KYOCERA

FS-C8600DN
FS-C8650DN

SERVICE MANUAL

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Rev. 1

CAUTION

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

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

ATTENTION

IL Y A UN RISQUE D'EXPLOSION SI LA BATTERIE EST REMPLACEE PAR UN MODELE DE TYPE INCORRECT. METTRE AU REBUT LES BATTERIES UTILISEES SELON LES INSTRUCTIONS DONNEES.

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

Notation of products in the manual

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

FS-C8600DN: 45 ppm model
FS-C8650DN: 55 ppm model

Revision history

Revision	Date	Replaced pages	Remarks
1	June 18, 2012	Contents, 1-1-1 to 1-1-3,1-1-6,1-2-2,1-2-8,1-2-9, 1-2-19,1-2-20,1-2-22,1-2-26,1-2-28,1-3-32,1-2-33, 1-2-38,1-2-43,1-3-6 to 1-3-8,1-3-10,1-3-16,1-3-17, 1-3-21 to 1-3-23,1-3-26 to 1-3-29,1-3-31 to 1-3-34, 1-3-37,1-3-38,1-3-48,1-3-49,1-3-53,1-3-54,1-3-59, 1-3-60,1-3-62,1-3-65,1-3-72,1-3-76,1-3-77,1-3-79, 1-3-84,1-3-85,1-3-87 to 1-3-91,1-3-93 to 1-3-96, 1-3-99,1-3-106,1-3-108,1-3-112 to 1-3-116,1-3-126, 1-3-130 to 1-3-133,1-3-135,1-3-137,1-3-139, 1-3-141,1-3-147 to1-3-150,1-4-2,1-4-26 to 1-4-28, 1-4-35 to 1-4-39,1-4-42,1-4-55,1-4-58 to 1-4-60, 1-4-71,1-4-88,1-4-90,1-4-91,1-5-1,1-5-4,1-5-8, 1-5-11,1-5-17,1-5-18,1-5-24,1-5-26,1-5-32,1-5-44 to 1-5-46,1-5-48,1-5-49,1-5-54,1-5-79 to 1-5-81,1-6-1, 1-6-2,2-2-1,2-2-3,2-3-1,2-3-8,2-3-28,2-3-32,2-3-36, 2-3-46,2-3-56,2-3-62,2-3-68,2-3-72,2-4-3,2-4-7, 2-4-8,2-4-13,2-4-22,2-4-23	

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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 machine.

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 machine 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 machine on an infirm or angled surface: the machine may tip over, causing injury. .

- Do not install the machine in a humid or dusty place. This may cause fire or electric shock. .....

- Do not install the machine near a radiator, heater, other heat source or near flammable material. This may cause fire.....

- Allow sufficient space around the machine to allow the ventilation grills to keep the machine as cool as possible. Insufficient ventilation may cause heat buildup and poor printing performance. .....

- Always handle the machine by the correct locations when moving it. .....

- Always use anti-toppling and locking devices on machines so equipped. Failure to do this may cause the machine to move unexpectedly or topple, leading to injury. .....

- Avoid inhaling toner or developer excessively. Protect the eyes. If toner or developer is accidentally ingested, drink a lot of water to dilute it in the stomach and obtain medical attention immediately. If it gets into the eyes, rinse immediately with copious amounts of water and obtain medical attention. .....

- Advice customers that they must always follow the safety warnings and precautions in the machine'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 machine 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 machine 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 machine, remove the power plug from the wall outlet immediately. .....

3. Miscellaneous

⚠WARNING

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

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

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1-1-1 Specifications

Machine

Item		Specifications	
		45 ppm	55 ppm
Type		Desktop	
Printing method		Electrophotography by semiconductor laser, tandem drum system	
Paper weight	Cassette	60 to 256 g/m^2	
	MP tray	60 to 300 g/m^2	
Paper type	Cassette	Plain, Rough, Vellum, Recycled, Preprinted, Bond, Color (Colour), Prepunched, Letterhead, Thick, High Quality, Custom 1 to 8 (Duplex: Same as simplex)	
	MP tray	Plain, Transparency (OHP film), Rough, Vellum, Labels, Recycled, Preprinted, Bond, Cardstock, Color (Colour), Prepunched, Letterhead, Thick, Coated, Envelope, High Quality, Custom 1 to 8	
Paper size	Cassette	A3, B4, A4, A4R, B5, B5R, A5R, Ledger, Legal, Letter, LetterR, StatementR, Oficio II, 12 × 18", Folio, 8K, 16K, 16KR	
	MP tray	A3, B4, A4, A4R, B5, ISO B5, B5R, A5R, B6R, A6R, Return postcard, Postcards, Envelope DL, Envelope C5, Envelope C4, Envelope #10 (Commercial #10), Envelope #9 (Commercial #9), Envelope #6 (Commercial #6 3/4), Envelope Monarch, Youkei 2, Youkei 4, Ledger, Legal, Letter, LetterR, Executive, StatementR, Oficio II, 12 × 18", Folio, 8K, 16K, 16KR, Custom (98× 148mm × 304.9 × 1219.2mm)	
Printing speed	B/W	A4 : 45 ppm Letter : 45 ppm A4R : 24 ppm LetterR : 24 ppm A3 : 22 ppm Ledger : 22 ppm B4 : 27 ppm Legal : 21 ppm B5 : 45 ppm	A4 : 55 ppm Letter : 55 ppm A4R : 24 ppm LetterR : 24 ppm A3 : 27 ppm Ledger : 27 ppm B4 : 33 ppm Legal : 21 ppm B5 : 55 ppm
	Color	A4 : 45 ppm Letter : 45 ppm A4R : 24 ppm LetterR : 24 ppm A3 : 22 ppm Ledger : 22 ppm B4 : 27 ppm Legal : 21 ppm B5 : 45 ppm	A4 : 50 ppm Letter : 50 ppm A4R : 24 ppm LetterR : 24 ppm A3 : 25 ppm Ledger : 25 ppm B4 : 30 ppm Legal : 21 ppm B5 : 50 ppm
First print time (A4, feed from cassette)	B/W	5.4 s or less	4.9 s or less
	Color	6.6 s or less	6.2 s or less

Item		Specifications	
		45 ppm	55 ppm
Warm-up time (22 °C/71.6 °F, 60% RH)	Power on	41 s or less	45 s or less
	Low Power	25 s or less	25 s or less
	Sleep	41 s or less	45 s or less
Paper capacity	Cassette	550 sheets (64 g/m²) 500 sheets (80 g/m²)	
	MP tray	A4/Letter or less 165 sheets (64 g/m²) 150 sheets (80 g/m²) More than A4/Letter 55 sheets (64 g/m²) 50 sheets (80 g/m²)	
Output tray capacity	Main tray	500 sheets (80 g/m²)	
	Job separator tray	250 sheets (80 g/m²) (When the Documents Finisher is installed, 100 sheets.)	
Photoconductor		a-Si (drum diameter 30 mm)	
Image write system		Semiconductor laser	
Charging system		Charger roller	
Developing system		Touch down developing system Developer: 2-component Toner replenishing: Automatic from the toner container	
Transfer system		Primary: Roller transfer system (Intermediate transfer belt) Secondary:Roller transfer system	
Separation system		Small diameter separation, Separation electrode	
Cleaning system		Drum: Counter blade, Cleaning roller Transfer belt: Fur brush	
Charge erasing system		Exposure by cleaning lamp (LED)	
Fusing system		Belt fusing Heat source: IH Abnormally high temperature protection devices: thermostat	
CPU		PowerPC 750GL/750 MHz	
Main memory	Standard	1024 MB (1024 MB DIMMx 1)	
	Maximum	2048 MB(1024 MB DIMMx 2)	
Hard Disk		160 GB (160 GB x 1) (standard)	
Interface	Standard	USB Interface Connector: 1 (Hi-Speed USB) USB Port: 2 (Hi-Speed USB) Network interface: 1 (10 BASE-T/100 BASE-TX/1000 BASE-T)	
	Option	Network interface: 1 (10 BASE-T/100 BASE-TX/1000 BASE-T)	
Resolution		600 × 600 dpi	
Operating system		Windows XP, Windows Server 2003, Windows Vista, Windows 7, Windows Server 2008, Apple Macintosh OS 10.x	
Page description language		PRESCRIBE	

Item		Specifications	
		45 ppm	55 ppm
Operating environment	Temperature	10 to 32.5 °C/50 to 90.5 °F	
	Humidity	15 to 80% RH	
	Altitude	2,500 m/8,202 ft or less	
	Brightness	1,500 lux or less	
Dimensions (W × D × H)	machine only	672 × 787 × 744 mm 26 29/64 × 30 63/64 × 29 13/32”	
	machine with Paper feeder	672 × 787 ×1053 mm 26 29/64 × 30 63/64 × 41 19/64”	
Space required (W × D)	Using MP tray	1001 × 787 mm 39 13/32 × 30 63/64	
	FUll system	1937 × 787 mm (machine + 4000-sheet finisher + Side deck) 76 17/64 × 30 63/64”	
Weight		111 kg / 244.7 lb	
Power source		120 V AC, 60 Hz, more than 12.0 A 220 - 240 V AC, 50/60 Hz, more than 7.2 A	
Options		Paper feeder, Large capacity feeder, Side deck, Side multi tray, Side paper feeder, Side large capacity feeder, 1000-sheet finisher, 4000-sheet finisher, Center-folding unit, Mailbox, Punch unit, Data security kit,Emulation option kit, Gigabit ethernet board, IC card reader holder and Duct unit	

NOTE: These specifications are subject to change without notice.

1-1-2 Parts names

(1) Machine

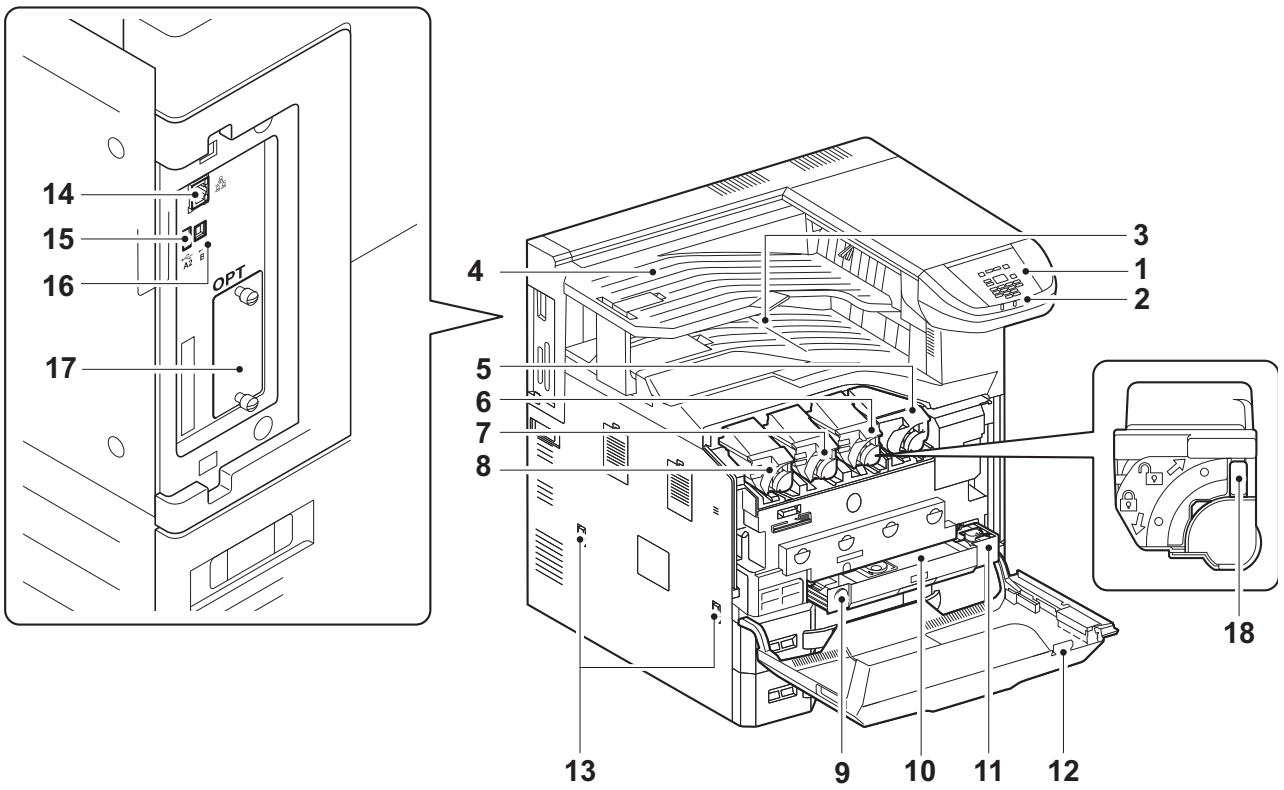


Figure 1-1-1

1. Operation panel
2. Indicators
3. Main tray
4. Job separator tray
5. Toner container K
6. Toner container M
7. Toner container C
8. Toner container Y
9. Release button
10. Waste toner box
11. Waste toner tray
12. Front cover
13. Handles
14. Network interface connector
15. USB port
16. USB interface connector
17. Option interface
18. Toner container release lever

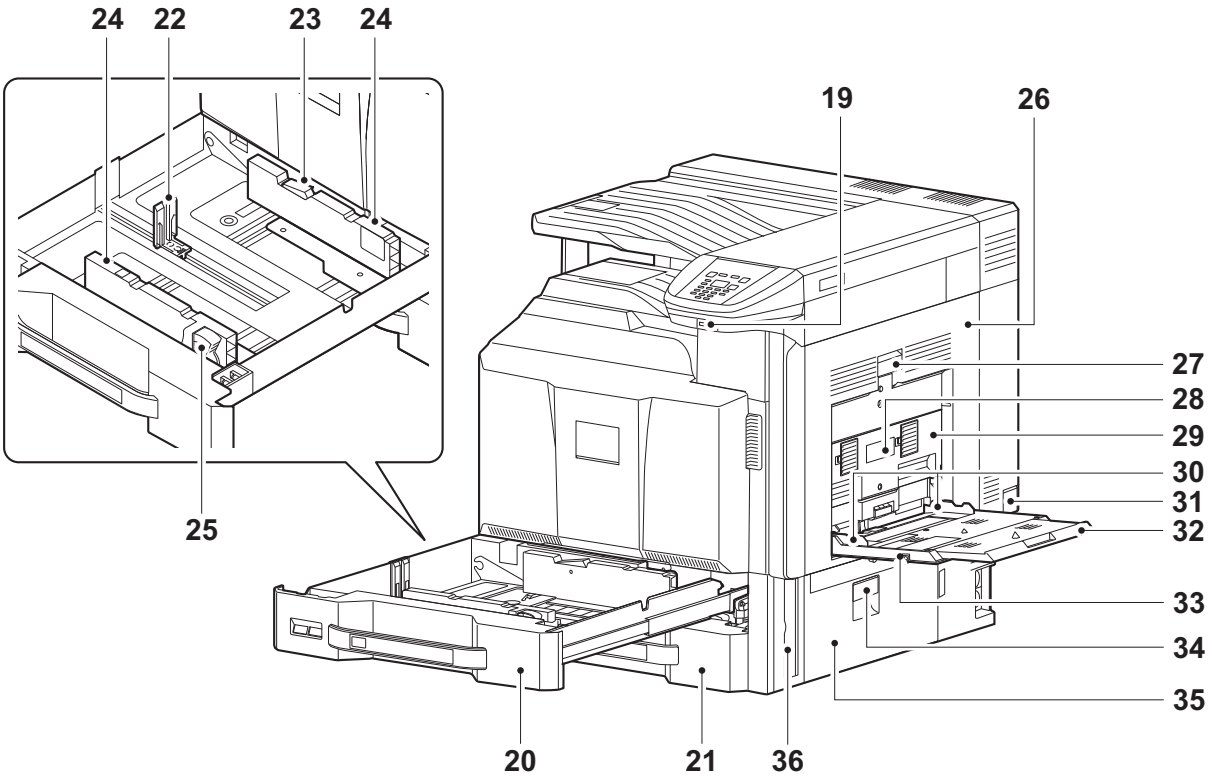


Figure 1-1-2

19. USB port
20. Cassettes 1
21. Cassettes 2
22. Paper length guide
23. Guide lock lever
24. Paper width guide
25. Paper width adjusting tab
26. Paper conveying unit
27. Paper conveying unit lever
28. Duplex cover lever
29. Duplex cover
30. MP paper width guide
31. Main power switch
32. MP support Tray
33. MP (Multi-Purpose) tray
34. Paper conveying cover lever
35. Paper conveying cover
36. Handle

(2) Option

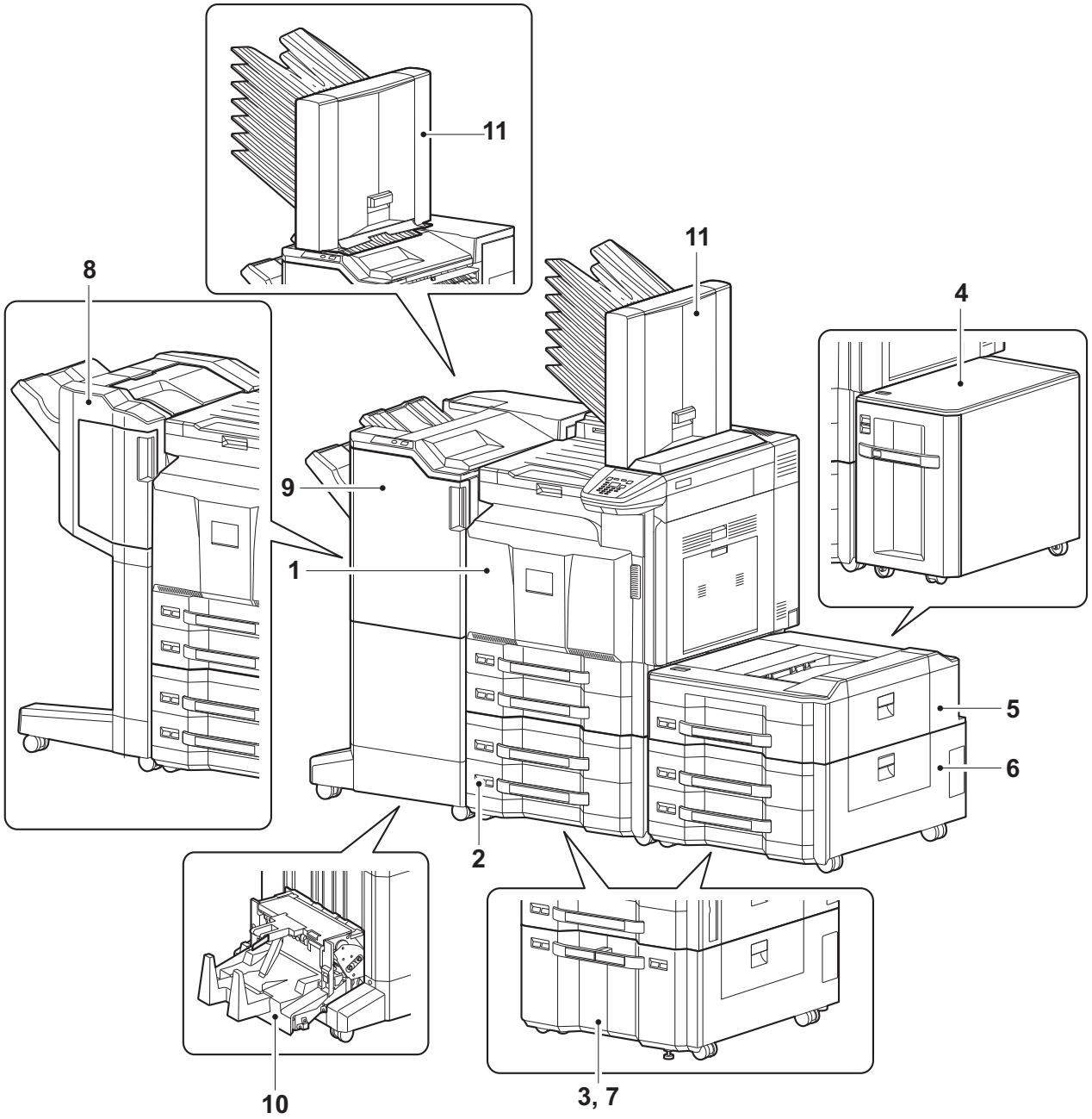


Figure 1-1-3

1. Machine
2. Paper feeder
3. Large capacity feeder
4. Side deck
5. Side multi tray
6. Side paper feeder
7. Side large capacity feeder
8. 1000-sheet finisher
9. 4000-sheet finisher
10. Center-folding unit
11. Mailbox

* : The mailbox can be installed either the main unit or the 4000-sheet finisher.(Not installable at the same time)

(3) Operation panel

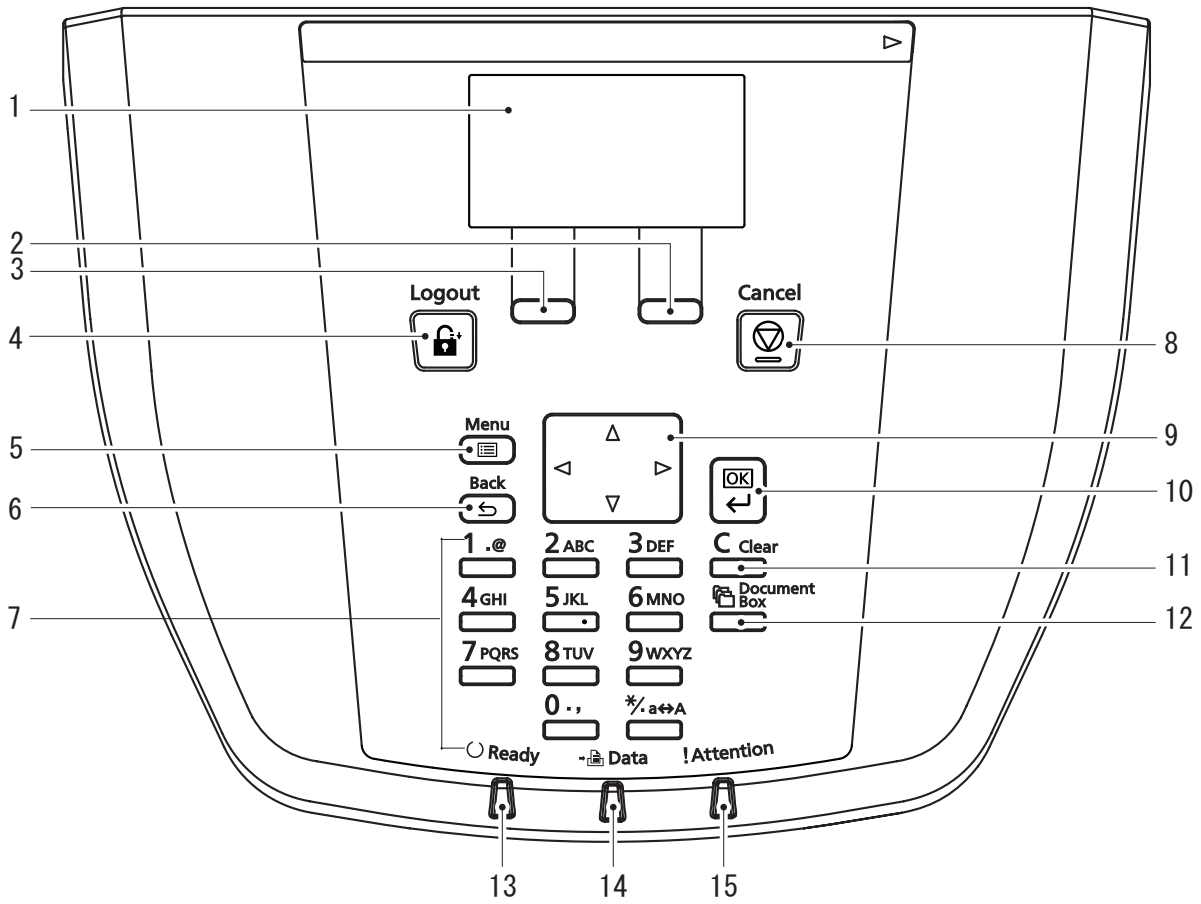


Figure 1-1-4

1. Message display
2. Right select key
3. Left select key
4. Logout key
5. Menu key
6. Back key
7. Numeric keys
8. Cancel key
9. Cursor key
10. OK key
11. Clear key
12. Print Box key
13. Ready indicator
14. Data indicator
15. Attention indicator

1-1-3 Machine cross section

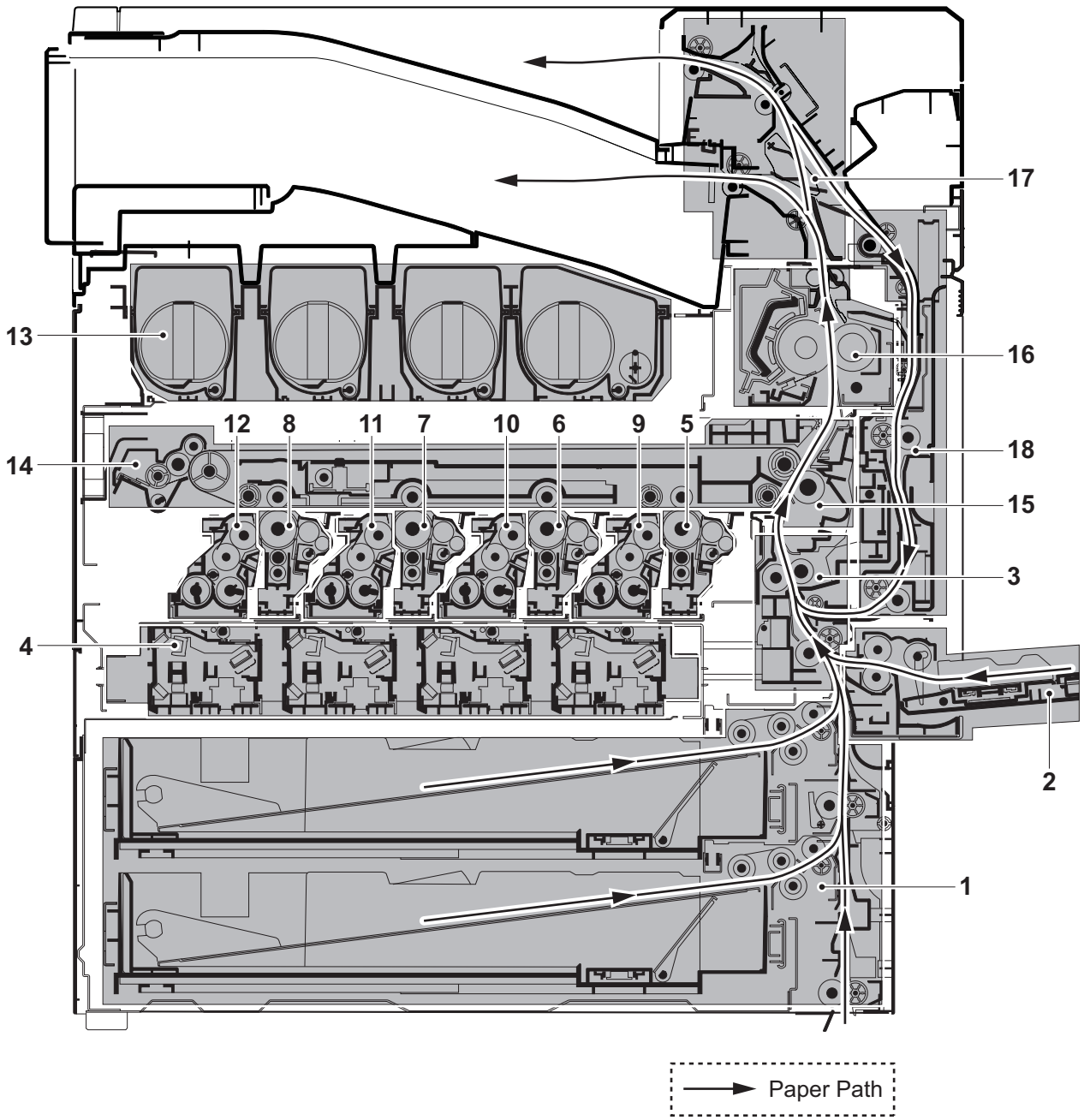


Figure 1-1-5

1. Cassette paper feed section
2. MP tray paper feed section
3. Paper conveying section
4. Laser scanner unit
5. Drum unit K
6. Drum unit M
7. Drum unit C
8. Drum unit Y
9. Developer unit K
10. Developer unit M
11. Developer unit C
12. Developer unit Y
13. Toner container section
14. Primary transfer section
15. Secondary transfer/Separation sections
16. Fuser section
17. Eject/Feed shift sections
18. Duplex section

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, 12.0 A
   220 - 240 V AC, 7.2 A
4. Power source frequency: 50 Hz ± 2%/60 Hz ± 2%
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 of 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.
   Machine front : 100 cm/ 40"
   Machine rear : 10 cm/ 4"
   Machine right : 35 cm/ 14"
   Machine left : 30 cm/ 12"
   Machine top : 40 cm/ 15"

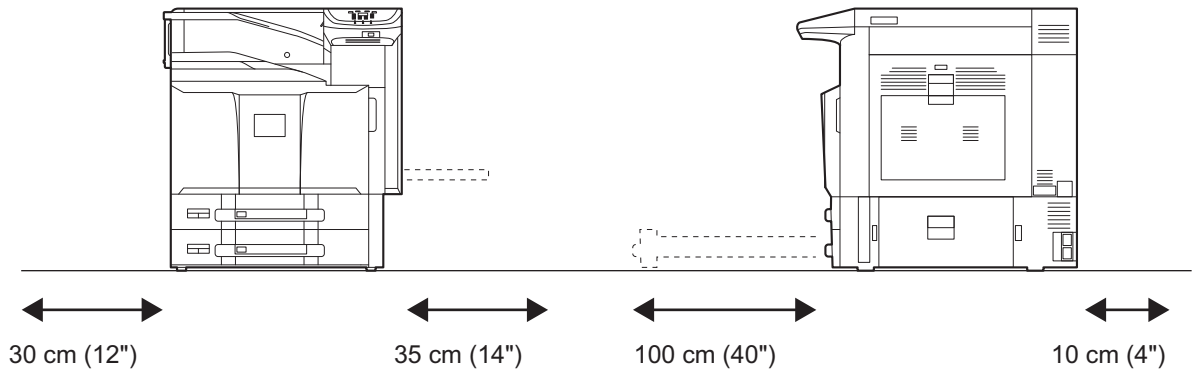
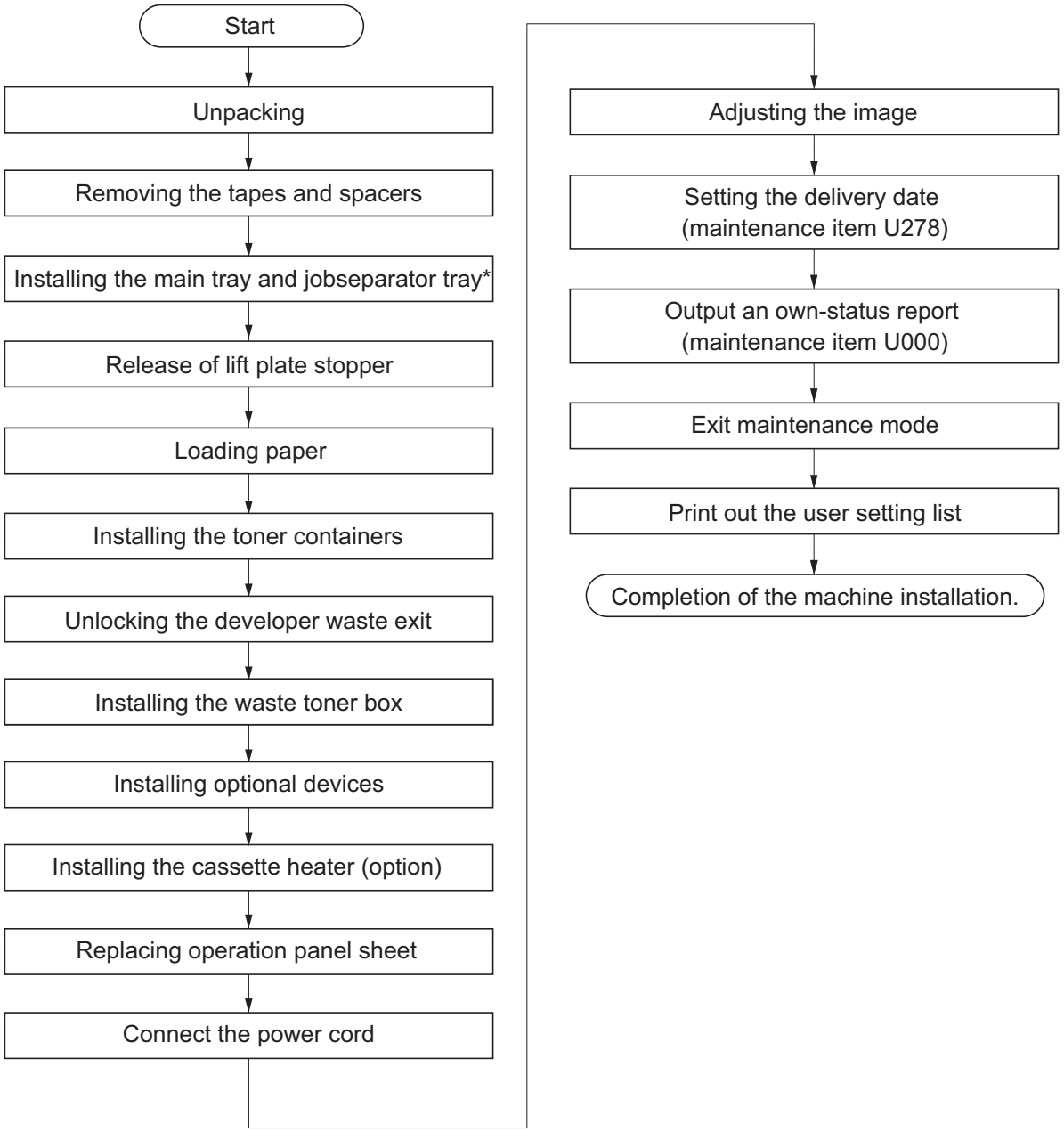


Figure 1-2-1

1-2-2 Unpacking and installation

(1) Installation procedure



*: *:When the finisher has been installed, the job separator tray and the main tray are not needed.

Moving the machine

When moving the machine, pull out three carrying handles, and move with carrying handles and the handhold.

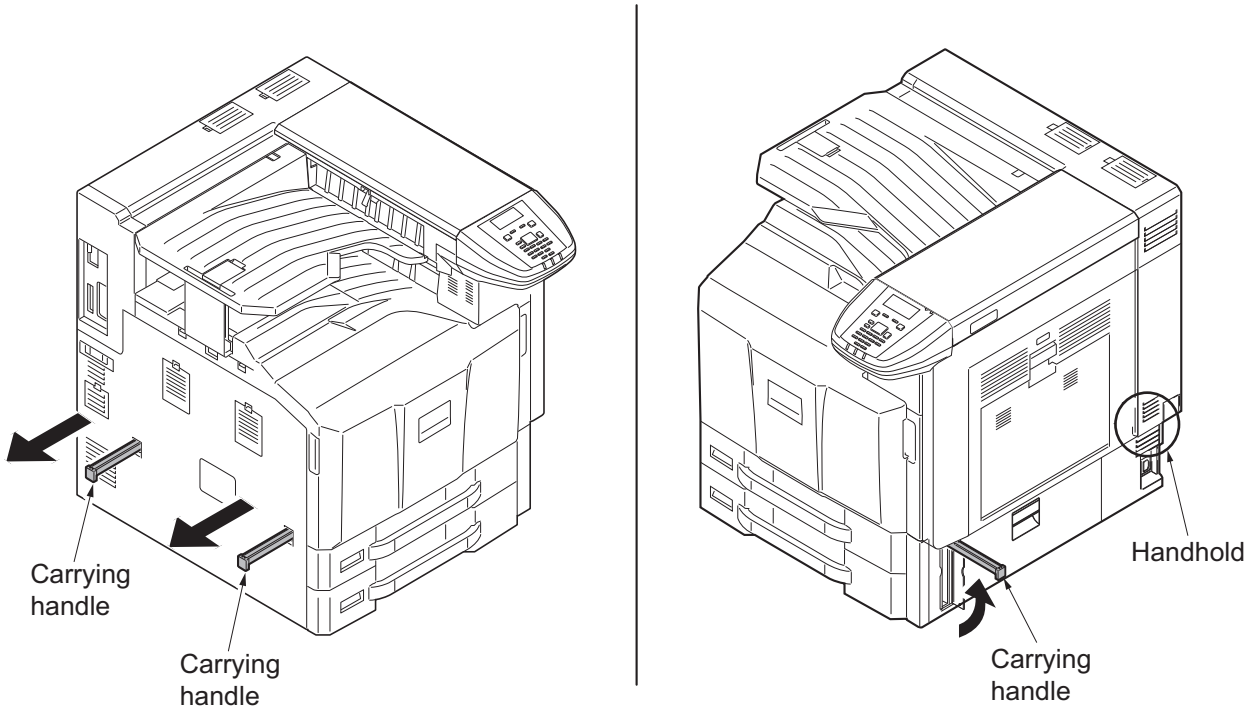


Figure 1-2-2

*: Moving this machine is a job for four people.

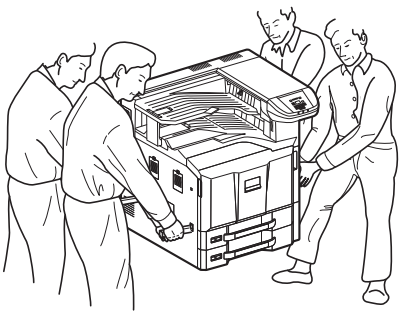


Figure 1-2-3

Unpacking

120V model

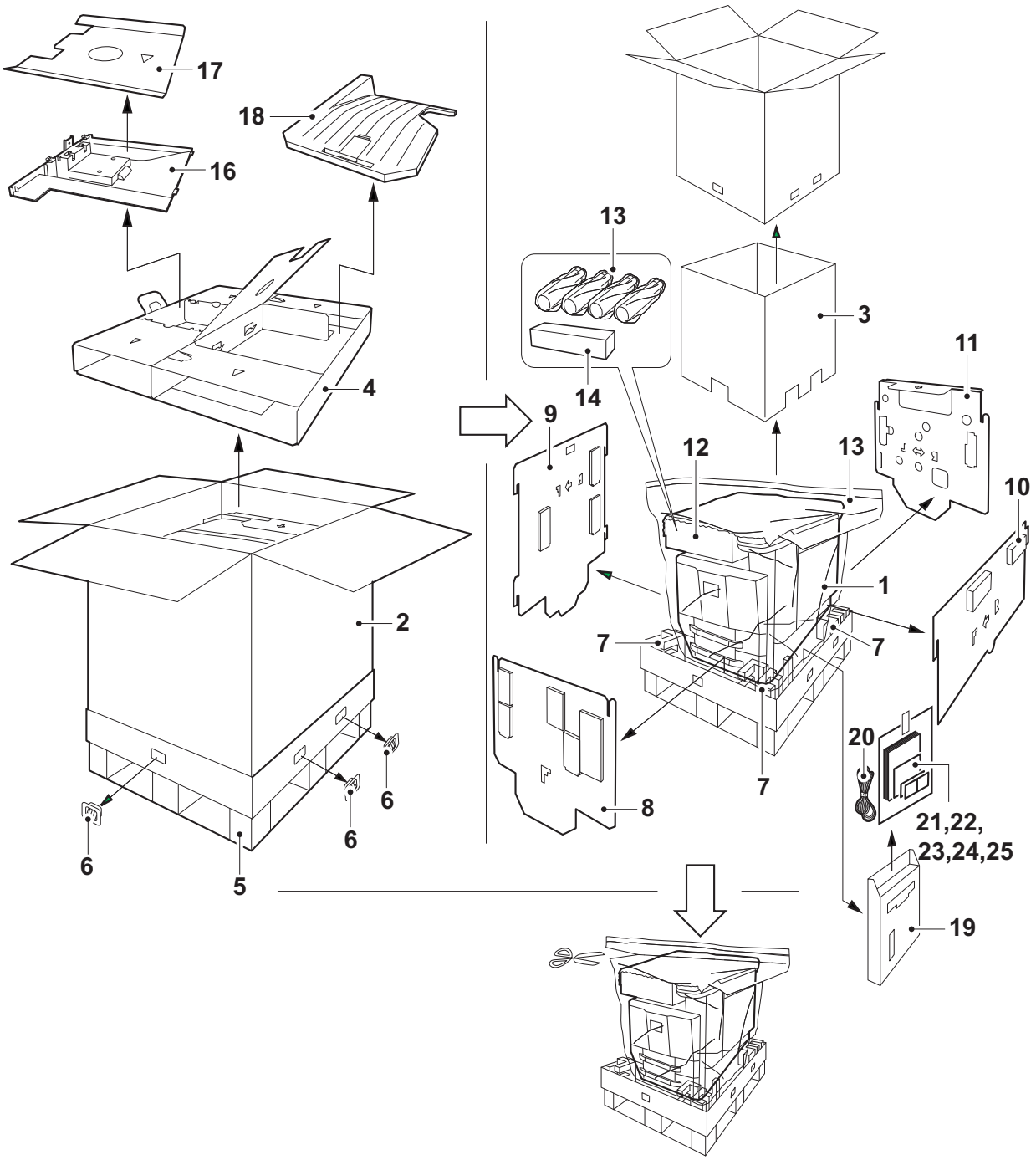


Figure 1-2-4

220-240V model

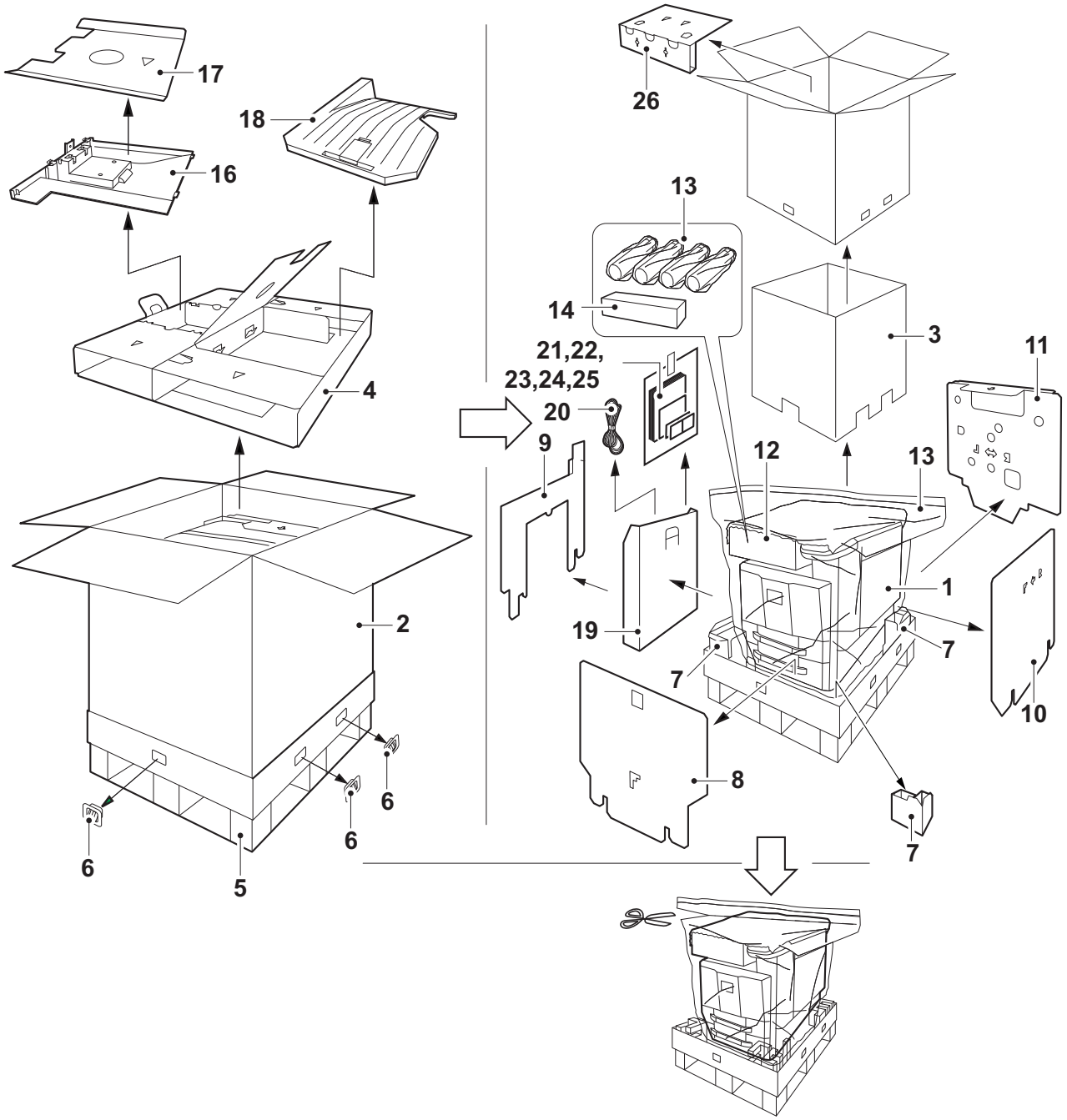


Figure 1-2-5

1. Machine
2. Outer case
3. Inner case
4. Spacer A
5. Skid
6. Hinge joints
7. Bottom pad
8. Front pad
9. Left pad
10. Right pad
11. Rear pad
12. Top spacer
13. Machine cover
14. Toner container (Y,M,C,K)
15. Waste toner box
16. Main tray
17. Spacer B
18. Job separetor tray
19. Document tray
20. Power cord
21. Plastic bag
22. Paper size plates
23. Paper media plates
24. Pin
25. Operation guide etc.
26. Top pad

Place the machine on a level surface.

Removing the tapes

1. Remove two tapes and the protect sheet.
2. Remove tape and the top spacer.

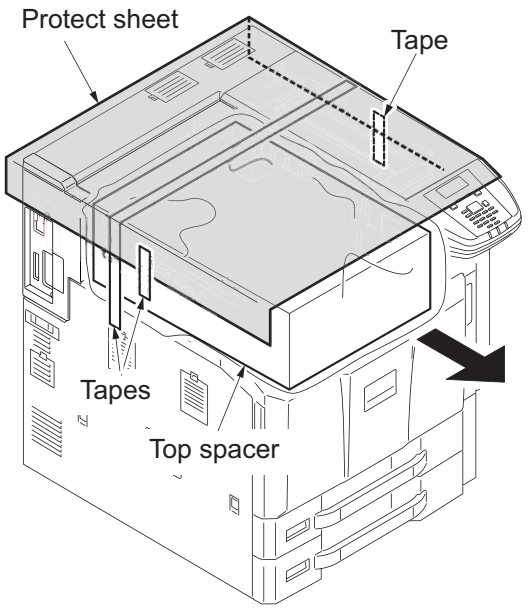


Figure 1-2-6

3. Remove tape and then two protect sheets.
4. Remove three tapes and then protect sheet.
5. Remove tape and then silica gel.

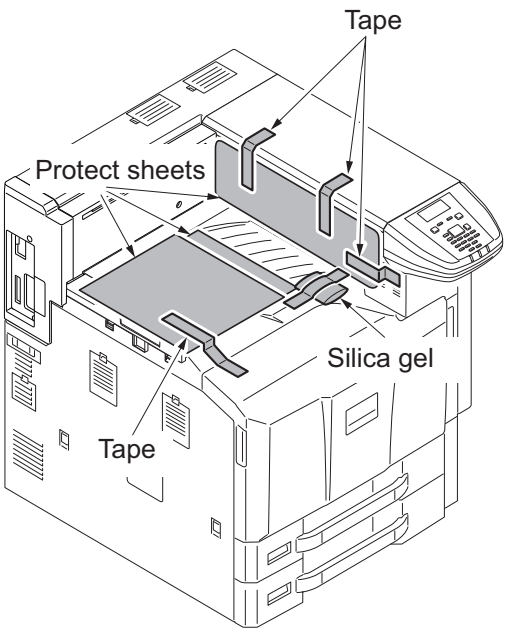


Figure 1-2-7

6. Open the front cover and then remove tape.

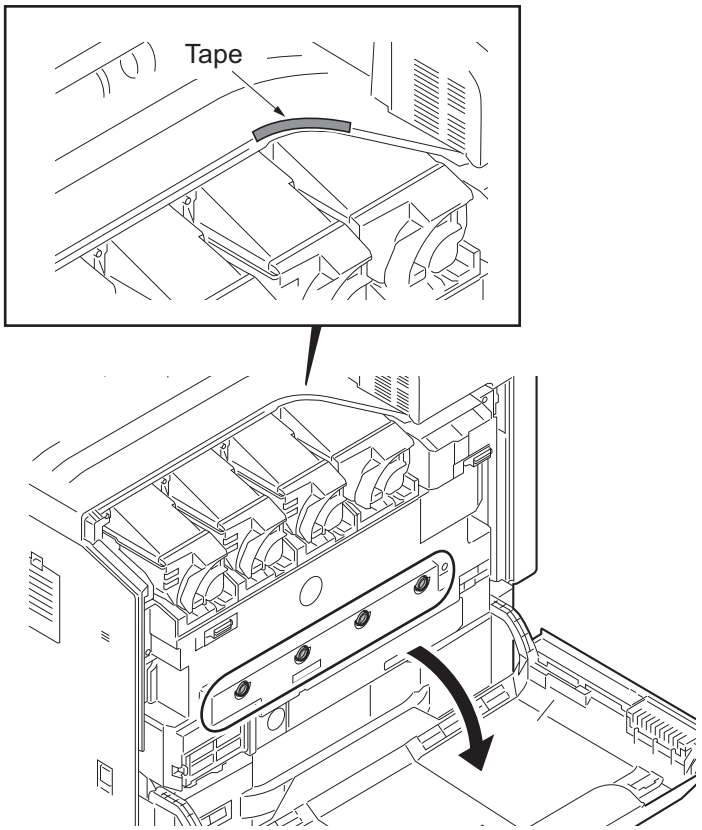


Figure 1-2-8

1. Remove three tapes and then remove three protect sheet.
2. Remove two tapes.

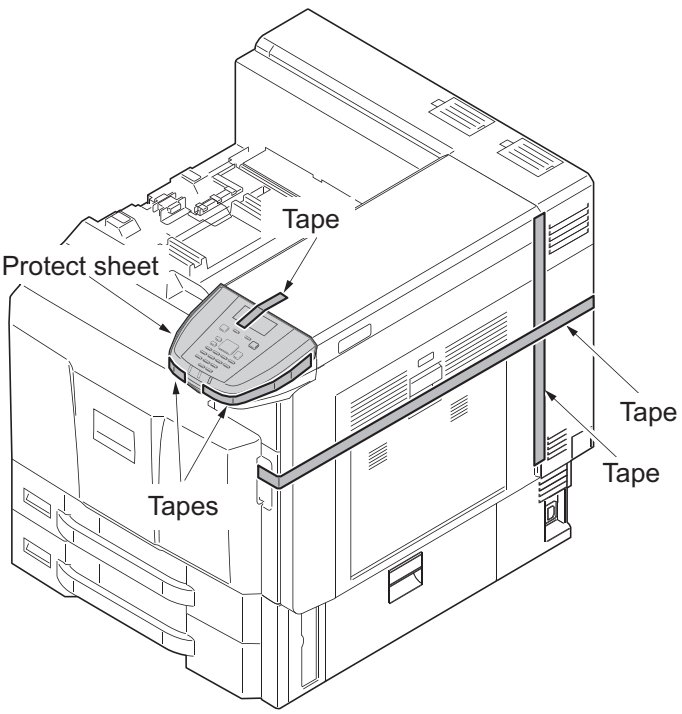


Figure 1-2-9

3. Remove tape.

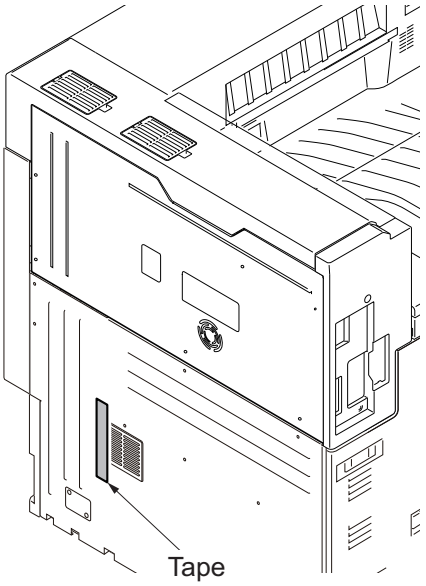


Figure 1-2-10

Installing the main tray and job separator tray

*: When the finisher has been installed, the job separator tray and the main tray are not needed.

1. Install the main tray included by latching in two hooks and securing by one screw.

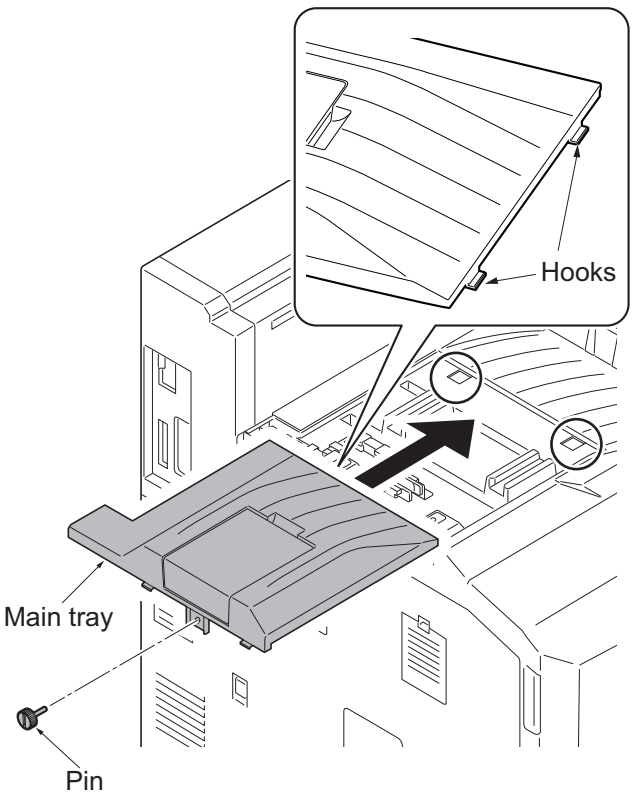


Figure 1-2-11

2. Raise the tray fixing plate.
3. Latch the three hooks to the job separator tray.
4. Load the tray on the tray fixing board and slide it to secure.

*: Make sure that the two clicks have been properly locked.

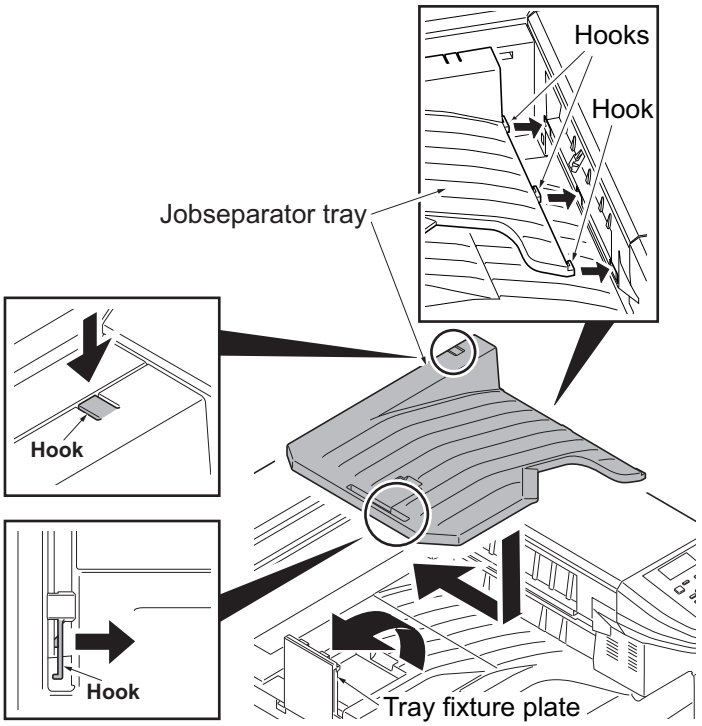


Figure 1-2-12

Release of lift plate stopper

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

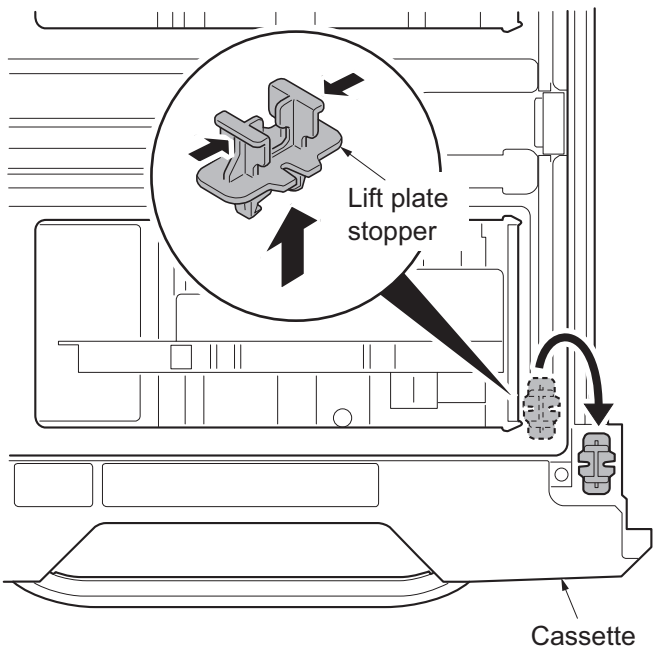


Figure 1-2-13

Loading paper

1. Squeeze the ends of the bottom of the paper length guide and move the guide to fit the length of the paper.

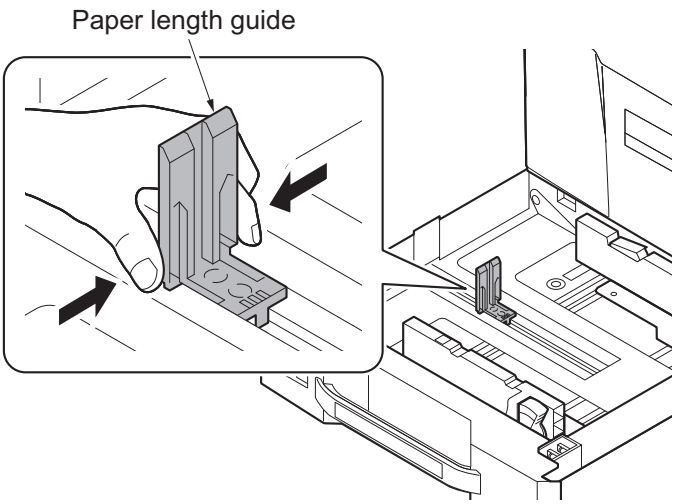


Figure 1-2-14

2. Press the guide lock lever to release the lock.
3. Grasp the paper width adjusting tab and move the paper width guides to fit the paper.

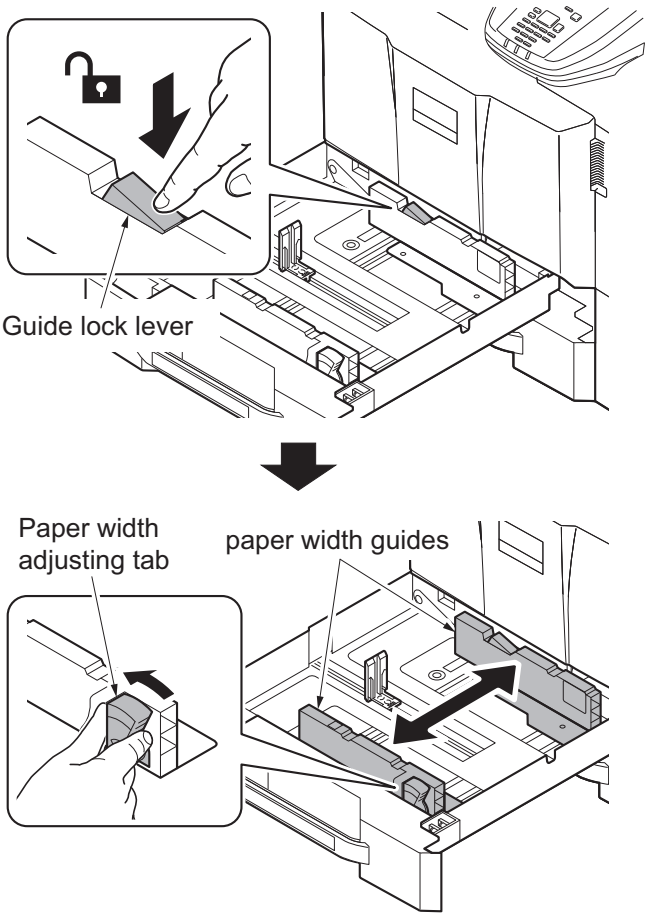


Figure 1-2-15

4. Align the paper flush against the right side of the cassette.
*: Before loading the paper, be sure that it is not curled or folded.
*: Ensure that the loaded paper does not exceed the level indicated.
*: Make sure that the paper length guide and the paper width guides are correctly abut with the paper. Be sure to remove spaces between the guides and the paper.

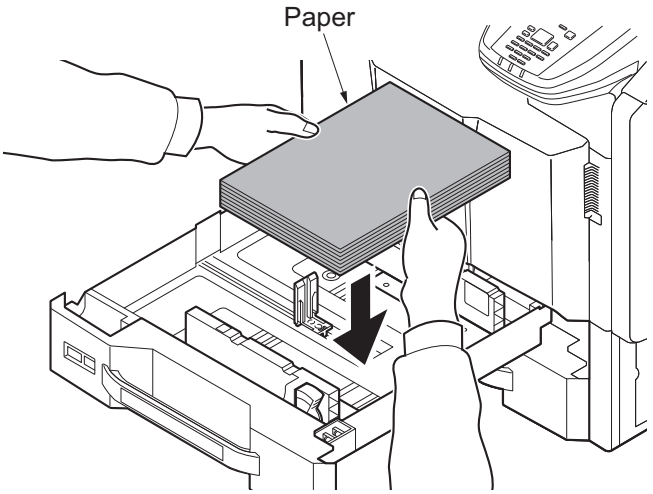


Figure 1-2-16

5. Press the guide lock lever to lock.

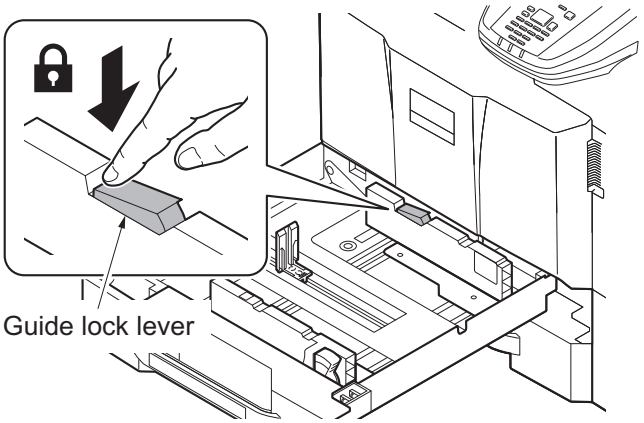


Figure 1-2-17

6. Insert the paper size plate and the paper media plate.
7. Gently push the cassette back in.

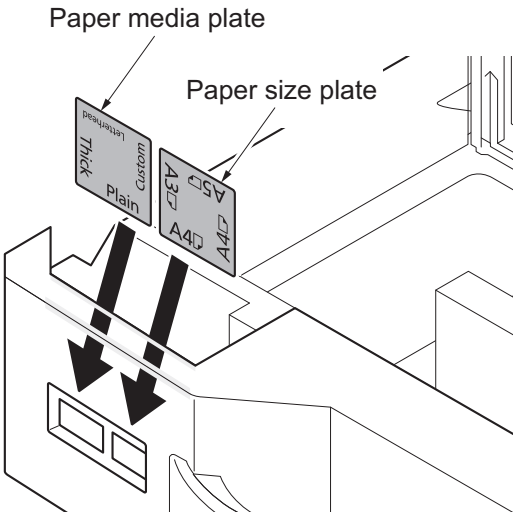


Figure 1-2-18

Installing the toner containers

1. Open the front cover.
2. Hold the toner container vertically and hit the upper part about 3 times. Invert the toner container so that the other end is up, and hit in the same way.
3. Hold the toner container horizontally and shake from side to side about 3 times.

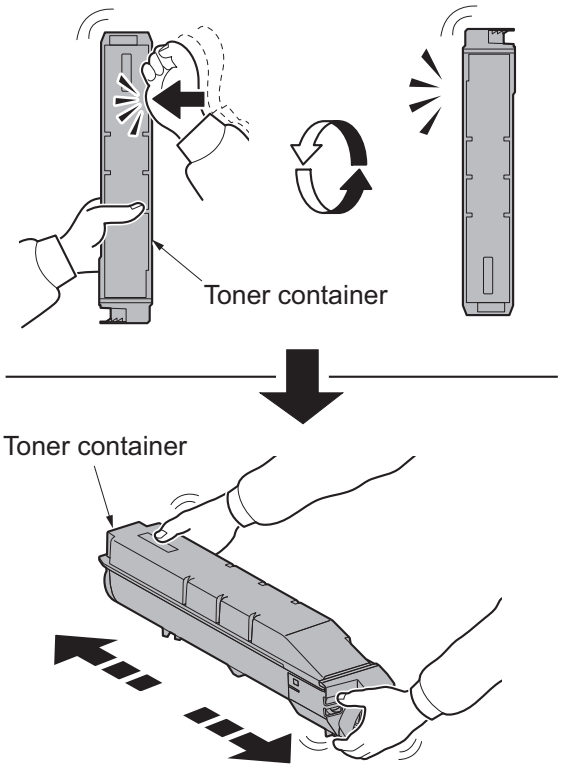


Figure 1-2-19

4. Install four color toner containers.
5. Turn down the toner container release levers to lock the four color toner containers.

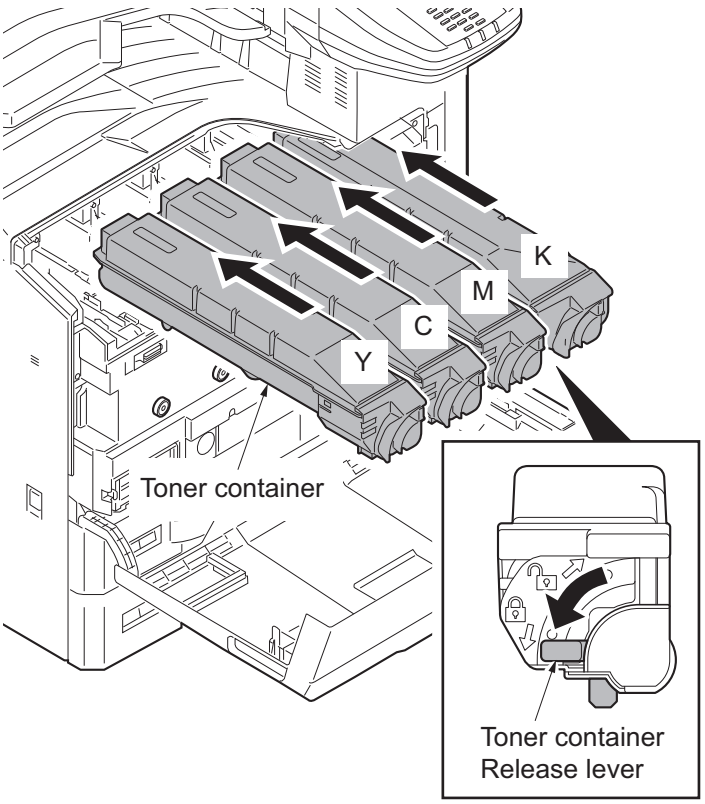


Figure 1-2-20

Unlocking the developer waste exit

Caution

To ease setup, the device was shipped with the developer unit already replenished with developer. Therefore, to prevent developer from spilling during shipping, a developer shutter is equipped with the developer unit.

To disengage the shutter, use the following procedure: Note that if the shutter is not completely disengaged and retained in place, the developer in the developer unit may clog at the outlet causing a damage to the developer unit.

1. Remove the tape and then remove the set up leaflet.

*: The setup leaflet must be affixed in position before dispatching the machine.

2. Press the fixing pin in four positions and rotate.

*: Fully insert the fixing pin keeping the line vertical and rotate by 90 degrees clockwise. Make sure that the central line is horizontal.

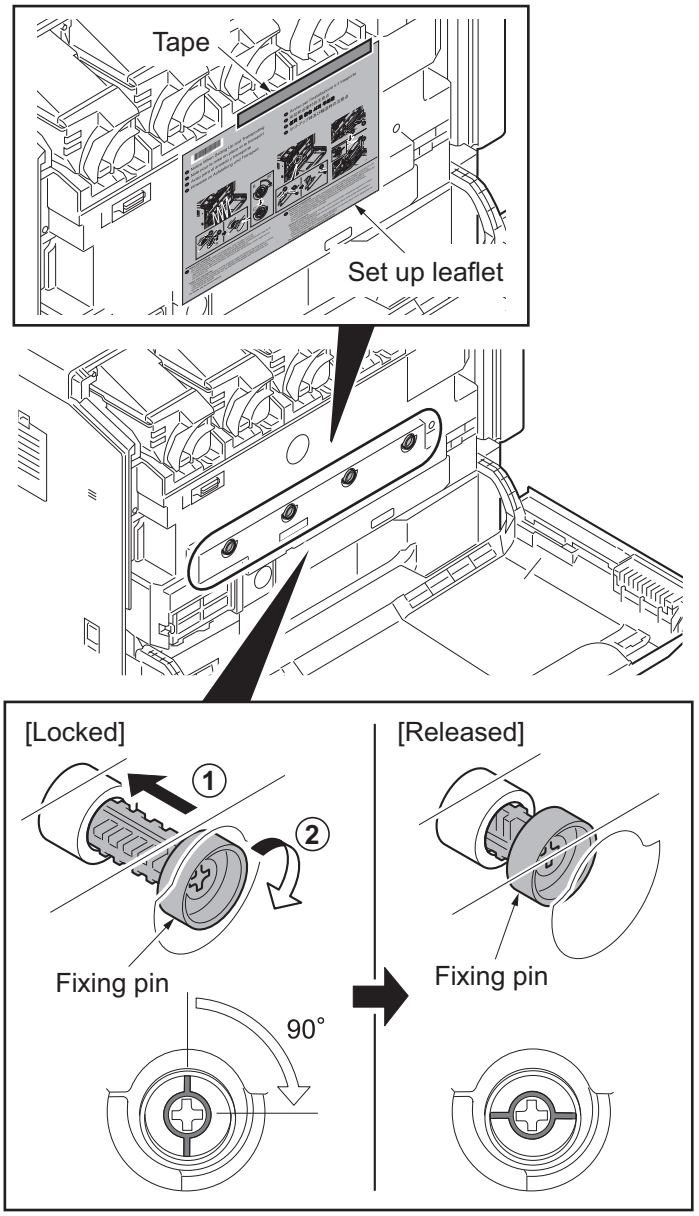


Figure 1-2-21

3. Remove a screw and slide the lever right wards.
4. Fix the lever using the screw previously removed at the right screw hole and unlock the developer waste exit.

*: When the device is shipped again or removed, use the reverse procedure to lock in the developer waste exit. Failure to observe this caution could result in deteriorated print quality and/or C calls.

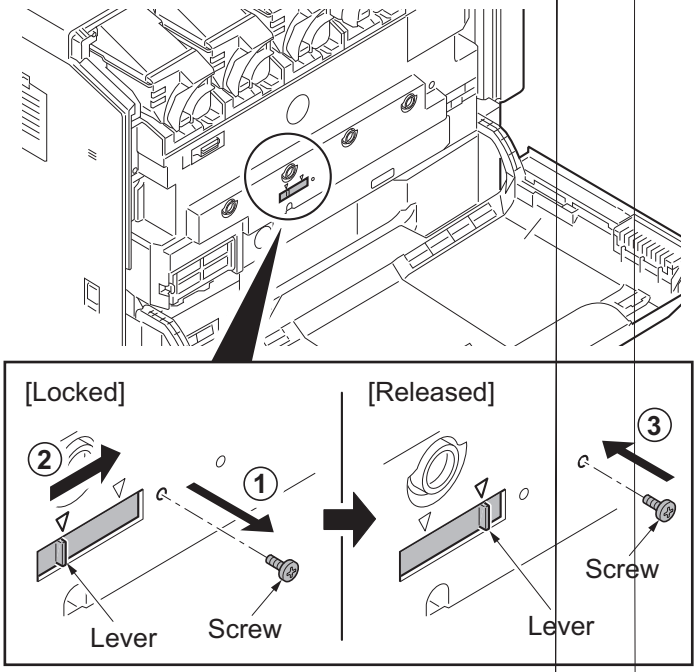


Figure 1-2-22

Installing the waste toner box

Caution

Before installing the waste toner box, unlock the developer waste exit (see page 1-2-14).

1. Push the release button and pull out the waste toner tray.
2. Open the lid and install the waste toner box.
3. Push the waste toner tray back in.
4. Close the front cover.

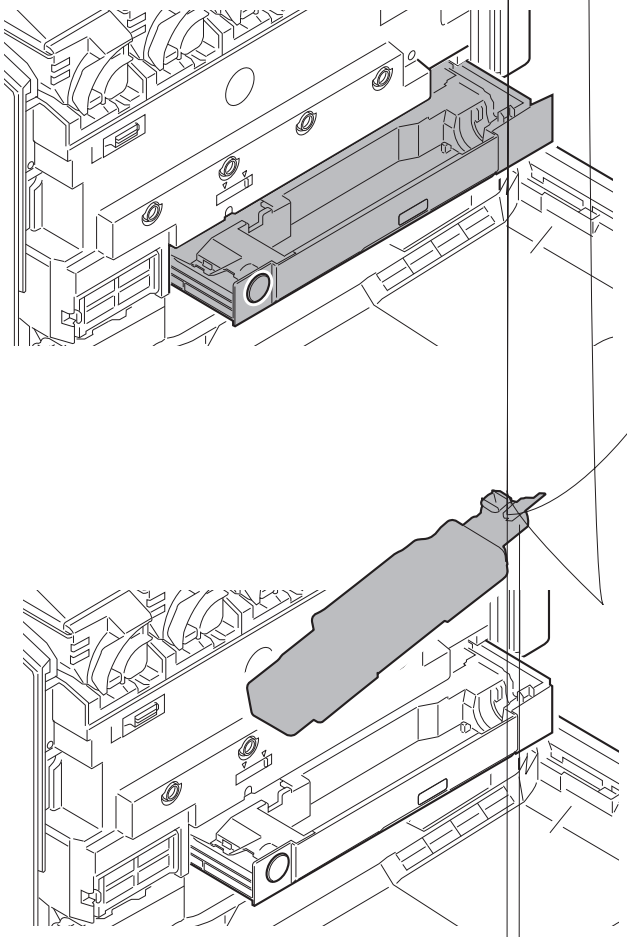


Figure 1-2-23

Installing optional devices

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

Installing the cassette heater (option)

1. Install the optional cassette heater as necessary (see page 1-2-21).

Connect the power cord

1. Connect the power cord to the power cord connector on rear lower of the machine.
2. Connect the power plug to the wall outlet.

Adjusting the image

1. Turn the main power switch on.

2. **Check the messages on the operation panel**
   After completion of warming up, in case to display "Warning for high temperature. Adjust the room temperature." on the operation panel, follow the step 3. (Performing Drum Refresh)
   In case to display “Warning for low temperature. Adjust the room temperature.” on the operation panel, install the machine in the other location this message won’t be shown.
   Installing the machine in a low temperature environment could cause image quality problems.
   In case to have no display, follow the step 4 (Performing LSU cleaning).

*: Perform the high altitude settings when a leakage is developed on images in a high altitude installation, such as in Mexico City.
   U140 - AC Calb - High Altitude - Mode 2

3. **Performing drum refresh (see the operation guide)**
   Press the Menu key.
   In the Adjust/Maint. menu screen, press cursor key to select Service Setting.
   Press the OK key.
   In the Service Setting. menu screen, press cursor key to select [Durm].
   Press [OK]. A confirmation screen appears.
   Press [Yes] ([Left select key]).

4. **Performing LSU cleaning (see the operation guide)**
   In the Adjust/Maint. menu screen, press cursor key to select Service Setting.
   Press the OK key.
   In the Service Setting. menu screen, press cursor key to select [LSU].
   Press the OK key. A confirmation screen appears.
   Press [Yes] ([Left select key]).

5. **Performing calibration**
   (see the operation guide,U464 Setting the ID correction operation - performing calibration)
   In the Adjust/Maint. menu screen, press cursor key to select ColorCalibration.
   Press the OK key. A confirmation screen appears.
   Press [Yes] ([Left select key]).

*: **Performing color registration (see the operation guide,U469 Adjusting the color registration)**
   Print Chart (Printing the color registration correction chart)
   In the Adjust/Maint. menu screen, press cursor key to select Color Regist.
   Press the OK key.
   In the Color Regist menu screen, press cursor key to select Detail.
   Press the OK key.
   In the Detail menu screen, press cursor key to select [Print Chart].
   Press the OK key. A confirmation screen appears.
   Press [Yes] ([Left select key]).

   Adjust Magenta
   In the Adjust/Maint. menu screen, press cursor key to select Color Regist.
   Press the OK key.
   In the Color Regist menu screen, press cursor key to select Detail.
   Press the OK key.
   In the Detail menu screen, press cursor key to select [Adjust Magenta].
   Press the OK key.The Adjust Magenta screen appears.
   In the H and V charts for magenta printed in Print Chart above, note the values where the lines are closest to forming a single straight line.

*: Values corrected are H-1, H-2, H-3, H-4, H-5, H-6, H-7, V-3.
   Highlight the read value using the cursor up or down key and fill the other entries using the left and right cursor keys.
   When you have completed all the values, press the OK key.
   The setting is saved and you are returned to the Color Regist. Detail menu screen.

   Adjust Cyan and Adjust Yellow
   In the Detail menu screen, press cursor key to select [Adjust Cyan] or [Adjust Yellow].
   Press the OK key.The Adjust Cyan or Adjust Yellow screen appears.
   Using the same procedure as for magenta above, identify the cyan and yellow values in the color registration correction chart and set them in the printer.

6. **Make test prints.**
   If image quality is unsatisfactory after test printing, execute calibration, then retry U410-Adjusting the halftone automatically.

Setting the delivery date (maintenance item U278)

1. Press the menu key while pressing and holding the OK and down cursor keys simultaneously.

2. Enter the maintenance mode by entering 10871087 using the numeric keys. (see page P.1-3-1)
3. Enter 278 using the numeric keys and press the Ok key.
4. Select [Today].
5. Press the Ok key. The delivery date is set.
6. Press the Back key to exit.

Output an own-status report (maintenance item U000)

1. Enter 000 using the numeric keys and press the Ok key.
2. Select [Maintenance] and press the Ok key. A status report is output.
3. Press the back key to exit.

Exit maintenance mode

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

Print out the user setting list

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

Completion of the machine installation

(2) Shut-down

To turn main power off, be sure to perform the following before turning the main power switch off.

*: Before proceeding, make sure that the data lamp is turned off.
*: The hard disk may be operating when the Data indicator is lit or blinking. Turning off the main power switch while the hard disk is operating may cause damage.

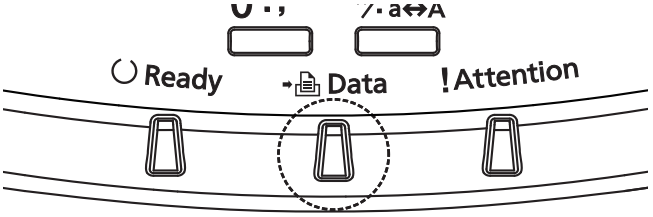


Figure 1-2-24

1. Press menu key.
2. Press the cursor key to select Shut down.
3. Press OK key. A confirmation screen appears.
4. Press [Yes] (Left Select key).
5. Follow the instructions on the display to turn the main power switch off.

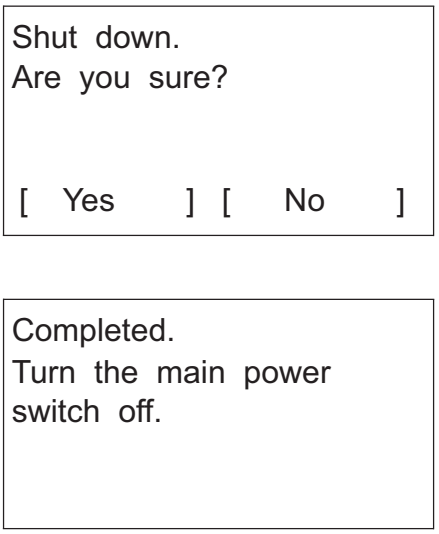


Figure 1-2-25

(3) Setting initial print modes

Factory settings are as follows:

Maintenance item No.	Contents	Factory setting
U253	Switching between double and single counts	DBL(A3/Ledger)
U260	Selecting the timing for print counting	Eject
U285	Setting service status page	On
U323	Setting abnormal temperature and humidity warning	On
U325	Setting the paper interval	Off/1
U327	Setting the cassette heater control	Off

1-2-3 Installing the cassette heater (option)

Cassette heater installation requires the following parts:

Parts	Quantity	Part.No.
Cassette heater set (120V)	1	302K994930
Cassette heater set (240V)	1	302K994940

Supplied parts of cassette heater set (302K994930):

Parts	Quantity	Part.No.
Cassette heater (120V)	1	302H794620
Wire saddle	3	7YZM610001++H0
Label	1	302KP34220
Connector cover	1	303NF04140
M3 x 8 tap-tight S screw	2	7BB700308H
M4 x 8 tap-tight S screw	1	7BB700408H

Supplied parts of cassette heater set (302K994940):

Parts	Quantity	Part.No.
Cassette heater (240V)	1	302H794610
Wire saddle	3	7YZM610001++H0
Label	1	302KP34220
Connector cover	1	303NF04140
M3 x 8 tap-tight S screw	2	7BB700308H
M4 x 8 tap-tight S screw	1	7BB700408H

Procedure

1. After confirming the data lamp is turned off, perform shut-down on the operation panel, turn power off, and unplug the power receptacle(see page P.1-2-19).
2. Pull the cassette 1 forward.
3. Draw out Cassette 1 by releasing the release lever.

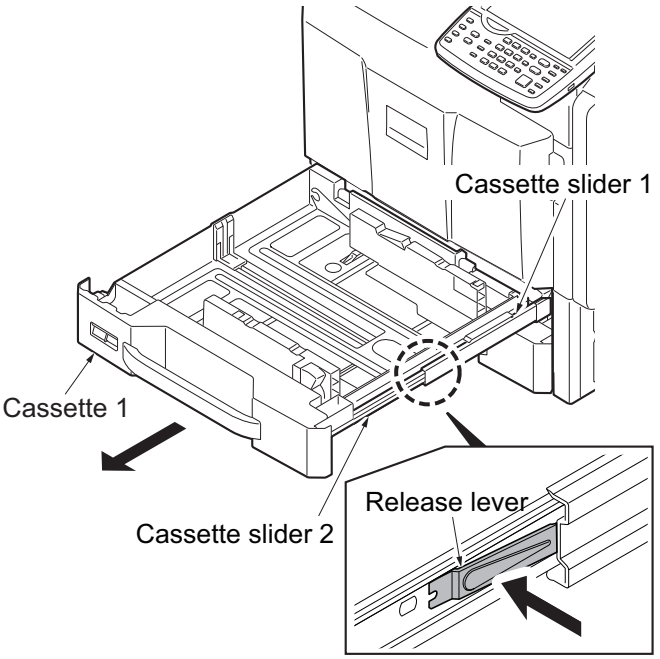


Figure 1-2-26

4. Pull the cassette 2 forward.
5. Draw out Cassette 2 by releasing the release lever.

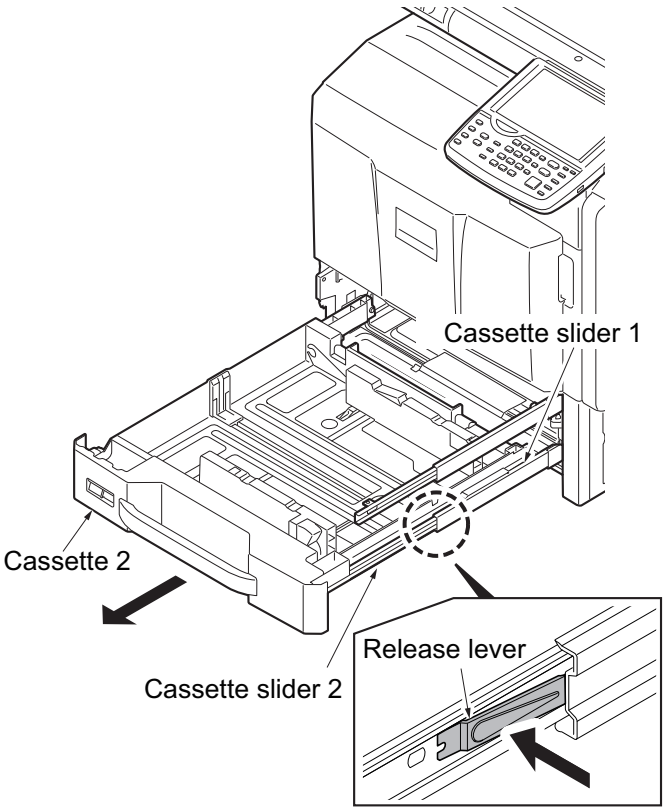


Figure 1-2-27

6. Fit three wire saddles on the bottom frame of the machine.
7. Fit the cassette heater using two M3 x 8 screws.

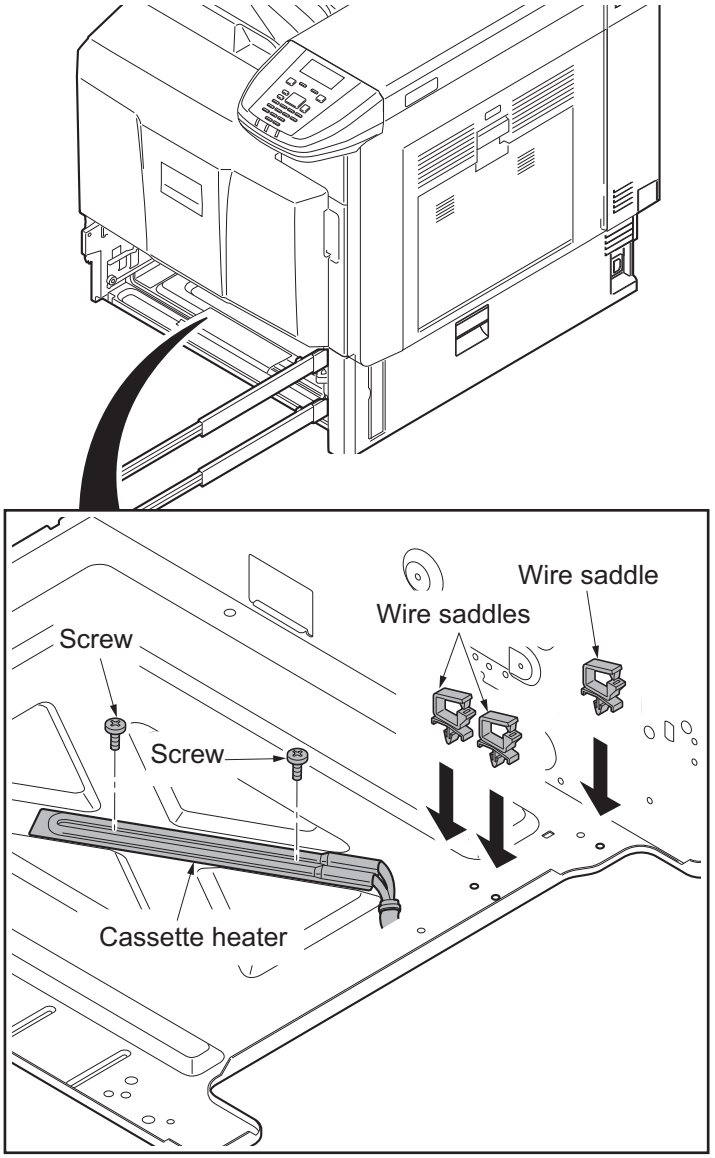


Figure 1-2-28

8. Connect the connector of the cassette heater to the connector in the rear frame of the machine.
9. Pass the wire of the cassette heater through three wire saddles and then fasten the wire.

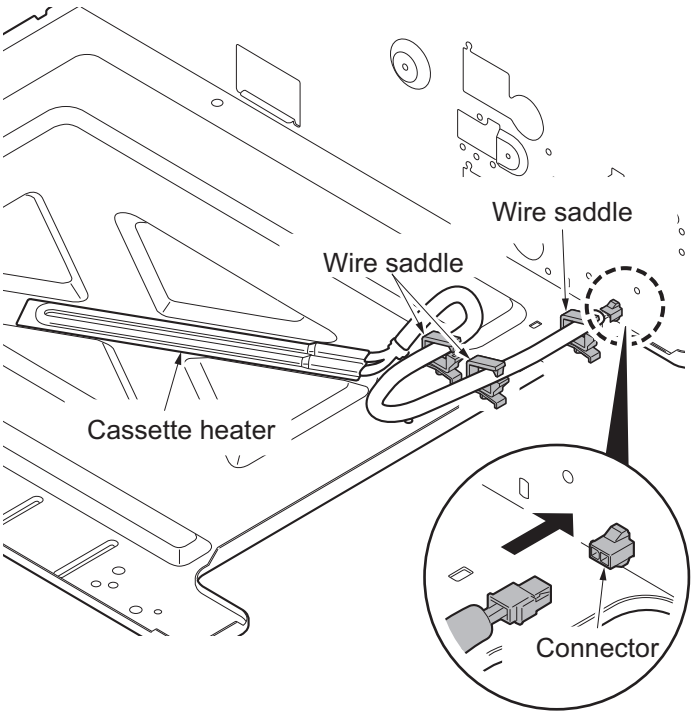


Figure 1-2-29

10. After installing the cassette heater, install the connector cover using the M4 × 8 screw.
11. Clean the label with alcohol and then affix the label.

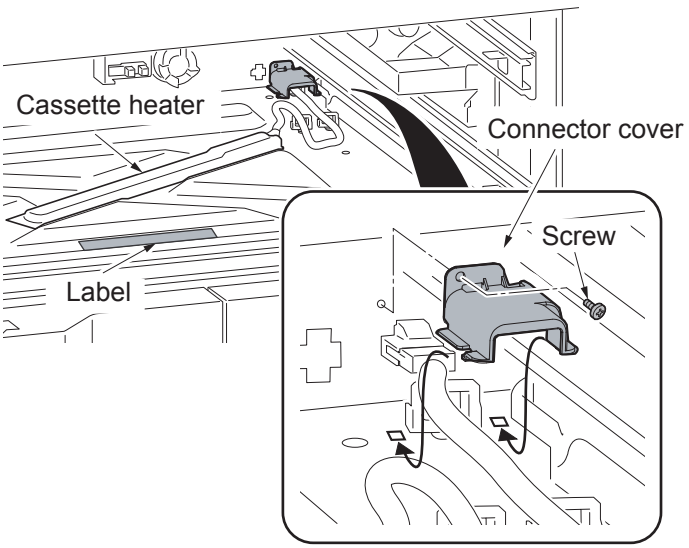


Figure 1-2-30

12. To install Cassette 1 and Cassette 2, align the cassette slider 2 and cassette slider 1 with each other.
13. Push the cassette in fully.

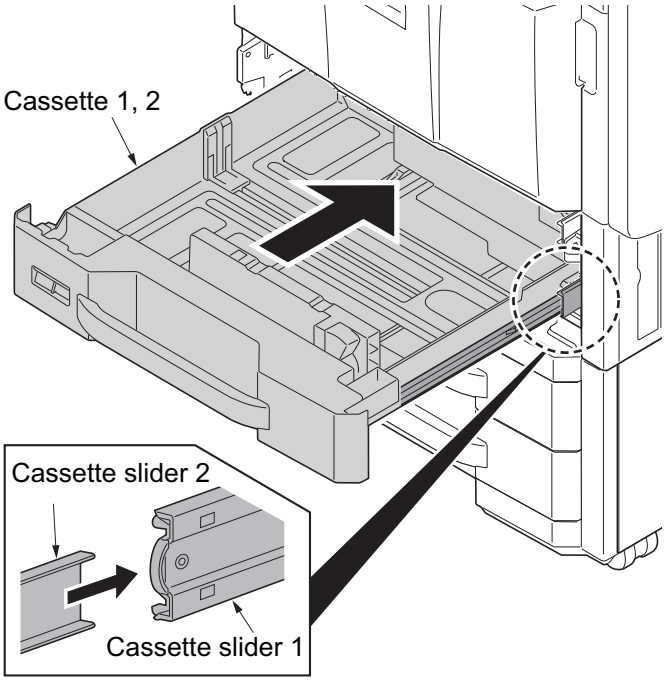


Figure 1-2-31

1-2-4 Installing the gigabit ethernet board (option)

Gigabit ethernet board installation requires the following parts:

Parts	Quantity	Part.No.
Gigabit ethernet board	1	1505JV0UN0 (option)

Procedure

1. After confirming the data lamp is turned off, perform shut-down on the operation panel, turn power off, and unplug the power receptacle (see page P.1-2-19).
2. Open the controller lid.
3. Remove two pins and then remove the slot cover.

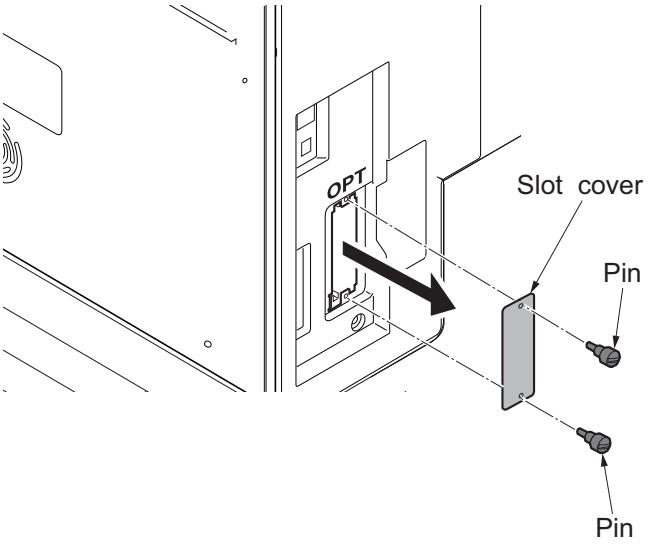


Figure 1-2-32

4. Insert the gigabit ethernet board along the groove in OPT2 and secure the board with two pins that have been removed in step 3.

*: Do not directly touch the gigabit ethernet board terminal.
Hold the top and bottom of the gigabit ethernet board, or the projection of the board to insert the gigabit ethernet board.

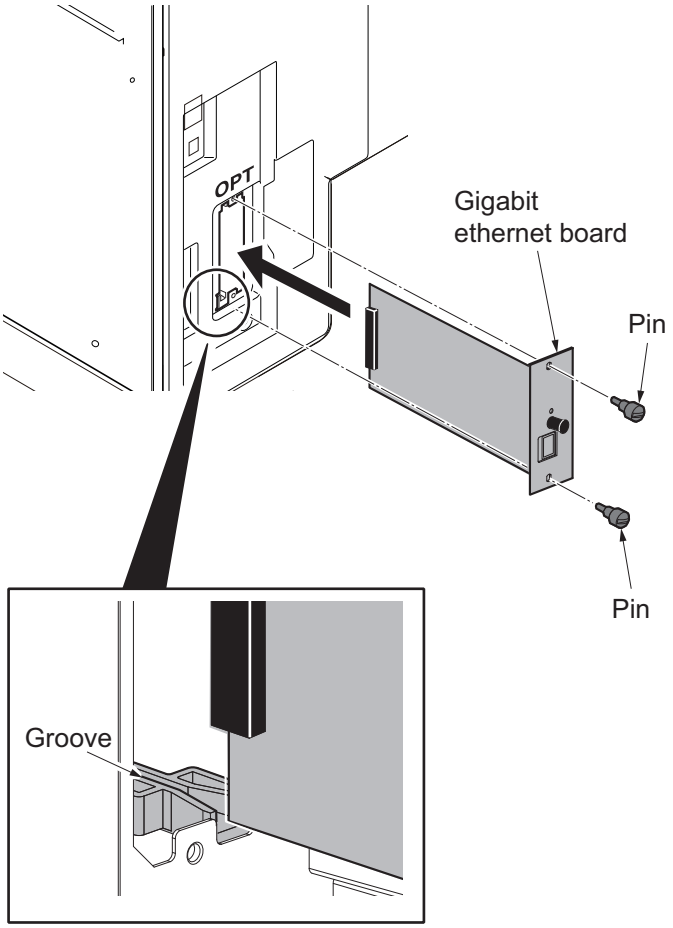


Figure 1-2-33

5. Plug the modular connector cable into the line terminal,
6. Close the controller lid.

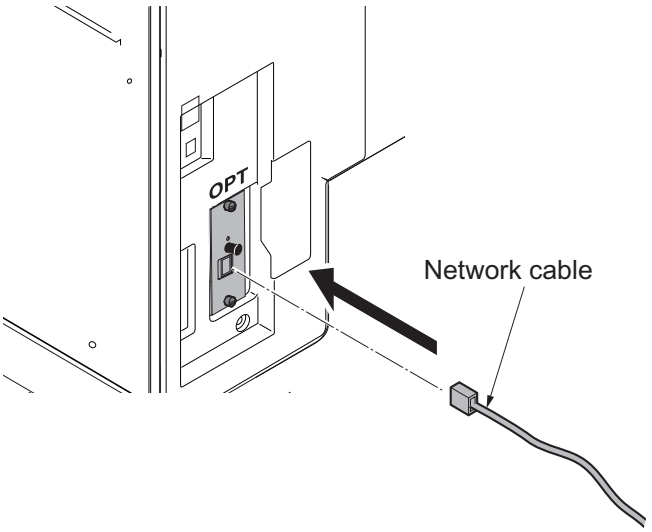


Figure 1-2-34

1-2-5 Installing the IC card reader holder (option)

IC card reader holder installation requires the following parts:

Parts	Quantity	Part.No.
IC card reader holder	1	1709AD0UN0 (option)
Relaying USB wire*	1	302MN46210

*1: For internal wirings only

Supplied parts of IC card reader holder (1709AD0UN0):

Parts	Quantity	Part.No.
Card reader case	1	-
Card reader base	1	-
Card reader mount	1	-
Card reader tray	1	-
USB Wire (For extension)	1	-
Pin	3	303NS24410
Clamp	6	7YZM690002++H01

The card reader base, card reader mount, and the pin are packaged as an assembled kit.

For internal wirings
Procedure

1. After confirming the data lamp is turned off, perform shut-down on the operation panel, turn power off, and unplug the power receptacle(see page P.1-2-19).
2. Pull the paper conveying unit out.
3. Remove two screws and then remove the upper right cover.

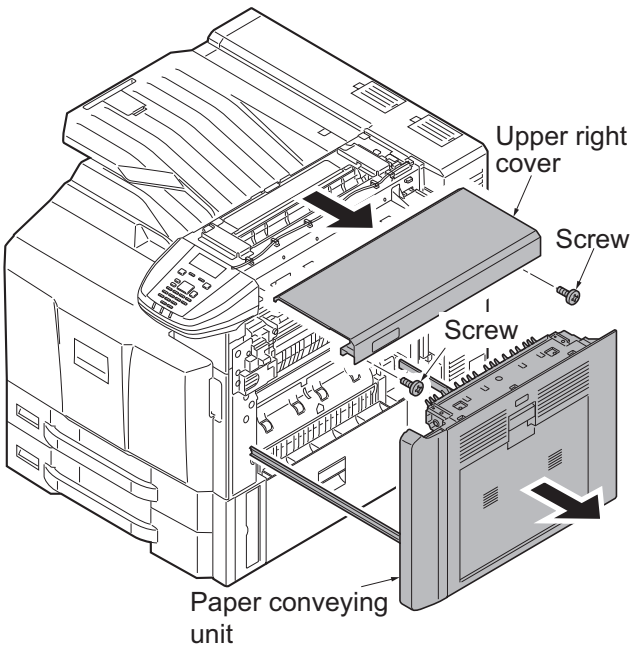


Figure 1-2-35

4. Remove two screws.
5. Unhook three hooks and then remove the Left upper cover.

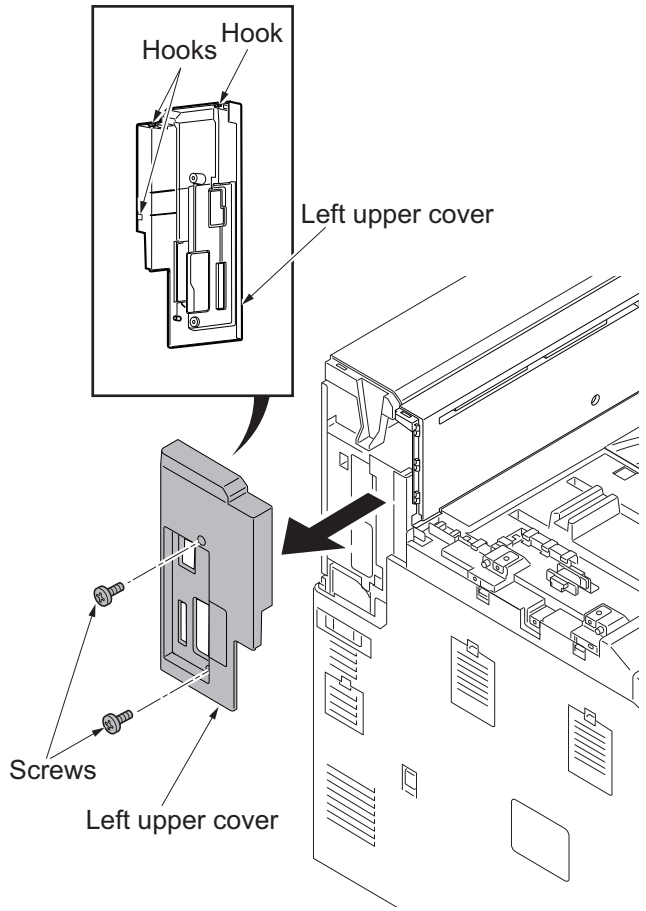


Figure 1-2-36

6. Remove screw and then remove the rear tray cover.

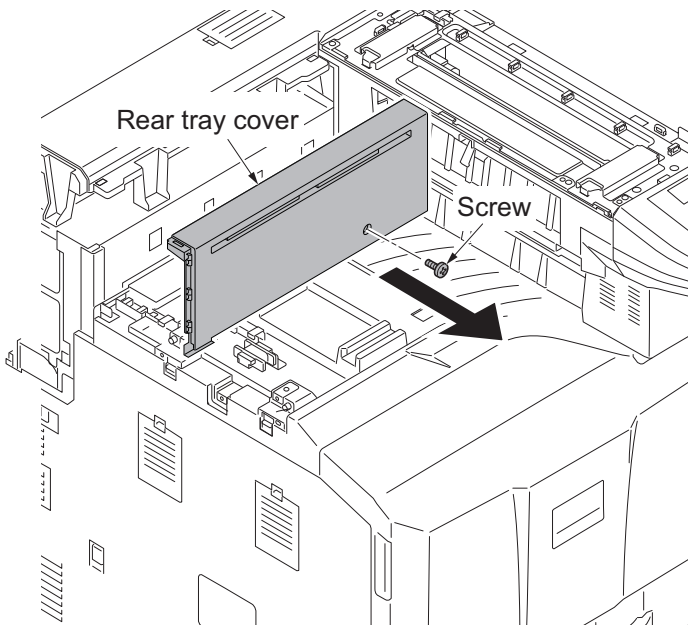


Figure 1-2-37

7. Remove seven screws and then remove the rear upper cover.

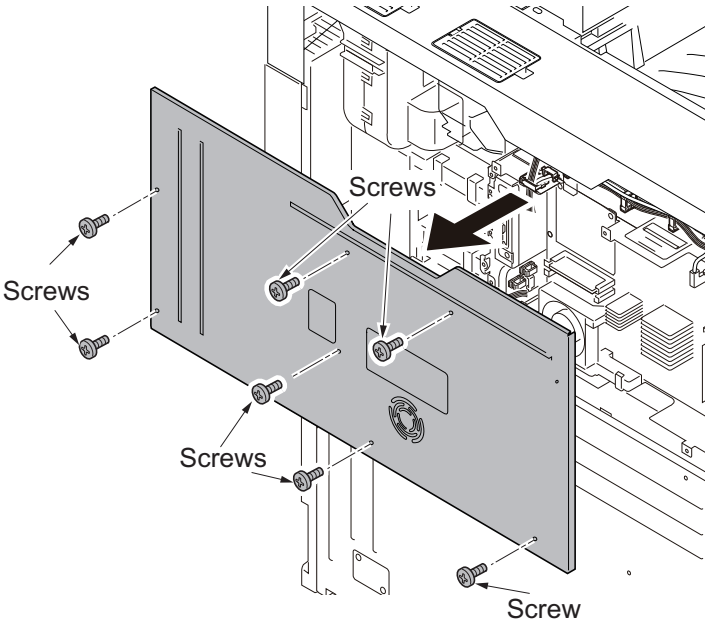
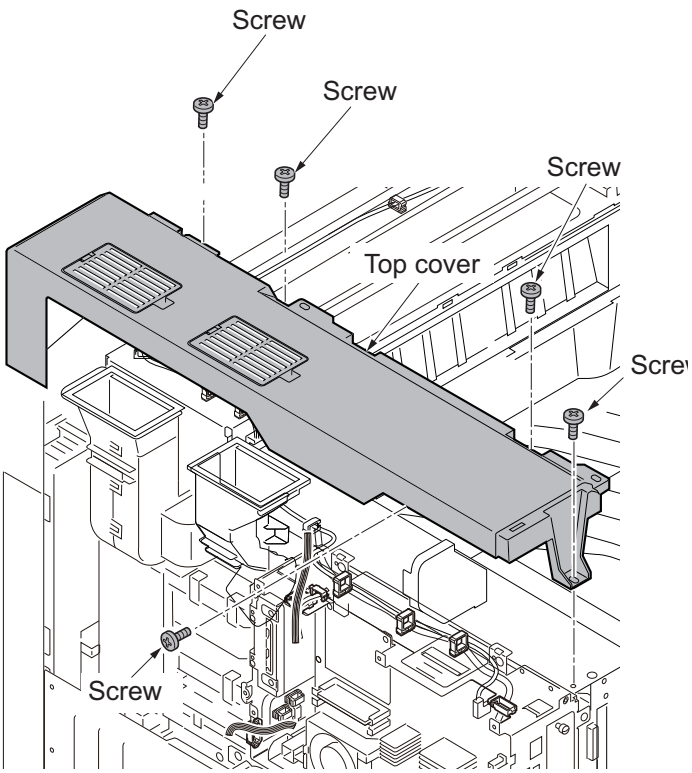


Figure 1-2-38

8. Remove five screws and then remove the Top cover.



9. Cut out the aperture plate on the upper right cover using nippers.

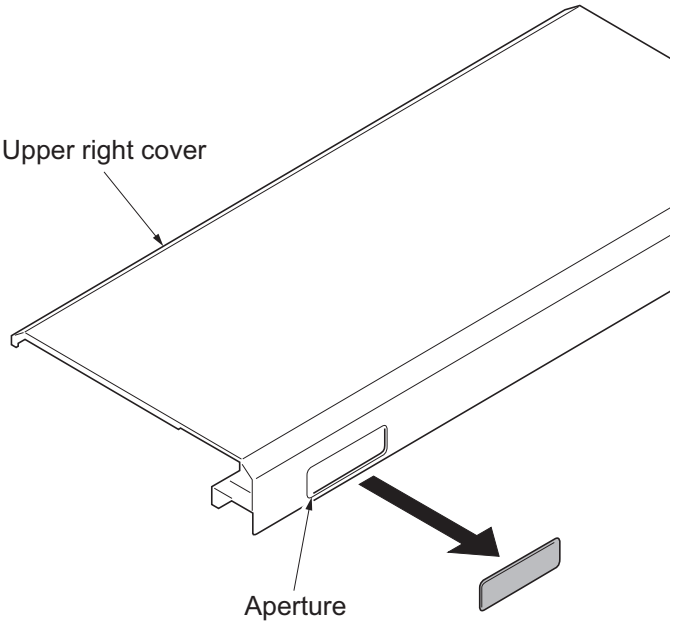


Figure 1-2-40

10. Fit two clamps.

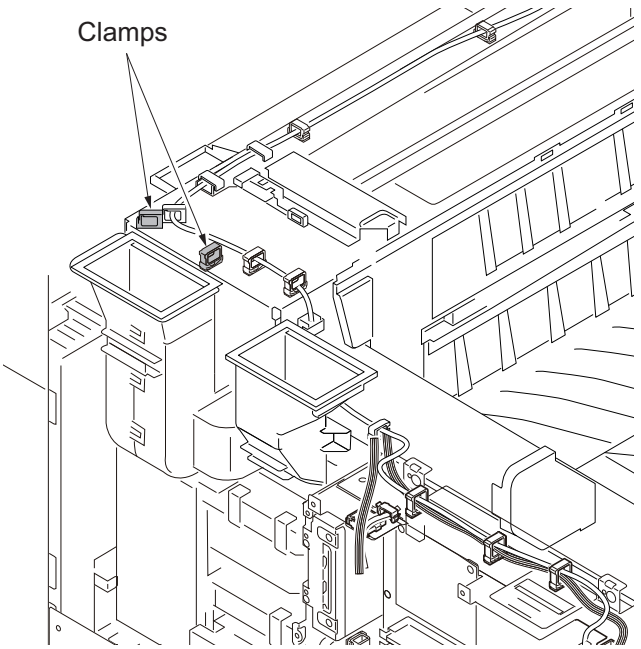


Figure 1-2-41

11. Fit four clamps.

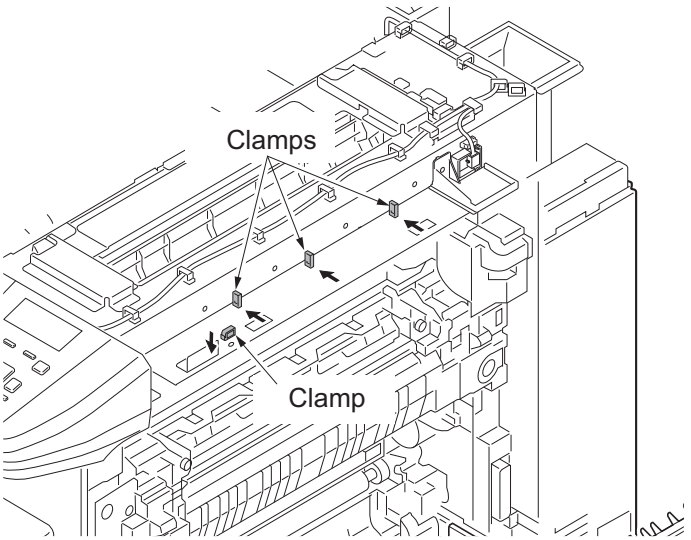


Figure 1-2-42

12. Release ten wire saddles.
13. Remove two wire holders.

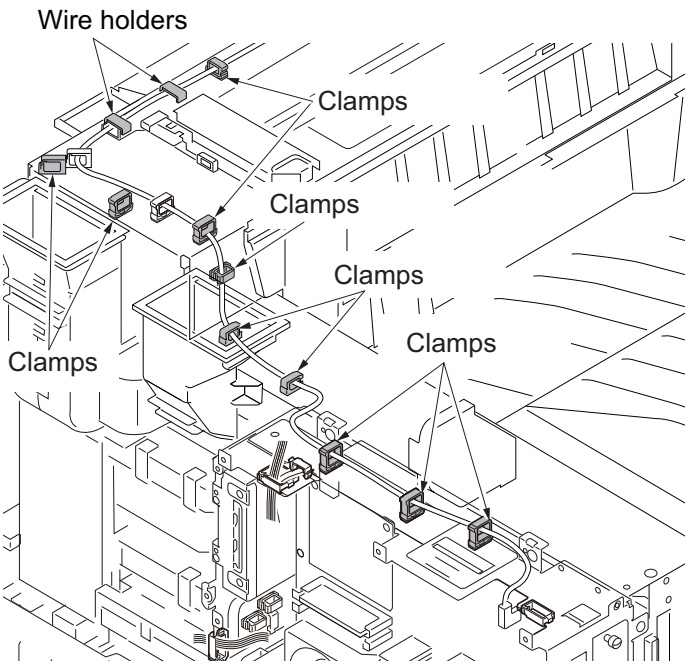


Figure 1-2-43

14. Connect the relaying USB wire to the USB wire of the IC card reader.
15. Insert the connector of the relaying USB wire to the main PWB.
16. Fix the USB wire of the IC card reader using ten wire saddles and two wire holders.

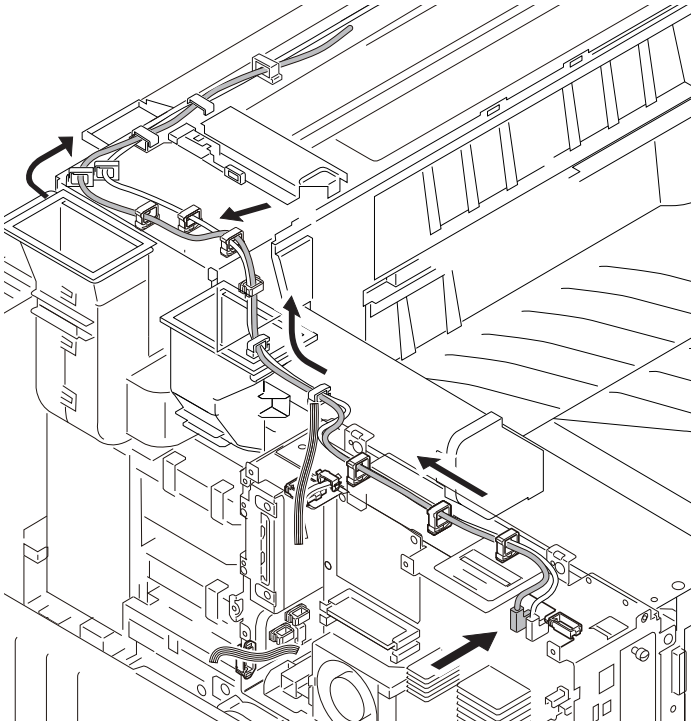


Figure 1-2-44

17. Pass the USB wire of the IC card reader through two clamps and then fasten the wire.

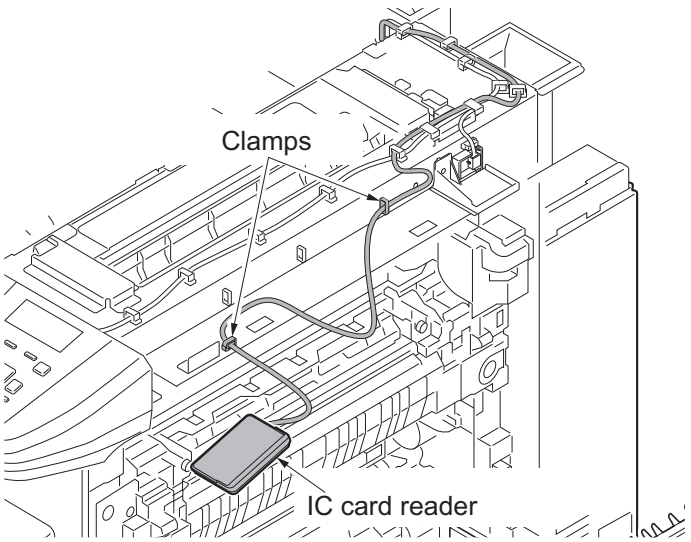


Figure 1-2-45

18. .Fix the wirings of extra portion using two clamps so that the distance of the USB power line from the clamp to the IC card reader is approximately 160mm.

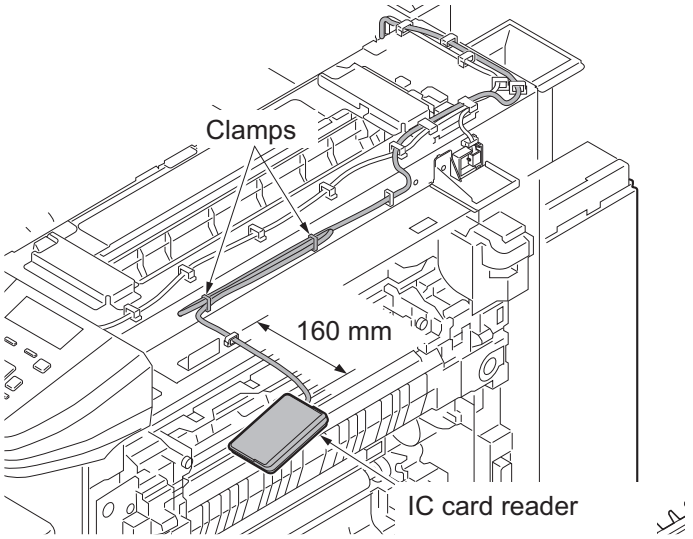


Figure 1-2-46

19. Route the IC card reader through the opening in the upper right cover and fix the upper right cover using the two screws.

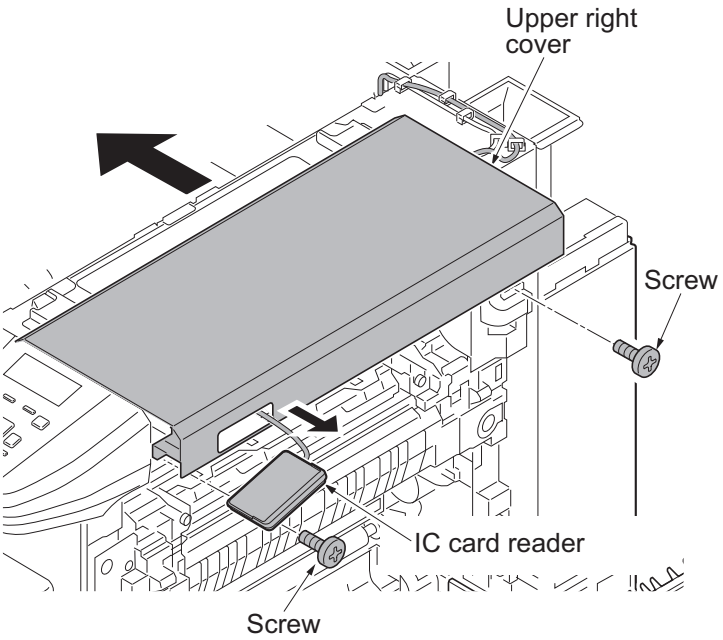


Figure 1-2-47

20. Remove the pin of the card reader base and then remove the card reader mount.

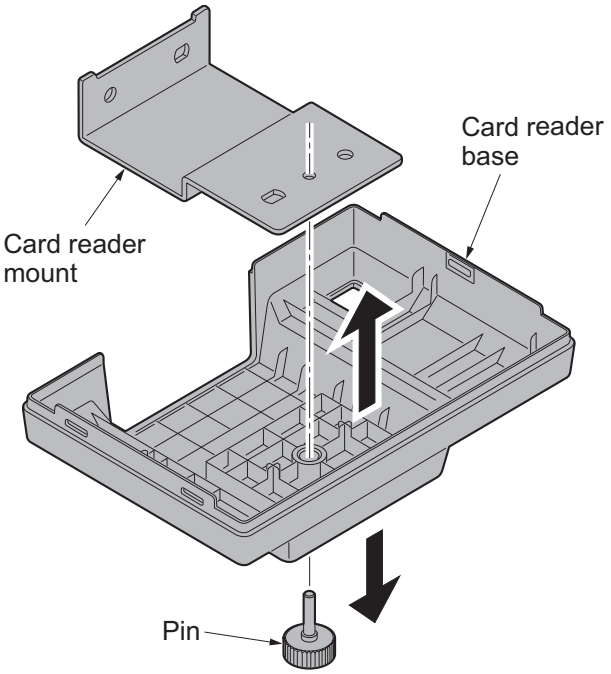


Figure 1-2-48

21. Fit the card reader mount to the machine using two pins.

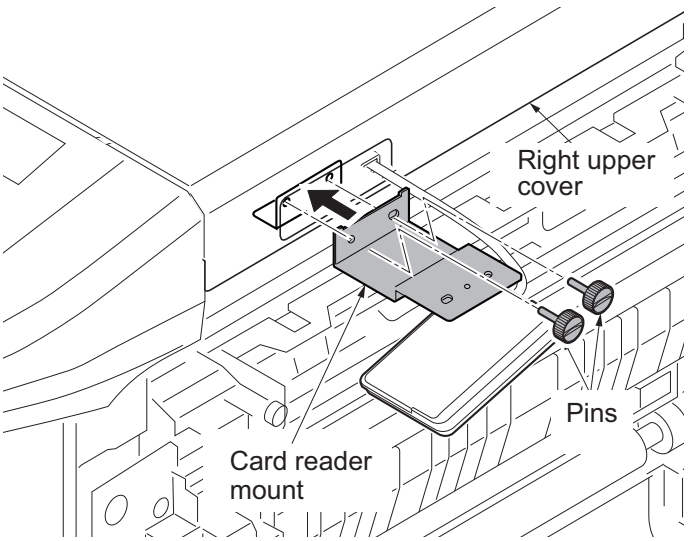


Figure 1-2-49

22. Refit the card reader base to card reader mount using the pin removed in step 20.

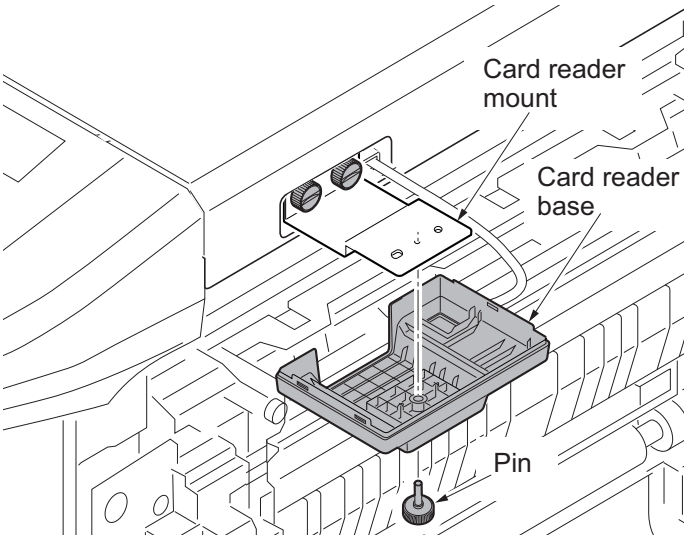


Figure 1-2-50

23. Fit the card reader tray to the card reader base.
    Choose the direction of mounting the IC card reader according to the depth of the reader.
    10mm to 22mm: Face the mark A upwards.
    Less than 10mm: Face the mark B upwards.

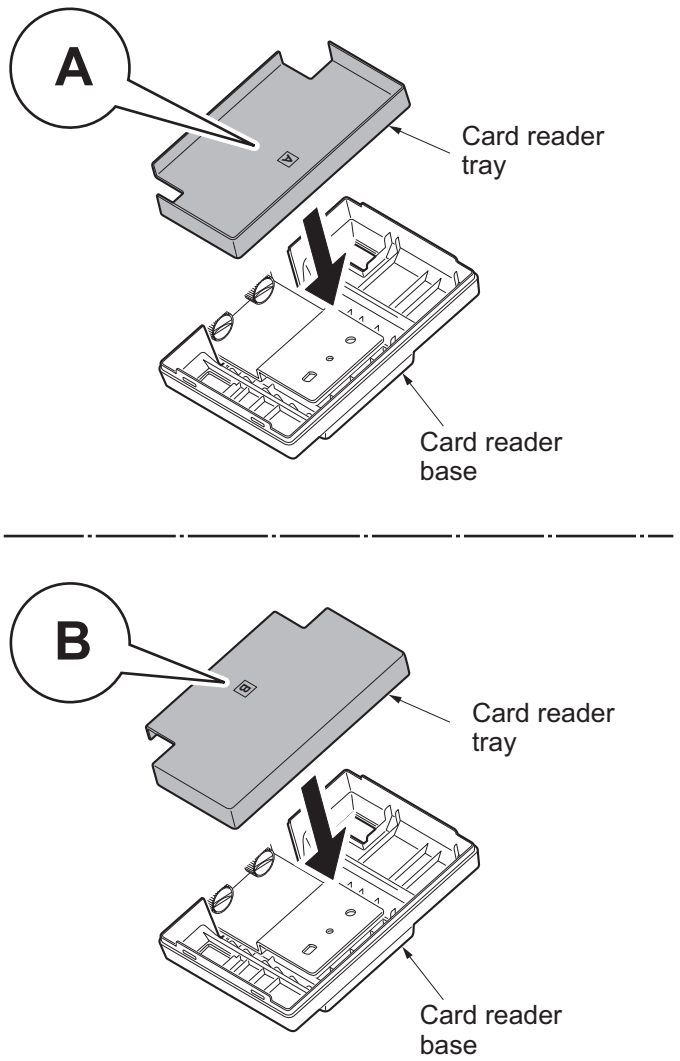


Figure 1-2-51

24. Mount the IC card reader on the card reader base.

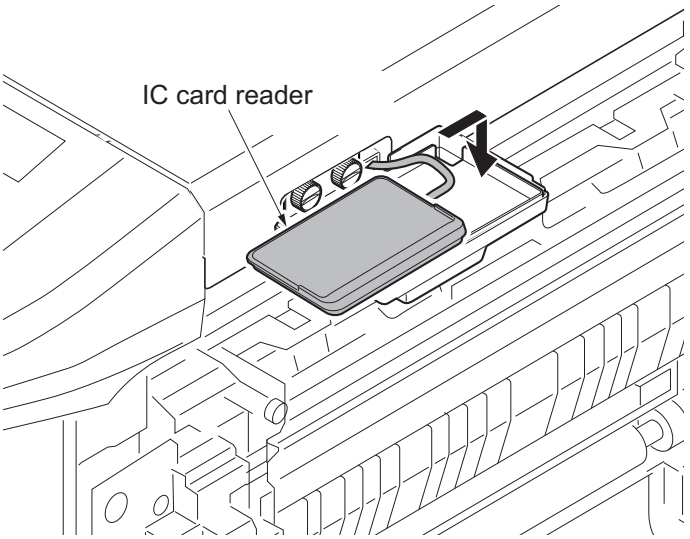
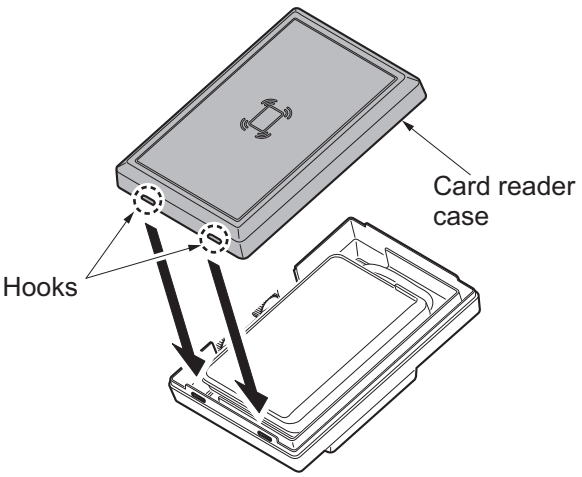


Figure 1-2-52

25. Hook the two hooks of the card reader case to fit the card reader case to the card reader base.
Press its top until it clicks in.



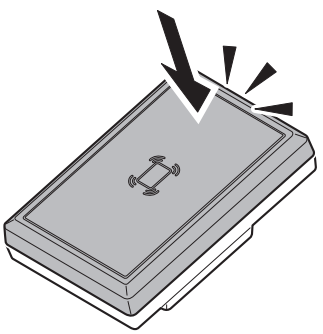


Figure 1-2-53

26. Replace the cover which was removed.

For external wirings
Procedure

1. After confirming the data lamp is turned off, perform shut-down on the operation panel, turn power off, and unplug the power receptacle(see page P.1-2-19).
2. Remove the pin of the card reader base and then remove the card reader mount.

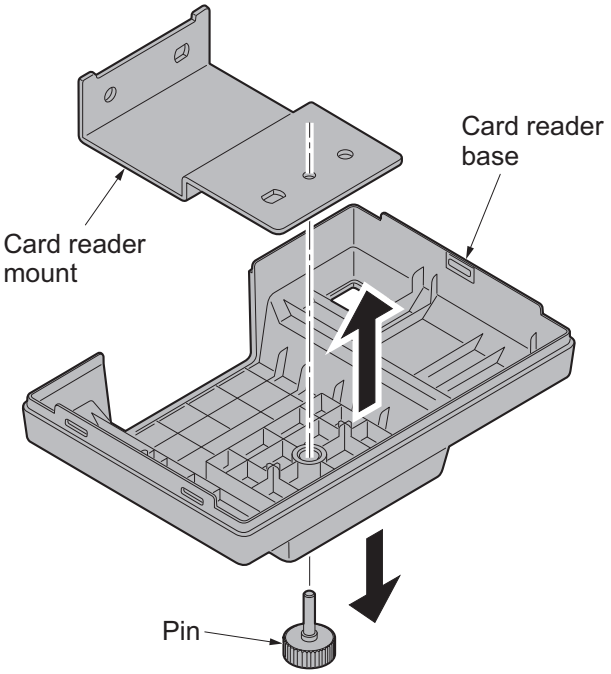


Figure 1-2-54

3. Remove the upper right cover (see page P.1-2-28).
4. Cut out the aperture plate on the upper right cover using nippers (see page P.1-2-31).
5. Replace the cover which was removed.

6. Fit the card reader mount to the machine using two pins.

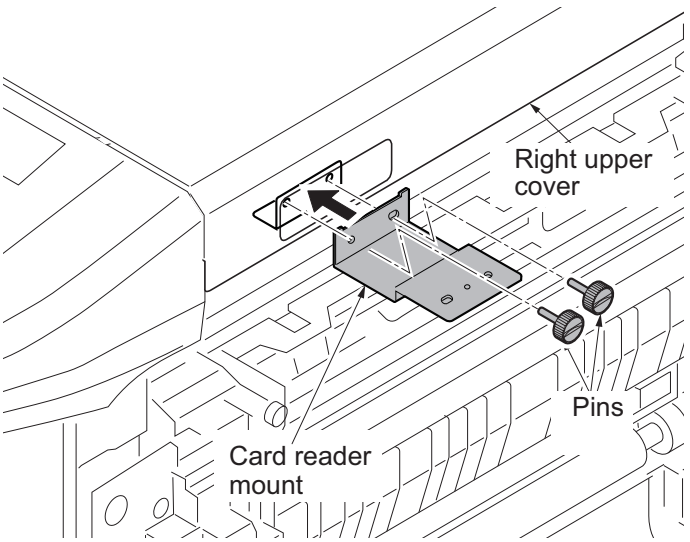


Figure 1-2-55

7. Refit the card reader base to card reader mount using the pin removed in step 2.

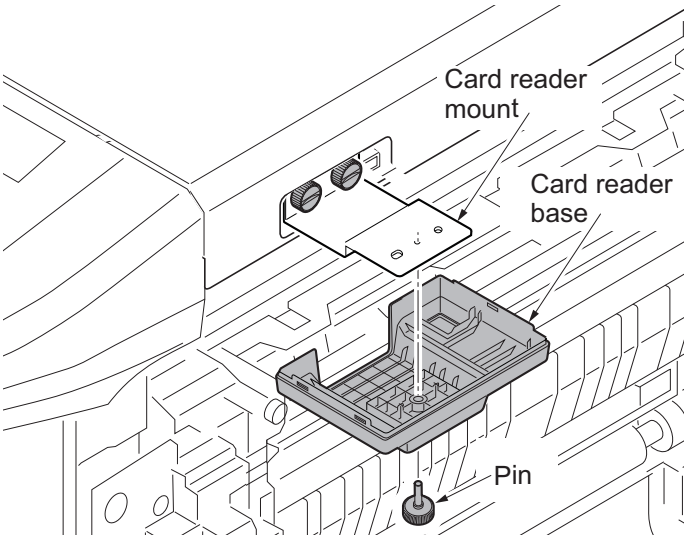
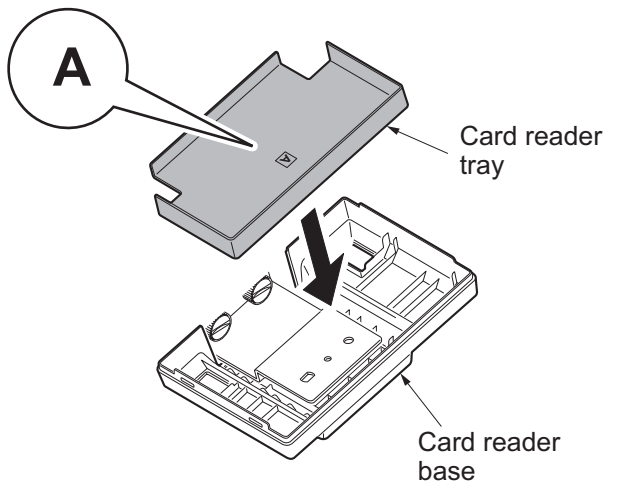


Figure 1-2-56

8. Fit the card reader tray to the card reader base.
   Choose the direction of mounting the IC card reader according to the depth of the reader.
   10mm to 22mm: Face the mark A upwards.
   Less than 10mm: Face the mark B upwards.



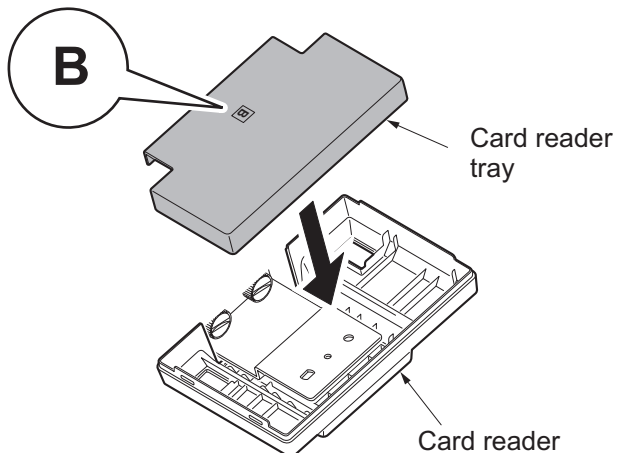


Figure 1-2-57

9. Route the USB wire of the IC card reader through the aperture of the card reader base and mount the IC card reader on the card reader base.

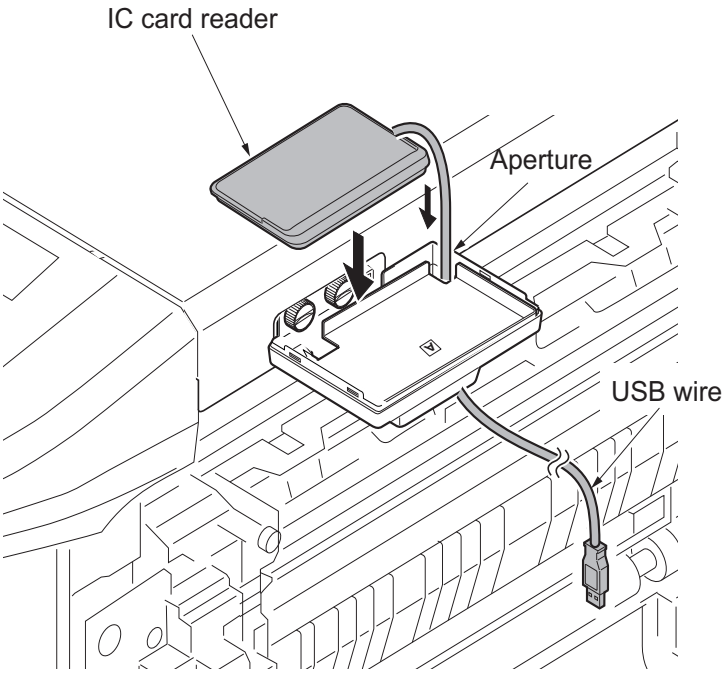


Figure 1-2-58

10. Hook the two hooks of the card reader case to fit the card reader case to the card reader base.
Press its top until it clicks in.

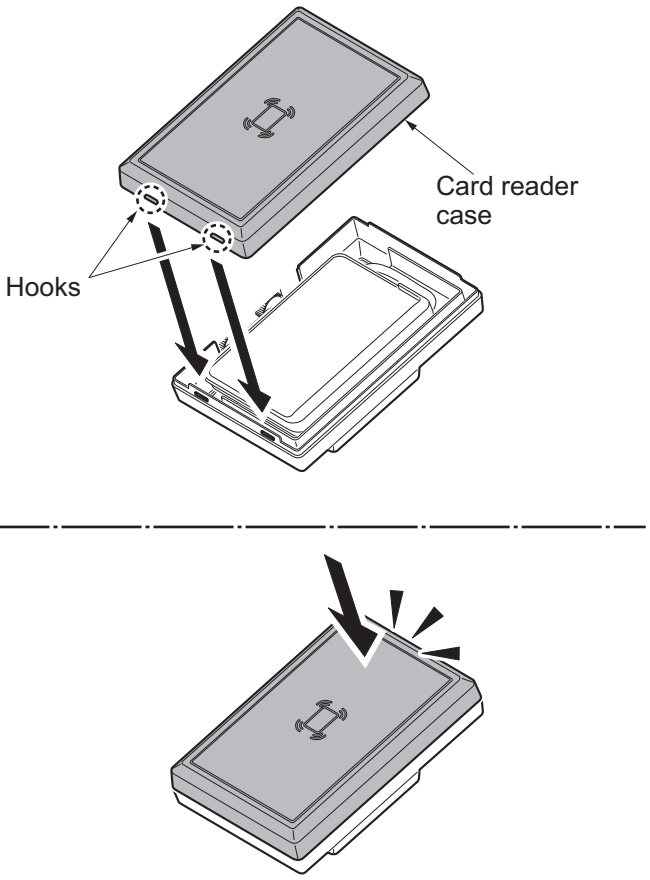


Figure 1-2-59

11. Fit six clamps.
    Right side: three
    Rear side: three

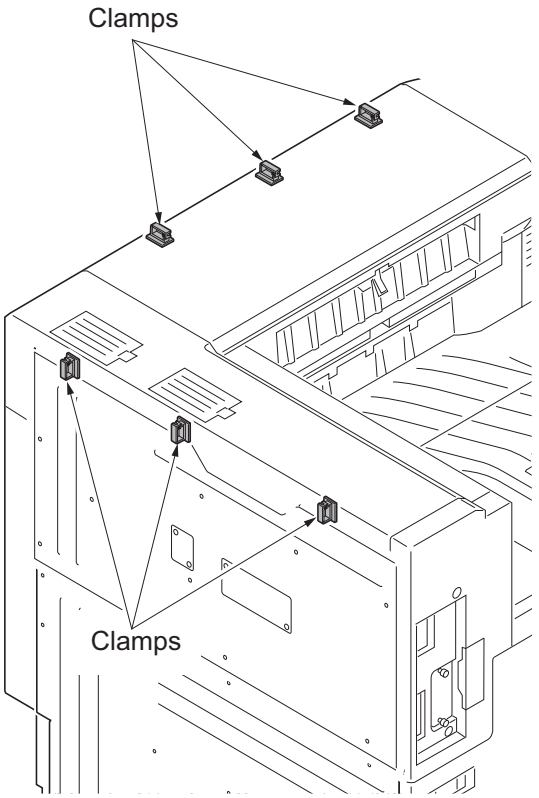


Figure 1-2-60

12. Pass the USB wire of the IC card reader through six clamps and then fasten the wire.
13. Connect the USB wire to the machine. If the length does not suffice, use the USB wire supplied.

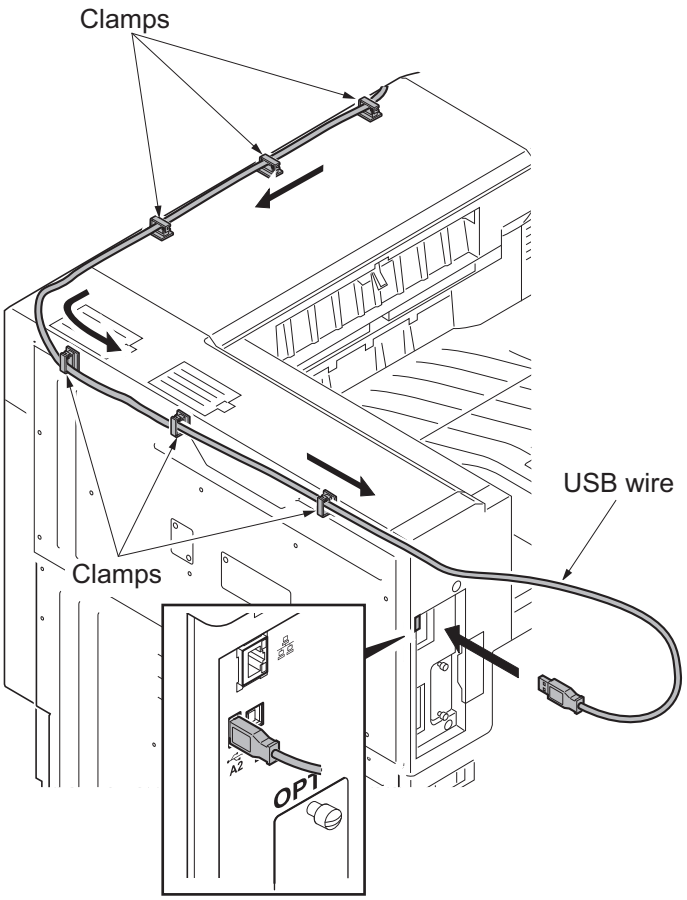


Figure 1-2-61

Enabling IC Card Authentication

Precautions

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

1. Turn the main power switch on.
2. Press [Menu].
3. Select Op Function. Press OK key.
4. The Login screen appears.
5. With the Login User Name entry field selected, press OK key.The Login User Name entry screen is displayed.
6. Enter the Login User Name using the numeric keys then press OK key.
7. Select the Login Password entry field. press OK key.
8. Enter the Login Password with the numeric keys then press OK key.
9. Pressing [Login] ([Right Select]).
10. The Op Functions menu appears.
11. Select the IC Card, then press OK key.
12. Select the License On. then press OK key.
13. Select the Official. then press OK key.
14. To use the application as a trial, select Trial and press OK key.
15. Enter the License key using the numeric keys.
16. When the confirmation screen appears, press [Yes] ([Left Select]).

To use a SSFC card, run maintenance mode U222 and set SSFC.

1-2-6 Installing the duct unit (option)

Duct unit installation requires the following parts:

Parts	Quantity	Part.No.
Duct unit	1	302LC94530

Supplied parts of duct unit (302LC94530):

Parts	Quantity	Part.No.
Duct A	1	-
Duct B	1	-
Filter	2	-
M3 x 8 tap-tight P screw	2	7BB200308H
M3 x 8 tap-tight P screw (black)	1	7BB282308H
M3 x 8 tap-tight S screw (black)	2	7BB782308H

*: This option unit cannot be installed together with the finisher.

Procedure

1. After confirming the data lamp is turned off, perform shut-down on the operation panel, turn power off, and unplug the power receptacle(see page P.1-2-19).
2. Fit duct B to duct A using two M3 x 8 tap-tight P screws.

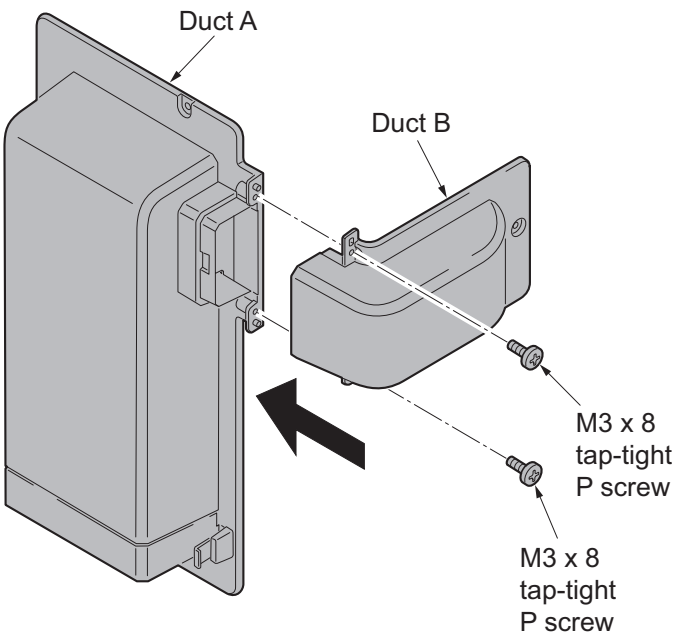


Figure 1-2-62

3. Fit two filters to duct A.

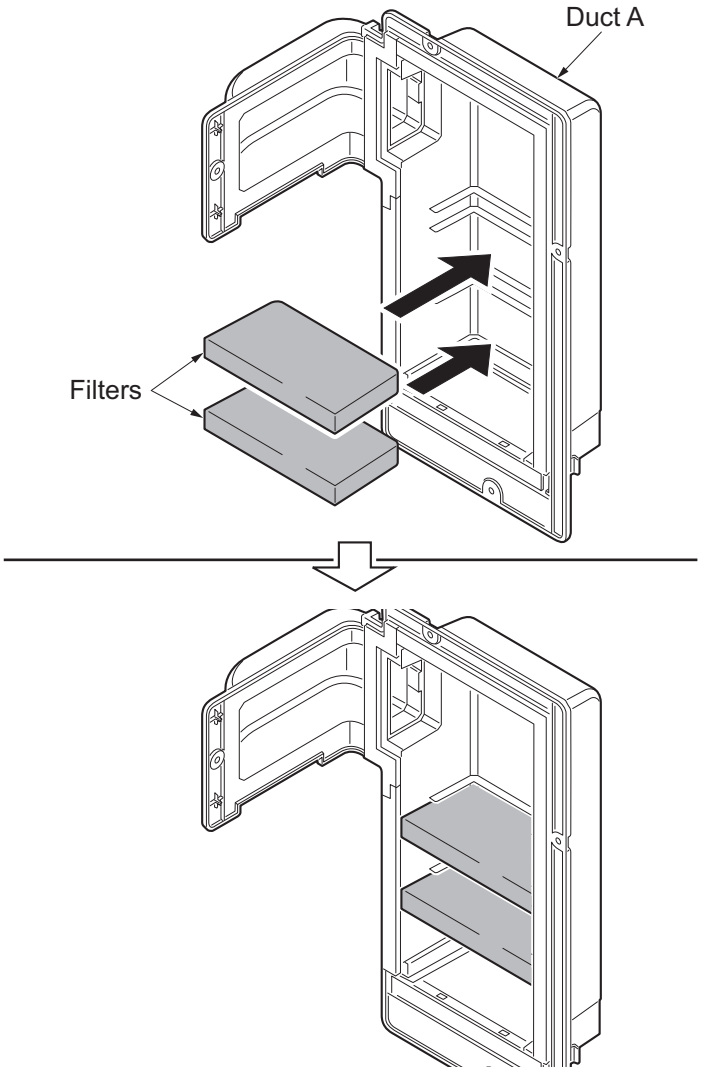


Figure 1-2-63

4. Remove the screw A from the rear lower cover.

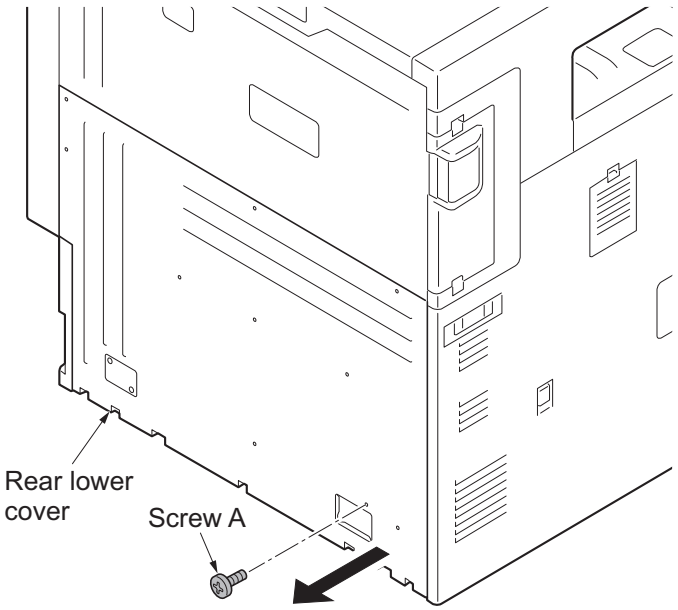


Figure 1-2-64

5. Fit the duct unit to the machine using the removed screw A, M3 x 8 tap-tight P screw (black) and two M3 x 8 tap-tight S screws (black).

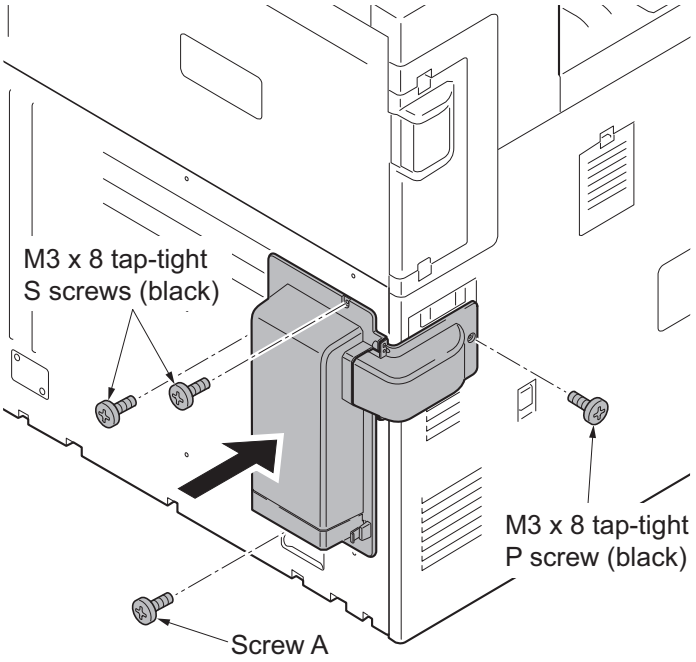


Figure 1-2-65

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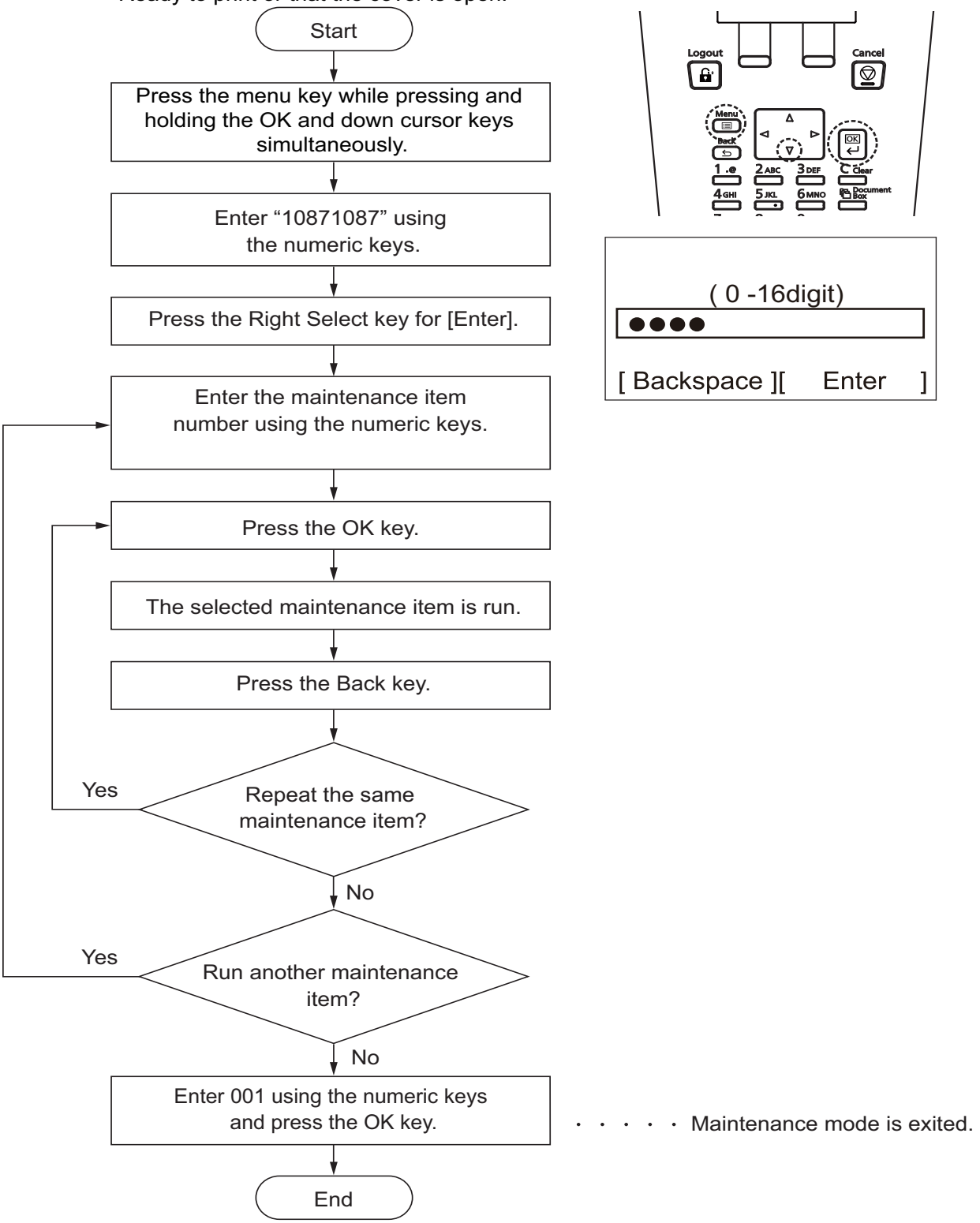
1-3-1 Maintenance mode

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

(1) Executing a maintenance item

Perform this operation when the panel displays Ready to print or that the cover is open.



・・・・・ Maintenance mode is exited.

(2) Maintenance modes item list

Section	Item No.	Content of maintenance item	Initial setting	
			45ppm	55ppm
General	U000	Outputting an own-status report	-	
	U001	Exiting the maintenance mode	-	
	U002	Setting the factory default data	-	
	U004	Setting the machine number	-	
	U019	Displaying the ROM version	-	
Initialization	U021	Memory initializing	-	
	U024	HDD formatting	-	
Drive, paper feed and paper conveying system	U030	Checking the operation of the motors	-	
	U031	Checking switches and sensors for paper conveying	-	
	U032	Checking the operation of the clutches	-	
	U033	Checking the operation of the solenoids	-	
	U034	Adjusting the print start timing	-	
		LSU Out Top	0/0/0/0/0/0/0/0/0/0/0	
		LSU Out Left	0/0/0/0/0/0/0/0/0	
		LSU Out Top B/W	-	0/0/0/0/0/0
		LSU Out Top 3/4	0/0/0/0/0/0	
	U037	Checking the operation of the fan motors	-	
	U051	Adjusting the deflection in the paper		
		Paper Loop Amount	-5/0/-5/0/ -5/0/-5/0 -6/-1/-5/0	-7/-1/-7/-1/ -7/-1/-7/-1/ -8/-2/-7/-1
		Paper Loop Amount B/W	-	-8/-8/-8/ -8/-9/-8
		Paper Loop Amount 3/4	-2/-2/-2/-2/-3/-2	
	U052	Setting the fuser motor control		
		Set Loop Sensor	-	
		Loop Sensor Control	On/On/On/On	
		Set Loop Sensor Valid	On	
	U053	Setting the adjustment of the motor speed		
		Motor1	12	11
		Motor2	0/0/0/17/0	0/0/0/15/0

Section	Item No.	Content of maintenance item	Initial setting	
			45ppm	55ppm
Drive, paper feed and paper convey-ing sys-tem	U053	Motor3	27/0/-30/ -30/82/0/18/-30/-30/ 0/0/0/0	-18/0/-27/ -27/73/0/ 16/-27/-27/ 0/0/0/0
		Motor4	-/28	25/22
		Motor5	-	0/0/14/0
		Motor6	-	-16/0/-25/ -25/66/0/ 15/-24/-24
		Motor1 Half	0	
		Motor2 Half	0/0/0/34/0	0/0/0/30/0
		Motor3 Half	54/0/-43/ -43/164/0/ 36/-60/-60	-36/0/-38/ -38/147/0/ 32/-54/-54
		Motor1 3/4	0	
		Motor2 3/4	0/0/0/22/0	
		Motor3 3/4	35/0/-39/-39/106/0/ 23/ -39/-39	-26/0/-39/-39/106/0/ 23/ -39/-39
	U059	Setting fan mode		
		Fan Mode	Mode1	
		Cooling Mode	0	
	U089	Outputting a MIP-PG pattern		
High voltage	U100	Adjusting main high voltage		
		Adj AC Bias	-	
		Set AC Auto Adj	On	
		Set DC Bias	-	
		Adj DC Bias	0/0/0/0/0/0/0/0	0/0/0/0/0/0/0/0/0
		Set Low Temp	1	
		Set Charger Freq	8807/ -/ 10690/ 8857	11022/10690/10690 8857
		Chk Current	-	
		Set AC Gain	Auto	
	U101	Setting the voltage for the primary trans-fer		
		Normal Full	126	131
		Normal Half	108	110
		Normal 3/4	118	118

Section	Item No.	Content of maintenance item	Initial setting	
			45ppm	55ppm
High voltage	U101	Normal B/W	-	135
		Add Color	2/2/5	
		Add Color 2nd	-3/-3/-2/-14	
		Surround Correct	Off	
	U106	Setting the voltage for the secondary transfer		
		Light/Normal 1st Normal2/3 1st	143/134/120	150/139/128
		Light/Normal 2nd Normal2/3 2nd	207/155/124	220/163/128
		Light/Normal 1st 3/4(Gloss) Normal2/3 1st 3/4(Gloss)	131/123/120	
		Light/Normal 2nd 3/4(Gloss) Normal2/3 2nd 3/4(Gloss)	180/140/120	
		Light/Normal 1st B/W Normal2/3 1st B/W	-	150/144/128/
		Light/Normal 2nd B/W Normal2/3 2nd B/W	-	183/171/128
		Heavy1 1st 3/4	133/129/124	
		Heavy1 2nd 3/4	155/150/124	
		Heavy4/5 1st Half	126/123/119	130/127/122
		Heavy4/5 2nd Half	144/140/119	151/146/122
		OHP	134/129/124	139/133/128
		Bias	1/1/1/-/138/126/133	1/1/1/1/143/130/133
	U107	Setting the transfer cleaning voltage	-	
		Belt(A)	202/180/192/-	207/182/192/212
		Belt(B)	150/110/130/-	160/110/130/160
	U108	Setting separation shift bias	-	
		Output	55/55/55/55/0/0	
		Output 3/4	55/55/55/55	
		Output B/W	20/20/20/20	
		Timing	-	
		Subtraction Value	-35	
	U110	Checking the drum count	-	
	U111	Checking the drum drive time	-	
	U117	Checking the drum number	-	
	U118	Displaying the drum history	-	
	U119	Setting the drum	-	

Section	Item No.	Content of maintenance item	Initial setting	
			45ppm	55ppm
High voltage	U122	Checking the transfer belt unit number	-	
	U123	Displaying the transfer belt unit history	-	
	U127	Checking/clearing the transfer count	-	
	U128	Setting transfer high-voltage timing	-5/0/13	-5/0/10
Developer	U130	Initial setting for the developer	-	
	U131	Adjusting the toner sensor control voltage	-	
		Manual	150/150/150/150	
		Mode	Auto	
	U132	Replenishing toner forcibly		
	U135	Checking toner motor operation	-	
	U136	Setting toner near end detection	3/3	
	U139	Displaying the temperature and humidity outside the machine	-	
	U140	Displaying developer bias		
		Sleeve DC	84/84/84/70/-	84/84/84/70/70
		Sleeve AC	155/155/155/155/-	155/155/155/155/155
		Mag DC	155/155/155/155/-	155/155/155/155/155
		Mag AC	160/200/200/200/-	160/200/200/200/160
		Sleeve Freq	5345/ -/ 5345/ 5345	5511/5345/5345/5345
		Sleeve Duty	68/-	68/68
		Mag Duty	43/-	43/43
		AC Calib	15/15/15/12 Mode1	
	U147	Setting for toner applying operation		
		Mode	Mode1	
		Upper Limit	2.0	
		Minimum	10	
		Interval Number	250/100/50	
	U148	Setting drum refresh mode	2/2	
	U155	Checking sensors for toner	-	
	U156	Setting the toner replenishment level		
		Supply	512/512/512/512/-	512/512/512/512/512
		Empty	100/100/100/100/-	100/100/100/100/100

Section	Item No.	Content of maintenance item	Initial setting	
			45ppm	55ppm
Developer	U157	Checking the developer drive time	-	
	U158	Checking the developer count	-	
Fuser	U161	Setting the fuser control temperature		
		Warm Up	165/140/80/170/165/150/50/155	170/145/80/175/175/150/50/160
		Print	170/5	175/5
		Low Power Mode	Mode1	
		Grain Mode	Mode0	
	U167	Checking/clearing the fuser count	-	
	U169	Checking/setting the fuser power source	-	
	U199	Displaying fuser heater temperature	-	
Operation panel and support equip-ment	U207	Checking the operation panel keys	-	
	U208	Setting the paper size for the side deck	Letter (Inch)/A4 (Metric)	
	U221	Setting the USB host lock function	Off	
	U223	Operation panel lock	Unlock	
	U234	Setting punch destination	Inch (Inch)/Europe Metric (Metric)	
	U237	Setting finisher stack quantity	0/0	
	U240	Checking the operation of the finisher	-	
	U241	Checking the operation of the switches of the finisher	-	
	U246	Setting the finisher		
		Finisher	0/0/0/0/0/0/0/0	
		Booklet	0/0/0/0/0/0/0/0/0	
	U247	Setting the paper feed device	-	
Mode setting	U250	Checking/clearing the maintenance cycle	600000/600000/300000	
	U251	Checking/clearing the maintenance counter	0/0/0	
	U252	Setting the destination	-	
	U253	Switching between double and single counts	DBL(A3/Ledger)	
	U260	Selecting the timing for print counting	Eject	
	U265	Setting OEM purchaser code	-	
	U271	Setting the page count	2/3	
	U278	Setting the delivery date	-	
	U285	Setting service status page	On	

Section	Item No.	Content of maintenance item	Initial setting	
			45ppm	55ppm
Mode setting	U323	Setting abnormal temperature and humidity warning	On	
	U325	Setting the paper interval	Off/1	
	U327	Setting the cassette heater control	Off	
	U332	Setting the size conversion factor		
		Rate	1.0	
		Mode	0	
		Level 1	1.0	
		Level 2	2.5	
	U340	Setting the applied mode	190/1	
	U345	Setting the value for maintenance due indication	0	
Image process-ing	U410	Setting a Gamma table	Table1	
	U460	Adjusting the conveying sensor		
		Conveying Sensor	0/0	
		On/Off Config	Off	
	U464	Setting the ID correction operation		
		Permission	On	
		Time Interval	480	
		Mode	Normal	
		On/Sleep Out	On	
		AP/NE	On	
		Leaving Time	480	
		Driving Time	300	
		Timing	3600	
		Target Value	890/910/910/760/320/320/300/350	
		Print Rate(B/W)	50	
		Calib	-	
		Edge Reduction	Off	
	U465	Data reference for ID correction	-	
	U467	Setting the color registration adjustment	-	
		Color Regist	On	
		Timing	10	
	U468	Checking the color registration data	-	
	U469	Adjusting the color registration	-	
	U474	Checking LSU cleaning operation	1000	
	U485	Setting the color table	-	

Section	Item No.	Content of maintenance item	Initial setting	
			45ppm	55ppm
Image process-ing	U486	Setting color/black and white operation mode	Mode2	
Others	U901	Checking print counts by paper feed locations	-	
	U903	Checking/clearing the paper jam counts	-	
	U904	Checking/clearing the call for service counts	-	
	U905	Checking counts by optional devices	-	
	U906	Resetting partial operation control	-	
	U908	Checking the total counter value	-	
	U910	Clearing the print coverage data	-	
	U911	Checking print counts by paper sizes	-	
	U917	Setting backup data reading/writing	-	
	U920	Checking the print counts	-	
	U927	Clearing the all print counts and machine life counts (one time only)	-	
	U928	Checking machine life counts	-	
	U930	Checking/clearing the charger roller count	-	
	U952	Maintenance mode workflow	-	
	U964	Checking of log	-	
	U969	Checking of toner area code	-	
	U977	Data capture mode	-	
	U984	Checking the developer unit number	-	
	U985	Displaying the developer unit history	-	
	U989	HDD Scan disk	-	

Contents of the maintenance mode items

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U000</td><td>
Outputting an own-status report

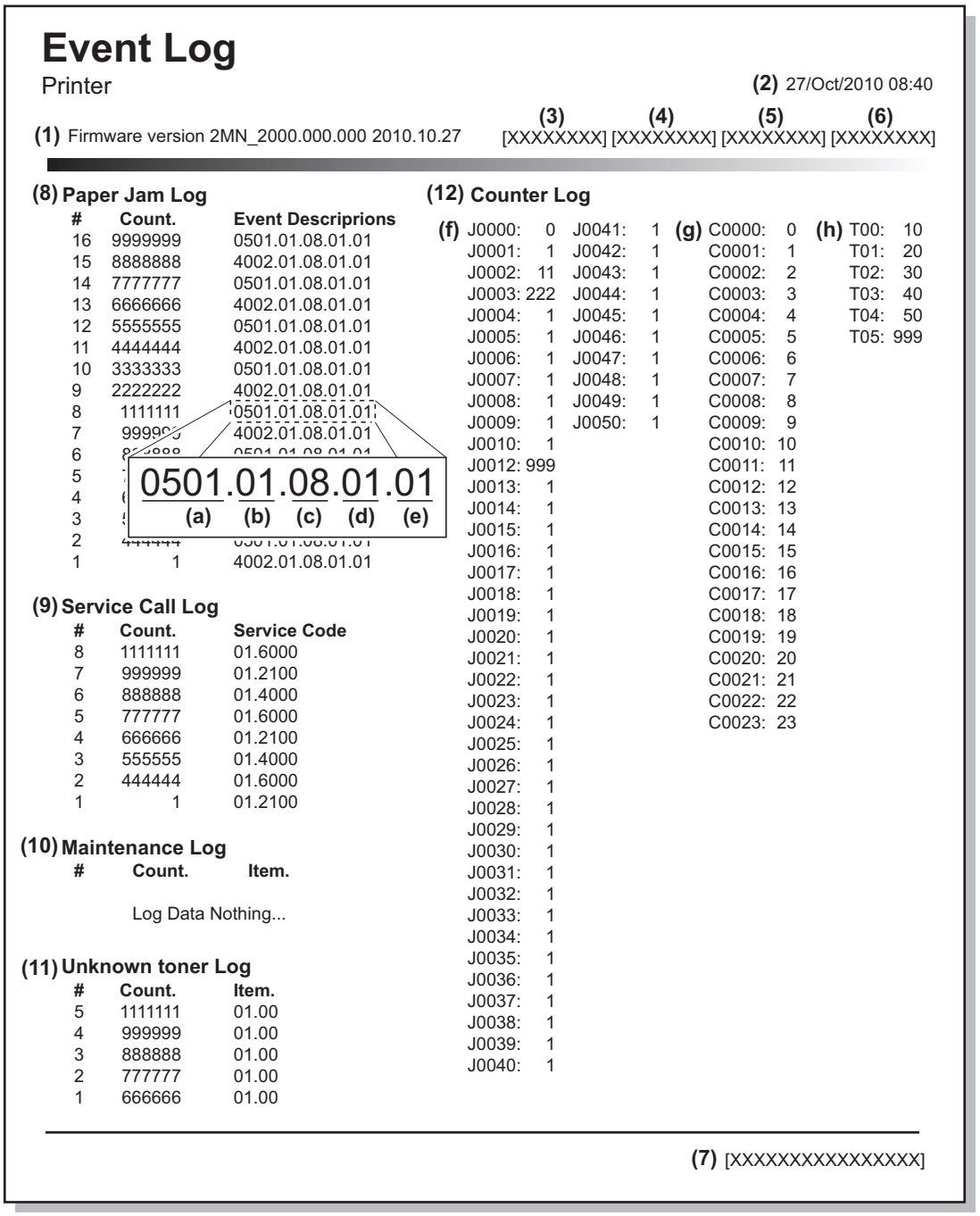
Description
Outputs lists of the current settings of the maintenance items, and paper jam and service call occurrences. Outputs the event log or service status page. Also sends output data to the USB memory.
Purpose
To check the current setting of the maintenance items, or paper jam or service call occurrences. Before initializing or replacing the backup RAM, output a list of the current settings of the maintenance items to reenter the settings after initialization or replacement.

Method
1. Press the OK key.
2. Select the item to be output using the cursor up/down keys.
<table>
<tr><th>Display</th><th>Output list</th></tr>
<tr><td>Maintenance</td><td>List of the current settings of the maintenance modes</td></tr>
<tr><td>User Status</td><td>Outputs the user status page</td></tr>
<tr><td>Service Status</td><td>Outputs the service status page</td></tr>
<tr><td>Event</td><td>Outputs the event log</td></tr>
<tr><td>Network Status</td><td>Outputs the network status page</td></tr>
<tr><td>All</td><td>Outputs the all reports</td></tr>
</table>
3. Press the OK key. A list is output.
4. Press the OK 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.
The output status is displayed.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>Ready</td><td>List of the current settings of the maintenance modes</td></tr>
<tr><td>Active</td><td>Outputs the user status page</td></tr>
<tr><td>Complete</td><td>Outputs the service status page</td></tr>
<tr><td>Error</td><td>Outputs the event log</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U000</td><td>
Method: Send to the USB memory
1. Perform shut-down on the operation panel, turn power off (see page p.1-2-19).
2. Insert USB memory in USB memory slot.
3. Turn the main power switch on.
4. Enter the maintenance item.
5. Press the OK key.
6. Select the item to be send.
7. Select [Text] or [HTML].
<table>
<tr><th>Display</th><th>Output list</th></tr>
<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>
</table>
8. Press the OK key.
Output will be sent to the USB memory.

Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
</table>

Item No.	Description
U000	**Event log**



Event Log

Printer

(2) 27/Oct/2010 08:40

(1) Firmware version 2MN_2000.000.000 2010.10.27 **(3)** [XXXXXXXX] **(4)** [XXXXXXXX] **(5)** [XXXXXXXX] **(6)** [XXXXXXXX]

(8) Paper Jam Log

#	Count.	Event Descriprions
16	9999999	0501.01.08.01.01
15	8888888	4002.01.08.01.01
14	7777777	0501.01.08.01.01
13	6666666	4002.01.08.01.01
12	5555555	0501.01.08.01.01
11	4444444	4002.01.08.01.01
10	3333333	0501.01.08.01.01
9	2222222	4002.01.08.01.01
8	1111111	0501.01.08.01.01
7	999999	4002.01.08.01.01
6	888888	0501.01.08.01.01
5	777777	
4	666666	
3	555555	
2	444444	
1	1	4002.01.08.01.01

0501.01.08.01.01
(a) (b) (c) (d) (e)

(9) Service Call Log

#	Count.	Service Code
8	1111111	01.6000
7	999999	01.2100
6	888888	01.4000
5	777777	01.6000
4	666666	01.2100
3	555555	01.4000
2	444444	01.6000
1	1	01.2100

(10) Maintenance Log

#	Count.	Item.

Log Data Nothing...

(11) Unknown toner Log

#	Count.	Item.
5	1111111	01.00
4	999999	01.00
3	888888	01.00
2	777777	01.00
1	666666	01.00

(12) Counter Log

(f)

J0000:	0	J0041:	1
J0001:	1	J0042:	1
J0002:	11	J0043:	1
J0003:	222	J0044:	1
J0004:	1	J0045:	1
J0005:	1	J0046:	1
J0006:	1	J0047:	1
J0007:	1	J0048:	1
J0008:	1	J0049:	1
J0009:	1	J0050:	1
J0010:	1		
J0012:	999		
J0013:	1		
J0014:	1		
J0015:	1		
J0016:	1		
J0017:	1		
J0018:	1		
J0019:	1		
J0020:	1		
J0021:	1		
J0022:	1		
J0023:	1		
J0024:	1		
J0025:	1		
J0026:	1		
J0027:	1		
J0028:	1		
J0029:	1		
J0030:	1		
J0031:	1		
J0032:	1		
J0033:	1		
J0034:	1		
J0035:	1		
J0036:	1		
J0037:	1		
J0038:	1		
J0039:	1		
J0040:	1		

(g)

C0000:	0
C0001:	1
C0002:	2
C0003:	3
C0004:	4
C0005:	5
C0006:	6
C0007:	7
C0008:	8
C0009:	9
C0010:	10
C0011:	11
C0012:	12
C0013:	13
C0014:	14
C0015:	15
C0016:	16
C0017:	17
C0018:	18
C0019:	19
C0020:	20
C0021:	21
C0022:	22
C0023:	23

(h)

T00:	10
T01:	20
T02:	30
T03:	40
T04:	50
T05:	999

(7) [XXXXXXXXXXXXXXXX]

Figure 1-3-1

Detail of event log

No.	Items	Description
(1)	System version	
(2)	System date	
(3)	Engine soft version	
(4)	Engine boot version	

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U000</td><td>Detail of event log
<table>
<tr><th>No.</th><th>Items</th><th colspan="3">Description</th></tr>
<tr><td>(5)</td><td colspan="4">Controller BROM version</td></tr>
<tr><td>(6)</td><td colspan="4">Operation panel mask version</td></tr>
<tr><td>(7)</td><td colspan="4">Machine serial number</td></tr>
<tr><td rowspan="11">(8)</td><td rowspan="11">Paper Jam Log</td><td>#</td><td>Count.</td><td>Event</td></tr>
<tr><td>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 excesseds 16, the oldest occurrence is removed.</td><td>The total page count at the time of the paper jam.</td><td>Log code (hexadecimal, 5 categories)

(a) Cause of a paper jam
(b) Paper source
(c) Paper size
(d) Paper type
(e) Paper eject</td></tr>
<tr><td colspan="3">(a) Cause of paper jam (Hexadecimal)</td></tr>
<tr><td colspan="3">For details on the case of paper jam, refer to Paper Misfeed Detection. (P.1-4-2)</td></tr>
<tr><td colspan="3">(b) Detail of paper source (Hexadecimal)</td></tr>
<tr><td colspan="3">00: MP tray
01: Cassette 1
02: Cassette 2
03: Cassette 3 (paper feeder/large capacity feeder)
04: Cassette 4 (paper feeder/large capacity feeder)
05: Cassette 5 (side multi tray/side deck)
06: Cassette 6 (side paper feeder/side large capacity feeder)
07: Cassette 7 (side paper feeder/side large capacity feeder)
08 to 09: Reserved</td></tr>
<tr><td colspan="3">(c) Detail of paper size (Hexadecimal)</td></tr>
<tr><td>00: (Not specified)
01: Monarch
02: Business
03: International DL
04: International C5
05: Executive
06: Letter-R
86: Letter-E
07: Legal
08: A4R
88: A4E
09: B5R
89: B5E
0A: A3</td><td>0B: B4
0C: Ledger
0D: A5R
0E: A6
0F: B6
10: Commercial #9
11: Commercial #6
12: ISO B5
13: Custom size
1E: C4
1F: Postcard
20: Reply-paid postcard
21: Oficio II</td><td>22: Special 1
23: Special 2
24: A3 wide
25: Ledger wide
26: Full bleed paper (12 x 8)
27: 8K
28: 16K-R
A8: 16K-E
32: Statement-R
B2: Statement-E
33: Folio
34: Western type 2
35: Western type 4</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U000</td><td>
<table>
<tr><th>No.</th><th>Items</th><th>Description</th></tr>
<tr><td>(8) cont.</td><td>Paper Jam Log</td><td>
(d) Detail of paper type (Hexadecimal)
<table>
<tr>
<td>01: Plain
02: Transparency
03: Preprinted
04: Labels
05: Bond
06: Recycled
07: Vellum
08: Rough
09: Letterhead</td>
<td>0A: Color
0B: Prepunched
0C: Envelope
0D: Cardstock
0E: Coated
0F: 2nd side
10: Media 16
11: High quality</td>
<td>15: Custom 1
16: Custom 2
17: Custom 3
18: Custom 4
19: Custom 5
1A: Custom 6
1B: Custom 7
1C: Custom 8</td>
</tr>
</table>
(e) Detail of paper eject location (Hexadecimal)
01: Face down (FD)
02: Face up (FU)/1000-sheet finisher face up (FU)/
4000-sheet finisher left sub tray (FU)
03: 1000-sheet finisher face down (FD)
4000-sheet finisher main tray (FD)
05: Job separator tray
06: 4000-sheet finisher right sub tray (FU)
07: 4000-sheet finisher left sub tray (FD)
09: 4000-sheet finisher right sub tray (FD)
0A: Center-folding unit tray
0B: Mailbox tray 1 (FD)
0C: Mailbox tray 1 (FU)
15: Mailbox tray 2 (FD)
16: Mailbox tray 2 (FU)
1F: Mailbox tray 3 (FD)
20: Mailbox tray 3 (FU)
29: Mailbox tray 4 (FD)
2A: Mailbox tray 4 (FU)
33: Mailbox tray 5 (FD)
34: Mailbox tray 5 (FU)
3D: Mailbox tray 6 (FD)
3E: Mailbox tray 6 (FU)
47: Mailbox tray 7 (FD)
48: Mailbox tray 7 (FU)
04/0D/0E: Reserved
</td></tr>
</table>
</td></tr>
</table>

Item No.	Description
U000	

No.	Items	Description		
(9)	Service Call Log	#	Count.	Service Code
		Remembers 1 to 8 of occurrence of self diagnostics error. If the occurrence of the previous diagnostics error is less than 8, all of the diagnostics errors are logged.	The total page count at the time of the self diagnostics error.	Self diagnostic error code (See page 1-4-27) Example: 01.6000 01: Self diagnostic error 6000: Self diagnostic error code number
(10)	Maintenance Log	#	Count.	Item
		Remembers 1 to 8 of occurrence of replacement. If the occurrence of the previous replacement of toner container is less than 8, all of the occurrences of replacement are logged.	The total page count at the time of the replacement of the toner container.	Code of maintenance replacing item (1 byte, 2 categories) First byte (Replacing item) 01: Toner container Second byte (Type of replacing item) 00: Black 01: Cyan 02: Magenta 03: Yellow First byte (Replacing item) 02: Maintenance kit Second byte (Type of replacing item) 01: MK-8505A 02: MK-8505B 03: MK-8505C
(11)	Unknown Toner Log	#	Count.	Item
		Remembers 1 to 5 of occurrence of unknown toner detection. If the occurrence of the previous unknown toner detection is less than 5, all of the unknown toner detection are logged.	The total page count at the time of the toner empty error with using an unknown toner container.	Unknown toner log code (1 byte, 2 categories) First byte 01: Toner container (Fixed) Second byte 00: Black 01: Cyan 02: Magenta 03: Yellow

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U000</td><td>
<table>
<tr><th>No.</th><th>Items</th><th colspan="3">Description</th></tr>
<tr><td rowspan="2">(12)</td><td rowspan="2">Counter Log

Comprised of three log counters including paper jams, self diagnostics errors, and replacement of the toner container.</td><td>(f) Paper jam</td><td>(g) Self diagnostic error</td><td>(h) Maintenance item replacing</td></tr>
<tr><td>Indicates the log counter of paper jams depending on location.

Refer to Paper Jam Log.

All instances including those are not occurred are displayed.</td><td>Indicates the log counter of self diagnostics errors depending on cause.

Example:
C6000: 4

Self diagnostics error 6000 has happened four times.</td><td>Indicates the log counter depending on the maintenance item for maintenance.

T: Toner container
00: Black
01: Cyan
02: Magenta
03: Yellow
M: Maintenance kit
00: MK-8505A
01: MK-8505B
02: MK-8505C

Example:
T00: 1
The toner container has been replaced once.</td></tr>
</table>
</td></tr>
</table>

Item No.	Description
U000	**Service status page (1)**

Service Status Page

Printer

(2) 27/10/2011 12:00

(1) Firmware version 2MN_2000.001.001 2011.10.27 **(3)** [XXXXXXXX] **(4)** [XXXXXXXX] **(5)** [XXXXXXXX]

Controller Information

Memory status

(7)	Standard Size	1.0 GB
(8)	Option Slot	1.0 GB
(9)	Total Size	2.0 GB

Time

(10)	Local Time Zone	+01:00 Amsterdam
(11)	Date and Time	27/10/2010 12:00
(12)	Time Server	10.183.53.13

Installed Options

(13)	Paper feeder	Cassette (500 x 2)
(14)	Side Feeder	Cassette (3000)
(15)	Finisher	1000-Finisher
(16)	IC Card Authentication Kit (B)	Installed
(17)	Security Kit (E)	Installed
	Data Security Kit (E)	
(18)	UG-33	Installed
(19)	UG-34	Installed
(20)	USB Keyboard	Connected
(21)	USB Keyboard Type	US-English

Print Coverage

(22)	Average(%)	/ Usage Page(A4/Letter Conversion)
(23)	K: 1.10	/ 1111111.11
	C: 2.20	/ 2222222.22
	M: 3.30	/ 3333333.33
	Y: 4.40	/ 4444444.44

e-MPS error control Y6 0

(24) Last Page K/C/M/Y(%) 1.00 / 2.22 / 3.33 / 4.44

(25) FRPO Status

Default Pattern Switch	B8	0
Default Font Number	C5*1000+C2*100+C3	00000

RP Code
(26) 1234 5678 9012
(27) 5678 9012 3456
(28) 9012 3456 7890
(29) 3456 7890 1234

1

(6) [XXXXXXXXXX]

Figure 1-3-2

Item No.	Description
U000	**Service status page (2)**

Service Status Page

Printer 27/10/2011 12:00

Firmware version 2MN_2000.001.001 2011.10.27 [XXXXXXXX] [XXXXXXXX] [XXXXXXXX]

Engine Information

(30) NVRAM Version _1F31225_1F31225
(31) MAC Address 00:C0:EE:D0:01:0D

Send Information

(32) Date and Time 11/10/27
(33) Address

1/2 **(34) (35)**
(36) 100/100
(37) 0/0/0/0/0/0/0/0
(38) 0000000/0000000/0000000/0000000/0000000/0000000/0000000/0000000/0000000/0000000/
0000000/0000000/0000000/0000000/0000000/0000000/0000000/0000000/0000000/0000000/0000000/0000000/
F00/U00/0/0/0/0/30/30/70/70/abcde/1/0/1/ **(39) (40) (41) (42) (43) (44) (45) (46) (47) (48) (49) (50) (51) (52)**
(53) 0000/0000/0000/0000/0000/0000/0000/0000/0000/0000/0000/0000/0000/0000/
0000/0000/0000/0000/0000/0000/0000/0000/0000/0000/
(54) 0000/0100/0500/1000/0000/0100/0500/1000/0000/0100/0500/1000/0000/0100/0500/1000/
0000/0100/0500/1000/0000/0100/0500/1000/0000/0100/0500/1000/0000/0100/0500/1000/
0000000000000000000000000000000/0000000000000000000000000000000000000000000/000000/ **(55) (56) (57)**
(58) 0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000/
0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000/
0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000/
0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000/
(59) 0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000/
0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000/
0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000/
0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000/
(60) 0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000/
0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000/
(61) 0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000/
0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000/
0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000/
0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000/
(62) 0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000/
0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000/
0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000/
0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000/
(63) 0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000000000/0000000000/
(64) 12345678/11223344/00001234abcd567800001234abcd5678/01234567890123456789012345678901/0008/00/07
12345678/11223344/00001234abcd567800001234abcd5678/01234567890123456789012345678901/0008/00/07
12345678/11223344/00001234abcd567800001234abcd5678/01234567890123456789012345678901/0008/00/07
12345678/11223344/00001234abcd567800001234abcd5678/01234567890123456789012345678901/0008/00/07
(65) XXXXXXXX
[2MN_81BR.001.010][ABCDEFGHIJ][ABCDEFGHIJ] **(66) (67) (68)**

(69) 00070107FE/0700FE00FE/00FE000100/0000000000/0000000000/0000000000/00000A010A/0A0A0A3200/0000000000/0000000000/
0008000000/080000001D/0096009B00/9B009BFFFB/0082000000/000000001F/0000002C00/0000000000/0000000000/0000000000/
0000000000/0000000000/0000000000/0000000000/00
0/3/ **(70) (71)**
0/12.3/56.7/ **(72) (73) (74)**
0/0 2010/12/15 12:34:56 **(75)**
1/5/ **(76)(77)**
1/1/ **(78)(79)**
ABCDEFGHIJKL/ABCDEFGHIJKL/ABCDEFGHIJKL/ABCDEFGHIJKL/ **(80)**

2 [XXXXXXXXXX]

Figure 1-3-3

Item No.	Description
U000	**Detail of service status page**

No.	Description	Supplement
(1)	Firmware version	-
(2)	System date	-
(3)	Engine soft version	-
(4)	Engine boot version	-
(5)	Operation panel mask version	-
(6)	Machine serial number	-
(7)	Standard memory size	-
(8)	Option memory size	
(9)	Total memory size	
(10)	Local time zone	-
(11)	Report output date	Day/Month/Year hour:minute
(12)	NTP server name	-
(13)	Presence or absence of the paper feeder	Paper feeder/Large capacity feeder/Not Installed
(14)	Presence or absence of the side feeder	Side deck/Side multi tray/Side paper feeder/ Side large capacity feeder/Not Installed
(15)	Presence or absence of the finisher	1000-sheet finisher/4000-sheet finisher/ Not Installed
(16)	Presence or absence of the IC card authentication kit	Installed/Not Installed/Trial
(17)	Presence or absence of the data security kit	Installed/Not Installed
(18)	Presence or absence of the UG-33	Installed/Not Installed
(19)	Presence or absence of the UG-34	Installed/Not Installed
(20)	Presence or absence of the USB keyboard	Connected/Not connected
(21)	USB keyboard setting display	US-English/US-English with Euro/German/French
(22)	Page of relation to the A4/Letter	-
(23)	Average coverage for total	Black/Cyan/Magenta/Yellow
(24)	Coverage on the final output page	-
(25)	FRPO setting	-
(26)	RP code	Code the engine software version and the date of update.
(27)	RP code	Code the main software version and the date of update.

Item No.	Description
U000	

No.	Description	Supplement
(28)	RP code	Code the engine software version and the date of the previous update.
(29)	RP code	Code the main software version and the date of the previous update.
(30)	NV RAM version	_ 1F3 1225 _ 1F3 1225 (a) (b) (c) (d) (e) (f) (a) Consistency of the present software version and the database _ (underscore): OK * (Asterisk): NG (b) Database version (c) The oldest time stamp of database version (d) Consistency of the present software version and the ME firmware version _ (underscore): OK * (Asterisk): NG (e) ME firmware version (f) The oldest time stamp of the ME database version Normal if (a) and (d) are underscored, and (b) and (e) are identical with (c) and (f).
(31)	Mac address	-
(32)	The last sent date and time	-
(33)	Transmission address	-
(34)	Destination information	-
(35)	Area information	-
(36)	Margin settings	Top margin/Left margin
(37)	Margin/Page length/Page width settings	Top margin integer part/Top margin decimal part/ Left margin integer part/Left margin decimal part/ Page length integer part/Page length decimal part/ Page width integer part/Page width decimal part
(38)	Life counter (The first line)	Machine life/MP tray/Cassette 1/Cassette 2/ Cassette 3/Cassette 4/Cassette 5/Cassette 6/ Cassette 7/Duplex
	Life counter (The second line)	Drum unit K/Drum unit C/Drum unit M/Drum unit Y/ Transfer belt unit/Developer unit K/ Developer unit C/Developer unit M/ Developer unit Y/Maintenance kit A/ Maintenance kit B/Maintenance kit C

Item No.	Description
U000	

No.	Description	Supplement
(39)	Panel lock information	F00: Off/F01: Partial lock 1/F02:Partial lock 2 F03: Partial lock 3/F04: Full lock
(40)	USB information	U00: Not installed/U01: Full speed/U02: Hi speed
(41)	Paper handling information	0: Paper source unit select/1: Paper source unit
(42)	Color printing double count mode	0: All single counts 1: A3, Single count, Less than 420 mm (length) 2: Legal, Single count, 356 mm or less (length) 3: Folio, Single count, Less than 330 mm (length)
(43)	Black and white printing double count mode	0: All single counts 1: A3, Single count, Less than 420 mm (length) 2: Legal, Single count, 356 mm or less (length) 3: Folio, Single count, Less than 330 mm (length)
(44)	Billing counting timing	-
(45)	Temperature (machine inside)	-
(46)	Temperature (machine outside)	-
(47)	Relative humidity (machine outside)	-
(48)	Humidity (machine inside)	-
(49)	Fixed assets number	-
(50)	Job end judgment time-out time	-
(51)	Job end detection mode	-
(52)	Prescribe environment reset	0: Off 1: On
(53)	Media type attributes 1 to 28 (Not used: 18, 19, 20)	Weight settings 0: Light 1: Normal 1 2: Normal 2 3: Normal 3 4: Heavy 1 5: Heavy 2 6: Heavy 3 6: Heavy 4 6: Heavy 5 7: Extra Heavy Fuser settings 0: High 1: Middle 2: Low 3: Vellum Duplex settings 0: Disable 1: Enable
(54)	Calibration information	Black/Cyan/Magenta/Yellow
(55)	Calibration information	-
(56)	Calibration information	-
(57)	Calibration information	-
(58)	Calibration information	-
(59)	Calibration information	-

Item No.	Description
U000	

No.	Description	Supplement
(60)	Calibration information	Black/Cyan/Magenta/Yellow
(61)	Calibration information	-
(62)	Calibration information	-
(63)	Calibration information	-
(64)	RFID information	-
(65)	RFID reader/writer version information	-
(66)	Option messege version	-
(67)	Color table version for printer	-
(68)	Color table 2 version for printer	-
(69)	Maintenance information	-
(70)	Altitude	0: Standard 1: High altitude 1 2: High altitude 2
(71)	Charger roller correction	1 to 5
(72)	Configuring toner coverage counters	0: Full-color count display 1: Color coverage count display
(73)	Low coverage setting	0.1 to 100.0
(74)	Middle coverage setting	0.1 to 100.0
(75)	Data Sanitization information	-
(76)	Toner low setting	0: Enabled 1: Disabled
(77)	Toner low detection level	0 to 100 (%)
(78)	Limiting shifting for one-page document	0: Disabled 1: Enabled
(79)	Setting confirmation display for banner printing	
(80)	Drum serial number	Black/Cyan/Magenta/Yellow
	Code conversion	

A	B	C	D	E	F	G	H	I	J
0	1	2	3	4	5	6	7	8	9

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U001</td><td>Exiting the maintenance mode

Description
Exits the maintenance mode and returns to the normal print mode.
Purpose
To exit the maintenance mode.

Method
1. Press the OK key. The normal print mode is entered.</td></tr>
<tr><td>U002</td><td>Setting the factory default data

Description
Restores the machine conditions to the factory default settings.
Purpose

Method
1. Press the OK key.
2. Select [Mode1(All)].
3. Press the OK key.
4. Exit the maintenance mode, perform shut-down, and turn the main power switch to off and on again. Allow more than 5 seconds between Off and On.
* : 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 U002.

Error codes
<table>
<tr><th>Codes</th><th>Description</th></tr>
<tr><td>0001</td><td>Entity error</td></tr>
<tr><td>0002</td><td>Counter error</td></tr>
<tr><td>0003</td><td>OS error</td></tr>
<tr><td>0020</td><td>Engine error</td></tr>
</table></td></tr>
</table>

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U004</td><td>
Setting the machine number

Description
Sets or displays the machine number.
Purpose
To check or set the machine number.

Method
1. Press the OK key.
If the machine serial number of engine PWB matches with that of main PWB
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>Machine No.</td><td>Displays the machine serial number</td></tr>
</table>
If the machine serial number of engine PWB does not match with that of main PWB
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>Machine No.(Main)</td><td>Displays the machine serial number of main</td></tr>
<tr><td>Machine No.(Eng)</td><td>Displays the machine serial number of engine</td></tr>
</table>
Setting
Carry out if the machine serial number does not match.
1. Select [Execute].
2. Press the OK key. Writing of serial No. starts.
3. Exit the maintenance mode, perform shut-down, and turn the main power switch to off and on again. Allow more than 5 seconds between Off and On.

Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
</table>

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U010</td><td>
Setting the maintenance mode ID

Description
Sets the maintenance mode ID.
Purpose
Modify maintenance mode ID for more security.

Method
1. Press the OK key.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>New ID</td><td>Enter a new 8-digit ID</td></tr>
<tr><td>New ID(Reconfirm)</td><td>Enter a new 8-digit ID (to confirm)</td></tr>
<tr><td>Initialize</td><td>Initialize the ID</td></tr>
</table>

Setting
1. Select [New ID].
2. Enter a new 8-digit ID on ten keys (0 – 9, *, #). * and # are mandatory to contain.
3. Select [New ID(Reconfirm)].
4. Enter a new 8-digit ID on ten keys (0 – 9, *, #).
5. Press the OK key. The setting is set.

Method: [Initialize]
1. Select [Initialize].
2. Press the OK key. ID is initialized.

Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
</table>

Item No.	Description
U019	**Displaying the ROM version** **Description** Displays the part number of the ROM fitted to each PWB. **Purpose** To check the part number or to decide, if the newest version of ROM is installed. **Method** 1. Press the OK key. The ROM version are displayed. 2. Change the screen using the cursor up/down keys.

Display	Description
Main	Main ROM
MMI	Operation ROM
Engine	Engine ROM
Engine Boot	Engine booting
RFID	RFID ROM
IH CPU	IH CPU ROM
IH CPU Boot	IH CPU booting
Motor CPU	Motor CPU ROM
Motor CPU Boot	Motor CPU booting
PDF Resource	PDF resource ROM
Option Language	Optional language ROM
Color Table1(Prn)	Color table 1 (printer) ROM
Color Table2(Prn)	Color table 2 (printer) ROM
PF1	Paper feeder / Large capacity feeder ROM
PF1 Boot	Paper feeder / Large capacity feeder booting
Side PF	Side multi tray /Side deck ROM
Side PF Boot	Side multi tray /Side deck booting
SMT SSW	Side multi tray multi feed sensor
PF2	Side paper feeder / Side large capacity feeder ROM
PF2 Boot	Side paper feeder / Side large capacity feeder booting
DF	1000-sheet finisher / 4000-sheet finisher ROM
DF Boot	1000-sheet finisher / 4000-sheet finisher booting
PH	Punch ROM
PH Boot	Punch booting
MT	Mail box ROM
MT Boot	Mail box booting
BF	Center-folding unit ROM
BF Boot	Center-folding unit booting

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U019</td><td>Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.</td></tr>
<tr><td>U021</td><td>Memory initializing

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.
Purpose
Restores the machine parameters to factory default settings.

Method
1. Press the OK key.
2. Select [Execute].
3. Press the OK key. All data other than that for adjustments due to variations between machines is initialized based on the destination setting.
4. Exit the maintenance mode, perform shut-down, and turn the main power switch to off and on again. Allow more than 5 seconds between Off and On.
* : 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.

Error codes
<table><tr><th>Codes</th><th>Description</th></tr><tr><td>0001</td><td>Entity error</td></tr><tr><td>0002</td><td>Counter error</td></tr><tr><td>0020</td><td>Engine error</td></tr></table></td></tr>
</table>

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U024</td><td>
HDD formatting

Description
Initializes the hard disk.
Purpose
To initialize the hard disk when replacing the hard disk after shipping.
Caution
In addition, the following settings are also initialized by initializing the hard disk.
System menu (user login administration, job accounting and document box etc.)
When fully formatted, the following pre-installed software are removed.
Option language, PDF1.7 resource

Method
1. Press the OK key.
2. Select the item.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>Full</td><td>Full format</td></tr>
<tr><td>Data</td><td>Data format (the application software are retained)</td></tr>
</table>
3. Press [Execute].
4. Press the OK key to initialize the hard disk.
5. Exit the maintenance mode, perform shut-down, and turn the main power switch to off and on again. Allow more than 5 seconds between Off and On.
</td></tr>
</table>

Item No.	Description
U030	**Checking the operation of the motors** **Description** Drives each motor. **Purpose** To check the operation of each motor. **Method** 1. Press the OK key. 2. Select the motor to be operated. 3. Press the OK key. The operation starts.

Display	Description
Feed	Paper feed motor (PFM) is turned on
DLP(K)	Developer motor K (DEVM-K) is turned on
DLP(CMY)	Developer motor MCY (DEVM-MCY) is turned on
Fuser	Fuser motor (FUM) is turned on
SB(CW)	Eject motor (EM) is turned on clockwise
SB(CCW)	Eject motor (EM) is turned on counterclockwise
CMY Release	Color release motor (CRM) is turned on
JobSepa	JS eject motor (JSEM) is turned on
Regist	Registration motor (RM) is turned on
Bridge1	BR conveying motor 1 (BRCM1) is turned on
Bridge2	BR conveying motor 2 (BRCM2) is turned on
Belt Meand	Transfer motor (TRM) is turned on
Press Release	Transfer release motor (TRRM) is turned on
Fuser Release	Fuser release motor (FURM) is turned on
DU1	Duplex motor 1 (DUM1) is turned on
DU2	Duplex motor 2 (DUM2) is turned on
Mid Roller	Middle motor (RM) is turned on
InnerJobSepa(CW)	JS conveying motor (JSCM) is turned on clockwise
InnerJobSepa(CCW)	JS conveying motor (JSCM) is turned on counterclock-wise

4. To stop operation, press the Back key.

Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.

Item No.	Description
U031	**Checking switches and sensors for paper conveying** **Description** Displays the on-off status of each paper detection switch or sensor on the paper path. **Purpose** To check if the switches and sensors for paper conveying operate correctly. **Method** 1. Press the OK key. 2. Turn each switch or sensor on and off manually to check the status. When a switch/sensor is detected to be in the ON position, the display for that switch/sensor will be “1”.

Display		Description
Switch 1	0 0 0 0 0 0 0	
	1	First digit: MP feed sensor (MPFS)
	1	Second digit: Feed sensor 1 (FS1)
	1	Third digit: Feed sensor 2 (FS2)
	1	Fourth digit: Paper conveying sensor (PCS)
	1	Fifth: Registration sensor (RS)
	1	Sixth: Loop sensor (LPS)
	1	Seventh: Switchback sensor (SBS)
Switch 2	0 0 0 0 0 0 0	
	1	First digit: Duplex sensor 1 (DUS1)
	1	Second digit: Duplex sensor 2 (DUS2)
	1	Third digit: BR conveying sensor 1 (BRCS1)
	1	Fourth digit: BR conveying sensor 2 (BRCS2)
	1	Fifth: BR eject sensor (BRES)
	1	Sixth: Eject full sensor (EFS)
	1	Seventh: Fuser eject sensor (FUES)
Switch 3	0 0 0 0 0 0 0	
	1	First digit: Middle sensor (MS)
	1	Second digit: JS eject sensor (JSES)
	1	Fourth digit: Third digit: Regist deflection sensor (RDS)
	1	Fifth: Tray full sensor(JSTFS)
	1	Sixth: Eject sensor (ES)

Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.

Item No.	Description
U032	**Checking the operation of the clutches** **Description** Turns each clutch on. **Purpose** To check the operation of each clutch. **Method** 1. Press the OK key. 2. Select [Motor On] or [Motor Off]. 3. Press the OK key. 4. Select the clutch to be operated. 5. Press the OK key. The operation starts. 6. To stop operation, press the Back key. **Completion** Press the Back key. The screen for selecting a maintenance item No. is displayed.

Display	Description
Motor On	Motor is turned on
Motor Off	Motor is turned off

Display	Description
Feed1	Paper feed clutch 1 (PFCL1) is turned on
Feed2	Paper feed clutch 2 (PFCL2) is turned on
MPT Feed	MP paper feed clutch (MPPFCL) is turned on
Feed	Paper conveying clutch (PCCL) is turned on
Assist1	Assist clutch 1 (ASCL1) is turned on
Assist2	Assist clutch 2 (ASCL2) is turned on

Item No.	Description
U033	**Checking the operation of the solenoids** **Description** Turns each solenoid on. **Purpose** To check the operation of each solenoid. **Method** 1. Press the OK key. 2. Select [Motor On] or [Motor Off].

Display	Description
Motor On	Motor is turned on
Motor Off	Motor is turned off

1. Press the OK key.
2. Select the solenoid to be operated.z
3. Press the OK key. The operation starts.

Display	Description
Branch Left	Feedshift solenoid (FSSOL) is turned on
Branch Exit	Feedshift solenoid is turned on
JobSepa	JS feedshift solenoid (JSFSSOL) is turned on
ID Clean	Cleaning solenoid (CLSOL) is turned on
Bridge Solenoid	Bridge solenoid is turned on
Mail box	Mail box solenoid is turned on

4. To stop operation, press the Back key.

Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U034</td><td>
Adjusting the print start timing

Description
Adjusts the leading edge registration or aligns the center line.
Purpose
Make the adjustment if there is a regular error between the leading edges of the print image.
Make the adjustment if there is a regular error between the center lines of the print image.

Method
1. Press the OK key.
2. Select the item to be adjusted.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>LSU Out Top</td><td>Leading edge registration adjustment</td></tr>
<tr><td>LSU Out Left</td><td>Center line adjustment</td></tr>
<tr><td>LSU Out Top B/W*</td><td>Leading edge registration adjustment in black/white mode</td></tr>
<tr><td>LSU Out Top 3/4</td><td>Leading edge registration adjustment at 3/4 times of line speed</td></tr>
</table>
*: 55 ppm model only.
</td></tr>
</table>

Item No.	Description
U034	**Adjustment: Leading edge registration adjustment** 1. Press the menu key. 2. Press the OK key to output a test pattern. 3. Select the item to be adjusted. [LSU Out Top]

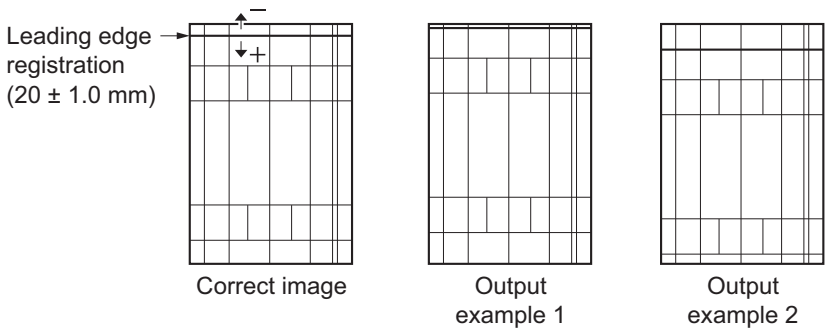
Display	Description	Setting range	Initial setting	Change in value per step
MPT(L)	Paper feed from MP tray	-3.0 to 3.0	0	0.1 mm
MPT Half(L)	Paper feed from MP tray	-3.0 to 3.0	0	0.1 mm
Cass(L)	Paper feed from cassette	-3.0 to 3.0	0	0.1 mm
Cass Half(L)	Paper feed from cassette	-3.0 to 3.0	0	0.1 mm
Dup(L)	Duplex mode (second)	-3.0 to 3.0	0	0.1 mm
Dup Half(L)	Duplex mode (second)	-3.0 to 3.0	0	0.1 mm
MPT(S)	Paper feed from MP tray	-3.0 to 3.0	0	0.1 mm
MPT Half(S)	Paper feed from MP tray	-3.0 to 3.0	0	0.1 mm
Cass(S)	Paper feed from cassette	-3.0 to 3.0	0	0.1 mm
Cass Half(S)	Paper feed from cassette	-3.0 to 3.0	0	0.1 mm
Dup(S)	Duplex mode (second)	-3.0 to 3.0	0	0.1 mm
Dup Half(S)	Duplex mode (second)	-3.0 to 3.0	0	0.1 mm

(L): When large size paper is used (218 mm or more in width of paper).
(S): When small size paper is used.

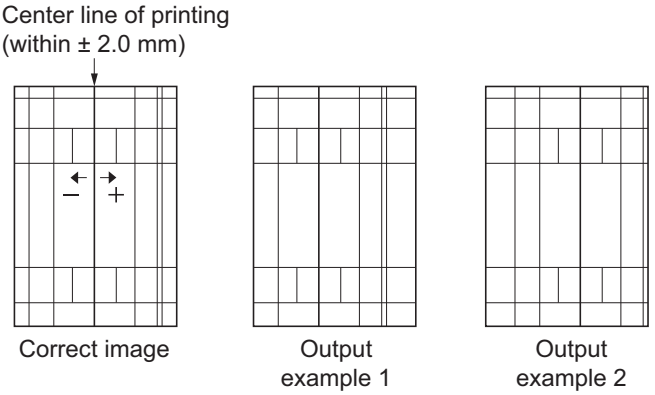
[LSU Out Top B/W] [LSU Out Top 3/4]

Display	Description	Setting range	Initial setting	Change in value per step
MPT(L)	Paper feed from MP tray	-3.0 to 3.0	0	0.1 mm
Cass(L)	Paper feed from cassette	-3.0 to 3.0	0	0.1 mm
Dup(L)	Duplex mode (second)	-3.0 to 3.0	0	0.1 mm
MPT(S)	Paper feed from MP tray	-3.0 to 3.0	0	0.1 mm
Cass(S)	Paper feed from cassette	-3.0 to 3.0	0	0.1 mm
Dup(S)	Duplex mode (second)	-3.0 to 3.0	0	0.1 mm

(L): When large size paper is used (218 mm or more in width of paper).
(S): When small size paper is used.

Item No.	Description
U034	4. Change the setting value using the numeric keys. * : Use the cursor keys to change the decimal digits. For output example 1, increase the value. For output example 2, decrease the value.  **Figure 1-3-4** 5. Press the OK key. The value is set. **Remark** When changing the setting value of [Large] each item is modified, equal to amount of the value which is changed adds also the value of [Small] each item and is pulled. **Adjustment: Center line adjustment** 1. Press the menu key. 2. Press the OK key to output a test pattern. 3. Press the menu key. 4. Select the item to be adjusted. [LSU Out Left]

Display	Description	Setting range	Initial setting	Change in value per step
MPT	Paper feed from MP tray	-3.0 to 3.0	0	0.1 mm
Cass1	Paper feed from cassette 1	-3.0 to 3.0	0	0.1 mm
Cass2	Paper feed from cassette 2	-3.0 to 3.0	0	0.1 mm
Cass3	Paper feed from optional cassette 3	-3.0 to 3.0	0	0.1 mm
Cass4	Paper feed from optional cassette 4	-3.0 to 3.0	0	0.1 mm
Cass5	Paper feed from optional cassette 5	-3.0 to 3.0	0	0.1 mm
Cass6	Paper feed from optional cassette 6	-3.0 to 3.0	0	0.1 mm
Cass7	Paper feed from optional cassette 7	-3.0 to 3.0	0	0.1 mm
Dup	Duplex mode (second)	-3.0 to 3.0	0	0.1 mm

Item No.	Description
U034	5. Change the setting value using the numeric keys. For output example 1, increase the value. For output example 2, decrease the value.  **Figure 1-3-5** 6. Press the OK key. The value is set. **Completion** Press the Back key. The screen for selecting a maintenance item No. is displayed.

Item No.	Description
U037	**Checking the operation of the fan motors** **Description** Drives each fan motor. **Purpose** To check the operation of each fan motor. **Method** 1. Press the OK key. 2. Select the fan motor to be operated. 3. Press the OK key. The operation starts.

Display	Description	Group
Fuser Cooling	Fuser rear fan motor (FURFM) is turned on	B
DLP Rear	Exhaust motor 1and 2 (EXFM1, 2) is turned on	A
LSU Cooling	LSU fan motor (LSUFM) is turned on	B
Belt Cooling	Belt fan motor 1and 2 (BLFM1, 2) is turned on	A
Exit Cooling	Eject front fan motor (EFFM) is turned on	B
Toner	Toner fan motor 1and 2 (TFM1, 2) is turned on	A
Low Volt	Power source fan motor (PSFM) is turned on	A
Exit Rear Cooling	Eject rear fan motor (EFRM) is turned on	B
IH PWB	IH fan motor (IHFM) is turned on	A
IH Coil	Fuser front fan motor (FUFFM) is turned on	A
DLP Front	Developer fan motor 1and 2 (DEVFM1, 2) is turned on	A
Conv Edge	Fuser fan motor 1and 2 (FUFM1, 2) is turned on	A
Fuser Edge	Fuser edge fan motor 1and 2 (FUEFM1, 2) is turned on	-
GroupA	Fan motors of group A are turned on	
GroupB	Fan motors of group B are turned on	

4. To stop operation, press the Back key.

Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.

Item No.	Description
U051	**Adjusting the deflection in the paper** **Description** Adjusts the deflection in the paper at the registration roller. **Purpose** Make the adjustment if the leading edge of the print image is missing or varies randomly, or if the print paper is Z-folded. **Method** 1. Press the OK key. 2. Select the item to be adjusted.

Display	Description
Loop Amount	Deflection adjustment
Loop Amount B/W*	Deflection adjustment in black and white mode
Loop Amount 3/4	Deflection adjustment at 3/4 times of line speed

*: 55 ppm model only.

Adjustment

1. Select the item to be adjusted.
   [Paper Loop Amount]

Display	Description	Setting range	Initial setting	
			45ppm	55ppm
MPT(L)	Paper feed from MP tray	-30 to 20	-5	-7
MPT H(L)	Paper feed from MP tray	-30 to 20	0	-1
Cass(L)	Paper feed from cassette	-30 to 20	-5	-7
Cass H(L)	Paper feed from cassette	-30 to 20	0	-1
Dup(L)	Duplex mode (second)	-30 to 20	-5	-7
Dup H(L)	Duplex mode (second)	-30 to 20	0	-1
MPT(S)	Paper feed from MP tray	-30 to 20	-5	-7
MPT H(S)	Paper feed from MP tray	-30 to 20	0	-1
Cass(S)	Paper feed from cassette	-30 to 20	-6	-8
Cass H(S)	Paper feed from cassette	-30 to 20	-1	-2
Dup(S)	Duplex mode (second)	-30 to 20	-5	-7
Dup H(S)	Duplex mode (second)	-30 to 20	0	-1

Change in value per step: 1.0 mm
(L): When large size paper is used (218 mm or more in width of paper).
(S): When small size paper is used.

Item No.	Description
U051	[LSU Out Top B/W]

Display	Description	Setting range	Initial setting	
			45ppm	55ppm
MPT(L)	Paper feed from MP tray	-30 to 20	-	-8
Cass(L)	Paper feed from cassette	-30 to 20	-	-8
Dup(L)	Duplex mode (second)	-30 to 20	-	-8
MPT(S)	Paper feed from MP tray	-30 to 20	-	-8
Cass(S)	Paper feed from cassette	-30 to 20	-	-8
Dup(S)	Duplex mode (second)	-30 to 20	-	-8

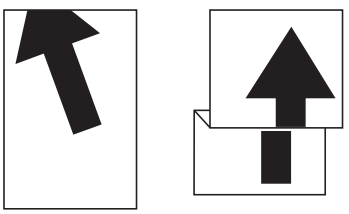
Change in value per step: 1.0 mm
(L): When large size paper is used (218 mm or more in width of paper).
(S): When small size paper is used.

[LSU Out Top 3/4]

Display	Description	Setting range	Initial setting	
			45ppm	55ppm
MPT(L)	Paper feed from MP tray	-30 to 20	-2	-2
Cass(L)	Paper feed from cassette	-30 to 20	-2	-2
Dup(L)	Duplex mode (second)	-30 to 20	-2	-2
MPT(S)	Paper feed from MP tray	-30 to 20	-2	-2
Cass(S)	Paper feed from cassette	-30 to 20	-3	-3
Dup(S)	Duplex mode (second)	-30 to 20	-2	-2

Change in value per step: 1.0 mm
(L): When large size paper is used (218 mm or more in width of paper).
(S): When small size paper is used.

2. Change the setting value using the 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.



Print example 1 Print example 2

Figure 1-3-6

3. Press the OK key. The value is set.

Completion
Press the Back key. The indication for selecting a maintenance item No. appears.

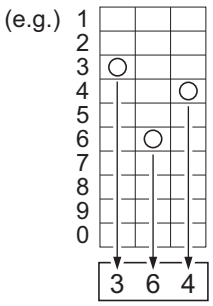
Item No.	Description
U052	**Setting the fuser motor control** **Description** Enters the sensor data values described on the supplied sheet provided when the loop sensor is replaced and performs correction processing for the fuser motor. **Purpose** To perform when replacing the loop sensor or paper conveying unit. **Method** 1. Press the OK key. 2. Select the item.

Display	Description
Set Loop S	Enter the data value for loop sensor
Adj Loop S	Perform the adjustment of the loop sensor sensitivity
Loop S Control	Set the loop sensor detection control
Set Loop S Valid	Sets the presence or absence of the loop sensor
Chk Loop S	Display the data value for loop sensor

Method: [Set Loop Sensor]

1. Select [Scanning Board1].
2. Enter the sensor data value of supplied sheet DATA1 using the numeric keys.
3. Select [Scanning Board2].
4. Enter the sensor data value of supplied sheet DATA2 using the numeric keys.
5. Press the OK key. The value is set.

How to read the sensor data value



Setting: [Loop Sensor Control]

1. Select the item.
2. Change the setting value using the numeric keys.

Display	Description
ScanBoard1	Scanning Board1 adjustment
ScanBoard2	Scanning Board2 adjustment

3. Press the OK key. The setting is set.

Item No.	Description

Setting: [Loop Sensor Control]

1. Select the item.
2. Select On or Off.

Display	Description	Initial setting
No.1	Sensor detection On/Off setting at 125 to 250 mm from the top of paper	On
No.2	Sensor detection On/Off setting at 250 to 290 mm from the top of paper	On
No.3	Sensor detection On/Off setting at 300 to 330 mm from the top of paper	On
No.4	Sensor detection On/Off setting at 350 to 370 mm from the top of paper	On

3. Press the OK key. The setting is set.

Setting: [Set Loop Sensor Valid]

1. Select On or Off.
   Initial setting: On
2. Press the OK key. The setting is set.

Completion

Press the Back key. The indication for selecting a maintenance item No. appears.

Item No.	Description
U053	**Setting the adjustment of the motor speed** **Description** Performs fine adjustment of the speeds of the motors. **Purpose** Basically, the setting need not be changed. Modify settings by interlock setting only if faulty images occur. **Method** 1. Press the OK key. 2. Select the item to be adjusted 3. Press the OK key.

Display	Description
Motor1	Adjustment of drum motor K speeds
Motor2	Adjustment of developer motor K, developer motor MCY, transfer motor, registration motor and transfer cleaning motor speeds
Motor3	Adjustment of eject motor, fuser motor, BR conveying motor 1/2, paper feed motor, JS eject motor, middle motor and duplex motor 1/2 speeds
Motor4	Drum motor K speed adjustment in black/white mode
Motor5*	Adjustment of developer motor K, transfer motor, registration motor and transfer cleaning motor speeds in black/white mode
Motor6*	Adjustment of eject motor, fuser motor, BR conveying motor 1/2, paper feed motor, JS eject motor, middle motor and duplex motor 1/2 speeds in black/white mode
Motor1 Half	Adjustment of drum motor K speeds in half speed
Motor2 Half	Adjustment of developer motor K, developer motor MCY, transfer motor, registration motor and transfer cleaning motor speeds in half speed
Motor3 Half	Adjustment of eject motor, fuser motor, BR conveying motor 1/2, paper feed motor, JS eject motor, middle motor and duplex motor 1/2 speeds in half speed
Motor1 3/4	Adjustment of drum motor K speeds at 3/4 times of line speed
Motor2 3/4	Adjustment of developer motor K, developer motor MCY, transfer motor, registration motor and transfer cleaning motor speeds at 3/4 times of line speed
Motor3 3/4	Adjustment of eject motor, fuser motor, BR conveying motor 1/2, paper feed motor, JS eject motor, middle motor and duplex motor 1/2 speeds at 3/4 times of line speed

*: 55 ppm model only.

Setting: [Motor1]

1. Select the item to be adjusted.

Display	Description	Setting range	Initial setting	
			45ppm	55ppm
Drum(K)	Drum motor K (DRM-K)	-5000 to 5000	12	11

Item No.	Description
U053	**Setting: [Motor2]** 1. Select the item to be adjusted.

Display	Description	Setting range	Initial setting	
			45ppm	55ppm
Dev(K)	Developer motor K (DEVM-K)	-5000 to 5000	0	0
Dev(CMY)	Developer motor MCY (DEVM-MCY)	-5000 to 5000	0	0
Trans	Transfer motor (TRM)	-5000 to 5000	0	0
Regist	Registration motor (RM)	-5000 to 5000	17	15
Clean	Transfer cleaning motor (TRCM)	-5000 to 5000	0	0

Setting: [Motor3]

1. Select the item to be adjusted.

Display	Description	Setting range	Initial setting	
			45ppm	55ppm
SB	Eject motor (EM)	-5000 to 5000	27	-18
Fixing	Fuser motor (FUM)	-5000 to 5000	0	0
Brg1	BR conveying motor 1 (BRCM1)	-5000 to 5000	-30	-27
Brg2	BR conveying motor 2 (BRCM2)	-5000 to 5000	-30	-27
Feed	Paper feed motor (PFM)	-5000 to 5000	82	73
JobSepa	JS eject motor (JSEM)	-5000 to 5000	0	0
Mid	Middle motor (MM)	-5000 to 5000	18	16
DU1	Duplex motor 1 (DUM1)	-5000 to 5000	-30	-27
DU2	Duplex motor 2 (DUM2)	-5000 to 5000	-30	-27
Brg1 DF H	BR conveying motor 1 (BRCM1)	-5000 to 5000	0	0
Brg1 DF L	BR conveying motor 1 (BRCM1)	-5000 to 5000	0	0
Brg2 DF H	BR conveying motor 2 (BRCM2)	-5000 to 5000	0	0
Brg2 DF L	BR conveying motor 2 (BRCM2)	-5000 to 5000	0	0

Item No.	Description
U053	**Setting: [Motor4]** 1. Select the item to be adjusted.

Display	Description	Setting range	Initial setting	
			45ppm	55ppm
Drum B/W K	Drum motor K (DRM-K) in black/white mode	-5000 to 5000	-	25
Drum-Mono K	Drum motor K (DRM-K) in monochrome mode	-5000 to 5000	28	22

*: 55 ppm model only.

Setting: [Motor5]:55 ppm model only
1. Select the item to be adjusted.

Display	Description	Setting range	Initial setting
Dev B/W(K)	Developer motor K (DEVM-K) in black/white mode	-5000 to 5000	0
Trans B/W	Transfer motor (TRM) in black/white mode	-5000 to 5000	0
Regist B/W	Registration motor (RM) in black/white mode	-5000 to 5000	14
Clean B/W	Transfer cleaning motor (TRCM) in black/white mode	-5000 to 5000	0

Setting: [Motor6]:55 ppm model only
1. Select the item to be adjusted.

Display	Description	Setting range	Initial setting
SB B/W	Eject motor (EM) in black/white mode	-5000 to 5000	-16
Fixing B/W	Fuser motor (FUM) in black/white mode	-5000 to 5000	0
Brg1 B/W	BR conveying motor 1 (BRCM1) in black/white mode	-5000 to 5000	-25
Brg2 B/W	BR conveying motor 2 (BRCM2) in black/white mode	-5000 to 5000	-25
Feed B/W	Paper feed motor (PFM) in black/white mode	-5000 to 5000	66
JobSepaB/W	JS eject motor (JSEM) in black/white mode	-5000 to 5000	0
Mid B/W	Middle motor (MM) in black/white mode	-5000 to 5000	15
DU1 B/W	Duplex motor 1 (DUM1) in black/white mode	-5000 to 5000	-24
DU2 B/W	Duplex motor 2 (DUM2) in black/white mode	-5000 to 5000	-24

Item No.	Description
U053	**Setting: [Motor1 Half]** 1. Select the item to be adjusted.

Display	Description	Setting range	Initial setting
Drum(K)	Drum motor K (DRM-K) in half speed	-5000 to 5000	0

Setting: [Motor2 Half]

1. Select the item to be adjusted.

Display	Description	Setting range	Initial setting	
			45ppm	55ppm
Dev(K)	Developer motor K (DEVM-K) in half speed	-5000 to 5000	0	0
Dev(CMY)	Developer motor MCY (DEVM-MCY) in half speed	-5000 to 5000	0	0
Trans	Transfer motor (TRM) in half speed	-5000 to 5000	0	0
Regist	Registration motor (RM) in half speed	-5000 to 5000	34	30
Clean	Transfer cleaning motor (TRCM) in half speed	-5000 to 5000	0	0

Setting: [Motor3 Half]

Select the item to be adjusted.

Display	Description	Setting range	Initial setting	
			45ppm	55ppm
SB	Eject motor (EM) in half speed	-5000 to 5000	54	-36
Fixing	Fuser motor (FUM) in half speed	-5000 to 5000	0	0
Brg1	BR conveying motor 1 (BRCM1) in half speed	-5000 to 5000	-43	-38
Brdg2	BR conveying motor 2 (BRCM2) in half speed	-5000 to 5000	-43	-38
Feed	Paper feed motor (PFM) in half speed	-5000 to 5000	164	147
JobSepa	JS eject motor (JSEM) in half speed	-5000 to 5000	0	0
Mid	Middle motor (MM) in half speed	-5000 to 5000	36	32

Item No.	Description
U053	

Display	Description	Setting range	Initial setting	
			45ppm	55ppm
DU1	Duplex motor 1 (DUM1) in half speed	-5000 to 5000	-60	-54
DU2	Duplex motor 2 (DUM2) in half speed	-5000 to 5000	-60	-54

Setting: [Motor1 3/4]

1. Select the item to be adjusted.

Display	Description	Setting range	Initial setting
Drum(K)	Drum motor K (DRM-K) at 3/4 times of line speed	-5000 to 5000	0

Setting: [Motor2 3/4]

Select the item to be adjusted.

Display	Description	Setting range	Initial setting
Dev(K)	Developer motor K (DEVM-K) at 3/4 times of line speed	-5000 to 5000	0
Dev(CMY)	Developer motor MCY (DEVM-MCY) at 3/4 times of line speed	-5000 to 5000	0
Trans	Transfer motor (TRM) at 3/4 times of line speed	-5000 to 5000	0
Regist	Registration motor (RM) at 3/4 times of line speed	-5000 to 5000	22
Clean	Transfer cleaning motor (TRCM) at 3/4 times of line speed	-5000 to 5000	0

Item No.	Description
U053	**Setting: [Motor3 3/4]** 1. Select the item to be adjusted.

Display	Description	Setting range	Initial setting	
			45ppm	55ppm
SB	Eject motor (EM) at 3/4 times of line speed	-5000 to 5000	35	-26
Fixing	Fuser motor (FUM) at 3/4 times of line speed	-5000 to 5000	0	0
Brg1	BR conveying motor 1 (BRCM1) at 3/4 times of line speed	-5000 to 5000	-39	-39
Brg2	BR conveying motor 2 (BRCM2) at 3/4 times of line speed	-5000 to 5000	-39	-39
Feed	Paper feed motor (PFM) at 3/4 times of line speed	-5000 to 5000	106	106
JobSepa	JS eject motor (JSEM) at 3/4 times of line speed	-5000 to 5000	0	0
Mid	Middle motor (MM) at 3/4 times of line speed	-5000 to 5000	23	23
DU1	Duplex motor 1 (DUM1) at 3/4 times of line speed	-5000 to 5000	-39	-39
DU2	Duplex motor 2 (DUM2) at 3/4 times of line speed	-5000 to 5000	-39	-39

Completion

Press the Back key. The indication for selecting a maintenance item No. appears.

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U059</td><td>

Setting fan mode

Description
Specifies mode for developer fan motors.
Purpose
Handling the lowering density [to suppress thermal stresses owing to the heated toner]

Method
1. Press the OK key.
2. Select the mode.

<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>Fan</td><td>Sets threshold temperature at which developer fan motors operate.</td></tr>
<tr><td>Cooling</td><td>Sets temperature at which the developer fan motors are switched for controlling.</td></tr>
</table>

Setting: [Fan]
1. Select the mode.

<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>Mode1</td><td>Setting temperature:Normal</td></tr>
<tr><td>Mode2</td><td>Setting temperature:Temperature threshold is raised from mode1 (WUP, temperature at READY : mode1 temperature -7(°C), Temperature at PRINT : mode1 temperature -3(°C).)</td></tr>
<tr><td>Mode3</td><td>Setting temperature:Temperature threshold is raised from mode2 (WUP, temperature at READY : mode1 temperature -22(°C), Temperature at PRINT : mode1 temperature -8(°C).)</td></tr>
<tr><td>Auto</td><td>Starting with Mode 2 at power up or recovery from sleep mode, and switches to Mode 3 when the termistor detects a developer temperature BK is equal to or higher than 38°C. The device never reverts from mode 2 from mode 3 while power is on.</td></tr>
</table>

Initial setting: Mode1
2. Press the OK key. The setting is set.

Setting: [Cooling]
1. Change the setting value using the numeric keys.

<table>
<tr><th>Display</th><th>Description</th><th>Setting range</th><th>Initial setting</th></tr>
<tr><td>Cooling Mode</td><td>Amount of shift from the initial standard temperature</td><td>-3 to 3 (°C)</td><td>0</td></tr>
</table>

A larger value advances the operating timing, and a smaller value slows it.
2. Press the OK key. The value is set.

Completion
Press the Back key. The indication for selecting a maintenance item No. appears.

</td></tr>
</table>

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U089</td><td>
Outputting a MIP-PG pattern

Description
Selects and outputs the MIP-PG pattern created in the machine.
Purpose
To check machine status when adjusting image printing, using MIP-PG pattern output.

Method
1. Press the OK key.
2. Select the MIP-PG pattern to be output and press the OK key.
<table>
<tr><th>Display</th><th>Description</th><th>Purpose</th></tr>
<tr><td>256Gradation</td><td>256-gradation PG</td><td>To check the gradation reproducibility</td></tr>
<tr><td>Color Belt</td><td>Four color belts PG</td><td>To check the developer state and the engine section ID</td></tr>
<tr><td>Gray(C)</td><td>Cyan PG</td><td>To check the drum quality</td></tr>
<tr><td>Gray(M)</td><td>Magenta PG</td><td>To check the drum quality</td></tr>
<tr><td>Gray(Y)</td><td>Yellow PG</td><td>To check the drum quality</td></tr>
<tr><td>Gray(K)</td><td>Black PG</td><td>To check the drum quality</td></tr>
<tr><td>White</td><td>Blank paper PG</td><td>To check the drum quality</td></tr>
<tr><td>Gradation Gray</td><td>5-graduation gray PG</td><td>To check for vertical lines on the laser scanner unit</td></tr>
<tr><td>Sample Set</td><td>Four color belts PG,
Cyan PG, Magenta PG,
Yellow PG and Black PG</td><td>Pattern output for LLU assurance application</td></tr>
</table>
3. Press the menu key.
4. Press the OK key. A MIP-PG pattern is output.

Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
</table>

Item No.	Description
U100	**Adjusting main high voltage** **Description** Controls the charger roller voltage to optimize the surface potential. **Purpose** To change the setting value to adjust the image if an image failure (background blur, etc.) occurs. **Method** 1. Press the OK key. 2. Select an item and press the OK key. 3. Press the OK key.

Display	Description
Adj AC Bias	Main charger AC bias for each color
Set AC Auto Adj	Setting the AC bias auto adjustment
Set DC Bias	Main charger DC bias for each color
Adj DC Bias	Additional surface potential
Set Low Temp	Pre-charge time at power supply ON
Set Charger Freq	Setting the main charger frequency
Chk Current	Rush current display
Set AC Gain	Setting the AC Gain

Setting: [Adj AC Bias]

1. Change the value using the numeric keys.
   Increasing the setting makes the image lighter; decreasing it makes the image darker.
   The values set vary depending on environments.

Display	Description	Setting range
AC(C)	Main charger AC bias for cyan	0 to 255
AC(M)	Main charger AC bias for magenta	0 to 255
AC(Y)	Main charger AC bias for yellow	0 to 255
AC(K)	Main charger AC bias for black	0 to 255
AC B/W(K)*	Main charger AC bias for black in black/white mode	0 to 255

   *: 55 ppm model only.
2. Press the OK key. The value is set.

Setting: [Set AC Auto Adj]

1. Select On or Off.

Display	Description
On	Turns auto adjustment ON
Off	Turns auto adjustment OFF

   Initial setting: On
2. Press the OK key. The setting is set.

Item No.	Description
U100	**Displaying: [Set DC Bias]** 1. The current setting is displayed.

Display	Description
DC1(C)	Main charger DC bias for cyan (full speed)
DC1 Half(C)	Main charger DC bias for cyan (half speed)
DC1(M)	Main charger DC bias for magenta (full speed)
DC1 Half(M)	Main charger DC bias for magenta (half speed)
DC1(Y)	Main charger DC bias for yellow (full speed)
DC1 Half(Y)	Main charger DC bias for yellow (half speed)
DC1(K)	Main charger DC bias for black (full speed)
DC1 Half(K)	Main charger DC bias for black (half speed)
DC1 B/W(K)*	Main charger DC bias for black in black/white mode

*: 55 ppm model only.

Setting: [Adj DC Bias]

1. Select the item to be set.
2. Change the value using the numeric keys.
   Increasing the setting makes the image lighter; decreasing it makes the image darker.l

Display	Description	Setting range	Initial setting
DC2(C)	Main charger DC bias for cyan (full speed)	128 to 127	0
DC2 Half(C)	Main charger DC bias for cyan (half speed)	128 to 127	0
DC2(M)	Main charger DC bias for magenta (full speed)	128 to 127	0
DC2 Half(M)	Main charger DC bias for magenta (half speed)	128 to 127	0
DC2(Y)	Main charger DC bias for yellow (full speed)	128 to 127	0
DC2 Half(Y)	Main charger DC bias for yellow (half speed)	128 to 127	0
DC2(K)	Main charger DC bias for black (full speed)	128 to 127	0
DC2 Half(K)	Main charger DC bias for black (half speed)	128 to 127	0
DC2 B/W(K)*	Main charger DC bias for black in black/white mode		

*: 55 ppm model only.

3. Press the OK key. The value is set.

Setting: [Set Low Temp]

1. Change the value using the numeric keys.l

Display	Description	Setting range	Initial setting
Set Low Temp	Pre-charge time at power supply ON	0 to 6	1

2. Press the OK key. The value is set.

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U100</td><td>
Setting: [Set Charger Freq]
1. Select the item to be set.
2. Change the value using the numeric keys.ll
<table>
<tr><th rowspan="2">Display</th><th rowspan="2">Description</th><th rowspan="2">Setting range</th><th colspan="2">Initial setting</th></tr>
<tr><th>45ppm</th><th>55ppm</th></tr>
<tr><td>Generally</td><td>Main charger frequency</td><td>7500 to 11280</td><td>8807</td><td>11022</td></tr>
<tr><td>B/W*</td><td>Main charger frequency in black/white mode</td><td>7500 to 11280</td><td>-</td><td>10690</td></tr>
<tr><td>Half</td><td>Main charger frequency in half speed</td><td>7500 to 11280</td><td>10690</td><td>10690</td></tr>
<tr><td>3/4</td><td>Main charger frequency at 3/4 times of line speed</td><td>7500 to 11280</td><td>8857</td><td>8857</td></tr>
</table>
*: 55 ppm model only.
3. Press the OK key. The value is set.

Displaying: [Chk Current]
1. The current setting is displayed.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>C</td><td>Cyan rush current</td></tr>
<tr><td>M</td><td>Magenta rush current</td></tr>
<tr><td>Y</td><td>Yellow rush current</td></tr>
<tr><td>K</td><td>Black rush current</td></tr>
</table>
Setting: [Set AC Gain]
1. Select the item to be set.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>Auto</td><td>Auto control</td></tr>
<tr><td>Mode1</td><td>Multiplication value 0.95</td></tr>
<tr><td>Mode2</td><td>Multiplication value 1.05</td></tr>
<tr><td>Mode3</td><td>Multiplication value 1.00</td></tr>
</table>
Initial setting: Auto
2. Press the OK key. The setting is set.

Completion
Press the Back key. The screen for maintenance item No. is displayed.
</td></tr>
</table>

Item No.	Description
U101	**Setting the voltage for the primary transfer** **Description** Sets the control voltage for the primary transfer. **Purpose** To change the setting when any density problems, such as too dark or light, occur. **Setting** 1. Press the OK key. 2. Select the item to be set.

Display	Description
Normal	Setting the primary transfer positive voltage
Add Color	Setting the addition value (The addition value at the surface is referenced as standard)
Add Color 2nd	Setting the addition value for the second side
Surround Correct	Environmental correction ON/OFF setting

Setting: [Normal]

1. Select the item to be set.
1. Change the value using the numeric keys.ll

Display	Description	Setting range	Initial setting	
			45ppm	55ppm
Full	Primary transfer positive voltage for yellow (full speed)	0 to 255	126	131
Half	Primary transfer positive voltage for yellow (half speed)	0 to 255	108	110
3/4	Primary transfer positive voltage for yellow at 3/4 times of line speed	0 to 255	118	118
B/W*	Primary transfer positive voltage for yellow in black/white mode	0 to 255	-	135

*: 55 ppm model only.

2. Press the OK key. The value is set.

Setting: [Add Color]

1. Select the item to be set.
2. Change the value using the numeric keys.l

Display	Description	Setting range	Initial setting
Normal	Regular	-127 to 127	2
Heavy4/5	Heavy 4/5	-127 to 127	2

3. Press the OK key. The value is set.

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U101</td><td>
Setting: [Add Color 2nd]
1. Select the item to be set.
2. Change the value using the numeric keys.l
<table>
<tr><th>Display</th><th>Description</th><th>Setting range</th><th>Initial setting</th></tr>
<tr><td>C</td><td>Addition value for the second side (cyan)</td><td>-127 to 127</td><td>-3</td></tr>
<tr><td>M</td><td>Addition value for the second side (magenta)</td><td>-127 to 127</td><td>-3</td></tr>
<tr><td>Y</td><td>Addition value for the second side (yellow)</td><td>-127 to 127</td><td>-2</td></tr>
<tr><td>K</td><td>Addition value for the second side (black)</td><td>-127 to 127</td><td>-14</td></tr>
</table>
3. Press the OK key. The value is set.

Setting: [Surround Correct]
1. Select On or Off.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>On</td><td>Environmental correction is not performed</td></tr>
<tr><td>Off</td><td>Environmental correction is performed</td></tr>
</table>
Initial setting: Off
2. Press the OK key. The setting is set.

Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
</table>

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U106</td><td>

Setting the voltage for the secondary transfer

Description
Sets the control voltage for the secondary transfer depending on each paper type.
Purpose
To change the setting when any density problems, such as too dark or light, occur.

Method
1. Press the OK key.
2. Select the item to be set.

<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>Light/Normal1</td><td>Control voltage for the transfer bias on paper with thickness 52 g/m² to 64 g/m² and 65 g/m² to 75 g/m²</td></tr>
<tr><td>Normal2/3</td><td>Control voltage for the transfer bias on paper with thickness 76 g/m² to 105 g/m²</td></tr>
<tr><td>Heavy1</td><td>Control voltage for the transfer bias on paper with thickness 106 g/m² to 135 g/m²</td></tr>
<tr><td>Heavy2</td><td>Control voltage for the transfer bias on paper with thickness 136 g/m² to 163 g/m²</td></tr>
<tr><td>Heavy3</td><td>Control voltage for the transfer bias on paper with thickness 164 g/m² to 220 g/m²</td></tr>
<tr><td>Heavy4</td><td>Control voltage for the transfer bias on paper with thickness 221 g/m² to 256 g/m²</td></tr>
<tr><td>Heavy5</td><td>Control voltage for the transfer bias on paper with thickness 257 g/m² to 300 g/m²</td></tr>
<tr><td>Bias</td><td>Transfer bias value</td></tr>
<tr><td>OHP</td><td>Control voltage for the transfer bias for transparencies</td></tr>
</table>

Setting: [Light/Normal1]
1. Select the item to be set.

<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>1st</td><td>Control voltage for the transfer bias for the first side (full speed)</td></tr>
<tr><td>2nd</td><td>Control voltage for the transfer bias for the second side (full speed)</td></tr>
<tr><td>1st 3/4(Gloss)</td><td>Control voltage for the transfer bias for the first side at 3/4 times of line speed</td></tr>
<tr><td>2nd 3/4(Gloss)</td><td>Control voltage for the transfer bias for the second side at 3/4 times of line speed</td></tr>
<tr><td>1st B/W*</td><td>Control voltage for the transfer bias for the first side in black/white mode</td></tr>
<tr><td>2nd B/W*</td><td>Control voltage for the transfer bias for the second side in black/white mode</td></tr>
</table>

*: 55 ppm model only.
2. Select the paper width to be set.
3. Change the value using the numeric keys.

</td></tr>
</table>

Item No.	Description
U106	[1st]

Display	Description	Setting range	Initial setting	
			45ppm	55ppm
Width=105	105 mm wide	0 to 255	143	150
Width=210	210 mm wide	0 to 255	134	139
Width=297	297 mm wide	0 to 255	120	128

[2nd]

Display	Description	Setting range	Initial setting	
			45ppm	55ppm
Width=105	105 mm wide	0 to 255	207	220
Width=210	210 mm wide	0 to 255	155	163
Width=297	297 mm wide	0 to 255	124	128

[1st 3/4(Gloss)]

Display	Description	Setting range	Initial setting	
			45ppm	55ppm
Width=105	105 mm wide	0 to 255	131	131
Width=210	210 mm wide	0 to 255	123	123
Width=297	297 mm wide	0 to 255	120	120

[2nd 3/4(Gloss)]

Display	Description	Setting range	Initial setting	
			45ppm	55ppm
Width=105	105 mm wide	0 to 255	180	180
Width=210	210 mm wide	0 to 255	140	140
Width=297	297 mm wide	0 to 255	120	120

[1st B/W]

Display	Description	Setting range	Initial setting
			55ppm
Width=105	105 mm wide	0 to 255	150
Width=210	210 mm wide	0 to 255	144
Width=297	297 mm wide	0 to 255	128

[2nd B/W]

Display	Description	Setting range	Initial setting
			55ppm
Width=105	105 mm wide	0 to 255	183
Width=210	210 mm wide	0 to 255	171
Width=297	297 mm wide	0 to 255	128

4. Press the OK key. The value is set.

Item No.	Description
U106	**Setting: [Normal2/3]** 1. Select the item to be set.

Display	Description
1st	Control voltage for the transfer bias for the first side (full speed)
2nd	Control voltage for the transfer bias for the second side (full speed)
1st 3/4(Gloss)	Control voltage for the transfer bias for the first side at 3/4 times of line speed
2nd 3/4(Gloss)	Control voltage for the transfer bias for the second side at 3/4 times of line speed
1st B/W*	Control voltage for the transfer bias for the first side in black/white mode
2nd B/W*	Control voltage for the transfer bias for the second side in black/white mode

*: 55 ppm model only.

2. Select the paper width to be set.
3. Change the value using the numeric keys.

[1st]

Display	Description	Setting range	Initial setting	
			45ppm	55ppm
Width=105	105 mm wide	0 to 255	143	150
Width=210	210 mm wide	0 to 255	134	139
Width=297	297 mm wide	0 to 255	120	128

[2nd]

Display	Description	Setting range	Initial setting	
			45ppm	55ppm
Width=105	105 mm wide	0 to 255	207	220
Width=210	210 mm wide	0 to 255	155	163
Width=297	297 mm wide	0 to 255	124	128

[1st 3/4(Gloss)]

Display	Description	Setting range	Initial setting	
			45ppm	55ppm
Width=105	105 mm wide	0 to 255	131	131
Width=210	210 mm wide	0 to 255	123	123
Width=297	297 mm wide	0 to 255	120	120

Item No.	Description
U106	[2nd 3/4(Gloss)]

Display	Description	Setting range	Initial setting	
			45ppm	55ppm
Width=105	105 mm wide	0 to 255	180	180
Width=210	210 mm wide	0 to 255	140	140
Width=297	297 mm wide	0 to 255	120	120

[1st B/W]

Display	Description	Setting range	Initial setting
			55ppm
Width=105	105 mm wide	0 to 255	150
Width=210	210 mm wide	0 to 255	144
Width=297	297 mm wide	0 to 255	128

[2nd B/W]

Display	Description	Setting range	Initial setting
			55ppm
Width=105	105 mm wide	0 to 255	183
Width=210	210 mm wide	0 to 255	171
Width=297	297 mm wide	0 to 255	128

4. Press the OK key. The value is set.

Setting: [Heavy1]

1. Select the item to be set.

Display	Description
1st 3/4	Control voltage for the transfer bias for the first side at 3/4 times of line speed
2nd 3/4	Control voltage for the transfer bias for the second side at 3/4 times of line speed

2. Select the paper width to be set.
3. Change the value using the numeric keys.l

[1st 3/4]

Display	Description	Setting range	Initial setting	
			45ppm	55ppm
Width=105	105 mm wide	0 to 255	133	133
Width=210	210 mm wide	0 to 255	129	129
Width=297	297 mm wide	0 to 255	124	124

Item No.	Description
U106	[2nd 3/4]

Display	Description	Setting range	Initial setting	
			45ppm	55ppm
Width=105	105 mm wide	0 to 255	155	155
Width=210	210 mm wide	0 to 255	150	150
Width=297	297 mm wide	0 to 255	124	124

4. Press the OK key. The value is set.

Setting: [Heavy4/5]

1. Select the item to be set.

Display	Description
1st Half	Control voltage for the transfer bias for the first side (half speed)
2nd Half	Control voltage for the transfer bias for the second side (half speed)

2. Select the paper width to be set.
3. Change the value using the numeric keys.l
   [1st Half]

Display	Description	Setting range	Initial setting	
			45ppm	55ppm
Width=105	105 mm wide	0 to 255	126	130
Width=210	210 mm wide	0 to 255	123	127
Width=297	297 mm wide	0 to 255	119	122

[2nd Half]

Display	Description	Setting range	Initial setting	
			45ppm	55ppm
Width=105	105 mm wide	0 to 255	144	151
Width=210	210 mm wide	0 to 255	140	146
Width=297	297 mm wide	0 to 255	119	122

4. Press the OK key. The value is set.

Setting: [OHP]

1. Select the item to be set.
2. Change the value using the numeric keys.

Display	Description	Setting range	Initial setting	
			45ppm	55ppm
Width=105	105 mm wide	0 to 255	134	139
Width=210	210 mm wide	0 to 255	129	133
Width=297	297 mm wide	0 to 255	124	128

3. Press the OK key. The value is set.

Item No.	Description
U106	**Setting: [Bias]** 1. Select the item to be set. 2. Change the value using the numeric keys.

Display	Description	Setting range	Initial setting	
			45ppm	55ppm
Reverse	Transfer reverse bias (full speed)	0 to 255	1	1
Reverse Half	Transfer reverse bias (half speed)	0 to 255	1	1
Reverse 3/4	Transfer reverse bias at 3/4 times of line speed	0 to 255	1	1
Reverse B/W*	Transfer reverse bias in black/white mode	0 to 255	-	1
Cleaning	Cleaning control value (full speed)	0 to 255	138	143
Cleaning Half	Cleaning control value (half speed)	0 to 255	126	130
Cleaning 3/4	Cleaning control value at 3/4 times of line speed	0 to 255	133	133

*: 55 ppm model only.

3. Press the OK key. The value is set.

Completion

Press the Back key. The screen for selecting a maintenance item No. is displayed.

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U107</td><td>
Setting the transfer cleaning voltage

Description
Sets the cleaning control voltage for transfer belt unit.
Purpose
Change settings if an offset has occurred due to the failure of cleaning the transfer belt.

Method
1. Press the OK key.
2. Select the item to be set.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>Belt(A)</td><td>Transfer belt cleaning voltage (printing)</td></tr>
<tr><td>Belt(B)</td><td>Transfer belt cleaning voltage (paper interval)</td></tr>
</table>
3. Select the item to be set.
4. Change the value using the numeric keys.
[Belt(A)]
<table>
<tr><th rowspan="2">Display</th><th rowspan="2">Description</th><th rowspan="2">Setting range</th><th colspan="2">Initial setting</th></tr>
<tr><th>45ppm</th><th>55ppm</th></tr>
<tr><td>Full</td><td>Full speed</td><td>0 to 255</td><td>202</td><td>207</td></tr>
<tr><td>Half</td><td>Half speed</td><td>0 to 255</td><td>180</td><td>182</td></tr>
<tr><td>3/4</td><td>3/4 times of line speed</td><td>0 to 255</td><td>192</td><td>192</td></tr>
<tr><td>B/W*</td><td>Black/white mode</td><td>0 to 255</td><td>-</td><td>212</td></tr>
</table>
[Belt(B)]
<table>
<tr><th rowspan="2">Display</th><th rowspan="2">Description</th><th rowspan="2">Setting range</th><th colspan="2">Initial setting</th></tr>
<tr><th>45ppm</th><th>55ppm</th></tr>
<tr><td>Full</td><td>Full speed</td><td>0 to 255</td><td>150</td><td>160</td></tr>
<tr><td>Half</td><td>Half speed</td><td>0 to 255</td><td>110</td><td>110</td></tr>
<tr><td>3/4</td><td>3/4 times of line speed</td><td>0 to 255</td><td>130</td><td>130</td></tr>
<tr><td>B/W*</td><td>Black/white mode</td><td>0 to 255</td><td>-</td><td>160</td></tr>
</table>
*: 55 ppm model only.
5. Press the OK key. The value is set.

Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
</table>

Item No.	Description
U108	**Setting separation shift bias** **Description** Adjusts output of separation shift bias and ON/OFF timing. **Purpose** To set when the separated malfunction of the paper occurs. **Method** 1. Press the OK key. 2. Select the item to be set.

Display	Description
Output	Adjusting the separation shift bias output
Output 3/4	Adjusting the separation shift bias output
Output B/W*	Adjusting the separation shift bias output in black/white mode
Timing	Adjusting the ON/OFF timing with paper position
Subtraction Value	

***: 55 ppm model only.**

Setting: [Output]

1. Select the item to be set.
2. Change the setting value using the numeric keys or numeric key.

Display	Description	Setting range	Initial setting
Light 1st	Separation shift bias for the first side on paper with thickness 52 to 64 g/m^2	0 to 255	55
Light 2nd	Separation shift bias for the second side on paper with thickness 52 to 64 g/m^2	0 to 255	55
Normal 1st	Separation shift bias for the first side on paper with thickness 65 to 75 g/m^2	0 to 255	55
Normal 2nd	Separation shift bias for the second side on paper with thickness 65 to 75 g/m^2	0 to 255	55
Add Lead	Addition value for leading edge on paper with thickness 76 to 105 g/m^2	-127 to 127	0
Heavy/OHP	Separation shift bias for transparencies or paper with thickness 106 to 300 g/m^2	0 to 255	0

3. Press the OK key. The value is set.

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U108</td><td>
Setting: [Output 3/4 / Output B/W]
1. Select the item to be set.
2. Change the setting value using the numeric keys or numeric key.
<table>
<tr><th rowspan="2">Display</th><th rowspan="2">Description</th><th rowspan="2">Setting range</th><th colspan="2">Initial setting</th></tr>
<tr><th>Output 3/4</th><th>Output B/W*</th></tr>
<tr><td>Light 1st</td><td>Separation shift bias for the first side on paper with thickness 52 to 64 g/m²</td><td>0 to 255</td><td>55</td><td>20</td></tr>
<tr><td>Light 2nd</td><td>Separation shift bias for the second side on paper with thickness 52 to 64 g/m²</td><td>0 to 255</td><td>55</td><td>20</td></tr>
<tr><td>Normal 1st</td><td>Separation shift bias for the first side on paper with thickness 65 to 75 g/m²</td><td>0 to 255</td><td>55</td><td>20</td></tr>
<tr><td>Normal 2nd</td><td>Separation shift bias for the second side on paper with thickness 65 to 75 g/m²</td><td>0 to 255</td><td>55</td><td>20</td></tr>
</table>
* : 55 ppm model only.
3. Press the OK key. The value is set.

Setting: [Timing]
1. Select the item to be set.
2. Change the setting value using the numeric keys or numeric key.
<table>
<tr><th>Display</th><th>Description</th><th>Setting range</th><th>Initial setting</th></tr>
<tr><td>On Lead</td><td>Separation shift bias ON timing at leading edge of paper</td><td>-200 to 200</td><td>0</td></tr>
<tr><td>On Center</td><td>Separation shift bias ON timing at center of paper</td><td>-200 to 200</td><td>0</td></tr>
<tr><td>Off</td><td>Separation shift bias OFF timing</td><td>-200 to 200</td><td>0</td></tr>
</table>
3. Press the OK key. The value is set.

Setting: [Subtraction Value]
1. Change the setting value using the numeric keys or numeric key.
<table>
<tr><th>Display</th><th>Description</th><th>Setting range</th><th>Initial setting</th></tr>
<tr><td>Value</td><td></td><td>-127 to 127</td><td>-35</td></tr>
</table>
2. Press the OK key. The value is set.

Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
</table>

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U110</td><td>
Checking the drum count

Description
Displays the drum counts for checking.
Purpose
To check the drum status.

Method
1. Press the OK key. The current drum counts is displayed.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>C</td><td>Drum count value for cyan</td></tr>
<tr><td>M</td><td>Drum count value for magenta</td></tr>
<tr><td>Y</td><td>Drum count value for yellow</td></tr>
<tr><td>K</td><td>Drum count value for black</td></tr>
</table>
Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
<tr><td>U111</td><td>
Checking the drum drive time

Description
Displays the drum drive time for checking a figure, which is used as a reference when correcting the high voltage based on time.
Purpose
To check the drum status.

Method
1. Press the OK key. The drum drive time is displayed.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>C</td><td>Drum drive time for cyan</td></tr>
<tr><td>M</td><td>Drum drive time for magenta</td></tr>
<tr><td>Y</td><td>Drum drive time for yellow</td></tr>
<tr><td>K</td><td>Drum drive time for black</td></tr>
</table>
Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
</table>

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U117</td><td>
Checking the drum number

Description
Displays the drum number.
Purpose
To check the drum number.

Method
1. Press the OK key. The drum number is displayed.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>C</td><td>Cyan drum number</td></tr>
<tr><td>M</td><td>Magenta drum number</td></tr>
<tr><td>Y</td><td>Yellow drum number</td></tr>
<tr><td>K</td><td>Black drum number</td></tr>
</table>
Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
</table>

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U118</td><td>
Displaying the drum history

Description
Displays the past record of machine number and the drum counter.
Purpose
To check the count value of machine number and the drum counter.

Method
1. Press the OK key.
2. Select the color to check.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>C</td><td>Cyan drum past record</td></tr>
<tr><td>M</td><td>Magenta drum past record</td></tr>
<tr><td>Y</td><td>Yellow drum past record</td></tr>
<tr><td>K</td><td>Black drum past record</td></tr>
</table>
3. Press the OK key.
The history of a machine number and a drum counter for each color is displayed by three cases.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>Machine History1 - 3</td><td>Historical records of the machine number</td></tr>
<tr><td>Cnt History1 - 3</td><td>Historical records of drum counter</td></tr>
</table>
Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
<tr><td>U119</td><td>
Setting the drum

Description
Sets drum sensitivity.
Purpose
To set the drum after replacing the drum unit or laser scanner unit.
When completed, perform maintenance mode U464, Calibration.

Method
1. Press the OK key.
2. Select [Execute].
3. Press the OK key. Drum setup is commenced.
4. Exit the maintenance mode, perform shut-down, and turn the main power switch to off and on again. Allow more than 5 seconds between Off and On.
</td></tr>
</table>

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U122</td><td>
Checking the transfer belt unit number

Description
Displays the number of the transfer belt unit for checking.
Purpose
To check the number of the transfer belt.

Method
1. Press the OK key.
The current number of the transfer belt is displayed.

Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
<tr><td>U123</td><td>
Displaying the transfer belt unit history

Description
Displays the past record of machine number and the transfer belt unit counter.
Purpose
To check the count value of machine number and the transfer counter.

Method
1. Press the OK key.
The history of a machine number and a transfer belt unit counter for each color is displayed by three cases.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>Machine History1 - 3</td><td>Historical records of the machine number</td></tr>
<tr><td>Cnt History1 - 3</td><td>Historical records of transfer belt unit counter</td></tr>
</table>
Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
</table>

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U127</td><td>

Checking/clearing the transfer count

Description
Displays and clears the counts of the transfer counter.
Purpose
To check the count or drive time after replacement of the transfer belt unit or transfer roller. Also to clear the counts after replacing transfer roller.

Method
1. Press the OK key. The current counts of the transfer counter is displayed.

<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>Mid(Cnt)</td><td>Transfer belt unit count value</td></tr>
<tr><td>2nd(Cnt)</td><td>Transfer roller count value</td></tr>
<tr><td>Mid(Time)</td><td>Transfer belt unit drive time</td></tr>
<tr><td>2nd(Time)</td><td>Transfer roller drive time</td></tr>
<tr><td>Clear</td><td>The counter value is cleared</td></tr>
</table>

Clearing
1. Select [Clear].
2. Press the OK key. The counter value is cleared.
   Clears only the transfer roller. The transfer belt unit is not cleared.

Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.

</td></tr>
</table>

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U128</td><td>
Setting transfer high-voltage timing

Description
Adjusts the ON/OFF timing of transfer high-voltage output.
Purpose
Basically, the setting need not be changed. If any problem such as faulty images or dirt on the back surface occurs, change the setting.

Method
1. Press the OK key.
2. Select the item to set.
3. Change the value using the numeric keys.
<table>
<tr><th rowspan="2">Display</th><th rowspan="2">Description</th><th rowspan="2">Setting range</th><th colspan="2">Initial setting</th></tr>
<tr><th>45ppm</th><th>55ppm</th></tr>
<tr><td>On Timing 1st</td><td>Transfer ON timing adjustment value (first side)</td><td>-200 to 200</td><td>-5</td><td>-5</td></tr>
<tr><td>On Timing 2nd</td><td>Transfer ON timing adjustment value (second side)</td><td>-200 to 200</td><td>0</td><td>0</td></tr>
<tr><td>Off Timing</td><td>Transfer OFF timing adjustment value</td><td>-200 to 200</td><td>13</td><td>10</td></tr>
</table>
4. Press the OK key. The value is set.

Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
<tr><td>U130</td><td>
Initial setting for the developer

Description
The toner sensor control bias is adjusted so that the sensor output is set as the target value with the initial developer.
Purpose
Automatically executed when the developer unit loaded with the initial developer is replaced.

Method
1. Press the OK key.
2. Select [Execute].
3. Press the OK key.
Toner installation is started and the control value of the toner sensor is displayed.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>C</td><td>Toner sensor C control voltage</td></tr>
<tr><td>M</td><td>Toner sensor M control voltage</td></tr>
<tr><td>Y</td><td>Toner sensor Y control voltage</td></tr>
<tr><td>K</td><td>Toner sensor K control voltage</td></tr>
<tr><td>Excute</td><td></td></tr>
</table>
Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
</table>

Item No.	Description
U131	**Adjusting the toner sensor control voltage** **Description** Adjusts the toner sensor control voltage. **Purpose** If control values are not correctly retrievable due to the EEPROM of the developer unit failure, etc., use manual adjustment and obtain a temporary control value. **Method** 1. Press the OK key. 2. Select the item to be set or displayed.

Display	Description
Manual	Toner sensor control voltage manual adjustment
Auto	Toner sensor control voltage auto adjustment
Mode	Switching the manual adjustment and auto adjustment

Setting: [Manual]

1. Select the item to be set.
2. Change the value using the numeric keys.

Display	Description	Setting range	Initial setting
Control(C)	Toner sensor C control voltage	0 to 255	150
Control(M)	Toner sensor M control voltage	0 to 255	150
Control(Y)	Toner sensor Y control voltage	0 to 255	150
Control(K)	Toner sensor K control voltage	0 to 255	150

3. Press the OK key. The value is set.

Displaying: [Auto]

1. The current setting is displayed.

Display	Description
Default(C)	Reference value for toner sensor C control voltage
Default(M)	Reference value for toner sensor M control voltage
Default(Y)	Reference value for toner sensor Y control voltage
Default(K)	Reference value for toner sensor K control voltage
Control(C)	Toner sensor C control voltage after correction
Control(M)	Toner sensor M control voltage after correction
Control(Y)	Toner sensor Y control voltage after correction
Control(K)	Toner sensor K control voltage after correction

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U131</td><td>
Setting: [Mode]
1. Select the item to be set.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>Manual</td><td>Toner sensor control voltage manual adjustment</td></tr>
<tr><td>Auto</td><td>Toner sensor control voltage auto adjustment</td></tr>
</table>
Initial setting: Auto
2. Press the OK key. The value is set.

Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
<tr><td>U132</td><td>
Replenishing toner forcibly

Description
Replenishes toner forcibly until the toner sensor output value reaches the toner feed start level.
Purpose
Used when the toner empty is detected frequently.

Method
1. Press the OK key.
2. Select [Execute].
3. Press the OK key.
Toner is replenished until the toner sensor output value reaches the toner feed start level.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>Supply(C)</td><td>Toner feed start level (cyan)</td></tr>
<tr><td>Supply(M)</td><td>Toner feed start level (magenta)</td></tr>
<tr><td>Supply(Y)</td><td>Toner feed start level (yellow)</td></tr>
<tr><td>Supply(K)</td><td>Toner feed start level (black)</td></tr>
<tr><td>Sensor(C)</td><td>Toner sensor output value (cyan)</td></tr>
<tr><td>Sensor(M)</td><td>Toner sensor output value (magenta)</td></tr>
<tr><td>Sensor(Y)</td><td>Toner sensor output value (yellow)</td></tr>
<tr><td>Sensor(K)</td><td>Toner sensor output value (black)</td></tr>
<tr><td>Excute</td><td></td></tr>
</table>
4. To stop operation, press the Back key.

Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
</table>

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U135</td><td>
Checking toner motor operation

Description
Drives toner motors.
Purpose
To check the operation of toner motors.

Remarks
When driving the toner motors long time or several times, developer section becomes the toner full and is locked.

Method
1. Press the OK key.
2. Select [Toner].
3. Press the OK key. The operation starts.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>Toner</td><td>Toner motor (TM) is turned on</td></tr>
</table>
4. To stop the operation, press the Back key.

Completion
Press the Back key after operation stops. The screen for selecting a maintenance item No. is displayed.
</td></tr>
<tr><td>U136</td><td>
Setting toner near end detection

Description
Sets the level that indicates the number of sheets that can be printed from occurrence of toner near end to toner empty.
Purpose
To change the setting to advance detection of near end if the interval from toner near end to toner empty seems too short.

Setting
1. Press the OK key.
2. Select the item to be set.
3. Change the value using the numeric keys.
<table>
<tr><th>Display</th><th>Description</th><th>Setting range</th><th>Initial setting</th></tr>
<tr><td>CMY</td><td>Setting the level of cyan/magenta/yellow toner</td><td>0 to 9</td><td>3</td></tr>
<tr><td>K</td><td>Setting the level of black toner</td><td>0 to 9</td><td>3</td></tr>
</table>
Increasing the setting makes the interval from toner near end to toner empty longer.
Decreasing the setting makes the interval from toner near end to toner empty shorter.
If 0 is set, toner near end will not be detected.
4. Press the OK key. The value is set.

Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
</table>

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U139</td><td>

Displaying the temperature and humidity outside the machine

Description
Displays the detected temperature and humidity outside the machine.
Purpose
To check the temperature and humidity outside the machine.

Method
1. Press the OK key.
2. Select the item.

Display	Description
Ext/Int	Internal/External temperature (°C), External humidity (%)
LSU	Internal temperature around the laser scanner unit (°C)
Developing	Internal temperature around the developer section (°C)

Method: [Ext/Int]
1. The current temperature and humidity are displayed.

Display	Description
Ext Temp	External temperature (°C)
Ext Humidity	External humidity (%)
Int Temp	Internal temperature (°C)

Method: [LSU]
1. The current temperature is displayed.

Display	Description
C	Internal temperature around the laser scanner unit C (°C)
M	Internal temperature around the laser scanner unit M (°C)
Y	Internal temperature around the laser scanner unit Y (°C)
K	Internal temperature around the laser scanner unit K (°C)

Method: [Developing]
1. The current temperature is displayed.

Display	Description
C	Internal temperature around the developer unit C (°C)
M	Internal temperature around the developer unit M (°C)
Y	Internal temperature around the developer unit Y (°C)
K	Internal temperature around the developer unit K (°C)

Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.

</td></tr>
</table>

Item No.	Description
U140	**Displaying developer bias** **Description** Displays and changes various developer bias value. **Purpose** To check or changes the developer bias value. **Method** 1. Press the OK key. 2. Select the item to be set.

Display	Description
Sleeve DC	Developer sleeve roller DC bias
Sleeve AC	Developer sleeve roller AC bias
Mag DC	Developer magnet roller DC bias
Mag AC	Developer magnet roller AC bias
Sleeve Freq	Developer sleeve roller frequency
Sleeve Duty	Developer sleeve roller duty
Mag Duty	Developer magnet roller duty
AC Calib	Executing or setting the AC calibration

Setting: [Sleeve DC]

1. Select the item to be set.
2. Change the setting value using the numeric keys.

Display	Description	Setting range	Initial setting	
			45ppm	55ppm
C	Developer sleeve roller DC bias for cyan	0 to 255	84	84
M	Developer sleeve roller DC bias for magenta	0 to 255	84	84
Y	Developer sleeve roller DC bias for yellow	0 to 255	84	84
K	Developer sleeve roller DC bias for black	0 to 255	70	70
B/W*	Developer sleeve roller DC bias in black/white mode	0 to 255	-	70

*: 55 ppm model only.

3. Press the OK key. The value is set.

Item No.	Description
U140	**Setting: [Sleeve AC]** 1. Select the item to be set. 2. Change the setting value using the numeric keys.

Display	Description	Setting range	Initial setting	
			45ppm	55ppm
C	Developer sleeve roller AC bias for cyan	0 to 255	155	155
M	Developer sleeve roller AC bias for magenta	0 to 255	155	155
Y	Developer sleeve roller AC bias for yellow	0 to 255	155	155
K	Developer sleeve roller AC bias for black	0 to 255	155	155
B/W*	Developer sleeve roller AC bias in black/white mode	0 to 255	-	155

*: 55 ppm model only.

3. Press the OK key. The value is set.

Setting: [Mag DC]

1. Select the item to be set.
2. Change the setting value using the numeric keys.

Display	Description	Setting range	Initial setting	
			45ppm	55ppm
C	Developer magnet roller DC bias for cyan	0 to 255	155	155
M	Developer magnet roller DC bias for magenta	0 to 255	155	155
Y	Developer magnet roller DC bias for yellow	0 to 255	155	155
K	Developer magnet roller DC bias for black	0 to 255	155	155
B/W*	Developer magnet roller DC bias in black/white mode	0 to 255	-	155

*: 55 ppm model only.

3. Press the OK key. The value is set.

Item No.	Description
U140	**Setting: [Mag AC]** 1. Select the item to be set. 2. Change the setting value using the numeric keys.

Display	Description	Setting range	Initial setting	
			45ppm	55ppm
C	Developer magnet roller AC bias for cyan	0 to 255	200	200
M	Developer magnet roller AC bias for magenta	0 to 255	200	200
Y	Developer magnet roller AC bias for yellow	0 to 255	200	200
K	Developer magnet roller AC bias for black	0 to 255	160	160
B/W*	Developer magnet roller AC bias in black/white mode	0 to 255	-	160

*: 55 ppm model only.

3. Press the OK key. The value is set.

Setting: [Sleeve Freq]

1. Select the item to be set.
2. Change the setting value using the numeric keys.

Display	Description	Setting range	Initial setting	
			45ppm	55ppm
Normal	Developer sleeve roller frequency	0 to 6200	5345	5511
B/W*	Developer sleeve roller frequency in black/white mode	0 to 6200	-	5345
Half	Developer sleeve roller frequency (half speed)	0 to 6200	5345	5345
3/4*	Developer sleeve roller frequency at 3/4 times of line speed	0 to 6200	5345	5345

*: 55 ppm model only.

3. Press the OK key. The value is set.

Setting: [Sleeve Duty]

1. Select the item to be set.
2. Change the setting value using the numeric keys.

Display	Description	Setting range	Initial setting	
			45ppm	55ppm
Normal	Developer sleeve roller duty	0 to 99	68	68
B/W*	Developer sleeve roller duty in black/white mode	0 to 99	-	68

*: 55 ppm model only.

3. Press the OK key. The value is set.

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U140</td><td>
Setting: [Mag Duty]
1. Select the item to be set.
2. Change the setting value using the numeric keys.
<table>
<tr><th rowspan="2">Display</th><th rowspan="2">Description</th><th rowspan="2">Setting range</th><th colspan="2">Initial setting</th></tr>
<tr><th>45ppm</th><th>55ppm</th></tr>
<tr><td>Normal</td><td>Developer magnet roller duty</td><td>0 to 99</td><td>43</td><td>43</td></tr>
<tr><td>B/W*</td><td>Developer magnet roller duty in black/white mode</td><td>0 to 99</td><td>-</td><td>43</td></tr>
</table>
*: 55 ppm model only.
3. Press the OK key. The value is set.
Method: [AC Calib]
1. Select the item.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>Calibration</td><td>Executing the AC calibration</td></tr>
<tr><td>Magnification</td><td>AC calibration target bias value setting</td></tr>
<tr><td>High Altitude</td><td>Mode setting for AC calibration bias control</td></tr>
</table>
Method: [Calibration]
1. Turns the items to implement to on.
2. If the machine is installed at high altitudes, turn all of CMYK to On. (Changing Type to 1) Changing Type to 2 cancels the high altitude mode.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>Type</td><td>Setting the mode</td></tr>
<tr><td>C</td><td>When replacing the developer unit C or drum unit C</td></tr>
<tr><td>M</td><td>When replacing the developer unit M or drum unit M</td></tr>
<tr><td>Y</td><td>When replacing the developer unit Y or drum unit Y</td></tr>
<tr><td>K</td><td>When replacing the developer unit K or drum unit K</td></tr>
<tr><td>Execute</td><td>Executing the calibration</td></tr>
</table>
3. Select [Execute].
4. Press the OK key. AC calibration is executed.
5. Exit the maintenance mode, perform shut-down, and turn the main power switch to off and on again. Allow more than 5 seconds between Off and On.
* : When an error occurs, an error code is displayed.
Setting: [Magnification]
1. Select the item to be set.
2. Change the setting value using the numeric keys.
<table>
<tr><th>Display</th><th>Description</th><th>Setting range</th><th>Initial setting</th></tr>
<tr><td>C</td><td>When replacing the developer unit C or drum unit C</td><td>-10 to 15</td><td>15</td></tr>
<tr><td>M</td><td>When replacing the developer unit M or drum unit M</td><td>-10 to 15</td><td>15</td></tr>
<tr><td>Y</td><td>When replacing the developer unit Y or drum unit Y</td><td>-10 to 15</td><td>15</td></tr>
<tr><td>K</td><td>When replacing the developer unit K or drum unit K</td><td>-10 to1 5</td><td>12</td></tr>
</table>
3. Press the OK key. The value is set.
</td></tr>
</table>

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U140</td><td>
Method: [High Altitude]
1. Select Mode1 or Mode2.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>Mode1</td><td>Execute AC calibration by normal bias control</td></tr>
<tr><td>Mode2</td><td>If print density is low in an installation at high altitude, execute calibration by fixing the bias potential.</td></tr>
</table>
Initial setting: Mode1
2. Press the OK key. The value is set.
3. Exit the maintenance mode, perform shut-down, and turn the main power switch to off and on again. Allow more than 5 seconds between Off and On.

Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
</table>

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U147</td><td>

Setting for toner applying operation

Description
Sets the mode for removing charged toner in the developing unit (T7 control: Toner applying operation). Defines the action that the toner accumulated on the developer blade is sent back in the developer unit (done by the vibration motor).
Purpose
The setting can be changed to reduce the toner applying quantity. Performed to change the occurrence of the control of the vibration motor.
If the charged toner stays inside the developing unit, density decreases.

Method
1. Press the OK key.
2. Select the item to be set.

Display	Description
Mode	Settings for toner applying operation
Upper Limit	Upper limit printing ratio of toner applying quantity with each mode
Minimum	Toner layer width when cleaning mode is selected
Interval Number	Setting the vibration motor On timing

Setting: [Mode]
1. Select the mode.

Display	Description
Mode0	Less consumption of toner than a regular toner applying operation
Mode1	Executes toner applying with the regular amount of toner
Mode2	Applying more consumption of toner than a regular toner applying operation

Initial setting; Mode1
2. Press the OK key. The setting is set.

Setting: [Upper Limit]
1. Change the setting value using the numeric keys.

Display	Description	Setting range	Initial setting
Value	Upper limit printing ratio of toner applying quantity with each mode (%)	0 to 2.0	2.0

2. Press the OK key. The value is set.

Setting: [Minimum]
1. Change the setting value using the numeric keys.

Display	Description	Setting range	Initial setting
Value	Toner layer width when cleaning mode is selected (mm)	0 to 30	10

2. Press the OK key. The value is set.

</td></tr>
</table>

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U147</td><td>
Setting: [Interval Number]
1. Select the item to be set.
2. Change the setting value using the numeric keys.
<table>
<tr><th>Display</th><th>Description</th><th>Setting range</th><th>Initial setting</th></tr>
<tr><td>Print(Normal)</td><td>During continuous printing (Normal environment)</td><td>10 to 500</td><td>250</td></tr>
<tr><td>Print(H/H)</td><td>During continuous printing (High humidity environment)</td><td>10 to 200</td><td>100</td></tr>
<tr><td>Print End</td><td>Print completed</td><td>10 to 100</td><td>50</td></tr>
</table>
3. Press the OK key. The value is set.

Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
<tr><td>U148</td><td>
Setting drum refresh mode

Description
Selects the mode used in drum refreshing
Purpose
Change settings when drum refreshing is too frequently executed.

Setting
1. Press the OK key.
2. Select the mode.
3. Change the setting value using the numeric keys.
<table>
<tr><th>Display</th><th>Description</th><th>Setting range</th><th>Initial setting</th></tr>
<tr><td>Normal</td><td rowspan="2">Auto setting drum refresh mode</td><td>0 to 3</td><td>2</td></tr>
<tr><td>Dew Cond</td><td>0 to 3</td><td>2</td></tr>
</table>
* : Normal 0: Off / 1: Short / 2: Standard / 3: Long
Dew Cond 0: mode1 / 1: mode2 / 2: mode2 / 3: mode3
0: Inoperable. 1 - 3: the greater the value the more refreshings to take place.
4. Press the OK key. The setting is set.

Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
</table>

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U155</td><td>

Checking sensors for toner

Description
Displays the toner sensor output value.
Purpose
To check the output value for each color when any image problems occur.

Method
1. Press the OK key.
2. Select the item to be display.

Display	Description
Waste Toner	Control voltage value of the waste toner sensor
Toner	Control voltage value and replenishment level of toner sensor each color

Method: [Waste Toner]
1. Check the status of sensor. The current value is displayed.

Display	Description
Full	Waste toner sensor 1 (WTS1)
Near Full	Waste toner sensor 2 (WTS2)

Method: [Toner]
1. Check the status of sensor. The current value is displayed.

Display	Description
Sensor(C)	Toner sensor C output value
Sensor(M)	Toner sensor M output value
Sensor(Y)	Toner sensor Y output value
Sensor(K)	Toner sensor K output value
Supply(C)	Toner replenishment level for cyan
Supply(M)	Toner replenishment level for magenta
Supply(Y)	Toner replenishment level for yellow
Supply(K)	Toner replenishment level for black

Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.

</td></tr>
</table>

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U156</td><td>

Setting the toner replenishment level

Description
Sets the toner replenishment level for each color.
Purpose
To change settings according to the original image.

Method
1. Press the OK key.
2. Select the item to be set.

Display	Description
Supply	Setting the toner replenishment level
Empty	Setting the toner empty level

Method: [Supply]
1. Select the item to be set.
2. Change the setting value using the numeric keys.
   Increasing the setting makes the image lighter; decreasing it makes the image darker.

Display	Description	Setting range	Initial setting
C	Toner replenishment level for cyan	0 to 900	512
M	Toner replenishment level for magenta	0 to 900	512
Y	Toner replenishment level for yellow	0 to 900	512
K	Toner replenishment level for black	0 to 900	512
B/W*	Toner replenishment level in black/white mode	0 to 900	512

   *: 55 ppm model only.
3. Press the OK key. The value is set.

Method: [Empty]
1. Select the item to be set.
2. Change the setting value using the numeric keys.
   Increasing the setting makes ‘toner empty’ appear later and decreasing it makes ‘toner empty’ appear earlier.

Display	Description	Setting range	Initial setting
C	Toner empty level for cyan	0 to 1023	100
M	Toner empty level for magenta	0 to 1023	100
Y	Toner empty level for yellow	0 to 1023	100
K	Toner empty level for black	0 to 1023	100
B/W*	Toner empty level in black/white mode	0 to 1023	100

   *: 55 ppm model only.
3. Press the OK key. The value is set.

Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.

</td></tr>
</table>

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U157</td><td>
Checking the developer drive time

Description
Displays the developer drive time for checking a figure, which is used as a reference when correcting the toner control.
Purpose
To check the developer drive time after replacing the developer unit.

Method
1. Press the OK key. The developer drive time is displayed.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>C</td><td>Developer drive time for cyan</td></tr>
<tr><td>M</td><td>Developer drive time for magenta</td></tr>
<tr><td>Y</td><td>Developer drive time for yellow</td></tr>
<tr><td>K</td><td>Developer drive time for black</td></tr>
</table>
Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
<tr><td>U158</td><td>
Checking the developer count

Description
Displays the developer count for checking.
Purpose
To check the developer unit status.

Method
1. Press the OK key. The current developer counts is displayed.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>C</td><td>Developer count value for cyan</td></tr>
<tr><td>M</td><td>Developer count value for magenta</td></tr>
<tr><td>Y</td><td>Developer count value for yellow</td></tr>
<tr><td>K</td><td>Developer count value for black</td></tr>
</table>
Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
</table>

Item No.	Description
U161	**Setting the fuser control temperature** **Description** Changes the fuser control temperature. **Purpose** Normally no change is necessary. However, can be used to prevent curling or creasing of paper, or solve a fuser problem on thick paper. **Method** 1. Press the OK key. 2. Select the item to be set.

Display	Description
WarmUp	Control temperature except at printing
Print	Control temperature during printing
LowPower Mode	Heating power reduction control
Grain Mode	Setting the grain mode

Setting: [WarmUp]

1. Select the item to be set.
2. Change the setting value using the numeric keys.

Display	Description	Setting range	Initial setting	
			45ppm	55ppm
Ready (C)	Control temperature at displaying Ready (Center)	130 to 200 (°C)	165	170
Ready (E)	Control temperature at displaying Ready (Edge)	100 to 200 (°C)	140	145
Ready (P)	Control temperature at displaying Ready (Press)	0 to 200 (°C)	80	80
Drive (C)	Stable temperature during driving (Center)	130 to 200 (°C)	170	175
Wait (C)	Stable temperature during halt (Center)	130 to 200 (°C)	165	175
Low Power (P)	Control temperature at low power consumption (Press)	0 to 200 (°C)	150	150
F.S. Shift(C	Full speed shift temperature (Center)	0 to 200 (°C)	50	50
Pressure(P)	Pressurizing beginning temperature (Press)	0 to 200 (°C)	155	160

3. Press the OK key. The value is set.

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U161</td><td>
Setting: [Print]
1. Select the item to be set.
2. Change the setting value using the numeric keys.
<table>
<tr><th rowspan="2">Display</th><th rowspan="2">Description</th><th rowspan="2">Setting range</th><th colspan="2">Initial setting</th></tr>
<tr><th>45ppm</th><th>55ppm</th></tr>
<tr><td>F.S.Print(C)</td><td>Temperature at maximum print speed (Center)</td><td>130 to 200 (°C)</td><td>170</td><td>175</td></tr>
<tr><td>Dup Shift(C)</td><td>Temperature at duplex printing (Center)</td><td>-20 to 20 (°C)</td><td>5</td><td>5</td></tr>
</table>
3. Press the OK key. The value is set.

Setting: [LowPower Mode]
1. Select the item to be set.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>Mode0</td><td>Not used normally (use when a fusing problem has occurred at continuous printing in mode 1, however, use caution that mode 0, when used continously, can deteriorate the durability of the fuser rollers).</td></tr>
<tr><td>Mode1</td><td>Fuser control temperature reduction mode (For normal users)</td></tr>
<tr><td>Mode2</td><td>Large volume output mode (For users who repeatedly print approximately 1500 sheets at a time)</td></tr>
</table>
Initial setting: Mode1
2. Press the OK key. The setting is set.
Setting: [Grain Mode]

1. Select the item to be set.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>Mode0</td><td>Existing level (No special treatment)</td></tr>
<tr><td>Mode1</td><td>Setting the grain mode</td></tr>
<tr><td>Mode2</td><td>More improvements</td></tr>
</table>
Initial setting: Mode0
Press the OK key. The setting is set.

Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
</table>

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U167</td><td>
Checking/clearing the fuser count

Description
Displays and clears the fuser count for checking.
Purpose
To check the fuser count or drive time after replacement of the fuser unit. Also to clear the counts after replacing unit.

Method
1. Press the OK key. The fuser count is displayed.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>Cnt</td><td>Fuser unit count value</td></tr>
<tr><td>Release</td><td>Fuser unit drive time (release)</td></tr>
<tr><td>Press</td><td>Fuser unit drive time (press)</td></tr>
<tr><td>Clear</td><td>Clear the fuser unit count valueis</td></tr>
</table>
Clearing
1. Select the [Clear].
2. Press the OK key. The count is cleared.

Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
<tr><td>U169</td><td>
Checking/setting the fuser power source

Description
Displays and settings the reference voltage of the fuser IH PWB.
Purpose
To check the reference voltage.
When performing U021, use the same voltage as for the IH control PWB.

Method
1. Press the OK key.
2. Select the mode.
<table>
<tr><th>Display</th><th>Description</th><th>Setting range</th></tr>
<tr><td>Mode</td><td>Reference voltage</td><td>1 to 4</td></tr>
</table>
1: 100 V specifications 2: 200 V specifications 3: 120 V specifications
4: 110 V specifications
3. Press the OK key. The setting is set.

Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
</table>

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U199</td><td>
Displaying fuser heater temperature

Description
Displays the detected fuser temperature.
Purpose
To check the fuser temperature.

Method
1. Press the OK key. The fuser temperature is displayed.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>Heat Edge1</td><td>Heat roller edge temperature (°C)</td></tr>
<tr><td>Heat Edge2</td><td>Heat roller edge temperature (°C)</td></tr>
<tr><td>Heat Center</td><td>Heat roller center temperature (°C)</td></tr>
<tr><td>Press Center</td><td>Press roller center temperature (°C)</td></tr>
</table>
Completion
Press the Back key. The screen for selecting a maintenance mode No. is displayed.
</td></tr>
<tr><td>U207</td><td>
Checking the operation panel keys

Description
Checks operation of the operation panel keys.
Purpose
To check operation of all the keys and LEDs on the operation panel.

Method
1. Press the OK key.

Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
</table>

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U208</td><td>
Setting the paper size for the side deck

Description
Sets the size of paper used in side deck.
Purpose
To change the setting when installing the side deck or the size of paper used in the side deck is changed.

Setting
1. Press the OK key.
2. Select the paper size (A4, B5 or Letter).
Initial setting: Letter (Inch specifications)
A4 (Metric specifications)
3. Press the OK key. The setting is set.
4. Exit the maintenance mode, perform shut-down, and turn the main power switch to off and on again. Allow more than 5 seconds between Off and On.
</td></tr>
<tr><td>U211</td><td>
Setting the presence or absence of the job separator

Description
Sets the presence or absence of the inner job separator.
Purpose
To run this maintenance item if the inner job separator is installed.

Method
1. Press the OK key.
2. Select [Inner Job Separator].
3. Select On or Off.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>On</td><td>The inner job separator is installed</td></tr>
<tr><td>Off</td><td>The inner job separator is not installed</td></tr>
</table>
Initial setting: Off
4. Press the OK key. The setting is set.
5. Exit the maintenance mode, perform shut-down, and turn the main power switch to off and on again. Allow more than 5 seconds between Off and On.
</td></tr>
</table>

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U221</td><td>
Setting the USB host lock function

Description
Specifies ON/OFF the USB host lock function. Setting this to ON causes the machine to be unable to recognize the device connected to the USB host.
Purpose
Set according to the preference of the user.

Method
1. Press the OK key.
2. Select [Host Lock].
3. Select On or Off.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>On</td><td>USB host lock function ON</td></tr>
<tr><td>Off</td><td>USB host lock function OFF</td></tr>
</table>
Initial setting: Off
4. Press the OK key. The setting is set.
5. Exit the maintenance mode, perform shut-down, and turn the main power switch to off and on again. Allow more than 5 seconds between Off and On.
</td></tr>
<tr><td>U223</td><td>
Operation panel lock

Description
Sets the operation panel lock function.
Purpose
This is performed to inhibit operating and canceling the menu on the operation panel which may be done by others then an administrator.

Setting
1. Press the OK key.
2. Select the item.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>Unlock</td><td>Release the lock of the operation from the menu</td></tr>
<tr><td>Partial Lock</td><td>Lock the operation from the menu</td></tr>
<tr><td>Lock</td><td>Lock the operation from the menu and job cancel</td></tr>
</table>
Initial setting: Unlock
3. Press the OK key. The setting is set.
<table>
<tr><th>Item</th><th>Partial Lock</th><th>Lock</th></tr>
<tr><td>Entering menu</td><td>Prohibited</td><td>Prohibited</td></tr>
<tr><td>Pressing Back key</td><td>Permitted</td><td>Prohibited</td></tr>
</table>
Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
</table>

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U234</td><td>
Setting punch destination

Description
Sets the destination of punch unit of 1000-sheet finisher or 4000-sheet finisher.
Purpose
To be set when installing a different punch unit from the destination of the machine.

Setting
1. Press the OK key.
2. Select the destination.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>Auto</td><td>Conforms to destination settings.</td></tr>
<tr><td>Japan Metric</td><td>Metric (Japan) specifications</td></tr>
<tr><td>Inch</td><td>Inch (North America) specifications</td></tr>
<tr><td>Europe Metric</td><td>Metric (Europe) specifications</td></tr>
</table>
Initial setting: Inch (Inch specifications)/Europe Metric (Metric specifications)
3. Press the OK key. The setting is set.
4. Exit the maintenance mode, perform shut-down, and turn the main power switch to off and on again. Allow more than 5 seconds between Off and On.
</td></tr>
</table>

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U237</td><td>

Setting finisher stack quantity

Description
Sets the number of sheets of each stack on the main tray and on the middle tray in 4000-sheet finisher.
Purpose
To change the setting when a stack malfunction has occurred.

Method
1. Press the OK key.
2. Select the item to be set.

Display	Description
Main Tray	Number of sheets of stack on the main tray
Middle Tray	Number of sheets of stack on the middle tray for staple mode

Setting: [Main Tray]
1. Change the setting using the numeric keys.

Display	Description
0	Number of sheets of stack on the main tray: 4000 sheets
1	Number of sheets of stack on the main tray: 2000 sheets

Initial setting: 0
2. Press the OK key. The setting is set.
3. Exit the maintenance mode, perform shut-down, and turn the main power switch to off and on again. Allow more than 5 seconds between Off and On.

Setting: [Middle Tray]
1. Change the setting using the numeric keys.

Display	Description
0	Number of sheets of stack on the middle tray for staple mode: 65 sheets
1	Number of sheets of stack on the middle tray for staple mode: 30 sheets

Initial setting: 0
Number of sheets of stack on the internal tray for non-staple printing: 10 sheets
2. Press the OK key. The setting is set.
3. Exit the maintenance mode, perform shut-down, and turn the main power switch to off and on again. Allow more than 5 seconds between Off and On.

</td></tr>
</table>

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U240</td><td>

Checking the operation of the finisher

Description
Turns each motor and solenoid of 1000-sheet finisher or 4000-sheet finisher ON.
Purpose
To check the operation of each motor and solenoid of the 1000-sheet finisher or 4000-sheet finisher.

Method
1. Press the OK key.
2. Select the item to be checked.
3. Press the OK key.

<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>Motor</td><td>Checking the motor of the document finisher</td></tr>
<tr><td>Solenoid</td><td>Checking the solenoid of the document finisher</td></tr>
<tr><td>Mail Box</td><td>Checking the motor of the mailbox</td></tr>
<tr><td>Top Mail Box</td><td>Checking the motor of the top mailbox</td></tr>
<tr><td>Booklet</td><td>Checking the motor of the center-folding unit</td></tr>
</table>

Method: [Motor]
1. Select the item to be operated.
2. Press the OK key. The operation starts.

<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>Feed In(H)</td><td>DF paper entry motor (DFPEM) is turned on at high speed</td></tr>
<tr><td>Feed In(L)</td><td>DF paper entry motor (DFPEM) is turned on at low speed</td></tr>
<tr><td>Middle(H)</td><td>DF middle motor (DFMM) is turned on at high speed</td></tr>
<tr><td>Middle(L)</td><td>DF middle motor (DFMM) is turned on at low speed</td></tr>
<tr><td>Eject(H)</td><td>DF eject motor (DFEM) is turned on at high speed</td></tr>
<tr><td>Eject(L)</td><td>DF eject motor (DFEM) is turned on at low speed</td></tr>
<tr><td>Save(H)</td><td>DF drum motor (DFDRM) is turned on at high speed</td></tr>
<tr><td>Save(L)</td><td>DF drum motor (DFDRM) is turned on at low speed</td></tr>
<tr><td>Tray</td><td>DF tray motor (DFTM) is turned on</td></tr>
<tr><td>Staple Move</td><td>DF slide motor (DFSLM) is turned on</td></tr>
<tr><td>Staple</td><td>DF staple motor (DFSTM) is turned on</td></tr>
<tr><td>Width Test(A3)</td><td>DF side registration motor 1, 2 (DFSRM1, 2) is turned on</td></tr>
<tr><td>Width Test(LD)</td><td>DF side registration motor 1, 2 (DFSRM1, 2) is turned on</td></tr>
<tr><td>Beat</td><td>DF paddle motor (DFPDM) is turned on</td></tr>
<tr><td>Eject Unlock(HP)</td><td>DF eject release motor (DFERM) is turned on to home position</td></tr>
<tr><td>Sort Test</td><td>DF shift motor 1, 2 (DFSFM1, 2) is turned on</td></tr>
<tr><td>EjectUnlock(30)</td><td>DF eject release motor (DFERM) drive position 30-sheet stack</td></tr>
<tr><td>EjectUnlock(50)</td><td>DF eject release motor (DFERM) drive position 50-sheet stack</td></tr>
</table>

</td></tr>
</table>

Item No.	Description
U240	

Display	Description
EjectUnlock(Fix)	DF eject release motor (DFERM) fixed drive position
EjectUnlock(Full)	DF eject release motor (DFERM) full-open drive position
Punch	Punch motor (PUM) is turned on
Punch Move	Punch slide motor (PUSLM) is turned on

Method: [Solenoid]

1. Select the item to be operated.
2. Press the OK key. The operation starts.

Display	Description
Sub Tray	DF feedshift solenoid (DFFSSOL) is turned on
Save Drum	DF drum solenoid (DFDRSOL) is turned on
Booklet	DF center fold solenoid (DFCFSOL) is turned on
Punch	Punch solenoid (PUSOL) is turned on
Three Fold	CF feedshift solenoid (CFFSSOL) is turned on

Method: [Mail Box/Top Mail Box]

1. Select the item to be operated.
2. Press the OK key. The operation starts.

Display	Description
Conv	MB drive motor (MBDM) is turned on at paper conveying
Branch	MB drive motor (MBDM) is turned on at feedshift operation

Method: [Booklet]

1. Select the item to be operated.
2. Press the OK key. The operation starts.

Display	Description
Folding	CF main motor (CFMM) is turned on
Blade	CF blade motor (CFBM) is turned on
Bundle Up	CF adjustment motor 2 (CFADM2) is turned on
Bundle Down	CF adjustment motor 1 (CFADM1) is turned on
Staple	CF staple motor (CFSTM) is turned on
Width Test(A3)	CF side registration motor 1, 2 (CFSRM1, 2) is turned on
Width Test(LD)	CF side registration motor 1, 2 (CFSRM1, 2) is turned on
Feed In	CF paper entry motor (CFPEM) is turned on

Completion

Press the Back key. The screen for selecting a maintenance item No. is displayed.

Item No.	Description
U241	**Checking the operation of the switches of the finisher** **Description** Displays the status of each switches and sensors of 1000-sheet finisher or 4000-sheet finisher. **Purpose** To check the operation of each switches and sensors of the 1000-sheet finisher or 4000-sheet finisher. **Method** 1. Press the OK key. 2. Select the item to be checked. 3. Press the OK key

Display	Description
Finisher	Checking the switch and sensor of the document finisher
Mail Box	Checking the switch and sensor of the mailbox
Booklet	Checking the switch and sensor of the center-folding unit
Top Mail Box	Checking the motor of the top mailbox
Punch	Checking the switch and sensor of the punch unit

Method: [Finisher]

1. Turn each switch or sensor on and off manually to check the status.
   When a switch/sensor is detected to be in the ON position, the display for that switch/sensor will be “1”.

Display		Description
Switch 1	0 0 0 0 0 0 0	
	1	First digit: DF front cover switch (DFFCSW)
	1	Second digit: DF eject cover switch (DFECSW)*1
	1	Third digit: DF top cover switch (DFTCSW)*2
	1	Fourth digit: DF tray sensor 1 (DFTS1)
	1	Fifth: DF tray sensor 2 (DFTS2)*1
	1	Sixth: DF tray sensor 3 (DFTS3)
	1	Seventh: DF tray sensor 4 (DFTS4)
Switch 2	0 0 0 0 0 0 0	
	1	First digit: DF tray sensor 5 (DFTS5)*1
	1	Second digit: DF tray upper surface sensor (DFTUSS)
	1	Third digit: DF paper entry sensor (DFPES)
	1	Fourth digit: DF sub eject sensor (DFSES)*1
	1	Fifth: DF middle eject sensor (DFMES)
	1	Sixth: DF drum sensor (DFDRS)*1
	1	Seventh: DF slide sensor (DFSLS)

Item No.	Description
U241	

Display	Description
Switch 3 0 0 0 0 0 0 0	
1	First digit: DF middle tray sensor (DFMTS)
1	Second digit: DF side registration sensor 1 (DFSRS1)
1	Third digit: DF side registration sensor 2 (DFSRS2)
1	Fourth digit: DF bundle discharge sensor (DFBDS)*1
1	Fifth: DF adjustment sensor (DFADS)
1	Sixth: DF paddle sensor (DFPDS)*1
1	Seventh: DF shift sensor 1 (DFSFS1)
Switch 4 0 0 0 0 0 0 0	
1	First digit: DF shift sensor 2 (DFSFS2)
1	Second digit: DF shift release sensor (DFSFRS)
1	Third digit: DF sub tray full sensor (DFSTFS)
1	Fourth digit: DF shift set sensor (DFSFSS)

* : *1: 4000-sheet finisher only. *2: 1000-sheet finisher only.

Method: [Mail Box]

1. Turn each switch or sensor on and off manually to check the status.
   When a switch/sensor is detected to be in the ON position, the display for that switch/sensor will be “1”.

Display	Description
Switch 1 0 0 0 0 0 0 0	
1	First digit: MB eject sensor (MBES)
1	Second digit: MB cover open/close switch (MBCOCSW)
1	Third digit: MB overflow sensor 1 (MBOFS1)
1	Fourth digit: MB overflow sensor 2 (MBOFS2)
1	Fifth: MB overflow sensor 3 (MBOFS3)
1	Sixth: MB overflow sensor 4 (MBOFS4)
1	Seventh: MB overflow sensor 5 (MBOFS5)
Switch 2 0 0 0 0 0 0 0	
1	First digit: MB overflow sensor 6 (MBOFS6)
1	Second digit: MB overflow sensor 7 (MBOFS7)
1	Third digit: MB paper entry sensor (MBPES)

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U241</td><td>
Method: [Booklet]
1. Turn each switch or sensor on and off manually to check the status.
When a switch/sensor is detected to be in the ON position, the display for that switch/sensor will be “1”.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>Switch 1 0 0 0 0 0 0 0</td><td></td></tr>
<tr><td>1</td><td>First digit: CF paper entry sensor (CFPES)</td></tr>
<tr><td>1</td><td>Second digit: CF eject sensor (CFES)</td></tr>
<tr><td>1</td><td>Third digit: CF paper sensor (CFPS)</td></tr>
<tr><td>1</td><td>Fourth digit: CF tray full sensor (CFTFS)</td></tr>
<tr><td>1</td><td>Fifth: CF adjustment sensor 1 (CFADS1)</td></tr>
<tr><td>1</td><td>Sixth: CF adjustment sensor 2 (CFADS2)</td></tr>
<tr><td>1</td><td>Seventh: CF side registration sensor 1 (CFSRS1)</td></tr>
<tr><td>Switch 2 0 0 0 0 0 0 0</td><td></td></tr>
<tr><td>1</td><td>First digit: CF side registration sensor 2 (CFSRS2)</td></tr>
<tr><td>1</td><td>Second digit: CF blade sensor (CFBLS)</td></tr>
<tr><td>1</td><td>Third digit: CF tray switch (CFTSW)</td></tr>
<tr><td>1</td><td>Fourth digit: CF set switch (CFSSW)</td></tr>
<tr><td>1</td><td>Fifth: CF left guide switch (CFLGSW)</td></tr>
<tr><td>1</td><td>Sixth: CF paper conveying sensor (CFPCS)</td></tr>
<tr><td>1</td><td>Seventh: CF side registration sensor 2 (CFSRS2)</td></tr>
</table>
Method: [Punch]
1. Turn each switch or sensor on and off manually to check the status.
When a switch/sensor is detected to be in the ON position, the display for that switch/sensor will be “1”.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>Switch 1 0 0 0 0 0 0 0</td><td></td></tr>
<tr><td>1</td><td>First digit: Punch home position sensor (PUHPS)</td></tr>
<tr><td>1</td><td>Second digit: Punch paper edge sensor (PUPES)</td></tr>
<tr><td>1</td><td>Third digit: Punch paper edge sensor (PUPES)</td></tr>
<tr><td>1</td><td>Fourth digit: Punch paper edge sensor (PUPES)</td></tr>
<tr><td>1</td><td>Fifth: Punch paper edge sensor (PUPES)</td></tr>
<tr><td>1</td><td>Sixth: Punch tank set switch (PUTSSW)</td></tr>
<tr><td>1</td><td>Seventh: Punch tank full sensor (PUTFS)</td></tr>
</table>
Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
</table>

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U246</td><td>

Setting the finisher

Description
Provides various settings for the 1000-sheet finisher or 4000-sheet finisher, if furnished.
Purpose
1. **Adjustment of registration stop timing in punch mode**
   Adjust if skewed paper conveying occurs or if the print paper is Z-folded in punch mode.
2. **Adjustment of paper stop timing in the punch mode**
   To adjust this item when the position of a punch hole is different from the specified one.
3. **Adjustment of center position timing in the punch mode**
   Adjusts the center position of a punch hole in punch mode if the position is not proper.
4. **Adjustment of front/rear side registration home position**
   Provides optimization when paper jam occurs due to an inferior fitting of the side registration guides to paper.
5. **Adjustment of front/rear shift home position**
   Performed when adjustment is lost with the ejected paper
6. **Adjusting of front/back stapling home position**
   Adjusts the stapling position in the staple mode if the position is not proper.
7. **Adjustment of upper/lower side registration home position**
   Provides optimization when paper jam occurs due to an inferior fitting of the side registration guides to paper.
8. **Adjustment of booklet stapling position**
   Adjusts the booklet stapling position in the stitching mode if the position is not proper.
9. **Adjustment of center folding position**
   Adjusts the center folding position in the stitching mode if the position is not proper.
10. **Adjustment of tri- folding position**
    Adjusts the tri-folding position in the stitching mode if the position is not proper.

Method
1. Press the OK key.
2. Select the item to set.
3. Press the OK key.

Display	Description
Finisher	Adjustment of 1000-sheet finisher and 4000-sheet finisher
Booklet	Adjustment of center-folding unit

Method: [Finisher]
1. Select the item to set.

Display	Description
Punch Regist	1.Adjustment of registration stop timing in punch mode
Punch Feed	2.Adjustment of the paper stop timing in punch mode
Punch Width	3.Adjustment of the center position timing in punch mode
WidthFront HP	4.Adjustment of front side registration home position
WidthTail HP	4.Adjustment of rear side registration home position
ShiftFront HP	5.Adjustment of front shift home position
ShiftTail HP	5.Adjustment of rear shift home position
Staple HP	6.Adjustment of front and back stapling home position

</td></tr>
</table>

Item No.	Description
U246	**Setting: [Punch Regist]** 1. Select [Punch Regist]. 2. Change the setting value using the numeric keys.

Description	Setting range	Initial setting	Change in value per step
Adjustment of registration stop timing	-20 to 20	0	0.25 mm

If skewed paper conveying occurs (sample 1), increase the setting value. If the print paper is Z-folded (sample 2), decrease the setting value.

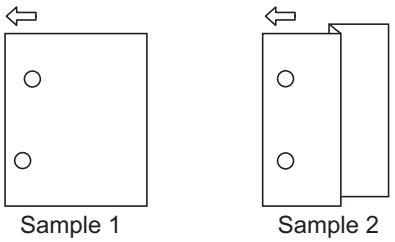


Figure 1-3-7

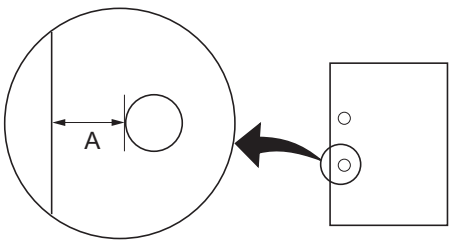
3. Press the OK key. The value is set.

Setting: [Punch Feed]

1. Select [Punch Feed].
2. Change the setting value using the numeric keys.

Description	Setting range	Initial setting	Change in value per step
Adjustment of the paper stop timing	-10 to 10	0	0.52 mm

If the distance of the position of a punch hole is smaller than the specified value A, increase the setting value. If the distance is larger than the value A, decrease the setting value.



Preset value A: 13 mm (metric)
9.5 mm (inch)

Figure 1-3-8

3. Press the OK key. The value is set.

Item No.	Description
U246	**Setting: [Punch Width]** 1. Select [Punch Width]. 2. Change the setting value using the numeric keys.

Description	Setting range	Initial setting	Change in value per step
Adjustment of the punch center position timing	-4 to 4	0	0.52 mm

If the punch hole is too close to the front of the machine, increase the setting value. If the punch hole is too close to the rear of the machine, decrease the setting value.

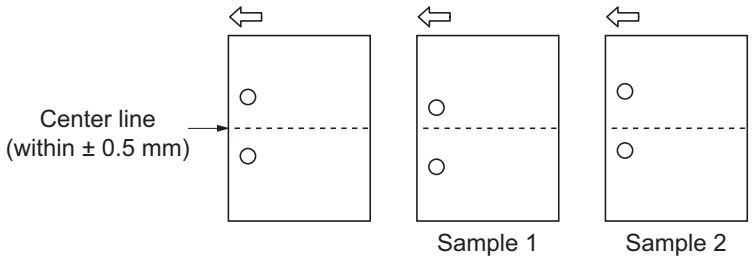


Figure 1-3-9

3. Press the OK key. The value is set.

Setting: [WidthFront HP/WidthTail HP]

1. Select [Width Front HP] or [Width Tail HP].
2. Change the setting value using the numeric keys.

Description	Setting range	Initial setting	Change in value per step
Adjustment of front side registration home position	-15 to 15	0	0.19 mm
Adjustment of rear side registration home position	-15 to 15	0	0.19 mm

3. Press the OK key. The value is set.
4. Press the Back key. The screen for selecting a maintenance item No. is displayed.
5. Enter maintenance mode U240 and select [Motor], then [Width Test(A3)].
   The width guides of the middle tray will move to A3-size position.
6. Pull the middle tray, insert paper between the guides and check that paper is abut the guides.
7. Repeat the above adjustment until paper is properly in position.

Setting: [ShiftFront HP/ShiftTail HP]

1. Select [Shift Front HP] or [Shift Tail HP].
2. Change the setting value using the numeric keys.

Description	Setting range	Initial setting	Change in value per step
Adjustment of front shift home position	-15 to 15	0	0.19 mm
Adjustment of rear shift home position	-15 to 15	0	0.19 mm

3. Press the OK key. The value is set.
4. Press the Back key. The screen for selecting a maintenance item No. is displayed.
5. Enter maintenance mode U240 and select [Motor], then [Sort Test].
6. Repeat the above adjustment until eject paper is properly in position.

Item No.	Description
U246	**Setting: [Staple HP]** 1. Select [Staple HP]. 2. Change the setting value using the numeric keys.

Description	Setting range	Initial setting	Change in value per step
Adjustment of front and back stapling home position	-15 to 15	0	0.19 mm

When staple positions are off toward the front side of the machine (sample 1), increase the setting value. When staple positions are off toward the rear side of the machine (sample 2), decrease the setting value.

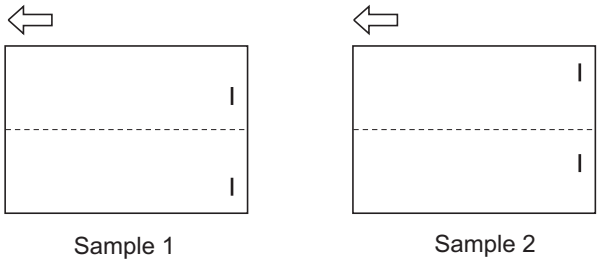


Figure 1-3-10

3. Press the OK key. The value is set.

Method: [Booklet]

1. Select the item to set.

Display	Description
WidthUp HP	7.Adjustment of upper side registration home position
WidthDown HP	7.Adjustment of lower side registration home position
Staple Pos1	8.Adjustment of booklet stapling position for A4/Letter size
Staple Pos2	8.Adjustment of booklet stapling position for B4/Legal size
Staple Pos3	8.Adjustment of booklet stapling position for A3/Ledger/8K size
Booklet Pos1	9.Adjustment of center folding position for A4/Letter size
Booklet Pos2	9.Adjustment of center folding position for B4/Legal size
Booklet Pos3	9.Adjustment of center folding position for A3/Ledger/8K size
Three Fold	10.Adjustment of tri-folding position

Item No.	Description
U246	**Setting: [WidthUp HP/WidthDown HP]** 1. Select [Width Up HP] or [Width Down HP]. 2. Change the setting value using the numeric keys.

Description	Setting range	Initial setting	Change in value per step
Adjustment of upper side registration home position	-15 to 15	0	0.34 mm
Adjustment of lower side registration home position	-15 to 15	0	0.34 mm

3. Press the OK key. The value is set.
4. Press the Back key. The screen for selecting a maintenance item No. is displayed.
5. Enter maintenance mode U240 and select [Booklet], then [Width Test(A3)].
   The width guides of the center-folding unit will move to A3-size position.
6. Pull the center-folding unit, insert paper between the guides and check that paper is abut the guides.
7. Repeat the above adjustment until paper is properly in position.

Setting: [Staple Pos]

1. Select [Staple Pos1], [Staple Pos2] or [Staple Pos3].
2. Change the setting value using the numeric keys.

Description	Setting range	Initial setting	Change in value per step
Adjustment of booklet stapling position for A4/Letter size	-15 to 15	0	0.32 mm
Adjustment of booklet stapling position for B4/Legal size	-15 to 15	0	0.32 mm
Adjustment of booklet stapling position for A3/Ledger/8K size	-15 to 15	0	0.32 mm

When staples are placed too far right (sample 1), decrease the preset value. When staples are placed too far left (sample 2), increase the preset value.
Reference value: within ± 2 mm

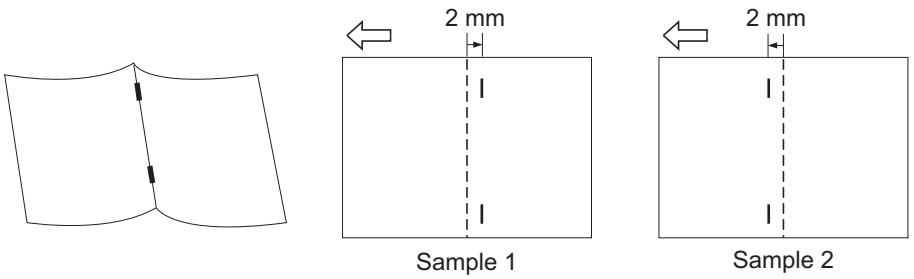


Figure 1-3-11

3. Press the OK key. The value is set.

Item No.	Description
U246	**Setting: [Booklet Pos]** 1. Select [Booklet Pos1], [Booklet Pos2] or [Booklet Pos3]. 2. Change the setting value using the numeric keys.

Description	Setting range	Initial setting	Change in value per step
Adjustment of center folding position for A4/Letter size	-15 to 15	0	0.32 mm
Adjustment of center folding position for B4/Legal size	-15 to 15	0	0.32 mm
Adjustment of center folding position for A3/Ledger/ 8K size	-15 to 15	0	0.32 mm

When the centerfold position too far right (sample 1), increase the preset value. When the centerfold position too far left (sample 2), decrease the setting value.
Reference value A: A4, Letter: Length of paper × 1/2 ± 2 mm
A3, Ledger, B4: Length of paper × 1/2 ± 3 mm

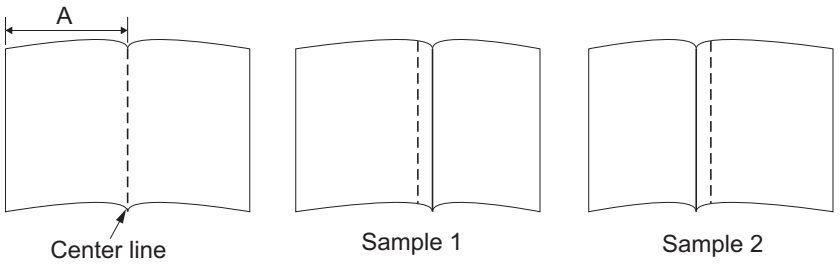


Figure 1-3-12

3. Press the OK key. The value is set.

Setting: [Three Fold]
1. Select [Three Fold].
2. Change the setting value using the numeric keys.

Description	Setting range	Initial setting	Change in value per step
Adjustment of tri-folding position	-15 to 15	0	0.32 mm

When the tri-fold position too far right (sample 1), increase the preset value. When the tri-fold position too far left (sample 2), decrease the setting value.
Reference value A: 7.0 ± 2 mm

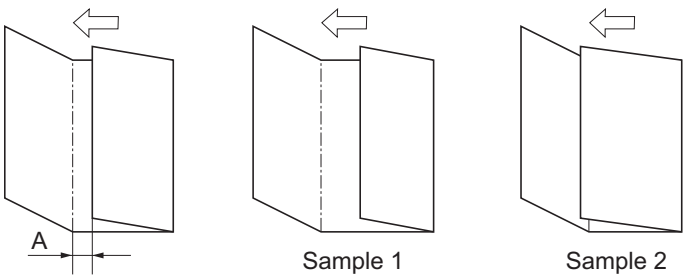


Figure 1-3-13

3. Press the OK key. The value is set.

Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U247</td><td>

Setting the paper feed device

Description
Turns on motor and clutches of paper feeder device.
Purpose
To check the operation of motor and clutches of paper feed device.

Method
1. Press the OK key.
2. Select the paper feed device.

<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>2PF</td><td>Paper feeder</td></tr>
<tr><td>LCF</td><td>Large capacity feeder</td></tr>
<tr><td>Side Deck</td><td>Side deck</td></tr>
<tr><td>SMT</td><td>Side multi tray</td></tr>
<tr><td>Side 2PF</td><td>Side paper feeder</td></tr>
<tr><td>Side LCF</td><td>Side large capacity feeder</td></tr>
</table>

Method: [2PF/Side 2PF]
1. Press the OK key.
2. Select [Motor] or [Device].
3. Select the item to be operated using the Left/Right Select keys.

<table>
<tr><th colspan="2">Display</th><th>Description</th></tr>
<tr><td>Motor</td><td>Off</td><td>PF paper feed motor (PFPFM) is turned off</td></tr>
<tr><td></td><td>On</td><td>PF paper feed motor (PFPFM) is turned on</td></tr>
<tr><td>Device</td><td>C1 Clutch</td><td>PF paper conveying clutch 1 (PFPCCL1) is turned on</td></tr>
<tr><td></td><td>C2 Clutch</td><td>PF paper conveying clutch 2 (PFPCCL2) is turned on</td></tr>
<tr><td></td><td>V Feed(H) Clutch</td><td>PF paper feed clutch 1 (PFPFCL1) is turned on</td></tr>
<tr><td></td><td>V Feed(L) Clutch</td><td>PF paper feed clutch 2 (PFPFCL2) is turned on</td></tr>
<tr><td></td><td>Cassette1 Solenoid</td><td>PF pickup solenoid 1 (PFPUSOL1) is turned on</td></tr>
<tr><td></td><td>Cassette2 Solenoid</td><td>PF pickup solenoid 2 (PFPUSOL2) is turned on</td></tr>
</table>

4. Select [Execute].
5. Press the OK key. The operation starts.
6. To stop operation, press the Back key.

</td></tr>
</table>

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U247</td><td>
Method: [LCF/Side LCF]
1. Press the OK key.
2. Select [Motor] or [Device].
1. Select the item to be operated using the Left/Right Select keys
<table>
<tr><th colspan="2">Display</th><th>Description</th></tr>
<tr><td>Motor</td><td>Off</td><td>PF paper feed motor (PFPFM) is turned off</td></tr>
<tr><td></td><td>On</td><td>PF paper feed motor (PFPFM) is turned on</td></tr>
<tr><td>Device</td><td>C1 Clutch</td><td>PF paper conveying clutch 1 (PFPCCL1) is turned on</td></tr>
<tr><td></td><td>C2 Clutch</td><td>PF paper conveying clutch 2 (PFPCCL2) is turned on</td></tr>
<tr><td></td><td>V Feed Clutch</td><td>PF paper conveying clutch 3 (PFPCCL3) is turned on</td></tr>
<tr><td></td><td>H Feed1 Clutch</td><td>PF paper feed clutch 1 (PFPFCL1) is turned on</td></tr>
<tr><td></td><td>H Feed2 Clutch</td><td>PF paper feed clutch 2 (PFPFCL2) is turned on</td></tr>
<tr><td></td><td>Cassette1 Solenoid</td><td>PF pickup solenoid 1 (PFPUSOL1) is turned on</td></tr>
<tr><td></td><td>Cassette2 Solenoid</td><td>PF pickup solenoid 2 (PFPUSOL2) is turned on</td></tr>
</table>
2. Select [Execute].
3. Press the OK key. The operation starts.
4. To stop operation, press the Back key.

Method: [Side Deck]
1. Press [Motor] or [Device] and select the item.
<table>
<tr><th colspan="2">Display</th><th>Description</th></tr>
<tr><td>Motor</td><td>Off</td><td>SF paper feed motor (SFPFM) is turned off</td></tr>
<tr><td></td><td>On</td><td>SF paper feed motor (SFPFM) is turned on</td></tr>
<tr><td>Device</td><td>C1 Clutch</td><td>SF paper conveying clutch (SFPCCL) is turned on</td></tr>
<tr><td></td><td>Cassette1 Solenoid</td><td>SF pickup solenoid (PFPUSOL) is turned on</td></tr>
</table>
2. Select [Execute].
3. Press the OK key. The operation starts.
4. To stop operation, press the Back key.
</td></tr>
</table>

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U247</td><td>
Method: [SMT]
1. Press the OK key.
2. Select [Motor] or [Device].
1. Select the item to be operated using the Left/Right Select keys
<table>
<tr><th colspan="2">Display</th><th>Description</th></tr>
<tr><td>Motor</td><td>Off</td><td>SM paper feed motor (SMPFM) is turned off</td></tr>
<tr><td></td><td>On</td><td>SM paper feed motor (SMPFM) is turned on</td></tr>
<tr><td>Device</td><td>C1 Clutch</td><td>SM paper conveying clutch 1 (SMPCCL1) is turned on</td></tr>
<tr><td></td><td>Feed1 Clutch</td><td>SM paper conveying clutch 2 (SMPCCL2) is turned on</td></tr>
<tr><td></td><td>Feed2 Clutch</td><td>SM paper conveying clutch 3 (SMPCCL3) is turned on</td></tr>
<tr><td></td><td>Feed3 Clutch</td><td>SM paper conveying clutch 4 (SMPCCL4) is turned on</td></tr>
<tr><td></td><td>Cassette1 Solenoid</td><td>SM pickup solenoid (SMPUSOL) is turned on</td></tr>
<tr><td></td><td>Separator Solenoid</td><td>SM feedshift solenoid (SMFSSOL) is turned on</td></tr>
</table>
2. Select [Execute].
3. Press the OK key. The operation starts.
To stop operation, press the Back key.

Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
<tr><td>U250</td><td>
Checking/clearing the maintenance cycle

Description
Changes preset values for maintenance cycle.
Purpose
Provides changing the time when the message to acknowledge to conduct maintenance is periodically displayed.

Setting
1. Press the OK key.
2. Select the item to be set.
3. Change the setting using the Left/Right Select keys or numeric keys.
<table>
<tr><th>Display</th><th>Description</th><th>Setting range</th><th>Initial setting</th></tr>
<tr><td>M.Cnt A</td><td>Preset values for maintenance cycle (kit A)</td><td>0 to 9999999</td><td>600000</td></tr>
<tr><td>M.Cnt B</td><td>Preset values for maintenance cycle (kit B)</td><td>0 to 9999999</td><td>600000</td></tr>
<tr><td>M.Cnt C</td><td>Preset values for maintenance cycle (kit C)</td><td>0 to 9999999</td><td>300000</td></tr>
</table>
4. Press the OK key. The value is set.

Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
</table>

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U251</td><td>

Checking/clearing the maintenance counter

Description
Displays and clears or changes the maintenance count.
Purpose
To verify the maintenance counter count. Also to clear the count during maintenance service.

Setting
1. Press the OK key.
2. Select the item to be changed.
3. Change the setting using the numeric keys.

<table>
<tr><th>Display</th><th>Description</th><th>Setting range</th><th>Initial setting</th></tr>
<tr><td>M.Cnt A</td><td>Count value for maintenance cycle (kit A)</td><td>0 to 9999999</td><td>0</td></tr>
<tr><td>M.Cnt B</td><td>Count value for maintenance cycle (kit B)</td><td>0 to 9999999</td><td>0</td></tr>
<tr><td>M.Cnt C</td><td>Count value for maintenance cycle (kit C)</td><td>0 to 9999999</td><td>0</td></tr>
</table>

4. Press the OK key. The value is set.

Clearing
1. Select [Clear].
2. Press the OK key. The setting value is cleared.

Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.

</td></tr>
</table>

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U252</td><td>
Setting the destination

Description
Switches the operations and screens of the machine according to the destination.
Purpose
To be executed after initializing the backup RAM, in order to return the setting to the value before replacement or initialization.

Method
1. Press the OK key.
2. Select the destination.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>Japan Metric</td><td>Metric (Japan) specifications</td></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>
<tr><td>Korea</td><td>Korea specifications</td></tr>
</table>
3. Press the OK key.
4. Exit the maintenance mode, perform shut-down, and turn the main power switch to off and on again. Allow more than 5 seconds between Off and On.
* : 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 U252.
</td></tr>
</table>

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U253</td><td>

Switching between double and single counts

Description
Switches the count system for the total counter and other counters for every color mode.
Purpose
Used to select, according to the preference of the user, if A3/Ledger paper is to be counted as one sheet (single count) or two sheets (double count).

Setting
1. Press the OK key.
2. Select the item to set.
3. Press the OK key.

<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>Full Color</td><td>Count system of full color mode</td></tr>
<tr><td>B/W</td><td>Count system of black/white mode</td></tr>
</table>

4. Select the count system.

<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>SGL(All)</td><td>Single count for all size paper</td></tr>
<tr><td>DBL(A3/Ledger)</td><td>Double count for A3/Ledger size or larger</td></tr>
<tr><td>DBL(B4)</td><td>Double count for B4 size or larger</td></tr>
<tr><td>DBL(Folio)</td><td>Double count for Folio size or larger</td></tr>
</table>

Initial setting: DBL(A3/Ledger)
5. Press the OK key. The setting is set.

Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.

</td></tr>
</table>

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U260</td><td>
Selecting the timing for print counting

Description
Changes the print count timing for the total counter and other counters.
Purpose
To be set according to user request.

Setting
1. Press the OK key.
2. Select the print count timing.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>Feed</td><td>When secondary paper feed starts</td></tr>
<tr><td>Eject</td><td>When the paper is ejected</td></tr>
</table>
Initial setting: Eject
3. Press the OK key. The setting is set.

Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
<tr><td>U265</td><td>
Setting OEM purchaser code

Description
Sets the OEM purchaser code.
Purpose
Sets the code when replacing the main PWB and the like.

Setting
1. Press the OK key.
2. Change the setting value using the numeric keys.
3. Press the OK key. The setting is set.
4. Exit the maintenance mode, perform shut-down, and turn the main power switch to off and on again. Allow more than 5 seconds between Off and On.
</td></tr>
</table>

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U271</td><td>
Setting the page count

Description
Banner counting
Purpose
To change when modifying counting Banner

Setting
1. Press the OK key.
2. Select the item.
3. Change the setting value using the numeric keys.
<table>
<tr><th>Display</th><th>Description</th><th>Setting range</th><th>Initial setting</th></tr>
<tr><td>Banner A</td><td>Counting for Banner A (470.1mm to 915mm/18.51” to 36”)</td><td>2 to 30</td><td>2</td></tr>
<tr><td>Banner B</td><td>Counting for Banner B (915.1mm to 1,220mm/36.01” to 48”)</td><td>2 to 30</td><td>3</td></tr>
</table>
4. Press the OK key. The value is set.

Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
<tr><td>U278</td><td>
Setting the delivery date

Description
Enter delivery date in month, day, and year.
Purpose
To operate when installing the machine. Perform this to confirm the delivery date.

Method
1. Press the OK key.
2. Select [Today].
3. Press the OK key. The delivery date is set.

Setting
1. Press the OK key.
2. Select [Year], [Month] or [Day].
3. Change the setting using thenumeric keys.
4. Press the OK key. The setting is set.

Clearing
1. Select [Clear].
2. Press the OK key. The delivery date is cleared.

Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
</table>

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U285</td><td>
Setting service status page

Description
Determines displaying the print coverage report on reporting.
Purpose
According to user request, changes the setting.

Setting
1. Press the OK key.
2. Select On or Off.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>On</td><td>Displays the print coverage</td></tr>
<tr><td>Off</td><td>Not to display the print coverage</td></tr>
</table>
Initial setting: On
3. Press the OK key. The setting is set.

Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
<tr><td>U323</td><td>
Setting abnormal temperature and humidity warning

Description
Specify whether or not a notice is displayed on the operation panel when abnormal temperature and humidity is detected.
Purpose
According to user request, changes the setting.

Setting
1. Press the OK key.
2. Select On or Off.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>On</td><td>Displays the abnormal temperature and humidity warning</td></tr>
<tr><td>Off</td><td>Not to display the abnormal temperature and humidity warning</td></tr>
</table>
Initial setting: On
3. Press the OK key. The setting is set.

Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
</table>

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U325</td><td>

Setting the paper interval

Description
Determines the interval between pages and the toner replenishment amount when printing pages with high print coverage.
Purpose
Modify the settings only if a spotted background or uneven density appears when printing pages with high print coverage.

Method
1. Press the OK key.
2. Select the item to set.

<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>Interval</td><td>Paper interval control ON/OFF setting</td></tr>
<tr><td>Mode</td><td>Setting mode of the paper interval control</td></tr>
</table>

Setting: [Interval]
1. Select On or Off.

<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>On</td><td>Paper interval control is performed</td></tr>
<tr><td>Off</td><td>Paper interval control is not performed</td></tr>
</table>

Initial setting: Off
2. Press the OK key. The setting is set.

Setting: [Mode]
1. Change the setting value using the numeric keys.

<table>
<tr><th>Display</th><th>Description</th><th>Setting range</th><th>Initial setting</th></tr>
<tr><td>Mode</td><td>Paper interval control mode</td><td>1 to 10</td><td>1</td></tr>
</table>

Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.

</td></tr>
</table>

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U327</td><td>
Setting the cassette heater control

Description
Sets the cassette heater control.
Purpose
To change the setting according to the machine installation environment.

Setting
1. Press the OK key.
2. Select On or Off.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>Mode1</td><td>Set to On at 65% RH (during sleep mode or in ready state)</td></tr>
<tr><td>Mode2</td><td>Always on (during sleep mode or in ready state)</td></tr>
<tr><td>Off</td><td>Cassette heater OFF</td></tr>
</table>
Initial setting: Off
3. Press the OK key. The setting is set.

* : To finalize the setting values, exit the maintenance mode, perform shut-down from the normal display, and turn the main power switch off and on again.

Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
</table>

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U332</td><td>
Setting the size conversion factor
Description
Rate: 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 print the service status page.
Mode: Make settings on the color print coverage counter displays, as well as the coverage threshold.

Method
1. Press the OK key.
2. Select the item to set.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>Rate</td><td>Size coefficient</td></tr>
<tr><td>Mode</td><td>Toggling full-color count and color coverage count display</td></tr>
<tr><td>Level 1</td><td>Low coverage threshold value</td></tr>
<tr><td>Level 2</td><td>Middle coverage threshold value</td></tr>
</table>
Setting: [Rate]
Purpose: To set the coefficient for converting the black ratio for nonstandard sizes in relation to the A4/Letter size.
1. Change the setting using the numeric keys.
<table>
<tr><th>Display</th><th>Description</th><th>Setting range</th><th>Initial setting</th></tr>
<tr><td>Rate</td><td>Size coefficient</td><td>0.1 to 3.0</td><td>1.0</td></tr>
</table>
2. Press the OK key. The value is set.

Setting: [Mode]
Purpose: Make settings on the color print color/coverage counter displays.
1. Select the mode.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>0</td><td>Full-color count display</td></tr>
<tr><td>1</td><td>Color coverage count display</td></tr>
</table>
Initial setting: 0
* : If ‘0’ has been changed to ‘1’, revert the U260 feed/eject counter switch to its initial state (Eject).
2. Press the OK key. The setting is set.

Setting: [Level 1/2]
Purpose:Make settings on the color print coverage threshold.
1. Select the item.
2. Change the setting using the numeric keys.
<table>
<tr><th>Display</th><th>Description</th><th>Setting range</th><th>Initial setting</th></tr>
<tr><td>Level 1</td><td>Low coverage threshold value</td><td>0.1 to 99.8</td><td>1.0</td></tr>
<tr><td>Level 2</td><td>Middle coverage threshold value</td><td>0.1 to 99.9</td><td>2.5</td></tr>
</table>
3. Press the OK key. The value is set.
Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
</table>

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U340</td><td>
Setting the applied mode

Description
Allocates memory to ensure that there is sufficient memory available for the printer to use as a working area.
Purpose
Modify the memory allocation if insufficient memory for transparency support or XPS direct printing occurs.

Method
1. Press the OK key.
2. Select the item to set.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>Adj Memory</td><td>Setting the memory allocation</td></tr>
</table>

Setting: [Adj Memory]
1. Change the setting using the numeric keys.
<table>
<tr><th>Display</th><th>Description</th><th>Setting range</th><th>Initial setting</th></tr>
<tr><td>Image</td><td>Area temporarily used to create output image.</td><td>0 to 400 (MB)</td><td>190</td></tr>
<tr><td>Image(Detail)</td><td>Area temporarily used to hold downloaded font and other data.</td><td>0 to 400 (MB)</td><td>1</td></tr>
</table>
Set the values below in case print failure occurs with the memory shortage.
(recommended value)
Image : +190
Image(Detaile) : +1
2. Press the OK key. The value is set.
3. Exit the maintenance mode, perform shut-down, and turn the main power switch to off and on again. Allow more than 5 seconds between Off and On.

Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
</table>

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U345</td><td>
Setting the value for maintenance due indication

Description
Sets when to display a message notifying that the time for maintenance is about to be reached, by setting the number of prints that can be made before the current maintenance cycle ends. When the difference between the number of prints of the maintenance cycle and that of the maintenance count reaches the set value, the message is displayed.
Purpose
To change the time for maintenance due indication.

Setting
1. Press the OK key.
2. Change the setting using the numeric keys.
<table>
<tr><th>Display</th><th>Description</th><th>Setting range</th><th>Initial setting</th></tr>
<tr><td>Cnt</td><td>Time for maintenance due indication
(Remaining number of prints that can be made before the current maintenance cycle ends)</td><td>0 to 9999</td><td>0</td></tr>
</table>
3. Press the OK key. The value is set.

Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
<tr><td>U410</td><td>
Setting a Gamma table

Description
Setting a Gamma table.
Purpose
Setting a Gamma table.

Method
1. Press the OK key.
2. Select the item to set.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>Table1</td><td>Gamma table1</td></tr>
<tr><td>Table2</td><td>Gamma table2</td></tr>
<tr><td>Table3</td><td>Gamma table3</td></tr>
</table>
Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
</table>

Item No.	Description
U460	**Adjusting the conveying sensor** **Description** Compensates the threshold value of the side multi tray's multi feed sensor. **Purpose** If more than one sheet is fed at a time, modify the threshold depending on the environment. **Method** 1. Press the OK key. 2. Select [SMT]. **Method** 1. Select the item. **Setting: [Conveying Sensor]** 1. Select the item. **Setting: [Threshold(S)/(M)]** 1. Select the item. 2. Change the setting value using the numeric keys. 3. Press the OK key. The value is set. **Method: [Execute]** 1. Select [Execute]. 2. Press the OK key. Calibration is executed.

Display	Description
SMT	Settings of multiple feed sensor on the side multi tray

Display	Description
Conveying Sensor	Multi feed sensor settings/Calibration
On/Off Config	Multi feed sensor On/Off settings

Display	Description
Threshold(S)	Paper feeding threshold settings
Threshold(M)	Multi feed threshold settings
Sensor(Non-P)	Empty paper sensor display
Sensor	Displaying sensor value when paper is present
Execute	Executing the calibration

Display	Description	Setting range	Initial setting
Threshold(S)	Paper feeding threshold settings	0 to 254	0
Threshold(M)	Multi feed threshold settings	0 to 254	0

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U460</td><td>
Setting: [On/Off Config]
1. Select On or Off.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>On</td><td>Multi feed sensor is enabled</td></tr>
<tr><td>Off</td><td>Multi feed sensor is disabled</td></tr>
</table>
Initial setting: Off
2. Press the OK key. The setting is set.

Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
</table>

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U464</td><td>
Setting the ID correction operation

Description
Turns ID correction (calibration) on or off. Also, this allows individual settings for calibration operation.
Purpose
Implements various settings of calibration when poor image quality is caused or to allow various settings of calibration depending on the user preference.
To perform the calibration when replacing the maintenance kit.
Method
1. Press the OK key.
1. Select the item to be set.
2. Press the OK key.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>Permission</td><td>Setting to turn calibration on/off</td></tr>
<tr><td>Time Interval</td><td>Setting the interval time of calibration after printing</td></tr>
<tr><td>Mode</td><td>Setting the color print execution mode</td></tr>
<tr><td>On/Sleep Out*</td><td>Setting execution parameters for calibration when powered up or reverted from auto-sleep</td></tr>
<tr><td>AP/NE*</td><td>Paper interval calibration ON/OFF setting at the time of calibration/near end after toner feed</td></tr>
<tr><td>Leaving Time*</td><td>Setting the standard time for judging whether or not to carry out calibration based on the sleep time when the machine recovers from the sleep mode</td></tr>
<tr><td>Driving Time*</td><td>Setting the standard time for judging whether or not to carry out paper interval calibration based on the driving time during printing</td></tr>
<tr><td>Timing*</td><td>Setting the standard time for judging whether or not to carry out calibration based on the continuous print driving time during printing</td></tr>
<tr><td>Target Value</td><td>Setting the sensor target values for toner thick layer calibration and light amount calibration</td></tr>
<tr><td>Print Rate(B/W)*</td><td>Setting the proportion of black/white printing at which black/white calibration is executed during color printing.</td></tr>
<tr><td>Calib</td><td>Executing the calibration</td></tr>
<tr><td>Edge Reduction</td><td>Smoothing edge settings (automatic calibration is implemented after settings are completed)</td></tr>
</table>
*: Enabled when Mode is set to Custom.
Setting: [Permission]
1. Select On or Off.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>On</td><td>Turns calibration ON</td></tr>
<tr><td>Off</td><td>Turns calibration OFF</td></tr>
</table>
Initial setting: On
2. Press the OK key. The setting is set.
</td></tr>
</table>

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U464</td><td>
Setting: [Time Interval]
1. Change the setting value using the numeric keys.
<table>
<tr><th>Display</th><th>Description</th><th>Setting range</th><th>Initial setting</th></tr>
<tr><td>Time(sec)</td><td>Setting the interval time of calibration</td><td>0 to 9999 (s)</td><td>480</td></tr>
</table>
2. Press the OK key. The value is set.

Setting: [Mode]
1. Select the item.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>Short</td><td>Setting the color print execution mode: short</td></tr>
<tr><td>Normal</td><td>Setting the color print execution mode: normal</td></tr>
<tr><td>Long</td><td>Setting the color print execution mode: long</td></tr>
<tr><td>Custom</td><td>Setting the color print execution mode: custom</td></tr>
<tr><td>Auto</td><td>Setting the color print execution mode: auto</td></tr>
</table>
Initial setting: Normal
2. Press the OK key. The setting is set.

Setting: [On/Sleep Out]
1. Select On or Off.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>On</td><td>Executes calibration if fuser temperature is less than 50°C/ 122°F at power-up or recovery from auto sleep mode</td></tr>
<tr><td>Off</td><td>Not to execute calibration regardless of fuser temperature at power-up or recovery from auto sleep mode</td></tr>
</table>
Initial setting: On
2. Press the OK key. The setting is set.

Setting: [AP/NE]
1. Select On or Off.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>On</td><td>Paper interval calibration at the time of calibration/near end after toner feed is carried out</td></tr>
<tr><td>Off</td><td>Paper interval calibration at the time of calibration/near end after toner feed is not carried out</td></tr>
</table>
Initial setting: On
2. Press the OK key. The setting is set.
</td></tr>
</table>

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U464</td><td>
Setting: [Leaving Time]
1. Change the setting value using the numeric keys.
<table>
<tr><th>Display</th><th>Description</th><th>Setting range</th><th>Initial setting</th></tr>
<tr><td>Time(min)</td><td>Setting the standard time of sleep mode</td><td>0 to 480 (min)</td><td>480</td></tr>
</table>
2. Press the OK key. The value is set.

Setting: [Driving Time]
1. Change the setting value using the numeric keys.
<table>
<tr><th>Display</th><th>Description</th><th>Setting range</th><th>Initial setting</th></tr>
<tr><td>Time(sec)</td><td>Setting the drive standard time</td><td>300 to 3000 (s)</td><td>300</td></tr>
</table>
2. Press the OK key. The value is set.

Setting: [Timing]
1. Change the setting value using the numeric keys.
<table>
<tr><th>Display</th><th>Description</th><th>Setting range</th><th>Initial setting</th></tr>
<tr><td>Time(sec)</td><td>Setting the drive standard time of continuous print</td><td>0 to 3600 (s)</td><td>3600</td></tr>
</table>
2. Press the OK key. The value is set.

Setting: [Target Value]
1. Select the item.
2. Change the setting value using the numeric keys.
<table>
<tr><th rowspan="2">Display</th><th rowspan="2">Description</th><th rowspan="2">Setting range</th><th colspan="2">Initial setting</th></tr>
<tr><th>45ppm</th><th>55ppm</th></tr>
<tr><td>Thick-ness(C)</td><td>Toner thick layer calibration (cyan)</td><td>0 to 1000</td><td>890</td><td>890</td></tr>
<tr><td>Thick-ness(M)</td><td>Toner thick layer calibration (magenta)</td><td>0 to 1000</td><td>910</td><td>910</td></tr>
<tr><td>Thick-ness(Y)</td><td>Toner thick layer calibration (yellow)</td><td>0 to 1000</td><td>910</td><td>910</td></tr>
<tr><td>Thick-ness(K)</td><td>Toner thick layer calibration (black)</td><td>0 to 1000</td><td>760</td><td>790</td></tr>
<tr><td>Gamma(C)</td><td>Light amount calibration (cyan)</td><td>0 to 500</td><td>320</td><td>320</td></tr>
<tr><td>Gamma(M)</td><td>Light amount calibration (magenta)</td><td>0 to 500</td><td>320</td><td>320</td></tr>
<tr><td>Gamma(Y)</td><td>Light amount calibration (yellow)</td><td>0 to 500</td><td>300</td><td>300</td></tr>
<tr><td>Gamma(K)</td><td>Light amount calibration (black)</td><td>0 to 500</td><td>350</td><td>350</td></tr>
</table>
3. Press the OK key. The value is set.
</td></tr>
</table>

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U464</td><td>
Setting: [Print Rate(B/W)]
1. Change the setting value using the numeric keys.
<table>
<tr><th>Display</th><th>Description</th><th>Setting range</th><th>Initial setting</th></tr>
<tr><td>Threshold</td><td>Proportion of black/white printing</td><td>0 to 100 (%)</td><td>50</td></tr>
</table>
2. Press the OK key. The value is set.

Method: [Calib]
1. Select [Execute].
2. Press the OK key. Calibration is executed.
* : Duplicates selecting [System Menu] - [Adjustment/Maintenance] - [Calibration].
The same operation as System menu.

Setting: [Edge Reduction]
1. Select On or Off.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>On</td><td>Enable smoothing edges</td></tr>
<tr><td>Off</td><td>Disable smoothing edges</td></tr>
</table>
Initial setting: On
Press the OK key. The setting is set.

Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
<tr><td>U465</td><td>
Data reference for ID correction

Description
References the data related to ID correction.
Purpose
To check the corresponding data.

Method
1. Press the OK key.
2. Select the item to be reference.
3. Press the OK key
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>TCONT</td><td>Developer bias control value after ID correction</td></tr>
<tr><td>Laser Power</td><td>Scaling factor to the value determined in light amount calibration</td></tr>
<tr><td>Bias Calib</td><td>Sensor value for toner thick layer calibration</td></tr>
<tr><td>T7 CTD</td><td>T7 control value</td></tr>
<tr><td>Stress</td><td>Durability</td></tr>
</table>
</td></tr>
</table>

Item No.	Description
U465	**Displaying: [TCOUNT]** Select [TCOUNT]. The current value is displayed.

Display	Description
Before(C)	Developer bias control value for cyan before ID correction
Before(M)	Developer bias control value for magenta before ID correction
Before(Y)	Developer bias control value for yellow before ID correction
Before(K)	Developer bias control value for black before ID correction
After(C)	Developer bias control value for cyan after ID correction
After(M)	Developer bias control value for magenta after ID correction
After(Y)	Developer bias control value for yellow after ID correction
After(K)	Developer bias control value for black after ID correction

Displaying: [Laser Power]

1. Select [Laser Power]. The current value is displayed.

Display	Description
C	Scaling factor to the value determined in light amount calibration (cyan)
M	Scaling factor to the value determined in light amount calibration (magenta)
Y	Scaling factor to the value determined in light amount calibration (yellow)
K	Scaling factor to the value determined in light amount calibration (black)

Displaying: [Bias Calib]

1. Select [Bias Calib]. The current value is displayed.

Display	Description
C	Sensor value for toner thick layer calibration (cyan)
M	Sensor value for toner thick layer calibration (magenta)
Y	Sensor value for toner thick layer calibration (yellow)
K	Sensor value for toner thick layer calibration (black)

Displaying: [T7 CTD]

1. Select [T7 CTD]. The current value is displayed.

Display	Description
C	T7 control value (cyan)
M	T7 control value (magenta)
Y	T7 control value (yellow)
K	T7 control value (black)

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U465</td><td>
Displaying: [Stress]
1. Select [Stress]. The current value is displayed.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>Front</td><td>Durability of the belt (front)</td></tr>
<tr><td>Rear</td><td>Durability of the belt (rear)</td></tr>
</table>
Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
</table>

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U467</td><td>

Setting the color registration adjustment

Description
Sets the color registration adjustment and transfer belt speed correction. Also, determines the conditions by which color registration correction is executed depending on the LSU temperature.
Purpose
If color variance is uneven due to a sensor failure, etc., turn this off and temporarily make a manual adjustment.

Method
1. Press the OK key.
2. Select the item to be set.

<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>Color Regist</td><td>Setting the color registration correction operation</td></tr>
<tr><td>Timing</td><td>After the previous correction is executed, color registration is compensated as the LSU temperature varies by the value determined.</td></tr>
</table>

Setting: [Color Regist]
1. Select On or Off.

<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>On</td><td>Enables the color registration correction operation.</td></tr>
<tr><td>Off</td><td>Disables the color registration correction operation.</td></tr>
</table>

Initial setting: On
2. Press the OK key. The setting is set.

Setting: [Timing]
1. Change the setting value using the numeric keys.

<table>
<tr><th>Display</th><th>Description</th><th>Setting range</th><th>Initial setting</th></tr>
<tr><td>LSU Temp</td><td>Conditions for execution depending on the LSU temperature variation</td><td>2 to 10</td><td>10</td></tr>
</table>

2. Press the OK key. The value is set.

Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.

</td></tr>
</table>

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U468</td><td>

Checking the color registration data

Description
Displays the color registration correction data and transfer belt speed correction data.
Purpose
To check the corresponding data.

Method
1. Press the OK key.
2. Select the item to be reference.
3. Press the OK key.

<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>V Correction</td><td>Display the transfer speed adjustment value</td></tr>
<tr><td>Auto(C)</td><td>Display the auto color registration adjustment value for cyan</td></tr>
<tr><td>Auto(M)</td><td>Display the auto color registration adjustment value for magenta</td></tr>
<tr><td>Auto(Y)</td><td>Display the auto color registration adjustment value for yellow</td></tr>
<tr><td>Manual(C)</td><td>Display the manual color registration adjustment value for cyan</td></tr>
<tr><td>Manual(M)</td><td>Display the manual color registration adjustment value for magenta</td></tr>
<tr><td>Manual(Y)</td><td>Display the manual color registration adjustment value for yellow</td></tr>
</table>

Displaying: [V Correction]
1. Select [V Correction]. The current value is displayed.

<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>Status</td><td>transfer speed adjustment value</td></tr>
</table>

Displaying: [Auto(C)/Auto(M)/Auto(Y)]
1. Select [Auto(C)], [Auto(M)] or [Auto(Y)]. The current value is displayed.

<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>Main Scan</td><td>Auto color registration adjustment value of the main scanning direction</td></tr>
<tr><td>Sub Scan</td><td>Auto color registration adjustment value of the auxiliary scanning direction</td></tr>
<tr><td>Mag</td><td>Auto color registration adjustment value of the magnification</td></tr>
</table>

Displaying: [Manual(C)/Manual(M)/Manual(Y)]
1. Select [Manual(C)], [Manual((M)] or [Manual((Y)]. The current value is displayed.

<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>Main Scan</td><td>Manual color registration adjustment value of the main scanning direction</td></tr>
<tr><td>Sub Scan</td><td>Manual color registration adjustment value of the auxiliary scanning direction</td></tr>
<tr><td>Mag1-6</td><td>Manual color registration adjustment value of the magnification1-6</td></tr>
</table>

</td></tr>
</table>

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U468</td><td>Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.</td></tr>
<tr><td>U469</td><td>Adjusting the color registration

Description
Performs the color registration correction and transfer belt speed correction.
Purpose
To perform when replacing the transfer belt unit or laser scanner unit.

Method
* : Before excuting this mode, the U464 Calib mode must be executed.
1. Press the OK key.
2. Select the item.
3. Press the OK key.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>Manual</td><td>Executing the manual color registration correction</td></tr>
<tr><td>Belt Initialize</td><td>Executing the transfer belt speed correction</td></tr>
<tr><td>Belt Check</td><td>Confirmation of transfer belt position</td></tr>
</table>
Method: [Manual]
1. Select [Print].
2. Press the OK key. A chart for adjustment is outputted.

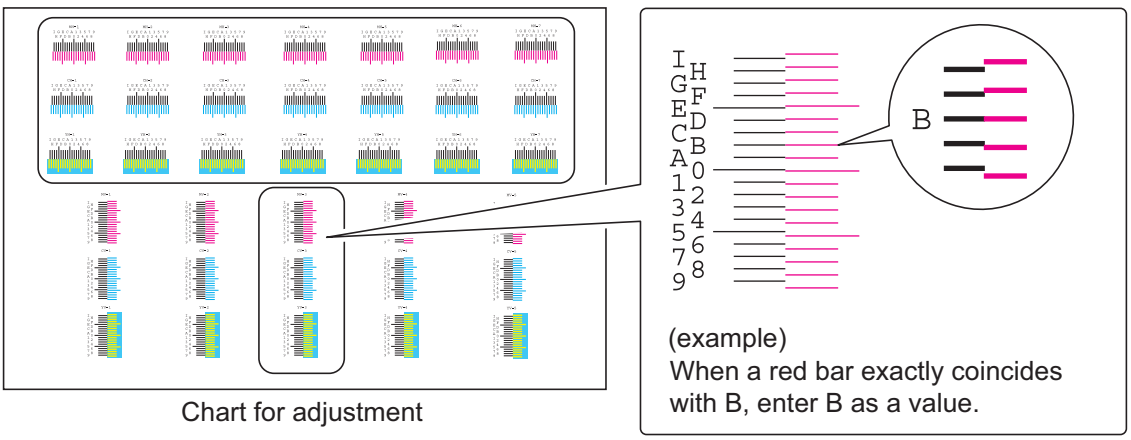
 

Chart for adjustment

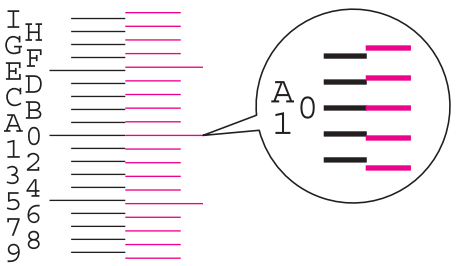
Figure 1-3-14

3. Select [Regist].
4. Read figures at MH-1 to 7/CH-1 to 7/YH-1 to 7 and MV-3/CV-3/YV-3 of the reference chart and enter the figure marked at the scale which the BK fine line is in line with the M/C/Y fine lines, using the cursor and 10 keys.</td></tr>
</table>

Item No.	Description
U469	

Codes	Descrip-tion	Codes	Descrip-tion
CH-1	0	MH-5	0
CH-2	0	MH-6	0
CH-3	0	MH-7	0
CH-4	0	MV-3	0
CH-5	0	YH-1	0
CH-6	0	YH-2	0
CH-7	0	YH-3	0
CV-3	0	YH-4	0
MH-1	0	YH-5	0
MH-2	0	YH-6	0
MH-3	0	YH-7	0
MH-4	0	YV-3	0

5. Press the OK key to finalize the value.
6. Press the OK key after all values have been entered. Color registration correction starts.
7. Print a chart for adjustment.
8. Verify that each scale is within the range of 1to A.



The scale must be corresponding within the range of "A" from "1".

Figure 1-3-15

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U469</td><td>
Method: [Belt Initialize]
1. Select [Execute].
2. Press the OK key. Transfer belt speed correction starts.

Method:[Belt Check]
1. Select [Mode].
2. Change the setting value using the numeric keys.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>Angle</td><td>Display of cam position</td></tr>
<tr><td>Belt Position</td><td>Display of belt position</td></tr>
<tr><td>Mode</td><td>Operational mode</td></tr>
<tr><td>Excute</td><td>Execution of belt position confirmation</td></tr>
</table>
3. Select [Execute].
4. Press the OK key. Transfer belt position confirmation starts, and the value is displayed.

Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
<tr><td>U474</td><td>
Checking LSU cleaning operation

Description
Provides cleaning LSU by means of the LSU cleaning motor. Also, the cleaning cycle can be adjusted.

Method
1. Press the OK key.
2. Select the item.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>Execute</td><td>Executing the cleaning operation</td></tr>
<tr><td>Cycle</td><td>Setting the cleaning cycle</td></tr>
</table>
Method: [Execute]
1. Press the OK key. Cleaning the LSU slit glass.

Setting: [Cycle]
1. Change the setting value using numeric keys.
<table>
<tr><th>Display</th><th>Description</th><th>Setting range</th><th>Initial setting</th></tr>
<tr><td>Cnt</td><td>Cleaning cycle</td><td>0 to 5000</td><td>1000</td></tr>
</table>
The setting can be changed by 1000 per step.
2. Press the OK key. The value is set.

Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
</table>

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U485</td><td>

Setting the color table

Description
Modify and install the color table.
Purpose
Perform the procedure to modify the color table.

Method.
1. Press the OK key.
2. Select the item.

Press the OK key.

<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>Color Table 1(Prn)</td><td>Setting the printer color table (Default)</td></tr>
<tr><td>Color Table 2(Prn)</td><td>Setting the printer color table (Custom)</td></tr>
<tr><td>Install</td><td>Install the printer color table</td></tr>
<tr><td>Uninstall</td><td>Uninstall the printer color table</td></tr>
</table>

Setting: [Color Table 1(Prn)],[Color Table 2(Prn)]
1. Default/Custom printer color tables are shown.
2. Select the target color tables for switching
3. Press the OK key.

Setting: [Install]
* : Before proceeding, make sure that the USB flash device that contains the color table files is inserted.
The color table files must be placed in the root of the USB flash device.
1. Press the Excute button.
2. Press the OK key.
3. Installation is completed when [OK] is displayed.

Setting: [Uninstall]
1. The color table currently being installed is displayed.
2. Select the color table you want to uninstall, then press the OK key.

Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.

</td></tr>
</table>

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U486</td><td>

Setting color/black and white operation mode

Description
When color and B/W documents are mixed, sets operation mode after a color document is detected.
Purpose
Mode: To ensure productivity when printing color and B/W documents in ACS mode, select Mode3. However, selecting Mode3 will increase the maintenance count for cyan, magenta, and yellow color developer units even when there is a B/W printing after a color printing.
Permission: During monochrome half-speed printing, which is color printing mode at hald speed, the color background problem may occur when printing on envelopes.

Method
1. Press the OK key.
2. Select the item.

<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>Mode</td><td>Setting color/black and white operation</td></tr>
<tr><td>Permission</td><td>Allowing black and white half speed mode</td></tr>
</table>

Setting: [Mode]
1. Press the OK key.
2. Select the mode.

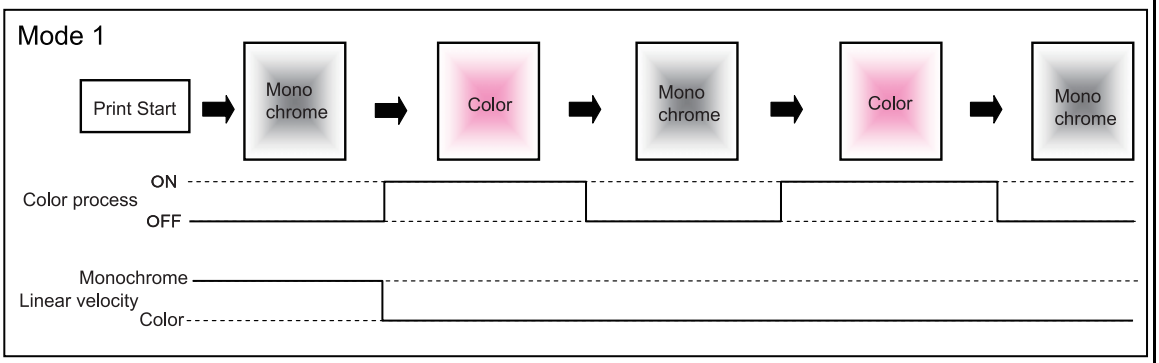
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>Mode1</td><td>A mode suited for the user with high black-and-white usage in which the occurrence of color printing during continuous printing is minimum.
Once diverted to color printing mode, the subsequent black and white printing is executed in the same linear velocity as in color printing with other processings switched on the fly.</td></tr>
<tr><td>Mode2</td><td>A mode suited for the user with high black-and-white usage in which the occurrence of color printing during continuous printing is maximum.
Printing in color mode resumes up to 9 pages in a row even an interrupt is made to switch to black and white mode, until printing is diverted to black and white mode from color mode at the 10th page (color processing is terminated).</td></tr>
<tr><td>Mode3</td><td>A mode suited for the user with high black-and-white usage in which the occurrence of color printing during continuous printing is maximum.
Mode suited for high color printing volume
Once diverted to color mode, the black and white printings are executed in color processing mode (including the linear velocity).</td></tr>
<tr><td>Auto</td><td>Mode that allows to select from modes 1 through 3 depending on the usage. Mode is selected from three modes depending on the percentage of color and black and white printings in the total number of print pages during a predetermined period.</td></tr>
</table>

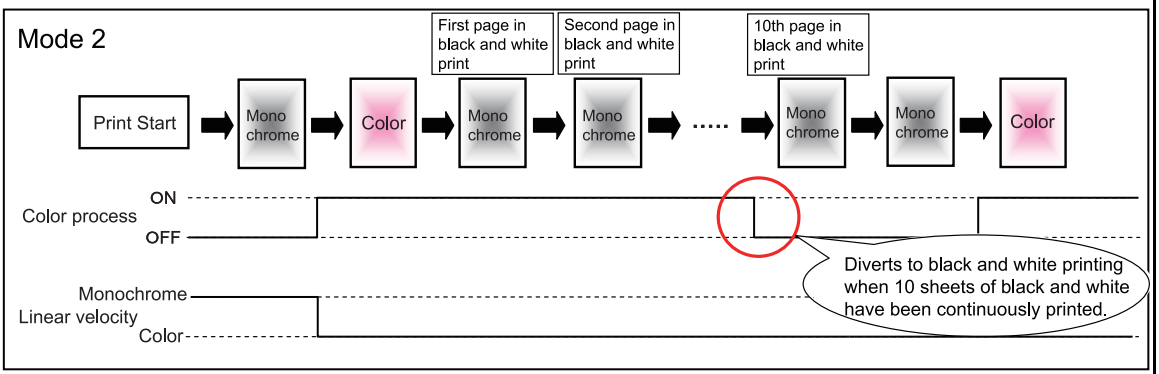
Initial setting: Mode2
3. Press the OK key. The setting is set.

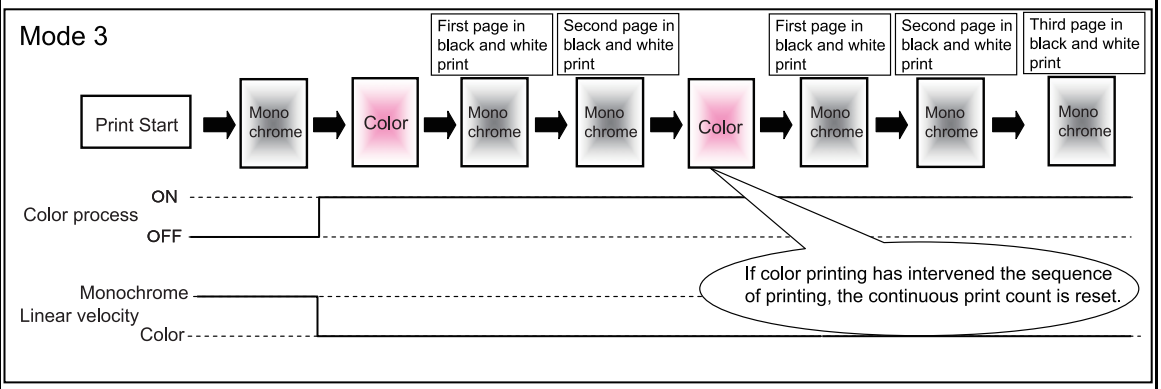
</td></tr>
</table>

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U486</td><td>
Setting: [Permission]
1. Select On or Off.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>On</td><td>Black and white printing (3 colors are released)*</td></tr>
<tr><td>Off</td><td>Color printing (4 colors are latched in)</td></tr>
</table>
Initial setting: Off
* : Enable this setting if color background printing has occurred when printing on envelopes.Note jitter could result.
2. Press the OK key. The setting is set.

Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.

Details on the modes






</td></tr>
</table>

Figure 1-3-16

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U901</td><td>

Checking print counts by paper feed locations

Description
Displays or clears paper feed counts by paper feed locations.
Performs backup when the counters on the engine PWB and PF main PWB do not match.
Purpose
To check the time to replace consumable parts. Also to clear the counts after replacing the consumable parts.
Backup the counter values after completing changing the PF main PWB and the paper feed unit.

Method
1. Press the OK key. The counts by paper feed locations are displayed.

<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>MPT</td><td>MP tray</td></tr>
<tr><td>Cassette1</td><td>Cassette 1</td></tr>
<tr><td>Cassette2</td><td>Cassette 2</td></tr>
<tr><td>Cassette3</td><td>Cassette 3 (paper feeder/large capacity feeder)</td></tr>
<tr><td>Cassette4</td><td>Cassette 4 (paper feeder/large capacity feeder)</td></tr>
<tr><td>Cassette5</td><td>Cassette 5 (side multi tray/side deck)</td></tr>
<tr><td>Cassette6</td><td>Cassette 6 (side paper feeder/side large capacity feeder)</td></tr>
<tr><td>Cassette7</td><td>Cassette 7 (side paper feeder/side large capacity feeder)</td></tr>
<tr><td>Duplex</td><td>Duplex unit</td></tr>
</table>

* : When an optional paper feed unit is not installed, the corresponding count is not displayed.

Clearing
1. Select the counts to be cleared.
   [Cassette3], [Cassette4], [Cassette5], [Cassette6] and [Cassette7] cannot be cleared.
2. Select the counts for all and press [Clear].
3. Press the OK key. The counts is cleared.

Back up
If the paper feeding counters of the engine and the paper feeder do not match, the following message will be displayed.
The back up destination will be shown on the list items and 'engine (fixed value)' <-> None <-> 'PF (fixed PF value) are displayed.
1. Press the OK key. The counts by paper feed locations are displayed.

<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>Cassette3</td><td>Cassette 3 (paper feeder/large capacity feeder)</td></tr>
<tr><td>Cassette4</td><td>Cassette 4 (paper feeder/large capacity feeder)</td></tr>
<tr><td>Cassette5</td><td>Cassette 5 (side multi tray/side deck)</td></tr>
<tr><td>Cassette6</td><td>Cassette 6 (side paper feeder/side large capacity feeder)</td></tr>
<tr><td>Cassette7</td><td>Cassette 7 (side paper feeder/side large capacity feeder)</td></tr>
<tr><td>Duplex</td><td>Duplex unit</td></tr>
</table>

</td></tr>
</table>

Item No.	Description
U901	1. Select the paper feed location. 2. Select engine counter values when changing the PF main PWB. Backup the engine counter values to PF. Select PF counter values when changing the paper feed unit. Backup the PF counter values to engine. 3. Select [Execute]. 4. Press the start key. Back up the counter values. 5. Exit the maintenance mode, perform shut-down, and turn the main power switch to off and on again. Allow more than 5 seconds between Off and On. * : The values of cassette 4 counter vary in accordance with the cassette 3 counter. The values of cassette 7 counter vary in accordance with the cassette 6 counter. Select [None] if the counter values are not backed up. **Completion** Press the Back key. The screen for selecting a maintenance item No. is displayed.

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U903</td><td>

Checking/clearing the paper jam counts

Description
Displays or clears the jam counts by jam locations.
Purpose
To check the paper jam status. Also to clear the jam counts after replacing consumable parts.

Method
1. Press the OK key.
2. Select the item.

<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>Cnt</td><td>Displays/clears the jam counts</td></tr>
<tr><td>Total Cnt</td><td>Displays the total jam counts</td></tr>
</table>

Method: [Cnt]
1. Select [Cnt]. The count of jam code by type is displayed.
   Codes for which the count value is 0 are not displayed.
2. Change the screen using the cursor up/down keys.
3. Select the count value for jam code and press [Clear].
   The individual counter cannot be cleared.
4. Press the OK key. The counter value is cleared.

Method: [Total Cnt]
1. Select [Total Cnt]. The total number of jam code by type is displayed.
2. Change the screen using the cursor up/down keys.
   The total number of jam count cannot be cleared.

How to display the history of paper jams
[Function]
To check the variation in the occurrences of paper jams as a consequence of firmware upgrade.

[Procedure]
1. Retrives versions of system and engine software at the timing of clearing.
2. Displays comparison of the occurrences of paper jams before and after firmware upgrades.
3. Displays the date of clearing.

[Method]
At firmware upgrade
1. Perform clearance of the counter following the above before performing firmware upgrade.
2. Clearing the counter records the date of clearing.
3. Perform firmware upgrade.

At performing service
1. Print a maintenance report using mode U000 and check the variance of occurrence of paper jams after firmware upgrade was done.

</td></tr>
</table>

Item No.	Description
U903	**Detail of history of paper jams**

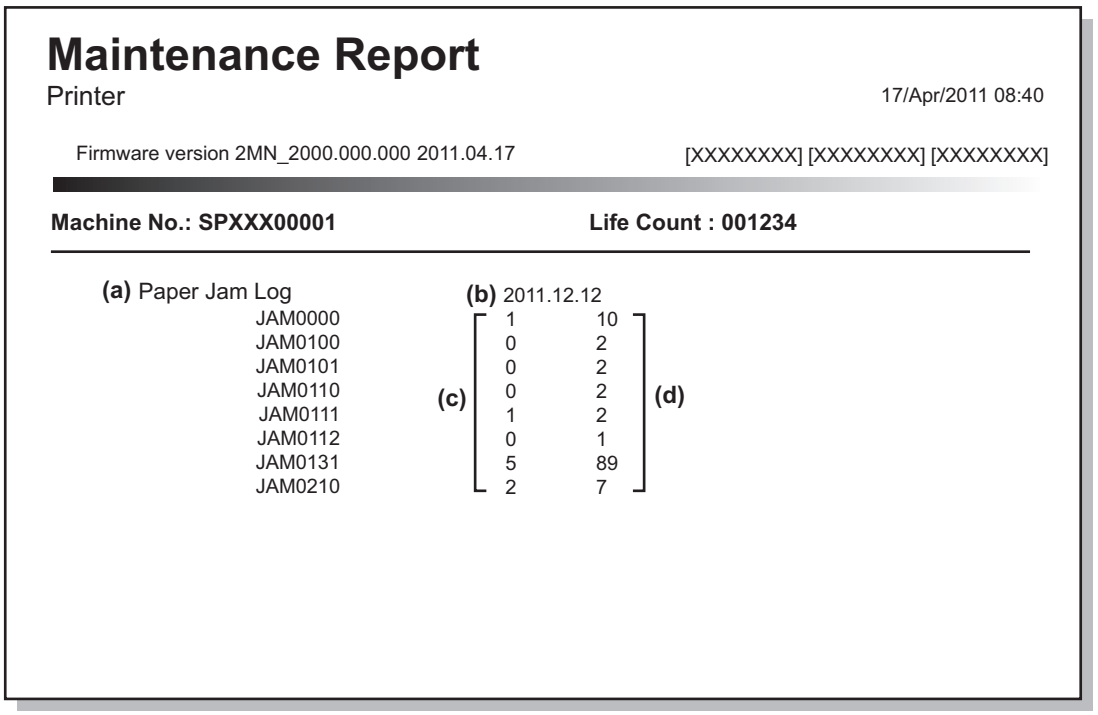


Figure 1-3-17

No.	Description
a	Paper jam numbers
b	Date of clearing counter records
c	Occurrences of paper jams after clearing the paper jam counts
d	Total number of paper jams

Method: [Total Cnt]

1. Select [Total Cnt]. The total number of jam code by type is displayed.
2. Change the screen using the cursor up/down keys.
   The total number of jam count cannot be cleared.

Completion

Press the Back key. The screen for selecting a maintenance item No. is displayed.

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U904</td><td>

Checking/clearing the call for service counts

Description
Displays or clears the service call code counts by types.
Purpose
To check the service call code status by types.
Also to clear the service call code counts after replacing consumable parts.

Method
1. Press the OK key.
2. Select the item.

<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>Cnt</td><td>Displays/clears the call for service counts</td></tr>
<tr><td>Total Cnt</td><td>Displays the total call for service counts</td></tr>
</table>

Method: [Cnt]
1. Select [Cnt]. The count for service call detection by type is displayed.
   Codes for which the count value is 0 are not displayed.
2. Change the screen using the cursor up/down keys.
3. Select the count value for service call code and press [Clear].
   The individual counter cannot be cleared.
4. Press the OK key. The counter value is cleared.

Method: [Total Cnt]
1. Select [Total Cnt]. 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.

How to display the history of service counts
[Function]
To check the variation in the occurrences of service calls as a consequence of firmware upgrade.

[Procedure]
1. Retrives versions of system and engine software at the timing of clearing.
2. Displays comparison of the occurrences of service calls before and after firmware upgrades.
3. Displays the date of clearing.

[Method]
At firmware upgrade
1. Perform clearance of the counter following the above before performing firmware upgrade.
2. Clearing the counter records the date of clearing.
3. Perform firmware upgrade.

At performing service
1. Print a maintenance report using mode U000 and check the variance of occurrence of service calls after firmware upgrade was done.

</td></tr>
</table>

Item No.	Description
U904	**Detail of history of service counts**

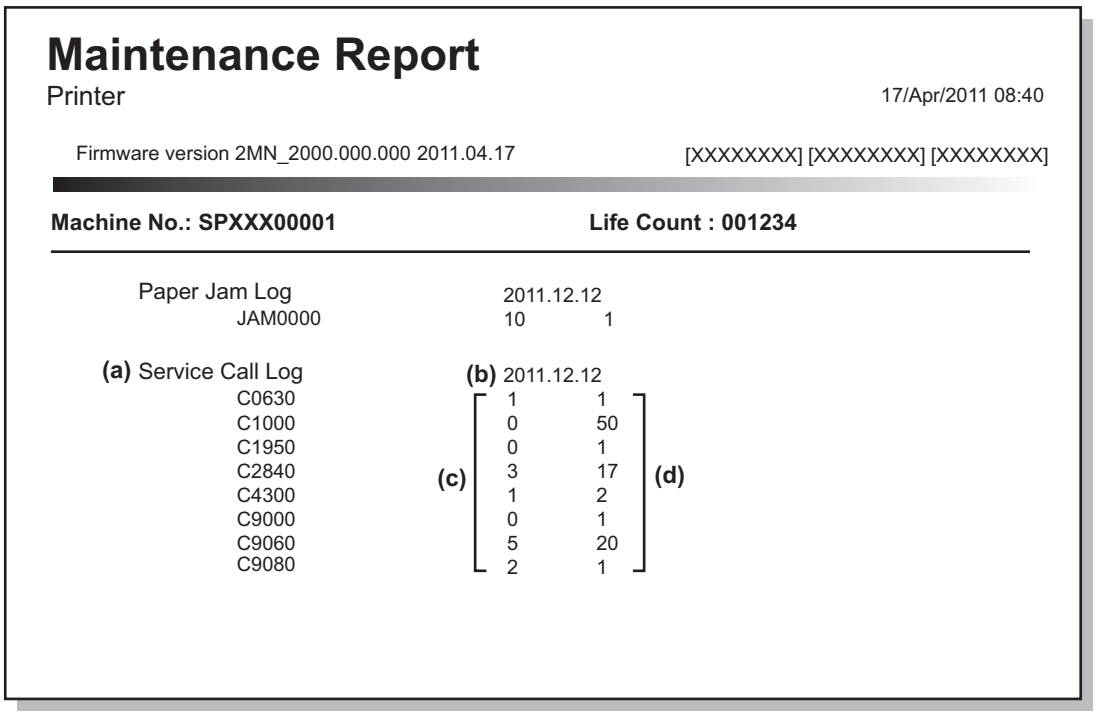


Figure 1-3-18

No	Description
a	Service call numbers
b	Date of clearing counter records
c	Occurrences of paper jams after clearing the service call counts
d	Total number of service calls

Method: [Total Cnt]

1. Select [Total Cnt]. 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.

Completion

Press the Back key. The screen for selecting a maintenance item No. is displayed.

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U905</td><td>
Checking counts by optional devices

Description
Displays the counts of 1000-sheet or 4000-sheet finisher.
Purpose
To check the use of 1000-sheet or 4000-sheet finisher.

Method
1. Press the OK key.
2. Select the device, the count of which is to be checked.
3. Press the OK key.
The count of the selected device is displayed.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>DF</td><td>Counts of 1000-sheet or 4000-sheet finisher</td></tr>
</table>

Method: [DF]
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>Sorter</td><td>No. of prints that has passed</td></tr>
<tr><td>Staple</td><td>Frequency the stapler has been activated</td></tr>
<tr><td>Punch</td><td>Frequency the punch has been activated</td></tr>
<tr><td>Stack*</td><td>Frequency the main tray eject has been activated</td></tr>
<tr><td>Saddle*</td><td>Frequency the saddle eject has been activated</td></tr>
<tr><td>Fold*</td><td>Frequency the center folding has been activated</td></tr>
<tr><td>Three Fold*</td><td>Frequency the tri-folding has been activated</td></tr>
</table>
* : 4000-sheet finisher only

Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
</table>

Item No.	Description
U906	**Resetting partial operation control** **Description** Resets the service call code for partial operation control. **Purpose** To be reset after partial operation is performed due to problems in the cassettes or other sections, and the related parts are serviced. **Method** 1. Press the OK key. 2. Press [Execute]. 3. Press the OK key to reset partial operation control. 4. Exit the maintenance mode, perform shut-down, and turn the main power switch to off and on again. Allow more than 5 seconds between Off and On.
U908	**Checking the total counter value** **Description** Displays the total counter value. **Purpose** To check the total counter value. **Method** 1. Press the OK key. The total count value is displayed. **Completion** Press the Back key. The screen for selecting a maintenance item No. is displayed.
U910	**Clearing the print coverage data** **Description** Clears the accumulated data for the print coverage per A4 size paper and its period of time (as shown on the service status report). **Purpose** To clear data as required at times such as during maintenance service. **Method** 1. Press the OK key. 2. Select [Execute]. 3. Press the OK key. The print coverage data is cleared. **Completion** Press the Back key. The screen for selecting a maintenance item No. is displayed.

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U911</td><td>

Checking print counts by paper sizes

Description
Displays the paper feed counts by paper sizes.
Purpose
To check the counts after replacing consumable parts.

Method
1. Press the OK key. The screen for the paper feed counts by paper size is displayed.

<table>
<tr><th>Display (metric)</th><th>Description</th><th>Display (inch)</th><th>Description</th></tr>
<tr><td>A3</td><td>Paper feed counts for A3</td><td>Ledger</td><td>Paper feed counts for Ledger</td></tr>
<tr><td>B4</td><td>Paper feed counts for B4</td><td>Legal</td><td>Paper feed counts for Legal</td></tr>
<tr><td>A4</td><td>Paper feed counts for A4</td><td>Letter</td><td>Paper feed counts for Letter</td></tr>
<tr><td>B5</td><td>Paper feed counts for B5</td><td>Statement</td><td>Paper feed counts for Statement</td></tr>
<tr><td>A5</td><td>Paper feed counts for A5</td><td rowspan="2"></td><td rowspan="2"></td></tr>
<tr><td>Folio</td><td>Paper feed counts for Folio</td></tr>
<tr><td>ETC</td><td>Paper feed counts for other size</td><td>ETC</td><td>Paper feed counts for other size</td></tr>
</table>

Clearing
1. Select the paper size of counts to be cleared.
2. Press the OK key. The counts is cleared.

Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.

</td></tr>
</table>

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U917</td><td>
Setting backup data reading/writing

Description
Retrieves the backup data to a USB memory from the machine; or writes the data from the USB memory to the machine.
Purpose
To store and write data when replacing the HDD.

Method
1. Perform shut-down on the operation panel, turn power off (see page p.1-2-19).
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 maintenance item U917.
5. Select [Import] or [Export].
<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>
6. Select the item.
<table>
<tr><th>Display</th><th>Description</th><th>Depending data</th></tr>
<tr><td>Job Account</td><td>Job accounting</td><td>-</td></tr>
<tr><td>User</td><td>User managements</td><td>Job accounting</td></tr>
<tr><td>Document Box</td><td>Document box information</td><td>Job accountings and user managements</td></tr>
</table>
* : Since data are dependent with each other, data other than those assigned are also retrieved or written in.
7. Press the OK 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.
8. When normally completed, [Finish] is displayed.
9. Turn the main power switch off and on after completing writing when selecting [Import].
</td></tr>
</table>

Item No.	Description
U917	**Error Codes**

Codes	Description	Codes	Description
e002	Parameter error	e31e	User managements error
e003	File write error	e31f	User managements open error
e004	File initialization error	e320	User managements error
e005	File error	e321	User managements open error
e006	Processing error	e322	User managements list error
e010	Address book clear error (contact)	e324	Shortcut open error
e011	Address book open error (contact)	e325	Shortcut list error
e012	Address book list error (contact)	e410	Box file open error
e013	Address book list error (contact)	e411	Box error in writing
e014	Address book clear error (group)	e412	Box error in reading
e015	Address book open error (group)	e413	Box list error
e016	Address book list error (group)	e414	Box list error
e017	Address book list error (group)	e415	Box error
e110	Job accounting clear error	e416	Box error
e111	Job accounting open error	e417	Box open error
e112	Job accounting open error	e418	Box close error
e113	Job accounting error in writing	e419	Box creation error
e114	Job accounting list error	e41a	Box creation error
e115	Job accounting list error	e41b	Box deletion error
e210	One-touch open error	e41c	Box movement error
e211	One-touch list error	e510	Program error in writing
e212	One-touch list error	e511	Program error in reading
e310	User managements backup error	e610	Shortcut error in writing
e311	User managements clear error	e611	Shortcut error in reading
e312	User managements open error	e710	Fax memory open error
e313	User managements open error	e711	Fax memory initialization error
e314	User managements open error	e712	Fax memory list error
e315	User managements error in writing	e713	Fax memory error
e316	User managements list error	e714	Fax memory error
e317	User managements list error	e715	Fax memory mode error
e318	User managements list error	e716	Fax memory error
e319	User managements list error	e717	Fax memory error
e31a	User managements open error	e718	Fax memory mode error
e31b	User managements error	e910	File reading error
e31c	User managements error	e911	File writing error
e31d	User managements open error	e912	Data mismatch

Item No.	Description
U917	**Error Codes**

Codes	Description	Codes	Description
e913	Log file open error	d009	File open error
e914	Log file error in writing	d00a	File close error
e915	Directory open error	d00b	File reading error
e916	Directory error in reading	d00c	File writing error
e917	Synchronization error	d00d	File copy error
e918	Synchronization error	d00e	File compressed error
d000	Unspecified error	d00f	File decompressed error
d001	HDD unavailable	d010	Directory open error
d002	USB memory is not inserted	d011	Directory creation error
d003	File for writing is not found in the USB	d012	File writing error
d004	File for reading is not found in the HDD	d013	File reading error
d005	USB error in writing	d014	File deletion error
d006	USB error in reading	d015	File copy error to the USB
d007	USB unmount error	d016	File compatibility error
d008	File rename error		

Completion

Press the Back key. The screen for selecting a maintenance item No. is displayed.

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U920</td><td>
Checking the print counts

Description
Checks the print counts.
Purpose
To check the print counts.

Method
1. Press the OK key. The current counts are displayed.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>ColorPrn H</td><td>Count value of full color print (coverage: high)</td></tr>
<tr><td>ColorPrn M</td><td>Count value of full color print (coverage: middle)</td></tr>
<tr><td>ColorPrn L</td><td>Count value of full color print (coverage: low)</td></tr>
<tr><td>B/W Prn</td><td>Count value of black/white print</td></tr>
</table>
Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
<tr><td>U927</td><td>
Clearing the all print counts and machine life counts (one time only)

Description
Resets all of the counts back to zero.

Supplement
The total account counter and the machine life counter can be cleared only once if all count values are 1000 or less.

Method
1. Press the OK key.
2. Select [Execute].
3. Press the OK key. All print counts and machine life counts are cleared.

Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
</table>

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U928</td><td>
Checking machine life counts

Description
Displays the machine life counts.
Purpose
To check the machine life counts.

Method
1. Press the OK key. The current machine life counts is displayed.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>Cnt</td><td>Machine life counts</td></tr>
</table>
Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
<tr><td>U930</td><td>
Checking/clearing the charger roller count

Description
Displays the counts of the charger roller counter for checking or clearing.
Purpose
To check the count after replacement of the charger roller unit. To clear the counter value when replacing the charger roller unit.
Method
1. Press the OK key. The current counts of the charger roller count for each color is displayed.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>C</td><td>Count value of cyan charger roller</td></tr>
<tr><td>M</td><td>Count value of magenta charger roller</td></tr>
<tr><td>Y</td><td>Count value of yellow charger roller</td></tr>
<tr><td>K</td><td>Count value of black charger roller</td></tr>
</table>
Clearing
1. Select the counts to be cleared.
2. Select the counts for all and press [Clear].
3. Press the OK key. The counts is cleared.

Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
</table>

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U952</td><td>

Maintenance mode workflow

Description
The maintenance modes configured in the machine or a USB flash device as a workflow must be executed in succession.
Purpose
This allows maintenance mode to be preset as a template.

Setting
1. Press the OK key.
2. Select the item.

Display	Description
Continue	Restarting an abandoned workflow
Exec(USB)	Executes a workflow housed in a USB flash device
Exec	Executes a workflow stored in the machine
Entry(USB)	Exports a workflow housed in a USB flash device to the machine
Entry	Assigns a workflow in the machine manually
Log	Displays a list of workflows recently executed

Method: [Exec]
1. Select [Execute].
2. Select the workflow.

Display	Description
Data1 - 6	The area to store workflows in the machine

3. Press the OK key.
   Executes maintenance modes defined in a workflow in succession.

Method: [Entry]
1. Select [Entry].
2. Select the area to store workflow.

Display	Description
Data1 - 6	The area to store workflows in the machine

3. Press the numeric keys to assign a maintenance Nbr. into a workflow.

Display	Description
Flow1 - 14	Assign a maintenance Nbr.

4. Press the OK key. The setting is set.
5. Press the OK key.
   Executes maintenance modes defined in a workflow in succession.

</td></tr>
</table>

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U952</td><td>
Method: [Exec(USB)]
1. Perform shut-down on the operation panel, turn power off(see page P.1-2-19).
2. Insert USB memory in USB memory slot.
3. Turn the main power switch on.
4. Enter maintenance item U952.
5. Select [Execute(USB)].
6. Select the workflow.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>Data01 - 06</td><td>Workflow data in the USB flash device</td></tr>
</table>
7. Press the OK key.
Executes maintenance modes defined in a workflow in succession.

Method: [Entry(USB)]
1. Perform shut-down on the operation panel, turn power off (see page p.1-2-19).
2. Insert USB memory in USB memory slot.
3. Turn the main power switch on.
4. Enter maintenance item U952.
5. Select [Entry(USB)].
6. Select the workflow.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>Data01 - 06</td><td>Workflow data in the USB flash device</td></tr>
</table>
7. Select the work flow save area.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>Data1 - 6</td><td>The area to store workflows in the machine</td></tr>
</table>
8. Select [Execute].
Exports a workflow housed in a USB flash device to the machine.

Example
Registration is feasible when a USB flash device that stores the commands and text/maintenance ID (editable) is inserted.
File Format: xxx.mwf

!R! MNFC “WFPS”;
1.SET UP, 464, 469, 000, 927, 278
2.WARRANTY, 089, 000
3.MK-A, 119, 930, 140, 469, 127, 464, 469, 464, 251
4.MK-B, 119, 930, 140, 464, 469, 464, 251
5.MK-C, 167, 464, 469, 251
WRED;EXIT;

Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
</table>

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U964</td><td>
Checking of log

Description
Sends a log file saved on the HDD to a USB memory.
Purpose
To transfer a log file saved on the HDD to a USB memory as a means of investigating malfunctions.

Method
1. Perform shut-down on the operation panel, turn power off(see page P.1-2-19).
2. Insert USB memory in USB memory slot.
3. Turn the main power switch on.
4. Enter maintenance item U964.
5. Select [Execute].
6. Press the OK key.
Starts sending the log file saved on the HDD to the USB memory.
Processing is displayed for approximately 3 to 5 minutes.
7. When normally completed, [Completed] is displayed.
8. Exit the maintenance mode, perform shut-down, and turn the main power switch to off and on again. Allow more than 5 seconds between Off and On.
If a problem occurs during auto correction, error code is displayed.

Error codes
<table>
<tr><th>Error codes</th><th>Error name</th><th>Description</th></tr>
<tr><td>1</td><td>No Usb Storage</td><td>USB memory is not inserted</td></tr>
<tr><td>2</td><td>No File</td><td>File is not found</td></tr>
<tr><td>3</td><td>Mount Error</td><td>USB memory mount error</td></tr>
<tr><td>4</td><td>File Delete Error</td><td>File deletion error</td></tr>
<tr><td>5</td><td>Copy Error</td><td>File copy error</td></tr>
<tr><td>6</td><td>Unmount Error</td><td>USB memory unmount error</td></tr>
<tr><td>7</td><td>Other Error</td><td>Other error</td></tr>
</table>
</td></tr>
<tr><td>U969</td><td>
Checking of toner area code

Description
Displays the toner area code.
Purpose
To check the toner area code.

Method
1. Press the OK key. The toner area code is displayed.

Completion
Press the stop/clear key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
</table>

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U977</td><td>
Data capture mode

Description
Store the print data sent to the machine into USB memory.
Purpose
In case to occur the error at printing, check the print data sent to the machine.

Method
1. Perform shut-down on the operation panel, turn power off(see page P.1-2-19).
2. Insert USB memory in USB memory slot.
3. Turn the main power switch on.
4. Enter maintenance item U977.
5. Select [Execute].
6. Press the OK key.
7. Send the print data to the machine.
Once the print data is stored into USB memory, [OK] will be displayed.

Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.

Error codes
<table>
<tr><th>Error codes</th><th>Description</th></tr>
<tr><td>1</td><td>The removable memory has been crushed or removed or write-protected</td></tr>
<tr><td>2</td><td>The removable memory is full</td></tr>
<tr><td>3</td><td>Other errors have occurred</td></tr>
</table>
</td></tr>
<tr><td>U984</td><td>
Checking the developer unit number

Description
Displays the developer unit number.
Purpose
To check the developer unit number.

Method
1. Press the OK key. The developer unit number for each color is displayed.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>C</td><td>Cyan developer unit number</td></tr>
<tr><td>M</td><td>Magenta developer unit number</td></tr>
<tr><td>Y</td><td>Yellow developer unit number</td></tr>
<tr><td>K</td><td>Black developer unit number</td></tr>
</table>
Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
</table>

<table>
<tr><th>Item No.</th><th>Description</th></tr>
<tr><td>U985</td><td>
Displaying the developer unit history

Description
Displays the past record of machine number and the developer counter.
Purpose
To check the count value of machine number and the developer counter.

Method
1. Press the OK key.
2. Select the color to check.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>C</td><td>Cyan developer unit past record</td></tr>
<tr><td>M</td><td>Magenta developer unit past record</td></tr>
<tr><td>Y</td><td>Yellow developer unit past record</td></tr>
<tr><td>K</td><td>Black developer unit past record</td></tr>
</table>
The history of a machine number and a developer counter for each color is displayed by three cases.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>Machine History1 - 3</td><td>Historical records of the machine number</td></tr>
<tr><td>Cnt History1 - 3</td><td>Historical records of developer counter</td></tr>
</table>
Completion
Press the Back key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
<tr><td>U989</td><td>
HDD Scan disk

Description
Restores data in the hard disk by scanning the disk.
Purpose
If power is turned off while accessing to the hard disk is performed, the control information in the hard disk drive may be damaged. Use this mode to restore the data.

Method
1. Press the OK key.
2. Select [Execute].
3. Press the OK key. When scanning of the disk is complete, the execution result is displayed.
4. Exit the maintenance mode, perform shut-down, and turn the main power switch to off and on again. Allow more than 5 seconds between Off and On.
</td></tr>
</table>

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 misfeed in the machine, pull out the cassette, open the paper conveying unit or paper conveying cover.

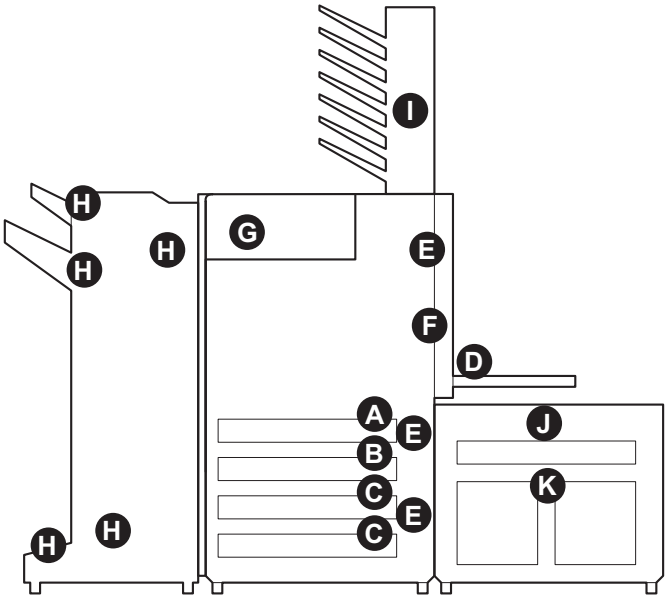


Figure 1-4-1 Paper misfeed indication

A. Misfeed in cassette 1
B. Misfeed in cassette 2
C. Misfeed in cassette 3 or 4 (option)
D. Misfeed in the MP tray
E. Misfeed in paper conveying unit, paper conveying cover or PF paper conveying cover
F. Misfeed in the duplex section
G. Misfeed in bridge unit (option)
H. Misfeed in document finisher (option)
I. Misfeed in cassette 5 (option)
J. Misfeed in cassette 6 or 7 (option)

(2) Paper misfeed detection condition

Machine

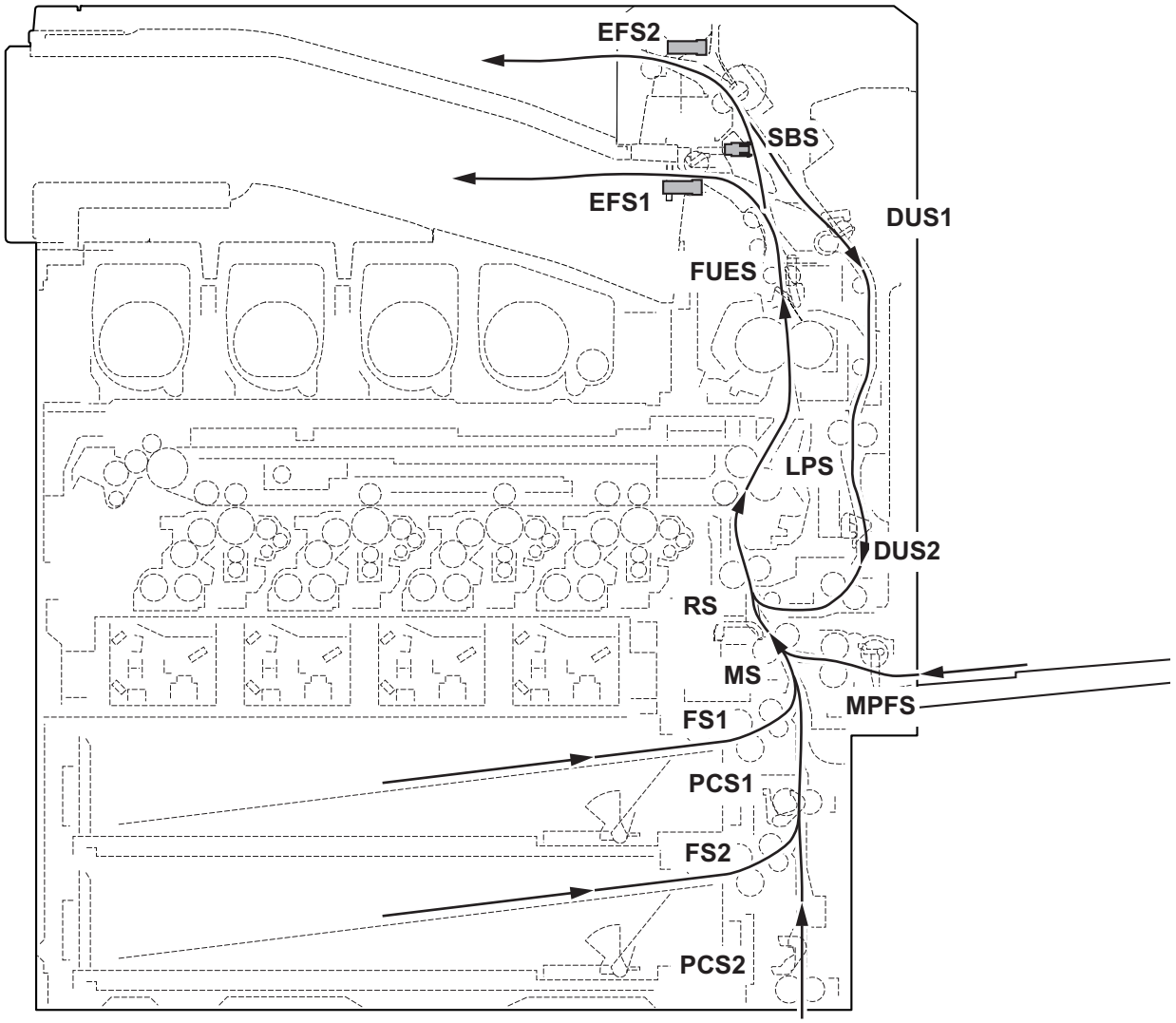


Figure 1-4-2 Paper jam location

* : This model does not support the following codes:
0132 /0505 /0515 /9030

Code	Contents	Conditions	Jam location*
0000	Initial jam	The power is turned on when a sensor in the conveying system is on.	-
0100	Secondary paper feed request time out	Secondary paper feed request given by the controller is unreachable.	-
0101	Waiting for process package to become ready	Process package won't become ready.	-
0102	Waiting for toner package to become ready	Toner package won't become ready.	-
0103	Waiting for the image-sustaining package to become ready	The image-sustaining package won't become ready.	-
0104	Waiting for conveying package to become ready	Conveying package won't become ready.	-
0106	Paper feeding request for duplex printing time out	Paper feeding request for duplex printing given by the controller is unreachable.	-
0107	Waiting for fuser package to become ready	Fuser package won't become ready.	-
0108	Waiting for option package to become ready	Option package won't become ready.	-
0110	Paper conveying unit open	The paper conveying unit is opened during printing.	E
0111	Front cover open	The front cover is opened during printing.	-
0112	Duplex cover open	The duplex cover is opened during printing.	F
0113	Paper conveying cover open	The paper conveying cover is opened during printing.	E
0114	BR conveying unit open	The BR conveying unit is opened during printing.	G
0115	BR eject cover open	The BR eject cover is opened during printing.	G
0131	MP lift sensor upper limit detection	MP lift sensor 1 (MPLS1) does not turn on within specified time of the MP lift plate rising.	D
0200	Machine sequence error	A sequence error has caused.	-
0210	PF paper conveying cover open	The PF paper conveying cover is opened during printing.	E

*: Refer to figure 1-4-1 for paper misfeed indication (see page 1-4-1).

Code	Contents	Conditions	Jam location*
0211	SM paper conveying cover open	The SM paper conveying cover is opened during printing.	J
0212	SM top cover open	The SM top cover is opened during printing.	J
0213	SD cover open	The SD cover is opened during printing.	J
0214	PF paper conveying cover (side) open	The PF paper conveying cover (side) is opened during printing.	K
0215	Side multi tray release	The side multi tray is released during printing.	J
0300	Ejection uncompleted	An ejection-completed error has occurred.	-
0501	No paper feed from cassette 1	Feed sensor 1 (FS1) does not turn on during paper feed from cassette 1.	A
0502	No paper feed from cassette 2	Feed sensor 2 (FS2) does not turn on during paper feed from cassette 2.	B
0503	No paper feed from cassette 3	PF feed sensor 1 (PFFS1) does not turn on during paper feed from cassette 3 (paper feeder).	C
0504	No paper feed from cassette 4	PF feed sensor 2 (PFFS2) does not turn on during paper feed from cassette 4 (paper feeder).	C
0505	No paper feed from cassette 5	SM feed sensor (SMFS) does not turn on during paper feed from cassette 5 (side multi tray).	J
0506	No paper feed from cassette 6	PF feed sensor 1 (PFFS1) does not turn on during paper feed from cassette 6 (side paper feeder).	K
0507	No paper feed from cassette 7	PF feed sensor 2 (PFFS2) does not turn on during paper feed from cassette 7 (side paper feeder).	K
0508	No paper feed from duplex section	Registration sensor (RS) does not turn on during paper feed from duplex section.	F
0509	No paper feed from MP tray	MP feed sensor (MPFS) does not turn on during paper feed from MP tray.	D
0511	Multiple sheets in cassette 1	Feed sensor 1 (FS1) does not turn off during paper feed from cassette 1.	A
0512	Multiple sheets in cassette 2	Feed sensor 2 (FS2) does not turn off during paper feed from cassette 2.	B
0513	Multiple sheets in cassette 3	PF feed sensor 1 (PFFS1) does not turn off during paper feed from cassette 3 (paper feeder).	C
0514	Multiple sheets in cassette 4	PF feed sensor 2 (PFFS2) does not turn off during paper feed from cassette 4 (paper feeder).	C

*: Refer to figure 1-4-1 for paper misfeed indication (see page 1-4-1).

Code	Contents	Conditions	Jam location*
0515	Multiple sheets in cassette 5	SM feed sensor (SMFS) does not turn off during paper feed from cassette 5 (side multi tray).	J
0516	Multiple sheets in cassette 6	PF feed sensor 1 (PFFS1) does not turn off during paper feed from cassette 6 (side paper feeder).	K
0517	Multiple sheets in cassette 7	PF feed sensor 2 (PFFS2) does not turn off during paper feed from cassette 7 (side paper feeder).	K
0518	Multiple sheets in duplex section	Registration sensor (RS) does not turn off during paper feed from duplex section.	F
0519	Multiple sheets in MP tray	MP feed sensor (MPFS) does not turn off during paper feed from MP tray.	D
0523	No paper feed from cassette 3	PF feed sensor 1 (PFFS1) does not turn on during paper feed from cassette 3 (large capacity feeder).	C
0524	No paper feed from cassette 4	PF feed sensor 2 (PFFS2) does not turn on during paper feed from cassette 4 (large capacity feeder).	C
0525	No paper feed from cassette 5	SM feed sensor (SMFS) does not turn on during paper feed from cassette 5 (side multi tray).	J
0526	No paper feed from cassette 6	PF feed sensor 1 (PFFS1) does not turn on during paper feed from cassette 6 (side large capacity feeder).	K
0527	No paper feed from cassette 7	PF feed sensor 2 (PFFS2) does not turn on during paper feed from cassette 7 (side large capacity feeder).	K
0533	Multiple sheets in cassette 3	PF feed sensor 1 (PFFS1) does not turn off during paper feed from cassette 3 (large capacity feeder).	C
0534	Multiple sheets in cassette 4	PF feed sensor 2 (PFFS2) does not turn off during paper feed from cassette 4 (large capacity feeder).	C
0535	Multiple sheets in cassette 5	SM feed sensor (SMFS) does not turn off during paper feed from cassette 5 (side multi tray).	J
0536	Multiple sheets in cassette 6	PF feed sensor 1 (PFFS1) does not turn off during paper feed from cassette 6 (side large capacity feeder).	K
0537	Multiple sheets in cassette 7	PF feed sensor 2 (PFFS2) does not turn off during paper feed from cassette 7 (side large capacity feeder).	K

*: Refer to figure 1-4-1 for paper misfeed indication (see page 1-4-1).

Code	Contents	Conditions	Jam location*
0545	No paper feed from side deck	SD feed sensor (SDFS) does not turn on during paper feed from side deck.	J
0555	Multiple sheets in side deck	SD feed sensor (SDFS) does not turn off during paper feed from side deck.	J
1301	Middle sensor non arrival jam	Middle sensor (MS) does not turn on during paper feed from cassette 1.	A
1302		Middle sensor (MS) does not turn on during paper feed from cassette 2.	B
1303		Middle sensor (MS) does not turn on during paper feed from cassette 3 (paper feeder/large capacity feeder).	C
1304		Middle sensor (MS) does not turn on during paper feed from cassette 4 (paper feeder/large capacity feeder).	C
1305		Middle sensor (MS) does not turn on during paper feed from cassette 5 (side multi tray/side deck).	J
1306		Middle sensor (MS) does not turn on during paper feed from cassette 6 (side paper feeder/side large capacity feeder).	K
1307		Middle sensor (MS) does not turn on during paper feed from cassette 7 (side paper feeder/side large capacity feeder).	K
1311	Middle sensor stay jam	Middle sensor (MS) does not turn off during paper feed from cassette 1.	E
1312		Middle sensor (MS) does not turn off during paper feed from cassette 2.	E
1313		Middle sensor (MS) does not turn off during paper feed from cassette 3 (paper feeder/large capacity feeder).	E
1314		Middle sensor (MS) does not turn off during paper feed from cassette 4 (paper feeder/large capacity feeder).	E
1315		Middle sensor (MS) does not turn off during paper feed from cassette 5 (side multi tray/side deck).	E
1316		Middle sensor (MS) does not turn off during paper feed from cassette 6 (side paper feeder/side large capacity feeder).	E
1317		Middle sensor (MS) does not turn off during paper feed from cassette 7 (side paper feeder/side large capacity feeder).	E

*: Refer to figure 1-4-1 for paper misfeed indication (see page 1-4-1).

Code	Contents	Conditions	Jam location*
1502	Paper conveying sensor non arrival jam	Paper conveying sensor (PCS) does not turn on during paper feed from cassette 2.	B
1503		Paper conveying sensor (PCS) does not turn on during paper feed from cassette 3 (paper feeder/large capacity feeder).	C
1504		Paper conveying sensor (PCS) does not turn on during paper feed from cassette 4 (paper feeder/large capacity feeder).	C
1512	Paper conveying sensor stay jam	Paper conveying sensor (PCS) does not turn off during paper feed from cassette 2.	E
1513		Paper conveying sensor (PCS) does not turn off during paper feed from cassette 3 (paper feeder/large capacity feeder).	E
1514		Paper conveying sensor (PCS) does not turn off during paper feed from cassette 4 (paper feeder/large capacity feeder).	E
1703	PF paper conveying sensor 1 non arrival jam	PF paper conveying sensor 1 (PFPCS1) does not turn on during paper feed from cassette 3 (paper feeder).	C
1704		PF paper conveying sensor 1 (PFPCS1) does not turn on during paper feed from cassette 4 (paper feeder).	C
1713	PF paper conveying sensor 1 stay jam	PF paper conveying sensor 1 (PFPCS1) does not turn off during paper feed from cassette 3 (paper feeder).	E
1714		PF paper conveying sensor 1 (PFPCS1) does not turn off during paper feed from cassette 4 (paper feeder).	E
1904	PF paper conveying sensor 2 non arrival jam	PF paper conveying sensor 2 (PFPCS2) does not turn on during paper feed from cassette 4 (paper feeder).	C
1914	PF paper conveying sensor 2 stay jam	PF paper conveying sensor 2 (PFPCS2) does not turn off during paper feed from cassette 4 (paper feeder).	E
2106	PF paper conveying sensor 1 non arrival jam	PF paper conveying sensor 1 (PFPCS1) does not turn on during paper feed from cassette 6 (side paper feeder).	K
2107		PF paper conveying sensor 1 (PFPCS1) does not turn on during paper feed from cassette 7 (side paper feeder).	K
2116	PF paper conveying sensor 1 stay jam	PF paper conveying sensor 1 (PFPCS1) does not turn off during paper feed from cassette 6 (side paper feeder).	J
2117		PF paper conveying sensor 1 (PFPCS1) does not turn off during paper feed from cassette 7 (side paper feeder).	J
2307	PF paper conveying sensor 2 non arrival jam	PF paper conveying sensor 2 (PFPCS2) does not turn on during paper feed from cassette 7 (side paper feeder).	K

*: Refer to figure 1-4-1 for paper misfeed indication (see page 1-4-1).

Code	Contents	Conditions	Jam location*
2317	PF paper conveying sensor 2 stay jam	PF paper conveying sensor 2 (PFPCS2) does not turn off during paper feed from cassette 7 (side paper feeder).	K
2603	PF paper conveying sensor 1 non arrival jam	PF paper conveying sensor 1 (PFPCS1) does not turn on during paper feed from cassette 3 (large capacity feeder).	C
2604		PF paper conveying sensor 1 (PFPCS1) does not turn on during paper feed from cassette 4 (large capacity feeder).	C
2606		PF paper conveying sensor 1 (PFPCS1) does not turn on during paper feed from cassette 6 (side large capacity feeder).	K
2607		PF paper conveying sensor 1 (PFPCS1) does not turn on during paper feed from cassette 7 (side large capacity feeder).	K
2613	PF paper conveying sensor 1 stay jam	PF paper conveying sensor 1 (PFPCS1) does not turn off during paper feed from cassette 3 (large capacity feeder).	E
2614		PF paper conveying sensor 1 (PFPCS1) does not turn off during paper feed from cassette 4 (large capacity feeder).	E
2616		PF paper conveying sensor 1 (PFPCS1) does not turn off during paper feed from cassette 6 (side large capacity feeder).	J
2617		PF paper conveying sensor 1 (PFPCS1) does not turn off during paper feed from cassette 7 (side large capacity feeder).	J
2704	PF paper conveying sensor 2 non arrival jam	PF paper conveying sensor 2 (PFPCS2) does not turn on during paper feed from cassette 4 (large capacity feeder).	C
2707		PF paper conveying sensor 2 (PFPCS2) does not turn on during paper feed from cassette 7 (side large capacity feeder).	K
2714	PF paper conveying sensor 2 stay jam	PF paper conveying sensor 2 (PFPCS2) does not turn off during paper feed from cassette 4 (large capacity feeder).	E
2717		PF paper conveying sensor 2 (PFPCS2) does not turn off during paper feed from cassette 7 (side large capacity feeder).	J

*: Refer to figure 1-4-1 for paper misfeed indication (see page 1-4-1).

Code	Contents	Conditions	Jam location*
3106	PF paper conveying sensor 1 non arrival jam	PF paper conveying sensor 1 (PFPCS1) does not turn on during paper feed from cassette 6 (side large capacity feeder).	K
3107		PF paper conveying sensor 1 (PFPCS1) does not turn on during paper feed from cassette 7 (side large capacity feeder).	K
3116	PF paper conveying sensor 1 stay jam	PF paper conveying sensor 1 (PFPCS1) does not turn off during paper feed from cassette 6 (side large capacity feeder).	J
3117		PF paper conveying sensor 1 (PFPCS1) does not turn off during paper feed from cassette 7 (side large capacity feeder).	J
3307	PF paper conveying sensor 2 non arrival jam	PF paper conveying sensor 2 (PFPCS2) does not turn on during paper feed from cassette 7 (side large capacity feeder).	K
3317	PF paper conveying sensor 2 stay jam	PF paper conveying sensor 2 (PFPCS2) does not turn off during paper feed from cassette 7 (side large capacity feeder).	J
3405	SM paper conveying sensor 1 non arrival jam	SM paper conveying sensor 1 (SMPCS1) does not turn on during paper feed from cassette 5 (side multi tray).	J
3406		SM paper conveying sensor 1 (SMPCS1) does not turn on during paper feed from cassette 6 (side multi tray).	K
3407		SM paper conveying sensor 1 (SMPCS1) does not turn on during paper feed from cassette 7 (side multi tray).	K
3415	SM paper conveying sensor 1 stay jam	SM paper conveying sensor 1 (SMPCS1) does not turn off during paper feed from cassette 5 (side multi tray).	J
3416		SM paper conveying sensor 1 (SMPCS1) does not turn off during paper feed from cassette 6 (side multi tray).	J
3417		SM paper conveying sensor 1 (SMPCS1) does not turn off during paper feed from cassette 7 (side multi tray).	J

*: Refer to figure 1-4-1 for paper misfeed indication (see page 1-4-1).

Code	Contents	Conditions	Jam location*
3505	SM paper conveying sensor 2 non arrival jam	SM paper conveying sensor 2 (SMPCS2) does not turn on during paper feed from cassette 5 (side multi tray).	J
3506		SM paper conveying sensor 2 (SMPCS2) does not turn on during paper feed from cassette 6 (side multi tray).	K
3507		SM paper conveying sensor 2 (SMPCS2) does not turn on during paper feed from cassette 7 (side multi tray).	K
3515	SM paper conveying sensor 2 stay jam	SM paper conveying sensor 2 (SMPCS2) does not turn off during paper feed from cassette 5 (side multi tray).	J
3516		SM paper conveying sensor 2 (SMPCS2) does not turn off during paper feed from cassette 6 (side multi tray).	J
3517		SM paper conveying sensor 2 (SMPCS2) does not turn off during paper feed from cassette 7 (side multi tray).	J
3605	SM paper conveying sensor 3 non arrival jam	SM paper conveying sensor 3 (SMPCS3) does not turn on during paper feed from cassette 5 (side multi tray).	J
3606		SM paper conveying sensor 3 (SMPCS3) does not turn on during paper feed from cassette 6 (side multi tray).	K
3607		SM paper conveying sensor 3 (SMPCS3) does not turn on during paper feed from cassette 7 (side multi tray).	K
3615	SM paper conveying sensor 3 stay jam	SM paper conveying sensor 3 (SMPCS3) does not turn off during paper feed from cassette 5 (side multi tray).	J
3616		SM paper conveying sensor 3 (SMPCS3) does not turn off during paper feed from cassette 6 (side multi tray).	J
3617		SM paper conveying sensor 3 (SMPCS3) does not turn off during paper feed from cassette 7 (side multi tray).	K

*: Refer to figure 1-4-1 for paper misfeed indication (see page 1-4-1).

Code	Contents	Conditions	Jam location*
3705	SM eject sensor non arrival jam	SM eject sensor (SMES) does not turn on during paper feed from cassette 5 (side multi tray).	J
3706		SM eject sensor (SMES) does not turn on during paper feed from cassette 6 (side multi tray).	K
3707		SM eject sensor (SMES) does not turn on during paper feed from cassette 7 (side multi tray).	K
3715	SM eject sensor stay jam	SM eject sensor (SMES) does not turn off during paper feed from cassette 5 (side multi tray).	J
3716		SM eject sensor (SMES) does not turn off during paper feed from cassette 6 (side multi tray).	J
3717		SM eject sensor (SMES) does not turn off during paper feed from cassette 7 (side multi tray).	J
4001	Registration sensor non arrival jam	Registration sensor (RS) does not turn on during paper feed from cassette 1.	E
4002		Registration sensor (RS) does not turn on during paper feed from cassette 2.	E
4003		Registration sensor (RS) does not turn on during paper feed from cassette 3 (paper feeder/large capacity feeder).	E
4004		Registration sensor (RS) does not turn on during paper feed from cassette 4 (paper feeder/large capacity feeder).	E
4005		Registration sensor (RS) does not turn on during paper feed from cassette 5 (side multi tray/side deck).	E
4006		Registration sensor (RS) does not turn on during paper feed from cassette 6 (side paper feeder/side large capacity feeder).	E
4007		Registration sensor (RS) does not turn on during paper feed from cassette 7 (side paper feeder/side large capacity feeder).	E
4009		Registration sensor (RS) does not turn on during paper feed from MP tray.	E

*: Refer to figure 1-4-1 for paper misfeed indication (see page 1-4-1).

Code	Contents	Conditions	Jam location*
4011	Registration sensor stay jam	Registration sensor (RS) does not turn off during paper feed from cassette 1.	E
4012		Registration sensor (RS) does not turn off during paper feed from cassette 2.	E
4013		Registration sensor (RS) does not turn off during paper feed from cassette 3 (paper feeder/large capacity feeder).	E
4014		Registration sensor (RS) does not turn off during paper feed from cassette 4 (paper feeder/large capacity feeder).	E
4015		Registration sensor (RS) does not turn off during paper feed from cassette 5 (side multi tray/side deck).	E
4016		Registration sensor (RS) does not turn off during paper feed from cassette 6 (side paper feeder/side large capacity feeder).	E
4017		Registration sensor (RS) does not turn off during paper feed from cassette 7 (side paper feeder/side large capacity feeder).	E
4019		Registration sensor (RS) does not turn off during paper feed from MP tray.	E
4101	Loop sensor non arrival jam	Loop sensor (LPS) does not turn on during paper feed from cassette 1.	E
4102		Loop sensor (LPS) does not turn on during paper feed from cassette 2.	E
4103		Loop sensor (LPS) does not turn on during paper feed from cassette 3 (paper feeder/large capacity feeder).	E
4104		Loop sensor (LPS) does not turn on during paper feed from cassette 4 (paper feeder/large capacity feeder).	E
4105		Loop sensor (LPS) does not turn on during paper feed from cassette 5 (side multi tray/side deck).	E
4106		Loop sensor (LPS) does not turn on during paper feed from cassette 6 (side paper feeder/side large capacity feeder).	E
4107		Loop sensor (LPS) does not turn on during paper feed from cassette 7 (side paper feeder/side large capacity feeder).	E
4108		Loop sensor (LPS) does not turn on during paper feed from duplex section.	E
4109		Loop sensor (LPS) does not turn on during paper feed from MP tray.	E

*: Refer to figure 1-4-1 for paper misfeed indication (see page 1-4-1).

Code	Contents	Conditions	Jam location*
4111	Loop sensor stay jam	Loop sensor (LPS) does not turn off during paper feed from cassette 1.	E
4112		Loop sensor (LPS) does not turn off during paper feed from cassette 2.	E
4113		Loop sensor (LPS) does not turn off during paper feed from cassette 3 (paper feeder/large capacity feeder).	E
4114		Loop sensor (LPS) does not turn off during paper feed from cassette 4 (paper feeder/large capacity feeder).	E
4115		Loop sensor (LPS) does not turn off during paper feed from cassette 5 (side multi tray/side deck).	E
4116		Loop sensor (LPS) does not turn off during paper feed from cassette 6 (side paper feeder/side large capacity feeder).	E
4117		Loop sensor (LPS) does not turn off during paper feed from cassette 7 (side paper feeder/side large capacity feeder).	E
4118		Loop sensor (LPS) does not turn off during paper feed from duplex section.	E
4119		Loop sensor (LPS) does not turn off during paper feed from MP tray.	E

*: Refer to figure 1-4-1 for paper misfeed indication (see page 1-4-1).

Code	Contents	Conditions	Jam location*
4201	Fuser eject sensor non arrival jam	Fuser eject sensor (FUES) does not turn on during paper feed from cassette 1.	E
4202		Fuser eject sensor (FUES) does not turn on during paper feed from cassette 2.	E
4203		Fuser eject sensor (FUES) does not turn on during paper feed from cassette 3 (paper feeder/large capacity feeder).	E
4204		Fuser eject sensor (FUES) does not turn on during paper feed from cassette 4 (paper feeder/large capacity feeder).	E
4205		Fuser eject sensor (FUES) does not turn on during paper feed from cassette 5 (side multi tray/side deck).	E
4206		Fuser eject sensor (FUES) does not turn on during paper feed from cassette 6 (side paper feeder/side large capacity feeder).	E
4207		Fuser eject sensor (FUES) does not turn on during paper feed from cassette 7 (side paper feeder/side large capacity feeder).	E
4208		Fuser eject sensor (FUES) does not turn on during paper feed from duplex section.	E
4209		Fuser eject sensor (FUES) does not turn on during paper feed from MP tray.	E
4211	Fuser eject sensor stay jam	Fuser eject sensor (FUES) does not turn off during paper feed from cassette 1.	G
4212		Fuser eject sensor (FUES) does not turn off during paper feed from cassette 2.	G
4213		Fuser eject sensor (FUES) does not turn off during paper feed from cassette 3 (paper feeder/large capacity feeder).	G
4214		Fuser eject sensor (FUES) does not turn off during paper feed from cassette 4 (paper feeder/large capacity feeder).	G
4215		Fuser eject sensor (FUES) does not turn off during paper feed from cassette 5 (side multi tray/side deck).	G
4216		Fuser eject sensor (FUES) does not turn off during paper feed from cassette 6 (side paper feeder/side large capacity feeder).	G
4217		Fuser eject sensor (FUES) does not turn off during paper feed from cassette 7 (side paper feeder/side large capacity feeder).	G
4218		Fuser eject sensor (FUES) does not turn off during paper feed from duplex section.	G
4219		Fuser eject sensor (FUES) does not turn off during paper feed from MP tray.	G

*: Refer to figure 1-4-1 for paper misfeed indication (see page 1-4-1).

Code	Contents	Conditions	Jam location*
4301	Duplex sensor 1 non arrival jam	Duplex sensor 1 (DUS1) does not turn on during paper feed from cassette 1.	G
4302		Duplex sensor 1 (DUS1) does not turn on during paper feed from cassette 2.	G
4303		Duplex sensor 1 (DUS1) does not turn on during paper feed from cassette 3 (paper feeder/large capacity feeder).	G
4304		Duplex sensor 1 (DUS1) does not turn on during paper feed from cassette 4 (paper feeder/large capacity feeder).	G
4305		Duplex sensor 1 (DUS1) does not turn on during paper feed from cassette 5 (side multi tray/side deck).	G
4306		Duplex sensor 1 (DUS1) does not turn on during paper feed from cassette 6 (side paper feeder/side large capacity feeder).	G
4307		Duplex sensor 1 (DUS1) does not turn on during paper feed from cassette 7 (side paper feeder/side large capacity feeder).	G
4309		Duplex sensor 1 (DUS1) does not turn on during paper feed from MP tray.	G
4311	Duplex sensor 1 stay jam	Duplex sensor 1 (DUS1) does not turn off during paper feed from cassette 1.	F
4312		Duplex sensor 1 (DUS1) does not turn off during paper feed from cassette 2.	F
4313		Duplex sensor 1 (DUS1) does not turn off during paper feed from cassette 3 (paper feeder/large capacity feeder).	F
4314		Duplex sensor 1 (DUS1) does not turn off during paper feed from cassette 4 (paper feeder/large capacity feeder).	F
4315		Duplex sensor 1 (DUS1) does not turn off during paper feed from cassette 5 (side multi tray/side deck).	F
4316		Duplex sensor 1 (DUS1) does not turn off during paper feed from cassette 6 (side paper feeder/side large capacity feeder).	F
4317		Duplex sensor 1 (DUS1) does not turn off during paper feed from cassette 7 (side paper feeder/side large capacity feeder).	F
4319		Duplex sensor 1 (DUS1) does not turn off during paper feed from MP tray.	F

*: Refer to figure 1-4-1 for paper misfeed indication (see page 1-4-1).

Code	Contents	Conditions	Jam location*
4401	Duplex sensor 2 non arrival jam	Duplex sensor 2 (DUS2) does not turn on during paper feed from cassette 1.	F
4402		Duplex sensor 2 (DUS2) does not turn on during paper feed from cassette 2.	F
4403		Duplex sensor 2 (DUS2) does not turn on during paper feed from cassette 3 (paper feeder/large capacity feeder).	F
4404		Duplex sensor 2 (DUS2) does not turn on during paper feed from cassette 4 (paper feeder/large capacity feeder).	F
4405		Duplex sensor 2 (DUS2) does not turn on during paper feed from cassette 5 (side multi tray/side deck).	F
4406		Duplex sensor 2 (DUS2) does not turn on during paper feed from cassette 6 (side paper feeder/side large capacity feeder).	F
4407		Duplex sensor 2 (DUS2) does not turn on during paper feed from cassette 7 (side paper feeder/side large capacity feeder).	F
4409		Duplex sensor 2 (DUS2) does not turn on during paper feed from MP tray.	F
4411	Duplex sensor 2 stay jam	Duplex sensor 2 (DUS2) does not turn off during paper feed from cassette 1.	F
4412		Duplex sensor 2 (DUS2) does not turn off during paper feed from cassette 2.	F
4413		Duplex sensor 2 (DUS2) does not turn off during paper feed from cassette 3 (paper feeder/large capacity feeder).	F
4414		Duplex sensor 2 (DUS2) does not turn off during paper feed from cassette 4 (paper feeder/large capacity feeder).	F
4415		Duplex sensor 2 (DUS2) does not turn off during paper feed from cassette 5 (side multi tray/side deck).	F
4416		Duplex sensor 2 (DUS2) does not turn off during paper feed from cassette 6 (side paper feeder/side large capacity feeder).	F
4417		Duplex sensor 2 (DUS2) does not turn off during paper feed from cassette 7 (side paper feeder/side large capacity feeder).	F
4418		Duplex sensor 2 (DUS2) does not turn off during paper feed from duplex section.	F
4419		Duplex sensor 2 (DUS2) does not turn off during paper feed from MP tray.	F

*: Refer to figure 1-4-1 for paper misfeed indication (see page 1-4-1).

Code	Contents	Conditions	Jam location*
4601	Eject full sensor non arrival jam	Eject full sensor (EFS) does not turn on during paper feed from cassette 1.	G
4602		Eject full sensor (EFS) does not turn on during paper feed from cassette 2.	G
4603		Eject full sensor (EFS) does not turn on during paper feed from cassette 3 (paper feeder/large capacity feeder).	G
4604		Eject full sensor (EFS) does not turn on during paper feed from cassette 4 (paper feeder/large capacity feeder).	G
4605		Eject full sensor (EFS) does not turn on during paper feed from cassette 5 (side multi tray/side deck).	G
4606		Eject full sensor (EFS) does not turn on during paper feed from cassette 6 (side paper feeder/side large capacity feeder).	G
4607		Eject full sensor (EFS) does not turn on during paper feed from cassette 7 (side paper feeder/side large capacity feeder).	G
4608		Eject full sensor (EFS) does not turn on during paper feed from duplex section.	G
4609		Eject full sensor (EFS) does not turn on during paper feed from MP tray.	G
4611	Eject full sensor stay jam	Eject full sensor (EFS) does not turn off during paper feed from cassette 1.	G
4612		Eject full sensor (EFS) does not turn off during paper feed from cassette 2.	G
4613		Eject full sensor (EFS) does not turn off during paper feed from cassette 3 (paper feeder/large capacity feeder).	G
4614		Eject full sensor (EFS) does not turn off during paper feed from cassette 4 (paper feeder/large capacity feeder).	G
4615		Eject full sensor (EFS) does not turn off during paper feed from cassette 5 (side multi tray/side deck).	G
4616		Eject full sensor (EFS) does not turn off during paper feed from cassette 6 (side paper feeder/side large capacity feeder).	G
4617		Eject full sensor (EFS) does not turn off during paper feed from cassette 7 (side paper feeder/side large capacity feeder).	G
4618		Eject full sensor (EFS) does not turn off during paper feed from duplex section.	G
4619		Eject full sensor (EFS) does not turn off during paper feed from MP tray.	G

*: Refer to figure 1-4-1 for paper misfeed indication (see page 1-4-1).

Code	Contents	Conditions	Jam location*
4701	Switchback sensor non arrival jam	Switchback sensor (SBS) does not turn on during paper feed from cassette 1.	G
4702		Switchback sensor (SBS) does not turn on during paper feed from cassette 2.	G
4703		Switchback sensor (SBS) does not turn on during paper feed from cassette 3 (paper feeder/large capacity feeder).	G
4704		Switchback sensor (SBS) does not turn on during paper feed from cassette 4 (paper feeder/large capacity feeder).	G
4705		Switchback sensor (SBS) does not turn on during paper feed from cassette 5 (side multi tray/side deck).	G
4706		Switchback sensor (SBS) does not turn on during paper feed from cassette 6 (side paper feeder/side large capacity feeder).	G
4707		Switchback sensor (SBS) does not turn on during paper feed from cassette 7 (side paper feeder/side large capacity feeder).	G
4708		Switchback sensor (SBS) does not turn on during paper feed from duplex section.	G
4709		Switchback sensor (SBS) does not turn on during paper feed from MP tray.	G
4711	Switchback sensor stay jam	Switchback sensor (SBS) does not turn off during paper feed from cassette 1.	G
4712		Switchback sensor (SBS) does not turn off during paper feed from cassette 2.	G
4713		Switchback sensor (SBS) does not turn off during paper feed from cassette 3 (paper feeder/large capacity feeder).	G
4714		Switchback sensor (SBS) does not turn off during paper feed from cassette 4 (paper feeder/large capacity feeder).	G
4715		Switchback sensor (SBS) does not turn off during paper feed from cassette 5 (side multi tray/side deck).	G
4716		Switchback sensor (SBS) does not turn off during paper feed from cassette 6 (side paper feeder/side large capacity feeder).	G
4717		Switchback sensor (SBS) does not turn off during paper feed from cassette 7 (side paper feeder/side large capacity feeder).	G
4718		Switchback sensor (SBS) does not turn off during paper feed from duplex section.	G
4719		Switchback sensor (SBS) does not turn off during paper feed from MP tray.	G

*: Refer to figure 1-4-1 for paper misfeed indication (see page 1-4-1).

Code	Contents	Conditions	Jam location*
4901	BR conveying sensor 1 non arrival jam	BR conveying sensor 1 (BRCS1) does not turn on during paper feed from cassette 1.	G
4902		BR conveying sensor 1 (BRCS1) does not turn on during paper feed from cassette 2.	G
4903		BR conveying sensor 1 (BRCS1) does not turn on during paper feed from cassette 3 (paper feeder/large capacity feeder).	G
4904		BR conveying sensor 1 (BRCS1) does not turn on during paper feed from cassette 4 (paper feeder/large capacity feeder).	G
4905		BR conveying sensor 1 (BRCS1) does not turn on during paper feed from cassette 5 (side multi tray/side deck).	G
4906		BR conveying sensor 1 (BRCS1) does not turn on during paper feed from cassette 6 (side paper feeder/side large capacity feeder).	G
4907		BR conveying sensor 1 (BRCS1) does not turn on during paper feed from cassette 7 (side paper feeder/side large capacity feeder).	G
4908		BR conveying sensor 1 (BRCS1) does not turn on during paper feed from duplex section.	G
4909		BR conveying sensor 1 (BRCS1) does not turn on during paper feed from MP tray.	G
4911	BR conveying sensor 1 stay jam	BR conveying sensor 1 (BRCS1) does not turn off during paper feed from cassette 1.	G
4912		BR conveying sensor 1 (BRCS1) does not turn off during paper feed from cassette 2.	G
4913		BR conveying sensor 1 (BRCS1) does not turn off during paper feed from cassette 3 (paper feeder/large capacity feeder).	G
4914		BR conveying sensor 1 (BRCS1) does not turn off during paper feed from cassette 4 (paper feeder/large capacity feeder).	G
4915		BR conveying sensor 1 (BRCS1) does not turn off during paper feed from cassette 5 (side multi tray/side deck).	G
4916		BR conveying sensor 1 (BRCS1) does not turn off during paper feed from cassette 6 (side paper feeder/side large capacity feeder).	G
4917		BR conveying sensor 1 (BRCS1) does not turn off during paper feed from cassette 7 (side paper feeder/side large capacity feeder).	G

*: Refer to figure 1-4-1 for paper misfeed indication (see page 1-4-1).

Code	Contents	Conditions	Jam location*
4918	BR conveying sensor 1 stay jam	BR conveying sensor 1 (BRCS1) does not turn off during paper feed from duplex section.	G
4919		BR conveying sensor 1 (BRCS1) does not turn off during paper feed from MP tray.	G
5001	BR conveying sensor 2 non arrival jam	BR conveying sensor 2 (BRCS2) does not turn on during paper feed from cassette 1.	G
5002		BR conveying sensor 2 (BRCS2) does not turn on during paper feed from cassette 2.	G
5003		BR conveying sensor 2 (BRCS2) does not turn on during paper feed from cassette 3 (paper feeder/large capacity feeder).	G
5004		BR conveying sensor 2 (BRCS2) does not turn on during paper feed from cassette 4 (paper feeder/large capacity feeder).	G
5005		BR conveying sensor 2 (BRCS2) does not turn on during paper feed from cassette 5 (side multi tray/side deck).	G
5006		BR conveying sensor 2 (BRCS2) does not turn on during paper feed from cassette 6 (side paper feeder/side large capacity feeder).	G
5007		BR conveying sensor 2 (BRCS2) does not turn on during paper feed from cassette 7 (side paper feeder/side large capacity feeder).	G
5008		BR conveying sensor 2 (BRCS2) does not turn on during paper feed from duplex section.	G
5009		BR conveying sensor 2 (BRCS2) does not turn on during paper feed from MP tray.	G
5011	BR conveying sensor 2 stay jam	BR conveying sensor 2 (BRCS2) does not turn off during paper feed from cassette 1.	G
5012		BR conveying sensor 2 (BRCS2) does not turn off during paper feed from cassette 2.	G
5013		BR conveying sensor 2 (BRCS2) does not turn off during paper feed from cassette 3 (paper feeder/large capacity feeder).	G
5014		BR conveying sensor 2 (BRCS2) does not turn off during paper feed from cassette 4 (paper feeder/large capacity feeder).	G
5015		BR conveying sensor 2 (BRCS2) does not turn off during paper feed from cassette 5 (side multi tray/side deck).	G

*: Refer to figure 1-4-1 for paper misfeed indication (see page 1-4-1).

Code	Contents	Conditions	Jam location*
5016	BR conveying sensor 2 stay jam	BR conveying sensor 2 (BRCS2) does not turn off during paper feed from cassette 6 (side paper feeder/side large capacity feeder).	G
5017		BR conveying sensor 2 (BRCS2) does not turn off during paper feed from cassette 7 (side paper feeder/side large capacity feeder).	G
5018		BR conveying sensor 2 (BRCS2) does not turn off during paper feed from duplex section.	G
5019		BR conveying sensor 2 (BRCS2) does not turn off during paper feed from MP tray.	G
5101	BR eject sensor non arrival jam	BR eject sensor (BRES) does not turn on during paper feed from cassette 1.	G
5102		BR eject sensor (BRES) does not turn on during paper feed from cassette 2.	G
5103		BR eject sensor (BRES) does not turn on during paper feed from cassette 3 (paper feeder/large capacity feeder).	G
5104		BR eject sensor (BRES) does not turn on during paper feed from cassette 4 (paper feeder/large capacity feeder).	G
5105		BR eject sensor (BRES) does not turn on during paper feed from cassette 5 (side multi tray/side deck).	G
5106		BR eject sensor (BRES) does not turn on during paper feed from cassette 6 (side paper feeder/side large capacity feeder).	G
5107		BR eject sensor (BRES) does not turn on during paper feed from cassette 7 (side paper feeder/side large capacity feeder).	G
5108		BR eject sensor (BRES) does not turn on during paper feed from duplex section.	G
5109		BR eject sensor (BRES) does not turn on during paper feed from MP tray.	G

*: Refer to figure 1-4-1 for paper misfeed indication (see page 1-4-1).

Code	Contents	Conditions	Jam location*
5111	BR eject sensor stay jam	BR eject sensor (BRES) does not turn off during paper feed from cassette 1.	G
5112		BR eject sensor (BRES) does not turn off during paper feed from cassette 2.	G
5113		BR eject sensor (BRES) does not turn off during paper feed from cassette 3 (paper feeder/large capacity feeder).	G
5114		BR eject sensor (BRES) does not turn off during paper feed from cassette 4 (paper feeder/large capacity feeder).	G
5115		BR eject sensor (BRES) does not turn off during paper feed from cassette 5 (side multi tray/side deck).	G
5116		BR eject sensor (BRES) does not turn off during paper feed from cassette 6 (side paper feeder/side large capacity feeder).	G
5117		BR eject sensor (BRES) does not turn off during paper feed from cassette 7 (side paper feeder/side large capacity feeder).	G
5118		BR eject sensor (BRES) does not turn off during paper feed from duplex section.	G
5119		BR eject sensor (BRES) does not turn off during paper feed from MP tray.	G
6000	DF paper entry error	DF paper entry sensor (DFPES) turns on before the eject signal is output from the machine (4000-sheet finisher).	H
6001		DF paper entry sensor (DFPES) turns on before the eject signal is output from the machine (1000-sheet finisher).	H
6020	DF front cover open	DF front upper cover is opened during operation (4000-sheet finisher).	H
6021		DF front cover is opened during operation (1000-sheet finisher).	H
6041	DF top cover open	DF top cover is opened during operation (1000-sheet finisher).	H
6050	CF eject cover open	CF eject cover is opened during operation (4000-sheet finisher).	H
6060	MB cover open	MB cover is opened during operation (4000-sheet finisher).	H
6070	Center folding unit open	Center folding unit is opened during operation (4000-sheet finisher).	H
6080	CF left guide open	CF left guide is opened during operation (4000-sheet finisher).	H

*: Refer to figure 1-4-1 for paper misfeed indication (see page 1-4-1).

Code	Contents	Conditions	Jam location*
6100	DF paper entry sensor non arrival jam	DF paper entry sensor (DFPES) is not turned on even if a specified time has elapsed after the machine eject signal was received (4000-sheet finisher).	H
6101		DF paper entry sensor (DFPES) is not turned on even if a specified time has elapsed after the machine eject signal was received (1000-sheet finisher).	H
6110	DF paper entry sensor stay jam	DF paper entry sensor (DFPES) is not turned off within specified time of its turning on (4000-sheet finisher).	H
6111		DF paper entry sensor (DFPES) is not turned off within specified time of its turning on (1000-sheet finisher).	H
6200	DF sub eject sensor non arrival jam	DF sub eject sensor (DFSES) does not turn on within specified time of DF paper entry sensor (DFPES) turning on.	H
6210	DF sub eject sensor stay jam	DF sub eject sensor (DFSES) is not turned off within specified time of its turning on.	H
6300	DF middle eject sensor non arrival jam	DF middle eject sensor (DFMES) does not turn on within specified time of DF paper entry sensor (DFPES) turning on (4000-sheet finisher).	H
6301		DF middle eject sensor (DFMES) does not turn on within specified time of DF paper entry sensor (DFPES) turning on (1000-sheet finisher).	H
6310	DF middle eject sensor stay jam	DF middle eject sensor (DFMES) is not turned off within specified time of its turning on (4000-sheet finisher).	H
6311		DF middle eject sensor (DFMES) is not turned off within specified time of its turning on (1000-sheet finisher)	H

*: Refer to figure 1-4-1 for paper misfeed indication (see page 1-4-1).

Code	Contents	Conditions	Jam location*
6400	DF tray upper surface sensor non arrival jam	DF tray upper surface sensor (DFTUSS) does not turn on within specified time of DF middle eject sensor (DFMES) turning on (4000-sheet finisher).	H
6401		DF tray upper surface sensor (DFTUSS) does not turn on within specified time of DF middle eject sensor (DFMES) turning on (1000-sheet finisher).	H
6410	DF tray upper surface sensor stay jam	DF tray upper surface sensor (DFTUSS) is not turned off within specified time of its turning on (4000-sheet finisher).	H
6411		DF tray upper surface sensor (DFTUSS) is not turned off within specified time of its turning on (1000-sheet finisher).	H
6500	DF bundle discharge sensor non arrival jam	DF bundle discharge sensor (DFBDS) does not turn on within specified time of DF middle eject sensor (DFMES) turning on.	H
6510	DF bundle discharge sensor stay jam	DF bundle discharge sensor (DFBDS) is not turned off since the bundle discharge starts (4000-sheet finisher).	H
6511		DF bundle discharge sensor (DFBDS) is not turned off since the bundle discharge starts (1000-sheet finisher).	H
6600	DF drum sensor non arrival jam	DF drum sensor (DFDRS) does not turn on within specified time of DF paper entry sensor (DFPES) turning on.	H
6610	DF drum sensor stay jam	DF drum sensor (DFDRS) is not turned off within specified time of its turning on.	H
6710	Center folding unit stay jam	During paper conveying to center folding unit, DF drum sensor (DFDRS) is not turned off within specified time of its turning on.	H
6810	DF side registration sensor 1 stay jam	DF side registration sensor 1 (DFSRS1) is not turned off within specified time after driving the DF side registration motor 1 (DFSRM1) (4000-sheet finisher).	H
6811		DF side registration sensor 1 (DFSRS1) is not turned off within specified time after driving the DF side registration motor 1 (DFSRM1) (1000-sheet finisher).	H
6910	DF side registration sensor 2 stay jam	DF side registration sensor 2 (DFSRS2) is not turned off within specified time after driving the DF side registration motor 2 (DFSRM2) (4000-sheet finisher).	H
6811		DF side registration sensor 2 (DFSRS2) is not turned off within specified time after driving the DF side registration motor 2 (DFSRM2) (1000-sheet finisher).	H

*: Refer to figure 1-4-1 for paper misfeed indication (see page 1-4-1).

Code	Contents	Conditions	Jam location*
7000	DF staple operation error	DF staple sensor (DFSTS) is not turned on within specified time after driving the DF staple motor (DFSTM) (4000-sheet finisher).	H
7001		DF staple sensor (DFSTS) is not turned on within specified time after driving the DF staple motor (DFSTM) (1000-sheet finisher).	H
7100	CF paper entry sensor non arrival jam	CF paper entry sensor (CFPES) is not turned on even if a specified time has elapsed after the machine eject signal was received.	H
7110	CF paper entry sensor stay jam	CF paper entry sensor (CFPES) is not turned off within specified time of its turning on.	H
7200	CF eject sensor non arrival jam	CF eject sensor (CFES) is not turned on within specified time since centerfold operation starts.	H
7210	CF eject sensor stay jam	During centerfold operation, CF eject sensor (CFES) is not turned off within specified time of its turning on.	H
7300	CF eject sensor non arrival jam	CF eject sensor (CFES) is not turned on within specified time since three fold operation starts.	H
7310	CF eject sensor stay jam	During three fold operation, CF eject sensor (CFES) is not turned off within specified time of its turning on.	H
7400	CF side registration sensor 2 non arrival jam	CF side registration sensor 2 (CFSRS2) is not turned on within specified time after driving the CF side registration motor 2 (CFSRM2).	H
7500	CF side registration sensor 1 non arrival jam	CF side registration sensor 1 (CFSRS1) is not turned on within specified time after driving the CF side registration motor 1 (CFSRM1).	H
7600	CF staple operation error	CF staple sensor (CFSTS) is not turned on within specified time after driving the CF staple motor (CFSTM).	H
7700	CF paper conveying sensor non arrival jam	CF paper conveying sensor (CFPCS) is not turned on even if a specified time has elapsed after the machine eject signal was received.	H
7710	CF paper conveying sensor stay jam	CF paper conveying sensor (CFPCS) is not turned off within specified time of its turning on.	H
7800	MB eject sensor non arrival jam	MB eject sensor (MBES) is not turned on even if a specified time has elapsed after the machine eject signal was received.	I
7810	MB eject sensor stay jam	MB eject sensor (MBES) is not turned off within specified time of its turning on.	I
7950	Paper interval error jam	An illegal inter-page or inter-print interval has occurred (4000-sheet finisher).	H
7951		An illegal inter-page or inter-print interval has occurred (1000-sheet finisher).	H

*: Refer to figure 1-4-1 for paper misfeed indication (see page 1-4-1).

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 and a four-digit error code indicating the type of the error.

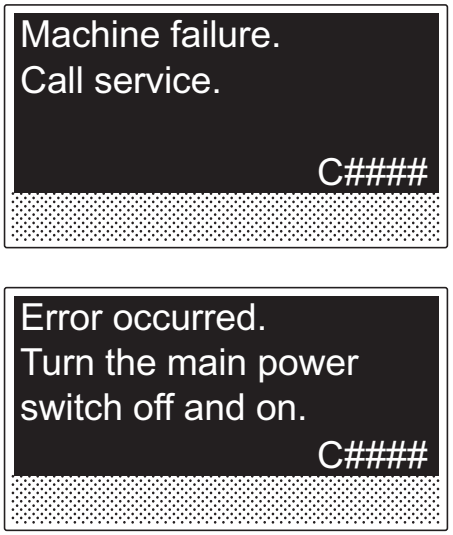


Figure 1-4-3

(2) Self diagnostic codes

If the part causing the problem was not supplied, use the unit including the part for replacement.

Code	Contents	Causes	Check procedures/ corrective measures
0100	**Backup memory device error**	Defective EEPROM.	Replace the main PWB and check for correct operation (see page 1-5-44).
		Defective main PWB.	Replace the main PWB and check for correct operation (see page 1-5-44).
0120	**MAC address data error** For data in which the MAC address is invalid.	Defective EEPROM.	Replace the main PWB and check for correct operation (see page 1-5-44).
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
0150	**Backup memory read/write error (engine PWB)** No response is issued from the device in reading/writing for 5 ms or more and this problem is repeated 5 times successively. Mismatch of reading data from 2 locations occurs 8 times successively. Mismatch between writing data and reading data occurs 8 times successively.	Improper installation EEPROM.	Check the installation of the EEPROM and remedy if necessary.
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
		Device damage of EEPROM.	Contact the Service Administrative Division.
0160	**Backup memory data error (engine PWB)** Reading data from EEPROM is abnormal.	Data damage of EEPROM.	Contact the Service Administrative Division.
0170	**Billing counting error** A checksum error is detected in the main and engine backup memories for the billing counters.	Data damage of EEPROM.	Contact the Service Administrative Division.
		Defective PWB.	Replace the DF main PWB or the engine PWB and check for correct operation. (see page 1-5-44,1-5-49)
0180	**Machine number mismatch** Machine number of main and engine does not match.	Data damage of EEPROM.	Contact the Service Administrative Division.
0640	**Hard disk error** The hard disk cannot be accessed.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable.
		Defective hard disk.	Run U024 (HDD formatting) without turning the power off to initialize the hard disk. Replace the hard disk drive and check for correct operation if the problem is still detected after initialization.
		Defective main PWB.	Replace the main PWB and check for correct operation (see page 1-5-44).

Code	Contents	Causes	Check procedures/ corrective measures
0800	**Image processing error** JAM010X is detected twice.	Defective main PWB.	Replace the main PWB and check for correct operation (see page 1-5-44).
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.	The battery is disconnected from the main PWB.	Check visually and remedy if necessary
		Defective main PWB.	Replace the main PWB and check for correct operation (see page 1-5-44).
		* : Once detected, turning the main power switch off and on lets the machine in disconnection mode, displaying Maintenance T.Execute U906 to reset.	
0970	**12 V power down detect** Power is disconnected during sleepingDetection of the temporary blackout during sleeping (24V is off, 23V is on, only the controller software is running).	Defective power source PWB.	Replace the power source PWB and check for correct operation.
0980	**24 V power down detect** **24V disconnection signal is detected for 1 s and 12V disconnection signal is not detected.**	Defective power source PWB.	Replace the power source PWB and check for correct operation.
1000	**MP lift motor error** After the MP lift motor is driven, the ON status of MP lift sensors 1 and 2 cannot be detected for 3 s.	Defective MP plate elevation mechanism.	Check to see if the MP plate can move smoothly and repair it if any problem is found.
		Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. MP lift motor and relay PWB (YC3) Relay PWB (YC12) and feed PWB 1 (YC17) Feed PWB 1 (YC1) and engine PWB (YC6)
		Defective drive transmission system of motor.	Check if the gears rotate smoothly. If not, grease the bushes and gears. Check for broken gears and replace if any.
		Defective MP lift motor.	Replace the MP lift motor.
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).

Code	Contents	Causes	Check procedures/ corrective measures
1010	**Lift motor 1 error** After cassette 1 is inserted, lift sensor 1 does not turn on within 12 s. This error is detected 5 times successively. The lock signal of the motor is detected continuously for 1 s. This error is detected 5 times successively.	Defective bottom plate elevation mechanism in the cassette.	Check to see if the bottom plate can move smoothly and repair it if any problem is found.
		Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Lift motor 1 and feed PWB 2 (YC3) Feed PWB 2 (YC1) and engine PWB (YC4)
		Defective drive transmission system of motor.	Check if the gears rotate smoothly. If not, grease the bushes and gears. Check for broken gears and replace if any.
		Defective lift motor 1.	Replace the lift motor 1.
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
1020	**Lift motor 2 error** After cassette 2 is inserted, lift sensor 2 does not turn on within 12 s. This error is detected 5 times successively. The lock signal of the motor is detected continuously for 1 s. This error is detected 5 times successively.	Defective bottom plate elevation mechanism in the cassette.	Check to see if the bottom plate can move smoothly and repair it if any problem is found.
		Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Lift motor 2 and feed PWB 2 (YC3) Feed PWB 2 (YC1) and engine PWB (YC4)
		Defective drive transmission system of motor.	Check if the gears rotate smoothly. If not, grease the bushes and gears. Check for broken gears and replace if any.
		Defective lift motor 2.	Replace the lift motor 2.
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).

Code	Contents	Causes	Check procedures/ corrective measures
1030	**PF lift motor 1 error (paper feeder)** After cassette 3 is inserted, PF lift sensor 1 does not turn on within 12 s. This error is detected 5 times successively. During driving the motor, the lift overcurrent protective monitor signal is detected for 1 s or more 5 times successively. However, the first 1 s after motor is turned on is excluded from detection.	Defective bottom plate elevation mechanism in the cassette.	Check to see if the bottom plate can move smoothly and repair it if any problem is found.
		Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. PF lift motor 1 and PF main PWB (YC7)
		Defective drive transmission system of motor.	Check if the gears rotate smoothly. If not, grease the bushes and gears. Check for broken gears and replace if any.
		Defective PF lift motor 1.	Replace the PF lift motor 1.
		Defective PF main PWB.	Replace the PF main PWB (Refer to the service manual for the paper feeder).
1040	**PF lift motor 2 error (paper feeder)** After cassette 4 is inserted, PF lift sensor 2 does not turn on within 12 s. This error is detected 5 times successively. During driving the motor, the lift overcurrent protective monitor signal is detected for 1 s or more 5 times successively. However, the first 1 s after motor is turned on is excluded from detection.	Defective bottom plate elevation mechanism in the cassette.	Check to see if the bottom plate can move smoothly and repair it if any problem is found.
		Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. PF lift motor 2 and PF main PWB (YC7)
		Defective drive transmission system of motor.	Check if the gears rotate smoothly. If not, grease the bushes and gears. Check for broken gears and replace if any.
		Defective PF lift motor 2.	Replace the PF lift motor 2.
		Defective PF main PWB.	Replace the PF main PWB (Refer to the service manual for the paper feeder).
1050	**SM lift motor error (side multi tray)** [45 ppm/55 ppm model] After cassette 5 is inserted, SM lift sensor does not turn on within 12 s. This error is detected 5 times successively. (Time to detect is 2 seconds at the second time and later.) During driving the motor, the lift overcurrent protective monitor signal is detected for 1 s or more 5 times successively. However, the first 1 s after motor is turned on is excluded from detection.	Defective bottom plate elevation mechanism in the cassette.	Check to see if the bottom plate can move smoothly and repair it if any problem is found.
		Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. SM lift motor and SM main PWB (YC5)
		Defective drive transmission system of motor.	Check if the gears rotate smoothly. If not, grease the bushes and gears. Check for broken gears and replace if any.
		Defective SM lift motor.	Replace the SM lift motor.
		Defective SM main PWB.	Replace the SM main PWB (Refer to the service manual for the paper feeder).

Code	Contents	Causes	Check procedures/ corrective measures
1060	**PF lift motor 1 error (side paper feeder)** After cassette 6 is inserted, PF lift sensor 1 does not turn on within 12 s. This error is detected 5 times successively. (Time to detect is 2 seconds at the second time and later.) During driving the motor, the lift overcurrent protective monitor signal is detected for 1 s or more 5 times successively. However, the first 1 s after motor is turned on is excluded from detection. *:The software over-current protection monitor signal has been detected for 200ms or longer where LFC is installed.	Defective bottom plate elevation mechanism in the cassette.	Check to see if the bottom plate can move smoothly and repair it if any problem is found.
		Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. PF lift motor 1 and PF main PWB (YC7)
		Defective drive transmission system of motor.	Check if the gears rotate smoothly. If not, grease the bushes and gears. Check for broken gears and replace if any.
		Defective PF lift motor 1.	Replace the PF lift motor 1.
		Defective PF main PWB.	Replace the PF main PWB (Refer to the service manual for the paper feeder).
1070	**PF lift motor 2 error (side paper feeder)** After cassette 7 is inserted, PF lift sensor 2 does not turn on within 12 s. This error is detected 5 times successively. (Time to detect is 2 seconds at the second time and later.) During driving the motor, the lift overcurrent protective monitor signal is detected for 1 s or more 5 times successively. However, the first 1 s after motor is turned on is excluded from detection. *:The software over-current protection monitor signal has been detected for 200ms or longer where LFC is installed.	Defective bottom plate elevation mechanism in the cassette.	Check to see if the bottom plate can move smoothly and repair it if any problem is found.
		Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. PF lift motor 2 and PF main PWB (YC7)
		Defective drive transmission system of motor.	Check if the gears rotate smoothly. If not, grease the bushes and gears. Check for broken gears and replace if any.
		Defective PF lift motor 2.	Replace the PF lift motor 2.
		Defective PF main PWB.	Replace the PF main PWB (Refer to the service manual for the paper feeder).

Code	Contents	Causes	Check procedures/ corrective measures
1100	**PF lift motor 1 error (large capacity feeder)** After cassette 3 is inserted, PF lift sensor 1 does not turn on within 23 s. This error is detected 5 times successively. (Time to detect is 2 seconds at the second time and later.) During driving the motor, the lift overcurrent protective monitor signal is detected for 200 ms or more 5 times successively. However, the first 1 s after PF lift motor 1 is turned on is excluded from detection.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. PF lift motor 1 and PF main PWB (YC7)
		Defective drive transmission system of motor.	Check if the gears rotate smoothly. If not, grease the bushes and gears. Check for broken gears and replace if any.
		Defective PF lift motor 1.	Replace the PF lift motor 1.
		Defective PF main PWB.	Replace the PF main PWB (Refer to the service manual for the paper feeder).
1110	**PF lift motor 2 error (large capacity feeder)** After cassette 4 is inserted, PF lift sensor 2 does not turn on within 23 s. This error is detected 5 times successively. (Time to detect is 2 seconds at the second time and later.) During driving the motor, the lift overcurrent protective monitor signal is detected for 200 ms or more 5 times successively. However, the first 1 s after PF lift motor 2 is turned on is excluded from detection.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. PF lift motor 2 and PF main PWB (YC7)
		Defective drive transmission system of motor.	Check if the gears rotate smoothly. If not, grease the bushes and gears. Check for broken gears and replace if any.
		Defective PF lift motor 2.	Replace the PF lift motor 2.
		Defective PF main PWB.	Replace the PF main PWB (Refer to the service manual for the paper feeder).
1140	**SD lift motor error (side deck)** After cassette 5 is inserted, SD lift sensor does not turn on within 30 s. The lock signal of the motor is detected continuously for 200 ms.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. SD lift motor and SD main PWB (YC8)
		Defective drive transmission system of motor.	Check if the gears rotate smoothly. If not, grease the bushes and gears. Check for broken gears and replace if any.
		Defective SD lift motor.	Replace the SD lift motor.
		Defective SD main PWB.	Replace the SD main PWB (Refer to the service manual for the paper feeder).

Code	Contents	Causes	Check procedures/ corrective measures
1250	**SM multi feed sensor communication error (side multi tray)** A communication error is detected 3 times in succession.	Improper installation side multi tray.	Follow installation instruction carefully again.
		Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. SM main PWB (YC1) and engine PWB (YC19)
		Defective engine PWB.	Replace the engine PWB a1-5-49nd check for correct operation (see page 1-5-49).
		Defective SM main PWB.	Replace the SM main PWB (Refer to the service manual for the paper feeder).
1350	**SM multi feed sensor error (side multi tray)** The SM multi feed sensor has detected multi feeding 5 times successively.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. SM multi feed sensor and SM main PWB (YC11)
		Defective SM multi feed sensor.	Replace the SM multi feed sensor.
		Defective SM main PWB.	Replace the SM main PWB (Refer to the service manual for the paper feeder).
1450	**SM multi feed sensor backup error (side multi tray)** When writing the data, read and write data does not match 3 times in succession. Deleting a block has failed three times in a row. Writing won't complete in 200 ms after writing has commenced.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. SM multi feed sensor and SM main PWB (YC11)
		Defective SM multi feed sensor.	Replace the SM multi feed sensor.
		Defective SM main PWB.	Replace the SM main PWB (Refer to the service manual for the paper feeder).
1800	**Paper feeder communication error** A communication error from paper feeder is detected 10 times in succession.	Improper installation paper feeder.	Follow installation instruction carefully again.
		Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. PF main PWB (YC13) and engine PWB (YC19)
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
		Defective PF main PWB.	Replace the PF main PWB (Refer to the service manual for the paper feeder).

Code	Contents	Causes	Check procedures/ corrective measures
1810	**Side multi tray communication error** A communication error from paper feeder is detected 10 times in succession.	Improper installation side multi tray.	Follow installation instruction carefully again.
		Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. SM main PWB (YC1) and engine PWB (YC19)
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
		Defective SM main PWB.	Replace the SM main PWB (Refer to the service manual for the paper feeder).
1820	**Side paper feeder communication error** A communication error from paper feeder is detected 10 times in succession.	Improper installation side paper feeder.	Follow installation instruction carefully again.
		Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. PF main PWB (YC13) and SM main PWB (YC4) SM main PWB (YC1) and engine PWB (YC19)
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
		Defective SM main PWB.	Replace the SM main PWB (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).
1900	**Paper feeder EEPROM error** When writing the data, read and write data does not match 3 times in succession.	Defective PF main PWB.	Replace the PF main PWB (Refer to the service manual for the paper feeder).
		Device damage of EEPROM.	Contact the Service Administrative Division.
1910	**Side multi tray EEPROM error** When writing the data, read and write data does not match 3 times in succession.	Defective SM main PWB.	Replace the SM main PWB (Refer to the service manual for the paper feeder).
		Device damage of EEPROM.	Contact the Service Administrative Division.
1920	**Side paper feeder EEPROM error** When writing the data, read and write data does not match 3 times in succession.	Defective PF main PWB.	Replace the PF main PWB (Refer to the service manual for the paper feeder).
		Device damage of EEPROM.	Contact the Service Administrative Division.

Code	Contents	Causes	Check procedures/ corrective measures
1950	**Transfer belt unit EEPROM error** No response is issued from the device in reading/writing for 5 ms or more and this problem is repeated 5 times successively. Mismatch of reading data from 2 locations occurs 8 times successively. Mismatch between writing data and reading data occurs 8 times successively.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Transfer belt unit and engine PWB (YC3)
		Defective transfer belt unit.	Replace the transfer belt unit and check for correct operation (see 1-5-34).
2101	**Developer motor K error** After developer motor K is driven, the ready signal does not turn to L within 5 s. After developer motor K is stabilized, the ready signal is at the H level for 5 s continuously.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Developer motor K and motor control PWB (YC7) Motor control PWB (YC3) and engine PWB (YC9)
		Defective drive transmission system of motor.	Check if the gears rotate smoothly. If not, grease the bushes and gears. Check for broken gears and replace if any.
		Defective developer motor K.	Replace the developer motor K.
		Defective Motor control PWB.	Replace the Motor control PWB and check for correct operation.
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
2103	**Developer motor MCY error** After developer motor MCY is driven, the ready signal does not turn to L within 5 s. After developer motor MCY is stabilized, the ready signal is at the H level for 5 s continuously.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Developer motor MCY and motor control PWB (YC7) Motor control PWB (YC3) and engine PWB (YC9)
		Defective drive transmission system of motor.	Check if the gears rotate smoothly. If not, grease the bushes and gears. Check for broken gears and replace if any.
		Defective developer motor MCY.	Replace the developer motor MCY.
		Defective Motor control PWB.	Replace the Motor control PWB and check for correct operation.
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).

Code	Contents	Causes	Check procedures/ corrective measures
2201	**Drum motor K steady-state error** After drum motor K is stabilized, the ready signal is at the H level for 5 s continuously.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Drum motor K and motor control PWB (YC5) Motor control PWB (YC3) and engine PWB (YC9)
		Defective drive transmission system of motor.	Check if the gears rotate smoothly. If not, grease the bushes and gears. Check for broken gears and replace if any.
		Defective drum motor K.	Replace the drum motor K.
		Defective Motor control PWB.	Replace the Motor control PWB and check for correct operation.
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
2202	**Drum motor C steady-state error** After drum motor C is stabilized, the ready signal is at the H level for 5 s continuously.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Drum motor C and motor control PWB (YC4) Motor control PWB (YC3) and engine PWB (YC9)
		Defective drive transmission system of motor.	Check if the gears rotate smoothly. If not, grease the bushes and gears. Check for broken gears and replace if any.
		Defective drum motor C.	Replace the drum motor C.
		Defective Motor control PWB.	Replace the Motor control PWB and check for correct operation.
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).

Code	Contents	Causes	Check procedures/ corrective measures
2203	**Drum motor M steady-state error** After drum motor M is stabilized, the ready signal is at the H level for 5 s continuously.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Drum motor M and motor control PWB (YC5) Motor control PWB (YC3) and engine PWB (YC9)
		Defective drive transmission system of motor.	Check if the gears rotate smoothly. If not, grease the bushes and gears. Check for broken gears and replace if any.
		Defective drum motor M.	Replace the drum motor M.
		Defective Motor control PWB.	Replace the Motor control PWB and check for correct operation.
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
2204	**Drum motor Y steady-state error** After drum motor Y is stabilized, the ready signal is at the H level for 5 s continuously.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Drum motor Y and motor control PWB (YC4) Motor control PWB (YC3) and engine PWB (YC9)
		Defective drive transmission system of motor.	Check if the gears rotate smoothly. If not, grease the bushes and gears. Check for broken gears and replace if any.
		Defective drum motor Y.	Replace the drum motor Y.
		Defective Motor control PWB.	Replace the Motor control PWB and check for correct operation.
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).

Code	Contents	Causes	Check procedures/ corrective measures
2211	**Drum motor K startup error** Drum motor K is not stabilized within 5 s since the motor is activated.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Drum motor K and motor control PWB (YC5) Motor control PWB (YC3) and engine PWB (YC9)
		Defective drive transmission system of motor.	Check if the gears rotate smoothly. If not, grease the bushes and gears. Check for broken gears and replace if any.
		Defective drum motor K.	Replace the drum motor K.
		Defective Motor control PWB.	Replace the Motor control PWB and check for correct operation.
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
2212	**Drum motor C startup error** Drum motor C is not stabilized within 5 s since the motor is activated.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Drum motor C and motor control PWB (YC4) Motor control PWB (YC3) and engine PWB (YC9)
		Defective drive transmission system of motor.	Check if the gears rotate smoothly. If not, grease the bushes and gears. Check for broken gears and replace if any.
		Defective drum motor C.	Replace the drum motor C.
		Defective Motor control PWB.	Replace the Motor control PWB and check for correct operation.
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).

Code	Contents	Causes	Check procedures/ corrective measures
2213	**Drum motor M startup error** Drum motor M is not stabilized within 5 s since the motor is activated.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Drum motor M and motor control PWB (YC5) Motor control PWB (YC3) and engine PWB (YC9)
		Defective drive transmission system of motor.	Check if the gears rotate smoothly. If not, grease the bushes and gears. Check for broken gears and replace if any.
		Defective drum motor M.	Replace the drum motor M.
		Defective Motor control PWB.	Replace the Motor control PWB and check for correct operation.
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
2214	**Drum motor Y startup error** Drum motor Y is not stabilized within 5 s since the motor is activated.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Drum motor Y and motor control PWB (YC4) Motor control PWB (YC3) and engine PWB (YC9)
		Defective drive transmission system of motor.	Check if the gears rotate smoothly. If not, grease the bushes and gears. Check for broken gears and replace if any.
		Defective drum motor Y.	Replace the drum motor Y.
		Defective Motor control PWB.	Replace the Motor control PWB and check for correct operation.
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
2300	**Fuser motor error** After fuser motor is driven, the ready signal does not turn to L within 2 s. After fuser motor is stabilized, the ready signal is at the H level for 1 s continuously.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Fuser motor and feed PWB 1 (YC18) Feed PWB 1 (YC1) and engine PWB (YC6)
		Defective drive transmission system of motor.	Check if the gears rotate smoothly. If not, grease the bushes and gears. Check for broken gears and replace if any.
		Defective fuser motor.	Replace the fuser motor.
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).

Code	Contents	Causes	Check procedures/ corrective measures
2500	**Paper feed motor error** After paper feed motor is driven, the ready signal does not turn to L within 2 s. After paper feed motor is stabilized, the ready signal is at the H level for 1 s continuously.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Paper feed motor and feed PWB 2 (YC2) Feed PWB 2 (YC1) and engine PWB (YC4)
		Defective drive transmission system of motor.	Check if the gears rotate smoothly. If not, grease the bushes and gears. Check for broken gears and replace if any.
		Defective paper feed motor.	Replace the paper feed motor.
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
2600	**PF paper feed motor error (large capacity feeder)** After PF paper feed motor is driven, the ready signal does not turn to L within 2 s.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. PF paper feed motor and PF main PWB (YC16)
		Defective drive transmission system of motor.	Check if the gears rotate smoothly. If not, grease the bushes and gears. Check for broken gears and replace if any.
		Defective PF paper feed motor.	Replace the PF paper feed motor.
		Defective PF main PWB.	Replace the PF main PWB (Refer to the service manual for the paper feeder).
2610	**PF paper feed motor error (paper feeder)** After PF paper feed motor is driven, the ready signal does not turn to L within 2 s.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. PF paper feed motor and PF main PWB (YC16)
		Defective drive transmission system of motor.	Check if the gears rotate smoothly. If not, grease the bushes and gears. Check for broken gears and replace if any.
		Defective PF paper feed motor.	Replace the PF paper feed motor.
		Defective PF main PWB.	Replace the PF main PWB (Refer to the service manual for the paper feeder).

Code	Contents	Causes	Check procedures/ corrective measures
2640	**SD paper feed motor error (side deck)** After SD paper feed motor is driven, the ready signal does not turn to L within 2 s.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. SD paper feed motor and SD main PWB (YC16)
		Defective drive transmission system of motor.	Check if the gears rotate smoothly. If not, grease the bushes and gears. Check for broken gears and replace if any.
		Defective SD paper feed motor.	Replace the SD paper feed motor.
		Defective SD main PWB.	Replace the SD main PWB (Refer to the service manual for the paper feeder).
2650	**SM paper feed motor error (side multi tray)** After SM paper feed motor is driven, the ready signal does not turn to L within 2 s.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. SM paper feed motor and SM main PWB (YC5)
		Defective drive transmission system of motor.	Check if the gears rotate smoothly. If not, grease the bushes and gears. Check for broken gears and replace if any.
		Defective SM paper feed motor.	Replace the SM paper feed motor.
		Defective SM main PWB.	Replace the SM main PWB (Refer to the service manual for the paper feeder).
2660	**PF paper feed motor error (side large capacity feeder)** After PF paper feed motor is driven, the ready signal does not turn to L within 2 s.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. PF paper feed motor and PF main PWB (YC16)
		Defective drive transmission system of motor.	Check if the gears rotate smoothly. If not, grease the bushes and gears. Check for broken gears and replace if any.
		Defective PF paper feed motor.	Replace the PF paper feed motor.
		Defective PF main PWB.	Replace the PF main PWB (Refer to the service manual for the paper feeder).

Code	Contents	Causes	Check procedures/ corrective measures
2670	**PF paper feed motor error (side paper feeder)** After PF paper feed motor is driven, the ready signal does not turn to L within 2 s.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. PF paper feed motor and PF main PWB (YC16)
		Defective drive transmission system of motor.	Check if the gears rotate smoothly. If not, grease the bushes and gears. Check for broken gears and replace if any.
		Defective PF paper feed motor.	Replace the PF paper feed motor.
		Defective PF main PWB.	Replace the PF main PWB (Refer to the service manual for the paper feeder).
2700	**Color release motor error** When the color release motor is driven, the color release sensor does not turn on/off for 5 s.	Defective connector cable or poor contact in the connector.	Reinsert the transfer belt unit connector if necessary.Check for continuity within the harness and, if none, replace the harness. Color release motor and engine PWB (YC3)
		Defective drive transmission system of motor.	Replace the transfer belt unit.
		Defective color release motor.	Replace the transfer belt unit.
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
2730	**Transfer release motor error** When the transfer release motor is driven, the transfer release sensor does not turn on/off for 5 s.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Transfer release motor and relay PWB (YC14) Relay PWB (YC14) and feed PWB 1 (YC14) Feed PWB 1 (YC1) and engine PWB (YC6)
		Defective drive transmission system of motor.	Check if the gears rotate smoothly. If not, grease the bushes and gears. Check for broken gears and replace if any.
		Defective transfer release motor.	Replace the transfer release motor.
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).

Code	Contents	Causes	Check procedures/ corrective measures
2760	**Transfer motor startup error** Transfer motor is not stabilized within 5 s since the motor is activated.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Transfer motor and feed PWB 1 (YC13) Feed PWB 1 (YC2) and engine PWB (YC5)
		Defective drive transmission system of motor.	Check if the gears rotate smoothly. If not, grease the bushes and gears. Check for broken gears and replace if any.
		Defective transfer motor.	Replace the transfer motor.
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
2770	**Transfer skew error** An abnormal value is detected to transfer skew sensor.	Improper installation transfer belt unit.	Reinstall the transfer belt unit.
		Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Transfer belt unit and engine PWB (YC3)
		Defective transfer skew sensor.	Replace the transfer belt unit.
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
2780	**Transfer skew sensor error** An abnormal value is detected to transfer skew sensor.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Transfer belt unit and engine PWB (YC3)
		Defective transfer skew sensor.	Replace the transfer belt unit.
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
2790	**Transfer skew motor error** When the transfer skew motor is driven, timeouts (300 ms) were detected twice in a row.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Transfer skew motor and engine PWB (YC3)
		Defective drive transmission system of motor.	Check if the gears rotate smoothly. If not, grease the bushes and gears. Check for broken gears and replace if any.
		Defective transfer skew motor.	Replace the transfer skew motor.
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).

Code	Contents	Causes	Check procedures/ corrective measures
2810	**Waste toner motor error** Initialized when an error is constantly observed for 2 s after the waste toner motor is activated. An error is constantly observed for 2.5 s after rebooting. The lock detect signal won't be H level three times in a row within 200 ms at 1.25 ms cycles after the waste toner motor has been driven.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Waste toner motor and front PWB (YC16) Front PWB (YC3) and engine PWB (YC7)
		Defective drive transmission system of motor.	Check if the gears rotate smoothly. If not, grease the bushes and gears. Check for broken gears and replace if any.
		Defective waste toner motor.	Replace the waste toner motor.
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
2820	**Transfer motor steady-state error** After transfer motor is stabilized, the ready signal is at the H level for 5 s continuously. The counter value obtained by timer capture is lower than 2200 for 10 times in a row.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Transfer motor and feed PWB 1 (YC13) Feed PWB 1 (YC2) and engine PWB (YC5)
		Defective drive transmission system of motor.	Check if the gears rotate smoothly. If not, grease the bushes and gears. Check for broken gears and replace if any.
		Defective transfer motor.	Replace the transfer motor.
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
2840	**Transfer cleaning motor error** After transfer cleaning motor is driven, the ready signal does not turn to L within 2 s. After transfer cleaning motor is stabilized, the ready signal is at the H level for 1 s continuously.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Transfer cleaning motor and engine PWB (YC3)
		Defective drive transmission system of motor.	Check if the gears rotate smoothly. If not, grease the bushes and gears. Check for broken gears and replace if any.
		Defective transfer cleaning motor.	Replace the transfer cleaning motor.
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).

Code	Contents	Causes	Check procedures/ corrective measures
2850	**Transfer belt motor sensor error** The signal is not received for 100 ms in succession.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Transfer motor and feed PWB (YC13) Feed PWB (YC1) to engine PWB(YC6)
		Defective transfer motor.	Replace the transfer motor.
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
2860	**Transfer belt sensor error** The signal is not received for 100 ms in succession.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Transfer belt sensor and engine PWB (YC3)
		Defective transfer belt sensor.	Replace the transfer belt sensor.
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
2950	**Motor control PWB communication error** A communication error from the motor control PWB is detected 10 times in succession.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Motor control PWB (YC3) and engine PWB (YC9)
		Defective motor control PWB.	Replace the motor control PWB and check for correct operation.
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
4001	**Polygon motor K synchronization error** After polygon motor K is driven, the ready signal does not turn to L within 30 s. The polygon motor speed won't stabilize within 10 s.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Polygon motor K and LSU relay PWB (YC4) LSU relay PWB (YC4) and engine PWB (YC12)
		Defective polygon motor K.	Replace the laser scanner unit (see page 1-5-17).
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).

Code	Contents	Causes	Check procedures/ corrective measures
4002	**Polygon motor C synchronization error** After polygon motor C is driven, the ready signal does not turn to L within 30 s. The polygon motor speed won't stabilize within 10 s.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Polygon motor C and LSU relay PWB (YC9) LSU relay PWB (YC3) and engine PWB (YC12)
		Defective polygon motor C.	Replace the laser scanner unit (see page 1-5-17).
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
4003	**Polygon motor M synchronization error** After polygon motor M is driven, the ready signal does not turn to L within 30 s. The polygon motor speed won't stabilize within 10 s.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Polygon motor M and LSU relay PWB (YC7) LSU relay PWB (YC3) and engine PWB (YC12)
		Defective polygon motor M.	Replace the laser scanner unit (see page 1-5-17).
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
4004	**Polygon motor Y synchronization error** After polygon motor Y is driven, the ready signal does not turn to L within 30 s. The polygon motor speed won't stabilize within 10 s.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Polygon motor Y and LSU relay PWB (YC11) LSU relay PWB (YC3) and engine PWB (YC12)
		Defective polygon motor Y.	Replace the laser scanner unit (see page 1-5-17).
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
4011	**Polygon motor K steady-state error** After polygon motor K is stabilized, the ready signal is at the H level for 15 s continuously.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Polygon motor K and LSU relay PWB (YC4) LSU relay PWB (YC4) and engine PWB (YC12)
		Defective polygon motor K.	Replace the laser scanner unit (see page 1-5-17).
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).

Code	Contents	Causes	Check procedures/ corrective measures
4012	**Polygon motor C steady-state error** After polygon motor C is stabilized, the ready signal is at the H level for 15 s continuously.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Polygon motor C and LSU relay PWB (YC9) LSU relay PWB (YC3) and engine PWB (YC12)
		Defective polygon motor C.	Replace the laser scanner unit (see page 1-5-17).
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
4013	**Polygon motor M steady-state error** After polygon motor M is stabilized, the ready signal is at the H level for 15 s continuously.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Polygon motor M and LSU relay PWB (YC7) LSU relay PWB (YC3) and engine PWB (YC12)
		Defective polygon motor M.	Replace the laser scanner unit (see page 1-5-17).
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
4014	**Polygon motor Y steady-state error** After polygon motor Y is stabilized, the ready signal is at the H level for 15 s continuously.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Polygon motor Y and LSU relay PWB (YC11) LSU relay PWB (YC3) and engine PWB (YC12)
		Defective polygon motor Y.	Replace the laser scanner unit (see page 1-5-17).
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
4101	**BD initialization error K** After polygon motor K is driven, the BD signal is not detected for 1 s.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Laser scanner unit and LSU relay PWB (YC5) LSU relay PWB (YC3) and engine PWB (YC12)
		Defective PD PWB K.	Replace the laser scanner unit (see page 1-5-17).
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).

Code	Contents	Causes	Check procedures/ corrective measures
4102	**BD initialization error C** After polygon motor C is driven, the BD signal is not detected for 1 s.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Laser scanner unit and LSU relay PWB (YC10) LSU relay PWB (YC3) and engine PWB (YC12)
		Defective PD PWB C.	Replace the laser scanner unit (see page 1-5-17).
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
4103	**BD initialization error M** After polygon motor M is driven, the BD signal is not detected for 1 s.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Laser scanner unit and LSU relay PWB (YC8) LSU relay PWB (YC3) and engine PWB (YC12)
		Defective PD PWB M.	Replace the laser scanner unit (see page 1-5-17).
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
4104	**BD initialization error Y** After polygon motor Y is driven, the BD signal is not detected for 1 s.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Laser scanner unit and LSU relay PWB (YC12) LSU relay PWB (YC3) and engine PWB (YC12)
		Defective PD PWB Y.	Replace the laser scanner unit (see page 1-5-17).
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
4201	**BD steady-state error K** The BD signal is not detected.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Laser scanner unit and LSU relay PWB (YC5) LSU relay PWB (YC3) and engine PWB (YC12)
		Defective PD PWB K.	Replace the laser scanner unit (see page 1-5-17).
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).

Code	Contents	Causes	Check procedures/ corrective measures
4202	**BD steady-state error C** The BD signal is not detected.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Laser scanner unit and LSU relay PWB (YC10) LSU relay PWB (YC3) and engine PWB (YC12)
		Defective PD PWB C.	Replace the laser scanner unit (see page 1-5-17).
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
4203	**BD steady-state error M** The BD signal is not detected.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Laser scanner unit and LSU relay PWB (YC8) LSU relay PWB (YC3) and engine PWB (YC12)
		Defective PD PWB M.	Replace the laser scanner unit (see page 1-5-17).
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
4204	**BD steady-state error Y** The BD signal is not detected.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Laser scanner unit and LSU relay PWB (YC12) LSU relay PWB (YC3) and engine PWB (YC12)
		Defective PD PWB Y.	Replace the laser scanner unit (see page 1-5-17).
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
4300	**Polygon motor phase error** ASIC won't settle in completion of phase adjustment for 2 s after a BD signal is detected.	Defective laser scanner unit.	Replace the laser scanner unit (see page 1-5-17).
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).

Code	Contents	Causes	Check procedures/ corrective measures
4600	**LSU cleaning motor error** After LSU cleaning motor is driven, the ready signal does not turn to L within 2 s. After LSU cleaning motor is stabilized, the ready signal is at the H level for 1 s continuously.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. LSU cleaning motor and engine PWB (YC21)
		Defective drive transmission system of motor.	Check if the gears rotate smoothly. If not, grease the bushes and gears. Check for broken gears and replace if any.
		Defective LSU cleaning motor.	Replace the LSU cleaning motor.
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
5101	**Main high-voltage error K** Measure the inflowing current when Vpp is varied in 3 steps and verify if the difference of the currents of 0 and step 2 is less than 42 (51 if lower high-voltage board).	Improper installation charger roller unit K.	Reinstall the charger roller unit K.
		Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. High voltage PWB 1 (YC4) and engine PWB (YC17)
		Defective high voltage PWB 1.	Replace the high voltage PWB 1 and check for correct operation (see page 1-5-54).
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
5102	**Main high-voltage error C** Measure the inflowing current when Vpp is varied in 3 steps and verify if the difference of the currents of 0 and step 2 is less than 42 (51 if lower high-voltage board).	Improper installation charger roller unit C.	Reinstall the charger roller unit C.
		Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. High voltage PWB 1 (YC2) and engine PWB (YC16)
		Defective high voltage PWB 1.	Replace the high voltage PWB 1 and check for correct operation (see page 1-5-54).
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).

Code	Contents	Causes	Check procedures/ corrective measures
5103	**Main high-voltage error M** Measure the inflowing current when Vpp is varied in 3 steps and verify if the difference of the currents of 0 and step 2 is less than 42 (51 if lower high-voltage board).	Improper installation charger roller unit M.	Reinstall the charger roller unit M.
		Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. High voltage PWB 1 (YC3) and engine PWB (YC17)
		Defective high voltage PWB 1.	Replace the high voltage PWB 1 and check for correct operation (see page 1-5-54).
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
5104	**Main high-voltage error Y** Measure the inflowing current when Vpp is varied in 3 steps and verify if the difference of the currents of 0 and step 2 is less than 42 (51 if lower high-voltage board).	Improper installation charger roller unit Y.	Reinstall the charger roller unit Y.
		Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. High voltage PWB 1 (YC1) and engine PWB (YC16)
		Defective high voltage PWB 1.	Replace the high voltage PWB 1 and check for correct operation (see page 1-5-54).
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
6000	**Broken fuser heater wire** Fuser thermistor 1 does not reach 100° C/212 °F even after 60 s during warming up. The detected temperature of fuser thermistor 1 does not reach the specified temperature (ready indication temperature) for 420 s in warming up after reached to 100° C/212 °F.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Power source PWB (YC3) and fuser IH PWB (YC1) Fuser IH PWB (YC4) and engine PWB (YC26)
		Fuser thermostat triggered.	Replace the fuser unit (see page 1-5-40).
		Defective fuser IH.	Replace the fuser unit (see page 1-5-40).
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
6020	**Abnormally high fuser thermistor 1 temperature** Fuser thermistor 1 detects a temperature higher than 240°C/464°F for 1 s.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Fuser unit and engine PWB (YC26)
		Shorted fuser thermistor 1.	Replace the fuser unit (see page 1-5-40).
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).

Code	Contents	Causes	Check procedures/ corrective measures
6030	**Broken fuser thermistor 1 wire** Input from fuser thermistor 1 is 984 or more (A/D value) continuously for 1 s. Verify if A/D read in the differential output won't change by 4 or more when it was turned on for 10 seconds in a low-temperature environment.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Fuser unit and engine PWB (YC26)
		Broken fuser thermistor 1 wire.	Replace the fuser unit (see page 1-5-40).
		Fuser thermostat triggered.	Replace the fuser unit (see page 1-5-40).
		Defective fuser IH.	Replace the fuser unit (see page 1-5-40).
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
6040	**Fuser heater error** Input from fuser thermistor 1 is abnormal value continuously for 1 s.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Fuser unit and engine PWB (YC26)
		Broken fuser thermistor 1 wire.	Replace the fuser unit (see page 1-5-40).
		Defective fuser IH.	Replace the fuser unit (see page 1-5-40).
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
6050	**Abnormally low fuser thermistor 1 temperature** Fuser thermistor 1 detects a temperature lower than 100°C/212°F for 1 s after warming up, during ready or during print. Fuser thermistor 1 detects a temperature lower than 70°C/158°F for 1 s during low power mode.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Fuser unit and engine PWB (YC26)
		Defective fuser thermistor 1.	Replace the fuser unit (see page 1-5-40).
		Defective fuser IH.	Replace the fuser unit (see page 1-5-40).
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
6120	**Abnormally high fuser thermistor 4 temperature** Fuser thermistor 4 detects a temperature higher than 190°C/374°F for 1 s.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Fuser unit and engine PWB (YC26)
		Shorted fuser thermistor 4.	Replace the fuser unit (see page 1-5-40).
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).

Code	Contents	Causes	Check procedures/ corrective measures
6130	**Broken fuser thermistor 4 wire** Input from fuser thermistor 4 is 992 or more (A/D value) continuously for 60 s.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Fuser unit and engine PWB (YC26)
		Broken fuser thermistor 4 wire.	Replace the fuser unit (see page 1-5-40).
		Defective fuser IH.	Replace the fuser unit (see page 1-5-40).
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
6150	**Abnormally low fuser thermistor 4 temperature** Fuser thermistor 4 detects a temperature lower than 30°C/ 86°F for 1 s after warming up.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Fuser unit and engine PWB (YC26)
		Defective fuser thermistor 4.	Replace the fuser unit (see page 1-5-40).
		Defective fuser IH.	Replace the fuser unit (see page 1-5-40).
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
6200	**Broken fuser edge heater wire** Fuser thermistor 2 does not reach 100° C/212 °F even after 60 s during warming up. The detected temperature of fuser thermistor 2 does not reach the specified temperature (ready indication temperature) for 420 s in warming up after reached to 100° C/212 °F.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Power source PWB (YC3) and fuser IH PWB (YC1) Fuser IH PWB (YC4) and engine PWB (YC26)
		Fuser thermostat triggered.	Replace the fuser unit (see page 1-5-40).
		Defective fuser IH.	Replace the fuser unit (see page 1-5-40).
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
6220	**Abnormally high fuser thermistor 2 temperature** Fuser thermistor 2 detects a temperature higher than 245°C/473°F for 1 s.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Fuser unit and engine PWB (YC26)
		Shorted fuser thermistor 2.	Replace the fuser unit (see page 1-5-40).
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).

Code	Contents	Causes	Check procedures/ corrective measures
6230	**Broken fuser thermistor 2 wire** The Input signal from the fuser thermistor 2 is 992 or more (A/D value) continuously for 1 s when the temperature at the fuser thermistor 1 is greater than 100°C/212°F during warming up.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Fuser unit and engine PWB (YC26)
		Broken fuser thermistor 2 wire.	Replace the fuser unit (see page 1-5-40).
		Fuser thermostat triggered.	Replace the fuser unit (see page 1-5-40).
		Defective fuser IH.	Replace the fuser unit (see page 1-5-40).
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
6250	**Abnormally low fuser thermistor 2 temperature** Fuser thermistor 2 detects a temperature lower than 100°C/212°F for 1 s during ready or print. Fuser thermistor 2 detects a temperature lower than 50°C/122°F for 1 s during warming up.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Fuser unit and engine PWB (YC26)
		Defective fuser thermistor 2.	Replace the fuser unit (see page 1-5-40).
		Defective fuser IH.	Replace the fuser unit (see page 1-5-40).
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
6320	**Abnormally high fuser thermistor 3 temperature** Fuser thermistor 3 detects a temperature higher than 205°C/401°F for 1 s.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Fuser unit and engine PWB (YC26)
		Shorted fuser thermistor 3.	Replace the fuser unit (see page 1-5-40).
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
6330	**Broken fuser thermistor 3 wire** Fuser thermistor 3 detects a temperature lower than 20°C/68°F continuously for 1 s	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Fuser unit and engine PWB (YC26)
		Broken fuser thermistor 3 wire.	Replace the fuser unit (see page 1-5-40).
		Fuser thermostat triggered.	Replace the fuser unit (see page 1-5-40).
		Defective fuser IH.	Replace the fuser unit (see page 1-5-40).
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).

Code	Contents	Causes	Check procedures/ corrective measures
6600	**Fuser belt rotation error** A belt rotating pulse is not received for 1 s. (Engine CPU)	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Fuser unit and engine PWB (YC26)
		Defective fuser belt sensor.	Replace the fuser unit (see page 1-5-40).
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
6610	**Fuser release motor error** When the fuser release motor is driven, the fuser release sensor does not turn on/off for 5 s.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Fuser unit and engine PWB (YC26)
		Defective drive transmission system of motor.	Check if the gears rotate smoothly. If not, grease the bushes and gears. Check for broken gears and replace if any.
		Defective fuser release motor.	Replace the fuser unit (see page 1-5-40).
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
6710	**Fuser IH PWB CPU reset error** Watch doc timer has been overflowed.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Fuser IH PWB (YC4) and engine PWB (YC26)
		Defective fuser IH PWB.	Replace the fuser IH PWB and check for correct operation.
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
6720	**Fuser IH belt rotation error** A belt rotating pulse is not received for 2 s.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Fuser unit and engine PWB (YC26)
		Defective fuser belt sensor.	Replace the fuser unit (see page 1-5-40).
		Defective fuser IH PWB.	Replace the fuser IH PWB and check for correct operation.
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).

Code	Contents	Causes	Check procedures/ corrective measures
6730	**Abnormally high fuser IH PWB temperature 1** The input detect temperature is greater than 105°C/221 °F.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Fuser IH PWB (YC4) and engine PWB (YC26)
		Defective fuser IH PWB.	Replace the fuser IH PWB and check for correct operation.
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
6740	**Abnormally high fuser IH PWB temperature 2** The input detect temperature is greater than 105°C/221 °F.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Fuser IH PWB (YC4) and engine PWB (YC26)
		Defective fuser IH PWB.	Replace the fuser IH PWB and check for correct operation.
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
6750	**Fuser IH output over-current error** The output current is greater than 90A for 10 ms in succession.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Fuser IH PWB (YC4) and engine PWB (YC26)
		Defective fuser IH PWB.	Replace the fuser IH PWB and check for correct operation.
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
6760	**Fuser IH input over-current error** The input current is greater than 20A(100V/120V), 10A(200V) for 100 ms in succession.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Fuser IH PWB (YC4) and engine PWB (YC26)
		Defective fuser IH PWB.	Replace the fuser IH PWB and check for correct operation.
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
6770	**Fuser IH low electric power error** The preset power is less than 0.6 times of it for 120 ms in succession.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Fuser IH PWB (YC4) and engine PWB (YC26)
		Defective fuser IH PWB.	Replace the fuser IH PWB and check for correct operation.
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).

Code	Contents	Causes	Check procedures/ corrective measures
6900	**Fuser belt cooling fan error** When the fuser edge fan motor 1 , 2 is driven, alarm signal is detected for 5 s continuously.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Fuser edge fan motor 1 and front PWB (YC26) Fuser edge fan motor 2 and fuser PWB (YC2) Fuser PWB (YC1) and engine PWB (YC26)
		Defective fuser edge fan motor 1 or 2.	Replace the fuser edge fan motor 1 or 2.
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
6910	**Engine software ready error** The device won't engage in ready state in 60 minutes after warming-up has began.	Defective engine software.	Install the engine software.
		Defective engine PWB.	Replace the engine PWB and check for correct operation(see page 1-5-49).
6920	**Fuser front fan motor error** When the fuser front fan motor is driven, alarm signal is detected for 5 s continuously.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Fuser front fan motor and engine PWB (YC26)
		Defective fuser front fan motor.	Replace fuser front fan motor.
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
6930	**Fuser rear fan motor error** When the fuser rear fan motor is driven, alarm signal is detected for 5 s continuously.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, Fuser rear fan motor and fuser PWB (YC2) Fuser PWB (YC1) and engine PWB (YC26)
		Defective fuser rear fan motor.	Replace fuser rear fan motor.
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
6940	**IH fan motor error** When the IH fan motor is driven, the alarm signal is detected for 5 s continuously.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. IH fan motor and feed PWB 1 (YC11) Feed PWB 1 (YC2) and engine PWB (YC5)
		Defective IH fan motor.	Replace the IH fan motor.
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).

Code	Contents	Causes	Check procedures/ corrective measures
6950	**Fuser IH PWB communication error** No response is received in 30 ms since a command is sent to IHCPU. A checksum error is detected 10 times in succession.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Fuser IH PWB (YC4) and engine PWB (YC26)
		Defective fuser IH PWB.	Replace the fuser IH PWB and check for correct operation.
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
6960	**Current PWB error** Less than 1A is continuously observed for 5 s.	Defective current PWB.	Replace the current PWB and check for correct operation.
6990	**Fuser power supply incompatibility** Information won't match between the engine backup and the fuser IH PWB.	Differences in settings after initialization	When this has happened after initialization using U201, make settings identical with the voltages on the IH PWB using U169.
		Defective fuser IH PWB.	Replace the fuser IH PWB and check for correct operation.
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
		Data damage of EEPROM.	Contact the Service Administrative Division.
7001	**Toner motor K error** When the toner motor K is driven, the pulse sensor is not detected for 15 times in 200 ms intervals has occurred in 15 times. During the toner motor is driven, an event in which TMOT_LOCK turns to H (locked) 5 times has occurred in 15 sets.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Toner motor K and engine PWB (YC27)
		Defective screw sensor K.	Replace the screw sensor K.
		Defective toner motor K.	Replace the toner motor K.
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
7002	**Toner motor C error** When the toner motor K is driven, the pulse sensor is not detected for 15 times in 200 ms intervals has occurred in 15 times. During the toner motor is driven, an event in which TMOT_LOCK turns to H (locked) 5 times has occurred in 15 sets.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Toner motor C and engine PWB (YC27)
		Defective screw sensor C.	Replace the screw sensor C.
		Defective toner motor C.	Replace the toner motor C.
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).

Code	Contents	Causes	Check procedures/ corrective measures
7003	**Toner motor M error** When the toner motor K is driven, the pulse sensor is not detected for 15 times in 200 ms intervals has occurred in 15 times. During the toner motor is driven, an event in which TMOT_LOCK turns to H (locked) 5 times has occurred in 15 sets.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Toner motor M and engine PWB (YC27)
		Defective screw sensor M.	Replace the screw sensor M.
		Defective toner motor M.	Replace the toner motor M.
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
7004	**Toner motor Y error** When the toner motor K is driven, the pulse sensor is not detected for 15 times in 200 ms intervals has occurred in 15 times. During the toner motor is driven, an event in which TMOT_LOCK turns to H (locked) 5 times has occurred in 15 sets.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Toner motor Y and engine PWB (YC27)
		Defective screw sensor Y.	Replace the screw sensor Y.
		Defective toner motor Y.	Replace the toner motor Y.
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
7101	**Toner sensor K error** Sensor output value of 60 or less or 944 or more continued for 3 s.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Toner sensor K and front PWB (YC9) Front PWB (YC2) and engine PWB (YC10)
		Defective toner sensor K.	Replace developer unit K (see page 1-5-29).
		Failure of locking the developer waste slot at setup.	Check whether the developer waste slot has been unlocked and unlock if necessary (see page 1-2-14).
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).

Code	Contents	Causes	Check procedures/ corrective measures
7102	**Toner sensor C error** Sensor output value of 60 or less or 944 or more continued for 3 s.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Toner sensor C and front PWB (YC13) Front PWB (YC2) and engine PWB (YC10)
		Defective toner sensor C.	Replace developer unit C (see page 1-5-29).
		Failure of locking the developer waste slot at setup.	Check whether the developer waste slot has been unlocked and unlock if necessary (see page 1-2-14).
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
7103	**Toner sensor M error** Sensor output value of 60 or less or 944 or more continued for 3 s.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Toner sensor M and front PWB (YC11) Front PWB (YC2) and engine PWB (YC10)
		Defective toner sensor M.	Replace developer unit M (see page 1-5-29).
		Failure of locking the developer waste slot at setup.	Check whether the developer waste slot has been unlocked and unlock if necessary (see page 1-2-14).
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
7104	**Toner sensor Y error** Sensor output value of 60 or less or 944 or more continued for 3 s.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Toner sensor Y and front PWB (YC15) Front PWB (YC2) and engine PWB (YC10)
		Defective toner sensor Y.	Replace developer unit Y (see page 1-5-29).
		Failure of locking the developer waste slot at setup.	Check whether the developer waste slot has been unlocked and unlock if necessary (see page 1-2-14).
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).

Code	Contents	Causes	Check procedures/ corrective measures
7200	**Broken outer temperature sensor 2 wire** The sensor input sampling is greater than 230.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Outer temperature sensor 2 and front PWB (YC19) Front PWB (YC2) and engine PWB (YC10)
		Defective outer temperature sensor 2.	Replace outer temperature sensor 2.
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
7210	**Short-circuited outer temperature sensor 2** The sensor input sampling is less than 69.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Outer temperature sensor 2 and front PWB (YC19) Front PWB (YC2) and engine PWB (YC10)
		Defective outer temperature sensor 2.	Replace outer temperature sensor 2.
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
7221	**Broken LSU thermistor K wire** The sensor input sampling is greater than 230.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Laser scanner unit and LSU relay PWB (YC5) LSU relay PWB (YC3) and engine PWB (YC12)
		Defective LSU thermistor K.	Replace the laser scanner unit (see page 1-5-17).
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).

Code	Contents	Causes	Check procedures/ corrective measures
7222	**Broken LSU thermistor C wire** The sensor input sampling is greater than 230.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Laser scanner unit and LSU relay PWB (YC10) LSU relay PWB (YC3) and engine PWB (YC12)
		Defective LSU thermistor C.	Replace the laser scanner unit (see page 1-5-17).
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
7223	**Broken LSU thermistor M wire** The sensor input sampling is greater than 230.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Laser scanner unit and LSU relay PWB (YC8) LSU relay PWB (YC3) and engine PWB (YC12)
		Defective LSU thermistor M.	Replace the laser scanner unit (see page 1-5-17).
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
7224	**Broken LSU thermistor Y wire** The sensor input sampling is greater than 230.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Laser scanner unit and LSU relay PWB (YC12) LSU relay PWB (YC3) and engine PWB (YC12)
		Defective LSU thermistor Y.	Replace the laser scanner unit (see page 1-5-17).
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
7231	**Short-circuited LSU thermistor K** The sensor input sampling is less than 69.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Laser scanner unit and LSU relay PWB (YC5) LSU relay PWB (YC3) and engine PWB (YC12)
		Defective LSU thermistor K.	Replace the laser scanner unit (see page 1-5-17).
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).

Code	Contents	Causes	Check procedures/ corrective measures
7232	**Short-circuited LSU thermistor C** The sensor input sampling is less than 69.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Laser scanner unit and LSU relay PWB (YC10) LSU relay PWB (YC3) and engine PWB (YC12)
		Defective LSU thermistor C.	Replace the laser scanner unit (see page 1-5-17).
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
7233	**Short-circuited LSU thermistor M** The sensor input sampling is less than 69.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Laser scanner unit and LSU relay PWB (YC8) LSU relay PWB (YC3) and engine PWB (YC12)
		Defective LSU thermistor M.	Replace the laser scanner unit (see page 1-5-17).
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
7234	**Short-circuited LSU thermistor Y** The sensor input sampling is less than 69.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Laser scanner unit and LSU relay PWB (YC12) LSU relay PWB (YC3) and engine PWB (YC12)
		Defective LSU thermistor Y.	Replace the laser scanner unit (see page 1-5-17).
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
7241	**Broken developer thermistor K wire** The sensor input sampling is greater than 230.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Developer unit K and front PWB (YC9) Front PWB (YC2) and engine PWB (YC10)
		Defective developer thermistor K.	Replace developer unit K (see page 1-5-29).
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).

Code	Contents	Causes	Check procedures/ corrective measures
7242	**Broken developer thermistor C wire** The sensor input sampling is greater than 230.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Developer unit C and front PWB (YC13) Front PWB (YC2) and engine PWB (YC10)
		Defective developer thermistor C.	Replace developer unit C (see page 1-5-29).
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
7243	**Broken developer thermistor M wire** The sensor input sampling is greater than 230.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Developer unit M and front PWB (YC11) Front PWB (YC2) and engine PWB (YC10)
		Defective developer thermistor M.	Replace developer unit M (see page 1-5-29).
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
7244	**Broken developer thermistor Y wire** The sensor input sampling is greater than 230.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Developer unit Y and front PWB (YC15) Front PWB (YC2) and engine PWB (YC10)
		Defective developer thermistor Y.	Replace developer unit Y (see page 1-5-29).
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
7251	**Short-circuited developer thermistor K** The sensor input sampling is less than 69.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Developer unit K and front PWB (YC9) Front PWB (YC2) and engine PWB (YC10)
		Defective developer thermistor K.	Replace developer unit K (see page 1-5-29).
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).

Code	Contents	Causes	Check procedures/ corrective measures
7252	**Short-circuited developer thermistor C** The sensor input sampling is less than 69.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Developer unit C and front PWB (YC13) Front PWB (YC2) and engine PWB (YC10)
		Defective developer thermistor C.	Replace developer unit C (see page 1-5-29).
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
7253	**Short-circuited developer thermistor M** The sensor input sampling is less than 69.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Developer unit M and front PWB (YC11) Front PWB (YC2) and engine PWB (YC10)
		Defective developer thermistor M.	Replace developer unit M (see page 1-5-29).
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
7254	**Short-circuited developer thermistor Y wire** The sensor input sampling is less than 69.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Developer unit Y and front PWB (YC15) Front PWB (YC2) and engine PWB (YC10)
		Defective developer thermistor Y.	Replace developer unit Y (see page 1-5-29).
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
7401	**Developer unit K type mismatch error** Absence of the developer unit K is detected.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Developer unit K and front PWB (YC9) Front PWB (YC2) and engine PWB (YC10)
		Different type of the developer unit is installed.	Install the correct developer unit.
7402	**Developer unit C type mismatch error** Absence of the developer unit C is detected.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Developer unit C and front PWB (YC13) Front PWB (YC2) and engine PWB (YC10)
		Different type of the developer unit is installed.	Install the correct developer unit.

Code	Contents	Causes	Check procedures/ corrective measures
7403	**Developer unit M type mismatch error** Absence of the developer unit M is detected.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Developer unit M and front PWB (YC11) Front PWB (YC2) and engine PWB (YC10)
		Different type of the developer unit is installed.	Install the correct developer unit.
7404	**Developer unit Y type mismatch error** Absence of the developer unit Y is detected.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Developer unit Y and front PWB (YC15) Front PWB (YC2) and engine PWB (YC10)
		Different type of the developer unit is installed.	Install the correct developer unit.
7601	**ID sensor 1 error** An abnormal value is detected in the input data to ID sensor 1. Dark potential error FrontDarkP and FrontDarkS are greater than 0.80V. Light potential error FrontBrightS is smaller than FrontDarkS. FrontBrightP is smaller than FrontDarkP + 0.5V.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. ID sensor 1 and feed PWB 1 (YC10) Feed PWB 1 (YC1) and engine PWB (YC6)
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
7602	**ID sensor 2 error** Dark potential error RearDarkP and RearDarkS are greater than 0.80V. Light potential error RearBrightS is smaller than RearDarkS. RearBrightP is smaller than RearDarkP + 0.5V.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. ID sensor 2 and feed PWB 1 (YC10) Feed PWB 1 (YC1) and engine PWB (YC6)
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).

Code	Contents	Causes	Check procedures/ corrective measures
7800	**Broken outer temperature sensor 1 wire** The device did not respond for more than 5 ms during reading, in 5 times.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Outer temperature sensor 1 and front PWB (YC16) Front PWB (YC2) and engine PWB (YC10)
		Defective outer temperature sensor 1.	Replace outer temperature sensor 1.
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
7901	**Drum K EEPROM error** No response is issued from the device in reading/writing for 5 ms or more and this problem is repeated five times successively. Mismatch of reading data from two locations occurs 8 times successively. Mismatch between writing data and reading data occurs 8 times successively.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Drum PWB K and front PWB (YC7) Front PWB (YC2) and engine PWB (YC10)
		Defective drum PWB K.	Replace the drum unit K (see page 1-5-29).
7902	**Drum C EEPROM error** No response is issued from the device in reading/writing for 5 ms or more and this problem is repeated five times successively. Mismatch of reading data from two locations occurs 8 times successively. Mismatch between writing data and reading data occurs 8 times successively.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Drum PWB C and front PWB (YC12) Front PWB (YC2) and engine PWB (YC10)
		Defective drum PWB C.	Replace the drum unit C (see page 1-5-29).
7903	**Drum M EEPROM error** No response is issued from the device in reading/writing for 5 ms or more and this problem is repeated five times successively. Mismatch of reading data from two locations occurs 8 times successively. Mismatch between writing data and reading data occurs 8 times successively.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Drum PWB M and front PWB (YC10) Front PWB (YC2) and engine PWB (YC10)
		Defective drum PWB M.	Replace the drum unit M (see page 1-5-29).

Code	Contents	Causes	Check procedures/ corrective measures
7904	**Drum Y EEPROM error** No response is issued from the device in reading/writing for 5 ms or more and this problem is repeated five times successively. Mismatch of reading data from two locations occurs 8 times successively. Mismatch between writing data and reading data occurs 8 times successively.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Drum PWB Y and front PWB (YC14) Front PWB (YC2) and engine PWB (YC10)
		Defective drum PWB Y.	Replace the drum unit Y (see page 1-5-29).
7911	**Developer unit K EEPROM error** No response is issued from the device in reading/writing for 5 ms or more and this problem is repeated five times successively. Mismatch of reading data from two locations occurs 8 times successively. Mismatch between writing data and reading data occurs 8 times successively.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Developer unit K and front PWB (YC9) Front PWB (YC2) and engine PWB (YC10)
		Defective developer unit K.	Replace the developer unit K (see page 1-5-29).
7912	**Developer unit C EEPROM error** No response is issued from the device in reading/writing for 5 ms or more and this problem is repeated five times successively. Mismatch of reading data from two locations occurs 8 times successively. Mismatch between writing data and reading data occurs 8 times successively.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Developer unit C and front PWB (YC13) Front PWB (YC2) and engine PWB (YC10)
		Defective developer unit C.	Replace the developer unit C (see page 1-5-29).

Code	Contents	Causes	Check procedures/ corrective measures
7913	**Developer unit M EEPROM error** No response is issued from the device in reading/writing for 5 ms or more and this problem is repeated five times successively. Mismatch of reading data from two locations occurs 8 times successively. Mismatch between writing data and reading data occurs 8 times successively.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Developer unit M and front PWB (YC11) Front PWB (YC2) and engine PWB (YC10)
		Defective developer unit M.	Replace the developer unit M (see page 1-5-29).
7914	**Developer unit Y EEPROM error** No response is issued from the device in reading/writing for 5 ms or more and this problem is repeated five times successively. Mismatch of reading data from two locations occurs 8 times successively. Mismatch between writing data and reading data occurs 8 times successively.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Developer unit Y and front PWB (YC15) Front PWB (YC2) and engine PWB (YC10)
		Defective developer unit Y.	Replace the developer unit Y (see page 1-5-29).
7941	**Laser scanner unit K EEPROM error** Mismatch of reading data from two locations occurs 8 times successively. Mismatch between writing data and reading data occurs 8 times successively.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. APC PWB K and LSU relay PWB (YC5) LSU relay PWB (YC2) and engine PWB (YC11)
		Defective APC PWB K.	Replace the laser scanner unit (see page 1-5-17).
7942	**Laser scanner unit C EEPROM error** Mismatch of reading data from two locations occurs 8 times successively. Mismatch between writing data and reading data occurs 8 times successively.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. APC PWB C and LSU relay PWB (YC10) LSU relay PWB (YC2) and engine PWB (YC11)
		Defective APC PWB C.	Replace the laser scanner unit (see page 1-5-17).

Code	Contents	Causes	Check procedures/ corrective measures
7943	**Laser scanner unit M EEPROM error** Mismatch of reading data from two locations occurs 8 times successively. Mismatch between writing data and reading data occurs 8 times successively.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. APC PWB M and LSU relay PWB (YC8) LSU relay PWB (YC2) and engine PWB (YC11)
		Defective APC PWB M.	Replace the laser scanner unit (see page 1-5-17).
7944	**Laser scanner unit Y EEPROM error** Mismatch of reading data from two locations occurs 8 times successively. Mismatch between writing data and reading data occurs 8 times successively.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. APC PWB Y and LSU relay PWB (YC12) LSU relay PWB (YC2) and engine PWB (YC11)
		Defective APC PWB Y.	Replace the laser scanner unit (see page 1-5-17).
8010	**Punch motor error 1** When the punch motor is driven, punch home position sensor does not turn on within 200 ms.	Defective connector cable or poor contact in the connector (4000-sheet finisher).	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Punch motor and punch PWB (YC4) Punch home position sensor and punch PWB (YC8) Punch PWB (YC1) and DF main PWB (YC7)
		Defective connector cable or poor contact in the connector (1000-sheet finisher).	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Punch motor and punch PWB (YC4) Punch home position sensor and punch PWB (YC8) Punch PWB (YC1) and DF main PWB (YC8)
		Defective punch home position sensor.	Replace the punch home position sensor.
		Defective punch motor.	Replace the punch motor.
		Defective PWB.	Replace the punch PWB or DF main PWB and check for correct operation.

Code	Contents	Causes	Check procedures/ corrective measures
8020	**Punch motor error 2** Home position is not obtained in 3 s after home position is initialized or in standby.	Defective connector cable or poor contact in the connector (4000-sheet finisher).	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Punch motor and punch PWB (YC4) Punch PWB (YC1) and DF main PWB (YC7)
		Defective connector cable or poor contact in the connector (1000-sheet finisher).	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Punch motor and punch PWB (YC4) Punch PWB (YC1) and DF main PWB (YC8)
		Defective punch motor.	Replace the punch motor.
		Defective PWB.	Replace the punch PWB or DF main PWB and check for correct operation.
8030	**Punch motor error 3** Home position does not turn from On to Off in 50 ms after home position has been initialized.	Defective connector cable or poor contact in the connector (4000-sheet finisher).	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Punch motor and punch PWB (YC4) Punch PWB (YC1) and DF main PWB (YC7)
		Defective connector cable or poor contact in the connector (1000-sheet finisher).	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Punch motor and punch PWB (YC4) Punch PWB (YC1) and DF main PWB (YC8)
		Defective punch motor.	Replace the punch motor.
		Defective PWB.	Replace the punch PWB or DF main PWB and check for correct operation.
8040	**Abnormal simultaneous connection of mailbox** When the mailbox is installed in both the main unit and the finisher.	When the mailbox is installed in both the main unit and the finisher.	Uninstall either of the mailboxes.

Code	Contents	Causes	Check procedures/ corrective measures
8090	**DF paddle motor error** When the DF paddle motor is driven, DF paddle sensor does not turn on within 1 s.	Defective connector cable or poor contact in the connector (4000-sheet finisher).	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. DF paddle motor and DF main PWB (YC15) DF paddle sensor and DF main PWB (YC22)
		Defective connector cable or poor contact in the connector (1000-sheet finisher).	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. DF paddle motor and DF main PWB (YC11) DF paddle sensor and DF main PWB (YC20)
		Defective DF paddle sensor.	Replace the DF paddle sensor.
		Defective DF paddle motor.	Replace the DF paddle motor.
		Defective DF main PWB.	Replace the DF main PWB and check for correct operation.
8100	**DF eject release motor error** When the DF eject release motor is driven, DF bundle discharge sensor does not turn on within 1 s.	Defective connector cable or poor contact in the connector (4000-sheet finisher).	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. DF eject release motor and DF main PWB (YC12) DF bundle discharge sensor and DF main PWB (YC22)
		Defective connector cable or poor contact in the connector (1000-sheet finisher).	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. DF eject release motor and DF main PWB (YC10) DF bundle discharge sensor and DF main PWB (YC20)
		Defective DF bundle discharge sensor.	Replace the DF bundle discharge sensor.
		Defective DF eject release motor.	Replace the DF eject release motor.
		Defective DF main PWB.	Replace the DF main PWB and check for correct operation.

Code	Contents	Causes	Check procedures/ corrective measures
8110	**DF shift motor 1 error** (4000-sheet finisher) When the DF shift motor 1 is driven, DF shift sensor 1 does not turn on within 160 ms.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. DF shift motor 1 and DF main PWB (YC14) DF shift sensor 1 and DF main PWB (YC23)
		Defective DF shift sensor 1.	Replace the DF shift sensor 1.
		Defective DF shift motor 1.	Replace the DF shift motor 1.
		Defective DF main PWB.	Replace the DF main PWB and check for correct operation.
8120	**DF shift motor 2 error** (4000-sheet finisher) When the DF shift motor 2 is driven, DF shift sensor 2 does not turn on within 160 ms.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. DF shift motor 2 and DF main PWB (YC14) DF shift sensor 2 and DF main PWB (YC23)
		Defective DF shift sensor 2.	Replace the DF shift sensor 2.
		Defective DF shift motor 2.	Replace the DF shift motor 2.
		Defective DF main PWB.	Replace the DF main PWB and check for correct operation.
8130	**DF shift release motor error** (4000-sheet finisher) When the DF shift release motor is driven, DF shift release sensor does not turn on within 1 s.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. DF shift release motor and DF main PWB (YC14) DF shift release sensor and DF main PWB (YC23)
		Defective DF shift release sensor.	Replace the DF shift release sensor.
		Defective DF shift release motor.	Replace the DF shift release motor.
		Defective DF main PWB.	Replace the DF main PWB and check for correct operation.

Code	Contents	Causes	Check procedures/ corrective measures
8140	**DF tray motor error 1** When the main tray has started ascending, DF tray sensor 1 or DF tray upper surface sensor does not turn on within 20 s.	Defective connector cable or poor contact in the connector (4000-sheet finisher).	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. DF tray motor and DF main PWB (YC16) DF tray sensor 1 and DF main PWB (YC22) DF tray upper surface sensor and DF main PWB (YC21, YC13)
		Defective connector cable or poor contact in the connector (1000-sheet finisher).	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. DF tray motor and DF main PWB (YC14) DF tray sensor 1 and DF main PWB (YC20) DF tray upper surface sensor and DF main PWB (YC18)
		Defective sensor.	Replace DF tray sensor 1 or DF tray upper surface sensor.
		Defective DF tray motor.	Replace the DF tray motor.
		Defective DF main PWB.	Replace the DF main PWB and check for correct operation.
8150	**DF tray motor error 2** When the main tray has descended, DF tray sensor 1 or DF tray upper surface sensor does not turn off within 5 s.	Defective connector cable or poor contact in the connector (4000-sheet finisher).	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. DF tray motor and DF main PWB (YC16) DF tray sensor 1 and DF main PWB (YC22) DF tray upper surface sensor and DF main PWB (YC21, YC13)
		Defective connector cable or poor contact in the connector (1000-sheet finisher).	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. DF tray motor and DF main PWB (YC14) DF tray sensor 1 and DF main PWB (YC20) DF tray upper surface sensor and DF main PWB (YC18)
		Defective sensor.	Replace DF tray sensor 1 or DF tray upper surface sensor.
		Defective DF tray motor.	Replace the DF tray motor.
		Defective DF main PWB.	Replace the DF main PWB and check for correct operation.

Code	Contents	Causes	Check procedures/ corrective measures
8160	**DF tray motor error 3** When the main tray has descended, DF tray sensor 3 does not turn on within 20 s.	Defective connector cable or poor contact in the connector (4000-sheet finisher).	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. DF tray motor and DF main PWB (YC16) DF tray sensor 3 and DF main PWB (YC23)
		Defective connector cable or poor contact in the connector (1000-sheet finisher).	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. DF tray motor and DF main PWB (YC14) DF tray sensor 3 and DF main PWB (YC20)
		Defective DF tray sensor 3.	Replace DF tray sensor 3.
		Defective DF tray motor.	Replace the DF tray motor.
		Defective DF main PWB.	Replace the DF main PWB and check for correct operation.
8170	**DF side registration motor 1 error 1** When initial operation, DF side registration sensor 1 does not turn on within 3 s.	Defective connector cable or poor contact in the connector (4000-sheet finisher).	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. DF side registration motor 1 and DF main PWB (YC15) DF side registration sensor 1 and DF main PWB (YC22)
		Defective connector cable or poor contact in the connector (1000-sheet finisher).	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. DF side registration motor 1 and DF main PWB (YC11) DF side registration sensor 1 and DF main PWB (YC20)
		Defective DF side registration sensor 1.	Replace DF side registration sensor 1.
		Defective DF side registration motor 1.	Replace DF side registration motor 1.
		Defective DF main PWB.	Replace the DF main PWB and check for correct operation.

Code	Contents	Causes	Check procedures/ corrective measures
8180	**DF side registration motor 1 error 2** JAM6810 is detected twice.	Defective connector cable or poor contact in the connector (4000-sheet finisher).	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. DF side registration motor 1 and DF main PWB (YC15) DF side registration sensor 1 and DF main PWB (YC22)
		Defective connector cable or poor contact in the connector (1000-sheet finisher).	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. DF side registration motor 1 and DF main PWB (YC11) DF side registration sensor 1 and DF main PWB (YC20)
		Defective DF side registration sensor 1.	Replace DF side registration sensor 1.
		Defective DF side registration motor 1.	Replace DF side registration motor 1.
		Defective DF main PWB.	Replace the DF main PWB and check for correct operation.
8190	**DF side registration motor 2 error 1** When initial operation, DF side registration sensor 2 does not turn on within 3 s.	Defective connector cable or poor contact in the connector (4000-sheet finisher).	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. DF side registration motor 2 and DF main PWB (YC15) DF side registration sensor 2 and DF main PWB (YC22)
		Defective connector cable or poor contact in the connector (1000-sheet finisher).	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. DF side registration motor 2 and DF main PWB (YC11) DF side registration sensor 2 and DF main PWB (YC20)
		Defective DF side registration sensor 2.	Replace DF side registration sensor 2.
		Defective DF side registration motor 2.	Replace DF side registration motor 2.
		Defective DF main PWB.	Replace the DF main PWB and check for correct operation.

Code	Contents	Causes	Check procedures/ corrective measures
8200	**DF side registration motor 2 error 2** JAM6910 is detected twice.	Defective connector cable or poor contact in the connector (4000-sheet finisher).	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. DF side registration motor 2 and DF main PWB (YC15) DF side registration sensor 2 and DF main PWB (YC22)
		Defective connector cable or poor contact in the connector (1000-sheet finisher).	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. DF side registration motor 2 and DF main PWB (YC11) DF side registration sensor 2 and DF main PWB (YC20)
		Defective DF side registration sensor 2.	Replace DF side registration sensor 2.
		Defective DF side registration motor 2.	Replace DF side registration motor 2.
		Defective DF main PWB.	Replace the DF main PWB and check for correct operation.
8210	**DF slide motor error** When initial operation, DF staple sensor does not turn on within 3 s.	Defective connector cable or poor contact in the connector (4000-sheet finisher).	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. DF slide motor and DF main PWB (YC12) DF staple sensor and DF main PWB (YC22)
		Defective connector cable or poor contact in the connector (1000-sheet finisher).	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. DF slide motor and DF main PWB (YC10) DF staple sensor and DF main PWB (YC20)
		Defective DF staple sensor.	Replace the DF staple sensor.
		Defective DF slide motor.	Replace the DF slide motor.
		Defective DF main PWB.	Replace the DF main PWB and check for correct operation.

Code	Contents	Causes	Check procedures/ corrective measures
8230	**DF staple motor error 1** Staple JAM (DF) has been detected twice in a row. (The home position could not be detected in 600 ms since the motor was driven after jam was detected twice.)	Defective connector cable or poor contact in the connector (4000-sheet finisher).	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Staple unit and DF main PWB (YC17)
		Defective connector cable or poor contact in the connector (1000-sheet finisher).	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Staple unit and DF main PWB (YC11)
		Defective DF staple sensor.	Replace the staple unit.
		Defective DF staple motor.	
		Defective DF main PWB.	Replace the DF main PWB and check for correct operation.
8240	**DF staple motor error 2** Staple JAM (DF) has been detected twice in a row. (The second JAM detection condition fullfilled with a lock detection signal maintained 1 V for 500 ms continuously, while the stapler motor was driven.)	Defective connector cable or poor contact in the connector (4000-sheet finisher).	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Staple unit and DF main PWB (YC17)
		Defective connector cable or poor contact in the connector (1000-sheet finisher).	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Staple unit and DF main PWB (YC11)
		Defective DF staple motor.	Replace the staple unit.
		Defective DF main PWB.	Replace the DF main PWB and check for correct operation.
8250	**DF tray motor error 4** The lock signal of the motor is detected continuously for 10 s.	Defective connector cable or poor contact in the connector (4000-sheet finisher).	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. DF tray motor and DF main PWB (YC16) DF tray sensor 3 and DF main PWB (YC23)
		Defective connector cable or poor contact in the connector (1000-sheet finisher).	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. DF tray motor and DF main PWB (YC14) DF tray sensor 3 and DF main PWB (YC20)
		Defective DF tray motor.	Replace the DF tray motor.
		Defective DF main PWB.	Replace the DF main PWB and check for correct operation.

Code	Contents	Causes	Check procedures/ corrective measures
8300	**Center-folding unit communication error** (4000-sheet finisher) Communication with the center-folding unit is not possible.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. CF main PWB (YC7) and DF main PWB (YC9)
		Defective CF set sensor.	Replace the CF set sensor.
		Defective PWB.	Replace the CF main PWB or the DF main PWB and check for correct operation.
8310	**CF side registration motor 2 error** (4000-sheet finisher) When initial operation, CF side registration sensor 2 does not turn on within 1 s.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. CF side registration motor 2 and CF main PWB (YC10) CF side registration sensor 2 and CF main PWB (YC20)
		Defective CF side registration sensor 2.	Replace CF side registration sensor 2.
		Defective CF side registration motor 2.	Replace CF side registration motor 2.
		Defective CF main PWB.	Replace the CF main PWB and check for correct operation.
8320	**CF adjustment motor error** (4000-sheet finisher) When initial operation, CF adjustment sensor does not turn on within 2.5 s.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. CF adjustment motor 1, 2 and CF main PWB (YC10) CF adjustment sensor 1, 2 and CF main PWB (YC20)
		Defective CF adjustment sensor 1, 2.	Replace CF adjustment sensor 1, 2.
		Defective CF adjustment motor 1, 2.	Replace CF adjustment motor 1, 2.
		Defective CF main PWB.	Replace the CF main PWB and check for correct operation.

Code	Contents	Causes	Check procedures/ corrective measures
8330	**CF blade motor error** (4000-sheet finisher) When initial operation, CF blade sensor does not turn on within 3 s.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. CF blade motor and CF main PWB (YC15) CF blade sensor and CF main PWB (YC20)
		Defective CF blade sensor.	Replace the CF blade sensor.
		Defective CF blade motor.	Replace the CF blade motor.
		Defective CF main PWB.	Replace the CF main PWB and check for correct operation.
8340	**CF staple motor error 1** (4000-sheet finisher) Staple JAM (center-folding unit) has been detected twice in a row. (The home position could not be detected in 600 ms since the motor was driven after jam was detected twice.)	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. CF staple unit and CF main PWB (YC13)
		Defective CF staple sensor.	Replace the CF staple unit.
		Defective CF staple motor.	
		Defective CF main PWB.	Replace the CF main PWB and check for correct operation.
8350	**CF side registration motor 1 error** (4000-sheet finisher) When initial operation, CF side registration sensor 1 does not turn on within 1 s.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. CF side registration motor 1 and CF main PWB (YC10) CF side registration sensor 1 and CF main PWB (YC20)
		Defective CF side registration sensor 1.	Replace CF side registration sensor 1.
		Defective CF side registration motor 1.	Replace CF side registration motor 1.
		Defective CF main PWB.	Replace the CF main PWB and check for correct operation.
8360	**CF main motor error** (4000-sheet finisher) During driving the motor, lock signal is detected for 1 s continuously.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. CF main motor and CF main PWB (YC16)
		Defective CF main motor.	Replace the CF main motor.
		Defective CF main PWB.	Replace the CF main PWB and check for correct operation.

Code	Contents	Causes	Check procedures/ corrective measures
8370	**CF staple motor error 2** (4000-sheet finisher) Staple JAM (DF) has been detected twice in a row. (The second JAM detection condition fullfilled with a lock detection signal maintained 1 V for 1000 ms continuously, while the stapler motor was driven.)	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. CF staple unit and CF main PWB (YC13)
		Defective CF staple motor.	Replace the CF staple unit.
		Defective CF main PWB.	Replace the CF main PWB and check for correct operation.
8410	**Punch slide motor error 1** The punch slide sensor won't turn On when home position has been moved by 30 mm.	Defective connector cable or poor contact in the connector (4000-sheet finisher).	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Punch slide motor and punch PWB (YC3) Punch slide sensor and punch PWB (YC6) Punch PWB (YC1) and DF main PWB (YC7)
		Defective connector cable or poor contact in the connector (1000-sheet finisher).	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Punch slide motor and punch PWB (YC3) Punch slide sensor and punch PWB (YC6) Punch PWB (YC1) and DF main PWB (YC8)
		Defective slide sensor.	Replace the punch slide sensor.
		Defective punch slide motor.	Replace the punch slide motor.
		Defective PWB.	Replace the punch PWB or DF main PWB and check for correct operation.
8420	**Punch slide motor error 2** In detection of paper edges, the paper edge cannot be detected in 30 mm move.	Defective connector cable or poor contact in the connector (4000-sheet finisher).	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Punch slide motor and punch PWB (YC3) Punch PWB (YC1) and DF main PWB (YC7)
		Defective connector cable or poor contact in the connector (1000-sheet finisher).	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Punch slide motor and punch PWB (YC3) Punch PWB (YC1) and DF main PWB (YC8)
		Defective punch slide motor.	Replace the punch slide motor.
		Defective PWB.	Replace the punch PWB or DF main PWB and check for correct operation.

Code	Contents	Causes	Check procedures/ corrective measures
8430	**Punch unit communication error** Communication failed to be established after the punch unit was hooked up.	Defective connector cable or poor contact in the connector (4000-sheet finisher).	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Punch PWB (YC1) and DF main PWB (YC7)
		Defective connector cable or poor contact in the connector (1000-sheet finisher).	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Punch PWB (YC1) and DF main PWB (YC8)
		Defective PWB.	Replace the punch PWB or the DF main PWB and check for correct operation.
8500	**Mailbox communication error** (4000-sheet finisher) Communication failed to be established after the mailbox was hooked up.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. MB main PWB (YC3) and DF main PWB (YC6)
		Defective PWB.	Replace the MB main PWB or the DF main PWB and check for correct operation.
8510	**MB conveying motor error 1** (4000-sheet finisher) When initial operation, MB home position sensor does not turn on within 5 s.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. MB conveying motor and MB main PWB (YC5) MB home position sensor and MB main PWB (YC2)
		Defective MB home position sensor.	Replace the MB home position sensor.
		Defective MB conveying motor.	Replace the MB conveying motor.
		Defective MB main PWB.	Replace the MB main PWB and check for correct operation.

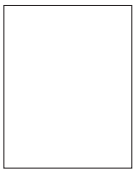
Code	Contents	Causes	Check procedures/ corrective measures
8520	**MB conveying motor error 2** (4000-sheet finisher) When standby operation, MB home position sensor does not turn off within 1 s.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. MB conveying motor and MB main PWB (YC5) MB home position sensor and MB main PWB (YC2)
		Defective MB home position sensor.	Replace the MB home position sensor.
		Defective MB conveying motor.	Replace the MB conveying motor.
		Defective MB main PWB.	Replace the MB main PWB and check for correct operation.
8800	**Document finisher main program error** Document finisher main program error at power up.	Defective connector cable or poor contact in the connector (4000-sheet finisher).	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. DF main PWB (YC4) and engine PWB (YC18)
		Defective connector cable or poor contact in the connector (1000-sheet finisher).	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. DF main PWB (YC7) and engine PWB (YC18)
		Defective PWB.	Replace the DF main PWB or the engine PWB and check for correct operation.
8900	**Document finisher backup error** Read and write data does not match 3 times in succession.	Defective connector cable or poor contact in the connector (4000-sheet finisher).	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. DF main PWB (YC4) and engine PWB (YC18)
		Defective connector cable or poor contact in the connector (1000-sheet finisher).	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. DF main PWB (YC7) and engine PWB (YC18)
		Improper installation EEPROM.	Check the installation of the EEPROM and remedy if necessary.
		Defective DF main PWB.	Replace the DF main PWB and check for correct operation.

Code	Contents	Causes	Check procedures/ corrective measures
8930	**Center-folding unit backup error** (4000-sheet finisher) Read and write data does not match 3 times in succession.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. CF main PWB (YC7) and DF main PWB (YC9)
		Improper installation EEPROM.	Check the installation of the EEPROM and remedy if necessary.
		Defective CF main PWB.	Replace the CF main PWB and check for correct operation.
F000	**Communication error between main PWB and operation PWB**	Defective main PWB.	Turn the main power switch off/on to restart the machine. If the error is not resolved, replace main PWB (see page 1-5-44).
		Defective operation PWB.	Replace the operation PWB and check for correct operation.
F010	**Main PWB checksum error**	Defective main PWB.	Turn the main power switch off/on to restart the machine. If the error is not resolved, replace main PWB (see page 1-5-44).
F040	**Communication error between main PWB and print engine**	Defective main PWB.	Turn the main power switch off/on to restart the machine. If the error is not resolved, replace main PWB (see page 1-5-44).
		Defective engine PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
F050	**Print engine ROM checksum error**	Defective engine software.	Install the engine software.
		Defective engine PWB.	Turn the main power switch off/on to restart the machine. If the error is not resolved, replace engine PWB (see page 1-5-49).
F278	**Power supply in drive system error**	The main power switch was turned off before the machine was shutdown, or a power failure has occurred.	Turn on power. (To switch off power, after confirming the data lamp is turned off, perform shut-down on the operation panel, turn power off.)

1-4-3 Image formation problems

If the part causing the problem was not supplied, use the unit including the part for replacement.

(1) No image appears (entirely white).

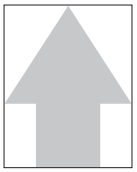


See page 1-4-86

(2) No image appears (entirely black).

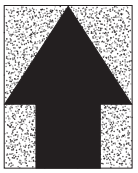
See page 1-4-86

(3) Image is too light.



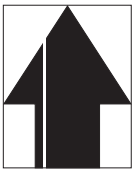
See page 1-4-87

(4) The background is colored.



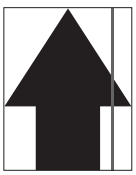
See page 1-4-87

(5) White streaks are printed vertically.



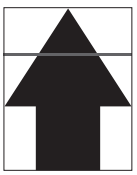
See page 1-4-88

(6) Black streaks are printed vertically.



See page 1-4-88

(7) Streaks are printed horizontally.

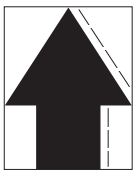


See page 1-4-88

(8) Spots are printed.

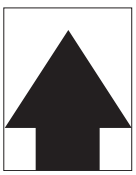
See page 1-4-89

(9) Image is blurred.



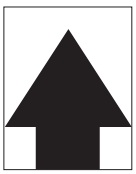
See page 1-4-89

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



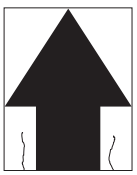
See page 1-4-89

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



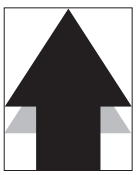
See page 1-4-89

(12) Paper is wrinkled.



See page

(13) Offset occurs.

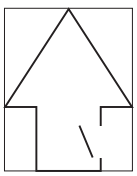


See page 1-4-90

(14) Part of image is missing.

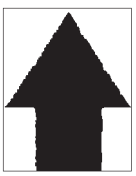
See page 1-4-90

(15) Fusing is loose.



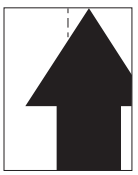
See page 1-4-91

(16) Image is out of focus.



See page 1-4-91

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

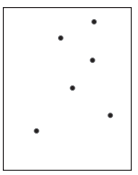


See page 1-4-91

(18) Unevenly repeating horizontal streaks in the printed objects.

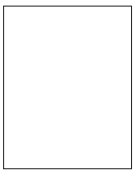
See page 1-4-91

(19) Colored spots in the printed objects.



See page 1-4-91

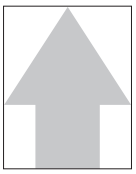
(1) No image appears (entirely white).

Print example	Causes		Check procedures/corrective measures
	Defective transfer bias output.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. High voltage PWB 2 (YC1) and engine PWB (YC8)
		Defective high voltage PWB 2.	Replace the high voltage PWB 2 (see page 1-5-55).
		Defective engine PWB.	Replace the engine PWB (see page 1-5-49).
	Defective developer bias output.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. High voltage PWB 1 (YC1, 2) and engine PWB (YC16) High voltage PWB 1 (YC3, 4) and engine PWB (YC17)
		Defective high voltage PWB 1.	Replace the high voltage PWB 1 (see page 1-5-54).
		Defective engine PWB.	Replace the engine PWB (see page 1-5-49).
	No LSU laser is output.	Defective laser scanner unit.	Replace the laser scanner unit (see page 1-5-17).
		Defective engine PWB.	Replace the engine PWB (see page 1-5-49).

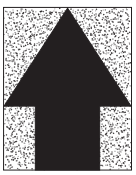
(2) No image appears (entirely black).

Print example	Causes		Check procedures/corrective measures
	No main charging.	Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. High voltage PWB 1 (YC1, 2) and engine PWB (YC16) High voltage PWB 1 (YC3, 4) and engine PWB (YC17)
		Defective charger roller unit.	Replace the charger roller unit (see page 1-5-31).
		Defective high voltage PWB 1.	Replace the high voltage PWB 1 (see page 1-5-54).
		Defective engine PWB.	Replace the engine PWB (see page 1-5-49).
	The laser is activated simultaneously for all colors.	Defective laser scanner unit.	Replace the laser scanner unit (see page 1-5-17).

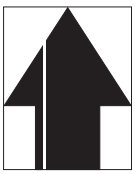
(3) Image is too light.

Print example	Causes		Check procedures/corrective measures
	Defective developer bias output.	Defective developer unit.	Run maintenance mode U089 to output four-color bar PG, check the output status of the four colors, and replace the developer unit for any faulty color (see page 1-5-29).
		Defective high voltage PWB 1.	Replace the high voltage PWB 1 (see page 1-5-54).
		Defective engine PWB.	Replace the engine PWB (see page 1-5-49).
	Dirty drum unit.		Perform the drum refresh.
	Defective transfer bias output.	Defective high voltage PWB 2.	Replace the high voltage PWB 2 (see page 1-5-55).
		Defective transfer belt unit.	Replace the transfer belt unit (see page 1-5-34).
		Defective engine PWB.	Replace the engine PWB (see page 1-5-49).
	Defective color calibration.		Perform the tone curve adjustment (Refer to operation guide).
	Insufficient toner.		If the display shows the message requesting toner replenishment, replace the container.
	Insufficient agitation of toner container.		Shake the toner container vertically approximately 10 times.
	Paper damp.		Check the paper storage conditions, replace the paper.

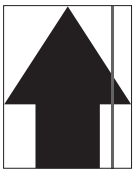
(4) The background is colored.

Print example	Causes		Check procedures/corrective measures
	Defective developer bias output.	Defective developer unit.	Run maintenance mode U089 to output four-color bar PG, check the output status of the four colors, and replace the developer unit for any faulty color (see page 1-5-29).
		Defective high voltage PWB 1.	Replace the high voltage PWB 1 (see page 1-5-54).
		Defective engine PWB.	Replace the engine PWB (see page 1-5-49).
	Defective color calibration.		Perform the calibration (Refer to operation guide).
			Perform the tone curve adjustment (Refer to operation guide).

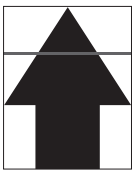
(5) White streaks are printed vertically.

Print example	Causes	Check procedures/corrective measures
	Foreign object in one of the developer units.	Run maintenance mode U089 to output four-color bar PG, check the output status of the four colors, and replace the developer unit for any faulty color (see page 1-5-29).
	Dirty transfer belt.	Clean the transfer belt. Replace the transfer belt unit if it is extremely dirty (see page 1-5-34).
	Dirty transfer roller.	Clean the transfer roller. Replace the transfer roller if it is extremely dirty (see page 1-5-38).
	Dirty LSU slit glasses.	Perform the laser scanner cleaning.

(6) Black streaks are printed vertically.

Print example	Causes	Check procedures/corrective measures
	Dirty or flawed drum.	Perform the drum refresh (Refer to operation guide). Flawed drum. Replace the drum unit (see page 1-5-29).
	Deformed or worn cleaning blade in the drum unit.	Replace the drum unit (see page 1-5-29).
	Defective transfer belt cleaning.	Clean the cleaning pre brush. Replace the cleaning pre brush if it is extremely dirty (see page 1-5-36).
	Worn transfer belt.	Replace the transfer belt unit (see page 1-5-34).
	Defective transfer roller.	Replace the transfer roller (see page 1-5-38).

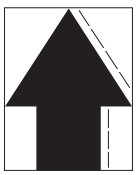
(7) Streaks are printed horizontally.

Print example	Causes	Check procedures/corrective measures
	Dirty or flawed drum.	Perform the drum refresh (Refer to operation guide). Flawed drum. Replace the drum unit (see page 1-5-29).
	Dirty developer section.	Clean any part contaminated with toner in the developer section.
	Poor contact of grounding terminal of drum unit.	Check the installation of the drum unit. If it operates incorrectly, replace it (see page 1-5-29).

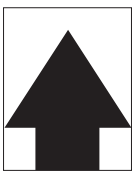
(8) Spots are printed.

Print example	Causes	Check procedures/corrective measures
	Dirty or flawed drum.	Perform the drum refresh (Refer to operation guide). Flawed drum. Replace the drum unit (see page 1-5-29).
	Deformed or worn cleaning blade in the drum unit.	Replace the drum unit (see page 1-5-29).
	Flawed developer roller.	Replace the developer unit (see page 1-5-29).
	Defective transfer belt cleaning.	Replace the cleaning pre brush (see page 1-5-36).
	Dirty heat roller and press roller.	Clean the heat roller and press roller.

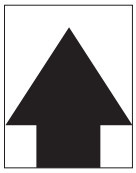
(9) Image is blurred.

Print example	Causes	Check procedures/corrective measures
	Deformed press roller.	Replace the fuser unit (see page 1-5-40).
	Paper conveying section drive problem.	Check the gears and belts and, if necessary, grease them.

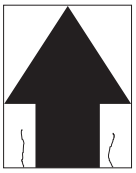
(10) The leading edge of the image is consistently misaligned with the original.

Print example	Causes	Check procedures/corrective measures
	Misadjusted leading edge registration.	Run maintenance mode U034 to readjust the leading edge registration (see page 1-3-32).
	Misadjusted the deflection in the paper.	Run maintenance mode U051 to readjust the deflection in the paper (see page 1-3-37).

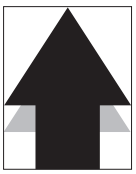
(11) The leading edge of the image is sporadically misaligned with the original.

Print example	Causes	Check procedures/corrective measures
	Paper feed clutch, middle motor, registration motor or duplex motor operating incorrectly.	Check the installation of the clutch or motor. If it operates incorrectly, replace it.

(12) Paper is wrinkled.

Print example	Causes	Check procedures/corrective measures
	Paper curled.	Check the paper storage conditions.
	Paper damp.	Check the paper storage conditions.
	Faulty width adjusting cursor settings at loading paper.	Check how the cursor is set according to the width.(The gap between the paper and the cursor should be 1mm or less.)
	Unbalanced spring pressures at the left and right registration transporting.	Measure the spring pressures.
	Defective pressure springs.	Replace the fuser unit (see page 1-5-40).

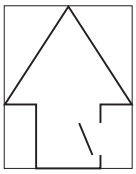
(13) Offset occurs.

Print example	Causes	Check procedures/corrective measures
	Deformed or worn cleaning blade in the drum unit.	Replace the drum unit (see page 1-5-29).
	Faulty cleaning bias output voltage	Verify the cleaning bias output.If no voltage is indicated, replace the high-voltage PWB 2.
	Defective transfer belt cleaning.	Replace the transfer belt unit (see page 1-5-34).
	Defective fuser unit.	Replace the fuser unit (see page 1-5-40).
	Wrong types of paper.	Check if the paper meets specifications. Replace paper.

(14) Part of image is missing.

Print example	Causes	Check procedures/corrective measures
	Paper damp.	Check the paper storage conditions.
	Paper creased.	Replace the paper.
	Drum condensation.	Perform the drum refresh (Refer to operation guide).
	Dirty or flawed drum.	Flawed drum. Replace the drum unit (see page 1-5-29).
	Dirty transfer belt.	Clean the transfer belt. Replace the transfer belt unit if it is extremely dirty (see page 1-5-34).
	Dirty transfer roller.	Clean the transfer roller. Replace the transfer roller if it is extremely dirty (see page 1-5-38).

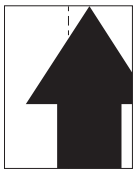
(15) Fusing is loose.

Print example	Causes	Check procedures/corrective measures
	Wrong types of paper.	Check if the paper meets specifications, replace paper.
	Faulty media type settings.	Verify the media type accords with the weight of the paper used.
	Flawed heat roller or press roller.	Replace the fuser unit (see page 1-5-40).
	Defective pressure springs.	
	Defective fuser IH.	

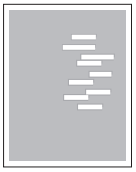
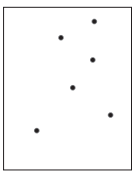
(16) Image is out of focus.

Print example	Causes	Check procedures/corrective measures
	Drum condensation.	Perform the drum refresh (Refer to operation guide).

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

Print example	Causes	Check procedures/corrective measures
	Misadjusted image center line.	Run maintenance item U034 to readjust the center line of image printing (see page 1-3-32).
	Paper is not placed correctly.	Place the paper correctly.

(18) Unevenly repeating horizontal streaks in the printed objects. Colored spots in the printed objects.

Print example	Causes	Check procedures/corrective measures
 	The device is installed in an altitude greater than 1500 m sea level.	Run maintenance mode U140 and run calibration in high altitude mode (see page 1-3-73).

1-4-4 Electric problems

If the part causing the problem was not supplied, use the unit including the part for replacement.
Troubleshooting to each failure must be in the order of the numbered symptoms.

Problem	Causes	Check procedures/corrective measures
(1) The machine does not operate when the main power switch is turned on.	1. No electricity at the power outlet.	Measure the input voltage.
	2. The power cord is not plugged in properly.	Check the contact between the power plug and the outlet.
	3. Broken power cord.	Check for continuity. If none, replace the cord.
	4. Defective main power switch.	Check for continuity across the contacts. If none, replace the main power switch.
	5. Defective power source PWB.	Replace the power source PWB (see page 1-5-51).
(2) MP lift motor does not operate.	1. Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. MP lift motor and relay PWB (YC3) Relay PWB (YC12) and feed PWB 1 (YC17) Feed PWB 1 (YC1) and engine PWB (YC6)
	2. Defective drive transmission system.	Check if the rollers and gears rotate smoothly. If not, grease the bushes and gears. Check for broken gears and replace if any.
	3. Defective motor.	Replace the MP lift motor.
	4. Defective PWB.	Replace the relay PWB, feed PWB 1 or engine PWB and check for correct operation (see page 1-5-49).
(3) Registration motor does not operate.	1. Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Registration motor and feed PWB 1 (YC25) Feed PWB 1 (YC2) and engine PWB (YC5)
	2. Defective drive transmission system.	Check if the rollers and gears rotate smoothly. If not, grease the bushes and gears. Check for broken gears and replace if any.
	3. Defective motor.	Replace the registration motor.
	4. Defective PWB.	Replace the feed PWB 1 or engine PWB and check for correct operation (see page 1-5-49).
(4) Middle motor does not operate .	1. Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Middle motor and feed PWB 2 (YC7) Feed PWB 2 (YC1) and engine PWB (YC4)
	2. Defective drive transmission system.	Check if the rollers and gears rotate smoothly. If not, grease the bushes and gears. Check for broken gears and replace if any.
	3. Defective motor.	Replace the middle motor.
	4. Defective PWB.	Replace the feed PWB 2 or engine PWB and check for correct operation (see page 1-5-49).

Problem	Causes	Check procedures/corrective measures
(5) Eject motor does not operate.	1. Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Eject motor and front PWB (YC5) Front PWB (YC3) and engine PWB (YC7)
	2. Defective drive transmission system.	Check if the rollers and gears rotate smoothly. If not, grease the bushes and gears. Check for broken gears and replace if any.
	3. Defective motor.	Replace the eject motor.
	4. Defective PWB.	Replace the front PWB or engine PWB and check for correct operation (see page 1-5-49).
(6) Duplex motor 1 does not operate.	1. Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Duplex motor 1 and relay PWB (YC16) Relay PWB (YC13) and feed PWB 1 (YC23) Feed PWB 1 (YC2) and engine PWB (YC5)
	2. Defective drive transmission system.	Check if the rollers and gears rotate smoothly. If not, grease the bushes and gears. Check for broken gears and replace if any.
	3. Defective motor.	Replace the duplex motor 1.
	4. Defective PWB.	Replace the relay PWB, feed PWB 1 or engine PWB and check for correct operation (see page 1-5-49).
(7) Duplex motor 2 does not operate.	1. Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Duplex motor 2 and relay PWB (YC7) Relay PWB (YC1) and feed PWB 1 (YC14) Feed PWB 1 (YC1) and engine PWB (YC6)
	2. Defective drive transmission system.	Check if the rollers and gears rotate smoothly. If not, grease the bushes and gears. Check for broken gears and replace if any.
	3. Defective motor.	Replace the duplex motor 2.
	4. Defective PWB.	Replace the relay PWB, feed PWB 1 or engine PWB and check for correct operation (see page 1-5-49).
(8) Toner fan motor 1, 2 does not operate.	1. Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Toner fan motor 1, 2 and engine PWB (YC19)
	2. Defective motor.	Replace the toner fan motor 1 or 2.
	3. Defective PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).

Problem	Causes	Check procedures/corrective measures
(9) Developer fan motor 1, 2 does not operate.	1. Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Developer fan motor 1, 2 and front PWB (YC6) Front PWB (YC3) and engine PWB (YC7)
	2. Defective motor.	Replace the developer fan motor 1 or 2.
	3. Defective PWB.	Replace the front PWB or engine PWB and check for correct operation (see page 1-5-49).
(10) Exhaust fan motor 1, 2 does not operate.	1. Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Exhaust fan motor 1, 2 and engine PWB (YC19)
	2. Defective motor.	Replace the exhaust fan motor 1 or 2.
	3. Defective PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
(11) LSU fan motor does not operate.	1. Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. LSU fan motor and front PWB (YC16) Front PWB (YC2) and engine PWB (YC10)
	2. Defective motor.	Replace the LSU fan motor.
	3. Defective PWB.	Replace the front PWB or engine PWB and check for correct operation (see page 1-5-49).
(12) Belt fan motor 1, 2 does not operate.	1. Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Belt fan motor 1, 2 and engine PWB (YC19)
	2. Defective motor.	Replace the belt fan motor 1 or 2.
	3. Defective PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
(13) Fuser fan motor 1, 2 does not operate.	1. Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Fuser fan motor 1, 2 and relay PWB (YC16) Relay PWB (YC13) and feed PWB 1 (YC23) Feed PWB 1 (YC2) and engine PWB (YC5)
	2. Defective motor.	Replace the fuser fan motor 1 or 2.
	3. Defective PWB.	Replace the relay PWB, feed PWB 1 or engine PWB and check for correct operation (see page 1-5-49).
(14) Eject fan motor 1, 2 does not operate.	1. Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Eject fan motor 1, 2 and relay PWB (YC11) Relay PWB (YC13) and feed PWB 1 (YC23) Feed PWB 1 (YC2) and engine PWB (YC5)
	2. Defective motor.	Replace the eject fan motor 1 or 2.
	3. Defective PWB.	Replace the relay PWB, feed PWB 1 or engine PWB and check for correct operation (see page 1-5-49).

Problem	Causes	Check procedures/corrective measures
(15) Eject front fan motor does not operate.	1. Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Eject front fan motor and front PWB (YC4) Front PWB (YC3) and engine PWB (YC7)
	2. Defective motor.	Replace the eject front fan motor.
	3. Defective PWB.	Replace the front PWB or engine PWB and check for correct operation (see page 1-5-49).
(16) Eject rear fan motor does not operate.	1. Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Eject rear fan motor and feed PWB 1 (YC19) Feed PWB 1 (YC1) and engine PWB (YC6)
	2. Defective motor.	Replace the eject rear fan motor.
	3. Defective PWB.	Replace the feed PWB 1 or engine PWB and check for correct operation (see page 1-5-49).
(17) Power source fan motor does not operate.	1. Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Power source fan motor and engine PWB (YC22)
	2. Defective motor.	Replace the power source fan motor.
	3. Defective PWB.	Replace the engine PWB and check for correct operation (see page 1-5-49).
(18) Controller fan motor does not operate.	1. Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Controller fan motor and main PWB (YC23)
	2. Defective motor.	Replace the controller fan motor.
	3. Defective PWB.	Replace the main PWB and check for correct operation (see page 1-5-44).
(19) Paper feed clutch 1, 2 does not operate.	1. Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Paper feed clutch 1, 2 and feed PWB 2 (YC4) Feed PWB 2 (YC1) and engine PWB (YC4)
	2. Defective clutch.	Replace the paper feed clutch 1 or 2.
	3. Defective PWB.	Replace the feed PWB 2 or engine PWB and check for correct operation (see page 1-5-49).
(20) Assist clutch 1, 2 does not operate.	1. Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Assist clutch 1 and feed PWB 2 (YC10) Assist clutch 2 and feed PWB 2 (YC12) Feed PWB 2 (YC1) and engine PWB (YC4)
	2. Defective clutch.	Replace the assist clutch 1 or 2.
	3. Defective PWB.	Replace the feed PWB 2 or engine PWB and check for correct operation (see page 1-5-49).

Problem	Causes	Check procedures/corrective measures
(21) Paper conveying clutch does not operate.	1. Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Paper conveying clutch and feed PWB 2 (YC5) Feed PWB 2 (YC1) and engine PWB (YC4)
	2. Defective clutch.	Replace the paper conveying clutch.
	3. Defective PWB.	Replace the feed PWB 2 or engine PWB and check for correct operation (see page 1-5-49).
(22) MP paper feed clutch does not operate.	1. Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. MP paper feed clutch and relay PWB (YC3) Relay PWB (YC12) and feed PWB 1 (YC17) Feed PWB 1 (YC1) and engine PWB (YC6)
	2. Defective clutch.	Replace the MP paper feed clutch.
	3. Defective PWB.	Replace the relay PWB, feed PWB 1 or engine PWB and check for correct operation (see page 1-5-49).
(23) Pickup solenoid 1, 2 does not operate.	1. Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Pickup solenoid 1, 2 and feed PWB 2 (YC8) Feed PWB 2 (YC1) and engine PWB (YC4)
	2. Defective solenoid.	Replace the pickup solenoid 1 or 2.
	3. Defective PWB.	Replace the feed PWB 2 or engine PWB and check for correct operation (see page 1-5-49).
(24) Feedshift solenoid does not operate.	1. Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Feedshift and front PWB (YC5) Front PWB (YC3) and engine PWB (YC7)
	2. Defective solenoid.	Replace the feedshift solenoid 1 or 2.
	3. Defective PWB.	Replace the front PWB or engine PWB and check for correct operation (see page 1-5-49).
(25) Cleaning solenoid does not operate.	1. Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Cleaning solenoid and feed PWB 1 (YC10) Feed PWB 1 (YC1) and engine PWB (YC4)
	2. Defective solenoid.	Replace the cleaning solenoid.
	3. Defective PWB.	Replace the feed PWB 1 or engine PWB and check for correct operation (see page 1-5-49).
(26) The message requesting paper to be loaded is shown when paper is present on the cassette.	1. Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Paper sensor 1, 2 and feed PWB 2 (YC8) Feed PWB 2 (YC1) and engine PWB (YC4)
	2. Deformed actuator.	Check visually and replace if necessary.
	3. Defective sensor.	Replace the paper sensor 1 or 2.
	4. Defective PWB.	Replace the feed PWB 2 or engine PWB and check for correct operation (see page 1-5-49).

Problem	Causes	Check procedures/corrective measures
(27) The message requesting paper to be loaded is shown when paper is present on the MP tray.	1. Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. MP paper sensor and relay PWB (YC3) Relay PWB (YC12) and feed PWB 1 (YC17) Feed PWB 1 (YC1)and engine PWB (YC6)
	2. Deformed actuator.	Check visually and replace if necessary.
	3. Defective sensor.	Replace the MP paper sensor.
	4. Defective PWB.	Replace the feed PWB 1 or engine PWB and check for correct operation (see page 1-5-49).
(28) The size of paper on the cassette is not displayed correctly.	1. Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Paper length switch 1, 2 and feed PWB 2 (YC3) Paper width switch 1, 2 and feed PWB 2 (YC3) Feed PWB 2 (YC1) and engine PWB (YC4)
	2. Defective switch.	Replace the paper length switch 1, 2 or paper width switch 1, 2.
	3. Defective PWB.	Replace the feed PWB 2 or engine PWB and check for correct operation (see page 1-5-49).
(29) The size of paper on the MP tray is not displayed correctly.	1. Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. MP paper length switch and relay PWB (YC2) MP paper width switch and relay PWB (YC2) Relay PWB (YC12) and feed PWB 1 (YC17) Feed PWB 1 (YC1)and engine PWB (YC6)
	2. Defective switch.	Replace the MP paper length switch or MP paper width switch.
	3. Defective PWB.	Replace the relay PWB, feed PWB 1 or engine PWB and check for correct operation (see page 1-5-49).
(30) A paper jam in the paper feed, paper conveying or eject section is indicated when the main power switch is turned on.	1. A piece of paper torn from paper is caught around feed sensor 1, 2, MP feed sensor, middle sensor, paper conveying sensor, registration sensor, loop sensor, fuser eject sensor, duplex sensor 1, 2, eject full sensor or switchback sensor.	Check visually and remove it, if any.
	2. Defective sensor.	Replace the feed sensor 1, 2, MP feed sensor, middle sensor, paper conveying sensor, registration sensor, loop sensor, fuser eject sensor, duplex sensor 1, 2, eject full sensor or switchback sensor.

Problem	Causes	Check procedures/corrective measures
(31) A message indicating cover open is displayed when the front cover is closed.	1. Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Front cover switch and front PWB (YC16) Front PWB (YC2) and engine PWB (YC10)
	2. Defective switch.	Replace the front cover switch.
(32) A message indicating unit open is displayed when the paper conveying unit is closed.	1. Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Paper conveying unit switch and feed PWB 1 (YC15) Feed PWB 1 (YC4) and power source PWB (YC12)
	2. Defective switch.	Replace the paper conveying unit switch.
(33) A message indicating cover open is displayed when the duplex cover is closed.	1. Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Duplex cover switch and relay PWB (YC7) Relay PWB (YC1) and feed PWB 1 (YC14) Feed PWB 1 (YC1)and engine PWB (YC6)
	2. Defective switch.	Replace the duplex cover switch.
(34) A message indicating cover open is displayed when the paper conveying cover is closed.	1. Defective connector cable or poor contact in the connector.	Reinsert the connector. Also check for continuity within the connector cable. If none, replace the cable. Paper conveying cover switch and feed PWB 2 (YC6) Feed PWB 2 (YC1) and power source PWB (YC4)
	2. Defective switch.	Replace the paper conveying cover switch.

1-4-5 Mechanical problems

If the part causing the problem was not supplied, use the unit including the part for replacement.

Problem	Causes/check procedures	Corrective measures
(1) No primary paper feed.	Check if the surfaces of the following rollers are dirty with paper powder. Forwarding pulley Paper feed pulley MP paper feed pulley	Clean with isopropyl alcohol.
	Check if the following rollers is deformed. Forwarding pulley Paper feed pulley MP paper feed pulley	Check visually and replace any deformed (see page 1-5-7, 1-5-12.
	Defective paper feed clutch 1, 2 or MP paper feed clutch installation.	Check visually and remedy if necessary.
(2) No secondary paper feed.	Check if the surfaces of the following rollers are dirty with paper powder. Right registration roller Left registration roller	Clean with isopropyl alcohol.
	Defective registration motor installation. (45 ppm/55 ppm model) Defective registration clutch installation. (30 ppm/35 ppm model)	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 remedy or replace if necessary.
(4) Multiple sheets of paper are fed.	Check if the paper is excessively curled.	Change the paper.
	Paper is loaded incorrectly.	Load the paper correctly.
	Check if the separation pulley is worn.	Replace the separation pulley if it is worn (see page 1-5-7, 1-5-12).
(5) Paper jams.	Check if the paper is excessively curled.	Change the paper.
	Check if the contact between the right and left registration rollers is correct.	Check visually and remedy if necessary.
	Check if the heat roller or press roller is extremely dirty or deformed.	Check visually and replace the fuser unit (see page 1-5-40).
(6) Toner drops on the paper conveying path.	Check if the drum unit or developer unit is extremely dirty.	Clean the drum unit or developer unit.
(7) Abnormal noise is heard.	Check if the rollers, pulleys and gears operate smoothly.	Grease the bushes and gears.
	Check if the following clutches are installed correctly. Paper feed clutch 1, 2 Assist clutch 1, 2 Paper conveying clutch MP paper feed clutch	

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1-5-1 Precautions for assembly and disassembly

(1) Precautions

Before starting disassembly, after confirming the data lamp is turned off, perform shut-down on the operation panel, turn power off, and unplug the power receptacle(see page 1-2-19).
When the fax kit is installed, be sure to disconnect the modular cable 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 85% RH. Avoid abrupt changes in temperature and humidity.
Avoid exposure to any substance which is harmful to or may affect the quality of the drum.
Do not touch the drum surface with any object. Should it be touched by hands or stained with oil, clean it.

(3) Toner

Store the toner container in a cool, dark place.
Avoid direct light and high humidity.

(4) How to tell a genuine Kyocera toner container

As a means of brand protection, the Kyocera 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 branded toner container, otherwise, it is a counterfeit.

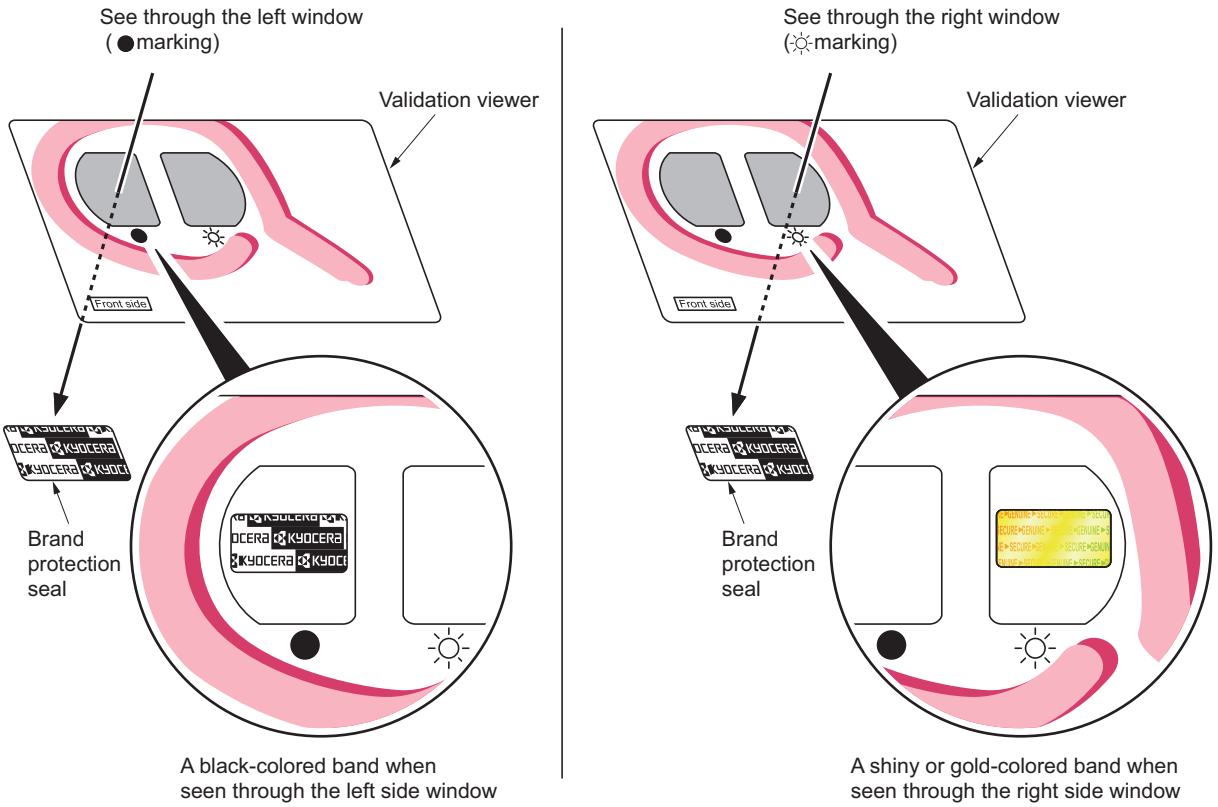


Figure 1-5-1

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

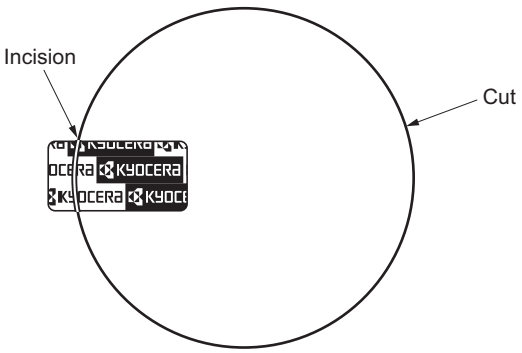


Figure 1-5-2

1-5-2 Paper feed section

(1) Detaching and refitting the primary paper feed unit

Procedure

Detaching remove the primary paper feed unit

1. Pull the cassette 1 and cassette 2 out completely.
2. Pull the paper conveying unit out.
3. Open the right lower cover.
4. Remove the strap and then remove the right lower cover.

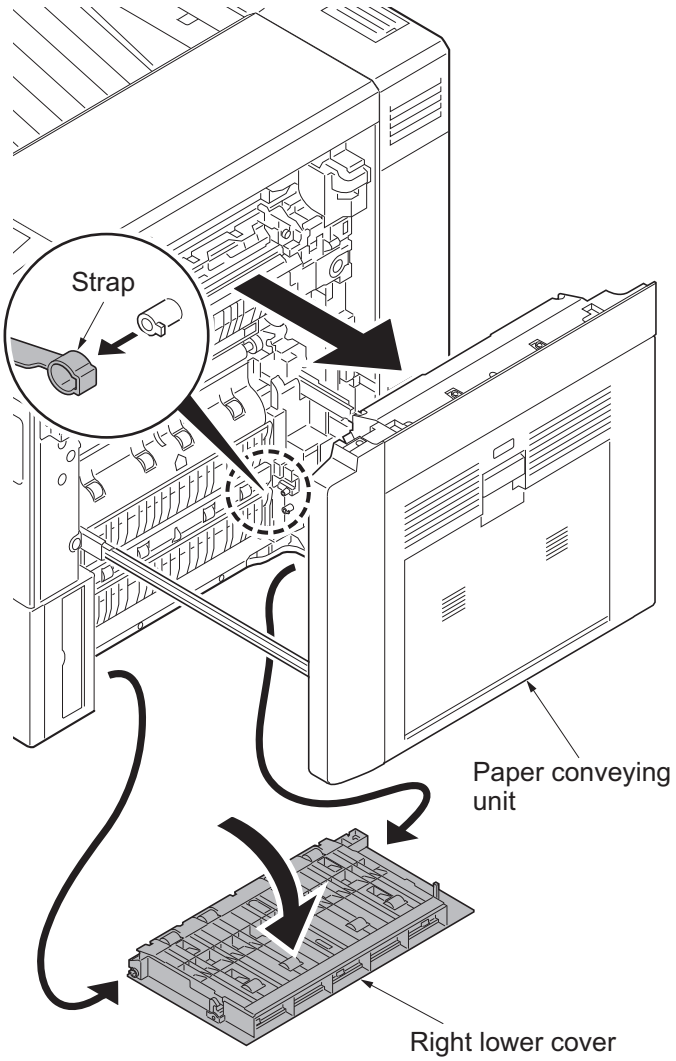


Figure 1-5-3

5. Remove the rear upper cover and the rear lower cover (see page 1-5-56).
6. Remove three screws B and then remove the right lower rear cover.

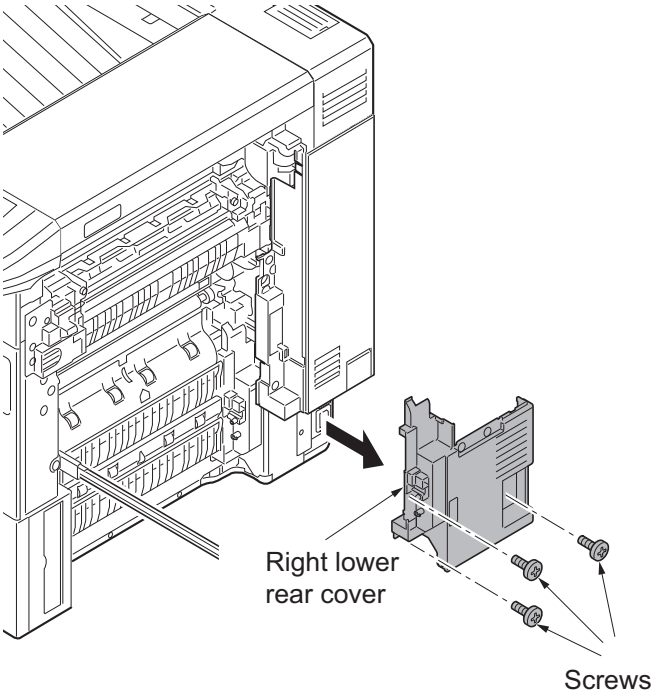


Figure 1-5-4

7. Open the handle cover.
8. Remove three screws.
9. Unhook the hook and then remove the right lower front cover.

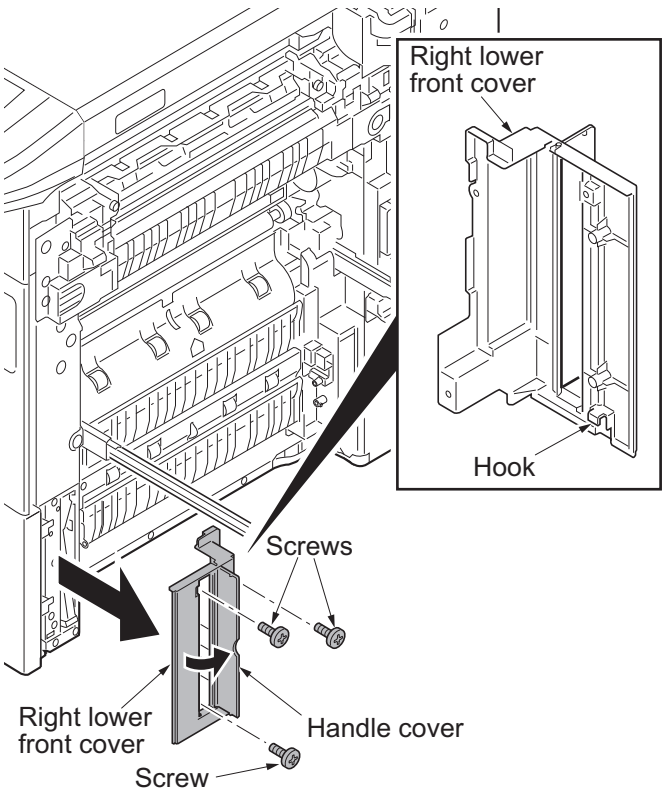


Figure 1-5-5

10. Remove two connectors.

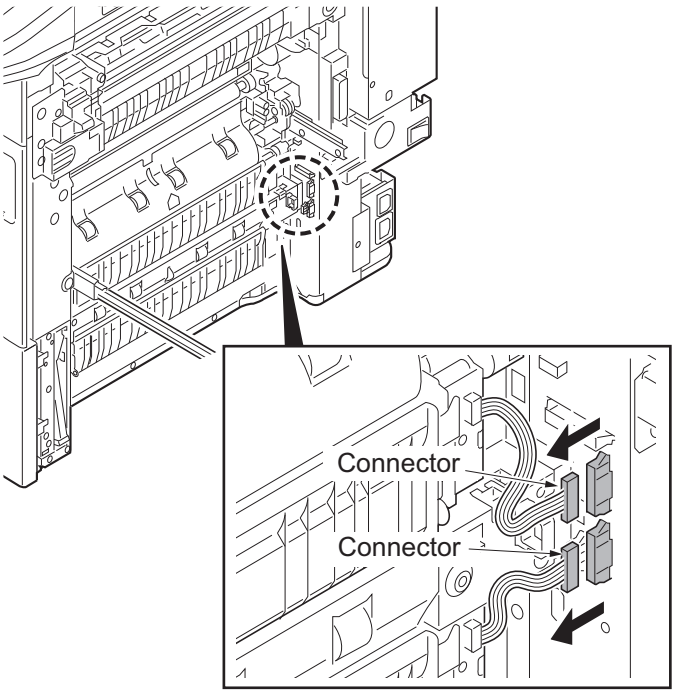


Figure 1-5-6

11. Remove two screws each from primary paper feed unit.
12. Remove the primary paper feed unit.

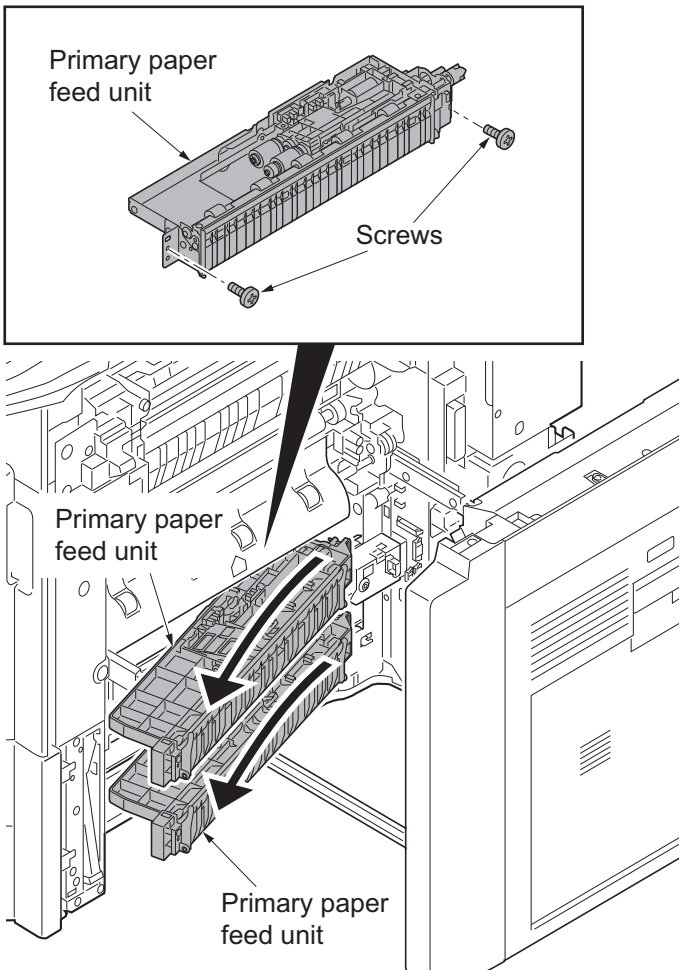


Figure 1-5-7

13. Check or replace the primary paper feed unit and refit all the removed parts.
    *: When refit the primary paper feed unit, you must confirm the inserted pin to the driving coupler.
    *: When refit the primary paper feed unit, you must install the primary paper feed unit while pushing the retard release lever of the lower side.
14. When the primary paper feed unit is replaced, perform maintenance mode U903 (clearing the jam counter) (see page 1-3-134).

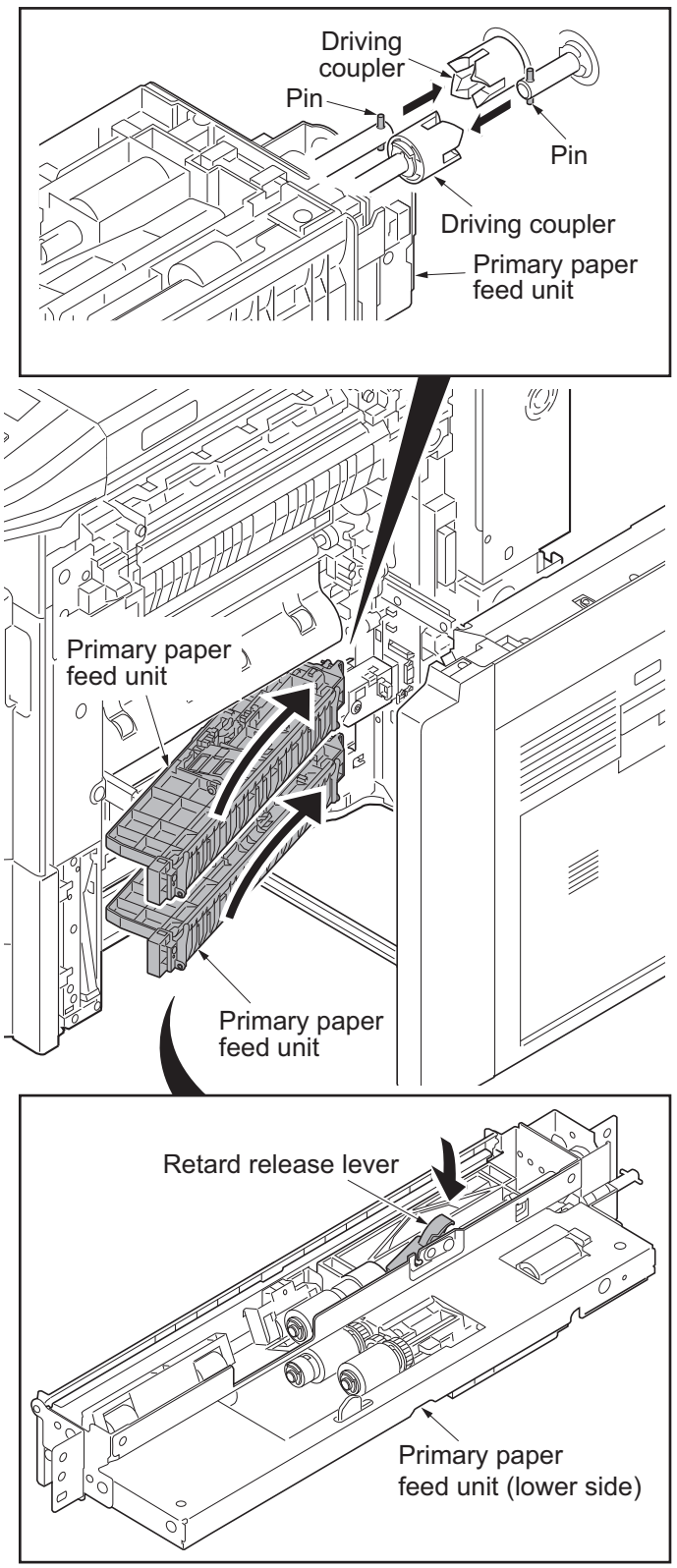


Figure 1-5-8

(2) Detaching and refitting the forwarding pulley, paper feed pulley and separation pulley.

Procedure

1. Remove the primary paper feed unit (see page 1-5-3).
2. Remove the stop ring A and then remove the one way clutch and the paper feed pulley.
3. Remove the stop ring B and then remove the forwarding pulley.

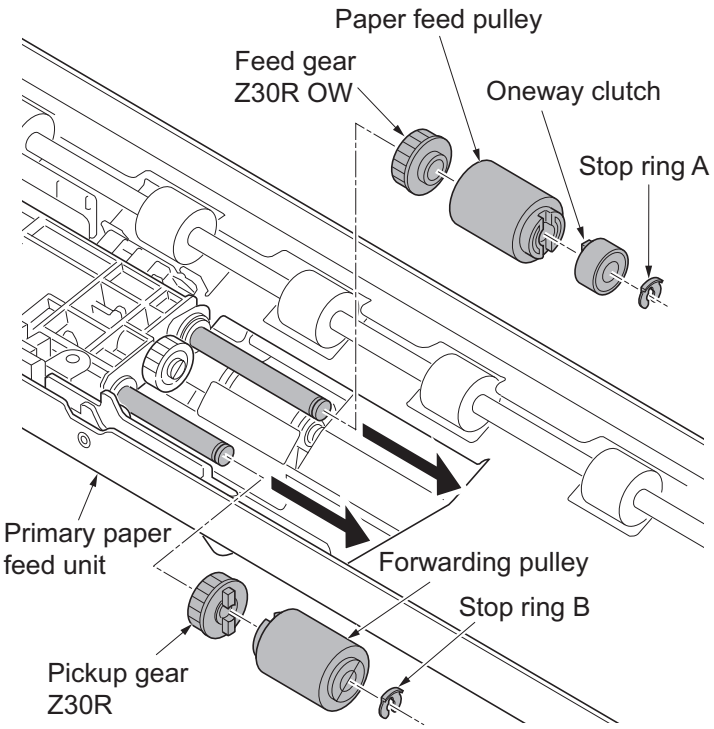


Figure 1-5-9

4. Remove the stop ring.
5. Remove the separation pulley while pushing the retard release lever.
6. Clean or replace the forwarding pulley, paper feed pulley and separation pulley.
7. Refit the forwarding pulley, paper feed pulley and separation pulley to the primary paper feed unit.
8. When the forwarding pulley, paper feed pulley or separation pulley is replaced, perform maintenance mode U903 (clearing the jam counter) (see page 1-3-134).

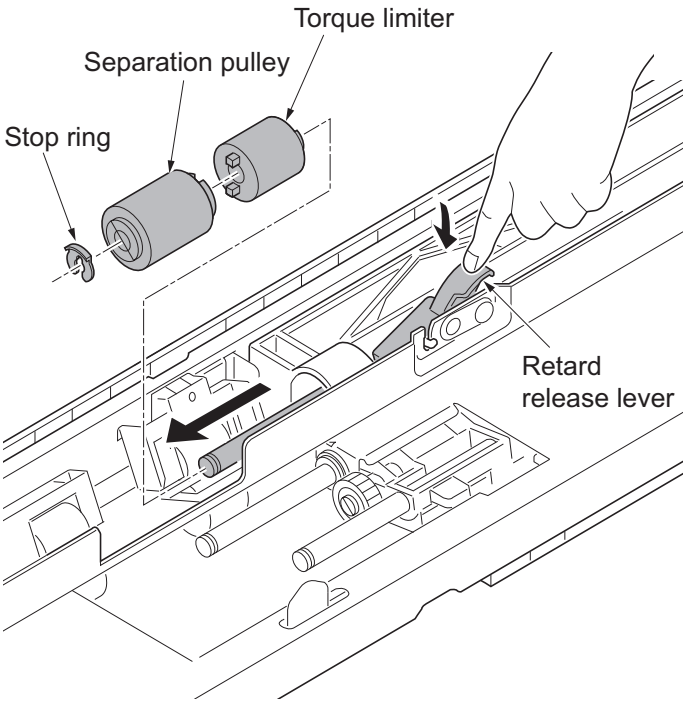


Figure 1-5-10

(3) Detaching and refitting the MP tray paper feed unit

Procedure

1. Pull the paper conveying unit out.
2. Remove screw.
3. Unhook two hooks and then remove the right cover.
4. Remove the right front cover. (see page 1-5-32)
5. Remove two screws and then remove the right middle cover.

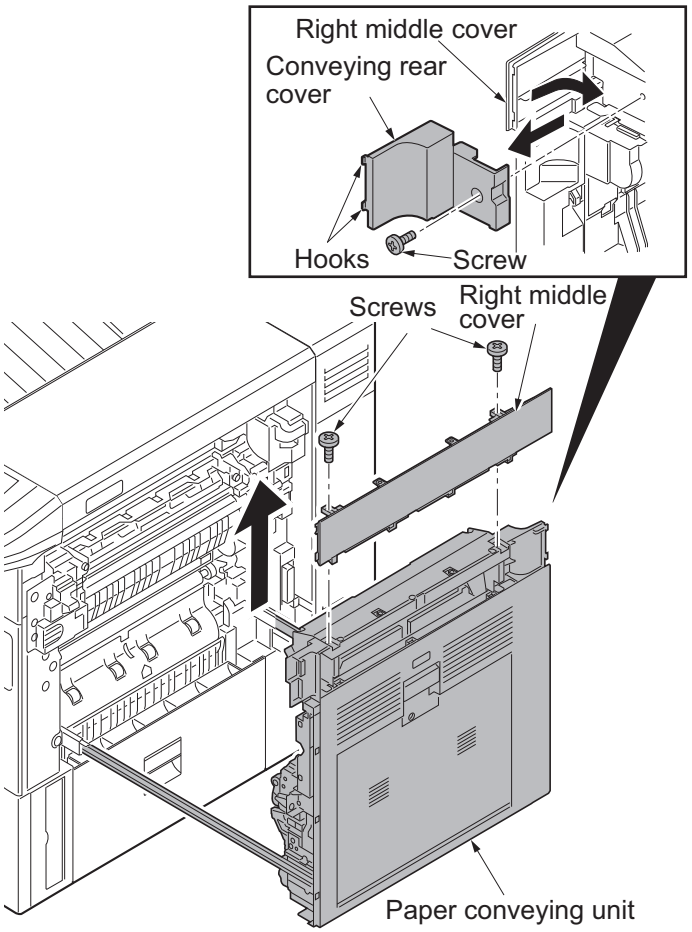


Figure 1-5-11

6. Open the MP tray.
7. Remove four screws.

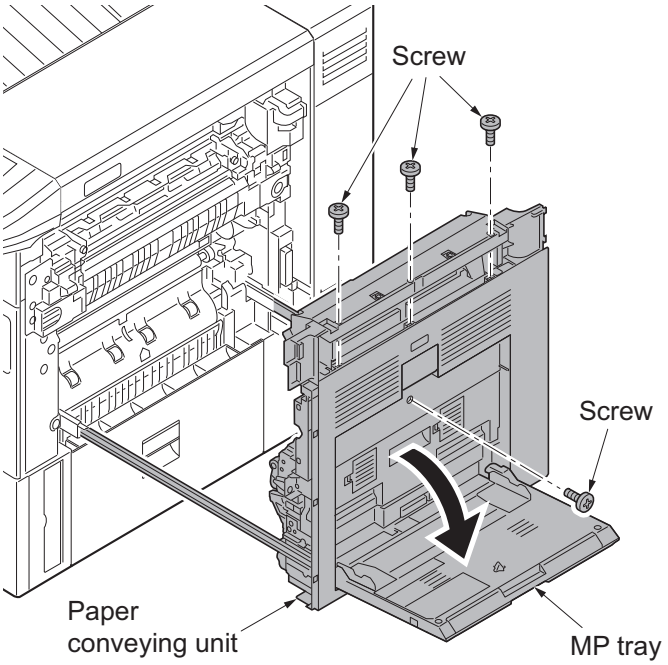


Figure 1-5-12

8. Unhook eight hooks and then remove the right cover and DU cover assembly.

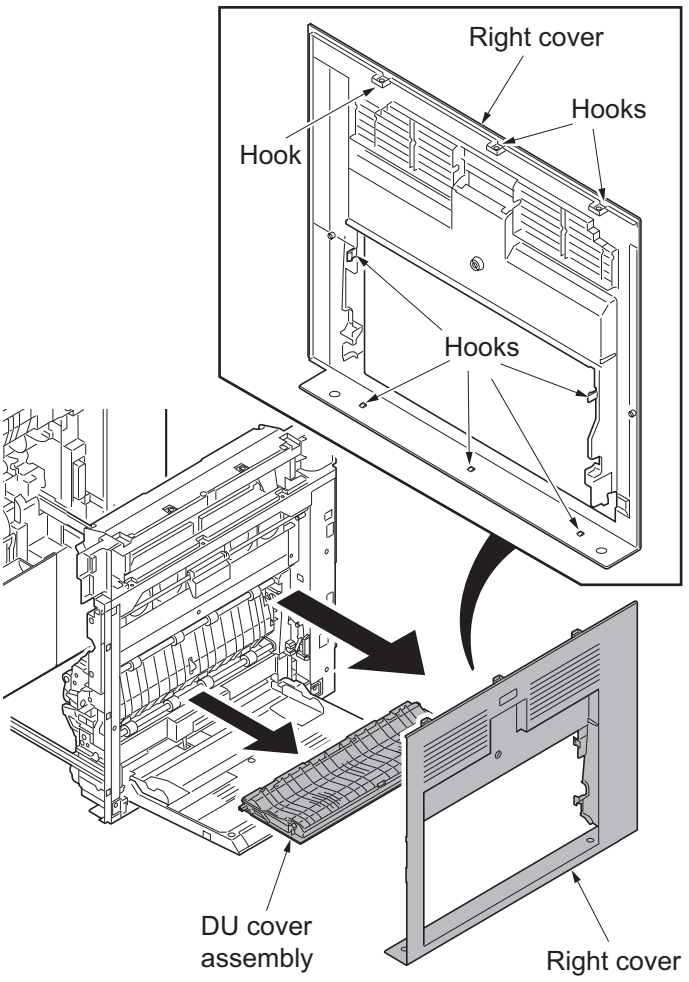


Figure 1-5-13

9. Remove two connectors.
10. Release the wire saddle.
11. Remove the wire saddle.
    *: To refit the wire saddle, be sure to fit in the positioning hole that was previously used.

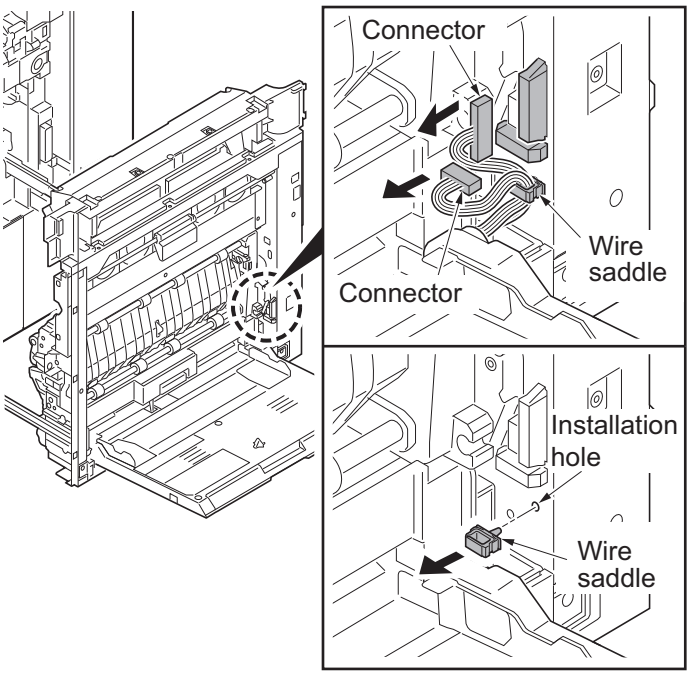


Figure 1-5-14

12. Remove the MP tray.
    *: When refitting the MP tray, insert it in the MP tray paper feed unit side by turning the lift arm.

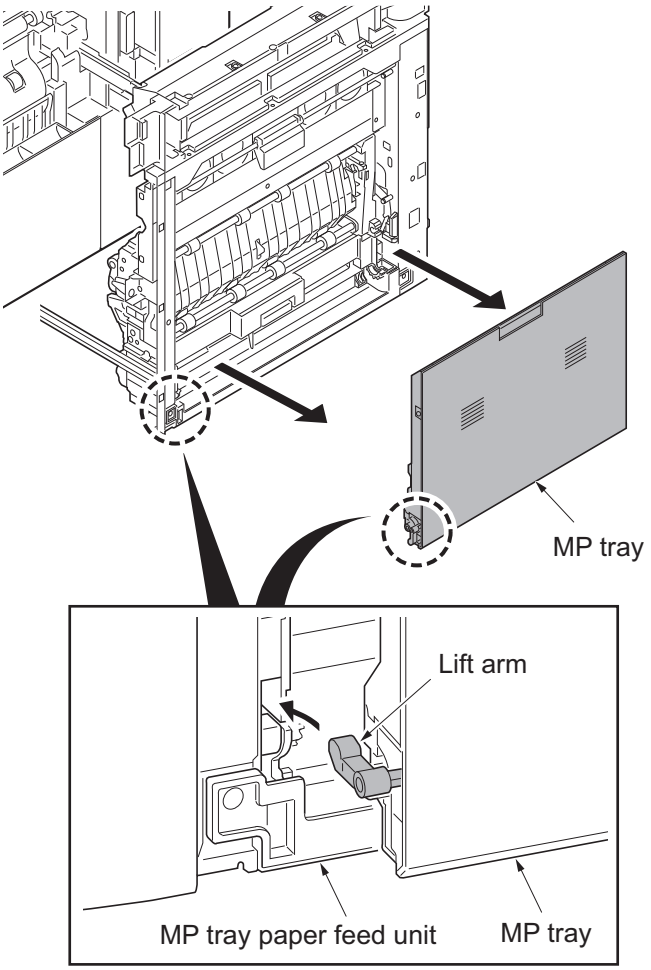


Figure 1-5-15

13. Remove two screws.
14. Remove the MP tray paper feed unit.

*: To reinstall the MP tray feed unit, align it with the opening in the front left bottom frame of the feed unit, install the MP tray feed unit, and raise it so that it is correctly seated.

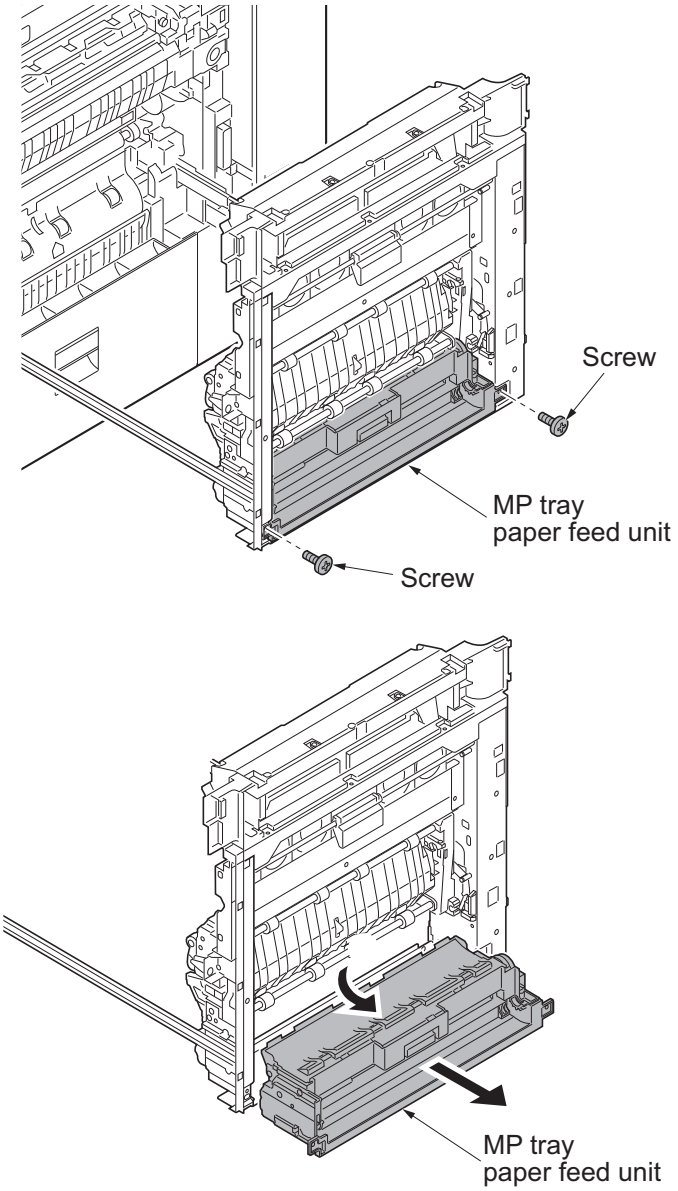


Figure 1-5-16

(4) Detaching and refitting the MP forwarding pulley, MP paper feed pulley and MP separation pulley

Procedure

1. Remove the MP tray paper feed unit (see page 1-5-8).

Detaching forwarding pulley and paper feed pulley

2. Unhook three hooks and then remove the Du lower guide.

*: Remove the DU lower guide easy by bending the top base that the hook is hooking because the hook of the DU lower guide lacks flexibility.

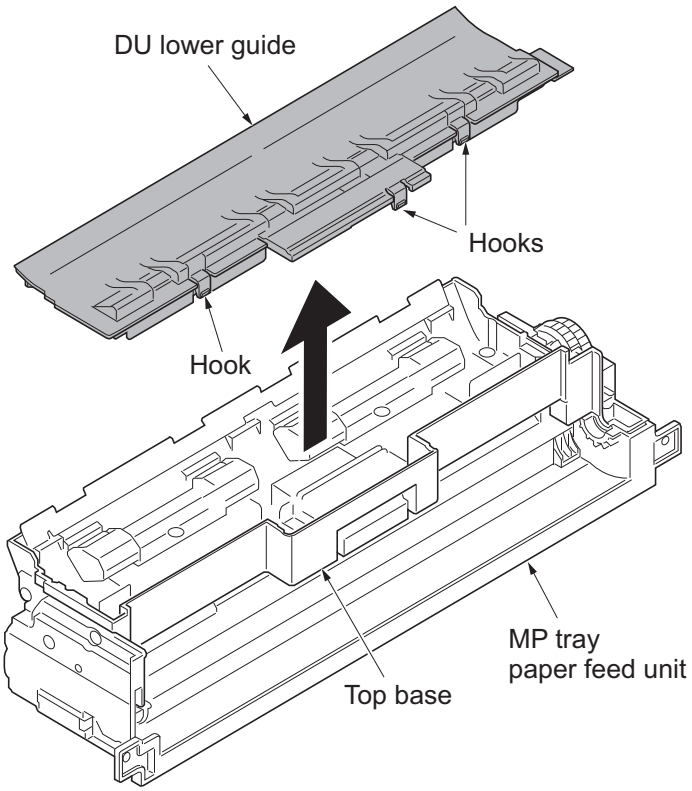


Figure 1-5-17

3. Remove the stop ring A and then slide the driving joint.
4. Slide the bush A.
5. Remove the stop ring B and then remove the bush B.

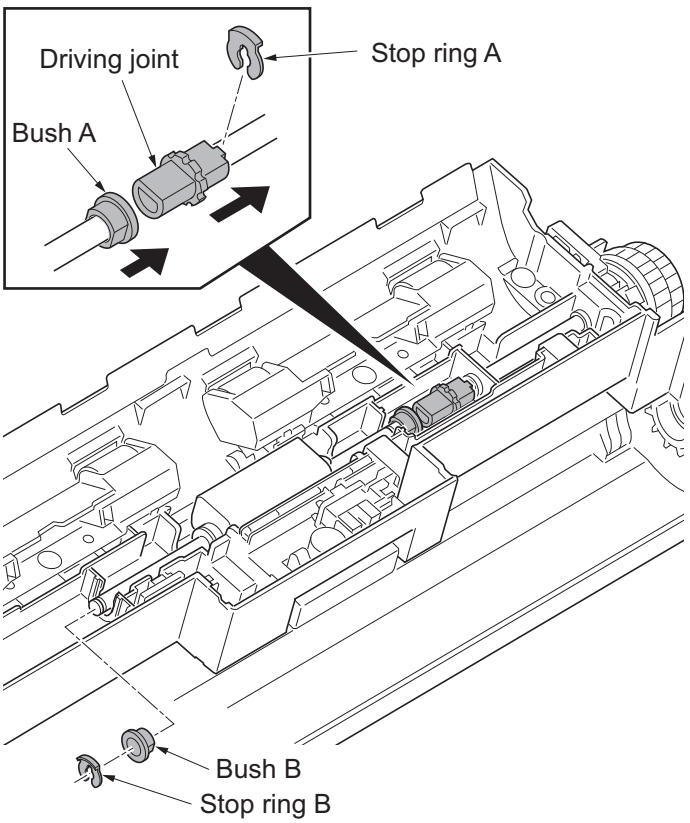


Figure 1-5-18

6. Unhook the hook of the feed holder assembly.
7. Remove the spring and the feed holder assembly from the top base.

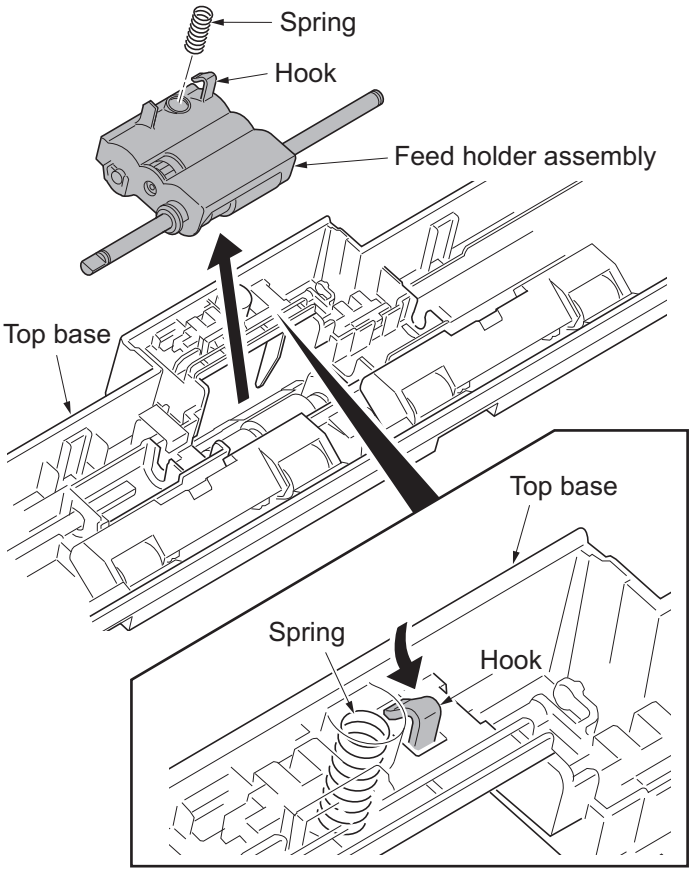


Figure 1-5-19

8. Remove two stop rings.
9. Pull the feed MPF shaft out.
10. Remove two bushes, one way gear Z30R and MP paper feed pulley.

*: To refit the one-way gear Z30R, mount the gear in the correct direction as shown.

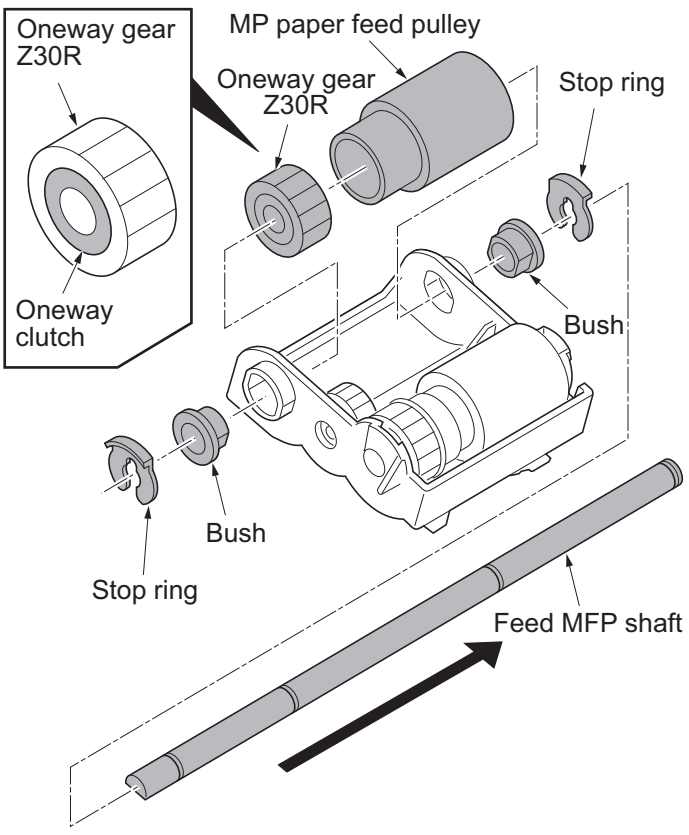


Figure 1-5-20

11. Remove the pickup MPF shaft from the axis holes of feed MPF holder.
12. Pull the pickup gear Z30R and MP forwarding pulley out from the pickup MFP shaft.

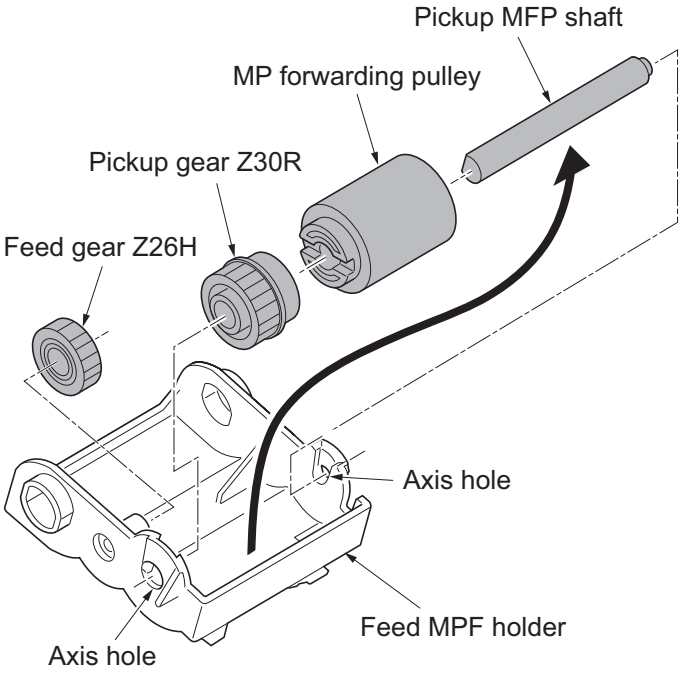


Figure 1-5-21

Detaching the MP separation pulley

13. Unhook two hooks and then remove the middle guide.

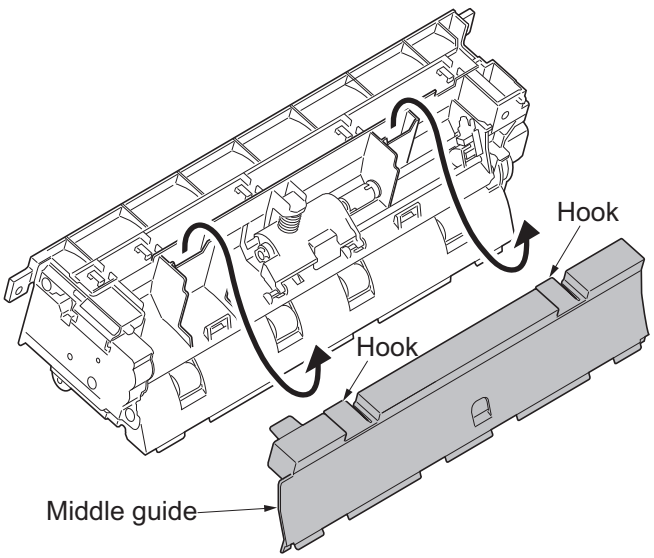


Figure 1-5-22

14. Remove the spring.
15. Release the uniting of joint by sliding the retard holder assembly.

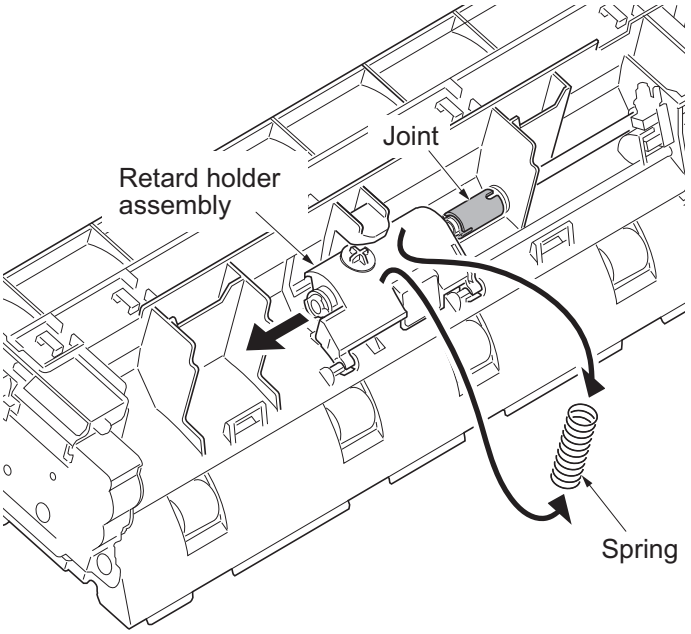


Figure 1-5-23

16. Remove the retard holder assembly by turning it as shown.

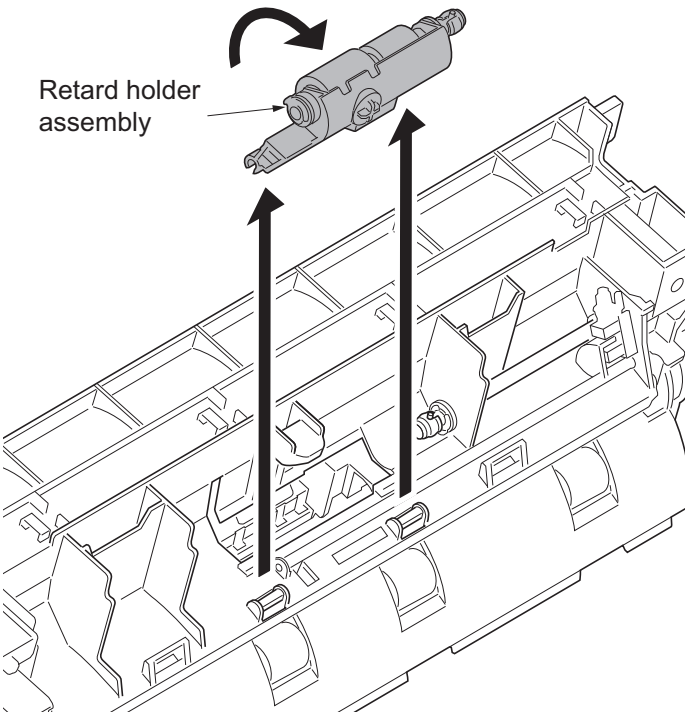


Figure 1-5-24

17. Remove two stop rings.
18. Remove two bushes.
19. Pull the retard MPF shaft out and then remove the torque limiter and the MP separation pulley.
20. Clean or replace the MP forwarding pulley, MP paper feed pulley and MP separation pulley.
21. Refit the MP forwarding pulley, MP paper feed pulley and MP separation pulley to the MP tray paper feed unit.
22. When the MP forwarding pulley, MP paper feed pulley or MP separation pulley is replaced, perform maintenance mode U903 (clearing the jam counter) (see page 1-3-134).

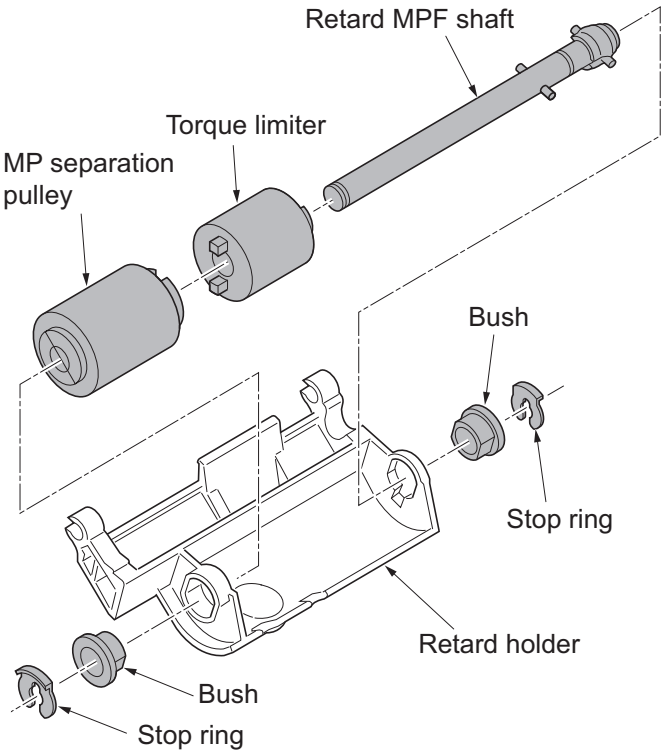


Figure 1-5-25

1-5-3 Optical section

(1) Detaching and refitting the LSU

Procedure

1. Remove the paper conveying unit (see page 1-5-32).
2. Remove the left upper cover (see page 1-5-44).
3. Remove the toner filter.
4. Remove the left filter cover and the left filter.
5. Remove two transfer belt filters.
6. Remove the left cover lid.
7. Open the front cover and remove screw A.
8. Remove four screws B and then remove the left cover.

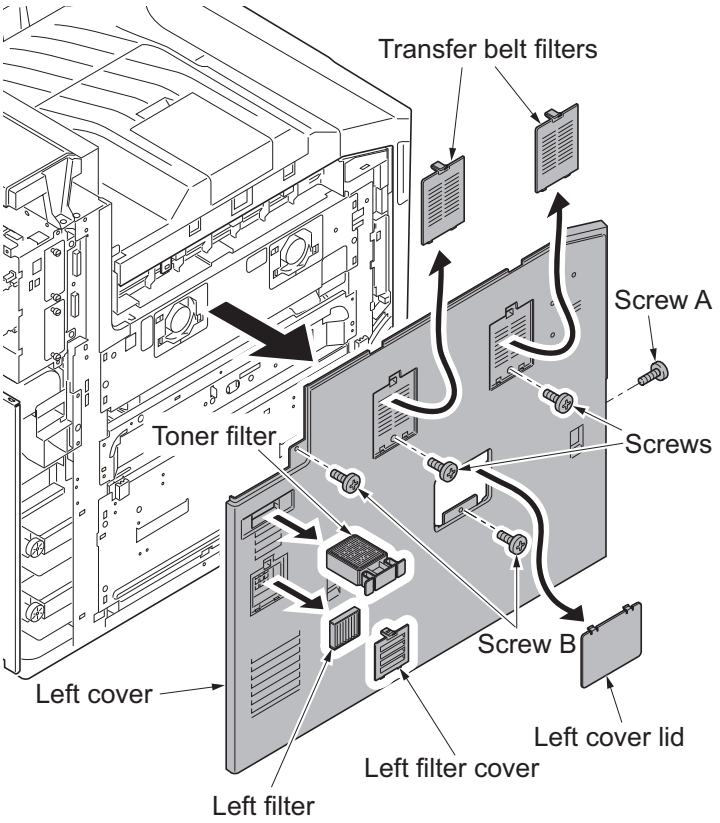


Figure 1-5-26

9. Remove four screws and then remove the LSU retainer.

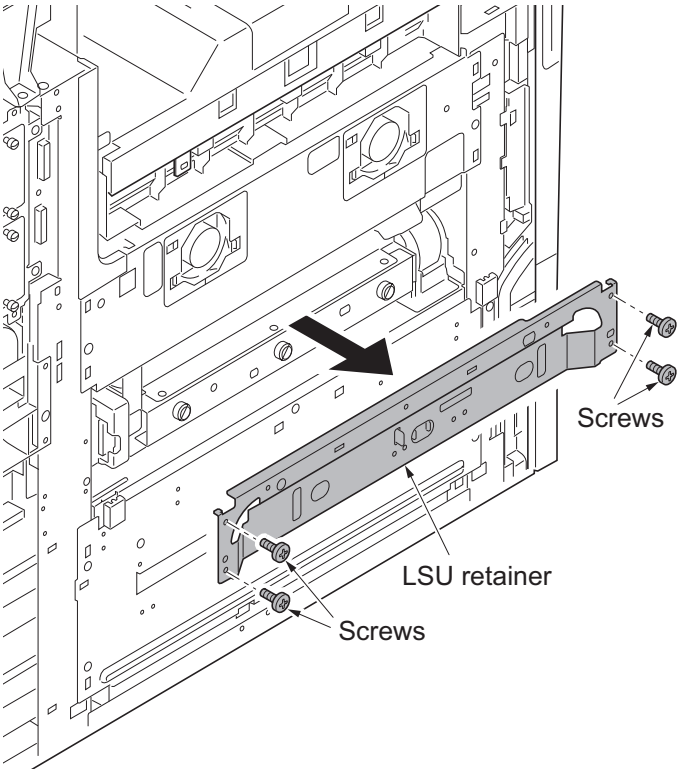


Figure 1-5-27

10. Remove two screws and then remove the middle feed plate and middle feed plate B.
11. Remove two LSU retainer pins and two springs.

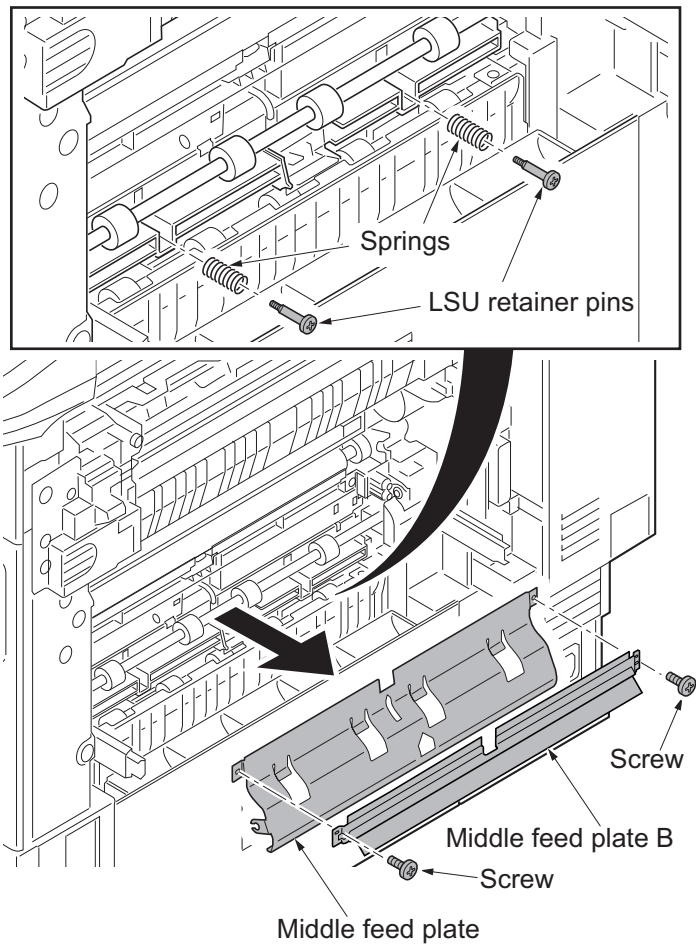


Figure 1-5-28

12. Pull the LSU out a little.
13. Remove the following connector from the LSU.
    30 ppm model/35 ppm model:
    FFC connector with a lock: 1pcs
    Connector: 2pcs

    45 ppm model/55 ppm model:
    FFC connector with a lock: 2pcs
    Connector: 2pcs

    *: When remove the FFC from the FFC connector with a lock, removing it after release the lock by lifting the lock lever up.

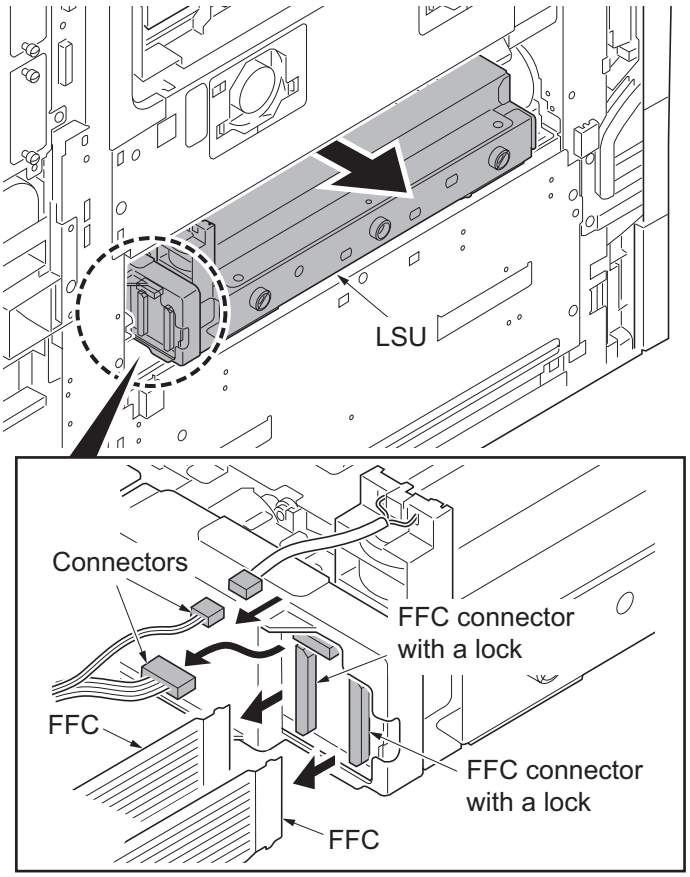


Figure 1-5-29

14. Pull the LSU out from the body of the machine.

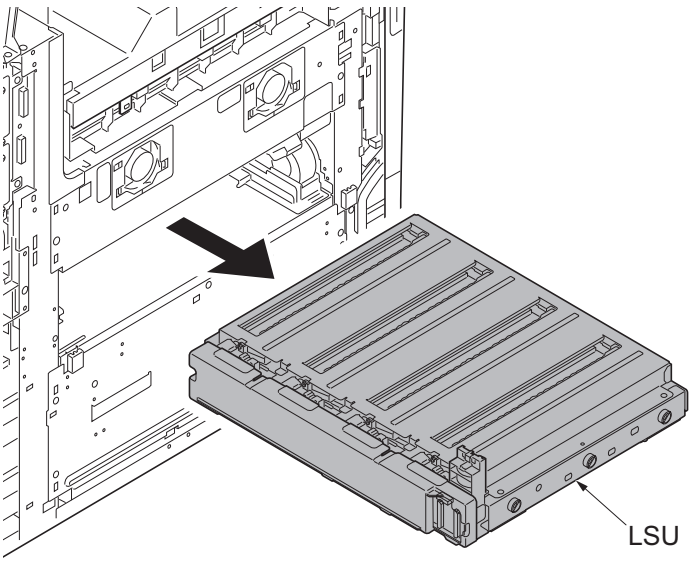


Figure 1-5-30

15. Remove seven screws and then remove the LSU mount lid.

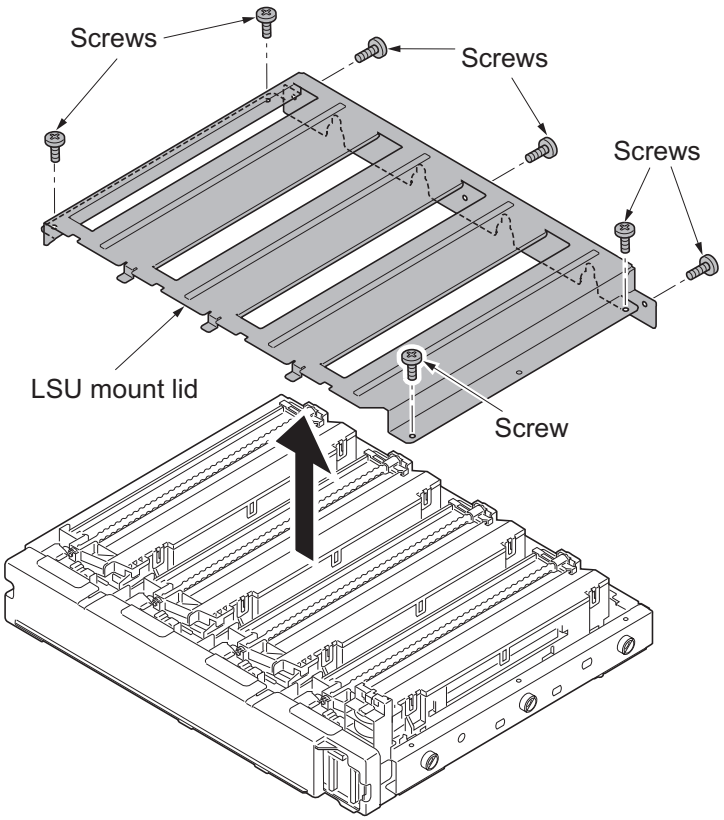


Figure 1-5-31

16. Remove the screw.
17. Unhook four hooks and then remove the LSU relay PWB cover.

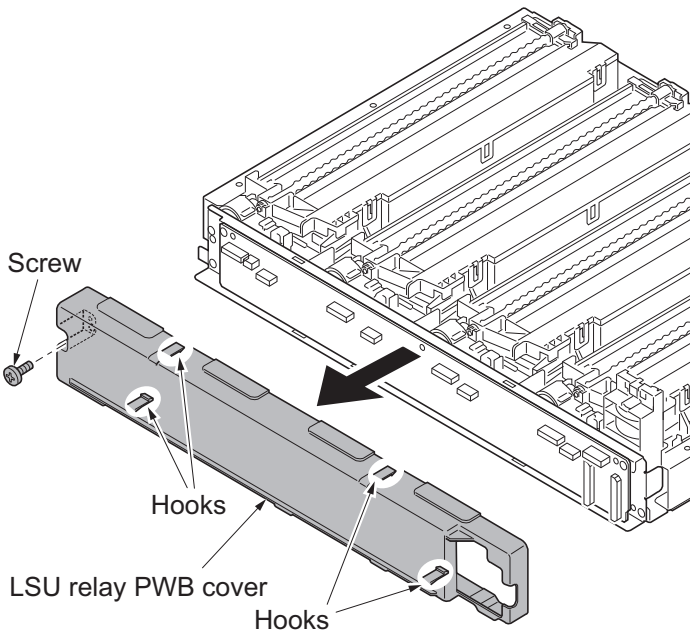


Figure 1-5-32

18. Remove all the connectors and the FFC connectors with a lock.
    *: When remove the FFC from the FFC connector with a lock, removing it after release the lock by lifting the lock lever up.
19. Remove the electric wire from the electric wire support portion.
20. Remove the FFC from the FFC support potion.

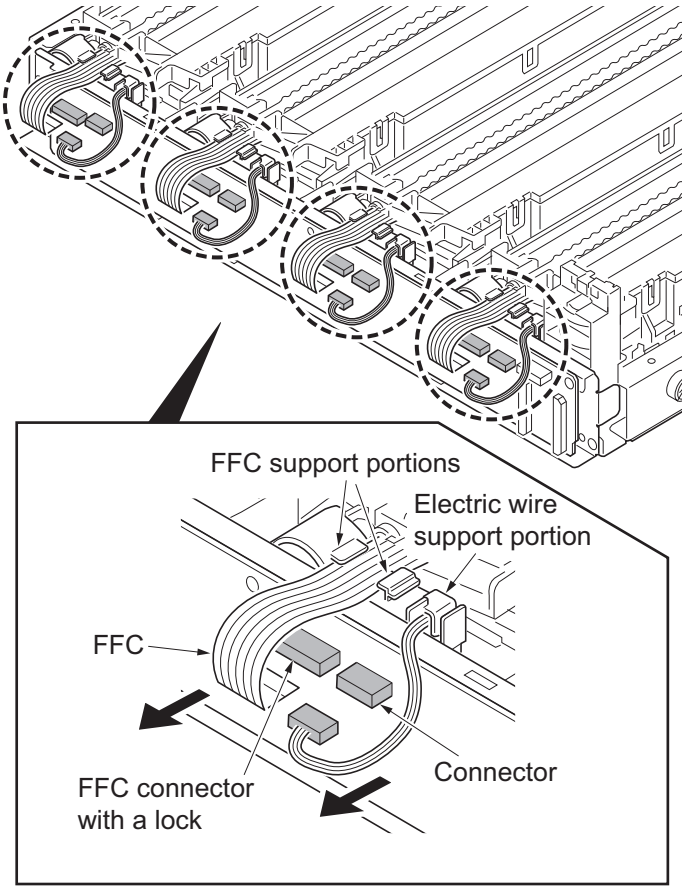


Figure 1-5-33

21. Remove the LSU retainer pins and the springs.
22. Remove two screws each and then remove the LSU front holder.

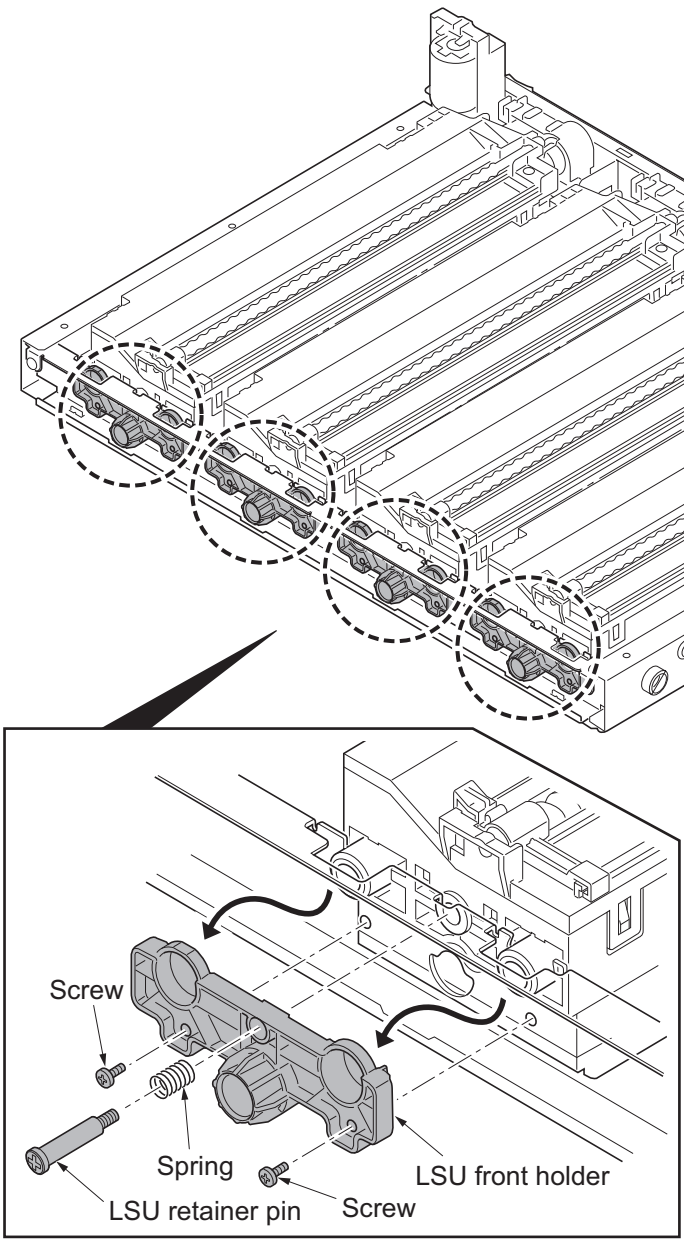


Figure 1-5-34

23. Wrap an antistatic discharging belt around your wrist to prevent damage to the LSU.
    *: Do not touch terminals and FFC contacts in the APC PWB of the LSU.
24. Remove four LSUs, following the precautions and instructions below.
    (1) Lift the far end of the LSU.
    (2) Unhook the protrusions at the front of the LSU.
    *: Be sure to handle the front and rear handholds when handling the LSU.
    *: Do not get the LSU in direct contact with the holding frame subsequently applying shocks to the polygon motor inside.

25. Check or replace the LSU and refit all the removed parts.
    *: When reconnecting FFCs, be sure to insert the FFC all the way in with the FFC connector.This is to avoid a lengthy servicing due to a possible error which could cause re-disassembly and -assembly.

26. When replacing the new LSU, proceed as follows:
    1)Performs maintenance mode U469 (Color registration correction) (see page 1-3-126).
    2)Performs maintenance mode U119 (Setting the drum) (see page 1-3-65).
    3)Performs maintenance mode U464 (Calibration) (see page 1-3-118).

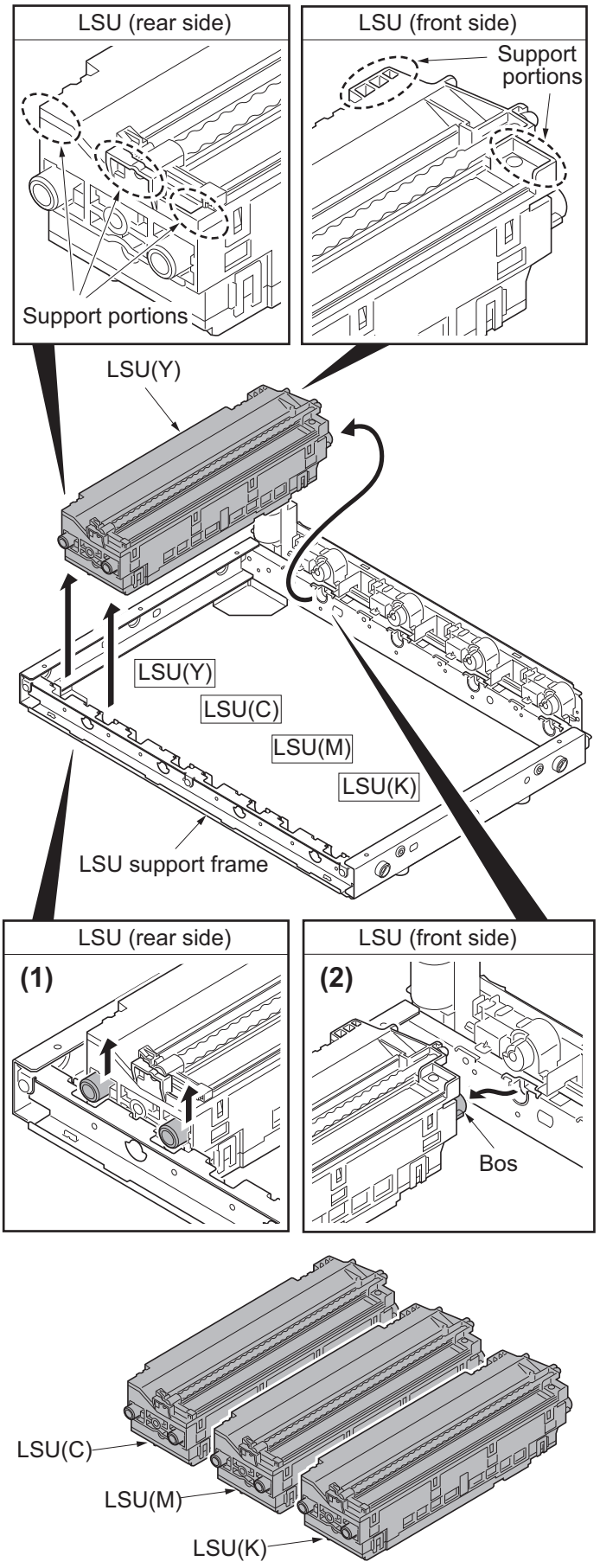


Figure 1-5-35

(2) Color registration adjustment

Follow the procedure below to replace the laser scanner unit.

Procedure

1. Press the menu key.
2. Performs maintenance mode U464 (Calibration) (see page 1-3-118).
3. Select [Adjustment/Maintenance], [Color Registration], [Detail], [Chart printing] and then press the OK key. In the confirmation screen, press [Yes] ([Left select key]). A chart is printed.
4. Select [Adjustment/Maintenance], [Color Registration], [Detail], [Magenta registration] and then press the OK key.
5. Read figures at H-1 to 7 and V-3 of the reference chart and enter the figure marked at the scale which the BK fine line is in line with the magenta fine lines, using the up/down keys.
6. Press OK key. A preset value is saved.
7. Select [Cyan registration] or [Yellow registration] and then repeat steps 3 through 5.

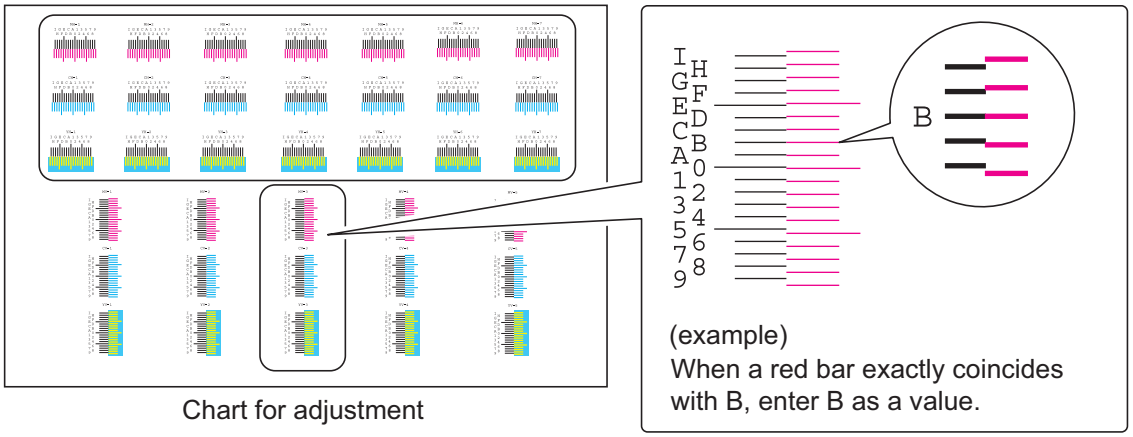


Figure 1-5-36

8. Output the chart by Procedure 2 again.
9. Verify that each scale is within the range of 1to A. If they are within the range, proceed to step 9.
   If scales are out of range, repeat steps 3 through 6.

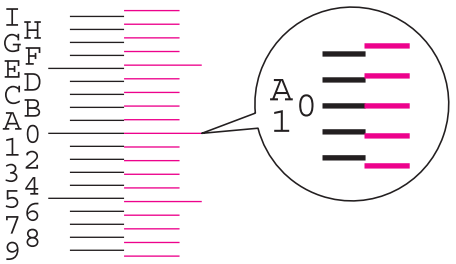


Figure 1-5-37

10. Verify that scales of MV-1,2,4,5/CV-1,2,4,5/YV-1,2,4,5 coincide within the range of 1 to A.
    If they are within the range, adjustment is complete.
    If they are out of range, proceed to step 10.

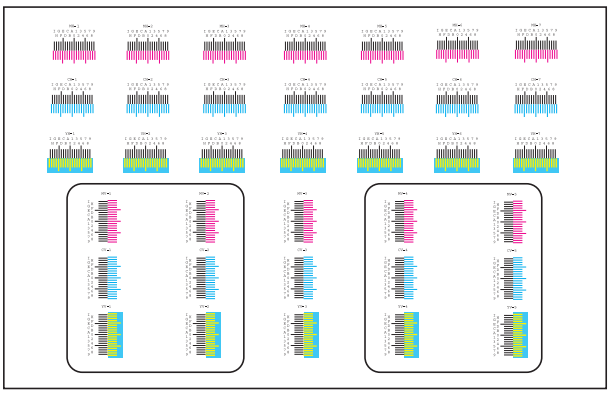


Chart for adjustment

Figure 1-5-38

If manual color registration has failed:

11. If the balance between V-1 and V-5 is more than 2 scales (sample 1) or less than -2 scales (sample 2), perform the following steps:

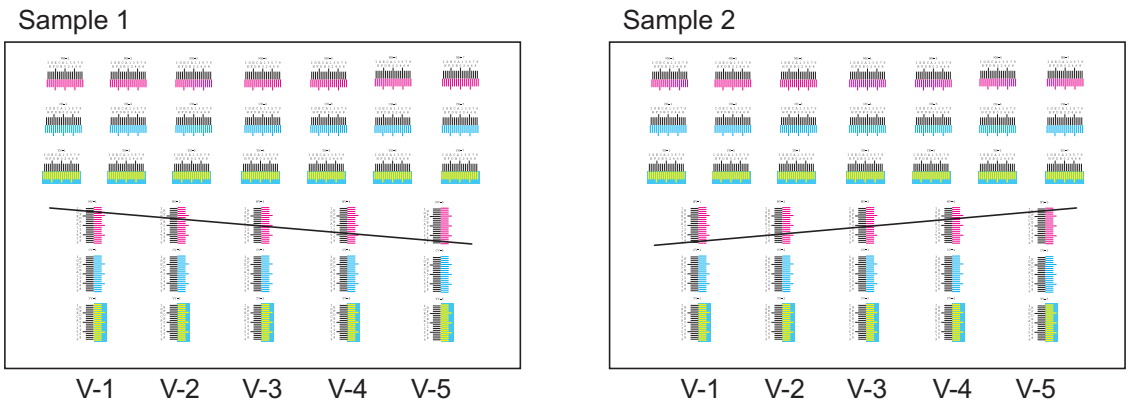


Figure 1-5-39

12. Open the front cover and then pull out the waste toner box tray (see page 1-5-27).
13. Rotate the adjustment knob using a 5 mm hex wrench.
    Direction of rotation
    (V-1 - V-5) >= 2 scales (sample 1): rotate counterclockwise.
    (V-1 - V-5) <= -2 scales (sample 2): rotate clockwise.
    Number of rotation
    (V-1- V-5) x 4 clicks
14. Refit the waste toner box tray as before and then close the front cover.
15. Perform shut-down on the operation panel, turn power off (see page p.1-2-19).
    Correction automatically starts.
16. Print a reference chart and verify the result.

Caution
After the adjustment for the abgle of the mirror has been made, run the maintenance mode U464 (Calibration). (see page 1-3-118)

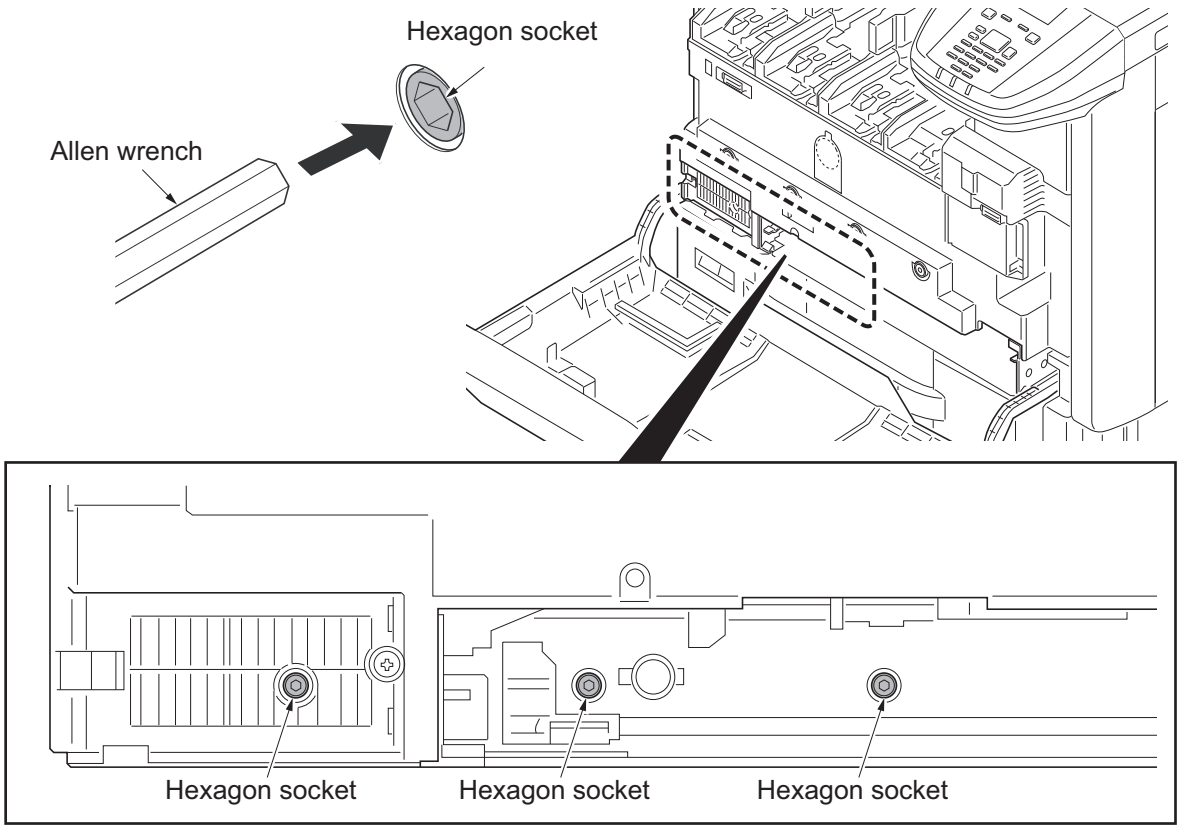


Figure 1-5-40

1-5-4 Image formation section

(1) Detaching and refitting the inner unit

Procedure

1. Open the front cover.
2. Remove all toner container each.
3. Remove the waste toner box tray by lifting upwards and from the right side.

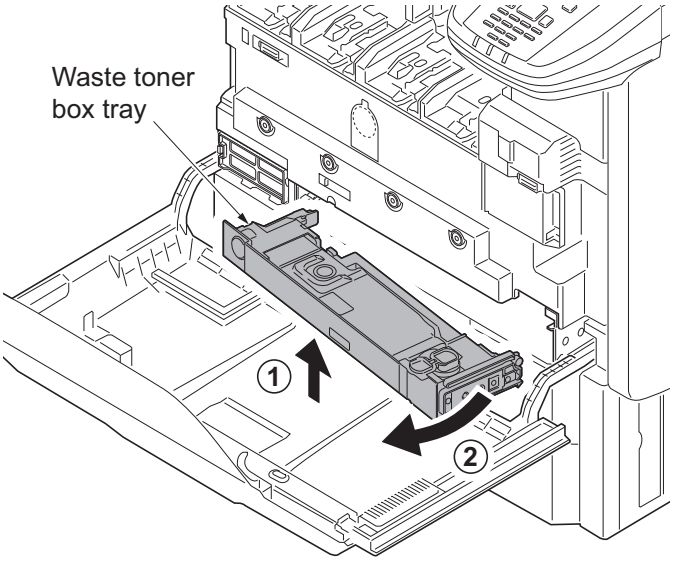


Figure 1-5-41

4. Remove the screw and then open the connector cover.
5. Remove the connector.
6. Remove three fixed screws of inner unit.
7. Turn the bandage sheet over and remove the fixed screw B.

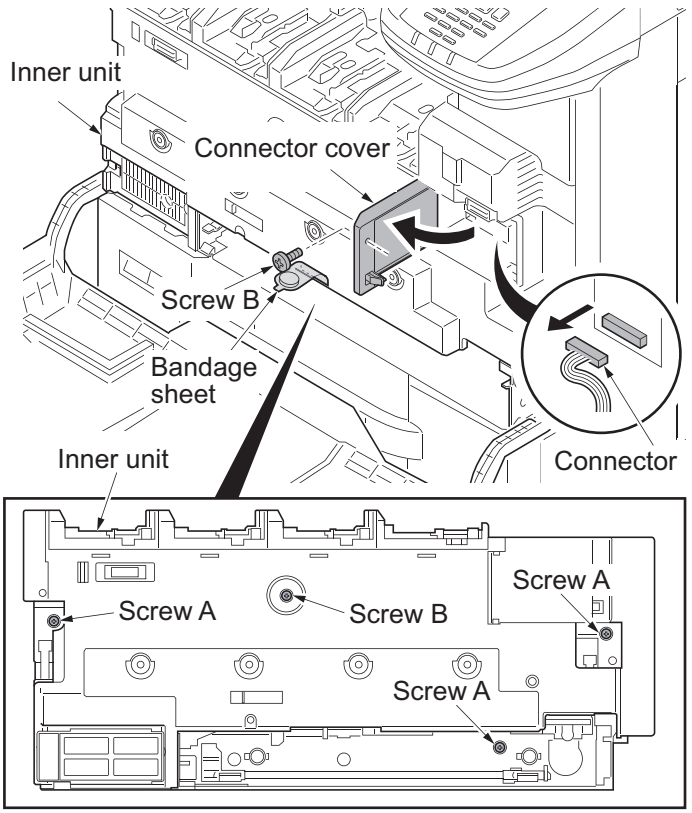


Figure 1-5-42

8. Release the lock by pushing the fixed levers at the right and left of inner unit.
9. Remove the inner unit.

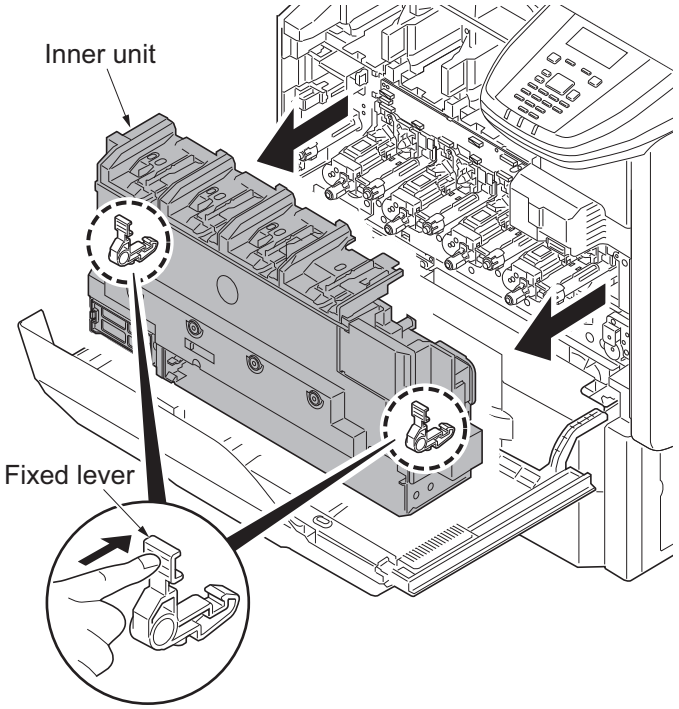


Figure 1-5-43

(2) Detaching and refitting the developer unit and drum unit

Detaching example: Developer unit Y and Drum unit Y

Procedure

1. Remove the fuser unit (see page 1-5-40).
2. Pull the transfer belt unit out a little (see page 1-5-34).
3. Remove the inner unit (see page 1-5-27).
4. Close the toner supply shutter.
5. Remove two connectors.

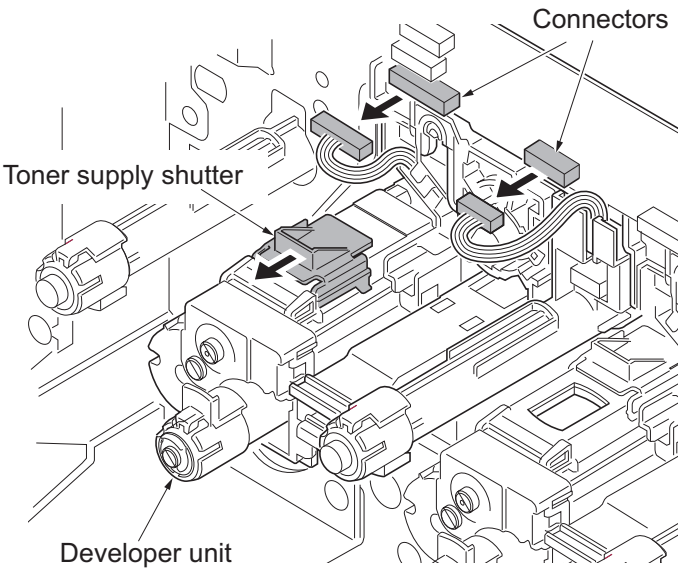


Figure 1-5-44

6. Pull out as one body the developer unit and the drum unit.
   (The developer unit becomes basic and the drum units are combined.)
7. Detach the developer unit while supporting bottom.

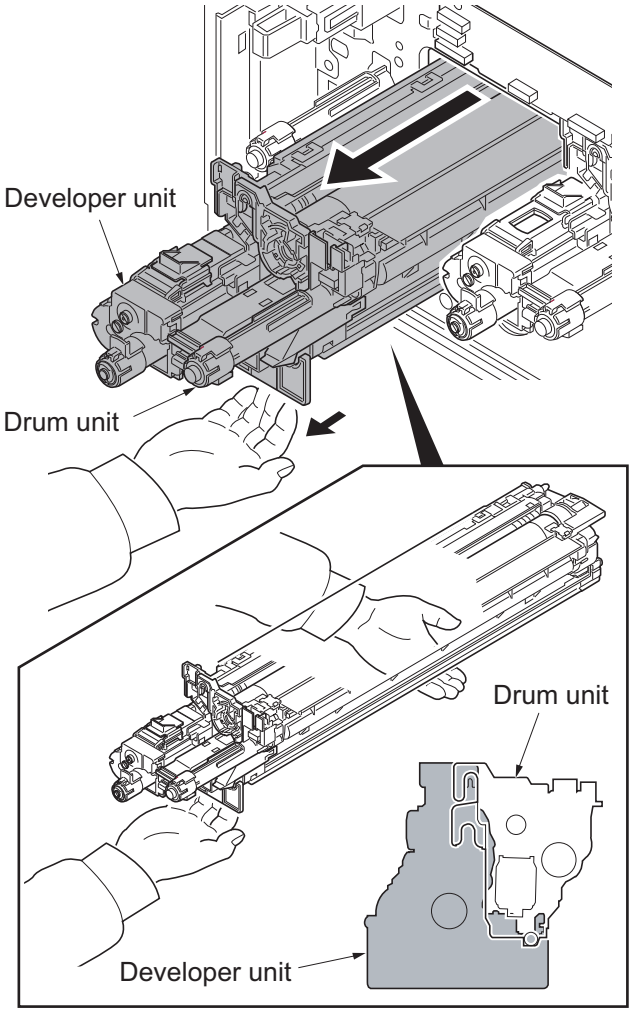


Figure 1-5-45

8. Remove the drum unit from the developer unit.
9. Check or replace the drum unit and the developer unit and refit all the removed parts.

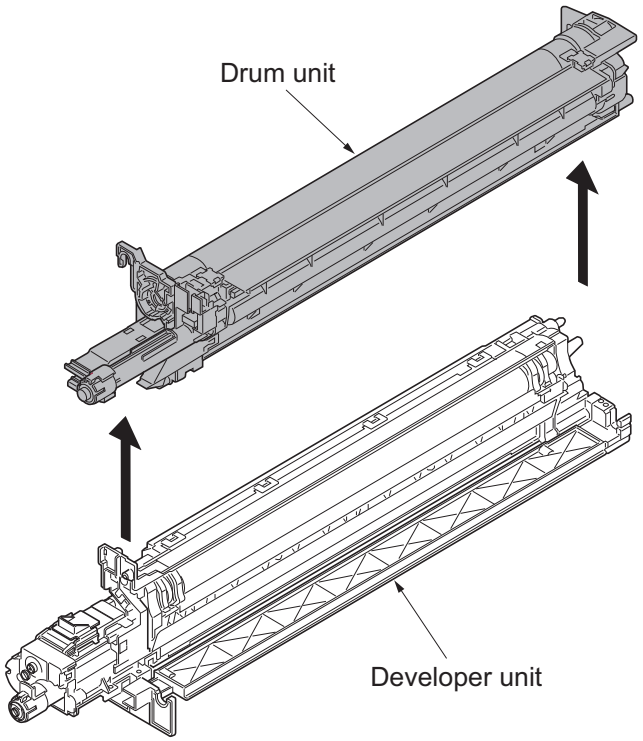


Figure 1-5-46

10. When replacing the new developer unit, proceed as follows:
    1) Performs maintenance mode U140 (AC calibration) (see page 1-3-73).
    2)Performs maintenance mode U464 (Calibration) (see page 1-3-118).
    3)Performs maintenance mode U469 (Auto color registration correction) (see page 1-3-126).

11. When replacing the new drum unit, proceed as follows:
    1) Performs maintenance mode U119 (drum setup) (see page 1-3-65).
    2) Performs maintenance mode U930 (checking/clearing the charger roller count) and checking the counter value (see page 1-3-145).
    3) Performs maintenance mode U140 (AC calibration) (see page 1-3-73).
    4)Performs maintenance mode U464 (Calibration) (see page 1-3-118).
    5)Performs maintenance mode U469 (Auto color registration correction) (see page 1-3-126).
    6)Performs maintenance mode U464 (Calibration) (see page 1-3-118).

(3) Detaching and refitting the charger roller unit

Detaching example: Charger roller unit Y

Procedure

1. Remove the inner unit (see page 1-5-27).
2. Pull out the charger roller unit by picking and releasing the MC lock lever.
3. Check or replace the charger roller unit and refit all the removed parts.

*: When refitting the charger roller unit, that must hook the hook certain by operating the MC lock lever after inserting the charger roller unit until bumping.

4. When replacing the new charger roller unit, proceed as follows:
   Performs maintenance mode U930 (clearing the charger roller count) (see page 1-3-145).

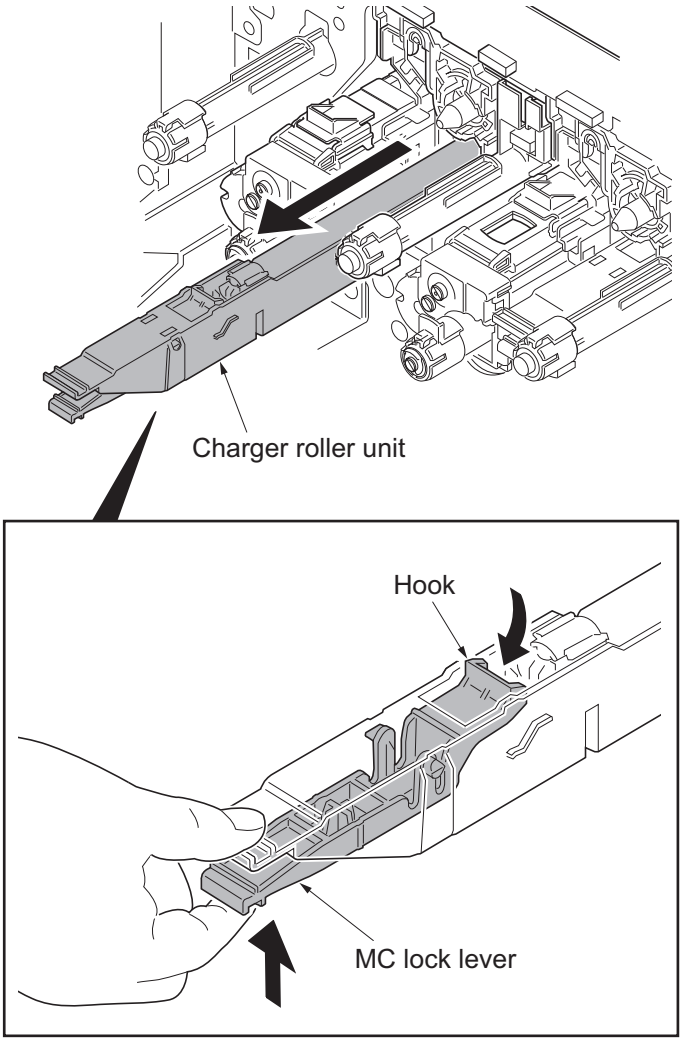


Figure 1-5-47

1-5-5 Transfer section

(1) Detaching and refitting the paper conveying unit

Procedure

1. Pull the paper conveying unit out.
2. Remove four screws.
3. Unhook three hooks and then remove the right front cover.

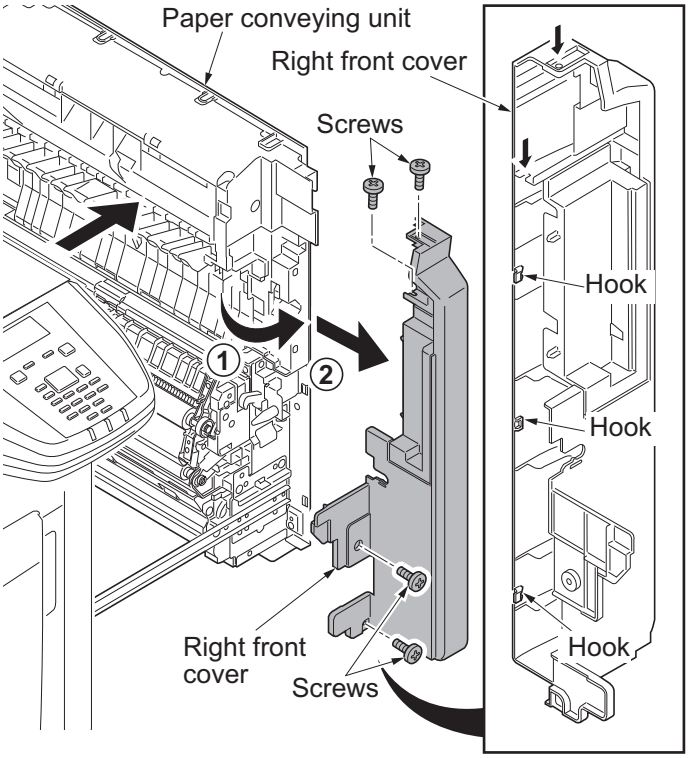


Figure 1-5-48

4. Unhook two hooks and then remove the conveying inner cover from the paper conveying unit.

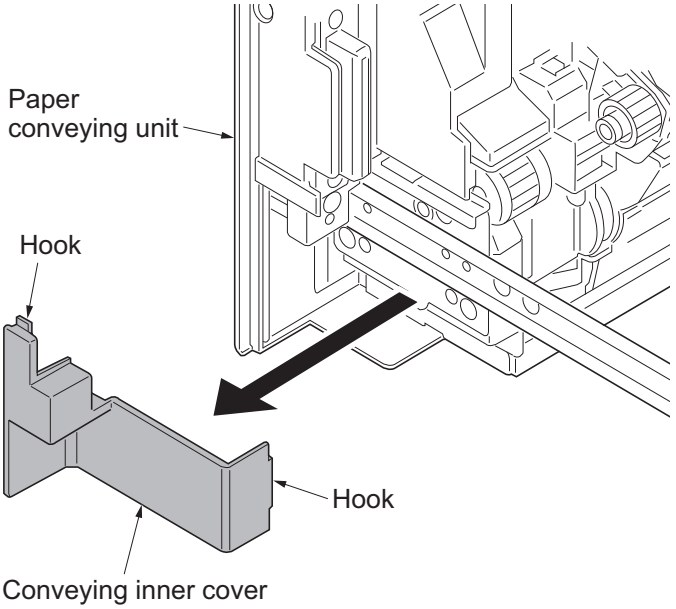


Figure 1-5-49

5. Remove four screws.
6. Remove the paper conveying unit by lifting upward.

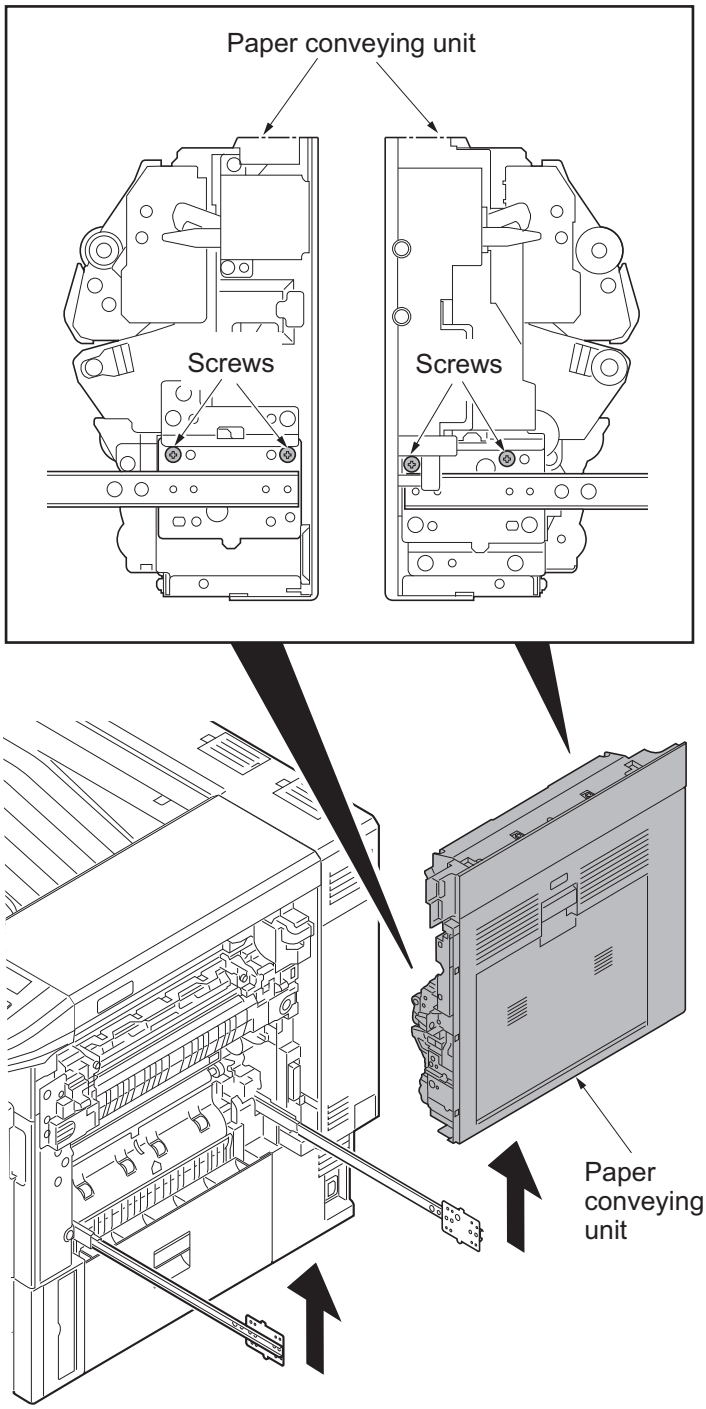


Figure 1-5-50

(2) Detaching and refitting the transfer belt unit

Procedure

1. Remove the paper conveying unit (see page 1-5-32).
2. Remove the fuser unit (see page 1-5-40).
3. Remove the connector.

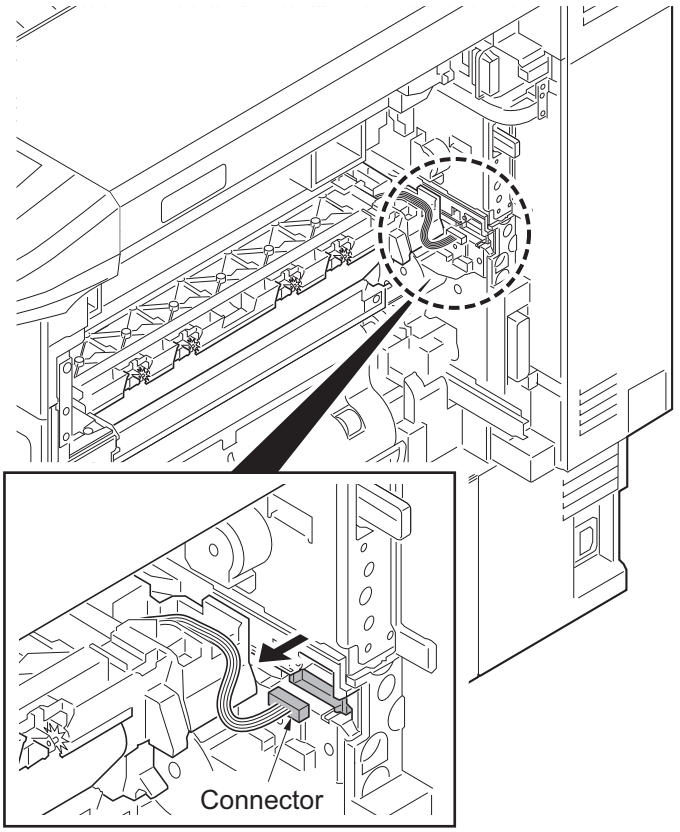


Figure 1-5-51

4. Pull out the transfer belt unit by lifting up both ends.

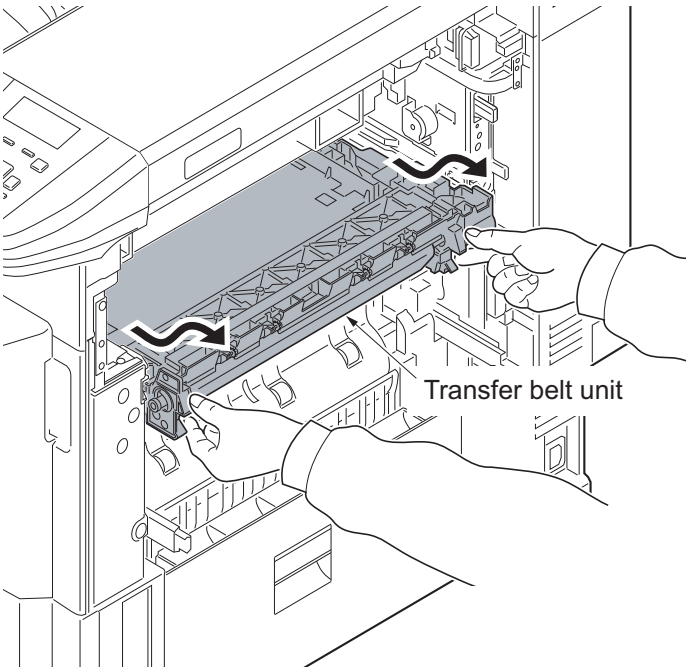


Figure 1-5-52

5. Remove the transfer belt unit.
6. Check or replace the transfer belt unit and refit all the removed parts.

*: When refitting the new transfer belt unit, set the projected part aligned with the rail entrance.

7. When replacing the new transfer belt unit, proceed as follows:
   1) Performs maintenance mode U469 (Transfer belt speed correction) (see page 1-3-126).
   2)Performs maintenance mode U464 (Calibration) (see page 1-3-118).
   3)Performs maintenance mode U469 (Auto color registration correction) (see page 1-3-126).

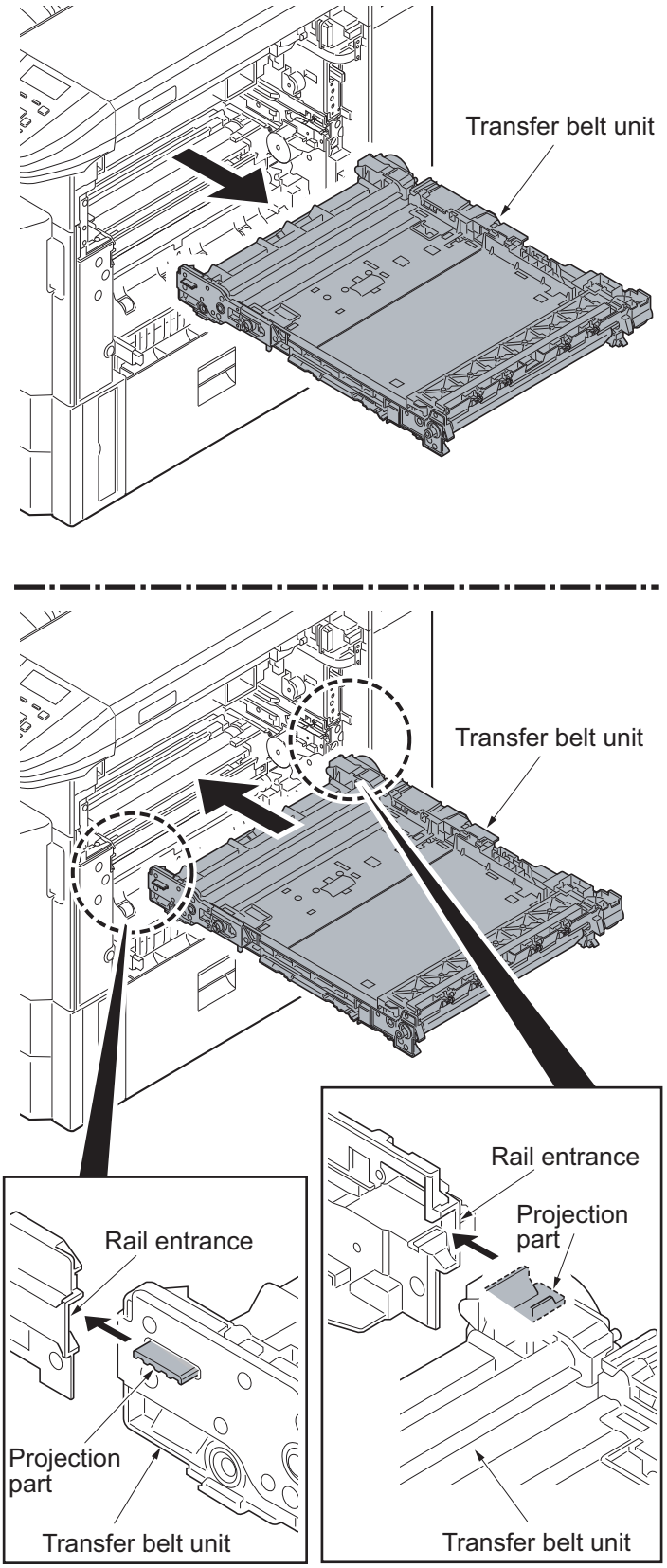


Figure 1-5-53

(3) Detaching and refitting the cleaning pre brush

Procedure

1. Remove the transfer belt unit (see page 1-5-34).
2. Unhook the front and back springs from the hooks.

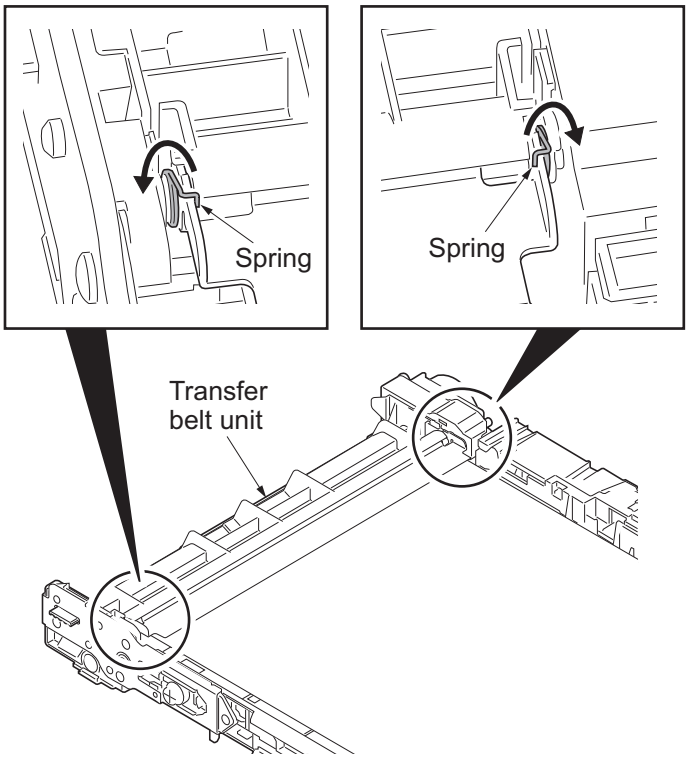


Figure 1-5-54

3. Unhook two hooks and then remove the cleaning cover.

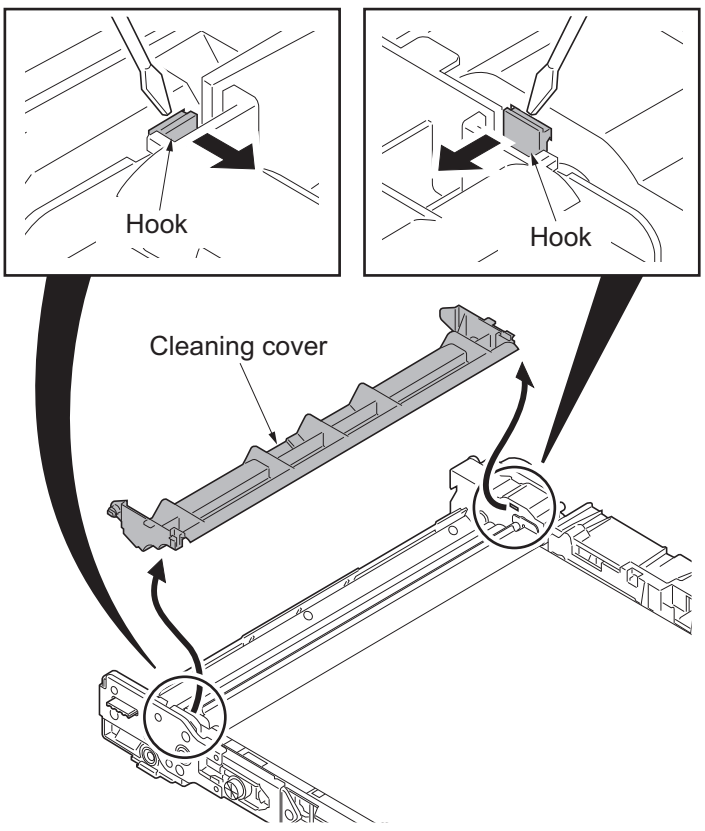


Figure 1-5-55

4. Remove the cleaning pre brush by turning it as shown.
5. Check or replace the cleaning pre brush and refit all the removed parts.

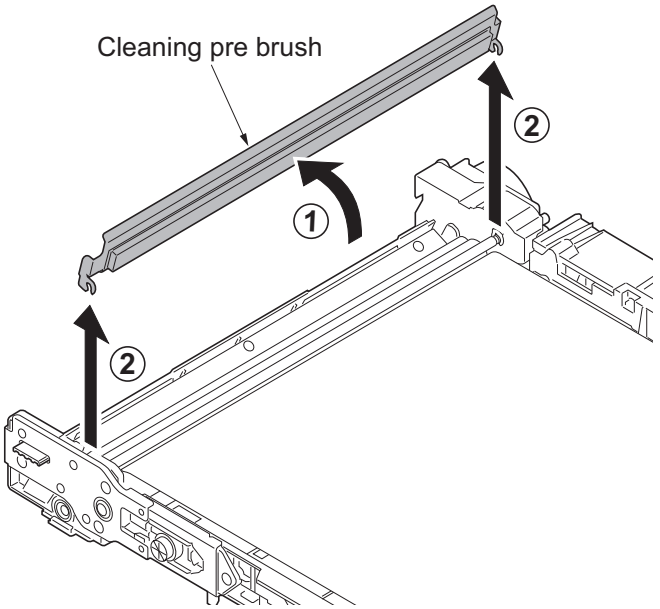


Figure 1-5-56

*: Hook the springs back in place onto the cleaning pre brush when installing.

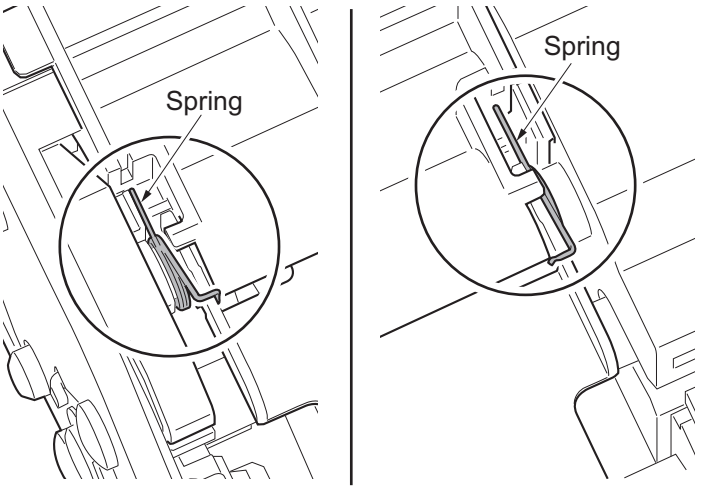


Figure 1-5-57

(4) Detaching and refitting the transfer roller

Procedure

1. Pull out the paper conveying unit.

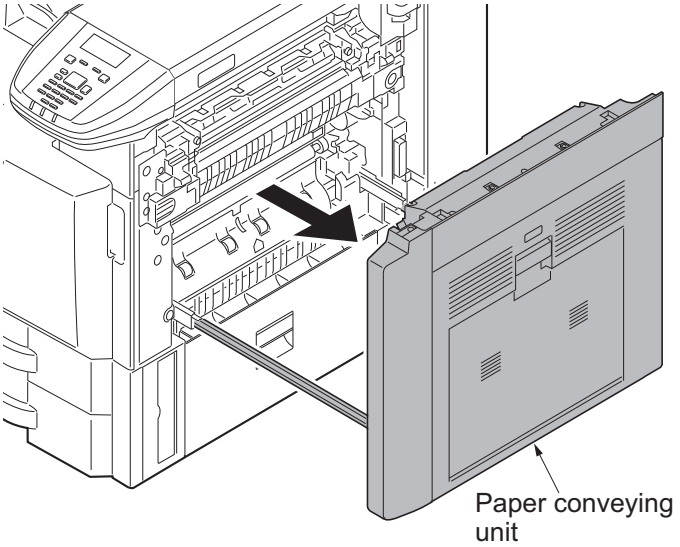


Figure 1-5-58

2. Loosen two fixed screws on the TC guide.
3. Remove the stop ring.
4. Unhook the hook and remove the TC gear Z29R.
5. Remove two bearings.
6. Remove the transfer roller.

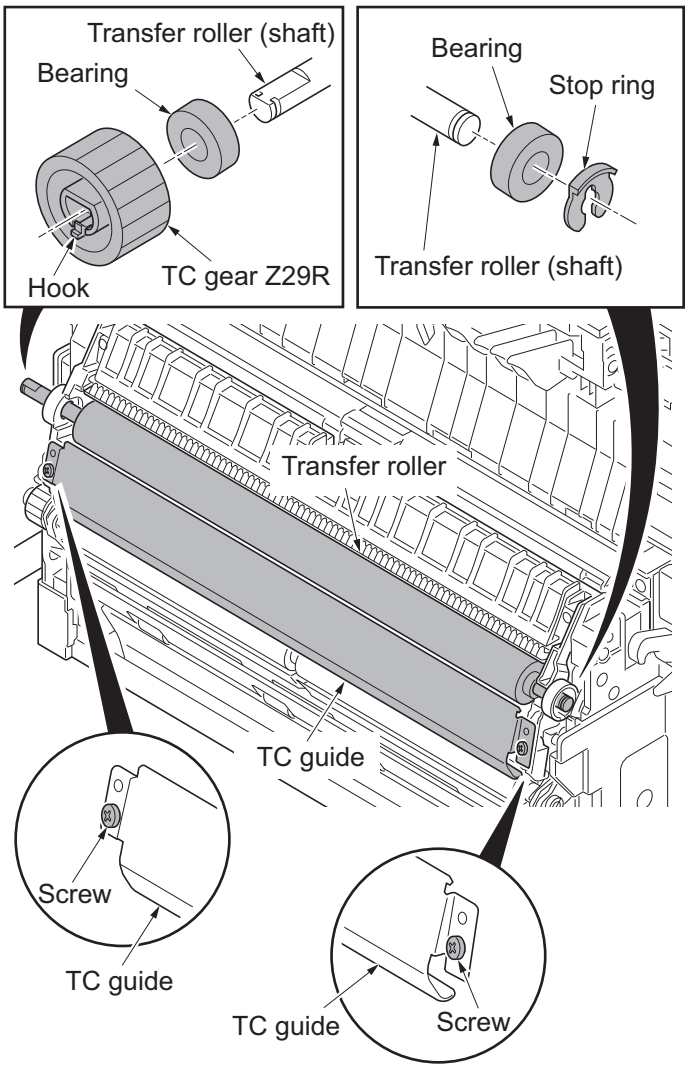


Figure 1-5-59

7. Check or replace the transfer roller and refit all the removed parts.
*: When refitting the transfer roller, confirm that the terminal of the ground plate is in contact with the ground plate in the frame.

8. When replacing the new transfer roller, proceed as follows:
   1) Performs maintenance mode U127 (clearing the transfer counter) (see page 1-3-67).
   2)Performs maintenance mode U464 (Calibration) (see page 1-3-118).
   3)Performs maintenance mode U469 (Auto color registration correction) (see page 1-3-126).

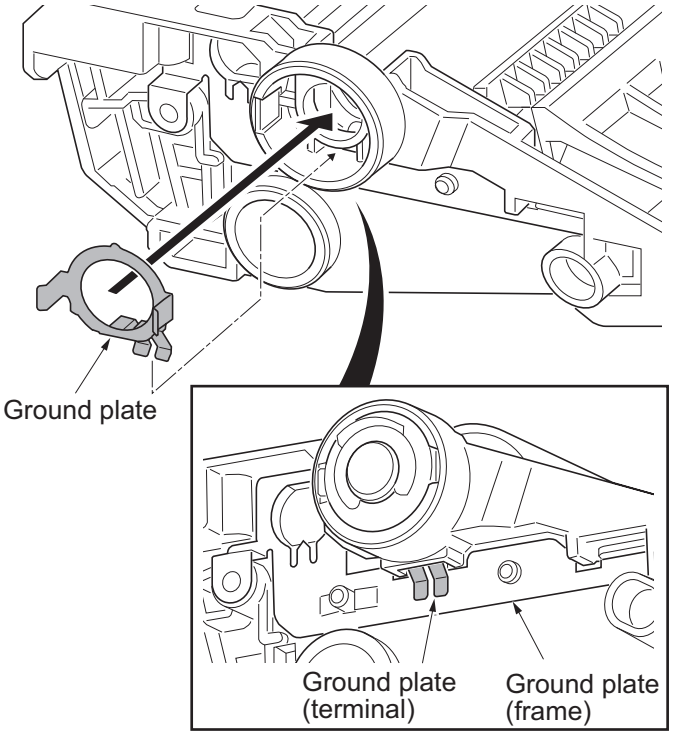


Figure 1-5-60

1-5-6 Fuser section

(1) Detaching and refitting the fuser unit

Procedure

1. Pull out the paper conveying unit.
2. Remove the screw and then the fuser wire cover.
3. Remove two connectors

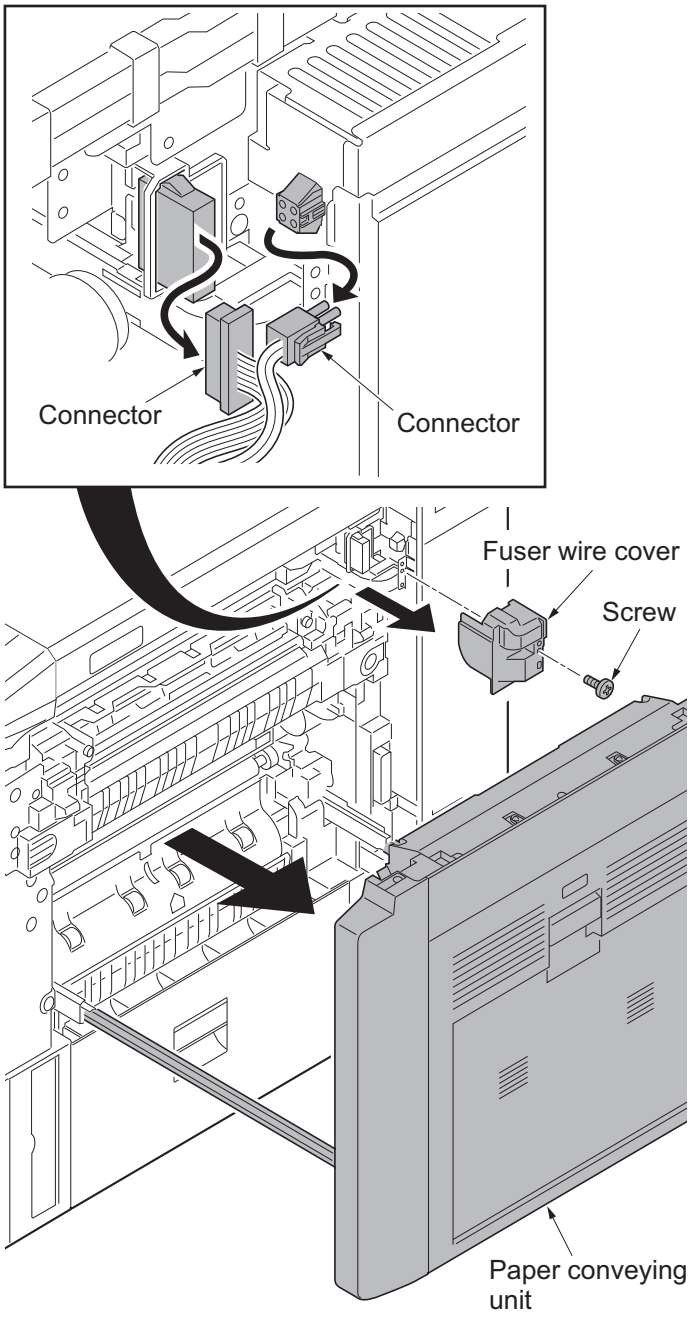


Figure 1-5-61

4. Remove four screws (M4 × 10) and then remove the fuser unit.
5. Check or replace the fuser unit and refit all the removed parts.

6. When replacing the new fuser unit, proceed as follows:
   1) Performs maintenance mode U167 (clearing the fuser count) (see page 1-3-85).
   2)Performs maintenance mode U464 (Calibration) (see page 1-3-118).
   3)Performs maintenance mode U469 (Auto color registration correction) (see page 1-3-126).

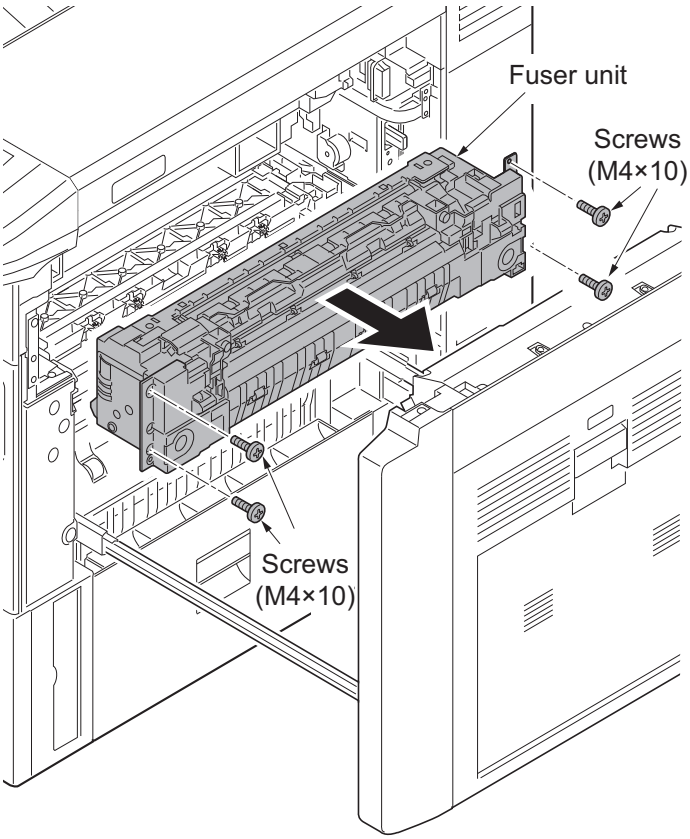


Figure 1-5-62

(2) Detaching and refitting fuser IH unit

Procedure

1. Remove the left upper cover.
2. Remove the rear upper cover and the rear lower cover (see page 1-5-56).
3. Remove the fuser unit (see page 1-5-40).
4. Remove the right upper cover (see page 1-5-56).
5. Remove the tray rear cover.
6. Remove the right middle rear cover (see page 1-5-56).
7. Remove four screws and then remove the fuser IH PWB cover (see page 1-5-56).
8. Remove the IH electric wire cover (see page 1-5-56).
9. Remove the top cover.
10. Remove the wire holder.
11. Release the wire saddle.
12. Remove two connectors from the fuser IH PWB according to the following notes.

*: Confirm the power plug is removed from the outlet without fail when you remove the connector because a high current is supplied to fuser IH unit by this connector.

*: Confirm the connected connector was surely locked when you connect this connector again.

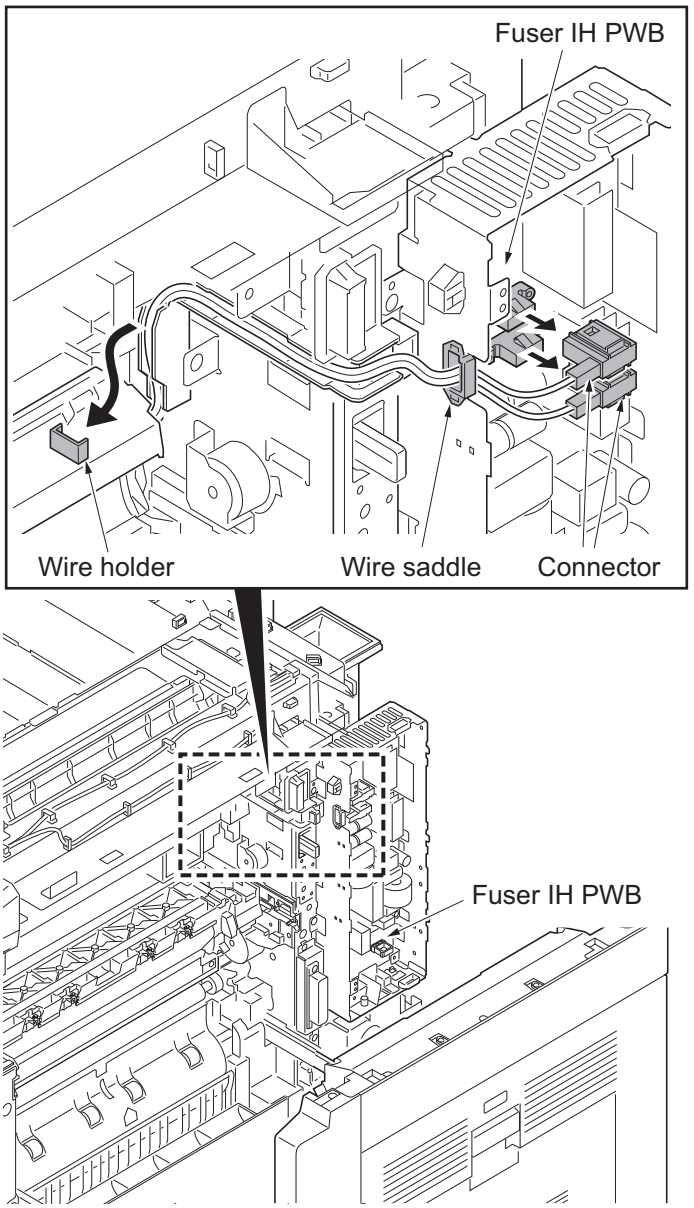


Figure 1-5-63

13. Remove two screws.
14. Unhook the hook by lifting up the fuser IH unit a little and then remove it.

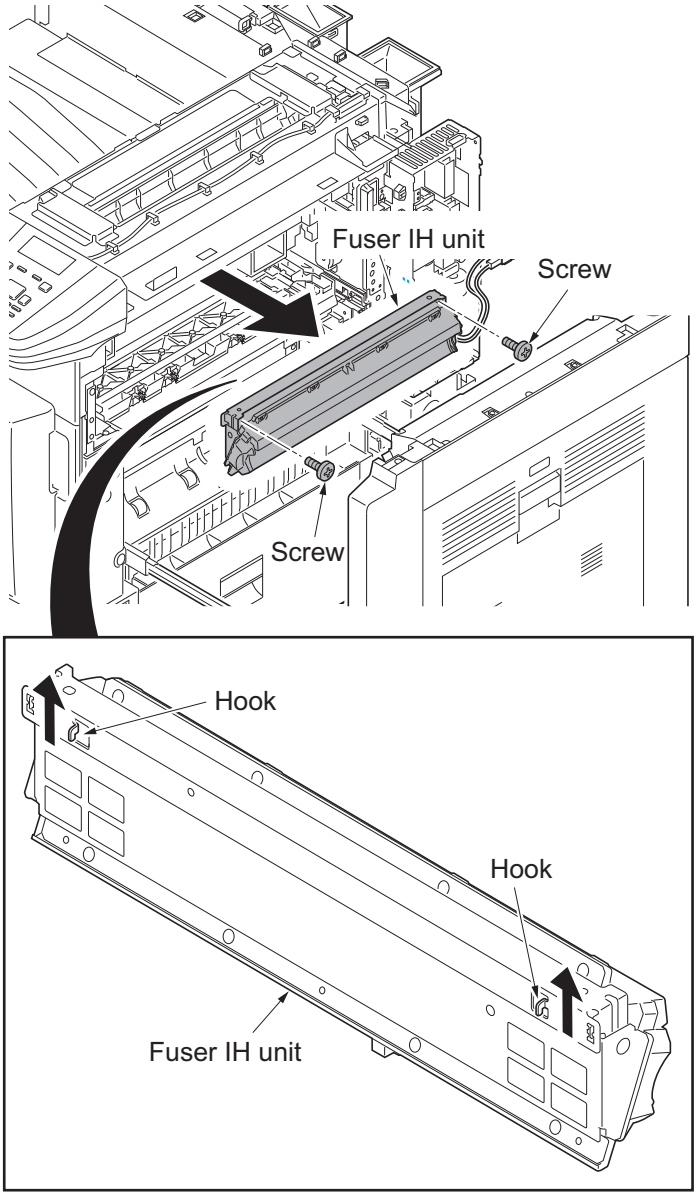


Figure 1-5-64

1-5-7 PWBs

(1) Detaching and refitting the main PWB

Procedure

1. Remove two screws.
2. Unhook three hooks and then remove the left upper cover.
3. Remove the rear upper cover (see page 1-5-56).

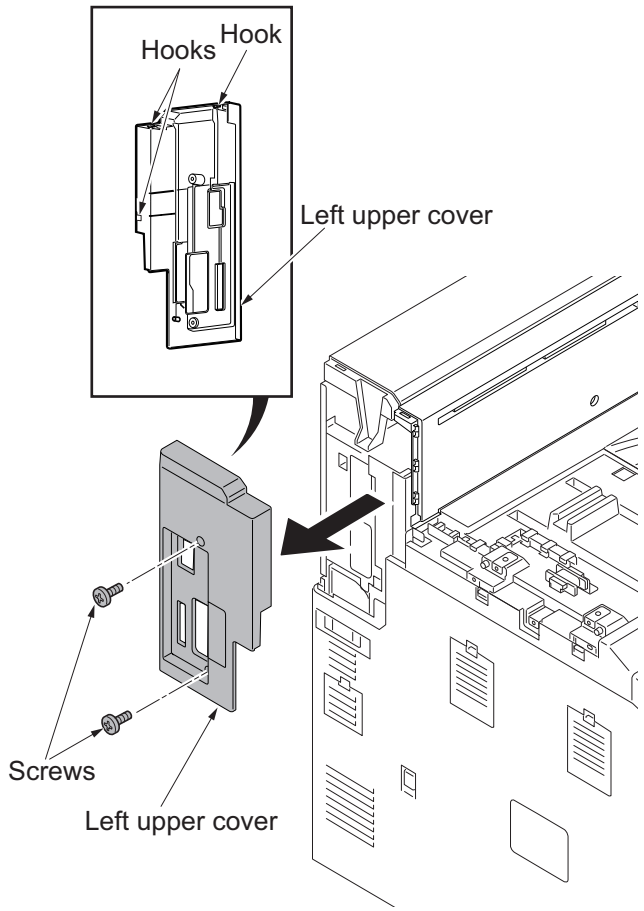


Figure 1-5-65

4. Release five wire saddles on the controller box.

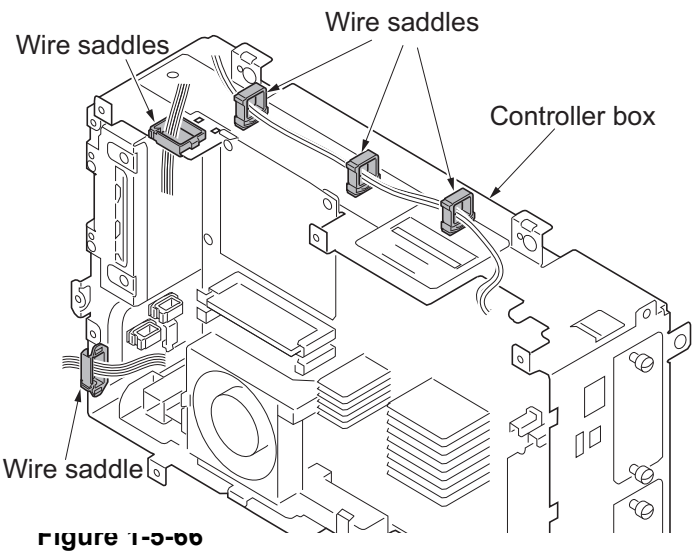


Figure 1-5-66

5. Remove the following connectors that connected to the main PWB from the outside of the control box.

   YC24
   YC3 (FFC connector with a lock)
   YC21 (WH)
   YC12

*: When removing the FFC from the FFC connector with a lock, remove the FFC after released by lifting down the lock lever
(see figure a and b).

*: When connecting an FFC furnished with the protrusions at both ends, address the side with a blue-colored tape towards the locking lever, insert the FFC into the connector until the protrusions are recessed, and raise the lock lever to lock the FFC
(see figure c).

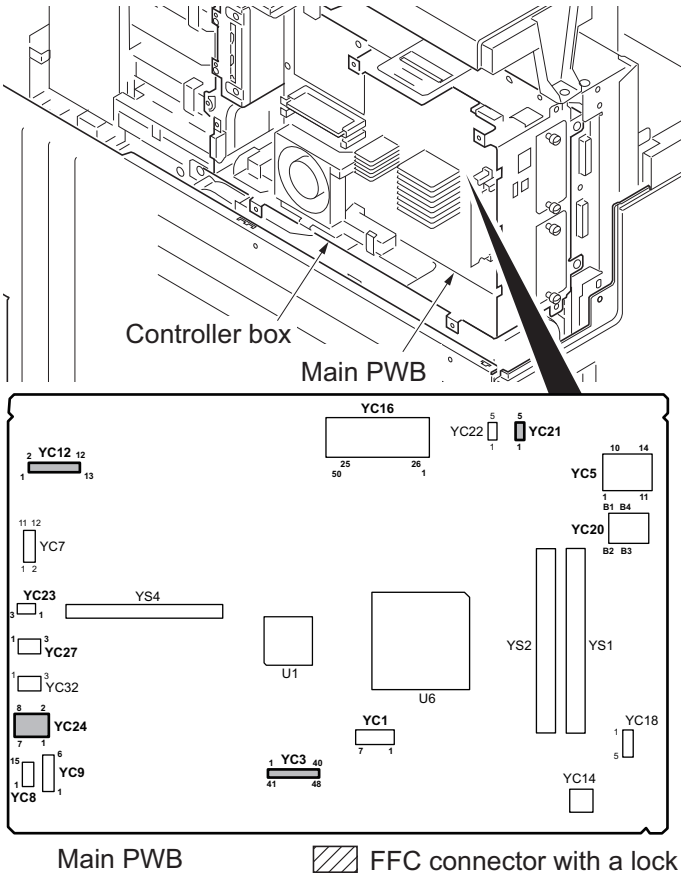


Figure 1-5-67

6. Remove five screws.
7. Unhook two hooks and then remove the controller box.

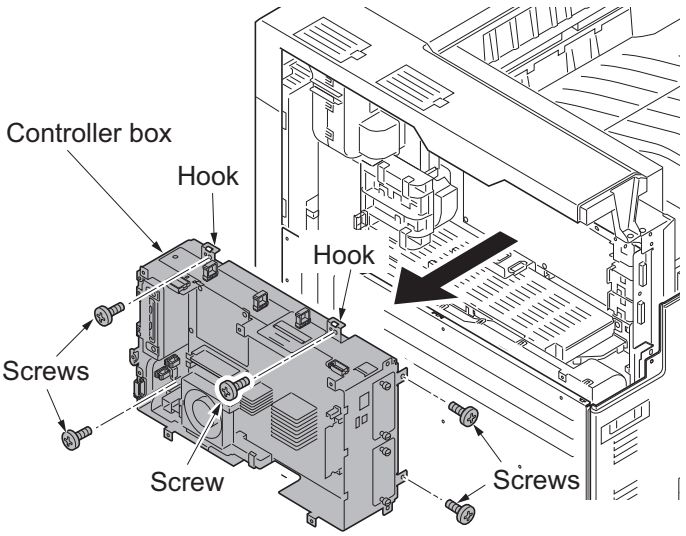


Figure 1-5-68

8. Remove the following connectors that connected to the main PWB.
   YC23
   YC27
   YC8 (FFC connector with a lock)
   YC9
   YC1 [BLACK] (with a lock)

*: When removing the FFC from the FFC connector with a lock, remove the FFC after released by lifting down the lock lever (see page 1-5-45)

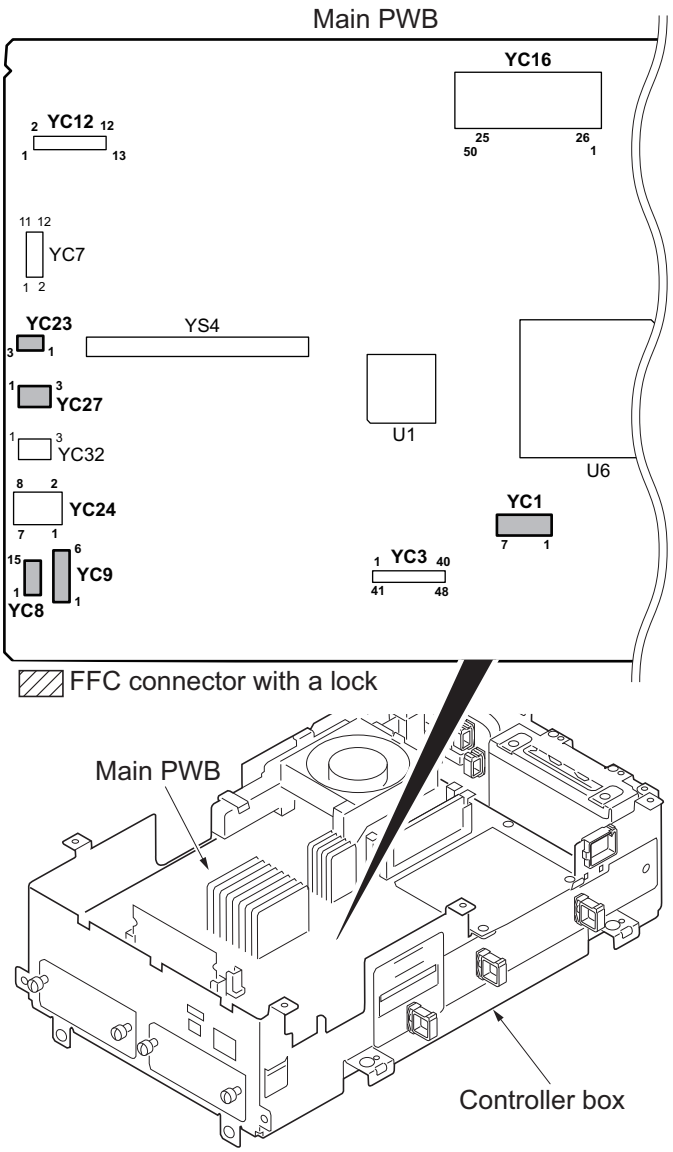


Figure 1-5-69

9. Release the wire saddle.
10. Remove two wire holders.
11. Remove two screws.
12. Remove the fan motor holder.

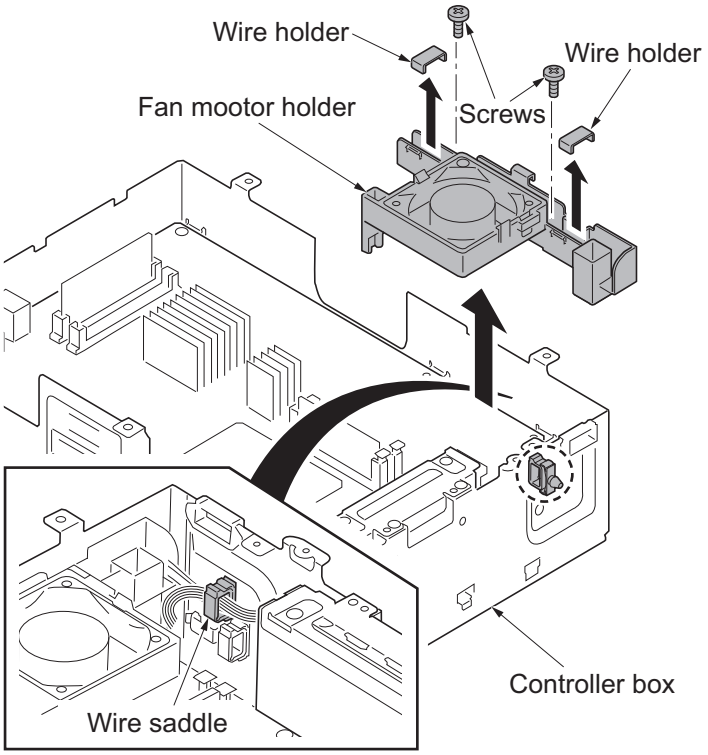


Figure 1-5-70

13. Remove five screws from the main PWB.

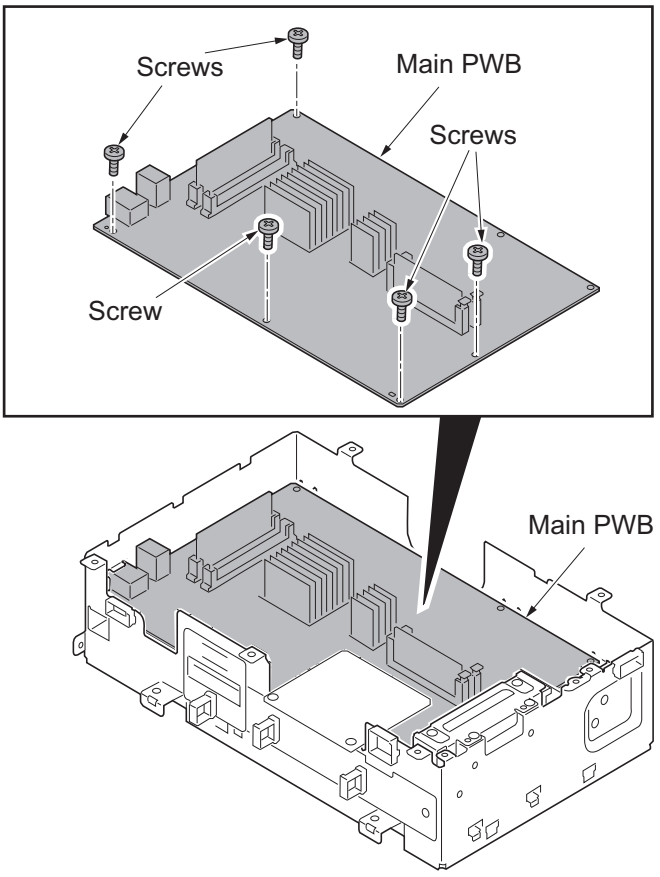


Figure 1-5-71

14. Remove the main PWB by releasing the projection of ground plate in the network connector.
15. Check or replace the main PWB and refit all the removed parts.

*: When replacing the main PWB, remove the following devices from the main PWB and then reattach it to the new main PWB. (see page 1-6-2)

EEPROM (YC14)
Code DIMM (YS4)
Memory DDR (YS1)

*: Exchange EEPROM (YC14) and code DIMM (YC4) by the set.

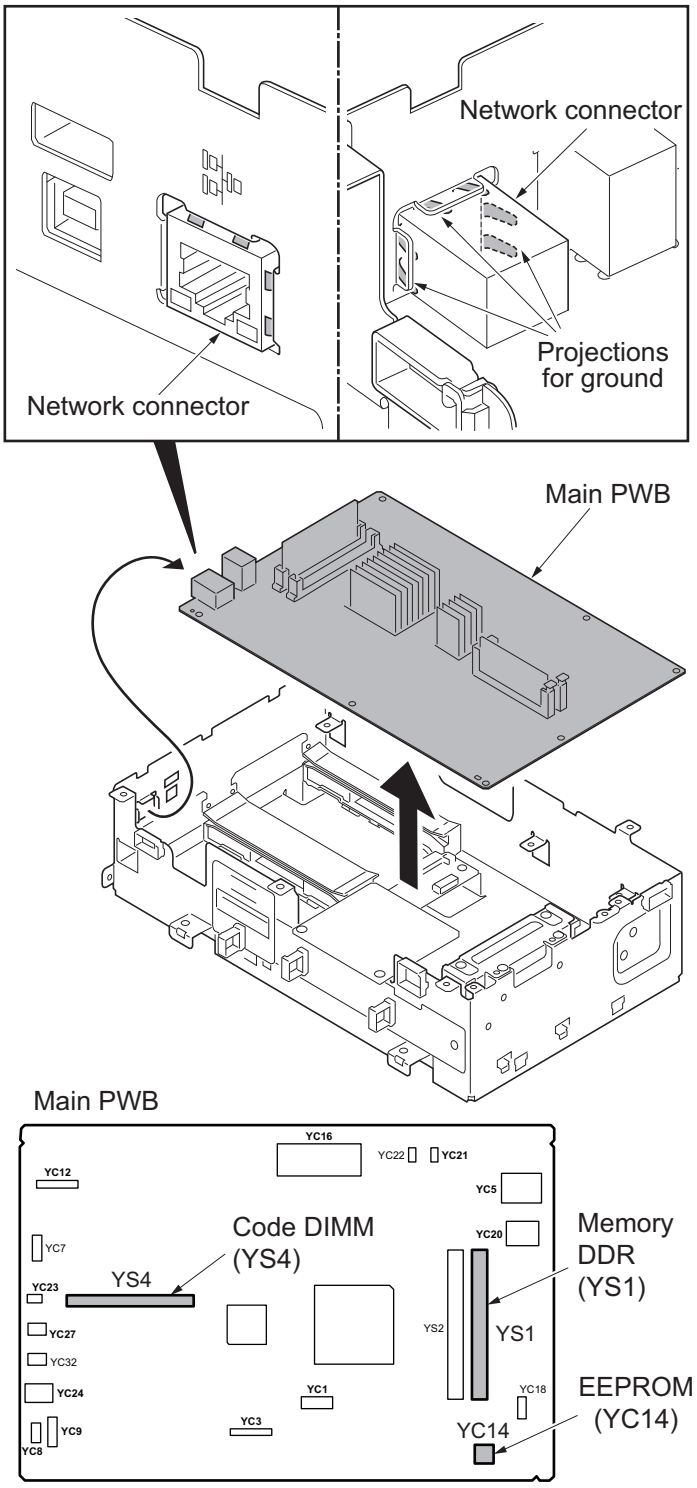


Figure 1-5-72

(2) Detaching and refitting the engine PWB

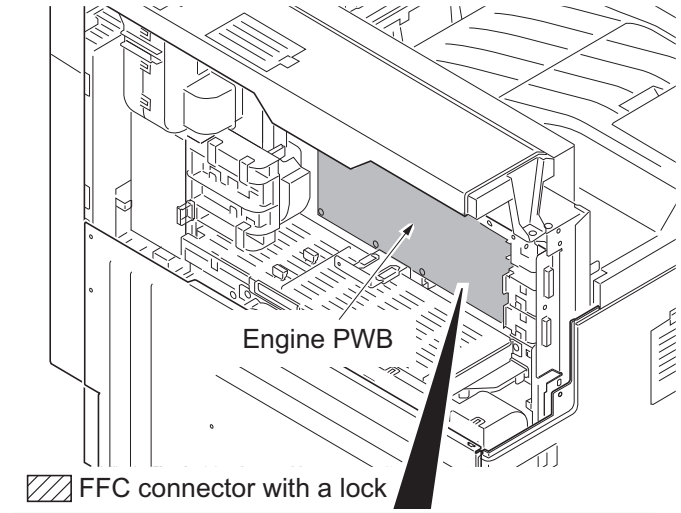
Procedure

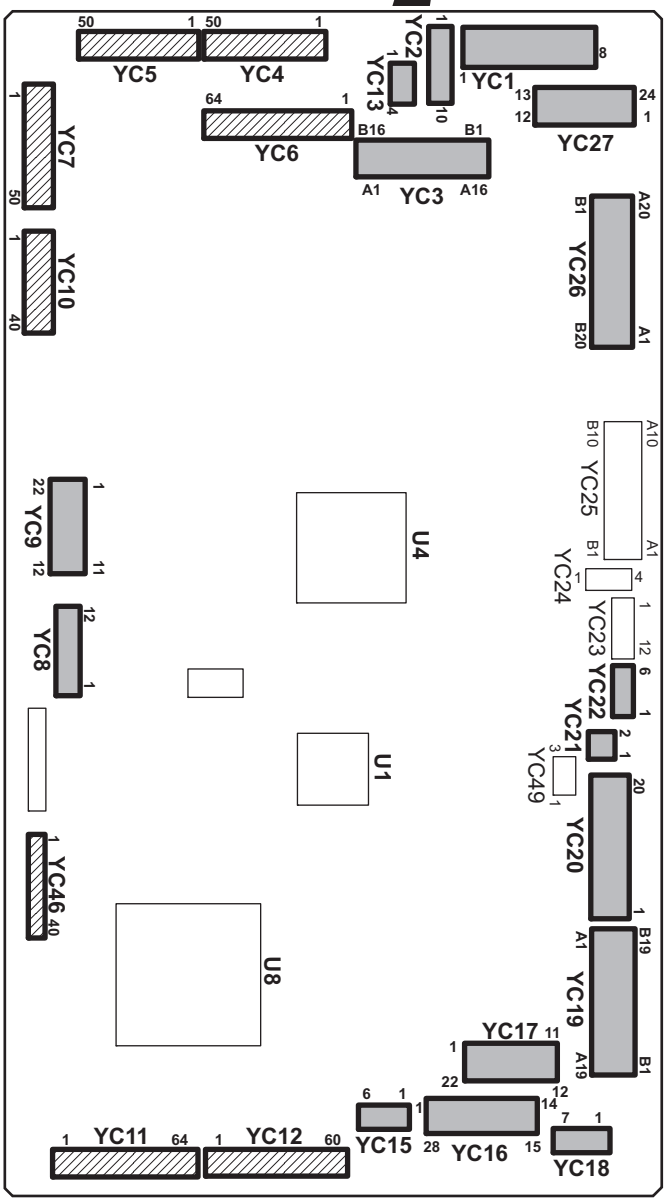
1. Remove the controller box (see page 1-5-44).
2. Remove twenty two connectors of following from the engine PWB.
   YC1
   YC2
   YC3
   YC4
   YC5 (FFC connector with a lock)
   YC6 (FFC connector with a lock)
   YC7 (FFC connector with a lock)
   YC10 (FFC connector with a lock)
   YC26
   YC9
   YC8
   YC46 (FFC connector with a lock)
   YC11 (FFC connector with a lock)
   YC12 (FFC connector with a lock)
   YC15
   YC16
   YC18
   YC17
   YC19
   YC20
   YC21
   YC22

*: When removing the FFC from the FFC connector with a lock, remove the FFC after released by lifting down the lock lever (see page 1-5-45)

*: When removing the FFC from the YC-46, remove the FFC after released by lifting up the lock lever.

*: When connecting an FFC furnished with the protrusions at both ends, address the side with a blue-colored tape towards the locking lever, insert the FFC into the connector until the protrusions are recessed, and raise the lock lever to lock the FFC (see page 1-5-45)



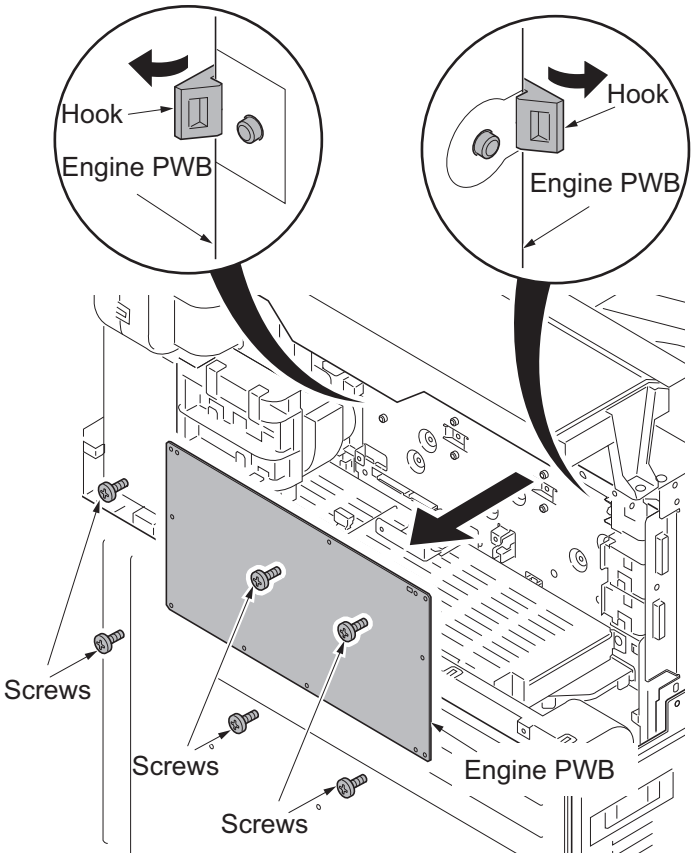


Engine PWB

3. Remove six screws.
4. Unhook two hooks and then remove the engine PWB.
5. Check or replace the engine PWB and refit all the removed parts.

*: When replacing the engine PWB, remove the EEPROM (U100) from the engine PWB and then reattach it to the new engine PWB.

Figure 1-5-73



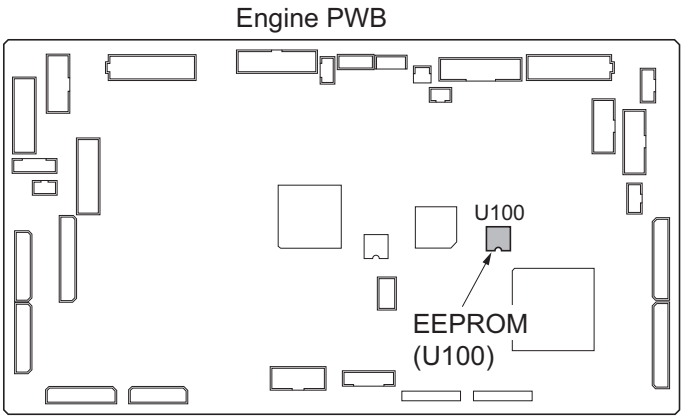


Figure 1-5-74

(3) Detaching and refitting the power source PWB

Procedure

1. Remove the rear lower cover (see page 1-5-56).
2. Release three wire saddles.
3. Remove four connectors.

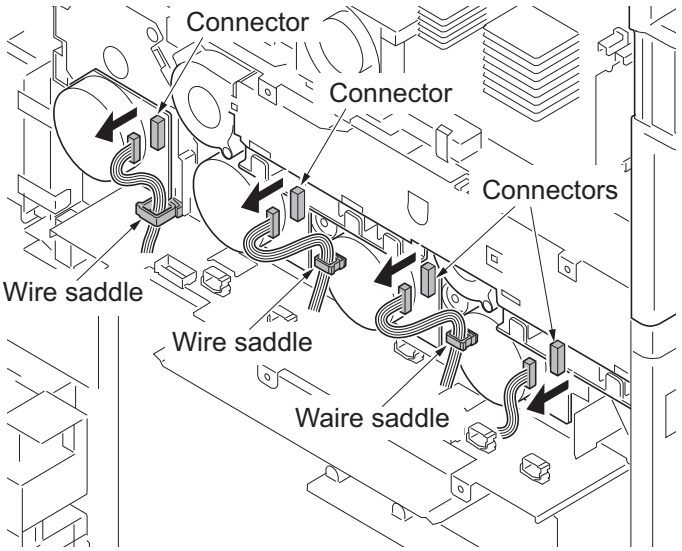
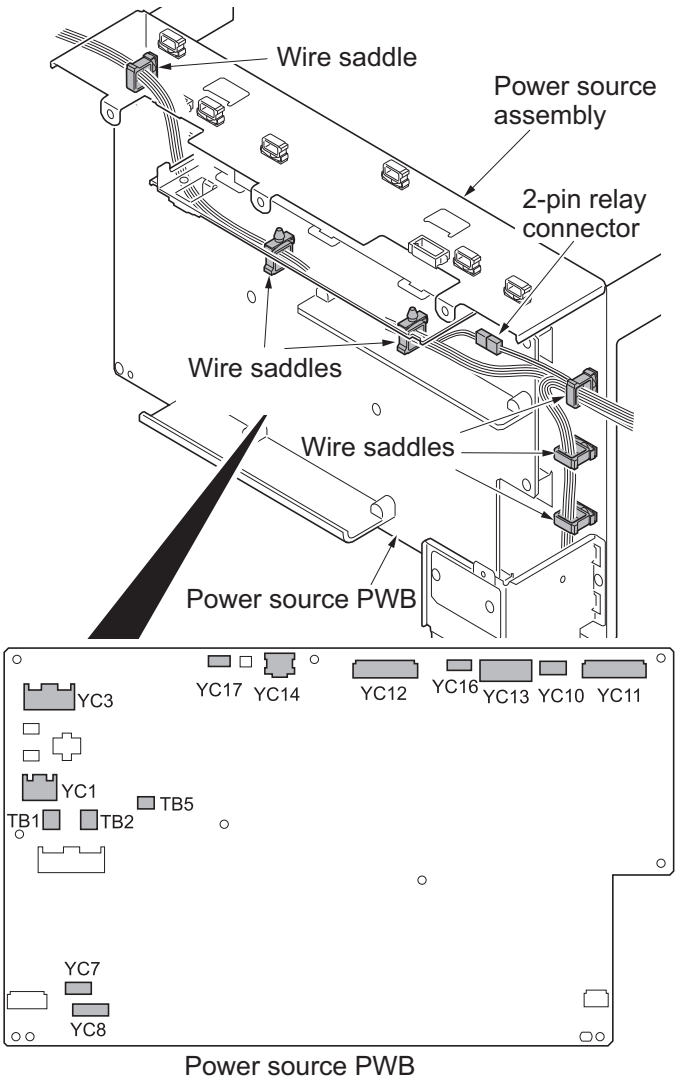


Figure 1-5-75

4. Release six wire saddles.
5. Remove the following eleven connectors and three tabs from the power source PWB.
   YC3
   YC1
   TB1
   TB2
   TB5
   YC7
   YC8
   YC17
   YC14
   YC12
   YC16
   YC13
   YC10
   YC11
6. Remove 2-pin relay connector.



Power source PWB

Figure 1-5-76

7. Release the wire saddle.
8. Remove the connector from the coin vender plate.

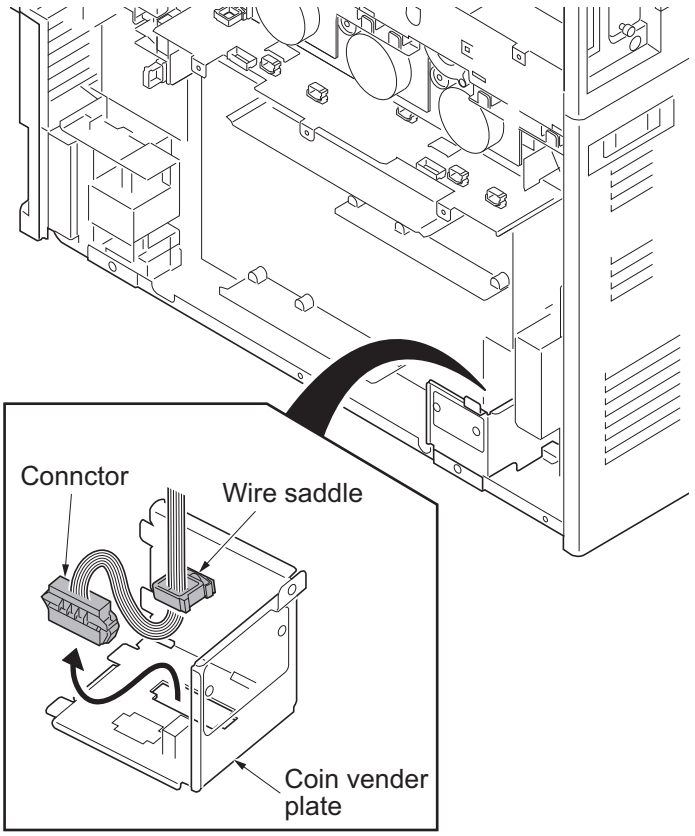


Figure 1-5-77

9. Remove screw.
10. Remove cooling duct1.
11. Remove two screws.
12. Remove the power source assembly.

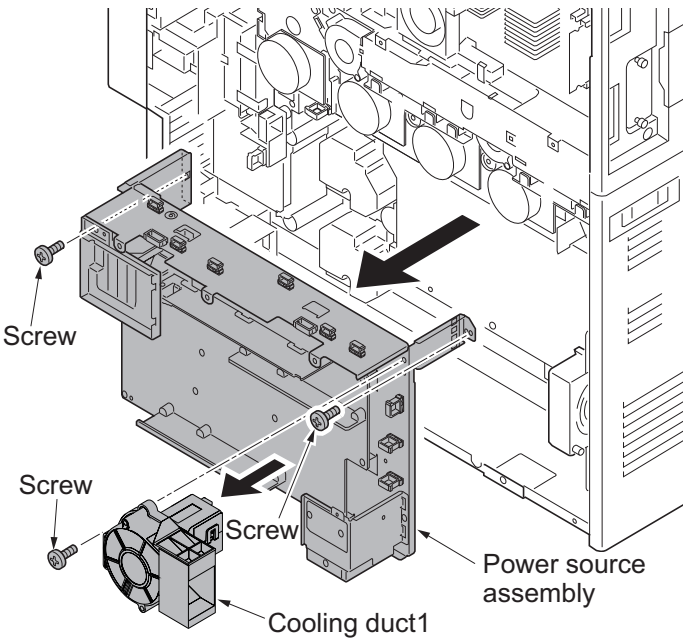


Figure 1-5-78

13. Release wire saddle.
14. Remove 2-pin relay connector.
15. Remove screw.
16. Remove cooling duct2.
17. Remove eight screws.
18. Remove the power source PWB.
19. Check or replace the power source PWB and refit all the removed parts.

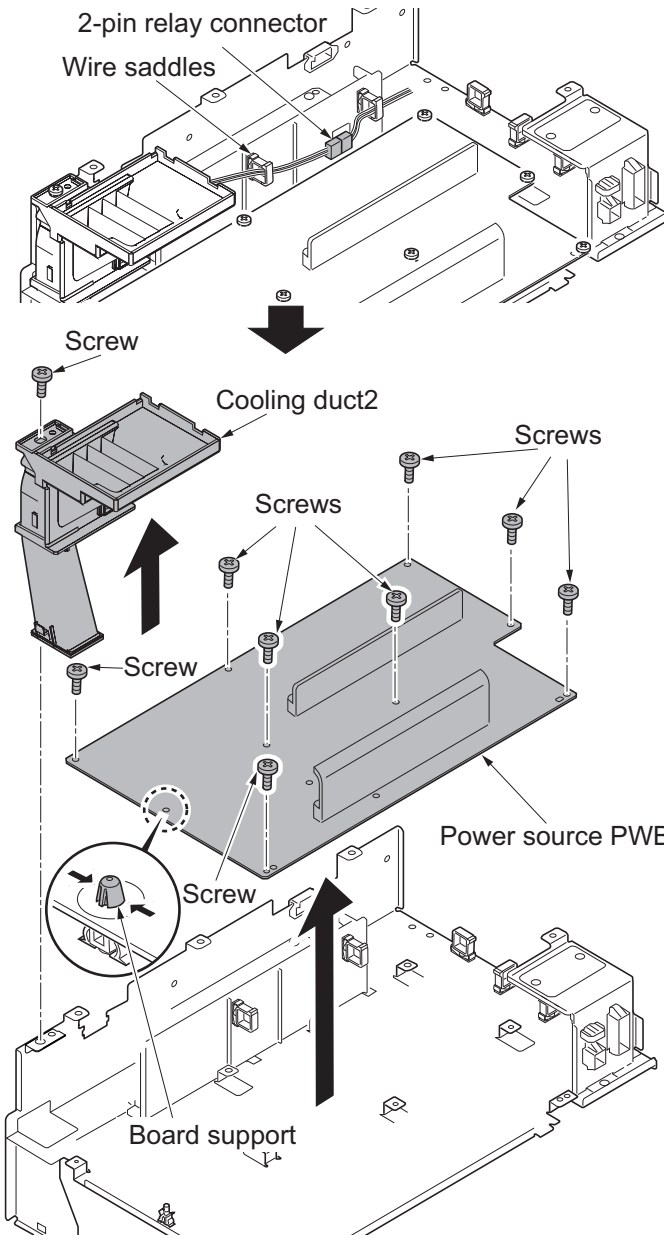


Figure 1-5-79

(4) Detaching and refitting the high voltage PWB 1

Procedure

1. Remove the power source PWB (see page 1-5-51).
2. Remove the main drive unit (see page 1-5-64).
3. Remove six connectors from high voltage PWB.

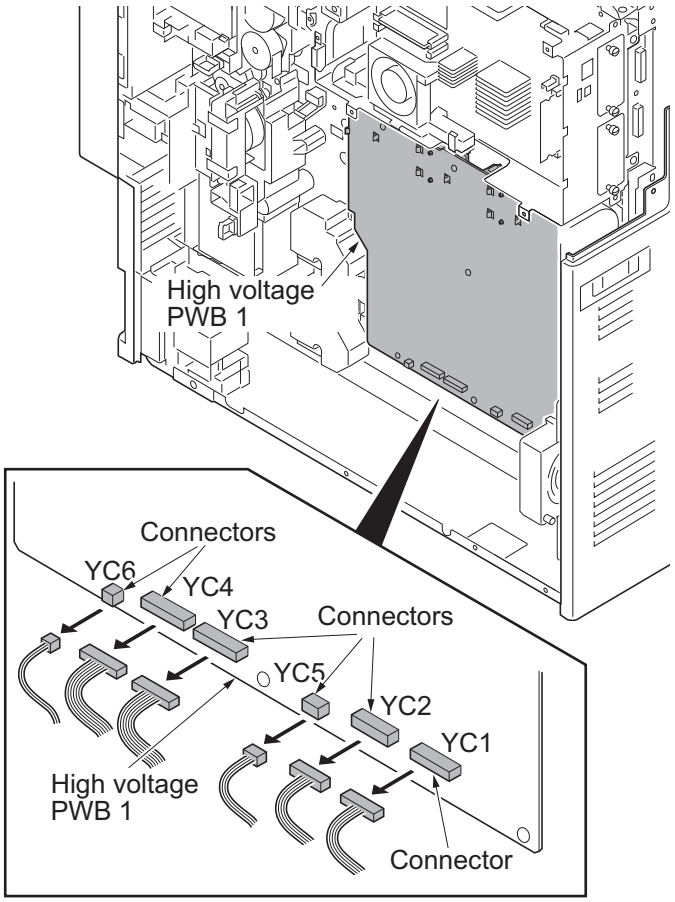


Figure 1-5-80

4. Remove eight screws.
5. Unhook two hooks of PWB spacer and then remove the high voltage PWB 1.
6. Check or replace the high voltage PWB 1 and refit all the removed parts.

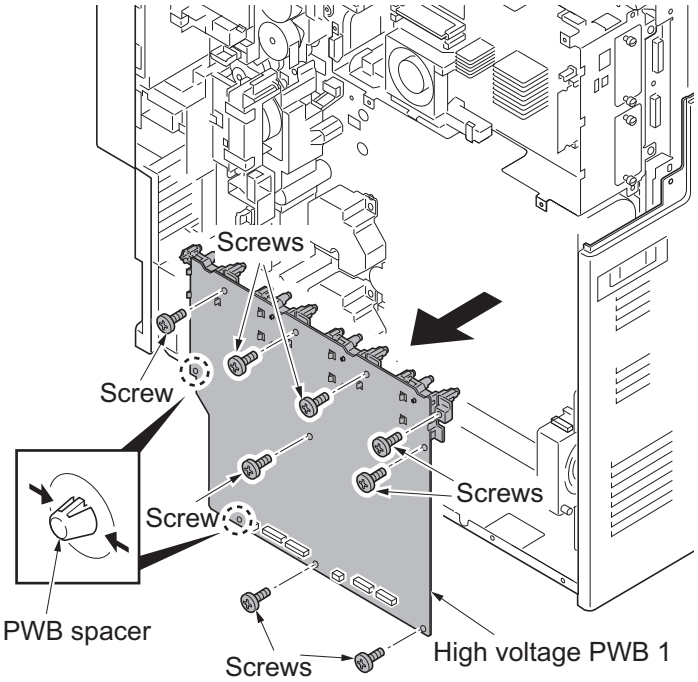


Figure 1-5-81

(5) Detaching and refitting the high voltage PWB 2

Procedure

1. Remove the main drive unit (see page 1-5-64).
2. Pull the transfer belt unit out a little (see page 1-5-34).
3. Remove two connectors from the high voltage PWB 2 assembly.

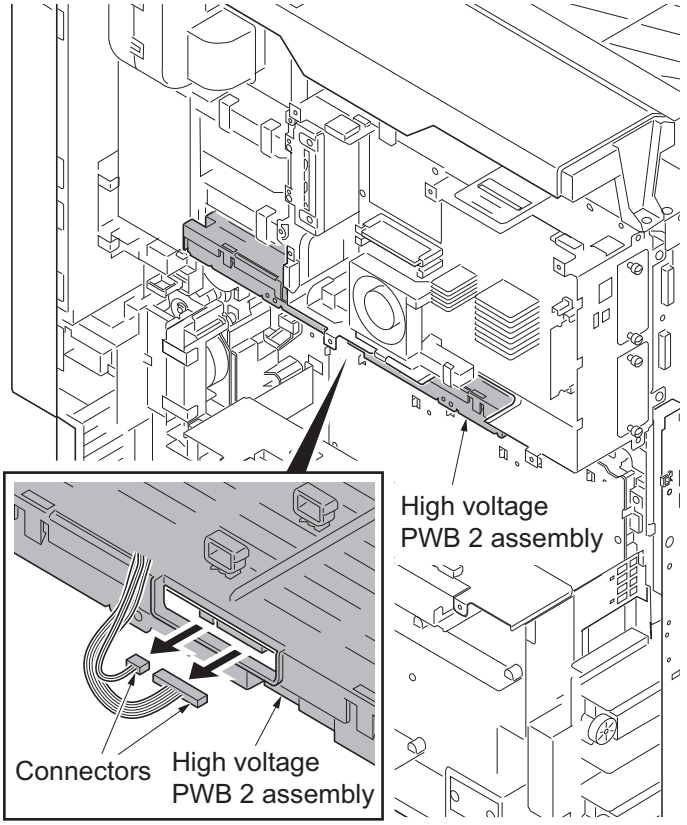


Figure 1-5-82

4. Remove two screws.
5. Unhook two hooks and then remove the high voltage PWB 2.
6. Check or replace the high voltage PWB 2 and refit all the removed parts.

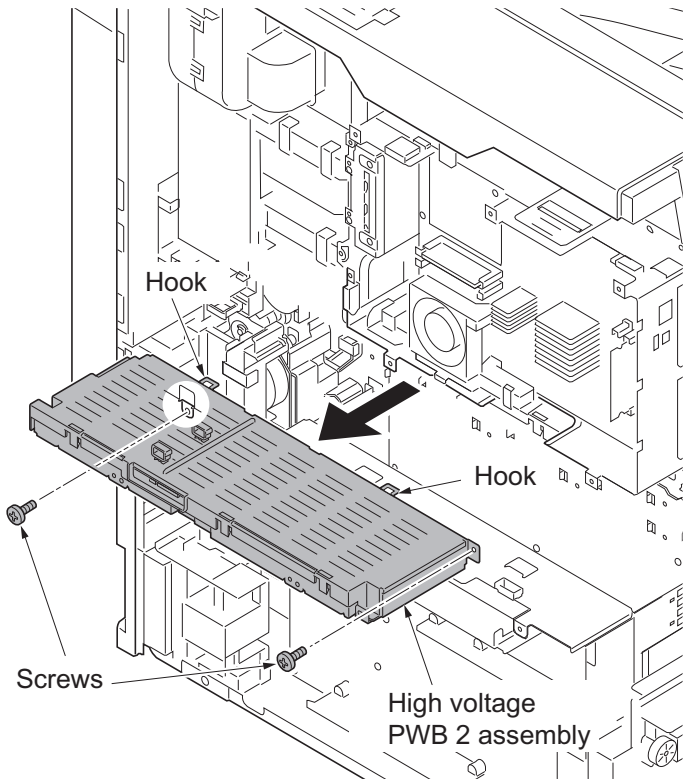


Figure 1-5-83

(6) Detaching and refitting the fuser IH PWB

Procedure

1. Remove seven screws and then remove the rear upper cover.

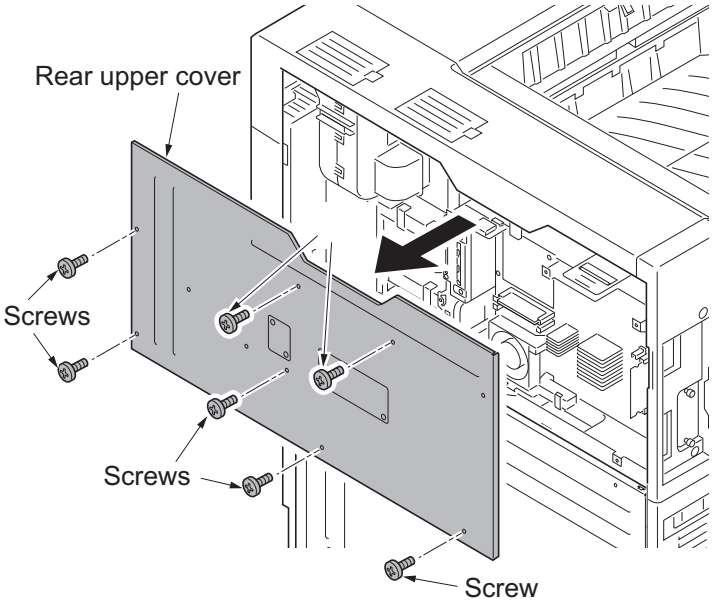


Figure 1-5-84

2. Remove eight screws.
3. Release two hanging parts and then remove the rear lower cover.
4. Remove the fuser unit (see page 1-5-40).

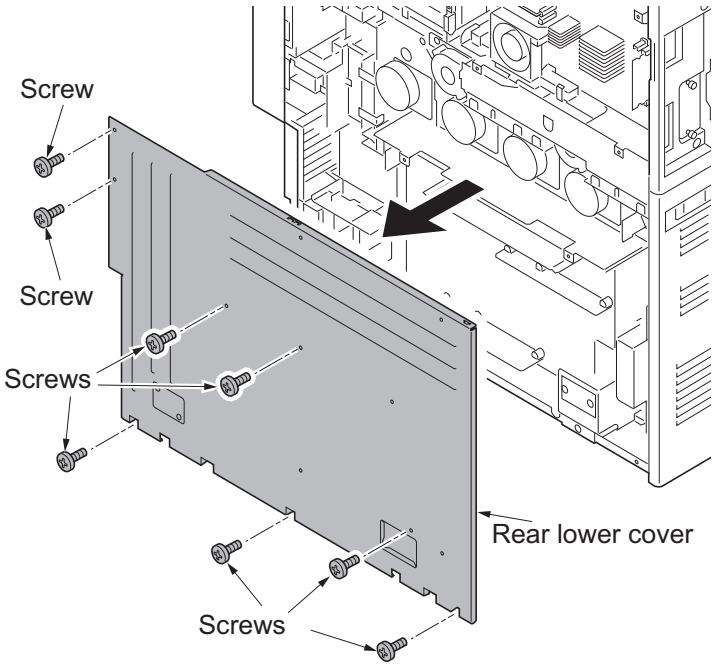


Figure 1-5-85

5. Remove two screws and then remove the ISU right cover.
6. Remove the screw and five hooks and then remove the right upper cover.

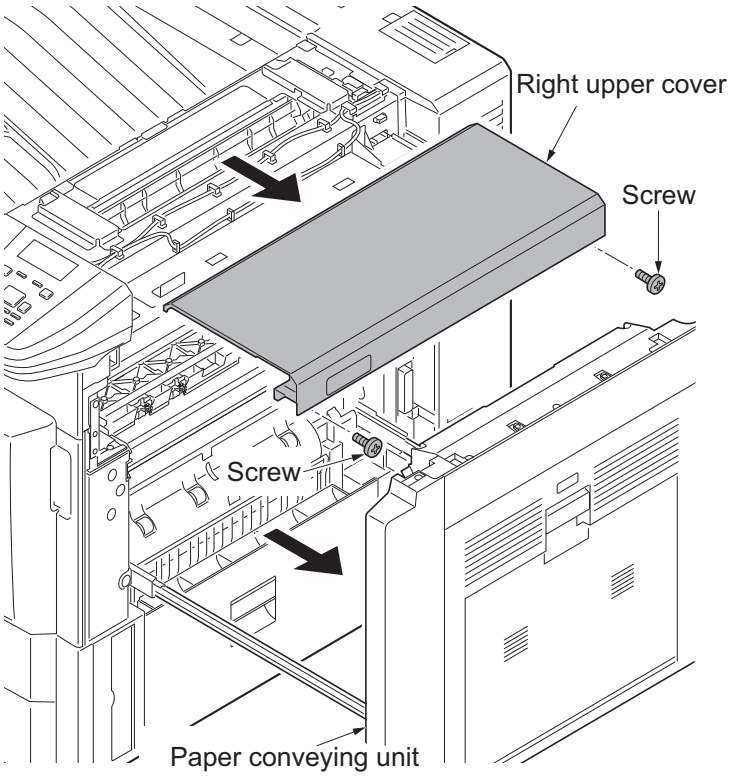


Figure 1-5-86

7. Remove the screw.
8. Unhook two hooks and then remove the right middle rear cover.

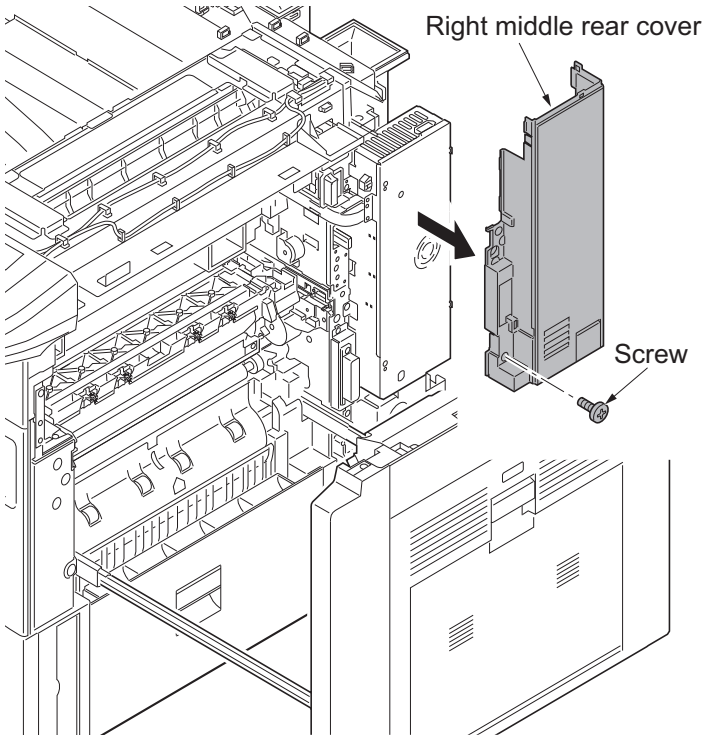


Figure 1-5-87

9. Remove four screws and the remove the fuser IH PWB cover.
10. Remove the IH electric wire cover.

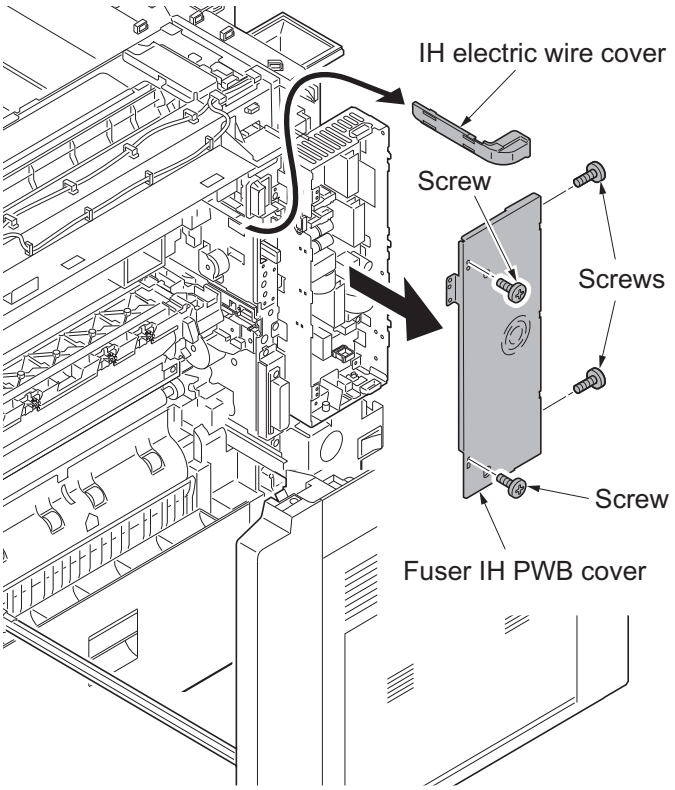


Figure 1-5-88

11. Release two wire saddles.
12. Remove four connectors from the fuser IH PWB.

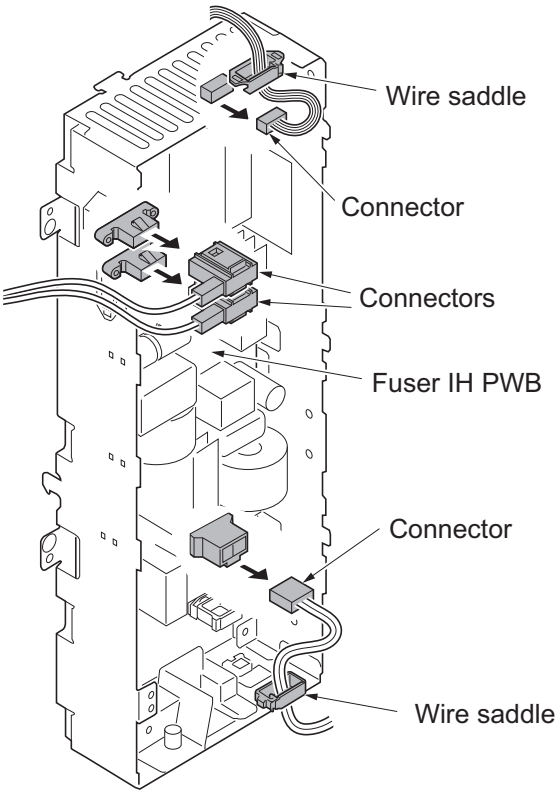


Figure 1-5-89

13. Remove two wire holders.
14. Remove the connector (YC27) from feed PWB 1.

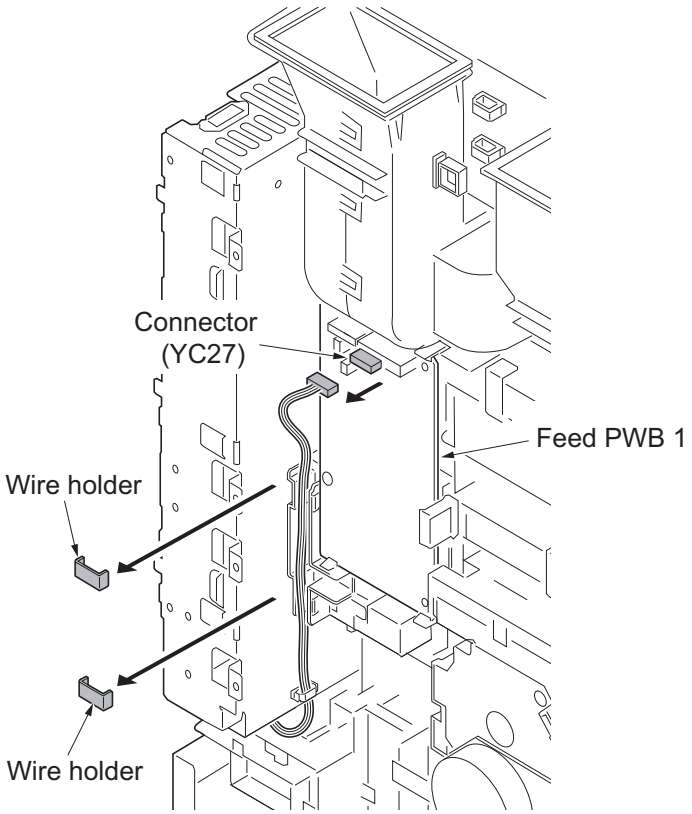


Figure 1-5-90

15. Remove three screws.
16. Unhook two hooks and then remove IH box assembly.

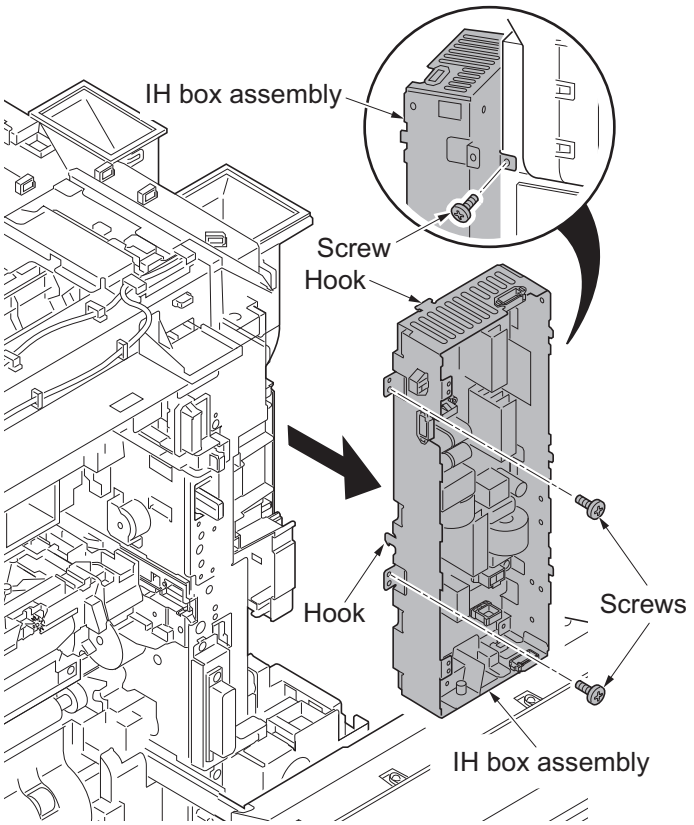


Figure 1-5-91

17. Remove two connectors.
18. Remove six screws.
19. Unhook the hook of the PWB spacer and then remove the fuser IH PWB.
20. Check or replace the fuser IH PWB and refit all the removed parts.

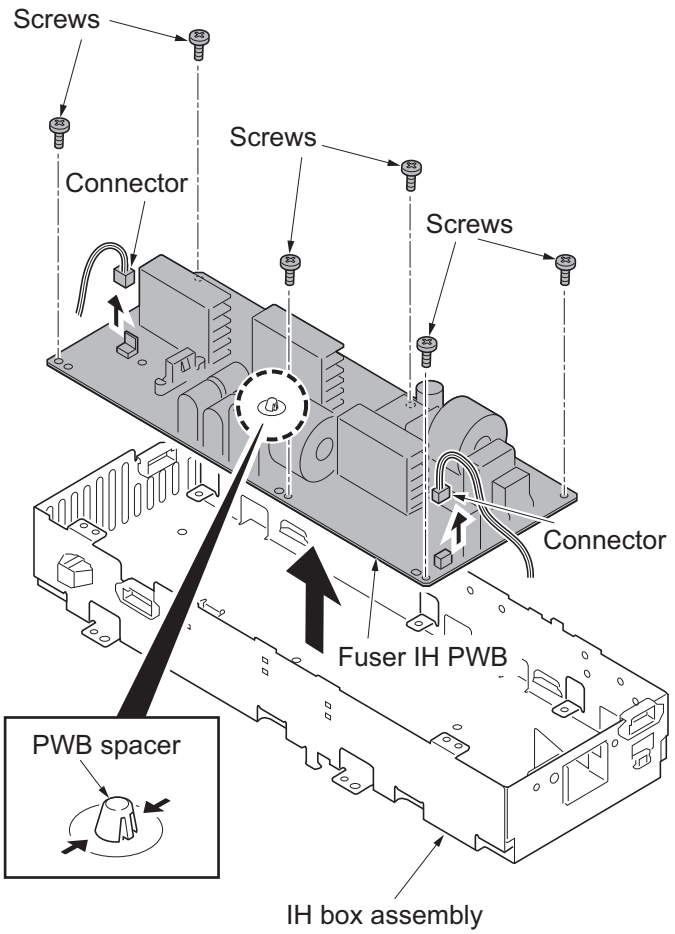


Figure 1-5-92

1-5-8 Drive section

(1) Detaching and refitting the drum drive unit K and the drum drive unit MCY

Procedure

Detaching the drum drive unit K

1. Remove the rear upper cover and the rear lower cover (see page 1-5-56).
2. Remove the connector.
3. Release the wire saddle.

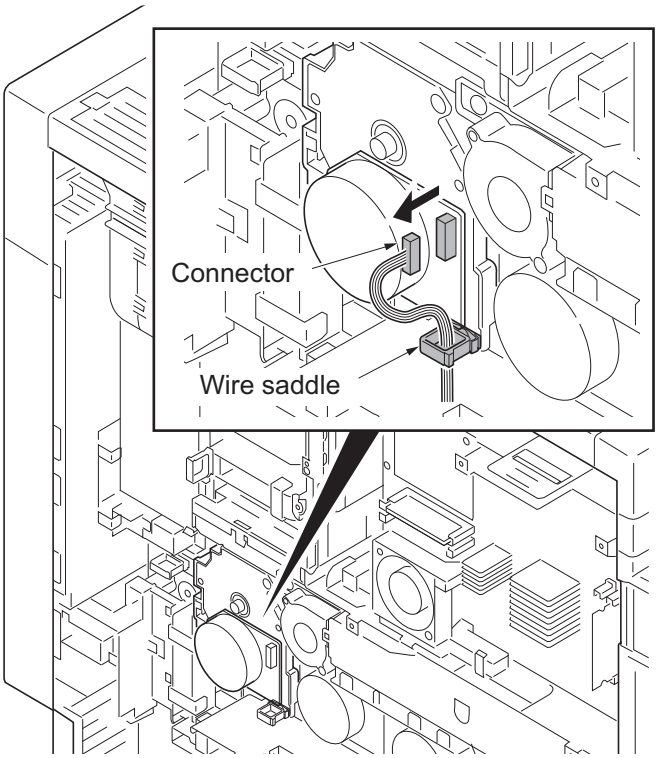


Figure 1-5-93

4. Remove three screws.
5. Remove the drum drive unit K.

*: Do not have a shaft part alone when you carry drum drive unit K. (Have the housing.)

*: Put support on the tip of the shaft so that the shaft may become the horizontal when you put drum drive unit K on the table etc.

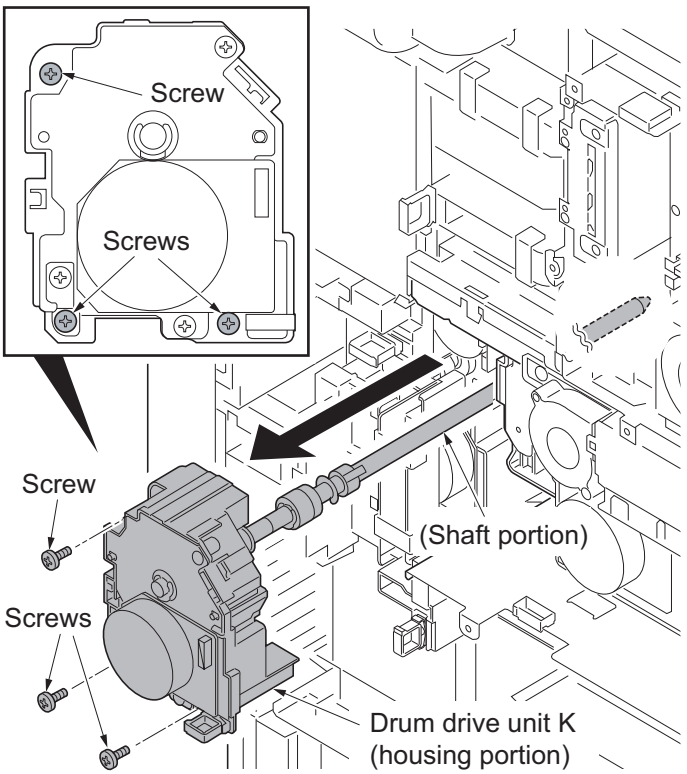


Figure 1-5-94

Detaching the drum drive unit MCY

6. Remove the left upper cover (see page 1-5-44).
7. Remove the left cover (see page 1-5-17).
8. Remove the connector.
9. Remove the screw.

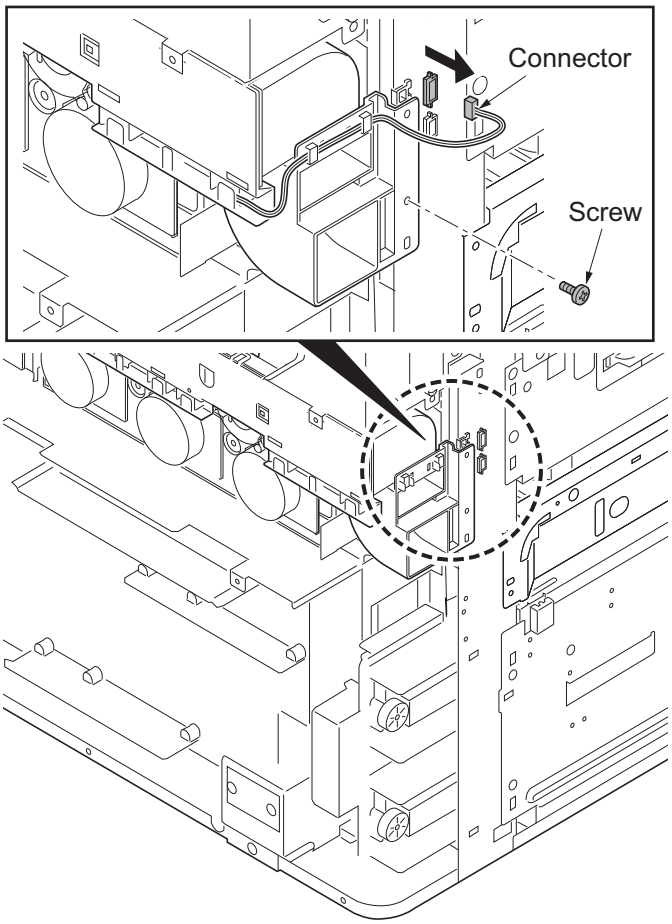


Figure 1-5-95

10. Remove as one body the toner unit duct, the toner fan motor 1 and the toner fan motor 2.

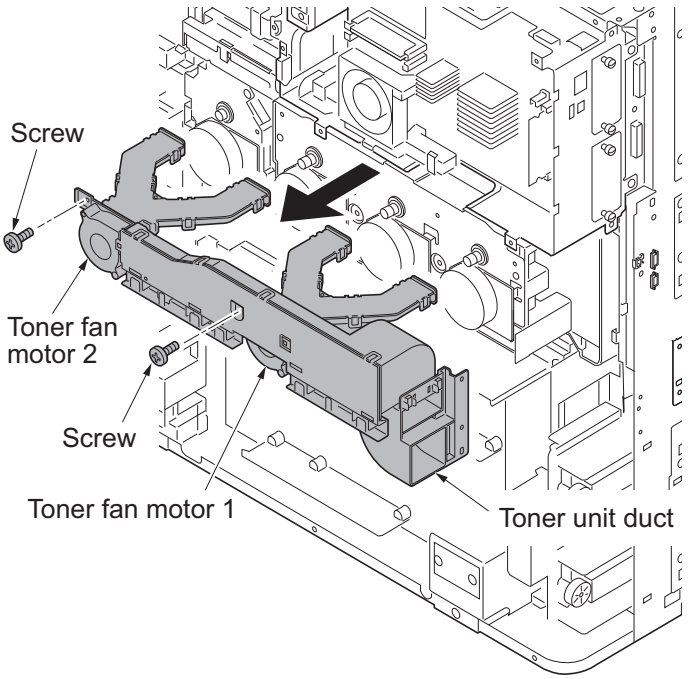


Figure 1-5-96

11. Release wire saddles.
    30ppm model/35ppm model: 1
    45ppm model/55ppm model: 2
12. Remove connectors.
    30ppm model/35ppm model: 1
    45ppm model/55ppm model: 3

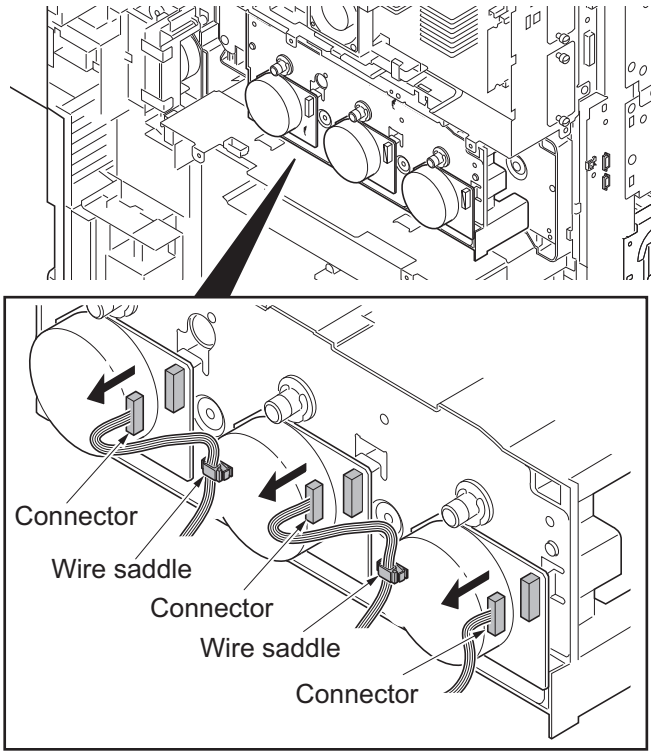


Figure 1-5-97

13. Remove five screws and then remove the drum drive unit MCY.
    *: Do not have a shaft part alone when you carry drum drive unit MCY. (Have the housing.)
    *: Put support on the tip of the shaft so that the shaft may become the horizontal when you put drum drive unit MCY on the table etc.
14. Check or replace the drum drive unit K and the drum drive unit MCY and refit all the removed parts.

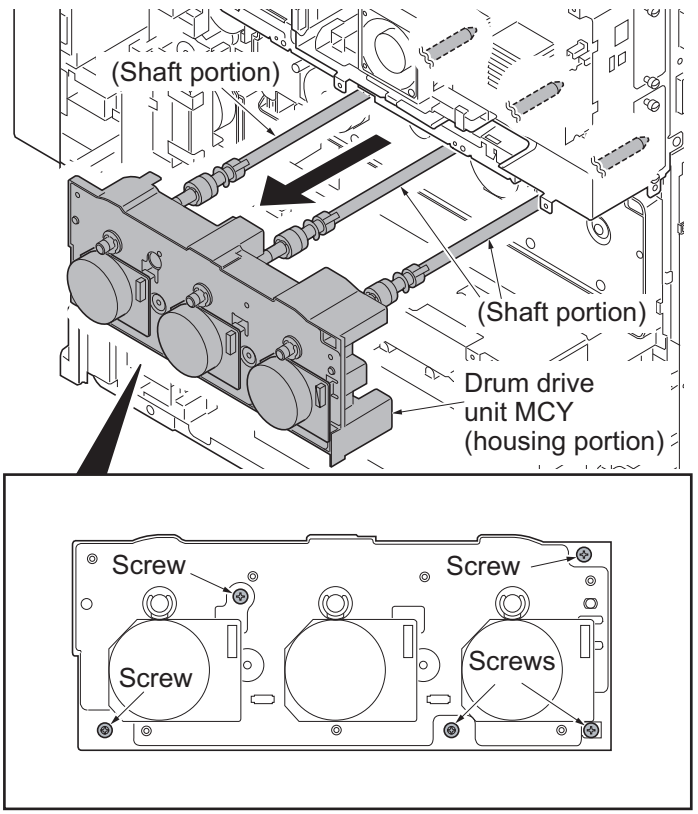


Figure 1-5-98

(2) Detaching and refitting the main drive unit

Procedure

1. Remove the drum drive unit K and the drum drive unit MCY (see page 1-5-61).
2. Release three wire saddles on the main drive unit.
3. Remove two connectors.

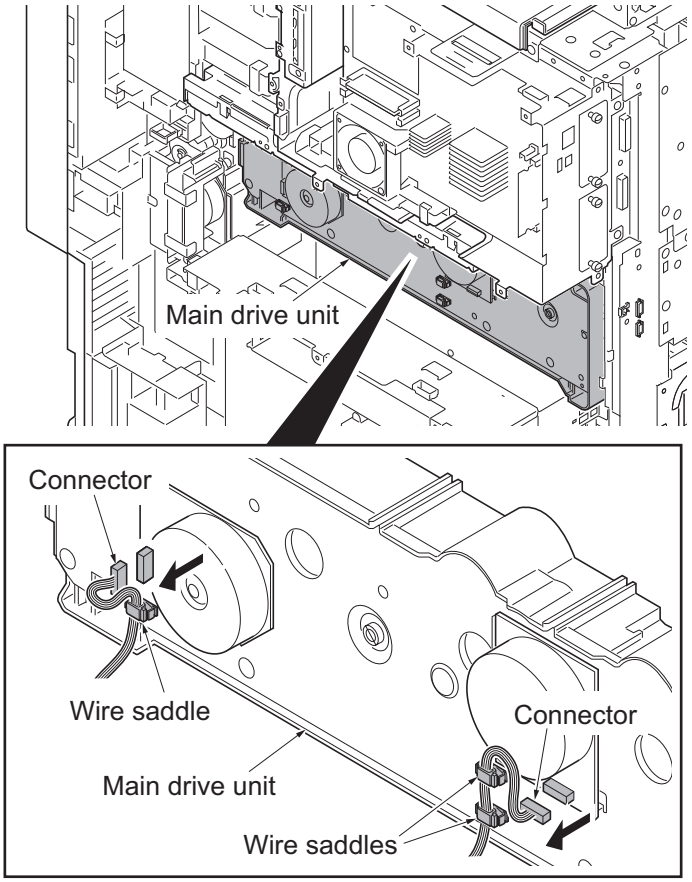


Figure 1-5-99

4. Remove five screws.
5. Remove the main drive unit.
6. Check or replace the main drive unit and refit all the removed parts.

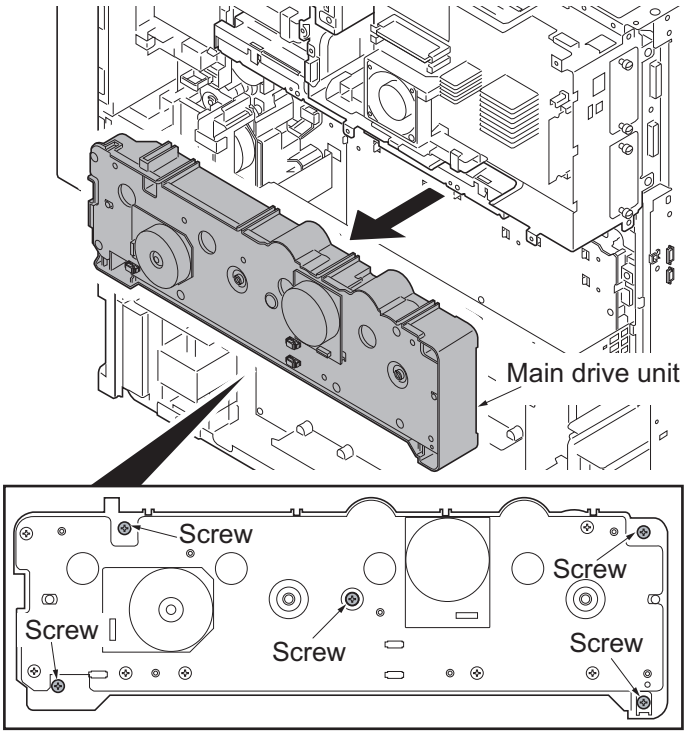


Figure 1-5-100

(3) Detaching and refitting the fuser drive unit, transfer drive unit and feed drive unit

Procedure

Detaching the fuser drive unit

1. Remove the rear upper cover and the rear lower cover (see page 1-5-56).
2. Remove five wire holders of feed PWB 1 assembly.
3. Release the wire saddle.

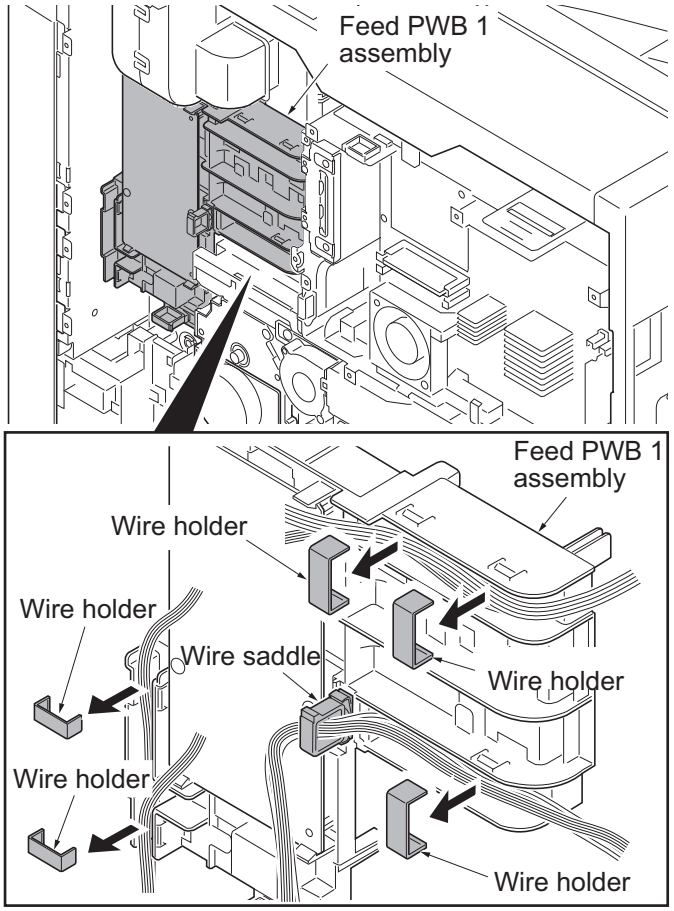


Figure 1-5-101

4. Remove the following twenty connectors from the feed PWB 1.
   YC18, YC19
   YC20, YC27
   YC26, YC3
   YC17, YC14
   YC10, YC16
   YC13, YC12
   YC23, YC25
   YC15, YC11
   YC5, YC4
   YC1 (FFC connector with a lock)
   YC2 (FFC connector with a lock)

*: When removing the FFC from the FFC connector with a lock, remove the FFC after released by lifting down the lock lever (see page 1-5-45).

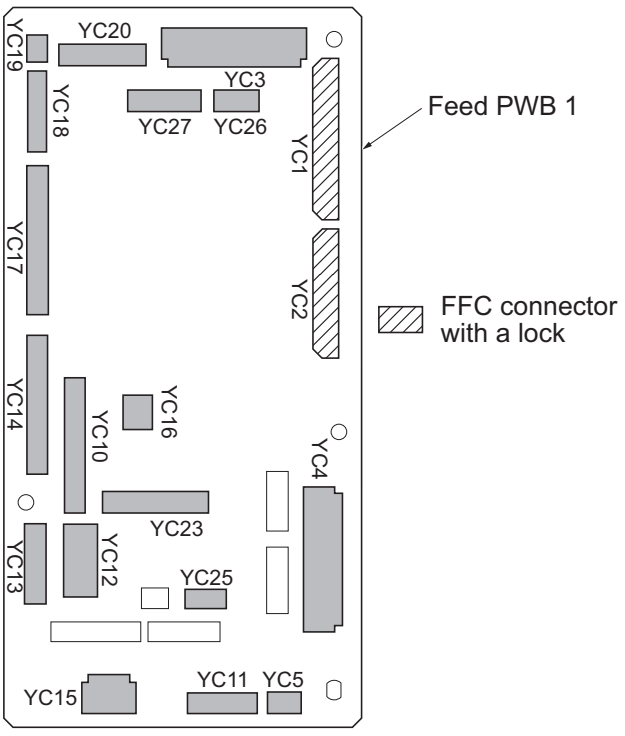


Figure 1-5-102

5. Remove the FFC from the FFC connector with a lock (YC4) on the engine PWB.
   Remove the FFC from the FFC connector with a lock (YC1) on the feed PWB 2.

*: When removing the FFC from the FFC connector with a lock, remove the FFC after released by lifting down the lock lever (see page 1-5-45).

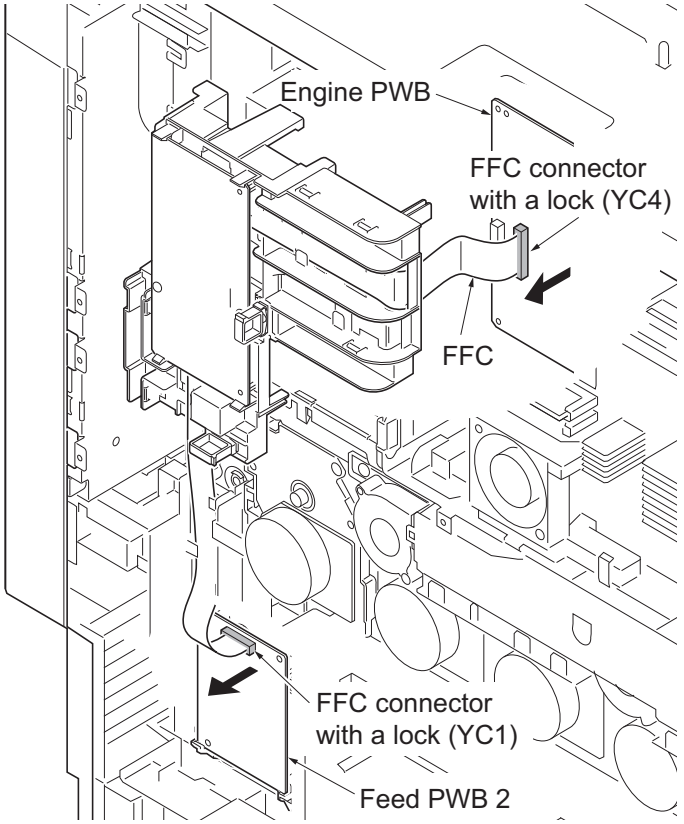


Figure 1-5-103

6. Remove three screws.
7. Remove the feed PWB 1 assembly.

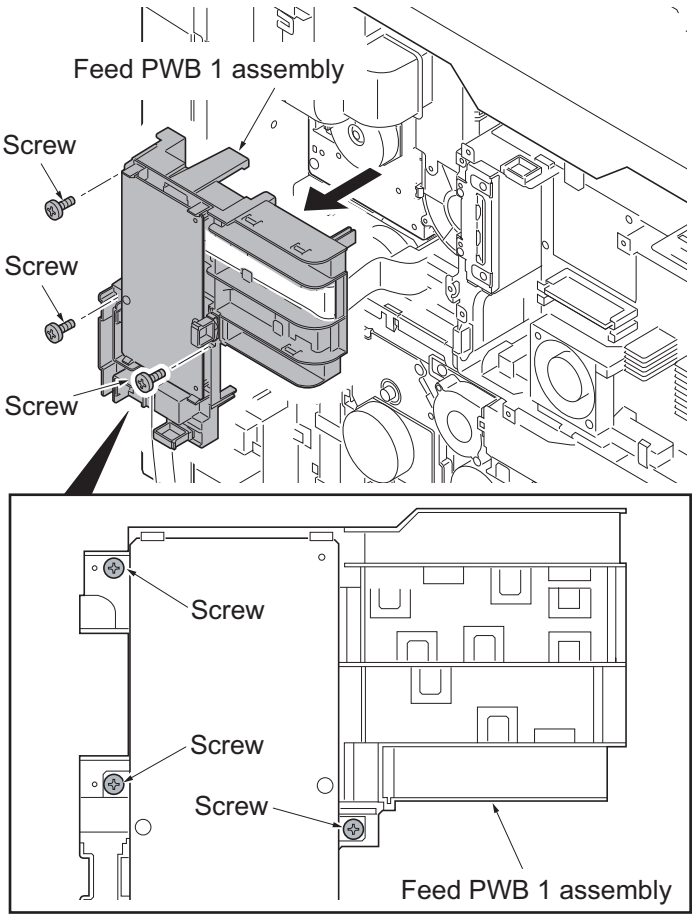


Figure 1-5-104

8. Remove the connector.
9. Remove three screws.
10. Remove the fuser drive unit.

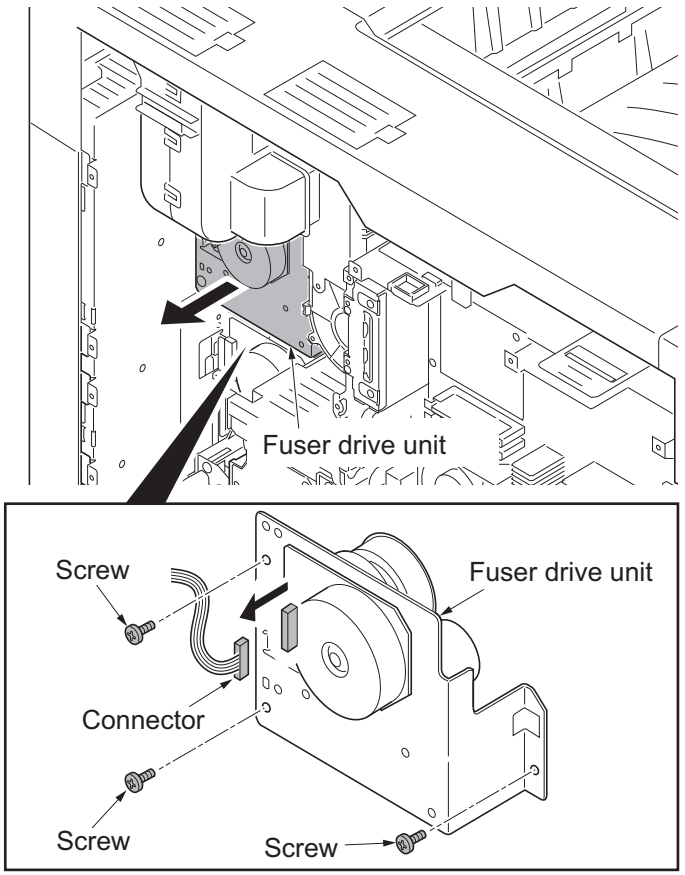


Figure 1-5-105

Detaching the transfer drive unit

11. Pull out the transfer belt unit a little (see page 1-5-34).
12. Release the clamp.
13. Remove the connector.
14. Remove three screws.
15. Remove the transfer drive unit.

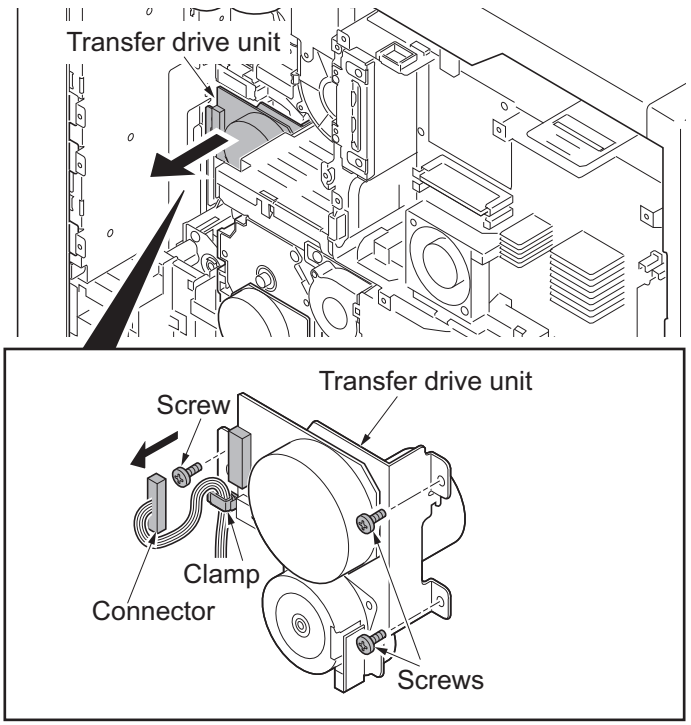


Figure 1-5-106

Detaching the feed drive unit

16. Remove three wire holders from the feed 2 FFC guide.

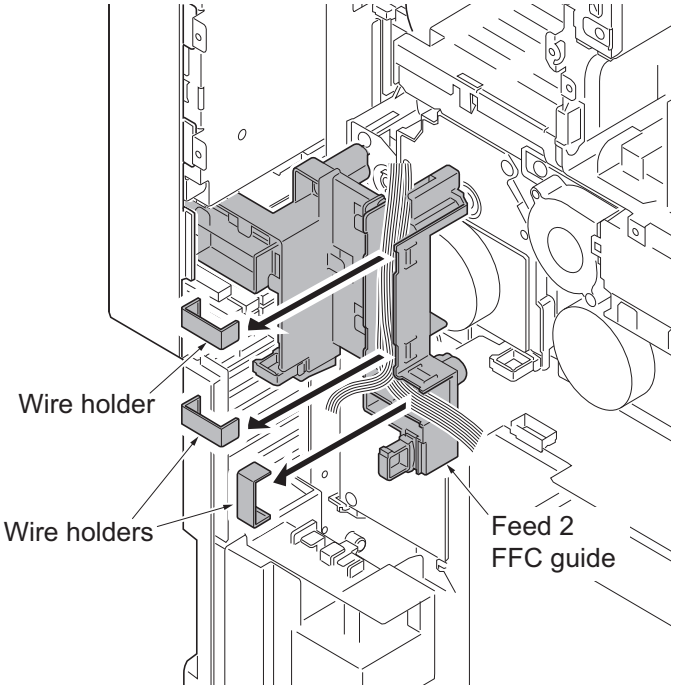


Figure 1-5-107

17. Remove two screws and then remove the feed 2 FFC guide.

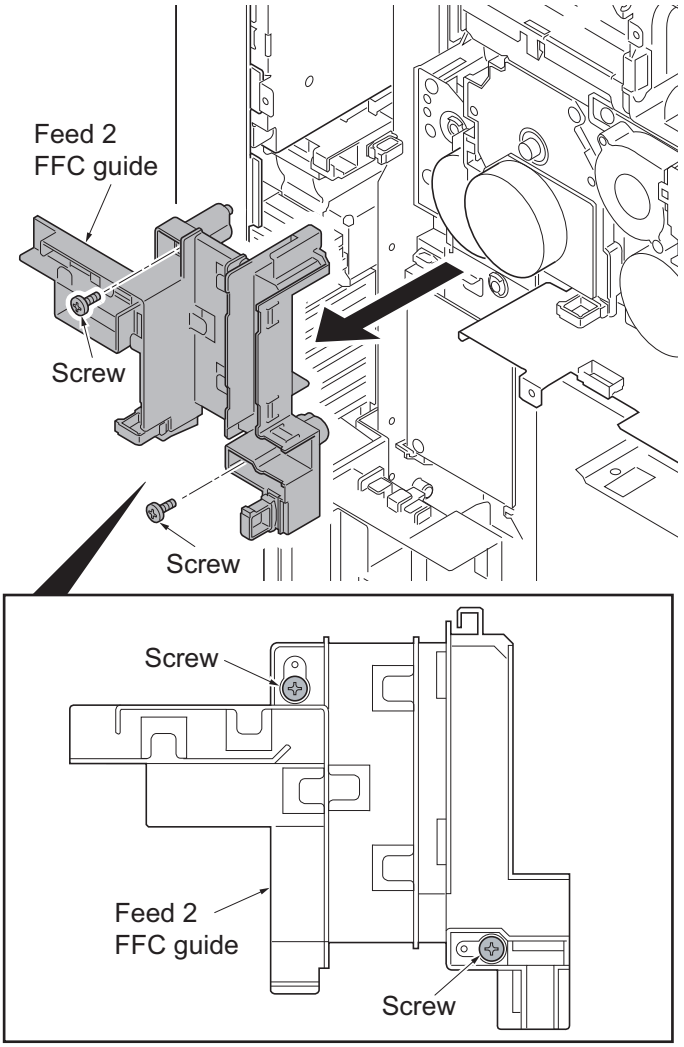


Figure 1-5-108

18. Remove the following nine connectors from the feed PWB 2.
    YC10
    YC11
    YC7
    YC8
    YC3
    YC5
    YC6
    YC13
    YC12

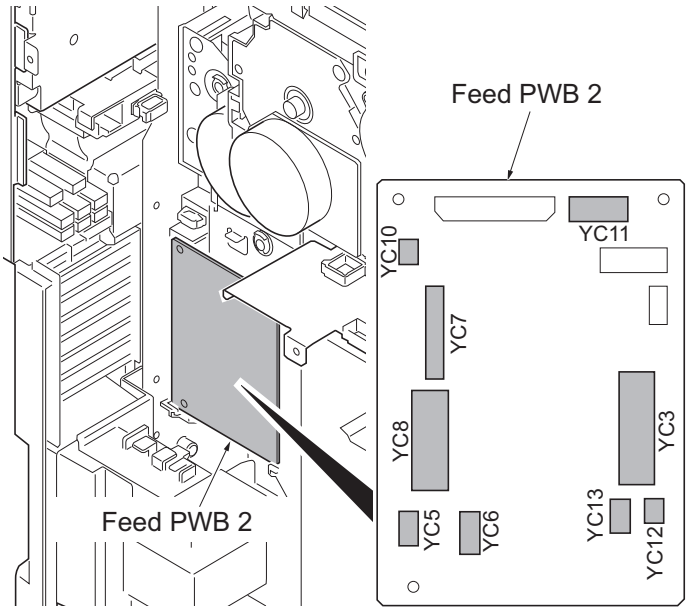


Figure 1-5-109

19. Remove three screws.
20. Remove the feed drive unit.

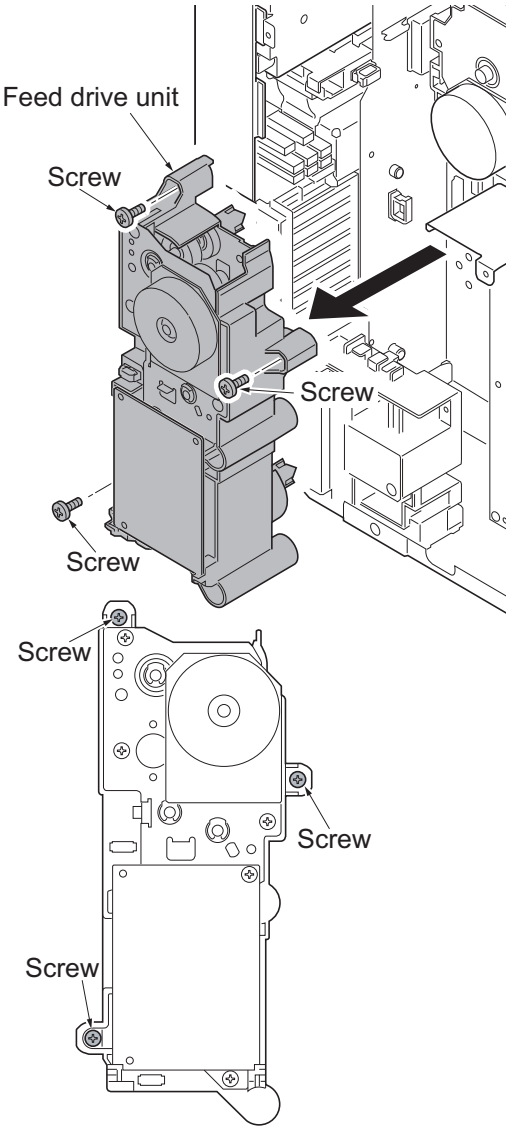


Figure 1-5-110

21. Check or replace the feed drive unit and refit all the removed parts.
    *: Connect the connector (yellow) to the connector of paper feed clutch 1 on stamp [YELLOW] side as before, when removing the connector of the paper feed clutch as the check of the feed drive unit etc.

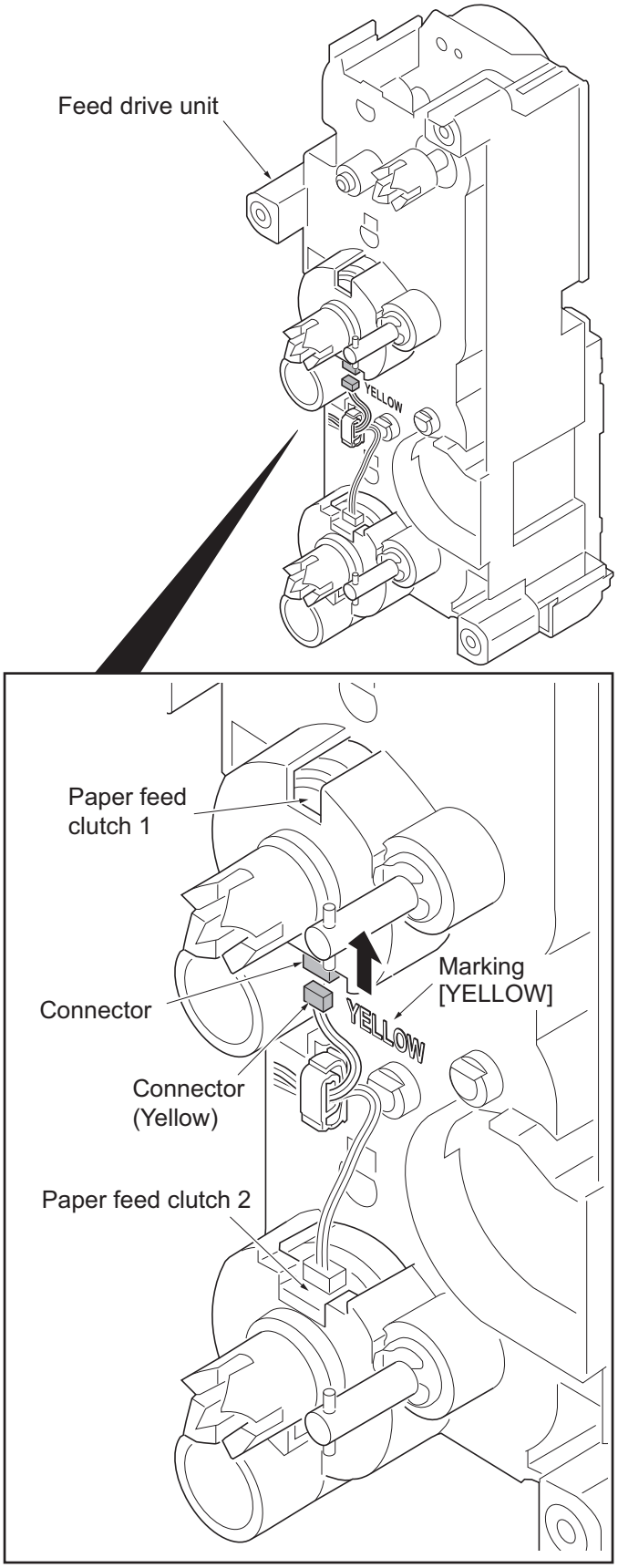


Figure 1-5-111

(4) Detaching and refitting the lift motor 1 and 2

Procedure

1. Remove the rear lower cover (see page 1-5-56).
2. Remove the power source assembly (see page 1-5-51).
3. Remove the connector each.
4. Remove two screws each.
5. Remove the lift motor 1 and 2.
6. Check or replace the lift motor and refit all the removed parts.

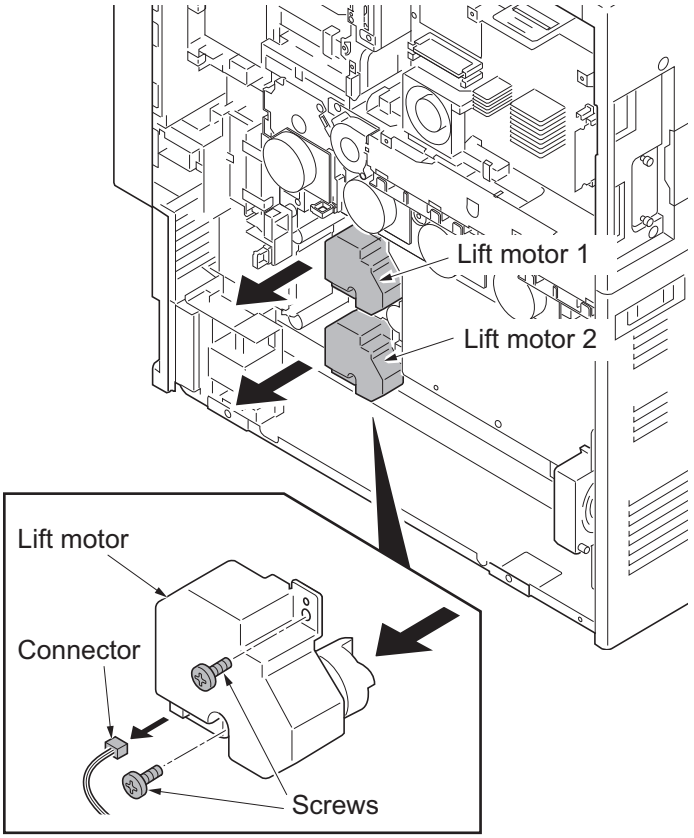


Figure 1-5-112

1-5-9 Others

(1) Detaching the eject filter

Procedure

1. Unhook the hook each and remove two eject filter units.
2. Remove the eject filter from the eject cover.
3. Clean or replace the eject filter and refit the filter.

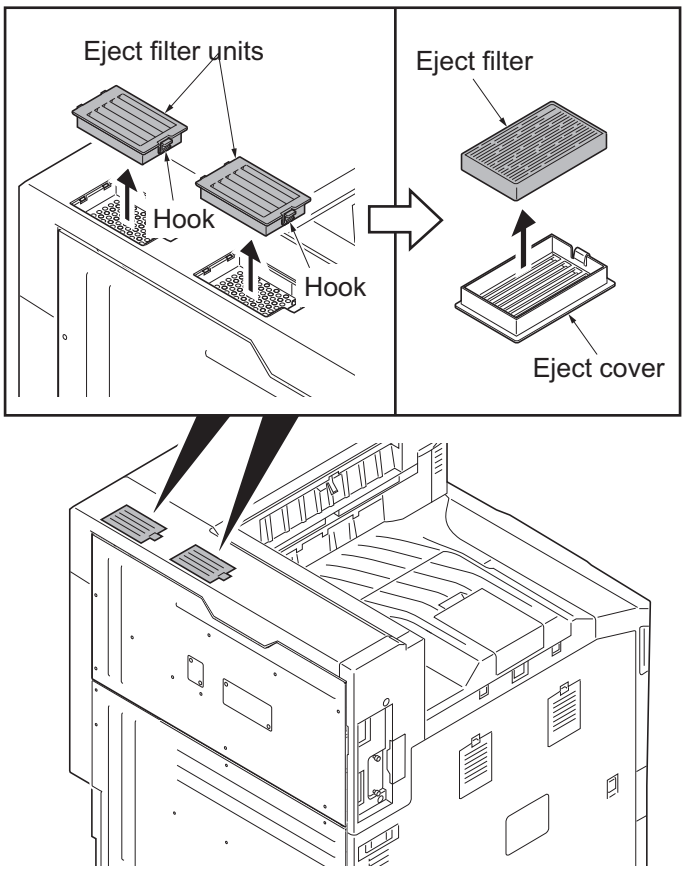


Figure 1-5-113

(2) Detaching and refitting the toner filter

Procedure

1. Remove the toner filter unit while gripping the levers.
2. Clean or replace the toner filter unit and refit the filter.

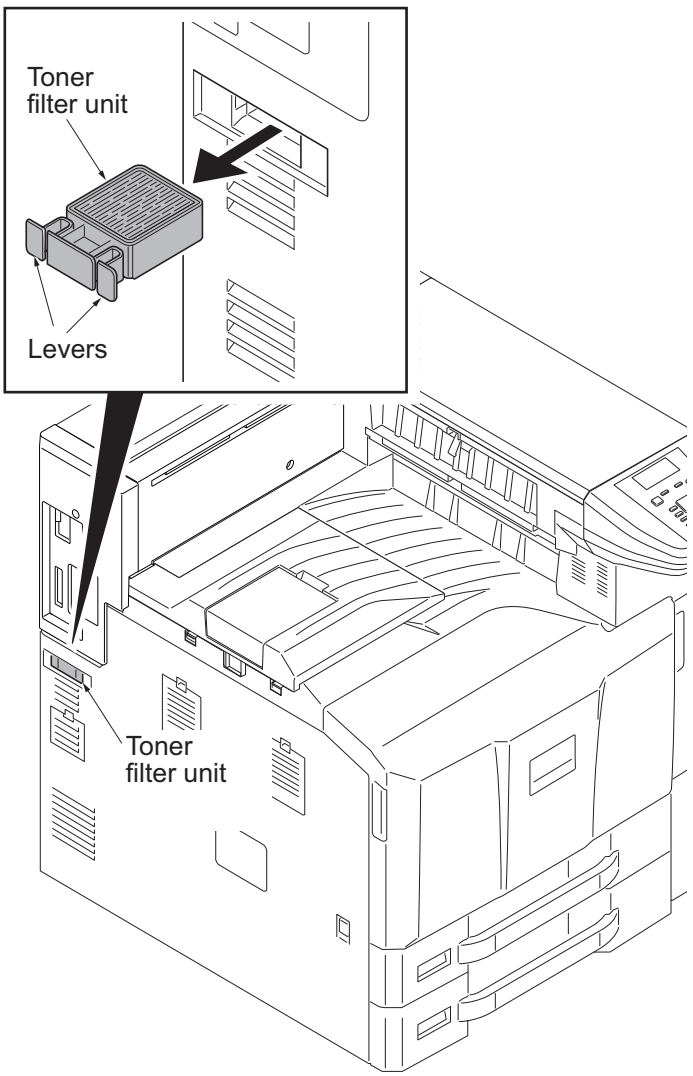


Figure 1-5-114

(3) Detaching and refitting the fan filter

Procedure

1. Open the front cover.
2. Remove the fan filter by releasing the lever.
3. Clean the fan filter.
4. Refit the fan filter.

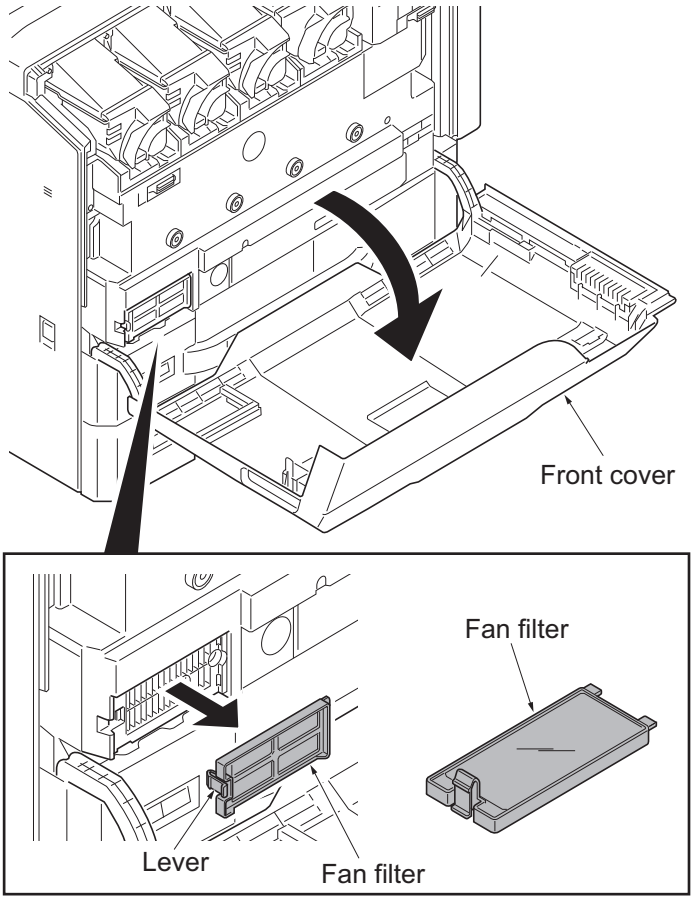


Figure 1-5-115

(4) Detaching and refitting the transfer belt filter

Procedure

1. Remove two transfer belt filters by releasing the lever.
2. Clean the transfer belt filter.
3. Refit the transfer belt filter.

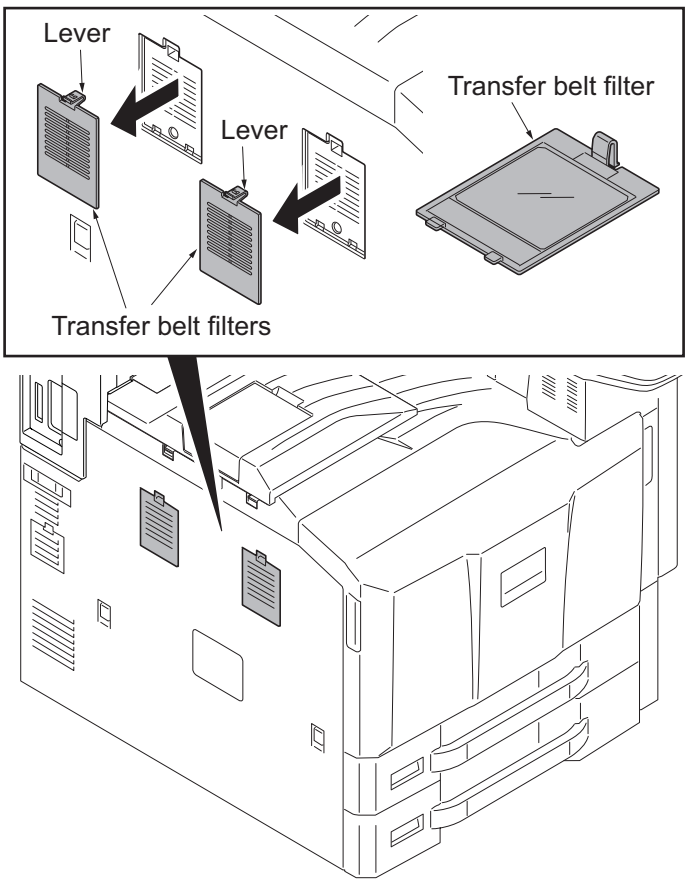


Figure 1-5-116

(5) Detaching and refitting the left filter

Procedure

1. Remove the left filter cover by releasing the lever.
2. Remove the left filter.
3. Clean or replace the left filter and refit the filter.

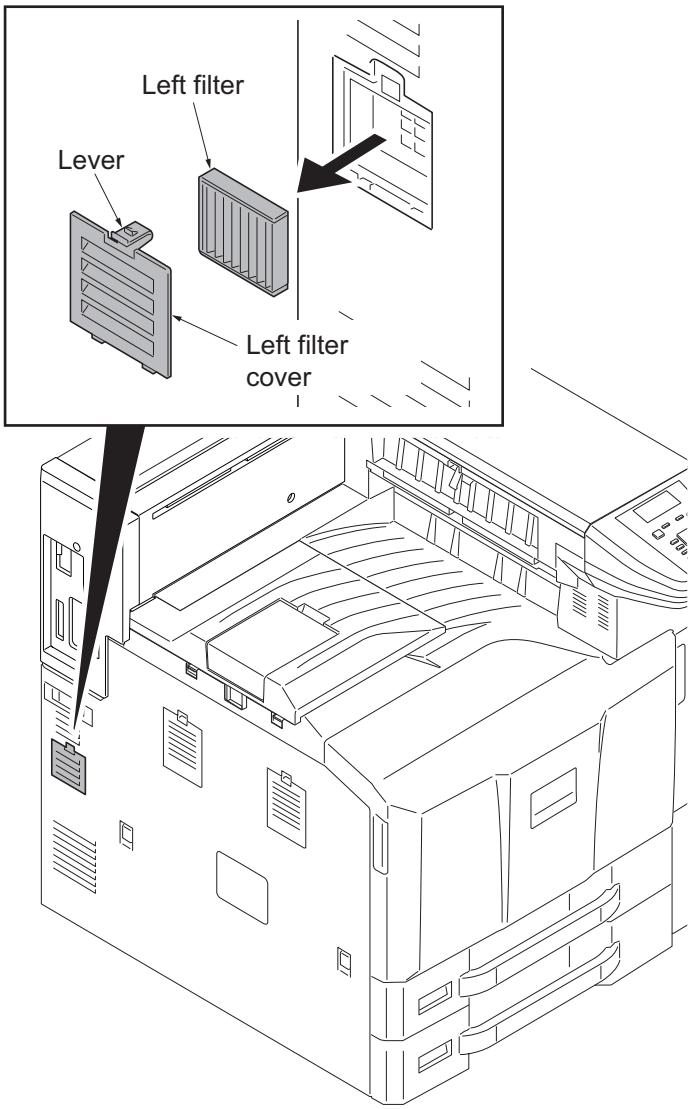


Figure 1-5-117

(6) Detaching and refitting the developer filter

Procedure

1. Remove the developer filter cover by releasing the lever.
2. Remove the developer filter.
3. Clean the developer filter and refit the filter.

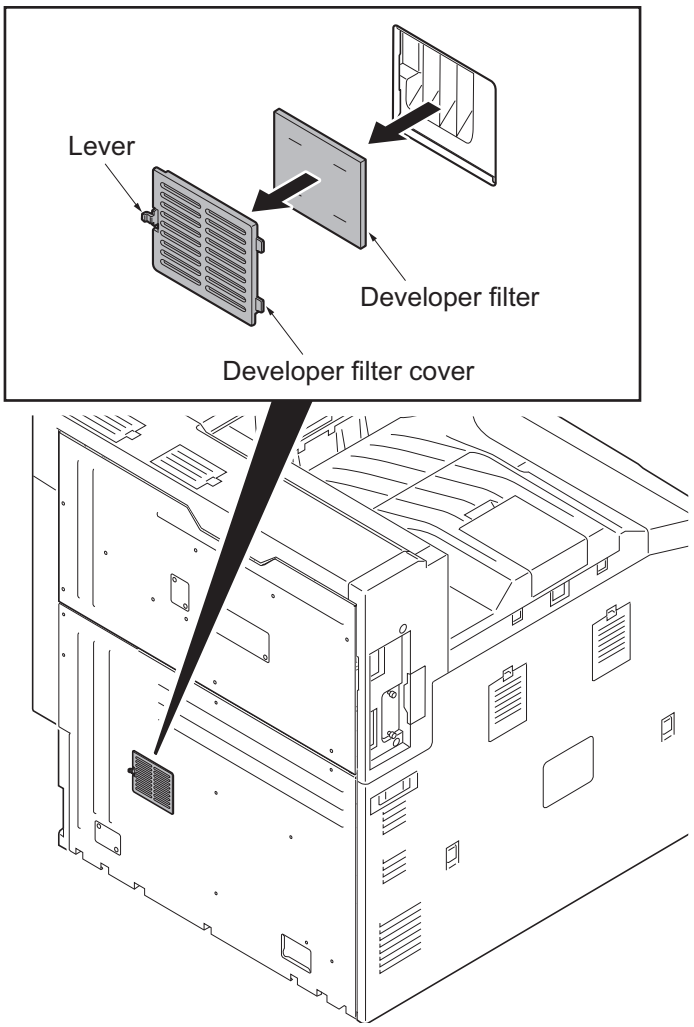


Figure 1-5-118

(7) Detaching and refitting the hard disk unit

Procedure

1. Perform maintenance mode U917 (backup data reading) (see page 1-3-141).
2. Remove the rear upper cover (see page 1-5-56).
3. Release the wire saddle.
4. Remove two screws.

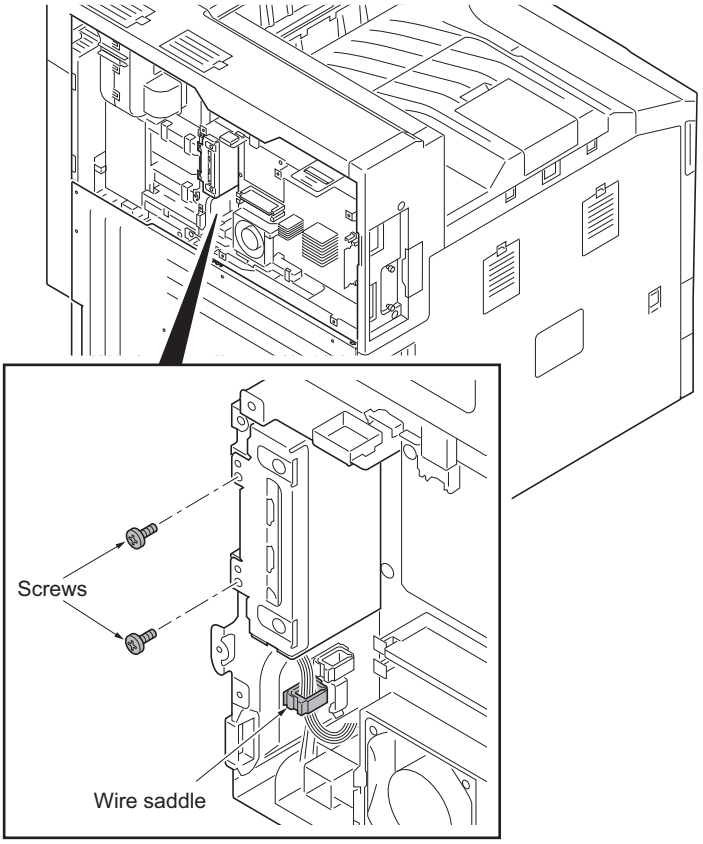


Figure 1-5-119

5. Unhook two hooks and pull out the HDD bracket a little.

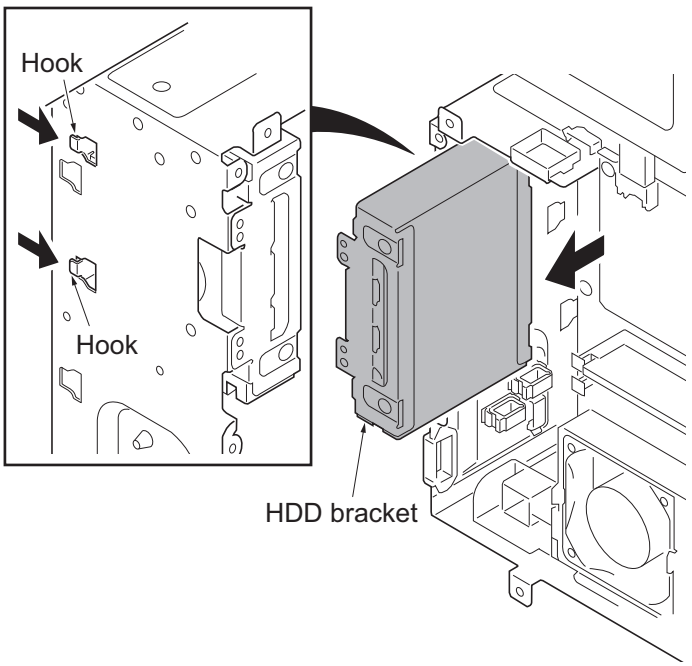


Figure 1-5-120

6. Remove two connectors from the hard disk unit while pushing the lock lever. Number of hard disk unit equipmentl: 1

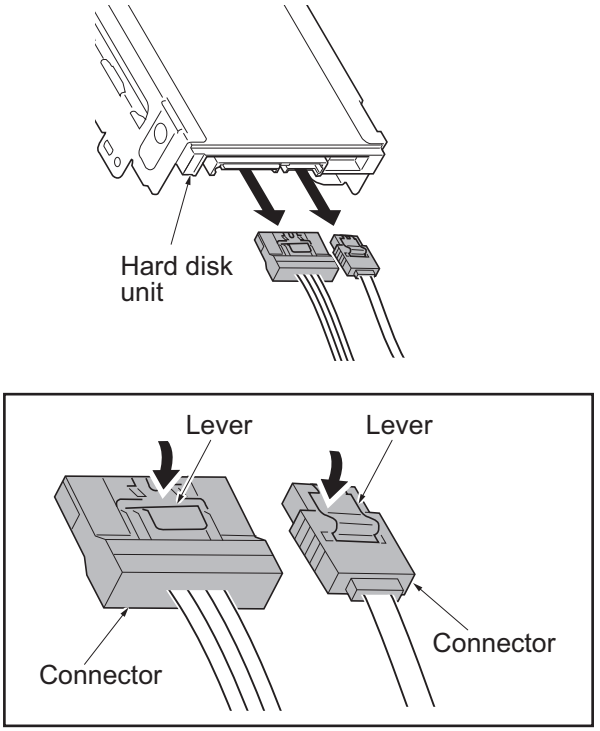


Figure 1-5-121

7. Remove four screws and then remove the hard disk unit from the HDD bracket.
8. Replace the hard disk unit and refit all the removed parts.
9. Perform maintenance mode U024 (HDD formatting) (see page 1-3-27).
10. Install the firmwares by the following procedure.
    1)Connects to the machine the USB memory that preserved Software LANGUAGE BR, JP (Opt Font,Opt Msg), and the PDF1.7 resource. The firmware is installed by switching the main power switch to ON/OFF.
11. Perform maintenance mode U917 (backup data writing) (see page 1-3-141).

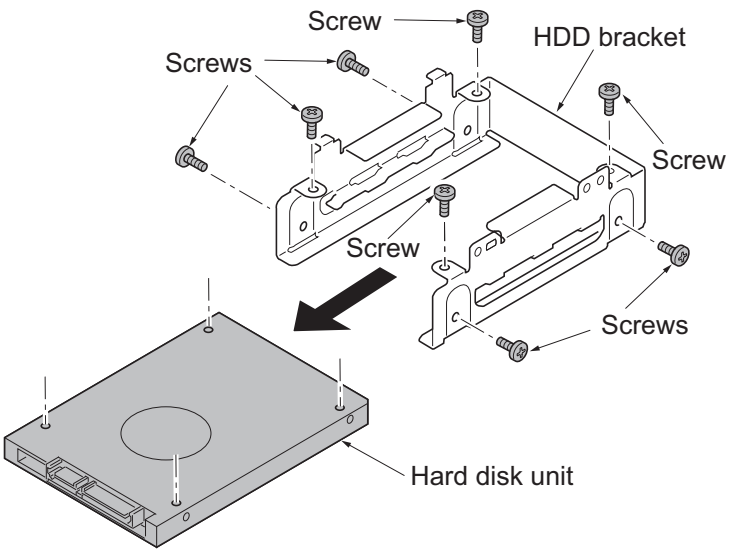


Figure 1-5-122

(8) Detaching and refitting the eject unit

Procedure

1. Pull out the paper conveying unit.
2. Remove the fuser unit (see page 1-5-40).
3. Remove the connector.
4. Remove four screws and then remove the eject unit.
5. Check or replace the eject unit and refit all the removed parts.

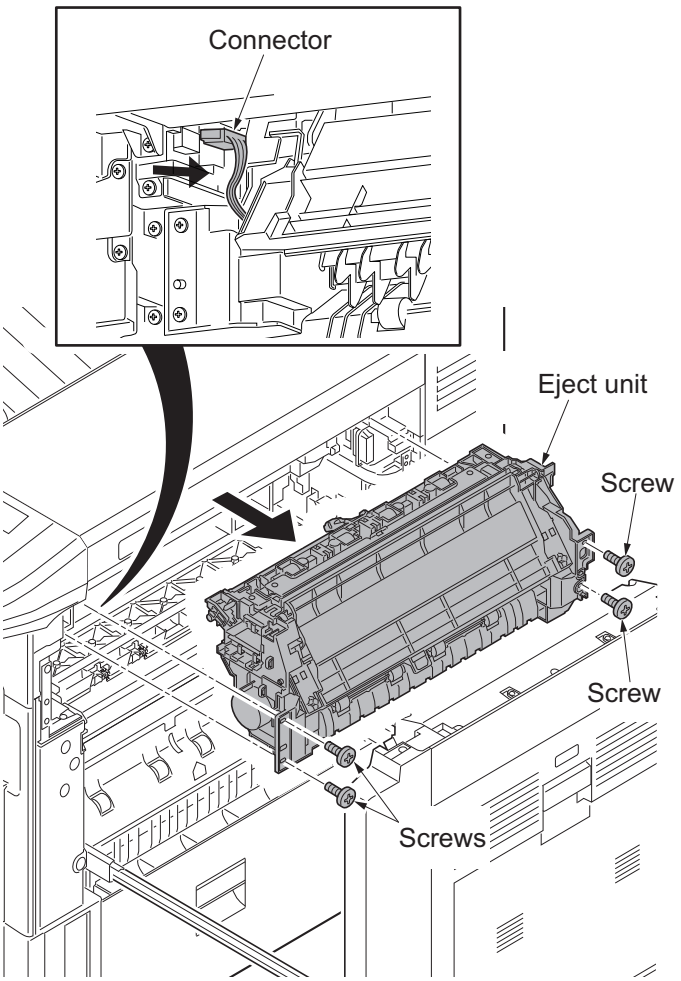


Figure 1-5-123

Cautions on installing the eject unit

When an additional actuator is installed at the upper actuator while installing the bridge unit, inserting the eject unit into the device, use care that the eject unit does not get in contact with the eject guide, by keeping its actuator lifted while inserting.

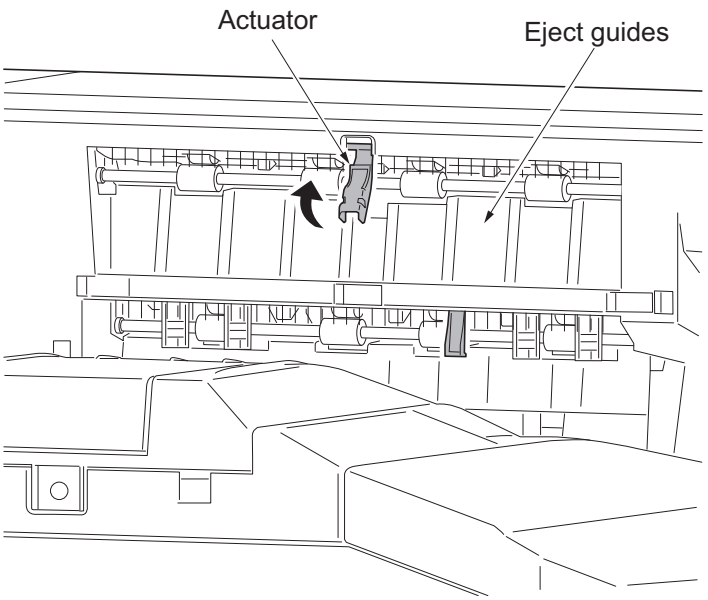


Figure 1-5-124

(9) Direction of installing the principal fan motors

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

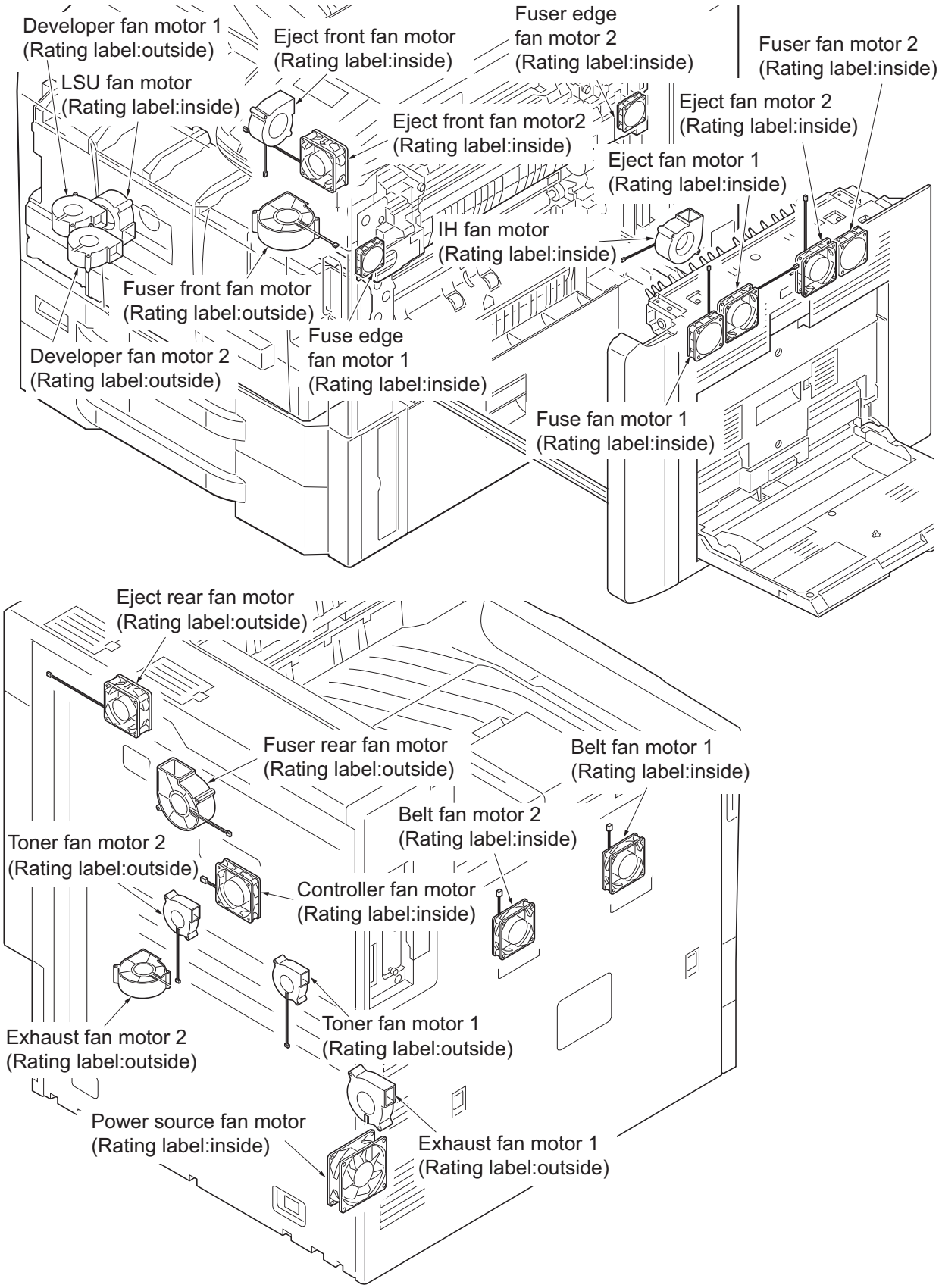


Figure 1-5-125

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1-6-1 Upgrading the firmware

Follow the procedure below to upgrade the firmware of main PWB, engine PWB, fuser IH PWB, motor control PWB, PDF Resource, optional language, color table and optional devices.

Preparation

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

Procedure

1. Perform maintenance item U000 (maintenance report output) and check U019 ROM version.
2. After confirming the data lamp is turned off, perform shut-down on the operation panel, turn power off, and unplug the power receptacle (see page P.1-2-19).
3. Insert the USB flash device in which the firmware has been written into a notch hole of the machine.
4. Turn the main power switch on. Upgrading firmware starts (blinking the memory LED).
   Caution:
   Never turn off the power switch or remove the USB flash device during upgrading.
5. [ROM version] is displayed on the touch panel when upgrading is complete.
6. Perform shut-down, and turn the main power switch to off.
7. Wait for several seconds and then remove the USB flash device from the machine.
8. Turn the main power switch on.
9. Perform maintenance item U000 (maintenance report output) and check that U019 ROM version has been upgraded.

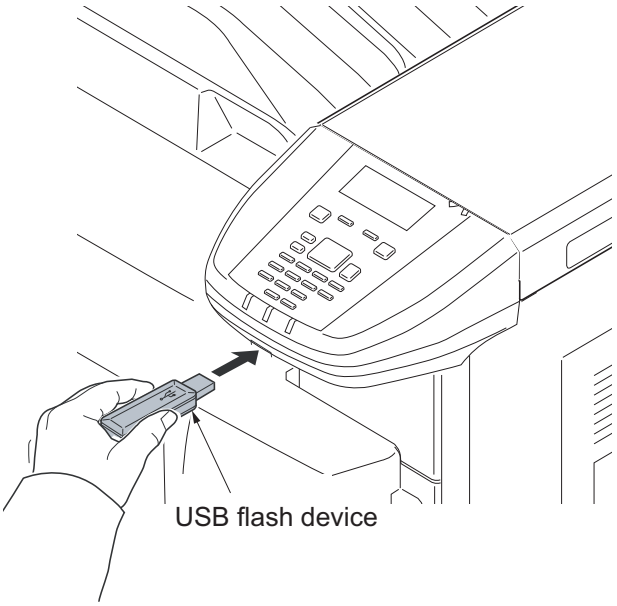

Figure 1-6-1

1-6-2 Remarks on main PWB replacement

When replacing the main PWB, remove the EEPROM (YC14) and code DIMM (YS4) from the main PWB that has been removed and then reattach it to the new main PWB.

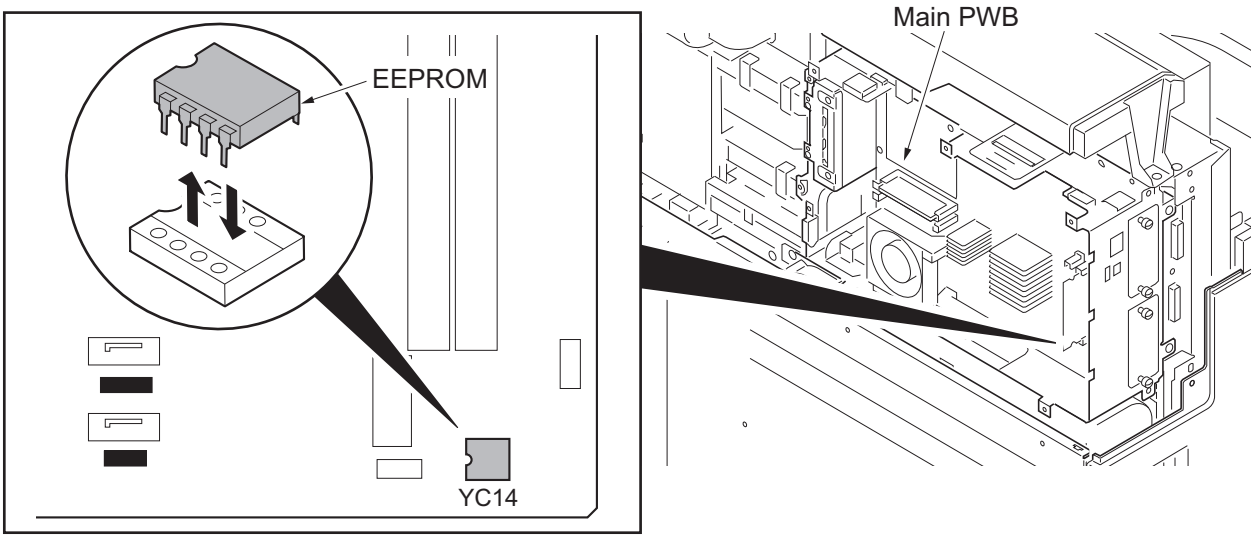

Figure 1-6-2

When refitting DIMM, check “CODE” marked on the PWB and refit them to the original position.

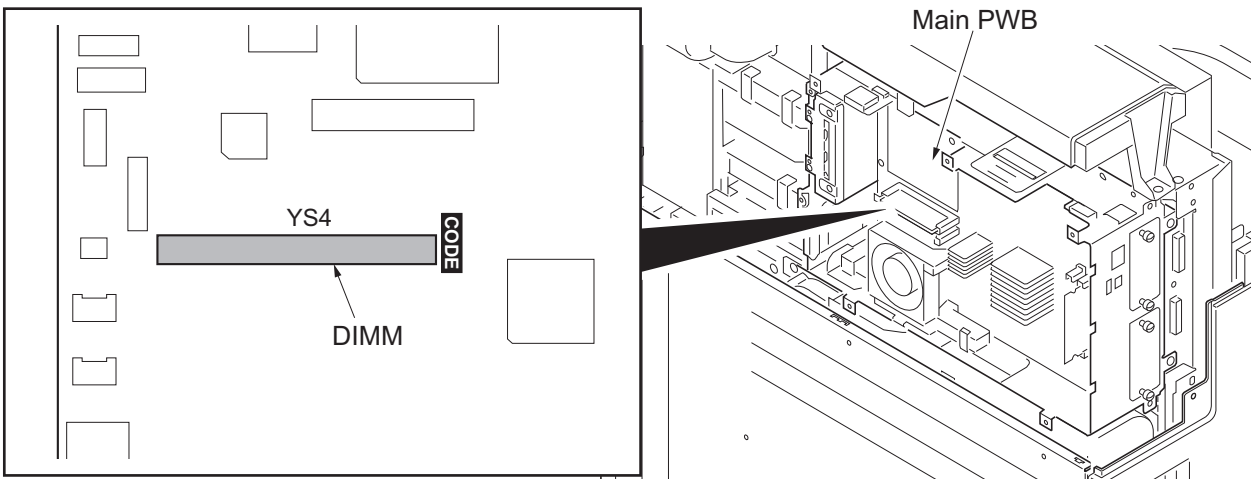

Figure 1-6-3

If the code DIMM (YS4) was replaced with a service supplied part, perform the following.

1. Insert the USB flash device in which the latest firmware was copied, into the slot on the machine and turn power on.(see page P.1-6-1)
2. Referring to the U000 maintenance report printed previously, enter the following values.
   U278 Setting the delivery date
   U952 Maintenance mode workflow
3. Reset machine settings.(Resets system menu settings modified at setup to their defaults.)
   Main items for settings
   [Date Setting] - Date and time settings.
   [User/Job accounting] - Defaults for user authentication and job accounting only.
   Resettings are not required as the data are stored in harddisk.
   [Network] - Network settings (IP address)
   [Adjustment/Maintenance] - Silent Mode setting

4. Run the maintenance mode for image adjustments which follows.
   1. Performs maintenance mode U464 (Calibration) (see page P.1-3-118).
   2. Performs maintenance mode U469 (Auto color registration correction) (see page P.1-3-126).

1-6-3 Remarks on engine PWB replacement

When replacing the engine PWB, remove the EEPROM (U100) from the engine PWB that has been removed and then reattach it to the new engine PWB.

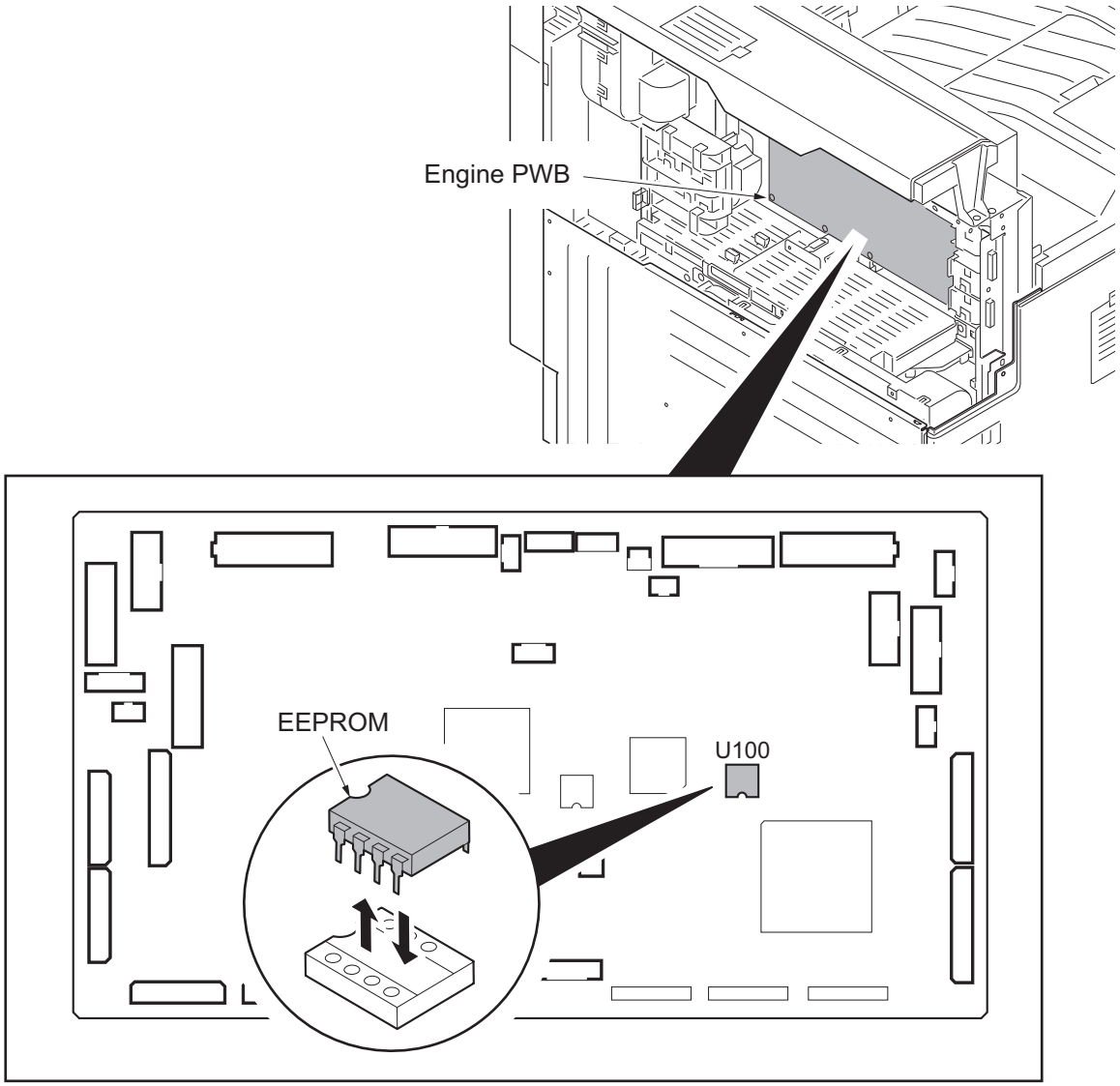

Figure 1-6-4

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

Cassette paper feed section consists of the paper holder with the cassette operation plate activated by lift motor 1 and 2, and the pulleys, such as the forwarding pulley, the paper feed pulley and the separation pulley, for extracting and conveying the paper. Paper is fed out of the cassette by the rotation of the forwarding pulley, paper feed pulley and separation pulley.

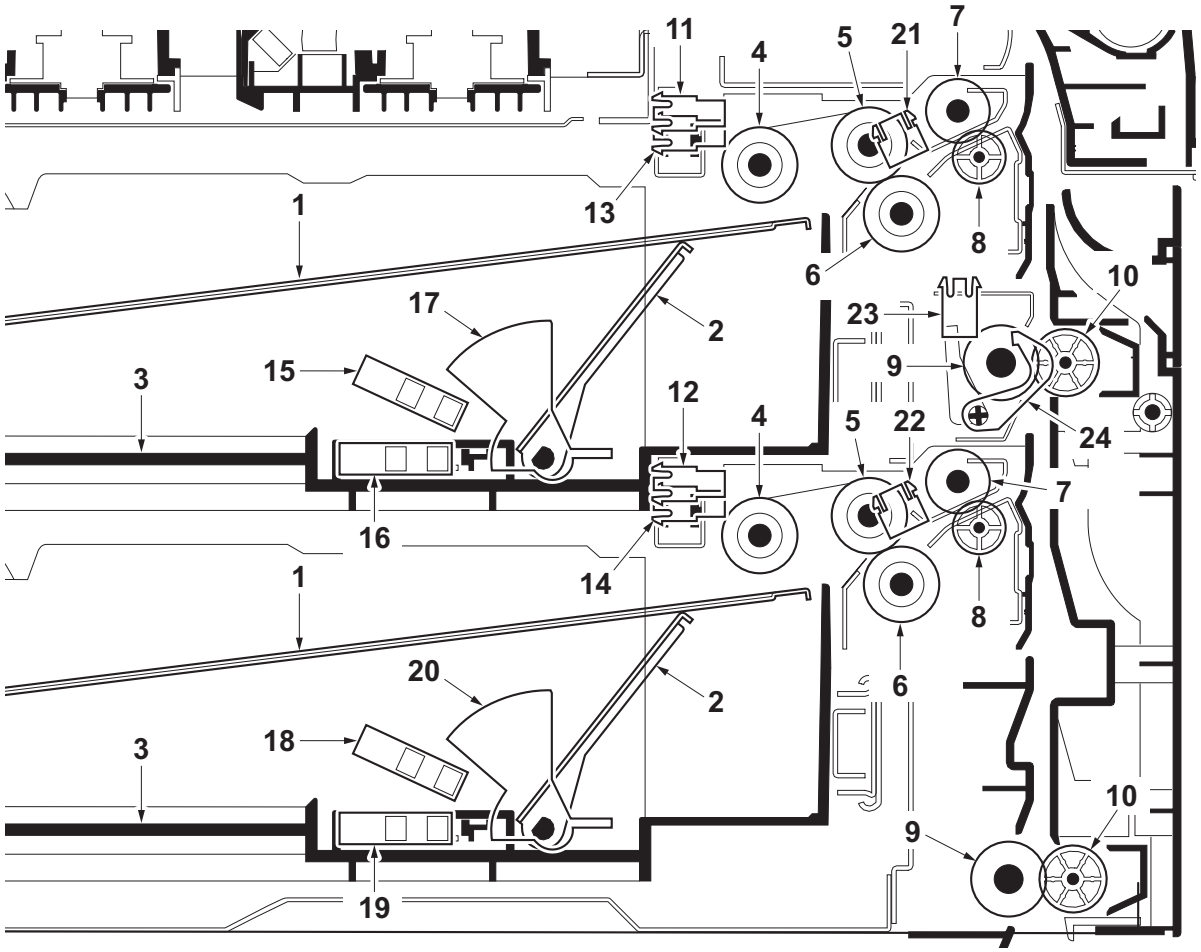

Figure 2-1-1 Cassette paper feed section

1. Cassette base
2. Cassette operation plate
3. Cassette
4. Forwarding pulleys
5. Paper feed pulleys
6. Separation pulleys
7. Assist rollers
8. Assist pulleys
9. Paper conveying roller
10. Paper conveying pulley
11. Paper sensor 1 (PS1)
12. Paper sensor 2 (PS2)
13. Lift sensor 1 (LS1)
14. Lift sensor 2 (LS2)
15. Paper gauge sensor 1 (U) (PGS1(U))
16. Paper gauge sensor 1 (L) (PGS1(L))
17. Actuator (Paper gauge sensor 1)
18. Paper gauge sensor 2 (U) (PGS2(U))
19. Paper gauge sensor 2 (L) (PGS2(L))
20. Actuator (Paper gauge sensor 2)
21. Feed sensor 1 (FS1)
22. Feed sensor 2 (FS2)
23. Paper conveying sensor (PCS)
24. Actuator (Paper conveying sensor)

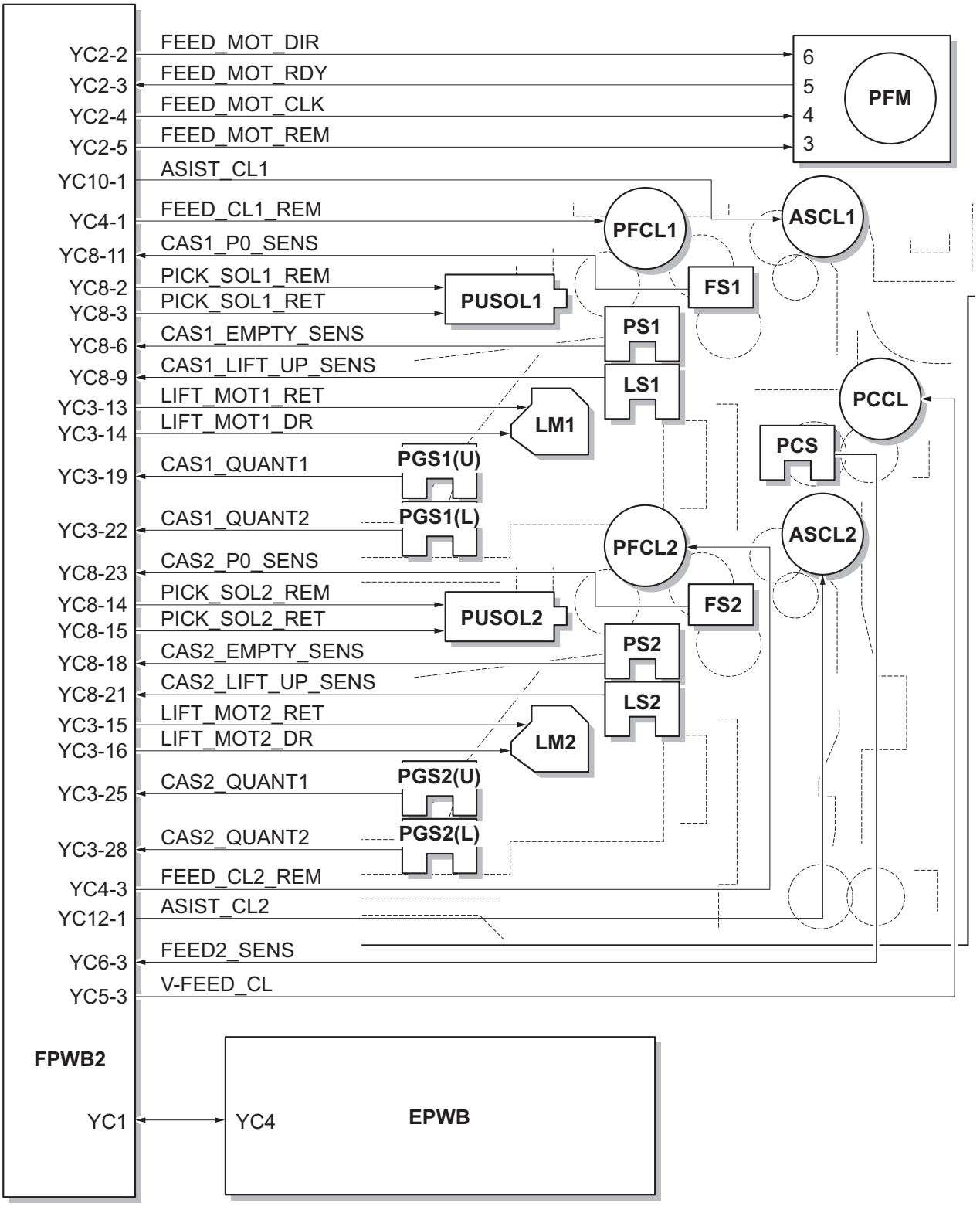

Figure 2-1-2 Cassette paper feed section block diagram

(2) MP tray paper feed section

Paper is fed out of the MP tray by the rotation of the MP forwarding pulley, MP paper feed pulley and MP separation pulley. The MP separation pulley prevents multiple sheets from being fed at one time by the torque limiter.

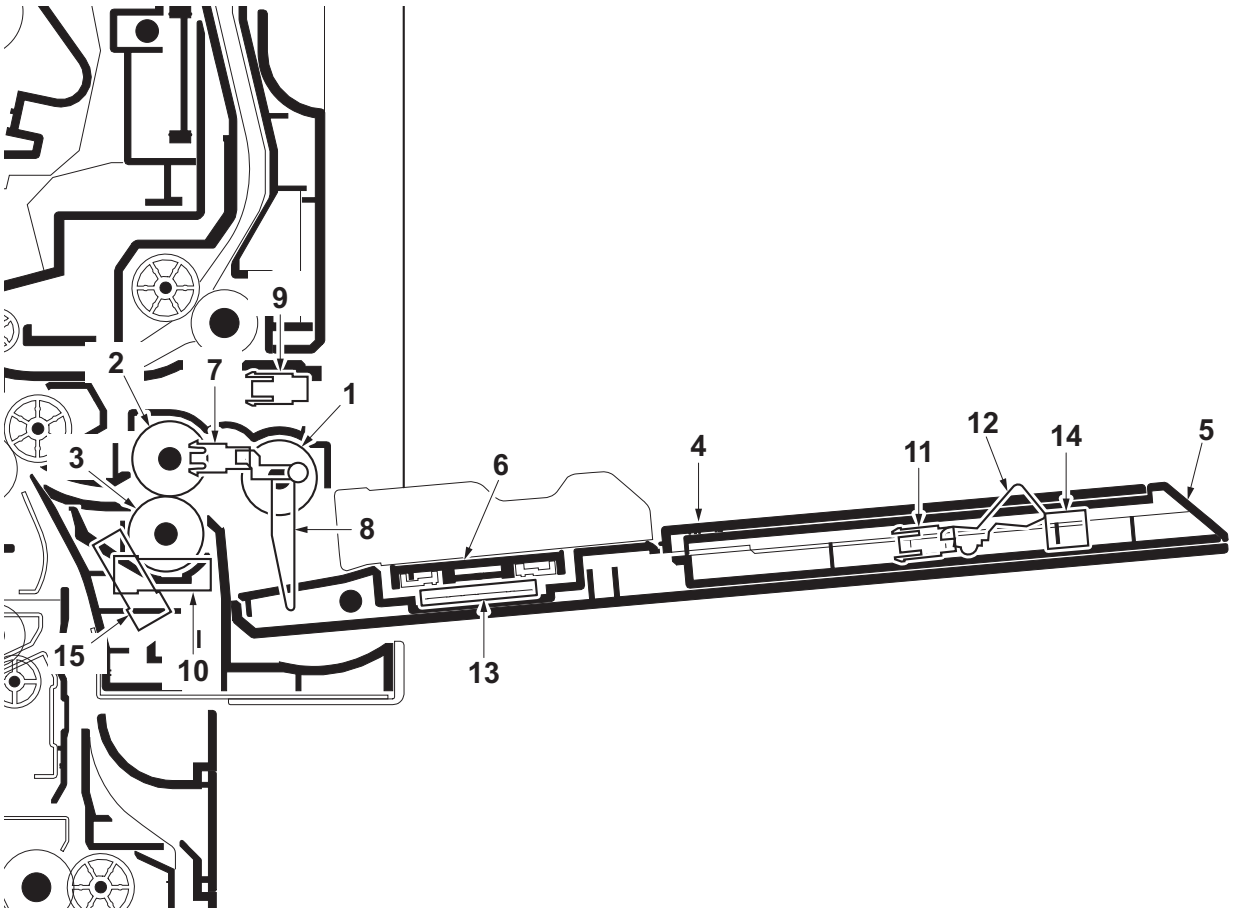

Figure 2-1-3 MP tray paper feed section

1. MP forwarding pulley
2. MP paper feed pulley
3. MP separate pulley
4. MP table
5. MP support Tray
6. MP lift base
7. MP paper sensor (MPPS)
8. Actuator (MP paper sensor)
9. MP lift sensor 1 (MPLS1)
10. MP lift sensor 2 (MPLS2)
11. MP paper length switch (MPPLSW)
12. Actuator (MP paper length switch)
13. MP paper width switch (MPPWSW)
14. MP tray switch (MPTSW)
15. MP feed sensor (MPFS)

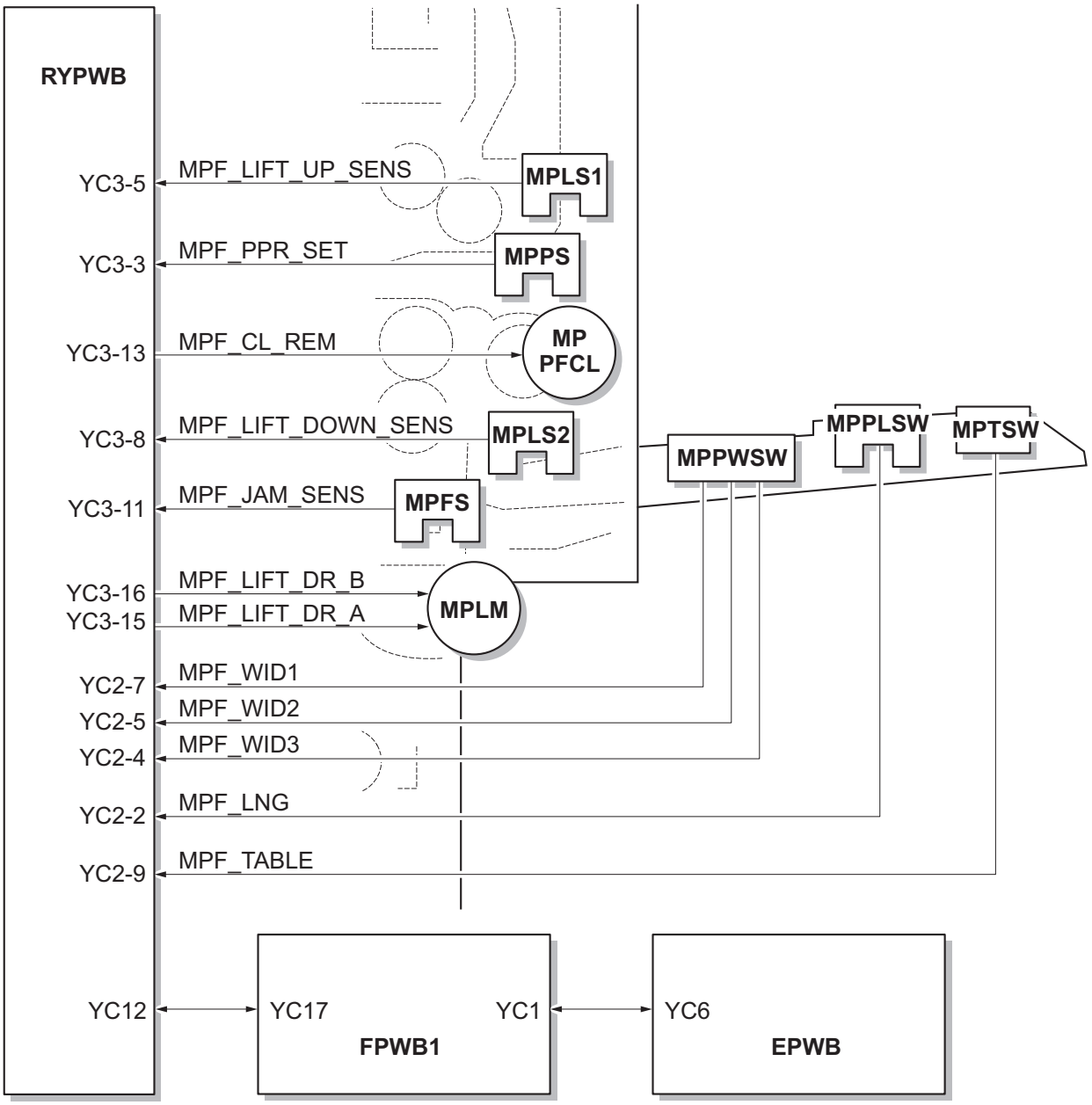

Figure 2-1-4 MP tray paper feed section block diagram

(3) Paper conveying section

The paper conveying section conveys paper to the transfer/separation section as paper feeding from the cassette or MP tray, or as paper refeeding for duplex printing. Paper by feeding is conveyed by the middle roller to the position where the registration sensor (RS) is turned on, and then sent to the transfer/separation section by the right registration roller and left registration roller.

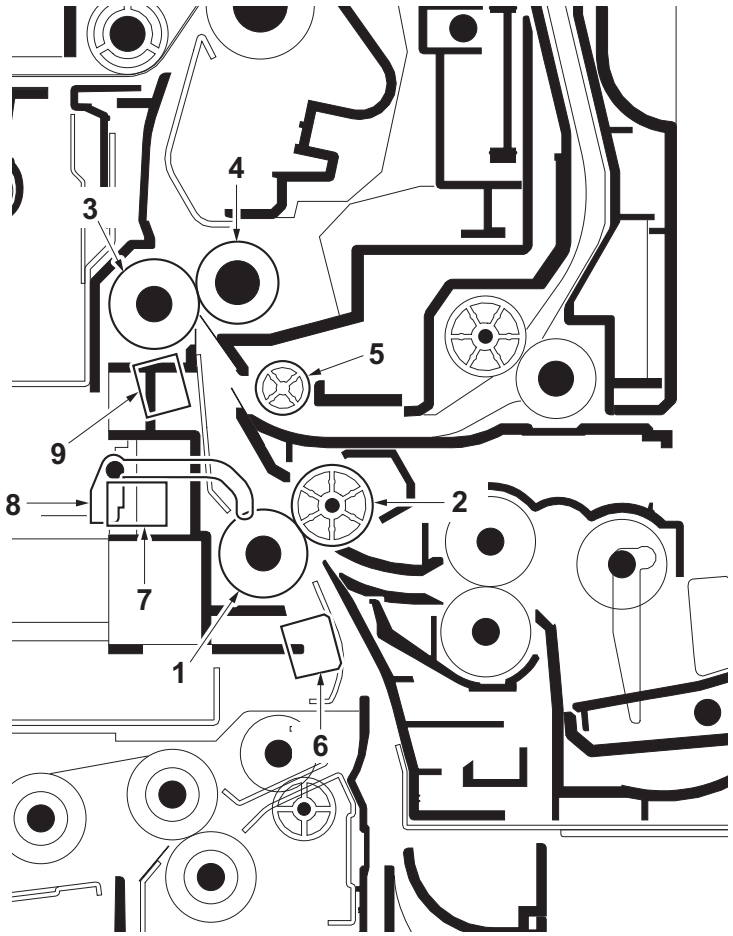

Figure 2-1-5 Paper conveying section

1. Middle roller
2. Middle pulley
3. Left registration roller
4. Right registration roller
5. Paper conveying pulley
6. Middle sensor (MS)
7. Regist deflection sensor (RDS)
8. Actuator (regist deflection sensor)
9. Registration sensor (RS)

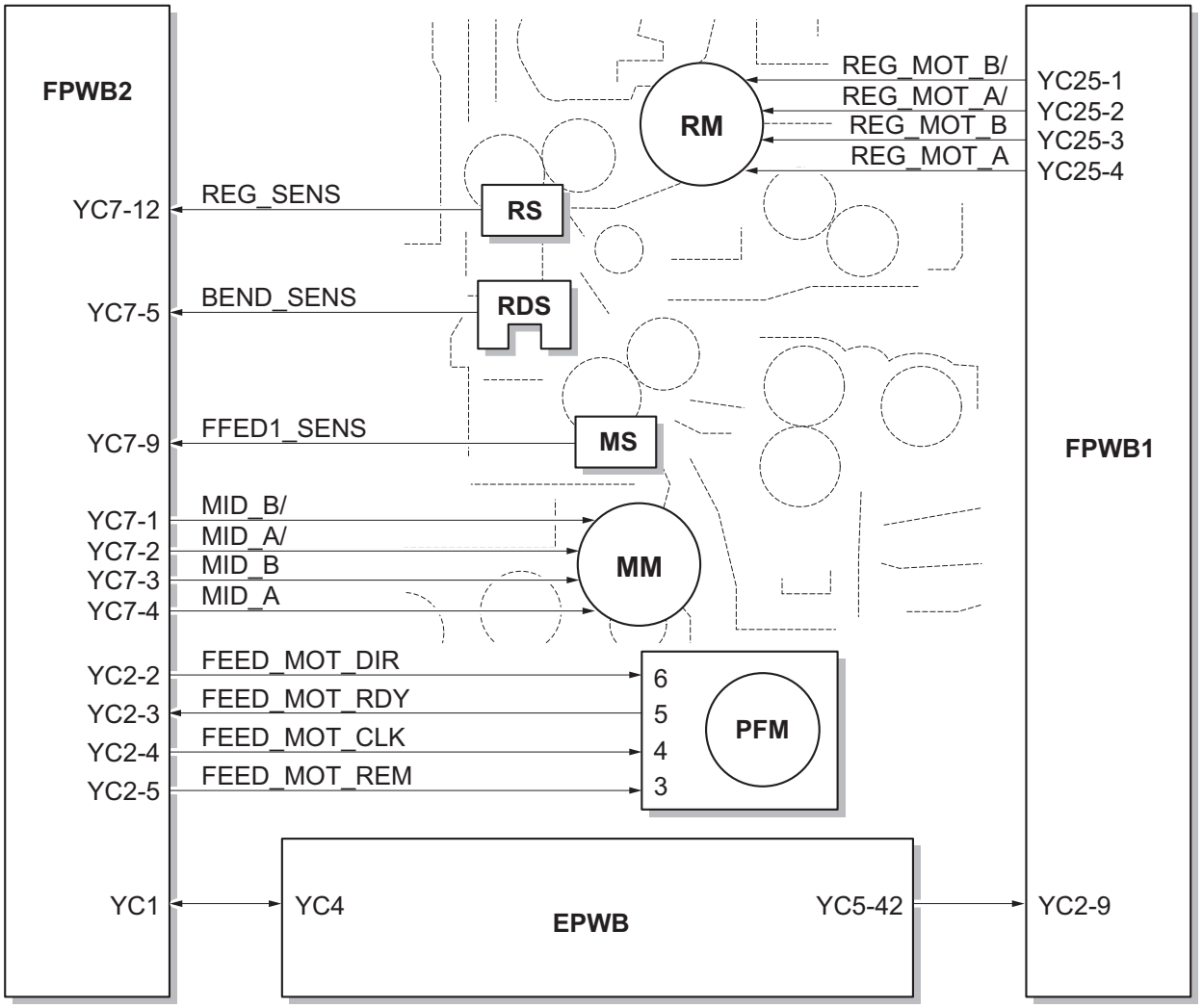

Figure 2-1-6 Paper conveying section block diagram

2-1-2 Drum section

The drum section consists of the charger roller unit, drum and cleaning section. The drum is electrically charged uniformly by means of a charger roller to form a latent image on the surface. The cleaning section consists of the cleaning blade and the cleaning roller which remove residual toner from the drum surface after transfer. The cleaning lamp (CL) consists of LEDs and removes residual charge on the drum before main charging.

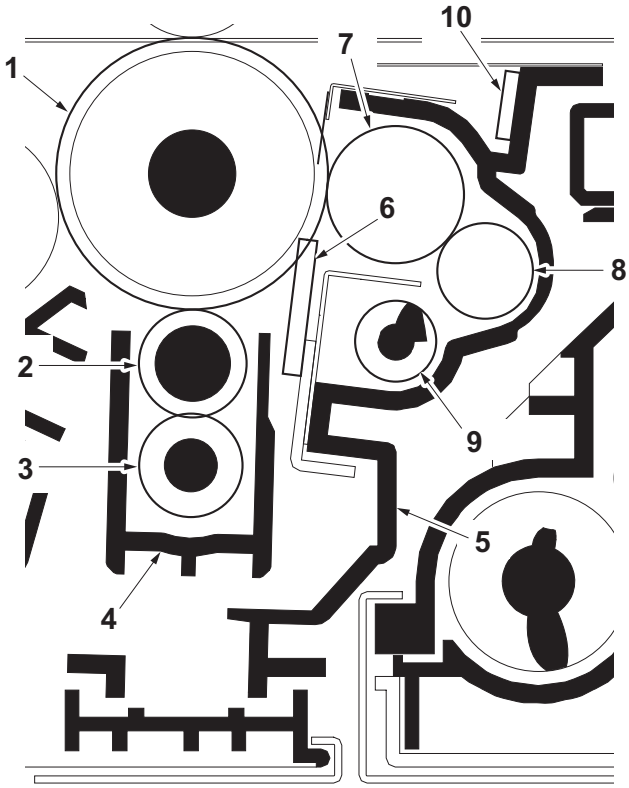

Figure 2-1-7 Drum section

1. Drum
2. Charger roller
3. Charger cleaning roller
4. Charger case
5. Drum frame
6. Cleaning blade
7. Cleaning roller
8. Control roller
9. Drum screw
10. Cleaning lamp (CL)

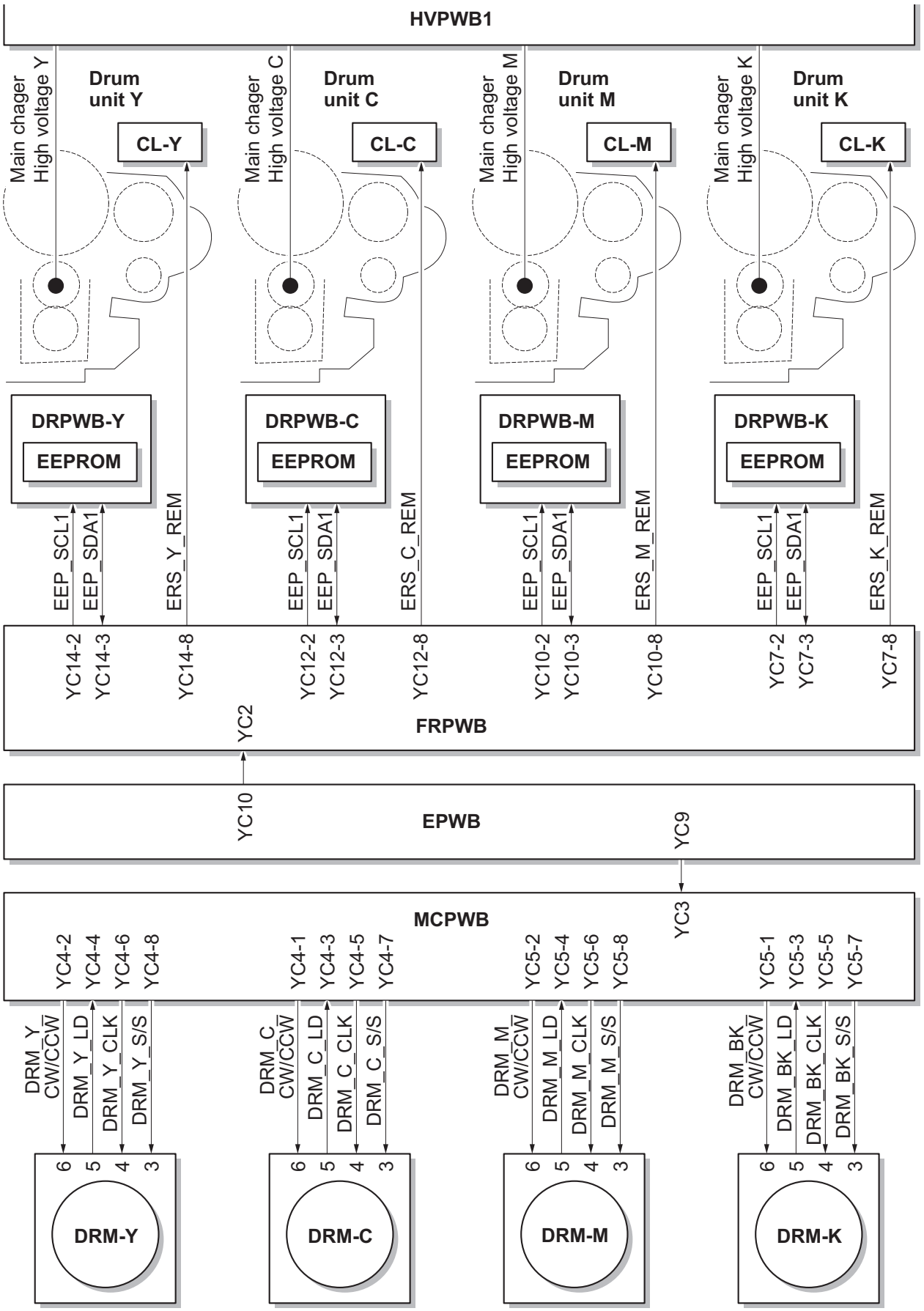

Figure 2-1-8 Drum section block diagram

2-1-3 Developer section

The developer unit consists of the sleeve roller that forms the magnetic brush, the magnet roller, the developer blade and the developer screws that agitate the toner. Also, the toner sensor (TS) checks whether or not toner remains in the developer unit.

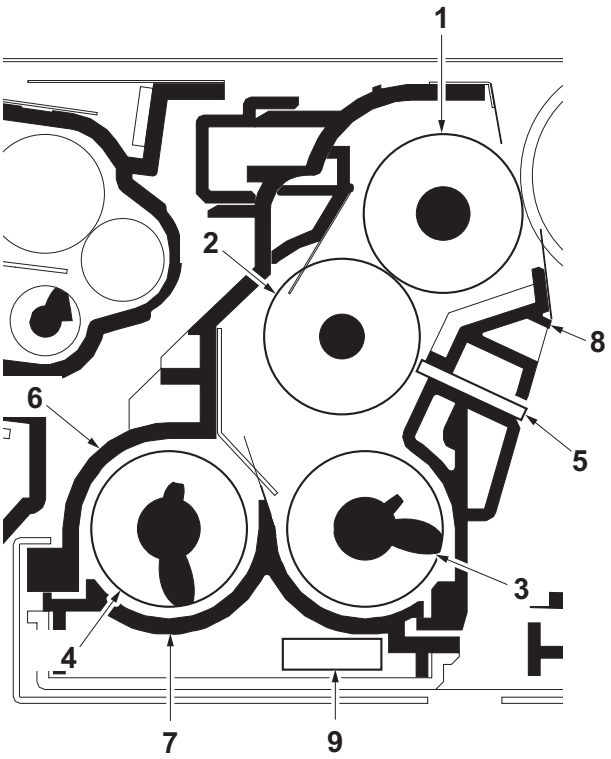

Figure 2-1-9 Developer section

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

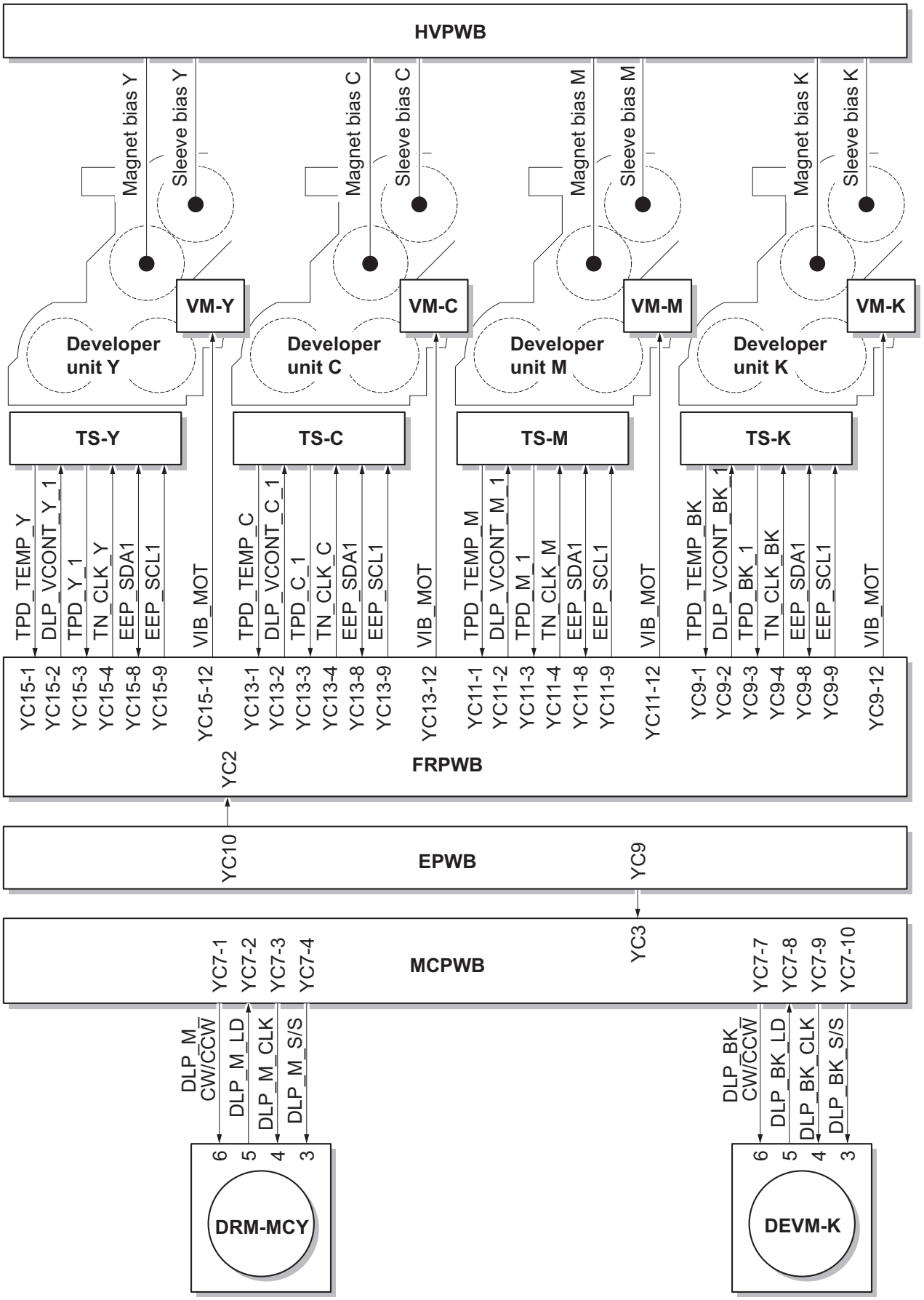

Figure 2-1-10 Developer section block diagram

2-1-4 Laser scanner section

The charged surface of the drum is then scanned by the laser beam from the laser scanner unit. The laser beam is dispersed as the polygon motor (PM) 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. Also the LSU cleaning motor (LSUCM) is activated to conduct automatically cleaning of the LSU dust shield glass.

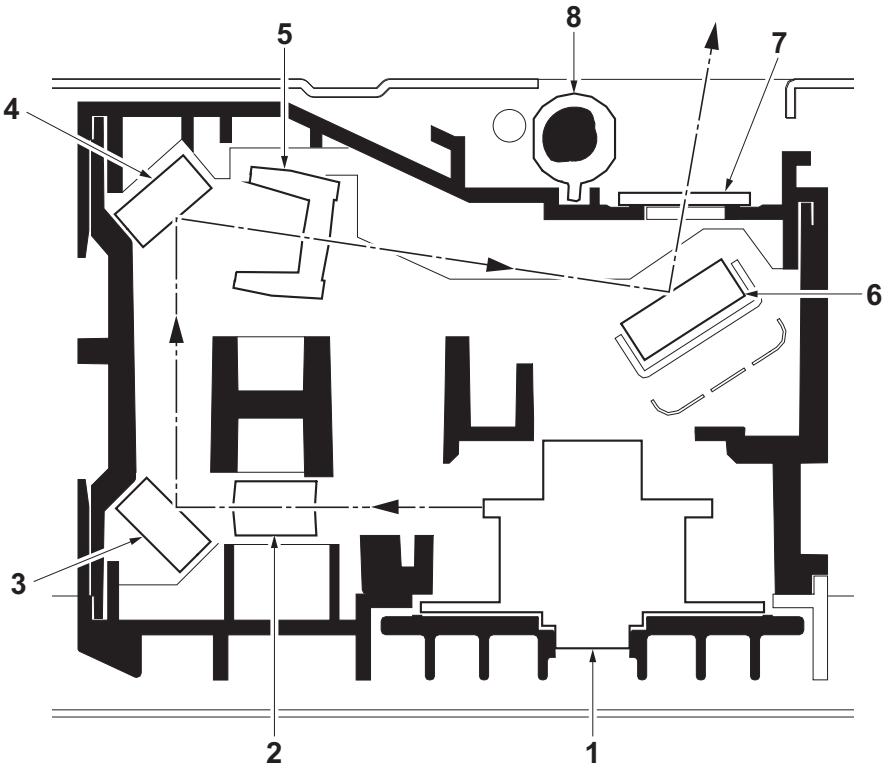

Figure 2-1-11 Laser scanner section

1. Polygon motor (PM)
2. f-θ lens A
3. Mirror A
4. Mirror B
5. f-θ lens B
6. Mirror C
7. LSU dust shield glass
8. LSU spiral

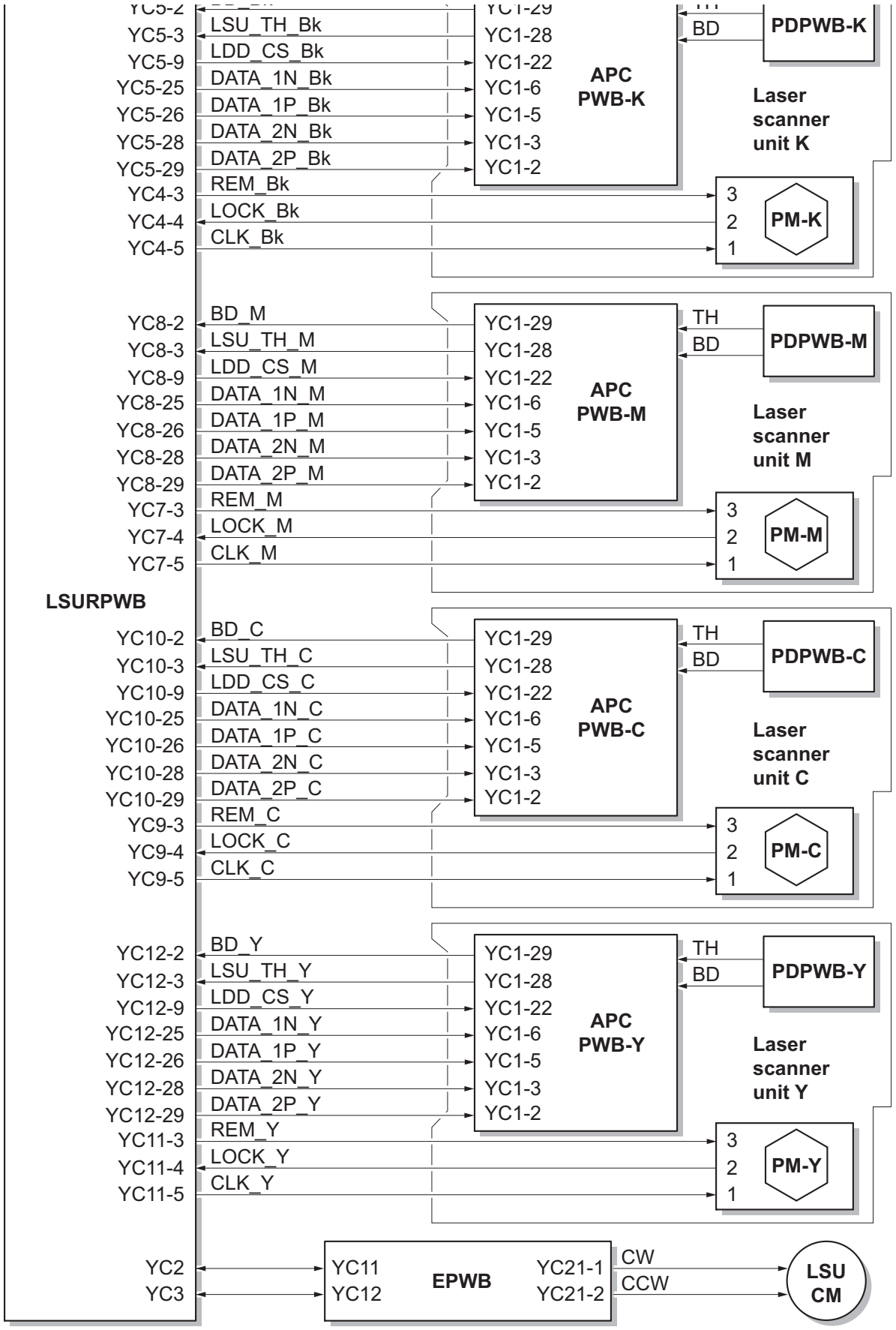

Figure 2-1-12 Laser scanner unit block diagram

2-1-5 Transfer/Separation section

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

(1) Intermediate transfer unit section

The intermediate transfer unit section consists of the transfer cleaning unit, the transfer belt, and the four primary transfer rollers for respective color drums, and forms a full-color toner image by superimposing and transferring single-color toner images formed on each drum onto the transfer belt. Also with the ID sensors (IDS) mounted on the machine frame, the toner density on the transfer belt is measured.
The transfer cleaning unit collects toner remaining on the transfer belt after secondary transfer and forwards it as waste toner to the waste toner box.

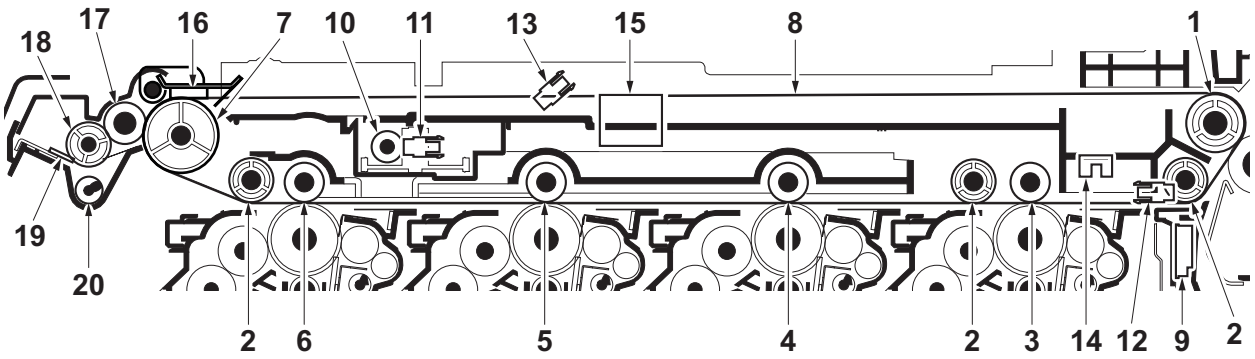

Figure 2-1-13 Intermediate transfer unit section

1. Drive roller
2. Backup roller
3. Primary transfer roller K
4. Primary transfer roller M
5. Primary transfer roller C
6. Primary transfer roller Y
7. Tension roller
8. Transfer belt
9. ID sensor (IDS)
10. Color release motor (CRM)
11. Color release sensor (CRS)
12. Transfer belt sensor (TRBLS)
13. Transfer skew sensor (TRSS)
14. Transfer edge sensor (TRES)
15. Transfer skew motor (TRSM)
16. Cleaning pre brush
17. Cleaning fur brush
18. Cleaning roller
19. Cleaning blade
20. Cleaning screw

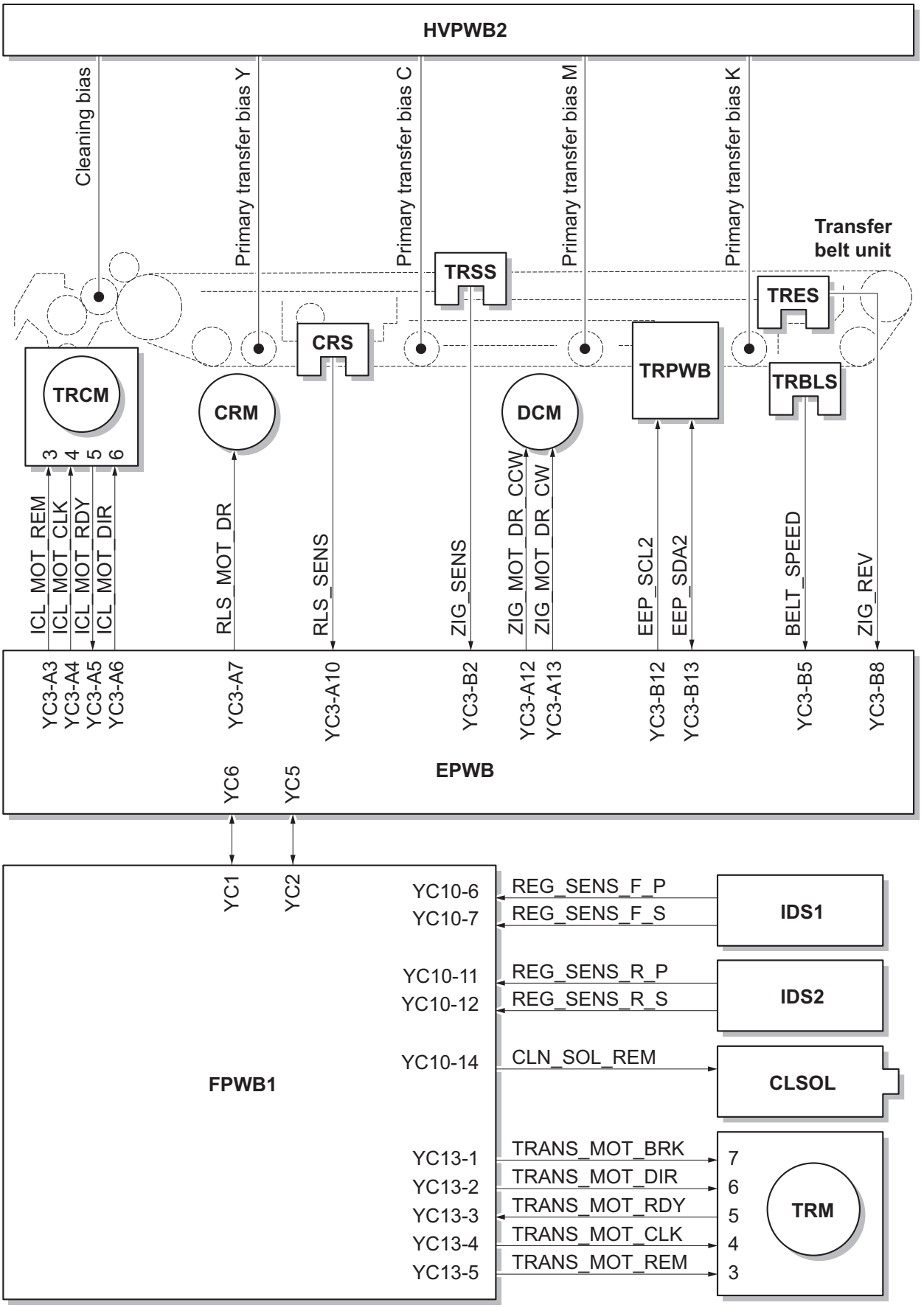

Figure 2-1-14 Intermediate transfer unit section block diagram

(2) Secondary transfer roller section

The secondary transfer roller section consists of the secondary transfer roller mounted to the paper conveying unit and the separation brush. To the secondary transfer roller, DC bias is applied from the high voltage PWB 2 (HVPWB2). The toner image formed on the transfer belt is transferred to the paper by the potential difference and the paper is separated by curvature separation.

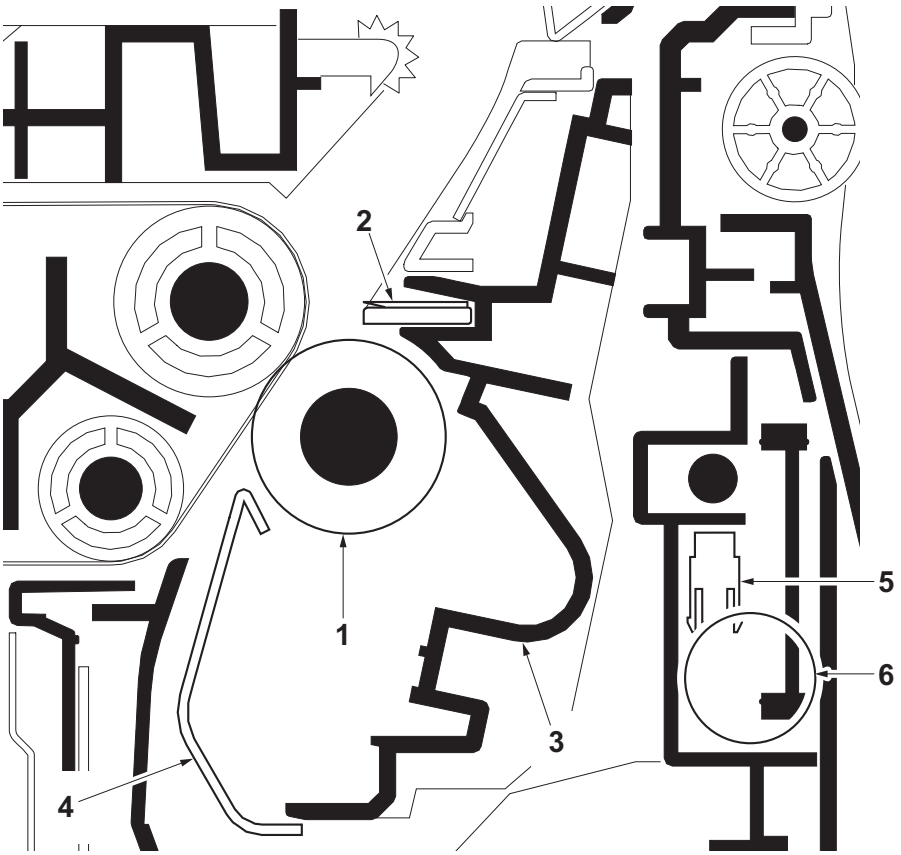

Figure 2-1-15 Secondary transfer roller section

1. Secondary transfer roller
2. Separation brush
3. Secondary transfer frame
4. Transfer guide
5. Transfer release sensor (TRRS)
6. Transfer release motor (TRRM)

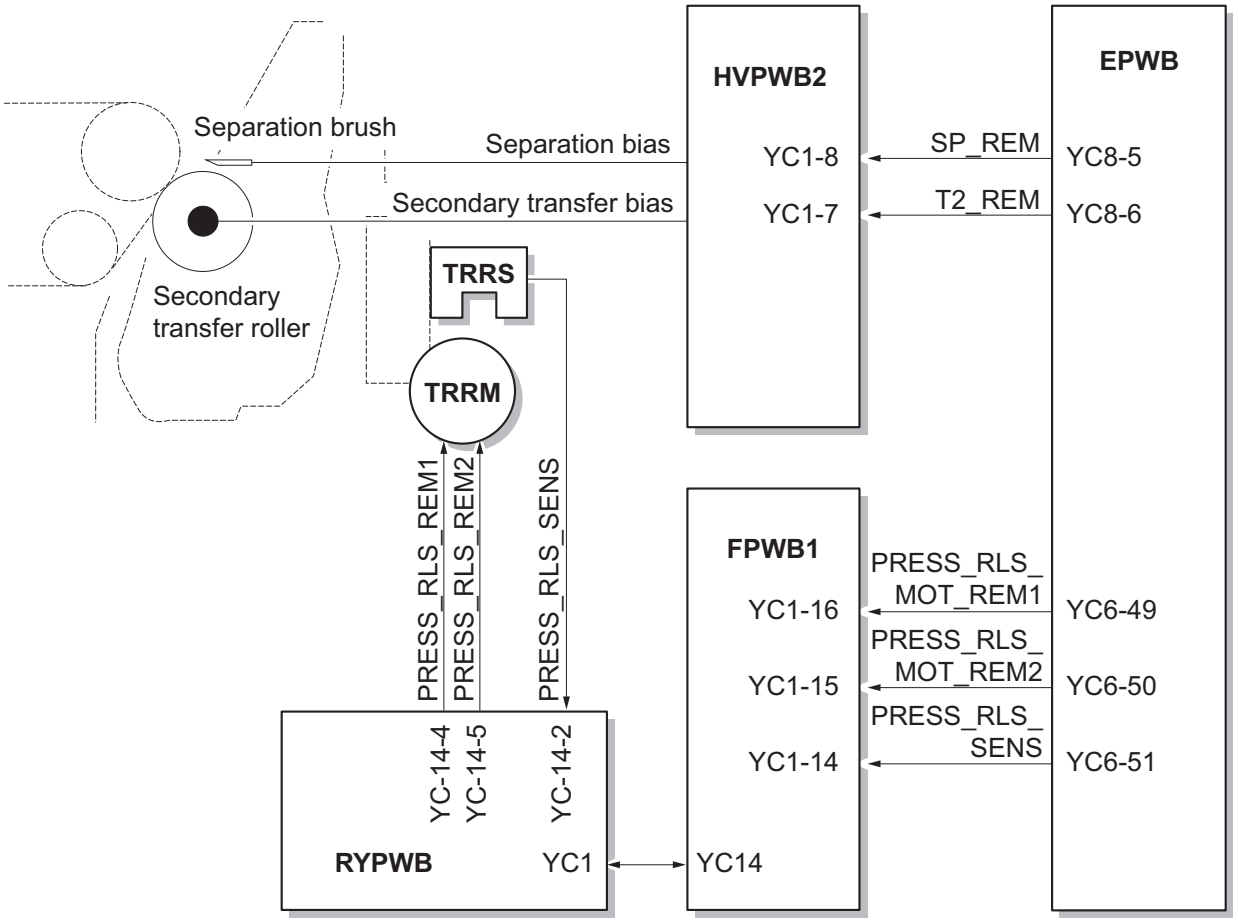

Figure 2-1-16 Secondary transfer roller section block diagram

2-1-6 Fuser section

The paper sent from the transfer/separation section is interleaved between the heat roller and the press roller. The heat roller (fuser belt) is heated by the fuser IH (FIH), and the toner is fused by heat and pressure and fixed onto the paper because the press roller is pressed by the fuser press spring. The surface temperature of heat roller and press roller are detected by the fuser thermistor (FTH) and controlled by the engine PWB (EPWB).

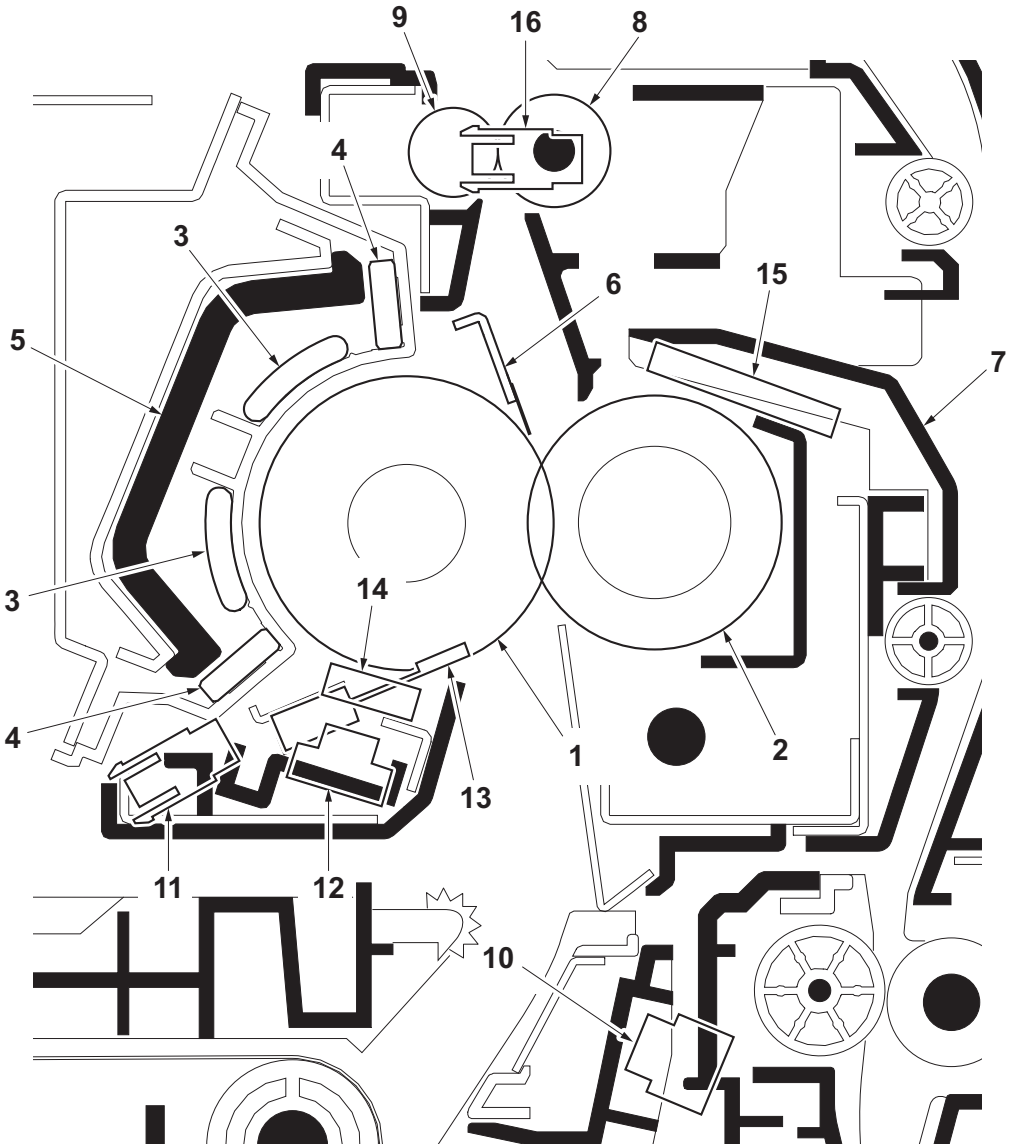

Figure 2-1-17 Fuser section

1. Heat roller (Fuser belt)
2. Press roller
3. IH coils
4. Side core
5. Arch core
6. Separators
7. Right fuser cover
8. Fuser eject pulley
9. Fuser eject roller
10. Loop sensor (LPS)
11. Fuser belt sensor (FUBLS)
12. Fuser thermistor 1 (FTH1)
13. Fuser thermistor 2 (FTH2)
14. Fuser thermistor 3 (FTH3)
15. Fuser thermistor 4 (FTH4)
16. Fuser eject sensor (FUES)

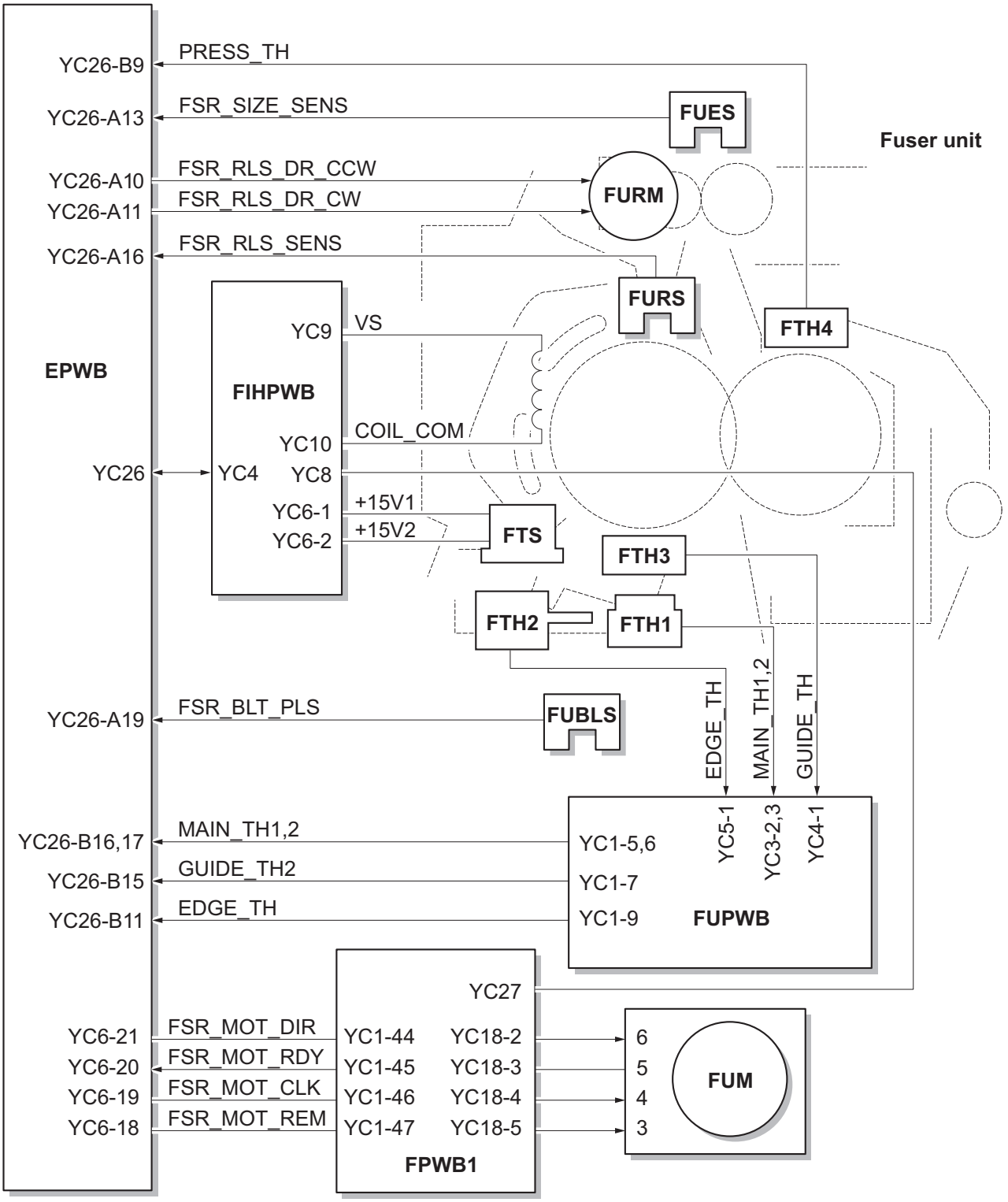

Figure 2-1-18 Fuser section block diagram

2-1-7 Eject/Feedshift section

The paper eject/feedshift section consists of the conveying path which sends the paper that has passed the fuser section to the top tray, duplex conveying section or job separator.

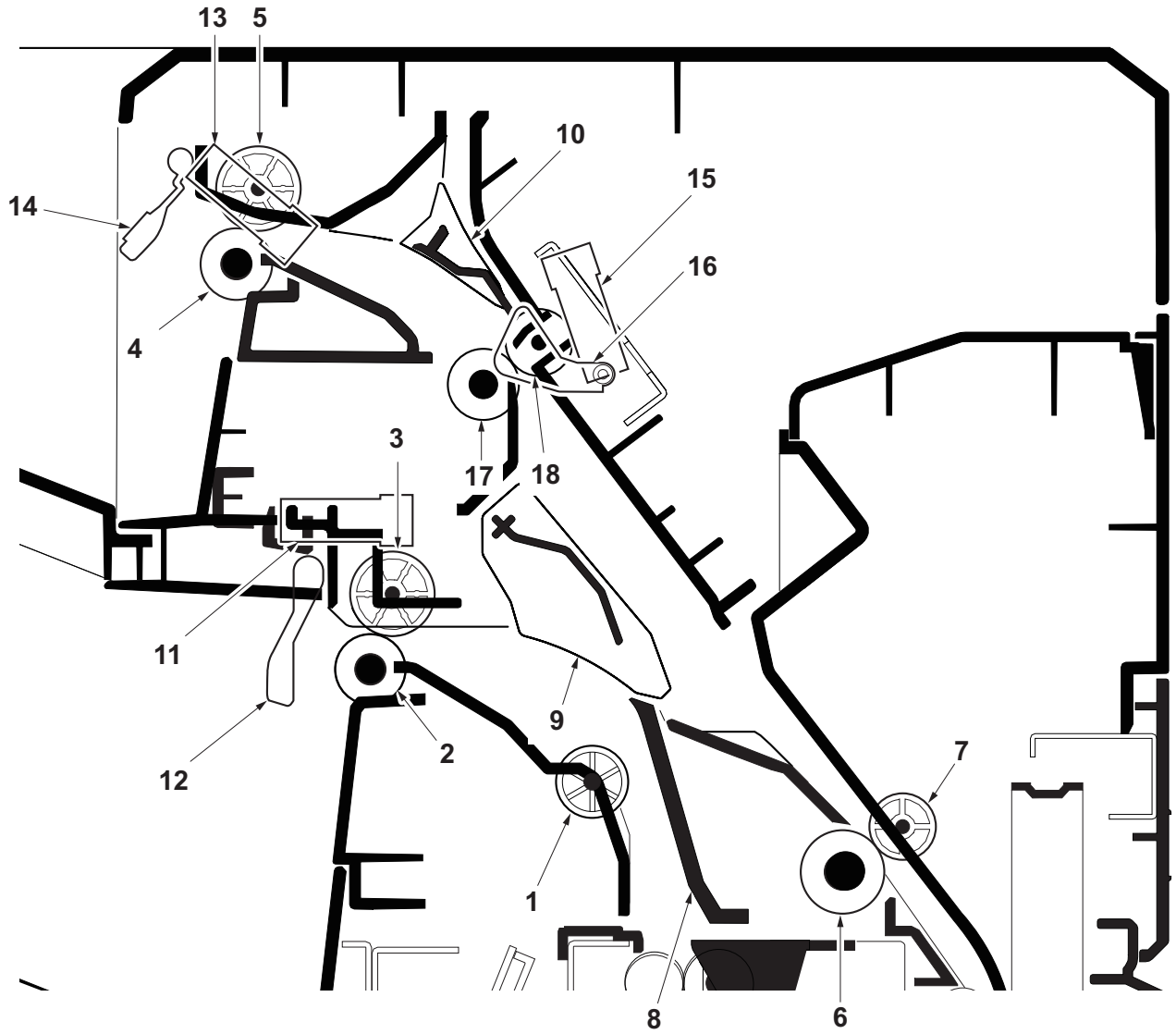

Figure 2-1-19 Eject/Feed shift section

1. Middle pulley
2. Eject roller
3. Eject pulley
4. Eject roller B
5. Eject pulley B
6. Upper duplex roller
7. Duplex pulley
8. Lower duplex roller
9. Lower change guide
10. Upper change guide
11. Eject full sensor 1 (EFS1)
12. Actuator (eject full sensor 1)
13. Eject full sensor 2 (EFS2)
14. Actuator (eject full sensor 2)
15. Switchback sensor (SBS)
16. Actuator (switchback sensor)
17. Eject roller C
18. Eject pulley C

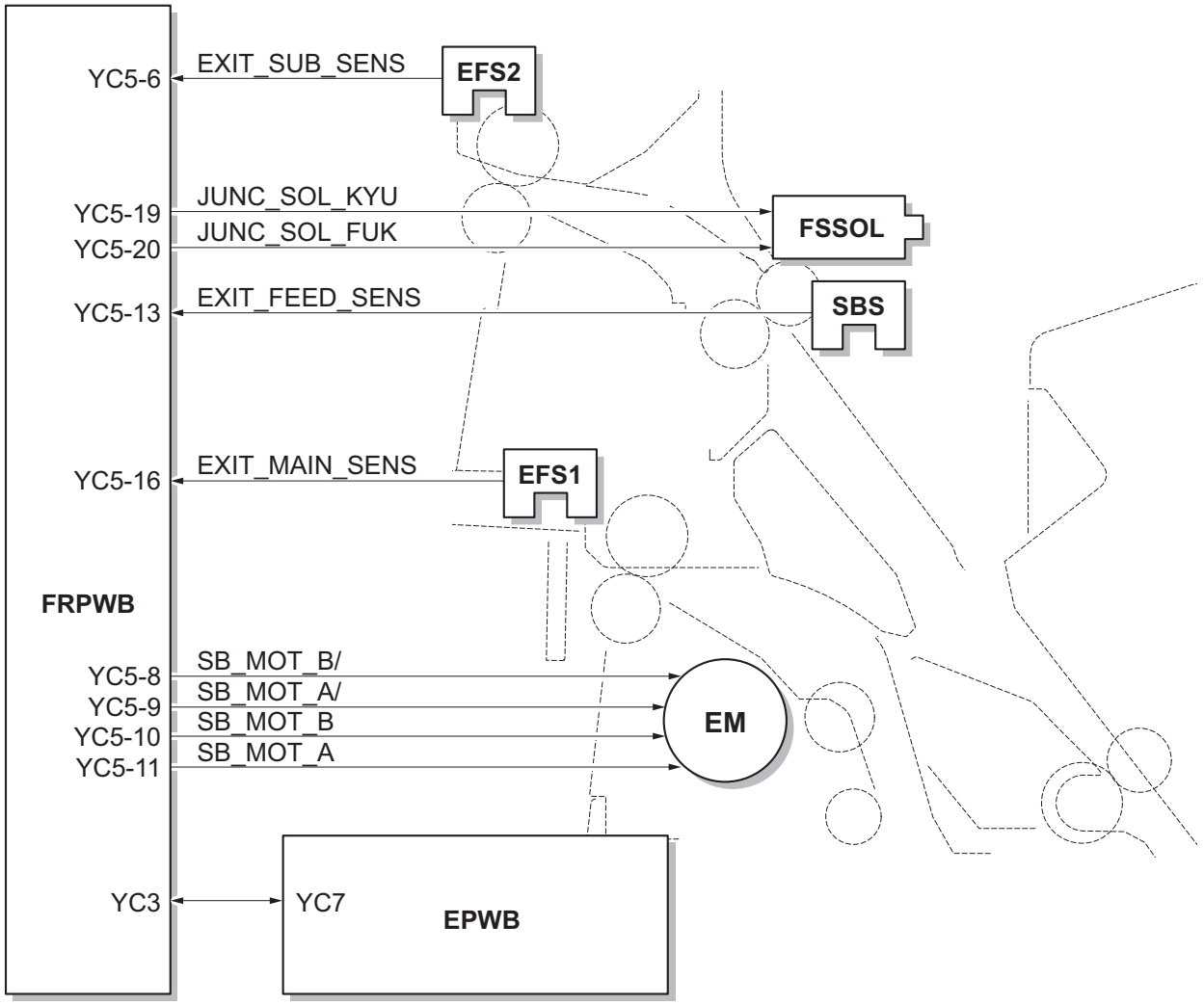

Figure 2-1-20 Eject/Feed shift section block diagram

2-1-8 Duplex conveying section

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

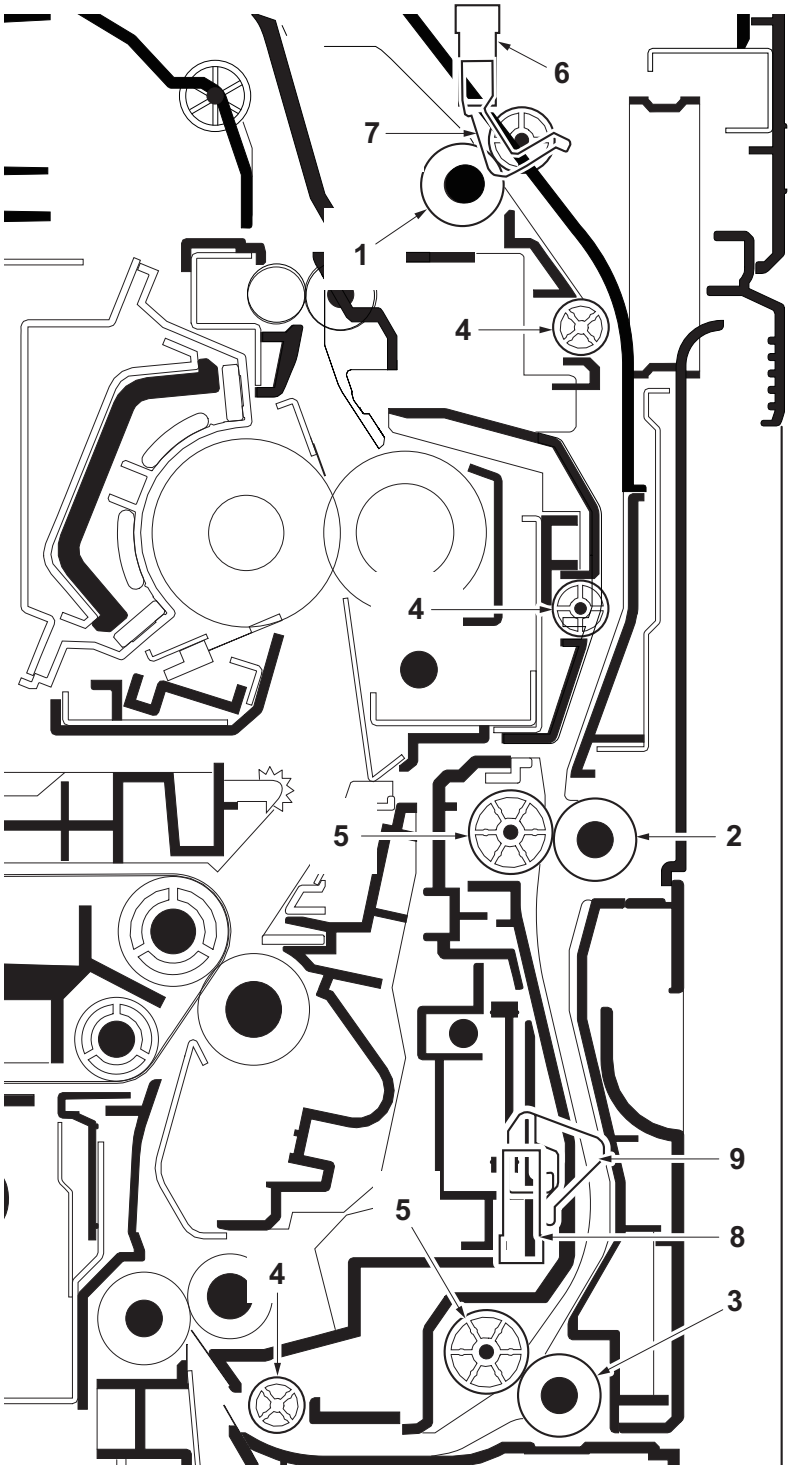

Figure 2-1-21 Duplex conveying section

1. Upper duplex roller
2. Middle duplex roller
3. Lower duplex roller
4. Duplex pulleys A
5. Duplex pulleys B
6. Duplex sensor 1 (DUS1)
7. Actuator (duplex sensor 1)
8. Duplex sensor 2 (DUS2)
9. Actuator (duplex sensor 2)

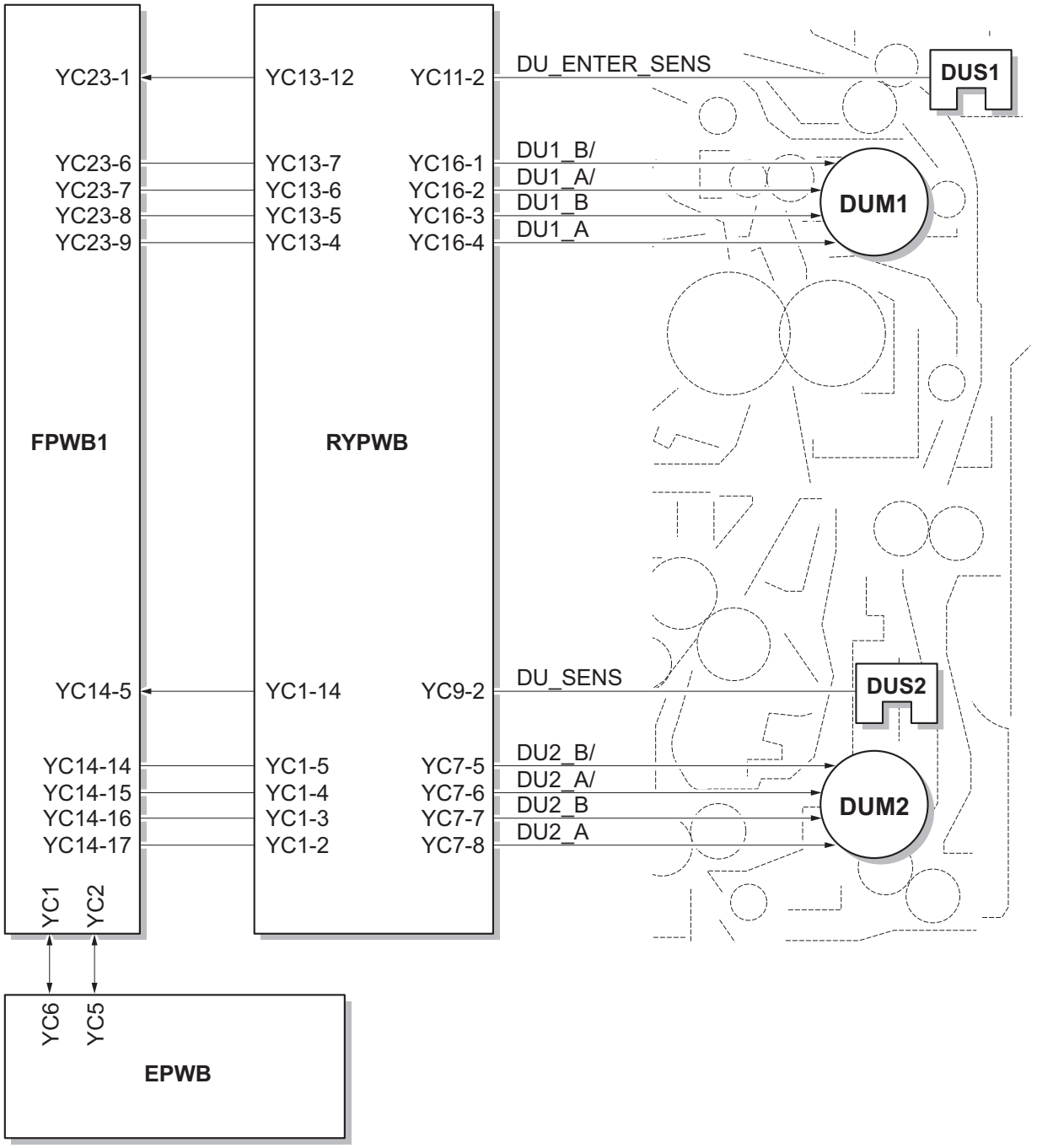

Figure 2-1-22 Duplex conveying section block diagram

2-2-1 Electrical parts layout

(1) PWBs

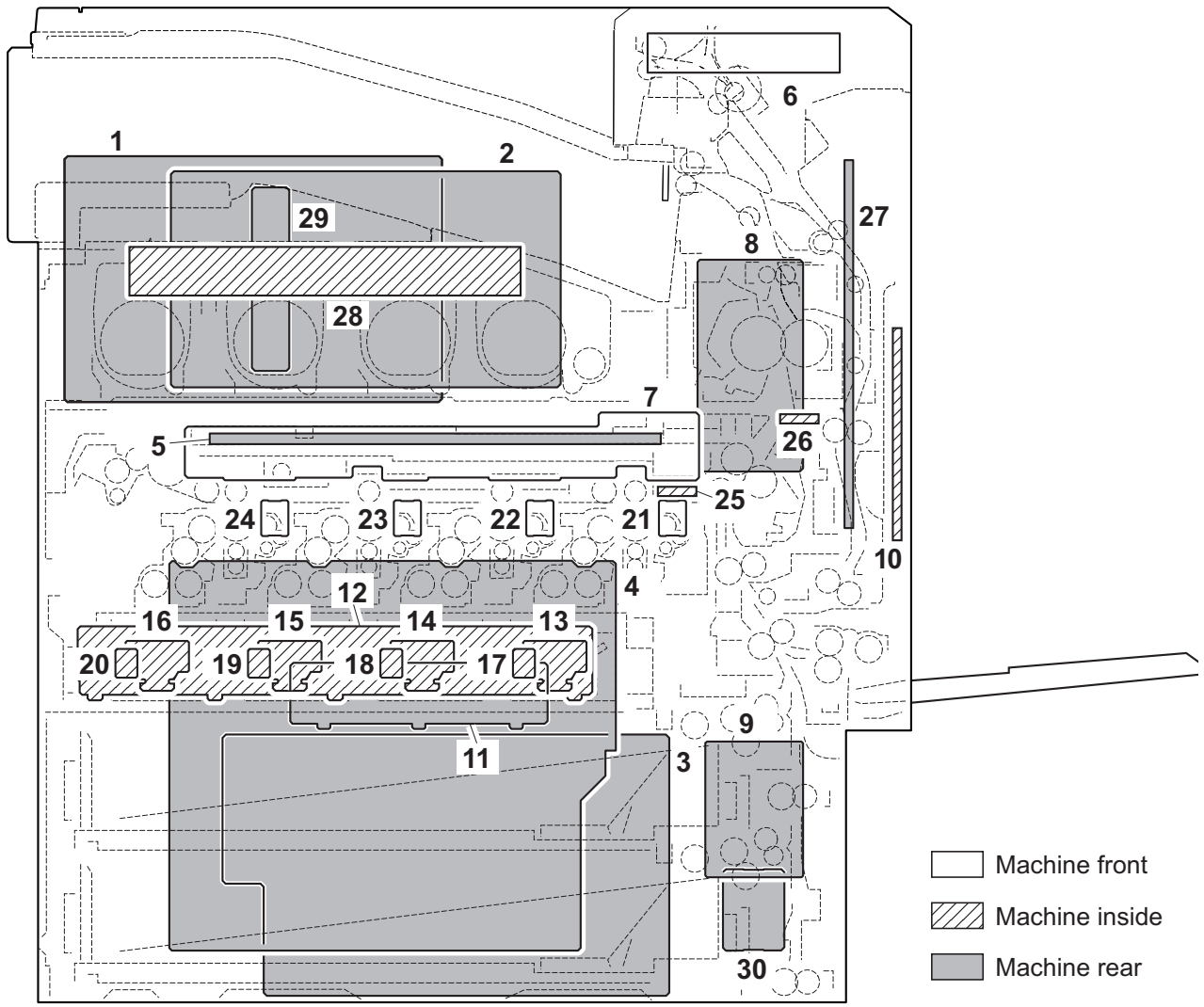

Figure 2-2-1 PWBs

1. Main PWB (MPWB) ..... Controls the software such as the print data processing and provides the interface with computers.
2. Engine PWB (EPWB)..... Controls printer hardware such as high voltage/bias output control, paper conveying system control, and fuser temperature control, etc.
3. Power source PWB (PSPWB) ..... After full-wave rectification of AC power source input, switching for converting to 24 V DC and 12 V DC for output.
4. High voltage PWB 1 (HVPWB1) ..... Generates main charging and developer bias.
5. High voltage PWB 2 (HVPWB2) ..... Generates transfer bias and separation bias.
6. Operation PWB (OPWB)..... Controls keys and LCD indication.
7. Front PWB (FRPWB)..... Consists of wiring relay circuit between engine PWB and drum units, developer units, eject unit.
8. Feed PWB 1 (FPWB1)..... Consists of wiring relay circuit between engine PWB and fuser drive unit, relay PWB.

9. Feed PWB 2 (FPWB2)..... Consists of wiring relay circuit between engine PWB and paper conveying section, drive section.
10. Relay PWB (RPWB) ..... Consists of wiring relay circuit between feed PWB 1 and paper conveying unit.
11. Motor control PWB (MCPWB)..... Consists of wiring relay circuit between engine PWB and drum motors, developer motors.
12. LSU relay PWB (LSURPWB)..... Consists of wiring relay circuit between engine PWB and laser scanner unit.
13. APC PWB K (APCPWB-K) ..... Generates and controls the laser beam (black).
14. APC PWB M (APCPWB-M) ..... Generates and controls the laser beam (magenta).
15. APC PWB C (APCPWB-C)..... Generates and controls the laser beam (cyan).
16. APC PWB Y (APCPWB-Y) ..... Generates and controls the laser beam (yellow).
17. PD PWB K (PDPWB-K) ..... Controls horizontal synchronizing timing of laser beam (black).
18. PD PWB M (PDPWB-M)..... Controls horizontal synchronizing timing of laser beam (magenta).
19. PD PWB C (PDPWB-C)..... Controls horizontal synchronizing timing of laser beam (cyan).
20. PD PWB Y (PDPWB-Y) ..... Controls horizontal synchronizing timing of laser beam (yellow).
21. Drum PWB K (DRPWB-K) ..... Drum individual information in EEPROM storage.
22. Drum PWB M (DRPWB-M)..... Drum individual information in EEPROM storage.
23. Drum PWB C (DRPWB-C)..... Drum individual information in EEPROM storage.
24. Drum PWB Y (DRPWB-Y) ..... Drum individual information in EEPROM storage.
25. Transfer PWB (TRPWB) ..... Transfer belt individual information in EEPROM storage.
26. Fuser PWB (FUPWB) ..... Relays wirings from electrical components on the fuser unit.
27. Fuser IH PWB (FIHPWB)..... Controls the fuser IH.
28. RFID PWB (RFPWB) ..... Reads the container information.
29. Interface PWB (IFPWB) ..... Consists of wiring relay circuits between main PWB and Fax control PWB.
30. Current PWB (CRPWB) ..... Changes and outputs the AC current input to an analog signal.

List of correspondences of PWB names

No.	Name used in service manual	Name used in parts list
1	Main PWB (MPWB)	PARTS PWB MAIN ASSY SP
2	Engine PWB (EPWB)	PARTS PWB ENGINE ASSY SP
3	Power source PWB (PSPWB)	PARTS UNIT LOW VOLTAGE SP
4	High voltage PWB 1 (HVPWB1)	PARTS UNIT HIGH VOLTAGE MAIN SP
5	High voltage PWB 2 (HVPWB2)	PARTS UNIT HIGH VOLTAGE TRANSFER SP
6	Operation PWB (OPWB)	PARTS PWB PANEL ASSY SP
7	Front PWB (FRPWB)	PARTS PWB FRONT CLR ASSY SP
8	Feed PWB 1 (FPWB1)	PARTS PWB FEED 1 ASSY SP
9	Feed PWB 2 (FPWB2)	PARTS PWB FEED 2 ASSY SP
10	Relay PWB (RPWB)	PARTS PWB JUNCTION ASSY SP
11	Motor control PWB (MCPWB)	PARTS PWB MOTOR CONTROL ASSY SP
12	LSU relay PWB (LSURPWB)	PARTS PWB LSU JUNC CLR ASSY SP
13	APC PWB K (APCPWB-K)	-
14	APC PWB M (APCPWB-M)	-
15	APC PWB C (APCPWB-C)	-
16	APC PWB Y (APCPWB-Y)	-
17	PD PWB K (PDPWB-K)	-
18	PD PWB M (PDPWB-M)	-
19	PD PWB C (PDPWB-C)	-
20	PD PWB Y (PDPWB-Y)	-
21	Drum PWB K (DRPWB-K)	-
22	Drum PWB M (DRPWB-M)	-
23	Drum PWB C (DRPWB-C)	-
24	Drum PWB Y (DRPWB-Y)	-
25	Transfer PWB (TRPWB)	-
26	Fuser PWB (FUPWB)	-
27	Fuser IH PWB (FIHPWB)	-
28	RFID PWB (RFPWB)	PARTS PWB RFID ASSY SP
29	Interface PWB (IFPWB)	PARTS PWB KUIO ASSY SP
30	Current PWB (CRPWB)	PARTS PWB CURRENT AVE ASSY SP

(2) Switches and sensors

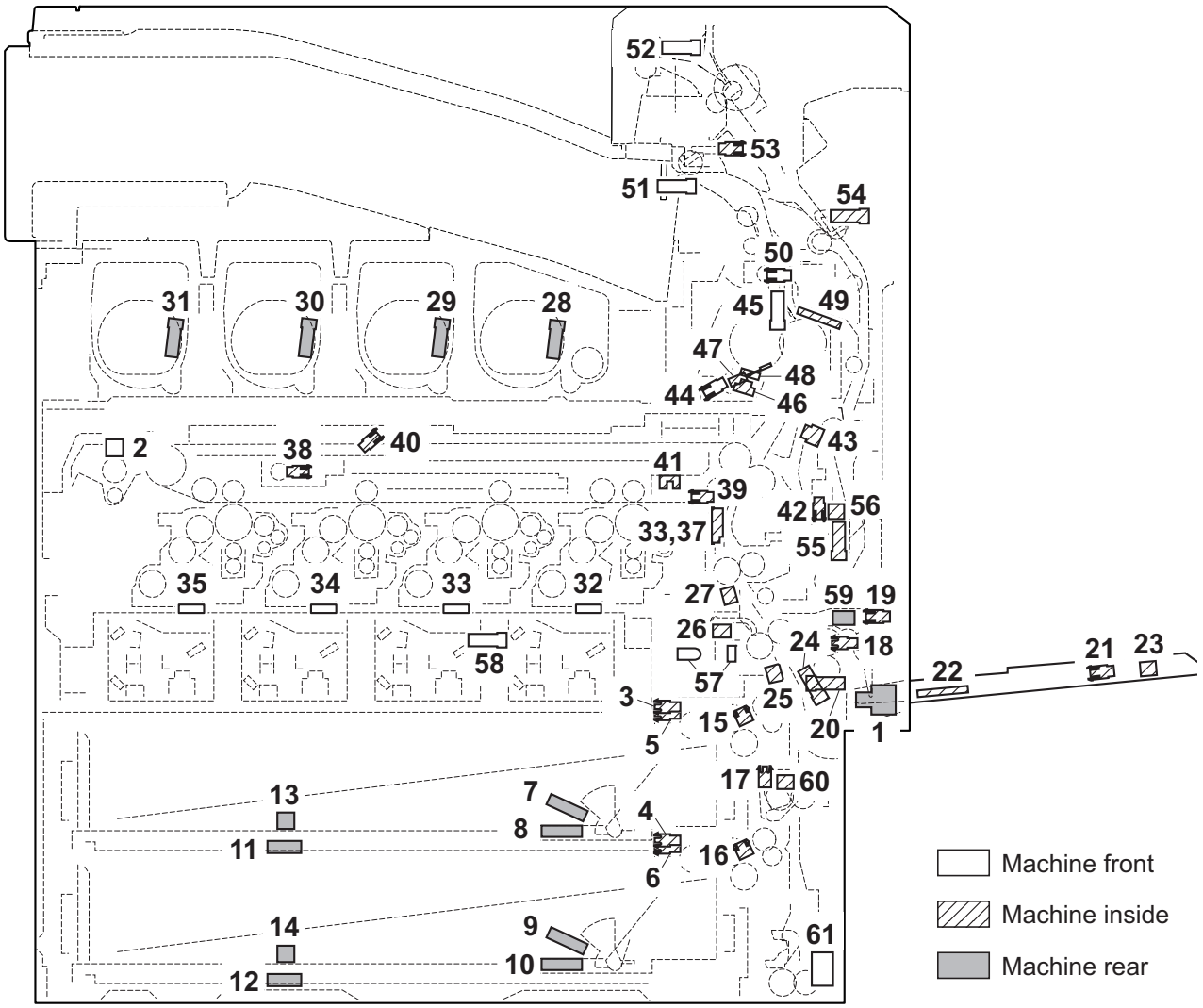

Figure 2-2-2 Switches and sensors

1. Main power switch (MSW) ..... Turns ON/OFF the AC power source.
2. Front cover switch (FRCSW) ..... Detects the opening and closing of the front cover.
3. Paper sensor 1 (PS1) ..... Detects the presence of paper (cassette 1).
4. Paper sensor 2 (PS2) ..... Detects the presence of paper (cassette 2).
5. Lift sensor 1 (LS1)..... Detects activation of upper limit of the bottom plate (cassette 1).
6. Lift sensor 2 (LS2)..... Detects activation of upper limit of the bottom plate (cassette 2).
7. Paper gauge sensor 1 (U) (PGS1(U))... Detects the paper gauge (cassette 1).
8. Paper gauge sensor 1 (L) (PGS1(L))... Detects the paper gauge (cassette 1).
9. Paper gauge sensor 2 (U) (PGS2(U))... Detects the paper gauge (cassette 2).
10. Paper gauge sensor 2 (L) (PGS2(L))... Detects the paper gauge (cassette 2).
11. Paper length switch 1 (PLSW1) ..... Detects the length of paper (cassette 1).
12. Paper length switch 2 (PLSW2) ..... Detects the length of paper (cassette 2).
13. Paper width switch 1 (PWSW1) ..... Detects the width of paper (cassette 1).
14. Paper width switch 2 (PWSW2) ..... Detects the width of paper (cassette 2).
15. Feed sensor 1 (FS1) ..... Detects a paper misfeed in the paper feed section (cassette 1).
16. Feed sensor 2 (FS2) ..... Detects a paper misfeed in the paper feed section (cassette 2).
17. Paper conveying sensor (PCS)..... Detects a paper misfeed in the vertical conveying section.

18. MP paper sensor (MPPS) ..... Detects the presence of paper (MP tray).
19. MP lift sensor 1 (MPLS1) ..... Detects activation of upper limit of the MP plate.
20. MP lift sensor 2 (MPLS2) ..... Detects activation of lower limit of the MP plate.
21. MP paper length switch (MPPLSW)..... Detects the length of paper (MP tray).
22. MP paper width switch (MPPWSW)..... Detects the width of paper (MP tray).
23. MP tray switch (MPTSW)..... Detects the MP tray extension is extend.
24. MP feed sensor (MPFS) ..... Detects a paper misfeed in the MP paper feed section.
25. Middle sensor (MS)..... Detects a paper misfeed in the paper conveying section.
26. Regist deflection sensor (RDS)..... Detects the deflection in the paper.
27. Registration sensor (RS)..... Controls the secondary paper feed start timing.
28. Screw sensor K (SRS-K) ..... Controls the toner replenishing for the toner container K.
29. Screw sensor M (SRS-M) ..... Controls the toner replenishing for the toner container M.
30. Screw sensor C (SRS-C) ..... Controls the toner replenishing for the toner container C.
31. Screw sensor Y (SRS-Y) ..... Controls the toner replenishing for the toner container Y.
32. Toner sensor K (TS-K) ..... Detects the toner density in the developer unit K.
33. Toner sensor M (TS-M) ..... Detects the toner density in the developer unit M.
34. Toner sensor C (TS-C)..... Detects the toner density in the developer unit C.
35. Toner sensor Y (TS-Y) ..... Detects the toner density in the developer unit Y.
36. ID sensor 1 (IDS1) ..... Measures image density for color calibration.
37. ID sensor 2 (IDS2) ..... Measures image density for color calibration.
38. Color release sensor (CRS)..... Detects separation of primary transfer rollers M, C, and Y.
39. Transfer belt sensor (TRBLS) ..... Detects positioning of transfer belt rotation.
40. Transfer skew sensor (TRSS)..... Detects skew of transfer belt center position.
41. Transfer edge sensor (TRES) ..... Detects edge position of the transfer belt.
42. Transfer release sensor (TRRS) ..... Detects separation of secondary transfer roller.
43. Loop sensor (LPS) ..... Detects a paper misfeed. Controls the fuser motor by detecting deflection in the paper.
44. Fuser belt sensor (FUBLS) ..... Detects positioning of fuser belt rotation.
45. Fuser release sensor (FURS) ..... Detects fuser pressure release setting (envelope mode).
46. Fuser thermistor 1 (FTH1) ..... Detects the heat roller (fuser belt) temperature.
47. Fuser thermistor 2 (FTH2) ..... Detects the heat roller (fuser belt) temperature.
48. Fuser thermistor 3 (FTH3) ..... Detects the heat roller (fuser belt) temperature.
49. Fuser thermistor 4 (FTH4) ..... Detects the press roller temperature.
50. Fuser eject sensor (FUES) ..... Detects a paper misfeed in the fuser section.
51. Eject full sensor 1 (EFS1) ..... Detects a paper misfeed in the eject section. Detects when the main tray is full.
52. Eject full sensor 2 (EFS2) ..... Detects a paper misfeed in the eject section. Detects when the sub tray is full.
53. Switchback sensor (SBS) ..... Detects a paper misfeed in the eject and switchback sections.
54. Duplex sensor 1 (DUS1) ..... Detects a paper misfeed in the duplex section.
55. Duplex sensor 2 (DUS2) ..... Detects a paper misfeed in the duplex section.
56. Duplex cover switch (DUCSW) ..... Detects the opening and closing of the duplex cover.
57. Waste toner sensor 1 (WTS1)..... Detects when the waste toner box is full.
58. Waste toner sensor 2 (WTS2)..... Detects when the waste toner box is near end.
59. Paper conveying unit switch (PCUSW) ..... Detects the opening and closing of the paper conveying unit.
60. Paper conveying cover switch (DUCSW) ..... Detects the opening and closing of the paper conveying cover.
61. Outer temperature sensor (OTEMS)..... Detects the outside temperature and humidity.

(3) Motors

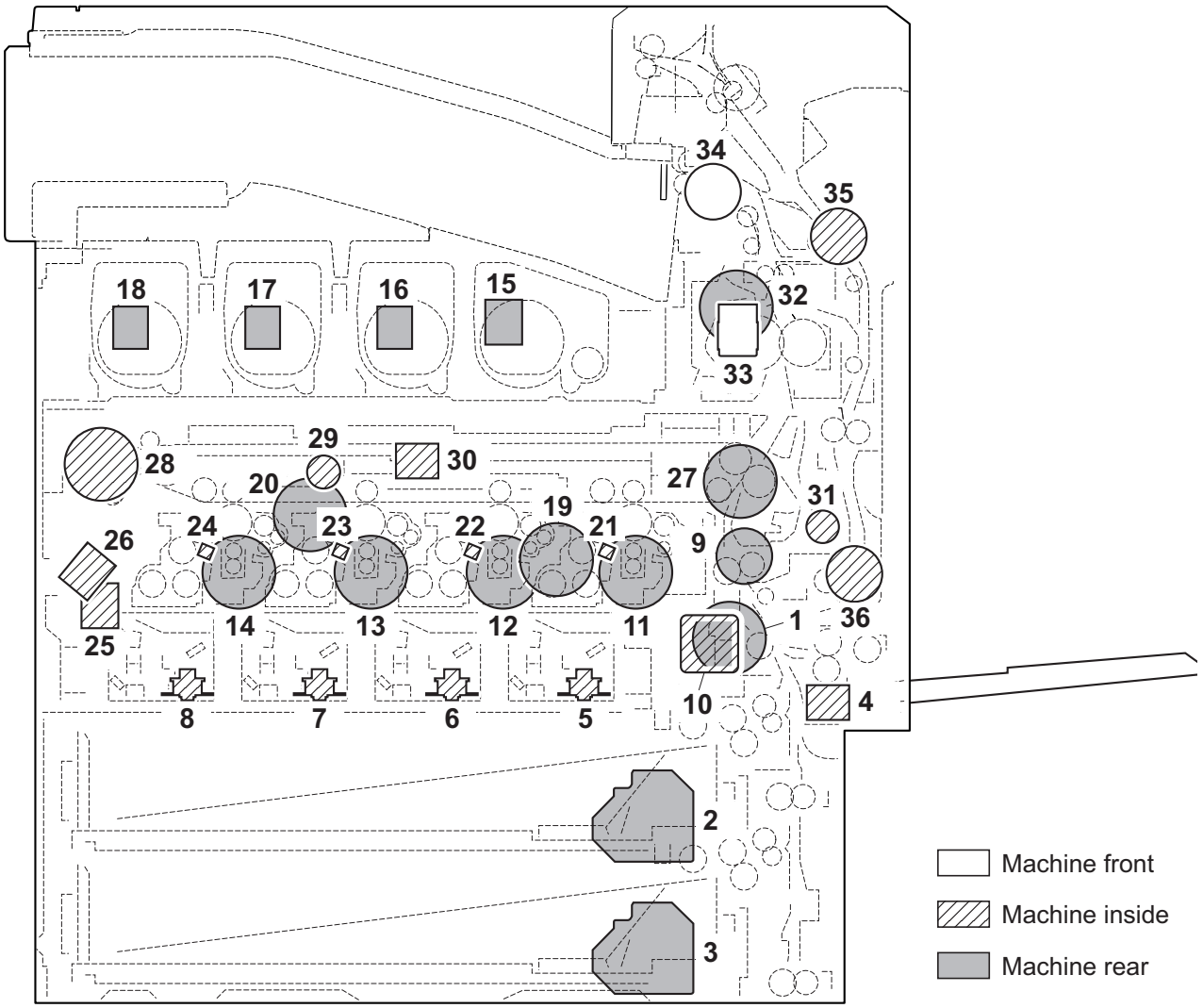

Figure 2-2-3 Motors

1. Paper feed motor (PFM) ..... Drives the paper feed section.
2. Lift motor 1 (LM1)..... Operates the bottom plate (cassette 1).
3. Lift motor 2 (LM2)..... Operates the bottom plate (cassette 2).
4. MP lift motor (MPLM) ..... Operates the MP plate.
5. Polygon motor K (PM-K) ..... Drives the polygon mirror K.
6. Polygon motor M (PM-M)..... Drives the polygon mirror M.
7. Polygon motor C (PM-C)..... Drives the polygon mirror C.
8. Polygon motor Y (PM-Y) ..... Drives the polygon mirror Y.
9. Registration motor (RM)..... Drives the registration section.
10. Middle motor (MM)..... Drives the paper conveying section.
11. Drum motor K (DRM-K) ..... Drives the drum unit K.
12. Drum motor M (DRM-M) ..... Drives the drum unit M.
13. Drum motor C (DRM-C) ..... Drives the drum unit C.
14. Drum motor Y (DRM-Y) ..... Drives the drum unit Y.
15. Toner motor K (TM-K) ..... Replenishes toner to the developer unit K.
16. Toner motor M (TM-M) ..... Replenishes toner to the developer unit M.
17. Toner motor C (TM-C)..... Replenishes toner to the developer unit C.

18. Toner motor Y (TM-Y) ..... Replenishes toner to the developer unit Y.
19. Developer motor K (DEVM-K)..... Drives the developer unit K.
20. Developer motor MCY (DEVM-MCY) ... Drives the developer units M, C and Y.
21. Vibration motor K (VM-K)..... Toner lump in the developer unit K vibrates.
22. Vibration motor M (VM-M)..... Toner lump in the developer unit M vibrates.
23. Vibration motor C (VM-C) ..... Toner lump in the developer unit C vibrates.
24. Vibration motor Y (VM-Y)..... Toner lump in the developer unit Y vibrates.
25. LSU cleaning motor (LSUCM) ..... Drives LSU dust shield glass cleaning system.
26. Waste toner motor (WTM)..... Drives waste toner system.
27. Transfer motor (TRM) ..... Drives the transfer section.
28. Transfer cleaning motor (TRCM) ..... Drives the transfer cleaning section.
29. Color release motor (CRM)..... Drives separation of primary transfer rollers M, C, and Y.
30. Transfer skew motor (TRSM)..... Drives skew of transfer tension roller.
31. Transfer release motor (TRRM)..... Drives separation of secondary transfer roller.
32. Fuser motor (FUM) ..... Drives the fuser section.
33. Fuser release motor (FURM)..... Drives fuser pressure release.
34. Eject motor (EM)..... Drives the eject section.
35. Duplex motor 1 (DUM1)..... Drives the duplex section.
36. Duplex motor 2 (DUM2)..... Drives the duplex section.

(4) Fan motors

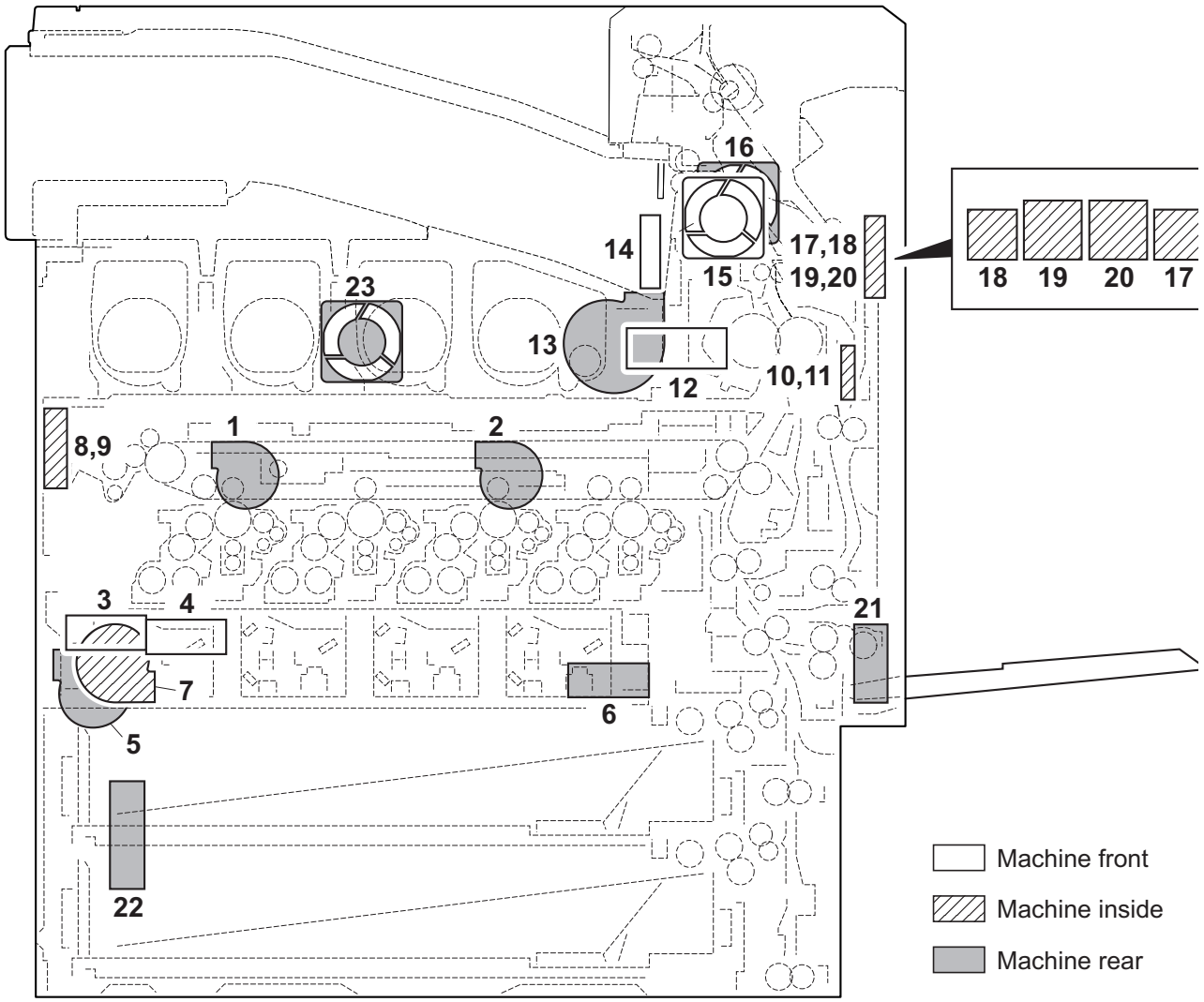

Figure 2-2-4 Motors

1. Toner fan motor 1 (TFM1)..... Cools the toner container section.
2. Toner fan motor 2 (TFM2)..... Cools the toner container section.
3. Developer fan motor 1 (DEVFM1) ..... Cools the developer section.
4. Developer fan motor 2 (DEVFM2) ..... Cools the developer section.
5. Exhaust fan motor 1 (EXFM1) ..... Cools the machine inside.
6. Exhaust fan motor 2 (EXFM2) ..... Cools the machine inside.
7. LSU fan motor (LSUFM) ..... Cools the laser scanner unit section.
8. Belt fan motor 1 (BLFM1)..... Cools the transfer belt section.
9. Belt fan motor 2 (BLFM2)..... Cools the transfer belt section.
10. Fuser edge fan motor 1 (FUEFM1)..... Cools the fuser section (edge).
11. Fuser edge fan motor 2 (FUEFM2)..... Cools the fuser section (edge).
12. Fuser front fan motor (FUFFM)..... Cools the fuser section (front side).
13. Fuser rear fan motor (FURFM) ..... Cools the fuser section (rear side).
14. Eject front fan motor 1 (EFFM1) ..... Cools the eject section (front side).
15. Eject front fan motor 2 (EFFM2) ..... Cools the eject section (front side).
16. Eject rear fan motor (ERFM)..... Cools the eject section (rear side).

17. Fuser fan motor 1 (FUFM1) ..... Cools the fuser section.
18. Fuser fan motor 2 (FUFM2) ..... Cools the fuser section.
19. Eject fan motor 1 (EFM1)..... Cools the eject section.
20. Eject fan motor 2 (EFM2)..... Cools the eject section.
21. IH fan motor (IHFM)..... Cools the fuser IH PWB.
22. Power source fan motor (PSFM) ..... Cools the power source section.
23. Controller fan motor (CONFM)..... Cools the controller section.

(5) Others

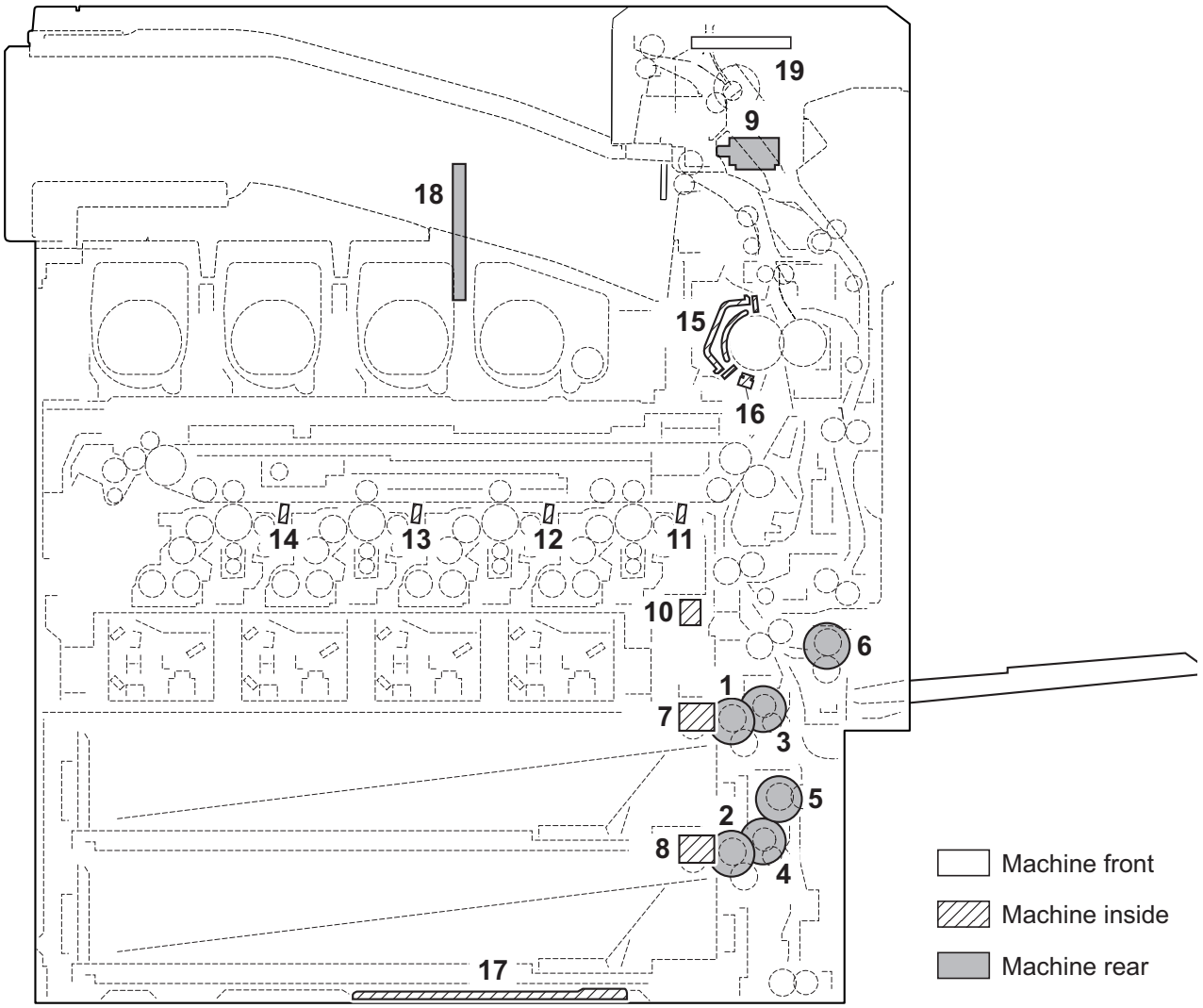

Figure 2-2-5 Others

1. Paper feed clutch 1 (PFCL1) ..... Primary paper feed from cassette 1.
2. Paper feed clutch 1 (PFCL1) ..... Primary paper feed from cassette 2.
3. Assist clutch 1 (ASCL1) ..... Controls the drive of the assist roller.
4. Assist clutch 2 (ASCL2) ..... Controls the drive of the assist roller.
5. Paper conveying clutch (PCCL)..... Controls the drive of vertical conveying section.
6. MP paper feed clutch (MPPFCL) ..... Controls primary paper feed from the MP tray.
7. Pickup solenoid 1 (PUSOL1) ..... Controls the pickup roller (cassette 1).
8. Pickup solenoid 2 (PUSOL2) ..... Controls the pickup roller (cassette 2).
9. Feedshift solenoid (FSSOL)..... Controls the feedshift guide.
10. Cleaning solenoid (CLSOL) ..... Controls the ID sensor cleaning.
11. Cleaning lamp K (CL-K) ..... Eliminates the residual electrostatic charge on the drum (black).
12. Cleaning lamp M (CL-M)..... Eliminates the residual electrostatic charge on the drum (magenta).
13. Cleaning lamp C (CL-C)..... Eliminates the residual electrostatic charge on the drum (cyan).
14. Cleaning lamp Y (CL-Y) ..... Eliminates the residual electrostatic charge on the drum (yellow).
15. Fuser IH (FIH) ..... Heats the heat roller (fuser belt).
16. Fuser thermostat (FTS)..... Prevents overheating of the heat roller (fuser belt).

17. Cassette heater (CH)..... Dehumidifies the cassette section (option).
18. Hard disk (HDD)..... Storages the image data and information of job accounting mode.
19. LCD back light (LCDBL)..... Back lighting of LCD.

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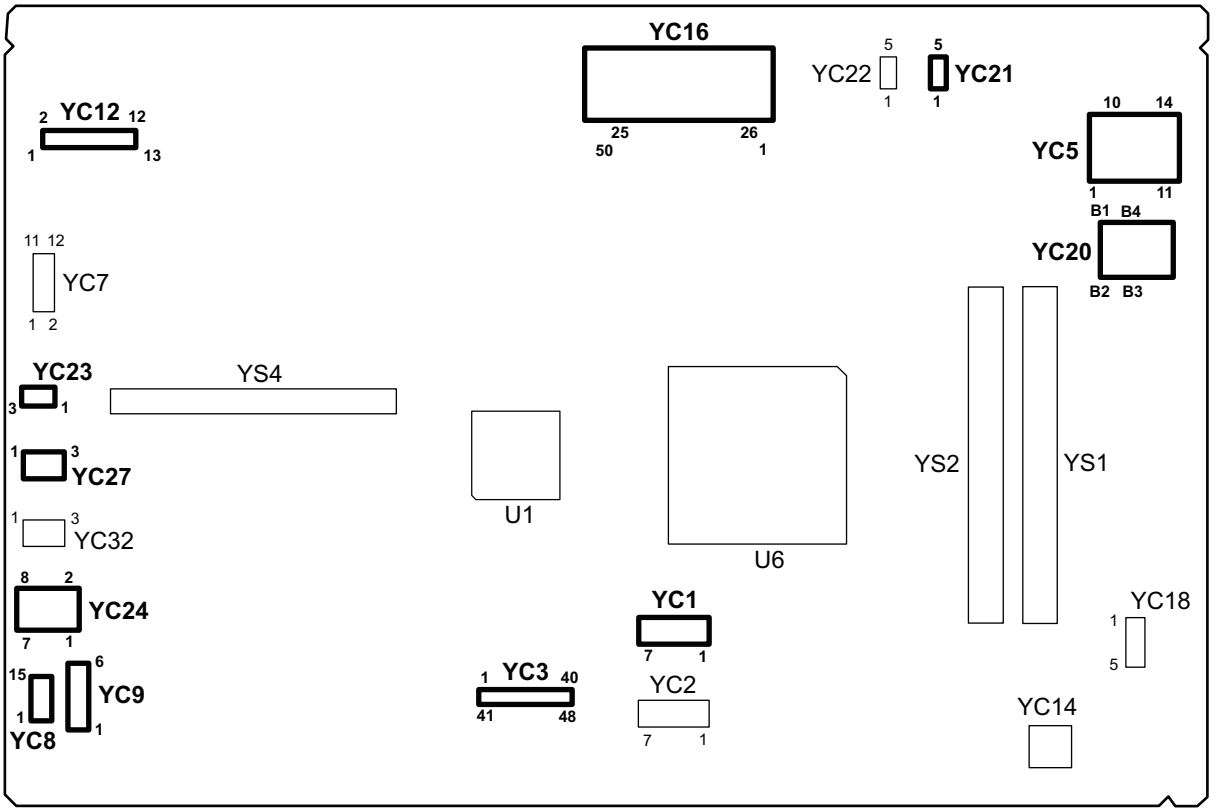
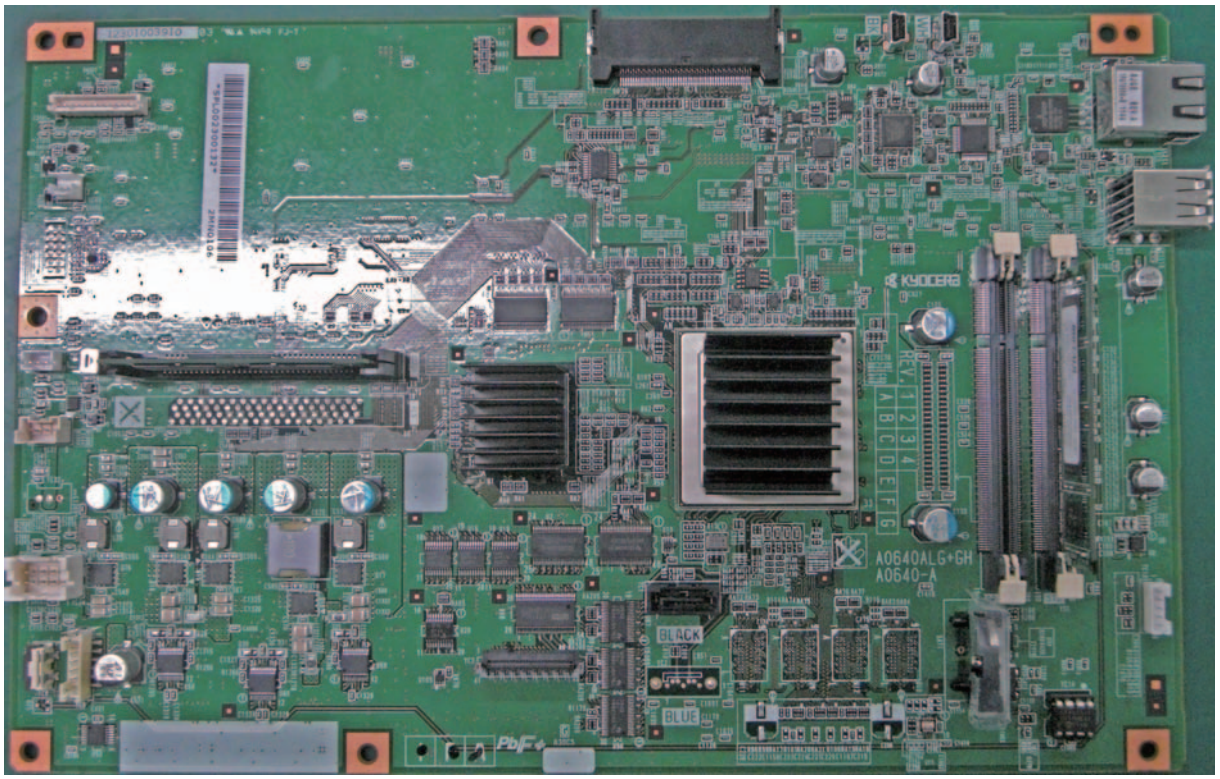
2-3-1 Main PWB





* : Refer to the picture.

Figure 2-3-1 Main PWB silk-screen diagram and photograph

Connector	Pin	Signal	I/O	Voltage	Description
YC1	1	GND	-	-	Ground
Connected to hard disk	2	SATATXDP_C2H	O	-	HDD data signal
	3	SATATXDN_C2H	O	-	HDD data signal
	4	GND	-	-	Ground
	5	SATARXDN_H2C	I	-	HDD data signal
	6	SATARXDP_H2C	I	-	HDD data signal
	7	GND	-	-	Ground
YC3	1	GND	-	-	Ground
Connected to engine PWB	2	EGSCLK	O	0/3.3 V DC	Clock signal
	3	EGSI	I	0/3.3 V DC (pulse)	Serial communication data signal
	4	EGSDIR	O	0/3.3 V DC	Engine communication direction signal
	5	EGSBSY	O	0/3.3 V DC	Engine busy signal
	6	EGSO	I	0/3.3 V DC (pulse)	Serial communication data signal
	7	EGSIRN	O	0/3.3 V DC	Engine interrupt signal
	8	GND	-	-	Ground
	9	GND	-	-	Ground
	10	HOLD_ENG	O	0/3.3 V DC	Engine hold signal
	11	SLEEP	O	0/3.3 V DC	Sleep signal
	12	HSYNDD_P	O	0/3.3 V DC (pulse)	Image control signal
	13	HSYNDD_N	O	0/3.3 V DC (pulse)	Image control signal
	14	HSYNCC_P	O	0/3.3 V DC (pulse)	Image control signal
	15	HSYNCC_N	O	0/3.3 V DC (pulse)	Image control signal
	16	HSYNCB_P	O	0/3.3 V DC (pulse)	Image control signal
	17	HSYNCB_N	O	0/3.3 V DC (pulse)	Image control signal
	18	HSYNCA_P	O	0/3.3 V DC (pulse)	Image control signal
	19	HSYNCA_N	O	0/3.3 V DC (pulse)	Image control signal
	20	VSYNDD_P	O	0/3.3 V DC (pulse)	Image control signal
	21	VSYNDD_N	O	0/3.3 V DC (pulse)	Image control signal
	22	VSYNCD_P	O	0/3.3 V DC (pulse)	Image control signal
		VSYNCD_N	O	0/3.3 V DC (pulse)	Image control signal
	23	VSYNCB_P	O	0/3.3 V DC (pulse)	Image control signal
	24	VSYNCB_N	O	0/3.3 V DC (pulse)	Image control signal
	25	VSYNCA_P	O	0/3.3 V DC (pulse)	Image control signal
	26	VSYNCA_N	O	0/3.3 V DC (pulse)	Image control signal
	27	GND	-	-	Ground

Connector	Pin	Signal	I/O	Voltage	Description
YC3	28	TCLKP	O	0/3.3 V DC (pulse)	Image control signal
Connected to engine PWB	29	TCLKN	O	0/3.3 V DC (pulse)	Image control signal
	30	GND	-	-	Ground
	31	TCP	O	0/3.3 V DC (pulse)	Image control signal
	32	TCN	O	0/3.3 V DC (pulse)	Image control signal
	33	GND	-	-	Ground
	34	TBP	O	0/3.3 V DC (pulse)	Image control signal
	35	TBN	O	0/3.3 V DC (pulse)	Image control signal
	36	GND	-	-	Ground
	37	TAP	O	0/3.3 V DC (pulse)	Image control signal
	38	TAN	O	0/3.3 V DC (pulse)	Image control signal
	39	GND	-	-	Ground
	40	SGND	-	-	Ground
YC5	1	TD1+	O	0/3.3 V DC (pulse)	Transmission data
Connected to ethernet	2	TD1-	O	0/3.3 V DC (pulse)	Transmission data
	3	TD2+	O	0/3.3 V DC (pulse)	Transmission data
	4	TD2-	O	0/3.3 V DC (pulse)	Transmission data
	5	CT1	O	3.3 V DC	3.3 V DC power output
	6	CT2	O	3.3 V DC	3.3 V DC power output
	7	TD3+	O	0/3.3 V DC (pulse)	Transmission data
	8	TD3-	O	0/3.3 V DC (pulse)	Transmission data
	9	TD4+	O	0/3.3 V DC (pulse)	Transmission data
	10	TD4-	O	0/3.3 V DC (pulse)	Transmission data
	11	GRLED_A1	O	0/3.3 V DC	LED emitter signal
	12	GRLED_K1	O	0/3.3 V DC	LED emitter signal
	13	YWLED_A2	O	0/3.3 V DC	LED emitter signal
	14	YWLED_K2	O	0/3.3 V DC	LED emitter signal

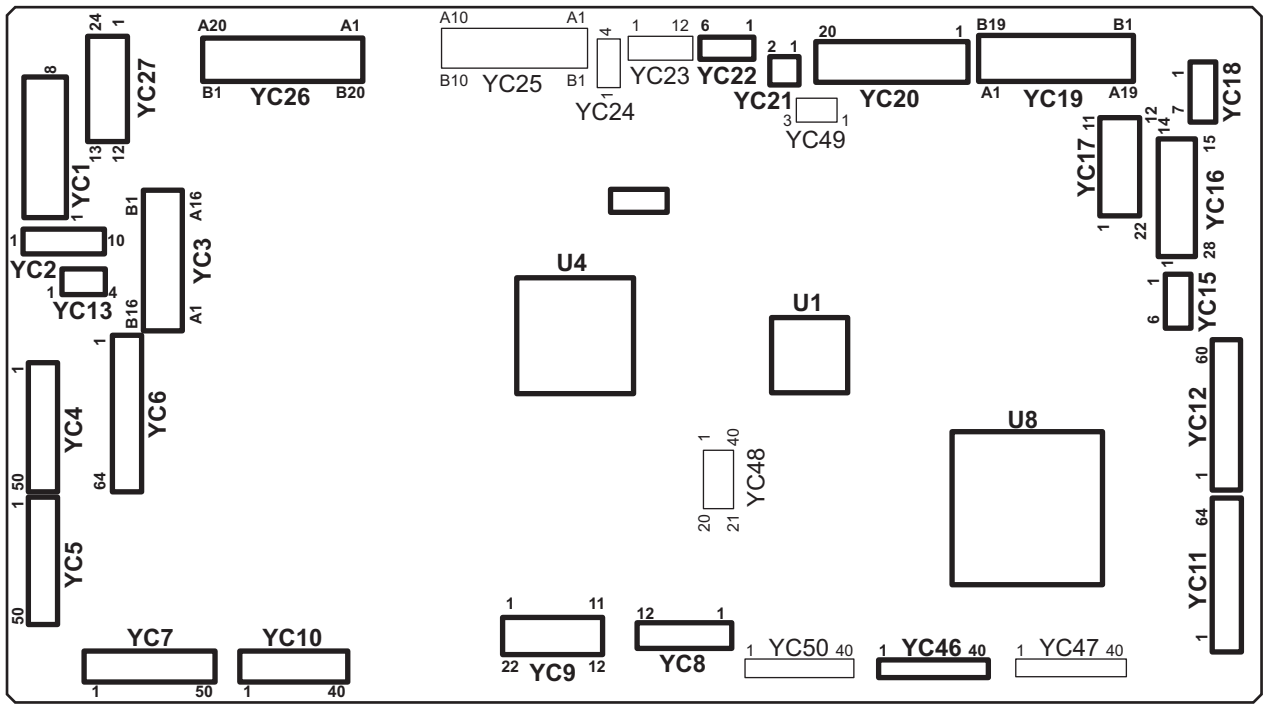
Connector	Pin	Signal	I/O	Voltage	Description
YC8	1	RESET0	I	0/3.3 V DC	Reset signal
Connected to interface PWB	2	WAKEUP0	O	0/3.3 V DC	Control signal
	3	AUDIO0	I	Analog	Audio signal
	4	GND	-	-	Ground
	5	USB_DP0	I/O	-	USB data signal
	6	USB_DN0	I/O	-	USB data signal
	7	VBUS0	O	3.3 V DC	3.3 V DC power to IFPWB
	8	GND	-	-	Ground
	9	RESET1	I	0/3.3 V DC	Reset signal
	10	WAKEUP1	O	0/3.3 V DC	Control signal
	11	AUDIO1	I	Analog	Audio signal
	12	GND	-	-	Ground
	13	USB_DP1	I/O	-	USB data signal
	14	USB_DN1	I/O	-	USB data signal
	15	VBUS1	O	3.3 V DC	3.3 V DC power to IFPWB
YC9	1	GND	-	-	Ground
Connected to interface PWB	2	5V_CUT0	I	0/3.3 V DC	5 V DC cut signal
	3	GND	-	-	Ground
	4	5V	O	5 V DC	5 V DC power to IFPWB
	5	GND	-	-	Ground
	6	5V_CUT1	I	0/3.3 V DC	5 V DC cut signal
YC12	1	5V	O	5 V DC	5 V DC power output
Connected to operation PWB	2	LED	-	-	Not used
	3	GND	-	-	Ground
	4	C2P_SDAT	O	0/3.3 V DC (pulse)	OPWB transmission signal
	5	WETCLK	-	-	Not used
	6	P2C_SDAT	I	0/3.3 V DC (pulse)	OPWB received signal
	7	AIRWET	-	-	Not used
	8	C2P_MODE1	O	0/3.3 V DC	LCD control signal
	9	AIRTEMP	-	-	Not used
	10	C2P_MODE2	O	0/3.3 V DC	Buzzer control signal
	11	P2C_OK_KEY	I	0/3.3 V DC	OK key signal
	12	PRESTN	O	0/3.3 V DC	Reset signal
	13	3.3V	O	3.3 V DC	3.3 V DC power output

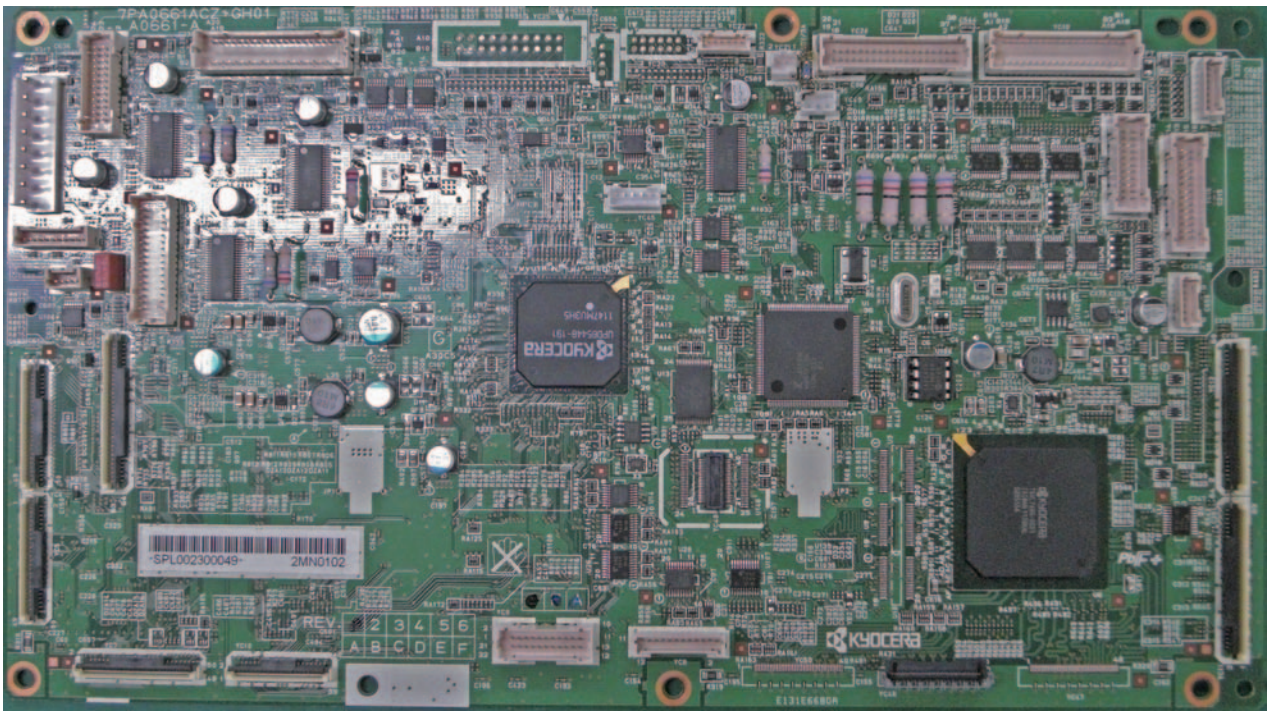
Connector	Pin	Signal	I/O	Voltage	Description
YC16	1	GND	-	-	Ground
Connected to CF card	2	D3	I/O	0/3.3 V DC (pulse)	Data bus signal
	3	D4	I/O	0/3.3 V DC (pulse)	Data bus signal
	4	D5	I/O	0/3.3 V DC (pulse)	Data bus signal
	5	D6	I/O	0/3.3 V DC (pulse)	Data bus signal
	6	D7	I/O	0/3.3 V DC (pulse)	Data bus signal
	7	/CE1	O	0/3.3 V DC	Control signal
	8	A10	O	0/3.3 V DC (pulse)	Address bus signal
	9	/OE	O	0/3.3 V DC	Control signal
	10	A9	O	0/3.3 V DC (pulse)	Address bus signal
	11	A8	O	0/3.3 V DC (pulse)	Address bus signal
	12	A7	O	0/3.3 V DC (pulse)	Address bus signal
	13	VCC	O	0/3.3 V DC	Control signal
	14	A6	O	0/3.3 V DC (pulse)	Address bus signal
	15	A5	O	0/3.3 V DC (pulse)	Address bus signal
	16	A4	O	0/3.3 V DC (pulse)	Address bus signal
	17	A3	O	0/3.3 V DC (pulse)	Address bus signal
	18	A2	O	0/3.3 V DC (pulse)	Address bus signal
	19	A1	O	0/3.3 V DC (pulse)	Address bus signal
	20	A0	O	0/3.3 V DC (pulse)	Address bus signal
	21	D0	I/O	0/3.3 V DC (pulse)	Data bus signal
	22	D1	I/O	0/3.3 V DC (pulse)	Data bus signal
	23	D2	I/O	0/3.3 V DC (pulse)	Data bus signal
	24	WP	O	0/3.3 V DC	Control signal
	25	/CD2	O	0/3.3 V DC	Control signal
	26	/CD1	O	0/3.3 V DC	Control signal
	27	D11	I/O	0/3.3 V DC (pulse)	Data bus signal
	28	D12	I/O	0/3.3 V DC (pulse)	Data bus signal
	29	D13	I/O	0/3.3 V DC (pulse)	Data bus signal
	30	D14	I/O	0/3.3 V DC (pulse)	Data bus signal
	31	D15	I/O	0/3.3 V DC (pulse)	Data bus signal
	32	/CE2	O	0/3.3 V DC	Control signal
	33	/VS1	O	0/3.3 V DC	Control signal
	34	/IORD	O	0/3.3 V DC	Control signal
	35	/IOWD	O	0/3.3 V DC	Control signal
	36	/WE	O	0/3.3 V DC	Control signal
	37	RDY/BSY	I	0/3.3 V DC	Control signal

Connector	Pin	Signal	I/O	Voltage	Description
YC16	38	VCC	O	0/3.3 V DC	Control signal
Connected to CF card	39	CSEL	O	0/3.3 V DC	Control signal
	40	VS2	O	0/3.3 V DC	Control signal
	41	RESET	I	0/3.3 V DC	Reset signal
	42	/WAIT	O	0/3.3 V DC	Control signal
	43	INPACK	O	0/3.3 V DC	Control signal
	44	/REG	I	0/3.3 V DC	REG signal
	45	BVD2	O	0/3.3 V DC	Control signal
	46	BVD1	O	0/3.3 V DC	Control signal
	47	D8	I/O	0/3.3 V DC (pulse)	Data bus signal
	48	D9	I/O	0/3.3 V DC (pulse)	Data bus signal
	49	D10	I/O	0/3.3 V DC (pulse)	Data bus signal
	50	GND	-	-	Ground
YC20	D1	VBUS	O	5 V DC	5 V DC power output
Connected to USB	D2	D-_D	I/O	-	USB data signal
	D3	D+_D	I/O	-	USB data signal
	D4	GND	-	-	Ground
	H1	GND_D	-	-	Ground
	H2	VBUS_H	O	5 V DC	5 V DC power output
	H3	D-_H	I/O	-	USB data signal
	H4	D+_H	I/O	-	USB data signal
YC21	1	VBUS	O	5 V DC	5 V DC power output
Connected to USB host	2	DATA -	I/O	-	USB data signal
	3	DATA +	I/O	-	USB data signal
	4	ID	-	-	Not used
	5	GND	-	-	Ground
YC23	1	SPEED_CONTROL	O	0/5 V DC	CONFM: On/Off
Connected to controller fan motor	2	GND	-	-	Ground
	3	5V	O	5 V DC	5 V DC power output to CONFM

Connector	Pin	Signal	I/O	Voltage	Description
YC24	1	+12V	I	12 V DC	12 V DC power from PSPWB
Connected to power source PWB	2	+12V	I	12 V DC	12 V DC power from PSPWB
	3	+12V	I	12 V DC	12 V DC power from PSPWB
	4	+12V	I	12 V DC	12 V DC power from PSPWB
	5	GND	-	-	Ground
	6	GND	-	-	Ground
	7	GND	-	-	Ground
	8	GND	-	-	Ground
YC27	1	GND	-	-	Ground
Connected to hard disk	2	+5V_HDD	O	5 V DC	5 V DC power to HDD1
	3	GND	-	-	Ground

2-3-2 Engine PWB





* : Refer to the picture.

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

Connector	Pin	Signal	I/O	Voltage	Description
YC1	1	GND	-	-	Ground
Connected to feed PWB 1	2	5V	I	5 V DC	5 V DC power from FPWB1
	3	GND	-	-	Ground
	4	12V	I	12 V DC	12 V DC power from FPWB1
	5	GND	-	-	Ground
	6	GND	-	-	Ground
	7	24V1	I	24 V DC	24 V DC power from FPWB1
	8	24V1	I	24 V DC	24 V DC power from FPWB1
YC2	1	GND	-	-	Ground
Connected to front PWB	2	GND	-	-	Ground
	3	GND	-	-	Ground
	4	GND	-	-	Ground
	5	GND	-	-	Ground
	6	+24V	O	24 V DC	24 V DC power to FRPWB
	7	+24V	O	24 V DC	24 V DC power to FRPWB
	8	+5V	O	5 V DC	5 V DC power to FRPWB
	9	+3.3V2	O	3.3 V DC	3.3 V DC power to FRPWB
	10	+3.3V1	O	3.3 V DC	3.3 V DC power to FRPWB
YC3	A1	+24V1	O	24 V DC	24 V DC power to TRCM
Connected to transfer belt unit	A2	GND	-	-	Ground
	A3	ICL_MOT_REM	I	0/3.3 V DC	TRCM: On/Off
	A4	ICL_MOT_CLK	O	0/3.3 V DC (pulse)	TRCM clock signal
	A5	ICL_MOT_RDY	I	0/3.3 V DC	TRCM ready signal
	A6	ICL_MOT_DIR	O	0/3.3 V DC	TRCM drive switch signal
	A7	RLS_MOT_DR	O	0/24 V DC	CRM: On/Off
	A8	24V1	O	24 V DC	24 V DC power to CRM
	A9	GND	-	-	Ground
	A10	RLS_SENS	I	0/3.3 V DC	CRS: On/Off
	A11	5V	O	5 V DC	5 V DC power to CRS
	A12	ZIG_MOT_DR_CCW	O	0/24 V DC	TRSM: On/Off (CCW)
	A13	ZIG_MOT_DR_CW	O	0/24 V DC	TRSM: On/Off (CW)
	A14	GND	-	-	Ground
	A15	BLT_INDEX	-	-	Not used

Connector	Pin	Signal	I/O	Voltage	Description
YC3	A16	5V	-	-	Ground
Connected to transfer belt unit	B1	GND	-	-	Ground
	B2	ZIG_SENS	I	0/3.3 V DC	TRSS: On/Off
	B3	5V	O	5 V DC	5 V DC power to TRSS
	B4	GND	-	-	Ground
	B4	GND	-	-	Ground
	B5	BLT_SPEED	I	0/3.3 V DC	TRBLS: On/Off
	B6	+5V	O	5 V DC	5 V DC power to TRBLS
	B7	TEMP	I	Analog	TEMP signal
	B8	ZIG_REV_SENS	I	0/3.3 V DC	TRES: On/Off
	B9	GND	-	-	Ground
	B10	5V	O	5 V DC	5 V DC power to TRES
	B11	3.3V2	O	3.3 V DC	3.3 V DC power to TRPWB
	B12	EEP_SCL2	O	0/3.3 V DC (pulse)	EEPROM clock signal
	B13	EEP_SDA2	I/O	0/3.3 V DC (pulse)	EEPROM data signal
	B14	GND	-	-	Ground
	B15	A0	-	-	Not used
	B16	A1	-	-	Not used
YC4	1	GND	-	-	Ground
Connected to feed PWB 2	2	FEED_MOT_REM	O	0/3.3 V DC	PFM: On/Off
	3	FEED_MOT_CLK	O	0/3.3 V DC (pulse)	PFM clock signal
	4	FEED_MOT_RDY	I	0/3.3 V DC	PFM ready signal
	5	FEED_MOT_DIR	O	0/3.3 V DC	PFM drive switch signal
	6	FEED_CL1_REM	O	0/24 V DC	PFCL1: On/Off
	7	FEED_CL2_REM	O	0/24 V DC	PFCL2: On/Off
	8	ASIST_CL2	O	0/24 V DC	ASCL2: On/Off
	9	LIFT_MOT2_REM	O	0/24 V DC	LM2: On/Off
	10	GND	-	-	Ground
	11	LIFT_MOT1_REM 1	O	0/24 V DC	LM1: On/Off
	12	CAS2_WID	I	0/3.3 V DC	PWSW2: On/Off
	13	CAS2_LNG3	I	0/3.3 V DC	PLSW2: On/Off
	14	CAS2_LNG2	I	0/3.3 V DC	PLSW2: On/Off
	15	CAS2_LNG1	I	0/3.3 V DC	PLSW2: On/Off
	16	CAS1_WID	I	0/3.3 V DC	PWSW1: On/Off

Connector	Pin	Signal	I/O	Voltage	Description
YC4	17	CAS1_LNG3	I	0/3.3 V DC	PLSW1: On/Off
Connected to feed PWB 2	18	CAS1_LNG2	I	0/3.3 V DC	PLSW1: On/Off
	19	CAS1_LNG1	I	0/3.3 V DC	PLSW1: On/Off
	20	GND	-	-	Ground
	21	CAS2_QUANT2	I	0/3.3 V DC	PGS2(L): On/Off
	22	CAS2_QUANT1	I	0/3.3 V DC	PGS2(U): On/Off
	23	CAS1_QUANT2	I	0/3.3 V DC	PGS1(L): On/Off
	24	CAS1_QUANT1	I	0/3.3 V DC	PGS1(U): On/Off
	25	LIFT_MOT1_LOCK	I	0/3.3 V DC	LM1 lock signal
	26	LIFT_MOT2_LOCK	I	0/3.3 V DC	LM2 lock signal
	27	CURRENT_SIG	I	0/3.3 V DC	Current signal
	28	V-FEED_CL	O	0/24 V DC	PCCL: On/Off
	29	COVER_OPEN	I	0/3.3 V DC	PCCSW: On/Off
	30	FEED2_SENS	I	0/3.3 V DC	PFPCS1: On/Off
	31	CAS1_P0	I	0/3.3 V DC	FS1: On/Off
	32	CAS1_LIFT_UP	I	0/3.3 V DC	LS1: On/Off
	33	GND	-	-	Ground
	34	CAS1_EMPTY	I	0/3.3 V DC	PS1: On/Off
	35	PICK_SOL1_RET	O	0/24 V DC	PUSOL1: On/Off (RET)
	36	PICK_SOL1_REM	O	0/24 V DC	PUSOL1: On/Off (ACT)
	37	CAS2_P0	I	0/3.3 V DC	FS2: On/Off
	38	CAS2_LIFT_UP	I	0/3.3 V DC	LS2: On/Off
	39	CAS2_EMPTY	I	0/3.3 V DC	PS2: On/Off
	40	PICK_SOL2_RET	O	0/24 V DC	PUSOL2: On/Off (RET)
	41	PICK_SOL2_REM	O	0/24 V DC	PUSOL2: On/Off (ACT)
	42	GND	-	-	Ground
	43	REG_SENS	I	0/3.3 V DC	RS: On/Off
	44	FEED1_SENS	I	0/3.3 V DC	PCS: On/Off
	45	BEND_SENS	I	0/3.3 V DC	RDS: On/Off
	46	MID_MOT_PH	O	0/3.3 V DC	MM control signal
	47	MID_MOT_REM(ROL_CL)	O	0/3.3 V DC	MM/MCL: On/Off
	48	MID_MOT_CLK	O	0/3.3 V DC (pulse)	MM clock signal
	49	MID_MOT_PD	O	0/3.3 V DC	MM control signal
	50	ASIST_CL1	O	0/24 V DC	ASCL1: On/Off

Connector	Pin	Signal	I/O	Voltage	Description
YC5	1	GND	-	-	Ground
Connected to feed PWB 1	2	M_TEMP	-	-	Not used
	3	LOOP_SENS	I	0/3.3 V DC	LPS: On/Off
	4	GND	-	-	Ground
	5	EDGE_FAN_H	O	0/24 V DC	FUFM: On/Off
	6	DU1_MOT_PD	O	0/3.3 V DC	DUM1 control signal
	7	DU1_MOT_CLK	O	0/3.3 V DC (pulse)	DUM1 clock signal
	8	DU1_MOT_REM(CL_H)	O	0/3.3 V DC	DUM1/DUCL1: On/Off
	9	GND	-	-	Ground
	10	EXIT_FAN	O	0/24 V DC	EFM: On/Off
	11	DU_ENTER_SENS	I	0/3.3 V DC	DUS1: On/Off
	12	TCON_SET	-	-	Not used
	13	GND	-	-	Ground
	14	TRANS_REM	O	0/3.3 V DC	TRCM: On/Off
	15	TRANS_CLK	O	0/3.3 V DC (pulse)	TRCM clock signal
	16	TRANS_RDY	I	0/3.3 V DC	TRCM ready signal
	17	TRANS_DIR	O	0/3.3 V DC	TRCM drive switch signal
	18	TRANS_BRK	O	0/3.3 V DC	TRCM break signal
	19	GND	-	-	Ground
	20	DRM_BK_REM	-	-	Not used
	21	DRM_BK_RDY	-	-	Not used
	22	DRM_BK_DIR	-	-	Not used
	23	DRM_BK_BRK	-	-	Not used
	24	GND	-	-	Ground
	25	DLP_BK_REM	-	-	Not used
	26	DLP_BK_CLK	-	-	Not used
	27	DLP_BK_RDY	-	-	Not used
	28	DLP_BK_DIR	-	-	Not used
	29	GND	-	-	Ground
	30	DRM_CLR_REM	-	-	Not used
	31	DRM_BK_CLR_CLK	-	-	Not used
	32	DRM_CLR_RDY	-	-	Not used
	33	DRM_CLR_DIR	-	-	Not used
	34	GND	-	-	Ground
	35	DLP_CLR_REM	-	-	Not used

Connector	Pin	Signal	I/O	Voltage	Description
YC5	36	DLP_CLR_CLK	-	-	Not used
Connected to feed PWB 1	37	DLP_CLR_RDY	-	-	Not used
	38	DLP_CLR_DIR	-	-	Not used
	39	GND	-	-	Ground
	40	REG_MOT_PD	O	0/3.3 V DC	RM control signal
	41	REG_MOT_CLK	O	0/3.3 V DC (pulse)	RM clock signal
	42	REG_MOT_REM(CL)	O	0/3.3 V DC	RM/RCL: On/Off
	43	GND	-	-	Ground
	44	IH_FAN_L	O	0/24 V DC	IHFM: On/Off
	45	IH_FAN_H	O	0/24 V DC	IHFM: On/Off
	46	IH_PWB_FAN_ALM	I	0/3.3 V DC	IHFM alarm signal
	47	POWER_OFF	O	0/3.3 V DC	Power off signal
	48	DRM_HEAT	-	-	Not used
	49	IH_PWB_FAN_ALM(U)	-	-	Not used
	50	GND	-	-	Ground
YC6	1	GND	-	-	Ground
Connected to feed PWB 1	2	MAIL_SDI	I	0/3.3 V DC (pulse)	MAIL serial communication data signal
	3	NC	-	-	Not used
	4	MAIL_CLK	O	0/3.3 V DC (pulse)	MAIL clock signal
	5	MAIL_SDO	O	0/3.3 V DC (pulse)	MAIL serial communication data signal
	6	MAIL_RDY	I	0/3.3 V DC	MAIL ready signal
	7	MAIL_SEL	O	0/24 V DC	MAIL select signal
	8	GND	-	-	Ground
	9	MAIN_HEAT	-	-	Not used
	10	SUB_HEAT	-	-	Not used
	11	ZEROC	-	-	Not used
	12	FSR_RELAY	O	0/3.3 V DC	Fuser relay signal
	13	PRESS_REM	-	-	Not used
	14	EXIT_REAR_FAN_L	O	0/24 V DC	ERFM: On/Off
	15	EXIT_REAR_FAN_H	O	0/24 V DC	ERFM: On/Off
	16	GND	-	-	Ground

Connector	Pin	Signal	I/O	Voltage	Description
YC6	17	FSR_CL_REM	-	-	Not used
Connected to feed PWB 1	18	FSR_MOT_REM	O	0/3.3 V DC	FUM: On/Off
	19	FSR_MOT_CLK		0/3.3 V DC (pulse)	FUM clock signal
	20	FSR_MOT_RDY	O	0/3.3 V DC	FUM ready signal
	21	FSR_MOT_DIR	O	0/3.3 V DC	FUM drive switch signal
	22	FSR_MOT_BRK	O	0/3.3 V DC	FUM break signal
	23	GND	-	-	Ground
	24	MPF_TABLE	I	0/3.3 V DC	MPTSW: On/Off
	25	MPF_WID1	I	0/3.3 V DC	MPPWSW: On/Off
	26	MPF_WID2	I	0/3.3 V DC	MPPWSW: On/Off
	27	MPF_WID3	I	0/3.3 V DC	MPPWSW: On/Off
	28	MPF_LNG	I	0/3.3 V DC	MPPLSW: On/Off
	29	GND	-	-	Ground
	30	MPF_PPR	I	0/3.3 V DC	MPPS: On/Off
	31	MPF_UP	I	0/3.3 V DC	MPLS1: On/Off
	32	MPF_DOWN	I	0/3.3 V DC	MPLS2: On/Off
	33	MPF_JAM	I	0/3.3 V DC	MPFS: On/Off
	34	MPF_CL	O	0/24 V DC	MPPFCL: On/Off
	35	MPF_LIF2	O	0/24 V DC	MPLM: On/Off
	36	MPF_LIFT1	O	0/24 V DC	MPLM: On/Off
	37	GND	-	-	Ground
	38	TC_MOT_LOCK	-	-	Not used
	39	TC_TONER_LED	-	-	Not used
	40	TONER_FULL	-	-	Not used
	41	TC_TONER_VCONT	-	-	Not used
	42	INTER_LOCK	-	-	Not used
	43	DU2_MOT_PD	O	0/3.3 V DC	DUM2 control signal
	44	DU2_MOT_CLK	O	0/3.3 V DC (pulse)	DUM2 clock signal
	45	DU2_MOT_REM	O	0/3.3 V DC	DUM2/DUCL2: On/Off
	46	GND	-	-	Ground
	47	DU_OPEN	I	0/3.3 V DC	DUCSW: On/Off
	48	DU_FAN	-	-	Not used
	49	PRESS_MOT_REM1	O	0/24 V DC	TRRM: On/Off
	50	PRESS_MOT_REM2	O	0/24 V DC	TRRM: On/Off
	51	PRESS_RLS_SENS	I	0/3.3 V DC	TRRS: On/Off

Connector	Pin	Signal	I/O	Voltage	Description
YC6	52	DU_SENS	I	0/3.3 V DC	DUS2: On/Off
Connected to feed PWB 1	53	BELT_JAM_SENS	-	-	Not used
	54	GND	-	-	Ground
	55	CLN_SOL_RET	O	0/24 V DC	CLSOL: On/Off (RET)
	56	CLN_SOL_REM	O	0/24 V DC	CLSOL: On/Off (ACT)
	57	REG_SENS_R_S	I	Analog	IDS2 detection signal
	58	REG_SENS_R_P	I	Analog	IDS2 detection signal
	59	REG_R_LED	O	Analog	IDS2 control signal
	60	GND	-	-	Ground
	61	REG_SENS_F_S	I	Analog	IDS1 detection signal
	62	REG_SENS_F_P	I	Analog	IDS1 detection signal
	63	REG_F_LED	O	Analog	IDS1 control signal
	64	GND	-	-	Ground
YC7	1	GND	-	-	Ground
Connected to front PWB	2	WTNR_SET	-	-	Not used
	3	INTER_LOCK	-	-	Not used
	4	IH_CORE_SENS	-	-	Not used
	5	IH_CORE_MOT_REM	-	-	Not used
	6	IH_CORE_CLK	-	-	Not used
	7	WTNR_LED	O	0/3.3 V DC (pulse)	WTS1 LED emitter signal
	8	IH_COIL_FAN_ALM	I	0/3.3 V DC	FUFFM alarm signal
	9	IH_COIL_FAN_H	O	0/24 V DC	FUFFM: On/Off
	10	IH_COIL_FAN_L	O	0/24 V DC	FUFFM: On/Off
	11	EXIT_FAN	O	0/24 V DC	EFFM: On/Off
	12	VIB_MOT_REM	O	0/24 V DC	VM: On/Off
	13	JUNC_SOL_REM	O	0/24 V DC	FSSOL: On/Off (ACT)
	14	JUNC_SOL_RET	O	0/24 V DC	FSSOL: On/Off (RET)
	15	GND	-	-	Ground
	16	EXIT_MAIN_SENS	I	0/3.3 V DC	EFS1: On/Off
	17	EXIT_FEED_SENS	I	0/3.3 V DC	SBS: On/Off
	18	SB_MOT_REM	O	0/3.3 V DC	EM: On/Off
	19	SB_MOT_PH	O	0/3.3 V DC	EM control signal
	20	SB_MOT_CLK	O	0/3.3 V DC (pulse)	EM clock signal

Connector	Pin	Signal	I/O	Voltage	Description
YC7	21	SB_MOT_PD	O	0/3.3 V DC	EM control signal
Connected to front PWB	22	SB_MOT_DIR	O	0/3.3 V DC	EM drive switch signal
	23	GND	-	-	Ground
	24	WTNR_FULL	I	Analog	WTS1 detection signal
	25	THOP_DIR	-	-	Not used
	26	DLP_FAN_CLR_H	O	0/24 V DC	DEVFM1: On/Off
	27	DLP_FAN_CLR_L	O	0/24 V DC	DEVFM1: On/Off
	28	WTNR_SET	I	Analog	WTS2 detection signal
	29	WTNR_NEAR(M)	I	Analog	WTS2 detection signal
	30	WTNR_NEAR_V CONT	O	0/3.3 V DC	WTS2 control signal
	31	GND	-	-	Ground
	32	ROT_MOT_REM	-	-	Not used
	33	ROT_MOT_CLK	-	-	Not used
	34	ROT_MOT_PD	-	-	Not used
	35	ROT_MOT_DIR	-	-	Not used
	36	ROT_SUB_SENS	-	-	Not used
	37	THOP_MOT_Bk	-	-	Not used
	38	THOP_MOT_M	-	-	Not used
	39	THOP_MOT_C	-	-	Not used
	40	THOP_MOT_Y	-	-	Not used
	41	GND	-	-	Ground
	42	ENCODE_ Bk	-	-	Not used
	43	ENCODE_M	-	-	Not used
	44	ENCODE_C	-	-	Not used
	45	ENCODE_Y	-	-	Not used
	46	THOP_ Bk	-	-	Not used
	47	THOP_M	-	-	Not used
	48	THOP_C	-	-	Not used
	49	THOP_Y	-	-	Not used
	50	GND	-	-	Ground

Connector	Pin	Signal	I/O	Voltage	Description
YC8	1	SGND	-	-	Ground
Connected to high voltage PWB 2	2	SGND	-	-	Ground
	3	SP_CNT	O	Analog	Separation bias control voltage
	4	T2_CNT	O	Analog	Secondary transfer bias control voltage
	5	T2_OFF_REM	O	0/3.3 V DC	Separation bias: On/Off
	6	T_REM	O	0/3.3 V DC	Secondary transfer bias: On/Off
	7	FB_CONT	O	0/3.3 V DC	Primary transfer cleaning bias: On/Off
	8	T1_CONT_Bk	O	Analog	Primary transfer bias K control voltage
	9	T1_CONT_M	O	Analog	Primary transfer bias M control voltage
	10	T1_CONT_C	O	Analog	Primary transfer bias C control voltage
	11	T1_CONT_Y	O	Analog	Primary transfer bias Y control voltage
	12	T1_CLR_OFF_REM	O	0/3.3 V DC	Primary transfer control signal
YC9	1	MOT_CLK	O	0/3.3 V DC (pulse)	MCPWB clock signal
Connected to motor control PWB	2	MOT_SDO	O	0/3.3 V DC (pulse)	MCPWB serial communication data signal
	3	MOT_SEL	O	0/3.3 V DC	MCPWB select signal
	4	MOT_SDI	I	0/3.3 V DC (pulse)	MCPWB serial communication data signal
	5	MOT_RDY	I	0/3.3 V DC	MCPWB ready signal
	6	EMERGENCY	O	0/3.3 V DC	MCPWB control signal
	7	BLT_SPEED	O	0/3.3 V DC	TBLS: On/Off
	8	BLT_INDEX	-	-	Not used
	9	DRM_INDEX_BK	O	0/3.3 V DC	DRM-K control signal
	10	DRM_INDEX_M	O	0/3.3 V DC	DRM-M control signal
	11	DRM_INDEX_C	O	0/3.3 V DC	DRM-C control signal
	12	DRM_INDEX_Y	O	0/3.3 V DC	DRM-Y control signal
	13	GND	-	-	Ground
	14	GND	-	-	Ground
	15	+5V	O	5 V DC	5 V DC power to MCPWB
	16	+5V	O	5 V DC	5 V DC power to MCPWB
	17	BLT_BRAKE	-	-	Not used
	18	BLT_VM	-	-	Not used

Connector	Pin	Signal	I/O	Voltage	Description
YC9	19	BLT_REM	-	-	Not used
Connected to motor control PWB	20	MOT_DATA_SET	O	0/3.3 V DC	MCPWB control signal
	21	DRM_ON	O	0/3.3 V DC	MCPWB control signal
	22	BLT_FG	-	-	Not used
YC10	1	GND	-	-	Ground
Connected to front PWB	2	DRM_INDEX_Bk	I	0/3.3 V DC	DRM-K control signal
	3	ERS_Bk	O	0/24 V DC	CL-K: On/Off
	4	TPD_Bk_1	I	Analog	TS-K detection signal
	5	DLP_VCONT_Bk_1	O	0/3.3 V DC	TS-K control signal
	6	TPD_TEMP_Bk	I	Analog	Developer thermistor K detection signal
	7	GND	-	-	Ground
	8	DRM_INDEX_M	I	0/3.3 V DC	DRM-M control signal
	9	ERS_M	O	0/24 V DC	CL-M: On/Off
	10	TPD_M_1	I	Analog	TS-M detection signal
	11	DLP_VCONT_M_1	O	0/3.3 V DC	TS-M control signal
	12	TPD_TEMP_M	I	Analog	Developer thermistor M detection signal
	13	GND	-	-	Ground
	14	DRM_INDEX_C	I	0/3.3 V DC	DRM-C control signal
	15	ERS_C	O	0/24 V DC	CL-C: On/Off
	16	TPD_C_1	I	Analog	TS-C detection signal
	17	DLP_VCONT_C_1	O	0/3.3 V DC	TS-C control signal
	18	TPD_TEMP_C	I	Analog	Developer thermistor C detection signal
	19	GND	-	-	Ground
	20	TN_CLK	O	0/3.3 V DC (pulse)	Clock signal
	21	GND	-	-	Ground
	22	EEP_SCL1	O	0/3.3 V DC (pulse)	EEPROM clock signal
	23	GND	-	-	Ground
	24	EEP_SDA1	I/O	0/3.3 V DC (pulse)	EEPROM data signal
	25	GND	-	-	Ground
	26	TPD_Y_1	I	Analog	TS-Y detection signal
	27	DLP_VCONT_Y_1	O	0/3.3 V DC	TS-Y control signal

Connector	Pin	Signal	I/O	Voltage	Description
YC10	28	TPD_TEMP_Y	I	Analog	Developer thermistor Y detection signal
Connected to front PWB	29	ERS_Y	O	0/24 V DC	CL-Y: On/Off
	30	DRM_INDEX_Y	I	0/3.3 V DC	DRM-Y control signal
	31	FRONT_OPEN	I	0/3.3 V DC	FRCSW: On/Off
	32	GND	-	-	Ground
	33	I2C_SCL	O	0/3.3 V DC (pulse)	EEPROM clock signal
	34	GND	-	-	Ground
	35	I2C_SDA	I/O	0/3.3 V DC (pulse)	EEPROM data signal
	36	GND	-	-	Ground
	37	LSU_FAN	O	0/24 V DC	LSUFM: On/Off
	38	CLEAN_MOT_LOCK	I	0/3.3 V DC	WTM lock signal
	39	CLEAN_MOT_REM	O	0/24 V DC	WTM: On/Off
	40	GND	-	-	Ground
YC11	1	GND	-	-	Ground
Connected to LSU relay PWB	2	DATA_2PBK(LVDS)	O	0/3.3 V DC (pulse)	Video data signal K (P)
	3	DATA_2NBK(LVDS)	O	0/3.3 V DC (pulse)	Video data signal K (N)
	4	GND	-	-	Ground
	5	GAIN_FIX_BK	O	0/3.3 V DC	APCPWB-K control signal
	6	PARA_SIG_P2_BK	O	0/3.3 V DC	APCPWB-K control signal
	7	PARA_SIG_P1_BK	O	0/3.3 V DC	APCPWB-K control signal
	8	PARA_SIG_P0_BK	O	0/3.3 V DC	APCPWB-K control signal
	9	INT_ST_1_BK	O	0/3.3 V DC	APCPWB-K control signal
	10	INT_ST_2_BK	O	0/3.3 V DC	APCPWB-K control signal
	11	PARA_SIG_P3_2BK	O	0/3.3 V DC	APCPWB-K control signal
	12	GND	-	-	Ground
	13	DATA_4PBK(LVDS)	O	0/3.3 V DC (pulse)	Video data signal K (P)
	14	DATA_4NBK(LVDS)	O	0/3.3 V DC (pulse)	Video data signal K (N)

Connector	Pin	Signal	I/O	Voltage	Description
YC11	15	GND	-	-	Ground
Connected to LSU relay PWB	16	DATA_3PBK(LVDS)	O	0/3.3 V DC (pulse)	Video data signal K (P)
	17	DATA_3NBK(LVDS)	O	0/3.3 V DC (pulse)	Video data signal K (N)
	18	GND	-	-	Ground
	19	DATA_2P_M(LVDS)	O	0/3.3 V DC (pulse)	Video data signal M (P)
	20	DATA_2N_M(LVDS)	O	0/3.3 V DC (pulse)	Video data signal M (N)
	21	GND	-	-	Ground
	22	GAIN_FIX_M	O	0/3.3 V DC	APCPWB-M control signal
	23	PALA_STG_P2_M	O	0/3.3 V DC	APCPWB-M control signal
	24	PALA_STG_P1_M	O	0/3.3 V DC	APCPWB-M control signal
	25	PALA_STG_P0_M	O	0/3.3 V DC	APCPWB-M control signal
	26	INT_ST_M	O	0/3.3 V DC	APCPWB-M control signal
	27	GND	-	-	Ground
	28	DATA_2P_C(LVDS)	O	0/3.3 V DC (pulse)	Video data signal C (P)
	29	DATA_2N_C(LVDS)	O	0/3.3 V DC (pulse)	Video data signal C (N)
	30	GND	-	-	Ground
	31	GAIN_FIX_C	O	0/3.3 V DC	APCPWB-C control signal
	32	PALA_STG_P2_C	O	0/3.3 V DC	APCPWB-C control signal
	33	PALA_STG_P1_C	O	0/3.3 V DC	APCPWB-C control signal
	34	PALA_STG_P0_C	O	0/3.3 V DC	APCPWB-C control signal
	35	INT_ST_C	O	0/3.3 V DC	APCPWB-C control signal
	36	GND	-	-	Ground
	37	DATA_2P_Y(LVDS)	O	0/3.3 V DC (pulse)	Video data signal Y (P)
	38	DATA_2N_Y(LVDS)	O	0/3.3 V DC (pulse)	Video data signal Y (N)
	39	GND	-	-	Ground
	40	GAIN_FIX_Y	O	0/3.3 V DC	APCPWB-Y control signal
	41	PALA_STG_P2_Y	O	0/3.3 V DC	APCPWB-Y control signal
	42	PALA_STG_P1_Y	O	0/3.3 V DC	APCPWB-Y control signal
	43	PALA_STG_P0_Y	O	0/3.3 V DC	APCPWB-Y control signal
	44	INT_ST_Y	O	0/3.3 V DC	APCPWB-Y control signal
	45	GND	-	-	Ground

Connector	Pin	Signal	I/O	Voltage	Description
YC11	46	EEPROM_CS_1_BK	I/O	0/3.3 V DC (pulse)	APCPWB-K EEPROM data signal
Connected to LSU relay PWB	47	IDD_CS_1_BK	O	0/3.3 V DC	APCPWB-K control signal
	48	EEPROM_CS_2_BK	I/O	0/3.3 V DC (pulse)	APCPWB-K EEPROM data signal
	49	IDD_CS_2_BK	O	0/3.3 V DC	APCPWB-K control signal
	50	EEPROM_CS_M	I/O	0/3.3 V DC (pulse)	APCPWB-M EEPROM data signal
	51	IDD_CS_M	O	0/3.3 V DC	APCPWB-M control signal
	52	EEPROM_CS_C	I/O	0/3.3 V DC (pulse)	APCPWB-C EEPROM data signal
	53	IDD_CS_C	O	0/3.3 V DC	APCPWB-C control signal
	54	EEPROM_CS_Y	I/O	0/3.3 V DC (pulse)	APCPWB-Y EEPROM data signal
	55	IDD_CS_Y	O	0/3.3 V DC	APCPWB-Y control signal
	56	SGND	-	-	Ground
	57	MSET_N	O	0/3.3 V DC	Control signal
	58	SGND	-	-	Ground
	59	SDO	O	0/3.3 V DC (pulse)	Serial communication data signal
	60	SGND	-	-	Ground
	61	SDI	I	0/3.3 V DC (pulse)	Serial communication data signal
	62	SGND	-	-	Ground
	63	CLK	O	0/3.3 V DC (pulse)	Clock signal
	64	SGND	-	-	Ground
YC12	1	-			
Connected to LSU relay PWB	2	LOCK_BK	I	0/3.3 V DC	PM-K lock signal
	3	REM_BK	O	0/24 V DC	PM-K: On/Off
	4	GND	-	-	Ground
	5	DATA_1PBK	O	0/3.3 V DC (pulse)	Video data signal K (P)
	6	DATA_1NBK	O	0/3.3 V DC (pulse)	Video data signal K (N)
	7	GND	-	-	Ground
	8	SDCLK_BK	O	0/3.3 V DC (pulse)	APCPWB-K clock signal
	9	GND	-	-	Ground
	10	PARA_SIG_P4_BK	O	0/3.3 V DC	APCPWB-K control signal
	11	PARA_SIG_P3_BK	O	0/3.3 V DC	APCPWB-K control signal
	12	CUALM_BK	I	0/3.3 V DC	APCPWB-K alarm signal

Connector	Pin	Signal	I/O	Voltage	Description
YC12	13	LSU_TH_BK	I	Analog	LSU thermistor K detection signal
Connected to LSU relay PWB	14	BD_BK	I	0/3.3 V DC (pulse)	Horizontal synchronization signal K
	15	GND	-	-	Ground
	16	CLK_M	O	0/3.3 V DC (pulse)	PM-M clock signal
	17	LOCK_M	I	0/3.3 V DC	PM-M lock signal
	18	REM_M	O	0/24 V DC	PM-M: On/Off
	19	GND	-	-	Ground
	20	DATA_1P_M	O	0/3.3 V DC (pulse)	Video data signal M (P)
	21	DATA_1N_M	O	0/3.3 V DC (pulse)	Video data signal M (N)
	22	GND	-	-	Ground
	23	SDCLK_M	O	0/3.3 V DC (pulse)	APCPWB-M clock signal
	24	SGND	-	-	Ground
	25	PARA_SIG_P4_M	O	0/3.3 V DC	APCPWB-M control signal
	26	PARA_SIG_P3_M	O	0/3.3 V DC	APCPWB-M control signal
	27	CUALM_M	I	0/3.3 V DC	APCPWB-M alarm signal
	28	LSU_TH_M	I	Analog	LSU thermistor M detection signal
	29	BD_M	I	0/3.3 V DC (pulse)	Horizontal synchronization signal M
	30	GND	-	-	Ground
	31	CLK_C	O	0/3.3 V DC (pulse)	PM-C clock signal
	32	LOCK_C	I	0/3.3 V DC	PM-C lock signal
	33	REM_C	O	0/24 V DC	PM-C: On/Off
	34	GND	-	-	Ground
	35	DATA_1P_C	O	0/3.3 V DC (pulse)	Video data signal C (P)
	36	DATA_1N_C	O	0/3.3 V DC (pulse)	Video data signal C (N)
	37	GND	-	-	Ground
	38	SDCLK_C	O	0/3.3 V DC (pulse)	APCPWB-C clock signal
	39	GND	-	-	Ground
	40	PARA_SIG_P4_C	O	0/3.3 V DC	APCPWB-C control signal
	41	PARA_SIG_P3_C	O	0/3.3 V DC	APCPWB-C control signal
	42	CUALM_C	I	0/3.3 V DC	APCPWB-C alarm signal
	43	LSU_TH_C	I	Analog	LSU thermistor C detection signal
	44	BD_C	I	0/3.3 V DC (pulse)	Horizontal synchronization signal C
	45	GND	-	-	Ground
	46	CLK_Y	O	0/3.3 V DC (pulse)	PM-Y clock signal
	47	LOCK_Y	I	0/3.3 V DC	PM-Y lock signal
	48	REM_Y	O	0/24 V DC	PM-Y: On/Off
	49	GND	-	-	Ground

Connector	Pin	Signal	I/O	Voltage	Description
YC12	50	DATA_1P_Y	O	0/3.3 V DC (pulse)	Video data signal Y (P)
Connected to LSU relay PWB	51	DATA_1N_Y	O	0/3.3 V DC (pulse)	Video data signal Y (N)
	52	GND	-	-	Ground
	53	SDCLK_Y	O	0/3.3 V DC (pulse)	APCPWB-Y clock signal
	54	GND	-	-	Ground
	55	PARA_SIG_P4_Y	O	0/3.3 V DC	APCPWB-Y control signal
	56	PARA_SIG_P3_Y	O	0/3.3 V DC	APCPWB-Y control signal
	57	CUALM_Y	I	0/3.3 V DC	APCPWB-Y alarm signal
	58	LSU_TH_Y	I	Analog	LSU thermistor Y detection signal
	59	BD_Y	I	0/3.3 V DC (pulse)	Horizontal synchronization signal Y
	60	GND	-	-	Ground
YC13	1	GND	-	-	Ground
Connected to feed PWB 1	2	GND	-	-	Ground
	3	3.3V3	I	3.3 V DC	3.3 V DC power from FPWB1
	4	3.3V2	I	3.3 V DC	3.3 V DC power from FPWB1
YC15	1	GND	-	-	Ground
Connected to the LSU relay PWB	2	+3.3V2	O	3.3 V DC	3.3 V DC power to LSURPWB
	3	GND	-	-	Ground
	4	GND	-	-	Ground
	5	+5V_AN	O	5 V DC	5 V DC power to LSURPWB
	6	+5V_AN	O	5 V DC	5 V DC power to LSURPWB

Connector	Pin	Signal	I/O	Voltage	Description
YC16	1	GND	-	-	Ground
Connected to high voltage PWB 1	2	AC_MAIN_CLK	O	0/3.3 V DC (pulse)	AC charger roller Y clock signal
	3	DC_MAIN_REM	O	0/3.3 V DC	DC main charger Y: On/Off
	4	DC_MAIN_CNT_Y	O	PWM	DC charger roller Y control signal
	5	MAIN_IDC_Y	O	PWM	DC charger roller Y control signal
	6	AC_SLV_CLK_Y	O	0/3.3 V DC (pulse)	AC sleeve bias Y clock signal
	7	DC_SLV_CNT_Y	O	PWM	DC sleeve bias Y control voltage
	8	DC_MAG_CNT_Y	O	PWM	DC magnet bias Y control voltage
	9	AC_SLV_CNT_Y	O	PWM	AC sleeve bias Y control voltage
	10	AC_MAIN_CNT_Y	O	PWM	AC charger roller Y control signal
	11	DISCHARGE_Y	I	PWM	Main charger Y control signal
	12	AC_MAG_CNT_Y	O	0/3.3 V DC (pulse)	AC magnet bias Y control voltage
	13	AC_MAG_CLK_Y	O	0/3.3 V DC (pulse)	AC magnet bias Y clock signal
	14	DC_REC_CNT	O	PWM	DC bias Y control voltage
	15	N.C	-	-	Not used
	16	DC_REC_REM	O	PWM	DC bias C control voltage
	17	AC_MAG_CLK_C	O	0/3.3 V DC (pulse)	AC magnet bias C clock signal
	18	AC_MAG_CNT_C	O	0/3.3 V DC (pulse)	AC magnet bias C control voltage
	19	DISCHARGE_C	I	PWM	Main charger C control signal
	20	AC_MAIN_CNT_C	O	PWM	AC charger roller C control signal
	21	AC_SLV_CNT_C	O	PWM	AC sleeve bias C control voltage
	22	DC_MAG_CNT_C	O	PWM	DC magnet bias C control voltage
	23	DC_SLV_CNT_C	O	PWM	DC sleeve bias C control voltage
	24	AC_SLV_CLK_C	O	0/3.3 V DC (pulse)	AC sleeve bias C clock signal
	25	DC_MAG_REM	O	0/3.3 V DC	DC main charger C: On/Off
	26	MAIN_IDC_C	O	PWM	DC charger roller C control signal
	27	DC_MAIN_CNT_C	O	PWM	DC charger roller C control signal
	28	GND	-	-	Ground

Connector	Pin	Signal	I/O	Voltage	Description
YC17	1	GND	-	-	Ground
Connected to high voltage PWB 1	2	DC_MAIN_CNT_M	O	PWM	DC charger roller Y control signal
	3	MAIN_IDC_M	O	PWM	DC charger roller M control signal
	4	AC_SLV_CLK_M	O	0/3.3 V DC (pulse)	AC sleeve bias M clock signal
	5	DC_SLV_CNT_M	O	PWM	DC sleeve bias M control voltage
	6	DC_MAG_CNT_M	O	PWM	DC magnet bias M control voltage
	7	AC_SLV_CNT_M	O	PWM	AC sleeve bias M control voltage
	8	AC_MAIN_CNT_M	O	PWM	AC charger roller M control signal
	9	DISCHARGE_M	I	PWM	Main charger M control signal
	10	AC_MAG_CNT_M	O	0/3.3 V DC (pulse)	AC magnet bias M control voltage
	11	AC_MAG_CLK_M	O	0/3.3 V DC (pulse)	AC magnet bias M clock signal
	12	AC_MAG_CLK_Bk	O	PWM	DC charger roller K control signal
	13	AC_MAG_CNT_Bk	O	PWM	DC charger roller K control signal
	14	DISCHARGE_Bk	I	PWM	Main charger K control signal
	15	AC_SLV_CNT_Bk	O	0/3.3 V DC (pulse)	AC sleeve bias K clock signal
	16	DC_MAG_CNT_Bk	O	PWM	DC sleeve bias K control voltage
	17	DC_SLV_CNT_Bk	O	PWM	DC magnet bias K control voltage
	18	AC_SLV_CLK_Bk	O	PWM	AC sleeve bias K control voltage
	19	AC_MAIN_CNT_Bk	O	PWM	AC charger roller K control signal
	20	MAIN_IDC_Bk	O	PWM	DC charger roller K control signal
	21	DC_MAIN_CNT_Bk	O	PWM	DC charger roller K control signal
	22	GND	-	-	Ground
YC18	1	DF_CLK	O	0/3.3 V DC (pulse)	DFMPWB clock signal
Connected to 1000-sheet/ 4000-sheet finisher	2	DF_SDO	O	0/3.3 V DC (pulse)	DFMPWB serial communication data signal
	3	DF_SEL	O	0/3.3 V DC	DFMPWB select signal
	4	DF_SDI	O	0/3.3 V DC (pulse)	DFMPWB serial communication data signal
	5	DF_RDY	I	0/3.3 V DC	DFMPWB ready signal
	6	DF_DET	O	0/3.3 V DC	DFMPWB detection signal
	7	GND	-	-	Ground

Connector	Pin	Signal	I/O	Voltage	Description
YC19	A1	PF_CLK	O	0/3.3 V DC (pulse)	PFMPWB clock signal
Connected to paper feeder/ large capacity feeder, toner fan motor 1/2, belt fan motor 1/2 and exhaust fan motor 1/2	A2	PF_SDO	O	0/3.3 V DC (pulse)	PFMPWB serial communication data signal
	A3	PF_SEL	O	0/3.3 V DC	PFMPWB select signal
	A4	PF_SDI	I	0/3.3 V DC (pulse)	PFMPWB serial communication data signal
	A5	PF_RDY	I	0/3.3 V DC	PFMPWB ready signal
	A6	PF_PAUSE	O	0/3.3 V DC	PFMPWB pause signal
	A7	PF_CAS1_OPEN	I	0/3.3 V DC	PFMPWB control signal
	A8	PF_CAS2_OPEN	I	0/3.3 V DC	PFMPWB control signal
	A9	3.3V4	O	3.3 V DC	3.3 V DC power to PFMPWB
	A10	GND	-	-	Ground
	A11	GND	-	-	Ground
	A12	TN_FAN1	O	0/24 V DC	TFM1: On/Off
	A13	24V1	O	24 V DC	24 V DC power to TFM1
	A14	TN_FAN2	O	0/24 V DC	TFM2: On/Off
	A15	24V1	O	24 V DC	24 V DC power to TFM2
	A16	LVU_FAN1	-	-	Not used
	A17	24V1	-	-	Not used
	A18	LVU_FAN2	-	-	Not used
	A19	24V1	-	-	Not used
	B1	SIDE_CLK	O	0/3.3 V DC (pulse)	PFMPWB clock signal (side)
	B2	SIDE_SDO	O	0/3.3 V DC (pulse)	PFMPWB serial communication data signal (side)
	B3	SIDE_SEL	O	0/3.3 V DC	PFMPWB select signal (side)
	B4	SIDE_SDI	I	0/3.3 V DC (pulse)	PFMPWB serial communication data signal (side)
	B5	SIDE_RDY	I	0/3.3 V DC	PFMPWB ready signal (side)
	B6	SIDE_PAUSE	O	0/3.3 V DC	PFMPWB pause signal (side)
	B7	CAS1_OPEN	I	0/3.3 V DC	PFMPWB control signal (side)
	B8	CAS2_OPEN	I	0/3.3 V DC	PFMPWB control signal (side)
	B9	MULTI_OPEN	O	0/3.3 V DC	PFMPWB control signal (side)
	B10	3.3V4	O	3.3 V DC	3.3 V DC power to PFMPWB (side)
	B11	GND	-	-	Ground
	B12	24V1	O	24 V DC	24 V DC power to BLFM1

Connector	Pin	Signal	I/O	Voltage	Description
YC19	B13	BELT_FAN1	O	0/24 V DC	BLFM1: On/Off
Connected to paper feeder/ large capacity feeder, toner fan motor 1/2, belt fan motor 1/2 and exhaust fan motor 1/2	B14	24V1	O	24 V DC	24 V DC power to BLFM2
	B15	BELT_FAN2	O	0/24 V DC	BLFM2: On/Off
	B16	DLP_FAN1	O	0/24 V DC	EXFM1: On/Off
	B17	24V1	O	24 V DC	24 V DC power to EXFM1
	B18	DLP_FAN2	O	0/24 V DC	EXFM2: On/Off
	B19	24V1	O	24 V DC	24 V DC power to EXFM2
YC20	1	DECAL_HP	-	-	Not used
Connected to bridge unit	2	GUIDE_REM	-	-	Not used
	3	GUIDE_CLK	-	-	Not used
	4	GUIDE_PD	-	-	Not used
	5	GUIDE_DIR	-	-	Not used
	6	DECAL_REM	-	-	Not used
	7	DECAL_PH	-	-	Not used
	8	DECAL_CLK	-	-	Not used
	9	DECAL_PD	-	-	Not used
	10	DECAL_DIR	-	-	Not used
	11	24V1	O	24 V DC	24 V DC power to BRSOL
	12	MAIL_SOL_REM	O	0/24 V DC	BRSOL: On/Off (ACT)
	13	MAIL_SOL_RET	O	0/24 V DC	BRSOL: On/Off (RET)
	14	GND	-	-	Ground
	15	EXIT_COV_OPEN	I	0/3.3 V DC	BRECSW: On/Off
	16	GND	-	-	Ground
	17	EXIT_SENS	I	0/3.3 V DC	BRES: On/Off
	18	5V	O	5 V DC	5 V DC power to BRES
	19	5V	O	5 V DC	5 V DC power to BRES
	20	BRIDGE2 REM	O	0/3.3 V DC	BRCM2: On/Off
	21	BRIDGE2 PH	O	0/3.3 V DC	BRCM2 control signal
	22	BRIDGE2 CLK	O	0/3.3 V DC (pulse)	BRCM2 clock signal
	23	BRIDGE2 PD	O	0/3.3 V DC	BRCM2 control signal
	24	BRIDGE2 DIR	O	0/3.3 V DC	BRCM2 drive switch signal
	25	BRIDGE1 REM	O	0/3.3 V DC	BRCM2: On/Off
	26	BRIDGE1 PH	O	0/3.3 V DC	BRCM1 control signal
	27	BRIDGE1 CLK	O	0/3.3 V DC (pulse)	BRCM1 clock signal
	28	BRIDGE1 PD	O	0/3.3 V DC	BRCM1 control signal

Connector	Pin	Signal	I/O	Voltage	Description
YC20	29	BRIDGE1 DIR	O	0/3.3 V DC	BRCM1 drive switch signal
Connected to bridge unit	30	BRIDGE_SENS 2	I	0/3.3 V DC	BRCS2: On/Off
	31	BRIDGE_OPEN	I	0/3.3 V DC	BRCSW: On/Off
	32	BRIDGE_SENS 1	I	0/3.3 V DC	BRCS1: On/Off
	33	GND	-	-	Ground
	34	5V	O	5 V DC	5 V DC power to BRPWB
	35	GND	-	-	Ground
	36	GND	-	-	Ground
	37	24V1	O	24 V DC	24 V DC power to BRPWB
	38	24V1	O	24 V DC	24 V DC power to BRPWB
YC21	1	CCW	O	0/24 V DC	LSUCM: On/Off (CCW)
Connected to LSU cleaning motor	2	CW	O	0/24 V DC	LSUCM: On/Off (CW)
YC22	1	LVU_FAN	O	0/24 V DC	PSFM: On/Off
Connected to power source fan motor	2	+24V1	O	24 V DC	24 V DC power to PSFM
YC26	A1	EDGE_FAN_ALM (F)	I	0/3.3 V DC	FUEFM2 alarm signal
Connected to fuser unit and fuser IH PWB	A2	GND	-	-	Ground
	A3	EDGE_FAN	O	0/24 V DC	FUEFM2: On/Off
	A4	EDGE_FAN_ALM (R)	I	0/3.3 V DC	FUEFM1 alarm signal
	A5	GND	-	-	Ground
	A6	EDGE_FAN	O	0/24 V DC	FUEFM1: On/Off
	A7	FSR_FAN_ALM	I	0/3.3 V DC	FURFM alarm signal
	A8	GND	-	-	Ground
	A9	FSR_FAN	O	0/24 V DC	FURFM: On/Off
	A10	FSR_RLS_DR_CCW	O	0/24 V DC	FURM: On/Off (CCW)

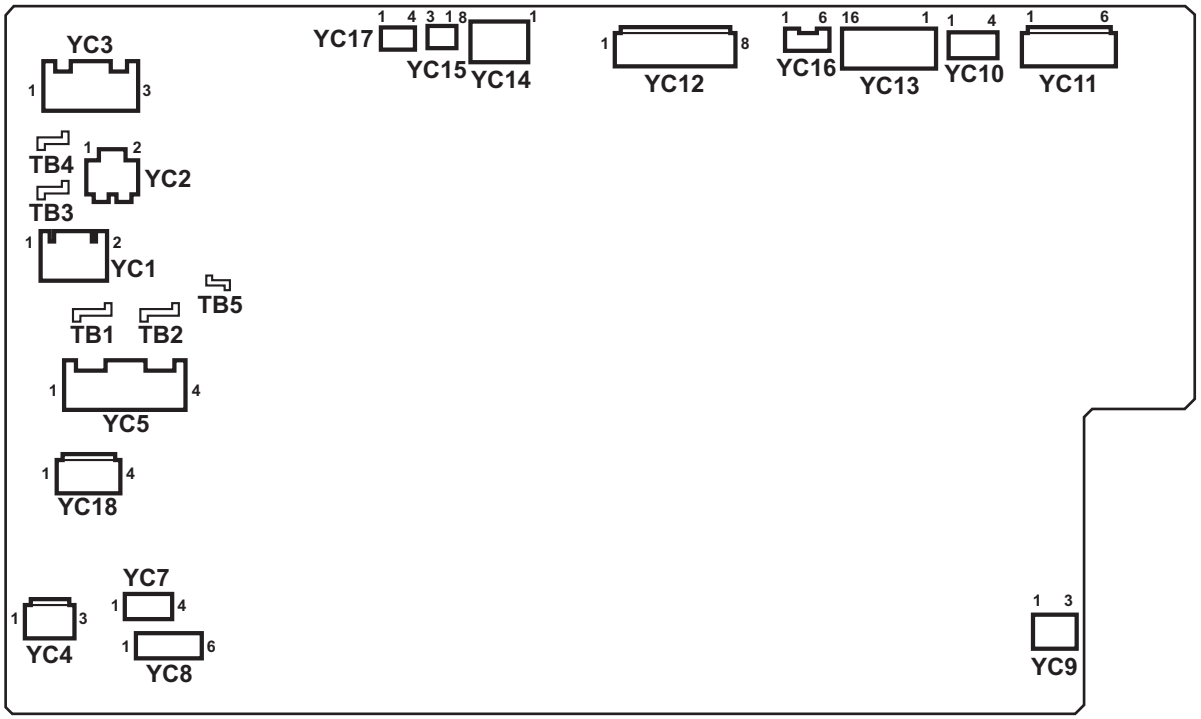
Connector	Pin	Signal	I/O	Voltage	Description
YC26	A11	FSR_RLS_DR_CW	O	0/24 V DC	FURM: On/Off (CW)
Connected to fuser unit and fuser IH PWB	A12	GND	-	-	Ground
	A13	FSR_SIZE_SENS	I	0/3.3 V DC	FUES: On/Off
	A14	+5V	O	5 V DC	5 V DC power to FUES
	A15	GND	-	-	Ground
	A16	FSR_RLS_SENS	I	0/3.3 V DC	FURS: On/Off
	A17	+5V	O	5 V DC	5 V DC power to FURS
	A18	GND	-	-	Ground
	A19	FSR_BLT_PLS	I	0/3.3 V DC	FUBLS: On/Off
	A20	+5V	O	5 V DC	5 V DC power to FUBLS
	B1	PRESS_HEART_REM	-	-	Not used
	B2	IH_RXD	I	0/3.3 V DC (pulse)	Serial communication data signal
	B3	IH_TXD	O	0/3.3 V DC (pulse)	Serial communication data signal
	B4	ROTATION	O	0/3.3 V DC	FIH control signal
	B5	IH_HEAT_REM	O	0/3.3 V DC	FIH: On/Off
	B6	+3.3V2	O	3.3 V DC	5 V DC power to FIH
	B7	GND	-	-	Ground
	B8	GND	-	-	Ground
	B9	PRESS_TH	I	Analog	FTH4 detection signal
	B10	GND	-	-	Ground
	B11	EDGE_TH	I	Analog	FTH2 detection signal
	B12	GND	-	-	Ground
	B13	GUIDE_TH1	-	-	Not used
	B14	GND	-	-	Ground
	B15	GUIDE_TH2	I	Analog	FTH3 detection signal
	B16	MAIN_TH2	I	Analog	FTH1 detection signal
	B17	MAIN_TH1	I	Analog	FTH1 detection signal
	B18	GND	-	-	Ground
	B19	+24V1	O	24 V DC	24 V DC power to BRFM
	B20	BRIDGE_FAN	O	0/24 V DC	BRFM: On/Off
YC27	1	GND	-	-	Ground
Connected to RFID PWB, toner motor K/M/C/Y and screw sensor K/M/C/Y	2	SDA	I/O	0/3.3 V DC (pulse)	EEPROM data signal
	3	SCL	I	0/3.3 V DC (pulse)	EEPROM clock signal
	4	3.3V2	O	3.3 V DC	3.3 V DC power to RFPWB
	5	24V1	O	24 V DC	24 V DC power to TM-Y

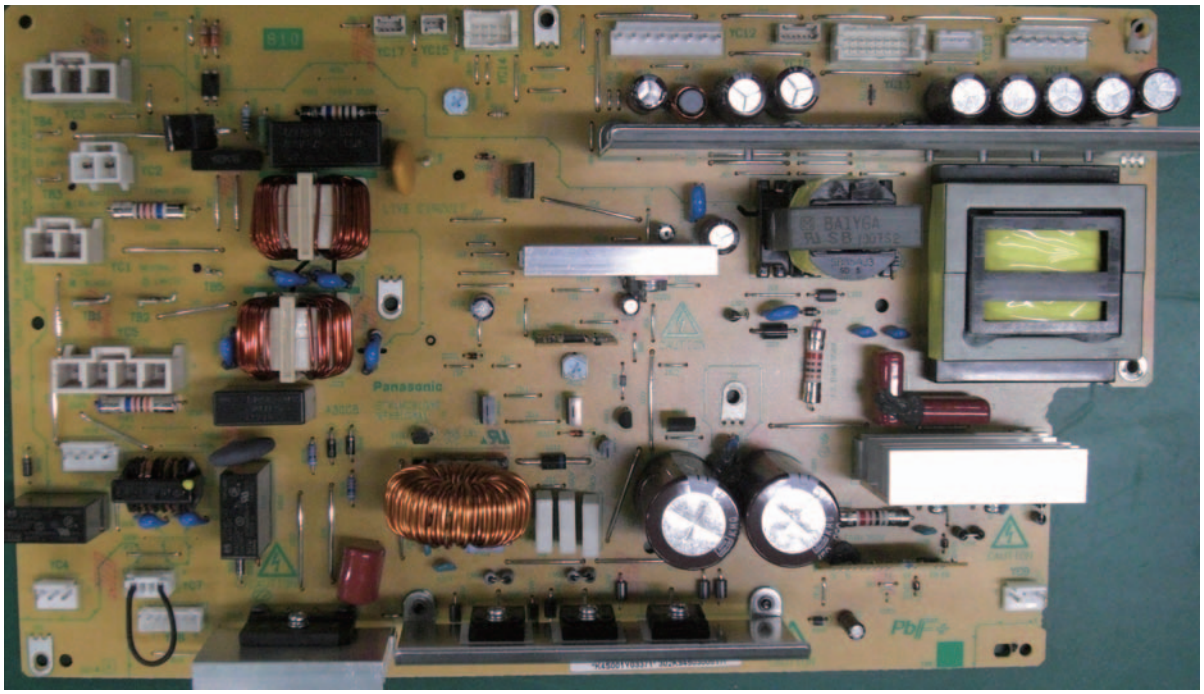
Connector	Pin	Signal	I/O	Voltage	Description
YC27	6	TMOT_Y_DR	O	0/24 V DC	TM-Y: On/Off
Connected to RFID PWB, toner motor K/M/C/Y and screw sensor K/M/C/Y	7	24V1	O	24 V DC	24 V DC power to TM-C
	8	TMOT_C_DR	O	0/24 V DC	TM-C: On/Off
	9	24V1	O	24 V DC	24 V DC power to TM-M
	10	TMOT_M_DR	O	0/24 V DC	TM-M: On/Off
	11	24V1	I	24 V DC	24 V DC power to TM-K
	12	TMOT_K_DR	O	0/24 V DC	TM-K: On/Off
	13	GND	-	-	Ground
	14	ENCODE_Y	I	0/3.3 V DC	SRS-Y: On/Off
	15	5V	O	5 V DC	5 V DC power to SRS-Y
	16	GND	-	-	Ground
	17	ENCODE_C	I	0/3.3 V DC	SRS-C: On/Off
	18	5V	O	5 V DC	5 V DC power to SRS-C
	19	GND	-	-	Ground
	20	ENCODE_M	I	0/3.3 V DC	SRS-M: On/Off
	21	5V	O	5 V DC	5 V DC power to SRS-M
	22	GND	-	-	Ground
	23	ENCODE_K	I	0/3.3 V DC	SRS-K: On/Off
	24	5V	O	5 V DC	5 V DC power to SRS-K
YC46	1	SLLEP_INT	I	0/3.3 V DC	Sleep signal
Connected to main PWB	2	G6_EG_SCLK	I	0/3.3 V DC (pulse)	Engine clock signal
	3	G6_EG_SI	I	0/3.3 V DC (pulse)	Serial communication data signal
	4	G6_EG_SDIR	I	0/3.3 V DC	Engine communication direct signal
	5	G6_EG_SBSY	I	0/3.3 V DC	Engine busy signal
	6	G6_EG_SO	O	0/3.3 V DC (pulse)	Serial communication data signal
	7	G6_EG_IRN	I	0/3.3 V DC	Engine interrupt signal
	8	I2C_SCL	I	0/3.3 V DC (pulse)	Clock signal
	9	I2C_SDA	I	0/3.3 V DC (pulse)	Serial communication data signal
	10	HLD_ENG	I	0/3.3 V DC	Engine hold signal
	11	SLEEP_ENG	I	0/3.3 V DC	Engine sleep signal
	12	HSYNC_DP	I	0/3.3 V DC (pulse)	Image control signal
	13	HSYNC_DN	I	0/3.3 V DC (pulse)	Image control signal
	14	HSYNC_CP	I	0/3.3 V DC (pulse)	Image control signal
	15	HSYNC_CN	I	0/3.3 V DC (pulse)	Image control signal
	16	HSYNC_BP	I	0/3.3 V DC (pulse)	Image control signal
	17	HSYNC_BN	I	0/3.3 V DC (pulse)	Image control signal

Connector	Pin	Signal	I/O	Voltage	Description
YC46	18	HSYNC_AP	I	0/3.3 V DC (pulse)	Image control signal
Connected to main PWB	19	HSYNC_AN	I	0/3.3 V DC (pulse)	Image control signal
	20	VSYNC_DP	I	0/3.3 V DC (pulse)	Image control signal
	21	VSYNC_DN	I	0/3.3 V DC (pulse)	Image control signal
	22	VSYNC_CP	I	0/3.3 V DC (pulse)	Image control signal
	23	VSYNC_CN	I	0/3.3 V DC (pulse)	Image control signal
	24	VSYNC_BP	I	0/3.3 V DC (pulse)	Image control signal
	25	VSYNC_BN	I	0/3.3 V DC (pulse)	Image control signal
	26	VSYNC_AP	I	0/3.3 V DC (pulse)	Image control signal
	27	VSYNC_AN	I	0/3.3 V DC (pulse)	Image control signal
	28	GND	-	-	Ground
	29	SAR_VCLK_P	I	0/3.3 V DC (pulse)	Clock signal
	30	SAR_VCLK_N	I	0/3.3 V DC (pulse)	Clock signal
	31	GND	-	-	Ground
	32	SAR_CH3_P	I	0/3.3 V DC (pulse)	Image control signal
	33	SAR_CH3_N	I	0/3.3 V DC (pulse)	Image control signal
	34	GND	-	-	Ground
	35	SAR_CH2_P	I	0/3.3 V DC (pulse)	Image control signal
	36	SAR_CH2_N	I	0/3.3 V DC (pulse)	Image control signal
	37	GND	-	-	Ground
	38	SAR_CH1_P	I	0/3.3 V DC (pulse)	Image control signal
	39	SAR_CH1_N	I	0/3.3 V DC (pulse)	Image control signal
	40	GND	-	-	Ground

2-3-3 Power source PWB

I





* : Refer to the picture.

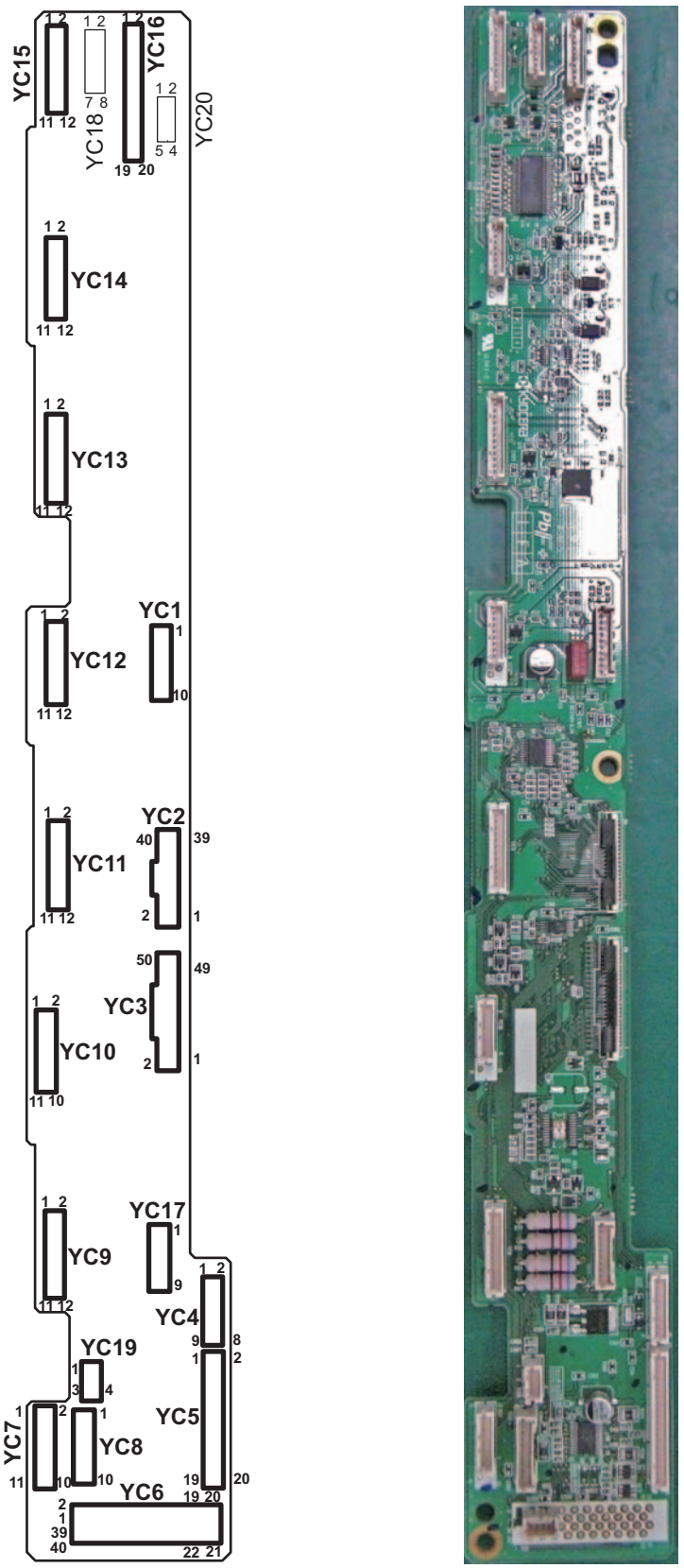
Figure 2-3-3 Power source PWB silk-screen diagram and photograph

Connector	Pin	Signal	I/O	Voltage	Description
TB	1	LIVE	I	120 V AC 220-240 V AC	AC power input
Connected to AC inlet and main power switch	2	NEUTRAL	I	120 V AC 220-240 V AC	AC power input
	3	LIVE	-	-	Not used
	4	NEUTRAL	-	-	Not used
	5	DH_LIVE	I	120 V AC 220-240 V AC	AC power input
YC1	1	MSW_OUT	O	120 V AC 220-240 V AC	AC power output to MSW
Connected to main power switch	2	MSW_IN	I	120 V AC 220-240 V AC	AC power input from MSW
YC3	1	IH_NEUTRAL	O	120 V AC 220-240 V AC	AC power output to FIHPWB
Connected to fuser IH PWB	2	NC	-	-	Not used
	3	IH_LIVE	O	120 V AC 220-240 V AC	AC power output to FIHPWB
YC8	1	DH_LIVE	O	120 V AC 220-240 V AC	AC power output to CH
Connected to cassette heater	2	DH_LIVE	O	120 V AC 220-240 V AC	AC power output to CH
	3	NC	-	-	Not used
	4	NC	-	-	Not used
	5	DH_NEUTRAL	O	120 V AC 220-240 V AC	AC power output to CH
	6	DH_NEUTRAL	O	120 V AC 220-240 V AC	AC power output to CH
YC9	1	DH_LIVE	O	120 V AC 220-240 V AC	AC power output to PFCH
Connected to paper feeder/ large capacity feeder	2	DH_NEUTRAL	O	120 V AC 220-240 V AC	AC power output to PFCH
YC10	1	+24V1	O	24 V DC	24 V DC power to LSURPWB
Connected to LSU relay PWB	2	+24V1	O	24 V DC	24 V DC power to LSURPWB
	3	GND	-	-	Ground
	4	GND	-	-	Ground

Connector	Pin	Signal	I/O	Voltage	Description
YC11	1	24V1	O	24 V DC	24 V DC power to MCPWB
Connected to motor control PWB	2	24V1	O	24 V DC	24 V DC power to MCPWB
	3	24V1	O	24 V DC	24 V DC power to MCPWB
	4	GND	-	-	Ground
	5	GND	-	-	Ground
	6	GND	-	-	Ground
YC12	1	24V1	O	24 V DC	24 V DC power to FPWB1
Connected to feed PWB 1	2	24V1	O	24 V DC	24 V DC power to FPWB1
	3	24V1	O	24 V DC	24 V DC power to FPWB1
	4	12V	O	12 V DC	12 V DC power to FPWB1
	5	GND	-	-	Ground
	6	GND	-	-	Ground
	7	GND	-	-	Ground
	8	GND	-	-	Ground
YC13	1	24V1	O	24 V DC	24 V DC power to paper feeder/large capacity feeder
Connected to paper feeder/ large capacity feeder, 1000-sheet/ 4000-sheet finisher and ISC PWB	2	24V1	O	24 V DC	24 V DC power to paper feeder/large capacity feeder
	3	24V1	O	24 V DC	24 V DC power to 1000-sheet/4000-sheet finisher
	4	24V1	O	24 V DC	24 V DC power to 1000-sheet/4000-sheet finisher
	5	24V1	O	24 V DC	24 V DC power to ISCPWB
	6	24V1	O	24 V DC	24 V DC power to ISCPWB
	7	24V1	-	-	Not used
	8	24V1	-	-	Not used
	9	GND	-	-	Ground
	10	GND	-	-	Ground
	11	GND	-	-	Ground
	12	GND	-	-	Ground
	13	GND	-	-	Ground
	14	GND	-	-	Ground
	15	GND	-	-	Ground
	16	GND	-	-	Ground

Connector	Pin	Signal	I/O	Voltage	Description
YC16	1	24V1	O	24 V DC	24 V DC power to HVPWB1
Connected to high voltage PWB 1	2	24V1	O	24 V DC	24 V DC power to HVPWB1
	3	24V1	O	24 V DC	24 V DC power to HVPWB1
	4	PGND	-	-	Ground
	5	PGND	-	-	Ground
	6	PGND	-	-	Ground
YC17	1	POWER_OFF	I	0/3.3 V DC	Sleep mode signal: On/Off
Connected to feed PWB 1	2	DRUM_HEAT_REM	I	0/3.3 V DC	FH: On/Off
	3	GND	-	-	Ground
	4	FSR_RELAY_REM	-	-	Not used

2-3-4 Front PWB



* : Refer to the picture.

Figure 2-3-4 Front PWB silk-screen diagram and photograph

Connector	Pin	Signal	I/O	Voltage	Description
YC1	1	+3.3V1	I	3.3 V DC	3.3 V DC power from EPWB
Connected to engine PWB	2	+3.3V2	I	3.3 V DC	3.3 V DC power from EPWB
	3	+5V	I	5 V DC	5 V DC power from EPWB
	4	+24V	I	24 V DC	24 V DC power from EPWB
	5	+24V	I	24 V DC	24 V DC power from EPWB
	6	GND	-	-	Ground
	7	GND	-	-	Ground
	8	GND	-	-	Ground
	9	GND	-	-	Ground
	10	GND	-	-	Ground
YC2	1	GND	-	-	Ground
Connected to engine PWB	2	DRM_INDEX_Bk	O	0/3.3 V DC	DRM-K control signal
	3	ERS_Bk_REM	I	0/24 V DC	CL-K: On/Off
	4	TPD_ Bk_1	O	Analog	TS-K detection signal
	5	DLP_VCONT_Bk _1	I	0/3.3 V DC	TS-K control signal
	6	TPD_TEMP_Bk	O	Analog	Developer thermistor K detection signal
	7	GND	-	-	Ground
	8	DRM_INDEX_M	O	0/3.3 V DC	DRM-M control signal
	9	ERS_ M_REM	I	0/24 V DC	CL-M: On/Off
	10	TPD_M_1	O	Analog	TS-M detection signal
	11	DLP_VCONT_M_ 1	I	0/3.3 V DC	TS-M control signal
	12	TPD_TEMP_M	O	Analog	Developer thermistor M detection signal
	13	GND	-	-	Ground
	14	DRM_INDEX_C	O	0/3.3 V DC	DRM-C control signal
	15	ERS_C_REM	I	0/24 V DC	CL-C: On/Off
	16	TPD_C_1	O	Analog	TS-C detection signal
	17	DLP_VCONT_C_ 1	I	0/3.3 V DC	TS-C control signal
	18	TPD_TEMP_C	O	Analog	Developer thermistor C detection signal
	19	GND	-	-	Ground
	20	TN_CLK	I	0/3.3 V DC (pulse)	Clock signal
	21	GND	-	-	Ground
	22	EEP_SCL1	I	0/3.3 V DC (pulse)	EEPROM clock signal

Connector	Pin	Signal	I/O	Voltage	Description
YC2	23	GND	-	-	Ground
Connected to engine PWB	24	EEP_SDA1	I/O	0/3.3 V DC (pulse)	EEPROM data signal
	25	GND	-	-	Ground
	26	TPD_Y_1	O	Analog	TS-Y detection signal
	27	DLP_VCONT_Y_1	I	0/3.3 V DC	TS-Y control signal
	28	TPD_TEMP_Y	O	Analog	Developer thermistor Y detection signal
	29	ERS_Y_REM	I	0/24 V DC	CL-Y: On/Off
	30	DRM_INDEX_ Y	O	0/3.3 V DC	DRM-Y control signal
	31	FRONT_OPEN	O	0/3.3 V DC	FRCSW: On/Off
	32	GND	-	-	Ground
	33	I2C_SCL	I	0/3.3 V DC (pulse)	EEPROM clock signal
	34	GND	-	-	Ground
	35	I2C_SDA	I/O	0/3.3 V DC (pulse)	EEPROM data signal
	36	GND	-	-	Ground
	37	LSU_FAN_REM	I	0/24 V DC	LSUFM: On/Off
	38	CLEAN_MOT_LOCK	O	0/3.3 V DC	WTM lock signal
	39	CLEAN_MOT_REM	I	0/24 V DC	WTM: On/Off
	40	GND	-	-	Ground
YC3	1	GND	-	-	Ground
Connected to engine PWB	2	WTNR_SET	-	-	Not used
	3	INTER_LOCK	-	-	Not used
	4	IH_CORE_SENS	-	-	Not used
	5	IH_CORE_MOT_REM	-	-	Not used
	6	IH_CORE_CLK	-	-	Not used
	7	WTNR_LED	I	0/3.3 V DC (pulse)	WTS1 LED emitter signal
	8	IH_COIL_FAN_ALM	O	0/3.3 V DC	FUFFM alarm signal
	9	IH_COIL_FAN_H	I	0/24 V DC	FUFFM: On/Off
	10	IH_COIL_FAN_L	I	0/24 V DC	FUFFM: On/Off
	11	EXIT_FAN	I	0/24 V DC	EFFM: On/Off
	12	VIB_MOT__FAN	I	0/24 V DC	VM: On/Off
	13	JUNC_SOL_REM	I	0/24 V DC	FSSOL: On/Off (ACT)
	14	JUNC_SOL_RET	I	0/24 V DC	FSSOL: On/Off (RET)

Connector	Pin	Signal	I/O	Voltage	Description
YC3	15	GND	-	-	Ground
Connected to engine PWB	16	EXIT_MAIN_SENS	O	0/3.3 V DC	EFS1: On/Off
	17	EXIT_FEED_SENS	O	0/3.3 V DC	SBS: On/Off
	18	SB_MOT_REM	I	0/3.3 V DC	EM: On/Off
	19	SB_MOT_PH	I	0/3.3 V DC	EM control signal
	20	SB_MOT_CLK	I	0/3.3 V DC (pulse)	EM clock signal
	21	SB_MOT_PD	I	0/3.3 V DC	EM control signal
	22	SB_MOT_DIR	I	0/3.3 V DC	EM drive switch signal
	23	GND	-	-	Ground
	24	WT_VCONT_FULL	I	0/3.3 V DC	WTS1 control signal
	25	THOP_DIR	-	-	Not used
	26	DLP_FAN_CLR_H	I	0/24 V DC	DEVFM1: On/Off
	27	DLP_FAN_CLR_L	I	0/24 V DC	DEVFM1: On/Off
	28	WTNR_FULL	O	Analog	WTS1 detection signal
	29	WTNR_NEAR	O	Analog	WTS2 detection signal
	30	WTNR_VCONT	I	0/3.3 V DC	WTS2 control signal
	31	GND	-	-	Ground
	32	WTNR_LED	I	0/3.3 V DC	WTS1 control signal
	33	THOP_MOT_Y_DIR	-	-	Not used
	34	THOP_MOT_C_DIR	-	-	Not used
	35	THOP_MOT_BK_DIR	-	-	Not used
	36	EXIT_SUB_SENS	O	0/3.3 V DC	EFS2: On/Off
	37	THOP_MOT_Bk_REM	-	-	Not used
	38	THOP_MOT_M_REM	-	-	Not used
	39	THOP_MOT_C_REM	-	-	Not used
	40	THOP_MOT_Y_REM	-	-	Not used
	41	GND	-	-	Ground
	42	ENCODE_ Bk	-	-	Not used
	43	ENCODE_M	-	-	Not used

Connector	Pin	Signal	I/O	Voltage	Description
YC3	44	ENCODE_C	-	-	Not used
Connected to engine PWB	45	ENCODE_Y	-	-	Not used
	46	THOP_ Bk	-	-	Not used
	47	THOP_M	-	-	Not used
	48	THOP_C	-	-	Not used
	49	THOP_Y	-	-	Not used
	50	GND	-	-	Ground
YC4	1	5V	-	-	Not used
Connected to fuser front fan motor and eject front fan motor	2	LED1	-	-	Not used
	3	5V	-	-	Not used
	4	LED2	-	-	Not used
	5	IH_COIL_FAN_ALM	I	0/3.3 V DC	FUFFM alarm signal
	6	GND	-	-	Ground
	7	IH_COIL_FAN	O	0/24 V DC	FUFFM: On/Off
	8	24V	O	24 V DC	24 V DC power to EFFM
	9	EXIT FAN	O	0/24 V DC	EFFM: On/Off
YC5	1	ROT_CORE A	-	-	Not used
Connected to eject unit	2	ROT_CORE B	-	-	Not used
	3	ROT_CORE A/	-	-	Not used
	4	ROT_CORE B/	-	-	Not used
	5	GND	-	-	Ground
	6	EXIT_SUB_SENS	I	0/3.3 V DC	EFS2: On/Off
	7	5V	O	DC5V	5V DC power to EFS2
	8	SB_MOT B/	O	0/24 V DC (pulse)	EM drive control signal
	9	SB_MOT A/	O	0/24 V DC (pulse)	EM drive control signal
	10	SB_MOT B	O	0/24 V DC (pulse)	EM drive control signal
	11	SB_MOT A	O	0/24 V DC (pulse)	EM drive control signal
	12	GND	-	-	Ground
	13	EXIT_FEED_SENS	I	0/3.3 V DC	SBS: On/Off
	14	5V	O	5 V DC	5 V DC power to SBS
	15	GND	-	-	Ground
	16	EXIT_PAPER_SENS	I	0/3.3 V DC	EFS1: On/Off

Connector	Pin	Signal	I/O	Voltage	Description
YC5	17	5V	O	5 V DC	5 V DC power to EFS1
Connected to eject unit	18	+24V1	O	24 V DC	24 V DC power to FSSOL
	19	JUNC_SOL_KYU	O	0/24 V DC	FSSOL: On/Off (ACT)
	20	JUNC_SOL_FUK	O	0/24 V DC	FSSOL: On/Off (RET)
YC6	1	24V	O	24 V DC	24 V DC power to DEVFM2
Connected to developer fan motor 1/2	2	DLP_FAN_Bk	O	0/24 V DC	DEVFM2: On/Off
	3	24V	O	24 V DC	24 V DC power to DEVFM1
	4	DLP_FAN_M	O	0/24 V DC	DEVFM1: On/Off
YC7	1	3.3V2	O	3.3 V DC	3.3 V DC power to DRPWB-K
Connected to drum unit K	2	EEP_SCL1	O	0/3.3 V DC (pulse)	EEPROM clock signal
	3	EEP_SDA1	I/O	0/3.3 V DC (pulse)	EEPROM data signal
	4	GND	-	-	Ground
	5	DRM_ADR0_Bk	-	-	Not used
	6	DRM_ADR1_Bk	-	-	Not used
	7	24V	O	24 V DC	24 V DC power to CL-K
	8	ERS_Bk_REM	O	0/24 V DC	CL-K: On/Off
YC8	1	5V	O	5 V DC	5 V DC power to WTS1
Connected to waste toner sensor 1/2	2	WTNR_FULL	I	Analog	WTS1 detection signal
	3	WTNR_LED	O	0/3.3 V DC (pulse)	WTS1 LED emitter signal
	4	5V_LED	O	5 V DC	5 V DC power to WTS1
	5	GND	-	-	Ground
	6	WTNR_NEAR	I	Analog	WTS2 detection signal
	7	5V	O	5 V DC	5 V DC power to WTS2
	8	WTNR_SP	-	-	Not used
	9	WTNR_LED	-	-	Not used
	10	5V_LED	-	-	Not used

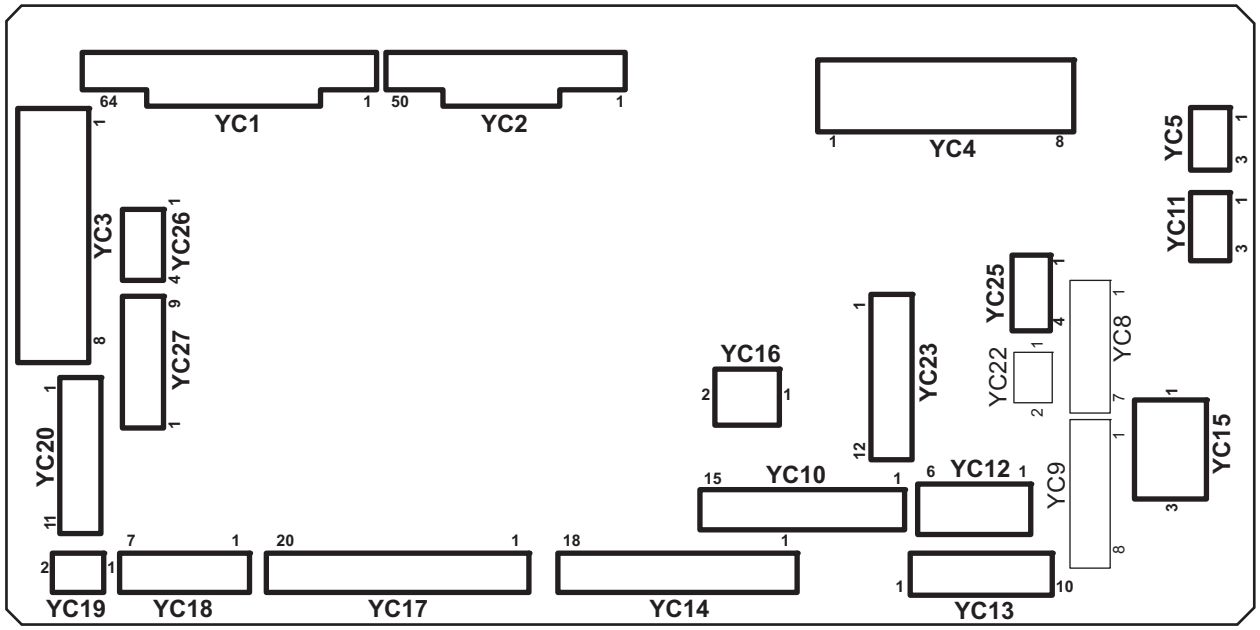
Connector	Pin	Signal	I/O	Voltage	Description
YC9	1	TPD_TEMP_BK	I	Analog	Developer thermistor K detection signal
Connected to developer unit K	2	DLP_VCONT_BK_1	O	0/3.3 V DC	DEVPWB-K control signal
	3	TPD_BK_1	I	Analog	DEVPWB-K detection signal
	4	TN_CLK_BK	O	0/3.3 V DC (pulse)	Clock signal
	5	GND	-	-	Ground
	6	DLP_ADR1_BK	-	-	Not used
	7	DLP_ADR0_BK	-	-	Not used
	8	EEP_SDA1	I/O	0/3.3 V DC (pulse)	EEPROM data signal
	9	EEP_SCL1	O	0/3.3 V DC (pulse)	EEPROM clock signal
	10	3.3V2	O	3.3 V DC	3.3 V DC power to TS-K
	11	3V	O	3.3 V DC	3.3 V DC power to VM-K
	12	VIB_MOT	O	0/24 V DC	VM-K: On/Off
YC10	1	3.3V2	O	3.3 V DC	3.3 V DC power to DRPWB-M
Connected to drum unit M	2	EEP_SCL1	O	0/3.3 V DC (pulse)	EEPROM clock signal
	3	EEP_SDA1	I/O	0/3.3 V DC (pulse)	EEPROM data signal
	4	GND	-	-	Ground
	5	DRM_ADR0_M	-	-	Not used
	6	DRM_ADR1_M	-	-	Not used
	7	24V	O	24 V DC	24 V DC power to CL-M
	8	ERS_M_REM	O	0/24 V DC	CL-M: On/Off
YC11	1	TPD_TEMP_M	I	Analog	Developer thermistor M detection signal
Connected to developer unit M	2	DLP_VCONT_M_1	O	0/3.3 V DC	DEVPWB-M control signal
	3	TPD_M_1	I	Analog	DEVPWB-M detection signal
	4	TN_CLK_M	O	0/3.3 V DC (pulse)	Clock signal
	5	GND	-	-	Ground
	6	DLP_ADR1_M	-	-	Not used
	7	DLP_ADR0_M	-	-	Not used
	8	EEP_SDA1	I/O	0/3.3 V DC (pulse)	EEPROM data signal
	9	EEP_SCL1	O	0/3.3 V DC (pulse)	EEPROM clock signal
	10	3.3V2	O	3.3 V DC	3.3 V DC power to TS-M
	11	3V	O	3.3 V DC	3.3 V DC power to VM-M
	12	VIB_MOT	O	0/24 V DC	VM-M: On/Off

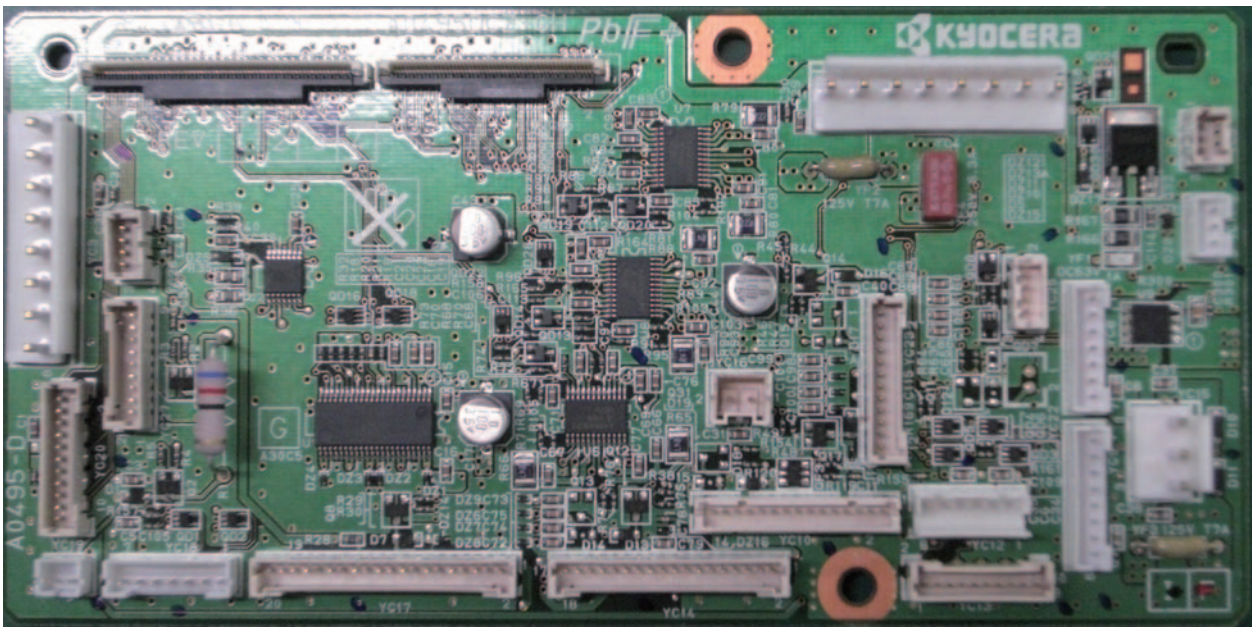
Connector	Pin	Signal	I/O	Voltage	Description
YC12	1	3.3V2	O	3.3 V DC	3.3 V DC power to DRPWB-C
Connected to drum unit C	2	EEP_SCL1	O	0/3.3 V DC (pulse)	EEPROM clock signal
	3	EEP_SDA1	I/O	0/3.3 V DC (pulse)	EEPROM data signal
	4	GND	-	-	Ground
	5	DRM_ADR0_C	-	-	Not used
	6	DRM_ADR1_C	-	-	Not used
	7	24V	O	24 V DC	24 V DC power to CL-C
	8	ERS_C_REM	O	0/24 V DC	CL-C: On/Off
YC13	1	TPD_TEMP_C	I	Analog	Developer thermistor C detection signal
Connected to developer unit C	2	DLP_VCONT_C_1	O	0/3.3 V DC	DEVPWB-C control signal
	3	TPD_C_1	I	Analog	DEVPWB-C detection signal
	4	TN_CLK_C	O	0/3.3 V DC (pulse)	Clock signal
	5	GND	-	-	Ground
	6	DLP_ADR1_C	-	-	Not used
	7	DLP_ADR0_C	-	-	Not used
	8	EEP_SDA1	I/O	0/3.3 V DC (pulse)	EEPROM data signal
	9	EEP_SCL1	O	0/3.3 V DC (pulse)	EEPROM clock signal
	10	3.3V2	O	3.3 V DC	3.3 V DC power to TS-C
	11	3V	O	3.3 V DC	3.3 V DC power to VM-C
	12	VIB_MOT	O	0/24 V DC	VM-C: On/Off
YC14	1	3.3V2	O	3.3 V DC	3.3 V DC power to DRPWB-Y
Connected to drum unit Y	2	EEP_SCL1	O	0/3.3 V DC (pulse)	EEPROM clock signal
	3	EEP_SDA1	I/O	0/3.3 V DC (pulse)	EEPROM data signal
	4	GND	-	-	Ground
	5	DRM_ADR0_ Y	-	-	Not used
	6	DRM _ADR1_ Y	-	-	Not used
	7	24V	O	24 V DC	24 V DC power to CL-Y
	8	ERS_ Y _REM	O	0/24 V DC	CL-Y: On/Off

Connector	Pin	Signal	I/O	Voltage	Description
YC15	1	TPD_TEMP_Y	I	Analog	Developer thermistor Y detection signal
Connected to developer unit Y	2	DLP_VCONT_Y_1	O	0/3.3 V DC	DEVPWB-Y control signal
	3	TPD_Y_1	I	Analog	DEVPWB-Y detection signal
	4	TN_CLK_Y	O	0/3.3 V DC (pulse)	Clock signal
	5	GND	-	-	Ground
	6	DLP_ADR1_Y	-	-	Not used
	7	DLP_ADR0_Y	-	-	Not used
	8	EEP_SDA1	I/O	0/3.3 V DC (pulse)	EEPROM data signal
	9	EEP_SCL1	O	0/3.3 V DC (pulse)	EEPROM clock signal
	10	3.3V2	O	3.3 V DC	3.3 V DC power to TS-Y
	11	3V	O	3.3 V DC	3.3 V DC power to VM-Y
	12	VIB_MOT	O	0/24 V DC	VM-Y: On/Off
YC16	1	NC	-	-	Not used
Connected to outer temperature sensor 1, front cover switch, LSU fan motor and waste toner motor	2	NC	-	-	Not used
	3	NC	-	-	Not used
	4	NC	-	-	Not used
	5	FRONT_OPEN	I	0/3.3 V DC	FRCSW: On/Off
	6	GND	-	-	Ground
	7	24V	O	24 V DC	24 V DC power to LSUFM
	8	LSU_FAN_OUT	O	DC0V/24V	LSUFM: On/Off
	9	CL_MOT1	O	DC0V/24V	WTM: On/Off
	10	CL_MOT2	O	24 V DC	24 V DC power to WTM
	11	GND	-	-	Ground
YC17	1	GND	-	-	Not used
Connected to eject front fan motor 2	2	LED1	-	-	Not used
	3	5V	-	-	Not used
	4	LED2	-	-	Not used
	5	IH_COIL_FAN_ALM	-	-	Not used
	6	GND	-	-	Not used
	7	IH_COIL_FAN	-	-	Not used
	8	24V	O	DC24V	24 V DC power to EFFM2
	9	EXIT_FAN	O	DC0V/24V	EFFM2: On/Off

Connector	Pin	Signal	I/O	Voltage	Description
YC19	1	3.3V1	O	3.3 V DC	3.3 V DC power to OTEMS2
Connected to outer temper-ature sensor 2	2	I2C_SDA	I	0/3.3 V DC (pulse)	EEPROM data signal
	3	GND	-	-	Ground
	4	I2C_SCL	O	0/3.3 V DC (pulse)	EEPROM clock signal

2-3-5 Feed PWB 1





* : Refer to the picture.

Figure 2-3-5 Feed PWB 1 silk-screen diagram and photograph

Connector	Pin	Signal	I/O	Voltage	Description
YC1	1	GND	-	-	Ground
Connected to engine PWB	2	REG_F_LED	I	Analog	IDS1 control signal
	3	REG_SENS_F_P	O	Analog	IDS1 detection signal
	4	REG_SENS_F_S	O	Analog	IDS1 detection signal
	5	GND	-	-	Ground
	6	REG_R_LED	I	Analog	IDS2 control signal
	7	REG_SENS_RP(BK)	O	Analog	IDS2 detection signal
	8	REG_SENS_RS(BK)	O	Analog	IDS2 detection signal
	9	CLN_SOL_REM	I	0/24 V DC	CLSOL: On/Off (ACT)
	10	CLN_SOL_RET	I	0/24 V DC	CLSOL: On/Off (RET)
	11	GND	-	-	Ground
	12	BELT_JAM_SENS	-	-	Not used
	13	DU_SENS	O	0/3.3 V DC	DUS2: On/Off
	14	PRESS_RLS_SENS	O	0/3.3 V DC	TRRS: On/Off
	15	PRESS_MOT_REM2	I	0/24 V DC	TRRM: On/Off
	16	PRESS_MOT_REM1	I	0/24 V DC	TRRM: On/Off
	17	DU_FAN	-	-	Not used
	18	DU_OPEN	O	0/3.3 V DC	DUCSW: On/Off
	19	GND	-	-	Ground
	20	DU2_REM(CL_LOW)	I	0/3.3 V DC	DUM2/DUCL2: On/Off
	21	DU2_CLK	I	0/3.3 V DC (pulse)	DUM2 clock signal
	22	DU2_PD	I	0/3.3 V DC	DUM2 control signal
	23	INTER_LOCK	-	-	Not used
	24	GND	-	-	Not used
	25	GND	-	-	Not used
	26	GND	-	-	Not used
	27	GND	-	-	Not used
	28	GND	-	-	Ground
	29	MPF_LIFT1	I	0/24 V DC	MPLM: On/Off
	30	MPF_LIF2	I	0/24 V DC	MPLM: On/Off
	31	MPF_CL	I	0/24 V DC	MPPFCL: On/Off
	32	MPF_JAM	O	0/3.3 V DC	MPFS: On/Off

Connector	Pin	Signal	I/O	Voltage	Description
YC1	33	MPF_DOWN	O	0/3.3 V DC	MPLS2: On/Off
Connected to engine PWB	34	MPF_UP	O	0/3.3 V DC	MPLS1: On/Off
	35	MPF_PPR	O	0/3.3 V DC	MPPS: On/Off
	36	GND	-	-	Ground
	37	MPF_LNG	O	0/3.3 V DC	MPPLSW: On/Off
	38	MPF_WID3	O	0/3.3 V DC	MPPWSW: On/Off
	39	MPF_WID2	O	0/3.3 V DC	MPPWSW: On/Off
	40	MPF_WID1	O	0/3.3 V DC	MPPWSW: On/Off
	41	MPF_TABLE	O	0/3.3 V DC	MPTSW: On/Off
	42	GND	-	-	Ground
	43	FSR_MOT_BRK	I	0/3.3 V DC	FUM break signal
	44	FSR_MOT_DIR	I	0/3.3 V DC	FUM drive switch signal
	45	FSR_MOT_RDY	O	0/3.3 V DC	FUM ready signal
	46	FSR_MOT_CLK	I	0/3.3 V DC (pulse)	FUM clock signal
	47	FSR_MOT_REM	I	0/3.3 V DC	FUM: On/Off
	48	GND	-	-	Ground
	49	GND	-	-	Ground
	50	EXIT_REAR_FAN_H	I	0/24 V DC	ERFM: On/Off
	51	EXIT_REAR_FAN_L	I	0/24 V DC	ERFM: On/Off
	52	PRESS_REM	-	-	Not used
	53	FSR_RELAY	I	0/3.3 V DC	Fuser relay signal
	54	ZEROC	-	-	Not used
	55	SUB_HEAT_REM	-	-	Not used
	56	MAIN_HEAT_REM	-	-	Not used
	57	GND	-	-	Ground
	58	JOB_SOL_REM	I	0/24 V DC	JSFSSOL: On/Off
	59	JOB_OPEN_SENS	O	0/3.3 V DC	JSOCS: On/Off
	60	JOB_MOT_DIR	I	0/3.3 V DC	JSEM drive switch signal
	61	JOB_MOT_CLK	I	0/3.3 V DC (pulse)	JSEM clock signal
	62	JOB_MOT_REM	I	0/3.3 V DC	JSEM: On/Off
	63	JOB_SET	O	0/3.3 V DC	Job separator set signal
	64	GND	-	-	Ground

Connector	Pin	Signal	I/O	Voltage	Description
YC2	1	GND	-	-	Ground
Connected to engine PWB	2	GND	-	-	Ground
	3	DRM_HEAT_REM	-	-	Not used
	4	POWER_OFF	I	0/3.3 V DC	Power off signal
	5	IH_PWB_FAN_ALM	O	0/3.3 V DC	IHFM alarm signal
	6	IH_PWB_FAN_H	I	0/24 V DC	IHFM: On/Off
	7	IH_PWB_FAN_L	-	-	Not used
	8	GND	-	-	Ground
	9	REG_MOT_REM(CL)	I	0/3.3 V DC	RM/RCL: On/Off
	10	REG_MOT_CLK	I	0/3.3 V DC (pulse)	RM clock signal
	11	REG_MOT_PD	I	0/3.3 V DC	RM control signal
	12	GND	-	-	Ground
	13	DLP_MOT_CLR_DIR	-	-	Not used
	14	DLP_MOT_CLR_RDY	-	-	Not used
	15	DLP_MOT_CLR_CLK	-	-	Not used
	16	DLP_MOT_CLR_REM	-	-	Not used
	17	GND	-	-	Ground
	18	DRM_MOT_CLR_DIR	-	-	Not used
	19	DRM_MOT_CLR_RDY	-	-	Not used
	20	DRM_MOT_BK_CLR_CLK	-	-	Not used
	21	DRM_MOT_CLR_REM	-	-	Not used
	22	GND	-	-	Ground
	23	DLP_MOT_BK_DIR	-	-	Not used
	24	DLP_MOT_BK_RDY	-	-	Not used
	25	DLP_MOT_BK_CLK	-	-	Not used
	26	DLP_MOT_BK_REM	-	-	Not used

Connector	Pin	Signal	I/O	Voltage	Description
YC2	27	GND	-	-	Ground
Connected to engine PWB	28	DRM_MOT_BK_BRK	-	-	Not used
	29	DRM_MOT_BK_DIR	-	-	Not used
	30	DRM_MOT_BK_RDY	-	-	Not used
	31	DRM_MOT_BK_REM	-	-	Not used
	32	GND	-	-	Ground
	33	TRANS_MOT_BRK	I	0/3.3 V DC	TRCM break signal
	34	TRANS_MOT_DIR	I	0/3.3 V DC	TRCM drive switch signal
	35	TRANS_MOT_RDY	O	0/3.3 V DC	TRCM ready signal
	36	TRANS_MOT_CLK	I	0/3.3 V DC (pulse)	TRCM clock signal
	37	TRANS_MOT_REM	I	0/3.3 V DC	TRCM: On/Off
	38	GND	-	-	Ground
	39	TCON_SET	-	-	Not used
	40	DU_ENTER_SENS	O	0/3.3 V DC	DUS1: On/Off
	41	EXIT_FAN	I	0/24 V DC	EFM: On/Off
	42	GND	-	-	Ground
	43	DU1_MOT_REM(CL_H)	I	0/3.3 V DC	DUM1/DUCL1: On/Off
	44	DU1_MOT_CLK	I	0/3.3 V DC (pulse)	DUM1 clock signal
	45	DU1_MOT_PD	I	0/3.3 V DC	DUM1 control signal
	46	EDGE_FAN_H	I	0/24 V DC	FUFM: On/Off
	47	GND	-	-	Ground
	48	LOOP_SENS	O	0/3.3 V DC	LPS: On/Off
	49	M_TEMP	-	-	Not used
	50	GND	-	-	Ground

Connector	Pin	Signal	I/O	Voltage	Description
YC3	1	24V1	O	24 V DC	24 V DC power to EPWB
Connected to engine PWB	2	24V1	O	24 V DC	24 V DC power to EPWB
	3	GND	-	-	Ground
	4	GND	-	-	Ground
	5	12V	O	12 V DC	12 V DC power to EPWB
	6	GND	-	-	Ground
	7	5V	O	5 V DC	5 V DC power to EPWB
	8	GND	-	-	Ground
YC4	1	24V1	I	24 V DC	24 V DC power from PSPWB
Connected to power source PWB	2	24V1	I	24 V DC	24 V DC power from PSPWB
	3	24V1	I	24 V DC	24 V DC power from PSPWB
	4	12V	I	12 V DC	12 V DC power from PSPWB
	5	GND	-	-	Ground
	6	GND	-	-	Ground
	7	GND	-	-	Ground
	8	GND	-	-	Ground
YC5	1	GND	-	-	Ground
Connected to power source PWB	2	DRM_HEAT_REM	O	0/3.3 V DC	FH: On/Off
	3	POWER_OFF	O	0/3.3 V DC	Sleep mode signal: On/Off
YC10	1	GND	-	-	Ground
Connected to ID sensor1/2 and cleaning solenoid	2	M_TEMP	-	-	Not used
	3	3.3V	O	3.3 V DC	3.3 V DC power to IDS1
	4	REG_F_LED	O	Analog	IDS1 control signal
	5	GND	-	-	Ground
	6	REG_SENS_F_P	I	Analog	IDS1 detection signal
	7	REG_SENS_F_S	I	Analog	IDS1 detection signal
	8	3.3V	O	3.3 V DC	3.3 V DC power to IDS2
	9	REG_R_LED	O	Analog	IDS2 control signal
	10	GND	-	-	Ground
	11	REG_SENS_R_P	I	Analog	IDS2 detection signal
	12	REG_SENS_R_S	I	Analog	IDS2 detection signal
	13	24V	O	24 V DC	24 V DC power to CLSOL
	14	CLN_SOL_REM	O	0/24 V DC	CLSOL: On/Off (ACT)
	15	CLN_SOL_RET	O	0/24 V DC	CLSOL: On/Off (RET)

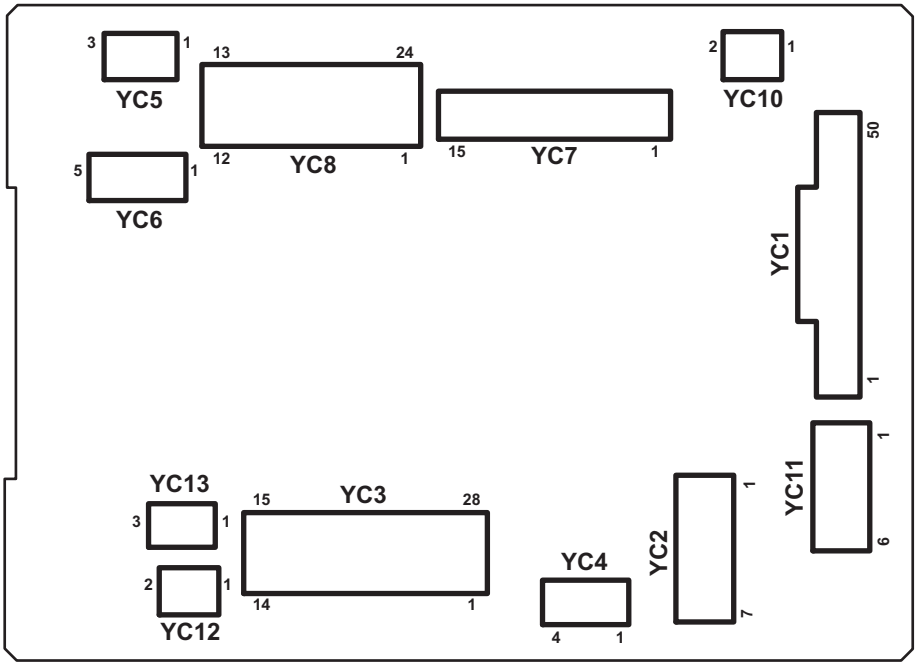
Connector	Pin	Signal	I/O	Voltage	Description
YC11	1	IH_PWB_FAN	O	0/24 V DC	IHFM: On/Off
Connected to IH fan motor	2	GND	-	-	Ground
	3	IH_PWB_FAN_ALM	I	0/3.3 V DC	IHFM alarm signal
YC12	1	24V2	O	24 V DC	24 V DC power to FPWB2
Connected to feed PWB 2	2	24V2	O	24 V DC	24 V DC power to FPWB2
	3	5V	O	5 V DC	5 V DC power to FPWB2
	4	GND	-	-	Ground
	5	GND	-	-	Ground
	6	GND	-	-	Ground
YC13	1	TRANS_MOT_BRK	O	0/3.3 V DC	TRM break signal
Connected to transfer motor	2	TRANS_MOT_DIR	O	0/3.3 V DC	TRM drive switch signal
	3	TRANS_MOT_RDY	I	0/3.3 V DC	TRM ready signal
	4	TRANS_MOT_CLK	O	0/3.3 V DC (pulse)	TRM clock signal
	5	TRANS_MOT_REM	O	0/24 V DC	TRM: On/Off
	6	GND	-	-	Ground
	7	24V2	O	24 V DC	24 V DC power to TRM
	8	GND	-	-	Not used
	9	24V2	-	-	Not used
	10	TANK_SET	-	-	Not used
YC14	1	REG_BK_LED	-	-	Not used
Connected to relay PWB	2	REG_BK_SENS1_P	-	-	Not used
	3	REG_BK_SENS1_S	-	-	Not used
	4	BELT_JAM_SENS	-	-	Not used
	5	DU_SENS	I	0/3.3 V DC	DUS2: On/Off
	6	PRESS_RLS_SENS	I	0/3.3 V DC	TRRS: On/Off
	7	5V	O	5 V DC	5 V DC power to RYPWB
	8	PRESS_RLSMOT1	O	0/24 V DC	TRRM: On/Off
	9	PRESS_RLSMOT2	O	0/24 V DC	TRRM: On/Off

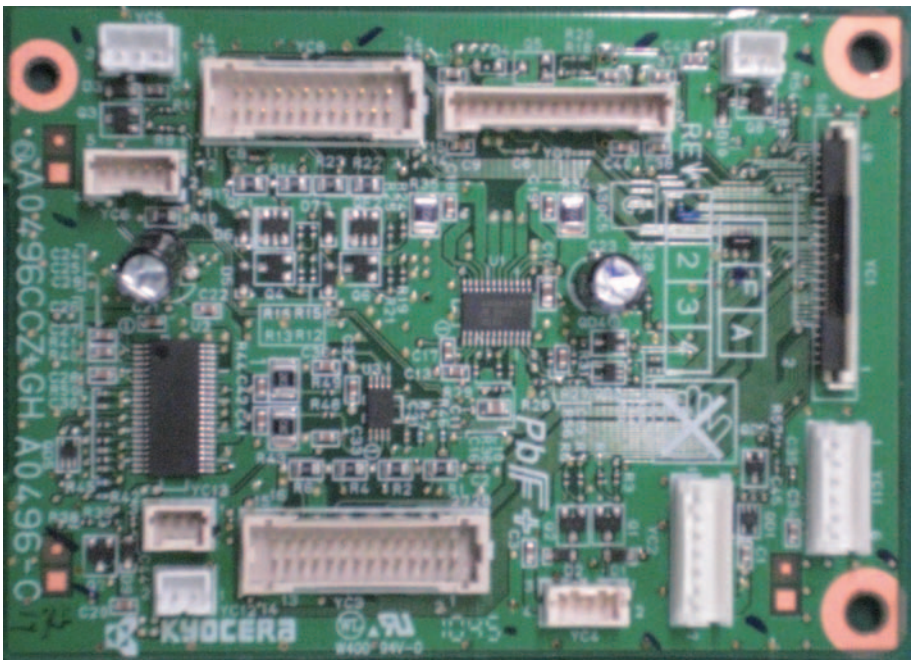
Connector	Pin	Signal	I/O	Voltage	Description
YC14	10	24V2	O	24 V DC	24 V DC power to RYPWB
Connected to relay PWB	11	DU_FAN	-	-	Not used
	12	DU_CL_LOWER_REM	O	0/24 V DC	DUCL2: On/Off
	13	DU_OPEN_SW	I	0/3.3 V DC	DUCSW: On/Off
	14	DU2_B/	O	0/24 V DC (pulse)	DUM2 drive control signal
	15	DU2_A/	O	0/24 V DC (pulse)	DUM2 drive control signal
	16	DU2_B	O	0/24 V DC (pulse)	DUM2 drive control signal
	17	DU2_A	O	0/24 V DC (pulse)	DUM2 drive control signal
	18	GND	-	-	Not used
YC15	1	24V1	O	24 V DC	24 V DC power to PCUSW
Connected to paper conveying unit switch	2	N.C	-	-	Not used
	3	24V2	I	24 V DC	24 V DC power from PCUSW
YC16	1	24V2	O	24 V DC	24 V DC power to HVPWB2
Connected to high voltage PWB 2	2	GND	-	-	Ground
YC17	1	GND	-	-	Ground
Connected to relay PWB	2	GND	-	-	Ground
	3	CLN_SOL_REM	-	-	Not used
	4	24V2	-	-	Not used
	5	MPF_LIFT_MOT_B	O	0/24 V DC	MPLM: On/Off
	6	MPF_LIFT_MOT_A	O	0/24 V DC	MPLM: On/Off
	7	24V2	O	24 V DC	24 V DC power to RYPWB
	8	MPF_CL_REM	O	0/24 V DC	MPPFCL: On/Off
	9	MPF_JAM_SENS	I	0/3.3 V DC	MPFS: On/Off
	10	MPF_LIFT_DOWN_SENS	I	0/3.3 V DC	MPLS2: On/Off
	11	MPF_LIFT_UP_SENS	I	0/3.3 V DC	MPLS1: On/Off
	12	MPF_PPR_SET	I	0/3.3 V DC	MPPS: On/Off
	13	LED_3.3V3	O	3.3 V DC	3.3 V DC power to RYPWB
	14	MPF_LNG	I	0/3.3 V DC	MPPLSW: On/Off

Connector	Pin	Signal	I/O	Voltage	Description
YC17	15	MPF_WID3	I	0/3.3 V DC	MPPWSW: On/Off
Connected to relay PWB	16	MPF_WID2	I	0/3.3 V DC	MPPWSW: On/Off
	17	MPF_WID1	I	0/3.3 V DC	MPPWSW: On/Off
	18	MPF_TABLE	I	0/3.3 V DC	MPTSW: On/Off
	19	GND	-	-	Ground
	20	GND	-	-	Ground
YC18	1	FSR_MOT_BRK	O	0/3.3 V DC	FUM break signal
Connected to fuser motor	2	FSR_MOT_DIR	O	0/3.3 V DC	FUM drive switch signal
	3	FSR_MOT_RDY	I	0/3.3 V DC	FUM ready signal
	4	FSR_MOT_CLK	O	0/3.3 V DC (pulse)	FUM clock signal
	5	FSR_MOT_REM	O	0/24 V DC	FUM: On/Off
	6	GND	-	-	Ground
	7	24V2	O	24 V DC	24 V DC power to FUM
YC19	1	EXIT_REAR_FAN	O	0/24 V DC	ERFM: On/Off
Connected to eject rear fan motor	2	24V1	O	24 V DC	24 V DC power to ERFM
YC20	1	MAIL_SDI	I	0/3.3 V DC (pulse)	MAIL serial communication data
Connected to job separator	2	GND	-	-	Ground
	3	GND	-	-	Ground
	4	NC	-	-	Not used
	5	24V1	O	24 V DC	24 V DC power to MAIL
	6	MAIL_CLK	O	0/3.3 V DC (pulse)	MAIL clock signal
	7	5V	O	5 V DC	5 V DC power to MAIL
	8	MAIL_SDO	O	0/3.3 V DC (pulse)	MAIL serial communication data
	9	MAIL_RDY	O	0/3.3 V DC	MAIL ready signal
	10	MAIL_SEL	O	0/3.3 V DC	MAIL select signal
	11	NC	-	-	Not used

Connector	Pin	Signal	I/O	Voltage	Description
YC23	1	DU_ENTER_SENS	I	0/3.3 V DC	DUS1: On/Off
Connected to relay PWB	2	EXIT_FAN	O	0/24 V DC	EFM: On/Off
	3	24V2	O	24 V DC	24 V DC power to RYPWB
	4	DU_CL_UPPER_REM	O	0/24 V DC	DUCL1: On/Off
	5	GND	-	-	Ground
	6	DU1_B/	O	0/24 V DC (pulse)	DUM1 drive control signal
	7	DU1_A/	O	0/24 V DC (pulse)	DUM1 drive control signal
	8	DU1_B	O	0/24 V DC (pulse)	DUM1 drive control signal
	9	DU1_A	O	0/24 V DC (pulse)	DUM1 drive control signal
	10	EDGE_FAN_REM	O	0/24 V DC	FUFM: On/Off
	11	LOOP_SENS	I	0/3.3 V DC	LPS: On/Off
	12	3.3V	O	3.3 V DC	3.3 V DC power to RYPWB
YC25	1	REG_MOT_B/	O	0/24 V DC (pulse)	RM drive control signal
Connected to registration motor	2	REG_MOT_A/	O	0/24 V DC (pulse)	RM drive control signal
	3	REG_MOT_B	O	0/24 V DC (pulse)	RM drive control signal
	4	REG_MOT_A	O	0/24 V DC (pulse)	RM drive control signal
YC26	1	3.3V2	O	3.3 V DC	3.3 V DC power to EPWB
Connected to engine PWB	2	3.3V3	O	3.3 V DC	3.3 V DC power to EPWB
	3	GND	-	-	Ground
	4	GND	-	-	Ground
YC27	1	MAIN_HEAT_REM	-	-	Not used
Connected to fuser IH PWB	2	SUB_HEAT_REM	-	-	Not used
	3	24V2	-	-	Not used
	4	ZEROC	-	-	Not used
	5	GND	-	-	Not used
	6	GND	-	-	Ground
	7	FSR_RELAY	O	0/3.3 V DC	Fuser relay signal
	8	24V1	O	24 V DC	24 V DC power to IHPWB
	9	PRESS_REM	-	-	Not used

2-3-6 Feed PWB 2





* : Refer to the picture.

Figure 2-3-6 Feed PWB 2 silk-screen diagram and photograph

Connector	Pin	Signal	I/O	Voltage	Description
YC1	1	GND	-	-	Ground
Connected to engine PWB	2	FEED_MOT_REM	I	0/3.3 V DC	PFM: On/Off
	3	FEED_MOT_CLK	I	0/3.3 V DC (pulse)	PFM clock signal
	4	FEED_MOT_RDY	O	0/3.3 V DC	PFM ready signal
	5	FEED_MOT_DIR	I	0/3.3 V DC	PFM drive switch signal
	6	FEED_CL1_REM	I	0/24 V DC	PFCL1: On/Off
	7	FEED_CL2_REM	I	0/24 V DC	PFCL2: On/Off
	8	ASIST_CL2	I	0/24 V DC	ASCL2: On/Off
	9	LIFT_MOT2_REM	I	0/24 V DC	LM2: On/Off
	10	GND	-	-	Ground
	11	LIFT_MOT1_REM 1	I	0/24 V DC	LM1: On/Off
	12	CAS2_WID	O	0/3.3 V DC	PWSW2: On/Off
	13	CAS2_LNG3	O	0/3.3 V DC	PLSW2: On/Off
	14	CAS2_LNG2	O	0/3.3 V DC	PLSW2: On/Off
	15	CAS2_LNG1	O	0/3.3 V DC	PLSW2: On/Off
	16	CAS1_WID	O	0/3.3 V DC	PWSW1: On/Off
	17	CAS1_LNG3	O	0/3.3 V DC	PLSW1: On/Off
	18	CAS1_LNG2	O	0/3.3 V DC	PLSW1: On/Off
	19	CAS1_LNG1	O	0/3.3 V DC	PLSW1: On/Off
	20	GND	-	-	Ground
	21	CAS2_QUANT2	O	0/3.3 V DC	PGS2(L): On/Off
	22	CAS2_QUANT1	O	0/3.3 V DC	PGS2(U): On/Off
	23	CAS1_QUANT2	O	0/3.3 V DC	PGS1(L): On/Off
	24	CAS1_QUANT1	O	0/3.3 V DC	PGS1(U): On/Off
	25	LIFT_MOT1_LOCK	O	0/3.3 V DC	LM1 lock signal
	26	LIFT_MOT2_LOCK	O	0/3.3 V DC	LM2 lock signal
	27	CURRENT_SIG	O	0/3.3 V DC	Current signal
	28	V-FEED_CL	I	0/24 V DC	PCCL: On/Off
	29	COVER_OPEN	O	0/3.3 V DC	PCCSW: On/Off
	30	FEED2_SENS	O	0/3.3 V DC	PFPCS1: On/Off
	31	CAS1_P0	O	0/3.3 V DC	FS1: On/Off
	32	CAS1_LIFT_UP	O	0/3.3 V DC	LS1: On/Off
	33	GND	-	-	Ground
	34	CAS1_EMPTY	O	0/3.3 V DC	PS1: On/Off

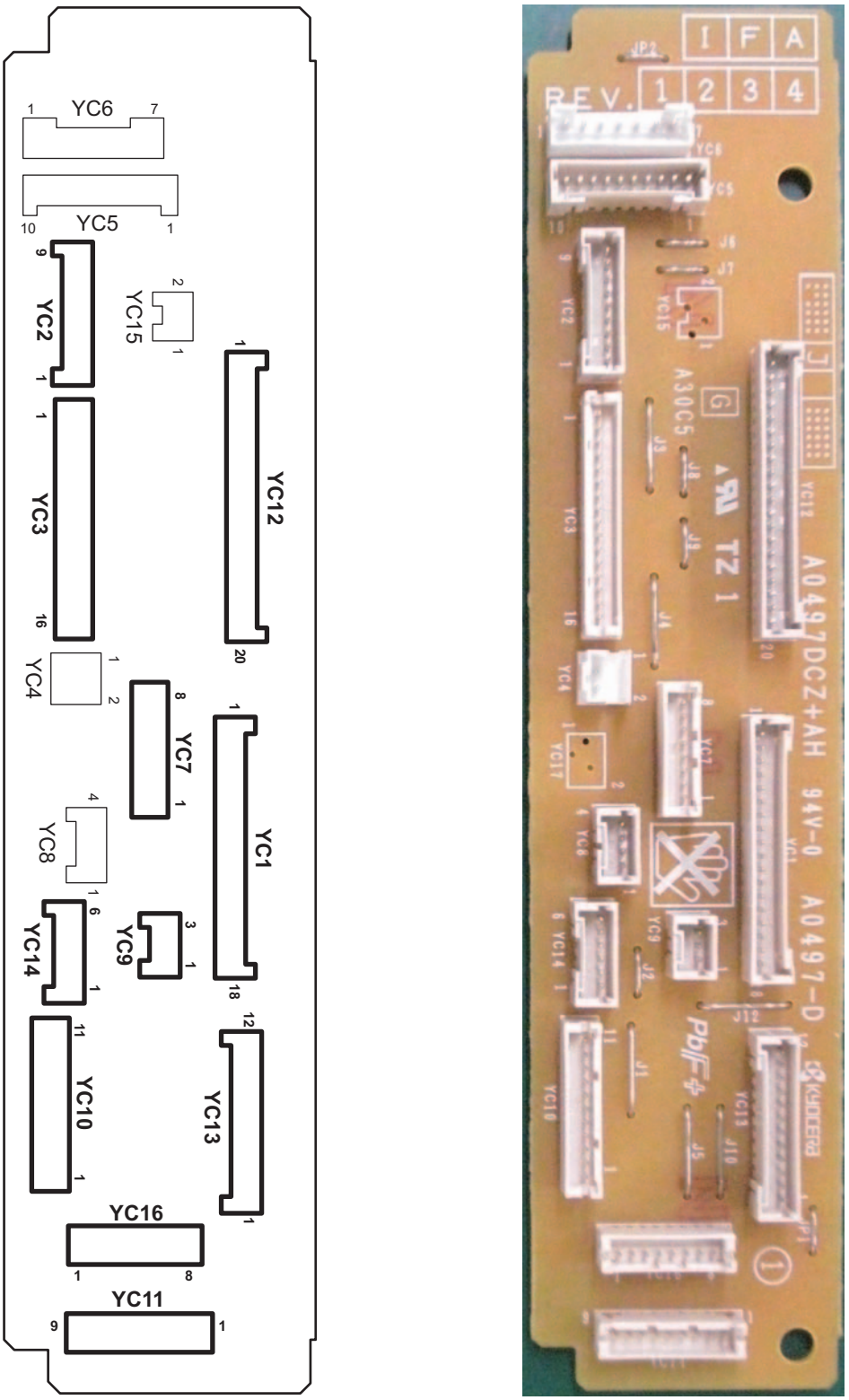
Connector	Pin	Signal	I/O	Voltage	Description
YC1	35	PICK_SOL1_RET	I	0/24 V DC	PUSOL1: On/Off (RET)
Connected to engine PWB	36	PICK_SOL1_REM	I	0/24 V DC	PUSOL1: On/Off (ACT)
	37	CAS2_P0	O	0/3.3 V DC	FS2: On/Off
	38	CAS2_LIFT_UP	O	0/3.3 V DC	LS2: On/Off
	39	CAS2_EMPTY	O	0/3.3 V DC	PS2: On/Off
	40	PICK_SOL2_RET	I	0/24 V DC	PUSOL2: On/Off (RET)
	41	PICK_SOL2_REM	I	0/24 V DC	PUSOL2: On/Off (ACT)
	42	GND	-	-	Ground
	43	REG_SENS	O	0/3.3 V DC	RS: On/Off
	44	FEED1_SENS	O	0/3.3 V DC	PCS: On/Off
	45	BEND_SENS	O	0/3.3 V DC	RDS: On/Off
	46	MID_MOT_PH	I	0/3.3 V DC	MM control signal
	47	MID_MOT_REM(ROL_CL)	I	0/3.3 V DC	MM/MCL: On/Off
	48	MID_MOT_CLK	I	0/3.3 V DC (pulse)	MM clock signal
	49	MID_MOT_PD	I	0/3.3 V DC	MM control signal
	50	ASIST_CL1	I	0/24 V DC	ASCL1: On/Off
YC2	1	FEED_MOT_GAIN	-	-	Not used
Connected to paper feed motor	2	FEED_MOT_DIR	O	0/3.3 V DC	PFM drive switch signal
	3	FEED_MOT_RDY	I	0/3.3 V DC	PFM ready signal
	4	FEED_MOT_CLK	O	0/3.3 V DC (pulse)	PFM clock signal
	5	FEED_MOT_REM	O	0/24 V DC	PFM: On/Off
	6	GND	-	-	Ground
	7	24V2	O	24 V DC	24 V DC power to PFM
YC3	1	CAS1_LNG1	I	0/3.3 V DC	PLSW1: On/Off
Connected to paper length switch 1/2, paper width switch 1/2, lift motor 1/2, paper gauge sensor 1(U)/(L) and paper gauge sensor 2(U)/(L)	2	CAS1_LNG2	I	0/3.3 V DC	PLSW1: On/Off
	3	GND	-	-	Ground
	4	CAS1_LNG3	I	0/3.3 V DC	PLSW1: On/Off
	5	CAS1_WID	I	0/3.3 V DC	PWSW1: On/Off
	6	GND	-	-	Ground
	7	CAS2_LNG1	I	0/3.3 V DC	PLSW2: On/Off
	8	CAS2_LNG2	I	0/3.3 V DC	PLSW2: On/Off
	9	GND	-	-	Ground
	10	CAS2_LNG3	I	0/3.3 V DC	PLSW2: On/Off
	11	CAS2_WID	I	0/3.3 V DC	PWSW2: On/Off

Connector	Pin	Signal	I/O	Voltage	Description
YC3	12	GND	-	-	Ground
Connected to paper length switch 1/2, paper width switch 1/2, lift motor 1/2, paper gauge sensor 1(U)/(L) and paper gauge sensor 2(U)/(L)	13	LIFT_MOT1_RET	O	0/24 V DC	LM1: On/Off
	14	LIFT_MOT1_DR	O	0/24 V DC	LM1: On/Off
	15	LIFT_MOT2_RET	O	0/24 V DC	LM2: On/Off
	16	LIFT_MOT2_DR	O	0/24 V DC	LM2: On/Off
	17	LED_5V	O	5 V DC	5 V DC power to PGS1(U)
	18	GND	-	-	Ground
	19	CAS1_QUANT1	I	0/3.3 V DC	PGS1(U): On/Off
	20	LED_5V	O	5 V DC	5 V DC power to PGS1(L)
	21	GND	-	-	Ground
	22	CAS1_QUANT2	I	0/3.3 V DC	PGS1(L): On/Off
	23	LED_5V	O	5 V DC	5 V DC power to PGS2(U)
	24	GND	-	-	Ground
	25	CAS2_QUANT1	I	0/3.3 V DC	PGS2(U): On/Off
	26	LED_5V	O	5 V DC	5 V DC power to PGS2(L)
	27	GND	-	-	Ground
	28	CAS2_QUANT2	I	0/3.3 V DC	PGS2(L): On/Off
YC4	1	FEED_CL1_REM	O	0/24 V DC	PFCL1: On/Off
Connected to paper feed clutch 1/2	2	24V2	O	24 V DC	PFCL124 V DC power to PFCL1
	3	FEED_CL2_REM	O	0/24 V DC	PFCL2: On/Off
	4	24V2	O	24 V DC	24 V DC power to PFCL2
YC5	1	NC	-	-	Not used
Connected to paper conveying clutch	2	24V2	O	24 V DC	24 V DC power to PCCL
	3	V-FEED_CL	O	0/24 V DC	PCCL: On/Off
YC6	1	LED_5V	O	5 V DC	5 V DC power to PCS
Connected to paper conveying sensor and paper conveying cover switch	2	GND	-	-	Ground
	3	FEED2_SENS	I	0/3.3 V DC	PCS: On/Off
	4	FEED_COVER_OPEN	I	0/3.3 V DC	PCCSW: On/Off
	5	GND	-	-	Ground

Connector	Pin	Signal	I/O	Voltage	Description
YC7	1	MID_B/	O	0/24 V DC (pulse)	MM drive control signal
Connected to middle motor, regist deflection sensor, middle sensor and registration sensor	2	MID_A/	O	0/24 V DC (pulse)	MM drive control signal
	3	MID_B	O	0/24 V DC (pulse)	MM drive control signal
	4	MID_A	O	0/24 V DC (pulse)	MM drive control signal
	5	BEND_SENS	I	0/3.3 V DC	RDS: On/Off
	6	GND	-	-	Ground
	7	5V	O	5 V DC	5 V DC power to RDS
	8	GND	-	-	Ground
	9	FEED1_SENS	I	0/3.3 V DC	MS: On/Off
	10	5V	O	5 V DC	5 V DC power to MS
	11	GND	-	-	Ground
	12	REG_SENS	I	0/3.3 V DC	RS: On/Off
	13	5V	O	5 V DC	5 V DC power to RS
	14	MID_CL_REM	O	0/24 V DC	MCL: On/Off
	15	24V2	O	24 V DC	24 V DC power to MCL
YC8	1	24V2	O	24 V DC	24 V DC power to PUSOL1
Connected to primary paper feed unit	2	PICK_SOL1_REM	O	0/24 V DC	PUSOL1: On/Off (ACT)
	3	PICK_SOL1_RET	O	0/24 V DC	PUSOL1: On/Off (RET)
	4	LED_5V	O	5 V DC	5 V DC power to PS1
	5	GND	-	-	Ground
	6	CAS1_EMPTY_SENS	I	0/3.3 V DC	PS1: On/Off
	7	LED_5V	O	5 V DC	5 V DC power to LS1
	8	GND	-	-	Ground
	9	CAS1_LIFT_UP_SENS	I	0/3.3 V DC	LS1: On/Off
	10	5V	O	5 V DC	5 V DC power to FS1
	11	CAS1_P0_SENS	I	0/3.3 V DC	FS1: On/Off
	12	GND	-	-	Ground
	13	24V2	O	24 V DC	24 V DC power to PUSOL2
	14	PICK_SOL2_REM	O	0/24 V DC	PUSOL2: On/Off (ACT)
	15	PICK_SOL2_RET	O	0/24 V DC	PUSOL2: On/Off (RET)
	16	LED_5V	O	5 V DC	5 V DC power to PS2
	17	GND	-	-	Ground
	18	CAS2_EMPTY_SENS	I	0/3.3 V DC	PS2: On/Off
	19	LED_5V	O	5 V DC	5 V DC power to LS2

Connector	Pin	Signal	I/O	Voltage	Description
YC8	20	GND	-	-	Ground
Connected to primary paper feed unit	21	CAS2_LIFT_UP_SENS	I	0/3.3 V DC	LS2: On/Off
	22	5V	O	5 V DC	5 V DC power to FS2
	23	CAS2_P0_SENS	I	0/3.3 V DC	FS2: On/Off
	24	GND	-	-	Ground
YC10	1	ASIST_CL1	O	0/24 V DC	ASCL1: On/Off
Connected to assist clutch 1	2	24V2	O	24 V DC	24 V DC power to ASCL1
YC11	1	GND	-	-	Ground
Connected to feed PWB 1	2	GND	-	-	Ground
	3	GND	-	-	Ground
	4	5V	O	5 V DC	5 V DC power to FPWB1
	5	24V2	O	24 V DC	24 V DC power to FPWB1
	6	24V2	O	24 V DC	24 V DC power to FPWB1
YC12	1	ASIST_CL2	O	0/24 V DC	ASCL2: On/Off
Connected to assist clutch 2	2	24V2	O	24 V DC	24 V DC power to ASCL2
YC13	1	CURRENT_SIG	I	0/3.3 V DC	Current signal
Connected to current PWB	2	GND	-	-	Ground
	3	5V1	I	5 V DC	5 V DC power from CRPWB

2-3-7 Relay PWB



* : Refer to the picture.

Figure 2-3-7 Relay PWB silk-screen diagram and photograph

Connector	Pin	Signal	I/O	Voltage	Description
YC1	1	GND	-	-	Not used
Connected to feed PWB 1	2	DU2_A	I	0/24 V DC (pulse)	DUM2 drive control signal
	3	DU2_B	I	0/24 V DC (pulse)	DUM2 drive control signal
	4	DU2_A/	I	0/24 V DC (pulse)	DUM2 drive control signal
	5	DU2_B/	I	0/24 V DC (pulse)	DUM2 drive control signal
	6	DU_OPEN_SW	O	0/3.3 V DC	DUCSW: On/Off
	7	DU_CL_LOWER_REM	I	0/24 V DC	DUCL2: On/Off
	8	DU_FAN	-	-	Not used
	9	24V2	I	24 V DC	24 V DC power from FPWB1
	10	PRESS_RLS_REM2	I	0/24 V DC	TRRM: On/Off
	11	PRESS_RLS_REM1	I	0/24 V DC	TRRM: On/Off
	12	5V	I	5 V DC	5 V DC power from FPWB1
	13	PRESS_RLS_SENS	O	0/3.3 V DC	TRRS: On/Off
	14	DU_SENS	O	0/3.3 V DC	DUS2: On/Off
	15	BELT_JAM_SENS	-	-	Not used
	16	REG_BK_SENS1_S	-	-	Not used
	17	REG_BK_SENS1_P	-	-	Not used
	18	REG_BK_LED	-	-	Not used
YC2	1	GND	-	-	Ground
Connected to MP tray unit	2	MPF_LNG	I	0/3.3 V DC	MPPLSW: On/Off
	3	5V	O	5 V DC	5 V DC power to MPPLSW
	4	MPF_WID3	I	0/3.3 V DC	MPPWSW: On/Off
	5	MPF_WID2	I	0/3.3 V DC	MPPWSW: On/Off
	6	GND	-	-	Ground
	7	MPF_WID1	I	0/3.3 V DC	MPPWSW: On/Off
	8	GND	-	-	Ground
	9	MPF_TABLE	I	0/3.3 V DC	MPTSW: On/Off

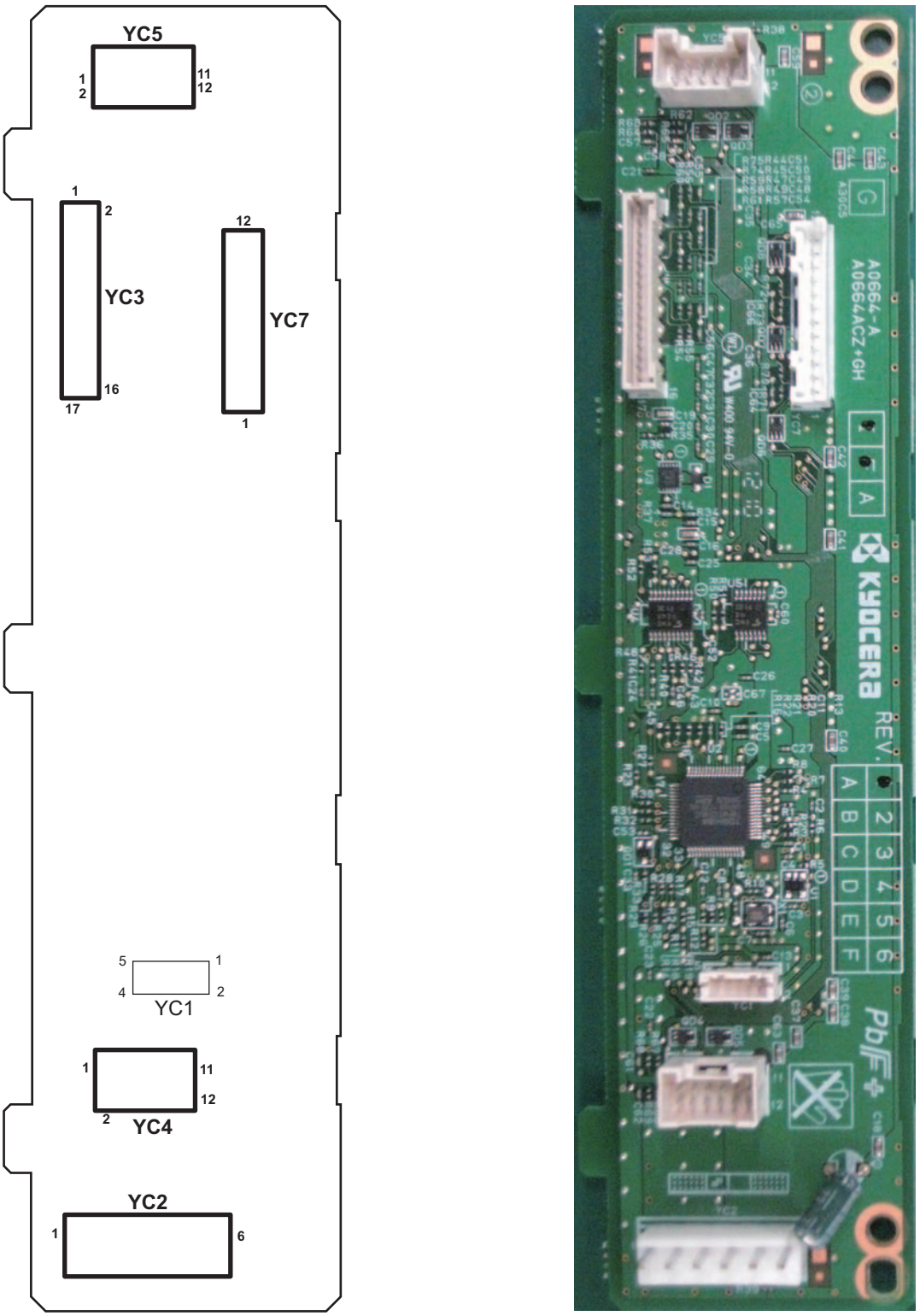
Connector	Pin	Signal	I/O	Voltage	Description
YC3	1	LED_3.3V3	O	3.3 V DC	3.3 V DC power to MPPLSW
Connected to MP tray unit	2	GND	-	-	Ground
	3	MPF_PPR_SET	I	0/3.3 V DC	MPPS: On/Off
	4	GND	-	-	Ground
	5	MPF_LIFT_UP_SENS	I	0/3.3 V DC	MPLS1: On/Off
	6	5V	O	5 V DC	5 V DC power to MPLS1
	7	GND	-	-	Ground
	8	MPF_LIFT_DOWN_SENS	I	0/3.3 V DC	MPLS2: On/Off
	9	5V	O	5 V DC	5 V DC power to MPLS1
	10	GND	-	-	Ground
	11	MPF_JAM_SENS	I	0/3.3 V DC	MPFS: On/Off
	12	5V	O	5 V DC	5 V DC power to MPFS
	13	MPF_CL_REM	O	0/24 V DC	MPPFCL: On/Off
	14	24V2	O	24 V DC	24 V DC power to MPPFCL
	15	MPF_LIFT_DR_A	O	0/24 V DC	MPLM: On/Off
	16	MPF_LIFT_DR_B	O	0/24 V DC	MPLM: On/Off
YC7	1	24V2	-	-	Not used
Connected to duplex clutch 2, duplex cover switch and duplex motor 2	2	DU_CL2_REM	-	-	Not used
	3	DU_OPEN	I	0/3.3 V DC	DUCSW: On/Off
	4	GND	-	-	Ground
	5	DU2_B/	O	0/24 V DC (pulse)	DUM2 drive control signal
	6	DU2_A/	O	0/24 V DC (pulse)	DUM2 drive control signal
	7	DU2_B	O	0/24 V DC (pulse)	DUM2 drive control signal
	8	DU2_A	O	0/24 V DC (pulse)	DUM2 drive control signal
YC9	1	GND	-	-	Ground
Connected to duplex sensor 2	2	DU_SENS	I	0/3.3 V DC	DUS2: On/Off
	3	5V	O	5 V DC	5 V DC power to DUS2

Connector	Pin	Signal	I/O	Voltage	Description
YC10	1	LOOP_SENS	I	0/3.3 V DC	LPS: On/Off
Connected to loop sensor	2	GND	-	-	Ground
	3	5V	O	5 V DC	5 V DC power to LPS
	4	3.3V	-	-	Not used
	5	REG_BK_LED	-	-	Not used
	6	GND	-	-	Not used
	7	REG_BK_SENS1_P	-	-	Not used
	8	REG_BK_SENS1_S	-	-	Not used
	9	GND	-	-	Not used
	10	BELT_JAM_SENS	-	-	Not used
	11	5V	-	-	Not used
YC11	1	GND	-	-	Ground
Connected to duplex sensor 1, eject fan motor and duplex clutch 1	2	DU_ENTER_SENS	I	0/3.3 V DC	DUS1: On/Off
	3	5V	O	5 V DC	5 V DC power to DUS1
	4	EXIT_FAN_REM	O	0/24 V DC	EFM1: On/Off
	5	24V2	O	24 V DC	24 V DC power to EFM1
	6	EXIT_FAN_REM	O	0/24 V DC	EFM2: On/Off
	7	24V2	O	24 V DC	24 V DC power to EFM2
	8	24V2	-	-	Not used
	9	DU_CL_UPPER_REM	-	-	Not used
YC12	1	GND	-	-	Ground
Connected to feed PWB 1	2	GND	-	-	Ground
	3	MPF_TABLE	O	0/3.3 V DC	MPTSW: On/Off
	4	MPF_WID1	O	0/3.3 V DC	MPPWSW: On/Off
	5	MPF_WID2	O	0/3.3 V DC	MPPWSW: On/Off
	6	MPF_WID3	O	0/3.3 V DC	MPPWSW: On/Off
	7	MPF_LNG	O	0/3.3 V DC	MPPLSW: On/Off
	8	LED_3.3V3	I	3.3 V DC	3.3 V DC power from FPWB1
	9	MPF_PPR_SET	O	0/3.3 V DC	MPPS: On/Off
	10	MPF_LIFT_UP_SENS	O	0/3.3 V DC	MPLS1: On/Off

Connector	Pin	Signal	I/O	Voltage	Description
YC12	11	MPF_LIFT_DOWN_SENS	O	0/3.3 V DC	MPLS2: On/Off
Connected to feed PWB 1	12	MPF_JAM_SENS	O	0/3.3 V DC	MPFS: On/Off
	13	MPF_CL_REM	I	0/24 V DC	MPPFCL: On/Off
	14	24V2	I	24 V DC	24 V DC power from FPWB1
	15	MPF_LIFT_MOT_A	I	0/24 V DC	MPLM: On/Off
	16	MPF_LIFT_MOT_B	I	0/24 V DC	MPLM: On/Off
	17	24V2	-	-	Not used
	18	ID_SOL_ACT	-	-	Not used
	19	GND	-	-	Not used
	20	GND	-	-	Not used
YC13	1	3.3V	I	3.3 V DC	3.3 V DC power from FPWB1
Connected to feed PWB 1	2	LOOP_SENS	O	0/3.3 V DC	LPS: On/Off
	3	EDGE_FAN_REM	I	0/24 V DC	FUFM: On/Off
	4	DU1_A	I	0/24 V DC (pulse)	DUM1 drive control signal
	5	DU1_B	I	0/24 V DC (pulse)	DUM1 drive control signal
	6	DU1_A/	I	0/24 V DC (pulse)	DUM1 drive control signal
	7	DU1_B/	I	0/24 V DC (pulse)	DUM1 drive control signal
	8	GND	-	-	Ground
	9	DU_CL_UPPER_REM	I	0/24 V DC	DUCL1: On/Off
	10	24V2	I	24 V DC	24 V DC power from FPWB1
	11	EXIT_FAN	I	0/24 V DC	EFM: On/Off
	12	DU_ENTER_SENS	O	0/3.3 V DC	DUS1: On/Off
YC14	1	GND	-	-	Ground
Connected to transfer release sensor and transfer release motor	2	PRESS_RLS_SENS	I	0/3.3 V DC	TRRS: On/Off
	3	5V	O	5 V DC	5 V DC power to TRRS
	4	PRESS_RLS_REM1	O	0/24 V DC	TRRM: On/Off
	5	PRESS_RLS_REM2	O	0/24 V DC	TRRM: On/Off
	6	NC	-	-	Not used

Connector	Pin	Signal	I/O	Voltage	Description
YC16	1	DU1_B/	O	0/24 V DC (pulse)	DUM1 drive control signal
Connected to duplex motor 1 and fuser fan motor 1/2	2	DU1_A/	O	0/24 V DC (pulse)	DUM1 drive control signal
	3	DU1_B	O	0/24 V DC (pulse)	DUM1 drive control signal
	4	DU1_A	O	0/24 V DC (pulse)	DUM1 drive control signal
	5	EDGE_FAN_REM	O	0/24 V DC	FUFM1: On/Off
	6	24V2	O	24 V DC	24 V DC power to FUFM1
	7	EDGE_FAN_REM	O	0/24 V DC	FUFM2: On/Off
	8	24V2	O	24 V DC	24 V DC power to FUFM2

2-3-8 Motor control PWB



* : Refer to the picture.

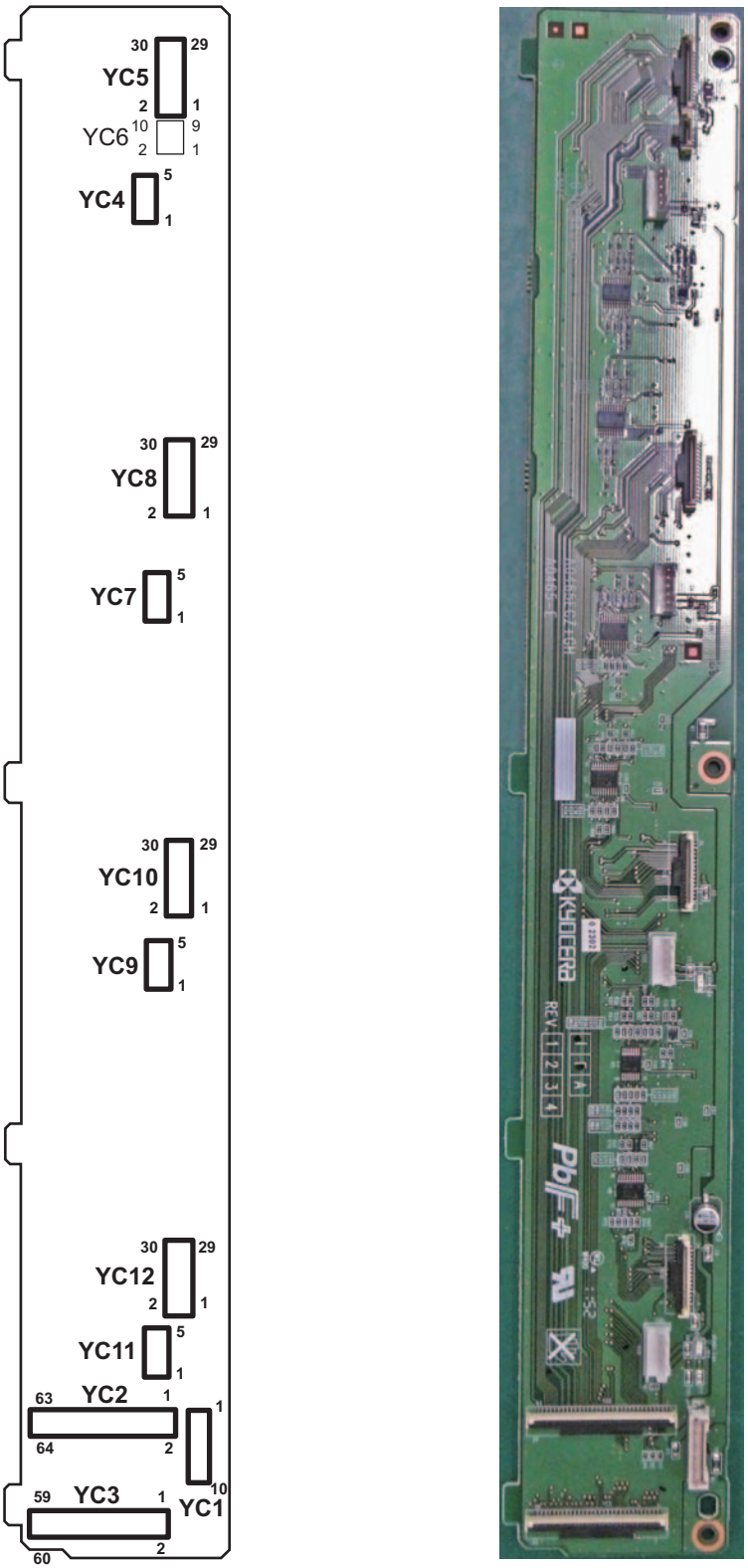
Figure 2-3-8 Motor control PWB silk-screen diagram and photograph

Connector	Pin	Signal	I/O	Voltage	Description
YC2	1	PGND	-	-	Ground
Connected to power source PWB	2	PGND	-	-	Ground
	3	PGND	-	-	Ground
	4	+24V1	I	24 V DC	24 V DC power from PSPWB
	5	+24V1	I	24 V DC	24 V DC power from PSPWB
	6	+24V1	I	24 V DC	24 V DC power from PSPWB
YC3	1	BLT_SPEED	I	0/3.3 V DC	TBLS: On/Off
Connected to engine PWB	2	EMERGENCY	I	0/3.3 V DC	MCPWB control signal
	3	ENG_RDY	O	0/3.3 V DC	MCPWB ready signal
	4	ENG_SDO	O	0/3.3 V DC (pulse)	MCPWB serial communication data signal
	5	ENG_SEL	I	0/3.3 V DC	MCPWB select signal
	6	ENG_SDI	I	0/3.3 V DC (pulse)	MCPWB serial communication data signal
	7	ENG_CLK	I	0/3.3 V DC (pulse)	MCPWB clock signal
	8	BLT_FG	-	-	Not used
	9	MOT_ON	I	0/3.3 V DC	MCPWB control signal
	10	MOT_DATA_SET	I	0/3.3 V DC	MCPWB control signal
	11	BLT_REM	-	-	Not used
	12	BLT_VM	-	-	Not used
	13	BLT_BRAKE	-	-	Not used
	14	+5V	I	5 V DC	5 V DC power to MCPWB
	15	+5V	I	5 V DC	5 V DC power to MCPWB
	16	SGND	-	-	Ground
	17	SGND	-	-	Ground

Connector	Pin	Signal	I/O	Voltage	Description
YC4	1	DRM_C_CW/ CCW	O	0/24 V DC	DRM-C: On/Off
Connected to drum motor C/Y	2	DRM_Y_CW/ CCW	O	0/24 V DC	DRM-Y: On/Off
	3	DRM_C_LD	O	0/3.3 V DC	DRM-C control signal
	4	DRM_Y_LD	O	0/3.3 V DC	DRM-Y control signal
	5	DRM_C_CLK	O	0/3.3 V DC (pulse)	DRM-C clock signal
	6	DRM_Y_CLK	O	0/3.3 V DC (pulse)	DRM-Y clock signal
	7	DRM_C_Start/ Stop	O	0/3.3 V DC	DRM-C control signal
	8	DRM_Y_Start/ Stop	O	0/3.3 V DC	DRM-Y control signal
	9	PGND	-	-	Ground
	10	PGND	-	-	Ground
	11	+24V1	O	24 V DC	24 V DC power to DRM-C
	12	+24V1	O	24 V DC	24 V DC power to DRM-Y
YC5	1	DRM_BK_CW/ CCW	O	0/24 V DC	DRM-Bk: On/Off
Connected to drum motor K/M	2	DRM_M_CW/ CCW	O	0/24 V DC	DRM-M: On/Off
	3	DRM_BK_LD	O	0/3.3 V DC	DRM-Bk control signal
	4	DRM_M_LD	O	0/3.3 V DC	DRM-M control signal
	5	DRM_BK_CLK	O	0/3.3 V DC (pulse)	DRM-Bk clock signal
	6	DRM_M_CLK	O	0/3.3 V DC (pulse)	DRM-M clock signal
	7	DRM_BK_Start/ Stop	O	0/3.3 V DC	DRM-Bk control signal
	8	DRM_M_Start/ Stop	O	0/3.3 V DC	DRM-M control signal
	9	PGND	-	-	Ground
	10	PGND	-	-	Ground
	11	+24V1	O	24 V DC	24 V DC power to DRM-K
	12	+24V1	O	24 V DC	24 V DC power to DRM-M

Connector	Pin	Signal	I/O	Voltage	Description
YC7	1	DLP_CL_CW/ CCW	O	0/24 V DC	DEVM-CL: On/Off
Connected to developer motor CL/BK	2	DLP_CL_LD	O	0/3.3 V DC	DEVM-CL control signal
	3	DLP_CL_CLK	O	0/3.3 V DC (pulse)	DEVM-CL clock signal
	4	DLP_CL_Start/ Stop	O	0/3.3 V DC	DEVM-CL control signal
	5	PGND	-	-	Ground
	6	+24V1	O	24 V DC	24 V DC power to DEVM-CL
	7	DLP_BK_CW/ CCW	O	0/24 V DC	DEVM-BK: On/Off
	8	DLP_BK_LD	O	0/3.3 V DC	DEVM-BK control signal
	9	DLP_BK_CLK	O	0/3.3 V DC (pulse)	DEVM-BK clock signal
	10	DLP_BK_Start/ Stop	O	0/3.3 V DC	DEVM-BK control signal
	11	PGND	-	-	Ground
	12	+24V1	O	24 V DC	24 V DC power to DEVM-BK

2-3-9 LSU relay PWB



* : Refer to the picture.

Figure 2-3-9 LSU relay PWB silk-screen diagram and photograph

Connector	Pin	Signal	I/O	Voltage	Description
YC1	1	+24V1	O	24 V DC	24 V DC power from PSPWB
Connected to power source PWB and engine PWB	2	+24V1	O	24 V DC	24 V DC power from PSPWB
	3	PGND	-	-	Ground
	4	PGND	-	-	Ground
	5	+5V1	O	5 V DC	5 V DC power from EPWB
	6	+5V1	O	5 V DC	5 V DC power from EPWB
	7	GND	-	-	Ground
	8	GND	-	-	Ground
	9	+3.3V2	O	3.3 V DC	3.3 V DC power from EPWB
	10	PGND	-	-	Ground
YC2	1	SGND	-	-	Ground
Connected to engine PWB	2	CLK	I	0/3.3 V DC (pulse)	Clock signal
	3	SGND	-	-	Ground
	4	SDI	O	0/3.3 V DC (pulse)	Serial communication data signal
	5	SGND	-	-	Ground
	6	SDO	I	0/3.3 V DC (pulse)	Serial communication data signal
	7	SGND	-	-	Ground
	8	MSET_N	I	0/3.3 V DC	Control signal
	9	SGND	-	-	Ground
	10	LDD_CS Y	I	0/3.3 V DC	APCPWB-Y control signal
	11	EEPROM CS Y	I/O	0/3.3 V DC (pulse)	APCPWB-Y EEPROM data signal
	12	LDD_CS C	I	0/3.3 V DC	APCPWB-C control signal
	13	EEPROM CS C	I/O	0/3.3 V DC (pulse)	APCPWB-C EEPROM data signal
	14	LDD_CS M	I	0/3.3 V DC	APCPWB-M control signal
	15	EEPROM CS M	I/O	0/3.3 V DC (pulse)	APCPWB-M EEPROM data signal
	16	LDD_CS 2 Bk	I	0/3.3 V DC	APCPWB-K control signal
	17	EEPROM CS 2 Bk	I/O	0/3.3 V DC (pulse)	APCPWB-K EEPROM data signal
	18	LDD_CS 1 Bk	I	0/3.3 V DC	APCPWB-K control signal
	19	EEPROM CS 1 Bk	I/O	0/3.3 V DC (pulse)	APCPWB-K EEPROM data signal
	20	SGND	-	-	Ground
	21	INT_ST Y	I	0/3.3 V DC	APCPWB-Y control signal
	22	PALA_SIG P0 Y	I	0/3.3 V DC	APCPWB-Y control signal
	23	PALA_SIG P1 Y	I	0/3.3 V DC	APCPWB-Y control signal
	24	PALA_SIG P2 Y	I	0/3.3 V DC	APCPWB-Y control signal
	25	GAIN FIX Y	I	0/3.3 V DC	APCPWB-Y control signal
	26	SGND	-	-	Ground

Connector	Pin	Signal	I/O	Voltage	Description
YC2	27	DATA_2N_Y(LVDS)	I	0/3.3 V DC (pulse)	Video data signal Y (N)
Connected to engine PWB	28	DATA_2P_Y(LVDS)	I	0/3.3 V DC (pulse)	Video data signal Y (P)
	29	SGND	-	-	Ground
	30	INT_ST 1 C	I	0/3.3 V DC	APCPWB-C control signal
	31	PALA_SIG P0 C	I	0/3.3 V DC	APCPWB-C control signal
	32	PALA_SIG P1 C	I	0/3.3 V DC	APCPWB-C control signal
	33	PALA_SIG P2 C	I	0/3.3 V DC	APCPWB-C control signal
	34	GAIN FIX C	I	0/3.3 V DC	APCPWB-C control signal
	35	SGND	-	-	Ground
	36	DATA_2N_C(LVDS)	I	0/3.3 V DC (pulse)	Video data signal C (N)
	37	DATA_2P_C(LVDS)	I	0/3.3 V DC (pulse)	Video data signal C (P)
	38	SGND	-	-	Ground
	39	INT_ST M	I	0/3.3 V DC	APCPWB-M control signal
	40	PALA_SIG P0 M	I	0/3.3 V DC	APCPWB-M control signal
	41	PALA_SIG P1 M	I	0/3.3 V DC	APCPWB-M control signal
	42	PALA_SIG P2 M	I	0/3.3 V DC	APCPWB-M control signal
	43	GAIN FIX M	I	0/3.3 V DC	APCPWB-M control signal
	44	SGND	-	-	Ground
	45	DATA_2N_M(LVDS)	I	0/3.3 V DC (pulse)	Video data signal M (N)
	46	DATA_2P_M(LVDS)	I	0/3.3 V DC (pulse)	Video data signal M (P)
	47	SGND	-	-	Ground
	48	DATA_3NBk(LVDS)	I	0/3.3 V DC (pulse)	Video data signal K (N)
	49	DATA_3PBk(LVDS)	I	0/3.3 V DC (pulse)	Video data signal K (P)
	50	SGND	-	-	Ground
	51	DATA_4NBk(LVDS)	I	0/3.3 V DC (pulse)	Video data signal K (N)
	52	DATA_4PBk(LVDS)	I	0/3.3 V DC (pulse)	Video data signal K (P)
	53	SGND	-	-	Ground
	54	PALA_SIG P3_2Bk	I	0/3.3 V DC	APCPWB-K control signal

Connector	Pin	Signal	I/O	Voltage	Description
YC2	55	INT_ST 2 Bk	I	0/3.3 V DC	APCPWB-K control signal
Connected to engine PWB	56	INT_ST 1 Bk	I	0/3.3 V DC	APCPWB-K control signal
	57	PALA_SIG P0 Bk	I	0/3.3 V DC	APCPWB-K control signal
	58	PALA_SIG P1 Bk	I	0/3.3 V DC	APCPWB-K control signal
	59	PALA_SIG P2 Bk	I	0/3.3 V DC	APCPWB-K control signal
	60	GAIN FIX Bk	I	0/3.3 V DC	APCPWB-K control signal
	61	SGND	-	-	Ground
	62	DATA_2NBk(LVDS)	I	0/3.3 V DC (pulse)	Video data signal K (N)
	63	DATA_2PBk(LVDS)	I	0/3.3 V DC (pulse)	Video data signal K (P)
	64	SGND	-	-	Ground
YC3	1	SGND	-	-	Ground
Connected to engine PWB	2	BD Y	O	0/3.3 V DC (pulse)	Horizontal synchronization signal Y
	3	LSU_TH Y	O	Analog	LSU thermistor Y detection signal
	4	CUALM Y	O	0/3.3 V DC	APCPWB-Y alarm signal
	5	PALA_SIG P3 Y	I	0/3.3 V DC	APCPWB-Y control signal
	6	PALA_SIG P4 Y	I	0/3.3 V DC	APCPWB-Y control signal
	7	SGND	-	-	Ground
	8	SDCLK Y	I	0/3.3 V DC (pulse)	APCPWB-Y clock signal
	9	SGND	-	-	Ground
	10	DATA_1N_Y(LVDS)	I	0/3.3 V DC (pulse)	Video data signal Y (N)
	11	DATA_1P_Y(LVDS)	I	0/3.3 V DC (pulse)	Video data signal Y (P)
	12	SGND	-	-	Ground
	13	REM Y	I	0/24 V DC	PM-Y: On/Off
	14	LOCK Y	O	0/3.3 V DC	PM-Y lock signal
	15	CLK Y	I	0/3.3 V DC (pulse)	PM-Y clock signal
	16	SGND	-	-	Ground
	17	BD C	O	0/3.3 V DC (pulse)	Horizontal synchronization signal C
	18	LSU_TH C	O	Analog	LSU thermistor C detection signal
	19	CUALM C	O	0/3.3 V DC	APCPWB-C alarm signal
	20	PALA_SIG P3 C	I	0/3.3 V DC	APCPWB-C control signal
	21	PALA_SIG P4 C	I	0/3.3 V DC	APCPWB-C control signal
	22	SGND	-	-	Ground
	23	SDCLK C	I	0/3.3 V DC (pulse)	APCPWB-C clock signal

Connector	Pin	Signal	I/O	Voltage	Description
YC3	24	SGND	-	-	Ground
Connected to engine PWB	25	DATA_1N_C(LVDS)	I	0/3.3 V DC (pulse)	Video data signal C (N)
	26	DATA_1P_C(LVDS)	I	0/3.3 V DC (pulse)	Video data signal C (P)
	27	SGND	-	-	Ground
	28	REM C	I	0/24 V DC	PM-C: On/Off
	29	LOCK C	O	0/3.3 V DC	PM-C lock signal
	30	CLK C	I	0/3.3 V DC (pulse)	PM-C clock signal
	31	SGND	-	-	Ground
	32	BD M	O	0/3.3 V DC (pulse)	Horizontal synchronization signal M
	33	LSU_TH M	O	Analog	LSU thermistor M detection signal
	34	CUALM M	O	0/3.3 V DC	APCPWB-M alarm signal
	35	PALA_SIG P3 M	I	0/3.3 V DC	APCPWB-M control signal
	36	PALA_SIG P4 M	I	0/3.3 V DC	APCPWB-M control signal
	37	SGND	-	-	Ground
	38	SDCLK M	I	0/3.3 V DC (pulse)	APCPWB-M clock signal
	39	SGND	-	-	Ground
	40	DATA_1N_M(LVDS)	I	0/3.3 V DC (pulse)	Video data signal M (N)
	41	DATA_1P_M(LVDS)	I	0/3.3 V DC (pulse)	Video data signal M (P)
	42	SGND	-	-	Ground
	43	REM M	I	0/24 V DC	PM-M: On/Off
	44	LOCK M	O	0/3.3 V DC	PM-M lock signal
	45	CLK M	I	0/3.3 V DC (pulse)	PM-M clock signal
	46	SGND	-	-	Ground
	47	BD Bk	O	0/3.3 V DC (pulse)	Horizontal synchronization signal K
	48	LSU_TH Bk	O	Analog	LSU thermistor K detection signal
	49	CUALM Bk	O	0/3.3 V DC	APCPWB-K alarm signal
	50	PALA_SIG P3 Bk	I	0/3.3 V DC	APCPWB-K control signal
	51	PALA_SIG P4 Bk	I	0/3.3 V DC	APCPWB-K control signal
	52	SGND	-	-	Ground
	53	SDCLK Bk	I	0/3.3 V DC (pulse)	APCPWB-K clock signal
	54	SGND	-	-	Ground
	55	DATA_1NBk(LVDS)	I	0/3.3 V DC (pulse)	Video data signal K (N)
	56	DATA_1PBk(LVDS)	I	0/3.3 V DC (pulse)	Video data signal K (P)

Connector	Pin	Signal	I/O	Voltage	Description
YC3	57	SGND	-	-	Ground
Connected to engine PWB	58	REM Bk	I	0/24 V DC	PM-K: On/Off
	59	LOCK Bk	O	0/3.3 V DC	PM-K lock signal
	60	CLK Bk	I	0/3.3 V DC (pulse)	PM-K clock signal
YC4	1	+24V	O	24 V DC	24 V DC power to PM-K
Connected to polygon motor K	2	PGND	-	-	Ground
	3	P_REM Bk	O	0/24 V DC	PM-K: On/Off
	4	P_LOCK Bk	I	0/3.3 V DC	PM-K lock signal
	5	P_CLK Bk	O	0/3.3 V DC (pulse)	PM-K clock signal
YC5	1	SGND	-	-	Ground
Connected to APC PWB K	2	BD Bk	I	0/3.3 V DC (pulse)	Horizontal synchronization signal K
	3	LSU_TH Bk	I	Analog	LSU thermistor K detection signal
	4	PALA_SIG P3_2Bk	-	-	Not used
	5	LDD_CS 2 Bk	-	-	Not used
	6	+5V	O	5 V DC	5 V DC power to APCPWB-K
	7	+5V	O	5 V DC	5 V DC power to APCPWB-K
	8	+5V	O	5 V DC	5 V DC power to APCPWB-K
	9	LDD_CS 1 Bk	O	0/3.3 V DC	APCPWB-K control signal
	10	SDI1 BK	I	0/3.3 V DC (pulse)	Serial communication data signal
	11	SDO1 BK	O	0/3.3 V DC (pulse)	Serial communication data signal
	12	CLK1 BK	O	0/3.3 V DC (pulse)	APCPWB-K clock signal
	13	EEPROM CS 1 Bk	I/O	0/3.3 V DC (pulse)	APCPWB-K EEPROM data signal
	14	MSET_N	O	0/3.3 V DC	APCPWB-K control signal
	15	CUALM Bk	I	0/3.3 V DC	APCPWB-K alarm signal
	16	INT_ST 2 Bk	O	0/3.3 V DC	APCPWB-K control signal
	17	INT_ST 1 Bk	O	0/3.3 V DC	APCPWB-K control signal
	18	PALA_SIG P0 Bk	O	0/3.3 V DC	APCPWB-K control signal
	19	PALA_SIG P1 Bk	O	0/3.3 V DC	APCPWB-K control signal
	20	PALA_SIG P2 Bk	O	0/3.3 V DC	APCPWB-K control signal
	21	PALA_SIG P3 Bk	O	0/3.3 V DC	APCPWB-K control signal
	22	PALA_SIG P4 Bk	O	0/3.3 V DC	APCPWB-K control signal
	23	SDCLK Bk	O	0/3.3 V DC (pulse)	APCPWB-K clock signal
	24	GAIN FIX Bk	O	0/3.3 V DC	APCPWB-K control signal

Connector	Pin	Signal	I/O	Voltage	Description
YC5	25	DATA_1NBk(LVDS)	O	0/3.3 V DC (pulse)	Video data signal K (N)
Connected to APC PWB K	26	DATA_1PBk(LVDS)	O	0/3.3 V DC (pulse)	Video data signal K (P)
	27	SGND	-	-	Ground
	28	DATA_2NBk(LVDS)	O	0/3.3 V DC (pulse)	Video data signal K (N)
	29	DATA_2PBk(LVDS)	O	0/3.3 V DC (pulse)	Video data signal K (P)
	30	SGND	-	-	Ground
YC7	1	24V	O	24 V DC	24 V DC power to PM-M
Connected to polygon motor M	2	PGND	-	-	Ground
	3	P_REM M	O	0/24 V DC	PM-M: On/Off
	4	P_LOCK M	I	0/3.3 V DC	PM-M lock signal
	5	P_CLK M	O	0/3.3 V DC (pulse)	PM-M clock signal
YC8	1	SGND	-	-	Ground
Connected to APC PWB M	2	BD M	I	0/3.3 V DC (pulse)	Horizontal synchronization signal M
	3	LSU_TH M	I	Analog	LSU thermistor M detection signal
	4	-	-	-	Not used
	5	-	-	-	Not used
	6	+5V	O	5 V DC	5 V DC power to APCPWB-M
	7	+5V	O	5 V DC	5 V DC power to APCPWB-M
	8	+5V	O	5 V DC	5 V DC power to APCPWB-M
	9	LDD_CS M	O	0/3.3 V DC	APCPWB-M control signal
	10	SDI M	I	0/3.3 V DC (pulse)	Serial communication data signal
	11	SDO M	O	0/3.3 V DC (pulse)	Serial communication data signal
	12	CLK M	O	0/3.3 V DC (pulse)	APCPWB-M clock signal
	13	EEPROM CS 0 M	I/O	0/3.3 V DC (pulse)	APCPWB-M EEPROM data signal
	14	MSET_N	O	0/3.3 V DC	APCPWB-M control signal
	15	CUALM M	I	0/3.3 V DC	APCPWB-M alarm signal
	16	-	-	-	-
	17	INT_ST M	O	0/3.3 V DC	APCPWB-M control signal
	18	PALA_SIG P0 M	O	0/3.3 V DC	APCPWB-M control signal
	19	PALA_SIG P1 M	O	0/3.3 V DC	APCPWB-M control signal
	20	PALA_SIG P2 M	O	0/3.3 V DC	APCPWB-M control signal

Connector	Pin	Signal	I/O	Voltage	Description
YC8	21	PALA_SIG P3 M	O	0/3.3 V DC	APCPWB-M control signal
Connected to APC PWB M	22	PALA_SIG P4 M	O	0/3.3 V DC	APCPWB-M control signal
	23	SDCLK M	O	0/3.3 V DC (pulse)	APCPWB-M clock signal
	24	GAIN FIX M	O	0/3.3 V DC	APCPWB-M control signal
	25	DATA_1N_M(LVDS)	O	0/3.3 V DC (pulse)	Video data signal M (N)
	26	DATA_1P_M(LVDS)	O	0/3.3 V DC (pulse)	Video data signal M (P)
	27	SGND	-	-	Ground
	28	DATA_2N_M(LVDS)	O	0/3.3 V DC (pulse)	Video data signal M (N)
	29	DATA_2P_M(LVDS)	O	0/3.3 V DC (pulse)	Video data signal M (P)
	30	SGND	-	-	Ground
YC9	1	24V	O	24 V DC	24 V DC power to PM-C
Connected to polygon motor C	2	PGND	-	-	Ground
	3	P_REM C	O	0/24 V DC	PM-C: On/Off
	4	P_LOCK C	I	0/3.3 V DC	PM-C lock signal
	5	P_CLK C	O	0/3.3 V DC (pulse)	PM-C clock signal
YC10	1	SGND	-	-	Ground
Connected to APC PWB C	2	BD C	I	0/3.3 V DC (pulse)	Horizontal synchronization signal C
	3	LSU_TH C	I	Analog	LSU thermistor C detection signal
	4	-	-	-	Not used
	5	-	-	-	Not used
	6	+5V	O	5 V DC	5 V DC power to APCPWB-C
	7	+5V	O	5 V DC	5 V DC power to APCPWB-C
	8	+5V	O	5 V DC	5 V DC power to APCPWB-C
	9	LDD_CS C	O	0/3.3 V DC	APCPWB-C control signal
	10	SDI C	I	0/3.3 V DC (pulse)	Serial communication data signal
	11	SDO C	O	0/3.3 V DC (pulse)	Serial communication data signal
	12	CLK C	O	0/3.3 V DC (pulse)	APCPWB-C clock signal
	13	EEPROM CS 0 C	I/O	0/3.3 V DC (pulse)	APCPWB-C EEPROM data signal
	14	MSET_N	O	0/3.3 V DC	APCPWB-C control signal
	15	CUALM C	I	0/3.3 V DC	APCPWB-C alarm signal

Connector	Pin	Signal	I/O	Voltage	Description
YC10	16	-	-	-	-
Connected to APC PWB C	17	INT_ST C	O	0/3.3 V DC	APCPWB-C control signal
	18	PALA_SIG P0 C	O	0/3.3 V DC	APCPWB-C control signal
	19	PALA_SIG P1 C	O	0/3.3 V DC	APCPWB-C control signal
	20	PALA_SIG P2 C	O	0/3.3 V DC	APCPWB-C control signal
	21	PALA_SIG P3 C	O	0/3.3 V DC	APCPWB-C control signal
	22	PALA_SIG P4 C	O	0/3.3 V DC	APCPWB-C control signal
	23	SDCLK C	O	0/3.3 V DC (pulse)	APCPWB-C clock signal
	24	GAIN FIX C	O	0/3.3 V DC	APCPWB-C control signal
	25	DATA_1N_C(LVDS)	O	0/3.3 V DC (pulse)	Video data signal C (N)
	26	DATA_1P_C(LVDS)	O	0/3.3 V DC (pulse)	Video data signal C (P)
	27	SGND	-	-	Ground
	28	DATA_2N_C(LVDS)	O	0/3.3 V DC (pulse)	Video data signal C (N)
	29	DATA_2P_C(LVDS)	O	0/3.3 V DC (pulse)	Video data signal C (P)
	30	SGND	-	-	Ground
YC11	1	24V	O	24 V DC	24 V DC power to PM-Y
Connected to polygon motor Y	2	PGND	-	-	Ground
	3	P_REM Y	O	0/24 V DC	PM-Y: On/Off
	4	P_LOCK Y	I	0/3.3 V DC	PM-Y lock signal
	5	P_CLK Y	O	0/3.3 V DC (pulse)	PM-Y clock signal
YC12	1	SGND	-	-	Ground
Connected to APC PWB Y	2	BD Y	I	0/3.3 V DC (pulse)	Horizontal synchronization signal Y
	3	LSU_TH Y	I	Analog	LSU thermistor Y detection signal
	4	-	-	-	Not used
	5	-	-	-	Not used
	6	+5V	O	5 V DC	5 V DC power to APCPWB-Y
	7	+5V	O	5 V DC	5 V DC power to APCPWB-Y
	8	+5V	O	5 V DC	5 V DC power to APCPWB-Y
	9	LDD_CS Y	O	0/3.3 V DC	APCPWB-Y control signal
	10	SDI Y	I	0/3.3 V DC (pulse)	Serial communication data signal

Connector	Pin	Signal	I/O	Voltage	Description
YC12	11	SDO Y	O	0/3.3 V DC (pulse)	Serial communication data signal
Connected to APC PWB Y	12	CLK Y	O	0/3.3 V DC (pulse)	APCPWB-Y clock signal
	13	EEPROM CS Y	I/O	0/3.3 V DC (pulse)	APCPWB-Y EEPROM data signal
	14	MSET_N	O	0/3.3 V DC	APCPWB-Y control signal
	15	CUALM Y	I	0/3.3 V DC	APCPWB-Y alarm signal
	16	-	-	-	-
	17	INT_ST Y	O	0/3.3 V DC	APCPWB-Y control signal
	18	PALA_SIG P0 Y	O	0/3.3 V DC	APCPWB-Y control signal
	19	PALA_SIG P1 Y	O	0/3.3 V DC	APCPWB-Y control signal
	20	PALA_SIG P2 Y	O	0/3.3 V DC	APCPWB-Y control signal
	21	PALA_SIG P3 Y	O	0/3.3 V DC	APCPWB-Y control signal
	22	PALA_SIG P4 Y	O	0/3.3 V DC	APCPWB-Y control signal
	23	SDCLK Y	O	0/3.3 V DC (pulse)	APCPWB-Y clock signal
	24	GAIN FIX Y	O	0/3.3 V DC	APCPWB-Y control signal
	25	DATA_1N_Y(LVDS)	O	0/3.3 V DC (pulse)	Video data signal Y (N)
	26	DATA_1P_Y(LVDS)	O	0/3.3 V DC (pulse)	Video data signal Y (P)
	27	SGND	-	-	Ground
	28	DATA_2N_Y(LVDS)	O	0/3.3 V DC (pulse)	Video data signal Y (N)
	29	DATA_2P_Y(LVDS)	O	0/3.3 V DC (pulse)	Video data signal Y (P)
	30	SGND	-	-	Ground

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2-4-1 Appendixes

(1) List of maintenance parts

Maintenance part name		Part No.	Alternative part No.
Name used in service manual	**Name used in parts list**		
Paper feed pulley	PULLEY FEED	302K906350	2K906350
Separation pulley	PULLEY RETARD	302K906360	2K906360
Forwarding pulley	PULLEY PICKUP	302K906370	2K906370
Lower duplex roller	PARTS ROLLER DU LOW SP	302K994470	2K994470
Middle duplex roller	PARTS ROLLER DU MID SP	302K994480	2K994480
Upper duplex roller	PARTS ROLLER DU UP SP	302K994490	2K994490
Eject roller	PARTS ROLLER EXIT SP	302LC94350	2LC94350
Fan filter	PARTS FILTER FAN ASSY(V) SP	302LC94170	2LC94170
Developer filter	FILTER DLP COOLING	302LC33500	2LC33500
Transfer belt filter	PARTS FILTER BELT UNIT(V) SP	302LC94130	2LC94130
Toner filter	FILTER LEFT SIDE	302LC33370	2LC33370
Left filter	FILTER LEFT SIDE	302LC33370	2LC33370
Eject filter	PARTS FILTER EXIT UNIT SP	302K994100	2K994100

(2) Maintenance kits

Maintenance part name		Parts No.	Alternative part No.
Name used in service	**Name used in parts list**		
MK-8505A/Maintenance kit (600,000 pages)	MK-8505A/MAINTENANCE KIT	1702LC0UN0	072LC0UN
Drum unit K	DK-8505 (K)	-	-
Developer unit K	DV-8505K	-	-
Transfer belt unit	TR-8505	-	-
Transfer roller	PARTS ROLLER SECONDLY TRANSFER SP	-	-
MK-8505B/Maintenance kit (600,000 pages)	MK-8505B/MAINTENANCE KIT	1702LC0UN1	072LC0U1
Drum unit C	DK-8505 (C)	-	-
Drum unit M	DK-8505 (M)	-	-
Drum unit Y	DK-8505 (Y)	-	-
Developer unit C	DV-8505C	-	-
Developer unit M	DV-8505M	-	-
Developer unit Y	DV-8505Y	-	-
MK-8505C/Maintenance kit (300,000 pages)	MK-8505C/MAINTENANCE KIT	1702LC0UN2	072LC0U2
Fuser unit	FK-UNIT	-	-
Eject filter	FILTER TOP		
Toner filter / Left filter	FILTER LEFT SIDE		

(3) Periodic maintenance procedures

Section	Maintenance part/location	User call	300K/600K/ 900K/1200K	Points and cautions	Page
Test print	Perform at the maximum print size	Test print	Test print		

Section	Maintenance part/location	User call	300K/600K/ 900K/1200K	Points and cautions	Page
Paper feed ,conveying-section	Paper feed pulley	Check Clean	Check Replace	Clean with alcohol or a dry cloth. CH:performing U901 and check feeding count: Target to replace at 150K.	P.1-5-7
	Separation pulley	Check Clean	Check Replace	Clean with alcohol or a dry cloth. CH:performing U901 and check feeding count: Target to replace at 150K.	P.1-5-7
	Forwarding pulley	Check Clean	Check Replace	Clean with alcohol or a dry cloth. CH:performing U901 and check feeding count: Target to replace at 150K.	P.1-5-7
	Guides	Clean	Clean	Clean with alcohol or a dry cloth.	

Section	Maintenance part/location	User call	300K/600K/ 900K/1200K	Points and cautions	Page
Transfer section	Transfer belt unit	-	Replace	Every 600k Replace.	P.1-5-34
	Transfer roller	-	Replace	Every 600k Replace.	P.1-5-38

Section	Maintenance part/location	User call	300K/600K/ 900K/1200K	Points and cautions	Page
Developer section	Developer unit K	Clean	Replace	Vacuum. Every 600k Replace.	P.1-5-29
	Developer unit C	Clean	Replace	Vacuum. Every 600k Replace.	P.1-5-29
	Developer unit M	Clean	Replace	Vacuum. Every 600k Replace.	P.1-5-29
	Developer unit Y	Clean	Replace	Vacuum. Every 600k Replace.	P.1-5-29

Section	Maintenance part/location	User call	300K/600K/ 900K/1200K	Points and cautions	Page
Drum section	Drum unit K	Clean	Replace	Vacuum. Every 600k Replace.	P.1-5-29
	Drum unit C	Clean	Replace	Vacuum. Every 600k Replace.	P.1-5-29
	Drum unit M	Clean	Replace	Vacuum. Every 600k Replace.	P.1-5-29
	Drum unit Y	Clean	Replace	Vacuum. Every 600k Replace.	P.1-5-29

Section	Maintenance part/location	User call	300K/600K/ 900K/1200K	Points and cautions	Page
Fuser section	Fuser unit	-	Replace	Every 300k Replace.	P.1-5-40

Section	Maintenance part/location	User call	300K/600K/ 900K/1200K	Points and cautions	Page
Eject,Duplex section	Lower duplex roller	-	Clean	Clean with alcohol or a dry cloth.	
	Middle duplex roller	-	Clean	Clean with alcohol or a dry cloth.	
	Upper duplex roller	-	Clean	Clean with alcohol or a dry cloth.	
	Eject roller	-	Clean	Clean with alcohol or a dry cloth.	

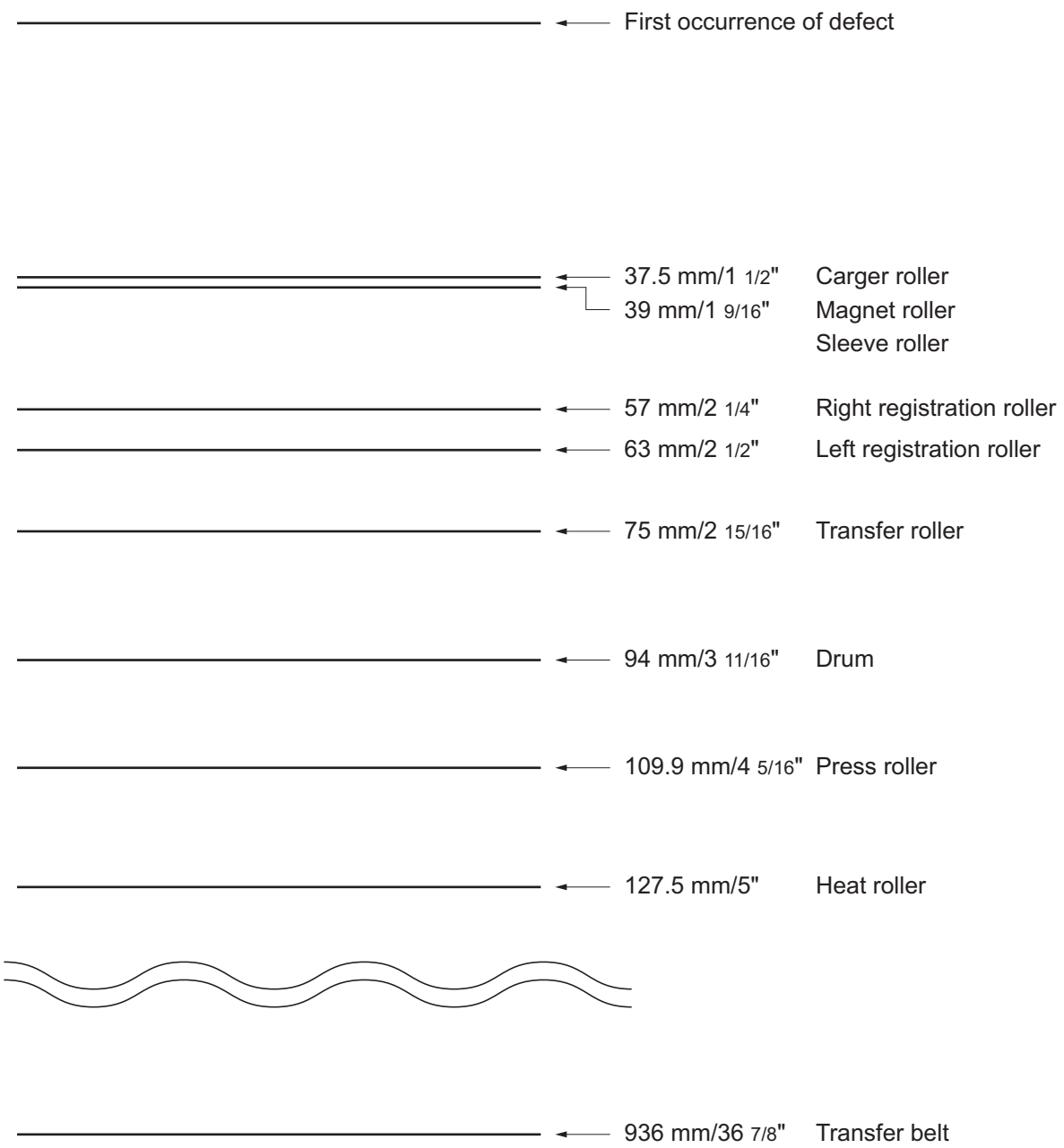
Section	Maintenance part/location	User call	300K/600K/ 900K/1200K	Points and cautions	Page
Outer, Cover	Outer Covers, Tray	-	Clean	Clean with alcohol or a dry cloth.	

Section	Maintenance part/location	User call	300K/600K/ 900K/1200K	Points and cautions	Page
Driving, Other	Fan filter	Clean	Clean	Vacuum. 1pcs	P.1-5-74
	Developer filter	Clean	Clean	Vacuum. 1pcs	P.1-5-77
	Transfer belt filter	Clean	Clean	Vacuum. 2pcs	P.1-5-75
	Toner filter Left filter	Replace	Replace	Every 300k Replace. (MK KIT) 2pcs	P.1-5-73 P.1-5-76
	Eject filter	Replace	Replace	Every 300k Replace. (MK KIT) 2pcs	P.1-5-72
	Each Clutches	Check Replace	Check	Check the image registration and paper feed conveying condition on paper feed conveying (registration) part.	
	Sensors	Check	Check	Clean with alcohol or a dry cloth. (lighting part and light reception part.)	
	Image quality	Check Adjust	Check Adjust		

Section	Maintenance part/location	User call	300K/600K/ 900K/1200K	Points and cautions	Page
Option	Duct unit	Clean	Clean	Vacuum.	

* : Please do not use spray containing flamable gas for air-blow or air-brush purposes.

(4) Repetitive defects gauge



(5) Firmware environment commands

The printer maintains a number of printing parameters in its memory. There parameters may be changed permanently with the FRPO (Firmware RePrOgram) commands.
This section provides information on how to use the FRPO command and its parameters using examples.

Using FRPO commands for reprogramming firmware

The current settings of the FRPO parameters are listed as optional values on the service status page.

Note: Before changing any FRPO parameter, print out a service status page, so you will know the parameter values before the changes are made. To return FRPO parameters to their factory default values, send the FRPO INIT (FRPO-INITialize) command.(!R! FRPO INIT; EXIT;)

The FRPO command is sent to the printer in the following sequence:
!R! FRPO parameter, value; EXIT;
Example: Changing emulation mode to PCL6
!R! FRPO P1, 6; EXIT;

FRPO parameters

Item	FRPO	Setting values	Factory setting
Top margin	A1	Integer value in inches	0
	A2	Fraction value in 1/100 inches	0
Left margin	A3	Integer value in inches	0
	A4	Fraction value in 1/100 inches	0
Page length	A5	Integer value in inches	17
	A6	Fraction value in 1/100 inches	30
Page width	A7	Integer value in inches	17
	A8	Fraction value in 1/100 inches	30
Default pattern resolution	B8	0: 300 dpi 1: 600 dpi	0
Page orientation	C1	0: Portrait 1: Landscape	0
Default font No. *	C2	Middle two digits of power-up font	0
	C3	Last two digits of power-up font	0
	C5	First two digits of power-up font	0
PCL font switch	C8	0: HP compatibility mode 32: Conventional compatibility mode	0
Total host buffer size	H8	0 to 99 in units of the size defined by FRPO S5	5
Form feed time-out value	H9	Value in units of 5 seconds (1 to 99)	6(30s)
Duplex mode	N4	0: Off 1: Long edge binding 2: Short edge binding	0
Sleep timer time-out time	N5	Value in units of 1 minute (1 to 240)	60

Item	FRPO	Setting values	Factory setting
Ecoprint level	N6	0: Off 2: On	0
Default emulation mode	P1	6: PCL 6 9: KPDL	120V: 9 220-240V: 6
Carriage-return action	P2	0: Ignores 1: Carriage-return 2: Carriage-return + linefeed	1
Linefeed action	P3	0: Ignores 1: Linefeed 2: Linefeed + carriage-return	1
Automatic emulation switching	P4	0: AES disabled 1: AES enabled	120V: 1 220-240V: 0
Alternative emulation (For KPDL3)	P5	Same as the P1 values except that 9 is ignored.	6
Automatic emulation switching trigger	P7	0: Page eject commands 1: None 2: Page eject and prescribe EXIT commands 3: Prescribe EXIT commands 4: Formfeed (^L) commands 6: Prescribe EXIT and formfeed commands 10: Page eject commands; if AES fails, resolves to KPDL	120V: 11 220-240V: 10
Command recognition character	P9	ASCII code of 33 to 126	82 (R)
Default stacker	R0	1 (inner tray)	1

Item	FRPO	Setting values	Factory setting
Default paper size	R2	0: Size of the default paper cassette (See R4.) 1: Monarch (3-7/8 × 7-1/2 inches) 2: Business (4-1/8 × 9-1/2 inches) 3: International DL (11 × 22 cm) 4: International C5 (16.2 × 22.9 cm) 5: Executive (7-1/4 × 10-1/2 inches) 6: US Letter (8-1/2 × 11 inches) 7: US Legal (8-1/2 × 14 inches) 8: A4 (21.0 × 29.7 cm) 9: JIS B5 (18.2 × 25.7 cm) 10: A3 (29.7 ´ 42 cm) 11: B4 (25.7 ´ 36.4 cm) 12: US Ledger (11 ´ 17 inches) 13: ISO A5 14: A6 (10.5 × 14.8 cm) 15: JIS B6 (12.8 × 18.2 cm) 16: Commercial #9 (3-7/8 × 8-7/8 inches) 17: Commercial #6 (3-5/8 × 6-1/2 inches) 18: ISO B5 (17.6 × 25 cm) 19: Custom (11.7 × 17.7 inches) 20: 21: 22: 23: 24: 30: C4 (22.9 ´ 32.4 cm) 31: Hagaki (10 × 14.8 cm) 32: Ofuku-hagaki (14.8 × 20 cm) 33: Officio II 38: 39: 8K 40: 16K 42: 8.5 × 13.5 inches 50: Statement 51: Folio 52: Youkei 2 53: Youkei 4	0
Default cassette	R4	0: MP tray 1: Cassette 1 2: Cassette 2 3: Cassette 3 4: Cassette 4 5: Cassette 5 6: Cassette 6 7: Cassette 7	1
MP tray paper size	R7	Same as the R2 values except: 0	8 (A4)
A4/letter equation	S4	0: Off 1: On	1

Item	FRPO	Setting values	Factory setting
Host buffer size	S5	0: 10 KB 1: 100 KB 2: 1024 KB	1
Wide A4	T6	0: Off 1: On	0
Line spacing *	U0	Lines per inch (integer value)	6
	U1	Lines per inch (decimal value)	0
Character spacing *	U2	Characters per inch (integer value)	10
	U3	Characters per inch (decimal value)	0
Country code	U6	0: US-ASCII 1: France 2: Germany 3: UK 4: Denmark 5: Sweden 6: Italy 7: Spain 8: Japan 9: US Legal 10: IBM PC-850 (Multilingual) 11: IBM PC-860 (Portuguese) 12: IBM PC-863 (Canadian French) 13: IBM PC-865 (Norwegian) 14: Norway 15: Denmark 2 16: Spain 2 17: Latin America 50 - 99: HP PCL symbol set coding	41
Code set at power up in daisywheel emulation	U7	0: Same as the default emulation mode (P1) 1: IBM 6: PCL 7 - 99: HP PCL symbol set coding	53
Font pitch for fixedpitch scalable font *	U8	Default font pitch (integer value)	10
	U9	Default font pitch (decimal value)	0
Font height for the default scalable font *	V0	Integer value in 100 points: 0 to 9	0
	V1	Integer value in points: 0 to 99	12
	V2	decimal value in 1/100 points: 0, 25, 50, 75	0
Default scalable font *	V3	Name of typeface of up to 32 characters, enclosed with single or double quotation marks	Courier

Item	FRPO	Setting values	Factory setting
Default weight (courier and letter Gothic)	V9	0: Courier = darkness Letter Gothic = darkness 1: Courier = regular Letter Gothic = darkness 4: Courier = darkness Letter Gothic = regular 5: Courier = regular Letter Gothic = regular	5
Color mode	W1	0: Black & white 1: Color	1
Gloss mode	W6	0: Low (normal) 1: High	0
Paper type for the MP tray	X0	1: Plain 2: Transparency 3: Preprinted 4: Label 5: Bond 6: Recycle 7: Vellum 9: Letterhead 10: Color 11: Prepunched 12: Envelope 13: Cardstock 14: Coated 16: Thick 17: High quality 21 to 28: Custom1 to 8	1
Paper type for cassettes 1 and 2	X1 X2	1: Plain 3: Preprinted 5: Bond 6: Recycled 7: Vellum 9: Letterhead 10: Color 11: Prepunched 16: Thick 17: High quality 21 to 28: Custom1 to 8	1

Item	FRPO	Setting values	Factory setting
Paper type for optional cassettes 3 to 7	X3 X4 X5 X6 X10	1: Plain 3: Preprinted 5: Bond 6: Recycled 9: Letterhead 10: Color 11: Prepunched 17: High quality 21 to 28: Custom1 to 8	1
PCL paper source	X9	0: Performs paper selection depending on media type. 2: Performs paper selection depending on paper sources.	0
Automatic continue for 'Press GO'	Y0	0: Off 1: On	0
Automatic continue timer	Y1	Value in units of 5 seconds (1 to 99)	6 (30 s)
Error message for device error	Y3	0: Not detect 64: Detect	64
Duplex operation for specified paper type (Prepunched, Preprintedand Letterhead)	Y4	0: Off 1: On	0
Default operation for PDF direct printing	Y5	0: Enlarges or reduces the image to fit in the current paper size. Loads paper from the current paper cassette. 1: Through the image. Loads paper which is the same size as the image. 2: Enlarges or reduces the image to fit in the current paper size. Loads Letter, A4 size paper depending on the image size. 3: Through the image. Loads Letter, A4 size paper depending on the image size. 8: Through the image. Loads paper from the current paper cassette. 9: Through the image. Loads Letter, A4 size paper depending on the image size. 10: Enlarges or reduces the image to fit in the current paper size. Loads Letter, A4 size paper depending on the image size.	0
e-MPS error	Y6	0: Does not print the error report and display the error message. 1: Prints the error report. 2: Displays the error message. 3: Prints the error report and displays the error message.	3

*: Ignored in some emulation modes.

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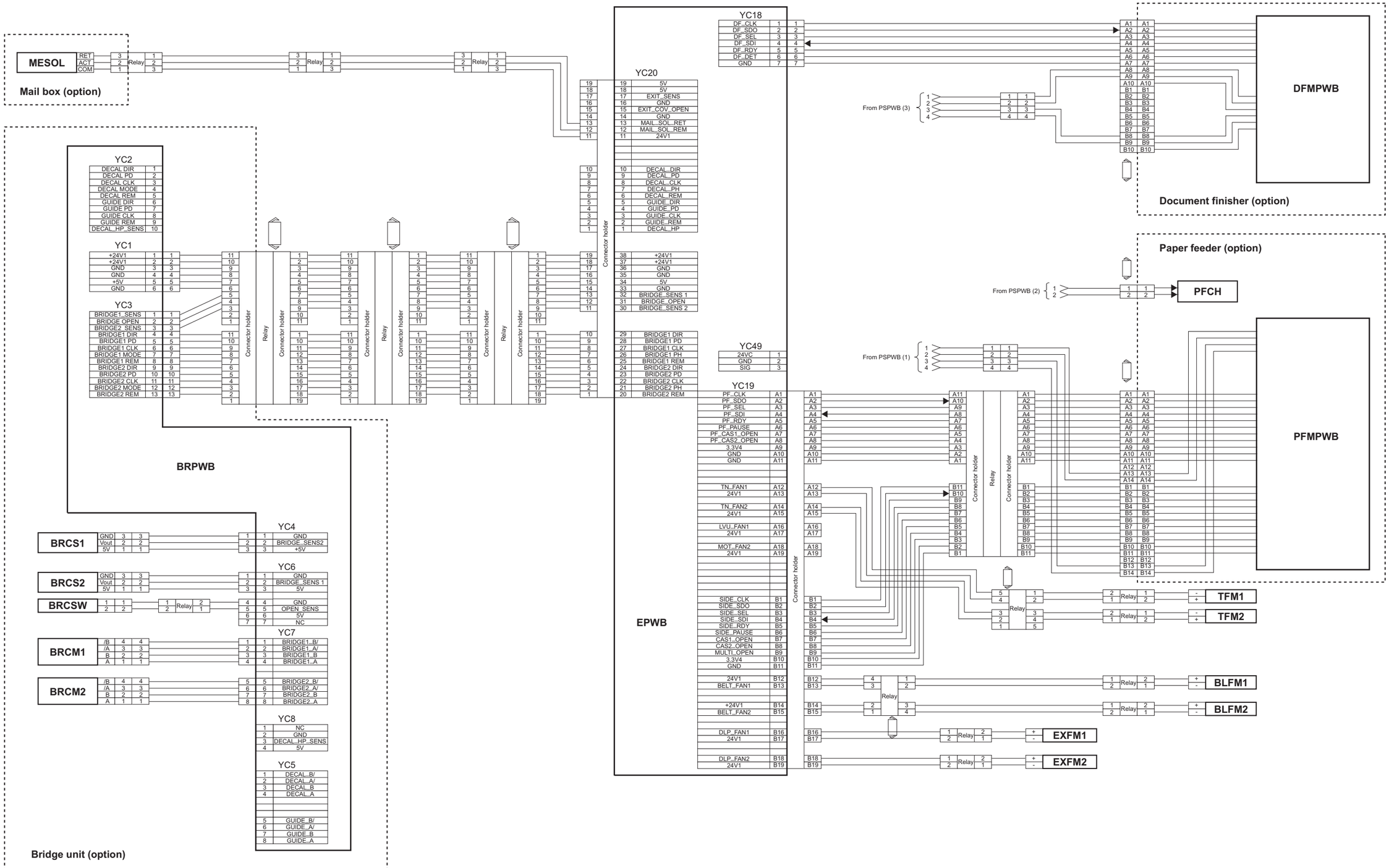
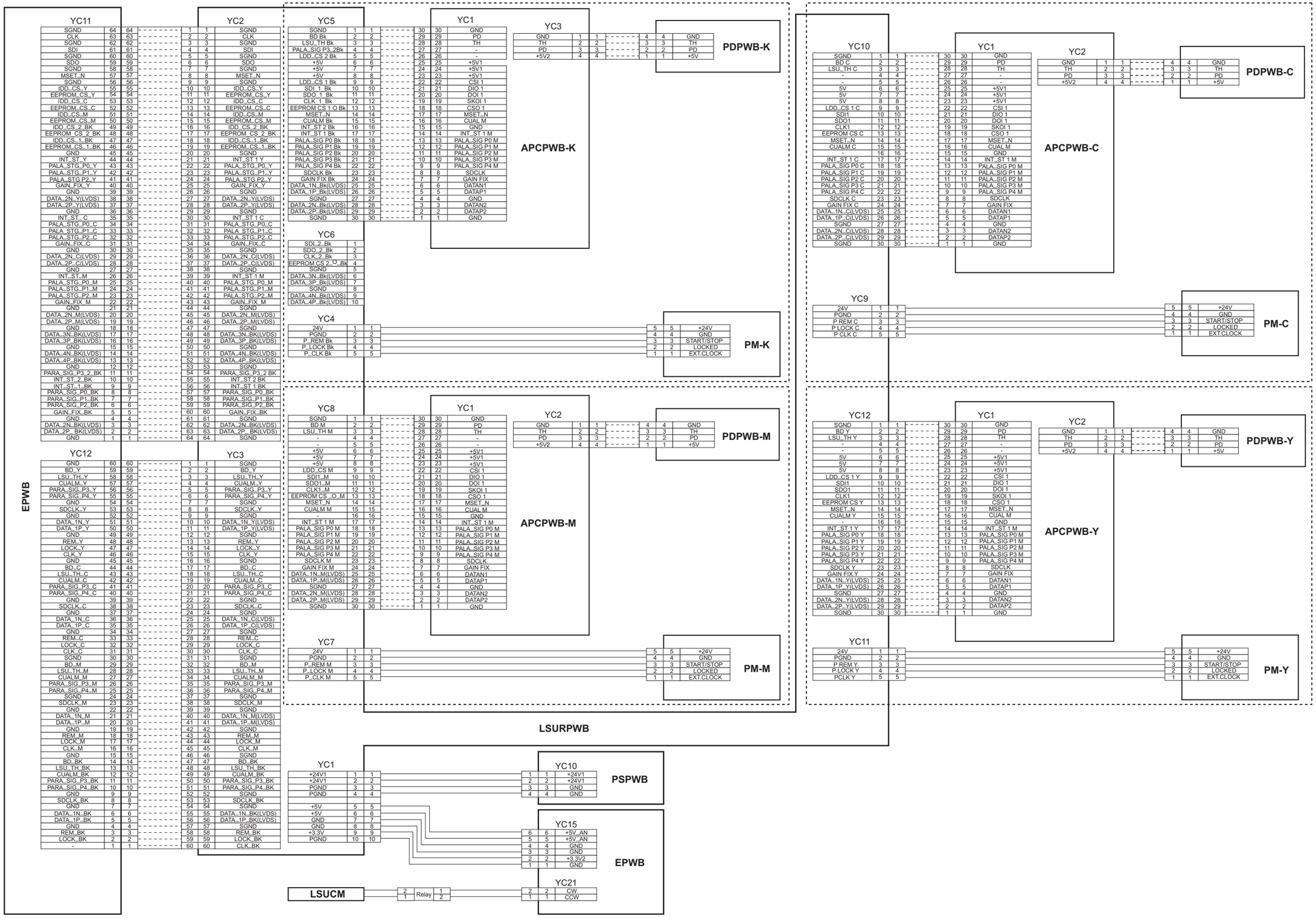
(6) Wiring diagram

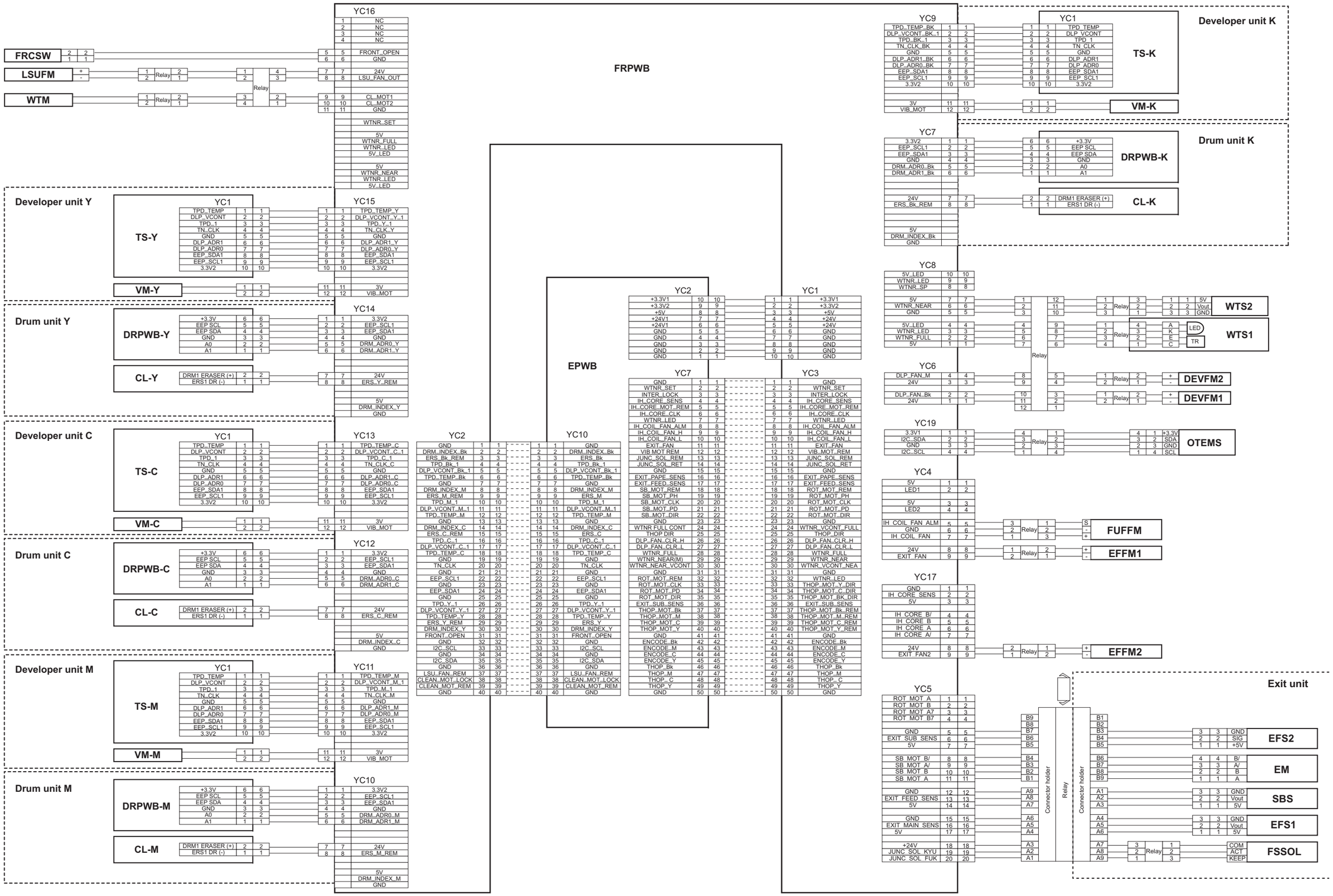
No.1)



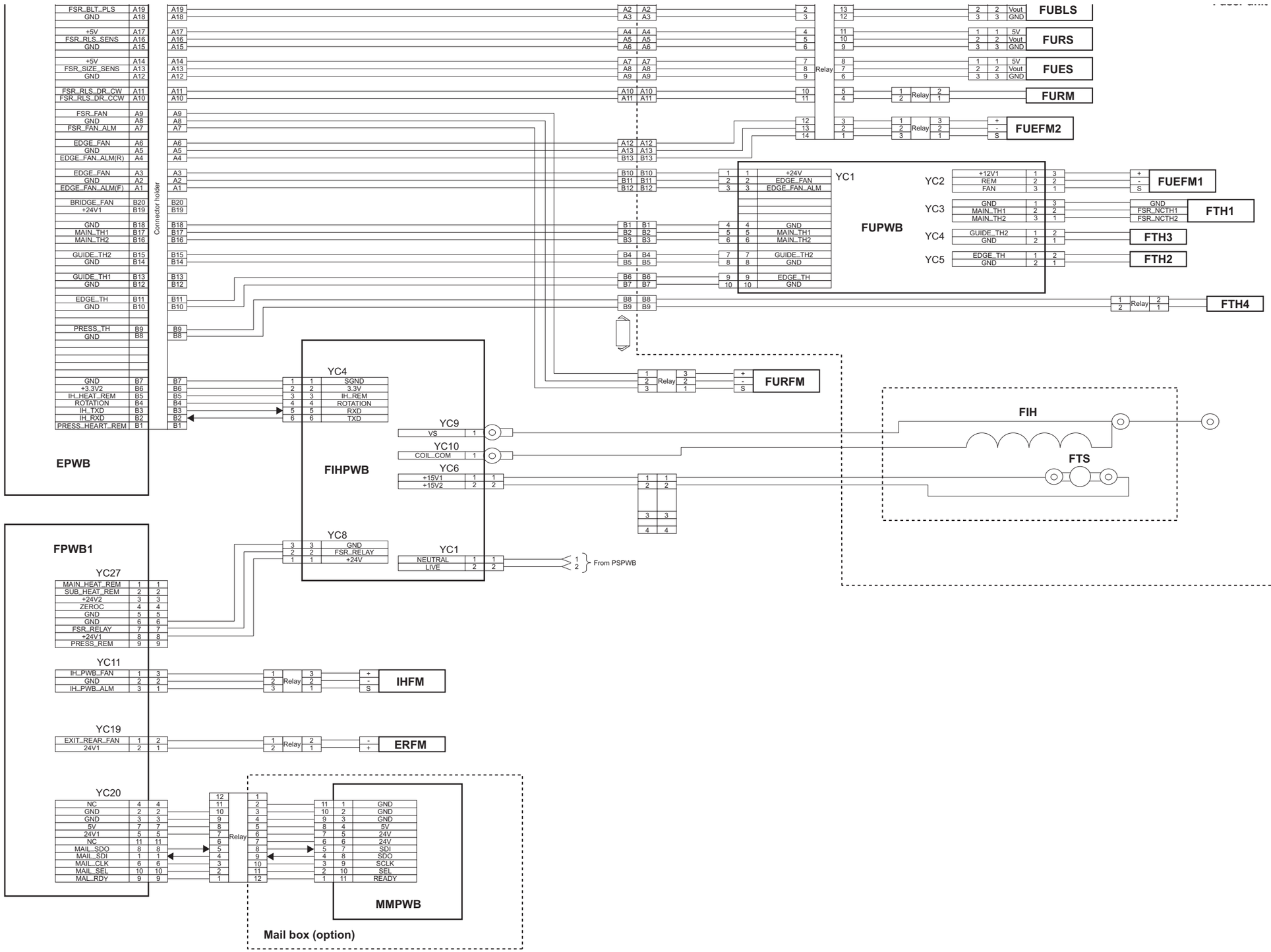
No.2


EPWB
YC11
SGND 64 64 1 1 SGND
CLK 63 63 2 2 CLK
SGND 62 62 3 3 SGND
SDI 61 61 4 4 SDI
SGND 60 60 5 5 SGND
SDO 59 59 6 6 SDO
SGND 58 58 7 7 SGND
MSET_N 57 57 8 8 MSET_N
SGND 56 56 9 9 SGND
IDD_CS_Y 55 55 10 10 IDD_CS_Y
EEPROM_CS_Y 54 54 11 11 EEPROM_CS_Y
IDD_CS_C 53 53 12 12 IDD_CS_C
EEPROM_CS_C 52 52 13 13 EEPROM_CS_C
IDD_CS_M 51 51 14 14 IDD_CS_M
EEPROM_CS_M 50 50 15 15 EEPROM_CS_M
IDD_CS_2_BK 49 49 16 16 IDD_CS_2_BK
EEPROM_CS_2_BK 48 48 17 17 EEPROM_CS_2_BK
IDD_CS_1_BK 47 47 18 18 IDD_CS_1_BK
EEPROM_CS_1_BK 46 46 19 19 EEPROM_CS_1_BK
GND 45 45 20 20 SGND
INT_ST_Y 44 44 21 21 INT_ST 1 Y
PALA_STG_P0_Y 43 43 22 22 PALA_STG_P0_Y
PALA_STG_P1_Y 42 42 23 23 PALA_STG_P1_Y
PALA_STG P2_Y 41 41 24 24 PALA_STG P2_Y
GAIN_FIX_Y 40 40 25 25 GAIN_FIX_Y
GND 39 39 26 26 SGND
DATA_2N_Y(LVDS) 38 38 27 27 DATA_2N_Y(LVDS)
DATA_2P_Y(LVDS) 37 37 28 28 DATA_2P_Y(LVDS)
GND 36 36 29 29 SGND
INT_ST_C 35 35 30 30 INT_ST 1 C
PALA_STG_P0_C 34 34 31 31 PALA_STG_P0_C
PALA_STG_P1_C 33 33 32 32 PALA_STG_P1_C
PALA_STG_P2_C 32 32 33 33 PALA_STG_P2_C
GAIN_FIX_C 31 31 34 34 GAIN_FIX_C
GND 30 30 35 35 SGND
DATA_2N_C(LVDS) 29 29 36 36 DATA_2N_C(LVDS)
DATA_2P_C(LVDS) 28 28 37 37 DATA_2P_C(LVDS)
GND 27 27 38 38 SGND
INT_ST_M 26 26 39 39 INT_ST 1 M
PALA_STG_P0_M 25 25 40 40 PALA_STG_P0_M
PALA_STG_P1_M 24 24 41 41 PALA_STG_P1_M
PALA_STG_P2_M 23 23 42 42 PALA_STG_P2_M
GAIN_FIX_M 22 22 43 43 GAIN_FIX_M
GND 21 21 44 44 SGND
DATA_2N_M(LVDS) 20 20 45 45 DATA_2N_M(LVDS)
DATA_2P_M(LVDS) 19 19 46 46 DATA_2P_M(LVDS)
GND 18 18 47 47 SGND
DATA_3N_BK(LVDS) 17 17 48 48 DATA_3N_BK(LVDS)
DATA_3P_BK(LVDS) 16 16 49 49 DATA_3P_BK(LVDS)
GND 15 15 50 50 SGND
DATA_4N_BK(LVDS) 14 14 51 51 DATA_4N_BK(LVDS)
DATA_4P_BK(LVDS) 13 13 52 52 DATA_4P_BK(LVDS)
GND 12 12 53 53 SGND
PARA_SIG_P3_2_BK 11 11 54 54 PARA_SIG_P3_2 BK
INT_ST_2_BK 10 10 55 55 INT_ST 2 BK
INT_ST_1_BK 9 9 56 56 INT_ST 1 BK
PARA_SIG_P0_BK 8 8 57 57 PARA_SIG_P0_BK
PARA_SIG_P1_BK 7 7 58 58 PARA_SIG_P1_BK
PARA_SIG_P2_BK 6 6 59 59 PARA_SIG_P2_BK
GAIN_FIX_BK 5 5 60 60 GAIN_FIX_BK
GND 4 4 61 61 SGND
DATA_2N_BK(LVDS) 3 3 62 62 DATA_2N_BK(LVDS)
DATA_2P_ BK(LVDS) 2 2 63 63 DATA_2P_ BK(LVDS)
GND 1 1 64 64 SGND
YC2
YC12
GND 60 60 1 1 SGND
BD_Y 59 59 2 2 BD_Y
LSU_TH_Y 58 58 3 3 LSU_TH_Y
CUALM_Y 57 57 4 4 CUALM_Y
PARA_SIG_P3_Y 56 56 5 5 PARA_SIG_P3_Y
PARA_SIG_P4_Y 55 55 6 6 PARA_SIG_P4_Y
GND 54 54 7 7 SGND
SDCLK_Y 53 53 8 8 SDCLK_Y
GND 52 52 9 9 SGND
DATA_1N_Y 51 51 10 10 DATA_1N_Y(LVDS)
DATA_1P_Y 50 50 11 11 DATA_1P_Y(LVDS)
GND 49 49 12 12 SGND
REM_Y 48 48 13 13 REM_Y
LOCK_Y 47 47 14 14 LOCK_Y
CLK_Y 46 46 15 15 CLK_Y
GND 45 45 16 16 SGND
BD_C 44 44 17 17 BD_C
LSU_TH_C 43 43 18 18 LSU_TH_C
CUALM_C 42 42 19 19 CUALM_C
PARA_SIG_P3_C 41 41 20 20 PARA_SIG_P3_C
PARA_SIG_P4_C 40 40 21 21 PARA_SIG_P4_C
GND 39 39 22 22 SGND
SDCLK_C 38 38 23 23 SDCLK_C
GND 37 37 24 24 SGND
DATA_1N_C 36 36 25 25 DATA_1N_C(LVDS)
DATA_1P_C 35 35 26 26 DATA_1P_C(LVDS)
GND 34 34 27 27 SGND
REM_C 33 33 28 28 REM_C
LOCK_C 32 32 29 29 LOCK_C
CLK_C 31 31 30 30 CLK_C
SGND 30 30 31 31 SGND
BD_M 29 29 32 32 BD_M
LSU_TH_M 28 28 33 33 LSU_TH_M
CUALM_M 27 27 34 34 CUALM_M
PARA_SIG_P3_M 26 26 35 35 PARA_SIG_P3_M
PARA_SIG_P4_M 25 25 36 36 PARA_SIG_P4_M
SGND 24 24 37 37 SGND
SDCLK_M 23 23 38 38 SDCLK_M
GND 22 22 39 39 SGND
DATA_1N_M 21 21 40 40 DATA_1N_M(LVDS)
DATA_1P_M 20 20 41 41 DATA_1P_M(LVDS)
GND 19 19 42 42 SGND
REM_M 18 18 43 43 REM_M
LOCK_M 17 17 44 44 LOCK_M
CLK_M 16 16 45 45 CLK_M
GND 15 15 46 46 SGND
BD_BK 14 14 47 47 BD_BK
LSU_TH_BK 13 13 48 48 LSU_TH_BK
CUALM_BK 12 12 49 49 CUALM_BK
PARA_SIG_P3_BK 11 11 50 50 PARA_SIG_P3_BK
PARA_SIG_P4_BK 10 10 51 51 PARA_SIG_P4_BK
GND 9 9 52 52 SGND
SDCLK_BK 8 8 53 53 SDCLK_BK
GND 7 7 54 54 SGND
DATA_1N_BK 6 6 55 55 DATA_1N_BK(LVDS)
DATA_1P_BK 5 5 56 56 DATA_1P_BK(LVDS)
GND 4 4 57 57 SGND
REM_BK 3 3 58 58 REM_BK
LOCK_BK 2 2 59 59 LOCK_BK
- 1 1 60 60 CLK_BK
YC3
YC5
SGND 1 1 30 30 GND
BD Bk 2 2 29 29 PD
LSU_TH Bk 3 3 28 28 TH
PALA_SIG P3_2Bk 4 4 27 27 -
LDD_CS 2 Bk 5 5 26 26 -
+5V 6 6 25 25 +5V1
+5V 7 7 24 24 +5V1
+5V 8 8 23 23 +5V1
LDD_CS 1 Bk 9 9 22 22 CSI 1
SDI 1 Bk 10 10 21 21 DIO 1
SDO_1 Bk 11 11 20 20 DOI 1
CLK_1 Bk 12 12 19 19 SKOI 1
EEPROM CS 1 O Bk 13 13 18 18 CSO 1
MSET_N 14 14 17 17 MSET_N
CUALM Bk 15 15 16 16 CUAL M
INT_ST 2 Bk 16 16 15 15 GND
INT_ST 1 Bk 17 17 14 14 INT_ST 1 M
PALA_SIG P0 Bk 18 18 13 13 PALA_SIG P0 M
PALA_SIG P1 Bk 19 19 12 12 PALA_SIG P1 M
PALA_SIG P2 Bk 20 20 11 11 PALA_SIG P2 M
PALA_SIG P3 Bk 21 21 10 10 PALA_SIG P3 M
PALA_SIG P4 Bk 22 22 9 9 PALA_SIG P4 M
SDCLK Bk 23 23 8 8 SDCLK
GAIN FIX Bk 24 24 7 7 GAIN FIX
DATA_1N_Bk(LVDS) 25 25 6 6 DATAN1
DATA_1P_Bk(LVDS) 26 26 5 5 DATAP1
SGND 27 27 4 4 GND
DATA_2N_Bk(LVDS) 28 28 3 3 DATAN2
DATA_2P_Bk(LVDS) 29 29 2 2 DATAP2
SGND 30 30 1 1 GND
YC1
YC6
SDI_2_Bk 1
SDO_2_Bk 2
CLK_2_Bk 3
EEPROM CS 2_ O_Bk 4
SGND 5
DATA_3N_Bk(LVDS) 6
DATA_3P_Bk(LVDS) 7
SGND 8
DATA_4N_Bk(LVDS) 9
DATA_4P_Bk(LVDS) 10
YC4
24V 1 1 5 5 +24V
PGND 2 2 4 4 GND
P_REM Bk 3 3 3 3 START/STOP
P_LOCK Bk 4 4 2 2 LOCKED
P_CLK Bk 5 5 1 1 EXT.CLOCK
PDPWB-K
APCPWB-K
PM-K
YC1
YC3
GND 1 1 4 4 GND
TH 2 2 3 3 TH
PD 3 3 2 2 PD
+5V2 4 4 1 1 +5V
PDPWB-C
YC10
SGND 1 1 30 30 GND
BD C 2 2 29 29 PD
LSU_TH C 3 3 28 28 TH
- 4 4 27 27 -
- 5 5 26 26 -
5V 6 6 25 25 +5V1
5V 7 7 24 24 +5V1
5V 8 8 23 23 +5V1
LDD_CS 1 C 9 9 22 22 CSI 1
SDI1 10 10 21 21 DIO 1
SDO1 11 11 20 20 DOI 1
CLK1 12 12 19 19 SKOI 1
EEPROM CS C 13 13 18 18 CSO 1
MSET_N 14 14 17 17 MSET_N
CUALM C 15 15 16 16 CUAL M
- 16 16 15 15 GND
INT_ST 1 C 17 17 14 14 INT_ST 1 M
PALA_SIG P0 C 18 18 13 13 PALA_SIG P0 M
PALA_SIG P1 C 19 19 12 12 PALA_SIG P1 M
PALA_SIG P2 C 20 20 11 11 PALA_SIG P2 M
PALA_SIG P3 C 21 21 10 10 PALA_SIG P3 M
PALA_SIG P4 C 22 22 9 9 PALA_SIG P4 M
SDCLK C 23 23 8 8 SDCLK
GAIN FIX C 24 24 7 7 GAIN FIX
DATA_1N_C(LVDS) 25 25 6 6 DATAN1
DATA_1P_C(LVDS) 26 26 5 5 DATAP1
SGND 27 27 4 4 GND
DATA_2N_C(LVDS) 28 28 3 3 DATAN2
DATA_2P_C(LVDS) 29 29 2 2 DATAP2
SGND 30 30 1 1 GND
YC2
APCPWB-C
YC9
24V 1 1 5 5 +24V
PGND 2 2 4 4 GND
P REM C 3 3 3 3 START/STOP
P LOCK C 4 4 2 2 LOCKED
P CLK C 5 5 1 1 EXT.CLOCK
PM-C
YC8
SGND 1 1 30 30 GND
BD M 2 2 29 29 PD
LSU_TH M 3 3 28 28 TH
- 4 4 27 27 -
- 5 5 26 26 -
+5V 6 6 25 25 +5V1
+5V 7 7 24 24 +5V1
+5V 8 8 23 23 +5V1
LDD_CS M 9 9 22 22 CSI 1
SDI1_M 10 10 21 21 DIO 1
SDO1_M 11 11 20 20 DOI 1
CLK1_M 12 12 19 19 SKOI 1
EEPROM CS _O_M 13 13 18 18 CSO 1
MSET_N 14 14 17 17 MSET_N
CUALM M 15 15 16 16 CUAL M
- 16 16 15 15 GND
INT_ST 1 M 17 17 14 14 INT_ST 1 M
PALA_SIG P0 M 18 18 13 13 PALA_SIG P0 M
PALA_SIG P1 M 19 19 12 12 PALA_SIG P1 M
PALA_SIG P2 M 20 20 11 11 PALA_SIG P2 M
PALA_SIG P3 M 21 21 10 10 PALA_SIG P3 M
PALA_SIG P4 M 22 22 9 9 PALA_SIG P4 M
SDCLK M 23 23 8 8 SDCLK
GAIN FIX M 24 24 7 7 GAIN FIX
DATA_1N_M(LVDS) 25 25 6 6 DATAN1
DATA_1P_M(LVDS) 26 26 5 5 DATAP1
SGND 27 27 4 4 GND
DATA_2N_M(LVDS) 28 28 3 3 DATAN2
DATA_2P_M(LVDS) 29 29 2 2 DATAP2
SGND 30 30 1 1 GND
YC1
YC2
GND 1 1 4 4 GND
TH 2 2 3 3 TH
PD 3 3 2 2 PD
+5V2 4 4 1 1 +5V
PDPWB-M
YC7
24V 1 1 5 5 +24V
PGND 2 2 4 4 GND
P_REM M 3 3 3 3 START/STOP
P_LOCK M 4 4 2 2 LOCKED
P_CLK M 5 5 1 1 EXT.CLOCK
PM-M
APCPWB-M
YC12
SGND 1 1 30 30 GND
BD Y 2 2 29 29 PD
LSU_TH Y 3 3 28 28 TH
- 4 4 27 27 -
5V 6 6 25 25 +5V1
5V 7 7 24 24 +5V1
5V 8 8 23 23 +5V1
LDD_CS 1 Y 9 9 22 22 CSI 1
SDI1 10 10 21 21 DIO 1
SDO1 11 11 20 20 DOI 1
CLK1 12 12 19 19 SKOI 1
EEPROM CS Y 13 13 18 18 CSO 1
MSET_N 14 14 17 17 MSET_N
CUALM Y 15 15 16 16 CUAL M
- 16 16 15 15 GND
INT_ST 1 Y 17 17 14 14 INT_ST 1 M
PALA_SIG P0 Y 18 18 13 13 PALA_SIG P0 M
PALA_SIG P1 Y 19 19 12 12 PALA_SIG P1 M
PALA_SIG P2 Y 20 20 11 11 PALA_SIG P2 M
PALA_SIG P3 Y 21 21 10 10 PALA_SIG P3 M
PALA_SIG P4 Y 22 22 9 9 PALA_SIG P4 M
SDCLK Y 23 23 8 8 SDCLK
GAIN FIX Y 24 24 7 7 GAIN FIX
DATA_1N_Y(LVDS) 25 25 6 6 DATAN1
DATA_1P_Y(LVDS) 26 26 5 5 DATAP1
SGND 27 27 4 4 GND
DATA_2N_Y(LVDS) 28 28 3 3 DATAN2
DATA_2P_Y(LVDS) 29 29 2 2 DATAP2
SGND 30 30 1 1 GND
YC2
APCPWB-Y
YC11
24V 1 1 5 5 +24V
PGND 2 2 4 4 GND
P REM Y 3 3 3 3 START/STOP
P LOCK Y 4 4 2 2 LOCKED
PCLK Y 5 5 1 1 EXT.CLOCK
PM-Y
LSURPWB
YC1
+24V1 1 1
+24V1 2 2
PGND 3 3
PGND 4 4
+5V 5 5
+5V 6 6
GND 7 7
GND 8 8
+3.3V 9 9
PGND 10 10
YC10
1 1 +24V1
2 2 +24V1
3 3 GND
4 4 GND
PSPWB
YC15
6 6 +5V_AN
5 5 +5V_AN
4 4 GND
3 3 GND
2 2 +3.3V2
1 1 GND
EPWB
LSUCM
2 1 Relay 1 2
YC21
2 2 CW
1 1 CCW

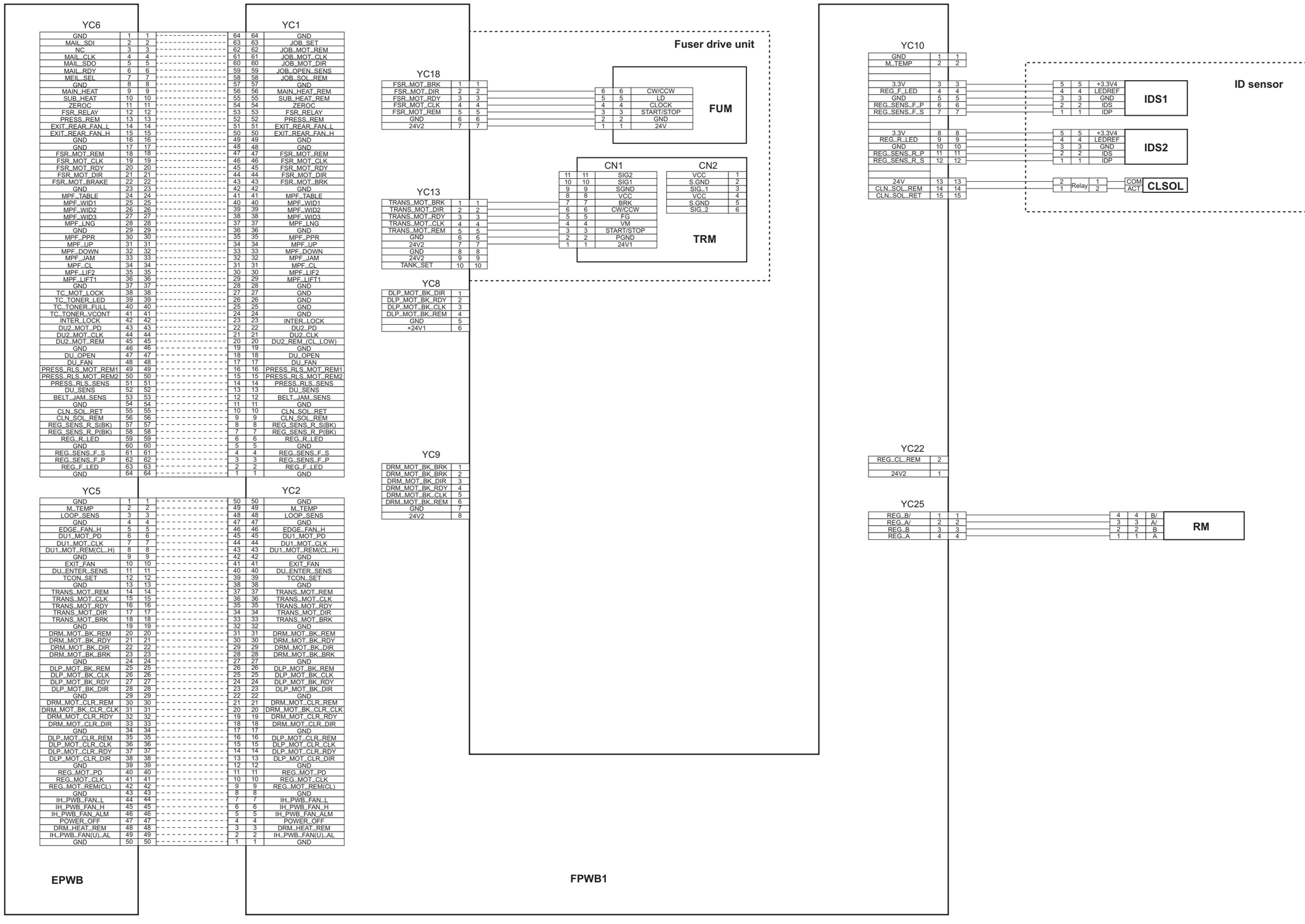
No.3


FRPWB
EPWB
YC16
FRCSW
LSUFM
WTM
Relay
FRONT_OPEN
GND
24V
LSU_FAN_OUT
CL_MOT1
CL_MOT2
WTNR_SET
5V
WTNR_FULL
WTNR_LED
5V_LED
WTNR_NEAR
Developer unit Y
TS-Y
VM-Y
YC1
YC15
YC14
Drum unit Y
DRPWB-Y
CL-Y
DRM1 ERASER (+)
ERS1 DR (-)
Developer unit C
TS-C
VM-C
YC13
YC12
Drum unit C
DRPWB-C
CL-C
Developer unit M
TS-M
VM-M
YC11
Drum unit M
DRPWB-M
CL-M
YC9
YC7
YC8
YC6
YC19
YC4
YC17
YC5
YC2
YC10
YC3
Developer unit K
TS-K
VM-K
Drum unit K
DRPWB-K
CL-K
WTS2
WTS1
DEVFM2
DEVFM1
OTEMS
FUFFM
EFFM1
EFFM2
Exit unit
EFS2
EM
SBS
EFS1
FSSOL
Connector holder
Relay

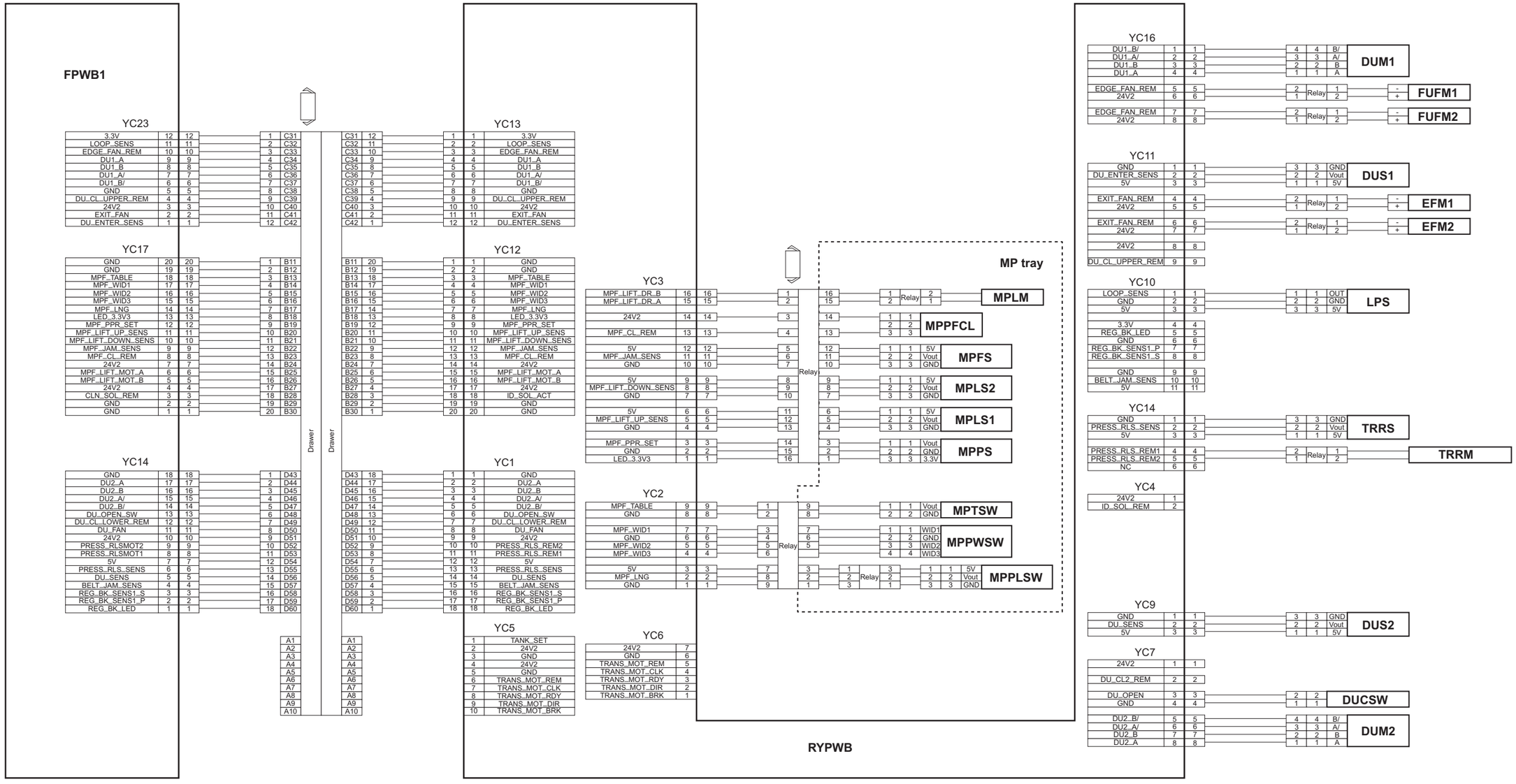
No.4


EPWB
FIHPWB
FPWB1
MMPWB
FUPWB
Connector holder
FSR_BLT_PLS
GND
+5V
FSR_RLS_SENS
FSR_SIZE_SENS
FSR_RLS_DR_CW
FSR_RLS_DR_CCW
FSR_FAN
FSR_FAN_ALM
EDGE_FAN
EDGE_FAN_ALM(R)
EDGE_FAN_ALM(F)
BRIDGE_FAN
+24V1
MAIN_TH1
MAIN_TH2
GUIDE_TH2
GUIDE_TH1
EDGE_TH
PRESS_TH
+3.3V2
IH_HEAT_REM
ROTATION
IH_TXD
IH_RXD
PRESS_HEART_REM
YC4
SGND
3.3V
IH_REM
ROTATION
RXD
TXD
YC9
VS
YC10
COIL_COM
YC6
+15V1
+15V2
YC8
FSR_RELAY
YC1
NEUTRAL
LIVE
From PSPWB
YC27
MAIN_HEAT_REM
SUB_HEAT_REM
+24V2
ZEROC
YC11
IH_PWB_FAN
IH_PWB_ALM
YC19
EXIT_REAR_FAN
YC20
NC
MAIL_SDO
MAIL_SDI
MAIL_CLK
MAIL_SEL
MAL_RDY
Relay
FUBLS
FURS
FUES
FURM
FUEFM2
FURFM
FUEFM1
FTH1
FTH3
FTH2
FTH4
IHFM
ERFM
Vout
5V
FIH
FTS
SDI
SDO
SCLK
SEL
READY
Mail box (option)

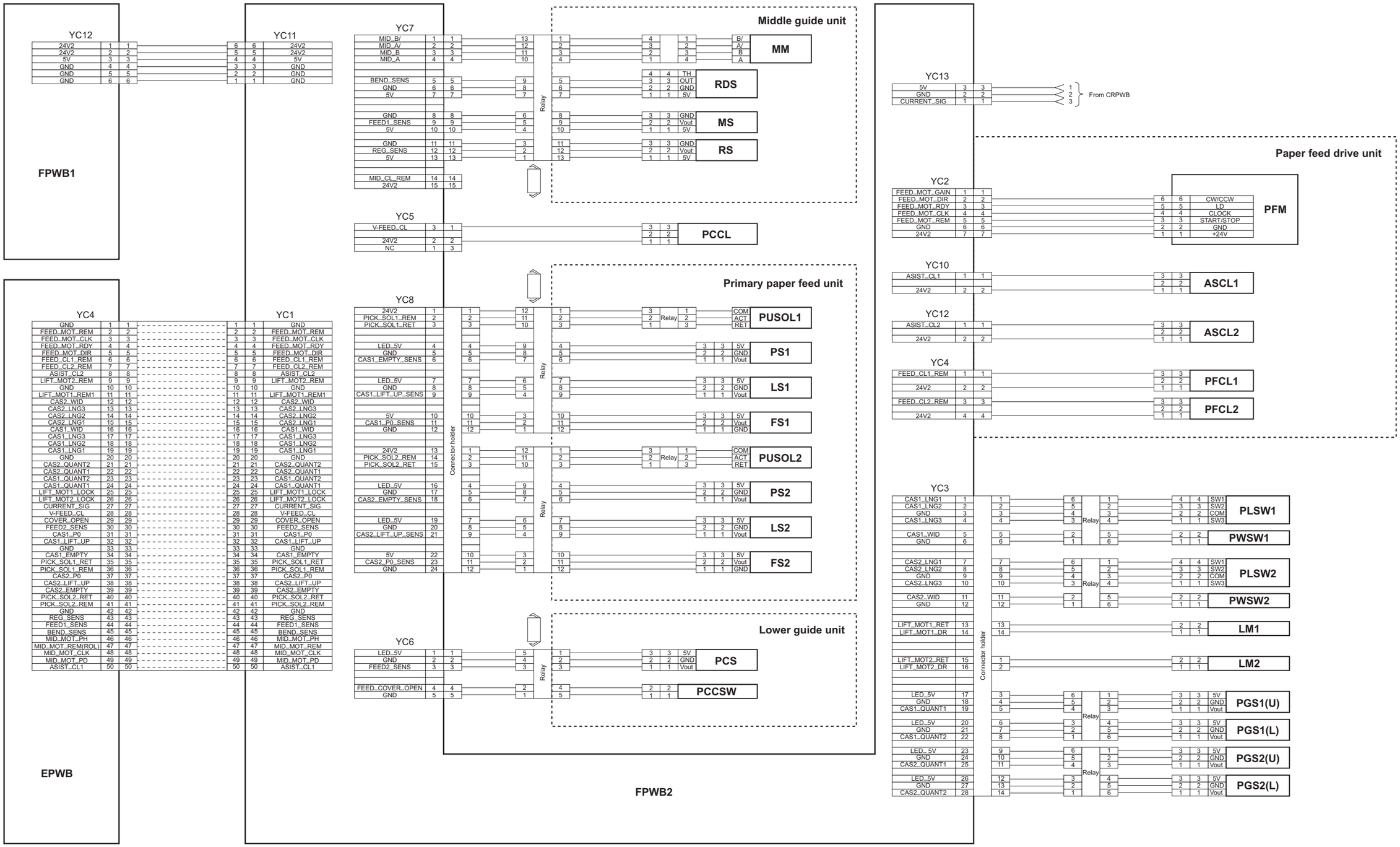
No.5


YC6
GND 1 1 64 64 GND
MAIL_SDI 2 2 63 63 JOB_SET
NC 3 3 62 62 JOB_MOT_REM
MAIL_CLK 4 4 61 61 JOB_MOT_CLK
MAIL_SDO 5 5 60 60 JOB_MOT_DIR
MAIL_RDY 6 6 59 59 JOB_OPEN_SENS
MEIL_SEL 7 7 58 58 JOB_SOL_REM
GND 8 8 57 57 GND
MAIN_HEAT 9 9 56 56 MAIN_HEAT_REM
SUB_HEAT 10 10 55 55 SUB_HEAT_REM
ZEROC 11 11 54 54 ZEROC
FSR_RELAY 12 12 53 53 FSR_RELAY
PRESS_REM 13 13 52 52 PRESS_REM
EXIT_REAR_FAN_L 14 14 51 51 EXIT_REAR_FAN_L
EXIT_REAR_FAN_H 15 15 50 50 EXIT_REAR_FAN_H
GND 16 16 49 49 GND
GND 17 17 48 48 GND
FSR_MOT_REM 18 18 47 47 FSR_MOT_REM
FSR_MOT_CLK 19 19 46 46 FSR_MOT_CLK
FSR_MOT_RDY 20 20 45 45 FSR_MOT_RDY
FSR_MOT_DIR 21 21 44 44 FSR_MOT_DIR
FSR_MOT_BRAKE 22 22 43 43 FSR_MOT_BRK
GND 23 23 42 42 GND
MPF_TABLE 24 24 41 41 MPF_TABLE
MPF_WID1 25 25 40 40 MPF_WID1
MPF_WID2 26 26 39 39 MPF_WID2
MPF_WID3 27 27 38 38 MPF_WID3
MPF_LNG 28 28 37 37 MPF_LNG
GND 29 29 36 36 GND
MPF_PPR 30 30 35 35 MPF_PPR
MPF_UP 31 31 34 34 MPF_UP
MPF_DOWN 32 32 33 33 MPF_DOWN
MPF_JAM 33 33 32 32 MPF_JAM
MPF_CL 34 34 31 31 MPF_CL
MPF_LIF2 35 35 30 30 MPF_LIF2
MPF_LIFT1 36 36 29 29 MPF_LIFT1
GND 37 37 28 28 GND
TC_MOT_LOCK 38 38 27 27 GND
TC_TONER_LED 39 39 26 26 GND
TC_TONER_FULL 40 40 25 25 GND
TC_TONER_VCONT 41 41 24 24 GND
INTER_LOCK 42 42 23 23 INTER_LOCK
DU2_MOT_PD 43 43 22 22 DU2_PD
DU2_MOT_CLK 44 44 21 21 DU2_CLK
DU2_MOT_REM 45 45 20 20 DU2_REM_(CL_LOW)
GND 46 46 19 19 GND
DU_OPEN 47 47 18 18 DU_OPEN
DU_FAN 48 48 17 17 DU_FAN
PRESS_RLS_MOT_REM1 49 49 16 16 PRESS_RLS_MOT_REM1
PRESS_RLS_MOT_REM2 50 50 15 15 PRESS_RLS_MOT_REM2
PRESS_RLS_SENS 51 51 14 14 PRESS_RLS_SENS
DU_SENS 52 52 13 13 DU_SENS
BELT_JAM_SENS 53 53 12 12 BELT_JAM_SENS
GND 54 54 11 11 GND
CLN_SOL_RET 55 55 10 10 CLN_SOL_RET
CLN_SOL_REM 56 56 9 9 CLN_SOL_REM
REG_SENS_R_S(BK) 57 57 8 8 REG_SENS_R_S(BK)
REG_SENS_R_P(BK) 58 58 7 7 REG_SENS_R_P(BK)
REG_R_LED 59 59 6 6 REG_R_LED
GND 60 60 5 5 GND
REG_SENS_F_S 61 61 4 4 REG_SENS_F_S
REG_SENS_F_P 62 62 3 3 REG_SENS_F_P
REG_F_LED 63 63 2 2 REG_F_LED
GND 64 64 1 1 GND
YC5
GND 1 1 50 50 GND
M_TEMP 2 2 49 49 M_TEMP
LOOP_SENS 3 3 48 48 LOOP_SENS
GND 4 4 47 47 GND
EDGE_FAN_H 5 5 46 46 EDGE_FAN_H
DU1_MOT_PD 6 6 45 45 DU1_MOT_PD
DU1_MOT_CLK 7 7 44 44 DU1_MOT_CLK
DU1_MOT_REM(CL_H) 8 8 43 43 DU1_MOT_REM(CL_H)
GND 9 9 42 42 GND
EXIT_FAN 10 10 41 41 EXIT_FAN
DU_ENTER_SENS 11 11 40 40 DU_ENTER_SENS
TCON_SET 12 12 39 39 TCON_SET
GND 13 13 38 38 GND
TRANS_MOT_REM 14 14 37 37 TRANS_MOT_REM
TRANS_MOT_CLK 15 15 36 36 TRANS_MOT_CLK
TRANS_MOT_RDY 16 16 35 35 TRANS_MOT_RDY
TRANS_MOT_DIR 17 17 34 34 TRANS_MOT_DIR
TRANS_MOT_BRK 18 18 33 33 TRANS_MOT_BRK
GND 19 19 32 32 GND
DRM_MOT_BK_REM 20 20 31 31 DRM_MOT_BK_REM
DRM_MOT_BK_RDY 21 21 30 30 DRM_MOT_BK_RDY
DRM_MOT_BK_DIR 22 22 29 29 DRM_MOT_BK_DIR
DRM_MOT_BK_BRK 23 23 28 28 DRM_MOT_BK_BRK
GND 24 24 27 27 GND
DLP_MOT_BK_REM 25 25 26 26 DLP_MOT_BK_REM
DLP_MOT_BK_CLK 26 26 25 25 DLP_MOT_BK_CLK
DLP_MOT_BK_RDY 27 27 24 24 DLP_MOT_BK_RDY
DLP_MOT_BK_DIR 28 28 23 23 DLP_MOT_BK_DIR
GND 29 29 22 22 GND
DRM_MOT_CLR_REM 30 30 21 21 DRM_MOT_CLR_REM
DRM_MOT_BK_CLR_CLK 31 31 20 20 DRM_MOT_BK_CLR_CLK
DRM_MOT_CLR_RDY 32 32 19 19 DRM_MOT_CLR_RDY
DRM_MOT_CLR_DIR 33 33 18 18 DRM_MOT_CLR_DIR
GND 34 34 17 17 GND
DLP_MOT_CLR_REM 35 35 16 16 DLP_MOT_CLR_REM
DLP_MOT_CLR_CLK 36 36 15 15 DLP_MOT_CLR_CLK
DLP_MOT_CLR_RDY 37 37 14 14 DLP_MOT_CLR_RDY
DLP_MOT_CLR_DIR 38 38 13 13 DLP_MOT_CLR_DIR
GND 39 39 12 12 GND
REG_MOT_PD 40 40 11 11 REG_MOT_PD
REG_MOT_CLK 41 41 10 10 REG_MOT_CLK
REG_MOT_REM(CL) 42 42 9 9 REG_MOT_REM(CL)
GND 43 43 8 8 GND
IH_PWB_FAN_L 44 44 7 7 IH_PWB_FAN_L
IH_PWB_FAN_H 45 45 6 6 IH_PWB_FAN_H
IH_PWB_FAN_ALM 46 46 5 5 IH_PWB_FAN_ALM
POWER_OFF 47 47 4 4 POWER_OFF
DRM_HEAT_REM 48 48 3 3 DRM_HEAT_REM
IH_PWB_FAN(U)_AL 49 49 2 2 IH_PWB_FAN(U)_AL
GND 50 50 1 1 GND
YC2
EPWB
Fuser drive unit
YC18
FSR_MOT_BRK 1 1
FSR_MOT_DIR 2 2
FSR_MOT_RDY 3 3
FSR_MOT_CLK 4 4
FSR_MOT_REM 5 5
GND 6 6
24V2 7 7
6 6 CW/CCW
5 5 LD
4 4 CLOCK
3 3 START/STOP
2 2 GND
1 1 24V
FUM
CN1
11 11 SIG2
10 10 SIG1
9 9 SGND
8 8 VCC
7 7 BRK
6 6 CW/CCW
5 5 FG
4 4 VM
3 3 START/STOP
2 2 PGND
1 1 24V1
CN2
VCC 1
S.GND 2
SIG_1 3
VCC 4
S.GND 5
SIG_2 6
TRM
YC13
TRANS_MOT_BRK 1 1
TRANS_MOT_DIR 2 2
TRANS_MOT_RDY 3 3
TRANS_MOT_CLK 4 4
TRANS_MOT_REM 5 5
GND 6 6
24V2 7 7
GND 8 8
24V2 9 9
TANK_SET 10 10
YC8
DLP_MOT_BK_DIR 1
DLP_MOT_BK_RDY 2
DLP_MOT_BK_CLK 3
DLP_MOT_BK_REM 4
GND 5
+24V1 6
YC9
DRM_MOT_BK_BRK 1
DRM_MOT_BK_BRK 2
DRM_MOT_BK_DIR 3
DRM_MOT_BK_RDY 4
DRM_MOT_BK_CLK 5
DRM_MOT_BK_REM 6
GND 7
24V2 8
FPWB1
YC10
GND 1 1
M_TEMP 2 2
3.3V 3 3
REG_F_LED 4 4
GND 5 5
REG_SENS_F_P 6 6
REG_SENS_F_S 7 7
3.3V 8 8
REG_R_LED 9 9
GND 10 10
REG_SENS_R_P 11 11
REG_SENS_R_S 12 12
24V 13 13
CLN_SOL_REM 14 14
CLN_SOL_RET 15 15
5 5 +3.3V4
4 4 LEDREF
3 3 GND
2 2 IDS
1 1 IDP
IDS1
5 5 +3.3V4
4 4 LEDREF
3 3 GND
2 2 IDS
1 1 IDP
IDS2
ID sensor
2 Relay 1 COM
1 2 ACT
CLSOL
YC22
REG_CL_REM 2
24V2 1
YC25
REG_B/ 1 1
REG_A/ 2 2
REG_B 3 3
REG_A 4 4
4 4 B/
3 3 A/
2 2 B
1 1 A
RM

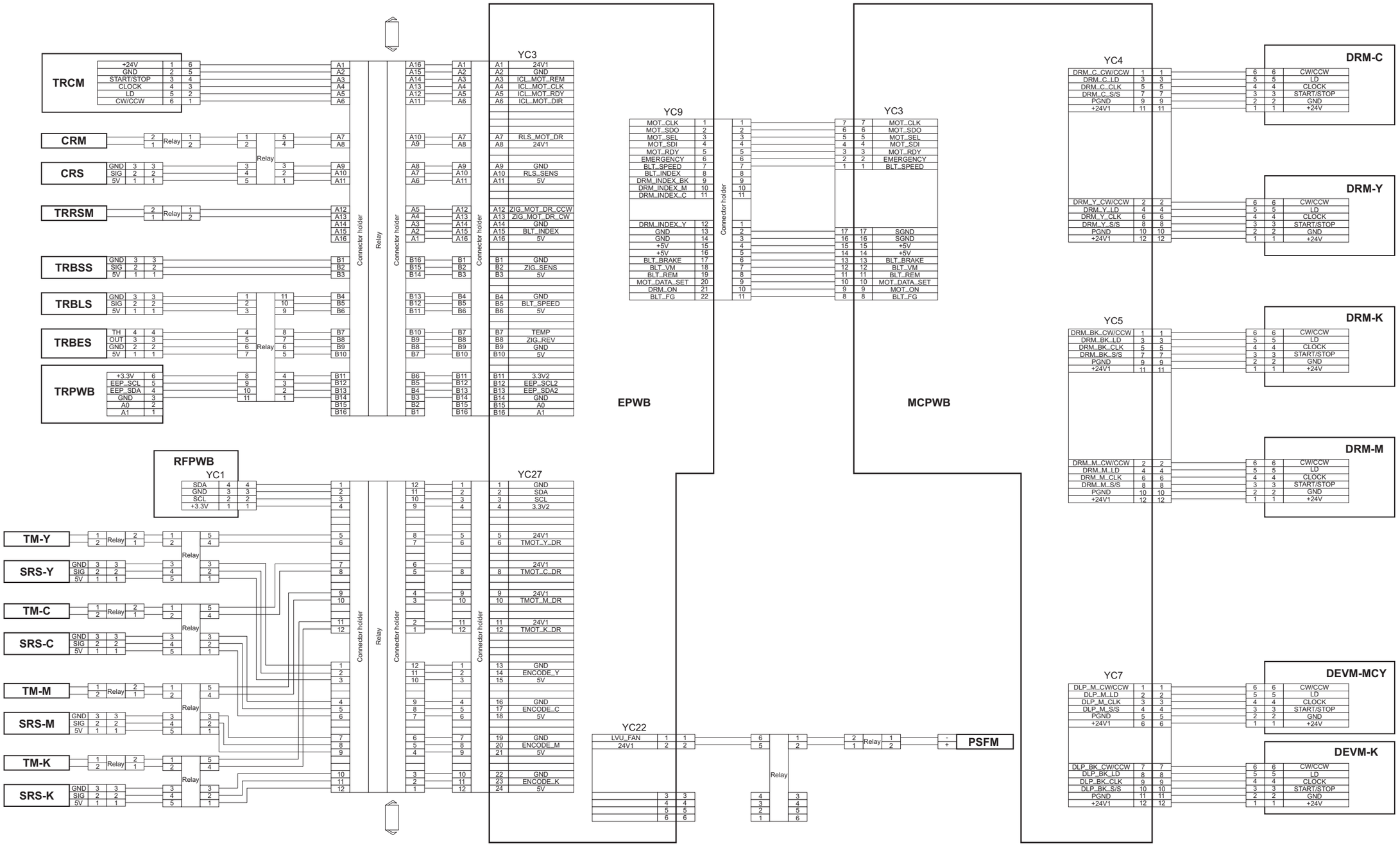
No.6


FPWB1
YC23
3.3V 12 12 1 C31
LOOP_SENS 11 11 2 C32
EDGE_FAN_REM 10 10 3 C33
DU1_A 9 9 4 C34
DU1_B 8 8 5 C35
DU1_A/ 7 7 6 C36
DU1_B/ 6 6 7 C37
GND 5 5 8 C38
DU_CL_UPPER_REM 4 4 9 C39
24V2 3 3 10 C40
EXIT_FAN 2 2 11 C41
DU_ENTER_SENS 1 1 12 C42
YC17
GND 20 20 1 B11
GND 19 19 2 B12
MPF_TABLE 18 18 3 B13
MPF_WID1 17 17 4 B14
MPF_WID2 16 16 5 B15
MPF_WID3 15 15 6 B16
MPF_LNG 14 14 7 B17
LED_3.3V3 13 13 8 B18
MPF_PPR_SET 12 12 9 B19
MPF_LIFT_UP_SENS 11 11 10 B20
MPF_LIFT_DOWN_SENS 10 10 11 B21
MPF_JAM_SENS 9 9 12 B22
MPF_CL_REM 8 8 13 B23
24V2 7 7 14 B24
MPF_LIFT_MOT_A 6 6 15 B25
MPF_LIFT_MOT_B 5 5 16 B26
24V2 4 4 17 B27
CLN_SOL_REM 3 3 18 B28
GND 2 2 19 B29
GND 1 1 20 B30
YC14
GND 18 18 1 D43
DU2_A 17 17 2 D44
DU2_B 16 16 3 D45
DU2_A/ 15 15 4 D46
DU2_B/ 14 14 5 D47
DU_OPEN_SW 13 13 6 D48
DU_CL_LOWER_REM 12 12 7 D49
DU_FAN 11 11 8 D50
24V2 10 10 9 D51
PRESS_RLSMOT2 9 9 10 D52
PRESS_RLSMOT1 8 8 11 D53
5V 7 7 12 D54
PRESS_RLS_SENS 6 6 13 D55
DU_SENS 5 5 14 D56
BELT_JAM_SENS 4 4 15 D57
REG_BK_SENS1_S 3 3 16 D58
REG_BK_SENS1_P 2 2 17 D59
REG_BK_LED 1 1 18 D60
A1 A1
A2 A2
A3 A3
A4 A4
A5 A5
A6 A6
A7 A7
A8 A8
A9 A9
A10 A10
Drawer
Drawer
C31 12 1 1 3.3V
C32 11 2 2 LOOP_SENS
C33 10 3 3 EDGE_FAN_REM
C34 9 4 4 DU1_A
C35 8 5 5 DU1_B
C36 7 6 6 DU1_A/
C37 6 7 7 DU1_B/
C38 5 8 8 GND
C39 4 9 9 DU_CL_UPPER_REM
C40 3 10 10 24V2
C41 2 11 11 EXIT_FAN
C42 1 12 12 DU_ENTER_SENS
YC13
YC12
B11 20 1 1 GND
B12 19 2 2 GND
B13 18 3 3 MPF_TABLE
B14 17 4 4 MPF_WID1
B15 16 5 5 MPF_WID2
B16 15 6 6 MPF_WID3
B17 14 7 7 MPF_LNG
B18 13 8 8 LED_3.3V3
B19 12 9 9 MPF_PPR_SET
B20 11 10 10 MPF_LIFT_UP_SENS
B21 10 11 11 MPF_LIFT_DOWN_SENS
B22 9 12 12 MPF_JAM_SENS
B23 8 13 13 MPF_CL_REM
B24 7 14 14 24V2
B25 6 15 15 MPF_LIFT_MOT_A
B26 5 16 16 MPF_LIFT_MOT_B
B27 4 17 17 24V2
B28 3 18 18 ID_SOL_ACT
B29 2 19 19 GND
B30 1 20 20 GND
YC1
D43 18 1 1 GND
D44 17 2 2 DU2_A
D45 16 3 3 DU2_B
D46 15 4 4 DU2_A/
D47 14 5 5 DU2_B/
D48 13 6 6 DU_OPEN_SW
D49 12 7 7 DU_CL_LOWER_REM
D50 11 8 8 DU_FAN
D51 10 9 9 24V2
D52 9 10 10 PRESS_RLS_REM2
D53 8 11 11 PRESS_RLS_REM1
D54 7 12 12 5V
D55 6 13 13 PRESS_RLS_SENS
D56 5 14 14 DU_SENS
D57 4 15 15 BELT_JAM_SENS
D58 3 16 16 REG_BK_SENS1_S
D59 2 17 17 REG_BK_SENS1_P
D60 1 18 18 REG_BK_LED
YC5
1 TANK_SET
2 24V2
3 GND
4 24V2
5 GND
6 TRANS_MOT_REM
7 TRANS_MOT_CLK
8 TRANS_MOT_RDY
9 TRANS_MOT_DIR
10 TRANS_MOT_BRK
YC3
MPF_LIFT_DR_B 16 16 1
MPF_LIFT_DR_A 15 15 2
24V2 14 14 3
MPF_CL_REM 13 13 4
5V 12 12 5
MPF_JAM_SENS 11 11 6
GND 10 10 7
5V 9 9 8
MPF_LIFT_DOWN_SENS 8 8 9
GND 7 7 10
5V 6 6 11
MPF_LIFT_UP_SENS 5 5 12
GND 4 4 13
MPF_PPR_SET 3 3 14
GND 2 2 15
LED_3.3V3 1 1 16
YC2
MPF_TABLE 9 9 1
GND 8 8 2
MPF_WID1 7 7 3
GND 6 6 4
MPF_WID2 5 5 5
MPF_WID3 4 4 6
5V 3 3 7
MPF_LNG 2 2 8
GND 1 1 9
YC6
24V2 7
GND 6
TRANS_MOT_REM 5
TRANS_MOT_CLK 4
TRANS_MOT_RDY 3
TRANS_MOT_DIR 2
TRANS_MOT_BRK 1
Relay
MP tray
16 1 Relay 2 1 MPLM
15 2 1
14 1 1 MPPFCL
13 3 3
12 1 1 5V MPFS
11 2 2 Vout
10 3 3 GND
9 1 1 5V MPLS2
8 2 2 Vout
7 3 3 GND
6 1 1 5V MPLS1
5 2 2 Vout
4 3 3 GND
3 1 1 Vout MPPS
2 2 2 GND
1 3 3 3.3V
9 1 1 Vout MPTSW
8 2 2 GND
7 1 1 WID1 MPPWSW
6 2 2 GND
5 3 3 WID2
4 4 WID3
3 1 1 5V MPPLSW
2 Relay 2 2 Vout
1 3 3 GND
RYPWB
YC16
DU1_B/ 1 1 4 4 B/ DUM1
DU1_A/ 2 2 3 3 A/
DU1_B 3 3 2 2 B
DU1_A 4 4 1 1 A
EDGE_FAN_REM 5 5 2 Relay 1 - FUFM1
24V2 6 6 1 2 +
EDGE_FAN_REM 7 7 2 Relay 1 - FUFM2
24V2 8 8 1 2 +
YC11
GND 1 1 3 3 GND DUS1
DU_ENTER_SENS 2 2 2 2 Vout
5V 3 3 1 1 5V
EXIT_FAN_REM 4 4 2 Relay 1 - EFM1
24V2 5 5 1 2 +
EXIT_FAN_REM 6 6 2 Relay 1 - EFM2
24V2 7 7 1 2 +
24V2 8 8
DU_CL_UPPER_REM 9 9
YC10
LOOP_SENS 1 1 1 1 OUT LPS
GND 2 2 2 2 GND
5V 3 3 3 3 5V
3.3V 4 4
REG_BK_LED 5 5
GND 6 6
REG_BK_SENS1_P 7 7
REG_BK_SENS1_S 8 8
GND 9 9
BELT_JAM_SENS 10 10
5V 11 11
YC14
GND 1 1 3 3 GND TRRS
PRESS_RLS_SENS 2 2 2 2 Vout
5V 3 3 1 1 5V
PRESS_RLS_REM1 4 4 2 Relay 1 TRRM
PRESS_RLS_REM2 5 5 1 2
NC 6 6
YC4
24V2 1
ID_SOL_REM 2
YC9
GND 1 1 3 3 GND DUS2
DU_SENS 2 2 2 2 Vout
5V 3 3 1 1 5V
YC7
24V2 1 1
DU_CL2_REM 2 2
DU_OPEN 3 3 2 2 DUCSW
GND 4 4 1 1
DU2_B/ 5 5 4 4 B/ DUM2
DU2_A/ 6 6 3 3 A/
DU2_B 7 7 2 2 B
DU2_A 8 8 1 1 A

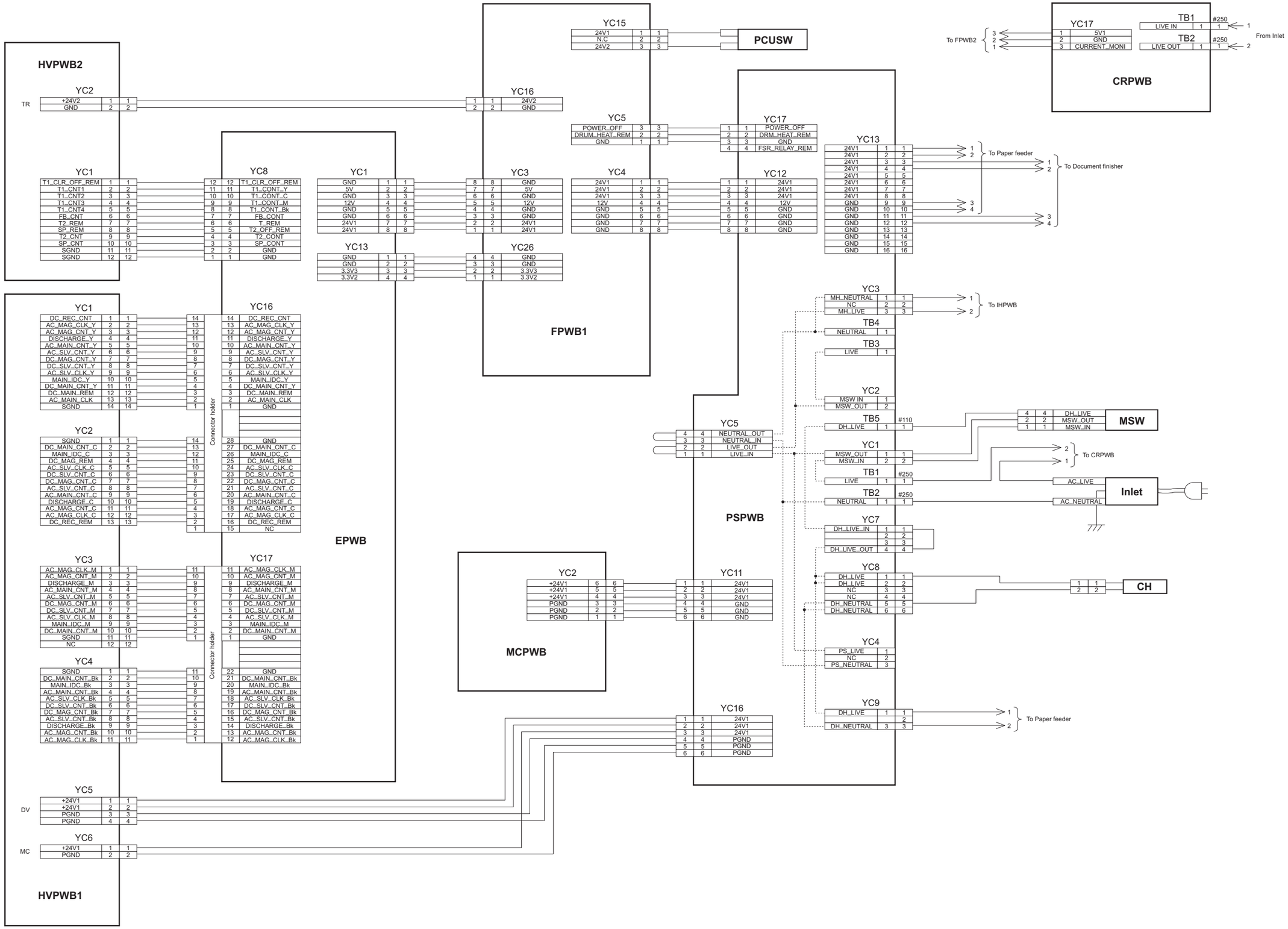
No.7


FPWB1
YC12
24V2 1 1
24V2 2 2
5V 3 3
GND 4 4
GND 5 5
GND 6 6
YC11
6 6 24V2
5 5 24V2
4 4 5V
3 3 GND
2 2 GND
1 1 GND
YC7
MID_B/ 1 1
MID_A/ 2 2
MID_B 3 3
MID_A 4 4
BEND_SENS 5 5
GND 6 6
5V 7 7
GND 8 8
FEED1_SENS 9 9
5V 10 10
GND 11 11
REG_SENS 12 12
5V 13 13
MID_CL_REM 14 14
24V2 15 15
Relay
Middle guide unit
MM
RDS
MS
RS
YC5
V-FEED_CL 3 1
24V2 2 2
NC 1 3
PCCL
Primary paper feed unit
YC8
24V2 1 1
PICK_SOL1_REM 2 2
PICK_SOL1_RET 3 3
LED_5V 4 4
GND 5 5
CAS1_EMPTY_SENS 6 6
LED_5V 7 7
GND 8 8
CAS1_LIFT_UP_SENS 9 9
5V 10 10
CAS1_P0_SENS 11 11
GND 12 12
24V2 13 13
PICK_SOL2_REM 14 14
PICK_SOL2_RET 15 15
LED_5V 16 16
GND 17 17
CAS2_EMPTY_SENS 18 18
LED_5V 19 19
GND 20 20
CAS2_LIFT_UP_SENS 21 21
5V 22 22
CAS2_P0_SENS 23 23
GND 24 24
Connector holder
PUSOL1
PS1
LS1
FS1
PUSOL2
PS2
LS2
FS2
Lower guide unit
YC6
LED_5V 1 1
GND 2 2
FEED_SENS 3 3
FEED_COVER_OPEN 4 4
GND 5 5
PCS
PCCSW
YC13
5V 3 3
GND 2 2
CURRENT_SIG 1 1
From CRPWB
Paper feed drive unit
YC2
FEED_MOT_GAIN 1 1
FEED_MOT_DIR 2 2
FEED_MOT_RDY 3 3
FEED_MOT_CLK 4 4
FEED_MOT_REM 5 5
GND 6 6
24V2 7 7
CW/CCW
LD
CLOCK
START/STOP
GND
+24V
PFM
YC10
ASIST_CL1 1 1
24V2 2 2
ASCL1
YC12
ASIST_CL2 1 1
24V2 2 2
ASCL2
YC4
FEED_CL1_REM 1 1
24V2 2 2
FEED_CL2_REM 3 3
24V2 4 4
PFCL1
PFCL2
YC3
CAS1_LNG1 1
CAS1_LNG2 2
GND 3
CAS1_LNG3 4
CAS1_WID 5
GND 6
CAS2_LNG1 7
CAS2_LNG2 8
GND 9
CAS2_LNG3 10
CAS2_WID 11
GND 12
LIFT_MOT1_RET 13
LIFT_MOT1_DR 14
LIFT_MOT2_RET 15
LIFT_MOT2_DR 16
LED_5V 17
GND 18
CAS1_QUANT1 19
LED_5V 20
GND 21
CAS1_QUANT2 22
LED_5V 23
GND 24
CAS2_QUANT1 25
LED_5V 26
GND 27
CAS2_QUANT2 28
Connector holder
Relay
SW1
SW2
COM
SW3
PLSW1
PWSW1
PLSW2
PWSW2
LM1
LM2
5V
GND
Vout
PGS1(U)
PGS1(L)
PGS2(U)
PGS2(L)
EPWB
FPWB2

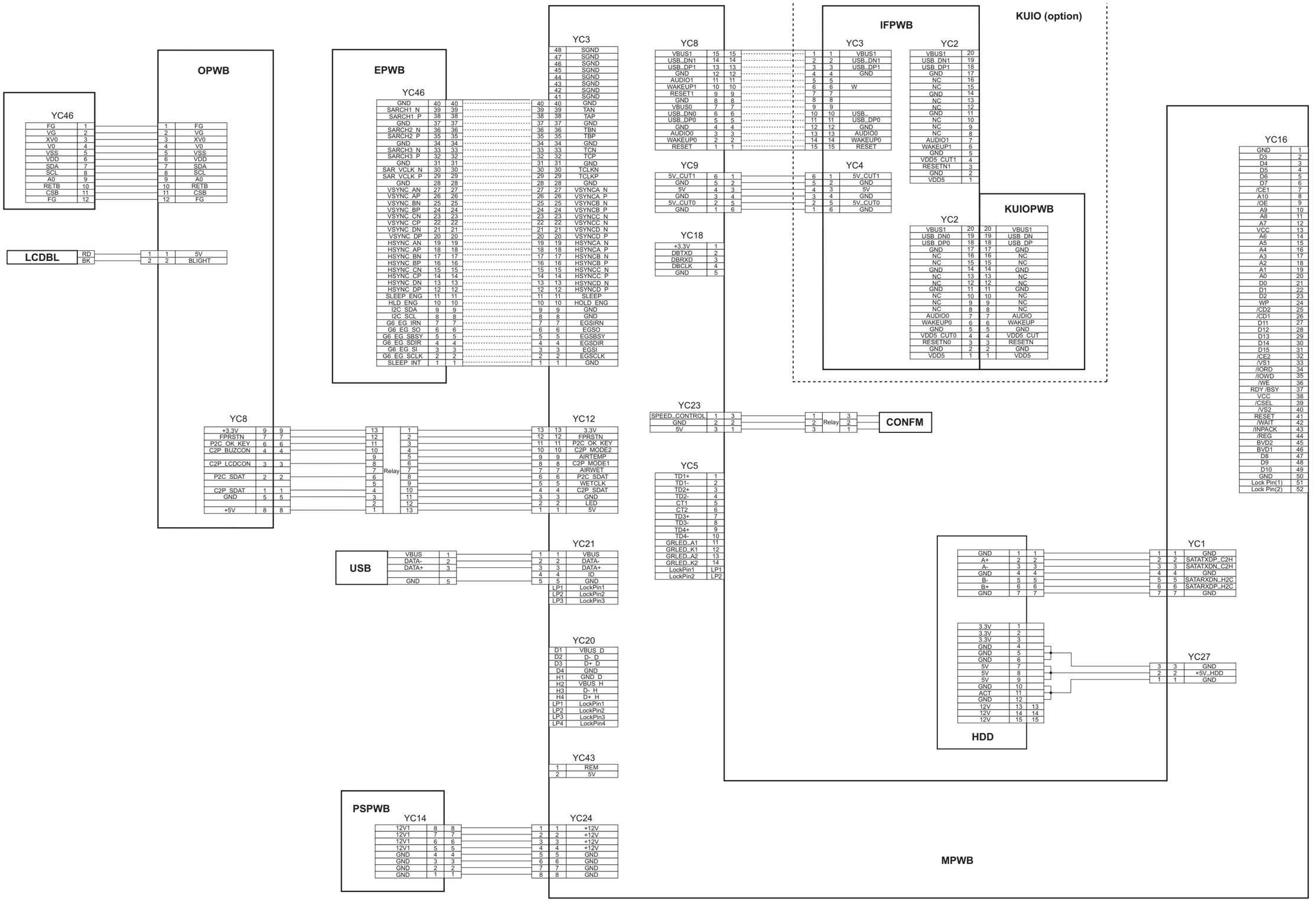
No.8


TRCM
+24V 1 6
GND 2 5
START/STOP 3 4
CLOCK 4 3
LD 5 2
CW/CCW 6 1
CRM
SIG 2 2
5V 1 1
Relay
CRS
GND 3 3
TRRSM
TRBSS
TRBLS
TRBES
TH 4 4
OUT 3 3
TRPWB
+3.3V 6
EEP_SCL 5
EEP_SDA 4
A0 2
A1 1
Connector holder
Relay
YC3
A1 24V1
A2 GND
A3 ICL_MOT_REM
A4 ICL_MOT_CLK
A5 ICL_MOT_RDY
A6 ICL_MOT_DIR
A7 RLS_MOT_DR
A8 24V1
A9 GND
A10 RLS_SENS
A11 5V
A12 ZIG_MOT_DR_CCW
A13 ZIG_MOT_DR_CW
A14 GND
A15 BLT_INDEX
A16 5V
B1 GND
B2 ZIG_SENS
B3 5V
B4 GND
B5 BLT_SPEED
B6 5V
B7 TEMP
B8 ZIG_REV
B9 GND
B10 5V
B11 3.3V2
B12 EEP_SCL2
B13 EEP_SDA2
B14 GND
B15 A0
B16 A1
EPWB
YC9
MOT_CLK 1
MOT_SDO 2
MOT_SEL 3
MOT_SDI 4
MOT_RDY 5
EMERGENCY 6
BLT_SPEED 7
BLT_INDEX 8
DRM_INDEX_BK 9
DRM_INDEX_M 10
DRM_INDEX_C 11
DRM_INDEX_Y 12
GND 13
GND 14
+5V 15
+5V 16
BLT_BRAKE 17
BLT_VM 18
BLT_REM 19
MOT_DATA_SET 20
DRM_ON 21
BLT_FG 22
YC3
MOT_CLK 7
MOT_SDO 6
MOT_SEL 5
MOT_SDI 4
MOT_RDY 3
EMERGENCY 2
BLT_SPEED 1
SGND 17
SGND 16
+5V 15
+5V 14
BLT_BRAKE 13
BLT_VM 12
BLT_REM 11
MOT_DATA_SET 10
MOT_ON 9
BLT_FG 8
MCPWB
YC4
DRM_C_CW/CCW 1 1
DRM_C_LD 3 3
DRM_C_CLK 5 5
DRM_C_S/S 7 7
PGND 9 9
+24V1 11 11
DRM-C
6 6 CW/CCW
5 5 LD
4 4 CLOCK
3 3 START/STOP
2 2 GND
1 1 +24V
DRM_Y_CW/CCW 2 2
DRM_Y_LD 4 4
DRM_Y_CLK 6 6
DRM_Y_S/S 8 8
PGND 10 10
+24V1 12 12
DRM-Y
YC5
DRM_BK_CW/CCW 1 1
DRM_BK_LD 3 3
DRM_BK_CLK 5 5
DRM_BK_S/S 7 7
PGND 9 9
+24V1 11 11
DRM-K
DRM_M_CW/CCW 2 2
DRM_M_LD 4 4
DRM_M_CLK 6 6
DRM_M_S/S 8 8
PGND 10 10
+24V1 12 12
DRM-M
RFPWB
YC1
SDA 4 4
GND 3 3
SCL 2 2
+3.3V 1 1
YC27
GND 1
SDA 2
SCL 3
3.3V2 4
24V1 5
TMOT_Y_DR 6
24V1 7
TMOT_C_DR 8
24V1 9
TMOT_M_DR 10
24V1 11
TMOT_K_DR 12
GND 13
ENCODE_Y 14
5V 15
GND 16
ENCODE_C 17
5V 18
GND 19
ENCODE_M 20
5V 21
GND 22
ENCODE_K 23
5V 24
TM-Y
SRS-Y
TM-C
SRS-C
TM-M
SRS-M
TM-K
SRS-K
YC22
LVU_FAN 1 1
24V1 2 2
PSFM
YC7
DLP_M_CW/CCW 1 1
DLP_M_LD 2 2
DLP_M_CLK 3 3
DLP_M_S/S 4 4
PGND 5 5
+24V1 6 6
DEVM-MCY
DLP_BK_CW/CCW 7 7
DLP_BK_LD 8 8
DLP_BK_CLK 9 9
DLP_BK_S/S 10 10
PGND 11 11
+24V1 12 12
DEVM-K

No.9


HVPWB2
TR
YC2
+24V2 1 1
GND 2 2
YC1
T1_CLR_OFF_REM 1 1
T1_CNT1 2 2
T1_CNT2 3 3
T1_CNT3 4 4
T1_CNT4 5 5
FB_CNT 6 6
T2_REM 7 7
SP_REM 8 8
T2_CNT 9 9
SP_CNT 10 10
SGND 11 11
SGND 12 12
YC8
12 12 T1_CLR_OFF_REM
11 11 T1_CONT_Y
10 10 T1_CONT_C
9 9 T1_CONT_M
8 8 T1_CONT_Bk
7 7 FB_CONT
6 6 T_REM
5 5 T2_OFF_REM
4 4 T2_CONT
3 3 SP_CONT
2 2 GND
1 1 GND
YC1
GND 1 1
5V 2 2
GND 3 3
12V 4 4
GND 5 5
GND 6 6
24V1 7 7
24V1 8 8
YC3
8 8 GND
7 7 5V
6 6 GND
5 5 12V
4 4 GND
3 3 GND
2 2 24V1
1 1 24V1
YC13
GND 1 1
GND 2 2
3.3V3 3 3
3.3V2 4 4
YC26
4 4 GND
3 3 GND
2 2 3.3V3
1 1 3.3V2
FPWB1
YC15
24V1 1 1
N.C 2 2
24V2 3 3
PCUSW
YC5
POWER_OFF 3 3
DRUM_HEAT_REM 2 2
GND 1 1
YC17
1 1 POWER_OFF
2 2 DRM_HEAT_REM
3 3 GND
4 4 FSR_RELAY_REM
YC4
24V1 1 1
24V1 2 2
24V1 3 3
12V 4 4
GND 5 5
GND 6 6
GND 7 7
GND 8 8
YC12
1 1 24V1
2 2 24V1
3 3 24V1
4 4 12V
5 5 GND
6 6 GND
7 7 GND
8 8 GND
YC13
24V1 1 1
24V1 2 2
24V1 3 3
24V1 4 4
24V1 5 5
24V1 6 6
24V1 7 7
24V1 8 8
GND 9 9
GND 10 10
GND 11 11
GND 12 12
GND 13 13
GND 14 14
GND 15 16
GND 16 16
To Paper feeder
To Document finisher
CRPWB
YC17
1 5V1
2 GND
3 CURRENT_MONI
To FPWB2
TB1 #250
LIVE IN 1 1
TB2 #250
LIVE OUT 1 1
From Inlet
EPWB
YC1
DC_REC_CNT 1 1
AC_MAG_CLK_Y 2 2
AC_MAG_CNT_Y 3 3
DISCHARGE_Y 4 4
AC_MAIN_CNT_Y 5 5
AC_SLV_CNT_Y 6 6
DC_MAG_CNT_Y 7 7
DC_SLV_CNT_Y 8 8
AC_SLV_CLK_Y 9 9
MAIN_IDC_Y 10 10
DC_MAIN_CNT_Y 11 11
DC_MAIN_REM 12 12
AC_MAIN_CLK 13 13
SGND 14 14
YC16
14 DC_REC_CNT
13 AC_MAG_CLK_Y
12 AC_MAG_CNT_Y
11 DISCHARGE_Y
10 AC_MAIN_CNT_Y
9 AC_SLV_CNT_Y
8 DC_MAG_CNT_Y
7 DC_SLV_CNT_Y
6 AC_SLV_CLK_Y
5 MAIN_IDC_Y
4 DC_MAIN_CNT_Y
3 DC_MAIN_REM
2 AC_MAIN_CLK
1 GND
YC2
SGND 1 1
DC_MAIN_CNT_C 2 2
MAIN_IDC_C 3 3
DC_MAG_REM 4 4
AC_SLV_CLK_C 5 5
DC_SLV_CNT_C 6 6
DC_MAG_CNT_C 7 7
AC_SLV_CNT_C 8 8
AC_MAIN_CNT_C 9 9
DISCHARGE_C 10 10
AC_MAG_CNT_C 11 11
AC_MAG_CLK_C 12 12
DC_REC_REM 13 13
Connector holder
14 GND
13 DC_MAIN_CNT_C
12 MAIN_IDC_C
11 DC_MAG_REM
10 AC_SLV_CLK_C
9 DC_SLV_CNT_C
8 DC_MAG_CNT_C
7 AC_SLV_CNT_C
6 AC_MAIN_CNT_C
5 DISCHARGE_C
4 AC_MAG_CNT_C
3 AC_MAG_CLK_C
2 DC_REC_REM
1 NC
YC3
AC_MAG_CLK_M 1 1
AC_MAG_CNT_M 2 2
DISCHARGE_M 3 3
AC_MAIN_CNT_M 4 4
AC_SLV_CNT_M 5 5
DC_MAG_CNT_M 6 6
DC_SLV_CNT_M 7 7
AC_SLV_CLK_M 8 8
MAIN_IDC_M 9 9
DC_MAIN_CNT_M 10 10
SGND 11 11
NC 12 12
YC17
11 AC_MAG_CLK_M
10 AC_MAG_CNT_M
9 DISCHARGE_M
8 AC_MAIN_CNT_M
7 AC_SLV_CNT_M
6 DC_MAG_CNT_M
5 DC_SLV_CNT_M
4 AC_SLV_CLK_M
3 MAIN_IDC_M
2 DC_MAIN_CNT_M
1 GND
Connector holder
YC4
SGND 1 1
DC_MAIN_CNT_Bk 2 2
MAIN_IDC_Bk 3 3
AC_MAIN_CNT_Bk 4 4
AC_SLV_CLK_Bk 5 5
DC_SLV_CNT_Bk 6 6
DC_MAG_CNT_Bk 7 7
AC_SLV_CNT_Bk 8 8
DISCHARGE_Bk 9 9
AC_MAG_CNT_Bk 10 10
AC_MAG_CLK_Bk 11 11
11 GND
10 DC_MAIN_CNT_Bk
9 MAIN_IDC_Bk
8 AC_MAIN_CNT_Bk
7 AC_SLV_CLK_Bk
6 DC_SLV_CNT_Bk
5 DC_MAG_CNT_Bk
4 AC_SLV_CNT_Bk
3 DISCHARGE_Bk
2 AC_MAG_CNT_Bk
1 AC_MAG_CLK_Bk
YC5
DV
+24V1 1 1
+24V1 2 2
PGND 3 3
PGND 4 4
YC6
MC
+24V1 1 1
PGND 2 2
HVPWB1
MCPWB
YC2
+24V1 6 6
+24V1 5 5
+24V1 4 4
PGND 3 3
PGND 2 2
PGND 1 1
YC11
1 1 24V1
2 2 24V1
3 3 24V1
4 4 GND
5 5 GND
6 6 GND
YC16
1 1 24V1
2 2 24V1
3 3 24V1
4 4 PGND
5 5 PGND
6 6 PGND
PSPWB
YC5
4 4 NEUTRAL_OUT
3 3 NEUTRAL_IN
2 2 LIVE_OUT
1 1 LIVE_IN
YC3
MH_NEUTRAL 1 1
NC 2 2
MH_LIVE 3 3
To IHPWB
TB4
NEUTRAL 1
TB3
LIVE 1
YC2
MSW IN 1
MSW_OUT 2
TB5 #110
DH_LIVE 1 1
YC1
MSW_OUT 1 1
MSW_IN 2 2
TB1 #250
LIVE 1 1
TB2 #250
NEUTRAL 1 1
YC7
DH_LIVE_IN 1 1
2 2
3 3
DH_LIVE_OUT 4 4
YC8
DH_LIVE 1 1
DH_LIVE 2 2
NC 3 3
NC 4 4
DH_NEUTRAL 5 5
DH_NEUTRAL 6 6
YC4
PS_LIVE 1
NC 2
PS_NEUTRAL 3
YC9
DH_LIVE 1 1
2
DH_NEUTRAL 3 3
To Paper feeder
4 4 DH_LIVE
2 2 MSW_OUT
1 1 MSW_IN
MSW
2 1 To CRPWB
AC_LIVE
AC_NEUTRAL
Inlet
1 1
2 2
CH

No.10


OPWB
EPWB
IFPWB
KUIO (option)
KUIOPWB
MPWB
HDD
USB
PSPWB
LCDBL
CONFM
Relay
YC46
YC3
YC8
YC9
YC4
YC18
YC23
YC5
YC12
YC21
YC20
YC43
YC14
YC24
YC2
YC16
YC1
YC27

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