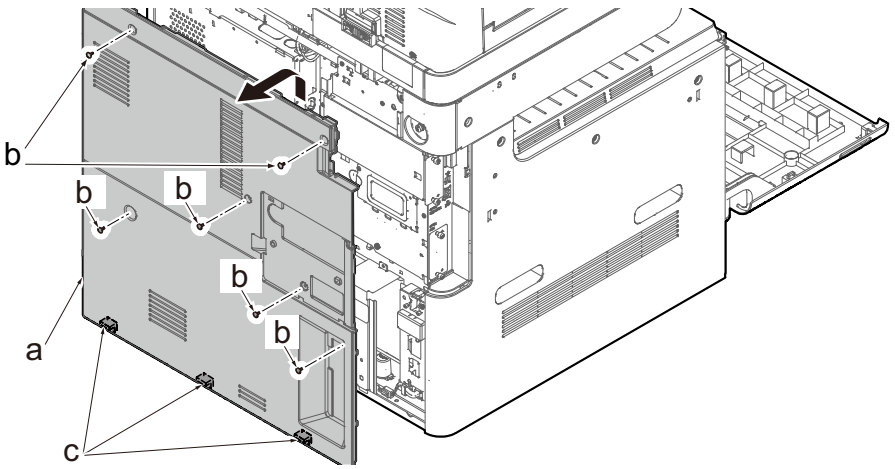
2 Remove the lock screw (b) and open the Wi-Fi cover (b) in the direction of the arrow.



3 Detach the rear cover.

1 Remove six screws (b)(M3x8).

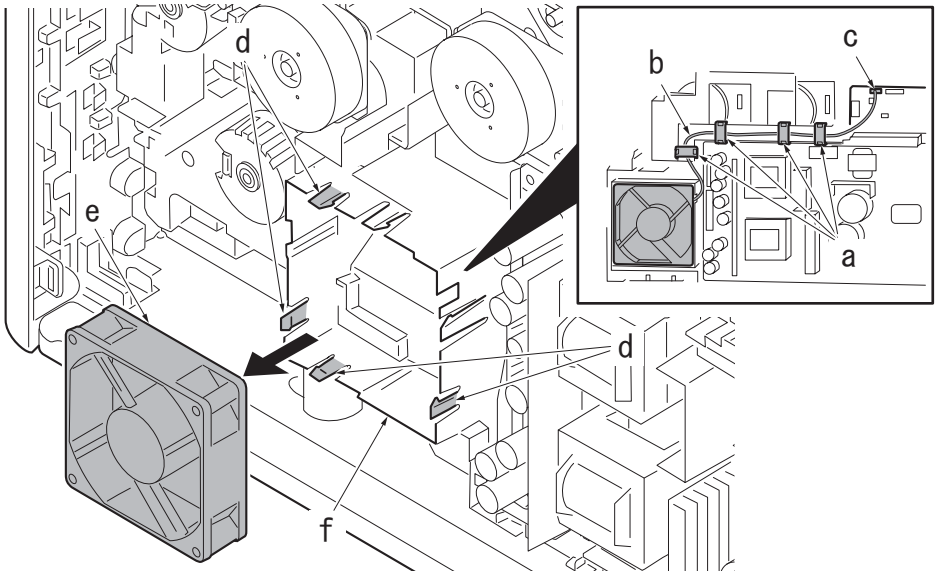
2 To detach the rear cover, align it upward and release three hooks (c).



4 Detach the image forming fan motor.

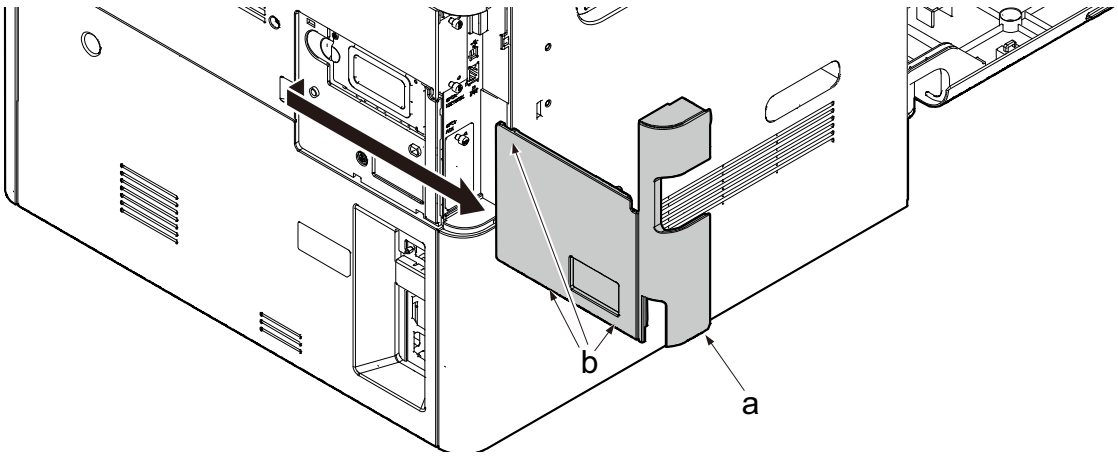
1 Release four clamps (a) and then disconnect the wire (b) and connector (c).

2 Release four hooks (d) and then detach the imaging fan motor (e) from the cooling duct (f).

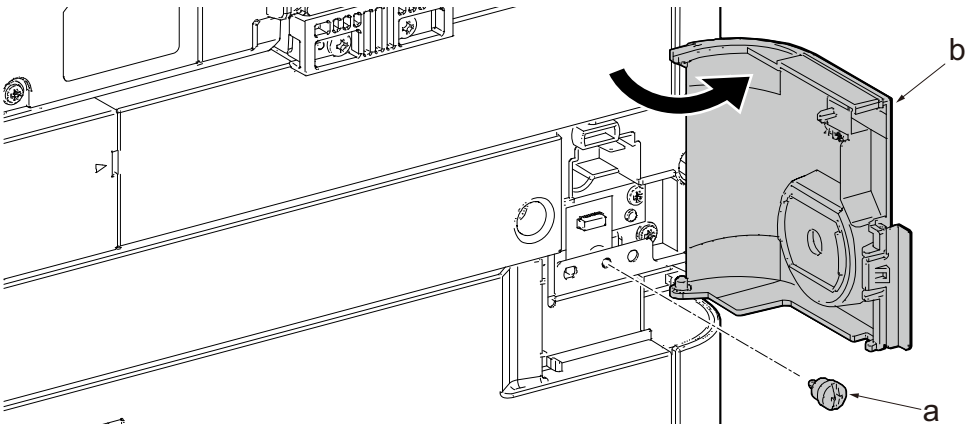


(5-3) Detaching and reattaching the power source fan motor

1 Release three hooks (b) in the direction of the arrow and remove the controller box cover (a).



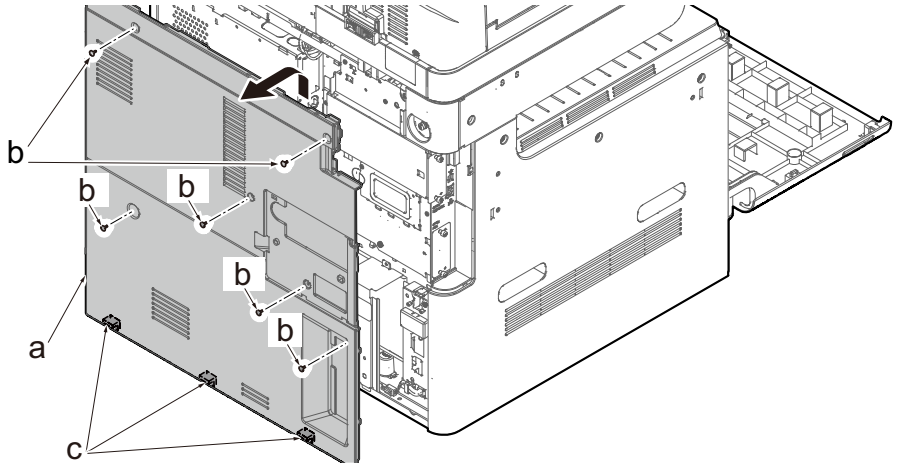
2 Remove the lock screw (b) and open the Wi-Fi cover (b) in the direction of the arrow.



3 Detach the rear cover.

1 Remove six screws (b)(M3x8).

2 To detach the rear cover, align it upward and release three hooks (c).



4 Detach the low-voltage PWB.

Caution

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

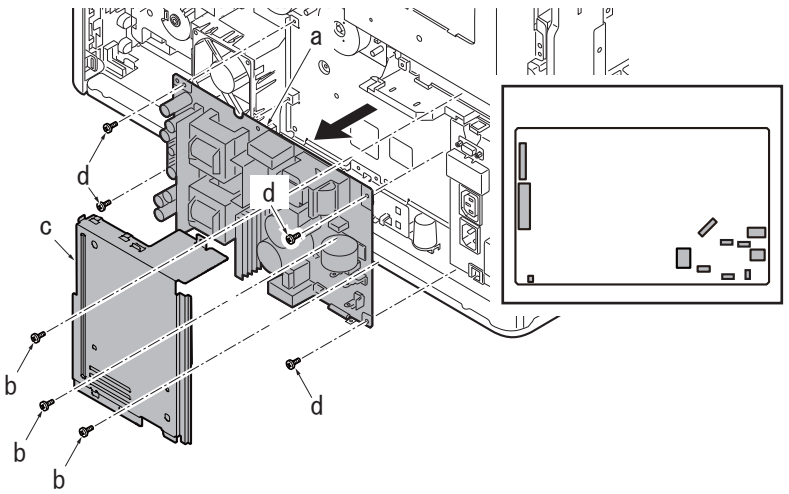
- Disconnect the power cord.
- Press the power switch one second or more to discharge the electric charge inside the main unit.

1 Remove three screws (b) and remove the low-voltage PWB cover (c).

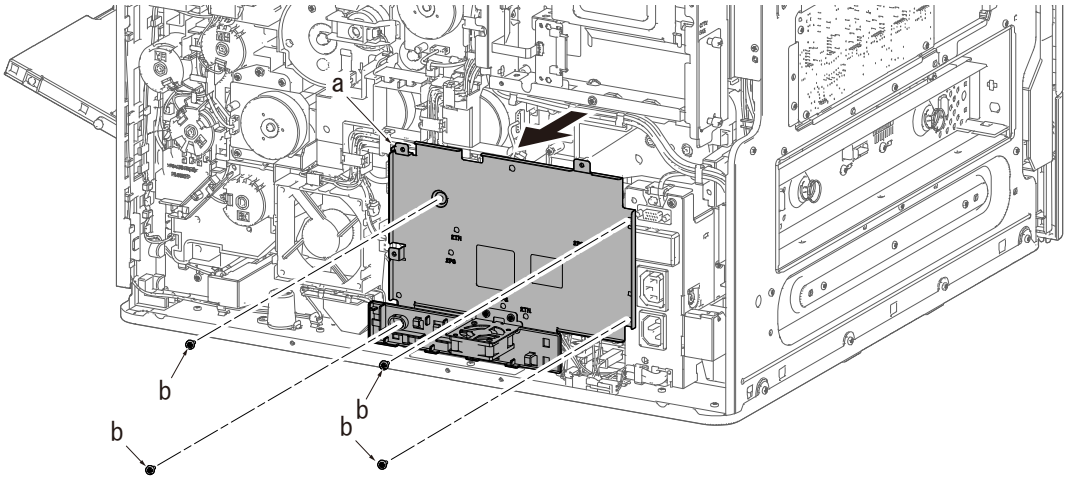
2 Disconnect all the connectors from the low-voltage PWB.

3 Remove four screws (b) and remove the low-voltage PWB (a).

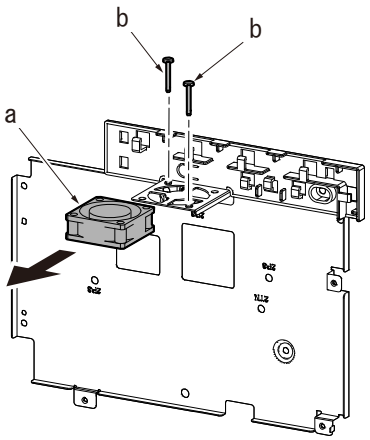
4 Check or replace the low-voltage PWB, and then reattach the parts in the original position.



5 **Remove four screws (b) and detach the low-voltage PWB mounting plate (a).**



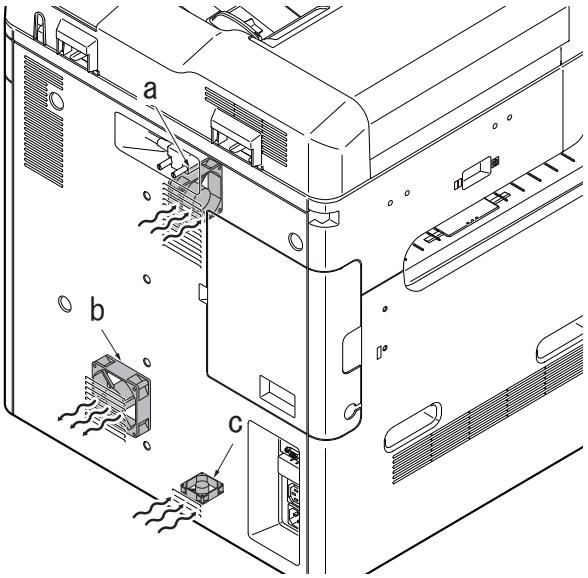
6 **Remove two screws (b) and then detach the power source fan motor (a).**



⑸-4) Fan motor attachment direction

When reattaching the fan motor, be aware of the attachment direction (intake/exhaust).

- IH fan motor (a) : intake(rating label side: the inside)
- Image forming fan motor (b) : exhaust(rating label side: the outside)
- Power source fan motor (c) : intake(rating label side: the inside)



4 - 6 Disassembly & Reassembly (option)

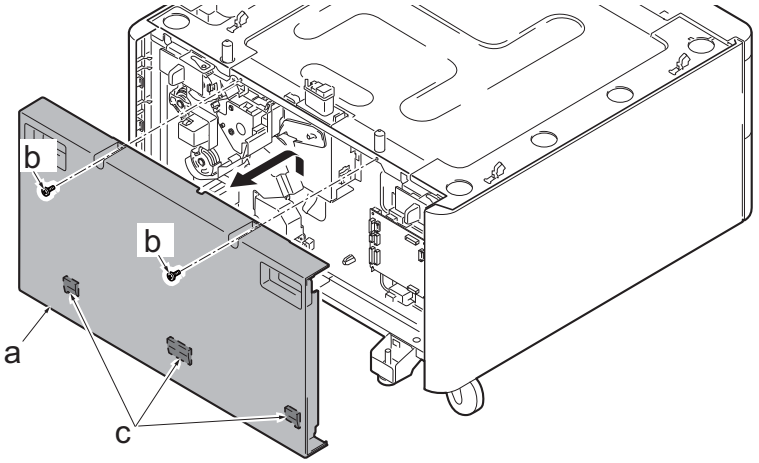
(1) Paper feeder (PF-470/PF-471)

(1-1) Detaching and reattaching the PF drive unit

1 Detach the PF rear cover.

1 Remove two screws (b).

2 Release three hooks (b) and detach PF rear cover (a) in the direction of the arrow.

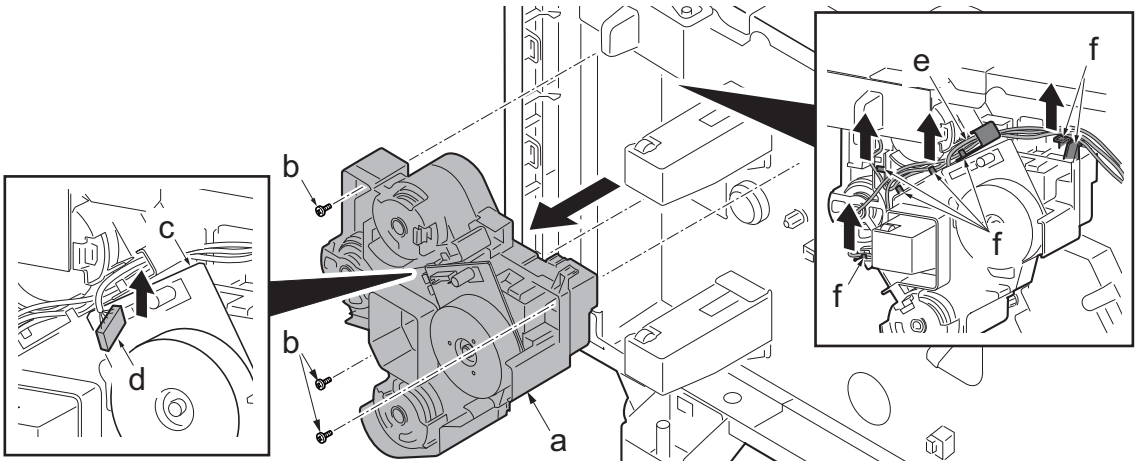


2 Detach the PF drive unit.

1 Disconnect the connector (d) of the PF motor (c).

2 Release the wire (e) from the hook (f).

3 Remove three screws (b) and detach the drive unit (a).

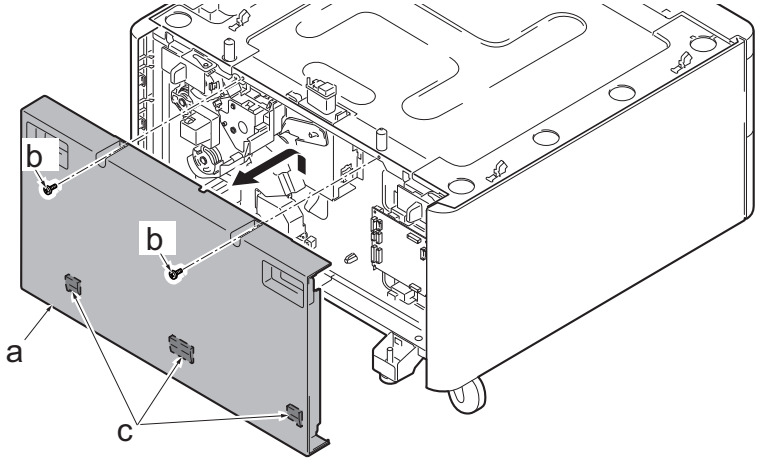


(1-2) Detaching and reattaching the PF PWB

1 Detach the PF rear cover.

1 Remove two screws (b).

2 Release three hooks (b) and detach PF rear cover (a) in the direction of the arrow.

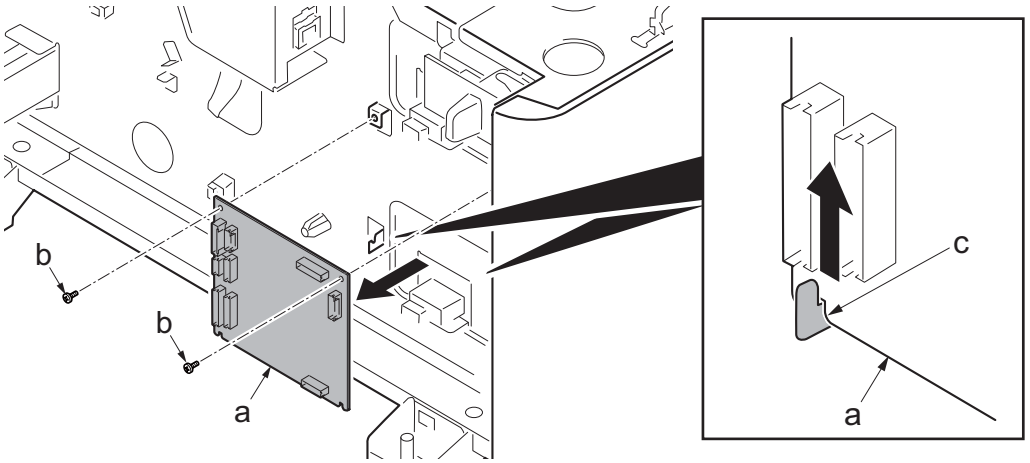


2 Detach the PF PWB.

1 Disconnect all the connectors from the PF PWB (a).

2 Remove two screws (b).

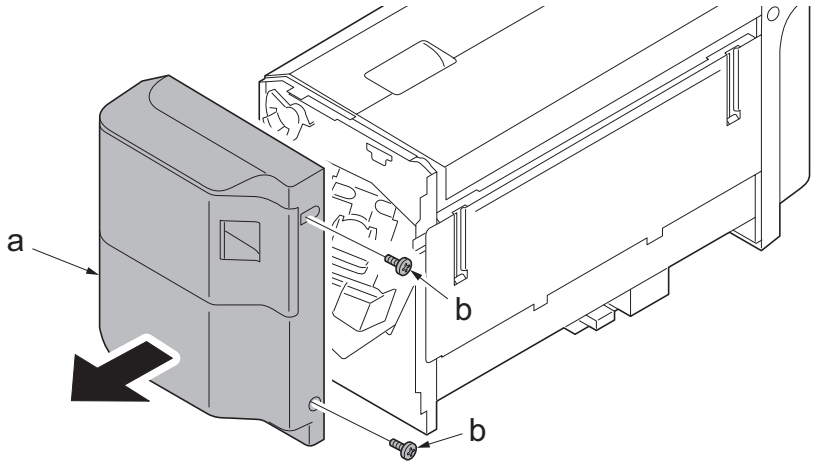
3 Release two hooks (c) and remove the PF PWB (a).



⑵ Finisher (DF-470)

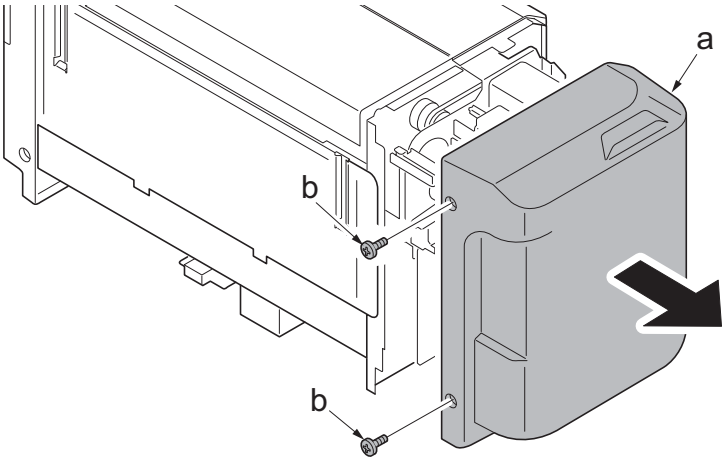
⑵-1 Detaching and reattaching the DF front cover

1 **Remove two screws (b) and detach the DF front cover (a).**



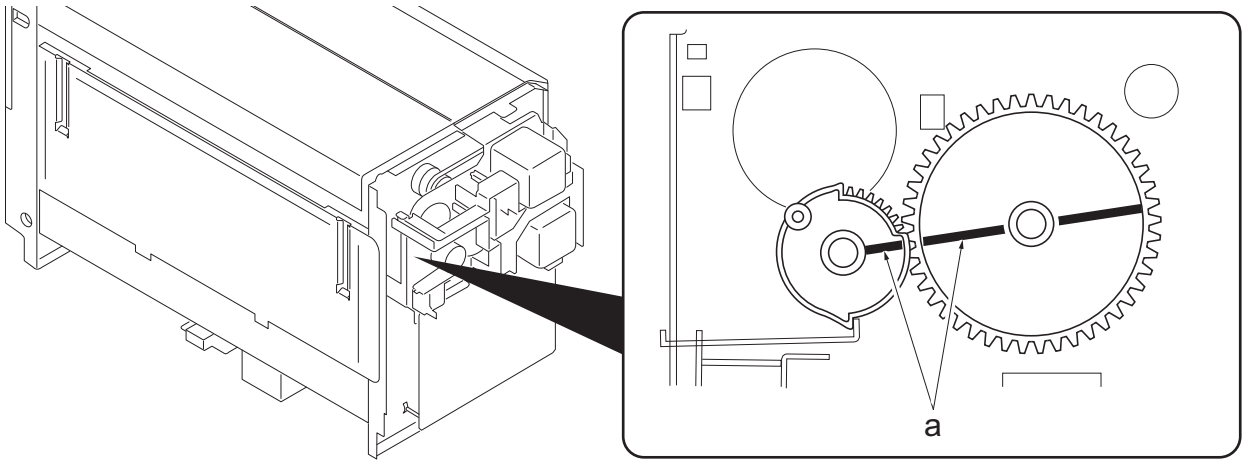
⑵-2 Detaching and reattaching the DF rear cover

1 **Remove two screws (b) and detach the DF rear cover (a).**



⑵-3 Aligning the phase of the upper and lower drive gears of the DF bundle eject belt

- When attaching the upper and lower drive gear of the DF bundle exit belt, align the phase of the ribs (a) so that they lie on the same line.



4 - 7 Periodical maintenance procedure (CH:Check CL:Clean AD:Adjust LU:Lubrication RE:Replace)

(1) Main unit

Set Up

Maintenance Parts, Location	Set UP	Call	PM maintenance (x1000 counts)				Point, Note
			200	400	600		
Test copy Test Print (Max. copy size)	CH AD	CH AD	CH AD	CH AD	CH AD		-
Entire inside the main unit		CL	CL	CL	CL		VACUUM : Remove toner and paper dust especially from imaging section and paper conveying path.
MK-8115A MK-8116B			RE	RE	RE		Drum unit, Developer unit, Fuser unit, primary transfer unit, Secondary transfer roller unit, Primary paper feed unit, Regist cleaner, MP feed pulley, Mp separation pad

Exterior and Cover

Maintenance Parts, Location	Set UP	Call	PM maintenance (x1000 counts)				Point, Note
			300	600			
OUTER COVERS	CH		CL	CL			Alcohol or dry cloth

Feed and Conveying section

Maintenance Parts, Location	Set UP	Call	PM maintenance (x1000 counts)				Point, Note
			300	600			
Regist cleaner (302K39445_)		CL	CL	CL			VACUUM : Paper dust removal
Primary paper feed unit (302K39448_)		CL					Alcohol or dry cloth
MP feed roller (302K39446_)		CL	CH RE	CH RE			Alcohol or dry cloth if no replacement. Check feed count by U901: Replace at 100K
MP separation pad (302P19409_)		CL	CH RE	CH RE			Alcohol or dry cloth if no replacement. Check feed count by U901: Replace at 100K
Rollers/pulleys		CL	CL	CL			Alcohol or dry cloth
Conveying guides		CL	CL	CL			Alcohol or dry cloth

Exit and Duplex section

Maintenance Parts, Location	Set UP	Call	PM maintenance (x1000 counts)				Point, Note
			300	600			

Rollers/pulleys		CL	CL	CL			Alcohol or dry cloth
Conveying guides			CL	CL			Alcohol or dry cloth

Image scanner section

Maintenance Parts, Location	Set UP	Call	PM maintenance (x1000 counts)				Point, Note
			300	600			
Contact glass (302P19405_) (302P19406_)	CL	CL	CL	CL			Use dry cloth after cleaning by the alcohol (Normally surface only) Clean the back side (dry wipe after alcohol wipe) only when the abnormal image (streaks and dirt) appears. Clean by the dry cloth when installing DP
Slit glass (302P19405_) (302P19406_)	CL	CL	CL	CL			Alcohol or dry cloth or water wipe

Drive and Other section

Maintenance Parts, Location	Set UP	Call	PM maintenance (x1000 counts)				Point, Note
			300	600			
CLUTCHS		CH RE	CH	CH			Check the copy registration and paper feed condition on registration and paper feed section.
SENSORS		CH	CH	CH			Use dry cloth or air blower to the light reception surface of the photo sensor.

Important

Please do not use flammable spray for air blower in the list.

(2) Document Processor

Set Up

Maintenance Parts, Location	Set UP	Call	PM maintenance (x1000 counts)				Point, Note
			300	600			
Test copy, Test print (Max. copy size)	CH AD	CH AD	CH AD	CH AD			-
MK-6110			RE	RE			DP feed roller assy, DP retard roller cover, DP retard roller

Exterior and Cover

Maintenance Parts, Location	Set UP	Call	PM maintenance (x1000 counts)				Point, Note
			300	600			
Entire inside the main unit		CL	CL	CL			Alcohol or dry cloth

DP feed motor section

Maintenance Parts, Location	Set UP	Call	PM maintenance (x1000 counts)				Point, Note
			300	600			
DP feed roller (302P19410_)		CL					Alcohol (Replace MK-6110 if necessary)
DP retard roller cover (302P19411_)		CL					Alcohol (Replace MK-6110 if necessary)
DP retard roller (302P19412_)		CL					Alcohol (Replace MK-6110 if necessary)

DP conveying and reversing section

Maintenance Parts, Location	Set UP	Call	PM maintenance (x1000 counts)				Point, Note
			300	600			
DP registration roller (302P19427_)		CL	CL	CL			Alcohol or dry cloth
DP registration pulley (303P72417_)		CL	CL	CL			Alcohol or dry cloth
DP conveying pulley A (303M82421_)		CL	CL	CL			Alcohol or dry cloth
DP conveying pulley B (303LL2419_)		CL	CL	CL			Alcohol or dry cloth
DP scanner guide (302P11826_)		CL	CL	CL			Alcohol or dry cloth

DP other section

Maintenance Parts, Location	Set UP	Call	PM maintenance (x1000 counts)				Point, Note
			300	600			
Original Cover (303JC0420_)		CL	CL	CL			Alcohol or dry cloth
Slit glass (302RH1721_)		CL	CL	CL			Alcohol or dry cloth (CCD section)
DP slit glass (302P21711_)		CL	CL	CL			Alcohol or dry cloth (CIS section)
Conveying guides			CL	CL			Alcohol or dry cloth
SENSORS		CH	CH	CH			Use dry cloth or air blower to the light reception surface of the photo sensor.

Important

Please do not use flammable spray for air blower in the list.

⑶ Paper Feeder (PF-470/471) (Option)

Set Up

Maintenance Parts, Location	Set UP	Call	PM maintenance (x1000 counts)				Point, Note
			300	600			
Test copy, Test print (Max. copy size)	CH AD	CH AD	CH AD	CH AD			Check the center alignment gap. (check after center adjustment of the main unit)

Exterior and Cover

Maintenance Parts, Location	Set UP	Call	PM maintenance (x1000 counts)				Point, Note
			300	600			
Entire inside the main unit		CL	CL	CL			Alcohol or dry cloth

PF feed section

Maintenance Parts, Location	Set UP	Call	PM maintenance (x1000 counts)				Point, Note
			300	600			
Feed unit (302K39448_)		CL	CH RE	CH RE			Alcohol or dry cloth

PF conveying section

Maintenance Parts, Location	Set UP	Call	PM maintenance (x1000 counts)				Point, Note
			300	600			
PF upper conveying roller (302MV9431_)		CL	CL	CL			Alcohol or dry cloth
PF lower conveying roller (302MV9432_)		CL	CL	CL			Alcohol or dry cloth
Conveying guides			CL	CL			Alcohol or dry cloth
SENSORS		CH	CH	CH			Use dry cloth or air blower to the light reception surface of the photo sensor.

Important

Please do not use flammable spray for air blower in the list.

⑷ Attachment Kit (AK-470) (Option)

Exterior and Cover

Maintenance Parts, Location	Set UP	Call	PM maintenance (x1000 counts)				Point, Note
			300	600			
Entire inside the main unit		CL	CL	CL			Alcohol or dry cloth

BR paper conveying section

Maintenance Parts, Location	Set UP	Call	PM maintenance (x1000 counts)				Point, Note
			300	600			
Rollers/pulleys		CL	CL	CL			Alcohol or dry cloth
Conveying guides		CL	CL	CL			Alcohol or dry cloth
SENSORS		CH	CH	CH			Use dry cloth or air blower to the light reception surface of the photo sensor.

Important

Please do not use flammable spray for air blower in the list.

⑸ Finisher (DF-470) (Option)

Exterior and Cover

Maintenance Parts, Location	Set UP	Call	PM maintenance (x1000 counts)				Point, Note
			300	600			
Entire inside the main unit		CL	CL	CL			Alcohol or dry cloth

DF conveying section

Maintenance Parts, Location	Set UP	Call	PM maintenance (x1000 counts)				Point, Note
			300	600			
Rollers/pulleys		CL	CL	CL			Alcohol or dry cloth
Conveying guides			CL	CL			Alcohol or dry cloth
SENSORS		CH	CH	CH			Use dry cloth or air blower to the light reception surface of the photo sensor.

Important

Please do not use flammable spray for air blower in the list.

5 Firmware

5 - 1 Firmware update

Execute the following to update the firmware below.

* The processing time is reduced with simultaneous processing by group.

[GROUP1 UPDATE]

UPDATE step	Target	Master file name	Message
1	Controller Firmware Package	DL_PKG_CTRL.2P3(High) DL_PKG_CTRL.2P4(Low)	CPKG
	Common Basic App	DL_CTRL_STDAPP_CMN.2P3	CMN
	System Setting App	DL_CTRL_STDAPP_SST.2P3	SST
	Maintenance App	DL_CTRL_STDAPP_MNT.2P3	MNT
	Copy App	DL_CTRL_STDAPP_CPY.2P3	CPY
	Print App	DL_CTRL_STDAPP_PRT.2P3	PRT
	Send App	DL_CTRL_STDAPP_SND.2P3	SND
	BOX App	DL_CTRL_STDAPP_BOX.2P3	BOX
	Fax App	DL_CTRL_STDAPP_FAX.2P3	SFAX
	Web Page App	DL_CTRL_STDAPP_WPG.2P3	WPG
	Auth App	DL_CTRL_STDAPP_AUTH.2P3	AUTH
	Panel Control System App	DL_CTRL_STDAPP_PCS.2P3(High) DL_CTRL_STDAPP_PCS.2P4(Low)	PCS:
	Service Cooperation App	DL_CTRL_STDAPP_SCO.2P3	SCO
	Product Line Platform	DL_CTRL_PLP.2P3	PLP
	Extension Service Platform	DL_CTRL_EXSP.2P3	EXSP
	Package Version Info	DL_CTRL_VINF.2P3(High) DL_CTRL_VINF.2P4(Low)	VINF
	MMI	DL_PANL.2P3(High) DL_PANL.2P4(Low)	PANL
	Browser	DL_BRWS.2P1	BRWS
2	Option Language Data(1)	DL_OPT_xx.2P1 (*1)	OPT1
3	Option Language Data(2)		OPT2
4	Option Language Data(3)		OPT3
5	Option Language Data(4)		OPT4
6	Option Language Data(5)		OPT5
7	Option Language Data(Erase)	DL_OPT_ER.2P1	-
8	Color Table Data(Printer1)	DL_PCLT1.2P3	PCT1
9	Color Table Data(Printer2)	DL_PCLT2.2P3	

(*1) Alphanumeric characters corresponding to the type of the optional language is substituted for xx.

*: When installing the OCR dictionary firmware, it is necessary that the SSD or the SD card has to be installed. Also it is necessary to format the SSD / SD card at the system menu in the main unit.

[GROUP1 UPDATE]

UPDATE step	Target	Master file name	Message
1	FAX Board	DL_FAX.3R2	FAX

[GROUP3 UPDATE]

UPDATE step	Target	Master file name	Message
1	Document Processor	DL_DPRC.2P1	DP
2	Paper Feeder	DL_03NN.2P1	PF
3	Attachment Kit	DL_03NS.2P1	AK
4	Document Finisher	DL_05JS.2P1	DF
5	Engine Firmware	DL_ENGN.2P3	ENGN

[GROUP4 UPDATE]

UPDATE step	Target	Master file name	Message
1	Sub Panel Board	DL_SPNL.2P1	SPNL

Verify the signature at firmware update

Verify the signature of the update file to prevent the firmware update with illegally falsified data.

File names of the signature and firmware certificate

Target	Signature file name	Firmware certificate file name
Common Basic App	2P3_CTRL_STDAPP_CMN_sign.bin	2P3_CTRL_STDAPP_CMN_cert.pem
System Setting App	2P3_CTRL_STDAPP_SST_sign.bin	2P3_CTRL_STDAPP_SST_cert.pem
Maintenance App	2P3_CTRL_STDAPP_MNT_sign.bin	2P3_CTRL_STDAPP_MNT_cert.pem
Copy App	2P3_CTRL_STDAPP_CPY_sign.bin	2P3_CTRL_STDAPP_CPY_cert.pem
Print App	2P3_CTRL_STDAPP_PRT_sign.bin	2P3_CTRL_STDAPP_PRT_cert.pem
Send App	2P3_CTRL_STDAPP_SND_sign.bin	2P3_CTRL_STDAPP_SND_cert.pem
BOX App	2P3_CTRL_STDAPP_BOX_sign.bin	2P3_CTRL_STDAPP_BOX_cert.pem
Fax App	2P3_CTRL_STDAPP_FAX_sign.bin	2P3_CTRL_STDAPP_FAX_cert.pem
Web Page App	2P3_CTRL_STDAPP_WPG_sign.bin	2P3_CTRL_STDAPP_WPG_cert.pem
Auth App	2P3_CTRL_STDAPP_AUTH_sign.bin	2P3_CTRL_STDAPP_AUTH_cert.pem
Panel Control System App	2P3_CTRL_STDAPP_PCS_sign.bin(High) 2P4_CTRL_STDAPP_PCS_sign.bin(Low)	2P3_CTRL_STDAPP_PCS_cert.pem(High) 2P4_CTRL_STDAPP_PCS_cert.pem(Low)
Service Cooperation Ap	2P3_CTRL_STDAPP_CMN_sign.bin	2P3_CTRL_STDAPP_CMN_cert.pem
Product Line Platform	2P3_CTRL_PLP_sign.bin	2P3_CTRL_PLP_cert.pem
Extension Service Platform	2P3_CTRL_EXSP_sign.bin	2P3_CTRL_EXSP_cert.pem
Package Version Info	2P3_CTRL_VINF_sign.bin(High) 2P4_CTRL_VINF_sign.bin(Low)	2P3_CTRL_VINF_cert.pem(High) 2P4_CTRL_VINF_cert.pem(Low)
MMI	2P3_PANL_sign.bin(High) 2P4_PANL_sign.bin(Low)	2P3_PANL_cert.pem(High) 2P4_PANL_cert.pem(Low)
Browser	2P1_BRWS_sign.bin	2P1_BRWS_cert.pem
Option Language Data(1)	2P1_OPT_xx_sign.bin	2P1_OPT_xx_cert.pem
Option Language Data(2)		
Option Language Data(3)		
Option Language Data(4)		

Target	Signature file name	Firmware certificate file name
Option Language Data(5)		
Option Language Data(Erase)	2P1_OPT_ER_sign.bin	2P1_OPT_ER_cert.pem
Color Table Data(Printer1)	2P3_PCLT1_sign.bin	2P3_PCLT1_cert.pem
Color Table Data(Printer2)	2P3_PCLT2_sign.bin	2P3_PCLT2_cert.pem
Sub Panel Board	2P1_SPNL_sign.bin	2P1_SPNL_cert.pem
FAX Board	3R2_FAX_sign.bin	3R2_FAX_cert.pem
Engine Firmware	2P3_ENGN_sign.bin	2P3_ENGN_cert.pem
Document Processor	2P1_DPRC_sign.bin	2P1_DPRC_cert.pem
Document Finisher	2P1_05JS_sign.bin	2P1_05JS_cert.pem
Attachment Kit	2P1_03NS_sign.bin	2P1_03NS_cert.pem
Paper Feeder	2P1_03NN_sign.bin	2P1_03NN_cert.pem

Note when upgrading the firmware

When using a USB memory requiring a long time to start up, the main unit starts up before executing the firmware upgrade and entering into the firmware upgrade fails.

Maintenance mode U025 firmware update (S): Execute the firmware upgrade at Firmware Update (Security)

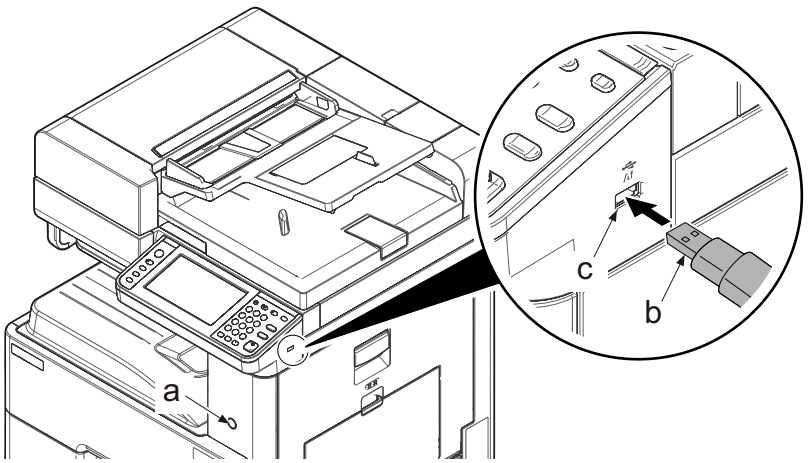
Preparations

Unzip the file containing the downloaded firmware and then copy the firmware and high-speed master file (skip files: ES_SKIP.ON) in the root folder of the USB memory.

* If the high-speed master file exists, the same version firmware update is skipped.

1 **After turning the power switch (a) on and the screen is properly displayed, turn the power switch (a) off.**

2 **Insert the USB memory (b) with the firmware into the USB memory slot and turn the power switch (a) on.**



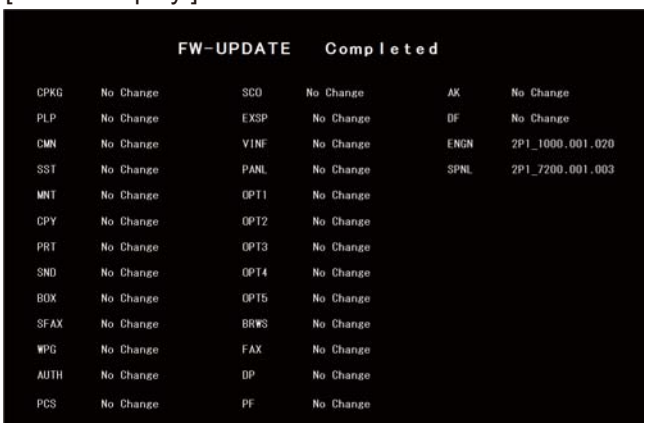
- [FW-UPDATE] is parallelly processed and the progress is displayed.

[7 Inch display]

[4.3 Inch display]

- "Completed" is displayed when the firmware update is completed.
- Check if the new firmware versions are displayed.

[7 Inch display]

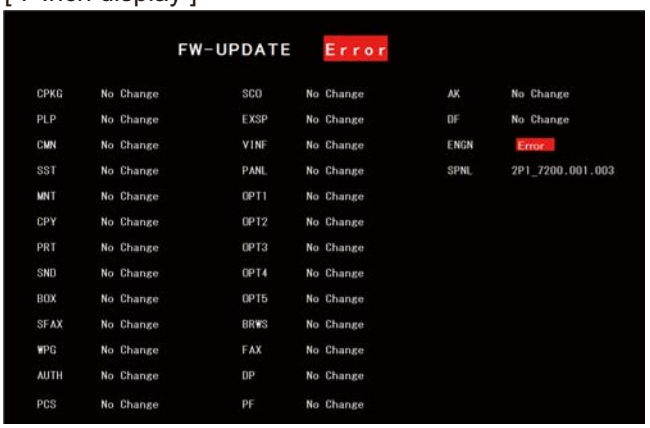


[4.3 Inch display]

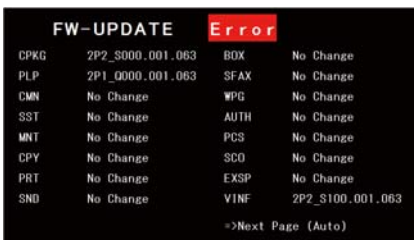
- When there is no corresponding master file, "No Change" is displayed.
  * is displayed after the firmware version update that has been skipped.
- [----------] is displayed when the FAX PWB, the option equipment, etc. is not installed.

For the case of an error

[7 Inch display]



[4.3 Inch display]



- When an error occurs during the firmware upgrade, the process is immediately interrupted and the error code and error message are indicated.

Codes	Description	Codes	Description
0000	Others	S000	Other signature verification error *1
0100	No Master file	S001	Signature verification file is inadequate
0200	Version mismatch of the master file	N001	Network connection failed. *2 (There is no upgrade target interrupted)
03xx	No Download File (No.xx)		
04xx	File (No.xx) Checksum mismatch	N002	Network connection failed. *3 (There is an upgrade target interrupted)
05xx	File (No.xx) Preparation failure		
06xx	File (No.xx) Oversize		
08xx	File (No.xx) Writing failure		

*1: Including the expired FM certificate.

*2: Automatically restarted for the normal start-up since the normal start-up is available next time.

*3: Transferred to the USB upgrade mode instead of the automatic restart since the normal start-up may not be available next time.

Indication of the signature verification result

Official signature verification file	Indicate the result
Both certificate and signature files exist and verification is successful.	Version number
Both certificate and signature files exist but verification is unsuccessful.	S000
Neither certificate nor signature files exist. Or either of them does not exist.	S001

1 Unplug the power cord and disconnect the USB memory.

2 Plug in the power cord and turn the power switch (a) on.

3 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.

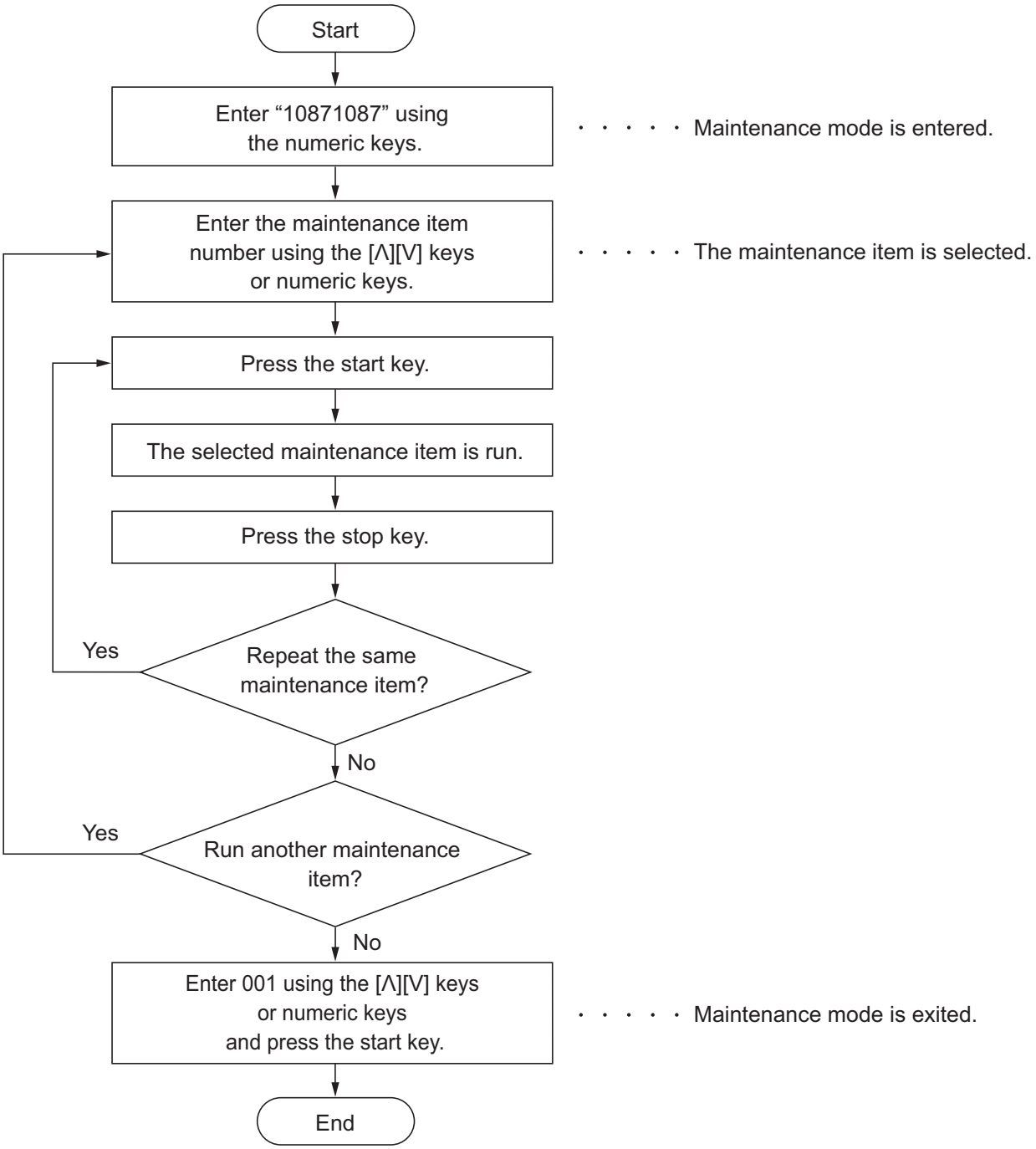
* The firmware update that was already completed before power shut-down is skipped.

6 Maintenance mode

6 - 1 Maintenance mode

This model is equipped with the service mode for the main unit maintenance and correction.

(1) Executing the maintenance mode



(2) Maintenance modes list

Section	Maintenance item	Outline
General	U000 Printing Maintenance Report	Printing the reports and exporting them to a USB memory
	U001 Exiting the maintenance mode	Exiting from the maintenance mode
	U002 Set Factory Default	Initializing to the factory-default setting
	U004 Machine Number	Display of the machine serial number and setting
	U010 Setting the maintenance mode ID	Setting the maintenance mode ID
	U019 Firmware Version	Displays the firmware version of the PWB
Initialization	U021 Initializes Memory	Initializing the backup RAM
	U025 Firmware update (S)	Updates the firmware
Drive Paper feed Conveying Cooling	U030 Motor operation check	Drive the drive motor
	U031 Check the conveying switch	Check the conveying switch On/Off
	U032 Clutch operation check	Check the paper conveying clutch operation
	U033 Solenoid operation check	Drive the paper conveying and toner supply solenoids
	U034 Paper timing data adjustment	Adjusting the leading edge timing and the center line
	U035 Folio size setting	Sets the Folio paper length and width.
	U037 Fan motor operation check	Drive each fan motor.
	U051 Registration paper loop amount adjustment	Adjusts the paper loop amount between the rollers
	U053 Adjusting the motor speed	Sets each motor's speed correction
Optical	U063 Shading position adjustment	Changes the scanner shading position
	U065 Adjusting the magnification for table scanning	Adjusting the magnification for table scanning
	U066 Adjusting the table scanning timing	Adjusting the leading edge timing for table scanning
	U067 Adjusting the table scanning center line	Adjusting the center line for table scanning
	U068 DP scanning position adjustment	Adjusting the starting position for DP scanning
	U070 DP magnification adjustment	Adjusting the magnification for DP scanning
	U071 Adjusting the DP leading edge Timing	Adjusting the DP scanning timing
	U072 Adjusting the DP original center	Adjusting the center line for DP scanning
	U089 MIP-PG pattern output	Output MIP-PG pattern
	U099 Original size detection setting	Sets the original size detection check and detection threshold
High voltage system	U100 Main high voltage adjustment	Adjust the drum surface potential
	U101 Primary transfer voltage adjustment	Sets high voltage except the main high voltage and outputs
	U106 Secondary transfer voltage adjustment	Set the secondary transfer voltage correction

Section	Maintenance item	Outline
	U107 Primary transfer cleaning voltage adjustment	Set the transfer belt cleaning voltage
	U108 Separation Shift bias adjustment	Sets the transfer belt unit cleaning control voltage.
	U110 Drum counter	Displays the drum counter
	U117 Drum unit number	Displays the drum number
	U118 Drum unit history	Displays the drum history
	U120 Drum drive distance counter	Displays the drive distance counter
High voltage system	U122 Displays the primary transfer unit number	Displays the primary transfer unit number
	U123 Primary transfer unit history	Displays the machine number and the primary transfer unit counter history
	U127 Clearing the transfer count	Displaying the counts
	U128 Transfer timing adjustment	Adjust the transfer high-voltage output ON/OFF timing
Developer system	U135 Checking the toner motor operation	Drives the toner motor
	U136 Toner level detection setting	Sets the number of pages printable at toner near end
	U139 Temperature, humidity	Displays the machine inside and outside humidity
	U140 Developer bias adjustment	Adjust the developer bias values
	U147 Setting the toner applying mode	Sets the overcharge toner removal mode
	U148 Drum refresh mode setting	Setting auto drum refresh
	U115 Toner sensor output	Displays the toner sensor output
	U157 Developer drive time	Displays/sets the developer drive time
	U158 Developer counter	Displays/sets the developer counter
Fuser	U161 Fuser temperature adjustment	Sets the fuser control temperature
	U164 Fuser unit history	Displays the machine number and the fuser unit history
	U165 Fuser unit number	Displays the fuser unit number
	U167 Clearing the fuser count	Displaying/clearing the counts
	U169 Setting the fuser power source	Displays/sets the IH PWB control voltage
	U197 Fuser control setting	Sets the fuser control temperature
	U199 Fuser temperature	Monitor the fuser temperature
Operation section / Support equipment	U201 Initializing the touch panel	Correct the X and Y axis position of the touch panel
	U203 Check DP operation	Checking the DP paper conveying operation with the DP alone
	U207 Operation key check	Check the operation panel key operation
	U222 Setting the IC card type	Sets the ID card type
	U230 Optional device serial number	Displays the optional device serial number
	U243 Checking the DP motor	Drive the PF motor and solenoid
	U244 DP switch check	Drive the DP sensor

Section	Maintenance item	Outline
Mode Setting	U250 Maintenance counter preset	Changes the preset value
	U251 Maintenance counter clear	Displaying/clearing/changing the counter value
	U252 Destination	Sets the machine operation and indication depending on the specification of the destination
	U253 Double/single count switch	Sets the counter by color mode
	U260 Feed/eject counter switch	Setting the count-up timing
	U265 Setting by destination	Sets the OEM code
	U278 Delivery date setting	Register Delivery Date
	U283 Setting China Red	Enable/Disable China Red setting.
	U285 Set Service Status Page	Setting the print coverage report output
Mode Setting	U287 Automatic recovery function	Sets whether to automatically recover afer error
	U290 Set the HyPAS application storage rive.	Set the HyPAS application storage rive.
	U329 Black line cleaning indication	Switch the black line cleaning guidance indication
	U332 Adjusting the black coverage coefficient	Setting the coefficient of the custom size
	U341 Printer cassette setting	Sets the cassette to printer output only
	U343 Duplex priority mode setting	Switches the duplex printing priority mode
	U345 Maintenance timing pre-caution setting	Setting the maintenance timing display
	U346 Selecting Sleep Mode	Setting the BAM related sleep mode
Image processi ng	U402 Print margin adjustment	Adjusts the scan image margins
	U403 Scanning margin adjustment (table)	Adjusts the margin for scanning originals
	U404 Scanning margin adjustment (DP)	Adjusts the margin for scanning originals
	U407 Adjusting the writing timing (Duplex/ Reversal)	Adjusting the writing timing when duplex printing
	U410 Adjusting the halftone automatically	Acquiring the data for the automatic halftone adjustment and the ID correction
	U411 Scanner auto adjustment	Adjusting the scanner and DP automatically
	U425 Target adjustment	Inputs the Lab value printed on an adjustment original
	U464 ID correction setting	Sets the ID correction
	U465 ID correction data	Displays the light intensity control value after the ID correction
	U467 Color registration correction operation setting	Sets the color registration correction
	U468 Color registration correction data	Displays the color registration correction data
	U470 Setting the JPEG compression rate	Sets the JPEG compression rate
	U474 Checking the LSU cleaning	Sets the LSU cleaning operation check and cleaning cycle
	U486 Color/BW mode setting	Sets the image processing

Section	Maintenance item	Outline
TDRS	U520 TDRS setting	Checking/setting the TDRS
FAX	U600 Initialize: All Data	Initializes all data and image memory.
	U601 Initialize: Keep data	Initializing the software switches of other than the machine data
	U603 User data 1	Makes user settings to enable the use as a FAX
	U604 User Data 2	Makes user settings to enable the use as a FAX
	U605 Data clear	Initializing the FAX communication data
	U610 System setting 1	Set the number of lines to be ignored when receiving a FAX at 100% magnification and in the auto reduction mode.
	U611 System setting 2	Number of adjustment lines for automatic reduction.
	U612 System setting 3	Setting regarding the FAX communication operation
	U615 System Setting 6	Sets the size to print at FAX reception and received image size
	U620 FAX system	Sets the signal detection method for remote switching
	U625 Communication Setting	Sets the auto redialing interval and the number of times of auto redialing
FAX	U630 Communication control procedures 1	Setting the FAX communication
	U631 Communication control procedures 2	Setting the FAX communication
	U632 Communication control procedures 3	Setting the FAX communication
	U633 Communication control procedures 4	Setting the FAX communication
	U634 Communication control procedures 5	Setting the acceptable error when judging the received TCF signal
	U640 Communication time setting 1	Setting the detection time by remote switching mode
	U641 Communication time setting 2	Sets the time-out time for the fax communication
	U650 Modem 1	Sets the G3 transmission cable equalizer
	U651 Modem 2	Sets the modem output level
	U660 Ring setting	Setting the NCU (network control unit)
	U670 List output	Outputting the list of the fax communication data
	U695 FAX function customization	FAX batch transmission is set up.
	U699 Software switch: Set	Sets the software switches individually
Others	U901 Clearing the counters by paper source	Displays/clears the counters by paper source
	U903 Clearing the jam counter	Displays/clears number of occurrence by jam trigger code
	U904 Clearing the service call error counter	Displays/clears the service call error and system error counts
	U905 Optional counter	Displaying the counts
	U908 Total counter	Displays the total count
	U910 Black rate data	Clearing the print coverage data and its period
	U911 Counter by media type	Displays/clears the counts by media type

Section	Maintenance item	Outline
	U917 Read/Write Backup Data	Reading/writing the backup data to a USB memory
	U920 Billing counter	Displays the billing count
	U927 Clearing all the billing/life counters	Clearing the billing count and machine life count
	U928 Machine life counter	Displays the machine life count
	U930 Clear the main charger roller counts	Displaying/setting the counts
	U935 Relay PWB Maintenance	Sets the mode when an error occurs
	U942 DP loop amount setting	Adjust the paper loop amount when using the document processor
	U964 Billing counter	Transfer the log files save in the HDD to a USB memory.
	U977 Setting the data capture mode	Stores the data sent to the main unit into a USB memory
	U984 Developer unit number	Displays the developer unit number
	U985 Developer unit history	Displays the developer unit number history
	U991 Scanner counter	Displays the scanner count

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	Maintenance mode setting list
User Status	Output User Status Page
Svc Status	Output Service Status Page
Event	Output the event log report
NW Status	Output Network Status Page
LLU Report	Output LLU report
Fax Sys Conf *1	Prints the list of local telephone number, confidential boxes and firmware versions.
Fax Act List *1	Prints the list of the error logs and communication lines.
Fax Self Sts *1	Maintenance mode setting, Fax communication setting output
Fax Pcl List *1	Outputs a list of communication procedures.
Fax Err List *1	Output the error list.
All	All reports output

*1: FAX installation only

3 Press the [Start] key to output the list.

If A4 paper is available, it is output with this size. If A4 paper is unavailable, sekect the paper source. Output status is displayed.

Method: when sending output data to a USB memory

1 Press the [Start] key.

2 Insert a USB memory into the USB memory slot.

3 Select the item to send.

4 Select [USB(Text)] or [USB(HTML)].

Items	Output list
Print	A report is printed.
USB(Text)	Destination: send to USB memory (text format)
USB(HTML)	Destination: send to USB memory (HTML format)

- Reinstall the USB memory for continuous USB out whenever completing output. (For unmounting the USB memory after output)

5 Press the [Start] key.

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

ECOSYS M8124cidn

KYOCERA

xxxxxxxxxxxxxxxx

(1) Firmware version 2P4_2000.001.133 2017.06.05

(2) 2017/07/03 15:15

[XXXXXXXX] [XXXXXXXX] [XXXXXXXX]

(3) **(4)** **(5)**

(6) Machine No.:Z2C5Y00100 **(7)** Total Life Count:100000 **(8)** Color Life Count:100000

(9) Paper Jam Log

#	Count.	Event Descriprions	Date and Time
12	5555555	0501.01.08.01.00	2014/02/12 17:30
11	4444444	4002.01.08.01.00	2014/02/12 17:30
10	3333333	0501.01.08.01.00	2014/02/12 17:30
9	2222222	4002.01.08.01.00	2014/02/12 17:30
8	1111111	0501.01.08.01.00	2014/02/12 17:30
7	999999	4002.01.08.01.00	2014/02/12 17:30
6	888888	0501.01.08.01.00	2014/02/12 17:30
5	777777	0501.01.08.01.00	2014/02/12 17:30
4	666666	0501.01.08.01.00	2014/02/12 17:30
3	555555	0501.01.08.01.00	2014/02/12 17:30
2	444444	0501.01.08.01.00	2014/02/12 17:30
1	1	4002.01.08.01.00	2014/02/12 17:30

0501.01.08.01.00
(a) (b) (c) (d) (e)

(10) Service Call Log

#	Count.	Service Code	Data and Time
8	1111111	01.00.6000	2014/02/12 17:30
7	999999	01.01.2100	2014/02/12 17:30
6	888888	01.01.0000	2014/02/12 17:30
5	777777	01.00.6000	2014/02/12 17:30
4	666666	01.00.2100	2014/02/12 17:30
3	555555	01.01.4000	2014/02/12 17:30
2	444444	01.00.6000	2014/02/12 17:30
1	1	01.00.2100	2014/02/12 17:30

(11) Maintenance Log

#	Count.	Item.	Data and Time
2	444444	02.01	2014/02/12 17:30
1	222222	02.02	2014/02/12 17:30

(12) Toner Log

#	Count.	Item.	Serial Number	Data and Time
5	1111111	01.00	0123456789ABCDEF	2014/02/12 17:30
4	999999	01.00	0123456789ABCDEF	2014/02/12 17:30
3	888888	01.00	0123456789ABCDEF	2014/02/12 17:30
2	777777	01.00	0123456789ABCDEF	2014/02/12 17:30
1	666666	01.00	0123456789ABCDEF	2014/02/12 17:30

1

Event Log

MFP

ECOSYS M8124cidn

Firmware version 2P4_2000.001.133 2017.02.02

KYOCERA

xxxxxxxxxxxxxxxx

2017/07/03 15:15

[XXXXXXXX] [XXXXXXXX] [XXXXXXXX]

Machine No.:Z2C5Y00100 Total Life Count:100000 Color Life Count:100000

(12) Counter Log

(f)

J0000:	0	J4302:	0
J0100:	1	J4303:	1
J0101:	11	J4304:	11
J0104:	222	J4309:	2
J0105:	1	J9000:	1
J0106:	1	J9004	0
J0107:	1	J9010:	1
J0110:	1	J9060:	1
J0111:	1	J9061:	2
J0211:	1	J9062:	1
J0212:	1	J9110:	1
J0213:	999	J9120:	0
J0501:	1	J9200:	1
J0502:	1	J9210:	1
J0503:	1	J9220:	2
J0504:	1		
J0508:	1		
J0509:	1		
J0511:	1		
J0512:	1		
J0513:	1		
J0514:	1		
J0518:	1		
J0519:	1		
J1403:	1		
J1404:	1		
J1413:	1		
J1414:	1		
J1604:	1		
J1614:	1		
J4002:	1		
J4003:	1		
J4004:	1		
J4009:	1		
J4012:	1		
J4013:	1		
J4014:	1		
J4019:	1		
J4201:	1		
J4202:	0		
J4203:	1		
J4204:	1		
J4208:	0		
J4209:	1		
J4211:	11		
J4212:	222		
J4213:	1		
J4214:	2		
J4218:	1		

(g)

C0000:	0
C0001:	1
C0002:	2
C0003:	3
C0004:	4
C0005:	5
C0006:	6
C0007:	7
C0008:	8
C0009:	9
C0010:	10
CF245:	11(0)
CF248:	12(0)
CF345:	13(0)

(h)

T00:	10
M00:	20
M01:	30

2

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 life counter
(8)	Color life counter

<table>
<tr><th>No.</th><th colspan="4">Contents</th></tr>
<tr><td>(9)</td><td colspan="4">Paper Jam Log</td></tr>
<tr><td></td><td>#</td><td>Count.</td><td>Event Descriptions</td><td>Date and Time</td></tr>
<tr><td></td><td>Remembers 1 to 16 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.</td><td>The total page count at the time of a paper jam.</td><td>Log code (5 types in hexadecimal)
(a) Cause of paper jam
(b) Paper source
(c) Paper size
(d) Paper type
(e) Paper eject</td><td>Date and time of occurrence</td></tr>
<tr><td></td><td colspan="3">(a)Detail of Cause of paper jam (Hexadecimal)</td></tr>
<tr><td></td><td colspan="3">• Refer to " Paper Mis feed Detection",for the detail of Cause of paper jam. (7-45page)</td></tr>
<tr><td></td><td colspan="3">(b) Detail of paper source (Hexadecimal)</td></tr>
<tr><td></td><td colspan="3">00: MP tray
01: Cassette 1
02: Cassette 2 (paper feeder)
03: Cassette 3 (paper feeder)
04 to 09: Reserved</td></tr>
<tr><td></td><td colspan="3">(c) Detail of paper size (Hexadecimal)</td></tr>
<tr><td></td><td>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</td><td>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</td><td>22: Special 1
24: 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</td><td></td></tr>
</table>

<table>
<tr><th>No.</th><th colspan="4">Contents</th></tr>
<tr><td rowspan="5">(9) cont.</td><td colspan="4">Paper Jam Log</td></tr>
<tr><td colspan="3">(d) Detail of paper type (Hexadecimal)</td><td></td></tr>
<tr><td>01: Plain
02: Transparency
03: Preprinted
04: Labels
05: Bond
06: Recycled
07: Vellum
08: Rough
09: Letterhead</td><td>0A: Color
0B: Prepunched
0C: Envelope
0D: Cardstock
0E: Coated
0F: 2nd side
10: Media 16
11: High quality</td><td>15: Custom 1
16: Custom 2
14: Custom 3
18: Custom 4
19: Custom 5
1A: Custom 6
1B: Custom 7
1C: Custom 8</td><td></td></tr>
<tr><td colspan="4">(e) Detail of paper source (Hexadecimal)</td></tr>
<tr><td colspan="3">01: Main unit face down (FD)
02: Main unit face up (FU)/500 sheets finisher(FU)
03: 500-sheets finisher(FD)
05: Job Separator Tray(FD)</td><td></td></tr>
<tr><td rowspan="3">(10)</td><td colspan="4">Service Call Log</td></tr>
<tr><td>#</td><td>Count.</td><td>Service Code</td><td>Date and Time</td></tr>
<tr><td>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.</td><td>The total page count at the time of the self diagnostic error.</td><td>The first two digits (identification)
01: Service call / System error
02: Unit replacement

Next two digits (Auto reboot information)
00: Without auto reboot
01: Auto reboot execution

Last four digits
Self diagnostic error code
(See page7-69page)

(Example) 01.00.6000
01 indicates Self diagnostic error, 00 without auto beboot and 6000 Self diagnostic error code.
U287 sets the auto reboot function</td><td>Date and time of occurrence</td></tr>
</table>

<table>
<tr><th>No.</th><th colspan="4">Contents</th></tr>
<tr><td rowspan="3">(11)</td><td colspan="4">Maintenance Log</td></tr>
<tr><td>#</td><td>Count.</td><td>item</td><td>Date and Time</td></tr>
<tr><td>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.</td><td>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.</td><td>Maintenance item code (1-byte value to indicate 2 items)
First byte (Replacing item)
01: Toner container
Second 1 byte (replacement item type)
00: Black
01: Cyan
02: Magenta
03: Yellow
First byte (Replacing item)
02: Maintenance kit
Second 1 byte (replacement item type)
01: MK-8115A/MK-8115B
02: MK-6110</td><td>Date and time of occurrence</td></tr>
<tr><td rowspan="3">(12)</td><td colspan="4">Toner Log</td></tr>
<tr><td>#</td><td>Count.</td><td>Item. Serial Number</td><td>Date and Time</td></tr>
<tr><td>Remembers 1 to 32 of occurrence of unknown toner detection. If the occurrence of the previous unknown toner detection is less than 32, all of the unknown toner detection are logged.</td><td>The total page count at the time of the request of toner container replacement.</td><td>log code
First 1byte(Replacing item)
01: Genuine product
02: Non-genuine product
Next 1byte (type of replacement item)
00: Black
01: Cyan
02: Magenta
03: Yellow
Last 16 digits
Displays the serial number of the toner container.</td><td>Date and time of occurrence</td></tr>
</table>

No.	Contents			
(13)	Counter Log			
	(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. The number of auto reboot is also displayed at the service call/ system error. (Example) CF245: 4(2) System Error 245 occurred last four times and then executed the auto reboot twice.	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-8115A/MK-8115B 02: MK-6110 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.	Consist of three log counters of paper jams, self diagnostics errors, and maintenance replacement items.

Detail of service status page

Service Status Page

MFP

ECOSYSY M8124cidn

KYOCERA

(2) ZXR7600043
(3) 01/08/2016 14:30
(4)(5) [2.1.6] [2P3_xxxx.xxx.xxx]
(1) Firmware Version 2P3_Q000.001.146 2017.06.05 **(6)** [2P3_1000.001.020] [2P3_1000.001.020] [2P3_1100.001.001]
(7) **(8)**

Controller Information

Memory Status
Standard Size 1.0 GB
Option Slot 0 MB
(9) Total Size 1.0 GB

Time
(10) Local Time Zone
GMT Greenwich Mean Time: Dublin, Edinburgh, Lisbon, London
(11) Date and Time 04/08/2016 01:46
(12) Time Server

Installed Options

(13)	Paper Feeder	Cassette (500 x 2)
(14)	SD Card	Not Installed
(15)	SSD	Not Installed
(16)	Finisher	Not Installed
(17)	Card Authentication Kit (B)	Not Installed
(18)	Data Security Kit (E)	Not Installed
(19)	UG-33	Not Installed
(20)	USB Keyboard	Not Connected
(21)	USB Keyboard Type	US-English

(22) Print Coverage

	Average (%)	/	Usage Page(A4/Letter Conversion)
(23)	Total		
	K(Total): 0.00	/	0.00
	K(Color) : 0.00	/	0.00
	K(B&W): 0.00	/	0.00
	C: 0.00	/	0.00
	M: 0.00	/	0.00
	Y: 0.00	/	0.00
(24)	Copy		
	K(Total): 0.00	/	0.00
	K(Color): 0.00	/	0.00
	K(B&W): 0.00	/	0.00
	C: 0.00	/	0.00
	M: 0.00	/	0.00
	Y: 0.00	/	0.00
(25)	Printer		
	K(Total): 0.00	/	0.00
	K(Color): 0.00	/	0.00
	K(B&W): 0.00	/	0.00
	C: 0.00	/	0.00
	M: 0.00	/	0.00
	Y: 0.00	/	0.00
(26)	FAX		
	K: 0.00	/	0.00

(27)	Period	(2017/06/23 - 2017/07/03 01:46)
(28)	Last Page (%)	0.00
(29)	Last Job (%)	0.00

(30) FRPO Status

Reserved	B0	00
Default Pattern Switch	B8	00
Page Orientation	C1	00
Default Font Number	C5*10000+C2*100+C3	00000
Reserved	C6	00
PCL Font Switch	C8	00
Print density	D4	03
Reserved	D6	03
Host Buffer Size	H8	05
FF Time Out	H9	06
Reserved	I5	01
Reserved	I6	00
Zoom	J0	00
Text wrap mode	J7	00
Horizontal user offset	K0+K1/100	0.00
Vertical user offset	K2+K3/100	0.00
Default KANJI number	K4	00
KANJI code switch	K6	00
Reserved	K9	00
KIR Mode	N0	02
Duplex mode	N4	00
Sleep Timer	N5	120
EcoPrint Mode	N6	00
Reserved	N7	00
Print Resolution	N8	01
Default Emulation	P1	06
CR/LF Action	P2/P3	1/1
AES Mode	P4	00
AES Option 1/2	P7	10
Command Recognition	P9	82
Default Paper Output	R0	01
Default Paper Size	R2	00
Reserved	R3	00
Default Paper Source	R4	01
Override A4/LT	S4	01
Host Buffer Size Rate	S5	01
RAM Disk Size	S6	128
RAM Disk Mode	S7	01
Wide A4	T6	00
Default Line Spacing	U0+U1/100	6.00
Default Character Spacing	U2+U3/100	10.00
Reserved U4 01		
Country Code/Symbol Set	U6/U7	41/53
Default Pitch	U8+U9/100	10.00
Default Font Height	V0*100+V1+V2/100	12.00
Default Font Name	V3	Courier
Default KANJI Font Size	V4*100+V5+V6/100	10.00
Default KANJI Font Name	V7	MTHSMINCHO-W3
Courier/LetterGothic	V9	05
MP Tray Paper Type	X0	01
Cassette 1 Paper Type	X1	01
Cassette 2 Paper Type	X2	01
Cassette 3 Paper Type	X3	01
PCL Paper Source	X9	00
Auto Error Clear	Y0	00
Error Clear Timer	Y1	06
Finishing error	Y3	127
Special Type Act Mode	Y4	00
PDF mode	Y5	00
e-MPS error control	Y6	03

RP Code
(31) 0008 01E2 3177
(32) 0008 027A C873
(33) FFFF FFFF FFFF
(34) 0008 01E2 31F5

1

Service Status Page

MFP

ECOSYS M8124cidn

KYOCERA

(2) ZKG6400006
(3) 01/08/2016 14:30
(4)(5) [2.1.6] [2P3_xxxx.xxx.xxx]
(1) Firmware Version 2P3_Q000.001.146 2016.08.01 (6) [2P3_1000.001.020] [2P3_1100.001.001] [2P3_1100.001.001]
(7) (8)

Controller Information

Print Settings

(35)	**MP Tray Priority**	Off
(36)	**Altitude Adjustment Status**	Normal
(37)	**Send information**	

(38) **System Firmware(Details)**

2P3_Q000.001.146
2P3_QA00.001.146
2P3_R000.001.146
2P3_R100.001.146
2P3_R200.001.146
2P3_R300.001.146
2P3_R400.001.146
2P3_R500.001.146
2P3_R600.001.146
2P3_R700.001.146
2P3_R800.001.146
2P3_R900.001.146
2P3_RB00.001.146
2P3_RD00.001.146
2P3_S100.001.146

Engine Information

(39)	NVRAM Version	_Cb26630_Cb26630
(40)	MAC Address	00:17:C8:16:84:04
(41)	DP Counters	
	Total	0

2

Service Status Page

MFP

ECOSYS M8124cidn

KYOCERA

(1) Firmware Version 2P3_Q000.001.146 2016.08.01

(2) ZKG6400006

(3) 01/08/2016 14:30

(4)(5) [2.1.6] [2P3_xxxx.xxx.xxx]

(6) [2P3_1000.001.020] [2P3_1100.001.001] [2P3_1100.001.001]

(7) **(8)**

(42)(43) 1/1
(44) 600/600
(45) 0/50/0/50/0/50/
(46) 12/0/0/6/0/0/
(47) 0/1/2/3/
(48) 0000000/0000000/0000000/0000000/0000000/0000000/
(49) 0000000/0000000/0000000/0000000/0000000/0000000/
(50) 0000000/0000000/0000000/0000000/0000000/0000000/
(51)-(70) F00/U00/0/0/0/0/0/35/30/70/20/65/11/13/1/abcde/1/0/1/1/
(71) 2010/9000/4010/5000/3010/2010/4000/4010/3010/2010/5000/6000/
5010/2010/2010/2010/2010/2010/2010/2010/2010/2010/
(72) 00000000/00000000/00000000000000000000000000000000/00000000000000000000000000000000/0000/00/00
00000000/00000000/00000000000000000000000000000000/00000000000000000000000000000000/0000/00/00
00000000/00000000/00000000000000000000000000000000/00000000000000000000000000000000/0000/00/00
00000000/00000000/00000000000000000000000000000000/00000000000000000000000000000000/0000/00/00
00000000/00000000/00000000000000000000000000000000/00000000000000000000000000000000/0000/00/00
00000000/00000000/00000000000000000000000000000000/00000000000000000000000000000000/0000/00/00
(73) 00000000/00000000/00000000000000000000000000000000/00000000000000000000000000000000/0000/00/00
00000000/00000000/00000000000000000000000000000000/00000000000000000000000000000000/0000/00/00
00000000/00000000/00000000000000000000000000000000/00000000000000000000000000000000/0000/00/00
00000000/00000000/00000000000000000000000000000000/00000000000000000000000000000000/0000/00/00
(74)(75) /0/
(76) [3NN_9000.002.001][ ][ ]
(77) [2P1_81DK.001.003][2P1_81SE.001.003][2P1_81NO.001.003][2P1_81BR.001.003][2P1_81TR.001.003]
(78) [ ][ ]
(79) 0258000000/0258000000/0000------/----------/--------00/000000002E/C3694B6---/----------/----------/---0000000/
0---------/----------/----------/----------/---------0/0000000---/----------/----------/----------/---00A00A8/
C00360000-/----------/----------/----------/----------/---0000000/0---------/----------/------00000/000-------/
---96AF961/43C14-----/---000493E/0--------0/0000000000/249F000024/9F0000249F/000000000-/-------000/0000000000/
0000000000/000000000-/-0202-----/----------/----------/----------/----------/----------/----------/----------/
----------/----------/----------/----------/----------/----------/----------/----------/-------000/00000
(80)(81) 0/4/
(82)-(85) 1/0/5.0/12.0
-/-/-/
(86)(87) 0/5/
(88) 1/
(99)-(91) 1/0/1/
(92) EZJ00Z400033/
(93) EZK00Z400016/

No.	Items	Contents
(1)	Firmware Version	-
(2)	Machine serial number	-
(3)	System date	-
(4)	HyPAS API version	-
(5)	Browser version	-
(6)	Engine firmware version	-
(7)	Engine boot version	-
(8)	Operation panel firmware version	-
(9)	Total memory size	-
(10)	Local time zone	-
(11)	Report output date	Day/Month/Year hour : minute
(12)	NTP server name	-
(13)	Whether the paper feeder is installed or not	Cassette(500 sheets×1) / Cassette(1500 sheets×2) / Not Installed
(14)	Availability of the SD memory card	Installed/Not Installed
(15)	Whether the SSD	Installed/Not Installed
(16)	Availability of the finisher (30 ppm model only)	500 sheets finisher/not installed
(17)	Availability of the ID Card Authentication Kit	Introduced/ before introduction/trial
(18)	Availability of the Security Kit(E)	Installed/Not Installed
(19)	Availability of UG-33	Introduced/ before introduction/trial
(20)	USB keyboard connection status	Connected/Not connected
(21)	Type of the USB keyboard	US-English/US-English with Euro symbol/German/French
(22)	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.
(23)	Entire average coverage	Black(total)/(color)/Black(Monochrome)/
(24)	Average coverage for copy	Black
(25)	Average printer coverage	Black/
(26)	Average coverage for FAX	Black
(27)	Cleared date and output date	-
(28)	Coverage on the last output page	-
(29)	Last job coverage information	-
(30)	FRPO setting	-
(31)	RP code	Coding the engine firmware version and the date of the previous update.
(32)	RP code	Code the main software version and the date of the latest update.
(33)	RP code	Coding the engine firmware version and the date of the previous update.

No.	Items	Contents
(34)	RP code	Code the main software version and the date of the previous update.
(35)	MP tray priority setting	Off : No setting Auto : Auto paper feed Always : All times
(36)	High altitude adjustment set data	Normal/1001-2000m/2001-3000m/3001-3500m
(37)	Transmission information	Last transmission time/IP address
(38)	System Firmware (detail)	-
(39)	NVRAM version	_ 1F3 1225 _ 1F3 1225 (a)(b)(c)(d)(e)(f) (a) Consistency of the current firmware version and the database _ (underscore): OK * (Asterisk): NG (b) Database version (c) The oldest time stamp of database version (d) Consistency of the present software version and the ME firmware version _ (underscore): OK * (Asterisk): NG (e) ME firmware version (f) The oldest time stamp of the ME firmware version Normal if (a) and (d) are underscored, and (b) and (e) are identical with (c) and (f).
(40)	Mac address	-
(41)	DP counter	The number of times of DP feeding
(42)	Destination information	-
(43)	Area information	-
(44)	Margin setting	Top margin/Left margin
(45)	Top offset	-
(46)	Left offset	-
(47)	L parameters	Top margin integer part/Top margin decimal part/Left margin integer part /Left margin decimal part
(48)	Life counter (cassette 1)	Machine life/MP tray/Cassette/Paper feeder 1/Paper feeder 2/ Duplex
(49)	Life counter (cassette 2)	Drum unit/Transfer unit/MC roller/Fuser unit
(50)	Life counter (cassette 3)	Maintenance kits
(51)	Panel lock information	F00: OFF F01: Partial lock1 F02: Partial lock2 F03: Partial lock3 F04: Full lock
(52)	USB information	U00: Not Connected U01: Full speed U02: Hi speed

No.	Items	Contents
(53)	Paper handling information	0: Paper source select 1: Paper source fixed
(54)	Auto cassette change	0: OFF 1: ON (Default)
(55)	Color printing double count mode	0: All single counts 1: A3 (Less than 420 mm length), Single counts 2: Legal(Less than 356mm length), Single counts 3: Folio (Less than 330 mm length), Single counts
(56)	Black and white printing double count mode	0: All single counts 1: A3 (Less than 420 mm length), Single counts 2: Legal(Less than 356mm length), Single counts 3: Folio (Less than 330 mm length), Single counts
(57)	Billing counts timing	0: When secondary paper feed starts 1: When completing output
(58)	Temperature (machine inside)	-
(59)	Temperature (machine outside)	-
(60)	Relative humidity (machine outside)	-
(61)	Absolute humidity (machine outside)	-
(62)	Machine inside humidity	-
(63)	LSU1 humidity information	-
(64)	LSU2 humidity information	-
(65)	DRT information	-
(66)	Asset Number	-
(67)	Job end judgment time-out time	-
(68)	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
(69)	Prescribe environment reset	0: Off 1: On
(70)	Scan to SMB mode setting	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 0: Light 1: Normal 1 2: Normal 2 3: Normal 3 4: Heavy 1 5: Heavy 2 6: Heavy 3 7: Heavy 4 8: Heavy 5 9: Extra Heavy Fuser settings 0: High 1: Middle 2: Low 3: Vellum Duplex settings 0: Disable 1: Enable
(72)	Calibration information	-
(73)	RFID information	-

No.	Items	Contents
(74)	RFID reader/writer version	-
(75)	Toner install mode information	0: Off 1: On
(76)	Paper feeder firmware version	-
(77)	Option message version	-
(78)	Color table version	-
(79)	Maintenance information	-
(80)	Altitude adjustment mode	
(81)	MC correction	1 to 7
(82)	Auto judgment of the color conversion processing	
(83)	Configuring the toner coverage counters	
(84)	Low coverage setting	0.1 to 100.0
(85)	Middle coverage setting	0.1 to 100.0
(86)	Toner low setting	0: Disabled 1: Enabled
(87)	Toner low detection level	0 to 100 (%)
(88)	Shift regulation for a single original	0: disable (shift regulation off) 1: enable (shift regulation on)
(89)	ErP applied mode setting	0: ErP non-applied mode 1: ErP applied mode
(90)	Full-page print mode	0: Normal mode (Factory setting) 1: Full-page mode
(91)	Wake-up mode	0: Off (Don't wake up) 1: On (Do wake up)
(92)	Drum serial number	-
(93)	Developer serial number	-

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

Sets the machine initial setting values to the factory default.

Purpose

Executes the machine initial settings when shipping from factory.

Method

1 Press the [Start] key.

2 Select [Mode1(All)].

Items	Contents
Mode1(All)	Sets the machine initial setting values to the factory default.

3 Press the [Start] key.

4 Turn the power switch off.

An error code is displayed in case of the initialization error.

When errors occur, turn the power switch off then on, and execute initialization using maintenance mode U002.

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

Error codes

Codes	Contents
0002	Setting information initialization failure
0003	Address book information initialization failure
0004	Job accounting information initialization failure
0005	Event log/Fax log/Job log information initialization failure
0006	Fax memory forward/panel program information initialization failure
0007	Short-cut key information initialization failure
0008	Fax reserve information initialization failure
0009	Account information initialization failure
0010	RP code backup execution failure
0011	Event log counter information/Accounting/Maintenance category initialization failure
0012	Coverage counter information initialization failure
0013	Life counter information initialization failure
0014	Engine information initialization failure
0015	Scanner information initialization failure
0016	Log audit (inspection log) initialization failure
0017	Device information initialization failure
0018	Device information initialization failure

- The operation is terminated abnormally and it is necessary to execute it once more after turning the power off.

U004 Machine Number

(Message: Machine No.)

Contents

Sets or displays the machine serial number.

Purpose

Checks the machine serial number

After the main/engine PWB replacement, execute if the "C0180 machine number mismatch" occurs.

Important

Do not execute U004, select [Execute] and press [Start] key if the machine serial number in the engine PWB is different from the main unit serial number. A different machine serial number is overwritten in the main PWB.

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.	Displays 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)	Displays the machine serial number in the main PWB.
Machine No.(Eng)	Displays 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.

The screen for setting is displayed.

Items	Contents
Change	Change the maintenance mode ID for the field.
Initialize	Initializes the maintenance mode ID for service.

Method: Change

1 Select [New 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 the field.

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.

6 Select [Execute].

7 Press the [Start] key to set the setting value.

Method: Initialize

1 Select [Execute].

Items	Contents
Execute	Initializes the maintenance mode ID for service.

2 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

Codes	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

Displays 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 [∧][∨] key.

Items	Contents
Controller	Main firmware
CMN App	CMN App firmware
SST App	SST App firmware
MNT App	MNT App firmware
CPY App	CPY App firmware
PRT App	PRT App firmware
SND App	SND App firmware
BOX App	BOX App firmware
FAX App *1	FAX App firmware
WPG App	WPG App firmware
AUTH App	AUTH App firmware
PCS App	PCS App firmware
SCO App	SCO App firmware
PLP	PLP firmware
EXSP	EXSP firmware
Version Info	Version Info firmware
MMI	Operation firmware
Browser	Browser firmware
Option Language1	Optional language1 firmware
Option Language2	Optional language2 firmware
Option Language3	Optional language3 firmware
Option Language4	Optional language4 firmware
Option Language5	Optional language5 firmware
Color Table1(Prn)	Color table 1 firmware (printer)
Color Table2(Prn)	Color table 2 firmware (printer)
Sub MMI	Panel firmware

Items	Contents
Sub MMI Boot	Panel Boot
Fax APL *1	Fax APL firmware
Fax Boot *1	Fax Boot
Fax IPL *1	Fax IPL firmware
Engine	Engine firmware
Engine Boot	Engine boot
DP *2	DP firmware
DP Boot *2	DP Boot
DF *3	finisher firmware
DF Boot *3	finisher boot
AK *4	Attachment kit firmware
AK Boot *4	Attachment kit boot
PF	Paper feeder firmware
PF Boot	Paper Feeder boot
HyPAS EMB API	HyPAS EMB API firmware
Application Name 01	Application 1 firmware
Application Name 02	Application 2 firmware
Application Name 03	Application 3 firmware
Application Name 04	Application 4 firmware
Application Name 05	Application 5 firmware
Application Name 06	Application 6 firmware
Application Name 07	Application 7 firmware
Application Name 08	Application 8 firmware
Application Name 09	Application 9 firmware
Application Name 10	Application 10 firmware
Application Name 11	Application 11 firmware
Application Name 12	Application 12 firmware
Application Name 13	Application 13 firmware
Application Name 14	Application 14 firmware
Application Name 15	Application 15 firmware
Application Name 16	Application 16 firmware

*1: FAX installed machine only/ *2: DP installed machine only/ *3: DF installed machine only/ *3: AK installed machine only

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
0002	Setting information initialization failure
0003	Address book information initialization failure
0004	Job accounting information initialization failure
0005	Event log/Fax log/Job log information initialization failure
0006	Fax memory forward/panel program information initialization failure
0007	Short-cut key information initialization failure
0008	Fax reserve information initialization failure
0009	Account information initialization failure
0010	RP code backup execution failure
0011	Event log counter information/Accounting/Maintenance category initialization failure
0012	Coverage counter information initialization failure
0013	Life counter information initialization failure
0014	Engine information initialization failure
0015	Scanner information initialization failure
0016	Log audit (inspection log) initialization failure

Items	Contents
0017	Device information initialization failure
0018	Device information initialization failure

- The operation is terminated abnormally and it is necessary to execute it once more after turning the power off.

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 main motor
Exit(CW)	Operate the exit motor(CW)
Vibration	Operate the vibration toner motor
Exit(CCW)	Operate the exit motor(CCW)

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

Displays 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	Displays the switching status of the registration sensor
Fuser	Displays the switching status of the fuser sensor
Dup	Displays the switching status of the duplex sensor
Feed	Displays the switching status of the paper feed sensor
Tray Full	Displays the switching status of the exit full sensor
JobSepa Full	Displays the switching status of the job separator full sensor
Bridge	Displays the switching status of the bridge switch
Belt Jam	Indicates the state of the switch of the belt wound sensor

Completion

1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

U032 Clutch operation check

(Message: Chk Clutch)

Contents

Supply power to each clutch.

Purpose

Execute to check each clutch's operation.

Method

1 Press the [Start] key.

2 Select the clutch to operate.

3 Press the [Start] key.

Each operation starts.

Items	Contents
Feed1	Operates the paper feed clutch 1
Regist	Operate the registration clutch
Dup	Operate the duplex clutch
Middle	Operate the middle clutch
DLP	Operate the developer clutch
Motor	Operate the motor

The clutch operation is available while the motor is operated.

4 To stop the clutch 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.

Select the motor before checking the motor rotation.

Items	Contents
MPT	Operate the MP solenoid
Eject	Operate the exit solenoid
Motor	Operate the motor

The solenoid operation is available while the motor is operated.

4 To stop the operation of the solenoid, press the [Stop] key.

Completion

1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

U034 Paper timing data 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 timing
LSU Out Left	Adjusts the center line

Adjustment: LSU Out Top Full

1 Select the item to adjust.

2 Press the [System Menu/Counter] key.

Note

Press the [System Menu/Counter] key and the setting screen below is displayed for necessary settings.
(Source/Conveying speed/Duplex/Color/Copies)

3 Press the [Start] key to output a test pattern.

4 Press the [System Menu] key.

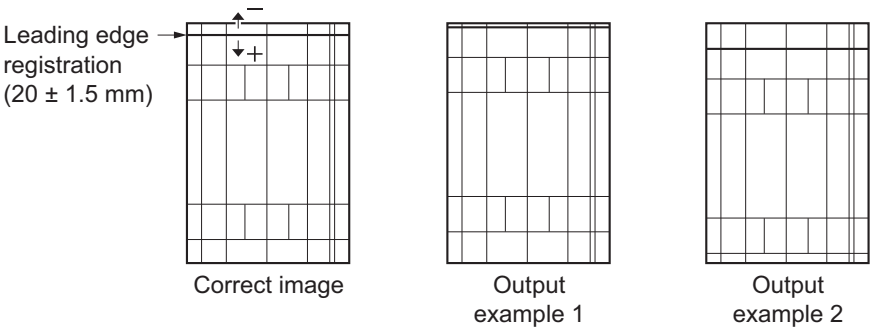
Items	Contents	Setting range	Initial setting	Data variation
Cass	Adjust the leading edge timing for the cassette paper feed	-30 to 20	0	1dot
MPT	Adjust the leading edge timing for the MP tray	-30 to 20	0	1dot
Dup	Adjust the leading edge timing for the duplex print	-30 to 20	0	1dot

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.

Important

Check the copy image after the adjustment. If the image is still incorrect, adjust the following in the maintenance mode.

U034 > U066(6-48page) > U071(6-53page)

Adjustment: LSU Out Left

1 Select the item to adjust.

2 Press the [System Menu/Counter] key.

Note

Press the [System Menu/Counter] key and the setting screen below is displayed for necessary settings.

(Source/Conveying speed/Duplex/Color/Copies)

3 Press the [Start] key to output a test pattern.

4 Press the [System Menu] key.

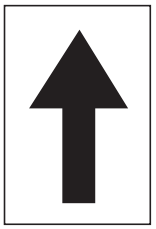
Items	Contents	Setting range	Initial setting	Data variation
MPT	Adjust the center line for the MP tray	-30 to 20	0	1dot
Cass1	Adjust the center line for cassette 1 feed	-30 to 20	0	1dot
Cass2	Adjust the center line for cassette 2 feed	-30 to 20	0	1dot
Cass3	Adjust the center line for cassette 3 feed	-30 to 20	0	1dot
Dup	Adjusting the center line when duplex copying (Back page)	-30 to 20	0	1dot

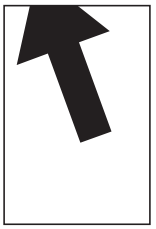
5 By using the [<] [>] keys or the numeric keys, change the setting value.

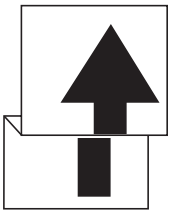
For the test pattern 1, increase the value.

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.


Original


Copy example 1


Copy example 2

6 Press the [Start] key to set the setting value.

Important

Check the copy image after the adjustment. If the image is still incorrect, adjust the following in the maintenance mode.

U034 < U067(6-50page) < U072(6-55page)

Completion

1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

U035 Folio size setting

(Message: Adj Folio Sz)

Contents

Changes the printable area when copyng 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	Sets the Folio paper length.	318 to 356 (mm)	330	1(mm)
Width	Sets the Folio paper width.	200 to 220 (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.

Purpose

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
Low Power	Operate the power source fan motor
LSU Cooling	Operate the LSU fan motor
Container	Operate the toner container fan motor
IH Coil	Operate the IH coil fan motor
IH Edge	Operate the IH edge cooling fan motor
DLP	Operate the developer 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: Full / Half / 3/4

1 Select the item to adjust.

2 Press the [System Menu/Counter] key.

Note

Press the [System Menu/Counter] key and the setting screen below is displayed for necessary settings. (Source/Conveying speed/Duplex/Color/Copies)

3 Place an original and press the [Start] key to make a test copy.

4 Press the [System Menu] key.

The screen for adjusting is displayed.

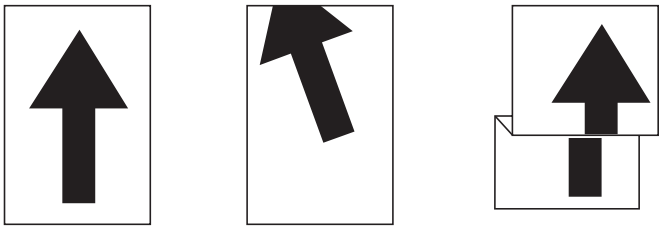
Items	Contents	Setting range	Initial setting			Data variation
			Full	Half	3/4	
MPT	Paper loop amount adjustment for the MP tray feed	-30 to 20	2/1	2/1	0	1mm
Cass1	Paper loop amount adjustment for the cassette 1 feed	-30 to 20	1	1	0	1mm
PF	Paper loop amount adjustment for the PF feed	-30 to 20	1	1	0	1mm
Dup	Paper loop amount adjustment for the duplex	-30 to 20	3/5	3/5	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	Adjusting the motor speed at full speed
Half	Adjusting the motor speed at half speed
3/4	Adjusting the motor speed at 3/4 speed

Setting: Full / Half / 3/4

1 Select the item to adjust.

2 By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Contents	Setting range	Initial setting	Data variation
Feed	Sets the main motor	-100 to 100	0	0.1%
Exit	Sets the main motor (MP)	-100 to 100	0	0.1%
Drum(CMY)	Sets the main motor (DU)	-100 to 100	0	-0.1%
Drum(K)	Sets the main motor (PF)	-100 to 100	0	-0.1%
DLP(CMY)	Sets the developer motor CMY	-100 to 100	0	-0.1%
DLP(K)	Sets the developer motor K	-100 to 100	0	-0.1%
Fuser	Sets the fuser motor	-100 to 100	0	-0.1%

3 Press the [Start] key to set the setting value.

Note

Test copy of the original is available by pressing the [System Menu/Counter] key as interruption copy mode when executing this maintenance mode.

Press the [System Menu/Counter] key and the setting screen below is displayed for necessary settings.

(Source/Conveying speed/Duplex/Color/Copies)

Completion

1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

U063 Shading position adjustment

(Message: Adj Shading)

Contents

Changes the scanner shading position.

Purpose

Execute if the vertical white lines appears on the image and they are not improved after cleaning the shading plate, namely there are scratches or dirt inside the shading plate.

By changing the shading position, shading is available where there is no influence of dirt or scratch of the shading plate.

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
Position	Changes the scanner shading position	-3 to 18 (High) -6 to 34 (Low)	0 0	

If the set value is increased, the shading position moves toward the machine left side and toward the right side if the value is reduced.

3 Press the [Start] key to set the setting value.

Note

Test copy of the original is available by pressing the [System Menu/Counter] key as interruption copy mode when executing this maintenance mode.

Press the [System Menu/Counter] key and the setting screen below is displayed for necessary settings.

(Source/Conveying speed/Duplex/Orientation/Color/Copies)

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 Scn)

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

Important

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)(6-46page)>U065((sub scanning direction)(6-46page)

Method

1 Press the [Start] key.

2 Press the [System Menu/Counter] key.

Note

Press the [System Menu/Counter] key and the setting screen below is displayed for necessary settings.

(Source/Conveying speed/Duplex/Orientation/Color/Copies)

3 Place an original and press the [Start] key to make a test copy.

4 Press the [System Menu] key.

5 Select the item to adjust.

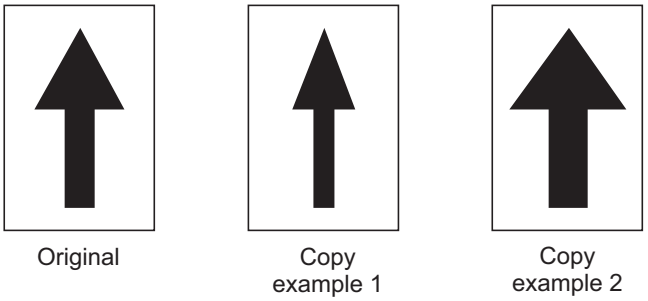
Items	Contents	Setting range	Initial setting	Data variation
Main Scan	Scanner magnification in the main scanning direction	-75 to 75 (High)	0	0.02%
		0 to 75 (Low)	0	0.02%
Sub Scan	Adjusts scanner magnification in the sub-scanning direction	-125 to 125	0	0.02%

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.



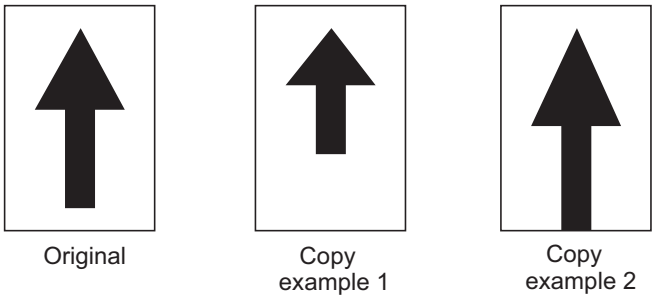
2 Press the [Start] key to set the setting value.

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.

Note

Press the [System Menu/Counter] key and the setting screen below is displayed for necessary settings.
(Source/Conveying speed/Duplex/Orientation/Color/Copies)

3 Place an original and press the [Start] key to make a test copy.

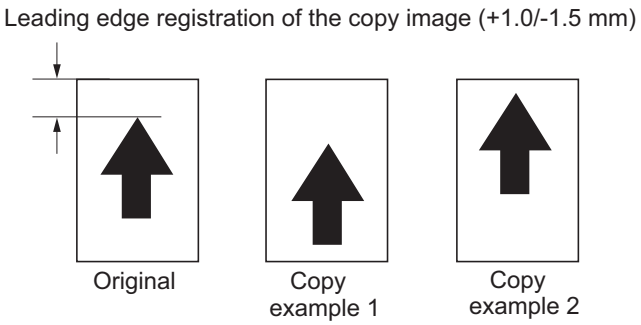
4 Press the [System Menu] key.

Items	Contents	Setting range	Initial setting	Data variation
Front	Adjusts the scanner leading edge margin.	-30 to 30 (High) -57 to 57 (Low)	0	0.16 mm

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 image moves forward, and it moves backward when the setting value is decreased.



6 Press the [Start] key to set the setting value.

Important

Check the copy image after the adjustment. If the image is still incorrect, adjust the following in the maintenance mode.
U034(6-37page) > U065(6-46page) > 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.

Note

Press the [System Menu/Counter] key and the setting screen below is displayed for necessary settings.
(Source/Conveying speed/Duplex/Orientation/Color/Copies)

3 Place an original and press the [Start] key to make a test copy.

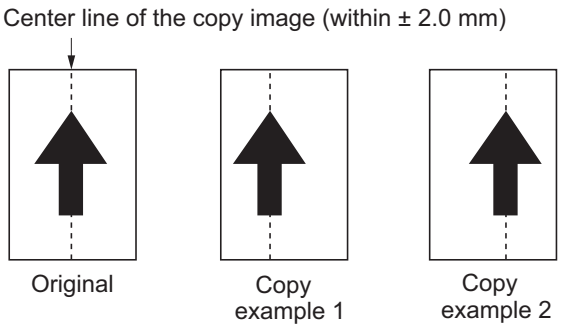
4 Press the [System Menu] key.

Items	Contents	Setting range	Initial setting	Data variation
Front	Adjusts the scanner center line	-60 to 60	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.



2 Press the [Start] key to set the setting value.

Important

Check the copy image after the adjustment. If the image is still incorrect, adjust the following in the maintenance mode.
U034(6-37page) > U065(6-46page) > 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.

Contents	Description	Setting range	Initial setting	Data variation
DP Read	Adjusts the starting position for scanning originals.	-38 to 38 (High) -72 to 72 (Low)	0	0.16 mm
Black Line	Adjusts 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 backward, and it moves forward 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.

Note

Press the [System Menu/Counter] key and the setting screen below is displayed for necessary settings.

(Source/Conveying speed/Duplex/Orientation/Color/Copies)

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.

Note

Press the [System Menu/Counter] key and the setting screen below is displayed for necessary settings.
(Source/Conveying speed/Duplex/Orientation/Color/Copies)

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] key.

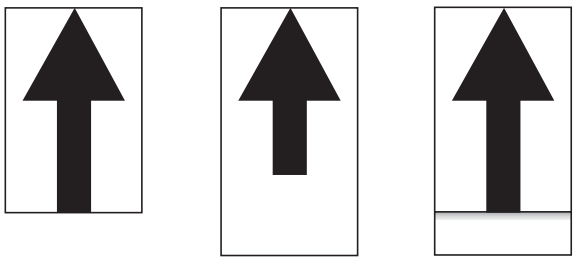
5 Select the item to adjust.

Contents	Description	Setting range	Initial setting	Data variation
Sub Scan(F)	Adjusting the magnification for table scanning	-125 to 125	0	0.02%
Sub Scan (B)	Adjusts the 2nd side magnification in the sub scanning direction when duplex scanning	-125 to 125	0	0.02%

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.



Original　Copy example 1　Copy example 2

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.

Note

Press the [System Menu/Counter] key and the setting screen below is displayed for necessary settings.
(Source/Conveying speed/Duplex/Orientation/Color/Copies)

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] key.

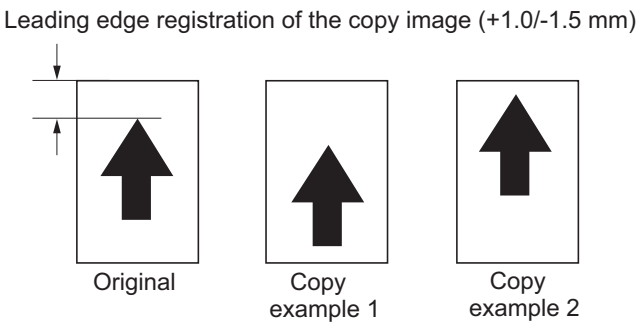
5 Select the item to adjust.

Contents	Description	Setting range	Initial setting	Data variation
Front Head	Leading edge registration. (Front page)	-36 to 36	0	-
Front Tail	Trailing edge registration. (Front page)	-36 to 36	0	-
Back Head	Leading edge registration. (Back page)	-36 to 36	0	-
Back Tail	Trailing edge registration. (Back page)	-36 to 36	0	-

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.

Important

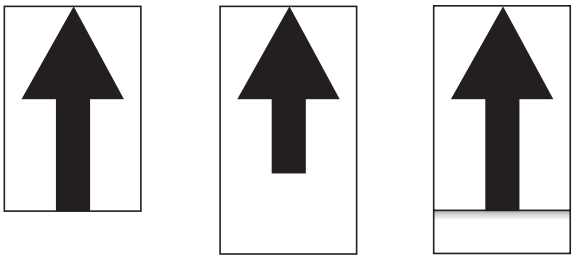
Check the 2nd side after adjusting the 1st side. Adjust if necessary. Check the copy image after the adjustment. If the image is still incorrect, adjust the following in the maintenance mode.

U034(6-37page) > 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.



Original | Copy example 1 | Copy example 2

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.

Note

Press the [System Menu/Counter] key and the setting screen below is displayed for necessary settings.
(Source/Conveying speed/Duplex/Orientation/Color/Copies)

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.

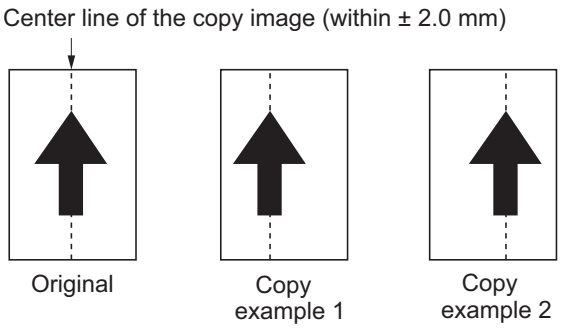
4 Press the [System Menu] key.

5 Select the item to adjust.

Contents	Description	Setting range	Initial setting	Data variation
Front	DP center line. (Front page)	-60 to 60	0	0.085 mm
Back	DP center line. (Back page)	-60 to 60	0	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.

Important

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(6-37page) > U065(6-46page) > U067(6-50page) > 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

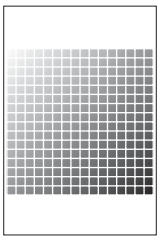
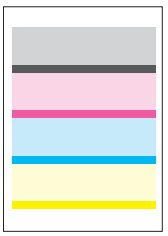
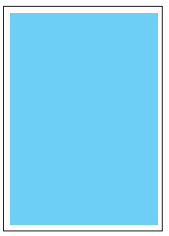
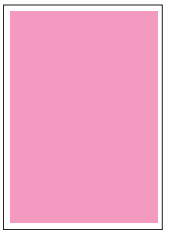
When adjusting the image scanning items, execute to check the machine status except the scanner section using the MIP-PG pattern output without image scanning process.

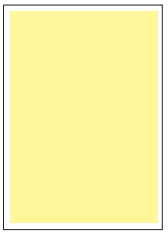
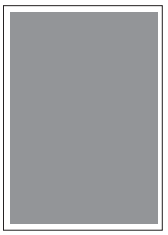
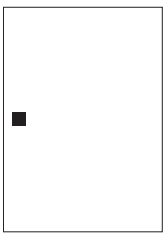
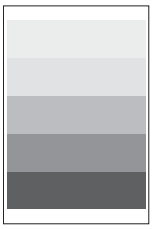
Test pages printed from the maintenance mode are not counted for the print coverage and page count displayed on the service status page.

Method

1 Press the [Start] key.

2 Select the MIP-PG pattern to output

Items	Contents
256Gradation	PG for the grayscale level check (256 grayscale PG1) 
Color Belt	PG for the developer status and engine ID check (four color 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) 
White	For drum quality check (Blank PG) 
Gradation Gray	PG for the LSU vertical streaks check 
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.

Note

Press the [System Menu/Counter] key and the setting screen below is displayed for necessary settings. (Copies)

4 Press the [Start] key to output a MIP-PG pattern.

5 Press the [System Menu] key.

Completion

1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

U099 Original size detection setting

(Message: Detect Org Sz)

Contents

Sets the original size detection check and detection threshold

Purpose

Changes the detection threshold if the original size is often mis-detected with entirely dark originals (high density) or originals dark at edges only

Method

1 Press the [Start] key.

2 Select the item to set.

The screen for setting is displayed.

Items	Contents
Data1	Display of the original width of OriginalArea color
B/W Level1	Original size detection threshold setting
Data2	Display of the original copies width of OriginalArea color (when the document processor is installed)

Reference: Data1/Data2

1 Place an original copy on the table and close the original copy cover or document processor.

2 The light source is turned on and the CCD sensor detects the original width. The original size sensor detects the original lengthwise. (Detected twice when the document processor is installed)

Items	Contents
Original Area(dot)	Detected number of pixels (dot) in the original width
Original Area(mm)	Detected number of pixels (mm) in the original width
Size SW L	Indicating ON/OFF of the original length sensor (0: Off/1: On)

Setting: B/W Level1

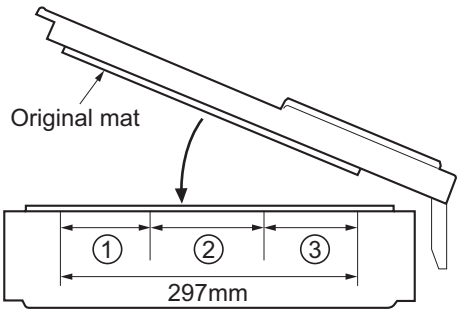
1 Select the item to set.

2 By using the [<] [>] keys or the numeric keys, change the setting value.

Contents	Description	Setting range	Initial setting	Data variation
Original1	Sets the threshold to judge the original	0 to 255	50	-
Original2	Sets the threshold to judge the original	0 to 255	50	-
Original3	Sets the threshold to judge the original	0 to 255	50	-
Light Source	Sets the threshold to judge the light source	0 to 255	49	-

Lowering the setting value improves the sensor's sensitivity and high density originals can be detected but the original mat may be detected as an original.

If differentiating each setting value, mis-detection may appear depending on the condition of placing the original.



In the figure	Original R/G/B	Original width size range	
①	1	A4R～A3	8.5"～11"
②	2	B6R～A4R	5.5"～8.5"
③	3	～B6R	～5.5"

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.

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 and refer to.

The screen for setting is displayed.

Items	Contents
Set DC Bias Before	Displays the main charge DC bias before correction.
Set DC Bias After	Displays the main charge DC bias after correction.
Adj DC Bias	Adjust the main charge DC bias
Set DC Auto Adj	Sets the automatic main charge DC bias adjustment
Set DC Charger	Displays the manual main charge DC bias correction value.

Refer: Set DC Bias Before

1 Displays the current setting. (Displays the value before the environmental correction by engine firmware)

Items	Contents	Setting range	Initial setting	Data variation
DC1(C)	Cyan main charge DC bias value	0 to 2000	Indefinite	1V
DC1(M)	Magenta main charge DC bias value	0 to 2000	Indefinite	1V
DC1(Y)	Yellow main charge DC bias value	0 to 2000	Indefinite	1V
DC1(K)	Black main charge DC bias value	0 to 2000	Indefinite	1V

Refer: Set DC Bias After

1 Displays the current setting. (Displays the value after the environmental correction by engine firmware)

Items	Contents	Setting range	Initial setting	Data variation
DC1(C)	Cyan main charge DC bias value	0 to 2000	Indefinite	1V
DC1(M)	Magenta main charge DC bias value	0 to 2000	Indefinite	1V
DC1(Y)	Yellow main charge DC bias value	0 to 2000	Indefinite	1V
DC1(K)	Black main charge DC bias value	0 to 2000	Indefinite	1V

Setting: Adj DC Bias

1 Displays the current setting. (Engine firmware displays the environmental correction result)

2 Select the item to set.

3 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.
Set value is variable depending on the environment.

Items	Contents	Setting range	Initial setting	Data variation
DC2(C)	Cyan main charge DC bias value	-20 to 20	0	10V
DC2(M)	Magenta main charge DC bias value	-20 to 20	0	10V
DC2(Y)	Yellow main charge DC bias value	-20 to 20	0	10V
DC2(K)	Black main charge DC bias value	-20 to 20	0	10V

4 Press the [Start] key to set the setting value.

Setting: Set DC Auto Adj

1 Select the item to set.

Items	Contents
On	Adjust automatically
Off	Not adjusted automatically

Initial setting: On

2 Press the [Start] key to set the setting value.

Refer: Set DC Charger

1 Displays the current setting.

Items	Contents	Setting range	Initial setting	Data variation
C	Cyan main charge DC bias correction value	0 to 200	145	10V
M	Magenta main charge DC bias correction value	0 to 200	145	10V
Y	Yellow main charge DC bias correction value	0 to 200	145	10V
K	Black main charge DC bias correction value	0 to 200	145	10V

Completion

1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

U101 Primary transfer voltage adjustment

(Message: 1st TC Output)

Contents

Set the primary transfer control voltage

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 normal primary transfer voltage
Add Color	Primary transfer voltage setting for the first side color printing
Add Color 2nd	Primary transfer voltage setting for the second side color printing
Add Mono	Setting the primary transfer voltage for BW
Surround Correct	Setting the environmental correction
High Correct	Setting the high level primary transfer voltage

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	Setting at full speed print	0 to 300	50/55	0.1A
Half	Setting at half speed print	0 to 300	40	0.1A
3/4	Setting at 3/4 speed print	0 to 300	25	0.1A

3 Press the [Start] key to set the setting value.

Note

Test copy of the original is available by pressing the [System Menu/Counter] key as interruption copy mode when executing this maintenance mode.

Press the [System Menu/Counter] key and the setting screen below is displayed for necessary settings.

(Source/Conveying speed/Duplex/Orientation/Color/Copies)

Setting: Add Color/Add Color 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
C	Setting the Cyan	-50 to 50	5/0	0.1A
M	Setting the Magenta	-50 to 50	5/0	0.1A
Y	Setting the Yellow	-50 to 50	0/-5	0.1A
K	Setting the Black	-50 to 50	10/10	0.1A

3 Press the [Start] key to set the setting value.

Note

Test copy of the original is available by pressing the [System Menu/Counter] key as interruption copy mode when executing this maintenance mode.

Press the [System Menu/Counter] key and the setting screen below is displayed for necessary settings.

(Source/Conveying speed/Duplex/Orientation/Color/Copies)

Setting: Add Mono

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
K	Setting the Black	-50 to 50	10	0.1A

3 Press the [Start] key to set the setting value.

Note

Test copy of the original is available by pressing the [System Menu/Counter] key as interruption copy mode when executing this maintenance mode.

Press the [System Menu/Counter] key and the setting screen below is displayed for necessary settings.

(Source/Conveying speed/Duplex/Orientation/Color/Copies)

Setting: Surround Correct

1 Select the item to set.

2 By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Contents
On	Enabling the prohibition of the primary transfer feedback environmental correction
Off	Disabling the prohibition of the primary transfer feedback environmental correction

Default Setting: On

3 Press the [Start] key to set the setting value.

Setting: High Correct

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
1st Trans 2nd	Primary transfer voltage setting for the second side	0 to 255	100	-
2nd Trans 2nd L/N1	Secondary transfer voltage setting for the second side (Light/Normal1)	0 to 255	100	-
2nd Trans 2nd N2/N3	Secondary transfer voltage setting for the second side (Normal2/Normal3)	0 to 255	100	-

3 Press the [Start] key to set the setting value.

Note

Test copy of the original is available by pressing the [System Menu/Counter] key as interruption copy mode when executing this maintenance mode.

Press the [System Menu/Counter] key and the setting screen below is displayed for necessary settings.

(Source/Conveying speed/Duplex/Orientation/Color/Copies)

Completion

1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

U106 Setting secondary transfer voltage (Message: Adj 2nd TC Output)

Contents

Set the secondary transfer control voltage

Purpose

Change setting if a failure such as faint image, etc. occurs.

Method

1 Press the [Start] key.

2 Select the item to execute.

The screen for executing is displayed.

Items	Contents
Color	Color printing
B/W	Black & white printing
Cleaning 2nd	Secondary transfer cleaning

Method: Color

1 Select the item to execute.

The screen for executing is displayed.

Items	Contents
Light/Normal1	Paper weight (Light to Normal1)
Normal2/3	Paper weight (Nomal2 to Normal3)
Light/Normal3	Paper weight (Light to Normal3)
Heavy1	Paper weight (heavy1)
Heavy2/3	Paper weight (heavy2 to heavy3)
OHP	Media type (OHP)
Coated	Media type (Coated)

Method: Light/Normal1 / Normal2/3 / Heavy2/3

1 Select the item to execute.

The screen for executing is displayed.

Items	Contents
1st Side	Correction value for the first side print
2nd side	Correction value for the second side print

Setting: 1st side/2nd side

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
Width=150	Paper width=150	0 to 130	Refer to the chart below	1A
Width=210	Paper width=210	0 to 130	Refer to the chart below	1A
Width=280	Paper width=280	0 to 130	Refer to the chart below	1A

3 Press the [Start] key to set the setting value.

Initial setting

Items	Light/Normal1		Normal2/3		Heavy2/3	
	1st side	2nd side	1st side	2nd side	1st side	2nd side
Width=150	90/80	95/90	90/85	90/85	40	40
Width=210	70/70	80/75	75/70	75/70	25	25
Width=280	50/45	60/50	55/50	55/50	20	20

Method: Light/Normal3

1 Select the item to execute.

The screen for executing is displayed.

Items	Contents
3/4	3/4 speed mode
Half	Half speed mode

Method

1 Select the item to execute.

The screen for executing is displayed.

Items	Contents
1st Side	Correction value for the first side print
2nd side	Correction value for the second side print

Setting: 1st side/2nd side

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
Width=150	Paper width=150	0 to 130	Refer to the chart below	1A
Width=210	Paper width=210	0 to 130	Refer to the chart below	1A
Width=280	Paper width=280	0 to 130	Refer to the chart below	1A

3 Press the [Start] key to set the setting value.

Initial setting

Items	Light/Normal3 (3/4)		Light/Normal3 (Half)	
	1st Side	2nd side	1st Side	2nd side
Width=150	60	60	50	45
Width=210	45	50	40	40
Width=280	40	40	35	35

Method:Heavy1

1 Select the item to execute.

The screen for executing is displayed.

Items	Contents
Full_3/4	3/4 speed printing
Half	Half speed printing

Method

1 Select the item to execute.

The screen for executing is displayed.

Items	Contents
1st side	Correction value for the first side print
2nd side	Correction value for the second side print

Setting: 1st side/2nd side

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
Width=150	Paper width=150	0 to 130	Refer to the chart below	1A
Width=210	Paper width=210	0 to 130	Refer to the chart below	1A
Width=280	Paper width=280	0 to 130	Refer to the chart below	1A

3 Press the [Start] key to set the setting value.

Initial setting

Items	Heavy1 (Full_3/4)		Heavy1 (Half)	
	1st side	2nd side	1st side	2nd side
Width=150	45	50	40	45
Width=210	40	40	35	40
Width=280	35	30	30	35

Setting: OHP/Coated

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
Width=150	Paper width=150	0 to 130	Refer to the chart below	1A
Width=210	Paper width=210	0 to 130	Refer to the chart below	1A
Width=280	Paper width=280	0 to 130	Refer to the chart below	1A

3 Press the [Start] key to set the setting value.

Initial setting

Items	OHP	Coted
Width=150	70	45
Width=210	55	40
Width=280	40	35

Method: B/W

1 Select the item to execute.

The screen for executing is displayed.

Items	Contents
Light/Normal3	Paper weight (Light to Normal3)
Heavy1	Paper weight (heavy1)
Heavy2/3	Paper weight (heavy2 to heavy3)

Method

1 Select the item to execute.

The screen for executing is displayed.

Items	Contents
1st side	Correction value for the first side print
2nd side	Correction value for the second side print

Setting: 1st side/2nd side

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
Width=150	Paper width=150	0 to 130	Refer to the chart below	1A
Width=210	Paper width=210	0 to 130	Refer to the chart below	1A
Width=280	Paper width=280	0 to 130	Refer to the chart below	1A

3 Press the [Start] key to set the setting value.

Initial setting

Items	Light/Normal3		Heavy1		Heavy2/3	
	1st side	2nd side	1st side	2nd side	1st side	2nd side
Width=150	80/70	80/70	40	45	35	35
Width=210	55/50	50/45	35	35	20	20
Width=280	45/35	40/35	32	27	18	18

Method: Cleaning 2nd

1 Select the item to execute.

Items	Contents
Cleaning 2nd	Secondary transfer cleaning

2 Press the [Start] key to execute the process.

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 primary transfer belt cleaning voltage.

Purpose

Change the setting when offset images appear with the transfer belt cleaning failure.

Method

1 Select the item to execute.

The screen for executing is displayed.

Items	Contents
Belt(A)	Belt A correction value
Belt(B)	Belt B correction value
Belt(C)	Belt C correction value

Setting

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
			Belt(A)	Belt(B)	Belt(C)	
Full	Full speed printing	0 to 300	40	40	130	0.1A
Half	Half speed printing	0 to 300	38	38	100	0.1A
3/4	3/4 speed printing	0 to 300	35	35	80	0.1A

3 Press the [Start] key to set the setting value.

Note

Test copy of the original is available by pressing the [System Menu/Counter] key as interruption copy mode when executing this maintenance mode.

Press the [System Menu/Counter] key and the setting screen below is displayed for necessary settings.

(Source/Conveying speed/Duplex/Orientation/Color/Copies)

Completion

1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

U108 Separation Shift bias adjustment

(Message: Adj Sepa Sbias)

Contents

Adjust On/Off timing of the separation shift bias.

Purpose

Execute when paper separation failure occurs. (Paper rolled up by the drum is held down)

Method

1 Press the [Start] key.

2 Select the item to execute.

The screen for executing is displayed.

Items	Contents
Light/Normal1	Paper weight (Light to Normal1)
Normal2/3	Paper weight (Nomal2 to Normal3)
Heavy1	Paper weight (heavy1)
Heavy2/3/Coated	Paper weight (heavy2 to heavy3) / Paper type (coated)
Timing	Setting the separation timing

Setting: Light / Normal1 / Normal2/3 / Heavy1 / Coated

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
1st side	Correction value for the first side print	0 to 30		1A
2nd side	Correction value for the second side print	0 to 30		1A

3 Press the [Start] key to set the setting value.

Note

Test copy of the original is available by pressing the [System Menu/Counter] key as interruption copy mode when executing this maintenance mode.

Press the [System Menu/Counter] key and the setting screen below is displayed for necessary settings.

(Source/Conveying speed/Duplex/Orientation/Color/Copies)

Initial setting

Items	Light/Normal1	Normal2/3	Heavy1	Coted
1st side	20	10	10	8
2nd side	20	12	10	8

Setting: Timing

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	ON timing adjustment	-100 to 100	0	0.5mm
Off Timing	OFF timing adjustment	-100 to 100	0	0.5mm

3 Press the [Start] key to set the setting value.

Note

Test copy of the original is available by pressing the [System Menu/Counter] key as interruption copy mode when executing this maintenance mode.

Press the [System Menu/Counter] key and the setting screen below is displayed for necessary settings.

(Source/Conveying speed/Duplex/Orientation/Color/Copies)

Completion

1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

U110 Drum counter

(Message: Drum Cnt)

Contents

Displays the drum counter values.

Purpose

Execute to check the drum usage status.

Reference:

1 Press the [Start] key.

2 The drum counter is displayed.

Items	Contents
C	Displays the cyan drum counter
M	Displays the magenta drum counter
Y	Displays the yellow drum counter
K	Displays the black drum counter

Completion

1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

U117 Drum unit number

(Message: Drum No.)

Contents

Displays the drum number.

Purpose

Execute to check the drum number.

Reference:

1 Press the [Start] key.

2 Displays the drum number.

Items	Contents
C	Displays the cyan drum number
M	Displays the magenta drum number
Y	Displays the yellow drum number
K	Displays the black drum number

Completion

1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

U118 Drum unit history

(Message: Drum History)

Contents

Displays 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.

2 Select the developer unit to refer to.

Items	Contents
C	Displays the cyan drum number
M	Displays the magenta drum number
Y	Displays the yellow drum number
K	Displays the black drum number

3 Displays 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.

U120 Drum drive distance counter

(Message: Drum Drv Dist Cnt)

Contents

Displays the drum drive distance counter.

Purpose

Drum control counter that is used instead of the conventional drum drive counter.

Reference:

1 Press the [Start] key.

2 Displays the drum drive distance counter

Items	Contents
C	Displays the cyan drum drive distance counter
M	Displays the magenta drum drive distance counter
Y	Displays the yellow drum drive distance counter
K	Displays the black drum drive distance counter

Completion

1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

U122 Displays the primary transfer unit number

(Message: 1st TC Output)

Contents

Displays the primary transfer unit number

Purpose

Displays the primary transfer unit number

Method

1 Press the [Start] key.

Displays the primary transfer unit number

Completion

1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

U123 Primary transfer unit history

(Message: 1st Transfer Unit History)

Contents

Displays the primary transfer unit history

Purpose

Confirms the machine number and primary transfer belt unit counter

Method

1 Press the [Start] key.

Displays the primary transfer unit number

2 Displays the machine serial number and 3 items of the primary transfer unit counter history.

Items	Contents
Machine History1 to 3	Machine serial number history
Cnt History1 to 3	Primary transfer unit history

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 transfer unit count after replacement. Also, clear the transfer counts after replacement.

Method

1 Press the [Start] key.

The transfer counter value appears.

Items	Contents
Mid(Cnt)	Displays the primary transfer counts
2nd(Cnt)	Displaying the secondary transfer counts
Mid(Time)	Displays the primary transfer unit drive time.
Clear	Clearing the transfer counts

Method: Clear

1 Select [Clear].

2 Press the [Start] key to clear the transfer counter value.

Completion

1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

U128 Transfer timing adjustment

(Message: Adj Paper Timing)

Contents

Adjust On/Off timing of the transfer high voltage output.

Purpose

Prevent paper from being rolled up by the drum.

Setting

1 Press the [Start] key.

2 Select the item to set.

The screen for setting is displayed.

Items	Contents	Setting range	Initial setting	Data variation
On Timing 1st	Primary transfer On timing adjustment	-100 to 100	0	0.5mm
On Timing 2nd	Secondary transfer On timing adjustment	-100 to 100	0	0.5mm
Off Timing	OFF timing adjustment	-100 to 100	0	0.5mm

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.

U135 Checking the toner motor operation

(Message: Chk Toner Motor)

Contents

Drives the toner motor.

Purpose

Checking the toner motor operation

Method

1 Press the [Start] key.

2 Select [Toner].

3 Press the [Start] key.

Checking the toner motor operation.

Items	Contents
Toner	Checking the toner motor operation

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.

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 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

Displays 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.

2 Select the item to check.

Displays the current temperature and humidity

Items	Contents
Ext Temp	Machine outside temperature (℃)
Ext Humidity	Machine outside humidity (%)
Temp(K)	LSU(K) temperature (℃)
Temp(COL)	LSU (C)/ (M)/ (Y) temperature (℃)
Dev Temp	Developer unit temperature (℃)

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

Displays/changes the developer bias set values.

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
Mag DC	Setting the magnet roller DC bias value
Sleeve DC	Setting the sleeve roller DC bias value
Clock Freq	Setting the clock frequency
Clock Duty	Setting the clock duty value
AC Ctrl	Setting the AC control voltage value
Motor	Setting the vibration motor operation

Setting: Mag DC / Sleeve DC / AC Ctrl

1 Select the item to set.

2 By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Contents	Setting range			Data variation
		Mag DC	Sleeve DC	AC Ctrl	
K	Black bias correction value	0 to 700	0 to 450	0 to 1597	1V
C	Cyan bias correction value	0 to 700	0 to 450	0 to 1597	1V
M	Magenta bias correction value	0 to 700	0 to 450	0 to 1597	1V
Y	Yellow bias correction value	0 to 700	0 to 450	0 to 1597	1V
Remove K	Black removal bias correction value	0 to 700	0 to 450	0 to 1597	1V
Remove C	Cyan removal bias correction value	0 to 700	0 to 450	0 to 1597	1V
Remove M	Magenta removal bias correction value	0 to 700	0 to 450	0 to 1597	1V
Remove Y	Yellow removal bias correction value	0 to 700	0 to 450	0 to 1597	1V
Remove K Half	Paper interval stripping bias correction value for black	0 to 700	0 to 450	0 to 1597	1V
Remove C Half	Paper interval stripping bias correction value for cyan	0 to 700	0 to 450	0 to 1597	1V

Items	Contents	Setting range			Data variation
Remove M Half	Paper interval stripping bias correction value for magenta	0 to 700	0 to 450	0 to 1597	1V
Remove Y Half	Paper interval stripping bias correction value for yellow	0 to 700	0 to 450	0 to 1597	1V

3 Press the [Start] key to set the setting value.

Initial setting

Items	Mag DC	Sleeve DC	AC Ctrl
K	530/480	200/180	1500
C	530/480	200/180	1500
M	530/480	200/180	1500
Y	540/490	200/180	1500
Remove K	410/380	180	1150
Remove C	410/380	180	1150
Remove M	410/380	180	1150
Remove Y	420/390	180	1150
Remove K Half	50	150	1150
Remove C Half	50	150	1150
Remove M Half	50	150	1150
Remove Y Half	50	150	1150

Setting: Clock 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
Clock	Setting the clock frequency value	0 to 3600	3600	1Hz

3 Press the [Start] key to set the setting value.

Setting: Clock 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
Duty	Setting the clock duty value	0 to 100	63	1%

3 Press the [Start] key to set the setting value.

Setting: Motor

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
Print(Normal)	Setting the continuous print (normal temperature)	0 to 255	25	10 sheets
Print(H/H)	Setting the continuous print (H/H temperature)	0 to 255	10	10 sheets
Print End	Setting the print finish time	0 to 255	50	1 sheet

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.

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).

Purpose

Change the setting to reduce the toner applying amount.

Density is lowered if overcharged toner stays in the developer unit.

Method

1 Press the [Start] key.

2 Select the item to execute.

The screen for executing is displayed.

Items	Contents
Mode	Select toner refresh on/off.
Drum T7	Set toner band length with toner refresh on.

Setting: Mode

1 Select the item to set.

Items	Contents
Mode0	Execute the toner applying operation : (Developer toner refresh and drum toner refresh on)
Mode1	Decrease the toner apply level: (Developer toner refresh off)
Mode2	No toner applied: (Developer toner refresh and drum toner refresh off)

Initial setting: Mode0:

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.

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 toner band length with toner refresh on.	0 to 255	50	0.1mm

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

Sets the mode to use the drum refresh in the user adjustment.

Purpose

Change the setting if the drum refresh is frequently operated.

Method / Setting:mode/WhiteAging

1 Press the [Start] key.

2 Select the item to set.

3 By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Description	Setting range	Initial setting	Data variation
Mode	Sets Auto drum refresh	0: Off 1: Short 2: Standard	2	-
WhiteAging	Sets the white line prevention aging	On/Off	off	-
Grinder Time	Set drum refresh time.			

4 Press the [Start] key to set the setting value.

Setting: Grinder Time

1 By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Contents	Setting range	Initial setting	Data variation
Over	Setting the developer temperature at 35°C/ 95°F or more	0 to 10	4	1 min
Less than	Setting the developing temperature at less than 35ºC	0 to 100	10	1 min

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.

U115 Toner sensor output

(Message: Toner S Output)

Contents

Displays the toner sensor output value.

Purpose

Execute to check the toner sensor output value.

Method

1 Press the [Start] key.

2 Select the item to refer to.

Switched to each reference screen.

Items	Contents
Waste Toner	Detecting the waste toner box full.
Toner	Displays the toner sensor value for each color

Refer: Waste Toner

1 Displays the waste toner sensor value.

Items	Contents
Full	Displays the toner sensor value

Refer: Toner

1 Displays the toner sensor value.

Items	Contents
Sensor(C)	Displays the cyan toner sensor output value
Sensor(M)	Displays the magenta toner sensor output value
Sensor(Y)	Displays the yellow toner sensor output value
Sensor(K)	Displays the black toner sensor output value and target value.

Completion

1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

U157 Developer drive time

(Message: Dev Time)

Contents

Displays the developer drive time to be a reference for the toner density control correction.

Purpose

Execute to check the developer drive time since replacing the developer unit.

Reference

1 Press the [Start] key.

Displays the developer drive time.

Items	Contents
C	Displays the Cyan developer unit drive time.
M	Displays the Magenta developer unit drive time.
Y	Displays the Yellow developer unit drive time.
K	Displays the Black developer unit drive time.

Completion

1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

U158 Developer counter

(Message: Dev Cnt)

Contents

Displays the developer counter

Purpose

Execute to check the developer unit usage status.

Reference

1 Press the [Start] key.

The developer count is displayed.

Items	Contents
C	Displays the cyan developer counter.
M	Displays the magenta developer counter.
Y	Displays the yellow developer counter.
K	Displays the black developer counter.

Completion

1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

U161 Fuser temperature adjustment

(Message: Adj Fuser Temp)

Contents

Sets the fuser temperature.

Purpose

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
Warm Up	Control temperature except at printing
Grain Mode	Control for the impalpable uneveness in glossiness
Belt Mode	Fuser belt protection mode selection at standby.
Ready Time Adjust	Setting the low-temperature aging temperature

Setting: Warm Up

1 Select the item to set.

2 By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Contents	Setting range	Data variation
Ready(C)	Control temperature at displaying Ready (Center)	100 to 200	1°C
Ready(E)	Control temperature at displaying Ready (Edge)	50 to 200	1°C
Ready(P)	Control temperature at displaying Ready (Press)	0 to 200	1°C
Drive(C)	Stable temperature during driving (Center)	100 to 200	1°C
Wait(C)	Stable temperature during halt (Center)	100 to 200	1°C
Low Power(C)	Control temperature at low power consumption (Center)	0 to 200	1°C
F.S.Shift(C)	Full speed shifting temperature (Center)	0 to 200	1°C
Pressure(C)	Pressurizing beginning temperature (Center)	0 to 200	1°C
F.S.Print(C)	Temperature (center) during full-speed printing	100 to 200	1°C
Duplex Shift	Decreased duplex print control temperature value	0 to 255	1°C

Default Setting

Items	setting				
	100V	120V		220 to 240V	
		7-inch panel model	4.3-inch panel model	7-inch panel model	4.3-inch panel model
Ready(C)	135	150	145	150	145
Ready(E)	90	105	100	105	100
Ready(P)	35	35	35	35	35
Drive(C)	140	155	150	155	150
Wait(C)	130	145	140	145	140
Low Power(C)	0	0	0	0	0
Full SpeedShift(C)	70	70	70	70	70
Pressure(C)	100	115	110	115	110
Duplex Shift	0	0	0	0	0

3 Press the [Start] key to set the setting value.

Setting: Grain Mode

1 Select the mode to set.

Items	Contents
Mode0	Present state control mode (Usually not used)
Mode1	Improvement mode for the impalpable uneveness in glossiness
Mode2	More improvement

Initial setting: Mode0

2 Press the [Start] key to set the setting value.

Setting: Belt Mode

1 Select the mode to set.

Items	Contents
On	Belt mode enabled
Off	Belt mode disabled

Default Setting: On

2 Press the [Start] key to set the setting value.

Setting: Ready time adjust

1 By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Contents	Setting range	Default Setting	
			100V	120V/220 to 240V
Value	Compensating Values for the Activating Temperature for Low-temperature Aging: (α)	0 to 4	0	0

2 Press the [Start] key to set the setting value.

Reducing the alpha value lowers the temperature at which aging is activated following the quiet mode has been stable.

Lowering the alpha value could deteriorate the fuser performance due to aging would not be activated during quiet mode.

Temperature to Activate Aging	Less than 13+α°C	13+α°C or more	18 °C or more
Aging time	60 sec	35 sec	0 sec

Completion

1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

U164 Fuser unit history

(Message: Fuser History)

Contents

Displays the machine serial number and the fuser unit counter history.

Purpose

Execute to check the machine serial number and the fuser counter values.

Reference

1 Press the [Start] key.

Displays the machine serial number and 3 items of the fuser counter history.

Items	Contents
Machine History1 to 3	Machine serial number history
Cnt History1 to 3	Fuser unit history

Completion

1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

U165 Fuser unit number

(Message: Fuser Unit Number)

Contents

Displays the fuser unit number.

Purpose

Execute to check the fuser unit number.

Method

1 Press the [Start] key.

Displays the fuser unit number.

Completion

1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

U167 Clearing the fuser count

(Message: Clr Fuser Cnt)

Contents

Displays the fuser counter

Purpose

Verify the fuser count after replacement.

Reference

1 Press the [Start] key.

The fuser count is displayed.

Items	Contents
Cnt	Displays the fuser count
Release	Displays the fuser unit drive time (release)
Press	Displays the fuser unit drive time (press)

Completion

1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

U169 Setting the fuser power source

(Message: Set Factory PS)

Contents

Displays and settings the reference voltage of the IH PWB.

Purpose

To check the reference voltage

When U021 is being executed, set the same voltage with the voltage of the IH control PWB.

Method

1 Press the [Start] key.

2 Select the item to set.

The screen for setting is displayed.

Items	Contents
Set Fuser	Destination setting for Fuser

Setting: Mode

3 By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Contents	Setting range	Default Setting
Mode	Destination setting for Fuser	1: 100 V specifications 2: 200 V specifications 3: 120 V specifications 4: 110 V specifications	- (Destination)

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.

U197 Fuser control setting

(Message: Set Fuser Control)

Contents

Change the fuser control setting.

Purpose

If the security gate (anti-theft gate) malfunctions with the fuser control, change the fuser control setting.

Specified destination (100V spec.)

Method

1 Press the [Start] key.

2 Select the item to set.

The screen for setting is displayed.

Items	Contents
Security Gate	Set prevention of malfunction for the security gate (anti-theft gate).

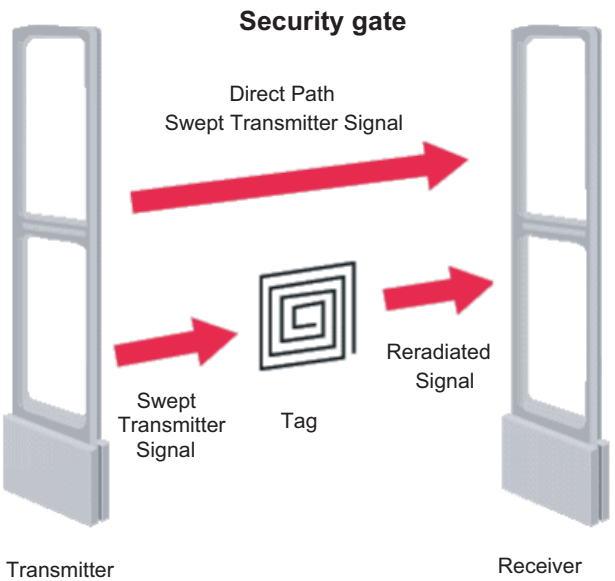
Setting: Security Gate

1 Select the item to set.

Items	Contents
On	Turn the security gate malfunction prevention setting on.
Off	Turn the security gate malfunction prevention setting off.

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.

U199 Fuser temperature

(Message: Fuser Temp)

Contents

Fuser temperature is displayed.

Purpose

Execute to check the fuser temperature.

Reference

1 Press the [Start] key.

Fuser temperature is displayed.

Items	Contents
Heat Edge1	Displays the fuser heat belt edge temperature (°C)
Heat Center	Displays the fuser heat belt center temperature (°C)
Heat Middle	Displays the fuser heat belt temperature (°C) at rear side.
Press Center	Displays the fuser press roller center temperature (°C)

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.

When unable to press the software numeric keys due to the touch screen press position error and unable to enter the maintenance mode, press and old [Home], [Stop] and [Reset] keys 3 seconds to start up U201.

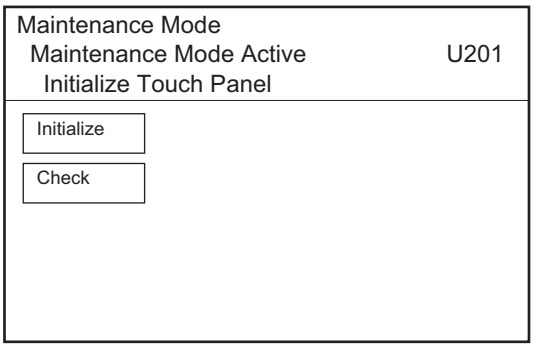
Method

1 Press the [Start] key.

2 Select the item to execute.

3 Press the [Start] key.

The screen for executing is displayed.

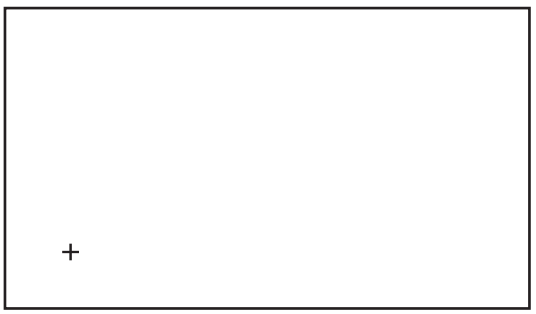


Items	Contents
Initialize	Automatically corrects the touch panel display position
Check	Checks the touch panel display position

Method: Initialize

1 Press the center of indicated "+".

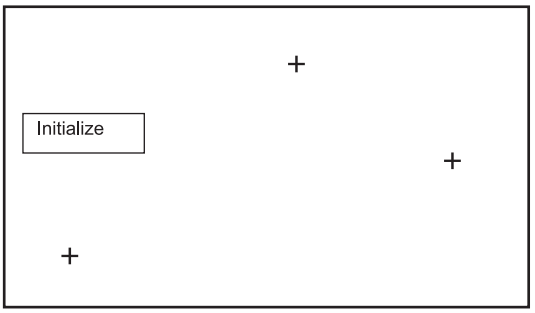
2 Repeat three times.



3 After finishing setting, the [Check] screen is automatically displayed.

Method: Check

1 Press the center of 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.1.

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

The screen for setting is displayed.

Items	Contents
Normal Speed	Normal scanning (600dpi)
High Speed	High speed scanning

Method: Normal Speed/High Speed

1 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

2 Press the [Start] key.

The operation starts.

3 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 LED at the most left column in the operation panel is turned on.

3 Pressing the keys in order from the top at the row where the LED is lit, count increases one by one. When pressing all the keys at the row and there is an LED at the next right side row, the LED is lit.

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

Sets 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	Select 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.

U230 Optional device serial number

(Message: Device Serial No)

Contents

Displays the optional device serial number

Purpose

Specify the production lot from the serial number to make it help of investigation at problem occurrence.

Method

1 Press the [Start] key.

Displays the serial number.

Items	Contents
PF1	Displays the paper feeder 1 serial number.

Completion

1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

U243 Checking the DP motor

(Message: Chk 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	Drive the DP feed motor
Conv Motor	Drive DP conveying motor.
Rev Motor	Drive DP feedshift motor.
Regist clutch	Drive DP registration clutch.

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: Chk DP Switch)

Contents

Displays each switch and sensor status of the document processor.

Purpose

Execute to check the operation of switches and sensors of the document processor.

Reference

1 Press the [Start] key.

2 Check the switches and sensors by manually turning them on/off.

The switch indication is inversed when the switch is detected.

Items	Contents
Feed	Check DP feed sensor.
Regist	Check DP registration sensor.
Timing	Check DP timing sensor.
Set	Check DP original sensor.
Longitudinal	Check DP original length sensor.
Cover Open	Check DP top cover switch.
Open	Check DP open/close switch.

Completion

1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

U250 Maintenance counter preset

(Message: Mnt Cnt Pre-set)

Contents

Changes the pre-set values for the maintenance cycle and automatic grayscale adjustment.

Purpose

Change the timing to display the message for maintenance and automatic grayscale 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
M.Cnt A	Changes the maintenance counter (Kit A)	0 to 9999999
M.Cnt B	Change the maintenance counter preset value (Kit B)	0 to 9999999
M.Cnt HT	Change the maintenance counter preset value (HT adjustment)	0 to 9999999
Cass1	Change the maintenance counter preset value (Cassette 1)	0 to 9999999
Cass2	Change the maintenance counter preset value (Cassette 2)	0 to 9999999
Cass3	Change the maintenance counter preset value (Cassette 3)	0 to 9999999

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 Maintenance counter clear

(Message: Clr Mnt Cnt)

Contents

Displays, clears or changes 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
Cass1	Maintenance cycle counter value (cassette 1)	0 to 9999999
Cass2	Maintenance cycle counter value (cassette 2)	0 to 9999999
Cass3	Maintenance cycle counter value (cassette 3)	0 to 9999999
Clear	Clears all the maintenance counts	0

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
Japan Metric *1	Japan metric
Inch *2	Inch
Europe Metric *2	Europe Metric
Asia Pacific *2	Asia Pacific
Australia *2	Australia
China *2	China
Korea *2	Korea

*1: 100 V model only, *2: Except 100 V model

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 Double/single count switch

(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 [B/W].

Items	Contents
Full Color	Switch the counter for color mode (Single/Double Count)
B/W	Switch the counter for B/W mode (Single/Double Count)

3 Select [SGL] or [DBL].

Items	Contents
SGL(All)	Set single count for all the paper sizes
DBL(A3/Ledger)	Set single count for A3(420mm) size or smaller
DBL(B4)	Set single count for Legal(356mm) size or smaller
DBL(Folio)	Set double count for Folio size or larger *2

Initial setting: SGL(All) (100V model), DBL(A3/Ledger) (120V/220-240V model)

*2: The Folio length can be set to between 330 and 356 mm using maintenance mode U035. However, the double count will be applied when the set value is 330mm (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 Feed/eject counter switch

(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 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

Sets 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.	Displays 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.

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.

Sets the delivery date of the machine.

Clearing

1 Select [Clear].

2 Press the [Start] key.

Clears 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.

Items	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.

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	Displays the digital dot coverage.
Off	Not to display the digital dot coverage.

Initial setting: On

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.

U287 Automatic recovery function

(Message: Set Reset Func)

Contents

Sets whether to enable the automatic recovery function after the service call error

Purpose

Sets whether to enable the automatic recovery function after the service call error or system error

Setting

1 Press the [Start] key.

2 Select the item to set.

3 By using the[<] [>] keys change the setting value.

Items	Contents	Setting range	Initial setting
C0XXX	Sets whether to enable the automatic recovery function after the service call error	On/Off	Off
C1XXX	Sets whether to enable the automatic recovery function after the C1xxx code service call error	On/Off	Off
C2XXX	Sets whether to enable the automatic recovery function after the C2xxx code service call error	On/Off	Off
C3XXX	Sets whether to enable the automatic recovery function after the C3xxx code service call error	On/Off	Off
C4XXX	Sets whether to enable the automatic recovery function after the C4xxx code service call error	On/Off	Off
C5XXX	Sets whether to enable the automatic recovery function after the C5xxx code service call error	On/Off	Off
C6XXX	Sets whether to enable the automatic recovery function after the C6xxx code service call error	On/Off	Off
C7XXX	Sets whether to enable the automatic recovery function after the C7xxx code service call error	On/Off	Off
C8XXX	Sets whether to enable the automatic recovery function after the C8xxx code service call error	On/Off	Off
C9XXX	Sets whether to enable the automatic recovery function after the C9xxx code service call error	On/Off	Off
CFXXX	Sets whether to enable the automatic recovery function after the CF code service call error	On/Off	On

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.

U290 Set the HyPAS application storage rive.

(Message: Set Drive App)

Contents

Set the HyPAS application storage rive.

Purpose

Set to save in the SD card or optional SSD.

Setting

1 Press the [Start] key.

2 Select the item to set.

Items	Contents
SD Card	Set to the SD card.
SSD	Set to the SSD card.

Initial setting: SD Card(0)

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.

U329 Black line cleaning indication

(Message: Set Clean Bk Line)

Contents

Sets whether to indicate the black lines cleaning guidance when detecting black lines.

Purpose

Displays the cleaning guidance to reduce the service call with the black lines by dust on the contact glass when scanning from the document processor.

Method

1 Press the [Start] key.

2 Select the item to set.

The screen for setting is displayed.

Items	Contents
Black Line Mode	Sets On/Off of the black line cleaning guidance indication

Setting: Black Line Mode

1 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

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.

U332 Adjusting the black coverage coefficient

(Message: Adj Calc Rate)

Contents

Sets 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	Description	Setting range	Initial setting
Rate	Set the coefficient for converting the black ratio for custom sizes in relation to the A4/Letter size.	0.1 to 3.0	1.0
Mode	Switch full-color count and color coverage count display	0: Full color 1: by coverage	0
Level1	Sets low coverage threshold value	0.1 to 99.8	10 (Indicated as 1.0)
Level2	Sets 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

Sets 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
Cass2	Setting cassette 2 to the printer paper source (paper feeder)
Cass3	Setting cassette 3 to the printer paper source (paper feeder)

Initial setting: Off (Cassette1〜3)

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 setting

(Message: Set Dup Pri Mode)

Contents

Switches between duplex or simplex copy for the initial copy mode.

Purpose

Set 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 print priority is enabled
Off	Duplex print priority is disabled

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 Maintenance timing pre-caution setting

(Message: Set Mnt Time Disp)

Contents

Sets 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.

Displays 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	Description	Setting range	Initial setting	Data variation
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 AutoSleep 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 Sets 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 enabled from the system menu.
Off	The sleep mode is disabled from the system menu.

Initial setting: On

Peel off the energy saver label when setting it to 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.

U402 Print 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.

Note

Press the [System Menu/Counter] key and the setting screen below is displayed for necessary settings.
(Source/Conveying speed/Duplex/Color/Copies)

3 Press the [Start] key to output a test pattern.

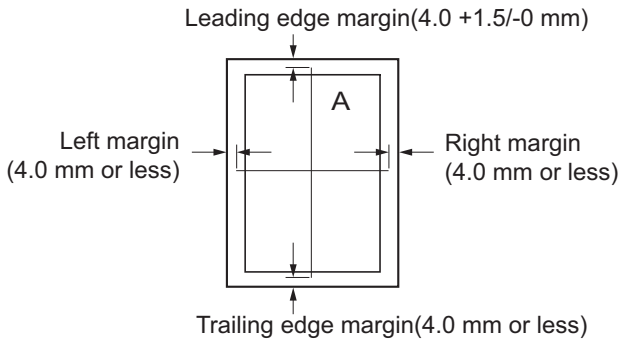
4 Press the [System Menu] key.

5 Select the item to set.

Items	Description	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.

Important

Appropriate margins are not obtained after this adjustment, execute the following maintenance mode.
U034(6-37page) > U4026-126page

Completion

1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

U403 Scanning margin adjustment (table)

(Message: Scan 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.

Note

Press the [System Menu/Counter] key and the setting screen below is displayed for necessary settings.
(Source/Conveying speed/Duplex/Orientation/Color/Copies)

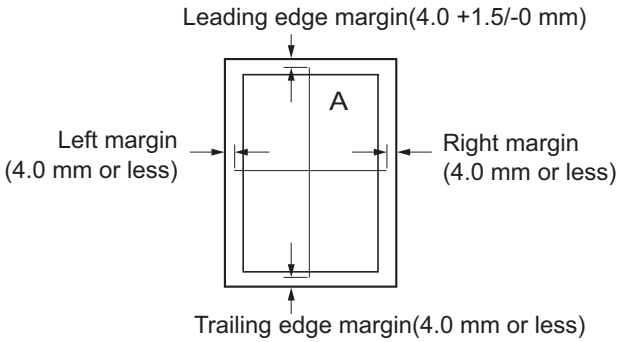
3 Place an original and press the [Start] key to make a test copy.

4 Press the [System Menu] key.

5 Select the item to adjust.

Items	Description	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.

Important

Check the copy image after the adjustment. If the image is still incorrect, adjust the following in the maintenance mode.
U034(6-37page) > U402(6-126page) > U403(6-128page)

Completion

1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

U404 Scanning margin adjustment (DP)

(Message: Scan 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.

Note

Press the [System Menu/Counter] key and the setting screen below is displayed for necessary settings.
(Source/Conveying speed/Duplex/Orientation/Color/Copies)

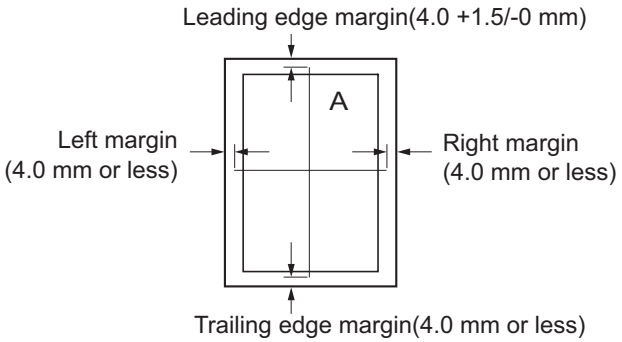
3 Place an original on the DP and press the [Start] key to make a test copy.

4 Press the [System Menu] key.

5 Select the item to adjust.

Items	Description	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	Sets 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.

Important

Check the copy image after the adjustment. If the image is still incorrect, adjust the following in the maintenance mode.
U034(6-37page) > U402(6-126page) > U403(6-128page) > U404(6-130page)

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)

Important

Adjust this after finishing the following maintenance modes.

U034 (6-37page) > U402 (6-126page) > U066 (6-48page) > U403 (6-128page) > U071 (6-53page) > U404 (6-130page) > U407

Adjustment

1 Press the [Start] key.

2 Press the [System Menu/Counter] key.

Note

Press the [System Menu/Counter] key and the setting screen below is displayed for necessary settings.

(Source/Conveying speed/Duplex/Orientation/Color/Copies)

3 Place an original on the DP and press the [Start] key to make a test copy.

4 Press the [System Menu] key.

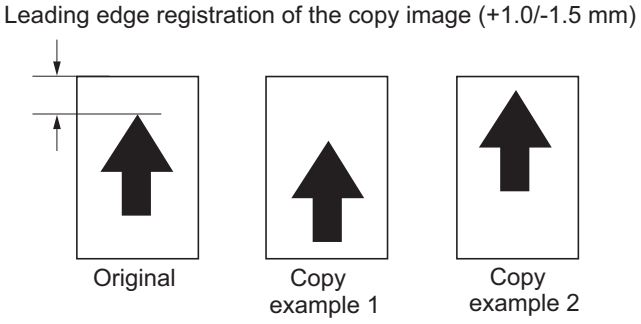
5 Select [Adj Data].

Items	Description	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.



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

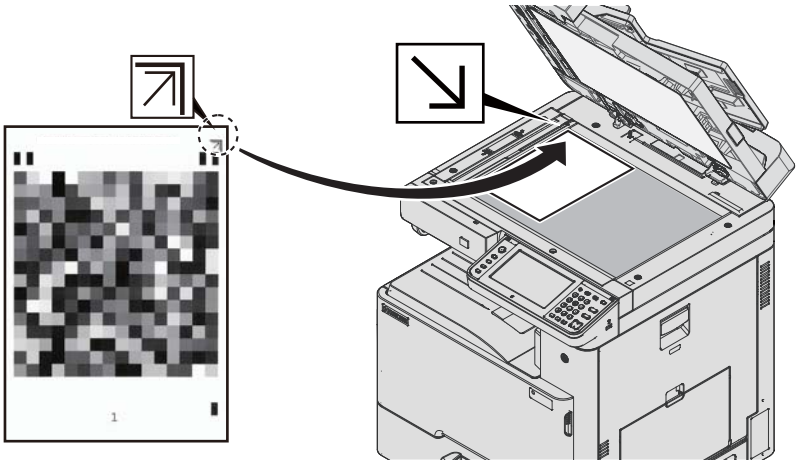
1 Press the [Start] key.

Displays the execution information screen.

A test pattern is output on A4 paper.

2 Set the output test pattern as original, in the back side which the direction of the arrow is, looking down the side which is printing to the original glass.

Load about 20 sheets of the blank paper on Test Pattern 1.



3 Press the [Start] key.

The first auto adjustment is executed.

4 Press the [Start] key.

The second auto adjustment is executed.

5 [Finish] appears after normal completion.

6 An error code appears when an error occurs.

Error codes

Codes	Occurrence position	Contents	Re-adjustment
S001	Scanner	Original type error	Enable
S002		Original reference patch is not detected	Enable
S003		Original deviation is in excess in the main scanning direction	Enable
S004		Original deviation is in excess in the sub-scanning direction	Enable
S005		Original skew is in excess	Enable
S006		Other scanner error	Enable
E001	Engine	Engine status error	Disable
E002		Engine sensor error	Disable
E003		The engine is driving.	Enable
C101	Controller	Pause status	Disable
C102		Adjustment result error	Disable
C1FF		Other controller error	Disable
C210		Table adjustment value error Black	Disable
C220		Table adjustment value error Cyan	Disable
C240		Table adjustment value error Magenta	Disable
C280		Table adjustment value error Yellow	Disable
C310		Simple increment adjustment value error Black	Disable
C320		Simple increment adjustment value error Cyan	Disable
C340		Simple increment adjustment value error Magenta	Disable
C380		Simple increment adjustment value error Yellow	Disable

Completion

1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

U411 Scanner auto adjustment

(Message: Auto Adj Scn)

Contents

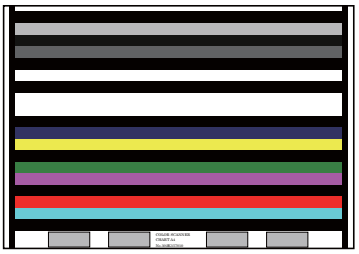
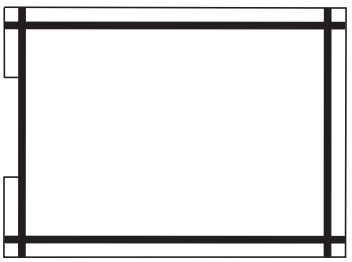
Uses the specified originals and automatically adjusts the following items in the scanner and the DP scanning sections.

Scanner section:Original size magnification, leading edge timing, center line, chromatic aberration in main/sub scanning direction, MTF correction, color/monochrome input gamma, color correction matrix automatic adjustment

DP scanning section: Original size magnification, leading edge timing and center line, MTF correction, Input gamma, automatic adjustment of color correction matrix

Purpose

Automatically adjusts the scanner and the DP scanning sections.

Items	Use	Contents	Original for adjustment (P/N)
Table (Chart A)	In case of losing adjustment data, differing from the color tone extremely (not improve in case of executing U410) When replacing ISU(CCD unit), Optical LED lamp and Engine EEPROM. Use when setting up DP or executing U021 initialization	Execute automatic adjusts the table scanning. LED light intensity Scan timing White reference correction factor Chromatic aberration correction filter in the main scanning direction *3 Color gamma input correction factor Color correction matrix factor	7505000005 
DP FU(ChartA)	Use when setting up DP or executing U021 initialization	Execute the 1st side automatic adjustment in the DP scanning section. White reference correction factor	
DP FU(ChartB)		Execute the 1st side automatic adjustment in the DP scanning section. Magnification in the sub-scanning direction Leading edge timing Center line Trailing edge timing	302AC68243 
Target		Set-up for obtaining the target value	7505000005
Debug *1		Adjusting the document processor scanning section with the chart output by the local machine Magnification in the sub-scanning direction Leading edge timing Center line Trailing edge timing	Without Chart B, executed in a simplified manner.

*1: USB installed machine only

Method: Table (Chart A)

Automatic input of the target value

Usually, it adjusts here.

1 Set the specified original (P/N: 7505000005) on the table.

2 Enter maintenance item U411.

3 Select [Target].

4 Select [Auto].

5 Press the [Start] key.

6 Select [Table(ChartA)].

7 Press the [Start] key to read the barcode of the original chart and to start the automatic adjustment.

8 When automatic adjustment has normally completed, [OK] is displayed.

When the error code "1e" or "1f" is displayed during the automatic adjustment in the table scanning and the barcode is not read, 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: 7505000005) by executing the maintenance mode U425.

2 Set the specified original (P/N: 7505000005) on the table.

3 Enter maintenance item U411.

4 Select [Target].

5 Select [U425].

6 Press the [Start] key.

7 Select [Table(ChartA)].

8 Press the [Start] key to start Auto adjustment.

9 When automatic adjustment has normally completed, [OK] is displayed.

If the image position is shifted largely at the DP adjustment below, an error might occur when adjusting it with ChartA. First, use ChartB (image position) to adjust it and then use ChartA (color).

Method: DP FU (Chart A)

Automatic input of the target value

1 Set the specified original (P/N: 7505000005) face-up on the DP.

2 Enter maintenance item U411.

3 Select [Target].

4 Select [Auto].

5 Press the [Start] key.

6 Select [DP FU(ChartA)].

7 Press the [Start] key to read the barcode of the original chart and to start the automatic adjustment.

8 When automatic adjustment has normally completed, [OK] is displayed.

When the error code "1e" or "1f" is displayed during the automatic adjustment in the DP scanning and the barcode is not read, adjust the following after manually inputting the target value.

Manual input of the target value

1 Enter the target values which are shown on the lower part of the front page of the adjustment original (P/N: 7505000005) by executing the maintenance mode U425.

2 Set the specified original (P/N: 7505000005) face-up on the DP.

3 Enter maintenance item U411.

4 Select [Target].

5 Select [U425].

6 Press the [Start] key.

7 Select [DP FU(ChartA)].

8 Press the [Start] key to start Auto adjustment.

9 When automatic adjustment has normally completed, [OK] is displayed.

Method: DP FU (Chart B)

Adjusting the first side of the DP duplex scanning

1 Set the specified original (P/N: 302AC68243) face-up on the DP.

2 Enter maintenance item U411.

3 Select [DP FU(ChartB)].

4 Press the [Start] key to start Auto adjustment.

5 When automatic adjustment has normally completed, [OK] is displayed.

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)	Align the original to the upper left corner to set it and execute the auto adjustment. Check the lamp light and replace it if it does not light.
02	Black band detection position error (Table far end in the main scanning direction)	
03	Black band detection position error (Table near end in the scanning direction)	
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)	

Codes	Contents	Corrective action
08	Black band is not detected (DP far end in the main scanning direction)	Check the attachment position of DP. Check the lamp light and replace it if it does not light. Check the back and front of the adjustment original.
09	Black band is not detected (DP near end in the main scanning direction)	
0a	Black band is not detected (DP leading edge in the sub-scanning direction)	
0b	Black band is not detected (Original check of DP leading edge in the sub-scanning direction)	
0c	Black band is not detected (DP trailing edge in the sub-scanning direction)	
0d	White band is not detected (DP trailing edge in the sub-scanning direction)	
0e	DMA time out	Turn the power switch off then on, and execute again.
0f	Magnification error in the sub-scanning direction	Turn the power switch off then on, and execute again. Adjust manually. (U065 to U067, U070 to U072)
10	Leading edge error in the sub-scanning direction	
11	Trailing edge error in the sub-scanning direction	
12	DP skew error in the sub-scanning direction	
13	Maintenance request error	Turn the power switch off then on, and execute again.
14	Center line error in the main scanning direction	Turn the power off and on, and execute again. Adjust manually. (U065 to U067, U070 to U072)
15	DP skew error in the main scanning direction	
16	Magnification error in the main scanning direction	
17	Service call error	Turn the power 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?

Codes	Contents	Corrective action
20	Input gamma correction coefficient error	Set the original correctly and execute again.
21	Color correction matrix coefficient error	
30	Chromatic aberration adjustment original error	
40	Black dot detection error at the linearity correction (Point A)	Align the original to the upper left corner to set it and execute the auto adjustment. Check the lamp light and replace it if it does not light.
41	Black dot detection error at the linearity correction (Point B)	
42	Black dot detection error at the linearity correction (Point C)	
43	Black dot detection error at the linearity correction (Point D)	
44	Black dot detection error at the linearity correction (Point E)	
45	Black dot detection error at the linearity correction (Point F)	
46	Black dot detection error at the linearity correction (Point G)	
47	Black dot detection error at the linearity correction (Point H)	
48	Black dot detection error at the linearity correction (Point I)	
49	Black dot detection error at the linearity correction (Point J)	
4a	Black dot detection error at the linearity correction (Point K)	Align the original to the upper left corner to set it and execute the auto adjustment. Check the lamp light and replace it if it does not light.
4b	Black dot detection error at the linearity correction (Point L)	
4c	Black dot detection error at the linearity correction (Point M)	
4d	Black dot detection error at the linearity correction (Point N)	
4e	Black dot detection error at the linearity correction (Point O)	
4f	Linearity correction, Point P black band no detection error.	
50	White reference plate correction ratio error.	・Place the adjustment original and execute it again. ・If not cleared, it is the failure with an input data error.
99	Completed to obtain the test RAW	-

Completion

1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

U425 Target adjustment

(Message: Set Target)

Contents

Enter the Lab values which are shown on the back page of the adjustment original (P/N: 7505000005).

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
ChartA	Setting the adjustment value of the table scanning
ChartB	Sets the adjustment value of the DP scanning

Method: ChartA

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	Description	Setting range	Initial setting	Data variation
L	L parameter setting	0.0 to 100	93.6	-
a	A value setting	-200 to 200	0.9	-
b	B value setting	-200 to 200	-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	Description	Setting range	Initial setting	Data variation
L	L parameter setting	0.0 to 100	10.6	-
a	A value setting	-200 to 200	-0.2	-
b	B value setting	-200 to 200	-0.7	-

3 Press the [Start] key to set the setting value.

Setting: Gray1

1 Select the item to set.

2 By using [<] [>] keys or the numeric keys, enter the values which are shown on the back page of the adjustment original.

Items	Description	Setting range	Initial setting	Data variation
L	L parameter setting	0.0 to 100	76.2	-
a	A value setting	-200 to 200	-0.2	-
b	B value setting	-200 to 200	1.2	-

3 Press the [Start] key to set the setting value.

Setting: Gray2

1 Select the item to set.

2 By using [<] [>] keys or the numeric keys, enter the values which are shown on the back page of the adjustment original.

Items	Description	Setting range	Initial setting	Data variation
L	L parameter setting	0.0 to 100	25.2	-
a	A value setting	-200 to 200	-0.2	-
b	B value setting	-200 to 200	-0.2	-

3 Press the [Start] key to set the setting value.

Setting: Gray3

1 Select the item to set.

2 By using [<] [>] keys or the numeric keys, enter the values which are shown on the back page of the adjustment original.

Items	Description	Setting range	Initial setting	Data variation
L	L parameter setting	0.0 to 100	51.3	-

Items	Description	Setting range	Initial setting	Data variation
a	A value setting	-200 to 200	-0.3	-
b	B value setting	-200 to 200	-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	Description	Setting range	Initial setting	Data variation
L	L parameter setting	0.0 to 100	72.6	-
a	A value setting	-200 to 200	-32.8	-
b	B value setting	-200 to 200	-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	Description	Setting range	Initial setting	Data variation
L	L parameter setting	0.0 to 100	48.1	-
a	A value setting	-200 to 200	69.9	-
b	B value setting	-200 to 200	-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	Description	Setting range	Initial setting	Data variation
L	L parameter setting	0.0 to 100	86.2	-
a	A value setting	-200 to 200	-18.6	-
b	B value setting	-200 to 200	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	Description	Setting range	Initial setting	Data variation
L	L parameter setting	0.0 to 100	46.7	-
a	A value setting	-200 to 200	54.2	-
b	B value setting	-200 to 200	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	Description	Setting range	Initial setting	Data variation
L	L parameter setting	0.0 to 100	67.8	-
a	A value setting	-200 to 200	-51.3	-
b	B value setting	-200 to 200	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	Description	Setting range	Initial setting	Data variation
L	L parameter setting	0.0 to 100	38.8	-
a	A value setting	-200 to 200	25.3	-
b	B value setting	-200 to 200	-22.8	-

3 Press the [Start] key to set the setting value.

Setting: Adjust Original

This setting is usually unnecessary.

Items	Description	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	Sets the adjustment value of the left edge.	9.0 to 11.0	10.0	0.1mm
Sub Scan	Set the adjustment value of the trailing edge.	189.0 to 191.0	190.0	0.1mm

1 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

- 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.
- Apply the following formula for the values obtained: ((A+B+C)/3)

2 Enter the value solved in "Lead" using the the [+] [-] keys keys.

3 Press the [Start] key to set the setting value.

4 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 1to the right edge of black belt 2.

5 Enter the values measured in "Main Scan" using the [<] [>] keys.

6 Press the [Start] key to set the setting value.

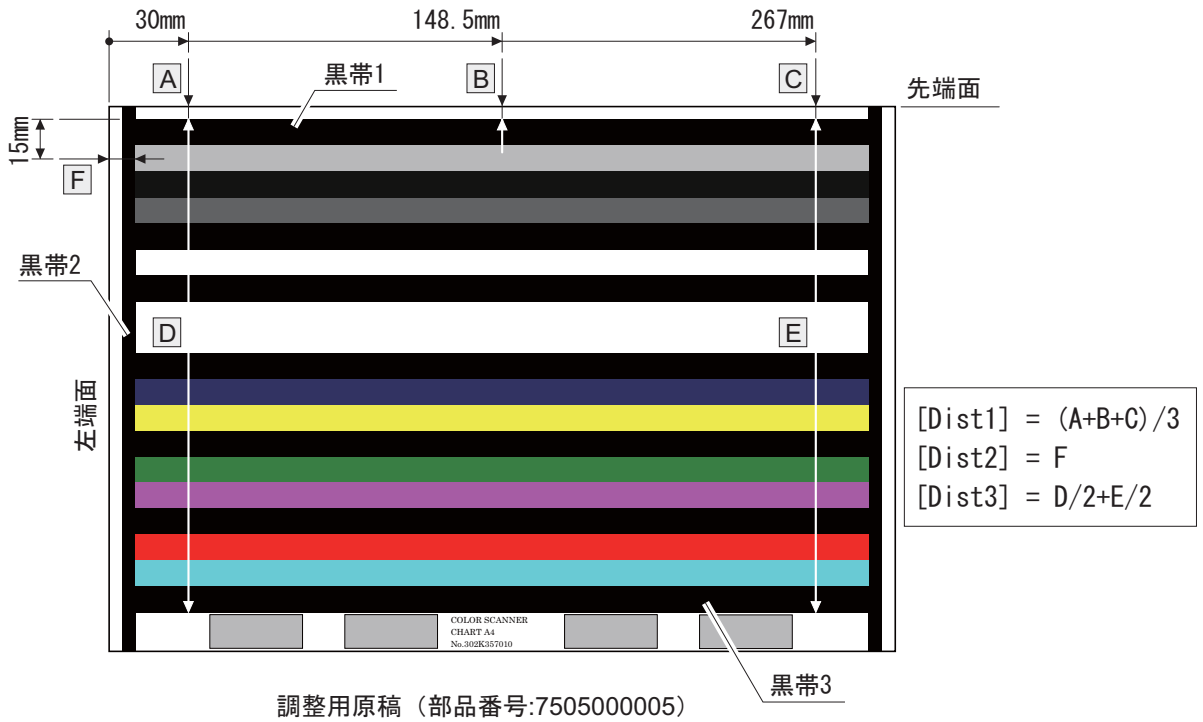
7 Measure the distance "D" and "E" from the top edge of black belt 1 to the bottom edge of black belt 3 on the adjustment original at two positions.

Measurement procedure

- 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.)
- Apply the following formula for the values obtained: (D/2+E/2)

8 Enter the value solved in "Sub Scan" using the using [<] [>] keys.

9 Press the [Start] key to set the setting value.



調整用原稿（部品番号:7505000005）

Method: ChartA

1 Select the item to set.

Items	Contents
Adjust Original	Setting the main scanning and sub-scanning directions

Setting: Adjust Original

This setting is usually unnecessary.

Items	Description	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	Sets the adjustment value of the left edge.	14.0 to 16.0	15.0	0.1mm
Sub Scan	Set the adjustment value of the trailing edge.	388.0 to 392.0	390.0	0.1mm

1 Measure the distance "A" from the leading edge to the black belt (inside) on the adjustment original.

2 Enter the value measured in "Lead" using the [<] [>] keys.

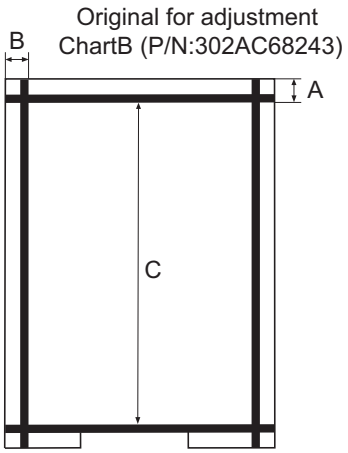
3 Measure the distance "B" from the left edge to the black belt (inside) on the adjustment original.

4 Enter the values measured in "Main Scan" using the [<] [>] keys.

5 Measure the distance "C" from the leading black belt (inside) to the trailing black belt (inside) on the adjustment original.

6 Enter the values measured in "Sub Scan" using the the [<] [>] keys keys.

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.

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	Sets the time interval to execute calibration after completing printing.
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 toner thick layer calibration and light intensity calibration
Calib	Executing Calibration

Setting: Permission

1 Select [On] or [Off].

Items	Contents
On	1: Permitting Calibration
Off	0: Prohibiting Calibration

Default 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	Default Setting	Data variation
Time(sec)	Calibration execution interval time (seconds)	0 to 9999	1	1 sec,

Setting is changeable in 10 count increments.

2 Press the [Start] key to set the setting value.

Setting: Leaving Time

1 By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Contents	Setting range	Default Setting	Data variation
Time(min)	Setting the sleep timer (minute)	0 to 9999	1	1 min

2 Press the [Start] key to set the setting value.

Setting: Target Value

1 Select the item to set.

2 By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Contents	Setting range	Default Setting
Thickness(C)	Toner layer calibration (Cyan)	0 to 1000	103
Thickness(M)	Toner layer calibration (Magenta)	0 to 1000	105
Thickness(Y)	Toner layer calibration (Yellow)	0 to 1000	118
Thickness(K)	Toner layer calibration (Black)	0 to 1000	125
Gamma(C)	Light amount calibration (Cyan)	0 to 1000	417
Gamma(M)	Light amount calibration (Magenta)	0 to 1000	415
Gamma(Y)	Light amount calibration (Yellow)	0 to 1000	389
Gamma(K)	Light amount calibration (Black)	0 to 1000	469

3 Press the [Start] key to set the setting value.

Method: Calib

1 Select [Execute].

2 Press the [Start] key.

Calibration is started.

Items	Contents
Execute	Executes Full Calibration

Completion

1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

U465 ID correction data

(Message: ID Adj Data)

Contents

Confirms the developer bias control value after the ID correction.

Purpose

Confirming the developer bias control value after the ID correction

Method

1 Press the [Start] key.

2 Select the item to check.

Switched to each reference screen.

Items	Contents
Laser Power	Displays the light intensity control value.

Refer: Laser Power

The current value is displayed.

Items	Contents
C	Displays the Cyan light intensity control value.
M	Displays the Magenta light intensity control value.
Y	Displays the Yellow light intensity control value.
K	Displays 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

Sets the color registration correction.

Also, sets 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.

Transit to the setting screen or start operation.

Items	Contents
Color Regist	Sets the color registration correction
Timing	Execute the color registration correction if the LSU temperature changes by the specified value after the previous correction
Initialize	Reset the correction value.

Setting: Color Regist

1 Select the item to set.

Items	Contents
On	1: Permitting the color registration correction operation
Off	0: Prohibiting the color registration correction operation

Initial setting: Off

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	Default Setting
LSU Temp	Execution condition by the LSU temperature variation	2 to 10	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: Color Regist Adjustment Data)

Contents

Displays the color registration correction data and transfer belt speed 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)
Regist(CH)	Displays the color registration (H/V) value (Cyan)
Regist(MH)	Displays the color registration (H/V) value (Magenta)
Regist(YH)	Displays the color registration (H/V) value (Yellow)

Refer: Auto(C) / Auto(M) / Auto(Y)

The current value is displayed.

Items	Contents
Main (L)	Automatic color registration adjustment value in the main scanning direction. (Left)
Sub	Automatic color registration adjustment value in the sub scanning direction.
Main (R)	Automatic color registration adjustment value in the main scanning direction.(Right)

Refer: Regist(CH)

The current value is displayed.

Items	Contents
CH-1	CH-1 adjustment value
CH-2	CH-2 adjustment value
CH-3	CH-3 adjustment value
CH-4	CH-4 adjustment value
CH-5	CH-5 adjustment value
CH-6	CH-6 adjustment value
CH-7	CH-7 adjustment value
CV	CV adjustment value

Refer: Regist(MH)

The current value is displayed.

Items	Contents
MH-1	MH-1 adjustment value
MH-2	MH-2 adjustment value
MH-3	MH-3 adjustment value
MH-4	MH-4 adjustment value
MH-5	MH-5 adjustment value
MH-6	MH-6 adjustment value
MH-7	MH-7 adjustment value
MV	MV adjustment value

Refer: Regist(YH)

The current value is displayed.

Items	Contents
YH-1	YH-1 adjustment value
YH-2	YH-2 adjustment value
YH-3	YH-3 adjustment value
YH-4	YH-4 adjustment value
YH-5	YH-5 adjustment value
YH-6	YH-6 adjustment value
YH-7	YH-7 adjustment value
YV	YV adjustment 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

Sets 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	Data variation
Luminance	Compression rate of the brightness	4 to 10	10	1%
Chrominance	Compression rate of the color difference	4 to 10	10	1%

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	Data variation
Luminance	Compression rate of the brightness	4 to 10	10	1%
Chrominance	Compression rate of the color difference	4 to 10	10	1%

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)	Sets 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	Data variation
Y1	Compression rate of the brightness	1 to 100	30 (%)	1%
Y2	Compression rate of the brightness	1 to 100	40 (%)	1%
Y3	Compression rate of the brightness	1 to 100	51 (%)	1%
Y4	Compression rate of the brightness	1 to 100	70 (%)	1%
Y5	Compression rate of the brightness	1 to 100	90 (%)	1%
CbCr1	Compression rate of the color difference	1 to 100	30 (%)	1%
CbCr2	Compression rate of the color difference	1 to 100	40 (%)	1%
CbCr3	Compression rate of the color difference	1 to 100	51 (%)	1%
CbCr4	Compression rate of the color difference	1 to 100	70 (%)	1%
CbCr5	Compression rate of the color difference	1 to 100	90 (%)	1%

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	Data variation
Y1	Compression rate of the brightness	1 to 100	30 (%)	1%
Y2	Compression rate of the brightness	1 to 100	40 (%)	1%
Y3	Compression rate of the brightness	1 to 100	51 (%)	1%
Y4	Compression rate of the brightness	1 to 100	70 (%)	1%
Y5	Compression rate of the brightness	1 to 100	90 (%)	1%
CbCr1	Compression rate of the color difference	1 to 100	30 (%)	1%

Items	Contents	Setting range	Initial setting	Data variation
CbCr2	Compression rate of the color difference	1 to 100	40 (%)	1%
CbCr3	Compression rate of the color difference	1 to 100	51 (%)	1%
CbCr4	Compression rate of the color difference	1 to 100	70 (%)	1%
CbCr5	Compression rate of the color difference	1 to 100	90 (%)	1%

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	Data variation
Y1	Compression rate of the brightness	1 to 100	15 (%)	1%
Y2	Compression rate of the brightness	1 to 100	25 (%)	1%
Y3	Compression rate of the brightness	1 to 100	90 (%)	1%
CbCr1	Compression rate of the color difference	1 to 100	15 (%)	1%
CbCr2	Compression rate of the color difference	1 to 100	25 (%)	1%
CbCr3	Compression rate of the color difference	1 to 100	90 (%)	1%

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	Data variation
Y1	Compression rate of the brightness	1 to 100	15 (%)	1%
Y2	Compression rate of the brightness	1 to 100	75 (%)	1%
Y3	Compression rate of the brightness	1 to 100	90 (%)	1%
CbCr1	Compression rate of the color difference	1 to 100	15 (%)	1%
CbCr2	Compression rate of the color difference	1 to 100	75 (%)	1%
CbCr3	Compression rate of the color difference	1 to 100	90 (%)	1%

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	Data variation
Y1	Compression rate of the brightness	1 to 100	15 (%)	1%
Y2	Compression rate of the brightness	1 to 100	25 (%)	1%
Y3	Compression rate of the brightness	1 to 100	75 (%)	1%
CbCr1	Compression rate of the color difference	1 to 100	15 (%)	1%
CbCr2	Compression rate of the color difference	1 to 100	25 (%)	1%
CbCr3	Compression rate of the color difference	1 to 100	75 (%)	1%

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	Data variation
Y	Compression rate of the brightness	4 to 10	10%	1%
CbCr	Compression rate of the color difference	4 to 10	10%	1%

3 Press the [Start] key to set the setting value.

Note

Test copy of the original is available by pressing the [System Menu/Counter] key as interruption copy mode when executing this maintenance mode.

Press the [System Menu/Counter] key and the setting screen below is displayed for necessary settings.

(Source/Conveying speed/Duplex/Orientation/Color/Copies)

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 Operation)

Contents

Sets the cleaning operation interval and timing to enter the operation.

Setting

1 Press the [Start] key.

2 By using the [<] [>] keys or the numeric keys, change the setting value.

Settable in 100-sheet increments

Items	Contents	Setting range	Default Setting	Data variation
Cycle	Sets the LSU cleaning cycle.	0 to 50	10	100 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.

U486 Color/BW mode setting

(Message: Set ACS mode)

Contents

Sets the operation mode after detecting color data when printing color/BW mixed data.

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
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 .
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).
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.
Auto	Mode 1 to 3 is automatically selected depending on the 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: Mode2

2 Press the [Start] key to set the setting value.

Setting: Permission

1 Select the item to set.

Items	Contents
On	Permit: monochrome printing (three colors separated)
Off	Prohibit: color printing (four color process)

Default 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.

U520 TDRS setting

(Message: Set TDRS)

Contents

Checks/sets the TDRS

Purpose

Execute to check/set the TDRS

Method

1 Press the [Start] key.

2 Select [New ID(Reconfirm)].

Items	Contents
On/Off Config	Changes to the TDRS features setting dialog

3 Select the item to set.

Items	Contents
On	Enables TDRS
Off	Disables TDRS

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.

U600 Initialize: All Data

(Message: Initialize: 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

Setting: Country Code / Method: Execute

1 Press the [Start] key.

2 Select [Country Code].

3 By using the [<] [>] keys or the numeric keys, change the setting value.

Refer to the following destination code list.

No need to change the default value of [OEM Code].

Items	Contents
Country Code	Setting Destination code
OEM Code	Sets the OEM code
Execute	Executing data initialization

4 Select [Execute].

5 Press the [Start] key.

Data initialization starts. 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.

When initialization is successful, "Completed" is displayed for one second.

Where an irregular value is input, when it initializes, the following errors are displayed.

Kind of error
Unknown Country (When Country Code is unknown)
Unknown OEM (When OEM Code is unknown)
Unknown Country (When both are unknown)

Completion

1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

Country code list

Country code	Destination	Country code	Destination
000	Japan	181	North America[2*]
156	Asian nations[1*]	181	South America[3*]

Country code	Destination	Country code	Destination
254	Taiwan	253	European nations[4*]
097	Korea	009	Australia
038	China	126	New Zealand[5*]

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

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

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

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

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

U601 Initialize: Keep data

(Message: Init Keep Data)

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

Setting: Country Code / Method: Execute

1 Press the [Start] key.

2 Select [Country Code].

3 By using the [<] [>] keys or the numeric keys, change the setting value.

Refer to the Country code list. (See page6-161page)

No need to change the default value of [OEM Code].

Items	Contents
Country Code	Setting Country code
OEM Code	Sets the OEM code
Execute	Executing data initialization

4 Select [Execute].

5 Press the [Start] key.

Data initialization starts. 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.

When initialization is successful, "Completed" is displayed for one second.

Completion

1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

U603 User data 1

(Message: User Data 1)

Contents

Sets 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

4 Press the [Start] key to set the setting value.

[Completed] is displayed.

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

Sets 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 automaric FAX/telephoe 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	Description	Setting range	Initial setting	Data variation
Rings (F/T)	Number of fax/telephone rings	0 to 15	-	

If the default is set to "0", the main unit will start FAX reception without any ringing.

4 Press the [Start] key to set the setting value.

[Completed] is displayed.

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
Clear Com.Rec.	Delete data of communication history and protocol list of displayed port

3 Press the [Start] key.

When initialization is successful, "Completed" is displayed for one second.

Completion

1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

U610 System setting 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%)

Sets the maximum number of lines to be ignored if the received data volume exceeds the recording capacity when recording the data at 100% magnification.

If the number of excess lines is below the setting, those lines are ignored. If it is over the setting, they are recorded on the next page.

1 By using the [<] [>] keys or the numeric keys, change the setting value.

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 setting 2

(Message: System Setting 2)

Contents

Sets the number of adjustment lines for automatic reduction.

Purpose

Sets the number of adjustment lines for automatic reduction.

Method

1 Press the [Start] key.

2 Select the item to set.

Items	Contents
ADJ LINES	Sets 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

Sets 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.

[Completed] is displayed.

Setting: ADJ LINES(A4)

Sets the number of adjustment lines for automatic reduction.

1 By using the [<] [>] keys or the numeric keys, change the setting value.

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.

[Completed] is displayed.

Setting: ADJ LINES(LT)

Sets the number of adjustment lines for automatic reduction when letter size paper is set.

1 By using the [<] [>] keys or the numeric keys, change the setting value.

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.

[Completed] is displayed.

Completion

1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

U612 System setting 3

(Message: System Setting 3)

Contents

Sets 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	Selects auto reduction in the sub-scanning direction
Protocol List	Sets the automatic protocol list printing.

Setting: Auto Reduct

Sets 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.

[Completed] is displayed.

Setting: Protocol List

Sets 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.

[Completed] is displayed.

Completion

1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

U615 System Setting 6

(Message: System Setting 6)

Contents

Sets the record width capacity and process if 11 inch width paper is set for the inch specification machine

Method

1 Press the [Start] key.

2 Select the item to set.

The screen for setting is displayed.

Items	Contents
RX WIDTH FOR 11"	

Setting: RX WIDTH FOR 11"

1 Select the item to set.

Items	Contents
LEDGER	Transmits the A3 width to the destination machine
B4	Transmits the B4 width to the destination machine

Initial setting: LEDGER

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

Sets the signal detection method for remote switching.

Change the setting according to the type of telephone connected to the main unit.

Purpose

Sets 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	Setting the remote switching mode

3 Select the item to set.

Items	Contents
One	Sets the one-shot type detection
Cont	Sets 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 Setting

(Message: Set Comm)

Contents

Sets 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	Sets the auto redialing interval
Times	Sets 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
Sets the redialing interval	1 to 9 minutes	3 minutes	-

2 Press the [Start] key to set the setting value.

[Completed] is displayed.

Setting: Times

1 By using the [<] [>] keys or the numeric keys, change the setting value.

Contents	Setting range	Initial setting	Data variation
Sets the number of times of redialing	0 to 15 times	3 times	-

2 Press the [Start] key to set the setting value.

[Completed] is displayed.

Completion

1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

U630 Communication control procedures 1

(Message: Communication Control 1)

Contents

Sets the FAX communication.

Purpose

Sets 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	Sets the communication starting speed.
RX Speed	Sets the reception speed.
TX Echo	Sets the waiting period to prevent echo problems at the sender.
RX Echo	Sets the reception speed.

Setting: TX Speed

Sets the 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	Set to V.17 14400bps.
9600bps/V29	Set to V.29 9600bps.
4800bps/V27ter	Set to V.27 4800bps.
2400bps/V27ter	Set to V.27ter 2400bps.

Initial setting: 14400bps/V17

2 Press the [Start] key to set the setting value.

[Completed] is displayed.

Setting: RX Speed

Sets 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 (fallback only)

Initial setting: 14400bps

2 Press the [Start] key to set the setting value.

[Completed] is displayed.

Setting: TX Echo

Sets 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	Sends the DCS 500 ms after receiving a DIS.
300	Sends the DCS 300 ms after receiving a DIS.

Initial setting: 300

2 Press the [Start] key to set the setting value.

[Completed] is displayed.

Setting: RX Echo

Sets 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	Sends the NSF, CSI or DIS 500ms after receiving the CED.
75	Sends the NSF, CSI or DIS 75ms after receiving the CED.

Initial setting: 75

2 Press the [Start] key to set the setting value.

[Completed] is displayed.

Completion

1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

U631 Communication control procedures 2

(Message: Comm Cnt 2)

Contents

Sets the FAX communication.

Purpose

Sets the transmission and reception of ECM

Sets 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	Sets ECM transmission.
ECM RX	Sets ECM reception.
CED Freq	The frequency of CED is set up.

Setting: ECM TX

Set to OFF when the reduction of transmission costs is of higher priority than image quality.

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.

[Completed] is displayed.

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 (Internet Protocol) 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.

[Completed] is displayed.

Setting: CED Freq

Sets 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.

[Completed] is displayed.

Completion

1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

U632 Communication control procedures 3

(Message: Comm Cnt 3)

Contents

Sets 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	Sets the DIS signal to 4 bytes.
Num OF CNG(F/T)	Sets the number of the CNG detection in the automatic FAX/telephone switching mode.

Setting: DIS 4Byte

Sets 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.

[Completed] is displayed.

Setting: Num OF CNG(F/T)

Sets the CNG detection times in the automatic FAX/telephone switching mode.

1 Select the item to set.

Items	Contents
1Time	Detects CNG once.
2Time	Detects CNG twice.

Initial setting: 1Time (100V model)/2Time (Others)

2 Press the [Start] key to set the setting value.

[Completed] is displayed.

Completion

1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

U633 Communication control procedures 4

(Message: Comm Cnt 4)

Contents

Sets 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	Enables or disables the V.34 communication.
V.34-3429Hz	Sets the V.34 symbol speed (3429 Hz).
DIS 2Res	Sets the number of times of DIS signal reception.
RTN Check	Sets the reference for the RTN signal output.

Setting: V.34

Sets 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.

[Completed] is displayed.

Setting: V.34-3429Hz

Sets 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.

[Completed] is displayed.

Setting: DIS 2Res

Sets 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	Responds to the first signal.
Twice	Responds to the second signal.

Initial setting: Once

2 Press the [Start] key to set the setting value.

[Completed] is displayed.

Setting: RTN Check

Sets 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.

[Completed] is displayed.

Completion

1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

U634 Communication control procedures 5

(Message: Comm Cnt 5)

Contents

Sets 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	Sets the allowed error bytes when detecting the TCF signal	1 to 255	0

4 Press the [Start] key to set the setting value.

[Completed] is displayed.

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

Sets the detection time when one-shot detection is selected for remote switching.

Sets the detection time when continuous detection is selected for remote switching.

Purpose

Sets 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)	Sets the one-shot detection time for remote switching.	0 to 255	7 1 (New Zealand)
Time (Cont)	Sets the continuous detection time for remote switching.	0 to 255	80

4 Press the [Start] key to set the setting value.

[Completed] is displayed.

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

Sets 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.

2 Select the item to set.

Items	Contents
T0 TIME OUT	Sets the T0 time-out time.
T1 TIME OUT	Sets the T1 time-out time.
T2 TIME OUT	Sets the T2 time-out time.
Ta TIME OUT	Sets the Ta time-out time.
Tb1 TIME OUT	Sets the Tb1 time-out time.
Tb2 TIME OUT	Sets the Tb2 time-out time.
Tc TIME OUT	Sets the Tc time-out time.
Td TIME OUT	Sets the Td time-out time.

Setting: T0 Time Out

Sets the time before detecting a CED or DIS signal after a dialing signal is sent.

Sets to prevent disconnection of a line that occurs depending on the quality of the exchange, or when the destination unit sets the auto switching function.

1 By using the [<] [>] keys or the numeric keys, change the setting value.

Contents	Setting range	Initial setting
Sets the T0 time-out time.	30 to 90 (s)	56 58 (100V model)

2 Press the [Start] key to set the setting value.

[Completed] is displayed.

Setting: Td Time Out

Sets the time before receiving the correct signal after call reception.

This setting is usually unnecessary.

1 By using the [<] [>] keys or the numeric keys, change the setting value.

Contents	Setting range	Initial setting
Sets the T1 time-out time.	30 to 90 (s)	36 38 (100V model)

2 Press the [Start] key to set the setting value.

[Completed] is displayed.

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
Sets the T2 time-out time.	1 to 255	69

2 Press the [Start] key to set the setting value.

[Completed] is displayed.

Setting: Ta Time Out

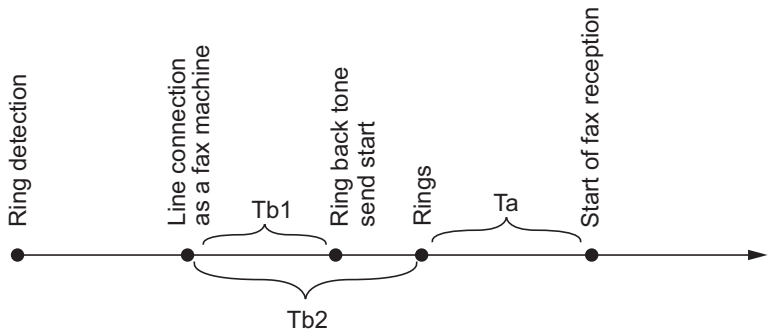
Sets the time to start ringing for an operator through the external telephone after receiving a call in the FAX/telephone automatic switching mode. (See figure 1-3-18). If either receiving a FAX signal within this time or passing this time, the mode automatically switches to the FAX reception mode. Execute 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
Sets the Ta time-out time.	1 to 255 s	30

2 Press the [Start] key to set the setting value.

[Completed] is displayed.



Setting: Tb1 Time Out

Sets 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
Sets the Tb1 time-out time.	1 to 255	20

2 Press the [Start] key to set the setting value.

[Completed] is displayed.

Setting: Tb2 Time Out

Sets 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
Sets the Tb2 time-out time.	1 to 255	80

2 Press the [Start] key to set the setting value.

[Completed] is displayed.

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
Sets the Tc time-out time.	1 to 255 s	60

2 Press the [Start] key to set the setting value.

[Completed] is displayed.

Setting: Td Time Out

Sets 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
Sets the Td time-out time.	1 to 255	6 30 (100V model) 9 (120V model)

2 Press the [Start] key to set the setting value.

[Completed] is displayed.

Completion

1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

U650 Modem 1

(Message: Modem 1)

Contents

Sets the G3 cable equalizer. Sets 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	Sets the G3 transmission cable equalizer.
Reg G3 RX Eqr	Sets the G3 reception cable equalizer.
RX Mdm Level	Sets the modem detection level.

Setting: Reg G3 TX Eqr

1 Select [0dB], [4dB], [8dB] or [12dB].

Initial setting: 0dB

2 Press the [Start] key to set the setting value.

[Completed] is displayed.

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.

[Completed] is displayed.

Setting: RX Mdm Level

1 Select [-33dBm], [-38dBm], [-43dBm] or [-48dBm].

Initial setting: -43dBm

2 Press the [Start] key to set the setting value.

[Completed] is displayed.

Completion

1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

U651 Modem 2

(Message: Modem 2)

Contents

Sets the modem output level.

Purpose

Adjust to make the equalizer compatible with the line characteristics when installing the main unit

Setting

1 Press the [Start] key.

2 Select the item to set.

3 By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Contents	Setting range	Initial setting
Sgl LVL Modem	Sets the modem output level	-15 to 0	11 10 (100V model) 12 (Australia)
DTMF LEV (Cent)	DTMF output level (center value)	-15.0 to 0.0	-8 -9 (100V model) -7 (Australia) -6 (120V model)
DTMF LEV (Diff)	Sets 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.

[Completed] is displayed.

Completion

1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

U660 Ring setting

(Message: Set Calls)

Contents

Sets 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	Sets the PSTN dial tone detection.
Busy Tone	Sets the busy tone detection.
PBX Setting	Setting the PBX connection
DC Loop	Sets 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.

[Completed] is displayed.

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

2 Press the [Start] key to set the setting value.

[Completed] is displayed.

Setting: Busy Tone

Sets whether the line is disconnected immediately after a busy tone is detected, or the busy tone is not detected and the line remains connected until T0 time-out time, 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	Detects 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.

[Completed] is displayed.

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.

[Completed] is displayed.

Setting: DC Loop

Sets if the loop current is detected before dialing.

1 Select the item to set.

Items	Contents
On	Detects the loop current before dialing.
Off	Detects the loop current before dialing.

Initial setting: On

2 Press the [Start] key to set the setting value.

[Completed] is displayed.

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	Prints the list of software switches, local telephone number, confidential boxes, firmware versions and other information.
Action List	Prints the list of the error logs and communication lines.
Self Sts Report	Prints the list of FAX communication settings only in the maintenance mode (self-status report).
Protocol List	Outputs a list of communication procedures.
Error List	Output the error list.
Addr List(No.)	Outputs address book in the IDs order
Addr List(Idx)	Outputs address book in the order of names.
One-touch List	Outputs a list of one-touch.
Group List	Outputs the group list.

Completion

1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

U695 FAX function customization

(Message: Custom 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.

[Completed] is displayed.

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.

[Completed] is displayed.

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

Sets 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.	Specifies 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.

[Completed] is displayed.

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
	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	Ringback tone ON/OFF cycle for the automatic FAX/ telephone switching

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
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

Displays and clears 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.

Displays the counts by paper source.

Items	Contents
MPT	Displays/clears the MP tray feed counter
Cassette 1	Displays/clears Cassette 1 count
Cassette2	Displays Cassette 2 count
Cassette3	Displays Cassette 3 count
Duplex	Displays/clears the duplex unit count

2 Select the counter to clear.

Unable to clear [Cassette 2] and [Cassette 3]

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

Displays/clears 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 Select [Clear] to clear the jam counts.

Individual counters cannot be cleared.

3 Press the [Start] key to clear the counter value.

Method: Total Cnt

1 Select [Total Cnt].

Accumulate number of occurrence is displayed by jam code.

2 Change the screen using the [∧] [∨] 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

Displays/clears the number of times of service call errors by service call error type.

Purpose

Executes 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	Displays/clears the service call counter.
Total Cnt	Displays accumulate service call error counts.

Method: Cnt

1 Select [Cnt].

Number of occurrence is displayed by service call error.

Code of no occurrence is not indicated.

2 Select [Clear] to clear the service call error counter.

Individual counters cannot be cleared.

3 Press the [Start] key to clear the counter value.

Method: Total Cnt

1 Select [Total Cnt].

Accumulate number of occurrence is displayed by service call error.

Unable to clear the accumulated service call error counter values.

Completion

1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

U905 Optional counter

(Message: Option Cnt)

Contents

Displays the counter values of the document processor and finisher.

Purpose

Execute to check the usage status of the document processor and finisher.

Method

1 Press the [Start] key.

2 Select the device to check.

Switched to the counter screen.

Items	Contents
DP	Displays the document processor count.
DF *1	Displays the document finisher count.

*1: DF installed machine

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	The document finisher counter is displayed.
Staple	Displays the staple counter.

Completion

1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

U908 Total counter

(Message: Total Counter)

Contents

Displays the total counter.

Purpose

Displays the total counter for check.

Method

1 Press the [Start] key.

Displays 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

Clears the accumulated data for the print coverage per A4 size paper and its period of time (as shown on the service status page).

Purpose

Clears data as required at the time such as maintenance

Method

1 Press the [Start] key.

2 Select [Execute].

Items	Contents
Execute	Clears 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 counts to confirm when replacing the maintenance parts.

Purpose

Displays the counts to confirm when replacing the maintenance parts .

Refer

1 Press the [Start] key.

Displays the paper feed counts by paper size.

Items	Contents
A3 *1	Displays A3 feed counts
B4 *1	Displays B4 feed counts
A4 *1	Displays A4 feed counts
B5 *1	Displays B5 feed counts
A5 *1	Displays A5 feed counts
Folio *1	Displays Folio feed counts
Ledger *2	Displays Ledger feed counts
Legal *2	Displays Legal feed counts
Letter *2	Displays Letter feed counts
Statement *2	Displays Statement feed counts
ETC	Displays Other paper feed counts.

*1: *1: metric specification, *2: inch specification

Completion

1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

U917 Read/Write 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 Press the [Start] key.

5 Select [Export] or [Import].

The screen for setting is displayed.

Items	Contents
Import	Imports 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.

Items	Contents	Depending data*
Address Book	Address book information	-
Job Account	Job accounting information	-
One Touch	One-touch key information	Address book information
User	User management information	Job accounting information
Document Box	Document box information	Job accounting, User information
Shortcut	Short-cut information	Job accounting, User, Document Box information
Fax Forward	FAX forward information	Job accounting, User, Document Box information
System	System setting information	-
Network	Network setting information	-
Job Setting	Job setting information	-
Printer	Printer setting information	-
Fax Setting	FAX setting information	-
Program	Program information	Information of Address book, Job accounting, User management, Document box, FAX transfer and FAX setting
Panel Setting	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 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.

Error codes

Codes	Contents
e0001	Internal processing error
e0002	File access error (Inability to access the USB memory, etc.)
e0003	The file necessary for Import does not exist.
e0004	The file incompatible with Import is directed.
e0005	The file is broken (Unzipping the file to import failed).
e0100 to eFFFF	Data processing error when executing Import/Export.

8 [Finish] appears after normal completion.

9 When selecting [Import], turn the power switch off then on, after completing writing. 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.

U920 Billing counter

(Message: Chg Cnt)

Contents

Displays the billing count.

Purpose

Execute to check the current billing counts

Method

1 Press the [Start] key.

2 Select the item to display.

The charge counts are displayed.

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)
B/W Copy	B/W copy count is displayed.
Col Prn H	Display color print counts (Coverage: High)
Col Prn M	Display color print counts (Coverage: Middle)
Col Prn L	Display 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

Clears all charge counts and machine life counts.

Supplement

The total charge counts and the machine life counts can be cleared only once if all count values are 1000 or less.

Method

1 Press the [Start] key.

2 Select [Execute].

Items	Contents
Execute	Initializes the billing count and machine life count.

3 Press the [Start] key.

Clears 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	Displays the machine life count
Color Cnt	Displays the machine life count (color)

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

Displays and clears the current main charger roller counts.

Purpose

To verify the main charger roller counts after replacing. Also, clear the counts after replacement.

Setting

1 Press the [Start] key.

The main charge roller counter for each color is displayed.

2 Select the item to set.

3 By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Contents
C	The current main charger roller count for C is displayed.
M	The current main charger roller count for M is displayed.
Y	The current main charger roller count for Y is displayed.
K	The current main charger roller count for K is displayed.
Clear	Clearing the main charger roller counts

4 Press the [Start] key to set the setting value.

Method: Clear

1 Select [Clear].

All counts is cleared.

2 Press the [Start] key to set the cleared value.

Completion

Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

U935 Relay PWB Maintenance

(Message: Mnt Relay Board)

Contents

Set the mode when a failure occurs.

Purpose

Set when the relay board is faulty.

Setting

1 Press the [Start] key.

2 By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Description	Setting range	Initial setting	Data variation
Mode	Malfunction setting mode	0 (Disabled) 1 (Enabled)	0	

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.

U942 DP loop amount setting

(Message: Adj DP Loop Amt)

Contents

Adjust the paper loop amount when using the document processor.

Purpose

Execute when original no-feed jam, skew or creases on the original appears.

Setting

1 Press the [Start] key.

2 Press the [System Menu/Counter] key.

Note

Press the [System Menu/Counter] key and the setting screen below is displayed for necessary settings.
(Source/Conveying speed/Duplex/Orientation/Color/Copies)

3 Place an original on the DP and press the [Start] key to make a test copy.

4 Press the [System Menu] key.

5 Select the item to adjust.

6 By using the [<] [>] keys or the numeric keys, change the setting value.

Items	Description	Setting range	Initial setting	Data variation
Front	Single-side original loop amount	-31 to 31	0	0.18mm
Back	Double-side original loop amount	-31 to 31	0	0.18mm

When the setting value is increased, the paper loop amount increase, and it decreases when the setting value is decreased.
Increase the set value if no feed jam or skew feed occurs and reduce the set value if creases appear on the original.

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.

U964 Billing counter

(Message:)

Contents

Transfer the log files save in the HDD to a USB memory.

Transfer the log and screenshot at the log retrieval.

Purpose

Transfer the log file saved in the HDD 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 U964.

5 Select [Execute].

Items	Contents
Execute	Transfer the log file.

6 Press the [Start] key.

Starts transferring the log files saved in the HDD 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.

Error codes

Codes	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	HDD 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 [Execute].

Items	Contents
Execute	Stores data in a USB memory.

3 Press the [Start] key.

When the operation is completed abnormally, an error code is displayed.

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

Displays the developer unit number.

Purpose

Execute to check the developer unit number.

Refer

1 Press the [Start] key.

Displays the developer unit number.

Items	Contents
C	Displays the Cyan developer unit number.
M	Displays the Magenta developer unit number.
Y	Indicates the Yellow developer unit number.
K	Displays the Black developer unit number.

Completion

1 Press the [Stop] key.

The screen for selecting a maintenance item No. is displayed.

U985 Developer unit history

(Message: Dev History)

Contents

Displays the machine serial number and developer counter history.

Purpose

Displays the machine serial number and developer count to check.

Method

1 Press the [Start] key.

2 Select the developer unit to refer to.

Items	Contents
C	Displays the Cyan developer unit history.
M	Displays the Magenta developer unit history.
Y	Indicates the Yellow developer unit history.
K	Displays the Black developer unit history.

Displays 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: Scn Cnt)

Contents

Displays the scanner operation counts.

Purpose

Display the number of scanner operation to check the usage status.

Method

1 Press the [Start] key.

Current number of operation is displayed.

Items	Contents
Copy Scan	Displays times of copy and scan operations.
Fax Scan	Displays times of FAX scan operations.
Other Scan	Displays times of other scan operations.

Completion

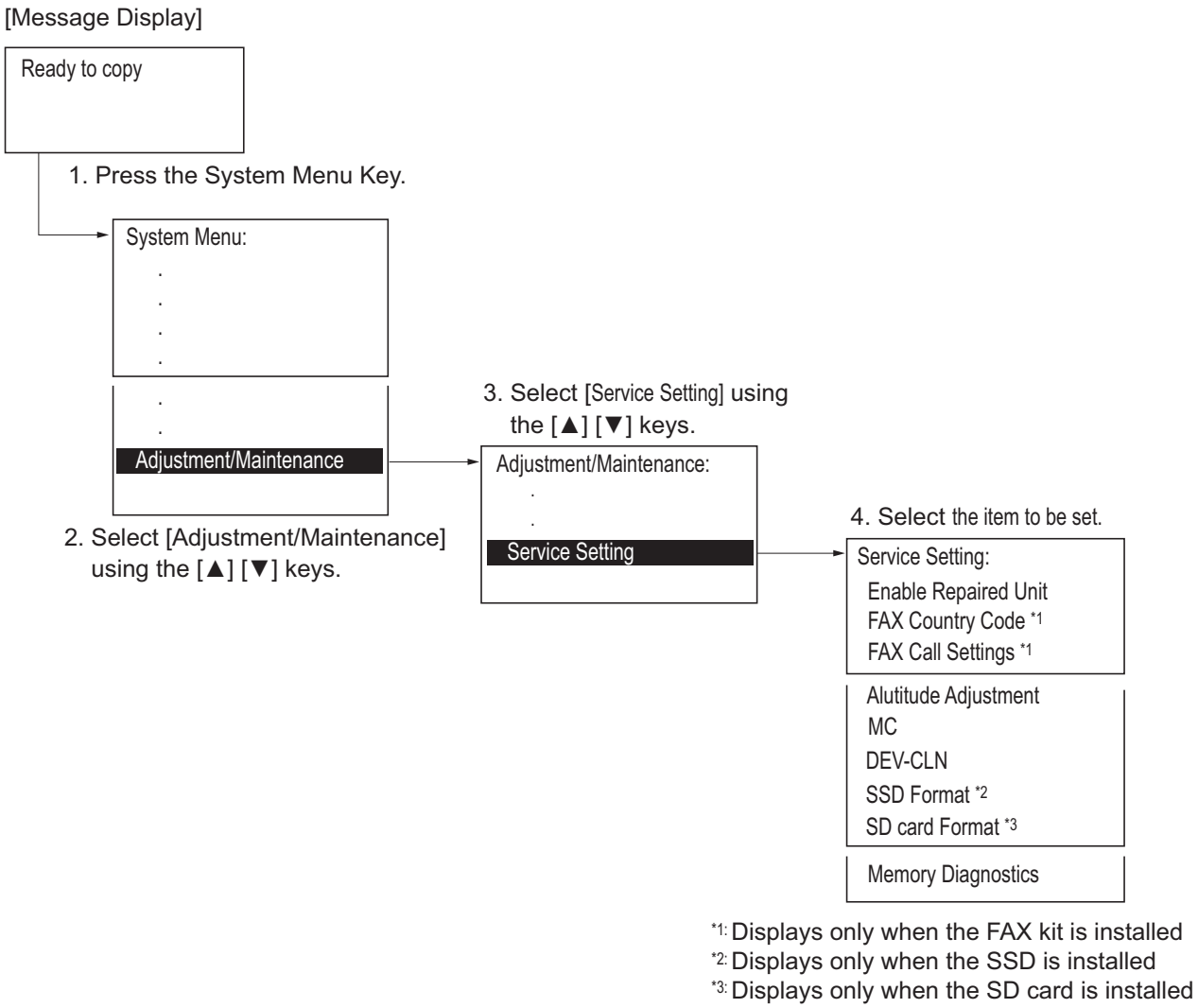
1 Press the [Stop] key.

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) Service mode execution method



(2) Service mode table

Items	Contents	Page
Clearing the partial operation	Retrieve the control of the defect unit.	6-219page
Test page	Output test page	6-219page
Developer unit	Set Toner Install mode when replacing the developer unit.	6-219page
FAX country code	Initializes all data and image memory.	6-220page
FAX calling setting	Set up for connection	6-221page
Altitude Adjustment	Sets the altitude adjustment mode	6-222page
DEV-CLN	Setting the developer unit cleaning.	6-222page
Formatting the SSD	Format the SSD	6-222page
Formatting the SD card	Format the SD card	6-223page
Memory diagnostics	Memory diagnostics is executed at start-up to check if read/write is executed properly.	6-223page

Resetting the partial operation

Contents

When replacing the defect unit, the system control turns to normal and use of the unit is enabled.

Appears on the menu only at the partial operation status.

Purpose

Execute when replacing the defect unit.

Method

1 Enter [Service Settings] menu.

2 Press [Λ] or [V] key and select [Clear partial operation].

3 Press the [Start] key.

Completion

Power is restarted after execution.

Test page

Contents

Output the test page drawn with the half tone of 16 gradations.

Purpose

When the image failure occurs, output the test page in order to judge if it is a cause of the engine or the scanner side.

Method

1 Enter [Service Settings] menu.

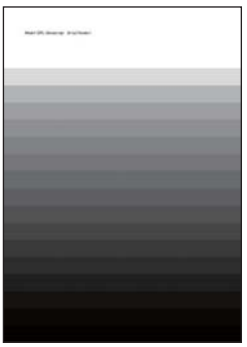
2 By pressing [Λ] [V] key, select [Test Page].

3 Press the [Start] key.

4 Press [Execute] key.

Test page is printed.

Glay scale
(16 levels)



Completion

Press the [Start] key.

Developer unit

Contents

Set Toner Install mode when replacing the developer unit.

Purpose

Execute when replacing the developer unit.

Method

1 Enter [Service Settings] menu.

2 Press [Λ] or [V] key and select [Developer unit].

3 Press [Execute] key.

Completion

1 After execution, power is automatically restarted and Toner Install operation is executed.

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

Initialize the FAX PWB

Method

1 Enter [Service Settings] menu.

2 By pressing [Λ] [V] key, select [FAX country code]

3 Press the [Start] key.

4 Enter the Country code using the numeric keys.

5 Press the [Start] key to set the setting value.

Data initialization starts.

Country code list

Country code	Destination	Country code	Destination
000	Japan	181	North America[2*]
156	Asian nations[1*]	181	South America[3*]
254	Taiwan	253	European nations[4*]
097	Korea	009	Australia
038	China	126	New Zealand[5*]

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

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

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

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

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

Completion

1 Press the [Stop] key.

FAX calling 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 [Service Settings] menu.

2 Press [Λ] or [V] key and select [FAX calling setting].

3 Press the [Start] key.

Items	Contents
PBX selection	Setting the PBX/PSTN connection
PBX setting	Setting the PBX connection
PSTN connection number setting	PSTN access code setting

Setting: PBX selection

1 By pressing [Λ] [V] key, select [PBX selection]

2 Press the [Start] key.

3 Press [Λ] [V] key and select [PBX] or [PSTN].

4 Press the [Start] key to set the setting value.

Setting: PBX Setting

1 Press [Λ] [V] key and select [PBX settings].

2 Press the [Start] key.

3 By pressing [Λ] [V] key, select [Loop] or [Flash].

4 Press the [Start] key to set the setting value.

Setting: Access code Setting

1 Press [Λ] or [V] key and select [PSTN connection number setting].

2 Press the [Start] key.

3 Press [Λ] or [V] key and input the access code. (0 to 9, 00 to 99)

4 Press the [Start] key to set the setting value.

Completion

1 Press the [Stop] key.

Altitude Adjustment

Contents

Set Altitude Adjustment mode.

Purpose

Execute if the print quality is low at the usage environment of 1001 meter or more altitude.

Method

1 Enter [Service Settings] menu.

2 By pressing [Λ] [V] key, select [Altitude Adjustment].

3 Press the [Start] key.

4 By pressing [Λ] [V] key, select the altitude range of [Normal], [1001 to 2000m], [2001 to 3000m] or [3001 to 3500m].

5 Press the [Start] key to set the setting value.

Completion

1 Press the [Stop] key.

DEV-CLN

Contents

Execute toner discharging and replenishing repeatedly to cast the deteriorated toner out of the developer unit.

Purpose

The deterioration of image due to the low development density and blurring will be reduced.

Method

1 Enter [Service Settings] menu.

2 By pressing [Λ] [V] key, select [DEV-CLN].

3 Press the [Start] key.

Completion

1 Press the [Stop] key.

Formatting the SSD

Contents

Initialize the HDD.

Purpose

Initialize the HDD when replacing the HDD in the field.

Important

The following settings are initialized if the HDD is initialized.

System Menu (User Management, Job Accounting, Address Book, One Touch Key, Document Box, etc.),Shortcut key, Panel program.

If executing full-format, the following installed software is deleted.

Optional language, HyPAS application (FMU, etc.), OCR dictionary software, color table.

Method

1 Enter [Service Settings] menu.

2 By pressing [Λ] [V] key, select [Format SSD]

3 Press the [Yes] key to execute the initialization.

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.

Formatting the SD card

Contents

Initialize the SD card.

Purpose

Executed when starting use of the SD card or when necessary.

Method

1 Enter [Service Settings] menu.

2 By pressing [Λ] [V] key, select [Format SD Card]

3 Press the [Yes] key to execute the initialization.

Completion

1 Press the [Stop] key.

Memory diagnostics

Contents

Memory diagnostics is executed at start-up to check if read/write is executed properly.

Purpose

A memory device defect is considered as one of factors of the case where the F-code error, lock-up or abnormal image occurs and is not cleared.

Check the memory failure

Method

1 Enter [Service Settings] menu.

2 By pressing [Λ] [V] key, select [Memory diagnostics]

3 Press the [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 7-2 or 7-11).
(LED lamp for originals on the contact glass→CCD]*2 or [CIS]*1 failure at scanning factor)

Isolate with the original scanning position.

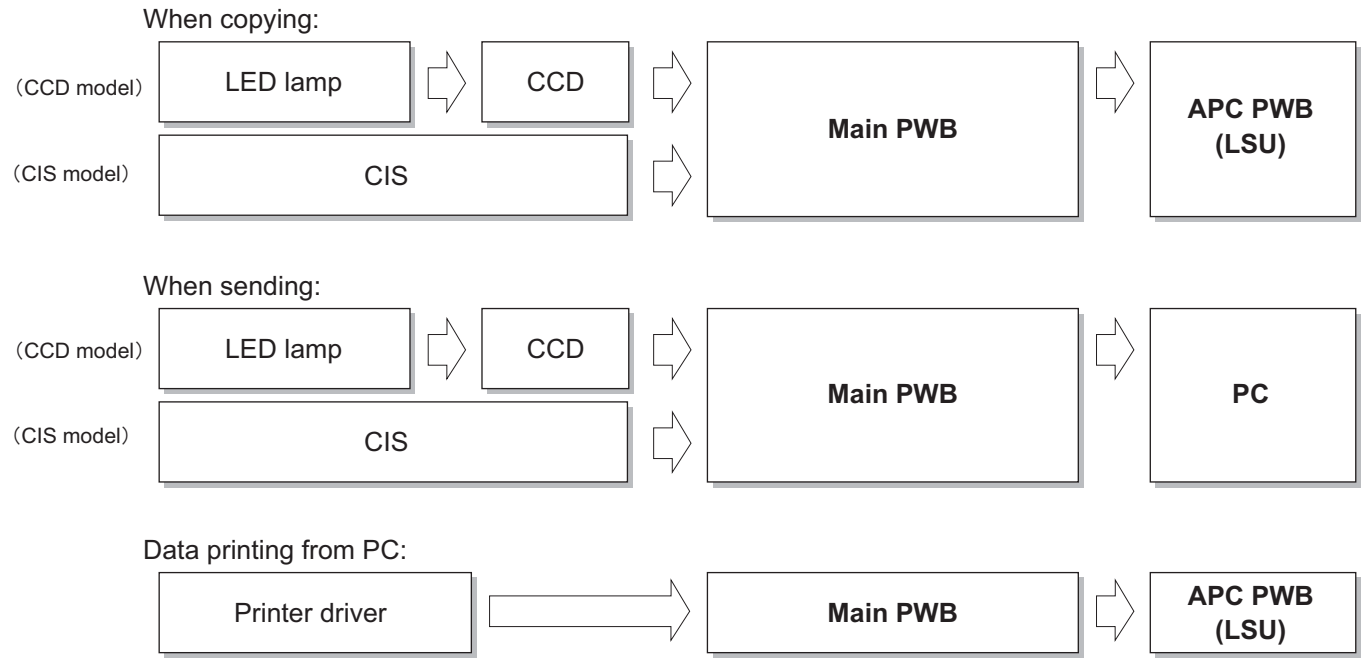
a. DP simplex (Scan by the main unit [CCD]*2 or [CIS]*1)

b. On the contact glass (Scan by the main unit [CCD]*2 or [CIS]*1)

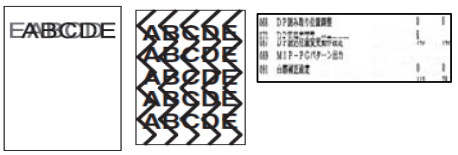
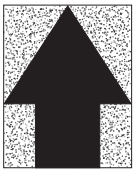
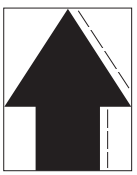
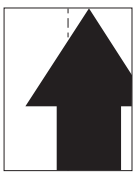
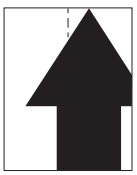
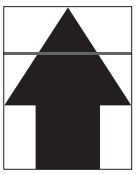
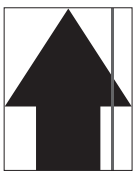
2 Refer to image failure with engine factor (See page 7-21 or 7-30).
(Main charge --> Drum --> LSU --> Developer --> Tansfer image formation process failure)

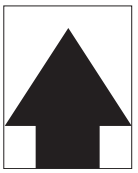
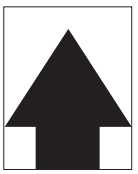
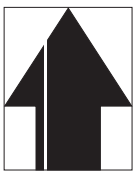
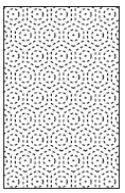
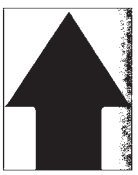
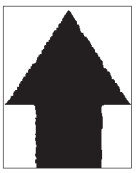
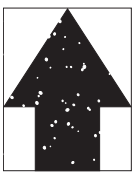
*1:CIS model , *2:CCD model

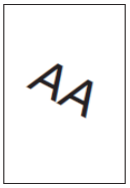
Image data flow



(2) Scanner Factors (when scanning from DP)

No.	Contents	Image sample
(2-1)	Abnormal image (7-4page)	
(2-2)	Background image is foggy. (7-4page)	
(2-3)	Black dots (7-5page)	
(2-4)	Blurred characters (7-5page)	
(2-5)	Mismatch between the center of the original and the center of the copy image (Front side) (7-6page)	
(2-6)	Mismatch between the center of the original and the center of the copy image (Back side) (7-6page)	
(2-7)	Horizontal black streaks (7-6page)	
(2-8)	Vertical streaks or bands (7-7page)	

No.	Contents	Image sample
(2-9)	Regular difference of the leading edge on the original image and copy image (Front side) (7-7page)	
(2-10)	Regular difference of the leading edge on the original image and copy image (Back side) (7-8page)	
(2-11)	Vertical streaks, band (white) (7-8page)	
(2-12)	Moiré (7-8page)	
(2-13)	Missing entire image (White / Black) (7-9page)	
(2-14)	Image is dark partly or light (7-9page)	
(2-15)	Blurred image (7-10page)	
(2-16)	Image is missing partly (7-10page)	

No.	Contents	Image sample
(2-17)	Skewed image (7-11page)	
(2-18)	Entire image is light (7-11page)	

Content of Scanner Factors (when scanning from DP)

(2-1)Abnormal image

(When scanning from the DP)

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	FFC is not connected properly. Or it is faulty.	Clean the FFC terminals of the following FFC and reconnect them. If the FFC terminal is deformed or broken, replace the FFC. • CCD model: CCD PWB - Main PWB • CIS model: CIS PWB - Main PWB	
2	(CCD model) Replacing the lens unit	The CCD PWB is faulty.	Replace the lens unit.	
3	(CIS model) Replacing the lamp unit	The CIS PWB is faulty	Replace the lamp unit.	
4	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

(2-2)Background image is foggy.

(When scanning from the DP)

Step	Check description	Assumed cause	Measures	Reference
1	Changing the setting	The density adjustment is not set	Set [Background Density] to [Auto] at [System Menu/Counter] > [Common Settings] > [Function Defaults]	
2	Checking the original	The original is raised at scanning.	Correct the wavy original and set it	
3	Cleaning the shading plate	The shading plate is dirty.	Clean the shading plate at the backside of the contact glass.	
4	Executing U411	The image is not adjusted.	When the same phenomenon occurs at the table scanning too, execute U411 [Table(chartA)].	
5	Checking the home position sensor	The home position sensor is not properly attached.	Reattach the home position sensor.	
6	Checking the connection	FFC is not connected properly. Or it is faulty.	Clean the FFC terminals of the following FFC and reconnect them. If the FFC terminal is deformed or broken, replace the FFC. • CCD model: CCD PWB - Main PWB • CIS model: CIS PWB - Main PWB	

Step	Check description	Assumed cause	Measures	Reference
7	Checking the lamp unit	The lamp unit is not attached properly.	Reattach the lamp unit.	
8	Checking the DP slit glass	The DP slit glass is dirty or not properly attached.	Clean the DP slit glass or reattach it.	
9	(CCD model) Replacing the lens unit	The CCD PWB is faulty.	Replace the lens unit.	
10	Replacing the lamp unit	The LED drive PWB (CCD model) or CIS PWB (CIS model) is faulty.	Replace the lamp unit.	
11	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

(2-3)Black dots

(When scanning from the DP)

Step	Check description	Assumed cause	Measures	Reference
1	Replacing the original	The original is dirty.	Check the black dots on the original and replace it if necessary.	
2	Cleaning the DP slit glass	The DP slit glass is dirty.	Clean the DP slit glass.	
3	Checking the connection	FFC is not connected properly. Or it is faulty.	Clean the FFC terminals of the following FFC and reconnect them. If the FFC terminal is deformed or broken, replace the FFC. • CCD model: CCD PWB - Main PWB • CIS model: CIS PWB - Main PWB	
4	(CCD model) Replacing the lens unit	The CCD PWB is faulty.	Replace the lens unit.	
5	(CIS model) Replacing the lamp unit	The CIS PWB is faulty	Replace the lamp unit.	
6	Checking the main PWB	The main PWB is faulty.	Replace the main PWB.	

(2-4)Blurred characters

(When scanning from the DP)

Step	Check description	Assumed cause	Measures	Reference
1	Checking the original	The originals out of specification are used. (They are thick, thin, or smooth.)	Ask a user to use the specified paper.	
2	Checking 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 the bushing.	
4	Checking the DP conveying pulley and the pressure spring	The original conveying pulley does not rotate smoothly.	Reattach the DP conveying pulley and the pressure spring.	
5	Checking the DP drive parts	The DP drive parts are not properly attached.	Reattach the DP drive parts.	
6	Checking the original pick-up guide	The original pick-up guide does not operate properly.	Reattach the original pick-up guide.	
7	Replacing the DP scanning guide	The DP scanning guide is deformed.	Replace the DP scanning guide.	
8	Checking the DP	The document processor is not properly installed in the main unit.	Check the positioning of the document processor and tighten the screws again.	

Step	Check description	Assumed cause	Measures	Reference
9	Replacing the DP hinges	DP hinge is faulty. (The DP hinge does not operate smoothly in the up and down direction, and the right and left sides of the DP are distorted because the DP can not hold the opened condition.)	Replace the DP hinges.	

(2-5)Mismatch between the center of the original and the center of the copy image (Front side)

(When scanning the front side through DP)

Step	Check description	Assumed cause	Measures	Reference
1	Checking 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 U072 [Front].	
3	Executing U411	The auto scanner adjustment when DP scanning is not executed.	Execute U411 [DP FU(Chart B)].	

(2-6)Mismatch between the center of the original and the center of the copy image (Back side)

(When scanning the back side through DP)

Step	Check description	Assumed cause	Measures	Reference
1	Checking 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 U072 [Back].	

(2-7)Horizontal black streaks

(When scanning from the DP)

Step	Check description	Assumed cause	Measures	Reference
1	Replacing the original	The original is dirty.	Replace the original.	
2	Cleaning the DP slit glass	The DP slit glass is dirty.	Clean the DP slit glass.	
3	Checking the connection	FFC is not connected properly. Or it is faulty.	Clean the FFC terminals of the following FFC and reconnect them. If the FFC terminal is deformed or broken, replace the FFC. • CCD model: CCD PWB - Main PWB • CIS model: CIS PWB - Main PWB	
4	(CCD model) Replacing the lens unit	The CCD PWB is faulty.	Replace the lens unit.	
5	(CIS model) Replacing the lamp unit	The CIS PWB is faulty	Replace the lamp unit.	
6	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

(2-8)Vertical streaks or bands

(When scanning from the DP)

Step	Check description	Assumed cause	Measures	Reference
1	Cleaning the DP slit glass and the DP original conveying guide	The DP slit glass is dirty.	Clean the DP slit glass and the DP conveying guide.	
2	Cleaning the shading plate	The shading plate is dirty.	Clean the shading plate at the backside of the contact glass.	
3	Cleaning the mirror	The mirror is dirty.	Clean the optical mirror	
4	Checking the lamp unit	The dust is adhered on the lamp unit.	Remove dust inside the laser path of the lamp unit.	
5	(CCD model) Cleaning the CCD PWB	Dust is on the CCD PWB.	Clean the CCD PWB using an air-blower.	
6	Executing U063	The image scanning position is incorrect.	Execute U063 to change the scanner shading position.	
7	Replacing the original	The original is dirty.	Replace the original.	
8	Executing U068	The starting position for scanning an original on the DP is incorrect.	Adjust U068 [DP Read].	
9	Executing U072	The center line settings are incorrect. (The streaks or bands appear out of the original image.)	Adjust U072 [Front].	
10	Executing U411	The auto scanner adjustment when DP scanning is not executed.	Execute U411 [DP FU(Chart B)].	
11	Checking the connection	FFC is not connected properly. Or it is faulty.	Clean the FFC terminals of the following FFC and reconnect them. If the FFC terminal is deformed or broken, replace the FFC. • CCD model: CCD PWB - Main PWB • CIS model: CIS PWB - Main PWB	
12	(CCD model) Replacing the lens unit	The CCD PWB is faulty.	Replace the lens unit.	
13	(CIS model) Replacing the lamp unit	The CIS PWB is faulty	Replace the lamp unit.	
14	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

(2-9)Regular difference of the leading edge on the original image and copy image (Front side)

(When scanning from 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 [Front Head] at U071.	
2	Executing U411	The starting position for scanning an original on the DP is incorrect.	Execute U411 [DP FU(Chart B)].	
3	Cleaning the DP conveying roller and the bushings	The DP conveying roller or the bushing is dirty.	Clean the DP conveying roller and the bushing.	
4	Replacing the DP conveying roller	The DP conveying roller is worn down.	Replace the DP conveying roller.	

Step	Check description	Assumed cause	Measures	Reference
5	Applying the grease	The DP drive motor rotates irregularly and the excessive load is applied to the DP drive gear.	Apply the grease to the drive gear of the DP drive motor. (EM-50LP: Part number (7BG010009H))	
6	Replacing the DP drive motor	The DP drive motor rotates irregularly due to the fault.	Reattach the DP drive motor and reconnect the connector. If not repaired, replace it.	

(2-10)Regular difference of the leading edge on the original image and copy image (Back side)

(When scanning from 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 [Back Head] at U071.	

(2-11)Vertical streaks, band (white)

(When scanning from the DP)

Step	Check description	Assumed cause	Measures	Reference
1	Replacing the original	The original is dirty.	Replace the original.	
2	Cleaning the mirror	The mirror is dirty.	Clean the optical mirror	
3	Cleaning the shading plate	The shading plate is dirty.	Clean the shading plate at the backside of the contact glass.	
4	Checking the lamp unit	The dust is adhered on the lamp unit.	Remove dust inside the laser path of the lamp unit.	
5	Executing U063	The image scanning position is incorrect.	Execute U063 to change the scanner shading position.	
6	Checking the connection	FFC is not connected properly. Or it is faulty.	Clean the FFC terminals of the following FFC and reconnect them. If the FFC terminal is deformed or broken, replace the FFC. • CCD model: CCD PWB - Main PWB • CIS model: CIS PWB - Main PWB	
7	(CCD model) Replacing the lens unit	The CCD PWB is faulty.	Replace the lens unit.	
8	(CIS model) Replacing the lamp unit	The CIS PWB is faulty	Replace the lamp unit.	
9	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

(2-12)Moiré

(When scanning from the DP)

Step	Check description	Assumed cause	Measures	Reference
1	Changing the setting	The original image quality is not set properly. (moiré changes depending on the image quality.)	Set [Original Image] at [System Menu/ Counter] > [Common Settings] > [Function Defaults]	
2	Reloading the original	The original is not set properly. (moiré appears in the original scanning direction.)	Rotate the originals in 180 degrees and reload them.	

(2-13)Missing entire image (White / Black)

(When scanning from the DP)

Step	Check description	Assumed cause	Measures	Reference
1	Checking the original	The originals were set upside down.	Reset the original to correct the front and back direction.	
2	Executing U068	The starting position for scanning an original on the DP is incorrect.	Adjust U068 [DP Read].	
3	Checking the home position sensor	The home position sensor is not properly attached.	Reattach the home position sensor.	
4	Checking the connection	FFC is not connected properly. Or it is faulty.	Clean the FFC terminals of the following FFC and reconnect them. If the FFC terminal is deformed or broken, replace the FFC. • CCD model: CCD PWB - Main PWB • CIS model: CIS PWB - Main PWB	
5	Checking the scanner drive belt	The scanner drive belt comes off.	Reattach the scanner drive belt.	
6	(CCD model) Replacing the lens unit	The CCD PWB is faulty.	Replace the lens unit.	
7	(CIS model) Replacing the lamp unit	The CIS PWB is faulty	Replace the lamp unit.	
8	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

(2-14)Image is dark partly or light

(When scanning from the DP)

Step	Check description	Assumed cause	Measures	Reference
1	Checking the original	The original is dirty.	Replace the original.	
2	Checking the original	The originals are bent or creased.	Stretch the bending or the paper creases of the original.	
2	Cleaning the DP slit glass	The DP slit glass is dirty.	Clean the DP slit glass.	
3	Checking the DP slit glass	The DP slit glass is bent.	Reattach the DP slit glass.	
4	Checking the DP scanning guide	DP scanning guide is not installed properly.	Reattach the DP scanning guide.	
5	Cleaning the mirror	The mirror is dirty.	Clean the optical mirror	
6	Checking the lamp unit	The dust is adhered on the lamp unit.	Remove dust inside the laser path of the lamp unit.	
7	Replacing the lamp unit	The LED drive PWB (CCD model) or CIS PWB (CIS model) is faulty.	Replace the lamp unit.	
8	Checking the connection	FFC is not connected properly. Or it is faulty.	Clean the FFC terminals of the following FFC and reconnect them. If the FFC terminal is deformed or broken, replace the FFC. • CCD model: CCD PWB - Main PWB • CIS model: CIS PWB - Main PWB	
9	Checking the main PWB	The main PWB is faulty.	Replace the main PWB.	

(2-15)Blurred image

(When scanning from the DP)

Step	Check description	Assumed cause	Measures	Reference
1	Replacing the original	The original is wavy.	Make the originals flat, or replace it if possible.	
2	Checking the DP slit glass	The DP slit glass has condensation.	Remove the condensation on the DP slit glass.	
3	Checking the mirror	The mirror has condensation.	Remove condensation from the optical mirror	
4	Removing condensation	The lens unit (CCD model) or lamp unit (CIS model) is condensed	Remove condensation from the lens unit (CCD model) or lamp unit (CIS model)	
5	Executing U411	Each auto adjustment of the scanner is incorrect.	Execute U411 [DP FU(ChartA)].	
6	Checking the connection	FFC is not connected properly. Or it is faulty.	Clean the FFC terminals of the following FFC and reconnect them. If the FFC terminal is deformed or broken, replace the FFC. • CCD model: CCD PWB - Main PWB • CIS model: CIS PWB - Main PWB	
7	(CCD model) Replacing the lens unit	The CCD PWB is faulty.	Replace the lens unit.	
8	(CIS model) Replacing the lamp unit	The CIS PWB is faulty	Replace the lamp unit.	
9	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

(2-16)Image is missing partly

(When scanning from the DP)

Step	Check description	Assumed cause	Measures	Reference
1	Checking the original	The original is not set properly.	Reset the originals.	
2	Changing the setting	The original size and the paper side do not match on the operation panel. (The setting is incorrect.)	Set the original size manually.	
3	Changing the setting	The copy position is rotated automatically.	Set [Auto Image Rotation] to [Off] from the System Menu.	
4	Cleaning the DP slit glass	The DP slit glass is dirty.	Clean the DP slit glass.	
5	Checking the DP slit glass	The DP slit glass is not properly attached.	Reattach the DP slit glass.	
6	Checking the connection	FFC is not connected properly. Or it is faulty.	Clean the FFC terminals of the following FFC and reconnect them. If the FFC terminal is deformed or broken, replace the FFC. • CCD model: CCD PWB - Main PWB • CIS model: CIS PWB - Main PWB	
7	(CCD model) Replacing the lens unit	The CCD PWB is faulty.	Replace the lens unit.	
8	(CIS model) Replacing the lamp unit	The CIS PWB is faulty	Replace the lamp unit.	
9	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

(2-17)Skewed image

(When scanning from the DP)

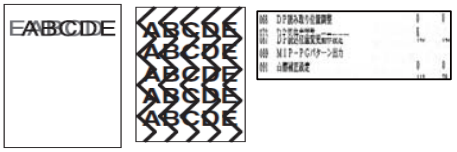
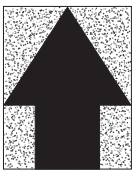
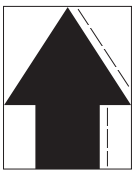
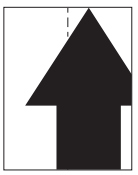
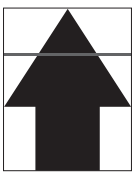
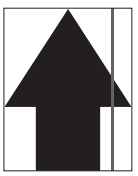
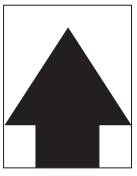
Step	Check description	Assumed cause	Measures	Reference
1	Checking the original	The original is bent, curled or creased.	Stretch the bend or the paper creases of the original.	
2	Checking the original width guides	The original skews.	Relocate the original width guides.	
3	Cleaning the DP feed roller	The DP feed roller is dirty	Clean the DP feed roller.	
4	Checking the DP feed roller	The DP feed roller is worn down	Replace the DP feed roller.	
5	Cleaning the DP registration roller	The DP registration roller is dirty.	Clean the DP registration roller.	
6	Checking the DP registration pulley	The operation of the DP registration pulley is faulty.	Reattach the DP registration pulley.	
7	Executing U942	The original loop amount before registration is improper.	Adjust the original loop amount at U942.	

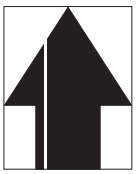
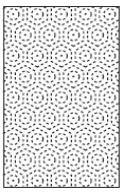
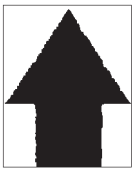
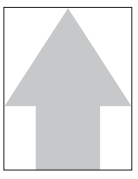
(2-18)Entire image is light

(When scanning from the DP)

Step	Check description	Assumed cause	Measures	Reference
1	Executing U068	The starting position for scanning an original on the DP is incorrect.	Adjust U068 [DP Read].	
2	Changing the setting	The density is not properly adjusted. (The original type and image quality differs.)	Set the image quality according to the originals.	
3	Changing the setting	The density is not properly adjusted. ([EcoPrint] is set to "On".)	Change to [Off] at [System Menu/Counter] > [Common Setting] > [Function Defaults] > [EcoPrint]	
4	Changing the setting	The density is not properly adjusted. (The density setting is too light.)	Set the density setting to be dark.	
5	Changing the setting	The density is not properly adjusted. ([Background density] is set to "Off".)	Set [Manual] in the Background Density Adjustment to make dark.	
6	Changing the setting	[Prevent Bleed-thru] setting is [On]	Change to [Off] at [System Menu/Counter] > [Common Setting] > [Function Defaults] > [Prevent Bleed-thru]	
7	Cleaning the shading plate	The shading plate is dirty.	Clean the shading plate at the backside of the contact glass.	
8	Executing U411	The scanner image is not adjusted.	Execute U411 [DP FU(ChartA)].	
9	Checking the connection	FFC is not connected properly. Or it is faulty.	Clean the FFC terminals of the following FFC and reconnect them. If the FFC terminal is deformed or broken, replace the FFC. • CCD model: CCD PWB - Main PWB • CIS model: CIS PWB - Main PWB	
10	(CCD model) Replacing the lens unit	The CCD PWB is faulty.	Replace the lens unit.	
11	(CIS model) Replacing the lamp unit	The CIS PWB is faulty	Replace the lamp unit.	
12	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

(3) Scanner Factors (when scanning on the contact glass)

No.	Contents	Image sample
(3-1)	Abnormal image (7-14page)	
(3-2)	Colored background (7-14page)	
(3-3)	Black dots (7-14page)	
(3-4)	Blurred characters (7-15page)	
(3-5)	Mismatch between the center of the original and the center of the copy image (7-15page)	
(3-6)	Horizontal black streaks (7-15page)	
(3-7)	Vertical streaks or bands (7-16page)	
(3-8)	Regular difference of the leading edge on the original image and copy image (7-16page)	

No.	Contents	Image sample
(3-9)	Vertical streaks, band (white) (7-17page)	
(3-10)	Moiré (7-17page)	
(3-11)	No image comes out (White or Black) (7-18page)	
(3-12)	Image is dark partly or light (7-18page)	
(3-13)	Blurred image (7-18page)	
(3-14)	Image is missing partly (7-19page)	
(3-15)	Skewed image (7-20page)	
(3-16)	Entire image is light (7-20page)	

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 connected properly. Or it is faulty.	Clean the FFC terminals of the following FFC and reconnect them. If the FFC terminal is deformed or broken, replace the FFC. • CCD model: CCD PWB - Main PWB • CIS model: CIS PWB - Main PWB	
2	(CCD model) Replacing the lens unit	The CCD PWB is faulty.	Replace the lens unit.	
3	(CIS model) Replacing the lamp unit	The CIS PWB is faulty	Replace the lamp unit.	
4	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

(3-2)Colored background

Step	Check description	Assumed cause	Measures	Reference
1	Reloading the original	The original is raised at scanning.	Set the original during pressing.	
2	Cleaning the shading plate	The shading plate is dirty.	Clean the shading plate at the backside of the contact glass.	
3	Executing U411	The image is not adjusted.	Execute U411 [Table(ChartA)].	
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 connected properly. Or it is faulty.	Clean the FFC terminals of the following FFC and reconnect them. If the FFC terminal is deformed or broken, replace the FFC. • CCD model: CCD PWB - Main PWB • CIS model: CIS PWB - Main PWB	
6	Reattaching the lamp unit	The lamp unit is not attached properly.	Reattach the lamp unit.	
7	(CCD model) Replacing the lens unit	The CCD PWB is faulty.	Replace the lens unit.	
8	Replacing the lamp unit	The LED drive PWB (CCD model) or CIS PWB (CIS model) is faulty.	Replace the lamp unit.	
9	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

(3-3)Black dots

Step	Check description	Assumed cause	Measures	Reference
1	Replacing the original	The original is dirty.	Check the black dots or color dots on the original and replace it if necessary.	
2	Cleaning the contact glass	The contact glass is dirty.	Clean the contact glass.	
3	Checking the connection	FFC is not connected properly. Or it is faulty.	Clean the FFC terminals of the following FFC and reconnect them. If the FFC terminal is deformed or broken, replace the FFC. • CCD model: CCD PWB - Main PWB • CIS model: CIS PWB - Main PWB	
4	(CCD model) Replacing the lens unit	The CCD PWB is faulty.	Replace the lens unit.	
5	(CIS model) Replacing the lamp unit	The CIS PWB is faulty	Replace the lamp unit.	

Step	Check description	Assumed cause	Measures	Reference
6	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

(3-4)Blurred characters

Step	Check description	Assumed cause	Measures	Reference
1	Removing foreign material	There is a load on the scanner movement since the foreign objects adhere on the scanner rails (CCD model) or scanner rod (CIS model)	Remove foreign objects adhering to the scanner rail (CCD model) or scanner rod (CIS model)	
2	Reattaching the lamp unit	The lamp unit is not attached properly.	Reattach the lamp unit.	
3	Checking the belt tension	A load is applied to the scanner movement since the belt tension is improper.	Adjust the scanner motor belt tension properly.	
4	Removing foreign material	Foreign objects adhere to the scanner wire drum and pulley (CCD model) or scanner drive belt (CIS model)	Remove foreign objects adhering to the scanner wire drum and pulley (CCD model) or scanner drive belt (CIS model)	
5	(CCD model) Replacing the scanner wire	There are scratches on the scanner wire.	Replace the scanner wires.	
6	(CIS model) Replacing the scanner belt	The scanner belt is scratched	Replace the scanner belt	

(3-5)Mismatch between the center of the original and the center of the copy image

Step	Check description	Assumed cause	Measures	Reference
1	Checking 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 U067 [Front].	
4	Executing U411	The automatic table scanning adjustment is not executed.	Execute U411 [Table(ChartA)].	

(3-6)Horizontal black streaks

Step	Check description	Assumed cause	Measures	Reference
1	Replacing the original	The original is dirty.	Replace the original.	
2	Cleaning the contact glass	The contact glass is dirty.	Clean the contact glass.	
3	Executing U066	Scan the image at back side of the size indication plate. (Adjustment value at U066 [Front] is not appropriate.	Adjust U066 [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)].	

Step	Check description	Assumed cause	Measures	Reference
5	Checking the connection	FFC is not connected properly. Or it is faulty.	Clean the FFC terminals of the following FFC and reconnect them. If the FFC terminal is deformed or broken, replace the FFC. • CCD model: CCD PWB - Main PWB • CIS model: CIS PWB - Main PWB	
6	(CCD model) Replacing the lens unit	The CCD PWB is faulty.	Replace the lens unit.	
7	(CIS model) Replacing the lamp unit	The CIS PWB is faulty	Replace the lamp unit.	
8	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

(3-7)Vertical streaks or bands

Step	Check description	Assumed cause	Measures	Reference
1	Replacing the original	The original is dirty.	Replace the original.	
2	Changing the setting	Actual original size and detected original size are mismatched.	Set the original paper size.	
3	Cleaning the platen cover	The original cover is dirty.	Clean the original cover.	
4	Executing U067	The center line settings are incorrect. (The streaks or bands appear out of the original image.)	Adjust U067 [Front].	
5	Executing U411	The leading edge timing is incorrect. (Streaks or bands appear out of the original.)	Execute U411 [Table(ChartA)].	
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 mirror	The mirror is dirty.	Clean the optical mirror	
8	Removing dust	The dust is adhered on the lamp unit.	Remove dust inside the laser path of the lamp unit.	
9	(CCD model) Cleaning the CCD PWB	Dust is on the CCD PWB.	Clean the CCD PWB using an air-blower.	
10	Executing U063	The image scanning position is incorrect.	Execute U063 to change the scanner shading position.	
11	Checking the connection	FFC is not connected properly. Or it is faulty.	Clean the FFC terminals of the following FFC and reconnect them. If the FFC terminal is deformed or broken, replace the FFC. • CCD model: CCD PWB - Main PWB • CIS model: CIS PWB - Main PWB	
12	(CCD model) Replacing the lens unit	The CCD PWB is faulty.	Replace the lens unit.	
13	(CIS model) Replacing the lamp unit	The CIS PWB is faulty	Replace the lamp unit.	
14	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

(3-8)Regular difference of the leading edge on the original image and copy image

Step	Check description	Assumed cause	Measures	Reference
1	Reloading the original	The original is not set properly. (The leading edge of the original is not set on the contact glass properly)	Reset the originals.	

Step	Check description	Assumed cause	Measures	Reference
2	Executing U066	The scanner leading edge timing is incorrect	Adjust U066 [Front].	
3	Executing U411	The scanner leading edge timing is incorrect	Execute U411 [Table(ChartA)].	
4	Checking the home position sensor	The home position sensor is not properly attached.	Reattach the home position sensor.	
5	Checking the scanner drive belt	The scanner drive belt is loose.	Reattach the scanner drive belt.	
6	Checking the scanner motor	The scanner motor is faulty, and so the rotation is irregular.	Reattach the scanner motor and reconnect the connector. If not repaired, replace it.	

(3-9)Vertical streaks, band (white)

Step	Check description	Assumed cause	Measures	Reference
1	Replacing the original	The original is dirty.	Replace the original.	
2	Cleaning the mirror	The mirror is dirty.	Clean the mirror in the lamp unit.	
3	Cleaning the shading plate	The shading plate is dirty.	Clean the shading plate at the backside of the contact glass.	
4	Removing dust	The dust is adhered on the lamp unit.	Remove dust inside the laser path of the lamp unit.	
5	Executing U063	The image scanning position is incorrect.	Execute U063 to change the scanner shading position.	
6	Checking the connection	FFC is not connected properly. Or it is faulty.	Clean the FFC terminals of the following FFC and reconnect them. If the FFC terminal is deformed or broken, replace the FFC. • CCD model: CCD PWB - Main PWB • CIS model: CIS PWB - Main PWB	
7	(CCD model) Replacing the lens unit	The CCD PWB is faulty.	Replace the lens unit.	
8	(CIS model) Replacing the lamp unit	The CIS PWB is faulty	Replace the lamp unit.	
9	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

(3-10)Moiré

Step	Check description	Assumed cause	Measures	Reference
1	Changing the setting	The original image quality is not set properly. (moiré changes depending on the image quality.)	Set [Original Image] in [System Menu/ Counter] key > [Common Settings] > [Function Defaults].	
2	Checking the original	The original is not set properly. (moiré appears in the original scanning direction.)	Rotate the originals in 90 degrees and reset them.	
3	Executing U065	The ratio in the main scanning direction is large. (This problem occurs when the print ratio is set as 100%.)	Change the 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(ChartA)].	

(3-11)No image comes out (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 connected properly. Or it is faulty.	Clean the FFC terminals of the following FFC and reconnect them. If the FFC terminal is deformed or broken, replace the FFC. • CCD model: CCD PWB - Main PWB • CIS model: CIS PWB - Main PWB	
3	(CCD model) Replacing the lens unit	The CCD PWB is faulty.	Replace the lens unit.	
4	(CIS model) Replacing the lamp unit	The CIS PWB is faulty	Replace the lamp unit.	
5	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

(3-12)Image is dark partly or light

Step	Check description	Assumed cause	Measures	Reference
1	Replacing the original	The original is dirty.	Replace the original.	
2	Checking the original	The originals are bent or creased.	Stretch the bending or the paper creases of the original.	
3	Reattaching the original mat	The original mat shifts.	Reattach the original mat.	
4	Cleaning the contact glass	The contact glass is dirty.	Clean the contact glass.	
5	Reattaching the contact glass	The contact glass is not properly attached.	Reattach the contact glass.	
6	Cleaning the mirror	The mirror is dirty.	Clean the mirror in the lamp unit.	
7	Removing dust	The dust is adhered on the lamp unit.	Remove dust inside the laser path of the lamp unit.	
8	Replacing the lamp unit	The LED drive PWB (CCD model) or CIS PWB (CIS model) is faulty.	Replace the lamp unit.	
9	Checking the connection	FFC is not connected properly. Or it is faulty.	Clean the FFC terminals of the following FFC and reconnect them. If the FFC terminal is deformed or broken, replace the FFC. • CCD model: CCD PWB - Main PWB • CIS model: CIS PWB - Main PWB	
10	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

(3-13)Blurred image

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	The lens unit (CCD model) or lamp unit (CIS model) is condensed	Remove condensation from the lens unit (CCD model) or lamp unit (CIS model)	
4	Executing U411	Each auto adjustment of the scanner is incorrect.	Execute U411 [Table(ChartA)].	

Step	Check description	Assumed cause	Measures	Reference
5	Checking the connection	FFC is not connected properly. Or it is faulty.	Clean the FFC terminals of the following FFC and reconnect them. If the FFC terminal is deformed or broken, replace the FFC. • CCD model: CCD PWB - Main PWB • CIS model: CIS PWB - Main PWB	
6	(CCD model) Replacing the lens unit	The CCD PWB is faulty.	Replace the lens unit.	
7	(CIS model) Replacing the lamp unit	The CIS PWB is faulty	Replace the lamp unit.	
8	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

(3-14)Image is missing partly

Step	Check description	Assumed cause	Measures	Reference
1	Changing the setting	Marked part by highlighter pen on the original cannot be scanned.	Set [Copy] > [Functions] > [Original image] > [Others] > [Highlighter] > [On]	
2	Checking the original	The original is not set properly.	Reset the originals.	
3	Changing the setting	The original size and the paper side do not match on the operation panel. (The setting is incorrect.)	Set the original size manually.	
4	Changing the setting	The copy position is rotated automatically.	Set [Auto Image Rotation] to [Off] from the System Menu.	
5	Changing the setting	The Border Erase function is not properly set. (Setting 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 connected properly. Or it is faulty.	Clean the FFC terminals of the following FFC and reconnect them. If the FFC terminal is deformed or broken, replace the FFC. • LED model: CCD PWB - Main PWB • CIS model: CIS PWB ? Main PWB	
10	Checking the connection	The connector is not connected properly, 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. • Original size sensor - Engine PWB (YC15)	
11	Replacing the original size sensor	Original size and paper size are not matched on the operation panel display. (Original size sensor is misdetected.)	Replace the original size sensor.	
12	Checking the lens unit	The lens unit is not attached properly.	Reattach the lens unit.	
13	Replacing the lens unit	The CCD PWB is faulty.	Replace the lens unit.	
14	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

Step	Check description	Assumed cause	Measures	Reference
15	Replacing the main PWB	The main PWB is faulty.	Reconnect all the connectors to the main PWB. If the wire is pinched up or has damage, repair or replace it. If not repaired, replace the main PWB.	

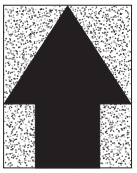
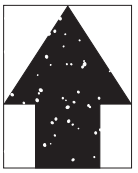
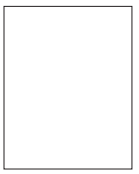
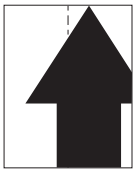
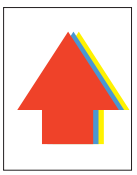
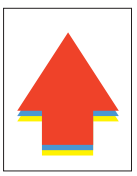
(3-15)Skewed image

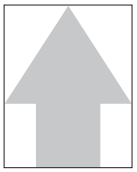
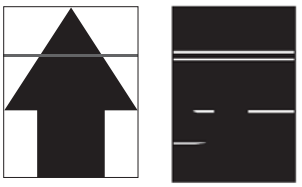
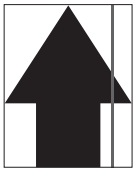
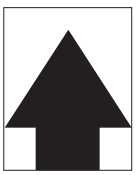
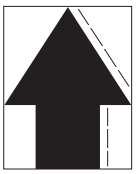
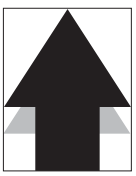
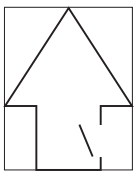
Step	Check description	Assumed cause	Measures	Reference
1	Reloading the original	The original is not properly set. (The original is skewed.)	Reset the originals.	
2	Reattaching the lamp unit	The lamp unit is not attached properly.	Reattach the lamp unit.	

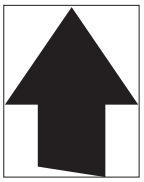
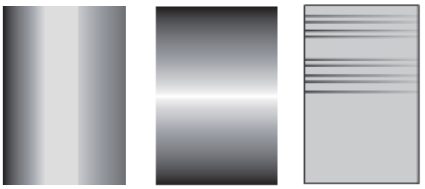
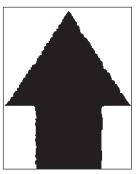
(3-16)Entire image is light

Step	Check description	Assumed cause	Measures	Reference
1	Changing the setting	The density is not properly adjusted. (The original type and image quality differs.)	Set the image quality according to the originals.	
2	Changing the setting	The density is not properly adjusted. ([EcoPrint] is set to "On".)	Change to [Off] at [System Menu/Counter] > [Common Setting] > [Function Defaults] > [EcoPrint]	
3	Changing the setting	The density is not properly adjusted. (The density setting is too light.)	Set the density setting to be dark.	
4	Changing the setting	[Prevent Bleed-thru] setting is [On]	Change to [Off] at [System Menu/Counter] > [Common Setting] > [Function Defaults] > [Prevent Bleed-thru]	
5	Cleaning the shading plate	The shading plate is dirty.	Clean the shading plate at the backside of the contact glass.	
6	Executing U411	The image is not adjusted.	Execute U411 [Table(ChartA)].	
7	Checking the connection	FFC is not connected properly. Or it is faulty.	Clean the FFC terminals of the following FFC and reconnect them. If the FFC terminal is deformed or broken, replace the FFC. • CCD model: CCD PWB - Main PWB • CIS model: CIS PWB - Main PWB	
8	(CCD model) Replacing the lens unit	The CCD PWB is faulty.	Replace the lens unit.	
9	(CIS model) Replacing the lamp unit	The CIS PWB is faulty	Replace the lamp unit.	
10	Checking the main PWB	The connector or the FFC is not connected properly. Or, the wire, FFC, the 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.	

(4) Engine Factors (Paper conveying cause: Transfer, Fuser and Separation)

No.	Contents	Image sample
(4-1)	Colored background (7-23page)	
(4-2)	Black spots, color spots (toner smudges) (7-23page)	
(4-3)	Image is missing partly (blank image, white spots) (7-23page)	
(4-4)	Blank image (7-24page)	
(4-5)	Mismatch between the center of the original and the center of the copy image (7-24page)	
(4-6)	Color shift in the main scanning direction (7-24page)	
(4-7)	Color shift in the sub scanning direction (7-25page)	
(4-8)	Dirty reverse side (7-25page)	

No.	Contents	Image sample
(4-9)	Entire image is light (7-25page)	
(4-10)	Horizontal streaks or band (7-25page)	
(4-11)	Vertical streaks or bands (7-26page)	
(4-12)	Irregular errors at the leading edge of the original image and the copy image (variation of paper leading edge timing) (7-26page)	
(4-13)	Blurred characters (7-27page)	
(4-14)	Offset (7-27page)	
(4-15)	Color reproduction is poor (7-27page)	
(4-16)	Fusing failure (7-28page)	

No.	Contents	Image sample
(4-17)	Paper skew at the trailing edge（7-28page）	
(4-18)	Uneven transfer（7-28page）	
(4-19)	Blurred image（7-29page）	

Content of Engine Factors (Paper conveying cause: Transfer, Fuser and Separation)

(4-1)Colored background

Step	Check description	Assumed cause	Measures	Reference
1	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.	
2	Checking the secondary transfer roller	The secondary transfer roller is dirty.	When the image failure appears in the secondary transfer roller circumference interval (65mm), clean the secondary transfer roller. If not repaired, replace the secondary transfer roller unit.	

(4-2)Black spots, color spots (toner smudges)

Step	Check description	Assumed cause	Measures	Reference
1	Checking the secondary transfer roller	The secondary transfer roller is dirty or scratched.	When the image failure appears in the secondary transfer roller circumference interval (65mm), clean the secondary transfer roller. If not repaired, replace the secondary transfer roller unit.	
2	Checking the fuser separation claws	The fuser separation nails are dirty	Clean the fuser separation claws if dirty	
3	Checking the fuser unit	The fuser roller is dirty, scratched or foreign objects adheres	When the image failure appears in the fuser roller circumference interval (94mm), clean it. Remove foreign objects on the fuser roller by printing solid images. If it is not improved, replace the fuser unit.	

(4-3)Image is missing partly (blank image, white spots)

Step	Check description	Assumed cause	Measures	Reference
1	Replacing paper	The paper is damp.	Replace with the dry paper.	

Step	Check description	Assumed cause	Measures	Reference
2	Checking the paper storage place	The paper is stored in the high humidity environment.	Install the cassette heater if necessary. Also, ask users to store paper in a dry place.	
3	Checking the secondary transfer roller	The secondary transfer roller is dirty or scratched.	When the image failure appears in the secondary transfer roller circumference interval (65mm), clean the secondary transfer roller. If not repaired, replace the secondary transfer roller unit.	
4	Setting the media type	The media type is not properly set.	Set the proper media type via the System Menu.	

(4-4)Blank image

Step	Check description	Assumed cause	Measures	Reference
1	Checking the right cover	The right conveying unit is not closed.	Check the lock of the right cover Assy, and open and close the right cover (conveying unit).	
2	Checking the connection	The connector is not connected properly, 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 1 - Engine PWB (YC8)	
3	Replacing high voltage PWB 1	The developer, main charger and transfer bias output from high voltage PWB 1 is low.	Replace high voltage PWB 1.	
4	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

(4-5)Mismatch between the center of the original and the center of the copy image

Step	Check description	Assumed cause	Measures	Reference
1	Checking 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 fit with the paper size.	Relocate the paper width guides or the MP paper width guides to fit them with 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].	

(4-6)Color shift in the main scanning direction

Step	Check description	Assumed cause	Measures	Reference
1	Executing Color Registration	Color Registration fails.	Execute U464 and check if [Permission] is ON. Next, Execute U467 and check [Color Registration] is ON. Then, execute System Menu [Adjustment/Maintenance] > [Calibration] and [Color Registration].	
2	Checking the ID sensor and the ID sensor shutter	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	LSU replacement	The LSU is faulty.	Replace the LSU.	
4	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

(4-7)Color shift in the sub scanning direction

Step	Check description	Assumed cause	Measures	Reference
1	Executing Color Registration	Color Registration fails.	Execute U464 and check if [Permission] is ON. Next, Execute U467 and check [Color Registration] is ON. Then, execute System Menu [Adjustment/Maintenance] > [Calibration] and [Color Registration].	
2	Checking the ID sensor and the ID sensor shutter	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 engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

(4-8)Dirty reverse side

Step	Check description	Assumed cause	Measures	Reference
1	Checking the secondary transfer roller	The secondary transfer roller is dirty or scratched.	When the image failure appears in the secondary transfer roller circumference interval (65mm), clean the secondary transfer roller. If not repaired, replace the secondary transfer roller unit.	
2	Changing the setting	The secondary transfer voltage is improperly set.	Reset the secondary transfer voltage to the default value at U106.	
3	Checking the fuser pressure roller	The fuser pressure roller is dirty caused by the paper type setting.	Perform the duplex printing with the solid image and clean the fuser pressure roller. And set proper paper thickness in System Menu.	
4	Cleaning the conveying guide	The conveying guide is dirty	Clean the conveying guide.	

(4-9)Entire image is light

Step	Check description	Assumed cause	Measures	Reference
1	Replacing paper	The paper is damp.	Replace the paper.	
2	Checking the paper storage place	Paper is stored in the high humidity environment.	Install the cassette heater if necessary. Also, ask users to store paper in a dry place.	
3	Changing the setting	The secondary transfer voltage is improperly set.	Reset the secondary transfer voltage to the default value at U106.	
4	Checking the secondary transfer bias contact	The secondary transfer bias contact is dirty or deformed, so, the impression is unavailable.	Clean the secondary transfer bias contact. Or, correct its shape so that it is grounded securely.	
5	Checking the connection	The connector is not connected properly, 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 1 - Engine PWB (YC8)	
6	Replacing high voltage PWB 1	The secondary transfer bias output from high voltage PWB 1 is faulty.	Replace high voltage PWB 1.	
7	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

(4-10)Horizontal streaks or band

Step	Check description	Assumed cause	Measures	Reference
1	Checking the fuser unit	The fuser belt is dirty or scratched.	When the image failure appears in the fuser belt circumference interval (94mm), clean it. If it is not improved, replace the fuser unit.	

Step	Check description	Assumed cause	Measures	Reference
2	Checking the right cover	Only one side of the right cover (conveying unit) is closed, or the pressure spring is deformed.	Close the right cover (conveying unit).	
3	Checking the secondary transfer roller unit	The pressure spring is not properly attached or deformed.	Reattach the pressure spring. If not repaired, replace the secondary transfer roller unit.	

(4-11)Vertical streaks or bands

Step	Check description	Assumed cause	Measures	Reference
1	Cleaning the fuser unit	The fuser pressure roller or the fuser separation plate is dirty by paper dust or toner.	Execute the duplex printing with the solid image to clean the fuser pressure roller. And also, clean the fuser separation plate. If the parts inside the fuser unit are damaged, replace the fuser unit.	
2	Changing the setting	The media type is not properly set.	Set the proper media type via the System Menu.	
3	Cleaning the exit feed-shift guide	The exit feed-shift guide has toner dirt or welding.	Clean the exit feed-shift guide.	
4	Cleaning the separation needle	The separation needles are dirty with paper dust or toner.	Clean the discharge needle which is upper part of the secondary transfer roller by the Cleaning brush, etc..	
5	Checking the secondary transfer roller	The secondary transfer roller is dirty, deformed, or worn down.	When the image failure appears in the secondary transfer roller circumference interval (65mm), clean the secondary transfer roller. If not repaired, replace the secondary transfer roller unit.	
6	Checking the connection	The connector is not connected properly, 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 1 - Engine PWB (YC8)	
7	Replacing high voltage PWB 1	The transfer bias output from high voltage PWB 1 is faulty.	Replace high voltage PWB 1.	
8	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

(4-12)Irregular errors at the leading edge of the original image and the copy image (variation of paper leading edge timing)

Step	Check description	Assumed cause	Measures	Reference
1	Executing U034	The leading edge timing is not properly adjusted.	Adjust the leading edge timing at U034 [LSU Out Top].	
2	Executing U051	The paper loop amount before registration is improper.	Execute U051 to adjust the paper loop amount before registration.	
3	Checking the clutch	The feed conveying related clutch does not operate correctly.	Execute U032. If the paper feed / conveying related clutches (feed clutch, middle clutch or registration clutch) do not operate properly, reattach them and reconnect the connectors. If not repaired, replace drive unit C.	

(4-13)Blurred characters

Step	Check description	Assumed cause	Measures	Reference
1	Replacing paper	Unspecified papers are used.	Replace with the paper within the specification.	
2	Changing the setting	The media type is not properly set.	Set the proper media type via the System Menu.	
3	Applying the grease	The drives from the conveying motors are not smoothly transmitted.	Apply the grease to the drive gear of the conveying related motor. (EM-50LP: Part number (7BG010009H))	
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)Offset

Step	Check description	Assumed cause	Measures	Reference
1	Checking the paper	Unspecified papers are used.	Replace with the paper within the specification, or change to the media type setting closest to the specified paper.	
2	Changing the setting	The media type is not properly set.	Change the settings according to the media type (paper weight).	
3	Executing U106	The secondary transfer voltage is improperly set.	Reset the secondary transfer voltage to the default value at U106.	
4	Cleaning the secondary transfer roller	The secondary transfer roller is dirty.	When the image failure appears in the secondary transfer roller circumference interval (65mm), clean the secondary transfer roller. If not repaired, replace the secondary transfer roller unit.	
5	Checking U161	The higher fuser temperature is set.	Execute U161 [Print] and reset the fuser temperature to the default value.	
6	Checking the fuser unit	The fuser roller is dirty or scratched.	When the image failure appears in the fuser roller circumference interval (94mm), clean it. If it is not improved, replace the fuser unit.	
7	Checking the connection	The connector is not connected properly, 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 1 - Engine PWB (YC8)	
8	Replacing high voltage PWB 1	High voltage PWB 1 is faulty.	Replace high voltage PWB 1.	
9	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

(4-15)Color reproduction is poor

Step	Check description	Assumed cause	Measures	Reference
1	Replacing paper	The paper is damp.	Replace the paper.	
2	Checking the paper storage place	Paper is stored in the high humidity environment.	Install the cassette heater if necessary. And instruct the user to store the paper in a place with low humidity.	
3	Checking the paper	Rough paper for monochrome print is used.	Use the color paper with smooth surface that fits for color print.	
4	Adjusting the image	The half tone image cannot be reproduced.	Execute System Menu [Adjustment/ Maintenance] > [Calibration] and [Tone Curve Adjustment].	

Step	Check description	Assumed cause	Measures	Reference
5	Executing U161	Fused toner is not fitted on paper	Select [Mode1] at U161 [Grain Mode]. If not resolved, select [Mode2].	
6	Executing Developer refresh	The toner in the developer unit is deteriorated.	Execute System Menu [Adjustment/ Maintenance] > [Service Settings] > [DLP-CLN] (Developer Refresh).	
7	Checking the drum unit and the developer unit	The drum unit or the main charger unit is not properly installed.	Reattach the main charger unit and the drum unit that has poor reproduction.	
8	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

(4-16)Fusing failure

Step	Check description	Assumed cause	Measures	Reference
1	Replacing paper	Unspecified papers are used.	Replace with the proper paper.	
2	Setting the media type	The media type is not properly set.	Set the proper media type via the System Menu.	
3	Checking U161	The lower fuser temperature is set.	Change the fuser temperature to the default value.	
4	Replacing the fuser unit	The nipping pressure (width) is small and fuser pressure setting is weak.	Replace the fuser unit.	

(4-17)Paper skew at the trailing edge

Step	Check description	Assumed cause	Measures	Reference
1	Cleaning the secondary transfer roller unit	The neighboring parts of the secondary transfer roller are dirty with paper dust.	Clean the secondary transfer roller, discharge needle and the paper conveying route.	
2	Removing foreign material	Paper is caught by foreign material such as a piece of paper.	Replace the toner sucking fan motor if it does not operate properly when executing U037 [Toner].	
3	Relocating the paper width guides or the MP paper width guides	The set position of the paper width guides / MP paper width guides is mismatched with the paper size, and so, the paper is skewed.	Relocate the paper width guides or the MP paper width guides to fit them with the paper size.	
4	Checking the conveying section	The registration rollers or the middle pulleys are not properly attached, or they are dirty.	Check if the registration rollers and the middle pulleys are properly attached. If necessary, reattach them. Also, they are dirty with toner or paper dust, clean them.	
5	Opening and reclosing the right cover	The right cover is not firmly closed.	Open the right cover (conveying unit) once, and close it firmly.	
6	Reinstalling the fuser unit	The fuser unit is not properly installed.	Insert the fuser unit straight into the main unit, and lock both sides of the fuser unit firmly.	

(4-18)Uneven transfer

Step	Check description	Assumed cause	Measures	Reference
1	Opening and closing the conveying section	The conveying section is not closed completely.	Open the right cover (conveying unit) once, and close it firmly.	

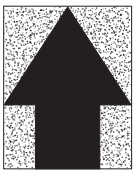
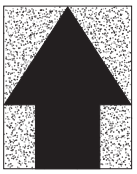
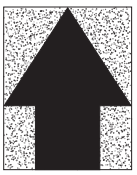
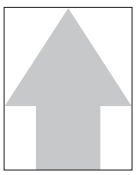
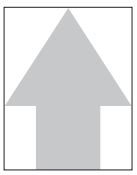
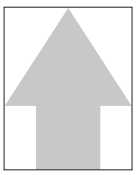
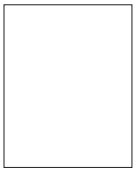
Step	Check description	Assumed cause	Measures	Reference
2	Checking the secondary transfer roller	The secondary transfer roller is dirty or scratched.	When the image failure appears in the secondary transfer roller circumference interval (65mm), clean the secondary transfer roller. If not repaired, replace the secondary transfer roller unit.	
3	Checking the connection	The connector is not connected properly. The foreign objects adhere on the connector terminal which makes contact failure. 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 1 - Engine PWB (YC8)	
4	Replacing high voltage PWB 1	The transfer bias output from high voltage PWB 1 is faulty.	Replace high voltage PWB 1.	
5	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	
6	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.	

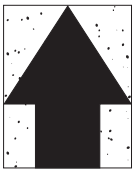
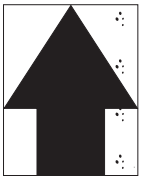
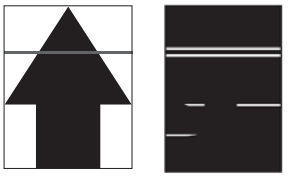
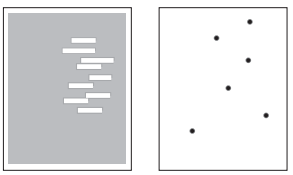
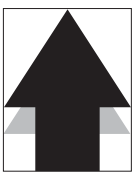
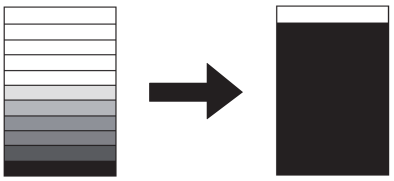
(4-19)Blurred image

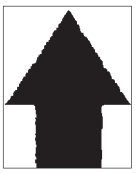
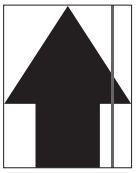
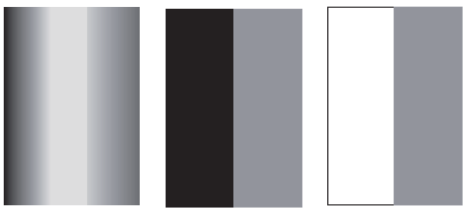
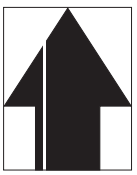
Step	Check description	Assumed cause	Measures	Reference
1	Replacing paper	The paper is damp.	Replace with the new dry paper.	
2	Checking the paper storage place	Paper is stored in the high humidity environment.	Install the cassette heater if necessary. Also, ask users to store paper in a dry place.	

⑸ Engine Factors (Image forming cause)

Content of Engine Factors (Image forming cause)

No.	Contents	Image sample
(5-1)	Colored background (7-32page)	
(5-2)	Colored background (7-33page)	
(5-3)	Colored background (7-33page)	
(5-4)	Entire image is light (7-34page)	
(5-5)	Entire image is light (7-34page)	
(5-6)	Entire image is light (7-35page)	
(5-7)	Image is missing partly (7-35page)	
(5-8)	Blank image (7-35page)	

No.	Contents	Image sample
(5-9)	Toner dirt (Single color) (7-36page)	
(5-10)	Periodic toner dirt (Single color) (7-37page)	
(5-11)	No image comes out (Black) (7-37page)	
(5-12)	Regularly horizontal streaks or band (7-37page)	
(5-13)	Irregularly horizontal streaks or band (7-38page)	
(5-14)	Horizontal uneven density (7-38page)	
(5-15)	Offset (7-39page)	
(5-16)	Gradation reproducibility is low (7-39page)	

No.	Contents	Image sample
(5-17)	Blurred image (7-39page)	
(5-18)	Vertical streaks, band (black or color) (7-40page)	
(5-19)	Vertical uneven density (7-40page)	
(5-20)	Vertical streaks, band (white) (7-40page)	

Content of Engine Factors (Image forming cause)

(5-1)Colored background

Step	Check description	Assumed cause	Measures	Reference
1	Measures for the image quality improvement	Uncharged toner is increasing due to the high density continuous printing in the high temperature environment.	Execute System Menu [Adjustment/ Maintenance] > [Service Settings] > [DLP-CLN] (Developer Refresh). Then, execute [Calibration] and [Tone Curve Adjustment] at [Adjustment/Maintenance] in order.	
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 developer high-voltage contact	The developer high voltage contact of high voltage PWB 1 is dirty or deformed.	Clean the developer high voltage contact and correct it so that it grounds securely. Or reattach high voltage PWB 1.	
4	Executing U140	The setting values at U140 are different from the default.	Retrieve the U140 setting values to the default	
5	Checking the developer unit	The charge amount of the toner is low.	Replace the developer unit.	
6	Checking the connection	The connector is not connected properly, 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 1 - Engine PWB (YC8)	
7	Replacing high voltage PWB 1	The developer bias output from high voltage PWB 1 is high.	Replace high voltage PWB 1.	
8	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

(5-2)Colored background

Step	Check description	Assumed cause	Measures	Reference
1	Checking the temperature inside the main unit	Temperature is low in the installation environment.	If the machine inside temperature is below 10°C / 50°F at U139, instruct user to change the installation environment of the room temperature 16°C / 60.8°F or higher. (This phenomenon tends to occur immediately after being left in a low temperature environment for few days if turning on the power).	
2	Setting the cassette heater	Developing section is affected by the humidity	Turn on the cassette heater switch at the machine rear side.	
3	Reinstalling the main charger unit	The main charger unit is not installed properly.	Reinstall the main charger unit to the drum unit, and Reinstall the drum unit to the main body to ensure that the connector is connected.	
4	Checking the main charger unit	The MC roller surface is dirty.	Clean the MC roller surface. If not resolved, replace the main charger unit and clear the MC roller counter at U930.	
5	Changing the setting	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.	
6	Checking the drum unit and the developer unit	The drum is faulty.	Replace the drum unit.	
7	Checking the main charger high-voltage contact	The main charger high voltage contact of high voltage PWB 1 is dirty or deformed.	Clean the main charger high voltage contact and correct it so that it grounds. Or, reinstall high voltage PWB 1.	
8	Replacing high voltage PWB 1	The main charger bias output from high voltage PWB 1 is high.	Replace high voltage PWB 1.	
9	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

(5-3)Colored background

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	The connector is not connected properly. The foreign objects adhere on the connector terminal which makes contact failure. 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. • Front ID sensor, rear ID sensor - Engine PWB (YC7) • ID shutter sensor - Engine PWB (YC7) • ID shutter motor - Engine PWB (YC7)	
2	Checking the ID sensor and the ID shutter	Calibration is not executed properly.	Output the event log report and if there is a history of C7601 or C7602, clean the front ID sensor or rear ID sensor, and execute Calibration. If not repaired, replace the front ID sensor or the rear ID sensor. Also, check the ID shutter operation. If it does not open, replace the ID shutter sensor or the ID shutter motor.	
3	Checking the connection	FFC terminal is not connected properly. The foreign objects adhere on the connector terminal which makes contact failure. Or, FFC is faulty.	Reconnect the FFC. If the FFC terminal is deformed or broken, replace the FFC. • LSU (APC PWB) - LSU relay PWB • LSU relay PWB - Main PWB	
4	LSU replacement	The LSU is faulty.	Replace the LSU.	
5	Replacing the LSU relay PWB	The LSU relay PWB is faulty.	Replace the LSU relay PWB.	

Step	Check description	Assumed cause	Measures	Reference
6	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	
7	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

(5-4)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	Measures for the image quality improvement	Calibration is executed with the condition of the light density, and developing bias is controlled with a high level. Or, the toner is deteriorated due to many low density printing.	Execute System Menu [Adjustment/ Maintenance] > [Service Settings] > [DLP-CLN] (Developer Refresh). Then, execute [Calibration] and [Tone Curve Adjustment] at [Adjustment/Maintenance] in order.	
3	Checking the drum unit and the developer unit	The developing roller does not contact with the drum as the drum unit or the developer unit is not installed properly.	Reinstall the drum unit and the developer unit.	
4	Cleaning the DS pulleys	The DS pulleys are dirty.	Clean the DS pulleys at both ends of the developer unit.	
5	Checking the developer bias contact	The developer bias contact is deformed.	Correct the developer bias contact so that it grounds securely.	
6	Developer unit replacement	The developer unit is faulty.	Specify the failure color and replace the developer unit for that color.	
7	Executing U140	The developer bias values that are fixed (except "Sleeve AC" and "Mag DC") and are not changed according to the Calibration are changed from the default value.	Execute U140 and reset the developer bias to the default value.	
8	Checking the primary transfer bias contact	The primary transfer bias contact is deformed.	Correct the primary transfer bias contact so that it grounds securely.	
9	Checking the connection	The connector is not connected properly. The foreign objects adhere on the connector terminal which makes contact failure. 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 PWB - Transfer relay PWB • Transfer relay PWB - Engine PWB (YC11) • High voltage PWB 2 - Engine PWB (YC11)	
10	Primary transfer unit replacement	The primary transfer roller is not attached properly, or the transfer belt is deteriorated.	Replace the primary transfer unit if the primary transfer roller comes off or the transfer belt is deteriorated.	
11	Replacing the transfer relay PWB	The transfer relay PWB is faulty.	Replace the transfer relay PWB.	
12	Replacing high voltage PWB 2	High voltage PWB 2 is faulty.	Replace high voltage PWB 2.	
13	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

(5-5)Entire image is light

Step	Check description	Assumed cause	Measures	Reference
1	Executing Drum refresh	Condensation on the drum surface	Execute Drum refresh.	
2	Cleaning the eraser	Eraser is dirty	Clean the eraser.	
3	Checking the eraser	Eraser is faulty	Reinsert the drum unit into the main unit all the way. If not repaired, replace the drum unit.	

Step	Check description	Assumed cause	Measures	Reference
4	Drum unit replacement	The drum surface is worn down and photoconductor layer is thickened. The drum surface potential after exposure is high.	Replace the drum unit.	
5	Checking the connection	The connector is not connected properly. The foreign objects adhere on the connector terminal which makes contact failure. 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 1 - Engine PWB (YC8)	
6	Replacing high voltage PWB 1	High voltage PWB 1 is faulty.	Replace high voltage PWB 1.	
7	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

(5-6)Entire image is light

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	The connector is not connected properly, or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • LSU(APC PWB) - Main PWB	
2	LSU replacement	The LSU is faulty.	Replace the LSU.	
3	Changing the setting	The transfer high voltage setting was changed.	If the setting values at U106 are not the default values, reset them to the default values.	
4	Checking the connection	The connector is not connected properly. The foreign objects adhere on the connector terminal which makes contact failure. 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 1 - Engine PWB (YC8)	
5	Replacing the LSU relay PWB	The LSU relay PWB is faulty.	Replace the LSU relay PWB.	
6	Replacing high voltage PWB 1	High voltage PWB 1 is faulty.	Replace high voltage PWB 1.	
7	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	
8	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

(5-7)Image is missing partly

Step	Check description	Assumed cause	Measures	Reference
1	Executing Drum refresh	The drum surface is dirty.	Execute Drum refresh.	
2	Setting the cassette heater	Developing section is affected by the humidity	Turn on the cassette heater switch at the machine rear side.	
3	Drum unit replacement	There are adhered objects on the drum surface.	Replace the drum unit.	

(5-8)Blank image

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	Developer unit replacement	The developer drive gear is faulty.	Replace the developer unit.	

Step	Check description	Assumed cause	Measures	Reference
3	Checking U140	The developer bias values that are fixed (except "Sleeve AC" and "Mag DC") and are not changed according to the Calibration are changed from the default value.	Execute U140 and reset the developer bias to the default value.	
4	Checking the connection	The connector is not connected properly. The foreign objects adhere on the connector terminal which makes contact failure. 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. • Developer motor K - Engine PWB (YC18) • Developer motor CMY - Engine PWB (YC19) • Developer clutch - Engine PWB (YC19)	
5	Checking the developer motor	The developing motor does not operate properly.	Execute U030 to check the developer motor operation. If the developer motor does not operate properly, reattach it and reconnect the connector. If not repaired, replace it.	
6	Checking the developer clutch	The developer clutch does not operate properly.	Execute U032 and check the developer clutch operation. If it does not operate correctly, reattach the developer clutch and reconnect the connector. If not repaired, replace the developer clutch.	
7	Checking the connection	The connector is not connected properly. The foreign objects adhere on the connector terminal which makes contact failure. 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 1 - Engine PWB (YC8)	
8	Replacing high voltage PWB 1	The developer, main charger and transfer bias output from high voltage PWB 1 is low.	Replace high voltage PWB 1.	
9	Checking the connection	FFC terminal is not connected properly. The foreign objects adhere on the connector terminal which makes contact failure. Or, FFC is faulty.	Reconnect the FFC. If the FFC terminal is deformed or broken, replace the FFC. • LSU (APC PWB) - LSU relay PWB • LSU relay PWB - Main PWB	
10	LSU replacement	APC PWB of LSU is faulty.	Replace the LSU.	
11	Replacing the LSU relay PWB	The LSU relay PWB is faulty.	Replace the LSU relay PWB.	
12	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	
13	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

(5-9)Toner dirt (Single color)

Step	Check description	Assumed cause	Measures	Reference
1	Cleaning the developer unit / executing Developer Refresh	Toner drops off from the developer unit.	Clean the developer unit and execute System Menu [Adjustment/Maintenance] > [Service Settings] > [DLP-CLN] (Developer Refresh).	
2	Executing U474	Toner drops off from the cleaning fur brush of the transfer belt.	Execute [Laser Scanner Cleaning] few times at U474. (Solve the problem of the toner clogging of the cleaning fur brush by the high density printing.)	

(5-10)Periodic toner dirt (Single color)

Step	Check description	Assumed cause	Measures	Reference
1	(In case of 94mm cycle) Executing drum refresh	The drum surface is dirty.	Execute Drum refresh.	
2	Setting the cassette heater	Developing section is affected by the humidity	Turn on the cassette heater switch at the machine rear side.	
3	(In case of 94mm interval) Replacing drum unit	There are some scratches on the drum surface.	Replace the drum unit.	
4	(In case of 37mm interval) Replacing the main charger unit	There is dirt or foreign object on the MC roller surface. Or, the shaft is corroded.	Clean the MC roller surface. If not resolved, replace the main charger unit and clear the MC roller counter at U930.	
5	(In case of 50mm interval) Cleaning/Replacing the developer unit	There is dirt, foreign object or scratch on the developing roller.	Wipe the developer roller dry. If it does not improve, replace the developer unit.	

(5-11)No image comes out (Black)

Step	Check description	Assumed cause	Measures	Reference
1	reinstalling the main charger unit and drum unit	The drum unit or the main charger unit is not properly installed.	Reattach the main charger unit to the drum unit and reinstall the drum unit into the main unit to ensure secure contact .	
2	Checking the MC roller contact	The contact of the MC roller is dirty or deformed. (Charge bias can't be applied)	Clean the main charger roller contact and correct it so that it is grounded securely.	
3	Checking high voltage PWB 1	The high voltage contact of high voltage PWB 1 is dirty or deformed.	Clean the high voltage contact and correct it so that it grounds securely. Or reattach high voltage PWB 1.	
4	Checking the connection	The connector is not connected properly. The foreign objects adhere on the connector terminal which makes contact failure. 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 1 - Engine PWB (YC8)	
5	Replacing high voltage PWB 1	The main charger bias voltage output is not even from high voltage PWB 1.	Replace high voltage PWB 1.	
6	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	
7	Checking the connection	FFC terminal is not connected properly. The foreign objects adhere on the connector terminal which makes contact failure. Or, FFC is faulty.	Reconnect the FFC. If the FFC terminal is deformed or broken, replace the FFC. • LSU (APC PWB) - LSU relay PWB • LSU relay PWB - Main PWB	
8	LSU replacement	The LSU is faulty.	Replace the LSU.	
9	Replacing the LSU relay PWB	The LSU relay PWB is faulty.	Replace the LSU relay PWB.	
10	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

(5-12)Regularly horizontal streaks or band

Step	Check description	Assumed cause	Measures	Reference
1	Identifying the failure color (Excluding monochrome models)	(Judgment of the abnormal color)	Output the Color Belt at U089 and specify the failure color.	
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.	

Step	Check description	Assumed cause	Measures	Reference
3	Executing Developer refresh	The last image remains on the developer roller surface.	Execute System Menu [Adjustment/ Maintenance] > [Service Settings] > [DLP-CLN] (Developer Refresh).	
4	Developer unit replacement	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	Drum unit replacement	The drum surface is scratched and there is leak.	Replace the drum unit.	
7	Main charger unit replacement	The MC roller surface is dirty or scratch.	Replace the main charger unit if the image failure appears in the MC roller circumference interval (37mm), and then clear the main charger roller counter at U930.	
8	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.	
9	Checking the connection	The connector is not connected properly. The foreign objects adhere on the connector terminal which makes contact failure. 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 1 - Engine PWB (YC8)	
10	Replacing high voltage PWB 1	The main charger bias voltage output is not even from high voltage PWB 1.	Replace high voltage PWB 1.	
11	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

(5-13)Irregularly horizontal streaks or band

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 System Menu [Adjustment/ Maintenance] > [Service Settings] > [Altitude Adjustment] and change to [1001-2000m] (further change to [2001-3000m] if not repaired).	
2	Changing the setting	The developer bias is easy to leak since the main unit is installed in the low altitude environment.	Execute System Menu [Adjustment/ Maintenance] > [Service Settings] > [Altitude Adjustment] and set the proper altitude.	
3	Checking the MC roller contact	MC roller contact is not grounded.	Correct the MC roller contact to secure the grounding.	
4	Checking the drum unit and the developer unit	The drum unit is not properly installed, so it does not ground the drum drive shaft.	Reinstall the drum unit.	
5	Replacing paper	Paper with the high surface resistance is used.	Replace with the recommended paper.	

(5-14)Horizontal uneven density

Step	Check description	Assumed cause	Measures	Reference
1	Checking the main charger unit	MC roller rotation is uneven.	Reattach the main charger unit.	

Step	Check description	Assumed cause	Measures	Reference
2	Main charger unit replacement	The MC cleaning roller is deformed.	Replace the main charger unit and clear the MC roller counter at U930.	
3	Cleaning the DS pulleys	The DS pulleys are dirty.	Clean the DS pulleys at both ends of the developer unit.	
4	Developer unit replacement	The DS pulleys are faulty.	Replace the developer unit.	
5	Cleaning the developing bias contact	The conduction is not stabilized due to the dirty developer bias contact.	Clean the developer bias contact.	
6	Checking the developer unit	The developer powder in the developer unit is deteriorated.	Execute System Menu [Adjustment/ Maintenance] > [Service Settings] > [DLP-CLN] (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	Setting the cassette heater	Developing section is affected by the humidity	Turn on the cassette heater switch at the machine rear side.	
9	Drum unit replacement	The drum surface is worn down.	Replace the drum unit.	
10	LSU replacement	The laser emission is uneven.	Replace the LSU.	

(5-15)Offset

Step	Check description	Assumed cause	Measures	Reference
1	Executing Drum refresh	The drum surface is dirty.	Execute Drum refresh.	
2	Setting the cassette heater	Developing section is affected by the humidity	Turn on the cassette heater switch at the machine rear side.	
3	Drum unit replacement	The drum surface is worn down or has some scratches.	Replace the drum unit.	
4	Cleaning the developing roller	The developer roller is dirty	Clean the developer roller.	
5	Developer unit replacement	The developer roller surface is worn down or has scratches.	Replace the developer unit.	

(5-16)Gradation reproducibility is low

Step	Check description	Assumed cause	Measures	Reference
1	Adjusting the image	The calibration or gradation adjustment is not executed.	Execute System Menu [Adjustment/ Maintenance] > [Calibration] and [Tone Curve Adjustment].	

(5-17)Blurred image

Step	Check description	Assumed cause	Measures	Reference
1	Executing Drum refresh	The drum surface has condensation.	Execute Drum refresh.	
2	Setting the cassette heater	Developing section is affected by the humidity	Turn on the cassette heater switch at the machine rear side.	
3	Executing the Laser Scanner Cleaning	The LSU dustproof glass is dirty.	Execute System Menu [Adjustment/ Maintenance] > [Laser Scanner Cleaning].	
4	LSU replacement	The LSU dustproof glass is deteriorated.	Replace the LSU.	

(5-18)Vertical streaks, band (black or color)

Step	Check description	Assumed cause	Measures	Reference
1	Executing Drum refresh	The drum surface is dirty.	Execute Drum refresh.	
2	Setting the drum heater	Developing section is affected by the humidity	Turn on the cassette heater switch at the machine rear side.	
3	Drum unit replacement	The cleaning blade or drum surface is worn out.	Replace the drum unit.	
4	Cleaning the MC roller	Streaky dirt adheres to the surface of the MC roller, and no electric potential is applied.	Clean the MC roller surface with water.	
5	Main charger unit replacement	MC roller surface is streaky altered.	Replace the main charger unit and clear the MC roller counter at U930.	
6	Executing Developer refresh	The toner layer on the developer roller is uneven.	Execute System Menu [Adjustment/ Maintenance] > [Service Settings] > [DLP-CLN] (Developer Refresh). If not repaired, replace the developer unit.	

(5-19)Vertical uneven density

Step	Check description	Assumed cause	Measures	Reference
1	Checking 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.	
2	Primary transfer unit replacement	The transfer belt is not contact with the drum uniformly.	Replace the primary transfer unit.	
3	Executing Drum refresh	The drum surface has condensation.	Execute Drum refresh.	
4	Setting the cassette heater	Developing section is affected by the humidity	Turn on the cassette heater switch at the machine rear side.	
5	Checking the main charger unit	Streaky dirt adheres to the surface of the MC roller.	Clean the MC roller surface. If not resolved, replace the main charger unit and clear the MC roller counter at U930.	
6	Drum unit replacement	The drum surface is worn down.	Replace the drum unit.	
7	Executing Developer refresh	The toner layer on the developer roller is uneven.	Execute System Menu [Adjustment/ Maintenance] > [Service Settings] > [DLP-CLN] (Developer Refresh). If not repaired, replace the developer unit.	

(5-20)Vertical streaks, band (white)

Step	Check description	Assumed cause	Measures	Reference
1	Executing the Laser Scanner Cleaning	The LSU dustproof glass is dirty.	Execute System Menu [Adjustment/ Maintenance] > [Laser Scanner Cleaning].	
2	Developer unit replacement	Foreign objects or aggregated toner adhere on the developing roller.	Clean the developer roller. Or, replace the developer unit if not repaired after cleaning.	
3	Removing foreign material	There are foreign objects on the laser path of the LSU.	Remove foreign objects on the frame or sealing material between the developer unit and the drum unit.	
4	Executing Drum refresh	The drum surface is dirty.	Execute Drum refresh.	
5	Setting the cassette heater	Developing section is affected by the humidity	Turn on the cassette heater switch at the machine rear side.	

Step	Check description	Assumed cause	Measures	Reference
6	Checking the main charger unit	There is dirt, foreign object or scratch on the MC roller.	Clean the MC roller surface. If not resolved, replace the main charger unit and clear the MC roller counter at U930.	
7	Cleaning the eraser	Eraser is dirty	Clean the eraser.	
8	Drum unit replacement	There are some scratches on the drum surface.	Replace the drum unit.	

7 - 2 Feeding/Conveying Failures

(1) Prior standard check items

Wear, dirt or foreign matter adhesion of conveyance system rollers, pulleys and gears

No.	Contents
(1-1)	Paper jam due to the cover-open detection
(1-2)	Paper jam from paper factor
(1-3)	Paper jam due to the dog-ear, paper skew, paper creases, fusing failure or the paper curl
(1-4)	Paper jam due to the guide
(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 from the factor of conveying roller, motor or clutch
(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 / closing the front cover	The front cover is not engaged.	Open the right cover and close it securely.	
2	Checking the toner container and waste toner box	The toner container and waste toner box are not attached properly	Check how the toner container and waste toner box are attached. Reattach them if necessary.	
3	Opening and reclosing the right cover	The right cover is not aligned to the other exterior covers.	Open the right cover and close it again securely.	
4	Checking the conveying unit	Parts on the conveying unit are not attached properly	Check the state of the secondary transfer unit attached in the conveying unit. Then, reattach the unit if necessary.	

(1-2)Paper jam from paper factor

Step	Check description	Assumed cause	Measures	Reference
1	Reloading paper	The paper curls.	Reload paper upside down.	
2	Replacing paper	The paper is damp.	Replace with the dry paper.	
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.	

(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 due to the guide

Step	Check description	Assumed cause	Measures	Reference
1	Checking the guide	The guide is dirty or foreign objects adhere	The guide is dirty with toner, paper dust, etc. Or if foreign objects adhere, clean it with cloth, etc.	
2	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.	
3	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.	
3	(When feeding the paper from the large capacity feeder) Checking the paper	The paper is not properly loaded.	When the paper is loaded over the guide in the deck of the large capacity paper feeder, reload the paper so the paper edge is not on the corner of the deck.	

(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 from the factor of conveying roller, motor or clutch

Step	Check description	Assumed cause	Measures	Reference
1	Checking the roller or the pulley	The roller or surface of the pulley is dirty, or faulty.	Check if the rollers or the pulleys have no paper dust, toner, foreign objects, diameter change or frictional wear, and clean their surface. If not repaired, replace the parts.	

Step	Check description	Assumed cause	Measures	Reference
2	Cleaning the roller shaft and the bearings	The roller shaft or the bearings are dirty.	If a load is given to the roller rotation caused by the dirt of the roller shaft or the bearings, clean.	
3	Checking the spring	The spring does not press the conveying roller or pulley properly.	Check if the spring is dropping off or the roller and the pulley are pressed properly, then reattach them if necessary.	
4	Checking the clutch	The clutch does not operate properly.	Execute U032 (main unit), U243 (dual scan DP) to check the clutch operation. If the clutch does not operate properly, reattach it and reconnect the connector. If not repaired, replace the individual clutch or the unit containing the clutch.	
5	Checking the motor	The motor does not operate properly.	Execute U030 [Main unit] and U243 [DP] and check the related motor operation. If not operating normally, replace the motor.	

(1-8)Paper jam due to the sensor

Step	Check description	Assumed cause	Measures	Reference
1	Checking the actuator and the recovery spring	The actuator or the return spring does not operate correctly.	If the actuator is caught or came off, reattach the actuator or recovery spring.	
2	Cleaning the sensor	The sensor is dirty.	If the sensor surface is dirty with paper dust, etc., clean it.	
3	Checking the sensor	The sensor does not operate correctly.	Check the sensor operation by executing U031 (main unit) or U244 (document processor). If the sensor does not operate properly, clean and reattach it, then reinsert the connector. 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.	If there is no image margin at the paper leading edge, execute U034 to adjust the leading edge timing and then U403 to adjust the leading edge margin	
2	Relocating the paper width guides	The paper size is misdetected.	Relocate the paper width guides or the MP paper width guides along with the paper size to properly detect the paper size.	
3	Checking the settings	The media type is not properly set.	If the media type setting does not match the actual paper thickness, set the paper weight at [System Menu] > [Common Settings] > [Paper Settings] > [Media Type Settings].	

(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. Reattach them if necessary.	

(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	Setting the cassette heater	The paper is damp.	Turn the cassette heater switch on at the machine rear side.	

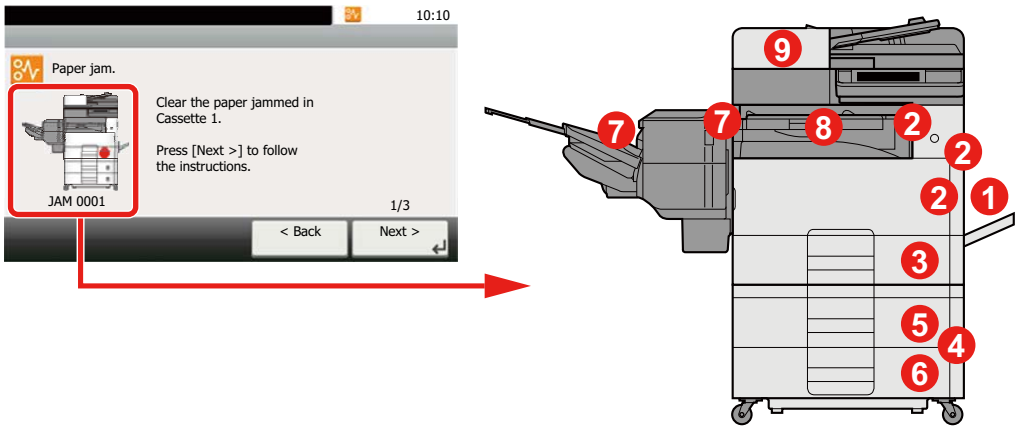
⑵ Paper misfeed detection

(2-1)Paper misfeed indication

When a paper misfeed occurs, the machine immediately stops printing and displays the paper misfeed message on the operation panel. To remove paper misfed in the machine, pull out the cassette, open the 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.

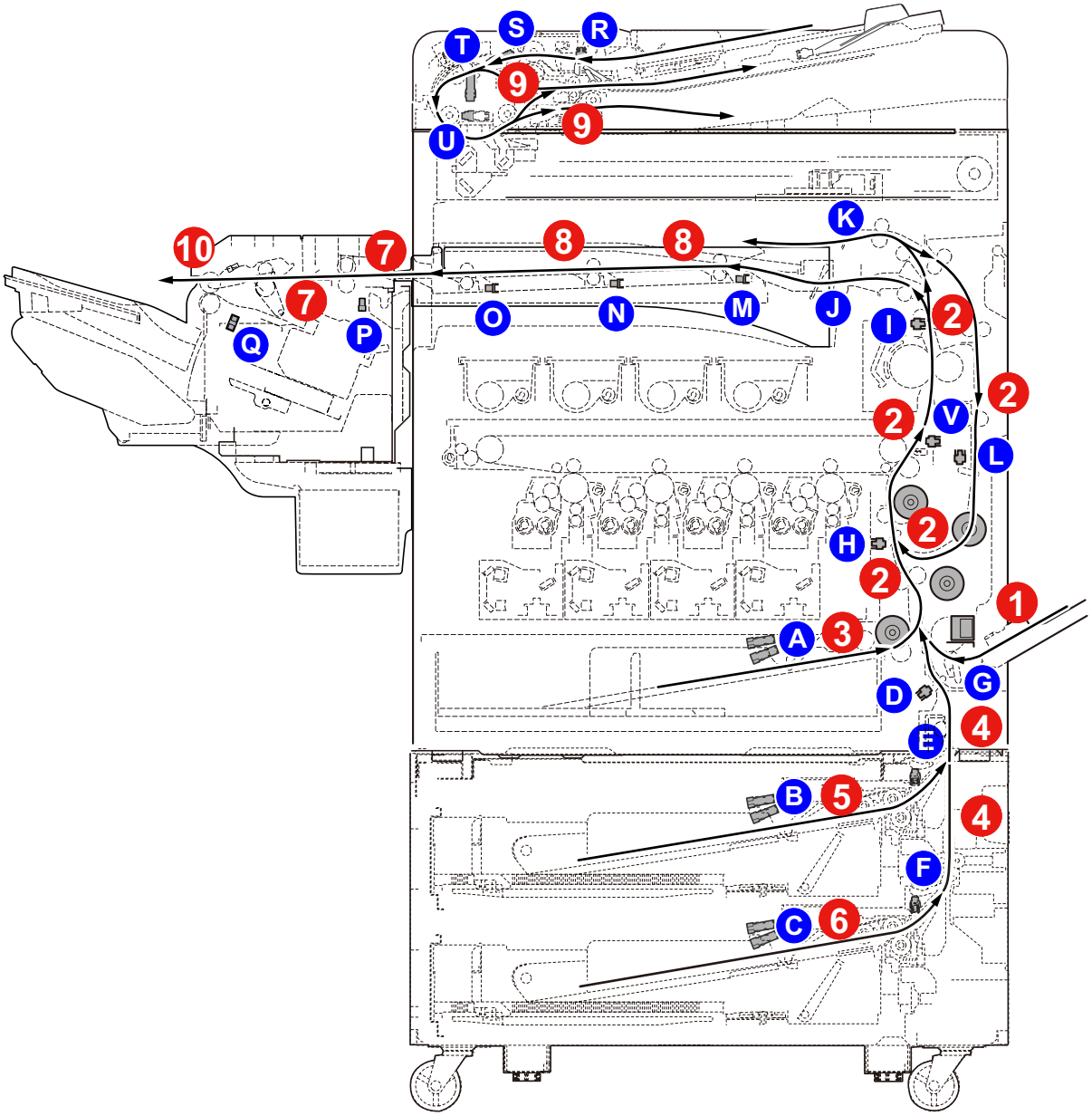
3 Shows the next step.

4 Shows the removal procedure.

Display	Jam location	Display	Jam location
1	Misfeed in the MP tray	6	Misfeed in the cassette 3
2	Misfeed inside the right cover 1	7	Misfeed in the document finisher
3	Misfeed in the cassette 1	8	Misfeed in the conveying unit
4	Misfeed inside the right cover 3	9	Misfeed in the document processor
5	Misfeed in the cassette 2		

(2-2)Paper misfeed detection condition

Main unit + Optional unit



Item	Sensor name	Item	Sensor name
A	Paper sensor	L	DU sensor
B	PF paper sensor 1	M	BR conveying sensor 1
C	PF paper sensor 2	N	BR conveying sensor 2
D	Conveying sensor	O	BR conveying sensor 3
E	PF conveying sensor 1	P	DF conveying sensor
F	PF conveying sensor 2	Q	DF exit sensor
G	MP paper sensor	R	DP originsl sensor
H	Registration sensor	S	DP paper feed sensor
I	Exit sensor	T	DP registration sensor
J	Paper full sensor	U	DP timing sensor
K	JS full sensor		

Error code and JAM location

Error code	JAM location	Error code	JAM location	Error code	JAM location	Error code	JAM location
J0000	-	J4002	4	J4311	2	J6023	-
J0100	-	J4003	4	J4312	2	J6043	-
J0101	-	J4012	2	J4313	2	J6103	8
J0104	-	J4013	2	J4319	2	J6113	8
J0105	-	J4101	2	J4901	8	J6123	8
J0106	-	J4102	2	J4902	8	J6413	8
J0107	-	J4103	2	J4903	8	J6423	8
J0108	-	J4108	2	J4808	8	J6803	8
J0110	-	J4109	2	J4909	8	J6813	8
J0111	-	J4111	2	J4911	8	J6903	8
J0114	-	J4112	2	J4912	8	J6913	8
J0120	2	J4113	2	J4913	8	J7013	8
J0121	2	J4118	2	J4918	8	J7023	8
J0210	-	J4119	2	J4919	8	J7913	-
J0501	3	J4201	2	J5001	8	J7923	-
J0502	5	J4202	2	J5002	8	J7933	-
J0503	6	J4203	2	J5003	8	J7943	-
J0508	2	J4208	2	J5008	8	J7953	-
J0509	1	J4209	2	J5009	8	J7963	-
J0511	3	J4211	2	J5011	8	J9000	9
J0512	4	J4212	2	J5012	8	J9001	9
J0513	4	J4213	2	J5013	8	J9002	9
J0518	2	J4218	2	J5018	8	J9004	9
J0519	1	J4219	2	J5019	8	J9010	-
J1403	4	J4301	2			J9011	-
J1413	4	J4302	2			J9110	9
		J4303	2			J9200	9
		J4309	2			J9400	9
						J9410	9

(3) Jam Codes

Error code	Contents	note
J0000	Power ON jam	
J0100/J0101/J0104/ J0105/J0106/J0107	Jam from firmware factor	
J0110/J0111/J0114	Cover open detection	J0110: Right cover open detection, J0111: Front cover open detection, J0114: Bridge cover open detection
J0120/J0121	Firmware triggered jam at duplex	
J0210	PF right cover open detection	Object: 500-sheet paper feeder, 500-sheetx2 paper feeder
J0501/J0502/J0503	Cassette no feed	J0501: Registration sensor does not turn on J0502: PF conveying sensor 1 does not turn on J0503: PF conveying sensor 2 does not turn on
J0508	Duplex no feed	
J0509	No paper feed from the MP tray	
J0511	Multi-feeding from cassette	
J0512/J0513	Multi feed jam	Object: Paper feeder
J0518	Multi-feeding from the duplex section	
J0519	Multi-feeding from the MP tray	
J1403	PF conveying sensor 1 non-arrival jam	
J1413	PF conveying sensor 1 stay jam	
J4002/J4003	Registration sensor non-arrival jam	
J4012/J4013	Registration sensor stay jam	
J4101/J4102/J4103/ J4108/J4109	Belt roll-up sensor non-arrival jam	PF conveying sensor does not turn on
J4111/J4112/J4113/J4118/ J4119	Belt roll-up sensor stay jam	PF conveying sensor does not turn off
J4201/J4202/J4203/ J4208/J4209	Eject sensor non-arrival jam	
J4211/J4212/J4213/J4218/ J4219	Eject sensor stay jam	
J4301/J4302/J4303/J4309	DU sensor non-arrival jam	
J4311/4312/4313/4319	DU sensor stay jam	
J4901/4902/4903/4908/ 4909	BR conveying sensor 2 non-arrival jam	
J4911/4912/4913/4918/ 4919	BR conveying sensor 2 stay jam	
J5001/5002/5003/5008/ 5009	BR conveying sensor 3 non-arrival jam	
J5011/5012/5013/5018/ 5019	BR conveying sensor 3 stay jam	
J6023	DF staple cover open jam	
J6043	DF top cover open jam	
J6103	DF conveying sensor jam	
J6113	DF conveying stay jam	
J6123	DF conveying sensor stay jam	
J6413	DF exit sensor stay jam	
J6423	DF exit sensor stay jam	

Error code	Contents	note
J6803	Front adjustor plate operation on error	
J6813	Front adjustor plate operation off error	
J6903	Rear adjustor plate operation on error	
J6913	Rear adjustor plate operation off error	
J7013	Staple operation error	
J7023	Staple initial operation error	
J7913	Sequence error 1	
J7923	Sequence error 2	
J7933	Sequence error 3	
J7943	Sequence error 4	
J7953	Sequence error 5	
J7963	Sequence error 6	
J9000	No original feed	
J9001	DP conveying jam	
J9002	Paper jam detected when starting the paper conveying	
J9004	DP switchback jam	
J9010	DP cover open jam	
J9011	DP top cover open jam	
J9110	DP feed sensor multi-feeding jam	
J9200	DP registration sensor non-arrival jam	
J9400	DP timing sensor non-arrival jam	
J9410	DP timing sensor stay jam	

Content of Jam Code

J0000: Power ON jam

The power is turned on while a conveying sensor turns on.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the paper path	There is a piece of paper remaining on paper conveying route to turn on the sensor.	If a piece of paper or the foreign objects adhere on the conveying path, or a burr in the parts such as the guide or the actuator, remove them.	
2	Specifying the sensor	If the faulty sensor can be specified at U031, the connector is not properly connected or the wire is faulty.	Specify the sensor turning on at U031, clean and reattach the sensor. Then, reconnect the connector. If the sensor turning on is displayed at U031 again, replace the wire or the sensor.	

J0100/J0101/J0104/J0105/J0106/J0107: Jam from 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.	Remove the paper on the conveying section. Turn off the power switch off and unplug the power cord. After 5s passes, reconnect the power cord and turn the power switch on.	

Step	Check description	Assumed cause	Measures	Reference
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, J0111: Front cover open detection, J0114: Bridge cover open detection

Cover opened during printing

Step	Check description	Assumed cause	Measures	Reference
1	Checking the cover	The covers are not fitted.	Check if the cover is closed firmly, and reattach it if necessary. If the cover is deformed, repair or replace it.	
2	Checking the cover switch	The cover switch does not operate properly.	Reattach the cover switch and reconnect the connector. If the cover switch is faulty, replace it.	

J0120/J0121: Firmware triggered jam at duplex

The firmware does not properly activate.

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	The controller does not activate properly.	Remove the paper on the conveying section. Turn off the power switch off and unplug the power cord. After 5s passes, reconnect the power cord and turn the power switch on.	
2	Firmware upgrade	The firmware does not properly activate.	Upgrade the firmware to the latest version.	

J0210: PF right cover open detection

Object: 500-sheet paper feeder, 500-sheetx2 paper feeder

PF right cover opened during printing

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 cover is securely closed, and reattach it if necessary. Correct or replace it if deformed.	
2	Checking the PF right cover switch	The PF right cover switch does not operate properly.	Reattach the PF right cover switch and reconnect the connector. If it is faulty, replace it.	

J0501/J0502/J0503: Cassette no feed

Prior checkpoints at no paper feed from the cassette

Step	Check description	Assumed cause	Measures	Reference
1	Checking the 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 curls or is wavy.	Correct the paper. Switch the leading edge and the trailing edge of paper, or flip paper upside down and reload the paper	

Step	Check description	Assumed cause	Measures	Reference
4	Checking the paper	foreign objects are on the paper.	Remove the paper with foreign objects.	
5	Checking the paper	Unspecified papers are used.	Use the paper matching the specification	

J0501/J0502/J0503: Cassette no feed

J0501: Registration sensor does not turn on

J0502: PF conveying sensor 1 does not turn on

J0503: PF conveying sensor 2 does not turn on

The next sensor does not turn on after the feed clutch turns on when feeding from cassette 1-3

Step	Check description	Assumed cause	Measures	Reference
1	Relocating the paper width guides and paper length guide	The paper width guide and length guide set position does not match the paper	Relocate the paper width guides and paper length guide to match the paper size.	
2	Checking the actuator for the upper paper sensor/lower paper sensor.	The actuator does not operate properly.	If the actuator is deformed or does not properly operate, replace it.	
3	Checking the paper path	The paper is caught with a piece of paper, etc.	If there is a piece of paper, foreign objects, etc. on the conveying path, remove them.	
4	Checking the pickup pulley	The conveying function of the pickup pulley is not enough.	Check the pickup spring. In case of installation failure, reattach the spring. Clean the pickup roller surface. If the surface is worn down, replace the pickup roller.	
5	Checking the paper feed roller	The conveying function of the paper feed roller is not enough.	Clean the feed roller surface. If worn down, replace it.	
6	Checking the paper feed clutch	The paper feed clutch is not connected, so the paper feed roller does not rotate.	Reattach the feed clutch and reconnect the connector. If not repaired, replace it.	
7	Checking the sensor	The sensor does not operate correctly.	Reattach the sensor and reconnect the connector. If not repaired, replace it.	
8	Checking the wire connection	The connector is not properly connected.	Reconnect the connectors on the engine PWB and PF PWB.	

J0508: Duplex no feed

The registration sensor does not turn on when feed from the duplex section.

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 a piece of paper, foreign objects, etc. on the conveying path, remove them.	
2	Checking the conveying roller and the pulley	The paper conveying force is lowered.	Clean the surface of the DU conveying roller and conveying pulley. Check the pressure to the roller and pulley. If the spring or bushing comes off, reattach it. Check the drive gear and replace it if damaged.	
3	Checking the registration sensor	The registration sensor does not operate properly.	Execute U031 [Regist]. If the registration sensor does not operate properly, clean and reattach it then reconnect the connector. If not repaired, replace it.	
4	Checking the DU clutch	DU clutch does not operate correctly.	Execute U032 [DU1]. If DU clutch does not operate correctly, reattach it and reconnect the connector. If not repaired, replace it.	
5	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

J0509: No paper feed from the MP tray

When feeding from MP tray, registration sensor does not turn on.

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 a piece of paper, foreign objects, etc. on the conveying path, remove them.	
2	Checking the MP feed roller and drive gears	The paper conveying force is lowered or slippage occurs	Clean the surface of the MP feed roller. If it is worn down, replace it. If the foreign objects adhere on the drive gear, remove them. If damaged, replace it.	
3	Checking the registration sensor	The registration sensor does not operate properly.	Execute U031 [Regist]. If the registration sensor does not operate properly, clean and reattach it then reconnect the connector. If not repaired, replace it.	
4	Checking the MP lift plate	The MP lift plate does not operate properly.	Execute U030 [MPT]. If the MP lift plate does not operate normally, reattach the MP lift plate. If not repaired, replace the drive unit.	
5	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

J0511: Multi-feeding from cassette

The registration sensor does not turn on when feeding from cassette 1.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the paper	The cut-end of the paper is crushed.	Fan the paper well and load it by reversing the paper direction	
2	Checking the retard roller	The paper separation force of the retard pulley is not enough.	Clean the retard pulley surface. If worn down, replace it.	
3	Checking the retard roller operation	The retard roller does not contact the feed roller	Rotate the retard roller to check if it contacts the feed roller. If the load is heavy in excess, check the drive belt and clean the ISU shaft	
4	Checking the paper length switch	Paper size is misdetected by paper length switch.	If the paper size loaded in the cassette differs from the paper size indicated on the operation panel, reattach the paper length switch and reconnect the connector. If not repaired, replace the paper length switch.	
5	Checking the registration sensor	The registration sensor does not operate properly.	Execute U031 [Regist]. If the registration sensor does not operate properly, clean and reattach it then reconnect the connector. If not repaired, replace it.	
6	Checking the paper feed clutch	The paper feed clutch does not operate properly.	Execute U032 [Feed]. If the feed clutch does not operate normally, replace the drive unit.	
7	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

J0512/J0513: Multi feed jam

Object: Paper feeder

The PF conveying sensor does not turn off when feeding from cassette2, 3

Step	Check description	Assumed cause	Measures	Reference
1	Checking the paper	The cut-end of the paper is crushed.	Fan the paper well and load it by reversing the paper direction	
2	Checking the retard roller	The paper separation force of the retard pulley is not enough.	Clean the retard pulley surface. If worn down, replace it.	

Step	Check description	Assumed cause	Measures	Reference
3	Checking the retard roller operation	The retard roller does not contact the feed roller	Rotate the retard roller to check if it contacts the feed roller. If the load is heavy in excess, check the drive belt and clean the ISU shaft	
4	Checking the paper length switch	Paper size is misdetected by paper length switch.	If the paper size loaded in the cassette differs from the paper size indicated on the operation panel, reattach the paper length switch and reconnect the connector. If not repaired, replace the paper length switch.	
5	Checking the PF conveying sensor	PF conveying sensor does not operate correctly.	Check the operation of the actuator. Clean and reattach the sensor, then reconnect the connector. If not repaired, replace it.	
6	Checking the PF paper feed clutch	The PF paper feed clutch does not operate properly.	If the PF feed clutch does not operate normally, replace the PF drive unit.	
7	Replacing the PF PWB	The PF PWB is faulty.	Replace the PF PWB.	
8	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

J0518: Multi-feeding from the duplex section

The registration sensor does not turn off during paper feed from the duplex section.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the registration sensor	The registration sensor does not operate properly.	Execute U031 [Regist]. If the registration sensor does not operate properly, clean and reattach it then reconnect the connector. If not repaired, replace it.	
2	Checking the DU clutch	DU clutch does not operate correctly.	Execute U032 [Dup]. If the DU clutch does not operate normally, replace the drive unit.	
3	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

J0519: Multi-feeding from the MP tray

When feeding from MP tray, registration sensor does not turn off.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the paper size	Paper size on display and actual one mismatch (actual is longer)	Adjust the paper setting to match the actual paper size	
2	Checking the MP feed roller and the MP separation pad	The paper separation force of the MP separation pad is insufficient.	Clean the MP feed roller and MP separation pad, or replace them	
3	Checking the registration sensor	The registration sensor does not operate properly.	Execute U031 [Regist]. If the registration sensor does not operate properly, clean and reattach it then reconnect the connector. If not repaired, replace it.	
4	Checking the MP solenoid	The MP feed roller rotation does not stop due to the MP solenoid operation failure	Execute U033 [MPT]. If the MP solenoid does not operate normally, replace the drive unit.	
5	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

J1403: PF conveying sensor 1 non-arrival jam

The PF conveying sensor 1 does not turn on when feeding from cassette 3

Step	Check description	Assumed cause	Measures	Reference
1	Checking the PF cover	The PF cover is deformed.	Check if the PF cover is closed securely. Replace it if it cannot be closed due to deformation.	
2	Checking PF conveying sensor 1	PF conveying sensor 1 does not operate normally	Check the operation of the actuator. Clean and reattach the sensor, then reconnect the connector. If not repaired, replace it.	
3	Checking the PF conveying clutch	PF conveying clutch does not operate correctly.	If the PF conveying clutch does not operate normally, replace the PF drive unit.	
4	Replacing the PF PWB	The PF PWB is faulty.	Replace the PF PWB.	
5	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

J1413: PF conveying sensor 1 stay jam

The PF conveying sensor 1 does not turn off when feeding from cassette 3

Step	Check description	Assumed cause	Measures	Reference
1	Checking the PF cover	The PF cover is deformed.	Check if the PF cover is closed securely. Replace it if it cannot be closed due to deformation.	
2	Checking PF conveying sensor 1	PF conveying sensor 1 does not operate normally	Check the operation of the actuator. Clean and reattach the sensor, then reconnect the connector. If not repaired, replace it.	
3	Checking the PF conveying clutch	PF conveying clutch does not operate correctly.	If the PF conveying clutch does not operate normally, replace the PF drive unit.	
4	Replacing the PF PWB	The PF PWB is faulty.	Replace the PF PWB.	
5	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

J4002/J4003: Registration sensor non-arrival jam

The registration sensor does not turn on when feeding from cassette 3.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the registration sensor	The registration sensor does not operate properly.	Execute U031 [Regist]. If the registration sensor does not operate properly, clean and reattach it then reconnect the connector. If not repaired, replace it.	
2	Checking the PF conveying clutch	PF conveying clutch does not operate correctly.	If the PF conveying clutch does not operate normally, replace the PF drive unit.	
3	Replacing the PF PWB	The PF PWB is faulty.	Replace the PF PWB.	
4	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

J4012/J4013: Registration sensor stay jam

The registration sensor does not turn on when feeding from cassette 2-3

Step	Check description	Assumed cause	Measures	Reference
1	Checking the registration sensor	The registration sensor does not operate properly.	Execute U031 [Regist]. If the registration sensor does not operate properly, clean and reattach it then reconnect the connector. If not repaired, replace it.	
2	Checking the PF conveying clutch	PF conveying clutch does not operate correctly.	If the PF conveying clutch does not operate normally, replace the PF drive unit.	

Step	Check description	Assumed cause	Measures	Reference
3	Replacing the PF PWB	The PF PWB is faulty.	Replace the PF PWB.	
4	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

J4201/J4202/J4203/J4208/J4209: Belt roll-up sensor non-arrival jam

The exit sensor does not turn on during paper feed from cassette 1-3, duplex section or MP tray.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the actuator	The actuator or exit sensor connecting section does not operate properly.	Move the actuator for the exit sensor in the fuser unit and check the joint section operates normally and the exit sensor turns on. If not, correct the actuator or replace the fuser unit.	
2	Checking the paper setting	The actual paper and the paper settings (paper weight, media type, etc.) do not match.	Change to the proper paper setting from System Menu	
3	Checking the fuser heat roller/ Fuser pressure roller/front fuser guide	Foreign objects adhere to the fuser heat roller, Fuser pressure roller or fuser front guide	Clean the fuser heat roller, Fuser pressure roller and fuser front guide. If not repaired, replace the fuser unit.	
4	Checking the fuser separation claws	Foreign materials such as toner adhere on the fuser separation nails. Or the fuser separation nails are deformed or improperly attached.	If toner, etc. adhere on the fuser separation nails, remove them. If it is deformed, replace the fuser unit.	
5	Checking the leading edge margin	The leading edge margin is insufficient	Execute U034 [Adj Paper Timing] and adjust the leading edge timing.	
6	Checking the exit sensor	The exit sensor does not operate properly.	Execute U031 [Fuser]. If the exit sensor does not operate properly, clean and reattach it then reconnect the connector. If not repaired, replace it.	
7	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

J4211/J4212/J4213/J4218/J4219: Belt roll-up sensor stay jam

The exit sensor does not turn off during paper feed from cassette 1-3, duplex section or MP tray.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the fuser exit guide	Paper is caught up at the fuser exit guide.	If welding of toner, burrs are on the conveying surface of the fuser exit guide, remove them or replace the fuser exit guide.	
2	Checking the exit guide	Paper is caught up at the exit guide	If welding of toner, burrs are on the fuser exit guide, remove or replace them.	
3	Checking the exit roller and the drive parts	The exit roller or drive parts do not operate correctly.	Check if the exit motor drive is transmitted to the upper/lower exit roller. if the drive gears is damaged or the bushing is worn down, replace it.	
4	Checking the actuator	The actuator or exit sensor connecting section does not operate properly.	Move the actuator for the exit sensor in the fuser unit and check the joint section operates normally and the exit sensor turns on. If not, correct the actuator or replace the fuser unit.	
5	Checking the exit sensor	The exit sensor does not operate properly.	Execute U031 [Fuser]. If the exit sensor does not operate properly, clean and reattach it then reconnect the connector. If not repaired, replace it.	

Step	Check description	Assumed cause	Measures	Reference
6	Checking the exit motor	The exit motor does not operate correctly.	Execute U030 [Exit]. If the exit motor does not operate correctly, reattach it and reconnect the connector. If not repaired, replace it.	
7	Checking the feed-shift solenoid	The feed-shift solenoid does not operate normally.	Execute U033 [Eject] to check the exit feed-shift guide operation. If it does not operate correctly, reattach the solenoid and reconnect the connector. If not repaired, replace it.	
8	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

J4301/J4302/J4303/J4309: DU sensor non-arrival jam

The DU sensor does not turn on when feeding from cassette 1-3 or MP tray

Step	Check description	Assumed cause	Measures	Reference
1	Checking the exit guide	Paper is caught up at the exit guide	If welding of toner, burrs are on the fuser exit guide, remove or replace them.	
2	Checking the exit roller and the drive parts	The exit roller or drive parts do not operate correctly.	Check if the exit motor drive is transmitted to the upper/lower exit roller. if the drive gears is damaged or the bushing is worn down, replace it.	
3	Checking the feed-shift solenoid	The feed-shift solenoid does not operate normally.	Execute U033 [Eject] to check the exit feed-shift guide operation. If it does not operate correctly, reattach the solenoid and reconnect the connector. If not repaired, replace it.	
4	Checking the exit motor	The exit motor does not operate correctly.	Execute U030 [Exit]. If the exit motor does not operate correctly, reattach it and reconnect the connector. If not repaired, replace it.	
5	Checking the DU conveying roller	Conveying capability of the DU conveying roller is not enough.	Clean the DU conveying roller. If the surface is worn down, replace it.	
6	Checking the DU conveying pulley	Pressure of the DU conveying pulley is not enough.	Check the DP conveying pulley. If the pressing parts are deformed or damaged, replace them.	
7	Checking the DU sensor	DU sensor does not operate correctly.	Execute U031 [DU1]. If DU sensor does not operate properly, clean and reattach it then reconnect the connector. If not repaired, replace it.	
8	Checking the DU clutch	DU clutch does not operate correctly.	Execute U032 [Dup]. If the DU clutch does not operate normally, replace the drive unit.	
9	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

J4311/4312/4313/4319: DU sensor stay jam

The DU sensor does not turn off when feeding from cassette 1-3 or MP tray

Step	Check description	Assumed cause	Measures	Reference
1	Checking the DU conveying roller	Conveying capability of the DU conveying roller is not enough.	Clean the DU conveying roller. If the surface is worn down, replace it.	
2	Checking the DU conveying pulley	Pressure of the DU conveying pulley is not enough.	Check the DP conveying pulley. If the pressing parts are deformed or damaged, replace them.	

Step	Check description	Assumed cause	Measures	Reference
3	Checking the DU sensor	DU sensor does not operate correctly.	Execute U031 [DU1]. If DU sensor does not operate properly, clean and reattach it then reconnect the connector. If not repaired, replace it.	
4	Checking the DU clutch	DU clutch does not operate correctly.	Execute U032 [Dup]. If the DU clutch does not operate normally, replace the drive unit.	
5	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

J4901/4902/4903/4908/4909: BR conveying sensor 2 non-arrival jam

BR conveying sensor 2 does not turn on during paper feed from cassette 1-3, duplex section or MP tray.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the BR conveying belt	The BR conveying belt comes off.	Check the BR conveying belt and reattach it	
2	Checking the conveying guide	The foreign objects such as toner are on the conveying guide.	Clean or replace the conveying guide.	
3	Checking the paper conveying roller	Conveying capability of the conveying roller is not enough.	Clean the conveying roller. If the surface is worn out, replace it.	
4	Checking BR conveying sensor 2	BR conveying sensor 2 does not operate correctly.	Reattach and reconnect BR conveying sensor 2. If not repaired, replace it.	
5	Checking the BR conveying motor	The BR conveying motor does not operate correctly.	Reconnect the connector of the DP conveying motor. If it is not fixed, replace it.	
6	Replacing the BR PWB	The BR PWB is faulty.	Replace the BR PWB.	
7	Replacing the DF relay PWB	The DF relay PWB is faulty	Replace the DF relay PWB.	
8	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

J4911/4912/4913/4918/4919: BR conveying sensor 2 stay jam

BR conveying sensor 2 does not turn off during paper feed from cassette 1-3, duplex section or MP tray.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the conveying guide	The foreign objects such as toner are on the conveying guide.	Clean or replace the conveying guide.	
2	Checking the paper conveying roller	Conveying capability of the conveying roller is not enough.	Clean the conveying roller. If the surface is worn out, replace it.	
3	Checking BR conveying sensor 2	BR conveying sensor 2 does not operate correctly.	Reattach and reconnect BR conveying sensor 2. If not repaired, replace it.	
4	Replacing the BR PWB	The BR PWB is faulty.	Replace the BR PWB.	
5	Replacing the DF relay PWB	The DF relay PWB is faulty	Replace the DF relay PWB.	
6	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

J5001/5002/5003/5008/5009: BR conveying sensor 3 non-arrival jam

BR conveying sensor 3 does not turn on during paper feed from cassette 1-3, duplex section or MP tray.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the conveying guide	The foreign objects such as toner are on the conveying guide.	Clean or replace the conveying guide.	
2	Checking the paper conveying roller	Conveying capability of the conveying roller is not enough.	Clean the conveying roller. If the surface is worn out, replace it.	

Step	Check description	Assumed cause	Measures	Reference
3	Checking BR conveying sensor 3	BR conveying sensor 3 does not operate correctly.	Reattach and reconnect BR conveying sensor 3. If not repaired, replace it.	
4	Replacing the BR PWB	The BR PWB is faulty.	Replace the BR PWB.	
5	Replacing the DF relay PWB	The DF relay PWB is faulty	Replace the DF relay PWB.	
6	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

J5011/5012/5013/5018/5019: BR conveying sensor 3 stay jam

BR conveying sensor 3 does not turn off during paper feed from cassette 1-3, duplex section or MP tray.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the conveying guide	The foreign objects such as toner are on the conveying guide.	Clean or replace the conveying guide.	
2	Checking the paper conveying roller	Conveying capability of the conveying roller is not enough.	Clean the conveying roller. If the surface is worn out, replace it.	
3	Checking BR conveying sensor 3	BR conveying sensor 3 does not operate correctly.	Reattach and reconnect BR conveying sensor 3. If not repaired, replace it.	
4	Replacing the BR PWB	The BR PWB is faulty.	Replace the BR PWB.	
5	Replacing the DF relay PWB	The DF relay PWB is faulty	Replace the DF relay PWB.	
6	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

J6023: DF staple cover open jam

The DF staple cover open is detected during the DF operation

Step	Check description	Assumed cause	Measures	Reference
1	Checking the DF staple cover	The DF front cover is not aligned to the other exterior covers.	Check if the DF staple cover is closed firmly and reattach it if necessary. If the DF staple cover is deformed, repair or replace it.	
2	Checking the DF staple cover switch	The DF staple cover switch does not operate normally	Check the DF staple cover switch. If not operating normally, reattach it and reconnect the connector. If not repaired, replace it.	
3	Replacing the DF PWB	The DF PWB is faulty.	Replace the DF PWB.	

J6043: DF top cover open jam

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 is closed firmly and reattach the DF top cover if necessary. If the DF top cover is deformed, repair or replace it.	
2	Checking the DF top cover sensor	The DF top cover sensor does not operate correctly.	Check the DF top cover sensor. If it does not operate correctly, reattach it and reconnect the connector. If not repaired, replace it.	
3	Replacing the DF PWB	The DF PWB is faulty.	Replace the DF PWB.	

J6103: DF conveying sensor jam

The DF conveying sensor does not turn on after passing the specific time since the paper output signal from the main unit was received.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the conveying guide	The foreign objects such as toner are on the conveying guide.	Clean or replace the conveying guide.	
2	Checking the paper conveying roller	Conveying capability of the conveying roller is not enough.	Clean the conveying roller. If the surface is worn out, replace it.	
3	Checking the DF conveying sensor	The DF entry sensor does not operate correctly.	Check the DF entry sensor. If it does not operate correctly, reattach it and reconnect the connector. If not repaired, replace it.	
4	Replacing the DF PWB	The DF PWB is faulty.	Replace the DF PWB.	

J6113: DF conveying stay jam

The DF conveying sensor does not turn off when passing the specific time after it turns on

Step	Check description	Assumed cause	Measures	Reference
1	Checking the conveying guide	The foreign objects such as toner are on the conveying guide.	Clean or replace the conveying guide.	
2	Checking the paper conveying roller	Conveying capability of the conveying roller is not enough.	Clean the conveying roller. If the surface is worn out, replace it.	
3	Checking the DF conveying sensor	The DF entry sensor does not operate correctly.	Check the DF entry sensor. If it does not operate correctly, reattach it and reconnect the connector. If not repaired, replace it.	
4	Replacing the DF PWB	The DF PWB is faulty.	Replace the DF PWB.	

J6123: DF conveying sensor stay jam

The conveying sensor detects paper at power-up or cover close

Step	Check description	Assumed cause	Measures	Reference
1	Checking the conveying guide	The foreign objects such as toner are on the conveying guide.	Clean or replace the conveying guide.	
2	Checking the paper conveying roller	Conveying capability of the conveying roller is not enough.	Clean the conveying roller. If the surface is worn out, replace it.	
3	Checking the DF conveying sensor	The DF conveying sensor does not operate normally.	Check the DF conveying sensor. If not operating normally, reattach it and reconnect the connector. If not repaired, replace it.	
4	Replacing the DF PWB	The DF PWB is faulty.	Replace the DF PWB.	

J6413: DF exit sensor stay jam

During the bundle eject operation, the DF exit sensor does not detect no paper when passing the specified time.

Step	Check description	Assumed cause	Measures	Reference
1	Checking DF adjustor tray	Foreign objects such as toner, etc. adhere to the DF adjustor tray	Clean the DF adjustor tray or replace it	
2	Checking the exit roller	The paper conveying force of the exit roller is insufficient.	Clean the exit roller. If the surface is worn out, replace it.	
3	Checking the DF exit sensor	The DF exit sensor does not operate correctly.	Check the DF exit sensor. If it does not operate correctly, reattach it and reconnect the connector. If not repaired, replace it.	
4	Replacing the DF PWB	The DF PWB is faulty.	Replace the DF PWB.	

J6423: DF exit sensor stay jam

The DF exit sensor detects paper at power-up or cover close

Step	Check description	Assumed cause	Measures	Reference
1	Checking DF adjustor tray	Foreign objects such as toner, etc. adhere to the DF adjustor tray	Clean the DF adjustor tray or replace it	
2	Checking the exit roller	The paper conveying force of the exit roller is insufficient.	Clean the exit roller. If the surface is worn out, replace it.	
3	Checking the DF exit sensor	The DF exit sensor does not operate correctly.	Check the DF exit sensor. If it does not operate correctly, reattach it and reconnect the connector. If not repaired, replace it.	
4	Replacing the DF PWB	The DF PWB is faulty.	Replace the DF PWB.	

J6803: Front adjustor plate operation on error

The DF adjustor sensor 1 does not turn on after passing the specified time when executing jobs

Step	Check description	Assumed cause	Measures	Reference
1	Checking DF adjustor sensor 1	DF adjustor sensor 1 does not operate normally	Check the DF adjustor sensor 1. If not operating normally, reattach it and reconnect the connector. If not repaired, replace it.	
2	Checking the DF adjustor motor 1	DF adjustor motor 1 does not operate normally	Check the DF adjustor motor 1. If not operating normally, reattach it and reconnect the connector. If not repaired, replace it.	
3	Replacing the DF PWB	The DF PWB is faulty.	Replace the DF PWB.	

J6813: Front adjustor plate operation off error

The DF adjustor sensor 1 does not turn off after passing the specified time when executing jobs

Step	Check description	Assumed cause	Measures	Reference
1	Checking DF adjustor sensor 1	DF adjustor sensor 1 does not operate normally	Check the DF adjustor sensor 1. If not operating normally, reattach it and reconnect the connector. If not repaired, replace it.	
2	Checking the DF adjustor motor 1	DF adjustor motor 1 does not operate normally	Check the DF adjustor motor 1. If not operating normally, reattach it and reconnect the connector. If not repaired, replace it.	
3	Replacing the DF PWB	The DF PWB is faulty.	Replace the DF PWB.	

J6903: Rear adjustor plate operation on error

The DF adjustor sensor 2 does not turn on after passing the specified time when executing jobs

Step	Check description	Assumed cause	Measures	Reference
1	Checking DF adjustor sensor 2	DF adjustor sensor 2 does not operate normally	Check the DF adjustor sensor 2. If not operating normally, reattach it and reconnect the connector. If not repaired, replace it.	
2	Checking the DF adjustor motor 2	DF adjustor motor 2 does not operate normally	Check the DF adjustor motor 2. If not operating normally, reattach it and reconnect the connector. If not repaired, replace it.	
3	Replacing the DF PWB	The DF PWB is faulty.	Replace the DF PWB.	

J6913: Rear adjustor plate operation off error

The DF adjustor sensor 2 does not turn off after passing the specified time when executing jobs

Step	Check description	Assumed cause	Measures	Reference
1	Checking DF adjustor sensor 2	DF adjustor sensor 2 does not operate normally	Check the DF adjustor sensor 2. If not operating normally, reattach it and reconnect the connector. If not repaired, replace it.	
2	Checking the DF adjustor motor 2	DF adjustor motor 2 does not operate normally	Check the DF adjustor motor 2. If not operating normally, reattach it and reconnect the connector. If not repaired, replace it.	
3	Replacing the DF PWB	The DF PWB is faulty.	Replace the DF PWB.	

J7013: Staple operation error

When starting the clinch operation, the initial setting of the staple for the next bundle is not ready after passing the specified time.

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	Replacing the DF staple unit	The DF staple unit is faulty.	Replace the DF staple unit.	
3	Replacing the DF PWB	The DF PWB is faulty.	Replace the DF PWB.	

J7023: Staple initial operation error

During the initial operation at power-up or cover close, when the staple supply operation is performed 10 time, the initial setting of the staple is not available.

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	Replacing the DF staple unit	The DF staple unit is faulty.	Replace the DF staple unit.	
3	Replacing the DF PWB	The DF PWB is faulty.	Replace the DF PWB.	

J7913: Sequence error 1

Operation start=1 during Finisher operation permission=0

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	Firmware mismatches	Upgrade the firmware to the latest version.	
2	Replacing the DF PWB	The DF PWB is faulty.	Replace the DF PWB.	

J7923: Sequence error 2

Maintenance mode request has occurred during Finisher operation permission = 0 or Operation start = 1

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	Firmware mismatches	Upgrade the firmware to the latest version.	
2	Replacing the DF PWB	The DF PWB is faulty.	Replace the DF PWB.	

J7933: Sequence error 3

Backup data command 1 is received at operation start=1

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	Firmware mismatches	Upgrade the firmware to the latest version.	
2	Replacing the DF PWB	The DF PWB is faulty.	Replace the DF PWB.	

J7943: Sequence error 4

Operation start=1 is received during standby=0

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	Firmware mismatches	Upgrade the firmware to the latest version.	
2	Replacing the DF PWB	The DF PWB is faulty.	Replace the DF PWB.	

J7953: Sequence error 5

Paper interval and bundle interval are not normal.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	Firmware mismatches	Upgrade the firmware to the latest version.	
2	Replacing the DF PWB	The DF PWB is faulty.	Replace the DF PWB.	

J7963: Sequence error 6

The exit finish command is not sent from the finisher when passing 15s after the BR exit sensor turns off

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	Firmware mismatches	Upgrade the firmware to the latest version.	
2	Replacing the DF PWB	The DF PWB is faulty.	Replace the DF PWB.	

J9000: No original feed

The DP feed sensor does not turn on after the paper feed was retried.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the original	The original leading edge has a dog-ear, is curled, wavy or others.	Correct or replace the original	
2	Checking the original	The original out of specification is used.	Explain users to use the original within the specifications.	
3	Checking the original	Foreign objects adhere on the original.	If foreign objects adhere, remove them	
4	Checking the original	The originals are stapled	Remove the staple	
5	Checking the original	Too many originals are loaded	Reduce the original stack volume to the specified	
6	Checking 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.	
7	Checking the paper path	The original is caught up by a piece of paper.	If there is a piece of paper, foreign objects on the conveying path, remove them.	
8	Checking the pickup pulley	The conveying function of the pickup pulley is not enough.	Clean the pickup pulley surface. If worn down, replace it.	

Step	Check description	Assumed cause	Measures	Reference
9	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.	
10	Checking the DP feed sensor	The DP feed sensor does not operate correctly.	Execute U244 [Feed]. If the DP feed sensor does not operate normally, check the actuator, spring and sensor connector. If not repaired, replace the sensor.	
11	Checking the DP feed clutch	The DP feed clutch does not operate correctly.	Check the DF feed clutch. If it does not operate correctly, reattach it and reconnect the connector. If not repaired, replace it.	
12	Checking the DP feed motor	The DP feed motor does not operate correctly.	Execute U243 [Feed Motor]. If the DP feed motor does not operate correctly, reattach it and reconnect the connector. If not repaired, replace it.	
13	Replacing the DP PWB	The DP PWB is faulty.	Replace the DP PWB.	

J9001: DP conveying jam

The DP timing sensor off is detected before the specified time after it turns on

Step	Check description	Assumed cause	Measures	Reference
1	Checking the original	The original out of specification is fed.	Explain users to use the original within the specifications.	
2	Checking the DP timing sensor	DP timing sensor does not operate correctly.	Execute U244 [Timing]. If the DP timing sensor does not operate correctly, reattach it and reconnect the connector. If not repaired, replace it.	
3	Replacing the DP PWB	The DP PWB is faulty.	Replace the DP PWB.	

J9002: Paper jam detected when starting the paper conveying

An unspecified conveying sensor turns on when starting paper conveying.

Step	Check description	Assumed cause	Measures	Reference
1	Specifying the sensor	Specify the sensor which is turned on	Specified the sensor turning on at U244 and go to the next step	
2	Checking the paper path	There is a piece of paper remaining on the paper conveying path to turn on the sensor.	If there is a piece of paper, foreign objects, etc. the conveying path, remove them.	
3	Checking the sensor	The sensor does not operate correctly.	Clean and reattach the sensor specified at U244 and reconnect the connector. If not repaired, replace it.	
4	Replacing the DP PWB	The DP PWB is faulty.	Replace the DP PWB.	

J9004: DP switchback jam

During the reversing duplex scanning, the DP registration sensor does not turn on when passing the specified time after the DP timing sensor turns off.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the paper path	The original is caught up by a piece of paper.	If there is a piece of paper, foreign objects on the conveying path, remove them.	

Step	Check description	Assumed cause	Measures	Reference
2	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	Checking the DP feed-shift guide	The original is hooked with the DP feedshift guide.	Check the DP feed-shift guide. If deformed, replace it.	
4	Checking the DP feed-shift motor	The DP feed-shift motor does not operate correctly.	Execute U243 [Rev Motor]. If the DP feed-shift motor does not operate correctly, reattach it and reconnect the connector. If not repaired, replace it.	
5	Checking the DP feed-shift sensor	The DP feed-shift sensor does not operate normally	Reattach the DP feed-shift sensor and reconnect the connector. If not repaired, replace it.	
6	Checking the DP registration sensor	The DP registration sensor does not operate correctly.	Execute U244 [Regist]. If the DP registration sensor does not operate correctly, reattach it and reconnect the connector. If not repaired, replace it.	
7	Replacing the DP PWB	The DP PWB is faulty.	Replace the DP PWB.	

J9010: DP cover open jam

The DP is opened during the original conveying

Step	Check description	Assumed cause	Measures	Reference
1	Checking the DP	The DP is not connected properly	Check if the DP is closed securely. Reattach it if necessary.	
2	Checking the DP opening/ closing switch	The DP opening/closing switch does not operate properly.	Execute U244 [Option]. If the DP open/close switch does not operate normally, reattach it and reconnect the connector.	
3	Replacing the DP PWB	The DP PWB is faulty.	Replace the DP PWB.	

J9011: DP top cover open jam

The DP top cover opens during the original conveying.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the DP top cover	The DP top cover is faulty.	Check if the DP top cover closes securely and reattach it if necessary. If the DP top cover is deformed, repair or replace it.	
2	Checking the DP top cover switch	The DP top cover switch does not operate properly.	Execute U244 [Cover Open]. If the DP top cover switch does not operate correctly, reattach it and reconnect the connector. If not repaired, replace it.	
3	Replacing the DP PWB	The DP PWB is faulty.	Replace the DP PWB.	

J9110: DP feed sensor multi-feeding jam

The DP feed sensor or DP registration sensor does not turn off after passing the specific time after the DP timing sensor turned on.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the original	The original leading edge has a dog-ear, is curled, wavy or others.	Correct or replace the original	
2	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
3	Checking the front DP separation pad and DP separation pulley	The paper separation force of the DP front separation pad and DP separation pulley is not enough	Clean the DP front separation pad and DP separation pulley. If worn down, replace them.	
4	Checking the DP feed sensor and DP registration sensor	The DP feed sensor or DP registration sensor does not operate normally	Clean and reattach the DP feed sensor and DP registration sensor and then reconnect the connector. If not repaired, replace it.	
5	Checking the DP feed clutch	The rotation of the DP feed roller does not stop while the DP feed clutch remains engaged.	Check the DF feed clutch. If it does not operate correctly, reattach it and reconnect the connector. If not repaired, replace it.	
6	Replacing the DP PWB	The DP PWB is faulty.	Replace the DP PWB.	

J9200: DP registration sensor non-arrival jam

The DP registration sensor does not turn on when passing the specified time after the DP timing sensor turns on

Step	Check description	Assumed cause	Measures	Reference
1	Checking the original	The original leading edge has a dog-ear, is curled, wavy or others.	Correct or replace the original	
2	Checking the original	The original out of specification is used.	Explain users to use the original within the specifications.	
3	Checking 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	Checking the paper path	The original is caught up by a piece of paper.	If there is a piece of paper, foreign objects on the conveying path, remove them.	
5	Checking the DP registration sensor	The DP registration sensor does not operate correctly.	Execute U244 [Regist]. If the DP registration sensor does not operate correctly, reattach it and reconnect the connector. If not repaired, replace it.	
6	Replacing the DP PWB	The DP PWB is faulty.	Replace the DP PWB.	

J9400: DP timing sensor non-arrival jam

The DP timing sensor does not turn on when passing the specified time after the DP registration sensor turns

Step	Check description	Assumed cause	Measures	Reference
1	Checking the original	The original leading edge has a dog-ear, is curled, wavy or others.	Correct or replace the original	
2	Checking the original	The original out of specification is used.	Explain users to use the original within the specifications.	
3	Checking 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	Checking the paper path	The original is caught up by a piece of paper.	If there is a piece of paper, foreign objects on the conveying path, remove them.	
5	Checking the DP timing sensor	DP timing sensor does not operate correctly.	Execute U244 [Timing]. If the DP timing sensor does not operate correctly, reattach it and reconnect the connector. If not repaired, replace it.	
6	Replacing the DP PWB	The DP PWB is faulty.	Replace the DP PWB.	

J9410: DP timing sensor stay jam

The DP timing sensor does not turn off when passing the specified time after it turns on

Step	Check description	Assumed cause	Measures	Reference
1	Checking the original	The original leading edge has a dog-ear, is curled, wavy or others.	Correct or replace the original	
2	Checking the original	The original out of specification is used.	Explain users to use the original within the specifications.	
3	Checking 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	Checking the paper path	The original is caught up by a piece of paper.	If there is a piece of paper, foreign objects on the conveying path, remove them.	
5	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	Checking the DP timing sensor	DP timing sensor does not operate correctly.	Execute U244 [Timing]. If the DP timing sensor does not operate correctly, reattach it and reconnect the connector. If not repaired, replace it.	
7	Replacing the DP PWB	The DP PWB is faulty.	Replace the DP PWB.	

⑷ Other Feeding/Conveying Failures

No.	Contents	Condition
(1)	Paper creases (Fuser factor)	
(2)	Paper creases (Registration or Transfer factor)	

Content of Feeding/Conveying Failures

(4-1)Paper creases (Fuser factor)

Condition: The image is printed on the crease section. (Fuser factor)

Step	Check description	Assumed cause	Measures	Reference
1	Checking the paper	Paper is curled caused by the moisture absorption. Or, paper leading edge is waving.	Flip paper upside down and reset. Or, replace with new paper which is unopened paper.	
2	(When the paper is skewed) Checking the rear transfer guide and the discharge needle.	Paper is caught in the rear transfer guide, discharge needle, a piece of paper, etc..	If a piece of paper or foreign objects are on the conveying path, or foreign objects or burrs are on the rear transfer guide or the discharge needle, remove them or replace them.	
3	(If occurring under a specific condition) Changing the setting	The actual paper and the paper settings (media type, paper size) do not match.	Set the proper media type via the System Menu.	
4	Checking the paper storage place	Paper is stored in a damp place.	Install the cassette heater if necessary. Also, ask users to store paper in a dry place.	
5	Checking the transfer roller	The transfer roller is dirty with the toner, paper dust or others, or it is worn down.	Clean the transfer roller. If the surface is worn down, replace it.	
6	Replacing the fuser unit	The center of the fuser pressure roller is worn out. The front and rear pressure spring are not attached properly.	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.	

(4-2)Paper creases (Registration or Transfer factor)

Condition: The image is not printed on the crease section. (Registration, transfer factor)

Step	Check description	Assumed cause	Measures	Reference
1	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.	
2	Checking the paper	foreign objects are on the paper.	Remove paper that the foreign objects adhere from the cassette.	
3	Opening and reclosing the right cover	The right cover is not firmly closed.	Open the right cover (conveying unit) once, and close it firmly.	
4	(When the paper is being conveyed obliquely) Resetting the paper width guide or MP paper width guide	The set position of the paper width guides / MP paper width guides is mismatched with the paper size, and so, the paper is skewed.	Reset the paper width guide or the MP paper width guide matches to paper size. Or, check set position of the support guide. (Excluding the cassette1)	
5	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
6	Checking the conveying rollers	Conveying related rollers are not attached properly. Or, the conveying capability is not enough due to dirty.	Clean the surface of the conveying related rollers and the pulleys (vertical conveying, middle, registration) and reattach.	
7	(When paper is skewed) Checking the pressure spring	Pressure balance is not good because the pressure spring of front and back of the roller are not attached properly.	Check the pressure of the conveying related rollers and the pulleys, and if the spring or the bearings are dropped off, reattach them. If they are deformed or worn out, replace them.	
8	(When the paper skew occurs) Checking the paper path	Paper is caught at the conveying guide, piece of paper, etc..	If a piece of paper, the foreign objects are on the conveying path, or the foreign objects, a burr are on the conveying surface of the conveying guide, remove or replace them. If the sheet guide material has a damage, deformation, floating, repair or replace them.	

7 - 3 Self Diagnostic

If the part causing the problem was not supplied, use the unit including the part for replacement.

Caution

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.

⑴ Self diagnostic error codes

(1-1)Error codes list

Error code	Contents
C0030	FAX PWB system error
C0070	FAX PWB incompatible detection error
C0100	Backup memory device error
C0120	MAC address data error
C0130	Backup memory reading/writing error
C0140	Backup memory data error
C0150	Engine EEPROM reading / writing error
C0160	EEPROM data error
C0170	Charger count error
C0180	Machine serial number mismatch
C0190	Backup memory device error (Engine)
C0500	Drive lock detected by the engine firmware
C0510	Main charger control error
C0520	Developer control error
C0530	Backup task error
C0800	Image processing error
C0830	FAX PWB flash program area checksum error
C0840	RTC error
C0870	PC FAX Image data transmission error
C0920	FAX file system error
C0980	24V power interruption detection
C1010	Lift motor 1 error
C1020	PF lift motor 1 error
C1030	PF lift motor 2 error
C1800	Paper Feeder communication error
C1900	Paper Feeder EEPROM error
C2101	Developer motor K steady-state error
C2102	Developer motor CMY steady-state error
C2201	Drum motor K steady-state error
C2202	Drum motor CMY steady-state error
C2300	Fuser motor steady state error

Error code	Contents
C2310	Fuser motor start-up error
C2550	Conveying motor steady-state error
C2550	Conveying motor startup error
C2600	PF motor error
C2700	Belt release motor error
C3100	Carriage error
C3100	Carriage error
C3200	LED error
C3200	CIS error
C3300	CCD AGC error
C3300	CIS AGC error
C3500	Scanner AISC communication error
C3600	Scanner sequence error
C4001	Polygon motor K startup error
C4002	Polygon motor C startup error
C4003	Polygon motor M startup error
C4004	Polygon motor Y startup error
C4011	Polygon motor K steady-state error
C4012	Polygon motor C steady-state error
C4013	Polygon motor M steady-state error
C4014	Polygon motor Y steady-state error
C4101	BD initialization error (Black)
C4102	BD initialization error (Cyan)
C4103	BD initialization error (Magenta)
C4104	BD initialization error (Yellow)
C4600	LSU cleaning motor error
C4700	Video ASIC device error
C6000	IH heating error
C6020	Fuser center thermistor high temperature error
C6030	Broken fuser center thermistor
C6050	Fuser center thermistor low temperature error
C6120	Fuser press roller thermistor high temperature error
C6130	Broken fuser press roller thermistor
C6200	IH heating error 2
C6220	Fuser edge thermistor high temperature error
C6230	Broken fuser edge thermistor
C6250	Fuser edge thermistor low temperature error
C6320	Fuser middle thermistor high temperature error
C6330	Broken fuser middle thermistor
C6600	Fuser heat belt rotation error
C6610	Fuser pressure release sensor error
C6740	IH PWB high temperature error (IGBT2)
C6760	Fuser IH input excessive electric current error
C6770	IH low power error
C6940	IH fan motor error
C6950	IH-CPU communication error
C6990	Fuser power source destination error

Error code	Contents
C7101	T/C sensor K error
C7102	T/C sensor C error
C7103	T/C sensor M error
C7104	T/C sensor Y error
C7200	Inner thermistor broken (developer)
C7210	Inner thermistor short-circuited (developer)
C7221	Broken LSU thermistor K
C7224	Broken LSU thermistor Y
C7231	LSU thermistor K short-circuited
C7234	LSU thermistor Y short-circuited
C7240	Broken container thermistor
C7250	Container thermistor short-circuited
C7601	Front ID sensor error
C7602	Rear ID sensor error
C7611	ID sensor density error K
C7612	ID sensor density error C
C7613	ID sensor density error M
C7614	ID sensor density error Y
C7620	ID sensor timing error
C7800	Outer thermistor broken
C7810	Outer thermistor short-circuited
C8030	DF tray upper limit detection error
C8040	DF belt error
C8140	Dr tray motor error
C8210	DF staple error
C8320	DF adjuster motor 2 error
C8330	DF adjuster motor 1error
C8350	DF roller motor error
C8360	DF slide motor error
C8460	EEPROM error
C8800	Document finisher communication error
C8830	Relay conveying unit communication error
C8990	Finisher setup error
C9000	DP communication error
C9060	DP EEPROM error

(1-2)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	Resetting the main power	The FAX PWB does not operate properly.	Turn off the power switch and unplug the power plug. After 5s passes, reconnect the power plug and 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.	
3	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

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 flash memory does not operate properly.	Turn off the power switch and unplug the power plug. After 5s passes, reconnect the power plug and turn on the power switch.	
2	Checking the main PWB	The connector or the FFC is not connected properly. Or, the wire, FFC, the 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

The MAC address data is incorrect.

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 plug. After 5s passes, reconnect the power plug and turn on the power switch.	
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 plug. After 5s passes, reconnect the power plug and turn on the power switch.	
2	Checking the main PWB	The connector or the FFC is not connected properly. Or, the wire, FFC, the 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 flash memory data read at the initial start-up is faulty

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 plug. After 5s passes, reconnect the power plug and turn on the power switch.	

Step	Check description	Assumed cause	Measures	Reference
2	Checking the main PWB	The connector or the FFC is not connected properly. Or, the wire, FFC, the 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. Continuous five times detection of no response from the device for 5ms or more on reading / writing.

2. Data read twice do not match continuous 8 times.

3. Writing data and reading data do not match continuous 8 times.

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	The EEPROM on the engine PWB does not operate properly.	Turn off the power switch and unplug the power plug. After 5s passes, reconnect the power plug and turn on the power switch.	
2	Checking the EEPROM on the engine PWB	The EEPROM is not properly attached.	Reattach the EEPROM on the engine PWB.	
3	Replacing the EEPROM	The EEPROM is faulty.	1. Print Maintenance Report at U000 beforehand. 2. Replace the EEPROM on the engine PWB. C6990 appears when turning the power on. Execute U169 at that state. 3. Then, print Maintenance Report at U000. Compare the setting values with Maintenance Report printed before and change the different values. (Target maintenance mode: U063, U100, U127, U140, U161, U465, U468 and U901, etc.) 4. Check the output image and adjust the image at U410, U411, etc. if necessary.	
4	Replacing the engine PWB	The engine PWB is faulty.	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 on the engine PWB does not operate properly.	Turn off the power switch and unplug the power plug. After 5s passes, reconnect the power plug 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.	1. Print Maintenance Report at U000 beforehand. 2. Replace the EEPROM on the engine PWB. C6990 appears when turning the power on. Execute U169 at that state. 3. Then, print Maintenance Report at U000. Compare the setting values with Maintenance Report printed before and change the different values. (Target maintenance mode: U063, U100, U127, U140, U161, U465, U468 and U901, etc.) 4. Check the output image and adjust the image at U410, U411, etc. if necessary.	

Step	Check description	Assumed cause	Measures	Reference
4	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

C0170: Charger count error

1. Errors are detected in both backup memory of the engine PWB charge counter and main PWB charge counter.

2. Main PWB counter data and engine PWB counter date are faulty

Step	Check description	Assumed cause	Measures	Reference
1	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB and execute U004	
2	Replacing the EEPROM on the engine PWB	The EEPROM is faulty.	1. Print Maintenance Report at U000 beforehand. 2. Replace the EEPROM on the engine PWB. C6990 appears when turning the power on. Execute U169 at that state. 3. Then, print Maintenance Report at U000. Compare the setting values with Maintenance Report printed before and change the different values. (Target maintenance mode: U063, U100, U127, U140, U161, U465, U468 and U901, etc.) 4. Check the output image and adjust the image at U410, U411, etc. if necessary.	
3	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 No. of the main PWB	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 No. in the EEPROM on the engine PWB	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 on the engine PWB	The EEPROM is faulty.	If the machine serial number on the engine PWB is different at U004, reattach the EEPROM. If not repaired, replace the EEPROM on the engine PWB by referring to the following procedures. 1. Print Maintenance Report at U000 beforehand. 2. Replace the EEPROM on the engine PWB. C6990 appears when turning the power on. Execute U169 at that state. 3. Then, print Maintenance Report at U000. Compare the setting values with Maintenance Report printed before and change the different values. (Target maintenance mode: U063, U100, U127, U140, U161, U465, U468 and U901, etc.) 4. Check the output image and adjust the image at U410, U411, etc. if necessary.	

Step	Check description	Assumed cause	Measures	Reference
5	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

C0190: Backup memory device error (Engine)

Data from the main unit IC cannot be read out at power-up

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	The IC in the engine PWB does not operate normally	Turn off the power switch and unplug the power plug. After 5s passes, reconnect the power plug and turn on the power switch.	
2	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

C0500: Drive lock detected by the engine firmware

During the engine steady state control, the main motor drive continued 60 minutes or more (except during the maintenance mode)

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	The firmware in the engine PWB does not operate normally	Turn off the power switch and unplug the power plug. After 5s passes, reconnect the power plug and turn on the power switch.	
2	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

C0510: Main charger control error

The main charger bias turns on while the drum stops.

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	The firmware in the engine PWB does not operate normally	Turn off the power switch and unplug the power plug. After 5s passes, reconnect the power plug and turn on the power switch.	
2	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

C0520: Developer control error

The developer bias off is detected during the main charge bias off

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	The firmware in the engine PWB does not operate normally	Turn off the power switch and unplug the power plug. After 5s passes, reconnect the power plug and turn on the power switch.	
2	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

C0530: Backup task error

No operation 30s or more when monitoring the backup task operation

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	The firmware in the engine PWB does not operate normally	Turn off the power switch and unplug the power plug. After 5s passes, reconnect the power plug and turn on the power switch.	
2	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

C0800: Image processing error

The print sequence jam (J010x) is 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 or the FFC is not connected properly. Or, the wire, FFC, the 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	Resetting the main power	The FAX PWB is not connected 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	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

• Not communicated with RTC correctly.

• RTC data is inconsistent with empty battery.

Step	Check description	Assumed cause	Measures	Reference
1	Setting time and date (RTC)	Time and date (RTC) are erased	Set Date and Time (RTC) from System Menu	
2	Replacing the main PWB	The main PWB is faulty, or the backup battery runs out.	Replacing 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 between the FAX PWB and the main PWB.

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	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.	
5	Replacing the main PWB	The main PWB is faulty.	Replace the main 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	Resetting the main power	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	FAX control values are incorrect	Execute U600 to initialize the FAX.	
3	Reconnecting the FAX PWB	The FAX PWB is not connected properly.	Reinstall FAX PWB to Main PWB.	
4	Firmware upgrade	The firmware is faulty.	Reinstall the FAX firmware.	
5	Replacing the FAX PWB	The FAX PWB is faulty.	Replace the FAX PWB.	

C0980: 24V power interruption detection

• 24V power shutoff signal is detected 1s continuously.

• Other service call error occurs after 24V power shutoff signal is lowered, and then 24V power is recovered.

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	The firmware in the engine PWB does not operate normally	Turn off the power switch and unplug the power plug. After 5s passes, reconnect the power plug and turn on the power switch.	
2	Checking the connection	The connector is not connected properly, or the wire is faulty.	Clean the terminal of the wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • Low-voltage PWB - Engine PWB	
3	Replacing the low voltage PWB	The low voltage PWB is faulty.	When the +24V generation from the low voltage PWB is not stable, and it lowers, replace the low voltage PWB.	
4	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

C1010: Lift motor 1 error

• Cassette 1 lift motor over-current is detected 5 times continuously.

• Lift sensor on is not detected 5 times continuously when passing 15s after cassette 1 is loaded.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the lift plate	The lift plate does not operate properly.	Repair or replace the lift plate when it does not move vertically.	
2	Checking the connection	The connector is not connected properly, 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 motor - Engine PWB(YC15) • Lift sensor - Engine PWB(YC15)	
3	Checking the lift motor	The lift motor is faulty.	Check the lift motor operation, and replace it if necessary.	
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	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.	

C1020: PF lift motor 1 error

Object: 500-sheet paper feeder, 500-sheetx2 paper feeder

The PF lift sensor 1 on is not detected 5 times continuously when passing 15s after loading cassette 2.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the lift plate	The lift plate does not operate properly.	Repair or replace the lift plate when it does not move vertically.	
2	Checking the connection	The connector is not connected properly, 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 lift moor 1 - PF PWB (YC4) • PF upper limit sensor 1 - PF PWB (YC3)	
3	Checking PF lift motor 1	PF lift motor 1 is faulty.	Check the operation of lift motor 1, and replace it if necessary.	
4	Checking PF lift sensor 1	PF lift sensor 1 is not properly attached, or it is faulty.	Reattach PF lift sensor 1. If not repaired, replace it.	
5	PF firmware upgrade	The PF firmware is not the latest version.	Upgrade the PF firmware to the latest version.	
6	Replacing the PF PWB	The PF PWB is faulty.	Replace the PF PWB.	

C1030: PF lift motor 2 error

Object: 500-sheetx2 paper feeder

The PF lift sensor 2 on is not detected 5 times continuously when passing 15s after loading cassette 3.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the lift plate	The lift plate does not operate properly.	Repair or replace the lift plate when it does not move vertically.	
2	Checking the connection	The connector is not connected properly, 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 lift moor 2 - PF PWB (YC6) • PF upper limit sensor 2 - PF PWB (YC5)	
3	Checking PF lift motor 2	PF lift motor 2 is faulty.	Check the operation of lift motor 2, and replace it if necessary.	
4	Checking PF lift sensor 2	PF lift sensor 2 is not properly attached, or it is faulty.	Reattach PF lift sensor 2. If not repaired, replace it.	
5	PF firmware upgrade	The PF firmware is not the latest version.	Upgrade the PF firmware to the latest version.	
6	Replacing the PF PWB	The PF PWB is faulty.	Replace the PF PWB.	

C1800: Paper Feeder communication error

Object: 500-sheet paper feeder, 500-sheetx2 paper feeder

The communication error was detected 10 times continuously.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	The connector is not connected properly, 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. • Engine PWB (YC25) - PF PWB(YC1)	
2	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware and PF firmware to the latest version	
3	Replacing the PF PWB	The PF PWB is faulty.	Replace the PF PWB.	

Step	Check description	Assumed cause	Measures	Reference
4	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

C1900: Paper Feeder EEPROM error

Object: 500-sheet paper feeder, 500-sheetx2 paper feeder

For internal count

The writing data and the reading data mismatch 4 times continuously when writing.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	The connector is not connected properly, 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. • Engine PWB (YC25) - PF PWB(YC1)	
2	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware and PF firmware to the latest version	
3	Replacing the PF PWB	The PF PWB is faulty.	Replace the PF PWB.	
4	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

C2101: Developer motor K steady-state error

Developer motor K steady state off is detected for 1s continuously after becoming the steady state.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
2	Checking the connection	The connector is not connected properly, 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. • Developer motor K - Engine PWB (YC18)	
3	Checking the drive unit	The drive unit is faulty.	Execute U030 [Dlp(K)/Drum] and check the developer motor K operation. If there are any load for the gear rotation inside the drive unit replace drive unit B.	
4	Replacing the developer motor	The developer motor is faulty.	Replace developer motor K.	
5	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

C2102: Developer motor CMY steady-state error

Developer motor CMY steady state off is detected 1s continuously after becoming the steady state.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
2	Checking the connection	The connector is not connected properly, 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. • Developer motor CMY - Engine PWB (YC19)	
3	Checking the drive unit	The drive unit is faulty.	Execute U030 [Dlp(Col)] and check the drum motor CMY operation. If there are any load for the gear rotation inside the drive unit replace drive unit A.	
4	Replacing the developer motor	The developer motor is faulty.	Replace developer motor CMY.	

Step	Check description	Assumed cause	Measures	Reference
5	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

C2201: Drum motor K steady-state error

Drum motor K steady state off is detected for 1s continuously after becoming the steady state.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
2	Checking the connection	The connector is not connected properly, 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 (YC19)	
3	Checking the drive unit	The drive unit is faulty.	Execute U030 [Dlp(K)/Drum] and check the drum motor K operation. If there are any load for the gear rotation inside the drive unit replace drive unit A.	
4	Replacing drum motor K	Drum motor K is faulty.	Replace drum motor K.	
5	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

C2202: Drum motor CMY steady-state error

Drum motor CMY steady state off is detected 1s continuously after becoming the steady state.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
2	Checking the connection	The connector is not connected properly, 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 CMY - Engine PWB (YC19)	
3	Checking the drive unit	The drive unit is faulty.	Execute U030 [Dlp(K)/Drum] and check the drum motor CMY operation. If there are any load for the gear rotation inside the drive unit replace drive unit A.	
4	Replacing drum motor CMY	Drum motor CMY are faulty.	Replace drum motor CMY.	
5	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

C2300: Fuser motor steady state error

The fuser motor steady state off is detected 1s continuously after becoming steady state

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
2	Checking the connection	The connector is not connected properly, 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 (YC18)	
3	Checking the drive unit	The drive unit is faulty.	Check the fuser motor operation. If there are any load for the gear rotation inside the drive unit replace drive unit B.	
4	Replacing the fuser motor	The fuser motor is faulty.	Replace the fuser motor.	
5	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

C2310: Fuser motor start-up error

The fuser motor is not in the steady state within 1.5s after start-up.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
2	Checking the connection	The connector is not connected properly, 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 (YC18)	
3	Checking the drive unit	The drive unit is faulty.	Check the fuser motor operation. If there are any load for the gear rotation inside the drive unit replace drive unit B.	
4	Replacing the fuser motor	The fuser motor is faulty.	Replace the fuser motor.	
5	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

C2550: Conveying motor steady-state error

The conveying motor steady state off is detected 1s continuously after becoming the steady state.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
2	Checking the connection	The connector is not connected properly, 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. • Conveying motor - Engine PWB (YC14)	
3	Checking the drive unit	The drive unit is faulty.	Execute U030 [Feed] and check the feed motor operation. If there are any load for the gear rotation inside the drive unit replace drive unit C.	
4	Replacing the conveying motor	The conveying motor is faulty.	Replace the conveying motor.	
5	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

C2550: Conveying motor startup error

The conveying motor is not in the steady state within 2s after start-up.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
2	Checking the connection	The connector is not connected properly, 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. • Conveying motor - Engine PWB (YC14)	
3	Checking the drive unit	The drive unit is faulty.	Execute U030 [Feed] and check the feed motor operation. If there are any load for the gear rotation inside the drive unit replace drive unit C.	
4	Replacing the conveying motor	The conveying motor is faulty.	Replace the conveying motor.	
5	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

C2600: PF motor error

Object: 500-sheet paper feeder, 500-sheetx2 paper feeder

An error signal was detected 2s continuously during the PF motor drive

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	The connector is not connected properly, 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 motor - PF PWB(YC25)	
2	Firmware upgrade	The firmware is not the latest version.	Upgrade the PF firmware to the latest version.	
3	Checking the PF motor	The PF motor is faulty	Replace the PF motor	
4	Replacing the PF PWB	The PF PWB is faulty.	Replace the PF PWB.	

C2700: Belt release motor error

The error signal is detected for 3s continuously after the belt release motor starts up.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The engine firmware is faulty.	Upgrade the engine firmware to the latest version	
2	Checking the drive parts	The drive transmission of the belt release motor is faulty.	Repair the drive transmission parts if the drive from the belt release motor is not transmitted.	
3	Checking the connection	The connector is not connected properly, 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. • Belt release motor - Transfer PWB (YC2) • Belt rotation sensor - Transfer PWB (YC2) • Transfer PWB (YC2) - Transfer relay PWB (YC1) • Transfer relay PWB (YC2) - Engine PWB (YC11)	
4	Checking the belt rotation sensor	The belt rotation sensor comes off.	Reattach or replace the belt rotation sensor.	
5	Checking the belt release motor	The belt release motor is not operated correctly.	Reattach or replace the belt release motor.	
6	Primary transfer unit replacement	The primary transfer roller lift-up drive section is faulty.	Replace the primary transfer unit.	
7	Replacing the transfer relay PWB	The transfer relay PWB is faulty.	Replace the transfer relay PWB.	
8	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

C3100: Carriage error

Object: CCD model

The home position sensor is off and does not turn on when passing the specified time at initialization and it does not turn on at retry once.

Step	Check description	Assumed cause	Measures	Reference
1	Unlocking the primary mirror unit	The primary mirror unit is not unlocked.	Unlock the primary mirror 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 scanner and scanner wire	A load is applied to the scanner movement.	Move the mirror unit manually. If there is heavy load in excess, clean the scanner wire, wire drum, scanner rail, etc.	
4	Checking the connection	The connector is not connected properly, 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. • Scanner motor - Engine PWB (YC12)	
5	Checking the scanner motor and the belt tension.	The scanner motor or belt tension is faulty	Reattach the scanner motor and adjust the belt tension. If not repaired, replace the scanner motor.	
6	Checking the home position sensor	The home position sensor is faulty.	Reattach the home position sensor. If not repaired, replace it.	
7	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

C3100: Carriage error

Object: CIS model

The home position sensor is off and does not turn on when passing the specified time at initialization and it does not turn on at retry once.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
2	Checking the scanner and ISU shaft	A load is applied to the scanner movement.	Move the mirror unit manually. If there is heavy load in excess, check the drive belt and clean the ISU shaft.	
3	Checking the connection	The connector is not connected properly, 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. • Scanner motor - Engine PWB (YC12)	
4	Checking the scanner motor	The scanner motor is faulty.	Reattach the scanner motor. If not repaired, replace it.	
5	Checking the home position sensor	The home position sensor is faulty.	Reattach the home position sensor. If not repaired, replace it.	
6	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

C3200: LED error

Object: CCD model

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	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
2	Checking the LED lamp	The LED lamp does not light.	Check if the LED lamp lights. If it does not light, replace the lamp unit and execute U411 [Table].	
3	Checking the connection	FFC is not connected properly. Or it is faulty.	Clean the FFC terminals of the following FFC and reconnect them. If the FFC terminal is deformed or broken, replace the FFC. • LED drive PWB - Main PWB (YC3003)	

Step	Check description	Assumed cause	Measures	Reference
4	Checking the lens unit	The CCD PWB is faulty.	Clean the FFC terminal and reconnect it. If deformed or broken, replace the FFC. • CCD PWB - Main PWB (YC3002) If not repaired, replace the lens unit and execute U411.	
5	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

C3200: CIS error

Object: CIS model

• The white reference data retrieved by lighting the lamp at the initial operation is lower than the specified value.

• The white reference data retrieved by lighting the lamp at the auto table adjustment is lower than the specified value.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
2	Checking the CIS lamp	The CIS lamp does not light	Check if the CIS lamp turns on. If not, replace the lamp unit and execute U411 [Table]	
3	Checking the connection	FFC is not connected properly. Or it is faulty.	Clean the FFC terminals of the following FFC and reconnect them. If the FFC terminal is deformed or broken, replace the FFC. • CIS PWB - Main PWB (YC3001)	
4	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

C3300: CCD AGC error

Object: CCD model

For internal count

The white reference data after adjustment is not within the target range

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
2	Cleaning the backside of the contact glass	The white reference sheet is dirty.	Clean the white reference sheet at the backside of the contact glass.	
3	Checking the LED lamp	The LED lamp is broken.	Check if the LED lamp lights. If it does not light, replace the lamp unit and execute U411 [Table].	
4	Checking the connection	FFC is not connected properly. Or it is faulty.	Clean the FFC terminals of the following FFC and reconnect them. If the FFC terminal is deformed or broken, replace the FFC. • LED drive PWB - Main PWB (YC3003)	
5	Checking the lens unit	The CCD PWB is faulty.	Clean the FFC terminal and reconnect it. If deformed or broken, replace the FFC. • CCD PWB - Main PWB (YC3002) If not repaired, replace the lens unit and execute U411.	
6	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

C3300: CIS AGC error

Object: CIS model

For internal count

The white reference data after adjustment is not within the target range

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
2	Cleaning the backside of the contact glass	The white reference sheet is dirty.	Clean the white reference sheet at the backside of the contact glass.	
3	Checking the CIS lamp	The CIS lamp does not light	Check if the CIS lamp turns on. If not, replace the lamp unit and execute U411 [Table]	
4	Checking the connection	FFC is not connected properly. Or it is faulty.	Clean the FFC terminals of the following FFC and reconnect them. If the FFC terminal is deformed or broken, replace the FFC. • CIS PWB - Main PWB (YC3001)	
5	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

C3500: Scanner AISC communication error

Readback values are different 4 times continuously during communication between the scanner and ASIC

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the main firmware and the engine firmware to the latest version.	
2	Checking the connection	FFC is not connected properly. Or it is faulty.	Clean the FFC terminals of the following FFC and reconnect them. If the FFC terminal is deformed or broken, replace the FFC. • Main PWB (YC26) - Engine PWB (YC3)	
3	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	
4	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

C3600: Scanner sequence error

- Mail box buffer overflow is detected.
- Software sequence error is detected.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the main firmware and the engine firmware to the latest version.	
2	Executing U021	The memory operation is faulty.	Execute U021 and initialize the backup data	
3	Checking the connection	FFC is not connected properly. Or it is faulty.	Clean the FFC terminals of the following FFC and reconnect them. If the FFC terminal is deformed or broken, replace the FFC. • Main PWB (YC26) - Engine PWB (YC3)	
4	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	
5	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

C4001: Polygon motor K startup error

Polygon motor K is not in the steady state within 10s after becoming steady state.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
2	Checking the connection	The connector is not connected properly, 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. • Polygon motor K - LSU relay PWB (YC5) • LSU relay PWB (YC9) - Engine PWB (YC6)	
3	Checking the polygon motor	The polygon motor does not rotate properly.	Check the rotation sound of the polygon motor, and reattach or replace LSU K if it does not rotate properly.	
4	Replacing the LSU relay PWB	The LSU relay PWB is faulty.	Replace the LSU relay PWB.	
5	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

C4002: Polygon motor C startup error

Polygon motor C is not in the steady state within 10s after becoming steady state.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
2	Checking the connection	The connector is not connected properly, 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. • Polygon motor C - LSU relay PWB (YC7) • LSU relay PWB (YC9) - Engine PWB (YC6)	
3	Checking the polygon motor	The polygon motor does not rotate properly.	Check the rotation sound of the polygon motor, and reattach or replace LSU C if it does not rotate properly.	
4	Replacing the LSU relay PWB	The LSU relay PWB is faulty.	Replace the LSU relay PWB.	
5	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

C4003: Polygon motor M startup error

Polygon motor M is not in the steady state within 10s after becoming steady state.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
2	Checking the connection	The connector is not connected properly, 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. • Polygon motor M - LSU relay PWB (YC6) • LSU relay PWB (YC9) - Engine PWB (YC6)	
3	Checking the polygon motor	The polygon motor does not rotate properly.	Check the rotation sound of the polygon motor, and reattach or replace LSU M if it does not rotate properly.	
4	Replacing the LSU relay PWB	The LSU relay PWB is faulty.	Replace the LSU relay PWB.	
5	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

C4004: Polygon motor Y startup error

Polygon motor Y is not in the steady state within 10s after becoming steady state.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
2	Checking the connection	The connector is not connected properly, 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. • Polygon motor Y - LSU relay PWB (YC8) • LSU relay PWB (YC9) - Engine PWB (YC6)	
3	Checking the polygon motor	The polygon motor does not rotate properly.	Check the rotation sound of the polygon motor, and reattach or replace LSU Y if it does not rotate properly.	
4	Replacing the LSU relay PWB	The LSU relay PWB is faulty.	Replace the LSU relay PWB.	
5	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

C4011: Polygon motor K steady-state error

Polygon motor K is off from the steady state for 1s continuously after becoming the steady state.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
2	Checking the connection	The connector is not connected properly, 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. • Polygon motor K - LSU relay PWB (YC5) • LSU relay PWB (YC9) - Engine PWB (YC6)	
3	Checking the polygon motor	The polygon motor does not rotate properly.	Check the rotation sound of the polygon motor, and reattach or replace LSU K if it does not rotate properly.	
4	Replacing the LSU relay PWB	The LSU relay PWB is faulty.	Replace the LSU relay PWB.	
5	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

C4012: Polygon motor C steady-state error

Polygon motor C is off from the steady state for 1s continuously after becoming the steady state.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
2	Checking the connection	The connector is not connected properly, 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. • Polygon motor C - LSU relay PWB (YC7) • LSU relay PWB (YC9) - Engine PWB (YC6)	
3	Checking the polygon motor	The polygon motor does not rotate properly.	Check the rotation sound of the polygon motor, and reattach or replace LSU C if it does not rotate properly.	
4	Replacing the LSU relay PWB	The LSU relay PWB is faulty.	Replace the LSU relay PWB.	
5	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

C4013: Polygon motor M steady-state error

Polygon motor M is off from the steady state for 1s continuously after becoming the steady state.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
2	Checking the connection	The connector is not connected properly, 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. • Polygon motor M - LSU relay PWB (YC6) • LSU relay PWB (YC9) - Engine PWB (YC6)	
3	Checking the polygon motor	The polygon motor does not rotate properly.	Check the rotation sound of the polygon motor, and reattach or replace LSU M if it does not rotate properly.	
4	Replacing the LSU relay PWB	The LSU relay PWB is faulty.	Replace the LSU relay PWB.	
5	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

C4014: Polygon motor Y steady-state error

Polygon motor Y is off from the steady state for 1s continuously after becoming the steady state.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
2	Checking the connection	The connector is not connected properly, 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. • Polygon motor Y - LSU relay PWB (YC8) • LSU relay PWB (YC9) - Engine PWB (YC6)	
3	Checking the polygon motor	The polygon motor does not rotate properly.	Check the rotation sound of the polygon motor, and reattach or replace LSU Y if it does not rotate properly.	
4	Replacing the LSU relay PWB	The LSU relay PWB is faulty.	Replace the LSU relay PWB.	
5	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

C4101: BD initialization error (Black)

BD is not detected within 1s after polygon motor K is in the steady state.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the main firmware to the latest version.	
2	Checking the connection	The connector is not connected properly, 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. • APC PWB K - LSU relay PWB (YC1) • LSU relay PWB (YC10) - Main PWB (YC23)	
3	Checking the LSU	The APC PWB does not operate normally	Reinstall or replace LSU K.	
4	Replacing the LSU relay PWB	The LSU relay PWB is faulty.	Replace the LSU relay PWB.	
5	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

C4102: BD initialization error (Cyan)

BD is not detected within 1s after polygon motor C is in the steady state.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the main firmware to the latest version.	
2	Checking the connection	The connector is not connected properly, 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. • APC PWB C - LSU relay PWB (YC3) • LSU relay PWB (YC10) - Main PWB (YC23)	
3	Checking the LSU	The APC PWB does not operate normally	Reinstall or replace LSU C.	
4	Replacing the LSU relay PWB	The LSU relay PWB is faulty.	Replace the LSU relay PWB.	
5	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

C4103: BD initialization error (Magenta)

BD is not detected within 1s after polygon motor M is in the steady state.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the main firmware to the latest version.	
2	Checking the connection	The connector is not connected properly, 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. • APC PWB M - LSU relay PWB (YC2) • LSU relay PWB (YC10) - Main PWB (YC23)	
3	Checking the LSU	The APC PWB does not operate normally	Reinstall or replace LSU M.	
4	Replacing the LSU relay PWB	The LSU relay PWB is faulty.	Replace the LSU relay PWB.	
5	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

C4104: BD initialization error (Yellow)

BD is not detected within 1s after polygon motor Y is in the steady state.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the main firmware to the latest version.	
2	Checking the connection	The connector is not connected properly, 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. • APC PWB Y - LSU relay PWB (YC4) • LSU relay PWB (YC10) - Main PWB (YC23)	
3	Checking the LSU	The APC PWB does not operate normally	Reinstall or replace LSU Y.	
4	Replacing the LSU relay PWB	The LSU relay PWB is faulty.	Replace the LSU relay PWB.	
5	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

C4600: LSU cleaning motor error

The error signal is detected for 2s continuously after the motor starts up.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
2	Checking the drive parts	The drive transmission from the LSU cleaning motor is faulty.	Repair the drive transmission parts if the drive from the LSU cleaning motor is not transmitted.	
3	Checking the connection	The connector is not connected properly, or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • LSU cleaning motor - LSU relay PWB (YC11) • LSU relay PWB (YC9) - Engine PWB (YC6)	
4	Replacing the LSU cleaning motor	The LSU cleaning motor is faulty.	Replace the LSU cleaning motor.	
5	Replacing the LSU relay PWB	The LSU relay PWB is faulty.	Replace the LSU relay PWB.	
6	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

C4700: Video ASIC device error

Writing data and reading data does not match 8 consecutive times.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the main firmware and engine firmware to the latest version.	
2	Checking the connection	The connector is not connected properly, or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • Main PWB (YC26) - Engine PWB (YC3)	
3	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	
4	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

C6000: IH heating error

1. The fuser center thermistor does not detect 100°C / 212°F or more within 25s after warm-up is started.

2. During the warm-up, the fuser center thermistor does not detect the ready temperature within 20s after it detects 100°C / 212°F.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
2	Executing U169	The IH setting mismatches the power supply specification.	Set the destination same as the voltage of the IH PWB at U169.	
3	Removing foreign material	There are foreign objects between the fuser unit and the IH unit. Or, the foreign objects are adhered on the fuser heat belt.	Remove foreign material if it is on between the fuser unit and the IH unit, or on the fuser unit. Then, reinstall the fuser unit.	
4	Reinstalling the fuser unit	There are foreign objects in the drawer contact terminal of the fuser unit	Clean the drawer connector terminal of the fuser unit. Check if the pin of the drawer connector is not bent, and replace the fuser unit if it is bent. If it is normal, reinstall the fuser unit so that the drawer connector is securely connected.	

Step	Check description	Assumed cause	Measures	Reference
5	Checking the connection	The connector is not connected properly, 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. • Drawer connector of the fuser unit - Engine PWB (YC9) • IH unit - IH PWB (YC2, YC3) • IH PWB (YC4) - Engine PWB (YC10)	
6	Replacing the fuser unit	The parts such as the thermistor or thermal cutout are faulty.	Replace the fuser unit.	
7	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	
8	Replacing the IH PWB	The IH PWB is faulty.	Replace the IH PWB.	
9	Replacing the IH unit	The IH unit is faulty.	Replace the IH unit.	

C6020: Fuser center thermistor high temperature error

The fuser center thermistor detected 230°C / 446°F or more for 1s.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
2	Reinstalling the fuser unit	There are foreign objects in the drawer contact terminal of the fuser unit	Clean the drawer connector terminal of the fuser unit. Check if the pin of the drawer connector is not bent, and replace the fuser unit if it is bent. If it is normal, reinstall the fuser unit so that the drawer connector is securely connected.	
3	Checking the connection	The connector is not connected properly, 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. • Drawer connector of the fuser unit - Engine PWB (YC9) • IH unit - IH PWB (YC2, YC3) • IH PWB (YC4) - Engine PWB (YC10)	
4	Replacing the fuser unit	The parts such as the thermistor are faulty.	Replace the fuser unit.	
5	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	
6	Replacing the IH PWB	The IH PWB is faulty.	Replace the IH PWB.	
7	Replacing the IH unit	The IH unit is faulty.	Replace the IH unit.	

C6030: Broken fuser center thermistor

1. During warm-up, the fuser center thermistor detects 41°C / 105°F for 1s continuously while the fuser edge thermistor detects 100°C / 212°F or more.

2. The fuser center thermistor does not detect 25°C / 77°F within 12s after start-up.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
2	Removing foreign material	There are foreign objects between the fuser unit and the IH unit. Or, the foreign objects are adhered on the fuser heat belt.	Remove foreign material if it is on between the fuser unit and the IH unit, or on the fuser unit. Then, reinstall the fuser unit.	

Step	Check description	Assumed cause	Measures	Reference
3	Reinstalling the fuser unit	There are foreign objects in the drawer contact terminal of the fuser unit	Clean the drawer connector terminal of the fuser unit. Check if the pin of the drawer connector is not bent, and replace the fuser unit if it is bent. If it is normal, reinstall the fuser unit so that the drawer connector is securely connected.	
4	Checking the connection	The connector is not connected properly, 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. • Drawer connector of the fuser unit - Engine PWB (YC9) • IH unit - IH PWB (YC2, YC3) • IH PWB (YC4) - Engine PWB (YC10)	
5	Replacing the fuser unit	The parts such as the thermistor are faulty.	Replace the fuser unit.	
6	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	
7	Replacing the IH PWB	The IH PWB is faulty.	Replace the IH PWB.	
8	Replacing the IH unit	The IH unit is faulty.	Replace the IH unit.	

C6050: Fuser center thermistor low temperature error

The fuser center thermistor detects less than 80°C / 176°F for 1s during printing.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
2	Removing foreign material	There are foreign objects between the fuser unit and the IH unit. Or, the foreign objects are adhered on the fuser heat belt.	Remove foreign material if it is on between the fuser unit and the IH unit, or on the fuser unit. Then, reinstall the fuser unit.	
3	Reinstalling the fuser unit	There are foreign objects in the drawer contact terminal of the fuser unit	Clean the drawer connector terminal of the fuser unit. Check if the pin of the drawer connector is not bent, and replace the fuser unit if it is bent. If it is normal, reinstall the fuser unit so that the drawer connector is securely connected.	
4	Checking the connection	The connector is not connected properly, 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. • Drawer connector of the fuser unit - Engine PWB (YC9) • IH unit - IH PWB (YC2, YC3) • IH PWB (YC4) - Engine PWB (YC10)	
5	Replacing the fuser unit	The parts such as the thermistor are faulty.	Replace the fuser unit.	
6	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	
7	Replacing the IH PWB	The IH PWB is faulty.	Replace the IH PWB.	
8	Replacing the IH unit	The IH unit is faulty.	Replace the IH unit.	

C6120: Fuser press roller thermistor high temperature error

The fuser press roller thermistor detected 210°C / 410°F or more for 1s.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
2	Reinstalling the fuser unit	There are foreign objects in the drawer contact terminal of the fuser unit	Clean the drawer connector terminal of the fuser unit. Check if the pin of the drawer connector is not bent, and replace the fuser unit if it is bent. If it is normal, reinstall the fuser unit so that the drawer connector is securely connected.	
3	Checking the connection	The connector is not connected properly, 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. • Drawer connector of the fuser unit - Engine PWB (YC9)	
4	Replacing the fuser unit	The parts such as the thermistor are faulty.	Replace the fuser unit.	
5	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

C6130: Broken fuser press roller thermistor

1. During warm-up, the fuser press roller thermistor detects less than 35°C / 95°F for 60s continuously.

2. After finishing warm-up, the fuser press roller thermistor detects less than 35°C / 95°F for 30s continuously.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
2	Removing foreign material	There are foreign objects between the fuser unit and the IH unit. Or, the foreign objects are adhered on the fuser heat belt.	Remove foreign material if it is on between the fuser unit and the IH unit, or on the fuser unit. Then, reinstall the fuser unit.	
3	Reinstalling the fuser unit	There are foreign objects in the drawer contact terminal of the fuser unit	Clean the drawer connector terminal of the fuser unit. Check if the pin of the drawer connector is not bent, and replace the fuser unit if it is bent. If it is normal, reinstall the fuser unit so that the drawer connector is securely connected.	
4	Checking the connection	The connector is not connected properly, 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. • Drawer connector of the fuser unit - Engine PWB (YC9) • IH unit - IH PWB (YC2, YC3) • IH PWB (YC4) - Engine PWB (YC10)	
5	Replacing the fuser unit	The parts such as the thermistor are faulty.	Replace the fuser unit.	
6	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	
7	Replacing the IH PWB	The IH PWB is faulty.	Replace the IH PWB.	
8	Replacing the IH unit	The IH unit is faulty.	Replace the IH unit.	

C6200: IH heating error 2

1. After warm-up is started, the fuser edge thermistor does not detect 80°C / 176°F within 25s. Or, during the warm-up, specified temperature (Ready display temperature) is not detected even 420s passed after center thermistor reached 100°C / 212°F.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
2	Removing foreign material	There are foreign objects between the fuser unit and the IH unit. Or, the foreign objects are adhered on the fuser heat belt.	Remove foreign material if it is on between the fuser unit and the IH unit, or on the fuser unit. Then, reinstall the fuser unit.	
3	Reinstalling the fuser unit	There are foreign objects in the drawer contact terminal of the fuser unit	Clean the drawer connector terminal of the fuser unit. Check if the pin of the drawer connector is not bent, and replace the fuser unit if it is bent. If it is normal, reinstall the fuser unit so that the drawer connector is securely connected.	
4	Checking the connection	The connector is not connected properly, 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. • Drawer connector of the fuser unit - Engine PWB (YC9) • IH unit - IH PWB (YC2, YC3) • IH PWB (YC4) - Engine PWB (YC10)	
5	Replacing the fuser unit	The parts such as the thermistor are faulty.	Replace the fuser unit.	
6	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	
7	Replacing the IH PWB	The IH PWB is faulty.	Replace the IH PWB.	
8	Replacing the IH unit	The IH unit is faulty.	Replace the IH unit.	

C6220: Fuser edge thermistor high temperature error

The fuser edge thermistor detects 245°C / 473°F or more for 1s.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
2	Reinstalling the fuser unit	There are foreign objects in the drawer contact terminal of the fuser unit	Clean the drawer connector terminal of the fuser unit. Check if the pin of the drawer connector is not bent, and replace the fuser unit if it is bent. If it is normal, reinstall the fuser unit so that the drawer connector is securely connected.	
3	Checking the connection	The connector is not connected properly, 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. • Drawer connector of the fuser unit - Engine PWB (YC9)	
4	Replacing the fuser unit	The parts such as the thermistor are faulty.	Replace the fuser unit.	
5	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	
6	Replacing the IH unit	The IH unit is faulty.	Replace the IH unit.	

C6230: Broken fuser edge thermistor

1. During warm-up, the fuser edge thermistor detects less than 41°C / 105°F for 1s continuously while the fuser center thermistor detects 100°C / 212°F or more.

2. The fuser edge thermistor does not detect 25°C / 77°F within 12s after start-up.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
2	Reinstalling the fuser unit	There are foreign objects in the drawer contact terminal of the fuser unit	Clean the drawer connector terminal of the fuser unit. Check if the pin of the drawer connector is not bent, and replace the fuser unit if it is bent. If it is normal, reinstall the fuser unit so that the drawer connector is securely connected.	
3	Checking the connection	The connector is not connected properly, 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. • Drawer connector of the fuser unit - Engine PWB (YC9)	
4	Replacing the fuser unit	The parts such as the thermistor are faulty.	Replace the fuser unit.	
5	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

C6250: Fuser edge thermistor low temperature error

The fuser edge thermistor detected less than 80°C / 176°F for 1s during printing.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
2	Removing foreign material	There are foreign objects between the fuser unit and the IH unit. Or, the foreign objects are adhered on the fuser heat belt.	Remove foreign material if it is on between the fuser unit and the IH unit, or on the fuser unit. Then, reinstall the fuser unit.	
3	Reinstalling the fuser unit	There are foreign objects in the drawer contact terminal of the fuser unit	Clean the drawer connector terminal of the fuser unit. Check if the pin of the drawer connector is not bent, and replace the fuser unit if it is bent. If it is normal, reinstall the fuser unit so that the drawer connector is securely connected.	
4	Checking the connection	The connector is not connected properly, 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. • Drawer connector of the fuser unit - Engine PWB (YC9) • IH unit - IH PWB (YC2, YC3) • IH PWB (YC4) - Engine PWB (YC10)	
5	Replacing the fuser unit	The parts such as the thermistor are faulty.	Replace the fuser unit.	
6	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	
7	Replacing the IH PWB	The IH PWB is faulty.	Replace the IH PWB.	
8	Replacing the IH unit	The IH unit is faulty.	Replace the IH unit.	

C6320: Fuser middle thermistor high temperature error

The fuser middle thermistor detected 245°C / 473°F or more for 1s.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
2	Reinstalling the fuser unit	There are foreign objects in the drawer contact terminal of the fuser unit	Clean the drawer connector terminal of the fuser unit. Check if the pin of the drawer connector is not bent, and replace the fuser unit if it is bent. If it is normal, reinstall the fuser unit so that the drawer connector is securely connected.	
3	Checking the connection	The connector is not connected properly, 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. • Drawer connector of the fuser unit - Engine PWB (YC9)	
4	Replacing the fuser unit	The parts such as the thermistor are faulty.	Replace the fuser unit.	
5	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	
6	Replacing the IH unit	The IH unit is faulty.	Replace the IH unit.	

C6330: Broken fuser middle thermistor

The fuser middle thermistor detects less than 41 °C / 105°F for 1s continuously while the fuser center thermistor or the fuser edge thermistor detects 100°C / 212°F or more during warm-up.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
2	Reinstalling the fuser unit	There are foreign objects in the drawer contact terminal of the fuser unit	Clean the drawer connector terminal of the fuser unit. Check if the pin of the drawer connector is not bent, and replace the fuser unit if it is bent. If it is normal, reinstall the fuser unit so that the drawer connector is securely connected.	
3	Checking the connection	The connector is not connected properly, 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. • Drawer connector of the fuser unit - Engine PWB (YC9)	
4	Replacing the fuser unit	The parts such as the thermistor are faulty.	Replace the fuser unit.	
5	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	
6	Replacing the IH unit	The IH unit is faulty.	Replace the IH unit.	

C6600: Fuser heat belt rotation error

The belt rotation pulse is not input for 1.8s continuously.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	

Step	Check description	Assumed cause	Measures	Reference
2	Reinstalling the fuser unit	There are foreign objects in the drawer contact terminal of the fuser unit	Clean the drawer connector terminal of the fuser unit. Check if the pin of the drawer connector is not bent, and replace the fuser unit if it is bent. If it is normal, reinstall the fuser unit so that the drawer connector is securely connected.	
3	Checking the connection	The connector is not connected properly, 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. • Drawer connector of the fuser unit - Engine PWB (YC9)	
4	Replacing the fuser unit	The fuser unit parts such as the fuser heat belt, the belt rotation detecting system, or the belt rotation sensor are faulty	Replace the fuser unit.	
5	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	
6	Replacing the fuser drive unit	The fuser drive unit is faulty.	Replace the fuser drive unit.	

C6610: Fuser pressure release sensor error

1. The fuser pressure release sensor does not turn off even after 10s passed from instructing to reduce the fuser pressure.

2. The fuser pressure release sensor does not turn on even after 10s passed from instructing to increase the fuser pressure.

3. The lock signal of the fuser pressure release motor became error for 300ms.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
2	Reinstalling the fuser unit	There are foreign objects in the drawer contact terminal of the fuser unit	Clean the drawer connector terminal of the fuser unit. Check if the pin of the drawer connector is not bent, and replace the fuser unit if it is bent. If it is normal, reinstall the fuser unit so that the drawer connector is securely connected.	
3	Checking the connection	The connector is not connected properly, 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. • Drawer connector of the fuser unit - Engine PWB (YC9)	
4	Replacing the fuser unit	The fuser unit is faulty at the fuser pressure release mechanism or the fuser pressure release sensor .	Replace the fuser unit.	
5	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

C6740: IH PWB high temperature error (IGBT2)

The IGBT temperature acquired from the power microprocessor detects 115°C / 239°F or more for 1s continuously.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	

Step	Check description	Assumed cause	Measures	Reference
2	Checking the connection	The connector is not connected properly, 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. • IH fan motor - Engine PWB (YC20) • IH PWB (YC4) - Engine PWB (YC10)	
3	Replacing the IH PWB fan motor	The IH PWB fan motor is faulty.	Replace the IH PWB fan motor.	
4	Replacing the IH PWB	The IH PWB is faulty.	Replace the IH PWB.	
5	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

C6760: Fuser IH input excessive electric current error

The input current obtained from the power microcomputer was 20A (100/120V) or 10A (200V) or more continued for 200ms.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
2	Checking the fuser unit	The fuser heat belt is faulty.	Detach the fuser unit and check if the fuser heat belt is not faulty. If there is any damage, replace the fuser unit.	
3	Checking the connection	The connector is not connected properly, 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. • IH PWB (YC4) - Engine PWB (YC10)	
4	Replacing the IH PWB	The IH PWB is faulty.	Replace the IH PWB.	
5	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

C6770: IH low power error

After fuser heating starts,the electric power detection on the IH PWB detected a set electric power value of 30% or less for a predetermined time.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
2	Reinstalling the fuser unit	There are foreign objects in the drawer contact terminal of the fuser unit	Clean the drawer connector terminal of the fuser unit. Check if the pin of the drawer connector is not bent, and replace the fuser unit if it is bent. If it is normal, reinstall the fuser unit so that the drawer connector is securely connected.	
3	Checking the connection	The connector is not connected properly, 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. • IH unit - IH PWB (YC2, YC3) • IH PWB (YC4) - Engine PWB (YC10)	
4	Replacing the IH unit	The IH unit is faulty. (The coil is broken.)	Replace the IH unit.	
5	Replacing the IH PWB	The IH PWB is faulty.	Replace the IH PWB.	
6	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

C6940: IH fan motor error

Lock-up is detected for 20s continuously when the fan motor drives.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
2	Checking the connection	The connector is not connected properly, 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. • IH fan motor - Engine PWB (YC20)	
3	Checking the IH fan motor	The IH fan motors do not properly operate.	Clean the IH fan motor and remove foreign objects. If not resolved after that, replace the IH fan motor.	
4	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

C6950: IH-CPU communication error

1. Communication between the IH PWB and the engine PWB is not established in the initial communication. (150ms interval x 10 times retries and then 3 times retries of the relay remote)

2. After the initial communication is established, communication between the IH PWB and the engine PWB is not established at the operation except for printing. (If communication fails for 500ms, 3 times retries or the relay remote are performed.)

3. After the initial communication is established, communication between the IH PWB and the engine PWB is not established durint printing. (If communication fails for 500ms, 150ms interval x 10 times retries are performed.)

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 plug. After 5s passes, reconnect the power plug 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 connection	The connector is not connected properly, 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. • IH PWB (YC4) - Engine PWB (YC10)	
4	Replacing the IH PWB	The IH PWB is faulty.	Replace the IH PWB.	
5	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

C6990: Fuser power source destination error

The engine backup data does not match the IH PWB power supply destination. (0, 5 or more)

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
2	Executing U169	The voltage setting at U169 mismatches the voltage of the IH PWB.	Set the destination same as the voltage of the IH PWB at U169.	
3	Checking the connection	The connector is not connected properly, 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. • IH PWB (YC4) - Engine PWB (YC10)	
4	Replacing the IH PWB	The IH PWB is faulty.	Replace the IH PWB.	
5	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

C7101: T/C sensor K error

The sensor input voltage is less than 0.3V, or 3.2V or more. Also, that state continues for 5s or more.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
2	Reinstalling the developer unit	The developer unit is not properly installed.	Reinstall developer unit K so that the connector firmly connects.	
3	Checking the connection	The connector is not connected properly, 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. • Developer PWB K - Drum/Developer relay PWB (YC9) • Drum/Developer relay PWB (YC1) - Engine PWB (YC17)	
4	Developer unit replacement	Developer unit K (T/C sensor K) is faulty.	Replace developer unit K.	
5	Replacing the drum/developer relay PWB	The drum/developer relay PWB is faulty.	Replace the drum/developer relay PWB.	
6	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

C7102: T/C sensor C error

The sensor input voltage is less than 0.3V, or 3.2V or more. Also, that state continues for 5s or more.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
2	Reinstalling the developer unit	The developer unit is not properly installed.	Reinstall developer unit C so that the connector firmly connects.	
3	Checking the connection	The connector is not connected properly, 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. • Developer PWB C - Drum/Developer relay PWB (YC7) • Drum/Developer relay PWB (YC1) - Engine PWB (YC17)	
4	Developer unit replacement	Developer unit C (T/C sensor C) is faulty.	Replace the developer unit C.	
5	Replacing the drum/developer relay PWB	The drum/developer relay PWB is faulty.	Replace the drum/developer relay PWB.	
6	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

C7103: T/C sensor M error

The sensor input voltage is less than 0.3V, or 3.2V or more. Also, that state continues for 5s or more.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
2	Reinstalling the developer unit	The developer unit is not properly installed.	Reinstall developer unit M so that the connector firmly connects.	

Step	Check description	Assumed cause	Measures	Reference
3	Checking the connection	The connector is not connected properly, 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. • Developer PWB M - Drum/Developer relay PWB (YC8) • Drum/Developer relay PWB (YC1) - Engine PWB (YC17)	
4	Developer unit replacement	Developer unit M (T/C sensor M) is faulty.	Replace the developer unit M.	
5	Replacing the drum/developer relay PWB	The drum/developer relay PWB is faulty.	Replace the drum/developer relay PWB.	
6	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

C7104: T/C sensor Y error

The sensor input voltage is less than 0.3V, or 3.2V or more. Also, that state continues for 5s or more.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
2	Reinstalling the developer unit	The developer unit is not properly installed.	Reinstall developer unit Y so that the connector firmly connects.	
3	Checking the connection	The connector is not connected properly, 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. • Developer PWB Y - Drum/Developer relay PWB (YC6) • Drum/Developer relay PWB (YC1) - Engine PWB (YC17)	
4	Developer unit replacement	Developer unit Y (T/C sensor Y) is faulty.	Replace the developer unit Y.	
5	Replacing the drum/developer relay PWB	The drum/developer relay PWB is faulty.	Replace the drum/developer relay PWB.	
6	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

C7200: Inner thermistor broken (developer)

The sensor input data is 0.3V or less.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
2	Reinstalling the developer unit	The developer unit is not properly installed.	Reinstall developer unit K so that the connector firmly connects.	
3	Checking the connection	The connector is not connected properly, 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. • Developer PWB K - Drum/Developer relay PWB (YC9) • Drum/Developer relay PWB (YC1) - Engine PWB (YC17)	
4	Developer unit replacement	The sensor on the developer PWB is faulty	Replace developer unit K.	
5	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
6	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

C7210: Inner thermistor short-circuited (developer)

The sensor input data is 3.0V or more.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
2	Reinstalling the developer unit	The developer unit is not properly installed.	Reinstall developer unit K so that the connector firmly connects.	
3	Checking the connection	The connector is not connected properly, 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. • Developer PWB K - Drum/Developer relay PWB (YC9) • Drum/Developer relay PWB (YC1) - Engine PWB (YC17)	
4	Developer unit replacement	The sensor on the developer PWB is faulty	Replace developer unit K.	
5	Replacing the drum/developer relay PWB	The drum/developer relay PWB is faulty.	Replace the drum/developer relay PWB.	
6	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

C7221: Broken LSU thermistor K

The sensor input data is 0.3V or less.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
2	Checking the connection	The connector or FFC is not properly connected, or the wire or FFC is faulty.	Clean the terminal of the following wire connectors and the FFC, then reinsert them. If there is no continuity, replace the wire or FFC. • APC PWB K - LSU relay PWB (YC1) • LSU relay PWB (YC9) - Engine PWB(YC6)	
3	Replacing the LSU	LSU thermistor K is faulty.	Replace LSU K.	
4	Replacing the LSU relay PWB	The LSU relay PWB is faulty.	Replace the LSU relay PWB.	
5	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

C7224: Broken LSU thermistor Y

The sensor input data is 0.3V or less.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
2	Checking the connection	The connector or FFC is not properly connected, or the wire or FFC is faulty.	Clean the terminal of the following wire connectors and the FFC, then reinsert them. If there is no continuity, replace the wire or FFC. • APC PWB Y - LSU relay PWB (YC4) • LSU relay PWB (YC9) - Engine PWB(YC6)	
3	Replacing the LSU	LSU thermistor Y is faulty.	Replace LSU Y.	

Step	Check description	Assumed cause	Measures	Reference
4	Replacing the LSU relay PWB	The LSU relay PWB is faulty.	Replace the LSU relay PWB.	
5	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

C7231: LSU thermistor K short-circuited

The sensor input data is 3.0V or more.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
2	Checking the connection	The connector or FFC is not properly connected, or the wire or FFC is faulty.	Clean the terminal of the following wire connectors and the FFC, then reinsert them. If there is no continuity, replace the wire or FFC. • APC PWB K - LSU relay PWB (YC1) • LSU relay PWB (YC9) - Engine PWB(YC6)	
3	Replacing the LSU	LSU thermistor K is faulty.	Replace LSU K.	
4	Replacing the LSU relay PWB	The LSU relay PWB is faulty.	Replace the LSU relay PWB.	
5	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

C7234: LSU thermistor Y short-circuited

The sensor input data is 3.0V or more.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
2	Checking the connection	The connector or FFC is not properly connected, or the wire or FFC is faulty.	Clean the terminal of the following wire connectors and the FFC, then reinsert them. If there is no continuity, replace the wire or FFC. • APC PWB Y - LSU relay PWB (YC4) • LSU relay PWB (YC9) - Engine PWB(YC6)	
3	Replacing the LSU	LSU thermistor Y is faulty.	Replace LSU Y.	
4	Replacing the LSU relay PWB	The LSU relay PWB is faulty.	Replace the LSU relay PWB.	
5	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

C7240: Broken container thermistor

The sensor input data is 0.3V or less.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
2	Checking the connection	The connector is not connected properly, 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. • Container relay PWB (YC1) - Engine PWB (YC22)	
3	Replacing the container relay PWB	The container relay PWB is faulty.	Replace the container relay PWB.	
4	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

C7250: Container thermistor short-circuited

The sensor input data is 3.0V or more.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
2	Checking the connection	The connector is not connected properly, 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. • Container relay PWB (YC1) - Engine PWB (YC22)	
3	Replacing the container relay PWB	The container relay PWB is faulty.	Replace the container relay PWB.	

C7601: Front ID sensor error

• The sensor output value of the dark potential is 0.15V or less, or 0.80V or more.

• Bright potential is lower than the dark potential, or the gap is 0.5V or less.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
2	Cleaning the front ID sensor	The front ID sensor is dirty.	Clean the front ID sensor surface.	
3	Checking the connection	The connector is not connected properly, 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. • Front ID sensor - Engine PWB (YC7)	
3	Replacing the front D sensor	The front ID sensor is faulty.	Replace the front ID sensor.	
4	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

C7602: Rear ID sensor error

• The sensor output value of the dark potential is 0.15V or less, or 0.80V or more.

• Bright potential is lower than the dark potential, or the gap is 0.5V or less.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
2	Cleaning the rear ID sensor	The rear ID sensor is dirty.	Clean the rear ID sensor surface.	
3	Checking the connection	The connector is not connected properly, 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. • Rear ID sensor - Engine PWB (YC7)	
3	Replacing the rear ID sensor	The rear ID sensor is faulty.	Replace the rear ID sensor.	
4	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

C7611: ID sensor density error K

The density of the BK-patch on the primary transfer belt is faulty at the Calibration or Color Adjustment.

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 plug. After 5s passes, reconnect the power plug and turn on the power switch.	

Step	Check description	Assumed cause	Measures	Reference
2	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
3	Cleaning the ID sensor	The ID sensor is dirty.	Clean the surface of the front and rear ID sensors.	
4	Checking the developer unit and drum unit	The developer unit or the drum unit is not properly installed.	Reinstall developer unit K and drum unit K.	
5	Checking the primary transfer unit	The primary transfer belt is dirty.	Clean the surface of the primary transfer belt, or replace the primary transfer unit.	
6	Checking the connection	The connector is not connected properly, 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. • Front ID sensor and Rear ID sensor - Engine PWB (YC7)	
7	Replacing the ID sensor	The ID sensor is faulty.	Replace the front ID sensor or the rear ID sensor.	
8	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

C7612: ID sensor density error C

The density of the C-patch on the primary transfer belt is faulty at the Calibration or Color Adjustment.

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 plug. After 5s passes, reconnect the power plug 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	Cleaning the ID sensor	The ID sensor is dirty.	Clean the surface of the front and rear ID sensors.	
4	Checking the developer unit and drum unit	The developer unit or the drum unit is not properly installed.	Reinstall developer unit C and drum unit C.	
5	Checking the primary transfer unit	The primary transfer belt is dirty.	Clean the surface of the primary transfer belt, or replace the primary transfer unit.	
6	Checking the connection	The connector is not connected properly, 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. • Front ID sensor and Rear ID sensor - Engine PWB (YC7)	
7	Replacing the ID sensor	The ID sensor is faulty.	Replace the front ID sensor or the rear ID sensor.	
8	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

C7613: ID sensor density error M

The density of the M-patch on the primary transfer belt is faulty at the Calibration or Color Adjustment.

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 plug. After 5s passes, reconnect the power plug 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	Cleaning the ID sensor	The ID sensor is dirty.	Clean the surface of the front and rear ID sensors.	

Step	Check description	Assumed cause	Measures	Reference
4	Checking the developer unit and drum unit	The developer unit or the drum unit is not properly installed.	Reinstall developer unit M and drum unit M.	
5	Checking the primary transfer unit	The primary transfer belt is dirty.	Clean the surface of the primary transfer belt, or replace the primary transfer unit.	
6	Checking the connection	The connector is not connected properly, 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. • Front ID sensor and Rear ID sensor - Engine PWB (YC7)	
7	Replacing the ID sensor	The ID sensor is faulty.	Replace the front ID sensor or the rear ID sensor.	
8	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

C7614: ID sensor density error Y

The density of the Y-patch on the primary transfer belt is faulty at the Calibration or Color Adjustment.

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 plug. After 5s passes, reconnect the power plug 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	Cleaning the ID sensor	The ID sensor is dirty.	Clean the surface of the front and rear ID sensors.	
4	Checking the developer unit and drum unit	The developer unit or the drum unit is not properly installed.	Reinstall developer unit Y and drum unit Y.	
5	Checking the primary transfer unit	The primary transfer belt is dirty.	Clean the surface of the primary transfer belt, or replace the primary transfer unit.	
6	Checking the connection	The connector is not connected properly, 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. • Front ID sensor and Rear ID sensor - Engine PWB (YC7)	
7	Replacing the ID sensor	The ID sensor is faulty.	Replace the front ID sensor or the rear ID sensor.	
8	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

C7620: ID sensor timing error

The color registration fails.

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 plug. After 5s passes, reconnect the power plug 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	Cleaning the ID sensor	The ID sensor is dirty.	Clean the surface of the front and rear ID sensors.	
4	Checking the developer unit and drum unit	The developer unit or the drum unit is not properly installed.	Reinstall the developer unit and drum unit.	

Step	Check description	Assumed cause	Measures	Reference
5	Checking the primary transfer unit	The primary transfer belt is dirty.	Clean the surface of the primary transfer belt, or replace the primary transfer unit.	
6	Checking the connection	The connector is not connected properly, 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. • Front ID sensor and Rear ID sensor - Engine PWB (YC7)	
7	Replacing the ID sensor	The ID sensor is faulty.	Replace the front ID sensor or the rear ID sensor.	
8	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

C7800: Outer thermistor broken

The sensor input data is 0.3V or less.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
2	Checking the connection	The connector is not connected properly, 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. • Temperature/humidity sensor - Engine PWB (YC11)	
3	Replacing the temperature/ humidity sensor	The temperature/humidity sensor is faulty.	Replace the temperature/humidity sensor.	
4	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

C7810: Outer thermistor short-circuited

The sensor input data is 3.0V or more.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
2	Checking the connection	The connector is not connected properly, 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. • Temperature/humidity sensor - Engine PWB (YC11)	
3	Replacing the temperature/ humidity sensor	The temperature/humidity sensor is faulty.	Replace the temperature/humidity sensor.	
4	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

C8030: DF tray upper limit detection error

Object: 500-sheet document finisher

The DF tray upper limit sensor on is detected when the DF tray motor is in ascending operation

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	The connector is not connected properly, 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 tray upper limit sensor - DFPWB (CN5) • Paper level sensor 1, 2 - DFPWB (CN6)	

Step	Check description	Assumed cause	Measures	Reference
2	Replacing the sensor	The Dr tray upper limit sensor, paper level sensor 1 or 2 is faulty	Replace the DF tray upper limit sensor or paper level sensor.	
3	Firmware upgrade	The firmware is not the latest version.	Upgrade the DP firmware to the latest version.	
4	Replacing the DF PWB	The DF PWB is faulty.	Replace the DF PWB.	

C8040: DF belt error

Object: 500-sheet document finisher

The DF belt sensor on or off cannot be detected when passing the specified time after the DF belt solenoid turns on

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	The connector is not connected properly, or the wire is faulty.	Clean the wire connector terminal and reconnect it. If there is no continuity, replace the wire. • DF belt sensor - DF PWB (CN10) • DF belt solenoid - DF PWB (CN21)	
2	Replacing the DF belt sensor	DF belt sensor is faulty	Replace DF belt sensor	
3	Replacing the DF belt solenoid	DF belt solenoid is faulty	Replace DF belt solenoid	
4	Firmware upgrade	The firmware is not the latest version.	Upgrade the DP firmware to the latest version.	
5	Replacing the DF PWB	The DF PWB is faulty.	Replace the DF PWB.	

C8140: Dr tray motor error

Object: 500-sheet document finisher

During the DF tray motor drive, the DF tray lower limit sensor, paper level sensor 1 and 2 on is not detected within 10s.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	The connector is not connected properly, 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 tray motor - DF PWB (CN15) • DF tray lower limit sensor - DF PWB (CN5) • Paper level sensor1, 2 - DF PWB (CN6)	
2	Replacing the DF tray motor	The DF tray motor is faulty.	Replace the DF tray motor.	
3	Replacing the sensor	The DF tray lower limit sensor, paper level sensor 1 or 2 is faulty	Replace the DF tray lower limit sensor or paper level sensor.	
4	Firmware upgrade	The firmware is not the latest version.	Upgrade the DP firmware to the latest version.	
5	Replacing the DF PWB	The DF PWB is faulty.	Replace the DF PWB.	

C8210: DF staple error

Object: 500-sheet document finisher

JAM7013 and 7023 was detected twice

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	The connector is not connected properly, or the wire is faulty.	Clean the terminal of the wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • DF staple unit - DF PWB	

Step	Check description	Assumed cause	Measures	Reference
2	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.	
3	Replacing the DF staple unit	The DF staple unit is faulty.	Replace the DF staple unit.	
4	Firmware upgrade	The firmware is not the latest version.	Upgrade the DP firmware to the latest version.	
5	Replacing the DF PWB	The DF PWB is faulty.	Replace the DF PWB.	

C8320: DF adjuster motor 2 error

Object: 500-sheet document finisher

The DF adjustor sensor 2 on or off cannot be detected when passing the specified time after the DF adjustor motor 2 turns on

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	The connector is not connected properly, 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 adjustor motor 2 - DFPWB (CN18) • DF adjustor sensor 2 - DFPWB (CN7)	
2	Replacing DF adjustor motor 2	DF adjustor motor 2 is faulty	Replace DF adjustor motor 2	
3	Replacing the DF adjustor sensor 2	DF adjustor sensor 2 is faulty	Replace DF adjustor sensor 2	
4	Firmware upgrade	The firmware is not the latest version.	Upgrade the DP firmware to the latest version.	
5	Replacing the DF PWB	The DF PWB is faulty.	Replace the DF PWB.	

C8330: DF adjuster motor 1error

Object: 500-sheet document finisher

The DF adjustor sensor 1 on or off cannot be detected when passing the specified time after the DF adjustor motor 1 turns on

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	The connector is not connected properly, 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 adjustor motor 1 - DFPWB(CN18) • DF adjustor sensor 1 - DFPWB(CN7)	
2	Replacing DF adjustor motor 1	DF adjustor motor 1 is faulty	Replace DF adjustor motor 1	
3	Replacing the DF adjustor sensor 1	DF adjustor sensor 1 is faulty	Replace DF adjustor sensor 1	
4	Firmware upgrade	The firmware is not the latest version.	Upgrade the DP firmware to the latest version.	
5	Replacing the DF PWB	The DF PWB is faulty.	Replace the DF PWB.	

C8350: DF roller motor error

Object: 500-sheet document finisher

The DF roller sensor on or off cannot be detected when passing the specified time after the DF roller motor turns on

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	The connector is not connected properly, 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 roller motor - DF PWB (CN20) • DF roller sensor - DF PWB (CN11)	
2	Replacing the DF roller sensor	DF roller sensor is faulty	Replace DF roller sensor	
3	Replacing the DF roller motor	The DF roller motor is faulty	Replace DF roller motor	
4	Firmware upgrade	The firmware is not the latest version.	Upgrade the DP firmware to the latest version.	
5	Replacing the DF PWB	The DF PWB is faulty.	Replace the DF PWB.	

C8360: DF slide motor error

Object: 500-sheet document finisher

The DF slide sensor on or off cannot be detected when passing the specified time after the DF slide motor turns on

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	The connector is not connected properly, 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 slide motor - DF PWB(CN14) • DF slide sensor - DF PWB(CN22)	
2	Replacing the DF slide sensor	The DF slide sensor is faulty.	Replace the DF slide sensor	
3	Replacing the DF slide motor	The DF slide motor is faulty.	Replace the DF slide motor	
4	Firmware upgrade	The firmware is not the latest version.	Upgrade the DP firmware to the latest version.	
5	Replacing the DF PWB	The DF PWB is faulty.	Replace the DF PWB.	

C8460: EEPROM error

Object: 500-sheet document finisher

EEPROM read/write is not available

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the DP firmware to the latest version.	
2	Replacing the DF PWB	The DF PWB is faulty.	Replace the DF PWB.	

C8800: Document finisher communication error

Object: 500-sheet document finisher

The communication error was detected 10 times continuously.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	The connector is not connected properly, or the wire is faulty.	Clean the wire connector terminal and reconnect it. If there is no continuity, replace the wire. • Engine PWB (YC5) - DF relay PWB (YC2) • DF relay PWB (YC3) - DF PWB (CN1)	
2	Firmware upgrade	The firmware is not the latest version.	Upgrade the DP firmware to the latest version.	
3	Replacing the DF relay PWB	The DF relay PWB is faulty	Replace the DF relay PWB.	
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.	

C8830: Relay conveying unit communication error

Object: 500-sheet document finisher + relay conveying unit

The communication error was detected 10 times continuously.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	The connector is not connected properly, 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. • Engine PWB (YC5) - DF relay PWB (YC2) • DF relay PWB (YC4) - BR PWB (YC5)	
2	Firmware upgrade	The firmware is not the latest version.	Upgrade the BR firmware to the latest version.	
3	Replacing the BR PWB	The BR PWB is faulty.	Replace the BR PWB.	
4	Replacing the DF relay PWB	The DF relay PWB is faulty	Replace the DF 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.	

C8990: Finisher setup error

Object: 500-sheet document finisher + relay conveying unit

1. Communication error occurs with either the finisher or relay conveying unit.

2. Communication error occurs while installation of the relay conveying unit is detected

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	The connector is not connected properly, or the wire is faulty.	Clean the wire connector terminal and reconnect it. If there is no continuity, replace the wire. • DF PWB (CN1) - DF relay PWB (YC3) • DF relay PWB (YC4) - BR PWB (YC5)	
2	Firmware upgrade	The firmware is not the latest version.	Upgrade the DP firmware to the latest version.	
3	Replacing the DF PWB	The DF PWB is faulty.	Replace the DF PWB.	
4	Replacing the BR PWB	The BR PWB is faulty.	Replace the BR PWB.	

C9000: DP communication error

Object: Document processor

The communication error was detected 10 times continuously.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The main unit firmware and the document processor firmware mismatch	Upgrade the main unit firmware and the document processor firmware to the latest version.	
2	Checking the connection	The connector is not connected properly, 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 PWB (YC2) - Engine PWB (YC4)	
3	Replacing the DP PWB	The DP PWB is faulty.	Replace the DP PWB.	
4	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

C9060: DP EEPROM error

Object: Document processor

The writing data and the reading data into the EEPROM mismatch.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the EEPROM	The EEPROM is not properly installed.	Reattach the EEPROM on the DP PWB.	
2	Replacing the DP PWB	The DP PWB is faulty.	Replace the DP PWB.	
3	Replacing the EEPROM	The EEPROM is faulty.	Replace the EEPROM on the DP PWB, then execute U411.	

C9180: DP feed-shift motor error

Object: Document processor

1. The DP feed-shift motor home position cannot be detected even driving it for one round.

2. The DP feed-shift motor home position cannot be detected even after retrying the detection for 3 times.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	The EEPROM is not properly installed.	Reattach the EEPROM on the DP PWB.	
2	Replacing the DP feed-shift sensor		Replace the DP feed-shift sensor	
3	Replacing the DP feed-shift motor		Replace the DP feed-shift motor	
4	Replacing the DP PWB	The DP PWB is faulty.	Replace the DP PWB	
5	Replacing the engine PWB	The EEPROM is faulty.	Replace the engine PWB	

⑵ System Error (Fxxxx) Outline

(2-1)System Error code list

Error code	Contents
F000	Main unit CPU communication error (Controller - Panel)
F010	Program read error
F020	System memory error (RAM reading/writing error or CPU memory error)
F040	Communication error between the main unit CPU (Communication error between the controller and engine)
F050	Engine program error
F052	Panel engine program error

(2-2)Content of System Error (Fxxxx) Outline

F000: Main unit CPU communication error (Controller - Panel)

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 communication between the main PWB and the operation panel main PWB is faulty.	Turn off the power switch and pull out the power plug. After passing 5s, reinsert the power plug and turn on the power switch.	
2	Checking the connection	The connector is not connected properly. Or, the wire or the SATA cable is faulty.	Clean the wire, the terminal of SATA cable connector and reconnect them. If there is no continuity, replace the wire. • Main PWB - Operation panel PWB	
3	Executing U021	The backup RAM data is faulty.	Execute U021 to initialize the backup RAM data.	
4	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	
5	Replacing the operation panel main PWB	The operation panel main PWB is faulty.	Replace the panel main PWB.	

F010: Program read error

Data corruption is detected at the program read

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	The communication between the main PWB and the operation panel main PWB is faulty.	Turn off the power switch and pull out the power plug. After passing 5s, reinsert the power plug and turn on the power switch.	
2	Executing U021	The backup RAM data is faulty.	Execute U021 to initialize the backup RAM data.	
3	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 communication between the main PWB and the operation panel main PWB is faulty.	Turn off the power switch and pull out the power plug. After passing 5s, reinsert the power plug and turn on the power switch.	

Step	Check description	Assumed cause	Measures	Reference
2	Executing U021	The backup RAM data is faulty.	Execute U021 to initialize the backup RAM data.	
3	Checking the main PWB	The connector or the FFC is not connected properly. Or, the wire, FFC, the 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 CPU (Communication error between the controller and engine)

There is an error in the communication between the main PWB and the engine PWB.

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	There is an error in the communication between the main PWB and the engine PWB.	Turn off the power switch and pull out the power plug. After passing 5s, reinsert the power plug and turn on the power switch.	
2	Checking the connection	The connector is not connected properly, 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. • Engine PWB (YC3) - Main PWB (YC26)	
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 program error

The engine program cannot start up.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the engine firmware to the latest version	
2	Resetting the main power	The engine firmware checksum is faulty.	Turn off the power switch and pull out the power plug. After passing 5s, reinsert the power plug and turn on the power switch.	
3	Checking the EEPROM	The EEPROM is not properly attached.	Reattach the EEPROM.	
4	Checking the engine PWB	The connector or the FFC is not connected properly. Or, the wire, FFC, the 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.	

F052: Panel engine program error

The panel program cannot start up.

Step	Check description	Assumed cause	Measures	Reference
1	Firmware upgrade	The firmware is not the latest version.	Upgrade the panel firmware to the latest version.	
2	Resetting the main power	The panel RAM checksum is faulty.	Turn off the power switch and pull out the power plug. After passing 5s, reinsert the power plug and turn on the power switch.	

Step	Check description	Assumed cause	Measures	Reference
3	Checking the connection	The connector is not connected properly, or the wire is faulty.	Clean the terminal of the connectors on the operation panel PWB, reconnect the connector of the wire. If there is no continuity, replace the wire.	
4	Replacing the operation panel main PWB	The operation panel main PWB is faulty.	Replace the panel main PWB.	

⑵-3⑶ 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
-	It locks on a Welcome screen.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)	(1) Check the harness of * (between Main board <=>SSD), and the connection state of a connector between Panel<=>Main boards, and perform an operation check. (2) Check contact of a DDR memory (extracting) and perform an operation check. If exchangeable, it will exchange and will perform an operation check. (3) Initialize SSD and perform an operation check. * (4) U021 Controller backup initialization is carried out and an operation check is performed. (5) Exchange a PanelMain board and perform an operation check. (6) Exchange a Main board and perform an operation check. (7) It will get, if USBLOG is obtainable, and contact service headquarters. * : only SSD standard model	* Execution of U024 will vanish user data and the software installed. Reinstallation is required.
F000	CF000 will be displayed if * notes progress is carried out for a definite period of time with a Welcome screen.The communication fault between Panel-Main boards.Communication fault between Panel Core-Main Core Notes 2	(1) Check the harness of * (between Main board <=>SSD), and the connection state of a connector between Panel<=>Main boards, and perform an operation check. (2) Check contact of a DDR memory (extracting) and perform an operation check. If exchangeable, it will exchange and will perform an operation check. (3) Initialize SSD and perform an operation check. * (4) U021 Controller backup initialization is carried out and an operation check is performed. (5) Exchange a Main board and perform an operation check. (6) Exchange a PanelMain board and perform an operation check. (7) It will get, if USBLOG is obtainable, and contact service headquarters. * : only SSD standard model * Note 2 : Only Dual Core CPU model	

Number	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) Initialize HDD and perform an operation check. * (3) U021 Controller backup initialization is carried out and an operation check is performed. (4) Exchange a Scan/DP board and perform an operation check. (5) Exchange a Main board and perform an operation check. (6) Get USBLOG and contact service headquarters. * Only SSD standard model	
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) Initialize SSD and perform an operation check. * (3) U021 Controller backup initialization is carried out and an operation check is performed. (4) Perform a deed operation check for DIMM Clear by U671. * Notes(Since it disappears when received data remain, cautions are required.) (5) Exchange FAX_DIMM and perform an operation check. * Notes (6) Exchange a FAX board and perform an operation check. (7) Exchange a Main board and perform an operation check. (8) Get USBLOG and contact service headquarters. * Only SSD standard model * Note Only model which has Flash for FAX data in a Main board	
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) Initialize SSD and perform an operation check. * (3) Carry out U021 Main backup initialization and perform an operation check. (4) Exchange a Main board and perform an operation check. (5) Exchange SSD and perform an operation check. * (6) Get USBLOG and contact service headquarters. * Only SSD standard model	Authentication device: Card reader etc.
F17X	Abnormality detecting in a printer data control part	(1) Initialize SSD 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. * Only SSD standard model	

Number	Contents	Verification procedure & check point	Remarks
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) Initialize SSD and perform an operation check. * (3) U021 Controller backup initialization is carried out and an operation check is performed. (4) Exchange an Engine board and perform an operation check. (5) Exchange a Main board and perform an operation check. (6) Get USBLOG and contact service headquarters. * Only SSD standard model	
F1DX	Abnormality detecting of the image memory Management Department	(1) Initialize SSD 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. * Only SSD standard model	* 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) Initialize SSD and perform an operation check. * (3) Carry out U021 Main backup initialization and perform an operation check. (4) Exchange a Main board and perform an operation check. (5) Exchange SSD and perform an operation check. * (6) Get USBLOG and contact service headquarters. * Only SSD standard model	* 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.
F24X	Abnormality detecting in the system Management Department	(1) Check contact of a DDR memory and perform an operation check. (2) Initialize SSD and perform an operation check. * (3) Carry out U021 Main backup initialization and perform an operation check. (4) Exchange a Main board and perform an operation check. (5) Exchange SSD and perform an operation check.* (6) Get USBLOG and contact service headquarters. * Only SSD standard model	
F25X	Abnormality detecting in a network management department	(1) Initialize SSD 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) Get USBLOG and packet capture and contact service headquarters. * Only SSD standard model	* It may occur according to a visitor's network environment.
F26X F27X F28X F29X F2AX	Abnormality detecting in the system Management Department	(1) Initialize SSD 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. * Only SSD standard model	

Number	Contents	Verification procedure & check point	Remarks
F2BX F2CX F2DX F2EX F2FX F30X F31X F32X	Abnormality detecting in a network control part	(1) Initialize SSD 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) Get USBLOG and contact service headquarters. (Depending on an analysis result, it is packet capture acquisition) * Only SSD standard model	
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) Initialize SSD and perform an operation check. * (3) U021 Controller backup initialization is carried out and an operation check is performed. (4) Exchange a Scan/DP board and perform an operation check. (5) Exchange a Main board and perform an operation check. (6) Get USBLOG and contact service headquarters. * Only SSD standard model	
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. * Notes (2) Initialize SSD and perform an operation check. * (3) U021 Controller backup initialization is carried out and an operation check is performed. (4) Exchange a Panel board and perform an operation check. * Notes (5) Exchange a Main board and perform an operation check. (6) Get USBLOG and contact service headquarters. * Only SSD standard model * Note : A Dual Core CPU model and HyPAS model	
F35X	Abnormality detecting in the printing controlling Management Department	(1) Initialize SSD 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. * Only SSD standard model	

Number	Contents	Verification procedure & check point	Remarks
F37X	Abnormality detecting in the FAX Management Department	(1) Initialize SSD and perform an operation check. * (2) Carry out U021 Main backup initialization and perform an operation check. (3) Perform a deed operation check for DIMM Clear by U671.(Since it disappears when received data remain, cautions are required.) * notes (4) Exchange FAX_DIMM and perform an operation check. * Notes (5) Exchange a Main board and perform an operation check. (6) Exchange SSD and perform an operation check. * (7) Get USBLOG and contact service headquarters. * Only SSD standard model * Note Only model which has Flash for FAX data in a Main board	
F38X	Abnormality detecting in the authentication authorized Management Department	(1) Initialize SSD 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. * Only SSD standard model	
F3AX F3BX F3CX F3DX F3EX F3FX F40X F41X F42X F43X F44X F45X	Abnormality detecting in the Entity Management Department	(1) Initialize SSD 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. * Only SSD standard model	
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) * Only SSD standard model	* 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	Abnormality detecting of an image editing processing part	(1) Initialize SSD 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. * Only SSD standard model	

Number	Contents	Verification procedure & check point	Remarks
F4DX	Abnormality detecting in the Entity Management Department	(1) Initialize SSD 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. * Only SSD standard model	
F50X	Abnormality detecting in the FAX Management Department	(1) Initialize SSD 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. * Only SSD standard model	Since the USB log immediately after occurrence is needed for analysis, please give me cooperation of acquisition.
F52X F53X F55X F56X F57X	Abnormality detecting in a JOB execution part	(1) Initialize SSD 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. * Only SSD standard model	Since the USB log immediately after 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.)
F63X	Abnormality detecting in a device control section	(1) Initialize SSD 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. * Only SSD standard model	
F68X	Abnormality detecting in a storage device control section	(1) Initialize SSD 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. * Only SSD standard model	* F684 is the overwrite error at the time of an SSD security kit.

Number	Contents	Verification procedure & check point	Remarks
F90X	Abnormality detecting in the extension application service part	(1) Initialize SSD 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. * Only SSD standard model	Since the USB log immediately after occurrence is needed for analysis, please give me cooperation of acquisition.
F93X	Abnormality detecting in the extension application management part	(1) Initialize SSD 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. * Only SSD standard model	Since the USB log immediately after occurrence is needed for analysis, please give me cooperation of acquisition.
F9FX	Abnormality detecting in the extension application various service part	(1) Initialize SSD 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. * Only SSD standard model	Since the USB log immediately after occurrence is needed for analysis, please give me cooperation of acquisition.
FC0X	Abnormality detecting in system application	(1) Initialize SSD 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. * Only SSD standard model	Since the USB log immediately after occurrence is needed for analysis, please give me cooperation of acquisition.
FC5X	Abnormality detecting in Copy application	(1) Initialize SSD 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. * Only SSD standard model	Since the USB log immediately after occurrence is needed for analysis, please give me cooperation of acquisition.
FCAX	Abnormality detecting in Print application	(1) Initialize SSD 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. * Only SSD standard model	Since the USB log immediately after occurrence is needed for analysis, please give me cooperation of acquisition.
FCFX	Abnormality detecting in Send application	(1) Initialize SSD 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. * Only SSD standard model	Since the USB log immediately after occurrence is needed for analysis, please give me cooperation of acquisition.

Number	Contents	Verification procedure & check point	Remarks
FD4X	Abnormality detecting in Box application	(1) Initialize SSD 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. * Only SSD standard model	Since the USB log immediately after occurrence is needed for analysis, please give me cooperation of acquisition.
FD9X	Abnormality detecting in FAX application	(1) Initialize SSD 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. * Only SSD standard model	Since the USB log immediately after occurrence is needed for analysis, please give me cooperation of acquisition.
FF7X	Abnormality detecting in a report creation part	(1) Initialize SSD 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. * Only SSD standard model	Since the USB log immediately after occurrence is needed for analysis, please give me cooperation of acquisition.
F80X	Abnormality detecting in the Data Access Platform Service	(1) Initialize SSD 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. * Only SSD standard model	Since the USB log immediately after occurrence is needed for analysis, please give me cooperation of acquisition.
FE3X	Abnormality detecting in a authentication/ authorization part	(1) Initialize SSD 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. * Only SSD standard model	Since the USB log immediately after occurrence is needed for analysis, please give me cooperation of acquisition.
FF5X	Abnormality detecting in the Application Entity Management Department	(1) Initialize SSD 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. * Only SSD standard model	Since the USB log immediately after occurrence is needed for analysis, please give me cooperation of acquisition.

7 - 4 FAX Related Errors

(1) FAX Related Errors

No.	Contents
(1)	C0030: FAX PWB system error
(2)	C0070: FAX PWB incompatible detection error
(3)	C0830: FAX PWB flash program area checksum error
(4)	C0870: PC FAX Image data transmission error
(5)	C0920: FAX file system error
(6)	The FAX cannot be sent
(7)	The beep sounds when the copying or printing is finished
(8)	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	Resetting the main power	The FAX PWB does not operate properly.	Turn off the power switch and unplug the power plug. After 5s passes, reconnect the power plug and 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 firmware is faulty.	Reinstall the FAX firmware.	
3	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	

(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	Resetting the main power	The FAX PWB is not connected 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 between the FAX PWB and the main PWB.

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	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 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.	
5	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	
6	Executing U024	The data stored in the SSD is faulty.	Execute U024 [SSD Format].	

(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	Resetting the main power	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	Reconnecting the FAX PWB	The FAX PWB is not connected properly.	Reinstall FAX PWB to Main PWB.	
4	Firmware upgrade	The firmware is faulty.	Reinstall the FAX firmware.	
5	Replacing the FAX PWB	The FAX PWB is faulty.	Replace the FAX PWB.	

(1-6)The 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	Changing the setting	The line settings are incorrect.	Correct the line settings. (Reduce the transmission speed, etc.)	
4	Checking the status at the destination unit.	The destination unit is busy.	Wait a while and then redial the number if busy tones are heard.	
5	Checking the status at 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 at 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.	

Step	Check description	Assumed cause	Measures	Reference
7	Changing 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.	

(1-7)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.	

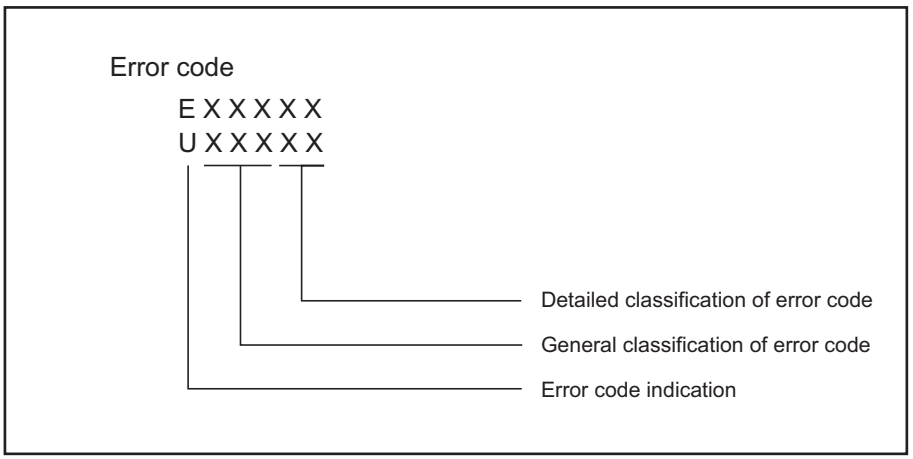
(1-8)When the data of the A3 or B4 size originals is transmitted, all of it is transmitted as the A4 size data

Step	Check description	Assumed cause	Measures	Reference
1	Changing the setting	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	Changing the setting	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 U 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	Document jam or the document length exceeds the maximum.
U00613/E00613	The optical section is faulty
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.
U00910/E00910	Some pages cannot be received after retry of transmission in the ECM mode

Error code	Contents
U01000/E01000	An FTT signal was received for a set number of times after TCF signal transmission at 2400 bps. Or, an RTN signal was received in response to a Q signal (excluding EOP) after transmission at 2400 bps.
U01001/E01001	Function as indicated by DIS signal is not consistent with the one of own machine.
U01016/E01016	T1 timeout occurs since MBF signal is received but DIS signal is not after sending EOM signal.
U01019/E01019	Command send retrial times exceeds since significant signal is not received after sending CNC signal. (between own machines)
U01020/E01020	Command send retrial times exceeds since significant signal is not received after sending CTC signal. (ECM)
U01021/E01021	Command send retrial times exceeds since significant 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 retry time is exceeded since the 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).

Error code	Contents
U01821/E01821	The communication was interrupted because there is no communication speed commonly used with the destination unit.
U03000/E03000	No document was present in the destination unit when polling reception started.
U03200/E03200	In interoffice sub address bulletin board reception, the data was not stored in the box specified by the destination unit.
U03300/E03300	In polling reception from a unit of our own model, operation was interrupted due to a mismatch in permitted ID or telephone number. Or, in interoffice sub address-based bulletin board reception, operation was interrupted due to a mismatch in permitted ID or telephone number.
U03400/E03400	Polling reception was interrupted because of a mismatch in individual numbers (destination unit is either of our make or by another manufacturer).
U03500/E03500	In interoffice sub address bulletin board reception, the specified sub address password was not registered in the destination unit.
U03600/E03600	An interoffice sub address bulletin board reception was interrupted because of a mismatch in the specified sub address password.
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	Request to 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	The optical section is faulty	Check the service call error record and perform the corrective actions.	

U00656/E00656

Step	Check description	Assumed cause	Measures	Reference
1	Resending	Transmission was interrupted because there was an error in the modem.	Resend.	
2	Resetting the main power	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	Replacing 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 pull out the power plug. After passing 5s, reinsert the power plug 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 reception of a RTN or PIN signal.	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	Re-reception	An RTN or PIN signal was transmitted because of a page reception error.	Resend the page if there is a page not transmitted properly.	

U00910/E00910

Step	Check description	Assumed cause	Measures	Reference
1	Re-reception	Some pages cannot be received after retry of transmission in the ECM mode	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)	Execute U630 [TX Speed] to reduce the transmit start speed. Then, resend the data.	
3	Changing the initial value	Line condition is poor. (Own machine)	Change the default value of 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)	Execute U630 [TX Speed] to reduce the transmit start speed. Then, resend the data.	
3	Changing the initial value	Line condition is poor. (Own machine)	Change the default value of 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)	Execute U630 [TX Speed] to reduce the transmit start speed. Then, resend the data.	
3	Changing the initial value	Line condition is poor. (Own machine)	Change the default value of 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)	Execute U630 [TX Speed] to reduce the transmit start speed. Then, resend the data.	
3	Changing the initial value	Line condition is poor. (Own machine)	Change the default value of 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)	Execute U630 [TX Speed] to reduce the transmit start speed. Then, resend the data.	
3	Changing the initial value	Line condition is poor. (Own machine)	Change the default value of the transmit start speed by executing U630 [TX Speed].	

U01021/E01021

Step	Check description	Assumed cause	Measures	Reference
1	Resending	Command send retrial times exceeds since significant signal is not received after sending EOR•Q signal. (ECM)	Resend.	
2	Checking the transmit start speed	Line condition is poor. (Destination unit)	Execute U630 [TX Speed] to reduce the transmit start speed. Then, resend the data.	
3	Changing the initial value	Line condition is poor. (Own machine)	Change the default value of 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)	Execute U630 [TX Speed] to reduce the transmit start speed. Then, resend the data.	
3	Changing the initial value	Line condition is poor. (Own machine)	Change the default value of 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)	Execute U630 [TX Speed] to reduce the transmit start speed. Then, resend the data.	
3	Changing the initial value	Line condition is poor. (Own machine)	Change the default value of 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)	Execute U630 [TX Speed] to reduce the transmit start speed. Then, resend the data.	
3	Changing the initial value	Line condition is poor. (Own machine)	Change the default value of the transmit start speed by executing U630 [TX Speed].	

U01080/E01080

Step	Check description	Assumed cause	Measures	Reference
1	Resending	PIP signal is received after sending PPS and NULL signals.	Resend.	
2	Checking the transmit start speed	Line condition is poor. (Destination unit)	Execute U630 [TX Speed] to reduce the transmit start speed. Then, resend the data.	
3	Changing the initial value	Line condition is poor. (Own machine)	Change the default value of 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)	Execute U630 [TX Speed] to reduce the transmit start speed. Then, resend the data.	
3	Changing the initial value	Line condition is poor. (Own machine)	Change the default value of 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 Mm 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 [Rag G3 RX Ear]. (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)	Execute U630 [TX Speed] to reduce the transmit start speed. Then, resend the data.	
3	Changing the initial value	Line condition is poor. (Own machine)	Change the default value of the transmit start speed by executing U630 [TX Speed].	

U01095/E01095

Step	Check description	Assumed cause	Measures	Reference
1	Resending	Command send retry time is exceeded since the significant signal is not received after sending (PPS) Q signal at phase D during transmission.	Resend.	

Step	Check description	Assumed cause	Measures	Reference
2	Checking the transmit start speed	Line condition is poor. (Destination unit)	Execute U630 [TX Speed] to reduce the transmit start speed. Then, resend the data.	
3	Changing the initial value	Line condition is poor. (Own machine)	Change the default value of 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)	Execute U630 [TX Speed] to reduce the transmit start speed. Then, resend the data.	
3	Changing the initial value	Line condition is poor. (Own machine)	Change the default value of the transmit start speed by executing U630 [TX Speed].	

U01097/E01097

Step	Check description	Assumed cause	Measures	Reference
1	Resending	The preset number of command retransfers was exceeded after transmission of an RR signal or no response.	Resend.	
2	Checking the transmit start speed	Line condition is poor. (Destination unit)	Execute U630 [TX Speed] to reduce the transmit start speed. Then, resend the data.	
3	Changing the initial value	Line condition is poor. (Own machine)	Change the default value of 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 the destination unit to resend the data.	
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 the destination unit to resend the data.	
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 the destination unit to resend the data.	

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 the destination unit to resend the data.	
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 the destination unit to resend the data.	
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 Mm 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 [Rag G3 RX Ear]. (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 the destination unit to resend the data.	
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 the destination unit to resend the data.	
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 the destination unit to resend the data.	
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 [Rag G3 RX Ear]. (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 the destination unit to resend the data.	
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 the destination unit to resend the data.	
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 the destination unit to resend the data.	
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 the destination unit to resend the data.	
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 in 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 the destination unit to resend the data.	
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 in 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.	Execute U630 [TX Speed] to reduce the transmit start speed. Then, resend the data.	

Step	Check description	Assumed cause	Measures	Reference
2	Checking the transmit start speed	The communication line condition is poor and an error frequently occurs.	Change the default value of the transmit start speed by executing U630 [TX Speed].	

U01600/E01600

Step	Check description	Assumed cause	Measures	Reference
1	Request to 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)	Execute U630 [TX Speed] to reduce the transmit start speed. Then, resend the data.	
3	Changing the initial value	Line condition is poor. (Own machine)	Change the default value of 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)	Execute U630 [TX Speed] to reduce the transmit start speed. Then, resend the data.	
3	Changing the initial value	Line condition is poor. (Own machine)	Change the default value of 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)	Execute U630 [TX Speed] to reduce the transmit start speed. Then, resend the data.	
3	Changing the initial value	Line condition is poor. (Own machine)	Change the default value of 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.	

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].	

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	Request to 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	Request to 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	Request to 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 receiversownFAXIDtoreceiveagain.'	

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 receiversownFAXIDtoreceiveagain.'	

U03600/E03600

Step	Check description	Assumed cause	Measures	Reference
1	Resending	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 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	Request to the destination unit	The original was transmitted to the sub address box, but the specified box was not registered in the destination unit that is our own model.	Register the sub address password in the destination unit.	
2	Checking the sub address of the FAX transmission condition	The original was transmitted to the sub address box in the destination unit that is our own model, but the sub address of the transmission condition did not match.	Match the sub address in the FAX forward condition	

U04100/E04100

Step	Check description	Assumed cause	Measures	Reference
1	Resending	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	Request to 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	Resending	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.	

Step	Check description	Assumed cause	Measures	Reference
2	Request to 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	Request to 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	Request to the destination unit	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.	Print documents stored in memory and make room in memory. Or stop receiving in the FAX box.	

U14100/E14100

Step	Check description	Assumed cause	Measures	Reference
1	Request to the destination unit	Transmission was interrupted due to the memory overflow in the destination unit when transmitting into the sub address box.	Request the destination unit to release memory.	

U19000/E19000

Step	Check description	Assumed cause	Measures	Reference
1	Checking the memory	The reception was interrupted due to the memory overflow in the main unit during memory reception.	Release memory by printing originals stored in memory.	

U19100/E19100

Step	Check description	Assumed cause	Measures	Reference
1	Resending	The transmission was interrupted because there is an error in the data during transmission.	Resend.	
2	Resetting the main power	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	The transmission was interrupted because there is an error in the data during transmission.	Turn off the power switch and pull out the power plug. After passing 5s, reattach the FAX PWB and reinsert the power plug. Then, turn on the power switch.	
3	Firmware upgrade	The firmware is not the latest version.	Upgrade the fax firmware to the latest version.	
4	Initializing the fax	The FAX initial value was changed.	Execute U600 to initialize the FAX.	
5	Replacing the FAX PWB	The FAX PWB is faulty.	Replace the FAX PWB.	

7 - 5 Send Related Errors

(1) Send Related Errors

No.	Contents
(1)	The sending error 2101 does not disappear even if changing the host name or the security software settings
(2)	Sending error 2203 does not disappear
(3)	The scanning data from the contact glass is automatically sent

Content of Send Related Errors

(1-1)The sending error 2101 does not disappear even if changing the host name or the security software settings

Step	Check description	Assumed cause	Measures	Reference
1	Changing the setting	The incorrect port number has been set.	Change the SMB port number from "139" to "445".	

(1-2)Sending error 2203 does not disappear

Step	Check description	Assumed cause	Measures	Reference
1	Changing the setting	The Windows Fire Wall is not properly set. (Windows Vista / 7 / 8)	Open [Control panel] > [System and Security] > Windows firewall] and select [Permit the program or function through Windows firewall]. Check [Share files and printers] and the check box on the right as well.	

(1-3)The scanning data from the contact glass is automatically sent

Step	Check description	Assumed cause	Measures	Reference
1	Changing the setting	[Continuous Scan] is not set to [On].	Press [Send] key or [FAX] key, and select [On] in [Advanced setup] > [Continuous scan].	
2	Changing the setting	[Continuous Scan] is not set to [On].	Select [On] at [Functions] > [Continuous scan]	

⑵ 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	SMTP protocol is invalid.
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	Changing the setting	SMTP / POP3 server name is incorrect.	Correct the SMTP / POP3 server name at [Function Settings] > [E-mail] via the command center.	
2	Changing the setting	The network settings are incorrect.	Correct the settings in the Network Settings via the Command Center.	
3	Changing the setting	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	Changing the setting	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	Changing the setting	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	Changing the setting	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

SMTP protocol is invalid.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the settings	SMTP protocol is invalid.	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	Changing the setting	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	Changing the setting	SMTP / POP3 server name is incorrect.	Correct the SMTP / POP3 server name at [Function Settings] > [E-mail] via the command center.	
2	Connecting the LAN cable	The LAN cable is not connected to the main unit.	Connect the LAN cable to the main unit.	
3	Changing the setting	The port number is incorrect.	Correct the SMTP/POP3 port number.	
4	Changing the setting	The network settings are incorrect.	Correct the settings in the Network Settings via the Command Center.	
5	Changing the setting	The network settings that the main unit is connected to are incorrect.	Correct the network settings that the main unit is connected to.	
6	Changing the setting	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	Changing the setting	SMTP / POP3 server name is incorrect.	Correct the SMTP / POP3 server name at [Function Settings] > [E-mail] via the command center.	
2	Changing the setting	The port number is incorrect.	Correct the SMTP/POP3 port number.	
3	Changing the setting	The network settings are incorrect.	Correct the settings in the Network Settings via the Command Center.	
4	Changing the setting	The network settings that the main unit is connected to are incorrect.	Correct the network settings that the main unit is connected to.	
5	Changing the setting	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	Changing the setting	The network settings are incorrect.	Correct the settings in the Network Settings via the Command Center.	
2	Changing the setting	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	Changing the setting	The network settings are incorrect.	Correct the settings in the Network Settings via the Command Center.	
2	Changing the setting	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	Changing the setting	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	Changing the setting	The network settings are incorrect.	Correct the settings in the Network Settings via the Command Center.	
2	Changing the setting	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	Changing the setting	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	Changing the setting	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	Changing the setting	The self-signed certificate of the device is incorrect.	Correct the certificates in the Security Settings via the Command Center.	
2	Changing the setting	The service certificate settings are incorrect.	Correct the certificates in the Security Settings via the Command Center.	
3	Changing the setting	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 to 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 specific 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	Correcting the FTP host name	The FTP host name is incorrect.	Correct the FTP host name via the Command Center.	
2	Changing the setting	The network settings are incorrect.	Correct the settings in the Network Settings via the Command Center.	

Step	Check description	Assumed cause	Measures	Reference
3	Changing the setting	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	Correcting the user name or the password	The user name or the password is incorrect.	Correct the user name and the password.	
2	Changing the setting	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	Changing the setting	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	Changing the setting	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	Changing the setting	The security settings of the device are incorrect.	Correct the settings in the Security Settings via the Command Center.	
2	Changing the setting	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	Correcting 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	Correcting the FTP port no.	The port number is incorrect.	Correct the FTP port number.	
4	Changing the setting	The network settings are incorrect.	Correct the settings in the Network Settings via the Command Center.	
5	Changing the setting	The FTP server settings are incorrect.	Correct the protocol in the Network Settings via the Command Center.	

Scan to FTP error code : 2102

Connection to the FTP server has failed. (Timeout)

Step	Check description	Assumed cause	Measures	Reference
1	Correcting the FTP host name	The FTP host name is incorrect.	Correct the FTP host name via the Command Center.	
2	Correcting the FTP port no.	The port number is incorrect.	Correct the FTP port number.	
3	Changing the setting	The network settings are incorrect.	Correct the settings in the Network Settings via the Command Center.	
4	Changing the setting	The network settings that the main unit is connected to are incorrect.	Correct the network settings that the main unit is connected to.	
5	Changing the setting	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	Correcting the FTP host name	The FTP host name is incorrect.	Correct the FTP host name via the Command Center.	
2	Correcting the FTP port no.	The port number is incorrect.	Correct the FTP port number.	
3	Changing the setting	The network settings are incorrect.	Correct the settings in the Network Settings via the Command Center.	
4	Changing the setting	The network settings that the main unit is connected to are incorrect.	Correct the network settings that the main unit is connected to.	
5	Changing the setting	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	Changing the setting	The network settings are incorrect.	Correct the settings in the Network Settings via the Command Center.	
2	Changing the setting	The network settings that the main unit is connected to are incorrect.	Correct the network settings that the main unit is connected to.	
3	Correcting the destination folder name	The destination folder name is incorrect.	Set the correct destination folder.	
4	Changing the setting	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	Changing the setting	The network settings are incorrect.	Correct the settings in the Network Settings via the Command Center.	
2	Changing the setting	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 specific period of time.

Step	Check description	Assumed cause	Measures	Reference
1	Changing the setting	The network settings are incorrect.	Correct the settings in the Network Settings via the Command Center.	
2	Changing the setting	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	Changing the setting	The network settings are incorrect.	Correct the settings in the Network Settings via the Command Center.	
2	Changing the setting	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	Changing the setting	The network settings are incorrect.	Correct the settings in the Network Settings via the Command Center.	
2	Changing the setting	The network settings that the main unit is connected to are incorrect.	Correct the network settings that the main unit is connected to.	
3	Changing the setting	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 specific 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	Correcting the destination host name	The destination host name is incorrect.	Correct the destination host name.	

Step	Check description	Assumed cause	Measures	Reference
2	Changing the setting	The network settings are incorrect.	Correct the settings in the Network Settings via the Command Center.	
3	Changing the setting	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	Correcting the user name and the password	The user name or the password is incorrect.	Correct the user name and the password.	
2	Changing the setting	The network settings are incorrect.	Correct the settings in the Network Settings via the Command Center.	
3	Changing the setting	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 destination host name, destination folder name and the file name	The invalid character is included.	Correct the destination host name, folder name or the file name if the invalid characters are included.	
2	Correcting 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	Changing the setting of the destination host and folder.	The destination host or the destination folder is not set properly.	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	Changing the setting	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	Correcting 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	Correcting the SMB port no.	The port number is incorrect.	Correct the SMB port number.	
4	Changing the setting	The network settings are incorrect.	Correct the settings in the Network Settings via the Command Center.	

Step	Check description	Assumed cause	Measures	Reference
5	Changing the setting	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	Correcting the sending file name	The sending file name is incorrect.	Correct the scanning file name.	
2	Changing the setting	The network settings are incorrect.	Correct the settings in the Network Settings via the Command Center.	
3	Changing the setting	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 specific period of time.

Step	Check description	Assumed cause	Measures	Reference
1	Changing the setting	The network settings are incorrect.	Correct the settings in the Network Settings via the Command Center.	
2	Changing the setting	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 paper direction is incorrect	
(3)	Paper is fed from the MP tray	The main unit MP tray setting is wrong
(4)	Garbled characters	The printer driver was not properly installed.
(5)	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.
(6)	The same data is repeatedly printed out	A PC (spooler) does not properly operate.
(7)	PC window shows [Print job error], [Standby] or [Printer unavailable] is indicated on the printer properties	The main unit is not ready to print.
(8)	Attention lamp is lit while the printer standby message is indicated.	The main unit locks up.
(9)	Print is not available in sleep mode due to the main unit startup error. Attention lamp is turned on.	The main unit locks up.
(10)	Print stops after printing several pages and locks up. Attention lamp on operation panel lights.	The image processing fails due to the insufficient memory, so the main unit locks up.
(11)	Print output is unavailable due to the network factor (1)	The network has some troubles or the network setting is incorrect.
(12)	Print output is unavailable due to the network factor (2)	The cable between the main unit and the PC is not properly connected.
(13)	Print output is unavailable due to the network factor (3)	The access point (router or HUB) in the network does not operate properly.
(14)	Print output is unavailable due to the network factor (4)	The router is faulty, or the router settings are incorrect.
(15)	Print output is unavailable due to the network factor (5)	"Offline" appears and the print function is unavailable.
(16)	Print output is unavailable due to the network factor (6)	Only 1 PC can't print out of all PCs installed. There is no error indication and print job will be held if print instruction is requested.
(17)	Print output is unavailable due to the network factor (7)	The main unit IP address is changed.
(18)	Data is not printed out due to the printer driver setting (1)	[Not connected] is displayed on PC and print job can't be performed due to the error. (Can't print)
(19)	Data is not printed out due to the printer driver setting (2)	[Preparing the printer] is displayed on the operation panel. The printing document is not output and the job is held.
(20)	Data is not printed out due to the printer driver setting (3)	A PC does not recognize the main unit.
(21)	Data is not printed out due to the printer driver setting (4)	PC operation does not stabilize.
(22)	Data is not printed out due to the printer driver setting (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.
(23)	Data is not printed out due to the printer driver setting (6)	The incorrect printer driver was selected.
(24)	Data is not printed out due to the printer driver setting (7)	Installed printer driver shows "Deleting" and it remains when reinstalling it
(25)	The printed image is partly missing	The image data processing with a certain application (Excel, PDF) is faulty.
(26)	"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	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	Checking the actuator and the spring	The actuator or the spring does not operate properly.	Reattach the actuator and the spring for the upper / lower paper sensors. If not repaired, replace them.	
5	Checking the situation	The print data generated by a certain application (Word) is faulty.	Check if the print data not generated by a certain application (Word) is output properly. And then, change the application setting if necessary.	
6	Changing the setting	Paper orientation is not properly set in the print page setting on a certain application (Word).	Check the page orientation with preview before printing and reset the page orientation at the print setting on a certain application (Word).	
7	Checking the settings	The paper size and the media type detected at the main unit did not match with the paper size and the media type set in the printer driver.	Check if the paper size detected on the MP tray and the media type of the MP tray set via the System Menu (for the main unit) matched to the paper size and the media type at [Imaging] > [Basic] in the printer properties at the PC.	
8	Changing the setting	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 paper direction is incorrect

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	There is a communication error.	Turn the power switch off after confirming there is no job in process at PC and main unit. When passing 5s, turn the power switch on.	
2	Checking the font list	Font for special data is not resident.	After checking output from Excel and Word is normal, print the font list to check if a font supported to special data is built in.	
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.	

⑶ Paper is fed from the MP tray

The main unit MP tray setting is wrong

Step	Check description	Assumed cause	Measures	Reference
1	Changing the setting	The Auto Cassette Change is [On].	Change the Auto cassette change setting to [OFF] if paper is not available in the selected cassette, paper will not be fed. ([System Menu/Counter] > [Printer] > [Auto Cassette Change] > [OFF])	
2	Changing the setting	"Media type" in the [Basic] tab in the print settings at the PC differs from the media type of the cassette that is set in the main unit.	Check the media type set on the main unit cassette and MP tray and set the media type for the main unit in the [Basic] tab in the print settings at the PC.	
3	Changing the setting	The same media type is set between the main unit cassette and MP tray	Set different media types between the main unit cassette and MP tray	

⑷ 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.	Turn the power switch off after confirming there is no job in process at PC and main unit. When passing 5s, turn the power switch on.	
2	Checking the font list	Font for special data is not resident.	After checking output from Excel and Word is normal, print the font list to check if a font supported to special data is built in.	
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.	

⑸ Paper is not fed from the MP tray

The media types of each paper source defined in the printer driver and the main unit are mismatched.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the settings	The paper size and the media type detected at the main unit did not match with the paper size and the media type set in the printer driver.	Check if the paper size detected on the MP tray and the media type of the MP tray set via the System Menu (for the main unit) matched to the paper size and the media type at [Imaging] > [Basic] in the printer properties at the PC.	
2	Changing the setting	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.	

⑹ The same data is repeatedly printed out

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.	

(7) PC window shows [Print job error], [Standby] or [Printer unavailable] is indicated on the printer properties

The main unit is not ready to print.

Step	Check description	Assumed cause	Measures	Reference
1	Clearing the error	The main unit is not ready to print.	Check if an error is displayed on the operation panel or [Attention] lamp blinks. Then, clear the error.	
2	Checking the main unit	The main unit is not ready to print.	Resolve the problem at the main unit if any	

(8) Attention lamp is lit while the printer standby message is indicated.

The main unit locks up.

Step	Check description	Assumed cause	Measures	Reference
1	Clearing the error	The main unit is not ready to print.	Cancel the print jobs of all the PCs after confirming no error appears on the operation panel. Then, turn the power switch off. When passing 5s, turn the power switch on.	

(9) Print is not available in sleep mode due to the main unit startup error. Attention lamp is turned on.

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 setting	The sleep level is not set to Quick Recovery mode.	Turn the power switch off. When passing 5s, turn the power switch on. Then, set Sleep Level to Quick Recovery	

(10) Print stops after printing several pages and locks up. Attention lamp on operation panel lights.

The image processing fails due to the insufficient memory, so the main unit locks up.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the situation	The data processing in a certain PC is faulty.	Check if the issue occurs when printing the data from all PCs in the network or from a certain PC. Then, print out the data from another PC if it occurs at a certain PC.	
2	Checking the situation	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.	
3	Firmware upgrade	The firmware is not the latest version.	Upgrade the main firmware to the latest version.	
4	Deleting the job	Processing fails.	Cancel the job in process and reprint in the main unit job status	
5	Resetting the main power	The main unit locks up.	If the operation panel or the buttons are not active, turn the power switch off and unplug the power plug. After 5s passes, reconnect the power plug and turn the power switch on.	

(11) Print output is unavailable due to the network factor (1)

The network has some troubles or the network setting is incorrect.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the network	There is trouble in the network.	Check if the memory LED on the operation panel of the main unit is blinking after printing out from the PC. If not blinking, cancel the processing job and reprint out.	
2	Checking the network	There is trouble in the network.	When the printing error appears on the operation panel or the PC screen, clear the error caused by the toner or paper jam, etc.	
3	Checking the network	There is trouble in the network.	Check the main unit IP Address in the status page, etc. and then check if Command Center can be opened using that IP Address. If not, reconfigure the network again.	
4	Checking the network	There is trouble in the network.	Check the internet connection and restore the network connection if necessary	
5	Checking the network	There is trouble in the network.	Check the cable and reset the router or HUB.	
6	Restarting up	The PC or the main unit locks up.	Restart the PC or the main unit, and print out again.	

(12) Print output is unavailable due to 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.	

(13) Print output is unavailable due to 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 is lit 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 the main unit do not start up properly.	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.	

(14) Print output is unavailable due to the network factor (4)

The router is faulty, or the router settings are incorrect.

Step	Check description	Assumed cause	Measures	Reference
1	Changing the setting	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	Changing the setting	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.	

(15) Print output is unavailable due to the network factor (5)

"Offline" appears and the print function is unavailable.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the network	There is trouble in the network.	Check the internet connection and restore the network connection if necessary	
2	Restarting up	The PC malfunctions.	When "Offline" appears on the printer driver, check if it is used in the pause or offline. Then, restart up the PC.	
3	Changing the setting	The application is not properly set.	Check if the other Excel / Word data can be output and change the setting of the application.	
4	Changing the setting	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	Restarting up	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	Restarting up	The port settings in the printer properties at the PC are incorrect.	Remove the checks at the dual-directional support and the SNMP status in the [Port] tab of the printer properties in a PC. Then, restart up the main unit and the PC.	
7	Restarting up	The main unit does not start up properly.	After the printer is ready, check if the test sheet can be output and restart the main unit.	

⑯ Print output is unavailable due to the network factor (6)

Condition:

PC OS: Windows 7

Print file: Test page

Connecting method: Wireless LAN

Only 1 PC can't print out of all PCs installed. There is no error indication and print job will be held if print instruction is requested.

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 setting	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.	

⑰ Print output is unavailable due to 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 cable is not properly connected.	Check if there is problem with the cable connection on the network.	
3	Restarting up	The main unit does not start up properly.	If the operation panel or the buttons are not active, turn the power switch off and unplug the power plug. After 5s passes, reconnect the power plug and turn the power switch on.	
4	Changing the setting	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 setting	The static IP Address is not set in the System Menu	Set the static IP Address in the System Menu	

⑱ Data is not printed out due to the printer driver setting (1)

Condition:

PC OS: Windows 7

Print file: Test page

Connecting method: Wireless LAN

[Not connected] is displayed on PC and print job can't be performed due to the error. (Can't print)

Step	Check description	Assumed cause	Measures	Reference
1	Deleting the job	The faulty print job is remaining.	Check if the print job remains in the printer driver and delete the remaining.	

⑲ Data is not printed out due to the printer driver setting (2)

Condition:

PC OS: Windows 7

Print file: Test page

Connecting method: Wireless LAN

[Preparing the printer] is displayed on the operation panel. The printing document is not output and the job is held.

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.	

⑳ Data is not printed out due to the printer driver setting (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	Installing the printer driver	The printer driver is faulty.	Uninstall and reinstall the printer driver.	
3	Restarting up	The PC does not start up properly.	Restart up the PC.	
4	Checking the printer driver	The printer driver is not the latest version.	Update the printer driver.	

㉑ Data is not printed out due to the printer driver setting (4)

PC operation does not stabilize.

Step	Check description	Assumed cause	Measures	Reference
1	Restarting up	The printer driver is not properly set.	Restart PC. (In case if many application software are running or the free space of the PC memory /HDD is low)	

(22) Data is not printed out due to the printer driver setting (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	

(23) Data is not printed out due to the printer driver setting (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.	

(24) Data is not printed out due to the printer driver setting (7)

Installed printer driver shows "Deleting" and it remains when reinstalling it

Step	Check description	Assumed cause	Measures	Reference
1	Deleting the job	The print jobs remain in the spool inside the printer driver.	Delete all print jobs spooling inside the printer driver.	
2	Uninstalling the printer driver	There is the unused printer driver.	Delete the unused printer driver.	
3	Restarting the print	The system is pausing.	Right click the pausing printer icon and select [Print resuming]. Then, check the ready port.	
4	Checking the settings	The host name or the IP address is not properly set.	When the main unit connects to a local network, check the host name and the IP address on the status report of the main unit.	
5	Adding the Standard TCP/IP port	There is no main unit IP Address in the Standard TCP/IP Port	Add the main unit IP address in Standard TCP/IP port and print Test Page	

(25) The printed image is partly missing

The image data processing with a certain application (Excel, PDF) is faulty.

Step	Check description	Assumed cause	Measures	Reference
1	Checking the situation	The image data processing with a certain application (Excel, PDF) is faulty.	When the phenomenon occurs with a certain file only, check if there is an abnormality in the image data.	
2	Checking the situation	The data processing with a certain application (Excel, PDF) 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 setting	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.	

⑵⑹ "Paper Mismatch Error" appears

The paper size is not detected properly.

Step	Check description	Assumed cause	Measures	Reference
1	Changing the setting	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	Checking the MP tray	The MP tray is not pulled out.	Pull out the MP tray to extend it if the A3 size paper is not detected.	
4	Changing the setting	The paper size is not set properly in the System Menu.	Register the custom size in [MP Tray Setting] in the System Menu > [Paper Size] > [Size Entry].	
5	Changing the setting	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)	"Check the document processor" appears
(2)	[Error occurred in cassette X] is displayed (Cassette 1) even after removing/inserting the cassette and checking/removing paper remaining in the main unit
(3)	[Error occurred in cassette X] is displayed (Cassette 2, 3) even after removing/inserting the cassette and checking/ removing paper remaining in the main unit
(4)	The cover open message appears after closing the front cover
(5)	The cover open message remains after closing the front cover
(6)	The add paper message appears while the paper is loaded on the MP tray
(7)	When DP is used, [Remove the original from document processor] is wrongly displayed

Content of Error Messages

⑴ "Check the document processor" appears

Closing of the document processor cannot be detected.

Step	Check description	Assumed cause	Measures	Reference
1	Executing U244	The DP opening/closing switch does not operate properly.	Execute U244 [Open]. If the DP opening/ closing switch does not operate properly, reattach it and reconnect the connector. If not repaired, replace it.	
2	Checking the connection	The connector is not connected properly, or the wire is faulty.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • DP opening/closing switch - DP PWB • DP PWB - Low-voltage PWB	
3	Checking the DP opening/ closing switch signal	The DP opening/closing switch signal output is faulty.	Check the output of the DP opening/closing switch signal on the DP PWB.	
4	Replacing the DP PWB	The DP PWB is faulty.	Replace the DP PWB.	
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.	

⑵ [Error occurred in cassette X] is displayed (Cassette 1) even after removing/inserting the cassette and checking/removing paper remaining in the main unit

Step	Check description	Assumed cause	Measures	Reference
1	Reinstalling the paper feed unit	The paper feed unit is not inserted completely.	Pull the paper feed unit out, then reinsert it completely.	
2	Checking the lift plate	The lift plate does not rise up.	Reattach the lift plate. If it is deformed, replace it.	
3	Checking the connection	The connector is not connected properly, 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 motor - Engine PWB	
4	Replacing the lift motor	The lift motor is faulty.	Replace the lift motor.	
5	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

⑶ [Error occurred in cassette X] is displayed (Cassette 2, 3) even after removing/inserting the cassette and checking/removing paper remaining in the main unit

Object: Paper feeder

Step	Check description	Assumed cause	Measures	Reference
1	Reinstall the PF feed unit	The PF paper feed unit is not inserted completely.	Pull the PF paper feed unit out, and then reinsert it completely.	
2	Checking the lift plate	The PF lift plate does not rise up.	Reattach the PF lift plate. If it is deformed, replace it.	
3	Checking the connection	The connector is not connected properly, 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 lift moor 2 - PF PWB (YC6) • PF upper limit sensor 2 - PF PWB (YC5)	
4	Replacing the PF lift motor	The PF lift motor is faulty.	In case if it does not improve even U906 (Reset disable function) is executed, replace the PF lift motor 1 and 2.	
5	Replacing the PF PWB	The PF PWB is faulty.	Replace the PF PWB.	
6	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

⑷ The cover open message appears after closing the front cover

Step	Check description	Assumed cause	Measures	Reference
1	Reattaching the front cover	The front cover does not turn the front cover sensor on due to the fitting failure.	Reattach the front cover.	
2	Checking the connection	The connector is not connected properly, 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. • Front cover switch - Low-voltage PWB	
3	Replacing the front cover switch	The front cover switch is faulty.	Replace the front cover switch.	

⑸ The cover open message remains after closing the front cover

Step	Check description	Assumed cause	Measures	Reference
1	Checking the right cover switch	The covers are not fitted.	The right cover switch does not turn on when closing the right cover. If turning on when directly pressing it, check the cover. If the cover does not match, reattach it.	
2	Checking the connection	The connector is not connected properly, 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. • Right cover switch - Engine PWB	
3	Replacing the right cover switch	The right cover switch is faulty.	Replace the right cover switch.	

⑹ 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 connected properly, 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 - Relay connector • Relay connector - Engine PWB	
2	Replacing the actuator	The actuator is deformed.	Replace the actuator for the MP paper sensor.	
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.	

⑺ When DP is used, [Remove the original from document processor] is wrongly displayed

Step	Check description	Assumed cause	Measures	Reference
1	Checking the connection	The DP original sensor wire is faulty	Check the DP original sensor wire. If it is constantly on due to short-circuit, replace the wire. • DP original sensor - DP PWB	
2	Checking the actuator	The actuator is deformed.	Replace the actuator for the DP original sensor	
3	Checking the DP original sensor	The DP original sensor is not attached properly or faulty.	Reattach the DP original sensor. If not repaired, replace it.	
4	Replacing the DP PWB	The DP PWB is faulty.	Replace the DP PWB.	

7 - 8 Abnormal Noise

No.	Contents	Condition
(1)	Abnormal noise (Basic support)	
(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	Fan motor is dirty or faulty.
(7)	Abnormal sound from the paper feed section	Wear, dirtiness, foreign material adhesion or attachment failure at the paper feed section
(8)	Abnormal sound from the MP feed section	Wear, dirtiness, foreign objects adhesion or attachment failure at the MP feed section
(9)	Abnormal sound from the fuser exit section	The fuser exit roller bushing and pulley are dirty and foreign objects adhere to them
(10)	Abnormal sound from the fuser section	Smudges / foreign objects adhesion or the interference between the parts in the fuser section
(11)	Abnormal sound from inside the machine	Toner container drive failure, toner supply shutter opening/closing failure or toner aggregation
(12)	Abnormal sound from inside the machine	Smudges / foreign objects adhesion or the toner condensation in the developer section
(13)	Abnormal sound from inside the machine	Frictional wear, smudges / foreign objects adhesion, or the waste toner clogging in the drum section
(14)	Abnormal sound from rear side of the main unit	

Content of Abnormal Noise

⑴ Abnormal noise (Basic support)

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, the pulley or the gear, if they do not rotate smoothly, apply the grease on the gears or the bearings. (EM-50LP, Part number: 7BG010009H)	
2	Reattaching the gears or the bearings	The parts such as each gear or bushing are not properly attached.	Reattach the gear or the bearings.	

⑵ 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 bearings and the gears of the conveying related rollers, and apply the grease (EM-50LP, Part number: 7BG010009H).	
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 the Hanarl. (302LV94550)	
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 the grease (EM-50LP, Part number: 7BG010009H).	

Step	Check description	Assumed cause	Measures	Reference
4	Checking the pressure spring	Pressure of the conveying related roller and pulley are weak, and the bearing vibrates as the roller and pulley rotate.	Reattach the pressure springs of the conveying related rollers or the pulleys, or replace them.	
5	Replacing the drive unit	The parts in the drive unit are faulty.	Replace the drive unit	

⑶ Abnormal sound from the developer section

Caused by the developer unit.

Step	Check description	Assumed cause	Measures	Reference
1	Executing U030	Specifying the sound from the developer unit	Specify the sound from the developer unit at U030 [DLP]	
2	Checking the developer unit	The developer unit drive is faulty.	Check if the developer is not leaking from the developer unit, there is no damaged location, and whether the roller rotates manually. Repair if necessary.	
3	Developer unit replacement	The developer unit is faulty.	Replace the developer unit.	

⑷ 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 bearings and the shafts, and apply the grease (EM-50LP, Part number: 7BG010009H).	
2	Checking the bushing	The bushing is worn down.	Replace the bearing of the DP conveying roller.	
3	Cleaning and applying the grease	The drive gear is dirty or foreign objects are on it.	Clean the gears which transmit the drive to the DP conveying roller, and apply the grease (EM-50LP, Part number: 7BG010009H).	
4	Checking the motor	The motor does not engage with the drive gear.	Reattach the DP conveying related motors.	

⑸ 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 bushings and gears of the conveying rollers and apply the Hanarl (EM-50LP, Part number: 7BG010009H).	
2	Cleaning and applying the grease	The inside of the pulley is worn down.	Clean the drive shaft of the conveying pulleys and apply the Hanarl. (302LV94550)	
3	Cleaning and applying the grease	The bearings are dirty or the foreign objects adhere.	Clean the reverse guide and the shaft of the exit feedshift guide. If it is not possible to remove the dirt or the foreign objects, replace them.	
4	Checking the exit motor	The exit motor is faulty.	Execute U030 [Exit]. If the abnormal sound occurs, replace the exit reverse motor.	

⑹ Fan rotating sounds are noisy

Fan motor is dirty or faulty.

Step	Check description	Assumed cause	Measures	Reference
1	Cleaning the fan motor	The fan of the fan motor is dirty.	Execute U037 and specify the fan motor which has a high rotation sound, 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.	

⑺ Abnormal sound from the paper feed section

Wear, dirtiness, foreign material adhesion or attachment failure at the 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 gear or the clutch at the paper feed drive section 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 gears and the bearings of the feed drive section, and apply the grease. (EM-50LP, Part number: 7BG010009H)	
3	Cleaning and applying the grease	The shaft or the bushing is dirty or foreign objects are on them.	Clean the shaft and the bearings of the feed roller, and apply the grease. (EM-50LP, Part number: 7BG010009H)	
4	Checking the paper feed roller	The paper feed roller surface is dirty or worn down.	Clean the paper feed roller, or replace it if necessary.	

⑻ Abnormal sound from the MP feed section

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 bearings of the MP feed roller, and apply the grease. (EM-50LP, Part number: 7BG010009H)	
3	Checking the MP friction pad	The surface of the MP friction pad is dirty or worn out.	Clean the MP friction pad and replace it if necessary.	
4	Checking the MP lift plate	The MP lift plate is not attached properly.	Reattach the MP lift plate.	

⑼ Abnormal sound from the fuser exit section

The fuser exit roller bushing and pulley are dirty and foreign objects adhere to them

Step	Check description	Assumed cause	Measures	Reference
1	Cleaning and applying the grease	The fuser exit roller, bushing or stop ring is dirty, or foreign objects adhere to it.	Clean the fuser exit roller, the bushing, stop ring, etc., and apply heat-resistant grease.	

(10) Abnormal sound from the fuser section

Smudges / foreign objects adhesion or the interference between the parts in the fuser section

Step	Check description	Assumed cause	Measures	Reference
1	Cleaning and applying the grease	The fuser exit roller, bushing or stop ring is dirty, or foreign objects adhere to it.	Clean the fuser exit roller, bushing, stop ring, pulley, etc. and apply grease (EM-50LP, Part number: 7BG010009H)	
2	Cleaning and applying the grease	The gear is dirty or foreign objects are on it.	Clean the fuser drive gear and apply the grease. (EM-50LP, Part number: 7BG010009H)	
3	Replacing the fuser unit	The fuser unit is faulty.	Replace the fuser unit.	

(11) Abnormal sound from inside the machine

Toner container drive failure, toner supply shutter opening/closing failure or toner aggregation

Step	Check description	Assumed cause	Measures	Reference
1	Checking the toner container	The torque increases due to the toner condensation.	Shake the toner container enough and reinstall it. Or, replace it.	
2	Cleaning the drive parts of the container motor	The drive gear shaft or the bearings of the container motor is dirty. Or, the foreign objects are adhered.	If the drive gear of the container motor does not rotate smoothly, clean the shaft or the bearings.	

(12) Abnormal sound from inside the machine

Smudges / foreign objects adhesion or the toner condensation in the developer section

Step	Check description	Assumed cause	Measures	Reference
1	Checking the 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.	
2	Checking the developer unit	The torque inside the developer unit increased due to the toner condensation, etc.	Clean the developer unit. Then, replace it if the issue is not resolved.	

(13) Abnormal sound from inside the machine

Frictional wear, smudges / foreign objects adhesion, or the waste toner clogging in the drum section

Step	Check description	Assumed cause	Measures	Reference
1	Executing Drum refresh	Toner is not enough on the drum.	Execute the drum refresh to supply the toner to the cleaning unit.	
2	Checking the drum screw	The drum screw does not properly rotate.	Check the drum screw rotation and if it does not rotates smoothly, clean it. If it locks, replace the IH 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 surface of the drum drive gear and apply the grease. (EM-50LP, Part number: 7BG010009H)	
4	Drum unit replacement	The torque inside the drum unit increased due to the waste toner clogging, etc.	Replace the drum unit.	

(14) Abnormal sound from rear side of the main unit

Step	Check description	Assumed cause	Measures	Reference
1	Reattaching the motor in the drive unit	The motor in the drive unit is faulty	Reattach the motor in the drive unit.	
2	Checking the drive gears engagement	The drive unit gears and gears at each unit side do not engage properly	Reattach the drive unit	

7 - 9 Malfunction

No.	Contents	Condition
(1)	The size of paper set in the cassette is misdetected or not displayed	
(2)	The main unit malfunctions even if turning on the power switch	
(3)	No display in the operation panel	(Image on the operation panel is faulty or becomes pure white)
(4)	The operation panel remains displaying "WELCOME" and does not change	Communicate between the main PWB and the operation panel main PWB can't be done.
(5)	The login fails with other than the ID card	

Content of Malfunction

(1) The size of paper set in the cassette is misdetected or not displayed

Object: Main unit, Paper feeder

Step	Check description	Assumed cause	Measures	Reference
1	Checking the paper length switch and fan-shape arm	The paper length switch or fan-shape arm does not operate properly	Reattach the paper length switch or fan-shape arm	
2	Checking the connection	The connector is not connected properly, 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. • Paper length switch - Engine PWB • Paper width switch - Engine PWB	
3	Replacing the paper length switch	The paper length switch is faulty	Replace the paper length switch	
4	Replacing the paper width switch	The paper width switch is faulty	Replace the paper width switch	
5	Replacing the engine PWB	The engine PWB is faulty.	Replace the engine PWB.	

(2) The main unit malfunctions even if turning on the power switch

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	Checking the power cord	The power plug of the power cord is faulty.	If the power plug is deformed or faulty, replace the power cord.	
3	Checking the power cord	The power cord is faulty.	If there is no continuity of the power cord, replace the power cord.	
4	Checking the power switch	The power switch is faulty.	Check the continuity between the contacts of the power switch. Replace the power switch if there is no continuity.	
5	Checking the low voltage PWB	The connector is not connected properly. The wire or the PWB is faulty.	Clean the terminal of the connectors on the low voltage PWB, then reconnect the wire connector. If the wire is faulty, repair or replace it. If not repaired, replace the low voltage PWB.	
6	Checking the main PWB	The connector or FFC terminal is not connected properly. Or, the wire, FFC, 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.	

Step	Check description	Assumed cause	Measures	Reference
7	Checking the engine PWB	The connector or FFC terminal is not connected properly. Or, the wire, FFC, 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.	

⑶ No display in the operation panel

(Image on the operation panel is faulty or becomes pure white)

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	The main firmware does not start correctly.	Turn off the power switch and pull out the power plug. After passing 5s, reinsert the power plug and turn on the power switch.	
2	Checking the connection	The connector is not connected properly. Or, the wire is faulty so that the power for display is not supplied.	Clean the terminal of the following wire connectors and reconnect the connectors. If there is no continuity, replace the wire. • Main PWB - Operation panel main PWB • Main PWB - Low-voltage PWB	
3	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	
4	Checking the operation panel PWB	The operation panel main PWB is faulty.	Replace the panel main PWB.	
5	Replacing the low voltage PWB	Low voltage power PWB is faulty and the power is not supplied to the main PWB.	Replace the low voltage PWB.	

⑷ The operation panel remains displaying "WELCOME" and does not change

Communicate between the main PWB and the operation panel main PWB can't be done.

Step	Check description	Assumed cause	Measures	Reference
1	Resetting the main power	The communication between the main PWB and the operation panel main PWB is faulty.	Turn off the power switch and pull out the power plug. After passing 5s, reinsert the power plug and turn on the power switch.	
2	Checking the connection	The connector is not connected properly. Or, the wire or the SATA cable is faulty.	Clean the following wire, the terminal of SATA cable connector and reconnect them. If there is no continuity, replace the wire. • Main PWB - Operation panel main PWB	
3	Executing U021	The backup RAM data is faulty.	Execute U021 to initialize the backup RAM data.	
4	Replacing the main PWB	The main PWB is faulty.	Replace the main PWB.	
5	Replacing the operation panel main PWB	The operation panel main PWB is faulty.	Replace the panel main PWB.	

⑸ The login fails with other than the ID card

Step	Check description	Assumed cause	Measures	Reference
1	Changing the setting	[User/Job Account] is valid while the card authentication kit is not installed.	Set [Permit] at [User/Job Account] > [ID Card Settings] > [Key Login] via the System Menu.	

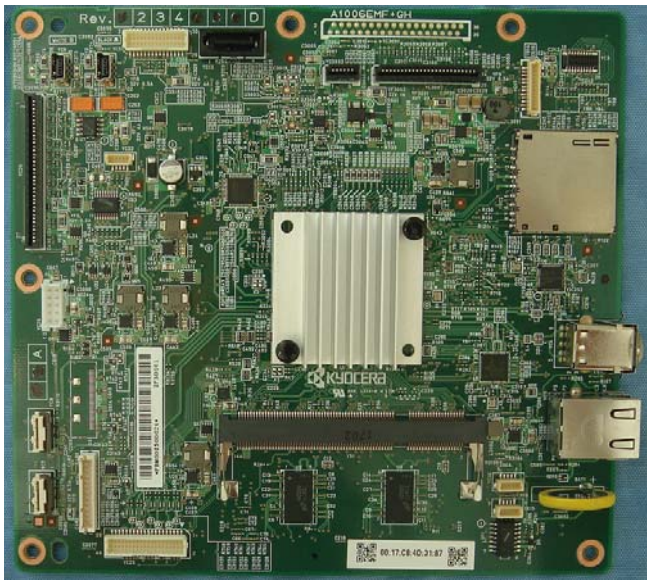
8 PWBs

8 - 1 Description for PWB

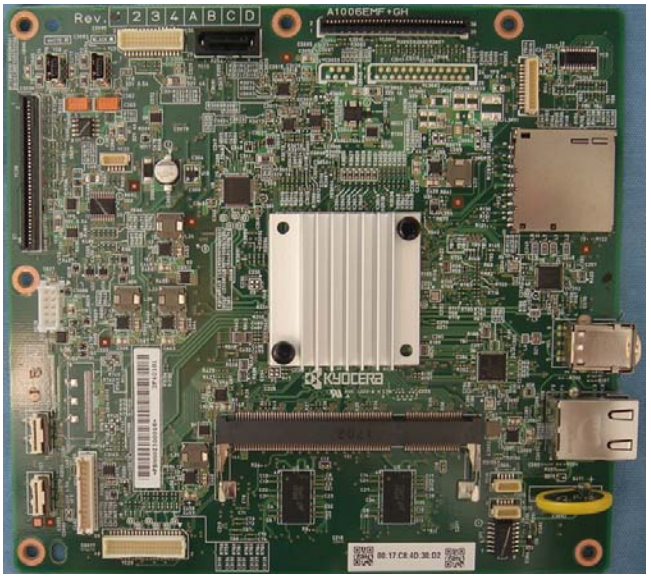
(1) Main PWB

(1-1) PWB photograph

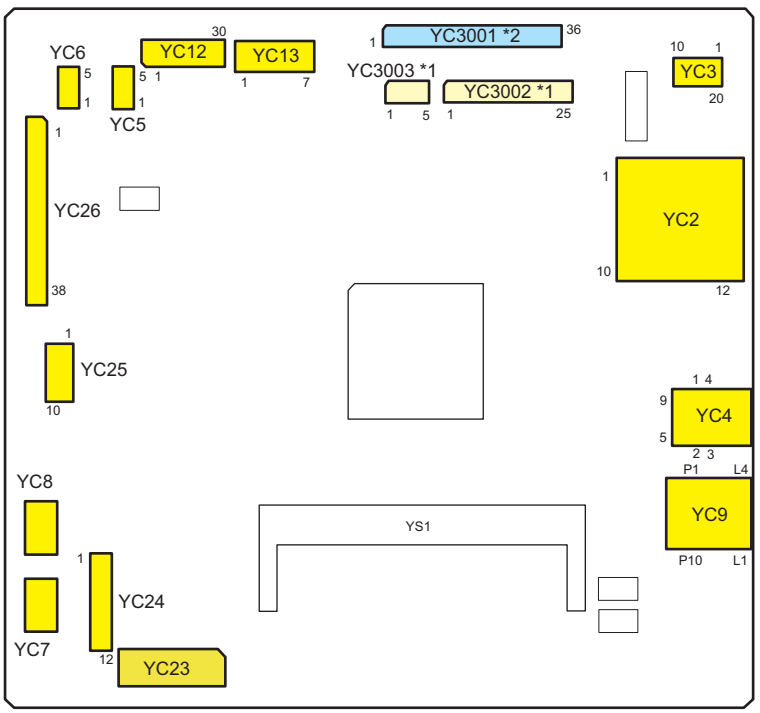
High Model



Low Model



(1-2) Connector position



(1-3) Connector lists

Destination

- YC2: SD card
- YC3: Wi-Fi PWB
- YC4: USB device
- YC5: USB host (Front)
- YC6: USB host (Side)
- YC7: eKUIO PWB
- YC8: eKUIO PWB
- YC9: Ethernet
- YC12: Operation panel PWB, Power switch
- YC13: Operation panel PWB
- YC23: LSU relay PWB
- YC24: LSU relay PWB
- YC25: Low voltage PWB
- YC26: Engine PWB
- YC3001: CIS*2
- YC3002: CCD PWB*1
- YC3003: LED drive PWB*1

*1: CCD model, *2: CIS model

Connector	Pins	Signal	I/O	Voltage	Description
YC2	1	CD/DAT3	IO	DC3.3V(pulse)	Data[3]
	2	CMD	IO	DC3.3V(pulse)	Command
	3	VSS	O	-	Ground
	4	VDD	O	DC3.3V	Power output
	5	CLK	O	DC3.3V(pulse)	Transfer clock
	6	VSS	O	-	Ground
	7	DAT0	IO	DC3.3V(pulse)	Data[0]
	8	DAT1	IO	DC3.3V(pulse)	Data[1]
	9	DAT2	IO	DC3.3V(pulse)	Data[2]
	10	CD	I	DC3.3V	Detecting switch
	11	COMMON	I	-	Common Connection(Ground)
	12	WP	I	DC3.3V	Write-Protect
YC3	1	SD_D3	IO	DC3.3V(pulse)	Data[3]
	2	SD_D2	IO	DC3.3V(pulse)	Data[2]
	3	SD_CMD	IO	DC3.3V(pulse)	Command
	4	GND	O	-	Ground
	5	SD_CLK	O	DC3.3V(pulse)	Transfer clock
	6	GND	O	-	Ground
	7	SD_D1	IO	DC3.3V(pulse)	Data[1]
	8	SD_D0	IO	DC3.3V(pulse)	Data[0]
	9	GND	O	-	Ground

Connector	Pins	Signal	I/O	Voltage	Description
YC3	10	VIO	O	DC3.3V	Power output
	11	VBAT	O	DC3.3V	Power output
	12	GND	O	-	Ground
	13	PAVDD	O	DC3.3V	Power output
	14	GND	O	-	Ground
	15	HOSTWAKE	O	-	Not used(Ground)
	16	GND	O	-	Ground
	17	RESET	O	-	Not used(Ground)
	18	GND	O	-	Ground
	19	USB_+	O	-	Not used(Ground)
	20	USB_-	O	-	Not used(Ground)
YC4	1	VBUS	O	DC5V	VBUS
	2	D-	IO	(DC0.4V)pluse	Data(-)
	3	D+	IO	(DC0.4V)pluse	Data(+)
	4	GND	O	-	Ground
	5	STDB_SSTX-	IO	-	Not used
	6	STDB_SSTX+	IO	-	Not used
	7	GND	O	-	Ground
	8	STDB_SSRX-	IO	-	Not used
	9	STDB_SSRX+	IO	-	Not used
YC5	1	VBUS	O	DC5V	VBUS
	2	DATA-	IO	(DC0.4V)pluse	Data(-)
	3	DATA+	IO	(DC0.4V)pluse	Data(+)
	4	ID	-	-	Not used
	5	SHEELD-G	O	-	Ground
YC6	1	VBUS	O	DC5V	VBUS
	2	DATA-	IO	(DC0.4V)pluse	Data(-)
	3	DATA+	IO	(DC0.4V)pluse	Data(+)
	4	ID	-	-	Not used
	5	SHEELD-G	O	-	Ground
YC7	1	VBUS1	O	DC5V	VBUS
	2	USB_DN1	IO	(±400mV)pluse	Data(-)
	3	USB_DP1	IO	(±400mV)pluse	Data(+)
	4	AUDIO1	I	Analog	FAX Audio
	5	WAKEUP1	I	DC3.3V	recovery request
	6	RESET1	O	DC5V	Reset
	7	GND	O	-	Ground
	8	GND	O	-	Ground
	9	GND	O	-	Ground
	10	GND	O	-	Ground
	11	NC	-	-	Not used
	12	5V2_C2	O	DC5V	Power output
	13	5V2_C2	O	DC5V	Power output
	14	5V2_C2	O	DC5V	Power output
	15	5V1_C	O	DC5V	Power output
YC8	1	VBUS1	O	DC5V	VBUS
	2	USB_DN1	IO	(±400mV)pluse	Data(-)

Connector	Pins	Signal	I/O	Voltage	Description
YC8	3	USB_DP1	IO	(±400mV)pluse	Data(+)
	4	AUDIO1	I	Analog	FAX Audio
	5	WAKEUP1	I	DC3.3V	recovery request
	6	RESET1	O	DC5V	Reset
	7	GND	O	-	Ground
	8	GND	O	-	Ground
	9	GND	O	-	Ground
	10	GND	O	-	Ground
	11	NC	-	-	Not used
	12	5V2_C2	O	DC5V	Power output
	13	5V2_C2	O	DC5V	Power output
	14	5V2_C2	O	DC5V	Power output
	15	5V1_C	O	DC5V	Power output
YC9	R1	TD1+	IO	-1.0 to +1.0(pulse)	Data
	R2	TD1-	IO	-1.0 to +1.0(pulse)	Data
	R3	TD2+	IO	-1.0 to +1.0(pulse)	Data
	R4	TD2-	IO	-1.0 to +1.0(pulse)	Data
	R5	CT1	-	-	Center tap
	R6	CT2	-	-	Center tap
	R7	TD3+	IO	-1.0 to +1.0(pulse)	Data
	R8	TD3-	IO	-1.0 to +1.0(pulse)	Data
	R9	TD4+	IO	-1.0 to +1.0(pulse)	Data
	R10	TD4-	IO	-1.0 to +1.0(pulse)	Data
	L1	YWLED_A	O	DC3.3V	LED anode(Power output)
	L2	YWLED_K	I	-	LED cathode(Ground)
	L3	GRLED_K	I	-	LED cathode(Ground)
	L4	GRLED_A	O	DC3.3V	LED anode(Power output)
YC12	1	I2C_SCL_NFC	O	DC3.3V(pulse)	NFC communication clock
	2	I2C_SDA_NFC	IO	DC3.3V(pulse)	NFC communication data
	3	DC3.3V2_NFC	O	DC3.3V	NFC power output
	4	NIRQ	I	0V	NFC interrupt
	5	FPRST	O	0V	Panel reset
	6	INT_ENERGYSAVERKEY	I	DC3.3V	Energy Saver key input
	7	P2C_SDAT	I	DC3.3V(pulse)	Panel communication data
	8	PNL_WKUP_REQ	I	0V	Operation panel recovery request
	9	C2P_SDAT	O	DC3.3V(pulse)	Panel communication data
	10	AUDIO	O	Analog	FAX Audio
	11	P2C_SDIR	I	DC3.3V	Panel communication direction
	12	NC	-	-	Not used
	13	P2C_SBSY	I	DC3.3V	Panel communication permission
	14	LED_ATTENTION	O	0V	LED control
	15	C2P_SCK	O	DC3.3V(pulse)	Panel communication clock
	16	LED_MEMORY	O	0V	LED control
	17	DISPLAY_POWERON	-	-	Not used
	18	BEEP_POWERON	O	0V	Alert sound drive
	19	INT_ANYKEY	I	0V	Energy saver recovery
	20	GND	O	-	Ground

Connector	Pins	Signal	I/O	Voltage	Description
YC12	21	GND	O	-	Ground
	22	GND	O	-	Ground
	23	DC5V1	O	DC5V	Power output
	24	GND	O	-	Ground
	25	DC5V1	O	DC5V	Power output
	26	JOB_LED	O	-	Job separator LED
	27	DC5V1	O	DC5V	Power output
	28	GND	O	-	Ground
	29	DC5V1	O	DC5V	Power output
	30	POWER_SW	I	DC3.3V	Power source switch
YC13	1	GND	O	-	Ground
	2	LCD_OFF	O	DC3.3V	Conducting LCD
	3	LOCKN	I	DC3.3V	Communication sync
	4	GND	O	-	Ground
	5	TX0N	O	-100 to +100mV(pulse)	LCD data(N)
	6	TX0P	O	-100 to +100mV(pulse)	LCD data(P)
	7	GND	O	-	Ground
YC23	1	VCONT(M)	O		Reference voltage
	2	OUTPEN(M)	O	DC3.3V(pulse)	Output permission
	3	OVDATA2N(M)*3	O	-100 to +100mV(pulse)	Image data
	4	SAMPLE2(M)*3	O	DC3.3V(pulse)	Sample / hold
	5	VDATA2P(M)*3	O	-100 to +100mV(pulse)	Image data
	6	SAMPLE1(M)	O	DC3.3V(pulse)	Sample / hold
	7	VDATA1N(M)	O	-100 to +100mV(pulse)	Image data
	8	BD_C(M)	I	DC3.3V(pulse)	Horizontal sync signal
	9	VDATA1P(M)	O	-100 to +100mV(pulse)	Image data
	10	OUTPEN(C)	O	DC3.3V(pulse)	Output permission
	11	VCONT(C)	O		Reference voltage
	12	SAMPLE2(C)*3	O	DC3.3V(pulse)	Sample / hold
	13	VDATA2N(C)*3	O	-100 to +100mV(pulse)	Image data
	14	SAMPLE1(C)	O	DC3.3V(pulse)	Sample / hold
	15	VDATA2P(C)*3	O	-100 to +100mV(pulse)	Image data
	16	BD_B(C)	I	DC3.3V(pulse)	Horizontal sync signal
	17	VDATA1N(C)	O	-100 to +100mV(pulse)	Image data
	18	OUTPEN(Y)	O	DC3.3V(pulse)	Output permission
	19	VDATA1P(C)	O	-100 to +100mV(pulse)	Image data
	20	SAMPLE2(Y)*3	O	DC3.3V(pulse)	Sample / hold
	21	VCONT(Y)	O		Reference voltage
	22	SAMPLE1(Y)	O	DC3.3V(pulse)	Sample / hold
	23	VDATA2N(Y)*3	O	-100 to +100mV(pulse)	Image data
	24	BD_A(Y)	I	DC3.3V(pulse)	Horizontal sync signal
	25	VDATA2P(Y)*3	O	-100 to +100mV(pulse)	Image data
	26	GND	-		Ground
	27	VDATA1N(Y)	O	-100 to +100mV(pulse)	Image data
	28	CLOCK(BK)	O	DC3.3V(pulse)	Polygon motor clock
	29	VDATA1P(Y)	O	-100 to +100mV(pulse)	Image data
	30	CLOCK(M)	O	DC3.3V(pulse)	Polygon motor clock

Connector	Pins	Signal	I/O	Voltage	Description
YC23	31	GND	-		Ground
	32	CLOCK(C)	O	DC3.3V(pulse)	Polygon motor clock
	33	GND	-		Ground
	34	CLOCK(Y)	O	DC3.3V(pulse)	Polygon motor clock
	35	NC	-		Not used
	36	NC	-		Not used
	37	NC	-		Not used
	38	NC	-		Not used
	39	NC	-		Not used
	40	NC	-		Not used
YC24	1	DC3.3_IL	O	DC3.3V	Power supply output
	2	GND	-	-	Ground
	3	VDATA2N(BK)*3	O	-100 to +100mV(pulse)	Image data
	4	VDATA2P(BK)*3	O	-100 to +100mV(pulse)	Image data
	5	VDATA1N(BK)	O	-100 to +100mV(pulse)	Image data
	6	VDATA1P(BK)	O	-100 to +100mV(pulse)	Image data
	7	SAMPLEN2(BK)*3	O	DC3.3V(pulse)	Sample / hold
	8	SAMPLEN1(BK)	O	DC3.3V(pulse)	Sample / hold
	9	OUTPEN(BK)	O	DC3.3V(pulse)	Output permission
	10	VCONT(BK)	O		Reference voltage
	11	BD_D(BK)	I	DC3.3V(pulse)	Horizontal sync signal
	12	3.3V3_C_LSU*3	O	DC3.3V	Power output
YC25	1	GND	-		Ground
	2	DC24V2	I	DC24V	Power input
	3	DC5V0	I	DC5V	Power input
	4	DC5V0	I	DC5V	Power input
	5	DC5V0	I	DC5V	Power input
	6	SLEEP	O	DC5V	Sleep signal
	7	GND	I	-	Ground
	8	GND	I	-	Ground
	9	GND	I	-	Ground
	10	AC_DOWN	-	-	Not used
YC26	1	OVSYNCMON	I	DC3.3V(pulse)	VSYNC monitor
	2	PAGEST	I	DC3.3V(pulse)	Page valid range
	3	SCAN_E2C_SCK	I	DC3.3V(pulse)	Scan communication clock
	4	SCAN_C2E_SDAT	O	DC3.3V(pulse)	Scan communication data
	5	SCAN_E2C_SDAT	I	DC3.3V(pulse)	Scan communication data
	6	SCAN_E2C_SEL	I	DC3.3V	Scan communication start request
	7	SCAN_C2E_RDY	O	DC3.3V	Scan communication permission
	8	C2E_SCK	I	DC3.3V(pulse)	Engine communication clock
	9	C2E_SDAT	O	DC3.3V(pulse)	Engine communication data
	10	E2C_SDAT	I	DC3.3V(pulse)	Engine communication data
	11	E2C_SDIR	I	DC3.3V	Engine communication direction
	12	E2C_IR	I	0V	Engine communication interrupt
	13	E2C_SBSY	I	DC3.3V	Engine communication permission
	14	GND	-	-	Ground
	15	EG_SCL	I	DC3.3V(pulse)	Video register communication clock

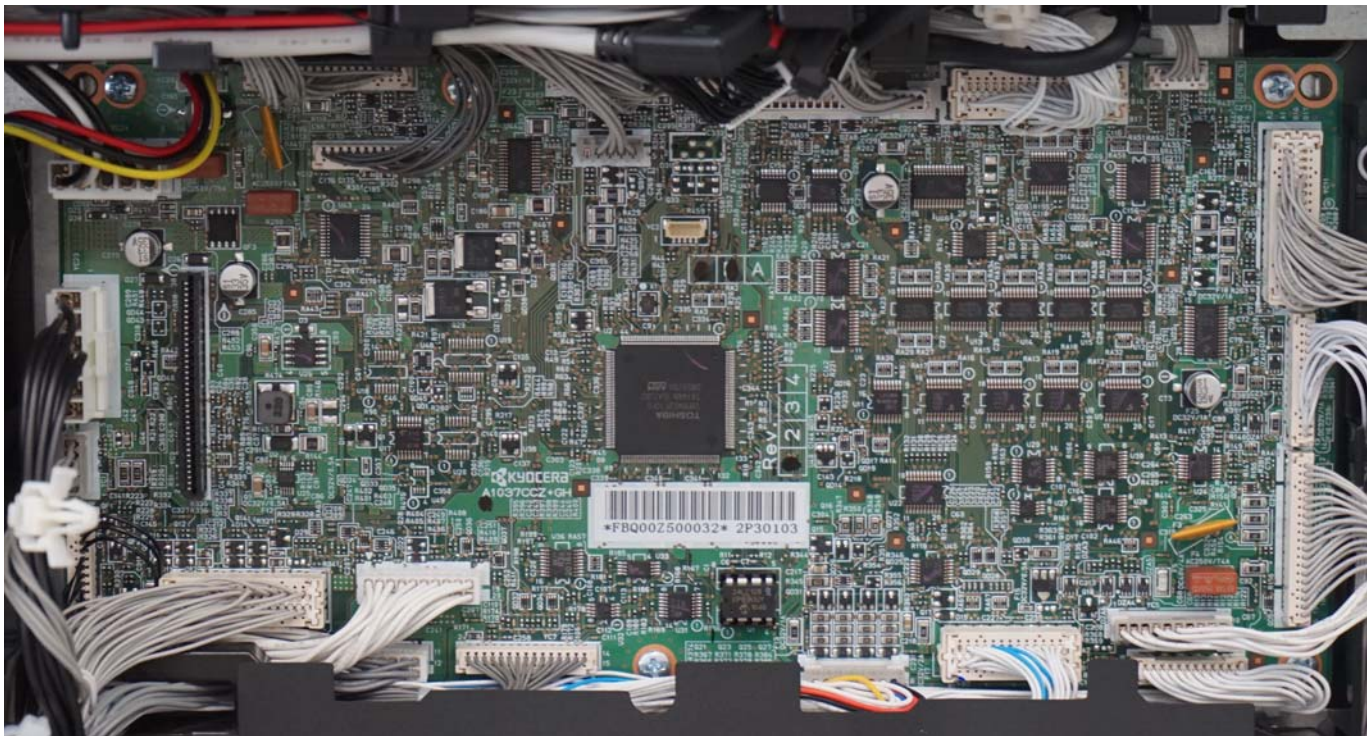
Connector	Pins	Signal	I/O	Voltage	Description
YC26	16	GND	-	-	Ground
	17	EG_SDA	IO	DC3.3V(pulse)	Video register communication data
	18	GND	-	-	Ground
	19	PVSYNC	I	DC3.3V(pulse)	Sub scanning start signal
	20	DC5V4_IL	I	DC5V	Power input
	21	C2E_QUICK_START	O	0V	Recovery from sleep mode or other status notification
	22	E2C_WKUP_BGD_N	I	DC3.3V	Background recovery request
	23	ENGHLD	O	0V	Engine hold
	24	SCANHLD	O	0V	Scan hold
	25	DUTY_COTROL	O	DC3.3V(pulse)	Duty control
	26	E2C_WKUP_RDY_N	I	DC3.3V	Ready recovery request
	27	DC5V2_E	O	DC5V	Power output
	28	C2E_STBY_ASIC	O	DC3.3V	ASIC access permission
	29	DC3.3V2_E	O	DC3.3V	Power output
	30	DC3.3V2_E	O	DC3.3V	Power output
	31	DC3.3V2_E	O	DC3.3V	Power output
	32	DC3.3V1	O	DC3.3V	Power output
	33	NC	-	-	Not used
	34	NC	-	-	Not used
	35	GND	O	-	Ground
	36	GND	O	-	Ground
	37	GND	O	-	Ground
	38	JOB_LED	I		Job separator LED
YC3001*2	1	OS6_RE	I	Analog	Image signal
	2	GND	O	-	Ground
	3	OS5_RO	I	Analog	Image signal
	4	GND	O	-	Ground
	5	OS3_GO	I	Analog	Image signal
	6	GND	O	-	Ground
	7	OS4_GE	I	Analog	Image signal
	8	GND	O	-	Ground
	9	OS2_BE	I	Analog	Image signal
	10	GND	O	-	Ground
	11	OS1_BO	I	Analog	Image signal
	12	GND	O	-	Ground
	13	CCD_SH	O	DC3.3V(pulse)	Shift gate
	14	GND	O	-	Ground
	15	CCDCLK2	O	DC3.3V(pulse)	Transfer clock
	16	GND	O	-	Ground
	17	CCD_RS	O	DC3.3V(pulse)	Reset gate
	18	GND	O	-	Ground
	19	CCDCLK1	O	DC3.3V(pulse)	Transfer clock
	20	NC	-	-	Not used
	21	DC5V5	O	DC5V	Power output
	22	DC5V5	O	DC5V	Power output
	23	NC	-		Not used

Connector	Pins	Signal	I/O	Voltage	Description
	24	+12V3_C	O	12V	Power output
YC3001*2	25	+12V3_C	O	12V	Power output
YC3002*1	1	+12V3_C	O	12V	Power output
	2	+12V3_C	O	12V	Power output
	3	LED_PWM	O	DC3.3V(pulse)	Lamp lighting control
	4	LED_ENA	O	DC3.3V(pulse)	Lamp lighting control
	5	GND	O	-	Ground
	6	GND	O	-	Ground
YC3003*1	1	DC3.3V5	O	DC3.3V	Power output
	2	DC3.3V5	O	DC3.3V	Power output
	3	DC3.3V5	O	DC3.3V	Power output
	4	Pull-down	-		Pull-down
	5	LED_COM2	O		LED anode
	6	LED2_B	I		LED cathode
	7	LED2_G	I		LED cathode
	8	LED2_R	I		LED cathode
	9	MODE	O	DC3.3V(pulse)	CIS control signal
	10	SP	O	DC3.3V(pulse)	CIS control signal
	11	VREF	O	1.1V	Reference power output
	12	GND	O	-	Ground
	13	CLK	O	DC3.3V(pulse)	CIS control clock
	14	GND	O	-	Ground
	15	OS1	I	Analog	Image signal
	16	GND	O	-	Ground
	17	OS2	I	Analog	Image signal
	18	GND	O	-	Ground
	19	OS3	I	Analog	Image signal
	20	GND	O	-	Ground
	21	OS4	I	Analog	Image signal
	22	GND	O	-	Ground
	23	OS5	I	Analog	Image signal
	24	GND	O	-	Ground
	25	OS6	I	Analog	Image signal
	26	GND	O	-	Ground
	27	OS7	I	Analog	Image signal
	28	GND	O	-	Ground
	29	OS8	I	Analog	Image signal
	30	GND	O	-	Ground
	31	OS9	I	Analog	Image signal
	32	GND	O	-	Ground
	33	LED_COM1	O		LED anode
	34	LED1_B	I		LED cathode
	35	LED1_G	I		LED cathode
	36	LED1_R	I		LED cathode

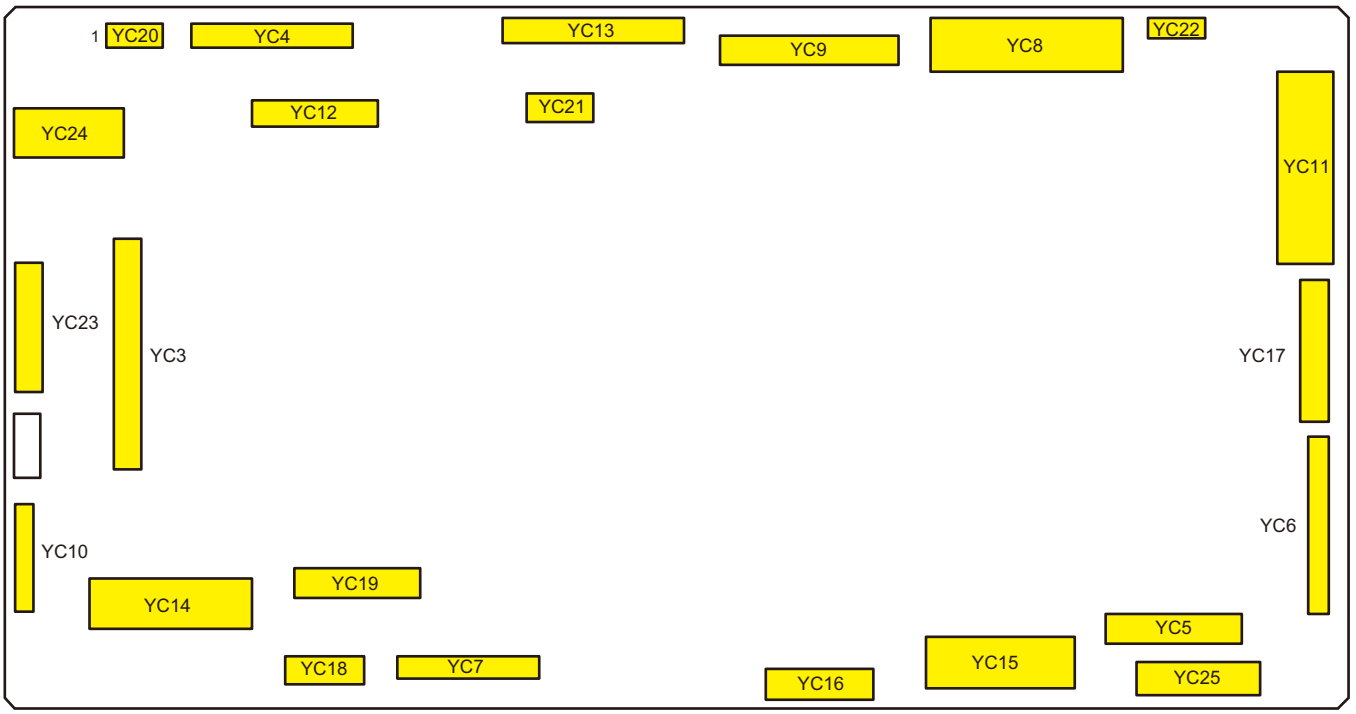
*1: CCD model, *2: CIS model only, *3: 30 ppm model only

(2) Engine PWB

(2-1) PWB photograph



(2-2) Connector position



⑵-3⑶ Connector lists

Destination

- YC3: Main PWB
- YC4: Document Processor
- YC5: Finisher(option) (30 ppm model only)
- YC6: LSU relay PWB
- YC7: ID sensor PWB, ID sensor shutter position, ID sensor shutter motor
- YC8: High voltage PWB
- YC9: Fuser PWB
- YC10: IH PWB
- YC11: High voltage PWB 2, Temperature/humidity PWB, Waste toner sensor, Developer fan motor (M/K), Developer fan motor (Y/C), LSU fan motor, Transfer relay PWB,
- YC12: Scanner motor, Home position sensor, Original sensor, Original size sensor
- YC13: Exit solenoid, Exit motor, JS paper full sensor, Paper full sensor, JS paper sensor
- YC14: Fuser cooling fan motor, Duplex sensor, Fuser sensor, MPF paper sensor, Vertical conveying sensor, MPF solenoid, Duplex clutch, Registration clutch, Middle clutch, Feed clutch, Conveying motor
- YC15: Registration sensor, Lift sensor, paper sensor 1,2, Lift motor, Paper length switch, Paper width switch, Imaging fan motor, Power source fan motor
- YC16: Exit motor, Exit sensor, Exit full sensor, Fuser sensor, JS exit sensor, Exit fan motor
- YC17: Drum/developer relay PWB
- YC18: Developer(K)/Belt motor, Fuser motor
- YC19: Developer motor(CMY), Developer clutch, Drum motor(CMY), Drum motor(K)
- YC20: IH cooling fan motor
- YC21: Toner container/IH coil fan motor, Developer toner fan motor
- YC22: Toner container relay PWB, Bridge detection switch
- YC23: Low voltage PWB
- YC24: Right cover switch, Front cover switch
- YC25: Paper feeder(option)

Connector	Pins	Signal	I/O	Voltage	Description
YC3	1	JOB_LED	O	3.3V/0V	Job Separator paper detection
	2	GND	I	-	Ground
	3	GND	I	-	Ground
	4	GND	I	-	Ground
	5	NC	-	-	Not used
	6	NC	-	-	Not used
	7	3.3V1	I	3.3V	Power source
	8	3.3V2_E	I	3.3V	Power source
	9	3.3V2_E	I	3.3V	Power source
	10	3.3V2_E	I	3.3V	Power source
	11	C2E_STBY_ASIC	I	3.3V	ASIC access permission
	12	5V2_E	I	5V	Power source
	13	E2C_WKUP_RDY_N	O	3.3V/0V	Ready recovery request

Connector	Pins	Signal	I/O	Voltage	Description
YC3	14	DUTY_COTROL	I	DC3.3V(pulse)	Duty control
	15	SCANHLD	I	3.3V/0V	Scan hold
	16	ENGHLD	I	3.3V/0V	Engine hold
	17	E2C_WKUP_BGD_N	O	3.3V	Background recovery request
	18	C2E_QUICK_START	I	3.3V/0V	Recovery from sleep mode or other status notification
	19	5V4_IL	O	5V	Power source
	20	PVSYNC	O	3.3V/0V	Sub scanning start signal
	21	GND	I	-	Ground
	22	EG_SDA	IO	DC3.3V(pulse)	Video register communication data
	23	GND	I	-	Ground
	24	EG_SCL	O	DC3.3V(pulse)	Video register communication clock
	25	GND	I	-	Ground
	26	E2C_SBSY	O	3.3V/0V	Main-Engine communication permission
	27	E2C_IR	O	3.3V/0V	Main-Engine communication interrupt
	28	E2C_SDIR	O	3.3V/0V	Main-Engine communication direction
	29	E2C_SDAT	O	DC3.3V(pulse)	Main-Engine communication data
	30	C2E_SDAT	I	DC3.3V(pulse)	Main-Engine communication data
	31	C2E_SCK	I	DC3.3V(pulse)	Main-Engine communication clock
	32	SCAN_C2E_RDY	I	3.3V/0V	Engine-Scan communication permission
	33	SCAN_E2C_SEL	O	3.3V/0V	Engine-Scan communication start request
	34	SCAN_E2C_SDAT	O	DC3.3V(pulse)	Engine-Scan communication data
	35	SCAN_C2E_SDAT	I	DC3.3V(pulse)	Engine-Scan communication data
	36	SCAN_E2C_SCK	O	DC3.3V(pulse)	Engine-Scan communication clock
	37	PAGEST	O	3.3V/0V	Page valid range
	38	OVSYNCMON	I	3.3V/0V	ＶＳＹＮＣ monitor
YC4	1	GND	O	-	Ground
	2	GND	O	-	Ground
	3	GND	O	-	Ground
	4	GND	O	-	Ground
	5	24V2	O	24V	Power source
	6	24V2	O	24V	Power source
	7	3.3V2_E	O	3.3V	Power source
	8	3.3V2_E	O	3.3V	Power source
	9	DP_CLK	O	DC3.3V(pulse)	Engine-DP communication clock
	10	DP_SO	O	DC3.3V(pulse)	Engine-DP communication data
	11	DP_SEL	O	3.3V/0V	Engine-DP communication select
	12	DP_SI	I	DC3.3V(pulse)	Engine-DP communication data
	13	DP_RDY	I	3.3V/0V	Engine-DP communication status
	14	DP_TMG	I	3.3V/0V	VSYNC output to Engine
	15	DP_OPEN	I	3.3V/0V	DP open/close detection
	16	DP_ORG_SET	I	3.3V/0V	DP original set detection
	17	3.3V3	O	3.3V	Power source
	18	GND	O	-	Ground
YC5	1	EH_CLK	O	DC3.3V(pulse)	Engine-EH communication clock
	2	EH_SI	I	DC3.3V(pulse)	Engine-EH communication data
	3	EH_SO	O	DC3.3V(pulse)	Engine-EH communication data

Connector	Pins	Signal	I/O	Voltage	Description
YC5	4	BR_SEL	O	3.3V/0V	Engine-AK communication select
	5	DF_SEL	O	3.3V/0V	Engine-DF communication select
	6	DF_RDY	I	3.3V/0V	Engine-DF communication ready
	7	3.3V2	O	3.3V	Power source
	8	3.3V2	O	3.3V	Power source
	9	GND	O	-	Ground
	10	GND	O	-	Ground
YC6	1	LSU_MOTA	O	24V/0V	LSU cleaning motor drive signal
	2	LSU_MOTB	O	24V/0V	LSU cleaning motor drive signal
	3	LSU_TH_BK	I	Analog	LSU thermistor BK
	4	PLGN_MOT_BK_RDY	I	3.3V/0V	Polygon motor BK ready
	5	PLGN_MOT_BK_REM	O	3.3V/0V	Polygon motor BK remote
	6	24V2_BK	O	24V	Power source
	7	PLGN_MOT_M_RDY	I	3.3V/0V	Polygon motor M ready
	8	24V2_M	O	24V	Power source
	9	PLGN_MOT_C_RDY	I	3.3V/0V	Polygon motor C ready
	10	24V2_C	O	24V	Power source
	11	LSU_TH_Y	I	Analog	LSU thermistor Y
	12	PLGN_MOT_Y_RDY	I	3.3V/0V	Polygon motor Y ready
	13	PLGN_MOT_Y_REM	O	3.3V/0V	Color polygon motor remote
	14	24V2_Y	O	24V	Power source
	15	GND	O	-	Ground
	16	GND	O	-	Ground
	17	GND	O	-	Ground
	18	GND	O	-	Ground
	19	LSU_SEL	I	3.3V/0V	LSU identification signal
YC7	1	3.3V2_LED	O	3.3V	Power source
	2	GND	O	-	Ground
	3	ID_CLN_HP	I	3.3V/0V	ID Sensor Cleaning Home Position detection
	4	ID_MOTB	O	24V/0V	ID Sensor Cleaning Motor drive signal
	5	ID_MOTA	O	24V/0V	ID Sensor Cleaning Motor drive signal
	6	ID_R_S	I	Analog	Rear ID sensor S-wave
	7	ID_R_P	I	Analog	Rear ID sensor P-wave
	8	GND	O	-	Ground
	9	ID_R_LED_VREF	O	Analog	Rear ID sensor LED control
	10	3.3V2	O	3.3V	Power source
	11	ID_F_S	I	Analog	Front ID sensor S-wave
	12	ID_F_P	I	Analog	Front ID sensor P-wave
	13	GND	O	-	Ground
	14	ID_F_LED_VREF	O	Analog	Front ID sensor LED control
	15	3.3V2	O	3.3V	Power source
YC8	A1	BACCNT_C	O	Analog	Developer AC output control C
	A2	BACCNT_M	O	Analog	Developer AC output control M
	A3	MAINCNT_C	O	Analog	Main charger high-voltage control C
	A4	HV_CLK_C	O	DC10V(pulse)	High-voltage developer clock C
	A5	SLVCNT_C	O	Analog	Developer Sleeve output control C

Connector	Pins	Signal	I/O	Voltage	Description
YC8	A6	MAGCNT_Y	O	Analog	Developer Mag output control Y
	A7	MAGCNT_C	O	Analog	Developer Mag output control C
	A8	SLVCNT_Y	O	Analog	Developer Sleeve output control Y
	A9	MAINCNT_Y	O	Analog	Main charger high-voltage control Y
	A10	BACCNT_Y	O	Analog	Developer AC output control Y
	A11	HV_CLK_Y	O	DC10V(pulse)	High-voltage developer clock Y
	A12	NC	-	-	Not used
	A13	NC	-	-	Not used
	A14	NC	-	-	Not used
	A15	NC	-	-	Not used
	A16	NC	-	-	Not used
	A17	NC	-	-	Not used
	B1	GND	O	-	Ground
	B2	GND	O	-	Ground
	B3	SPCNT	O	Analog	Separation high-voltage control
	B4	T2CNT	O	Analog	Secondary transfer high-voltage control
	B5	MISENS	I	Analog	High-voltage discharge detection
	B6	HV_REM1	O	DC3.3V(pulse)	High-voltage remote (100%: ON / 0%: OFF)
	B7	SLVCNT_BK	O	Analog	Developer Sleeve output control K
	B8	MAGCNT_M	O	Analog	Developer Mag output control M
	B9	MAGCNT_BK	O	Analog	Developer Mag output control K
	B10	SLVCNT_M	O	Analog	Developer Sleeve output control M
	B11	MAINCNT_BK	O	Analog	Main charger high-voltage control K
	B12	MAINCNT_M	O	Analog	Main charger high-voltage control M
	B13	BACCNT_BK	O	Analog	Developer AC output control K
	B14	HV_CLK_BK	O	DC10V(pulse)	High-voltage developer clock K
	B15	HV_CLK_M	O	DC10V(pulse)	High-voltage developer clock M
	B16	24V2_IL	O	24V	Power source
	B17	24V2_IL	O	24V	Power source
YC9	1	FSR_TH_PRESS	I	Analog	Fuser contact thermistor (press)
	2	FSR_JAM_SENS	I	3.3V/0V	Fuser jam detection
	3	FSR_ROLL_F	I	DC3.3V(pulse)	Fuser rotation detection (Front)
	4	FSR_ROLL_R	I	DC3.3V(pulse)	Fuser rotation detection (Rear)
	5	GND	O	-	Ground
	6	EEP_SDA	IO	DC3.3V(pulse)	Fuser EEPROM communication data
	7	EEP_SCL	O	DC3.3V(pulse)	Fuser EEPROM communication clock
	8	3.3V2	O	3.3V	Power source
	9	FSR_PRESS_SENS	I	3.3V/0V	Fuser pressure detection
	10	FSR_TH_EDGE	I	Analog	Fuser contact thermistor (edge)
	11	GND	O	-	Ground
	12	FSR_TH_CENTER	I	Analog	Fuser contact thermistor (center)
	13	GND	O	-	Ground
	14	FSR_TH_MID	I	Analog	Fuser contact thermistor (middle)
	15	GND	O	-	Ground
	16	3.3V2_THCUT	O	3.3V	Power source
	17	3.3V2	O	3.3V	Power source

Connector	Pins	Signal	I/O	Voltage	Description
	18	FSR_MOT_A	O	24V/0V	Fuser pressure release motor drive signal
	19	FSR_MOT_B	O	24V/0V	Fuser pressure release motor drive signal
YC10	1	+3.3V2	O	3.3V	Power source
	2	GND	O	-	Ground
	3	SUB_SDA	IO	DC3.3V(pulse)	Communication data
	4	SUB_SCL	O	DC3.3V(pulse)	Communication clock
	5	GND	O	-	Ground
	6	+3.3V2	O	3.3V	Power source
	7	IH_IGBT_CLK_HIGH	O	DC1.5V(pulse)	IH control clock
	8	IH_IGBT_CLK_LOW	O	DC1.5V(pulse)	IH control clock
	9	IH_ERROR	I	3.3V/0V	IH PWB error detection signal
	10	IH_TXD	O	DC3.3V(pulse)	IH PWB communication transmission data
	11	IH_RXD	I	DC3.3V(pulse)	IH PWB communication reception data
YC11	A1	GND	O	-	Ground
	A2	T1CNT_BK	O	Analog	Primary transfer high-voltage control K
	A3	T1CNT_C	O	Analog	Primary transfer high-voltage control C
	A4	CLCNT	O	DC3.3V(pulse)	Cleaning bias control
	A5	HV_REM2	O	DC3.3V(pulse)	High-voltage remote (100%: ON / 0%: OFF)
	A6	T1CNT_Y	O	Analog	Primary transfer high-voltage control Y
	A7	T1CNT_M	O	Analog	Primary transfer high-voltage control M
	A8	+24V2_IL	O	24V	Power source
	A9	HUM_OUT	I	Analog	Machine outside humidity sensor
	A10	HUM_CLK1	O	DC3.3V(pulse)	Machine outside humidity sensor clock
	A11	HUM_CLK0	O	DC3.3V(pulse)	Machine outside humidity sensor clock
	A12	THERM	I	Analog	Machine outside temperature sensor
	A13	GND	O	-	Ground
	A14	3.3V2	O	3.3V	Power source
	A15	WT_SENS	I	Analog	Waste toner box level detection
	A16	WT_LED	O	3.3V/0V	Waste toner box level detection LED
	A17	3.3V2_LED	O	3.3V	Power source
	B1	24V2	O	24V	Power source
	B2	DLP_BK_FAN	O	24/0V	Developer BK cooling fan control
	B3	24V2	O	24V	Power source
	B4	LSU_FAN	O	24/0V	LSU cooling fan control
	B5	24V2	O	24V	Power source
	B6	DLP_COL_FAN	O	24/0V	Color developer cooling fan control
	B7	GND	O	-	Ground
	B8	TBLT_HP2	I	3.3V/0V	Primary transfer belt pressure detection
	B9	TBLT_SCL	O	DC3.3V(pulse)	Primary transfer belt EEPROM communication clock
	B10	TBLT_SDA	IO	DC3.3V(pulse)	Primary transfer belt EEPROM communication data
	B11	3.3V2	O	3.3V	Power source
	B12	TBLT_MOTB	O	24V/0V	Primary transfer belt pressure motor drive signal
	B13	TBLT_HP1	I	3.3V/0V	Primary transfer belt pressure detection

Connector	Pins	Signal	I/O	Voltage	Description
	B14	TBLT_MOTA	O	24V/0V	Primary transfer belt pressure motor drive signal
	B15	24V2	O	24V	Power source
	B16	TBLT_FAN	O	24/0V	Primary transfer belt cooling fan control
	B17	NC	-	-	Not used
YC12	1	SCAN_/B	O	24V/0V	Scanner motor drive
	2	SCAN_/A	O	24V/0V	Scanner motor drive
YC12	3	SCAN_B	O	24V/0V	Scanner motor drive
	4	SCAN_A	O	24V/0V	Scanner motor drive
	5	3.3V2_LED	O	3.3V	Power source
	6	GND	O	-	Ground
	7	HP_SENS	I	3.3V/0V	Scanner home position detection
	8	3.3V2_LED	O	3.3V	Power source
	9	GND	O	-	Ground
	10	TABLE_OPEN	I	3.3V/0V	DP open/close detection
	11	GND	O	-	Ground
	12	ORG_SENS	I	3.3V/0V	Scanner original size detection
	13	5V2	O	5V	Power source
YC13	1	GND	O	-	Ground
	2	RELAY_REM	O	3.3V/0V	IH relay control signal
	3	24V2	O	24V	Power source
	4	EXIT_SOL	O	24V/0V	Exit solenoid drive
	5	24V2	O	24V	Power source
	6	EXIT_/B	O	24V/0V	Exit motor drive
	7	EXIT_/A	O	24V/0V	Exit motor drive
	8	EXIT_B	O	24V/0V	Exit motor drive
	9	EXIT_A	O	24V/0V	Exit motor drive
	10	3.3V2_LED	O	3.3V	Power source
	11	GND	O	-	Ground
	12	EXIT_FULL_UP	I	3.3V/0V	Upper exit paper full detection
	13	3.3V2_LED	O	3.3V	Power source
	14	GND	O	-	Ground
	15	EXIT_FULL_DOWN	I	3.3V/0V	Lower exit paper full detection
	16	3.3V3_LED	O	3.3V	Power source
	17	GND	O	-	Ground
	18	JOB_TRAY	I	3.3V/0V	Job Separator paper detection
	19	NC	-	-	Not used
YC14	A1	24V2_IL	O	24V	Power source
	A2	FUSER_FAN1	O	24/0V	Fuser edge cooling fan control
	A3	24V2_IL	O	24V	Power source
	A4	FUSER_FAN2	O	24/0V	Fuser edge cooling fan control
	A5	3.3V2_LED	O	3.3V	Power source
	A6	GND	O	-	Ground
	A7	DU_SW	I	3.3V/0V	DU paper detection
	A8	GND	O	-	Ground
	A9	ROOP_SW	I	3.3V/0V	Paper jam detection after transferring
	A10	5V2	O	5V	Power source

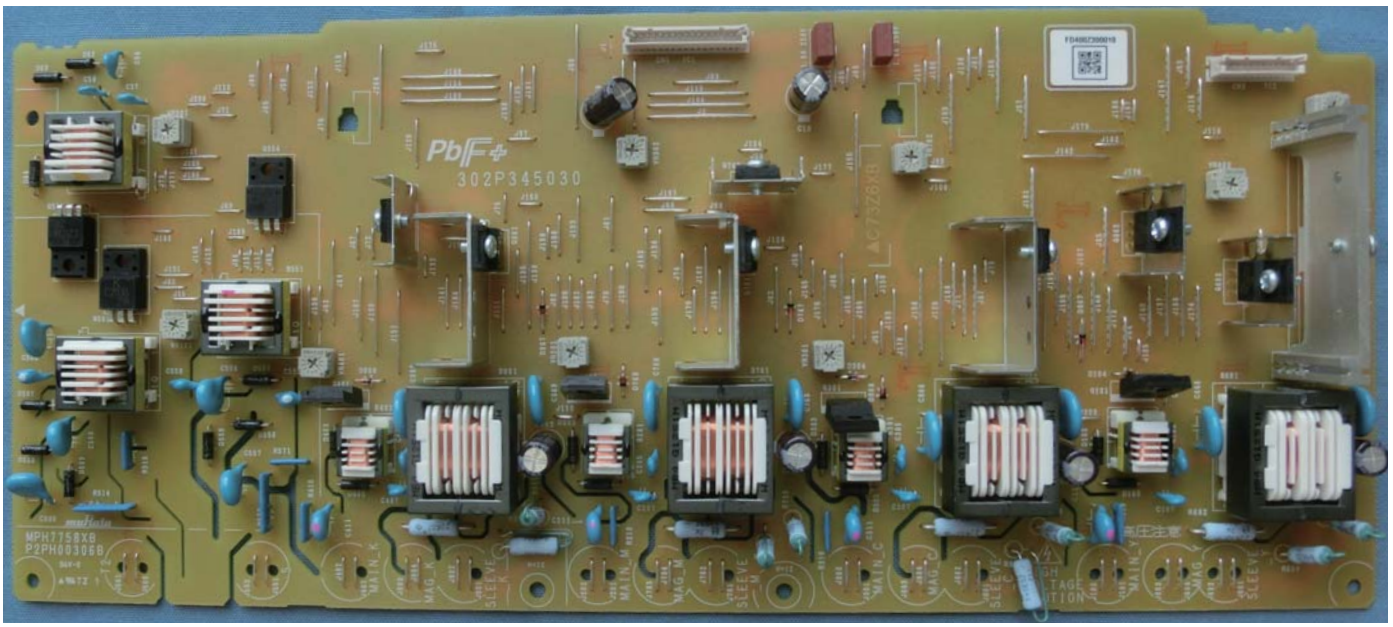
Connector	Pins	Signal	I/O	Voltage	Description
	A11	3.3V2_LED	O	3.3V	Power source
	A12	GND	O	-	Ground
	A13	MPF_PAPER	I	3.3V/0V	MPF paper detection
	A14	3.3V2_LED	O	3.3V	Power source
	A15	GND	O	-	Ground
	A16	FEED_SW	I	3.3V/0V	Conveying paper detection
	B1	24V2	O	24V	Power source
	B2	MPF_SOL	O	24V/0V	MPF solenoid control
	B3	DU_CL	O	24V/0V	Duplex clutch control
	B4	24V2	O	24V	Power source
	B5	REG_CL	O	24V/0V	Registration clutch control
	B6	24V2	O	24V	Power source
	B7	MID_CL	O	24V/0V	Middle conveying clutch control
	B8	24V2	O	24V	Power source
	B9	FEED_CL	O	24V/0V	Conveying clutch control
	B10	24V2	O	24V	Power source
	B11	FEED_MT_DIR	O	5V/0V	Conveying motor rotation direction
	B12	FEED_MT_RDY	I	3.3V/0V	Conveying motor ready
	B13	FEED_MT_CLK	O	DC5V(Pulse)	Conveying motor clock
	B14	FEED_MT_REM	O	5V/0V	Conveying motor remote
	B15	GND	O	-	Ground
	B16	24V2_IL	O	24V	Power source
YC15	A1	5V2	O	5V	Power source
	A2	RESIST_SW	I	3.3V/0V	Registration paper detection
	A3	GND	O	-	Ground
	A4	3.3V2_LED	O	3.3V	Power source
	A5	GND	O	-	Ground
	A6	LIFT_FULL	I	3.3V/0V	Lift motor upper limit detection
	A7	3.3V2_LED	O	3.3V	Power source
	A8	GND	O	-	Ground
	A9	CAS_EMPTY1	I	3.3V/2V/1.65V/1.26V	Cassette paper level detection
	A10	3.3V2_LED	O	3.3V	Power source
	A11	GND	O	-	Ground
	A12	CAS_EMPTY2	I	3.3V/2V/1.65V/1.26V	Cassette paper level detection
	A13	NC	-	-	Not used
	B1	GND	O	-	Ground
	B2	LIFT_MOT_OUT	O	24V/0V	Lift motor drive
	B3	CAS_LSIZE3	I	3.3V/0V	Cassette paper size detection
	B4	GND	O	-	Ground
	B5	CAS_LSIZE2	I	3.3V/0V	Cassette paper size detection
	B6	CAS_LSIZE1	I	3.3V/0V	Cassette paper size detection
	B7	CAS_WSIZE1	I	3.3V/0V	Cassette paper size detection
	B8	GND	O	-	Ground
	B9	DLP_FAN	O	24V/0V	Developer cooling fan control
	B10	24V2	O	24V	Power source
	B11	LVU_FAN_REM	O	24V/0V	Low-voltage PWB cooling fan control
	B12	GND	O	-	Ground

Connector	Pins	Signal	I/O	Voltage	Description
	B13	LVU_FAN_ALM	I	3.3V/0V	Low-voltage PWB cooling fan lock detection
YC16	1	24V2	O	24V	Power source
	2	TN_MOT_Y	O	24V/0V	Toner motor control(Y)
	3	24V2	O	24V	Power source
	4	TN_MOT_C	O	24V/0V	Toner motor control(C)
	5	24V2	O	24V	Power source
	6	TN_MOT_M	O	24V/0V	Toner motor control(M)
YC16	7	24V2	O	24V	Power source
	8	TN_MOT_BK	O	24V/0V	Toner motor control(BK)
YC17	1	3.3V2	O	3.3V	Power source
	2	GND	O	-	Ground
	3	TPC_Y	I	Analog	T/C sensor(Y)
	4	ERASE_COL_REM	O	3.3V/0V	Color eraser control
	5	TPC_C	I	Analog	T/C sensor(C)
	6	TPC_M	I	Analog	T/C sensor(M)
	7	TPC_BK	I	Analog	T/C sensor(BK)
	8	DLP_TH	I	Analog	Developer thermistor
	9	ERASE_BK_REM	O	3.3V/0V	Eraser control(BK)
	10	GND	O	-	Ground
	11	24V2	O	24V	Power source
	12	EEP_SCL	O	DC3.3V(pulse)	Developer/Drum EEPROM communication clock
	13	EEP_SDA	IO	DC3.3V(pulse)	Developer/Drum EEPROM communication data
	14	MOT_VIBRATION	O	DC3.3V(pulse)	Vibration motor control
YC18	1	DLP_MOT_BK_DIR	O	5V/0V	Developer motor rotation direction
	2	DLP_MOT_BK_RDY	I	3.3V/0V	Developer motor ready
	3	DLP_MOT_BK_CLK	O	DC5V(Pulse)	Developer motor clock
	4	DLP_MOT_BK_REM	O	5V/0V	Developer motor remote
	5	GND	O	-	Ground
	6	24V2_IL	O	24V	Power source
	7	FSR_MOT_DIR	O	5V/0V	Fuser motor rotation direction
	8	FSR_MOT_RDY	I	3.3V/0V	Fuser motor ready
	9	FSR_MOT_CLK	O	DC5V(Pulse)	Fuser motor clock
	10	FSR_MOT_REM	O	5V/0V	Fuser motor remote
	11	GND	O	-	Ground
	12	24V2_IL	O	24V	Power source
YC19	1	DLP_MOT_COL_DIR	O	5V/0V	Color developer motor rotation direction
	2	DLP_MOT_COL_RDY	I	3.3V/0V	Color developer motor ready
	3	DLP_MOT_COL_CLK	O	DC5V(Pulse)	Color developer motor clock
	4	DLP_MOT_COL_REM	O	5V/0V	Color developer motor remote
	5	GND	O	-	Ground
	6	24V2	O	24V	Power source
	7	24V2	O	24V	Power source
	8	DLP_CL_REM	O	24V/0V	Developer clutch remote
	9	DRM_MOT_COL_DIR	O	5V/0V	Color drum motor rotation direction
	10	DRM_MOT_COL_RDY	I	3.3V/0V	Color drum motor ready

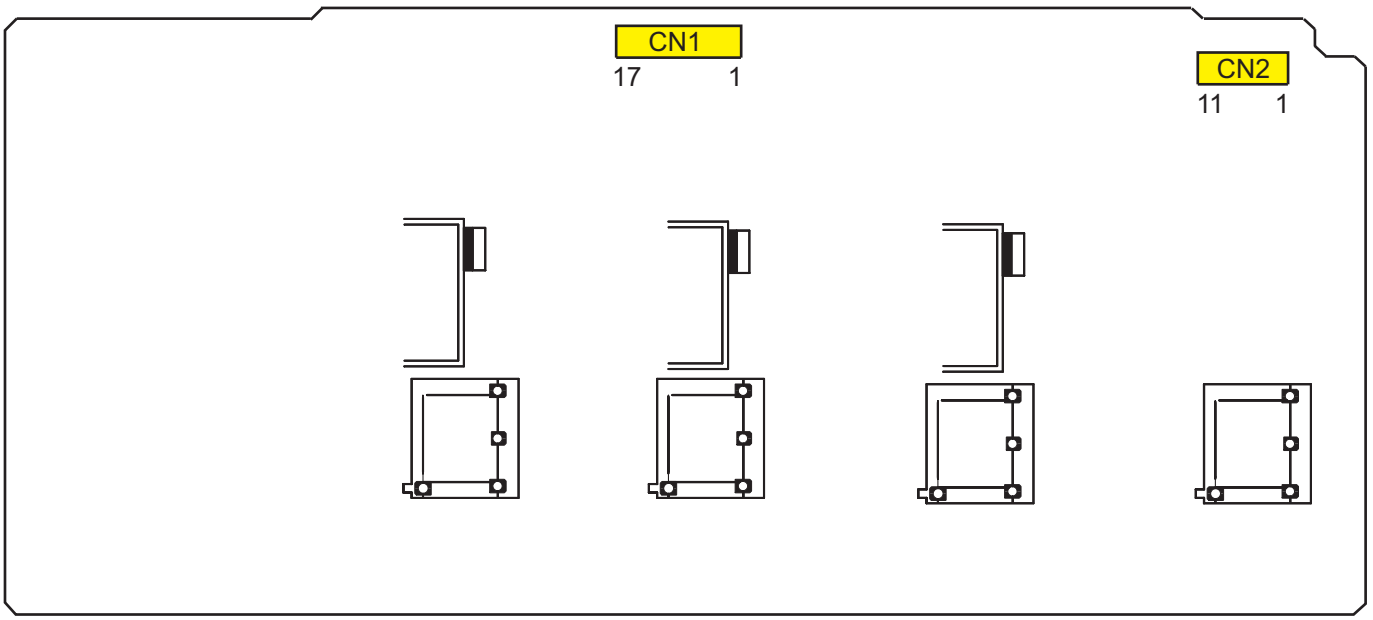
Connector	Pins	Signal	I/O	Voltage	Description
	11	DRM_MOT_COL_CLK	O	DC5V(Pulse)	Color drum motor clock
	12	DRM_MOT_COL_REM	O	5V/0V	Color drum motor remote
	13	GND	O	-	Ground
	14	24V2_IL	O	24V	Power source
	15	DRM_MOT_BK_DIR	O	5V/0V	Drum motor rotation direction(BK)
	16	DRM_MOT_BK_RDY	I	3.3V/0V	Drum motor ready BK
	17	DRM_MOT_BK_CLK	O	DC5V(Pulse)	Drum motor clock K
	18	DRM_MOT_BK_REM	O	5V/0V	Drum motor remote K
	19	GND	O	-	Ground
YC19	20	24V2_IL	O	24V	Power source
YC20	1	IH_FAN1_REM	O	24V/0V	IH PWB cooling fan control
	2	GND	O	-	Ground
	3	IH_FAN1_ALM	O	24V/0V	IH PWB cooling fan lock detection
YC21	1	IH_FAN2_ALM	O	24V/0V	Toner container cooling fan lock detection
	2	GND	O	-	Ground
	3	IH_FAN2_REM	O	24V/0V	Toner container cooling fan control
	4	24V2_IL	O	24V	Power source
	5	DLP_FAN_REM	O	24V/0V	Developer cooling fan control
YC22	1	1WIRE	IO	DC3.3V(pulse)	Toner container communication
	2	CONT_TH	I	Analog	Toner container thermistor
	3	GND	O	-	Ground
	4	BRSET	I	3.3V/0V	AK set detection
	5	GND	O	-	Ground
YC23	1	24V2	O	24V	Power source
	2	24V2	O	24V	Power source
	3	24V2	O	24V	Power source
	4	GND	O	-	Ground
	5	GND	O	-	Ground
	6	GND	O	-	Ground
YC24	1	3.3V3	O	3.3V	Power source
	2	24V2	O	24V	Power source
	3	24V2_IL1	O	24V	Power source
	4	24V2_IL1	O	24V	Power source
	5	24V2_IL2	O	24V	Power source
YC25	1	EH_CLK	O	DC3.3V(pulse)	Engine-EH communication clock
	2	EH_SI	I	DC3.3V(pulse)	Engine-EH communication data
	3	EH_SO	O	DC3.3V(pulse)	Engine-EH communication data
	4	PF_SEL	O	3.3V/0V	Engine-PF communication select
	5	PF_RDY	I	3.3V/0V	Engine-PF communication ready
	6	PF_SET	I	3.3V/0V	PF paper set detection
	7	PF_PAUSE	O	3.3V/0V	PF timing adjustment
	8	24V2	O	24V	Power source
	9	3.3V3	O	3.3V	Power source
	10	3.3V2	O	3.3V	Power source
	11	GND	O	-	Ground
	12	GND	O	-	Ground

(3) High voltage PWB 1

(3-1) PWB photograph



(3-2) Connector position



⑶-3⑶ Connector lists

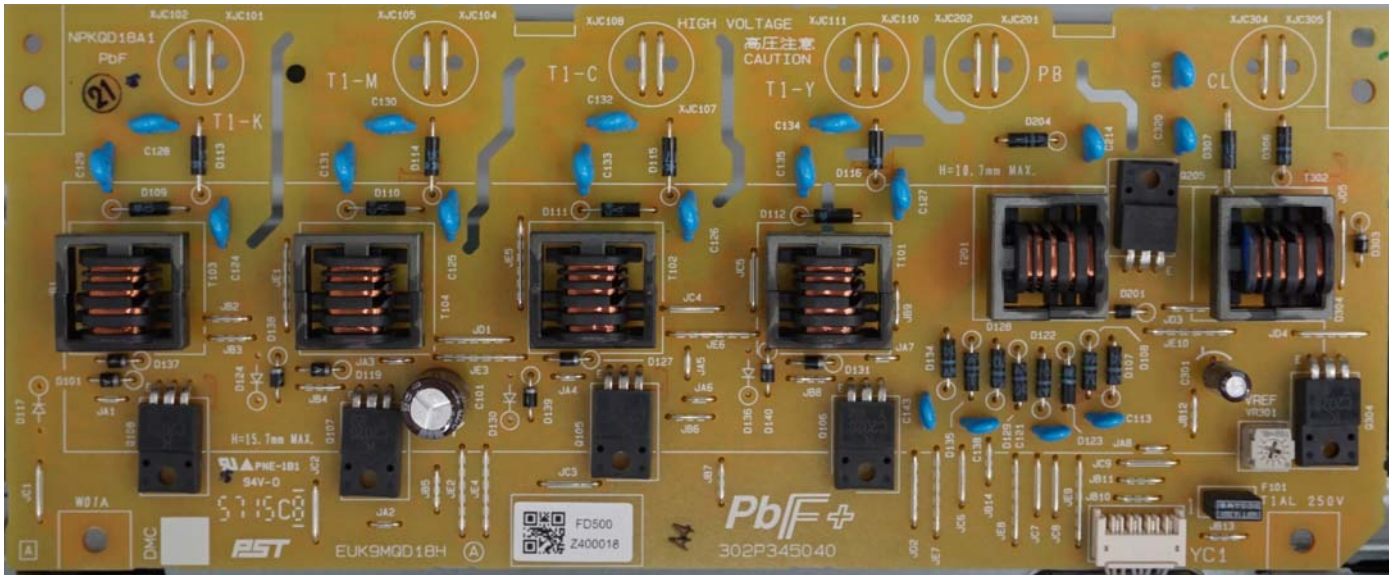
Destination

- CN1: Engine PWB
- CN2: Engine PWB

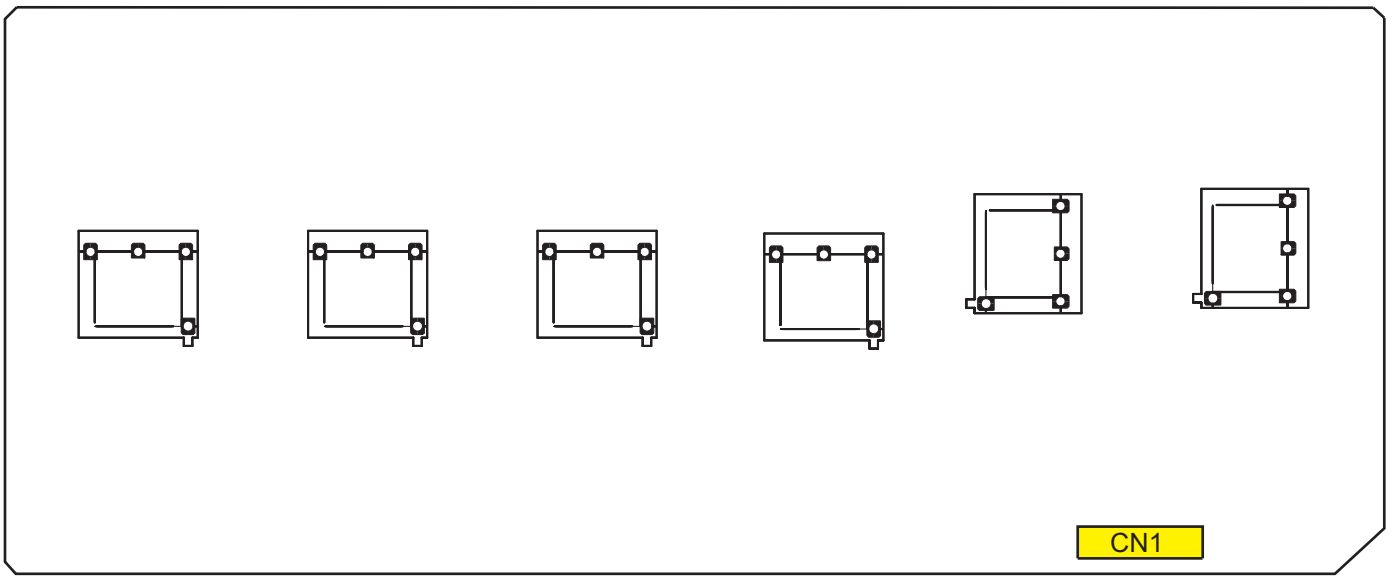
Connector	Pins	Signal	I/O	Voltage	Description
YC1	1	24V2_IL	-	24V	Power source
	2	24V2_IL	-	24V	Power source
	3	HV_CLK_M	I	DC10V(pulse)	Developer clock M
	4	HV_CLK_BK	I	DC10V(pulse)	Developer clock BK
	5	BACCNT_BK	I	0 to 3V(Analog)	Developer BK_AC control
	6	MAINCNT_M	I	0 to 3V(Analog)	Main charger control M
	7	MAINCNT_BK	I	0 to 3V(Analog)	Main charger control BK
	8	SLVCNT_M	I	0 to 3V(Analog)	Developer sleeve_DC control M
	9	MAGCNT_BK	I	0 to 3V(Analog)	Developer magnet_DC control BK
	10	MAGCNT_M	I	0 to 3V(Analog)	Developer magnet_DC control M
	11	SLVCNT_BK	I	0 to 3V(Analog)	Developer sleeve_DC control BK
	12	HV_REM1	I	H/L(H: 24V, L: 0V)	Full output On/Off
	13	MISENS	O	0 to 3V(Analog)	Main charger output current detection
	14	T2CNT	I	0 to 3V(Analog)	Secondary transfer control
	15	SPCNT	I	0 to 3V(Analog)	Separation control
	16	GND	-	0V	Ground
	17	GND	-	0V	Ground
YC2	1	HV_CLK_Y	I	DC10V(pulse)	Developer clock Y
	2	BACCNT_Y	I	0 to 3V(Analog)	Developer_AC control Y
	3	MAINCNT_Y	I	0 to 3V(Analog)	Main charger control Y
	4	SLVCNT_Y	I	0 to 3V(Analog)	Developer sleeve_DC control Y
	5	MAGCNT_C	I	0 to 3V(Analog)	Developer magnet_DC control C
	6	MAGCNT_Y	I	0 to 3V(Analog)	Developer magnet_DC control Y
	7	SLVCNT_C	I	0 to 3V(Analog)	Developer sleeve_DC control C
	8	HV_CLK_C	I	DC10V(pulse)	Developer clock C
	9	MAINCNT_C	I	0 to 3V(Analog)	Main charger control C
	10	BACCNT_M	I	0 to 3V(Analog)	Developer_AC control M
	11	BACCNT_C	I	0 to 3V(Analog)	Developer_AC control C

(4) High voltage PWB 2

(4-1) PWB photograph



(4-2) Connector position



(4-3) Connector lists

Destination

- YC1: Engine PWB

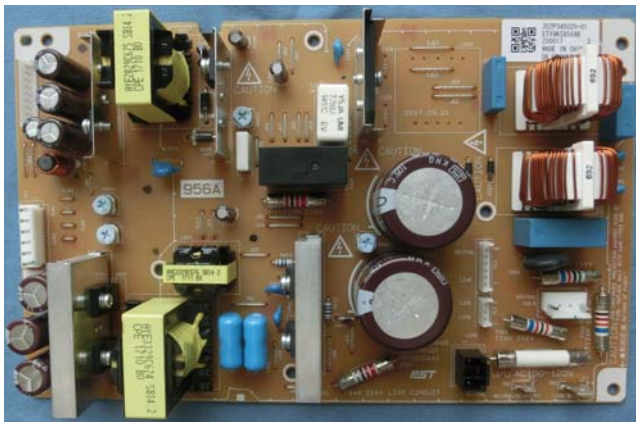
Connector	Pins	Signal	I/O	Voltage	Description
YC1	1	24V2_IL	-	24V	Power source
	2	T1CNT_M	I	0 to 3V(Analog)	Primary transfer control M
	3	T1CNT_Y	I	0 to 3V(Analog)	Primary transfer control Y
	4	HV_REM2	I	H/L(H: 24V, L: 0V)	Full output On/Off
	5	CLCNT	I	0 to 3V(Analog)	Cleaning control
	6	T1CNT_C	I	0 to 3V(Analog)	Primary transfer control C
	7	T1CNT_BK	I	0 to 3V(Analog)	Primary transfer control BK

Connector	Pins	Signal	I/O	Voltage	Description
	8	GND	-	0V	Ground

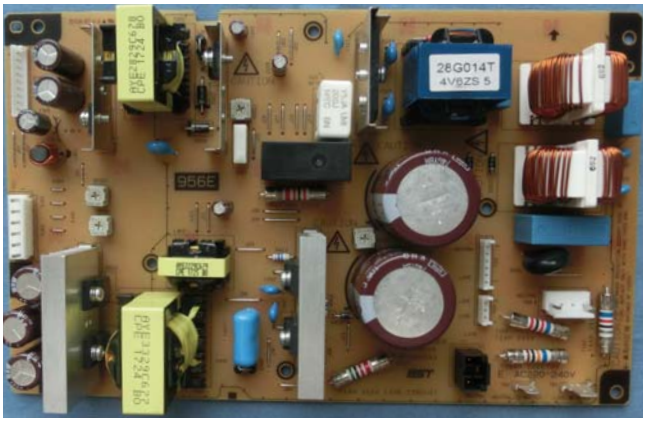
(5) Low voltage PWB

(5-1) PWB photograph

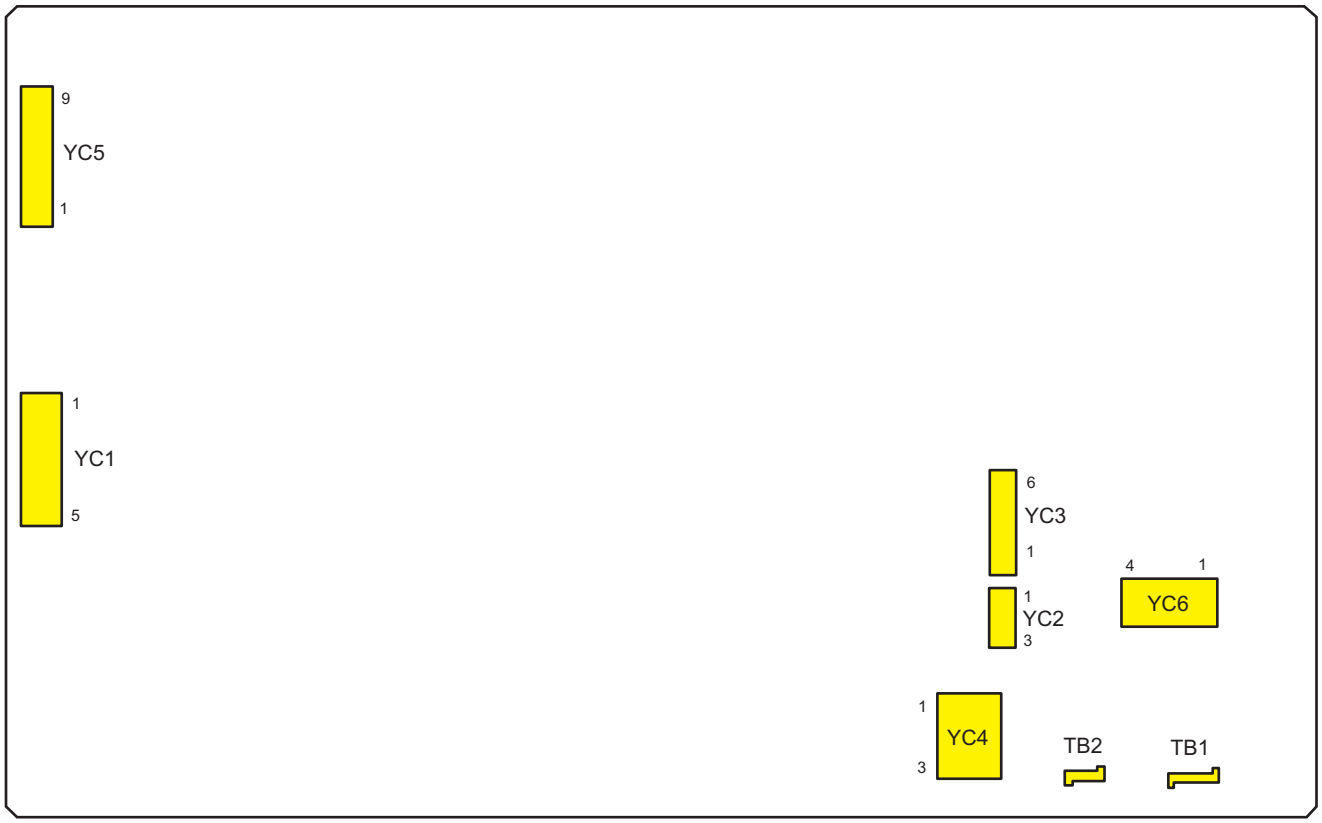
100-120V



220-240V



(5-2) Connector position



⑸-3) Connector lists

Destination

- TB1/TB2: Inlet
- YC1: Outlet (30ppm model only)
- YC2: Cassette heater switch
- YC3: Paper feeder(option), Cassette heater
- YC4: Fuser heater
- YC5: Front cover switch
- YC6: Engine PWB
- YC7: Main PWB
- YC8: Engine PWB

Connector	Pins	Signal	I/O	Voltage	Description
TB1	1	AC_LIVE	I	Commercial power supply voltage	AC_LIVE
TB2	1	AC_NEUTRAL	I	Commercial power supply voltage	AC_NEUTRAL
YC1	1	24V2	O	24V	24V output to Engine PWB
	2	24V2	O	24V	24V output to Engine PWB
	3	24V2	O	24V	24V output to Engine PWB
	4	GND	-	0V	Ground
	5	GND	-	0V	Ground
	6	GND	-	0V	Ground
YC2	1	CH_SW_IN	O	Commercial power supply voltage	LIVE output to the dehumidifying heater switch
	2	N.C	-	-	-
	3	CH_SW_OUT	I	Commercial power supply voltage	LIVE input from he dehumidifying heater switch
YC3	1	Cassette_H_LIVE	O	Commercial power supply voltage	LIVE output to the dehumidifying heater
	2	Cassette_H_LIVE	O	Commercial power supply voltage	LIVE output to the dehumidifying heater
	3	N.C.	-	-	-
	4	N.C.	-	-	-
	5	Cassette_H_NEUTRAL	O	Commercial power supply voltage	NEUTRAL output to the dehumidifying heater
	6	Cassette_H_NEUTRAL	O	Commercial power supply voltage	NEUTRAL output to the dehumidifying heater
YC4	1	IH_LIVE	O	Commercial power supply voltage	LIVE output to Fuser unit
	2	N.C.	-	-	-
	3	IH_NEUTRAL	O	Commercial power supply voltage	NEUTRAL output to Fuser unit
YC5	1	24V2	O	24V	24V output to Main PWB
	2	GND	-	0V	Ground
	3	5V0	O	5V	5V output to Main PWB
	4	5V0	O	5V	5V output to Main PWB
	5	5V0	O	5V	5V output to Main PWB

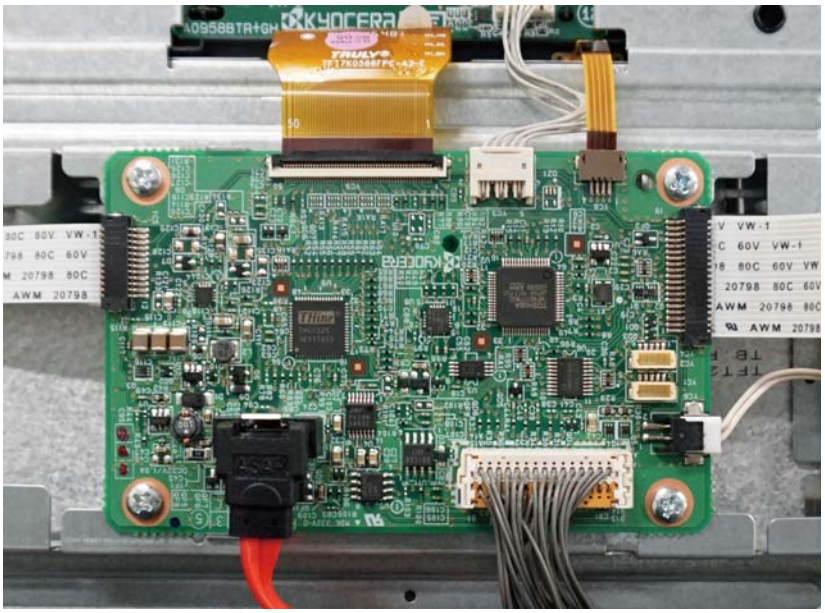
Connector	Pins	Signal	I/O	Voltage	Description
	6	GND	-	0V	Ground
	7	GND	-	0V	Ground
	8	GND	-	0V	Ground
	9	SLEEP	I	5V	Sleep signal
YC6	1	AC_LIVE	O	Commercial power supply voltage	LIVE output to DF
	2	N.C.	-	-	-
	3	N.C.	-	-	-
	4	AC_NEUTRAL	O	Commercial power supply voltage	NEUTRAL output to DF

⑹ Operation PWB

⑹-1) PWB photograph

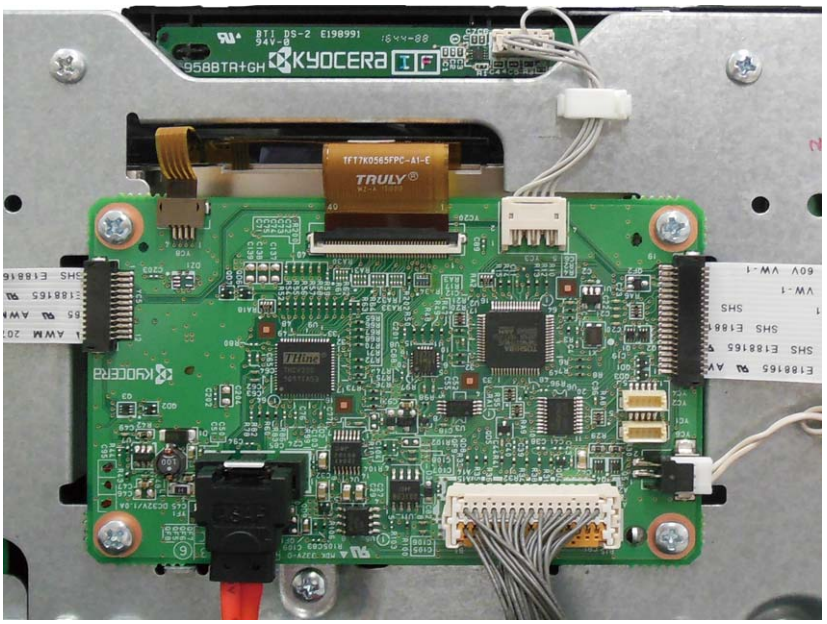
7-inch panel model

CCD Model



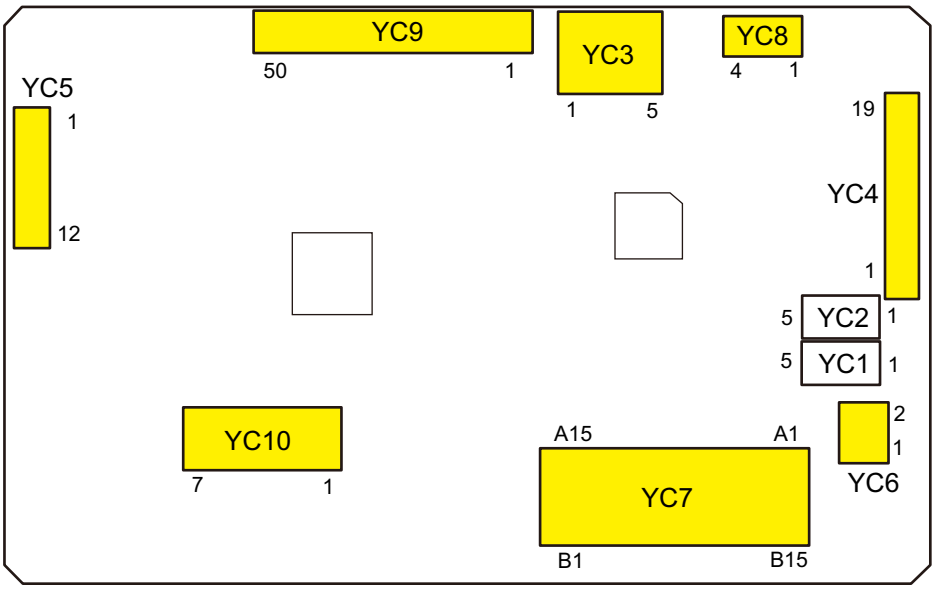
4.3-inch panel model

CIS Model

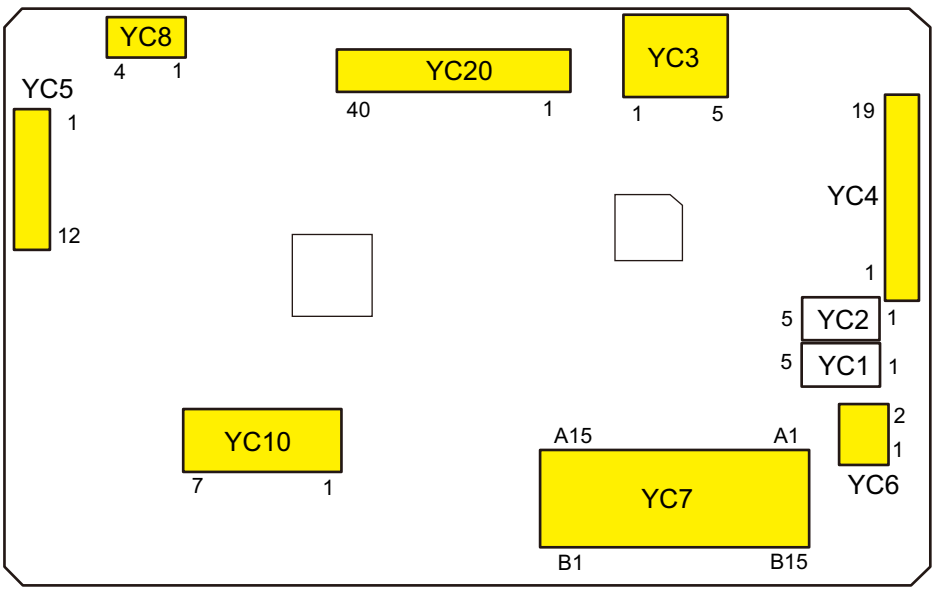


⑹-2) Connector position

7-inch panel model



4.3-inch panel model



(6-3) Connector lists

Destination

- YC3: NFC PWB
- YC4: Panel key PWB R
- YC5: Panel key PWB L
- YC6: Speaker
- YC7: Main PWB
- YC8: Touch panel
- YC9: CCD PWB*2
- YC10: Main PWB
- YC20: CCD PWB*1

*1: 4.3-inch panel model*2: 7-inch panel model

Connector	Pins	Signal	I/O	Voltage	Description
YC3	1	DC3.3V2_NFC	O	DC3.3V	Power supply output
	2	GND	-	-	Ground
	3	NFC_SWCLK	O	DC0V/3.3V(pulse)	NFC data clock
	4	NFC_SWDA	I/O	DC0V/3.3V(pulse)	NFC input/output data
	5	NIRQ	I	DC0V/3.3V	NFC interrupt
YC4	1	ENERGYSAVER KEY	I	DC0V/3.3V	Key input
	2	ENERGYSAVER LED	O	DC0V/3.3V	LED output
	3	SCAN2	O	DC0V/3V	Key scan
	4	ATTENTION	O	DC0V/5V	LED output
	5	MEMORY	O	DC0V/5V	LED output
	6	DC5V1	O	DC5V	Power supply output
	7	SCAN4	O	DC0V/3V	Key scan
	8	LED1	O	DC0V/3.3V	LED output
	9	KEY3	I	DC0V/3.3V	Key input
	10	LED2	O	DC0V/3.3V	LED output
	11	SCAN3	O	DC0V/3V	Key scan
	12	SCAN7	O	DC0V/3V	Key scan
	13	SCAN6	O	DC0V/3V	Key scan
	14	KEY2	I	DC0V/3.3V	Key input
	15	KEY1	I	DC0V/3.3V	Key input
	16	GND	-	-	Ground
	17	SCAN5	O	DC0V/3V	Key scan
	18	PROCESSING	O	DC0V/5V	LED output
	19	KEY0	I	DC0V/3.3V	Key input
YC5	1	GND	-	-	Ground
	2	SCAN0	O	DC0V/3V	Key scan
	3	KEY0	I	DC0V/3.3V	Key input
	4	NC	-	-	Not used
	5	KEY1	I	DC0V/3.3V	Key input
	6	NC	-	-	Not used

Connector	Pins	Signal	I/O	Voltage	Description
YC5	7	SCAN1	O	DC0V/3V	Key scan
	8	SCAN2	O	DC0V/3V	Key scan
	9	NC	-	-	Not used
	10	NC	-	-	Not used
	11	LED0	O	DC0V/3.3V	LED output
	12	JOB_LED	I	DC0V/3.3V	Job separator LED input
YC6	1	SPEAKER_P	O	Pulse	Speaker output
	2	SPEAKER_N	O	Pulse	Speaker output
YC7	A1	DC5V1	I	DC5V	Power supply input
	A2	DC5V1	I	DC5V	Power supply input
	A3	DC5V1	I	DC5V	Power supply input
	A4	DC5V1	I	DC5V	Power supply input
	A5	GND	-	-	Ground
	A6	INT_ANYKEY	O	DC0V/3.3V	Panel sleep recovery
	A7	DISPLAY_POWERON	I	DC0V/3.3V	Display lit
	A8	C2P_SCK	I	DC0V/3.3V(pulse)	Main-Panel communication clock
	A9	P2C_SBSY	O	DC0V/3.3V	Main-Panel communication busy
	A10	P2C_SDIR	O	DC0V/3.3V	Main-panel communication direction
	A11	C2P_SDAT	I	DC0V/3.3V(pulse)	Main-Panel communication data
	A12	P2C_SDAT	O	DC0V/3.3V(pulse)	Main-Panel communication data
	A13	FPRST	I	DC0V/3.3V	Panel reset
	A14	DC3.3V2_NFC	I	DC3.3V	Power supply output
	A15	I2C_SCL_NFC	I	DC0V/3.3V(pulse)	NFC-Panel communication clock
	B1	I2C_SDA_NFC	I/O	DC0V/3.3V(pulse)	NFC-Panel communication data
	B2	NIRQ	I	DC0V/3.3V	NFC-Panel communication interrupt
	B3	INT_ENERGYSAVERKEY_N	O	DC0V/3.3V	Energy saver interrupt
	B4	PNL_WKUP_REQ	I	DC0V/3.3V	Operation panel recovery request
	B5	AUDIO	I	Analog	Audio signal
		NC	-	-	Not used
	B7	LED_ATTENTION	I	DC0V/3.3V	LED drive
	B8	LED_MEMORY	I	DC0V/3.3V	LED drive
	B9	BEEP_POWERON	I	DC0V/3.3V	Speaker input
	B10	GND	-	-	Ground
	B11	GND	-	-	Ground
	B12	GND	-	-	Ground
	B13	JOB_LED	O	DC0V/3.3V	Job separator LED output
	B14	GND	-	-	Ground
	B15	NC	-	-	Not used
YC8	1	XR	I	0V to DC3.3V	Touch panel coordinate data
	2	YB	I	0V to DC3.3V	Touch panel coordinate data
	3	XL	I	0V to DC3.3V	Touch panel coordinate data
	4	YT	I	0V to DC3.3V	Touch panel coordinate data
YC9*2	1	NC	-	-	Not used
	2	NC	-	-	Not used
	3	GND	-	-	Ground
	4	DITH	O	DC3.3V	Dithering function permission

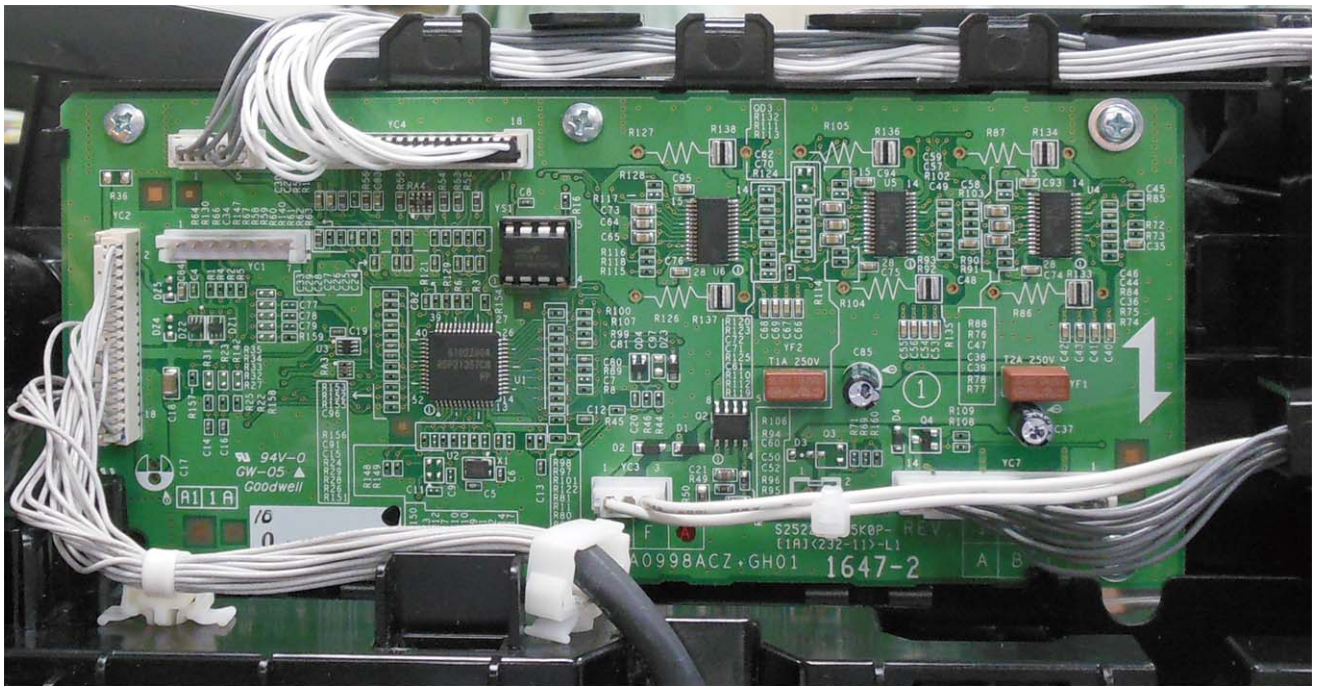
Connector	Pins	Signal	I/O	Voltage	Description
YC9*2	5	VCOM	O	DC0V/3.3V	Power supply output
	6	NC	-	-	Not used
	7	RSTB	O	DC0V/3.3V	Reset
	8	AVDD	O	DC0V/10.DC5V	Power supply output
	9	VEEG	O	DC0V/-8V	Power supply output
	10	VDDG	O	DC0V/18V	Power supply output
	11	UPDN	O	DC0V	Up and down display select
	12	SHLR	O	DC3.3V	Right and left display select
	13	GND	-	-	Ground
	14	DCLK	O	DC0V/3.3V(pulse)	Display data clock
	15	GND	-	-	Ground
	16	R0	O	DC0V/3.3V	LCD display data
	17	R1	O	DC0V/3.3V	LCD display data
	18	R2	O	DC0V/3.3V	LCD display data
	19	R3	O	DC0V/3.3V	LCD display data
	20	R4	O	DC0V/3.3V	LCD display data
	21	R5	O	DC0V/3.3V	LCD display data
	22	R6	O	DC0V/3.3V	LCD display data
	23	R7	O	DC0V/3.3V	LCD display data
	24	G0	O	DC0V/3.3V	LCD display data
	25	G1	O	DC0V/3.3V	LCD display data
	26	G2	O	DC0V/3.3V	LCD display data
	27	G3	O	DC0V/3.3V	LCD display data
	28	G4	O	DC0V/3.3V	LCD display data
	29	G5	O	DC0V/3.3V	LCD display data
	30	G6	O	DC0V/3.3V	LCD display data
	31	G7	O	DC0V/3.3V	LCD display data
	32	B0	O	DC0V/3.3V	LCD display data
	33	B1	O	DC0V/3.3V	LCD display data
	34	B2	O	DC0V/3.3V	LCD display data
	35	B3	O	DC0V/3.3V	LCD display data
	36	B4	O	DC0V/3.3V	LCD display data
	37	B5	O	DC0V/3.3V	LCD display data
	38	B6	O	DC0V/3.3V	LCD display data
		B7	O	DC0V/3.3V	LCD display data
	40	HSD	O	DC0V/3.3V	Horizontal display data sync
	41	VSD	O	DC0V/3.3V	Vertical display data sync
	42	DE	O	DC0V/3.3V	Data input permission
	43	MODE	O	DC0V/3.3V	Display mode select
	44	DVDD	O	DC3.3V	Power supply output
	45	VCOM	O	DC0V/3.3V	Power supply output
	46	GND	-	-	Ground
	47	VLED-	I	DC0V/0.3V	LED input
	48	VLED-	I	DC0V/0.3V	LED input
	49	VLED+	O	DC0V/19V	LED output
	50	VLED+	O	DC0V/19V	LED output
YC10	1	GND	-	-	Ground

Connector	Pins	Signal	I/O	Voltage	Description
YC10	2	LCD_OFF	I	DC0V/3.3V	LCD display off
	3	LOCKN	I	DC0V/3.3V	LCD display permission
	4	GND	-	-	Ground
	5	RX0N	I/O	Pulse	LCD display data
	6	RX0P	I/O	Pulse	LCD display data
	7	GND	-	-	Ground
YC20*1	1	NC	-	-	Not used
	2	NC	-	-	Not used
	3	NC	-	-	Not used
	4	NC	-	-	Not used
	5	GND	-	-	Ground
	6	NC	-	-	Not used
	7	DEN	O	DC0V/3.3V	Data input permission
	8	VSYNC	O	DC0V/3.3V	Vertical display data sync
	9	HSYNC	O	DC0V/3.3V	Horizontal display data sync
	10	RESET	O	DC0V/3.3V	LCD reset
	11	CLK	O	DC0V/3.3V(pulse)	Display data clock
	12	GND	-	-	Ground
	13	B7	O	DC0V/3.3V	LCD display data
	14	B6	O	DC0V/3.3V	LCD display data
	15	B5	O	DC0V/3.3V	LCD display data
	16	B4	O	DC0V/3.3V	LCD display data
	17	B3	O	DC0V/3.3V	LCD display data
	18	B2	O	DC0V/3.3V	LCD display data
	19	B1	O	DC0V/3.3V	LCD display data
	20	B0	O	DC0V/3.3V	LCD display data
	21	G7	O	DC0V/3.3V	LCD display data
	22	G6	O	DC0V/3.3V	LCD display data
	23	G5	O	DC0V/3.3V	LCD display data
	24	G4	O	DC0V/3.3V	LCD display data
	25	G3	O	DC0V/3.3V	LCD display data
	26	G2	O	DC0V/3.3V	LCD display data
	27	G1	O	DC0V/3.3V	LCD display data
	28	G0	O	DC0V/3.3V	LCD display data
	29	R7	O	DC0V/3.3V	LCD display data
	30	R6	O	DC0V/3.3V	LCD display data
	31	R5	O	DC0V/3.3V	LCD display data
	32	R4	O	DC0V/3.3V	LCD display data
	33	R3	O	DC0V/3.3V	LCD display data
	34	R2	O	DC0V/3.3V	LCD display data
	35	R1	O	DC0V/3.3V	LCD display data
	36	R0	O	DC0V/3.3V	LCD display data
	37	DVDD	O	DC3.3V	Power supply output
	38	GND	-	-	Ground
	39	VLED+	O	DC0V/12V	LED output
	40	VLED-	I	DC0V	LED input

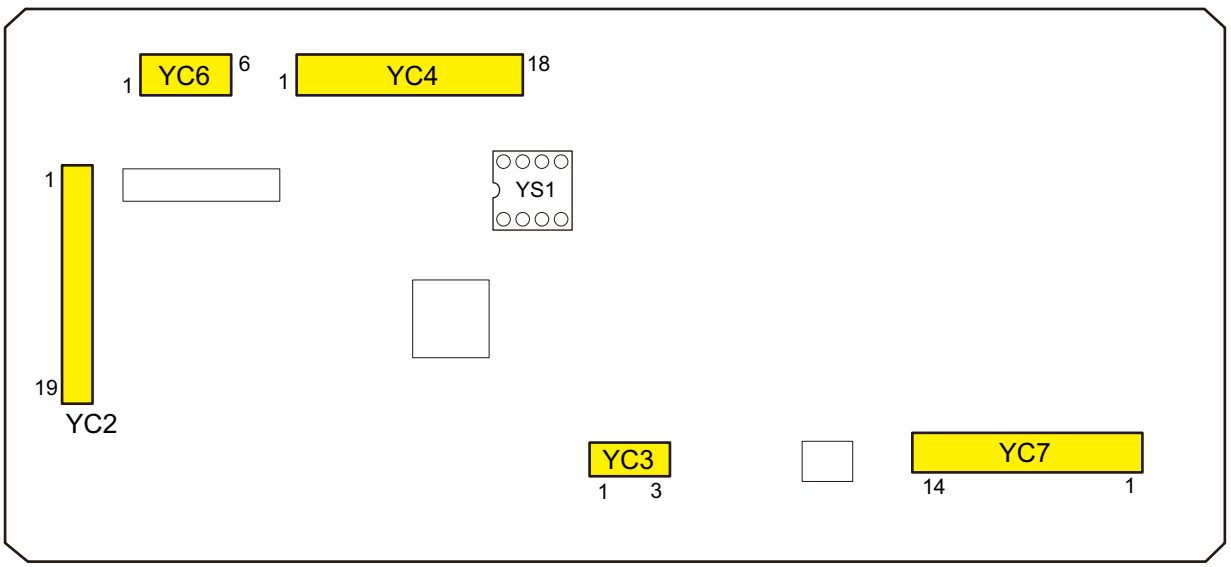
*1: 4.3-inch panel model*2: 7-inch panel model

(7) DP PWB

(7-1) PWB photograph



(7-2) Connector position



(7-3) Connector lists

Destination

- YC2: Engine PWB
- YC3: DP cover open/close switch
- YC4: DP original sensor, DP feed sensor, DP registration sensor, DP open/close switch, DP feedshift sensor, DP timing sensor
- YC6: Original length sensor, Original width sensor
- YC7: DP feed motor, DP conveying motor, DP feedshift motor, DP registration clutch

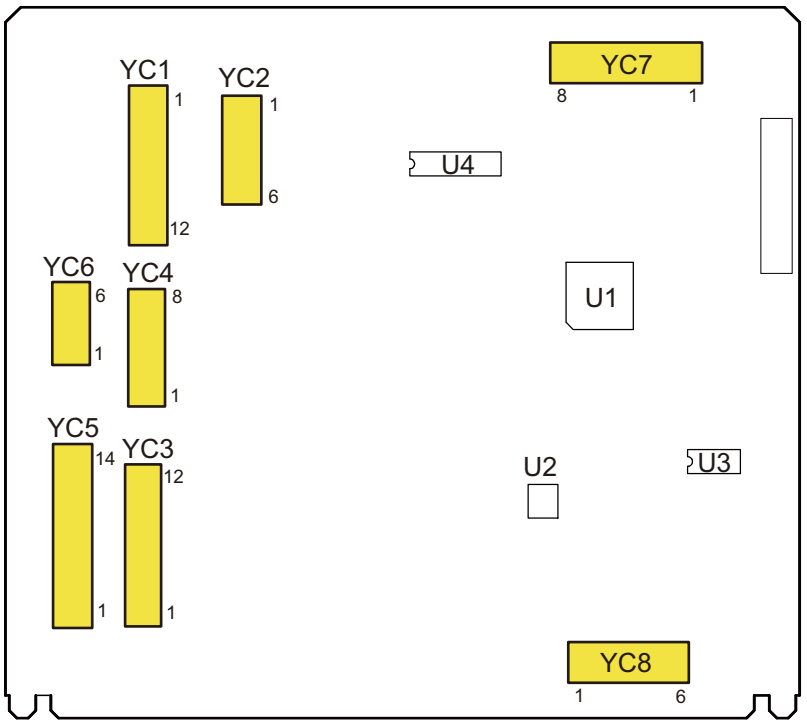
Connector	Pins	Signal	I/O	Voltage	Description
YC2	1	FG	-	-	Ground
	2	GND	-	-	Ground
	3	DC3.3V3	I	DC3.3V	Power supply input
	4	DP_ORG_SET	I	DC0V/3.3V	DP original set detection
	5	DP_OPEN	I	DC0V/3.3V	DP open/close detection
	6	DP_TMG	O	DC0V/3.3V	VSYNC output to Engine
	7	DP_RDY	O	DC0V/3.3V(pulse)	Engine-DP communication status
	8	DP_SI	O	DC0V/3.3V(pulse)	Engine-DP communication data
	9	DP_SEL	I	DC0V/3.3V	Engine-DP communication select
	10	DP_SO	I	DC0V/3.3V(pulse)	Engine-DP communication data
	11	DP_CLK	I	DC0V/3.3V(pulse)	Engine-DP communication clock
	12	DC3.3V2_E	I	DC3.3V	Power supply input
	13	DC3.3V2_E	I	DC3.3V	Power input
	14	DC24V2	I	DC24V	Power input
	15	DC24V2	I	DC24V	Power input
	16	GND	-	-	Ground
	17	GND	-	-	Ground
	18	GND	-	-	Ground
	19	GND	-	-	Ground
YC3	1	DC24V2	O	DC24V	Power output
	2	NC	-	-	Not used
	3	DC24VIL_DP	O	DC24V	Power output
YC4	1	DC3.3V3	O	DC3.3V	Power output
	2	GND	-	-	Ground
	3	SET_SW	I	DC0V/3.3V	DP original set detection
	4	DC3.3V2_E	O	DC3.3V	Power output
	5	GND	-	-	Ground
	6	FEED_SW	I	DC0V/3.3V	Original conveying detection
	7	DC3.3V2_E	O	DC3.3V	Power output
	8	GND	-	-	Ground
	9	REGIST_SW	I	DC0V/3.3V	Original conveying registration detection
	10	DC3.3V3	O	DC3.3V	Power output
	11	GND	-	-	Ground
	12	DP_OPEN_SW	I	DC0V/3.3V	DP open/close detection
	13	DC3.3V2_E	O	DC3.3V	Power output
	14	GND	-	-	Ground

Connector	Pins	Signal	I/O	Voltage	Description
YC4	15	HP_SW	I	DC0V/3.3V	Home position detection for the feedshift guide and conveying pressure
	16	DC3.3V2_E	O	DC3.3V	Power output
	17	GND	-	-	Ground
	18	TIMING_SW	I	DC0V/3.3V	Original conveying timing detection
YC6	1	DC3.3V2_E	O	DC3.3V	Power output
	2	GND	-	-	Ground
	3	LS_SW	I	DC0V/3.3V	Original length detection
	4	DC3.3V2_E	O	DC3.3V	Power output
	5	WSIZE	I	0V to DC3.3V	Original width detection
	6	GND	-	-	Ground
YC7	1	FEED_MOT_A	O	0V to DC24V(analog)	Feed motor output
	2	FEED_MOT_B	O	0V to DC24V(analog)	Feed motor output
	3	FEED_MOT_/A	O	0V to DC24V(analog)	Feed motor output
	4	FEED_MOT_/B	O	0V to DC24V(analog)	Feed motor output
	5	CONV_MOT_A	O	0V to DC24V(analog)	Conveying motor output
	6	CONV_MOT_/A	O	0V to DC24V(analog)	Conveying motor output
	7	CONV_MOT_B	O	0V to DC24V(analog)	Conveying motor output
	8	CONV_MOT_/B	O	0V to DC24V(analog)	Conveying motor output
	9	JNC_MOT_A	O	0V to DC24V(analog)	Feedshift motor output
	10	JNC_MOT_B	O	0V to DC24V(analog)	Feedshift motor output
	11	JNC_MOT_/A	O	0V to DC24V(analog)	Feedshift motor output
	12	JNC_MOT_/B	O	0V to DC24V(analog)	Feedshift motor output
	13	CL_REM	O	DC0V/24V	Registration clutch remote
	14	DC24VIL_DP	O	DC24V	Power output

8 - 2 Description for PWB (OPTION)

(1) PF PWB (PF-410/PF-471)

(1-1) Connector position



(1-2) Connector lists

Destination

- YC1: Engine PWB
- YC2: PF drive motor
- YC3: PF lift sensor 1, PF paper sensor 1(U), PF paper sensor 1(L), PF feed sensor 1
- YC4: PF lift motor 1, PF feed clutch 1, PF conveying clutch
- YC5: PF lift sensor 2, PF paper sensor 2(U), PF paper sensor 2(L), PF feed sensor 2
- YC6: PF lift motor 2, PF feed clutch 2
- YC7: PF paper length switch 1, PF paper width switch 1, Right cover switch 3
- YC8: PF paper length switch 2, PF paper width switch 2

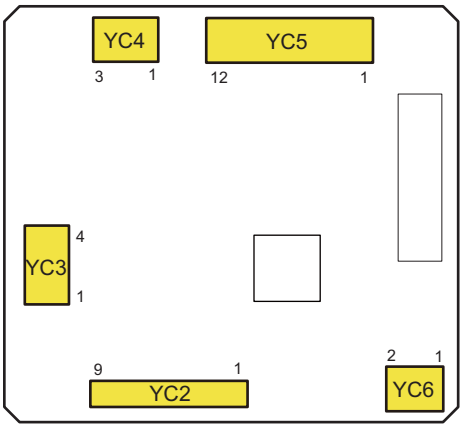
Connector	Pins	Signal	I/O	Voltage	Description
YC1	1	GND	-	-	Ground
	2	GND	-	-	Ground
	3	3.3V4	I	DC3.3V	DC3.3V power input from Main body
	4	3.3V0	I	DC3.3V	DC3.3V power input from Main body
	5	24V4	I	DC24V	DC24V power input from Main body
	6	PF_PAUSE	O	DC0V/3.3V	Pause signal
	7	PF_SET	O	DC0V/3.3V	Set signal
	8	PF_RDY	O	DC0V/3.3V	Ready signal
	9	PF_SEL	I	DC0V/3.3V	Paper Feeder select signal

Connector	Pins	Signal	I/O	Voltage	Description
	10	EH_SI	I	DC0V/3.3V(pulse)	Serial communication data signal input
	11	EH_SO	O	DC0V/3.3V(pulse)	Serial communication data signal output
	12	EH_CLK	I	DC0V/3.3V(pulse)	Serial communication clock signal
YC2	1	MAIN_DIR	O	DC0V/3.3V	PFDM drive change signal
	2	MAIN_READY	I	DC0V/3.3V	Ready signal
	3	MAIN_CLK	O	DC0V/3.3V(pulse)	PFDM clock signal
	4	MAIN_REM	O	DC0V/3.3V	PFDM: On/Off
	5	GND	-	-	Ground
	6	24V4	O	DC24V	DC24V power output to PFDM
YC3	1	3.3V4	O	DC3.3V	DC3.3V power output to PFLS1
	2	GND	-	-	Ground
	3	PFLS1	I	DC0V/3.3V	PFLS1: On/Off
	4	3.3V4	O	DC3.3V	DC3.3V power output to PFPS1(U)
	5	GND	-	-	Ground
	6	PFPS1(U)	I	DC0V/3.3V	PFPS1(U): On/Off
	7	3.3V4	O	DC3.3V	DC3.3V power output to PFPS1(L)
	8	GND	-	-	Ground
	9	PFPS1(L)	I	DC0V/3.3V	PFPS1(L): On/Off
	10	3.3V4	O	DC3.3V	DC3.3V power output to PFFS1
	11	GND	-	-	Ground
	12	PFFS1	I	DC0V/3.3V	PFFS1: On/Off
YC4	1	LIFT_REM1	O	DC0V/3.3V	PFLM1: On/Off
	2	24V4	O	DC24V	DC24V power output to PFLM1
	3	REG_CL_REM1	O	DC0V/3.3V	PFPFCL1: On/Off
	4	NC	-	-	Not used
	5	24V4	O	DC24V	DC24V power output to PFPFCL1
	6	REG_CL_REM	O	DC0V/3.3V	PFCCL: On/Off
	7	NC	-	-	Not used
	8	24V4	O	DC24V	DC24V power output to PFCCL
YC5	1	3.3V4	O	DC3.3V	DC3.3V power output to PFLS2
	2	GND	-	-	Ground
	3	PFLS2	I	DC0V/3.3V	PFLS2: On/Off
	4	3.3V4	O	DC3.3V	DC3.3V power output to PFPS2(U)
	5	GND	-	-	Ground
	6	PFPS2(U)	I	DC0V/3.3V	PFPS2(U): On/Off
	7	3.3V4	O	DC3.3V	DC3.3V power output to PFPS2(L)
	8	GND	-	-	Ground
	9	PFPS2(L)	I	DC0V/3.3V	PFPS2(L): On/Off
	10	3.3V4	O	DC3.3V	DC3.3V power output to PFFS2
	11	GND	-	-	Ground
	12	PFFS2	I	DC0V/3.3V	PFFS2: On/Off
	13	NC	-	-	Not used
	14	GND	-	-	Ground
YC6	1	LIFT_REM2	O	DC0V/24V	PFLM2: On/Off
	2	24V4	O	DC24V	DC24V power output to PFLM2
	3	REG_CL_REM2	O	DC0V/24V	PFPFCL2: On/Off
	4	NC	-	-	Not used

Connector	Pins	Signal	I/O	Voltage	Description
	5	24V4	O	DC24V	DC24V power output to PFPFCL2
YC7	1	PAPLSIZE1(3)	I	DC0V/3.3V	PFPLSW1: On/Off
	2	PAPLSIZE1(2)	I	DC0V/3.3V	PFPLSW1: On/Off
	3	GND	-	-	Ground
	4	PAPLSIZE1(1)	I	DC0V/3.3V	PFPLSW1: On/Off
	5	PAPWSIZE1	I	DC0V/3.3V	PFPWSW1: On/Off
	6	GND	-	-	Ground
	7	COVEROPEN	I	DC0V/3.3V	RC3SW: On/Off
	8	GND	-	-	Ground
YC8	1	PAPLSIZE2(3)	I	DC0V/3.3V	PFPLSW2: On/Off
	2	PAPLSIZE1(2)	I	DC0V/3.3V	PFPLSW2: On/Off
	3	GND	-	-	Ground
	4	PAPLSIZE2(1)	I	DC0V/3.3V	PFPLSW2: On/Off
	5	PAWLSIZE2	I	DC0V/3.3V	PFPWSW2: On/Off
	6	GND	-	-	Ground

(2) BR PWB (AK-470)

(2-1) Connector position



(2-2) Connector lists

Destination

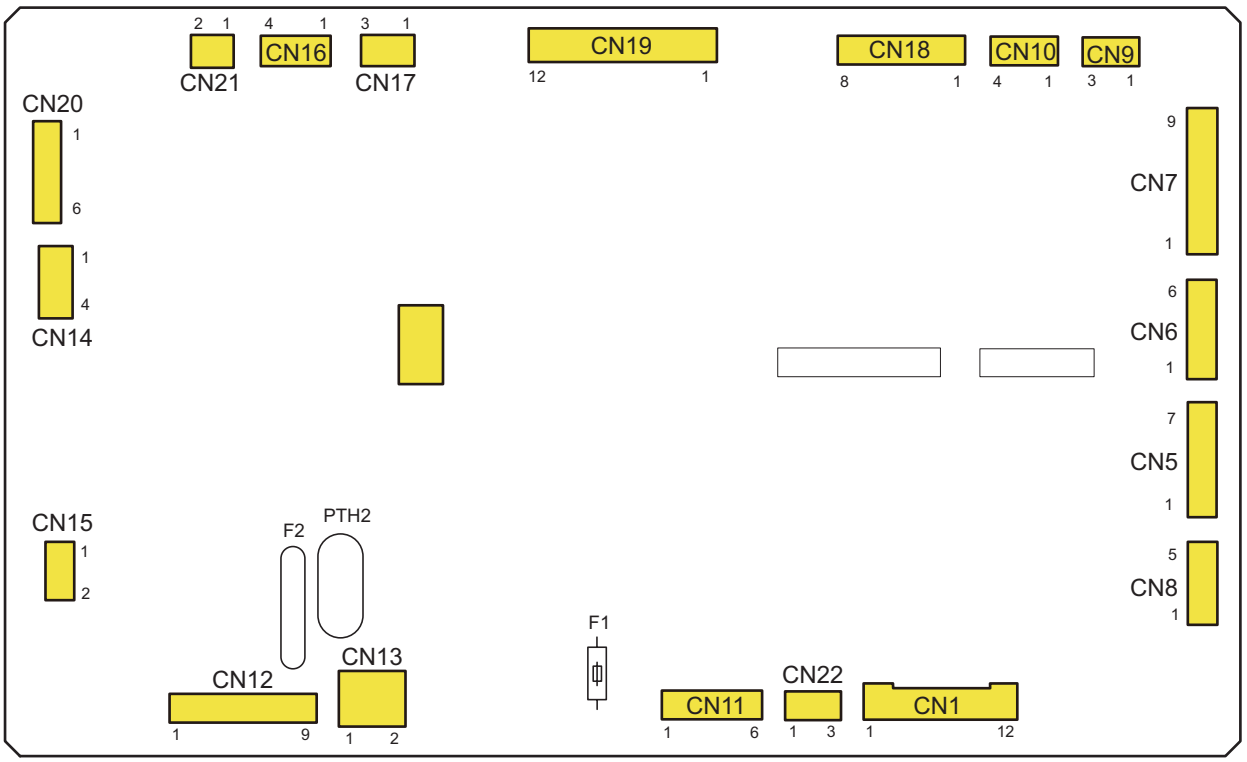
- YC2: BR conveying sensor 1, 2 and 3
- YC3: BR motor
- YC4: BR cover switch
- YC5: DP relay PWB
- YC6: BR fan motor

Connector	Pins	Signal	I/O	Voltage	Description
YC2	1	3.3V2	O	DC3.3V	DC3.3V power output to BRCS3
	2	GND	-	-	Ground
	3	JAM_SENCE3	I	DC0V/3.3V	BRCS3: On/Off
	4	3.3V2	O	DC3.3V	DC3.3V power output to BRCS2
	5	GND	-	-	Ground
	6	JAM_SENCE2	I	DC0V/3.3V	BRCS2: On/Off
	7	3.3V2	O	DC3.3V	DC3.3V power output to BRCS1
	8	GND	-	-	Ground
	9	JAM_SENCE1	I	DC0V/3.3V	BRCS1: On/Off
YC3	1	SMOTB_	O	DC0V/24V(pulse)	BRM drive control signal
	2	SMOTA_	O	DC0V/24V(pulse)	BRM drive control signal
	3	SMOTB	O	DC0V/24V(pulse)	BRM drive control signal
	4	SMOTA	O	DC0V/24V(pulse)	BRM drive control signal
YC4	1	24V	O	DC24V	DC24V power output to BRCSW

Connector	Pins	Signal	I/O	Voltage	Description
	2	NC	-	-	Not used
YC4	3	24VIL	I	DC0V/24V	BRCSW: On/Off
YC5	1	BR_CLK	I	DC0V/3.3V(pulse)	Serial clock signal
	2	BR_SI	O	DC0V/3.3V(pulse)	Serial communication data signal output
	3	BR_SO	I	DC0V/3.3V(pulse)	Serial communication data signal input
	4	BR_SEL	I	DC0V/3.3V	Select signal
	5	BR_RDY	O	DC0V/3.3V	Ready signal
	6	3.3V4	I	DC3.3V	DC3.3V power input from DFRPWB
	7	FAN_CONT	I	DC0V/24V	BRFM: On/Off
	8	GND	-	-	Ground
	9	GND	-	-	Ground
	10	GND	-	-	Ground
	11	24V_DF	I	DC24V	DC24V power input from DFRPWB
	12	24V_DF	I	DC24V	DC24V power input from DFRPWB
YC6	1	FAN_CONT	O	DC0V/24V	BRFM: On/Off
	2	+24V_DFD	O	DC24V	DC24V power output to BRFM

(3) DF PWB (DF-470)

(3-1) Connector position



(3-2) Connector lists

Destination

- CN1: DF relay PWB
- CN5: Tray upper limit sensor, Tray lower limit sensor
- CN6: Paper detection sensor 1, Paper detection sensor 2
- CN7: Exit paper sensor, Adjustment sensor 1, 2
- CN8: Staple position sensor
- CN9: Conveying sensor
- CN10: Belt sensor
- CN11: Roller sensor, DF top cover sensor
- CN12: Drive motor in the staple unit, Home position sensor, Self-priming sensor, Staple sensor
- CN13: Staple cover switch
- CN14: Slide motor
- CN15: Tray motor
- CN16: Paddle solenoid
- CN17: Paper detection solenoid
- CN18: Adjusting motor 1, 2
- CN19: Conveying motor, Bundle exit motor
- CN20: Roller motor
- CN21: Belt solenoid
- CN22: Slide sensor

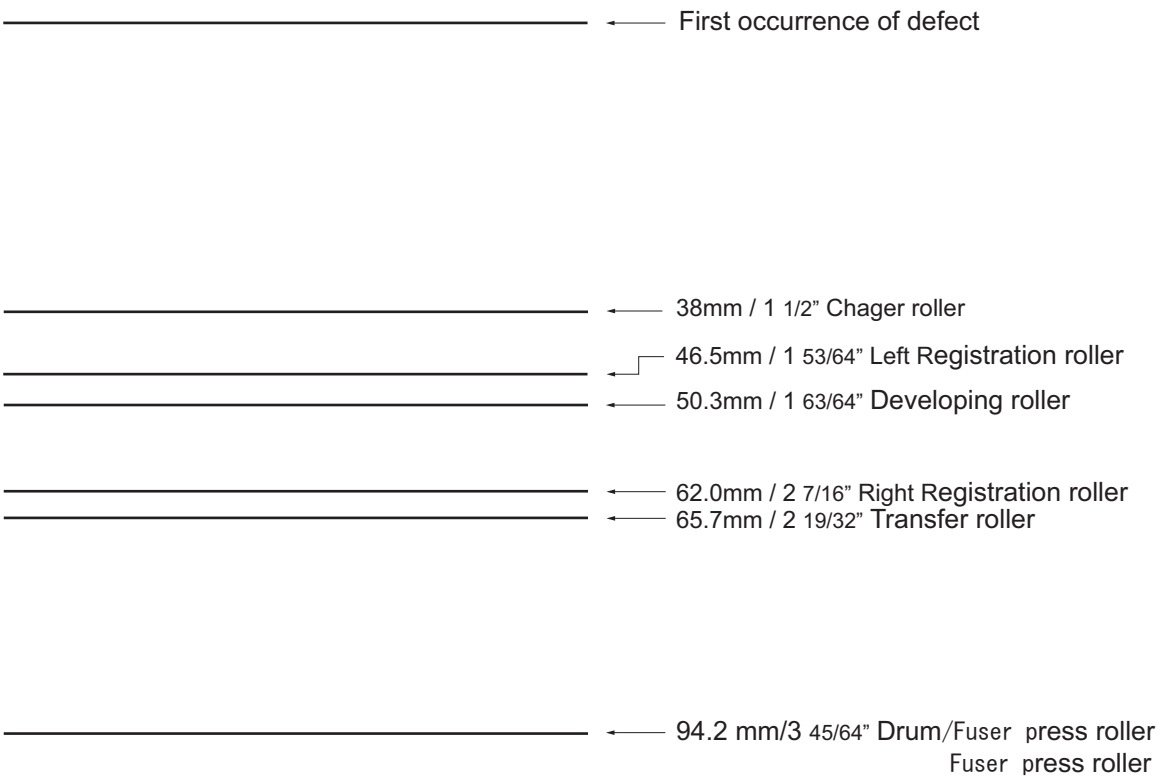
Connector	Pins	Signal	I/O	Voltage	Description
CN1	1	DF_CLK	I	DC0V/5V(pulse)	Serial clock signal
	2	DF_SI	O	DC0V/5V(pulse)	Serial communication data signal output
	3	DF_SO	I	DC0V/5V(pulse)	Serial communication data signal input
	4	DF_SEL	I	DC0V/5V	Select signal
	5	DF_RDY	O	DC0V/5V	Ready signal
	6	DF_SET	O	DC0V/5V	Finisher connect signal
	7	+24V	I	DC24V	DC24V power input from DFRPWB
	8	+24V	I	DC24V	DC24V power input from DFRPWB
	9	+24V	I	DC24V	DC24V power input from DFRPWB
	10	GND	-	-	Ground
	11	GND	-	-	Ground
	12	GND	-	-	Ground
CN5	1	T_LL_SEN	I	DC0V/5V	TLLS: On/Off
	2	SGND	-	-	Ground
	3	+5V	O	DC5V	DC5V power output to TLLS
	4	T_UL_SEN	I	DC0V/5V	TULS: On/Off
	5	SGND	-	-	Ground
	6	+5V	O	DC5V	DC5V power output to TULS
	7	NC	-	-	Not connected
CN6	1	+5V	O	DC5V	DC5V power output to PSS1
	2	SGND	-	-	Ground
	3	RHDS1	I	DC0V/5V	PSS1: On/Off
	4	+5V	O	DC5V	DC5V power output to PSS2
	5	SGND	-	-	Ground
	6	RHDS2	I	DC0V/5V	PSS2: On/Off
CN7	1	+5V	O	DC5V	DC5V power output to EPS
	2	SGND	-	-	Ground
	3	EMPS	I	DC0V/5V	EPS: On/Off
	4	+5V	O	DC5V	DC5V power output to ADS1
	5	SGND	-	-	Ground
	6	FJ_HPS	I	DC0V/5V	ADS1: On/Off
	7	+5V	O	DC5V	DC5V power output to ADS2
	8	SGND	-	-	Ground
	9	RJ_HPS	I	DC0V/5V	ADS2: On/Off
CN8	1	+5V	O	DC5V	DC5V power output to SPS
	2	SGND	-	-	Ground
	3	JIS	I	DC0V/5V	SPS: On/Off
	4	NC	-	-	Not used
	5	NC	-	-	Not used
CN9	1	+5V	O	DC5V	DC5V power output to PCS
	2	SGND	-	-	Ground
	3	PINS	I	DC0V/5V	PCS: On/Off
CN10	1	+5V	O	DC5V	DC5V power output to BLS
	2	SGND	-	-	Ground
	3	BRS	I	DC0V/5V	BLS: On/Off
	4	NC	-	-	Not used

Connector	Pins	Signal	I/O	Voltage	Description
CN11	1	+5V	O	DC5V	DC5V power output to RLS
	2	SGND	-	-	Ground
	3	RUDS	I	DC0V/5V	RLS: On/Off
	4	+5V	O	DC5V	DC5V power output to DFTCS
	5	SGND	-	-	Ground
	6	JAMCVR_S	I	DC0V/5V	DFTCS: On/Off
CN12	1	STPM+	O	DC0V/24V(pulse)	STM drive control signal
	2	STPM+	O	DC0V/24V(pulse)	STM drive control signal
	3	STPM-	O	DC0V/24V(pulse)	STM drive control signal
	4	STPM-	O	DC0V/24V(pulse)	STM drive control signal
	5	+5V	O	DC5V	DC5V power output to STHPS,STSPS,STES
	6	STP_HPS	O	DC0V/5V	STHPS: On/Off
	7	SELF_P	I	DC0V/5V	STSPS: On/Off
	8	LS	I	DC0V/5V	STES: On/Off
	9	SGND	-	-	Ground
CN13	1	+24V	O	DC24V	DC24V power output to STCSW
	2	H_SW	I	DC0V/24V	STCSW: On/Off
CN14	1	SLD_*A	O	DC0V/24V(pulse)	SLM drive control signal
	2	SLD_A	O	DC0V/24V(pulse)	SLM drive control signal
	3	SLD_B	O	DC0V/24V(pulse)	SLM drive control signal
	4	SLD_*B	O	DC0V/24V(pulse)	SLM drive control signal
CN15	1	TM_+	O	DC0V/24V(pulse)	TEM drive control signal
	2	TM_-	O	DC0V/24V(pulse)	TEM drive control signal
	3	NC	-	-	Not used
CN16	1	+24V	O	DC24V	DC24V power output to PDSOL
	2	P_SOL	O	DC0V/24V	PDSOL: On/Off
	3	NC	-	-	Not used
	4	NC	-	-	Not used
CN17	1	+24V	O	DC24V	DC24V power output to PSSOL
	2	S_SOL	O	DC0V/24V	PSSOL: On/Off
	3	NC	-	-	Not used
CN18	1	FJMOT_*A	O	DC0V/24V(pulse)	ADM1 drive control signal
	2	FJMOT_A	O	DC0V/24V(pulse)	ADM1 drive control signal
	3	FJMOT_B	O	DC0V/24V(pulse)	ADM1 drive control signal
	4	FJMOT_*B	O	DC0V/24V(pulse)	ADM1 drive control signal
	5	RJMOT_*A	O	DC0V/24V(pulse)	ADM2 drive control signal
	6	RJMOT_A	O	DC0V/24V(pulse)	ADM2 drive control signal
	7	RJMOT_B	O	DC0V/24V(pulse)	ADM2 drive control signal
	8	RJMOT_*B	O	DC0V/24V(pulse)	ADM2 drive control signal
CN19	1	FMOT_*B	O	DC0V/24V(pulse)	PCM drive control signal
	2	+24V	O	DC24V	DC24V power output to PCM
	3	FMOT_B	O	DC0V/24V(pulse)	PCM drive control signal
	4	FMOT_A	O	DC0V/24V(pulse)	PCM drive control signal
	5	+24V	O	DC24V	DC24V power output to PCM
	6	FMOT_*A	O	DC0V/24V(pulse)	PCM drive control signal

Connector	Pins	Signal	I/O	Voltage	Description
CN19	7	TMOT_*B	O	DC0V/24V(pulse)	BDM drive control signal
	8	+24V	O	DC24V	DC24V power output to BDM
	9	TMOT_B	O	DC0V/24V(pulse)	BDM drive control signal
	10	TMOT_A	O	DC0V/24V(pulse)	BDM drive control signal
	11	+24V	O	DC24V	DC24V power output to BDM
	12	TMOT_*A	O	DC0V/24V(pulse)	BDM drive control signal
CN20	1	ROMOT_*B	O	DC0V/24V(pulse)	RLM drive control signal
	2	+24V	O	DC24V	DC24V power output to RLM
	3	ROMOT_B	O	DC0V/24V(pulse)	RLM drive control signal
	4	ROMOT_A	O	DC0V/24V(pulse)	RLM drive control signal
	5	+24V	O	DC24V	DC24V power output to RLM
	6	ROMOT_*A	O	DC0V/24V(pulse)	RLM drive control signal
CN21	1	+24V	O	DC24V	DC24V power output to BLSOL
	2	BR_SOL	O	DC0V/24V	BLSOL: On/Off
CN22	1	+5V	O	DC5V	DC5V power output to SLS
	2	SGND	-	-	Ground
	3	SLP_HP	I	DC0V/5V	SLS: On/Off

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 parametervalues before the changes are made.

FRPO INIT command can reset all the FRPO parameters to the default settings of the printer.

(!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
Default pattern resolution	B8	0: 300 dpi 1: 600 dpi	0
Default copy number	C0	1 to 999	1
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 switch	C8	0: HP compatibility mode (Characters higher than 127 are not printed.) 32: Conventional mode (Characters higher than 127 are printed.) Supported symbol sets : ISO-60 Norway [00D], ISO-15 Italian [00I], ISO-11 Sweden [00S], ISO-6 ASCII [00U], ISO-4 U.K. [01E], ISO-69 France [01F], ISO-21 Germany [01G], ISO-17 Spain [02S], Symbol [19M]* *: 128 or more of the high code section can be printed with any C8 value. But, when setting C8 value to 0, character code 160 is not printed.	0
Print density control	D4	1: Light 2: Slightly light 3: Standard 4: Slightly dark 5: Dark	3
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 1(KDJ)

Items	FRPO	Setting value	Factory setting
Reduction rate	J0	0: 100% 5: 70 % 6: 81 % 7: 86 % 8: 94 % 9: 98 %	0
Auto linefeed (LF) mode *1	J7	0: Auto linefeed 1: No auto linefeed	0
Integer section of User horizontal offset *1	K0	-7 to +7 (cm)	0
Decimal section of User User horizontal offset *1	K1	-99 to +99 (1/100 cm)	0
Integer section of User vertical offset *1	K2	-7 to +7 (cm)	0
Decimal section of User vertical offset *1	K3	-99 to +99 (1/100 cm)	0
Kanji font number *1	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 *1	K6	0: New JIS mode 1: Old JIS mode	0
KIR	N0	0: OFF 2: ON	2
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 [0: OFF]	1
Eco Print mode	N6	0: OFF 2: ON	0
Resolution	N8	0: 300dpi 1: 600dpi 3: 1200dpi	1
Default emulation mode	P1	6: PCL6 (except PCL XL) 9: KPDL	6 9(KDA)
Carriage-return action *	P2	0: Ignores 1: CR 2: CR+LF	1
Linefeed action *	P3	0: Ignores 1: LF 2: CR+LF	1

Items	FRPO	Setting value	Factory setting
KPDL auto switching (When the optional KPDL3 upgrade kit is installed)	P4	0: None 1: Auto switching	0 1(KDA)
AES option 1-After AES is started, the data neither applicable to KPDL nor auto switching (alternate) emulation is processed in KPDL (When the optional KPDL3 upgrade kit is installed).	P7	After AES is started, the data neither applicable to KPDL nor auto switching (alternate) emulation is processed in KPDL. 0: AES activated by all the page exit commands. 1: None 2: AES activated by all the page exit commands and Prescribe EXIT command. 3: AES activated by Prescribe EXIT command only. 4: AES activated by ^L command only. 6: AES activated by Prescribe EXIT command and ^L command. After AES is started, the data neither applicable to KPDL nor auto switching (alternate) emulation is processed in KPDL. 10: AES activated by all the page exit commands and Prescribe EXIT command.	10 11(KDA)
Command recognition character	P9	ASCII code of 33 to 126	82(R)
Stacker setting at start-up	R0	1(Inner tray) 3 5	1 3 (When DF-470 is installed)

Items	FRPO	Setting value	Factory setting
Paper Size	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 10: ISO A3 11: JIS B4 12: Ledger 13: ISO A5 14: ISO A6 15: JIS B6 16: Envelope #9 17: Envelope #6-3/4 18: ISO B5 19 Custom 30: C4 31: Cardstock 32: 20: Oufuku Hagaki 33: Oficio II 39: 8K 40: 16K 42: 8.5x13.5 50: Statement 51: Folio 52: Youkei type 2 (Envelope) 53: Youkei type 4 (Envelope)	0
Default paper source	R4	0: Multi Purpose Tray 1: Cassette 1 2: Cassette 2 3: Cassette 3	1
MP tray paper size	R7	Same as the R2 values except: 0	8 6(KDA)
A4/Letter override	S4	0: OFF 1: ON	1 0(KDJ)
Host buffer size rate (H8 value and integration)	S5	0: 10 KB 1: 100 KB 2: 1 MB	1
RAM disk size	S6	1 to 1024 MB	128
RAM disk mode	S7	0: OFF 1: ON	1
Wide A4	T6	0: OFF 1: ON	0

Items	FRPO	Setting value	Factory setting
Line spacing *	U0	Lines per inch (integer value)	6
Line spacing	U1	Lines per inch (fraction value)	0
Character spacing	U2	Characters per inch (integer value)	10
Character spacing	U3	Characters per inch (fraction value)	0
Country code 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 21: US ASCII (U7 = 50 SET) 77: HP Roman-8 (U4 = 52 SET)	41 0(KDJ)
Supported symbol sets	U7	0: Same as the default emulation mode (P1) 1: IBM 6: IBM PC-8 50: US ASCII (U6 = 21 SET) 52: HP Roman-8 (U6 = 77 SET)	53 0(KDJ)
Default font pitch	U8	0 to 99	10
	U9	0 to 99	0
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

Items	FRPO	Setting value	Factory setting
ANK outline font name at start-up*	V3	ANK outline font name at power-up	Courier
Initial Kanji outline font size (100 V model only)*, *1	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
	V7	Kanji outline font name at start-up	MTHSMINCHO-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
Media type (MP tray)	X0	1: Plain 2: Transparency 3: Preprinted 4: Labels 5: Bond 6: Recycled 7: Vellum 9: Letterhead 10: Color 11: Prepunched 12: Envelope 13: Cardstock 16: Thick 17: High quality 21 to 28: Custom 1 to Custom 8	1

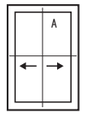
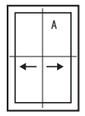
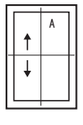
Items	FRPO	Setting value	Factory setting
Media type (Paper cassettes 1)	X1	1: Plain 3: Preprinted 5: Bond 6: Recycled 7: Vellum 9: Letterhead 10: Color 11: Prepunched 16: Thick 17: High quality 21 to 28: Custom 1 to Custom 8	1
Media type (Cassette 2, 3)	X2 X3	1: Plain 3: Preprinted 5: Bond 6: Recycled 7: Vellum 9: Letterhead 10: Color 11: Prepunched 16: Thick 17: High quality 21 to 28: Custom 1 to Custom 8	1
Cassette selection mode (PCL)	X9	0: Paper selection depending on an escape sequence compatible with HP-LJ5Si 2: Paper selection depending on an escape sequence compatible with HP-LJ8000	0
Auto error clear at an error (For errors to clear by pressing [Go] key only)	Y0	0: OFF 1: ON	0
Auto error clear timeout time	Y1	Value in units of 5 seconds (0 to 99).	6 (30 sec)
Paper error detection at duplex printing	Y3	0 to 255	127

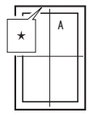
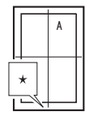
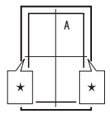
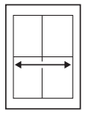
Items	FRPO	Setting value	Factory setting
Forced duplex printing setting (Media type is Preprinted, Prepunched and Letterhead only)	Y4	0: OFF 1: ON	0
PDF direct printing	Y5	0: Zoom depending on paper size 1: Loads paper which is the same size as the image 2: Loads Letter, A4 size paper depending on the image sizeEnlarges 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 sizeEnlarges or reduces the image to fit in the current paper size	0
e-MPS error	Y6	0: No error control 1: Output the error list 2: Displays the error 3: Displays the error and prints the error report	3

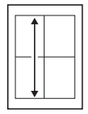
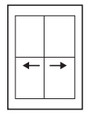
*1: KDJ only

*: Ignored depending on emulation

9 - 3 Chart of image adjustment procedures

Adjusting order	Item	Image	Maintenance mode		Page	Setting procedure		Remarks
			No.	Mode		Method	Adjustment	
1	Adjusting the center line of the MP tray (Adjustment of writing) Changes the LSU writing start timing.		U034 (original: Test pattern)	LSU Out Left	6-37page	1 Press the Start key. 2 Select the adjustment content. [LSU Out Left] - [MPT] 3 Press the System Menu key. 4 Press the Start key. (Pattern output) 5 Press the System Menu key. 6 Excute the adjustment.	1 By using the [Left/Right],[+/-] cursor or the numeric keys, change the setting value. 2 Press the Start key to set the setting value. 3 Press the [Stop] key.	*When the setting value is increased, the image moves rightward. *When adjusting for the duplex copy, select [Duplex].
2	Adjusting the center line of the cassettes (Adjustment of writing) Changes the LSU writing start timing.		U034 (original: Test pattern)	LSU Out Left	6-37page	1 Press the Start key. 2 Select the adjustment content. 「LSU Out Left] - [Cassette1] to [Cassette7] 3 Press the System Menu key. 4 Press the Start key. (Pattern output) 5 Press the System Menu key. 6 Excute the adjustment.	1 By using the [Left/Right],[+/-] cursor or the numeric keys, change the setting value. 2 Press the Start key to set the setting value. 3 Press the [Stop] key.	*When the setting value is increased, the image moves rightward. *When adjusting for the duplex copy, select [Duplex].
3	Adjusting the leading edge registration of the MP tray (Adjustment of writing) Changes the secondary paper feed timing.		U034 (original: Test pattern)	LSU Out Top	6-37page	1 Press the Start key. 2 Select the adjustment content. [Lsu Out Top] - [MPT(L)] 3 Press the System Menu key. 4 Press the Start key. (Pattern output) 5 Press the System Menu key. 6 Excute the adjustment.	1 By using the [Left/Right],[+/-] cursor or the numeric keys, change the setting value. 2 Press the Start key to set the setting value. 3 Press the [Stop] key.	*When the setting value is increased, the image moves downward. *When adjusting for the duplex copy, select [Duplex].
4	Adjusting the leading edge registration of the cassette (Adjustment of writing) Changes the secondary paper feed timing.		U034 (original: Test pattern)	LSU Out Top	6-37page	1 Press the Start key. 2 Select the adjustment content. 「Lsu Out Top] - [Cassette(L)] 3 Press the System Menu key. 4 Press the Start key. (Pattern output) 5 Press the System Menu key. 6 Excute the adjustment.	1 By using the [Left/Right],[+/-] cursor or the numeric keys, change the setting value. 2 Press the Start key to set the setting value. 3 Press the [Stop] key.	*When the setting value is increased, the image moves downward. *When adjusting for the duplex copy, select [Duplex].

Adjusting order	Item	Image	Maintenance mode		Page	Setting procedure		Remarks
			No.	Mode		Method	Adjustment	
5	Adjusting the leading edge margin (Adjustment of writing) Changes the LSU illumination start timing.		U402	Lead (original: Test pattern)	6-126page	1 Press the Start key. 2 Select the adjustment content. [Lead] 3 Press the System Menu key. 4 Press the Start key. (Pattern output) 5 Press the System Menu key. 6 Excute the adjustment.	1 By using the [Left/Right],[+/-] cursor or the numeric keys, change the setting value. 2 Press the Start key to set the setting value. 3 Press the [Stop] key.	*When the setting value is increased, the margin get larger.
6	Adjusting the trailing edge margin (Adjustment of writing) Changes the LSU illumination end timing.		U402	Trail (original: Test pattern)	6-126page	1 Press the Start key. 2 Select the adjustment content. [Trail] 3 Press the System Menu key. 4 Press the Start key. (Pattern output) 5 Press the System Menu key. 6 Excute the adjustment.	1 By using the [Left/Right],[+/-] cursor or the numeric keys, change the setting value. 2 Press the Start key to set the setting value. 3 Press the [Stop] key.	*When the setting value is increased, the margin get larger.
7	Adjusting the left and right margins (Adjustment of writing) Changes the LSU illumination start/end timing.		U402	A Margin C Margin (original: Test pattern)	6-126page	1 Press the Start key. 2 Select the adjustment content. Select [A Margin] or [C Margin]. 3 Press the System Menu key. 4 Press the Start key. (Pattern output) 5 Press the System Menu key. 6 Excute the adjustment.	1 By using the [Left/Right],[+/-] cursor or the numeric keys, change the setting value. 2 Press the Start key to set the setting value. 3 Press the [Stop] key.	*When the setting value is increased, the margin get larger.
8	Adjusting magnification of the scanner in the main scanning direction Processes data.		U065	Main Scan (original: Test copy)	6-46page	1 Press the Start key. 2 Select the adjustment content. [Main Scan] 3 Press the System Menu key. 4 Place an original and press the Start key. (Test copy output) 5 Press the System Menu key. 6 Excute the adjustment.	1 By using the [Left/Right],[+/-] cursor or the numeric keys, change the setting value. 2 Press the Start key to set the setting value. 3 Press the [Stop] key.	U065: When using on the contact glass *When the setting value is increased, the image get larger.

Adjusting order	Item	Image	Maintenance mode		Page	Setting procedure		Remarks
			No.	Mode		Method	Adjustment	
9	Adjusting magnification of the scanner in the sub scanning direction (scanning adjustment) Changes the original scanning speed.		U065 U070 (original: Test copy)	Sub Scan Sub Scan(F) Sub Scan(B) Sub Scan(CIS)	6-46page 6-52page	1 Press the Start key. 2 Select the adjustment content. U065: [Sub Scan] U070：[Sub Scan(F)]、[Sub Scan(B)]または[Sub Scan(CIS)] 3 Press the System Menu key. 4 Place an original and press the Start key. (Test copy output) 5 Press the System Menu key. 6 Excute the adjustment.	1 By using the [Left/Right],[+/-] cursor or the numeric keys, change the setting value. 2 Press the Start key to set the setting value. 3 Press the [Stop] key.	U065: When using on the contact glass *When the setting value is increased, the image get larger. U070: When using document processor *When the setting value is increased, the image get longer.
10	Adjusting the center line (Adjustment of reading) Scan data is processed.		U067 U072 (original: Test copy)	Front Front Back CIS	6-50page 6-55page	1 Press the Start key. 2 Select the adjustment content. U067: [Front] U072: [Front], [Back] or [CIS] 3 Press the System Menu key. 4 Place an original and press the Start key. (Test copy output) 5 Press the System Menu key. 6 Excute the adjustment.	1 By using the [Left/Right],[+/-] cursor or the numeric keys, change the setting value. 2 Press the Start key to set the setting value. 3 Press the [Stop] key.	U067: When using on the contact glass *When the setting value is increased, the image moves leftward. U072: When using 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 (Adjustment of reading) Changes the original scan start timing.		U066 U071 (original: Test copy)	Front Front Head Back Head	6-48page 6-53page	1 Press the Start key. 2 Press the System Menu key. 3 Place an original and press the Start key. (Test copy output) 4 Press the System Menu key. 5 Select the adjustment content. U066: [Front] U071: [Front Head] or [Back Head]	1 By using the [Left/Right], [+/-] cursor or the numeric keys, change the setting value. 2 Press the Start key to set the setting value. 3 Press the [Stop] key.	U066: When using on the contact glass *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 7505000005), the following adjustments are automatically made:

- LED light intensity
- Scan timing
- White reference correction factor
- Chromatic aberration correction filter in the main scanning direction (CCD model only)
- Color gamma input correction factor
- Color correction matrix

When maintenance item U411 (Automatic adjustment in the scanner) is run using the specified original (P/N 302AC68243), the following adjustments are automatically made:
When running this test chart, you first must clean the feed rollers with alcohol and ensure the DP width guides are correctly positioned against the original.

- Adjusting the DP sub scanning magnification (U070)
- Adjusting the DP leading edge registration (U071)
- Adjusting the DP center line (U072)
- Adjusting the DP trailing edge registration (U071)

When maintenance item U411 (Automatic adjustment in the scanner) is run using the specified original, the following adjustments are automatically made:

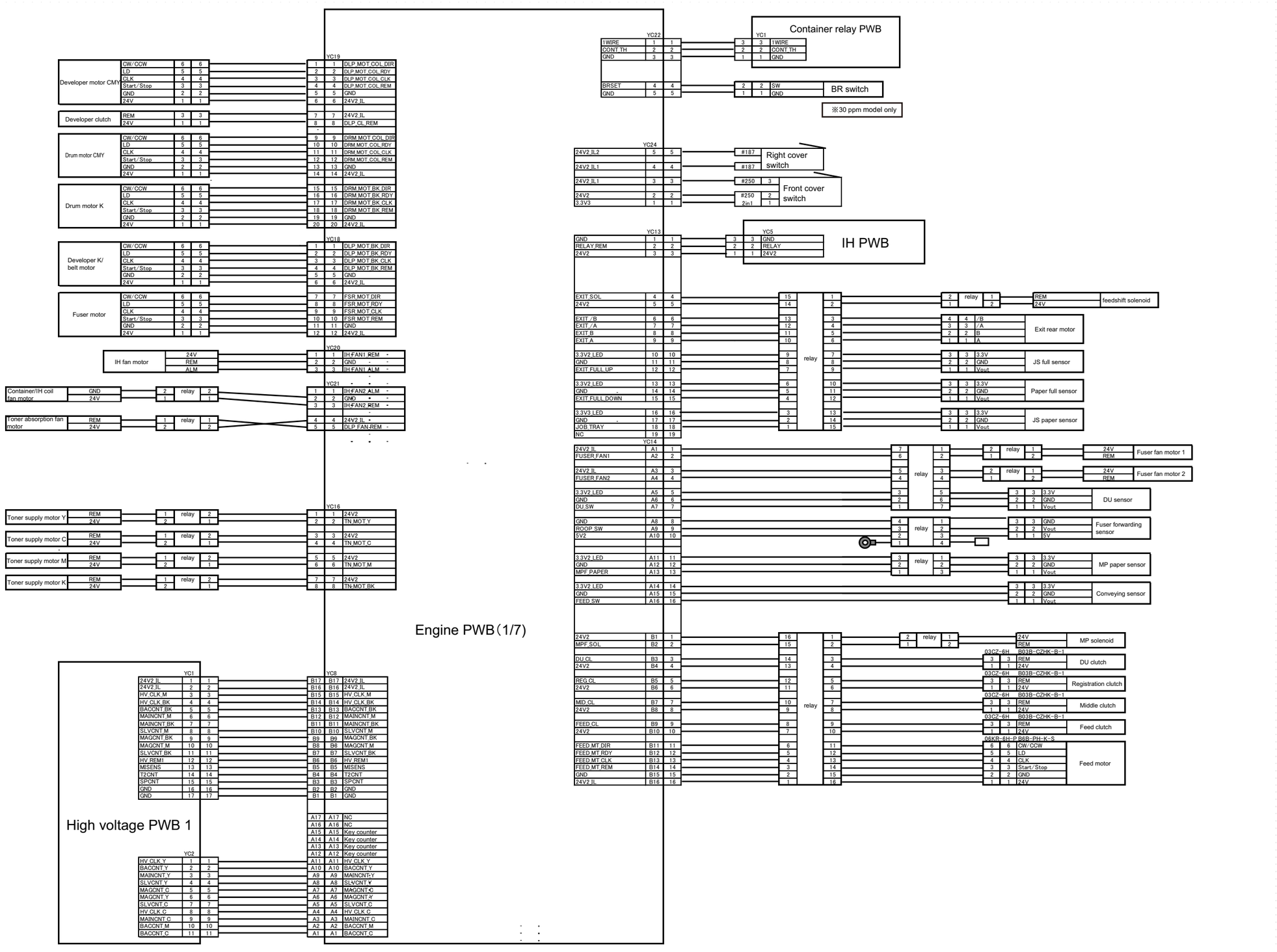
- Adjusting the DP sub scanning magnification (U070)
- Adjusting the DP leading edge registration (U071)
- Adjusting the DP center line (U072)
- Adjusting the DP trailing edge registration (U071)

Image quality

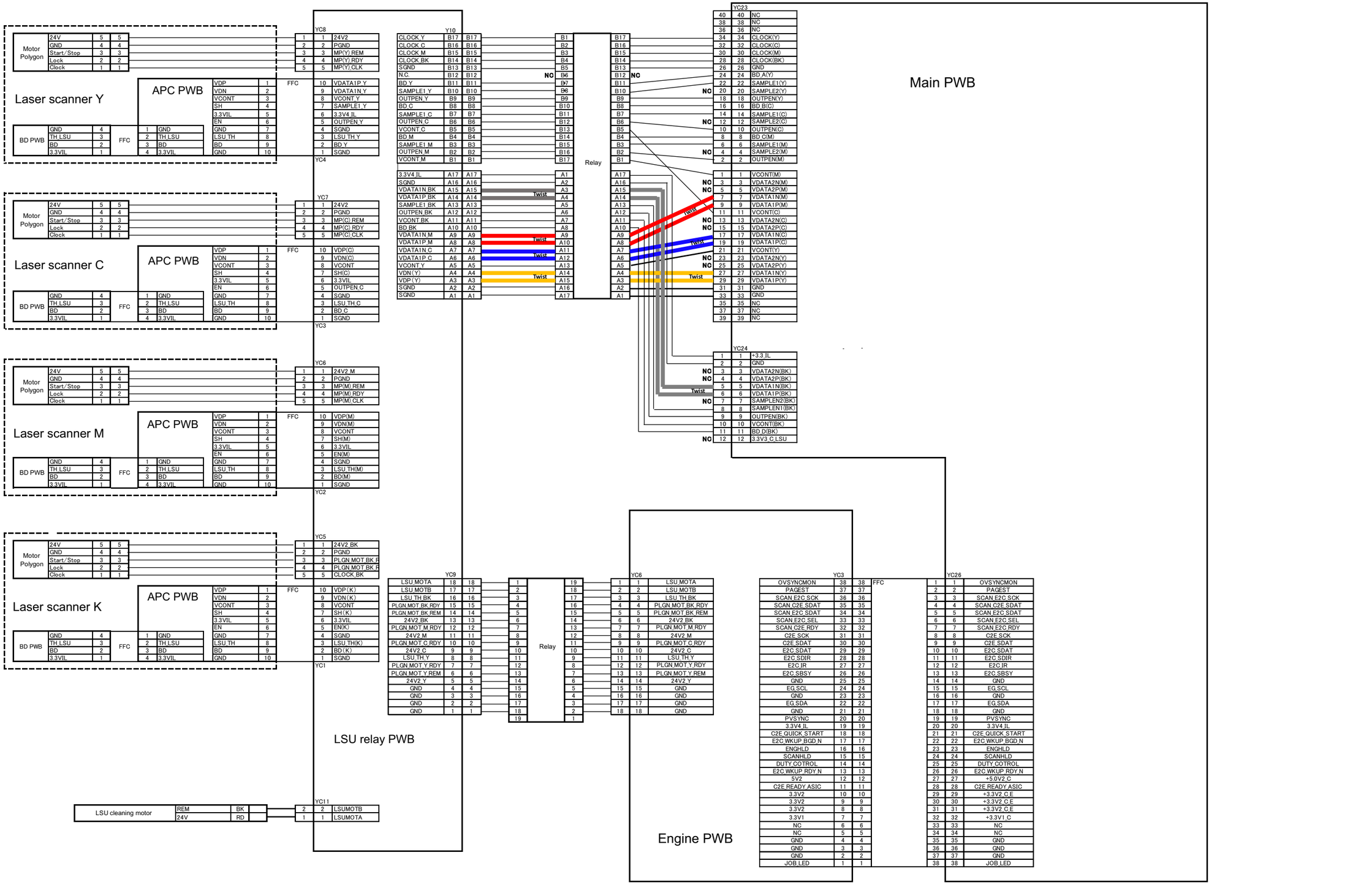
Items	Specifications
100% magnification	Printer: ±0.8% Copy: ±1.5% Using DP: ±2.0%
Magnificaiton	Copy: ±2.0% Using DP: ±2.5%
Lateral squareness	Copy: ±2.0mm/200mm Using DP: ±2.5mm/200mm
Leading edge timing	Print: 2.0 mm or less Copy: 2.0mm or less Using DP: 2.5mm or less
Skewed paper feed (left-right difference)	Print: 1.0mm /100mm or less Copy: 1.0mm /100mm or less(table) 1.5mm/100 mm or less (DP)
Lateral image shifting	Print: ±2.0mm or less(cassette) ±3.0mm or less(MP tray) Copy: ±2.0mm or less(cassette) ±3.0mm or less(MP tray) Using DP: ±2.0mm or less(cassette) ±3.0mm or less(MP tray)

9 - 4 Wiring diagram

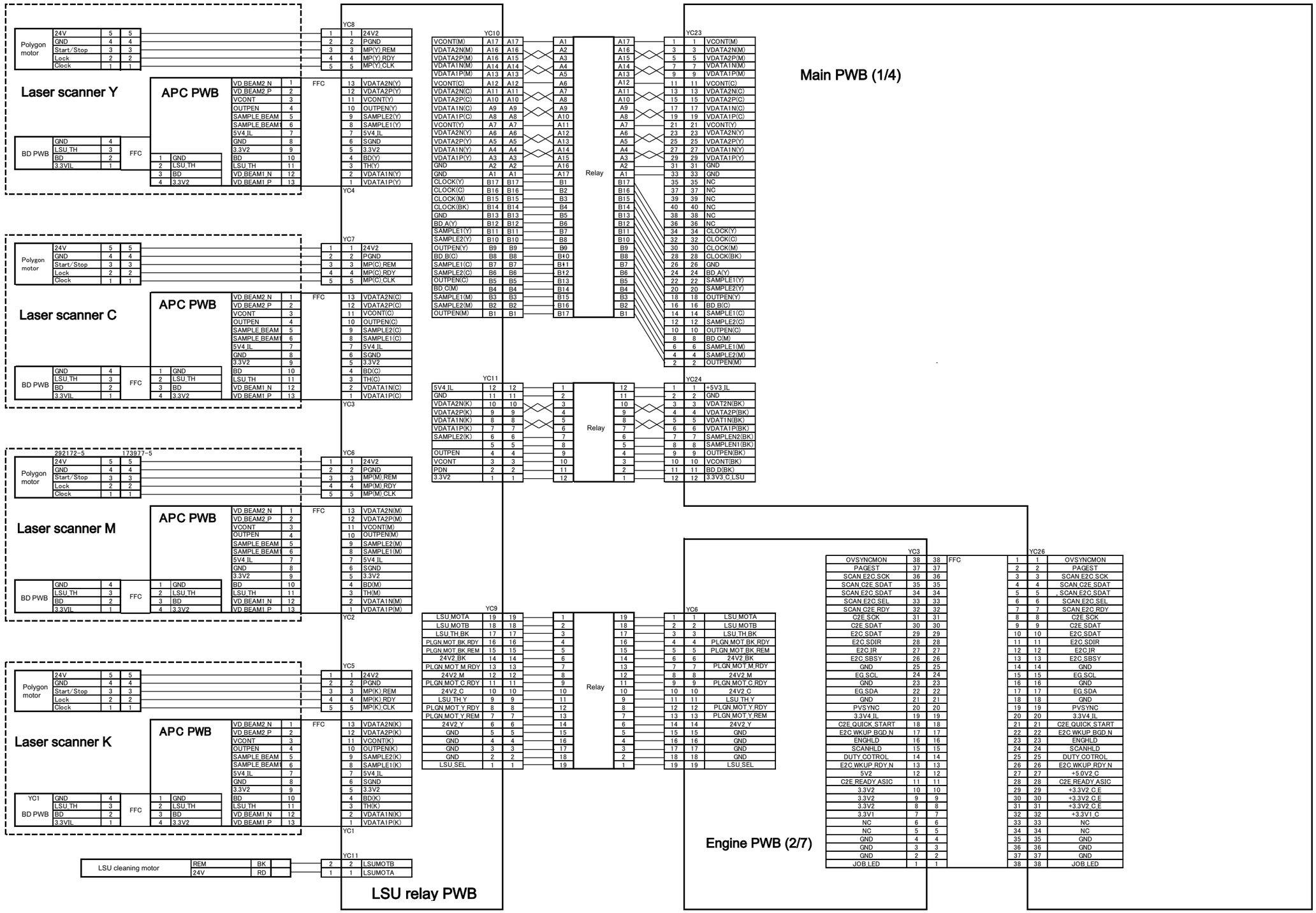
(1) Engine(1/7)/HVU/IH



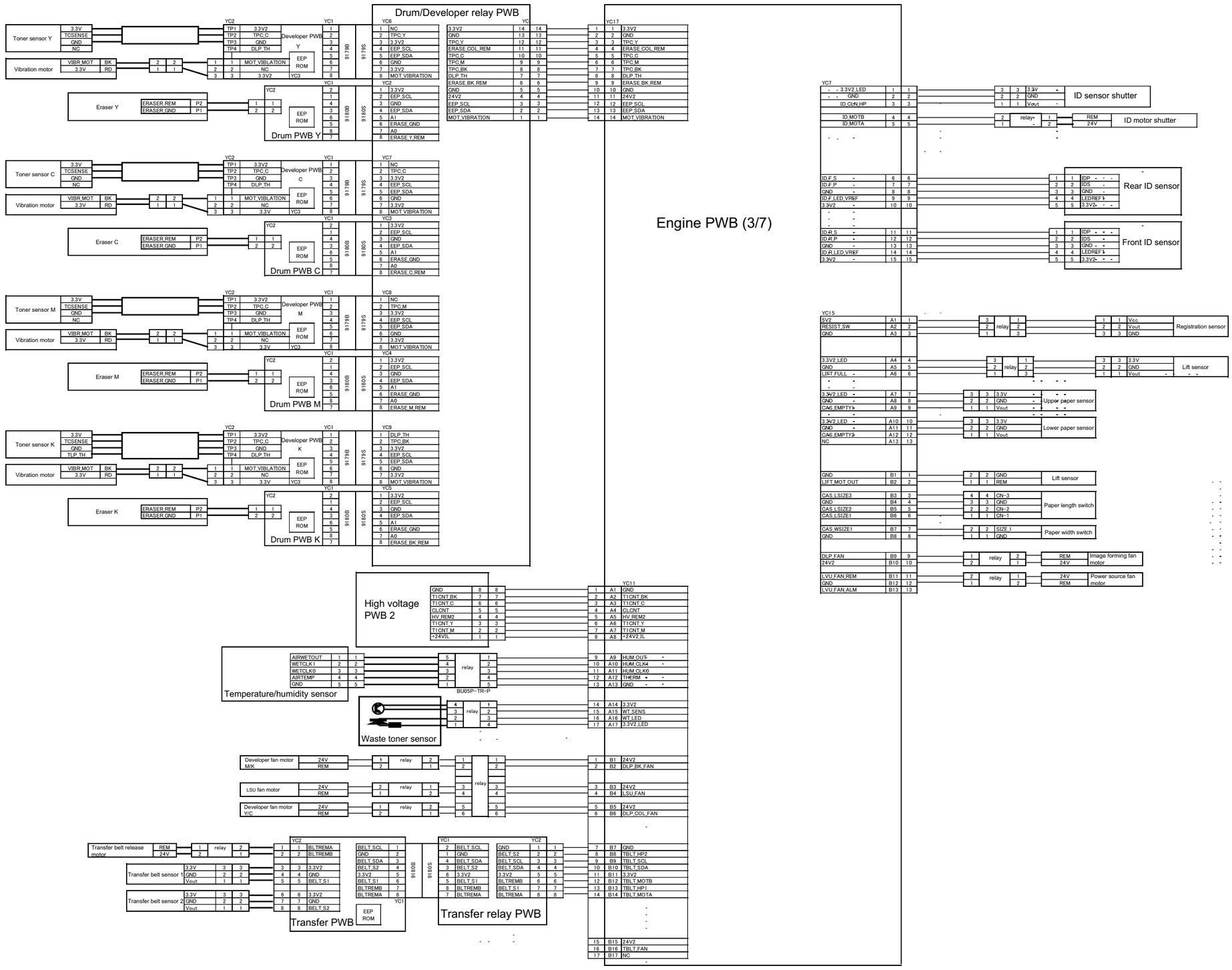
⑵ Engine(2/7)/Main (1/4)/LSU (1 beam)



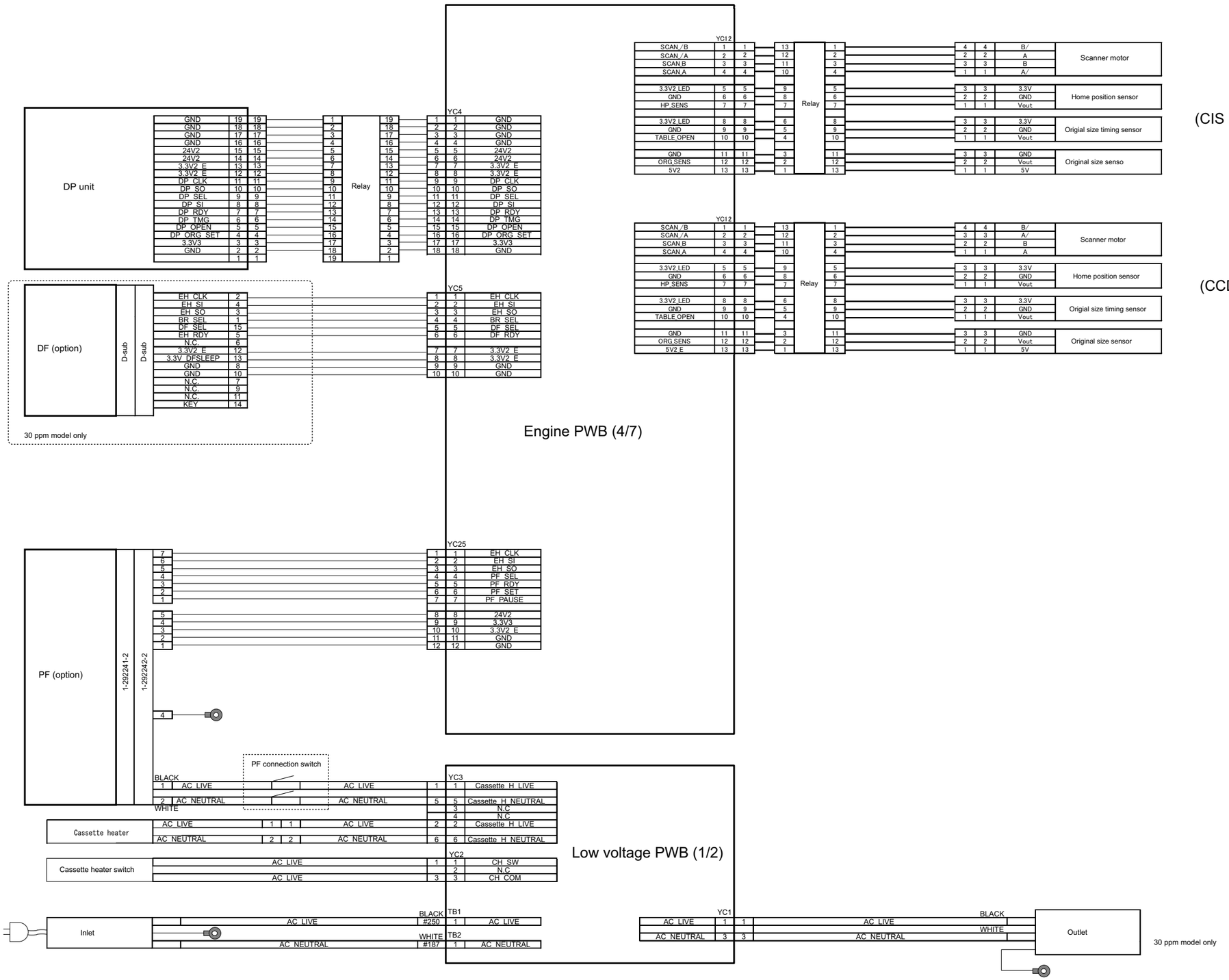
(3) Engine(2/7)/Main (1/4)/LSU(2 beams)



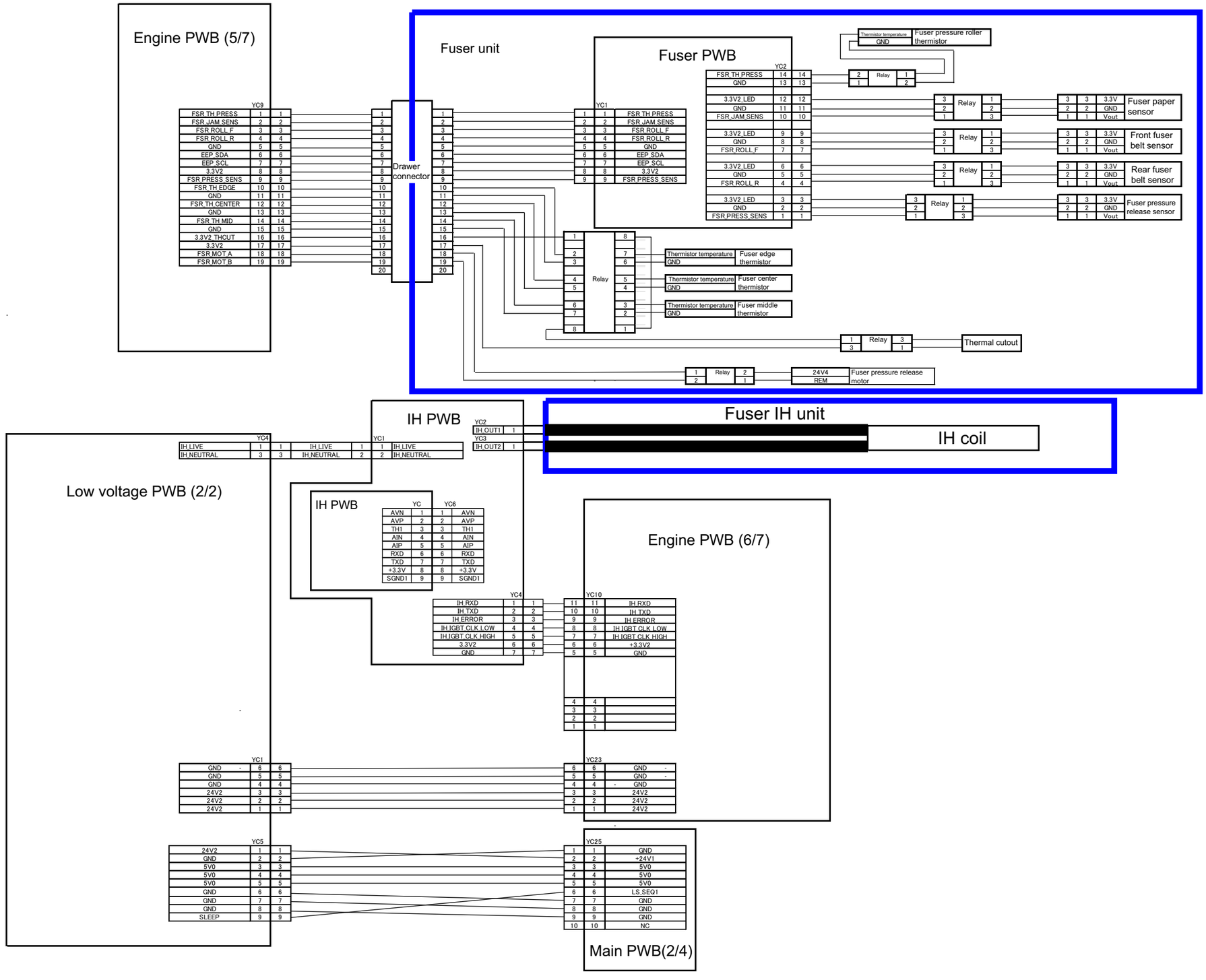
⑷ Engine(3/7)/Drum/Developer



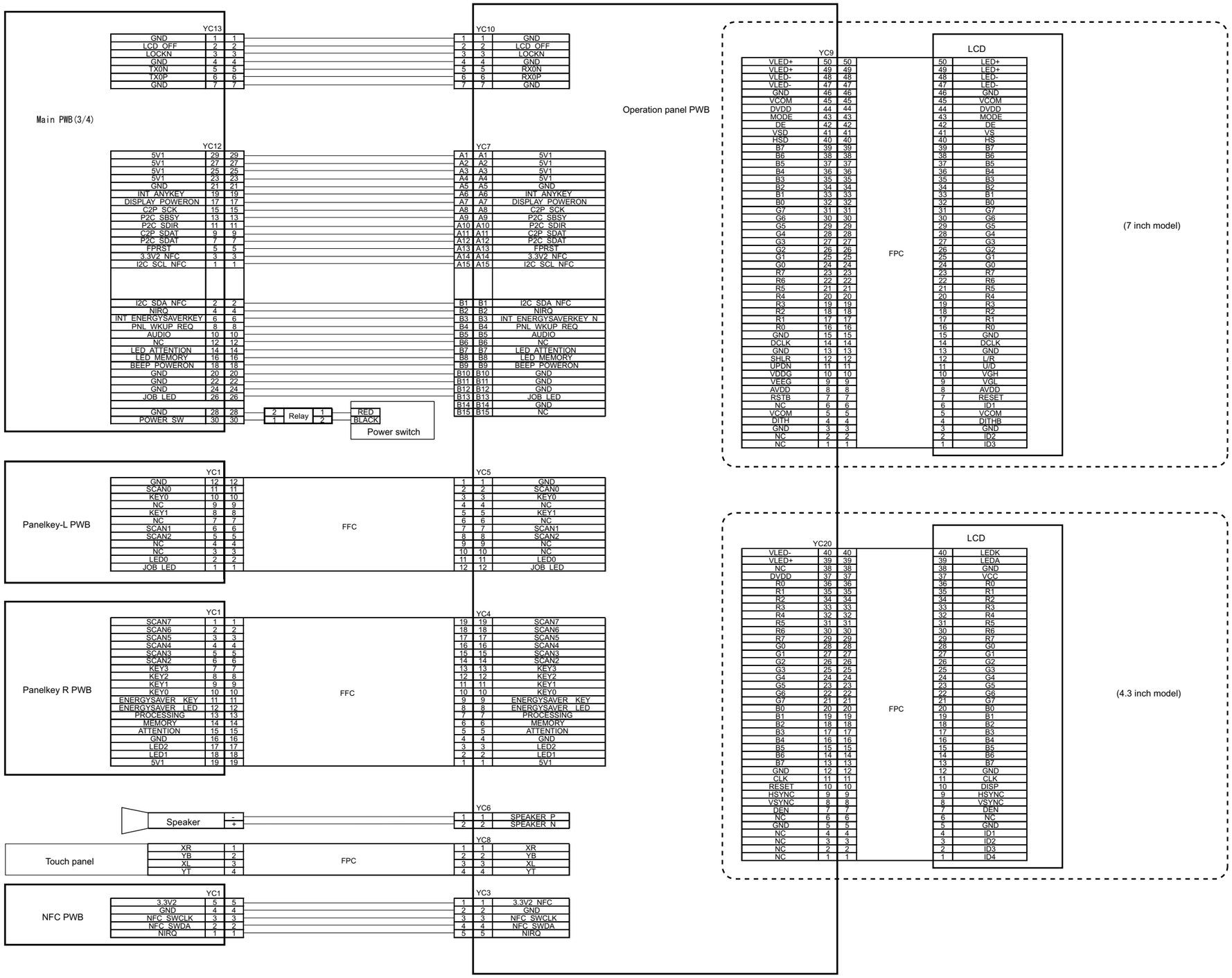
⑸ Engine(4/7)/ISU/EH



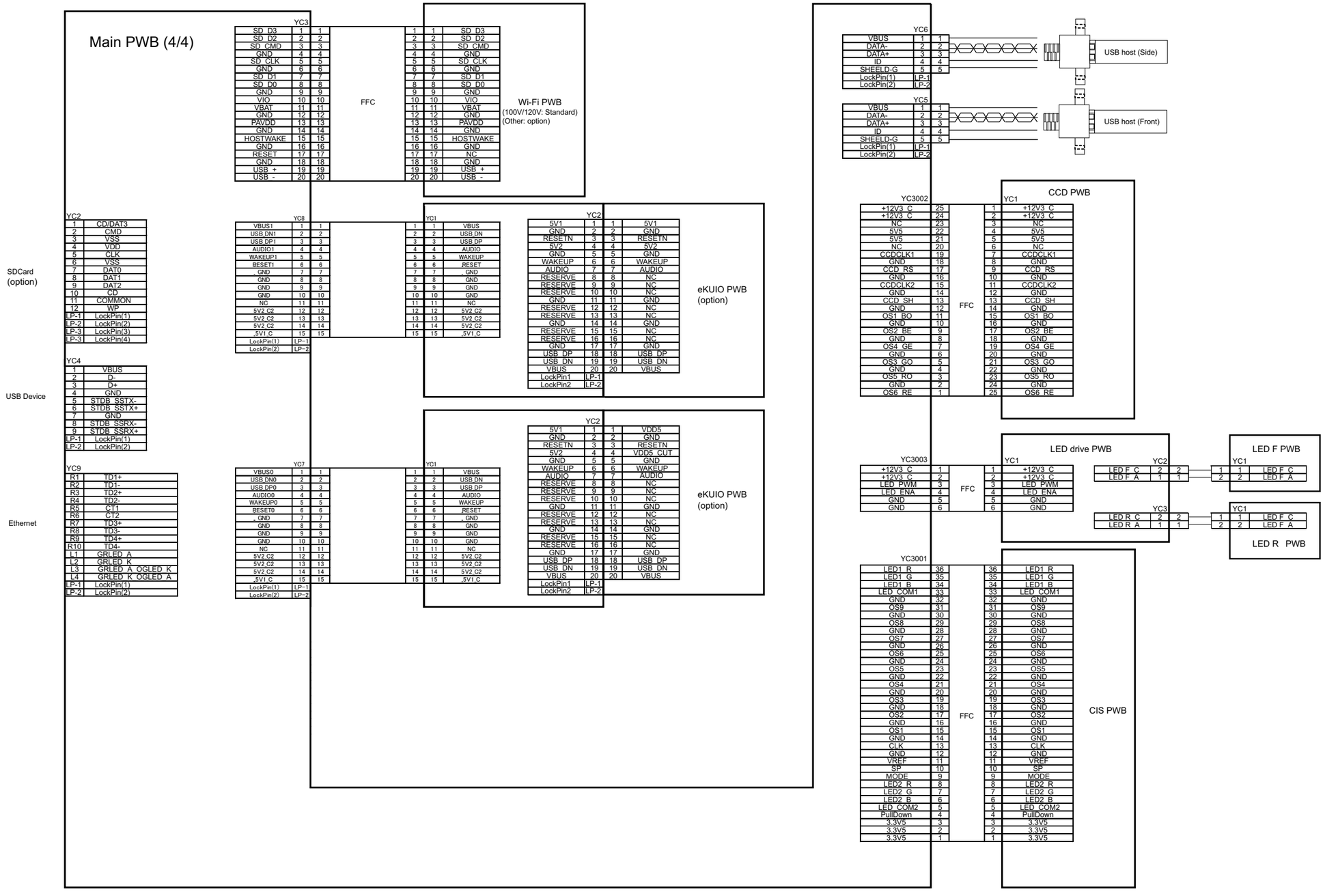
⑹ Engine(5/7, 6/7)/Main (2/4)/Fuser/IH/LVU



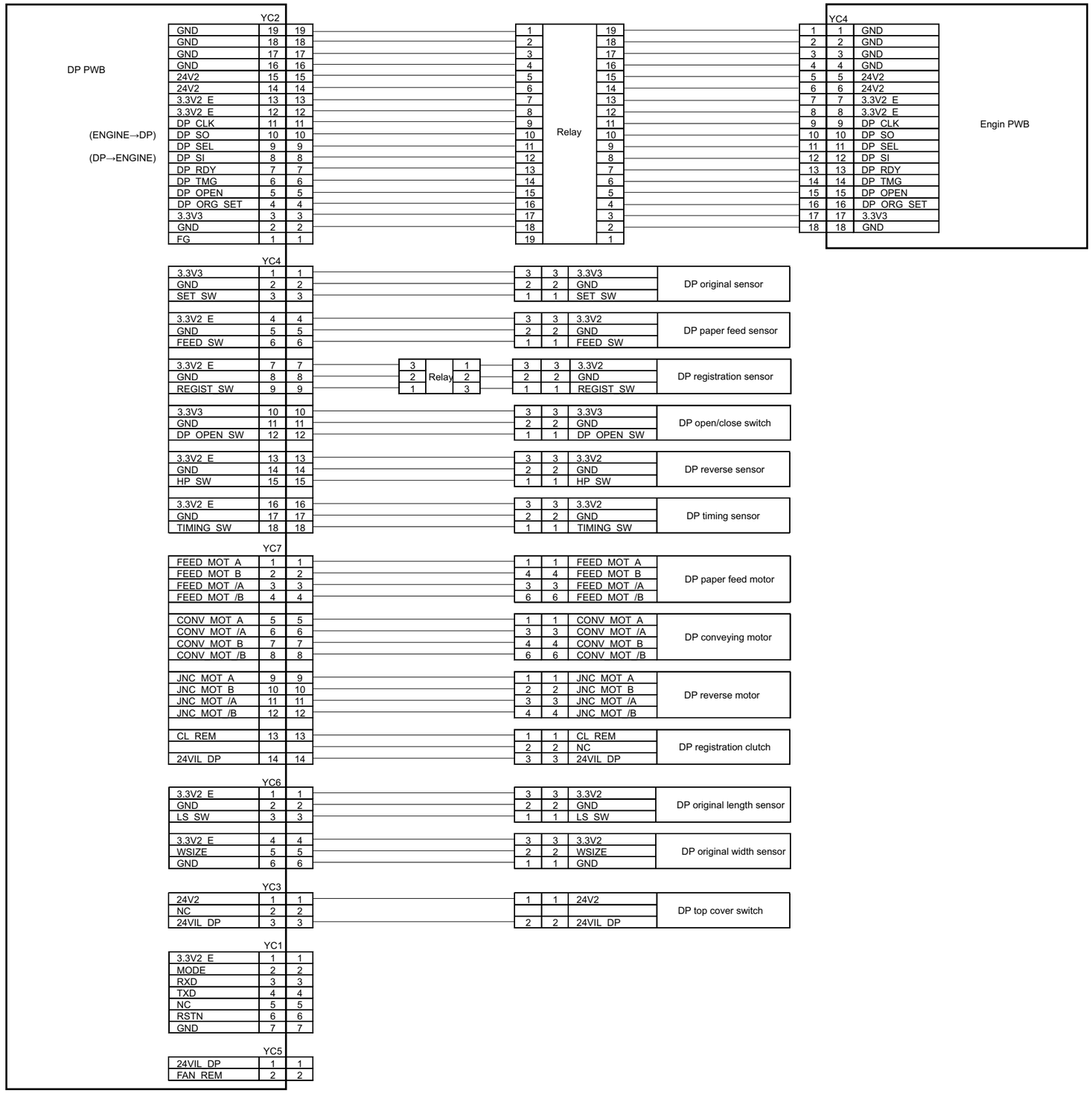
(7) Operation panel/LCD/Main PWB (3/4)



(8) Main (4/4)/ISU/Option

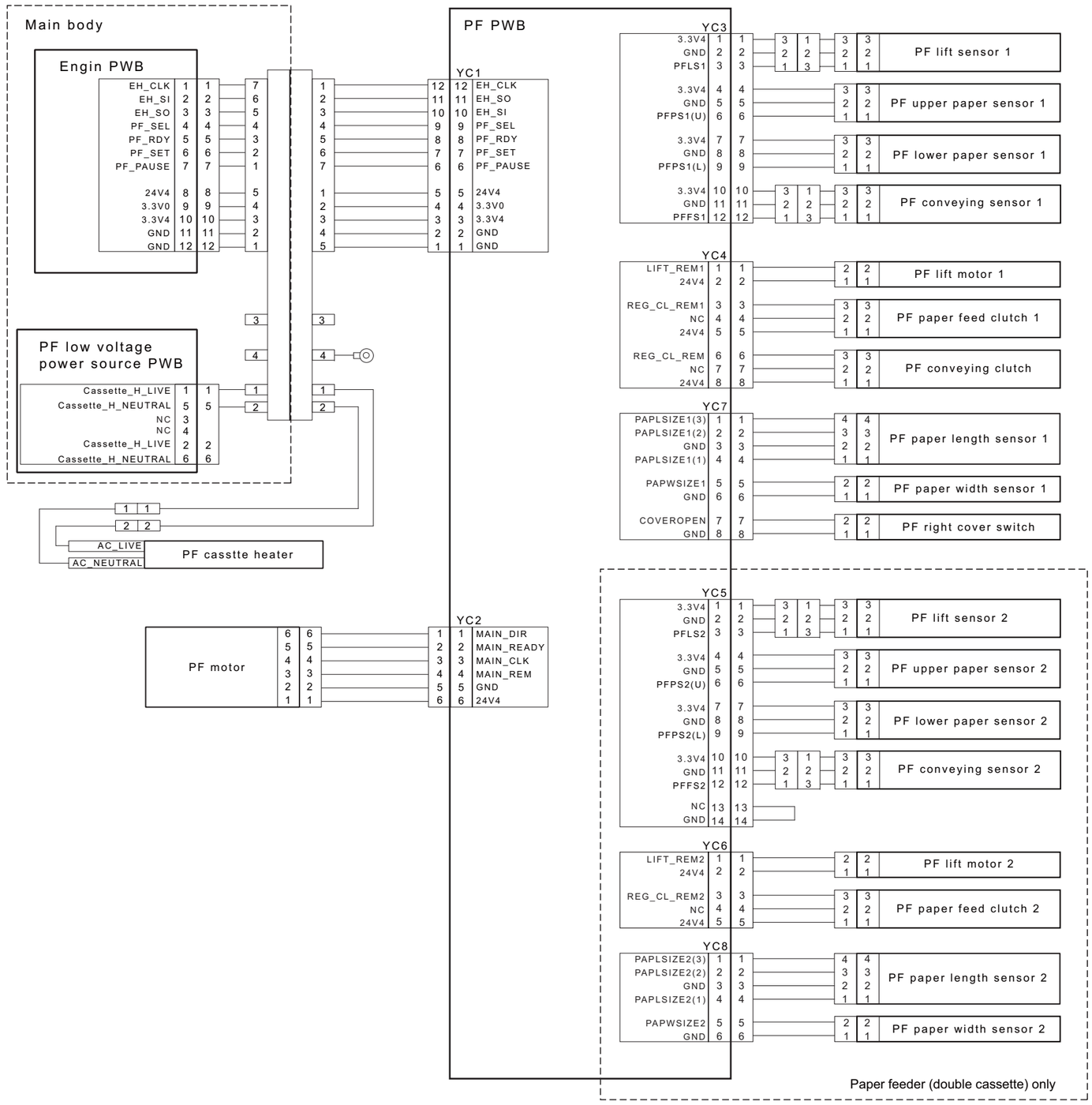


(9) Document Processor

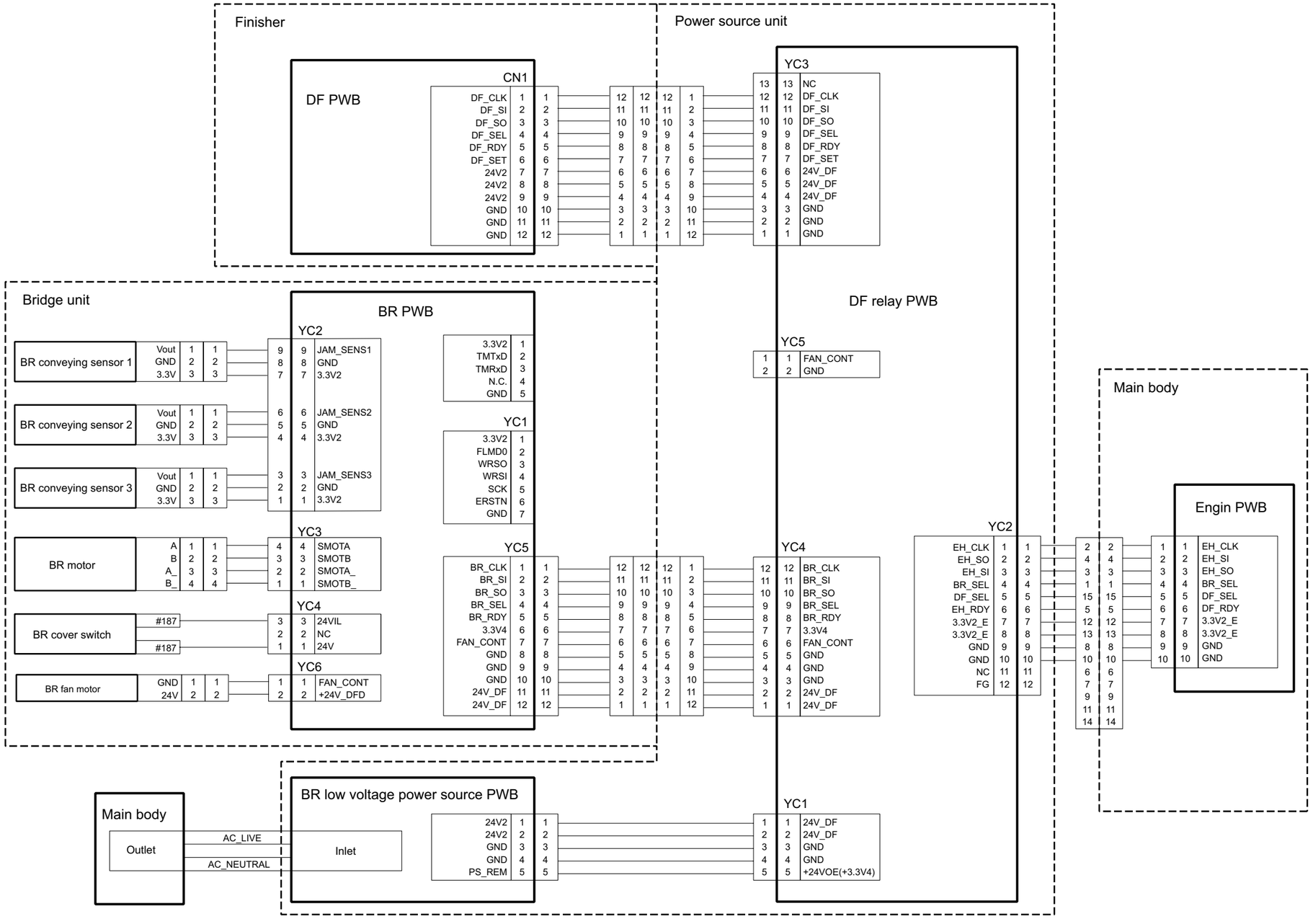


9 - 5 Wiring diagram (Options)

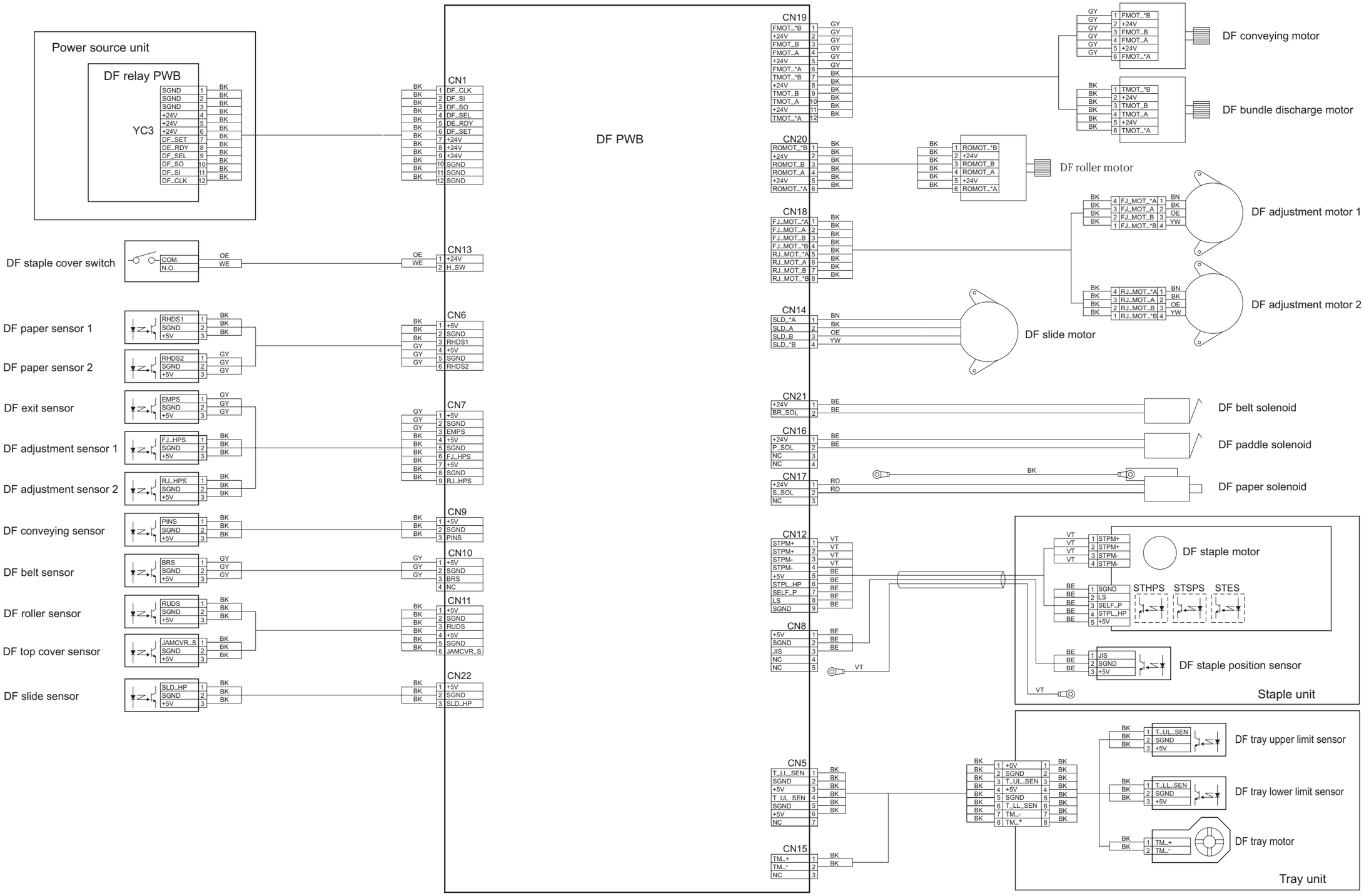
(1) Paper feeder (PF-470/PF-471)



(2) Attachment Kit (AK-470)



(3) 500-sheet Finisher (DF-470)



9 - 6 Installation guide

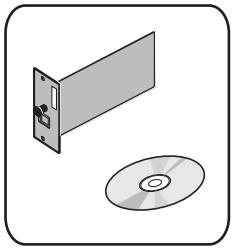
(1) IB-50

IB-50

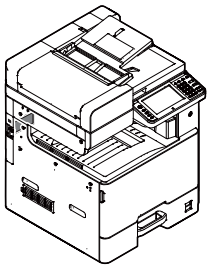
(Network interface)

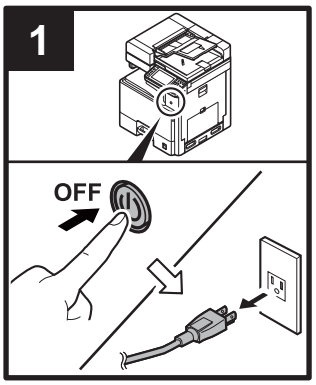
INSTALLATION GUIDE

IB-50

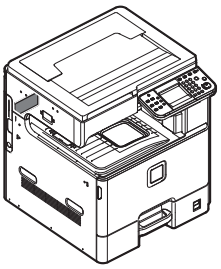


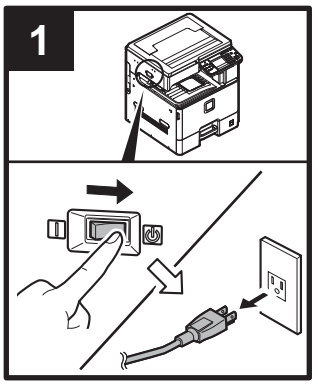
Color
MFP 24/30

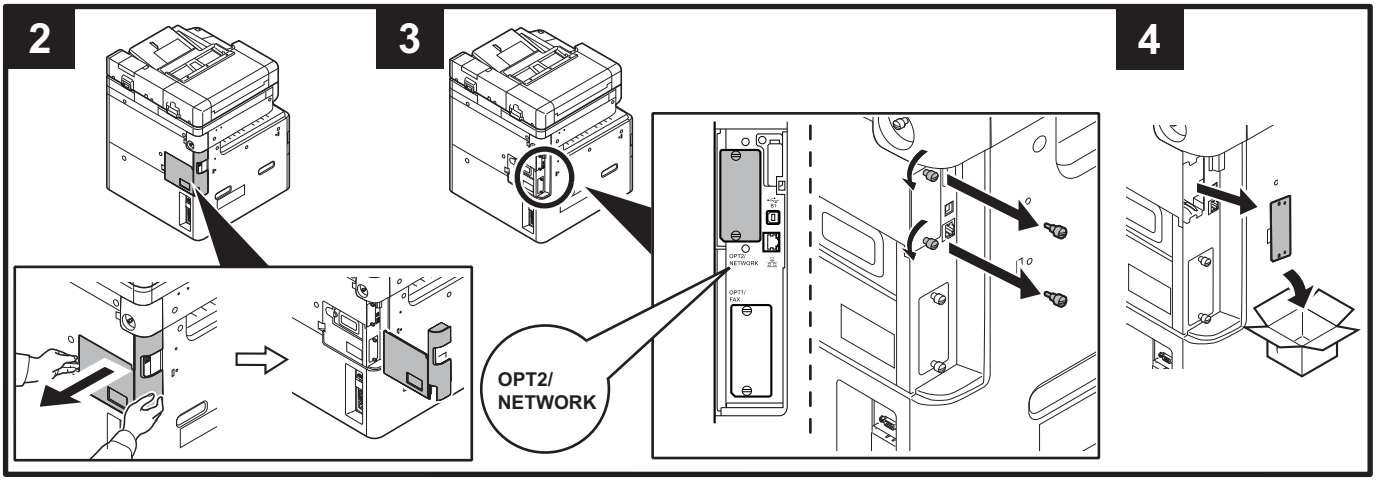


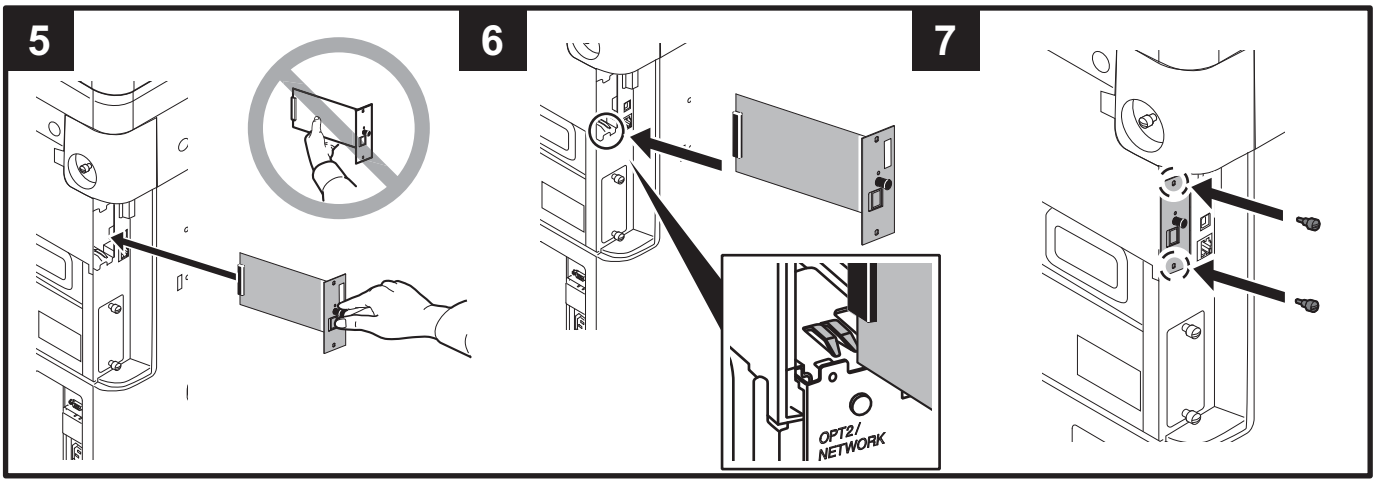


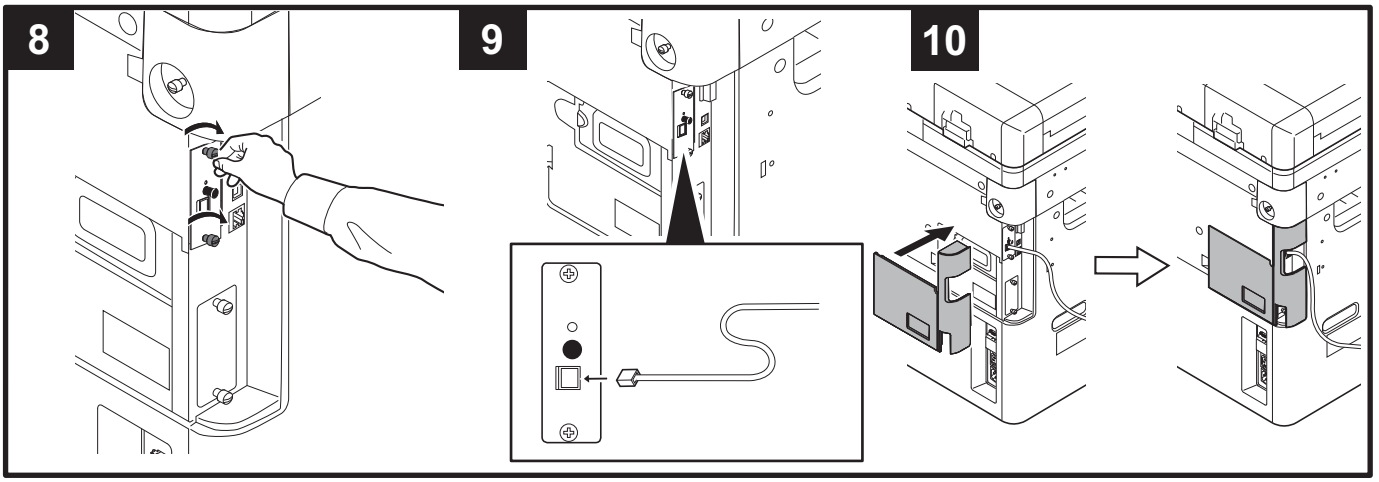
Color
MFP 20/25









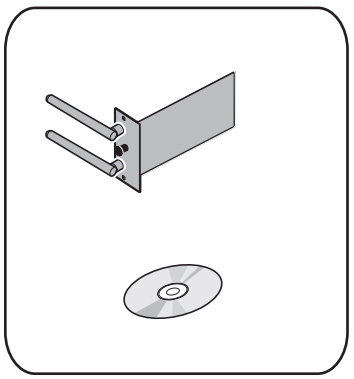


⑵ IB-51

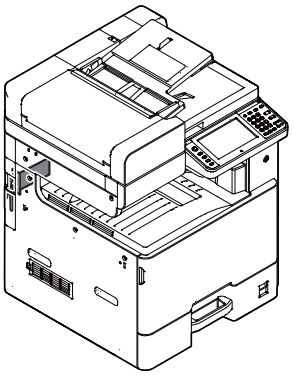
IB-51
(Wireless Interface)

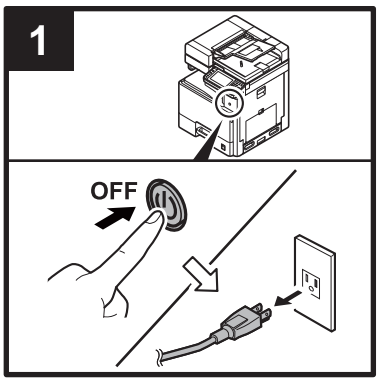
INSTALLATION GUIDE

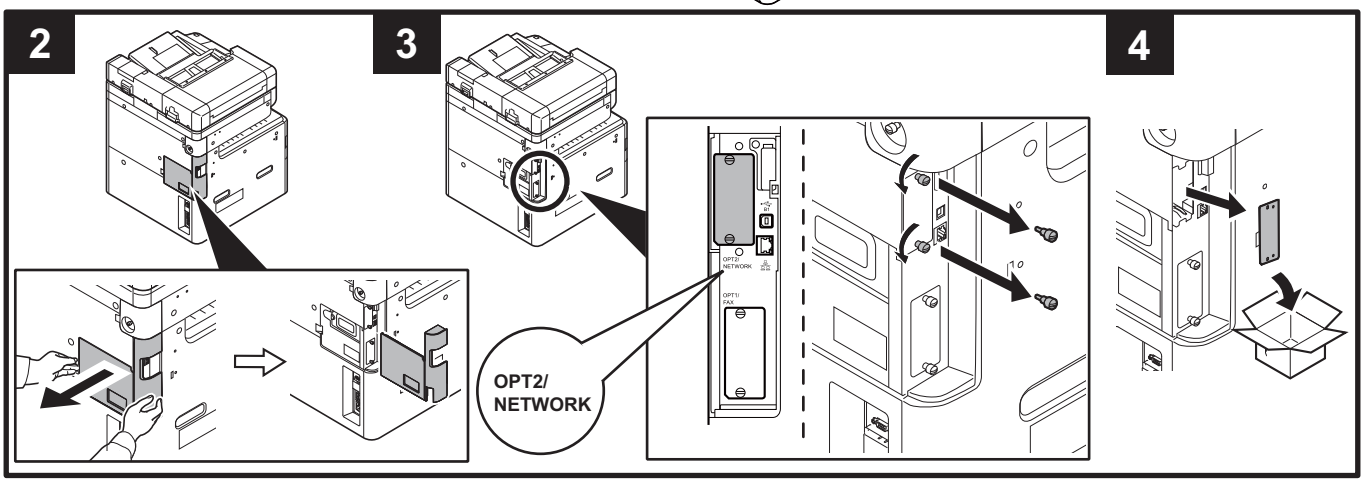
IB-51

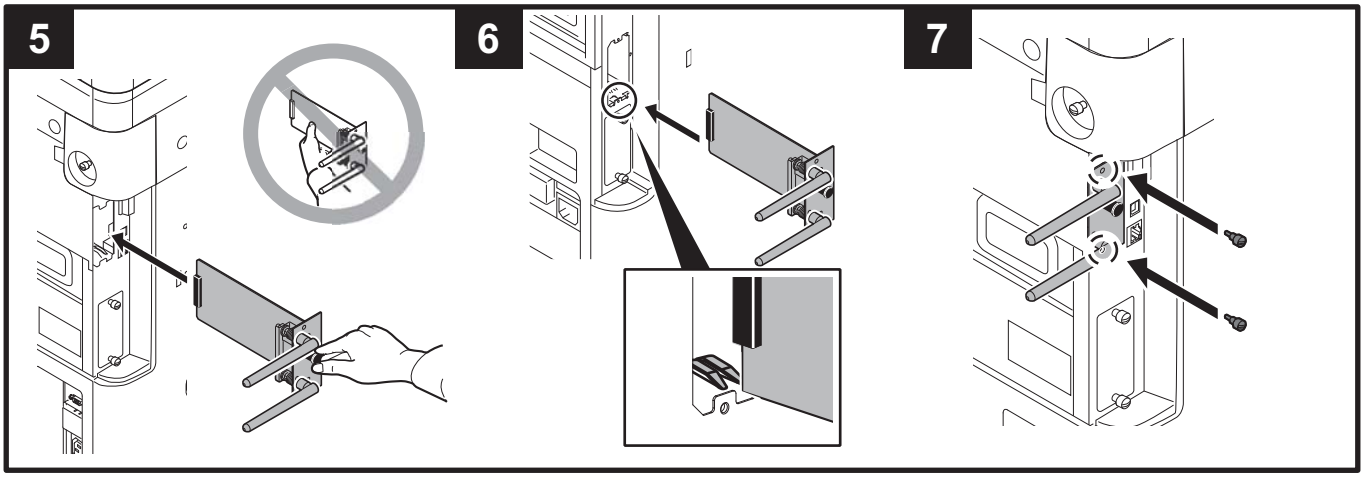


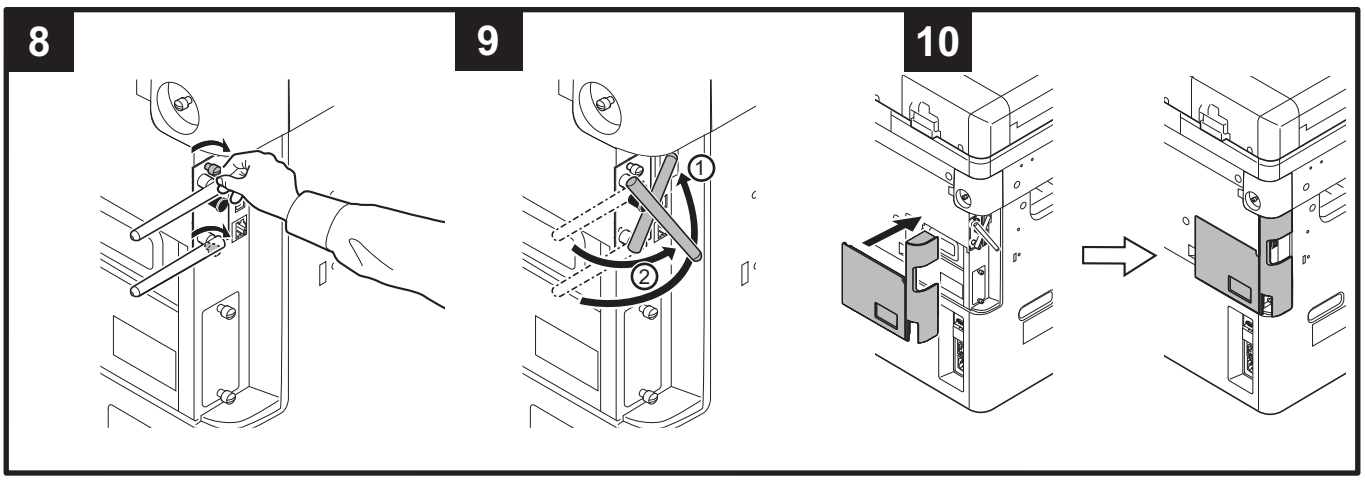
Color
MFP 24/30









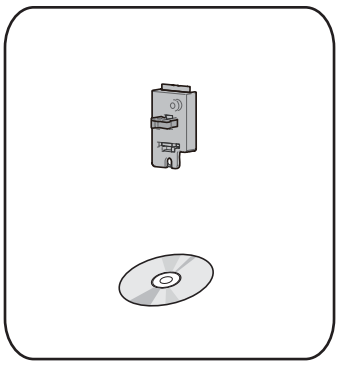


⑶ IB-36

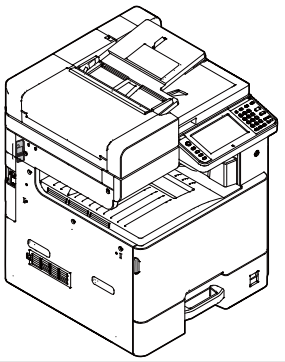
IB-36
(Wireless Interface)

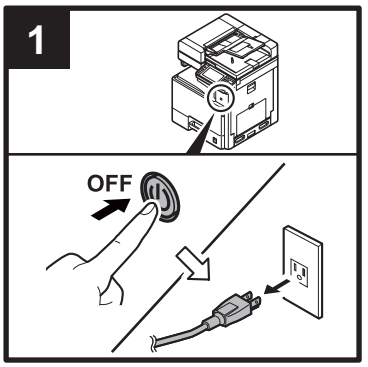
INSTALLATION GUIDE

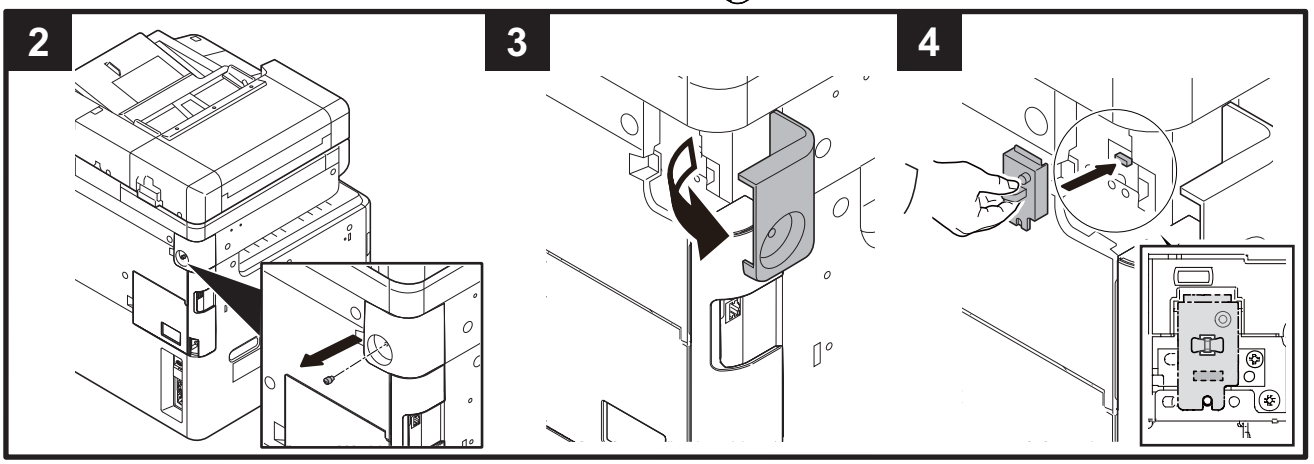
IB-36

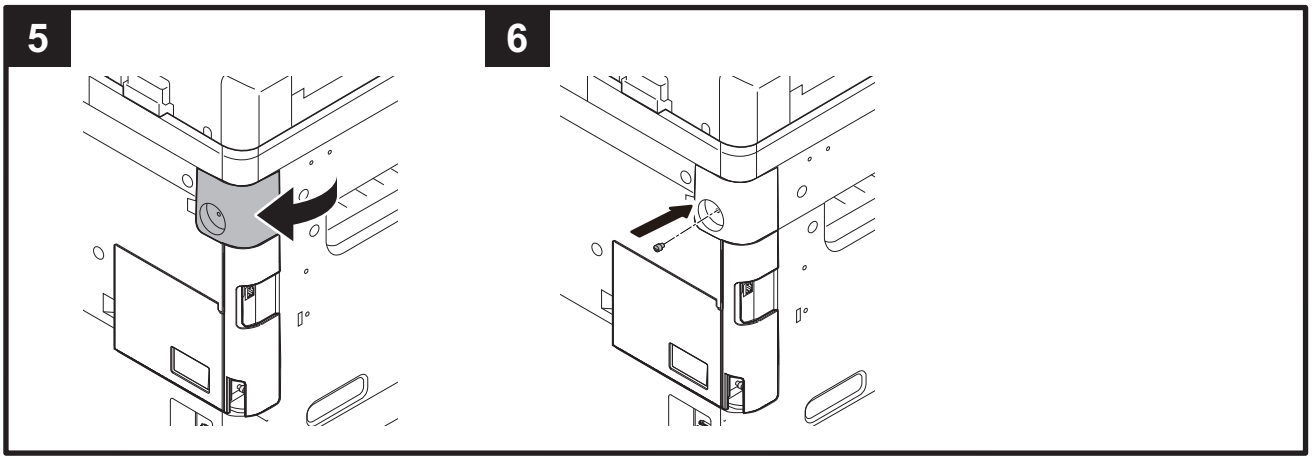


Color
MFP 24/30









⑷ PF-470/PF-471

PF-470/471

(500 sheet×1 Paper feeder)
(500 sheet×2 Paper feeder)

INSTALLATION GUIDE

PF-470/471 PAPER FEEDER

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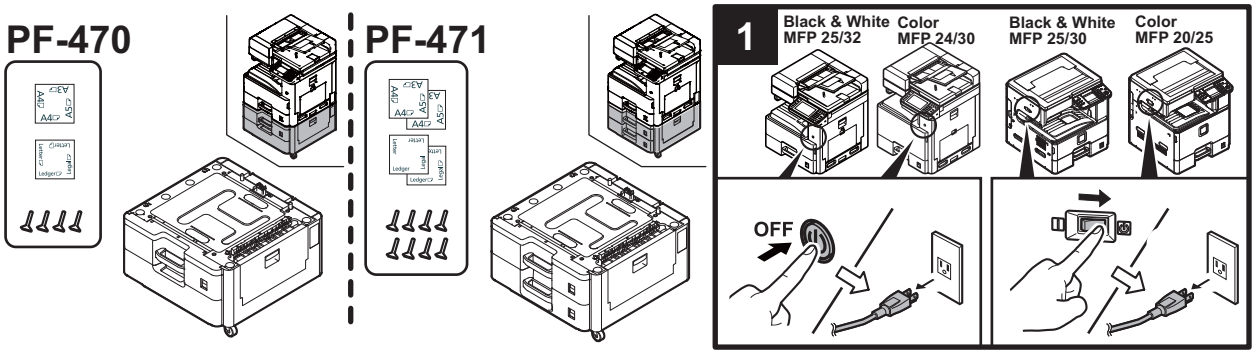

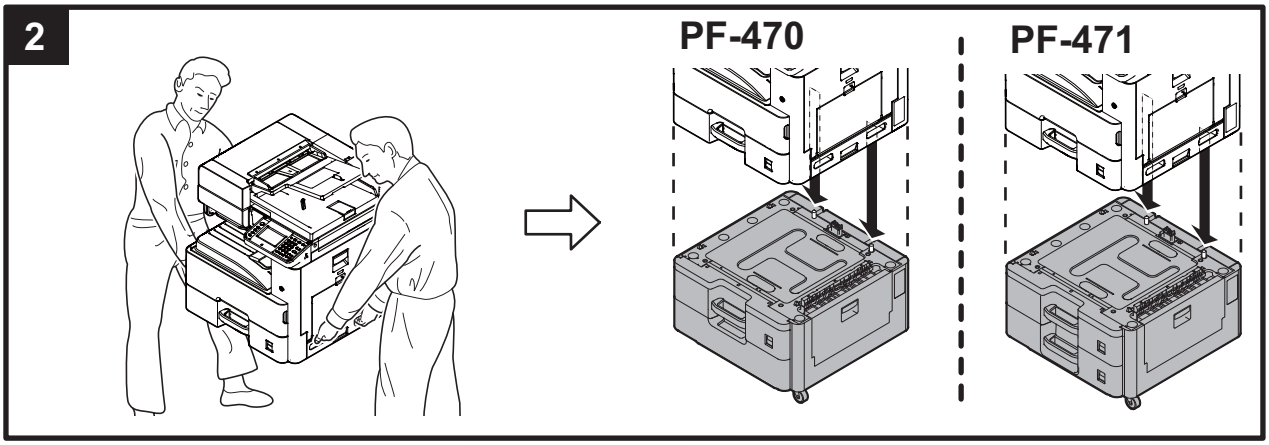

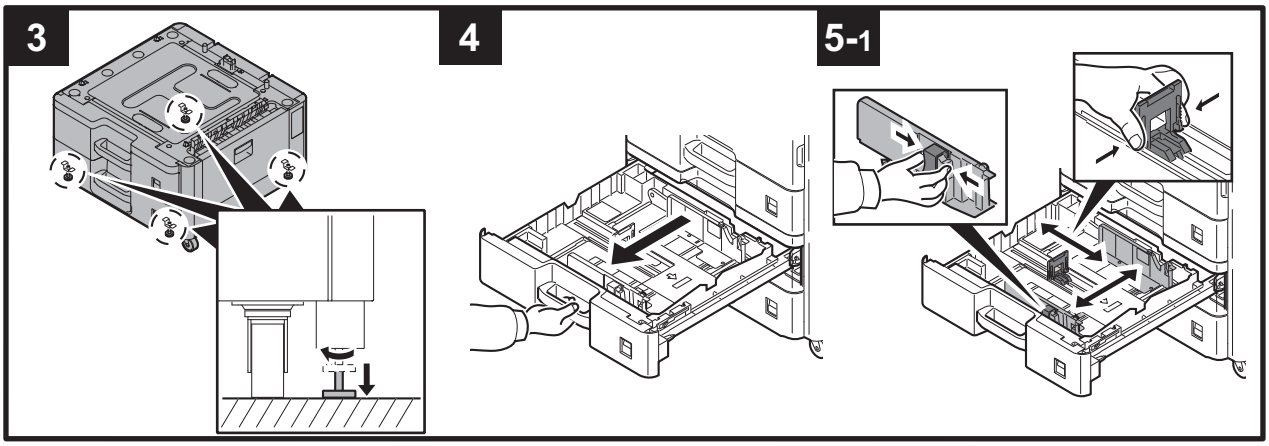

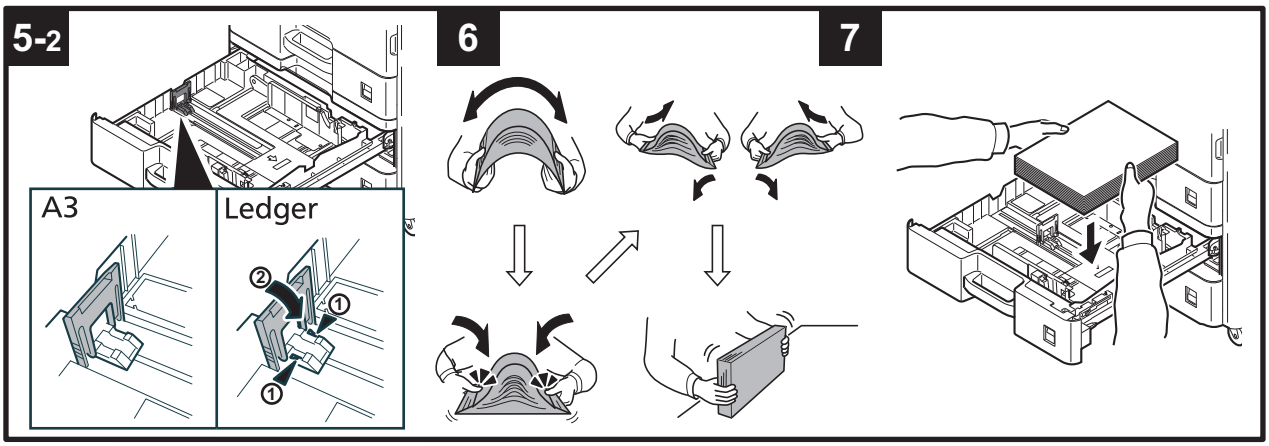

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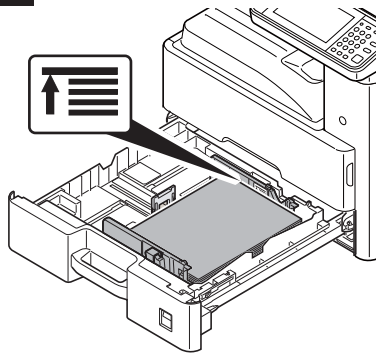

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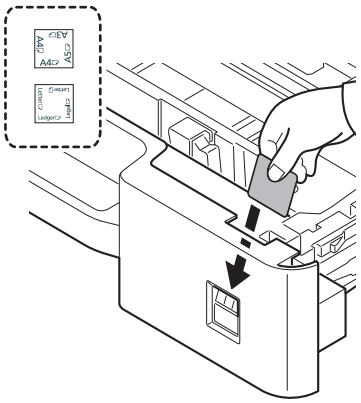

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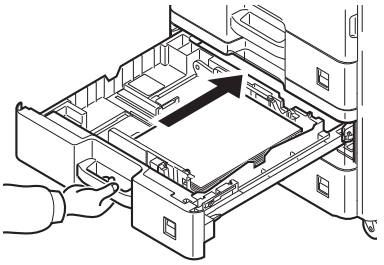


(ENG)

Fix Paper Width Guide

You can fix the paper width guide using the supplied retaining pins.
Follow the steps below as necessary.

(FR)

Fixation du guide de largeur du papier

Vous pouvez fixer le guide de largeur du papier en utilisant les goupilles de fixation fournies.
Suivez les étapes ci-dessous en fonction des besoins.

(ES)

Fijar la guía de anchura del papel

Puede fijar la guía de anchura del papel con los pernos de retén proporcionados.
Siga los pasos siguientes según sea necesario.

(DE)

Papierbreitenführung befestigen

Sie können die Papierbreitenführung mit den gelieferten Haltebolzen befestigen.
Folgen Sie den Schritten unten falls notwendig.

(IT)

Fissare la guida di larghezza carta

Per fissare la guida di larghezza carta, utilizzare i perni di fissaggio forniti.
Eseguire i seguenti punti come necessario.

(CN)

固定纸张宽度导板
您可以使用附带的定位销固定纸张宽度导板。
必要时执行如下步骤。

(TW)

固定紙張寬度導板

您可以使用隨附的定位卡榫固定紙張寬度導板。
如有必要，請執行以下步驟。

(KO)

용지폭 가이드 고정

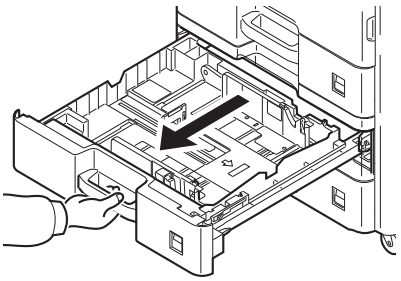
기기와 함께 제공된 핀으로 용지폭 가이드를 고정시킬 수 있습니다.
필요하면 아래의 작업을 하십시오.

(JP)

用紙幅ガイドの固定

用紙幅ガイドは同梱のピンで固定することが可能です。
必要に応じて、以下の作業を行って下さい。

11



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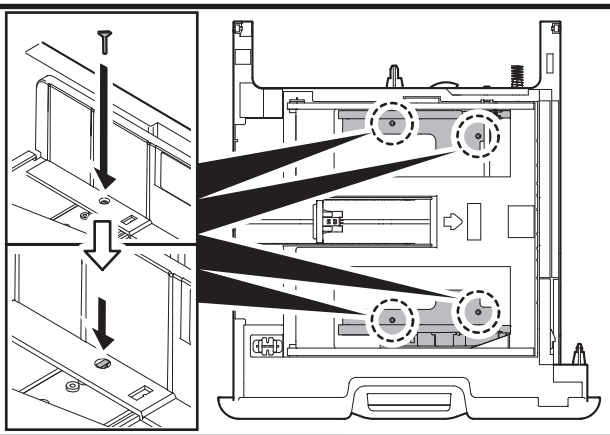

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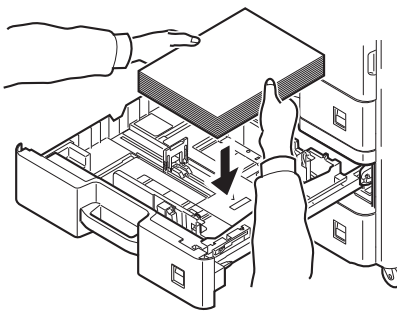

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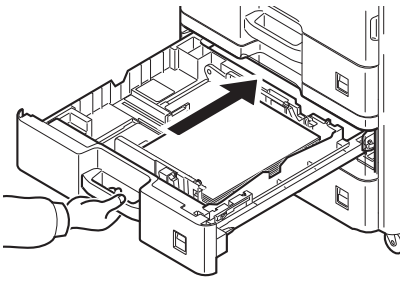


⑸ AK-470/DF-470

AK-470/DF-470

(Conveying Unit)
(500 sheet Finisher)

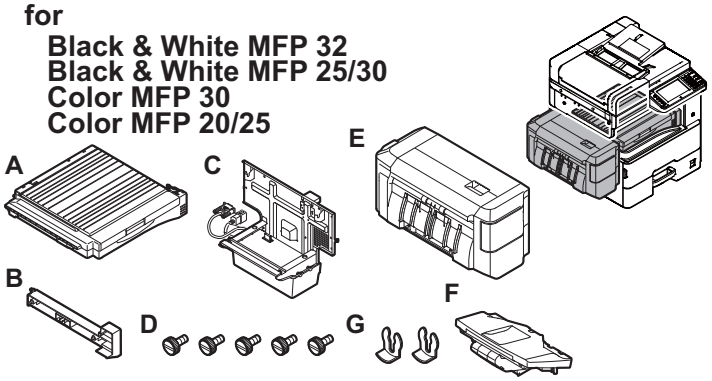
INSTALLATION GUIDE

DF-470 DOCUMENT FINISHER , AK-470 ATTACHMENT KIT

305JS5671003

for

Black & White MFP 32
Black & White MFP 25/30
Color MFP 30
Color MFP 20/25



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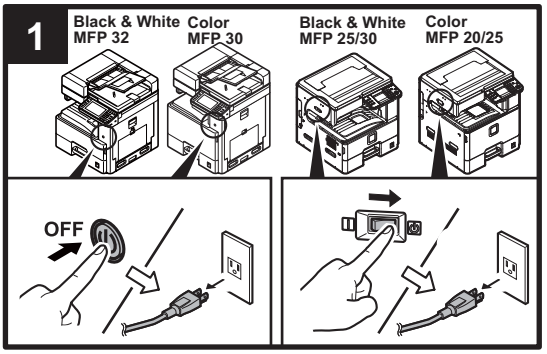

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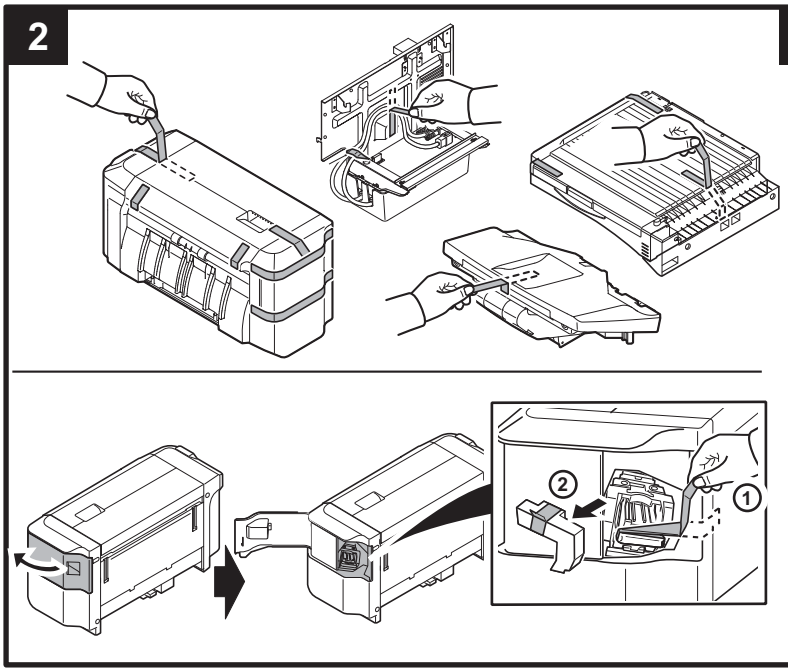

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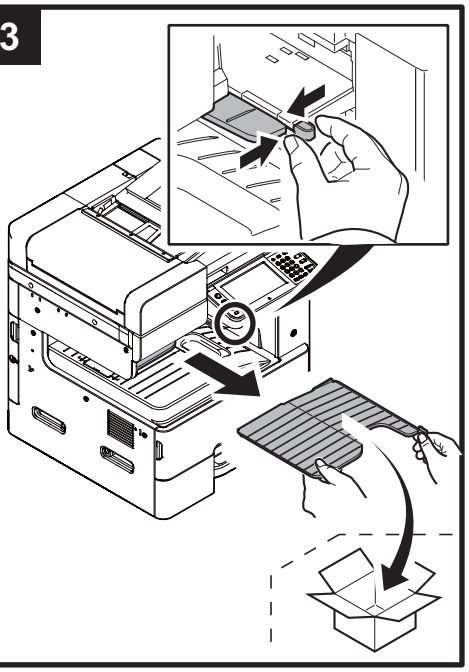
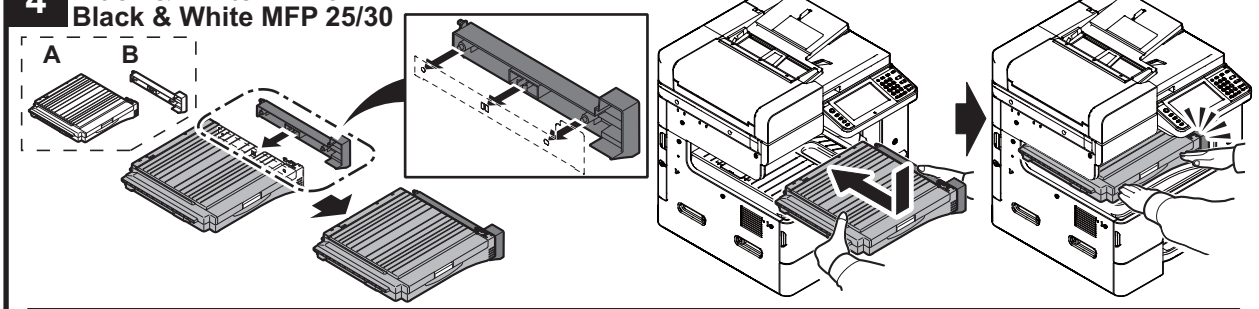
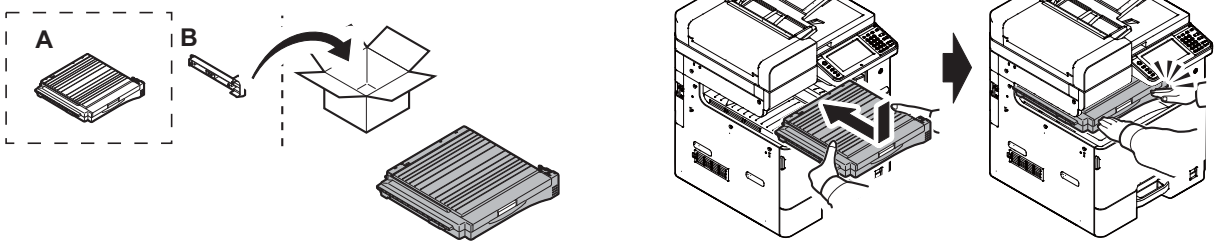


4 Black & White MFP 32 / Black & White MFP 25/30



Color MFP 30
Color MFP 20/25



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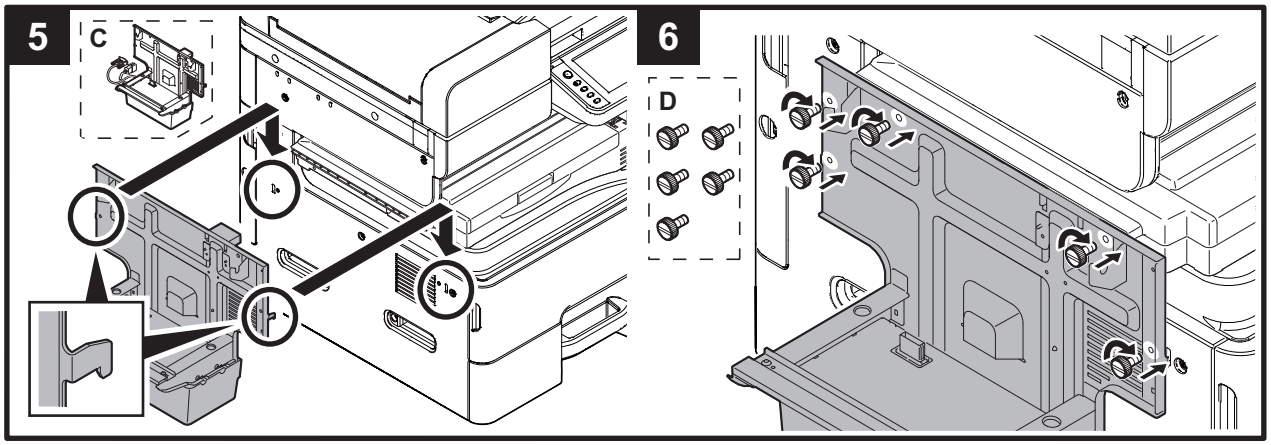
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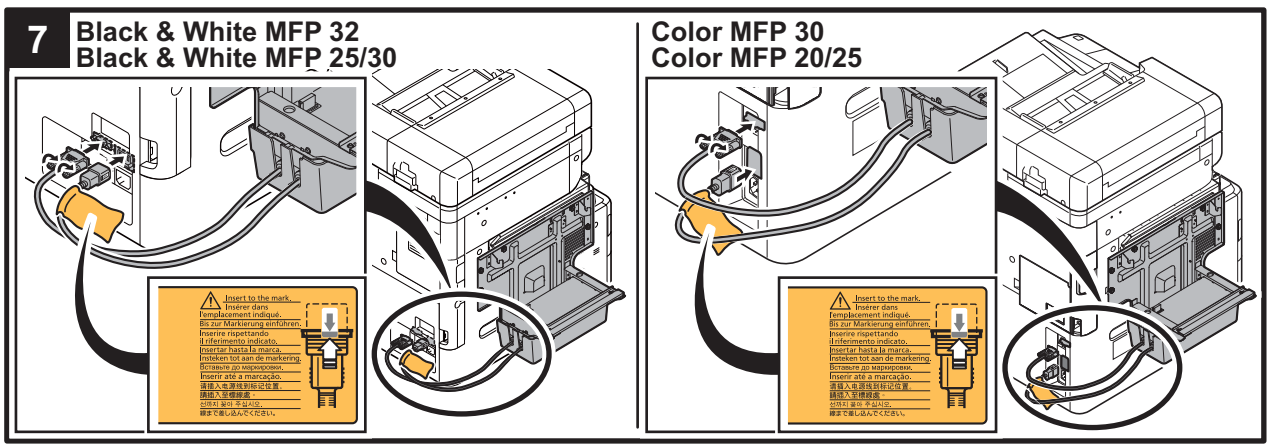
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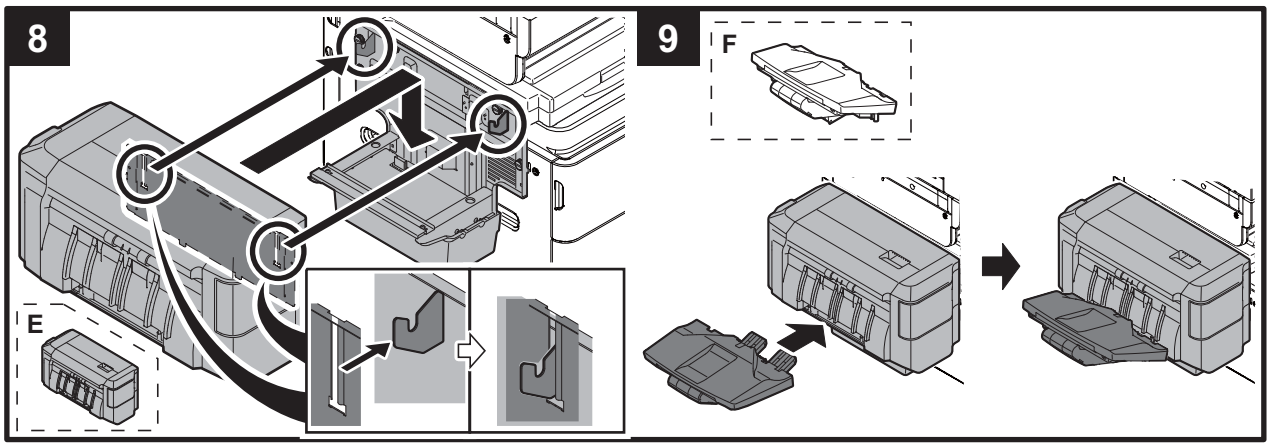
Black & White MFP 32
Black & White MFP 25/30
Color MFP 30
Color MFP 20/25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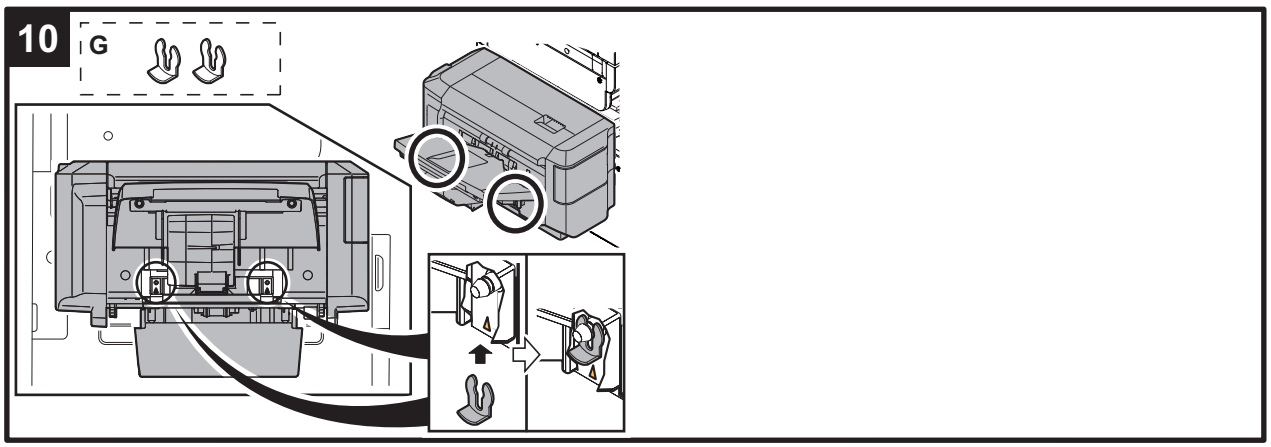
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G

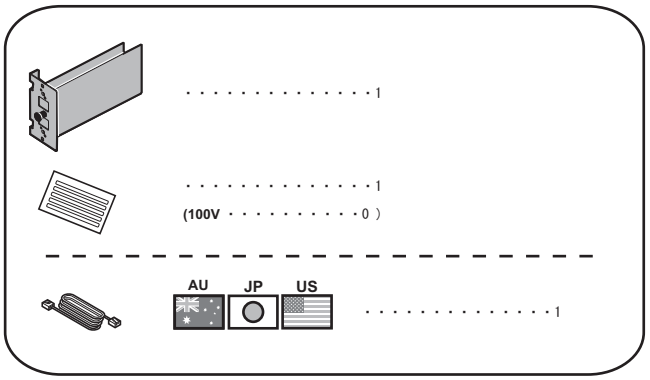
⑹ Fax System 13

Fax System 13

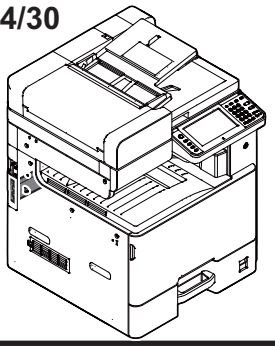
INSTALLATION GUIDE

FAX System 13

303S45613001



Color MFP 24/30



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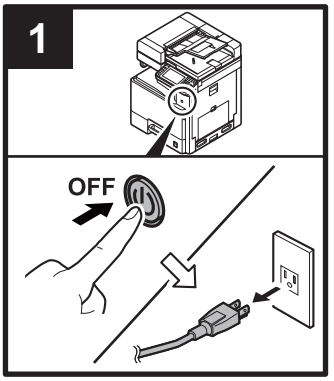

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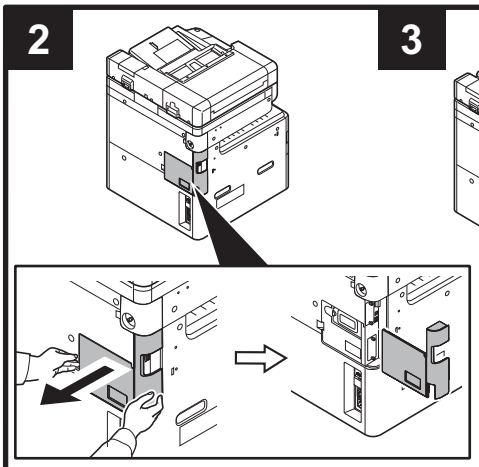

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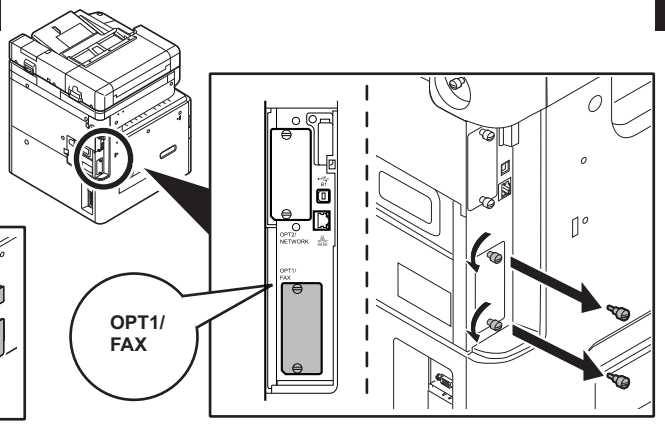

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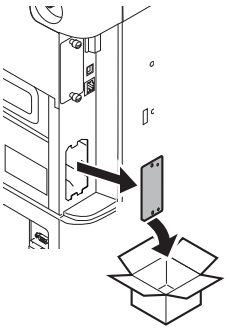

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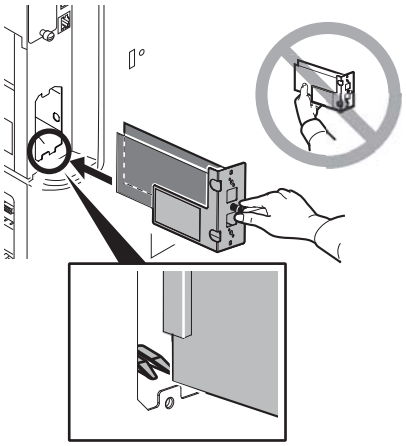

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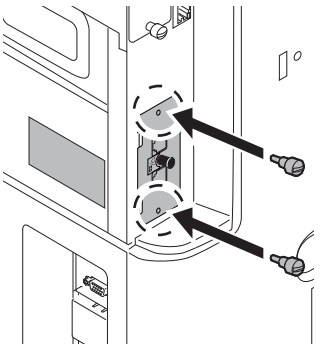

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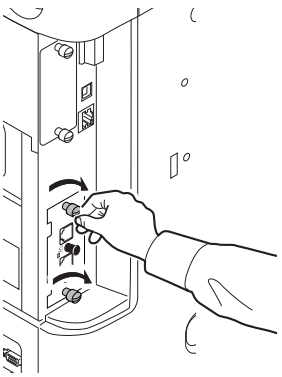

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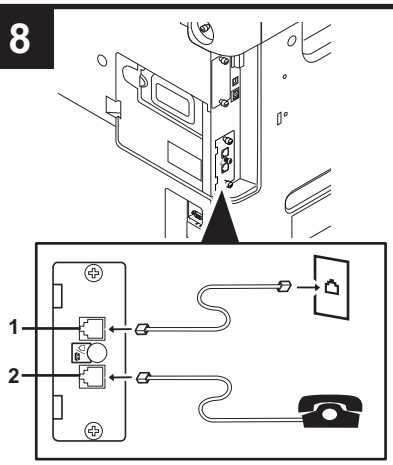


1	LINE connector	Connect the modular cord for the telephone line to this connector.
2	TEL connector	When using a commercially available telephone set, connect the modular cord to this connector.

1	Connecteur LINE	Brancher le cordon pour la ligne téléphonique sur cette prise.
2	Connecteur TEL	Lors de l'utilisation d'un téléphone standard, brancher le cordon téléphonique à cette prise.

1	Conector de LÍNEA	Conecte el cable modular de la línea telefónica a este conector.
2	Conector TEL	Si utiliza un aparato telefónico de los disponibles en el mercado, conecte el cable modular a este conector.

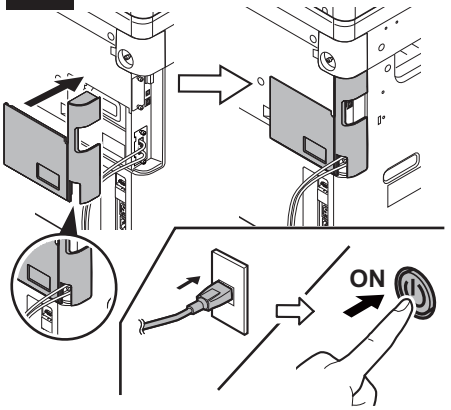
1	Leitungs-anschluss-buchse	Verbinden Sie diesen Anschluss mit der Telefondose.
2	Telefonan-schlussbuchse	Hier kann ein Telefon angeschlossen werden.

1	Connettore LINEA	Collegare a questo connettore il cavo modulare della linea telefonica.
2	Connettore TEL	Se si desidera collegare al sistema un normale telefono, collegarlo a questo connettore.

1	LINHA conector	Conecte o cabo modular para a linha telefônica a este conector.
2	TEL conector	Ao usar um aparelho telefônico disponível comercialmente, conecte o cabo modular a este conector.

1	LINE接続コネクター	電話回線のモジュラーコードを接続してください。
2	TEL接続コネクター	市販の電話機を併用する場合は、ここに接続してください。

9



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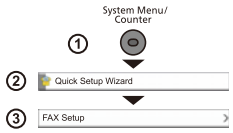
10

FAX Setup Wizard

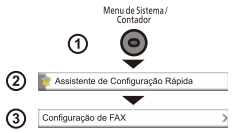
ENG

The machine provides Quick Setup Wizard in System Menu to set the FAX. Follow the instructions on the operation panel.



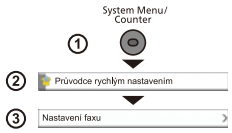
BR

A máquina fornece o Assistente de Configuração Rápida no Menu de Sistema para configurar o FAX. Siga as instruções no painel de operação.



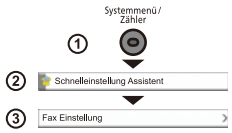
CZ

V systémové nabídce zařízení najdete Průvodce rychlým nastavením, pomocí něhož můžete nastavit FAX. Postupujte podle pokynů na provozním panelu.



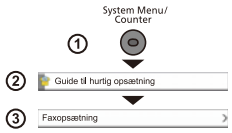
DE

Die Maschine bietet den Schnelleinstieg Wizard im Systemmenü an, um das Fax einzustellen: Folgen Sie den Anweisungen auf dem Bedienfeld.



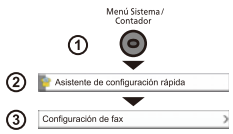
DK

Maskinen indeholder en Guide til hurtig opsætning i System menuen til indstilling af faxen. Følg anvisningerne på betjeningspanelet.



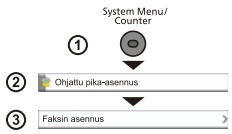
ES

La máquina dispone del Asistente de configuración rápida en el Menú Sistema para configurar el fax. Siga las instrucciones del panel de controles.



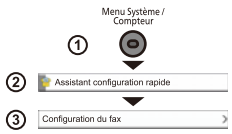
FI

Laitteen Järjestelmä-valikossa on ohjattu pika-asennustoiminto faksin asetusta varten. Noudata käyttöpaneelin ohjeita.



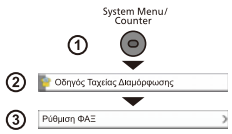
FR

L'appareil prévoit un Assistant de configuration rapide dans le menu système pour régler les paramètres du fax. Suivez les instructions sur le panneau de commande.



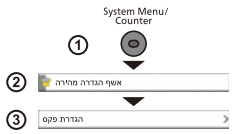
GR

Το μηχάνημα διαθέτει έναν Οδηγό Γρήγορης Εγκατάστασης στο Μενού Συστήματος για τη ρύθμιση του ΦΑΞ. Ακολουθήστε τις οδηγίες που εμφανίζονται στον πίνακα λειτουργίας.



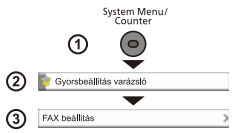
HEB

המכשיר מספק אשף הגדרה מהירה בתפריט המערכת, להגדרת הפקס.
פעל לפי ההוראות המופיעות בלוח המפעיל.



HU

A rendszermenüben a gyorstelepítő varázsló lehetővé teszi a FAX beállítását. Kövesse a kezelőpulton megjelenő utasításokat.

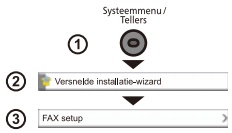


IT

È possibile utilizzare la procedura guidata di installazione rapida reperibile nel Menu Sistema per la configurazione del modulo FAX. Attenersi alle istruzioni visualizzate sul pannello comandi.

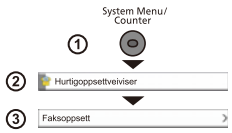
NL

In het Systeemmenu van het apparaat bevindt zich de wizard Snel installeren om de fax in te stellen. Volg de instructies op het bedieningspaneel van de fax.



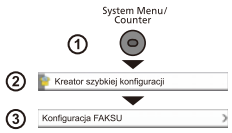
NO

Maskinen har en Hurtigoppsettveiviser i Systemmenyen til innstilling av faksen. Følg veiledningen på betjeningspanelet.



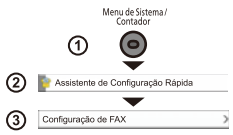
PL

W menu systemowym urządzenia dostępny jest Przewodnik szybkiej instalacj, który pozwoli ustawić funkcję FAKSU. Wykonuj instrukcje z panelu operacyjnego.



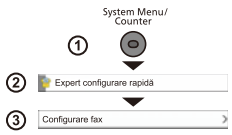
PT

A máquina proporciona o Assistente de Configuração Rápida no Menu do Sistema para definir o FAX. Siga as instruções no painel de funcionamento.



RO

Echipamentul are un expert de configurare rapidă în meniul Sistem pentru configurarea faxului.Urmați instrucțiunile din panoul de utilizare.

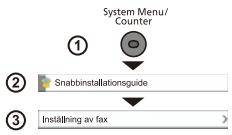


RU

Аппарат позволяет запустить мастер быстрой установки из системного меню для настройки факса. Выполните инструкции на панели управления.

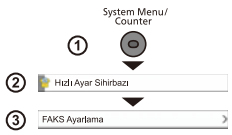
SV

Maskinen har en snabbstartguide i systemmenyn för att ställa in faxen: Följ instruktionerna som anges på kontrollpanelen.



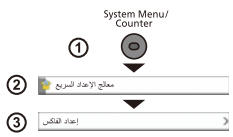
TR

Cihaz FAKS ayarlamak için Sistem Menüsünde Hızlı Kurulum Sihirbazı sunar. İşletim panosundaki talimatları izleyin.



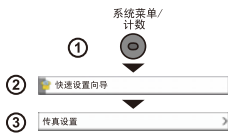
ARA

يوفر الجهاز معالج الإعداد السريع في قائمة النظام لإعداد الفاكس.
اتبع التعليمات الموجودة على لوحة التشغيل.



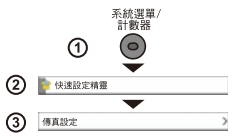
CN

可通过机器系统菜单中的快速设置向导设置传真。请遵循操作面板上的指导说明。



TW

可透過系統選單中的快速設定精靈進行傳真設定。請依照操作面板上的指示說明。

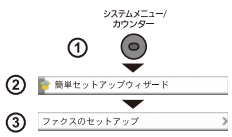


KO

기기의 시스템 메뉴에서 팩스를 설정할 수 있도록 빠른 설정 마법사를 제공합니다.조작 패널에 표시된 지침을 따르십시오.

JP

本機は、システムメニューに簡単セットアップウィザードを搭載しております。画面にしたがってファクスを設定してください。



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