

Digital Copier

d-Copia 2500MF

d-Copia 3000MF

SERVICE MANUAL

Code Y108620-5

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Italy

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CAUTION

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

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

ATTENTION

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

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

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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.



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



2.Precautions for Maintenance

WARNING

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

CAUTION

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

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



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



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



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



• Remove toner completely from electronic components.



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



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



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



• Handle greases and solvents with care by following the instructions below:



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

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



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



3.Miscellaneous

WARNING

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



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1-1-1 Specifications

Machine

Type	Desktop
Printing system	Indirect electrostatic system
Originals.....	Sheets, books and three-dimensional objects
	Maximum size: A3/Ledger
Original feed system	Fixed
Paper weight.....	Cassette: 60 to 105 g/m ² (Duplex:60 to 80 g/m ²)
	MP tray : 45 to 200 g/m ²
Paper type	Cassette: Plain, Preprinted, Bond, Recycled, Thin paper, Letterhead, Color, Prepunched, High quality and Custom
	MP tray : Plain, Transparency, Preprinted, Labels, Bond, Recycled, Thin paper, Letterhead, Color, Prepunched, Envelope, Cardstock, Thick paper, High quality and Custom
Paper sizes	Cassette: Ledger, Legal, Oficio II, 8.5 x 13.5", Letter, LetterR, StatementR, A3, B4, A4, A4R, B5, B5R, A5R, Folio, 8K, 16K, 16KR
	MP tray : Ledger, Legal, Oficio II, 8.5 x 13.5", Letter, LetterR, Executive, StatementR, A3, B4, A4, A4R, B5, B5(ISO), B5R, A5R, B6R, A6R, Oufuku Hagaki, Hagaki, Envelope DL, Envelope C5, Envelope C4, Comm.#10, Comm.#9, Comm.#6-3/4, Monarch, Youkei 2, Youkei 4, Folio, 8K, 16K, 16KR
Magnification ratios.....	Manual mode: 25 to 400%, 1% increments
	Auto mode: Preset Zoom
Print speed.....	25 ppm model
	A3/Ledger: 12.5 sheets/min.
	B4/Legal: 12.5 sheets/min.
	A4/Letter: 25 sheets/min.
	A4R/LetterR: 17.5 sheets/min.
	B5: 25 sheets/min.
	B5R: 20 sheets/min.
	A5R: 14 sheets/min.
	30 ppm model
	A3/Ledger: 15 sheets/min.
	B4/Legal: 15 sheets/min.
	A4/Letter: 30 sheets/min.
	A4R/LetterR: 22 sheets/min.
	B5: 30 sheets/min.
	B5R: 20 sheets/min.
	A5R: 14 sheets/min.
First copy time	4.7 s or less
Warm-up time	29 s (room temperature 22°C/71.6°F, 60% RH)
	Recovery from low power mode: 10 s (room temperature 22°C/71.6°F, 60% RH)
	Recovery from sleep mode: 15 s (room temperature 22°C/71.6°F, 60% RH)
Paper feed system.....	Automatic feed
	Capacity:
	Cassette: 500 sheets (80 g/m ²)
	Manual feed
	Capacity:
	MP tray : 200 sheets (80 g/m ²)
Paper eject system	Output tray: 250 sheets (80 g/m ²)
	150 sheets (80 g/m ² , with job separator)
	100 sheets (80 g/m ² , with built-in finisher)
Multiple copying	1 to 999 sheets
Light source	Inert gas lamp
Scanning system	Flat bed scanning by CCD image sensor
Photoconductor.....	a-Si (drum diameter 30 mm)
Recording system	Semiconductor laser
Charging system.....	Single positive corona charging
Developing system	Dry, reverse developing (single component system)
	Developer: 1-component, magnetism toner
	Toner replenishing: automatic from a toner container
Transfer system	Transfer roller

Separation system	Separation electrode
Cleaning system	Cleaning blade and roller
Charge erasing system	Exposure by cleaning lamp
Fusing system	Heat roller
	Heat source: halogen heaters
	Abnormally high temperature protection devices: thermostats
Main memory	Standard 512 MB/Maximum 1024 MB
Image storage memory	Standard 80 GB
Resolution	600 x 600 dpi
Operating environment	Temperature: 10 to 32.5°C/50 to 90.5°F
	Humidity: 15 to 80% RH
Dimensions	570 (W) x 620 (D) x 767.2 (H) mm (main unit only)
	22 7/16" (W) x 24 13/16" (D) x 30 3/16" (H)
Weight	75 kg/165 lbs
Space required	725 (W) x 620 (D) mm (using MP tray)
	28 9/16" (W) x 24 13/16" (D)
Power source	120 V AC, 60 Hz, 11.4 A
	220 to 240 V AC, 50 Hz, 5.7 A
Power consumption	1370 W
Options	Document processor, paper feeder, document finisher, built-in finisher, job separator, key counter, fax kit, data backup kit security kit, PDF upgrade kit and extension memory

Printer functions

Printing speed	Same as copying speed
First print time	4.7 s or less
Resolution	300 dpi/600 dpi/Fast 1200 mode
Applicable OS	Microsoft Windows 95/98/Me/2000/XP
	Microsoft Windows NT4.0
	Microsoft Windows Server 2003
	Microsoft Windows Vista
	Apple Macintosh OS 8.x/9.x/X
Interface	Hi-speed USB: 1
	Network interface: 1 (10BASE-T/100BASE-TX)
	Full-speed USB: 1 (USB flash memory slot)
Page description language	PRESCRIBE

Scanner functions

Applicable OS	Microsoft Windows 98 (second edition)
	Microsoft Windows 2000 (service pack 2 or later)
	Microsoft Windows Me
	Microsoft Windows XP
	Microsoft Windows Vista
Operating environment	CPU: 600 MHz or more
	RAM: 128 MB or more
Resolution	600 dpi, 400 dpi, 300 dpi, 200 dpi, 200 x 100 dpi, 200 x 400 dpi
File format	TIFF (MMR/JPG compression), JPEG, PDF (MMR/JPG compression), PDF (high compression)
Scanning speed	A4/600 dpi/Text + Photo mode
	Single-sided: monochrome 30 sheets/min, Color 15 sheets/min
	Double-sided: monochrome 15 sheets/min, Color 10 sheets/min
Interface	Ethernet: 10BASE-T/100BASE-TX
Network protocol	TCP/IP
Transmission protocol	PC transmission: SMB Scan to SMB, FTP Scan to FTP
	E-mail transmission: SMTP Scan to E-mail
	TWAIN scan: TWAIN source/WIA (only for Windows Vista)

NOTE: These specifications are subject to change without notice.

1-1-2 Parts names

(1) Machine

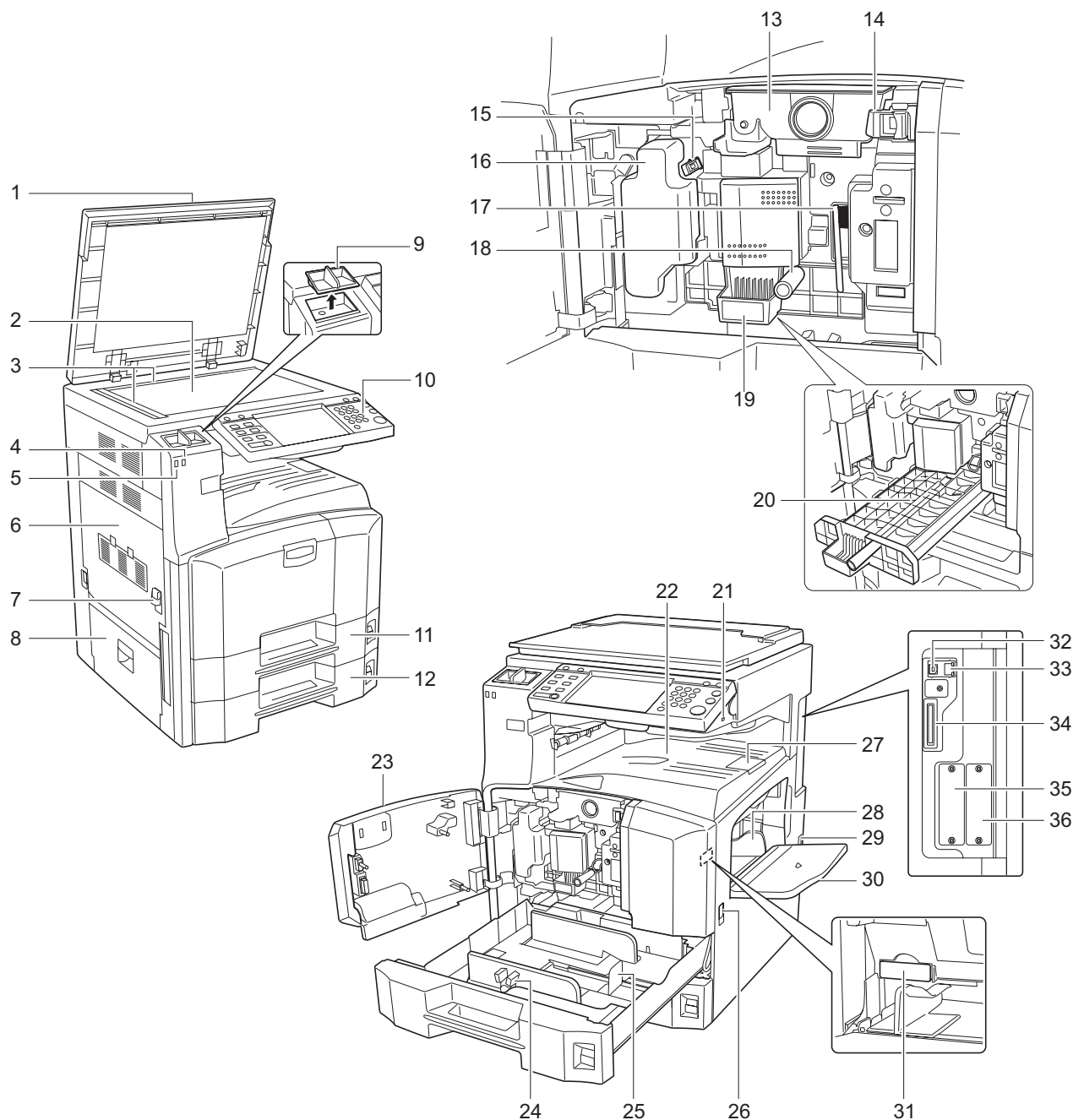
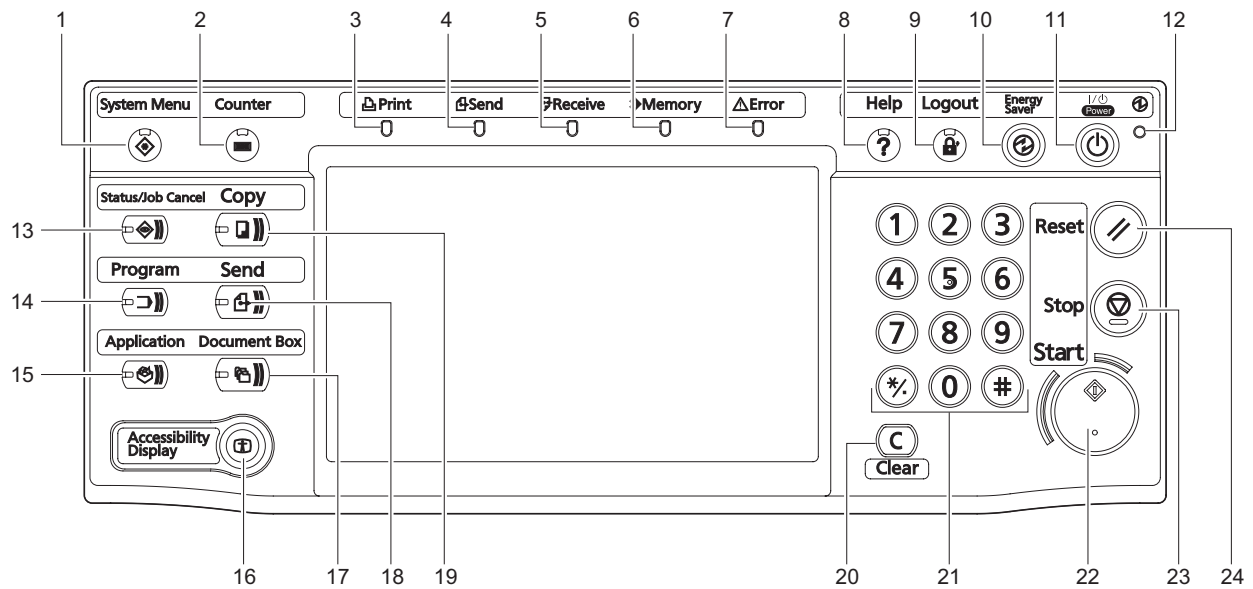


Figure 1-1-1

- | | | |
|-----------------------------------|--------------------------------|----------------------------------|
| 1. Original cover (Option) | 13. Toner container | 25. Paper length guide |
| 2. Platen | 14. Toner container stopper | 26. Carrying handles |
| 3. Original size indicator plates | 15. Cleaner rod | 27. Eject stopper |
| 4. Reception indicator | 16. Waste toner box | 28. Paper width guides |
| 5. Error indicator | 17. Cleaning brush | 29. Main power switch |
| 6. Left cover 1 | 18. Knob (A1) | 30. MP tray |
| 7. Left cover 1 Lever | 19. Paper feed unit (A2) | 31. Memory card cover |
| 8. Left cover 2 | 20. Paper feed unit cover (A3) | 32. USB interface connector |
| 9. Clip holder | 21. USB memory slot | 33. Network interface connector |
| 10. Operation panel | 22. Top tray | 34. Memory card slot |
| 11. Cassette 1 | 23. Front cover | 35. Option interface slot (OPT1) |
| 12. Cassette 2 | 24. Paper width adjusting tab | 36. Option interface slot (OPT2) |

(2) Operation panel**Figure 1-1-2**

- | | |
|--------------------------------|-------------------------------------|
| 1. System menu key/indicator | 13. Status/Job cancel key/indicator |
| 2. Counter key/indicator | 14. Program key/indicator |
| 3. Print indicator | 15. Application key/indicator |
| 4. Send indicator | 16. Accessibility key/indicator |
| 5. Receive indicator | 17. Document box key/indicator |
| 6. Memory indicator | 18. Send key/indicator |
| 7. Error indicator | 19. Copy key/indicator |
| 8. Help key/indicator | 20. Clear key |
| 9. Logout key/indicator | 21. Numeric keys |
| 10. Energy saver key/indicator | 22. Start key/indicator |
| 11. Power key/indicator | 23. Stop key |
| 12. Main power indicator | 24. Reset key |

1-1-3 Machine cross section

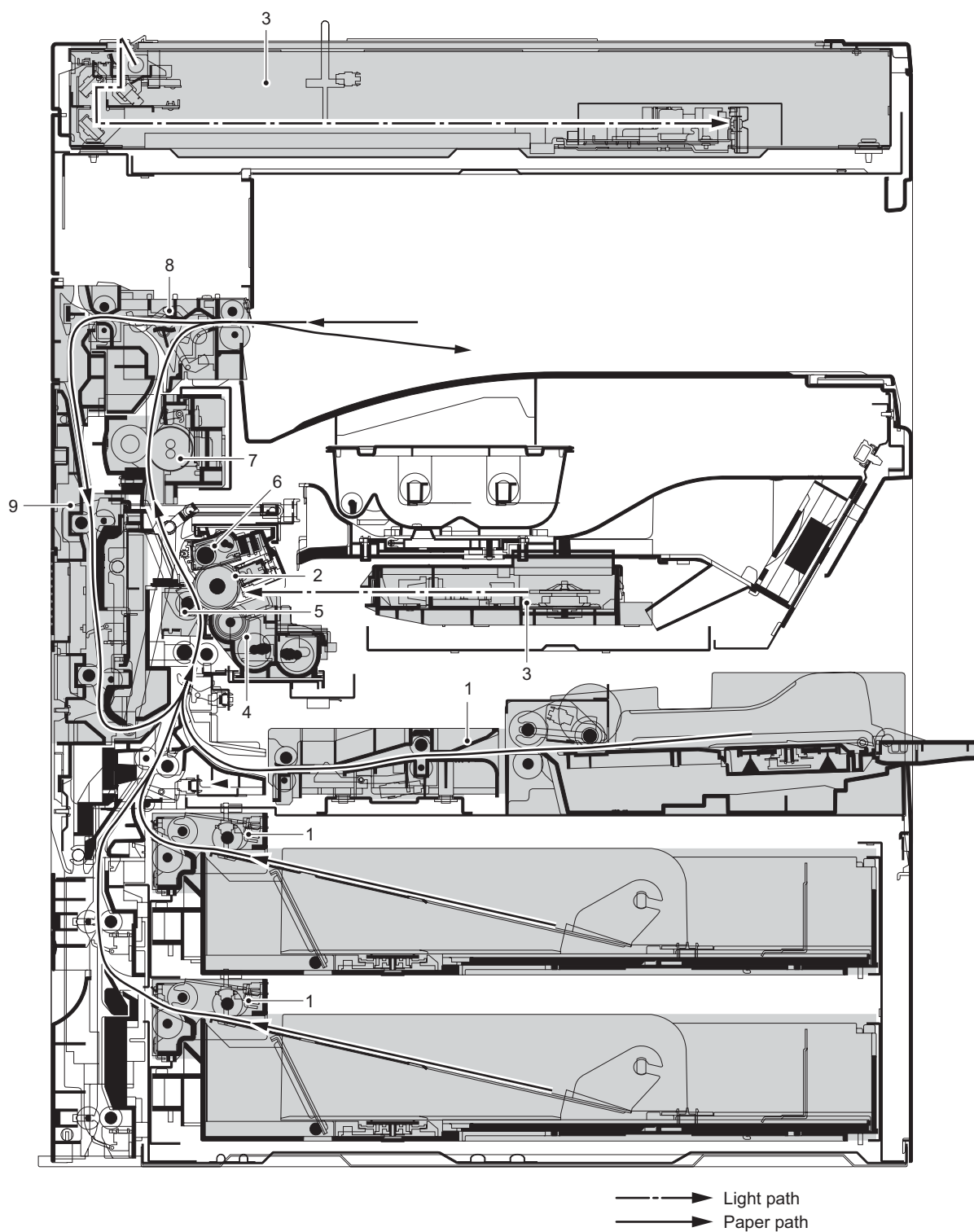


Figure 1-1-3 Machine cross section

- | | |
|------------------------------------|--|
| 1. Paper feed section | 6. Cleaning and charge erasing section |
| 2. Main charging section | 7. Fuser section |
| 3. Optical section | 8. Eject and switchback section |
| 4. Developing section | 9. Duplex section |
| 5. Transfer and separation section | |

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1-2-1 Installation environment

1. Temperature: 10 to 32.5°C/50 to 90.5°F
2. Humidity: 15 to 80% RH
3. Power supply: 120 V AC, 11.2 A
220 to 240 V AC, 6.0 A
4. Power source frequency: 50 Hz $\pm$ 0.3%/60 Hz $\pm$ 0.3%
5. Installation location

Avoid direct sunlight or bright lighting. Ensure that the photoconductor will not be exposed to direct sunlight or other strong light when removing paper jams.

Avoid extremes of temperature and humidity, abrupt ambient temperature changes, and hot or cold air directed onto the machine.

Avoid dust and vibration.

Choose a surface capable of supporting the weight of the machine.

Place the machine on a level surface (maximum allowance inclination: 1°).

Avoid air-borne substances that may adversely affect the machine or degrade the photoconductor, such as mercury, acidic or alkaline vapors, inorganic gasses, NOx, SOx gases and chlorine-based organic solvents.

Select a room with good ventilation.
6. Allow sufficient access for proper operation and maintenance of the machine.
Machine front: 1000 mm/39 3/8" Machine rear: 100 mm/3 15/16"
Machine right: 300 mm/11 13/16" Machine left: 400 mm/15 3/4"

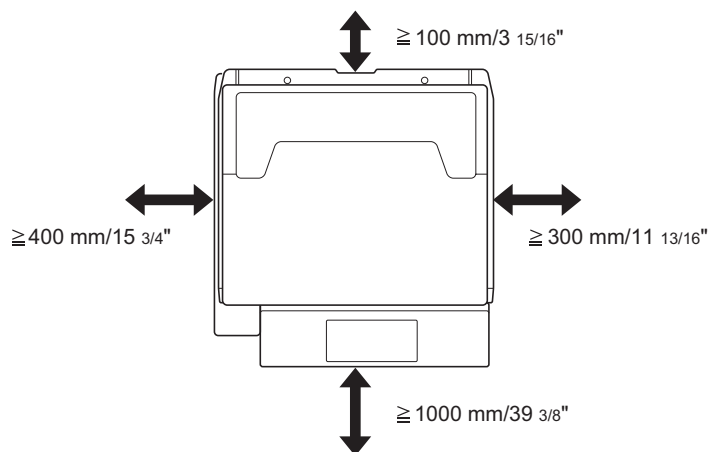
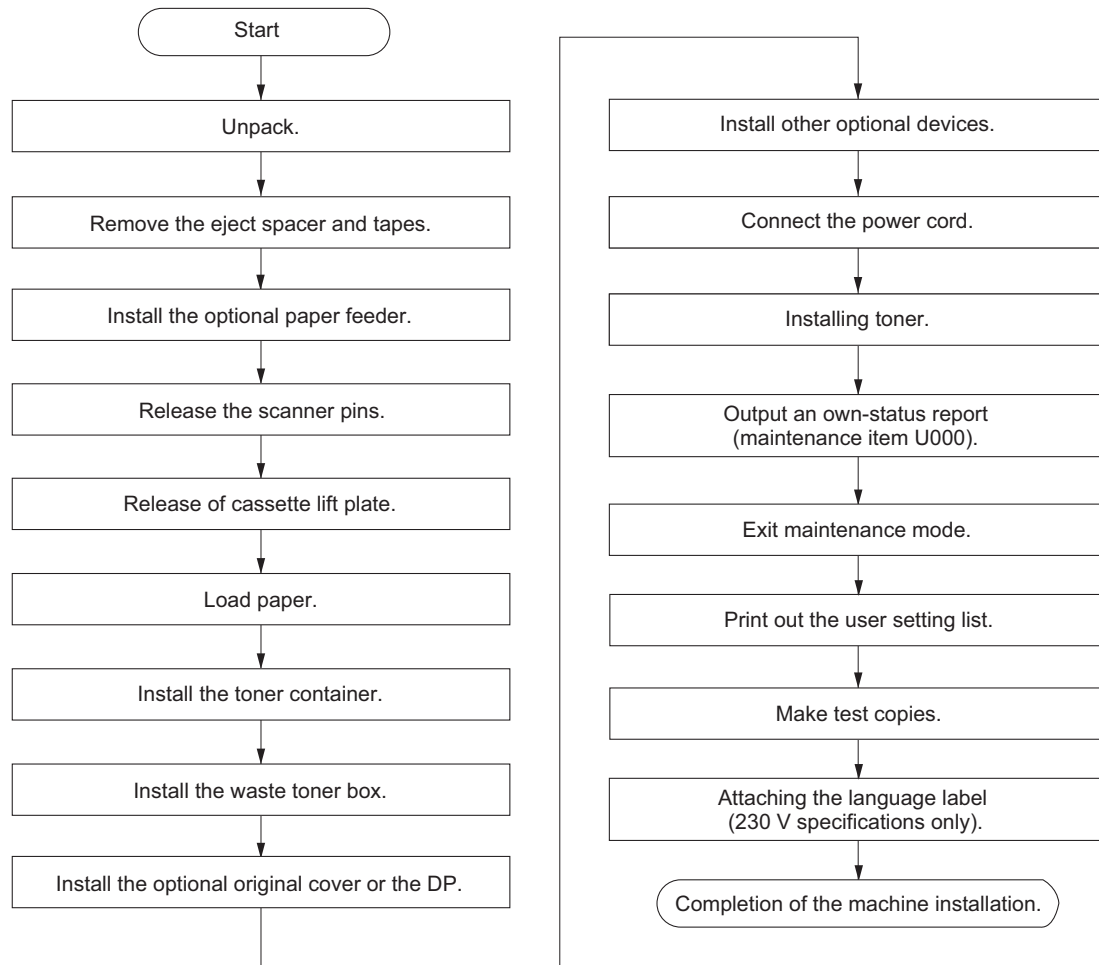


Figure 1-2-1 Installation dimensions

1-2-2 Unpacking and installation

(1) Installation procedure



Moving the machine

When moving the machine, pull out the four carrying handles on the right and left sides and hold them.

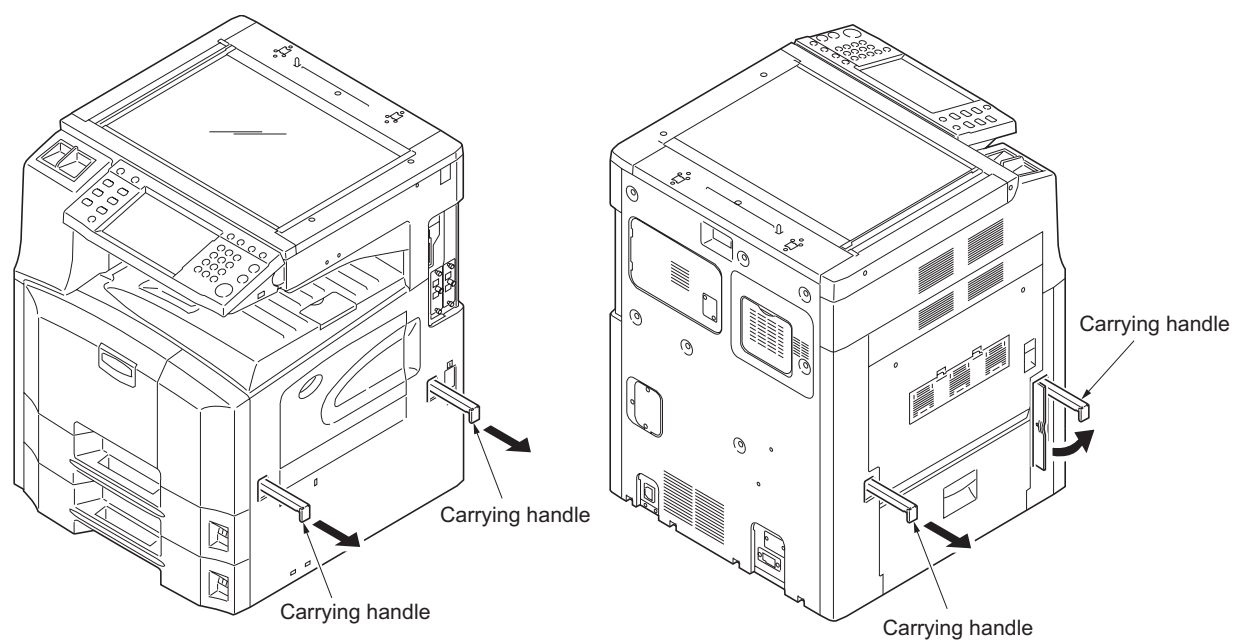


Figure 1-2-2

Unpacking.

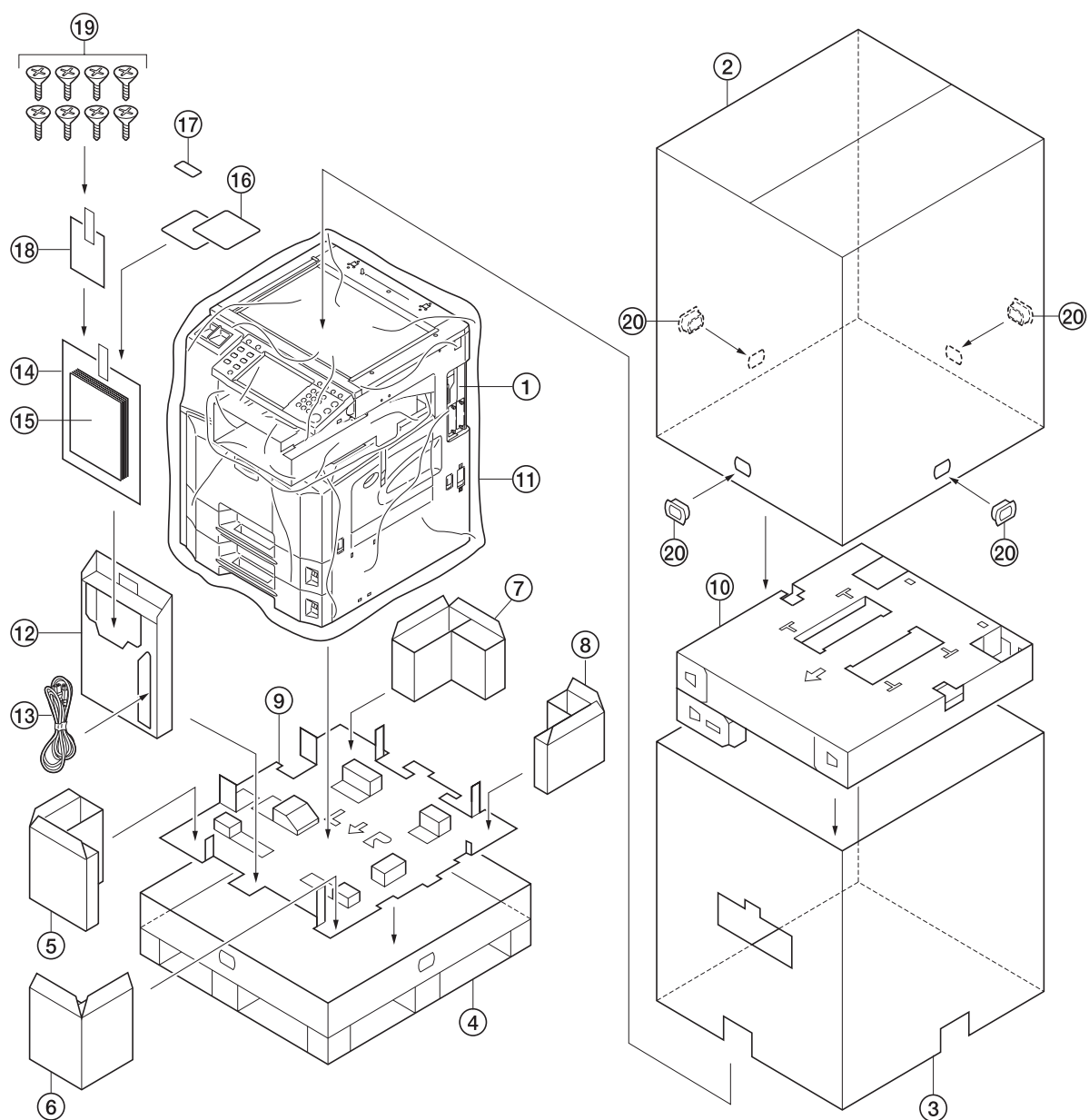


Figure 1-2-3 Unpacking

- | | |
|---------------------------|---------------------|
| 1. Machine | 11. Machine cover |
| 2. Outer case | 12. Document tray |
| 3. Inner frame | 13. Power cord |
| 4. Skid | 14. Plastic bag |
| 5. Bottom front left pad | 15. Operation guide |
| 6. Bottom front right pad | 16. Size plates |
| 7. Bottom rear left pad | 17. USB host label |
| 8. Bottom rear right pad | 18. Plastic bag |
| 9. Bottom pad | 19. M3 x 8 screws |
| 10. Top pad | 20. Hinge joints |

Caution: Place the machine on a level surface.

Remove the eject spacer and tapes.

1. Remove the eject spacer.
2. Remove four tapes.

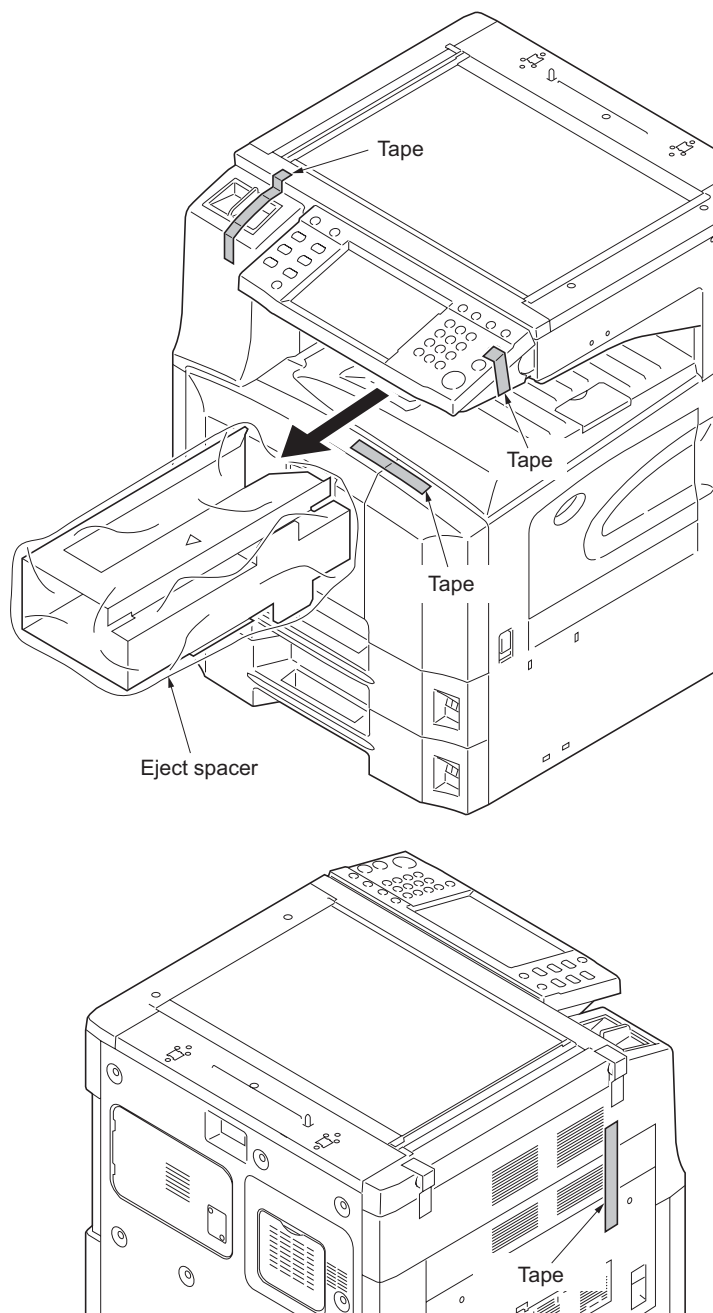


Figure 1-2-4

Install the optional paper feeder.

1. Install the optional paper feeder as necessary.
2. Verify levelness at the four corners of the platen using a level gauge, and adjust the level bolts at the bottom of the machine to optimize levelness.

Release the scanner pins.

1. Remove two tapes.
2. Remove two scanner pins.

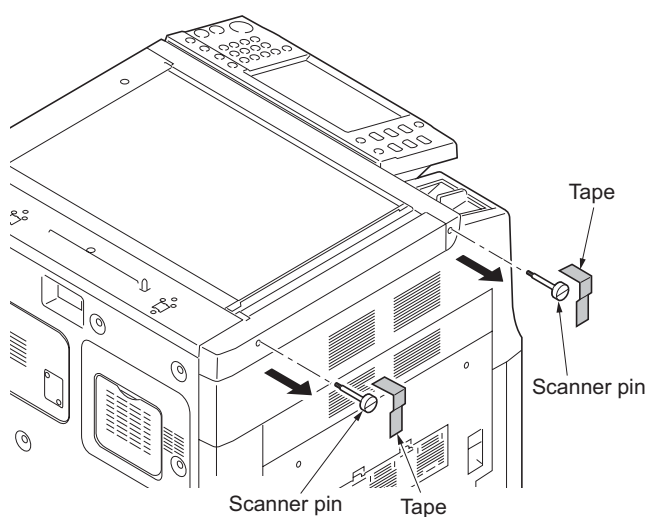


Figure 1-2-5

Release of cassette lift plate.

1. Pull cassette 1 and 2 out. Remove the lift plate stopper from each cassette and attach it to the storage location. When moving the machine, attach the lift plate in original position.

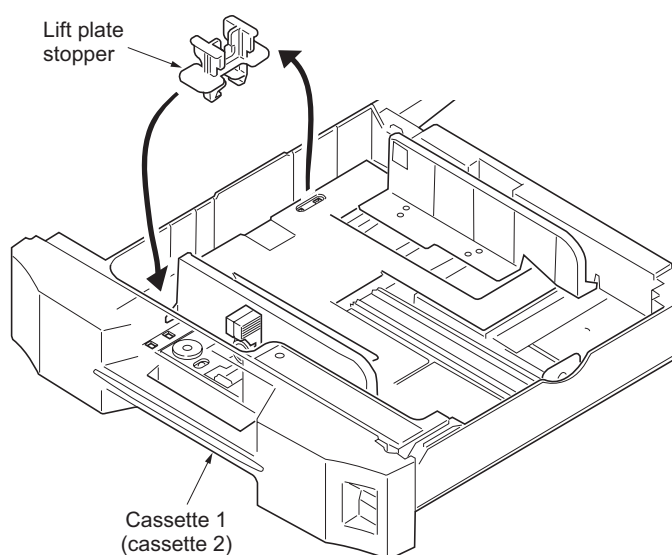


Figure 1-2-6

Load paper.

1. Holding the paper width adjusting tab both ends, move the paper width guides to fit the paper size.

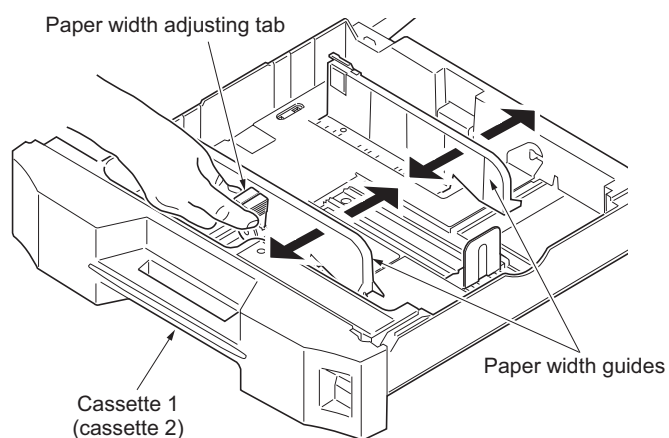


Figure 1-2-7

2. Adjust the paper length guide to fit the paper size.

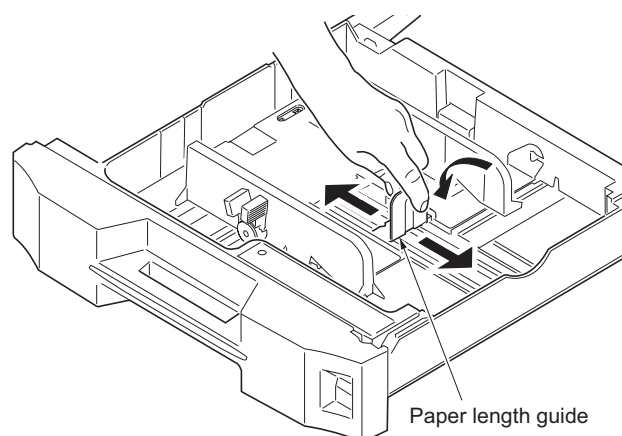


Figure 1-2-8

3. Align the paper flush against the left side of the cassette.

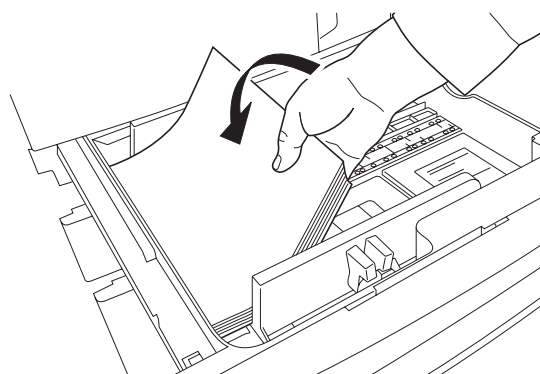


Figure 1-2-9

4. Gently push cassette 1 and 2 back in.

Install the toner container.

1. Open the front cover.
2. Hold the toner container vertically and tap the upper part five times or more.
Turn the toner container upside down and tap the upper part five times or more.

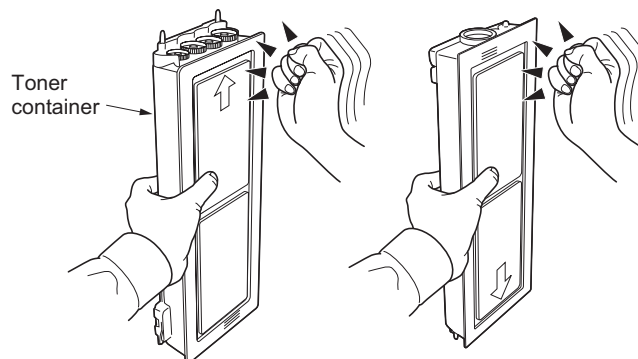


Figure 1-2-10

3. Shake the toner container up and down five times or more.
Turn the toner container upside down and shake it five times or more.

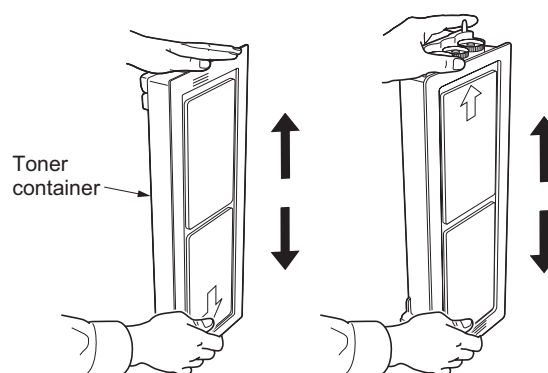


Figure 1-2-11

4. Shake the toner container approximately five times in the horizontal direction to stir toner.

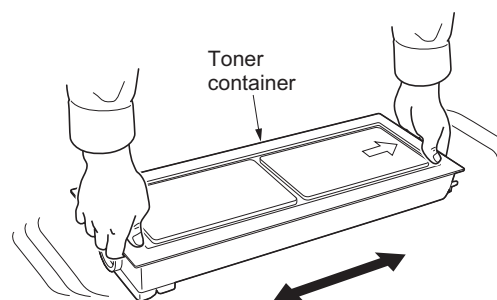


Figure 1-2-12

5. Gently push the toner container into the machine along the rails. Push the container all the way into the machine until it locks in place.

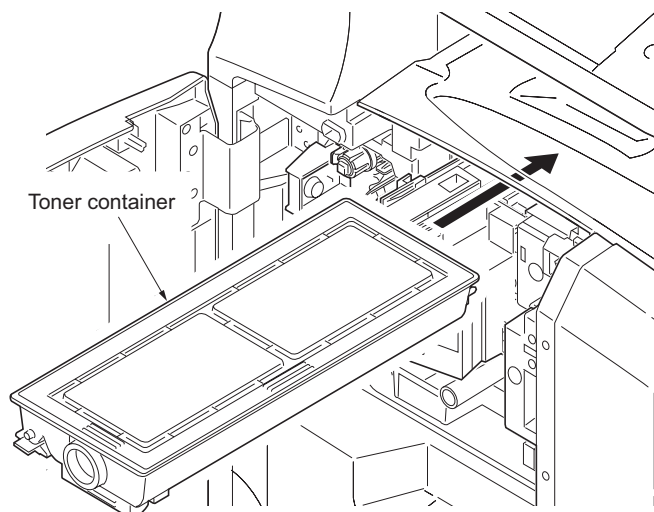


Figure 1-2-13

Install the waste toner box.

1. Install the waste toner box in the machine.
2. Close the front cover.

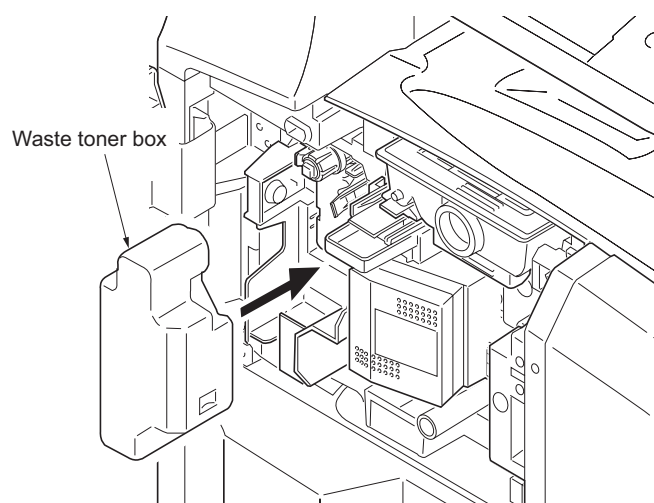


Figure 1-2-14

Install the optional original cover or the DP.

1. Install the optional original cover or DP.

Install other optional devices.

1. Install the optional devices (job separator, built-in finisher, document finisher and/or fax kit etc.) as necessary.

Connect the power cord.

1. Connect the power cord to the connector on the machine.
2. Insert the power plug into the wall outlet.

Installing toner.

1. Turn the main power switch on. Toner installation is started.
2. The drive chain is disengaged when toner installation is completed.
Run maintenance mode U130 if [Add Toner] remains displayed even after the drive chain is disengaged.

Output an own-status report (maintenance item U000).

1. Press the status key.
2. Enter the maintenance mode by entering 10871087 using the numeric keys.
3. Enter 000 using the numeric keys and press the start key.
4. Select MAINTENANCE and press the start key to output a list of the current settings of the maintenance items.
5. Press the stop key.

Exit maintenance mode.

1. Enter 001 using the numeric keys and press the start key. The machine exits the maintenance mode.

Print out the user setting list.

1. Select [Report Print] to output the user various setting reports.

Make test copies.

1. Place an original and make test copies.

Attaching the language label (230 V specifications only).

1. According to need, attach the correspond language label.

Completion of the machine installation.

(2) Setting initial copy modes

Factory settings are as follows:

Maintenance item No.	Contents	Factory setting
U253	Switching between double and single counts	Double count (A3/LGR)
U260	Selecting the timing for copy counting	After ejection
U285	Setting service status page	ON
U324	Setting the main charger cleaning indication	ON
U326	Setting the black line cleaning indication	ON
U328	Side ejection setting	OFF
U342	Setting the ejection restriction	ON
U343	Switching between duplex/simplex copy mode	OFF

1-2-3 Installing the key counter (option)

Installing the key counter requires the following component:

Key counter

Key counter set

Supplied parts of key counter set:

Key counter socket assembly

Key counter cover

Key counter mount

Key counter retainer

Key counter cover retainer

One (1) M3 × 8 tap-tight P screw

Two (2) M4 × 10 tap-tight P screws

Two (2) M4 × 10 tap-tight S screws

Two (2) M3 × 6 bronze flat-head screws

One (1) M4 × 20 tap-tight S screw

One (1) M3 bronze nut

One (1) M3 × 8 bronze binding screw

One (1) M4 × 30 tap-tight S screw

Four (4) M4 × 6 chrome TP screws

Two (2) M4 × 10 chrome TP screws

Procedure

1. Press the power key on the operation panel to off. Make sure that the power indicator and the memory indicator are off before turning off the main power switch. And then unplug the power cable from the wall outlet.
2. Fit the key counter socket assembly to the key counter retainer using two screws and nut.
3. Fit the key counter mount to the key counter cover using two screws.
4. Fit the key counter retainer to the key counter mount using two screws.

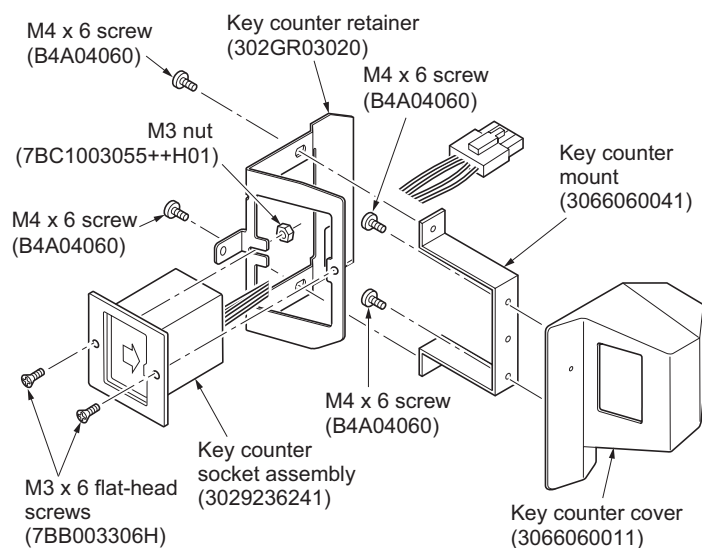


Figure 1-2-15

5. Remove two screws and remove the scanner right cover.
6. Cut out the aperture plate on the upper right cover using nippers.
7. Pull the key counter wire out.

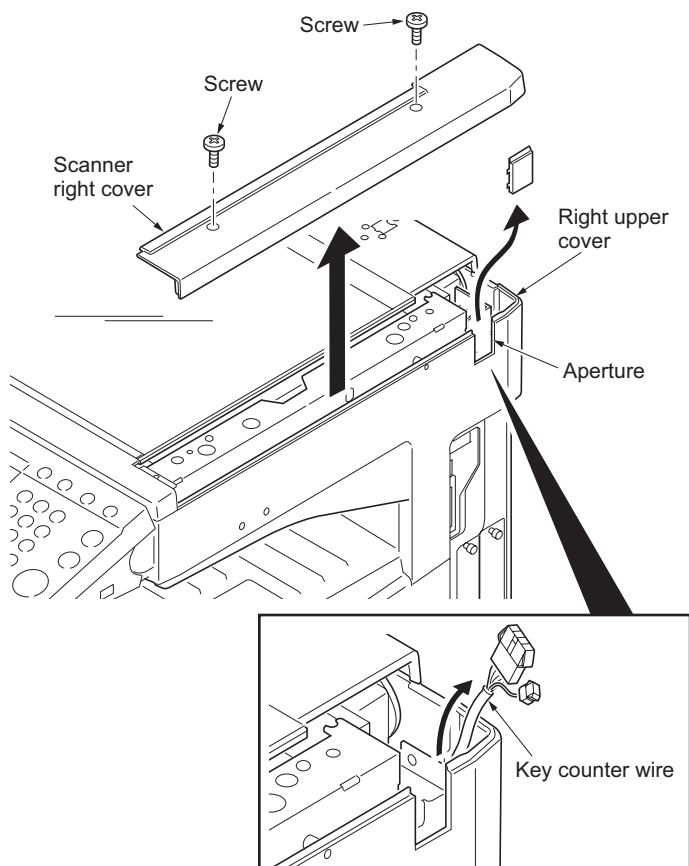


Figure 1-2-16

8. Seat the fook of the key counter cover retainer in the aperture in the right upper cover.
9. Fit the key counter cover retainer using two screws.

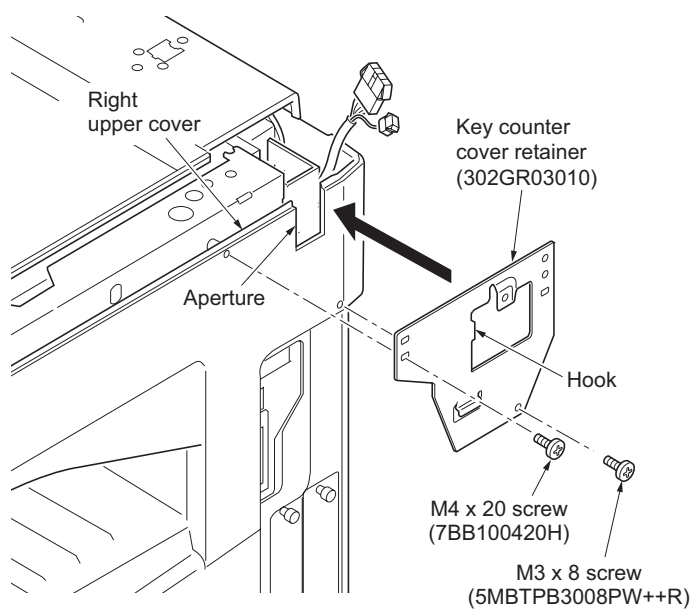


Figure 1-2-17

10. Pass the 4-pin connector of the key counter signal cable through the aperture in the key counter cover retainer.
11. Insert the 4-pin connector of the key counter signal cable into the 4-pin connector of the key counter wire.
12. Hook the square hole on the key counter cover onto the key counter cover retainer.
13. Fit the key counter unit using the screw.

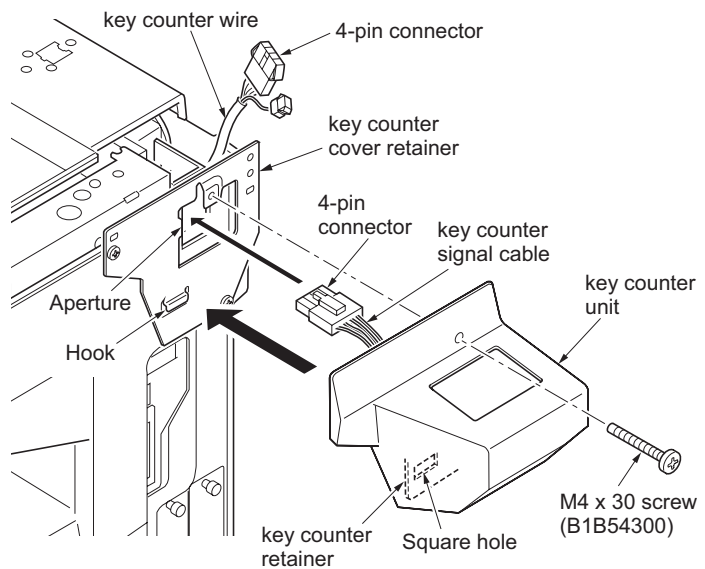


Figure 1-2-18

14. Seat the 2-pin and the 4-pin connectors between the right upper cover and the partition plate.
15. Refit the scanner right cover. Be sure not that the 2-pin connector is not pinched between the scanner right cover and the upper right cover.

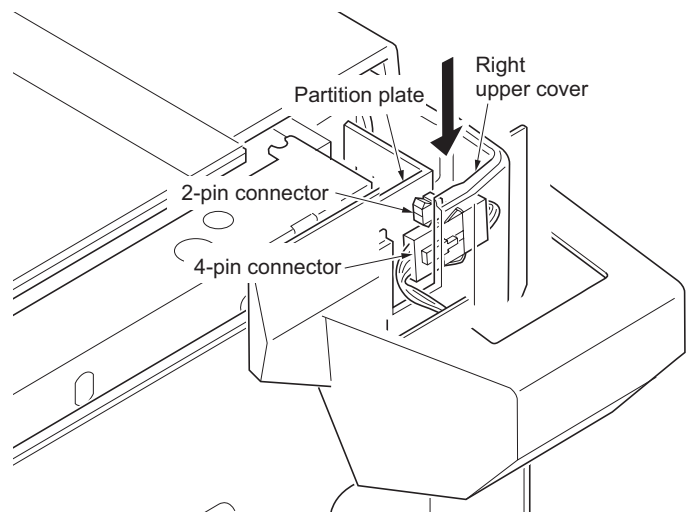


Figure 1-2-19

16. Insert the key counter into the key counter socket assembly.
17. Turn the main power switch on and enter the maintenance mode.
18. Run maintenance item U204 and select ON.
19. Exit the maintenance mode.
20. Check that the message requesting the key counter to be inserted is displayed on the touch panel when the key counter is pulled out.
21. Check that the counter counts up as prints are made.

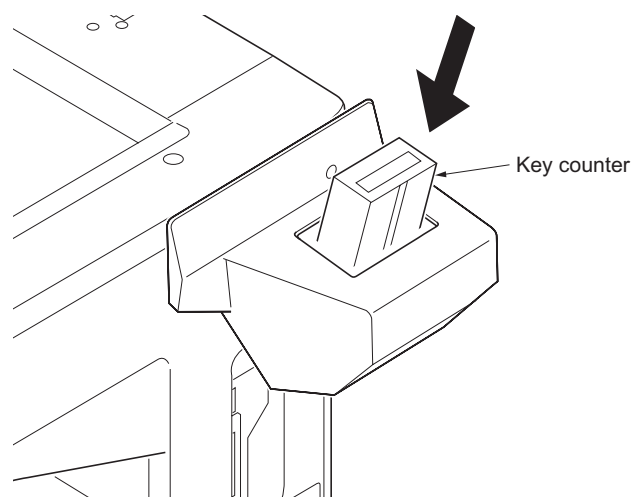
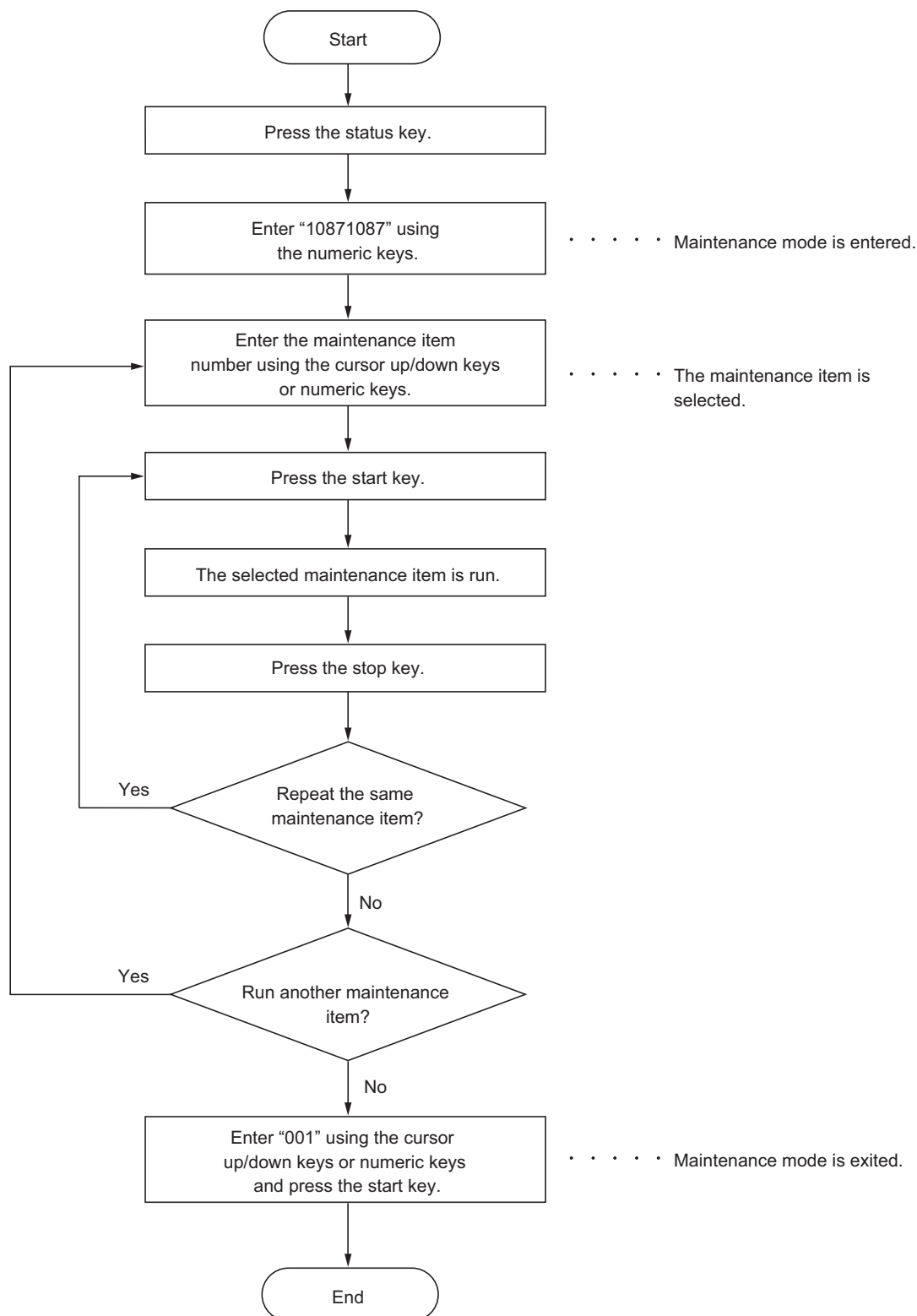


Figure 1-2-20

1-3-1 Maintenance mode

The machine is equipped with a maintenance function which can be used to maintain and service the machine.

(1) Executing a maintenance item



(2) Maintenance modes item list

Section	Item No.	Content of maintenance item	Initial setting*
General	U000	Outputting an own-status report	-
	U001	Exiting the maintenance mode	-
	U002	Setting the factory default data	-
	U003	Setting the service telephone number	*****1,*2
	U004	Displaying the machine number	-
	U005	Copying without paper	-
	U019	Displaying the ROM version	-
Initialization	U020	Initializing all data	-
	U021	Initializing counters and mode settings	-
	U022	Initializing backup memory	-
	U024	HDD formatting	-
Drive, paper feed, paper conveying and cooling system	U030	Checking motor operation	-
	U031	Checking switches for paper conveying	-
	U032	Checking clutch operation	-
	U033	Checking solenoid operation	-
	U034	Adjusting the print start timing Adjusting the leading edge registration Adjusting the center line Adjusting the trailing edge registration	120/0/0/0*1 180/0/0/0/0/0*1 0*1
	U035	Setting the printing area for folio paper Length Width	330*1 210*1
	U051	Adjusting the deflection in the paper	0/50/50/40/10*1
	U053	Setting the adjustment of the motor speed	0/-1/-2/0/2/-8/0*1
	U055	Setting the motor periodic drive	ON*1
	U059	Setting fan mode	45*1
Optical	U061	Turning the exposure lamp on	-
	U063	Adjusting the shading position	0*1
	U065	Adjusting the scanner magnification Main scanning direction/auxiliary scanning direction	0/0*1
	U066	Adjusting the scanner leading edge registration	0/0*1
	U067	Adjusting the scanner center line	0/0*1
	U068	Adjusting the scanning position for originals from the DP	0/0*1
	U070	Adjusting the DP magnification	0/0/0/0*1
	U071	Adjusting the DP scanning timing	0/0/0/0/0/0/0*1
	U072	Adjusting the DP center line	0/0*1
	U073	Checking scanner operation	-
	U074	Adjusting the DP input light luminosity	0/0/0/0*1
	U080	Setting the economy mode	-6*1
	U081	Adjusting the correct exposure	0/0/0*1
	U087	Setting DP reading position modification operation	125/125/120*1
	U089	Outputting a MIP-PG pattern	-
	U093	Setting the exposure density gradient Text and photo/Text/Photo	0/0/0*1
	U099	Adjusting original size detection	105/105/105/60/60/60*1 150/240*1

*Initial setting for executing U020, *1: The item initialized for executing U020, *2: The item initialized for executing U021

Section	Item No.	Content of maintenance item	Initial setting*
High voltage	U100	Setting the main high voltage	-
	U101	Setting the other high voltages	26/58/50/89/1* ¹ 115/91/68/40/92* ¹
	U110	Checking the drum count	-
	U114	Setting separation charger mode	4* ¹
	U117	Checking the drum number	-
	U118	Displaying the drum history	-
Developing	U130	Initial setting for the developing unit	-
	U135	Checking toner motor operation	100/30/100* ¹
	U144	Setting toner loading operation	0/5/30* ¹
	U150	Checking sensors for toner	-
	U157	Checking/clearing the developing drive time	-
	U158	Checking the developing count	-
Fuser and cleaning	U161	Setting the fuser control temperature	110* ¹
		Driving start temperature when warm-up starts	165* ¹
		Fuser center control temperature for displaying [Ready for copying.]	155* ¹
		Fuser edge control temperature for displaying [Ready for copying.]	165* ¹
		Fuser center control temperature during printing	0* ¹
	U163	Resetting the fuser problem data	-
	U167	Checking/clearing the fuser counts	-
	U193	Setting the fuser drive control	ON* ¹
Operation panel and support equipment	U199	Checking the fuser temperature	-
	U200	Turning all LEDs on	-
	U201	Initializing the touch panel	-
	U202	Setting the KMAS host monitoring system	-
	U203	Checking DP operation	-
	U204	Setting the presence or absence of a key card or key counter	OFF/COUNTER* ^{1,2}
	U207	Checking the operation panel keys	-
	U220	Setting the trial functions	-
	U221	Setting the USB host lock function	OFF* ¹
	U233	Limiting job separator output	MODE0* ^{1,2}
	U236	Setting the limit for the ejection section of the built-in finisher	OFF* ^{1,2}
	U243	Checking the operation of the DP motors	-
	U244	Checking the DP switches	-
	U245	Checking messages	-
	U246	Setting the finisher	0/0/0* ¹
Mode setting	U247	Setting the paper feed device	-
	U250	Setting the maintenance cycle	300000* ^{1,2}
	U251	Checking/clearing the maintenance count	-
	U252	Setting the destination	-
	U253	Switching between double and single counts	Double count (A3/LGR)* ¹
	U260	Selecting the timing for copy counting	After ejection* ^{1,2}
	U265	Setting OEM purchaser code	0* ¹
	U285	Setting service status page	ON* ^{1,2}

*Initial setting for executing U020, *1: The item initialized for executing U020, *2: The item initialized for executing U021

Section	Item No.	Content of maintenance item	Initial setting*
Mode setting	U324	Setting the main charger cleaning indication	ON ^{*1,*2}
	U326	Setting the black line cleaning indication	ON/8 ^{*1,*2}
	U328	Side ejection setting	OFF ^{*1,*2}
	U332	Setting the size conversion factor	1.0 ^{*1,*2}
	U339	Setting the drum heater ON/OFF	0 ^{*1,*2}
	U341	Specific paper feed location setting for printing function	-
	U342	Setting the ejection restriction	ON ^{*1,*2}
	U343	Switching between duplex/simplex copy mode	OFF ^{*1,*2}
	U345	Setting the value for maintenance due indication	-
Image processing	U402	Adjusting margins of image printing	75/85/85/95/155/110 ^{*1}
	U403	Adjusting margins for scanning an original on the platen	2.0/2.0/2.0/2.0 ^{*1}
	U404	Adjusting margins for scanning an original from the DP	3.0/2.5/3.0/4.0 ^{*1}
	U407	Adjusting the leading edge registration for memory image printing	47 ^{*1}
	U411	Adjusting the scanner automatically	-
	U425	Setting the target	-
Network scanner	U510	Setting the enterprise mode	Inch specifications: ON ^{*1,*2} Metric specifications: OFF ^{*1,*2}
Others	U901	Checking/clearing copy counts by paper feed locations	-
	U903	Checking/clearing the paper jam counts	-
	U904	Checking/clearing the service call counts	-
	U905	Checking/clearing counts by optional devices	-
	U906	Resetting partial operation control	-
	U908	Checking the total counter value	-
	U910	Clearing the black ratio data	-
	U911	Checking/clearing copy counts by paper sizes	-
	U920	Checking the copy counts	-
	U927	Clearing the all copy counts and machine life counts (one time only)	-
	U928	Checking machine life counts	-
	U931	Setting the automatic toner install	OFF ^{*1,*2}
	U933	Setting the fax backup kit	-
	U935	Relay board maintenance	-
	U942	Setting of deflection for feeding from DP	0/0 ^{*1}
	U984	Checking the developing unit number	-
	U985	Displaying the developing unit history	-
	U989	HDD scandisk	-
	U990	Checking/clearing the time for the exposure lamp to light	-
	U991	Checking the scanner count	-
	U993	Outputting a VTC-PG pattern	-

*Initial setting for executing U020, *1: The item initialized for executing U020, *2: The item initialized for executing U021

(3) Contents of the maintenance mode items

Maintenance item No.	Description																																																																																																																																																																																																																																																																												
U000	Outputting an own-status report Description Outputs lists of the current settings of the maintenance items, and paper jam and service call occurrences. Outputs the event log or service status page. Printing a report is disabled either when a job is remaining in the buffer or when [Pause All Print Jobs] is pressed to halt printing. Purpose To check the current setting of the maintenance items, or paper jam or service call occurrences. Before initializing or replacing the backup RAM, output a list of the current settings of the maintenance items to reenter the settings after initialization or replacement. Method - Press the start key. - Select the item to be output. <table><tr><th>Display</th><th>Output list</th></tr><tr><td>MAINTENANCE</td><td>List of the current settings of the maintenance modes</td></tr><tr><td>EVENT LOG</td><td>Outputs the event log</td></tr><tr><td>SERVICE STATUS</td><td>Outputs the service status page</td></tr></table> - Press the start key. The interrupt print mode is entered and a list is output. When A4/Letter paper is available, a report of this size is output. If not, specify the paper feed location. When output is complete, the screen for selecting an item is displayed. Event log Event Log MFP Firmware version 2H0_2L00.P01.006 2007.05.22 <table><tr><th colspan="2">(1)</th><th colspan="2">(2)</th></tr><tr><td colspan="4">(3) Paper Jam Log</td></tr><tr><th>#</th><th>Count.</th><th colspan="2">Event Descriptions</th></tr><tr><td>16</td><td>9876543</td><td colspan="2">02.11.41.01.01</td></tr><tr><td>15</td><td>666554</td><td colspan="2">02.11.42.02.02</td></tr><tr><td>14</td><td>4988</td><td colspan="2">02.11.43.01.09</td></tr><tr><td>13</td><td>4988</td><td colspan="2">02.11.44.02.11</td></tr><tr><td>12</td><td>4988</td><td colspan="2"></td></tr><tr><td>11</td><td>4988</td><td colspan="2"></td></tr><tr><td>10</td><td>1103</td><td colspan="2"></td></tr><tr><td>9</td><td>1103</td><td colspan="2"></td></tr><tr><td>8</td><td>1103</td><td colspan="2">02.11.41.01.01</td></tr><tr><td>7</td><td>1103</td><td colspan="2">02.11.42.02.02</td></tr><tr><td>6</td><td>1027</td><td colspan="2">02.11.43.01.09</td></tr><tr><td>5</td><td>1027</td><td colspan="2">02.11.44.02.11</td></tr><tr><td>4</td><td>1027</td><td colspan="2">02.11.45.03.91</td></tr><tr><td>3</td><td>1027</td><td colspan="2">02.01.F0.01.01</td></tr><tr><td>2</td><td>550</td><td colspan="2">01.01.01.01.01</td></tr><tr><td>1</td><td>28</td><td colspan="2">01.09.01.01.01</td></tr></table> 02. 11. 41. 01. 01 (a) (b) (c) (d) (e) <table><tr><td colspan="4">(4) Service Call Log</td></tr><tr><th>#</th><th>Count.</th><th colspan="2">Service Code</th></tr><tr><td>8</td><td>7881214</td><td colspan="2">F0.0030</td></tr><tr><td>7</td><td>578944</td><td colspan="2">01.0100</td></tr><tr><td>6</td><td>5296</td><td colspan="2">F0.4000</td></tr><tr><td>5</td><td>5295</td><td colspan="2">F0.3010</td></tr><tr><td>4</td><td>2099</td><td colspan="2">01.2100</td></tr><tr><td>3</td><td>1054</td><td colspan="2">01.2100</td></tr><tr><td>2</td><td>809</td><td colspan="2">01.2120</td></tr><tr><td>1</td><td>30</td><td colspan="2">01.2100</td></tr></table><table><tr><td colspan="4">(5) Maintenance Log</td></tr><tr><th>#</th><th>Count.</th><th colspan="2">Item</th></tr><tr><td>8</td><td>9045571</td><td colspan="2">00.02</td></tr><tr><td>7</td><td>704511</td><td colspan="2">01.01</td></tr><tr><td>6</td><td>7045</td><td colspan="2">00.01</td></tr><tr><td>5</td><td>3454</td><td colspan="2">00.04</td></tr><tr><td>4</td><td>3454</td><td colspan="2">00.03</td></tr><tr><td>3</td><td>3454</td><td colspan="2">00.02</td></tr><tr><td>2</td><td>417</td><td colspan="2">00.01</td></tr><tr><td>1</td><td>35</td><td colspan="2">01.21</td></tr></table><table><tr><td colspan="4">(6) Unknown toner Log</td></tr><tr><th>#</th><th>Count.</th><th colspan="2">Item</th></tr><tr><td>5</td><td>3454</td><td colspan="2">01.00</td></tr><tr><td>4</td><td>3454</td><td colspan="2">01.00</td></tr><tr><td>3</td><td>3454</td><td colspan="2">01.00</td></tr><tr><td>2</td><td>417</td><td colspan="2">01.00</td></tr><tr><td>1</td><td>35</td><td colspan="2">01.00</td></tr></table><table><tr><td colspan="4">(7) Counter Log</td></tr><tr><td>(f) J04:000</td><td>J20:000</td><td>J70:000</td><td>J93:002</td><td>(g) C0101:001</td><td>C2223:001</td><td>C3502:001</td><td>(h) M01:01</td></tr><tr><td>J05:000</td><td>J21:000</td><td>J71:000</td><td>J94:000</td><td>C0102:001</td><td>C2225:001</td><td>C3503:001</td><td>M02:01</td></tr><tr><td>J09:000</td><td>J22:000</td><td>J72:000</td><td>J95:000</td><td>C0107:001</td><td>C2228:001</td><td>C3552:001</td><td></td></tr><tr><td>J10:000</td><td>J23:000</td><td>J73:000</td><td>J96:000</td><td>C0108:001</td><td>C2259:001</td><td>C3553:001</td><td></td></tr><tr><td>J11:002</td><td>J30:002</td><td>J74:002</td><td></td><td>C0220:001</td><td>C3003:001</td><td></td><td></td></tr><tr><td>J12:000</td><td>J40:002</td><td>J75:002</td><td></td><td>C2002:001</td><td>C3411:001</td><td></td><td></td></tr><tr><td>J13:000</td><td>J41:000</td><td>J76:000</td><td></td><td>C2030:001</td><td>C3412:001</td><td></td><td></td></tr><tr><td>J14:000</td><td>J42:000</td><td>J78:000</td><td></td><td>C2031:001</td><td>C3421:001</td><td></td><td></td></tr><tr><td>J43:000</td><td>J80:000</td><td></td><td></td><td>C2223:001</td><td></td><td></td><td></td></tr></table>	Display	Output list	MAINTENANCE	List of the current settings of the maintenance modes	EVENT LOG	Outputs the event log	SERVICE STATUS	Outputs the service status page	(1)		(2)		(3) Paper Jam Log				#	Count.	Event Descriptions		16	9876543	02.11.41.01.01		15	666554	02.11.42.02.02		14	4988	02.11.43.01.09		13	4988	02.11.44.02.11		12	4988			11	4988			10	1103			9	1103			8	1103	02.11.41.01.01		7	1103	02.11.42.02.02		6	1027	02.11.43.01.09		5	1027	02.11.44.02.11		4	1027	02.11.45.03.91		3	1027	02.01.F0.01.01		2	550	01.01.01.01.01		1	28	01.09.01.01.01		(4) Service Call Log				#	Count.	Service Code		8	7881214	F0.0030		7	578944	01.0100		6	5296	F0.4000		5	5295	F0.3010		4	2099	01.2100		3	1054	01.2100		2	809	01.2120		1	30	01.2100		(5) Maintenance Log				#	Count.	Item		8	9045571	00.02		7	704511	01.01		6	7045	00.01		5	3454	00.04		4	3454	00.03		3	3454	00.02		2	417	00.01		1	35	01.21		(6) Unknown toner Log				#	Count.	Item		5	3454	01.00		4	3454	01.00		3	3454	01.00		2	417	01.00		1	35	01.00		(7) Counter Log				(f) J04:000	J20:000	J70:000	J93:002	(g) C0101:001	C2223:001	C3502:001	(h) M01:01	J05:000	J21:000	J71:000	J94:000	C0102:001	C2225:001	C3503:001	M02:01	J09:000	J22:000	J72:000	J95:000	C0107:001	C2228:001	C3552:001		J10:000	J23:000	J73:000	J96:000	C0108:001	C2259:001	C3553:001		J11:002	J30:002	J74:002		C0220:001	C3003:001			J12:000	J40:002	J75:002		C2002:001	C3411:001			J13:000	J41:000	J76:000		C2030:001	C3412:001			J14:000	J42:000	J78:000		C2031:001	C3421:001			J43:000	J80:000			C2223:001			
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Figure 1-3-1

Figure 1-3-1

Maintenance item No.	Description			
U000	Detail of event log			
	No.	Items	Description	
	(1)	System version		
	(2)	System date		
	(3)	Paper Jam Log	#	Count. Event
			Remembers 1 to 16 of occurrence. If the occurrence of the previous paper jam is less than 16, all of the paper jams are logged. When the occurrence exceeded 16, the oldest occurrence is removed.	The total page count at the time of the paper jam. Log code (2 digit, hexadecimal, 5 categories) (a) Cause of a paper jam (b) Paper source (c) Paper size (d) Paper type (e) Paper eject
			(a) Cause of paper jam (Hexadecimal)	
			04: Cover open 05: Secondary paper feed does not start 10: No paper feed from cassette 1 11: No paper feed from cassette 2 12: No paper feed from optional cassette 3 13: No paper feed from optional cassette 4 14: No paper feed from MP tray 18: Misfeed in vertical paper conveying section 19: Misfeed in paper feeder vertical paper conveying section 20: Misfeed in MP tray paper conveying section 21: Multiple sheets in paper feed section 23: Multiple sheets in MP tray conveying section 30: Misfeed in registration/transfer section 40: Misfeed in fuser section (MP tray) 41: Misfeed in fuser section (cassette 1) 42: Misfeed in fuser section (cassette 2) 43: Misfeed in fuser section (optional cassette 3) 44: Misfeed in fuser section (optional cassette 4) 47: Misfeed in fuser section (duplex section) 50: Misfeed in eject section 51: Misfeed in job separator eject section 52: Misfeed in feedshift section 60: Duplex paper conveying section 1 61: Duplex paper conveying section 2 70: No original feed 71: An original jam in the original conveying section 1 72: An original jam in the original conveying section 2 73: An original jam in the original switchback section 74: An original jam in the original switchback/feed section 75: An original jam in the original switchback/conveying section 78: Document processor cover open 80: Jam between the finisher and machine (built-in finisher) 81: Paper entry sensor nonarrival jam 82: Jam in stapler 83: Exit sensor stay jam 91: Finisher cover open 92: Exit sensor non-arrival jam (document finisher) 93: Reverse sensor jam (document finisher) 94: Paper entry sensor stay/remaining jam (document finisher) 95: Paper conveying sensor jam (document finisher) 96: Jam between the built-in finisher and machine (built-in finisher)	

Maintenance item No.	Description		
U000			
(3) cont.	Paper Jam Log	No. Items Description	
		(b) Detail of paper source (Hexadecimal)	
		01: Cassette 1 02: Cassette 2 03: Cassette 3 (paper feeder) 04: Cassette 4 (paper feeder) 07: MP tray 05/06/08/09: Reserved	
		(c) Detail of paper size (Hexadecimal)	
		01: Monarch 02: Business 03: International DL 04: International C5 05: Executive 06: Letter-R 86: Letter-E 07: Legal 08: A4R 88: A4E 09: B5R 89: B5E 0A: A3 0B: B4	0C: Ledger 0D: A5R 8D: A5E 0E: A6 0F: B6 10: Commercial #9 11: Commercial #6 12: ISO B5 13: Custom size 1E: C4 1F: Postcard 20: Reply-paid post-card 21: Oficio II 22: Special 1
		23: Special 2 24: A3 wide 25: Ledger wide 26: Full bleed paper (12 × 8) 27: 8K 28: 16K-R A8: 16K-E 32: Statement-R B2: Statement-E 33: Folio 34: Western type 2 35: Western type 4	
		(d) Detail of paper type (Hexadecimal)	
		00: (Not specified) 01: Plain 02: Transparency 03: Preprint 04: Labels 05: Bond 06: Recycle 07: Vellum 08: Rough	09: Letter head 0A: Color 0B: Prepunched 0C: Envelope 0D: Cardstock 0E: Coated 0F: 2nd side 10: Media 16 11: High quality
		15: Custom 1 16: Custom 2 17: Custom 3 18: Custom 4 19: Custom 5 1A: Custom 6 1B: Custom 7 1C: Custom 8	
		(e) Detail of paper exit location (Hexadecimal)	
		01: Face down (FD) 02: Face up (FU)/ Document finisher face up (FU)/ 03: Document finisher face-down (FD) 04: Document finisher sub tray (FD) 05: Reserved 0B: Reserved 0C: Reserved 0D: Reserved 0E: Reserved 15: Reserved	16: Reserved 1F: Reserved 20: Reserved 29: Reserved 2A: Reserved 33: Reserved 34: Reserved 3D: Reserved 3E: Reserved 47: Reserved 48: Reserved

Maintenance item No.	Description				
U000					
	No.	Items	Description		
	(4)	Service Call Log	#	Count.	Service Code
			Remembers 1 to 8 of occurrence of self diagnostics error. If the occurrence of the previous diagnostics error is less than 8, all of the diagnostics errors are logged.	The total page count at the time of the self diagnostics error.	Self diagnostic error code (See page 1-4-19) Example: 01.6000 01: Self diagnostic error 6000: Self diagnostic error code number
	(5)	Maintenance Log	#	Count.	Item
			Remembers 1 to 8 of occurrence of replacement. If the occurrence of the previous replacement of toner container is less than 8, all of the occurrences of replacement are logged.	The total page count at the time of the replacement of the toner container.	Code of maintenance replacing item (1 byte, 2 categories) First byte (Replacing item) 01: Toner container 02: Maintenance kit Second byte (Type of replacing item) 00: (fixed)
	(6)	Unknown Toner Log	#	Count.	Item
			Remembers 1 to 5 of occurrence of unknown toner detection. If the occurrence of the previous unknown toner detection is less than 5, all of the unknown toner detection are logged.	The total page count at the time of the [Toner Empty] error with using an unknown toner container.	Unknown toner log code (1 byte, 2 categories) First byte 01: Fixed (Toner container) Second byte 00: Fixed (Black)
	(7)	Counter Log Comprised of three log counters including paper jams, self diagnostics errors, and replacement of the toner container.	(f) Jam	(g) Self diagnostic error	(h) Maintenance item replacing
			Indicates the log counter of paper jams depending on location. Refer to Paper Jam Log. All instances including those are not occurred are displayed.	Indicates the log counter of self diagnostics errors depending on cause. (See page 1-4-19) Example: C6000: 4 Self diagnostics error 6000 has happened four times.	Indicates the log counter depending on the maintenance item for maintenance. T: Toner container 00: Black M: Maintenance kit 00: (fixed) Example: T00: 1 The toner container has been replaced once.

Maintenance item No.	Description
U000	Service status page (1) Service Status Page MFP (1) Firmware version 2H0_2L00.P01.006 (2) 2007.05.22 Controller Information Memory Status (3) Option Slot1 524288KB (4) Option Slot2 524288KB (5) Total 1048576KB Time (6) Local Time Zone +01:00_Amsterdam (7) Data and Time 05/22/2007 09:06 (8) Time Server 10.183.53.13 (9) FRPO Status User Top Margin A1+A2/100 0.00 User Left Margin A3+A4/100 0.00 User Page Length A5+A6/100 17.30 1 Auto Continue Mode Y0 00 Auto Continue Timer Y1 06

Figure 1-3-2

Detail of service status page

No.	Description	Supplement
(1)	System version	
(2)	System date	
(3)	Slot 1 RAM size	
(4)	Slot 2 RAM size	
(5)	Total RAM size	
(6)	Local time zone	
(7)	Report output date	Day/Month/Year hour:minute
(8)	NTP server name	
(9)	FRPO setting	

Maintenance item No.	Description
U000	Service status page (2) Service Status Page MFP Firmware version 2H0_2L00.P01.006 2007.05.22 Engine Information (10) Engine ROM Version 2H0_1000.P01.006 (11) Front Panel ROM Version 2H0_A000.001.019 (12) NVRAM Version _Bb04B29_Bb04B29 (13) Scanner Version (14) FAX Slot1 FAX BOOT Version 3KH_5000.001.001 FAX APL Version 3KH_5100.001.001 FAX IPL Version 3KH_5200.001.001 (15) Serial No. AFZ3123456 (16) MAC Address 00:C0:EE:D0:01:0D Toner Coverage (%) (17) Period (- 05/22/2007 08:05) (18) Usage Page (A4/Letter Conversion) 3043.50 (19) Average (%) Total 2.90 Copy 3.56 Printer 2.87 FAX 3.52 (20) Last Page (%) 2.80 Installed Options (21) Document Processor Installed (22) Paper Feeder Cassette (23) Finisher 3000-Finisher Mail Box Not Installed (24) Job Separator Installed (25) Memory Card Not Installed (26) PDF Expansion Kit Installed (27) Fax Backup Kit Not Installed (28) Security Kit Installed (29) Data Security Kit (C) Software (30) Security Library Version 0.50 Counter (31) Printed Total Printed Pages 631 Copier 11 Printer 620 FAX 0 (32) Scanned Total Scanned Pages 1 Copier 0 Other 1 (33) Paper Size A3 69 A4 539 A5 0 B4 36 B5 0 Ledger 7 Folio 0 Legal 0 Letter 0 Statement 0 Other 0 (34) FAX Information Slot1/Slot2 Rings (Normal) 3 Rings (FAX/TEL) 3 Rings (TAD) 3 TX SPEED V.29 9600bps RX SPEED 9600bps ECM TX ON ECM RX OFF V.34 TX REG.G3 TX EQR 4db REG.G3 RX EQR 0db RX MODEM LEVEL -43dBm SGL LVL MODEM -9dBm (35) 1/2 (36) 245/490 (37) 0/-30/-30/-30 (38) 0/0/0/0 (39) 0/50/0/50/10/61/8/11 (40) F00/U00 (41) 12345678/11223344/00001234abcd567800001234abcd5678/01234567890123456789012345678901/0008/00/07 (42) 0000000000/F80C001A37/302A183C00/000100013D/8791BFC305/0000003100/000F5D0000/01FD000000/ 0000000FB7/0000000000/0000260000/0000000000/0000000000/0000008400/0000000000/011F000F51/ 8F0F000000/0000000000/0000000000/0000000000/0000000000/0000000000/0000000000/00000000F/ 2

Figure 1-3-3

Maintenance item No.	Description	
U000	Detail of service status page	
	No.	Description
	(10)	Engine ROM version
	(11)	Operation panel ROM version
	(12)	NV RAM version
		_ Bb 04B29 _ Bb 04B29 (a) (b) (c) (d) (e) (f) (a) Consistency of the present software 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 database version Normal if (a) and (d) are underscored, and (b) and (e) are identical with (c) and (f).
	(13)	-
	(14)	Fax firmware version
		This item is printed only when the fax kit is installed.
	(15)	Serial No.
		10 digits
	(16)	Mac address
	(17)	Cleared date and output date
	(18)	Page of relation to the A4/Letter
	(19)	Average coverage
		Total/Copy/Printer/Fax
	(20)	Coverage on the final output page
	(21)	Presence or absence of the optional DP
		Installed Not Installed
	(22)	Presence or absence of the optional paper feeder
		Cassette: Paper feeder Not Installed
	(23)	Presence or absence of the optional document finisher
		Inner Finisher: Built-in finisher 1000-Finisher: Document finisher Not Installed
	(24)	Presence or absence of the optional job separator
		Installed Not Installed
	(25)	Presence or absence of the memory card
		Installed Not Installed
	(26)	Presence or absence of the optional PDF upgrade kit
		Installed: The formal version is installed Not Installed: The PDF upgrade kit is not installed Trial Version(xx/xx/xx): A trial version is installed
	(27)	Presence or absence of the optional fax backup kit
		Installed Not Installed
	(28)	Presence or absence of the optional security kit
		Installed Not Installed

Maintenance item No.	Description		
U000	No.	Description	Supplement
	(29)	Identification name for the security kit	
	(30)	Security kit version	
	(31)	Printed page counts	Total/Copy/Printer/Fax
	(32)	Scanned page counts	Total/Copy/Other
	(33)	Counts by paper sizes	
	(34)	Fax kit information	This item is printed only when the fax kit is installed.
	(35)	Destination information/Area information	
	(36)	Printable area setting	
	(37)	Top offset for each bin	MP tray/Cassette 2/Cassette 3/Cassette 4
	(38)	Left offset for each bin	MP tray/Cassette 2/Cassette 3/Cassette 4
	(39)	Margin/Page length/Page width settings	Top margin integer part/Top margin decimal part/ Left margin integer part/Left margin decimal part/ Page length integer part/Page length decimal part/ Page width integer part/Page width decimal part
	(40)	Panel lock information/USB information	Panel lock 0: OFF/1: Partial lock/2: Full lock USB 0: Not installed/1: Full speed/2: Hi speed
	(41)	RFID information	
	(42)	Maintenance information	
Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.			
U001	Exiting the maintenance mode Description Exits the maintenance mode and returns to the normal copy mode. Purpose To exit the maintenance mode. Method Press the start key. The normal copy mode is entered.		
U002	Setting the factory default data Description Restores the machine conditions to the factory default settings. Purpose To move the mirror frame of the scanner to the position for transport (position in which the frame can be fixed). Method 1. Press the start key. 2. Press [MODE1(ALL)] on the touch panel. 3. Press the start key. The mirror frame of the scanner returns to the position for transport. 4. Turn the main power switch off and on. An error code is displayed in case of an initialization error. Refer to the table of the error codes on P.1-3-15. When ERROR 09 occurred, turn main power switch off then on, format the hard disk using maintenance item U024, and execute initialization using maintenance item U002. For other errors occurred, turn main power switch off then on, and execute initialization using maintenance item U002.		

Maintenance item No.	Description						
U003	Setting the service telephone number Description Sets the telephone number to be displayed when a service call code is detected. Purpose To set the telephone number to call service when installing the machine. Method Press the start key. The currently set telephone number is displayed. Setting 1. Press the start key. The keys to enter the number are displayed on the touch panel. 2. Enter a telephone number (up to 15 digits). 3. Press the start key. The setting is set. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.						
U004	Displaying the machine number Description Displays the machine number. Purpose To check the machine number. Method Press the start key. The currently machine number is displayed. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.						
U005	Copying without paper Description Simulates the copy operation without paper feed. Purpose To check the overall operation of the machine. Method 1. Press the start key. 2. Select the item to be operated. <table border="1"> <thead> <tr> <th>Display</th><th>Operation</th></tr> </thead> <tbody> <tr> <td>MFP</td><td>Only the machine operates.</td></tr> <tr> <td>MFP + DP</td><td>Both the machine and DP operate (continuous operation).</td></tr> </tbody> </table> 3. Press the start key. 4. Press the system menu key. The copy mode screen is displayed. 5. Set the operation conditions required on the copy mode screen. Changes in the following settings can be made. Paper feed locations Magnifications Simplex or duplex copy mode Number of copies: in simplex copy mode, continuous copying is performed when set to 999; in duplex copy mode, continuous copying is performed regardless of the setting. Copy density Keys on the operation panel 6. To control the paper feed pulley, remove all the paper in the drawers, or the drawers. With the paper present, the paper feed pulley does not operate. 7. Press the start key. The operation starts. Copy operation is simulated without paper under the set conditions. To stop continuous operation, press the stop key. 8. To return to the screen for selecting an item, press the system menu key. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.	Display	Operation	MFP	Only the machine operates.	MFP + DP	Both the machine and DP operate (continuous operation).
Display	Operation						
MFP	Only the machine operates.						
MFP + DP	Both the machine and DP operate (continuous operation).						

Maintenance item No.	Description																																				
U019	Displaying the ROM version Description Displays the part number of the ROM fitted to each PWB. Purpose To check the part number or to decide, if the newest version of ROM is installed. Method 1. Press the start key. The ROM version are displayed. 2. Change the screen using the cursor up/down keys. <table border="1"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr><td>MAIN</td><td>Main PWB ROM IC</td></tr> <tr><td>MMI</td><td>Operation PWB ROM IC</td></tr> <tr><td>ENGINE</td><td>Engine PWB ROM IC</td></tr> <tr><td>ENGINE BOOT</td><td>Engine PWB booting</td></tr> <tr><td>OPTION LANGUAGE</td><td>Optional language ROM IC</td></tr> <tr><td>DICTIONARY</td><td>-</td></tr> <tr><td>DP</td><td>Optional DP main PWB ROM IC</td></tr> <tr><td>OPTION CASSETTE</td><td>Optional paper feeder main PWB ROM IC</td></tr> <tr><td>INNER DF</td><td>Optional built-in finisher main PWB ROM IC</td></tr> <tr><td>SIMPLE DF MAIN</td><td>Optional document finisher main PWB ROM IC</td></tr> <tr><td>ENGINE POWER</td><td>Engine power CPU</td></tr> <tr><td>FAX BOOT1</td><td>Optional fax control PWB booting (port 1)</td></tr> <tr><td>FAX APL1</td><td>Optional fax control PWB APL (port 1)</td></tr> <tr><td>FAX IPL1</td><td>Optional fax control PWB IPL (port 1)</td></tr> <tr><td>FAX BOOT2</td><td>Fax control PWB booting (port 2: optional dual FAX)</td></tr> <tr><td>FAX APL2</td><td>Fax control PWB APL (port 2: optional dual FAX)</td></tr> <tr><td>FAX IPL2</td><td>Fax control PWB IPL (port 2: optional dual FAX)</td></tr> </tbody> </table> Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.	Display	Description	MAIN	Main PWB ROM IC	MMI	Operation PWB ROM IC	ENGINE	Engine PWB ROM IC	ENGINE BOOT	Engine PWB booting	OPTION LANGUAGE	Optional language ROM IC	DICTIONARY	-	DP	Optional DP main PWB ROM IC	OPTION CASSETTE	Optional paper feeder main PWB ROM IC	INNER DF	Optional built-in finisher main PWB ROM IC	SIMPLE DF MAIN	Optional document finisher main PWB ROM IC	ENGINE POWER	Engine power CPU	FAX BOOT1	Optional fax control PWB booting (port 1)	FAX APL1	Optional fax control PWB APL (port 1)	FAX IPL1	Optional fax control PWB IPL (port 1)	FAX BOOT2	Fax control PWB booting (port 2: optional dual FAX)	FAX APL2	Fax control PWB APL (port 2: optional dual FAX)	FAX IPL2	Fax control PWB IPL (port 2: optional dual FAX)
Display	Description																																				
MAIN	Main PWB ROM IC																																				
MMI	Operation PWB ROM IC																																				
ENGINE	Engine PWB ROM IC																																				
ENGINE BOOT	Engine PWB booting																																				
OPTION LANGUAGE	Optional language ROM IC																																				
DICTIONARY	-																																				
DP	Optional DP main PWB ROM IC																																				
OPTION CASSETTE	Optional paper feeder main PWB ROM IC																																				
INNER DF	Optional built-in finisher main PWB ROM IC																																				
SIMPLE DF MAIN	Optional document finisher main PWB ROM IC																																				
ENGINE POWER	Engine power CPU																																				
FAX BOOT1	Optional fax control PWB booting (port 1)																																				
FAX APL1	Optional fax control PWB APL (port 1)																																				
FAX IPL1	Optional fax control PWB IPL (port 1)																																				
FAX BOOT2	Fax control PWB booting (port 2: optional dual FAX)																																				
FAX APL2	Fax control PWB APL (port 2: optional dual FAX)																																				
FAX IPL2	Fax control PWB IPL (port 2: optional dual FAX)																																				

Maintenance item No.	Description																																				
U020	Initializing all data Description Initializes all the backup RAM on the main PWB to return to the original settings. Refer to *1 of the maintenance mode item list about the item initialized. Also, initializes the settings with the system menu in order to restore default settings simultaneously. Reregister the fax settings since the settings are initialized when the fax kit is installed. Purpose To be executed as required. Caution Run the maintenance item U411 (Adjusting the scanner automatically) after initialization (see page 1-3-68). Method 1. Press the start key. 2. Select the destination. <table border="1"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>INCH</td><td>Inch (North America) specifications</td></tr> <tr> <td>EUROPE METRIC</td><td>Metric (Europe) specifications</td></tr> <tr> <td>ASIA PACIFIC</td><td>Metric (Asia Pacific) specifications</td></tr> </tbody> </table> 3. Press the start key. All data in the backup RAM is initialized. 4. Turn the main power switch off and on. An error code is displayed in case of an initialization error. When ERROR 09 occurred, turn main power switch off then on, format the hard disk using maintenance item U024, and execute initialization using maintenance item U020. For other errors occurred, turn main power switch off then on, and execute initialization using maintenance item U020. Error codes <table border="1"> <thead> <tr> <th>Codes</th><th>Description</th></tr> </thead> <tbody> <tr><td>ERROR 01</td><td>Configuration initialization error</td></tr> <tr><td>ERROR 02</td><td>Counter initialization error</td></tr> <tr><td>ERROR 03</td><td>One-touch initialization error</td></tr> <tr><td>ERROR 04</td><td>Panel program initialization error</td></tr> <tr><td>ERROR 05</td><td>Event log initialization error</td></tr> <tr><td>ERROR 06</td><td>Account initialization error</td></tr> <tr><td>ERROR 07</td><td>Address book initialization error</td></tr> <tr><td>ERROR 08</td><td>Department initialization error</td></tr> <tr><td>ERROR 09</td><td>Document box initialization error</td></tr> <tr><td>ERROR 0a</td><td>Permissibility initialization error</td></tr> <tr><td>ERROR 0b</td><td>Job log initialization error</td></tr> <tr><td>ERROR 20</td><td>Engine initialization error</td></tr> <tr><td>ERROR 40</td><td>Scanner initialization error</td></tr> </tbody> </table>	Display	Description	INCH	Inch (North America) specifications	EUROPE METRIC	Metric (Europe) specifications	ASIA PACIFIC	Metric (Asia Pacific) specifications	Codes	Description	ERROR 01	Configuration initialization error	ERROR 02	Counter initialization error	ERROR 03	One-touch initialization error	ERROR 04	Panel program initialization error	ERROR 05	Event log initialization error	ERROR 06	Account initialization error	ERROR 07	Address book initialization error	ERROR 08	Department initialization error	ERROR 09	Document box initialization error	ERROR 0a	Permissibility initialization error	ERROR 0b	Job log initialization error	ERROR 20	Engine initialization error	ERROR 40	Scanner initialization error
Display	Description																																				
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ERROR 08	Department initialization error																																				
ERROR 09	Document box initialization error																																				
ERROR 0a	Permissibility initialization error																																				
ERROR 0b	Job log initialization error																																				
ERROR 20	Engine initialization error																																				
ERROR 40	Scanner initialization error																																				

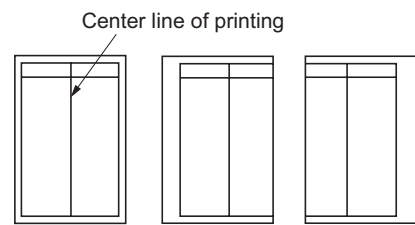
Maintenance item No.	Description																
U021	Initializing counters and mode settings Description Initializes all settings, except those pertinent to the type of machine, namely each counter, service call history and mode setting. Also initializes backup RAM according to region specification selected in maintenance item U252 Setting the destination. Refer to *2 of the maintenance mode item list about the item initialized. Purpose To return the machine settings to their factory default. Method 1. Press the start key. 2. Press [EXECUTE] on the touch panel. 3. Press the start key. All data other than that for adjustments due to variations between machines is initialized based on the destination setting. 4. Turn the main power switch off and on. An error code is displayed in case of an initialization error. Refer to the table of the error codes on P.1-3-15. When ERROR 09 occurred, turn main power switch off then on, format the hard disk using maintenance item U024, and execute initialization using maintenance item U021. For other errors occurred, turn main power switch off then on, and execute initialization using maintenance item U021.																
U022	Initializing backup memory Description Initializes only the backup data for image processing. Also, initializes the settings with the system menu in order to restore default settings simultaneously when [MAIN+ENGINE] is selected. Reregister the fax settings since the settings are initialized when the fax kit is installed. Purpose To be executed as required. Caution Run the maintenance item U411 (Adjusting the scanner automatically) after initialization the backup data of scanner or DP main PWB (see page 1-3-68). Method 1. Press the start key. 2. Select the item to initialize. <table border="1"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>MAIN+ENGINE</td><td>Initialize the backup data of main PWB and engine PWB.</td></tr> <tr> <td>SCANNER</td><td>Initialize the backup data of scanner.</td></tr> <tr> <td>DP</td><td>Initialize the backup data of DP main PWB.</td></tr> </tbody> </table> 3. When selecting [MAIN+ENGINE], select the destination. <table border="1"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>INCH</td><td>Inch (North America) specifications</td></tr> <tr> <td>EUROPE METRIC</td><td>Metric (Europe) specifications</td></tr> <tr> <td>ASIA PACIFIC</td><td>Metric (Asia Pacific) specifications</td></tr> </tbody> </table> 4. Press the start key. All data in the backup RAM is initialized. 5. Turn the main power switch off and on. An error code is displayed in case of an initialization error. Refer to the table of the error codes on P.1-3-15. When ERROR 09 occurred, turn main power switch off then on, format the hard disk using maintenance item U024, and execute initialization using maintenance item U022. For other errors occurred, turn main power switch off then on, and execute initialization using maintenance item U022.	Display	Description	MAIN+ENGINE	Initialize the backup data of main PWB and engine PWB.	SCANNER	Initialize the backup data of scanner.	DP	Initialize the backup data of DP main PWB.	Display	Description	INCH	Inch (North America) specifications	EUROPE METRIC	Metric (Europe) specifications	ASIA PACIFIC	Metric (Asia Pacific) specifications
Display	Description																
MAIN+ENGINE	Initialize the backup data of main PWB and engine PWB.																
SCANNER	Initialize the backup data of scanner.																
DP	Initialize the backup data of DP main PWB.																
Display	Description																
INCH	Inch (North America) specifications																
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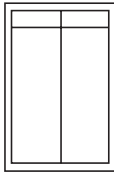
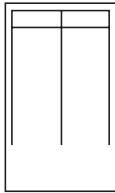
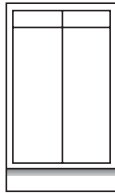
Maintenance item No.	Description												
U024	HDD formatting Description Initializes the HDD. In addition, the following settings are also initialized by initializing the HDD. System menu (user login administration, job accounting, address book, one-touch keys and document box etc.), shortcuts and panel programs Purpose To initialize the HDD when replacing the HDD after shipping. Method 1. Press the start key. 2. Press [EXECUTE] on the touch panel. 3. Press the start key to initialize the hard disk. 4. Turn the main power switch off and on.												
U030	Checking motor operation Description Drives each motor. Purpose To check the operation of each motor. Method 1. Press the start key. 2. Select the motor to be operated. 3. Press the start key. The operation starts. <table border="1"> <thead> <tr> <th>Display</th><th>Operation</th></tr> </thead> <tbody> <tr> <td>FEED</td><td>Paper feed motor operates</td></tr> <tr> <td>MAIN</td><td>Main motor operates</td></tr> <tr> <td>EJECT(FW)</td><td>Eject motor rotates forward</td></tr> <tr> <td>EJECT(REV)</td><td>Eject motor rotates in reverse</td></tr> <tr> <td>DRUM</td><td>Drum motor operates</td></tr> </tbody> </table> 4. To stop operation, press the stop key. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.	Display	Operation	FEED	Paper feed motor operates	MAIN	Main motor operates	EJECT(FW)	Eject motor rotates forward	EJECT(REV)	Eject motor rotates in reverse	DRUM	Drum motor operates
Display	Operation												
FEED	Paper feed motor operates												
MAIN	Main motor operates												
EJECT(FW)	Eject motor rotates forward												
EJECT(REV)	Eject motor rotates in reverse												
DRUM	Drum motor operates												

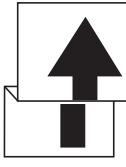
Maintenance item No.	Description																						
U031	Checking switches for paper conveying Description Displays the on-off status of each paper detection switch on the paper path. Purpose To check if the switches for paper conveying operate correctly. Method 1. Press the start key. 2. Turn each switch on and off manually to check the status. When a switch is detected to be in the ON position, the display for that switch will be highlighted. <table border="1"> <thead> <tr> <th>Display</th><th>Switches</th></tr> </thead> <tbody> <tr> <td>FEED1</td><td>Feed switch 1 (FSW1)</td></tr> <tr> <td>FEED2</td><td>Feed switch 2 (FSW2)</td></tr> <tr> <td>FEED3</td><td>Feed switch 3 (FSW3)</td></tr> <tr> <td>MP TRAY</td><td>MP feed switch (MPFSW)</td></tr> <tr> <td>REGIST</td><td>Registration switch (RSW)</td></tr> <tr> <td>EJECT</td><td>Eject switch (ESW)</td></tr> <tr> <td>BRANCH</td><td>Feedshift switch (FSSW)</td></tr> <tr> <td>DUPLEX</td><td>Duplex paper conveying switch (DUPPCSW)</td></tr> <tr> <td>JOB SEPARATOR</td><td>Job separator eject switch (JBESW)*</td></tr> </tbody> </table> *: Optional. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.	Display	Switches	FEED1	Feed switch 1 (FSW1)	FEED2	Feed switch 2 (FSW2)	FEED3	Feed switch 3 (FSW3)	MP TRAY	MP feed switch (MPFSW)	REGIST	Registration switch (RSW)	EJECT	Eject switch (ESW)	BRANCH	Feedshift switch (FSSW)	DUPLEX	Duplex paper conveying switch (DUPPCSW)	JOB SEPARATOR	Job separator eject switch (JBESW)*		
Display	Switches																						
FEED1	Feed switch 1 (FSW1)																						
FEED2	Feed switch 2 (FSW2)																						
FEED3	Feed switch 3 (FSW3)																						
MP TRAY	MP feed switch (MPFSW)																						
REGIST	Registration switch (RSW)																						
EJECT	Eject switch (ESW)																						
BRANCH	Feedshift switch (FSSW)																						
DUPLEX	Duplex paper conveying switch (DUPPCSW)																						
JOB SEPARATOR	Job separator eject switch (JBESW)*																						
U032	Checking clutch operation Description Turns each clutch on. Purpose To check the operation of each clutch. Method 1. Press the start key. 2. Select the clutch to be operated. 3. Press the start key. The clutch turns on for 1 s. <table border="1"> <thead> <tr> <th>Display</th><th>Clutches</th></tr> </thead> <tbody> <tr> <td>PF1</td><td>Upper paper feed clutch (PFCL-U)</td></tr> <tr> <td>PF2</td><td>Lower paper feed clutch (PFCL-L)</td></tr> <tr> <td>PF MP TRAY</td><td>MP paper feed clutch (MPPFCL)</td></tr> <tr> <td>FEED1</td><td>Feed clutch 1 (FCL1)</td></tr> <tr> <td>FEED2</td><td>Feed clutch 2 (FCL2)</td></tr> <tr> <td>LIFTBYP</td><td>MP paper feed clutch (MPPFCL)</td></tr> <tr> <td>FEED MP TRAY</td><td>MP feed clutch (MPFCL)</td></tr> <tr> <td>REGIST</td><td>Registration clutch (RCL)</td></tr> <tr> <td>DUPLEX</td><td>Duplex feed clutch (DUPFCL)</td></tr> <tr> <td>MOTOR ON</td><td>The main motor (MM) and the paper feed motor (PFM) are turned ON.</td></tr> </tbody> </table> To stop motor driving, press [MOTOR ON] again. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.	Display	Clutches	PF1	Upper paper feed clutch (PFCL-U)	PF2	Lower paper feed clutch (PFCL-L)	PF MP TRAY	MP paper feed clutch (MPPFCL)	FEED1	Feed clutch 1 (FCL1)	FEED2	Feed clutch 2 (FCL2)	LIFTBYP	MP paper feed clutch (MPPFCL)	FEED MP TRAY	MP feed clutch (MPFCL)	REGIST	Registration clutch (RCL)	DUPLEX	Duplex feed clutch (DUPFCL)	MOTOR ON	The main motor (MM) and the paper feed motor (PFM) are turned ON.
Display	Clutches																						
PF1	Upper paper feed clutch (PFCL-U)																						
PF2	Lower paper feed clutch (PFCL-L)																						
PF MP TRAY	MP paper feed clutch (MPPFCL)																						
FEED1	Feed clutch 1 (FCL1)																						
FEED2	Feed clutch 2 (FCL2)																						
LIFTBYP	MP paper feed clutch (MPPFCL)																						
FEED MP TRAY	MP feed clutch (MPFCL)																						
REGIST	Registration clutch (RCL)																						
DUPLEX	Duplex feed clutch (DUPFCL)																						
MOTOR ON	The main motor (MM) and the paper feed motor (PFM) are turned ON.																						

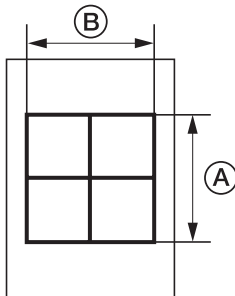
Maintenance item No.	Description								
U033	Checking solenoid operation Description Applies current to each solenoid in order to check its ON status. Purpose To check the operation of each solenoid. Method 1. Press the start key. 2. Select the solenoid to be operated. 3. Press the start key. The solenoid turns on for 1 s. <table border="1"> <thead> <tr> <th>Display</th><th>Solenoids</th></tr> </thead> <tbody> <tr> <td>BRANCH1</td><td>Feedshift solenoid (FSSOL)</td></tr> <tr> <td>BRANCH2</td><td>Feedshift solenoid (FSSOL)*</td></tr> <tr> <td>MOTOR ON</td><td>The main motor (MM) and the paper feed motor (PFM) are turned on.</td></tr> </tbody> </table> *Optional. To stop motor driving, press [MOTOR ON] again. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.	Display	Solenoids	BRANCH1	Feedshift solenoid (FSSOL)	BRANCH2	Feedshift solenoid (FSSOL)*	MOTOR ON	The main motor (MM) and the paper feed motor (PFM) are turned on.
Display	Solenoids								
BRANCH1	Feedshift solenoid (FSSOL)								
BRANCH2	Feedshift solenoid (FSSOL)*								
MOTOR ON	The main motor (MM) and the paper feed motor (PFM) are turned on.								

Maintenance item No.	Description																																	
U034	Adjusting the print start timing Description Adjusts the leading edge registration or center line. Purpose Make the adjustment if there is a regular error between the leading edges of the copy image and original. Make the adjustment if there is a regular error between the center lines of the copy image and original. Method - Press the start key. - Select the item to be adjusted. The setting screen for the selected item is displayed. <table><tr><th>Display</th><th>Description</th></tr><tr><td>LSU OUT TOP</td><td>Leading edge registration adjustment</td></tr><tr><td>LSU OUT LEFT</td><td>Center line adjustment</td></tr><tr><td>LSU OUT END</td><td>Trailing edge registration adjustment</td></tr></table> Adjustment: Leading edge registration adjustment - Select the item to be adjusted. <table><tr><th>Display</th><th>Description</th><th>Setting range</th><th>Initial setting</th><th>Change in value per step</th></tr><tr><td>TOP</td><td>Adjustment of reference value</td><td>0 to 500</td><td>120</td><td>0.042 mm</td></tr><tr><td>MP TRAY</td><td>Paper feed from MP tray*</td><td>-250 to 250</td><td>0</td><td>0.042 mm</td></tr><tr><td>CASSETTE</td><td>Paper feed from cassette*</td><td>-250 to 250</td><td>0</td><td>0.042 mm</td></tr><tr><td>DUPLEX</td><td>Duplex mode (second side)*</td><td>-250 to 250</td><td>0</td><td>0.042 mm</td></tr></table> *: Setting the difference value from reference value - Press the system menu key. - Press the start key to output a test pattern. - Press the system menu key. - Change the setting value using the +/- or numeric keys. For output example 1, decrease the value. For output example 2, increase the value. Leading edge registration Correct image Output example 1 Output example 2 Figure 1-3-4 - Press the start key. The value is set. Caution Check the copy image after the adjustment. If the image is still incorrect, perform the following adjustments in maintenance mode. U034 → U066 (P.1-3-28) → U071 (P.1-3-32)	Display	Description	LSU OUT TOP	Leading edge registration adjustment	LSU OUT LEFT	Center line adjustment	LSU OUT END	Trailing edge registration adjustment	Display	Description	Setting range	Initial setting	Change in value per step	TOP	Adjustment of reference value	0 to 500	120	0.042 mm	MP TRAY	Paper feed from MP tray*	-250 to 250	0	0.042 mm	CASSETTE	Paper feed from cassette*	-250 to 250	0	0.042 mm	DUPLEX	Duplex mode (second side)*	-250 to 250	0	0.042 mm
Display	Description																																	
LSU OUT TOP	Leading edge registration adjustment																																	
LSU OUT LEFT	Center line adjustment																																	
LSU OUT END	Trailing edge registration adjustment																																	
Display	Description	Setting range	Initial setting	Change in value per step																														
TOP	Adjustment of reference value	0 to 500	120	0.042 mm																														
MP TRAY	Paper feed from MP tray*	-250 to 250	0	0.042 mm																														
CASSETTE	Paper feed from cassette*	-250 to 250	0	0.042 mm																														
DUPLEX	Duplex mode (second side)*	-250 to 250	0	0.042 mm																														

Maintenance item No.	Description																																								
U034	Adjustment: Center line adjustment																																								
	1. Select the item to be adjusted.																																								
	<table><thead><tr><th>Display</th><th>Description</th><th>Setting range</th><th>Initial setting</th><th>Change in value per step</th></tr></thead><tbody><tr><td>LEFT</td><td>Adjustment of reference value</td><td>0 to 1000</td><td>180</td><td>0.042 mm</td></tr><tr><td>MP TRAY</td><td>Paper feed from MP tray*</td><td>-500 to 500</td><td>0</td><td>0.042 mm</td></tr><tr><td>CASSETTE 1</td><td>Paper feed from cassette 1*</td><td>-500 to 500</td><td>0</td><td>0.042 mm</td></tr><tr><td>CASSETTE 2</td><td>Paper feed from cassette 2*</td><td>-500 to 500</td><td>0</td><td>0.042 mm</td></tr><tr><td>CASSETTE 3</td><td>Paper feed from optional cassette 3*</td><td>-500 to 500</td><td>0</td><td>0.042 mm</td></tr><tr><td>CASSETTE 4</td><td>Paper feed from optional cassette 4*</td><td>-500 to 500</td><td>0</td><td>0.042 mm</td></tr><tr><td>DUPLEX</td><td>Duplex mode (second side)*</td><td>-500 to 500</td><td>0</td><td>0.042 mm</td></tr></tbody></table>	Display	Description	Setting range	Initial setting	Change in value per step	LEFT	Adjustment of reference value	0 to 1000	180	0.042 mm	MP TRAY	Paper feed from MP tray*	-500 to 500	0	0.042 mm	CASSETTE 1	Paper feed from cassette 1*	-500 to 500	0	0.042 mm	CASSETTE 2	Paper feed from cassette 2*	-500 to 500	0	0.042 mm	CASSETTE 3	Paper feed from optional cassette 3*	-500 to 500	0	0.042 mm	CASSETTE 4	Paper feed from optional cassette 4*	-500 to 500	0	0.042 mm	DUPLEX	Duplex mode (second side)*	-500 to 500	0	0.042 mm
	Display	Description	Setting range	Initial setting	Change in value per step																																				
	LEFT	Adjustment of reference value	0 to 1000	180	0.042 mm																																				
	MP TRAY	Paper feed from MP tray*	-500 to 500	0	0.042 mm																																				
	CASSETTE 1	Paper feed from cassette 1*	-500 to 500	0	0.042 mm																																				
	CASSETTE 2	Paper feed from cassette 2*	-500 to 500	0	0.042 mm																																				
	CASSETTE 3	Paper feed from optional cassette 3*	-500 to 500	0	0.042 mm																																				
	CASSETTE 4	Paper feed from optional cassette 4*	-500 to 500	0	0.042 mm																																				
DUPLEX	Duplex mode (second side)*	-500 to 500	0	0.042 mm																																					
*: Setting the difference value from reference value																																									
2. Press the system menu key.																																									
3. Press the start key to output a test pattern.																																									
4. Press the system menu key.																																									
5. Change the setting value using the +/- or numeric keys.																																									
For output example 1, decrease the value. For output example 2, increase the value.																																									
Center line of printing  Correct image Output example 1 Output example 2																																									
Figure 1-3-5																																									
6. Press the start key. The value is set.																																									
Caution																																									
Check the copy image after the adjustment. If the image is still incorrect, perform the following adjustments in maintenance mode.																																									
U034 → U067 (P.1-3-29) → U072 (P.1-3-34)																																									

Maintenance item No.	Description												
U034	Adjustment: Trailing edge registration adjustment 1. Select [END]. <table><tr><th>Display</th><th>Description</th><th>Setting range</th><th>Initial setting</th><th>Change in value per step</th></tr><tr><td>END</td><td>Trailing edge registration adjustment</td><td>-40 to 100</td><td>0</td><td>1 ms</td></tr></table> 2. Press the system menu key. 3. Press the start key to output a test pattern. 4. Press the system menu key. 5. Change the setting value using the +/- or numeric keys. For output example 1, decrease the value. For output example 2, increase the value.  Correct image  Output example 1  Output example 2 Figure 1-3-6 6. Press the start key. The value is set. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.	Display	Description	Setting range	Initial setting	Change in value per step	END	Trailing edge registration adjustment	-40 to 100	0	1 ms		
Display	Description	Setting range	Initial setting	Change in value per step									
END	Trailing edge registration adjustment	-40 to 100	0	1 ms									
U035	Setting the printing area for folio paper Description Changes the printing area for copying on folio paper. Purpose To prevent cropped images on the trailing edge or left/right side of copy paper by setting the actual printing area for folio paper. Setting 1. Press the start key. 2. Select the item to be set. 3. Change the setting using the +/- keys. <table><tr><th>Display</th><th>Setting</th><th>Setting range</th><th>Initial setting</th></tr><tr><td>LENGTH DATA</td><td>Length</td><td>330 to 356 mm</td><td>330</td></tr><tr><td>WIDTH DATA</td><td>Width</td><td>200 to 220 mm</td><td>210</td></tr></table> 4. Press the start key. The value is set. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.	Display	Setting	Setting range	Initial setting	LENGTH DATA	Length	330 to 356 mm	330	WIDTH DATA	Width	200 to 220 mm	210
Display	Setting	Setting range	Initial setting										
LENGTH DATA	Length	330 to 356 mm	330										
WIDTH DATA	Width	200 to 220 mm	210										

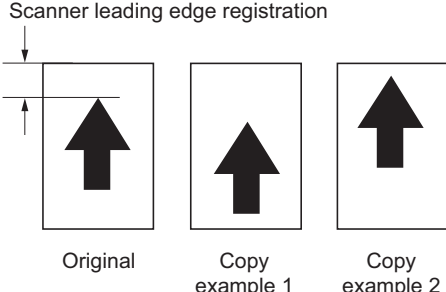
Maintenance item No.	Description																								
U051	Adjusting the deflection in the paper Description Adjusts the deflection in the paper. Purpose Make the adjustment if the leading edge of the copy image is missing or varies randomly, or if the copy paper is Z-folded. Adjustment 1. Press the start key. 2. Select the item to be adjusted. <table><tr><th>Display</th><th>Description</th><th>Setting range</th><th>Initial setting</th></tr><tr><td>MP TRAY</td><td>Paper feed from MP tray</td><td>-50 to 127</td><td>0</td></tr><tr><td>CASSETTE</td><td>Paper feed from cassette 1</td><td>-50 to 127</td><td>50</td></tr><tr><td>CASSETTE2</td><td>Paper feed from cassette 2</td><td>-50 to 127</td><td>50</td></tr><tr><td>DUPLEX</td><td>Duplex mode (second side)</td><td>-50 to 127</td><td>40</td></tr><tr><td>MP TRAY (THICK)</td><td>Paper feed from MP tray (thick paper)</td><td>-50 to 127</td><td>10</td></tr></table> 3. Press the system menu key. 4. Place an original and press the start key to make a test copy. 5. Press the system menu key. 6. Change the setting value using the +/- or numeric keys. For output example 1, increase the value. For output example 2, decrease the value. The greater the value, the larger the deflection; the smaller the value, the smaller the deflection.  Original  Copy example 1  Copy example 2 Figure 1-3-7 7. Press the start key. The value is set. Completion Press the stop key. The indication for selecting a maintenance item No. appears.	Display	Description	Setting range	Initial setting	MP TRAY	Paper feed from MP tray	-50 to 127	0	CASSETTE	Paper feed from cassette 1	-50 to 127	50	CASSETTE2	Paper feed from cassette 2	-50 to 127	50	DUPLEX	Duplex mode (second side)	-50 to 127	40	MP TRAY (THICK)	Paper feed from MP tray (thick paper)	-50 to 127	10
Display	Description	Setting range	Initial setting																						
MP TRAY	Paper feed from MP tray	-50 to 127	0																						
CASSETTE	Paper feed from cassette 1	-50 to 127	50																						
CASSETTE2	Paper feed from cassette 2	-50 to 127	50																						
DUPLEX	Duplex mode (second side)	-50 to 127	40																						
MP TRAY (THICK)	Paper feed from MP tray (thick paper)	-50 to 127	10																						

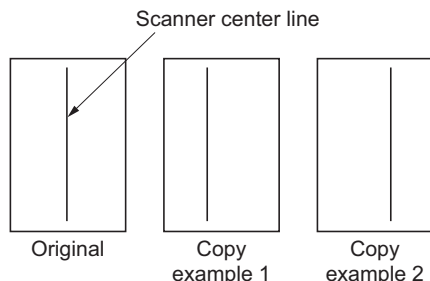
Maintenance item No.	Description																																								
U053	Setting the adjustment of the motor speed Description Performs fine adjustment of the speeds of the motors. Purpose To adjust the speed of the respective motors when the magnification is not correct. Method 1. Press the start key. 2. Select the item to be adjusted. <table><tr><th>Display</th><th>Description</th><th>Setting range</th><th>Initial setting</th><th>Change in value per step</th></tr><tr><td>ALL</td><td>Main motor, drum motor, paper feed motor and eject motor speed adjustment</td><td>-40 to 40</td><td>0</td><td>0.25 %</td></tr><tr><td>MAIN MOTOR</td><td>Main motor speed adjustment*1</td><td>-40 to 40</td><td>-1</td><td>0.25 %</td></tr><tr><td>DRUM MOTOR</td><td>Drum motor speed adjustment*1</td><td>-40 to 40</td><td>-2</td><td>0.25 %</td></tr><tr><td>FEED MOTOR</td><td>Paper feed motor speed adjustment*1</td><td>-40 to 40</td><td>0</td><td>0.25 %</td></tr><tr><td>EJECT MOTOR</td><td>Eject motor speed adjustment*1</td><td>-40 to 40</td><td>2</td><td>0.25 %</td></tr><tr><td>POLYGON MOTOR</td><td>Polygon motor speed adjustment</td><td>-20 to 20</td><td>-8</td><td>-</td></tr><tr><td>DF MOTOR</td><td>Paper conveying motor speed adjustment*2</td><td>-40 to 40</td><td>0</td><td>0.25 %</td></tr></table> *1: Correction value for the [ALL] value *2: Optional built-in finisher Adjustment 1. Press the system menu key. 2. Press the start key to output an A3/Ledger VTC pattern.  Correct values for an A3/Ledger output are: A = 300 ± 1.0 mm B = 260 ± 1.0 mm Figure 1-3-8 3. Press the system menu key. 4. A: Magnification in the auxiliary scanning direction 1) Select [ALL]. 2) Change the setting value using the +/- or numeric keys. Increasing the setting makes the image longer in the auxiliary scanning direction, and decreasing it makes the image shorter in the auxiliary scanning direction. B: Magnification in the main scanning direction 1) Select [POLYGON MOTOR]. 2) Change the setting value using the +/- or numeric keys. Increasing the setting makes the image shorter in the main scanning direction, and decreasing it makes the image longer in the main scanning direction. 5. Press the start key. The value is set. Completion Press the stop key. The indication for selecting a maintenance item No. appears.	Display	Description	Setting range	Initial setting	Change in value per step	ALL	Main motor, drum motor, paper feed motor and eject motor speed adjustment	-40 to 40	0	0.25 %	MAIN MOTOR	Main motor speed adjustment*1	-40 to 40	-1	0.25 %	DRUM MOTOR	Drum motor speed adjustment*1	-40 to 40	-2	0.25 %	FEED MOTOR	Paper feed motor speed adjustment*1	-40 to 40	0	0.25 %	EJECT MOTOR	Eject motor speed adjustment*1	-40 to 40	2	0.25 %	POLYGON MOTOR	Polygon motor speed adjustment	-20 to 20	-8	-	DF MOTOR	Paper conveying motor speed adjustment*2	-40 to 40	0	0.25 %
Display	Description	Setting range	Initial setting	Change in value per step																																					
ALL	Main motor, drum motor, paper feed motor and eject motor speed adjustment	-40 to 40	0	0.25 %																																					
MAIN MOTOR	Main motor speed adjustment*1	-40 to 40	-1	0.25 %																																					
DRUM MOTOR	Drum motor speed adjustment*1	-40 to 40	-2	0.25 %																																					
FEED MOTOR	Paper feed motor speed adjustment*1	-40 to 40	0	0.25 %																																					
EJECT MOTOR	Eject motor speed adjustment*1	-40 to 40	2	0.25 %																																					
POLYGON MOTOR	Polygon motor speed adjustment	-20 to 20	-8	-																																					
DF MOTOR	Paper conveying motor speed adjustment*2	-40 to 40	0	0.25 %																																					

Maintenance item No.	Description											
U055	Setting the motor periodic drive											
	Description											
	Specifies ON/OFF the drum small rotation mode.											
	Purpose											
	Set to ON if dribbling occurs on the image.											
	Setting											
	1. Press the start key.											
	2. Select ON or OFF.											
	<table><tr><th>Display</th><th>Description</th></tr><tr><td>ON</td><td>Drum small rotation mode ON</td></tr><tr><td>OFF</td><td>Drum small rotation mode OFF</td></tr></table>				Display	Description	ON	Drum small rotation mode ON	OFF	Drum small rotation mode OFF		
	Display	Description										
ON	Drum small rotation mode ON											
OFF	Drum small rotation mode OFF											
Initial setting: ON												
3. Press the start key. The setting is set.												
Completion												
Press the stop key. The screen for selecting a maintenance item No. is displayed.												
U059	Setting fan mode											
	Description											
	Sets the time of period cooling fan motor 1 is driven.											
	Purpose											
	To be executed as required.											
	Method											
	1. Press the start key.											
	2. Change the setting using the +/- keys.											
	<table><tr><th>Display</th><th>Description</th><th>Setting range</th><th>Initial setting</th></tr><tr><td>FAN1</td><td>Time of period the fan is driven after printing is completed</td><td>0 to 250 (s)</td><td>45</td></tr></table>				Display	Description	Setting range	Initial setting	FAN1	Time of period the fan is driven after printing is completed	0 to 250 (s)	45
	Display	Description	Setting range	Initial setting								
FAN1	Time of period the fan is driven after printing is completed	0 to 250 (s)	45									
3. Press the start key. The value is set.												
Completion												
Press the stop key. The screen for selecting a maintenance item No. is displayed.												

Maintenance item No.	Description								
U061	Turning the exposure lamp on Description Turns the exposure lamp on. Purpose To check the exposure lamp. Method 1. Press the start key. 2. Select [CCD]. 3. Press the start key. The exposure lamp lights. 4. To turn the exposure lamp off, press the stop key. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.								
U063	Adjusting the shading position Description Changes the shading position of the scanner. Purpose Used when white lines continue to appear longitudinally on the image after the shading plate is cleaned. This is due to flaws or stains inside the shading plate. To prevent this problem, the shading position should be changed so that shading is possible without being affected by the flaws or stains. Method 1. Press the start key. 2. Change the setting using the +/- or numeric keys. <table><tr><th>Description</th><th>Setting range</th><th>Initial setting</th><th>Change in value per step</th></tr><tr><td>Shading position</td><td>-12 to 18</td><td>0</td><td>0.086 mm</td></tr></table> Increasing the setting moves the shading position toward the machine left, and decreasing it moves the position toward the machine right. 3. Press the start key. The value is set. Supplement While this maintenance item is being executed, copying from an original is available in interrupt copying mode (which is activated by pressing the system menu key). Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.	Description	Setting range	Initial setting	Change in value per step	Shading position	-12 to 18	0	0.086 mm
Description	Setting range	Initial setting	Change in value per step						
Shading position	-12 to 18	0	0.086 mm						

Maintenance item No.	Description															
U065	Adjusting the scanner magnification Description Adjusts the magnification of the original scanning. Purpose Make the adjustment if the magnification in the main scanning direction is incorrect. Make the adjustment if the magnification in the auxiliary scanning direction is incorrect. Caution Adjust the magnification of the scanner in the following order. U053 (P.1-3-24) → U065 (main scanning direction) → U065 (auxiliary scanning direction) → U067 (P.1-3-29) → U070 (P.1-3-31) Method - Press the start key. - Select the item to be adjusted. <table><tr><th>Display</th><th>Description</th><th>Setting range</th><th>Initial setting</th><th>Change in value per step</th></tr><tr><td>MAIN SCAN ADJ</td><td>Scanner magnification in the main scanning direction</td><td>-15 to 15</td><td>0</td><td>0.1 %</td></tr><tr><td>SUB SCAN ADJ</td><td>Scanner magnification in the auxiliary scanning direction</td><td>-25 to 25</td><td>0</td><td>0.1 %</td></tr></table> Adjustment: Main scanning direction - Press the system menu key. - Place an original and press the start key to make a test copy. - Press the system menu key. - Change the setting value using the +/- or numeric keys. For copy example 1, increase the value. For copy example 2, decrease the value.  Original  Copy example 1  Copy example 2 Figure 1-3-9 - Press the start key. The value is set. Adjustment: Auxiliary scanning direction - Press the system menu key. - Place an original and press the start key to make a test copy. - Press the system menu key. - Change the setting value using the +/- or numeric keys. For copy example 1, increase the value. For copy example 2, decrease the value.  Original  Copy example 1  Copy example 2 Figure 1-3-10 - Press the start key. The value is set. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.	Display	Description	Setting range	Initial setting	Change in value per step	MAIN SCAN ADJ	Scanner magnification in the main scanning direction	-15 to 15	0	0.1 %	SUB SCAN ADJ	Scanner magnification in the auxiliary scanning direction	-25 to 25	0	0.1 %
Display	Description	Setting range	Initial setting	Change in value per step												
MAIN SCAN ADJ	Scanner magnification in the main scanning direction	-15 to 15	0	0.1 %												
SUB SCAN ADJ	Scanner magnification in the auxiliary scanning direction	-25 to 25	0	0.1 %												

Maintenance item No.	Description															
U066	Adjusting the scanner leading edge registration Description Adjusts the scanner leading edge registration of the original scanning. Purpose Make the adjustment if there is a regular error between the leading edges of the copy image and original. Adjustment 1. Press the start key. 2. Select the item to be adjusted. <table><tr><th>Display</th><th>Description</th><th>Setting range</th><th>Initial setting</th><th>Change in value per step</th></tr><tr><td>ADJUST DATA 1</td><td>Scanner leading edge registration</td><td>-45 to 45</td><td>0</td><td>0.086 mm</td></tr><tr><td>ADJUST DATA2</td><td>Scanner leading edge registration (rotate copying)</td><td>-45 to 45</td><td>0</td><td>0.086 mm</td></tr></table> 3. Press the system menu key. 4. Place an original and press the start key to make a test copy. 5. Press the system menu key. 6. Change the setting value using the +/- or numeric keys. For copy example 1, increase the value. For copy example 2, decrease the value. Scanner leading edge registration  Original Copy example 1 Copy example 2 Figure 1-3-11 7. Press the start key. The value is set. Caution Check the copy image after the adjustment. If the image is still incorrect, perform the following adjustments in maintenance mode. U066 → U403 (P.1-3-65) → U071 (P.1-3-32) → U404 (P.1-3-66) Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.	Display	Description	Setting range	Initial setting	Change in value per step	ADJUST DATA 1	Scanner leading edge registration	-45 to 45	0	0.086 mm	ADJUST DATA2	Scanner leading edge registration (rotate copying)	-45 to 45	0	0.086 mm
Display	Description	Setting range	Initial setting	Change in value per step												
ADJUST DATA 1	Scanner leading edge registration	-45 to 45	0	0.086 mm												
ADJUST DATA2	Scanner leading edge registration (rotate copying)	-45 to 45	0	0.086 mm												

Maintenance item No.	Description															
U067	Adjusting the scanner center line Description Adjusts the scanner center line of the original scanning. Purpose Make the adjustment if there is a regular error between the center lines of the copy image and original. Adjustment 1. Press the start key. 2. Select the item to be adjusted. <table><thead><tr><th>Display</th><th>Description</th><th>Setting range</th><th>Initial setting</th><th>Change in value per step</th></tr></thead><tbody><tr><td>ADJUST DATA 1</td><td>Scanner center line</td><td>-70 to 70</td><td>0</td><td>0.085 mm</td></tr><tr><td>ADJUST DATA 2</td><td>Scanner center line (rotate copying)</td><td>-25 to 25</td><td>0</td><td>0.085 mm</td></tr></tbody></table> 3. Press the system menu key. 4. Place an original and press the start key to make a test copy. 5. Press the system menu key. 6. Change the setting value using the +/- or numeric keys. For copy example 1, decrease the value. For copy example 2, increase the value. Scanner center line  Figure 1-3-12 7. Press the start key. The value is set. Caution Check the copy image after the adjustment. If the image is still incorrect, perform the following adjustments in maintenance mode. U067 → U403 (P.1-3-65) → U072 (P.1-3-34) → U404 (P.1-3-66) Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.	Display	Description	Setting range	Initial setting	Change in value per step	ADJUST DATA 1	Scanner center line	-70 to 70	0	0.085 mm	ADJUST DATA 2	Scanner center line (rotate copying)	-25 to 25	0	0.085 mm
Display	Description	Setting range	Initial setting	Change in value per step												
ADJUST DATA 1	Scanner center line	-70 to 70	0	0.085 mm												
ADJUST DATA 2	Scanner center line (rotate copying)	-25 to 25	0	0.085 mm												

Maintenance item No.	Description															
U068	Adjusting the scanning position for originals from the DP Description Adjusts the position for scanning originals from the DP. Performs the test copy at the four scanning positions after adjusting. Purpose Used when the image fogging occurs because the scanning position is not proper when the DP is used. Run U071 to adjust the timing of DP leading edge when the scanning position is changed. Setting 1. Press the start key. <table><tr><th>Display</th><th>Description</th><th>Setting range</th><th>Initial setting</th><th>Change in value per step</th></tr><tr><td>ADJUST DATA</td><td>Starting position adjustment for scanning originals</td><td>-33 to 33</td><td>0</td><td>0.086 mm</td></tr><tr><td>TEST POSITION</td><td>Scanning position for the test copy originals</td><td>0 to 3</td><td>0</td><td>0.22 mm</td></tr></table> 2. Select [ADJUST DATA] of the screen for selecting an item. 3. Change the setting using the +/- or numeric keys. When the setting value is increased, the scanning position moves to the right and it moves to the left when the setting value is decreased. 4. Press the start key. The value is set. 5. Select [TEST POSITION] of the screen for selecting an item. 6. Select the scanning position using the +/- or numeric keys. 7. Press the start key. The value is set. 8. Set the original (the one which density is known) in the DP and press the system menu key. The screen for the test copy mode is displayed. 9. Press the start key. Test copy is executed. 10. Perform the test copy at each scanning position with the setting value from 0 to 3 and check that no black line appears and the image is normally scanned. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.	Display	Description	Setting range	Initial setting	Change in value per step	ADJUST DATA	Starting position adjustment for scanning originals	-33 to 33	0	0.086 mm	TEST POSITION	Scanning position for the test copy originals	0 to 3	0	0.22 mm
Display	Description	Setting range	Initial setting	Change in value per step												
ADJUST DATA	Starting position adjustment for scanning originals	-33 to 33	0	0.086 mm												
TEST POSITION	Scanning position for the test copy originals	0 to 3	0	0.22 mm												

Maintenance item No.	Description																									
U070	Adjusting the DP magnification Description Adjusts the DP original scanning speed. Purpose Make the adjustment if the magnification is incorrect in the auxiliary scanning direction when the optional DP is used. Method 1. Press the start key. 2. Select the item to be adjusted. <table><thead><tr><th>Display</th><th>Description</th><th>Setting range</th><th>Initial setting</th><th>Change in value per step</th></tr></thead><tbody><tr><td>MAIN ADJ</td><td>Magnification in the auxiliary scanning direction (first page)</td><td>-25 to 25</td><td>0</td><td>0.1 %</td></tr><tr><td>SUB ADJ</td><td>Magnification in the auxiliary scanning direction (second page)</td><td>-25 to 25</td><td>0</td><td>0.1 %</td></tr><tr><td>MAIN ADJ(H)</td><td>Fidelity of magnification in the auxiliary scanning direction at high-speed scanning (first page)</td><td>-25 to 25</td><td>0</td><td>0.1 %</td></tr><tr><td>SUB ADJ(H)</td><td>Fidelity of magnification in the auxiliary scanning direction at high-speed scanning (second page)</td><td>-25 to 25</td><td>0</td><td>0.1 %</td></tr></tbody></table> Adjustment 1. Press the system menu key. 2. Place an original on the DP and press the start key to make a test copy. 3. Press the system menu key. 4. Change the setting value using the +/- or numeric keys. For copy example 1, increase the value. For copy example 2, decrease the value.  Original  Copy example 1  Copy example 2 Figure 1-3-13 5. Press the start key. The value is set. Caution Check the copy image after the adjustment. If the image is still incorrect, perform the following adjustments in maintenance mode. U070 → U071 (P.1-3-32) → U404 (P.1-3-66) Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.	Display	Description	Setting range	Initial setting	Change in value per step	MAIN ADJ	Magnification in the auxiliary scanning direction (first page)	-25 to 25	0	0.1 %	SUB ADJ	Magnification in the auxiliary scanning direction (second page)	-25 to 25	0	0.1 %	MAIN ADJ(H)	Fidelity of magnification in the auxiliary scanning direction at high-speed scanning (first page)	-25 to 25	0	0.1 %	SUB ADJ(H)	Fidelity of magnification in the auxiliary scanning direction at high-speed scanning (second page)	-25 to 25	0	0.1 %
Display	Description	Setting range	Initial setting	Change in value per step																						
MAIN ADJ	Magnification in the auxiliary scanning direction (first page)	-25 to 25	0	0.1 %																						
SUB ADJ	Magnification in the auxiliary scanning direction (second page)	-25 to 25	0	0.1 %																						
MAIN ADJ(H)	Fidelity of magnification in the auxiliary scanning direction at high-speed scanning (first page)	-25 to 25	0	0.1 %																						
SUB ADJ(H)	Fidelity of magnification in the auxiliary scanning direction at high-speed scanning (second page)	-25 to 25	0	0.1 %																						

Maintenance item No.	Description																																													
U071	Adjusting the DP scanning timing Description Adjusts the DP original scanning timing. Purpose Make the adjustment if there is a regular error between the leading or trailing edges of the original and the copy image when the optional DP is used. Method 1. Press the start key. 2. Select the item to be adjusted. <table><thead><tr><th>Display</th><th>Description</th><th>Setting range</th><th>Initial setting</th><th>Change in value per step</th></tr></thead><tbody><tr><td>ADJUST DATA1</td><td>Leading edge registration (first page)</td><td>-32 to 32</td><td>0</td><td>0.196 mm</td></tr><tr><td>ADJUST DATA2</td><td>Trailing edge registration (first page)</td><td>-32 to 32</td><td>0</td><td>0.196 mm</td></tr><tr><td>ADJUST DATA3</td><td>Leading edge registration (second page)</td><td>-32 to 32</td><td>0</td><td>0.196 mm</td></tr><tr><td>ADJUST DATA4</td><td>Trailing edge registration (second page)</td><td>-32 to 32</td><td>0</td><td>0.196 mm</td></tr><tr><td>ADJUST DATA1(H)</td><td>Leading edge registration at high-speed scanning (first page)</td><td>-32 to 32</td><td>0</td><td>0.196 mm</td></tr><tr><td>ADJUST DATA2(H)</td><td>Trailing edge registration at high-speed scanning (first page)</td><td>-32 to 32</td><td>0</td><td>0.196 mm</td></tr><tr><td>ADJUST DATA3(H)</td><td>Leading edge registration at high-speed scanning (second page)</td><td>-32 to 32</td><td>0</td><td>0.196 mm</td></tr><tr><td>ADJUST DATA4(H)</td><td>Trailing edge registration at high-speed scanning (second page)</td><td>-32 to 32</td><td>0</td><td>0.196 mm</td></tr></tbody></table> Adjustment: Leading edge registration 1. Press the system menu key. 2. Place an original on the DP and press the start key to make a test copy. 3. Press the system menu key. 4. Change the setting value using the +/- or numeric keys. For copy example 1, increase the value. For copy example 2, decrease the value.  Original  Copy example 1  Copy example 2 Figure 1-3-14 5. Press the start key. The value is set. Caution Check the copy image after the adjustment. If the image is still incorrect, perform the following adjustments in maintenance mode. U071 → U404 (P.1-3-66)	Display	Description	Setting range	Initial setting	Change in value per step	ADJUST DATA1	Leading edge registration (first page)	-32 to 32	0	0.196 mm	ADJUST DATA2	Trailing edge registration (first page)	-32 to 32	0	0.196 mm	ADJUST DATA3	Leading edge registration (second page)	-32 to 32	0	0.196 mm	ADJUST DATA4	Trailing edge registration (second page)	-32 to 32	0	0.196 mm	ADJUST DATA1(H)	Leading edge registration at high-speed scanning (first page)	-32 to 32	0	0.196 mm	ADJUST DATA2(H)	Trailing edge registration at high-speed scanning (first page)	-32 to 32	0	0.196 mm	ADJUST DATA3(H)	Leading edge registration at high-speed scanning (second page)	-32 to 32	0	0.196 mm	ADJUST DATA4(H)	Trailing edge registration at high-speed scanning (second page)	-32 to 32	0	0.196 mm
Display	Description	Setting range	Initial setting	Change in value per step																																										
ADJUST DATA1	Leading edge registration (first page)	-32 to 32	0	0.196 mm																																										
ADJUST DATA2	Trailing edge registration (first page)	-32 to 32	0	0.196 mm																																										
ADJUST DATA3	Leading edge registration (second page)	-32 to 32	0	0.196 mm																																										
ADJUST DATA4	Trailing edge registration (second page)	-32 to 32	0	0.196 mm																																										
ADJUST DATA1(H)	Leading edge registration at high-speed scanning (first page)	-32 to 32	0	0.196 mm																																										
ADJUST DATA2(H)	Trailing edge registration at high-speed scanning (first page)	-32 to 32	0	0.196 mm																																										
ADJUST DATA3(H)	Leading edge registration at high-speed scanning (second page)	-32 to 32	0	0.196 mm																																										
ADJUST DATA4(H)	Trailing edge registration at high-speed scanning (second page)	-32 to 32	0	0.196 mm																																										

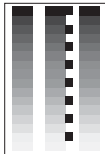
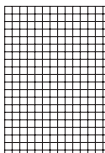
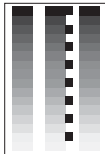
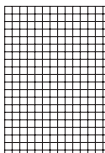
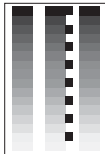
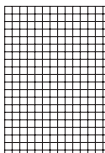
Maintenance item No.	Description
U071	Adjustment: Trailing edge registration 1. Press the system menu key. 2. Place an original on the DP and press the start key to make a test copy. 3. Press the system menu key. 4. Change the setting value using the +/- or numeric keys. For copy example 1, increase the value. For copy example 2, decrease the value.  Original  Copy example 1  Copy example 2 Figure 1-3-15 5. Press the start key. The value is set. Caution Check the copy image after the adjustment. If the image is still incorrect, perform the following adjustments in maintenance mode. U071 → U404 (P.1-3-66) Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.

Maintenance item No.	Description															
U072	Adjusting the DP center line Description Adjusts the scanning start position for the DP original. Purpose Make the adjustment if there is a regular error between the centers of the original and the copy image when the optional DP is used. Adjustment 1. Press the start key. 2. Select the item to be adjusted. <table><tr><th>Display</th><th>Description</th><th>Setting range</th><th>Initial setting</th><th>Change in value per step</th></tr><tr><td>ADJUST DATA1</td><td>Center line (first page)</td><td>-78 to 78</td><td>0</td><td>0.085 mm</td></tr><tr><td>ADJUST DATA2</td><td>Center line (second page)</td><td>-78 to 78</td><td>0</td><td>0.085 mm</td></tr></table> 3. Press the system menu key. 4. Place an original on the DP and press the start key to make a test copy. 5. Press the system menu key. 6. Change the setting value using the +/- or numeric keys. For copy example 1, increase the value. For copy example 2, decrease the value. Reference Original Copy example 1 Copy example 2 Figure 1-3-16 7. Press the start key. The value is set. Caution Check the copy image after the adjustment. If the image is still incorrect, perform the following adjustments in maintenance mode. U072 → U404 (P.1-3-66) Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.	Display	Description	Setting range	Initial setting	Change in value per step	ADJUST DATA1	Center line (first page)	-78 to 78	0	0.085 mm	ADJUST DATA2	Center line (second page)	-78 to 78	0	0.085 mm
Display	Description	Setting range	Initial setting	Change in value per step												
ADJUST DATA1	Center line (first page)	-78 to 78	0	0.085 mm												
ADJUST DATA2	Center line (second page)	-78 to 78	0	0.085 mm												

Maintenance item No.	Description																																																						
U073	Checking scanner operation Description Simulates the scanner operation under arbitrary conditions. Purpose To check scanner operation. Start 1. Press the start key. 2. Select the item to be operated. <table><tr><th>Display</th><th>Description</th></tr><tr><td>SCANNER MOTOR</td><td>Scanner operation</td></tr><tr><td>HOME POSITION</td><td>Home position operation</td></tr><tr><td>DP READING</td><td>DP scanning position operation</td></tr><tr><td>DUST CHECK</td><td>Dust adhesion check operation with lamp on</td></tr></table> Setting: SCANNER MOTOR 1. Select [SCANNER MOTOR]. 2. Select the item. 3. Change the setting using the +/- keys. <table><tr><th>Display</th><th>Operating conditions</th><th>Setting range</th></tr><tr><td>ZOOM</td><td>Magnification</td><td>25 to 400 %</td></tr><tr><td>SIZE</td><td>Original size</td><td>See below.</td></tr><tr><td>LAMP</td><td>On and off of the exposure lamp</td><td>0 (off) or 1 (on)</td></tr></table> Original sizes for each setting in SIZE <table><tr><th>Setting</th><th>Paper size</th><th>Setting</th><th>Paper size</th></tr><tr><td>5000</td><td>A4</td><td>5000</td><td>A5R</td></tr><tr><td>4300</td><td>B5</td><td>7800</td><td>Folio</td></tr><tr><td>5100</td><td>11" x 8 1/2"</td><td>10200</td><td>11" x 17"</td></tr><tr><td>10000</td><td>A3</td><td>9000</td><td>11" x 15"</td></tr><tr><td>8600</td><td>B4</td><td>8400</td><td>8 1/2" x 14"</td></tr><tr><td>7100</td><td>A4R</td><td>6600</td><td>8 1/2" x 11"</td></tr><tr><td>6100</td><td>B5R</td><td>5100</td><td>5 1/2" x 8 1/2"</td></tr></table> 4. Press the start key. Scanning starts under the selected conditions. 5. To stop operation, press the stop key. Method: HOME POSITION 1. Select [HOME POSITION]. 2. Press the start key. The mirror frame of the scanner moves to the home position. Method: DP READING 1. Select [DP READING]. 2. Press the start key. The mirror frame of the scanner moves to the reading position. Method: DUST CHECK 1. Select [DUST CHECK]. 2. Press the start key. The exposure lamp lights. 3. To turn the exposure lamp off, press the stop key. Completion Press the stop key when scanning stops. The screen for selecting a maintenance item No. is displayed.	Display	Description	SCANNER MOTOR	Scanner operation	HOME POSITION	Home position operation	DP READING	DP scanning position operation	DUST CHECK	Dust adhesion check operation with lamp on	Display	Operating conditions	Setting range	ZOOM	Magnification	25 to 400 %	SIZE	Original size	See below.	LAMP	On and off of the exposure lamp	0 (off) or 1 (on)	Setting	Paper size	Setting	Paper size	5000	A4	5000	A5R	4300	B5	7800	Folio	5100	11" x 8 1/2"	10200	11" x 17"	10000	A3	9000	11" x 15"	8600	B4	8400	8 1/2" x 14"	7100	A4R	6600	8 1/2" x 11"	6100	B5R	5100	5 1/2" x 8 1/2"
Display	Description																																																						
SCANNER MOTOR	Scanner operation																																																						
HOME POSITION	Home position operation																																																						
DP READING	DP scanning position operation																																																						
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ZOOM	Magnification	25 to 400 %																																																					
SIZE	Original size	See below.																																																					
LAMP	On and off of the exposure lamp	0 (off) or 1 (on)																																																					
Setting	Paper size	Setting	Paper size																																																				
5000	A4	5000	A5R																																																				
4300	B5	7800	Folio																																																				
5100	11" x 8 1/2"	10200	11" x 17"																																																				
10000	A3	9000	11" x 15"																																																				
8600	B4	8400	8 1/2" x 14"																																																				
7100	A4R	6600	8 1/2" x 11"																																																				
6100	B5R	5100	5 1/2" x 8 1/2"																																																				

Maintenance item No.	Description																				
U074	Adjusting the DP input light luminosity Description Adjusts the luminosity of the exposure lamp for scanning originals from the DP. Purpose Used if the exposure amount differs significantly between when scanning an original on the platen and when scanning an original from the DP. Setting 1. Press the start key. 2. Select the item to be set. <table><tr><th>Display</th><th>Description</th><th>Setting range</th><th>Initial setting</th></tr><tr><td>R</td><td>DP input light luminosity of R image</td><td>-12 to 12</td><td>0</td></tr><tr><td>G</td><td>DP input light luminosity of G image</td><td>-12 to 12</td><td>0</td></tr><tr><td>B</td><td>DP input light luminosity of B image</td><td>-12 to 12</td><td>0</td></tr><tr><td>K</td><td>DP input light luminosity of K image</td><td>-12 to 12</td><td>0</td></tr></table> 3. Change the setting using the +/- or numeric keys. Increasing the setting makes the luminosity higher, and decreasing it makes the luminosity lower. 4. Press the start key. The value is set. Supplement While this maintenance item is being executed, copying from an original is available in interrupt copying mode (which is activated by pressing the system menu key). Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.	Display	Description	Setting range	Initial setting	R	DP input light luminosity of R image	-12 to 12	0	G	DP input light luminosity of G image	-12 to 12	0	B	DP input light luminosity of B image	-12 to 12	0	K	DP input light luminosity of K image	-12 to 12	0
Display	Description	Setting range	Initial setting																		
R	DP input light luminosity of R image	-12 to 12	0																		
G	DP input light luminosity of G image	-12 to 12	0																		
B	DP input light luminosity of B image	-12 to 12	0																		
K	DP input light luminosity of K image	-12 to 12	0																		
U080	Setting the economy mode Description Sets the level in the economy mode. Purpose To increase or decrease the image density in the eco-print mode. Setting 1. Press the start key. 2. Select [ADJUST DATA]. <table><tr><th>Description</th><th>Setting range</th><th>Initial setting</th></tr><tr><td>Exposure is toner economy mode</td><td>-12 to 0</td><td>-6</td></tr></table> 3. Change the setting value using the +/- or numeric keys. Increasing the setting makes the image darker; decreasing it makes the image lighter. 4. Press the start key. The value is set. Supplement While this maintenance item is being executed, copying from an original is available in interrupt copying mode (which is activated by pressing the system menu key). Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.	Description	Setting range	Initial setting	Exposure is toner economy mode	-12 to 0	-6														
Description	Setting range	Initial setting																			
Exposure is toner economy mode	-12 to 0	-6																			

Maintenance item No.	Description
U081	Adjusting the correct exposure Description Adjusts the correct exposure in text and photo mode, text mode or photo mode. Purpose To be executed as required. Setting <

Maintenance item No.	Description																								
U089	Outputting a MIP-PG pattern Description Selects and outputs the MIP-PG pattern created in the machine. Purpose To check copier status other than scanner when adjusting image printing, using MIP-PG pattern output (without scanning). Method - Press the start key. - Select the MIP-PG pattern to be output and press the start key. <table><tr><th>Display</th><th>PG pattern to be output</th><th>Purpose</th></tr><tr><td>GRAYSCALE</td><td></td><td>To check the laser scanner unit engine output characteristics.</td></tr><tr><td>MONO-LEVEL</td><td></td><td>To check the drum quality.</td></tr><tr><td>256-LEVEL</td><td></td><td>To check resolution reproducibility in printing.</td></tr><tr><td>1 dot-LINE</td><td></td><td>To check fine line reproducibility. To adjust the position of the laser scanner unit (lateral squareness)</td></tr></table> - To change the output conditions of MONO-LEVEL and 1dot-LINE, use the +/- or numeric keys to change the preset values and press the start key to register the setting. <table><tr><th>Description</th><th>Setting range</th><th>Initial setting</th></tr><tr><td>Output density of MONO-LEVEL</td><td>0 to 255</td><td>0</td></tr><tr><td>1dot-LINE</td><td>0 to 24</td><td>0</td></tr></table> - Press the system menu key. - Press the start key. A MIP-PG pattern is output. - To return to the screen for selecting an item, press the system menu key. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.	Display	PG pattern to be output	Purpose	GRAYSCALE		To check the laser scanner unit engine output characteristics.	MONO-LEVEL		To check the drum quality.	256-LEVEL		To check resolution reproducibility in printing.	1 dot-LINE		To check fine line reproducibility. To adjust the position of the laser scanner unit (lateral squareness)	Description	Setting range	Initial setting	Output density of MONO-LEVEL	0 to 255	0	1dot-LINE	0 to 24	0
Display	PG pattern to be output	Purpose																							
GRAYSCALE		To check the laser scanner unit engine output characteristics.																							
MONO-LEVEL		To check the drum quality.																							
256-LEVEL		To check resolution reproducibility in printing.																							
1 dot-LINE		To check fine line reproducibility. To adjust the position of the laser scanner unit (lateral squareness)																							
Description	Setting range	Initial setting																							
Output density of MONO-LEVEL	0 to 255	0																							
1dot-LINE	0 to 24	0																							

Maintenance item No.	Description																																
U093	Setting the exposure density gradient Description Changes the exposure density gradient in the manual density mode, depending on respective image quality modes. Purpose To set how the image density is altered by a change of one step in the manual density adjustment for respective image quality modes. Also used to make copy images darker or lighter. Method - Press the start key. - Select the image quality mode. The setting screen for the selected item is displayed. <table><tr><th>Display</th><th>Description</th></tr><tr><td>MIXED</td><td>Density in text and photo mode</td></tr><tr><td>TEXT</td><td>Density in text mode</td></tr><tr><td>PHOTO</td><td>Density in photo mode</td></tr></table> Setting: Density in text and photo mode - Select the item to be set. - Adjust the setting using the +/- or numeric keys. <table><tr><th>Display</th><th>Description</th><th>Setting range</th><th>Initial setting</th></tr><tr><td>MIXED DARKER</td><td>Change in density when manual density is set dark</td><td>0 to 3</td><td>0</td></tr><tr><td>MIXED LIGHTER</td><td>Change in density when manual density is set light</td><td>0 to 3</td><td>0</td></tr></table> Increasing the setting makes the change in density larger, and decreasing it makes the change smaller. Figure 1-3-17 - Press the start key. The value is set. - To return to the screen for selecting an item, press the stop key. Setting: Density in text mode - Select the item to be set. - Adjust the setting using the +/- or numeric keys. <table><tr><th>Display</th><th>Description</th><th>Setting range</th><th>Initial setting</th></tr><tr><td>TEXT DARKER</td><td>Change in density when manual density is set dark</td><td>0 to 3</td><td>0</td></tr><tr><td>TEXT LIGHTER</td><td>Change in density when manual density is set light</td><td>0 to 3</td><td>0</td></tr></table> Increasing the setting makes the change in density larger, and decreasing it makes the change smaller. - Press the start key. The value is set. - To return to the screen for selecting an item, press the stop key.	Display	Description	MIXED	Density in text and photo mode	TEXT	Density in text mode	PHOTO	Density in photo mode	Display	Description	Setting range	Initial setting	MIXED DARKER	Change in density when manual density is set dark	0 to 3	0	MIXED LIGHTER	Change in density when manual density is set light	0 to 3	0	Display	Description	Setting range	Initial setting	TEXT DARKER	Change in density when manual density is set dark	0 to 3	0	TEXT LIGHTER	Change in density when manual density is set light	0 to 3	0
Display	Description																																
MIXED	Density in text and photo mode																																
TEXT	Density in text mode																																
PHOTO	Density in photo mode																																
Display	Description	Setting range	Initial setting																														
MIXED DARKER	Change in density when manual density is set dark	0 to 3	0																														
MIXED LIGHTER	Change in density when manual density is set light	0 to 3	0																														
Display	Description	Setting range	Initial setting																														
TEXT DARKER	Change in density when manual density is set dark	0 to 3	0																														
TEXT LIGHTER	Change in density when manual density is set light	0 to 3	0																														

Maintenance item No.	Description																		
U093	Setting: Density in photo mode 1. Select the item to be set. 2. Adjust the setting using the +/- or numeric keys. <table><tr><th>Display</th><th>Description</th><th>Setting range</th><th>Initial setting</th></tr><tr><td>PHOTO DARKER</td><td>Change in density when manual density is set dark</td><td>0 to 3</td><td>0</td></tr><tr><td>PHOTO LIGTER</td><td>Change in density when manual density is set light</td><td>0 to 3</td><td>0</td></tr></table> Increasing the setting makes the change in density larger, and decreasing it makes the change smaller. 3. Press the start key. The value is set. 4. To return to the screen for selecting an item, press the stop key. Supplement While this maintenance item is being executed, copying from an original is available in interrupt copying mode (which is activated by pressing the system menu key). Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.	Display	Description	Setting range	Initial setting	PHOTO DARKER	Change in density when manual density is set dark	0 to 3	0	PHOTO LIGTER	Change in density when manual density is set light	0 to 3	0						
Display	Description	Setting range	Initial setting																
PHOTO DARKER	Change in density when manual density is set dark	0 to 3	0																
PHOTO LIGTER	Change in density when manual density is set light	0 to 3	0																
U099	Adjusting original size detection Description Checks the operation of the original size detection sensor and sets the sensing threshold value. Purpose To adjust the sensitiveness of the sensor and size judgement time if the original size detection sensor malfunctions frequently due to incident light or the like. Method 1. Press the start key. 2. Select the item. The screen for executing each item is displayed. <table><tr><th>Display</th><th>Description</th></tr><tr><td>DATA</td><td>Displaying detection sensor transmission data</td></tr><tr><td>B/W LEVEL</td><td>Setting detection sensor threshold value Setting original size judgment time</td></tr></table> Method to display the data for the sensor 1. Place the original and close the original cover or DP. The detection sensor transmission data is displayed. <table><tr><th>Display</th><th>Description</th></tr><tr><td>ORIGINAL AREA R</td><td>Detected original width size (R)</td></tr><tr><td>ORIGINAL AREA G</td><td>Detected original width size (G)</td></tr><tr><td>ORIGINAL AREA B</td><td>Detected original width size (B)</td></tr><tr><td>ORIGINAL AREA</td><td>Detected original width size</td></tr><tr><td>SIZE SW L</td><td>Displays the original detection switch ON/OFF</td></tr></table> 2. To return to the screen for selecting an item, press the stop key.	Display	Description	DATA	Displaying detection sensor transmission data	B/W LEVEL	Setting detection sensor threshold value Setting original size judgment time	Display	Description	ORIGINAL AREA R	Detected original width size (R)	ORIGINAL AREA G	Detected original width size (G)	ORIGINAL AREA B	Detected original width size (B)	ORIGINAL AREA	Detected original width size	SIZE SW L	Displays the original detection switch ON/OFF
Display	Description																		
DATA	Displaying detection sensor transmission data																		
B/W LEVEL	Setting detection sensor threshold value Setting original size judgment time																		
Display	Description																		
ORIGINAL AREA R	Detected original width size (R)																		
ORIGINAL AREA G	Detected original width size (G)																		
ORIGINAL AREA B	Detected original width size (B)																		
ORIGINAL AREA	Detected original width size																		
SIZE SW L	Displays the original detection switch ON/OFF																		

Maintenance item No.	Description			
U099	Setting detection sensor threshold value			
	1. Select an item to be set.			
	2. Adjust the setting using the +/- or numeric keys.			
	Display	Description	Setting range	Initial setting
	ORIGINAL R	Original threshold value (R)	0 to 255	105
	ORIGINAL G	Original threshold value (G)	0 to 255	105
	ORIGINAL B	Original threshold value (B)	0 to 255	105
	LIGHT SOURCE R	Light source threshold value (R)	0 to 255	60
	LIGHT SOURCE G	Light source threshold value (G)	0 to 255	60
	LIGHT SOURCE B	Light source threshold value (B)	0 to 255	60
	WAIT TIME	Time from activation of the original detection switch (ODSW) to original size judgment	0 to 255	150
	A4R AREA	Original size detection position display (mm)	220/240	240
	3. Press the start key. The value is set.			
4. To return to the screen for selecting an item, press the stop key.				
Completion				
Press the stop key. The screen for selecting a maintenance item No. is displayed.				
U100	Setting the main high voltage			
	Description			
	Performs main charging.			
	Purpose			
	To check main charging.			
	Method			
	1. Press the start key.			
	2. Select the item to be operated.			
	3. Press the start key. The selected operation starts.			
	Display	Description		
	MC ON	Turning the main charger on		
	LASER ON/OFF	Turning the main charger on and the laser scanner unit on and off		
	4. To stop operation, press the stop key.			
Completion				
Press the stop key when main charger output stops. The screen for selecting a maintenance item No. is displayed.				

Maintenance item No.	Description																																												
U101	Setting the other high voltages Description Sets the developing bias control voltage, the transfer control voltage and the separation control voltage or checks the output of these voltages. Sets the transfer control voltage and the separation control voltage ON/OFF timing. Purpose To check the developing bias, the transfer voltage and the separation voltage or to take measures against drop of image density or background fog. Setting 1. Press the start key. 2. Select the item to be set. 3. Change the setting using the +/- keys. <table><tr><th>Display</th><th>Description</th><th>Setting range</th><th>Initial setting</th></tr><tr><td>DEV BIAS</td><td>Developing bias AC component frequency at image formation</td><td>20 to 32</td><td>26</td></tr><tr><td>DEV SBIAS</td><td>Developing shift bias potential at image formation</td><td>0 to 255</td><td>58</td></tr><tr><td>DEV DUTY</td><td>Developing bias AC component duty at image formation</td><td>0 to 100</td><td>50</td></tr><tr><td>TC DATA</td><td>Transfer control voltage</td><td>0 to 255</td><td>89</td></tr><tr><td>SC DATA</td><td>Separation control voltage</td><td>0 to 2</td><td>1</td></tr><tr><td>TC DATA2</td><td>Transfer control voltage for small sizes</td><td>0 to 255</td><td>115</td></tr><tr><td>TC ON</td><td>Time of period since the registration clutch is turned on until the transfer voltage is turned on</td><td>0 to 255</td><td>91</td></tr><tr><td>TC OFF</td><td>Time of period since the registration clutch is turned off until the transfer voltage is turned off</td><td>0 to 255</td><td>68</td></tr><tr><td>SC ON</td><td>Time of period since the registration clutch is turned on until the separation voltage is turned on</td><td>0 to 255</td><td>40</td></tr><tr><td>SC OFF</td><td>Time of period since the registration clutch is turned off until the separation voltage is turned off</td><td>0 to 255</td><td>92</td></tr></table> Increasing the DEV BIAS setting makes the image darker; decreasing it makes the image lighter. Increasing the DEV SBIAS setting makes the image darker. Increasing the DEV DUTY setting makes the image lighter; decreasing it makes the image darker. Increasing the TC DATA/TC DATA2 setting makes the transfer voltage higher, and decreasing it makes the voltage lower. Increasing the SC DATA setting makes the separation voltage higher, and decreasing it makes the voltage lower. 4. Press the start key. The value is set. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.	Display	Description	Setting range	Initial setting	DEV BIAS	Developing bias AC component frequency at image formation	20 to 32	26	DEV SBIAS	Developing shift bias potential at image formation	0 to 255	58	DEV DUTY	Developing bias AC component duty at image formation	0 to 100	50	TC DATA	Transfer control voltage	0 to 255	89	SC DATA	Separation control voltage	0 to 2	1	TC DATA2	Transfer control voltage for small sizes	0 to 255	115	TC ON	Time of period since the registration clutch is turned on until the transfer voltage is turned on	0 to 255	91	TC OFF	Time of period since the registration clutch is turned off until the transfer voltage is turned off	0 to 255	68	SC ON	Time of period since the registration clutch is turned on until the separation voltage is turned on	0 to 255	40	SC OFF	Time of period since the registration clutch is turned off until the separation voltage is turned off	0 to 255	92
Display	Description	Setting range	Initial setting																																										
DEV BIAS	Developing bias AC component frequency at image formation	20 to 32	26																																										
DEV SBIAS	Developing shift bias potential at image formation	0 to 255	58																																										
DEV DUTY	Developing bias AC component duty at image formation	0 to 100	50																																										
TC DATA	Transfer control voltage	0 to 255	89																																										
SC DATA	Separation control voltage	0 to 2	1																																										
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TC ON	Time of period since the registration clutch is turned on until the transfer voltage is turned on	0 to 255	91																																										
TC OFF	Time of period since the registration clutch is turned off until the transfer voltage is turned off	0 to 255	68																																										
SC ON	Time of period since the registration clutch is turned on until the separation voltage is turned on	0 to 255	40																																										
SC OFF	Time of period since the registration clutch is turned off until the separation voltage is turned off	0 to 255	92																																										
U110	Checking the drum count Description Displays the drum counts for checking. Purpose To check the drum status. Method Press the start key. The drum counter count is displayed. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.																																												

Maintenance item No.	Description																																				
U114	Setting separation charger mode Description Sets the separation charger mode. Purpose To change the setting if the fuser offset or carrier leaking occurs. Method 1. Press the start key. 2. Change the setting using the +/- or numeric keys. <table><tr><th>Display</th><th>Description</th><th>Setting range</th><th>Initial setting</th></tr><tr><td>MODE</td><td>Separation charger mode</td><td>0 to 5</td><td>4</td></tr></table> Details on the modes <table><tr><th>Display</th><th>First page</th><th>Second page</th><th>Specification by design</th></tr><tr><td>MODE0 (Value 0)</td><td>Full page separation turned off</td><td>Full page separation turned off</td><td>Countermeasure against thick paper, offset and carrier leaking</td></tr><tr><td>MODE1 (Value 1)</td><td>Full page separation turned off</td><td>Leading edge and trailing edge separation turned on</td><td>Countermeasure against thick paper, offset and carrier leaking</td></tr><tr><td>MODE2 (Value 2)</td><td>Leading edge and trailing edge separation turned on</td><td>Leading edge and trailing edge separation turned on</td><td>Countermeasure against color paper and back-side offset</td></tr><tr><td>MODE3 (Value 3)</td><td>Leading edge separation turned on</td><td>Full page separation turned on</td><td>Countermeasure against humidity-optimized paper and offset/smear</td></tr><tr><td>MODE4 (Value 4)</td><td>Leading edge and trailing edge separation turned on</td><td>Full page separation turned on</td><td>Countermeasure against low temperature and low moisture, and faulty paper separation</td></tr><tr><td>MODE5 (Value 5)</td><td>Full page separation turned on</td><td>Full page separation turned on</td><td>Countermeasure against thin paper and electrostatic discharging</td></tr></table> 3. Press the start key. The setting is set. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.	Display	Description	Setting range	Initial setting	MODE	Separation charger mode	0 to 5	4	Display	First page	Second page	Specification by design	MODE0 (Value 0)	Full page separation turned off	Full page separation turned off	Countermeasure against thick paper, offset and carrier leaking	MODE1 (Value 1)	Full page separation turned off	Leading edge and trailing edge separation turned on	Countermeasure against thick paper, offset and carrier leaking	MODE2 (Value 2)	Leading edge and trailing edge separation turned on	Leading edge and trailing edge separation turned on	Countermeasure against color paper and back-side offset	MODE3 (Value 3)	Leading edge separation turned on	Full page separation turned on	Countermeasure against humidity-optimized paper and offset/smear	MODE4 (Value 4)	Leading edge and trailing edge separation turned on	Full page separation turned on	Countermeasure against low temperature and low moisture, and faulty paper separation	MODE5 (Value 5)	Full page separation turned on	Full page separation turned on	Countermeasure against thin paper and electrostatic discharging
Display	Description	Setting range	Initial setting																																		
MODE	Separation charger mode	0 to 5	4																																		
Display	First page	Second page	Specification by design																																		
MODE0 (Value 0)	Full page separation turned off	Full page separation turned off	Countermeasure against thick paper, offset and carrier leaking																																		
MODE1 (Value 1)	Full page separation turned off	Leading edge and trailing edge separation turned on	Countermeasure against thick paper, offset and carrier leaking																																		
MODE2 (Value 2)	Leading edge and trailing edge separation turned on	Leading edge and trailing edge separation turned on	Countermeasure against color paper and back-side offset																																		
MODE3 (Value 3)	Leading edge separation turned on	Full page separation turned on	Countermeasure against humidity-optimized paper and offset/smear																																		
MODE4 (Value 4)	Leading edge and trailing edge separation turned on	Full page separation turned on	Countermeasure against low temperature and low moisture, and faulty paper separation																																		
MODE5 (Value 5)	Full page separation turned on	Full page separation turned on	Countermeasure against thin paper and electrostatic discharging																																		

Maintenance item No.	Description						
U117	Checking the drum number Description Displays the drum number. Purpose To check the drum number. Method Press the start key. The drum number is displayed. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.						
U118	Displaying the drum history Description Displays the past record of machine number and the drum counter. Purpose To check the count value of machine number and the drum counter. Method Press the start key. Past record of 5 cases is displayed. <table border="1"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>MACHINE No.1 to 5</td><td>Past record of machine number</td></tr> <tr> <td>COUNT 1 to 5</td><td>Past record of drum counter</td></tr> </tbody> </table> Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.	Display	Description	MACHINE No.1 to 5	Past record of machine number	COUNT 1 to 5	Past record of drum counter
Display	Description						
MACHINE No.1 to 5	Past record of machine number						
COUNT 1 to 5	Past record of drum counter						
U130	Initial setting for the developing unit Description Replenishes toner to the developing unit to a certain level from the toner container that has been installed. Purpose To operate when installing the machine or replacing the developing unit. Method 1. Press the start key. The screen for executing is displayed. 2. Press the start key. Toner installation is started and the output value of the sensor and execution time are displayed. <table border="1"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>TONER SENSOR</td><td>Output value of the sensor</td></tr> <tr> <td>TIME(SEC)</td><td>Execution time</td></tr> </tbody> </table> Completion Press the stop key after initial setting is complete. The screen for selecting a maintenance item No. is displayed.	Display	Description	TONER SENSOR	Output value of the sensor	TIME(SEC)	Execution time
Display	Description						
TONER SENSOR	Output value of the sensor						
TIME(SEC)	Execution time						

Maintenance item No.	Description																								
U135	Checking toner motor operation Description Turns the toner feed motor and toner feed clutch on. Purpose To check the operation of the toner feed motor or toner feed clutch. Settings may also be modified where mobility in toner is inferior or when printing materials of very high density. Normally no change is necessary from the initial setting. Method 1. Press the start key. 2. Select the item. <table><tr><th>Display</th><th>Description</th><th>Setting range</th><th>Initial setting</th></tr><tr><td>TONER CARRY</td><td>Toner feed motor (TFM)</td><td>-</td><td>-</td></tr><tr><td>TONER SUPPLY</td><td>Toner feed clutch (TNFCL)</td><td>-</td><td>-</td></tr><tr><td>CARRY ON TIME</td><td>Toner feed motor drive on time</td><td>0 to 255</td><td>100</td></tr><tr><td>SUPPLY ON TIME</td><td>Toner feed clutch on time</td><td>0 to 255</td><td>30</td></tr><tr><td>SUPPLY OFF TIME</td><td>Toner feed clutch off time</td><td>0 to 255</td><td>100</td></tr></table> Method 1. Select [TONER CARRY] or [TONER SUPPLY]. 2. Press the start key. The operation starts. 3. To stop operation, press the stop key. Setting: Low toner mobility 1. Select [CARRY ON TIME]. 2. Increasing the setting value using the + key. 3. Press the start key. The value is set. Setting: Printing very high density materials 1. Select [SUPPLY ON TIME]. 2. Increasing the setting value using the + key. 3. Press the start key. The value is set. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.	Display	Description	Setting range	Initial setting	TONER CARRY	Toner feed motor (TFM)	-	-	TONER SUPPLY	Toner feed clutch (TNFCL)	-	-	CARRY ON TIME	Toner feed motor drive on time	0 to 255	100	SUPPLY ON TIME	Toner feed clutch on time	0 to 255	30	SUPPLY OFF TIME	Toner feed clutch off time	0 to 255	100
Display	Description	Setting range	Initial setting																						
TONER CARRY	Toner feed motor (TFM)	-	-																						
TONER SUPPLY	Toner feed clutch (TNFCL)	-	-																						
CARRY ON TIME	Toner feed motor drive on time	0 to 255	100																						
SUPPLY ON TIME	Toner feed clutch on time	0 to 255	30																						
SUPPLY OFF TIME	Toner feed clutch off time	0 to 255	100																						

Maintenance item No.	Description																
U144	Setting toner loading operation Description Sets toner loading operation after completion of copying. Toner is forcibly evacuated in case the average printing ratio for the number of printed pages assigned by [PAGE] is lower than the ratio defined by [RATIO]. Purpose To set whether or not toner is loaded on the drum after low density copying. Normally no change is necessary from the initial setting. Setting 1. Press the start key. 2. Select the item to be set. 3. Change the setting using the +/- keys. <table><tr><th>Display</th><th>Description</th><th>Setting range</th><th>Initial setting</th></tr><tr><td>MODE</td><td>Toner loading operation</td><td>1 (ON) / 0 (OFF)</td><td>0</td></tr><tr><td>PAGE</td><td>Number of pages set</td><td>1 to 50</td><td>5</td></tr><tr><td>RATIO</td><td>Printing ratio</td><td>10 to 40</td><td>30</td></tr></table> 4. Press the start key. The value is set. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.	Display	Description	Setting range	Initial setting	MODE	Toner loading operation	1 (ON) / 0 (OFF)	0	PAGE	Number of pages set	1 to 50	5	RATIO	Printing ratio	10 to 40	30
Display	Description	Setting range	Initial setting														
MODE	Toner loading operation	1 (ON) / 0 (OFF)	0														
PAGE	Number of pages set	1 to 50	5														
RATIO	Printing ratio	10 to 40	30														
U150	Checking sensors for toner Description Displays the on-off status of each sensor or switch related to toner. Purpose To check if the sensors and switches operate correctly. Method 1. Press the start key. 2. Turn each switch on and off manually to check the status. When the on-status of a switch is detected, that switch is displayed in reverse. <table><tr><th>Display</th><th>Switches</th></tr><tr><td>DEVELOPER SENSOR</td><td>Toner sensor (TNS)</td></tr><tr><td>CONTAINER SET</td><td>Toner container detection switch (TCDSW)</td></tr><tr><td>CONTAINER SENSOR</td><td>Toner container sensor (TCS)</td></tr><tr><td>WASTE BOX SENSOR</td><td>Overflow sensor (OFS)</td></tr><tr><td>MOTOR ON</td><td>The toner feed clutch (TNFCL), the paper feed motor (PFM) and the toner feed motor (TFM) are turned on.</td></tr></table> To stop motor driving, press [MOTOR ON] again. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.	Display	Switches	DEVELOPER SENSOR	Toner sensor (TNS)	CONTAINER SET	Toner container detection switch (TCDSW)	CONTAINER SENSOR	Toner container sensor (TCS)	WASTE BOX SENSOR	Overflow sensor (OFS)	MOTOR ON	The toner feed clutch (TNFCL), the paper feed motor (PFM) and the toner feed motor (TFM) are turned on.				
Display	Switches																
DEVELOPER SENSOR	Toner sensor (TNS)																
CONTAINER SET	Toner container detection switch (TCDSW)																
CONTAINER SENSOR	Toner container sensor (TCS)																
WASTE BOX SENSOR	Overflow sensor (OFS)																
MOTOR ON	The toner feed clutch (TNFCL), the paper feed motor (PFM) and the toner feed motor (TFM) are turned on.																

Maintenance item No.	Description																								
U157	Checking/clearing the developing drive time Description Displays the developing drive time for checking, or clearing a figure, which is used as a reference when correcting the toner control. Purpose To check the developing drive time after replacing the developing unit. Method Press the start key. The developing drive time is displayed in minutes. Clearing 1. Press the clear key. 2. Press the start key. The time is cleared. Setting 1. Enter a drive time (in minutes) using the +/- or numeric keys. 2. Press the start key. The time is set. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.																								
U158	Checking the developing count Description Displays the developing count for checking. Purpose To check the developing count after replacing the developing unit. Method Press the start key. The developing counter count is displayed. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.																								
U161	Setting the fuser control temperature Description Changes the fuser control temperature. Purpose Normally no change is necessary. However, can be used to prevent curling or creasing of paper, or solve a fuser problem on thick paper. Method 1. Press the start key. 2. Select the item to be set. 3. Change the setting using the +/- or numeric keys. <table><tr><th>Display</th><th>Description</th><th>Setting range</th><th>Initial setting</th></tr><tr><td>DRIVE START TEMP</td><td>Driving start temperature when warm-up starts</td><td>0 to 255 (°C)</td><td>110</td></tr><tr><td>READY CONTROL T</td><td>Fuser center control temperature for displaying [Ready for copying.]</td><td>0 to 255 (°C)</td><td>165</td></tr><tr><td>READY CONTROL T2</td><td>Fuser edge control temperature for displaying [Ready for copying.]</td><td>0 to 255 (°C)</td><td>155</td></tr><tr><td>PRINT CONTROL T</td><td>Fuser center control temperature during printing</td><td>0 to 255 (°C)</td><td>165</td></tr><tr><td>READY DISP TIME</td><td>Time of period from driving until Ready is displayed</td><td>0 to 255 (s)</td><td>0</td></tr></table> 4. Press the start key. The value is set. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.	Display	Description	Setting range	Initial setting	DRIVE START TEMP	Driving start temperature when warm-up starts	0 to 255 (°C)	110	READY CONTROL T	Fuser center control temperature for displaying [Ready for copying.]	0 to 255 (°C)	165	READY CONTROL T2	Fuser edge control temperature for displaying [Ready for copying.]	0 to 255 (°C)	155	PRINT CONTROL T	Fuser center control temperature during printing	0 to 255 (°C)	165	READY DISP TIME	Time of period from driving until Ready is displayed	0 to 255 (s)	0
Display	Description	Setting range	Initial setting																						
DRIVE START TEMP	Driving start temperature when warm-up starts	0 to 255 (°C)	110																						
READY CONTROL T	Fuser center control temperature for displaying [Ready for copying.]	0 to 255 (°C)	165																						
READY CONTROL T2	Fuser edge control temperature for displaying [Ready for copying.]	0 to 255 (°C)	155																						
PRINT CONTROL T	Fuser center control temperature during printing	0 to 255 (°C)	165																						
READY DISP TIME	Time of period from driving until Ready is displayed	0 to 255 (s)	0																						

Maintenance item No.	Description						
U163	Resetting the fuser problem data Description Resets the detection of a service call code indicating a problem in the fuser section. Purpose To prevent accidents due to an abnormally high fuser temperature. Method 1. Press the start key. 2. Press [EXECUTE] on the touch panel. 3. Press the start key. The fuser problem data is initialized. 4. Turn the main power switch off and on.						
U167	Checking/clearing the fuser counts Description Displays and clears the fuser counts for checking. Purpose To check or clear the fuser counts after replacing the fuser unit. Method Press the start key. The fuser counts is displayed. Clearing 1. Press the clear key. 2. Press the start key. The count is cleared. Setting 1. Change the count using the +/- or numeric keys. 2. Press the start key. The count is set. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.						
U193	Setting the fuser drive control Description Specifies ON/OFF the fuser drive control. Purpose Countermeasure against black dots which is caused by toner adhering to the heat roller separation claws. Setting 1. Press the start key. 2. Select ON or OFF. <table border="1"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>ON</td><td>Fuser drive control ON</td></tr> <tr> <td>OFF</td><td>Fuser drive control OFF</td></tr> </tbody> </table> Initial setting: ON 3. Press the start key. The setting is set. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.	Display	Description	ON	Fuser drive control ON	OFF	Fuser drive control OFF
Display	Description						
ON	Fuser drive control ON						
OFF	Fuser drive control OFF						

Maintenance item No.	Description										
U199	Checking the fuser temperature Description Displays the fuser temperature, the ambient temperature and the absolute humidity. Purpose To check the fuser temperature, the ambient temperature and the absolute humidity. Method Press the start key. The fuser temperature and ambient temperature are displayed in centigrade (°C) and the absolute humidity is displayed in percentage (%). <table border="1"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>FIX CENTER TEMP</td><td>Fuser center temperature (°C)</td></tr> <tr> <td>FIX EDGE TEMP</td><td>Fuser edge temperature (°C)</td></tr> <tr> <td>SURROUND TEMP</td><td>Ambient temperature (°C)</td></tr> <tr> <td>HUMIDITY</td><td>Absolute humidity (%)</td></tr> </tbody> </table> Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.	Display	Description	FIX CENTER TEMP	Fuser center temperature (°C)	FIX EDGE TEMP	Fuser edge temperature (°C)	SURROUND TEMP	Ambient temperature (°C)	HUMIDITY	Absolute humidity (%)
Display	Description										
FIX CENTER TEMP	Fuser center temperature (°C)										
FIX EDGE TEMP	Fuser edge temperature (°C)										
SURROUND TEMP	Ambient temperature (°C)										
HUMIDITY	Absolute humidity (%)										
U200	Turning all LEDs on Description Turns all the LEDs on the operation panel on. Purpose To check if all the LEDs on the operation panel light. Method 1. Press the start key. All the LEDs on the operation panel light. 2. Press the stop key. The LEDs turns off. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.										
U201	Initializing the touch panel Description Automatically correct the positions of the X- and Y-axes of the touch panel. Purpose To automatically correct the display positions on the touch panel after it is replaced. Method 1. Press the start key. 2. Select the [INITIALIZE] or [CHECK]. <table border="1"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>INITIALIZE</td><td>Adjusts the display on the panel automatically.</td></tr> <tr> <td>CHECK</td><td>Checks the display on the touch panel.</td></tr> </tbody> </table> Method: INITIALIZE 1. Press the start key. 2. Press the center of the + keys. Be sure to press three + keys displayed in order. The touch panel is adjusted automatically. 3. Press the indicated three + keys, and then check the display. 4. Press the stop key. The screen for selecting a maintenance item No. is displayed. Method: CHECK 1. Press the start key. 2. Press the indicated three + keys, and then check the display. When adjusting the display, press [INITIALIZE] to execute the adjustment automatically. 3. Press the stop key. The screen for selecting a maintenance item No. is displayed. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.	Display	Description	INITIALIZE	Adjusts the display on the panel automatically.	CHECK	Checks the display on the touch panel.				
Display	Description										
INITIALIZE	Adjusts the display on the panel automatically.										
CHECK	Checks the display on the touch panel.										

Maintenance item No.	Description																								
U202	Setting the KMAS host monitoring system Description Initializes or operates the KMAS host monitoring system. This is an optional device which is currently supported only by Japanese specification machines, so no setting is necessary.																								
U203	Checking DP operation Description Simulates the original conveying operation separately in the optional DP. Purpose To 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 item to be operated. 4. When selecting [ADP] or [RADP], to set the magnification using the +/- keys. <table><tr><th>Display</th><th>Operation</th><th>Setting range</th><th>Initial setting</th></tr><tr><td>ADP</td><td>With paper, single-sided original</td><td>100 to 200 (%)</td><td>100</td></tr><tr><td>RADP</td><td>With paper, double-sided original</td><td>100 to 200 (%)</td><td>100</td></tr><tr><td>ADP (NON P)</td><td>Without paper, single-sided original (continuous operation)</td><td>-</td><td>-</td></tr><tr><td>RADP (NON P)</td><td>Without paper, double-sided original (continuous operation)</td><td>-</td><td>-</td></tr><tr><td>SPEED</td><td>Switching between normal reading (600 dpi) and high-speed reading</td><td>0 (Normal)/ 1 (high-speed)</td><td>0</td></tr></table> 5. Press the start key. The operation starts. 6. To stop continuous operation, press the stop key. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.	Display	Operation	Setting range	Initial setting	ADP	With paper, single-sided original	100 to 200 (%)	100	RADP	With paper, double-sided original	100 to 200 (%)	100	ADP (NON P)	Without paper, single-sided original (continuous operation)	-	-	RADP (NON P)	Without paper, double-sided original (continuous operation)	-	-	SPEED	Switching between normal reading (600 dpi) and high-speed reading	0 (Normal)/ 1 (high-speed)	0
Display	Operation	Setting range	Initial setting																						
ADP	With paper, single-sided original	100 to 200 (%)	100																						
RADP	With paper, double-sided original	100 to 200 (%)	100																						
ADP (NON P)	Without paper, single-sided original (continuous operation)	-	-																						
RADP (NON P)	Without paper, double-sided original (continuous operation)	-	-																						
SPEED	Switching between normal reading (600 dpi) and high-speed reading	0 (Normal)/ 1 (high-speed)	0																						

Maintenance item No.	Description												
U204	Setting the presence or absence of a key card or key counter Description Sets the presence or absence of the optional key card or key counter. Purpose To run this maintenance item if a key card or key counter is installed. Method 1. Press the start key. 2. Select the item to be set. The setting screen for the selected item is displayed. <table border="1"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>KEY-DEVICE</td><td>Sets the presence or absence of the key card or key counter</td></tr> <tr> <td>MESSAGE</td><td>Sets the message when optional equipment is not installed</td></tr> </tbody> </table> Setting: KEY-DEVICE 1. Select ON or OFF. <table border="1"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>ON</td><td>The key card or the key counter is installed</td></tr> <tr> <td>OFF</td><td>Not installed</td></tr> </tbody> </table> 2. Press the start key. The setting is set. 3. Turn the main power switch off and on. Setting: MESSAGE 1. Select [COUNTER], [CARD] or [COIN]. 2. Press the start key. The setting is set. 3. Turn the main power switch off and on. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.	Display	Description	KEY-DEVICE	Sets the presence or absence of the key card or key counter	MESSAGE	Sets the message when optional equipment is not installed	Display	Description	ON	The key card or the key counter is installed	OFF	Not installed
Display	Description												
KEY-DEVICE	Sets the presence or absence of the key card or key counter												
MESSAGE	Sets the message when optional equipment is not installed												
Display	Description												
ON	The key card or the key counter is installed												
OFF	Not installed												
U207	Checking the operation panel keys Description Checks operation of the operation panel keys. Purpose To check operation of all the keys and LEDs on the operation panel. Method 1. Press the start key. The screen for executing is displayed. 2. COUNT0 is displayed and the leftmost LED on the operation panel lights. 3. As the keys lined up in the same line as the lit indicator are pressed in the order from the top to the bottom, the figure shown on the touch panel increases in increments of 1. When all the keys in that line are pressed and if there are any LEDs corresponding to the keys in the line on the immediate right, the top LED in that line will light. 4. When all the keys on the operation panel have been pressed, all the LEDs light for up to 10 seconds. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.												

Maintenance item No.	Description														
U220	Setting the trial functions Description Enables the trial of USB functions by period limitation. Purpose To try USB activation functions. Method Press the start key. <table border="1"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>FUNCTION</td><td>Selecting trial functions</td></tr> <tr> <td>TRIAL STATUS</td><td>Displays the current setting (1: Under trial, 0: Not trial)</td></tr> <tr> <td>COUPON COUNT</td><td>Displays remaining times</td></tr> <tr> <td>TIME LIMIT</td><td>Displays the end term of the function under present trial</td></tr> <tr> <td>TRIAL START</td><td>Starts the trial of the function selected with FUNCTION</td></tr> <tr> <td>TRIAL STOP</td><td>Stops the trial of the function selected with FUNCTION</td></tr> </tbody> </table> Setting: FUNCTION 1. Select [FUNCTION]. 2. Select the function using the +/- keys. 3. Press the start key. The setting is set. [COUPON COUNT], [TIME LIMIT], [TRIAL START] and [TRIAL STOP] are displayed. Method: TRIAL START 1. Select [TRIAL STRAT]. 2. Press the start key. Trial of the function selected with [FUNCTION] is started. The display of [COUPON COUNT] decreases one. The display of [TIME LIMIT] will be the date of the present date plus 30 days. Method: TRIAL STOP 1. Select [TRIAL STOP]. 2. Press the start key. Trial of the function selected with [FUNCTION] is stopped. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.	Display	Description	FUNCTION	Selecting trial functions	TRIAL STATUS	Displays the current setting (1: Under trial, 0: Not trial)	COUPON COUNT	Displays remaining times	TIME LIMIT	Displays the end term of the function under present trial	TRIAL START	Starts the trial of the function selected with FUNCTION	TRIAL STOP	Stops the trial of the function selected with FUNCTION
Display	Description														
FUNCTION	Selecting trial functions														
TRIAL STATUS	Displays the current setting (1: Under trial, 0: Not trial)														
COUPON COUNT	Displays remaining times														
TIME LIMIT	Displays the end term of the function under present trial														
TRIAL START	Starts the trial of the function selected with FUNCTION														
TRIAL STOP	Stops the trial of the function selected with FUNCTION														

Maintenance item No.	Description								
U221	Setting the USB host lock function Description Specifies ON/OFF the USB host lock function. Setting this to ON causes the machine to be unable to recognize the device connected to the USB host. Purpose Set according to the preference of the user. Setting 1. Press the start key. 2. Select ON or OFF. <table border="1"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>ON</td><td>USB host lock function ON</td></tr> <tr> <td>OFF</td><td>USB host lock function OFF</td></tr> </tbody> </table> Initial setting: OFF 3. Press the start key. The setting is set. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.	Display	Description	ON	USB host lock function ON	OFF	USB host lock function OFF		
Display	Description								
ON	USB host lock function ON								
OFF	USB host lock function OFF								
U233	Limiting job separator output Description Sets a limit of number of output pages from the optional job separator. Purpose Settings may be modified if curled paper is output from the job separator. Setting 1. Press the start key. 2. Select the mode. <table border="1"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>MODE0</td><td>All sizes: 100 sheets</td></tr> <tr> <td>MODE1</td><td>A3 and Ledger sizes: 70, other sizes: 100</td></tr> <tr> <td>MODE2</td><td>A3 and Ledger sizes: 50, other sizes: 100</td></tr> </tbody> </table> Initial setting: MODE0 3. Press the start key. The setting is set. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.	Display	Description	MODE0	All sizes: 100 sheets	MODE1	A3 and Ledger sizes: 70, other sizes: 100	MODE2	A3 and Ledger sizes: 50, other sizes: 100
Display	Description								
MODE0	All sizes: 100 sheets								
MODE1	A3 and Ledger sizes: 70, other sizes: 100								
MODE2	A3 and Ledger sizes: 50, other sizes: 100								

Maintenance item No.	Description												
U236	Setting the limit for the ejection section of the built-in finisher Description If the machine is equipped with an optional built-in finisher, this mode sets whether A5R/B5R/statement size paper is output to the machine eject tray or not. Purpose If the machine is equipped with an optional built-in finisher and if paper jams occur due to curling of paper in the built-in ejection section when two-sided copying onto A5R/B5R/statement size paper is performed, this mode is used to change the setting to ON to disable ejection to the machine eject tray. Setting 1. Press the start key. 2. Select ON or OFF. <table border="1"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>ON</td><td>Does not eject to the machine eject tray.</td></tr> <tr> <td>OFF</td><td>Eject to the machine eject tray.</td></tr> </tbody> </table> Initial setting: OFF 3. Press the start key. The setting is set. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.	Display	Description	ON	Does not eject to the machine eject tray.	OFF	Eject to the machine eject tray.						
Display	Description												
ON	Does not eject to the machine eject tray.												
OFF	Eject to the machine eject tray.												
U243	Checking the operation of the DP motors Description Turns the motors and solenoids in the optional DP on. Purpose To check the operation of the DP motors or solenoids. Method 1. Press the start key. 2. Select the item to be operated. 3. Press the start key. The operation starts. <table border="1"> <thead> <tr> <th>Display</th><th>Motors and solenoids</th></tr> </thead> <tbody> <tr> <td>DP FEED MOTOR</td><td>Original feed motor (OFM) is turned on.</td></tr> <tr> <td>DP CONV MOTOR</td><td>Original conveying motor (OCM) is turned on.</td></tr> <tr> <td>DP REV MOTOR</td><td>Original switchback motor (OSBM) is turned on.</td></tr> <tr> <td>DP RJ SOL</td><td>Switchback feedshift solenoid (SBFSSOL) is turned on.</td></tr> <tr> <td>DP RP SOL</td><td>Switchback pressure solenoid (SBPSOL) is turned on.</td></tr> </tbody> </table> 4. To stop operation, press the stop key. Completion Press the stop key when operation stops. The screen for selecting a maintenance item No. is displayed.	Display	Motors and solenoids	DP FEED MOTOR	Original feed motor (OFM) is turned on.	DP CONV MOTOR	Original conveying motor (OCM) is turned on.	DP REV MOTOR	Original switchback motor (OSBM) is turned on.	DP RJ SOL	Switchback feedshift solenoid (SBFSSOL) is turned on.	DP RP SOL	Switchback pressure solenoid (SBPSOL) is turned on.
Display	Motors and solenoids												
DP FEED MOTOR	Original feed motor (OFM) is turned on.												
DP CONV MOTOR	Original conveying motor (OCM) is turned on.												
DP REV MOTOR	Original switchback motor (OSBM) is turned on.												
DP RJ SOL	Switchback feedshift solenoid (SBFSSOL) is turned on.												
DP RP SOL	Switchback pressure solenoid (SBPSOL) is turned on.												

Maintenance item No.	Description														
U244	Checking the DP switches Description Displays the status of the respective switches in the optional DP. Purpose To check if respective switches in the optional DP operate correctly. Method 1. Press the start key. 2. Turn the respective switches on and off manually to check the status. When a switch is detected to be in the ON position, the display for that switch will be highlighted. <table border="1"> <thead> <tr> <th>Display</th><th>Switches</th></tr> </thead> <tbody> <tr> <td>DP SET SW</td><td>Original set switch (OSSW)</td></tr> <tr> <td>DP PSD SW</td><td>Original size length switch (OSLSW)</td></tr> <tr> <td>DP REV SW</td><td>Original switchback switch (OSBSW)</td></tr> <tr> <td>CCD TIMING SW</td><td>DP timing switch (DPTSW)</td></tr> <tr> <td>DP COVER SW</td><td>DP interlock switch (DPILSW)</td></tr> <tr> <td>DP OPEN SW</td><td>DP open/close switch (DPOCSW)</td></tr> </tbody> </table> Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.	Display	Switches	DP SET SW	Original set switch (OSSW)	DP PSD SW	Original size length switch (OSLSW)	DP REV SW	Original switchback switch (OSBSW)	CCD TIMING SW	DP timing switch (DPTSW)	DP COVER SW	DP interlock switch (DPILSW)	DP OPEN SW	DP open/close switch (DPOCSW)
Display	Switches														
DP SET SW	Original set switch (OSSW)														
DP PSD SW	Original size length switch (OSLSW)														
DP REV SW	Original switchback switch (OSBSW)														
CCD TIMING SW	DP timing switch (DPTSW)														
DP COVER SW	DP interlock switch (DPILSW)														
DP OPEN SW	DP open/close switch (DPOCSW)														
U245	Checking messages Description Displays a list of messages on the touch panel of the operation panel. Purpose To check the messages to be displayed. Method 1. Press the start key. 2. Select the item to be displayed. 3. Displays the message one by one using cursor up/down keys. Switches the language on the touch panel using the cursor left/right keys. When a message number is entered with the numeric keys and then the start key is pressed, the message corresponding the specified number is displayed. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.														

Maintenance item No.	Description																				
U246	Setting the finisher Description Provides various settings for the built-in finisher, if furnished. Purpose Adjusts the side registration cursor stop position if paper registration is poor or stapling is made outside the specified area. Setting 1. Press the start key. 2. Select the desired cursor position. 3. Change the setting using the +/- or numeric keys. <table><tr><th>Display</th><th>Description</th><th>Setting range</th><th>Initial setting</th><th>Change in value per step</th></tr><tr><td>FRONT</td><td>Front side registration cursor stop position</td><td>-4 to +4</td><td>0</td><td>0.566 mm</td></tr><tr><td>REAR</td><td>Rear side registration cursor stop position</td><td>-4 to +4</td><td>0</td><td>0.566 mm</td></tr><tr><td>END</td><td>Trailing edge registration cursor stop position</td><td>-4 to +4</td><td>0</td><td>0.566 mm</td></tr></table> 4. Press the start key. The value is set. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.	Display	Description	Setting range	Initial setting	Change in value per step	FRONT	Front side registration cursor stop position	-4 to +4	0	0.566 mm	REAR	Rear side registration cursor stop position	-4 to +4	0	0.566 mm	END	Trailing edge registration cursor stop position	-4 to +4	0	0.566 mm
Display	Description	Setting range	Initial setting	Change in value per step																	
FRONT	Front side registration cursor stop position	-4 to +4	0	0.566 mm																	
REAR	Rear side registration cursor stop position	-4 to +4	0	0.566 mm																	
END	Trailing edge registration cursor stop position	-4 to +4	0	0.566 mm																	
U247	Setting the paper feed device Description Turns on motor and clutches of optional paper feeder. Purpose To check the operation of motors and clutches of paper feeder. Method 1. Press the start key. 2. Select the item to be operated. <table><tr><th>Display</th><th>Motor and clutches</th></tr><tr><td>DESK FEED</td><td>Paper feeder drive motor (PFDM)</td></tr><tr><td>CLUTCH FEED</td><td>Paper feeder conveying clutch (PFCCL)</td></tr><tr><td>CLUTCH U</td><td>Paper feeder paper feed clutch 1 (PFPFCL1)</td></tr><tr><td>CLUTCH L</td><td>Paper feeder paper feed clutch 2 (PFPFCL2)</td></tr></table> 3. Press the start key. The operation starts. 4. To stop operation, press the stop key. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.	Display	Motor and clutches	DESK FEED	Paper feeder drive motor (PFDM)	CLUTCH FEED	Paper feeder conveying clutch (PFCCL)	CLUTCH U	Paper feeder paper feed clutch 1 (PFPFCL1)	CLUTCH L	Paper feeder paper feed clutch 2 (PFPFCL2)										
Display	Motor and clutches																				
DESK FEED	Paper feeder drive motor (PFDM)																				
CLUTCH FEED	Paper feeder conveying clutch (PFCCL)																				
CLUTCH U	Paper feeder paper feed clutch 1 (PFPFCL1)																				
CLUTCH L	Paper feeder paper feed clutch 2 (PFPFCL2)																				

Maintenance item No.	Description						
U250	Setting the maintenance cycle Description Displays and changes the maintenance cycle. Purpose To check and change the maintenance cycle. Method Press the start key. The currently set maintenance cycle is displayed. Setting 1. Change the setting using the +/- or numeric keys. <table><tr><th>Description</th><th>Setting range</th><th>Initial setting</th></tr><tr><td>Maintenance cycle</td><td>0 to 9999999</td><td>300000</td></tr></table> 2. Press the start key. The value is set. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.	Description	Setting range	Initial setting	Maintenance cycle	0 to 9999999	300000
Description	Setting range	Initial setting					
Maintenance cycle	0 to 9999999	300000					
U251	Checking/clearing the maintenance count Description Displays, clears and changes the maintenance count. Purpose To check the maintenance count. Also to clear the count during maintenance service. Method Press the start key. The maintenance count is displayed. Clearing 1. Press the clear key. 2. Press the start key. The count is cleared. Setting 1. Enter a count using the +/- or numeric keys. 2. Press the start key. The count is set. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.						

Maintenance item No.	Description																		
U252	Setting the destination Description Switches the operations and screens of the machine according to the destination. Purpose To be executed after initializing the backup RAM by running maintenance item U020, in order to return the setting to the value before replacement or initialization. Method Press the start key. The screen for selecting an item is displayed. Setting - Press the start key. - Select the destination. <table><tr><th>Display</th><th>Description</th></tr><tr><td>INCH</td><td>Inch (North America) specifications</td></tr><tr><td>EUROPE METRIC</td><td>Metric (Europe) specifications</td></tr><tr><td>ASIA PACIFIC</td><td>Metric (Asia Pacific) specifications</td></tr></table> - Press the start key. The setting is set. - Turn the main power switch off and on. Supplement The specified initial settings are provided according to the destinations in the maintenance items below. To change the initial settings in those items, be sure to run maintenance item U021 after changing the destination. Initial setting according to the destinations <table><tr><th>Maintenance item No.</th><th>Title</th><th>Japan</th><th>Inch</th><th>Europe Metric, Asia Pacific</th></tr><tr><td>253</td><td>Switching between double and single counts</td><td>Single</td><td>Double</td><td>Double</td></tr></table>	Display	Description	INCH	Inch (North America) specifications	EUROPE METRIC	Metric (Europe) specifications	ASIA PACIFIC	Metric (Asia Pacific) specifications	Maintenance item No.	Title	Japan	Inch	Europe Metric, Asia Pacific	253	Switching between double and single counts	Single	Double	Double
Display	Description																		
INCH	Inch (North America) specifications																		
EUROPE METRIC	Metric (Europe) specifications																		
ASIA PACIFIC	Metric (Asia Pacific) specifications																		
Maintenance item No.	Title	Japan	Inch	Europe Metric, Asia Pacific															
253	Switching between double and single counts	Single	Double	Double															
U253	Switching between double and single counts Description Switches the count system for the total counter and other counters. Purpose Used to select, according to the preference of the user (copy service provider), if A3/Ledger paper is to be counted as one sheet (single count) or two sheets (double count). Setting - Press the start key. - Select the count system. <table><tr><th>Display</th><th>Description</th></tr><tr><td>SINGLE COUNT</td><td>Single count for all size paper</td></tr><tr><td>DBL CNT(A3/LGR)</td><td>Double count for A3/Ledger size or larger</td></tr><tr><td>DBL COUNT(B4)</td><td>Double count for B4 size or larger</td></tr><tr><td>DBL CNT(FOL/LGL)</td><td>Double count for Folio/Legal size or larger</td></tr></table> Initial setting: DBL CNT(A3/LGR) - Press the start key. The setting is set. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.	Display	Description	SINGLE COUNT	Single count for all size paper	DBL CNT(A3/LGR)	Double count for A3/Ledger size or larger	DBL COUNT(B4)	Double count for B4 size or larger	DBL CNT(FOL/LGL)	Double count for Folio/Legal size or larger								
Display	Description																		
SINGLE COUNT	Single count for all size paper																		
DBL CNT(A3/LGR)	Double count for A3/Ledger size or larger																		
DBL COUNT(B4)	Double count for B4 size or larger																		
DBL CNT(FOL/LGL)	Double count for Folio/Legal size or larger																		

Maintenance item No.	Description						
U260	Selecting the timing for copy counting Description Changes the copy count timing for the total counter and other counters. Purpose To be set according to user (copy service provider) request. If a paper jam occurs frequently in the optional document finisher when the number of copies is counted at the time of paper ejection, copies are provided without copy counts. The copy service provider cannot charge for such copying. To prevent this, the copy timing should be made earlier. If a paper jam occurs frequently in the paper conveying or fuser sections when the number of copies is counted before the paper reaches those sections, copying is charged without a copy being made. To prevent this, the copy timing should be made later. Setting 1. Press the start key. 2. Select the copy count timing. <table border="1"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>FEED</td><td>When secondary paper feed starts</td></tr> <tr> <td>EJECT</td><td>When the paper is ejected</td></tr> </tbody> </table> Initial setting: EJECT 3. Press the start key. The setting is set. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.	Display	Description	FEED	When secondary paper feed starts	EJECT	When the paper is ejected
Display	Description						
FEED	When secondary paper feed starts						
EJECT	When the paper is ejected						
U265	Setting OEM purchaser code Description Sets the OEM purchaser code. Purpose Sets the code when replacing the main PWB and the like. Setting 1. Press the start key. 2. Change the preset value using the +/- or numeric keys. 3. Press the start key. The setting is set. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.						
U285	Setting service status page Description Determines displaying the toner coverage report on reporting. Purpose According to user request, changes the setting. Method 1. Press the start key. 2. Press [COVERAGE]. Highlighted: ON, Non-highlighted: OFF Initial setting: ON 3. Press the start key. The setting is set. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.						

Maintenance item No.	Description								
U324	Setting the main charger cleaning indication Description Sets whether to display the main charger cleaning guidance. Purpose Set according to the preference of the user. Setting 1. Press the start key. 2. Select ON or OFF. <table border="1"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>ON</td><td>Displays the main charger cleaning guidance</td></tr> <tr> <td>OFF</td><td>Not to display the main charger cleaning guidance</td></tr> </tbody> </table> Initial setting: ON 3. Press the start key. The setting is set. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.	Display	Description	ON	Displays the main charger cleaning guidance	OFF	Not to display the main charger cleaning guidance		
Display	Description								
ON	Displays the main charger cleaning guidance								
OFF	Not to display the main charger cleaning guidance								
U326	Setting the black line cleaning indication Description Sets whether to display the cleaning guidance when detecting the black line. Purpose Displays the cleaning guidance in order to make the call for service with the black line decrease by the rubbish on the platen when scanning from the DP. Setting 1. Press the start key. 2. Select ON or OFF. <table border="1"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>ON</td><td>Displays the cleaning guidance</td></tr> <tr> <td>OFF</td><td>Not to display the cleaning guidance</td></tr> <tr> <td>COUNT</td><td>Setting counts of the cleaning guidance indication</td></tr> </tbody> </table> Initial setting: ON 3. Press the start key. The setting is set. Setting the count value 1. Enter a count using the +/- or numeric keys. Setting range: 0 to 999 Initial setting: 8 When setting is 0, the black line cleaning indication is displayed only if the black line is detected. 2. Press the start key. The count is set. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.	Display	Description	ON	Displays the cleaning guidance	OFF	Not to display the cleaning guidance	COUNT	Setting counts of the cleaning guidance indication
Display	Description								
ON	Displays the cleaning guidance								
OFF	Not to display the cleaning guidance								
COUNT	Setting counts of the cleaning guidance indication								

Maintenance item No.	Description								
U328	Side ejection setting Description Sets whether to eject to the side of the machine when an optional curl eliminator is installed. Purpose Set according to the preference of the user. Setting 1. Press the start key. 2. Select ON or OFF. <table><tr><th>Display</th><th>Description</th></tr><tr><td>ON</td><td>To eject to the side of the machine</td></tr><tr><td>OFF</td><td>Not to eject to the side of the machine</td></tr></table> Initial setting: OFF 3. Press the start key. The setting is set. 4. Turn the main power switch off and on.	Display	Description	ON	To eject to the side of the machine	OFF	Not to eject to the side of the machine		
Display	Description								
ON	To eject to the side of the machine								
OFF	Not to eject to the side of the machine								
U332	Setting the size conversion factor Description Sets the coefficient of nonstandard sizes in relation to the A4/Letter size. The coefficient set here is used to convert the black ratio in relation to the A4/Letter size and to display the result in user simulation. Purpose To set the coefficient for converting the black ratio for nonstandard sizes in relation to the A4/Letter size. Setting 1. Press the start key. 2. Change the setting using the +/- keys. <table><tr><th>Description</th><th>Setting range</th><th>Initial setting</th></tr><tr><td>Size parameter</td><td>0.1 to 3.0</td><td>1.0</td></tr></table> 3. Press the start key. The setting is set. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.	Description	Setting range	Initial setting	Size parameter	0.1 to 3.0	1.0		
Description	Setting range	Initial setting							
Size parameter	0.1 to 3.0	1.0							
U339	Setting the drum heater ON/OFF Description Turns the drum heater on or off during sleep mode. Purpose Set according to the preference of the user. Setting 1. Press the start key. 2. Change the setting using the +/- or numeric keys. <table><tr><th>Display</th><th>Description</th><th>Setting range</th><th>Initial setting</th></tr><tr><td>MODE</td><td>Setting the drum heater ON/OFF</td><td>0 to 4*</td><td>0</td></tr></table> *: The drum heater is off at sleep mode when the value is 0. The drum heater is on at sleep mode when the value is between 1 and 4. 3. Press the start key. The setting is set. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.	Display	Description	Setting range	Initial setting	MODE	Setting the drum heater ON/OFF	0 to 4*	0
Display	Description	Setting range	Initial setting						
MODE	Setting the drum heater ON/OFF	0 to 4*	0						

Maintenance item No.	Description														
U341	Specific paper feed location setting for printing function Description Sets a paper feed location specified for printer output. Purpose To use a paper feed location only for printer output. A paper feed location specified for printer output cannot be used for copy output. Setting 1. Press the start key. 2. Select the paper feed location for the printer. Two or more cassette can be selected. 3. Press the start key. The setting is set. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.														
U342	Setting the ejection restriction Description Sets or cancels the restriction on the number of sheets to be ejected continuously when the internal eject tray is selected as the eject location. Purpose According to user request, sets or cancels restriction on the number of sheets. Setting 1. Press the start key. 2. Select ON or OFF. <table border="1"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>ON</td><td>Sets restriction on the number of sheets</td></tr> <tr> <td>OFF</td><td>Cancels restriction on the number of sheets</td></tr> </tbody> </table> Initial setting: ON Details of restriction (number of sheets to be ejected continuously after the start key is pressed) <table border="1"> <thead> <tr> <th>Condition</th><th>Number of sheets</th></tr> </thead> <tbody> <tr> <td>When no optional ejection device is installed</td><td>250</td></tr> <tr> <td>When the job separator is installed</td><td>150</td></tr> <tr> <td>When the built-in finisher is installed</td><td>100</td></tr> </tbody> </table> 3. Press the start key. The setting is set. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.	Display	Description	ON	Sets restriction on the number of sheets	OFF	Cancels restriction on the number of sheets	Condition	Number of sheets	When no optional ejection device is installed	250	When the job separator is installed	150	When the built-in finisher is installed	100
Display	Description														
ON	Sets restriction on the number of sheets														
OFF	Cancels restriction on the number of sheets														
Condition	Number of sheets														
When no optional ejection device is installed	250														
When the job separator is installed	150														
When the built-in finisher is installed	100														

Maintenance item No.	Description						
U343	Switching between duplex/simplex copy mode Description Switches the initial setting between duplex and simplex copy. Purpose To be set according to frequency of use: set to the more frequently used mode. Setting 1. Press the start key. 2. Select ON or OFF. <table border="1"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>ON</td><td>Duplex copy</td></tr> <tr> <td>OFF</td><td>Simplex copy</td></tr> </tbody> </table> Initial setting: OFF 3. Press the start key. The setting is set. 4. Turn the main power switch off and on.	Display	Description	ON	Duplex copy	OFF	Simplex copy
Display	Description						
ON	Duplex copy						
OFF	Simplex copy						
U345	Setting the value for maintenance due indication Description Sets when to display a message notifying that the time for maintenance is about to be reached, by setting the number of copies that can be made before the current maintenance cycle ends. When the difference between the number of copies of the maintenance cycle and that of the maintenance count reaches the set value, the message is displayed. This maintenance mode is effective for only Japanese specification.						

Maintenance item No.	Description																																			
U402	Adjusting margins of image printing Description Adjusts margins for image printing. Purpose Make the adjustment if margins are incorrect. Adjustment 1. Press the start key. 2. Select the item to be adjusted. <table><thead><tr><th>Display</th><th>Description</th><th>Setting range</th><th>Initial setting</th><th>Change in value per step</th></tr></thead><tbody><tr><td>LEAD</td><td>Printer leading edge margin</td><td>0 to 236</td><td>75</td><td>0.042 mm</td></tr><tr><td>A</td><td>Printer left margin</td><td>-80 to 236</td><td>85</td><td>0.042 mm</td></tr><tr><td>C</td><td>Printer right margin</td><td>-118 to 236</td><td>85</td><td>0.042 mm</td></tr><tr><td>TRAIL</td><td>Printer trailing edge margin</td><td>-118 to 236</td><td>95</td><td>0.042 mm</td></tr><tr><td>TRAIL(DUP)</td><td>Printer trailing edge margin in duplex mode (second side)</td><td>-118 to 236</td><td>155</td><td>0.042 mm</td></tr><tr><td>TRIAL(MP)</td><td>Printer trailing edge margin (MP tray)</td><td>-118 to 236</td><td>110</td><td>0.042 mm</td></tr></tbody></table> 3. Press the system menu key. 4. Press the start key to output a test pattern. 5. Press the system menu key. 6. Change the setting value using the +/- or numeric keys. Increasing the value makes the margin wider, and decreasing it makes the margin narrower. Printer leading edge margin (3.0±2.5 mm) Printer left margin (2.0±2.0 mm) Printer right margin (2.0±2.0 mm) Printer trailing edge margin (3.0±2.5 mm) Figure 1-3-18 7. Press the start key. The value is set. Caution Check the copy image after the adjustment. If the image is still incorrect, perform the following adjustments in maintenance mode. U402 U403 (P.1-3-65) U404 (P.1-3-66) Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.	Display	Description	Setting range	Initial setting	Change in value per step	LEAD	Printer leading edge margin	0 to 236	75	0.042 mm	A	Printer left margin	-80 to 236	85	0.042 mm	C	Printer right margin	-118 to 236	85	0.042 mm	TRAIL	Printer trailing edge margin	-118 to 236	95	0.042 mm	TRAIL(DUP)	Printer trailing edge margin in duplex mode (second side)	-118 to 236	155	0.042 mm	TRIAL(MP)	Printer trailing edge margin (MP tray)	-118 to 236	110	0.042 mm
Display	Description	Setting range	Initial setting	Change in value per step																																
LEAD	Printer leading edge margin	0 to 236	75	0.042 mm																																
A	Printer left margin	-80 to 236	85	0.042 mm																																
C	Printer right margin	-118 to 236	85	0.042 mm																																
TRAIL	Printer trailing edge margin	-118 to 236	95	0.042 mm																																
TRAIL(DUP)	Printer trailing edge margin in duplex mode (second side)	-118 to 236	155	0.042 mm																																
TRIAL(MP)	Printer trailing edge margin (MP tray)	-118 to 236	110	0.042 mm																																

Maintenance item No.	Description																									
U403	Adjusting margins for scanning an original on the platen Description Adjusts margins for scanning the original on the platen. Purpose Make the adjustment if margins are incorrect. Adjustment 1. Press the start key. 2. Select the item to be adjusted. <table><thead><tr><th>Display</th><th>Description</th><th>Setting range</th><th>Initial setting</th><th>Change in value per step</th></tr></thead><tbody><tr><td>A MARGIN</td><td>Scanner left margin</td><td>0 to 10.0</td><td>2.0</td><td>0.5 mm</td></tr><tr><td>B MARGIN</td><td>Scanner leading edge margin</td><td>0 to 10.0</td><td>2.0</td><td>0.5 mm</td></tr><tr><td>C MARGIN</td><td>Scanner right margin</td><td>0 to 10.0</td><td>2.0</td><td>0.5 mm</td></tr><tr><td>D MARGIN</td><td>Scanner trailing edge margin</td><td>0 to 10.0</td><td>2.0</td><td>0.5 mm</td></tr></tbody></table> 3. Press the system menu key. 4. Place an original and press the start key to make a test copy. 5. Press the system menu key. 6. Change the setting value using the +/- keys. Increasing the value makes the margin wider, and decreasing it makes the margin narrower. Scanner leading edge margin (3±1.5 mm) Scanner left margin (2±1.0 mm) Scanner right margin (2±1.0 mm) Scanner trailing edge margin (2±1.0 mm) Figure 1-3-19 7. Press the start key. The value is set. Caution Check the copy image after the adjustment. If the image is still incorrect, perform the following adjustments in maintenance mode. U403 U404 (P.1-3-66) Completion Press the stop key. The indication for selecting a maintenance item No. appears.	Display	Description	Setting range	Initial setting	Change in value per step	A MARGIN	Scanner left margin	0 to 10.0	2.0	0.5 mm	B MARGIN	Scanner leading edge margin	0 to 10.0	2.0	0.5 mm	C MARGIN	Scanner right margin	0 to 10.0	2.0	0.5 mm	D MARGIN	Scanner trailing edge margin	0 to 10.0	2.0	0.5 mm
Display	Description	Setting range	Initial setting	Change in value per step																						
A MARGIN	Scanner left margin	0 to 10.0	2.0	0.5 mm																						
B MARGIN	Scanner leading edge margin	0 to 10.0	2.0	0.5 mm																						
C MARGIN	Scanner right margin	0 to 10.0	2.0	0.5 mm																						
D MARGIN	Scanner trailing edge margin	0 to 10.0	2.0	0.5 mm																						

Maintenance item No.	Description																									
U404	Adjusting margins for scanning an original from the DP Description Adjusts margins for scanning the original from the DP. Purpose Make the adjustment if margins are incorrect when the optional DP is used. Caution Before making this adjustment, ensure that the following adjustments have been made in maintenance mode. U402 (P.1-3-64) → U403 (P.1-3-65) → U404 Adjustment 1. Press the start key. 2. Select the item to be adjusted. <table><tr><th>Display</th><th>Description</th><th>Setting range</th><th>Initial setting</th><th>Change in value per step</th></tr><tr><td>A MARGIN</td><td>Left margin</td><td>0 to 10.0</td><td>3.0</td><td>0.5 mm</td></tr><tr><td>B MARGIN</td><td>Leading edge margin</td><td>0 to 10.0</td><td>2.5</td><td>0.5 mm</td></tr><tr><td>C MARGIN</td><td>Right margin</td><td>0 to 10.0</td><td>3.0</td><td>0.5 mm</td></tr><tr><td>D MARGIN</td><td>Trailing edge margin</td><td>0 to 10.0</td><td>4.0</td><td>0.5 mm</td></tr></table> 3. Press the system menu key. 4. Place an original on the DP and press the start key to make a test copy. 5. Press the system menu key. 6. Change the setting value using the +/- keys. Increasing the value makes the margin wider, and decreasing it makes the margin narrower. Leading edge margin (3±1.5 mm) Left margin (2±1.0 mm) Right margin (2±1.0 mm) Trailing edge margin (2±1.0 mm) Figure 1-3-20 7. Press the start key. The value is set. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.	Display	Description	Setting range	Initial setting	Change in value per step	A MARGIN	Left margin	0 to 10.0	3.0	0.5 mm	B MARGIN	Leading edge margin	0 to 10.0	2.5	0.5 mm	C MARGIN	Right margin	0 to 10.0	3.0	0.5 mm	D MARGIN	Trailing edge margin	0 to 10.0	4.0	0.5 mm
Display	Description	Setting range	Initial setting	Change in value per step																						
A MARGIN	Left margin	0 to 10.0	3.0	0.5 mm																						
B MARGIN	Leading edge margin	0 to 10.0	2.5	0.5 mm																						
C MARGIN	Right margin	0 to 10.0	3.0	0.5 mm																						
D MARGIN	Trailing edge margin	0 to 10.0	4.0	0.5 mm																						

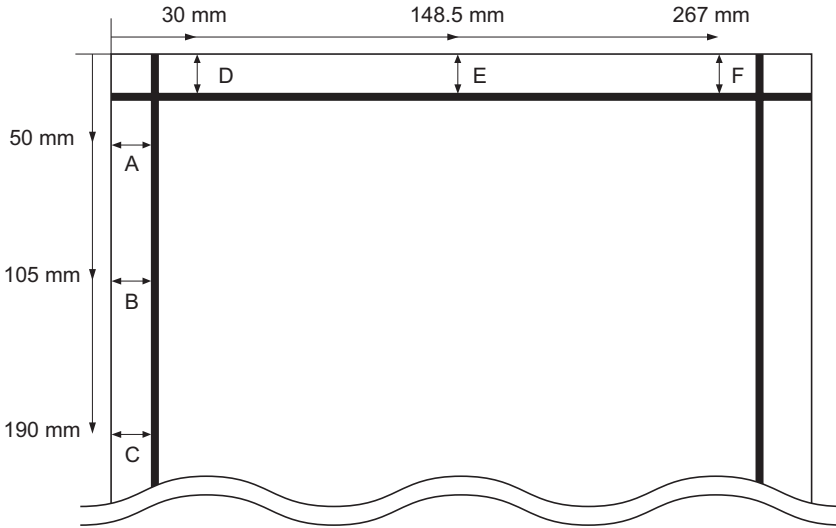
Maintenance item No.	Description								
U407	Adjusting the leading edge registration for memory image printing Description Adjusts the leading edge registration during memory copying. Purpose Make the following adjustment if there is a regular error between the leading edge of the copy image on the front face and that on the reverse face during duplex switchback copying. Caution Before making this adjustment, ensure that the following adjustments have been made in maintenance mode. U034 (P.1-3-20) U402 (P.1-3-64) U066 (P.1-3-28) U403 (P.1-3-65) U071 (P.1-3-32) U404 (P.1-3-66) U407 Adjustment 1. Press the start key. <table><tr><th>Description</th><th>Setting range</th><th>Initial setting</th><th>Change in value per step</th></tr><tr><td>Leading edge registration for memory image printing</td><td>-47 to 47</td><td>47</td><td>0.042 mm</td></tr></table> 2. Press the system menu key. 3. Place an original and press the start key to make a test copy. 4. Press the system menu key. 5. Change the setting value using the +/- or numeric keys. For copy example 1, decrease the value. For copy example 2, increase the value. Original Copy example 1 Copy example 2 Figure 1-3-21 6. Press the start key. The value is set. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.	Description	Setting range	Initial setting	Change in value per step	Leading edge registration for memory image printing	-47 to 47	47	0.042 mm
Description	Setting range	Initial setting	Change in value per step						
Leading edge registration for memory image printing	-47 to 47	47	0.042 mm						

Maintenance item No.	Description																								
U411	Adjusting the scanner automatically Description Uses a specified original and automatically adjusts the following items in the scanner and the DP scanning sections. Purpose To perform automatic adjustment of various items in the scanner and the DP scanning sections. To adjust scanner automatically when initializing the machine using the maintenance item U020 or U022. Method 1. Press the start key. 2. Select the item. The screen for executing is displayed. <table border="1"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>SCANNER</td><td>Automatic adjustment in the scanner section</td></tr> <tr> <td>DP</td><td>Automatic adjustment in the DP scanning section</td></tr> </tbody> </table> Method: SCANNER 1. Select [SCANNER]. 2. Enter the target values which are shown on the specified original executing maintenance item U425. 3. Set a specified original on the platen. 4. Select the item. <table border="1"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>ALL</td><td>Automatic adjustment using the platen for: original size magnification/leading edge timing/center line, input gamma, chromatic aberration filter, MTF filter, matrix, input gamma in monochrome mode and MTF filter in monochrome mode</td></tr> <tr> <td>INPUT</td><td>Automatic adjustment using the platen for: original size magnification/leading edge timing/center line</td></tr> <tr> <td>GAMMA</td><td>Automatic adjustment using the platen for: input gamma</td></tr> <tr> <td>C.A.</td><td>Automatic adjustment using the platen for: chromatic aberration filter</td></tr> <tr> <td>MTF</td><td>Automatic adjustment using the platen for: MTF filter</td></tr> <tr> <td>MATRIX</td><td>Automatic adjustment using the platen for: matrix</td></tr> <tr> <td>MONO GAMMA</td><td>Automatic adjustment using the platen for: input gamma in monochrome mode</td></tr> <tr> <td>MONO MTF</td><td>Automatic adjustment using the platen for: MTF filter in monochrome mode</td></tr> </tbody> </table> 5. Press the start key. Auto adjustment starts. When automatic adjustment has normally completed, [RESULT OK 00] is displayed. If a problem occurs during auto adjustment, [ERROR XX] (XX is replaced by an error code) is displayed and operation stops. Should this happen, determine the details of the problem and either repeat the procedure from the beginning, or adjust the remaining items manually by running the corresponding maintenance items. 6. To return to the screen for selecting an item, press the stop key.	Display	Description	SCANNER	Automatic adjustment in the scanner section	DP	Automatic adjustment in the DP scanning section	Display	Description	ALL	Automatic adjustment using the platen for: original size magnification/leading edge timing/center line, input gamma, chromatic aberration filter, MTF filter, matrix, input gamma in monochrome mode and MTF filter in monochrome mode	INPUT	Automatic adjustment using the platen for: original size magnification/leading edge timing/center line	GAMMA	Automatic adjustment using the platen for: input gamma	C.A.	Automatic adjustment using the platen for: chromatic aberration filter	MTF	Automatic adjustment using the platen for: MTF filter	MATRIX	Automatic adjustment using the platen for: matrix	MONO GAMMA	Automatic adjustment using the platen for: input gamma in monochrome mode	MONO MTF	Automatic adjustment using the platen for: MTF filter in monochrome mode
Display	Description																								
SCANNER	Automatic adjustment in the scanner section																								
DP	Automatic adjustment in the DP scanning section																								
Display	Description																								
ALL	Automatic adjustment using the platen for: original size magnification/leading edge timing/center line, input gamma, chromatic aberration filter, MTF filter, matrix, input gamma in monochrome mode and MTF filter in monochrome mode																								
INPUT	Automatic adjustment using the platen for: original size magnification/leading edge timing/center line																								
GAMMA	Automatic adjustment using the platen for: input gamma																								
C.A.	Automatic adjustment using the platen for: chromatic aberration filter																								
MTF	Automatic adjustment using the platen for: MTF filter																								
MATRIX	Automatic adjustment using the platen for: matrix																								
MONO GAMMA	Automatic adjustment using the platen for: input gamma in monochrome mode																								
MONO MTF	Automatic adjustment using the platen for: MTF filter in monochrome mode																								

Maintenance item No.	Description				
U411	Method: DP 1. Select [DP]. 2. Set a specified original in the DP. Cut the trailing edge of the original. 128±1 mm 60±1 mm Cut with the edge of black belt. Figure 1-3-22 3. Press [INPUT]. <table border="1"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>INPUT</td><td>Automatic adjustment of first page using the DP for: original size magnification/leading edge timing/center line</td></tr> </tbody> </table> 4. Press the start key. Auto adjustment starts. When automatic adjustment has normally completed, [RESULT OK 00] is displayed. If a problem occurs during auto adjustment, [ERROR XX] (XX is replaced by an error code) is displayed and operation stops. Should this happen, determine the details of the problem and either repeat the procedure from the beginning, or adjust the remaining items manually by running the corresponding maintenance items. 5. To return to the screen for selecting an item, press the stop key.	Display	Description	INPUT	Automatic adjustment of first page using the DP for: original size magnification/leading edge timing/center line
Display	Description				
INPUT	Automatic adjustment of first page using the DP for: original size magnification/leading edge timing/center line				

Maintenance item No.	Description	
U411	Error Codes	
	Codes	Description
	ERROR 01	Black band detection error (scanner leading edge registration)
	ERROR 02	Black band detection error (scanner center line)
	ERROR 03	Black band detection error (scanner main scanning direction magnification)
	ERROR 04	Black band is not detected (scanner leading edge registration)
	ERROR 05	Black band is not detected (scanner center line)
	ERROR 06	Black band is not detected (scanner main scanning direction magnification)
	ERROR 07	Black band is not detected (scanner auxiliary scanning direction magnification)
	ERROR 08	Black band is not detected (DP main scanning direction magnification far end)
	ERROR 09	Black band is not detected (DP main scanning direction magnification near end)
	ERROR 0a	Black band is not detected (DP auxiliary scanning direction magnification leading edge)
	ERROR 0b	Black band is not detected (DP auxiliary scanning direction magnification leading edge original check)
	ERROR 0c	Black band is not detected (DP auxiliary scanning direction trailing edge)
	ERROR 0d	Black band is not detected (DP auxiliary scanning direction trailing edge 2)
	ERROR 0e	DMA time out
	ERROR 0f	Auxiliary scanning direction magnification error
	ERROR 10	Auxiliary scanning direction leading edge detection error
	ERROR 11	Auxiliary scanning direction trailing edge detection error
	ERROR 12	Auxiliary scanning direction skew 1.5 error
	ERROR 13	Maintenance request error
	ERROR 14	Main scanning direction center line error
	ERROR 15	Main scanning direction skew 1.5 error
	ERROR 16	Main scanning direction magnification error
	ERROR 17	Carriage error
	ERROR 18	Service call error
	ERROR 19	DP status error
	ERROR 1a	DP open error
	ERROR 1b	Original is not detected
	ERROR ff	Other error
	ERROR 65	Memory over error
	Completion	
	Press the stop key. The screen for selecting a maintenance item is displayed.	

Maintenance item No.	Description																																		
U425	Setting the target Description Enters the lab values that is indicated on the back of the chart used for adjustment. Purpose Performs data input in order to correct for differences in originals during automatic adjustment. Method 1. Press the start key. 2. Select the item to be set. <table><tr><th>Display</th><th>Description</th></tr><tr><td>N875</td><td>Setting the N875 patch for the original for adjustment</td></tr><tr><td>N475</td><td>Setting the N475 patch for the original for adjustment</td></tr><tr><td>N125</td><td>Setting the N125 patch for the original for adjustment</td></tr><tr><td>CYAN</td><td>Setting the cyan patch for the original for adjustment</td></tr><tr><td>MAGENTA</td><td>Setting the magenta patch for the original for adjustment</td></tr><tr><td>YELLOW</td><td>Setting the yellow patch for the original for adjustment</td></tr><tr><td>RED</td><td>Setting the red patch for the original for adjustment</td></tr><tr><td>GREEN</td><td>Setting the green patch for the original for adjustment</td></tr><tr><td>BLUE</td><td>Setting the blue patch for the original for adjustment</td></tr><tr><td>ADJUST ORIGINAL</td><td>Setting the main and auxiliary scanning directions</td></tr></table> 3. Select the item to be set. <table><tr><th>Display</th><th>Description</th><th>Setting range</th></tr><tr><td>L</td><td>Setting the L value</td><td>0.0 to 100.0</td></tr><tr><td>a</td><td>Setting the a value</td><td>-200.0 to 200.0</td></tr><tr><td>b</td><td>Setting the b value</td><td>-200.0 to 200.0</td></tr></table> 4. Enters the value that is indicated on the back of the chart using the cursor +/- keys or numeric keys. 5. Press the start key. The value is set. 6. To return to the screen for selecting an item, press the stop key. Setting the main and auxiliary scanning directions 1. Measure distance from the left edge of the original for adjustment to the black band in three points. Measurement procedure 1) Measure the width from the paper edge to the black band in the position A, B and C. A, B and C are 50 mm, 105 mm and 190 mm left of the leading edge, respectively. 2) Apply the following formula for the values obtained: $((A + C) / 2 + B) / 2$ 2. Enter the values solved using the +/- keys in [MAIN ADJ]. 3. Press the start key. The value is set. 4. Measure distance from the leading edge of the original for adjustment to the black band in three points. Measurement procedure 1) Measure the width from the paper edge to the black band in the position D, E and F. D, E, and F are 30 mm, 148.5 mm and 267 mm down of the top left, respectively. 2) Apply the following formula for the values obtained: $((D + F) / 2 + E) / 2$ 5. Enter the values solved using the +/- keys in [SUB LEAD ADJ]. 6. Press the start key. The value is set. 7. To return to the screen for selecting an item, press the stop key.	Display	Description	N875	Setting the N875 patch for the original for adjustment	N475	Setting the N475 patch for the original for adjustment	N125	Setting the N125 patch for the original for adjustment	CYAN	Setting the cyan patch for the original for adjustment	MAGENTA	Setting the magenta patch for the original for adjustment	YELLOW	Setting the yellow patch for the original for adjustment	RED	Setting the red patch for the original for adjustment	GREEN	Setting the green patch for the original for adjustment	BLUE	Setting the blue patch for the original for adjustment	ADJUST ORIGINAL	Setting the main and auxiliary scanning directions	Display	Description	Setting range	L	Setting the L value	0.0 to 100.0	a	Setting the a value	-200.0 to 200.0	b	Setting the b value	-200.0 to 200.0
Display	Description																																		
N875	Setting the N875 patch for the original for adjustment																																		
N475	Setting the N475 patch for the original for adjustment																																		
N125	Setting the N125 patch for the original for adjustment																																		
CYAN	Setting the cyan patch for the original for adjustment																																		
MAGENTA	Setting the magenta patch for the original for adjustment																																		
YELLOW	Setting the yellow patch for the original for adjustment																																		
RED	Setting the red patch for the original for adjustment																																		
GREEN	Setting the green patch for the original for adjustment																																		
BLUE	Setting the blue patch for the original for adjustment																																		
ADJUST ORIGINAL	Setting the main and auxiliary scanning directions																																		
Display	Description	Setting range																																	
L	Setting the L value	0.0 to 100.0																																	
a	Setting the a value	-200.0 to 200.0																																	
b	Setting the b value	-200.0 to 200.0																																	

Maintenance item No.	Description						
U425	 Original for adjustment Figure 1-3-23 Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.						
U510	Setting the enterprise mode Description Sets whether or not the enterprise mode setting is enabled. Purpose According to user request, changes the setting. Setting 1. Press the start key. 2. Select ON or OFF. <table><tr><th>Display</th><th>Description</th></tr><tr><td>ON</td><td>Enterprise mode setting is enabled</td></tr><tr><td>OFF</td><td>Enterprise mode setting is disabled</td></tr></table> Initial setting: ON (Inch specifications)/OFF (Metric specifications) 3. Press the start key. The setting is set. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.	Display	Description	ON	Enterprise mode setting is enabled	OFF	Enterprise mode setting is disabled
Display	Description						
ON	Enterprise mode setting is enabled						
OFF	Enterprise mode setting is disabled						

Maintenance item No.	Description														
U901	Checking/clearing copy counts by paper feed locations Description Displays or clears copy counts by paper feed locations. Purpose To check the time to replace consumable parts. Also to clear the counts after replacing the consumable parts. Method Press the start key. The counts by paper feed locations are displayed. <table border="1"> <thead> <tr> <th>Display</th><th>Paper feed locations</th></tr> </thead> <tbody> <tr> <td>MP TRAY</td><td>MP tray</td></tr> <tr> <td>CASSETTE 1</td><td>Cassette 1</td></tr> <tr> <td>CASSETTE 2</td><td>Cassette 2</td></tr> <tr> <td>CASSETTE 3</td><td>Optional cassette 3</td></tr> <tr> <td>CASSETTE 4</td><td>Optional cassette 4</td></tr> <tr> <td>DUPLEX</td><td>Duplex section</td></tr> </tbody> </table> When an optional paper feed device is not installed, the corresponding count is not displayed. Clearing 1. Select the count to be cleared. To clear all counts, press the clear key. 2. Press the start key. The count is cleared. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.	Display	Paper feed locations	MP TRAY	MP tray	CASSETTE 1	Cassette 1	CASSETTE 2	Cassette 2	CASSETTE 3	Optional cassette 3	CASSETTE 4	Optional cassette 4	DUPLEX	Duplex section
Display	Paper feed locations														
MP TRAY	MP tray														
CASSETTE 1	Cassette 1														
CASSETTE 2	Cassette 2														
CASSETTE 3	Optional cassette 3														
CASSETTE 4	Optional cassette 4														
DUPLEX	Duplex section														
U903	Checking/clearing the paper jam counts Description Displays or clears the jam counts by jam locations. Purpose To check the paper jam status. Also to clear the jam counts after replacing consumable parts. Method 1. Press the start key. 2. Select the item. The screen for executing is displayed. <table border="1"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>COUNT</td><td>Displays/clears the jam counts</td></tr> <tr> <td>TOTAL COUNT</td><td>Displays the total jam counts</td></tr> </tbody> </table> Method: Displays/clears the jam counts 1. Select [COUNT]. The count for jam detection by type is displayed. 2. Change the screen using the cursor up/down keys. 3. Select the counts for all jam codes and press the clear key. 4. Press the start key. The count is cleared. The individual counter cannot be cleared. 5. To return to the screen for selecting an item, press the stop key. Method: Displays the total jam counts 1. Select [TOTAL COUNT]. The total number of jam counts by type is displayed. 2. Change the screen using the cursor up/down keys. The total number of jam count cannot be cleared. 3. To return to the screen for selecting an item, press the stop key. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.	Display	Description	COUNT	Displays/clears the jam counts	TOTAL COUNT	Displays the total jam counts								
Display	Description														
COUNT	Displays/clears the jam counts														
TOTAL COUNT	Displays the total jam counts														

Maintenance item No.	Description						
U904	Checking/clearing the service call counts Description Displays or clears the service call code counts by types. Purpose To check the service call code status by types. Also to clear the service call code counts after replacing consumable parts. Method 1. Press the start key. 2. Select the item. The screen for executing is displayed. <table border="1"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>COUNT</td><td>Displays/clears the service call counts</td></tr> <tr> <td>TOTAL COUNT</td><td>Displays the total service call counts</td></tr> </tbody> </table> Method: Displays/clears the service call counts 1. Select [COUNT]. The count for service call detection by type is displayed. 2. Change the screen using the cursor up/down keys. 3. Select the counts for all service call codes and press the clear key. 4. Press the start key. The count is cleared. The individual counter cannot be cleared. 5. To return to the screen for selecting an item, press the stop key. Method: Displays the total service call counts 1. Select [TOTAL COUNT]. The total number of service call counts by type is displayed. 2. Change the screen using the cursor up/down keys. The total number of service call count cannot be cleared. 3. To return to the screen for selecting an item, press the stop key. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.	Display	Description	COUNT	Displays/clears the service call counts	TOTAL COUNT	Displays the total service call counts
Display	Description						
COUNT	Displays/clears the service call counts						
TOTAL COUNT	Displays the total service call counts						

Maintenance item No.	Description																		
U905	Checking/clearing counts by optional devices Description Displays or clears the counts of optional DP or finisher. Purpose To check the use of optional DP and finisher. Also to clear the counts after replacing consumable parts. Method 1. Press the start key. 2. Select the device, the count of which is to be checked. The count of the selected device is displayed. <table border="1"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>DP</td><td>Counts of optional DP</td></tr> <tr> <td>FINISHER</td><td>Counts of optional finisher</td></tr> </tbody> </table> DP <table border="1"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>ADP</td><td>No. of single-sided originals that has passed through the DP</td></tr> <tr> <td>RADP</td><td>No. of double-sided originals that has passed through the DP</td></tr> </tbody> </table> Finisher <table border="1"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>CP CNT</td><td>No. of copies that has passed</td></tr> <tr> <td>STAPLE</td><td>Frequency the stapler has been activated</td></tr> </tbody> </table> Clearing 1. Select the item to be cleared. To clear the counts for all, press the clear key. 2. Press the start key. The count is cleared. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.	Display	Description	DP	Counts of optional DP	FINISHER	Counts of optional finisher	Display	Description	ADP	No. of single-sided originals that has passed through the DP	RADP	No. of double-sided originals that has passed through the DP	Display	Description	CP CNT	No. of copies that has passed	STAPLE	Frequency the stapler has been activated
Display	Description																		
DP	Counts of optional DP																		
FINISHER	Counts of optional finisher																		
Display	Description																		
ADP	No. of single-sided originals that has passed through the DP																		
RADP	No. of double-sided originals that has passed through the DP																		
Display	Description																		
CP CNT	No. of copies that has passed																		
STAPLE	Frequency the stapler has been activated																		
U906	Resetting partial operation control Description Resets the service call code for partial operation control. Purpose To be reset after partial operation is performed due to problems in the cassettes or other sections, and the related parts are serviced. Method 1. Press the start key. 2. Press [EXECUTE] on the touch panel. 3. Press the start key to reset partial operation control. The maintenance mode is exited, and the machine returns to the same status as when the main power switch is turned on.																		

Maintenance item No.	Description
U908	Checking the total counter value Description Displays the total counter value. Purpose To check the total counter value. Method Press the start key. The screen for total count value is displayed. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.
U910	Clearing the black ratio data Description Clears the accumulated black ratio data for A4 sheet. Purpose To clear data as required at times such as during maintenance service. Method 1. Press the start key. 2. Press [EXCUTE] on the touch panel. 3. Press the start key. The accumulated black ratio data is cleared. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.
U911	Checking/clearing copy counts by paper sizes Description Displays and clears the paper feed counts by paper sizes. Purpose To check or clear the counts after replacing consumable parts. Method Press the start key. The screen for the paper feed counts by paper size is displayed. Clearing 1. Select the paper size. To clear all counts, press the clear key. 2. Press the start key. The count is cleared. Completion Press the stop/clear key. The screen for selecting a maintenance item No. is displayed.

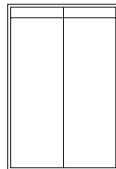
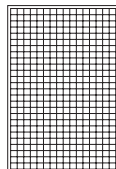
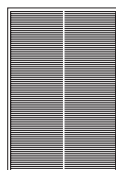
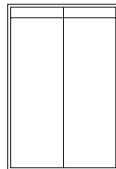
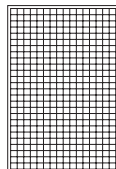
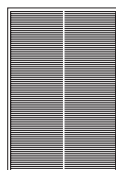
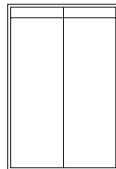
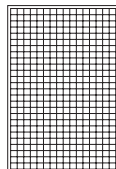
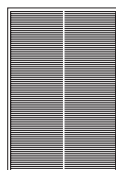
Maintenance item No.	Description
U920	Checking the copy counts Description Checks the copy counts. Purpose To check the copy counts. Method Press the start key. The current counts of copy counter, printer counter and fax counter are displayed. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.
U927	Clearing the all copy counts and machine life counts (one time only) Description Resets all of the counts back to 0. Purpose To start the counters with value 0 when installing the machine. Supplement The total account counter and the machine life counter can be cleared only once if all count values are 1000 or less. Method 1. Press the start key. 2. Press [EXECUTE] on the touch panel. 3. Press the start key. All copy counts and machine life counts are cleared. [CANNOT EXECUTE] is displayed if the count cannot be cleared. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.

Maintenance item No.	Description						
U928	Checking machine life counts Description Displays the machine life counts. Purpose To check the machine life counts. Method Press the start key. The current machine life counts is displayed. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.						
U931	Setting the automatic toner install Description Sets automatic toner installation on or off when power is turned on. Purpose Changed to off when deactivating automatic toner installation. Setting 1. Press the start key. 2. Select ON or OFF. <table border="1"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>ON</td><td>Automatic toner install function ON</td></tr> <tr> <td>OFF</td><td>Automatic toner install function OFF</td></tr> </tbody> </table> Initial setting: OFF 3. Press the start key. The setting is set. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.	Display	Description	ON	Automatic toner install function ON	OFF	Automatic toner install function OFF
Display	Description						
ON	Automatic toner install function ON						
OFF	Automatic toner install function OFF						

Maintenance item No.	Description										
U933	Setting the fax backup kit Description Initializes optional fax backup kit (memory card) and restore the backup data. Purpose To initialize the memory card when call for service (C0700) occurs. Also, to restore data when the hard disk has been damaged. Method 1. Press the start key. 2. Select the item. <table border="1"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>INITIALIZE CF</td><td>Initializes the fax backup kit and backs up the job accounting data in the hard disk into the fax backup kit.</td></tr> <tr> <td>FAX IMAGE</td><td>Prints the fax reception data backed up in the fax backup kit.</td></tr> <tr> <td>JOB ACCOUNTING</td><td>Restores the job accounting data stored in the fax backup kit to the hard disk.</td></tr> <tr> <td>RECOVERY CF</td><td>Rewrites the serial number of memory card to put it in active when the call for service C0700 occurs.</td></tr> </tbody> </table> Method: Restoring the backup data when replacing the HDD 1. Select [FAX IMAGE]. 2. Press [EXECUTE]. 3. Press the start key. The fax reception data is printed out. 4. Select [JOB ACCOUNTING]. 5. Press the start key. The job accounting data is restored. 6. Select [INITIALIZE CF]. 7. Press the start key. Memory card is initialized. 8. Turn the main power switch off and on. Method: When call for service C0700 occurred 1. Select [RECOVERY CF]. 2. Press the start key. 3. Turn the main power switch off and on. 4. Select [FAX IMAGE]. 5. Press [EXECUTE]. 6. Press the start key. Prints the fax images if the images remain in the memory card. 7. Select [INITIALIZE CF]. 8. Press the start key. Memory card is initialized. 9. Turn the main power switch off and on. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.	Display	Description	INITIALIZE CF	Initializes the fax backup kit and backs up the job accounting data in the hard disk into the fax backup kit.	FAX IMAGE	Prints the fax reception data backed up in the fax backup kit.	JOB ACCOUNTING	Restores the job accounting data stored in the fax backup kit to the hard disk.	RECOVERY CF	Rewrites the serial number of memory card to put it in active when the call for service C0700 occurs.
Display	Description										
INITIALIZE CF	Initializes the fax backup kit and backs up the job accounting data in the hard disk into the fax backup kit.										
FAX IMAGE	Prints the fax reception data backed up in the fax backup kit.										
JOB ACCOUNTING	Restores the job accounting data stored in the fax backup kit to the hard disk.										
RECOVERY CF	Rewrites the serial number of memory card to put it in active when the call for service C0700 occurs.										

Maintenance item No.	Description															
U935	Relay board maintenance Description Sets the mode when call for service (C0060) occurs. Purpose Sets the machine status temporarily when call for service (C0060) occurs. However, after the setting, call for service (C0060) occurs again when progress of period. Setting 1. Press the start key. 2. Select the item. <table><tr><th>Display</th><th>Description</th></tr><tr><td>MODE 0</td><td>Setting mode: OFF</td></tr><tr><td>MODE 1</td><td>Setting mode: ON (Usable up to three times of use)</td></tr></table> Initial setting: 0 3. Press the start key. The setting is set. 4. Turn the main power switch off and on. Supplement After removing the cause of the problem, be sure to change the setting in OFF.	Display	Description	MODE 0	Setting mode: OFF	MODE 1	Setting mode: ON (Usable up to three times of use)									
Display	Description															
MODE 0	Setting mode: OFF															
MODE 1	Setting mode: ON (Usable up to three times of use)															
U942	Setting of deflection for feeding from DP Description Adjusts the deflection generated when the optional DP is used. Purpose Use this mode if an original non-feed jam, oblique feed or wrinkling of original occurs when the DP is used. Setting 1. Press the start key. 2. Select the item to be adjusted. <table><tr><th>Display</th><th>Description</th><th>Setting range</th><th>Initial setting</th><th>Change in value per step</th></tr><tr><td>FEED MOT</td><td>Deflection in the original feed motor</td><td>-31 to 31</td><td>0</td><td>0.098 mm</td></tr><tr><td>REV MOT</td><td>Deflection in the original switchback motor</td><td>-31 to 31</td><td>0</td><td>0.098 mm</td></tr></table> 3. Press the system menu key. 4. Place an original on the DP and press the start key to make a test copy. 5. Press the system menu key. 6. Change the setting value using the +/- or numeric keys. The greater the value, the larger the deflection; the smaller the value, the smaller the deflection. If an original non-feed jam or oblique feed occurs, increase the setting value. If wrinkling of original occurs, decrease the value. 7. Press the start key. The setting is set. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.	Display	Description	Setting range	Initial setting	Change in value per step	FEED MOT	Deflection in the original feed motor	-31 to 31	0	0.098 mm	REV MOT	Deflection in the original switchback motor	-31 to 31	0	0.098 mm
Display	Description	Setting range	Initial setting	Change in value per step												
FEED MOT	Deflection in the original feed motor	-31 to 31	0	0.098 mm												
REV MOT	Deflection in the original switchback motor	-31 to 31	0	0.098 mm												

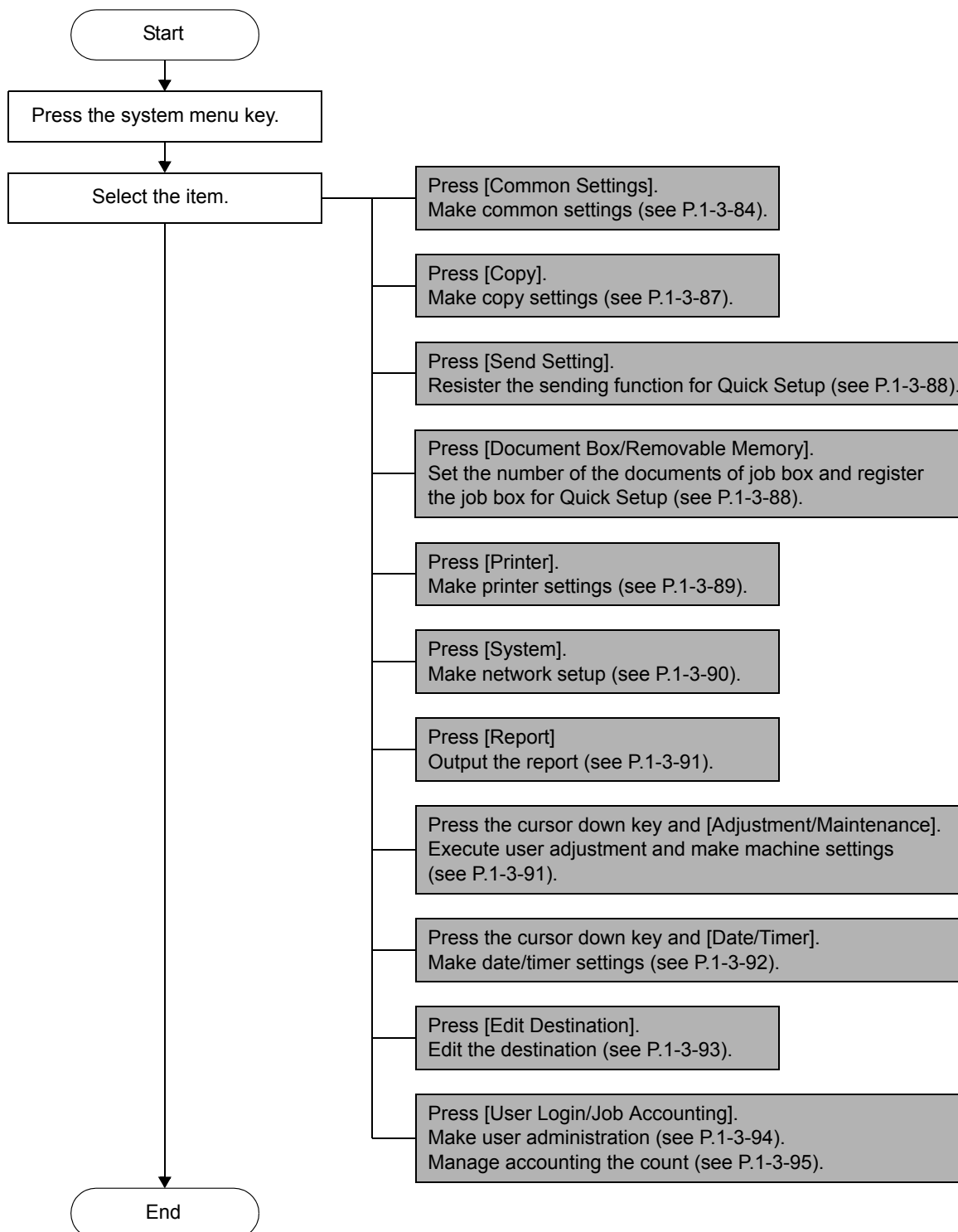
Maintenance item No.	Description						
U984	Checking the developing unit number Description Displays the developing unit number. Purpose To check the developing unit number. Method Press the start key. The number is displayed. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.						
U985	Displaying the developing unit history Description Displays the past record of machine number and the developing counter. Purpose To check the count value machine number and the developing counter. Method Press the start key. Past record of 5 cases is displayed. <table border="1"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>MACHINE No.1 to 5</td><td>Past record of machine number</td></tr> <tr> <td>COUNT 1 to 5</td><td>Past record of developing counter</td></tr> </tbody> </table> Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.	Display	Description	MACHINE No.1 to 5	Past record of machine number	COUNT 1 to 5	Past record of developing counter
Display	Description						
MACHINE No.1 to 5	Past record of machine number						
COUNT 1 to 5	Past record of developing counter						
U989	HDD scandisk Description Restores data in the hard disk by scanning the disk. Purpose If power is turned off while accessing to the hard disk is performed, the control information in the hard disk drive may be damaged. Use this mode to restore the data. Method 1. Press the start key. 2. Press [EXECUTE] on the touch panel. 3. Press the start key. 4. Turn the main power switch off and on. The hard disk is scanned. 5. When the memory indicator is turned off, turn the main power switch off and on.						
U990	Checking/clearing the time for the exposure lamp to light Description Displays, clears or changes the accumulated time for the exposure lamp to light. Purpose To check duration of use of the exposure lamp. Also to clear the accumulated time for the lamp after replacement. Method 1. Press the start key. The accumulated time of illumination for the exposure lamp is displayed in minutes. 2. Press the start key. The accumulated time is cleared. Setting 1. Enter a accumulated time using the +/- or numeric keys. 2. Press the start key. The time is set. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.						

Maintenance item No.	Description												
U991	Checking the scanner count Description Displays the scanner operation count. Purpose To check the status of use of the scanner. Method Press the start key. <table><tr><th>Display</th><th>Description</th></tr><tr><td>COPY SCAN CNT</td><td>Scanner operation count for copying</td></tr><tr><td>OTHERS SCAN CNT</td><td>Scanner operation count except for copying</td></tr></table> Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.	Display	Description	COPY SCAN CNT	Scanner operation count for copying	OTHERS SCAN CNT	Scanner operation count except for copying						
Display	Description												
COPY SCAN CNT	Scanner operation count for copying												
OTHERS SCAN CNT	Scanner operation count except for copying												
U993	Outputting a VTC-PG pattern Description Selects and outputs a VTC-PG pattern created in the machine. Purpose When performing respective image printing adjustments, used to check the machine status apart from that of the scanner with a non-scanned output VTC-PG pattern. Method 1. Press the start key. 2. Select the VTC-PG pattern to be output and press the start key. <table><tr><th>Display</th><th>PG pattern to be output</th><th>Purpose</th></tr><tr><td>PG1</td><td></td><td>Leading edge registration adjustment Center line adjustment Margin adjustment</td></tr><tr><td>PG2</td><td></td><td>Lateral squareness adjustment Magnification adjustment</td></tr><tr><td>PG3</td><td></td><td>Driving unevenness of drum</td></tr></table> 3. Press the system menu key. 4. Press the start key. A VTC-PG pattern is output. 5. To return to the screen for selecting an item, press the system menu key. Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.	Display	PG pattern to be output	Purpose	PG1		Leading edge registration adjustment Center line adjustment Margin adjustment	PG2		Lateral squareness adjustment Magnification adjustment	PG3		Driving unevenness of drum
Display	PG pattern to be output	Purpose											
PG1		Leading edge registration adjustment Center line adjustment Margin adjustment											
PG2		Lateral squareness adjustment Magnification adjustment											
PG3		Driving unevenness of drum											

1-3-2 User management

In addition to a maintenance function for service, the machine is equipped with a management function which can be operated by users. In this user management mode, settings such as default settings can be changed.

(1) Using the user management mode



(2) Common settings

Switching the language for display

Select the language displayed on the touch panel.

1. Press [Change] of Language.
2. Press the key for the language to use.
3. Press [OK].
4. Press the power key, and after confirming that the power key/indicator and memory indicator have turned off, turn the main power switch off and on.
5. Turn the main power switch on. Touch panel will be displayed in the selected language.

Default screen

Select the screen appearing right after start-up (default screen).

1. Press [Change] of Default Screen.
2. Select the screen to show.
3. Press [OK].

Sound

Set options for buzzer sound during the machine operations.

1. Press [Next] of Sound and then [Next] of Buzzer.
2. Press [Change] of Volume, Key Confirmation, Job Finish, Ready, or Warning.
3. Select the buzzer volume level, or other sound options.
4. Press [Close].

Original/Paper setup

Register additional types and sizes of originals and paper.

Custom original size setup

Set up frequently-used custom original sizes at maximum. The custom size options are displayed on the screen to select original size.

1. Press [Next] of Original/Paper Setup and then [Next] of Custom Original Size.
2. Press [Change] of Custom 1 to Custom 4 to register the size.
3. Press [On], and enter X (horizontal) and Y (vertical) dimensions using the [+]/[-] or numeric keys.
4. Press [OK].

Adding a custom size and media type for paper to print

Set up four frequently-used custom paper sizes at maximum. The custom size options are displayed on the screen to select paper set in the MP tray.

1. Press [Next] of Original/Paper Setup and then [Next] of Custom Paper Size.
2. Press [Change] of Custom 1 to Custom 4 to register the size.
3. Press [On], and enter X (horizontal) and Y (vertical) dimensions using the [+]/[-] or numeric keys.
4. Press [Media Type] to select the type of paper and press [OK] if necessary.
5. Press [OK].

Paper size and media type setup for cassettes

Select paper size and type of paper for Cassette 1, 2 and optional paper feeders (Cassette 3 and 4).

1. Press [Next] of Original/Paper Setup, [Next] of Cassette Setting, [Next] of Cassette 1 to Cassette 4 to register the size, and then [Change] of Paper Size.
2. To detect paper size automatically, press [Auto] and select Metric or Inch for Paper Size.
To select paper size, press [Standard Sizes 1] or [Standard Sizes 2] for Paper Size.
3. Press [OK].
4. Press [Change] of Media Type to select type of paper and press [OK].

Paper size and media type setup for MP tray

Select size and type of paper for MP Tray. Set up frequently used size and media type before use.

1. Press [Next] of Original/Paper Setup, [Next] of MP Tray Setting and then [Change] of Paper Size.
2. To detect paper size automatically, press [Auto] and select Metric or Inch for Paper Size.
To select paper size, press [Standard Sizes 1], [Standard Sizes 2], [Others] or [Size Entry] for Paper Size.
If you select [Size Entry], enter X (horizontal) and Y (vertical) dimensions using the [+]/[-].
3. Press [OK].
4. Press [Change] of Media Type to select the type of paper and press [OK].

Paper weight

Select weight for each media type.

1. Press [Next] of Original/Paper Setup and then [Next] of Media Type Setting.
2. Press [Next] for the media type to change weight.
3. Press [Change] of Media Weight.
4. Select the weight and press [OK].
5. To change the duplex printing settings for Custom 1 (-8), press [Change] of Duplex, select [Prohibit] or [Permit] and press [OK].
6. To change the name for Custom 1(-8), press [Change] of Name to enter the name and press [OK].

Default paper source

Select the default paper source from Cassette 1-4 and MP tray.

1. Press [Next] of Original/Paper Setup and then [Change] of Default Paper Source.
2. Select default setting for paper cassette.
3. Press [OK].

Automatic detection of originals

Automatically detect originals of special or non-standard size.

1. Press [Next] of Original/Paper Setup and then [Change] of Original Auto Detect.
2. Press [A6] or [Hagaki] of A6/Hagaki.
Press [Off] or [On] of Folio.
Press [Off] or [On] of 11 x 15"
3. Press [OK].

Media for auto selection

Select default media type for auto paper selection.

1. Press [Next] of Original/Paper Setup and then [Change] of Media for Auto Selection.
2. Select media type for paper selection.
3. Press [OK].

Paper source for cover paper

Select paper source for cover from Cassette 1-4 or MP tray.

1. Press [Next] of Original/Paper Setup and then [Change] of Paper Source for Cover.
2. Select the paper source to load cover paper.
3. Press [OK].

Special paper action

To print on Prepunched, Preprint, and Letterhead, punch-holes might fail to be aligned or print direction might be upside down depending on how to set the originals and combination of copying functions. In such a case, select [Adjust Print Direction] to adjust the print direction. When paper orientation is not important, select [Speed Priority].

1. Press [Next] of Original/Paper Setup and then [Change] of Special Paper Action.
2. Press [Adjust Print Direction] or [Speed Priority].
3. Press [OK].

Switching unit of measurement

Select inch or metric for the unit for paper dimensions.

1. Press [Change] of Measurement.
2. Press [mm] for metric or [Inch] for inch.
3. Press [OK].

Error handling

Select whether cancelling or continuing the job when error has occurred.

1. Press [Next] of Error Handling.
2. Press [Change] at the error to change what to do about it.
3. Select what to do about errors and press [OK].

Output tray

Select output tray respectively for copy jobs, print jobs from Custom Box, computers, and FAX RX data.

1. Press [Next] of Output Tray.
2. Press [Change] of Copy/Custom Box, Printer, or FAX Port1 or FAX Port2.
3. Select Output Tray.
For [Finisher Tray], select [Face Up] (print surface up) or [Face Down] (print surface down) for paper orientation at output.
4. Press [OK].

Function defaults

Set the defaults for available settings such as copying and sending. Setting the frequently-used values as defaults makes subsequent jobs easier.

Original orientation

Set the original orientation defaults.

1. Press [Next] of Function Defaults and then [Change] of Original Orientation.
2. Press [Top Edge Top] or [Top Edge Left].
3. Press [OK].

Continuous scan

Set the continuous scan defaults.

1. Press [Next] of Function Defaults and then [Change] of Continuous Scan.
2. Press [Off] or [On].
3. Press [OK].

Original image

Set the default original document type.

1. Press [Next] of Function Defaults and then [Change] of Original Image.
2. Select [Text+Photo], [Text] or [Photo].
3. Press [OK].

Scanner resolution

Select the default scanning resolution.

1. Press [Next] of Function Defaults and then [Change] of Scan Resolution.
2. Select the default resolution.
3. Press [OK].

Color selection

Select the default scanning color setting.

1. Press [Next] of Function Defaults and then [Change] of Color Selection.
2. Select the default color setting.
3. Press [OK].

File format

Select the default file type to send the scanned originals.

1. Press [Next] of Function Defaults and then [Change] of File Format.
2. Select the default file format.
3. Press [OK].

File separation

Select the default file separation setting.

1. Press [Next] of Function Defaults and then [Change] of File Separation.
2. Press [Off] or [Each Page].
3. Press [OK].

Density

Set the default density.

1. Press [Next] of Function Defaults and then [Change] of Density.
2. Press [Manual (Normal 0)] or [Auto].
3. Press [OK].

Zoom

Select the enlarged/reduced default when paper size/ sending size changed after the originals set.

1. Press [Next] of Function Defaults and then [Change] of Zoom.
2. Press [100%] or [Auto].
3. Press [OK].

File name entry

Set an automatically entered name (default) for jobs. Additional information such as Date and Time and Job No. can also be set.

1. Press [Next] of Function Defaults, cursor down key and then [Change] of File Name Entry.
2. Press [File Name] to enter the file name in not more than 30 characters.
3. Press [OK].
4. Press [Date and Time] to add the date/time to the job, or press [Job No.] to add the job number to the job. The added information will be displayed in Additional Info..
5. Press [OK].

E-mail subject/body

Set the subject and body automatically entered (default subject and body) when sending the scanned originals by E-mail.

1. Press [Next] of Function Defaults, cursor down key, and then [Change] of E-mail Subject/Body.
2. Press [Subject] to enter an E-mail subject not more than 60 characters.
3. Press [OK].
4. Press [Body] to enter an E-mail body not more than 500 characters.
5. Press [OK].
6. Check if the entries are correct and press [OK].

Border erase default

Set the default border width to be erased.

1. Press [Next] of Function Defaults, cursor down key and then [Change] of Border Erase Default.
2. Press [+] or [-] for the Border and Gutter width to erase.
3. Press [OK].

Margin default

Set the default margin.

1. Press [Next] of Function Defaults, cursor down key and then [Change] of Margin Default.
2. Press [+] or [-] for the Left/Right and Top/Bottom width margin.)
3. Press [OK].

Collate/Offset

Set the defaults for Collate/Offset.

1. Press [Next] of Function Defaults, cursor down key and then [Change] of Collate/Offset.
2. Select the defaults.
3. Press [OK].

Auto image rotation

Select the default Auto Image Rotation setting.

1. Press [Next] of Function Defaults, cursor down key and then [Change] of Auto Image Rotation.
2. Press [Off] or [On].
3. Press [OK].

Form overlay (copy)

Select the default form and form density from Form Box for form overlay for copy jobs.

1. Press [Next] of Function Defaults, cursor down key and then [Change] of Form Overlay (Copy).
2. Press [Select Stored Form].
3. Press [+] or [-] to enter the form density.
4. Press [Select Form].
5. Select the form and press [OK].
6. Press [OK].

Form overlay (box)

Select the default form and form density from Custom Box for form overlay for box print jobs.

1. Press [Next] of Function Defaults, cursor down key and [Change] of Form Overlay (Box).
2. Press [Select Stored Form].
3. Press [+] or [-] to enter the form density.
4. Press [Select Form].
5. Select the Box where the Form is stored and press [Open].
6. Select the form and press [OK].
7. Press [OK].

EcoPrint

Select the EcoPrint default.

1. Press [Next] of Function Defaults, cursor down key and then [Change] of EcoPrint.
2. Press [Off] or [On].
3. Press [OK].

PDF/TIFF/JPEG image

Select the default PDF/TIFF/JPEG file quality.

1. Press [Next] of Function Defaults. Press cursor down key twice and then [Change] of PDF/TIFF/JPEG Image.
2. Select the default image quality from [1 Low Quality (High Comp.) to [5 High Quality (Low Comp.)].
3. Press [OK].

High Comp. PDF image

Select the default High Comp.

1. Press [Next] of Function Defaults. Press cursor down key twice and [Change] of High Comp. PDF Image.
2. Select the default for [Compression Ratio Priority], [Standard], or [Quality Priority].
3. Press [OK].

Repeat copying

Select the repeat copy default.

1. Press [Next] of Function Defaults. Press cursor down key twice and [Change] of Repeat Copy.
2. Press [Off] or [On].
3. Press [OK].

Orientation confirmation set

Select whether to display a screen for selecting the orientation of the originals to be placed on the platen.

1. Press [Change] of Orientation Confirmation.
2. Press [Off] or [On].
3. Press [OK].

(3) Copy settings**Border erase to back page**

Select the border erase method for back of page.

1. Press [Change] of Border Erase to Back Page.
2. Press [Same as Front Page] or [Do not Erase].
3. Press [OK].

Paper selection

Set the default paper selection.

1. Press [Change] of Paper Selection.
2. Press [Auto] or [Default Paper Source].
3. Press [OK].

Auto paper selection

When [Auto] is selected for Paper Selection, set the paper size selection method when the zoom changed.

1. Press [Change] of Auto Paper Selection.
2. Press [Most Suitable Size] or [Same as Original Size].
3. Press [OK].

Auto % priority

When a paper source of different size from the original is selected, select whether automatic zoom (reduce/zoom) is performed.

1. Press [Change] of Auto % Priority.
2. Press [Off] or [On].
3. Press [OK].

Preset limit

Restrict the number of copies that can be made at one time.

1. Press [Change] of Preset Limit.
2. Enter the number of copies using [+] / [-] or numeric keys.
3. Press [OK].

Quick setup registration

Select the copying functions to be registered for Quick Setup.

Six keys of the Quick Setup screen are allocated to typical functions but can be changed as necessary.

1. Press [Next] of Quick Setup Registration.
2. Press [Change] of the function to be registered in Quick Setup.
3. Select a key (1-6) allocated on the Quick Setup Registration screen.
Press [Off] to delete a key from the Quick Setup.
4. Press [OK].

Reserve next priority setting

Select the operation of the reserve copy and interrupt copy functions and for canceling jobs.

1. Press [Change] of Reserve Next Priority.
2. Press [Off] or [On].
3. Press [OK].

(4) Sending settings**Quick setup registration**

Select the sending functions to be registered for Quick Setup.

Six keys of the Quick Setup screen are allocated to typical functions but can be changed as necessary.

1. Press [Next] of Quick Setup Registration.
2. Press [Change] of the function to be registered in Quick Setup.
3. Select a key (1-6) allocated on the Quick Setup Registration screen. Press [Off] to delete a key from the Quick Setup.
4. Press [OK].

High-compression PDF auto color

When documents are sent as highly compressed PDF files, the color and monochrome are automatically detected.

1. Press [Change] of High Comp. PDF Auto Color.
2. Press [Off] or [On].
3. Press [OK].

(5) Document box/Removable memory settings**Quick setup registration**

Select the Storing in Box, Sending from Box, Printing from Box functions to be registered for Quick Setup. Six keys of the Quick Setup screen are allocated to typical functions but can be changed as necessary.

1. Press [Next] of Quick Setup Registration.
2. Press [Next] of Store File, Send, or Print.
3. Press [Change] of the function to be registered in Quick Setup.
4. Select a key (1-6) allocated on the Quick Setup screen. Press [Off] to delete a key from the Quick Setup.
5. Press [OK].

Quick copy/Proof and hold print box

Quick Copy/Proof and Hold Box stores the print data which is printed by using the printer driver as a Quick Copy or Hold after Proof Print job.

1. Press [Next] of Job Box, then [Change] of Quick Copy Job Retention.
2. Enter the maximum number of stored jobs using the [+]/[-].
3. Press [OK].

Repeat copy box

Change the maximum number of Repeat Copy jobs to retain in the document box.

1. Press [Next] of Job Box.
2. Press [Change] of Repeat Copy Retention Number.
3. Enter the maximum number of stored jobs using the [+]/[-].
4. Press [OK].

(6) Printer settings

Emulation

Selection of emulation

Select the emulation for operating this machine by the command for other printers.

1. Press [Change] of Emulation.
2. Select the desired emulation.
3. Press [OK].
4. Press the power key, and after confirming that the power key/indicator and memory indicator have turned off, turn the main power switch off and on.

Setting of alternative emulation

When you have selected [KPD L (Auto)] as emulation mode, you can switch KPD L and another emulation mode (alternative emulation) automatically according to the data to print.

1. Press [Change] of Emulation, [KPD L (Auto)] and [Alt Emulation].
2. Select the desired alternative emulation.
3. Press [OK].
4. Press the power key, and after confirming that the power key/indicator and memory indicator have turned off, turn the main power switch off and on.

Setting of KPD L error report

When an error has occurred during printing in KPD L emulation mode, set whether or not the error report is output.

1. Press [Change] of Emulation, [KPD L] or [KPD L (Auto)], [KPD L Error Report]
2. Press [On] or [Off].
3. Press [OK].
4. Press the power key, and after confirming that the power key/indicator and memory indicator have turned off, turn the main power switch off and on.

Setting of page size and pen

When you have selected KC-GL as emulation mode, you can set the page size, eight kinds of pens, and thickness of each pen.

1. Press [Change] of Emulation, [KC-GL] and [Page Set].
2. Select the paper size.
3. Press [OK].
4. Press [Pen Adjust], [Change] of the pen to change its thickness (1 to 8).
5. Press [+] or [-] to set the pen thickness.
6. Press [OK].
7. Press the power key, and after confirming that the power key/indicator and memory indicator have turned off, turn the main power switch off and on.

Resolution

Select default resolution.

1. Press [Change] of Resolution.
2. Select default resolution.
3. Press [OK].

EcoPrint

EcoPrint conserves toner when printing.

1. Press [Change] of EcoPrint.
2. Press [Off] or [On].
3. Press [OK].

KIR

The machine is equipped with the smoothing KIR functions, which realizes exquisite output resolution of about 2400 dpi x 600 dpi.

1. Press [Change] of KIR.
2. Press [On] or [Off].
3. Press [OK].

Override A4/Letter

Select whether treating A4 size and Letter, which are similar in size, as the same size when printing.

1. Press [Change] of Override A4/Letter.
2. Press [Off] or [On].
3. Press [OK].

Duplex

Select binding orientation for duplex mode.

1. Press [Change] of Duplex.
2. Select [1-sided], [2-sided Bind ShortEdge], or [2-sided Bind LongEdge].
3. Press [OK].

Copies

Set the default number of copies.

1. Press [Change] of Copies.
2. Set the default number of copies using the [+] / [-] or numeric keys.
3. Press [OK].

Orientation

Set the default orientation.

1. Press [Change] of Orientation.
2. Press [Portrait] or [Landscape].
3. Press [OK].

Wide A4

Increase the number of characters per line for A4 paper.

1. Press [Change] of Wide A4.
2. Press [Off] or [On].
3. Press [OK].

Form feed timeout

Receiving print data from the computer, the machine may sometimes have to wait if there is no information identifying the last page has no data any more to be printed.

When the preset timeout passes, the machine automatically prints paper.

1. Press cursor down key and [Change] of Form Feed Timeout.
2. Press [+] or [-] to set the form feed timeout.
3. Press [OK].

LF action

Set the line feed action when the machine receives the line feed code.

1. Press the cursor down key and [Change] of LF Action.
2. Select [LF Only], [LF and CR] or [Ignore LF].
3. Press [OK].

CR action

Set the character return action when the machine receives the character return code.

1. Press the cursor down key and [Change] of CR Action.
2. Select [CR Only], [LF and CR] or [Ignore CR].
3. Press [OK].

(7) Network setup**TCP/IP setup by entering IP addresses**

Set up TCP/IP to connect to the Windows network. Set the IP addresses, subnet masks, and gateway addresses.

1. Press [Next] of Network and then [Change] of TCP/IP.
2. Press [On] on the left side of the touch panel.
3. Press [Off] of DHCP.
4. Press [IP Address] and enter the address using the numeric keys.
5. Press [Subnet Mask] and enter the address using the numeric keys.
6. Press [Default Gateway] and enter the address using the numeric keys.
7. Check if all the address entries are correct and press [OK].
8. Press the power key and confirm that the power key/indicator and the memory indicator are off. After that, turn the main power switch off and on.

TCP/IP setup (Equipped with DHCP server)

Set up TCP/IP when the network is equipped with the DHCP server.

1. Press [Next] of Network and then [Change] of TCP/IP.
2. Press [On] on the left side of the touch panel.
3. Press [On] of DHCP.
4. Press [OK].
5. Press the power key and confirm that the power key/indicator and the memory indicator are off. After that, turn the main power switch off and on.

Netware setup

Select the NetWare network connection.

1. Press [Next] of Network and then [Change] of NetWare.
2. Press [On].
3. Select the frame type.
4. Press [OK].
5. Press the power key and confirm that the power key/indicator and the memory indicator are off. After that, turn the main power switch off and on.

AppleTalk setup

1. Press [Next] of Network and then [Change] of Apple Talk.
2. Press [On].
3. Press [OK].
4. Press the power key and confirm that the power key/indicator and the memory indicator are off. After that, turn the main power switch off and on.

(8) Printing reports/Sending notice

Printing reports

Print reports to check the machine settings and status. Default settings for printing the result reports can also be configured.

1. Press [Next] of Report Print.
2. Press [Print] to print.
3. Printing starts.

Send result reports

Automatically print a report of transmission results when the transmission is complete.

1. Press [Next] of Result Report Setting, [Next] of Send Result Report and then [Change] of E-mail/Folder.
2. Select [Off], [On], or [Error Only].
3. Press [OK].

(9) Adjustment/Maintenance

Copy density adjustment

Adjust copy density.

1. Press [Next] of Copy Density Adjustment.
2. Press [Change] of Auto for auto density mode or of Manual for manual density mode.
3. Press the key to adjust density.
4. Press [OK].

Print density

Adjust print density.

1. Press [Change] of Print Density.
2. Press the key to adjust density.
3. Press [OK].

Send/Box density adjust

Adjust scan density when sending or storing the data in document box.

1. Press [Next] of Send/Box Density Adjust..
2. Press [Change] of Auto for auto density mode or of Manual for manual density mode.
3. Press the key to adjust density.
4. Press [OK].

Auto drum refresh

Set the duration of time to execute Auto Drum Refresh.

1. Press [Change] of Auto Drum Refresh.
2. Select [Off], [On(Low)] or [On(High)].
3. Press [OK].

Drum refresh

Refresh the drum when image blur or white spots appear on images in copies.

1. Place A3/11x17" on MP tray.
2. Press [Execute] of Drum Refresh1 or Drum Refresh2.
3. Press [Yes].
Drum Refresh starts.

Correcting fine black line

Correct fine black lines (black streaks caused by contamination), which may appear on the copies, when the optional document processor used.

1. Press [Change] of Correcting Black Line.
2. Select [Off], [On (Low)] or [On (High)].
3. Press [OK].

Display brightness

Set the brightness of the touch panel.

1. Press [Change] of Display Brightness.
2. Press the key to adjust brightness.
3. Press [OK].

Silent mode

Make the machine run more quietly. Select this mode when the running noise is uncomfortable.

1. Press [Change] of Silent Mode.
2. Press [Off] or [On].
3. Press [OK].

Auto color correction

Adjust the detection level used by the machine to determine whether the original is color or monochrome during sending.

1. Press [Change] of Auto Color Detection Level.
2. Press the key to set the detection level.
3. Press [OK].

System initialization

Initialize the hard disk mounted on the machine to return to the default mode.

CAUTION: System initialization will erase Custom Document Boxes, data stored in Document Box, addresses in the Address Book, user property, account information, and settings.

1. Press [Execute] of System Initialization.
2. When user login administration is invalid, the user authentication screen is displayed. Enter a login user name and password, and press [Login].
Initial setting: 3060 respectively
3. Press [Yes].
4. Once the initialization ends, the message indicating [Task is completed. Turn the main power switch off and on.] appears.
Turn the main power switch off and on.

(10) Date/Timer**Date/Time**

Set the date and time for the location where you use the machine.

1. Press [Change] of Date/Time.
2. Enter the date and time respectively using the [+]/[-].
3. Press [Off] or [On] of Summer Time and press [OK].

Time zone

Set the time difference in the location you are from GMT.

1. Press [Change] of Time Zone.
2. Select the location using the cursor up/down keys.
3. Press [OK].

Date format

Select the display format of year, month, and date.

1. Press [Change] of Date Format.
2. Select [MM/DD/YYYY], [DD/MM/YYYY], or [YYYY/MM/DD].
3. Press [OK].

Auto panel reset

If no job runs for a certain period of time, automatically reset settings and return to the default setting.

Auto panel reset ON/OFF

Select to use auto panel reset or not.

1. Press [Change] of Auto Panel Reset.
2. Press [Off] or [On].
3. Press [OK].

Reset timer

If you select [On] for auto panel reset, set the amount of time to wait before auto panel reset.

1. Press [Change] of Reset Timer.
2. Enter the time using the [+]/[-].
3. Press [OK].

Auto low power mode

Set the amount of time to wait before Auto Low Power Mode.

1. Press [Auto Low Power Mode].
2. Enter the time using the [+]/[-] or numeric keys.
3. Press [OK].

Auto sleep

If no job runs for a certain period of time, automatically enter sleep mode.

Auto sleep ON/OFF

Select whether to use auto sleep or not.

1. Press [Change] of Auto Sleep.
2. Press [Off] or [On].
3. Press [OK].

Sleep timer

If you select [On] for auto sleep, set the amount of time to wait before auto sleep.

1. Press [Change] of Sleep Timer.
2. Enter the time using the [+] / [-] or numeric keys.
3. Press [OK].

Auto error clear

If an error occurs during printing, the print job stops to wait for the next step to be taken by the user. In the auto error clear mode, automatically clear the error after a set amount of time elapses.

Auto error clear ON/OFF

Select whether to use auto error clear or not.

1. Press [Change] of Auto Error Clear.
2. Press [Off] or [On].
3. Press [OK].

Error clear timer

If you select [On] for auto error clear, set the amount of time to wait before automatically clearing errors.

1. Press [Change] of Error Clear Timer.
2. Enter the time using the [+] / [-].
3. Press [OK].

(11) Editing Destination (Address Book/Adding One-Touch Keys)

Save frequently used destinations to Address Book or One-touch Keys and the saved destinations can be changed. The destinations are available for Send as E-mail, Send to Folder, and Fax Transmission (optional).

Adding a destination

Add a new destination to the Address Book.

Adding an individual

1. Press [Register/Edit] of Address Book, [Add], [Contact] and then [Next].
2. Press [Change] of Address Number.
3. Enter a particular address number using the [+] / [-] or numeric keys.
4. Press [OK].
5. Press [Change] of Name.
6. Enter the destination name displayed on the Address Book and press [OK].
7. Press [Address].
8. Select transmission method from E-mail, Folder (FTP), FAX or Folder (SMB) using cursor up/down keys.
9. Press [Change Dest.].

E-mail Address

1. Press [E-mail Address] to enter the Email address and press [OK].
2. Check if the entries are correct and press [OK].

The Folder (FTP) Address

1. Press [Host Name], [Path], [Login User Name], and [Login Password] to enter relevant information respectively and press [OK].
2. Check if the entries are correct and press [OK].

The Folder (SMB) Address

1. Press [Host Name], [Path], [Login User Name], and [Login Password] to enter relevant information respectively and press [OK].
2. Check if the entries are correct and press [OK].

10. Check if the destination entry is correct and press [Register].

Adding a Group

Designations in the group can be added at the same time.

1. Press [Register/Edit] of Address Book, [Add], [Group] and then [Next].
2. Press [Change] of Address Number.
3. Enter a particular Address Number using the [+] / [-].
4. Press [OK].
5. Press [Change] of Name.
6. Enter the group name displayed on the Address Book.
7. Press [Group Member].
8. Press [Add].
9. Select a destination (individual) to add to the group.
10. Press [OK].
11. Check if the selected destination was added to the group and press [Register].

Adding a destination on One-touch Key

Add a new destination (individual or group).

1. Press [Register/Edit] of One-touch Key.
2. Select a One-touch Key number (001 to 100) for the destination. Pressing [No.] enables direct entry of a One-touch Key number.
3. Press [Register/Edit]. The address book appears.
4. Select a destination (individual or group) to add to the One-touch Key number.
5. Press [OK].

(12) User login administration

User login administration specifies how the user access is administered on this machine.

Enabling/Disabling User Login Administration

Enable user login administration.

1. When user login administration is invalid, the user authentication screen is displayed. Enter a login user name and password, and press [Login].
Initial setting: 3060 respectively
2. Press [Next] of User Login Setting and then [Change] of User Login.
3. Select [Off], [Local Authentic.] or [Network Authentic.].
When selecting [Network Authentic.], enter the host name (62 characters or less) and domain name (254 characters or less) for the Authentication Server.
Select [NTLM(WinNT)] or [Kerberos(Win2000/2003)] as the authentication method.
4. Press [OK].

Adding a user

Add a new user.

1. When user login administration is invalid, the user authentication screen is displayed. Enter a login user name and password, and press [Login].
2. Press [Next] of User Login Setting, [Register/Edit] of Local User List, and then [Add].
3. Press [Change] of User Name.
4. Enter the user name and press [OK].
5. Enter the login user name and E-mail address.
6. Press [Change] of Password and then [Password].
7. Enter the password and press [OK].
8. Press [Confirm Password].
9. Enter the same password to confirm and press [OK].
10. Press [Change] of Access Level.
11. Select the user access privilege and press [OK].
12. Press [Change] of Account Name.
13. Select the account and press [OK].
14. Press [Register].

Unknown login user name job

This specifies the behavior for handling the jobs sent with unknown login user names.

1. When user login administration is invalid, the user authentication screen is displayed. Enter a login user name and password, and press [Login].
2. Press [Change] of Unknown ID Job.
3. Press [Reject] or [Permit].
4. Press [OK].

(13) Job accounting

Job accounting Manages the copy/print count incurred by individual accounts by assigning an ID to each account.

Enabling/Disabling job accounting

Enable job accounting.

1. If user login administration is invalid, the user authentication screen is displayed. Enter a login user name and password, and press [Login].
Initial setting: 3060 respectively
2. Press [Next] of Job Accounting Setting, and then [Change] of Job Accounting.
3. Press [On] or [Off].
4. Press [OK].

Adding an account

Add a new account.

1. When user login administration is invalid, the user authentication screen is displayed. Enter a login user name and password, and press [Login].
2. Press [Next] of Job Accounting Setting, [Register/Edit] of Accounting List, and then [Add].
3. Press [Change] of Account Name.
4. Enter the account name and press [OK].
5. Enter the Account ID.
6. Activate or deactivate restriction.
7. Press [Register].

Managing the copy/print counts

Select how the copying and printing page counts are shown -either the total of both or each of copying and printing individually.

1. When user login administration is invalid, the user authentication screen is displayed. Enter a login user name and password, and press [Login].
2. Press [Next] of Job Accounting Setting, [Next] of Default Setting and then [Change] of Copy/Printer Count.
3. Press [Total] or [Split].
4. Press [OK].

Restricting the use of the machine

Restrict the use of the machine by account or the number of sheets available.

1. When user login administration is invalid, the user authentication screen is displayed. Enter a login user name and password, and press [Login].
2. Press [Next] of Job Accounting Setting, [Register/Edit] of Accounting List, and then [Add].
3. Press [Change] of Print Restriction Copier, Print Restriction Printer, Scan Restriction Others, or Fax TX Restriction.
4. Select [Off], [Counter Limit], or [Reject Usage].
When selecting [Counter Limit], enter the number of pages using the [+] / [-] or numeric keys.
5. Press [OK].
6. Repeat steps 3 to 4 for other accounts to be restricted.
7. Press [Register].

Applying limit of restriction

Specify how the machine behaves when the counter has reached the limit of restriction.

1. When user login administration is invalid, the user authentication screen is displayed. Enter a login user name and password, and press [Login].
2. Press [Next] of Job Accounting Setting, [Next] of Default Setting and then [Change] of Apply Limit.
3. Select [Immediately], [Subsequently], or [Alert Only].
4. Press [OK].

Counting the number of pages printed

Counts the number of pages printed. Counts are classified into Total Job Accounting and Each Job Accounting. A new count can also be started after resetting the count data which was stored for a certain period of time.

Total job accounting/Resetting the counter

Count the number of pages for all accounts and resets the counts for those accounts at one time.

1. When user login administration is invalid, the user authentication screen is displayed. Enter a login user name and password, and press [Login].
2. Press [Next] of Job Accounting Setting and then [Next] of Total Job Accounting.
3. Press [Check] at the function to check the count. The results will be displayed.
4. Confirm the count and press [Close].
5. Press [Execute] of Counter Reset to reset the counter.
6. Press [Yes] on the screen to confirm the reset. The counter is reset.

Each job accounting/Resetting the counter

Count the number of pages for each account and resets the counts by account.

1. When user login administration is invalid, the user authentication screen is displayed. Enter a login user name and password, and press [Login].
2. Press [Next] of Job Accounting Setting and [Check] of Each Job Accounting.
3. Select the account to check the count.
4. Press [Detail].
5. Press [Check] at the function to check the count. The results will be displayed.
6. Confirm the count and press [Close].
7. Press [Execute] of Counter Reset to reset the counter.
8. Press [Yes] on the screen to confirm the reset. The counter will be reset.

Counting by paper size

Count the number of pages by paper size (e.g. Letter).

1. When user login administration is invalid, the user authentication screen is displayed. Enter a login user name and password, and press [Login].
2. Press [Next] of Job Accounting Setting, [Next] of Default Setting, [Change] of Count by Paper Size, [Change] of Paper Size 1 to 5 and then [On].
3. Select the paper size.
4. Press [Media Type] to specify paper type.
5. Select the media type and press [OK].
6. Press [OK].

Printing an accounting report

Print out the total pages counted at all relevant accounts as an accounting report.

1. When user login administration is invalid, the user authentication screen is displayed. Enter a login user name and password, and press [Login].
2. Press [Next] of Job Accounting Setting and then [Print] of Print Accounting Report.
3. Press [Yes] on the screen to confirm the printing.

1-4-1 Paper misfeed detection

(1) Paper misfeed indication

When a paper misfeed occurs, the machine immediately stops copying and displays the jam location on the operation panel.

Paper misfeed counts sorted by the detection condition can be checked in maintenance item U903.

To remove paper jammed in the machine, open the front cover, left cover or pull the cassette out.

To remove original jammed in the optional DP, open the document processor top cover.

To remove the jammed paper in optional document finisher, detach the finisher from the machine.

Paper misfeed detection can be reset by opening and closing the respective covers to turn safety switch off and on.

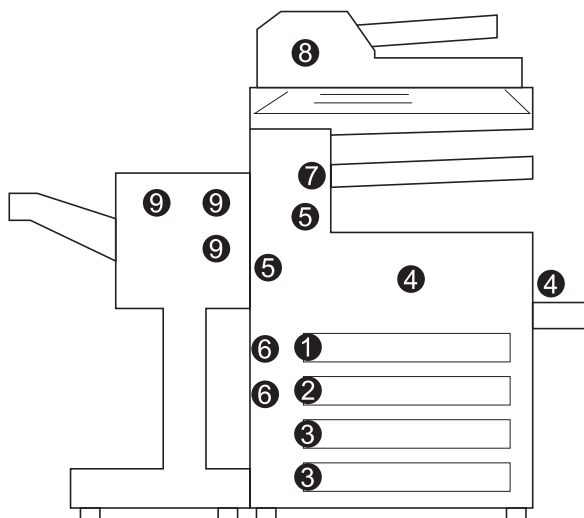
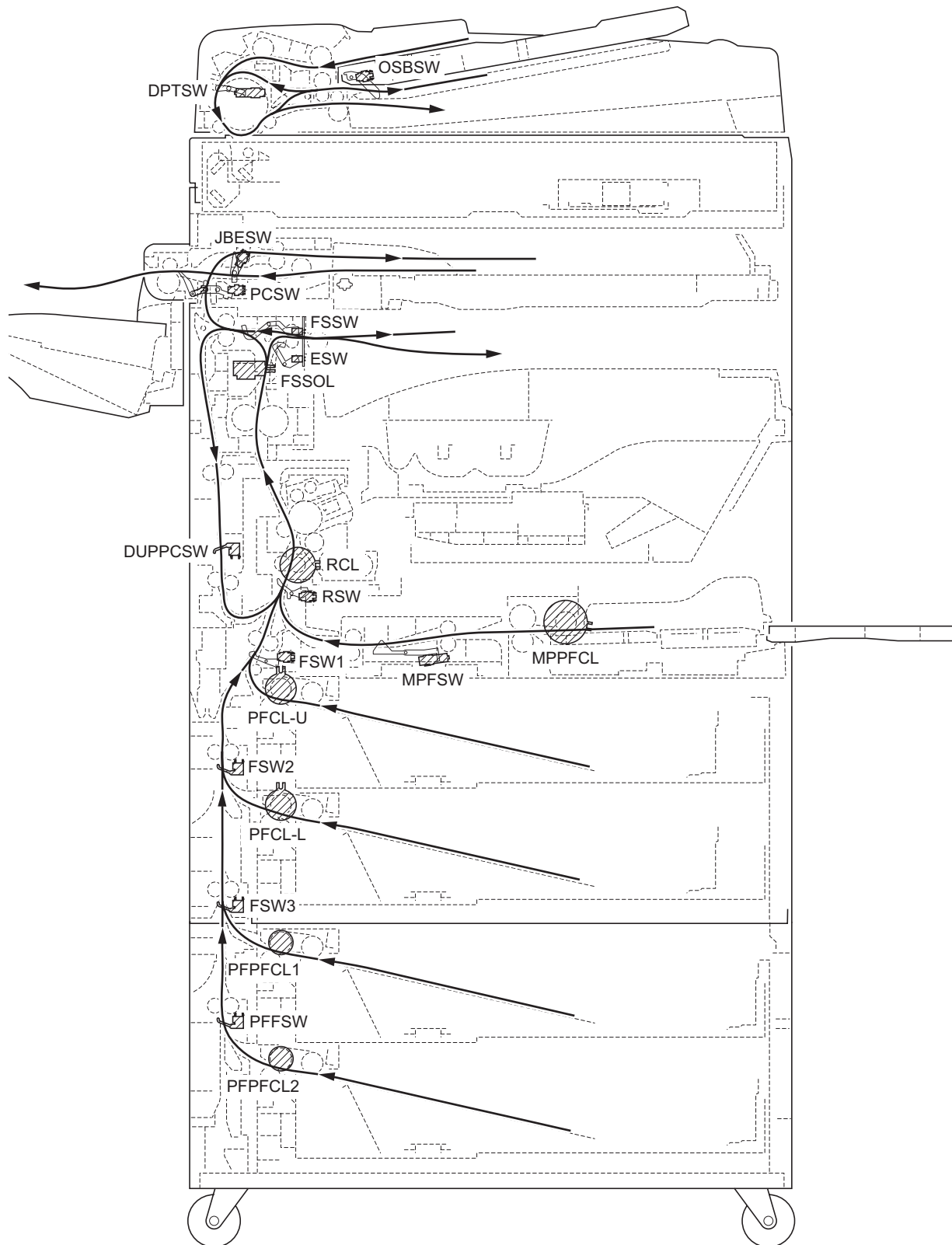


Figure 1-4-1

- (1) Misfeed in cassette 1
- (2) Misfeed in cassette 2
- (3) Misfeed in optional cassette 3 or 4
- (4) Misfeed in MP tray
- (5) Misfeed in duplex unit or left cover 1
- (6) Misfeed in left cover 2 or 3
- (7) Misfeed in optional built-in finisher
- (8) Misfeed in optional DP
- (9) Misfeed in optional document finisher

(2) Paper misfeed detection conditions**Figure 1-4-2**

Section	Description	Conditions	Specified time
System	04 Cover open	Cover is open during copying.	-
	05 Secondary paper feed does not start	Secondary paper feed does not start within specified time of arrival of paper at the registration section.	30 s
Paper feed section	10 No paper feed from cassette 1	Feed switch 1 (FSW1) does not turn on within the specified time of upper paper feed clutch (PFCL-U) turning on; the clutch is then successively turned off for 1 s and turned back on, but the switch again fails to turn on within the specified time.	1864 ms
	11 No paper feed from cassette 2	Feed switch 2 (FSW2) does not turn on within the specified time of lower paper feed clutch (PFCL-L) turning on; the clutch is then successively turned off for 1 s and turned back on, but the switch again fails to turn on within the specified time.	2121 ms
	12 No paper feed from optional cassette 3	Feed switch 3 (FSW3) does not turn on within the specified time of paper feeder paper feed clutch 1 (PFPFCL1) turning on; the clutch is then successively turned off for 1 s and turned back on, but the switch again fails to turn on within the specified time.	-
		Left cover 3 is opened in prior to feed switch 3 (FSW3) is turned on.	-
	13 No paper feed from optional cassette 4	The paper feeder feed switch (PFFSW) does not turn on within the specified time of paper feeder paper feed clutch 2 (PFPFCL2) turning on; the clutch is then successively turned off for 1 s and turned back on, but the switch again fails to turn on within the specified time.	-
		Left cover 3 is opened in prior to the paper feeder feed switch (PFFSW) is turned on.	-
	14 No paper feed from MP tray	The MP feed switch (MPFSW) does not turn on within the specified time of the MP paper feed clutch (MPPFCL) turning on; the clutch is then successively turned off for 1 s and turned back on, but the switch again fails to turn on within the specified time.	993 ms
	18 Misfeed in vertical paper conveying section	Feed switch 1 (FSW1) does not turn off within specified time of feed switch 2 (FSW2) turning on (paper feed from cassette 2).	1314 ms
		Feed switch 1 (FSW1) does not turn on within specified time of feed switch 2 (FSW2) turning on (paper feed from cassette 2).	1314 ms
		Feed switch 1 (FSW1) does not turn off within specified time of feed switch 2 (FSW2) turning on (paper feed from optional cassette 3, 4).	1386 ms
		Feed switch 1 (FSW1) does not turn on within specified time of feed switch 2 (FSW2) turning on (paper feed from optional cassette 3, 4).	1386 ms
		Feed switch 2 (FSW2) does not turn off within specified time of feed switch 3 (FSW3) turning on (paper feed from optional cassette 3, 4).	1686 ms
		Feed switch 2 (FSW2) does not turn on within specified time of feed switch 3 (FSW3) turning on (paper feed from optional cassette 3, 4).	1686 ms

Section	Description	Conditions	Specified time
Paper feed section	19 Misfeed in paper feeder vertical paper conveying section	The feed switch 3 (FSW3) does not turn off within specified time of its turning on (paper feed from optional cassette 3).	1429 ms + Paper length
		Feed switch 3 (FSW3) does not turn off within specified time of the paper feeder feed switch (PFFSW) turning on (paper feed from optional cassette 4).	1064 ms
		The feed switch 3 (FSW3) does not turn off within specified time of its turning on (paper feed from optional cassette 4).	1064 ms
		Feed switch 3 (FSW3) does not turn on within specified time of the paper feeder feed switch (PFFSW) turning on (paper feed from optional cassette 4).	2000 ms
	20 Misfeed in MP tray paper conveying section	The registration switch (RSW) does not turn off within specified time of the MP feed switch (MPFSW) turning on.	1686 ms
		The registration switch (RSW) does not turn on within specified time of the MP feed switch (MPFSW) turning on.	1686 ms
	21 Multiple sheets in paper feed section	The feed switch 1 (FSW1) does not turn off within specified time of its turning on (paper feed from cassette 1).	1429 ms + Paper length
		The feed switch 2 (FSW2) does not turn off within specified time of its turning on (paper feed from cassette 2).	1429 ms + Paper length
		The feed switch 3 (FSW3) does not turn off within specified time of its turning on (paper feed from optional cassette 3, 4/detected by the machine).	1429 ms + Paper length
		The feed switch 3 (FSW3) does not turn off within specified time of its turning on (paper feed from optional cassette 3, 4/detected by the paper feeder).	4300 ms
		The feed switch 2 (FSW2) does not turn off within specified time of its turning on (paper feed from optional cassette 3).	1686 ms
		The paper feeder feed switch (PFFSW) does not turn off within specified time of its turning on (paper feed from optional cassette 4).	4300 ms
		The feed switch 1 (FSW1) does not turn off within specified time of the upper paper feed clutch (PFCL-U) turning on.	1864 ms
		The feed switch 2 (FSW2) does not turn off within specified time of the lower paper feed clutch (PFCL-L) turning on.	2121 ms
		The feed switch 3 (FSW3) does not turn off within specified time of the paper feeder paper feed clutch 1 (PFPFCL1) turning on.	2036 ms
	23 Multiple sheets in MP tray conveying section	The MP feed switch (MPFSW) does not turn off within specified time of its turning on.	1429 ms + Paper length

Section	Description	Conditions	Specified time
Paper conveying section	30 Misfeed in registration/ transfer section	The registration switch (RSW) does not turn off within specified time of the feed switch 1 (FSW1) turning off.	1314 ms
		The registration switch (RSW) does not turn off within specified time of the feed switch 1 (FSW1) turning on.	1100 ms
		The registration switch (RSW) does not turn on within specified time of the feed switch 1 (FSW1) turning on.	1100 ms
		The registration switch (RSW) does not turn off within specified time of the MP feed switch (MPFSW) turning off.	1686 ms
Fuser section	40 Misfeed in fuser section (MP tray)	The eject switch (ESW) does not turn on within specified time of the registration clutch (RCL) turning on.	2321 ms
	41 Misfeed in fuser section (cassette 1) 42 Misfeed in fuser section (cassette 2) 43 Misfeed in fuser section (optional cassette 3) 44 Misfeed in fuser section (optional cassette 4) 47 Misfeed in fuser section (duplex section)	The feedshift switch (FSSW) does not turn on within specified time of the registration clutch (RCL) turning on.	1336 ms
Eject section	50 Misfeed in eject section	The eject switch (ESW) does not turn off within specified time of the registration switch (RSW) turning off.	2321 ms
		The eject switch (ESW) does not turn off within specified time of the registration clutch (RCL) turning on.	2321 ms
	51 Misfeed in job separator eject section	The job separator eject switch (JBESW) does not turn on within specified time of the feedshift switch (FSSW) turning on.	1350 ms
		The job separator eject switch (JBESW) does not turn off within specified time of the feedshift switch (FSSW) turning off.	714 ms + Paper length
		The job separator eject switch (JBESW) does not turn off within specified time of the feedshift switch (FSSW) turning on.	1350 ms
Feedshift section	52 Misfeed in feedshift section	The feedshift switch (FSSW) does not turn on within specified time of the start of eject motor (EM) reverse rotation.	1121 ms
		During paper switchback operation, the feedshift switch (FSSW) does not turn off within specified time of the its turning on.	4514 ms
		The feedshift switch (FSSW) does not turn off within specified time of the its turning on.	4514 ms
		The feedshift switch (FSSW) does not turn off within specified time of the registration clutch (RCL) turning on.	2321 ms

Section	Description	Conditions	Specified time
Duplex section	60 Duplex paper conveying section 1	The duplex paper conveying switch (DUPPCSW) does not turn on within specified time of the feedshift switch (FSSW) turning on.	2621 ms
		The duplex paper conveying switch (DUPPCSW) does not turn off within specified time of the feedshift switch (FSSW) turning off.	2629 ms
	61 Duplex paper conveying section 2	The registration switch (RSW) does not turn on within specified time of the duplex paper conveying switch (DUPPCSW) turning on.	1636 ms
		The registration switch (RSW) does not turn off within specified time of the duplex paper conveying switch (DUPPCSW) turning off.	1493 ms
Optional DP	70 No original feed	The DP timing switch (DPTSW) does not turn on within specified time during the first sheet feeding (Retry 5 times).	1468 pulses
		The DP timing switch (DPTSW) does not turn on within specified time during the second sheet feeding (Retry 5 times).	1468 pulses
	71 An original jam in the original conveying section 1	DP timing switch (DPTSW) does not turn off within specified time of the original conveying motor (OCM) turning on.	9900 pulses 30558 pulses for large sizes
	72 An original jam in the original conveying section 2	DP timing switch (DPTSW) turns off within the specified time of period of the original conveying motor (OCM) turning on.	1145 pulses
	73 An original jam in the original switchback section	During original switchback operation, DP timing switch (DPTSW) does not turn off within specified time of the original conveying motor (OCM) turning on.	9900 pulses 30558 pulses for large sizes
	74 An original jam in the original switchback/feed section	DP timing switch (DPTSW) does not turn on within specified time of the original switchback motor (OSBM) turning on.	2300 pulses
	75 An original jam in the original switchback/conveying section	The original switchback switch (OSBSW) does not turn on within specified time of the DP timing switch (DPTSW) turning off.	1815 pulses
	78 Document processor cover open	The document processor or document processor top cover is opened during original feeding. DP timing switch (DPTSW) or original switchback switch (OSBSW) turns on when starting the original paper feed.	-
Optional finisher	80 Finisher timeout jam (built-in finisher only)	Paper ejection is not output from the machine to the document finisher within specified time of the paper conveying switch (PCSW) turning on.	15 s

Section	Description	Conditions	Specified time
Optional finisher	81 Paper entry sensor nonarrival jam	(Document finisher) The paper entry sensor (PES) is not turned on even if a specified time has elapsed after the machine eject signal was received.	2627 ms
		(Built-in finisher) The paper conveying switch (PCSW) is not turned on even if a specified time has elapsed after the machine eject signal was received.	2000 ms
		(Built-in finisher) The paper conveying switch (PCSW) does not turn off within specified time of its turning on when paper is conveyed to the process table from the paper conveying unit.	1429 ms + Paper length
	82 Jam in stapler	(Document finisher) The staple home position sensor (STSPS) is not turned on within the specified time when driving the staple motor (STM).	1000 ms
		(Built-in finisher) The staple home position sensor (STHPS) is not turned on within the specified time when driving the staple motor (STM).	600 ms
	83 Exit sensor stay jam	(Document finisher) In the straight mode, the exit sensor (EXS) is not turned off within specified time of its turning on.	1680 ms
		(Document finisher) In the offset or staple mode, the exit sensor (EXS) is not turned off within specified time of its turning on.	5375 ms
		(Built-in finisher) The paper conveying switch (PCSW) does not turn off within specified time of its turning on when paper is ejected to the finisher tray from the process table.	1429 ms + Paper length
	91 Finisher cover open (document finisher only)	The finisher cover becomes open during paper is running. Paper is remaining in paths at power on.	-
	92 Exit sensor non-arrival jam (document finisher only)	In the straight mode, the exit sensor (EXS) is not turned on even if a specified time has elapsed after the paper entry sensor (PES) was turned on.	1770 ms
	93 Reverse sensor jam (document finisher only)	The reverse sensor (REVS) does not turn on within specified time of paper entry sensor (PES) turning on.	1125 ms
		The reverse sensor (REVS) is not turned on within specified time.	Depends on paper size
		The reverse sensor (REVS) does not turn off within specified time of paper entry sensor (PES) turning off.	654 ms
		The reverse sensor (REVS) is not turned off within specified time its turning on.	Depends on paper size

Section	Description	Conditions	Specified time
Optional finisher	94 Paper entry sensor stay/remaining jam (document finisher only)	The paper entry sensor (PES) is not turned off within specified time its turning on.	Depends on paper size
		The paper entry sensor (PES) is not turned off within specified time its turning on.	-
	95 Paper conveying sensor jam (document finisher only)	The paper conveying sensor (PCS) does not turn on within specified time of reverse sensor (REVS) turning on.	-
		The paper conveying sensor (PCS) does not turn off within specified time of reverse sensor (REVS) turning off.	-
	96 Jam between the built-in finisher and machine (built-in finisher only)	The paper conveying switch (PCSW) is not turned on within the specified time when paper is ejected to the finisher tray from the process table.	2000 ms

(3) Paper misfeeds

Problem	Causes/check procedures	Corrective measures
(1) A paper jam in the paper feed, conveying or eject section is indicated as soon as the main power switch is turned on.	A piece of paper torn from copy paper is caught around feed switch 1/2/3, registration switch, eject switch or feedshift switch.	Check visually and remove it, if any.
	Defective switch.	Run maintenance item U031 and turn switch on and off manually. Replace the switch if indication of the corresponding switch on the touch panel is not displayed in reverse. Feed switch 1/2/3, registration switch, eject switch, feedshift switch
(2) A paper jam in the paper feed section is indicated during copying (no paper feed from cassette 1). Jam code 10	Paper is extremely curled.	Change the paper.
	Check if the paper feed pulley, separation pulley or forwarding pulley of the cassette 1 are deformed.	Check visually and replace any deformed pulleys.
	Broken feed switch 1 actuator.	Check visually and replace switch.
	Defective feed switch 1.	Run maintenance item U031 and turn feed switch 1 on and off manually. Replace the switch if indication of the corresponding switch on the touch panel is not displayed in reverse.
	Check if the upper paper feed clutch malfunctions.	Run maintenance item U032 and select the upper paper feed clutch on the touch panel to be turned on and off. Check the status and remedy if necessary.
	Electrical problem with the upper paper feed clutch.	Check (see page 1-4-39).
(3) A paper jam in the paper feed section is indicated during copying (no paper feed from cassette 2). Jam code 11	Paper is extremely curled.	Change the paper.
	Check if the paper feed pulley, separation pulley or forwarding pulley of the cassette 2 are deformed.	Check visually and replace any deformed pulleys.
	Broken feed switch 2 actuator.	Check visually and replace switch.
	Defective feed switch 2.	Run maintenance item U031 and turn feed switch 2 on and off manually. Replace feed switch 2 if indication of the corresponding switch on the touch panel is not displayed in reverse.
	Check if the lower paper feed clutch malfunctions.	Run maintenance item U032 and select the lower paper feed clutch on the touch panel to be turned on and off. Check the status and remedy if necessary.
	Electrical problem with the lower paper feed clutch.	Check (see page 1-4-39).

Problem	Causes/check procedures	Corrective measures
(4) A paper jam in the paper feed section is indicated during copying (no paper feed from optional cassette 3). Jam code 12	Paper is extremely curled.	Change the paper.
	Check if the paper feed pulley, forwarding pulley and separation pulley of optional cassette 3 are deformed.	Check visually and replace any deformed pulleys.
	Broken feed switch 3 actuator.	Check visually and replace switch.
	Defective feed switch 3.	Run maintenance item U031 and turn feed switch 3 on and off manually. Replace feed switch 3 if indication of the corresponding switch on the touch panel is not displayed in reverse.
	Check if paper feeder paper feed clutch 1 malfunctions.	Run maintenance item U247 and select paper feeder paper feed clutch 1 on the touch panel to be turned on and off. Check the status and remedy if necessary.
	Electrical problem with paper feeder paper feed clutch 1.	Check (see service manual of paper feeder).
(5) A paper jam in the paper feed section is indicated during copying (no paper feed from optional cassette 4). Jam code 13	Paper is extremely curled.	Change the paper.
	Check if the paper feed pulley, forwarding pulley and separation pulley of optional cassette 4 are deformed.	Check visually and replace any deformed pulleys.
	Broken paper feeder feed switch actuator.	Check visually and replace switch.
	Defective paper feeder feed switch.	With 5 V DC present at YC2-8 on the paper feeder main PWB, check if YC2-7 on the paper feeder main PWB remains low when the paper feeder feed switch is turned on and off. If it does, replace the paper feeder feed switch.
	Check if paper feeder paper feed clutch 2 malfunctions.	Run maintenance item U247 and select paper feeder paper feed clutch 2 on the touch panel to be turned on and off. Check the status and remedy if necessary.
	Electrical problem with paper feeder paper feed clutch 2.	Check (see service manual of paper feeder).
(6) A paper jam in the paper feed section is indicated during copying (no paper feed from MP tray). Jam code 14	Paper is extremely curled.	Change the paper.
	Check if the MP paper feed pulley, MP forwarding pulley and MP separation pulley are deformed.	Check visually and replace any deformed pulleys.
	Broken MP feed switch actuator.	Check visually and replace switch.
	Defective MP feed switch.	Run maintenance item U031 and turn MP feed switch on and off manually. Replace the switch if indication of the corresponding switch on the touch panel is not displayed in reverse.
	Check if the MP paper feed clutch malfunctions.	Run maintenance item U032 and select MP paper feed clutch on the touch panel to be turned on and off. Check the status and remedy if necessary.
	Electrical problem with the MP paper feed clutch.	Check (see page 1-4-39).

Problem	Causes/check procedures	Corrective measures
(7) A paper jam in the paper feed section is indicated during copying (jam in vertical paper conveying section). Jam code 18	Broken feed switch 1/2/3 actuator.	Check visually and replace switch.
	Defective switch.	Run maintenance item U031 and turn following switch on and off manually. Replace the switch if indication of the corresponding switch on the touch panel is not displayed in reverse. Feed switch 1/2/3
	Defective feed pulleys or feed rollers.	Check visually and replace.
(8) A paper jam in the paper feed section is indicated during copying (jam in optional paper feeder vertical paper conveying section). Jam code 19	Broken feed switch 3 actuator.	Check visually and replace switch.
	Defective feed switch 3.	Run maintenance item U031 and turn feed switch 3 on and off manually. Replace the switch if indication of the corresponding switch on the touch panel is not displayed in reverse.
	Broken paper feeder feed switch actuator.	Check visually and replace switch.
	Defective paper feeder feed switch.	With 5 V DC present at YC2-8 on the paper feeder main PWB, check if YC2-7 on the paper feeder main PWB remains low when the paper feeder feed switch is turned on and off. If it does, replace the paper feeder feed switch.
(9) A paper jam in the paper feed section is indicated during copying (jam in MP tray paper conveying section). Jam code 20	Broken MP feed switch or registration switch actuator.	Check visually and replace switch.
	Defective switch.	Run maintenance item U031 and turn following switch on and off manually. Replace the switch if indication of the corresponding switch on the touch panel is not displayed in reverse. MP feed switch, registration switch
(10) A paper jam in the paper feed section is indicated during copying (multiple sheets in paper feed section). Jam code 21	Broken feed switch 1/2/3 actuator.	Check visually and replace switch.
	Defective switch.	Run maintenance item U031 and turn switch on and off manually. Replace the switch if indication of the corresponding switch on the touch panel is not displayed in reverse. Feed switch 1/2/3
	Broken paper feeder feed switch actuator.	Check visually and replace switch.
	Defective paper feeder feed switch.	With 5 V DC present at YC2-8 on the paper feeder main PWB, check if YC2-7 on the paper feeder main PWB remains low when the paper feeder feed switch is turned on and off. If it does, replace the paper feeder feed switch.
	Check if the clutch malfunctions.	Run maintenance item U032 and select following clutch on the touch panel to be turned on and off. Check the status and remedy if necessary. Upper paper feed clutch, lower paper feed clutch
	Electrical problem with clutch.	Check (see page 1-4-39).
	Check if paper feeder paper feed clutch 1 malfunctions.	Run maintenance item U247 and select paper feeder paper feed clutch 1 on the touch panel to be turned on and off. Check the status and remedy if necessary.

Problem	Causes/check procedures	Corrective measures
(10) A paper jam in the paper feed section is indicated during copying (multiple sheets in paper feed section). Jam code 21	Electrical problem with paper feeder paper feed clutch 1.	Check (see service manual of paper feeder).
	Defective feed pulleys or feed rollers.	Check visually and replace.
(11) A paper jam in the paper feed section is indicated during copying (multiple sheets in MP tray conveying section). Jam code 23	Broken MP feed switch actuator.	Check visually and replace switch.
	Defective switch.	Run maintenance item U031 and turn switch on and off manually. Replace the switch if indication of the corresponding switch on the touch panel is not displayed in reverse. MP feed switch
(12) A paper jam in the paper conveying section is indicated during copying (jam in registration/transfer section). Jam code 30	Broken feed switch 1, registration switch or MP feed switch actuator.	Check visually and replace switch.
	Defective switch.	Run maintenance item U031 and turn switch on and off manually. Replace the switch if indication of the corresponding switch on the touch panel is not displayed in reverse. Feed switch 1, registration switch, MP feed switch
	The contact between the right and left registration rollers is not correct.	Check visually and replace.
(13) A paper jam in the fuser section is indicated during copying (jam in fuser section). Jam codes 40 to 44 and 47	Broken eject switch or feed-shift switch actuator.	Check visually and replace switch.
	Defective switch.	Run maintenance item U031 and turn switch on and off manually. Replace the switch if indication of the corresponding switch on the touch panel is not displayed in reverse. Eject switch, feedshift switch
	Check if the registration clutch malfunctions.	Run maintenance item U032 and select the registration clutch on the touch panel to be turned on and off. Check the status and remedy if necessary.
	Electrical problem with the registration clutch.	Check (see page 1-4-39).
(14) A paper jam in the eject section is indicated during copying (jam in eject section). Jam code 50	Broken eject switch or registration switch actuator.	Check visually and replace switch.
	Defective switch.	Run maintenance item U031 and turn switch on and off manually. Replace the switch if indication of the corresponding switch on the touch panel is not displayed in reverse. Registration switch, eject switch
	Check if the registration clutch malfunctions.	Run maintenance item U032 and select the registration clutch on the touch panel to be turned on and off. Check the status and remedy if necessary.
	Electrical problem with the registration clutch.	Check (see page 1-4-39).

Problem	Causes/check procedures	Corrective measures
(15) A paper jam in the eject section is indicated during copying (jam in optional job separator eject section). Jam code 51	Broken feedshift switch or job separator eject switch actuator.	Check visually and replace switch.
	Defective switch.	Run maintenance item U031 and turn switch on and off manually. Replace the switch if indication of the corresponding switch on the touch panel is not displayed in reverse. Feedshift switch, job separator eject switch
(16) A paper jam in the feedshift section is indicated during copying (jam in feedshift section). Jam code 52	Check if the feedshift solenoid malfunctions.	Run maintenance item U033 and select the feedshift solenoid on the touch panel to be turned on and off. Check the status and remedy if necessary.
	Electrical problem with the feedshift solenoid.	Check (see page 1-4-40).
	Broken feedshift switch actuator.	Check visually and replace switch.
	Defective switch.	Run maintenance item U031 and turn switch on and off manually. Replace the switch if indication of the corresponding switch on the touch panel is not displayed in reverse. Feedshift switch
	Check if the registration clutch malfunctions.	Run maintenance item U032 and select the registration clutch on the touch panel to be turned on and off. Check the status and remedy if necessary.
	Electrical problem with the registration clutch.	Check (see page 1-4-39).
(17) A paper jam in the duplex section is indicated during copying (jam in duplex paper conveying section 1). Jam code 60	Broken feedshift switch or duplex paper conveying switch actuator.	Check visually and replace switch.
	Defective switch.	Run maintenance item U031 and turn switch on and off manually. Replace the switch if indication of the corresponding switch on the touch panel is not displayed in reverse. Feedshift switch, duplex paper conveying switch
(18) A paper jam in the duplex section is indicated during copying (jam in duplex paper conveying section 2). Jam code 61	Broken duplex paper conveying switch or registration switch actuator.	Check visually and replace switch.
	Defective switch.	Run maintenance item U031 and turn switch on and off manually. Replace the switch if indication of the corresponding switch on the touch panel is not displayed in reverse. Duplex paper conveying switch, registration switch

Problem	Causes/check procedures	Corrective measures
(19) An original jams in optional DP is indicated during copying (no original feed). Jam code 70	Defective DP timing switch.	Run maintenance item U244 and turn the DP timing switch on and off manually. Replace the switch if indication of the corresponding switch on the touch panel is not displayed in reverse.
	Check if the original feed motor malfunctions.	Run maintenance item U243 and select the original feed motor on the touch panel to be turned on and off. Check the status and remedy if necessary.
(20) An original jams in optional DP is indicated during copying (a jam in the original conveying section 1). Jam code 71	Defective DP timing switch.	Run maintenance item U244 and turn the DP timing switch on and off manually. Replace the switch if indication of the corresponding switch on the touch panel is not displayed in reverse.
(21) An original jams in optional DP is indicated during copying (a jam in the original conveying section 2). Jam code 72	Defective DP timing switch.	Run maintenance item U244 and turn the DP timing switch on and off manually. Replace the switch if indication of the corresponding switch on the touch panel is not displayed in reverse.
	Check if the original conveying motor malfunctions.	Run maintenance item U243 and select the original conveying motor on the touch panel to be turned on and off. Check the status and remedy if necessary.
(22) An original jams in optional DP is indicated during copying (a jam in the original switchback section). Jam code 73	Defective DP timing switch.	Run maintenance item U244 and turn the DP timing switch on and off manually. Replace the switch if indication of the corresponding switch on the touch panel is not displayed in reverse.
	Check if the original conveying motor malfunctions.	Run maintenance item U243 and select the original conveying motor on the touch panel to be turned on and off. Check the status and remedy if necessary.
(23) An original jams in optional DP is indicated during copying (a jam in the original switchback/feed section). Jam code 74	Defective DP timing switch.	Run maintenance item U244 and turn the DP timing switch on and off manually. Replace the switch if indication of the corresponding switch on the touch panel is not displayed in reverse.
	Check if the original switchback motor malfunctions.	Run maintenance item U243 and select the original switchback motor on the touch panel to be turned on and off. Check the status and remedy if necessary.
(24) An original jams in optional DP is indicated during copying (a jam in the original switchback/conveying section). Jam code 75	Defective switch.	Run maintenance item U244 and turn switch on and off manually. Replace the switch if indication of the corresponding switch on the touch panel is not displayed in reverse. DP timing switch, original switchback switch
(25) A paper jam in optional document finisher is indicated during copying (jam between finisher and machine). Jam code 80	Defective paper entry sensor.	With 5 V DC present at CN14-1 and CN14-3 on the finisher main PWB, check if CN14-2 and CN14-4 on the finisher main PWB remains low or high when the paper entry sensor is turned on and off. If it does, replace the paper entry sensor.

Problem	Causes/check procedures	Corrective measures
(26) A paper jam in optional document finisher is indicated during copying (paper jam during paper insertion to the finisher). Jam code 81	Document finisher	
	Extremely curled paper.	Change the paper.
	Defective paper entry sensor.	With 5 V DC present at CN14-1 and CN14-3 on the finisher main PWB, check if CN14-2 and CN14-4 on the finisher main PWB remains low or high when the paper entry sensor is turned on and off. If it does, replace the paper entry sensor.
	Defective finisher main PWB.	Replace the finisher main PWB and check for correct operation.
	Built-in finisher	
	Extremely curled paper.	Change the paper.
	Defective paper conveying switch.	With 5 V DC present at YC2-23 on the finisher control PWB, check if YC2-21 on the finisher control PWB remains low or high when the paper conveying switch is turned on and off. If it does, replace the paper conveying switch.
	Check if the feedshift roller or feedshift pulley is deformed.	Check and remedy.
(27) A paper jam in optional document finisher is indicated during copying (finisher stapler jam). Jam code 82	Document finisher	
	Defective staple home position sensor.	With 5 V DC present at CN10-2 on the finisher main PWB, check if CN10-5 on the finisher main PWB remains low or high. If it does, replace the stapler section.
	Built-in finisher	
	The stapler is blocked with a staple.	Remove the stapler cartridge, and check the cartridge and the stapling section of the stapler. Remove the staple if any.
	Defective stapler section.	With 5 V DC present at YC2-24 on the finisher control PWB, check if YC2-19 on the finisher control PWB remains low or high. If it does, replace the stapler section.
(28) A paper jam in optional document finisher is indicated during copying (eject sensor stay jam). Jam code 83	Document finisher	
	Defective eject sensor.	With 5 V DC present at CN5-4 on the finisher main PWB, check if CN5-6 on the finisher main PWB remains low or high when the eject sensor is turned on and off. If it does, replace the eject sensor.
	Check if the paper conveying motor malfunctions.	Check and remedy.
	Check if the eject roller and eject pulley contact each other.	Check and remedy.
	Check if the eject guide is deformed.	Check and remedy.
	Defective finisher main PWB.	Replace the finisher main PWB and check for correct operation.

Problem	Causes/check procedures	Corrective measures
(28) A paper jam in optional document finisher is indicated during copying (eject sensor stay jam). Jam code 83	Built-in finisher	
	Defective paper conveying switch.	With 5 V DC present at YC2-23 on the finisher control PWB, check if YC2-21 on the finisher control PWB remains low when the paper conveying switch is turned on and off. If it does, replace the paper conveying switch.
	Check if the eject roller or eject pulley is deformed.	Check and remedy.
(29) A paper jam in optional document finisher is indicated during copying (eject sensor non-arrival jam). Jam code 92	Defective eject sensor.	With 5 V DC present at CN5-4 on the finisher main PWB, check if CN5-6 on the finisher main PWB remains low or high when the eject sensor is turned on and off. If it does, replace the eject sensor.
	Check if the paper conveying motor malfunctions.	Check.
	Check if the eject roller and eject pulley contact each other.	Check and remedy.
	Check if the eject guide is deformed.	Check and remedy.
	Defective finisher main PWB.	Replace the finisher main PWB and check for correct operation.
(30) A paper jam in optional document finisher is indicated during copying (reverse sensor jam). Jam code 93	Defective reverse sensor.	With 5 V DC present at CN14-5 on the finisher main PWB, check if CN14-7 on the finisher main PWB remains low or high when the reverse sensor is turned on and off. If it does, replace the reverse sensor.
	Check if the reverse motor malfunctions.	Check.
	Check if the reverse roller and reverse pulley contact each other.	Check and remedy.
	Check if the reverse guide is deformed.	Check and remedy.
	Defective finisher main PWB.	Replace the finisher main PWB and check for correct operation.
(31) A paper jam in optional document finisher is indicated during copying (paper entry sensor stay jam). Jam code 94	Extremely curled paper.	Change the paper.
	Defective paper entry sensor.	With 5 V DC present at CN14-1 and CN14-3 on the finisher main PWB, check if CN14-2 and CN14-4 on the main PCB remains low or high when the paper entry sensor is turned on and off. If it does, replace the paper entry sensor.
	Check if the paper entry guide is deformed.	Check and remedy.
	Defective finisher main PWB.	Replace the finisher main PWB and check for correct operation.

Problem	Causes/check procedures	Corrective measures
(32) A paper jam in optional document finisher is indicated during copying (paper conveying sensor jam). Jam code 95	Defective paper conveying sensor.	With 5 V DC present at CN4-4 on the finisher main PWB, check if CN4-6 on the finisher main PWB remains low or high when the paper conveying sensor is turned on and off. If it does, replace the paper conveying sensor.
	Check if the paper conveying motor malfunctions.	Check.
	Check if the paper conveying roller and paper conveying pulley contact each other.	Check and remedy.
	Check if the paper conveying guide is deformed.	Check and remedy.
	Defective finisher main PWB.	Replace the finisher main PWB and check for correct operation.
(33) A paper jam in optional built-in finisher is indicated during copying (jam between finisher and machine). Jam code 96	Defective paper conveying switch.	With 5 V DC present at YC2-23 on the finisher control PWB, check if YC2-21 on the finisher control PWB remains low when the paper conveying switch is turned on and off. If it does, replace the paper conveying switch.
	Check if the eject roller or eject pulley is deformed.	Check and remedy.

1-4-2 Self-diagnosis

(1) Self-diagnostic function

This unit is equipped with a self-diagnostic function. When a problem is detected, copying is disabled and the problem displayed as a code consisting of C followed by a number, indicating the nature of the problem.

A message is also displayed requesting the user to call for service.

After removing the problem, the self-diagnostic function can be reset by turning the main power switch off and back on.

List of system errors

When an unexpected error is detected for some reason, a system error will be indicated. After a system error is indicated, the error can be cleared by turning the main power switch off and then on. If the error is detected continuously, however, perform the operation shown in Table 1-4-1. If a system error occurs frequently, a fault may have occurred. Check the details of the C call to take proper measures.

System error	Contents	Operation
0420	Optional paper feeder communication problem	System error → service call → partial operation
0440	Optional document finisher/built-in finisher communication problem	System error → service call → partial operation
4200	BD steady-state problem	System error → Normal service call processing
9000	Optional DP communication problem	System error → service call → partial operation

Table 1-4-1

In addition, it is a system error if the following error code is displayed. When an error has occurred, clear the error by turning the main power switch off then on.

CF1XX, CF2XX, CF3XX, CF4XX, CF5XX, CF6XX, CF7XX, CFAXX, CFBXX, 0xFBXX

Partial operation control

If any of the following calls for service is detected, partial operation control will be activated. After taking measures against the cause of trouble, run maintenance item U906 to reset partial operation control.

Code	Contents
C0180	Machine number mismatch error

Measures against the service codes detecting fuser problems

If one of the following service codes is detected, take actions to clear the cause of the trouble and perform maintenance item U163 to reset the service code.

Code	Contents
C6000	Fuser heater break
C6020	Abnormally high fuser thermistor temperature
C6050	Abnormally low fuser thermistor temperature
C6120	Abnormally high fuser thermistor temperature
C6150	Abnormally low fuser thermistor temperature
C6400	Zero-cross signal error
C6420	Fuser unit fuse cut problem

(2) Self diagnostic codes

Code	Contents	Remarks	
		Causes	Check procedures/corrective measures
C0060	Main PWB type mismatch error	Defective PWB.	Run maintenance item U935 to contact the Service Administrative Division.
C0120	Drum EEPROM error Reading from or writing to EEPROM cannot be performed.	Poor contact in the connector terminals.	Check the connection of connector on the engine PWB and the continuity across the connector terminals. Repair or replace if necessary.
		Defective drum unit.	Replace the drum unit.
C0130	Backup memory (EEPROM) device problem (Main PWB) Reading from or writing to EEPROM cannot be performed.	Defective main PWB.	Replace the main PWB and check for correct operation.
		Device damage of EEPROM.	Contact the Service Administrative Division.
C0150	Backup memory (EEPROM) device problem (Engine PWB) Reading from or writing to EEPROM cannot be performed.	Defective engine PWB.	Replace the engine PWB and check for correct operation.
		Device damage of EEPROM.	Contact the Service Administrative Division.
C0160	Backup memory (EEPROM) data problem (Engine PWB) Reading data from EEPROM is abnormal. Read and write data does not match 5 times continuously.	Problem with the backup memory data.	Run maintenance item U022 to initialize the backup memory data.
		Defective engine PWB.	If the C0160 is displayed after initializing the backup memory, replace the engine PWB and check for correct operation.
C0180	Machine number mismatch error Machine number of main PWB and engine PWB does not match.	Data damage of EEPROM.	Contact the Service Administrative Division.
C0320	Power CPU communication problem The engine PWB and the power CPU are unable to communicate with each other.	Defective engine PWB.	Replace the engine PWB and check for correct operation.
C0420	Optional paper feeder communication problem The engine PWB and the paper feeder are unable to communicate with each other.	Poor contact in the connector terminals.	Check the connection of connector YC22 on the engine PWB and the connector on the paper feeder main PWB, and the continuity across the connector terminals. Repair or replace if necessary.
		Defective PWB.	Replace the engine PWB or paper feeder main PWB and check for correct operation.
C0440	Optional document finisher/built-in finisher communication problem The engine PWB and the document finisher or the built-in finisher are unable to communicate with each other.	Poor contact in the connector terminals.	Check the connection of connector YC5 on the engine PWB and the connector of the document finisher, and the continuity across the connector terminals. Repair or replace if necessary.
			Check the connection of connector YC4 on the engine PWB and the connector of the built-in finisher, and the continuity across the connector terminals. Repair or replace if necessary.
		Defective PWB.	Replace the engine PWB or finisher main PWB and check for correct operation.

Code	Contents	Remarks	
		Causes	Check procedures/corrective measures
C0640	Hard disk drive problem The hard disk cannot be accessed.	Poor contact in the connector terminals.	Check the connection of connector YC8 on the main PWB and the connector on the hard disk. Repair or replace if necessary.
		Defective hard disk.	Run U024 (HDD formatting) without turning the power off to initialize the hard disk. Replace the hard disk drive and check for correct operation if the problem is still detected after initialization.
		Defective main PWB.	Replace the main PWB and check for correct operation.
C0700	Memory card error for backup Optional fax backup kit (memory card) is not suitable as backup.	Memory card installed incorrectly.	Install memory card correctly.
		Defective memory card.	Run the maintenance item U933 to initialize the memory card (see page 1-3-79).
C0800	Image processing problem JAM05 is detected twice.	Defective main PWB.	Replace the main PWB and check for correct operation.
C0960	Developing unit EEPROM error Reading from or writing to EEPROM cannot be performed.	Poor contact in the connector terminals.	Check the connection of connector on the engine PWB and the continuity across the connector terminals. Repair or replace if necessary.
		Defective developing unit.	Replace the developing unit.
C1010	Upper lift motor error When cassette 1 is inserted, upper lift limit switch does not turn on within 12 s of upper lift motor turning on.	Poor contact in the connector terminals.	Check the connection of connector of upper lift motor and the connector YC23 on the engine PWB, and the continuity across the connector terminals. Repair or replace if necessary.
		Broken gears or couplings of upper lift motor.	Replace upper lift motor.
		Defective upper lift motor.	Check for continuity across the coil. If none, replace upper lift motor.
		Defective upper lift limit switch.	Check if YC23-B9 on the engine PWB goes low when upper lift limit switch is turned off. If not, replace upper lift limit switch.
		Poor contact in the connector terminals.	Check the connection of connector of upper lift limit switch and the connector YC23 on the engine PWB, and the continuity across the connector terminals. Repair or replace if necessary.
		Defective engine PWB.	Replace the engine PWB and check for correct operation.

Code	Contents	Remarks	
		Causes	Check procedures/corrective measures
C1020	Lower lift motor error When cassette 2 is inserted, lower lift limit switch does not turn on within 12 s of lower lift motor turning on.	Poor contact in the connector terminals.	Check the connection of connector of lower lift motor and the connector YC23 on the engine PWB, and the continuity across the connector terminals. Repair or replace if necessary.
		Broken gears or couplings of lower lift motor.	Replace lower lift motor.
		Defective lower lift motor.	Check for continuity across the coil. If none, replace lower lift motor.
		Defective lower lift limit switch.	Check if YC23-A2 on the engine PWB goes low when lower lift limit switch is turned off. If not, replace lower lift limit switch.
		Poor contact in the connector terminals.	Check the connection of connector of lower lift limit switch and the connector YC23 on the engine PWB, and the continuity across the connector terminals. Repair or replace if necessary.
		Defective engine PWB.	Replace the engine PWB and check for correct operation.
C1030	Paper feeder lift motor 1 error (optional paper feeder) When optional cassette 3 is inserted, paper feeder lift switch 1 does not turn on within 12 s of paper feeder lift motor 1 turning on.	Poor contact in the connector terminals.	Check the connection of connector YC22 on the engine PWB and the connector on the paper feeder main PWB, and the continuity across the connector terminals. Repair or replace if necessary.
		Broken gears or couplings of paper feeder lift motor 1.	Replace paper feeder lift motor 1.
		Defective paper feeder lift motor 1.	Check for continuity across the coil. If none, replace paper feeder lift motor 1.
		Defective paper feeder lift switch 1.	Check if YC1-5 on the paper feeder main PWB goes low when paper feeder lift switch 1 is turned off. If not, replace paper feeder lift switch 1.
C1040	Paper feeder lift motor 2 error (optional paper feeder) When optional cassette 4 is inserted, paper feeder lift switch 2 does not turn on within 12 s of paper feeder lift motor 2 turning on.	Poor contact in the connector terminals.	Check the connection of connector YC22 on the engine PWB and the connector on the paper feeder main PWB, and the continuity across the connector terminals. Repair or replace if necessary.
		Broken gears or couplings of paper feeder lift motor 2.	Replace paper feeder lift motor 2.
		Defective paper feeder lift motor 2.	Check for continuity across the coil. If none, replace paper feeder lift motor 2.
		Defective paper feeder lift switch 2.	Check if YC1-7 on the paper feeder main PWB goes low when paper feeder lift switch 2 is turned off. If not, replace paper feeder lift switch 2.

Code	Contents	Remarks	
		Causes	Check procedures/corrective measures
C2000	Main motor problem Stable OFF is detected for 1 s continuously after main motor stability.	Poor contact in the connector terminals.	Check the connection of connector YC10 on the engine PWB and the connector on the main motor, and the continuity across the connector terminals. Repair or replace if necessary.
		Defective drive transmission system.	Check if the rollers and gears rotate smoothly. If not, grease the bushings and gears. Check for broken gears and replace if any.
		Defective engine PWB.	Replace the engine PWB and check for correct operation.
		Defective main motor.	Replace the main motor.
C2200	Drum motor problem Stable OFF is detected for 1 s continuously after drum motor stability.	Poor contact in the connector terminals.	Check the connection of connector YC10 on the engine PWB and the connector on the drum motor, and the continuity across the connector terminals. Repair or replace if necessary.
		Defective drive transmission system.	Check if the rollers and gears rotate smoothly. If not, grease the bushings and gears. Check for broken gears and replace if any.
		Defective engine PWB.	Replace the engine PWB and check for correct operation.
		Defective drum motor.	Replace the drum motor.
C2500	Paper feed motor error Stable OFF is detected for 1 s continuously after paper feed motor stability.	Poor contact in the connector terminals.	Check the connection of connector YC10 on the engine PWB and the connector on the paper feed motor, and the continuity across the connector terminals. Repair or replace if necessary.
		Defective drive transmission system.	Check if the rollers and gears rotate smoothly. If not, grease the bushings and gears. Check for broken gears and replace if any.
		Defective engine PWB.	Replace the engine PWB and check for correct operation.
		Defective paper feed motor.	Replace the paper feed motor.

Code	Contents	Remarks	
		Causes	Check procedures/corrective measures
C2600	Paper feeder drive motor error (optional paper feeder) The lock signal of the motor is detected above 500 ms.	Poor contact in the connector terminals.	Check the connection of connector YC22 on the engine PWB and the connector on the paper feeder main PWB, and the continuity across the connector terminals. Repair or replace if necessary.
		Paper feeder drive motor does not rotate correctly (the motor is overloaded).	Check the gears and remedy if necessary.
		Defective PWB.	Replace the paper feeder main PWB or engine PWB and check for correct operation.
		Defective paper feeder drive motor.	Replace the paper feeder drive motor.
C3100	Scanner carriage problem The home position is not correct when the power is turned on or at the start of copying using the table.	Poor contact in the connector terminals.	Check the connection of connector YC17 on the engine PWB and the connector on the scanner home position switch, and the continuity across the connector terminals. Repair or replace if necessary.
		Defective scanner home position switch.	Replace the scanner home position switch.
		Defective scanner motor.	Replace the scanner motor.
		The mirror frame, exposure lamp, or scanner wire is defective.	Check if the mirror frames and exposure lamp are on the rail. And check the scanner wire winds correctly.
		Defective engine PWB.	Replace the engine PWB and check for correct operation.
C3200	Exposure lamp problem After the reading starting, when input value at the time of exposure lamp illumination does not exceed the threshold value between 5 s.	Poor contact in the connector terminals.	Check the connection of connector YC16 on the engine PWB and the connector on the inverter PWB, and the continuity across the connector terminals. Repair or replace if necessary.
		Defective exposure lamp.	Replace the exposure lamp.
		Incorrect shading position.	Adjust the position of the platen (shading plate). If the problem still occurs, replace the scanner home position switch.
		Defective PWB.	Replace the engine PWB or scanner inverter PWB and check for correct operation.

Code	Contents	Remarks	
		Causes	Check procedures/corrective measures
C3300	CCD AGC problem After AGC, correct input is not obtained at CCD.	Poor contact in the connector terminals.	Check the connection of connector YC18 on the main PWB and the connector on the CCD PWB, and the continuity across the connector terminals. Repair or replace if necessary.
		Defective exposure lamp.	Replace the exposure lamp.
		Defective PWB.	Replace the main PWB or CCD PWB and check for correct operation.
C3500	Communication error between scanner and SHD An error code is detected.	Poor contact in the connector terminals.	Check the connection of connector YC18 on the main PWB and the connector on the CCD PWB, and the continuity across the connector terminals. Repair or replace if necessary.
		Defective PWB.	Replace the main PWB or CCD PWB and check for correct operation.
C4000	Polygon motor synchronization problem The polygon motor does not reach the stable speed within 20 s of the START signal turning on.	Poor contact in the connector terminals.	Check the connection of connector YC2 on the engine PWB and laser scanner unit, and the continuity across the connector terminals. Repair or replace if necessary.
		Defective polygon motor.	Replace the laser scanner unit.
		Defective engine PWB.	Replace the engine PWB and check for correct operation.
C4010	Polygon motor steady-state problem Stable OFF is detected for 5 s continuously after polygon motor stability.	Poor contact in the connector terminals.	Check the connection of connector YC2 on the engine PWB and laser scanner unit, and the continuity across the connector terminals. Repair or replace if necessary.
		Defective polygon motor.	Replace the laser scanner unit.
		Defective engine PWB.	Replace the engine PWB and check for correct operation.
C4200	BD steady-state problem ASIC detects a BD error A for 2 s after the polygon motor rotation has been stabilized.	Poor contact in the connector terminals.	Check the connection of connector YC2 on the engine PWB and laser scanner unit, and the continuity across the connector terminals. Repair or replace if necessary.
		Defective laser scanner unit.	Replace the laser scanner unit.
		Defective engine PWB.	Replace the engine PWB and check for correct operation.
C6000	Fuser heater break Fuser thermistor 1 detected less than 40°C/104°F for 10 s during warm-up and ready in.	Defective fuser heater M or S.	Replace the fuser heater M or S.
		Installation defectiveness on fuser thermistor 1.	Check the mounting state of the fuser thermistor 1. If any problem is found, repair it.
		Defective fuser thermostat.	Replace the fuser thermostat.
		Defective PWB.	Replace the power source PWB or engine PWB and check for correct operation.

Code	Contents	Remarks	
		Causes	Check procedures/corrective measures
C6020	Abnormally high fuser thermistor center temperature Fuser thermistor 2 is detected 230°C/ 446°F or more for 40 ms.	Installation defectiveness on fuser thermistor 2.	Check the mounting state of the fuser thermistor 2. If any problem is found, repair it.
		Defective fuser thermistor 2.	Replace the fuser thermistor 2.
		Defective engine PWB.	Replace the engine PWB and check for correct operation.
C6050	Abnormally low fuser thermistor center temperature Fuser thermistor 2 is detected 100°C/ 212°F less than 1 s continuously during copying.	Defective fuser heater M or S.	Replace the fuser heater M or S.
		Installation defectiveness on fuser thermistor 2.	Check the mounting state of the fuser thermistor 2. If any problem is found, repair it.
		Defective PWB.	Replace the power source PWB or engine PWB and check for correct operation.
C6120	Abnormally high fuser thermistor edge temperature Fuser thermistor 1 is detected 230°C/ 446°F or more for 40 ms.	Installation defectiveness on fuser thermistor 1.	Check the mounting state of the fuser thermistor 1. If any problem is found, repair it.
		Defective fuser thermistor 1.	Replace the fuser thermistor 1.
		Defective engine PWB.	Replace the engine PWB and check for correct operation.
C6150	Abnormally low fuser thermistor edge temperature Fuser thermistor 1 is detected 100°C/ 212°F less than 1 s continuously during copying.	Defective fuser heater M or S.	Replace the fuser heater M or S.
		Installation defectiveness on fuser thermistor 1.	Check the mounting state of the fuser thermistor 1. If any problem is found, repair it.
		Defective PWB.	Replace the power source PWB or engine PWB and check for correct operation.
C6400	Zero-cross signal error While fuser heater ON/OFF control is performed, the zero-cross signal is not input within 3 s.	Defective PWB.	Replace the engine PWB or power source PWB and check for correct operation.
C6420	Fuser unit fuse cut problem The fuse cannot be cut, When replacing the fuser unit, the fuse cannot be cut in 3 s after the fuse cut signal is turned on.	Poor contact in the connector terminals.	Check the connection of connector YC1 on the engine PWB and the continuity across the connector terminals. Repair or replace if necessary.
		Fuser unit connector inserted incorrectly.	Reinsert the fuser unit connector if necessary.

Code	Contents	Remarks	
		Causes	Check procedures/corrective measures
C7000	Toner motor problem A motor over-current signal is detected continuously for 1 s or longer.	Poor contact in the connector terminals.	Check the connection of connector YC1 on the engine PWB and the connector on the toner feed motor, and the continuity across the connector terminals. Repair or replace if necessary.
		Broken the gear.	Check visually and replace the gear if necessary.
		Defective toner feed motor.	Run maintenance item U135 and check if the toner feed motor operates. If not, replace the toner feed motor.
		Defective engine PWB.	Replace the engine PWB and check for correct operation.
C7200	Broken inner thermistor wire An abnormal value is detected in the input data to inner thermistor.	Poor contact in the connector terminals.	Check the connection of connector YC32 on the engine PWB and the continuity across the connector terminals. Repair or replace if necessary.
		Defective temperature sensor.	Replace the temperature sensor.
C7300	Toner hopper problem Toner emptiness is detected for 300 s, three times during the toner replenishment.	Poor contact in the connector terminals.	Check the connection of connector YC1 on the engine PWB and the continuity across the connector terminals. Repair or replace if necessary.
		Defective toner sensor.	Replace the developing unit.
C7400	Developing unit connector insertion problem Absence of the developing unit is detected.	Developing unit connector inserted incorrectly.	Reinsert the developing unit connector if necessary.
		Defective developing unit connector.	Replace the developing unit.
C7410	Drum unit connector insertion problem Absence of the drum unit is detected.	Drum unit connector inserted incorrectly.	Reinsert the drum unit connector if necessary.
		Defective drum unit connector.	Replace the drum unit.
C7800	Broken external thermistor wire The thermistor output value is 4.5 V or more.	Poor contact in the connector terminals.	Check the connection of connector YC1 on the engine PWB and the continuity across the connector terminals. Repair or replace if necessary.
		Defective humidity sensor.	Replace the humidity sensor.

Code	Contents	Remarks	
		Causes	Check procedures/corrective measures
C8030	Tray upper limit detection problem (optional document finisher) When the tray elevation motor raises a tray, the ON status of the tray upper limit sensor is detected.	The tray upper limit sensor/push paper sensor/surface view sensor connector makes poor contact.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
		Defective tray upper limit sensor/push paper sensor/surface view sensor.	Replace the sensor.
		Defective finisher main PWB.	Replace the finisher main PWB and check for correct operation.
C8140	Tray elevation motor problem (optional document finisher) When the tray elevation motor is driving, the ON status of the tray lower limit sensor or surface view sensor cannot be detected even if 10 s passed.	The tray elevation motor connector makes poor contact.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
		The tray elevation motor malfunctions.	Replace the tray elevation motor.
		The tray lower limit sensor/push paper sensor/surface view sensor connector makes poor contact.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
		Defective tray lower limit sensor/push paper sensor/surface view sensor.	Replace the sensor.
		Defective finisher main PWB.	Replace the finisher main PWB and check for correct operation.

Code	Contents	Remarks	
		Causes	Check procedures/corrective measures
C8170	Adjustment motor problem (optional document finisher) When the adjustment motor is driving, the ON status of the adjustment home position sensor cannot be detected even if a specified time has elapsed. When adjustment operation starts, the ON status of the adjustment home position sensor is not detected.	The adjustment motor connector makes poor contact.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
		Defective adjustment motor.	Replace adjustment motor.
		The adjustment home position sensor connector makes poor contact.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
		Defective adjustment home position sensor.	Replace the adjustment home position sensor.
		Defective finisher main PWB.	Replace the finisher main PWB and check for correct operation.
	Finisher front side registration motor problem (optional built-in finisher) When the front-side registration home-position sensor is turned on during initialization, the sensor did not turn on while it has moved by 106 pulses. When the front-side registration home-position sensor is turned off during initialization, the sensor did not turn on in 3 s.	The front side registration motor connector makes poor contact.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
		Defective front side registration motor.	Replace front side registration motor.
		The front side registration home position sensor connector makes poor contact.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
		Defective front side registration home position sensor.	Replace the front side registration home position sensor.
		Defective finisher control PWB.	Replace the finisher control PWB and check for correct operation.
C8180	Finisher rear side registration motor problem (optional built-in finisher) When the rear-side registration home-position sensor is turned on during initialization, the sensor did not turn on while it has moved by 106 pulses. When the rear-side registration home-position sensor is turned off during initialization, the sensor did not turn on in 3 s.	The rear side registration motor connector makes poor contact.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
		Defective rear side registration motor.	Replace rear side registration motor.
		The rear side registration home position sensor connector makes poor contact.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
		Defective rear side registration home position sensor.	Replace the rear side registration home position sensor.
		Defective finisher control PWB.	Replace the finisher control PWB and check for correct operation.

Code	Contents	Remarks	
		Causes	Check procedures/corrective measures
C8190	Finisher trailing edge registration motor problem (optional built-in finisher) When the trailing edge registration home-position sensor is turned on during initialization, the sensor did not turn on while it has moved by 106 pulses. When the trailing edge registration home-position sensor is turned off during initialization, the sensor did not turn on in 3 s.	The trailing edge registration motor connector makes poor contact.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
		Defective trailing edge registration motor.	Replace trailing edge registration motor.
		The trailing edge registration home position sensor connector makes poor contact.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
		Defective trailing edge registration home position sensor.	Replace the trailing edge registration home position sensor.
		Defective finisher control PWB.	Replace the finisher control PWB and check for correct operation.
C8210	Stapler problem (optional document finisher) When the stapler motor is driving, the ON status of the stapler home position sensor cannot be detected even if a specified time has elapsed.	The stapler connector makes poor contact.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
		The stapler is blocked with a staple.	Remove the stapler cartridge, and check the cartridge and the stapling section of the stapler.
		The stapler is broken.	Replace the stapler and check for correct operation.
		Defective finisher main PWB.	Replace the finisher main PWB and check for correct operation.
	Finisher stapler problem (optional built-in finisher) The stapler home position sensor does not change state from nondetection to detection within 200 ms of the start of stapler motor counterclockwise (forward) rotation. During initialization, the stapler home position sensor does not change state from non-detection to detection within 600 ms of the start of stapler motor clockwise (reverse) rotation.	The stapler connector makes poor contact.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
		The stapler is blocked with a staple.	Remove the stapler cartridge, and check the cartridge and the stapling section of the stapler.
		The stapler is broken.	Replace the front stapler and check for correct operation.
		Defective finisher control PWB.	Replace the finisher control PWB and check for correct operation.

Code	Contents	Remarks	
		Causes	Check procedures/corrective measures
C8440	Sensor adjusting problem (optional document finisher) The sensor cannot be adjusted within the specified range.	The paper entry sensor connector makes poor contact.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
		Defective paper entry sensor.	Replace the paper entry sensor and check for correct operation.
		The optical path of the paper entry sensor is blocked by foreign matter.	Remove the foreign matter.
		Defective finisher main PWB.	Replace the finisher main PWB and check for correct operation.
C8460	EEPROM problem (optional document finisher) Reading from or writing to EEPROM cannot be performed.	Defective EEPROM or finisher main PWB.	Replace the finisher main PWB and check for correct operation.
C9000	Optional DP communication problem A communication error is detected.	Poor contact in the connector terminals.	Check the connection of connector YC24 and YC31 on the engine PWB and the connector of the DP, and the continuity across the connector terminals. Repair or replace if necessary.
		Defective DP main PWB.	Replace the DP main PWB and check for correct operation.
C9060	DP EEPROM error (optional DP) Read and write data does not match. Data in the specified area of the backup memory does not match the specified values.	Defective DP main PWB.	Replace the DP main PWB and check for correct operation.
		Device damage of EEPROM.	Contact the Service Administrative Division.
F000	Operation panel PWB communication error	Defective main PWB.	Replace the main PWB and check for correct operation.
		Defective operation panel PWB.	Replace the operation panel PWB and check for correct operation.
F010	Main PWB checksum error	Defective main PWB.	Replace the main PWB and check for correct operation.
F020	Memory checksum error	Defective main PWB.	Replace the main PWB and check for correct operation.
		Defective expansion memory.	Replace the expansion memory and check for correct operation.
F030	Main PWB system error	Defective main PWB.	Replace the main PWB and check for correct operation.
F040	Engine PWB communication error	Defective main PWB.	Replace the main PWB and check for correct operation.
		Defective engine PWB.	Replace the engine PWB and check for correct operation.
F041	Scanner communication error	Defective main PWB.	Replace the main PWB and check for correct operation.
F050	Engine ROM checksum error	Defective engine PWB.	Replace the engine PWB and check for correct operation.

Code	Contents	Remarks	
		Causes	Check procedures/corrective measures
F060	Engine RAM error	Defective engine PWB.	Replace the engine PWB and check for correct operation.
F070	Flash ROM error	Defective flash ROM.	Replace the engine PWB and check for correct operation.
F080	Flash ROM error (during download)	Defective flash ROM.	Replace the engine PWB and check for correct operation.
F090	Fax control PWB communication error	Defective main PWB.	Replace the main PWB and check for correct operation.
F14F	Power source PWB secondary side error	Defective power source PWB.	Replace the power source PWB and check for correct operation.

1-4-3 Image formation problems

(1) No image appears
(entirely white).



See page 1-4-33.

(2) No image appears
(entirely black).



See page 1-4-33.

(3) Image is too light.



See page 1-4-34.

(4) Background is visible.



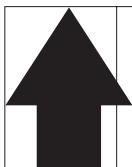
See page 1-4-34.

(5) A white line
appears longitudinally.



See page 1-4-34.

(6) A black line
appears longitudinally.



See page 1-4-35.

(7) A black line
appears laterally.



See page 1-4-35.

(8) One side of the
copy image is
darker than the
other.



See page 1-4-35.

(9) Black dots appear
on the image.



See page 1-4-35.

(10) Image is blurred.



See page 1-4-36.

(11) The leading edge
of the image is
consistently mis-
aligned with the
original.



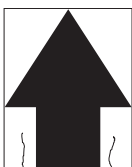
See page 1-4-36.

(12) The leading edge
of the image is
sporadically mis-
aligned with the
original.



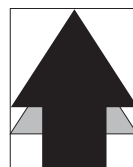
See page 1-4-36.

(13) Paper creases.



See page 1-4-36.

(14) Offset occurs.



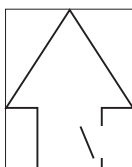
See page 1-4-37.

(15) Image is partly
missing.



See page 1-4-37.

(16) Fusing is poor.



See page 1-4-37.

(17) Image is out of
focus.



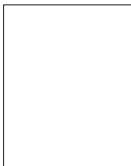
See page 1-4-37.

(18) Image center
does not align with
the original center.



See page 1-4-38.

(1) No image appears (entirely white).

Copy example	Causes		Check procedures/corrective measures
	No transfer charging.	The connector terminals of the high voltage PWB make poor contact.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
		Defective engine PWB.	Check if YC12-11 on the engine PWB goes low when maintenance item U101 is run. If not, replace the engine PWB.
		Defective high voltage PWB.	Check if transfer charging takes place when CN1-2 on the high voltage PWB goes low while maintenance item U101 is run. If not, replace the high voltage PWB.
	No LSU laser is output.	Defective laser scanner unit.	Replace the laser scanner unit (see page 1-5-29).
		Defective main PWB.	Check if YC21-3 on the main PWB goes low when maintenance item U100 is run. If not, replace the main PWB.
	No developing bias output.	The connector terminals of the high voltage PWB make poor contact.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
		Defective engine PWB.	Check if YC12-2 on the engine PWB goes low when maintenance item U101 is run. If not, replace the engine PWB.
		Defective high voltage PWB.	Check if developing bias is output when CN1-11 on the high voltage PWB goes low while maintenance item U101 is run. If not, replace the high voltage PWB.

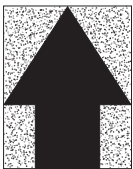
(2) No image appears (entirely black).

Copy example	Causes		Check procedures/corrective measures
	No main charging.	Broken main charger wire.	Replace the main charger unit (see page 1-5-36).
		Leaking main charger housing.	Clean the main charger wire and grid.
		The connector terminals of the high voltage PWB make poor contact.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
		Defective engine PWB.	Check if YC12-5 on the engine PWB goes low when maintenance item U100 is run. If not, replace the engine PWB.
		Defective high voltage PWB.	Check if main charging takes place when CN1-8 on the high voltage PWB goes low while maintenance item U100 is run. If not, replace the high voltage PWB.
	Exposure lamp fails to light.	Poor contact in the exposure lamp connector terminals.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
		Defective scanner inverter PWB.	Check if the exposure lamp lights when YC1-1 and YC1-6 on the scanner inverter PWB goes low while maintenance item U061 is run. If not, replace the scanner inverter PWB.
		Defective engine PWB.	Check if YC16-1 and YC16-6 on the engine PWB goes low when maintenance item U061 is run. If not, replace the engine PWB.

(3) Image is too light.

Copy example	Causes		Check procedures/corrective measures
	Insufficient toner.		If the display shows the message requesting toner replenishment, replace the container.
	Deteriorated toner.		Perform the drum refresh operation.
	Defective transfer charging output.	The connector terminals of the high voltage PWB make poor contact.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
		Defective engine PWB.	Check if YC12-11 on the engine PWB goes low when maintenance item U101 is run. If not, replace the engine PWB.
	Defective high voltage PWB.		Check if transfer charging takes place when CN1-2 on the high voltage PWB goes low while maintenance item U101 is run. If not, replace the high voltage PWB.

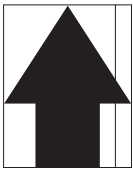
(4) Background is visible.

Copy example	Causes		Check procedures/corrective measures
	Deteriorated toner.		Perform the drum refresh operation.
	Dirty main charger wire.		Clean the wire or, if it is extremely dirty, replace it (see page 1-5-36).

(5) A white line appears longitudinally.

Copy example	Causes		Check procedures/corrective measures
	Foreign matter in the developing unit.		Check if the magnetic brush is formed uniformly. Replace the developing unit if any foreign matter (see page 1-5-38).
	Dirty shading plate.		Clean the shading plate.

(6) A black line appears longitudinally.

Copy example	Causes	Check procedures/corrective measures
	Dirty platen.	Clean the platen.
	Dirty or flawed drum.	Perform the drum refresh operation. If the drum is flawed, replace the drum unit (see page 1-5-34).
	Deformed or worn cleaning blade.	Replace the drum unit (see page 1-5-34).
	Dirty scanner mirror.	Clean the scanner mirror.
	Dirty main charger wire.	Clean the wire or, if it is extremely dirty, replace it (see page 1-5-36).

(7) A black line appears laterally.

Copy example	Causes	Check procedures/corrective measures
	Flawed drum.	Replace the drum unit (see page 1-5-34).
	Dirty developing section.	Clean any part contaminated with toner in the developing section.
	Leaking main charger housing.	Clean the main charger wire and grid.
	Leaking separation electrode.	Clean the separation electrode.

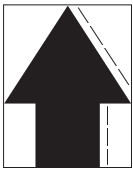
(8) One side of the copy image is darker than the other.

Copy example	Causes	Check procedures/corrective measures
	Dirty main charger wire.	Clean the wire or, if it is extremely dirty, replace it (see page 1-5-36).
	Defective exposure lamp.	Check if the exposure lamp light is distributed evenly. If not, replace the exposure lamp (see page 1-5-14).

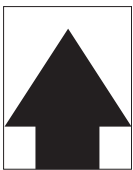
(9) Black dots appear on the image.

Copy example	Causes	Check procedures/corrective measures
	Dirty or flawed drum.	Perform the drum refresh operation. If the drum is flawed, replace the drum unit (see page 1-5-34).
	Dirty platen.	Clean the platen.
	Deformed or worn cleaning blade.	Replace the drum unit (see page 1-5-34).
	Dirty drum separation claws.	Clean the drum separation claws.
	Dirty the heat roller separation claws.	Clean the heat roller separation claws.

(10) Image is blurred.

Copy example	Causes	Check procedures/corrective measures
	Scanner moves erratically.	Check if there is any foreign matter on the front and rear scanner rails. If any, remove it.
	Deformed press roller.	Replace the press roller (see page 1-5-43).
	Paper conveying section drive problem.	Check the gears and belts and, if necessary, grease them.

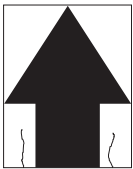
(11) The leading edge of the image is consistently misaligned with the original.

Copy example	Causes	Check procedures/corrective measures
	Misadjusted leading edge registration.	Run maintenance mode U034 to readjust the leading edge registration (see page 1-3-20).
	Misadjusted scanner leading edge registration.	Run maintenance mode U066 to readjust the scanner leading edge registration (see page 1-3-28).

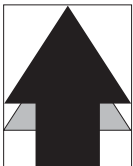
(12) The leading edge of the image is sporadically misaligned with the original.

Copy example	Causes	Check procedures/corrective measures
	Feed clutch, paper feed clutch, MP paper feed clutch or registration clutch installed or operating incorrectly.	Check the installation position and operation of each clutch. If any of them operates incorrectly, replace it.

(13) Paper creases.

Copy example	Causes	Check procedures/corrective measures
	Paper curled.	Check the paper storage conditions.
	Paper damp.	Check the paper storage conditions.
	Defective pressure springs.	Replace the pressure springs.
	Defective separation.	Check the drum separation claws and heat roller separation claws.

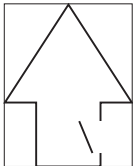
(14) Offset occurs.

Copy example	Causes	Check procedures/corrective measures
	Defective cleaning blade.	Replace the drum unit (see page 1-5-34).
	Defective fuser unit.	Check the heat roller and press roller.
	Wrong types of paper.	Check if the paper meets specifications. Replace paper.

(15) Image is partly missing.

Copy example	Causes	Check procedures/corrective measures
	Paper damp.	Check the paper storage conditions.
	Paper creased.	Change the paper.
	Drum condensation.	Perform the drum refresh operation.
	Dirty or flawed drum.	Perform the drum refresh operation. If the drum is flawed, replace the drum unit (see page 1-5-34).

(16) Fusing is poor.

Copy example	Causes	Check procedures/corrective measures
	Wrong types of paper.	Check if the paper meets specifications. Replace paper.
	Defective pressure springs.	Replace the pressure springs.
	Flawed press roller.	Replace the press roller (see page 1-5-43).
	Flawed fuser heater.	Replace the fuser heaters (see page 1-5-45).

(17) Image is out of focus.

Copy example	Causes	Check procedures/corrective measures
	Defective image scanning unit.	Replace the image scanning unit (see page 1-5-18).
	Drum condensation.	Perform the drum refresh operation.

(18) Image center does not align with the original center.

Copy example	Causes	Check procedures/corrective measures
	Misadjusted image center line.	Run maintenance item U034 to readjust the center line of image printing (see page 1-3-21).
	Misadjusted scanner center line.	Run maintenance item U067 to readjust the scanner leading edge registration (see page 1-3-29).
	Original is not placed correctly.	Place the original correctly.

1-4-4 Electric problems

Troubleshooting to each failure must be in the order of the numbered symptoms.

Problem	Causes	Check procedures/corrective measures
(1) The machine does not operate when the main power switch is turned on.	1. The power cord is not plugged in properly.	Check the contact between the power plug and the outlet.
	2. No electricity at the power outlet.	Measure the input voltage.
	3. Broken power cord.	Check for continuity. If none, replace the cord.
	4. Defective main power switch.	Check for continuity across the contacts. If none, replace the main power switch.
	5. Defective power source PWB.	With AC present, check for 24 V DC at YC8-4 on the power source PWB and 5 V DC at YC8-1. If none, replace the power source PWB.
(2) The eject motor does not operate.	1. Poor contact in the connector terminals.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
	2. Defective drive transmission system.	Check if the rollers and gears rotate smoothly. If not, grease the bushings and gears. Check for broken gears and replace if any.
	3. Defective eject motor.	Run maintenance item U030 and check if the eject motor operates. If not, replace the eject motor.
	4. Defective engine PWB.	Run maintenance item U030 and check if the eject motor operates. If not, replace the engine PWB.
(3) The toner feed motor does not operate.	1. Poor contact in the connector terminals.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
	2. Defective drive transmission system.	Check if the rollers and gears rotate smoothly. If not, grease the bushings and gears. Check for broken gears and replace if any.
	3. Defective toner feed motor.	Run maintenance item U135 and check if the toner feed motor operates. If not, replace the toner feed motor.
	4. Defective engine PWB.	Run maintenance item U135 and check if the toner feed motor operates. If not, replace the engine PWB.
(4) The scanner motor or cooling fan motor 1 to 8 does not operate.	1. Poor contact in the connector terminals.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
	2. Broken motor coil.	Check for continuity across the coil. If none, replace the motor.
(5) The upper/lower paper feed clutch, feed clutch 1/2/3, MP paper feed clutch, MP paper feed clutch, registration clutch, duplex feed clutch or toner feed clutch does not operate.	1. Broken clutch coil.	Check for continuity across the coil. If none, replace the clutch.
	2. Poor contact in the connector terminals.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
	3. Defective engine PWB.	Run maintenance item U032 and check if following terminals on the engine PWB goes low. If not, replace the engine PWB. Upper paper feed clutch: YC8-A13 on the engine PWB Lower paper feed clutch: YC8-A15 on the engine PWB Feed clutch 1: YC8-B8 on the engine PWB Feed clutch 2: YC8-A12 on the engine PWB Feed clutch 3: YC8-A5 on the engine PWB MP paper feed clutch: YC7-9 on the engine PWB MP feed clutch: YC7-11 on the engine PWB Registration clutch: YC8-B15 on the engine PWB Duplex feed clutch: YC8-B9 on the engine PWB Toner feed clutch: YC8-A17 on the engine PWB

Problem	Causes	Check procedures/corrective measures
(6) The feedshift solenoid does not operate.	1. Broken solenoid coil.	Check for continuity across the coil. If none, replace the solenoid.
	2. Poor contact in the connector terminals.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
	3. Defective engine PWB.	Run maintenance item U033 and check if the solenoid operates. If not, replace the engine PWB.
(7) The exposure lamp does not turn on or off.	1. Poor contact in the connector terminals.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
	2. Defective engine PWB.	Run maintenance item U061 and check if YC16-1 and YC16-6 on the engine PWB goes low. If not, replace the engine PWB.
		If YC16-1 and YC16-6 on the engine PWB is always low, replace the engine PWB.
	3. Defective scanner inverter PWB.	Run maintenance item U061 and check if the exposure lamp turns on with YC1-1 and YC1-6 on the scanner inverter PWB go low. If not, replace the scanner inverter PWB.
		If the exposure lamp does not turn off with YC1-1 and YC1-6 on the scanner inverter PWB high, replace the scanner inverter PWB.
	4. Defective exposure lamp.	Replace the exposure lamp even if checking or correcting other measures.
(8) Main charging is not performed.	1. Broken main charger wire.	(See page 1-4-33.)
	2. Leaking main charger housing.	
	3. The connector terminals of the high voltage PWB make poor contact.	
	4. Defective engine PWB.	
	5. Defective high voltage PWB.	
(9) No developing bias is output.	1. The connector terminals of the high voltage PWB make poor contact.	(See page 1-4-33.)
	2. Defective engine PWB.	
	3. Defective high voltage PWB.	
(10) Transfer charging is not performed.	1. The connector terminals of the high voltage PWB make poor contact.	(See page 1-4-33.)
	2. Defective engine PWB.	
	3. Defective high voltage PWB.	

Problem	Causes	Check procedures/corrective measures
(11) The original size is not detected correctly.	1. Original is not placed correctly.	Check the original and correct if necessary.
	2. Poor contact in the original detection switch or original size detection sensor connector terminals.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
	3. Defective original detection switch.	If the level of YC17-5 on the engine PWB does not go low when the original detection switch is turned on and off, replace the original detection switch.
	4. Defective original size detection sensor.	Check if sensor operates correctly. If not, replace it.
(12) The touch panel keys do not work.	1. Poor contact in the touch panel connector terminals.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
	2. Defective touch panel or main operation PWB.	If any keys do not work after running the maintenance item U201 to initialize the touch panel, replace the touch panel or main operation unit PWB.
(13) The message requesting paper to be loaded is shown when paper is present on the cassette 1/2 or MP tray.	1. Poor contact in the connector terminals of upper/lower paper switch or MP paper switch.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
	2. Defective upper/lower paper switch or MP paper switch.	If the level of following terminal on PWB does not go low when the switch is turned on and off, replace the switch. Upper paper switch: YC23-B12 on the engine PWB Lower paper switch: YC23-A5 on the engine PWB MP paper switch: YC7-6 on the engine PWB
(14) The size of paper on the cassette 1/2 or MP tray is not displayed correctly.	1. Poor contact in the connector terminals of upper/lower paper size length switch, upper/lower paper size width switch, MP paper size length switch or MP paper size width switch.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
	2. Defective upper/lower paper size length switch or MP paper size length switch.	If the level of following terminal on PWB does not go low when the switch is turned on and off, replace the switch. Upper paper size length switch: YC23-B2 on the engine PWB Lower paper size length switch: YC23-A12 on the engine PWB MP paper size length switch: YC7-13 on the engine PWB
	3. Defective upper/lower paper size width switch or MP paper size width switch.	If the level of following terminal on PWB does not change when the width guide in the cassette 1/2 or insert guide on the MP tray is moved, replace the switch. Upper paper size width switch: YC22-5, 7, 11 on the engine PWB Lower paper size width switch: YC22-6, 8, 12 on the engine PWB MP paper size width switch: YC7-1, 2, 3 on the engine PWB

Problem	Causes	Check procedures/corrective measures
(15) A paper jam in the paper feed, paper conveying, fuser, eject or duplex section is indicated when the main power switch is turned on.	1. A piece of paper torn from copy paper is caught around feed switch 1/2/3, registration switch, feedshift switch, eject switch or duplex paper conveying switch.	Check visually and remove it, if any.
	2. Defective feed switch 1/2/3, registration switch, feedshift switch, eject switch or duplex paper conveying switch.	Run maintenance item U031 and turn each switch on and off manually. Replace the switch if indication of the corresponding switch on the touch panel is not displayed in reverse.
(16) The message requesting cover to be closed is displayed when the front cover or left cover 1/2 is closed.	1. Poor contact in the connector terminals of safety switch 1/2 or left cover 2 switch.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
	2. Defective safety switch 1/2 or left cover 2 switch.	Check for continuity across each switch. If there is no continuity when the switch is on, replace it.
(17) Others.	1. Wiring is broken, shorted or makes poor contact.	Check for continuity. If none, repair.

1-4-5 Mechanical problems

Problem	Causes/check procedures	Corrective measures
(1) No primary paper feed.	Check if the surfaces of the following rollers or pulleys are dirty with paper powder: upper/lower forwarding pulleys, upper/lower paper feed pulleys, upper/lower separation pulleys, feed rollers, registration rollers, MP forwarding pulley, MP paper feed pulley and MP separation pulley.	Clean with isopropyl alcohol.
	Check if the upper/lower forwarding pulleys, upper/lower paper feed pulleys or upper/lower separation pulleys is deformed.	Replace the pulley if it is deformed (see page 1-5-2).
	Check if the MP forwarding pulley, MP paper feed pulley or MP separation pulley is deformed.	Replace the pulley if it is deformed (see page 1-5-5).
	Electrical problem with the following clutches: upper/lower paper feed clutches, feed clutches 1/2/3, MP paper feed clutch and MP feed clutch.	See page 1-4-39.
(2) No secondary paper feed.	Check if the surfaces of the right and left registration rollers are dirty with paper powder.	Clean with isopropyl alcohol.
	Electrical problem with the registration clutch.	See page 1-4-39.
(3) Skewed paper feed.	Width guide in a cassette installed incorrectly.	Check the width guide visually and correct or replace if necessary.
	Deformed width guide in a cassette.	Check visually and replace any deformed guide.
	Check if a pressure spring along the paper conveying path is deformed or out of place.	Repair or replace.
(4) The scanner does not travel.	Check if the scanner wire is loose.	Reinstall the scanner wire (see page 1-5-22).
	The scanner motor malfunctions.	See page 1-4-39.
(5) Multiple sheets of paper are fed at one time.	Paper is extremely curled.	Change the paper.
	Check if the upper or lower separation pulley is worn.	Replace the upper or lower separation pulley if it is worn (see page 1-5-2).
	Check if the MP separation pulley is worn.	Replace the MP separation pulley if it is worn (see page 1-5-5).

Problem	Causes/check procedures	Corrective measures
(6) Paper jams.	Paper is extremely curled.	Change the paper.
	Deformed guides along the paper conveying path.	Check visually and replace any deformed guides.
	Check if the contact between the right and left registration rollers is correct.	Check visually and remedy if necessary.
	Check if the contact between the feed roller and feed pulley is correct.	Check visually and remedy if necessary.
	Check if the press roller is extremely dirty or deformed.	Clean or replace the press roller.
	Check if the contact between the heat roller and its separation claws is correct.	Repair if any springs are off the separation claws.
	Check if the contact between the eject roller and pulley is correct.	Check visually and remedy if necessary.
	The feedshift solenoid malfunctions.	See page 1-4-40.
	Check if the duplex feed pulley, upper duplex feed roller or lower duplex feed roller is deformed.	Check visually and replace the pulley or roller if deformed.
(7) Toner drops on the paper conveying path.	Check if the developing unit is extremely dirty.	Clean the developing unit.
(8) Abnormal noise is heard.	Check if the pulleys, rollers and gears operate smoothly.	Grease the bearings and gears.
	Check if the following clutches are installed correctly: upper/lower paper feed clutches, feed clutches 1/2/3, MP paper feed clutch and MP feed clutch.	Correct.

1-4-6 Send error code

(1) Scan to SMB error codes

Code	Display	Remarks	
		Causes	Check procedures/corrective measures
1102	Error: User/Password or Shared Name/Folder Name	Domain name is not entered.	Enter the user name with the form of either [Domain¥User], [Domain/User] or [Domain@User].
		Assign disable user/pass-word.	Enter the correct user name/password.
		Assign the user who is not allowed to access to folder.	Enter correct user name/password. Check the access limit of destination folder.
		Assign disable shared name.	Enter the correct shared name. Check if the prohibited letters below are used to shared name. @ () ! & # \$ % ^ ~ [] `
		Host name error.	Check if the prohibited letters are used to shared name. " & ' () ` ; < >
1103	Error: Pathname or File Name	Domain name is not enter	Enter the user name with the form of either [Domain¥User], [Domain/User] or [Domain@User].
		Connect to the folder which is not permitted for reference/writing.	Enter correct user name/password. Check the access limit of destination folder.
		Assign disable folder path.	Enter correct folder path.
1105	Error: Not support protocol	SMB Protocol is set to OFF.	Check ON in the [Scanner]-[SMB] screen in COMMAND CENTER.
2101	Error: Can not connect	Enter the disable host name/IP address.	Enter the correct host name or IP address.
		Assign the wrong port number.	Enter the correct port number.
		Network is not connected.	Check if the server is operating properly. Check the network connection (cable. network condition within LAN, etc.).
2103	Error: Response wait with timeout	The server is unable to communicate.	Check if the server is operating properly.
2201	Error: Network transfer	Error occurs on the network.	Check the network connection (cable. network condition within LAN, etc.).
2203	Error: Response wait with timeout	Response is not returned from the server above specified time.	Check the network connection (cable. network condition within LAN, etc.).
9181	Error: Page max count over	The number of pages of a send file exceeded 999 pages.	Set the number of pages as 999 or less.

(2) Scan to FTP error codes

Code	Display	Remarks	
		Causes	Check procedures/corrective measures
1101	Error: Host name	Enter the disable host name/IP address.	Enter the correct host name or IP address.
1102	Error: User/Password	Domain name is not entered.	Enter the user name with the form of either [Domain¥User] or [Domain/User].
		Assign disable user/password.	Enter the correct user name/password.
1103	Error: Pathname or File Name	Connect to the folder which is not permitted for reference/writing.	Enter correct user name/password. Check the access limit of destination folder.
		Assign disable folder path.	Enter correct folder path.
1105	Error: Not support protocol	FTP Protocol is set to OFF.	Check ON in the [Scanner]-[FTP] screen in COMMAND CENTER.
2101	Error: Can not connect	Enter the disable host name/IP address.	Enter the correct host name or IP address.
		Assign the wrong port number.	Enter the correct port number.
		Network is not connected.	Check if the server is operating properly. Check the network connection (cable, network condition within LAN, etc.).
2102	Error: Can not connect with timeout	The server is unable to communicate.	Check if the server is operating properly.
		Send the server which does not support FTP server.	Enter the correct host name or IP address.
2103	Error: Response wait with timeout	The server is unable to communicate.	Check if the server is operating properly.
2201	Error: Network transfer	Error occurs on the network.	Check the network connection (cable, network condition within LAN, etc.).
2202	Error: Network transfer with timeout	Error occurs on the network.	Check the network connection (cable, network condition within LAN, etc.).
2203	Error: Response wait with timeout	Response is not returned from the server above specified time.	Check the network connection (cable, network condition within LAN, etc.).
3101	Error: Server response	The server is error status.	Check if the server is working properly.
9181	Error: Page max count over	The number of pages of a send file exceeded 999 pages.	Set the number of pages as 999 or less.

(3) Scan to E-mail error codes

Code	Display	Remarks	
		Causes	Check procedures/corrective measures
1101	Error: Host name	SMTP sever name is not set. Error SMTP server name.	Register [SMTP Server Name] in [Advanced]-[SMTP] -[General] in COMMAND CENTER.
1102	Error: User/Password	User ID for the authentication is not entered or entered wrongly. Wrong authentication password is entered.	Enter the correct user ID/password for authentication at [Advance] in COMMAND CENTER. Enter the password of [Login User Name] of the [POP3] page or the [SMTP] page correctly.
1104	Error: No Recipient address	The destination address is not specified.	Specify the destination address.
1105	Error: Not support protocol	SMTP Protocol is set to OFF.	Check ON [SMTP] in [Advanced]-[SMTP] -[General] in COMMAND CENTER.
1106	Error: No Sender Info	Sender address is not enter	Enter the correct [Sender Address] in [Advanced]-[SMTP] -[General] in COMMAND CENTER.
2101	Error: Can not connect	Select [Other authenticate] when authenticating POP before SMTP.	Select valid POP3 user other than [Other].
		The specified server is not SMTP server.	Enter the correct [SMTP Server Name] in [Advanced]-[SMTP] -[General] in COMMAND CENTER.
		Network is not connected.	Check if the server is operating properly. Check the network connection (cable. network condition within LAN, etc.).
2102	Error: Can not connect with timeout	The server is unable to communicate.	Check if the server is operating properly.
2103	Error: Response wait with timeout	The server is unable to communicate.	Check if the server is operating properly.
2201	Error: Network transfer	Error occurs on the network.	Check the network connection (cable. network condition within LAN, etc.).
2202	Error: Network transfer with timeout	Error occurs on the network.	Check the network connection (cable. network condition within LAN, etc.).
2203	Error: Response wait with timeout	Response is not returned from the server above specified time.	Check the network connection (cable. network condition within LAN, etc.).
2204	Error: E-Mail Size limit	The size of E-mail exceeds its limit.	Change the [E-mail Size Limit] in [Advanced]-[SMTP] -[General]-[E-mail Setting] in COMMAND CENTER.
3101	Error: Server response	The server is error status.	Check if the server is working properly.
		Server setting is not authenticated normally.	Check the settings for client/server authentication.
3201	Error: Not Found Authentication Mechanism	Unsupported SMTP Authentication Mechanism is found.	Check the settings for client/server Authentication Mechanism.
9181	Error: Page max count over	The number of pages of a send file exceeded 999 pages.	Set the number of pages as 999 or less.

(4) Network Twain error codes

Code	Display	Remarks	
		Causes	Check procedures/corrective measures
2202	Error: Network transfer with timeout	Response is not returned from the server above specified time.	Check the network connection (cable, network condition within LAN, etc.).
9181	Error: Page max count over	The number of pages of a send file exceeded 999 pages.	Set the number of pages as 999 or less.

(5) Software trouble error codes

Code	Display	Remarks	
		Causes	Check procedures/corrective measures
5101	Error: Not yet connected	Operation handle error. Error for stored status in the operation handle.	Turn the main power switch off and on.
5102	Error: Already connected	Operation handle error. Error for stored status in the operation handle.	Turn the main power switch off and on.
5103	Error: Not yet opened	Error for stored status in the operation handle.	Turn the main power switch off and on.
5104	Error: Already opened	Error for stored status in the operation handle.	Turn the main power switch off and on.
7101	Error: Memory Allocation	Insufficient memory space.	Turn the main power switch off and on.
7102	Error: Socket Create	Unable to create a communication socket.	Turn the main power switch off and on.
720f	Error: Unknown error	Unable to determine the cause.	Turn the main power switch off and on.

1-5-1 Precautions for assembly and disassembly

(1) Precautions

Before starting disassembly, press the power key on the operation panel to off. Make sure that the power indicator and the Memory indicator are off before turning off the main power switch. And then unplug the power cable from the wall outlet.

Turning off the main power switch before pressing the power key to off may cause damage to the equipped hard disk.

When fax kit is installed, be sure to disconnect the modular code before starting disassembly.

When handling PWBs (printed wiring boards), do not touch parts with bare hands.

The PWBs are susceptible to static charge. Do not touch any PWB containing ICs with bare hands or any object prone to static charge.

Use only the specified parts to replace the fuser unit thermostat. Never substitute electric wires, as the machine may be seriously damaged.

When replacing battery on a PWB, dispose properly according to laws and regulations.

When removing the hook of the connector, be sure to release the hook.

(2) Drum

Note the following when handling or storing the drum.

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

Keep the drum at an ambient temperature between 0°C/32°F and 35°C/95°F and at a relative humidity not higher than 85% RH. Avoid abrupt changes in temperature and humidity.

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

Do not touch the drum surface with any object. Should it be touched by hands or stained with oil, clean it.

(3) Toner

Store the toner container in a cool, dark place.

Avoid direct light and high humidity.

1-5-2 Paper feed section

(1) Detaching and refitting the forwarding, paper feed and separation pulleys

Follow the procedure below to replace the forwarding, paper feed and separation pulleys.

Procedure

Removing the primary paper feed units

1. Open the front cover and pull out the cassettes 1 and 2.
2. Remove the screw and remove the primary paper feed unit.

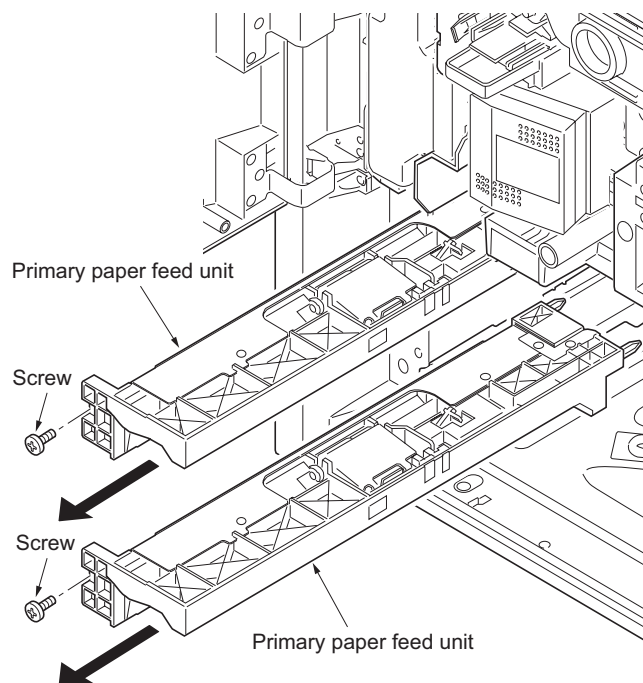


Figure 1-5-1

Removing the forwarding pulley

3. Remove the stopper from the primary paper feed unit.
4. Raise the forwarding pulley retainer in the direction of the arrow, and remove the retainer from the primary paper feed unit.

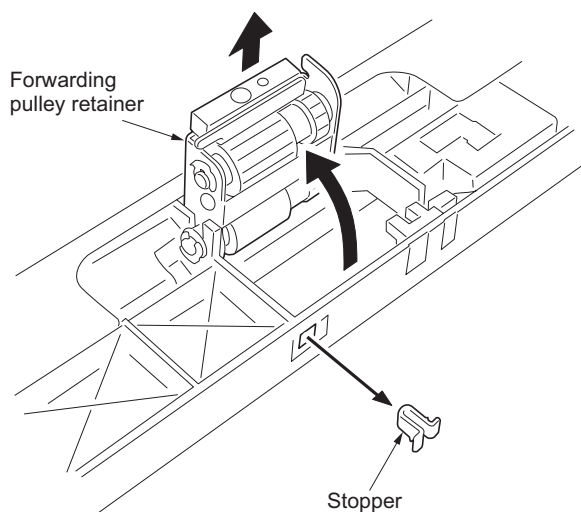


Figure 1-5-2

5. Remove the stop ring from the forwarding pulley retainer.
6. Pull the paper forwarding pulley shaft and remove the forwarding pulley.

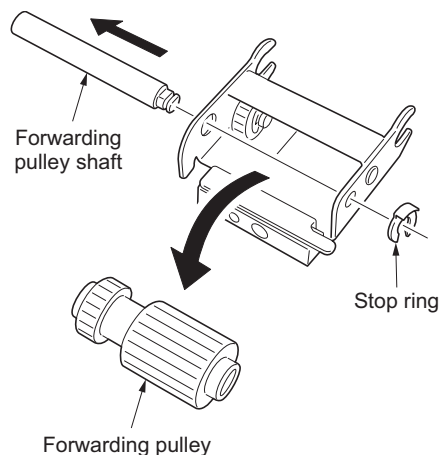


Figure 1-5-3

Removing the paper feed pulley

7. Remove two stop rings from the primary paper feed unit.
8. Pull the paper feed pulley shaft in the direction of the arrow and remove the paper feed pulley.

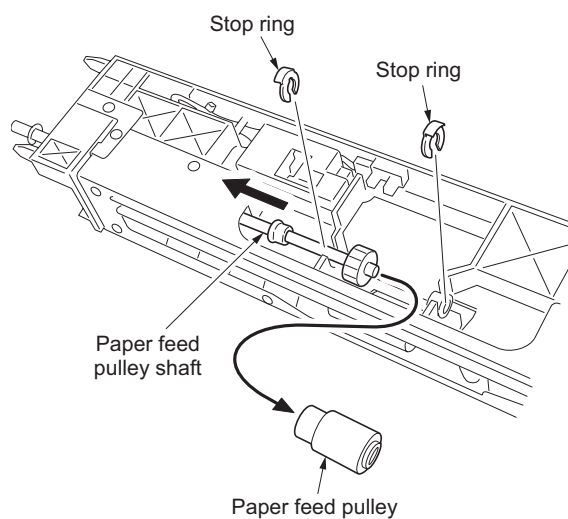


Figure 1-5-4

Removing the separation pulley

9. Remove the stop ring from the primary paper feed unit.
10. Pull the separation pulley shaft in the direction of the arrow and remove the separation pulley.

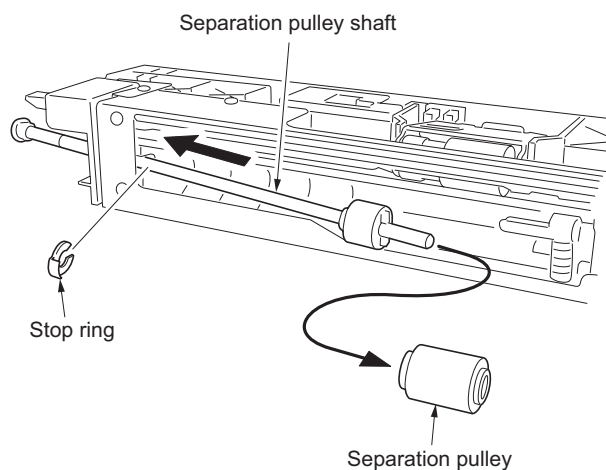
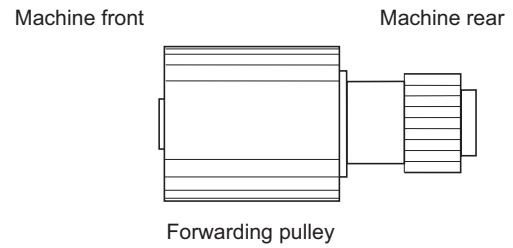


Figure 1-5-5

11. Replace the forwarding, paper feed and separation pulleys.
12. Refit all the removed parts.
When refitting the forwarding pulley, orient it correctly as shown in Figure 1-5-6.
13. When the forwarding pulley, paper feed pulley, separation pulley or the primary paper feed unit is replaced, perform maintenance mode U903 to clear the jam counter (see page 1-3-73).

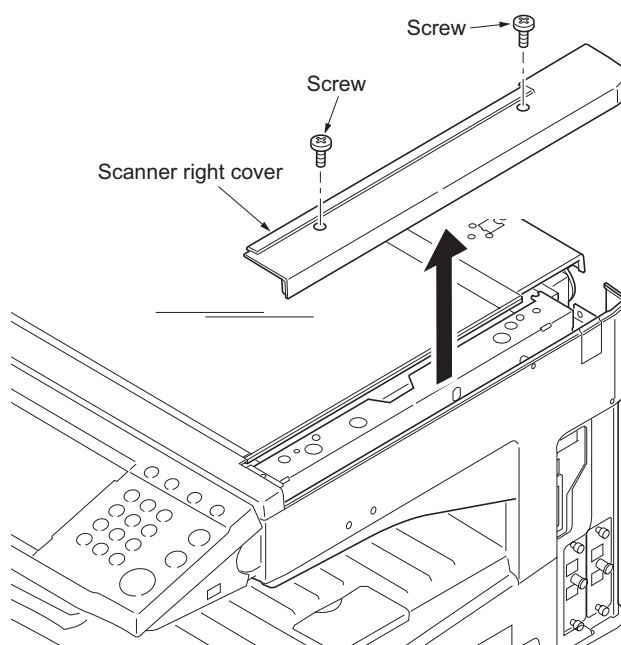
**Figure 1-5-6**

(2) Detaching and refitting the MP separation, MP paper feed and MP forwarding pulleys

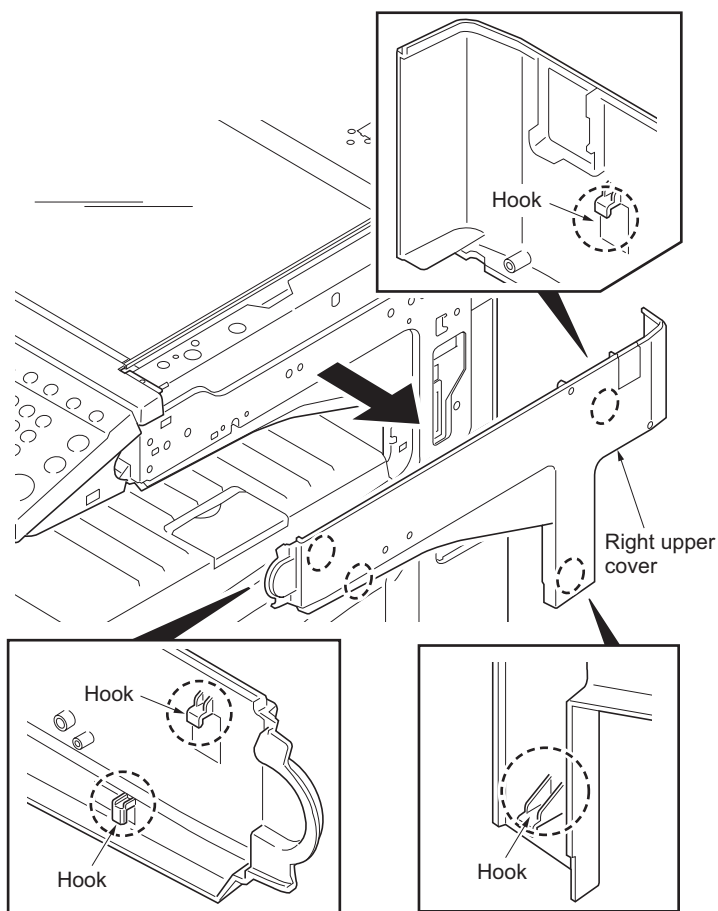
Follow the procedure below to replace the MP separation, MP paper feed and MP forwarding pulleys.

Procedure**Removing the MP unit**

1. Remove two screws and remove the scanner right cover.

**Figure 1-5-7**

2. Remove four hooks and remove the right upper cover.

**Figure 1-5-8**

3. Open the front cover.
4. Remove the screw and remove the front right cover.

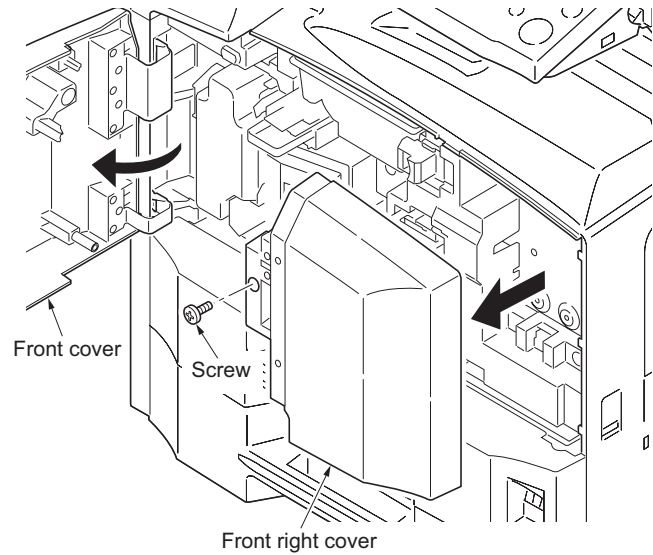


Figure 1-5-9

5. Raise the top tray.
6. Remove ten hooks and remove the right lower cover.

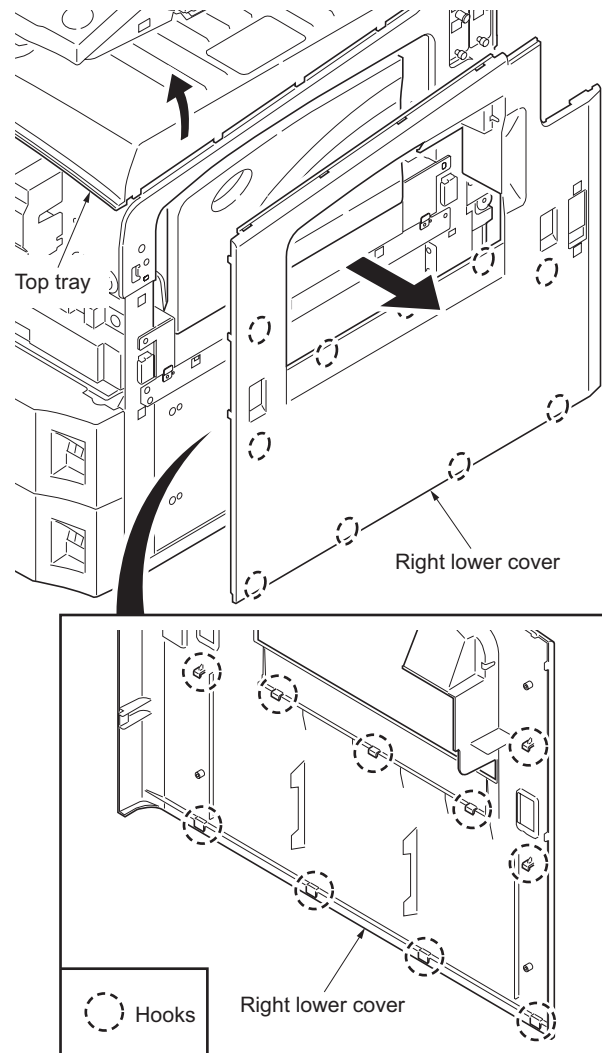


Figure 1-5-10

7. Loosen two screws and remove two MP holder plates.
8. Remove two screws.

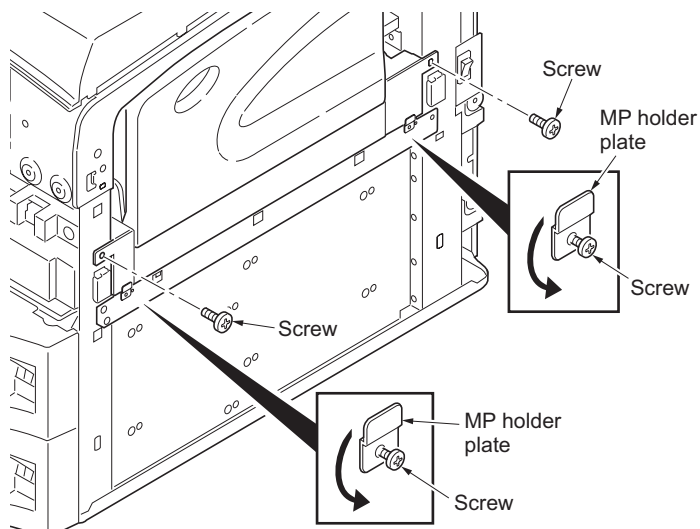


Figure 1-5-11

9. Remove two connectors.
10. Release the clamp.
11. Remove the MP unit.

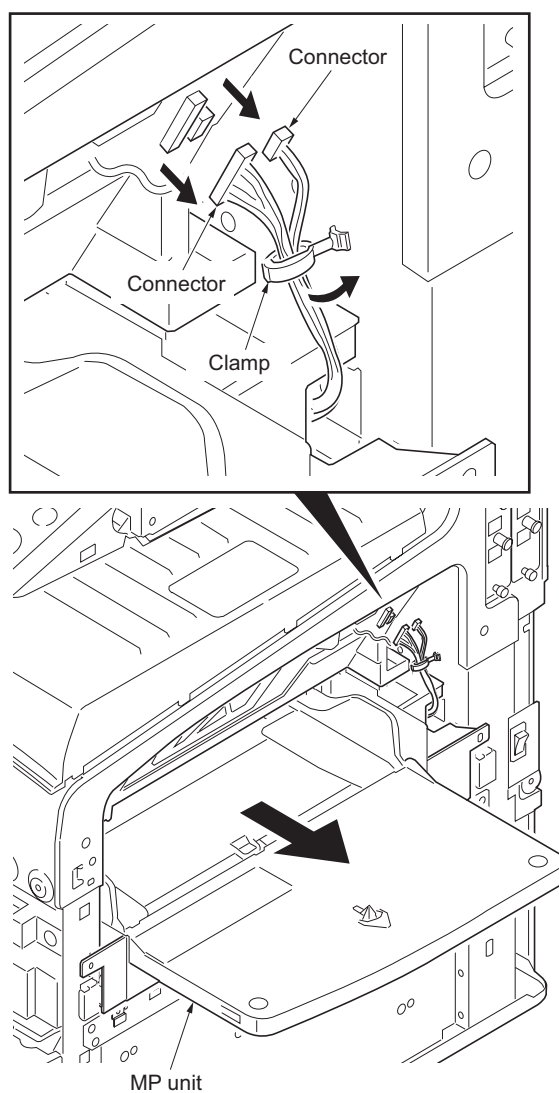
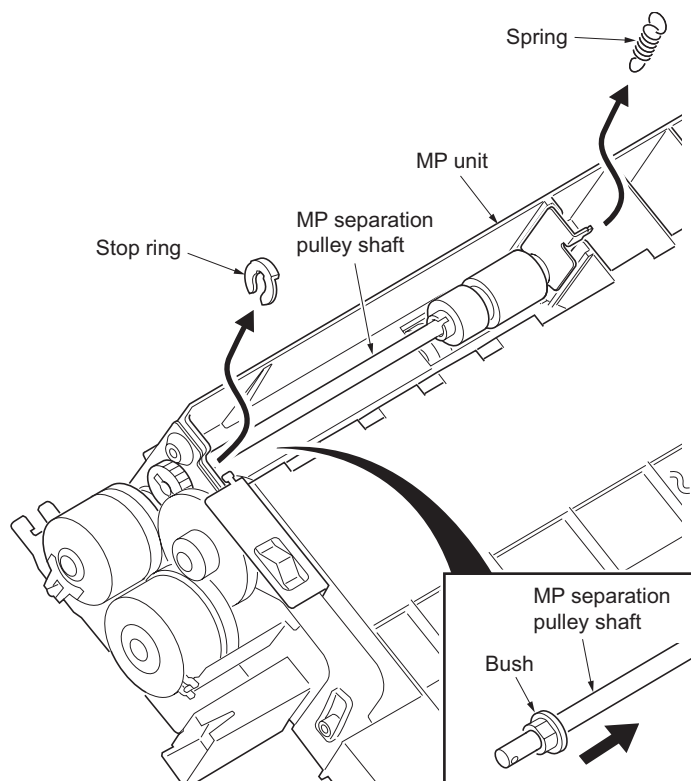


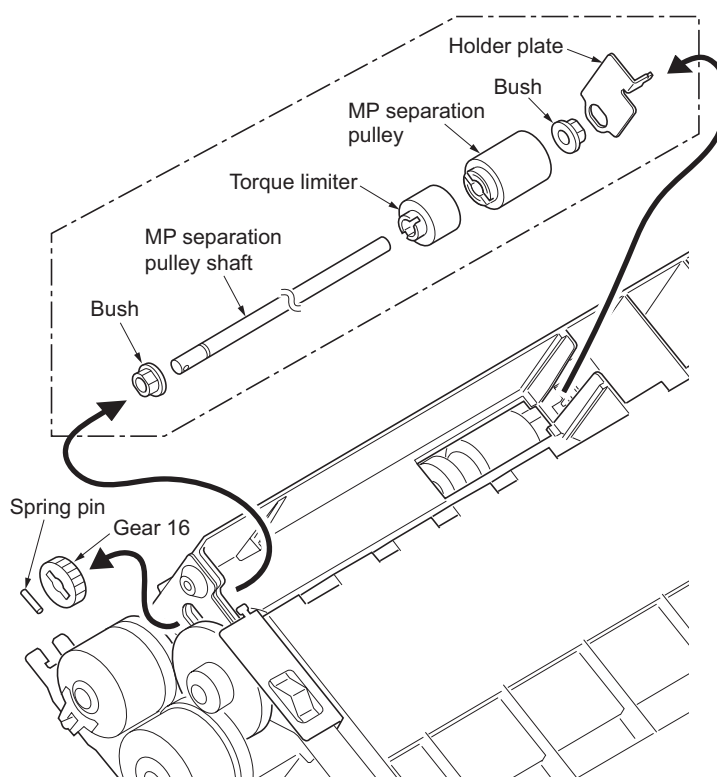
Figure 1-5-12

Removing the MP separation pulley

12. Reverse the MP unit and remove the spring and stop ring from the MP separation pulley shaft.
13. Move the bush inside.

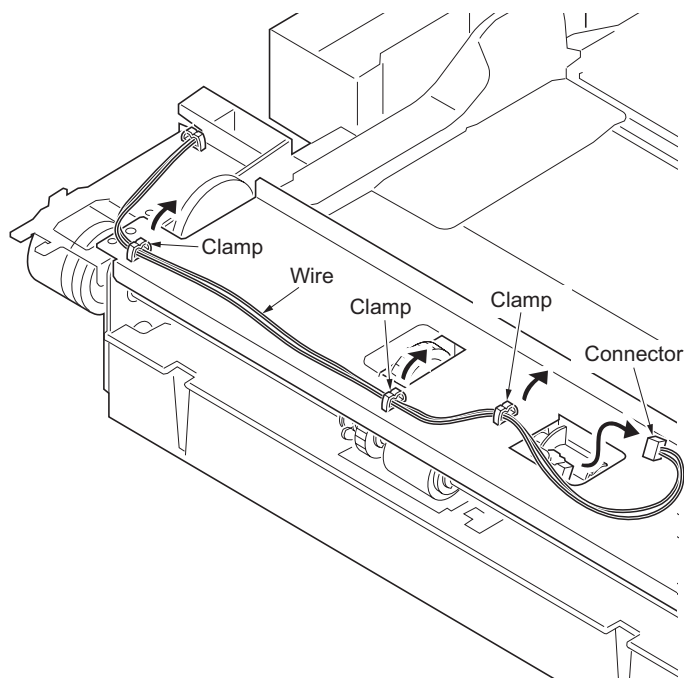
**Figure 1-5-13**

14. Raise the MP separation pulley shaft. Remove the holder plate and the bush, and then remove the MP separation pulley.

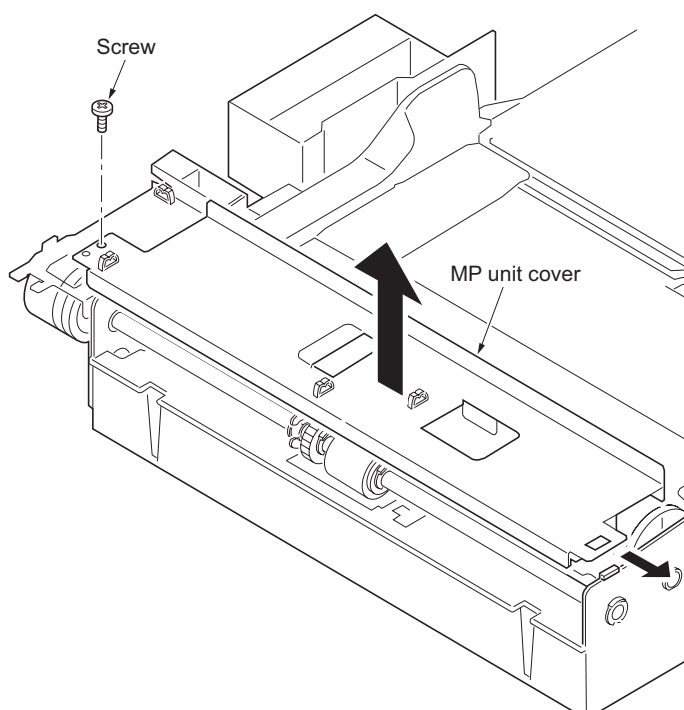
**Figure 1-5-14**

Removing the MP paper feed pulley

15. Remove the connector.
16. Release three clamps and remove the wire.

**Figure 1-5-15**

17. Remove the screw and remove the MP unit cover.

**Figure 1-5-16**

18. Remove the stop ring and bush.

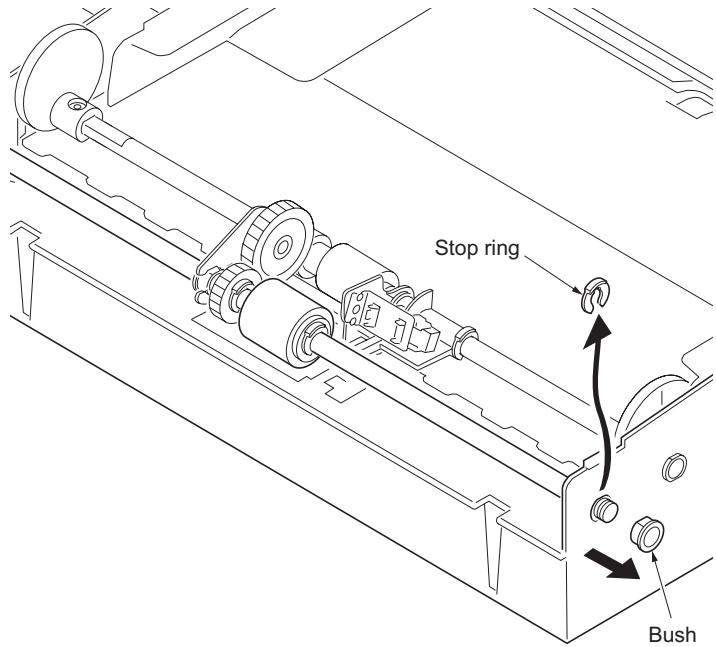


Figure 1-5-17

19. Remove the stop ring.

20. Raise the MP paper feed pulley shaft and remove the MP paper feed pulley.

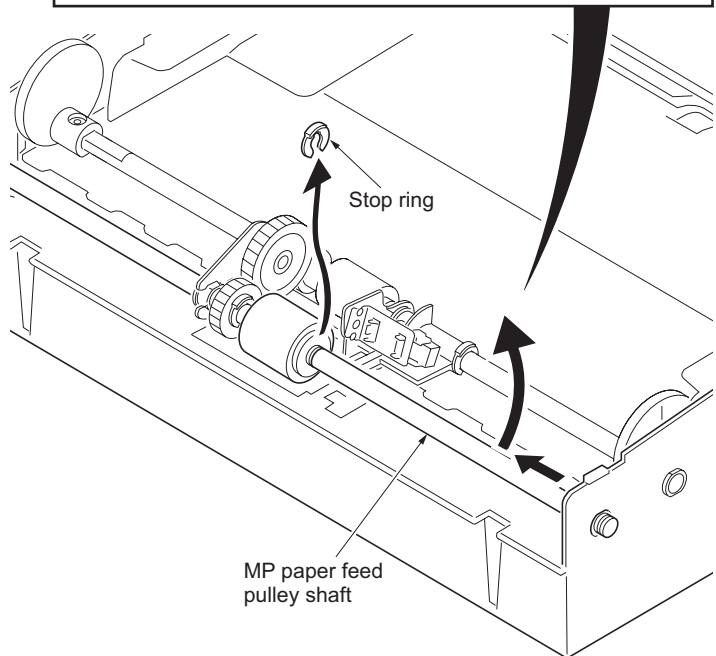
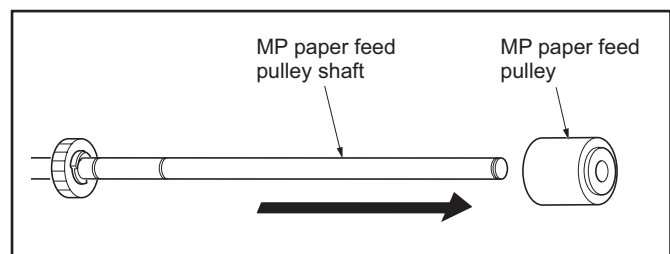
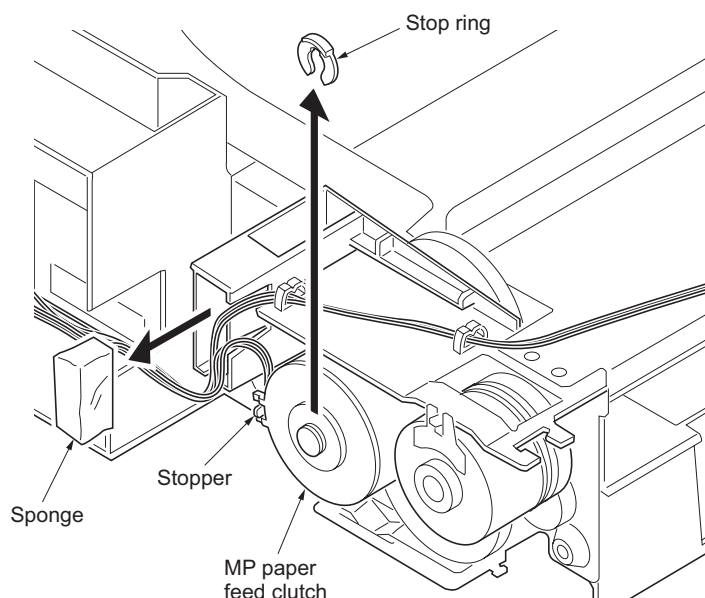


Figure 1-5-18

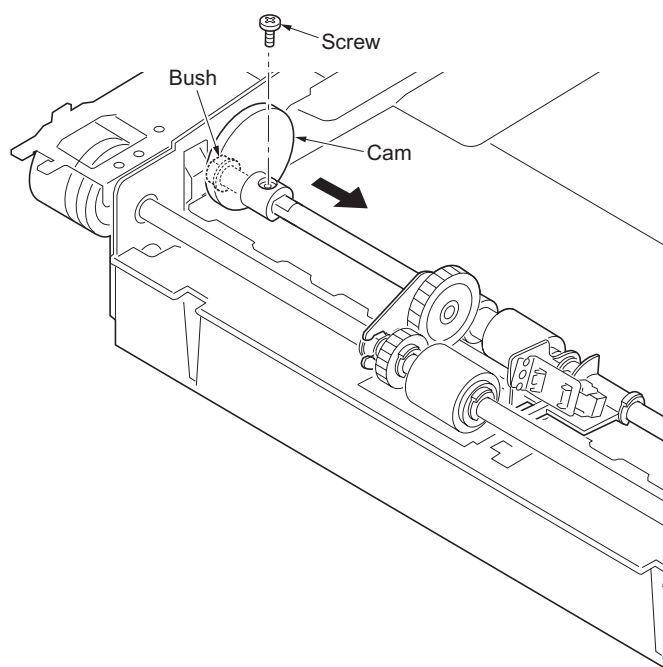
Removing the MP forwarding pulley

21. Remove the sponge.
22. Remove the stop ring and MP paper feed clutch.

When refitting, insert the cutout in the MP paper feed clutch over the stopper on the machine.

**Figure 1-5-19**

23. Remove the screw and move the cam and the bush toward the inner side.

**Figure 1-5-20**

24. Remove the stop ring and slide the bush in the direction of the arrow.

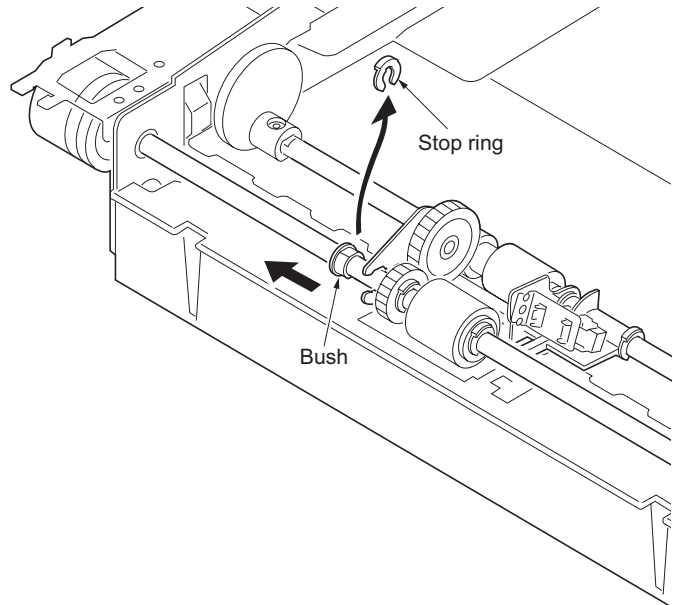


Figure 1-5-21

25. Slide the MP forwarding pulley shaft temporarily toward the rear side and then raise it to remove from the MP unit. Remove the shaft while raising the actuator of the MP paper switch.

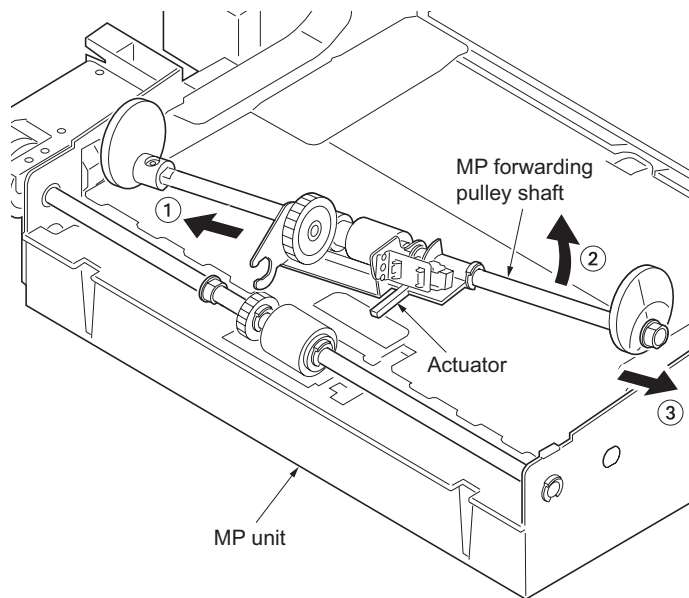


Figure 1-5-22

26. Remove the bush and cam.
27. Remove the stop ring.
28. Slide the MP forwarding pulley with the forwarding pulley retainer from the shaft to remove it.
29. Replace the MP separation, MP paper feed and MP forwarding pulleys.

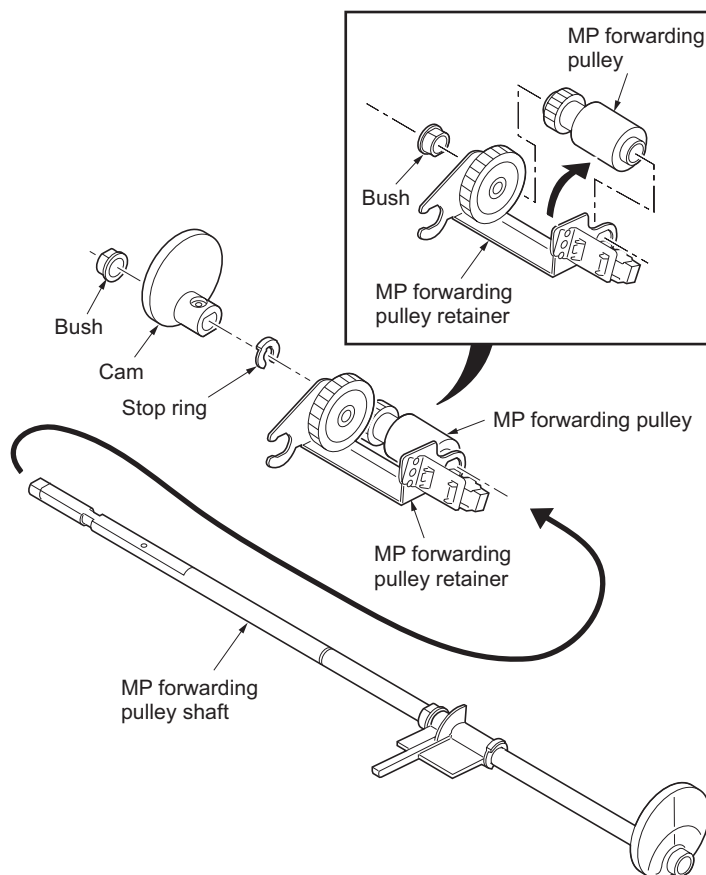


Figure 1-5-23

30. Refit all the removed parts.
When refitting the MP unit cover, the films on the cover are positioned under the MP paper feed pulley shaft.
31. When the MP forwarding pulley, MP paper feed pulley or the MP separation pulley is replaced, perform maintenance mode U903 to clear the jam counter (see page 1-3-73).

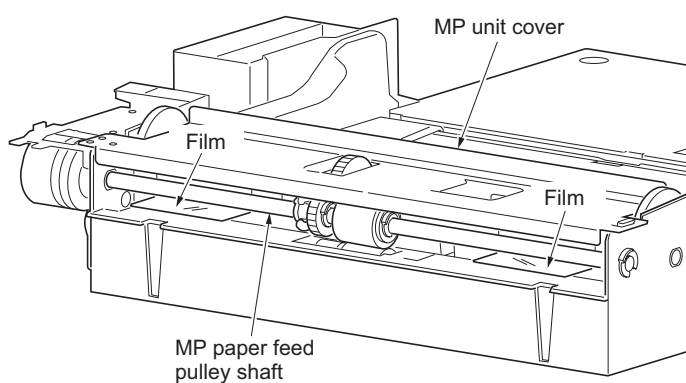


Figure 1-5-24

1-5-3 Optical section

(1) Detaching and refitting the exposure lamp

Follow the procedure below to replace the exposure lamp.

Procedure

1. Remove the original cover or the DP.
2. Remove eleven screws and remove the rear cover.

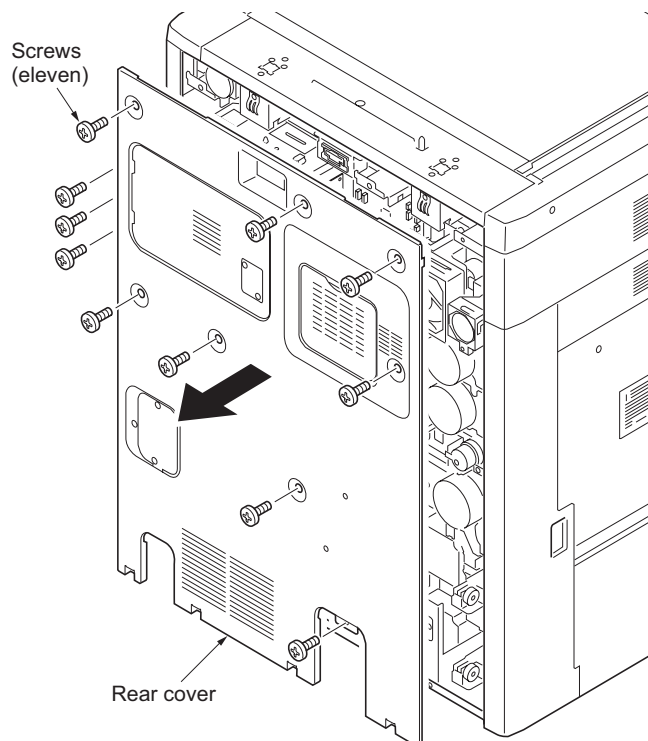


Figure 1-5-25

3. Remove the clip holder.
4. Remove two screws and remove the front left cover.

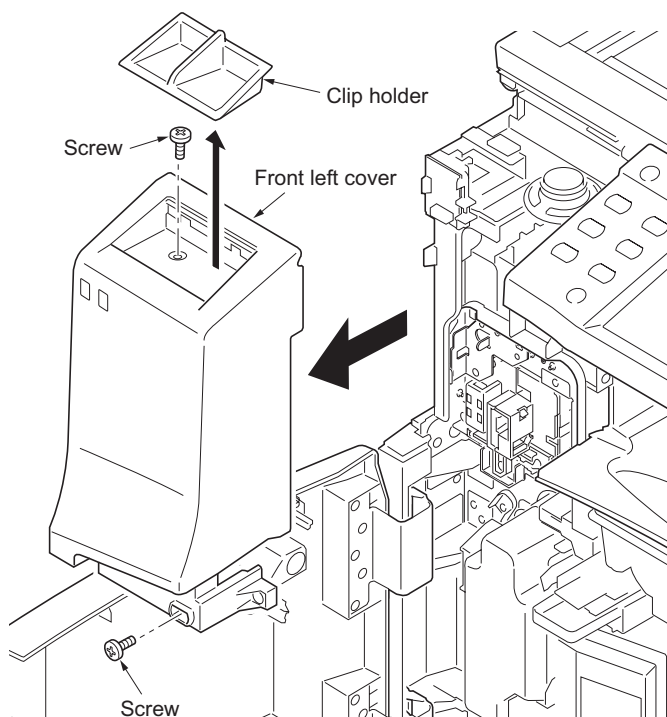
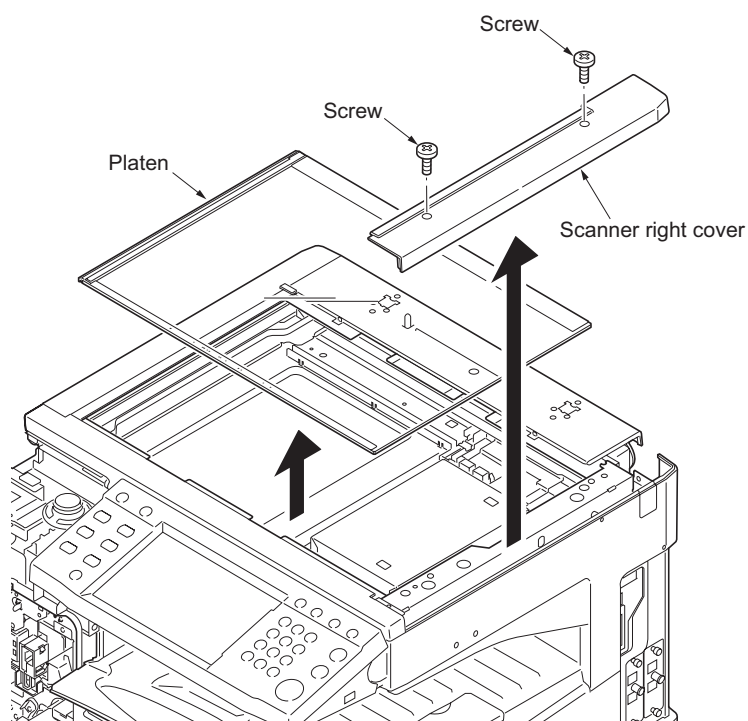
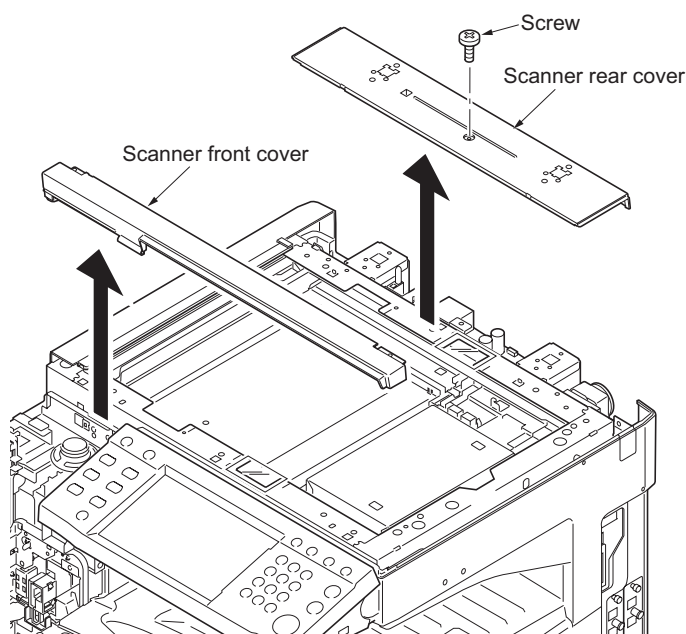


Figure 1-5-26

5. Remove two screws and remove the scanner right cover.
6. Remove the platen.

**Figure 1-5-27**

7. Remove the scanner front cover.
8. Remove the screw and remove the scanner rear cover.

**Figure 1-5-28**

9. Remove the connector of the scanner inverter PWB.
10. Release the clamp and remove the wire.
11. Pull the connector out from the opening on the rear of the scanner unit.

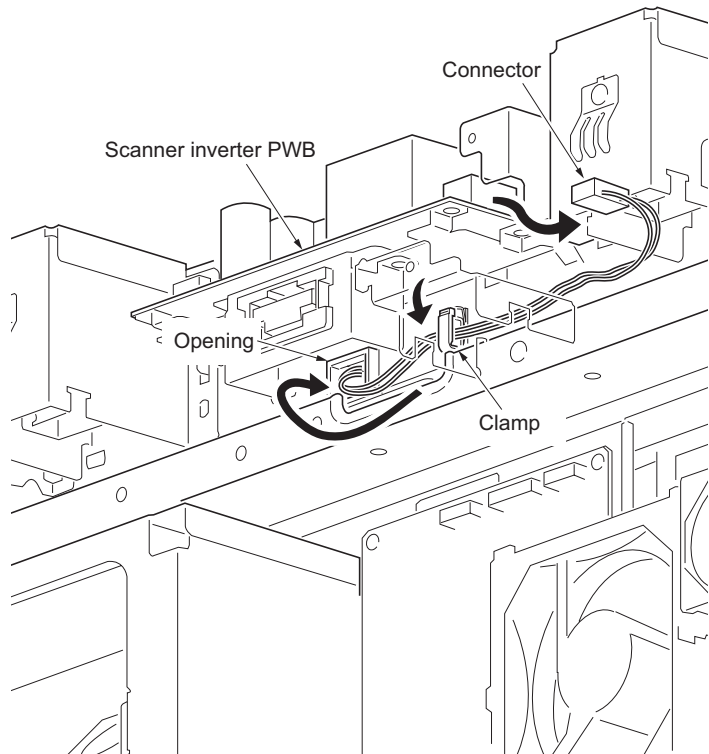


Figure 1-5-29

12. Remove two films.
13. Remove the wire guide lid.
14. Move the mirror 1 frame to notch position.

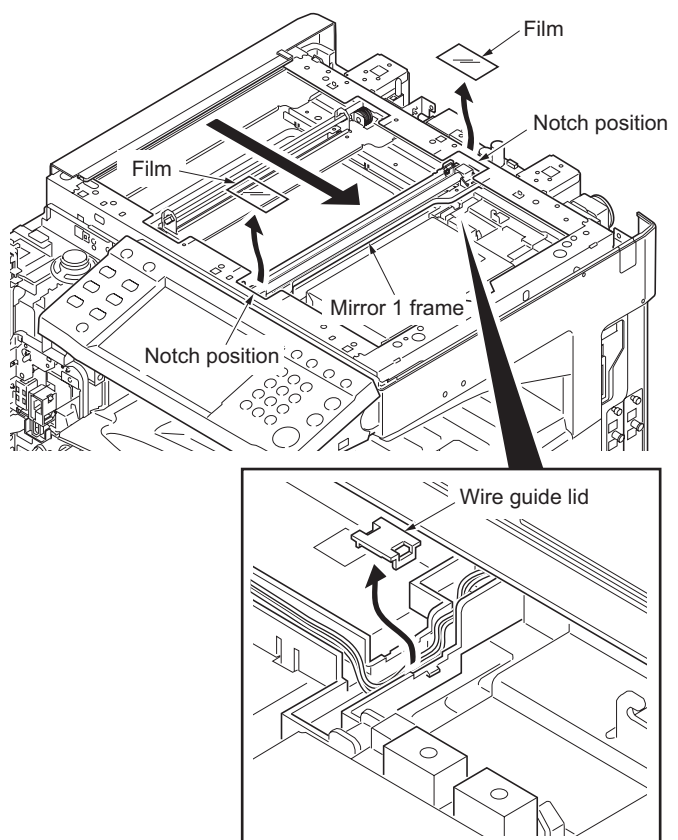


Figure 1-5-30

15. Remove the screw.
16. Open the lamp wire guide lid.

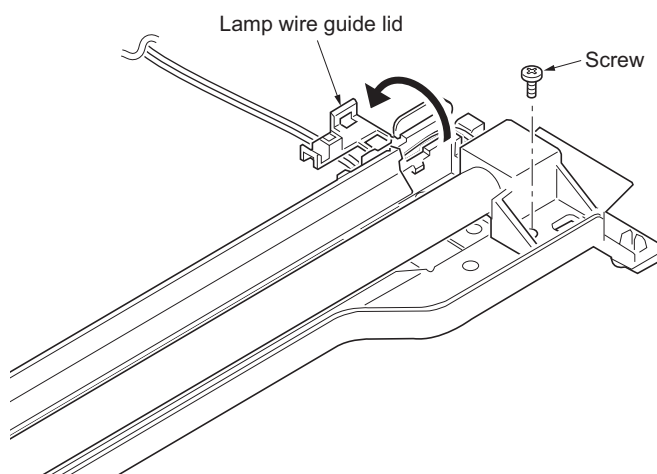


Figure 1-5-31

17. Remove the hook and remove the exposure lamp.
18. Replace the exposure lamp and install the lamp.
19. Refit all the removed parts.

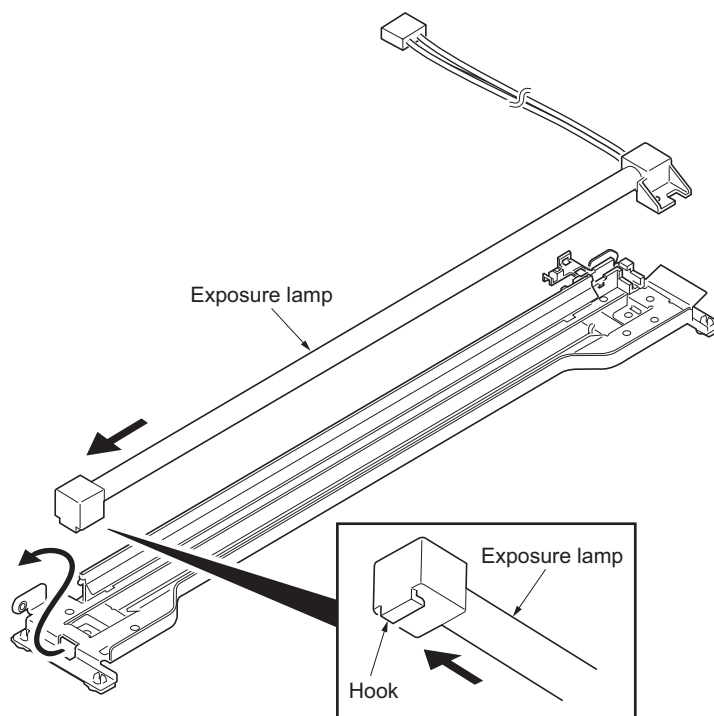


Figure 1-5-32

(2) Detaching and refitting the scanner unit

Follow the procedure below to replace the scanner unit.

Procedure

1. Remove the original cover or the DP.
2. Remove eleven screws and remove the rear cover.

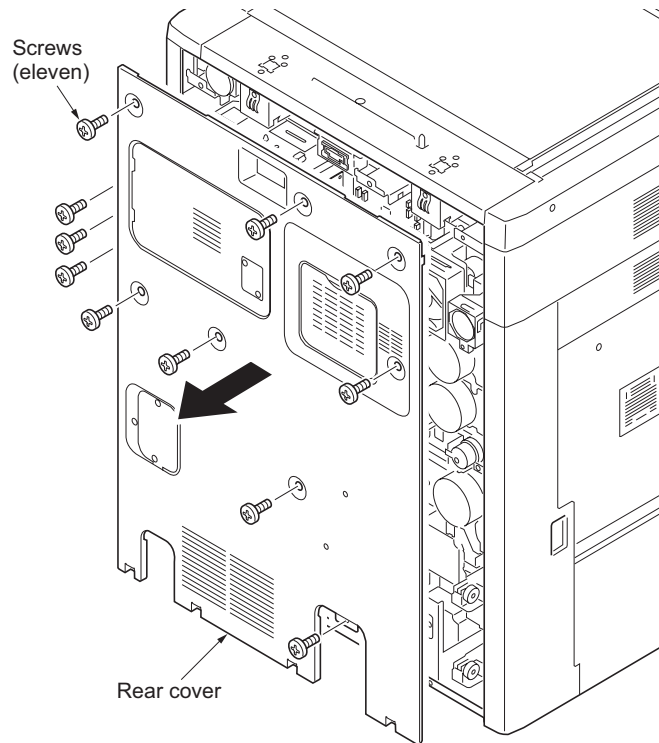


Figure 1-5-33

3. Remove the clip holder.
4. Remove two screws and remove the front left cover.

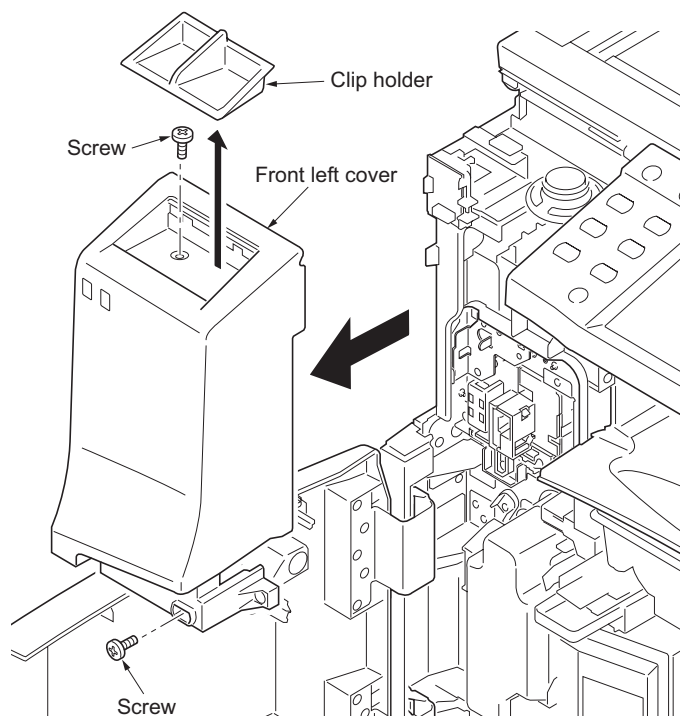
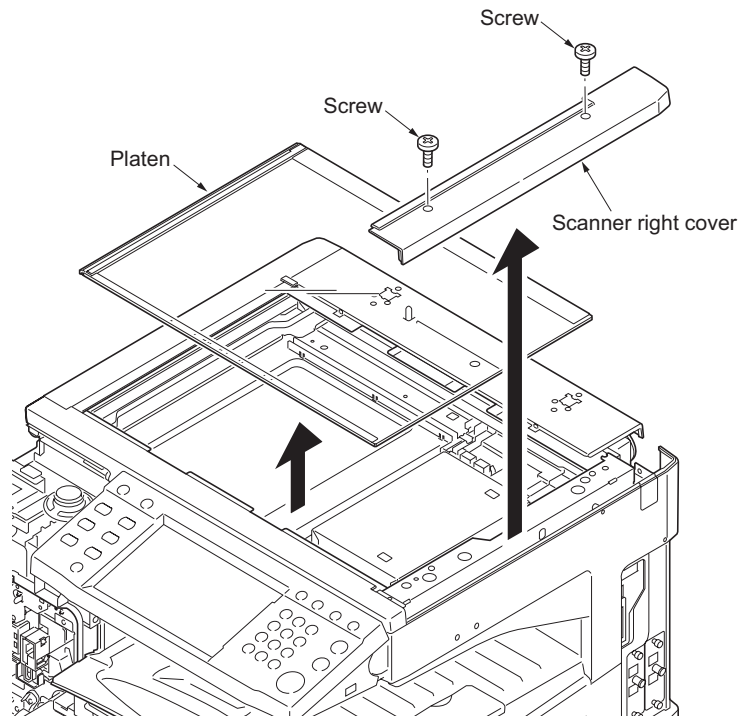
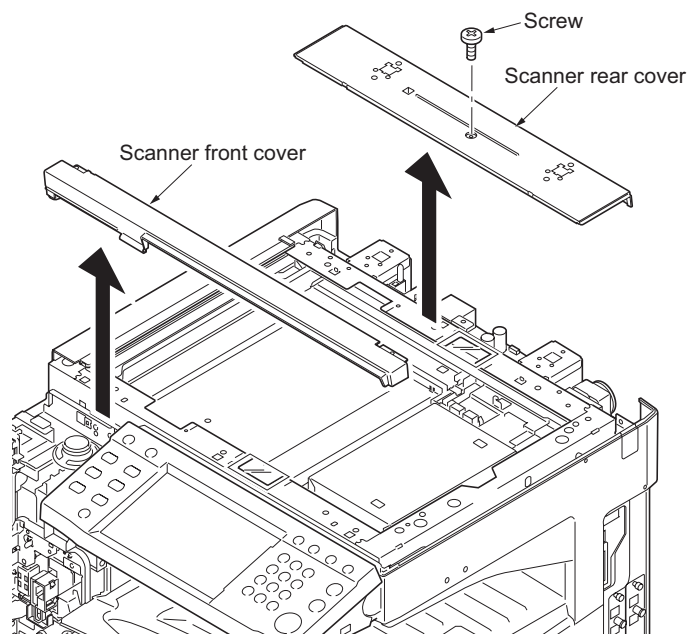


Figure 1-5-34

5. Remove two screws and remove the scanner right cover.
6. Remove the platen.

**Figure 1-5-35**

7. Remove the scanner front cover.
8. Remove the screw and remove the scanner rear cover.

**Figure 1-5-36**

9. Remove the claw and remove the left upper cover.
10. Remove the scanner left cover.

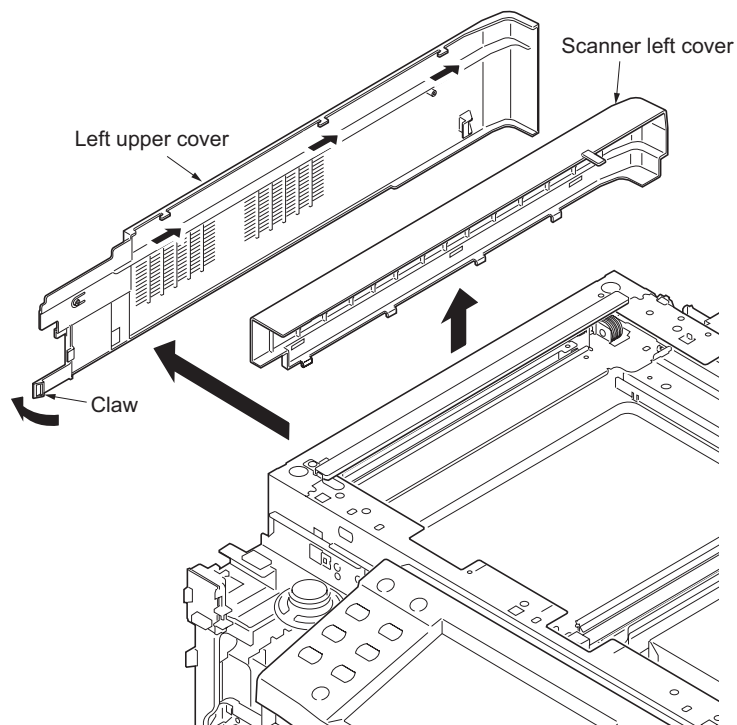


Figure 1-5-37

11. Remove YC24, YC17 and YC31 connectors of the engine PWB.
12. Remove FFC from YC16 connector of the engine PWB.
13. Remove the relay connector.
14. Release the clamp and remove the wire.
15. Remove FFC from YC18 connector of the main PWB.

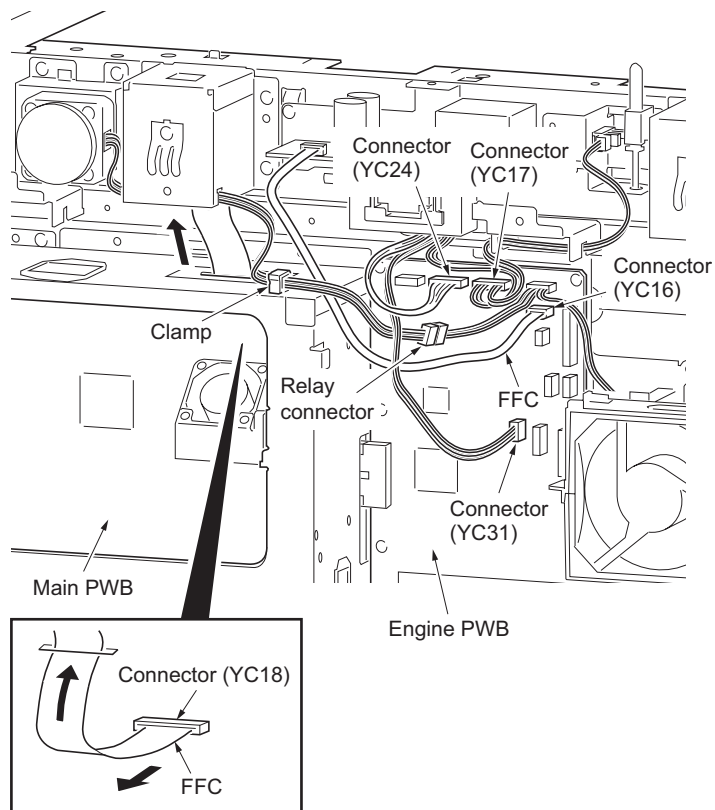


Figure 1-5-38

16. Remove four pins.
17. Remove the scanner unit.

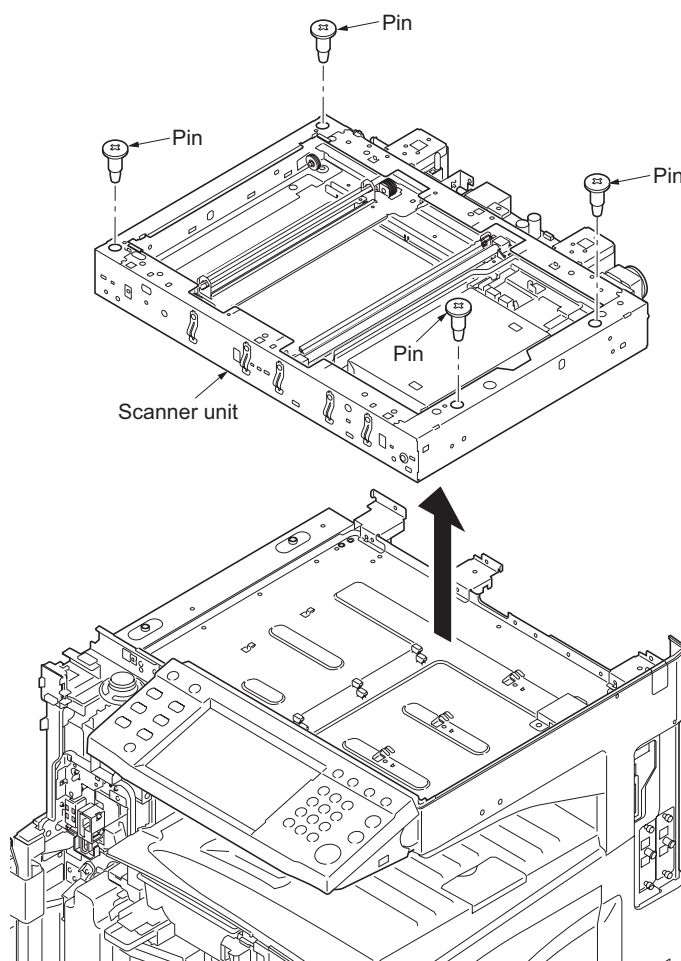


Figure 1-5-39

(3) Detaching and refitting the scanner wires

Take the following procedure when the scanner wires are broken or to be replaced.

(3-1) Detaching the scanner wires

Procedure

1. Remove the scanner unit (see page 1-5-18).
2. Remove the exposure lamp (see page 1-5-14).
3. Remove the screw and remove the slit holder plate.
4. Remove the slit glass.

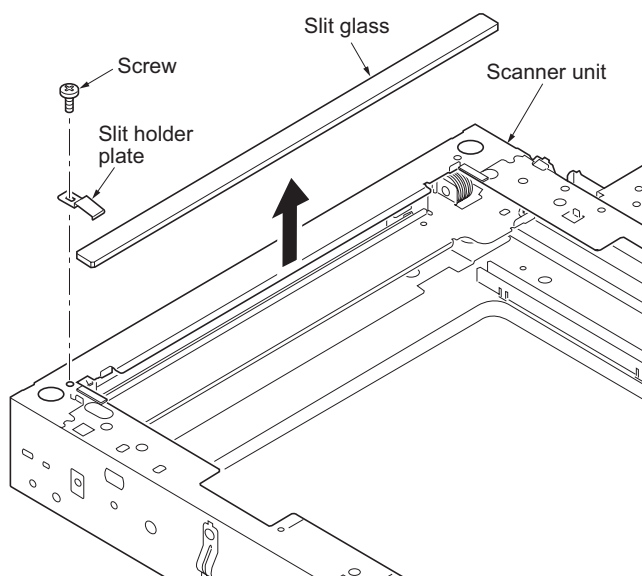


Figure 1-5-40

5. Remove each screw and remove front and rear wire holder plates.
6. Remove the mirror 1 frame from the scanner unit.

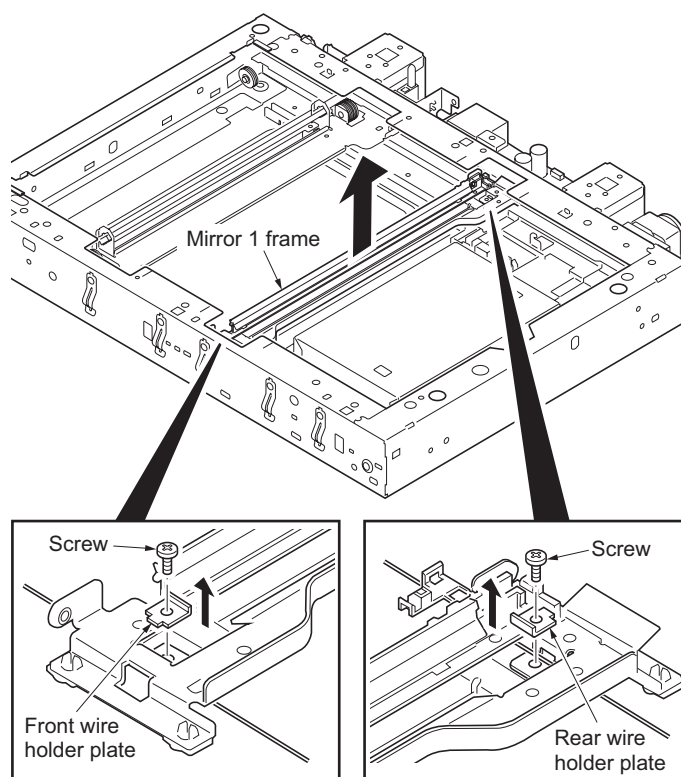


Figure 1-5-41

7. Remove the round terminals from the scanner wire springs.
8. Remove the scanner wires.

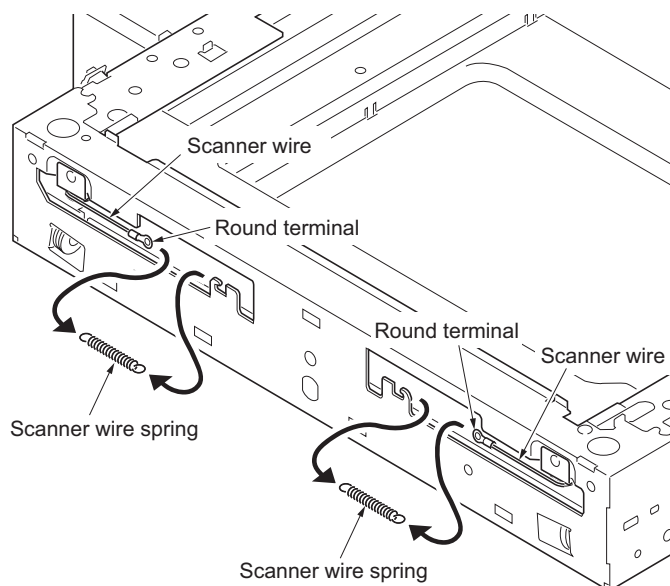


Figure 1-5-42

(3-2) Fitting the scanner wires**NOTE**

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

Machine front: gray

Machine rear: black

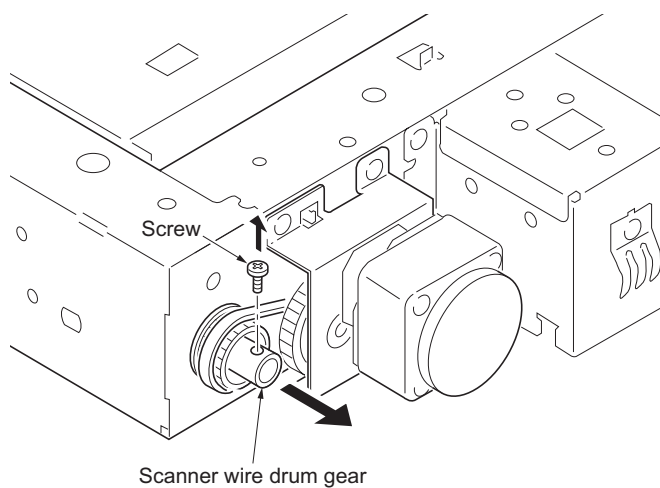
Fitting requires the following tools

Two frame securing tools

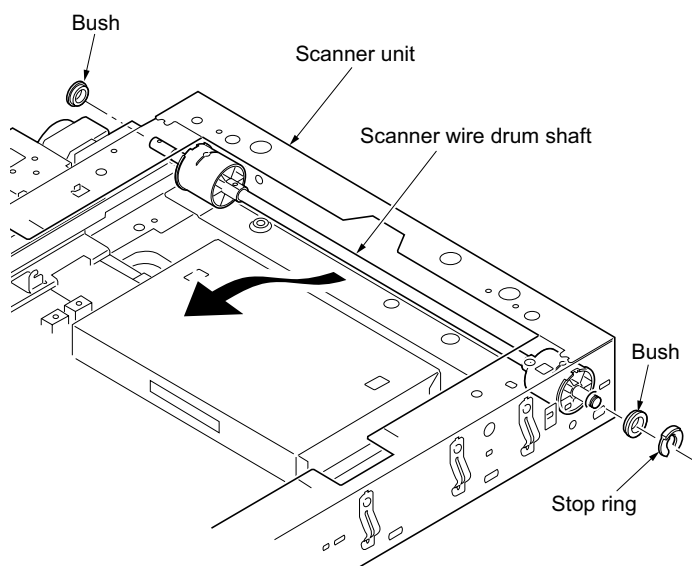
Two scanner wire stoppers

Procedure

1. Remove the screw and remove the scanner wire drum gear.

**Figure 1-5-43**

2. Remove the stop ring and bush from the front of the scanner wire drum shaft.
3. Remove the scanner wire drum shaft from the scanner unit.

**Figure 1-5-44**

4. Insert the locating ball on each of the scanner wires into the hole in the respective scanner wire drum and wind the scanner wire three turns inward and four turns outward. With the locating ball as the reference point, wind the shorter end of each of the wires outward.
5. Secure the scanner wires using the scanner wire stoppers.

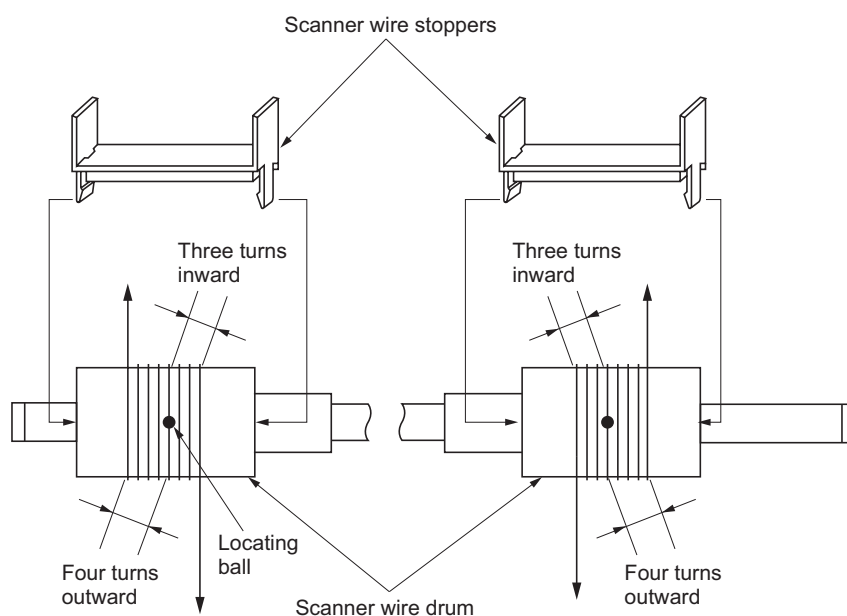


Figure 1-5-45

6. Refit the scanner wire drum shaft to the scanner unit.
7. Insert the two frame securing tools into the positioning holes at the front and rear of the scanner unit to fix the mirror 2 frame in position.

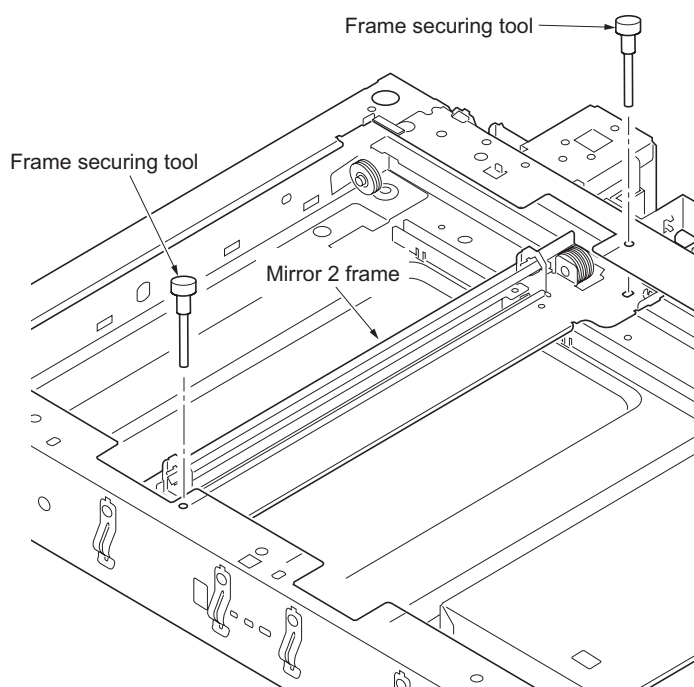


Figure 1-5-46

8. Loop the outer ends of the scanner wires around the outer grooves in the pulleys on the mirror 2 frame, winding from below to above. (1)
9. Hook the round terminals onto the catches inside the scanner unit. (2)
10. Loop the inner ends of the scanner wires around the grooves in the pulleys at the left of the scanner unit, winding from below to above. (3)
11. Loop the scanner wires around the inner grooves in the pulleys on the mirror 2 frame, winding from above to below. (4)
12. Wind the scanner wires around the grooves in the scanner wire guides at the left of the scanner unit. (5)
13. Hook the round terminals onto the scanner wire springs. (6)

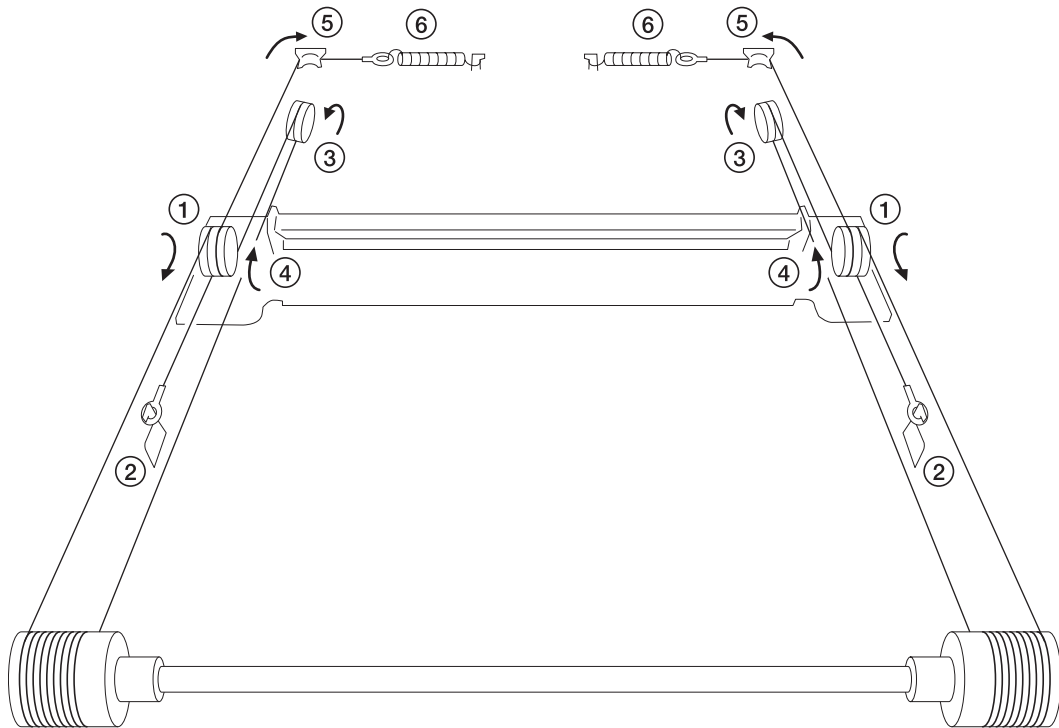


Figure 1-5-47

14. Remove the two scanner wire stoppers and frame securing tools.
15. Focusing on the locating ball of the wire drum, move aside the wires to inside.
16. Move the mirror 2 frame from side to side to correctly locate the wires in position.
17. Refit the mirror 1 frame.
18. Move the mirror 1 and 2 frames to the machine left, and insert the two frame securing tools into the positioning holes at the front and rear of the scanner unit to secure the frames in position.
19. Hold the wires and fix each front and rear wire holder plate to mirror 1 frame with the screw.
20. Remove the two frame securing tools.
21. Refit all the removed parts.

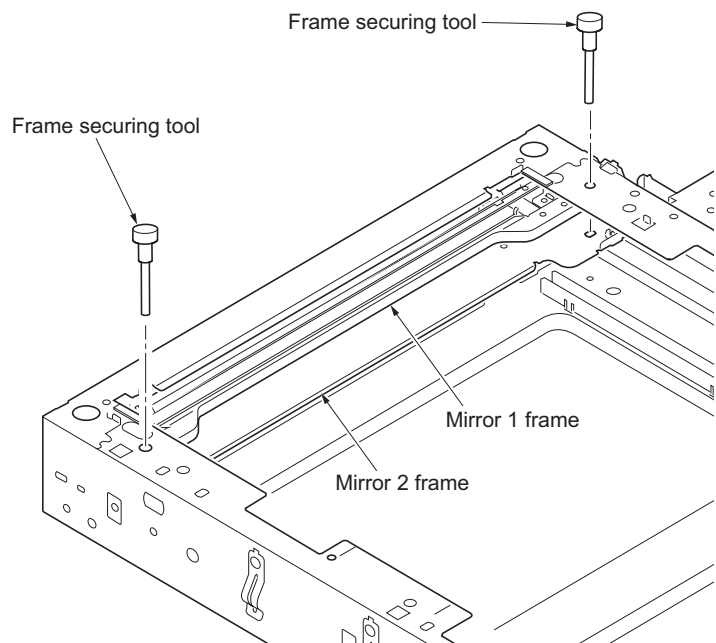


Figure 1-5-48

(4) Detaching and refitting the ISU (reference)

Follow the procedure below to replace the ISU.

Procedure

1. Remove two screws and remove the scanner right cover.
2. Remove the platen.

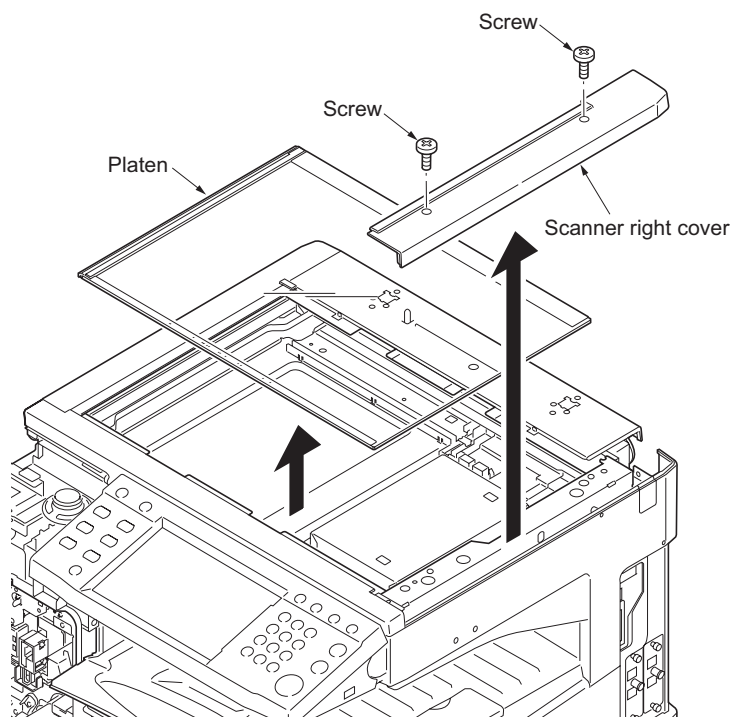


Figure 1-5-49

3. Remove six screws and remove the FFC ground and ISU cover.

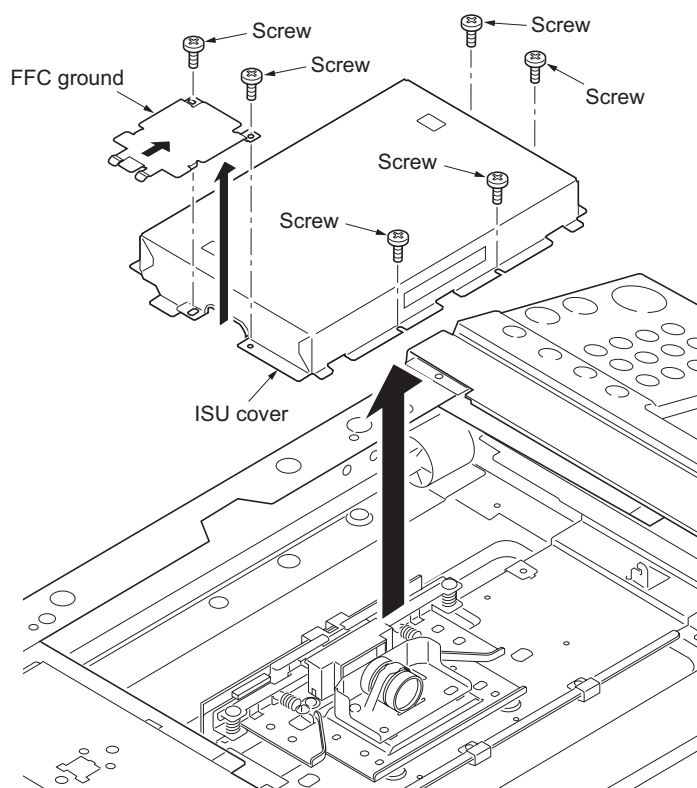
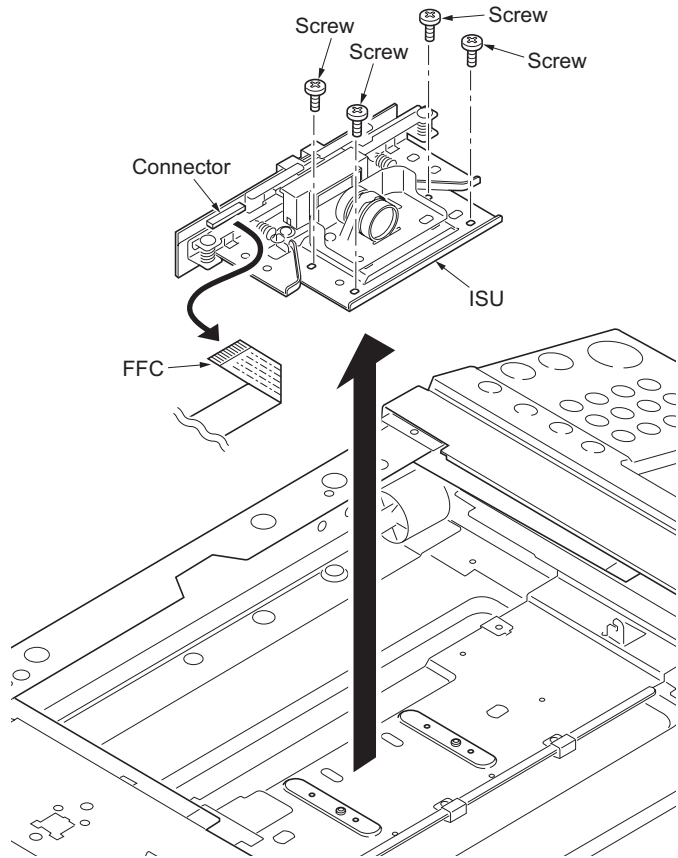


Figure 1-5-50

4. Remove the FFC from the connector.
5. Remove four screws and remove the ISU.
6. Replace the ISU.
7. Refit all the removed parts.

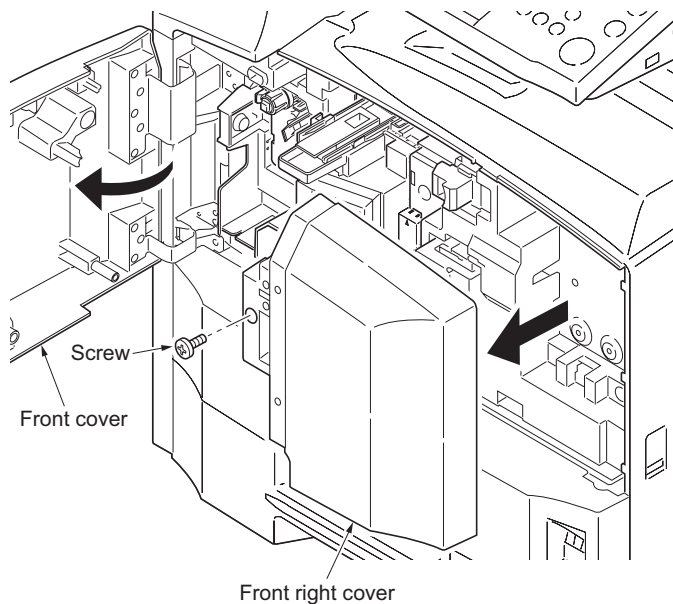
**Figure 1-5-51**

(5) Detaching and refitting the laser scanner unit

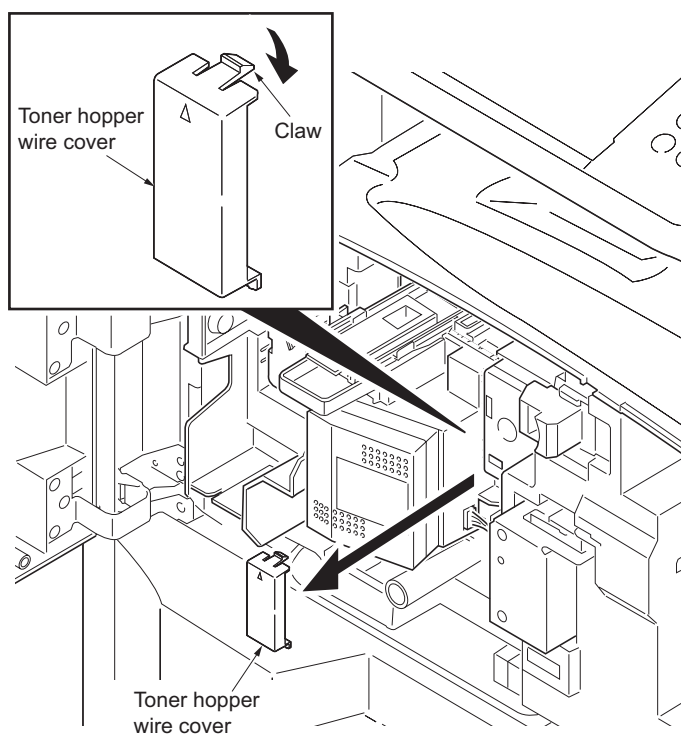
Follow the procedure below to replace the laser scanner unit.

Procedure

1. Open the front cover.
2. Remove the toner container.
3. Remove the waste toner box.
4. Remove the screw and remove the front right cover.

**Figure 1-5-52**

5. Remove the claw and remove the toner hopper wire cover.

**Figure 1-5-53**

6. Remove three screws.
7. Remove the connector.
8. Remove the toner hopper assembly.

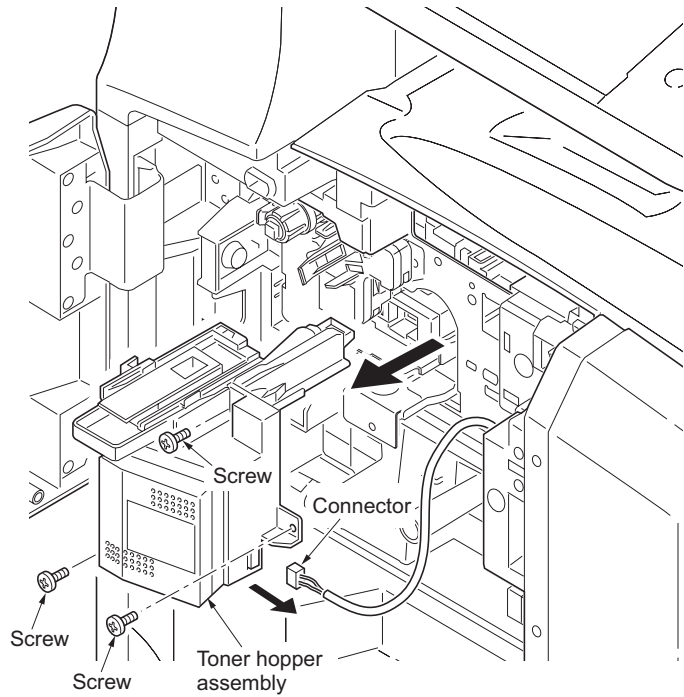


Figure 1-5-54

9. Remove the top tray.

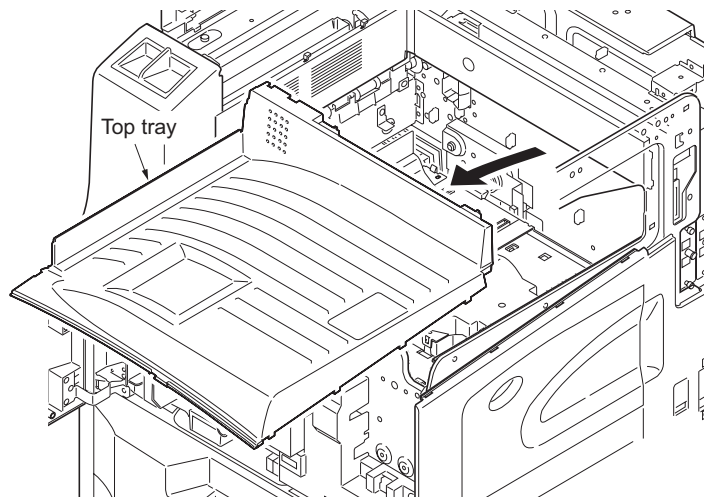
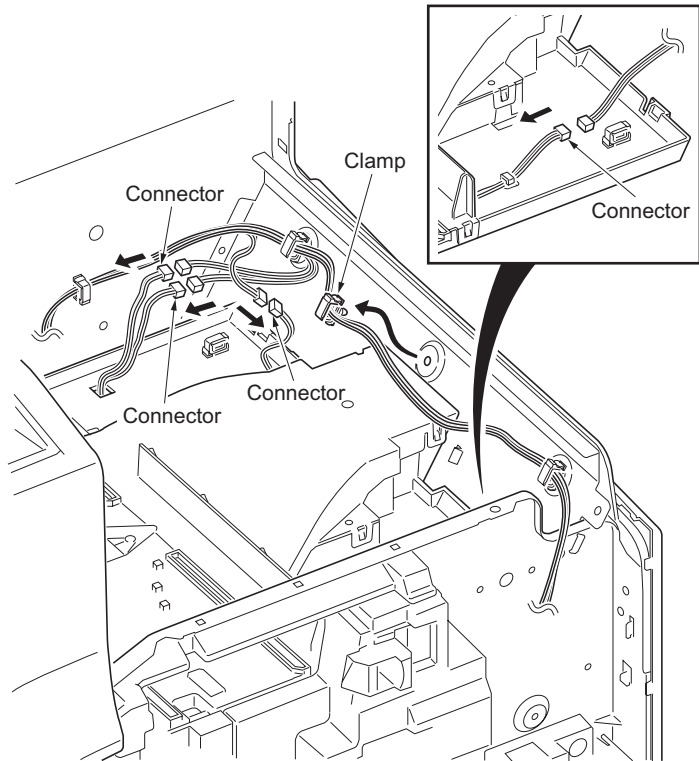
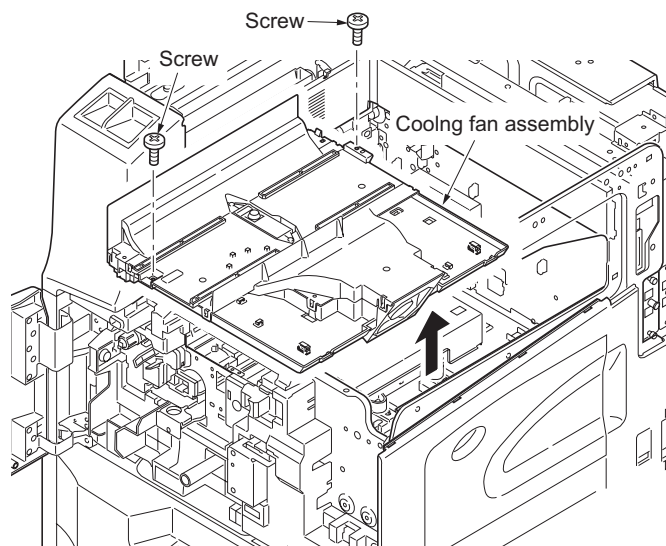


Figure 1-5-55

10. Remove four connectors.
11. Release the clamp.

**Figure 1-5-56**

12. Remove two screws and remove the cooling fan assembly.

**Figure 1-5-57**

13. Remove three screws and remove the LSU cover.

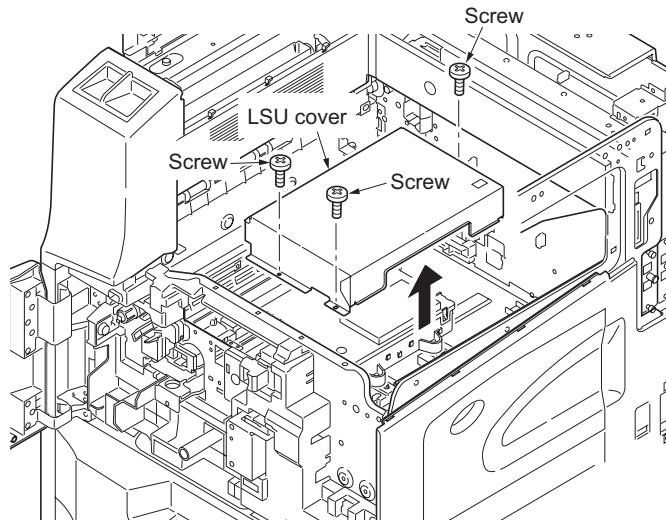


Figure 1-5-58

14. Remove two connectors.
 15. Remove four screws and remove the laser scanner unit.
 16. Replace the laser scanner unit and install the unit.
 17. Refit all the removed parts.

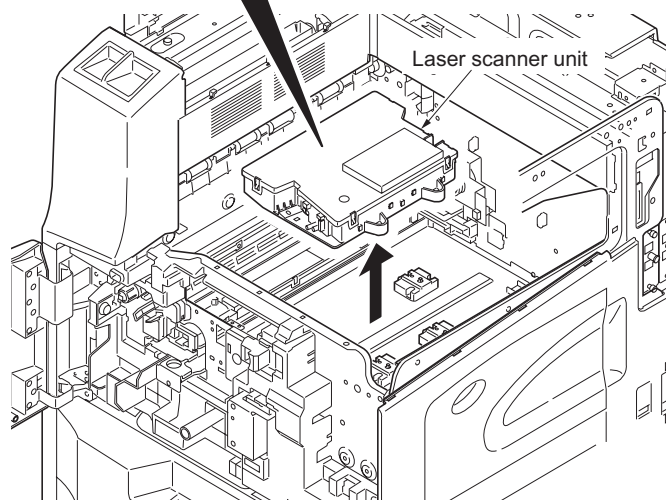
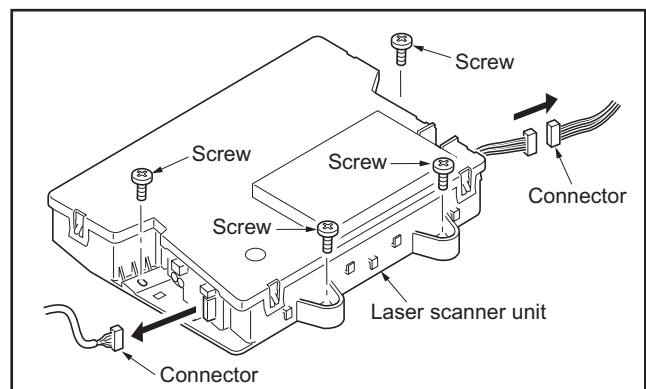


Figure 1-5-59

(6) Adjusting the position of the ISU (reference)

Perform the following adjustment if the leading and trailing edges of the copy image are laterally skewed (lateral squareness not obtained).

Caution:

Adjust the deflection in the paper at the registration roller first (see page 1-3-23). Check for the longitudinal squareness of the copy image, and if it is not obtained, perform the longitudinal squareness adjustment.

Before making the following adjustment, output a VTC-PG2 pattern in maintenance item U993 to use as the original for the adjustment.

Procedure

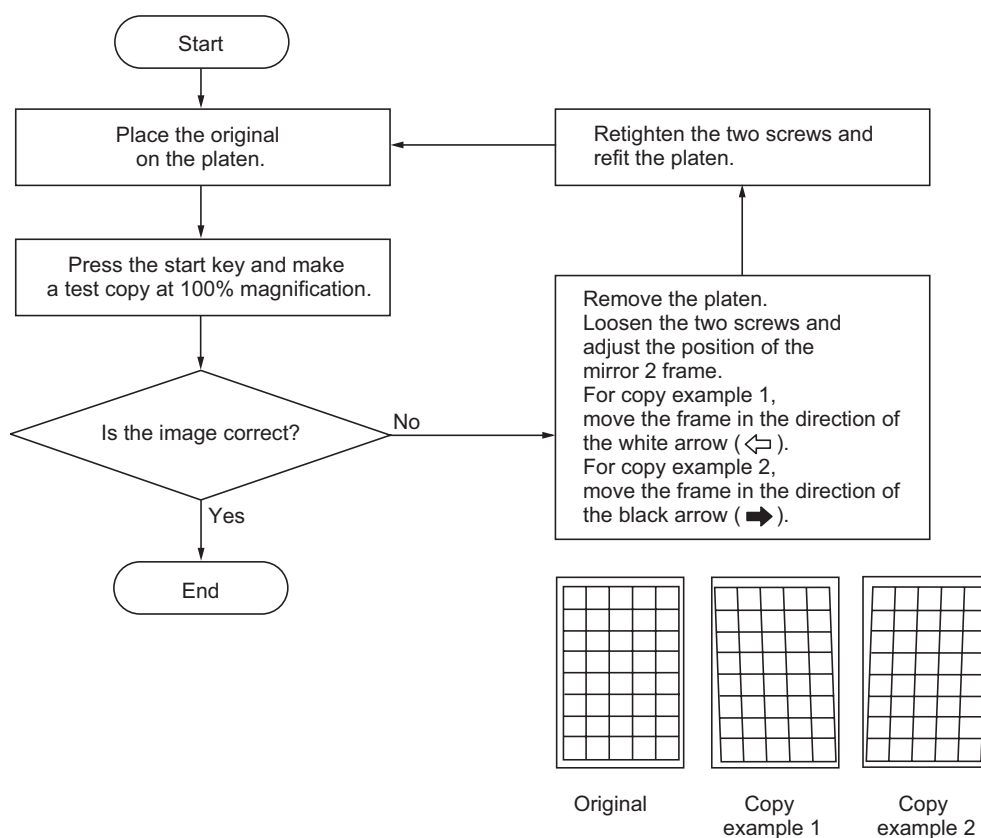


Figure 1-5-60

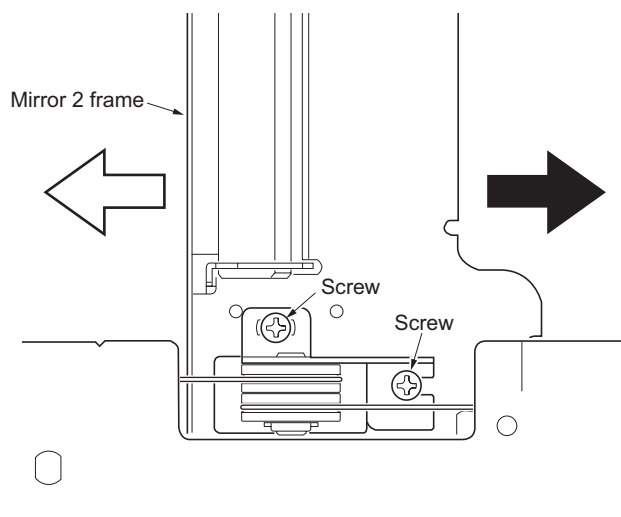


Figure 1-5-61

1-5-4 Drum section

(1) Detaching and refitting the drum unit

Follow the procedure below to replace the drum unit.

Cautions

Avoid direct sunlight or strong light when detaching and refitting the drum unit.
Never touch the drum surface when holding the drum unit.

Procedure

1. Open the left cover 1.
2. Open the front cover.
3. Remove the toner container.
4. Remove the waste toner box.
5. Remove the claw and remove the toner hopper wire cover.

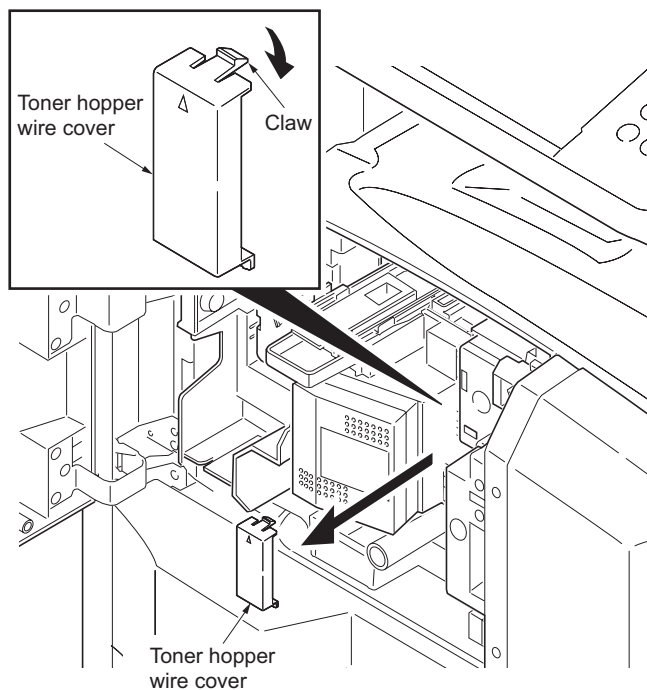


Figure 1-5-62

6. Remove the connector.
7. Remove three screws.
8. Remove the toner hopper assembly.

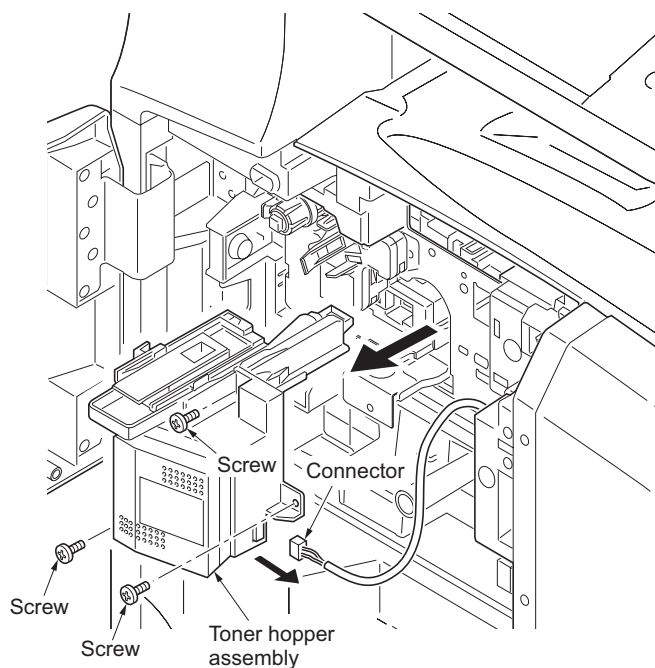


Figure 1-5-63

9. Remove the claw and remove the inner cover lid.
10. Remove three connectors.
11. Pull the developing lever.

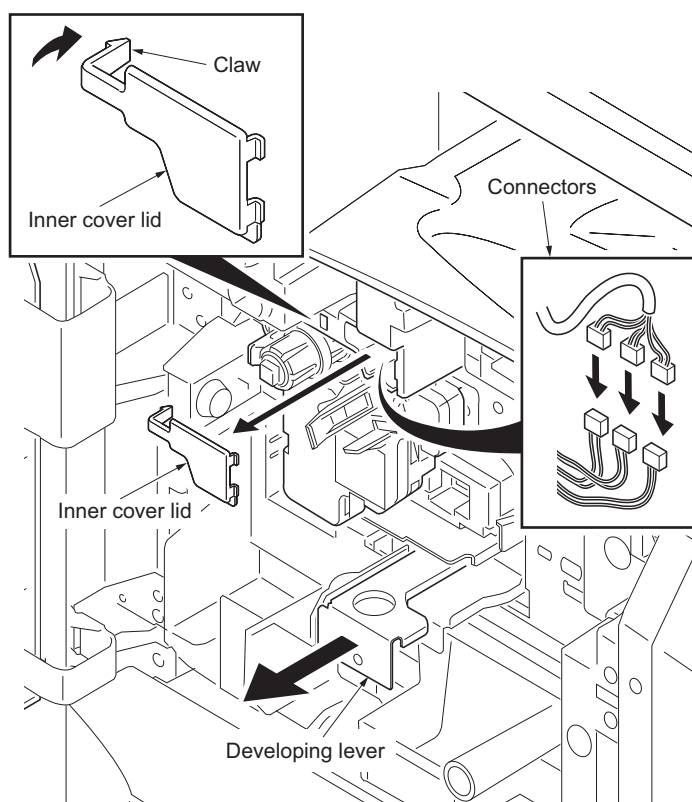


Figure 1-5-64

12. Remove the screw and remove the drum unit.
13. Replace the drum unit and install the unit. When the drum unit is replaced, perform maintenance mode U110 to clear the counter value (see page 1-3-42).

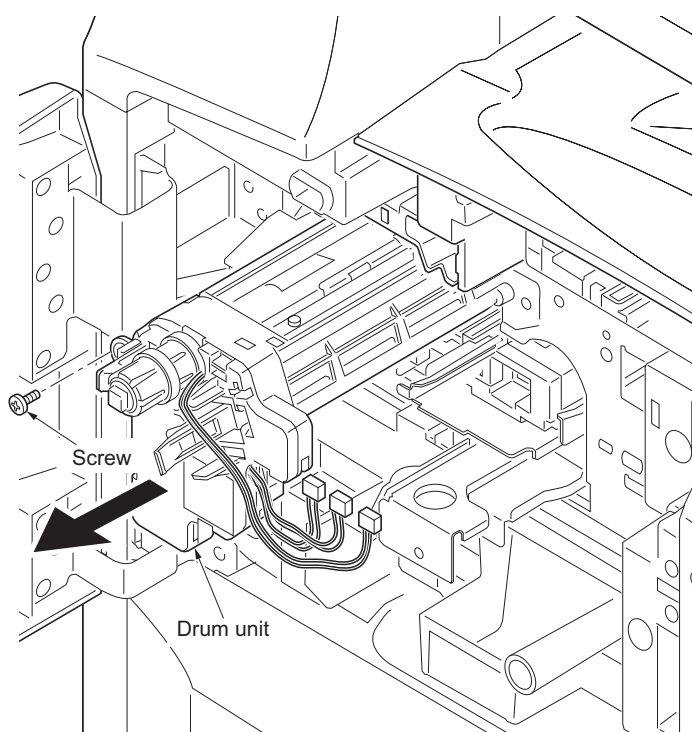


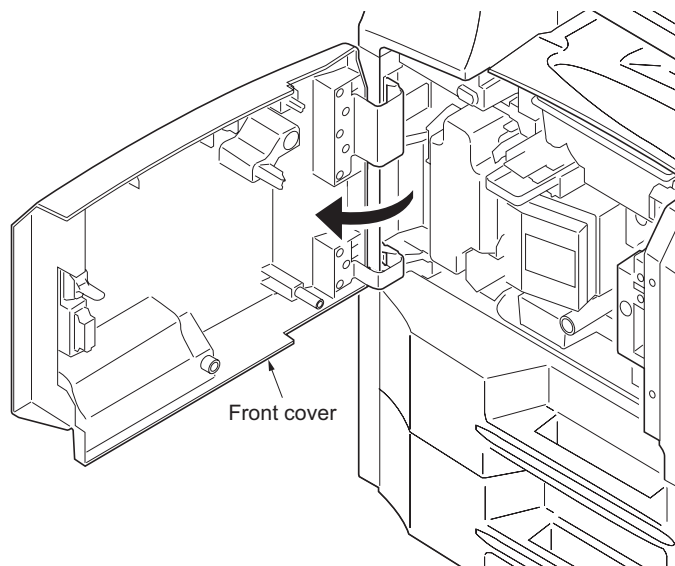
Figure 1-5-65

(2) Detaching and refitting the main charger unit

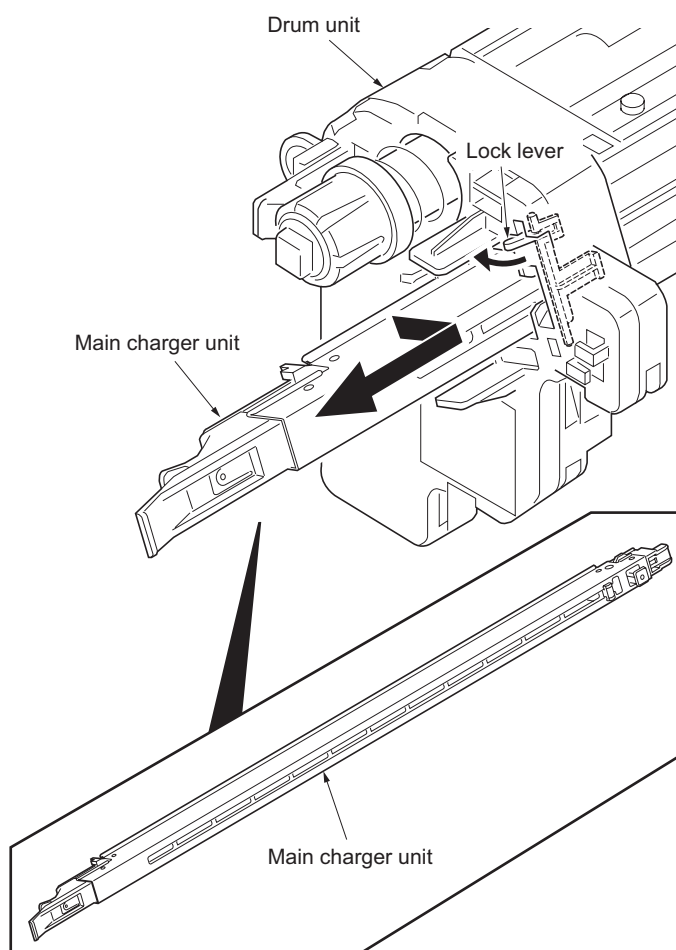
Follow the procedure below to replace the main charger unit.

Procedure

1. Open the front cover.

**Figure 1-5-66**

2. Pull the main charger unit.
3. While pressing the lock lever and remove the main charger unit.
4. Replace the main charger unit and install the unit.
The main charger unit, when fully inserted, must be set aside towards the drum unit.

**Figure 1-5-67**

(3) Detaching and refitting the drum separation claws

Follow the procedure below to replace the drum separation claws.

Procedure

1. Remove the drum unit (see page 1-5-37).
2. Remove two screws and remove the lower cleaning seal.

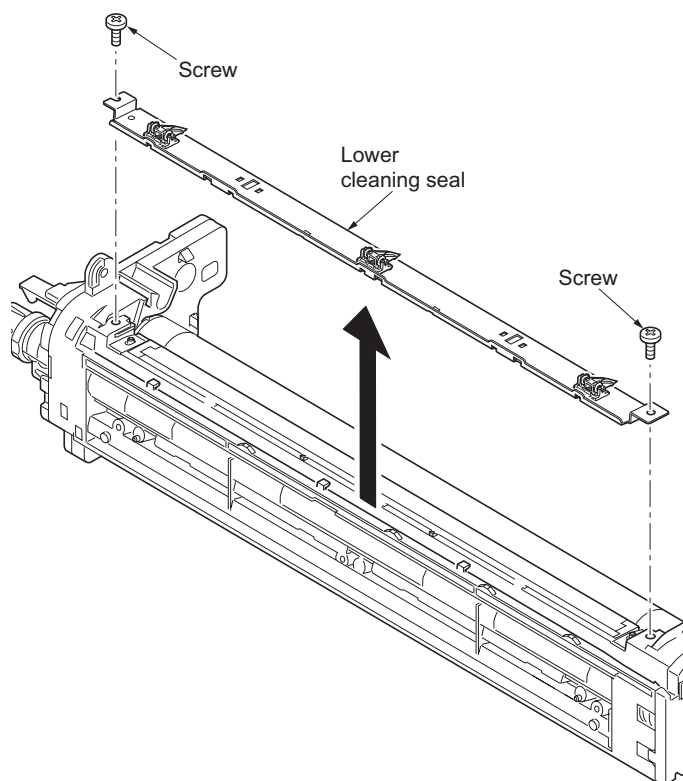


Figure 1-5-68

3. Release the inserted parts and remove the drum separation claws.
4. Replace the drum separation claws and install the claws.
5. Refit all the removed parts.

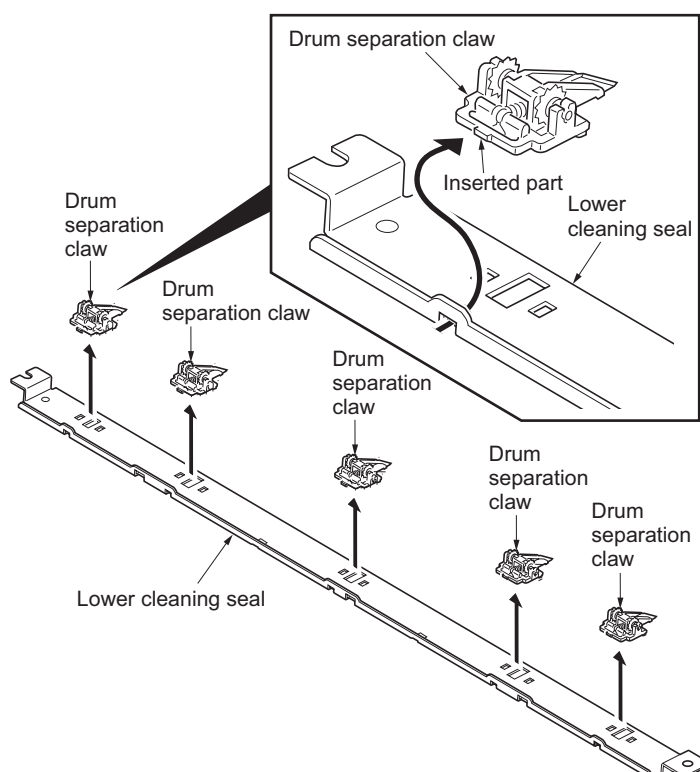


Figure 1-5-69

1-5-5 Developing section

(1) Detaching and refitting the developing unit

Follow the procedure below to replace the developing unit.

Procedure

1. Remove the drum unit (see page 1-5-37).
2. Remove two connectors.

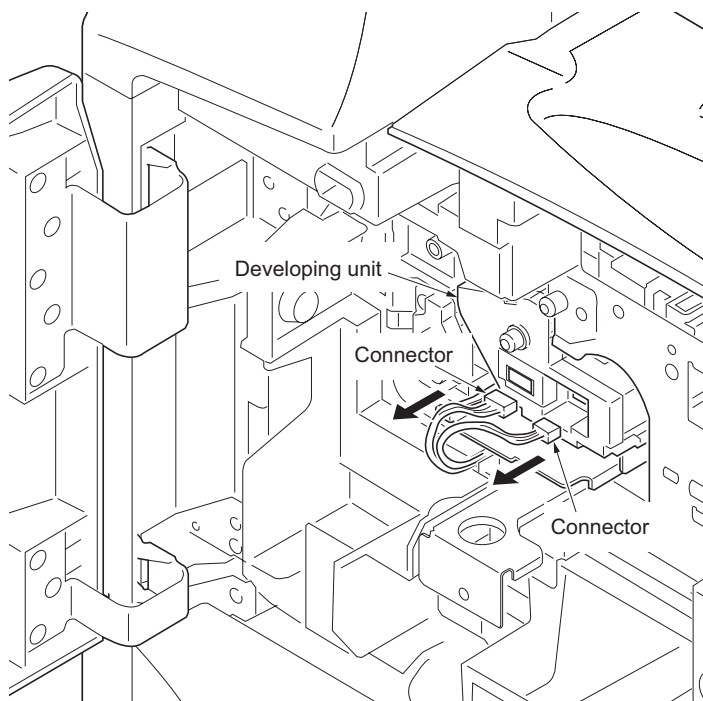


Figure 1-5-70

3. Remove the developing unit.
4. Replace the developing unit and install the unit.
5. Refit all the removed parts.
When the developing unit is replaced, perform maintenance mode U157 to clear the counter value (see page 1-3-47).

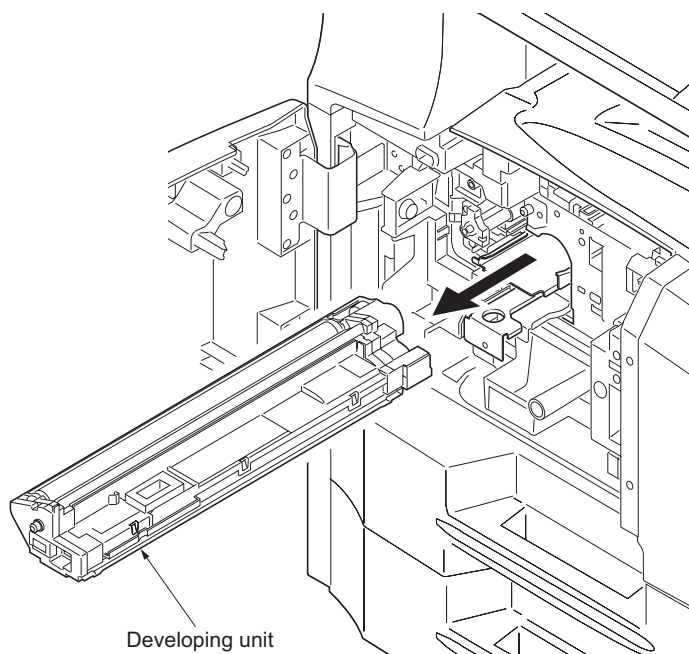


Figure 1-5-71

1-5-6 Transfer section

(1) Detaching and refitting the transfer roller unit

Follow the procedure below to replace the transfer roller unit.

Procedure

1. Open the left cover 1.
2. Remove the claws of the front and rear transfer bushes and remove the transfer roller unit.
3. Replace the transfer roller unit and install the unit.
The front and rear transfer springs must be firmly mounted on the holder.

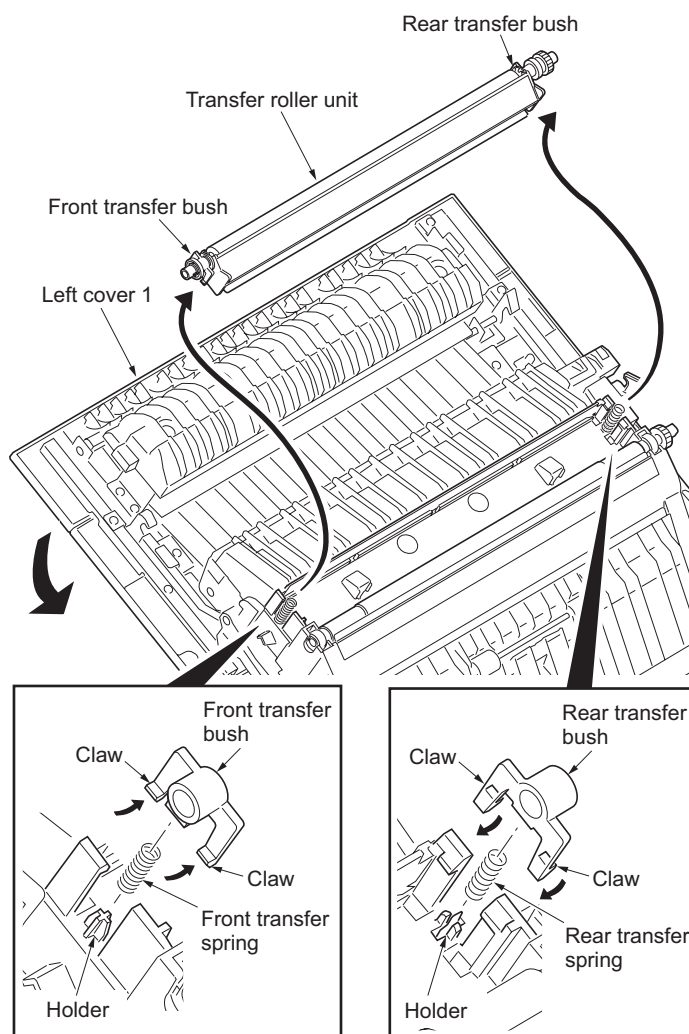


Figure 1-5-72

1-5-7 Fuser section

(1) Detaching and refitting the fuser unit

Follow the procedure below to check or replace the fuser unit.

Procedure

1. Open the front cover.
2. Remove the clip holder.
3. Remove two screws and remove front left cover.

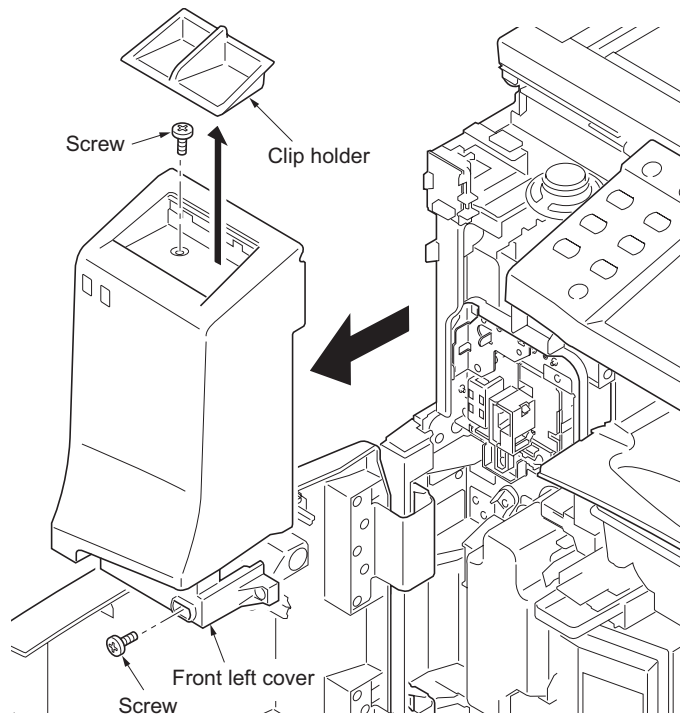


Figure 1-5-73

4. Open the left cover 1.
5. Remove two screws and remove the left cover hook.

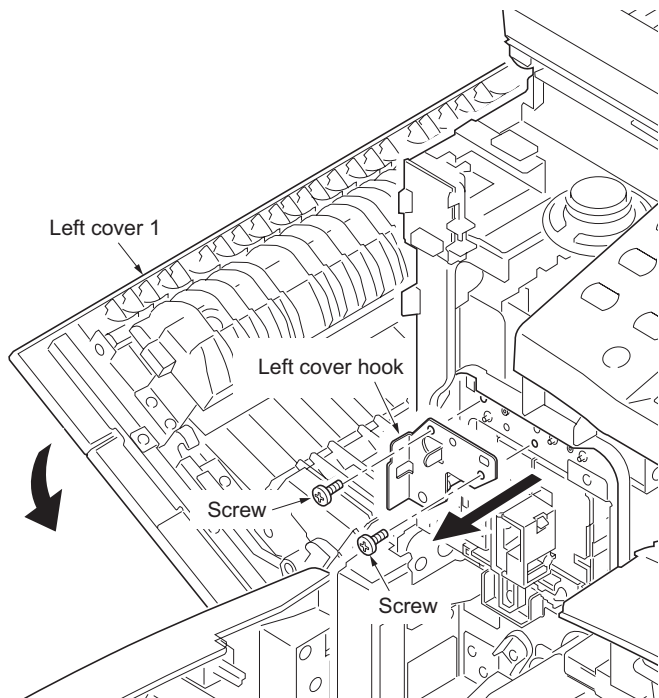


Figure 1-5-74

6. Remove three connectors.

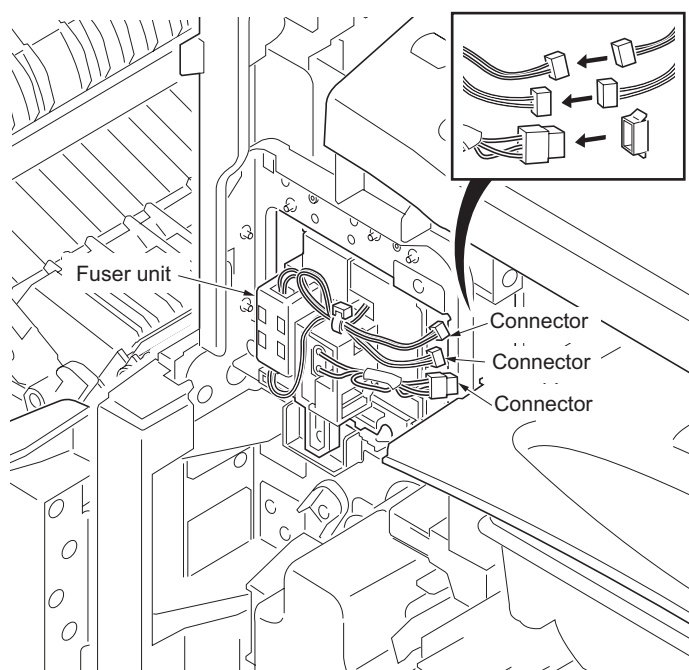


Figure 1-5-75

7. Remove the screw and remove the fuser unit.
8. Check or replace the fuser unit and install the unit.
9. Refit all the removed parts.
When the fuser unit is replaced, perform maintenance mode U167 to clear the counter value (see page 1-3-48).

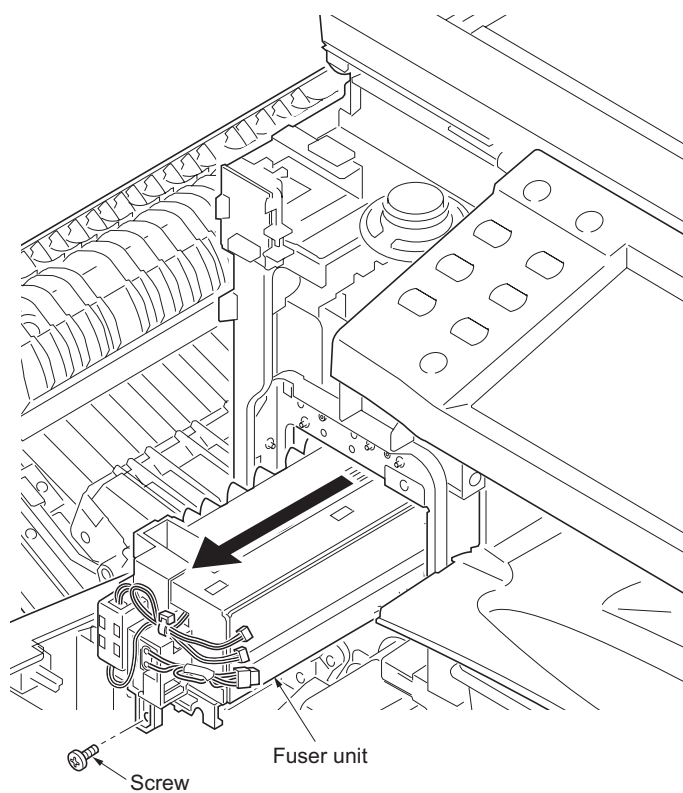


Figure 1-5-76

(2) Detaching and refitting the heat roller separation claws

Follow the procedure below to replace the heat roller separation claws.

Procedure

1. Remove the fuser heater (see page 1-5-45).
2. Remove four screws.
3. Remove four claws and remove the rear fuser guide.

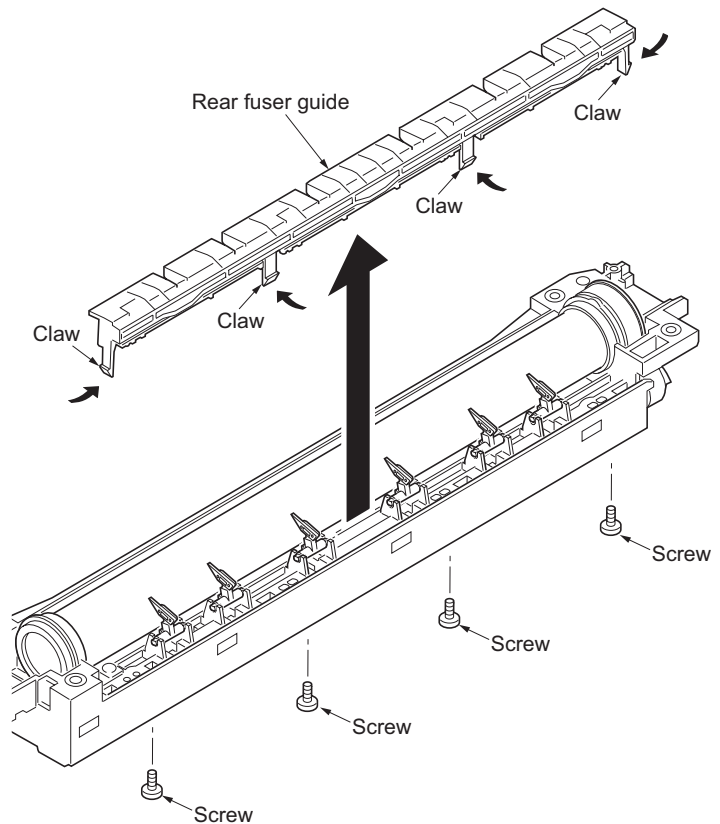


Figure 1-5-77

4. Remove the spring and remove the heat roller separation claws.
5. Replace the heat roller separation claws and install the claws.
6. Refit all the removed parts.

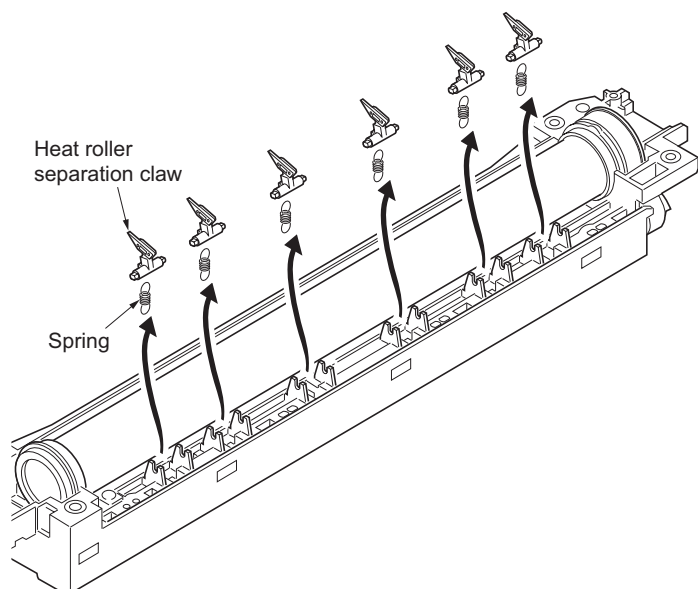


Figure 1-5-78

(3) Detaching and refitting the press roller

Follow the procedure below to replace the press roller.

Procedure

1. Remove the fuser unit (see page 1-5-40).
2. Remove four claws and remove the fuser unit cover.
3. Remove two connectors.

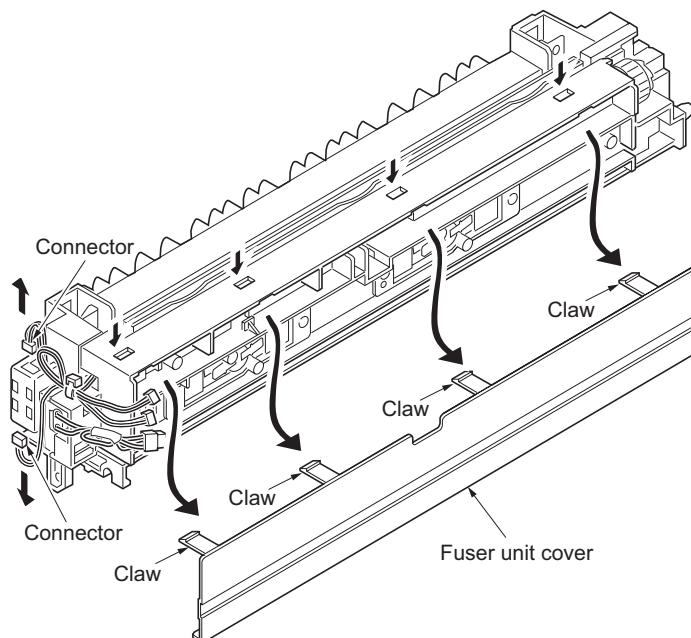


Figure 1-5-79

4. Remove four screws.
5. Separate the right fuser frame and left fuser frame.

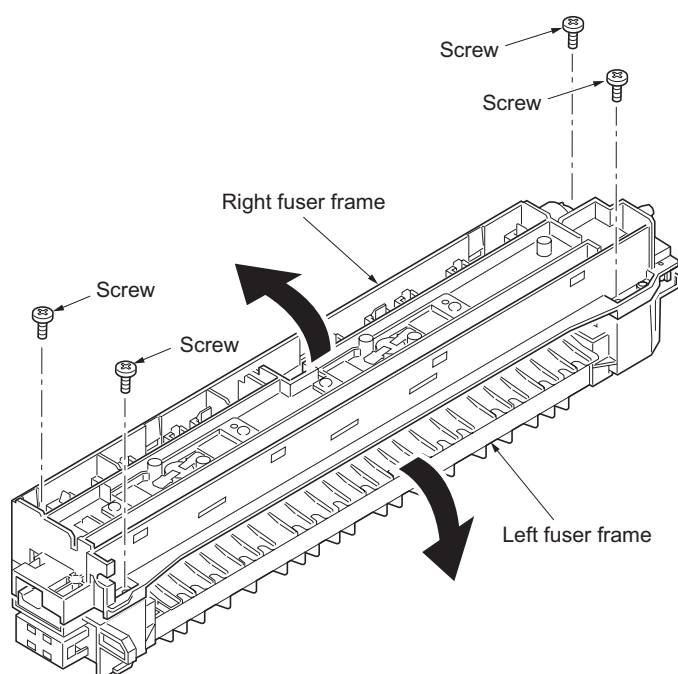


Figure 1-5-80

6. Remove the press roller.
7. Replace the press roller and install the roller.
8. Refit all the removed parts.

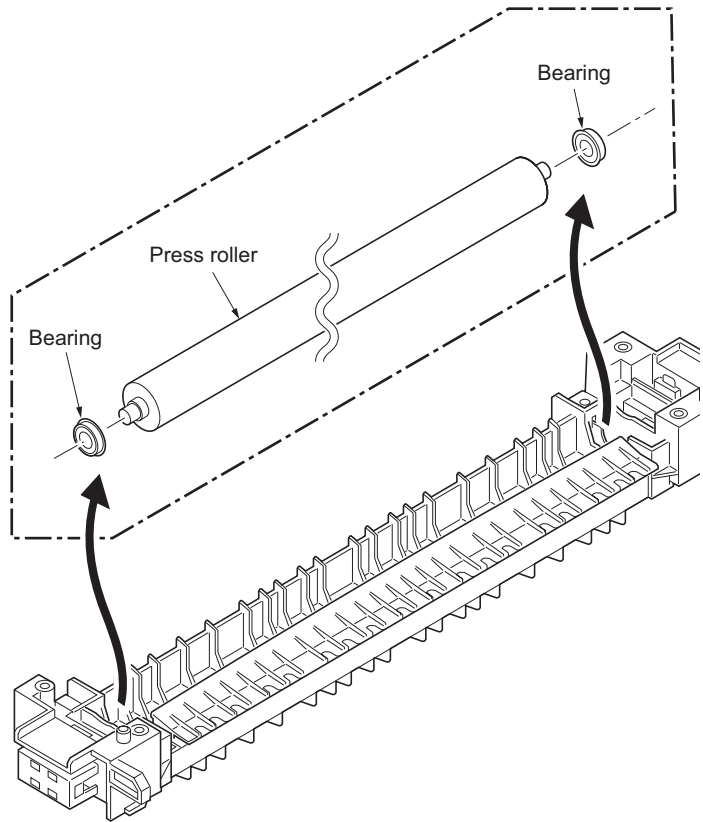


Figure 1-5-81

(4) Detaching and refitting the fuser heater

Follow the procedure below to replace the fuser heater.

Procedure

1. Remove the fuser unit (see page 1-5-40).
2. Remove four claws and remove the fuser unit cover.
3. Remove two connectors.

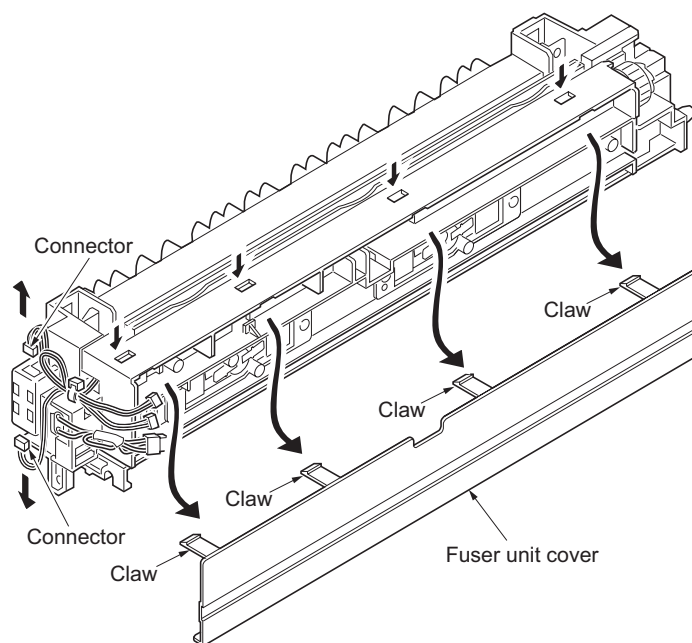


Figure 1-5-82

4. Remove four screws.
5. Separate the right fuser frame and left fuser frame.

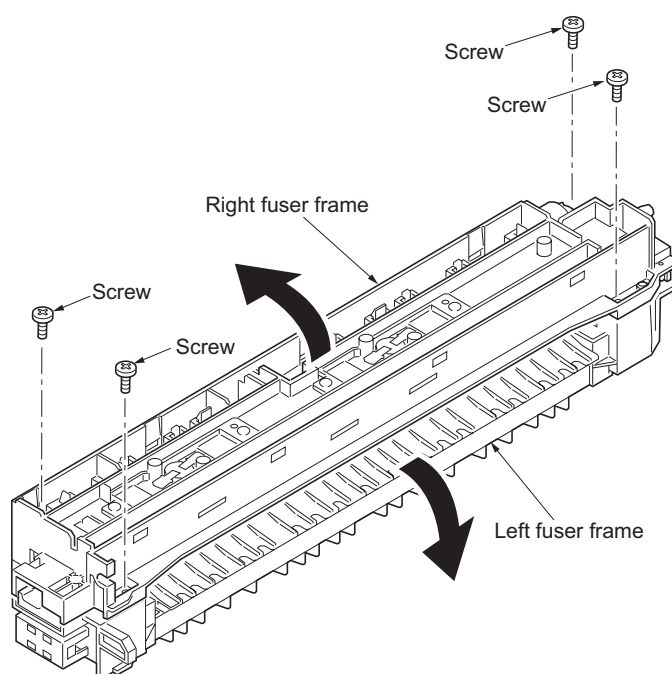


Figure 1-5-83

6. Remove two tabs.

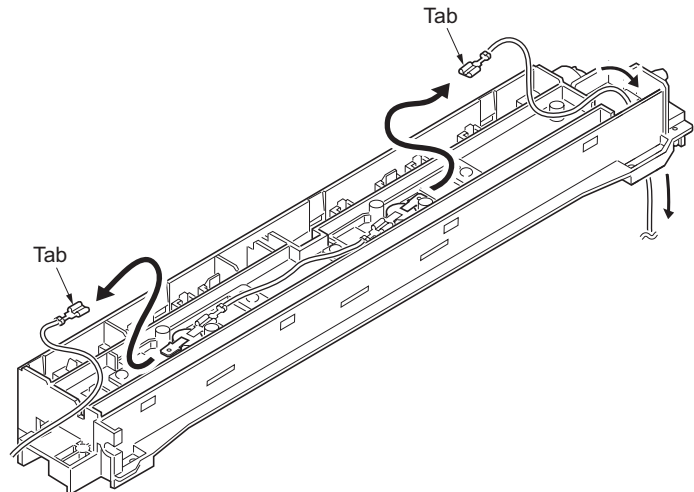


Figure 1-5-84

7. Remove the screw and rear fuser heater cover.
8. Remove the screw and front fuser heater cover.
9. Pull out the fuser heater.
10. Replace the fuser heater and install the heater.
11. Refit all the removed parts.

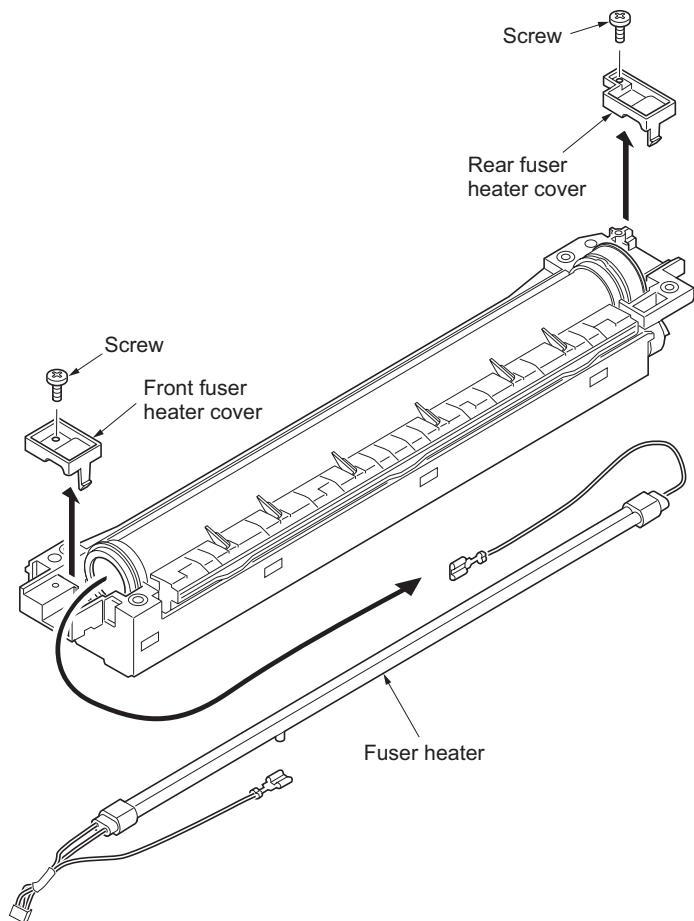


Figure 1-5-85

(5) Detaching and refitting the heat roller

Follow the procedure below to replace the heat roller.

Procedure

1. Remove the fuser heater (see page 1-5-45).
2. Remove the heat roller separation claws (see page 1-5-42).
3. Remove the front and rear heat bushes from right fuser frame.
4. Remove the fuser gear Z46, front and rear heat bushes from heat roller.
5. Replace the heat roller and install the roller
6. Refit all the removed parts.

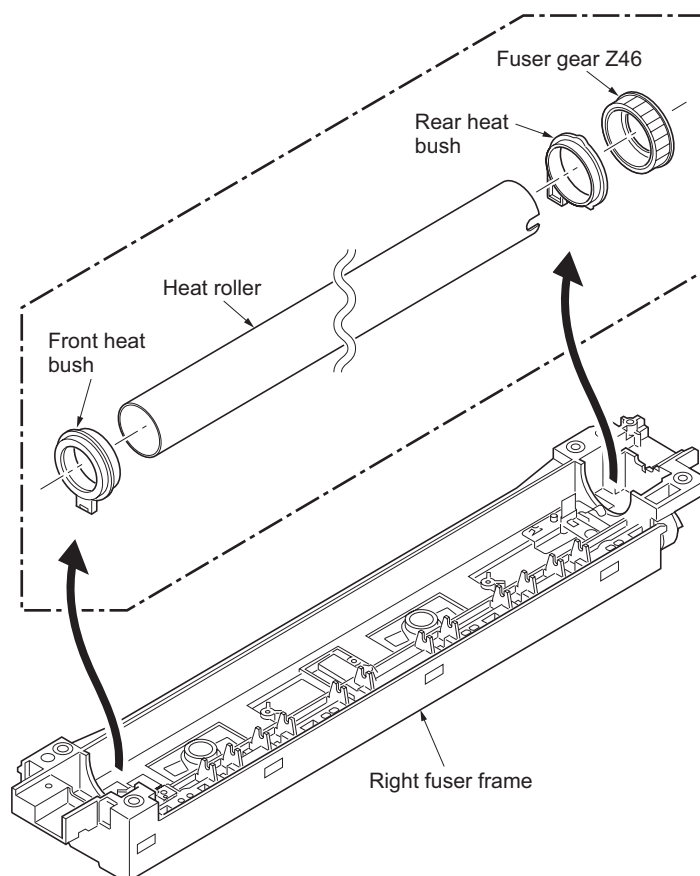


Figure 1-5-86

(6) Detaching and refitting the fuser thermistor 1

Follow the procedure below to replace the fuser thermistor 1.

Procedure

1. Remove the heat roller (see page 1-5-47).
2. Remove the screw and remove the fuser thermistor 1.
3. Replace the fuser thermistor 1 and install the thermistor.
4. Refit all the removed parts.

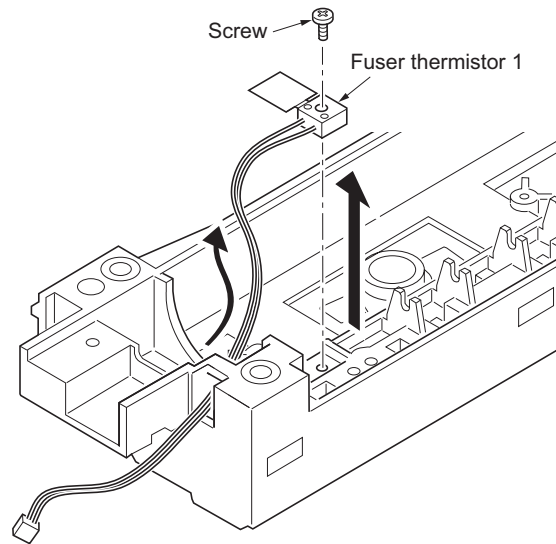


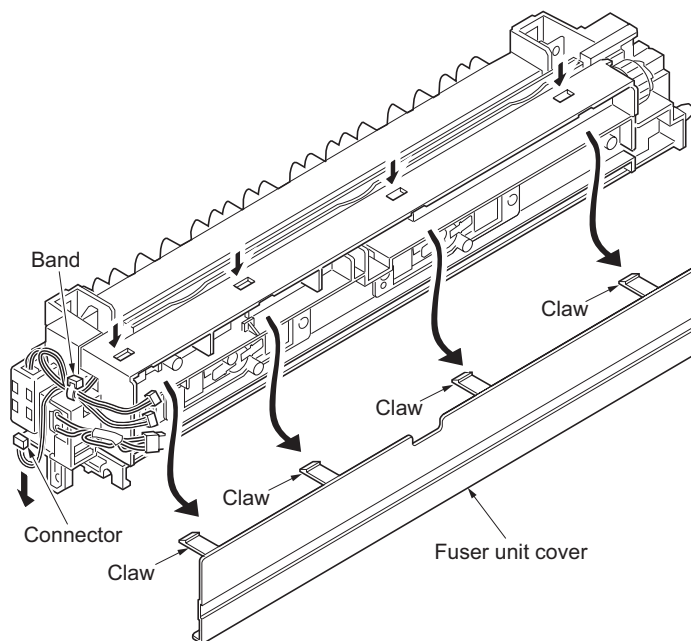
Figure 1-5-87

(7) Detaching and refitting the fuser thermistor 2

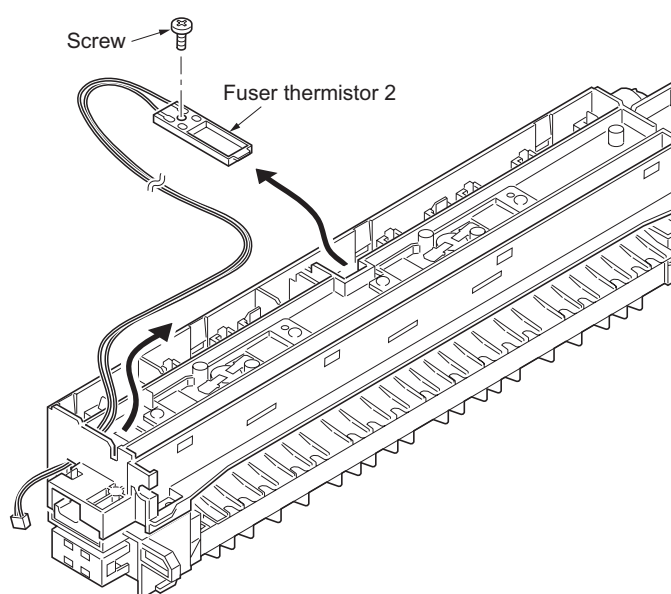
Follow the procedure below to replace the fuser thermistor 2.

Procedure

1. Remove the fuser unit (see page 1-5-40).
2. Remove four claws and remove the fuser unit cover.
3. Remove the connector.
4. Remove the band.

**Figure 1-5-88**

5. Remove the screw and remove the fuser thermistor 2.
6. Replace the fuser thermistor 2 and install the thermistor.
7. Refit all the removed parts.

**Figure 1-5-89**

(8) Detaching and refitting the fuser thermostats 1 and 2

Follow the procedure below to replace the fuser thermostats 1 and 2.

Procedure

1. Remove the fuser unit (see page 1-5-40).
2. Remove four claws and remove the fuser unit cover.

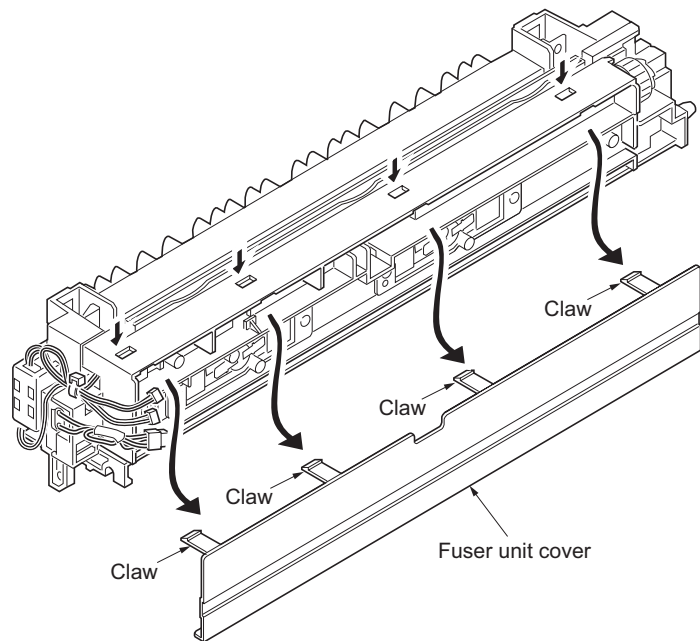


Figure 1-5-90

3. Remove four tabs.

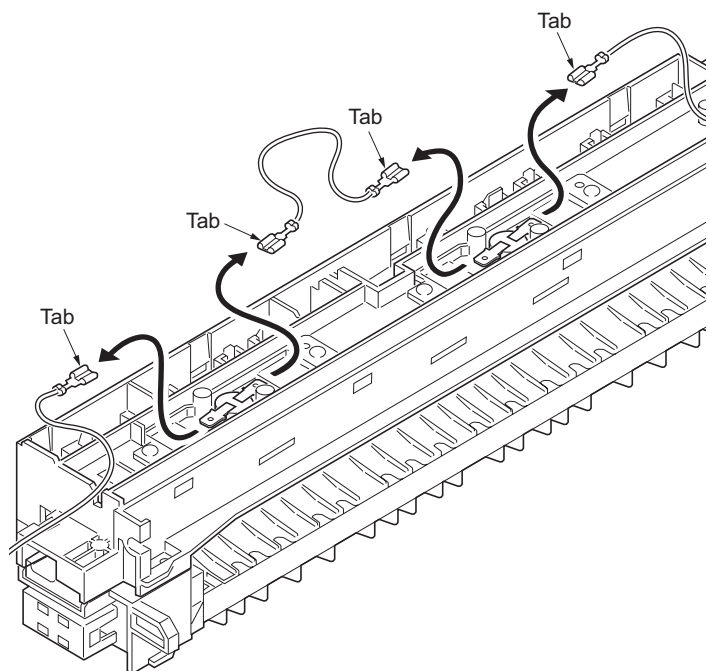


Figure 1-5-91

4. Remove each two screws and remove two fuser thermostat holders.

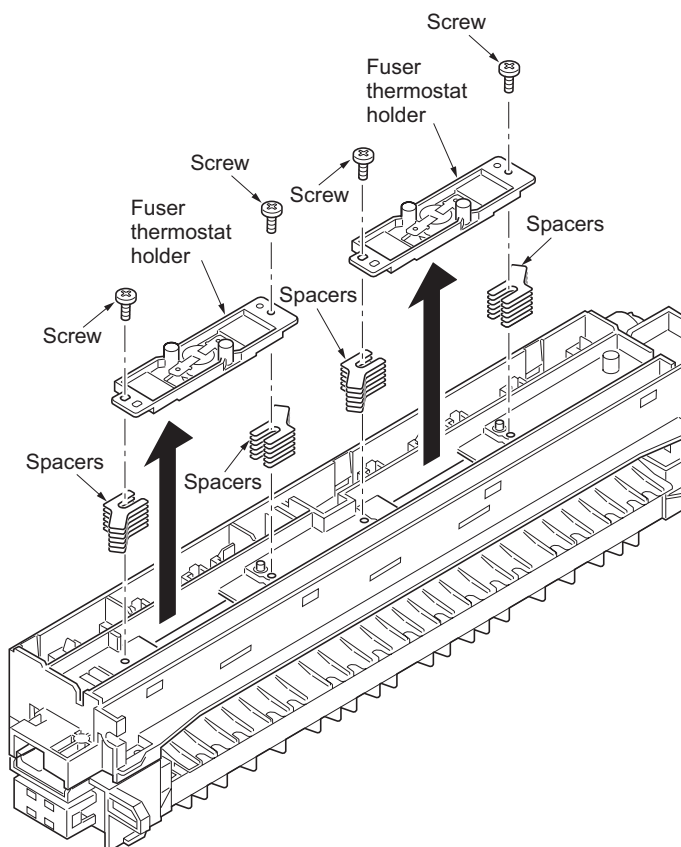


Figure 1-5-92

5. Remove two screws and remove fuser thermostats 1 and 2.
6. Replace the fuser thermostats 1 and 2 and install the thermostats.
7. Refit all the removed parts.

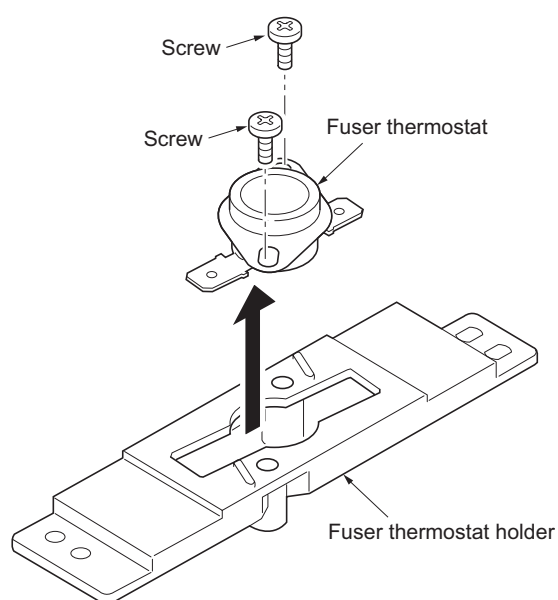


Figure 1-5-93

(9) Adjusting front position of the fuser unit (adjusting lateral squareness)

Follow the procedure below if the drum is not parallel to the fuser unit and therefore paper is not fed straight to the fuser section and the trailing edge of image on either the front or rear side becomes longer.

Procedure

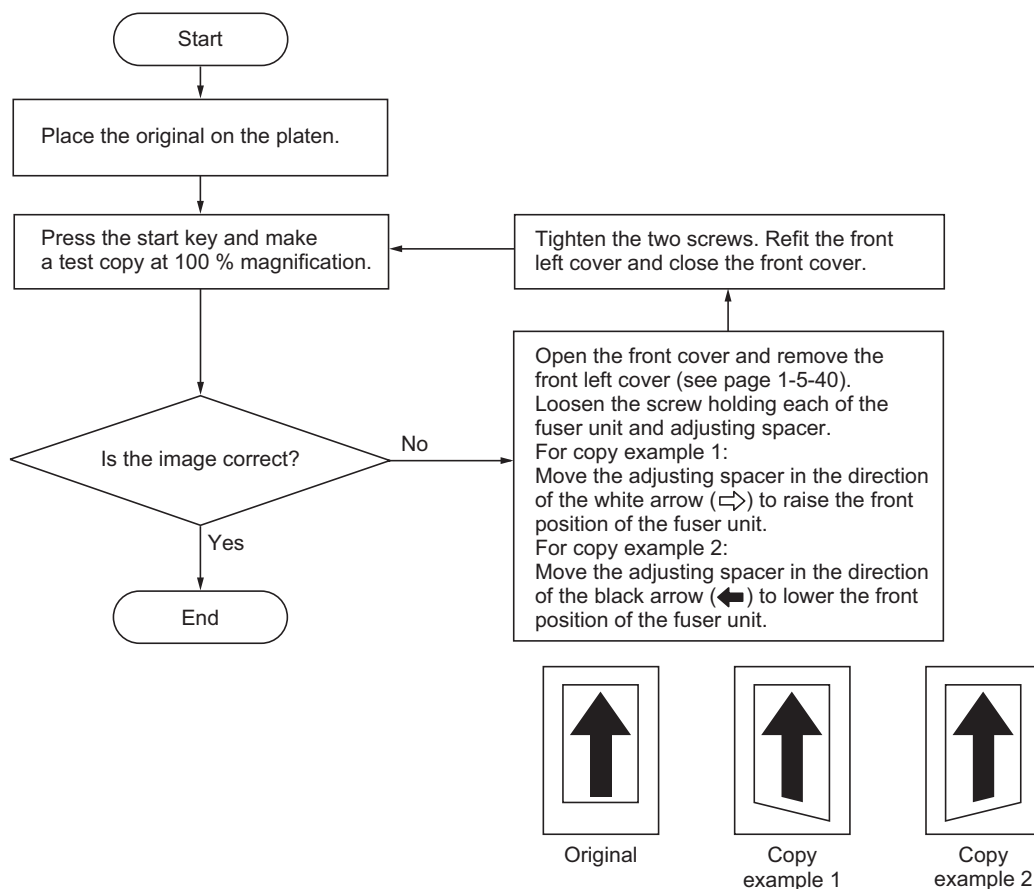


Figure 1-5-94

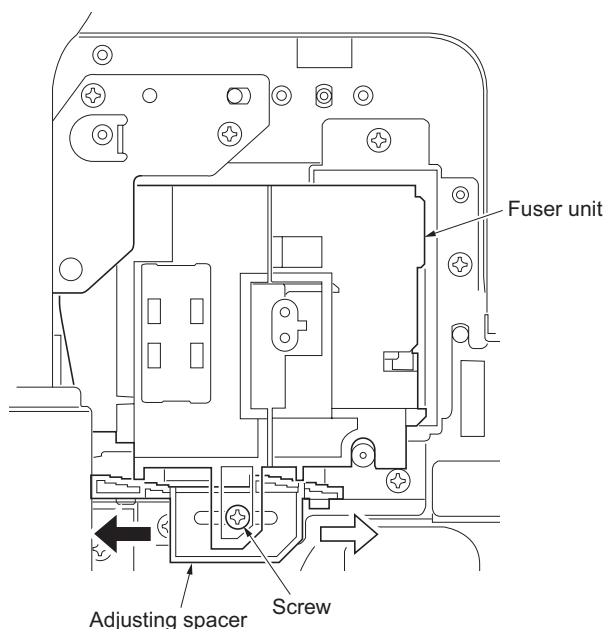


Figure 1-5-95

1-5-8 PWBs

(1) Detaching and refitting the engine PWB

Follow the procedure below to replace the engine PWB.

Procedure

1. Remove eleven screws and remove the rear cover.

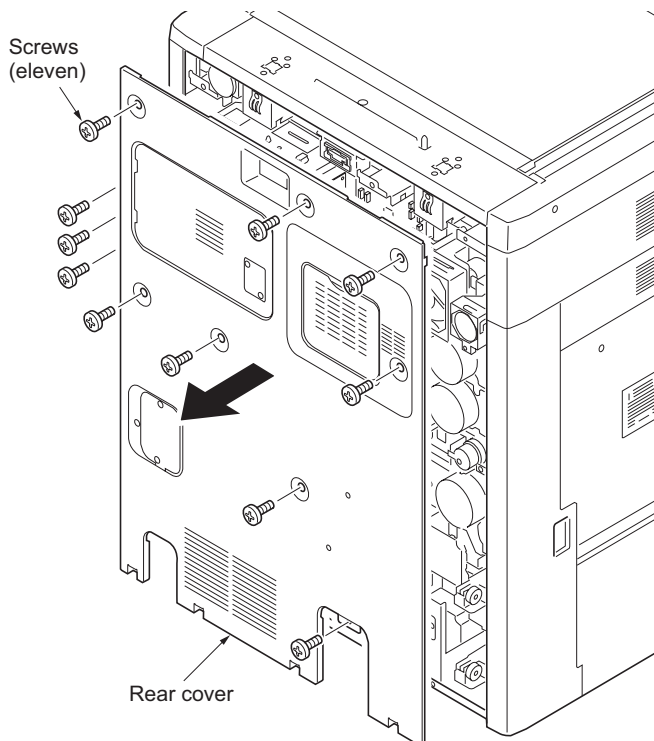


Figure 1-5-96

2. Remove three screws.
3. Remove the claw.
4. Remove the connector.
5. Remove the high voltage PWB.

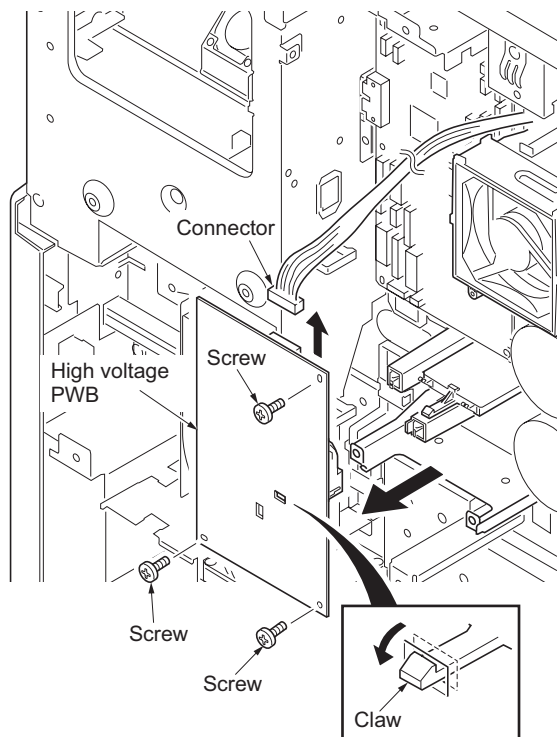


Figure 1-5-97

6. Remove all connectors of engine PWB.
7. Remove six screws and remove the engine PWB.
8. Replace the engine PWB and install the PWB.

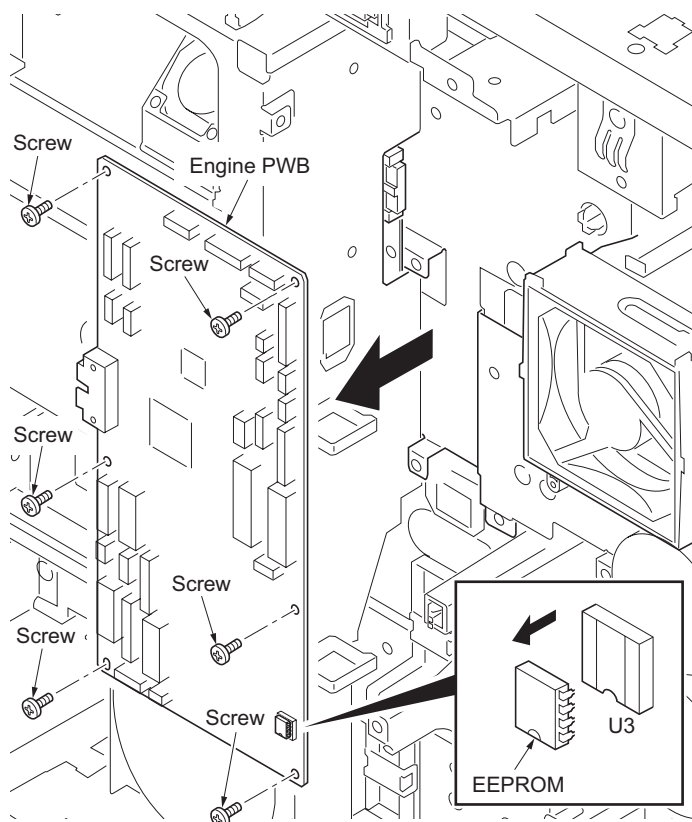


Figure 1-5-98

9. Refit all the removed parts.
When replacing the connectors back in place, be sure not to mistake YC14 and YC20 for each other.
YC14: Wire of the eject motor
YC20: Wire of the key counter

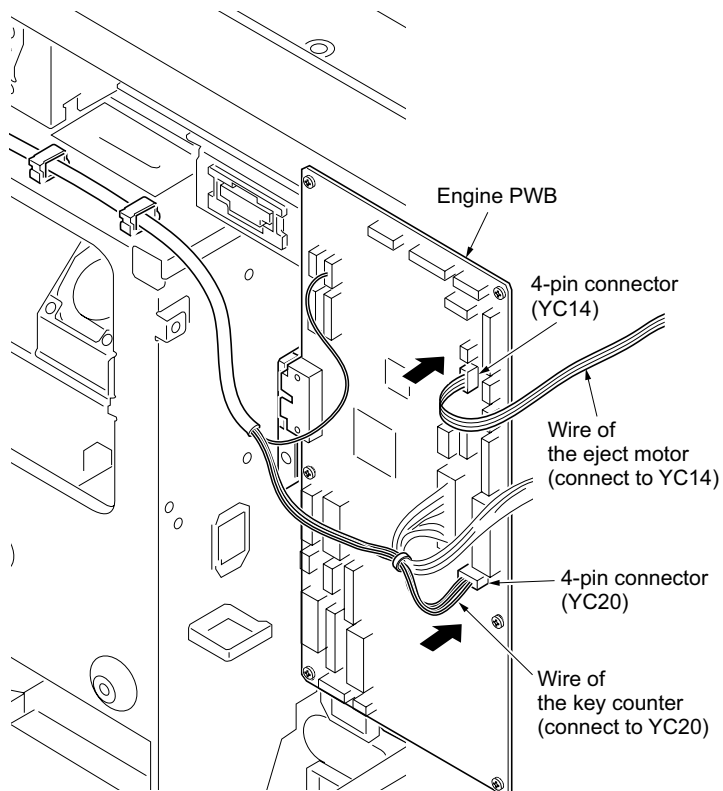


Figure 1-5-99

1-5-9 Others

(1) Detaching and refitting the ozone filter 1

Follow the procedure below to replace the ozone filter 1.

Procedure

1. Open the filter cover.
2. Remove the ozone filter 1.
3. Replace the ozone filter 1 and install the filter.

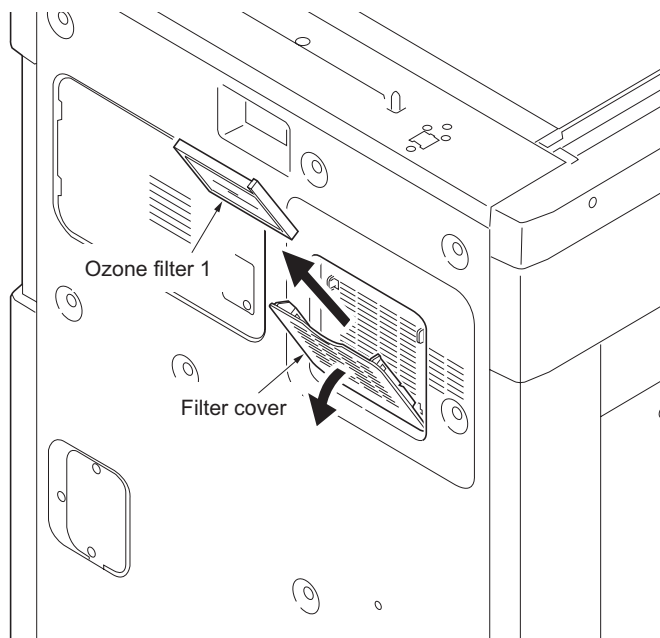


Figure 1-5-100

(2) Detaching and refitting the ozone filter 2

Follow the procedure below to replace the ozone filter 2.

Procedure

1. Remove the filter cover.
2. Remove the ozone filter 2.
3. Replace the ozone filter 2 and install the filter.
4. Refit all the removed parts.

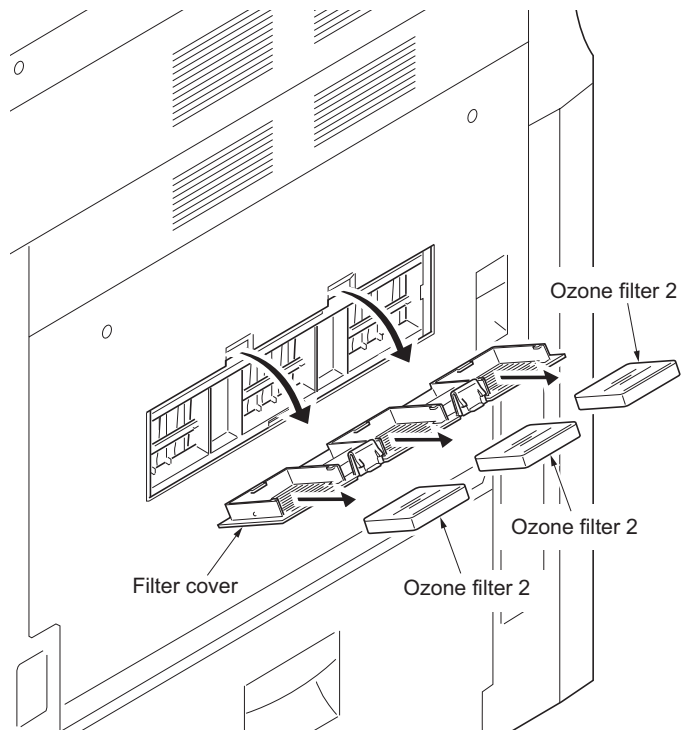


Figure 1-5-101

(3) Detaching and refitting the hard disk

Follow the procedure below to replace the hard disk.

Procedure

1. Remove eleven screws and remove the rear cover.

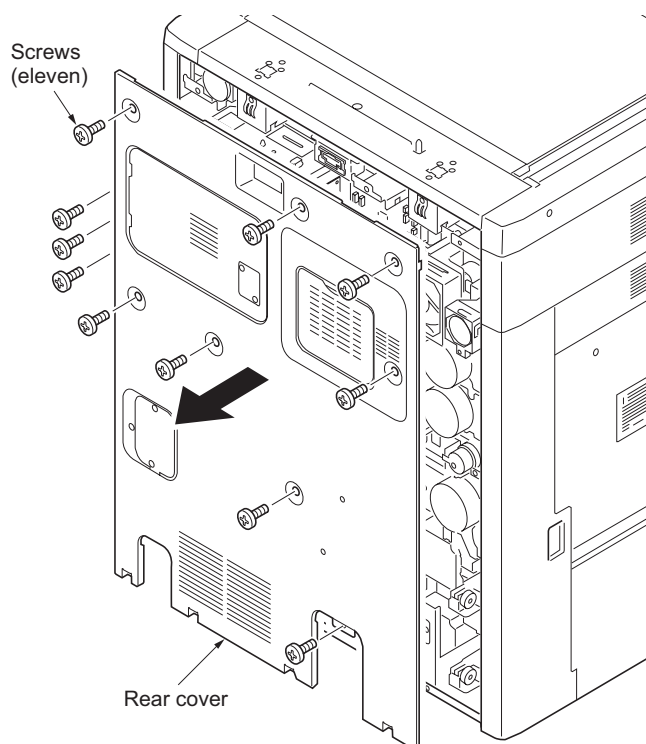


Figure 1-5-102

2. Remove two connectors.
3. Remove three screws and remove the HDD mount.

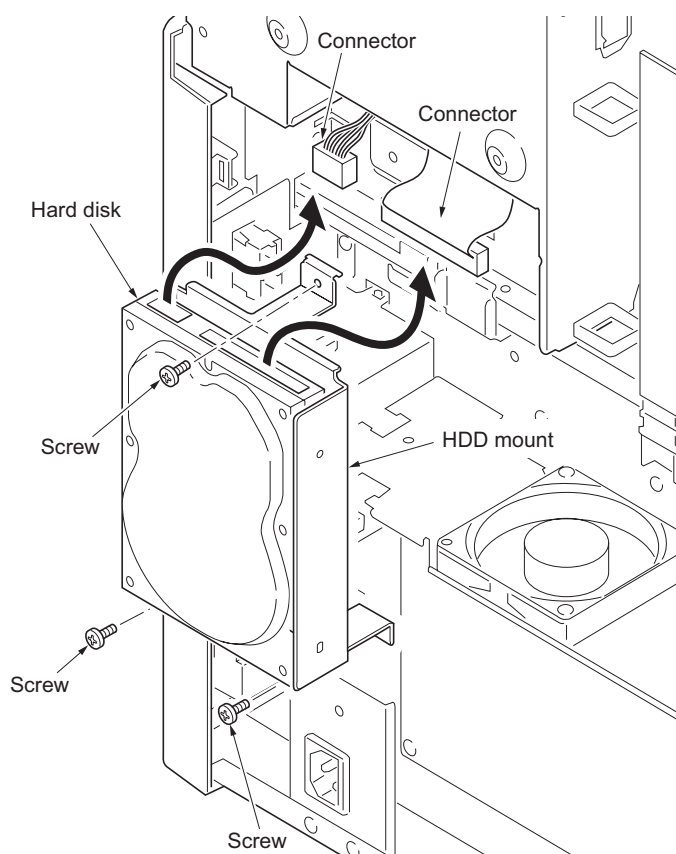


Figure 1-5-103

4. Remove four screws and remove the HDD mount.
5. Replace the hard disk and Install the hard disk.
6. Refit all the removed parts.
7. When the hard disk is replaced, perform maintenance mode U024 to initialize the hard disk (see page 1-3-17).

When the fax backup kit is installed, perform the following procedures (see page 1-3-79).

1. Run maintenance item U933 and press [FAX IMAGE] to print out the FAX image.
2. Run maintenance item U933 and press [JOB ACCOUNTING] to restore the job accounting data to the hard disk.
3. Run maintenance item U933 and press [INITIALIZE CF] to initialize the fax backup kit.

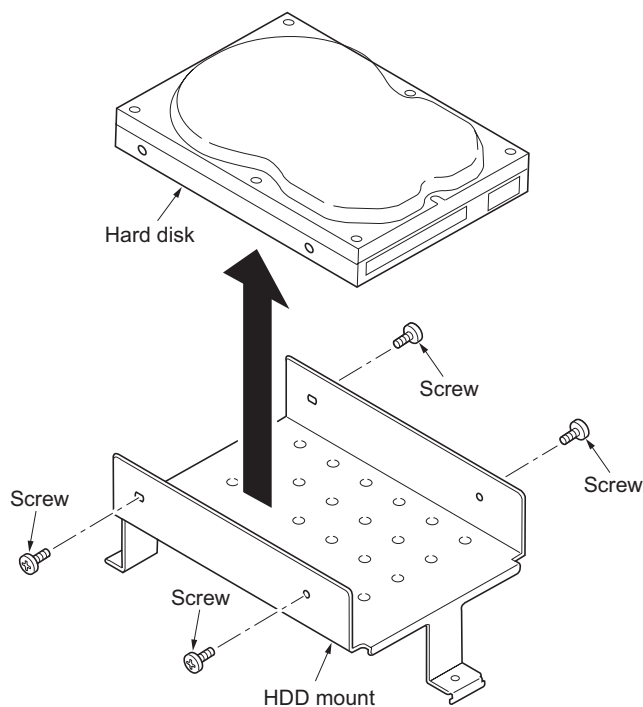


Figure 1-5-104

1-6-1 Upgrading the firmware

Follow the procedure below to upgrade the firmware of main PWB, engine PWB and MMI.

Firmware upgrading requires the following tools:

Compact Flash (Products manufactured by SANDISK are recommended.) or USB memory

NOTE

When writing data to a new Compact Flash from a computer, be sure to format it in advance.

Procedure

1. Press the power key on the operation panel to off. Make sure that the power indicator and the memory indicator are off before turning off the main power switch. And then unplug the power cable from the wall outlet.
2. Insert Compact Flash or USB memory in a notch hole of the machine.
Insert the surface of Compact Flash toward the machine rear.
3. Insert the power plug and turn the main power switch on. Upgrading firmware starts.

Caution:

Never turn the main power switch off during upgrading.

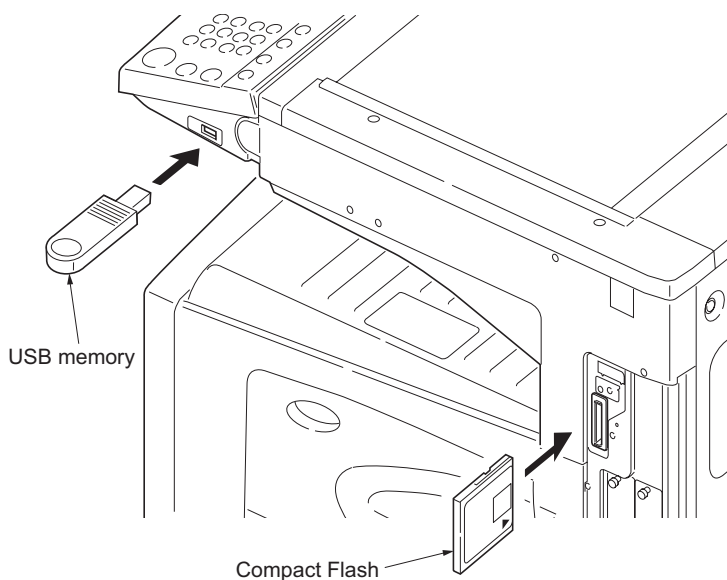


Figure 1-6-1

4. [100% Completed] is displayed on the touch panel when upgrading is complete.
5. Press the power key on the operation panel to off. Make sure that the power indicator and the memory indicator are off before turning off the main power switch. And then unplug the power cable from the wall outlet.
6. Remove Compact Flash or USB memory from the machine.
7. Insert the power plug and turn the main power switch on.

1-6-2 Adjustment-free variable resistors (VR)

The variable resistors listed below are set at the factory prior to shipping and cannot be adjusted in the field.

High voltage PWB: VR101, VR201, VR302, VR303

1-6-3 Remarks on engine PWB replacement

When replacing the engine PWB, remove the EEPROM from the engine PWB that has been removed and then reattach it to the new engine PWB.

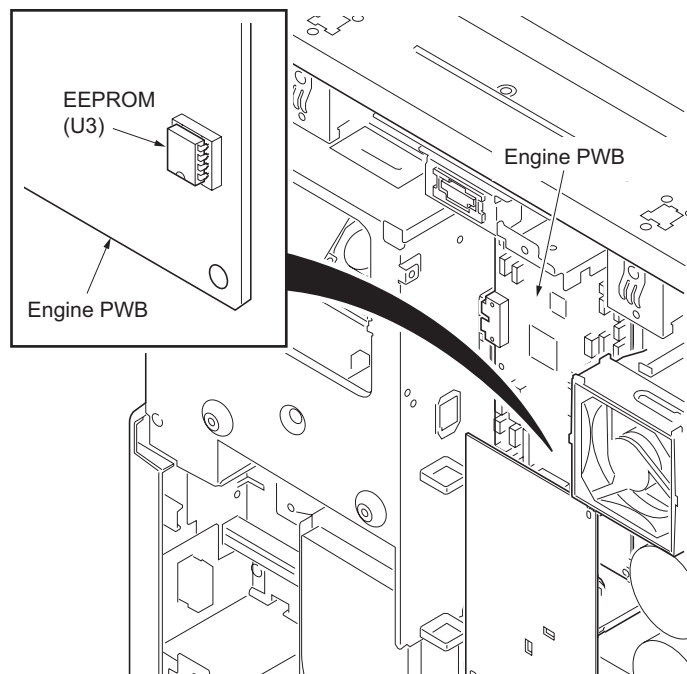


Figure 1-6-2

2-1-1 Paper feed section

(1) Cassette paper feed section

The paper feed section consists of the primary feed and secondary feed subsections. Primary feed conveys paper from the cassettes 1, 2 or MP tray to the left and right registration rollers, at which point secondary feed takes place and the paper travels to the transfer section in sync with the printing timing.

Each cassette consists of a lift driven by the lift motor and other components. Each cassette can hold up to 500 sheets of paper. Paper is fed from the cassette by the rotation of the forwarding pulley and paper feed pulley. The separation pulley prevents multiple sheets from being fed at one time, via the torque limiter.

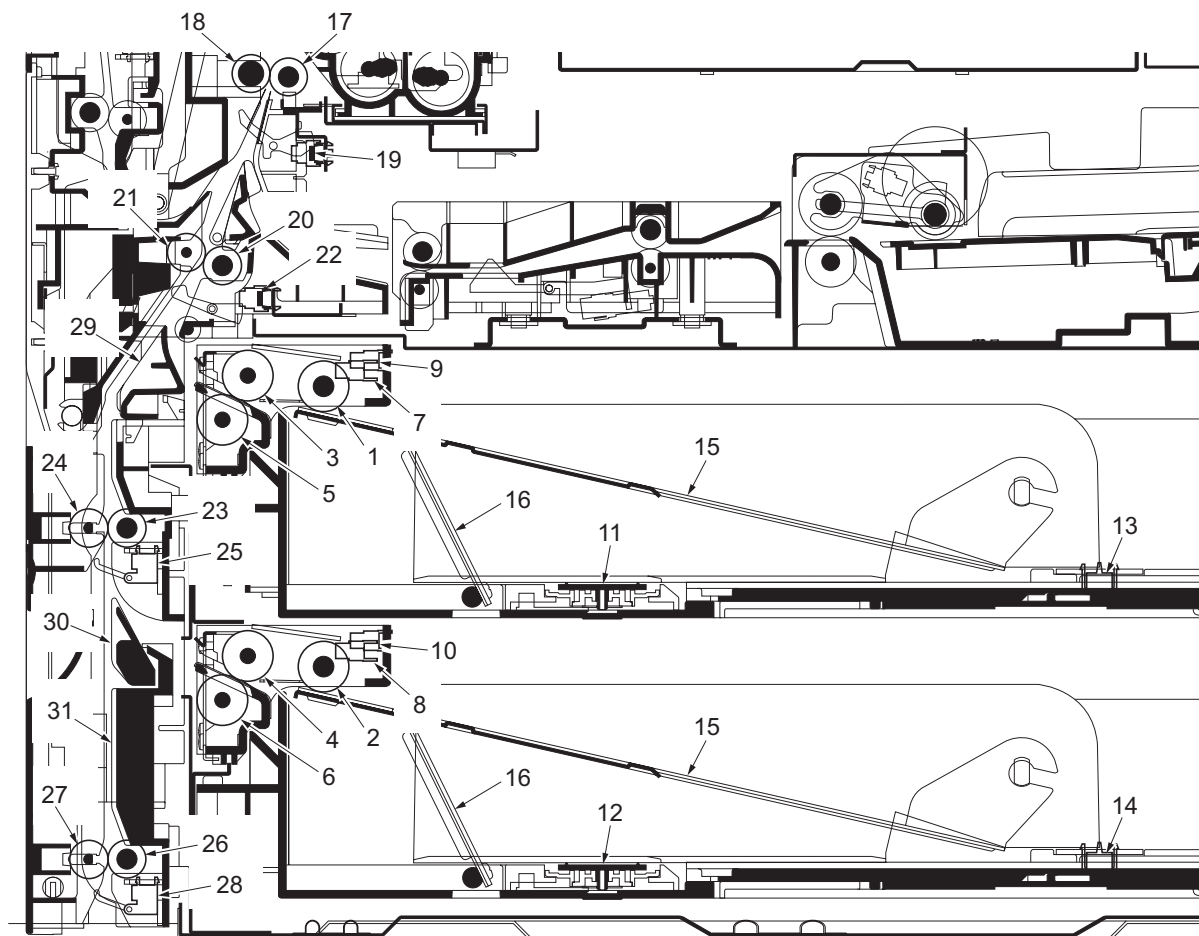


Figure 2-1-1 Cassette paper feed section

- | | |
|--|-------------------------------------|
| (1) Upper forwarding pulley | (17) Right registration roller |
| (2) Lower forwarding pulley | (18) Left registration roller |
| (3) Upper paper feed pulley | (19) Registration switch (RSW) |
| (4) Lower paper feed pulley | (20) Feed roller 1 |
| (5) Upper separation pulley | (21) Feed pulley |
| (6) Lower separation pulley | (22) Feed switch 1 (FSW1) |
| (7) Upper paper switch (PSW-U) | (23) Feed roller 2 |
| (8) Lower paper switch (PSW-L) | (24) Feed pulley |
| (9) Upper lift limit switch (LICSW-U) | (25) Feed switch 2 (FSW2) |
| (10) Lower lift limit switch (LICSW-L) | (26) Feed roller 3 |
| (11) Upper paper size width switch (PWSW-U) | (27) Feed pulley |
| (12) Lower paper size width switch (PWSW-L) | (28) Feed switch 3 (FSW3) |
| (13) Upper paper size length switch (PLSW-U) | (29) Vertical paper conveying guide |
| (14) Lower paper size length switch (PLSW-L) | (30) Paper conveying guide |
| (15) Cassette bases | (31) Vertical paper conveying frame |
| (16) Lift operation plates | |

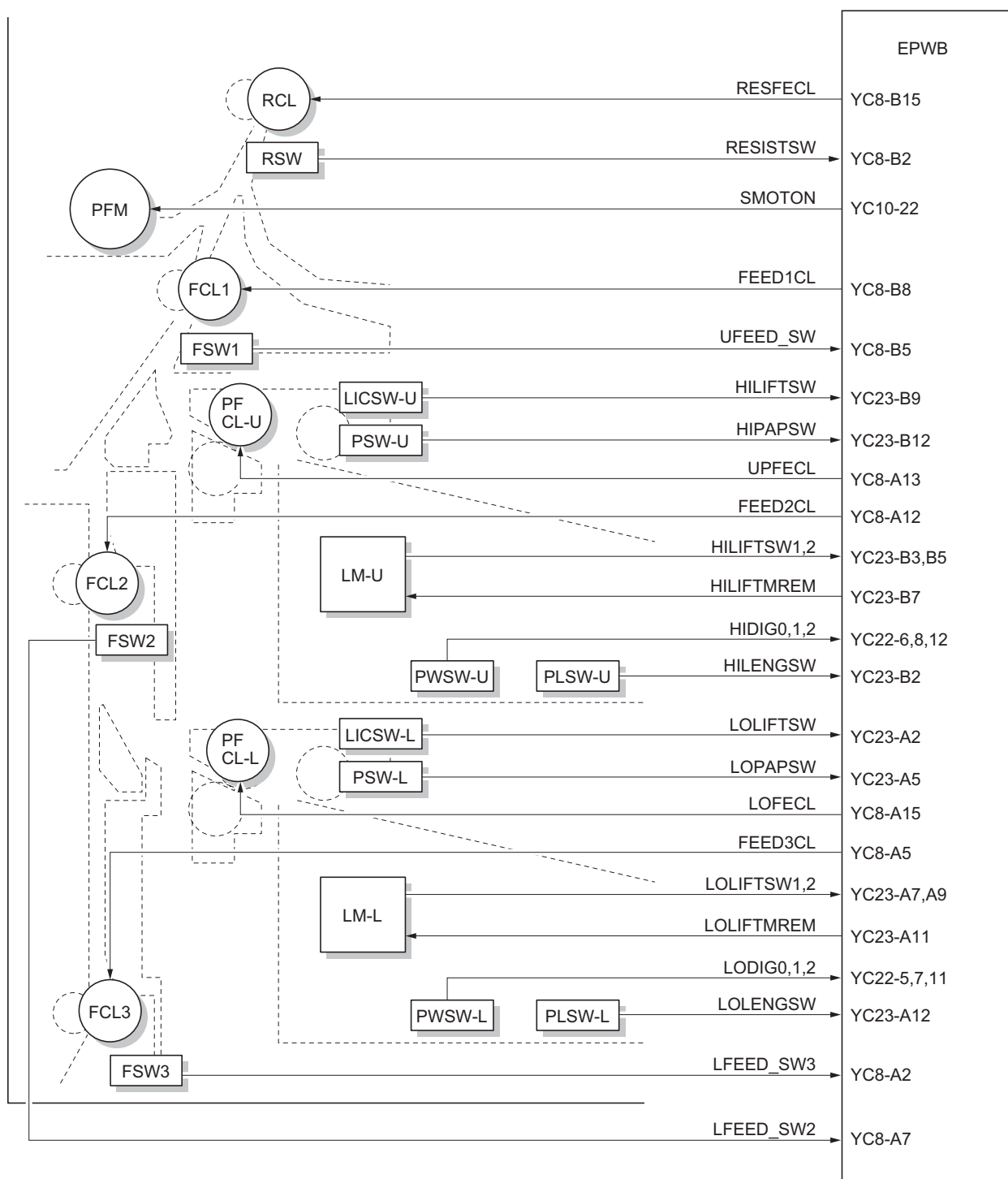


Figure 2-1-2 Cassette paper feed section block diagram

(2) MP tray paper feed section

The MP tray can hold up to 200 sheets of paper at one time. Paper is fed from the MP tray by the rotation of the MP forwarding pulley and MP paper feed pulley. Also during paper feed, the MP separation pulley prevents multiple sheets from being fed at one time by the torque limiter.

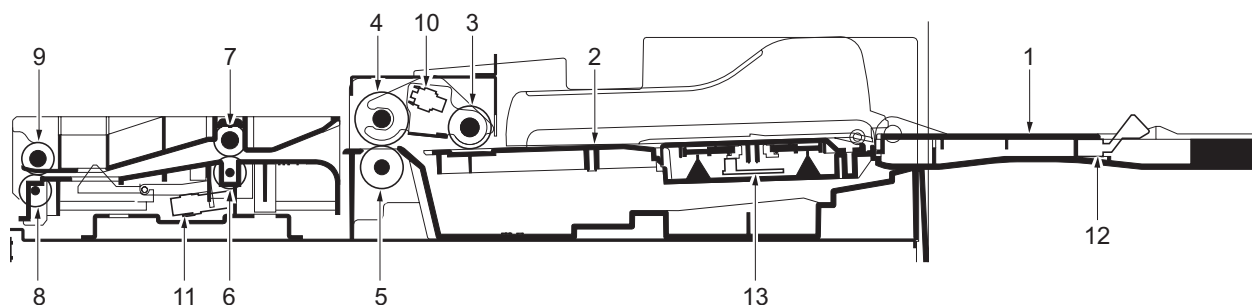


Figure 2-1-3 MP tray paper feed section

- | | |
|--------------------------|---|
| (1) MP tray | (9) MP feed roller 2 |
| (2) MP lift plate | (10) MP paper switch (MPPSW) |
| (3) MP forwarding pulley | (11) MP feed switch (MPFSW) |
| (4) MP paper feed pulley | (12) MP paper size length switch (MPPLSW) |
| (5) MP separation pulley | (13) MP paper size width switch (MPPWSW) |
| (6) MP feed pulley | |
| (7) MP feed roller 1 | |
| (8) MP feed pulley | |

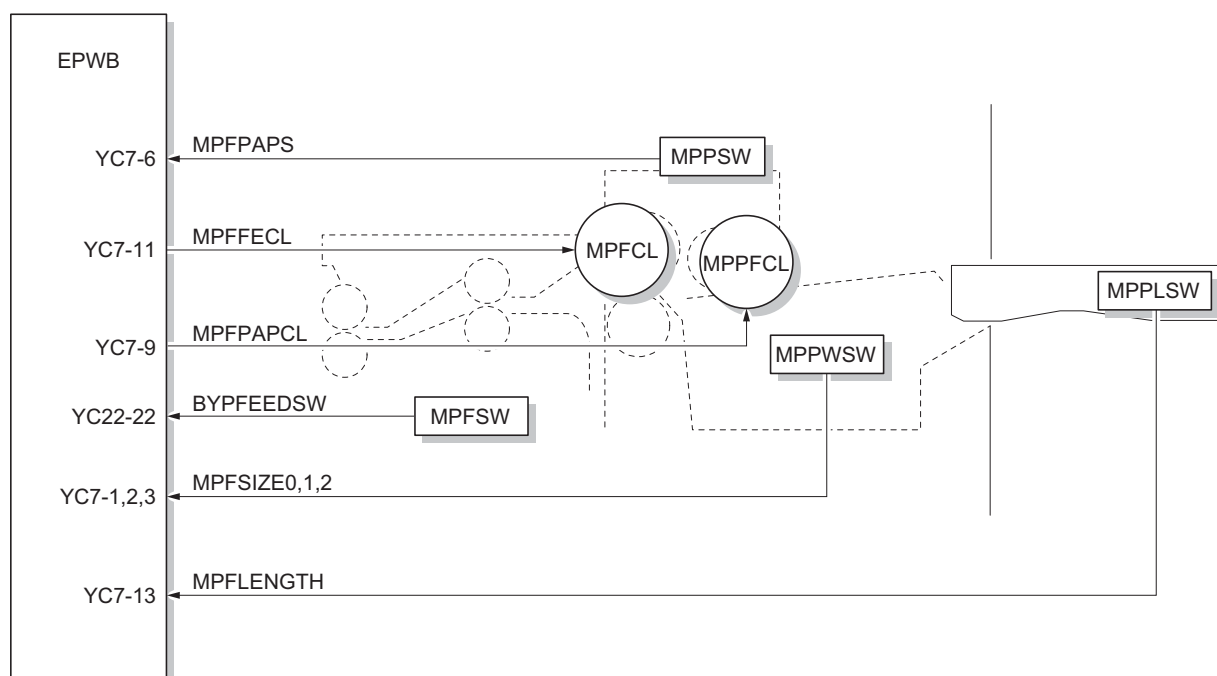


Figure 2-1-4 MP tray paper feed section block diagram

2-1-2 Main charging section

The main charging section consists of the main charger assembly, drum and so on. The drum is electrically charged uniformly by means of a grid to form a latent image on the surface.

The main charger unit charges the drum so that a latent image is formed on the surface, the shield grid ensuring the charge is applied uniformly.

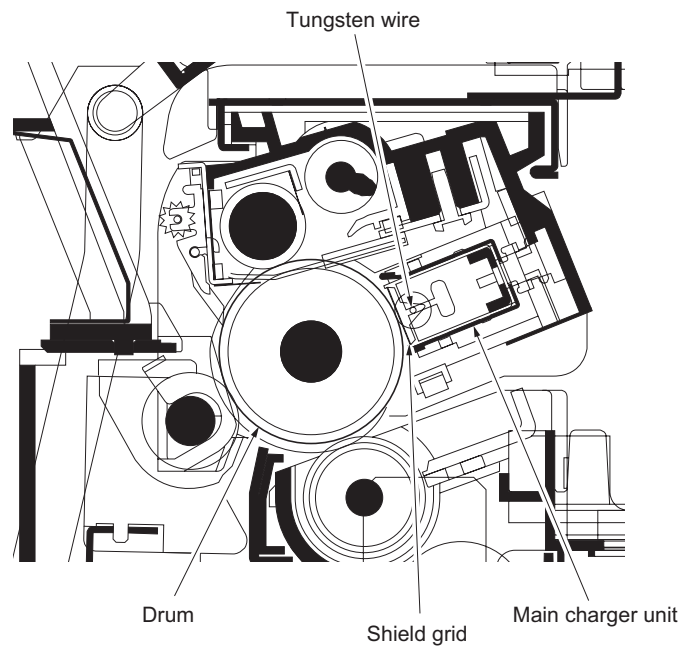


Figure 2-1-5 Main charging section

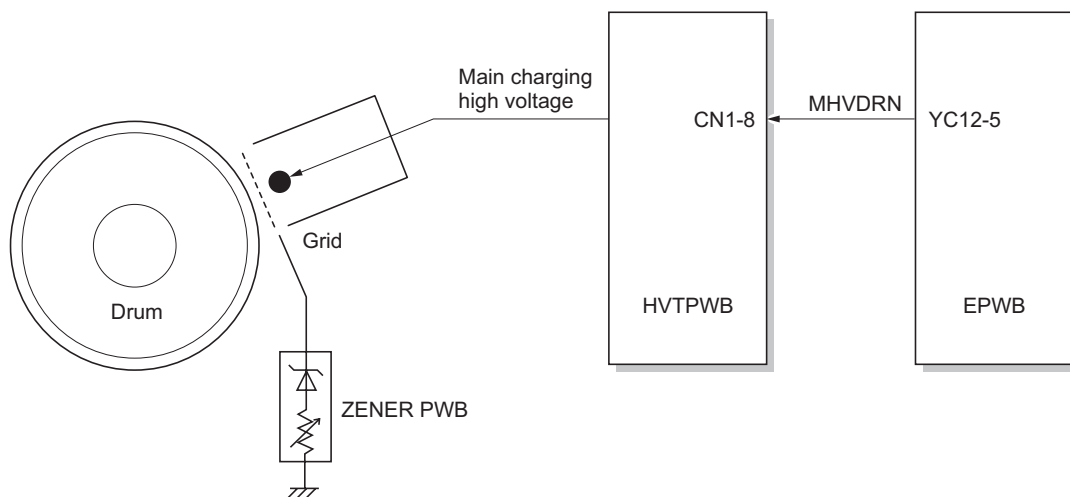


Figure 2-1-6 Main charging section block diagram

2-1-3 Optical section

The optical section consists of the image scanner section for scanning and the laser scanner section for printing.

(1) Image scanner section

The original image is illuminated by the exposure lamp (EL) and scanned by the CCD PWB (CCDPWB) in the image scanning unit via the three mirrors, the reflected light being converted to an electrical signal.

The scanner and mirror frames travel to scan on the optical rails on the front and rear of the machine to scan from side to side. The speed of the mirror frames is half the speed of the scanner.

When the DP is used, the scanner and mirror frames stop at the DP original scanning position to start scanning.

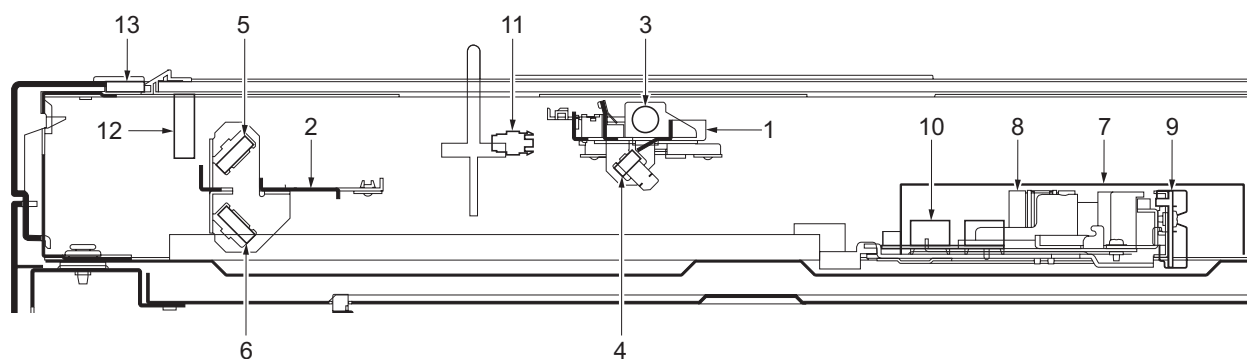


Figure 2-1-7 Image scanner section

- (1) Mirror 1 frame
- (2) Mirror 2 frame
- (3) Exposure lamp (EL)
- (4) Mirror 1
- (5) Mirror 2
- (6) Mirror 3
- (7) ISU
- (8) Lens
- (9) CCD PWB (CCDPWB)
- (10) Original size detection sensor (OSDS)
- (11) Original detection switch (ODSW)
- (12) Scanner home position switch (SHPSW)
- (13) Slit glass

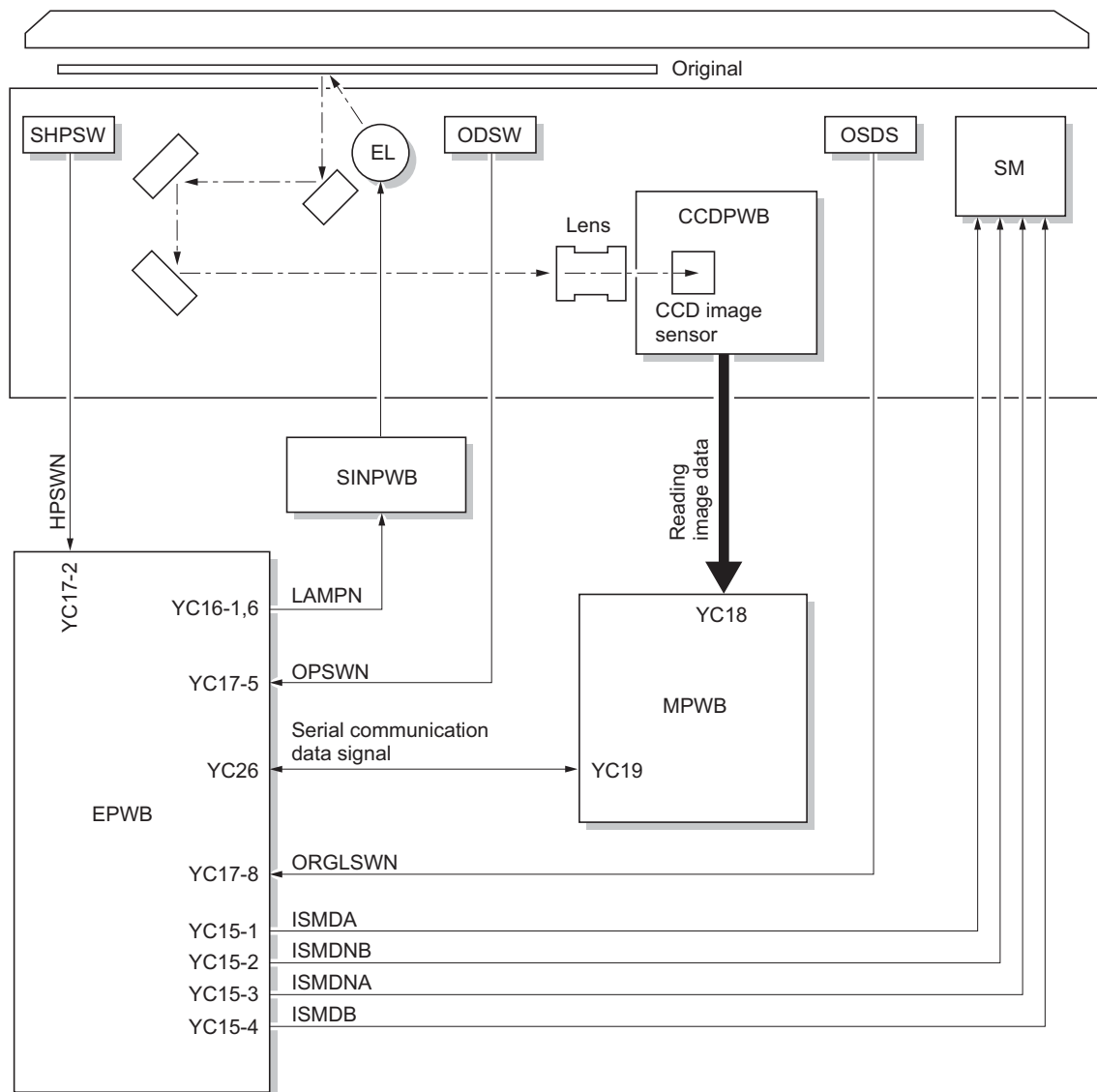


Figure 2-1-8 Image scanner section block diagram

(2) Laser scanner section

The image data scanned by the CCD PWB (CCDPWB) is processed on the main PWB (MPWB) and transmitted as image printing data to the laser scanner unit (LSU). By repeatedly turning the laser on and off, the laser scanner unit forms a latent image on the drum surface.

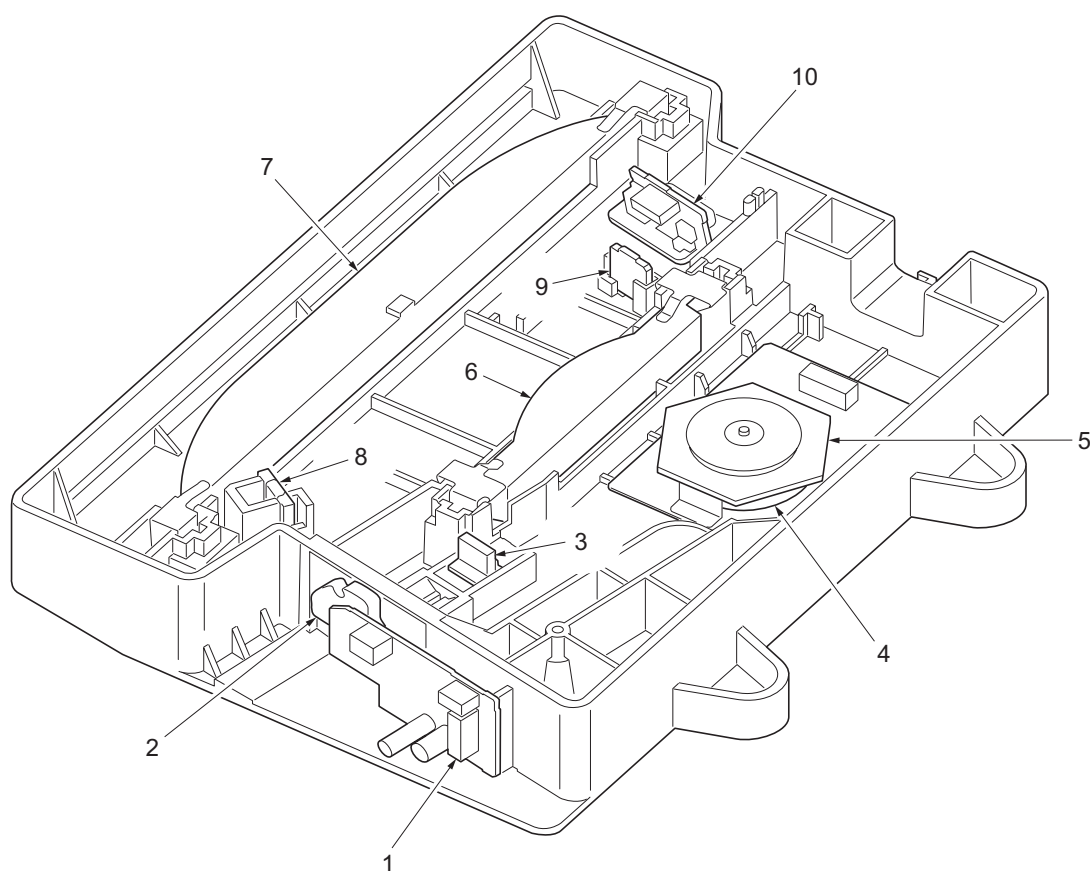


Figure 2-1-9 Laser scanner section

- (1) APC PWB (APCPWB)
- (2) Laser diode
- (3) Cylindrical lens
- (4) Polygon motor (PM)
- (5) Polygon mirror
- (6) fθ lens
- (7) fθ lens
- (8) PD sensor mirror
- (9) Cylindrical correcting lens
- (10) PD PWB (PDPWB)

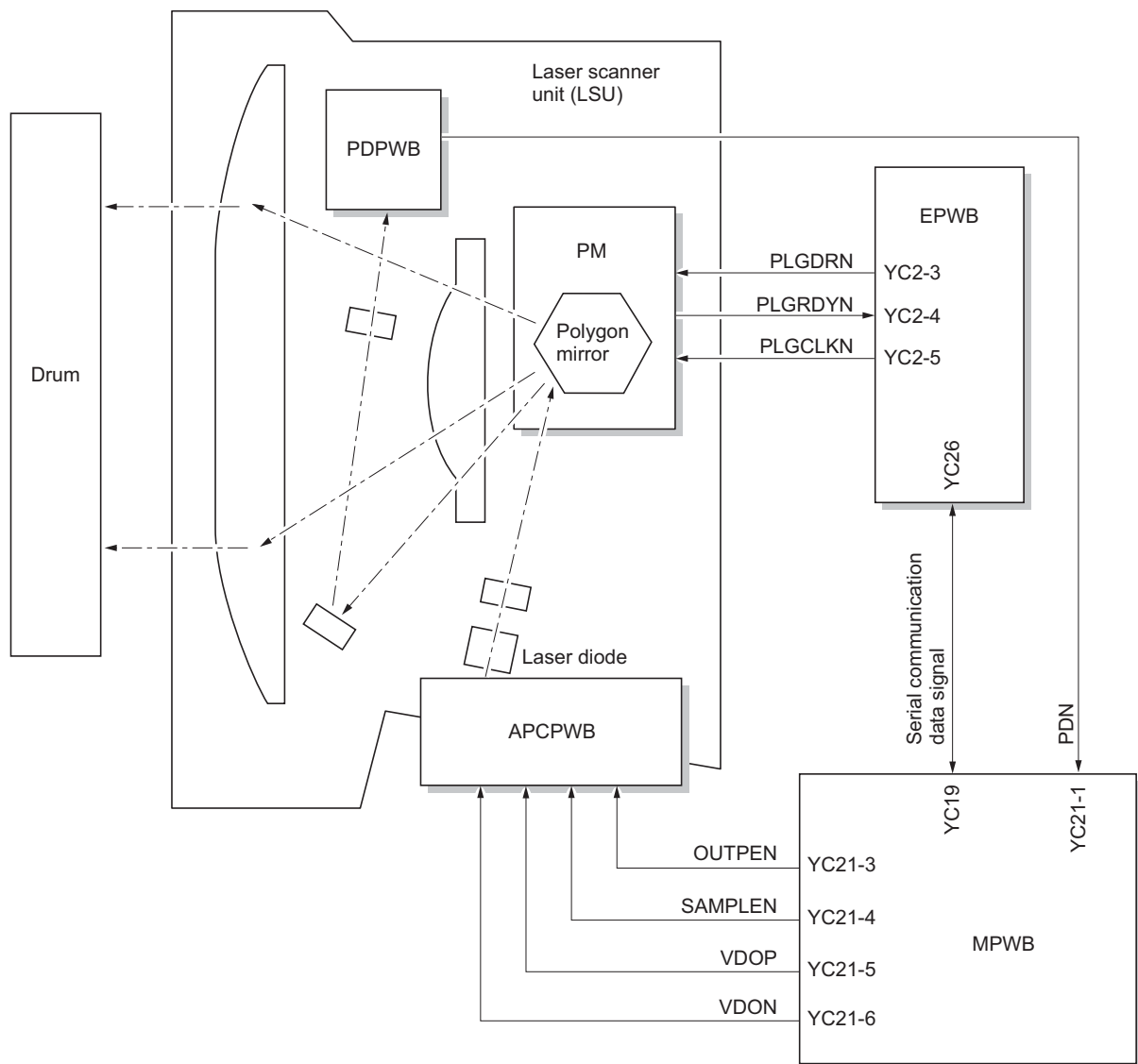


Figure 2-1-10 Laser scanner section block diagram

2-1-4 Developing section

The developing unit consists of the developing sleeve where a magnetic brush is formed, the magnetic toner blade and the developing spirals that agitate the toner.

When the toner sensor (TNS) detects a low toner level in the developing unit, the toner replenishment signal is output to the engine PWB (EPWB). The engine PWB (EPWB) that has received the signal turns on the toner feed motor (TFM) and replenishes toner from the toner container to the developing unit.

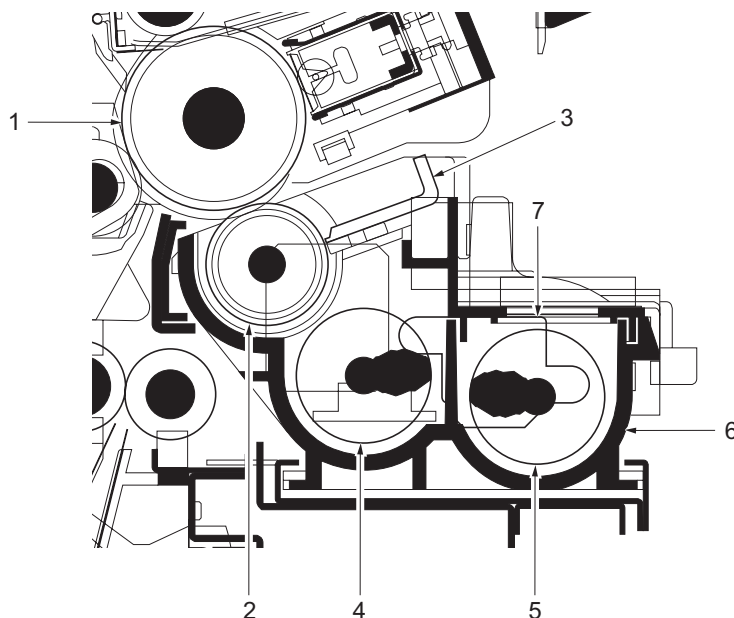


Figure 2-1-11 Developing section

- (1) Drum
- (2) Developing sleeve
- (3) Magnetic toner blade
- (4) Left developing spiral
- (5) Right developing spiral
- (6) Developing housing
- (7) Toner sensor (TNS)

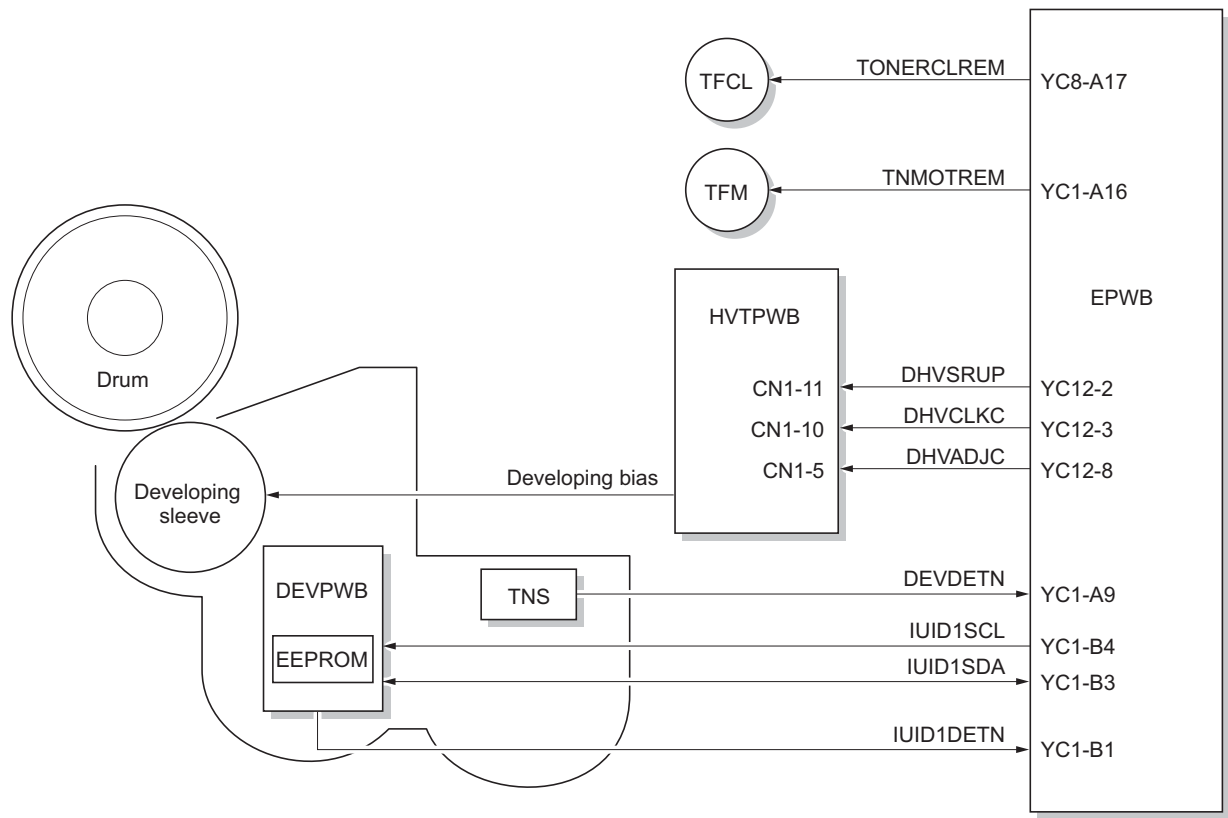


Figure 2-1-12 Developing section block diagram

(1) Single component developing system

This machine uses the single component developing system, and reversal processing is performed with a + charged drum (a-Si) and a + charged magnetic toner.

With the single component developing system, toner is electrically charged by friction with the developing sleeve and + charged when it passes through the magnetic toner blade. The toner that has passed through the magnetic toner blade forms a uniform layer on the developing sleeve. When the toner layer comes to the location where the developing sleeve is the nearest to the drum, toner moves between the drum and the developing sleeve by an electric field of the magnetic pole. Then, when the developing sleeve rotates and passes through the nearest location to the drum, on the portion of the drum that has been exposed to light, toner is attracted toward the drum by potential difference between the developing bias and the drum surface and development is performed. On the other hand, on the portion of the drum that has not been exposed to light, toner is attracted toward the sleeve and development is not performed. When toner comes to an area where the gap between the drum and the developing sleeve is large, an electric field disappears and toner does not leave the developing sleeve. Development is complete.

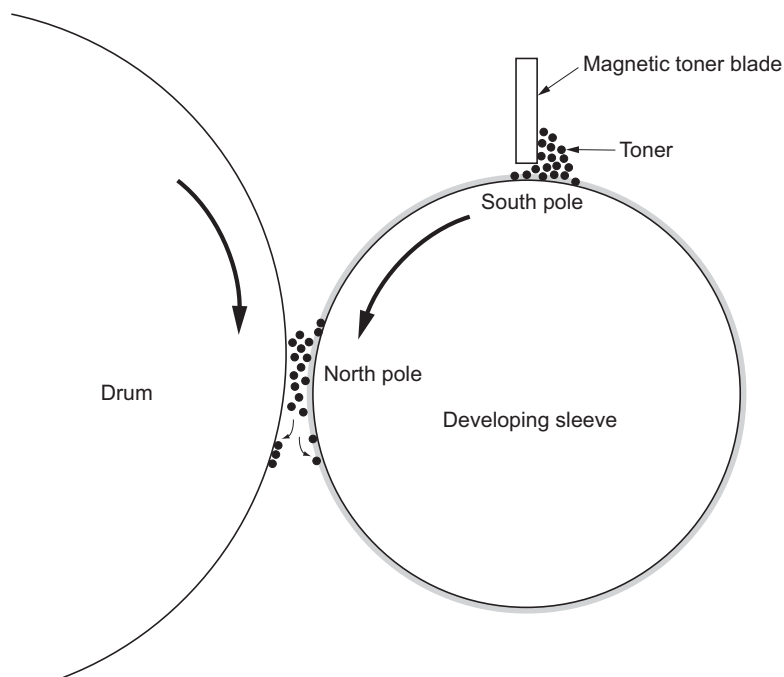


Figure 2-1-13 Single component developing system

2-1-5 Transfer and separation sections

The transfer and separation section consists mainly of the transfer roller, separation electrode and drum separation claws. A high voltage generated by the high voltage PWB (HVTPWB) is applied to the transfer roller for transfer charging. Paper after transfer is separated from the drum by applying separation charging that is output from the high voltage PWB (HVTPWB) to the separation electrode.

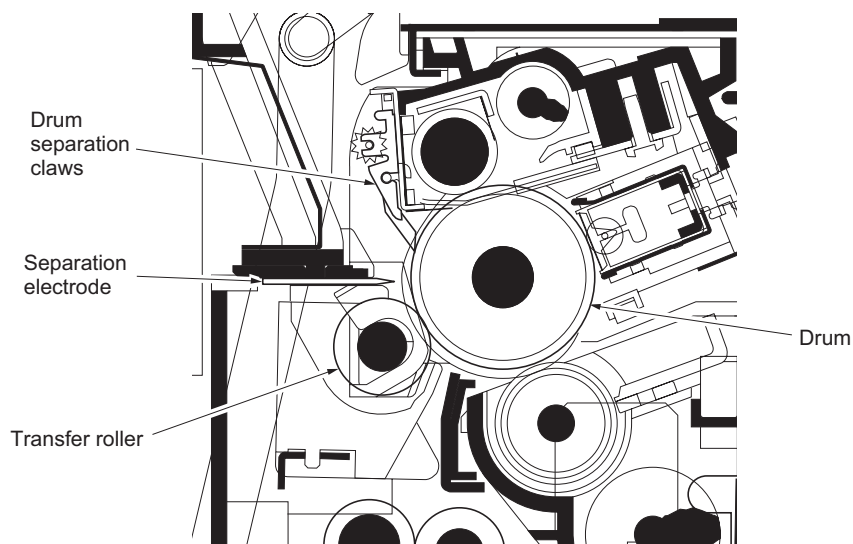


Figure 2-1-14 Transfer and separation sections

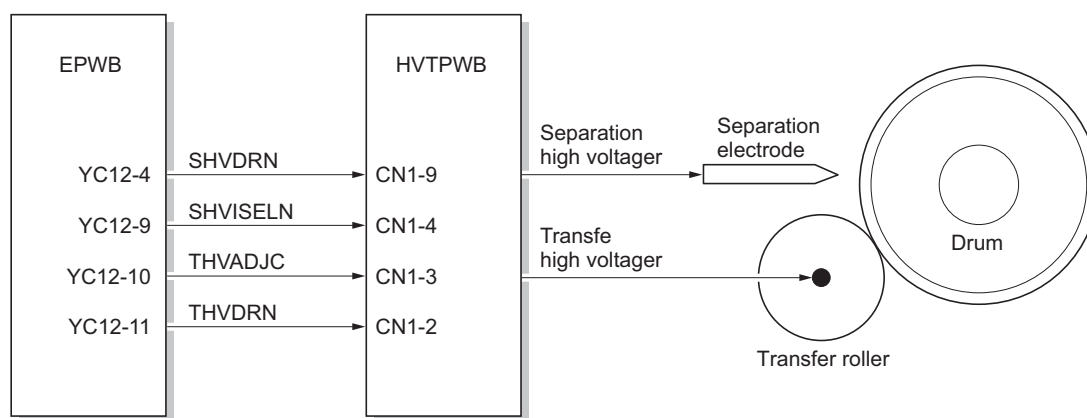


Figure 2-1-15 Transfer and separation sections block diagram

2-1-6 Cleaning and charge erasing sections

The cleaning section consists of the cleaning blade that removes residual toner from the drum surface after the transfer process, and the cleaning spiral that carries the residual toner back to the waste toner box. The cleaning lamp (CL) consists of LEDs and removes residual charge on the drum before main charging. Also the toner quantity in the waste toner box is sensed with the overflow sensor (OFS).

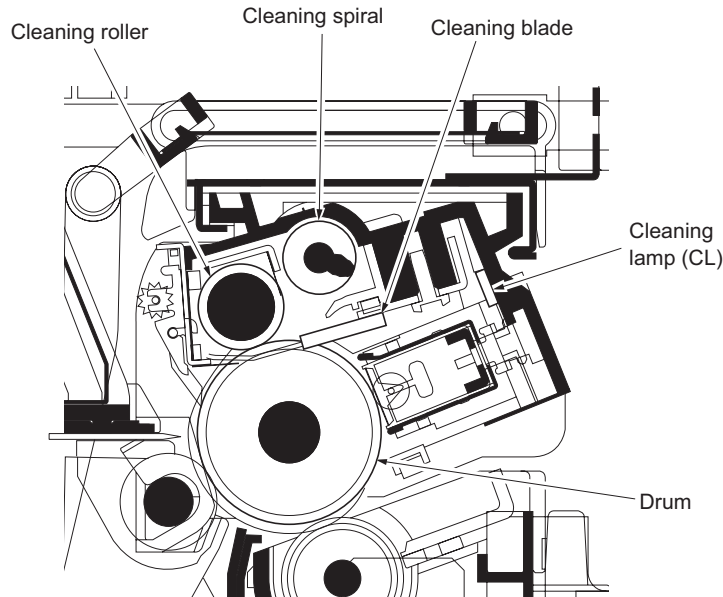


Figure 2-1-16 Cleaning and charge erasing sections

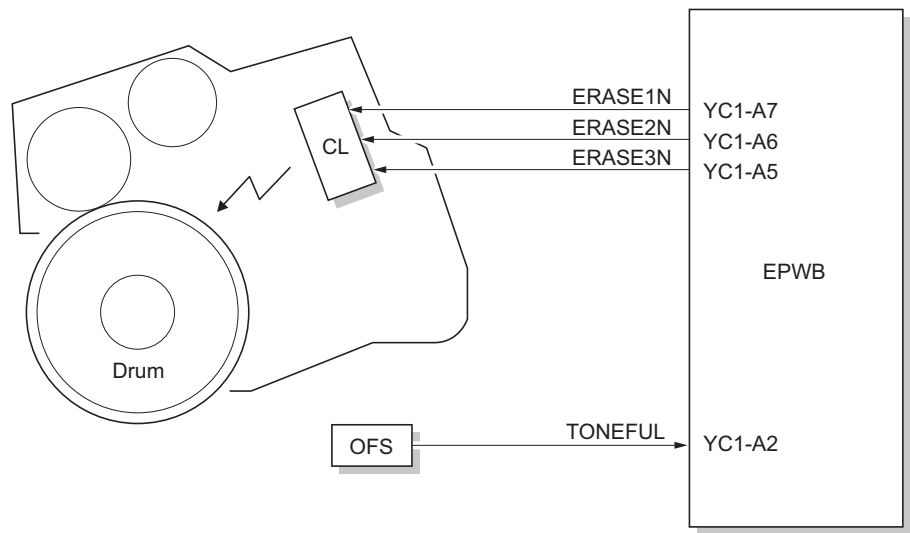


Figure 2-1-17 Cleaning and charge erasing sections block diagram

2-1-7 Fuser section

The fuser section consists of the parts shown in Figure 2-1-18. When paper reaches the fuser section after the transfer process, it passes between the press roller and heat roller, which is heated by fuser heaters M or S (FH-M or FH-S). Pressure is applied by the fuser unit pressure springs so that the toner on the paper is melted, fused and fixed onto the paper. The heat roller is heated by fuser heaters M or S (FH-M or FH-S) inside it; its surface temperature is detected by the fuser thermistor 1 and 2 (FTH1/2), and is regulated by the fuser heaters turning on and off.

If the fuser section becomes abnormally hot, fuser thermostat 1 and 2 (FTS1/2) operates shutting the power to the fuser heaters off. When the fusing process is completed, the paper is separated from the heat roller by its separation claws and is conveyed from the machine to eject and switchback section.

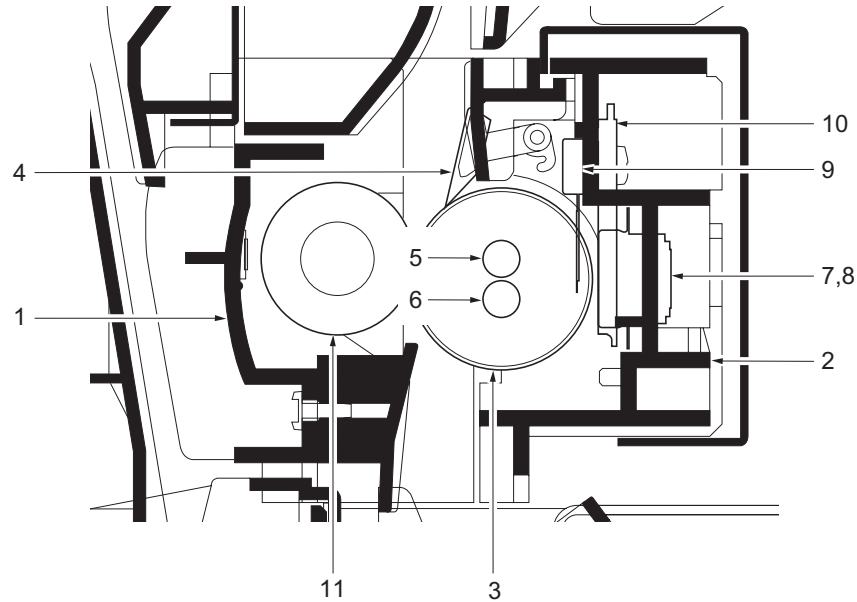


Figure 2-1-18 Fuser section

- (1) Left fuser frame
- (2) Right fuser frame
- (3) Heat roller
- (4) Heat roller separation claws
- (5) Fuser heater M (FH-M)
- (6) Fuser heater S (FH-S)
- (7) Fuser thermostat 1 (FTS1)
- (8) Fuser thermostat 2 (FTS2)
- (9) Fuser thermistor 1 (FTH1)
- (10) Fuser thermistor 2 (FTH2)
- (11) Press roller

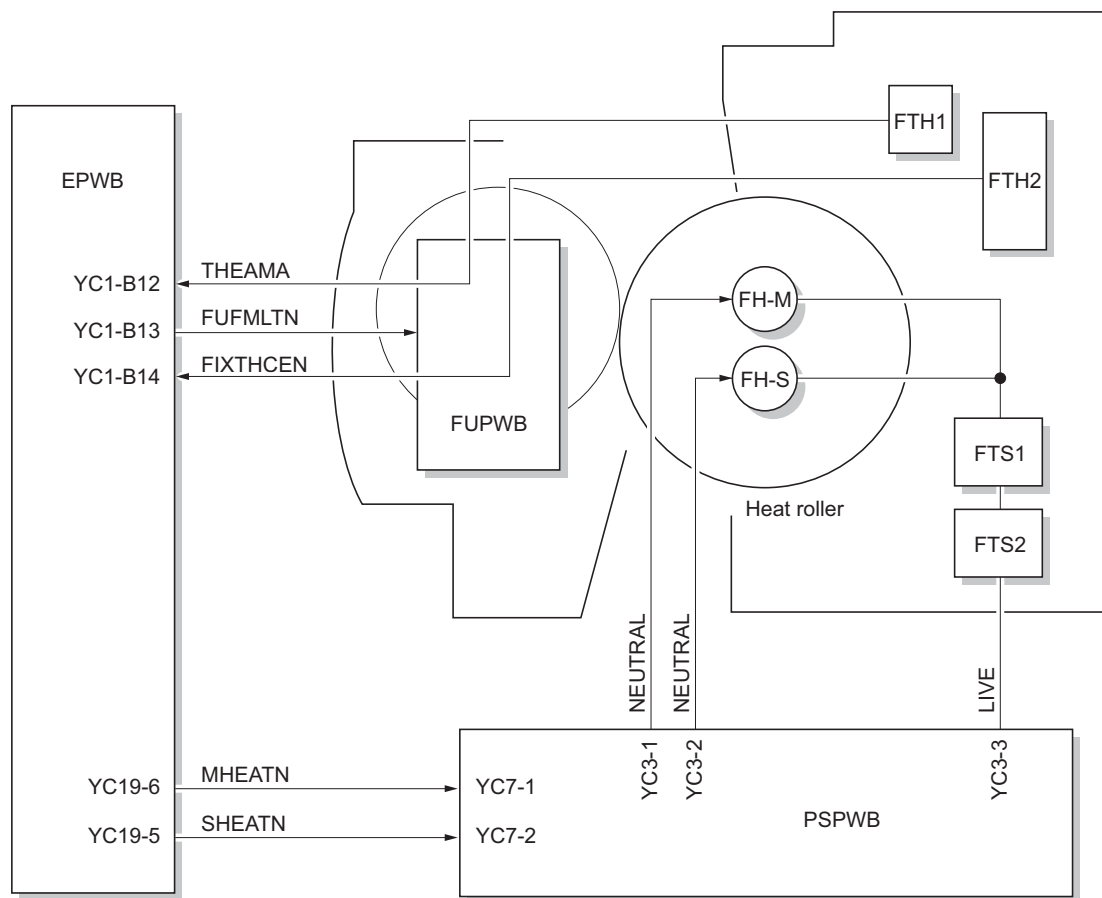


Figure 2-1-19 Fuser section block diagram

2-1-8 Eject and switchback sections

The eject and switchback sections eject paper on which fixing has ended with the eject roller that is rotated by forward rotation of the eject motor.

In duplex copying, paper is turned over by reverse rotation of the eject motor. When paper is transferred to the job separator or the internal finisher, the feedshift solenoid (FSSOL) is turned on to activate the feedshift guide to switch the paper transfer path.

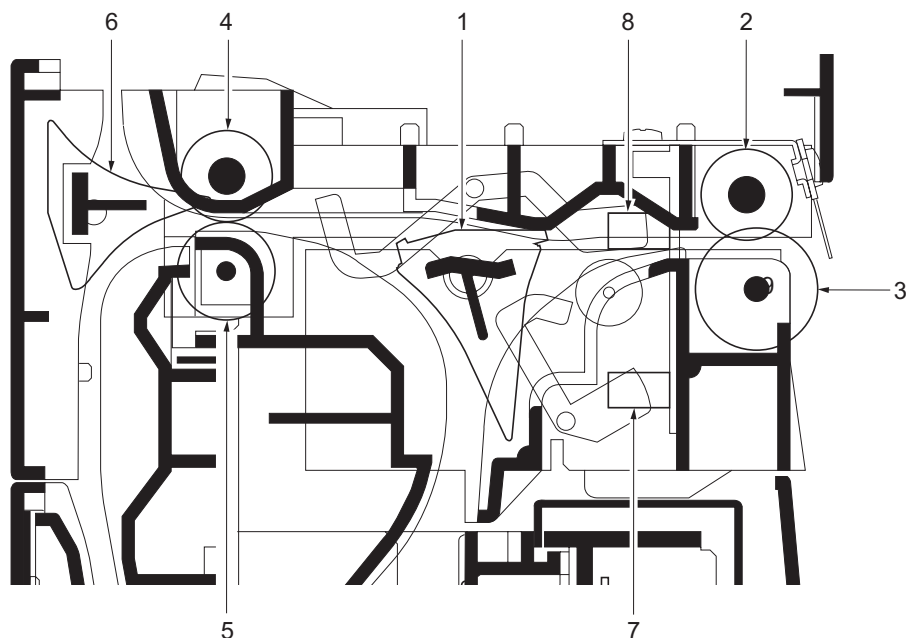


Figure 2-1-20 Eject and switchback sections

- | | |
|-----------------------|-----------------------------|
| (1) Feedshift guide | (5) Switchback pulley |
| (2) Eject roller | (6) Feedshift guide |
| (3) Eject pulley | (7) Eject switch (ESW) |
| (4) Switchback roller | (8) Feedshift switch (FSSW) |

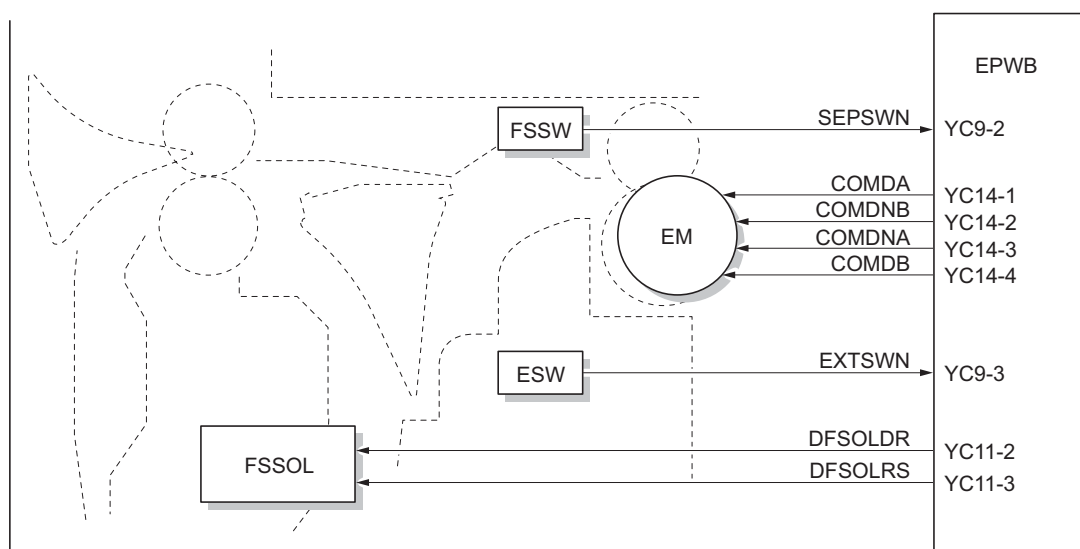


Figure 2-1-21 Eject and switchback sections block diagram

2-1-9 Duplex section

The duplex section consists of the components shown in figure. In duplex mode, after copying on to the reverse face of the paper, the paper is reversed in the switchback section and conveyed to the duplex section. The paper is then conveyed to the paper feed section by the upper and lower duplex feed rollers.

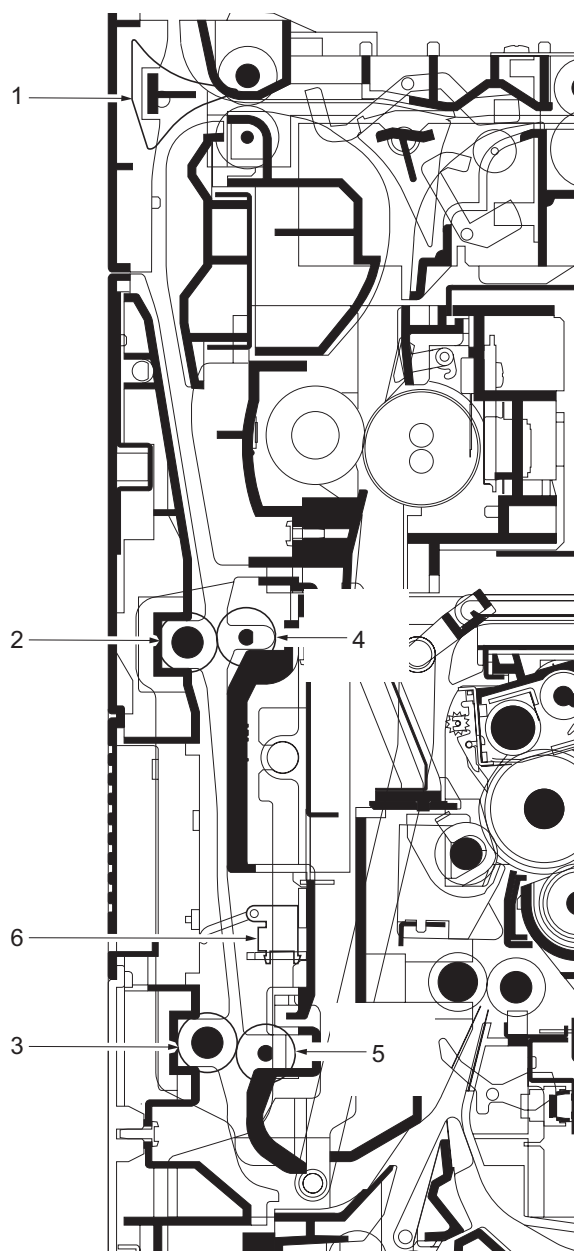


Figure 2-1-22 Duplex section

- (1) Feedshift guide
- (2) Upper duplex feed roller
- (3) Lower duplex feed roller
- (4) Duplex feed pulley
- (5) Duplex feed pulley
- (6) Duplex paper conveying switch (DUPPCSW)

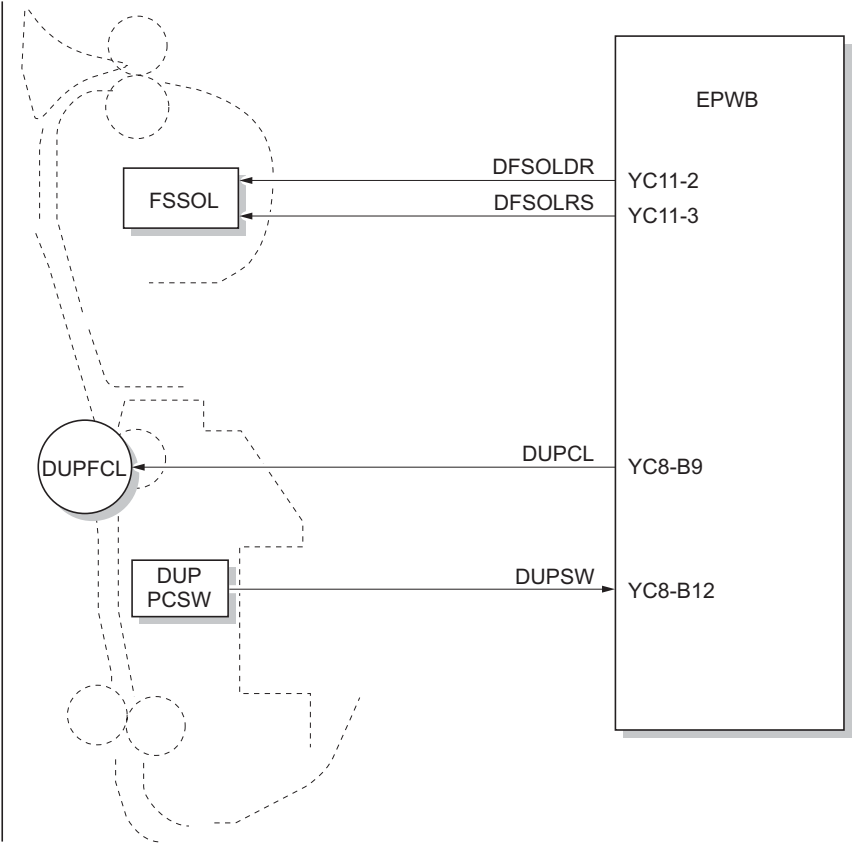


Figure 2-1-23 Duplex section block diagram

(1) Paper conveying operation in duplex copying

Paper of which copying onto the reverse side is complete is conveyed to the switchback section, the eject motor switches from normal rotation to reverse rotation to switch the eject roller to reverse rotation, and the paper conveying direction is reversed. Paper that has been switched back is conveyed to the duplex section via the eject roller and the switchback roller.

Paper that has been conveyed to the duplex section is conveyed to the paper feed section again by rotation of the upper duplex feed roller and the lower duplex feed roller and copying onto the front side is performed.

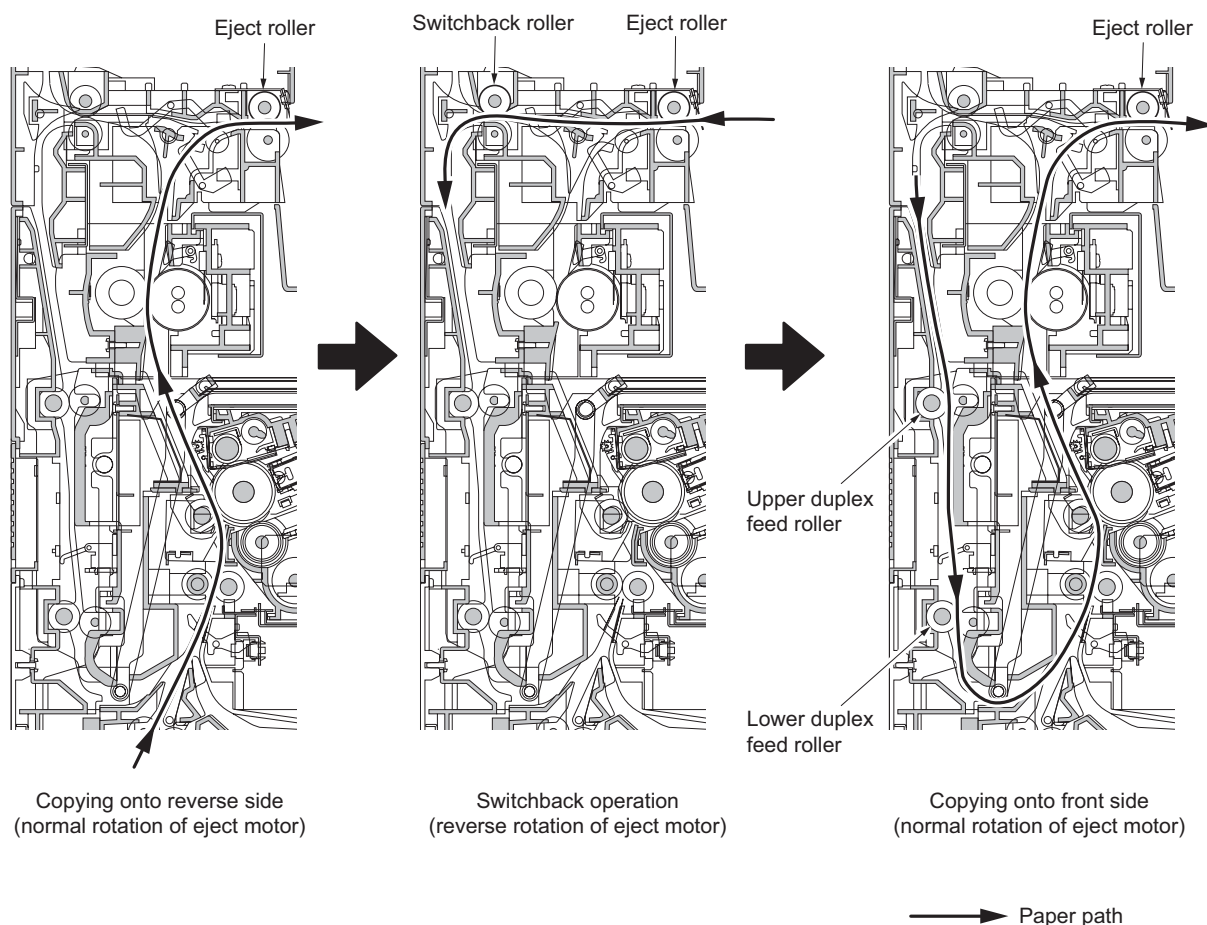


Figure 2-1-24

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2-2-1 Electrical parts layout

(1) PWBs

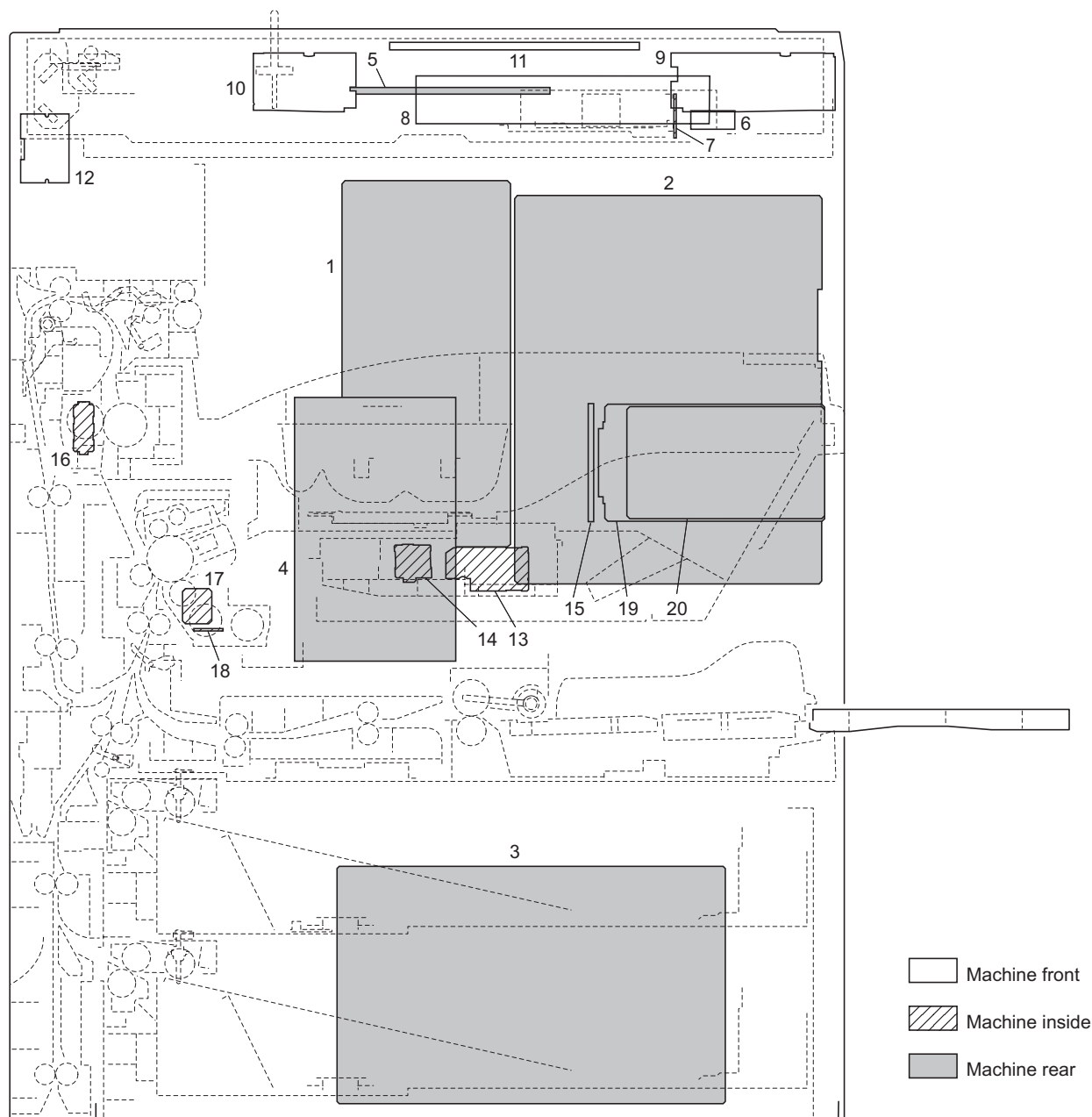
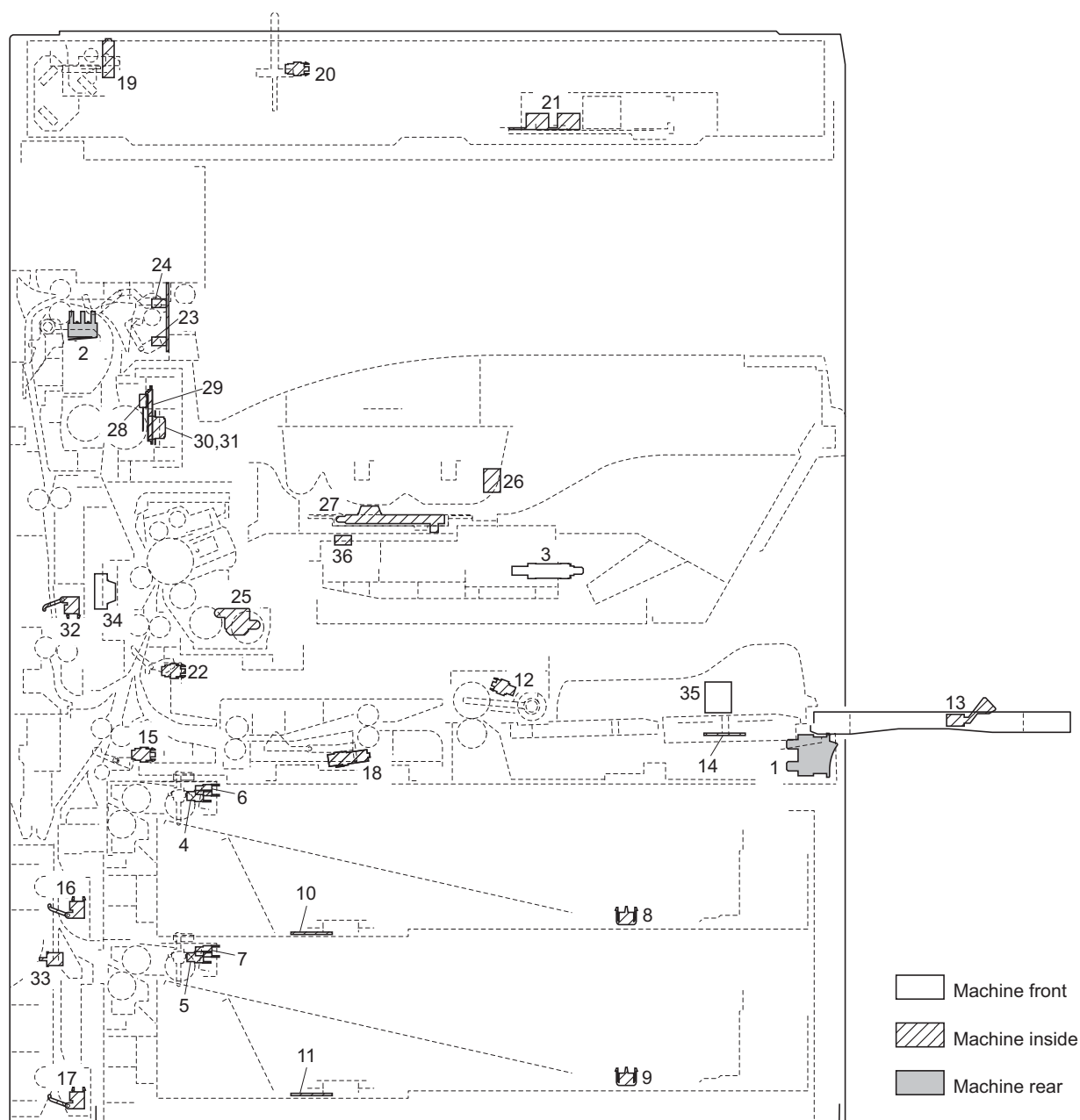


Figure 2-2-1 PWBs

- | | |
|---|--|
| 1. Engine PWB (EPWB)..... | Controls the other PWBs, electrical components and optional devices. |
| 2. Main PWB (MPWB) | Controls the image processing and operation panel. |
| 3. Power source PWB (PSPWB) | Generates +24 V DC and 5 V DC; controls the fuser heaters. |
| 4. High voltage PWB (HVPWB) | Main charging. Generates developing bias and high voltages for transfer. |
| 5. Scanner inverter PWB (SINPWB) | Controls the exposure lamp. |
| 6. LCD inverter PWB (LINPWB) | Controls LCD indication. |
| 7. CCD PWB (CCDPWB)..... | Reads the image of originals. |
| 8. Main operation unit PWB (OPWB-M)..... | Controls touch panel and LCD indication. |
| 9. Right operation unit PWB (OPWB-R) | Consists of the operation keys and display LEDs. |
| 10. Left operation unit PWB (OPWB-L) | Consists of the operation keys and display LEDs. |
| 11. Upper operation unit PWB (OPWB-U) | Consists of the operation keys and display LEDs. |
| 12. Front operation unit PWB (OPWB-F)..... | Consists of the display LEDs. |

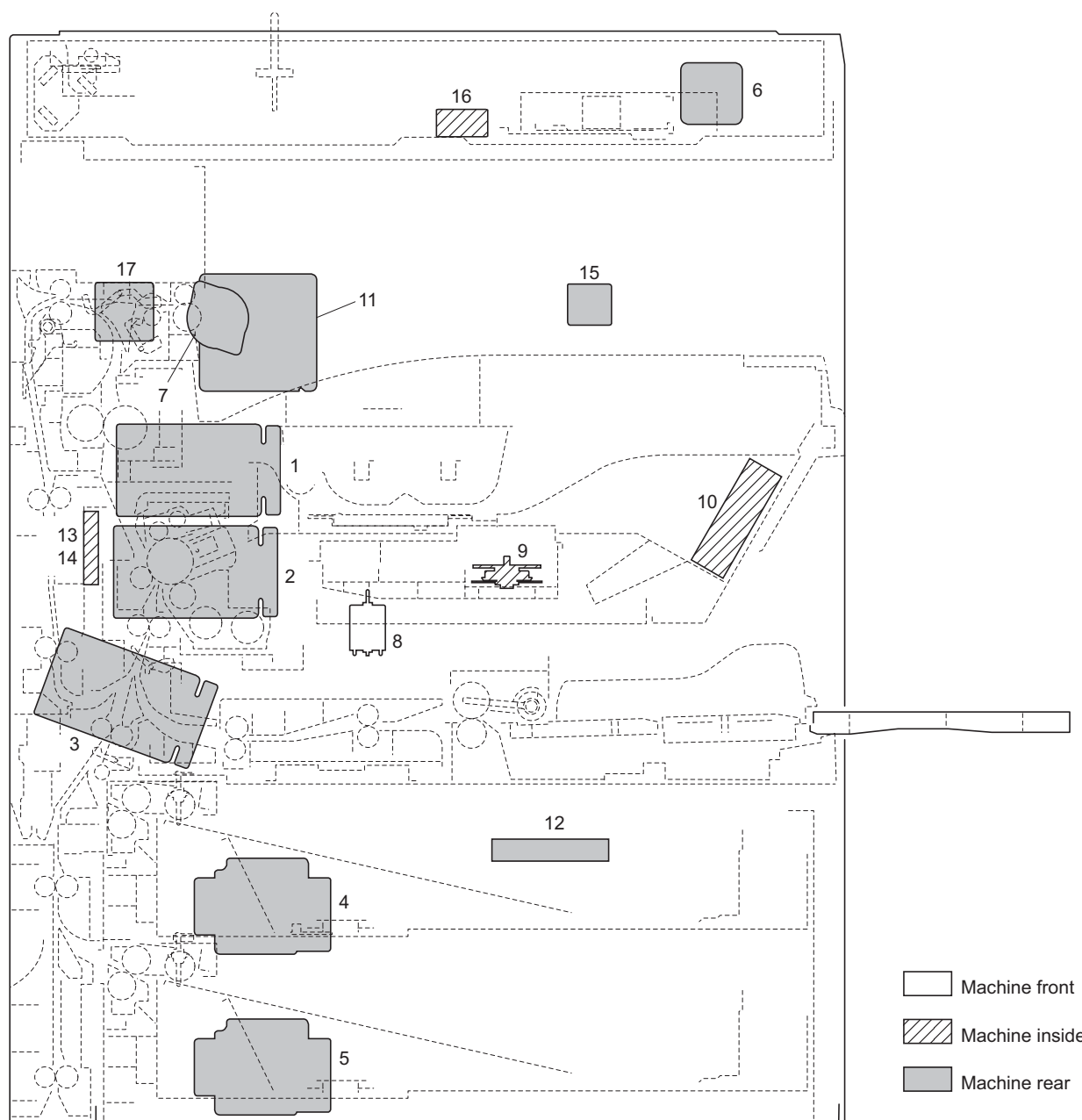
- 13. APC PWB (APCPWB) Generates and controls the laser beam.
- 14. PD PWB (PDPWB) Controls horizontal synchronizing timing of laser beam.
- 15. Interface PWB (IFPWB) Consists of wiring relay circuits.
- 16. Fuser PWB (FUPWB) Consists of wiring relay circuits.
- 17. Drum PWB (DRPWB) Stores the individual drum unit information.
- 18. Developing PWB (DRPWB) Stores the individual developing unit information.
- 19. Fax control PWB (FCPWB)* Modulates, demodulates, compresses, decompresses and smoothes out
image data, and converts resolution of image data.
- 20. NCU PWB (NCUPWB)* Controls connection to the telephone line.

*: Option

(2) Switches and sensors**Figure 2-2-2 Switches and sensors**

- | | |
|--|--|
| 1. Main power switch (MSW) | Turns the AC power on and off. |
| 2. Safety switch 1 (SSW1) | Breaks the safety circuit when the left cover 1 is opened. |
| 3. Safety switch 2 (SSW2) | Breaks the safety circuit when the front cover is opened. |
| 4. Upper paper switch (PSW-U) | Detects the presence of paper in the cassette 1. |
| 5. Lower paper switch (PSW-L) | Detects the presence of paper in the cassette 2. |
| 6. Upper lift limit switch (LICSW-U) | Detects the cassette 1 lift reaching the upper limit. |
| 7. Lower lift limit switch (LICSW-L) | Detects the cassette 2 lift reaching the upper limit. |
| 8. Upper paper size length switch (PLSW-U) | Detects the length of paper in the cassette 1. |
| 9. Lower paper size length switch (PLSW-L) | Detects the length of paper in the cassette 2. |
| 10. Upper paper size width switch (PWSW-U) | Detects the width of paper in the cassette 1. |
| 11. Lower paper size width switch (PWSW-L) | Detects the width of paper in the cassette 2. |

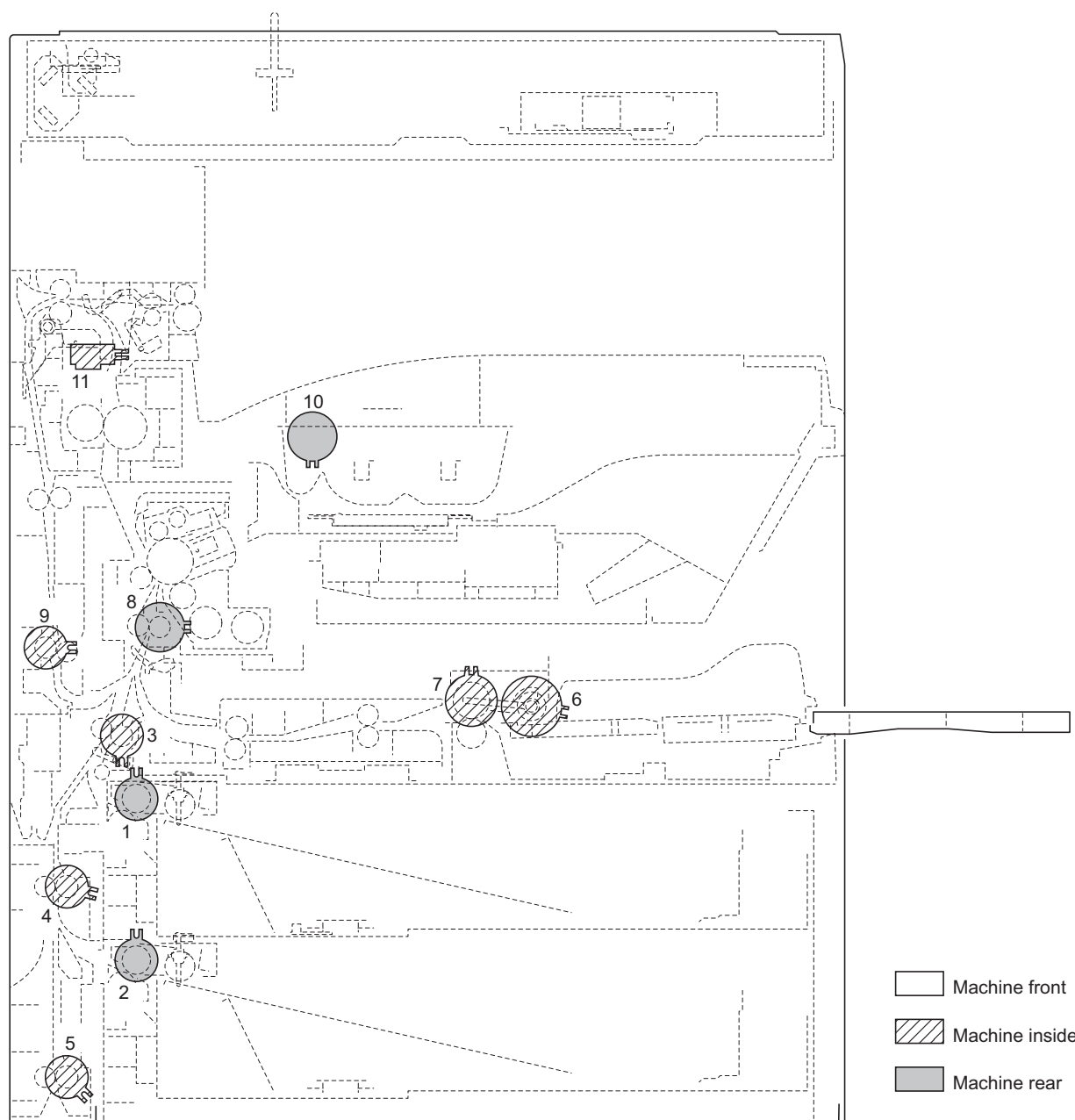
12. MP paper switch (MPPSW) Detects the presence of paper on the MP tray.
13. MP paper size length switch
(MPPLSW) Detects the length of paper on the MP tray.
14. MP paper size width switch
(MPPWSW) Detects the width of paper on the MP tray.
15. Feed switch 1 (FSW1) Controls feed clutch 1 drive timing.
16. Feed switch 2 (FSW2) Controls feed clutch 2 drive timing
17. Feed switch 3 (FSW3) Controls feed clutch 3 drive timing
18. MP feed switch (MPFSW) Controls MP feed clutch drive timing
19. Scanner home position switch (SHPSW)..... Detects the optical system in the home position.
20. Original detection switch (ODSW) Operates the original size detection sensor.
21. Original size detection sensor (OSDS) Detects the size of the original.
22. Registration switch (RSW) Controls the secondary paper feed start timing.
23. Eject switch (ESW) Detects a paper misfeed in the fuser section.
24. Feedshift switch (FSSW) Detects a paper misfeed in the switchback section in a duplex copy.
25. Toner sensor (TNS)..... Detects the toner density in the developing unit.
26. Toner container detection switch
(TCDSW) Detects the presence of the toner container.
27. Toner container sensor (TCS)..... Detects the quantity of toner in a toner container.
28. Fuser thermistor 1 (FTH1) Detects the heat roller temperature.
29. Fuser thermistor 2 (FTH2) Detects the heat roller temperature.
30. Fuser thermostat 1 (FTS1)..... Prevents overheating in the fuser section.
31. Fuser thermostat 2 (FTS2)..... Prevents overheating in the fuser section.
32. Duplex paper conveying switch
(DUPPCSW) Detects a paper jam in the duplex section.
33. Left cover 2 switch (LC2SW) Detects the opening and closing of the left cover 2.
34. Overflow sensor (OFS) Detects when the waste toner box is full.
35. Humidity sensor (HUMS) Detects absolute humidity.
36. Temperature sensor (TEMS)..... Detects inner temperature.

(3) Motors**Figure 2-2-3 Motors**

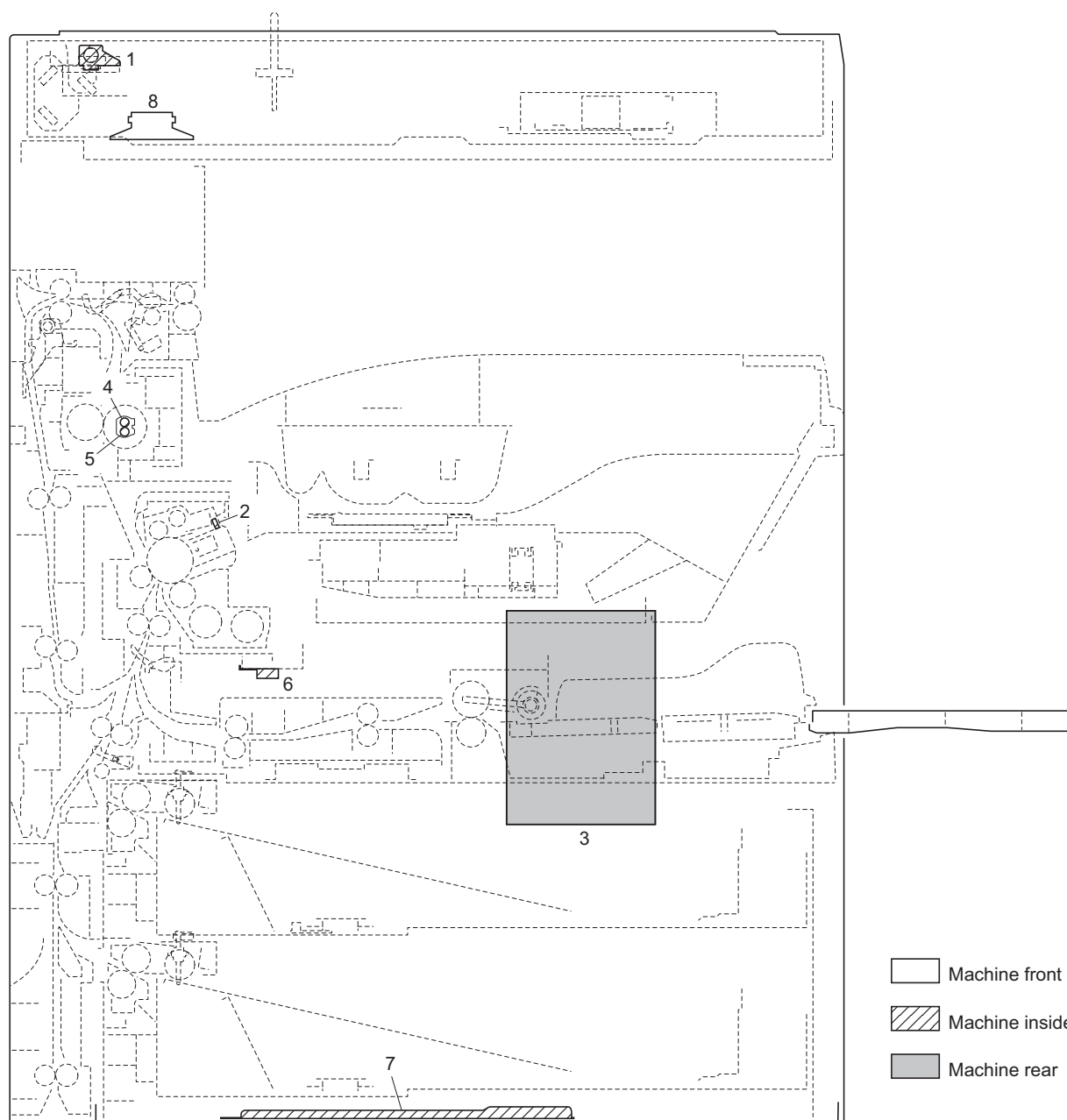
- | | |
|-------------------------------------|--|
| 1. Main motor (MM)..... | Drives developing section and fuser section. |
| 2. Drum motor (DM)..... | Drives the drum. |
| 3. Paper feed motor (PFM)..... | Drives paper feed section. |
| 4. Upper lift motor (LM-U)..... | Drives cassette 1 lift. |
| 5. Lower lift motor (LM-L)..... | Drives cassette 2 lift. |
| 6. Scanner motor (SM)..... | Drives the optical system. |
| 7. Eject motor (EM)..... | Drives the eject section. |
| 8. Toner feed motor (TFM)..... | Replenishes toner. |
| 9. Polygon motor (PM)..... | Drives the polygon mirror. |
| 10. Cooling fan motor 1 (CFM1)..... | Cools the machine interior. |
| 11. Cooling fan motor 2 (CFM2)..... | Cools the machine interior. |
| 12. Cooling fan motor 3 (CFM3)..... | Cools the machine interior (around the power source PWB). |
| 13. Cooling fan motor 4 (CFM4)..... | Cools the machine interior and supports paper transfer for duplex copying. |
| 14. Cooling fan motor 5 (CFM5)..... | Cools the machine interior and supports paper transfer for duplex copying. |
| 15. Cooling fan motor 6 (CFM6)..... | Cools the machine interior (controller box). |

2H0/2HZ

- 16. Cooling fan motor 7 (CFM7) Cools the machine interior (operation panel).
- 17. Cooling fan motor 8 (CFM8) Cools the machine interior (eject section).

(4) Clutches and solenoids**Figure 2-2-4 Clutches and solenoids**

- | | |
|---|---|
| 1. Upper paper feed clutch (PFCL-U) | Primary paper feed from the cassette 1. |
| 2. Lower paper feed clutch (PFCL-L) | Primary paper feed from the cassette 2. |
| 3. Feed clutch 1 (FCL1) | Controls the drive of feed roller. |
| 4. Feed clutch 2 (FCL2) | Controls the drive of feed roller. |
| 5. Feed clutch 3 (FCL3) | Controls the drive of feed roller. |
| 6. MP paper feed clutch (MPPFCL) | Primary paper feed from the MP tray. |
| 7. MP feed clutch (MPFCL) | Controls the drive of MP feed roller. |
| 8. Registration clutch (RCL) | Secondary paper feed. |
| 9. Duplex feed clutch (DUPFCL) | Controls the drive of the duplex feed roller. |
| 10. Toner feed clutch (TFCL) | Replenishes toner. |
| 11. Feedshift solenoid (FSSOL) | Operates the feedshift guide. |

(5) Other electrical components**Figure 2-2-5 Other electrical components**

- | | |
|--------------------------------|---|
| 1. Exposure lamp (EL) | Exposes originals. |
| 2. Cleaning lamp (CL) | Removes residual charge from the drum surface. |
| 3. Hard disk unit (HDD) | Stores the image data and information of job accounting mode. |
| 4. Fuser heater M (FH-M) | Heats the heat roller. |
| 5. Fuser heater S (FH-S) | Heats the heat roller. |
| 6. Drum heater (DH) | Dehumidifies the image formation section. |
| 7. Cassette heater (CH) | Dehumidifies the cassette section. |
| 8. Speaker (SP) | Outputs buzzer, monitoring and speaker sounds. |

2-3-1 Power source PWB

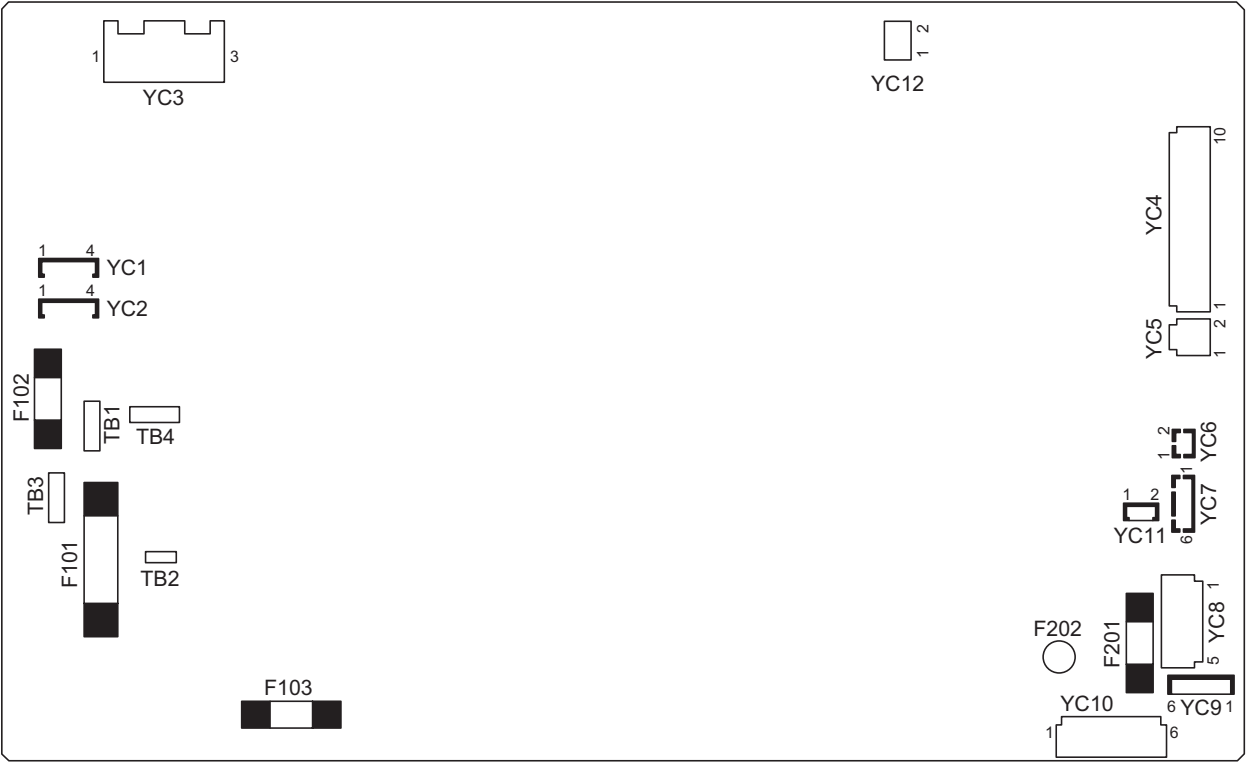


Figure 2-3-1 Power source PWB silk-screen diagram

Connector	Pin No.	Signal	I/O	Voltage	Description
TB Connected to the AC inlet and main power switch	TB1	LIVE	I	120 V AC 220-240 V AC	AC power input
	TB2	NEUTRAL	I	120 V AC 220-240 V AC	AC power input
	TB3	LIVE	O	120 V AC 220-240 V AC	AC power output to MSW
	TB4	LIVE	I	120 V AC 220-240 V AC	AC power input from MSW
YC1 Connected to the cassette heater	1	LIVE	O	120 V AC 220-240 V AC	AC power output
	2	N.C.	-	-	Not used
	3	N.C.	-	-	Not used
	4	NEUTRAL	O	120 V AC 220-240 V AC	AC power output
YC2 Connected to the cassette heater	1	LIVE	O	120 V AC 220-240 V AC	AC power output
	2	N.C.	-	-	Not used
	3	N.C.	-	-	Not used
	4	NEUTRAL	O	120 V AC 220-240 V AC	AC power output
YC3 Connected to the fuser heater M/S	1	NEUTRAL	O	120/0 V AC 220-240/0 V AC	FH-M: On/Off
	2	NEUTRAL	O	120/0 V AC 220-240/0 V AC	FH-S: On/Off
	3	LIVE	O	120 V AC 220-240 V AC	AC power output to FM-M/S
YC4 Connected to the main PWB	1	+5V	O	5 V DC	5 V DC power output to MPWB
	2	+5V	O	5 V DC	5 V DC power output to MPWB
	3	+5VSL	O	5 V DC	5 V DC power output to MPWB
	4	+12VSL	O	12 V DC	12 V DC power output to MPWB
	5	+24VSL	O	24 V DC	24 V DC power output to MPWB
	6	GND	-	-	Ground
	7	GND	-	-	Ground
	8	GND	-	-	Ground
	9	GND	-	-	Ground
	10	GND	-	-	Ground
YC5 Connected to the interface PWB	1	GND	-	-	Ground
	2	+5V	O	5 V DC	5 V DC power output to IFPWB
YC6 Connected to the cooling fan motor 3	1	FAN3DRN	O	0/24 V DC	CFM3: On/Off
	2	+24VSL	O	24 V DC	24 V DC power output to CFM3

Connector	Pin No.	Signal	I/O	Voltage	Description
YC7 Connected to the engine PWB	1	MHEATN	I	0/5 V DC	FH-M: On/Off
	2	SHEATN	I	0/5 V DC	FH-S: On/Off
	3	FAN3DRN	I	0/24 V DC	CFM3: On/Off
	4	GND	-	-	Ground
	5	ZCROSSC	O	0/5 V DC (pulse)	Zero-cross signal
	6	SLEEPN	O	0/5 V DC	Sleep signal: On/Off
YC8 Connected to the engine PWB	1	+5VSL	O	5 V DC	5 V DC power output to EPWB
	2	GND	-	-	Ground
	3	GND	-	-	Ground
	4	+24VSL	O	24 V DC	24 V DC power output to EPWB
	5	+24VSL	O	24 V DC	24 V DC power output to EPWB
YC9 Connected to the optional document finisher	1	GND	-	-	Ground
	2	GND	-	-	Ground
	3	GND	-	-	Ground
	4	GND	-	-	Ground
	5	GND	-	-	Ground
	6	GND	-	-	Ground
YC10 Connected to the optional paper feeder and optional document finisher	1	+5VSL	O	5 V DC	5 V DC power output to document finisher
	2	+24VSL	O	24 V DC	24 V DC power output to document finisher
	3	+24VSL	O	24 V DC	24 V DC power output to paper feeder
	4	GND	-	-	Ground
	5	GND	-	-	Ground
YC11 Connected to the main PWB	1	GND	-	-	Ground
	2	+5VSL	O	5 V DC	5 V DC power output to MPWB
YC12 Connected to the engine PWB	1	N.C.	-	-	Not used
	2	+24VIL	O	24 V DC	24 V DC power output to EPWB

2-3-2 Engine PWB

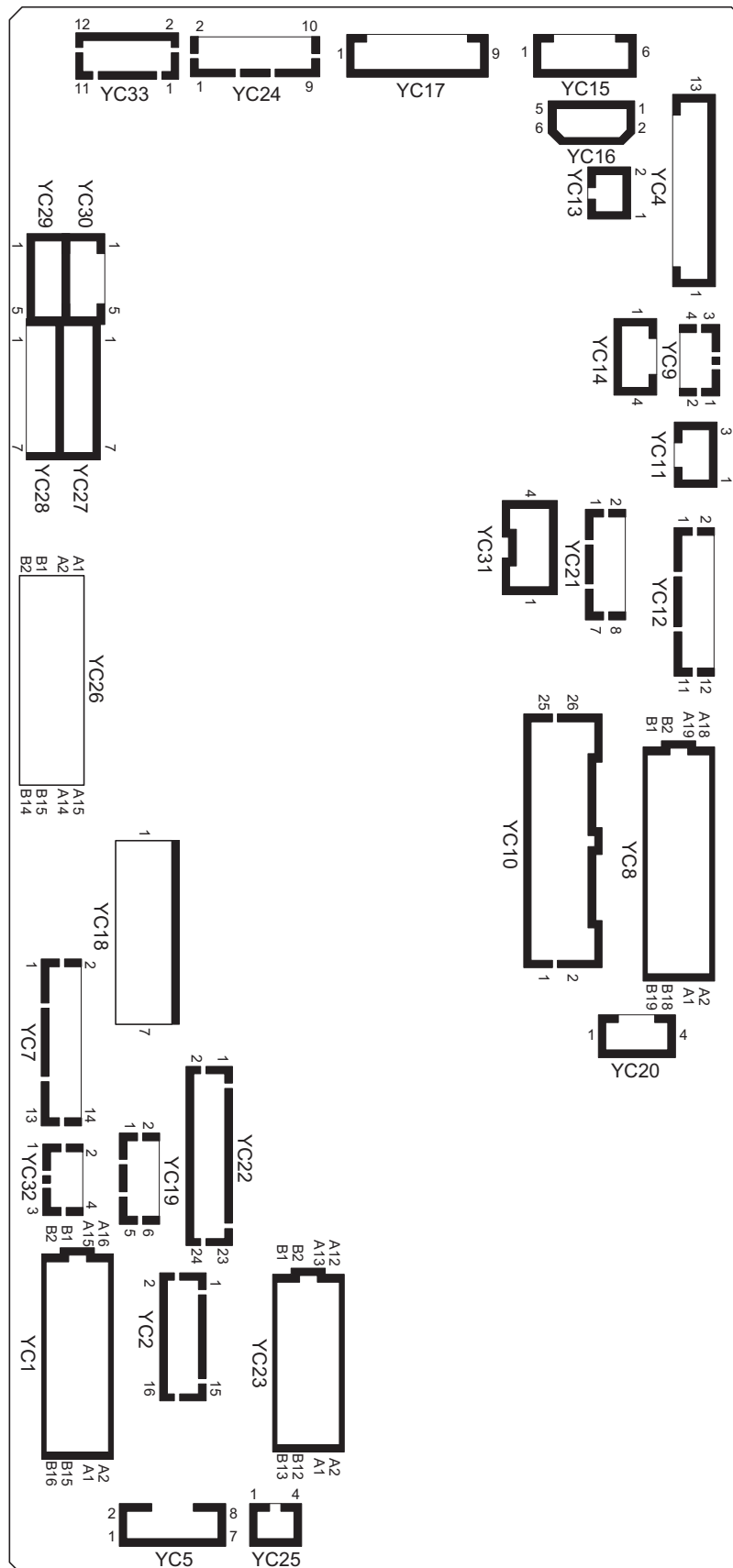


Figure 2-3-2 Engine PWB silk-screen diagram

Connector	Pin No.	Signal	I/O	Voltage	Description
YC1 Connected to the over-flow sensor, cleaning lamp, toner sensor, humidity sensor, toner feed motor, developing PWB, drum PWB and fuser unit	A1	GND	-	-	Ground
	A2	TONEFUL	I	0/5 V DC	OFS: On/Off
	A3	+5V	O	5 V DC	5 V DC power output to OFS
	A4	+24V	O	24 V DC	24 V DC power output to CL
	A5	ERASE3N	O	0/24 V DC	CL: On/Off
	A6	ERASE2N	O	0/24 V DC	CL: On/Off
	A7	ERASE1N	O	0/24 V DC	CL: On/Off
	A8	GND	-	-	Ground
	A9	DEVDET N	I	0/5 V DC	TNS: On/Off
	A10	+5V	O	5 V DC	5 V DC power output to TNS
	A11	+5V	O	5 V DC	5 V DC power output to HUMS
	A12	HUMID_SDA	I/O	Analog	HUMS detection voltage signal
	A13	GND	-	-	Ground
	A14	HUMID_SCL	O	0/5 V DC (pulse)	HUMS clock signal
	A15	TNMOT24V	O	24 V DC	24 V DC power output to TFM
	A16	TNMOTREM	O	0/24 V DC	TFM: On/Off
	B1	IUID1DET N	I	0/5 V DC	Developing unit detection signal
	B2	GND	-	-	Ground
	B3	IUID1SDA	I/O	0/5 V DC (pulse)	Developing unit EEPROM data signal
	B4	IUID1SCL	O	0/5 V DC (pulse)	Developing unit EEPROM clock signal
	B5	+5V	O	5 V DC	5 V DC power output to developing unit
	B6	IUID2DET N	I	0/5 V DC	Drum unit detection signal
	B7	GND	-	-	Ground
	B8	IUID2SDA	I/O	0/5 V DC (pulse)	Drum unit EEPROM data signal
	B9	IUID2SCL	O	0/5 V DC (pulse)	Drum unit EEPROM clock signal
	B10	+5V	O	5 V DC	5 V DC power output to drum unit
	B11	THEAMA_GND	-	-	Ground
	B12	THEAMA	I	Analog	FTH1 detection voltage signal
	B13	FUFMLTN	O	0/5 V DC	Fuse cut signal
	B14	FIXTHCEN	I	Analog	FTH2 detection voltage signal
	B15	N.C.	-	-	Not used
	B16	+3.3V	O	3.3 V DC	3.3 V DC power output to FUPWB
YC2 Connected to the polygon motor, cooling fan motor 1, toner container sensor and toner container detection switch	1	+24VSL	O	24 V DC	24 V DC power output to PM
	2	GND	-	-	Ground
	3	PLGDRN	O	0/24 V DC	PM: On/Off
	4	PLGRDYN	I	0/5 V DC	PM ready signal
	5	PLGCLKN	O	0/5 V DC (pulse)	PM clock signal
	6	FAN1 DRN	O	0/24 V DC	CFM1: On/Off
	7	FAN1 POW	O	24 V DC	24 V DC power output to CFM1
	8	GND	-	-	Ground
	9	COUNTSENS	I	0/5 V DC	TCS: On/Off
	10	+5VSL	O	5 V DC	5 V DC power output to TCS
	15	CONTSW	I	0/5 V DC	TCDSW: On/Off
	16	GND	-	-	Ground

Connector	Pin No.	Signal	I/O	Voltage	Description
YC4 Connected to the optional built-in finisher and optional job separator	1	RLSOLN	O	0/24 V DC	FSSOL (return): On/Off
	2	SLSOLN	O	0/24 V DC	FSSOL (activate): On/Off
	3	SCLK	O	0/5 V DC (pulse)	Built-in finisher/Job separator clock signal
	4	LOPSDI	I	0/5 V DC (pulse)	Built-in finisher serial communication data signal/Job separator JBESW: On/Off
	5	LOPSDO	O	0/5 V DC (pulse)	Built-in finisher/Job separator serial communication data signal
	6	LOPRDY	I	0/5 V DC	Built-in finisher ready signal/Job separator EPDSW: On/Off
	7	LOPSEL	O	0/5 V DC	Built-in finisher/Job separator select signal
	8	GND	-	-	Ground
	9	+5VSL	O	5 V DC	5 V DC power output to built-in finisher/Job separator
	10	GND	-	-	Ground
	11	GND	-	-	Ground
	12	+24VSL	O	24 V DC	24 V DC power output to built-in finisher/Job separator
	13	+24VSL	O	24 V DC	24 V DC power output to built-in finisher/Job separator
YC5 Connected to the optional document finisher	1	DET	I	0/5 V DC	Document finisher connection signal
	2	DFSDO	O	0/5 V DC (pulse)	Document finisher serial communication data signal
	3	DFSDI	I	0/5 V DC (pulse)	Document finisher serial communication data signal
	4	DFSCCLK	O	0/5 V DC (pulse)	Document finisher clock signal
	5	DFSEL	O	0/5 V DC	Document finisher select signal
	6	SISEL	-	-	Not used
	7	DFRDY	I	0/5 V DC	Document finisher ready signal
	8	SIRDY	-	-	Not used
YC7 Connected to the MP tray unit	1	MPFSIZE0	I	0/5 V DC	MPPWSW: On/Off
	2	MPFSIZE1	I	0/5 V DC	MPPWSW: On/Off
	3	MPFSIZE2	I	0/5 V DC	MPPWSW: On/Off
	4	GND	-	-	Ground
	5	+5VSL	O	5 V DC	5 V DC power output to MPPSW
	6	MPFPAPS	I	0/5 V DC	MPPSW: On/Off
	7	GND	-	-	Ground
	8	+24VSL	O	24 V DC	24 V DC power output to MPPFCL
	9	MPFPAPCL	O	0/24 V DC	MPPFCL: On/Off
	10	+24VSL	O	24 V DC	24 V DC power output to MPFCL
	11	MPFFECL	O	0/24 V DC	MPFCL: On/Off
	12	+5VSL	O	5 V DC	5 V DC power output to MPPLSW
	13	MPFLENGTH	I	0/5 V DC	MPPLSW: On/Off
	14	GND	-	-	Ground

Connector	Pin No.	Signal	I/O	Voltage	Description
YC8 Connected to the feed switch 1/2/3, feed clutch 1/2/3, left cover 2 switch, upper/lower paper feed clutches, toner feed clutch, registration switch, registration clutch, duplex feed clutch, duplex paper conveying switch and cooling fan motor 4/5	A1	GND	-	-	Ground
	A2	LFEED_SW3	I	0/5 V DC	FSW3: On/Off
	A3	+5V	O	5 V DC	5 V DC power output to FSW3
	A4	+24VR	O	24 V DC	24 V DC power output to FCL3
	A5	FEED3CL	O	0/24 V DC	FCL3: On/Off
	A6	GND	-	-	Ground
	A7	LFEED_SW2	I	0/5 V DC	FSW2: On/Off
	A8	+5V	O	5 V DC	5 V DC power output to FSW2
	A9	GND	-	-	Ground
	A10	FECOSW	I	0/5 V DC	LC2SW: On/Off
	A11	+24VR	O	24 V DC	24 V DC power output to FCL2
	A12	FEED2CL	O	0/24 V DC	FCL2: On/Off
	A13	UPFECL	O	0/24 V DC	PFCL-U: On/Off
	A14	+24V	O	24 V DC	24 V DC power output to PFCL-U
	A15	LOFECL	O	0/24 V DC	PFCL-L: On/Off
	A16	+24V	O	24 V DC	24 V DC power output to PFCL-L
	A17	TONERCLREM	O	0/24 V DC	TFCL: On/Off
	A18	TONERCL+24V	O	24 V DC	24 V DC power output to TFCL
	A19	N.C.	-	-	Not used
	B1	GND	-	-	Ground
	B2	RESISTSW	I	0/5 V DC	RSW: On/Off
	B3	+5V	O	5 V DC	5 V DC power output to RSW
	B4	GND	-	-	Ground
	B5	UFEED_SW	I	0/5 V DC	FSW1: On/Off
	B6	+5V	O	5 V DC	5 V DC power output to FSW1
	B7	+24VR	O	24 V DC	24 V DC power output to FCL1
	B8	FEED1CL	O	0/24 V DC	FCL1: On/Off
	B9	DUPCL	O	0/24 V DC	DUPFCL: On/Off
	B10	+24VR	O	24 V DC	24 V DC power output to DUPFCL
	B11	GND	-	-	Ground
	B12	DUPSW	I	0/5 V DC	DUPPCSW: On/Off
	B13	+5V	O	5 V DC	5 V DC power output to DUPPCSW
	B14	+24VR	O	24 V DC	24 V DC power output to RCL
	B15	RESFECL	O	0/24 V DC	RCL: On/Off
	B16	FAN4REM	O	0/24 V DC	CFM4: On/Off
	B17	+24VR	O	24 V DC	24 V DC power output to CFM4
	B18	FAN5REM	O	0/24 V DC	CFM5: On/Off
	B19	+24VR	O	24 V DC	24 V DC power output to CFM5
YC9 Connected to the feed-shift switch and eject switch	1	GND	-	-	Ground
	2	SEPSWN	I	0/5 V DC	FSSW: On/Off
	3	EXTSWN	I	0/5 V DC	ESW: On/Off
	4	+5V2	O	5 V DC	5 V DC power output to FSSW/ESW

Connector	Pin No.	Signal	I/O	Voltage	Description
YC10 Connected to the main motor, drum motor, paper feed motor and drum heater	1	+24VSL	O	24 V DC	24 V DC power output to MM
	2	+24VSL	O	24 V DC	24 V DC power output to DM
	3	+24VSL	O	24 V DC	24 V DC power output to MM
	4	+24VSL	O	24 V DC	24 V DC power output to DM
	5	GND	-	-	Ground
	6	GND	-	-	Ground
	7	GND	-	-	Ground
	8	GND	-	-	Ground
	9	MMOTLOCK	I	0/5 V DC	MM lock signal
	10	DMOTLOCK	I	0/5 V DC	DM lock signal
	11	MMOTON	O	0/24 V DC	MM: On/Off
	12	DMOTON	O	0/24 V DC	DM: On/Off
	13	MMOTCCW	O	0/5 V DC	MM rotation switch signal
	14	DMOTCCW	O	0/5 V DC	DM rotation switch signal
	15	MMOTCLK	O	0/5 V DC (pulse)	MM clock signal
	16	DMOTCLK	O	0/5 V DC (pulse)	DM clock signal
	17	+24VSL	O	24 V DC	24 V DC power output to PFM
	18	+24VSL	O	24 V DC	24 V DC power output to PFM
	19	GND	-	-	Ground
	20	GND	-	-	Ground
	21	SMOTLOCK	I	0/5 V DC	PFM lock signal
	22	SMOTON	O	0/24 V DC	PFM: On/Off
	23	SMOTCCW	O	0/5 V DC	PFM rotation switch signal
	24	SMOTCLK	O	0/5 V DC (pulse)	PFM clock signal
	25	+24VSL	O	24 V DC	24 V DC power output to DH
	26	DHEATREM	O	0/24 V DC	DH: On/Off
YC11 Connected to the feed-shift solenoid	1	+24V1	O	24 V DC	24 V DC power output to FSSOL
	2	DFSOLDR	O	0/24 V DC	FSSOL (activate): On/Off
	3	DFSOLRS	O	0/24 V DC	FSSOL (return): On/Off
YC12 Connected to the high voltage PWB	1	+24VIL2	O	24 V DC	24 V DC power output to HVTPWB
	2	DHVSURUP	O	0/5 V DC	Developing slowup signal
	3	DHVCLKC	O	0/5 V DC (pulse)	Developing bias clock signal
	4	SHVDRN	O	0/5 V DC	Separation high voltage: On/Off
	5	MHVDRN	O	0/5 V DC	Main charging high voltage: On/Off
	6	GND	-	-	Ground
	7	GND	-	-	Ground
	8	DHVADJC	O	Analog	Developing bias adjust signal
	9	SHVISELN	O	0/5 V DC	Separation high voltage switch signal
	10	THVADJC	O	Analog	Transfer high voltage adjust signal
	11	THVDRN	O	0/5 V DC	Transfer high voltage: On/Off
	12	+5V	O	5 V DC	5 V DC power output to HVTPWB

Connector	Pin No.	Signal	I/O	Voltage	Description
YC13 Connected to the cooling fan motor 2	1	FAN2POW	O	24 V DC	24 V DC power output to CFM2
	2	FAN2DRN	O	0/24 V DC	CFM2: On/Off
YC14 Connected to the eject motor	1	COMDA	O	0/24 V DC (pulse)	EM drive control signal (A)
	2	COMDNB	O	0/24 V DC (pulse)	EM drive control signal (_B)
	3	COMDNA	O	0/24 V DC (pulse)	EM drive control signal (_A)
	4	COMDB	O	0/24 V DC (pulse)	EM drive control signal (B)
YC15 Connected to the cooling fan motor 8 and scanner motor	1	ISNDA	O	0/24 V DC (pulse)	SM drive control signal (A)
	2	ISMDNB	O	0/24 V DC (pulse)	SM drive control signal (_B)
	3	ISMDNA	O	0/24 V DC (pulse)	SM drive control signal (_A)
	4	ISMDB	O	0/24 V DC (pulse)	SM drive control signal (B)
	5	+24VSL	O	24 V DC	24 V DC power output to CFM8
	6	SCAN_FAN	O	0/5 V DC	CFM8: On/Off
YC16 Connected to the scanner inverter PWB	1	LAMPN	O	0/24 V DC	EL: On/Off
	2	PGND	-	-	Ground
	3	+24V1	O	24 V DC	24 V DC power output to SINPWB
	4	+24V1	O	24 V DC	24 V DC power output to SINPWB
	5	PGND	-	-	Ground
	6	LAMPN	O	0/24 V DC	EL: On/Off
YC17 Connected to the scanner home position switch, original detection switch and original size detection sensor	1	+5VSL	O	5 V DC	5 V DC power output to SHPSW
	2	HPSWN	I	0/5 V DC	SHPSW: On/Off
	3	GND	-	-	Ground
	4	+5VSL	O	5 V DC	5 V DC power output to ODSW
	5	OPSWN	I	0/5 V DC	ODSW: On/Off
	6	GND	-	-	Ground
	7	+5VSL	O	5 V DC	5 V DC power output to OSDS
	8	ORGLSWN	I	0/5 V DC	OSDS: On/Off
	9	GND	-	-	Ground
YC18 Connected to the power source PWB	1	+5VSL	I	5 V DC	5 V DC input from PSPWB
	2	+24VSL	I	24 V DC	24 V DC power input from PSPWB
	3	GND	-	-	Ground
	4	+24VIL1_IN	I	24 V DC	24 V DC power input from SSW1
	5	+24VIL1_OUT	O	24 V DC	24 V DC power output to SSW2
	6	GND	-	-	Ground
	7	+24VIL2	I	24 V DC	24 V DC power input from SSW2
YC19 Connected to the power source PWB	1	SLEEPN	I	0/5 V DC	Sleep signal: On/Off
	2	ZCROSSC	I	0/5 V DC (pulse)	Zero-cross signal
	3	GND	-	-	Ground
	4	FAN3DRN	O	0/24 V DC	CFM3: On/Off
	5	SHEATN	O	0/5 V DC	FH-S: On/Off
	6	MHEATN	O	0/5 V DC	FH-M: On/Off

Connector	Pin No.	Signal	I/O	Voltage	Description
YC20 Connected to the key counter	1	+24V1	O	24 V DC	24 V DC power output to key counter
	2	KEYCN	O	0/5 V DC	Key counter signal
	3	SGND	-	-	Ground
	4	KEYENBN	I	0/5 V DC	Key counter connection signal
YC22 Connected to the upper/lower paper size length switches, optional paper feeder and MP feed switch	1	+24VIL2PF2	O	24 V DC	24 V DC power output to PWSW-L
	2	+24VIL2PF1	O	24 V DC	24 V DC power output to PWSW-U
	3	+24VIL2	O	24 V DC	24 V DC power output to PWSW-L
	4	+24VIL2	O	24 V DC	24 V DC power output to PWSW-U
	5	LODIG1	I	0/5 V DC	PWSW-L: On/Off
	6	HIDIG1	I	0/5 V DC	PWSW-U: On/Off
	7	LODIG0	I	0/5 V DC	PWSW-L: On/Off
	8	HIDIG0	I	0/5 V DC	PWSW-U: On/Off
	9	GND	-	-	Ground
	10	GND	-	-	Ground
	11	LODIG2	I	0/5 V DC	PWSW-L: On/Off
	12	HIDIG2	I	0/5 V DC	PWSW-U: On/Off
	13	GND	-	-	Ground
	14	+5VSL	O	5 V DC	5 V DC power output to paper feeder
	15	PFSEL	O	0/5 V DC	Paper feeder select signal
	16	PFCLK	O	0/5 V DC (pulse)	Paper feeder clock signal
	17	PFSDI	I	0/5 V DC (pulse)	Paper feeder serial communication data signal
	18	PFSDO	O	0/5 V DC (pulse)	Paper feeder serial communication data signal
	19	PFREADY	I	0/5 V DC	Paper feeder ready signal
	20	PFSEED	O	0/5 V DC	Paper feeder feed signal
	21	GND	-	-	Ground
	22	BYPFEEDSW	I	0/5 V DC	MPFSW: On/Off
	23	+5VSL	O	5 V DC	5 V DC power output to MPFSW
	24	N.C.	-	-	Not used
YC23 Connected to the upper/lower lift limit switches, upper/lower paper switches, upper/lower lift motors and upper/lower paper size length switches	A1	GND	-	-	Ground
	A2	LOLIFTSW	I	0/5 V DC	LICSW-L: On/Off
	A3	+5VSL	O	5 V DC	5 V DC power output to LICSW-L
	A4	GND	-	-	Ground
	A5	LOPAPSW	I	0/5 V DC	PSW-L: On/Off
	A6	+5VSL	O	5 V DC	5 V DC power output to PSW-L
	A7	LOLIFTSW2	I	0/5 V DC	LM-L paper gauge signal
	A8	GND	-	-	Ground
	A9	LOLIFTSW1	I	0/5 V DC	LM-L paper gauge signal
	A10	GND	-	-	Ground
	A11	LOLIFTREM	O	0/24 V DC	LM-L: On/Off
	A12	LOLENGSW	I	0/5 V DC	PLSW-L: On/Off
	A13	GND	-	-	Ground
	B1	GND	-	-	Ground
	B2	HILENGSW	I	0/5 V DC	PLSW-U: On/Off

Connector	Pin No.	Signal	I/O	Voltage	Description
YC23 Connected to the upper/lower lift limit switches, upper/lower paper switches, upper/lower lift motors and upper/lower paper size length switches	B3	HILIFTSW2	I	0/5 V DC	LM-U paper gauge signal
	B4	GND	-	-	Ground
	B5	HILIFTSW1	I	0/5 V DC	LM-U paper gauge signal
	B6	GND	-	-	Ground
	B7	HILIFTREM	O	0/24 V DC	LM-U: On/Off
	B8	GND	-	-	Ground
	B9	HILIFTSW	I	0/5 V DC	LICSW-U: On/Off
	B10	+5VSL	O	5 V DC	5 V DC power output to LICSW-U
	B11	GND	-	-	Ground
	B12	HIPAPSW	I	0/5 V DC	PSW-U: On/Off
	B13	+5VSL	O	5 V DC	5 V DC power output to PSW-U
YC24 Connected to the optional DP	1	GND	-	-	Ground
	2	GND	-	-	Ground
	3	GND	-	-	Ground
	4	GND	-	-	Ground
	5	ORGVSYNC	I	0/5 V DC	Original scanning interval signal
	6	DP_RDY	I	0/5 V DC	DP ready signal
	7	DP_SEL	O	0/5 V DC	DP select signal
	8	SCLK	O	0/5 V DC (pulse)	DP clock signal
	9	SDO	O	0/5 V DC (pulse)	DP serial communication data signal
	10	SDI	I	0/5 V DC (pulse)	DP serial communication data signal
YC25 Connected to the power source PWB	1	N.C.	-	-	Not used
	2	N.C.	-	-	Not used
	3	N.C.	-	-	Not used
	4	+24VIL	I	24V DC	24 V DC power input from PSPWB
YC26 Connected to the main PWB	A1	+5V1	O	5 V DC	5 V DC power output to MPWB
	A2	GND	-	-	Ground
	A3	AFESEL	O	0/3.3 V DC	Select signal
	A4	AFERDY	I	0/3.3 V DC	Ready signal
	A5	AFESI	I	0/3.3 V DC (pulse)	Serial communication data signal
	A6	AFESCLKN	I	0/3.3 V DC (pulse)	Clock signal
	A7	AFESDO	O	0/3.3 V DC (pulse)	Serial communication data signal
	A8	E2CSDIR	O	0/3.3 V DC	E2CSDIR signal
	A9	E2CSBSY	O	0/3.3 V DC	E2CSBSY signal
	A10	E2CEGSI	I	0/3.3 V DC (pulse)	Serial communication data signal
	A11	E2CSCKN	I	0/3.3 V DC (pulse)	Clock signal
	A12	E2CEGSO	O	0/3.3 V DC (pulse)	Serial communication data signal
	A13	SLEEP	I	0/3.3 V DC	Sleep signal: On/Off
	A14	24VDN	O	0/3.3 V DC	24 V DC power shut-off signal
	A15	OPSWN	-	-	Not used
	B1	OVSYN	O	0/3.3 V DC	Original scanning interval signal
	B2	SCANHLDN	I	0/3.3 V DC	Scanner hold signal
	B3	EGSCANRDY	I	0/3.3 V DC	Printing image interval signal

Connector	Pin No.	Signal	I/O	Voltage	Description
YC26 Connected to the main PWB	B4	GND	-	-	Ground
	B5	OUTPEN	O	0/3.3 V DC	Laser diode output signal
	B6	GND	-	-	Ground
	B7	E2CEGIRN	O	0/3.3 V DC	E2CEGIRN signal
	B8	GND	-	-	Ground
	B9	EGHLDN	I	0/3.3 V DC	Engine hold signal
	B10	GND	-	-	Ground
	B11	EGRESETN	I	0/3.3 V DC	Reset signal
	B12	GND	-	-	Ground
	B13	PDMASKN	O	0/3.3 V DC	Auxiliary scanning interval signal
	B14	GND	-	-	Ground
	B15	+3.3V_EGN	O	3.3 V DC	3.3 V DC power output to MPWB
YC31 Connected to the optional DP	1	+24VSL	O	24 V DC	24 V DC power output to DP
	2	GND	-	-	Ground
	3	+5VSL	O	5 V DC	5 V DC power output to DP
	4	GND	-	-	Ground
YC32 Connected to the temperature sensor	1	+5VSL	O	5 V DC	5 V DC power output to TEMS
	2	HUMIDA	I	Analog	TEMS detection voltage signal
	3	GND	-	-	Ground
	4	TEMPA	I	Analog	TEMS detection voltage signal

2-3-3 Main PWB

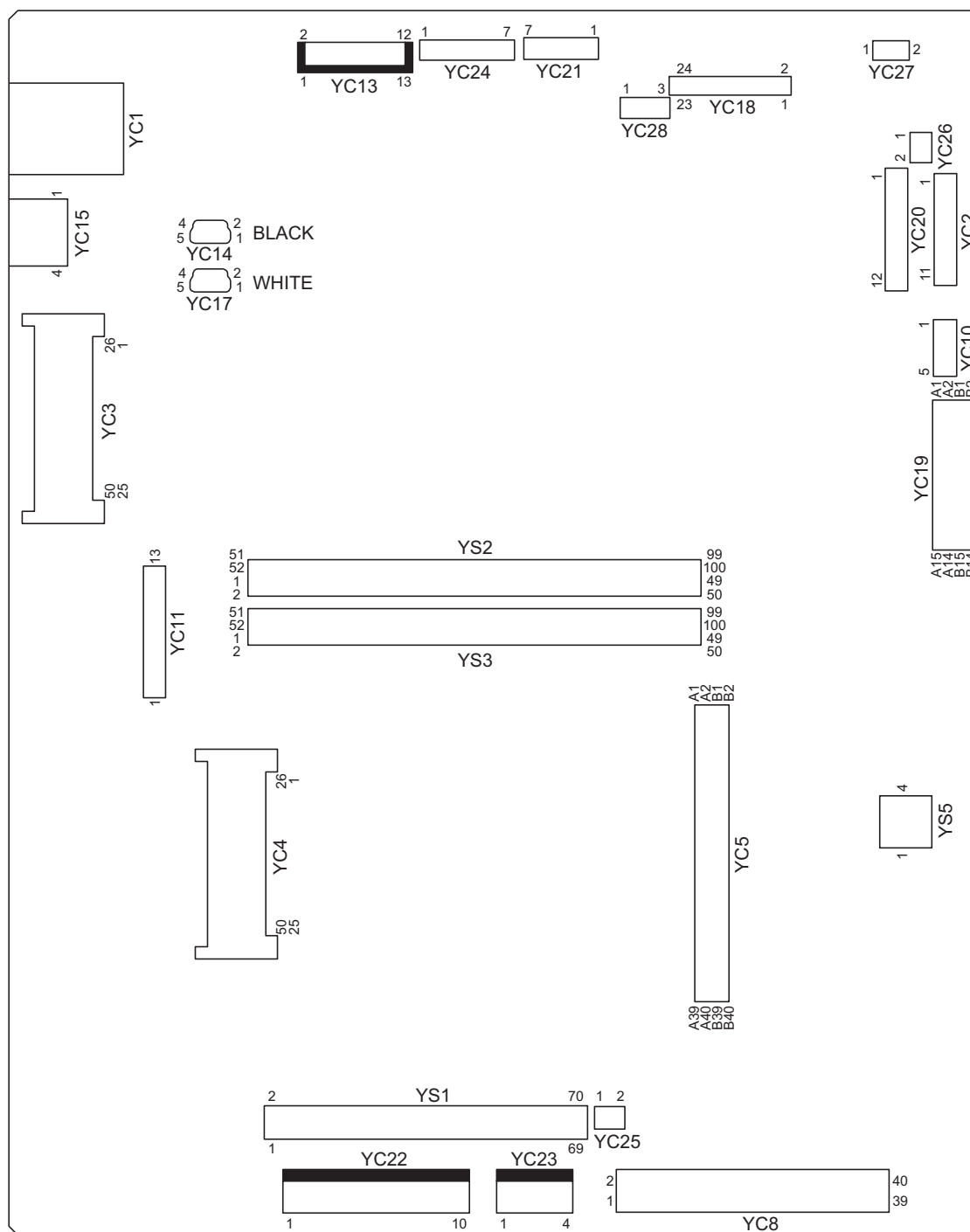


Figure 2-3-3 Main PWB silk-screen diagram

Connector	Pin No.	Signal	I/O	Voltage	Description
YC13 Connected to the main operation unit PWB	1	FPSTAT	O	0/3.3 V DC	Operation panel status signal
	2	LED_PANEL1	O	0/3.3 V DC (pulse)	Operation panel Indicator LED drive signal 1
	3	LED_PANEL0	O	0/3.3 V DC (pulse)	Operation panel Indicator LED drive signal 0
	4	RST_PANELN	O	0/3.3 V DC	OPWB-M reset signal
	5	HLD_PANEL	O	0/3.3 V DC	Operation panel displaying enable signal
	6	SW_FOOTN	-	-	Not used
	7	24V_DOWN	O	0/3.3 V DC	24 V DC power shut-off signal
	8	SPEND_ENTR	O	0/3.3 V DC	Energy save mode control signal
	9	AUDIO_KUIO	O	Analog	Audio output signal
	10	SGND	-	-	Ground
	11	PH_KEY	I	0/5 V DC	Power key: On/Off
	12	SGND	-	-	Ground
	13	+5V	O	5 V DC	5 V DC power output to OPWB-M
YC14 Connected to the main operation unit PWB	1	VBUS	O	5 V DC	5 V DC power output
	2	DATA-	I/O	-	USB data signal
	3	DATA+	I/O	-	USB data signal
	4	N.C.	-	-	Not used
	5	GND	-	-	Ground
YC17 Connected to the USB slot	1	VBUS	O	5 V DC	5 V DC power output
	2	DATA-	I/O	-	USB data signal
	3	DATA+	I/O	-	USB data signal
	4	N.C.	-	-	Not used
	5	GND	-	-	Ground
YC18 Connected to the CCD PWB	1	5V	O	5 V DC	5 V DC power output to CCDPWB
	2	5V	O	5 V DC	5 V DC power output to CCDPWB
	3	5V	O	5 V DC	5 V DC power output to CCDPWB
	4	CCDB	I	Analog	CCD output signal
	5	CCDBN	-	-	Ground
	6	CCDG	I	Analog	CCD output signal
	7	CCDGN	-	-	Ground
	8	CCDR	I	Analog	CCD output signal
	9	CCDRN	-	-	Ground
	10	GND	-	-	Ground
	11	GND	-	-	Ground
	12	SHBW	O	0/3.3 V DC	B/W shift signal
	13	GND	-	-	Ground
	14	SHRGW	O	0/3.3 V DC	Color shift signal
	15	GND	-	-	Ground
	16	SW	O	0/3.3 V DC	Color/B/W switch signal
	17	GND	-	-	Ground
	18	RSN	O	0/3.3 V DC	CCD control signal
	19	GND	-	-	Ground
	20	CCDCLKN	O	0/3.3 V DC (pulse)	CCD clock signal

Connector	Pin No.	Signal	I/O	Voltage	Description
YC18 Connected to the CCD PWB	21	GND	-	-	Ground
	22	CPN	O	0/3.3 V DC	CCD control signal
	23	N.C.	-	-	Not used
	24	10V	O	10 V DC	10 V DC power output to CCDPWB
YC19 Connected to the engine PWB	A1	+5V1	I	5 V DC	5 V DC power input from EPWB
	A2	GND	-	-	Ground
	A3	AFESEL	I	0/3.3 V DC	Select signal
	A4	AFERDY	O	0/3.3 V DC	Ready signal
	A5	AFESI	O	0/3.3 V DC (pulse)	Serial communication data signal
	A6	AFESCLKN	O	0/3.3 V DC (pulse)	Clock signal
	A7	AFESDO	I	0/3.3 V DC (pulse)	Serial communication data signal
	A8	E2CSDIR	I	0/3.3 V DC	E2CSDIR signal
	A9	E2CSBSY	I	0/3.3 V DC	E2CSBSY signal
	A10	E2CEGSI	O	0/3.3 V DC (pulse)	Serial communication data signal
	A11	E2CSCKN	O	0/3.3 V DC (pulse)	Clock signal
	A12	E2CEGSO	I	0/3.3 V DC (pulse)	Serial communication data signal
	A13	SLEEP	O	0/3.3 V DC	Sleep signal: On/Off
	A14	24VDN	I	0/3.3 V DC	24 V DC power shut-off signal
	A15	OPSWN	-	-	Not used
	B1	OVSYNC	I	0/3.3 V DC	Original scanning interval signal
	B2	SCANHLDN	O	0/3.3 V DC	Scanner hold signal
	B3	EGSCANRDY	O	0/3.3 V DC	Printing image interval signal
	B4	GND	-	-	Ground
	B5	OUTPEN	I	0/3.3 V DC	Laser diode output signal
	B6	GND	-	-	Ground
	B7	E2CEGIRN	I	0/3.3 V DC	E2CEGIRN signal
	B8	GND	-	-	Ground
	B9	EGHLDN	O	0/3.3 V DC	Engine hold signal
	B10	GND	-	-	Ground
	B11	EGRESETN	O	0/3.3 V DC	Reset signal
	B12	GND	-	-	Ground
	B13	PDMASKN	I	0/3.3 V DC	Auxiliary scanning interval signal
	B14	GND	-	-	Ground
	B15	+3.3V_EGN	I	3.3 V DC	3.3 V DC power input from EPWB
YC21 Connected to the LSU	1	PDN	I	0/3.3 V DC	Laser sync signal
	2	SGND	-	-	Ground
	3	OUTPEN	O	0/3.3 V DC	Laser diode output signal
	4	SAMPLEN	O	0/3.3 V DC	Sample hold signal
	5	VDOP	O	-	Image data signal
	6	VDON	O	-	Image data signal
	7	+5V1	O	5 V DC	5 V DC power output to APCPWB

Connector	Pin No.	Signal	I/O	Voltage	Description
YC22 Connected to the power source PWB	1	+5V	I	5 V DC	5 V DC power input from PSPWB
	2	+5V	I	5 V DC	5 V DC power input from PSPWB
	3	+5VSL	I	5 V DC	5 V DC power input from PSPWB
	4	+12VSL	I	12 V DC	12 V DC power input from PSPWB
	5	+24VSL	I	24 V DC	24 V DC power input from PSPWB
	6	GND	-	-	Ground
	7	GND	-	-	Ground
	8	GND	-	-	Ground
	9	GND	-	-	Ground
	10	GND	-	-	Ground
YC23 Connected to the hard disk	1	+12VSL	O	12 V DC	12 V DC power output to HDD
	2	GND	-	-	Ground
	3	GND	-	-	Ground
	4	+5VSL	O	5 V DC	5 V DC power output to HDD
YC24 Connected to the main operation unit PWB	1	+12VSL	O	12 V DC	12 V DC power output to OPWB-M
	2	+5V	O	5 V DC	5 V DC power output to OPWB-M
	3	+5V	O	5 V DC	5 V DC power output to OPWB-M
	4	PGND	-	-	Ground
	5	SGND	-	-	Ground
	6	SGND	-	-	Ground
	7	N.C.	-	-	Not used
YC26 Connected to the cooling fan motor 6	1	+5V	O	5 V DC	5 V DC power output to CFM6
	2	CTL_FAN	O	0/5 V DC	CFM6: On/Off
YC27 Connected to the power source PWB	1	GND	-	-	Ground
	2	+5VSL	I	5 V DC	5 V DC power input from PSPWB

2-3-4 Main operation unit PWB

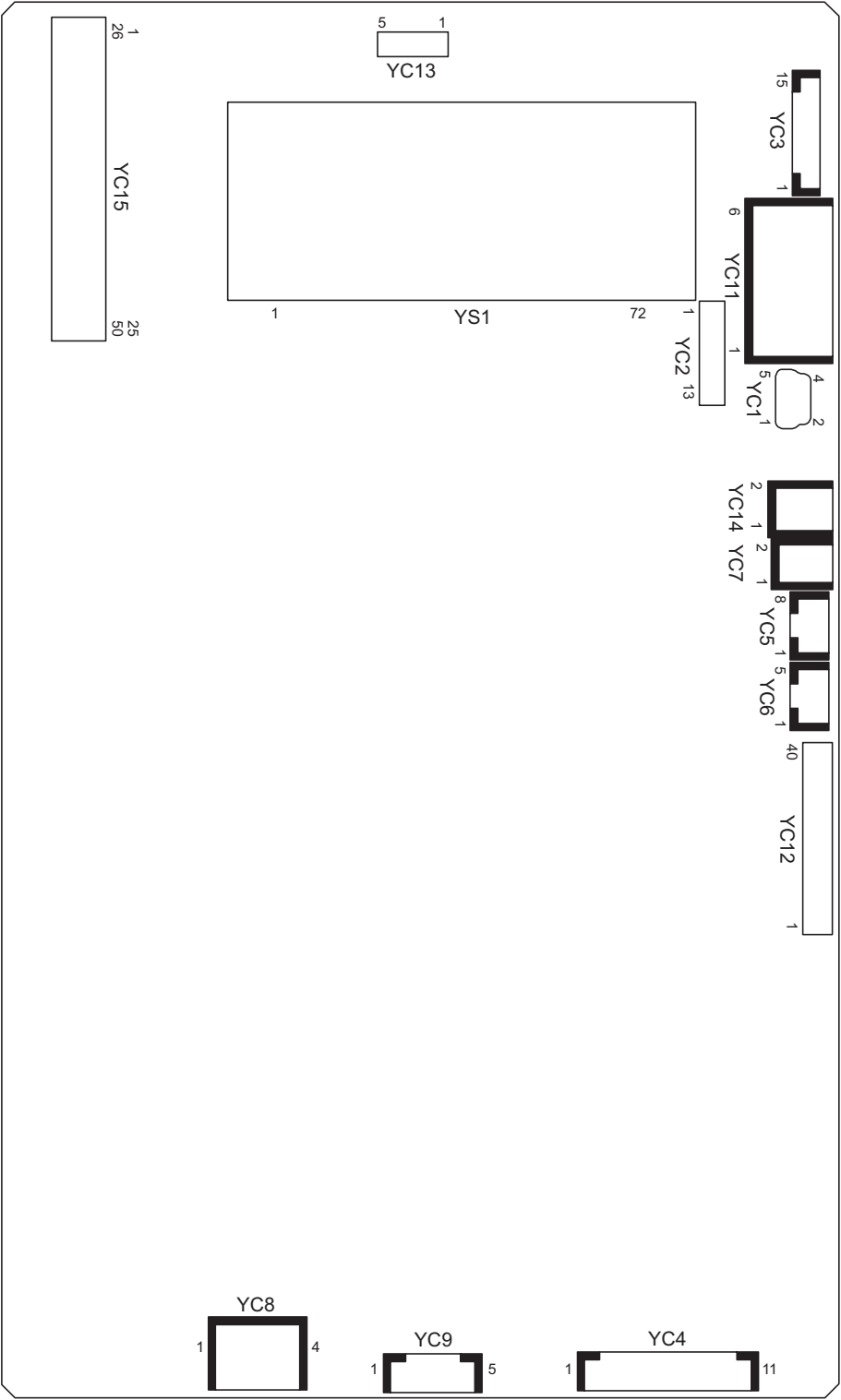


Figure 2-3-4 Main operation unit PWB silk-screen diagram

Connector	Pin No.	Signal	I/O	Voltage	Description
YC1 Connected to the main PWB	1	VBUS	I	5 V DC	5 V DC power input
	2	DATA-	I/O	-	USB data signal
	3	DATA+	I/O	-	USB data signal
	4	N.C.	-	-	N.C.
	5	GND	-	-	Ground
YC2 Connected to the main PWB	1	+5V	I	5 V DC	5 V DC power input from MPWB
	2	SGND	-	-	Ground
	3	PH_KEY	O	0/5 V DC	Power key: On/Off
	4	SGND	-	-	Ground
	5	AUDIO_KUIO	I	Analog	Audio output signal
	6	SPEND_ENTR	I	0/3.3 V DC	Energy save mode control signal
	7	24V_DOWN	I	0/3.3 V DC	24 V DC power shut-off signal
	8	SW_FOOTN	-	-	Not used
	9	HLD_PANEL	I	0/3.3 V DC	Operation panel displaying enable signal
	10	RST_PANELN	I	0/3.3 V DC	OPWB-M reset signal
	11	LED_PANEL0	I	0/3.3 V DC (pulse)	Operation panel Indicator LED drive signal 0
	12	LED_PANEL1	I	0/3.3 V DC (pulse)	Operation panel Indicator LED drive signal 1
	13	FPSTAT	I	0/3.3 V DC	Operation panel status signal
YC3 Connected to the right operation unit PWB	1	KEY0	I	0/3.3 V DC (pulse)	Operation panel key scan return signal 0
	2	KEY1	I	0/3.3 V DC (pulse)	Operation panel key scan return signal 1
	3	KEY2	I	0/3.3 V DC (pulse)	Operation panel key scan return signal 2
	4	KEY3	I	0/3.3 V DC (pulse)	Operation panel key scan return signal 3
	5	KEY4	I	0/3.3 V DC (pulse)	Operation panel key scan return signal 4
	6	SCAN0	O	0/3.3 V DC (pulse)	Scan signal 0
	7	SCAN1	O	0/3.3 V DC (pulse)	Scan signal 1
	8	SCAN2	O	0/3.3 V DC (pulse)	Scan signal 2
	9	SCAN3	O	0/3.3 V DC (pulse)	Scan signal 3
	10	SCAN6	O	0/3.3 V DC (pulse)	Scan signal 6
	11	LED0	O	0/3.3 V DC (pulse)	Operation panel Indicator LED drive signal 0
	12	LED1	O	0/3.3 V DC (pulse)	Operation panel Indicator LED drive signal 1
	13	Wake Up	I	0/5 V DC	Power key: On/Off
	14	5V_MSWON	O	5 V DC	5 V DC power output to OPWB-R
	15	SGND	-	-	Ground
YC4 Connected to the left operation unit PWB	1	KEY5	I	0/3.3 V DC (pulse)	Operation panel key scan return signal 5
	2	KEY6	I	0/3.3 V DC (pulse)	Operation panel key scan return signal 6
	3	KEY7	I	0/3.3 V DC (pulse)	Operation panel key scan return signal 7
	4	SCAN0	O	0/3.3 V DC (pulse)	Scan signal 0
	5	SCAN1	O	0/3.3 V DC (pulse)	Scan signal 1
	6	SCAN2	O	0/3.3 V DC (pulse)	Scan signal 2
	7	SCAN3	O	0/3.3 V DC (pulse)	Scan signal 3
	8	LED2	O	0/3.3 V DC (pulse)	Operation panel Indicator LED drive signal 2
	9	LED3	O	0/3.3 V DC (pulse)	Operation panel Indicator LED drive signal 3
	10	LED4	O	0/3.3 V DC (pulse)	Operation panel Indicator LED drive signal 4
	11	SGND	-	-	Ground

Connector	Pin No.	Signal	I/O	Voltage	Description
YC5 Connected to the upper operation unit PWB	1	SCAN4	O	0/3.3 V DC (pulse)	Scan signal 4
	2	SCAN5	O	0/3.3 V DC (pulse)	Scan signal 5
	3	LED5	O	0/3.3 V DC (pulse)	Operation panel Indicator LED drive signal 5
	4	LED6	O	0/3.3 V DC (pulse)	Operation panel Indicator LED drive signal 6
	5	LED7	O	0/3.3 V DC (pulse)	Operation panel Indicator LED drive signal 7
	6	S_LED0	O	0/3.3 V DC (pulse)	Operation panel Indicator LED drive signal 0
	7	S_LED1	O	0/3.3 V DC (pulse)	Operation panel Indicator LED drive signal 1
	8	SGND	-	-	Ground
YC6 Connected to the front operation unit PWB	1	SCAN5	O	0/3.3 V DC (pulse)	Scan signal 5
	2	LED5	O	0/3.3 V DC (pulse)	Operation panel Indicator LED drive signal 5
	3	LED6	O	0/3.3 V DC (pulse)	Operation panel Indicator LED drive signal 6
	4	S_LED1	O	0/3.3 V DC (pulse)	Operation panel Indicator LED drive signal 1
	5	SGND	-	-	Ground
YC7 Connected to the speaker	1	VO2(+)	O	Analog	Speaker sound signal (+)
	2	VO1(-)	O	Analog	Speaker sound signal (-)
YC8 Connected to the touch panel	1	TOP	I	Analog	Touch panel X+ position signal
	2	LEFT	I	Analog	Touch panel Y+ position signal
	3	BOTTOM	I	Analog	Touch panel X- position signal
	4	RIGHT	I	Analog	Touch panel Y- position signal
YC11 Connected to the main PWB	1	SGND	-	-	Ground
	2	SGND	-	-	Ground
	3	PGND	-	-	Ground
	4	+5V	I	5 V DC	5 V DC power input from MPWB
	5	+5V	I	5 V DC	5 V DC power input from MPWB
	6	+12VSL	I	12 V DC	12 V DC power input from MPWB
YC12 Connected to the LCD	1	SGND	-	-	Ground
	2	SGND	-	-	Ground
	3	B5	O	0/3.3 V DC	LCD control signal B5
	4	B4	O	0/3.3 V DC	LCD control signal B4
	5	B3	O	0/3.3 V DC	LCD control signal B3
	6	SGND	-	-	Ground
	7	B2	O	0/3.3 V DC	LCD control signal B2
	8	B1	O	0/3.3 V DC	LCD control signal B1
	9	B0	O	0/3.3 V DC	LCD control signal B0
	10	SGND	-	-	Ground
	11	G5	O	0/3.3 V DC	LCD control signal G5
	12	G4	O	0/3.3 V DC	LCD control signal G4
	13	G3	O	0/3.3 V DC	LCD control signal G3
	14	SGND	-	-	Ground
	15	G2	O	0/3.3 V DC	LCD control signal G2
	16	G1	O	0/3.3 V DC	LCD control signal G1
	17	G0	O	0/3.3 V DC	LCD control signal G0

Connector	Pin No.	Signal	I/O	Voltage	Description
YC12 Connected to the LCD	18	SGND	-	-	Ground
	19	R5	O	0/3.3 V DC	LCD control signal R5
	20	R4	O	0/3.3 V DC	LCD control signal R4
	21	R3	O	0/3.3 V DC	LCD control signal R3
	22	SGND	-	-	Ground
	23	R2	O	0/3.3 V DC	LCD control signal R2
	24	R1	O	0/3.3 V DC	LCD control signal R1
	25	R0	O	0/3.3 V DC	LCD control signal R0
	26	SGND	-	-	Ground
	27	DE	O	0/3.3 V DC	LCD control signal DE
	28	SGND	-	-	Ground
	29	L_R	O	3.3 V DC	3.3 V DC power output to LCD
	30	U_D	O	3.3 V DC	3.3 V DC power output to LCD
	31	SGND	-	-	Ground
	32	DCLK	O	0/3.3 V DC (pulse)	LCD clock signal
	33	N.C.	-	-	Not used
	34	SGND	-	-	Ground
	35	5V	O	5 V DC	5 V DC power output to LCD
	36	5V	O	5 V DC	5 V DC power output to LCD
	37	5V	O	5 V DC	5 V DC power output to LCD
	38	5V	O	5 V DC	5 V DC power output to LCD
	39	SGND	-	-	Ground
	40	SGND	-	-	Ground
YC13 Connected to the LCD inverter PWB	1	PGND	-	-	Ground
	2	12V	O	12 V DC	12 V DC power output to LINPWB
	3	BK_ON	O	0/5 V DC	LCD back light: On/Off
	4	ADJUST	O	Analog	LCD back light brightness adjustment signal
	5	SGND	-	-	Ground
YC14 Connected to the cooling fan motor 7	1	+5V	O	5 V DC	5 V DC power output to CFM7
	2	FAN_REM	O	0/5 V DC	CFM7: On/Off

Maintenance parts list

Maintenance part name		Spare Parts Catalogue	
Name used in service manual	Name used in parts list	Fig. No.	Ref. No.
Upper/lower paper feed pulley	PULLEY,PAPER FEED	5	2
Upper/lower separation pulley	PULLEY,SEPARATION	5	3
Upper/lower forwarding pulley	PULLEY FEED A	5	7
MP paper feed pulley	UPPER PULLEY,BYPASS	6	55
MP separation pulley	PULLEY,SEPARATION	6	2
MP forwarding pulley	PULLEY FEED A	6	7
MP feed roller 1	PARTS ROLLER MPF FEED A SP	7	21
MP feed roller 2	PARTS ROLLER MPF FEED B SP	7	22
MP feed pulley	PULLEY 15 MPF FEED	7	14
Left registration roller	PARTS ROLLER REGIST LEFT SP	9	29
Right registration roller	ROLLER REGIST RIGHT	9	40
Feed pulley	PULLEY 15 DUPLEX	4	32
Feed pulley	PULLEY 15 DUPLEX	9	30
Feed roller 1	PULLEY MID FEED A ASSY	8	35
Feed roller 1	PULLEY MID FEED B ASSY	8	36
Feed roller 2	PARTS ROLLER VERTICAL FEED A SP	4	22
Feed roller 3	PARTS ROLLER VERTICAL FEED B SP	4	23
Registration cleaner	SPONGE CLEANER REG	8	19
Laser scanner unit	PARTS LK-670	11	12
Platen	CONTACT GLASS	11	6
Slit glass	CONTACT GLASS DP	11	1
Mirror 1	MIRROR A	10	46
Mirror 2 and mirror 3	MIRROR B	10	2
Reflector	REFLECTOR SCANNER	10	41
Exposure lamp	PARTS LAMP SCANNER W SP	10	42
Original size detection switch	SENSOR ORIGINAL	10	32
Transfer roller unit	PARTS TR-670	9	A02
Separation electrode	PLATE STA ELIMINATION	9	8
Developing unit	PARTS,DV-420,SP	13	1
Drum unit	PARTS DK-670	12	A01
Main charger unit	PARTS,MC-420,SP	12	A02
Fuser unit	PARTS FK-670(E)	14	A01
Fuser unit	PARTS FK-670(U)	14	A01
Heat roller	PARTS ROLLER HEAT SP	14	30
Press roller	ROLLER PRESS	14	28
Heat roller separation claw	SEPARATOR ASSY B	14	11
Eject roller	PARTS ROLLER EXIT INNER SP	20	35
Switchback roller	PARTS ROLLER EXIT FEED SP	20	34
Eject pulley	PULLEY EXIT B	20	1
Feed pulley	PULLEY EXIT FEED	20	25
Upper duplex feed roller	PARTS DUPLEX A SP	18	16
Lower duplex feed roller	PARTS DUPLEX B SP	18	17
Duplex feed pulley	PULLEY 15 DUPLEX	18	18

Maintenance part name		Spare Parts Catalogue	
Name used in service manual	Name used in parts list	Fig. No.	Ref. No.
Right filter	PARTS HOLDER FILTER A SP	17	A01
Ozone filter 1	FILTER OZONE B	1	42
Ozone filter 2	FILTER OZONE A	19	38
Power source PWB	PARTS LVU 100	21	54
Power source PWB	PARTS LVU 200	21	54
Main PWB	PARTS,PWB MAIN ASS'Y,SP	21	44

Maintenance kits

Maintenance part name		Spare Parts Catalogue	
Name used in service manual	Name used in parts list	Fig. No.	Ref. No.
Maintenance kit			
<For 120 V specifications>	MK-670/MAINTENANCE KIT	27	-
Upper/lower paper feed pulley	PULLEY,PAPER FEED	-	-
Upper/lower separation pulley	PULLEY,SEPARATION	-	-
MP separation pulley	PULLEY,SEPARATION	-	-
Upper/lower forwarding pulley	PULLEY FEED A	-	-
MP forwarding pulley	PULLEY FEED A	-	-
Developing unit	PARTS,DV-420,SP	-	-
Ozone filter 1	FILTER OZONE B	-	-
Ozone filter 2	FILTER OZONE A	-	-
Drum unit	PARTS DK-670	-	-
Fuser unit	PARTS FK-670(U)	-	-
Transfer roller unit	PARTS TR-670	-	-
Right filter	PARTS HOLDER FILTER A SP	-	-
MP paper feed pulley	UPPER PULLEY,BYPASS	-	-
<For 220 - 240 V specifications>	MK-670/MAINTENANCE KIT	27	-
Upper/lower paper feed pulley	PULLEY,PAPER FEED	-	-
Upper/lower separation pulley	PULLEY,SEPARATION	-	-
MP separation pulley	PULLEY,SEPARATION	-	-
Upper/lower forwarding pulley	PULLEY FEED A	-	-
MP forwarding pulley	PULLEY FEED A	-	-
Developing unit	PARTS,DV-420,SP	-	-
Ozone filter 1	FILTER OZONE B	-	-
Ozone filter 2	FILTER OZONE A	-	-
Drum unit	PARTS DK-670	-	-
Fuser unit	PARTS FK-670(E)	-	-
Transfer roller unit	PARTS TR-670	-	-
Right filter	PARTS HOLDER FILTER A SP	-	-
MP paper feed pulley	UPPER PULLEY,BYPASS	-	-

Periodic maintenance procedures

Section	Maintenance part/location	Method	Maintenance cycle	Points and cautions	Page
Test copy and test print	Perform at the maximum copy size	Test copy	Every service		



Section	Maintenance part/location	Method	Maintenance cycle	Points and cautions	Page
Paper feed section	Upper/lower paper feed pulley	Replace	300K	Replace. (Clean with alcohol when user call occurs.)	P.1-5-2
	Upper/lower separation pulley	Replace	300K	Replace. (Clean with alcohol when user call occurs.)	P.1-5-2
	Upper/lower forwarding pulley	Replace	300K	Replace. (Clean with alcohol when user call occurs.)	P.1-5-2
	MP paper feed pulley	Replace	300K	Replace. (Clean with alcohol when user call occurs.)	P.1-5-5
	MP separation pulley	Replace	300K	Replace. (Clean with alcohol when user call occurs.)	P.1-5-5
	MP forwarding pulley	Replace	300K	Replace. (Clean with alcohol when user call occurs.)	P.1-5-5
	MP feed roller 1	Clean	300K	Clean with alcohol. (Check and clean with alcohol when user call occurs.)	
	MP feed roller 2	Clean	300K	Clean with alcohol. (Check and clean with alcohol when user call occurs.)	
	MP feed pulley	Clean	300K	Clean with alcohol. (Check and clean with alcohol when user call occurs.)	
	Left registration roller	Clean	300K	Clean with alcohol. (Check and clean with alcohol when user call occurs.)	
	Right registration roller	Clean	300K	Clean with alcohol. (Check and clean with alcohol when user call occurs.)	
	Feed pulley	Clean	300K	Clean with alcohol. (Check and clean with alcohol when user call occurs.)	
	Feed roller 1	Clean	300K	Clean with alcohol. (Check and clean with alcohol when user call occurs.)	
	Feed roller 2	Clean	300K	Clean with alcohol. (Check and clean with alcohol when user call occurs.)	
	Feed roller 3	Clean	300K	Clean with alcohol. (Check and clean with alcohol when user call occurs.)	
	Registration cleaner	Clean	Every service	Vacuum.	



Section	Maintenance part/location	Method	Maintenance cycle	Points and cautions	Page
Optical section	Laser scanner unit	Clean	Every service	Clean the slit glass with a dry cloth.	P.1-5-29
	Platen	Clean	Every service	Clean with alcohol and then a dry cloth.	
	Slit glass	Clean	Every service	Clean with a dry cloth or alcohol (do not clean with a wet cloth).	
	Mirror 1	Clean	User call	Clean with a wet cloth and then a dry cloth only if vertical black lines appear on the copy image.	
	Mirror 2 and mirror 3	Clean	User call	Clean with a wet cloth and then a dry cloth only if vertical black lines appear on the copy image.	
	Lens	Clean	User call	Clean with a dry cloth only if vertical black lines appear on the copy image.	P.1-5-14
	Reflector	Clean	User call	Clean with a dry cloth only if vertical black lines appear on the copy image.	
	Exposure lamp	Check or replace	User call	Replace if an image problem occurs.	
	Optical rail	Check or Grease	User call	Check noise and shifting and then apply scanner rail grease EM-50L.	
	Original size detection sensor	Check or clean	User call	Clean the sensor emitter and sensor receiver with alcohol or a dry cloth only if there is a problem.	



Section	Maintenance part/location	Method	Maintenance cycle	Points and cautions	Page
Transfer/separation section	Transfer roller unit	Replace	300K	Replace. (Vacuum or clean with a dry cloth when user call occurs.)	P.1-5-39
	Separation electrode	Clean	300K	Clean with a cleaning brush.	



Section	Maintenance part/location	Method	Maintenance cycle	Points and cautions	Page
Developing section	Developing unit	Replace	300K	Replace. (Check and replace when user call occurs.)	P.1-5-38



Section	Maintenance part/location	Method	Maintenance cycle	Points and cautions	Page
Main charging/drum section	Drum unit	Replace	300K	Replace. (Check and replace when user call occurs.)	P.1-5-34
	Main charger unit	Clean	User call	Clean with a wet cloth and then a dry cloth.	P.1-5-36



Section	Maintenance part/location	Method	Maintenance cycle	Points and cautions	Page
Fuser section	Fuser unit	Replace	300K	Replace. (Check and replace when user call occurs.)	P.1-5-40
	Heat roller	Check or replace	User call	Replace when problem occurs.	P.1-5-47
	Press roller	Check or replace	User call	Replace when problem occurs.	P.1-5-43
	Heat roller separation claw	Check, clean or replace	User call	Check and clean with alcohol. Replace if claw is deformed.	P.1-5-42



Section	Maintenance part/location	Method	Maintenance cycle	Points and cautions	Page
Eject section	Eject roller	Check or clean	User call	Check and clean with alcohol.	
	Switchback roller	Check or clean	User call	Check and clean with alcohol.	
	Eject pulley	Check or clean	User call	Check and clean with alcohol.	
	Feed pulley	Check or clean	User call	Check and clean with alcohol.	



Section	Maintenance part/location	Method	Maintenance cycle	Points and cautions	Page
Duplex section	Upper duplex feed roller	Clean	300K	Clean with alcohol. (Check and clean with alcohol when user call occurs.)	
	Lower duplex feed roller	Clean	300K	Clean with alcohol. (Check and clean with alcohol when user call occurs.)	
	Duplex feed pulley	Clean	300K	Clean with alcohol. (Check and clean with alcohol when user call occurs.)	



Section	Maintenance part/location	Method	Maintenance cycle	Points and cautions	Page
Covers	Covers	Clean	Every service	Clean with alcohol or a dry cloth.	P.1-5-55
	Right filter	Clean	Every service	Vacuum. (Clean when user call occurs.)	
	Ozone filter 1	Replace	300K	Replace. (Clean when user call occurs.)	
	Ozone filter 2	Replace	300K	Replace. (Clean when user call occurs.)	

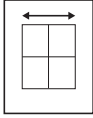
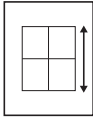
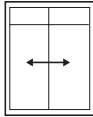
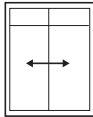
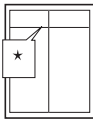
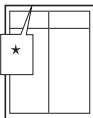
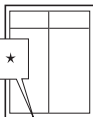
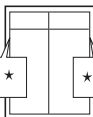
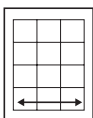
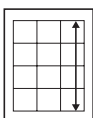


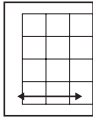
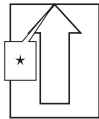
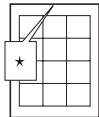
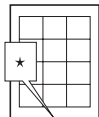
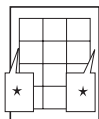
Section	Maintenance part/location	Method	Maintenance cycle	Points and cautions	Page
PWBs	Power source PWB	Check or clean	Every service	Clean (do not vacuum).	
	Main PWB	Check or clean	Every service	Clean (do not vacuum).	



Section	Maintenance part/location	Method	Maintenance cycle	Points and cautions	Page
Other	Image quality	Check and adjust	Every service		

Chart of image adjustment procedures

Adjusting order	Item	Image	Description	Maintenance mode		Original	Page	Remarks
				Item No.	Mode			
1	Adjusting the magnification in the main scanning direction (printing adjustment)		Polygon motor speed adjustment	U053	POLYGON MOTOR	U053 test pattern	P.1-3-24	
2	Adjusting the magnification in the auxiliary scanning direction (printing adjustment)		Drive motor speed adjustment	U053	MAIN MOTOR	U053 test pattern	P.1-3-24	
3	Adjusting the center line (printing adjustment)		Adjusting the LSU print start timing	U034	LSU OUT LEFT	U034 test pattern	P.1-3-21	
4	Adjusting the center line of the cassettes and paper feeder (printing adjustment)		Adjusting the position of the rack adjuster	U034	LSU OUT LEFT	U034 test pattern	-	Adjusts the position of each paper source.
5	Adjusting the leading edge registration (printing adjustment)		Registration clutch turning on timing (secondary paper feed start timing)	U034	LSU OUT TOP	U034 test pattern	P.1-3-20	
6	Adjusting the leading edge margin (printing adjustment)		LSU illumination start timing	U402	LESD	U402 test pattern	P.1-3-64	
7	Adjusting the trailing edge margin (printing adjustment)		LSU illumination end timing	U402	TRAIL TRAIL(DUP) TRAIL(MP)	U402 test pattern	P.1-3-64	To make an adjustment for duplex copying, select TRAIL(DUP). To make an adjustment for MP tray, select TRAIL(MP).
8	Adjusting the left and right margins (printing adjustment)		LSU illumination start/end timing	U402	A C	U402 test pattern	P.1-3-64	
9	Adjusting magnification of the scanner in the main scanning direction (scanning adjustment)		Data processing	U065	MAIN SCAN ADJ	Test chart	P.1-3-27	
10	Adjusting magnification of the scanner in the auxiliary scanning direction (scanning adjustment)		Original scanning speed	U065 U070	SUB SCAN ADJ MAIN ADJ/SUB ADJ	Test chart	P.1-3-27 P.1-3-31	U065: For copying an original placed on the platen. U070: For copying originals from the DP.

Adjusting order	Item	Image	Description	Maintenance mode		Original	Page	Remarks
				Item No.	Mode			
11	Adjusting the center line (scanning adjustment)		Adjusting the original scan data (image adjustment)	U067	ADJUST DATA1/2	Test chart	P.1-3-29	U067: For copying an original placed on the platen. U072: For copying originals from the DP.
				U072	ADJUST DATA1/2		P.1-3-34	
12	Adjusting the leading edge registra- tion (scanning adjustment)		Original scan start timing (image adjustment)	U066	ADJUST DATA1/2	Test chart	P.1-3-28	U066: For copying an original placed on the platen. U071: For copying originals from the DP.
				U071	ADJUST DATA1/2/ 3/4		P.1-3-32	
13	Adjusting the leading edge margin (scanning adjustment)		Adjusting the original scan data (image adjustment)	U403	B MARGIN	Test chart	P.1-3-65	U403: For copying an original placed on the platen. U404: For copying originals from the DP.
				U404	B MARGIN/		P.1-3-66	
14	Adjusting the trailing edge margin (scanning adjustment)		Adjusting the original scan data (image adjustment)	U403	D MARGIN	Test chart	P.1-3-65	U403: For copying an original placed on the platen. U404: For copying originals from the DP.
				U404	D MARGIN/		P.1-3-66	
15	Adjusting the left and right margins (scanning adjustment)		Adjusting the original scan data (image adjustment)	U403	A MARGIN	Test chart	P.1-3-65	U403: For copying an original placed on the platen. U404: For copying originals from the DP.
				U404	C MARGIN A MARGIN/ C MARGIN/		P.1-3-66	

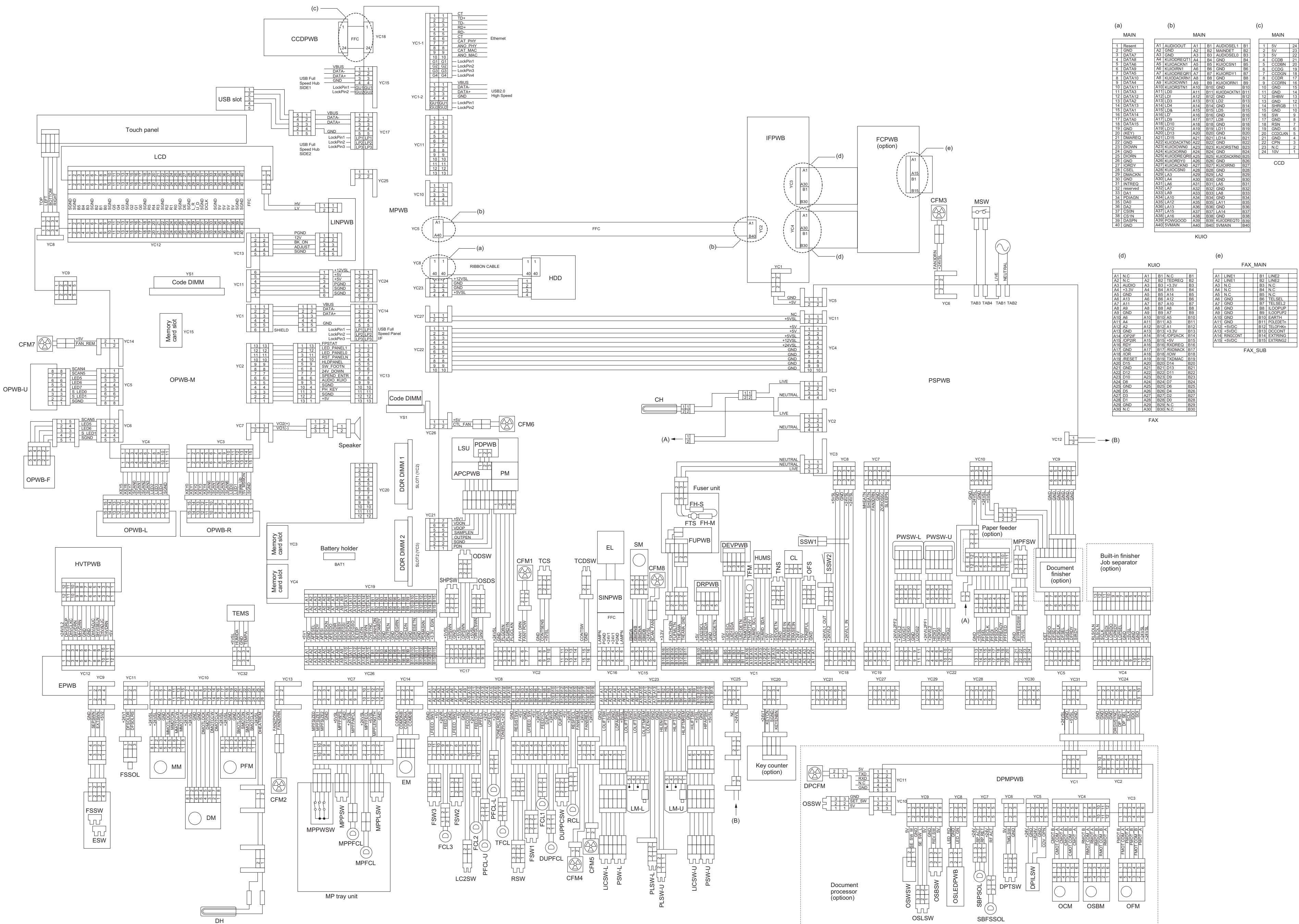
When maintenance item U411 (Adjusting the scanner automatically) is run using the specified original (P/N 302FZ56990), the following adjustments are automatically made:
Adjusting the scanner magnification (U065)
Adjusting the scanner leading edge registration (U066)
Adjusting the scanner center line (U067)

When maintenance item U411 (Adjusting the scanner automatically) is run using the specified original (P/N 2AC68241), the following adjustments are automatically made:
Adjusting the DP magnification (U070)
Adjusting the DP scanning timing (U071)
Adjusting the DP center line (U072)

Image quality

Item	Specifications
100% magnification	Machine: ±0.8% Using DP: ±1.5%
Enlargement/reduction	Machine: ±1.0% Using DP: ±1.5%
Lateral squareness	Machine: ±1.5 mm/375 mm Using DP: ±3.0 mm/375 mm
Leading edge registration	Cassette: ±2.5 mm MP tray: ±2.5 mm Duplex mode: ±2.5 mm
Skewed paper feed	Cassette: 1.5 mm or less MP tray: 1.5 mm or less Duplex mode: 2.0 mm or less
Left-right difference	Cassette: 2.0 mm or less MP tray: 2.0 mm or less Duplex mode: 3.0 mm or less
Curling	Simplex mode: 10.0 mm or less Duplex mode: 10.0 mm or less

General wiring diagram



UPDATING STATUS

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