



FS-1128MFP

SERVICE MANUAL

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Rev.4

CAUTION

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

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

ATTENTION

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

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

Revision history

Revision	Date	Replaced pages	Remarks
1	June 24, 2009	1-3-37, 1-4-7, 1-4-8, 1-4-9, 1-4-11, 1-5-3, 1-5-21, 1-5-22, 1-5-23, 1-5-24, 1-5-25, 1-5-26, 1-5-29, 1-5-30, 1-5-49, 2-1-8, 2-2-2	-
2	August 11, 2009	1-3-3, 1-3-4, 1-3-6 to 1-3-9, 1-3-15, 1-3-16, 1-3-30 to 1-3-33, 1-3-35, 1-3-41, 1-3-52, 1-3-53, 1-3-64, 1-3-71, 1-5-2, 1-5-29, 1-5-30	-
3	December 24, 2009	CONTENTS, 1-1-1, 1-1-2, 1-3-8 to 1-3-11	-
4	April 24, 2012	Safety precautions, 1-3-49, 1-3-50, Address	-

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

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CONTENTS

1-1 Specifications

1-1-1 Specifications	1-1-1
1-1-2 Parts names	1-1-4
(1) Overall	1-1-4
(2) Operation panel	1-1-5
1-1-3 Machine cross section	1-1-6

1-2 Installation

1-2-1 Installation environment	1-2-1
1-2-2 Unpacking	1-2-2
(1) Unpacking	1-2-2
(2) Removing the tapes	1-2-3
1-2-3 Installing the expansion memory (option)	1-2-6

1-3 Maintenance Mode

1-3-1 Maintenance mode	1-3-1
(1) Executing a maintenance item	1-3-1
(2) Maintenance modes item list	1-3-2
(3) Contents of the maintenance mode items	1-3-6
1-3-2 Management mode	1-3-78
(1) Using the management mode	1-3-78
(2) Common Settings	1-3-79
(3) Copy Settings	1-3-83
(4) Sending Settings	1-3-83
(5) Document Box Settings	1-3-83
(6) Printer Settings	1-3-84
(7) Printing Reports/Sending Notice	1-3-84
(8) Adjustment/Maintenance	1-3-85
(9) Date/Timer	1-3-85
(10) Editing Destination (Address Book/Adding One-Touch Keys)	1-3-86
(11) Restarting the System	1-3-87
(12) Network Setup	1-3-87
(13) User Login Administration	1-3-89
(14) Job accounting	1-3-89
(15) FAX Settings	1-3-91

1-4 Troubleshooting

1-4-1 Paper misfeed detection	1-4-1
(1) Paper misfeed indication	1-4-1
(2) Paper misfeed detection condition	1-4-2
1-4-2 Self-diagnostic function	1-4-3
(1) Self-diagnostic function	1-4-3
(2) Self diagnostic codes	1-4-4
1-4-3 Image formation problems	1-4-12
(1) Completely blank printout	1-4-13
(2) All-black printout	1-4-13
(3) Dropouts	1-4-14
(4) Black dots	1-4-14
(5) Black horizontal streaks	1-4-14
(6) Black vertical streaks	1-4-15
(7) Unsharpness	1-4-15
(8) Gray background	1-4-15
(9) Dirt on the top edge or back of the paper	1-4-16
(10) Undulated printing at the right edge (scanning start position)	1-4-16
1-4-4 Electric problems	1-4-17
1-4-5 Mechanical problems	1-4-20

1-4-6	Error codes	1-4-21
(1)	Error code	1-4-21
(2)	Table of general classification	1-4-22
(2-1)	U004XX error code table: Interrupted phase B	1-4-24
(2-2)	U006XX error code table: Problems with the unit	1-4-25
(2-3)	U008XX error code table: Page transmission error	1-4-25
(2-4)	U009XX error code table: Page reception error	1-4-25
(2-5)	U010XX error code table: G3 transmission	1-4-26
(2-6)	U011XX error code table: G3 reception	1-4-28
(2-7)	U017XX error code table: V.34 transmission	1-4-30
(2-8)	U018XX error code table: V.34 reception	1-4-30
(2-9)	U023XX error code table: Relay command abnormal reception	1-4-30
(2-10)	U044XX error code table: Encrypted transmission	1-4-30
1-4-7	Send error code	1-4-31
(1)	Scan to SMB error codes	1-4-31
(2)	Scan to FTP error codes	1-4-32
(3)	Scan to E-mail error codes	1-4-33
(4)	Network Twain error codes	1-4-34
(5)	Software trouble error codes	1-4-34

1-5 Assembly and Disassembly

1-5-1	Precautions for assembly and disassembly	1-5-1
(1)	Precautions	1-5-1
(2)	Drum	1-5-1
(3)	Toner	1-5-1
(4)	How to tell a genuine Kyocera Mita toner container	1-5-2
1-5-2	Outer covers	1-5-3
(1)	Detaching and refitting the left cover and right cover	1-5-3
1-5-3	Paper feed section	1-5-6
(1)	Detaching and refitting the paper feed assembly (paper feed roller and pickup roller)	1-5-6
(2)	Detaching and refitting the retard roller assembly	1-5-8
(3)	Detaching and refitting the MP paper feed roller	1-5-10
(4)	Note on removing and Installing the upper registration roller and lower registration roller	1-5-12
1-5-4	Optical section	1-5-13
(1)	Detaching and refitting the DP	1-5-13
(2)	Detaching and refitting the scanner unit	1-5-14
(3)	Detaching and refitting the laser scanner unit (LSU)	1-5-17
(4)	Replacing the image scanner unit (ISU)	1-5-21
(5)	Detaching and refitting the exposure lamp and inverter PWB	1-5-27
1-5-5	Developing section	1-5-29
(1)	Detaching and refitting the developing unit	1-5-29
1-5-6	Drum section	1-5-30
(1)	Detaching and refitting the drum unit	1-5-30
(2)	Detaching and refitting the main charger unit	1-5-31
1-5-7	Transfer/separation section	1-5-32
(1)	Detaching and refitting the transfer roller	1-5-32
1-5-8	Fuser section	1-5-34
(1)	Detaching and refitting the fuser unit	1-5-34
(2)	Switching the fuser pressure	1-5-38
1-5-9	PWBs	1-5-39
(1)	Detaching and refitting the control PWB	1-5-39
(2)	Detaching and refitting the power source PWB	1-5-42
(3)	Detaching and refitting the high voltage PWB	1-5-45
(4)	Detaching and refitting the scanner PWB	1-5-49
(5)	Detaching and refitting the FAX PWB	1-5-50
1-5-10	Others	1-5-51
(1)	Detaching and refitting the main motor	1-5-51
(2)	Direction of installing the left cooling fan motor, right cooling fan motor and power source fan motor	1-5-52
1-5-11	DP	1-5-53

1-6 Requirements on PWB Replacement

1-6-1 Upgrading the firmware.....	1-6-1
1-6-2 Remarks on control PWB replacement.....	1-6-2

2-1 Mechanical Construction

2-1-1 Paper feed/conveying section.....	2-1-1
(1) Cassette paper feed section.....	2-1-1
(2) MP tray paper feed section	2-1-2
(3) Paper conveying section	2-1-3
2-1-2 Drum section.....	2-1-4
(1) Drum section	2-1-4
(2) Main charger unit.....	2-1-5
2-1-3 Optical section	2-1-6
(1) Scanner unit	2-1-6
(2) Image scanner unit (ISU)	2-1-7
(3) Laser scanner unit.....	2-1-9
2-1-4 Developing section.....	2-1-11
2-1-5 Transfer/separation section	2-1-12
2-1-6 Cleaning section	2-1-13
2-1-7 Fuser section	2-1-14
2-1-8 Paper exit section	2-1-16
2-1-9 Duplex/conveying section	2-1-18
2-1-10 DP section.....	2-1-19

2-2 Electrical Parts Layout

2-2-1 Electrical parts layout.....	2-2-1
(1) PWBs	2-2-1
(2) Switches and sensors	2-2-3
(3) Other electrical components.....	2-2-4
(4) DP	2-2-5

2-3 Operation of the PWBs

2-3-1 Power source PWB.....	2-3-1
2-3-2 Control PWB	2-3-3
2-3-3 Scanner PWB	2-3-9
2-3-4 DP driver PWB.....	2-3-12

2-4 Appendixes

2-4-1 Appendixes	2-4-1
(1) Wiring diagram	2-4-1
(2) Repetitive defects gauge.....	2-4-3
(3) Maintenance parts list	2-4-4

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1-1-1 Specifications

Type	Desktop
Printing method.....	Electrophotography by semiconductor laser, single drum system
Originals.....	Sheet, Book, 3-dimensional objects (maximum original size: Folio/Legal)
Original feed system	Contact glass: fixed
	Document processor (optional): sheet-through
Paper weight.....	Cassette: 60 to 120 g/m ² (Duplex: 60 to 120 g/m ²)
	MP tray: 60 to 220 g/m ² , 230 µm (Cardstock)
Paper type	Cassette:
	Plain, Rough, Recycled, Preprinted, Bond, Color (Colour), Prepunched, Letterhead, High Quality, Custom 1 to 8 (Duplex: Same as simplex)
	MP tray:
	Plain, Transparency, Rough, Vellum, Labels, Recycled, Preprinted, Bond, Cardstock, Color (Colour), Prepunched, Letterhead, Thick, Envelope, High Quality, Custom 1 to 8
Paper size.....	Cassette:
	Maximum: 8 1/2 × 14"/A4 (Duplex: 8 1/2 × 14"/A4)
	Minimum: 5 1/2 × 8 1/2"/A6 (Duplex: 7 1/4 × 10 1/2"/A5)
	MP tray:
	Maximum: 8 1/2 × 14"/A4
	Minimum: 3 5/8 × 6 1/2"/C5
Magnification ratios.....	Manual mode: 25 - 400%, 1% increments
Printing speed (Simplex).....	A4: 28 ppm
	Letter: 30 ppm
	Legal: 24 ppm
	B5R: 22 ppm
	A5R: 17 ppm
	A6R: 17 ppm
First print time	(A4, feed from cassette)
	When using the document processor: 7.9 ± 0.5 seconds
	When the document processor is not used: 6.9 ± 0.5 seconds
Warm-up time	(22 °C/71.6 °F, 60%RH)
	Power on: 20 seconds
	Recovery from the low power mode: 10 seconds or less
	Recovery from the sleep mode: 15 seconds or less
Paper capacity	Cassette: 250 sheets (80 g/m ²)
	MP tray: 50 sheet (80 g/m ² , plain paper, Letter/A4 or smaller)
Output tray capacity	150 sheets (80 g/m ²)
Continuous printing.....	1 to 999 sheets
Photoconductor.....	OPC drum (diameter 30 mm)
Image write system.....	Semiconductor laser (1 beam)
Charging system.....	Scorotron (positive charging)
Developing system	Mono component dry developing method
	Toner replenishing: Automatic from the toner container
Transfer system	Transfer roller (negative-charged)
Separation system	Small diameter separation, discharger brush
Cleaning system	Drum: Counter blade
Charge erasing system.....	Exposure by eraser lamp (LED)
Fusing system.....	Heat roller system
Memory.....	Standard: 256 MB
	Maximum: 768 MB
Resolution.....	600 × 600 dpi
Operating environment	Temperature: 10 to 32.5 °C/50 to 90.5 °F
	Humidity: 15 to 80%
	Altitude: 2,500 m/8,202 ft maximum
	Brightness: 1,500 lux maximum
Dimensions (W × H × D)	494 × 430 × 448 mm
	19 7/16 × 16 15/16 × 17 11/16"
Weight.....	Approx. 18 kg/40 lbs
Floor requirements (W × D)	640 × 646 mm
	25 3/16 × 25 7/16"

Power source	120 V AC, 60 Hz, more than 7.8 A 220 - 240 V AC, 50/60 Hz, more than 4.0 A
Power consumption	During printing: 523 W (U.S.A./Canada), 494 W (European countries) During standby: 97 W (U.S.A./Canada), 91 W (European countries) Low power mode: 96 W (U.S.A./Canada), 90 W (European countries) During sleep mode: 11 W (U.S.A./Canada), 10.2 W (European countries) Power off: 0 W
Options	Paper feeder, additional memory

Printing functions

Printing speed	Same as copying speed.
First print time	6 seconds or less (A4, feed from cassette)
Resolution	Fine 1200, Fast 1200, 600 dpi, 300 dpi
Compatible operation system	Windows 2000, Windows XP, Windows XP Professional, Windows Server 2003, Windows Server 2003 x64 Edition, Windows Vista x86 Edition, Windows Vista x64 Edition, Windows 2008 Server, Windows Server 2008 x64 Edition, Apple Macintosh OS 10.x
Interface	Standard: USB: 1 port (Hi-speed USB 2.0) USB host: 1 port Ethernet: 1 port (10BASE-T/100BASE-TX)
Page description language	PRESCRIBE

Scanning functions

Compatible operation system	Windows 2000 (Service Pack 4), Windows XP, Windows Vista, Windows Server 2003, Windows Server 2008
System requirements	IBM PC/AT compatible CPU: Celeron 600 MHz or higher RAM: 128 MB or more HDD free space: 20 MB or more Interface: Ethernet
Resolution	600 dpi, 400 dpi, 300 dpi, 200 dpi
File format	JPEG, TIFF, PDF, XPS
Scanning speed *1	1-sided: B/W 20 images/min Color 7 images/min 2-sided: B/W 11 images/min Color 4 images/min (A4 landscape, 600 dpi, Image quality: Text/Photo original)
Interface	Ethernet (10 BASE-T/100 BASE-TX) USB2.0 (Hi-Speed USB)
Network protocol	TCP/IP
Transmission system	PC transmission SMB Scan to SMB FTP Scan to FTP, FTP over SSL E-mail transmission SNMP Scan to E-mail TWAIN scan*2 WIA scan*3

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

*2 Available Operating System: Windows 2000 (Service Pack 4), Windows XP, Windows Vista

*3 Available Operating System: Windows Vista

Fax functions

Compatibility	G3
Communication line	Subscriber telephone line
Transmission time	3 seconds or less (33600 bps, JBIG, ITU-T A4 #1 chart)
Transmission speed	33600/31200/28800/26400/24000/21600/19200/16800/14400/12000/9600/7200/ 4800/2400 bps
Coding scheme	JBIG/MMR/MR/MH
Error correction	ECM
Original size	Max. width: 8 1/2"/215 mm Max. length: 14"/355.6 mm
Automatic document feed	Max. 50 sheets
Scanner resolution	Horizontal × Vertical 200 × 100 dpi Normal (8 dot/mm × 3.85 line/mm) 200 × 200 dpi Fine (8 dot/mm × 7.7 line/mm) 200 × 400 dpi Super fine (8 dot/mm × 15.4 line/mm) 400 × 400 dpi Ultra fine (16 dot/mm × 15.4 line/mm) 600 × 600 dpi
Printing resolution	600 × 600 dpi
Gradations	256 shades (Error diffusion)
One-Touch key	22 keys
Multi-Station transmission	Max. 100 destinations
Substitute memory reception	256 sheets or more (when using ITU-T A4 #1)
Image memory capacity	3.5 MB (standard) (for incoming faxed originals)
Report output	Sent result report, FAX RX result report, Activity report, Status page

NOTE: These specifications are subject to change without notice.

1-1-2 Parts names

(1) Overall

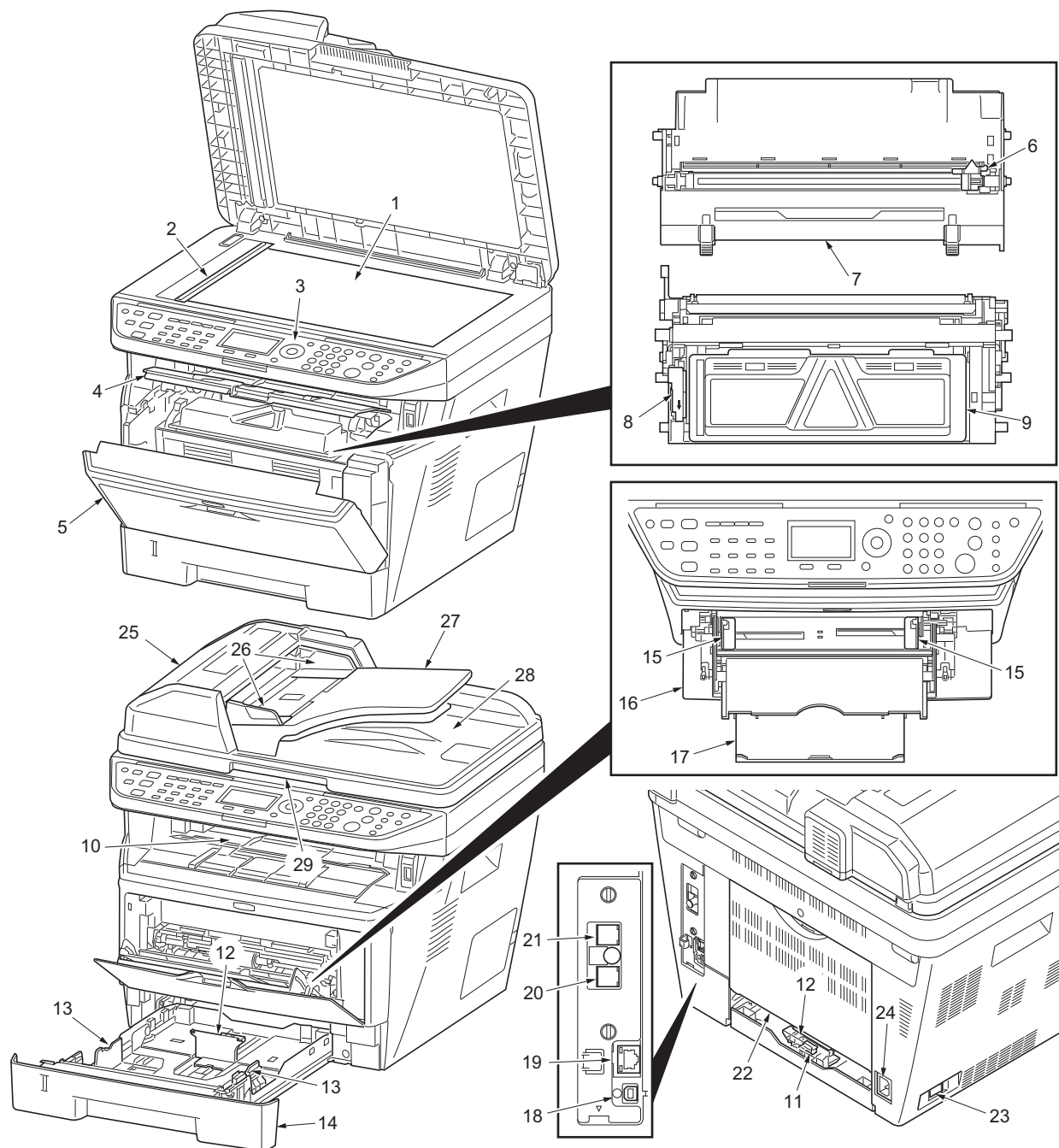


Figure 1-1-1

- | | | |
|----------------------------------|----------------------------------|---------------------------|
| 1. Platen (contact glass) | 11. Paper length guide | 21. Line connector (L1) |
| 2. Original size Indicator plate | 12. Paper stopper | 22. Rear cover |
| 3. Operation panel | 13. Paper width guides | 23. Main power switch |
| 4. Top cover | 14. Cassette | 24. Power cord connector |
| 5. Front cover | 15. Paper width guides (MP tray) | 25. Top cover |
| 6. Main charger cleaner | 16. MP (Multi-Purpose) tray | 26. Original width guides |
| 7. Drum unit | 17. MP tray extension | 27. Original table |
| 8. Lock lever | 18. USB Interface connector | 28. Original eject table |
| 9. Toner container | 19. Network Interface connector | 29. Opening handle |
| 10. Top tray | 20. Tel connector (T1) | |

(2) Operation panel

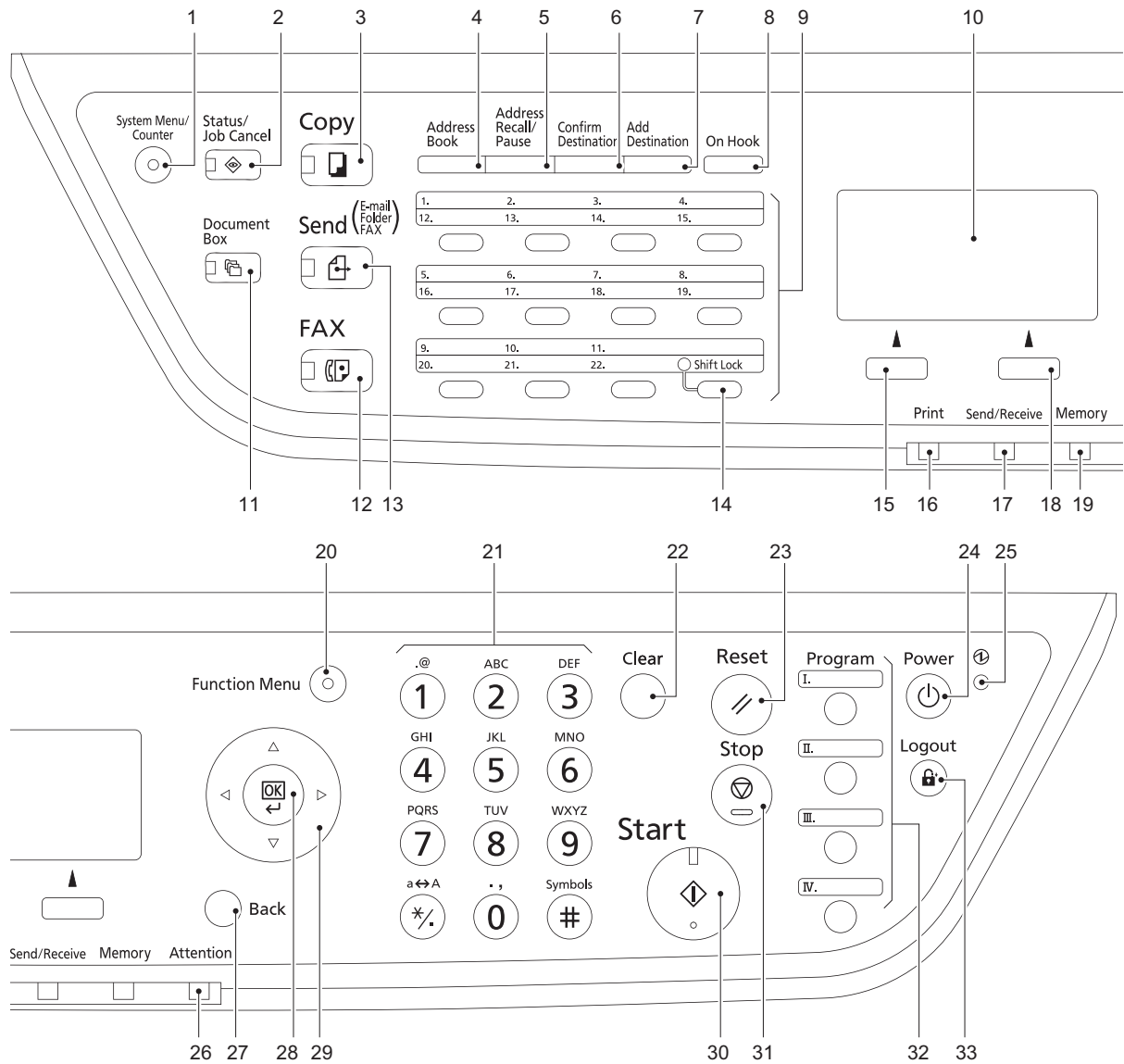


Figure 1-1-2

- | | | |
|----------------------------------|-----------------------------|-------------------------|
| 1. System menu/Counter key (LED) | 12. FAX key (LED) | 24. Power key |
| 2. Status/Job Cancel key (LED) | 13. Send key (LED) | 25. Main power LED |
| 3. Copy key (LED) | 14. Shift Lock key (LED) | 26. Attention indicator |
| 4. Address Book key | 15. Left Select key | 27. Back key |
| 5. Address Recall/Pause key | 16. Print indicator | 28. OK key |
| 6. Confirm Destination key | 17. Send/Receive indicator | 29. Cursor keys |
| 7. Add Destination key | 18. Right Select key | 30. Start key (LED) |
| 8. On Hook key | 19. Memory indicator | 31. Stop key |
| 9. One-touch keys | 20. Function Menu key (LED) | 32. Program keys |
| 10. Message display | 21. Numeric keys | 33. Logout key (LED) |
| 11. Document Box key (LED) | 22. Clear key | |
| | 23. Reset key | |

1-1-3 Machine cross section

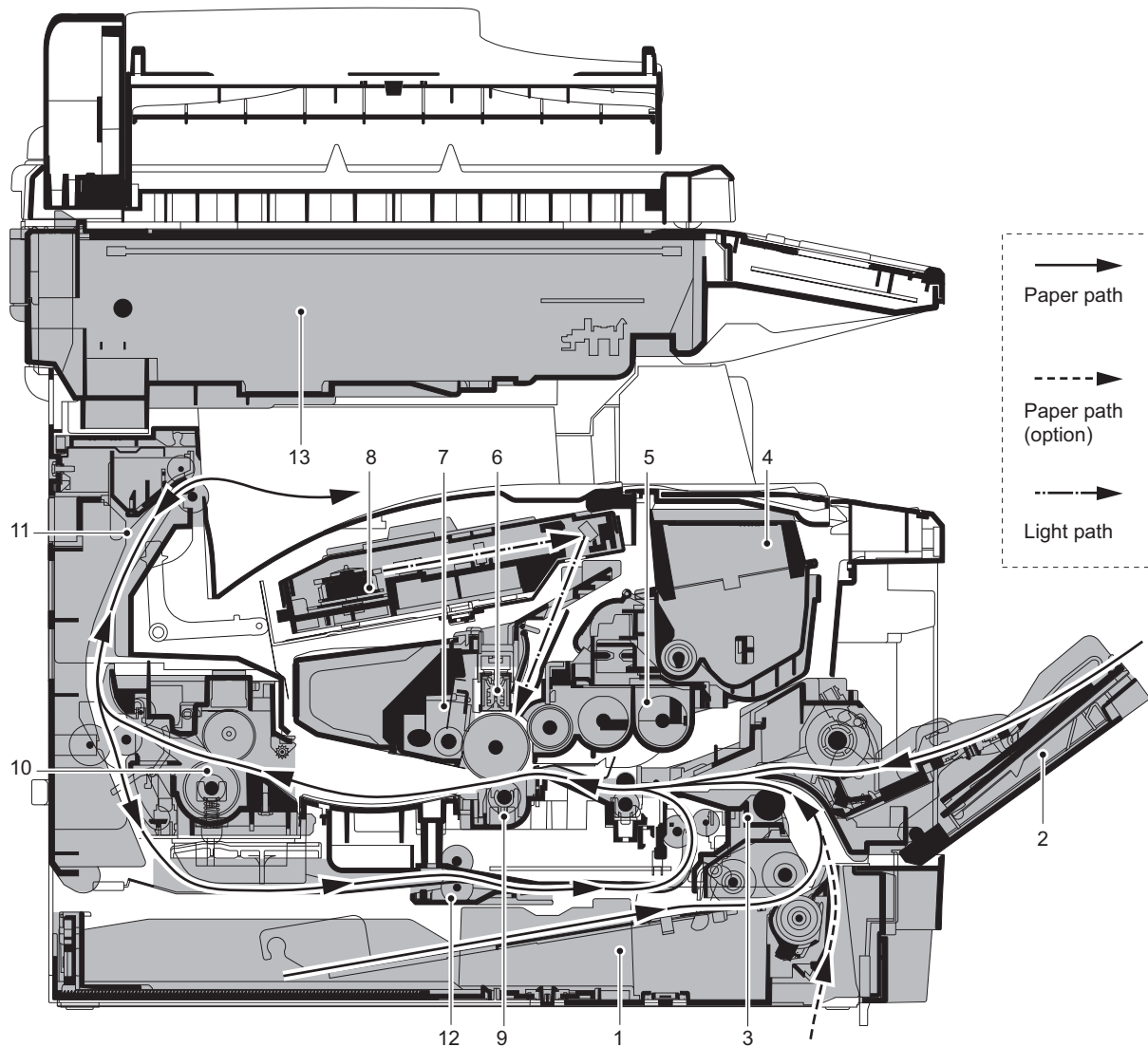


Figure 1-1-3

- | | |
|---------------------------------|--------------------------------|
| 1. Cassette | 8. Laser scanner unit (LSU) |
| 2. MP tray | 9. Transfer/separation section |
| 3. Paper feed/conveying section | 10. Fuser section |
| 4. Toner container | 11. Exit section |
| 5. Developing unit | 12. Duplex/conveying section |
| 6. Main charger unit | 13. Scanner section |
| 7. Drum unit | |

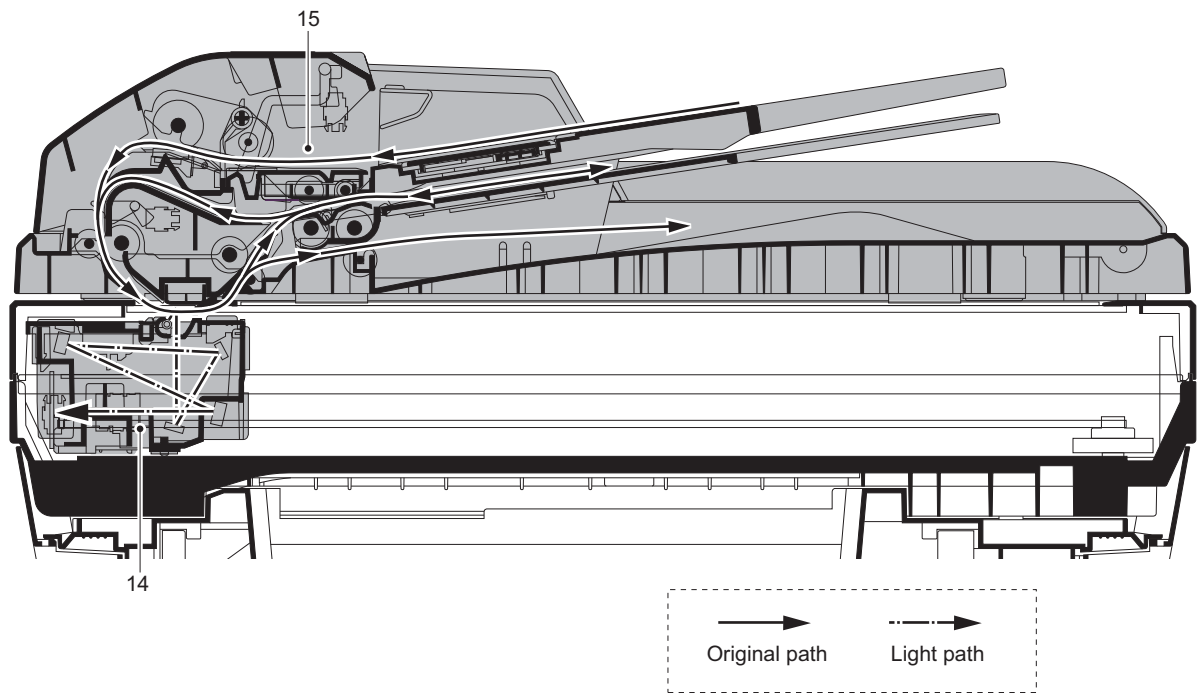


Figure 1-1-4

- 14. Image scanner unit (ISU)
- 15. Document processor (DP)

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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, 7.8 A
220 - 240 V AC, 4.0 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 locations subject to high temperature and high humidity or low temperature and low humidity; an abrupt change in the environmental temperature; and cool or hot, direct air.

Avoid places subject to dust and vibrations.

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 well-ventilated location.
6. Allow sufficient access for proper operation and maintenance of the machine.

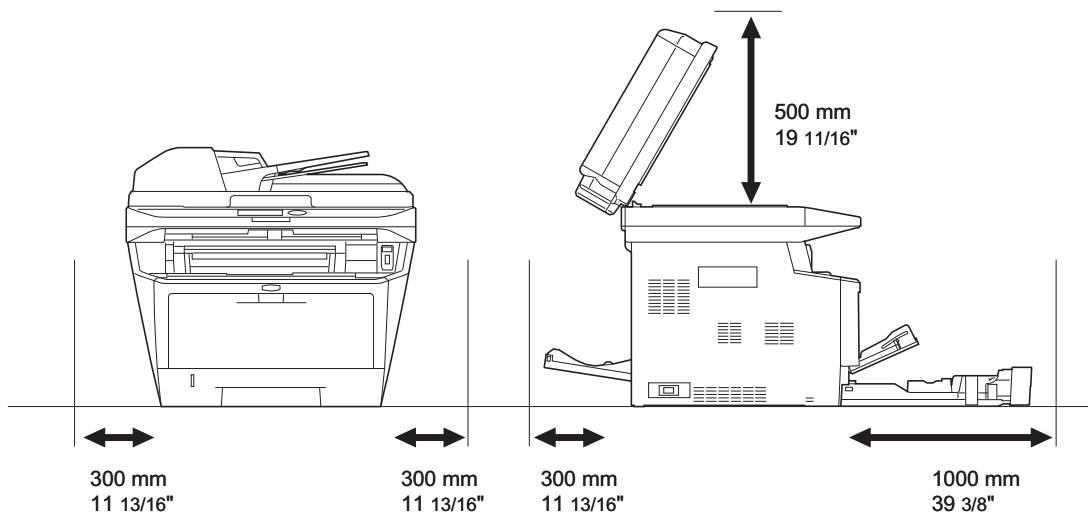


Figure 1-2-1

1-2-2 Unpacking

(1) Unpacking

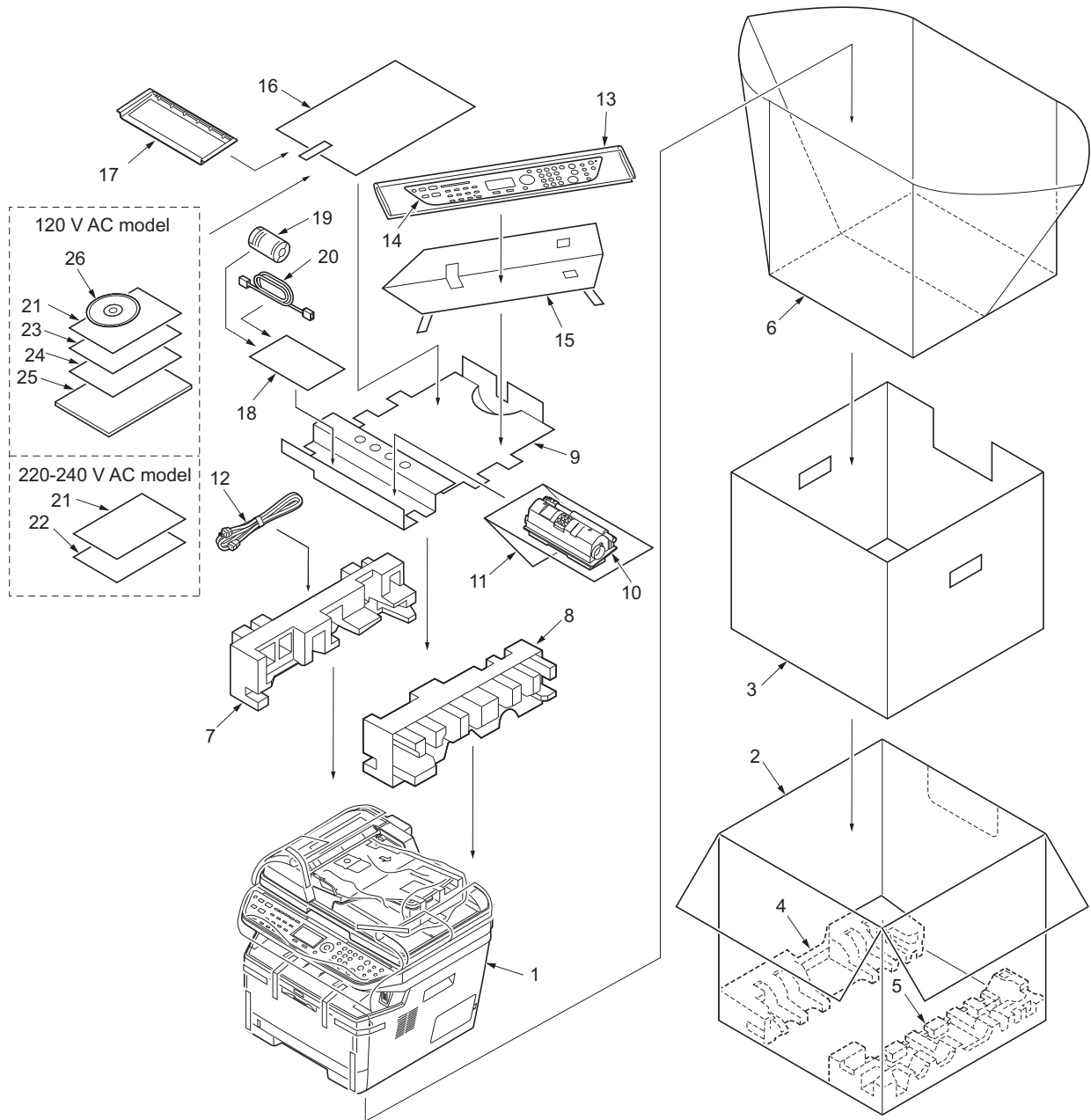


Figure 1-2-2

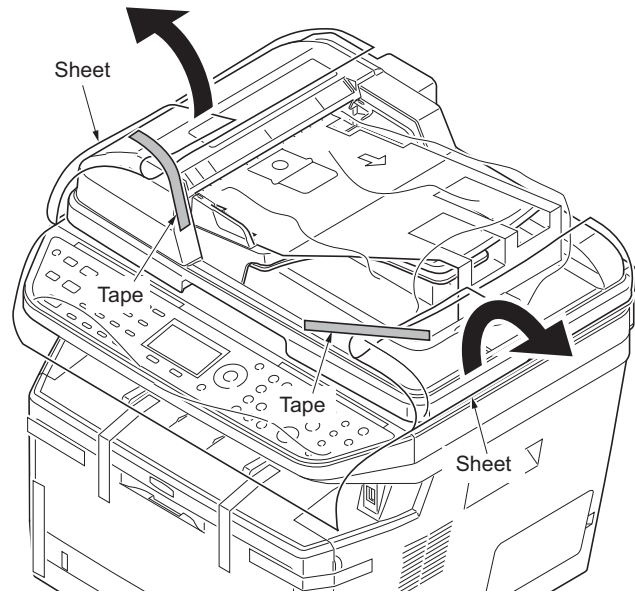
- | | | |
|---------------------|-----------------------------|-------------------------------|
| 1. Machine | 11. Plastic bag | 21. Operation panel leaflet |
| 2. Outer case | 12. Power cord | 22. EEA information leaflet** |
| 3. Inner frame | 13. Plastic bag (250 × 600) | 23. Setup guide* |
| 4. Bottom pad L | 14. Operation labels | 24. Quick guide* |
| 5. Bottom pad R | 15. Operation label pad | 25. Operation guide* |
| 6. Machine cover | 16. Plastic bag (240 × 350) | 26. CD-ROM* |
| 7. Top pad L | 17. Operation guide holder | |
| 8. Top pad R | 18. Plastic bag | |
| 9. Accessory spacer | 19. Ferrite core | |
| 10. Toner container | 20. Modular cable* | |

* 120 V AC model only.

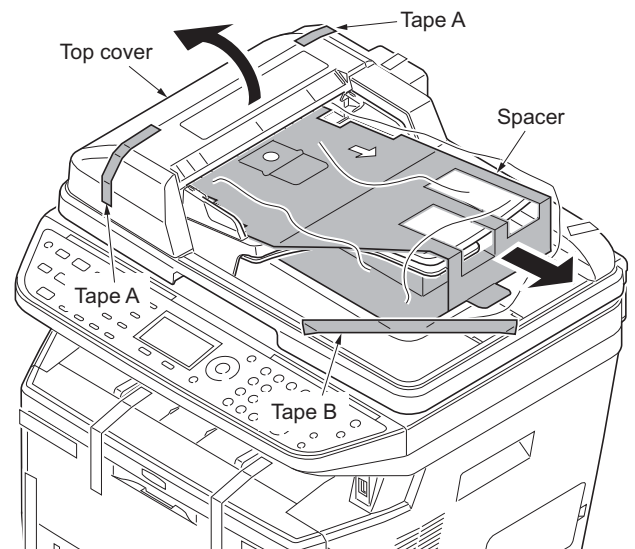
** 220-240 V AC model only.

(2) Removing the tapes**<Procedure>**

1. Remove two tapes.
2. Open the sheet.

**Figure 1-2-3**

3. Remove two tapes A.
4. Open the top cover.
5. Remove the tape B and then remove the spacer.
6. Close the top cover.

**Figure 1-2-4**

7. Remove four tapes.

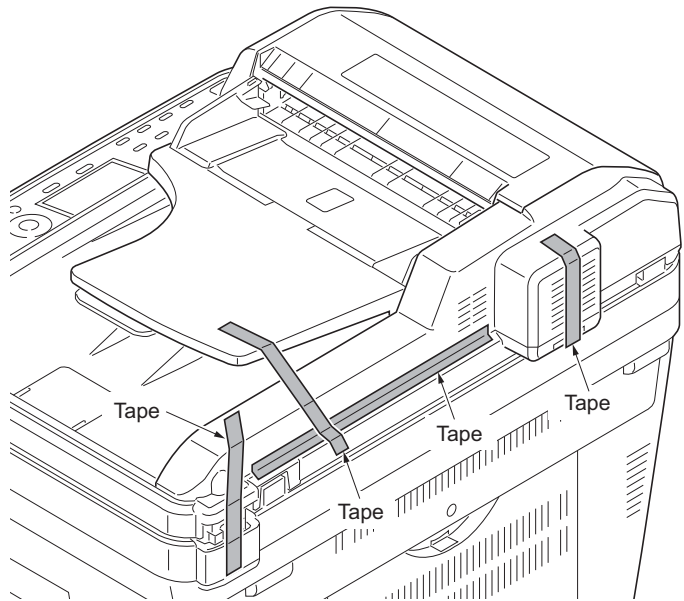


Figure 1-2-5

8. Open the DP.
9. Remove the sheet.
10. Remove the paper.

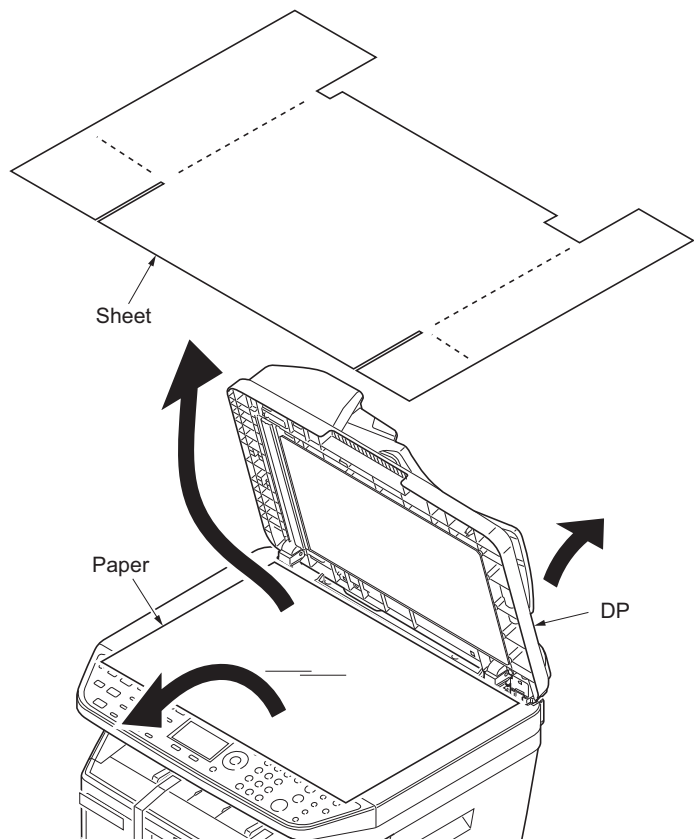


Figure 1-2-6

11. Remove nine tapes.
12. Close the DP.

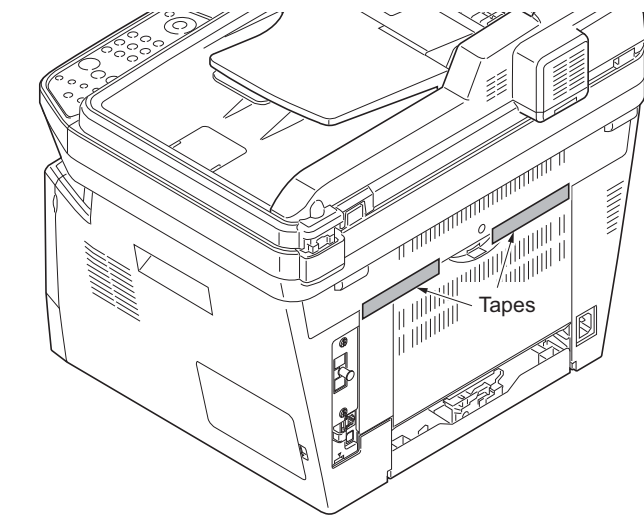
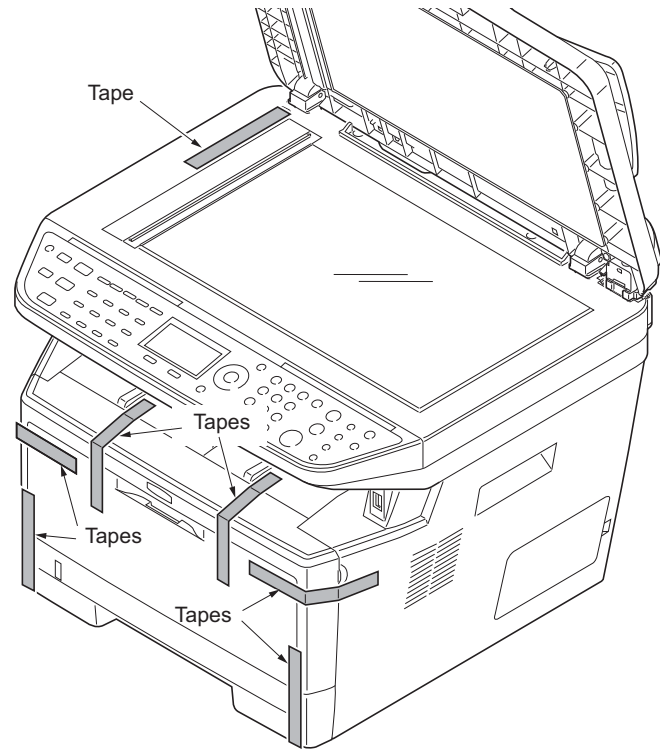


Figure 1-2-7

1-2-3 Installing the expansion memory (option)

<Procedure>

1. Turn off the main power switch.
 Caution: Do not insert or remove expansion memory while machine power is on.
 Doing so may cause damage to the machine and the expansion memory.
2. Remove the right side cover.
3. Remove the screw.

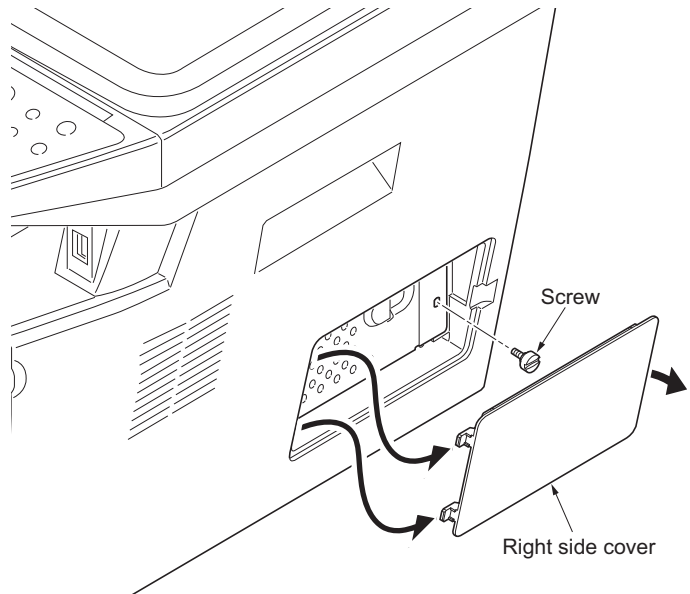


Figure 1-2-8

4. Open the memory slot cover.
5. Insert the expansion memory into the memory socket so that the notches on the memory align with the corresponding protrusions in the slot.
6. Close the memory slot cover.
7. Secure the screw.
8. Refit the right side cover.
9. Print a status page to check the memory expansion.

If memory expansion has been properly performed, information on the installed memory is printed with the total memory capacity has been increased. Standard memory capacity 256 MB.

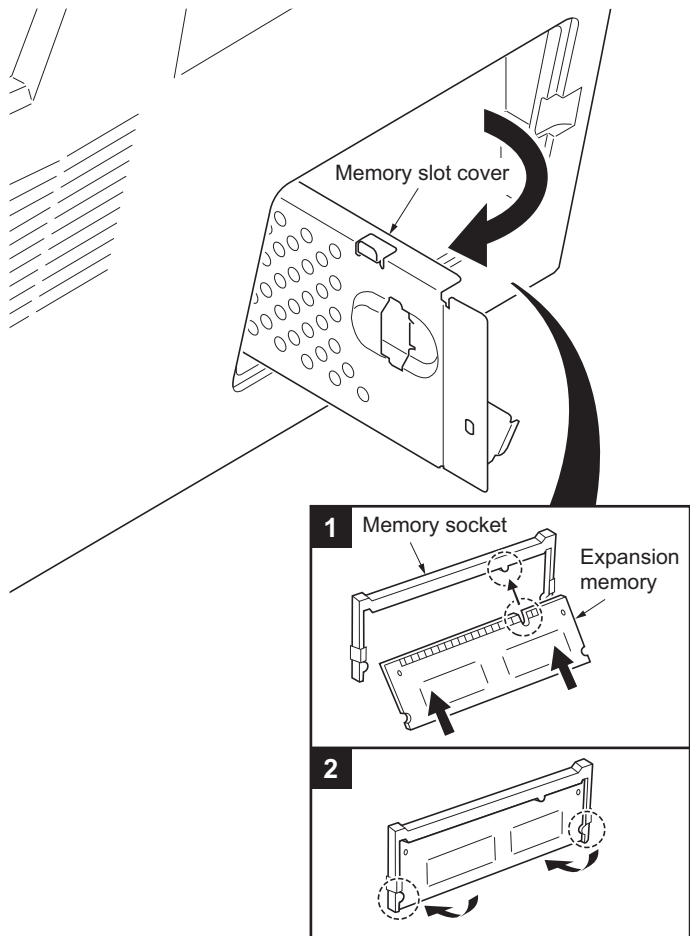
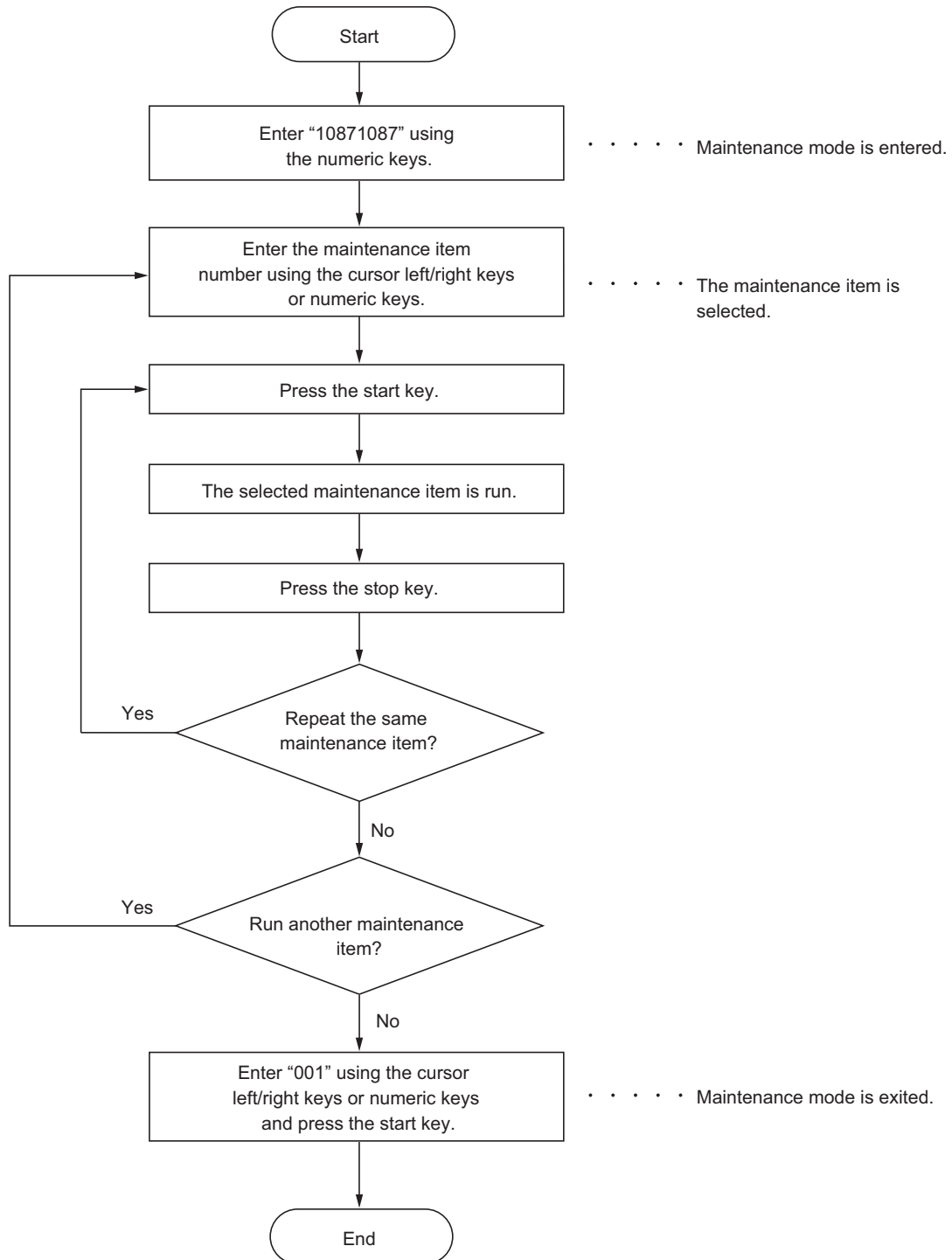


Figure 1-2-9

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	-
	U004	Displaying the machine number	-
	U019	Displaying the ROM version	-
Initialization	U021	Initializing counters and mode settings	-
Drive, paper feed, paper conveying and cooling system	U030	Checking motor operation	-
	U031	Checking switch/sensor 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	541/0/0/0 235/0/0/0/0/0/0
	U051	Adjusting the deflection in the paper	0/0/0/0/0
	U053	Setting the adjustment of the motor speed	0
Optical	U063	Adjusting the shading position	0
	U065	Adjusting the scanner magnification Main scanning direction/auxiliary scanning direction	0/0
	U066	Adjusting the scanner leading edge registration	0/0
	U067	Adjusting the scanner center line	0/0
	U068	Adjusting the scanning position for originals from the DP	0/0
	U070	Adjusting the DP magnification	0
	U071	Adjusting the DP scanning timing	0/0/0/0/0
	U072	Adjusting the DP center line	0/0
	U073	Checking scanner operation	-
	U087	Setting DP reading position modification operation	125/125/120
	U089	Outputting a MIP-PG pattern	-
High voltage	U100	Setting the main high voltage	0
	U101	Setting the voltage for the primary transfer	0
	U111	Checking/clearing the drum drive time	-
	U113	Performing drum refresh operation	OFF/0
Developing	U130	Initial setting for the developing unit	-
	U144	Setting toner loading operation	1/3/8/20/1/2/3
	U157	Checking the developing drive time	-
Fuser and cleaning	U161	Setting the fuser control temperature	0/0/0/0/0/0/0
	U199	Checking the fuser temperature	-

*: Factory initial setting, *1: The item initialized for executing U021, *2: The item initialized for executing U600

Section	Item No.	Content of maintenance item	Initial setting*
Operation panel and support equipment	U200	Turning all LEDs on	-
	U203	Checking DP operation	-
	U207	Checking the operation panel keys	-
	U222	Setting the IC card type	-
	U223	Operation panel lock	-
	U243	Checking the operation of the DP motor solenoids and clutch	-
	U244	Checking the DP sensors	-
Mode setting	U250	Setting the maintenance cycle	100000*1
	U251	Checking/clearing the maintenance count	-
	U252	Setting the destination	-
	U253	Switching between double and single counts	Double count
	U260	Selecting the timing for copy counting	EJECT*1
	U265	Setting OEM purchaser code	0
	U278	Setting the delivery date	-
	U285	Setting service status page	ON
	U332	Setting the size conversion factor	1.0*1
	U342	Setting the ejection restriction	ON*1
	U343	Switching between duplex/simplex copy mode	OFF*1
	U345	Setting the value for maintenance due indication	0*1
Image processing	U402	Adjusting margins of image printing	30/25/25/50/50
	U403	Adjusting margins for scanning an original on the platen	2.0/2.0/2.0/5.0
	U404	Adjusting margins for scanning an original from the DP	3.0/2.5/3.0/4.0
	U407	Adjusting the leading edge registration for memory image printing	0
	U411	Adjusting the scanner automatically	-
	U425	Setting the target	-
Fax	U600	Initializing all data	-
	U601	Initializing permanent data	-
	U603	Setting user data 1	DTMF*2
	U604	Setting user data 2	2 (120 V)*2 1 (220-240 V)*2
	U605	Clearing data	-
	U610	Setting system 1	
		Setting the number of lines to be ignored when receiving a fax at 100% magnification	3
		Setting the number of lines to be ignored when receiving a fax in the auto reduction mode	0
	U611	Setting the number of lines to be ignored when receiving a fax (A4R/LetterR) in the auto reduction mode	0
		Setting system 2	
		Setting the number of adjustment lines for automatic reduction	7
		Setting the number of adjustment lines for automatic reduction when A4 paper is set	22
		Setting the number of adjustment lines for automatic reduction when letter size paper is set	26

*: Factory initial setting, *1: The item initialized for executing U021, *2: The item initialized for executing U600

Section	Item No.	Content of maintenance item	Initial setting*
Fax	U612	Setting system 3 Selecting if auto reduction in the auxiliary direction is to be performed Setting the automatic printing of the protocol list Setting how trailing edge margins are detected	ON OFF ON
	U620	Setting the remote switching mode	ONE ^{*2}
	U625	Setting the transmission system 1 Setting the auto redialing interval Setting the number of times of auto redialing	3 (120 V) ^{*2} 2 (220-240 V) ^{*2} 2 (120 V) ^{*2} 3 (220-240 V) ^{*2}
	U630	Setting communication control 1 Setting the communication starting speed Setting the reception speed Setting the waiting period to prevent echo problems at the sender Setting the waiting period to prevent echo problems at the receiver	14400bps/V17 ^{*2} 14400bps ^{*2} 300 ^{*2} 75 ^{*2}
	U631	Setting communication control 2 Setting ECM transmission Setting ECM reception Setting the frequency of the CED signal	ON ^{*2} ON ^{*2} 2100 ^{*2}
	U632	Setting communication control 3 Setting the DIS signal to 4 bytes Setting the short protocol transmission Setting the reception of a short protocol transmission Setting the CNG detection times in the fax/telephone auto select mode	OFF ^{*2} ON ^{*2} ON ^{*2} 2TIME ^{*2}
	U633	Setting communication control 4 Enabling/disabling V.34 communication Setting the V.34 symbol speed (3429 Hz) Setting the number of times of DIS signal reception Setting the reference for RTN signal output	ON ^{*2} ON ^{*2} ONCE ^{*2} 15% ^{*2}
	U634	Setting communication control 5	0 ^{*2}
	U640	Setting communication time 1 One-shot detection time for remote switching Continuous detection time for remote switching	7 ^{*2} 80 ^{*2}
	U641	Setting communication time 2 Setting the T0 time-out time Setting the T1 time-out time Setting the T2 time-out time Setting the Ta time-out time Setting the Tb1 time-out time Setting the Tb2 time-out time Setting the Tc time-out time Setting the Td time-out time	56 ^{*2} 36 ^{*2} 69 ^{*2} 30 ^{*2} 20 ^{*2} 80 ^{*2} 60 ^{*2} 9 (120 V) ^{*2} 6 (220-240 V) ^{*2}
	U650	Setting modem 1 Setting the G3 transmission cable equalizer Setting the G3 reception cable equalizer Setting the modem detection level	0dB ^{*2} 0dB ^{*2} 43dBm ^{*2}

*: Factory initial setting, *1: The item initialized for executing U021, *2: The item initialized for executing U600

Section	Item No.	Content of maintenance item	Initial setting*
Fax	U651	Setting modem 2 Modem output level	9 (120 V) ^{*2} 10 (220-240 V) ^{*2}
		DTMF output level (main value)	5 (120 V) ^{*2} 10.5 (220-240 V) ^{*2}
		DTMF output level (level difference)	2 (120 V) ^{*2} 2.5 (220-240 V) ^{*2}
	U660	Setting the NCU Setting the connection to PBX/PSTN Setting PSTN dial tone detection Setting busy tone detection Setting for a PBX Setting the loop current detection before dialing	PSTN ^{*2} ON ^{*2} ON ^{*2} LOOP ^{*2} ON ^{*2}
Others	U670	Outputting lists	-
	U695	FAX function customize	ON/OFF
	U699	Setting the software switches	-
	U901	Checking 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	-
	U908	Checking the total counter value	-
	U910	Clearing the black ratio data	-
	U911	Checking/clearing copy counts by paper sizes	-
	U917	Setting backup data reading/writing	-
	U920	Checking the copy counts	-
	U927	Clearing the all copy counts and machine life counts (one time only)	-
	U928	Checking machine life counts	-
	U942	Setting of deflection for feeding from DP	0/0
	U969	Checking of toner area code	-
	U977	Data capture mode	-
	U991	Checking the scanner count	-
	U993	Outputting a VTC-PG pattern	-

*: Factory initial setting, *1: The item initialized for executing U021, *2: The item initialized for executing U600

(3) Contents of the maintenance mode items

Maintenance item No.	Description																
U000	<p>Outputting an own-status report</p> <p>Description Outputs lists of the current settings of the maintenance items and paper jam and service call occurrences. Outputs the event log. Also sends output data to the USB memory. 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.</p> <p>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.</p> <p>Method</p> <ol style="list-style-type: none"> Press the start key. Select the item to be output using the cursor up/down keys. <table border="1"> <thead> <tr> <th>Display</th><th>Output list</th></tr> </thead> <tbody> <tr> <td>MAINTENANCE</td><td>List of the current settings of the maintenance modes</td></tr> <tr> <td>EVENT</td><td>Outputs the event log</td></tr> <tr> <td>ALL</td><td>Outputs the all reports</td></tr> </tbody> </table> <ol style="list-style-type: none"> 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. <p>Method: Send to the USB memory</p> <ol style="list-style-type: none"> Press the power key on the operation panel, and after verifying the main power indicator has gone off, switch off the main power switch. Insert USB memory in USB memory slot. Turn the main power switch on. Enter the maintenance item. Press the start key. Select the item to be send. Select [TEXT] or [HTML]. <table border="1"> <thead> <tr> <th>Display</th><th>Output list</th></tr> </thead> <tbody> <tr> <td>Print</td><td>Outputs the report</td></tr> <tr> <td>USB (TEXT)</td><td>Sends output data to the USB memory (text type)</td></tr> <tr> <td>USB (HTML)</td><td>Sends output data to the USB memory (HTML type)</td></tr> </tbody> </table> <ol style="list-style-type: none"> Press the start key. Output will be sent to the USB memory. 	Display	Output list	MAINTENANCE	List of the current settings of the maintenance modes	EVENT	Outputs the event log	ALL	Outputs the all reports	Display	Output list	Print	Outputs the report	USB (TEXT)	Sends output data to the USB memory (text type)	USB (HTML)	Sends output data to the USB memory (HTML type)
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U000	Event log <div><div>Event Log</div><div>MFP</div><div>Firmware version 2JN_2F00.001.1772009.04.06</div><div><div>(1)</div><div>(2)</div></div><div><div><div>(3) Paper Jam Log</div><table><thead><tr><th>#</th><th>Count.</th><th>Event Descriptions</th></tr></thead><tbody><tr><td>16</td><td>9876543</td><td>10.01.08.01.01</td></tr><tr><td>15</td><td>666554</td><td>10.01.08.01.02</td></tr><tr><td>14</td><td>4988</td><td>10.01.08.01.01</td></tr><tr><td>13</td><td>4988</td><td>10.01.08.01.02</td></tr><tr><td>12</td><td>4988</td><td></td></tr><tr><td>11</td><td>4988</td><td>10.01.08.01.01</td></tr><tr><td>10</td><td>1103</td><td></td></tr><tr><td>9</td><td>1103</td><td></td></tr><tr><td>8</td><td>1103</td><td>12.03.08.01.01</td></tr><tr><td>7</td><td>1103</td><td>12.03.08.01.01</td></tr><tr><td>6</td><td>1027</td><td>12.03.08.01.01</td></tr><tr><td>5</td><td>1027</td><td>12.03.0A.01.01</td></tr><tr><td>4</td><td>1027</td><td>12.03.08.01.01</td></tr><tr><td>3</td><td>1027</td><td>12.03.08.01.02</td></tr><tr><td>2</td><td>550</td><td>12.03.0A.01.01</td></tr><tr><td>1</td><td>28</td><td>12.03.08.01.01</td></tr></tbody></table></div><div><div>(4) Service Call Log</div><table><thead><tr><th>#</th><th>Count.</th><th>Service Code</th></tr></thead><tbody><tr><td>8</td><td>7881214</td><td>01.0060</td></tr><tr><td>7</td><td>578944</td><td>01.0120</td></tr><tr><td>6</td><td>5296</td><td>01.4000</td></tr><tr><td>5</td><td>5295</td><td>01.3100</td></tr><tr><td>4</td><td>2099</td><td>01.2000</td></tr><tr><td>3</td><td>1054</td><td>01.2000</td></tr><tr><td>2</td><td>809</td><td>01.2200</td></tr><tr><td>1</td><td>30</td><td>01.2500</td></tr></tbody></table></div><div><div>(5) Maintenance Log</div><table><thead><tr><th>#</th><th>Count.</th><th>Item</th></tr></thead><tbody><tr><td>8</td><td>9045571</td><td>01.00</td></tr><tr><td>7</td><td>704511</td><td>02.00</td></tr><tr><td>6</td><td>7045</td><td>01.00</td></tr><tr><td>5</td><td>3454</td><td>02.00</td></tr><tr><td>4</td><td>3454</td><td>01.00</td></tr><tr><td>3</td><td>3454</td><td>02.00</td></tr><tr><td>2</td><td>417</td><td>01.00</td></tr><tr><td>1</td><td>35</td><td>02.00</td></tr></tbody></table></div><div><div>(6) Unknown toner Log</div><table><thead><tr><th>#</th><th>Count.</th><th>Item</th></tr></thead><tbody><tr><td>5</td><td>3454</td><td>01.00</td></tr><tr><td>4</td><td>3454</td><td>01.00</td></tr><tr><td>3</td><td>3454</td><td>01.00</td></tr><tr><td>2</td><td>417</td><td>01.00</td></tr><tr><td>1</td><td>35</td><td>01.00</td></tr></tbody></table></div><div><div>(7) Counter Log</div><table><tbody><tr><td>(f) J10:000</td><td>J73:000</td><td>(g) C0100:001</td><td>(h) M00:01</td></tr><tr><td>J11:000</td><td>J74:000</td><td>C0110:001</td><td></td></tr><tr><td>J12:000</td><td>J78:000</td><td>C0120:001</td><td></td></tr><tr><td>J20:002</td><td></td><td>C0150:001</td><td></td></tr><tr><td>J21:000</td><td></td><td>C0170:001</td><td></td></tr><tr><td>J22:000</td><td></td><td>C0420:001</td><td></td></tr><tr><td>J30:000</td><td></td><td>C2000:001</td><td></td></tr><tr><td>J40:000</td><td></td><td>C2610:001</td><td></td></tr><tr><td></td><td></td><td>C2620:001</td><td></td></tr></tbody></table></div></div></div>	#	Count.	Event Descriptions	16	9876543	10.01.08.01.01	15	666554	10.01.08.01.02	14	4988	10.01.08.01.01	13	4988	10.01.08.01.02	12	4988		11	4988	10.01.08.01.01	10	1103		9	1103		8	1103	12.03.08.01.01	7	1103	12.03.08.01.01	6	1027	12.03.08.01.01	5	1027	12.03.0A.01.01	4	1027	12.03.08.01.01	3	1027	12.03.08.01.02	2	550	12.03.0A.01.01	1	28	12.03.08.01.01	#	Count.	Service Code	8	7881214	01.0060	7	578944	01.0120	6	5296	01.4000	5	5295	01.3100	4	2099	01.2000	3	1054	01.2000	2	809	01.2200	1	30	01.2500	#	Count.	Item	8	9045571	01.00	7	704511	02.00	6	7045	01.00	5	3454	02.00	4	3454	01.00	3	3454	02.00	2	417	01.00	1	35	02.00	#	Count.	Item	5	3454	01.00	4	3454	01.00	3	3454	01.00	2	417	01.00	1	35	01.00	(f) J10:000	J73:000	(g) C0100:001	(h) M00:01	J11:000	J74:000	C0110:001		J12:000	J78:000	C0120:001		J20:002		C0150:001		J21:000		C0170:001		J22:000		C0420:001		J30:000		C2000:001		J40:000		C2610:001				C2620:001	
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J12:000	J78:000	C0120:001																																																																																																																																																														
J20:002		C0150:001																																																																																																																																																														
J21:000		C0170:001																																																																																																																																																														
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J40:000		C2610:001																																																																																																																																																														
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Detail of event log																																																																																																																																																																
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		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 exceeds 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																																																																																																																																																												

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U000							
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U000																					
	No.	Items	Description																		
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Maintenance item No.	Description			
U000	(3) cont.	Paper Jam Log	(c) Detail of paper size (Hexadecimal)	
			01: Monarch	0C: Ledger
			02: Business	0D: A5
			03: International DL	0E: A6
			04: International C5	0F: B6
			05: Executive	10: Commercial #9
			06: Letter-R	11: Commercial #6
			08: Letter-E	12: ISO B5
			07: Legal	13: Custom size
			08: A4R	1E: C4
			09: B5R	1F: Postcard
			09: B5E	20: Reply-paid postcard
			0A: A3	21: Oficio II
			0B: B4	22: Special 1
				23: Special 2
			(d) Detail of paper type (Hexadecimal)	
			01: Plain	0A: Color
			02: Transparency	0B: Prepunched
			03: Preprinted	0C: Envelope
			04: Labels	0D: Cardstock
			05: Bond	0E: Coated
			06: Recycled	0F: 2nd side
			07: Vellum	10: Media 16
			08: Rough	11: High quality
			09: Letterhead	
			(e) Detail of paper exit location (Hexadecimal)	
			01: Face down (FD)	
	(4)	Service Call Log	#	Count.
			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.
				Service Code
				Self diagnostic error code (See page 1-4-4)
				Example: 01.6000
				01: Self diagnostic error 6000: Self diagnostic error code number

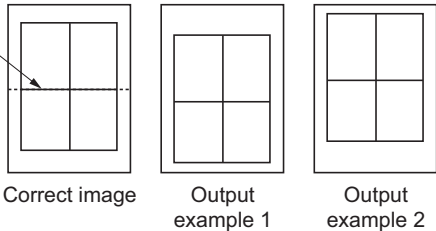
Maintenance item No.	Description			
U000				
	No.	Items	Description	
	(5)	Maintenance Log	#	Count.
			Remembers 1 to 8 of occurrence of replacement. If the occurrence of the previous replacement of toner container is less than 8, all of the occurrences of replacement are logged.	The total page count 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: Black 01: MK-130/MK-132
	(6)	Unknown Toner Log	#	Count.
			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	(f) Paper jam	(g) Self diagnostic error
		Comprised of three log counters including paper jams, self diagnostics errors, and replacement of the toner container.	(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 1-4-4) 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: MK-130/MK-132 Example: T00: 1 The toner container has been replaced once.
Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.				

Maintenance item No.	Description																										
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 <ol style="list-style-type: none"> 1. Press the start key. 2. Select [MODE1(ALL)] using the cursor up/down keys. 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. <p>An error code is displayed in case of an initialization error. Refer to the table of the error codes on P.1-3-13. When errors occurred, turn main power switch off then on, and execute initialization using maintenance item U002.</p>																										
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.																										
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 <ol style="list-style-type: none"> 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>Control PWB ROM</td></tr> <tr> <td>MMI</td><td>Operation panel PWB ROM</td></tr> <tr> <td>ENGINE</td><td>Engine ROM</td></tr> <tr> <td>ENGINE BOOT</td><td>Engine booting</td></tr> <tr> <td>CASS 2</td><td>Optional paper feeder main PWB ROM</td></tr> <tr> <td>CASS 3</td><td>Optional paper feeder main PWB ROM</td></tr> <tr> <td>SCANNER</td><td>Scanner PWB ROM</td></tr> <tr> <td>SCANNER BOOT</td><td>Scanner PWB booting</td></tr> <tr> <td>OPTION LANGUAGE</td><td>Optional language ROM</td></tr> <tr> <td>FAX BOOT</td><td>FAX PWB booting</td></tr> <tr> <td>FAX APL</td><td>FAX PWB APL</td></tr> <tr> <td>FAX IPL</td><td>FAX PWB IPL</td></tr> </tbody> </table> Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.	Display	Description	MAIN	Control PWB ROM	MMI	Operation panel PWB ROM	ENGINE	Engine ROM	ENGINE BOOT	Engine booting	CASS 2	Optional paper feeder main PWB ROM	CASS 3	Optional paper feeder main PWB ROM	SCANNER	Scanner PWB ROM	SCANNER BOOT	Scanner PWB booting	OPTION LANGUAGE	Optional language ROM	FAX BOOT	FAX PWB booting	FAX APL	FAX PWB APL	FAX IPL	FAX PWB IPL
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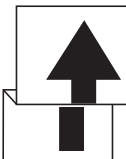
Maintenance item No.	Description																												
U021	<p>Initializing counters and mode settings</p> <p>Description Initializes all settings, except those pertinent to the type of machine, namely each counter, service call history and mode setting. Also initializes backup RAM according to region specification selected in maintenance item U252 Setting the destination. Refer to *1 of the maintenance mode item list about the item initialized.</p> <p>Purpose To return the machine settings to their factory default.</p> <p>Method</p> <ol style="list-style-type: none"> 1. Press the start key. 2. Select [EXECUTE] using the cursor up/down keys. 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. <p>An error code is displayed in case of an initialization error. When errors occurred, turn main power switch off then on, and execute initialization using maintenance item U021.</p> <p>Error codes</p> <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>	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
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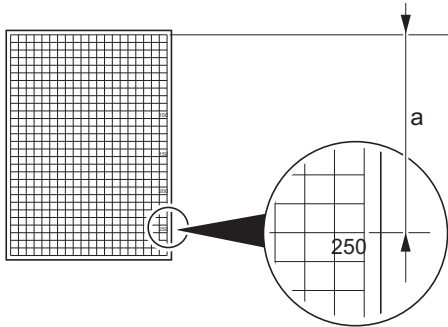
Maintenance item No.	Description										
U030	<p>Checking motor operation</p> <p>Description Drives each motor.</p> <p>Purpose To check the operation of each motor.</p> <p>Method</p> <ol style="list-style-type: none"> 1. Press the start key. 2. Select the motor to be operated using the cursor up/down keys. 3. Press the start key. The operation starts. <table border="1"> <thead> <tr> <th>Display</th><th>Operation</th></tr> </thead> <tbody> <tr> <td>MAIN</td><td>Main motor operates</td></tr> <tr> <td>PAPER FEEDER 1</td><td>PF paper feed motor* operates</td></tr> <tr> <td>PAPER FEEDER 2</td><td>PF paper feed motor* operates</td></tr> </tbody> </table> <p>*: Option.</p> <ol style="list-style-type: none"> 4. To stop operation, press the stop key. <p>Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.</p>	Display	Operation	MAIN	Main motor operates	PAPER FEEDER 1	PF paper feed motor* operates	PAPER FEEDER 2	PF paper feed motor* operates		
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PAPER FEEDER 1	PF paper feed motor* operates										
PAPER FEEDER 2	PF paper feed motor* operates										
U031	<p>Checking switch/sensor for paper conveying</p> <p>Description Displays the on-off status of each paper detection switch/sensor on the paper path.</p> <p>Purpose To check if the switch/sensor for paper conveying operate correctly.</p> <p>Method</p> <ol style="list-style-type: none"> 1. Press the start key. 2. Turn each switch/sensor on and off manually to check the status. <p>When a switch/sensor is detected to be in the ON position, the display for that switch/sensor will be "1".</p> <table border="1"> <thead> <tr> <th>Display</th><th>Switch and sensors</th></tr> </thead> <tbody> <tr> <td>WHOLE 0 0 0 0</td><td>Cassette switch/Paper sensor/MP paper sensor/Registration sensor</td></tr> <tr> <td>EXIT 0</td><td>Exit sensor</td></tr> <tr> <td>PAPER FEED 1 0 0 0</td><td>PF cassette switch*/PF paper sensor*/PF paper feed sensor*</td></tr> <tr> <td>PAPER FEED 2 0 0 0</td><td>PF cassette switch*/PF paper sensor*/PF paper feed sensor*</td></tr> </tbody> </table> <p>*: Option.</p> <p>Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.</p>	Display	Switch and sensors	WHOLE 0 0 0 0	Cassette switch/Paper sensor/MP paper sensor/Registration sensor	EXIT 0	Exit sensor	PAPER FEED 1 0 0 0	PF cassette switch*/PF paper sensor*/PF paper feed sensor*	PAPER FEED 2 0 0 0	PF cassette switch*/PF paper sensor*/PF paper feed sensor*
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PAPER FEED 2 0 0 0	PF cassette switch*/PF paper sensor*/PF paper feed sensor*										

Maintenance item No.	Description																
U032	<p>Checking clutch operation</p> <p>Description Turns each clutch on.</p> <p>Purpose To check the operation of each clutch.</p> <p>Method</p> <ol style="list-style-type: none"> 1. Press the start key. 2. Select the clutch to be operated using the cursor up/down keys. 3. Press the start key. The clutch turns on. <table border="1"> <thead> <tr> <th>Display</th><th>Clutches</th></tr> </thead> <tbody> <tr> <td>FEED CL</td><td>Paper feed clutch operates</td></tr> <tr> <td>REG CL</td><td>Registration clutch operates</td></tr> <tr> <td>DLP CL</td><td>Developing clutch operates</td></tr> <tr> <td>FEED CL(PF1)</td><td>PF paper feed clutch* operates</td></tr> <tr> <td>TRANS CL(PF1)</td><td>PF paper conveying clutch* operates</td></tr> <tr> <td>FEED CL(PF2)</td><td>PF paper feed clutch* operates</td></tr> <tr> <td>TRANS CL(PF2)</td><td>PF paper conveying clutch* operates</td></tr> </tbody> </table> <p>*: Option.</p> <ol style="list-style-type: none"> 4. To stop driving motors, press the stop key. <p>Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.</p>	Display	Clutches	FEED CL	Paper feed clutch operates	REG CL	Registration clutch operates	DLP CL	Developing clutch operates	FEED CL(PF1)	PF paper feed clutch* operates	TRANS CL(PF1)	PF paper conveying clutch* operates	FEED CL(PF2)	PF paper feed clutch* operates	TRANS CL(PF2)	PF paper conveying clutch* operates
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TRANS CL(PF2)	PF paper conveying clutch* operates																
U033	<p>Checking solenoid operation</p> <p>Description Applies current to each solenoid in order to check its ON status.</p> <p>Purpose To check the operation of each solenoid.</p> <p>Method</p> <ol style="list-style-type: none"> 1. Press the start key. 2. Select the solenoid to be operated using the cursor up/down keys. 3. Press the start key. The solenoid turns on. <table border="1"> <thead> <tr> <th>Display</th><th>Solenoids</th></tr> </thead> <tbody> <tr> <td>MPF SOL</td><td>MP paper feed solenoid operates</td></tr> <tr> <td>DU SOL</td><td>Duplex solenoid operates</td></tr> <tr> <td>FD SOL</td><td>Face down solenoid operation</td></tr> </tbody> </table> <p>*Option.</p> <ol style="list-style-type: none"> 4. To stop driving motors, press the stop key. <p>Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.</p>	Display	Solenoids	MPF SOL	MP paper feed solenoid operates	DU SOL	Duplex solenoid operates	FD SOL	Face down solenoid operation								
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FD SOL	Face down solenoid operation																

Maintenance item No.	Description																															
U034	<p>Adjusting the print start timing</p> <p>Description Adjusts the leading edge registration or center line.</p> <p>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.</p> <p>Caution Before performing this adjustment, perform the procedure under section “U053 Setting the adjustment of the motor speed”.</p> <p>Method</p> <ol style="list-style-type: none">1. Press the start key.2. Select the item to be adjusted using the cursor up/down keys.3. Press the start key. <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></table> <p>Adjustment: Leading edge registration adjustment</p> <ol style="list-style-type: none">1. Select the item to be adjusted using the cursor up/down 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>TOP</td><td>Adjustment of reference value</td><td>0 to 1180</td><td>541</td><td>0.04 mm</td></tr><tr><td>MP TRAY</td><td>Paper feed from MP tray*</td><td>-70 to 70</td><td>0</td><td>0.04 mm</td></tr><tr><td>CASSETTE</td><td>Paper feed from cassette*</td><td>-70 to 70</td><td>0</td><td>0.04 mm</td></tr><tr><td>DUPLEX</td><td>Duplex mode (second side)*</td><td>-70 to 70</td><td>0</td><td>0.04 mm</td></tr></table> <p>*: Setting the difference value from reference value</p> <ol style="list-style-type: none">2. Press the system menu/counter key.3. Press the start key to output a test pattern.4. Press the system menu/counter key.5. Change the setting value using the cursor left/right keys or numeric keys. Perform adjustment so that the image fits in the middle of the page. For output example 1, decrease the value. For output example 2, increase the value. <div><p>Center line in vertical direction</p><p>Correct image Output example 1 Output example 2</p></div> <p>Figure 1-3-1</p> <ol style="list-style-type: none">6. Press the start key. The value is set. <p>Caution Check the copy image after the adjustment. If the image is still incorrect, perform the following adjustments in maintenance mode.</p> <div><div>U034</div><div>→</div><div>U066 (P.1-3-22)</div><div>→</div><div>U071 (P.1-3-26)</div></div>	Display	Description	LSU OUT TOP	Leading edge registration adjustment	LSU OUT LEFT	Center line adjustment	Display	Description	Setting range	Initial setting	Change in value per step	TOP	Adjustment of reference value	0 to 1180	541	0.04 mm	MP TRAY	Paper feed from MP tray*	-70 to 70	0	0.04 mm	CASSETTE	Paper feed from cassette*	-70 to 70	0	0.04 mm	DUPLEX	Duplex mode (second side)*	-70 to 70	0	0.04 mm
Display	Description																															
LSU OUT TOP	Leading edge registration adjustment																															
LSU OUT LEFT	Center line adjustment																															
Display	Description	Setting range	Initial setting	Change in value per step																												
TOP	Adjustment of reference value	0 to 1180	541	0.04 mm																												
MP TRAY	Paper feed from MP tray*	-70 to 70	0	0.04 mm																												
CASSETTE	Paper feed from cassette*	-70 to 70	0	0.04 mm																												
DUPLEX	Duplex mode (second side)*	-70 to 70	0	0.04 mm																												

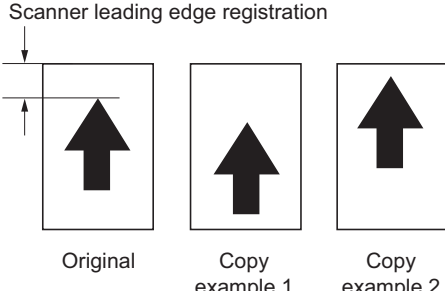
Maintenance item No.	Description																																			
U034	<p>Adjustment: Center line adjustment</p> <p>1. Select the item to be adjusted using the cursor up/down keys.</p> <table><tr><th>Display</th><th>Description</th><th>Setting range</th><th>Initial setting</th><th>Change in value per step</th></tr><tr><td>LEFT</td><td>Adjustment of reference value</td><td>0 to 1180</td><td>235</td><td>0.04 mm</td></tr><tr><td>MP TRAY</td><td>Paper feed from MP tray*</td><td>-70 to 70</td><td>0</td><td>0.04 mm</td></tr><tr><td>CASSETTE 1</td><td>Paper feed from cassette 1*</td><td>-70 to 70</td><td>0</td><td>0.04 mm</td></tr><tr><td>CASSETTE 2</td><td>Paper feed from optional cassette 2*</td><td>-70 to 70</td><td>0</td><td>0.04 mm</td></tr><tr><td>CASSETTE 3</td><td>Paper feed from optional cassette 3*</td><td>-70 to 70</td><td>0</td><td>0.04 mm</td></tr><tr><td>DUPLEX</td><td>Duplex mode (second side)*</td><td>-70 to 70</td><td>0</td><td>0.04 mm</td></tr></table> <p>*: Setting the difference value from reference value</p> <p>2. Press the system menu/counter key.</p> <p>3. Press the start key to output a test pattern.</p> <p>4. Press the system menu/counter key.</p> <p>5. Change the setting value using the cursor left/right keys or numeric keys. For output example 1, decrease the value. For output example 2, increase the value.</p> <div><p>Center line of printing</p><p>Correct image Output example 1 Output example 2</p></div> <p>Figure 1-3-2</p> <p>6. Press the start key. The value is set.</p> <p>Caution</p> <p>Check the copy image after the adjustment. If the image is still incorrect, perform the following adjustments in maintenance mode.</p> <div><div>U034</div><div>→</div><div>U067 (P.1-3-23)</div><div>→</div><div>U072 (P.1-3-28)</div></div> <p>Completion</p> <p>Press the stop key. The screen for selecting a maintenance item No. is displayed.</p>	Display	Description	Setting range	Initial setting	Change in value per step	LEFT	Adjustment of reference value	0 to 1180	235	0.04 mm	MP TRAY	Paper feed from MP tray*	-70 to 70	0	0.04 mm	CASSETTE 1	Paper feed from cassette 1*	-70 to 70	0	0.04 mm	CASSETTE 2	Paper feed from optional cassette 2*	-70 to 70	0	0.04 mm	CASSETTE 3	Paper feed from optional cassette 3*	-70 to 70	0	0.04 mm	DUPLEX	Duplex mode (second side)*	-70 to 70	0	0.04 mm
Display	Description	Setting range	Initial setting	Change in value per step																																
LEFT	Adjustment of reference value	0 to 1180	235	0.04 mm																																
MP TRAY	Paper feed from MP tray*	-70 to 70	0	0.04 mm																																
CASSETTE 1	Paper feed from cassette 1*	-70 to 70	0	0.04 mm																																
CASSETTE 2	Paper feed from optional cassette 2*	-70 to 70	0	0.04 mm																																
CASSETTE 3	Paper feed from optional cassette 3*	-70 to 70	0	0.04 mm																																
DUPLEX	Duplex mode (second side)*	-70 to 70	0	0.04 mm																																

Maintenance item No.	Description																														
U051	<p>Adjusting the deflection in the paper</p> <p>Description Adjusts the deflection in the paper.</p> <p>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.</p> <p>Adjustment</p> <ol style="list-style-type: none">1. Press the start key.2. Select the item to be adjusted using the cursor up/down 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>DELAY BASE</td><td>Adjustment of deflection in the paper</td><td>-128 to 127</td><td>0</td><td>1 mm</td></tr><tr><td>REGIST CAS1</td><td>Paper feed from cassette</td><td>-128 to 127</td><td>0</td><td>1 mm</td></tr><tr><td>REGIST CAS2</td><td>Paper feed from optional cassette</td><td>-128 to 127</td><td>0</td><td>1 mm</td></tr><tr><td>REGIST CAS3</td><td>Paper feed from optional cassette</td><td>-128 to 127</td><td>0</td><td>1 mm</td></tr><tr><td>DUPLEX</td><td>Duplex mode (second side)</td><td>-128 to 127</td><td>0</td><td>1 mm</td></tr></table> <ol style="list-style-type: none">3. Press the system menu/counter key.4. Place an original and press the start key to make a test copy.5. Press the system menu/counter key.6. Change the setting value using the cursor left/right keys 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. <div><div><p>Original</p></div><div><p>Copy example 1</p></div><div><p>Copy example 2</p></div></div> <p>Figure 1-3-3</p> <ol style="list-style-type: none">7. Press the start key. The value is set.8. Turn the main power switch off and on.	Display	Description	Setting range	Initial setting	Change in value per step	DELAY BASE	Adjustment of deflection in the paper	-128 to 127	0	1 mm	REGIST CAS1	Paper feed from cassette	-128 to 127	0	1 mm	REGIST CAS2	Paper feed from optional cassette	-128 to 127	0	1 mm	REGIST CAS3	Paper feed from optional cassette	-128 to 127	0	1 mm	DUPLEX	Duplex mode (second side)	-128 to 127	0	1 mm
Display	Description	Setting range	Initial setting	Change in value per step																											
DELAY BASE	Adjustment of deflection in the paper	-128 to 127	0	1 mm																											
REGIST CAS1	Paper feed from cassette	-128 to 127	0	1 mm																											
REGIST CAS2	Paper feed from optional cassette	-128 to 127	0	1 mm																											
REGIST CAS3	Paper feed from optional cassette	-128 to 127	0	1 mm																											
DUPLEX	Duplex mode (second side)	-128 to 127	0	1 mm																											

Maintenance item No.	Description										
U053	<p>Setting the adjustment of the motor speed</p> <p>Description Performs fine adjustment of the speeds of the motor.</p> <p>Purpose To adjust the speed of the motor when the magnification in the auxiliary scanning direction is not correct.</p> <p>Method</p> <p>1. Press the start key.</p> <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 MOTOR</td><td>Main motor speed adjustment</td><td>-50 to 50</td><td>0</td><td>0.5%</td></tr></table> <p>Adjustment</p> <p>1. Press the system menu/counter key.</p> <p>2. Press the start key to output a VTC pattern.</p> <div><p>Correct value: $a = 250 \pm 1.0 \text{ mm}$</p></div> <p>Figure 1-3-4</p> <p>3. Press the system menu/counter key.</p> <p>4. Change the setting value using the cursor left/right keys 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.</p> <p>5. Press the start key. The value is set.</p> <p>6. Turn the main power switch off and on.</p>	Display	Description	Setting range	Initial setting	Change in value per step	MAIN MOTOR	Main motor speed adjustment	-50 to 50	0	0.5%
Display	Description	Setting range	Initial setting	Change in value per step							
MAIN MOTOR	Main motor speed adjustment	-50 to 50	0	0.5%							




Maintenance item No.	Description								
U063	<p>Adjusting the shading position</p> <p>Description Changes the shading position of the scanner.</p> <p>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.</p> <p>Method</p> <div><div>1. Press the start key.</div><div>2. Change the setting using the cursor left/right keys or numeric keys.</div></div> <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>-32 to 20</td><td>0</td><td>0.086 mm</td></tr></table> <p>Increasing the setting moves the shading position toward the machine left, and decreasing it moves the position toward the machine right.</p> <div><div>3. Press the start key. The value is set.</div></div> <p>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/counter key).</p> <p>Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.</p>	Description	Setting range	Initial setting	Change in value per step	Shading position	-32 to 20	0	0.086 mm
Description	Setting range	Initial setting	Change in value per step						
Shading position	-32 to 20	0	0.086 mm						




Maintenance item No.	Description															
U065	<p>Adjusting the scanner magnification</p> <p>Description Adjusts the magnification of the original scanning.</p> <p>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.</p> <p>Caution Adjust the magnification of the scanner in the following order.</p> <div><div>U053 (P.1-3-19)</div>→<div>U065 (main scanning direction)</div>→<div>U065 (auxiliary scanning direction)</div>→<div>U067 (P.1-3-23)</div>→<div>U070 (P.1-3-25)</div></div> <p>Method</p> <div><div>1. Press the start key.</div><div>2. Select the item to be adjusted using the cursor up/down keys.</div></div> <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>Y SCAN ZOOM</td><td>Scanner magnification in the main scanning direction</td><td>-32 to 127</td><td>0</td><td>0.1%</td></tr><tr><td>X SCAN ZOOM</td><td>Scanner magnification in the auxiliary scanning direction</td><td>-25 to 25</td><td>0</td><td>0.1%</td></tr></table> <p>Adjustment: Main scanning direction</p> <div><div>1. Press the system menu/counter key.</div><div>2. Place an original and press the start key to make a test copy.</div><div>3. Press the system menu/counter key.</div><div>4. Change the setting value using the cursor left/right keys or numeric keys. For copy example 1, increase the value. For copy example 2, decrease the value.</div></div> <div><div><div></div><div>Original</div></div><div><div></div><div>Copy example 1</div></div><div><div></div><div>Copy example 2</div></div></div> <p>Figure 1-3-5</p> <div><div>5. Press the start key. The value is set.</div></div> <p>Adjustment: Auxiliary scanning direction</p> <div><div>1. Press the system menu/counter key.</div><div>2. Place an original and press the start key to make a test copy.</div><div>3. Press the system menu/counter key.</div><div>4. Change the setting value using the cursor left/right keys or numeric keys. For copy example 1, increase the value. For copy example 2, decrease the value.</div></div> <div><div><div></div><div>Original</div></div><div><div></div><div>Copy example 1</div></div><div><div></div><div>Copy example 2</div></div></div> <p>Figure 1-3-6</p> <div><div>5. Press the start key. The value is set.</div></div> <p>Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.</p>	Display	Description	Setting range	Initial setting	Change in value per step	Y SCAN ZOOM	Scanner magnification in the main scanning direction	-32 to 127	0	0.1%	X SCAN ZOOM	Scanner magnification in the auxiliary scanning direction	-25 to 25	0	0.1%
Display	Description	Setting range	Initial setting	Change in value per step												
Y SCAN ZOOM	Scanner magnification in the main scanning direction	-32 to 127	0	0.1%												
X SCAN ZOOM	Scanner magnification in the auxiliary scanning direction	-25 to 25	0	0.1%												

Maintenance item No.	Description															
U066	<p>Adjusting the scanner leading edge registration</p> <p>Description Adjusts the scanner leading edge registration of the original scanning.</p> <p>Purpose Make the adjustment if there is a regular error between the leading edges of the copy image and original.</p> <p>Adjustment</p> <ol style="list-style-type: none">1. Press the start key.2. Select the item to be adjusted using the cursor up/down 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>Scanner leading edge registration</td><td>-45 to 45</td><td>0</td><td>0.086 mm</td></tr><tr><td>TAIL</td><td>Scanner leading edge registration (rotate copying)</td><td>-45 to 45</td><td>0</td><td>0.086 mm</td></tr></table> <ol style="list-style-type: none">3. Press the system menu/counter key.4. Place an original and press the start key to make a test copy.5. Press the system menu/counter key.6. Change the setting value using the cursor left/right keys or numeric keys. For copy example 1, increase the value. For copy example 2, decrease the value. <div><p>Scanner leading edge registration</p><p>Original Copy example 1 Copy example 2</p></div> <p>7. Press the start key. The value is set.</p> <p>Caution Check the copy image after the adjustment. If the image is still incorrect, perform the following adjustments in maintenance mode.</p> <div><div>U066</div>→<div>U403 (P.1-3-45)</div>→<div>U071 (P.1-3-26)</div>→<div>U404 (P.1-3-46)</div></div> <p>Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.</p>	Display	Description	Setting range	Initial setting	Change in value per step	FRONT	Scanner leading edge registration	-45 to 45	0	0.086 mm	TAIL	Scanner leading edge registration (rotate copying)	-45 to 45	0	0.086 mm
Display	Description	Setting range	Initial setting	Change in value per step												
FRONT	Scanner leading edge registration	-45 to 45	0	0.086 mm												
TAIL	Scanner leading edge registration (rotate copying)	-45 to 45	0	0.086 mm												

Maintenance item No.	Description															
U067	<p>Adjusting the scanner center line</p> <p>Description Adjusts the scanner center line of the original scanning.</p> <p>Purpose Make the adjustment if there is a regular error between the center lines of the copy image and original.</p> <p>Adjustment</p> <div><div><div>1. Press the start key.</div><div>2. Select the item to be adjusted using the cursor up/down keys.</div></div><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>Scanner center line</td><td>-70 to 70</td><td>0</td><td>0.085 mm</td></tr><tr><td>ROTATE</td><td>Scanner center line (rotate copying)</td><td>-40 to 40</td><td>0</td><td>0.085 mm</td></tr></table><div><div><div>3. Press the system menu/counter key.</div><div>4. Place an original and press the start key to make a test copy.</div><div>5. Press the system menu/counter key.</div><div>6. Change the setting value using the cursor left/right keys or numeric keys. For copy example 1, decrease the value. For copy example 2, increase the value.</div></div><div><div><div>Scanner center line</div><div><div><div><div></div></div><div>Original</div></div><div><div><div></div></div><div>Copy example 1</div></div><div><div><div></div></div><div>Copy example 2</div></div></div></div></div><p>Figure 1-3-8</p><div><div>7. Press the start key. The value is set.</div></div><p>Caution Check the copy image after the adjustment. If the image is still incorrect, perform the following adjustments in maintenance mode.</p><div><div><div>U067</div><div>→</div><div>U403 (P.1-3-45)</div><div>→</div><div>U072 (P.1-3-28)</div><div>→</div><div>U404 (P.1-3-46)</div></div><p>Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.</p></div></div></div>	Display	Description	Setting range	Initial setting	Change in value per step	FRONT	Scanner center line	-70 to 70	0	0.085 mm	ROTATE	Scanner center line (rotate copying)	-40 to 40	0	0.085 mm
Display	Description	Setting range	Initial setting	Change in value per step												
FRONT	Scanner center line	-70 to 70	0	0.085 mm												
ROTATE	Scanner center line (rotate copying)	-40 to 40	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>DP READ</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>BLACK LINE</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>					Display	Description	Setting range	Initial setting	Change in value per step	DP READ	Starting position adjustment for scanning originals	-33 to 33	0	0.086 mm	BLACK LINE	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															
	DP READ	Starting position adjustment for scanning originals	-33 to 33	0	0.086 mm															
BLACK LINE	Scanning position for the test copy originals	0 to 3	0	0.22 mm																
2. Select [DP READ].																				
3. Change the setting using the cursor left/right keys 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 [BLACK LINE] using the cursor up/down keys.																				
6. Select the scanning position using the cursor left/right keys 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/counter 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.																				

Maintenance item No.	Description										
U070	<p>Adjusting the DP magnification</p> <p>Description Adjusts the DP original scanning speed.</p> <p>Purpose Make the adjustment if the magnification is incorrect in the auxiliary scanning direction when the DP is used.</p> <p>Method 1. Press the start key.</p> <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>CONVEY SPEED</td><td>Magnification in the auxiliary scanning direction</td><td>-25 to 25</td><td>0</td><td>0.1%</td></tr></table> <p>Adjustment 1. Press the system menu/counter key. 2. Place an original on the DP and press the start key to make a test copy. 3. Press the system menu/counter key. 4. Change the setting value using the cursor left/right keys or numeric keys. For copy example 1, increase the value. For copy example 2, decrease the value.</p> <div><div></div><div>Original</div><div></div><div>Copy example 1</div><div></div><div>Copy example 2</div></div> <p>Figure 1-3-9</p> <p>5. Press the start key. The value is set.</p> <p>Caution Check the copy image after the adjustment. If the image is still incorrect, perform the following adjustments in maintenance mode.</p> <div><div>U070</div><div>→</div><div>U071 (P.1-3-26)</div><div>→</div><div>U404 (P.1-3-46)</div></div> <p>Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.</p>	Display	Description	Setting range	Initial setting	Change in value per step	CONVEY SPEED	Magnification in the auxiliary scanning direction	-25 to 25	0	0.1%
Display	Description	Setting range	Initial setting	Change in value per step							
CONVEY SPEED	Magnification in the auxiliary scanning direction	-25 to 25	0	0.1%							

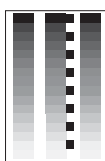
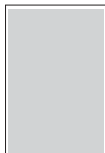
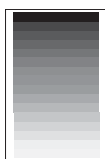
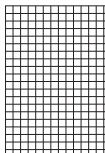
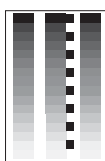
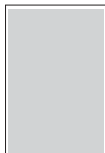
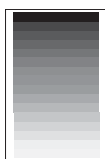
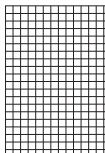
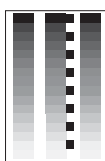
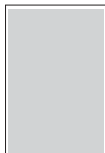
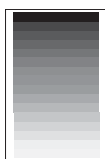
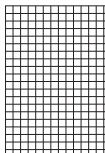
Maintenance item No.	Description																														
U071	<p>Adjusting the DP scanning timing</p> <p>Description Adjusts the DP original scanning timing.</p> <p>Purpose Make the adjustment if there is a regular error between the leading or trailing edges of the original and the copy image when the DP is used.</p> <p>Method</p> <ol style="list-style-type: none">1. Press the start key.2. Select the item to be adjusted using the cursor up/down 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 HEAD</td><td>Leading edge registration (first page)</td><td>-32 to 32</td><td>0</td><td>0.196 mm</td></tr><tr><td>FRONT TAIL</td><td>Trailing edge registration (first page)</td><td>-32 to 32</td><td>0</td><td>0.196 mm</td></tr><tr><td>BACK HEAD</td><td>Leading edge registration (second page)</td><td>-45 to 45</td><td>0</td><td>0.196 mm</td></tr><tr><td>BACK TAIL</td><td>Trailing edge registration (second page)</td><td>-45 to 45</td><td>0</td><td>0.196 mm</td></tr><tr><td>ROTATE</td><td>Leading edge registration (rotate copying)</td><td>-128 to 127</td><td>0</td><td>0.196 mm</td></tr></table> <p>Adjustment: Leading edge registration</p> <ol style="list-style-type: none">1. Press the system menu/counter key.2. Place an original on the DP and press the start key to make a test copy.3. Press the system menu/counter key.4. Change the setting value using the cursor left/right keys or numeric keys. For copy example 1, increase the value. For copy example 2, decrease the value. <div><div><p>Original</p></div><div><p>Copy example 1</p></div><div><p>Copy example 2</p></div></div> <p>Figure 1-3-10</p> <ol style="list-style-type: none">5. Press the start key. The value is set. <p>Caution Check the copy image after the adjustment. If the image is still incorrect, perform the following adjustments in maintenance mode.</p> <div><div>U071</div><div>→</div><div>U404 (P.1-3-46)</div></div>	Display	Description	Setting range	Initial setting	Change in value per step	FRONT HEAD	Leading edge registration (first page)	-32 to 32	0	0.196 mm	FRONT TAIL	Trailing edge registration (first page)	-32 to 32	0	0.196 mm	BACK HEAD	Leading edge registration (second page)	-45 to 45	0	0.196 mm	BACK TAIL	Trailing edge registration (second page)	-45 to 45	0	0.196 mm	ROTATE	Leading edge registration (rotate copying)	-128 to 127	0	0.196 mm
Display	Description	Setting range	Initial setting	Change in value per step																											
FRONT HEAD	Leading edge registration (first page)	-32 to 32	0	0.196 mm																											
FRONT TAIL	Trailing edge registration (first page)	-32 to 32	0	0.196 mm																											
BACK HEAD	Leading edge registration (second page)	-45 to 45	0	0.196 mm																											
BACK TAIL	Trailing edge registration (second page)	-45 to 45	0	0.196 mm																											
ROTATE	Leading edge registration (rotate copying)	-128 to 127	0	0.196 mm																											

Maintenance item No.	Description
U071	<p>Adjustment: Trailing edge registration</p> <ol style="list-style-type: none"> 1. Press the system menu/counter key. 2. Place an original on the DP and press the start key to make a test copy. 3. Press the system menu/counter key. 4. Change the setting value using the cursor left/right keys or numeric keys. For copy example 1, increase the value. For copy example 2, decrease the value. <div data-bbox="643 465 1002 694" data-label="Image"> </div> <p style="text-align: center;">Figure 1-3-11</p> <ol style="list-style-type: none"> 5. Press the start key. The value is set. <p>Caution Check the copy image after the adjustment. If the image is still incorrect, perform the following adjustments in maintenance mode.</p> <div data-bbox="287 902 624 972" data-label="Diagram"> </div> <p>Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.</p>

Maintenance item No.	Description																				
U072	<p>Adjusting the DP center line</p> <p>Description Adjusts the scanning start position for the DP original.</p> <p>Purpose Make the adjustment if there is a regular error between the centers of the original and the copy image when the DP is used.</p> <p>Adjustment</p> <div><div><div>1. Press the start key.</div><div>2. Select the item to be adjusted using the cursor up/down keys.</div></div><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>Center line (first page)</td><td>-39 to 39</td><td>0</td><td>0.085 mm</td></tr><tr><td>BACK</td><td>Center line (second page)</td><td>-39 to 39</td><td>0</td><td>0.085 mm</td></tr><tr><td>ROTATE</td><td>Center line (rotate copying)</td><td>-39 to 39</td><td>0</td><td>0.085 mm</td></tr></table><div><div><div>3. Press the system menu/counter key.</div><div>4. Place an original on the DP and press the start key to make a test copy.</div><div>5. Press the system menu/counter key.</div><div>6. Change the setting value using the cursor left/right keys or numeric keys. For copy example 1, increase the value. For copy example 2, decrease the value.</div></div><div><div><div>Reference</div><div><div><div></div><div></div></div><div>Original</div></div><div><div><div></div><div></div></div><div>Copy example 1</div></div><div><div><div></div><div></div></div><div>Copy example 2</div></div></div></div></div><p>Figure 1-3-12</p><div><div><div>7. Press the start key. The value is set.</div></div><p>Caution Check the copy image after the adjustment. If the image is still incorrect, perform the following adjustments in maintenance mode.</p><div><div><div>U072</div><div>→</div><div>U404 (P.1-3-46)</div></div><p>Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.</p></div></div></div>	Display	Description	Setting range	Initial setting	Change in value per step	FRONT	Center line (first page)	-39 to 39	0	0.085 mm	BACK	Center line (second page)	-39 to 39	0	0.085 mm	ROTATE	Center line (rotate copying)	-39 to 39	0	0.085 mm
Display	Description	Setting range	Initial setting	Change in value per step																	
FRONT	Center line (first page)	-39 to 39	0	0.085 mm																	
BACK	Center line (second page)	-39 to 39	0	0.085 mm																	
ROTATE	Center line (rotate copying)	-39 to 39	0	0.085 mm																	

Maintenance item No.	Description																																						
U073	<p>Checking scanner operation</p> <p>Description Simulates the scanner operation under arbitrary conditions.</p> <p>Purpose To check scanner operation.</p> <p>Start</p> <ol style="list-style-type: none">1. Press the start key.2. Select the item to be operated using the cursor up/down keys. <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>DUST CHECK</td><td>Dust adhesion check operation with lamp on</td></tr><tr><td>DP READING</td><td>DP scanning position operation</td></tr></table> <p>Setting: SCANNER MOTOR</p> <ol style="list-style-type: none">1. Select [SCANNER MOTOR].2. Select the item to be set using the cursor up/down keys.3. Change the setting using the cursor left/right 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> <p>Original sizes for each setting in SIZE</p> <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>7800</td><td>Folio</td></tr><tr><td>6100</td><td>B5R</td><td>8400</td><td>8 1/2" x 14"</td></tr><tr><td>5000</td><td>A5R</td><td>6600</td><td>8 1/2" x 11"</td></tr></table> <ol style="list-style-type: none">4. Select [EXECUTE] using the cursor up/down keys.5. Press the start key. Scanning starts under the selected conditions.6. To stop operation, press the stop key. <p>Method: HOME POSITION</p> <ol style="list-style-type: none">1. Select [HOME POSITION].2. Press the start key. The mirror frame of the scanner moves to the home position. <p>Method: DUST CHECK</p> <ol style="list-style-type: none">1. Select [DUST CHECK].2. Press the start key. The exposure lamp lights.3. To turn the exposure lamp off, press the stop key. <p>Method: DP READING</p> <ol style="list-style-type: none">1. Select [DP READING].2. Press the start key. The mirror frame of the scanner moves to the reading position. <p>Completion Press the stop key when scanning stops. The screen for selecting a maintenance item No. is displayed.</p>	Display	Description	SCANNER MOTOR	Scanner operation	HOME POSITION	Home position operation	DUST CHECK	Dust adhesion check operation with lamp on	DP READING	DP scanning position operation	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	7800	Folio	6100	B5R	8400	8 1/2" x 14"	5000	A5R	6600	8 1/2" x 11"
Display	Description																																						
SCANNER MOTOR	Scanner operation																																						
HOME POSITION	Home position operation																																						
DUST CHECK	Dust adhesion check operation with lamp on																																						
DP READING	DP scanning position operation																																						
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	7800	Folio																																				
6100	B5R	8400	8 1/2" x 14"																																				
5000	A5R	6600	8 1/2" x 11"																																				

Maintenance item No.	Description																						
U087	<p>Setting DP reading position modification operation</p> <p>Description The presence or absence of dust is determined by comparing the scan data of the original trailing edge and that taken after the original is conveyed past the DP original scanning position. If dust is identified, the DP original scanning position is adjusted for the following originals.</p> <p>Purpose When using DP, to solve the problem when black lines occurs due to the dust with respect to original reading position.</p> <p>Method</p> <ol style="list-style-type: none">1. Press the start key.2. Select the item to be set using the cursor up/down keys. <table><tr><th>Display</th><th>Description</th></tr><tr><td>CCD</td><td>Setting of standard data when dust is detected.</td></tr><tr><td>BLACK LINE</td><td>Initialization of original reading position.</td></tr></table> <p>Setting: Standard data when dust is detected</p> <ol style="list-style-type: none">1. Select the item to be set using the cursor up/down keys.2. Change the value using the cursor left/right keys or numeric keys. <table><tr><th>Display</th><th>Description</th><th>Setting range</th><th>Initial setting</th></tr><tr><td>CCD R</td><td>Lowest density of the R regard as the dust</td><td>0 to 255</td><td>125</td></tr><tr><td>CCD G</td><td>Lowest density of the G regard as the dust</td><td>0 to 255</td><td>125</td></tr><tr><td>CCD B</td><td>Lowest density of the B regard as the dust</td><td>0 to 255</td><td>120</td></tr></table> <ol style="list-style-type: none">3. Press the start key. The value is set. <p>Setting: Initialization of original reading position</p> <ol style="list-style-type: none">1. Select [CLEAR] using the cursor up/down keys.2. Press the start key. The setting is cleared. <p>Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.</p>	Display	Description	CCD	Setting of standard data when dust is detected.	BLACK LINE	Initialization of original reading position.	Display	Description	Setting range	Initial setting	CCD R	Lowest density of the R regard as the dust	0 to 255	125	CCD G	Lowest density of the G regard as the dust	0 to 255	125	CCD B	Lowest density of the B regard as the dust	0 to 255	120
Display	Description																						
CCD	Setting of standard data when dust is detected.																						
BLACK LINE	Initialization of original reading position.																						
Display	Description	Setting range	Initial setting																				
CCD R	Lowest density of the R regard as the dust	0 to 255	125																				
CCD G	Lowest density of the G regard as the dust	0 to 255	125																				
CCD B	Lowest density of the B regard as the dust	0 to 255	120																				

Maintenance item No.	Description																					
U089	<p>Outputting a MIP-PG pattern</p> <p>Description Selects and outputs the MIP-PG pattern created in the machine.</p> <p>Purpose To check copier status other than scanner when adjusting image printing, using MIP-PG pattern output (without scanning).</p> <p>Method</p> <ol style="list-style-type: none">1. Press the start key.2. Select the MIP-PG pattern to be output using the cursor up/down keys. <table><tr><th>Display</th><th>PG pattern to be output</th><th>Purpose</th></tr><tr><td>Gray Scale</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-Level</td><td></td><td>To check fine line reproducibility. To adjust the position of the laser scanner unit (lateral squareness)</td></tr></table> <p>Method: Gray Scale</p> <ol style="list-style-type: none">1. Select [Gray Scale] using the cursor up/down keys and press the start key.2. Select [HTFM1], [HTFM2], [Dither1] or [Dither2] using the cursor up/down keys and press the start key.3. Select [ON] or [OFF] using the cursor up/down keys and press the start key.4. Press the system menu/counter key.5. Press the start key. A MIP-PG pattern is output.6. To return to the screen for selecting an item, press the system menu/counter key. <p>Method: Mono-Level</p> <ol style="list-style-type: none">1. Select [Mono-Level] using the cursor up/down keys and press the start key.2. Change the value using the cursor left/right keys or numeric keys and press the start key. <table><tr><th>Description</th><th>Setting range</th><th>Initial setting</th></tr><tr><td>Gray level</td><td>0 to 255</td><td>0</td></tr></table> <ol style="list-style-type: none">3. Select [HTFM1], [HTFM2], [Dither1] or [Dither2] using the cursor up/down keys and press the start key.4. Select [ON] or [OFF] using the cursor up/down keys and press the start key.5. Press the system menu/counter key.6. Press the start key. A MIP-PG pattern is output.7. To return to the screen for selecting an item, press the system menu/counter key.	Display	PG pattern to be output	Purpose	Gray Scale		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-Level		To check fine line reproducibility. To adjust the position of the laser scanner unit (lateral squareness)	Description	Setting range	Initial setting	Gray level	0 to 255	0
Display	PG pattern to be output	Purpose																				
Gray Scale		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-Level		To check fine line reproducibility. To adjust the position of the laser scanner unit (lateral squareness)																				
Description	Setting range	Initial setting																				
Gray level	0 to 255	0																				

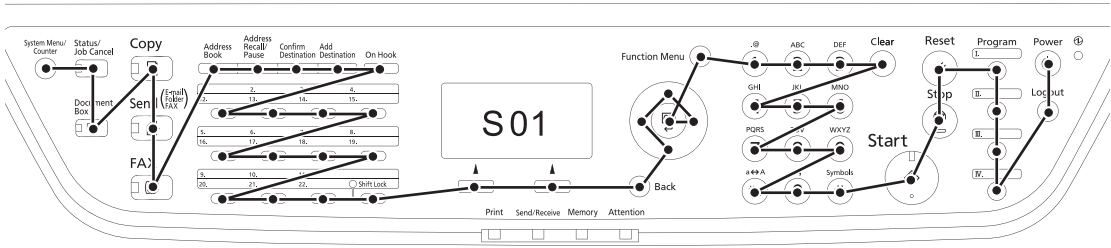
Maintenance item No.	Description						
U089	Method: 256-Level 1. Select [256-Level] using the cursor up/down keys and press the start key. 2. Select [HTFM1], [HTFM2], [Dither1] or [Dither2] using the cursor up/down keys and press the start key. 3. Select [ON] or [OFF] using the cursor up/down keys and press the start key. 4. Press the system menu/counter key. 5. Press the start key. A MIP-PG pattern is output. 6. To return to the screen for selecting an item, press the system menu/counter key.						
	Method: 1 dot-Level 1. Select [1 dot-Level] using the cursor up/down keys and press the start key. 2. Change the value using the cursor left/right keys or numeric keys and press the start key.						
	<table><tr><th>Description</th><th>Setting range</th><th>Initial setting</th></tr><tr><td>Dot pattern</td><td>0 to 15</td><td>0</td></tr></table>	Description	Setting range	Initial setting	Dot pattern	0 to 15	0
	Description	Setting range	Initial setting				
	Dot pattern	0 to 15	0				
	3. Press the system menu/counter key. 4. Press the start key. A MIP-PG pattern is output. 5. To return to the screen for selecting an item, press the system menu/counter key.						
	Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.						

Maintenance item No.	Description								
U100	<p>Setting the main high voltage</p> <p>Description Controls the main charger high voltage to optimize the surface potential.</p> <p>Purpose To change the setting value to adjust the image if an image failure (background blur, etc.) occurs.</p> <p>Setting</p> <ol style="list-style-type: none">1. Press the start key.2. Change the setting value using the cursor left/right keys or numeric keys. <table><tr><th>Display</th><th>Description</th><th>Setting range</th><th>Initial setting</th></tr><tr><td>ADJUST</td><td>Main charger high voltage output</td><td>-30 to 30</td><td>0</td></tr></table> <ol style="list-style-type: none">3. Press the start key. The value is set.4. Turn the main power switch off and on.	Display	Description	Setting range	Initial setting	ADJUST	Main charger high voltage output	-30 to 30	0
Display	Description	Setting range	Initial setting						
ADJUST	Main charger high voltage output	-30 to 30	0						
U101	<p>Setting the voltage for the primary transfer</p> <p>Description Sets the control voltage for the primary transfer.</p> <p>Purpose To change the setting when any density problems, such as too dark or light, occur.</p> <p>Setting</p> <ol style="list-style-type: none">1. Press the start key.2. Change the setting value using the cursor left/right keys or numeric keys. <table><tr><th>Display</th><th>Description</th><th>Setting range</th><th>Initial setting</th></tr><tr><td>ADJUST</td><td>Primary transfer control voltage</td><td>-30 to 30</td><td>0</td></tr></table> <ol style="list-style-type: none">3. Press the start key. The value is set.4. Turn the main power switch off and on.	Display	Description	Setting range	Initial setting	ADJUST	Primary transfer control voltage	-30 to 30	0
Display	Description	Setting range	Initial setting						
ADJUST	Primary transfer control voltage	-30 to 30	0						
U111	<p>Checking/clearing the drum drive time</p> <p>Description Displays and clears the drum drive time for checking a figure, which is used as a reference when correcting the high voltage based on time.</p> <p>Purpose To check the drum status. Also to clear the drum drive time during maintenance service (replacing the maintenance kit). (See page 2-4-4, page 1-5-29 and page 1-5-30)</p> <p>Method</p> <ol style="list-style-type: none">1. Press the start key. The drum drive time is displayed. <table><tr><th>Display</th><th>Description</th></tr><tr><td>TIME(min)</td><td>Drum drive time</td></tr></table> <p>Clearing</p> <ol style="list-style-type: none">1. Select [CLEAR] using the cursor up/down keys.2. Press the start key. The count is cleared. <p>Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.</p>	Display	Description	TIME(min)	Drum drive time				
Display	Description								
TIME(min)	Drum drive time								

Maintenance item No.	Description															
U113	<p>Performing drum refresh operation</p> <p>Description Sets the drum refresh operation.</p> <p>Purpose To operate when a faulty image (black line, etc.) occurs.</p> <p>Method</p> <p>1. Press the start key.</p> <table><tr><th>Display</th><th>Description</th><th>Setting range</th><th>Initial setting</th></tr><tr><td>DRUM REFRESH</td><td>Setting the drum refresh operation ON/OFF</td><td>1 (ON) / 0 (OFF)</td><td>0</td></tr><tr><td>ON TIME(sec)</td><td>Setting the drum refresh operation time</td><td>0 to 255 (s)</td><td>0</td></tr></table> <p>2. Select [DRUM REFRESH].</p> <p>3. Select [ON] using the cursor left/right keys.</p> <p>4. Press the start key. The setting is set.</p> <p>5. Turn the main power switch off and on.</p> <p>Setting: ON TIME(sec)</p> <p>1. Select [ON TIME(sec)] using the cursor up/down keys.</p> <p>2. Change the setting value using the cursor left/right keys.</p> <p>3. Press the start key. The value is set.</p> <p>4. Turn the main power switch off and on.</p>				Display	Description	Setting range	Initial setting	DRUM REFRESH	Setting the drum refresh operation ON/OFF	1 (ON) / 0 (OFF)	0	ON TIME(sec)	Setting the drum refresh operation time	0 to 255 (s)	0
Display	Description	Setting range	Initial setting													
DRUM REFRESH	Setting the drum refresh operation ON/OFF	1 (ON) / 0 (OFF)	0													
ON TIME(sec)	Setting the drum refresh operation time	0 to 255 (s)	0													
U130	<p>Initial setting for the developing unit</p> <p>Description Replenishes toner to the developing unit to a certain level from the toner container that has been installed.</p> <p>Purpose To operate when installing the machine or replacing the developing unit. Also to operate during maintenance service (replacing the maintenance kit). (See page 2-4-4, page 1-5-29 and page 1-5-30)</p> <p>Method</p> <p>1. Press the start key.</p> <p>2. Select [INST MODE] using the cursor up/down keys and press the start key.</p> <table><tr><th>Display</th><th>Description</th></tr><tr><td>TIME(SEC)</td><td>Execution time</td></tr><tr><td>INST MODE</td><td>Setting the toner installation ON/OFF</td></tr></table> <p>3. Select [ON] using the cursor left/right keys.</p> <p>4. Press the start key.</p> <p>5. Turn the main power switch off and on. Toner installation is started.</p> <p>Completion Press the stop key after initial setting is complete. The screen for selecting a maintenance item No. is displayed.</p>				Display	Description	TIME(SEC)	Execution time	INST MODE	Setting the toner installation ON/OFF						
Display	Description															
TIME(SEC)	Execution time															
INST MODE	Setting the toner installation ON/OFF															

Maintenance item No.	Description																																
U144	<p>Setting toner loading operation</p> <p>Description</p> <p>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].</p> <p>Purpose</p> <p>To set whether or not toner is loaded on the drum after low density copying. Normally no change is necessary from the initial setting.</p> <p>Setting</p> <ol style="list-style-type: none">1. Press the start key.2. Select the item to be set using the cursor up/down keys.3. Change the setting using the cursor left/right keys. <table><tr><th>Display</th><th>Description</th><th>Setting range</th><th>Initial setting</th></tr><tr><td>T7 MODE</td><td>Toner loading operation</td><td>1 (ON) / 0 (OFF)</td><td>1</td></tr><tr><td>STEP1 PAGE</td><td>Number of pages set (step1)</td><td>0 to 50</td><td>3</td></tr><tr><td>STEP2 PAGE</td><td>Number of pages set (step2)</td><td>0 to 50</td><td>8</td></tr><tr><td>STEP3 PAGE</td><td>Number of pages set (step3)</td><td>0 to 50</td><td>20</td></tr><tr><td>STEP1 RATE</td><td>Printing ratio (step1)</td><td>0 to 100</td><td>1</td></tr><tr><td>STEP2 RATE</td><td>Printing ratio (step2)</td><td>0 to 100</td><td>2</td></tr><tr><td>STEP3 RATE</td><td>Printing ratio (step3)</td><td>0 to 100</td><td>3</td></tr></table> <ol style="list-style-type: none">4. Press the start key. The value is set.5. Turn the main power switch off and on.	Display	Description	Setting range	Initial setting	T7 MODE	Toner loading operation	1 (ON) / 0 (OFF)	1	STEP1 PAGE	Number of pages set (step1)	0 to 50	3	STEP2 PAGE	Number of pages set (step2)	0 to 50	8	STEP3 PAGE	Number of pages set (step3)	0 to 50	20	STEP1 RATE	Printing ratio (step1)	0 to 100	1	STEP2 RATE	Printing ratio (step2)	0 to 100	2	STEP3 RATE	Printing ratio (step3)	0 to 100	3
Display	Description	Setting range	Initial setting																														
T7 MODE	Toner loading operation	1 (ON) / 0 (OFF)	1																														
STEP1 PAGE	Number of pages set (step1)	0 to 50	3																														
STEP2 PAGE	Number of pages set (step2)	0 to 50	8																														
STEP3 PAGE	Number of pages set (step3)	0 to 50	20																														
STEP1 RATE	Printing ratio (step1)	0 to 100	1																														
STEP2 RATE	Printing ratio (step2)	0 to 100	2																														
STEP3 RATE	Printing ratio (step3)	0 to 100	3																														
U157	<p>Checking the developing drive time</p> <p>Description</p> <p>Displays the developing drive time for checking.</p> <p>Purpose</p> <p>To check the developing drive time after replacing the developing unit.</p> <p>Method</p> <ol style="list-style-type: none">1. Press the start key. The developing drive time is displayed in minutes. <table><tr><th>Display</th><th>Description</th></tr><tr><td>TIME(min)</td><td>Developing drive time</td></tr></table> <p>Completion</p> <p>Press the stop key. The screen for selecting a maintenance item No. is displayed.</p>	Display	Description	TIME(min)	Developing drive time																												
Display	Description																																
TIME(min)	Developing drive time																																

Maintenance item No.	Description																																
U161	<p>Setting the fuser control temperature</p> <p>Description Changes the fuser control temperature.</p> <p>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.</p> <p>Method</p> <ol style="list-style-type: none">1. Press the start key.2. Select the item to be set using the cursor up/down keys.3. Change the setting using the cursor left/right keys or numeric keys. <table><tr><th>Display</th><th>Description</th><th>Setting range</th><th>Initial setting</th></tr><tr><td>1ST TEMP T1</td><td>Stabilized temperature during operation T1</td><td>-30 to 30</td><td>0</td></tr><tr><td>2ND TEMP T2</td><td>Stabilized temperature under suspension T2</td><td>-30 to 30</td><td>0</td></tr><tr><td>2ND TEMP T2-2</td><td>Stabilized temperature under suspension T2-2</td><td>-30 to 30</td><td>0</td></tr><tr><td>1ST FEED TEMP</td><td>Primary paper feed start temperature</td><td>-30 to 30</td><td>0</td></tr><tr><td>2ND FEED TEMP</td><td>Secondary paper feed start tempera</td><td>-30 to 30</td><td>0</td></tr><tr><td>PRINT TEMP T3</td><td>Temperature control during printing T3</td><td>-30 to 30</td><td>0</td></tr><tr><td>PRINT TEMP T4</td><td>Temperature control during printing T4</td><td>-30 to 30</td><td>0</td></tr></table> <ol style="list-style-type: none">4. Press the start key. The value is set.5. Turn the main power switch off and on.	Display	Description	Setting range	Initial setting	1ST TEMP T1	Stabilized temperature during operation T1	-30 to 30	0	2ND TEMP T2	Stabilized temperature under suspension T2	-30 to 30	0	2ND TEMP T2-2	Stabilized temperature under suspension T2-2	-30 to 30	0	1ST FEED TEMP	Primary paper feed start temperature	-30 to 30	0	2ND FEED TEMP	Secondary paper feed start tempera	-30 to 30	0	PRINT TEMP T3	Temperature control during printing T3	-30 to 30	0	PRINT TEMP T4	Temperature control during printing T4	-30 to 30	0
Display	Description	Setting range	Initial setting																														
1ST TEMP T1	Stabilized temperature during operation T1	-30 to 30	0																														
2ND TEMP T2	Stabilized temperature under suspension T2	-30 to 30	0																														
2ND TEMP T2-2	Stabilized temperature under suspension T2-2	-30 to 30	0																														
1ST FEED TEMP	Primary paper feed start temperature	-30 to 30	0																														
2ND FEED TEMP	Secondary paper feed start tempera	-30 to 30	0																														
PRINT TEMP T3	Temperature control during printing T3	-30 to 30	0																														
PRINT TEMP T4	Temperature control during printing T4	-30 to 30	0																														
U199	<p>Checking the fuser temperature</p> <p>Description Displays the fuser temperature, the ambient temperature.</p> <p>Purpose To check the fuser temperature, the ambient temperature.</p> <p>Method</p> <ol style="list-style-type: none">1. Press the start key. The fuser temperature and ambient temperature are displayed in centigrade (°C). <table><tr><th>Display</th><th>Description</th></tr><tr><td>HEAT TEMP</td><td>Fuser temperature (°C)</td></tr><tr><td>SURROUND TEMP</td><td>Ambient temperature (°C)</td></tr></table> <p>Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.</p>	Display	Description	HEAT TEMP	Fuser temperature (°C)	SURROUND TEMP	Ambient temperature (°C)																										
Display	Description																																
HEAT TEMP	Fuser temperature (°C)																																
SURROUND TEMP	Ambient temperature (°C)																																
U200	<p>Turning all LEDs on</p> <p>Description Turns all the LEDs on the operation panel on.</p> <p>Purpose To check if all the LEDs on the operation panel light.</p> <p>Method</p> <ol style="list-style-type: none">1. Press the start key.2. Select [EXECUTE] and press the start key. All the LEDs on the operation panel light.3. Press the stop key. The LEDs turns off. <p>Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.</p>																																

Maintenance item No.	Description																
U203	<p>Checking DP operation</p> <p>Description Simulates the original conveying operation separately in the DP.</p> <p>Purpose To check the DP operation.</p> <p>Method</p> <ol style="list-style-type: none"> 1. Press the start key. 2. Place an original in the DP if running this simulation with paper. 3. Select the speed to be operated using the cursor up/down keys. <table border="1" data-bbox="331 533 1398 658"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>NORMAL SPEED</td><td>Normal reading (600 dpi)</td></tr> <tr> <td>HIGH SPEED</td><td>High-speed reading</td></tr> </tbody> </table> <ol style="list-style-type: none"> 4. Press the start key. 5. Select the item to be operated using the cursor up/down keys. <table border="1" data-bbox="331 728 1398 936"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>CCD ADP (NON P)</td><td>Without paper, single-sided original of CCD (continuous operation)</td></tr> <tr> <td>CCD ADP</td><td>With paper, single-sided original of CCD</td></tr> <tr> <td>CCD RADP (NON P)</td><td>Without paper, double-sided original of CCD (continuous operation)</td></tr> <tr> <td>CCD RADP</td><td>With paper, double-sided original of CCD</td></tr> </tbody> </table> <ol style="list-style-type: none"> 6. Press the start key. The operation starts. 7. To stop continuous operation, press the stop key. <p>Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.</p>	Display	Description	NORMAL SPEED	Normal reading (600 dpi)	HIGH SPEED	High-speed reading	Display	Description	CCD ADP (NON P)	Without paper, single-sided original of CCD (continuous operation)	CCD ADP	With paper, single-sided original of CCD	CCD RADP (NON P)	Without paper, double-sided original of CCD (continuous operation)	CCD RADP	With paper, double-sided original of CCD
Display	Description																
NORMAL SPEED	Normal reading (600 dpi)																
HIGH SPEED	High-speed reading																
Display	Description																
CCD ADP (NON P)	Without paper, single-sided original of CCD (continuous operation)																
CCD ADP	With paper, single-sided original of CCD																
CCD RADP (NON P)	Without paper, double-sided original of CCD (continuous operation)																
CCD RADP	With paper, double-sided original of CCD																
U207	<p>Checking the operation panel keys</p> <p>Description Checks operation of the operation panel keys.</p> <p>Purpose To check operation of all the keys and LEDs on the operation panel.</p> <p>Method</p> <ol style="list-style-type: none"> 1. Press the start key. and the screen for executing is displayed. [S01] is displayed 2. Starting with the system menu/counter key in the left most column, press the operation panel keys one by one. Each time a key is pressed, the count will increase and the corresponding LED (if any) will light up. 3. When all the keys on the operation panel have been pressed, [END] is displayed and all the LEDs light.  <p>The diagram illustrates the layout of the operation panel. It features a central display showing 'S01'. To the left of the display are several columns of keys: 'System Menu/Counter', 'Status/Job Cancel', 'Copy', 'Address Book', 'Address Recall/Pause', 'Confirm Destination', 'Add Destination', and 'On Hook'. Below these are 'Fax' and 'Shift Lock' keys. To the right of the display are 'Function Menu', 'Back', 'Print', 'Send/Receive', 'Memory', and 'Attention' keys. Further right are 'Clear', 'Reset', 'Program', 'Power', 'Log out', and 'Start' keys. The diagram shows lines connecting each key to the central display, indicating that pressing any key will update the display and potentially light up an LED.</p> <p>Figure 1-3-13</p> <p>Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.</p>																

Maintenance item No.	Description										
U222	<p>Setting the IC card type</p> <p>Description Sets the IC card type. This is an optional device which is currently supported only by Japanese specification machines, so no setting is necessary.</p>										
U223	<p>Operation panel lock</p> <p>Description Sets the operation panel lock function to ON or OFF.</p> <p>Purpose To restrict operation in the system menu on the operation panel.</p> <p>Setting</p> <ol style="list-style-type: none"> 1. Press the start key. 2. Select the item using the cursor up/down keys. <table border="1"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>UNLOCK</td><td>Release the lock of the operation from the system menu</td></tr> <tr> <td>PARTIAL LOCK</td><td>Partially lock the operation from the system menu</td></tr> <tr> <td>LOCK</td><td>Entirely lock the operation from the system menu</td></tr> </tbody> </table> <p>Initial setting: UNLOCK</p> <ol style="list-style-type: none"> 3. Press the start key. The setting is set. <p>Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.</p>	Display	Description	UNLOCK	Release the lock of the operation from the system menu	PARTIAL LOCK	Partially lock the operation from the system menu	LOCK	Entirely lock the operation from the system menu		
Display	Description										
UNLOCK	Release the lock of the operation from the system menu										
PARTIAL LOCK	Partially lock the operation from the system menu										
LOCK	Entirely lock the operation from the system menu										
U243	<p>Checking the operation of the DP motor solenoids and clutch</p> <p>Description Turns the motor, solenoids and clutch in the DP on.</p> <p>Purpose To check the operation of the DP motor, solenoids and clutch.</p> <p>Method</p> <ol style="list-style-type: none"> 1. Press the start key. 2. Select the item to be operated using the cursor up/down keys. 3. Press the start key. The operation starts. <table border="1"> <thead> <tr> <th>Display</th><th>Motor, solenoids and clutch</th></tr> </thead> <tbody> <tr> <td>DP FEED MOT</td><td>DP paper feed motor is turned on.</td></tr> <tr> <td>DP REV PRS SOL</td><td>DP switchback pressure solenoid is turned on.</td></tr> <tr> <td>DP REV BRCH SOL</td><td>DP switchback feedshift solenoid is turned on.</td></tr> <tr> <td>DP FEED CL</td><td>DP paper feed clutch is turned on.</td></tr> </tbody> </table> <ol style="list-style-type: none"> 4. To stop operation, press the stop key. <p>Completion Press the stop key when operation stops. The screen for selecting a maintenance item No. is displayed.</p>	Display	Motor, solenoids and clutch	DP FEED MOT	DP paper feed motor is turned on.	DP REV PRS SOL	DP switchback pressure solenoid is turned on.	DP REV BRCH SOL	DP switchback feedshift solenoid is turned on.	DP FEED CL	DP paper feed clutch is turned on.
Display	Motor, solenoids and clutch										
DP FEED MOT	DP paper feed motor is turned on.										
DP REV PRS SOL	DP switchback pressure solenoid is turned on.										
DP REV BRCH SOL	DP switchback feedshift solenoid is turned on.										
DP FEED CL	DP paper feed clutch is turned on.										

Maintenance item No.	Description								
U244	<p>Checking the DP sensors</p> <p>Description Displays the status of the respective sensors in the DP.</p> <p>Purpose To check if respective sensors in the DP operate correctly.</p> <p>Method</p> <ol style="list-style-type: none">1. Press the start key.2. Turn the respective sensors on and off manually to check the status. <p>When a sensor is detected to be in the ON position, the display for that sensor will be highlighted.</p> <table><tr><th>Display</th><th>Sensors</th></tr><tr><td>TMG SW</td><td>DP timing sensor</td></tr><tr><td>SET SW</td><td>DP original sensor</td></tr><tr><td>DP OP SW</td><td>DP open/close sensor</td></tr></table> <p>Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.</p>	Display	Sensors	TMG SW	DP timing sensor	SET SW	DP original sensor	DP OP SW	DP open/close sensor
Display	Sensors								
TMG SW	DP timing sensor								
SET SW	DP original sensor								
DP OP SW	DP open/close sensor								
U250	<p>Setting the maintenance cycle</p> <p>Description Displays and changes the maintenance cycle.</p> <p>Purpose To check and change the maintenance cycle.</p> <p>Method</p> <ol style="list-style-type: none">1. Press the start key. The currently set maintenance cycle is displayed. <p>Setting</p> <ol style="list-style-type: none">1. Select [M.CNT A] using the cursor up/down keys.2. Change the setting using the cursor left/right keys 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>100000</td></tr></table> <ol style="list-style-type: none">3. Press the start key. The value is set. <p>Clearing</p> <ol style="list-style-type: none">1. Select [CLEAR] using the cursor up/down keys.2. Press the start key. The count is cleared. <p>Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.</p>	Description	Setting range	Initial setting	Maintenance cycle	0 to 9999999	100000		
Description	Setting range	Initial setting							
Maintenance cycle	0 to 9999999	100000							
U251	<p>Checking/clearing the maintenance count</p> <p>Description Displays, clears and changes the maintenance count.</p> <p>Purpose To check the maintenance count. Also to clear the count during maintenance service (replacing the maintenance kit). (See page 2-4-4, page 1-5-29 and page 1-5-30)</p> <p>Method</p> <ol style="list-style-type: none">1. Press the start key. The maintenance count is displayed. <p>Setting</p> <ol style="list-style-type: none">1. Select [M.CNT A] using the cursor up/down keys.2. Enter a count using the cursor left/right keys or numeric keys.3. Press the start key. The count is set. <p>Clearing</p> <ol style="list-style-type: none">1. Select [CLEAR] using the cursor up/down keys.2. Press the start key. The count is cleared. <p>Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.</p>								

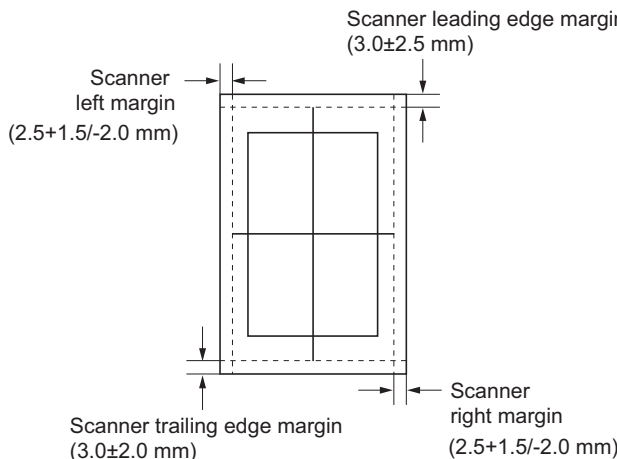
Maintenance item No.	Description																						
U252	<p>Setting the destination</p> <p>Description Switches the operations and screens of the machine according to the destination.</p> <p>Purpose To be executed after initializing the backup RAM, in order to return the setting to the value before replacement or initialization.</p> <p>Setting</p> <ol style="list-style-type: none">1. Press the start key.2. Select the destination using the cursor up/down keys. <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><tr><td>AUSTRALIA</td><td>Australia specifications</td></tr><tr><td>CHINA</td><td>China specifications</td></tr></table> <ol style="list-style-type: none">3. Press the start key. The setting is set.4. After turning the main power switch off, wait a while and turn it on. (If fax is not detected, try turning the main power switch on and off again.) <p>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.</p> <p>Initial setting according to the destinations</p> <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	AUSTRALIA	Australia specifications	CHINA	China 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																						
AUSTRALIA	Australia specifications																						
CHINA	China specifications																						
Maintenance item No.	Title	Japan	Inch	Europe Metric, Asia Pacific																			
253	Switching between double and single counts	Single	Double	Double																			
U253	<p>Switching between double and single counts</p> <p>Description Switches the count system for the total counter and other counters.</p> <p>Purpose Used to select, according to the preference of the user (copy service provider), if folio size paper is to be counted as one sheet (single count) or two sheets (double count).</p> <p>Setting</p> <ol style="list-style-type: none">1. Press the start key.2. Select the count system using the cursor up/down keys. <table><tr><th>Display</th><th>Description</th></tr><tr><td>SGL COUNT(ALL)</td><td>Single count for all size paper</td></tr><tr><td>DBL COUNT(FOLIO)</td><td>Double count for Folio size or larger</td></tr></table> <p>Initial setting: DBL COUNT(FOLIO)</p> <ol style="list-style-type: none">3. Press the start key. The setting is set. <p>Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.</p>	Display	Description	SGL COUNT(ALL)	Single count for all size paper	DBL COUNT(FOLIO)	Double count for Folio size or larger																
Display	Description																						
SGL COUNT(ALL)	Single count for all size paper																						
DBL COUNT(FOLIO)	Double count for Folio size or larger																						

Maintenance item No.	Description						
U260	<p>Selecting the timing for copy counting</p> <p>Description Changes the copy count timing for the total counter and other counters.</p> <p>Purpose To be set according to user request.</p> <p>Setting</p> <ol style="list-style-type: none"> 1. Press the start key. 2. Select the copy count timing using the cursor up/down keys. <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> <p>Initial setting: EJECT</p> <ol style="list-style-type: none"> 3. Press the start key. The setting is set. <p>Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.</p>	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	<p>Setting OEM purchaser code</p> <p>Description Sets the OEM purchaser code.</p> <p>Purpose Sets the code when replacing the control PWB and the like.</p> <p>Setting</p> <ol style="list-style-type: none"> 1. Press the start key. 2. Change the preset value using the cursor left/right keys or numeric keys. 3. Press the start key. The setting is set. <p>Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.</p>						
U278	<p>Setting the delivery date</p> <p>Description Enter delivery date in month, day, and year.</p> <p>Purpose Perform this to confirm the delivery date.</p> <p>Method</p> <ol style="list-style-type: none"> 1. Press the start key. 2. Select [TODAY] using the cursor up/down keys. 3. Press the start key. The delivery date is set. <p>Clearing</p> <ol style="list-style-type: none"> 1. Select [CLEAR] using the cursor up/down keys. 2. Press the start key. The delivery date is cleared. <p>Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.</p>						

Maintenance item No.	Description								
U285	<p>Setting service status page</p> <p>Description Determines displaying the digital dot coverage report on reporting.</p> <p>Purpose According to user request, changes the setting.</p> <p>Setting</p> <div><div><div>1. Press the start key.</div><div>2. Select ON or OFF using the cursor up/down keys.</div></div><table><tr><th>Display</th><th>Description</th></tr><tr><td>ON</td><td>Displays the digital dot coverage</td></tr><tr><td>OFF</td><td>Not to display the digital dot coverage</td></tr></table><div>Initial setting: ON</div><div>3. Press the start key. The setting is set.</div></div> <p>Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.</p>	Display	Description	ON	Displays the digital dot coverage	OFF	Not to display the digital dot coverage		
Display	Description								
ON	Displays the digital dot coverage								
OFF	Not to display the digital dot coverage								
U332	<p>Setting the size conversion factor</p> <p>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.</p> <p>Purpose To set the coefficient for converting the black ratio for nonstandard sizes in relation to the A4/Letter size.</p> <p>Setting</p> <div><div><div>1. Press the start key.</div><div>2. Change the setting using the cursor left/right keys or numeric keys.</div></div><table><tr><th>Display</th><th>Description</th><th>Setting range</th><th>Initial setting</th></tr><tr><td>Calc. Rate</td><td>Size parameter</td><td>0.1 to 3.0</td><td>1.0</td></tr></table><div>3. Press the start key. The value is set.</div></div> <p>Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.</p>	Display	Description	Setting range	Initial setting	Calc. Rate	Size parameter	0.1 to 3.0	1.0
Display	Description	Setting range	Initial setting						
Calc. Rate	Size parameter	0.1 to 3.0	1.0						
U342	<p>Setting the ejection restriction</p> <p>Description Sets or cancels the restriction on the number of sheets to be ejected continuously.</p> <p>Purpose According to user request, sets or cancels restriction on the number of sheets.</p> <p>Setting</p> <div><div><div>1. Press the start key.</div><div>2. Select [ON] or [OFF] using the cursor up/down keys.</div></div><table><tr><th>Display</th><th>Description</th></tr><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></table><div>Initial setting: ON</div><div>3. Press the start key. The setting is set.</div></div> <p>Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.</p>	Display	Description	ON	Sets restriction on the number of sheets	OFF	Cancels restriction on the number of sheets		
Display	Description								
ON	Sets restriction on the number of sheets								
OFF	Cancels restriction on the number of sheets								

Maintenance item No.	Description						
U343	<p>Switching between duplex/simplex copy mode</p> <p>Description Switches the initial setting between duplex and simplex copy.</p> <p>Purpose To be set according to frequency of use: set to the more frequently used mode.</p> <p>Setting</p> <ol style="list-style-type: none">1. Press the start key.2. Select [ON] or [OFF] using the cursor up/down keys. <table><tr><th>Display</th><th>Description</th></tr><tr><td>ON</td><td>Duplex copy</td></tr><tr><td>OFF</td><td>Simplex copy</td></tr></table> <p>Initial setting: OFF</p> <ol style="list-style-type: none">3. Press the start key. The setting is set. <p>Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.</p>	Display	Description	ON	Duplex copy	OFF	Simplex copy
Display	Description						
ON	Duplex copy						
OFF	Simplex copy						
U345	<p>Setting the value for maintenance due indication</p> <p>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.</p> <p>Purpose To change the time for maintenance due indication.</p> <p>Setting</p> <ol style="list-style-type: none">1. Press the start key.2. Select [COUNT] using the cursor up/down keys.3. Change the setting using the cursor left/right keys. <table><tr><th>Display</th><th>Description</th><th>Setting range</th></tr><tr><td>COUNT</td><td>Time for maintenance due indication (Remaining number of copies that can be made before the current maintenance cycle ends)</td><td>0 to 9999</td></tr></table> <p>Initial setting: 0</p> <ol style="list-style-type: none">4. Press the start key. The value is set. <p>Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.</p>	Display	Description	Setting range	COUNT	Time for maintenance due indication (Remaining number of copies that can be made before the current maintenance cycle ends)	0 to 9999
Display	Description	Setting range					
COUNT	Time for maintenance due indication (Remaining number of copies that can be made before the current maintenance cycle ends)	0 to 9999					

Maintenance item No.	Description
U402	<p>Adjusting margins of image printing</p> <p>Description Adjusts margins for image printing.</p> <p>Purpose Make the adjustment if margins are incorrect.</p> <p>Adjustment</p> <div><div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div></div></div> <div><div></div><div></div><div></div><div></div><div></div></div> <div><div></div><div></div><div></div><div></div><div></div></div> <div><div></div><div></div><div></div><div></div><div></div></div> <div><div></div><div></div><div></div><div></div><div></div></div> <div><div></div><div></div><div></div><div></div><div></div></div> <div><div></div><div></div><div></div><div></div><div></div></div> <div><div></div><div></div><div></div><div></div><div></div></div> <div><div></div><div></div><div></div><div></div><div></div></div> <div><div></div><div></div><div></div><div></div><div></div></div> <div><div></div><div></div><div></div><div></div><div></div></div> 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Maintenance item No.	Description																									
U403	<p>Adjusting margins for scanning an original on the platen</p> <p>Description Adjusts margins for scanning the original on the platen.</p> <p>Purpose Make the adjustment if margins are incorrect.</p> <p>Adjustment</p> <div><div><div>1. Press the start key.</div><div>2. Select the item to be adjusted using the cursor up/down keys.</div></div><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>5.0</td><td>0.5 mm</td></tr></tbody></table><div><div><div>3. Press the system menu/counter key.</div><div>4. Place an original and press the start key to make a test copy.</div><div>5. Press the system menu/counter key.</div><div>6. Change the setting value using the cursor left/right keys.</div></div><div>Increasing the value makes the margin wider, and decreasing it makes the margin narrower.</div></div><div></div><p style="text-align: center;">Figure 1-3-15</p><div><div>7. Press the start key. The value is set.</div></div><p>Caution Check the copy image after the adjustment. If the image is still incorrect, perform the following adjustments in maintenance mode.</p><div><div><div>U403</div><div>→</div><div>U404 (P.1-3-46)</div></div></div><p>Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.</p></div>	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	5.0	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	5.0	0.5 mm																						

Maintenance item No.	Description																									
U404	<p>Adjusting margins for scanning an original from the DP</p> <p>Description Adjusts margins for scanning the original from the DP.</p> <p>Purpose Make the adjustment if margins are incorrect when the optional DP is used.</p> <p>Caution Before making this adjustment, ensure that the following adjustments have been made in maintenance mode.</p> <div><div>U402 (P.1-3-44)</div>→<div>U403 (P.1-3-45)</div>→<div>U404</div></div> <p>Adjustment</p> <div><div>1. Press the start key.</div><div>2. Select the item to be adjusted using the cursor up/down keys.</div></div> <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> <div><div>3. Press the system menu/counter key.</div><div>4. Place an original on the DP and press the start key to make a test copy.</div><div>5. Press the system menu/counter key.</div><div>6. Change the setting value using the cursor left/right keys. Increasing the value makes the margin wider, and decreasing it makes the margin narrower.</div></div> <div><div><div><div>DP left margin (2.0±1.0 mm)</div><div>DP leading edge margin (3.0±1.5 mm)</div><div>DP right margin (2.0±1.0 mm)</div><div>DP trailing edge margin (2.0±1.0 mm)</div></div></div></div> <p>Figure 1-3-16</p> <div><div>7. Press the start key. The value is set.</div></div> <p>Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.</p>	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	<p>Adjusting the leading edge registration for memory image printing</p> <p>Description Adjusts the leading edge registration during memory copying.</p> <p>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.</p> <p>Caution Before making this adjustment, ensure that the following adjustments have been made in maintenance mode.</p> <div><div>U034 (P.1-3-16)</div>→<div>U402 (P.1-3-44)</div>→<div>U066 (P.1-3-22)</div>→<div>U403 (P.1-3-45)</div>→<div>U071 (P.1-3-26)</div>→</div> <div><div>U404 (P.1-3-46)</div>→<div>U407</div></div> <p>Adjustment</p> <div><div>1. Press the start key.</div><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>0</td><td>0.1 mm</td></tr></table><div><div>2. Press the system menu/counter key.</div><div>3. Place an original and press the start key to make a test copy.</div><div>4. Press the system menu/counter key.</div><div>5. Change the setting value using the cursor left/right keys.</div><div>For copy example 1, decrease the value.</div><div>For copy example 2, increase the value.</div></div><div><div><div><div>↑</div><div>Original</div></div><div><div>↑</div><div>Copy example 1</div></div><div><div>↑</div><div>Copy example 2</div></div></div><p>Figure 1-3-17</p><div><div>6. Press the start key. The value is set.</div><p>Completion Press the stop/clear key. The screen for selecting a maintenance item No. is displayed.</p></div></div></div>	Description	Setting range	Initial setting	Change in value per step	Leading edge registration for memory image printing	-47 to 47	0	0.1 mm
Description	Setting range	Initial setting	Change in value per step						
Leading edge registration for memory image printing	-47 to 47	0	0.1 mm						

Maintenance item No.	Description									
U411	<p>Adjusting the scanner automatically</p> <p>Description Uses the adjustment original supplied with DP and automatically adjusts the following items in the scanner and the DP scanning sections.</p> <p>Purpose To perform automatic adjustment of various items in the scanner and the DP scanning sections.</p> <p>Method 1. Press the start key.</p> <table><tr><th>Display</th><th>Description</th><th>Original to be used for adjustment (P/N)</th></tr><tr><td>ADJUST TABLE</td><td>Automatic adjustment in the scanner section: Original size magnification, leading edge timing, center line, input gamma, input gamma in mono-chrome mode and matrix</td><td>302FZ56990</td></tr><tr><td>ADJUST DP</td><td>Automatic adjustment in the DP scanning section: Original size magnification, leading edge timing, center line</td><td>303LJ57010 (Adjustment original supplied with DP)</td></tr></table> <p>Method: TABLE</p> <p>1. Enter the target values which are shown on the specified original (P/N: 302FZ56990) executing maintenance item U425.</p> <p>2. Set a specified original (P/N: 302FZ56990) on the platen.</p> <p>3. Enter maintenance item U411.</p> <p>4. Select [ADJUST TABLE] using the cursor up/down keys.</p> <p>5. Press the start key. Auto adjustment starts.</p> <p>When automatic adjustment has normally completed, [OK] is displayed. If a problem occurs during auto adjustment, [NG 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.</p> <p>6. To return to the screen for selecting an item, press the stop key.</p> <p>Method: DP</p> <p>1. Select [ADJUST DP] using the cursor up/down keys.</p> <p>2. Set a specified original (P/N: 303LJ57010) in the DP.</p> <p>3. Press the start key. Auto adjustment starts.</p> <p>When automatic adjustment has normally completed, [OK] is displayed. If a problem occurs during auto adjustment, [NG 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.</p> <p>4. To return to the screen for selecting an item, press the stop key.</p> <p>Completion Press the stop key. The screen for selecting a maintenance item is displayed.</p>	Display	Description	Original to be used for adjustment (P/N)	ADJUST TABLE	Automatic adjustment in the scanner section: Original size magnification, leading edge timing, center line, input gamma, input gamma in mono-chrome mode and matrix	302FZ56990	ADJUST DP	Automatic adjustment in the DP scanning section: Original size magnification, leading edge timing, center line	303LJ57010 (Adjustment original supplied with DP)
Display	Description	Original to be used for adjustment (P/N)								
ADJUST TABLE	Automatic adjustment in the scanner section: Original size magnification, leading edge timing, center line, input gamma, input gamma in mono-chrome mode and matrix	302FZ56990								
ADJUST DP	Automatic adjustment in the DP scanning section: Original size magnification, leading edge timing, center line	303LJ57010 (Adjustment original supplied with DP)								

Maintenance item No.	Description																																		
U425	<p>Setting the target</p> <p>Description Enters the lab values that is indicated on the back of the chart (P/N: 302FZ56990) used for adjustment.</p> <p>Purpose Performs data input in order to correct for differences in originals during automatic adjustment.</p> <p>Method</p> <ol style="list-style-type: none">Press the start key.Select the item to be set using the cursor up/down keys. <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> <ol style="list-style-type: none">Select the item to be set using the cursor up/down keys. <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> <ol style="list-style-type: none">Enters the value that is indicated on the back of the chart using the cursor left/right keys or numeric keys.Press the start key. The value is set.To return to the screen for selecting an item, press the stop key. <p>Setting: [ADJUST ORIGINAL]</p> <ol style="list-style-type: none">Measure the distance from the left edge to the black belt (a) of the original at A, B and C. Measurement procedure<ol style="list-style-type: none">Measure the distance from the edge to the black belt (a) of the original at A (30 mm from the leading edge), B (154.5 mm from the leading edge) and C (267 mm from the leading edge), respectively.Apply the following formula for the values obtained: $((A + C) / 2 + B) / 2$Enter the values solved using the cursor left/right keys or numeric keys in [MAIN].Press the start key. The value is set.Measure the distance from the leading edge to the black belt (c) of the original at D, E and F. Measurement procedure<ol style="list-style-type: none">Measure the distance from the edge to the black belt (c) of the original at D (50 mm from the left edge), E (105 mm from the left edge) and F (160 mm from the left edge), respectively.Apply the following formula for the values obtained: $((D + F) / 2 + E) / 2$Enter the values solved using the cursor left/right keys or numeric keys in [SUB LEAD].Press the start key. The value is set.Measure the length (G) from the edge of the black belt (b) to edge of the black belt (c) of the original.Enter the measured value using the cursor left/right keys or numeric keys in [SUB TAIL].Press the start key. The value is set.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
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Maintenance item No.	Description
U425	<p>The diagram illustrates the dimensions and layout of the U425 maintenance item. It features a central color calibration chart with various color patches and grayscale steps. The chart is framed by black belts (a), (b), and (c). Dimensions are provided for the overall size and the positions of the belts and edges.</p> <p>Dimensions:</p> <ul style="list-style-type: none"> Overall width: 267mm Distance from left edge to black belt (a): 154.5mm Distance from black belt (a) to right edge: 30mm Distance from top edge to black belt (a): 50mm Distance from black belt (a) to bottom edge: 105mm Distance from bottom edge to black belt (c): 160mm <p>Formulas:</p> <ul style="list-style-type: none"> 「Main」 = $((A + C)/2 + B)/2$ 「Sub Lead」 = $((D + F)/2 + E)/2$ 「Sub Tail」 = G <p>Original for adjustment (P/N: 302FZ56990)</p>

Maintenance item No.	Description																																																																								
U600	<p>Initializing all data</p> <p>Description Initializes software switches and all data in the backup data on the FAX PWB, according to the destination and OEM. Executes the check of the file system, when abnormality of the file system is detected, initializes the file system, communication past record and register setting contents.</p> <p>Purpose To initialize the FAX PWB.</p> <p>Method</p> <ol style="list-style-type: none">1. Press the start key.2. Select [Execute]. The screen for entering the destination code and OEM code is displayed.3. Select [Country Code] and enter a destination code using the numeric keys (refer to the destination code list on following for the destination code).4. Press the start key. There is no operation necessary on this screen. The destination code and the OEM code are displayed with the values currently set.5. Press the start key. Data initialization starts. To cancel data initialization, press the stop key.6. After data initialization, the entered destination, OEM codes and ROM version are displayed. A ROM version displays three kinds, application, boot, and IPL. <p>Destination code list</p> <table><tr><th>Code</th><th>Destination</th><th>Code</th><th>Destination</th><th>Code</th><th>Destination</th></tr><tr><td>000</td><td>Japan</td><td>156</td><td>Singapore</td><td>253</td><td>Sweden</td></tr><tr><td>009</td><td>Australia</td><td>159</td><td>South Africa</td><td></td><td>France</td></tr><tr><td>038</td><td>China</td><td>169</td><td>Thailand</td><td></td><td>Austria</td></tr><tr><td>080</td><td>Hong Kong</td><td>181</td><td>U.S.A.</td><td></td><td>Switzerland</td></tr><tr><td>084</td><td>Indonesia</td><td>242</td><td>South America</td><td></td><td>Belgium</td></tr><tr><td>088</td><td>Israel</td><td>253</td><td>CTR21 (European nations)</td><td></td><td>Denmark</td></tr><tr><td>108</td><td>Malaysia</td><td></td><td>Italy</td><td></td><td>Finland</td></tr><tr><td>126</td><td>New Zealand</td><td></td><td>Germany</td><td></td><td>Portugal</td></tr><tr><td>136</td><td>Peru</td><td></td><td>Spain</td><td></td><td>Ireland</td></tr><tr><td>137</td><td>Philippines</td><td></td><td>U.K.</td><td></td><td>Norway</td></tr><tr><td>152</td><td>Saudi Arabia</td><td></td><td>Netherlands</td><td>254</td><td>Taiwan</td></tr></table>	Code	Destination	Code	Destination	Code	Destination	000	Japan	156	Singapore	253	Sweden	009	Australia	159	South Africa		France	038	China	169	Thailand		Austria	080	Hong Kong	181	U.S.A.		Switzerland	084	Indonesia	242	South America		Belgium	088	Israel	253	CTR21 (European nations)		Denmark	108	Malaysia		Italy		Finland	126	New Zealand		Germany		Portugal	136	Peru		Spain		Ireland	137	Philippines		U.K.		Norway	152	Saudi Arabia		Netherlands	254	Taiwan
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152	Saudi Arabia		Netherlands	254	Taiwan																																																																				
U601	<p>Initializing permanent data</p> <p>Description Initializes software switches on the FAX PWB according to the destination and OEM.</p> <p>Purpose To initialize the FAX PWB without changing user registration data.</p> <p>Method</p> <ol style="list-style-type: none">1. Press the start key.2. Select [Execute]. The screen for entering the destination code and OEM code is displayed.3. Select [Country Code] and enter a destination code using the numeric keys (refer to the destination code list for the destination code).4. Press the start key. There is no operation necessary on this screen. The destination code and the OEM code are displayed with the values currently set.5. Press the start key. Data initialization starts. To cancel data initialization, press the back key.6. After data initialization, the entered destination, OEM codes and ROM version are displayed. A ROM version displays three kinds, application, boot, and IPL.																																																																								

Maintenance item No.	Description								
U603	<p>Setting user data 1</p> <p>Description Makes user settings to enable the use of the machine as a fax.</p> <p>Purpose To be run after installation of the facsimile kit if necessary.</p> <p>Method</p> <ol style="list-style-type: none">1. Press the start key.2. Select [LINE TYPE]. The current setting is displayed in reverse.3. Select the setting using the cursor up/down keys. <table><tr><th>Display</th><th>Description</th></tr><tr><td>DTMF</td><td>DTMF</td></tr><tr><td>10PPS</td><td>10 PPS</td></tr><tr><td>20PPS</td><td>20 PPS</td></tr></table> <p>Initial setting: DTMF</p> <ol style="list-style-type: none">4. Press the start key. The value is set. <p>Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.</p>	Display	Description	DTMF	DTMF	10PPS	10 PPS	20PPS	20 PPS
Display	Description								
DTMF	DTMF								
10PPS	10 PPS								
20PPS	20 PPS								
U604	<p>Setting user data 2</p> <p>Description Makes user settings to enable the use of the machine as a fax.</p> <p>Purpose Use this if the user wishes to adjust the number of rings that occur before the unit switches into fax receiving mode when fax/telephone auto-select is enabled.</p> <p>Method</p> <ol style="list-style-type: none">1. Press the start key. The current setting is displayed.2. Select [RINGS(F/P)#].3. Change the setting using the cursor left/right keys or numeric keys. <table><tr><th>Description</th><th>Setting range</th><th>Initial setting</th></tr><tr><td>Number of fax/telephone rings</td><td>0 to 15</td><td>2 (120 V)/1 (220-240 V)</td></tr></table> <p>If you set this to 0, the unit will start fax reception without any ringing.</p> <ol style="list-style-type: none">4. Press the start key. The value is set. <p>Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.</p>	Description	Setting range	Initial setting	Number of fax/telephone rings	0 to 15	2 (120 V)/1 (220-240 V)		
Description	Setting range	Initial setting							
Number of fax/telephone rings	0 to 15	2 (120 V)/1 (220-240 V)							
U605	<p>Clearing data</p> <p>Description Initializes data related to the fax transmission such as transmission history.</p> <p>Purpose To clear the transmission history.</p> <p>Method</p> <ol style="list-style-type: none">1. Press the start key.2. Select [CLEAR COM.REC.].3. Press the start key. Initialization processing starts. When processing is finished, the screen for selecting a maintenance item No. is displayed. <p>Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.</p>								

Maintenance item No.	Description																								
U610	<p>Setting system 1</p> <p>Description</p> <p>Makes settings for fax reception regarding the sizes of the fax paper and received images and automatic printing of the protocol list.</p> <p>Start</p> <ol style="list-style-type: none">1. Press the start key. The current setting is displayed in each item.2. Select the item to be set using the cursor up/down keys. <table><tr><th>Display</th><th>Description</th></tr><tr><td>CUT LINE:100%</td><td>Sets the number of lines to be ignored when receiving a fax at 100% magnification.</td></tr><tr><td>CUT LINE:AUTO</td><td>Sets the number of lines to be ignored when receiving a fax in the auto reduction mode.</td></tr><tr><td>CUT LINE:A4</td><td>Sets the number of lines to be ignored when receiving a fax (A4R/LetterR) in the auto reduction mode.</td></tr></table> <p>Setting the number of lines to be ignored when receiving a fax at 100% magnification</p> <p>Sets the maximum number of lines to be ignored if the received data volume exceeds the recording capacity when recording the data at 100% magnification. If the number of excess lines is below the setting, those lines are ignored. If over the setting, they are recorded on the next page.</p> <ol style="list-style-type: none">1. Change the setting using the cursor left/right keys 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>Number of lines to be ignored when receiving at 100%</td><td>0 to 22</td><td>3</td><td>16 lines</td></tr></table> <p>Increase the setting if a blank second page is output, and decrease it if the received image does not include the entire transmitted data.</p> <ol style="list-style-type: none">2. Press the start key. The value is set. <p>Setting the number of lines to be ignored when receiving a fax in the auto reduction mode</p> <p>Sets the maximum number of lines to be ignored if the received data volume exceeds the recording capacity when the data is recorded in the auto reduction mode. If the number of excess lines is below the setting, those lines are ignored. If over the setting, the entire data on a page is further reduced so that it can be recorded on the same page.</p> <ol style="list-style-type: none">1. Change the setting using the cursor left/right keys 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>Number of lines to be ignored when receiving in the auto reduction mode</td><td>0 to 22</td><td>0</td><td>16 lines</td></tr></table> <p>Increase the setting if a page received in the reduction mode is over-reduced and too much trailing edge margin is left. Decrease it if the received image does not include all transmitted data.</p> <ol style="list-style-type: none">2. Press the start key. The value is set. <p>Setting the number of lines to be ignored when receiving a fax (A4R/LetterR) in the auto reduction mode</p> <p>Sets the maximum number of lines to be ignored if the received data volume exceeds the recording capacity when the data is recorded in the auto reduction mode onto A4R or LetterR paper under the conditions below. If the number of excess lines is below the setting, those lines are ignored. If over the setting, the entire data on a page is further reduced so that it can be recorded on the same page.</p> <p>With A4R present and folio absent in the cassette</p> <p>With letterR paper present and legal paper absent in the cassette</p>	Display	Description	CUT LINE:100%	Sets the number of lines to be ignored when receiving a fax at 100% magnification.	CUT LINE:AUTO	Sets the number of lines to be ignored when receiving a fax in the auto reduction mode.	CUT LINE:A4	Sets the number of lines to be ignored when receiving a fax (A4R/LetterR) in the auto reduction mode.	Description	Setting range	Initial setting	Change in value per step	Number of lines to be ignored when receiving at 100%	0 to 22	3	16 lines	Description	Setting range	Initial setting	Change in value per step	Number of lines to be ignored when receiving in the auto reduction mode	0 to 22	0	16 lines
Display	Description																								
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Number of lines to be ignored when receiving in the auto reduction mode	0 to 22	0	16 lines																						

Maintenance item No.	Description			
U610 (cont.)	1. Change the setting using the cursor left/right keys or numeric keys.			
	Description	Setting range	Initial setting	Change in value per step
	Number of lines to be ignored when receiving a fax (A4R, letter) in the auto reduction mode	0 to 22	0	16 lines
	Increase the setting if a page received in the reduction mode is over-reduced and too much trailing edge margin is left. Decrease it if the received image does not include all transmitted data.			
	2. Press the start key. The value is set.			
	Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.			
U611	Setting system 2			
	Description Sets the number of adjustment lines for automatic reduction.			
	Start			
	1. Press the start key. The current setting is displayed in each item.			
	2. Select the item to be set using the cursor up/down keys.			
	Display	Description		
	ADJ LINES	Sets the number of adjustment lines for automatic reduction.		
	ADJ LINES (A4)	Sets the number of adjustment lines for automatic reduction when A4 paper is set.		
	ADJ LINES (LT)	Sets the number of adjustment lines for automatic reduction when letter size paper is set.		
	Setting the number of adjustment lines for automatic reduction Sets the number of adjustment lines for automatic reduction.			
	1. Change the setting using the cursor left/right keys or numeric keys.			
	Description	Setting range	Initial setting	
Number of adjustment lines for automatic reduction	0 to 22	7		
	2. Press the start key. The value is set.			
Setting the number of adjustment lines for automatic reduction when A4 paper is set Sets the number of adjustment lines for automatic reduction when A4 paper is set.				
1. Change the setting using the cursor left/right keys or numeric keys.				
Description	Setting range	Initial setting		
Number of adjustment lines for automatic reduction when A4 paper is set	0 to 22	22		
	2. Press the start key. The value is set.			
Setting the number of adjustment lines for automatic reduction when letter size paper is set Sets the number of adjustment lines for automatic reduction when letter size paper is set.				
1. Change the setting using the cursor left/right keys or numeric keys.				
Description	Setting range	Initial setting		
Number of adjustment lines for automatic reduction when letter size paper is set	0 to 26	26		
	2. 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																												
U612	<p>Setting system 3</p> <p>Description Makes settings for fax transmission regarding operation and automatic printing of the protocol list. This determines how trailing edge margin is detected (to prevent image from being mutilated) while printing a received Fax.</p> <p>Start</p> <ol style="list-style-type: none"> 1. Press the start key. 2. Select the item to be set using the cursor up/down keys. <table border="1"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>AUTO REDUCTION</td><td>Selects if auto reduction in the auxiliary direction is to be performed.</td></tr> <tr> <td>PROTOCOL LIST</td><td>Sets the automatic printing of the protocol list.</td></tr> <tr> <td>DETECT TRAIL</td><td>Sets how trailing edge margins are detected</td></tr> </tbody> </table> <p>Selecting if auto reduction in the auxiliary direction is to be performed Sets whether to receive a long document by automatically reducing it in the auxiliary direction or at 100% magnification.</p> <ol style="list-style-type: none"> 1. Select the setting using the cursor left/right keys. <table border="1"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>ON</td><td>Auto reduction is performed if the received document is longer than the fax paper.</td></tr> <tr> <td>OFF</td><td>Auto reduction is not performed.</td></tr> </tbody> </table> <p>Initial setting: ON</p> <ol style="list-style-type: none"> 2. Press the start key. The setting is set. <p>Setting the automatic printing of the protocol list Sets if the protocol list is automatically printed out.</p> <ol style="list-style-type: none"> 1. Select the setting using the cursor left/right keys. <table border="1"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>OFF</td><td>The protocol list is not printed out automatically.</td></tr> <tr> <td>ERROR</td><td>The protocol list is automatically printed out after communication only if a communication error occurs.</td></tr> <tr> <td>ON</td><td>The protocol list is automatically printed out after communication.</td></tr> </tbody> </table> <p>Initial setting: OFF</p> <ol style="list-style-type: none"> 2. Press the start key. The setting is set. <p>Setting how trailing edge margins are detected This determines whether trailing edge margin is detected (to prevent image from being mutilated) while printing a received Fax.</p> <ol style="list-style-type: none"> 1. Select ON or OFF using the cursor left/right keys. <table border="1"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>ON</td><td>Detects trailing edge margin</td></tr> <tr> <td>OFF</td><td>Does not detect trailing edge margin</td></tr> </tbody> </table> <p>Initial setting: ON</p> <ol style="list-style-type: none"> 2. Press the start key. The setting is set. <p>Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.</p>	Display	Description	AUTO REDUCTION	Selects if auto reduction in the auxiliary direction is to be performed.	PROTOCOL LIST	Sets the automatic printing of the protocol list.	DETECT TRAIL	Sets how trailing edge margins are detected	Display	Description	ON	Auto reduction is performed if the received document is longer than the fax paper.	OFF	Auto reduction is not performed.	Display	Description	OFF	The protocol list is not printed out automatically.	ERROR	The protocol list is automatically printed out after communication only if a communication error occurs.	ON	The protocol list is automatically printed out after communication.	Display	Description	ON	Detects trailing edge margin	OFF	Does not detect trailing edge margin
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ON	Detects trailing edge margin																												
OFF	Does not detect trailing edge margin																												

Maintenance item No.	Description																		
U620	<p>Setting the remote switching mode</p> <p>Description Sets the signal detection method for remote switching. Be sure to change the setting according to the type of telephone connected to the machine.</p> <p>Method</p> <ol style="list-style-type: none">1. Press the start key.2. Select the setting using the cursor left/right keys. <table><tr><th>Display</th><th>Description</th></tr><tr><td>ONE</td><td>One-shot detection</td></tr><tr><td>CONT</td><td>Continuous detection</td></tr></table> <p>Initial setting: ONE</p> <ol style="list-style-type: none">3. Press the start key. The setting is set. <p>Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.</p>	Display	Description	ONE	One-shot detection	CONT	Continuous detection												
Display	Description																		
ONE	One-shot detection																		
CONT	Continuous detection																		
U625	<p>Setting the transmission system 1</p> <p>Description Makes settings for the auto redialing interval and the number of times of auto redialing.</p> <p>Purpose Change the setting to prevent the following problems: fax transmission is not possible due to too short redial interval, or fax transmission takes too much time to complete due to too long redial interval.</p> <p>Start</p> <ol style="list-style-type: none">1. Press the start key.2. Select the item to be set. <table><tr><th>Display</th><th>Description</th></tr><tr><td>INTERVAL</td><td>Setting the auto redialing interval</td></tr><tr><td>TIMES</td><td>Setting the number of times of auto redialing</td></tr></table> <p>Setting the auto redialing interval</p> <ol style="list-style-type: none">1. Change the setting using the cursor left/right keys. <table><tr><th>Description</th><th>Setting range</th><th>Initial setting</th></tr><tr><td>Redialing interval</td><td>1 to 9 (min.)</td><td>3 (120 V)/2 (220-240 V)</td></tr></table> <ol style="list-style-type: none">2. Press the start key. The value is set. <p>Setting the number of times of auto redialing</p> <ol style="list-style-type: none">1. Change the setting using the cursor left/right keys or numeric keys. <table><tr><th>Description</th><th>Setting range</th><th>Initial setting</th></tr><tr><td>Number of redialing</td><td>0 to 15</td><td>2 (120 V)/3 (220-240 V)</td></tr></table> <p>When set to 0, no redialing is performed.</p> <ol style="list-style-type: none">2. Press the start key. The value is set. <p>Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.</p>	Display	Description	INTERVAL	Setting the auto redialing interval	TIMES	Setting the number of times of auto redialing	Description	Setting range	Initial setting	Redialing interval	1 to 9 (min.)	3 (120 V)/2 (220-240 V)	Description	Setting range	Initial setting	Number of redialing	0 to 15	2 (120 V)/3 (220-240 V)
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Number of redialing	0 to 15	2 (120 V)/3 (220-240 V)																	

Maintenance item No.	Description																																				
U630	<p>Setting communication control 1</p> <p>Description Makes settings for fax transmission regarding the communication.</p> <p>Start</p> <ol style="list-style-type: none"> 1. Press the start key. 3. Select the item to be set using the cursor up/down keys. <table border="1"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>TX SPEED</td><td>Sets the communication starting speed.</td></tr> <tr> <td>RX SPEED</td><td>Sets the reception speed.</td></tr> <tr> <td>TX ECHO</td><td>Sets the waiting period to prevent echo problems at the sender.</td></tr> <tr> <td>RX ECHO</td><td>Sets the waiting period to prevent echo problems at the receiver.</td></tr> </tbody> </table> <p>Setting the communication starting speed Sets the initial communication speed when starting transmission. When the destination unit has V.34 capability, V.34 is selected for transmission, regardless of this setting.</p> <ol style="list-style-type: none"> 1. Select the setting using the cursor up/down keys. <table border="1"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>14400bps/V17</td><td>V.17, 14400 bps</td></tr> <tr> <td>9600bps/V29</td><td>V.17, 9600 bps</td></tr> <tr> <td>4800bps/V27ter</td><td>V.27ter, 4800 bps</td></tr> <tr> <td>2400bps/V27ter</td><td>V.27ter, 2400 bps</td></tr> </tbody> </table> <p>Initial setting: 14400bps/V17</p> <ol style="list-style-type: none"> 2. Press the start key. The setting is set. <p>Setting the reception speed Sets the reception speed that the sender is informed of using the DIS or NSF signal. When the destination unit has V.34 capability, V.34 is selected, regardless of the setting.</p> <ol style="list-style-type: none"> 1. Select the setting using the cursor up/down keys. <table border="1"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>14400bps</td><td>V.17, V.33, V.29, V.27ter</td></tr> <tr> <td>9600bps</td><td>V.29, V.27ter</td></tr> <tr> <td>4800bps</td><td>V.27ter</td></tr> <tr> <td>2400bps</td><td>V.27ter (fallback only)</td></tr> </tbody> </table> <p>Initial setting: 14400bps</p> <ol style="list-style-type: none"> 2. Press the start key. The setting is set. <p>Setting the waiting period to prevent echo problems at the sender Sets the period before a DCS signal is sent after a DIS signal is received. Used when problems occur due to echoes at the sender.</p> <ol style="list-style-type: none"> 1. Select the setting using the cursor up/down keys. <table border="1"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>500</td><td>Sends a DCS 500 ms after receiving a DIS.</td></tr> <tr> <td>300</td><td>Sends a DCS 300 ms after receiving a DIS.</td></tr> </tbody> </table> <p>Initial setting: 300</p> <ol style="list-style-type: none"> 2. Press the start key. The setting is set. 	Display	Description	TX SPEED	Sets the communication starting speed.	RX SPEED	Sets the reception speed.	TX ECHO	Sets the waiting period to prevent echo problems at the sender.	RX ECHO	Sets the waiting period to prevent echo problems at the receiver.	Display	Description	14400bps/V17	V.17, 14400 bps	9600bps/V29	V.17, 9600 bps	4800bps/V27ter	V.27ter, 4800 bps	2400bps/V27ter	V.27ter, 2400 bps	Display	Description	14400bps	V.17, V.33, V.29, V.27ter	9600bps	V.29, V.27ter	4800bps	V.27ter	2400bps	V.27ter (fallback only)	Display	Description	500	Sends a DCS 500 ms after receiving a DIS.	300	Sends a DCS 300 ms after receiving a DIS.
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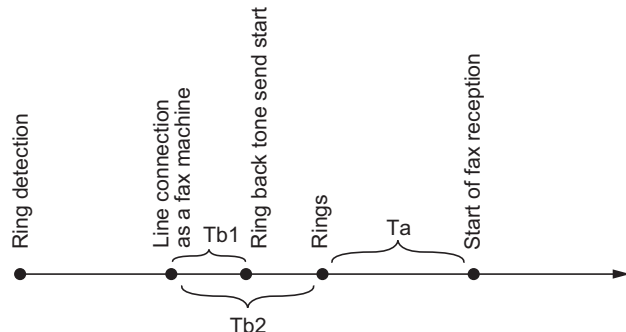
Maintenance item No.	Description																										
U630 (cont.)	<p>Setting the waiting period to prevent echo problems at the receiver Sets the period before an NSF, CSI or DIS signal is sent after a CED signal is received. Used when problems occur due to echoes at the receiver.</p> <ol style="list-style-type: none"> Select the setting using the cursor up/down keys. <table border="1"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>500</td><td>Sends an NSF, CSI or DIS 500 ms after receiving a CED.</td></tr> <tr> <td>75</td><td>Sends an NSF, CSI or DIS 75 ms after receiving a CED.</td></tr> </tbody> </table> <p>Initial setting: 75</p> <ol style="list-style-type: none"> Press the start key. The setting is set. <p>Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.</p>	Display	Description	500	Sends an NSF, CSI or DIS 500 ms after receiving a CED.	75	Sends an NSF, CSI or DIS 75 ms after receiving a CED.																				
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500	Sends an NSF, CSI or DIS 500 ms after receiving a CED.																										
75	Sends an NSF, CSI or DIS 75 ms after receiving a CED.																										
U631	<p>Setting communication control 2 Description Makes settings regarding fax transmission.</p> <p>Start</p> <ol style="list-style-type: none"> Press the start key. Select the item to be set using the cursor up/down keys. <table border="1"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>ECM TX</td><td>Sets ECM transmission.</td></tr> <tr> <td>ECM RX</td><td>Sets ECM reception.</td></tr> <tr> <td>CED FREQ.</td><td>Sets the frequency of the CED signal.</td></tr> </tbody> </table> <p>Setting ECM transmission To be set to OFF when reduction of transmission costs is of higher priority than image quality. This should not be set to OFF when connecting to the IP (Internet Protocol) telephone line.</p> <ol style="list-style-type: none"> Select the setting using the cursor up/down keys. <table border="1"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>ON</td><td>ECM transmission is enabled.</td></tr> <tr> <td>OFF</td><td>ECM transmission is disabled.</td></tr> </tbody> </table> <p>Initial setting: ON</p> <ol style="list-style-type: none"> Press the start key. The setting is set. <p>Setting ECM reception To be set to OFF when reduction of transmission costs is of higher priority than image quality. This should not be set to OFF when connecting to the IP (Internet Protocol) telephone line.</p> <ol style="list-style-type: none"> Select the setting using the cursor up/down keys. <table border="1"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>ON</td><td>ECM reception is enabled.</td></tr> <tr> <td>OFF</td><td>ECM reception is disabled.</td></tr> </tbody> </table> <p>Initial setting: ON</p> <ol style="list-style-type: none"> Press the start key. The setting is set. <p>Setting the frequency of the CED signal Sets the frequency of the CED signal. Used as one of the measures to improve transmission performance for international communications.</p> <ol style="list-style-type: none"> Select the setting using the cursor up/down keys. <table border="1"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>2100</td><td>2100 Hz</td></tr> <tr> <td>1100</td><td>1100 Hz</td></tr> </tbody> </table> <p>Initial setting: 2100</p> <ol style="list-style-type: none"> Press the start key. The setting is set. <p>Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.</p>	Display	Description	ECM TX	Sets ECM transmission.	ECM RX	Sets ECM reception.	CED FREQ.	Sets the frequency of the CED signal.	Display	Description	ON	ECM transmission is enabled.	OFF	ECM transmission is disabled.	Display	Description	ON	ECM reception is enabled.	OFF	ECM reception is disabled.	Display	Description	2100	2100 Hz	1100	1100 Hz
Display	Description																										
ECM TX	Sets ECM transmission.																										
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Display	Description																										
2100	2100 Hz																										
1100	1100 Hz																										

Maintenance item No.	Description																																		
U632	<p>Setting communication control 3</p> <p>Description Makes settings for fax transmission regarding the communication.</p> <p>Start</p> <ol style="list-style-type: none"> 1. Press the start key. 2. Select the item to be set using the cursor up/down keys. <table border="1"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>DIS 4BYTE</td><td>Sets the DIS signal to 4 bytes.</td></tr> <tr> <td>SHORT PRTCL TX</td><td>Sets the short protocol transmission.</td></tr> <tr> <td>SHORT PRTCL RX</td><td>Sets the reception of short protocol transmission.</td></tr> <tr> <td>NUM OF CNG(F/T)</td><td>Sets the CNG detection times in the fax/telephone auto select mode.</td></tr> </tbody> </table> <p>Setting the DIS signal to 4 bytes Sets if bit 33 and later bits of the DIS/DTC signal are sent.</p> <ol style="list-style-type: none"> 1. Select the setting using the cursor up/down keys. <table border="1"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>ON</td><td>Bit 33 and later bits of the DIS/DTC signal are not sent.</td></tr> <tr> <td>OFF</td><td>Bit 33 and later bits of the DIS/DTC signal are sent.</td></tr> </tbody> </table> <p>Initial setting: OFF</p> <ol style="list-style-type: none"> 2. Press the start key. The setting is set. <p>Setting the short protocol transmission Sets if short protocol transmission is performed.</p> <ol style="list-style-type: none"> 1. Select the setting using the cursor up/down keys. <table border="1"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>ON</td><td>Short protocol transmission is performed.</td></tr> <tr> <td>OFF</td><td>Short protocol transmission is not performed.</td></tr> </tbody> </table> <p>Initial setting: ON</p> <ol style="list-style-type: none"> 2. Press the start key. The setting is set. <p>Setting the reception of a short protocol transmission Selects whether to receive or ignore transmission using short protocol. If a short protocol transmission is received when an auto switching device is attached to the machine, communication problems, including auto switching inability, sometimes occur. Change the setting to ignore short protocol transmission to prevent such problems.</p> <ol style="list-style-type: none"> 1. Select the setting using the cursor up/down keys. <table border="1"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>ON</td><td>Receives short protocol transmission.</td></tr> <tr> <td>OFF</td><td>Ignores short protocol transmission.</td></tr> </tbody> </table> <p>Initial setting: ON</p> <ol style="list-style-type: none"> 2. Press the start key. The setting is set. <p>Setting the CNG detection times in the fax/telephone auto select mode Sets the CNG detection times in the fax/telephone auto select mode.</p> <ol style="list-style-type: none"> 1. Select the setting using the cursor up/down keys. <table border="1"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>1TIME</td><td>Detects CNG once.</td></tr> <tr> <td>2TIMES</td><td>Detects CNG twice.</td></tr> </tbody> </table> <p>Initial setting: 2TIMES</p> <ol style="list-style-type: none"> 2. Press the start key. The setting is set. <p>Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.</p>	Display	Description	DIS 4BYTE	Sets the DIS signal to 4 bytes.	SHORT PRTCL TX	Sets the short protocol transmission.	SHORT PRTCL RX	Sets the reception of short protocol transmission.	NUM OF CNG(F/T)	Sets the CNG detection times in the fax/telephone auto select mode.	Display	Description	ON	Bit 33 and later bits of the DIS/DTC signal are not sent.	OFF	Bit 33 and later bits of the DIS/DTC signal are sent.	Display	Description	ON	Short protocol transmission is performed.	OFF	Short protocol transmission is not performed.	Display	Description	ON	Receives short protocol transmission.	OFF	Ignores short protocol transmission.	Display	Description	1TIME	Detects CNG once.	2TIMES	Detects CNG twice.
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Maintenance item No.	Description																																
U633	<p>Setting communication control 4</p> <p>Description Makes settings for fax transmission regarding the communication.</p> <p>Purpose To reduce transmission errors when a low quality line is used.</p> <p>Start</p> <ol style="list-style-type: none"> 1. Press the start key. 2. Select the item to be set using the cursor up/down keys. <table border="1"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>V.34</td><td>Enables or disables V.34 communication.</td></tr> <tr> <td>V.34-3429Hz</td><td>Sets the V.34 symbol speed (3429 Hz).</td></tr> <tr> <td>DIS 2RES</td><td>Sets the number of times of DIS signal reception.</td></tr> <tr> <td>RTN CHECK</td><td>Sets the reference for RTN signal output.</td></tr> </tbody> </table> <p>Enabling/disabling V.34 communication Sets whether V.34 communication is enabled/disabled for transmission and reception.</p> <ol style="list-style-type: none"> 1. Select the setting using the cursor up/down keys. <table border="1"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>ON</td><td>V.34 communication is enabled for both transmission and reception.</td></tr> <tr> <td>TX</td><td>V.34 communication is enabled for transmission only.</td></tr> <tr> <td>RX</td><td>V.34 communication is enabled for reception only.</td></tr> <tr> <td>OFF</td><td>V.34 communication is disabled for both transmission and reception.</td></tr> </tbody> </table> <p>Initial setting: ON</p> <ol style="list-style-type: none"> 2. Press the start key. The setting is set. <p>Setting the V.34 symbol speed (3429 Hz) Sets if the V.34 symbol speed 3429 Hz is used.</p> <ol style="list-style-type: none"> 1. Select the setting using the cursor up/down keys. <table border="1"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>ON</td><td>V.34 symbol speed 3429 Hz is used.</td></tr> <tr> <td>OFF</td><td>V.34 symbol speed 3429 Hz is not used.</td></tr> </tbody> </table> <p>Initial setting: ON</p> <ol style="list-style-type: none"> 2. Press the start key. The setting is set. <p>Setting the number of times of DIS signal reception Sets the number of times to receive the DIS signal to once or twice. Used as one of the correction measures for transmission errors and other problems.</p> <ol style="list-style-type: none"> 1. Select the setting using the cursor up/down keys. <table border="1"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>ONCE</td><td>Responds to the first signal.</td></tr> <tr> <td>TWICE</td><td>Responds to the second signal.</td></tr> </tbody> </table> <p>Initial setting: ONCE</p> <ol style="list-style-type: none"> 2. Press the start key. The setting is set. 	Display	Description	V.34	Enables or disables V.34 communication.	V.34-3429Hz	Sets the V.34 symbol speed (3429 Hz).	DIS 2RES	Sets the number of times of DIS signal reception.	RTN CHECK	Sets the reference for RTN signal output.	Display	Description	ON	V.34 communication is enabled for both transmission and reception.	TX	V.34 communication is enabled for transmission only.	RX	V.34 communication is enabled for reception only.	OFF	V.34 communication is disabled for both transmission and reception.	Display	Description	ON	V.34 symbol speed 3429 Hz is used.	OFF	V.34 symbol speed 3429 Hz is not used.	Display	Description	ONCE	Responds to the first signal.	TWICE	Responds to the second signal.
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Maintenance item No.	Description												
U633 (cont.)	<p>Setting the reference for RTN signal output</p> <p>Sets the error line rate as the reference for RTN signal output. If transmission errors occur frequently due to the quality of the line, they can be reduced by lowering this setting.</p> <p>1. Select the setting using the cursor up/down keys.</p> <table><tr><th>Display</th><th>Description</th></tr><tr><td>5%</td><td>Error line rate of 5%</td></tr><tr><td>10%</td><td>Error line rate of 10%</td></tr><tr><td>15%</td><td>Error line rate of 15%</td></tr><tr><td>20%</td><td>Error line rate of 20%</td></tr></table> <p>Initial setting: 15%</p> <p>2. Press the start key. The setting is set.</p> <p>Completion</p> <p>Press the stop key. The screen for selecting a maintenance item No. is displayed.</p>	Display	Description	5%	Error line rate of 5%	10%	Error line rate of 10%	15%	Error line rate of 15%	20%	Error line rate of 20%		
Display	Description												
5%	Error line rate of 5%												
10%	Error line rate of 10%												
15%	Error line rate of 15%												
20%	Error line rate of 20%												
U634	<p>Setting communication control 5</p> <p>Description</p> <p>Sets the maximum number of error bytes judged acceptable when receiving a TCF signal. Used as a measure to ease transmission conditions if transmission errors occur.</p> <p>Method</p> <p>1. Press the start key.</p> <p>2. Change the setting using the cursor left/right keys or numeric keys.</p> <table><tr><th>Description</th><th>Setting range</th><th>Initial setting</th></tr><tr><td>Number of allowed error bytes when detecting TCF</td><td>0 to 255</td><td>0</td></tr></table> <p>3. Press the start key. The value is set.</p> <p>Completion</p> <p>Press the stop key. The screen for selecting a maintenance item No. is displayed.</p>	Description	Setting range	Initial setting	Number of allowed error bytes when detecting TCF	0 to 255	0						
Description	Setting range	Initial setting											
Number of allowed error bytes when detecting TCF	0 to 255	0											
U640	<p>Setting communication time 1</p> <p>Description</p> <p>Sets the detection time when one-shot detection is selected for remote switching. (This setting item will be displayed, but the setting made is ineffective.)</p> <p>Sets the detection time when continuous detection is selected for remote switching. (This setting item will be displayed, but the setting made is ineffective.)</p> <p>Method</p> <p>1. Press the start key.</p> <p>2. Select the item to be set using the cursor up/down keys.</p> <table><tr><th>Display</th><th>Description</th><th>Setting range</th><th>Initial setting</th></tr><tr><td>TIME (ONE)</td><td>Sets the one-shot detection time for remote switching.</td><td>0 to 255</td><td>7</td></tr><tr><td>TIME (CONT)</td><td>Sets the continuous detection time for remote switching.</td><td>0 to 255</td><td>80</td></tr></table> <p>3. Change the setting using the cursor left/right keys or numeric keys.</p> <p>4. Press the start key. The value is set.</p> <p>Completion</p> <p>Press the stop key. The screen for selecting a maintenance item No. is displayed.</p>	Display	Description	Setting range	Initial setting	TIME (ONE)	Sets the one-shot detection time for remote switching.	0 to 255	7	TIME (CONT)	Sets the continuous detection time for remote switching.	0 to 255	80
Display	Description	Setting range	Initial setting										
TIME (ONE)	Sets the one-shot detection time for remote switching.	0 to 255	7										
TIME (CONT)	Sets the continuous detection time for remote switching.	0 to 255	80										

Maintenance item No.	Description																																						
U641	<p>Setting communication time 2</p> <p>Description Sets the time-out time for fax transmission.</p> <p>Purpose To improve transmission performance for international communications mainly.</p> <p>Start</p> <ol style="list-style-type: none">1. Press the start key.2. Select the item to be set using the cursor up/down keys. <table><tr><th>Display</th><th>Description</th></tr><tr><td>T0 TIME OUT</td><td>Sets the T0 time-out time.</td></tr><tr><td>T1 TIME OUT</td><td>Sets the T1 time-out time.</td></tr><tr><td>T2 TIME OUT</td><td>Sets the T2 time-out time.</td></tr><tr><td>Ta TIME OUT</td><td>Sets the Ta time-out time.</td></tr><tr><td>Tb1 TIME OUT</td><td>Sets the Tb1 time-out time.</td></tr><tr><td>Tb2 TIME OUT</td><td>Sets the Tb2 time-out time.</td></tr><tr><td>Tc TIME OUT</td><td>Sets the Tc time-out time.</td></tr><tr><td>Td TIME OUT</td><td>Sets the Td time-out time.</td></tr></table> <p>Setting the T0 time-out time Sets the time before detecting a CED or DIS signal after a dialing signal is sent. Depending on the quality of the exchange, or when the auto select function is selected at the destination unit, a line can be disconnected. Change the setting to prevent this problem.</p> <ol style="list-style-type: none">1. Change the setting using the cursor left/right keys. <table><tr><th>Description</th><th>Setting range</th><th>Initial setting</th></tr><tr><td>T0 time-out time</td><td>30 to 90 s</td><td>56</td></tr></table> <ol style="list-style-type: none">2. Press the start key. The value is set. <p>Setting the T1 time-out time Sets the time before receiving the correct signal after call reception. No change is necessary for this maintenance item.</p> <ol style="list-style-type: none">1. Change the setting using the cursor left/right keys. <table><tr><th>Description</th><th>Setting range</th><th>Initial setting</th></tr><tr><td>T1 time-out time</td><td>30 to 90 s</td><td>36</td></tr></table> <ol style="list-style-type: none">2. Press the start key. The value is set.3. To return to the screen for selecting an item, press the stop/clear key. <p>Setting the T2 time-out time The T2 time-out time decides the following. From CFR signal output to image data reception From image data reception to the next signal reception In ECM, from RNR signal detection to the next signal reception</p> <ol style="list-style-type: none">1. Change the setting using the cursor left/right keys. <table><tr><th>Description</th><th>Setting range</th><th>Initial setting</th><th>Change in value per step</th></tr><tr><td>T2 time-out time</td><td>1 to 255</td><td>69</td><td>100 ms</td></tr></table> <ol style="list-style-type: none">2. Press the start key. The value is set.	Display	Description	T0 TIME OUT	Sets the T0 time-out time.	T1 TIME OUT	Sets the T1 time-out time.	T2 TIME OUT	Sets the T2 time-out time.	Ta TIME OUT	Sets the Ta time-out time.	Tb1 TIME OUT	Sets the Tb1 time-out time.	Tb2 TIME OUT	Sets the Tb2 time-out time.	Tc TIME OUT	Sets the Tc time-out time.	Td TIME OUT	Sets the Td time-out time.	Description	Setting range	Initial setting	T0 time-out time	30 to 90 s	56	Description	Setting range	Initial setting	T1 time-out time	30 to 90 s	36	Description	Setting range	Initial setting	Change in value per step	T2 time-out time	1 to 255	69	100 ms
Display	Description																																						
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T2 time-out time	1 to 255	69	100 ms																																				

Maintenance item No.	Description																												
U641 (cont.)	<p>Setting the Ta time-out time</p> <p>In the fax/telephone auto select mode, sets the time to continue ringing an operator through the connected telephone after receiving a call as a fax machine (see figure 1-3-1). A fax signal is received within the Ta set time, or the fax mode is selected automatically when the time elapses. In fax/telephone auto select mode, change the setting when fax reception is unsuccessful or a telephone fails to receive a call.</p> <p>1. Change the setting using the cursor left/right keys.</p> <table><tr><th>Description</th><th>Setting range</th><th>Initial setting</th></tr><tr><td>Ta time-out time</td><td>1 to 255</td><td>30</td></tr></table> <p>2. Press the start key. The value is set.</p>  <p style="text-align: center;">Figure 1-3-19 Ta/Tb1/Tb2 time-out time</p> <p>Setting the Tb1 time-out time</p> <p>In the fax/telephone auto select mode, sets the time to start sending the ring back tone after receiving a call as a fax machine (see figure 1-3-20). In fax/telephone auto select mode, change the setting when fax reception is unsuccessful or a telephone fails to receive a call.</p> <p>1. Change the setting using the cursor left/right keys.</p> <table><tr><th>Description</th><th>Setting range</th><th>Initial setting</th><th>Change in value per step</th></tr><tr><td>Tb1 time-out time</td><td>1 to 255</td><td>20</td><td>100 ms</td></tr></table> <p>2. Press the start key. The value is set.</p> <p>Setting the Tb2 time-out time</p> <p>In the fax/telephone auto select mode, sets the time to start ringing an operator through the connected telephone after receiving a call as a fax machine (see figure 1-3-19). In the fax/telephone auto select mode, change the setting when fax reception is unsuccessful or a telephone fails to receive a call.</p> <p>1. Change the setting using the cursor left/right keys.</p> <table><tr><th>Description</th><th>Setting range</th><th>Initial setting</th><th>Change in value per step</th></tr><tr><td>Tb2 time-out time</td><td>1 to 255</td><td>80</td><td>100 ms</td></tr></table> <p>2. Press the start key. The value is set.</p> <p>Setting the Tc time-out time</p> <p>In the TAD mode, set the time to check if there are any triggers for shifting to fax reception after a connected telephone receives a call. Only the telephone function is available if shifting is not made within the set Tc time. In the TAD mode, change the setting when fax reception is unsuccessful or a telephone fails to receive a call.</p> <p>1. Change the setting using the cursor left/right keys.</p> <table><tr><th>Description</th><th>Setting range</th><th>Initial setting</th></tr><tr><td>Tc time-out time</td><td>1 to 255 s</td><td>60</td></tr></table> <p>2. Press the start key. The value is set.</p>	Description	Setting range	Initial setting	Ta time-out time	1 to 255	30	Description	Setting range	Initial setting	Change in value per step	Tb1 time-out time	1 to 255	20	100 ms	Description	Setting range	Initial setting	Change in value per step	Tb2 time-out time	1 to 255	80	100 ms	Description	Setting range	Initial setting	Tc time-out time	1 to 255 s	60
Description	Setting range	Initial setting																											
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Tb1 time-out time	1 to 255	20	100 ms																										
Description	Setting range	Initial setting	Change in value per step																										
Tb2 time-out time	1 to 255	80	100 ms																										
Description	Setting range	Initial setting																											
Tc time-out time	1 to 255 s	60																											

Maintenance item No.	Description								
U641 (cont.)	<p>Setting the Td time-out time</p> <p>Sets the length of the time required to determine silent status (fax), one of the triggers for Tc time check. In the TAD mode, change the setting when fax reception is unsuccessful or a telephone fails to receive a call. Be sure not to set it too short; otherwise, the mode may be shifted to fax while the unit is being used as a telephone.</p> <ol style="list-style-type: none">1. Change the setting using the cursor left/right keys. <table><tr><th>Description</th><th>Setting range</th><th>Initial setting</th></tr><tr><td>Td time-out time</td><td>1 to 255 s</td><td>9 (120 V)/6 (220-240 V)</td></tr></table> <ol style="list-style-type: none">2. Press the start key. The value is set. <p>Completion</p> <p>Press the stop key. The screen for selecting a maintenance item No. is displayed.</p>	Description	Setting range	Initial setting	Td time-out time	1 to 255 s	9 (120 V)/6 (220-240 V)		
Description	Setting range	Initial setting							
Td time-out time	1 to 255 s	9 (120 V)/6 (220-240 V)							
U650	<p>Setting modem 1</p> <p>Description</p> <p>Sets the G3 cable equalizer.</p> <p>Sets the modem detection level.</p> <p>Start</p> <ol style="list-style-type: none">1. Press the start key.2. Select the item to be set using the cursor up/down keys. <table><tr><th>Display</th><th>Description</th></tr><tr><td>REG. G3 TX EQR</td><td>Sets the G3 transmission cable equalizer.</td></tr><tr><td>REG. G3 RX EQR</td><td>Sets the G3 reception cable equalizer.</td></tr><tr><td>RX MODEM LEVEL</td><td>Sets the modem detection level.</td></tr></table> <p>Setting the G3 transmission cable equalizer</p> <p>Perform the following adjustment to make the equalizer compatible with the line characteristics.</p> <ol style="list-style-type: none">1. Select [0dB], [4dB], [8dB] or [12dB] using the cursor up/down keys. Initial setting: 0dB2. Press the start key. The setting is set. <p>Setting the G3 reception cable equalizer</p> <p>Perform the following adjustment to make the equalizer compatible with the line characteristics.</p> <ol style="list-style-type: none">1. Select [0dB], [4dB], [8dB] or [12dB] using the cursor up/down keys. Initial setting: 0dB2. Press the start key. The setting is set. <p>Setting the modem detection level</p> <p>To improve the transmission performance when a low quality line is used.</p> <ol style="list-style-type: none">1. Select [33dBm], [38dBm], [43dBm] or [48dBm] using the cursor up/down keys. Initial setting: 43dBm2. Press the start key. The setting is set. <p>Completion</p> <p>Press the stop key. The screen for selecting a maintenance item No. is displayed.</p>	Display	Description	REG. G3 TX EQR	Sets the G3 transmission cable equalizer.	REG. G3 RX EQR	Sets the G3 reception cable equalizer.	RX MODEM LEVEL	Sets the modem detection level.
Display	Description								
REG. G3 TX EQR	Sets the G3 transmission cable equalizer.								
REG. G3 RX EQR	Sets the G3 reception cable equalizer.								
RX MODEM LEVEL	Sets the modem detection level.								

Maintenance item No.	Description																
U651	<p>Setting modem 2</p> <p>Description Sets the modem output level. Sets the DTMF output level of a push-button dial telephone.</p> <p>Purpose Used if problems occur when sending a signal with a push-button dial telephone.</p> <p>Start</p> <ol style="list-style-type: none">1. Press the start key.2. Select the item to be set using the cursor up/down keys. <table><tr><th>Display</th><th>Description</th><th>Setting range</th><th>Initial setting</th></tr><tr><td>SGL LV MDM</td><td>Modem output level</td><td>1 to 15</td><td>9 (120 V) 10 (220-240 V)</td></tr><tr><td>DTMF LV(C)</td><td>DTMF output level (main value)</td><td>0 to 15.0</td><td>5 (120 V) 10.5 (220-240 V)</td></tr><tr><td>DTMF LV(D)</td><td>DTMF output level (level difference)</td><td>0 to 5.5</td><td>2 (120 V) 2.5 (220-240 V)</td></tr></table> <ol style="list-style-type: none">3. Change the setting using the cursor left/right keys or numeric keys.4. Press the start key. The setting is set. <p>Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.</p>	Display	Description	Setting range	Initial setting	SGL LV MDM	Modem output level	1 to 15	9 (120 V) 10 (220-240 V)	DTMF LV(C)	DTMF output level (main value)	0 to 15.0	5 (120 V) 10.5 (220-240 V)	DTMF LV(D)	DTMF output level (level difference)	0 to 5.5	2 (120 V) 2.5 (220-240 V)
Display	Description	Setting range	Initial setting														
SGL LV MDM	Modem output level	1 to 15	9 (120 V) 10 (220-240 V)														
DTMF LV(C)	DTMF output level (main value)	0 to 15.0	5 (120 V) 10.5 (220-240 V)														
DTMF LV(D)	DTMF output level (level difference)	0 to 5.5	2 (120 V) 2.5 (220-240 V)														

Maintenance item No.	Description																														
U660	<p>Setting the NCU</p> <p>Description Makes setting regarding the network control unit (NCU).</p> <p>Purpose To be set when installing the facsimile kit.</p> <p>Start</p> <ol style="list-style-type: none"> 1. Press the start key. 2. Select the item to be set using the cursor up/down keys. <table border="1"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>EXCHANGE</td><td>Sets the connection to PBX/PSTN.</td></tr> <tr> <td>DIAL TONE</td><td>Sets PSTN dial tone detection.</td></tr> <tr> <td>BUSY TONE</td><td>Sets busy tone detection.</td></tr> <tr> <td>PBX SETTING</td><td>Setting for a PBX.</td></tr> <tr> <td>DC LOOP</td><td>Sets the loop current detection before dialing.</td></tr> </tbody> </table> <p>Setting the connection to PBX/PSTN</p> <p>Selects if a fax is to be connected to either a PBX or public switched telephone network.</p> <ol style="list-style-type: none"> 1. Select the setting using the cursor up/down keys. <table border="1"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>PSTN</td><td>Connected to the public switched telephone network.</td></tr> <tr> <td>PBX</td><td>Connected to a PBX.</td></tr> </tbody> </table> <p>Initial setting: PSTN</p> <ol style="list-style-type: none"> 2. Press the start key. The setting is set. <p>Setting PSTN dial tone detection</p> <p>Selects if the dial tone is detected to check the telephone is off the hook when a fax is connected to a public switched telephone network.</p> <ol style="list-style-type: none"> 1. Select the setting using the cursor up/down keys. <table border="1"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>ON</td><td>Detects the dial tone.</td></tr> <tr> <td>OFF</td><td>Does not detect the dial tone.</td></tr> </tbody> </table> <p>Initial setting: ON</p> <ol style="list-style-type: none"> 2. Press the start key. The setting is set. <p>Setting busy tone detection</p> <p>When a fax signal is sent, sets whether the line is disconnected immediately after a busy tone is detected, or the busy tone is not detected and the line remains connected until T0 time-out time. Fax transmission may fail due to incorrect busy tone detection. When set to 2, this problem may be prevented. However, the line is not disconnected within the T0 time-out time even if the destination line is busy.</p> <ol style="list-style-type: none"> 1. Select the setting using the cursor up/down keys. <table border="1"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>ON</td><td>Detects busy tone.</td></tr> <tr> <td>OFF</td><td>Does not detect busy tone.</td></tr> </tbody> </table> <p>Initial setting: ON</p> <ol style="list-style-type: none"> 2. Press the start key. The setting is set. 	Display	Description	EXCHANGE	Sets the connection to PBX/PSTN.	DIAL TONE	Sets PSTN dial tone detection.	BUSY TONE	Sets busy tone detection.	PBX SETTING	Setting for a PBX.	DC LOOP	Sets the loop current detection before dialing.	Display	Description	PSTN	Connected to the public switched telephone network.	PBX	Connected to a PBX.	Display	Description	ON	Detects the dial tone.	OFF	Does not detect the dial tone.	Display	Description	ON	Detects busy tone.	OFF	Does not detect busy tone.
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OFF	Does not detect busy tone.																														

Maintenance item No.	Description																				
U660 (cont.)	<p>Setting for a PBX Selects the mode to connect an outside call when connected to a PBX. According to the type of the PBX connected, select the mode to connect an outside call.</p> <ol style="list-style-type: none"> 1. Select the setting using the cursor up/down keys. <table border="1" data-bbox="331 387 1398 555"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>EARTH</td><td>Earth mode</td></tr> <tr> <td>FLASH</td><td>Flashing mode</td></tr> <tr> <td>LOOP</td><td>Code number mode</td></tr> </tbody> </table> <p>Initial setting: LOOP</p> <ol style="list-style-type: none"> 2. Press the start key. The setting is set. <p>Setting the loop current detection before dialing Sets if the loop current detection is performed before dialing.</p> <ol style="list-style-type: none"> 1. Select the setting using the cursor up/down keys. <table border="1" data-bbox="331 745 1398 869"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>ON</td><td>Performs loop current detection before dialing.</td></tr> <tr> <td>OFF</td><td>Does not perform loop current detection before dialing.</td></tr> </tbody> </table> <p>Initial setting: ON</p> <ol style="list-style-type: none"> 2. Press the start key. The setting is set. <p>Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.</p>	Display	Description	EARTH	Earth mode	FLASH	Flashing mode	LOOP	Code number mode	Display	Description	ON	Performs loop current detection before dialing.	OFF	Does not perform loop current detection before dialing.						
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U670	<p>Outputting lists Description Outputs a list of data regarding fax transmissions. Printing a list is disabled either when a job is remaining in the buffer or when [Pause All Print Jobs] is pressed to halt printing.</p> <p>Purpose To check conditions of use, settings and transmission procedures of the fax.</p> <p>Method</p> <ol style="list-style-type: none"> 1. Press the start key. 2. Select the item to be output using the cursor up/down keys. 3. Press the start key. The selected list is output. <table border="1" data-bbox="331 1332 1398 1839"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>SETTING LIST</td><td>Outputs a list of software switches, self telephone number, confidential boxes, ROM versions and other information.</td></tr> <tr> <td>ACTION LIST</td><td>Outputs a list of error history, transmission line details and other information.</td></tr> <tr> <td>SELF ST REPORT</td><td>Outputs a list of settings in maintenance mode (own-status report) regarding fax transmission only.</td></tr> <tr> <td>PROTOCOL LIST</td><td>Outputs a list of transmission procedures.</td></tr> <tr> <td>ERROR LIST</td><td>Outputs a list of error.</td></tr> <tr> <td>ADDR BOOK(No.)</td><td>Outputs address book in order IDs were added</td></tr> <tr> <td>ADDR BOOK(Name)</td><td>Outputs address book in order of names</td></tr> <tr> <td>ONE-TOUCH LIST</td><td>Outputs a list of one-touch.</td></tr> <tr> <td>GROUP LIST</td><td>Outputs a list of group.</td></tr> </tbody> </table> <p>Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.</p>	Display	Description	SETTING LIST	Outputs a list of software switches, self telephone number, confidential boxes, ROM versions and other information.	ACTION LIST	Outputs a list of error history, transmission line details and other information.	SELF ST REPORT	Outputs a list of settings in maintenance mode (own-status report) regarding fax transmission only.	PROTOCOL LIST	Outputs a list of transmission procedures.	ERROR LIST	Outputs a list of error.	ADDR BOOK(No.)	Outputs address book in order IDs were added	ADDR BOOK(Name)	Outputs address book in order of names	ONE-TOUCH LIST	Outputs a list of one-touch.	GROUP LIST	Outputs a list of group.
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GROUP LIST	Outputs a list of group.																				

Maintenance item No.	Description																		
U695	<p>FAX function customize</p> <p>Description Sets fax batch transmission ON/OFF. Also changes the print size priority at the time of small size reception.</p> <p>Purpose To be executed as required.</p> <p>Setting</p> <ol style="list-style-type: none"> Select the setting using the cursor up/down keys. <table border="1"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>FAX BULK TX</td><td>fax batch transmission ON/OFF</td></tr> <tr> <td>A5 PT PRI CHG</td><td>Change of print size priority at the time of small size reception</td></tr> </tbody> </table> <p>Setting: [FAX BULK TX]</p> <ol style="list-style-type: none"> Select ON or OFF using the cursor left/right keys. <table border="1"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>ON</td><td>Fax batch transmission is enabled.</td></tr> <tr> <td>OFF</td><td>Fax batch transmission is disabled.</td></tr> </tbody> </table> <p>Initial setting: ON</p> <ol style="list-style-type: none"> Press the start key. The setting is set. <p>Setting: [A5 PT PRI CHG]</p> <ol style="list-style-type: none"> Select ON or OFF using the cursor left/right keys. <table border="1"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>ON</td><td>At the time of A5 size reception: A5→B5→A4</td></tr> <tr> <td>OFF</td><td>At the time of A5 size reception: A5→A4→B5</td></tr> </tbody> </table> <p>Initial setting: OFF</p> <ol style="list-style-type: none"> Press the start key. The setting is set. <p>Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.</p>	Display	Description	FAX BULK TX	fax batch transmission ON/OFF	A5 PT PRI CHG	Change of print size priority at the time of small size reception	Display	Description	ON	Fax batch transmission is enabled.	OFF	Fax batch transmission is disabled.	Display	Description	ON	At the time of A5 size reception: A5→B5→A4	OFF	At the time of A5 size reception: A5→A4→B5
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U699	<p>Setting the software switches</p> <p>Description Sets the software switches on the FAX PWB individually.</p> <p>Purpose To change the setting when a problem such as split output of received originals occurs. Since the communication performance is largely affected, normally this setting need not be changed.</p> <p>Method</p> <ol style="list-style-type: none">1. Press the start key.2. Press [SW No.].3. Enter the desired software switch number (3 digits) using the numeric keys and press the enter key.4. Use numeric keys 7 to 0 to switch each bit between 0 and 1.5. Press the start key to set the value. <p>Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.</p> <p>List of Software Switches of Which the Setting Can Be Changed</p> <p><System setting></p> <table><tr><th>No.</th><th>Bit</th><th>Item</th></tr><tr><td>39</td><td>21</td><td>Declaration of reception size in automatic paper source selection for fax</td></tr></table> <p><Communication control procedure></p> <table><tr><th>No.</th><th>Bit</th><th>Item</th></tr><tr><td rowspan="3">31</td><td>2</td><td>Automatic reception level adjustment (V. 17)</td></tr><tr><td>1</td><td>Automatic reception level adjustment (V. 29)</td></tr><tr><td>0</td><td>Automatic reception level adjustment (V. 27ter)</td></tr><tr><td rowspan="2">36</td><td>7654</td><td>Coding format in transmission</td></tr><tr><td>3210</td><td>Coding format in reception</td></tr><tr><td rowspan="6">37</td><td>5</td><td>33600 bps/V34</td></tr><tr><td>4</td><td>31200 bps/V34</td></tr><tr><td>3</td><td>28800 bps/V34</td></tr><tr><td>2</td><td>26400 bps/V34</td></tr><tr><td>1</td><td>24000 bps/V34</td></tr><tr><td>0</td><td>21600 bps/V34</td></tr><tr><td rowspan="8">38</td><td>7</td><td>19200 bps/V34</td></tr><tr><td>6</td><td>16800 bps/V34</td></tr><tr><td>5</td><td>14400 bps/V34</td></tr><tr><td>4</td><td>12000 bps/V34</td></tr><tr><td>3</td><td>9600 bps/V34</td></tr><tr><td>2</td><td>7200 bps/V34</td></tr><tr><td>1</td><td>4800 bps/V34</td></tr><tr><td>0</td><td>2400 bps/V34</td></tr><tr><td>41</td><td>3</td><td>FSK detection in V.8</td></tr><tr><td rowspan="2">42</td><td>2</td><td>FIF length in transmission of more than 4 times of DIS/DTC signal</td></tr><tr><td>0</td><td>Automatic reception level adjustment (V. 33)</td></tr><tr><td>43</td><td>76543210</td><td>Adjustment width in automatic reception level adjustment</td></tr></table>	No.	Bit	Item	39	21	Declaration of reception size in automatic paper source selection for fax	No.	Bit	Item	31	2	Automatic reception level adjustment (V. 17)	1	Automatic reception level adjustment (V. 29)	0	Automatic reception level adjustment (V. 27ter)	36	7654	Coding format in transmission	3210	Coding format in reception	37	5	33600 bps/V34	4	31200 bps/V34	3	28800 bps/V34	2	26400 bps/V34	1	24000 bps/V34	0	21600 bps/V34	38	7	19200 bps/V34	6	16800 bps/V34	5	14400 bps/V34	4	12000 bps/V34	3	9600 bps/V34	2	7200 bps/V34	1	4800 bps/V34	0	2400 bps/V34	41	3	FSK detection in V.8	42	2	FIF length in transmission of more than 4 times of DIS/DTC signal	0	Automatic reception level adjustment (V. 33)	43	76543210	Adjustment width in automatic reception level adjustment
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	<table><tr><th>No.</th><th>Bit</th><th>Item</th></tr><tr><td>53</td><td>76543210</td><td>T3 timeout setting</td></tr><tr><td>54</td><td>76543210</td><td>T4 timeout setting (automatic equipment)</td></tr><tr><td>55</td><td>76543210</td><td>T5 timeout setting</td></tr><tr><td>60</td><td>76543210</td><td>Time before transmission of CNG (1100 Hz) signal</td></tr><tr><td>63</td><td>76543210</td><td>T0 timeout setting (manual equipment)</td></tr><tr><td>64</td><td>7</td><td>Phase C timeout in ECM reception</td></tr><tr><td>66</td><td>76543210</td><td>Timeout 1 in countermeasures against echo</td></tr><tr><td>67</td><td>76543210</td><td>Timeout 2 in countermeasures against echo</td></tr><tr><td>68</td><td>76543210</td><td>Timeout for FSK detection start in V.8</td></tr></table>	No.	Bit	Item	53	76543210	T3 timeout setting	54	76543210	T4 timeout setting (automatic equipment)	55	76543210	T5 timeout setting	60	76543210	Time before transmission of CNG (1100 Hz) signal	63	76543210	T0 timeout setting (manual equipment)	64	7	Phase C timeout in ECM reception	66	76543210	Timeout 1 in countermeasures against echo	67	76543210	Timeout 2 in countermeasures against echo	68	76543210	Timeout for FSK detection start in V.8					
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Maintenance item No.	Description												
U901	<p>Checking copy counts by paper feed locations</p> <p>Description Displays or clears copy counts by paper feed locations.</p> <p>Purpose To check the time to replace consumable parts.</p> <p>Method</p> <ol style="list-style-type: none"> 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>Optional cassette 2</td></tr> <tr> <td>CASSETTE 3</td><td>Optional cassette 3</td></tr> <tr> <td>DUPLEX</td><td>Duplex section</td></tr> </tbody> </table> <p>When an optional paper feed device is not installed, the corresponding count is not displayed.</p> <p>Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.</p>	Display	Paper feed locations	MP TRAY	MP tray	CASSETTE 1	Cassette 1	CASSETTE 2	Optional cassette 2	CASSETTE 3	Optional cassette 3	DUPLEX	Duplex section
Display	Paper feed locations												
MP TRAY	MP tray												
CASSETTE 1	Cassette 1												
CASSETTE 2	Optional cassette 2												
CASSETTE 3	Optional cassette 3												
DUPLEX	Duplex section												
U903	<p>Checking/clearing the paper jam counts</p> <p>Description Displays or clears the jam counts by jam locations.</p> <p>Purpose To check the paper jam status. Also to clear the jam counts after replacing consumable parts.</p> <p>Method</p> <ol style="list-style-type: none"> Press the start key. Select the item using the cursor up/down keys. <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> <p>Method: Displays/clears the jam counts</p> <ol style="list-style-type: none"> Select [COUNT] and press the start key. The count for jam detection by type is displayed. Change the screen using the cursor up/down keys. To clear the counts for all, select [ALL CLEAR]. Press the start key. The count is cleared. The individual counter cannot be cleared. To return to the screen for selecting an item, press the stop key. <p>Method: Displays the total jam counts</p> <ol style="list-style-type: none"> Select [TOTAL COUNT] and press the start key. The total number of jam counts by type is displayed. Change the screen using the cursor up/down keys. The total number of jam count cannot be cleared. To return to the screen for selecting an item, press the stop key. <p>Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.</p>	Display	Description	COUNT	Displays/clears the jam counts	TOTAL COUNT	Displays the total jam counts						
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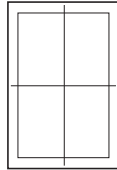
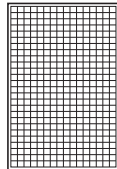
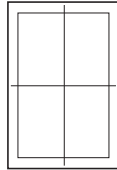
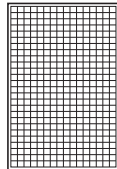
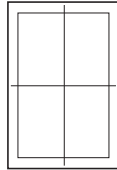
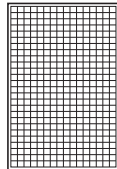
Maintenance item No.	Description						
U904	<p>Checking/clearing the service call counts</p> <p>Description Displays or clears the service call code counts by types.</p> <p>Purpose To check the service call code status by types. Also to clear the service call code counts after replacing consumable parts.</p> <p>Method</p> <ol style="list-style-type: none"> 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> <p>Method: Displays/clears the service call counts</p> <ol style="list-style-type: none"> 1. Select [COUNT] and press the start key. The count for service call detection by type is displayed. 2. Change the screen using the cursor up/down keys. 3. To clear the counts for all, select [ALL CLEAR]. 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. <p>Method: Displays the total service call counts</p> <ol style="list-style-type: none"> 1. Select [TOTAL COUNT] and press the start key. 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. <p>Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.</p>	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						
U905	<p>Checking/clearing counts by optional devices</p> <p>Description Displays or clears the counts of DP.</p> <p>Purpose To check the use of DP. Also to clear the counts after replacing consumable parts.</p> <p>Method</p> <ol style="list-style-type: none"> 1. Press the start key. <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> <p>Clearing</p> <ol style="list-style-type: none"> 1. Select the item to be cleared using the cursor up/down keys. To clear the counts for all, select [ALL CLEAR]. 2. Press the start key. The count is cleared. <p>Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.</p>	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						
ADP	No. of single-sided originals that has passed through the DP						
RADP	No. of double-sided originals that has passed through the DP						

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

Maintenance item No.	Description																														
U917	<p>Setting backup data reading/writing</p> <p>Description Retrieves the backup data to a USB memory from the machine; or writes the data from the USB memory to the machine.</p> <p>Purpose To store and write data when replacing the control PWB.</p> <p>Method</p> <ol style="list-style-type: none">1. Press the power key on the operation panel, and after verifying the power indicator has gone off, switch off the main power switch.2. Insert USB memory in USB memory slot.3. Turn the main power switch on. Wait for 10 seconds to allow the machine to recognize the USB memory.4. Enter the maintenance item.5. Press the start key.6. Select [Export] or [Import] using the cursor up/down keys and press the start key. <table><tr><th>Display</th><th>Description</th></tr><tr><td>IMPORT</td><td>Writing data from the USB memory to the machine</td></tr><tr><td>EXPORT</td><td>Retrieving from the machine to a USB memory</td></tr></table> <ol style="list-style-type: none">7. Select the item using the cursor up/down keys. <table><tr><th>Display</th><th>Description</th><th>Description</th></tr><tr><td>ADDRESS BOOK</td><td>Address book</td><td>-</td></tr><tr><td>JOB ACCNT.</td><td>Job accounting</td><td>-</td></tr><tr><td>ONE TOUCH</td><td>Information on one-touch</td><td>Address book</td></tr><tr><td>USER</td><td>User managements</td><td>Job accounting</td></tr><tr><td>PROGRAM</td><td>Program information</td><td>Job accountings and user managements</td></tr><tr><td>DOCUMENT BOX</td><td>Document box information</td><td>Job accountings and user managements</td></tr><tr><td>FAX FORWARD</td><td>FAX transfer information</td><td>Job accountings, user managements and document box information</td></tr></table> <p>*: Since data are dependent with each other, data other than those assigned are also retrieved or written in.</p> <ol style="list-style-type: none">8. Select [ON] using the cursor left/right keys.9. Press the start key. Starts reading or writing. The progress of selected item is displayed in %. When an error occurs, the operation is canceled and an error code is displayed.10. When normally completed, [FIN] is displayed.11. Turn the main power switch off and on after completing writing when selecting [IMPORT]. <p>Supplement The following restrictions apply to the data which were imported from 4in1 models (with FAX) to 3in1 models (without FAX). Personal address book: FAX-related data are not imported. Group address book: Group addresses including FAX addresses are not imported. Job accounting data: Initial values are added for FAX-related data. One-touch data: Groups assigned with FAX addresses or those including FAX are not imported. User management data: Initial values are added for out-going FAXes of authentication. Program data: Not imported. (The same applies when data are imported from 3in1 to 4in1 models.)</p> <p>Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.</p>	Display	Description	IMPORT	Writing data from the USB memory to the machine	EXPORT	Retrieving from the machine to a USB memory	Display	Description	Description	ADDRESS BOOK	Address book	-	JOB ACCNT.	Job accounting	-	ONE TOUCH	Information on one-touch	Address book	USER	User managements	Job accounting	PROGRAM	Program information	Job accountings and user managements	DOCUMENT BOX	Document box information	Job accountings and user managements	FAX FORWARD	FAX transfer information	Job accountings, user managements and document box information
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Display	Description	Description																													
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FAX FORWARD	FAX transfer information	Job accountings, user managements and document box information																													

Maintenance item No.	Description															
U920	<p>Checking the copy counts</p> <p>Description Checks the copy counts.</p> <p>Purpose To check the copy counts.</p> <p>Method Press the start key. The current counts of copy counter, printer counter and fax counter are displayed.</p> <p>Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.</p>															
U927	<p>Clearing the all copy counts and machine life counts (one time only)</p> <p>Description Resets all of the counts back to 0.</p> <p>Purpose To start the counters with value 0 when installing the machine.</p> <p>Supplement The total account counter and the machine life counter can be cleared only once if all count values are 1000 or less.</p> <p>Method 1. Press the start key. 2. Select [EXECUTE]. 3. Press the start key. All copy counts and machine life counts are cleared.</p> <p>Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.</p>															
U928	<p>Checking machine life counts</p> <p>Description Displays the machine life counts.</p> <p>Purpose To check the machine life counts.</p> <p>Method 1. Press the start key. The current machine life counts is displayed.</p> <p>Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.</p>															
U942	<p>Setting of deflection for feeding from DP</p> <p>Description Adjusts the deflection generated when the DP is used.</p> <p>Purpose Use this mode if an original non-feed jam, oblique feed or wrinkling of original occurs when the DP is used.</p> <p>Setting 1. Press the start key. 2. Select the item to be adjusted using the cursor up/down keys.</p> <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>REGIST TOP</td><td>Deflection of single-sided original</td><td>-31 to 31</td><td>0</td><td>0.098 mm</td></tr><tr><td>REGIST BACK</td><td>Deflection of double-sided original</td><td>-31 to 31</td><td>0</td><td>0.098 mm</td></tr></table> <p>3. Press the system menu/counter key. 4. Place an original on the DP and press the start key to make a test copy. 5. Press the system menu/counter key. 6. Change the setting value using the cursor left/right keys 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.</p> <p>Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.</p>	Display	Description	Setting range	Initial setting	Change in value per step	REGIST TOP	Deflection of single-sided original	-31 to 31	0	0.098 mm	REGIST BACK	Deflection of double-sided original	-31 to 31	0	0.098 mm
Display	Description	Setting range	Initial setting	Change in value per step												
REGIST TOP	Deflection of single-sided original	-31 to 31	0	0.098 mm												
REGIST BACK	Deflection of double-sided original	-31 to 31	0	0.098 mm												

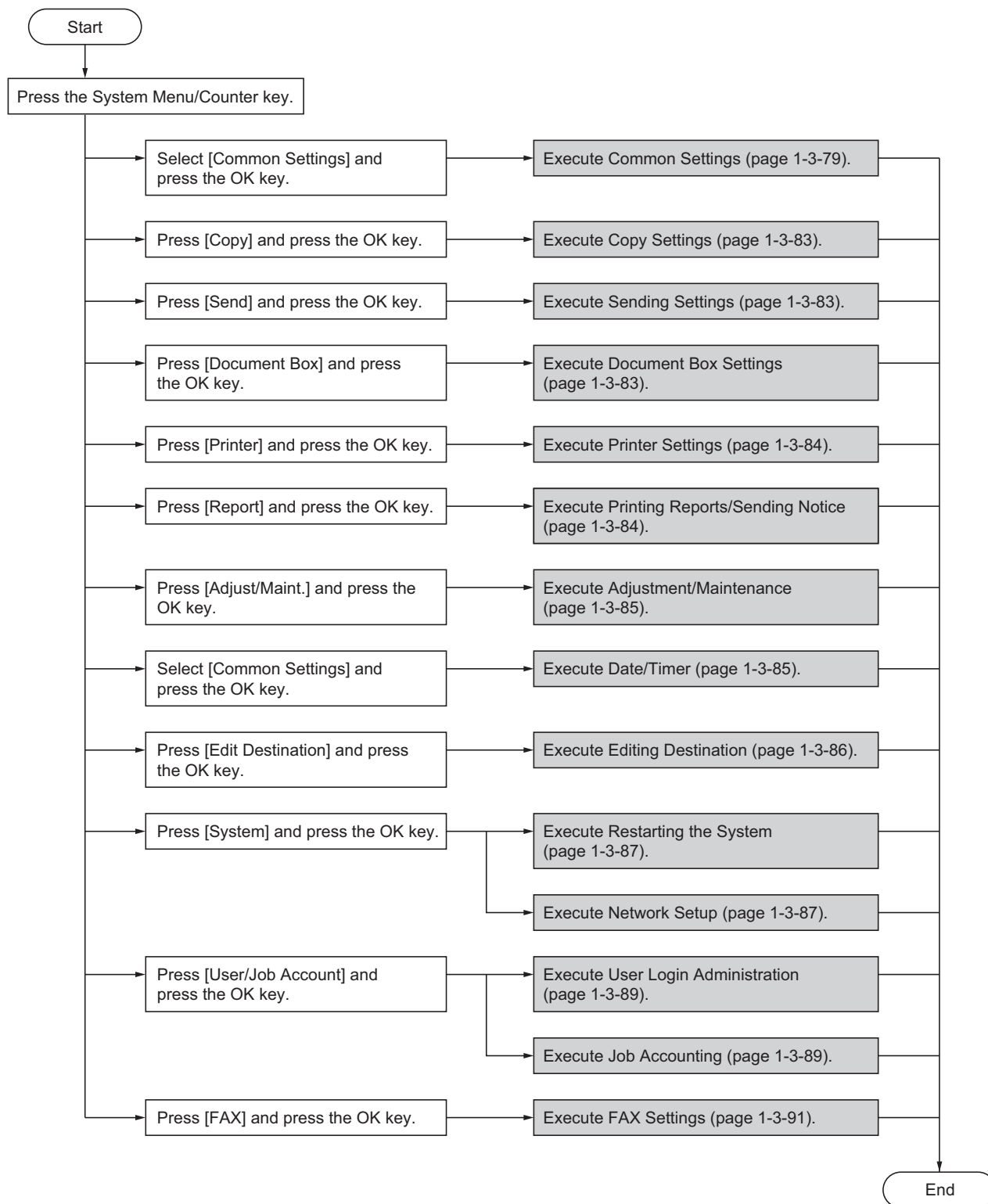
Maintenance item No.	Description								
U969	<p>Checking of toner area code</p> <p>Description Displays the toner area code.</p> <p>Purpose To check the toner area code.</p> <p>Method 1. Press the start key. The toner area code is displayed.</p> <p>Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.</p>								
U977	<p>Data capture mode</p> <p>Description Store the print data sent to the machine into USB memory.</p> <p>Purpose In case to occur the error at printing, check the print data sent to the machine.</p> <p>Method 1. Insert USB memory in USB memory slot. 2. Turn the main power switch on. 3. Enter the maintenance item. 4. Press the start key. 5. Select [EXECUTE]. 6. Press the start key. 7. Send the print data to the machine. Once the print data is stored into USB memory, OK will be displayed.</p> <p>Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.</p>								
U991	<p>Checking the scanner count</p> <p>Description Displays the scanner operation count.</p> <p>Purpose To check the status of use of the scanner.</p> <p>Method 1. Press the start key.</p> <table border="1"> <thead> <tr> <th>Display</th><th>Description</th></tr> </thead> <tbody> <tr> <td>Copy Scn</td><td>Scanner operation count for copying</td></tr> <tr> <td>Fax Scn</td><td>Scanner operation count for fax</td></tr> <tr> <td>Other Scn</td><td>Scanner operation count except for copying</td></tr> </tbody> </table> <p>Completion Press the stop key. The screen for selecting a maintenance No. item is displayed.</p>	Display	Description	Copy Scn	Scanner operation count for copying	Fax Scn	Scanner operation count for fax	Other Scn	Scanner operation count except for copying
Display	Description								
Copy Scn	Scanner operation count for copying								
Fax Scn	Scanner operation count for fax								
Other Scn	Scanner operation count except for copying								

Maintenance item No.	Description									
U993	<p>Outputting a VTC-PG pattern</p> <p>Description Selects and outputs a VTC-PG pattern created in the machine.</p> <p>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.</p> <p>Method</p> <ol style="list-style-type: none">1. Press the start key.2. Select the VTC-PG pattern to be output using the cursor up/down keys. <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></table> <ol style="list-style-type: none">3. Press the system menu/counter 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/counter key. <p>Completion Press the stop key. The screen for selecting a maintenance item No. is displayed.</p>	Display	PG pattern to be output	Purpose	PG1		Leading edge registration adjustment Center line adjustment Margin adjustment	PG2		Lateral squareness adjustment Magnification adjustment
Display	PG pattern to be output	Purpose								
PG1		Leading edge registration adjustment Center line adjustment Margin adjustment								
PG2		Lateral squareness adjustment Magnification adjustment								

1-3-2 Management mode

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

(1) Using the management mode



(2) Common Settings

Switching the Language for Display [Language]

1. Select [Language] using the cursor up/down keys.
2. Press the OK key.
3. Select the language you want to use.
4. Press the OK key.

Default Screen

1. Select [Default Screen] using the cursor up/down keys.
2. Press the OK key.
3. Select the screen to be displayed as the default screen.
4. Press the OK key.

Sound

1. Select [Sound] using the cursor up/down keys.
2. Press the OK key.
3. Select [Buzzer] using the cursor up/down keys.
4. Press the OK key.
5. Select [Key Confirmation], [Job Finish], [Ready] or [Warning] using the cursor up/down keys.
6. Select [On] or [Off]
7. Press the OK key.

Display Bright.

1. Select [Display Bright.] using the cursor up/down keys.
2. Press the OK key.
3. Select the display brightness.
[Darker -3] to [Lighter +3]
4. Press the OK key.

Custom Original Size Setup

1. Select [Orig./Paper Set.] using the cursor up/down keys.
2. Press the OK key.
3. Select [Custom Orig.Size] using the cursor up/down keys.
4. Press the OK key.
5. Enter the paper length (Y) using the numeric keys.
6. Press the OK key.
7. Enter the paper width (X) using the numeric keys.
8. Press the OK key.

Default Original Size Setup

1. Select [Orig./Paper Set.] using the cursor up/down keys.
2. Press the OK key.
3. Select [Def. Orig. Size] using the cursor up/down keys.
4. Press the OK key.
5. Select the paper size to be used as the default value.
6. Press the OK key.

Adding a Custom Size and Media Type for Paper to Print

1. Select [Orig./Paper Set.] using the cursor up/down keys.
2. Press the OK key.
3. Select [Custom PaperSize] using the cursor up/down keys.
4. Press the OK key.
5. Select the paper source and press the OK key.
6. Enter the paper length (Y) using the numeric keys.
7. Press the OK key.
8. Enter the paper width (X) using the numeric keys.
9. Press the OK key.
10. Select the media type for which you want to set the custom size.
11. Press the OK key.

Paper Size and Media Type Setup for Cassettes

1. Select [Orig./Paper Set.] using the cursor up/down keys.
2. Press the OK key.
3. Select [Cassette 1 (to 3) Set.] using the cursor up/down keys.
4. Press the OK key.
5. Select [Cassette 1 (to 3) Size] using the cursor up/down keys.
6. Select the paper size.
7. Press the OK key.
8. Select [Cassette 1 (to 3) Type] using the cursor up/down keys.
9. Select the paper type.
10. Press the OK key.

Paper Size and Media Type Setup for Multi Purpose Tray

1. Select [Orig./Paper Set.] using the cursor up/down keys.
2. Press the OK key.
3. Select [MP Tray Set.] using the cursor up/down keys.
4. Press the OK key.
5. Select [MP Tray Size] using the cursor up/down keys.
6. Select the paper size.
If you select [Others], you can select from additional paper sizes.
If you select [Size Entry], you can register a custom size.
7. Press the OK key.
8. Select [MP Tray Type] and press the OK key.
9. Select the paper type.
10. Press the OK key.

Paper Weight

1. Select [Orig./Paper Set.] using the cursor up/down keys.
2. Press the OK key.
3. Select [MP Tray Set.] using the cursor up/down keys.
4. Press the OK key.
5. Select the paper type and press the OK key.
6. Select [Paper Weight] and press the OK key.
7. Select the weight of paper.
8. Press the OK key.
9. Select [Print Density] and press the OK key.
10. Select the print density.
11. Press the OK key.

Default Paper Source

1. Select [Orig./Paper Set.] using the cursor up/down keys.
2. Press the OK key.
3. Select [Def. PaperSource] using the cursor up/down keys.
4. Press the OK key.
5. Select the paper source to be used preferentially.
6. Press the OK key.

Media for Auto Selection

1. Select [Orig./Paper Set.] using the cursor up/down keys.
2. Press the OK key.
3. Select [Media for Auto] using the cursor up/down keys.
4. Press the OK key.
5. Select [All Media Type] or the paper type to be used for paper selection.
6. Press the OK key.

Special Paper Action

1. Select [Orig./Paper Set.] using the cursor up/down keys.
2. Press the OK key.
3. Select [SpacialPaper Act.] using the cursor up/down keys.
4. Press the OK key.
5. Select [Adj. PrintDirect] or [Speed Priority].
6. Press the OK key.

Preset Limit

1. Select [Preset Limit] using the cursor up/down keys.
2. Press the OK key.
3. Enter the number of copies.
4. Press the OK key.

Switching Unit of Measurement

1. Select [Measurement] using the cursor up/down keys.
2. Press the OK key.
3. Select [inch] or [mm].
4. Press the OK key.

Error Handling

1. Select [Error Handling] using the cursor up/down keys.
2. Press the OK key.
3. Select [DuplexPagerError] using the cursor up/down keys.
4. Press the OK key.
5. Select the method to handle if duplex is disabled.
6. Press the OK key.
7. Select [PagerMismatchErr] using the cursor up/down keys.
8. Press the OK key.
9. Select the method to handle paper mismatch.
10. Press the OK key.

Orig.Orientation

1. Select [Function Default] using the cursor up/down keys.
2. Press the OK key.
3. Select [Orig.Orientation] using the cursor up/down keys.
4. Press the OK key.
5. Select [Top Edge Top] or [Top Edge Left].
6. Press the OK key.

Continuous Scan

1. Select [Function Default] using the cursor up/down keys.
2. Press the OK key.
3. Select [Continuous Scan] using the cursor up/down keys.
4. Press the OK key.
5. Select [Off] or [On].
6. Press the OK key.

Original Image

1. Select [Function Default] using the cursor up/down keys.
2. Press the OK key.
3. Select [Original Image] using the cursor up/down keys.
4. Press the OK key.
5. Select [Text+Photo], [Photo], [Text] or [for OCR].
6. Press the OK key.

Scan Resolution

1. Select [Function Default] using the cursor up/down keys.
2. Press the OK key.
3. Select [Scan Resolution] using the cursor up/down keys.
4. Press the OK key.
5. Select the default resolution.
6. Press the OK key.

Color Selection

1. Select [Function Default] using the cursor up/down keys.
2. Press the OK key.
3. Select [Color Selection] using the cursor up/down keys.
4. Press the OK key.
5. Select [Full Color], [Grayscale] or [Black & White].
6. Press the OK key.

File Format

1. Select [Function Default] using the cursor up/down keys.
2. Press the OK key.
3. Select [File Format] using the cursor up/down keys.
4. Press the OK key.
5. Select [PDF], [TIFF], [XPS] or [JPEG].
6. Press the OK key.

Density

1. Select [Function Default] using the cursor up/down keys.
2. Press the OK key.
3. Select [Density] using the cursor up/down keys.
4. Press the OK key.
5. Select [Auto] or [Manual].
6. Press the OK key.

Zoom

1. Select [Function Default] using the cursor up/down keys.
2. Press the OK key.
3. Select [Zoom] using the cursor up/down keys.
4. Press the OK key.
5. Select [100%] or [Auto].
6. Press the OK key.

File Name Entry

1. Select [Function Default] using the cursor up/down keys.
2. Press the OK key.
3. Select [File Name Entry] using the cursor up/down keys.
4. Press the OK key.
5. Select [None], [Date], [JobNo.], [JobNo. + Date] or [Date + JobNo.].
6. Press the OK key.

Subject/Body

1. Select [Function Default] using the cursor up/down keys.
2. Press the OK key.
3. Select [Subject/Body] using the cursor up/down keys.
4. Press the OK key.
5. Enter the e-mail subject (up to 60 characters).
6. Press the OK key.
7. Enter email body text (up to 500 characters).
8. Press the OK key.

Collate

1. Select [Function Default] using the cursor up/down keys.
2. Press the OK key.
3. Select [Collate] using the cursor up/down keys.
4. Press the OK key.
5. Select [Off] or [On].
6. Press the OK key.

EcoPrint

1. Select [Function Default] using the cursor up/down keys.
2. Press the OK key.
3. Select [EcoPrint] using the cursor up/down keys.
4. Press the OK key.
5. Select [Off] or [On].
6. Press the OK key.

2 in 1 Layout

1. Select [Function Default] using the cursor up/down keys.
2. Press the OK key.
3. Select [Detail Setting] using the cursor up/down keys.
4. Press the OK key.
5. Select [2 in 1 Layout] using the cursor up/down keys.
6. Press the OK key.
7. Select [L to R T to B] or [R to L].
8. Press the OK key.

4 in 1 Layout

1. Select [Function Default] using the cursor up/down keys.
2. Press the OK key.
3. Select [Detail Setting] using the cursor up/down keys.
4. Press the OK key.
5. Select [4 in 1 Layout] using the cursor up/down keys.
6. Press the OK key.
7. Select [Right then Down], [Down then Right], [Left then Down] or [Down then Left].
8. Press the OK key.

Border Line

1. Select [Function Default] using the cursor up/down keys.
2. Press the OK key.
3. Select [Detail Setting] using the cursor up/down keys.
4. Press the OK key.
5. Select [Border Line] using the cursor up/down keys.
6. Press the OK key.
7. Select [None], [Solid Line], [Dotted Line] or [Positioning Mark].
8. Press the OK key.

Orig. Binding

1. Select [Function Default] using the cursor up/down keys.
2. Press the OK key.
3. Select [Detail Setting] using the cursor up/down keys.
4. Press the OK key.
5. Select [Orig. Binding] using the cursor up/down keys.
6. Press the OK key.
7. Select [Left/Right] or [Top].
8. Press the OK key.

Finish Binding

1. Select [Function Default] using the cursor up/down keys.
2. Press the OK key.
3. Select [Detail Setting] using the cursor up/down keys.
4. Press the OK key.
5. Select [Finish Binding] using the cursor up/down keys.
6. Press the OK key.
7. Select [Left/Right] or [Top].
8. Press the OK key.

Image Quality

1. Select [Function Default] using the cursor up/down keys.
2. Press the OK key.
3. Select [Detail Setting] using the cursor up/down keys.
4. Press the OK key.
5. Select [Image Quality] using the cursor up/down keys.
6. Press the OK key.
7. Select the image quality.
[1 Low(High Comp)] to [5 High(Low Comp)]
8. Press the OK key.

Color TIFF Comp.

1. Select [Function Default] using the cursor up/down keys.
2. Press the OK key.
3. Select [Detail Setting] using the cursor up/down keys.
4. Press the OK key.
5. Select [Color TIFF Comp.] using the cursor up/down keys.
6. Press the OK key.
7. Select [TIFF V6] or [TTN2].
8. Press the OK key.

XPS FitTo Page

1. Select [Function Default] using the cursor up/down keys.
2. Press the OK key.
3. Select [Detail Setting] using the cursor up/down keys.
4. Press the OK key.
5. Select [XPS FitTo Page] using the cursor up/down keys.
6. Press the OK key.
7. Select [On] or [Off].
8. Press the OK key.

Margin Default

1. Press cursor down key, [Next] of Function Defaults, cursor down key and then [Change] of Margin Default.
2. Use the [+] or [-] to enter the margin widths for Left/Right and Top/Bottom(-0.75 - +0.75).
You can use the number keypad to enter the number directly.
3. Press [OK].

Login Operation

1. Select [Login Operation] using the cursor up/down keys.
2. Press the OK key.
3. Select [Use Numeric Key] or [Select Character].
4. Press the OK key.

(3) Copy Settings

Photo Processing

1. Select [Photo Processing] using the cursor up/down keys.
2. Press the OK key.
3. Select [Dithering(Normal)] or [Dithering(Rough)].
4. Press the OK key.

Paper Selection

1. Select [Paper Selection] using the cursor up/down keys.
2. Press the OK key.
3. Select [Auto] or [Def. Paper Source].
4. Press the OK key.

Auto Paper Selection

1. Select [AutoPaperSelect.] using the cursor up/down keys.
2. Press the OK key.
3. Select [MostSuitableSize] or [Same as OrigSize].
4. Press the OK key.

Auto % Priority

1. Select [Auto % Priority.] using the cursor up/down keys.
2. Press the OK key.
3. Select [Off] or [On].
4. Press the OK key.

Select Key Set

1. Select [Select Key Set.] using the cursor up/down keys.
2. Press the OK key.
3. Select [Left] or [Right].
4. Press the OK key.
5. select the function you want to register to the flexible key.
6. Press the OK key.

(4) Sending Settings

Select Key Set

1. Select [Select Key Set.] using the cursor up/down keys.
2. Press the OK key.
3. Select [Left] or [Right].
4. Press the OK key.
5. Select the function you want to register to the flexible key.
6. Press the OK key.

DestinationCheck

1. Select [DestinationCheck] using the cursor up/down keys.
2. Press the OK key.
3. Select [Dest. Confirm] or [Check New Dest.].
4. Press the OK key.
5. Select [Off] or [On].
6. Press the OK key.

(5) Document Box Settings

Select Key Set

1. Select [Select Key Set.] using the cursor up/down keys.
2. Press the OK key.
3. Select [Print] or [Store].
4. Press the OK key.
5. Select [Left] or [Right].
6. Press the OK key.
7. Select the function you want to register to the flexible key.
8. Press the OK key.

(6) Printer Settings

Emuration Set

1. Select [Emuration Set.] using the cursor up/down keys.
2. Press the OK key.
3. Select the printer you want to emulate.
4. Press the OK key.

When KPDL Is Selected for Emulation

1. Select [Emuration Set.] using the cursor up/down keys.
2. Press the OK key.
3. Select [KPDL] and press the OK key.
4. Select [Off] or [On].
5. Press the OK key.

When KPDL(Auto) Is Selected for Emulation

1. Select [Emuration Set.] using the cursor up/down keys.
2. Press the OK key.
3. Select [KPDL(Auto)] and press the OK key.
4. Select the printer for alternative emulation.
5. Press the OK key.
6. Select [Off] or [On].
7. Press the OK key.

EcoPrint

1. Select [EcoPrint] using the cursor up/down keys.
2. Press the OK key.
3. Select [Off] or [On].
4. Press the OK key.

Override A4/LTR

1. Select [Override A4/LTR] using the cursor up/down keys.
2. Press the OK key.
3. Select [Off] or [On].
4. Press the OK key.

Duplex

1. Select [Duplex] using the cursor up/down keys.
2. Press the OK key.
3. Select [Off], [Bind Long Edge] or [Bind Short Edge].
4. Press the OK key.

Copies

1. Select [Copies] using the cursor up/down keys.
2. Press the OK key.
3. Set the default number of copies.
4. Press the OK key.

Orientation

1. Select [Orientation] using the cursor up/down keys.
2. Press the OK key.
3. Select [Portrait] or [Landscape].
4. Press the OK key.

FormFeed Timeout

1. Select [FormFeed Timeout] using the cursor up/down keys.
2. Press the OK key.
3. Set the Form Feed Timeout.
4. Press the OK key.

LF Action

1. Select [LF Action] using the cursor up/down keys.
2. Press the OK key.
3. Select [LF Only], [LF and CR] or [Ignore LF].
4. Press the OK key.

CR Action

1. Select [CR Action] using the cursor up/down keys.
2. Press the OK key.
3. Select [CR Only], [LF and CR] or [Ignore CR].
4. Press the OK key.

Paper Feed Mode

1. Select [Paper Feed Mode] using the cursor up/down keys.
2. Press the OK key.
3. Select [Auto] or [Fixed].
4. Press the OK key.

(7) Printing Reports/Sending Notice

Printing Reports

1. Select [Report Print] using the cursor up/down keys.
2. Press the OK key.
3. Select [Menu Map], [Status Page] or [Font List].
4. Press the OK key.
5. Select [Yes].
The selected report is output.

Send Result Report

1. Select [Result Rpt Set.] using the cursor up/down keys.
2. Press the OK key.
3. Select [Send Result] using the cursor up/down keys.
4. Press the OK key.
5. Select [E-mail/Folder] using the cursor up/down keys.
6. Select [Off], [On] or [Error Only].
7. Press the OK key.

(8) Adjustment/Maintenance**Copy Denst. Adj.**

1. Select [Copy Denst. Adj.] using the cursor up/down keys.
2. Press the OK key.
3. Select [Auto] or [Manual].
4. Press the OK key.
5. Adjusting the density.
[-3 Lighter] to [+3 Darker]
6. Press the OK key.

Send/Box Density

1. Select [Send/Box Density] using the cursor up/down keys.
2. Press the OK key.
3. Select [Auto] or [Manual].
4. Press the OK key.
5. Adjusting the density.
[-3 Lighter] to [+3 Darker]
6. Press the OK key.

Correct. Bk Line

1. Select [Correct. Bk Line] using the cursor up/down keys.
2. Press the OK key.
3. Select [Off], [On(Low)] or [On(High)].
4. Press the OK key.

New Developer

1. Select [Service Setting] using the cursor up/down keys.
2. Press the OK key.
3. Select [New Developer] using the cursor up/down keys.
4. Press the OK key.
5. Select [Yes].

(9) Date/Timer**Date/Time**

1. Select [Date Setting] using the cursor up/down keys.
2. Press the OK key.
3. Select [Date/Time] using the cursor up/down keys.
4. Press the OK key.
5. Set the date and press the OK key.
6. Set the time and press the OK key.

Date Format

1. Select [Date Setting] using the cursor up/down keys.
2. Press the OK key.
3. Select [Date Format] using the cursor up/down keys.
4. Press the OK key.
5. Select [Month/Day/Year], [Day/Month/Year] or [Year/Month/Day].
6. Press the OK key.

Time Zone

1. Select [Date Setting] using the cursor up/down keys.
2. Press the OK key.
3. Select [Time Zone] using the cursor up/down keys.
4. Press the OK key.
5. Select your location.
6. Press the OK key.

Summer Time

1. Select [Date Setting] using the cursor up/down keys.
2. Press the OK key.
3. Select [Summer Time] using the cursor up/down keys.
4. Press the OK key.
5. Select [Off] or [On].
6. Press the OK key.

Auto Error Clear ON/OFF

1. Select [Timer Setting] using the cursor up/down keys.
2. Press the OK key.
3. Select [Auto Err. Clear] using the cursor up/down keys.
4. Press the OK key.
5. Select [Off] or [On].
6. Press the OK key.

Error Clear Timer

1. Select [Timer Setting] using the cursor up/down keys.
2. Press the OK key.
3. Select [Err. Clear Timer] using the cursor up/down keys.
4. Press the OK key.
5. Set the Error Clear Timer.
6. Press the OK key.

Auto Sleep

1. Select [Timer Setting] using the cursor up/down keys.
2. Press the OK key.
3. Select [Auto Sleep] using the cursor up/down keys.
4. Press the OK key.
5. Select [Off] or [On].
6. Press the OK key.

Sleep Timer

1. Select [Timer Setting] using the cursor up/down keys.
2. Press the OK key.
3. Select [Sleep Timer] using the cursor up/down keys.
4. Press the OK key.
5. Set the Sleep Timer.
6. Press the OK key.

Auto Panel Reset ON/OFF

1. Select [Timer Setting] using the cursor up/down keys.
2. Press the OK key.
3. Select [Auto Panel Reset] using the cursor up/down keys.
4. Press the OK key.
5. Select [Off] or [On].
6. Press the OK key.

Panel Reset Timer

1. Select [Timer Setting] using the cursor up/down keys.
2. Press the OK key.
3. Select [Panel Reset Timer] using the cursor up/down keys.
4. Press the OK key.
5. Set the Panel Reset Timer.
6. Press the OK key.

Low Power Timer

1. Select [Timer Setting] using the cursor up/down keys.
2. Press the OK key.
3. Select [Low Power Timer] using the cursor up/down keys.
4. Press the OK key.
5. Set the Low Power Timer.
6. Press the OK key.

Unusable Time

1. Select [Timer Setting] using the cursor up/down keys.
2. Press the OK key.
3. Select [Unusable Time] using the cursor up/down keys.
4. Press the OK key.
5. Select [On] and press the OK key.
6. Set the Start Time and press the OK key.
7. Set the End Time and press the OK key.
8. Set the unlock code and press the OK key.

(10) Editing Destination (Address Book/Adding One-Touch Keys)**Adding an Individual Destination**

1. Select [Address Book] using the cursor up/down keys.
2. Press the OK key.
3. Select [Menu].
4. Select [Add Address] using the cursor up/down keys.
5. Press the OK key.
6. Select [Contact] and press the OK key.
7. Enter each item and press the OK key.

Adding a Group

1. Select [Address Book] using the cursor up/down keys.
2. Press the OK key.
3. Select [Menu].
4. Select [Add Address] using the cursor up/down keys.
5. Press the OK key.
6. Select [Group] and press the OK key.
7. Enter each item and press the OK key.

Editing a Destination

1. Select [Address Book] using the cursor up/down keys.
2. Press the OK key.
3. Select the destination you want to edit.
4. Select [Menu].
5. Select [Detail/Edit] using the cursor up/down keys.
6. Press the OK key.
7. Edit items as necessary.
8. Select [Yes].

(11) Restarting the System

Restarting the System

1. Select [Restart] using the cursor up/down keys.
2. Press the OK key.
3. Select [Yes].
The machine is restarted.

(12) Network Setup

LAN Interface Setup

1. Select [Network Setting] using the cursor up/down keys.
2. Press the OK key.
3. Select [LAN Interface] using the cursor up/down keys.
4. Press the OK key.
5. Select the desired LAN interface.
6. Press the OK key.

TCP/IP (IPv4) Setup

1. Select [Network Setting] using the cursor up/down keys.
2. Press the OK key.
3. Select [TCP/IP Settings] using the cursor up/down keys.
4. Press the OK key.
5. Select [TCP/IP] using the cursor up/down keys.
6. Press the OK key.
7. Select [On] and press the OK key.
8. Select [IPv4 Setting] using the cursor up/down keys.
9. Press the OK key.
10. Select [DHCP] using the cursor up/down keys.
11. Press the OK key.
12. Select [Off] and press the OK key.
13. Select [Bonjour] using the cursor up/down keys.
14. Press the OK key.
15. Select [Off] and press the OK key.
16. Select [IP Address] using the cursor up/down keys.
17. Press the OK key.
18. Enter the IP address and press the OK key.
19. Select [Subnet Mask] using the cursor up/down keys.
20. Press the OK key.
21. Enter the Subnet Mask and press the OK key.
22. Select [Default Gateway] using the cursor up/down keys.
23. Press the OK key.
24. Enter the Default Gateway and press the OK key.

TCP/IP (IPv6) Setup

1. Select [Network Setting] using the cursor up/down keys.
2. Press the OK key.
3. Select [TCP/IP Settings] using the cursor up/down keys.
4. Press the OK key.
5. Select [IPv6 Setting] using the cursor up/down keys.
6. Press the OK key.
7. Select [On] or [Off].
8. Press the OK key.

NetWare Setup

1. Select [Network Setting] using the cursor up/down keys.
2. Press the OK key.
3. Select [NetWare] using the cursor up/down keys.
4. Press the OK key.
5. Select [On] or [Off].
6. Press the OK key.
7. Select the desired frame type.
8. Press the OK key.

AppleTalk Setup

1. Select [Network Setting] using the cursor up/down keys.
2. Press the OK key.
3. Select [AppleTalk] using the cursor up/down keys.
4. Press the OK key.
5. Select [On] or [Off].
6. Press the OK key.

WSD Scan Setup

1. Select [Network Setting] using the cursor up/down keys.
2. Press the OK key.
3. Select [WSD-SCAN] using the cursor up/down keys.
4. Press the OK key.
5. Select [On] or [Off].
6. Press the OK key.

WSD Print Setup

1. Select [Network Setting] using the cursor up/down keys.
2. Press the OK key.
3. Select [WSD-PRINT] using the cursor up/down keys.
4. Press the OK key.
5. Select [On] or [Off].
6. Press the OK key.

Protocol Detail

1. Select [Network Setting] using the cursor up/down keys.
2. Press the OK key.
3. Select [TCP/IP Settings] using the cursor up/down keys.
4. Press the OK key.
5. Select [Protocol Detail] using the cursor up/down keys.
6. Press the OK key.
7. Select the item for which you want to make settings.
8. Select [On] or [Off].
9. Press the OK key.

Network Security**SSL Setting**

1. Select [Network Setting] using the cursor up/down keys.
2. Press the OK key.
3. Select [Secure Protocol] using the cursor up/down keys.
4. Press the OK key.
5. Select [SSL] using the cursor up/down keys.
6. Press the OK key.
7. Select [On] or [Off].
8. Press the OK key.

IPP Security

1. Select [Network Setting] using the cursor up/down keys.
2. Press the OK key.
3. Select [Secure Protocol] using the cursor up/down keys.
4. Press the OK key.
5. Select [IPP Security] using the cursor up/down keys.
6. Press the OK key.
7. Select [IPP/IPP over SSL] or [IPPOverSSL only].
8. Press the OK key.

HTTP Security

1. Select [Network Setting] using the cursor up/down keys.
2. Press the OK key.
3. Select [Secure Protocol] using the cursor up/down keys.
4. Press the OK key.
5. Select [HTTP Security] using the cursor up/down keys.
6. Press the OK key.
7. Select [HTTP/HTTPS] or [HTTPS only].
8. Press the OK key.

LDAP Security

1. Select [Network Setting] using the cursor up/down keys.
2. Press the OK key.
3. Select [Secure Protocol] using the cursor up/down keys.
4. Press the OK key.
5. Select [LDAP Security] using the cursor up/down keys.
6. Press the OK key.
7. Select [Off], [LDAPv3/TLS] or [LDAP over SSL].
8. Press the OK key.

LDAP Security

1. Select [Network Setting] using the cursor up/down keys.
2. Press the OK key.
3. Select [IPSec] using the cursor up/down keys.
4. Press the OK key.
5. Select [On] or [Off].
6. Press the OK key.

Interface Block Setting**USB Host (USB memory slot setting)**

1. Select [I/F Block Set.] using the cursor up/down keys.
2. Press the OK key.
3. Select [USB Host] using the cursor up/down keys.
4. Press the OK key.
5. Select [Unblock] or [Block].
6. Press the OK key.

USB Device (USB interface setting)

1. Select [I/F Block Set.] using the cursor up/down keys.
2. Press the OK key.
3. Select [USB Device] using the cursor up/down keys.
4. Press the OK key.
5. Select [Unblock] or [Block].
6. Press the OK key.

Optional interface (Optional interface card setting)

1. Select [I/F Block Set.] using the cursor up/down keys.
2. Press the OK key.
3. Select [Option I/F] using the cursor up/down keys.
4. Press the OK key.
5. Select [Unblock] or [Block].
6. Press the OK key.

(13) User Login Administration

Enabling/Disabling User Login Administration

1. Select [User Login Set.] using the cursor up/down keys.
2. Press the OK key.
3. Select [User Login] using the cursor up/down keys.
4. Press the OK key.
5. Select [Local Authentic.] or [Netwk Authentic.].
Select [Off] to disable user login administration.
If you select [Netwk Authentic.], enter the host name (64 characters or less) and domain name (256 characters or less) for the Authentication Server. Select [NTLM] or [Kerberos] as the server type.
6. Press the OK key.

Adding a User

1. Select [User Login Set.] using the cursor up/down keys.
2. Press the OK key.
3. Select [Local User List] using the cursor up/down keys.
4. Press the OK key.
5. Select [Menu].
6. Select [Add User] and press the OK key.
7. Enter the user name and press the OK key.
8. Enter the login user name and press the OK key.
9. Select [Exit] and press the OK key.
10. Select the added user and press the OK key.
11. Select [Login Password:].
12. Select [Edit] and enter the login password.
13. Press the OK key.
14. Enter the same login password to confirm and press the OK key.
15. Select [E-mailAddress:].
16. Select [Edit] and enter the e-mail address.
17. Press the OK key.
18. Select [Access Level:].
19. Select [Change] and select the user access privilege.
20. Press the OK key.
21. Select [Account Name:].
22. Select [Change] and select the account.
23. Press the OK key.
24. Press the OK key.

Changing User Properties

1. Select [User Login Set.] using the cursor up/down keys.
2. Press the OK key.
3. Select [Local User List] using the cursor up/down keys.
4. Press the OK key.
5. Select the user whose information you want to change.
The procedure differs depending on the details to be edited.

Changing user information

1. Select [Edit].
2. In the same fashion as registering a new user, change information.
3. Press the OK key.
4. Select [Yes]. The user information is changed.

Deleting a user

1. Select [Menu].
2. Select [Delete] and press the OK key.
3. Select [Yes]. The selected user will be deleted.

Unknown login user name Job

1. Select [User Login Set.] using the cursor up/down keys.
2. Press the OK key.
3. Select [Unknown ID Job] using the cursor up/down keys.
4. Press the OK key.
5. Select [Reject] or [Permit].
6. Press the OK key.

(14) Job accounting

Enabling/Disabling Job Accounting

1. Select [Job Account. Set.] using the cursor up/down keys.
2. Press the OK key.
3. Select [Job Accountin] using the cursor up/down keys.
4. Press the OK key.
5. Select [On] or [Off].
6. Press the OK key.

Adding an Account

1. Select [Job Account. Set.] using the cursor up/down keys.
2. Press the OK key.
3. Select [Account. List] using the cursor up/down keys.
4. Press the OK key.
5. Select [Menu].
6. Select [Add Account], and press the OK key.
7. Enter the account name and press the OK key.
8. Enter the account code and press the OK key.
9. Select [Exit] and press the OK key.

Managing Accounts

1. Select [Job Account. Set.] using the cursor up/down keys.
2. Press the OK key.
3. Select [Account. List] using the cursor up/down keys.
4. Press the OK key.
5. Select an account to change or delete.

Changing account information

1. Select [Edit].
2. Change account information and restriction of use.
3. Press the OK key.
4. Select [Yes]. The account information is changed.

Deleting an account

1. Select [Menu].
2. Select [Delete] and press the OK key.
3. Select [Yes]. The account is deleted.

Managing the Copier/Printer Counts

1. Select [Job Account. Set.] using the cursor up/down keys.
2. Press the OK key.
3. Select [Default Setting] using the cursor up/down keys.
4. Press the OK key.
5. Select [Copy/Print Count] using the cursor up/down keys.
6. Press the OK key.
7. Select [Total] or [Split].
8. Press the OK key.

Applying Restriction

1. Select [Job Account. Set.] using the cursor up/down keys.
2. Press the OK key.
3. Select [Account. List] using the cursor up/down keys.
4. Press the OK key.
5. Select the account to which you want to set restriction of use and press the OK key.
6. Select the item to be restricted and select [Edit].
7. Select the desired restriction method and press the OK key.
8. Repeat step 6 to 7 to set items as necessary.
9. Press the OK key.
10. Select [Yes].

Applying Limit of Restriction

1. Select [Job Account. Set.] using the cursor up/down keys.
2. Press the OK key.
3. Select [Default Setting] using the cursor up/down keys.
4. Press the OK key.
5. Select [Apply Limit] using the cursor up/down keys.
6. Press the OK key.
7. Select [Immediately], [Subsequently] or [Alert Only].
8. Press the OK key.

Default Counter Limit

1. Select [Job Account. Set.] using the cursor up/down keys.
2. Press the OK key.
3. Select [Default Setting] using the cursor up/down keys.
4. Press the OK key.
5. Select [Counter Limit] using the cursor up/down keys.
6. Press the OK key.
7. Select the item for which you want to set the default restriction on the number of sheets and press the OK key.
8. Enter the default restriction on the number of sheets and press the OK key.
9. Repeat steps 7 to 8 set other default restrictions on the number of sheets.

Total Job Accounting/Resetting the Counter

1. Select [Job Account. Set.] using the cursor up/down keys.
2. Press the OK key.
3. Select [Total Accounting] using the cursor up/down keys.
4. Press the OK key.
5. Select the function of which you want to check counts and press the OK key.
6. After confirming the content press the OK key.
7. To reset the counter, select [Counter Reset].
8. Press the OK key.
9. Select [Yes].

Each Job Accounting/Resetting the Counter

1. Select [Job Account. Set.] using the cursor up/down keys.
2. Press the OK key.
3. Select [Each Job Account] using the cursor up/down keys.
4. Press the OK key.
5. Select the account of which you want to check counts and press the OK key.
6. Select the function of which you want to check counts and press the OK key.
7. After confirming the content press the OK key.
8. To reset the counter, select [Counter Reset].
9. Press the OK key.
10. Select [Yes].

Printing an Accounting Report

1. Select [Job Account. Set.] using the cursor up/down keys.
2. Press the OK key.
3. Select [Account. Report] using the cursor up/down keys.
4. Press the OK key.
5. Select [Yes]. A job accounting report is printed.

(15) FAX Settings**Rings**

1. Select [Reception] using the cursor up/down keys.
2. Press the OK key.
3. Select [Rings(Normal)], [Rings(TAD)] or [Rings(FAX/TEL)].
4. Press the OK key.
5. Enter the number of ringing times.
6. Press the OK key.

Retry Times

1. Select [Transmission] using the cursor up/down keys.
2. Press the OK key.
3. Select [Retry Times] using the cursor up/down keys.
4. Press the OK key.
5. Enter the number of retry times.
6. Press the OK key.

Receiving Mode

1. Select [Reception] using the cursor up/down keys.
2. Press the OK key.
3. Select [RX Settings] using the cursor up/down keys.
4. Press the OK key.
5. Select the desired receiving mode.
6. Press the OK key.

Reception Date/Time

1. Select [Reception] using the cursor up/down keys.
2. Press the OK key.
3. Select [RX Date/Time] using the cursor up/down keys.
4. Press the OK key.
5. Select [On].
6. Press the OK key.

Media Type for Print Output

1. Select [Reception] using the cursor up/down keys.
2. Press the OK key.
3. Select [FAX Media Typ] using the cursor up/down keys.
4. Press the OK key.
5. Select the desired paper type.
If you do not specify any paper type, select [All Media Type].
6. Press the OK key.

Registering Permit FAX No.

1. Select [TX/RX Restrict.] using the cursor up/down keys.
2. Press the OK key.
3. Select [Permit No. List] using the cursor up/down keys.
4. Press the OK key.
5. Select [Menu].
6. Select [Add FAX Number] using the cursor up/down keys.
7. Press the OK key.
8. Enter a Permit FAX number. Up to 32 digits can be entered.
9. Press the OK key.
10. When registering other Permit FAX numbers, repeat steps 5 to 9.

Changing and Deleting Permit FAX No.

1. Select [TX/RX Restrict.] using the cursor up/down keys.
2. Press the OK key.
3. Select [Permit No. List] using the cursor up/down keys.
4. Press the OK key.
5. Select the Permit FAX No. to be changed or deleted.
6. To change Permit FAX No., go to step 7, and to delete Permit FAX No., go to step 11.
7. Select [Menu].
8. Select [Detail/Edit] and press the OK key.
9. Reenter the Permit FAX number. Up to 32 digits can be entered.
10. Press the OK key.
11. Select [Menu].
12. Select [Delete] and press the OK key.
13. Select [Yes]. This deletes the Permit FAX number.
14. To change or delete other Permit FAX numbers, repeat steps 5 to 13.

Registering Reject FAX No.

1. Select [TX/RX Restrict.] using the cursor up/down keys.
2. Press the OK key.
3. Select [Reject No. List] using the cursor up/down keys.
4. Press the OK key.
5. Select [Menu].
6. Select [Add FAX Number] using the cursor up/down keys.
7. Press the OK key.
8. Enter a Reject FAX number. Up to 32 digits can be entered.
9. Press the OK key.
10. When registering other Reject FAX numbers, repeat steps 5 to 9.

Changing and Deleting Reject FAX No.

1. Select [TX/RX Restrict.] using the cursor up/down keys.
2. Press the OK key.
3. Select [Reject No. List] using the cursor up/down keys.
4. Press the OK key.
5. Select the Reject FAX No. to be changed or deleted.
6. To change Reject FAX No., go to step 7, and to delete Reject FAX No., go to step 11.
7. Select [Menu].
8. Select [Detail/Edit] and press the OK key.
9. Reenter the Reject FAX number. Up to 32 digits can be entered.
10. Press the OK key.
11. Select [Menu].
12. Select [Delete] and press the OK key.
13. Select [Yes]. This deletes the Reject FAX number.
14. To change or delete other Reject FAX numbers, repeat steps 5 to 13.

Registering Permit ID No.

1. Select [TX/RX Restrict.] using the cursor up/down keys.
2. Press the OK key.
3. Select [Permit ID List] using the cursor up/down keys.
4. Press the OK key.
5. Select [Menu].
6. Select [Add FAX ID] and press the OK key.
7. Enter a Permit ID number (0000 to 9999).
8. Press the OK key.
9. To register other Permit ID numbers, repeat steps 5 to 9.

Changing and Deleting Reject FAX No.

1. Select [TX/RX Restrict.] using the cursor up/down keys.
2. Press the OK key.
3. Select [Permit ID List] using the cursor up/down keys.
4. Press the OK key.
5. Select the Permit ID No. to be changed or deleted.
6. To change Permit ID No., go to step 7, and to delete Permit ID No., go to step 11.
7. Select [Menu].
8. Select [Detail/Edit] and press the OK key.
9. Reenter a Permit ID number (0000 to 9999).
10. Press the OK key.
11. Select [Menu].
12. Select [Delete] and press the OK key.
13. Select [Yes]. This deletes the Permit ID number.
14. To change or delete other Permit ID numbers, repeat steps 5 to 13.

Setting Send Restriction

1. Select [TX/RX Restrict.] using the cursor up/down keys.
2. Press the OK key.
3. Select [TX Restriction] using the cursor up/down keys.
4. Press the OK key.
5. Select [Off] or [Permit+Addr Book].
6. Press the OK key.

Setting Reception Restriction

1. Select [TX/RX Restrict.] using the cursor up/down keys.
2. Press the OK key.
3. Select [RX Restriction] using the cursor up/down keys.
4. Press the OK key.
5. Select [Off], [Permit+Addr Book] or [Reject List].
6. Press the OK key.

Registering an Encryption Key

1. Select [TX/RX Common] using the cursor up/down keys.
2. Press the OK key.
3. Select [Encryption Key] using the cursor up/down keys.
4. Press the OK key.
5. Select an unregistered encryption key and select [Menu].
6. Select [Register] and press the OK key.
7. Enter the encryption key. Up to 16 digits can be entered.
8. Press the OK key.
9. Repeat steps 5 to 8 to register other encryption keys.

Confirming and Deleting Registration Contents of Encryption Key

1. Select [TX/RX Common] using the cursor up/down keys.
2. Press the OK key.
3. Select [Encryption Key] using the cursor up/down keys.
4. Press the OK key.
5. Select the encryption key that you want to confirm or delete.
6. Proceed to step 7 to confirm it, or step 9 to delete it.
7. Select [Menu].
8. Select [Detail] and press the OK key.
9. Select [Menu].
10. Select [Delete] and press the OK key.
11. Select [Yes]. This deletes the encryption key.
12. Repeat steps 5 to 11 to confirm or delete other encryption keys.

Operation at the Receiving System

1. Select [Reception] using the cursor up/down keys.
2. Press the OK key.
3. Select [Encryption RX] using the cursor up/down keys.
4. Press the OK key.
5. Select [On].
6. Press the OK key.
7. Select the desired encryption key number.
8. Press the OK key.
9. The sending system conducts encrypted transmission.

Duplex Print Output

1. Select [Reception] using the cursor up/down keys.
2. Press the OK key.
3. Select [Duplex Printing] using the cursor up/down keys.
4. Press the OK key.
5. Select [On] or [Off].
6. Press the OK key.

2 in 1 Reception

1. Select [Reception] using the cursor up/down keys.
2. Press the OK key.
3. Select [2 in 1 Printing] using the cursor up/down keys.
4. Press the OK key.
5. Select [On] or [Off].
6. Press the OK key.

Print all at once [Batch Print]

1. Select [Reception] using the cursor up/down keys.
2. Press the OK key.
3. Select [Batch Print] using the cursor up/down keys.
4. Press the OK key.
5. Select [On] or [Off].
6. Press the OK key.

Printing Activity Reports

1. Select [Log].
2. Select [Outgoing FAX Rpt] or [Incoming FAX Rpt].
3. Select [Yes]. The report is printed.

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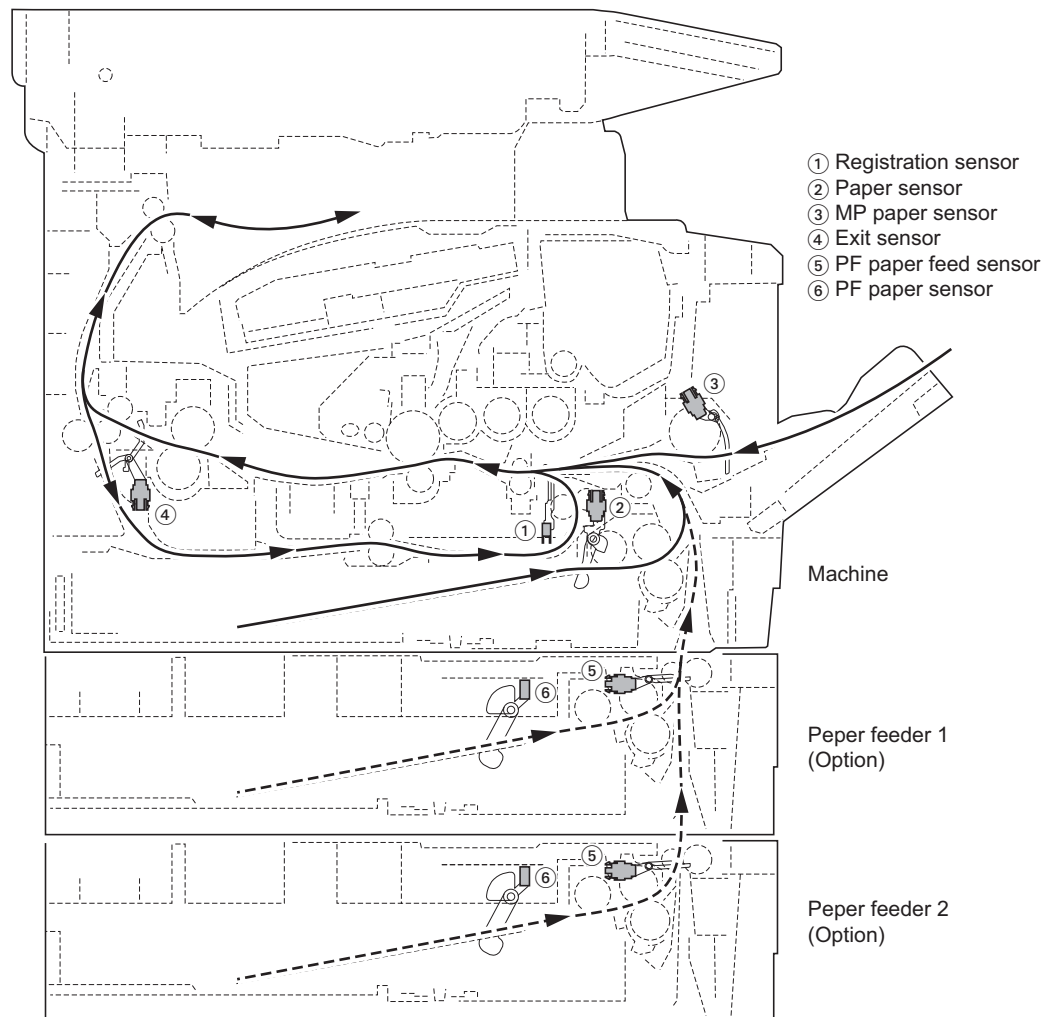
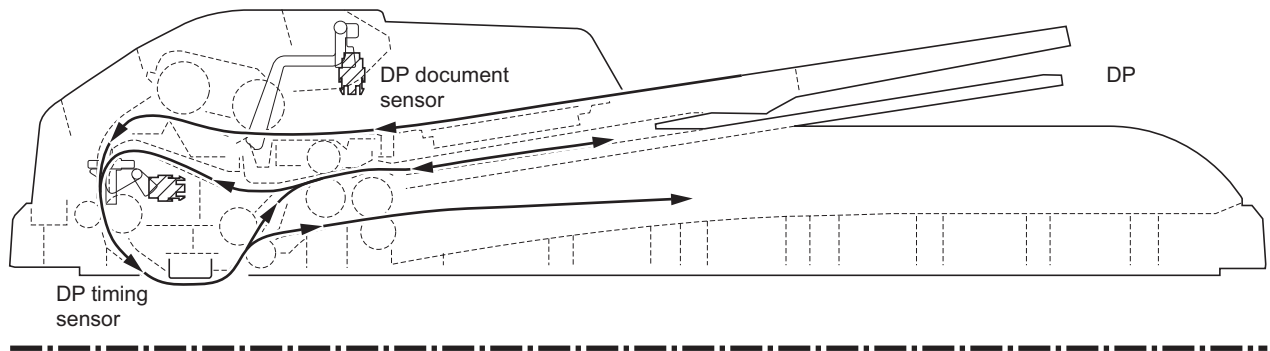
1-4-1 Paper misfeed detection

(1) Paper misfeed indication

When a paper misfeed occurs, the machine immediately stops printing and displays the paper misfeed message on the operation panel. To remove paper misfed in the machine, pull out the paper cassette, open the front cover, rear cover or duplexer's cover, or remove the drum unit.



Figure 1-4-1 Paper misfeed indication

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

1-4-2 Self-diagnostic function

(1) Self-diagnostic function

This machine is equipped with self-diagnostic function. When a problem is detected, the machine stops printing and display an error message on the operation panel. An error message consists of a message prompting a contact to service personnel, total print count, and a four-digit error code indicating the type of the error. (The display varies depending on the type of the error.)

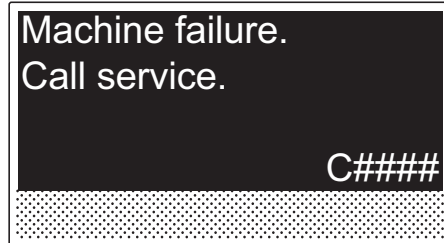


Figure 1-4-3

(2) Self diagnostic codes

Code	Contents	Remarks	
		Causes	Check procedures/corrective measures
0030	FAX PWB system error Processing with the fax software was disabled due to a hardware problem.	Defective FAX PWB.	Replace the FAX PWB (See page 1-5-50).
0070	FAX PWB incompatible detection Error Abnormal detection of FAX PWB incompatibility In the initial communication with the FAX PWB, any normal communication command is not transmitted.	Defective fax software.	Install the fax software.
		Defective FAX PWB.	Replace the FAX PWB (See page 1-5-50).
0100	Backup memory device error	Defective flash memory.	Replace the control PWB (See page 1-5-39).
		Defective control PWB.	Replace the control PWB (See page 1-5-39).
0120	MAC address data error	Defective flash memory.	Replace the control PWB (See page 1-5-39).
0130	Backup memory read/write error	Defective flash memory.	Replace the control PWB (See page 1-5-39).
		Defective control PWB.	Replace the control PWB (See page 1-5-39).
0140	Backup memory data error	Defective flash memory.	Replace the control PWB (See page 1-5-39).
		Defective control PWB.	Replace the control PWB (See page 1-5-39).
0150	Control PWB EEPROM error Detecting control PWB EEPROM (U17) communication error.	Improper installation control PWB EEPROM (U17).	Check the installation of the EEPROM (U17) and remedy if necessary (See page 1-5-39).
		Defective control PWB.	Replace the control PWB (See page 1-5-39).
		Data damage of control PWB EEPROM (U17).	Contact the Service Administrative Division.
0170	Billing counting error	Defective control PWB.	Replace the control PWB (See page 1-5-39).
		Data damage of control PWB EEPROM (U17).	Contact the Service Administrative Division.
0180	Machine number mismatch Machine number of main and engine does not match.	Data damage of control PWB EEPROM (U17).	Contact the Service Administrative Division.

Code	Contents	Remarks	
		Causes	Check procedures/corrective measures
0420	Paper feeder communication error Communication error between control PWB and optional paper feeder.	Improper installation paper feeder.	Follow installation instruction carefully again.
		Defective harness between control PWB (YC30) and paper feeder interface connector, or improper connector insertion.	Reinsert the connector. Also check for continuity within the connector harness. If none, remedy or replace the harness.
		Defective control PWB.	Replace the control PWB (See page 1-5-39).
		Defective harness between PF main PWB (YC5) and paper feeder interface connector, or improper connector insertion.	Reinsert the connector. Also check for continuity within the connector harness. If none, remedy or replace the harness (Refer to the service manual for the paper feeder).
		Defective PF main-PWB.	Replace the PF main PWB (Refer to the service manual for the paper feeder).
0830	FAX PWB flash program area checksum error A checksum error occurred with the program of the FAX PWB.	Defective fax software.	Install the fax software.
		Defective FAX PWB.	Replace the FAX PWB (See page 1-5-50).
0840	Faults of RTC The time is judged to go back based on the comparison of the RTC time and the current time or five years or more have passed.	Defective control PWB.	Replace the control PWB (See page 1-5-39).
		The battery is disconnected from the control PWB.	Check visually and remedy if necessary.
0870	FAX PWB to control PWB high capacity data transfer problem High-capacity data transfer between the FAX PWB and the control PWB of the machine was not normally performed even if the data transfer was retried the specified times.	Improper installation FAX PWB.	Reinstall the FAX PWB (See page 1-5-50).
		Defective FAX PWB or control PWB.	Replace the FAX PWB or control PWB and check for correct operation. (See page 1-5-50 or 1-5-39).
0920	Fax file system error The backup data is not retained for file system abnormality of flash memory of the FAX PWB.	Defective FAX PWB.	Replace the FAX PWB (See page 1-5-50).

Code	Contents	Remarks	
		Causes	Check procedures/corrective measures
2000	Main motor error The main motor ready input is not given for 2 s during the main motor is ON.	Defective harness between main motor (CN1) and control PWB (YC17), or improper connector insertion.	Reinsert the connector. Also check for continuity within the connector harness. If none, remedy or replace the harness (See page 1-5-39).
		Defective drive transmission system of the main motor.	Check if the rollers and gears rotate smoothly. If not, grease the bushings and gears. Check for broken gears and replace if any.
		Defective main motor.	Replace the main motor (See page 1-5-51).
		Defective control PWB.	Replace the control PWB (See page 1-5-39).
2610	PF paper feed motor error (Optional paper feeder 1) The PF paper feed motor of paper feeder 1 ready input is not given for 2 s during the PF paper feed motor is ON.	Defective harness between PF paper feed motor and PF main PWB (YC4), or improper connector insertion.	Reinsert the connector. Also check for continuity within the connector harness. If none, remedy or replace the harness (Refer to the service manual for the paper feeder).
		Defective PF paper feed motor drive transmission system.	Check if the gears rotate smoothly. If not, grease the bushings and gears. Check for broken gears and replace if any.
		Defective PF main motor.	Replace the PF main motor.
		Defective control PWB.	Replace the control PWB (See page 1-5-39).
2620	PF paper feed motor error (Optional paper feeder 2) The PF paper feed motor of paper feeder 2 ready input is not given for 2 s during the PF paper feed motor is ON.	Defective harness between PF paper feed motor and PF main PWB (YC4), or improper connector insertion.	Reinsert the connector. Also check for continuity within the connector harness. If none, remedy or replace the harness (Refer to the service manual for the paper feeder).
		Defective PF paper feed motor drive transmission system.	Check if the gears rotate smoothly. If not, grease the bushings and gears. Check for broken gears and replace if any.
		Defective PF main motor.	Replace the PF main motor (Refer to the service manual for the paper feeder).
		Defective control PWB.	Replace the control PWB (See page 1-5-39).

Code	Contents	Remarks	
		Causes	Check procedures/corrective measures
3100	ISU home position error	Defective FFC between CCD PWB (YC1) and control PWB (YC8).	Replace the image scanner unit (ISU) (See page 1-5-21).
		Defective FFC between control PWB (YC6) and scanner PWB (YC103), or improper FFC insertion.	Reinsert the FFC. Also check for continuity within the FFC. If none, remedy or replace the FFC.
		Defective home position sensor.	Replace the home position sensor.
		Defective harness between ISU motor and scanner PWB (YC104), or improper connector insertion.	Reinsert the connector. Also check for continuity within the connector harness. If none, remedy or replace the harness.
		Defective ISU motor.	Replace the ISU motor.

Code	Contents	Remarks	
		Causes	Check procedures/corrective measures
3200	Exposure lamp error The exposure lamp is not turned on.	Defective FFC between scanner PWB (YC103) and control PWB (YC6), or improper FFC insertion.	Reinsert the FFC. Also check for continuity within the FFC. If none, remedy or replace the FFC.
		Defective FFC between CCD PWB (YC1) and control PWB (YC8).	Replace the image scanner unit (ISU) (See page 1-5-21).
		Defective harness between CCD PWB (YC3) and inverter PWB (YC101), or improper connector insertion.	Reinsert the connector. Also check for continuity within the connector harness. If none, remedy or replace the harness.
		Defective harness between inverter PWB (YC102) and exposure lamp, or improper connector insertion.	Reinsert the connector. Also check for continuity within the connector harness. If none, remedy or replace the harness.
		Defective exposure lamp.	Replace the exposure lamp (See page 1-5-27).
		Defective inverter PWB.	Replace the inverter PWB (See page 1-5-27).
		Defective control PWB.	Replace the control PWB (See page 1-5-39).
3300	AGC error After AGC, correct input is not obtained at CCD.	Defective FFC between CCD PWB (YC1) and control PWB (YC8).	Replace the image scanner unit (ISU) (See page 1-5-21).
		Defective exposure lamp.	Replace the exposure lamp (See page 1-5-27).
		Defective CCD PWB.	Replace the CCD PWB.
		Defective control PWB.	Replace the control PWB (See page 1-5-39).

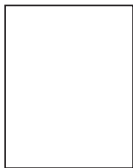
Code	Contents	Remarks	
		Causes	Check procedures/corrective measures
3500	CPU - ASIC (CCD PWB) communication error An error code is detected.	Defective FFC between CCD PWB (YC1) and control PWB (YC8).	Replace the image scanner unit (ISU) (See page 1-5-21).
		Defective CCD PWB.	Replace the CCD PWB.
		Defective control PWB.	Replace the control PWB (See page 1-5-39).
4000	Polygon motor (laser scanner unit) error The polygon motor ready input is not given for 6 s during the polygon motor is ON.	Defective harness between polygon motor and control PWB (YC10), or improper connector insertion.	Reinsert the connector. Also check for continuity within the connector harness. If none, remedy or replace the harness.
		Defective laser scanner unit.	Replace the laser scanner unit (See page 1-5-17).
		Defective control PWB.	Replace the control PWB (See page 1-5-39).
4200	BD error (laser scanner unit) error	BD sensor does not detect laser beam due to condensation on the polygon mirror.	Turn machine power off for at least 30 minutes, then turn machine on again. If not cured, replace the laser scanner unit (See page 1-5-17).
		Defective laser scanner unit.	Replace the laser scanner unit (See page 1-5-17).
		Defective control PWB.	Replace the control PWB (See page 1-5-39).
6000	Broken fuser heater lamp wire The fuser temperature does not rise after the fuser heater lamp has been turned on.	Poor contact in the fuser thermistor connector terminals.	Reinsert the connector (See page 1-5-34).
		Poor contact in the fuser heater lamp connector terminals.	Reinsert the connector (See page 1-5-34).
		Fuser thermistor installed incorrectly.	Replace the fuser unit (See page 1-5-34).
		Fuser thermal cut-out triggered.	Replace the fuser unit (See page 1-5-34).
		Fuser heater lamp installed incorrectly.	Replace the fuser unit (See page 1-5-34).
		Broken fuser heater lamp wire.	Replace the fuser unit (See page 1-5-34).
6020	Abnormally high fuser thermistor temperature Fuser thermistor detects abnormally temperature.	Shorted fuser thermistor.	Replace the fuser unit (See page 1-5-34).
		Defective control PWB.	Replace the control PWB (See page 1-5-39).

Code	Contents	Remarks	
		Causes	Check procedures/corrective measures
6030	Broken fuser thermistor wire Input from fuser thermistor is 0 (A/D value).	Poor contact in the fuser thermistor connector terminals.	Reinsert the connector (See page 1-5-34).
		Broken fuser thermistor wire.	Replace the fuser unit (See page 1-5-34).
		Fuser thermistor installed incorrectly.	Replace the fuser unit (See page 1-5-34).
		Fuser thermal cut-out triggered.	Replace the fuser unit (See page 1-5-34).
		Fuser heater lamp installed incorrectly.	Replace the fuser unit (See page 1-5-34).
		Broken fuser heater lamp wire.	Replace the fuser unit (See page 1-5-34).
6400	Zero cross signal error The zero cross signal does not reach the control PWB for specified time.	Defective harness between high voltage PWB (YC202) and control PWB (YC23), or improper connector insertion.	Reinsert the connector. Also check for continuity within the connector harness. If none, remedy or replace the harness (See page 1-5-39).
		Defective connection between power source PWB (YC103) and high voltage PWB (YC201).	Reinsert the connector.
		Defective power source PWB.	Replace the power source PWB (See page 1-5-42).
		Defective control PWB.	Replace the control PWB (See page 1-5-39).
7990	Waste toner full The waste toner sensor has detected that the waste toner reservoir (drum unit) is full.	Waste toner reservoir (drum unit) is full.	Turn the main power switch off/on to restart the machine. If the error is not resolved, replace the drum unit (See page 1-5-30).
		Defective waste toner sensor.	Replace the waste toner sensor.
		Defective control PWB.	Replace the control PWB (See page 1-5-39).
F000	Control PWB - Operation panel PWB communication error	Defective harness between operation panel PWB (YC1) and control PWB (YC7), or improper connector insertion.	Reinsert the connector. Also check for continuity within the connector harness. If none, remedy or replace the harness.
		Defective operation panel PWB.	Replace the operation panel PWB.
		Defective control PWB.	Replace the control PWB (See page 1-5-39).

Code	Contents	Remarks	
		Causes	Check procedures/corrective measures
F020	Control PWB RAM checksum error	Defective main memory (RAM) on the control PWB.	Turn the main power switch off/on to restart the machine. If the error is not resolved, replace control PWB (See page 1-5-39).
		Defective expanded memory (DIMM).	Replace the expanded memory (DIMM).
F040	Control PWB engine communication error A communication error is detected.	Defective control PWB.	Turn the main power switch off/on to restart the machine. If the error is not resolved, replace control PWB (See page 1-5-39).
F041	Control PWB - scanner PWB communication error A communication error is detected.	Defective control PWB or scanner PWB.	Turn the main power switch off/on to restart the machine. If the error is not resolved, replace control PWB or scanner PWB (See page 1-5-39 or 1-5-49).
F050	Control PWB engine checksum error	Some error may have occurred when downloading the firmware of the control PWB.	Download the firmware of the control PWB again (See page 1-6-1).
		Defective control PWB.	Turn the main power switch off/on to restart the machine. If the error is not resolved, replace control PWB (See page 1-5-39).
F186	Control PWB video data control error	Defective control PWB.	Turn the main power switch off/on to restart the machine. If the error is not resolved, replace control PWB (See page 1-5-39).

1-4-3 Image formation problems

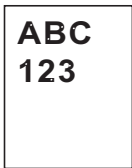
- (1) Completely blank printout.
- (2) All-black printout.
- (3) Dropouts.
- (4) Black dots.
- (5) Black horizontal streaks.



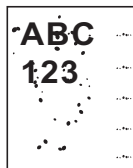
See page 1-4-13



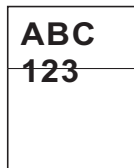
See page 1-4-13



See page 1-4-14

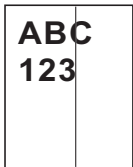


See page 1-4-14

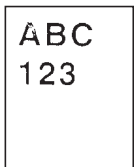


See page 1-4-14

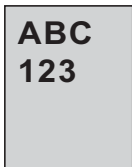
- (6) Black vertical streaks.
- (7) Unsharpness.
- (8) Gray background.
- (9) Dirt on the top edge or back of the paper.
- (10) Undulated printing at the right edge (scanning start position).



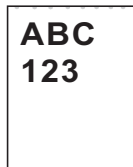
See page 1-4-15



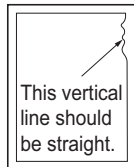
See page 1-4-15



See page 1-4-15

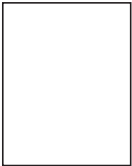
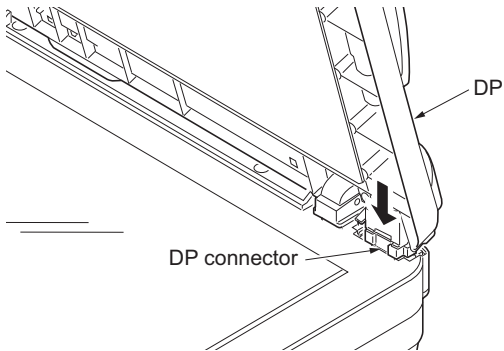


See page 1-4-16




See page 1-4-16

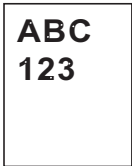
(1) Completely blank printout.

Print example	Causes	Check procedures/corrective measures
	Connection failure with DP connector.	<p>If a blank copy is made because the original loaded in the DP is not fed after the Start key is pressed: Turn the main power switch off, investigate the DP connector connection, and firmly connect the DP connector.</p> 
	Defective drum unit or developing unit.	Open the front cover and check that the drum unit and developing unit are correctly seated (See page 1-5-30 and 1-5-29). Investigate that the terminals between the main charger unit and the drum unit are not in loose contact (See page 1-5-30)
	Defective transfer bias output or developing bias output.	Replace the high voltage PWB (See page 1-5-45).
	Poor contact of developing bias terminal (spring) and high voltage output terminal B (J401, J402, J403) on the high voltage PWB. Poor contact of transfer bias terminal (spring) and transfer bias terminal T (J201, J202, J203) on the high voltage PWB.	Check the high voltage PWB visually and correct or replace if necessary (See page 1-5-45).
	Defective laser scanner unit.	Replace the laser scanner unit (See page 1-5-17).
	Defective control PWB.	Replace the control PWB (See page 1-5-39).

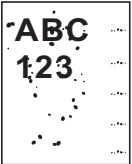
(2) All-black printout.

Print example	Causes	Check procedures/corrective measures
	Defective main charger unit.	Open the front cover and check that the drum unit and developing unit are correctly seated (See page 1-5-30 and 1-5-29). Investigate that the terminals between the main charger unit and the drum unit are not in loose contact (See page 1-5-30)
	Poor contact of main charger terminal (spring) and main charger output terminal M on the high voltage PWB.	Check the high voltage PWB visually and correct or replace if necessary (See page 1-5-45).
	Defective main charging output.	Replace the high voltage PWB (See page 1-5-45).
	Broken main charger wire.	Replace the main charger unit (See page 1-5-31).
	Defective control PWB.	Replace the control PWB (See page 1-5-39).

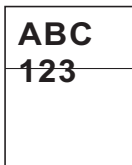
(3) Dropouts.

Print example	Causes	Check procedures/corrective measures
	Defective developing roller (developing unit).	If the defects occur at regular intervals of 62.8 mm/2 1/2" (See page 2-4-3), the problem may be the damaged developing roller (in the developing unit). Replace the developing unit (See page 1-5-29).
	Defective drum unit.	If the defects occur at regular intervals of 94 mm/3 11/16" (See page 2-4-3), the problem may be the damaged drum (in the drum unit). Replace the drum unit (See page 1-5-30).
	Defective fuser unit (heat roller or press roller).	If the defects occur at regular intervals of 73.162 mm/2 7/8", or 78.5 mm/3 1/16" (See page 2-4-3), the problem may be the damaged heat roller or press roller (in the fuser unit). Replace fuser unit (See page 1-5-34).
	Defective paper specifications.	Paper with rugged surface or dump tends to cause dropouts. Replace paper with the one that satisfies the paper specifications.
	Defective transfer roller installation.	The transfer roller must be supported by the bushes at the both ends. Clean the bush to remove oil and debris. Replace the transfer roller if necessary (See page 1-5-32).
	Defective transfer bias output.	Replace the high voltage PWB or control PWB (See page 1-5-45 or 1-5-39).

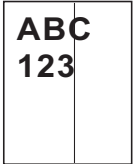
(4) Black dots.

Print example	Causes	Check procedures/corrective measures
	Defective drum unit or developing unit.	If the defects occur at regular intervals of 94 mm/3 11/16" (See page 2-4-3), the problem may be the damaged drum (in the drum unit). Replace drum unit (See page 1-5-30). If the defects occur at random intervals, the toner may be leaking from the developing unit or drum unit. Replace the developing unit or drum unit (See page 1-5-29 or 1-5-30).

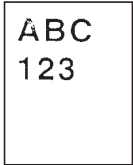
(5) Black horizontal streaks.

Print example	Causes	Check procedures/corrective measures
	Defective drum unit's ground.	Check that the drum shaft and the grounding tab (machine) are in good contact. Apply the grounding tab a small amount of electroconductive grease as required.
	Defective drum unit.	Replace the drum unit (See page 1-5-30).

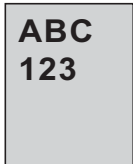
(6) Black vertical streaks.

Print example	Causes	Check procedures/corrective measures
	Adhesion of oxide to main charger wire.	Remove the drum unit (See page 1-5-30). Slide the charger cleaner (green) left and right 2 or 3 times to clean the charger wire, then return it to its original position (CLEANER HOME POSITION). Refer to the operation guide.
	Defective drum unit.	A streak of toner remaining on drum after printing means that the cleaning blade (in the drum unit) is not working properly. Replace the drum unit (See page 1-5-30).
	Defective developing roller (developing unit).	Replace the developing unit (See page 1-5-29).

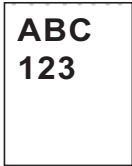
(7) Unsharpness.

Print example	Causes	Check procedures/corrective measures
	Defective paper specifications.	Replace paper with the one that satisfies the paper specification.
	Defective transfer roller installation.	The transfer roller must be supported by the bushes at the both ends. Clean the bush to remove oil and debris. Replace the transfer roller if necessary (See page 1-5-32).
	Defective transfer bias output.	Replace the high voltage PWB or control PWB (See page 1-5-45 or 1-5-39).
	EcoPrint mode setting.	The EcoPrint mode can provide faint, unsharp printing because it acts to conserve toner for draft printing purpose. For normal printing, turn the EcoPrint mode off by using the operator panel. For details, refer to the operation guide.

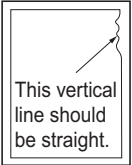
(8) Gray background.

Print example	Causes	Check procedures/corrective measures
	Print density setting.	The print density may be set too high. Try adjusting the print density. For details, refer to the operation guide.
	Defective potential on the drum surface.	Replace the drum unit (See page 1-5-30).
	Defective main charger grid.	Clean the main charger grid (See page 1-5-31).
	Defective developing roller (developing unit).	If a developing unit which is known to work normally is available for check, replace the current developing unit in the machine with the normal one. If the symptom disappears, replace the developing unit with a new one (See page 1-5-29).

(9) Dirt on the top edge or back of the paper.

Print example	Causes	Check procedures/corrective measures
	Toner contamination in various parts.	Dirty edges and back of the paper can be caused by toner accumulated on such parts as the paper chute guide, paper conveying paths, the bottom of the drum and developing unit, and the fuser unit inlet. Clean these areas and parts to remove toner.
	Defective transfer roller.	If the transfer roller is contaminated with toner, clean the transfer roller using a vacuum cleaner or by continuously printing a low density page until the symptom has faded away.

(10) Undulated printing at the right edge (scanning start position).

Print example	Causes	Check procedures/corrective measures
	Defective polygon motor (laser scanner unit).	Replace the laser scanner unit (See page 1-5-17).
	Defective control PWB.	Replace the control PWB (See page 1-5-39).

1-4-4 Electric problems

Problem	Causes	Check procedures/corrective measures
(1)The machine does not operate when the main power switch is turned on.	No electricity at the power outlet.	Measure the input voltage.
	The power cord is not plugged in properly.	Check the contact between the power plug and the outlet.
	The top cover is not closed completely.	Check the top cover.
	Broken power cord.	Check for continuity. If none, replace the cord.
	Defective main power switch.	Check for continuity across the contacts. If none, replace the power source PWB (See page 1-5-42).
	Blown fuse in the power source PWB.	Check for continuity. If none, remove the cause of blowing and replace the power source PWB (See page 1-5-42).
	Defective interlock switch.	Check for continuity across the contacts of interlock switch. If none, replace the power source PWB (See page 1-5-42).
	Defective power source PWB.	Replace the power source PWB (See page 1-5-42).
	Defective control PWB.	Replace the control PWB (See page 1-5-39).
(2)Right cooling fan motor does not operate.	Broken right cooling fan motor coil.	Check for continuity across the coil. If none, replace the right cooling fan motor.
	Defective harness between right cooling fan motor and control PWB (YC27), or improper connector insertion.	Reinsert the connector. Also check for continuity within the connector harness. If none, remedy or replace the harness.
	Defective control PWB.	Replace the control PWB (See page 1-5-39).
(3)Left cooling fan motor does not operate.	Broken left cooling fan motor coil.	Check for continuity across the coil. If none, replace the left cooling fan motor.
	Defective harness between left cooling fan motor and control PWB (YC104), or improper connector insertion.	Reinsert the connector. Also check for continuity within the connector harness. If none, remedy or replace the harness.
	Defective control PWB.	Replace the control PWB (See page 1-5-39).
(4)Power source fan motor does not operate.	Broken power source fan motor coil.	Check for continuity across the coil. If none, replace the power source fan motor.
	Defective harness between power source fan motor and control PWB (YC107), or improper connector insertion.	Reinsert the connector. Also check for continuity within the connector harness. If none, remedy or replace the harness.
	Defective control PWB.	Replace the control PWB (See page 1-5-39).
(5)Registration clutch does not operate.	Broken registration clutch coil.	Check for continuity across the coil. If none, replace the registration clutch.
	Defective harness between registration clutch and control PWB (YC20), or improper connector insertion.	Reinsert the connector. Also check for continuity within the connector harness. If none, remedy or replace the harness.
	Defective control PWB.	Replace the control PWB (See page 1-5-39).

Problem	Causes	Check procedures/corrective measures
(6)Paper feed clutch does not operate.	Broken paper feed clutch coil.	Check for continuity across the coil. If none, replace the paper feed clutch.
	Defective harness between paper feed clutch and control PWB (YC20), or improper connector insertion.	Reinsert the connector. Also check for continuity within the connector harness. If none, remedy or replace the harness.
	Defective control PWB.	Replace the control PWB (See page 1-5-39).
(7)Developing clutch does not operate.	Broken developing clutch coil.	Check for continuity across the coil. If none, replace the developing clutch.
	Defective harness between developing clutch and control PWB (YC20), or improper connector insertion.	Reinsert the connector. Also check for continuity within the connector harness. If none, remedy or replace the harness.
	Defective control PWB.	Replace the control PWB (See page 1-5-39).
(8)MP paper feed solenoid does not operate.	Broken MP paper feed solenoid coil.	Check for continuity across the coil. If none, replace the MP paper feed solenoid.
	Defective harness between MP paper feed solenoid and control PWB (YC21), or improper connector insertion.	Reinsert the connector. Also check for continuity within the connector harness. If none, remedy or replace the harness.
	Defective control PWB.	Replace the control PWB (See page 1-5-39).
(9)Duplex solenoid does not operate.	Broken duplex solenoid coil.	Check for continuity across the coil. If none, replace the duplex solenoid.
	Defective harness between duplex solenoid and control PWB (YC29), or improper connector insertion.	Reinsert the connector. Also check for continuity within the connector harness. If none, remedy or replace the harness.
	Defective control PWB.	Replace the control PWB (See page 1-5-39).
(10)Eraser lamp does not turn on.	Defective harness between eraser lamp (YC701) and control PWB (YC28), or improper connector insertion.	Reinsert the connector. Also check for continuity within the connector harness. If none, remedy or replace the harness.
	Defective eraser lamp (PWB).	Replace the eraser lamp (PWB).
	Defective control PWB.	Replace the control PWB (See page 1-5-39).
(11)Paper indicator is flashing when paper is present in the cassette.	Defective paper sensor.	Replace the paper sensor.
	Defective harness between paper sensor and control PWB (YC18), or improper connector insertion.	Reinsert the connector. Also check for continuity within the connector harness. If none, remedy or replace the harness.

Problem	Causes	Check procedures/corrective measures
(12)A paper jam in the paper feed/conveying section or fuser section is indicated when the main power switch is turned on.	A piece of paper torn from paper is caught around registration sensor or exit sensor.	Check and remove if any.
	Defective registration sensor on the high voltage PWB.	Replace the high voltage PWB (See page 1-5-45).
	Defective exit sensor.	Replace the exit sensor.
(13)Attention indicator is lit when the front cover is closed.	Defective interlock switch on the power source PWB.	Check for continuity across the interlock switch. If there is no continuity when the interlock switch is on, replace the power source PWB (See page 1-5-42).
(14)When the trouble occurs in the DP.		Refer to the DP's service manual.

1-4-5 Mechanical problems

Problem	Causes/check procedures	Corrective measures
(1)No primary paper feed.	Check if the surfaces of the paper feed roller is dirty with paper powder.	Clean with isopropyl alcohol.
	Check if the paper feed roller is deformed.	Check visually and replace any deformed paper feed roller (assembly) (See page 1-5-6).
	Defective paper feed clutch installation.	Check visually and remedy if necessary.
(2)No secondary paper feed.	Check if the surfaces of the upper and lower registration rollers are dirty with paper powder.	Clean with isopropyl alcohol.
	Defective registration clutch installation.	Check visually and remedy if necessary.
(3)Skewed paper feed.	Paper width guide in a cassette installed incorrectly.	Check the paper width guide visually and correct or replace if necessary.
(4)Multiple sheets of paper are fed at one time.	Check if the separator pad or MPF separation pad is worn.	Replace the separator pad if it is worn.
	Check if the paper is curled.	Replace the paper.
(5)Paper jams.	Check if the paper is excessively curled.	Replace the paper.
	Check if the contact between the upper and lower registration rollers is correct.	Check visually and remedy if necessary.
	Check if the heat roller or press roller is extremely dirty or deformed.	Replace the fuser unit (See page 1-5-34).
	Check if the contact between the ejection roller and fuser ejection pulley is correct.	Check visually and remedy if necessary.
(6)Toner drops on the paper conveying path.	Check if the drum unit or developing unit is extremely dirty.	Clean the drum unit or developing unit (See page 1-5-30 or 1-5-29).
(7)Abnormal noise is heard.	Check if the pulleys, rollers and gears operate smoothly.	Grease the bearings and gears.
	Check if the following electromagnetic clutches are installed correctly: Paper feed clutch, registration clutch and developing clutch.	Check visually and remedy if necessary.
(8)When the trouble occurs in the DP.		Refer to the DP's service manual.

1-4-6 Error codes

(1) Error code

Error codes are listed on the communication reports, activity report, etc. The codes consist of an error code indication U followed by a 5-digit number. (Error codes for V34 communication errors start with an E indication, followed by five digits.) The upper three of the five digits indicate general classification of the error and its cause, while the lower two indicate the detailed classification. Items for which detailed classification is not necessary have 00 as the last two digits.

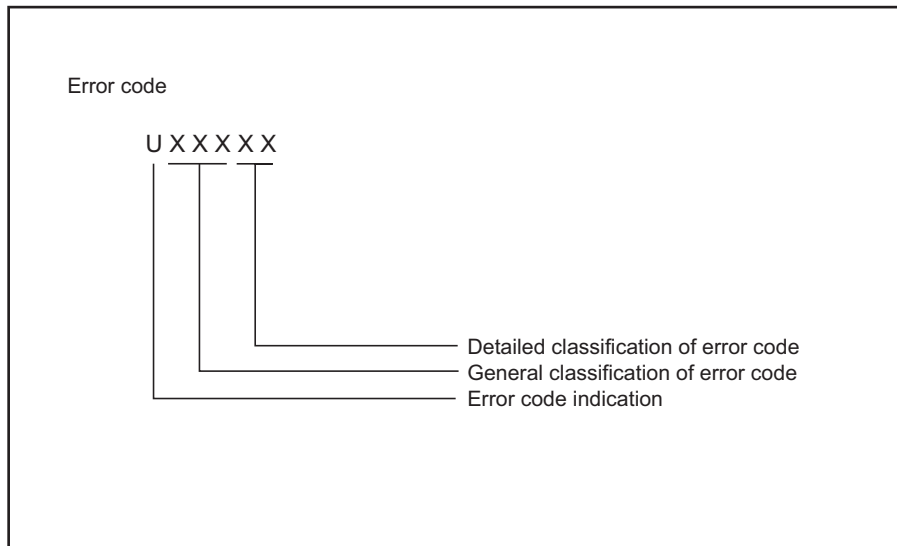


Figure 1-4-4

(2) Table of general classification

Error code	Description
U00000	No response or busy after the set number of redials.
U00100	Transmission was interrupted by a press of the stop/clear key.
U00200	Reception was interrupted by a press of the stop/clear key.
U00300	Recording paper on the destination unit has run out during transmission.
U004XX	A connection was made but interrupted during handshake with the receiver unit (refer to page 1-4-24 U004XX error code table).
U00500	Multiple communication was interrupted and call was not made on destination units after interruption.
U006XX	Communication was interrupted because of a machine problem (refer to page 1-4-25 U006XX error code table).
U00700	Communication was interrupted because of a problem in the destination unit.
U008XX	A page transmission error occurred in G3 mode (refer to page 1-4-25 U008XX error code table).
U009XX	A page reception error occurred in G3 mode (refer to page 1-4-25 U009XX error code table).
U010XX	Transmission in G3 mode was interrupted by a signal error (refer to page 1-4-26 U010XX error code table).
U011XX	Reception in G3 mode was interrupted by a signal error (refer to page 1-4-28 U011XX error code table).
U01400	An invalid one-touch key was specified during communication.
U01500	A communication error occurred when calling in V.8 mode.
U01600	A communication error occurred when called in V.8 mode.
U017XX	A communication error occurred before starting T.30 protocol during transmission in V.34 mode (refer to page 1-4-30 U017XX error code table).
U018XX	A communication error occurred before starting T.30 protocol during reception in V.34 mode (refer to page 1-4-30 U018XX error code table).
U02000	Relay broadcast was refused by a relay station because of a mismatch in permit ID number and permit telephone number when a relay command was issued.
U02100	A relay command failed because the destination unit (relay station) had no relay broadcast capability.
U02200	A relay command from a command station failed because a telephone number that was not registered in the relay station was specified. Or, relay broadcast was requested to a relay station but failed because a telephone number that was not registered in the relay station was specified. Or, Subaddress-based relay broadcast transmission failed because the data registered in the Subaddress relay box was deleted.
U023XX	Receiving station information was not normally received in reception of a relay command (refer to page 1-4-30 U023XX error code table).
U02400	An interoffice subaddress-based relay transmission was interrupted because of a mismatch in the specified relay box number.
U03000	No document was present in the destination unit when polling reception started.
U03100	In reverse polling, although no original was set in the destination unit, transmission was complete.
U03200	In confidential polling reception, data was not accumulated in the specified box in the destination unit. Or, in interoffice subaddress-based bulletin board reception, data was not stored in the box specified by the destination unit.
U03300	In polling reception from a unit of our make, operation was interrupted due to a mismatch in permit ID or telephone number. Or, in interoffice subaddress-based bulletin board reception, operation was interrupted due to a mismatch in permit ID or telephone number.

Error code	Description
U03400	Polling reception was interrupted because of a mismatch in individual numbers (destination unit is either of our make or by another manufacturer).
U03500	In confidential polling reception, the specified confidential box No. was not registered in the destination. Or, in interoffice subaddress-based bulletin board reception, the specified Subaddress confidential box number was not registered in the destination unit. Or, the destination was being accessed.
U03600	Confidential polling reception was interrupted because of a mismatch in specified confidential box No. Or, an interoffice subaddress-based bulletin board reception was interrupted because of a mismatch in the specified subaddress confidential box number.
U03700	Confidential polling reception failed because the destination unit had no confidential polling transmission capability or data was not accumulated in any box in the destination unit. Or, interoffice subaddress-based bulletin board reception failed because the destination unit had no subaddress-based bulletin board transmission capability, or data was not stored in any subaddress confidential box in the destination unit.
U04000	The confidential box specified for confidential transmission was not registered in the destination unit. Or, in interoffice subaddress-based transmission mode, the specified subaddress box number was not registered in the destination unit. Or, the destination was being accessed.
U04100	Confidential transmission failed because the destination unit had no confidential capability. Or, subaddress-based transmission failed because the destination unit had no subaddress-based reception capability.
U04200	In encrypted transmission, the specified encryption box was not registered in the destination unit.
U04300	Encrypted transmission failed because the destination unit had no encrypted communication capability.
U044XX	Communication was interrupted because of an encryption key error during encrypted transmission (refer to page 1-4-30 U044XX error code table).
U04500	Encrypted reception was interrupted because of a mismatch in encryption keys.
U05000	In transmission with a specified number, the set number of originals was different from the number of transmitted originals.
U05100	Password check transmission or restricted transmission was interrupted because the permit ID's did not agree with.
U05200	Password check reception or restricted reception was interrupted because the permit ID's did not match, the rejected FAX number's did match, or the destination receiver did not return its phone number.
U05300	The password check reception or the restricted reception was interrupted because the permitted numbers did not match, the rejected numbers did match, or the machine in question did not acknowledge its phone number.
U09000	G3 communication was attempted but failed because the destination unit was a G2 machine.
U12000	Relay broadcast was requested from a command station but memory overflowed during reception. Or, in subaddress-based relay reception, memory overflowed.
U12100	Relay was commanded but memory overflowed in the destination unit (relay station).
U14000	Memory overflowed during confidential reception. Or, in subaddress-based confidential reception, memory overflowed.
U14100	Memory overflowed in the destination unit during confidential transmission. Or, in interoffice subaddress-based transmission, memory overflowed in the destination unit.
U19000	Memory overflowed during memory reception.
U19100	Memory overflowed in the destination unit during transmission.
U19200	Memory transmission failed because a decoding error occurred.
U19300	Transmission failed because an error occurred during JBIG encoding.
U19400	Reception failed because an error occurred during JBIG decoding.

(2-1) U004XX error code table: Interrupted phase B

Error code	Description
U00420	A relay request was received from the host center but interrupted because of a mismatch in permit ID or telephone number.
U00421	Subaddress-based relay reception was interrupted because of a mismatch in the specified subaddress relay box number.
U00430	Polling request (confidential or reverse) was received but interrupted because of a mismatch in permit number. Or, subaddress-based bulletin board transmission request was received but interrupted because of a mismatch in permit ID in the transmitting unit.
U00431	Confidential polling transmission was interrupted because the specified confidential box No. was not registered. Or, an subaddress-based bulletin board transmission was interrupted because the specified subaddress confidential box was not registered.
U00432	Confidential polling transmission was interrupted because of a mismatch in confidential box ID number. Or, an subaddress-based bulletin board transmission was interrupted because of a mismatch in Subaddress confidential box numbers.
U00433	Confidential polling request was received but data was not present in the confidential box. Or, subaddress-based bulletin board transmission request was received but data was not present in the subaddress confidential box.
U00434	Confidential polling request was received but interrupted because the specified confidential box No. was intended for encryption.
U00435	Confidential polling request was received but interrupted because the specified confidential box was being accessed. Or, subaddress-based bulletin board transmission request was received but interrupted because the specified subaddress confidential box was being accessed.
U00440	Confidential reception was interrupted because the specified confidential box No. was not registered. Or, subaddress-based confidential reception or subaddress-based relay reception was interrupted because the specified subaddress box was not registered. Or, subaddress based confidential reception or subaddress relay command reception was interrupted because the specified subaddress box No. was being accessed.
U00441	Confidential reception was interrupted because the specified confidential box No. was intended for encryption.
U00450	The destination transmitter disconnected because the permit ID's did not agree with while the destination transmitter is in password-check transmission or restricted transmission.
U00460	Encrypted reception was interrupted because the specified encryption box number was not registered. Or, encrypted reception request was received but interrupted because the specified encryption box was being accessed.
U00462	Encrypted reception was interrupted because the encryption key for the specified encryption box was not registered.

(2-2) U006XX error code table: Problems with the unit

Error code	Description
U00600	The document processor cover is open.
U00601	Document jam or the document length exceeds the maximum.
U00602	Image scanning section problem.
U00603	No document feed.
U00604	Document length exceeded the limit of the bitmap memory capacity.
U00610	Recording section cover is open.
U00611	Recording paper JAM
U00613	Image writing section problem
U00614	Nearly empty of recording paper
U00615	Empty of recording paper
U00620	Copier fixing unit problem
U00622	Copier drive motor problem
U00655	CTS was not activated after RTS due to a modem error.
U00656	Data was not transmitted after CTS was activated due to a modem error.
U00670	Power was cut off during communication.
U00677	There was no file to transmit in the memory transmission mode.
U00690	System error.

(2-3) U008XX error code table: Page transmission error

Error code	Description
U00800	A page transmission error occurred because of reception of a RTN or PIN signal.
U00810	A page transmission error reoccurred after retry of transmission in the ECM mode.

(2-4) U009XX error code table: Page reception error

Error code	Description
U00900	An RTN or PIN signal was transmitted because of a page reception error.
U00910	A page reception error remained after retry of transmission in the ECM mode.

(2-5) U010XX error code table: G3 transmission

Error code	Description
U01000	An FTT signal was received for a set number of times after TCF signal transmission at 2400 bps. Or, an RTN signal was received in response to a Q signal (excluding EOP) after transmission at 2400 bps.
U01001	Function of the unit differs from that indicated by a DIS signal.
U01010	No relevant signal was received after transmission of a DNL (MPS or EOM) signal, and the preset number of command retransfers was exceeded (between units of our make).
U01011	No relevant signal was received after transmission of a DCS, TCF signal, and the preset number of command retransfers was exceeded.
U01012	No relevant signal was received after transmission of an NSS1, NSS2 (TCF) signal, and the preset number of command retransfers was exceeded (between units of our make).
U01013	No relevant signal was received after transmission of an NSS3, TCF signal, and the preset number of command retransfers was exceeded (between units of our make).
U01014	No relevant signal was received after transmission of an MPS signal, and the preset number of command retransfers was exceeded.
U01015	No relevant signal was received after transmission of an EOM signal, and the preset number of command retransfers was exceeded.
U01016	An MCF signal was received but no DIS signal was received after transmission of an EOM signal, and T1 timeout was detected.
U01017	No relevant signal was received after transmission of an EOP signal, and the preset number of command retransfers was exceeded.
U01018	No relevant signal was received after transmission of a PRI-EOP signal, and the preset number of command retransfers was exceeded.
U01019	No relevant signal was received after transmission of a CNC signal, and the preset number of command retransfers was exceeded (between units of our make).
U01020	No relevant signal was received after transmission of a CTC signal, and the preset number of command retransfers was exceeded (ECM).
U01021	No relevant signal was received after transmission of an EOR.Q signal, and the preset number of command retransfers was exceeded (ECM).
U01022	No relevant signal was received after transmission of an RR signal, and the preset number of command retransfers was exceeded (ECM).
U01023	No relevant signal was received after transmission of a PSS.NULL signal, and the preset number of command retransfers was exceeded (ECM).
U01024	No relevant signal was received after transmission of a PSS.MPS signal, and the preset number of command retransfers was exceeded (ECM).
U01025	No relevant signal was received after transmission of a PPS.EOM signal, and the preset number of command retransfers was exceeded (ECM).
U01026	No relevant signal was received after transmission of a PPS.EOP signal, and the preset number of command retransfers was exceeded (ECM).
U01027	No relevant signal was received after transmission of a PPS.PRI-EOP signal, and the preset number of command retransfers was exceeded (ECM).
U01028	T5 time-out was detected during ECM transmission (ECM).
U01040	A DCN or other inappropriate signal was received during standby for DIS signal reception.
U01041	A DCN signal was received after transmission of a DNL (MPS or EOM) signal (between units of our make).
U01042	A DCN signal was received after transmission of a DCS, TCF signal.

Error code	Description
U01043	A DCN signal was received after transmission of an NSS1, NSS2 (TCF) signal (between units of our make).
U01044	A DCN signal was received after transmission of an NSS3, TCF signal (between units of our make).
U01045	A DCN or other inappropriate signal was received after transmission of an MPS signal.
U01046	A DCN or other inappropriate signal was received after transmission of an EOM signal.
U01047	A DCN or other inappropriate signal was received after transmission of an EOP signal.
U01048	A DCN signal was received after transmission of a PRI-EOP signal.
U01049	A DCN signal was received after transmission of a CNC signal (between units of our make).
U01050	A DCN signal was received after transmission of a CTC signal (ECM).
U01051	A DCN signal was received after transmission of an EOR.Q signal (ECM).
U01052	A DCN signal was received after transmission of an RR signal (ECM).
U01053	A DCN signal was received after transmission of a PPS.NULL signal (ECM).
U01054	A DCN signal was received after transmission of a PPS.MPS signal (ECM).
U01055	A DCN signal was received after transmission of a PPS.EOM signal (ECM).
U01056	A DCN signal was received after transmission of a PPS.EOP signal (ECM).
U01057	A DCN signal was received after transmission of a PPS.PRI-EOP signal (ECM).
U01070	Polarity reversal was detected during handshake.
U01071	Polarity reversal was detected during message transmission.
U01072	A break in loop current was detected during transmission.
U01073	During reverse polling in V.34 mode at the receiver unit, a CM signal was not detected when transmitting after reception.
U01080	A PIP signal was received after transmission of a PPS.NULL signal.
U01091	During transmission in V.34 mode, communication was interrupted because a PPR signal was received over 10 times even after reducing the communication speed to the minimum with the symbol speed maintained at the level of connection.
U01092	During transmission in V.34 mode, communication was interrupted because of an impossible combination of the symbol speed and communication speed.

(2-6) U011XX error code table: G3 reception

Error code	Description
U01100	Function of the unit differs from that indicated by a DCS signal.
U01101	Function of the unit (excl. communication mode select) differs from that indicated by an NSS signal.
U01102	A DTC (NSC) signal was received when no transmission data was in the unit.
U01110	No response after transmission of a DIS signal.
U01111	No response after transmission of a DTC (NSC) signal.
U01112	No training reception after reception of a DCS or NSS signal.
U01113	No response after transmission of an FTT signal.
U01114	No message reception after transmission of a CFR signal.
U01115	No message reception after transmission of an MCF signal.
U01116	No message reception after transmission of a PPR signal.
U01117	No message reception after transmission of a CTR signal.
U01118	No message reception after transmission of an ERR signal.
U01119	No further signals were received after reception of a message.
U01120	No response after transmission of an MCF signal.
U01121	No response after transmission of an RTP signal.
U01122	No response after transmission of an RTN signal.
U01123	No response after transmission of a PIP signal.
U01124	No response after transmission of a PIN signal.
U01125	No response after transmission of a CNS signal (between units of our make).
U01126	No response after transmission of a PPR signal (ECM).
U01127	No response after transmission of an ERR signal (ECM).
U01128	No response after transmission of an RNR signal (ECM).
U01129	No response after transmission of an SPA signal (short protocol).
U01140	A DCN signal was received after transmission of a DIS signal.
U01141	A DCN signal was received after transmission of a DTC signal.
U01142	A DCN signal was received after transmission of a DCS or NSS signal.
U01143	A DCN signal was received after transmission of an FTT signal.
U01144	A DCN signal was received after transmission of a CFR signal.
U01145	A DCN signal was received after reception of a message.
U01146	A DCN signal was received after transmission of an MCF signal (interoffice communication after reception of an MPS, EOM signal or confidential interoffice communication).
U01147	A DCN signal was received after transmission of an RTP signal.
U01148	A DCN signal was received after transmission of an RTN signal.
U01149	A DCN signal was received after transmission of a PIP signal.
U01150	A DCN signal was received after transmission of a PIN signal.
U01151	A DCN signal was received after transmission of a PPR signal (ECM).
U01152	A DCN signal was received after transmission of a CTR signal (ECM).
U01153	A DCN signal was received after transmission of an ERR signal (ECM).

Error code	Description
U01154	A DCN signal was received after transmission of an RNR signal (ECM).
U01155	A DCN signal was received after transmission of an SPA signal (short protocol).
U01160	During message reception, transmission time exceeded the maximum transmission time per line.
U01161	Number of error lines exceeded limits during message reception.
U01162	A break in loop current was detected during message reception.
U01163	Polarity reversal was detected during message reception.
U01164	One page length exceeded the specified length during message reception.
U01170	A decoding error occurred during MMR message reception.
U01172	During reverse polling in V.34 mode at the transmitting unit, a JM signal was not detected after transmission of a CM signal when receiving after transmission.
U01191	Communication was interrupted because an error occurred during an image data reception sequence in the V.34 mode.
U01199	A DIS signal with different FIF was received after transmission of a DIS signal.

(2-7) U017XX error code table: V.34 transmission

Error code	Description
U01700	A communication error occurred in phase 2 (line probing).
U01720	A communication error occurred in phase 4 (modem parameter exchange).
U01721	Operation was interrupted due to the absence of a common communication speed between units.

U01700: A communication error that occurs at the transmitting unit in the period after transmission of INFO0 before entering phase 3 (primary channel equivalent device training). For example, INFO0/A/Abar (B/Bbar, for polling transmission)/INFOh was not detected.

U01720: A communication error that occurs at the transmitting unit in the period after initiating the control channel before entering the T.30 process. For example, PPh/ALT/MPh/E was not detected.

U01721: In the absence of a common communication speed between units (including when an impossible combination of communication speed and symbol speed occurs) after MPh exchange; 1) a DCN signal was received from the destination unit, and the line was cut; or 2) a DIS (NSF, CSI) signal was received from the destination unit and, in response to the signal, the unit transmitted a DCN signal, and the line was cut.

(2-8) U018XX error code table: V.34 reception

Error code	Description
U01800	A communication error occurred in phase 2 (line probing).
U01810	A communication error occurred in phase 3 (primary channel equivalent device training).
U01820	A communication error occurred in phase 4 (modem parameter exchange).
U01821	Operation was interrupted due to the absence of a common communication speed between units.

U01800: A communication error that occurs at the receiver unit in the period after transmission of INFO0 before entering phase 3 (primary channel equivalent device training). For example, INFO0/B/Bbar (A/Abar, for polling reception)/probing tone was not detected.

U01810: A communication error that occurs at the receiver unit in phase 3 (primary channel equivalent device training). For example, S/Sbar/PP/TRN was not detected.

U01820: A communication error that occurs at the receiver unit in the period after initiating the control channel before entering the T.30 process. For example, PPh/ALT/MPh/E was not detected.

U01821: In the absence of a common communication speed between units (including when an impossible combination of communication speed and symbol speed occurs) after MPh exchange, a DCN signal was transmitted to the destination unit and the line was cut.

(2-9) U023XX error code table: Relay command abnormal reception

Error code	Description
U02303	Timeout was detected before a correct DNL signal was received.
U02304	A signal other than MPS or EOM signal was received after a DNL signal was received.

(2-10) U044XX error code table: Encrypted transmission

Error code	Description
U04400	Encrypted transmission was interrupted because encryption keys did not agree.
U04401	Calling failed during encrypted transmission because the encryption key was not registered.

1-4-7 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/pass- word.	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 num- ber.	Enter the correct port number.
		Network is not connected.	Check if the server is operating properly. Check the network connection (cable. net- work condition within LAN, etc.).
2102	Error: Can not connect with timeout	The server is unable to com- municate.	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 com- municate.	Check if the server is operating properly.
2201	Error: Network transfer	Error occurs on the network.	Check the network connection (cable. net- work condition within LAN, etc.).
2202	Error: Network transfer with timeout	Error occurs on the network.	Check the network connection (cable. net- work condition within LAN, etc.).
2203	Error: Response wait with timeout	Response is not returned from the server above speci- fied time.	Check the network connection (cable. net- work 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 lamp is off before turning off the main power switch. And then unplug the power cable from the wall outlet.

When the 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.

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

Take care not to get the cables caught.

To reassemble the parts, use the original screws. If the types and the sizes of screws are not known, refer to the PARTS LIST.

(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 -20°C/-4°F and 40°C/104°F and at a relative humidity not higher than 90% 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.

(4) How to tell a genuine Kyocera Mita toner container

As a means of brand protection, the Kyocera Mita toner container utilizes an optical security technology to enable visual validation. A validation viewer is required to accomplish this.

Hold the validation viewer over the left side part of the brand protection seal on the toner container. Through each window of the validation viewer, the left side part of the seal should be seen as follows:

A black-colored band when seen through the left side window (●)

A shiny or gold-colored band when seen through the right side window (☀)

The above will reveal that the toner container is a genuine Kyocera Mita branded toner container, otherwise, it is a counterfeit.

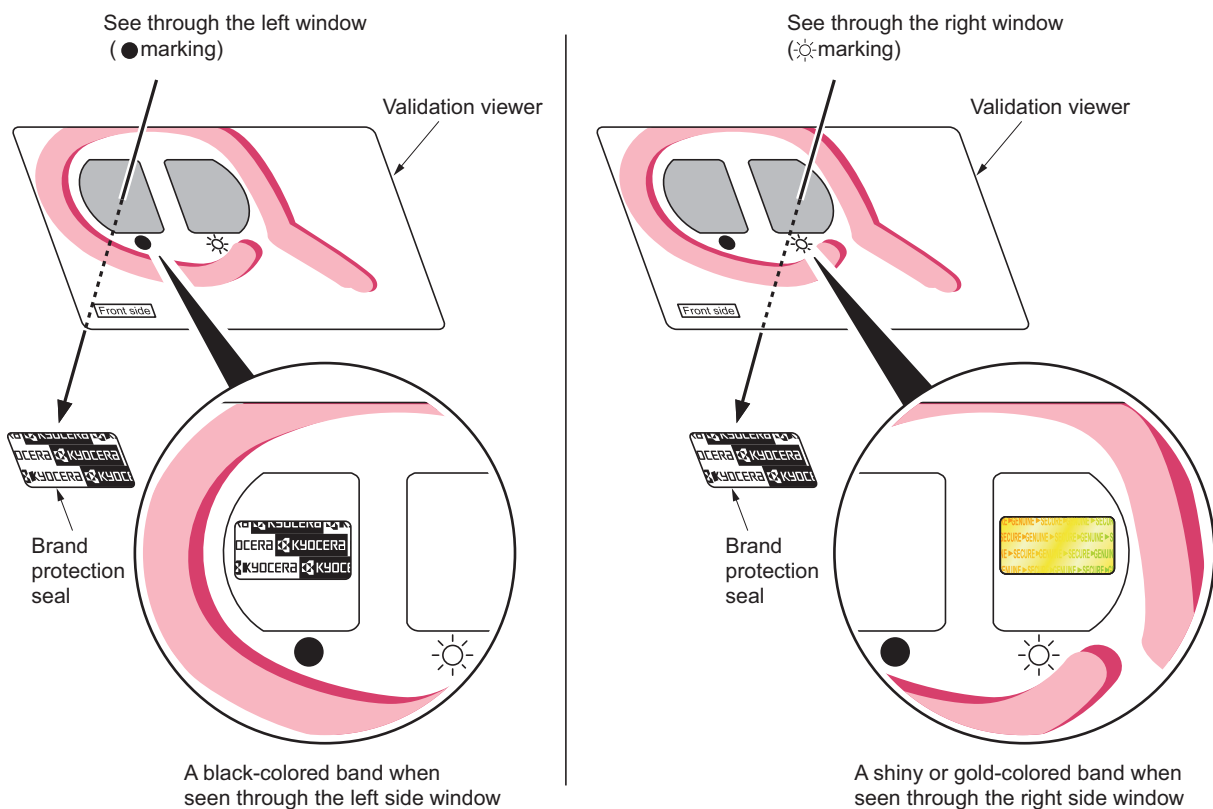


Figure 1-5-1

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

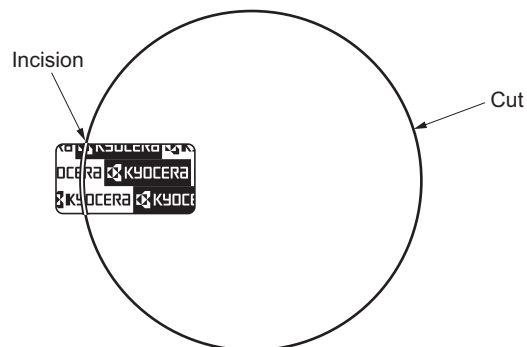


Figure 1-5-2

1-5-2 Outer covers

(1) Detaching and refitting the left cover and right cover

Procedure

1. Remove the screw.
2. Unhook four hooks and then remove the rear upper cover.

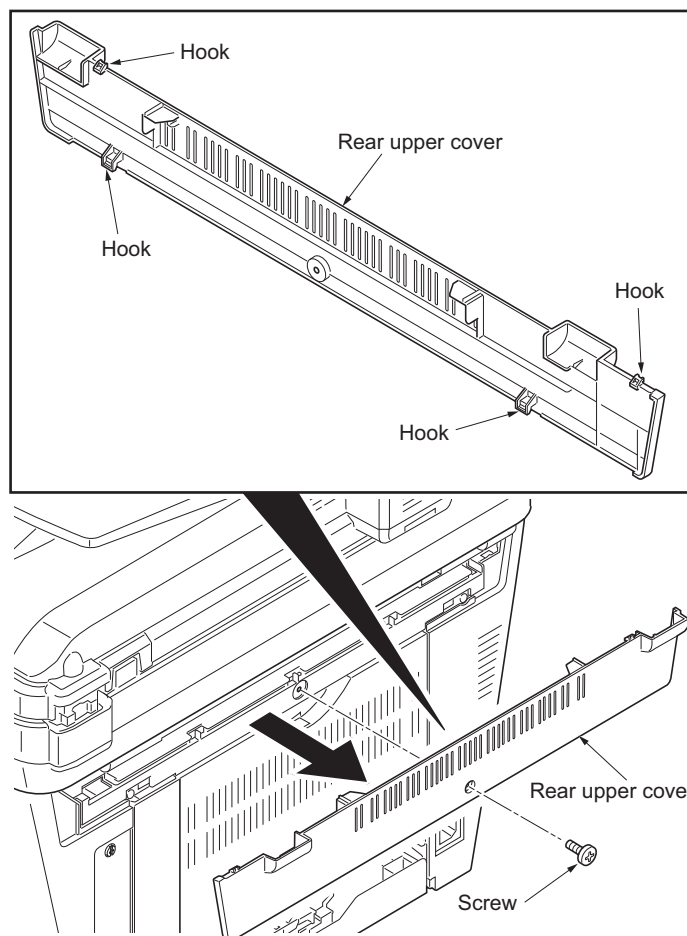


Figure 1-5-3

3. Remove the cassette (See page 1-5-6).
4. Open the front cover.
5. Unhook the hook and then remove the controller box cover.

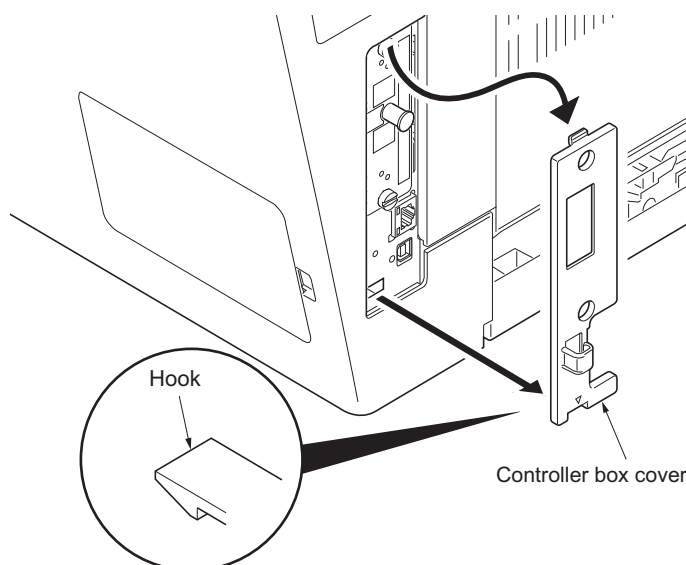


Figure 1-5-4

6. Unhook seven hooks and then remove the right cover.

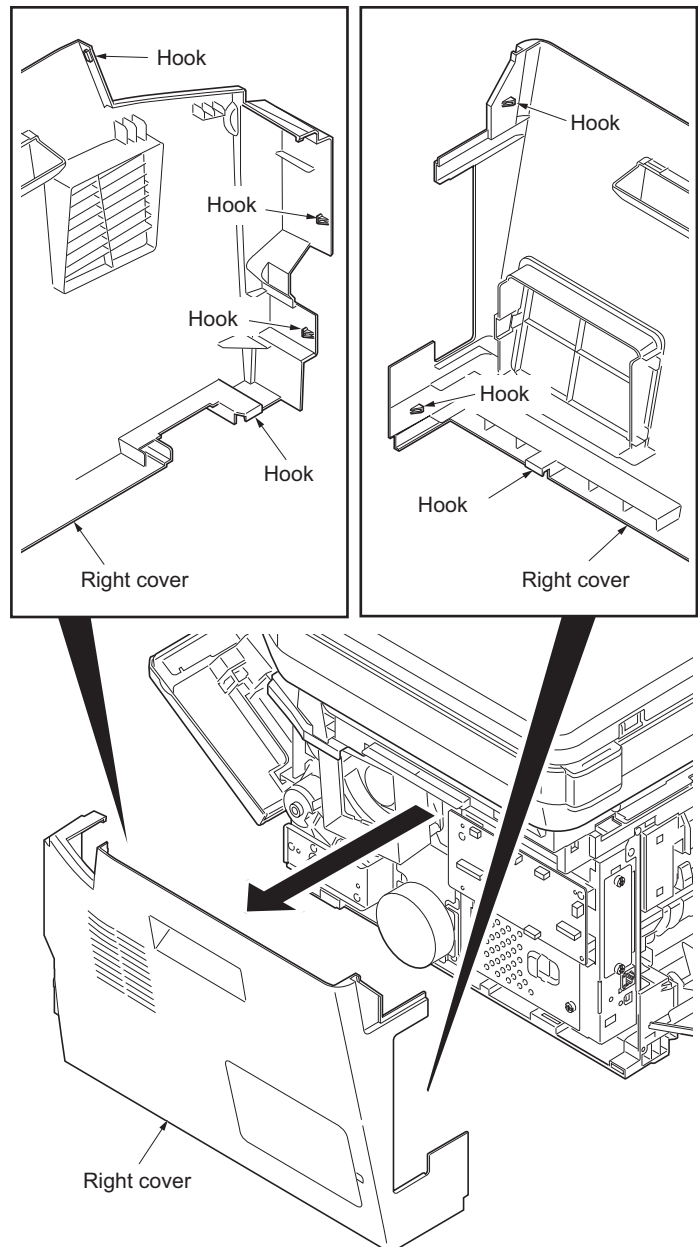


Figure 1-5-5

7. Unhook six hooks and then remove the left cover.

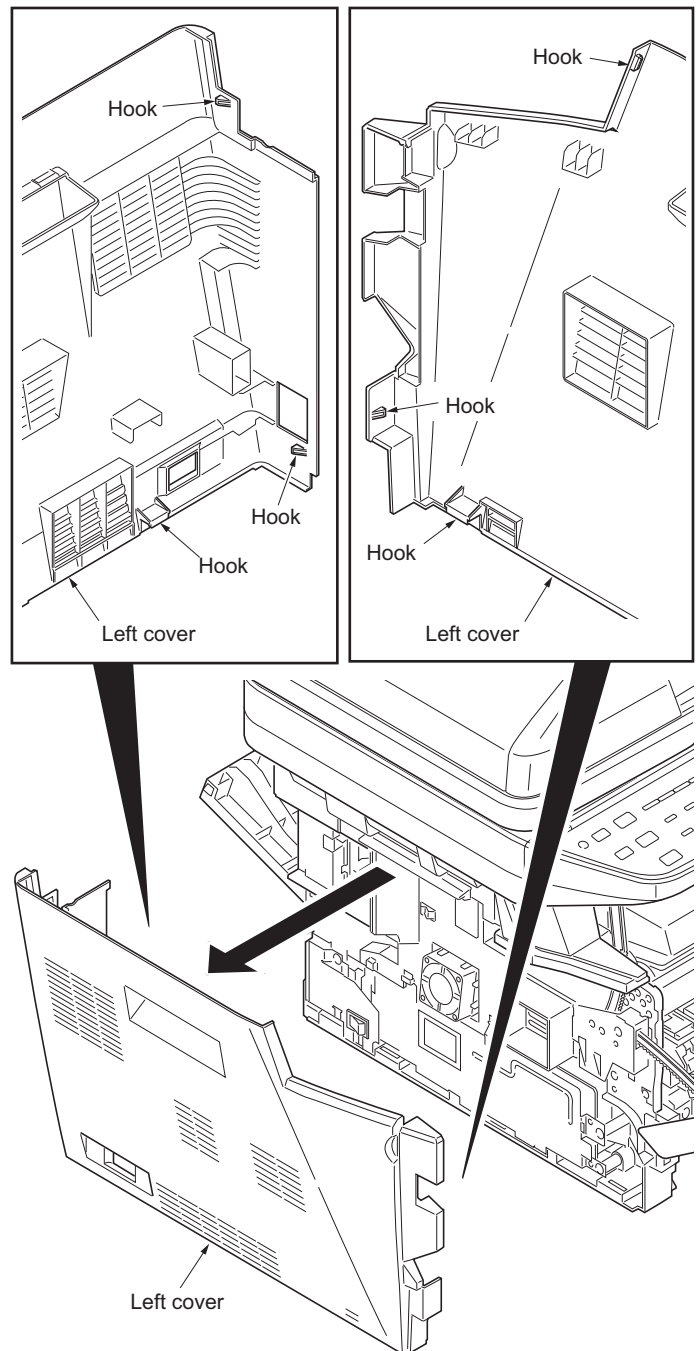


Figure 1-5-6

1-5-3 Paper feed section

(1) Detaching and refitting the paper feed assembly (paper feed roller and pickup roller)

Procedure

1. Remove the cassette.

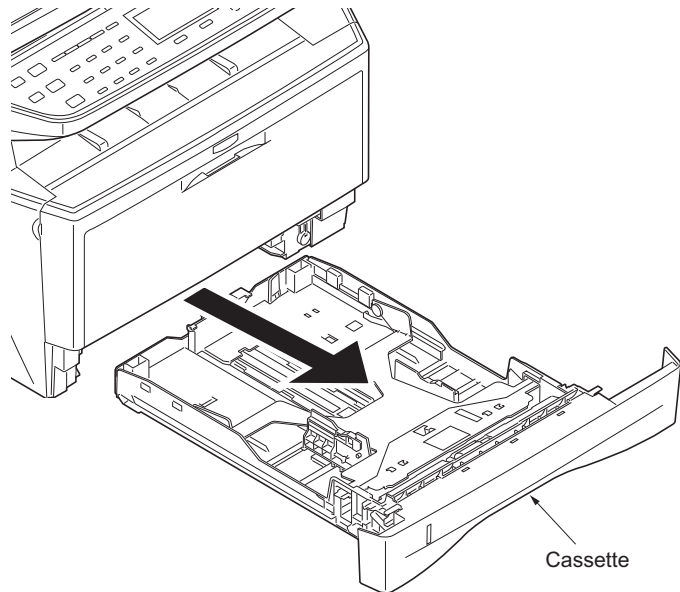


Figure 1-5-7

2. Slide the feed shaft.
3. While pressing the lever and then remove the paper feed roller assembly.

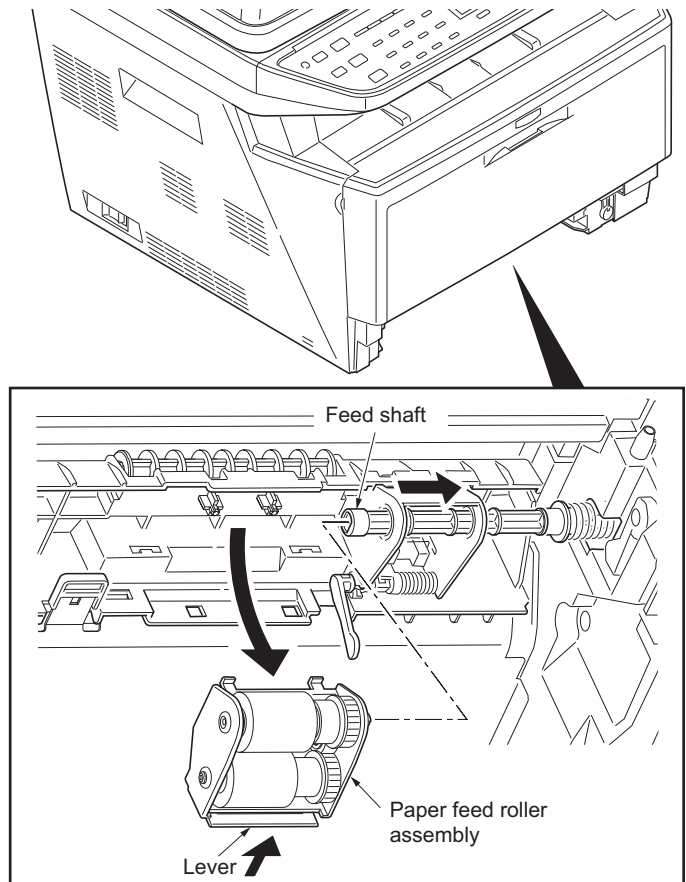


Figure 1-5-8

4. Check or replace the paper feed roller assembly and refit all the removed parts.

When refitting the paper feed roller assembly, be sure to align the paper feed roller pivot with the slotted hole on the feed shaft.

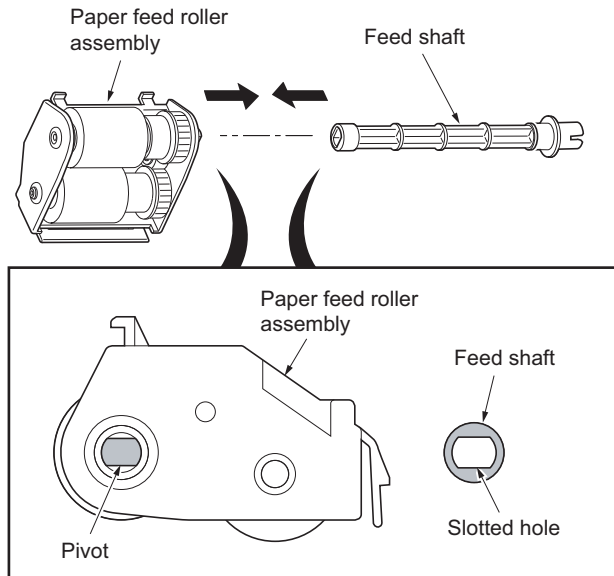
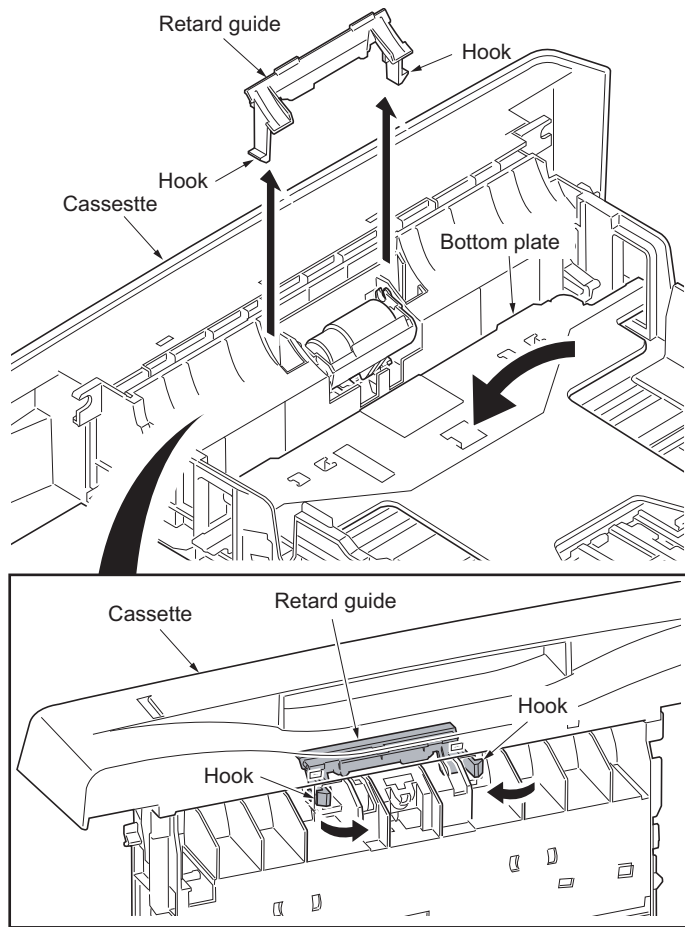


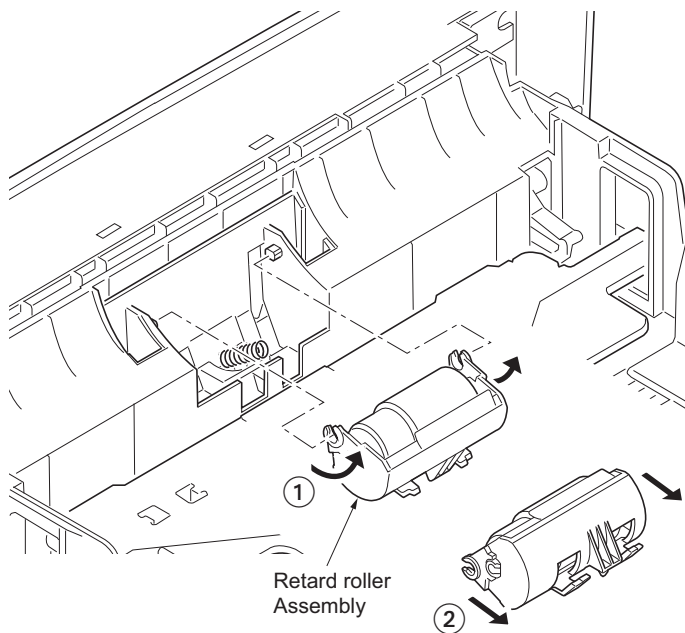
Figure 1-5-9

(2) Detaching and refitting the retard roller assembly**Procedure**

1. Remove the cassette (See page 1-5-6).
2. Push the bottom plate down until it locks.
3. Unhook two hooks and then remove the retard guide.

**Figure 1-5-10**

4. Remove the retard roller assembly.

**Figure 1-5-11**

5. Check or replace the retard roller assembly and refit all the removed parts.

Caution: Before refitting the retard roller assembly, firmly install the spring onto the projection of the retard roller assembly.

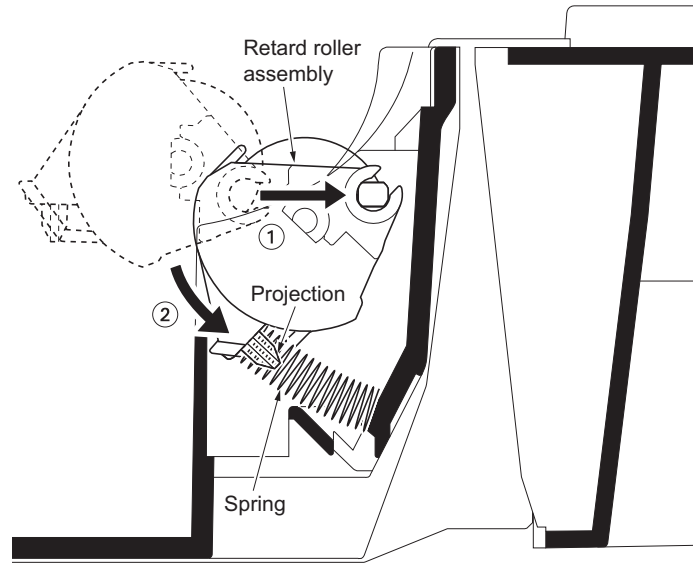
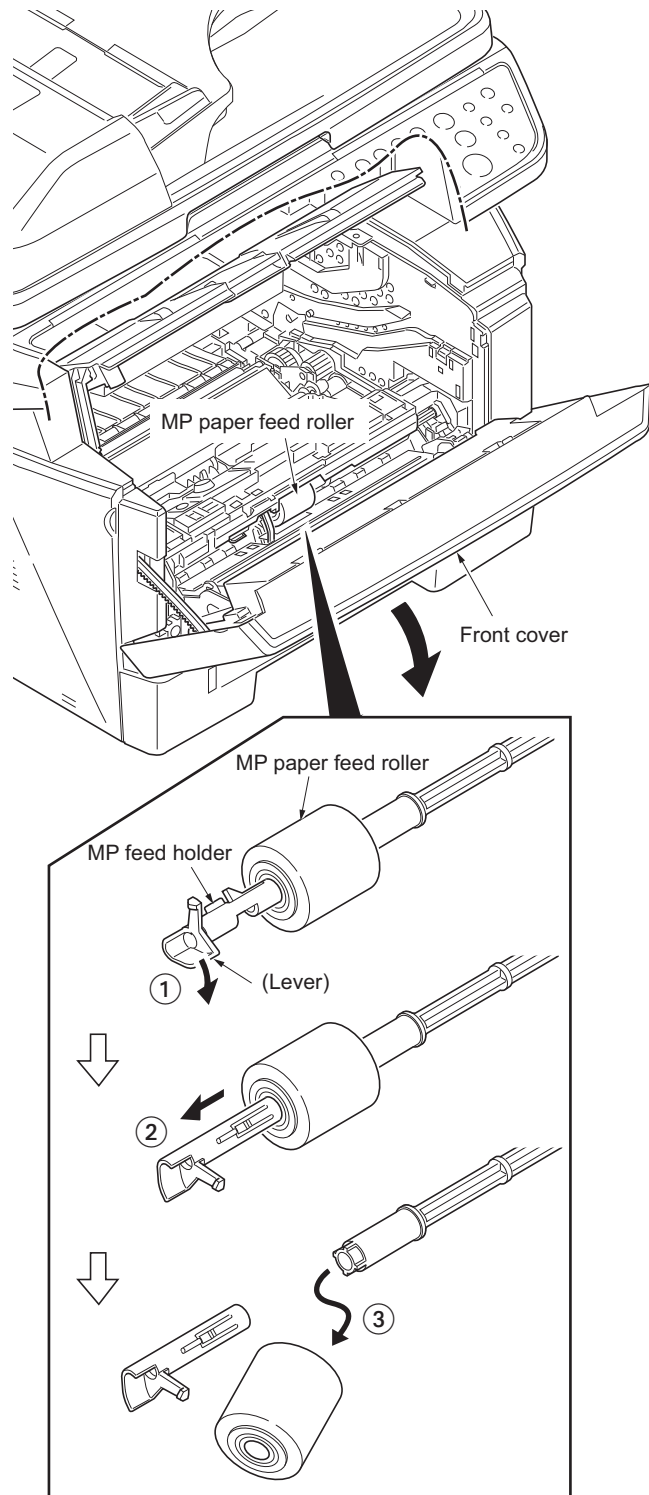


Figure 1-5-12

(3) Detaching and refitting the MP paper feed roller**Procedure**

1. Open the front cover.
2. Pull the MP feed holder (lever) down. 1
3. Slide the MP feed holder. 2
4. Remove the MP paper feed roller. 3

**Figure 1-5-13**

5. Check or replace the MP paper feed roller and refit all the removed parts.

When refitting the MP paper feed roller, be sure to align the paper feed roller pivot with the slotted hole on the MPF feed shaft.

When refitting the MP paper feed roller, be sure to align the MPF feed shaft pivot with the slotted hole on the MP paper feed roller.

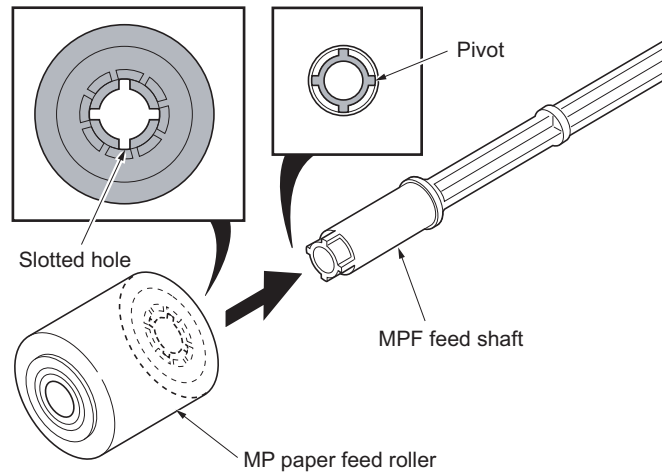
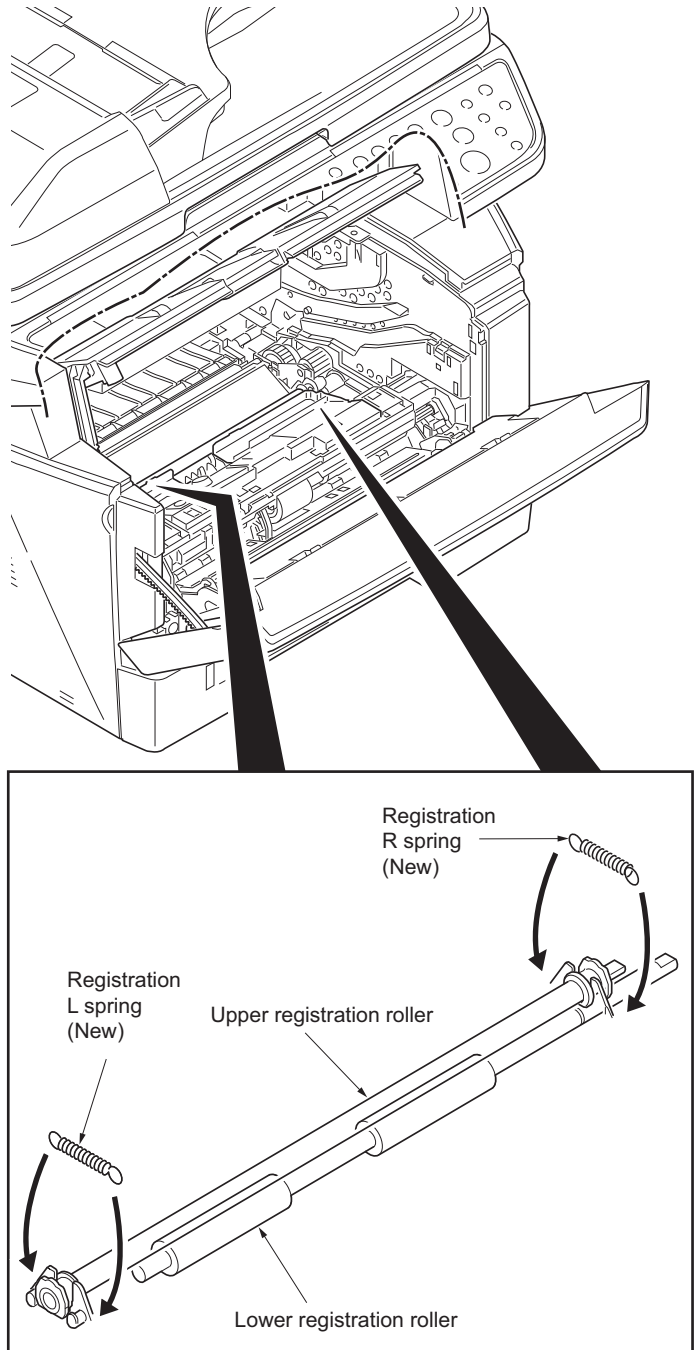


Figure 1-5-14

(4) Note on removing and Installing the upper registration roller and lower registration roller

When reinstalling the upper registration roller or lower registration roller, be sure to use a new registration L spring and registration R spring. Otherwise, paper feeding may be deteriorated due to the spring hooks possibly being distorted during the spring is unhooked.

**Figure 1-5-15**

1-5-4 Optical section

(1) Detaching and refitting the DP

Procedure

1. Pull the DP out.

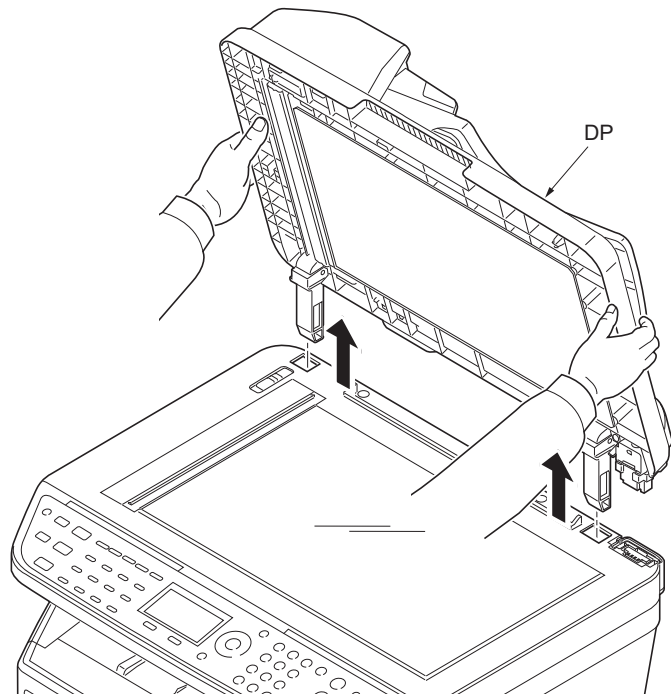
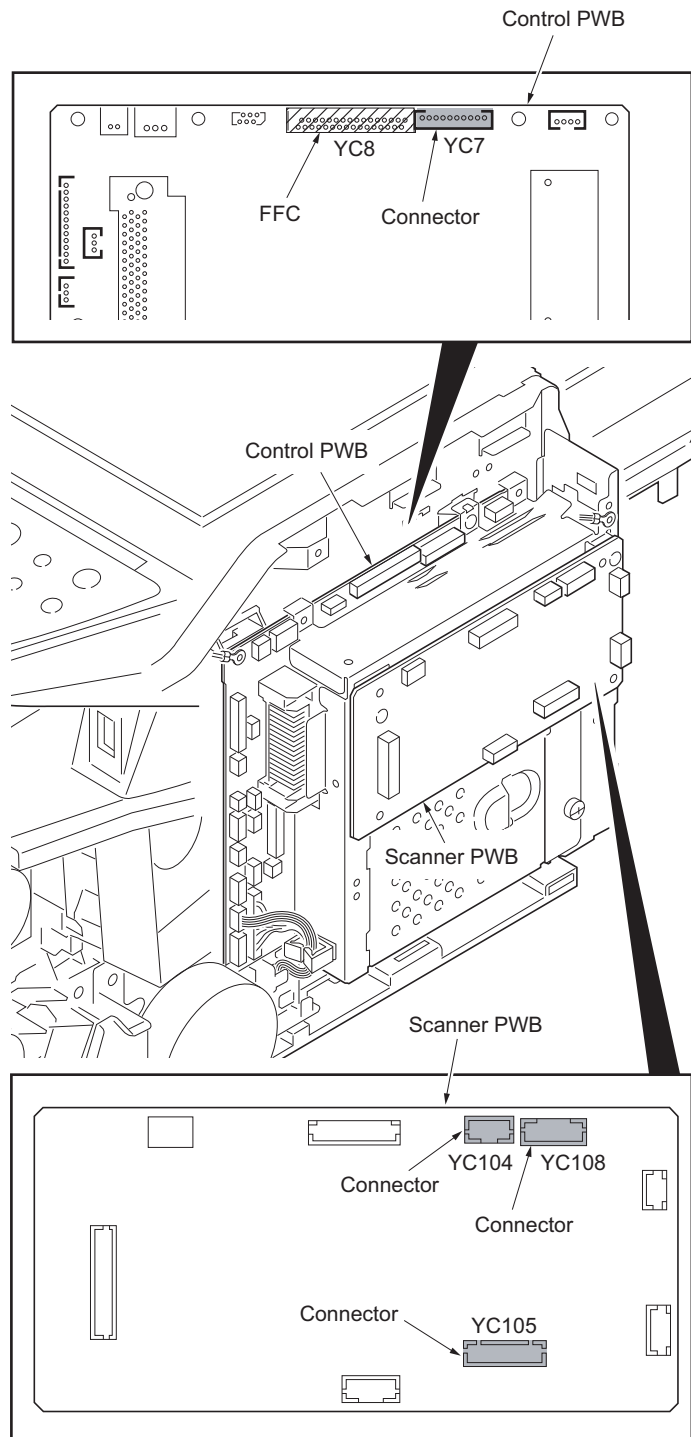


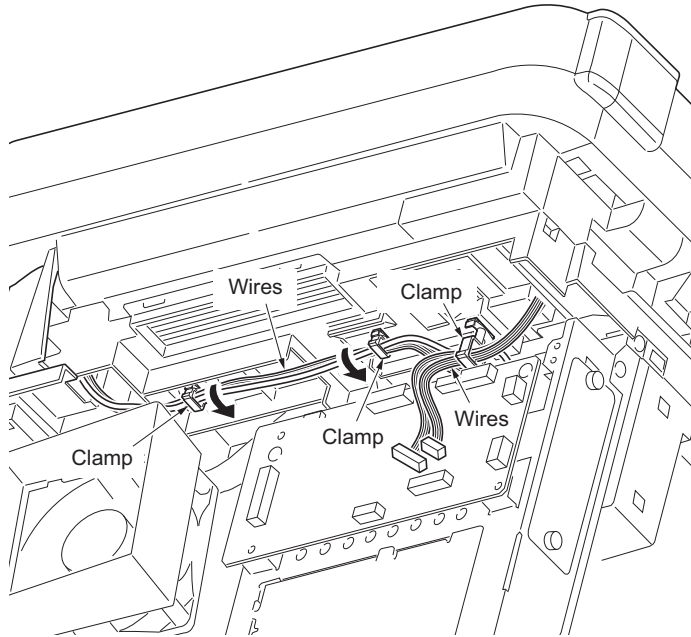
Figure 1-5-16

(2) Detaching and refitting the scanner unit**Procedure**

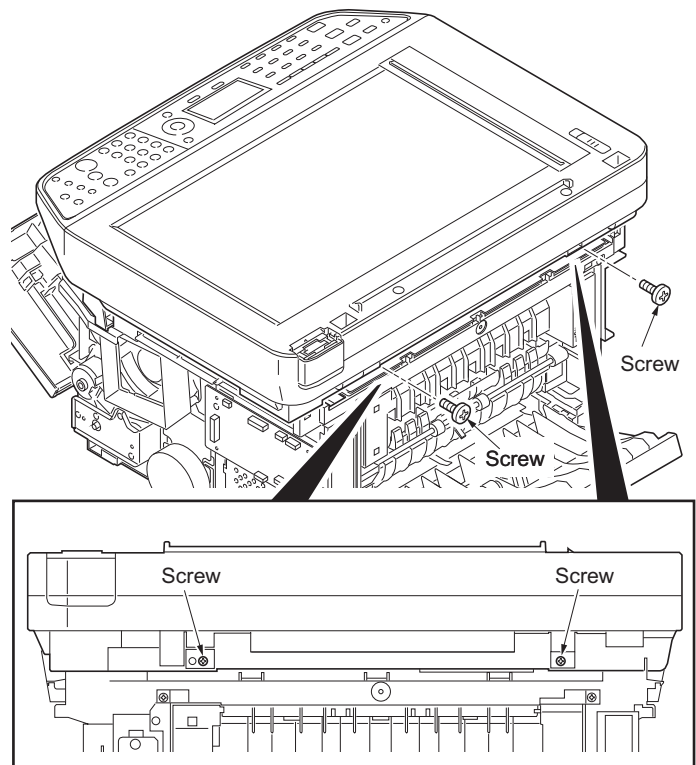
1. Remove the DP (See page 1-5-13).
2. Remove the left cover and right cover (See page 1-5-3).
3. Remove the FFC and connector from the control PWB.
4. Remove three connectors from the scanner PWB.

**Figure 1-5-17**

5. Release three clamps and then remove the wires.

**Figure 1-5-18**

6. Remove two screws.

**Figure 1-5-19**

7. Unhook four hooks and then remove the scanner unit.

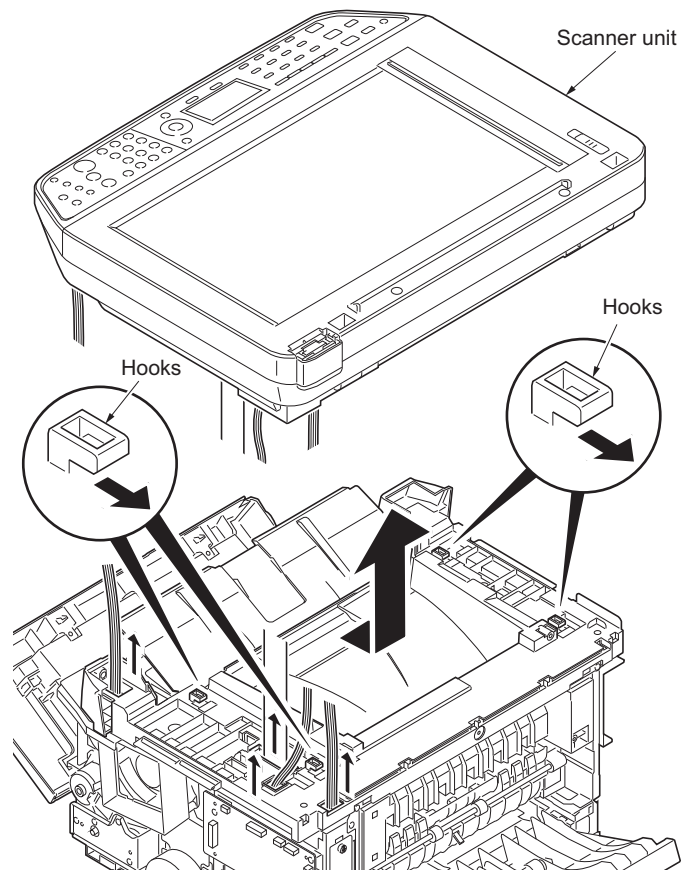


Figure 1-5-20

(3) Detaching and refitting the laser scanner unit (LSU)

Procedure

1. Remove the scanner unit (See page 1-5-14).
2. Remove the screw and then remove the grounding terminal.
3. Remove two connectors from the control PWB.

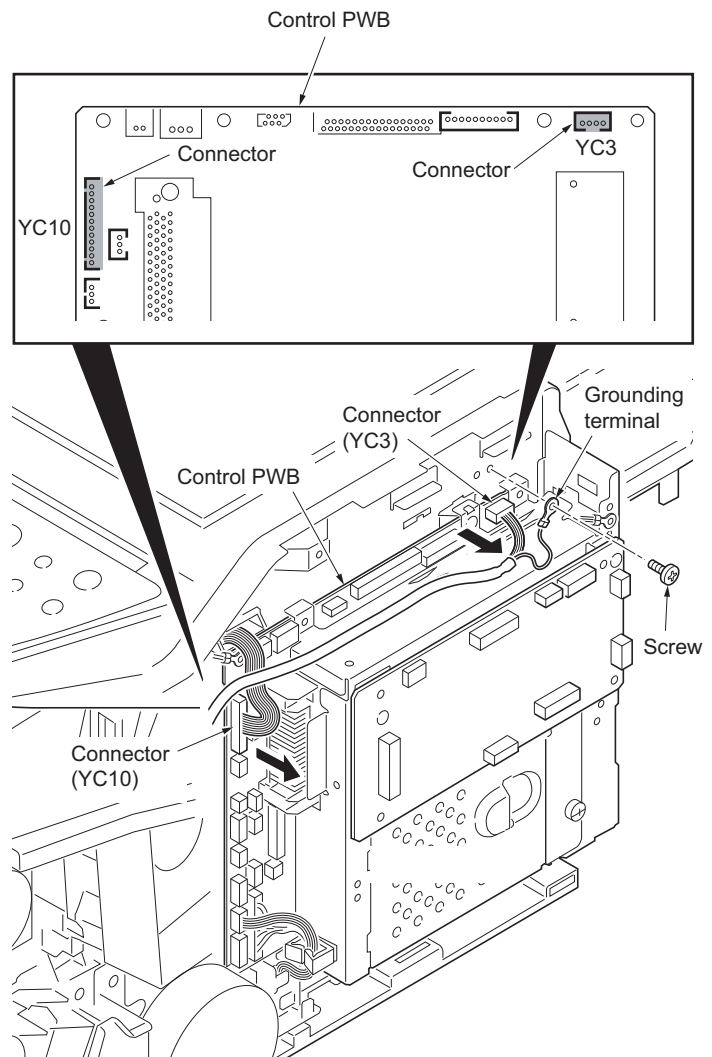


Figure 1-5-21

4. Remove the wires from three clamps.
5. Remove the connector from the power source PWB.

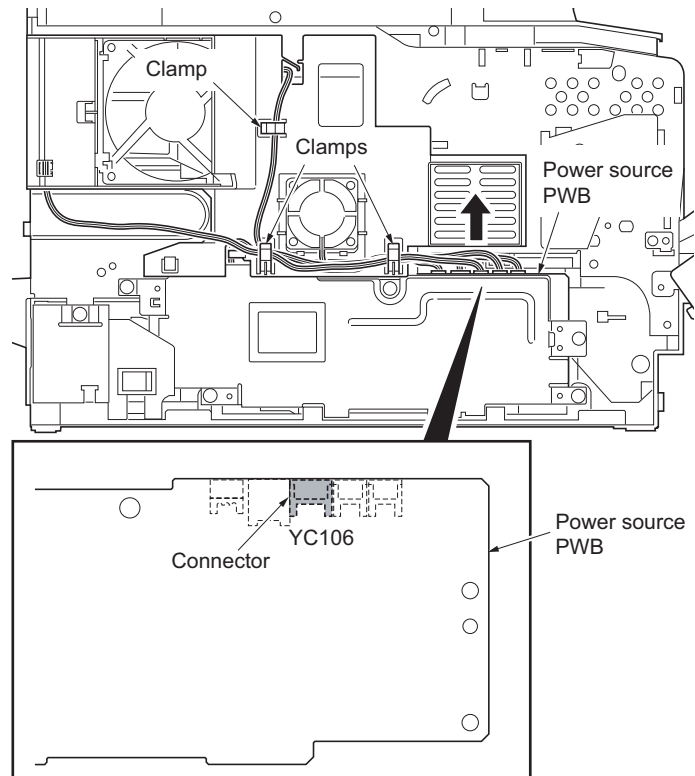


Figure 1-5-22

6. Unhook four hooks and then remove the frame left duct.
7. Remove the wires from the clamp.

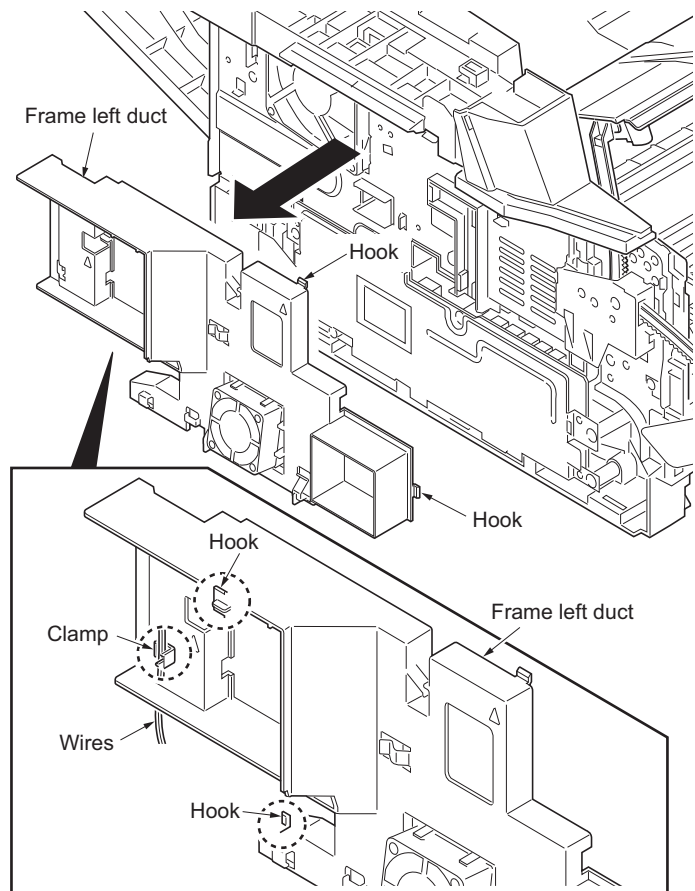
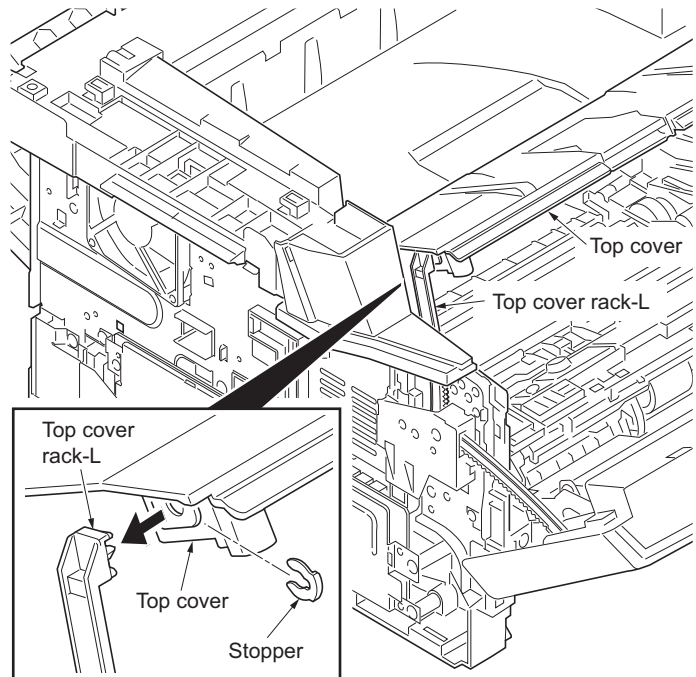
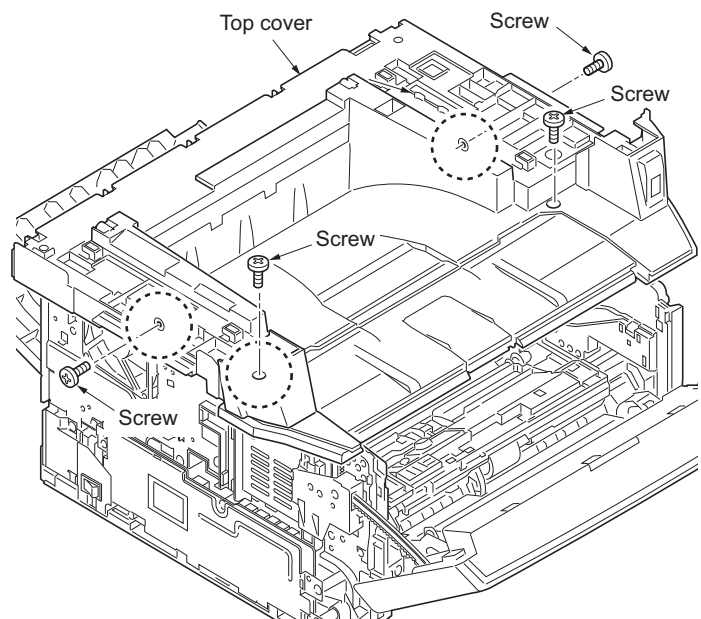


Figure 1-5-23

8. Remove the stopper and then remove the top cover rack-L from the top cover.

**Figure 1-5-24**

9. Remove four screws from the top cover.

**Figure 1-5-25**

10. Unhook two hooks and then remove the top cover.
11. Remove the connector.

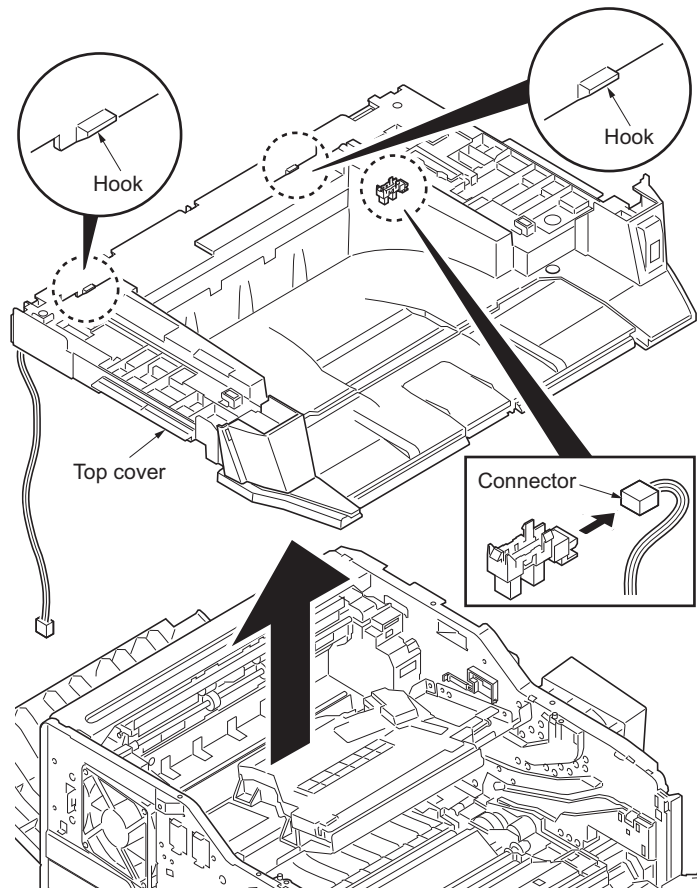


Figure 1-5-26

12. Release the clamp and then pull out the wires.
13. Remove four screws and then remove the laser scanner unit (LSU).
14. Check or replace the laser scanner unit (LSU) and refit all the removed parts.

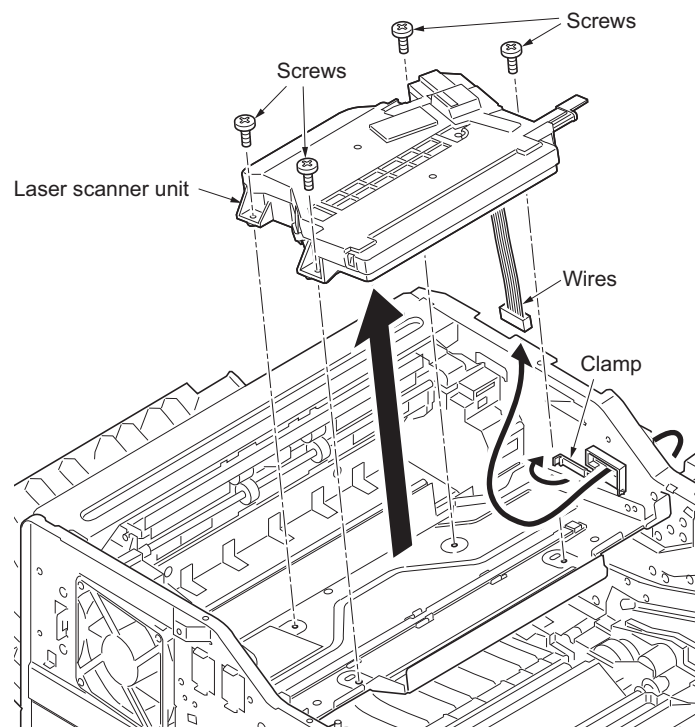


Figure 1-5-27

(4) Replacing the image scanner unit (ISU)

Procedure

Removing the image scanner unit (ISU)

1. Remove the DP (See page 1-5-13).
2. Unhook two hooks by using a flat screwdriver from the pits.
3. Remove the connector and then remove the operation panel.

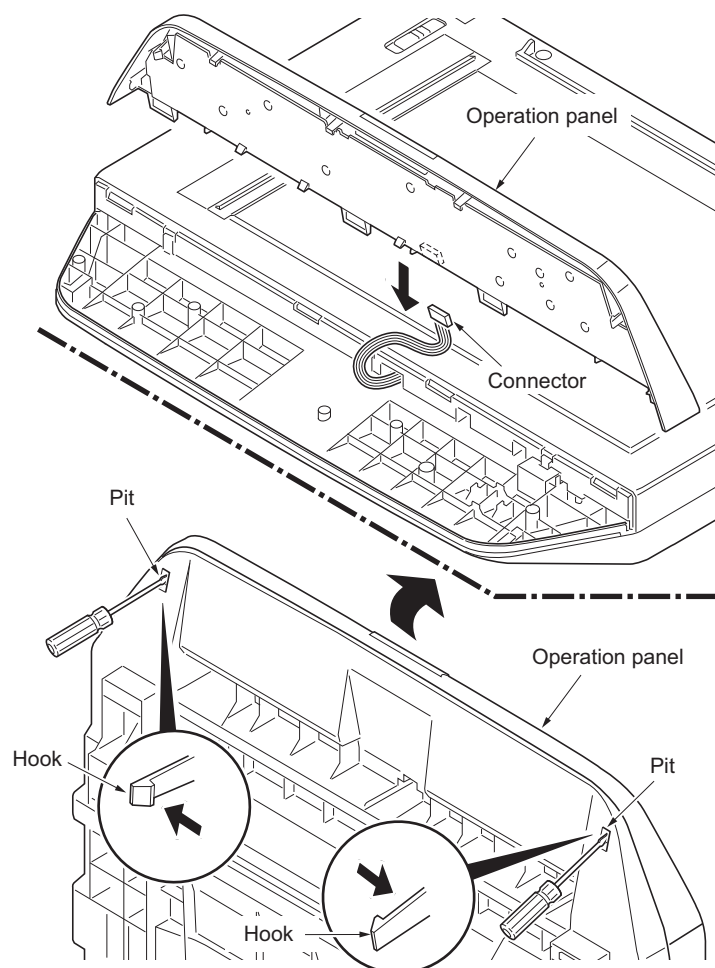


Figure 1-5-28

4. Remove two screws.
5. Unhook three hooks and then remove the ISU upper frame.

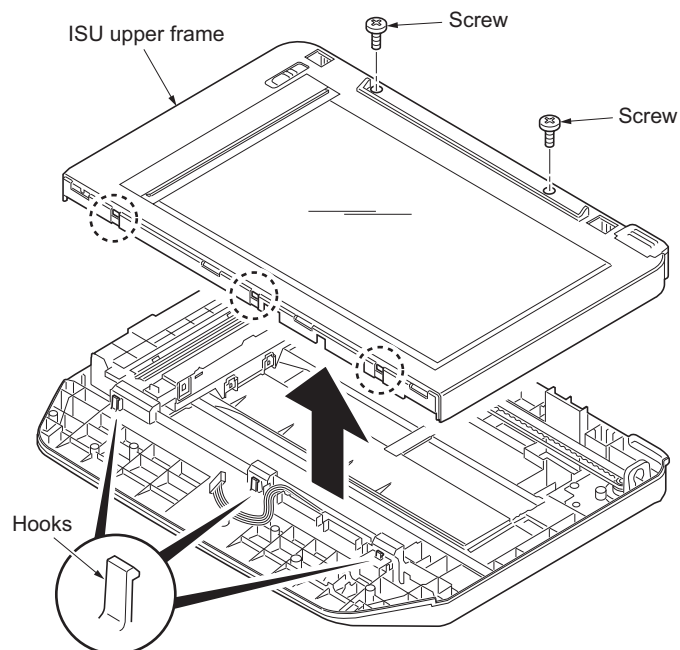


Figure 1-5-29

6. Move the image scanner unit (ISU) in the middle of the ISU shaft.
7. Detach the ISU shaft from the holder by lifting it.
8. Pull the ISU shaft out from the ISU.

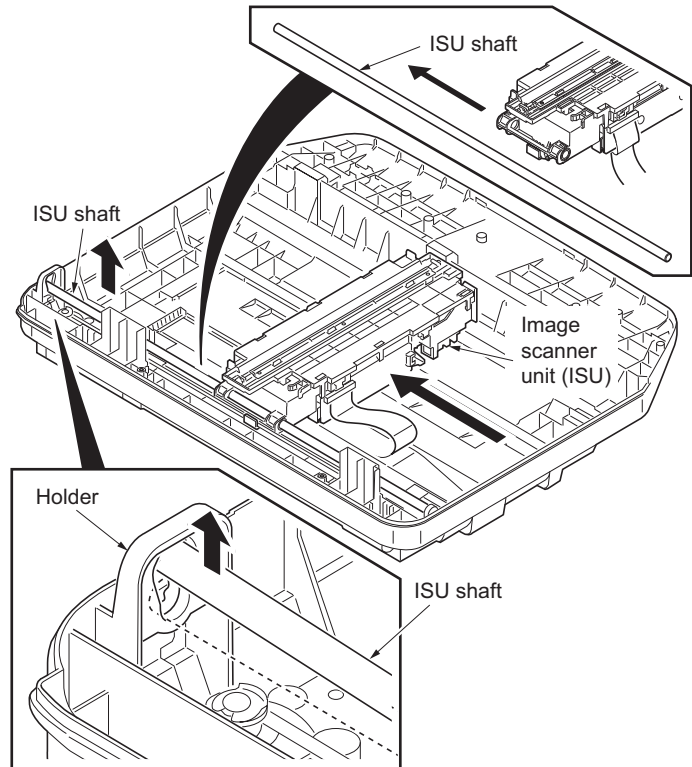


Figure 1-5-30

9. Remove the ISU belt from the tension pulley and ISU gear 63/32.
10. Remove the ISU belt from the hooks of the ISU.

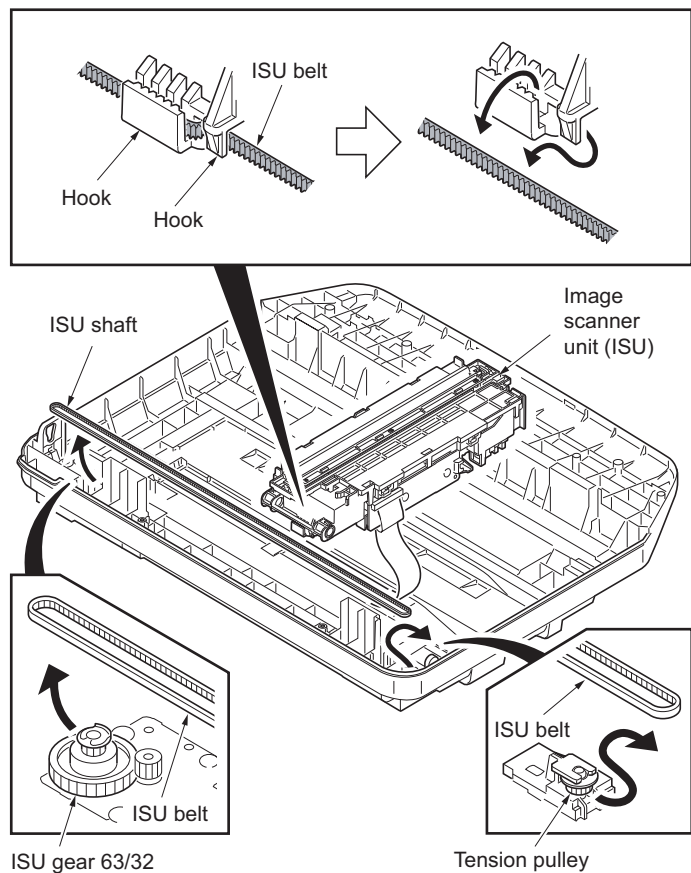


Figure 1-5-31

11. Remove the FFC center stopper.

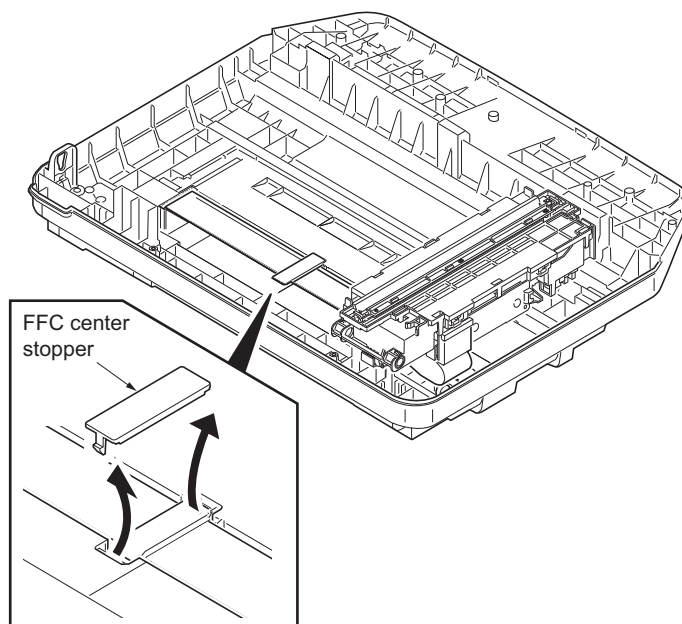


Figure 1-5-32

- 12. Remove the FFC from the FFC tape D.
- 13. Remove the ferrite core from the pit.
- 14. Remove the FFC from the FFC tape A.

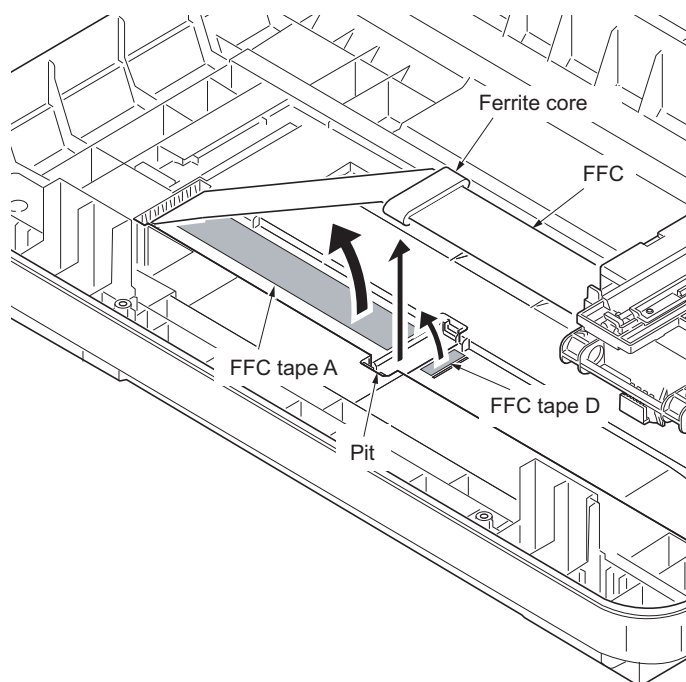


Figure 1-5-33

15. Fold the end of the FFC and then pull the FFC out from the ISU lower frame.
16. Remove the FFC tape D and A from the ISU lower frame.
17. Clean the adhesive residue of the FFC tape D and A.

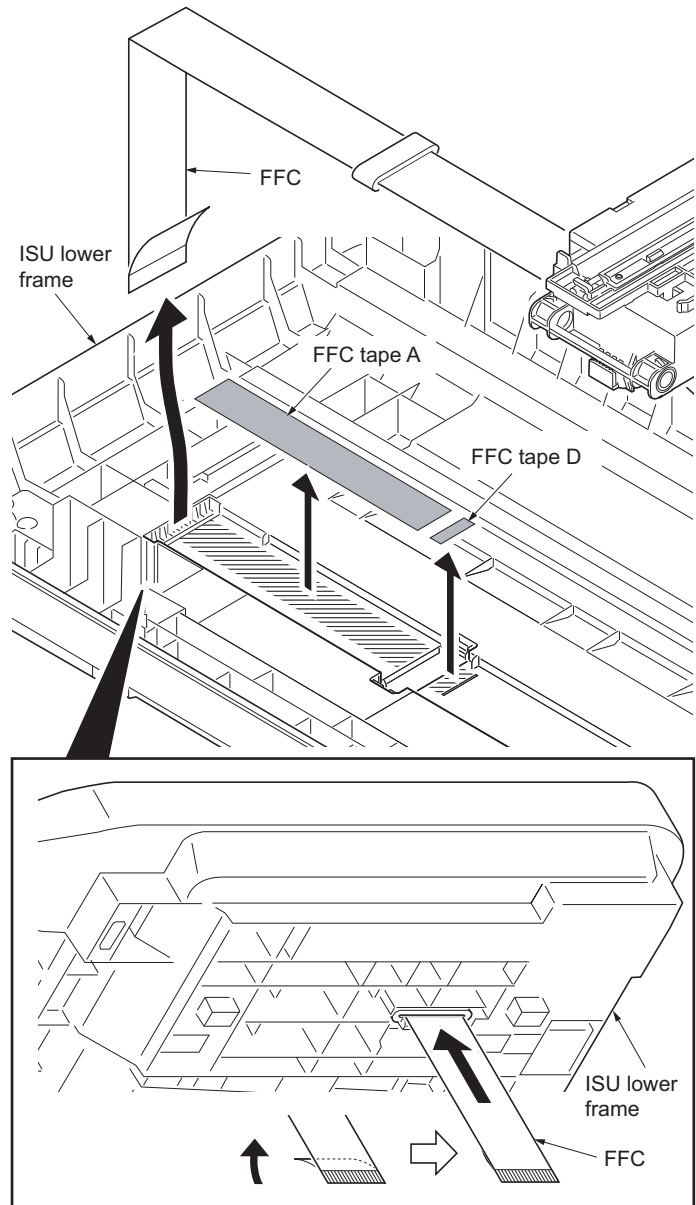


Figure 1-5-34

18. Remove the ferrite core from the FFC.

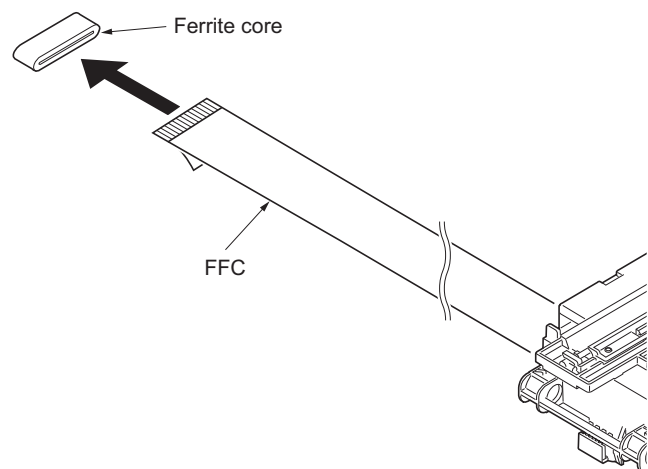
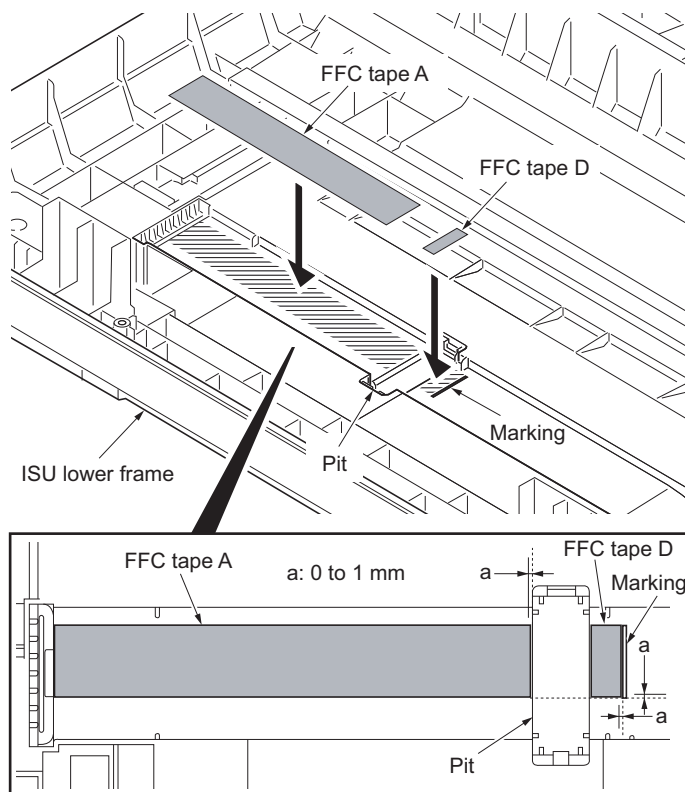


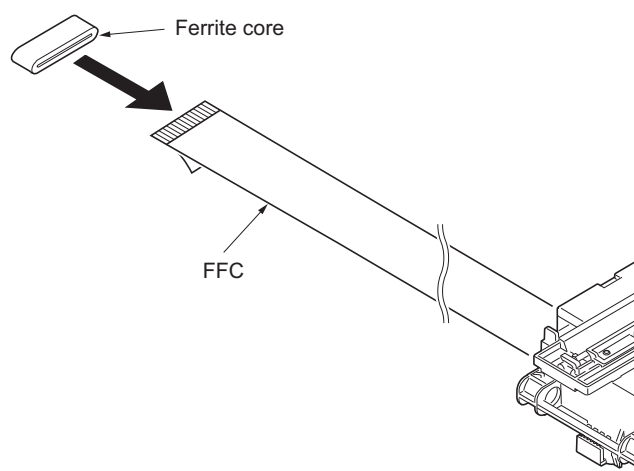
Figure 1-5-35

Installing the image scanner unit (ISU)

19. Peel off the protective seal on one side from the FFC tape D.
20. Stick the FFC tape D on the ISU lower frame, aligned with the marking of the frame.
(Sticking standards: See right figure)
21. Peel off the protective seal on the other side of the FFC tape A.
22. Stick the FFC tape A on the ISU lower frame.
(At the right for how to correctly stick the tape in position, see the figure.)

**Figure 1-5-36**

23. Fix the ferrite core onto the FFC.

**Figure 1-5-37**

24. Peel off the protective seal from the FFC tape D.
25. Align the line marking on the FFC with the rib on the ISU lower frame, then fix the FFC to the FFC tape D.
26. Install the ferrite core in the pit.
27. Peel off the released paper from the FFC tape A.
28. Stick the FFC on the FFC tape A.

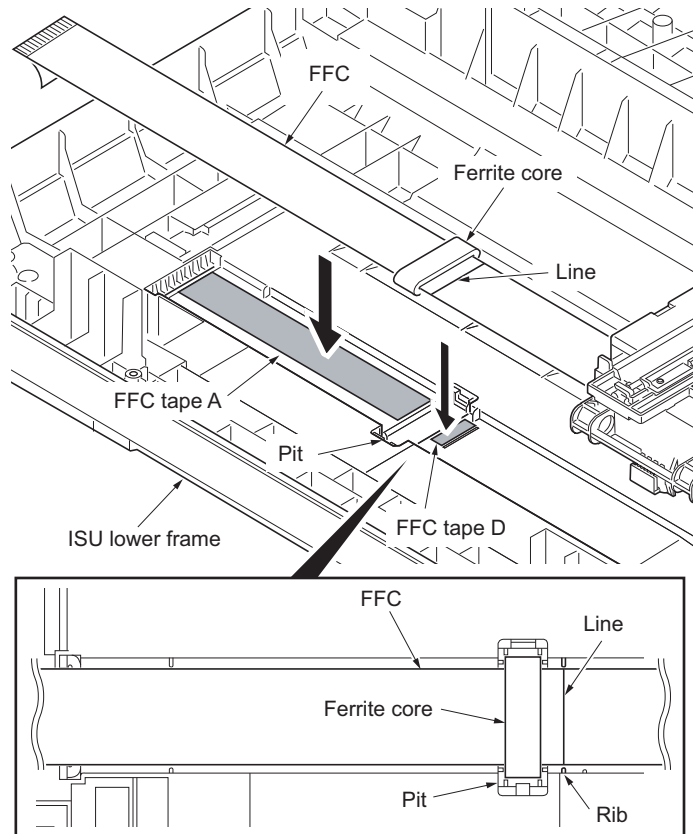


Figure 1-5-38

29. Thread an end of the FFC through the ISU lower frame.
30. Refer to the step 11 to 1 and refit all the removed parts.

NOTE:
When the replacing the image scanner unit (ISU), perform following maintenance modes.

1. U425 Setting the target (see page 1-3-49)
2. U411 Adjusting the scanner automatically (see page 1-3-48)

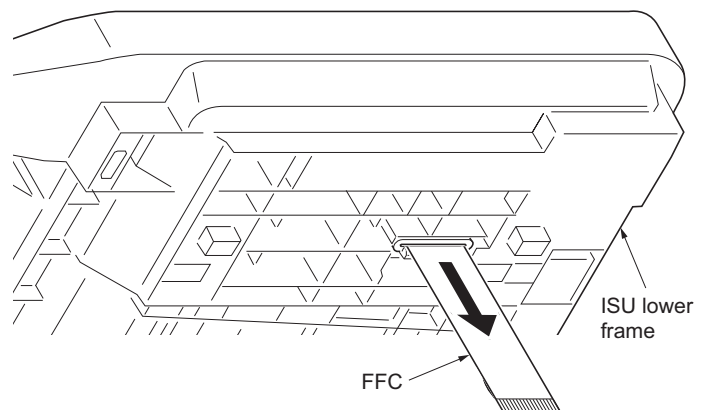
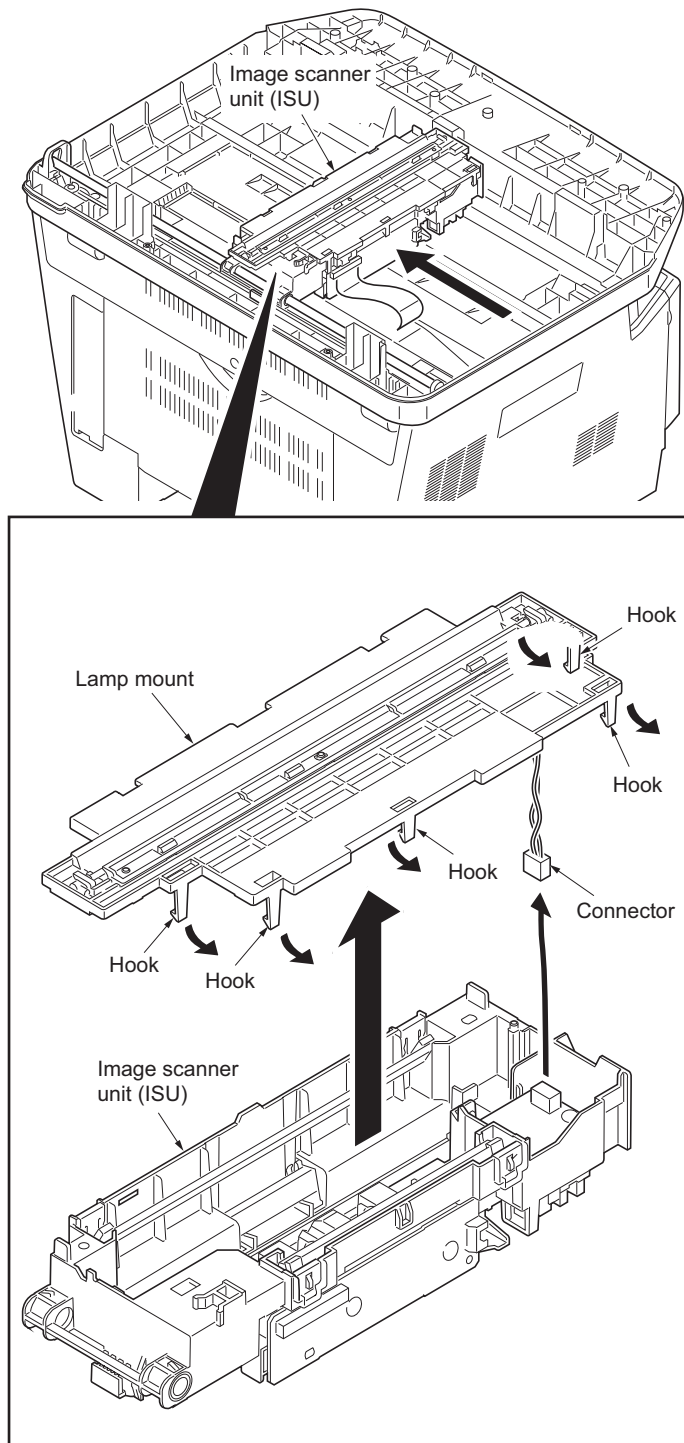


Figure 1-5-39

(5) Detaching and refitting the exposure lamp and inverter PWB**Procedure**

1. Remove the DP (See page 1-5-13).
2. Move the image scanner unit (ISU) unit to the center.
3. Unhook five hooks and then remove the lamp mount.
4. Remove the connector.

**Figure 1-5-40**

5. Remove the connector.
6. Remove the screw and then remove the inverter PWB.
7. Check or replace the inverter PWB and refit all the removed parts.

Caution: Replace F1 with a fuse rated 250 V ac, 0.75 A, non-time delay, (when F1 fuse is replaced.)

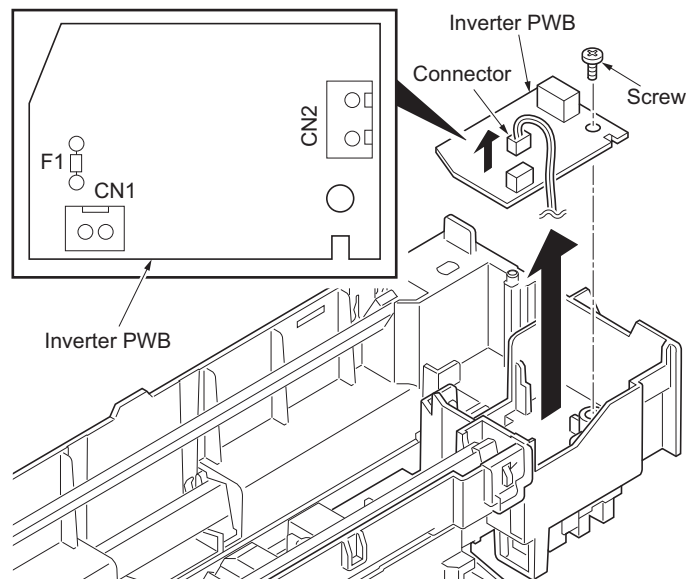


Figure 1-5-41

8. Unhook three hooks and then remove the ISU reflector.

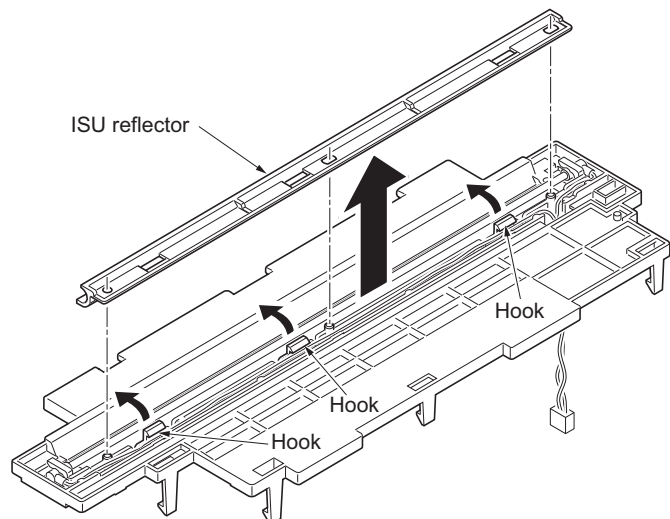


Figure 1-5-42

9. Remove the exposure lamp from the holders.
10. Check or replace the exposure lamp and refit all the removed parts.

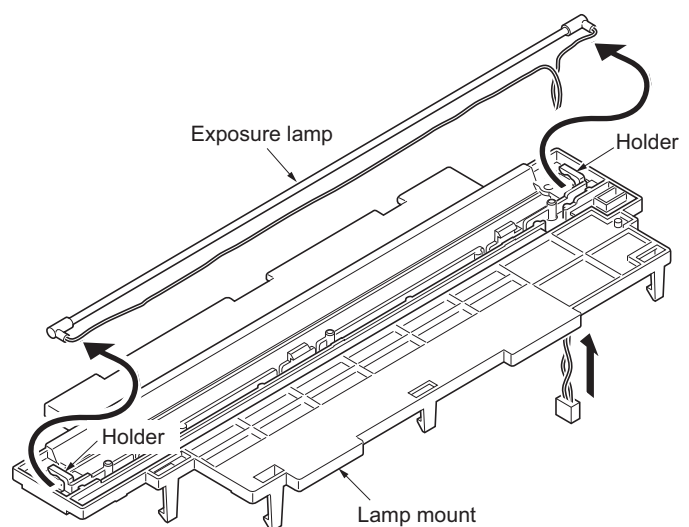


Figure 1-5-43

1-5-5 Developing section

(1) Detaching and refitting the developing unit

Procedure

1. Open the front cover.
2. Remove the developing unit.
3. Check or replace the developing unit and refit all the removed parts.

NOTE:

When the periodic maintenance (replacing the maintenance kit, see page 2-4-4), perform following maintenance modes.

1. U251 Clearing the maintenance count (see page 1-3-39)
2. U111 Clearing the drum drive time (see page 1-3-33)
3. U130 Initial setting for the developing unit (see page 1-3-34)

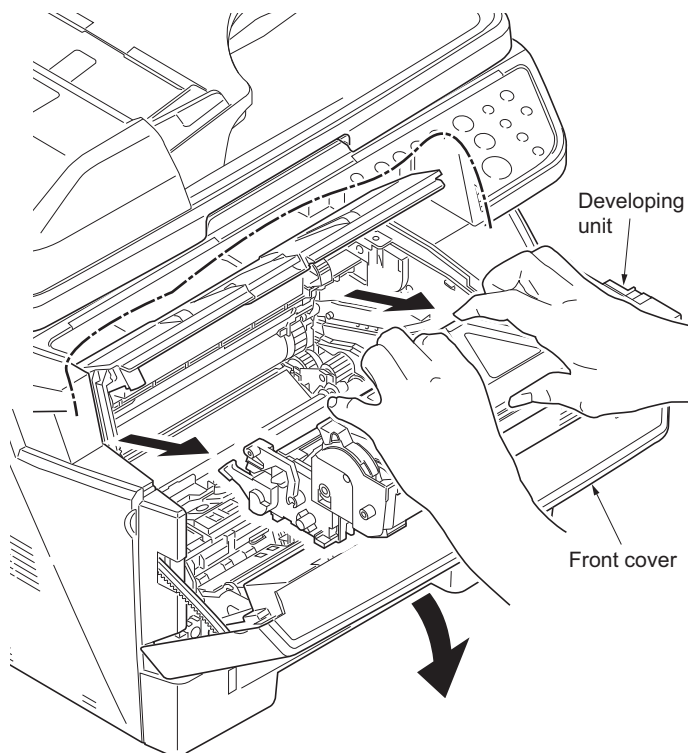


Figure 1-5-44

1-5-6 Drum section

(1) Detaching and refitting the drum unit

Procedure

1. Remove the developing unit (See page 1-5-29).
2. Remove the drum unit.
3. Check or replace the drum unit and refit all the removed parts.

NOTE:

When the periodic maintenance (replacing the maintenance kit, see page 2-4-4), perform following maintenance modes.

1. U251 Clearing the maintenance count (see page 1-3-39)
2. U111 Clearing the drum drive time (see page 1-3-33)
3. U130 Initial setting for the developing unit (see page 1-3-34)

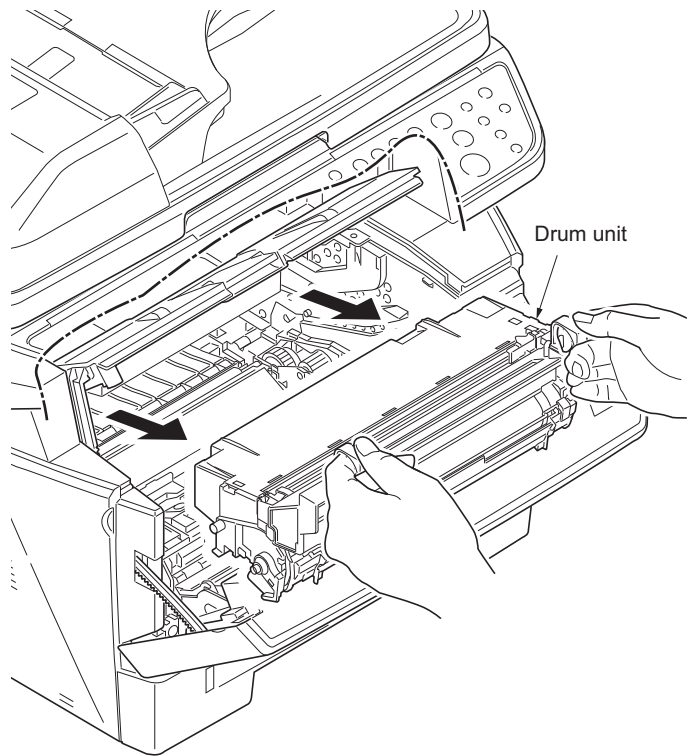


Figure 1-5-45

(2) Detaching and refitting the main charger unit

Procedure

1. Remove the developing unit (See page 1-5-29).
2. Remove the drum unit (See page 1-5-30).
3. Remove the tape.
4. While pushing on the main plate 1, slide the main charger unit 2.

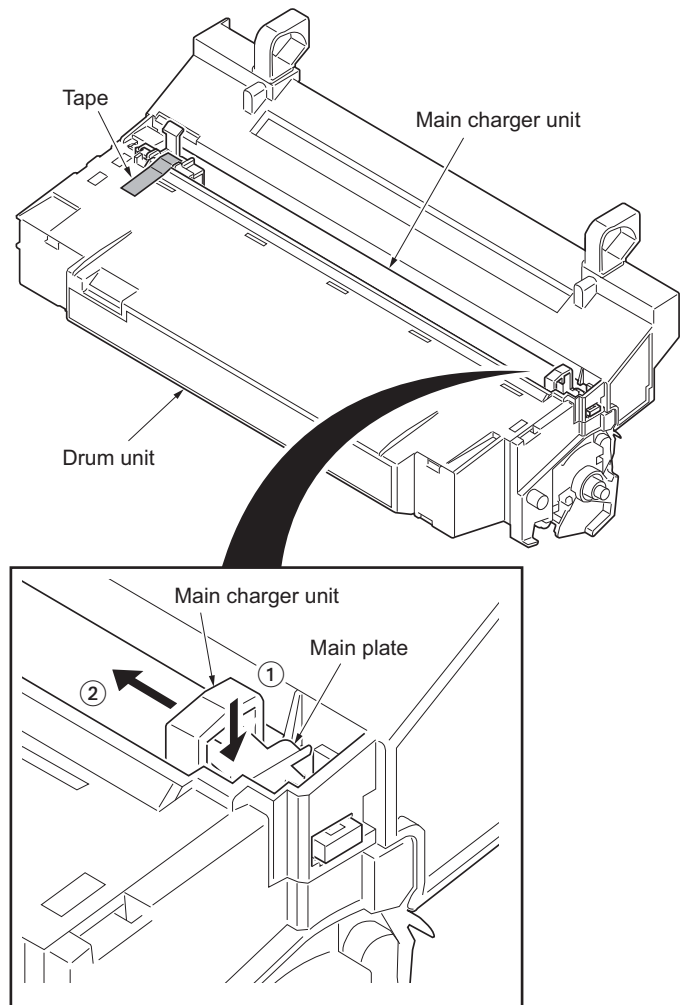


Figure 1-5-46

5. Remove the main charger unit by lifting it.
6. Check or replace the main charger unit and refit all the removed parts.

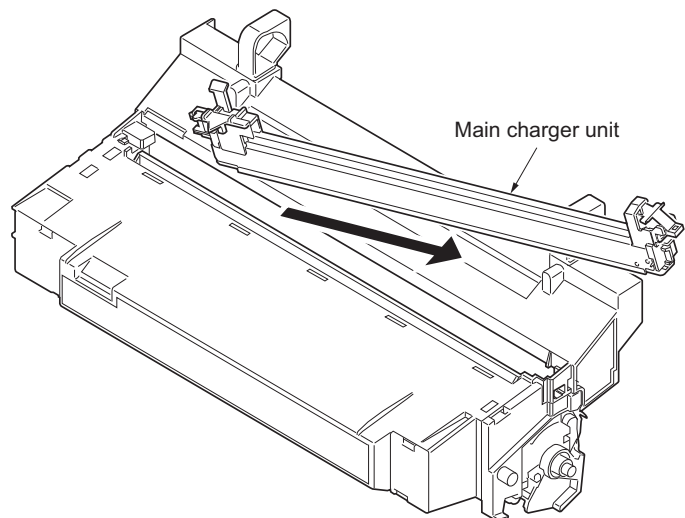


Figure 1-5-47

1-5-7 Transfer/separation section

(1) Detaching and refitting the transfer roller

Procedure

1. Remove the developing unit (See page 1-5-29).
2. Remove the drum unit (See page 1-5-30).
3. Slide the paper chute guide and unhook the hooks.
4. Remove the paper chute guide.

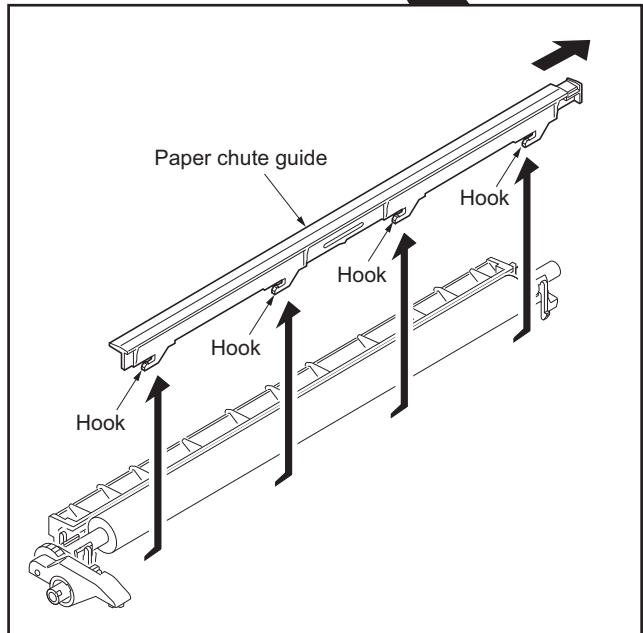
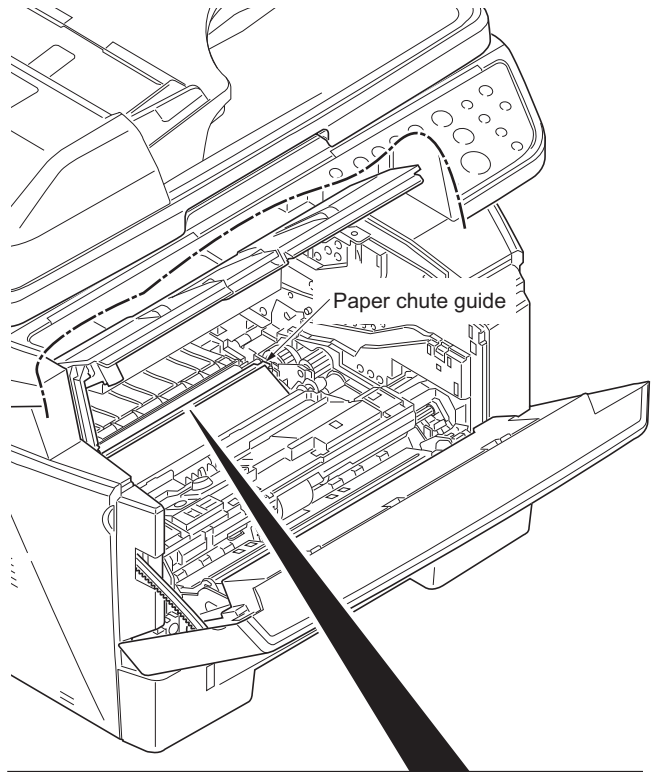


Figure 1-5-48

5. Remove the transfer roller's shaft from the both transfer bushes.
6. Remove the gear Z16 from the transfer roller.

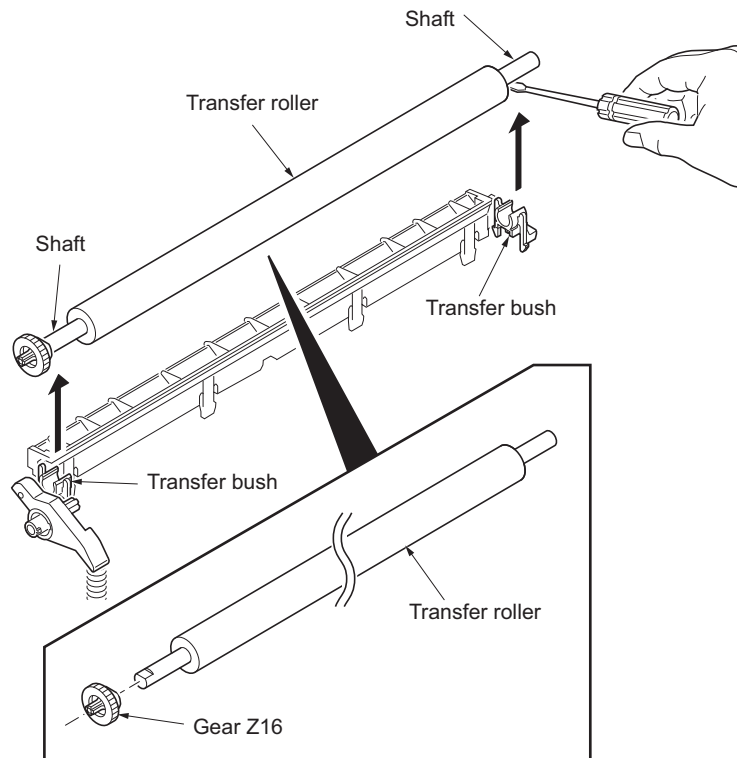


Figure 1-5-49

7. Check or replace the transfer roller and refit all the removed parts.

Caution: When refitting the transfer roller, be careful about following point.
Push the release lever to raise the lever end, then insert the front of gear Z16 under the release lever end.

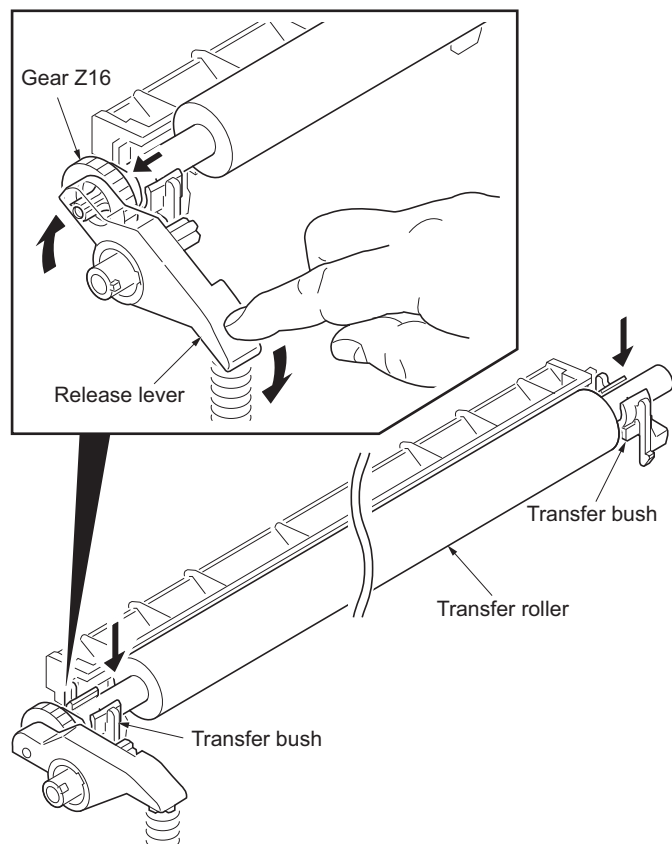


Figure 1-5-50

1-5-8 Fuser section

(1) Detaching and refitting the fuser unit

Procedure

1. Remove the left cover and right cover (See page 1-5-3).
2. Remove the wires from three clamps.
3. Remove the connector from the power source PWB.

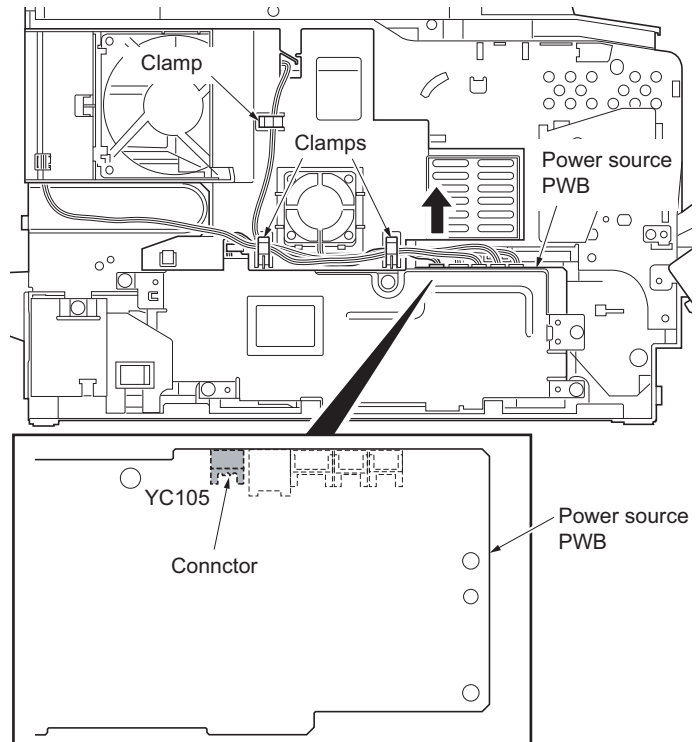


Figure 1-5-51

4. Unhook four hooks and then remove the frame left duct.
5. Remove the wires from the clamp.

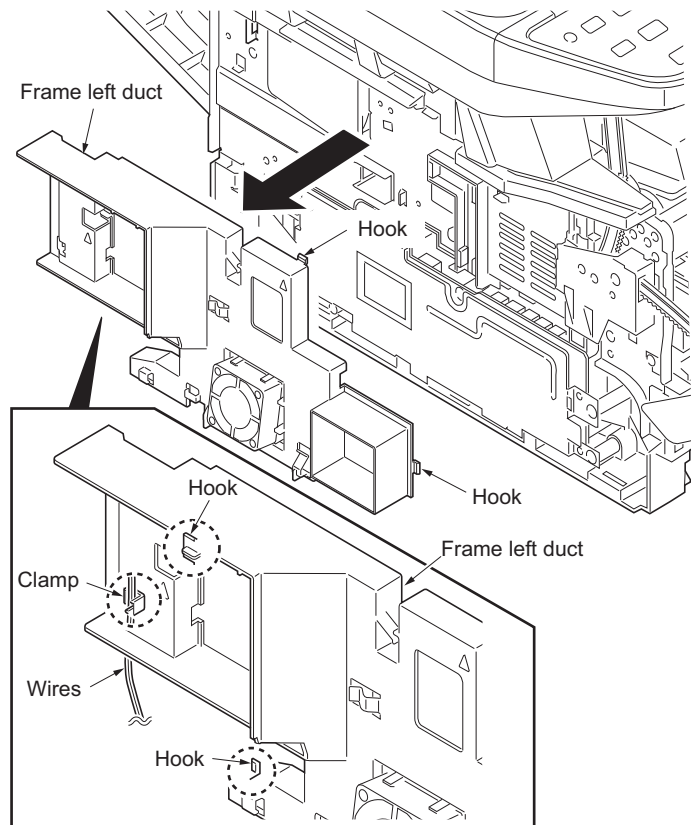
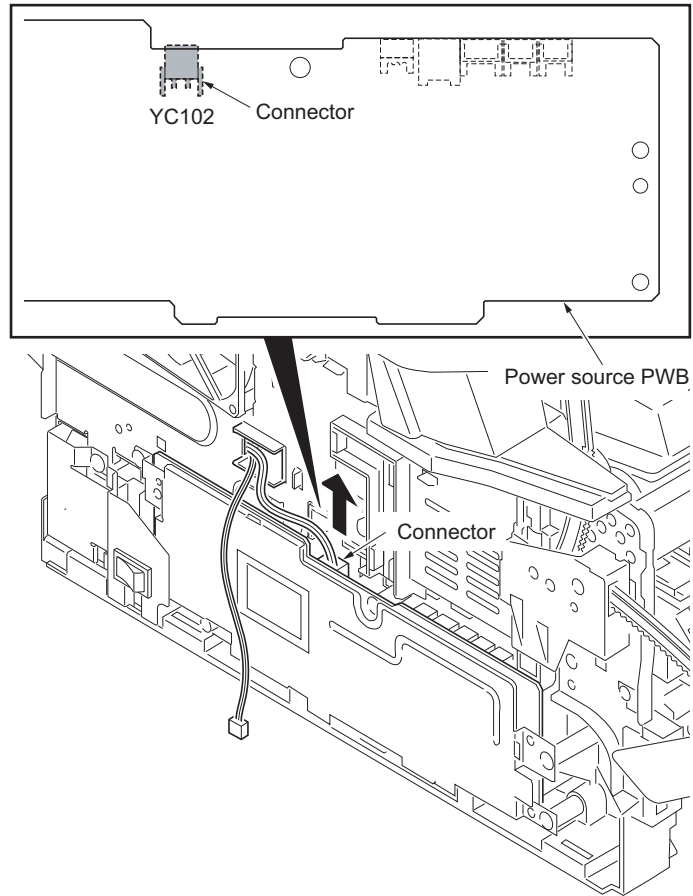
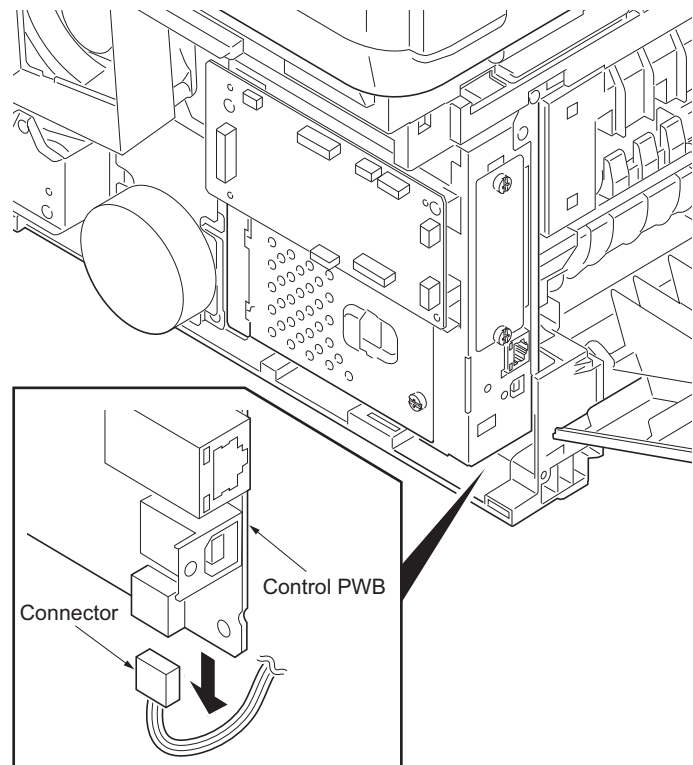


Figure 1-5-52

6. Remove the connector from the power source PWB.

**Figure 1-5-53**

7. Remove the connector from the control PWB.

**Figure 1-5-54**

8. Remove the rear cover.

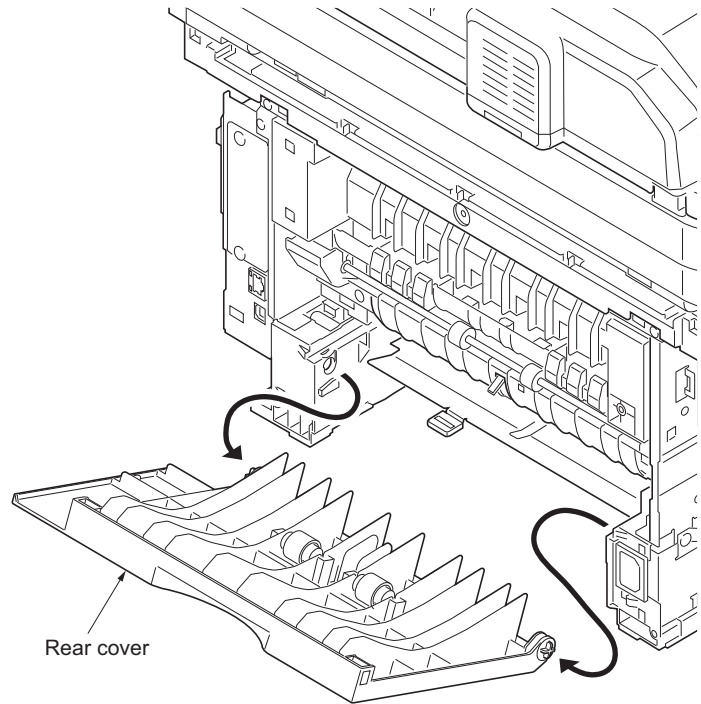


Figure 1-5-55

9. Remove two screws and then remove the fuser unit.

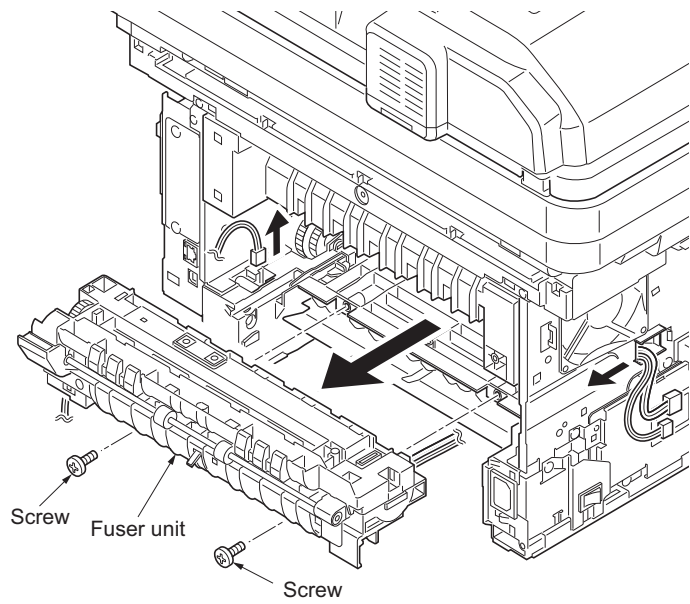


Figure 1-5-56

10. Check or replace the fuser unit and refit all the removed parts.

Caution: When reinstalling the fuser unit, tighten up a screw while pressing the fuser unit in order of 1 to 2.

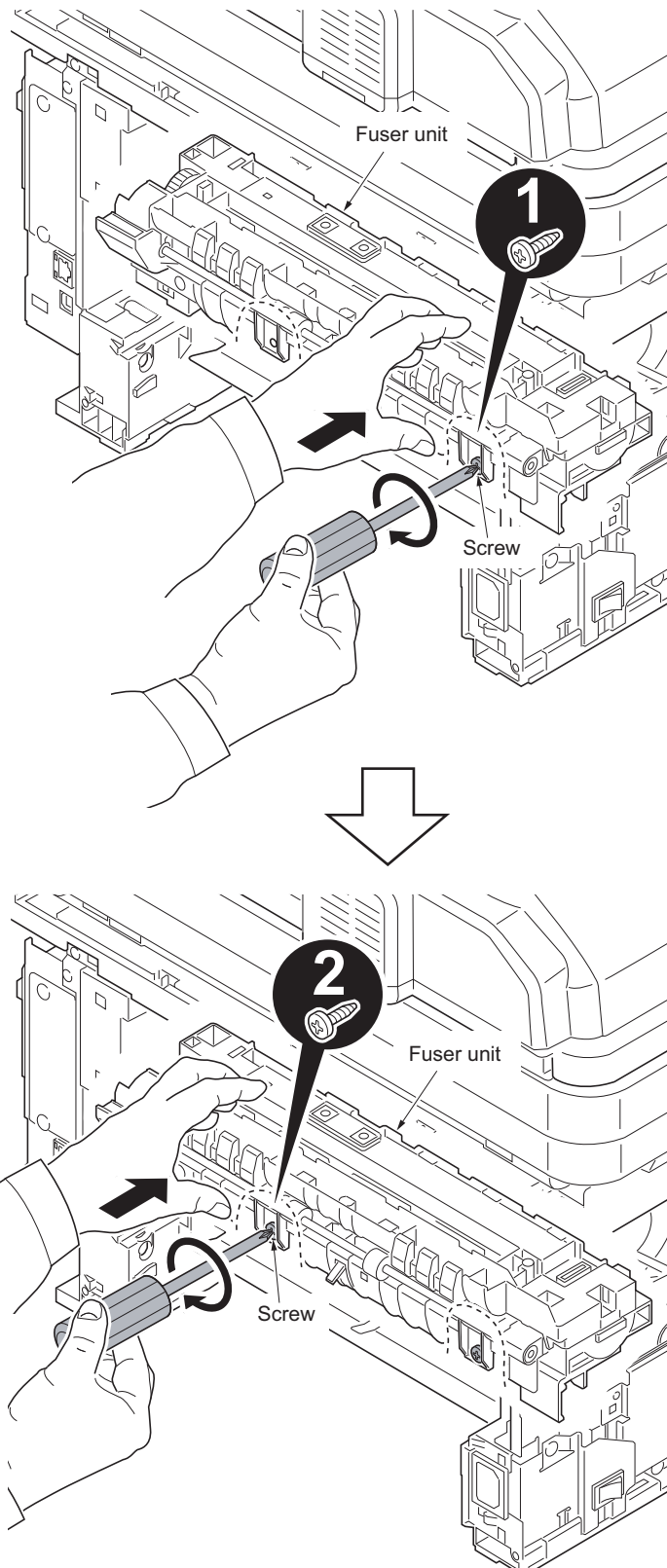


Figure 1-5-57

(2) Switching the fuser pressure

The fuser pressure may be decreased to suppress the print quality problems such as paper creases and curls. It must be cautioned that decreasing the fuser pressure could cause loose toner fusing.

Procedure

1. Remove the cassette (See page 1-5-6).
2. Open the duplex cover.
3. Slide the fuser lever R and L.
Normal: Flush with the front of the machine.
Fuser pressure decreased: Flush with the rear of the machine.

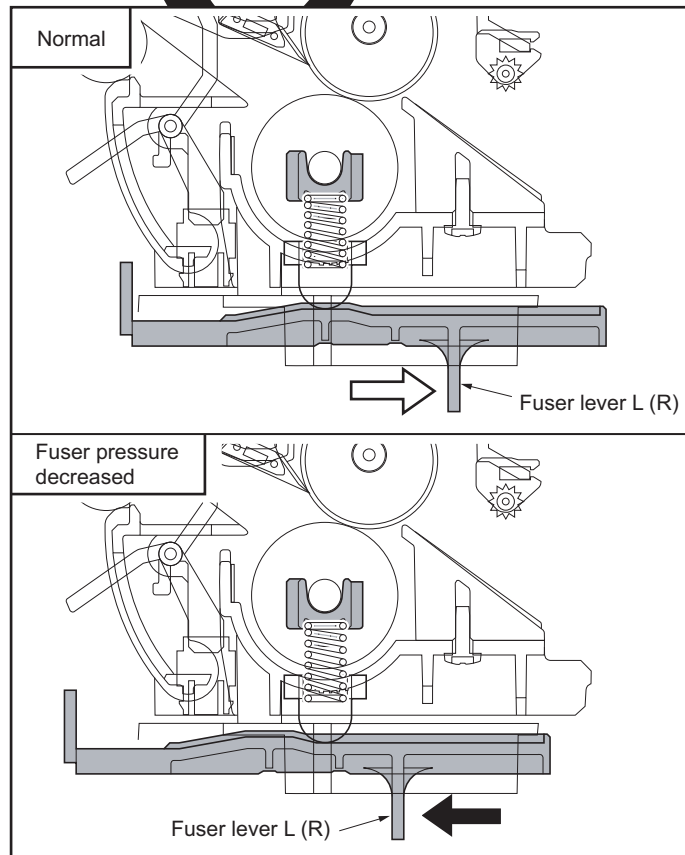
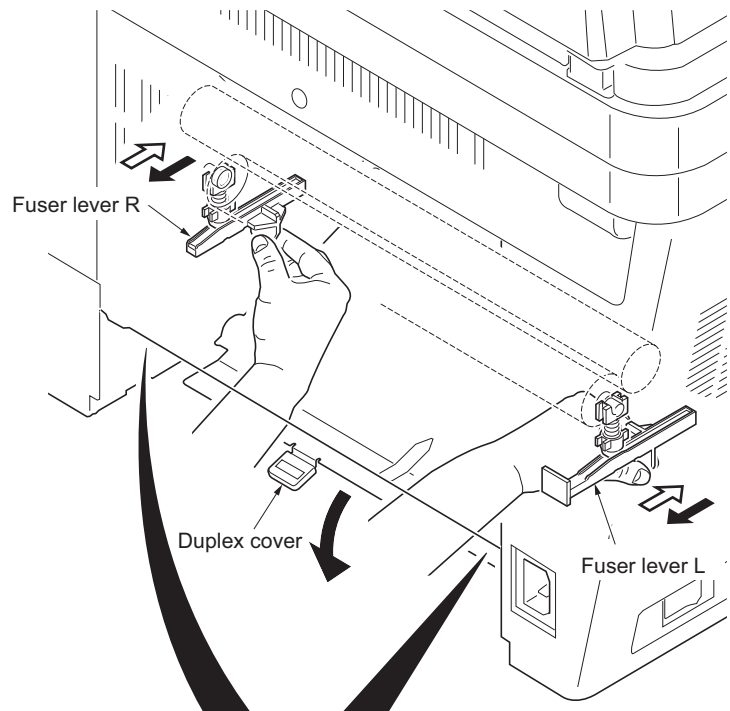


Figure 1-5-58

1-5-9 PWBs

(1) Detaching and refitting the control PWB

Procedure

1. Remove the FAX PWB (See page 1-5-50).
2. Remove the right cover (See page 1-5-3).
3. Remove the five connectors from the scanner PWB.
4. Remove twenty connectors and two FFCs from the control PWB.
5. Remove the wires from the clamp.

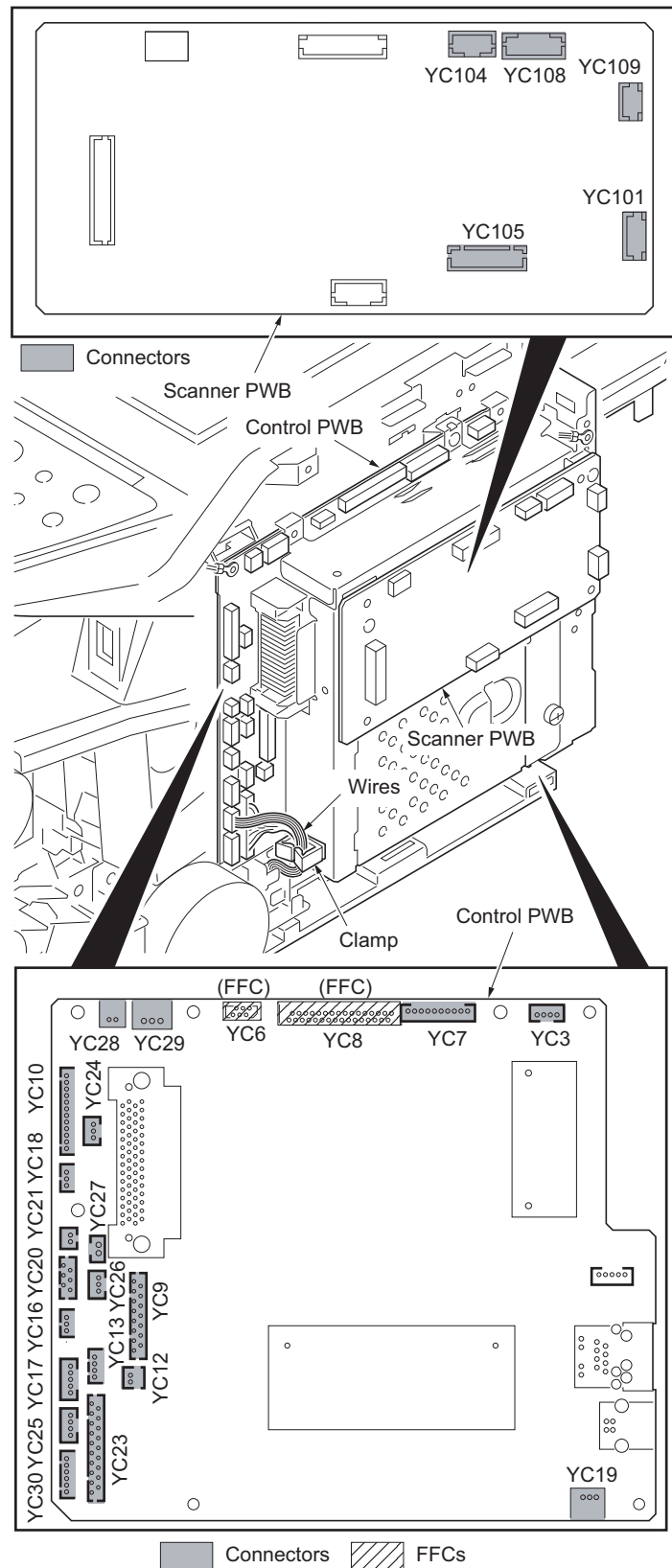
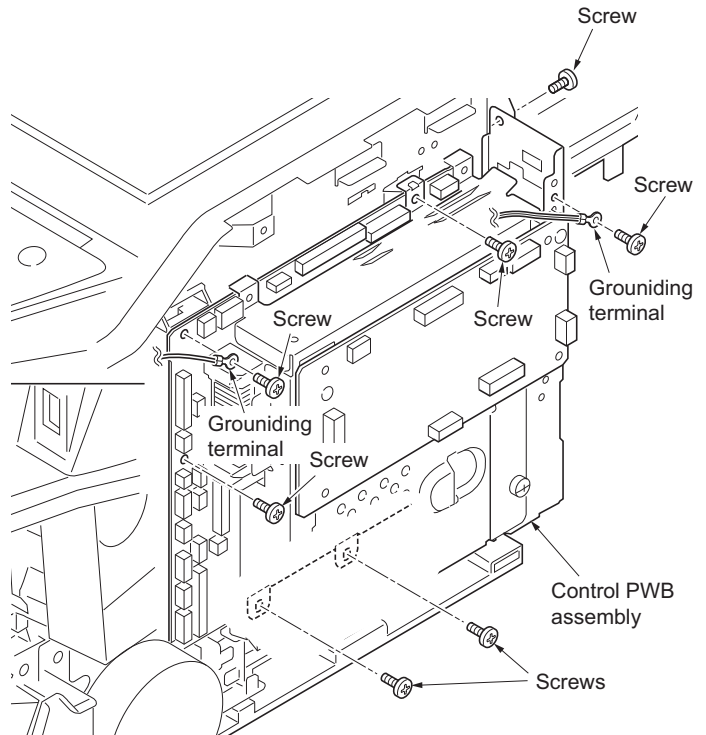
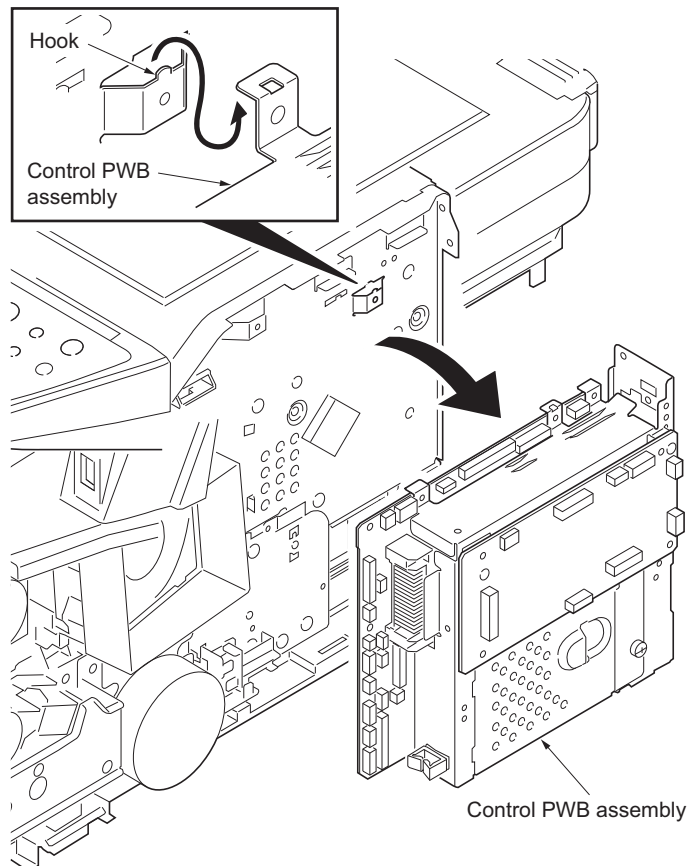


Figure 1-5-59

6. Remove six screws and two grounding terminals.

**Figure 1-5-60**

7. Unhook the hook and then remove the control PWB assembly.

**Figure 1-5-61**

8. Remove five screws and then remove the control PWB.
9. Check or replace the control PWB and refit all the removed parts.

To replace the control PWB, remove the EEPROM (U17) from the old control PWB and mount it to the new control PWB.

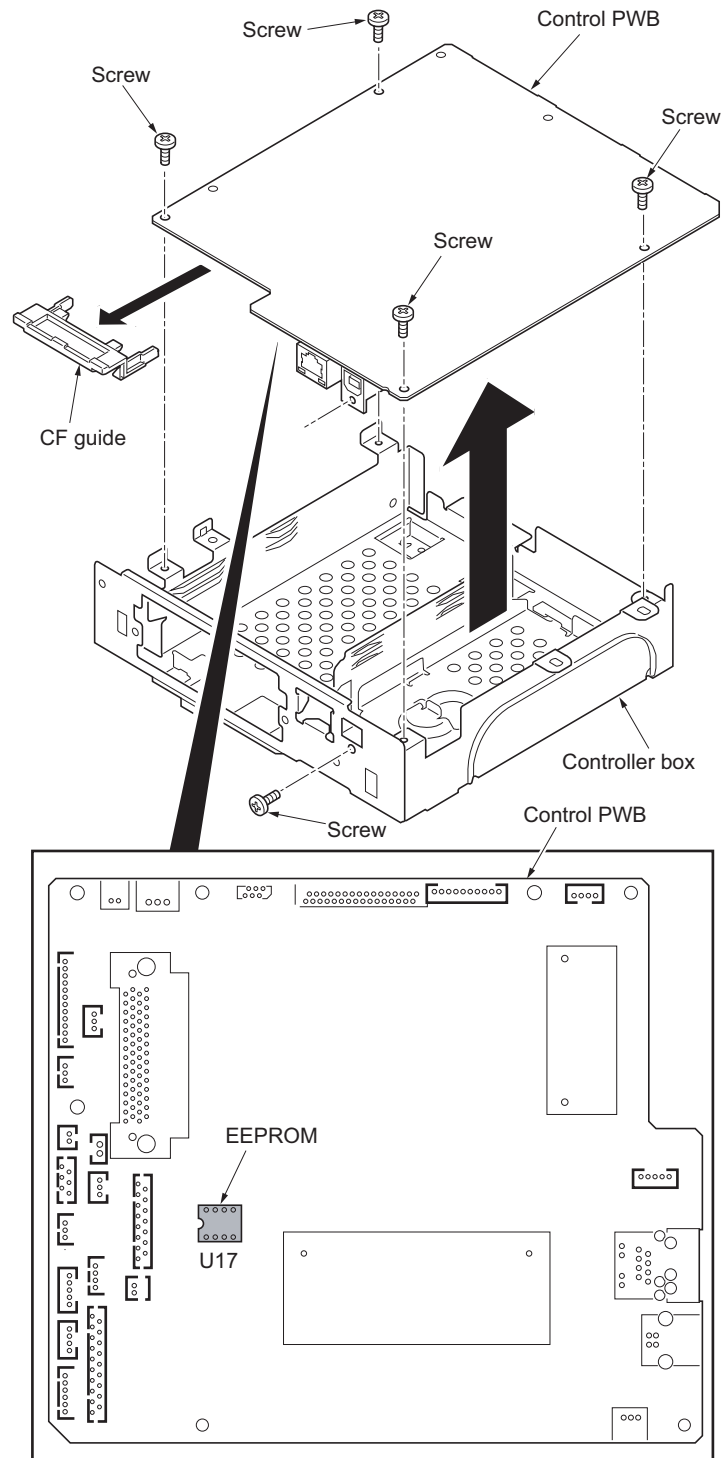
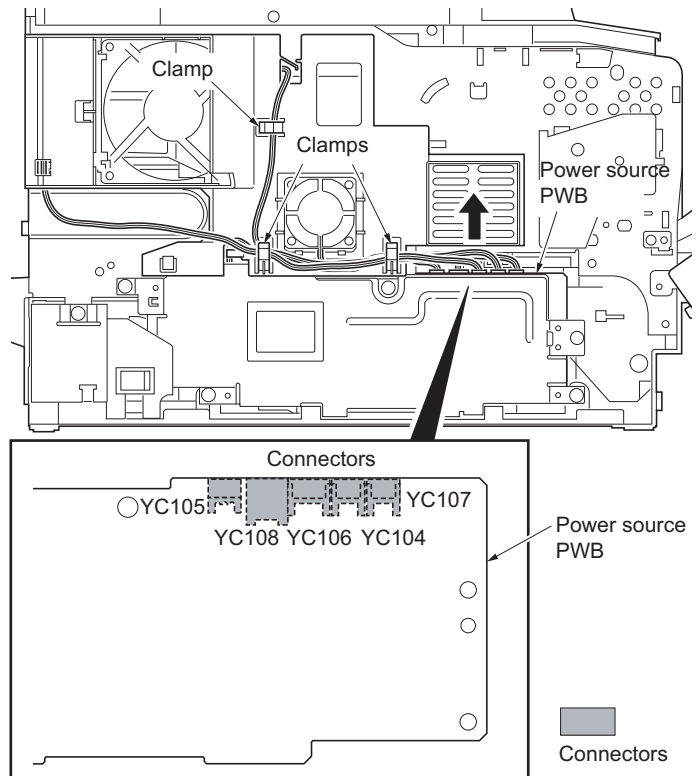


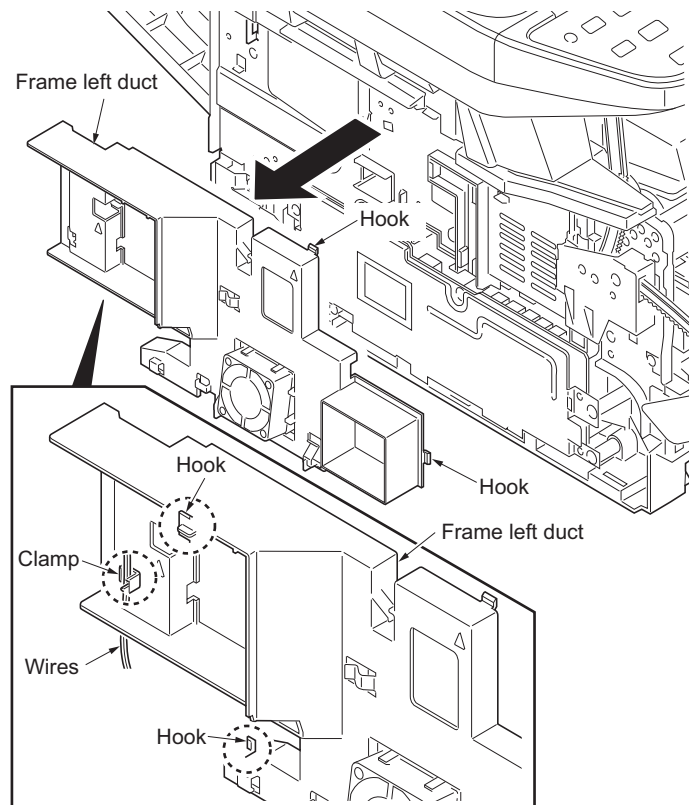
Figure 1-5-62

(2) Detaching and refitting the power source PWB**Procedure**

1. Remove the left cover (See page 1-5-3).
2. Remove the wires from three clamps.
3. Remove five connectors from the power source PWB.

**Figure 1-5-63**

4. Unhook four hooks and then remove the frame left duct.
5. Remove the wire from the clamp.

**Figure 1-5-64**

6. Remove the screw and then detach the inlet mount.

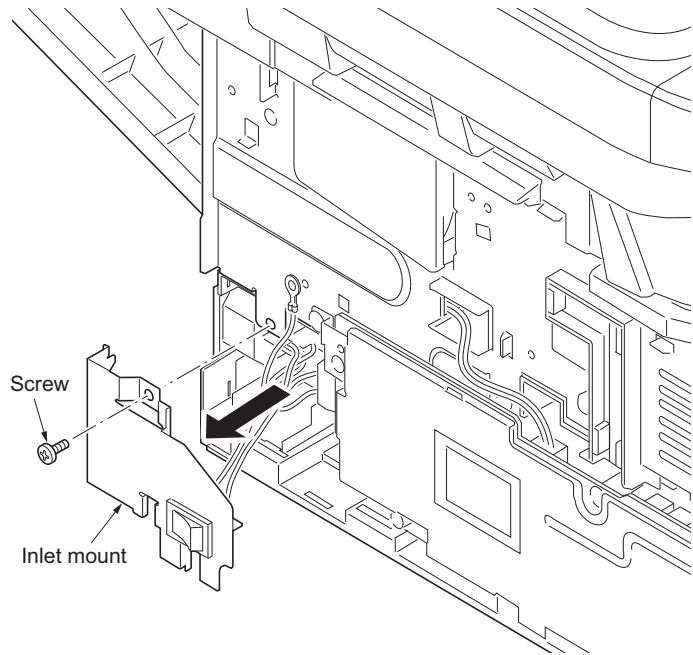


Figure 1-5-65

7. Remove five screws.
8. Remove three connectors and then remove the power source PWB assembly.

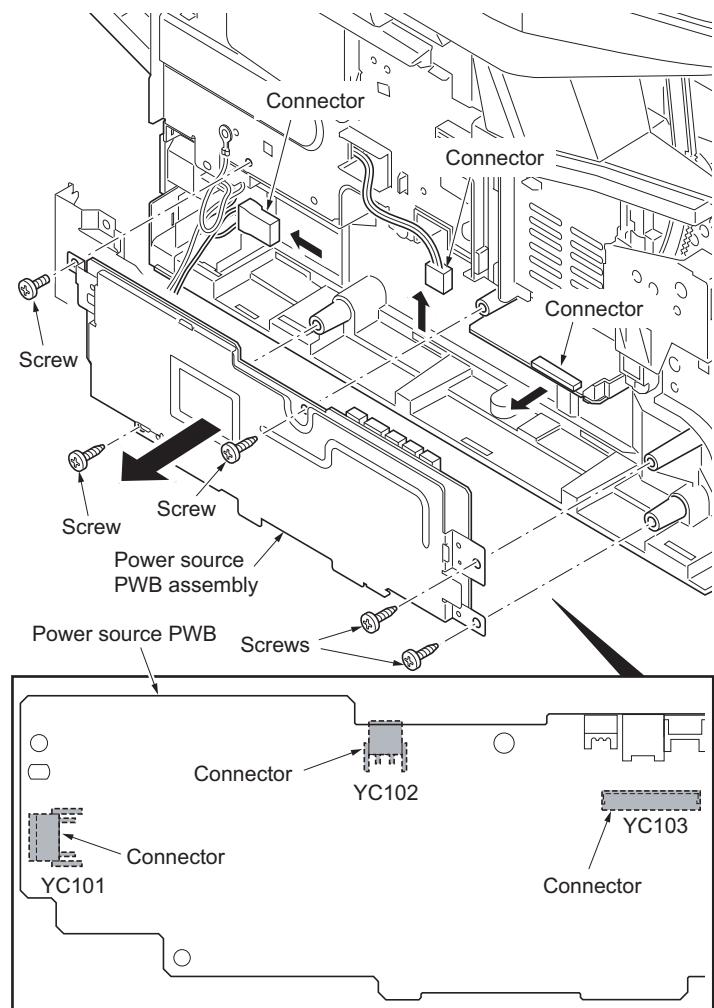


Figure 1-5-66

9. Remove four screws and then remove the power source PWB from the power source PWB plate.
10. Check or replace the power source PWB and refit all the removed parts.

Caution: The power source PWB sheet must be installed in the specified position.

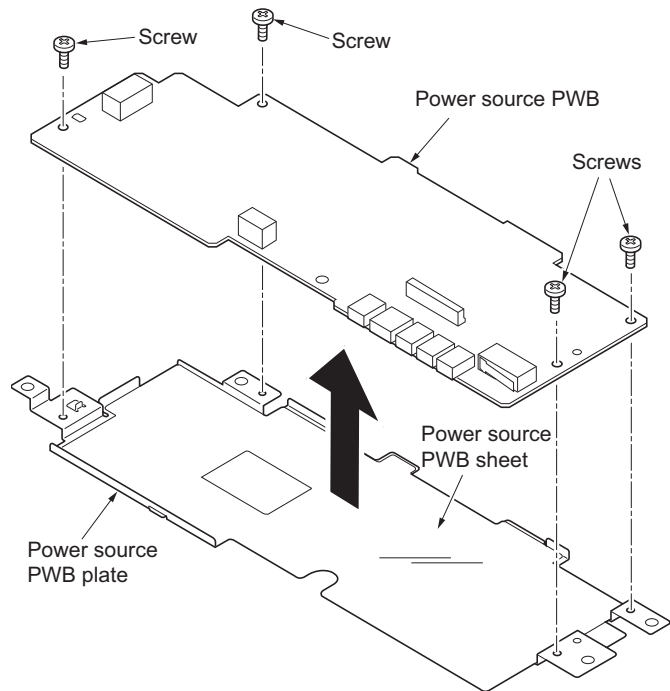


Figure 1-5-67

(3) Detaching and refitting the high voltage PWB

Procedure

1. Remove the developing unit (See page 1-5-29).
2. Remove the drum unit (See page 1-5-30).
3. Remove the cassette (See page 1-5-6).
4. Remove the left cover and right cover (See page 1-5-3).
5. Remove the power source PWB (See page 1-5-42).
6. Turn the machine with the front side up.
7. Remove the stopper.
8. Remove the DU holder.

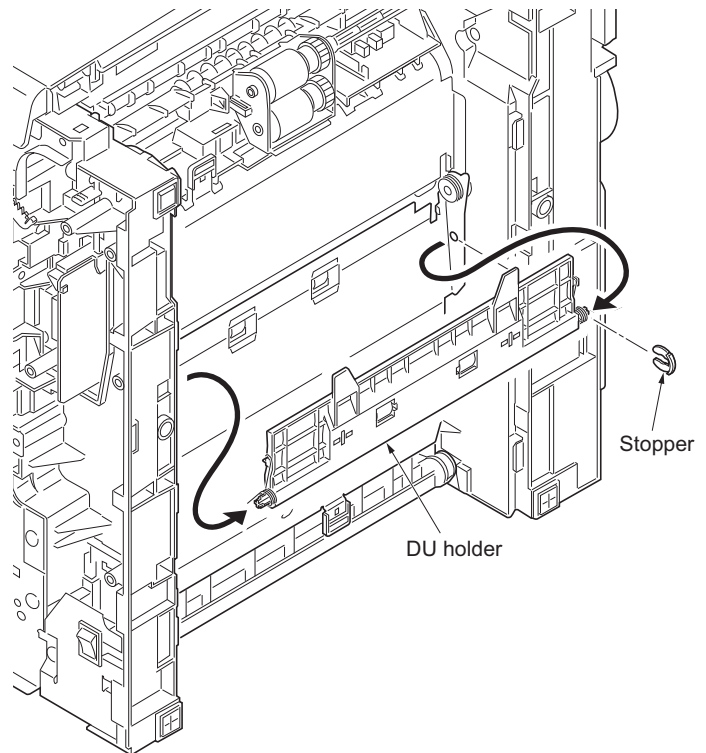


Figure 1-5-68

9. Pull the DU bush out.
10. Remove the DU cover assembly.

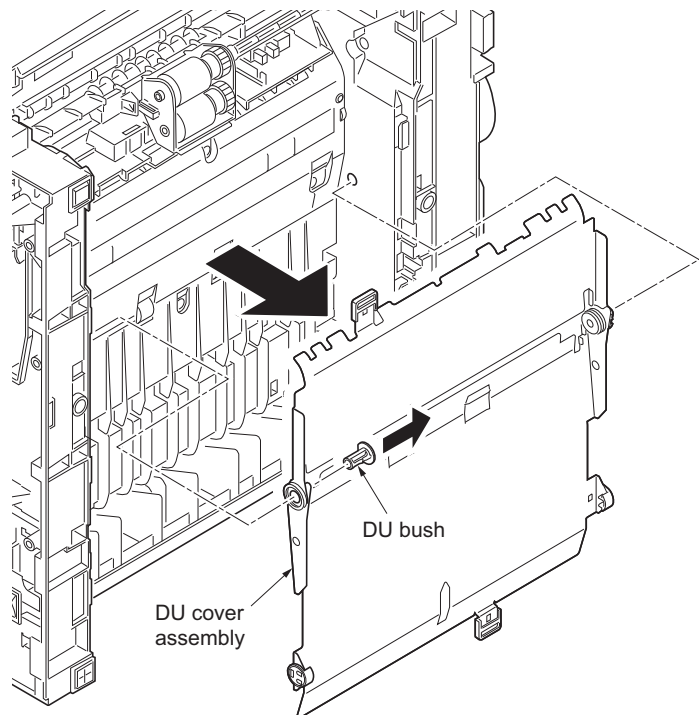


Figure 1-5-69

11. Remove four screws.
12. Unhook three hooks and then remove the lower base cover.

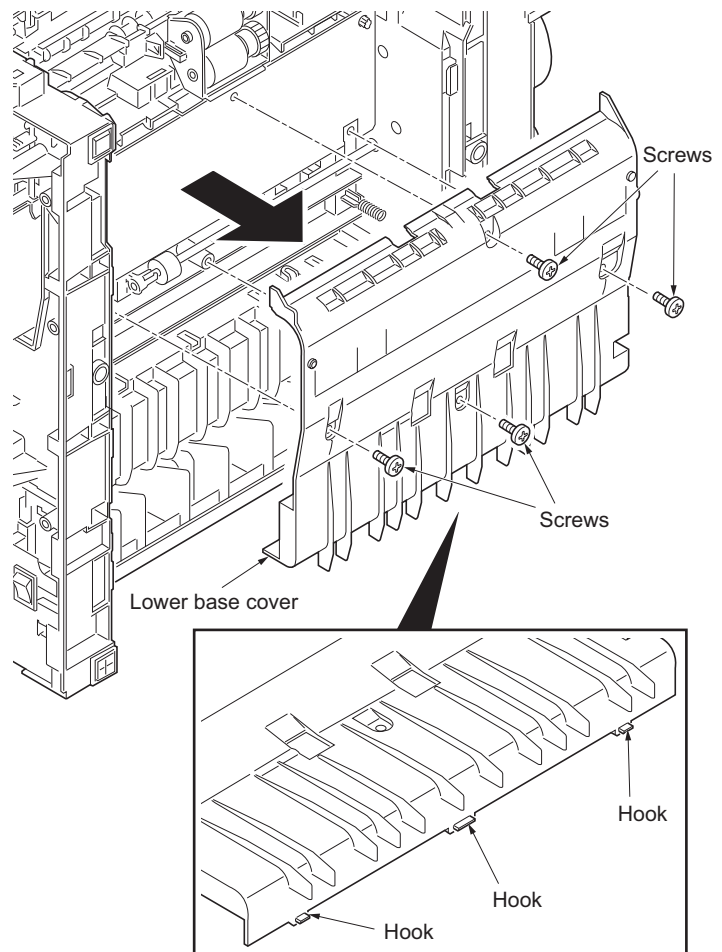
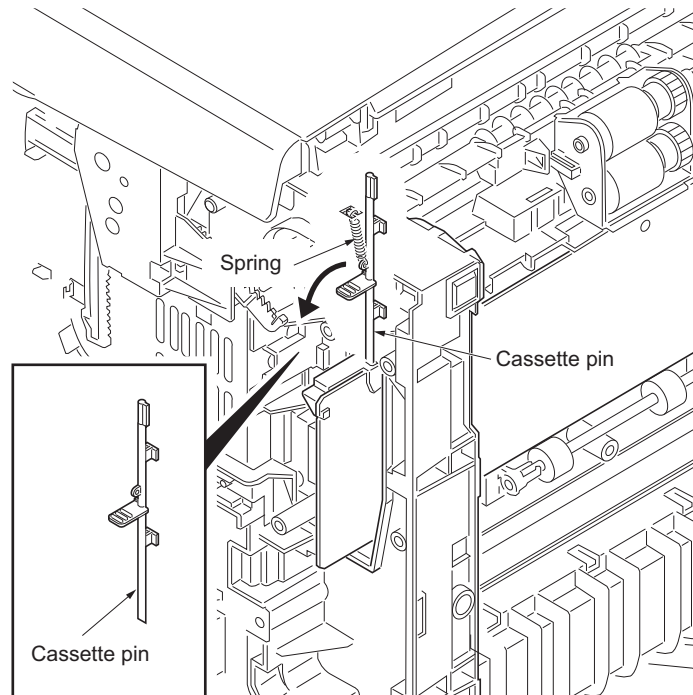
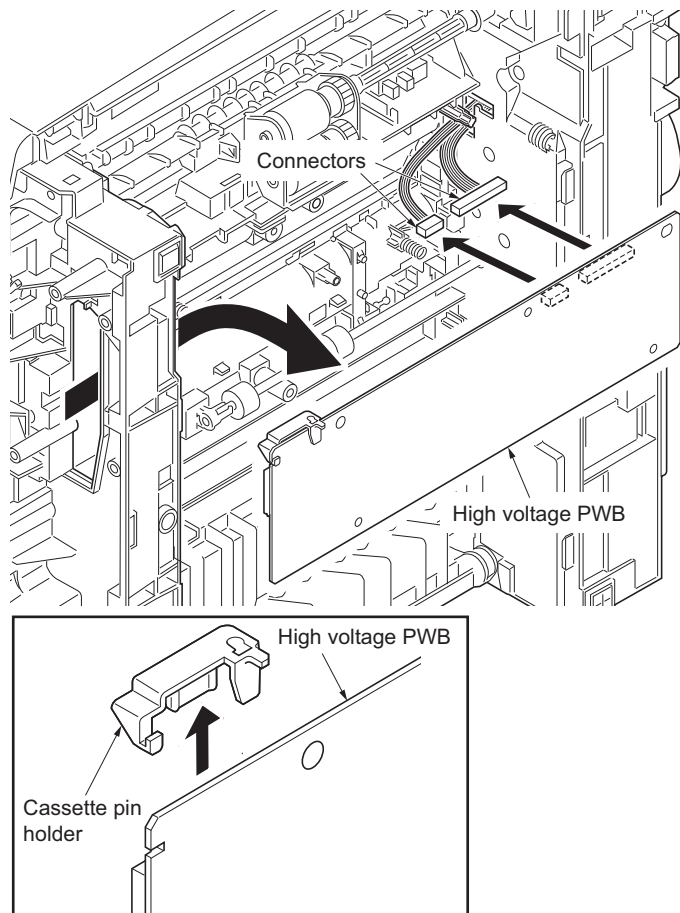


Figure 1-5-70

13. Remove the spring.
14. Remove the cassette pin.

**Figure 1-5-71**

15. Remove two connectors and then remove the high voltage PWB.
16. Remove the cassette pin holder from the high voltage PWB.

**Figure 1-5-72**

17. Check or replace the high voltage PWB and refit all the removed parts.

When refitting the high voltage PWB, be careful about following points.

- Position the ground plate so that it is atop the high voltage PWB.
- Each interface is firmly in contact with each spring.
- The bias contact pin must be installed in the specified position.
- The cassette pin must be inserted in the cassette pin holder.

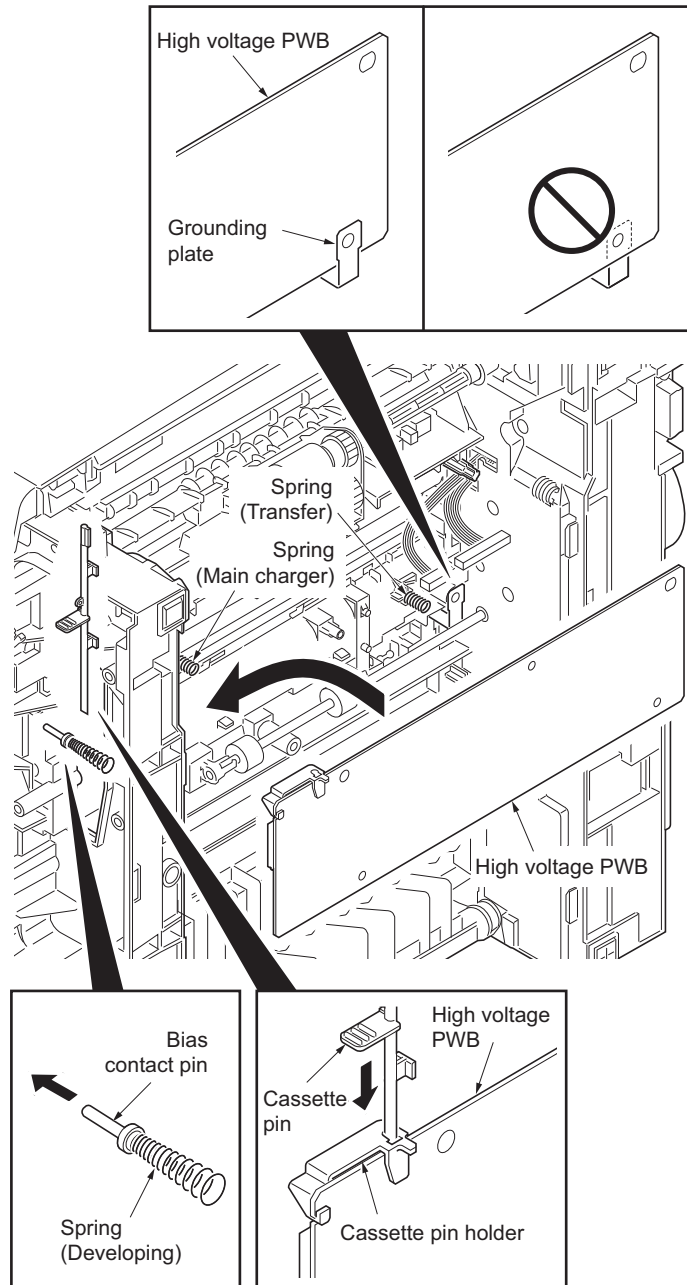


Figure 1-5-73

(4) Detaching and refitting the scanner PWB

Procedure

1. Remove the right cover (See page 1-5-3).
2. Remove six connectors and the FFC from the scanner PWB.

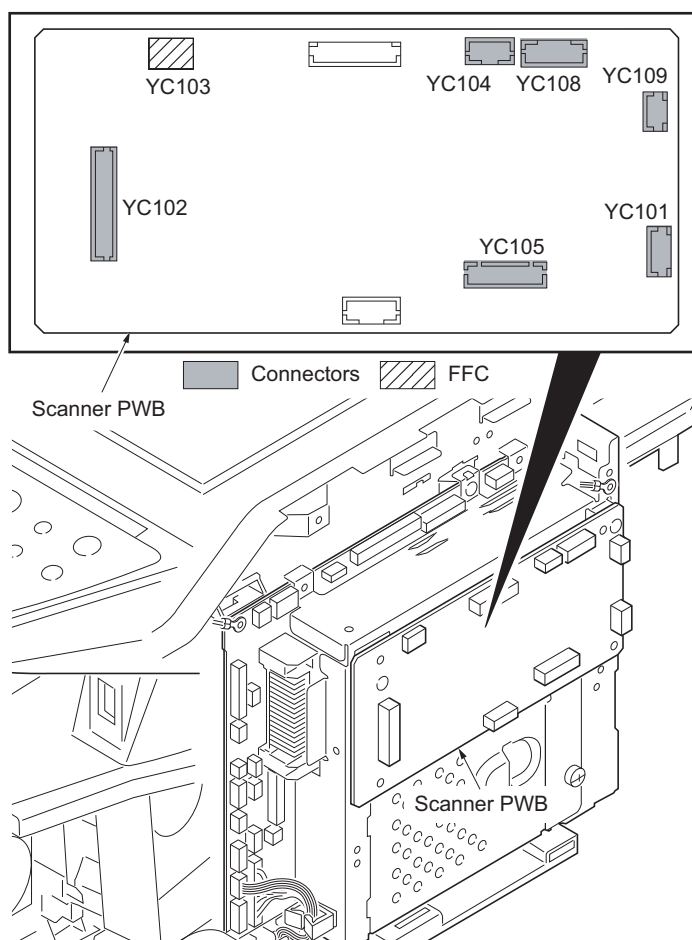


Figure 1-5-74

3. Remove four screws and then remove the scanner PWB.
4. Check or replace the scanner PWB and refit all the removed parts.

NOTE:

When the replacing the scanner PWB, perform following maintenance modes.

1. U425 Setting the target (see page 1-3-49)
2. U411 Adjusting the scanner automatically (see page 1-3-48)

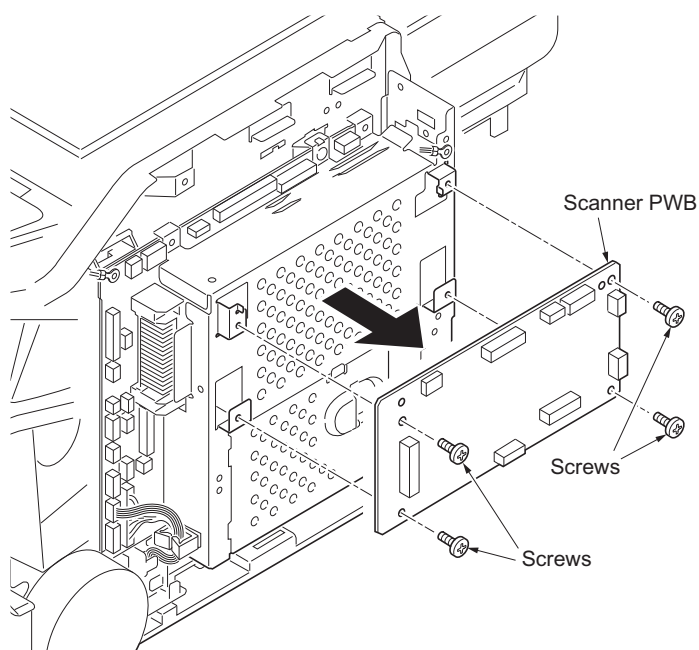
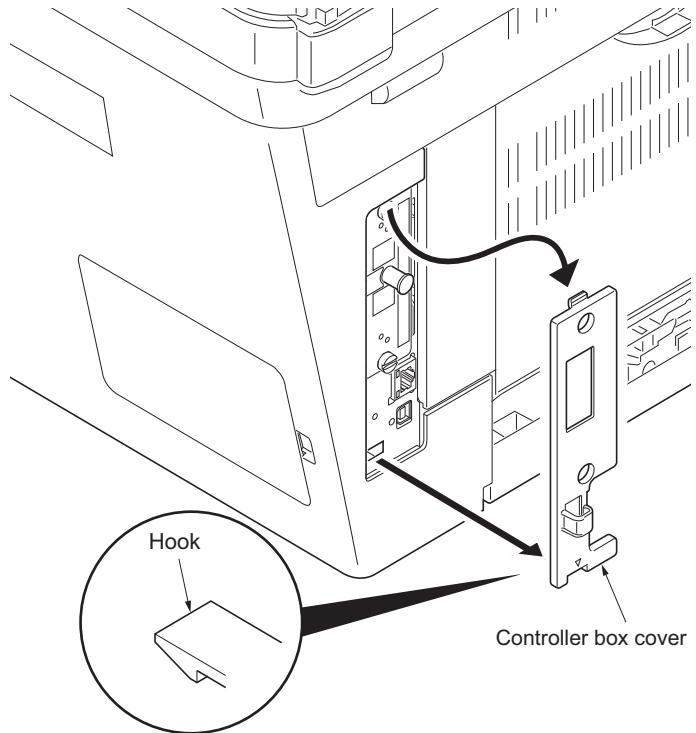


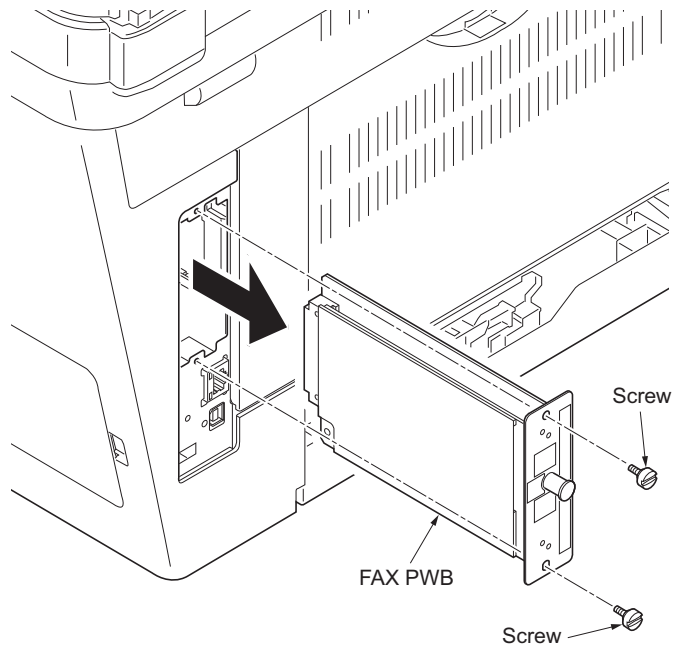
Figure 1-5-75

(5) Detaching and refitting the FAX PWB**Procedure**

1. Unhook the hook and then remove the controller box cover.

**Figure 1-5-76**

2. Remove two screws and then remove the FAX PWB.
3. Check or replace the FAX PWB and refit all the removed parts.

**Figure 1-5-77**

1-5-10 Others

(1) Detaching and refitting the main motor

Procedure

1. Remove the right cover (See page 1-5-3).
2. Remove the connector.
3. Remove the M3 screw and two M4 screws.
4. Remove the main motor.
5. Check or replace the main motor and refit all the removed parts.

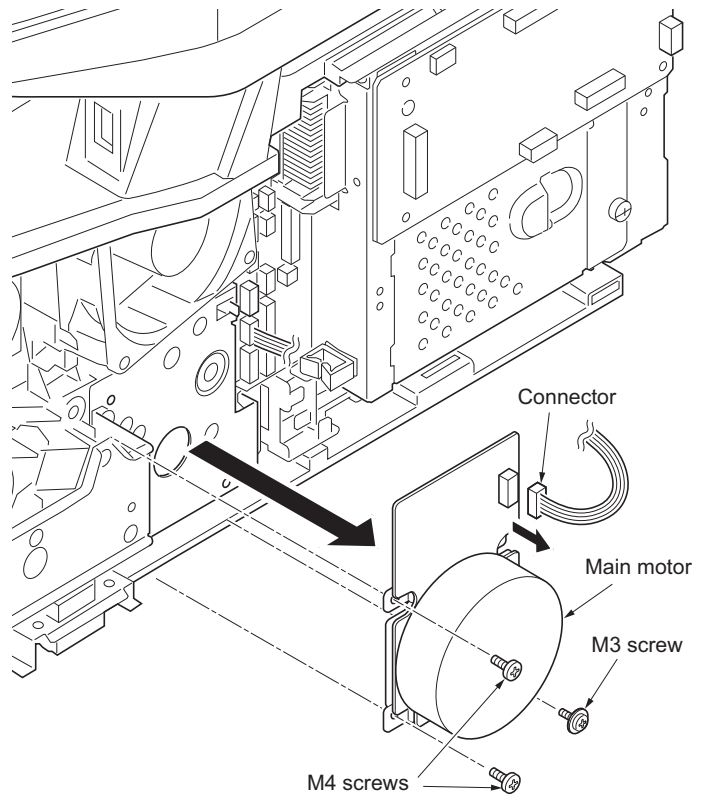


Figure 1-5-78

(2) Direction of installing the left cooling fan motor, right cooling fan motor and power source fan motor

When detaching or refitting a fan motor, be careful of the airflow direction (intake or exhaust).

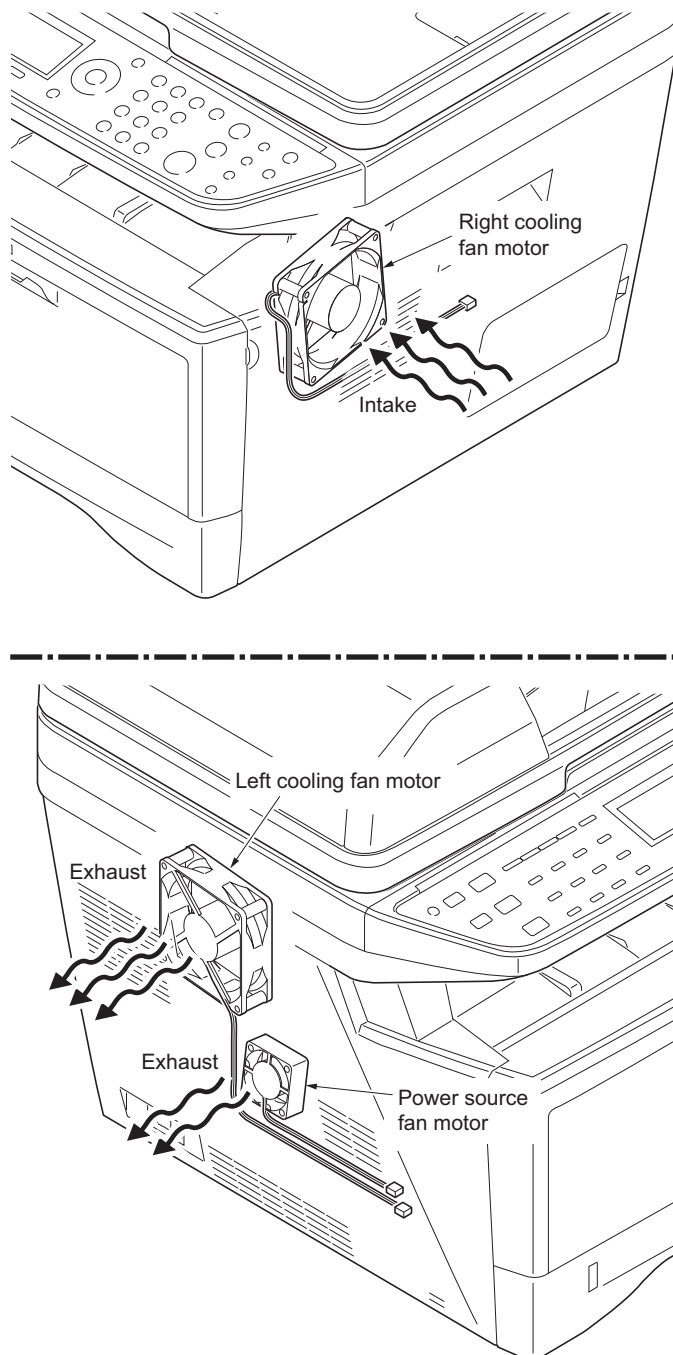


Figure 1-5-79

1-5-11 DP

Refer to the DP's service manual.

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1-6-1 Upgrading the firmware

Follow the procedure below to upgrade the firmware of control PWB (main controller and engine) and scanner PWB.

Preparation

Extract the file that has the download firmware and put them in the USB Memory.

Procedure

1. Turn ON the main switch and confirm if the screen shows "Ready to print" then, turn OFF the main power switch.
2. Insert USB memory that has the firmware in the USB memory slot.
3. Turn ON the main power switch.
4. About 40 seconds later, "Firmware Update Downloading" will be displayed and blinking the memory LED (this shows to start the download).
5. Display the software that now upgrading (5 minutes).

"Firmware Update Main"
 "Engine"
 "Scanner"

6. Display the completion of the upgrade (Memory LED is ON condition).

Firmware Update
 Main: Completed
 Engine: Completed
 Scanner: Completed

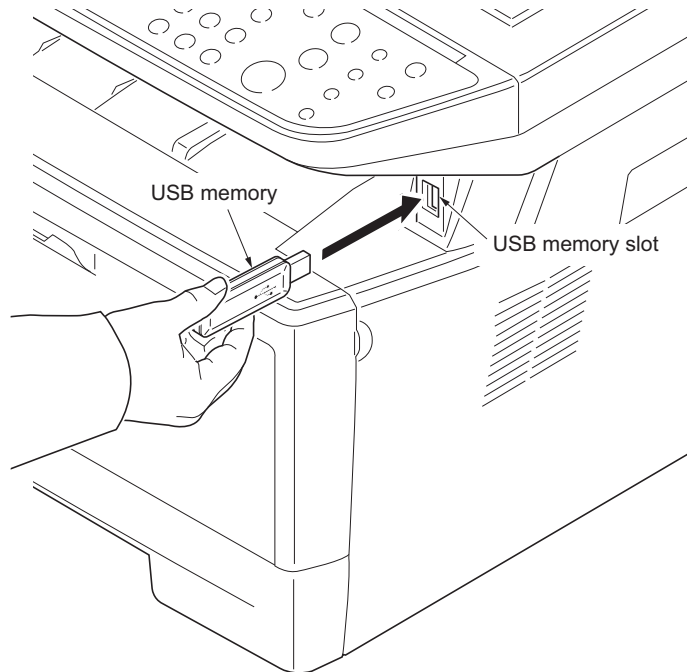


Figure 1-6-1

7. Turn OFF the main power switch and remove the USB memory.

Check the result of the version up

1. Output the service status by the U000 or execute U019 to check.

1-6-2 Remarks on control PWB replacement

When replacing the control PWB, remove the EEPROM (U17) from the control PWB that has been removed and then reattach it to the new control PWB.

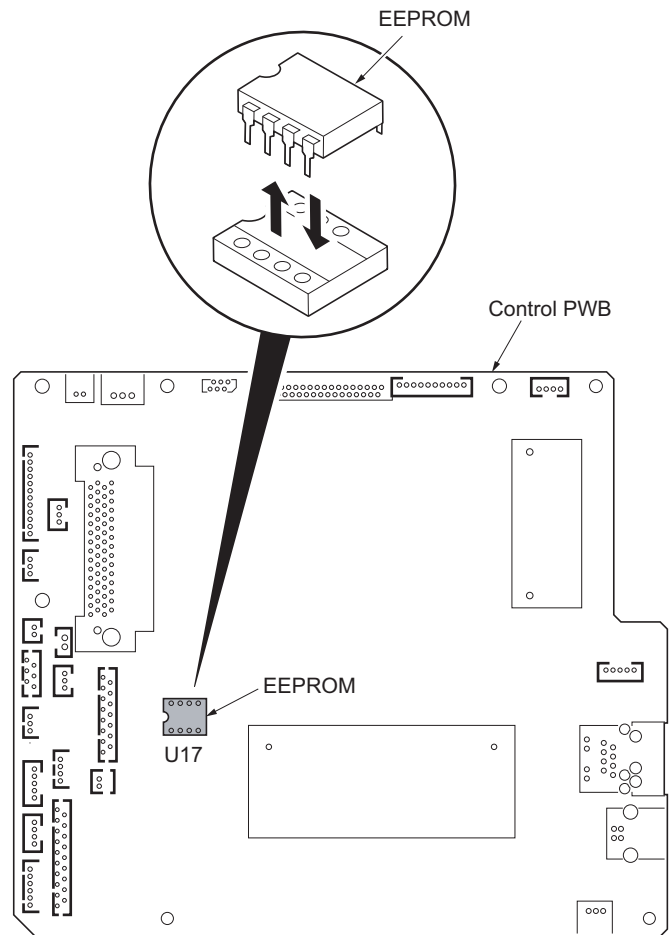


Figure 1-6-2

2-1-1 Paper feed/conveying section

Paper feed/conveying section consists of the paper feed unit that feeds paper from the cassette and the MP tray paper feed unit that feeds paper from the MP tray, and the paper conveying section that conveys the fed paper to the transfer/separation section.

(1) Cassette paper feed section

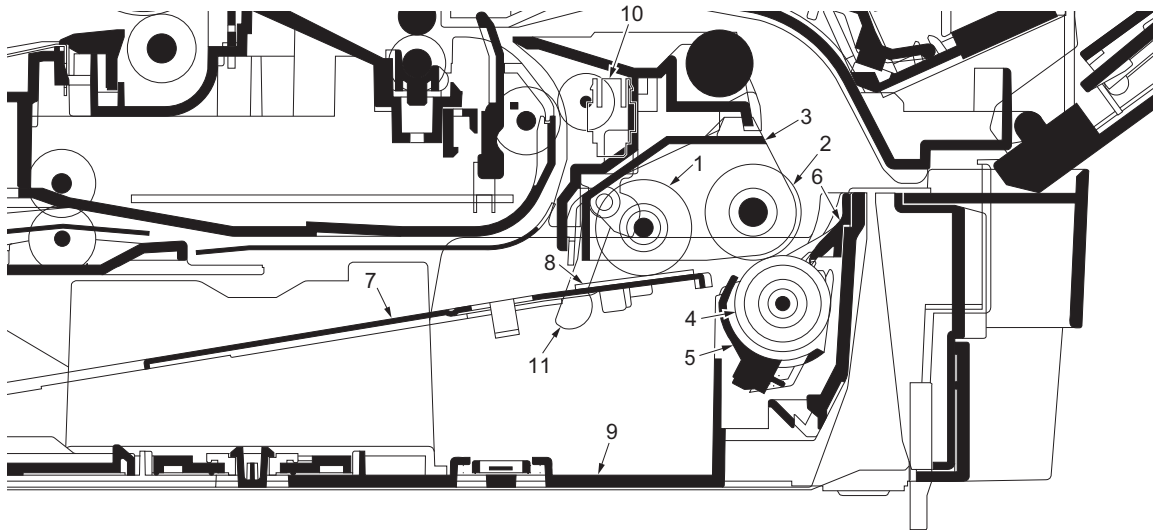


Figure 2-1-1 Cassette paper feed section

- | | |
|-----------------------|------------------------------|
| (1) Pickup roller | (7) Bottom plate |
| (2) Paper feed roller | (8) Bottom pad |
| (3) Feed holder | (9) Cassette base |
| (4) Retard roller | (10) Paper sensor |
| (5) Retard holder | (11) Actuator (paper sensor) |
| (6) Retard guide | |

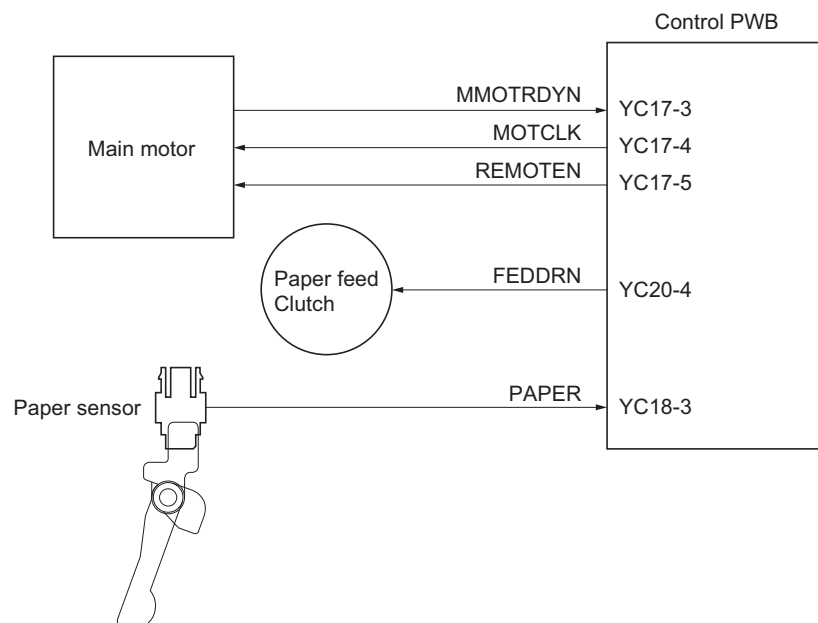


Figure 2-1-2Cassette paper feed section block diagram

(2) MP tray paper feed section

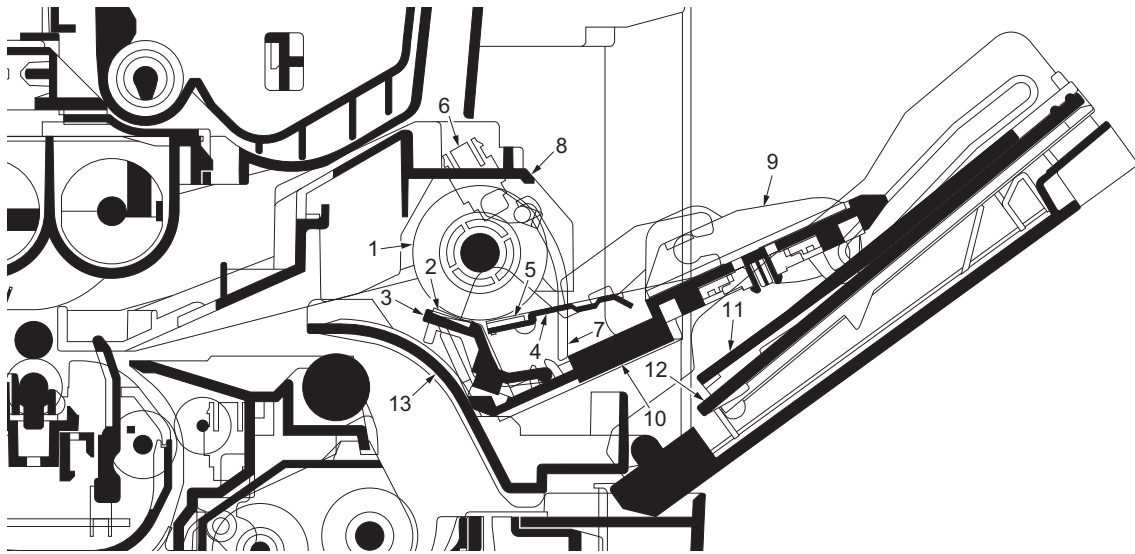


Figure 2-1-3 MP tray paper feed section

- | | |
|--------------------------------|----------------------|
| (1) MP paper feed roller | (8) MPF frame |
| (2) MPF separation pad | (9) MPF guide R/L |
| (3) MPF separator | (10) MPF base |
| (4) MPF bottom plate | (11) MPF middle tray |
| (5) MPF friction pad | (12) MPF upper tray |
| (6) MP paper sensor | (13) MPF turn guide |
| (7) Actuator (MP paper sensor) | |

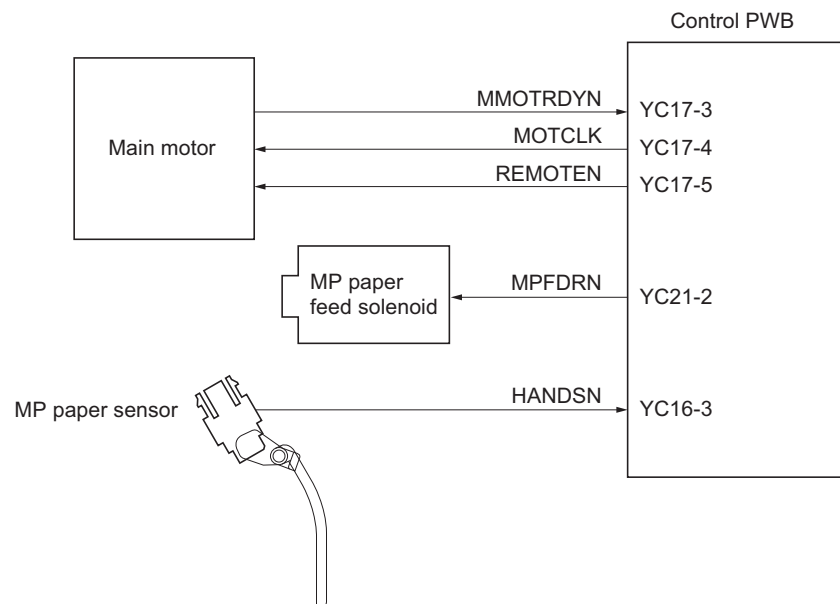


Figure 2-1-4 MP tray paper feed section block diagram

(3) Paper conveying section

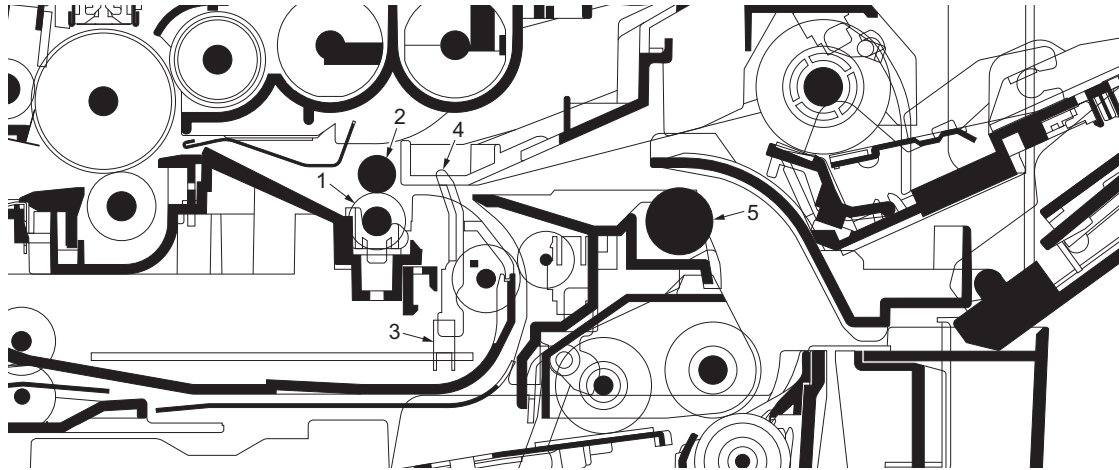


Figure 2-1-5 Paper conveying section

- (1) Lower registration roller
- (2) Upper registration roller
- (3) Registration sensor
- (4) Actuator (registration sensor)
- (5) Feed pulley

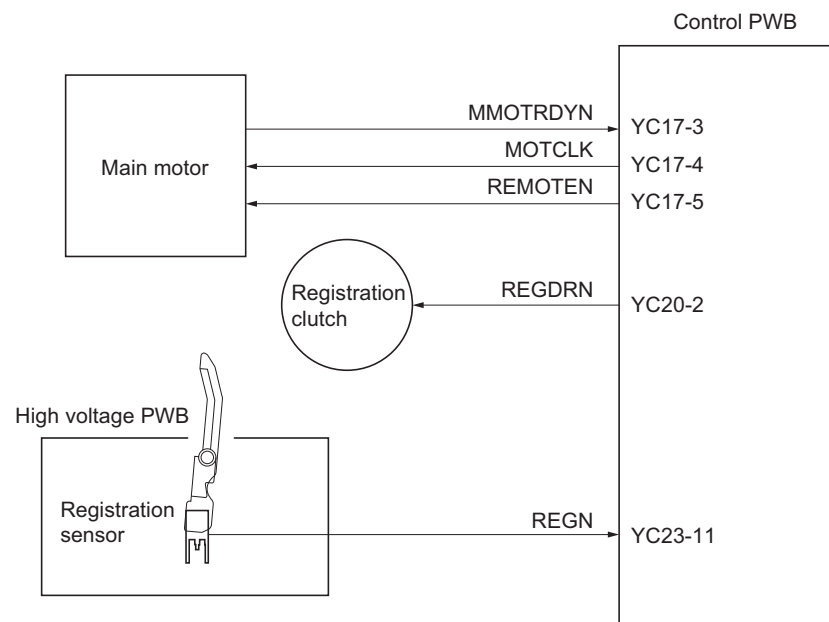


Figure 2-1-6 Paper conveying section block diagram

2-1-2 Drum section

(1) Drum section

The durable layer of organic photoconductor (OPC) is coated over the aluminum cylinder base. The OPC tends to reduce its own electrical conductance when exposed to light. After a cyclic process of charging, exposure, and development, the electrostatic image is constituted over the OPC layer.

Since the OPC is materialized by resin, it is susceptible to damage caused by sharp edges such as a screwdriver, etc., resulting in a print quality problem. Also, finger prints can cause deterioration of the OPC layer, therefore, the drum (in the drum unit) must be handled with care. Substances like water, alcohol, organic solvent, etc., should be strictly avoided. As with all other OPC drums, the exposure to a strong light source for a prolonged period can cause a print quality problem. The limit is approximately 500 lux for less than five minutes. If the drum (drum unit) remains removed from the machine, it should be stored in a cool, dark place.

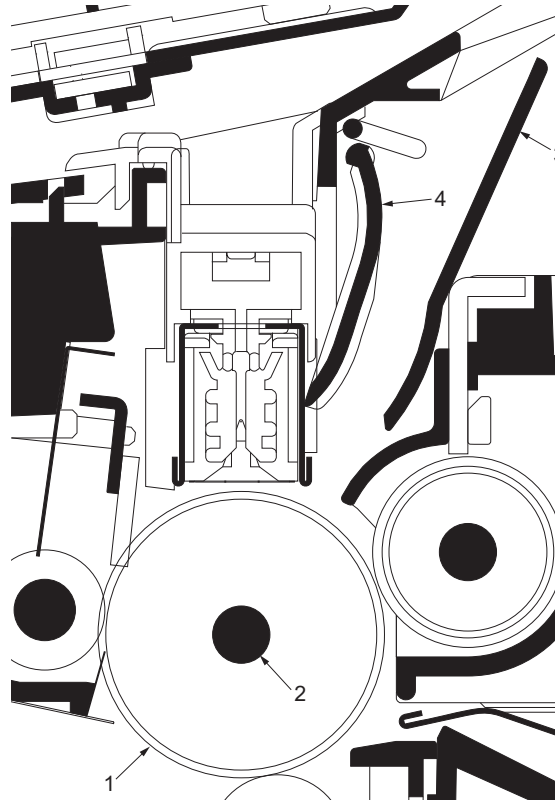


Figure 2-1-7 Drum unit

- (1) Drum
- (2) Drum shaft
- (3) Drum cover A
- (4) Drum cover B

(2) Main charger unit

As the drum rotates in a “clean (neutral)” state, its photoconductive layer is given a uniform, positive (+) corona charge dispersed by the main charger wire. Due to high-voltage scorotron charging, the charging wire can get contaminated by oxidation after a long run. Therefore, the charger wire must be cleaned at a specific interval. Cleaning the charging wire prevents print quality problems such as black streaks.

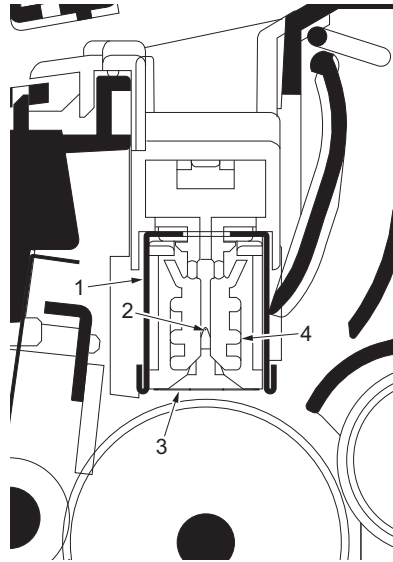


Figure 2-1-8 Main charger unit

- (1) Main charger shield
- (2) Main charger wire
- (3) Main charger grid
- (4) Main charger wire cleaner

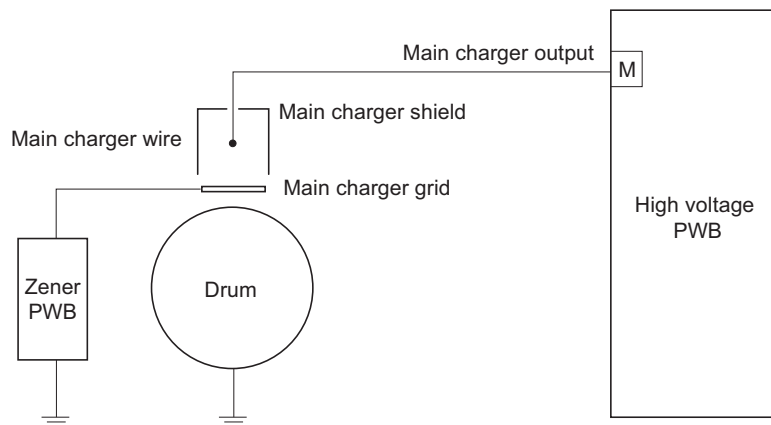
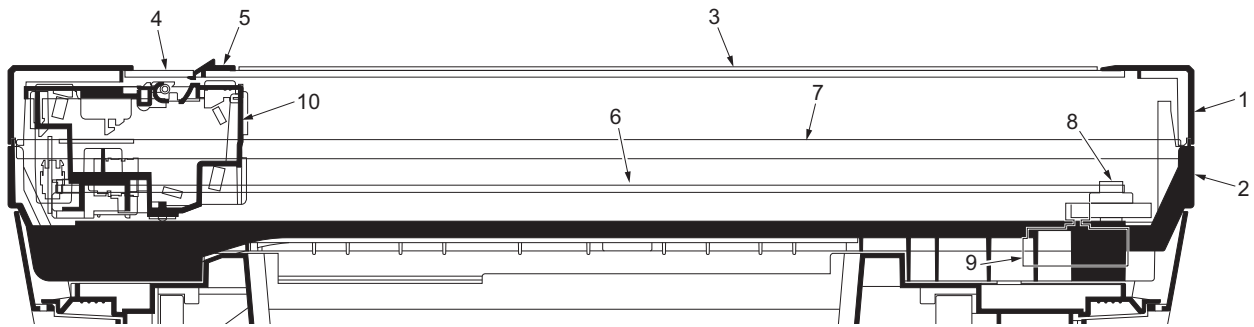


Figure 2-1-9 Drum unit and main charger unit block diagram

2-1-3 Optical section**(1) Scanner unit****Figure 2-1-10 Scanner unit**

- | | |
|--------------------------|-------------------------------|
| (1) ISU top frame | (6) ISU belt |
| (2) ISU bottom frame | (7) ISU shaft |
| (3) Contact glass | (8) ISU gear 63/32 |
| (4) DP contact glass | (9) ISU motor |
| (5) Size indicator plate | (10) Image scanner unit (ISU) |

(2) Image scanner unit (ISU)

The image scanner unit consists of an exposure lamp, four mirrors, a lens, a CCD PWB, and so on. Also an inverter PWB for driving the exposure lamp and a home position sensor for detecting the home position of the image scanner unit are incorporated.

The original on the contact glass is exposed to the light of the exposure lamp that is reflected by the ISU reflector. The image is input through reflection by the four mirrors and through the ISU lens to the CCD image sensor on the CCD PWB. The CCD image sensor scans one row of the image in the main scan direction, converts it to electric signals, and outputs them to the control PWB. Then the image scanner unit is moved in the sub scan direction along the sliding rod, and the CCD image sensor scans the next row of the image in the main scan direction. The operation described above is repeated for scanning the overall image of the original. If a document processor (DP) is used, the image scanner unit stops at the position of the DP contact glass and scans sequentially one row of the image on the original in synchronization with the moving timing of the original in the sub scan direction by driving the DP.

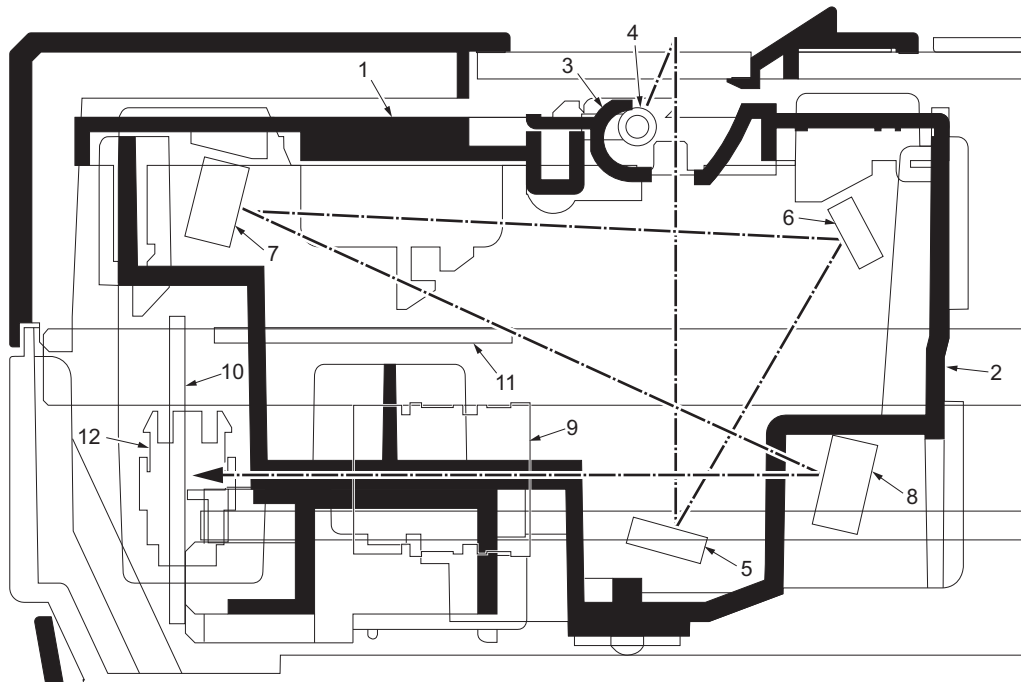


Figure 2-1-11 Image scanner unit (ISU)

- | | |
|-------------------|---------------------------|
| (1) Lamp mount | (7) Mirror C |
| (2) ISU housing | (8) Mirror D |
| (3) ISU reflector | (9) ISU lens |
| (4) Exposure lamp | (10) CCD PWB |
| (5) Mirror A | (11) Inverter PWB |
| (6) Mirror B | (12) Home position sensor |

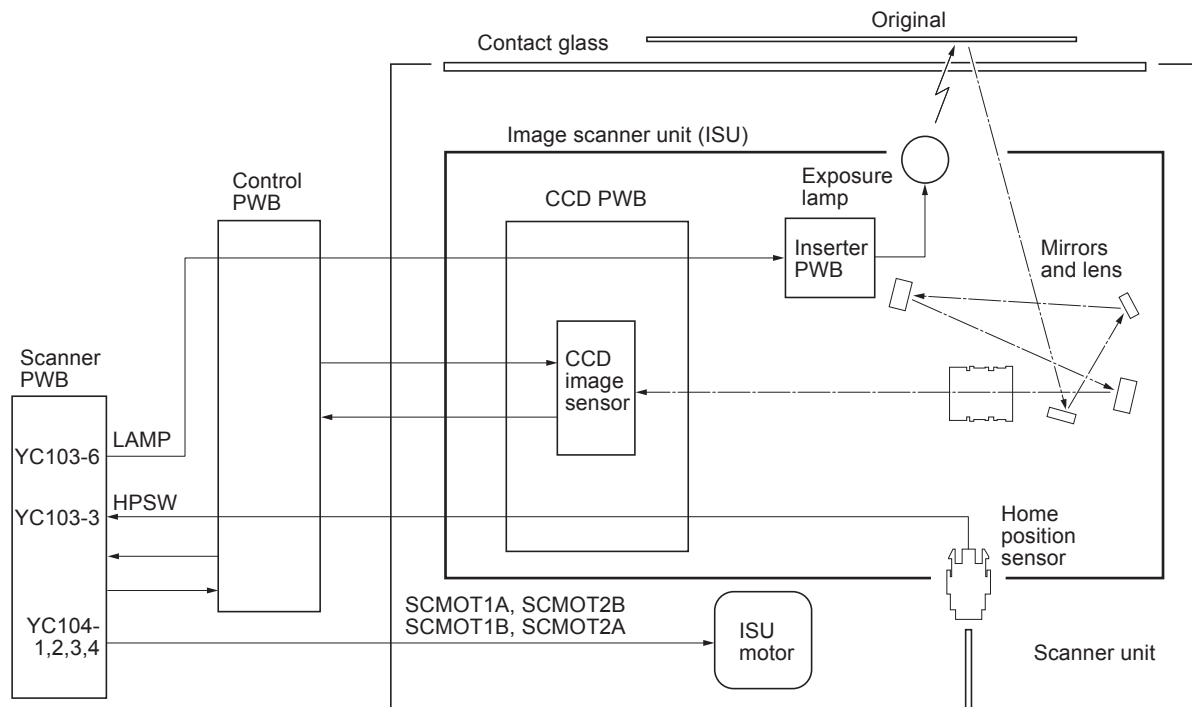


Figure 2-1-12 Scanner unit block diagram

(3) Laser scanner unit

The charged surface of the drum is then scanned by the laser beam from the laser scanner unit.

The laser beam (780 nm wavelength) beam is dispersed as the polygon motor revolves to reflect the laser beam over the drum. Various lenses and mirror are housed in the laser scanner unit, adjust the diameter of the laser beam, and focalize it at the drum surface.

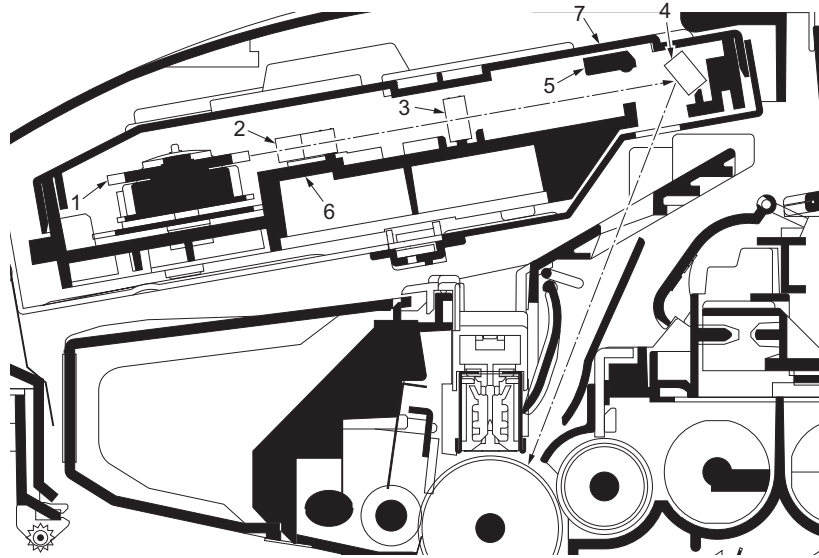


Figure 2-1-13 Laser scanner unit

- (1) Polygon motor (mirror)
- (2) F-θ lens
- (3) F-θ lens
- (4) LSU mirror
- (5) LSU shutter
- (6) LSU frame
- (7) LSU cover

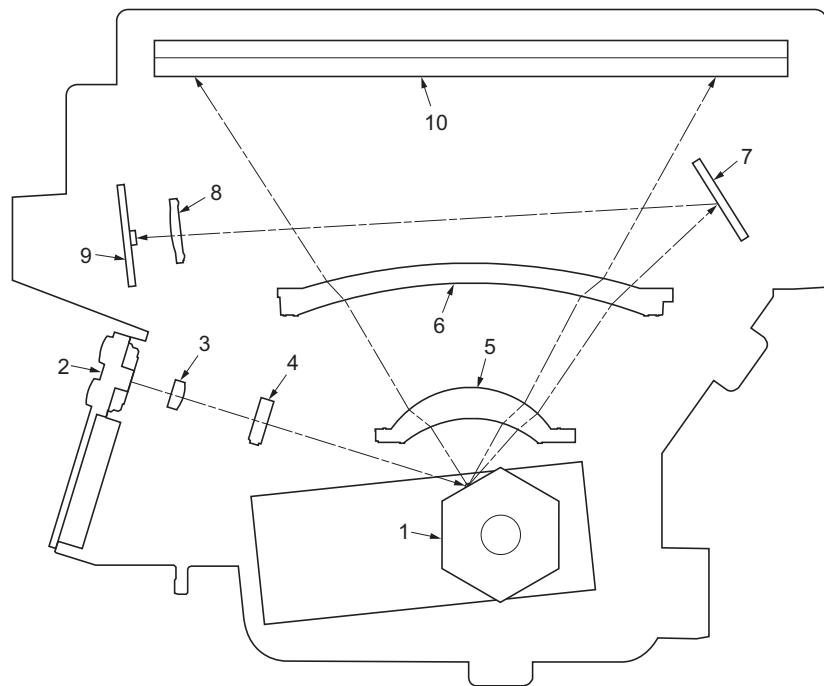


Figure 2-1-14 Laser scanner unit

- (1) Polygon motor (mirror)
- (2) Laser diode (APC PWB)
- (3) Collimator lens
- (4) Cylindrical lens
- (5) F-θ lens
- (6) F-θ lens
- (7) PD mirror
- (8) SOS lens
- (9) Pin photo diode sensor (PD PWB)
- (10) LSU mirror

2-1-4 Developing section

The latent image constituted on the drum is developed into a visible image. The developing roller contains a 3-pole (S-NS) magnet roller and an aluminum cylinder rotating around the magnet roller. Toner attracts to the magnet sleeve since it is powdery ink made of black resin bound to iron particles. Developing blade, magnetized by magnet, is positioned approximately 0.3 mm above the magnet sleeve to constitute a smooth layer of toner in accordance with the magnet sleeve revolution.

The developing roller is applied with the AC-weighted, positive DC power source. Toner on the magnet sleeve is given a positive charge. The positively charged toner is then attracted to the areas of the drum which was exposed to the laser light. (The gap between the drum and the magnet sleeve is approximately 0.32 mm.) The non-exposed areas of the drum repel the positively charged toner as these areas maintain the positive charge.

The developing roller is also AC-biased to ensure contrast in yielding by compensating the toner's attraction and repelling action during development.

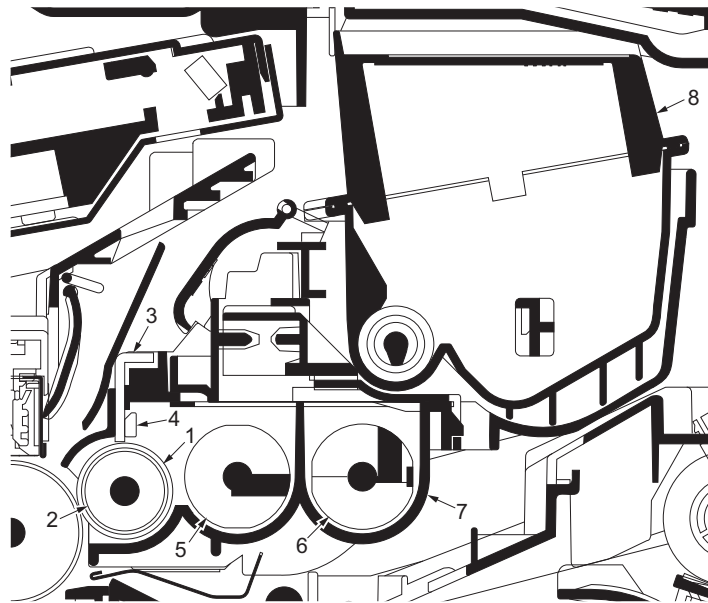


Figure 2-1-15 Developing unit and toner container

- | | |
|----------------------|---------------------|
| (1) Magnet sleeve | (5) DLP screw A |
| (2) Magnet roller | (6) DLP screw B |
| (3) Developing blade | (7) DLP case |
| (4) Blade magnet | (8) Toner container |

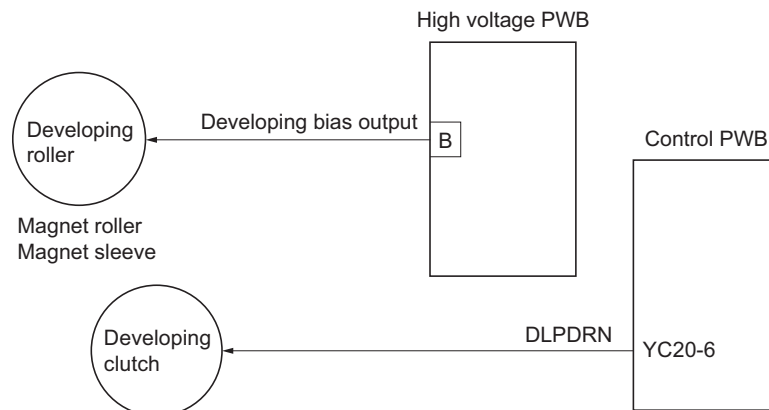


Figure 2-1-16 Developing section block diagram

2-1-5 Transfer/separation section

The transfer/separation section consists of the transfer roller, discharger brush and paper chute guide. A high voltage generated by the high voltage PWB is applied to the transfer roller for transfer charging. Paper after transfer is separated from the drum.

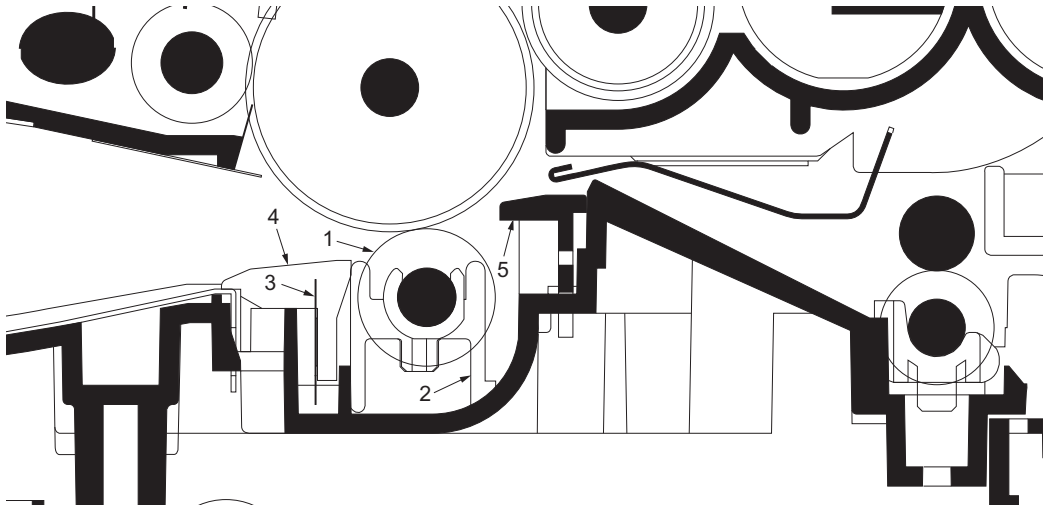


Figure 2-1-17 Transfer/separation section

- (1) Transfer roller
- (2) Transfer bushes
- (3) Discharger brush
- (4) DC brush holder
- (5) Paper chute guide

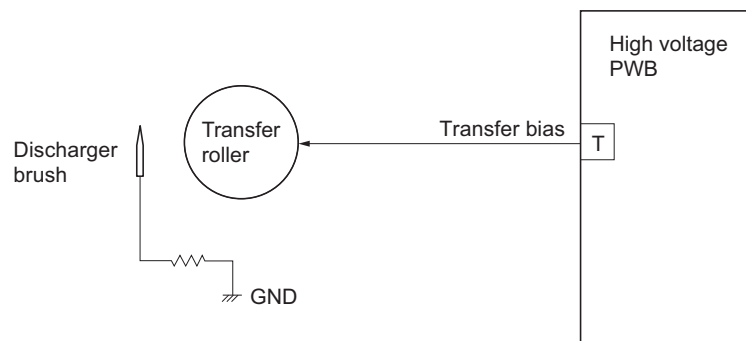


Figure 2-1-18 Transfer/separation section block diagram

2-1-6 Cleaning section

After the transferring process, the drum needs to be physically cleaned of toner which is residual after the development process. The cleaning blade is constantly pressed against the drum and scrapes the residual toner off to the sweep roller. The waste toner is collected at the output end of the sweep roller and sent back to the toner container, into the waste toner reservoir.

After the drum is physically cleaned, it then must be cleaned to the electrically neutral state. This is necessary to erase any residual positive charge, ready to accept the uniform charge for the next print process. The residual charge is canceled by exposing the drum to the light emitted from the eraser lamp (PWB). This lowers the electrical conductivity of the drum surface making the residual charge on the drum surface escape to the ground.

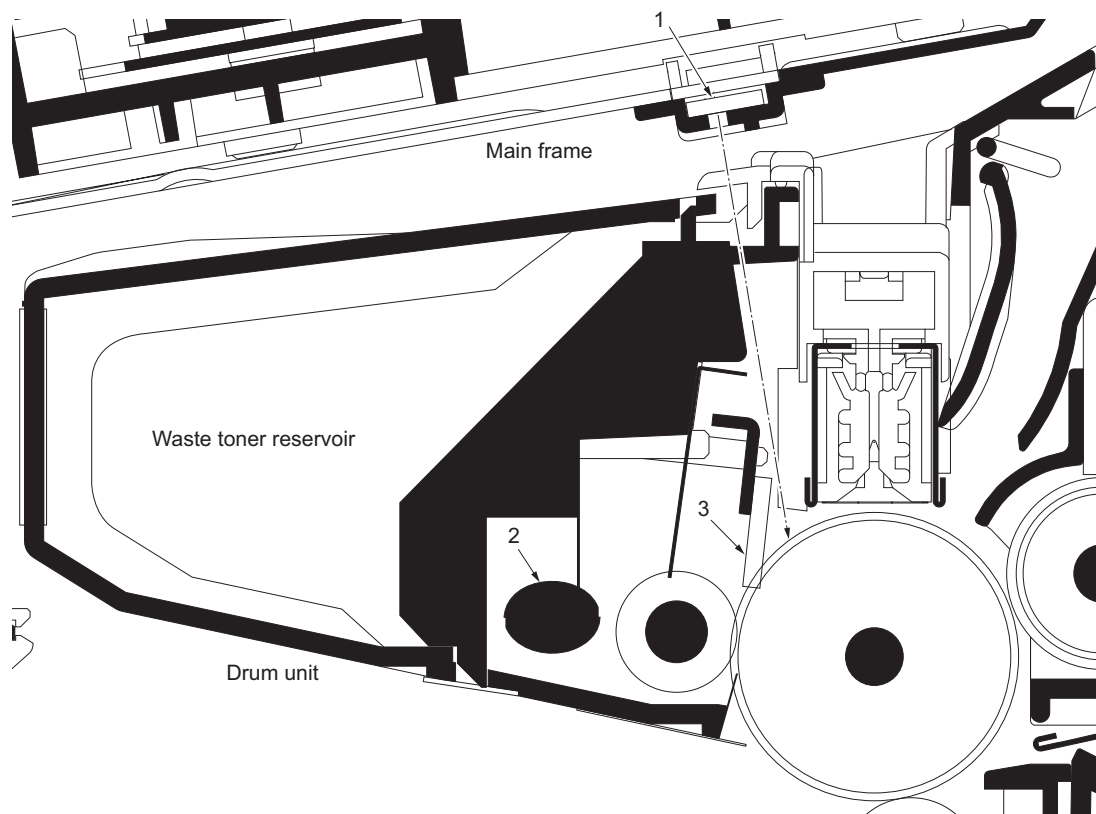


Figure 2-1-19 Cleaning section

- (1) Eraser lamp (PWB)
- (2) Sweep roller
- (3) Cleaning blade

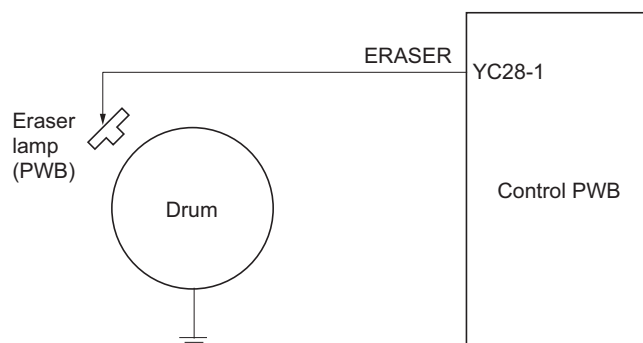


Figure 2-1-20 Cleaning section block diagram

2-1-7 Fuser section

The toner on the paper is molten and pressed into the paper as it passes between the heat roller and the press roller in the fuser unit. The heat roller has a heater lamp inside which continuously turns on and off by the fuser thermistor to maintain the constant temperature onto the heat roller surface. The heat roller is resin coated by fluorine to prevent toner from accumulating on the roller after a long run. Care must be taken while handling the heat roller not to scratch the roller surface as doing so may result in print problems. Fuser temperature is optimized to the paper type. The heat roller has four separators (claws) which are continuously in contact with its surface. These separators (claws) prevent the paper on which toner has been fused from being wound around the heat roller causing paper jam. The press roller is made of the heat-resistant silicon rubber. This roller is used to strongly press the paper towards the heat roller by means of press springs. The temperature of the heat roller is constantly monitored by the control PWB using the fuser thermistor. Should the temperature of the heat roller exceed the predetermined value, the fuser thermal cutout is activated to effectively disconnect the heater lamp from power.

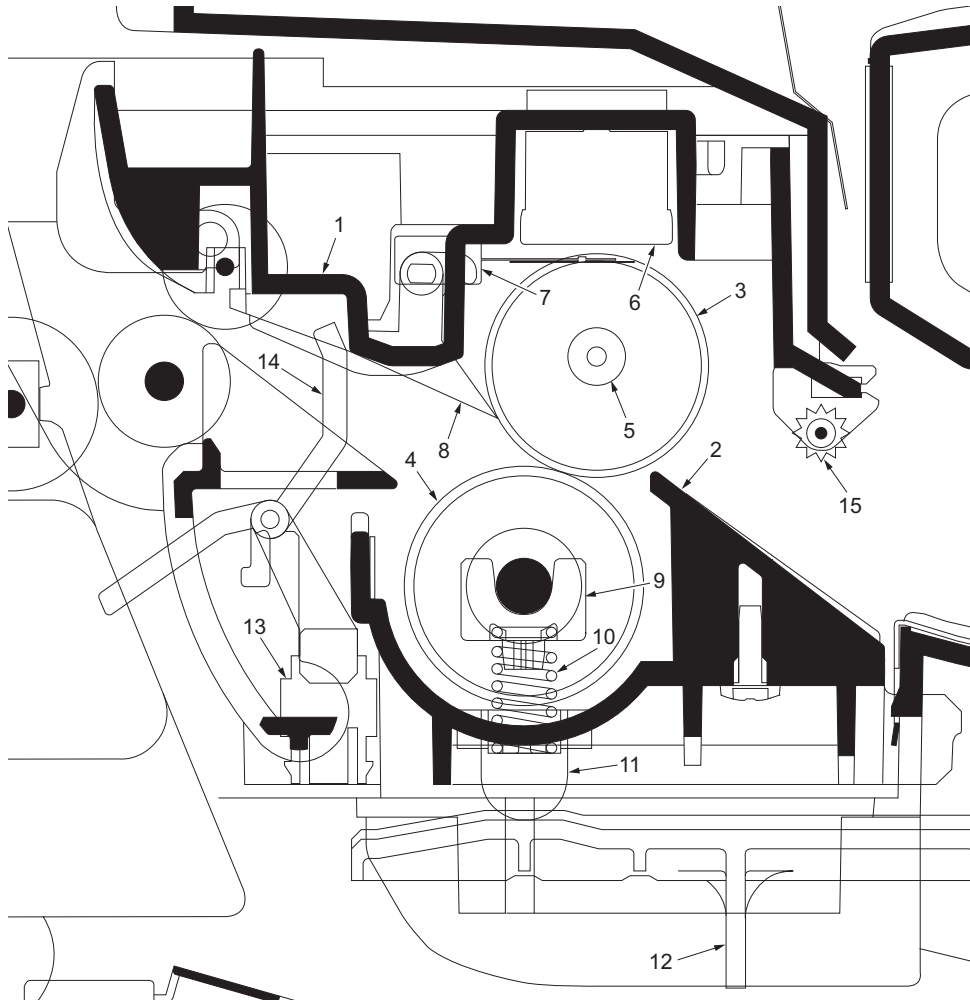


Figure 2-1-21 Fuser unit

- | | |
|--------------------------|-----------------------------|
| (1) Upper fuser frame | (9) Fuser bushes |
| (2) Lower fuser frame | (10) Press springs |
| (3) Heat roller | (11) Press spring holders |
| (4) Press roller | (12) Fuser lever L (R) |
| (5) Fuser heater lamp | (13) Exit sensor |
| (6) Fuser thermal cutout | (14) Actuator (exit sensor) |
| (7) Fuser thermistor | (15) Fuser guide pulley |
| (8) Separators | |

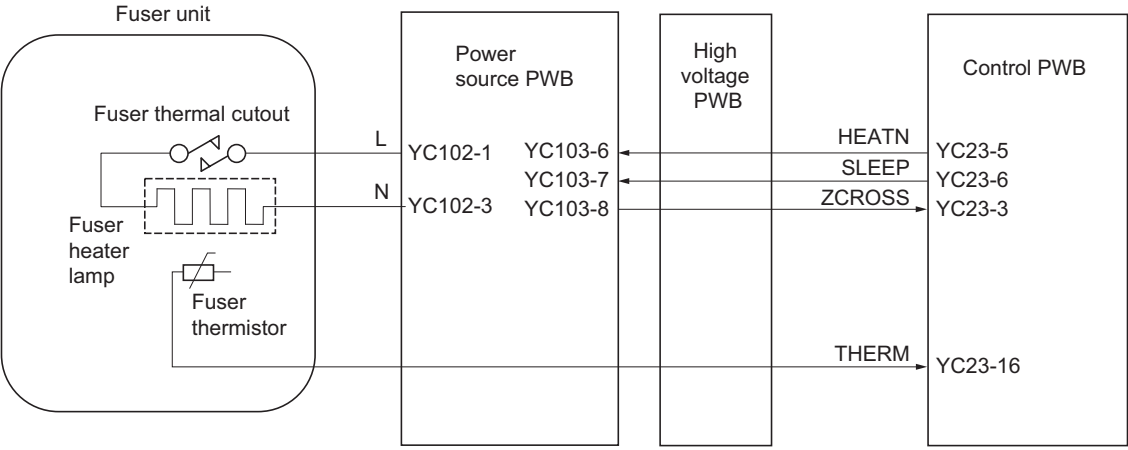


Figure 2-1-22 Fuser unit block diagram

2-1-8 Paper exit section

The paper exit section transports the paper which passed the fuser unit towards the top tray. The paper which passed through the fuser unit turns on the actuator (exit sensor) in the fuser unit, and is led by the guide comprised of the rear cover, frame and the FD cover guide, finally reaching the upper FD roller. The paper is delivered to the top tray by the rotation of the upper FD roller.

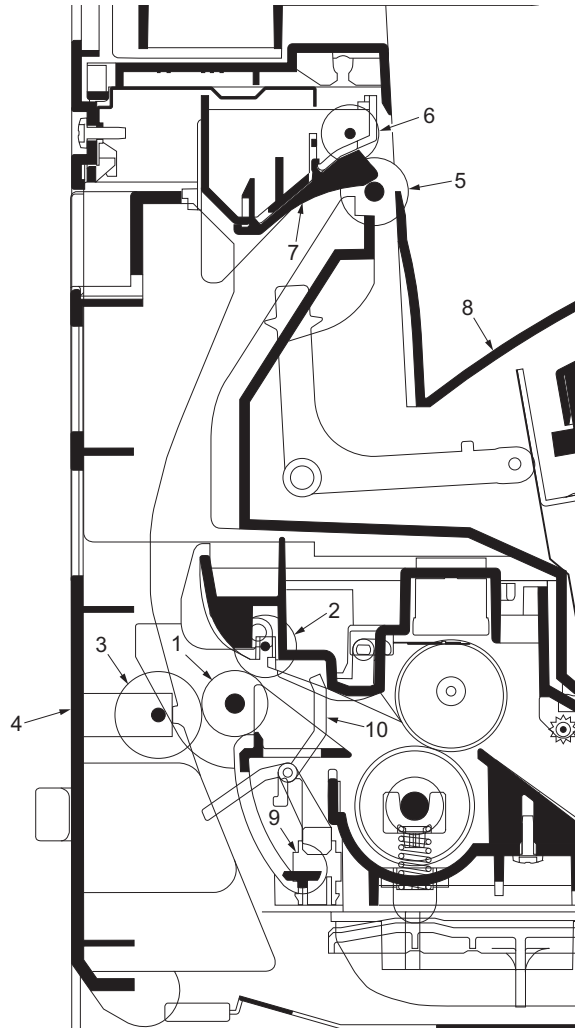


Figure 2-1-23 Paper exit section

- (1) Exit roller
- (2) Fuser exit pulley
- (3) Middle pulley
- (4) Rear cover
- (5) Upper FD roller
- (6) Exit pulley
- (7) FD cover
- (8) Top tray
- (9) Exit sensor
- (10) Actuator (exit sensor)

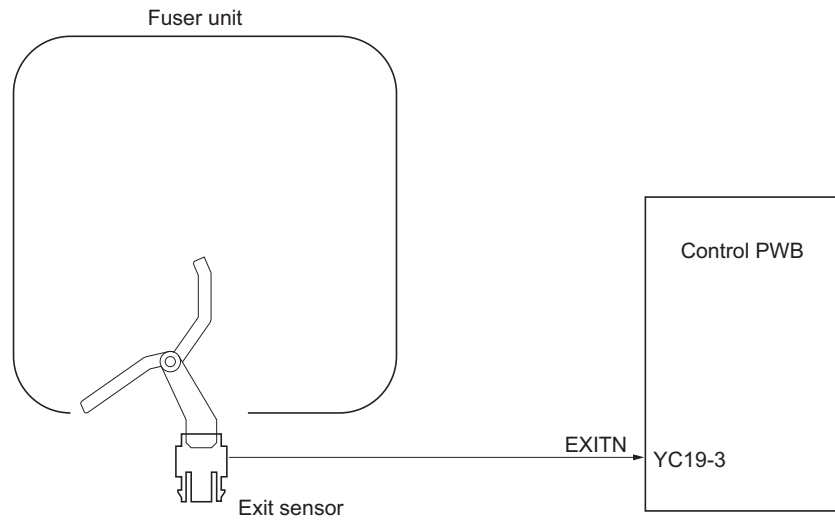


Figure 2-1-24 Paper exit section block diagram

2-1-9 Duplex/conveying section

The duplex/conveying section consists of conveying path which sends the paper sent from the exit section to the paper feed/conveying section when duplex printing.

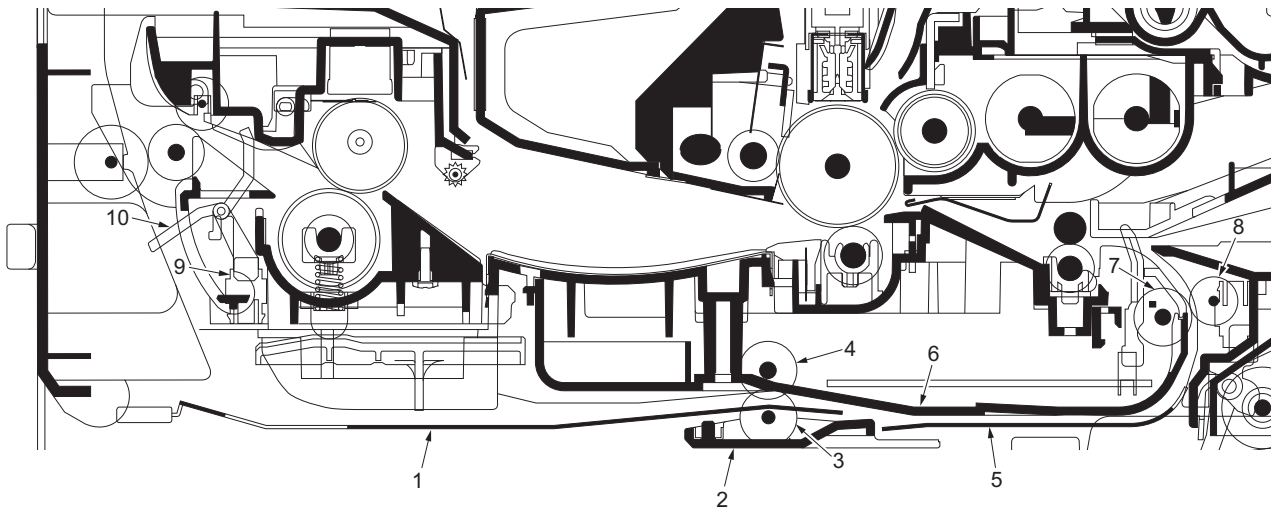


Figure 2-1-25 Duplex/conveying section

- (1) DU cover B
- (2) DU holder
- (3) Middle pulley B
- (4) DU roller
- (5) DU cover A
- (6) Lower base cover
- (7) Feed roller
- (8) Feed pulley
- (9) Exit sensor
- (10) Actuator (exit sensor)

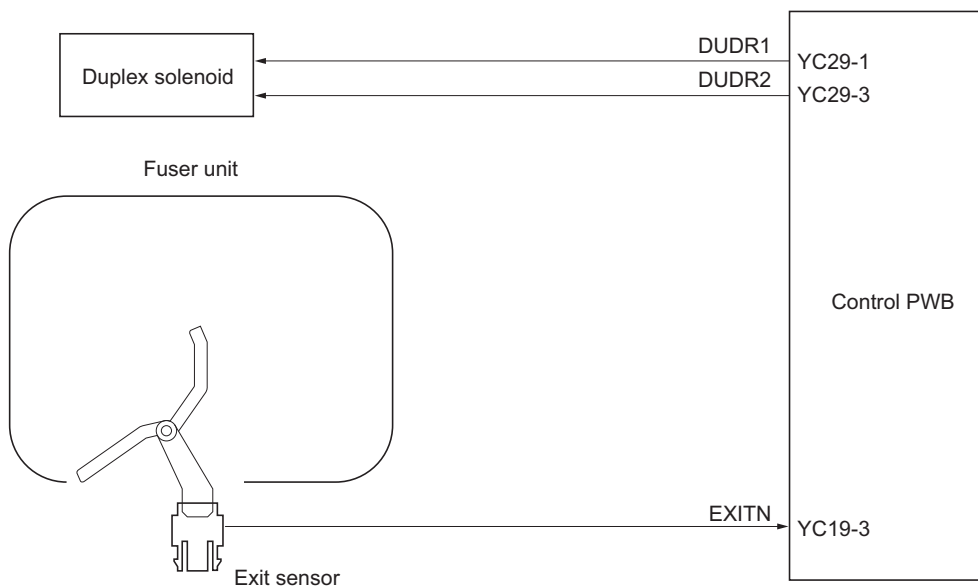


Figure 2-1-26 Duplex/paper conveying section block diagram

2-1-10 DP section

Refer to the DP's service manual.

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2-2-1 Electrical parts layout

(1) PWBs

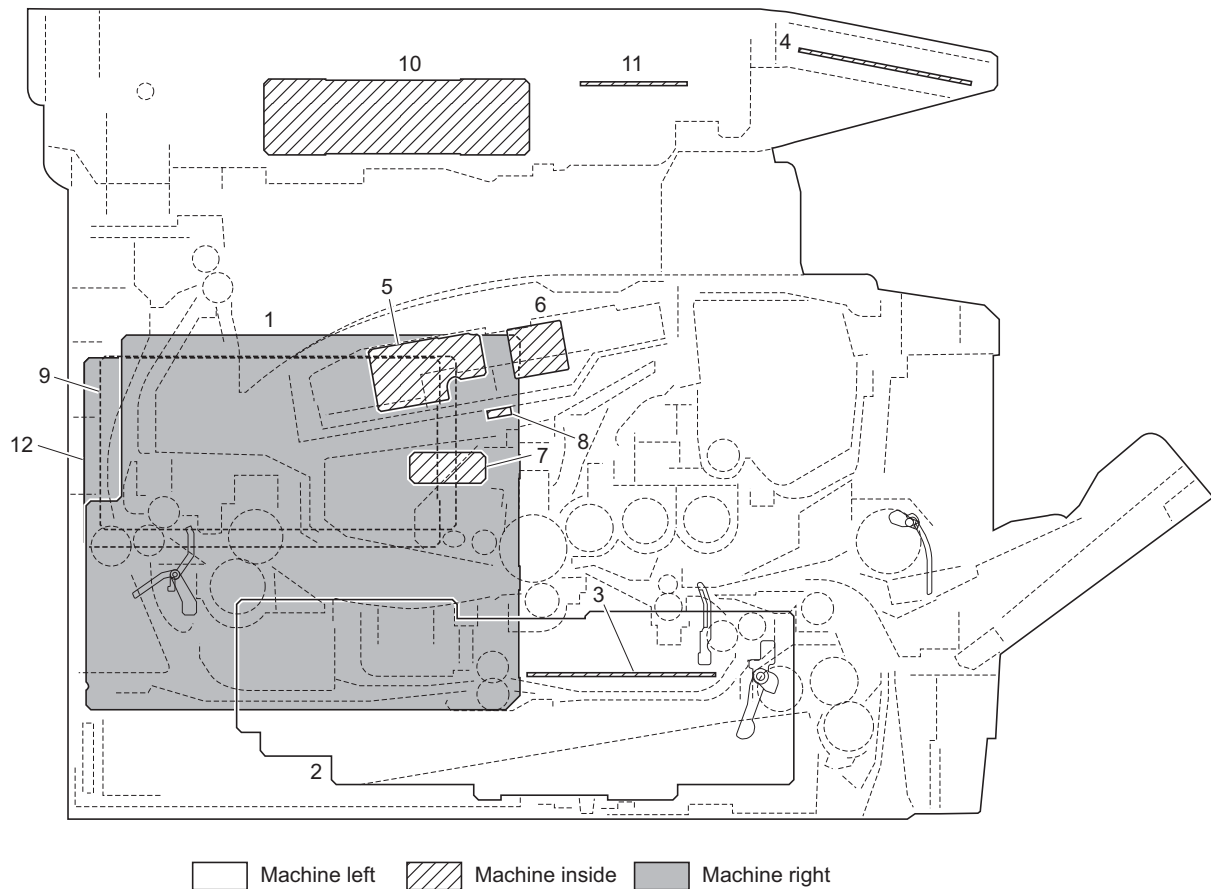


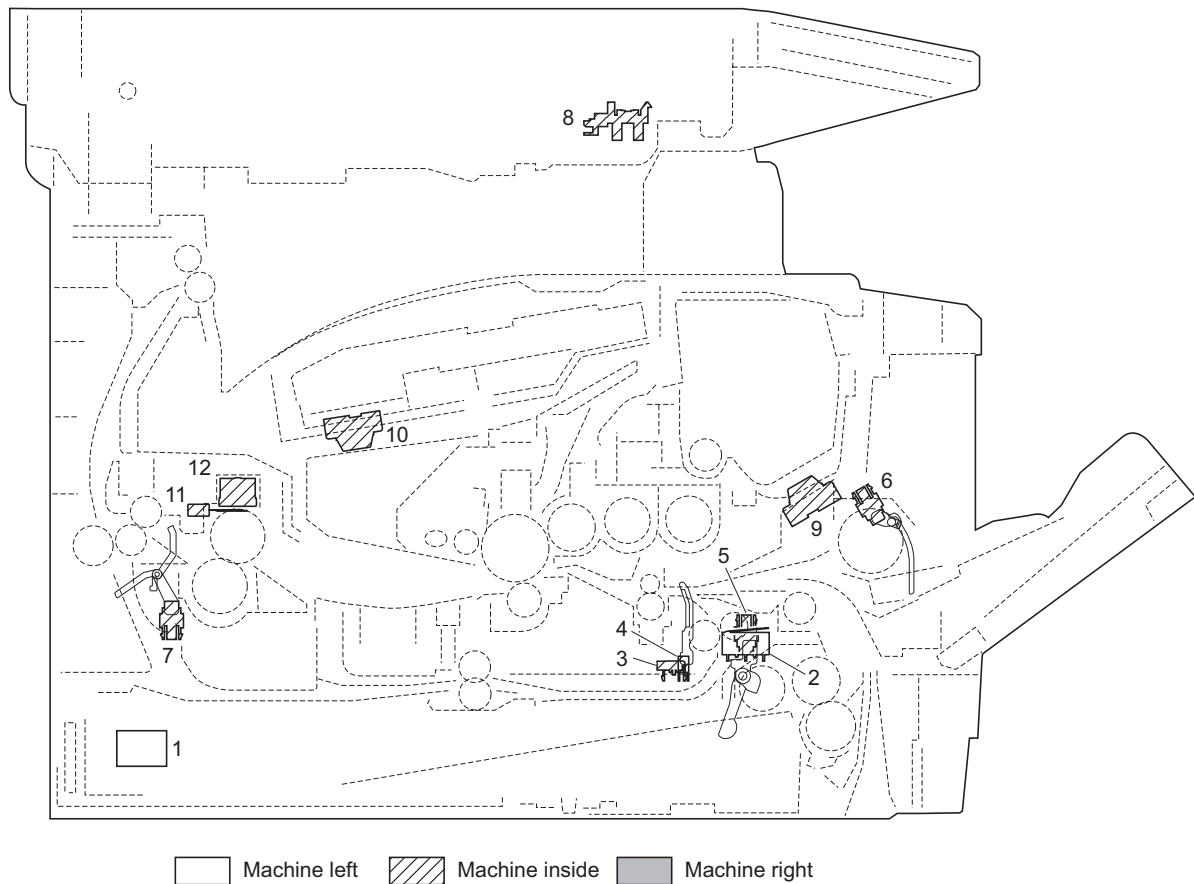
Figure 2-2-1 PWBs

- | | |
|------------------------------|--|
| 1. Control PWB | Main controller: Controls the software such as the print data processing and provides the interface with computers.
Engine: Controls machine hardware such as high voltage/bias output control, paper conveying system control, and fuser temperature control, etc. |
| 2. Power source PWB..... | After full-wave rectification of AC power source input, switching for converting to 24 V DC for output. Controls the fuser heater lamp. |
| 3. High voltage PWB..... | Generates main charging, developing bias and transfer bias. |
| 4. Operation panel PWB | Consists the LCD, LED indicators and key switches. |
| 5. APC PWB | Generates and controls the laser beam. |
| 6. PD PWB..... | Controls horizontal synchronizing timing of laser beam. |
| 7. Zener PWB | Adjusts the drum surface potential. |
| 8. Eraser lamp PWB | Eliminates the residual electrostatic charge on the drum. |
| 9. Scanner PWB | Controls the scanner section. |
| 10. CCD PWB..... | Reads the image of originals. |
| 11. Inverter PWB..... | Controls the exposure lamp. |
| 12. FAX PWB | Modulates, demodulates, compresses, decompresses and smoothes out image data, and converts resolution of image data. |

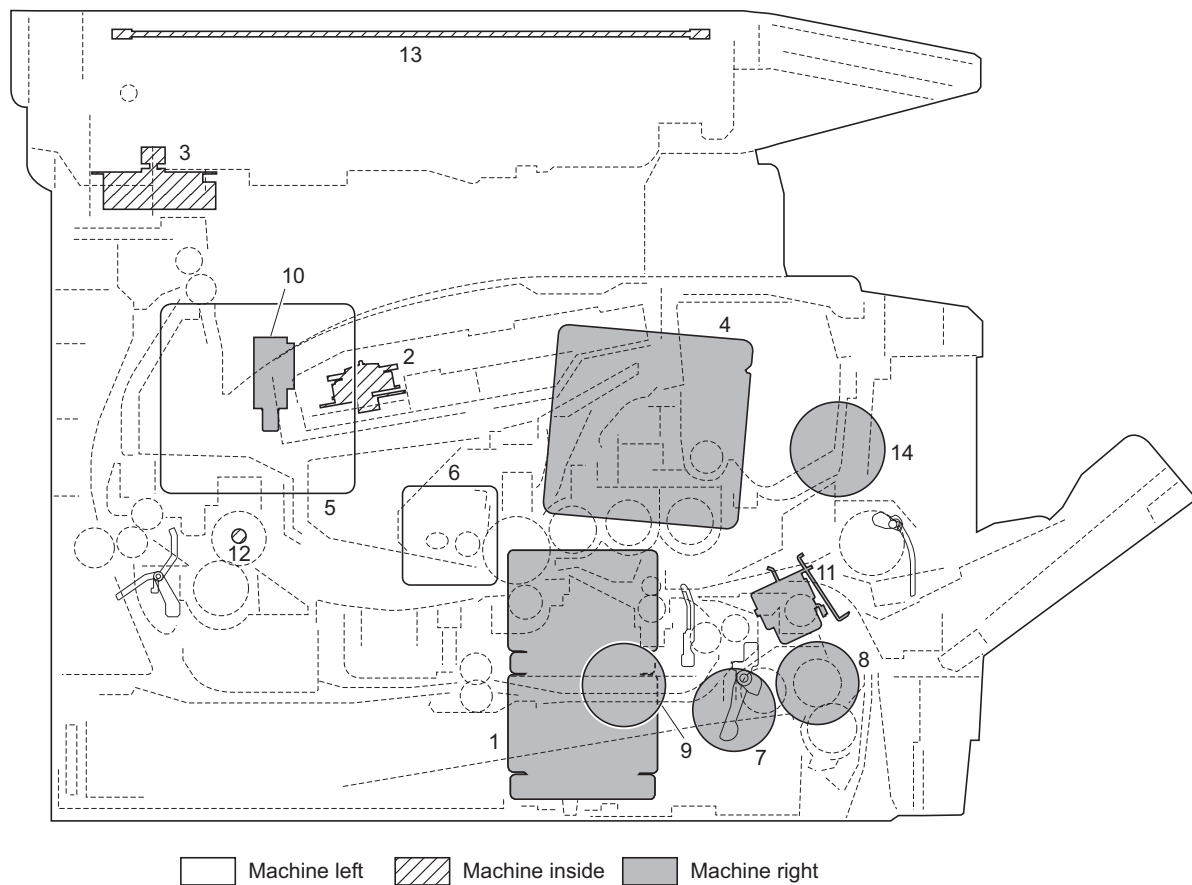
List of correspondences of PWB names

No.	Name used in service manual	Name used in parts list
1	Control PWB	PARTS MAIN PWB ASSY FS SP
1	Control PWB	PARTS MAIN PWB ASSY FS SP EU
2	Power source PWB	PARTS SWITCHING REGULATOR 120V SP
2	Power source PWB	PARTS SWITCHING REGULATOR 230V SP
3	High voltage PWB	HIGH VOLTAGE UNIT
4	Operation panel PWB	PARTS PANEL PWB ASSY SP
5	APC PWB	-
6	PD PWB	-
7	Zener PWB	-
8	Eraser lamp PWB	-
9	Scanner PWB	PARTS SCANNER PWB ASSY SP
10	CCD PWB	-
11	Inverter PWB	-
12	FAX PWB	PARTS MAIN FAX ASSY U SP
12	FAX PWB	PARTS MAIN FAX ASSY E SP

(2) Switches and sensors

**Figure 2-2-2 Switches and sensors**

- | | |
|--------------------------------|--|
| 1. Main power switch | Turns ON/OFF the AC power source. |
| 2. Interlock switch | Shuts off 24 V DC power line when the front cover is opened. |
| 3. Cassette switch | Detects open/close cassette. |
| 4. Registration sensor | Detects the timing of primary paper feed. |
| 5. Paper sensor | Detects the presence of paper in the cassette. |
| 6. MP paper sensor | Detects the presence of paper on the MP tray. |
| 7. Exit sensor | Detects paper jam in the fuser or duplex conveying section. |
| 8. Home position sensor | Detects the ISU in the home position. |
| 9. Toner sensor | Detects the quantity of toner in a toner container. |
| 10. Waste toner sensor | Detects when the waste toner reservoir (Drum unit) is full. |
| 11. Fuser thermistor | Measures the heat roller temperature. |
| 12. Fuser thermal cutout | Shuts off the power source to the fuser heater lamp when the heat roller reaches extremely high temperature. |

(3) Other electrical components**Figure 2-2-3 Other electrical components**

- | | |
|----------------------------------|---|
| 1. Main motor | Drives the paper feed/conveying section and fuser unit. |
| 2. Polygon motor | Drives the polygon mirror. |
| 3. ISU motor | Drives the ISU. |
| 4. Right cooling fan motor | Cools the interior of machine. |
| 5. Left cooling fan motor | Cools the interior of machine. |
| 6. Power source fan motor | Cools the interior of machine. |
| 7. Registration clutch | Controls the secondary paper feed. |
| 8. Paper feed clutch | Controls the paper cassette paper feed. |
| 9. Developing clutch | Controls the toner feed. |
| 10. Duplex solenoid | Controls the paper conveying at the duplex conveying section. |
| 11. MP paper feed solenoid | Controls the MPF bottom plate of the MP tray. |
| 12. Fuser heater lamp | Heats the heat roller. |
| 13. Exposure lamp | Exposes originals. |
| 14. Speaker | Outputs buzzer, monitoring and speaker sounds. |

(4) DP

Refer to the DP's service manual.

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2-3-1 Power source PWB

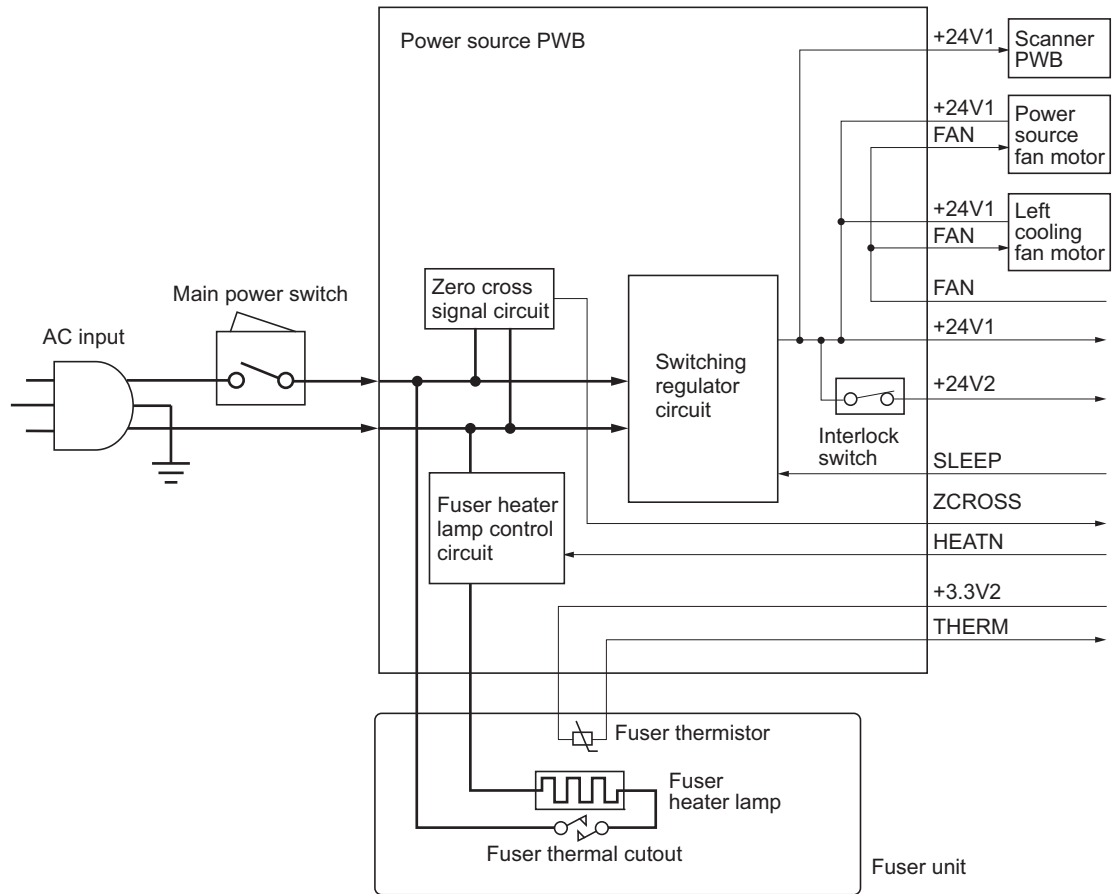


Figure 2-3-1 Power source PWB block diagram

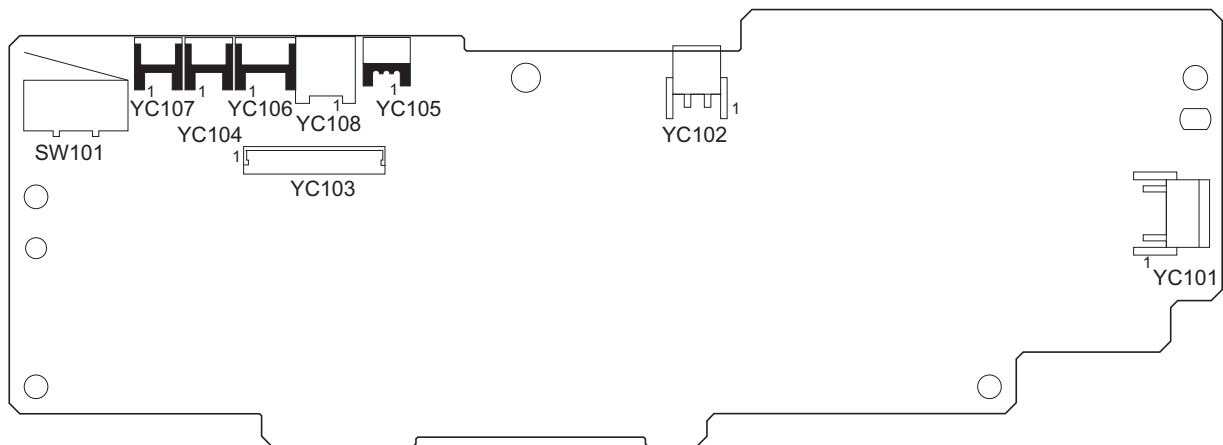
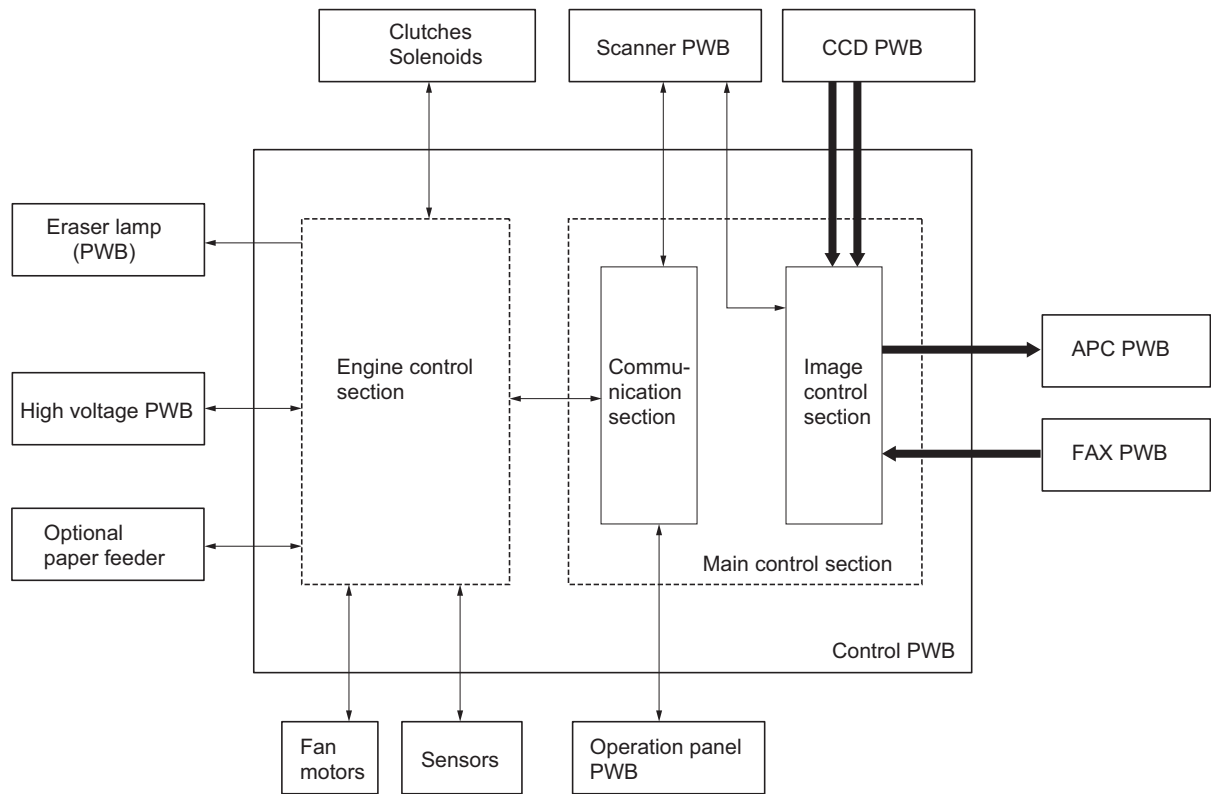


Figure 2-3-2 Power source PWB silk-screen diagram

Connector	Pin	Signal	I/O	Voltage	Description
YC101	1	NEUTRAL	I	120 V AC	AC power input
Connected to the AC inlet	2	LIVE	I	220 - 240 V AC 120 V AC 220 - 240 V AC	AC power input
YC102	1	LIVE	O	120 V AC	Fuser heater lamp output
Connected to the fuser heater lamp	2	NEUTRAL	O	220 - 240 V AC 120 V AC 220 - 240 V AC	Fuser heater lamp output
YC103	1	+24V1	O	24 V DC	24 V DC power source
Connected to the high voltage PWB	2	SGND	-	-	Ground
	3	FAN	I	0/24 V DC	Left cooling fan motor: On/Off
	4	THERM	O	Analog	Fuser thermistor detection voltage
	5	+3.3V1	I	3.3 V DC	3.3 V DC power source
	6	HEATN	I	0/3.3 V DC	Fuser heater lamp: On/Off
	7	SLEEP	I	0/3.3 V DC	Sleep mode signal: On/Off
	8	ZCROSS	O	0/3.3 V DC (pulse)	Zero cross signal
	9	+24V2	O	24 V DC	24 V DC power source (via interlock switch)
	10	+24V2	O	24 V DC	24 V DC power source (via interlock switch)
	11	PGND	-	-	Ground
	12	PGND	-	-	Ground
YC104	1	+24V1	O	24 V DC	24 V DC power source
Connected to the left cooling fan motor	2	FAN	O	0/24 V DC	Left cooling fan motor: On/Off
YC105	1	+3.3V1	O	3.3 V DC	3.3 V DC power source
Connected to the fuser thermistor	2	N.C.	-	-	Not used
	3	THERM	I	Analog	Fuser thermistor detection voltage
YC106	1	+24V1	O	24 V DC	24 V DC power source
Connected to the scanner PWB	2	N.C.	-	-	Not used
	3	GND	-	-	Ground
YC107	1	+24V1	O	24 V DC	24 V DC power source
Connected to the power source fan motor	2	FAN	O	0/24 V DC	Power source fan motor: On/Off
YC108	1	-	-	-	Frame ground (Control PWB)
Connected to the ground terminals	2	-	-	-	Frame ground (Frame)
	3	-	-	-	Frame ground (Frame)

2-3-2 Control PWB**Figure 2-3-3 Control PWB block diagram**

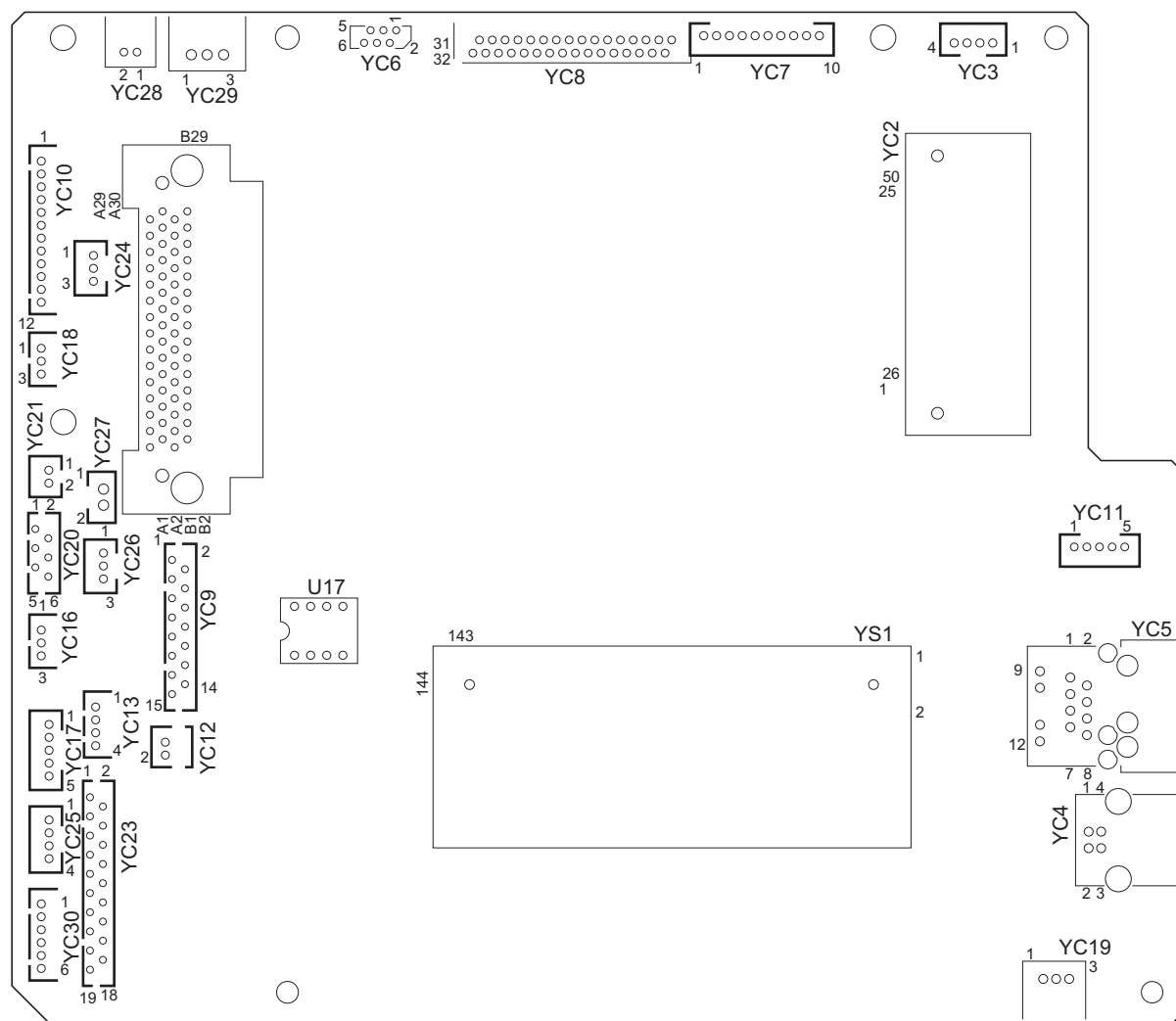


Figure 2-3-4 Control PWB silk-screen diagram

Connector	Pin	Signal	I/O	Voltage	Description
YC6 Connected to the scan- ner PWB	1	+12V	O	12 V DC	12 V DC power source
	2	GND	-	-	Ground
	3	HPSW	O	0/3.3 V DC	Home position sensor: On/Off
	4	GND	-	-	Ground
	5	NC	-	-	Not used
	6	LAMP	I	0/24 V DC	Exposure lamp drive signal
YC7 Connected to the opera- tion panel PWB	1	GND	-	-	Ground
	2	PANCTS	I	0/3.3 V DC (pulse)	Transmitting enable signal
	3	PANRTS	O	0/3.3 V DC (pulse)	Receiving enable signal
	4	+3.3V1	O	0/3.3 V DC	Home position sensor: On/Off
	5	PANRXD	I	0/3.3 V DC (pulse)	Operation panel PWB receiving data
	6	PANTXD	O	0/3.3 V DC (pulse)	Operation panel PWB transmitting data
	7	FPRSTN	O	3.3/0 V DC	Operation panel PWB reset signal
	8	GND	-	-	Ground
	9	POWERKEY	I	3.3/0 V DC	Power key input signal
	10	+5V1	O	5 V DC	5 V DC power source
YC8 Connected to the CCD PWB	1	LAMP	O	0/24 V DC	Exposure lamp drive signal
	2	NC	-	-	Not used
	3	GND	-	-	Ground
	4	GND	-	-	Ground
	5	HPSW	I	0/3.3 V DC	Home position sensor: On/Off
	6	+3.3V1	O	3.3 V DC	3.3 V DC power source
	7	NC	-	-	Not used
	8	CCDRSN	O	LVDS	CCD reset signal (-)
	9	CCDRSP	O	LVDS	CCD reset signal (+)
	10	NC	-	-	Not used
	11	CCDCLPP	O	LVDS	CCD reset signal (-)
	12	CCDCLPN	O	LVDS	CCD reset signal (+)
	13	NC	-	-	Not used
	14	CCDPH1N	O	LVDS	CCD shift register clock signal (-)
	15	CCDPH1P	O	LVDS	CCD shift register clock signal (+)
	16	NC	-	-	Not used
	17	CCDPH2N	O	LVDS	CCD shift register clock signal (-)
	18	CCDPH2P	O	LVDS	CCD shift register clock signal (+)
	19	NC	-	-	Not used
	20	CCDSH	O	LVDS	CCD shift gate signal (-)
	21	CCDSW	O	LVDS	CCD color/BW change signal (+)
	22	GND	-	-	Ground
	23	CCDDATAR	I	LVDS	CCD image output signal (Red)
	24	GND	-	-	Ground
	25	CCDDATAG	I	LVDS	CCD image output signal (Green)
	26	GND	-	-	Ground
	27	CCDDATAB	I	LVDS	CCD image output signal (Blue)
	28	GND	-	-	Ground
	29	+12V	O	12 V DC	12 V DC power source (For exposure lamp)
	30	GND	-	-	Ground
	31	+5V1	O	5 V DC	5 V DC power source
	32	+5V1	O	5 V DC	5 V DC power source

Connector	Pin	Signal	I/O	Voltage	Description
YC9	1	GND	-	-	Ground
Connected to the scanner PWB	2	+3.3V1	O	3.3 V DC	3.3 V DC power source
	3	CPUCLK	I	0/3.3 V DC (pulse)	Serial communications clock signal
	4	CPUSI	I	0/3.3 V DC (pulse)	Serial communications data input
	5	CPUSO	O	0/3.3 V DC (pulse)	Serial communications data output
	6	CPUSEL	I	0/3.3 V DC	Communications select signal
	7	CPURDY	O	0/3.3 V DC	Communications ready signal
	8	OVMONOUT	O	0/3.3 V DC	Communications ready signal
	9	PAGESET	O	0/3.3 V DC	Vertical synchronizing monitor signal
	10	SEGSO	I	0/3.3 V DC	Vertical synchronizing signal
	11	SSCKN	O	0/3.3 V DC (pulse)	Serial communications clock
	12	SECSI	O	0/3.3 V DC (pulse)	Serial communications data input
	13	SSBSY	I	0/3.3 V DC	Impossible transmission/Completion notice signal
	14	SSDIR	I	0/3.3 V DC	Serial communications T/R switching signal
	15	SEGIR	I	0/3.3 V DC	Serial communications interruption demand signal
YC10	1	+24V3	O	24 V DC	24 V DC power source
Connected to the laser scanner unit	2	GND	-	-	Ground
	3	PLGDRN	O	0/3.3 V DC	Polygon motor: On/Off
	4	PLGRDY	I	0/3.3 V DC	Polygon motor ready signal
	5	PLGCLK	O	0/3.3 V DC (pulse)	Polygon motor clock signal
	6	PDN	I	0/3.3 V DC (pulse)	Horizontal synchronizing signal
	7	GND	-	-	Ground
	8	VDON	O	0/3.3 V DC (pulse)	Video data signal (+)
	9	VDOP	O	0/3.3 V DC (pulse)	Video data signal (-)
	10	OUTPEN	O	0/3.3 V DC	Laser output enable signal
	11	SAMPLEN	O	0/3.3 V DC	Sample/hold timing switching signal
	12	+3.3V1	O	3.3 V DC	3.3 V DC power source
YC12	1	OUT-	O	Analog	Speaker sound signal (-)
Connected to the speaker	2	OUT+	O	Analog	Speaker sound signal (+)
YC16	1	PILED	O	3.3 V DC	3.3 V DC power source
Connected to the MP paper sensor	2	GND	-	-	Ground
	3	HANDSN	I	0/3.3 V DC	MP paper sensor: On/Off
YC17	1	+24V3	O	24 V DC	24 V DC power source
Connected to the main motor	2	GND	-	-	Ground
	3	MMOTRDYN	I	0/3.3 V DC	Main motor ready signal
	4	MMOTCLK	O	0/3.3 V DC (pulse)	Main motor clock signal
	5	REMOTEN	O	0/3.3 V DC	Main motor: On/Off
YC18	1	PILED	O	3.3 V DC	3.3 V DC power source
Connected to the paper sensor	2	GND	-	-	Ground
	3	PAPER	I	0/3.3 V DC	Paper sensor: On/Off
YC19	1	PILED	O	3.3 V DC	3.3 V DC power source
Connected to the exit sensor	2	GND	-	-	Ground
	3	EXITN	I	0/3.3 V DC	Exit sensor: On/Off

Connector	Pin	Signal	I/O	Voltage	Description
YC20	1	+24V3	O	24 V DC	24 V DC power source
Connected to the registration clutch, paper feed clutch and developing clutch	2	REGDRN	O	0/24 V DC	Registration clutch: On/Off
	3	+24V3	O	24 V DC	24 V DC power source
	4	FEDDRN	O	0/24 V DC	Paper feed clutch: On/Off
	5	+24V3	O	24 V DC	24 V DC power source
	6	DLPDRN	O	0/24 V DC	Developing clutch: On/Off
YC21	1	+24V3	O	24 V DC	24 V DC power source
Connected to the MP paper feed solenoid	2	MPFDRN	O	0/24 V DC	MP paper feed solenoid: On/Off
YC23	1	+24V1	I	24 V DC	24 V DC power source
Connected to the high voltage PWB	2	+3.3V1	O	3.3 V DC	3.3 V DC power source
	3	ZCROSS	I	0/3.3 V DC (pulse)	Zero cross signal
	4	FAN	O	0/24 V DC	Left cooling fan motor: On/Off
	5	HEATN	O	0/3.3 V DC	Fuser heater lamp: On/Off
	6	SLEEP	O	0/3.3 V DC	Sleep mode signal: On/Off
	7	MHVDR	O	0/3.3 V DC	Main charger output signal: On/Off
	8	RTHVDR	O	0/3.3 V DC	Transfer (reverse) bias output signal: On/Off
	9	PSEL1	O	0/3.3 V DC	Transfer (reverse) bias control signal: On/Off
	10	HVCLK	O	0/3.3 V DC (pulse)	Developing bias clock signal
	11	REGN	I	0/3.3 V DC	Registration sensor: On/Off
	12	TCNT	O	PWM	Transfer current control signal
	13	MCNT	O	PWM	Main charger output control signal
	14	THVDR	O	0/3.3 V DC	Transfer bias output signal: On/Off
	15	CASE	I	Analog	Cassette switch: On/Off
	16	THERM	I	Analog	Fuser thermistor detection voltage
	17	+24V3	O	24 V DC	24 V DC power source
	18	SGND	-	-	Ground
	19	SEPA	-	-	-
YC24	1	+3.3V1	O	3.3 V DC	3.3 V DC power source
Connected to the waste toner sensor	2	TNFULL	I	0/3.3 V DC	Waste toner full detection signal
	3	SGND	-	-	Ground
YC25	1	+24V2	I	24 V DC	24 V DC power source
Connected to the high voltage PWB	2	+24V2	I	24 V DC	24 V DC power source
	3	PGND	-	-	Ground
	4	PGND	-	-	Ground
YC26	1	+3.3V1	O	3.3 V DC	3.3 V DC power source
Connected to the toner sensor	2	EMPTY	I	0/3.3 V DC	Toner quantity detection signal
	3	SGND	-	-	Ground
YC27	1	+24V1	O	24 V DC	24 V DC power source
Connected to the right cooling fan motor	2	FAN	O	0/24 V DC	Right cooling fan motor: On/Off

Connector	Pin	Signal	I/O	Voltage	Description
YC28	1	ERASER	O	0/24 V DC	Eraser lamp: On/Off
Connected to the eraser lamp	2	ERASRW	O	24 V DC	24 V DC power source
YC29	1	DUDR1	O	0/24 V DC	Duplex solenoid (activate): On/Off
Connected to the duplex solenoid	2	COMMON	O	24 V DC	24 V DC power source
	3	DUDR2	O	0/24 V DC	Duplex solenoid (return): On/Off
YC30	1	+24V3	O	24 V DC	24 V DC power source
Connected to the optional paper feeder (PF main PWB)	2	PGND	-	-	Ground
	3	PFSI	I	0/3.3 V DC (pulse)	Serial communication data input signal
	4	PFSO	O	0/3.3 V DC (pulse)	Serial communication data output signal
	5	PSEL	O	0/3.3 V DC	Paper feeder selection signal
	6	+3.3V1	O	3.3 V DC	3.3 V DC power source

2-3-3 Scanner PWB

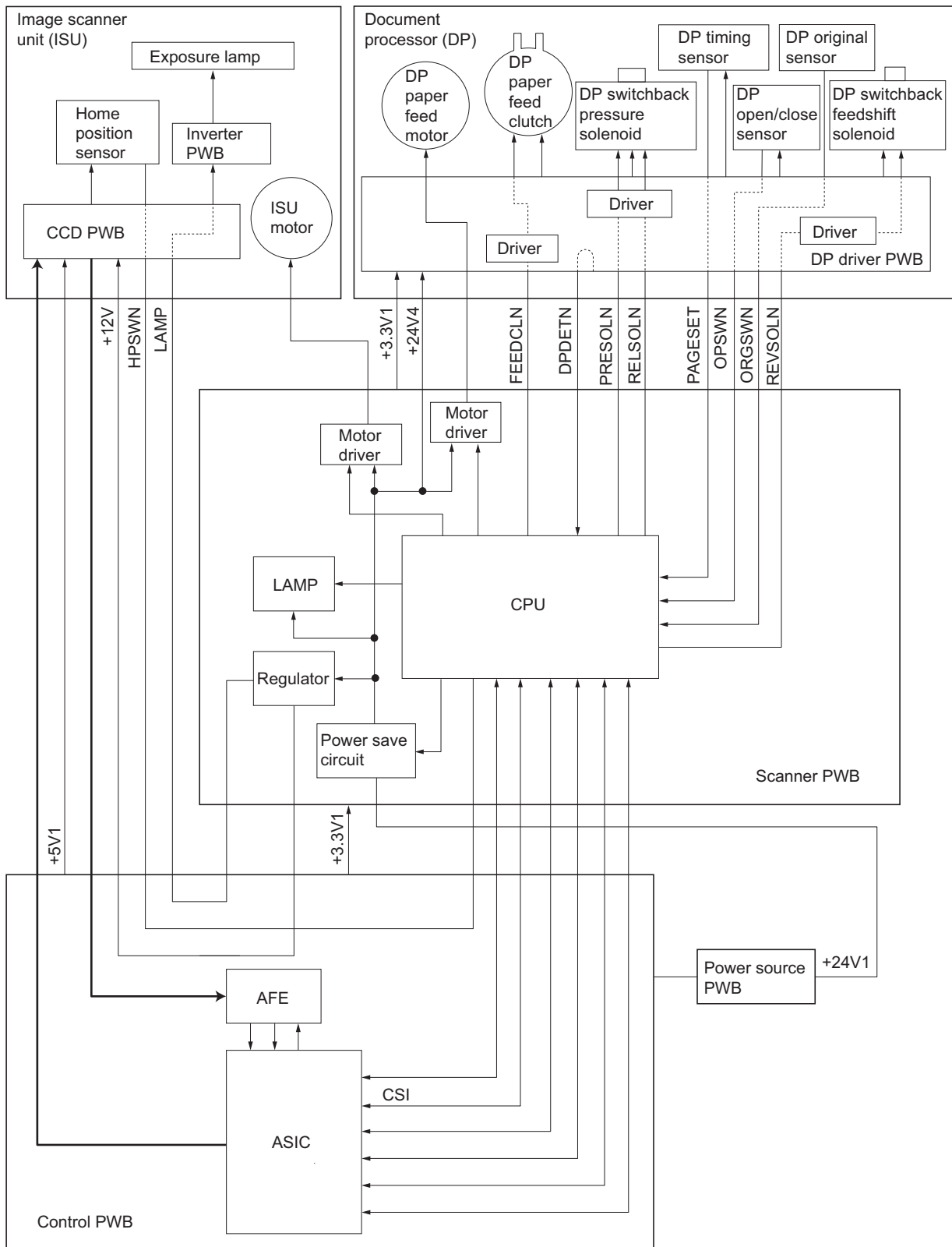


Figure 2-3-5 Scanner PWB block diagram

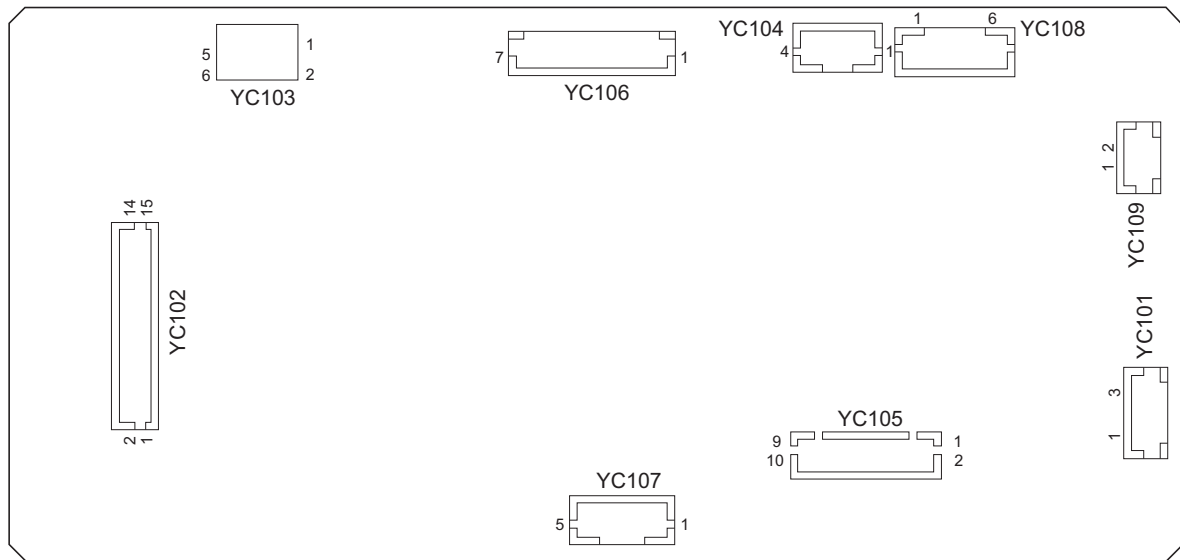


Figure 2-3-6 Scanner PWB silk-screen diagram

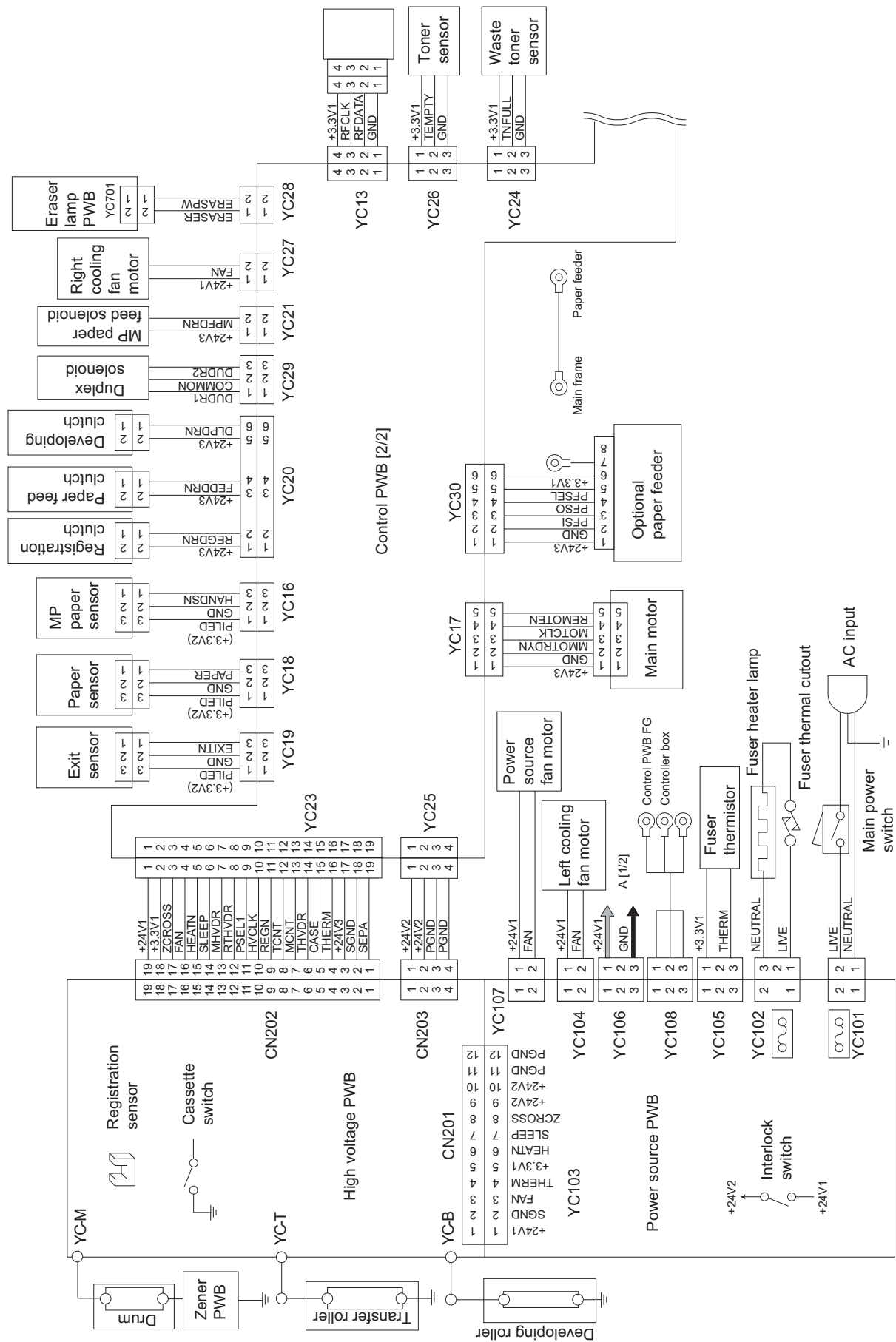
Connector	Pin	Signal	I/O	Voltage	Description
YC101 Connected to the power source PWB	1	+24V1	O	24 V DC	24 V DC power source
	2	N.C.	-	-	Not used
	3	GND	-	-	Ground
YC102 Connected to the control PWB	1	SEGIR	O	0/3.3 V DC	Serial communications interruption demand
	2	SSDIR	O	0/3.3 V DC	Serial communications trans./recep. change
	3	SSBSY	O	0/3.3 V DC	Impossible transmission/Completion notice
	4	SEGSi	I	0/3.3 V DC (pulse)	Serial communications data output
	5	SSCKN	I	0/3.3 V DC (pulse)	Serial communications clock
	6	SEGSO	O	0/3.3 V DC	Vertical synchronizing signal
	7	PAGESET	I	0/3.3 V DC	Vertical synchronizing monitor signal
	8	OVMONOUT	I	0/3.3 V DC	Communications ready signal
	9	CPURDY	I	0/3.3 V DC	Communications ready signal
	10	CPUSEL	O	0/3.3 V DC	Communications select signal
	11	CPUSO	I	0/3.3 V DC (pulse)	Serial communications data input
	12	CPUSi	O	0/3.3 V DC (pulse)	Serial communications data output
	13	CPUCLK	O	0/3.3 V DC (pulse)	Serial communications clock signal
	14	+3.3V1	I	3.3 V DC	3.3 V DC power source
	15	GND	-	-	Ground
YC103 Connected to the control PWB	1	+12V	I	12 V DC	12 V DC power source
	2	GND	-	-	Ground
	3	HPSW	I	0/3.3 V DC	Home position sensor: On/Off
	4	GND	-	-	Ground
	5	NC	-	-	Not used
	6	LAMP	I	0/24 V DC	Exposure lamp drive signal
YC104 Connected to the ISU motor	1	SCMOT1A	O	0/24 V DC (pulse)	ISU motor drive pulse
	2	SCMOT2B	O	0/24 V DC (pulse)	ISU motor drive pulse
	3	SCMOT1B	O	0/24 V DC (pulse)	ISU motor drive pulse
	4	SCMOT2A	O	0/24 V DC (pulse)	ISU motor drive pulse

Connector	Pin	Signal	I/O	Voltage	Description
YC105	1	+3.3V1	O	3.3 V DC	3.3 V DC power source
Connected to the DP driver PWB	2	GND	-	-	Ground
	3	TIMSWN	I	0/3.3 V DC	DP timing sensor: On/Off
	4	ORGSWN	I	0/3.3 V DC	DP original sensor: On/Off
	5	OPSWN	I	0/3.3 V DC	DP open/close sensor: On/Off
	6	DPDETN	I	0/3.3 V DC	DP installation detection signal
	7	RELSOLN	O	0/24 V DC	DP switchback pressure solenoid: (Release) On/Off
	8	PRESOLN	O	0/24 V DC	DP switchback pressure solenoid (Press.): On/Off
	9	REVSOL	O	0/24 V DC	DP switchback feedshift solenoid: On/Off
	10	FEEDCL	O	0/24 V DC	DP paper feed clutch: On/Off
YC108	1	MOT1A	O	0/24 V DC (pulse)	DP paper feed motor drive pulse
Connected to the DP driver PWB	2	MOT2B	O	0/24 V DC (pulse)	DP paper feed motor drive pulse
	3	MOT1B	O	0/24 V DC (pulse)	DP paper feed motor drive pulse
	4	MOT2A	O	0/24 V DC (pulse)	DP paper feed motor drive pulse
	5	+24V4	O	24 V DC	24 V DC power source
	6	GND	-	-	Ground
YC109	1	+24V4	O	24 V DC	24 V DC power source
Connected to the DP driver PWB	2	GND	-	-	Ground

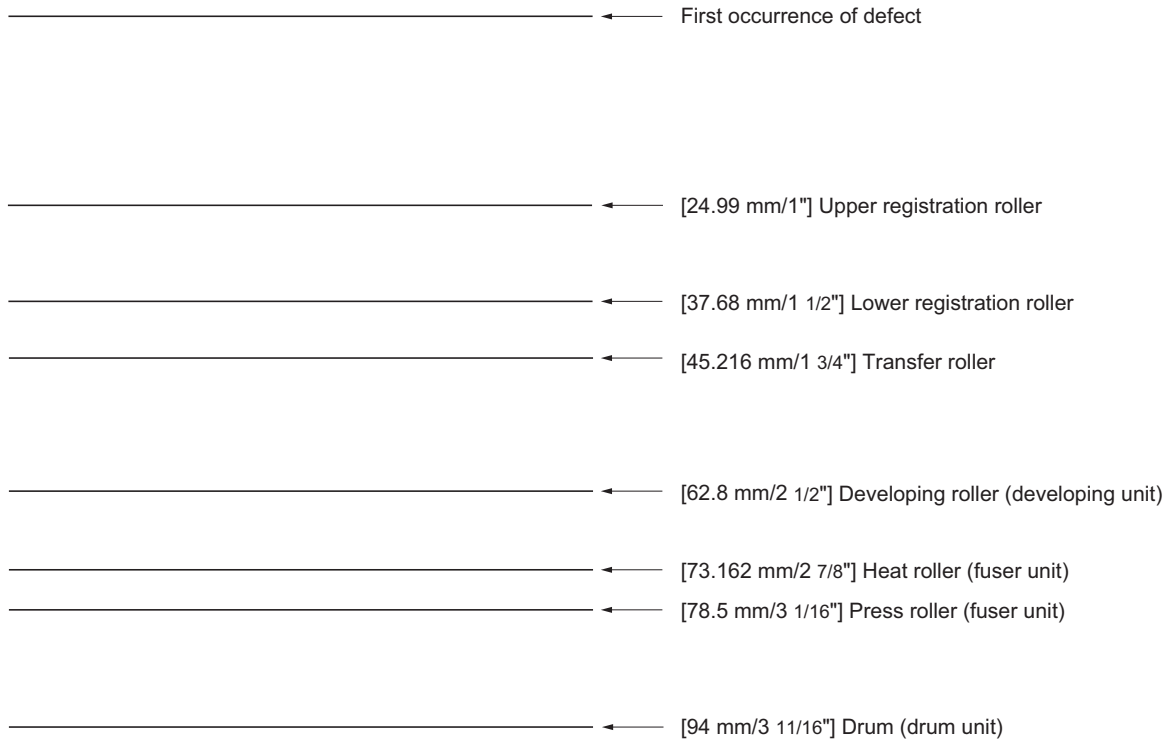
2JN

2-3-4 DP driver PWB

Refer to the DP's service manual.



(2) Repetitive defects gauge



(3) Maintenance parts list

Maintenance part name		Part No.	Alternative part No.	Fig. No.	Ref. No.
Name used in service	Name used in parts list				
Maintenance kit	MK-132/MAINTENANCE KIT (OPTION)	1702H97US0	072H97US	17	-
	DK-150			-	-
	DV-132(U)			-	-
Maintenance kit	MK-130/MAINTENANCE KIT (OPTION)	1702H98EU0	072H98EU	17	-
	DK-150			-	-
	DV-130(E)			-	-
Maintenance kit	MK-134/MAINTENANCE KIT (OPTION)	1702H98AS0	072H98AS	17	-
	DK-150			-	-
	DV-134(AO)			-	-

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