KYOCERA

ECOSYS FS-1020MFP
ECOSYS FS-1220MFP
ECOSYS FS-1120MFP
ECOSYS FS-1320MFP
ECOSYS FS-1025MFP
ECOSYS FS-1125MFP
ECOSYS FS-1325MFP

SERVICE MANUAL

Published in November 2013
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2M7SM062
Rev.2

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/Letter modes.

Ecosys FS-1020MFP: 3 in1 model by 20/21 ppm (without FAX and document processor)
Ecosys FS-1220MFP:3 in1 model by 20/21 ppm (without FAX and document processor)
Ecosys FS-1120MFP: 4 in1 model by 20/21 ppm (with FAX)
Ecosys FS-1320MFP:4 in1 model by 20/21 ppm (with FAX)
Ecosys FS-1025MFP: 3 in1 model by 25/26 ppm (without FAX)
Ecosys FS-1125MFP: 4 in1 model by 25/26 ppm (with FAX)
Ecosys FS-1325MFP:4 in1 model by 25/26 ppm (with FAX)

Revision history

Revision	Date	Replaced pages	Remarks
1	March 29, 2013	Contents, 1-1-4,1-1-9,1-2-6 to1-2-9,1-3-3, 1-3-4,1-3-7,1-3-11,1-3-15 to 1-3-20, 1-4-1 to1-4-3, 1-4-6 to1-4-8,1-4-10 to 1-4-15, 1-4-18,1-4-22,1-4-25, 1-5-22,1-5-25,1-5-30,1-5-31,1-6-1 to 1-6-6, 2-1-1,2-1-6,2-1-13,2-1-15,2-2-4,2-2-5,2-3-4,2-3-5, 2-3-11,2-3-17,2-4-17,2-4-18,2-4-21,2-4-22	
2	November 18, 2013	Contents, 1-1-1 to 1-1-9,1-1-12,1-2-6 to 1-2-9, 1-2-13,1-2-18,1-3-3,1-3-6 to 1-3-10,1-3-12,1-3-18, 1-4-2,1-4-3,1-4-10,1-4-17,1-4-26,1-6-1 to 1-6-5, 2-3-5,2-3-6,2-3-9,2-3-10,2-3-15,	-

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Safety precautions

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

Safety warnings and precautions

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

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

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

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

Symbols

The triangle (△) symbol indicates a warning including danger and caution. The specific point of attention is shown inside the symbol.

 General warning.

 Warning of risk of electric shock.

 Warning of high temperature.

⃠ indicates a prohibited action. The specific prohibition is shown inside the symbol.

 General prohibited action.

 Disassembly prohibited.

● indicates that action is required. The specific action required is shown inside the symbol.

 General action required.

 Remove the power plug from the wall outlet.

 Always ground the copier.

1. Installation Precautions

⚠ WARNING

- Do not use a power supply with a voltage other than that specified. Avoid multiple connections to one outlet: they may cause fire or electric shock. When using an extension cable, always check that it is adequate for the rated current.....

- Connect the ground wire to a suitable grounding point. Not grounding the copier may cause fire or electric shock. Connecting the earth wire to an object not approved for the purpose may cause explosion or electric shock. Never connect the ground cable to any of the following: gas pipes, lightning rods, ground cables for telephone lines and water pipes or faucets not approved by the proper authorities.....

⚠ CAUTION:

- Do not place the copier on an infirm or angled surface: the copier may tip over, causing injury.....

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

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

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

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

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

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

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

2. Precautions for Maintenance

⚠WARNING

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

⚠CAUTION

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

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

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

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

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

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

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

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

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

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

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

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

3. Miscellaneous

⚠WARNING

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

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

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CONTENTS

2-1 Mechanical Construction

2-2 Electrical Parts Layout

2-3 Operation of the PWBs

2-4 Appendixes

1-1-1 Specifications

Common Functions

Item		Specifications			
		3 in 1 model (without FAX)		4 in 1 model (with FAX)	
		20/21 ppm	25/26 ppm	20/21 ppm	25/26 ppm
Type		Desktop			
Printing method		Electrophotography by semiconductor laser			
Paper weight	**Cassette**	60 to 220 g/m^2 (Duplex: 60 to 120 g/m^2)			
	Manual feed tray*	-	60 to 220 g/m^2	-	60 to 220 g/m^2
Paper type	**Cassette/ Manual feed tray***	Plain, Preprinted, Labels, Bond, Recycled, Vellum, Rough, Letterhead, Color, Prepunched, Envelope, Cardstock, Thick paper, High Quality, Custom 1 to 8			
Warm-up time (22 °C/71.6 °F, 60% RH)	**Power on**	20 seconds or less	23 seconds or less	28 seconds or less	28 seconds or less
	Sleep	12 seconds or less	14 seconds or less	12 seconds or less	14 seconds or less
Paper capacity	**Cassette**	250 sheets (80 g/m^2)			
	Manual feed tray*	-	1 sheet	-	1 sheet
Output tray capacity	**Standard paper**	100 sheets (80 g/m^2) (The machine pauses after 100 sheets are printed.)			
	Special paper	-	1 sheet	-	1 sheet
Continuous copying		1 to 99 sheets			
Photoconductor		OPC drum (drum diameter 24 mm)			
Image write system		Semiconductor laser (1 beam)			
Charging system		Charger roller			
Developing system		Mono component dry developing method Toner replenishing: Automatic from the toner container			
Transfer system		Transfer roller			
Separation system		Small diameter separation, discharger brush			
Cleaning system		Counter blade			
Charge erasing system		Exposure by eraser lamp (LED)			
Fusing system		Heat roller system Abnormally high temperature protection devices: thermostat			
Memory		ROM:16MB/ RAM:64 MB(Maxmum 64 MB)			

Item		Specifications			
		3 in 1 model (without FAX)		4 in 1 model (with FAX)	
		20/21 ppm	25/26 ppm	20/21 ppm	25/26 ppm
Interface		USB Interface connector: 1 (USB Hi-Speed)	USB Interface connector: 1 (USB Hi-Speed) Network interface: 1 (10 BASE-T/100 BASE-TX)	USB Interface connector: 1 (USB Hi-Speed) Public telephone line: 1	USB Interface connector: 1 (USB Hi-Speed) Network interface: 1 (10 BASE-T/100 BASE-TX) Public telephone line: 1
Operating environment	**Temperature**	10 to 32.5 °C/ 50 to 90.5 °F			
	Humidity	15 to 80% RH			
	Altitude	3,500 m/11,482.8 ft or less High altitude mode is available for regular operation at less than 1500m or 1500 – 3500m.			
	Brightness	1,500 lux or less			
Dimensions (W × D × H)	**machine only**	390 × 333 × 317 mm 15 3/8 × 13 1/8 × 12 1/2"	390 × 361 × 362 mm 15 3/8 × 14 3/16 × 14 1/4"		
Space required (W × D)		390 × 645 mm (using paper feed tray) 15 3/8 × 25 3/8"	424 × 630 mm (using paper feed tray) 16 11/16 × 24 13/16"	424 × 645 mm (using paper feed tray) 16 11/16 × 25 3/8"	424 × 630 mm (using paper feed tray) 16 11/16 × 24 13/16"
Weight		8.7 kg/19.18 lb	10.0 kg/22 lb	9.7 kg/21.34 lb	10.1 kg/22.22 lb
Power source		120 V Specification Model:120 V (60 Hz, 6.0 A) 230 V Specification Model: 220 to 240 V (50 Hz/60 Hz, 3.1 A)			

*:The Manual Feed tray is only provided on the 25/26 ppm model.
NOTE: These specifications are subject to change without notice.

Copy Function

Item		Specifications			
		3 in 1 model (without FAX)		4 in 1 model (with FAX)	
		20/21 ppm	25/26 ppm	20/21 ppm	25/26 ppm
Paper size	**Cassette**	A4, A5, A6, Folio, JIS B5, ISO B5, Letter, Legal, Statement, Executive, Oficio II, (216 × 340 mm, 8-1/2 × 13 inches), 216 × 340 mm, 16 K, Custom (70 × 148 to 216 × 356 mm, 2-3/4 × 5-13/16 to 8-1/2 × 14 inches)			
	Manual feed tray*1	-	A4, A5, A6, Folio, JIS B5, ISO B5, Letter, Legal, Statement, Executive, Oficio II, (216 × 340 mm, 8-1/2 × 13 inches), 216 × 340 mm, 16 K, Custom (70 × 148 to 216 × 356 mm, 2-3/4 × 5-13/16 to 8-1/2 × 14 inches)	-	A4, A5, A6, Folio, JIS B5, ISO B5, Letter, Legal, Statement, Executive, Oficio II, (216 × 340 mm, 8-1/2 × 13 inches), 216 × 340 mm, 16 K, Custom (70 × 148 to 216 × 356 mm, 2-3/4 × 5-13/16 to 8-1/2 × 14 inches)
Paper weight setting	**Light**	63 g/m² or less			
	Normal 1	64 to 69 g/m²			
	Normal 2(3)	70 to 105 g/m²			
	Heavy 1	106 to 135 g/m²			
	Heavy 2(3)	136 to 220 g/m²			
Copying speed (feed from cassette) (images/ min) (300 × 300 dpi)	**When the DP is not used**				
	A4	Light: 20 Normal 1: 20 Normal 2(3): 20	Light: 25 Normal 1: 25 Normal 2(3): 25	Light: 20 Normal 1: 20 Normal 2(3): 20	Light: 25 Normal 1: 25 Normal 2(3): 25
	A4(Quiet Mode)	Light: 15 Normal 1: 15 Normal 2(3): 15 Heavy 1: 14 Heavy 2(3): 13	Light: 18 Normal 1: 18 Normal 2(3): 18 Heavy 1: 17 Heavy 2(3): 16	Light: 15 Normal 1: 15 Normal 2(3): 15 Heavy 1: 14 Heavy 2(3): 13	Light: 18 Normal 1: 18 Normal 2(3): 18 Heavy 1: 17 Heavy 2(3): 16
	Letter	Light: 21 Normal 1: 21 Normal 2(3): 21	Light: 26 Normal 1: 26 Normal 2(3): 26	Light: 21 Normal 1: 21 Normal 2(3): 21	Light: 26 Normal 1: 26 Normal 2(3): 26
	Letter(Quiet Mode)	Light: 16 Normal 1: 16 Normal 2(3): 16 Heavy 1: 14 Heavy 2(3): 13	Light: 19 Normal 1: 19 Normal 2(3): 19 Heavy 1: 17 Heavy 2(3): 16	Light: 16 Normal 1: 16 Normal 2(3): 16 Heavy 1: 14 Heavy 2(3): 13	Light: 19 Normal 1: 19 Normal 2(3): 19 Heavy 1: 17 Heavy 2(3): 16

Item		Specifications			
		3 in 1 model (without FAX)		4 in 1 model (with FAX)	
		20/21 ppm	25/26 ppm	20/21 ppm	25/26 ppm
Copying speed (feed from cassette) (images/ min) (300 × 300 dpi)	**A5/B5/A6 (Quiet Mode)**	Light: 12 Normal 1: 12 Normal 2(3): 12 Heavy 1: 10 Heavy 2(3): 9	Light: 15 Normal 1: 15 Normal 2(3): 15 Heavy 1: 13 Heavy 2(3): 12	Light: 12 Normal 1: 12 Normal 2(3): 12 Heavy 1: 10 Heavy 2(3): 9	Light: 15 Normal 1: 15 Normal 2(3): 15 Heavy 1: 13 Heavy 2(3): 12
	A5/B5/ A6(from 11th image) (Quiet Mode)	Light: 10 Normal 1: 10 Normal 2(3): 10 Heavy 1: 8 Heavy 2(3): 8	Light: 12 Normal 1: 12 Normal 2(3): 12 Heavy 1: 11 Heavy 2(3): 10	Light: 10 Normal 1: 10 Normal 2(3): 10 Heavy 1: 8 Heavy 2(3): 8	Light: 12 Normal 1: 12 Normal 2(3): 12 Heavy 1: 11 Heavy 2(3): 10
	When using the DP				
	A4	-	Light: 18 Normal 1: 18 Normal 2(3): 18	Light: 18 Normal 1: 18 Normal 2(3): 18	Light: 18 Normal 1: 18 Normal 2(3): 18
	A4(Quiet Mode)	-	Light: 18 Normal 1: 18 Normal 2(3): 18 Heavy 1: 17 Heavy 2(3): 16	Light: 15 Normal 1: 15 Normal 2(3): 15 Heavy 1: 14 Heavy 2(3): 13	Light: 18 Normal 1: 18 Normal 2(3): 18 Heavy 1: 17 Heavy 2(3): 16
	Letter	-	Light: 20 Normal 1: 20 Normal 2(3): 20	Light: 20 Normal 1: 20 Normal 2(3): 20	Light: 20 Normal 1: 20 Normal 2(3): 20
	Letter(Quiet Mode)	-	Light: 19 Normal 1: 19 Normal 2(3): 19 Heavy 1: 17 Heavy 2(3): 16	Light: 16 Normal 1: 16 Normal 2(3): 16 Heavy 1: 14 Heavy 2(3): 13	Light: 19 Normal 1: 19 Normal 2(3): 19 Heavy 1: 17 Heavy 2(3): 16
	Legal	-	Light: 16 Normal 1: 16 Normal 2(3): 16	Light: 13 Normal 1: 13 Normal 2(3): 13	Light: 16 Normal 1: 16 Normal 2(3): 16
	Legal(Quiet Mode)	-	Light: 15 Normal 1: 15 Normal 2(3): 15 Heavy 1: 13 Heavy 2(3): 11	Light: 12 Normal 1: 12 Normal 2(3): 12 Heavy 1: 11 Heavy 2(3): 10	Light: 15 Normal 1: 15 Normal 2(3): 15 Heavy 1: 13 Heavy 2(3): 11
	A5/B5/A6 (Quiet Mode)	-	Light: 15 Normal 1: 15 Normal 2(3): 15 Heavy 1: 13 Heavy 2(3): 12	Light: 12 Normal 1: 12 Normal 2(3): 12 Heavy 1: 10 Heavy 2(3): 9	Light: 15 Normal 1: 15 Normal 2(3): 15 Heavy 1: 13 Heavy 2(3): 12
	A5/B5/ A6(from 11th image) (Quiet Mode)	-	Light: 12 Normal 1: 12 Normal 2(3): 12 Heavy 1: 11 Heavy 2(3): 10	Light: 10 Normal 1: 10 Normal 2(3): 10 Heavy 1: 8 Heavy 2(3): 8	Light: 12 Normal 1: 12 Normal 2(3): 12 Heavy 1: 11 Heavy 2(3): 10

Item		Specifications			
		3 in 1 model (without FAX)		4 in 1 model (with FAX)	
		20/21 ppm	25/26 ppm	20/21 ppm	25/26 ppm
First copy time (A4, feed from cassette)	When using the DP	-	13 seconds or less	14 seconds or less	13 seconds or less
	When the DP is not used	12 seconds or less	11 seconds or less	12 seconds or less	11 seconds or less
Zoom level		25 to 400%, 1% increments			
Resolution		600 × 600 dpi			
Support Original types		Sheet, Book, 3-dimensional objects (maximum original size: A4/Letter)			
Original feed system		Fixed			

*1 :Duplex printing is only possible on the 25/26 ppm model.

Printer Functions

Item		Specifications			
		20/21ppm		25/26ppm	
Paper size	Cassette	A4, A5, A6, Folio, JIS B5, ISO B5, Letter, Legal, Statement, Executive, Envelope Monarch, Envelope #10, Envelope #9, Envelope #6-3/4, Envelope C5, Envelope DL, Oficio II (216 × 340 mm, 8-1/2 × 13 inches), 216 × 340 mm, 16 K, Custom (70 × 148 to 216 × 356 mm, 2-3/4 × 5-13/16 to 8-1/2 × 14 inches)			
	Manual feed tray*1	-	A4, A5, A6, Folio, JIS B5, ISO B5, Letter, Legal, Statement, Executive, Envelope Monarch, Envelope #10, Envelope #9, Envelope #6-3/4, Envelope C5, Envelope DL, Oficio II (216 × 340 mm, 8-1/2 × 13 inches), 216 × 340 mm, 16 K, Custom (70 × 148 to 216 × 356 mm, 2-3/4 × 5-13/16 to 8-1/2 × 14 inches)	-	A4, A5, A6, Folio, JIS B5, ISO B5, Letter, Legal, Statement, Executive, Envelope Monarch, Envelope #10, Envelope #9, Envelope #6-3/4, Envelope C5, Envelope DL, Oficio II (216 × 340 mm, 8-1/2 × 13 inches), 216 × 340 mm, 16 K, Custom (70 × 148 to 216 × 356 mm, 2-3/4 × 5-13/16 to 8-1/2 × 14 inches)

Item		Specifications	
		20/21ppm	**25/26ppm**
Paper weight setting	**Light**	63 g/m² or less	
	Normal 1	64 to 69 g/m²	
	Normal 2(3)	70 to 105 g/m²	
	Heavy 1	106 to 135 g/m²	
	Heavy 2(3)	136 to 220 g/m²	
Printing speed Simplex (images/min)	**A4**	Light: 20 Normal 1: 20 Normal 2(3): 20	Light: 25 Normal 1: 25 Normal 2(3): 25
	A4(Quiet Mode)	Light: 15 Normal 1: 15 Normal 2(3): 15 Heavy 1: 14 Heavy 2(3): 13	Light: 18 Normal 1: 18 Normal 2(3): 18 Heavy 1: 17 Heavy 2(3): 16
	Letter	Light: 21 Normal 1: 21 Normal 2(3): 21	Light: 26 Normal 1: 26 Normal 2(3): 26
	Let-ter(Quiet Mode)	Light: 16 Normal 1: 16 Normal 2(3): 16 Heavy 1: 14 Heavy 2(3): 13	Light: 19 Normal 1: 19 Normal 2(3): 19 Heavy 1: 17 Heavy 2(3): 16
	Legal	Light: 13 Normal 1: 13 Normal 2(3): 13	Light: 20 Normal 1: 20 Normal 2(3): 20
	Legal(Quiet Mode)	Light: 12 Normal 1: 12 Normal 2(3): 12 Heavy 1: 11 Heavy 2(3): 10	Light: 15 Normal 1: 15 Normal 2(3): 15 Heavy 1: 13 Heavy 2(3): 11
	A5/B5/A6 (Quiet Mode)	Light: 12 Normal 1: 12 Normal 2(3): 12 Heavy 1: 10 Heavy 2(3): 9	Light: 15 Normal 1: 15 Normal 2(3): 15 Heavy 1: 13 Heavy 2(3): 12
	A5/B5/ A6(from 11th image) (Quiet Mode)	Light: 10 Normal 1: 10 Normal 2(3): 10 Heavy 1: 8 Heavy 2(3): 8	Light: 12 Normal 1: 12 Normal 2(3): 12 Heavy 1: 11 Heavy 2(3): 10

Item		Specifications	
		20/21ppm	**25/26ppm**
Printing speed Duplex (images/min)	**A4**	-	Light: 15 Normal 1: 15 Normal 2(3): 15
	A4(Quiet Mode)	-	Light: 11 Normal 1: 11 Normal 2(3): 11 Heavy 1: 11 Heavy 2(3): 11
	Letter	-	Light: 15 Normal 1: 15 Normal 2(3): 15
	Letter (Quiet Mode)	-	Light: 11 Normal 1: 11 Normal 2(3): 11 Heavy 1: 11 Heavy 2(3): 11
	Legal	-	Light: 13 Normal 1: 13 Normal 2(3): 13
	Legal(Quiet Mode)	-	Light: 10 Normal 1: 10 Normal 2(3): 10 Heavy 1: 9 Heavy 2(3): 9
First print time*2 **(A4, feed from cassette)**		8.5 seconds or less	7.5 seconds or less
Resolution		Fast 1200 dpi 600 × 600 dpi	
Controller		ARM926EJ 390MHz	
Operating system		Windows XP, Windows Server 2003/R2, Windows Vista , Windows 7 , Windows Server 2008/R2, Mac OS X 10.5 or higher	

*1 :Duplex printing is only possible on the 25/26 ppm model.

*2 :Excluding time for system stabilization immediately after turning on the main power.

Scanner Functions

Item		Specifications
System Requirements		CPU: 20 MHz RAM: 64 MB
Resolution		600 × 600 dpi, 400 × 400 dpi, 300 × 300 dpi, 200 × 200 dpi
File format		BMP,JPG,PNG, TIFF, PDF,
Scanning speed Simplex (A4 land-scape)	**300 dpi**	B/W : 18 images/min Color: 6 images/min
	600 dpi	B/W : 5 images/min Color: 1 images/min
Transmission system		PC transmission: Scan to Folder TWAIN scan *1 WIA scan *2

*1 Available operating system: Windows XP, Windows Server 2003/R2, Windows Vista, Windows Server 2008/R2, Windows 7

*2 Available operating system: Windows Vista, Windows Server 2008/R2, Windows 7

FAX (4 in 1 model only)

Item		Specifications
Paper size	Cassette	A4,Folio,Letter,Legal
	Manual Feed Tray (25/26 ppm model)	A4,Folio,Letter,Legal
Compatibility		Super G3
Communication line		Subscriber telephone line
Transmission time		4 seconds or less (33600 bps, MMR, ITU-T A4 #1 chart)
Transmission speed		33600/31200/28800/26400/24000/21600/19200/16800/14400/12000/9600/7200/4800/2400 bps
Coding scheme		MMR/MR/MH
Error correction		ECM
Original size		Max. width:216 mm/ 8-1/2", Max. length: 356 mm/ 14"
Scanner resolution		Horizontal × Vertical Normal 200 × 100 dpi (8 dot/mm × 3.85 line/mm) Fine 200 × 200 dpi (8 dot/mm × 7.7 line/mm) Super fine 200 × 400 dpi (8 dot/mm × 15.4 line/mm)
Printing resolution		600 × 600 dpi
Gradations		256 shades (Error diffusion)
Multi-Station transmission		Max. 100 destinations
Substitute memory reception		150 sheets or more (when using ITU-T A4 #1 chart)
Report output		Outgoing FAX Report, Incoming FAX Report,FAX TX result report, FAX RX result report, Status page, Network status page

Document processor (Standard model only)

Item	Specifications
Original feed method	Automatic feed
Supported original types	Sheet originals
Original sizes	Maximum: Folio/ Legal Minimum : A6/ Statement-R
Original weights	60 to 105 g/m^2
Loading capacity	40 sheets (60 to 80 g/m^2) or less

1-1-2 Parts names

(1) Machine

3 in 1 25/26 ppm model, 4 in 1 20/21, 25/26 ppm model

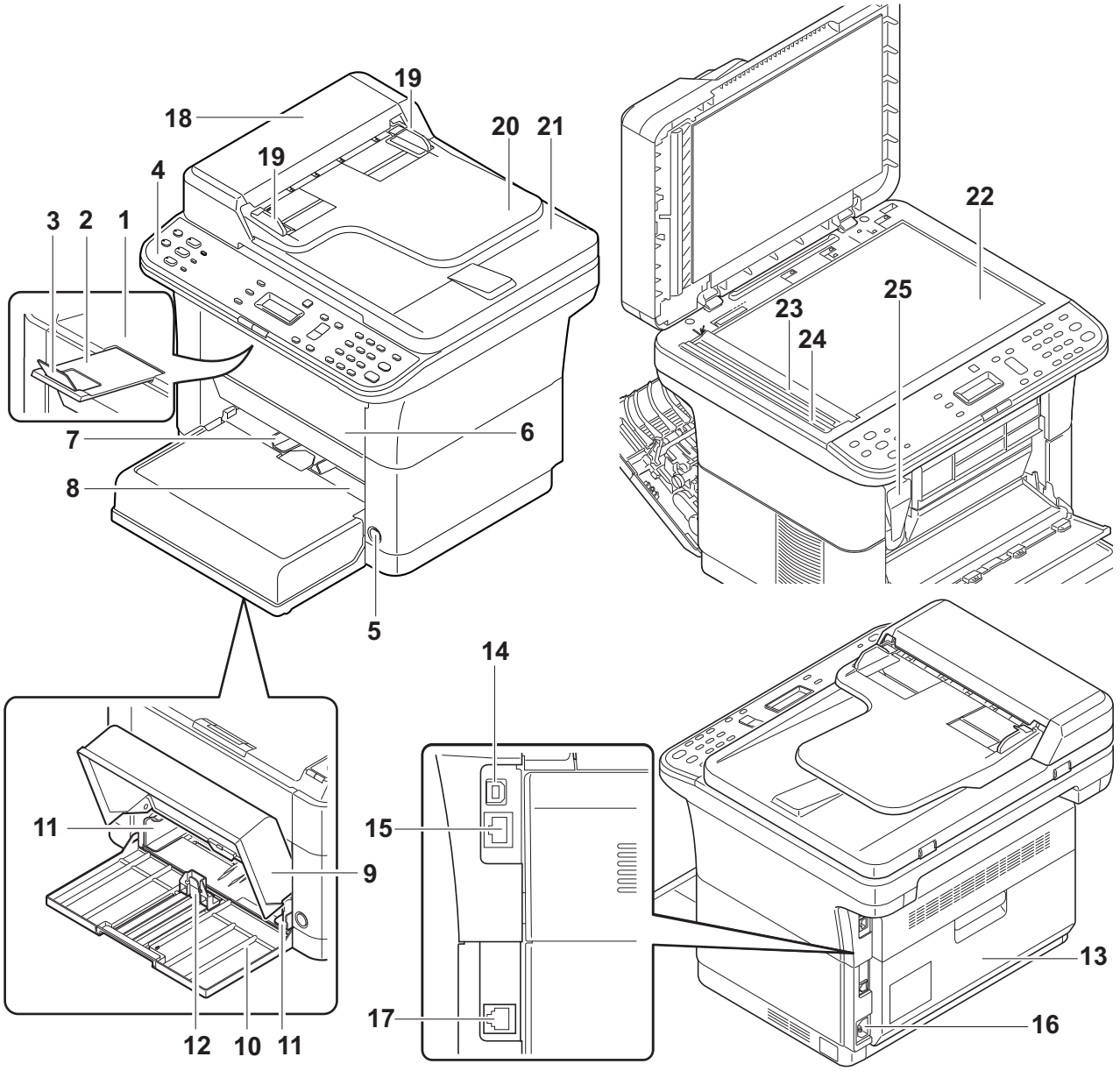

Figure 1-1-1

1. Top tray
2. Sub tray
3. Paper stopper
4. Operation panel
5. Power switch
6. Front cover
7. Manual feed paper width guides*1
8. Manual feed tray*1
9. Cassette cover
10. Cassette
11. Paper width guides
12. Paper length guide
13. Rear cover
14. USB interface connector
15. Network interface connector*1
16. Power code connector
17. Line connector*2
18. DP top cover
19. Original width guides
20. Original table
21. Original eject table
22. Platen (contact glass)
23. Original size Indicator plate
24. Slit glass cover
25. Toner container

*1: 25/26 ppm model only. *2: 4 in 1 model only

3 in 1 20/21 ppm model

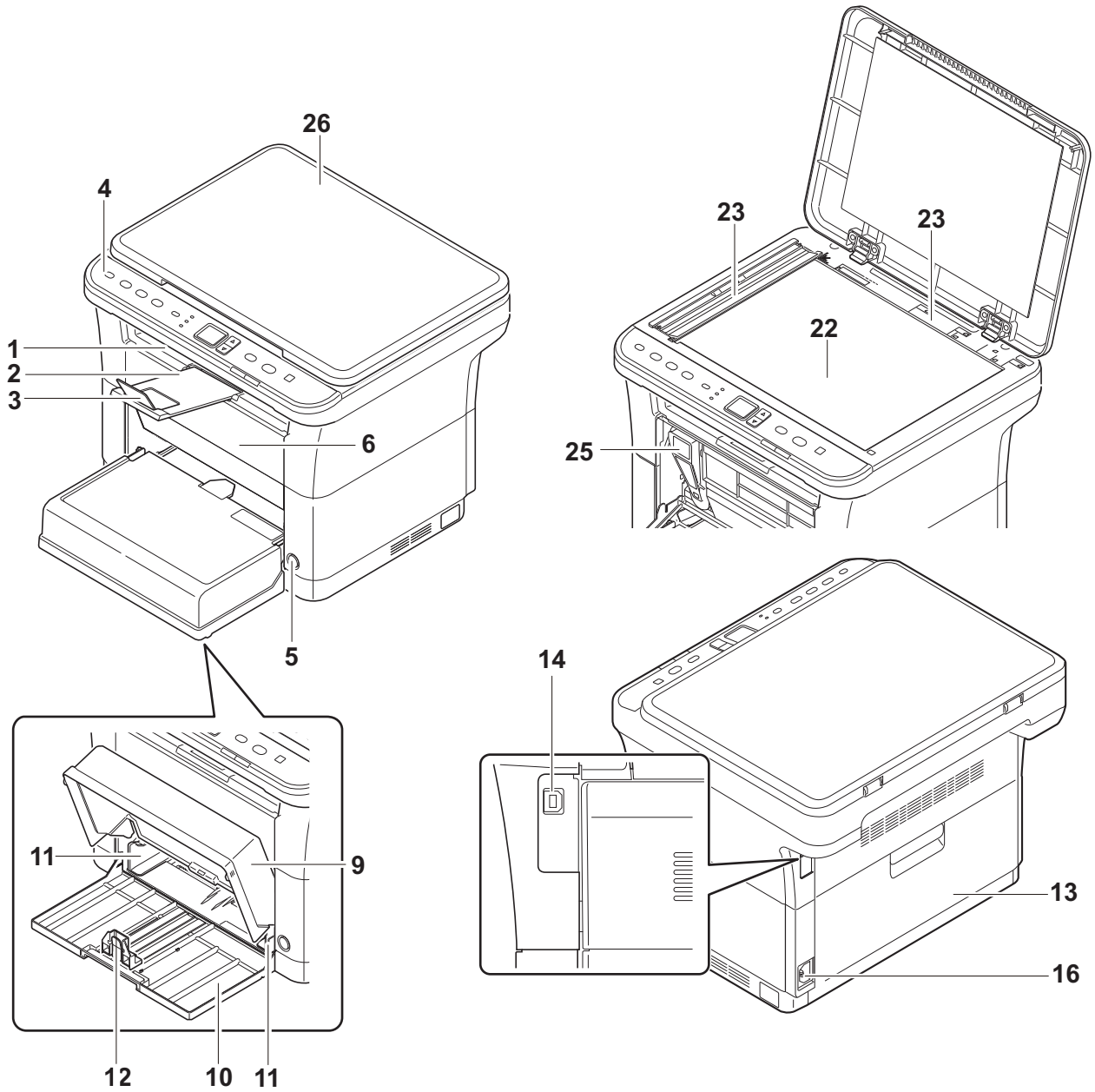

Figure 1-1-2

26. Original Cover

(2) Operation panel

3 in 1 20/21 ppm model

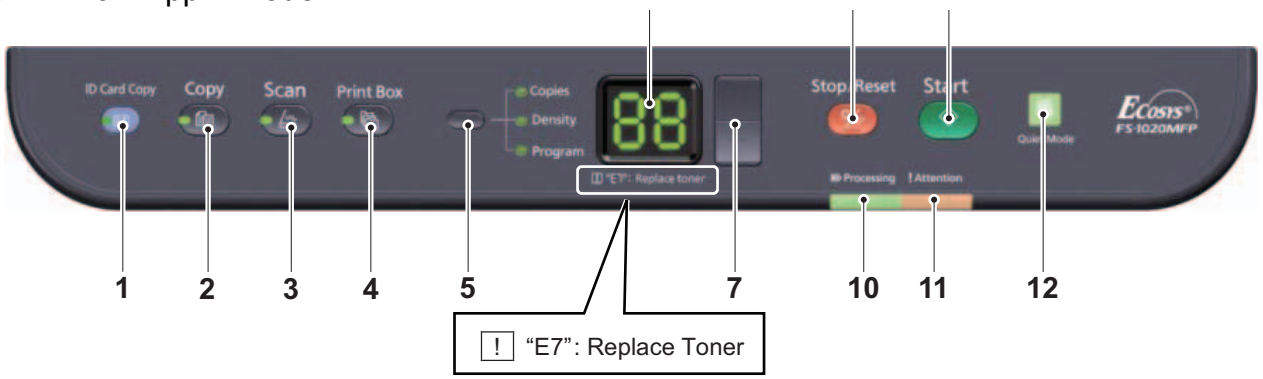

Figure 1-1-3

1. ID Card Copy key
2. Copy key
3. Scan key
4. Print Box key
5. Mode select key
6. Message display
7. Cursor key (Up/Down)
8. Stop / Reset key
9. Start key
10. Processing indicator
11. Attention indicator
12. Quiet Mode key

3 in 1 25/26 ppm model, 4 in 1 20/21, 25/26 ppm model

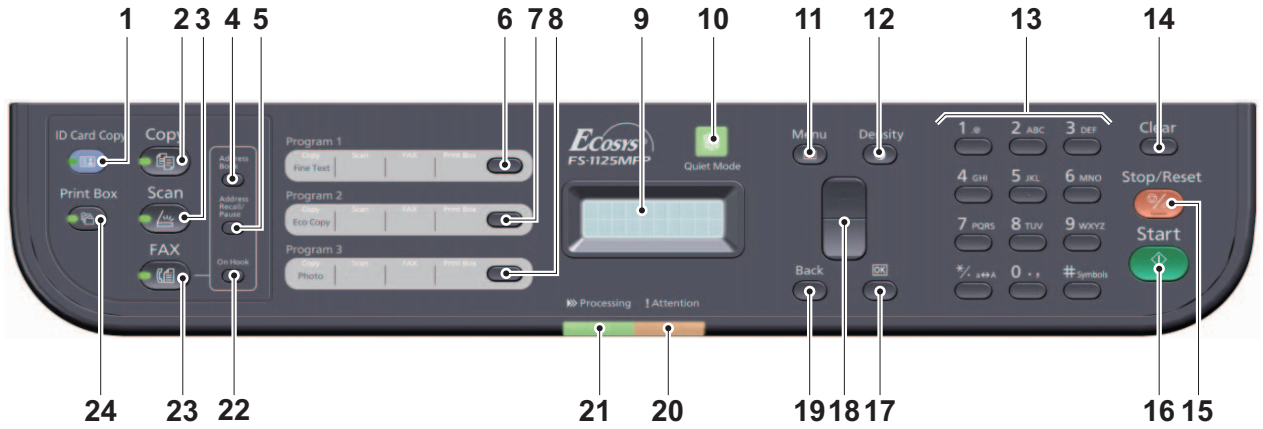

Figure 1-1-4

1. ID Card Copy key
2. Copy key
3. Scan key
4. Address Book key*
5. Recall / Pause key*
6. Program1 key
7. Program2 key
8. Program3 key
9. Message display
10. Quiet Mode key
11. Menu key
12. Density key
13. Numeric keys
14. Clear key
15. Stop / Reset key
16. Start key
17. OK key
18. Cursor key (Up/Down)
19. Back key
20. Attention indicator
21. Processing indicator
22. On Hook key*
23. FAX key*
24. Print Box key

*: 4 in 1 model only

1-1-3 Machine cross section

(1) 20/21 ppm Model

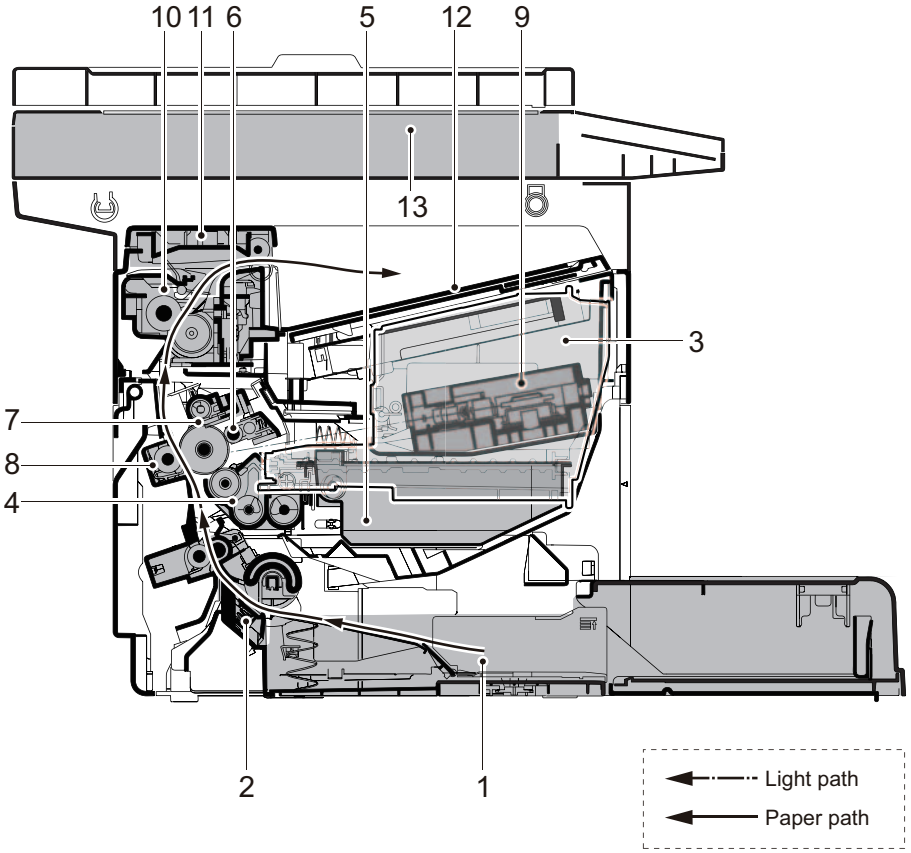

Figure 1-1-5

1. Cassette
2. Paper feed/conveying section
3. Toner container
4. Developing unit
5. Wast toner box
6. Drum charge roller
7. Drum unit
8. Transfer/separation section
9. Laser scanner unit
10. Fuser section
11. Exit section
12. Top tray
13. Scanner section

(2) 25/26 ppm Model

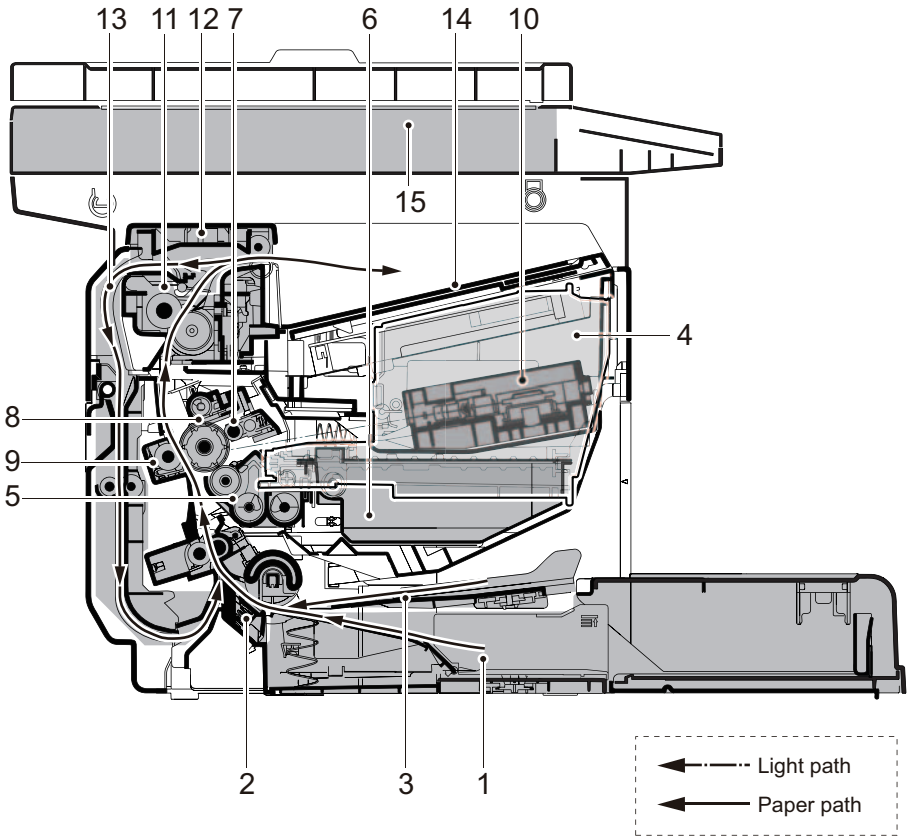

Figure 1-1-6

1. Cassette
2. Paper feed/conveying section
3. Manual feed tray
4. Toner container
5. Developing unit
6. Wast toner box
7. Drum charge roller
8. Drum unit
9. Transfer/separation section
10. Laser scanner unit
11. Fuser section
12. Feedshift/exit section
13. Duplex conveying section
14. Top tray
15. Scanner section

(3) ISU/DP Section

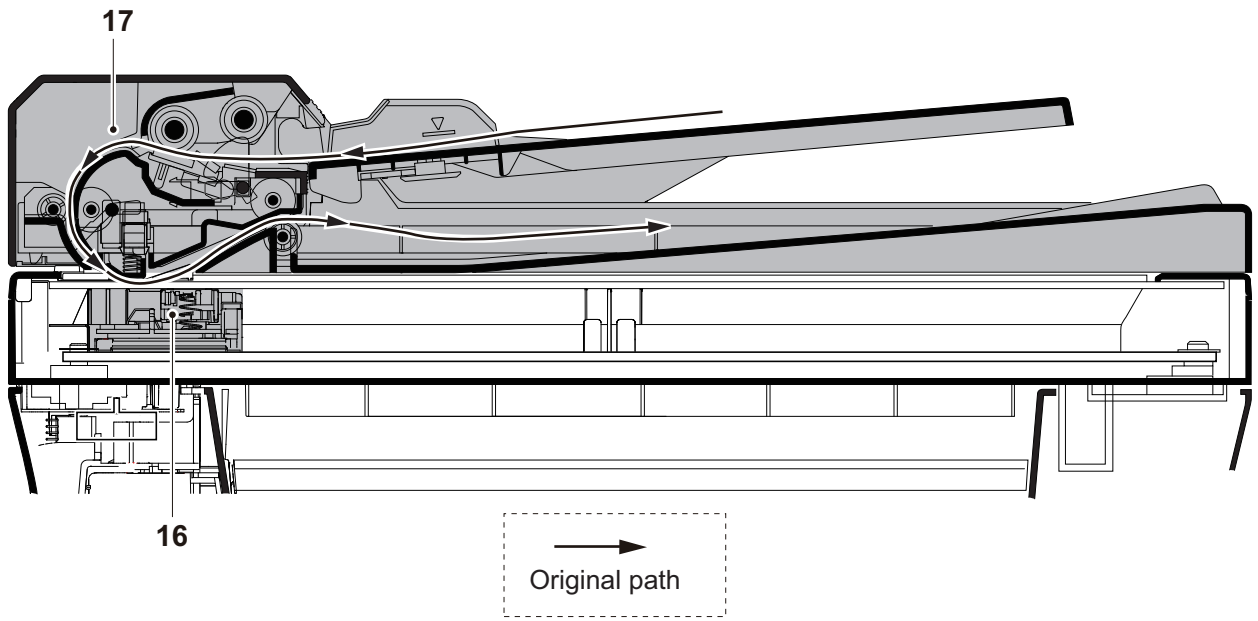

Figure 1-1-7

16. Image scanner unit (ISU)
17. Document processor (DP) *

* : DP is only possible on the 3 in1 25/26 ppm model, 4 in1 20/21 and 25/26 ppm model.

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1-2-1 Installation environment

1. Temperature: 10 to 32.5°C/50 to 90.5°F
2. Humidity: 15 to 80% RH
3. Power supply: 120 V AC, 6.0 A
   220 - 240 V AC, 3.1 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 : 250 mm/ 10"
   Machine rear : 350 mm/ 14"
   Machine right : 200 mm/ 8"
   Machine left : 200 mm/ 8"
   Machine top : 400 mm/ 15 3/4”

3 in 1 25/26 ppm model,4 in 1 20/21,25/26 ppm model

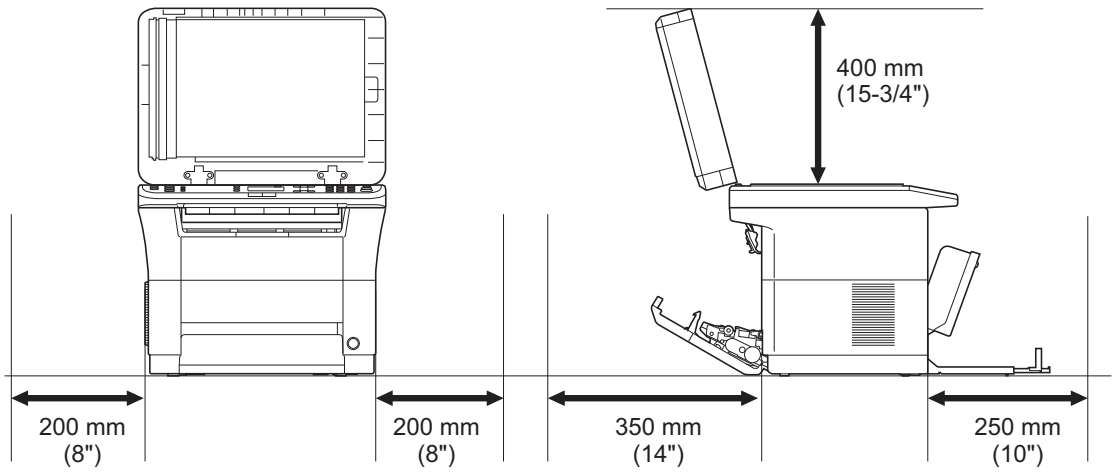


Figure 1-2-1

3 in 1 20/21 ppm model

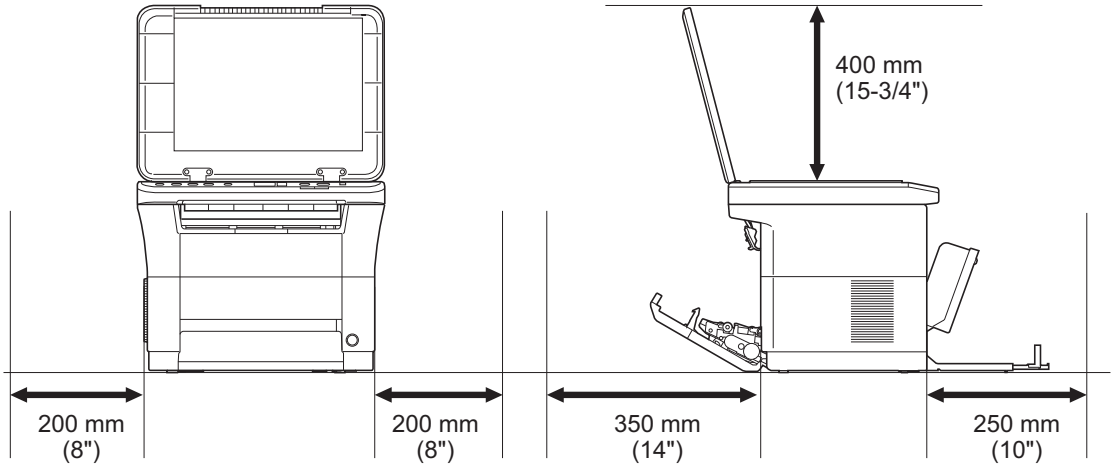


Figure 1-2-2

1-2-2 Unpacking and installation

(1) Installation procedure

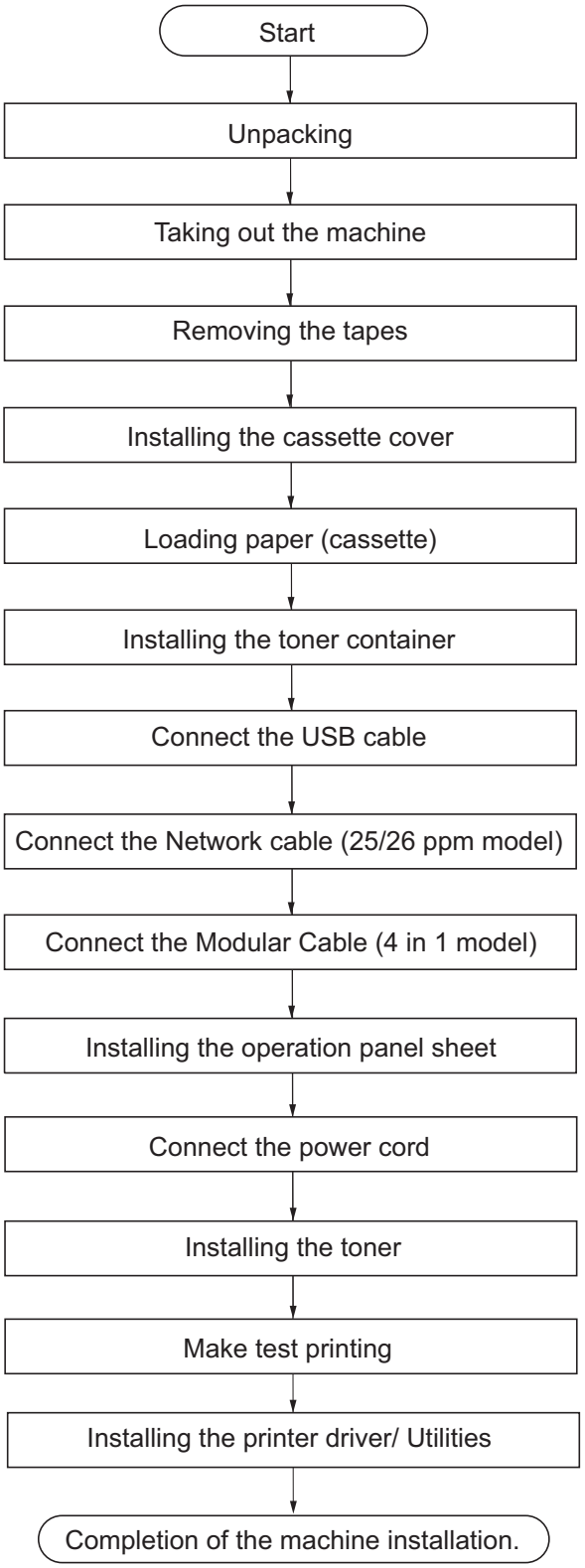


Figure 1-2-3

Unpacking

3 in 1 25/26 ppm model,4 in 1 20/21,25/26 ppm model

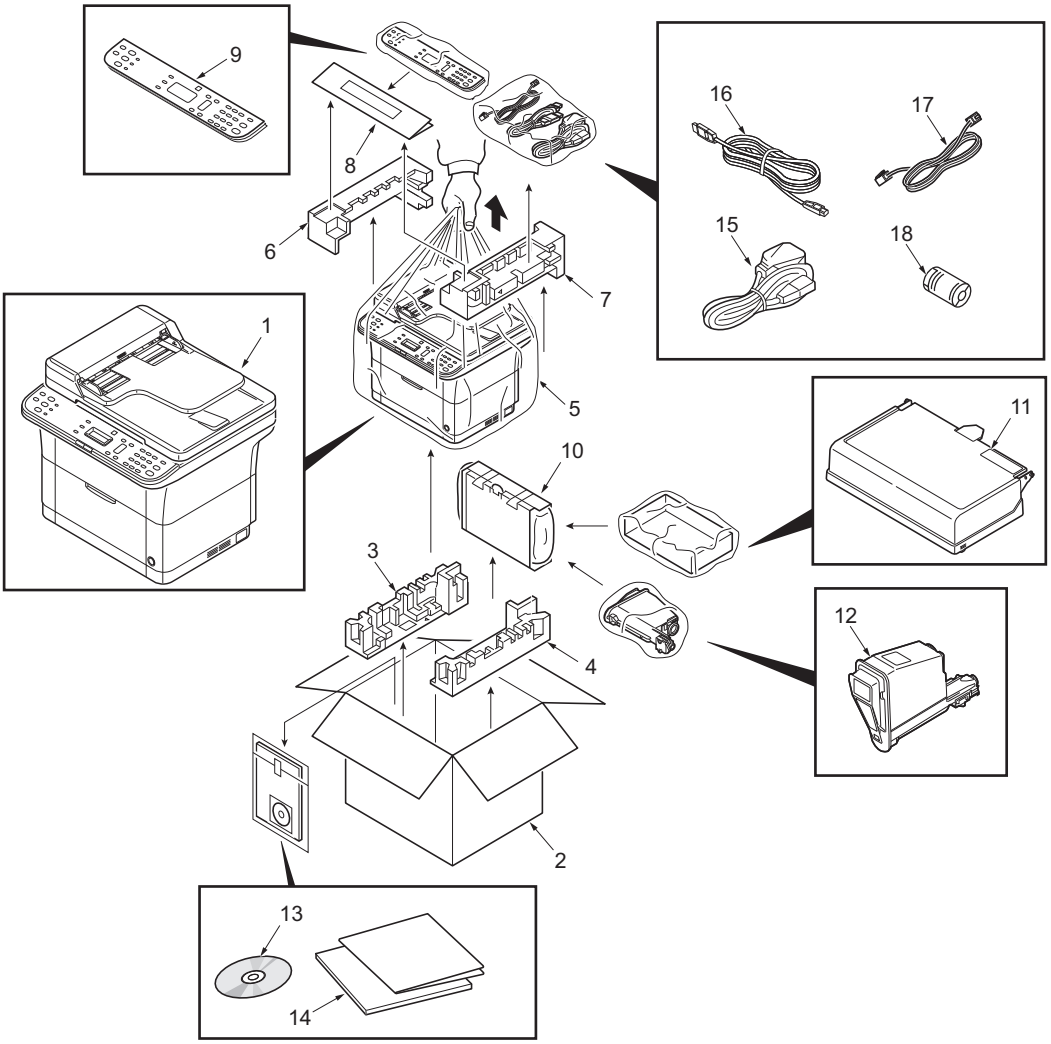


Figure 1-2-4

1. Machine
2. Outer case
3. Bottom left pad
4. Bottom right pad
5. Machine cover
6. Top left pad
7. Top right pad
8. Top spacer
9. Operation panel sheets
10. Spacer
11. Cassette cover
12. Toner container
13. CDROM
14. Quick installation guide etc.
15. Power cord
16. USB cable*1
17. Modular cable*2
18. Ferrite core*2

*1:China model only

*2: The packaging differs depending on the destination.

*: Place the machine on a level surface.

3 in 1 20/21 ppm model

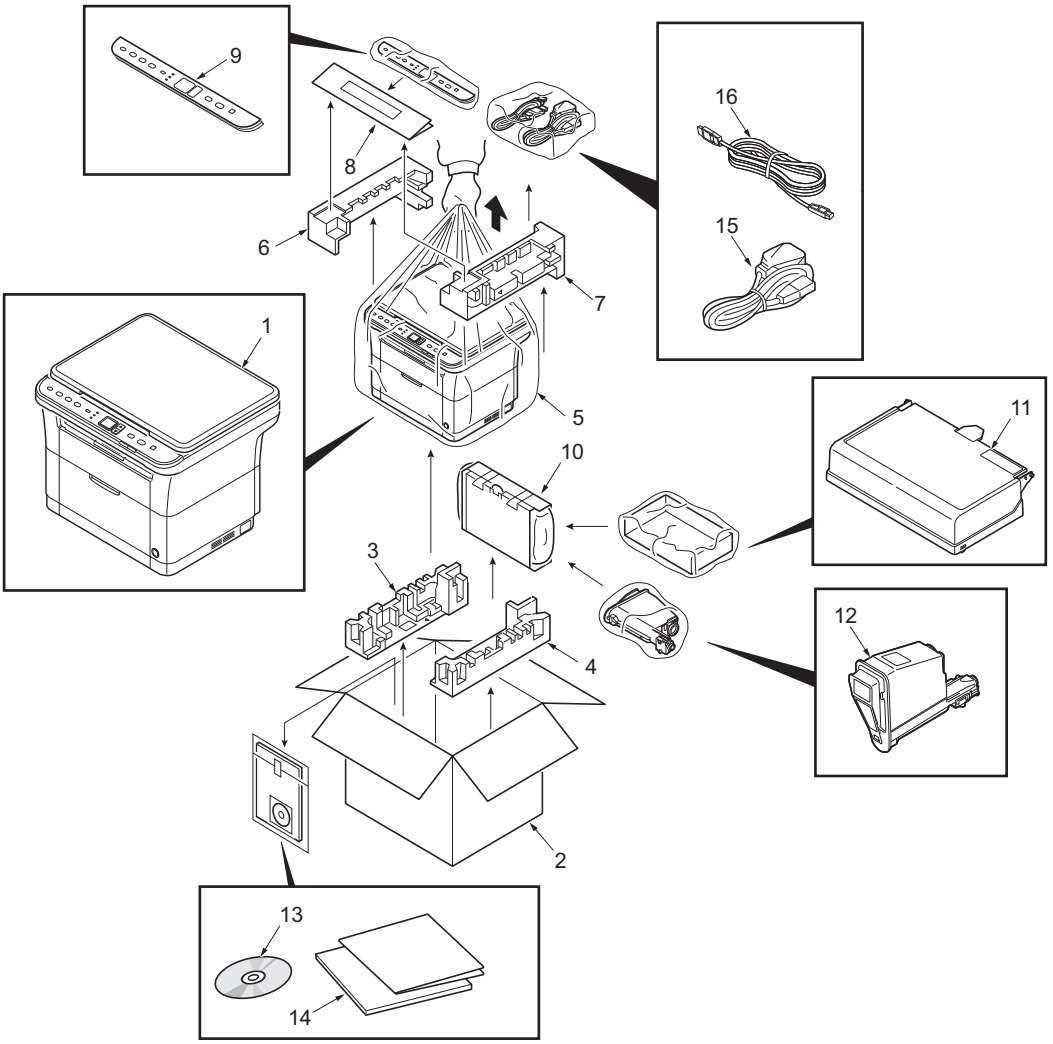


Figure 1-2-5

1. Machine
2. Outer case
3. Bottom left pad
4. Bottom right pad
5. Machine cover
6. Top left pad
7. Top right pad
8. Top spacer
9. Operation panel sheets
10. Spacer
11. Cassette cover
12. Toner container
13. CDROM
14. Quick installation guide etc.
15. Power cord
16. USB cable*

*:China model only

*: Place the machine on a level surface.

Removing the tapes

3 in 1 25/26 ppm model,4 in 1 20/21,25/26 ppm model

1. Remove four tapes.

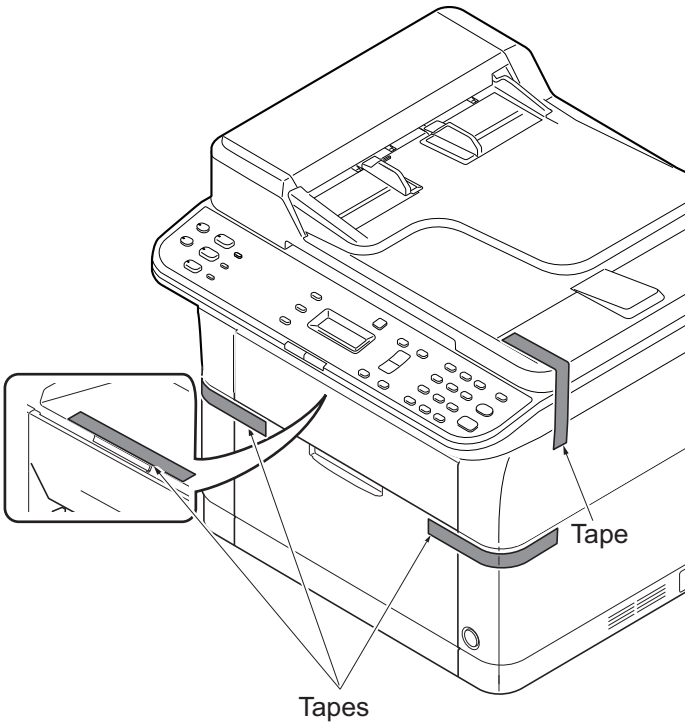


Figure 1-2-6

2. Remove tape.

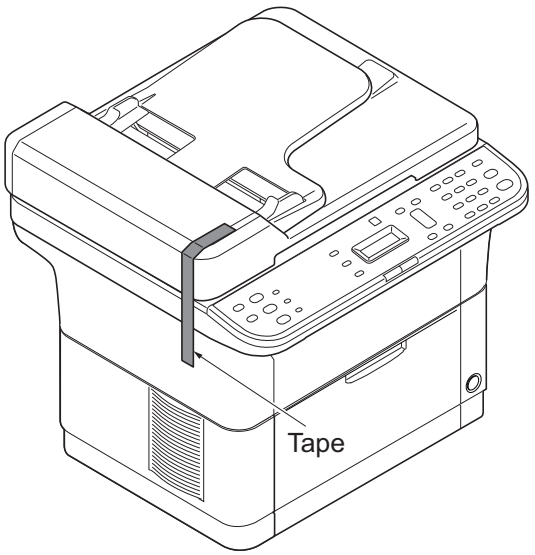


Figure 1-2-7

3. Remove five tapes.

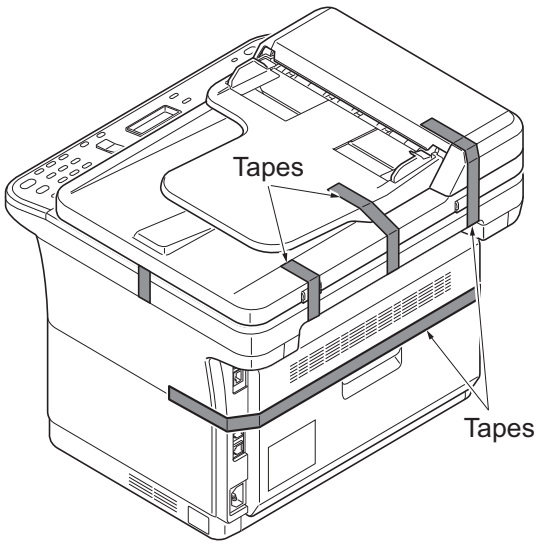


Figure 1-2-8

4. Open the DP.
5. Remove the film.
6. Remove two tapes.

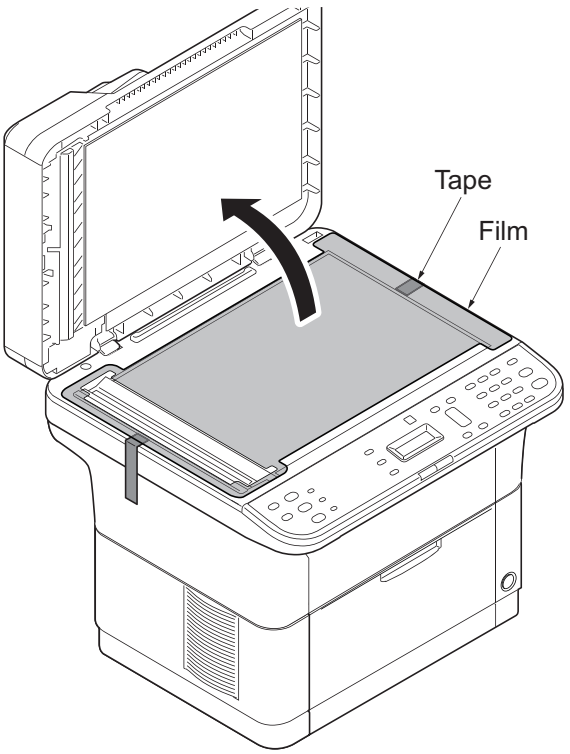


Figure 1-2-9

3 in 1 20/21 ppm model

1. Remove seven tapes.

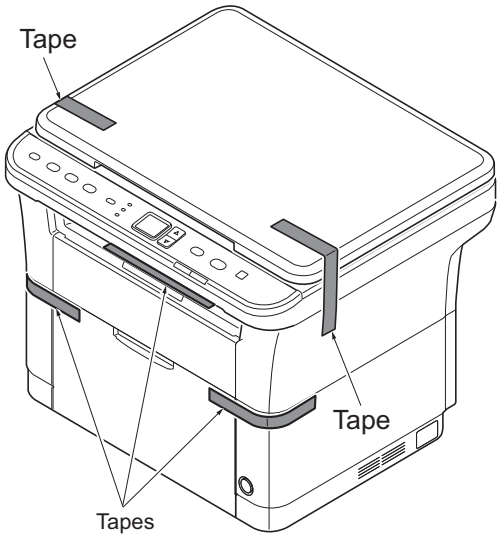


Figure 1-2-10

2. Remove two tapes.

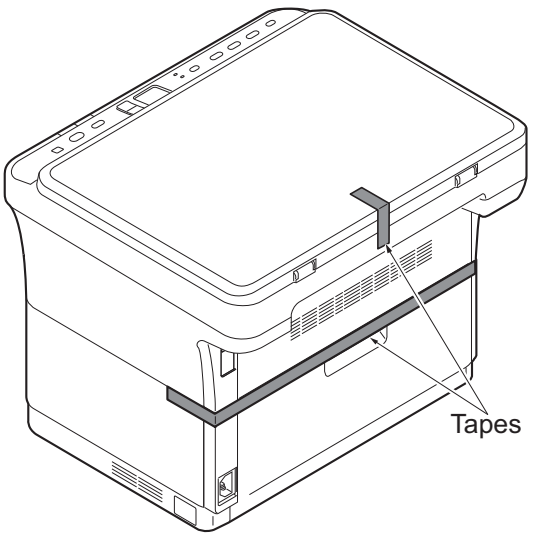


Figure 1-2-11

3. Open the Original Cover.
4. Remove the film.
5. Remove two tapes.

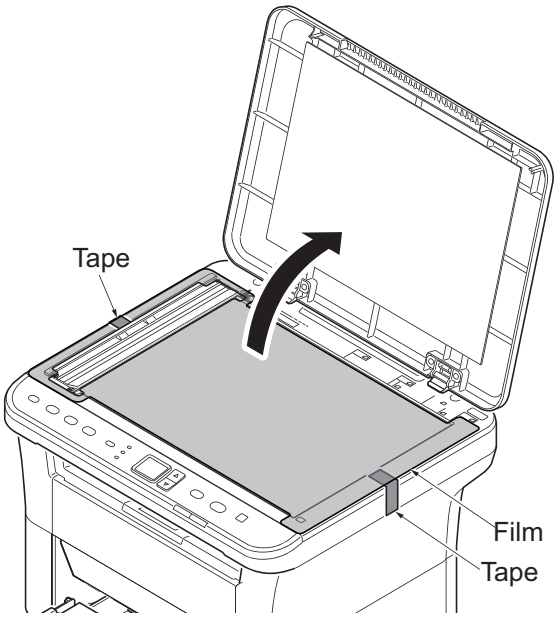


Figure 1-2-12

Installing the cassette cover

1. Attach the cassette cover.
   Attach the cassette cover so that its right and left-side pins and the boss on the machine frame mate with each other.
*: If performing installation in a 25/26 ppm model, install the cassette cover so that its guide at the top is positioned above the MF base.

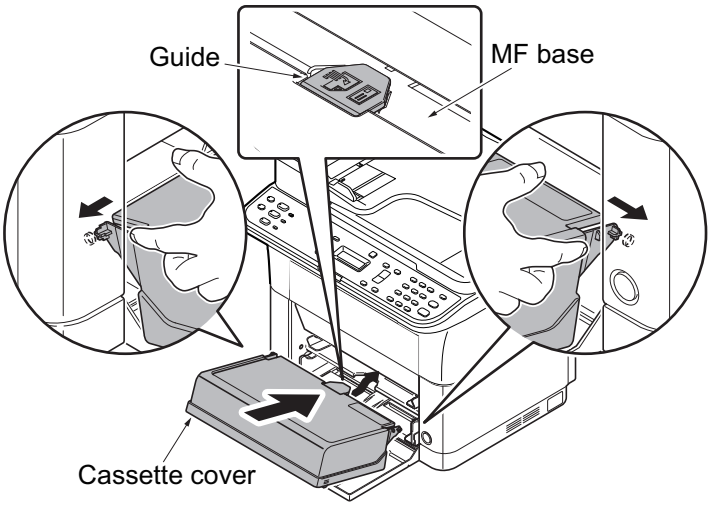


Figure 1-2-13

Loading paper (cassette)

1. Open the cassette cover.

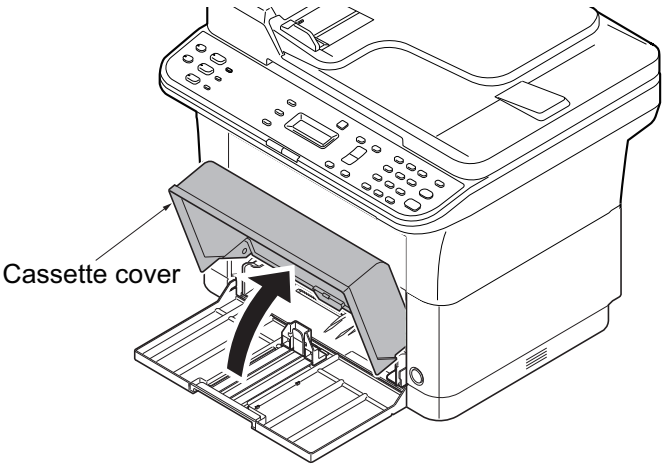


Figure 1-2-14

2. Adjust the position of the width guides located on the left and right sides of the cassette.
*: Paper sizes are marked on the cassette.

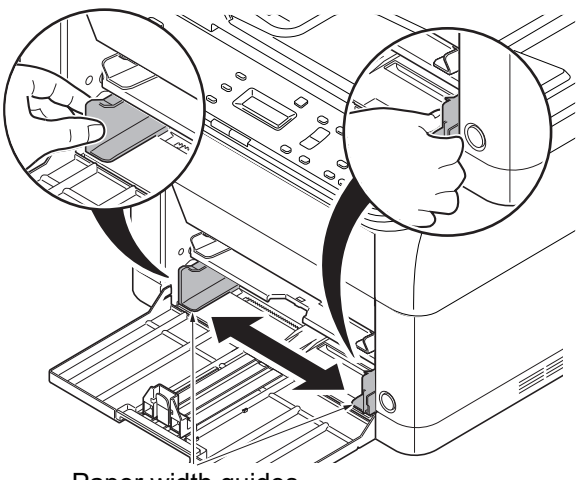


Figure 1-2-15

3. Adjust the paper length guide to the paper size required.

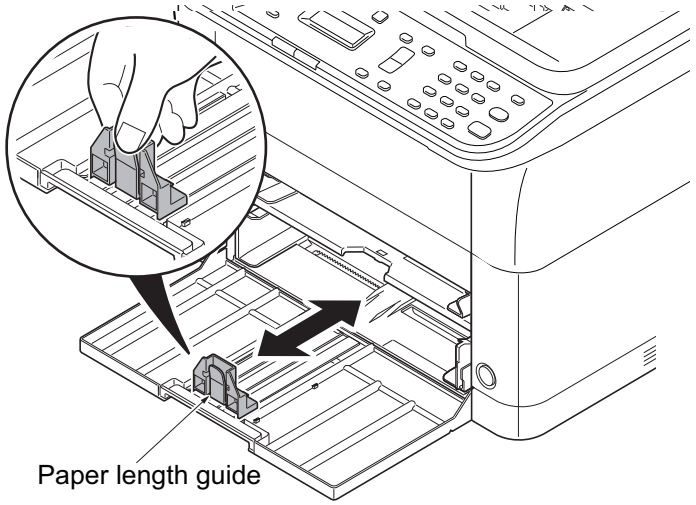


Figure 1-2-16

4. Load the paper all the way in the cassette until the paper touches the far inner side.

*: Ensure the side to be printed is facing up and the paper is not folded, curled, or damaged.

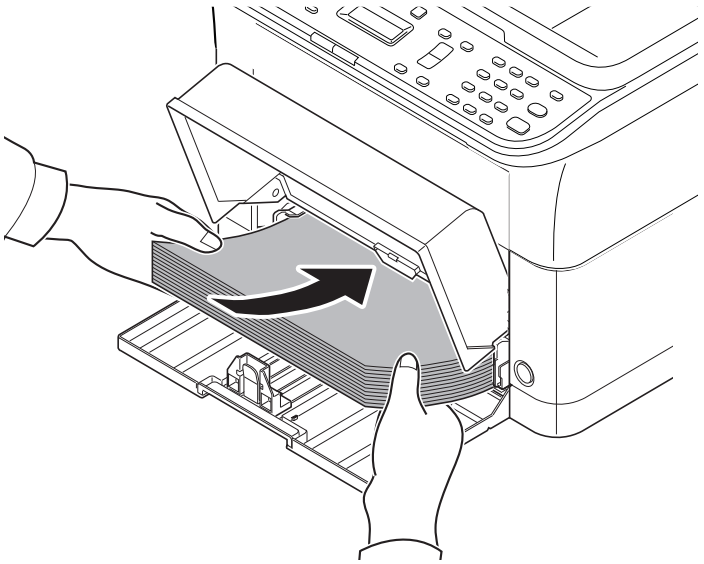


Figure 1-2-17

*: Adjust so that there is no gap between the paper length guide and the paper.

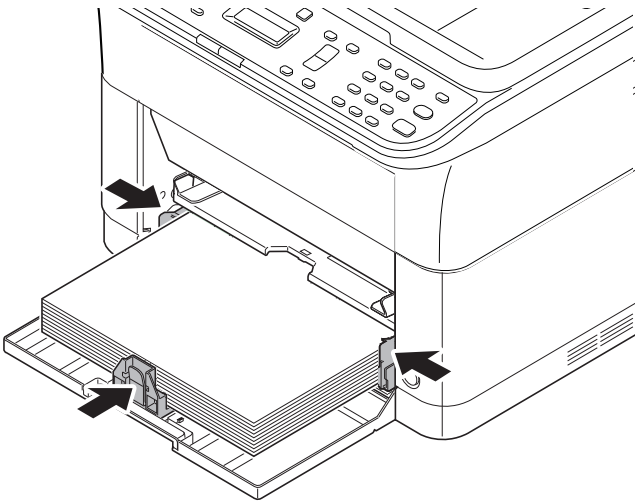


Figure 1-2-18

*: Load an amount of paper that fits under the tabs on the width guides.
*: Ensure that the loaded paper does not exceed the level indicated.

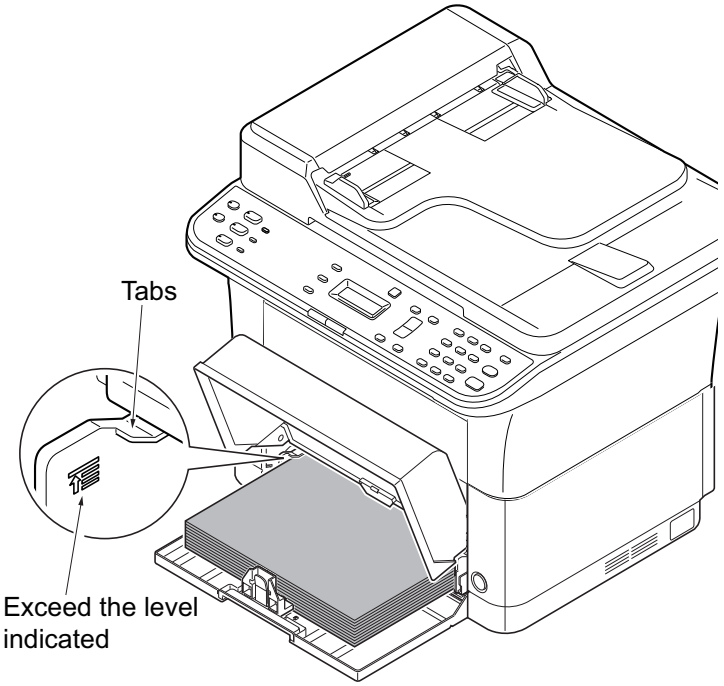


Figure 1-2-19

5. Close the cassette cover.

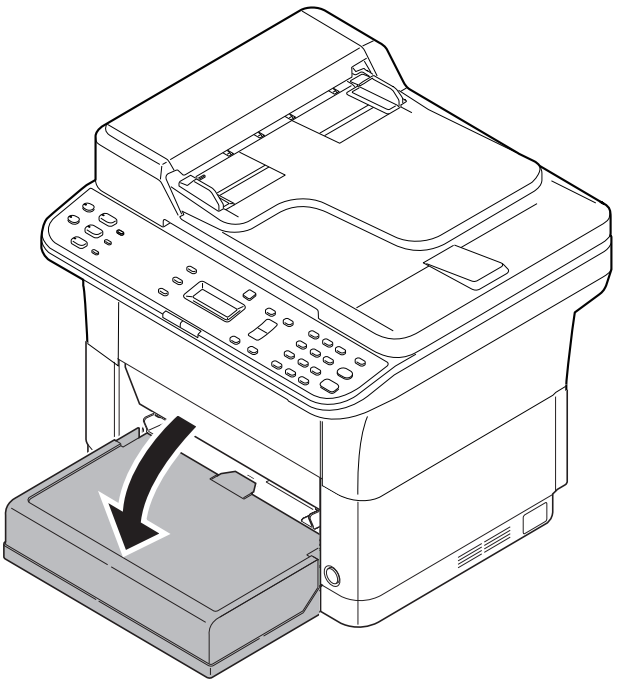


Figure 1-2-20

Installing the toner containers

1. Open the front cover.

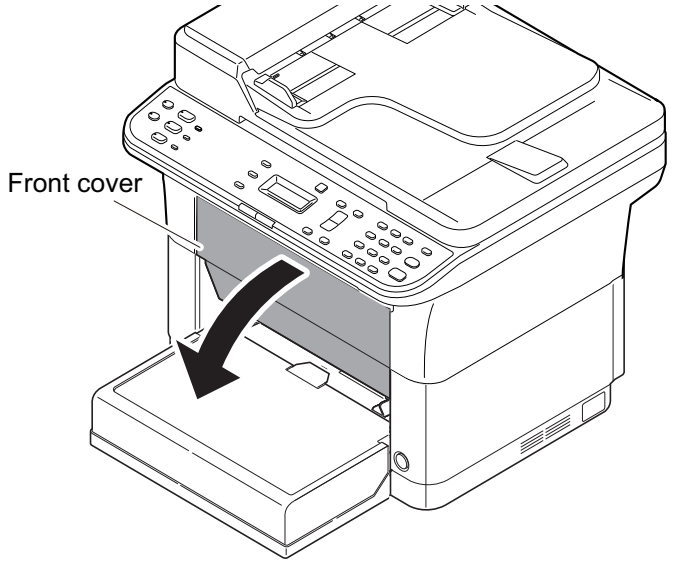


Figure 1-2-21

2. Take the new toner container out of the toner kit.
3. Shake well (the new toner container) as shown in the figure in order to loosen the toner inside the container.

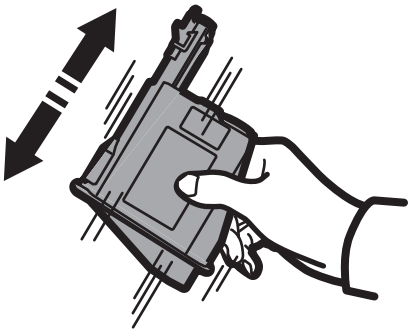


Figure 1-2-22

4. Install the toner container in the machine.

*: Push in firmly until you hear a “click” sound.

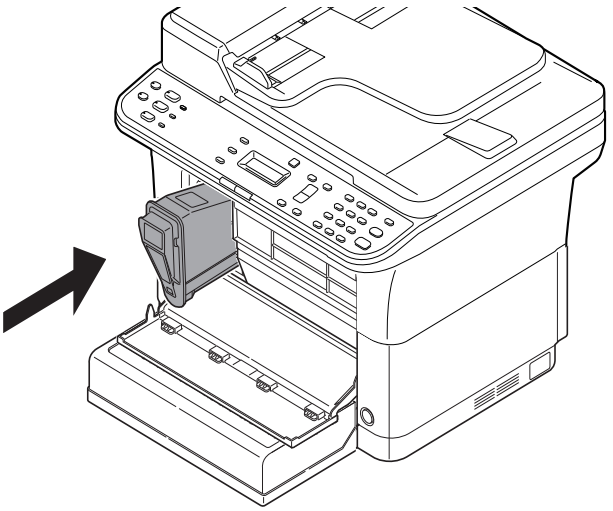


Figure 1-2-23

5. Close the front cover.

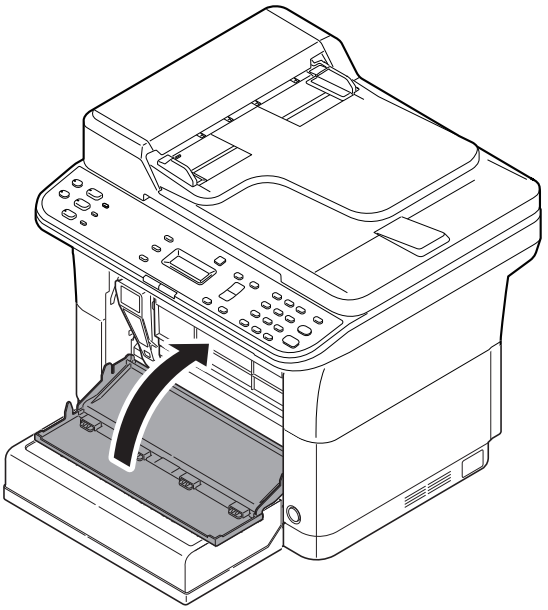


Figure 1-2-24

Connecting the USB Cable

1. Connect the USB cable (not included) to the USB interface connector. Connect the other end of the USB cable to the computer's USB interface connector.

*: China model only included.

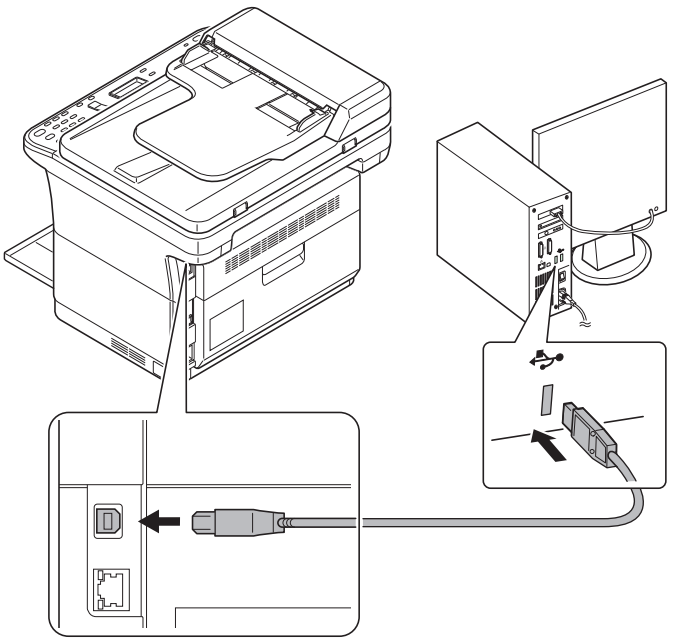


Figure 1-2-25

Connecting the Network Cable (25/26 ppm model only)

1. Connect the network cable (not included) to the network interface connector.
   Connect the other end of the cable to the PC or your network device.

*: Use shielded interface cables.

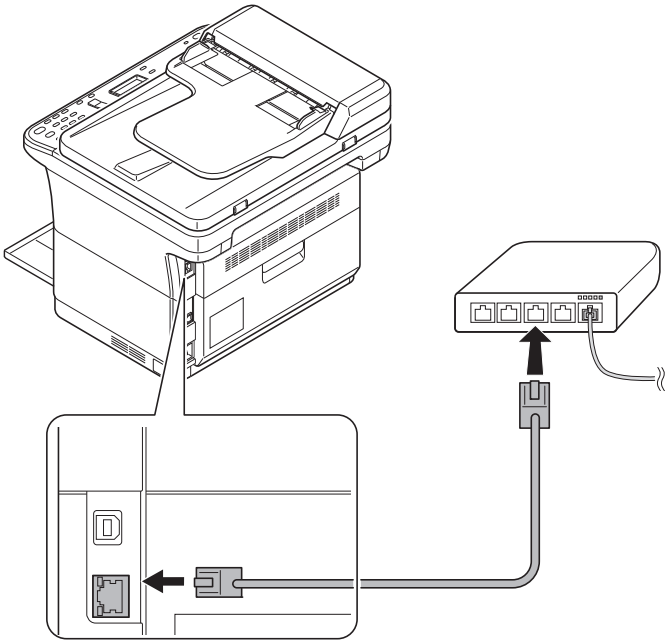


Figure 1-2-26

Connecting the Modular Cable (4 in 1 model only)

1. Connect the modular cable to the interface connector at the rear of the machine.

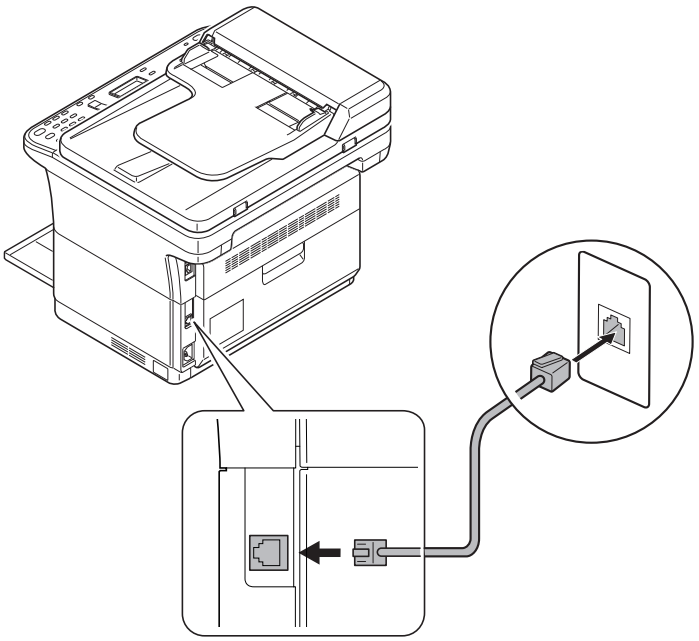


Figure 1-2-27

Install the ferrite core

If a ferrite core is supplied for the destination, follow the following procedure and fit the ferrite core to the modular cables.

1. Open the ferrite core by releasing the two latches.
2. Install the ferrite core onto the modular connecter cable.
3. Wind the modular cables around the ferrite core.

*: Fit the ferrite core on the cables at a distance 35 mm ± 10 mm from the terminal.

4. Close the ferrite core by snapping the two latches in.

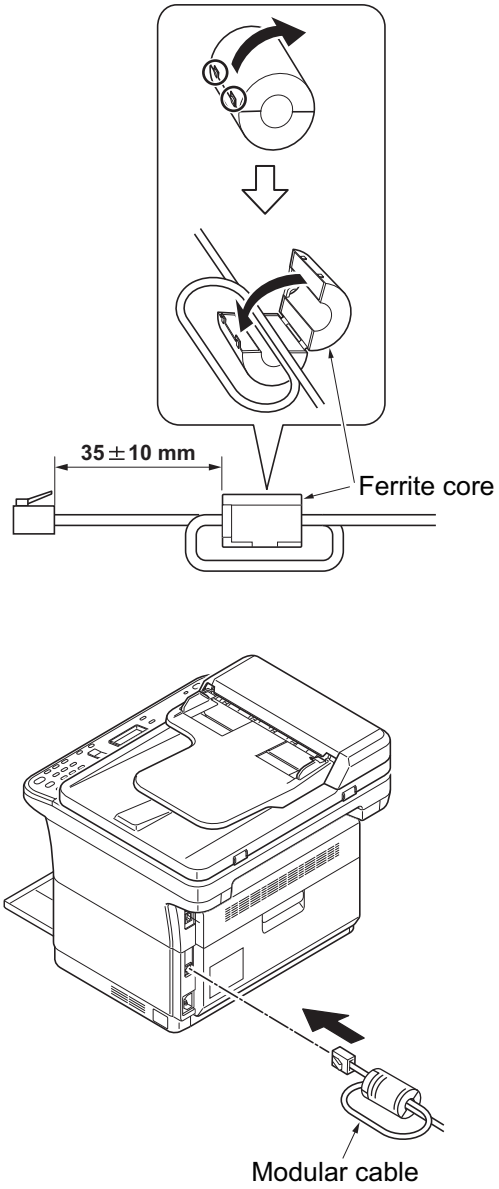
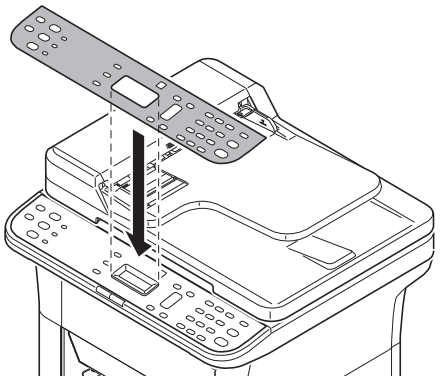


Figure 1-2-28

Installing the operation panel sheet

1. Affix the operation panel sheet which was supplied.

3 in1 25/26 ppm model
4 in1 20/21,25/26 ppm model



3 in1 20/21 ppm model

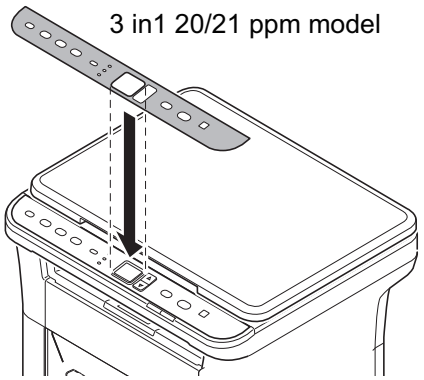


Figure 1-2-29

Connecting the power code

1. Connect the power cord to the power cord connector at the rear of the machine.
2. Connect the other end of the power cord to a power outlet.

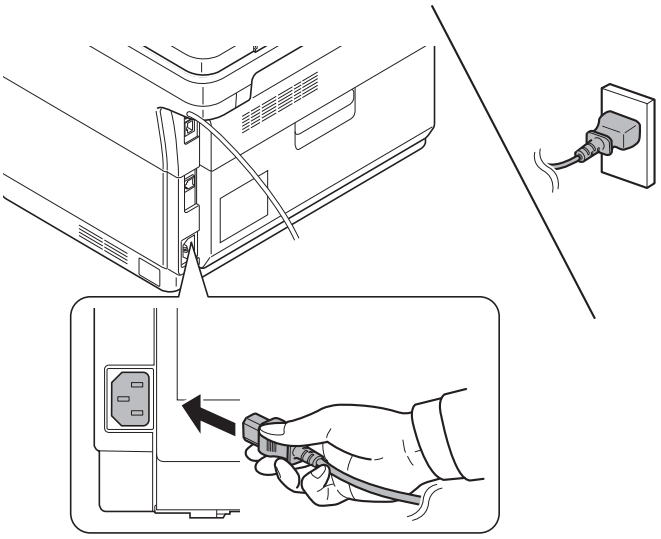


Figure 1-2-30

Installing the toner

1. Press the power switch to On.
2. Starting the toner Installation.

*: The installation is completed when the operation panel shows the following, after approximately 7 minutes.

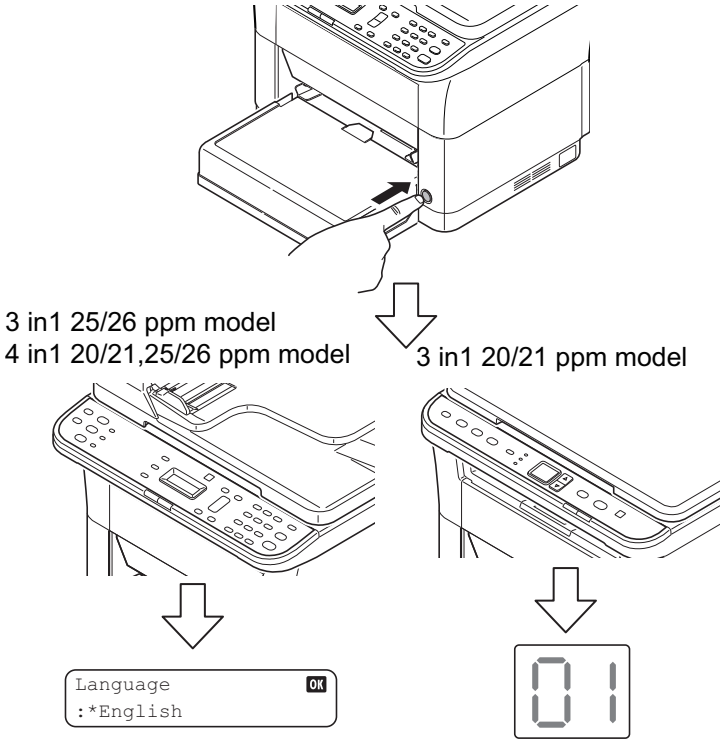


Figure 1-2-31

Make test printing

*: If you are using the machine at an altitude of 1500 m or higher, the Altitude setting can be used to restore print quality (see page P.1-3-21).

3 in 1 25/26 ppm model,4 in 1 20/21,25/26 ppm model

1. Draw out the sub tray and lift the paper stopper upright.

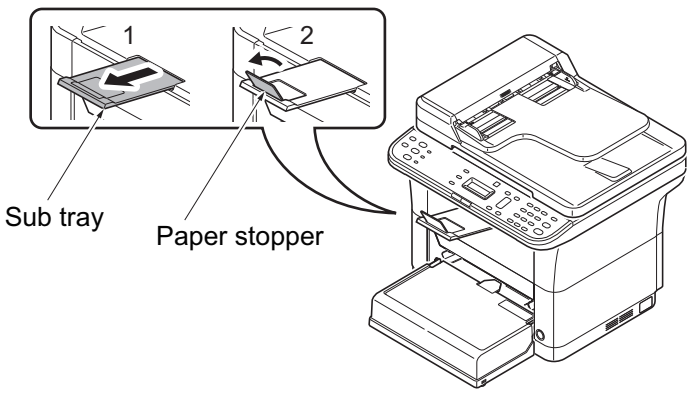


Figure 1-2-32

2. Use the cursor key to select the language and press OK.

1. Press the Menu key.
2. In the Menu. menu screen, press cursor key to select System menu.Press the OK key.
3. In the System menu screen, press cursor key to select Report.Press the OK key.
4. In the Report menu screen, press cursor key to select Status Page.Press the OK key.
5. In the Status Page menu screen, press cursor key to Yes.Press the OK key.

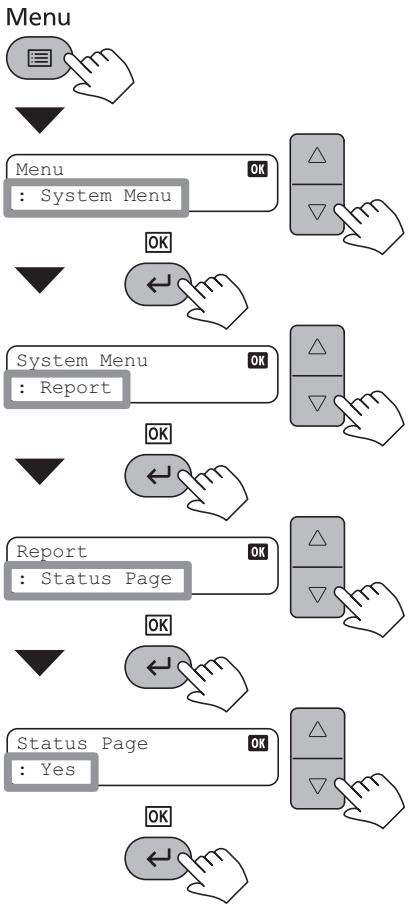


Figure 1-2-33

1. The status page will be printed.

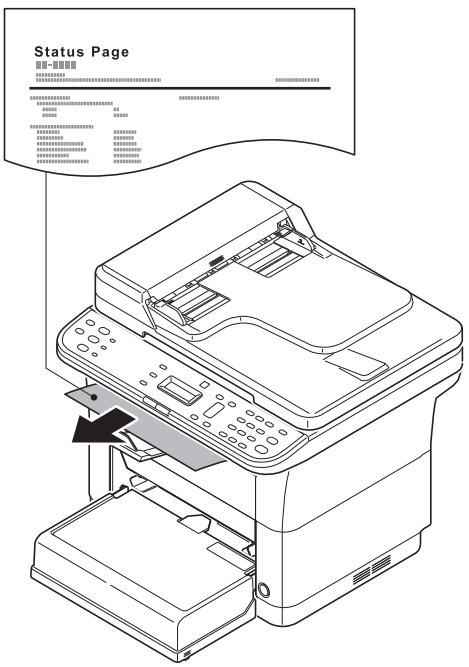


Figure 1-2-34

3 in 1 20/21 ppm model

1. Draw out the sub tray and lift the paper stopper upright.

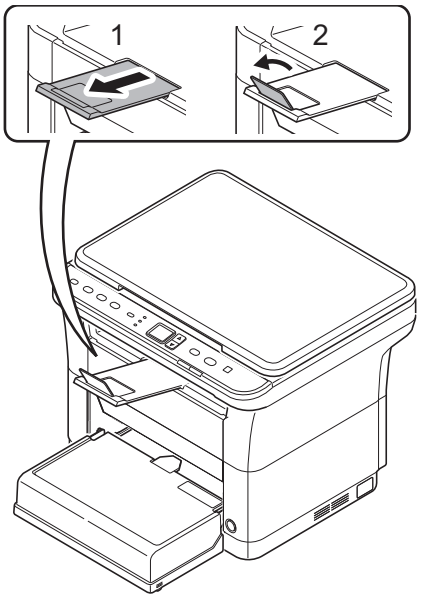
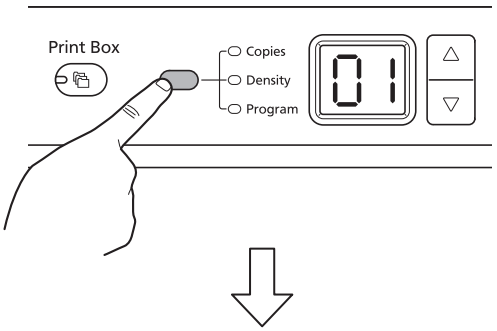


Figure 1-2-35

2. Press the Mode select key for 5 seconds.
3. The status page will be printed.



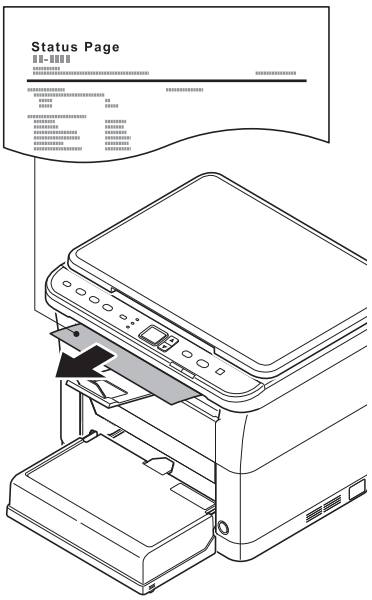


Figure 1-2-36

Installing the Printer Driver/ Utilities

*: Refer to the operation guide.

1. Turn on the computer and start up Windows.
*: If the Welcome to the Found New Hardware Wizard dialog box displays, select Cancel.
2. Insert the CDROM supplied with the machine into the optical drive.

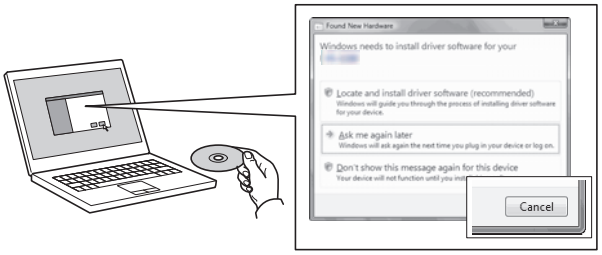


Figure 1-2-37

3. The software install wizard starts up.
4. Select the Express Install tab. The installer detects the machine.
5. Select the machine you want to install, select the Driver Package, and click Install.

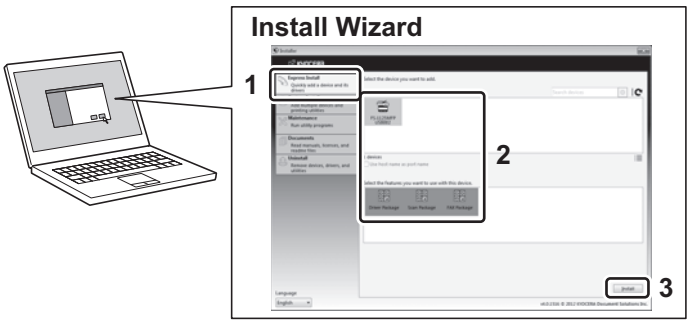


Figure 1-2-38

Access KYOCERA Client Tool

1. Sect All programs - Kyocera - Client Tool - KYOCERA Client Tool.
2. Start the KYOCERA Client Tool.

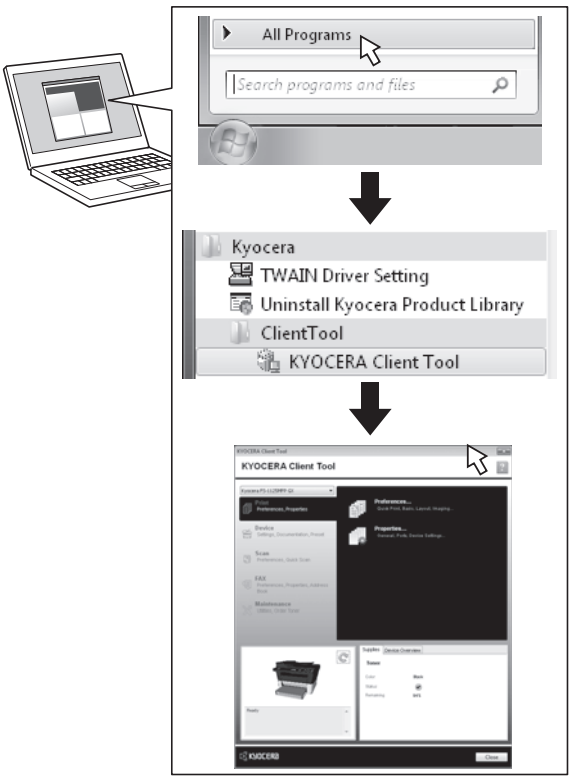


Figure 1-2-39

Completion of the machine installation

This page is intentionally left blank.

1-3-1 Service mode

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

* : 3 in 1 25/26 ppm model, 4 in 1 20/21, 25/26 ppm model

(1) Executing a Service mode

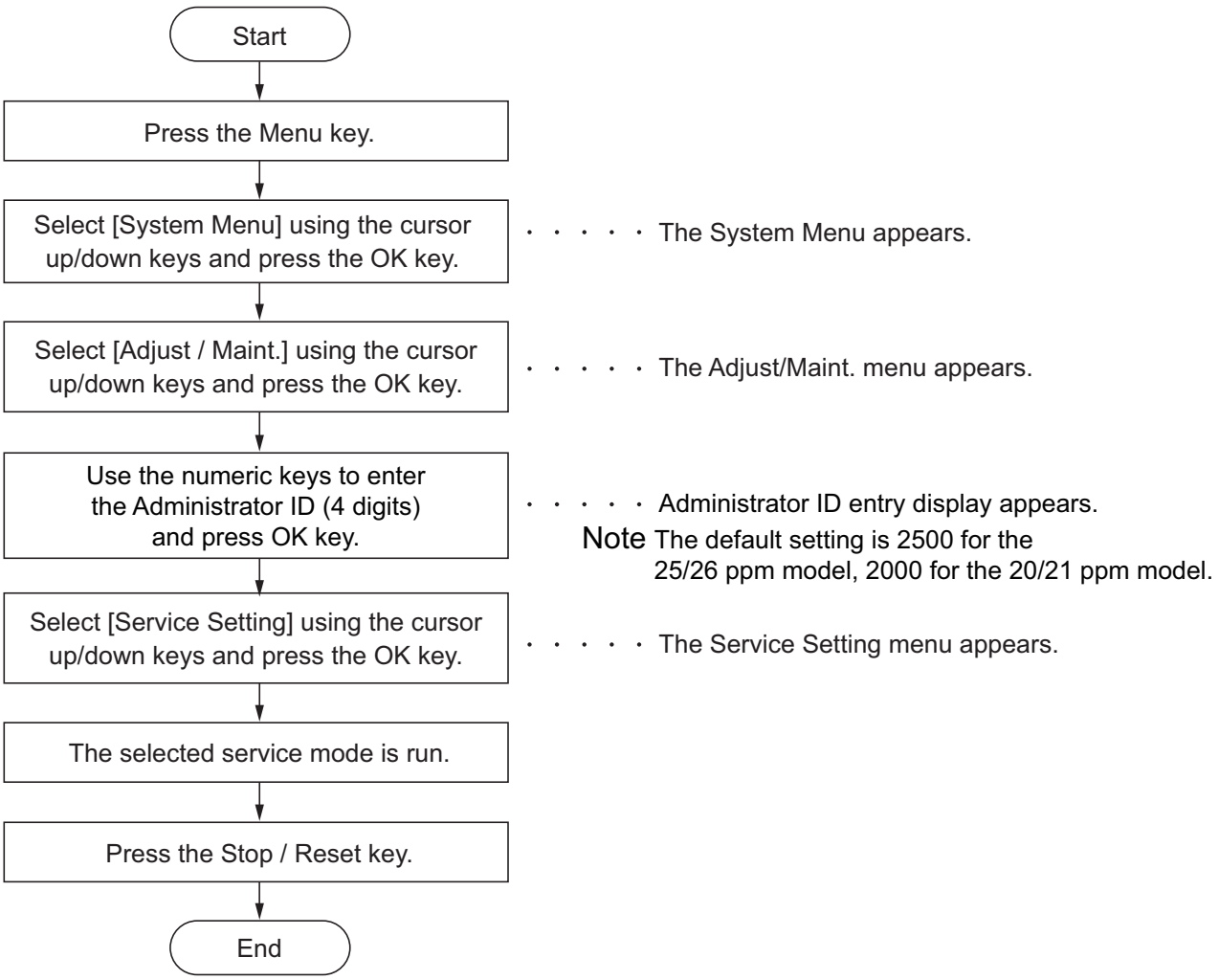
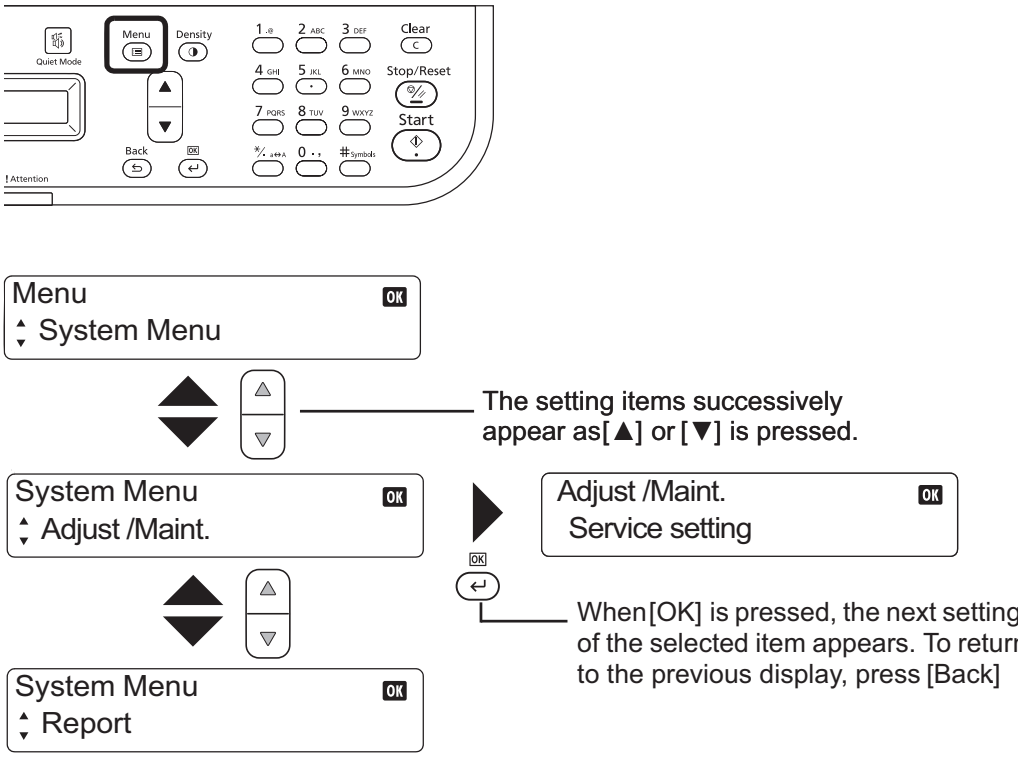


Figure 1-3-1

(2) Operation Method

The System Menu is operated as follows:



Note If the Administrator ID entry display appears, use the numeric keys to enter the Administrator ID (4 digits) and press [OK] key. The default setting is 2500 for the 25/26 ppm model, 2000 for the 20/21 ppm model.

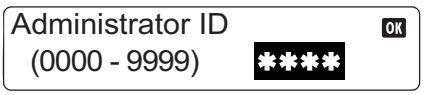


Figure 1-3-2

<table>
<tr><th>items</th><th>Description</th></tr>
<tr><td>Report</td><td>
Outputting an own-status report

Description
Outputs lists of the current settings of the service mode items, and paper jam and service call occurrences. Outputs the event log or Status Page.

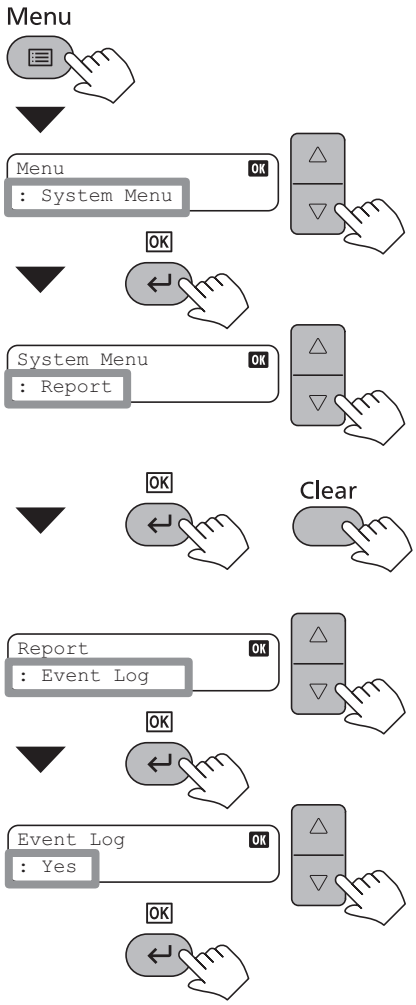
<table>
<tr><th>Display*1</th><th>Output list</th></tr>
<tr><td>Status Page</td><td>Outputs the Status Page</td></tr>
<tr><td>Event Log</td><td>Outputs the Event Log</td></tr>
<tr><td>Network Status*2</td><td>Outputs the Network Status Page</td></tr>
<tr><td>Admin Rpt Set.*3</td><td>Outgoing FAX Rpt, Incoming FAX Rpt</td></tr>
<tr><td>Result Rpt Set.*3</td><td>FAX RX Result, FAX TX Result</td></tr>
</table>
*1: 3 in 1 25/26 ppm model, 4 in 1 20/21, 25/26 ppm model
*2: 25/26 ppm model only
*3: 4 in 1 model only
</td></tr>
<tr><td>Status Page</td><td>
Printing a Status Page.

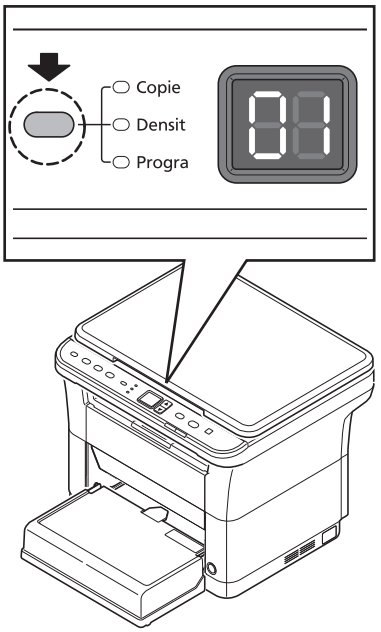
Description
The Status Page includes various printing settings and service cumulative.

Purpose
To acquire the current printing environmental parameters and cumulative information.

Method
3 in 1 25/26 ppm model, 4 in 1 20/21, 25/26 ppm model
1. Press the Menu key.
2. In the Menu. menu screen, press cursor key to select System menu.Press the OK key.
3. In the System setting menu screen, press cursor key to select Report.Press the OK key.
4. In the Report menu screen, press cursor key to select Status Page.Press the OK key.
5. In the Status Page menu screen, press cursor key to Yes.Press the OK key.
* : A4 or Letter size paper is delivered. If the machine has no A4 or Letter paper loaded, load A4 paper.

3 in 1 20/21 ppm model
1. Press the Mode select key for 5 seconds.
2. The Status Page will be printed.
</td></tr>
</table>

items	Description
Event log	**Printing the event log** **Description** Prints a history list of occurrences of paper jam, self-diagnostics, toner replacements, etc. **Purpose** To allow machine malfunction analysis based on the frequency of paper misfeeds, self diagnostic errors and replacements. **Method** **Output from operating panel** **3 in 1 25/26 ppm model, 4 in 1 20/21, 25/26 ppm model** 1. Press the Menu key. 2. In the Menu. menu screen, press cursor key to select System menu.Press the OK key. 3. In the System menu screen, press cursor key to select Report.While pressing and holding the Clear key, press the OK key. 4. In the Report menu screen, press cursor key to select Event Log.Press the OK key. 5. In the Event Log menu screen, press cursor key to Yes.Press the OK key.  **Figure 1-3-3**

items	Description
	3 in 1 20/21 ppm model 1. Press the Mode select key 20 seconds or more. 2. The Event Log will be printed.  **Figure 1-3-4** **Output from the Maintenance menu** An event log can be printed out in the maintenance menu of the KYOCERA Client Tool using the service package (See page 1-3-23).

items	Description
Status Page	**Status Page**

Status Page

FS-1125MFP

(1) [XXXXXXXX]
(2) Firmware version 2M7_2000.001.001 2012.02.22

(3) 02/22/2012 15:15
(4) [XXXXXXXX] [XXXXXXXX] **(5)**
(6) [XXXXXXXX]

(7) Paper Settings
(8) Cassette & Manual Feed Tray
Size: A4
Type: Plain

(9) Device Common Settings
(10) Network: Enabled
(11) USB Cable: Enabled
(12) Date format: Month/Day/Year
(13) Error Clear Timer: 5 Seconds
(14) Sleep Timer: 30 Minutes
(15) Power Off Timer: 1 week
(16) Form Feed Time Out: 30 Seconds

(17) Panel Settings
(18) Auto Panel Reset: Enabled
(19) Auto Panel Reset Timer: 5 Seconds
(20) Language: English
(21) Default Screen: Copy

(22) Network
(23) LAN Interface
(24) Setting: Auto
(25) Current: 100BASE-TX Full
(26) TCP/IP
(27) Status: Enabled
(28) Printer Host Name: KM5D0213
(29) IPv4
(30) DHCPv4 Status: Enable
(31) IP Address: 10.183.53.13
(32) Subnet Mask: 255.255.24.0
(33) Default Gateway: 10.183.48.252

(34) Copy Settings
(35) Density: 0
(36) Quality: Text+Photo
(37) Collate: Enabled
(38) EcoPrint: Enabled

(39) FAX Settings
(40) Density: 0
(41) Local FAX Name: abc
(42) Local FAX Number: 0120444444
(43) Fax Dialing Mode: Pattern 1(DTMF,10PPS)
(44) Rings: 1
RX Setting: Auto

(45) Counters
(46) Printed Pages 1000
(47) Scanned Pages 1000

(48) Print Coverage 10.00%
(A4/Letter Conversion)

(49) Toner Remaining 100%

(*)

WARNING
We recommend the use of our own brand supplies. We will not be liable for any damage caused by the use of third party supplies in this machine.

12345678/11223344/00001234abcd567800001234abcd5678/01234567890123456789012345678901/0008/00/07/
01/04/01/123456/1/02/20/9999999/23456/1/30/50
(50)(51)(52)(53)(54)(55)(56) (57) (58)(59)(60)(61)

Figure 1-3-5

items	Description

Detail of Status Page

No.	Description	Supplement
(1)	Machine serial No.	-
(2)	Firmware version	-
(3)	Date/ Time	4 in 1 20/21,25/26 ppm model only.
(4)	Engine soft version	-
(5)	Panel soft version	-
(6)	Engine Boot soft version	-
(7)	Paper Setting	-
(8)	Cassette & Manual feed tray Size/Type	Paper size: A4,A5,A6,B5,16K,Custom,Legal,Officio2, 216x340mm,Letter,Executive,Statement,Folio Paper type: Plain,Preprinted,Labels,Bond,Recycled,Vellum,Rough,Letterhead,Color,Prepunched,Envelope,Cardstock,Thick,High quality,Custom 1to 8
(9)	Device Common Settingr	-
(10)	Network (25/26 ppm model only)	Enabled / Disabled
(11)	USB Cable	Enabled / Disabled
(12)	Date Format (4 in 1 model only)	Month/Day/Year,Day/Month/Year,Year/Month/Day
(13)	Error Clear Time	5 to 495 Seconds
(14)	Sleep Timer	Western european model: 1 to 60 Minutes Others: 1 to 240 Minutes
(15)	Power Off Timer	1 hour, 2 hours, 3 hours, 4 hours, 5 hours, 6 hours, 9 hours, 12 hours, 1 day, 2 days, 3 days, 4 days, 5 days, 6 days, 1 week
(16)	Form Feed Time Out	5 to 495 Seconds
(17)	Panel setting	Except 3 in 1 20/21 ppm model
(18)	Auto Panel Reset	Enabled / Disabled
(19)	Auto Panel Reset Timer	5 to 495 Seconds
(20)	Language	3 in 1 25/26 ppm, 4 in 1 20/21, 25/26 ppm model
(21)	Default Screen	Copy, FAX, ID card Copy
(22)	Network (25/26 ppm model only)	-
(23)	LAN Interface	-
(24)	Setting	Auto, 10Base-Half, 10Base-Full, 100Base-Half, 100Base-Full
(25)	Current	10Base-Half, 10Base-Full, 100Base-Half, 100Base-Full, Not Connected
(26)	TCP/IP	-

items	Description

No.	Description	Supplement
(27)	Status	Enabled / Disabled
(28)	Printer Host Name	“KM”+Lower 6 figure of a MAC Address
(29)	IPv4	-
(30)	DHCPv4 Status	Enabled / Disabled
(31)	IP Address	IP address / Not Defined
(32)	Subnet Mask	Subnet Mask / Not Defined
(33)	Default Gateway	Default Gateway / Not Defined
(34)	Copy	
(35)	Density	-3,-2,-1,0,1,2,3
(36)	Original quality	Text,Text+Phot,Phot,Text+Phot(High)
(37)	Sort	Enabled / Disabled
(38)	EcoPrint	Enabled / Disabled
(39)	FAX Settings	4 in 1 model only
(40)	Density	-3,-2,-1,0,1,2,3
(41)	Local FAX Name	Max. 32 characters
(42)	Local FAX Number	Max. 20 figures
(43)	Fax Dialing Mode	Pattern 1(DTMF,10PPS), Pattern 2(DTMF,10PPS,20PPS)
(44)	Rings	1-15
	RX Setting	Auto(Normal) /Auto(DRD) * : This item "RX Setting" is displayed according to Fax Country Code.
	DRD Pattern	Pattern1 /Pattern2 /Pattern3 /Pattern4 * : This item "RX Setting" is displayed according to Fax Country Code.
(45)	Counters	-
(46)	Printed Pages	0-9999999
(47)	Scanned Pages	0-9999999
(48)	Print coverage*	0 to 100%

items	Description

No.	Description	Supplement
(49)	Toner Gauge	0 to 100% In the state of Low Toner, it always displays as 5% of residual quantity. * : Moreover, the following texts are indicated when the toner container currently used is judged not to be an original manufacturer's product by IC Chip. And Toner Gauges does not display. WARNING We recommend the use of our own brand supplies. We will not be liable for any damage caused by the use of third party supplies in this machine.
(50)	Print Density	Default: 3(1 to 5)
(51)	Main-Charger correction value	Default: 4(1 to 7)
(52)	High-Altitude mode	Default: 0(0 to 2)
(53)	Drum unit driving time	Total drum driving time
(54)	Area code(AREA)	Area information
(55)	Product code(PRDT)	Destination
(56)	Outside temperature	Exterior temperature
(57)	Maintenance kit counter	Maintenance kit counter
(58)	Add the electrified time counter	Total charge activation time
(59)	Drum rank	Value of drum rank (range is 1 - 3)
(60)	Outside Humidity	Outside Humidity information
(61)	Absolute Humidity	Absolute Humidity information

* : Print Coverage provides a close-matching reference of toner consumption and will not match with the actual toner consumption.

items	Description
Event Log	**Event Log**

Event Log

FS-1125MFP

(1) [XXXXXXXX]
(2) Firmware version 2M7_2000.001.001 02/22/2012

(3) 02/22/2012 15:15
(4)[XXXXXXXX] [XXXXXXXX] **(5)**
(6)[XXXXXXXX]

(7) Paper Jam Log

#	Count.	Jam Code
8	1111111	0511
7	999999	4211
6	888888	0518
5	777777	4211
4	666666	0518
3	555555	4020
2	444444	0518
1	1	4020

(8) 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

(9) Maintenance Log

#	Count.	Item.
3	555555	01.00
2	444444	01.00
1	1	01.00

(10) 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

(11) Counter Log

(a)

J01:	0
J05:	1
J40:	1
J42:	2
J90:	1
J94:	1

(b)

C0100:	0
C0120:	1
C2000:	2
C4200:	3
C6020:	4
C6030:	5

Figure 1-3-6

<table>
<tr><th>items</th><th>Description</th></tr>
<tr><td></td><td>
Detail of Event Log
<table>
<tr><th>No.</th><th>Items</th><th colspan="3">Description</th></tr>
<tr><td>(1)</td><td colspan="4">Machine serial No.</td></tr>
<tr><td>(2)</td><td colspan="4">Firmware version</td></tr>
<tr><td>(3)</td><td colspan="4">Date/ Time (4 in 1 20/21,25/26 ppm model)</td></tr>
<tr><td>(4)</td><td colspan="4">Engine soft version</td></tr>
<tr><td>(5)</td><td colspan="4">Panel soft version</td></tr>
<tr><td>(6)</td><td colspan="4">Engine Boot soft version</td></tr>
<tr><td rowspan="3">(7)</td><td rowspan="3">Paper Jam Log</td><td>#</td><td>Count.</td><td>Event</td></tr>
<tr><td>Remembers 1 to 8 of occurrence. If the occurrence of the previous paper jam is less than 8, all of the paper jams are logged. When the occurrence excesseds 8, the oldest occurrence is removed.</td><td>The total page count at the time of the paper jam.</td><td>Log code
Cause of a paper jam
(See page 1-4-2)</td></tr>
<tr><td colspan="3">For details on the case of paper jam, refer to Paper Misfeed Detection (See page 1-4-2).</td></tr>
<tr><td rowspan="2">(8)</td><td rowspan="2">Service Call Log</td><td>#</td><td>Count.</td><td>Service Code</td></tr>
<tr><td>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.</td><td>The total page count at the time of the self diagnostics error.</td><td>Self diagnostic error code (See page 1-4-6).

Example:
01.6000
01: Self diagnostic error
6000: Self diagnostic error code number</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><th>items</th><th>Description</th></tr>
<tr><td></td><td>
<table>
<tr><th>No.</th><th>Items</th><th colspan="3">Description</th></tr>
<tr><td rowspan="3">(9)</td><td rowspan="3">Maintenance Log</td><td>#</td><td>Count.</td><td>Item</td></tr>
<tr><td>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.</td><td>The total page count at the time of the replacement of the toner container.

* : The toner replacement log is triggered by toner empty.
This record may contain such a reference as the toner container is inserted twice or a used toner container is inserted.</td><td>Code of maintenance replacing item
(1 byte, 2 categories)

First byte (Replacing item)
01: Toner container
Second byte
(Type of replacing item)
00: Black(Fixed)
First byte (Replacing item)
02: Maintenance kit
Second byte
(Type of replacing item)
01: MK-1110/MK-1120
02: Developer unit
03: Drum unit</td></tr>
<tr><td colspan="3">Data is stored by following the procedure after the unit has been changed. (See page 2-4-15),(See page 2-4-17)</td></tr>
<tr><td rowspan="2">(10)</td><td rowspan="2">Unknown Toner Log</td><td>#</td><td>Count.</td><td>Item</td></tr>
<tr><td>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.</td><td>The total page count at the time of the toner empty error with using an non-genuine toner container.</td><td>Non-genuine toner log code
(1 byte, 2 categories)

First byte
01: Toner container (Fixed)
Second byte
00: Black</td></tr>
<tr><td rowspan="2">(11)</td><td rowspan="2">Counter Log

Comprised</td><td>(a) Paper jam</td><td>(b) Self diagnostic error</td><td rowspan="2">* : The toner replacement log is triggered by toner empty.
This record may contain such a reference as the toner container is inserted twice or a used toner container is inserted.</td></tr>
<tr><td>Indicates the log counter of paper jams depending on location.

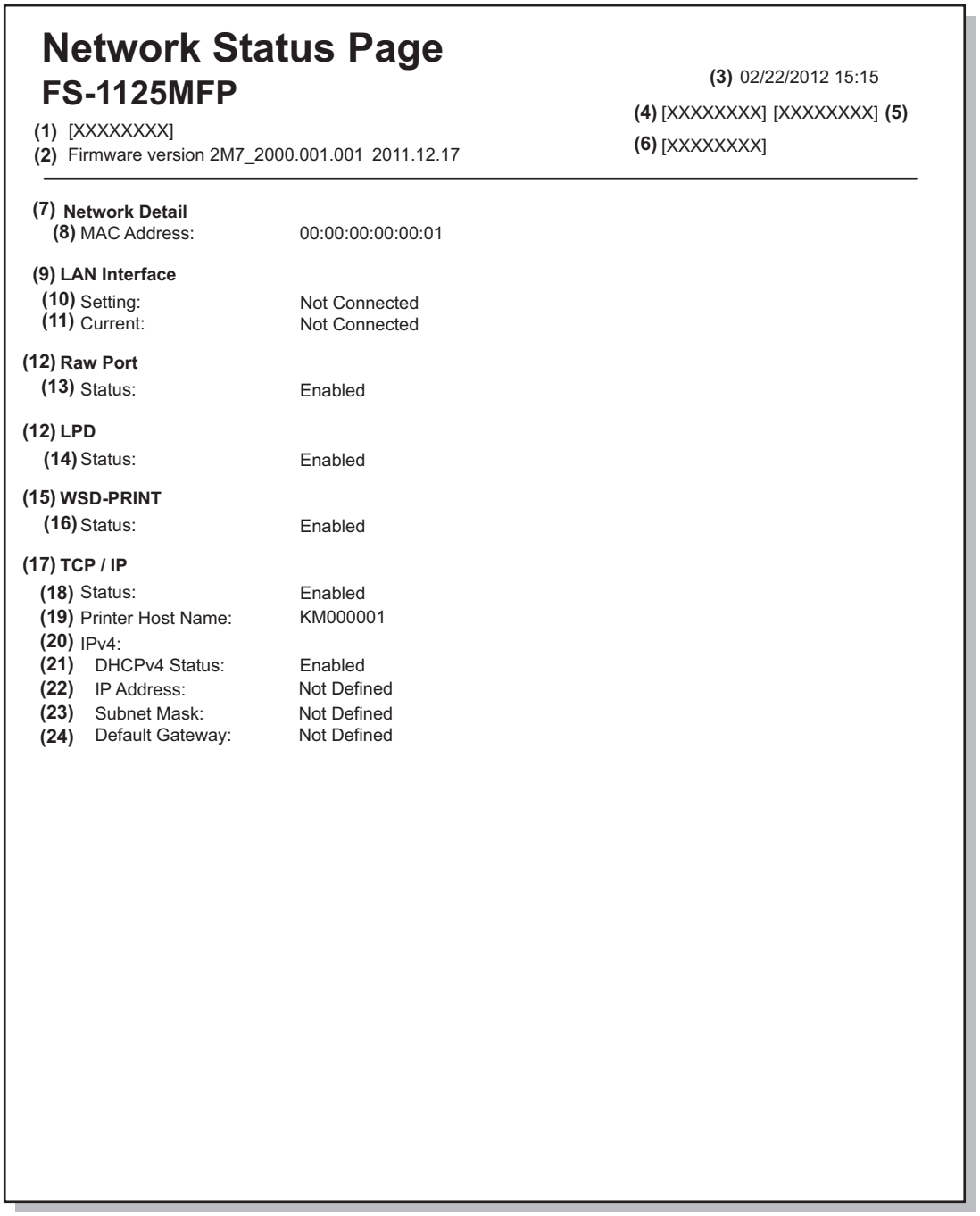
Refer to Paper Jam Log.

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

items	Description
Net-work Status Page	**Network Status Page**



Network Status Page

FS-1125MFP

(1) [XXXXXXXX]
(2) Firmware version 2M7_2000.001.001 2011.12.17

(3) 02/22/2012 15:15
(4) [XXXXXXXX] [XXXXXXXX] **(5)**
(6) [XXXXXXXX]

(7) Network Detail
(8) MAC Address: 00:00:00:00:00:01

(9) LAN Interface
(10) Setting: Not Connected
(11) Current: Not Connected

(12) Raw Port
(13) Status: Enabled

(12) LPD
(14) Status: Enabled

(15) WSD-PRINT
(16) Status: Enabled

(17) TCP / IP
(18) Status: Enabled
(19) Printer Host Name: KM000001
(20) IPv4:
(21) DHCPv4 Status: Enabled
(22) IP Address: Not Defined
(23) Subnet Mask: Not Defined
(24) Default Gateway: Not Defined

Figure 1-3-7

items	Description

Detail of Network Status Page

No.	Description	Supplement
(1)	Machine serial No.	-
(2)	Firmware version	-
(3)	Date/ Time	4 in 1 20/21,25/26 ppm model
(4)	Engine soft version	-
(5)	Panel soft version	-
(6)	Engine Boot soft version	-
(7)	Network Detail	-
(8)	MAC Address	Display MAC Address
(9)	LAN Interface	-
(10)	Setting	Auto,10Base-Half,10Base-Full,100Base-Half, 100Base-Full
(11)	Current	The present transmission standard is displayed.
(12)	Raw Port	-
(13)	Status	Enabled / Disabled
(14)	LPD	-
(15)	Status	Enabled / Disabled
(16)	WSD-PRINT	-
(17)	Status	Enabled / Disabled
(18)	TCP/IP	-
(19)	Status	Enabled / Disabled
(20)	Printer Host Name	KM+Lower 4 figure of a MAC Address
(21)	IPv4	-
(22)	DHCPv4 Status	Enabled / Disabled
(23)	IP Address	IP address /Not Defined
(24)	Subnet Mask	Subnet Mask /Not Defined
(25)	Default Gateway	Default Gateway /Not Defined

<table>
<tr><th>items</th><th>Description</th></tr>
<tr><td></td><td>
Service Settings

Description
Conduct machine maintenance.

<table>
<tr><th>Items</th><th>Description</th></tr>
<tr><td>Maintenance</td><td>Run this after replacing the Maintenance Kit.</td></tr>
<tr><td>New Developer</td><td>Run this after replacing the Developer unit.</td></tr>
<tr><td>New Drum</td><td>Run this after replacing the Drum unit.</td></tr>
<tr><td>FAX Country Code*1</td><td>To initialize the FAX control PWB.</td></tr>
<tr><td>FAX Call Set.*1*2</td><td>When using this machine in environment in which PBX for connection to multiple phones for business use is installed.</td></tr>
</table>
*1: 4 in 1mode only
*2:This setting does not appear in some regions.
</td></tr>
<tr><td>Maintenance</td><td>
Perform the installation of the Maintenance kit.

Description
At replacement of the maintenance kit, perform toner install settings, drum rank clearance, and clearances of various settings.

Purpose
Perform when the Maintenance kit is replaced.
* : During the MK replacement, the key is operative only when Replace MK is displayed (MK Counter: 100,000 or more).

Method
3 in 1 25/26 ppm model, 4 in 1 20/21,25/26 ppm model
Enter the Service Setting menu.
Select [Maintenance] using the cursor up/down keys.
Press [OK] in the confirmation display.

3 in 1 20/21 ppm model
1. Press and hold both Stop/Reset and Mode Select key for more than 5 seconds.

Completion
Press the Stop/Reset key.
</td></tr>
</table>

items	Description
New Devel-oper	**Perform the toner installation of the developer unit.** **Description** At replacement of the developer unit, perform toner install settings. **Purpose** Perform when the developer unit is replaced. **Method** **3 in 1 25/26 ppm model, 4 in 1 20/21,25/26 ppm model** 1. Enter the Service Setting menu. 2. Select [New Developer] using the cursor up/down keys. 3. Press [OK] in the confirmation display. **3 in 1 20/21 ppm model** 1. Press and hold both Mode Select and Quiet Mode key for more than 5 seconds. **Completion** Press the Stop/Reset key.
New Drum	**Perform the installation of the drum unit.** **Description** At replacement of the drum unit, perform drum rank clearance and drum usage time clearance. **Purpose** Perform when the drum unit is replaced. **Method** **3 in 1 25/26 ppm model, 4 in 1 20/21,25/26 ppm model** 1. Enter the Service Setting menu. 2. Select [New Drum] using the cursor up/down keys. 3. Press [OK] in the confirmation display. **3 in 1 20/21 ppm model** 1. press and hold both Stop/Reset and Quiet Mode key for more than 5 seconds. **Completion** Press the Stop/Reset key.

items	Description
FAX Country Code	**FAX Country Code** **Description** Initializes software switches and all data in the backup data on the FAX control PWB, according to the destination. **Purpose** To initialize the FAX control PWB. **Method** 1. Enter the Service Setting menu. 2. Select [FAX Country Code] using the cursor up/down keys. 3. Press the OK key. 4. Enter a destination code using the numeric keys. 5. Press the OK key. The setting is set. 6. Press the OK key. Data initialization starts.

Code	Destination	Code	Destination
000	Japan	250	Russia
009	Australia	253	CTR21 (European nations)
038	China		Italy
080	Hong Kong		Germany
			Spain
088	Israel		U.K.
097	Korea		Netherlands
			Sweden
115	Mexico/ Brazil		France
126	New Zealand		Austria
			Switzerland
			Belgium
152	Middle East		Denmark
156	Singapore		Finland
159	South Africa		Portugal
169	Thailand		Ireland
181	U.S.A.		Norway
		254	Taiwan
243	Saudi Arabia		

Completion
Press the Stop/Reset key.

<table>
<tr><th>items</th><th>Description</th></tr>
<tr><td>FAX
Call Set.</td><td>
FAX call setting

Description
Selects if a fax is to be connected to either a PBX or public switched telephone network.
Access code registration for connection to PSTN.
Purpose
To be executed as required.

Method
1. Enter the Service Setting menu.
2. Select [FAX Call Set.] using the cursor up/down keys.
3. Press the OK key.

<table>
<tr><th>Display</th><th>Destination</th></tr>
<tr><td>Exchange Select.</td><td>Setting the connection to PBX/PSTN</td></tr>
<tr><td>Dial No. to PSTN</td><td>Setting access code to PSTN</td></tr>
</table>

Select.
1. Select [Select.] using the cursor up/down keys.
2. Press the OK key.
3. Select [PBX] or [PSTN] using the cursor up/down keys.
4. Press the OK key. The setting is set.

Dial No. to PSTN
1. Select [Dial No. to PSTN] using the cursor up/down keys.
2. Press the OK key.
3. Enter access code using the numeric keys. (0 to 9, 00 to 99)
4. Press the OK key. The setting is set.
</td></tr>
</table>

1-3-2 Maintenance menu

KYOCERA Client Tool provides maintenance menus which allow you to optimize print quality, print or scan position, factory default settings, etc.
The Load Package button allows you to make settings provided by the Service Package.
The maintenance menus include the following items:

* : Before proceeding, save the Service Package file in any folder on the PC.

1. In the KYOCERA client Tool dialog box, select a device from the list.

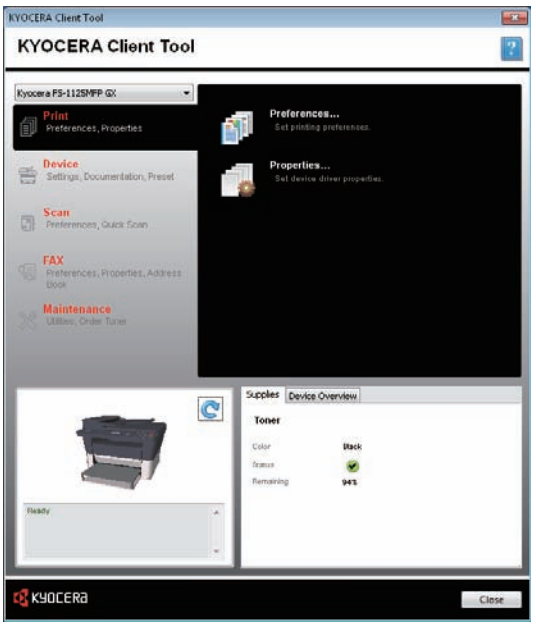


Figure 1-3-8

2. Click Maintenance > Maintenance Menu.

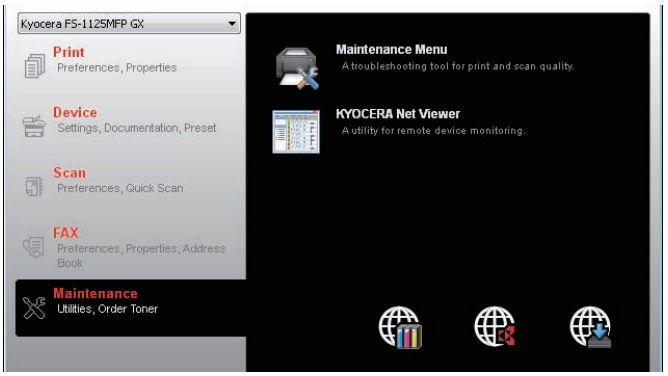
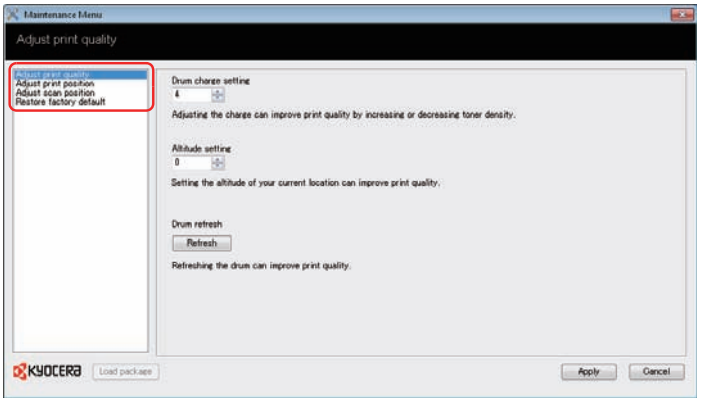


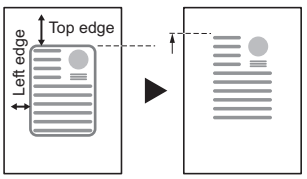
Figure 1-3-9

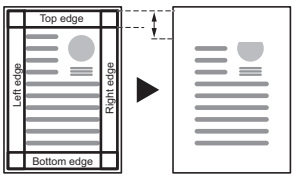
3. Select items in the list one at a time, and select the desired settings for each feature.
4. You can click Cancel to return to the previous view or to select another maintenance procedure.
5. When all settings are selected, click Apply.
6. Settings are completed when the message Finished is displayed.



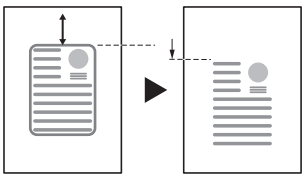
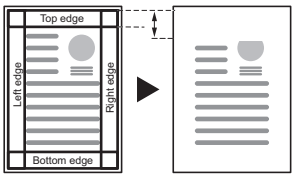
(1) Items for various settings

<table>
<tr><th>Maintenance menu</th><th>Items</th><th colspan="2">Description</th></tr>
<tr><td rowspan="3">Adjust print quality</td><td>Drum charge setting</td><td colspan="2">Select the main charge voltage of the drum unit, from 0 to 7. (default: 4)
A higher setting makes it less dense.
A lower setting makes the print output denser.</td></tr>
<tr><td>Altitude setting</td><td colspan="2">Select the altitude of your location:(default: 0)
0:0 to1500 meters (0 to 4921feet)
1:1500 to 2500 meters(4921 to 8202 feet)
2:2500 to 3500meters (8202 to 11,482.8 feet).</td></tr>
<tr><td>Drum refresh</td><td colspan="2">Select to clean the drum unit if printout appear blurry or has spots where information is missing.</td></tr>
<tr><td rowspan="4">Adjust print position</td><td rowspan="3">Printing start position</td><td colspan="2">Type or select the top and left margin starting position for single-sided printing, from -10 to +10 mm.
Type or select the top and left margin starting position for duplex printing,from -10 to +10 mm.
Each unit of change moves the position by 0.1mm.</td></tr>
<tr><td>Single-sided printing
Adjusts the position of the printed image.

Duplex printing
Adjusts the position of the image printed on the back side of the paper when duplex printing is used.</td><td> 

Top:-10, Left:0</td></tr>
<tr><td>Print margins</td><td colspan="2">Type or select desired margins of all edges, from 0 to 10 mm. This setting applies to the FAX and copy functions only, not to the printing function, where margins are usually set from within an application.
A higher setting makes the margin wider.
A lower setting makes the margin narrower.
Each unit of change moves the margin by 0.1 mm.</td></tr>
<tr><td>Adjusts the width of the top edge, bottom edge, left edge and right edge margins.
*:This setting applies to the FAX and copy functions only, not to the printing function,where margins are usually set from within an application.</td><td> 

Top:10, Bottom:0,
Left:0,Right:0</td></tr>
</table>

Maintenance menu	Items	Description	
Adjust scan position	Scanning start position	Type or select the start position for the platen, from -10 to +1 mm. Type or select the start position for the document processor, from -3 to +10 mm. Each unit of change moves the position by 0.1mm.	
		Adjusts the position of the scanned image.	 Platen Top:-10, Left:0
	Scan margins	Type or select the scan margins of all edges for the platen and document processor, from 0 to 10 mm. A higher setting makes the margin wider. A lower setting makes the margin narrower.	
		Scan margins Adjusts the width of the top edge, bottom edge, left edge and right edge margins.	 Top:10, Bottom:0, Left:0,Right:0
Factory Default	Restore Default	This feature restores the device to the factory default settings.	

(2) Service package

A service package can be used to deliver event logs and set drum-ranks.
The items for settings using a service package are as follows:

* : Obtain a service package in prior.

Open the Service Package

1. In the Maintenance Menu dialog box, click Load package, and then browse to find a user package file (.MTP). If a password is required, enter the password.

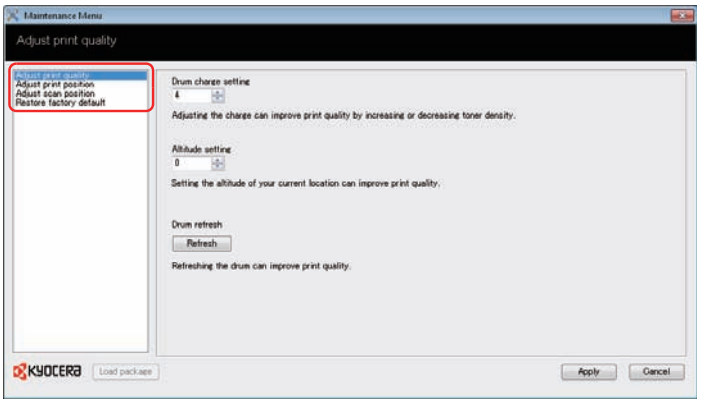


Figure 1-3-11

2. Select items in the list, and select the desired settings for each feature.

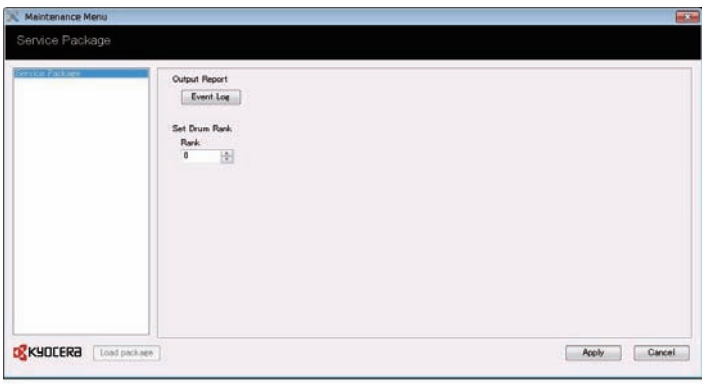


Figure 1-3-12

Select the item.

Display	Description
Output report	Printing the event log
Set drum rank	Setting the drum rank

Printing the event log

Procedure

1. Click the Event Log.
2. Click the check box to acknowledge.
3. The event log will be printed.

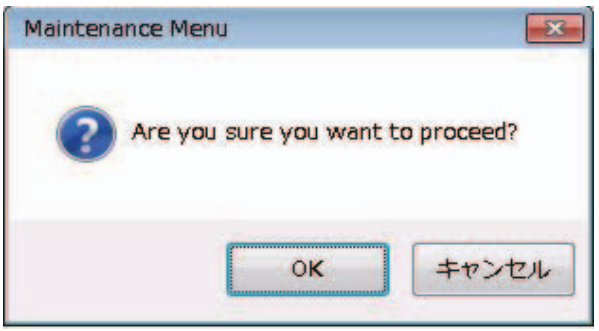


Figure 1-3-13

Drum rank settings

Drums are ranked in three depending on the fluctuation in sensitivity.
Exercising the procedures that follow the replacement of maintenance kit or drum unit, the rank of drum is automatically set to the default, 2.
If the rank differs, set the correct rank manually.
If the rank is not properly set with the drum unit, it is possible that gray background may occur or the productivity of fine lines may be deteriorated.

Procedure

1. Check the rank of the drum.
   Where the rank is found: Barcode label affixed on the drum unit
2. Enter the correct rank of the drum.
3. Press Apply to complete.

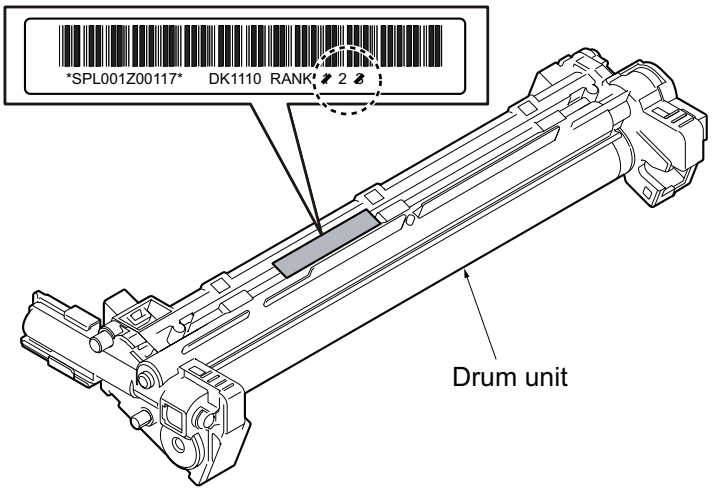


Figure 1-3-14

1-4-1 Paper misfeed detection

(1) Paper misfeed indication

If paper jams in the paper conveying system, or no paper sheets are fed at all, the machine automatically goes offline, and the Attention indicator will flash. A jam code is logged on the event log. When the jammed paper is removed and the rear cover is closed, the machine reverts to normal operation and resumes printing.

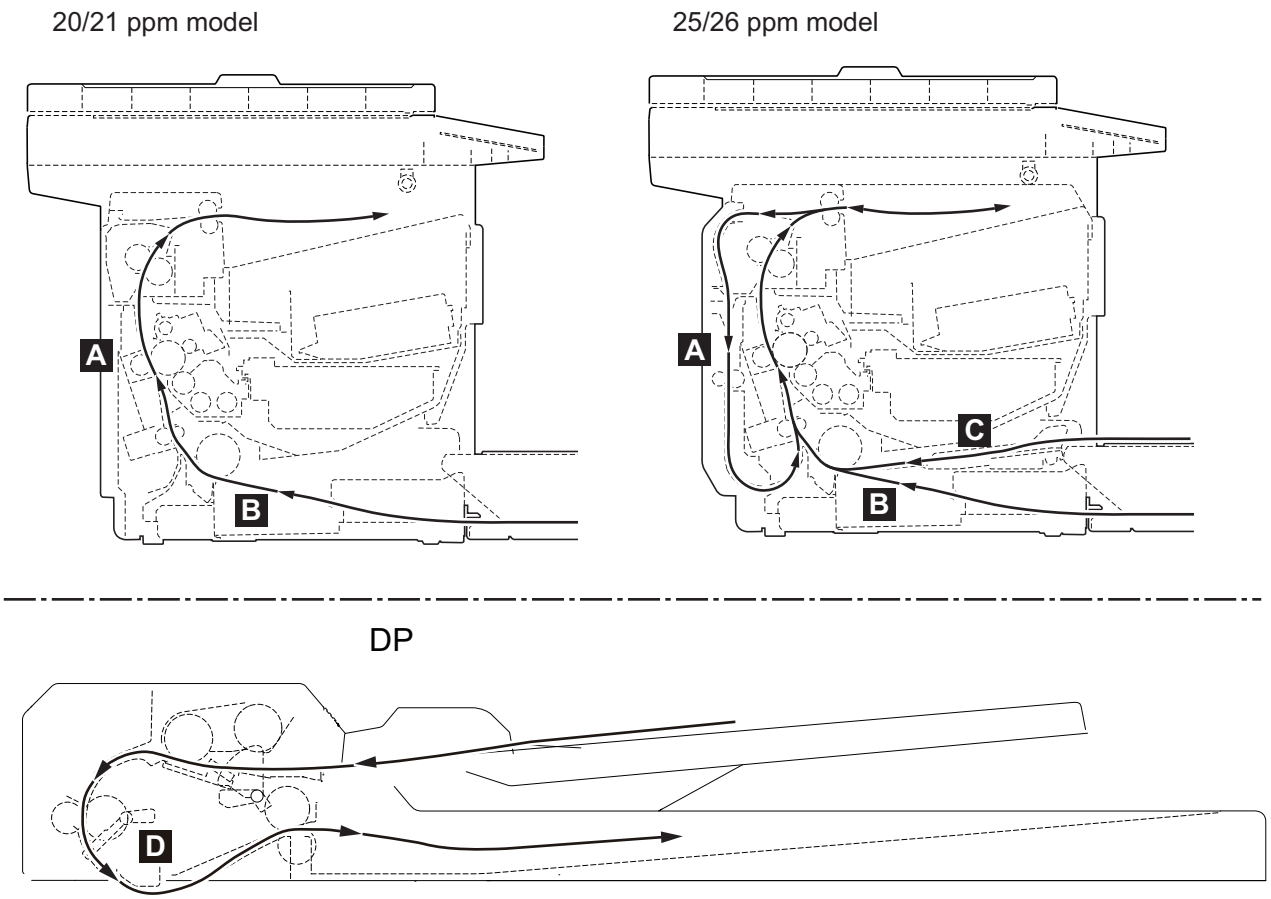


Figure 1-4-1 Paper misfeed indication

A. Misfeed in conveying unit or duplex section
B. Misfeed in cassette
C. Misfeed in Manual Feed tray
D. Misfeed in Document processor (DP)

(2) Paper misfeed detection condition

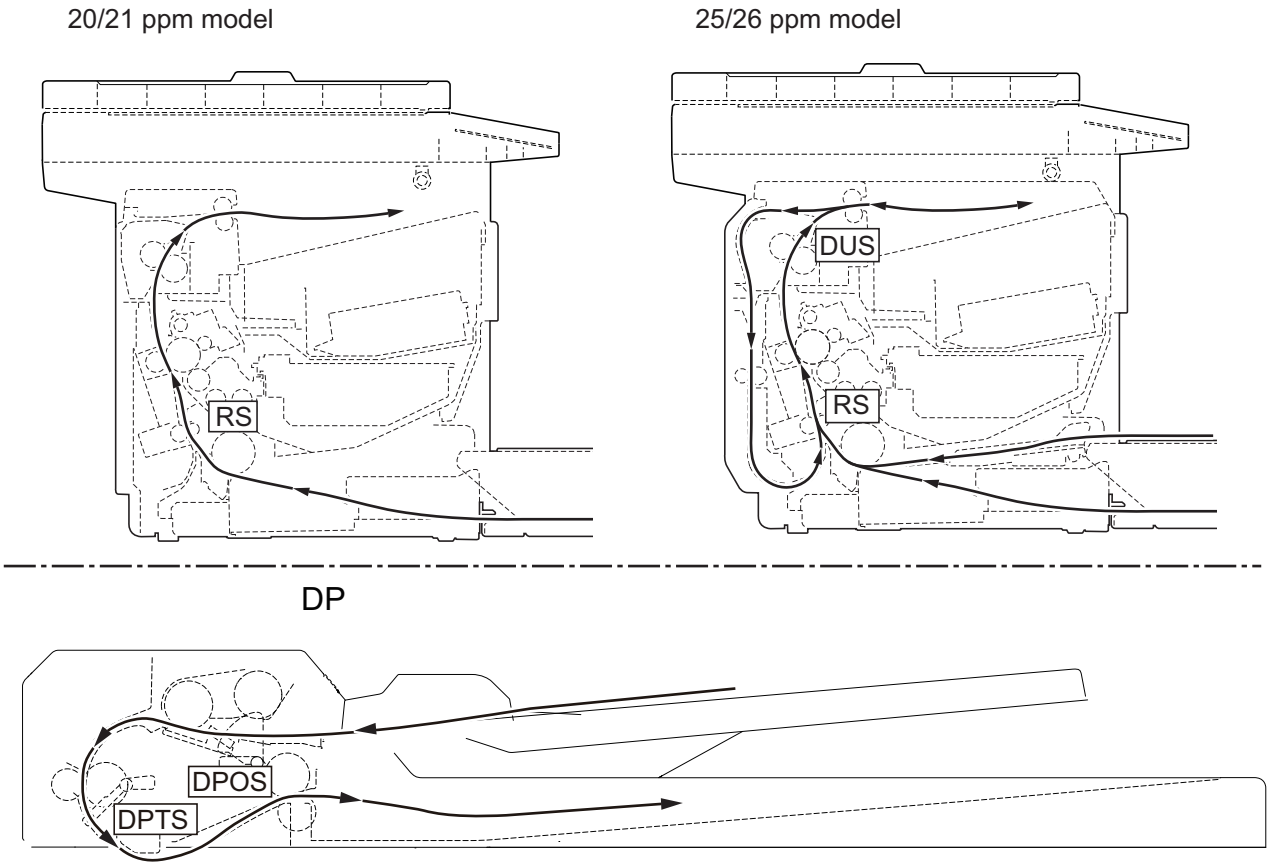


Figure 1-4-2 Paper jam location

Code	Contents	Conditions	Jam location*
0101	Waiting for process package to become ready	The process package does not return Ready in 185 seconds after a print request has been accepted.	-
0104	Wait for the conveying package to be ready	The conveying package does not return Ready in 185 seconds after a print request has been accepted.	-
0105	Prevention of the runaway motor	The process and fuser packages do not return Ready in 185 seconds after a print request has been accepted. The regist sensor won't be detected of its on and off for 480 s during the main motor is driven.	-
0106	Waiting for duplex print request (25/26ppm model)	Paper feeding request for duplex printing given by the controller is unreachable.	-
0107	Waiting for fuser package to become ready	The fuser package does not return Ready in 185 seconds after a print request has been accepted.	-
0111	Rear cover open	Cover is opened during printing.	-

*: Refer to figure 1-4-1 for paper misfeed indication (see page 1-4-1).

Code	Contents	Conditions	Jam location*
0120	Controller sequence error (Duplex print is requested when duplex pages are not present) (25/26ppm model)	Controller issued a request for duplex feeding while the pages for duplex print is not present in the duplex unit.	-
0121	Controller sequence error (Too many papers in the machine) (25/26ppm model)	The controller notifies the duplex unit in case the number of circulated sheets in the duplex unit is more than allowed by specification during multiple prints.	-
0508	No paper feed from duplex section (25/26ppm model)	Registration sensor (RS) does not turn on in 2.4 seconds after the duplex sensor (DUS) has turned on, during paper is feed from the duplex section.	A
0511	Multiple sheets in cassette	Registration sensor (RS) does not turn off in (3.4/ 2.7)*1 seconds after the registration sensor (RS) has turned on, during paper is feed from the cassette or MF tray.	B
0518	Multiple sheets in duplex section (25/26ppm model)	Registration sensor (RS) does not turn off in 2.7 seconds after the registration sensor (RS) has turned on, during paper is feed from the duplex section.	B
4020	Registration sensor on (Power up or warm up)	Paper is present at the registration sensor (RS) during power up or warm up.	B
4201	Duplex sensor non arrival jam (25/26ppm model)	Duplex sensor (DUS) does not turn on in 1.0 seconds after the registration sensor (RS) has turned on, during paper is feed from the cassette or MF tray.	B,C
4208	Duplex sensor non arrival jam (25/26ppm model)	Duplex sensor (DUS) does not turn on in 1.0 seconds after the registration sensor (RS) has turned on, during paper is feed from the duplex section.	A
4211	Duplex sensor stay jam (25/ 26ppm model)	Duplex sensor (DUS) does not turn off in 1.0 seconds after the registration sensor (RS) has turned off, during paper is feed from the cassette or MF tray.	A
4218	Duplex sensor stay jam (25/ 26ppm model)	Duplex sensor (DUS) does not turn off in 1.0 seconds after the registration sensor (RS) has turned off, during paper is feed from the duplex section.	A
4220	Duplex sensor on (25/26ppm model) (Power up or warm up)	Paper is present at the duplex sensor (DUS) during power up or warm up.	A
4301	Duplex sensor non arrival jam (25/26ppm model)	The duplex sensor (DUS) won't turn on in 0.6 second after a certain period of time switch-back has started (cassette and MPF feeding).	B,C
4311	Duplex sensor stay jam (25/ 26ppm model)	The duplex sensor (DUS) won't turn off in 3.0 second after a certain period of time switch-back has started (cassette and MPF feeding).	A

*: Refer to figure 1-4-1 for paper misfeed indication (see page 1-4-1).

Code	Contents	Conditions	Jam location*
9000	No paper feed from DP*2	DP timing sensor (DPTS) does not turn on during original feed from DP (Retry 5 times).	D
9001	Narrow JAM	DP timing sensor (DPTS) was turned off while the paper has travelled 53.2 mm after DP timing sensor (DPTS) had been turned on.	D
9002	DP Initial jam*2	The DP timing sensor (DPTS) is turned on at the start of paper feeding.	D
9410	DP timing sensor stay jam*2	The DP timing sensor (DPTS) does not turned off within the specified time its turning on.	D

*: Refer to figure 1-4-1 for paper misfeed indication (see page 1-4-1).

*1: 20/21 ppm / 25/26 ppm model)
*2: 3 in1 25/26 ppm model, 4 in1 20/21 and 25/26 ppm model.

1-4-2 Self-diagnostic function

(1) Self-diagnostic function

If a problem has occurred in the machine, you will be notified by the following display.
• The Attention indicator on the operation panel is lit or flashing.
• An error code appears in the display on the operation panel.
• KYOCERA Client Tool and Status Monitor will show the status of the machine.
If the Attention indicator is lit or flashing and an error code appears in the display on the operation panel, check the KYOCERA Client Tool or Status Monitor.

3 in 1 25/26 ppm model, 4 in 1 20/21, 25/26 ppm model

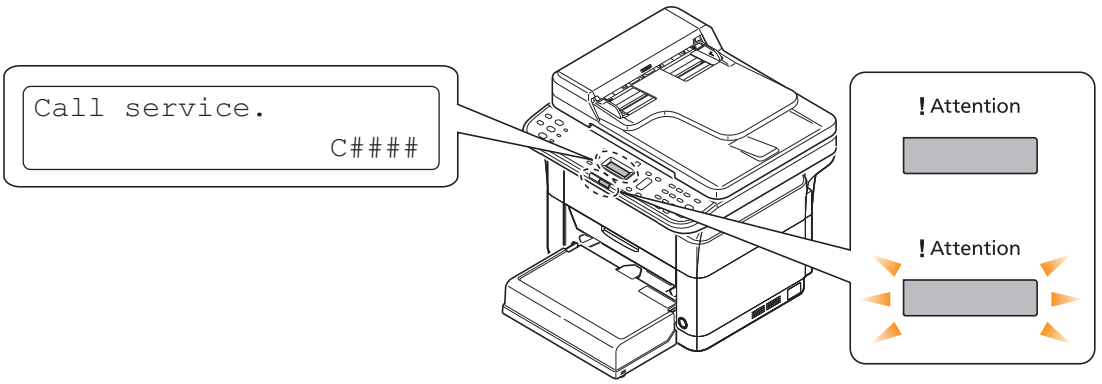


Figure 1-4-3

3 in 1 20/21 ppm model

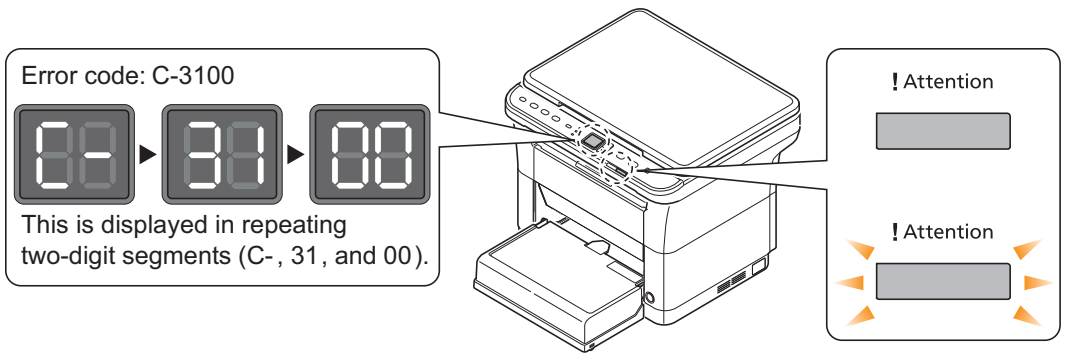


Figure 1-4-4

(2) Self diagnostic codes

If the part causing the problem was not supplied, use the unit including the part for replacement.
Release is performed by power supply OFF/ON.

Code	Contents	Causes	Check procedures/ corrective measures
0030	**FAX Board System Error** Cannot communicate with the modem when activated. *: 4 in 1 model only	Defective FAX control PWB.	Replace the fax control PWB and check for correct operation (see page 1-5-18).
0100	**Backup memory read/write error (Main NOR)** Flash returns an abnormal status.	Defective flash memory.	Replace the main PWB and check for correct operation (see page 1-5-18).
		Defective main PWB.	Replace the main PWB and check for correct operation (see page 1-5-18).
0120	**MAC address data error** For data in which the MAC address is invalid.	Defective flash memory.	Replace the main PWB and check for correct operation (see page 1-5-18).
0190	**Backup memory error (engine)** Unable to read the main PWB IC.	Defective flash memory.	Replace the main PWB and check for correct operation (see page 1-5-18).
		Defective main PWB.	Replace the main PWB and check for correct operation (see page 1-5-18).
0630	**Scan DMA error** Unable to transfer DMA.	Defective main PWB.	Replace the main PWB and check for correct operation (see page 1-5-18).
2000	**Main motor error** Pulse is not detected after 1000msec. Motor won't stabilize after 3000msec.	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. main motor and Relay PWB (YC4) Relay PWB and main PWB (YC14).
		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 motor.	Replace the main motor.(see page 1-5-30)
		Defective main PWB.	Replace the main PWB and check for correct operation (see page 1-5-18).
3100	**Scanner Carriage Error** The HP sensor won't be opened when it is driven in the scan direction for 37.44 mm at the initial scanning when the HP sensor is cut off. The HP sensor won't be cut off when it is driven in the return direction for 320.44mm at the initial scanning when the HP sensor is open.	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. Home position sensor and OPWB Scanner motor and main PWB (YC18)
		Defective home position sensor.	Replace the home position sensor.
		Defective scanner motor.	Replace the scanner unit (see page 1-5-15).
		Defective main PWB.	Replace the main PWB and check for correct operation (see page 1-5-18).

Code	Contents	Causes	Check procedures/ corrective measures
3300	**AGC Error** The resultant AGC fell outside the range of allowance.	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. CIS sensor and main PWB (YC8)
		Defective CIS sensor.	Replace the scanner unit (see page 1-5-15).
		Defective main PWB.	Replace the main PWB and check for correct operation (see page 1-5-18).
3500	**Scan ASIC Error** The scan ASIC has been inoperative.	Defective main PWB.	Replace the main PWB and check for correct operation (see page 1-5-18).
4000	**Polygon motor synchronize error** Polygon motor is not stabilized within 15 seconds since the motor is activated. After polygon motor is stabilized, the ready signal is not detected for 7 seconds 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 and main PWB (YC17)
		Defective polygon motor.	Replace the laser scanner unit (see page 1-5-15).
		Defective main PWB.	Replace the main PWB and check for correct operation (see page 1-5-18).
4200	**BD stability error** The BD signal is not detected for 1000 ms after processing the compulsion lighting. At the interrupt in VSYNC, the BD error is detected continuously for 10 times in 400 ms intervals.	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 (YC1) and main PWB (YC5)
		Defective APC PWB.	Replace the laser scanner unit (see page 1-5-15).
		Defective main PWB.	Replace the main PWB and check for correct operation (see page 1-5-18).
6000	**Broken fuser heater** The temperature does not reach 100° C/212 °F after the fuser heater lamp has been turned on continuously for 18 seconds. At the time of 20 degrees or less from specified temperature, the fuser temperature does not rise by 2 degrees or more after the fuser heater lamp has been turned on continuously for 8 seconds.(during ready or during print)	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 heater lamp and Power source PWB (YC102).
		Fuser thermostat triggered.	Replace the fuser unit (see page 1-5-17).
		Defective fuser heater.	Replace the fuser unit (see page 1-5-17).
		Defective main PWB.	Replace the main PWB and check for correct operation (see page 1-5-18).

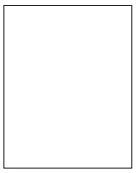
Code	Contents	Causes	Check procedures/ corrective measures
6020	**Abnormally high fuser thermistor temperature** Fuser thermistor detects a temperature higher than 210°C/410°F for 3 seconds	Deformed connector pin.	If the I/F connector pins of the fuser unit and the main unit are deformed owing to foreign matters, such as paper dusts, replace the connectors or the units including the connectors.
		Shorted fuser thermistor.	Replace the fuser unit (see page 1-5-17).
		Defective power source PWB.	Replace the power source PWB (see page 1-5-18).
		Defective main PWB.	Replace the main PWB and check for correct operation (see page 1-5-18).
6030	**Broken fuser thermistor wire** Average input AD given by the thermistor is less than 2 for 300msec.	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 main PWB (YC15)
		Broken fuser thermistor wire.	Replace the fuser unit (see page 1-5-17).
		Fuser thermostat triggered.	Replace the fuser unit (see page 1-5-17).
		Defective main PWB.	Replace the main PWB and check for correct operation (see page 1-5-18).
6400	**Fixing control zero cross signal error** The ZCROSS signal does not reach the main PWB for more than 2 seconds.	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 (YC103) and main PWB (YC12)
		Defective power source PWB.	Replace the power source PWB (see page 1-5-18).
		Defective main PWB.	Replace the main PWB and check for correct operation (see page 1-5-18).
F000	**Communication Error between Main PCB and Panel PCB** Communication failure during the start-up or operation. * : Only 3 in 1 25/26 ppm model, 4 in 1 20/21, 25/26 ppm model	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 1-5-18).
		Defective operation PWB.	Replace the scanner unit and check for correct operation (see page 1-5-10).
F020	**RAM R/W error** The average AD value of the sensor input is smaller than 2 during SLP_RLY is off and 300 ms.	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 1-5-18).

Code	Contents	Causes	Check procedures/ corrective measures
F040	**Communication Error between Main PCB and Engine PCB** Communication is failed between the controller and the 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 1-5-18).
F050	**No Engine Main Program** Engine program failure.	Defective engine software.	Install the engine software.
		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 1-5-18).

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 1-4-11

(2) No image appears (entirely black).

See page 1-4-11

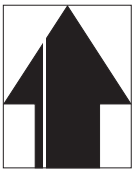
(3) Part of image is missing.

See page 1-4-12

(4) Gray background.

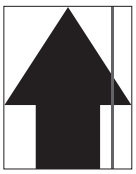
See page 1-4-12

(5) White streaks are printed vertically.



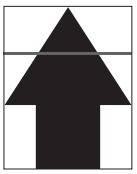
See page 1-4-13

(6) Black streaks are printed vertically.



See page 1-4-13

(7) White or black streaks are printed horizontally.



See page 1-4-13

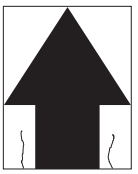
(8) Spots are printed.

See page 1-4-14

(9) Printing incomplete or out of position

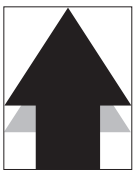
See page 1-4-14

(10) Paper is wrinkled.



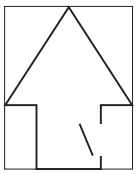
See page 1-4-14

(11) Offset occurs.



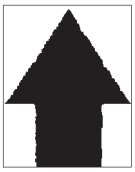
See page 1-4-15

(12) Fusing is loose.



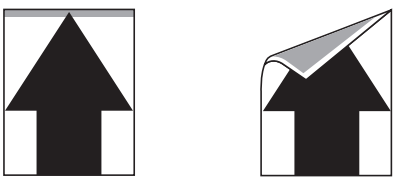
See page 1-4-15

(13) Faint or blurred printing.



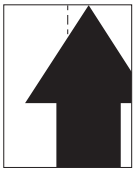
See page 1-4-15

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



See page 1-4-16

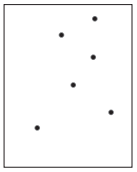
(15) Image center does not align with the original center.



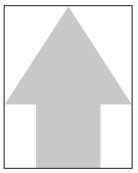
See page 1-4-16

(16) Unevenly repeating horizontal streaks in the printed objects.
Spots in the printed objects.

See page 1-4-16

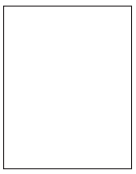


(17) Image is too light.



See page 1-4-17

(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 (YC1) and main PWB (YC13)
		Defective high voltage PWB.	Replace the high voltage PWB (see page 1-5-18).
		Defective main PWB.	Replace the main PWB (see page 1-5-18).
	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 (YC1) and main PWB (YC13)
		Defective high voltage PWB.	Replace the high voltage PWB (see page 1-5-18).
		Defective main PWB.	Replace the main PWB (see page 1-5-18).
	No LSU laser is 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. APC PWB (YC1) and main PWB (YC5)
		Defective laser scanner unit.	Replace the laser scanner unit (see page 1-5-15).
		Defective main PWB.	Replace the main PWB (see page 1-5-18).

(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 (YC1) and main PWB (YC13)
		Defective charger roller.	Replace the drum unit (see page 2-4-6,2-4-13).
		Defective high voltage PWB	Replace the high voltage PWB (see page 1-5-18).
		Defective main PWB.	Replace the main PWB (see page 1-5-18).
	Defective CIS sensor	Defective CIS sensor.	Replace the scanner unit (see page 1-5-10).
	Defective laser scanner unit.	Defective laser scanner unit.	Replace the laser scanner unit (see page 1-5-15).

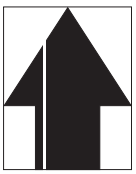
(3) Part of image is missing.

Print example	Causes		Check procedures/corrective measures
	Defective developer bias output.	Defective developer unit.	Replace the developer unit (see page 2-4-7,2-4-12).
		Defective high voltage PWB.	Replace the high voltage PWB (see page 1-5-18).
		Defective main PWB.	Replace the main PWB (see page 1-5-18).
	Dirty or flawed drum.		Perform the drum refresh (see page 1-3-19). Flawed drum. Replace the drum unit (see page 2-4-6,2-4-13).
	Defective transfer bias output.	Defective high voltage PWB	Replace the high voltage PWB (see page 1-5-18).
		Defective main PWB.	Replace the main PWB (see page 1-5-18).
	Dirty transfer roller.		Clean the transfer roller. Replace the transfer roller if it is extremely dirty (see page 2-4-14).
	Insufficient agitation of toner container.		Shake the toner container horizontal about 10 times (see page 1-2-13).
	Paper damp.		Check the paper storage conditions, replace the paper.
	Dirt on the surface of the contact glass.		Clean the contact glass.

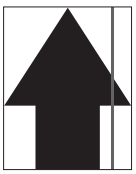
(4) Gray background.

Print example	Causes		Check procedures/corrective measures
	Main charge voltage setting.		The main charge voltage may be set too high. Try adjusting the main charge voltage (see page 1-3-19).
	Defective potential on the drum surface.		Replace the drum unit (see page 2-4-6,2-4-13). * : Check the rank of the drum before exchange (see page 1-3-23).
	Defective laser scanner unit.	Defective laser output.	Replace the laser scanner unit (see page 1-5-15).
	Defective developer bias output.	Defective developer unit.	Replace the developer unit (see page 2-4-7,2-4-12).
		Defective high voltage PWB.	Replace the high voltage PWB (see page 1-5-18).
		Defective main PWB.	Replace the engine PWB (see page 1-5-18).

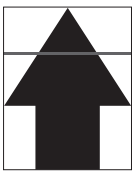
(5) White streaks are printed vertically.

Print example	Causes	Check procedures/corrective measures
	Foreign object in one of the developer units.	Replace the developer unit (see page 2-4-7,2-4-12).
	Dirty LSU slit glasses.	Clean the slit glasses.
	Dirty slit glasses.	Clean the slit glasses (contact glass) (see page 2-4-21).
	Dirty CIS sensor.	Clean surface glass of CIS sensor.
	Dirty contact glass.	Clean the contact glass.

(6) Black streaks are printed vertically.

Print example	Causes	Check procedures/corrective measures
	Dirty contact glass.	Clean the contact glass.
	Dirty or flawed drum.	Perform the drum refresh (see page 1-3-19). Flawed drum. Replace the drum unit (see page 2-4-6,2-4-13).
	Deformed or worn cleaning blade in the drum unit.	Replace the drum unit (see page 2-4-6,2-4-13).
	Defective charger roller.	Replace the drum unit (see page 2-4-6,2-4-13).
	Dirty slit glasses.	Clean the slit glasses (contact glass) (see page 2-4-21).
	Dirty CIS sensor.	Clean surface glass of CIS sensor.

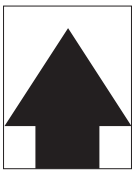
(7) White or black streaks are printed horizontally.

Print example	Causes	Check procedures/corrective measures
	Dirty or flawed drum.	Perform the drum refresh (see page 1-3-19). Flawed drum. Replace the drum unit (see page 2-4-6,2-4-13).
	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 2-4-13).

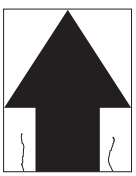
(8) Spots are printed.Printing incomplete or out of position

Print example	Causes		Check procedures/corrective measures
	Dirty contact glass.		Clean the contact glass.
	Dirty or flawed drum.		Perform the drum refresh (see page 1-3-19). Flawed drum. Replace the drum unit (see page 2-4-6,2-4-13).
	Deformed or worn cleaning blade in the drum unit.		Replace the drum unit (see page 2-4-6,2-4-13).
	Main charge voltage setting.		The main charge voltage may be set too low. Try adjusting the main charge voltage (see page 1-3-19).
	Defective transfer bias output.	Defective high voltage PWB.	Replace the high voltage PWB (see page 1-5-18).
		Defective main PWB.	Replace the engine PWB (see page 1-5-18).
	Flawed developer roller.		Replace the developer unit (see page 2-4-7,2-4-12).
	Dirty heat roller and press roller.		Clean the heat roller and press roller.

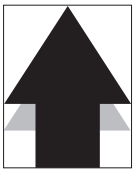
(9) Printing incomplete or out of position

Print example	Causes	Check procedures/corrective measures
	Misadjusted leading edge registration.	Run maintenance menu to readjust the leading edge registration (see page 1-3-21).
	Paper feed solenoid or main motor operating incorrectly.	Check the installation of the solenoid or motor. If it operates incorrectly, replace it.
	Misadjusted scanner leading edge registration.	Run maintenance menu to readjust the scanner leading edge registration (see page 1-3-19).

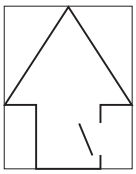
(10) Paper is wrinkled.

Print example	Causes	Check procedures/corrective measures
	Paper curled.	Check the paper storage conditions.
	Paper damp.	Check the paper storage conditions.
	Defective pressure springs.	Replace the fuser unit (see page 1-5-17).

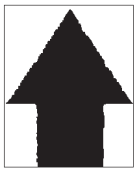
(11) Offset occurs.

Print example	Causes	Check procedures/corrective measures
	Deformed or worn cleaning blade in the drum unit.	Replace the drum unit (see page 2-4-6,2-4-13).
	Main charge voltage setting.	The main charge voltage may be set too high. Try adjusting the main charge voltage (see page 1-3-19).
	Defective fuser unit.	Replace the fuser unit (see page 1-5-17).
	Wrong types of paper.	Check if the paper meets specifications. Replace paper.

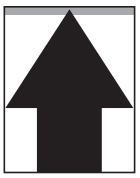
(12) Fusing is loose.

Print example	Causes	Check procedures/corrective measures
	Wrong types of paper.	Check if the paper meets specifications, replace paper.
	Flawed heat roller or press roller.	Replace the fuser unit (see page 1-5-17).
	Defective pressure springs.	

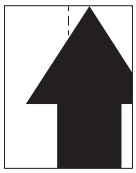
(13) Faint or blurred printing

Print example	Causes		Check procedures/corrective measures
	Wrong types of paper.		Check if the paper meets specifications, replace paper.
	Drum condensation.		Perform the drum refresh (see page 1-3-19).
	Defective transfer roller installation.		The transfer roller must be supported by the bushes at the both ends. Replace the transfer roller if it is extremely dirty (see page 2-4-14).
	Defective transfer bias output.	Defective high voltage PWB	Replace the high voltage PWB (see page 1-5-18).
		Defective main PWB.	Replace the main PWB (see page 1-5-18).

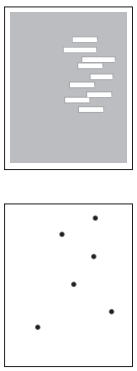
(14) Dirt on the top edge or back of the paper.

Print example	Causes	Check procedures/corrective measures
	Toner contamination in various parts.	Dirty edges and back of the paper can be caused by toner accumulated on such parts as the paper guide, paper conveying paths, the bottom of the drum and developing unit, and the fuser unit inlet. Clean these areas and parts to remove toner. (see page 2-4-20).
	Dirty transfer roller.	Clean the transfer roller. Replace the transfer roller if it is extremely dirty (see page 2-4-14).

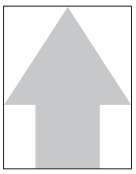
(15) Image center does not align with the original center.

Print example	Causes	Check procedures/corrective measures
	Misadjusted image center line.	Readjust the position of image printing (see page 1-3-21).
	Misadjusted scanner center line.	Readjust the scanner leading edge registration (see page 1-3-21).
	Original is not placed correctly.	Place the original correctly.
	Paper is not placed correctly.	Place the paper correctly.

(16) Unevenly repeating horizontal streaks in the printed objects.
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 menu in high altitude mode (see page 1-3-19).

(17) Image is too light.

Print example	Causes		Check procedures/corrective measures
	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.
	Deteriorated toner.		Perform the drum refresh (Refer to operation guide).
	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 (YC1) and main PWB (YC13)
		Defective high voltage PWB.	Replace the high voltage PWB (see page 1-5-18).
		Defective main PWB.	Replace the main PWB (see page 1-5-18).

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 power switch.	Check for continuity across the contacts. If none, replace the power source PWB (see page 1-5-18).
	5. Defective cover switch.	Check for continuity across the contacts of cover switch. If none, replace the power source PWB (see page 1-5-18).
	6. Defective power source PWB.	Replace the power source PWB (see page 1-5-18).
(2) Main 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. Main motor and relay PWB (YC4) Relay PWB and main PWB (YC14)
	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 main motor (see page 1-5-30).
	4. Defective PWB.	Replace the relay PWB or main PWB and check for correct operation (see page 1-5-18).
(3) Scanner 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. Scanner motor and main PWB (YC18)
	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 scanner unit (see page 1-5-10).
	4. Defective PWB.	Replace the main PWB and check for correct operation (see page 1-5-18)
(4) Cooling 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. Cooling fan motor and relay PWB (YC5) Relay PWB and main PWB (YC14)
	2. Defective motor.	Replace the cooling fan motor.
	3. Defective PWB.	Replace the relay PWB or main PWB and check for correct operation (see page 1-5-18).

Problem	Causes	Check procedures/corrective measures
(5) Paper feed 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. Paper feed solenoid and relay PWB (YC3) Relay PWB and main PWB (YC14)
	2. Defective solenoid.	Replace the paper feed solenoid.
	3. Defective PWB.	Replace the relay PWB or main PWB and check for correct operation (see page 1-5-18).
(6) Duplex solenoid does not operate. (25/26 ppm model only)	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 solenoid and relay PWB (YC2) Relay PWB and main PWB (YC14)
	2. Defective solenoid.	Replace the duplex solenoid.
	3. Defective PWB.	Replace the relay PWB or main PWB and check for correct operation (see page 1-5-18).
(7) Eraser lamp does not turn on.	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. Eraser lamp PWB and main PWB (YC20)
	2. Defective Eraser lamp.	Replace the Eraser lamp PWB.
	3. Defective PWB.	Replace the main PWB and check for correct operation (see page 1-5-18).
(8) A paper jam in the paper feed/conveying section or fuser section is indicated when the power switch is turned on.	1. A piece of paper torn from paper is caught around registration sensor or duplex sensor.	Check visually and remove it, if any.
	2. Defective sensor.	Replace the registration sensor or duplex sensor.
(9) Attention indicator is lit when the front and rear 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. Power source PWB (YC103) and main PWB (YC12)
	2. Defective switch.	Check for continuity across the cover switch. If there is no continuity when the cover switch is on, replace the power source PWB (see page 1-5-18).
	3. Failure of improper controller unit installation.	Check that the cover open-close lever A turns on the cover switch when the front and rear covers are closed. If it won't turn on when covers are closed, re-seat the controller unit (see page 1-5-24).

Problem	Causes	Check procedures/corrective measures
(10) DP 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. DP motor and main PWB (YC19)
	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 DP motor.
	4. Defective PWB.	Replace the main PWB and check for correct operation (see page 1-5-18)
(11) An original jams when the main power switch is turned on.	1. A piece of paper torn from an original is caught around the DP original sensor, DP timing sensor.	Check visually and remove it, if any.
	2. Defective sensor.	Replace the DP original sensor, DP timing sensor.

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 paper feed.	Check if the surfaces of the paper feed pulley is dirty with paper powder.	Clean with isopropyl alcohol.
	Check if the paper feed pulley is deformed.	Check visually and replace any deformed (see page 2-4-8).
	Defective paper feed solenoid installation.	Check visually and remedy if necessary.
	Check if the surfaces of the lower registration roller and upper registration roller is dirty with paper powder.	Clean with isopropyl alcohol.
(2) Skewed paper feed.	The paper width guide is not placed correctly.	Place the paper width guide correctly (see page 2-4-8).
	Paper width guide in a cassette installed incorrectly.	Check the paper width guide visually and remedy or replace if necessary.
(3) Multiple sheets of paper are fed at one time.	Check if the paper is excessively curled.	Change the paper.
	Paper is loaded incorrectly.	Load the paper correctly.
	Check if the separation pad is worn.	Replace the separation pad if it is worn (see page 2-4-8).
(4) Paper jams.	Check if the paper is excessively curled.	Change the paper.
	Check if the contact between the lower and upper 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 1-5-17).
	Check if the contact between the duplex roller and duplex pulleys is correct. (25/26 ppm model only)	Check visually and remedy if necessary.
(5) 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.
(6) Abnormal noise is heard.	Check if the pulleys, rollers and gears operate smoothly.	Grease the bearings and gears.
(7) No primary original feed.	Check if the surfaces of the following rollers are dirty with paper powder. DP forwarding roller DP feed roller	Clean with isopropyl alcohol.
	Check if the following rollers is deformed. DP forwarding roller DP original feed roller	Check visually and replace any deformed (see page 1-5-27).
(8) Multiple sheets of original are fed.	Original is not correctly set.	Set the original correctly.
	Check if the DP separation pad is worn.	Replace the DP separation pad if it is worn (see page 1-5-29).

Problem	Causes/check procedures	Corrective measures
(9) Originals jam.	Originals being used do not conform with the specifications.	Use only originals conforming to the specifications.
	Check if the surfaces of the following pulleys are dirty with paper powder. DP forwarding roller DP feed roller	Clean with isopropyl alcohol.
	Check if the contact between the DP conveying roller and DP conveying pulley is correct.	Check visually and remedy if necessary.
	Check if the contact between the DP eject roller and DP eject pulley is correct.	Check visually and remedy if necessary.

1-4-6 Error Messages

3 in 1 25/26 ppm model, 4 in 1 20/21, 25/26 ppm model

Message Display	Message Displayed in KYOCERA client tool, and the Status Monitor	Meaning	Remedy
Add paper.	**Add paper**	A paper jam has occurred.	When the jammed paper is removed and the rear cover is closed, the machine reverts to normal operation and resumes printing (see page 1-4-1).
		There is no paper in the paper source.	Load paper into the paper source.
Add toner.	**Add toner**	The toner is running out.	Have a new toner container ready.
Call service.	**Error has occurred**	An error has occurred in the machine.	Make a note of the error code displayed on the message display, and contact your service representative.
Cannot combine pages.	**-**	The machine cannot run this program due to unusable original size is registered in the program.	Change the program settings.
Cannot connect.	**-**	The USB cable is not connected.	Connect the USB cable.
		Cannot find KYOCERA Client Tool or the appropriate printer driver.	Open KYOCERA Client Tool or install the appropriate printer driver.
Close the cover.	**Cover open**	The rear cover or front cover is open.	Close the rear cover or front cover.
Error.Power off.	**Error has occurred**	Internal error has occurred.	Turn the main power switch OFF and then ON.
FAX memory is full.	**Memory full**	Memory full Fax transmission is not possible due to insufficient memory.	Press [OK] key and the job will be canceled.
		Fax reception is not possible due to insufficient memory.	Press [OK] key to clear the error.Only the received pages are printed and then the machine tries to receive the remaining pages.
Incorrect code.	**-**	The entered Administrator ID is not correct.	Enter the correct Administrator ID.

Message Display	Message Displayed in KYOCERA client tool, and the Status Monitor	Meaning	Remedy
Load error.	**Add paper**	The paper size and paper type settings selected at the time of faxing are different from KYOCERA Client Tool settings.	Check the paper size and paper type settings.
Load paper in cassette.	**Add paper**	The paper size setting selected at the time of printing are different from KYOCERA Client Tool settings.	Check the paper size setting.
Maximum number of scanned pages.	**Error has occurred**	The number of scanned pages exceeds the maximum number.	The maximum number of scanned original pages is 99. Only the scanned pages are available. Press [OK] key and the job will be canceled.
Memory is full.	**Memory overflow**	Unable to continue the job as the memory is used up.	Change the print resolution from Fast 1200 to 600 dpi.
Paper jammed in document processor.	**Paper jam**	A paper jam has occurred in the document processor.	Remove the jammed paper (see page 1-4-2).
Paper jammed in the rear cover.	**Paper jam**	Paper jam A paper jam has occurred.	Remove the jammed paper (see page 1-4-2).
Place original and press Start key.	**Add paper**	-	Place the original in the document processor again and press [Start] key.
Remove original from document processor.	**Remove original from document processor.**	An original remains in the document processor.	Remove originals from the document processor, put them back in their original order, and place them again. Press [OK] key to resume printing. Press [Stop/Reset] key to cancel the job.
Remove the paper of inner tray.	**Top tray full**	The inner tray is full of paper.	The machine pauses after 100 sheets are printed. Remove paper from the inner tray and press [OK] key to resume printing.
Replace MK.	**Replacing the Maintenance Kit**	Replacement of the maintenance kit is necessary at every 100,000 images of printing.	Replace Maintenance Kit (see page 2-4-2).
Scanner memory is full.	**Memory full**	Scanning cannot be performed due to insufficient memory of scanner.	Only the scanned pages are available. Press [OK] and the job will be canceled.

Message Display	Message Displayed in KYOCERA client tool, and the Status Monitor	Meaning	Remedy
Set paper in MF tray and press OK.	**Add paper**	Paper is not set in the Manual Feed tray.	Load paper into the Manual Feed tray and press [OK] key to begin printing.
Toner is running out.	**Toner is running out.**	The toner is running out.	Have a new toner container ready.
Non-genuine Toner.	**Non-genuine toner is installed**	The installed toner container is non-genuine.	When you want to use the toner container currently installed, press [Stop / Reset] and [OK] key simultaneously for 3 seconds or more.
Unknown toner installed.PC	**Error has occurred**	The installed toner container's regional specification does not match the machine’s.	Install the specified toner container.
USB connection was cut.	**Not connected.**	The machine cannot perform this job due to a disconnection of the USB cable.	Press [OK] key and connect the USB cable.
-	**Invalid driver**	The machine connected to the current port is not supported by the printer driver.	Use a printer driver for this port that matches the machine.
-	**Limited availability for jobs**	Unusable Time is in effect.	To use the machine temporarily during Unusable Time, enter the unlock code.

3 in 1 20/21 ppm model

Error Code	Message Displayed in KYOCERA Net client, and the Status Monitor	Meaning	Remedy
E-7	**Add toner**	The toner has run out.	Replace with a new toner container.
E-0001	**Non-genuine toner is installed**	The installed toner container is non-genuine.	When you want to use the toner container currently installed, press [Stop / Reset] and [Mode Select] key simultaneously for 3 seconds or more.
E-0002	**Error has occurred**	The installed toner container's regional specification does not match the machine's.	Install the specified toner container.
E-0003	**Memory full**	Scanning cannot be performed due to insufficient memory of scanner.	Only the scanned pages are available. Press [Stop/Reset] key and the job will be canceled.
E-0004	**Error has occurred**	The number of scanned pages exceeds the maximum number.	The maximum number of scanned original pages is 99. Only the scanned pages are available. Press [Stop/Reset] key and the job will be canceled.
E-0008	**Cover open**	The rear cover or front cover is open.	Close the rear cover or front cover.
E-0009	**Top tray full**	The top tray is full of paper.	The machine pauses after 100 sheets are printed. Remove paper from the top tray and press [Start] to resume printing.
E-0012	**Memory overflow**	Unable to continue the job as the memory is used up.	Change the print resolution from Fast 1200 to 600 dpi. Refer to Printer Driver User Guide.
E-0014	**Add paper**	The paper size and paper type settings selected at the time of printing are different from the KYOCERA Net client settings.	Check the paper size and paper type settings.
E-0015	**Not connected**	The machine cannot perform this job due to a disconnection of the USB cable.	Press [Stop/Reset]Key and connect the USB cable.
E-0017	**-**	The USB cable is not connected.	Press [Stop/Reset] key and connect the USB cable.
		Cannot find KYOCERA Client Tool or the appropriate printer driver.	Press [Stop/Reset] key. Open KYOCERA Client Tool or install the appropriate printer driver.

Error Code	Message Displayed in KYOCERA Net client, and the Status Monitor	Meaning	Remedy
E-0018	-	The file does not exist in Print Box.	Press [Stop/Reset]Key.
E-0019	-	The machine cannot run this program due to unusable original size is registered in the program.	Press [Stop/Reset] key and change the program settings.
J-xxxx	**Paper jam**	A paper jam has occurred.	When the jammed paper is removed and the rear cover is closed, the machine reverts to normal operation and resumes printing (see page 1-4-1).
PF	**Add paper**	A paper jam has occurred.	When the jammed paper is removed and the rear cover is closed, the machine reverts to normal operation and resumes printing (see page 1-4-1).
		There is no paper in the paper source.	Load paper into the paper source.
		The paper size and paper type settings selected at the time of printing are different from the KYOCERA Net client settings.	Check the paper size and paper type settings.
-	**Toner is running out.**	The toner is running out.	Have a new toner container ready.
-	**Replacing the Maintenance Kit**	Replacement of the maintenance kit is necessary at every 100,000 images of printing.	Replace Maintenance Kit.

1-4-7 Send error list

The error generated at the time of Push Scan is shown.
Detection of an error will display the following error message on MFP panel.

Send Error message	Explanation	Cause	The correspondence method
USB connection was cut.	Error: USB cable disconnected	It was drawn out while the USB cable communicated. Or the USB cable is not connected correctly.	A USB cable is re-connected. The JOB is uncontinuable.
An error occurs in image processing.	Error: PC side detects error.	The error was detected while processing the picture which the PC side received.	Please reconfirm whether it is what is permitted that the manuscript scans. The JOB is uncontinuable.

1-4-8 Error codes

(1) Error code

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

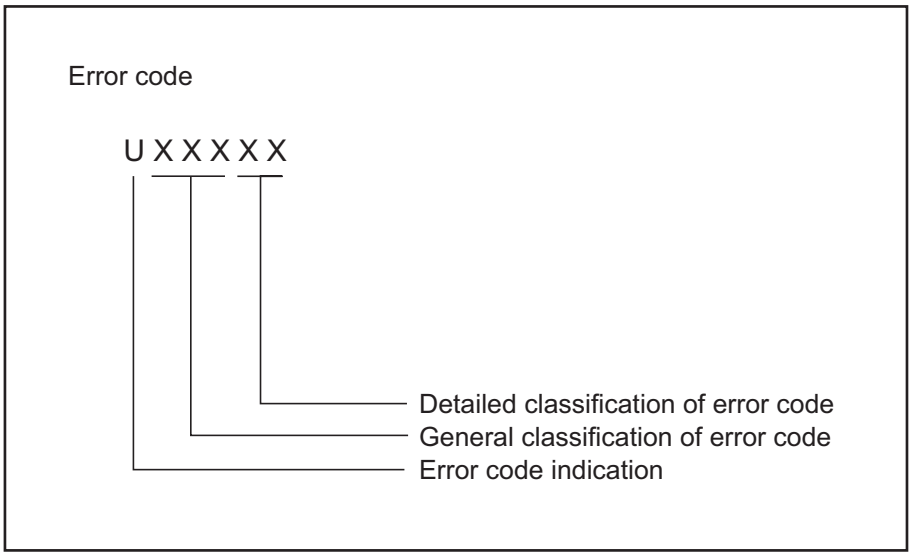


Figure 1-4-5

(2) Table of general classification

Error code	Description
U00000	No response or busy after the set number of redials.
U00100	Transmission was interrupted by a press of the stop/clear key.
U00200	Reception was interrupted by a press of the stop/clear key.
U00300	Recording paper on the destination unit has run out during transmission.
U004XX	A connection was made but interrupted during handshake with the receiver unit (See page 1-4-33).
U00500	Multiple communication was interrupted and call was not made on destination units after interruption.
U006XX	Communication was interrupted because of a machine problem (See page 1-4-34).
U00700	Communication was interrupted because of a problem in the destination unit.
U008XX	A page transmission error occurred in G3 mode (See page 1-4-34).
U009XX	A page reception error occurred in G3 mode (See page 1-4-34).
U010XX	Transmission in G3 mode was interrupted by a signal error (See page 1-4-35).
U011XX	Reception in G3 mode was interrupted by a signal error (See page 1-4-37).
U01400	An invalid one-touch key was specified during communication.
U01500	A communication error occurred when calling in V.8 mode.
U01600	A communication error occurred when called in V.8 mode.
U017XX	A communication error occurred before starting T.30 protocol during transmission in V.34 mode (See page 1-4-38).
U018XX	A communication error occurred before starting T.30 protocol during reception in V.34 mode (See page 1-4-39).
U02000	Relay broadcast was refused by a relay station because of a mismatch in permit ID number and permit telephone number when a relay command was issued.
U02100	A relay command failed because the destination unit (relay station) had no relay broadcast capability.
U02200	A relay command from a command station failed because a telephone number that was not registered in the relay station was specified. Or, relay broadcast was requested to a relay station but failed because a telephone number that was not registered in the relay station was specified. Or, Subaddress-based relay broadcast transmission failed because the data registered in the Subaddress relay box was deleted.
U023XX	Receiving station information was not normally received in reception of a relay command (See page 1-4-39).
U02400	An interoffice subaddress-based relay transmission was interrupted because of a mismatch in the specified relay box number.
U03000	No document was present in the destination unit when polling reception started.
U03100	In reverse polling, although no original was set in the destination unit, transmission was complete.
U03200	In confidential polling reception, data was not accumulated in the specified box in the destination unit. Or, in interoffice subaddress-based bulletin board reception, data was not stored in the box specified by the destination unit.

Error code	Description
U03300	In polling reception from a unit of our make, operation was interrupted due to a mismatch in permit ID or telephone number. Or, in interoffice subaddress-based bulletin board reception, operation was interrupted due to a mismatch in permit ID or telephone number.
U03400	Polling reception was interrupted because of a mismatch in individual numbers (destination unit is either of our make or by another manufacturer).
U03500	In confidential polling reception, the specified confidential box No. was not registered in the destination. Or, in interoffice subaddress-based bulletin board reception, the specified Subaddress confidential box number was not registered in the destination unit. Or, the destination was being accessed.
U03600	Confidential polling reception was interrupted because of a mismatch in specified confidential box No. Or, an interoffice subaddress-based bulletin board reception was interrupted because of a mismatch in the specified subaddress confidential box number.
U03700	Confidential polling reception failed because the destination unit had no confidential polling transmission capability or data was not accumulated in any box in the destination unit. Or, interoffice subaddress-based bulletin board reception failed because the destination unit had no subaddress-based bulletin board transmission capability, or data was not stored in any subaddress confidential box in the destination unit.
U04000	The confidential box specified for confidential transmission was not registered in the destination unit. Or, in interoffice subaddress-based transmission mode, the specified subaddress box number was not registered in the destination unit. Or, the destination was being accessed.
U04100	Confidential transmission failed because the destination unit had no confidential capability. Or, subaddress-based transmission failed because the destination unit had no subaddress-based reception capability.
U04200	In encrypted transmission, the specified encryption box was not registered in the destination unit.
U04300	Encrypted transmission failed because the destination unit had no encrypted communication capability.
U044XX	Communication was interrupted because of an encryption key error during encrypted transmission (See page 1-4-39).
U04500	Encrypted reception was interrupted because of a mismatch in encryption keys.
U05000	In transmission with a specified number, the set number of originals was different from the number of transmitted originals.
U05100	Password check transmission or restricted transmission was interrupted because the permit ID’s did not agree with.
U05200	Password check reception or restricted reception was interrupted because the permit ID’s did not match, the rejected FAX number’s did match, or the destination receiver did not return its phone number.
U05300	The password check reception or the restricted reception was interrupted because the permitted numbers did not match, the rejected numbers did match, or the machine in question did not acknowledge its phone number.
U09000	G3 communication was attempted but failed because the destination unit was a G2 machine.

Error code	Description
U12000	Relay broadcast was requested from a command station but memory overflowed during reception. Or, in subaddress-based relay reception, memory overflowed.
U12100	Relay was commanded but memory overflowed in the destination unit (relay station).
U14000	Memory overflowed during confidential reception. Or, in subaddress-based confidential reception, memory overflowed.
U14100	Memory overflowed in the destination unit during confidential transmission. Or, in interoffice subaddress-based transmission, memory overflowed in the destination unit.
U19000	Memory overflowed during memory reception.
U19100	Memory overflowed in the destination unit during transmission.
U19200	Memory transmission failed because a decoding error occurred.
U19300	Transmission failed because an error occurred during JBIG encoding.
U19400	Reception failed because an error occurred during JBIG decoding.

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

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

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

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

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

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

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

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

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

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

Error code	Description
U01040	A DCN or other inappropriate signal was received during standby for DIS signal reception.
U01041	A DCN signal was received after transmission of a DNL (MPS or EOM) signal (between units of our make).
U01042	A DCN signal was received after transmission of a DCS, TCF signal.
U01043	A DCN signal was received after transmission of an NSS1, NSS2 (TCF) signal (between units of our make).
U01044	A DCN signal was received after transmission of an NSS3, TCF signal (between units of our make).
U01045	A DCN or other inappropriate signal was received after transmission of an MPS signal.
U01046	A DCN or other inappropriate signal was received after transmission of an EOM signal.
U01047	A DCN or other inappropriate signal was received after transmission of an EOP signal.
U01048	A DCN signal was received after transmission of a PRI-EOP signal.
U01049	A DCN signal was received after transmission of a CNC signal (between units of our make).
U01050	A DCN signal was received after transmission of a CTC signal (ECM).
U01051	A DCN signal was received after transmission of an EOR.Q signal (ECM).
U01052	A DCN signal was received after transmission of an RR signal (ECM).
U01053	A DCN signal was received after transmission of a PPS.NULL signal (ECM).
U01054	A DCN signal was received after transmission of a PPS.MPS signal (ECM).
U01055	A DCN signal was received after transmission of a PPS.EOM signal (ECM).
U01056	A DCN signal was received after transmission of a PPS.EOP signal (ECM).
U01057	A DCN signal was received after transmission of a PPS.PRI-EOP signal (ECM).
U01070	Polarity reversal was detected during handshake.
U01071	Polarity reversal was detected during message transmission.
U01072	A break in loop current was detected during transmission.
U01073	During reverse polling in V.34 mode at the receiver unit, a CM signal was not detected when transmitting after reception.
U01080	A PIP signal was received after transmission of a PPS.NULL signal.
U01091	During transmission in V.34 mode, communication was interrupted because a PPR signal was received over 10 times even after reducing the communication speed to the minimum with the symbol speed maintained at the level of connection.
U01092	During transmission in V.34 mode, communication was interrupted because of an impossible combination of the symbol speed and communication speed.

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

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

Error code	Description
U01152	A DCN signal was received after transmission of a CTR signal (ECM).
U01153	A DCN signal was received after transmission of an ERR signal (ECM).
U01154	A DCN signal was received after transmission of an RNR signal (ECM).
U01155	A DCN signal was received after transmission of an SPA signal (short protocol).
U01160	During message reception, transmission time exceeded the maximum transmission time per line.
U01161	Number of error lines exceeded limits during message reception.
U01162	A break in loop current was detected during message reception.
U01163	Polarity reversal was detected during message reception.
U01164	One page length exceeded the specified length during message reception.
U01170	A decoding error occurred during MMR message reception.
U01172	During reverse polling in V.34 mode at the transmitting unit, a JM signal was not detected after transmission of a CM signal when receiving after transmission.
U01191	Communication was interrupted because an error occurred during an image data reception sequence in the V.34 mode.
U01199	A DIS signal with different FIF was received after transmission of a DIS signal.

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

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

U01700: A communication error that occurs at the transmitting unit in the period after transmission of INFO0 before entering phase 3 (primary channel equivalent device training). For example, INFO0/A/Abar (B/Bbar, for polling transmission)/INFOh was not detected.
U01720: A communication error that occurs at the transmitting unit in the period after initiating the control channel before entering the T.30 process. For example, PPh/ALT/MPh/E was not detected.
U01721: In the absence of a common communication speed between units (including when an impossible combination of communication speed and symbol speed occurs) after MPh exchange; 1) a DCN signal was received from the destination unit, and the line was cut; or 2) a DIS (NSF, CSI) signal was received from the destination unit and, in response to the signal, the unit transmitted a DCN signal, and the line was cut.

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

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

U01800: A communication error that occurs at the receiver unit in the period after transmission of INFO0 before entering phase 3 (primary channel equivalent device training). For example, INFO0/B/Bbar (A/Abar, for polling reception)/probing tone was not detected.
U01810: A communication error that occurs at the receiver unit in phase 3 (primary channel equivalent device training).
For example, S/Sbar/PP/TRN was not detected.
U01820: A communication error that occurs at the receiver unit in the period after initiating the control channel before entering the T.30 process. For example, PPh/ALT/MPh/E was not detected.
U01821: In the absence of a common communication speed between units (including when an impossible combination of communication speed and symbol speed occurs) after MPh exchange, a DCN signal was transmitted to the destination unit and the line was cut.

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

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

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

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

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1-5-1 Precautions for assembly and disassembly

(1) Precautions

Be sure to turn the power switch off and disconnect the power plug before starting disassembly.
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.

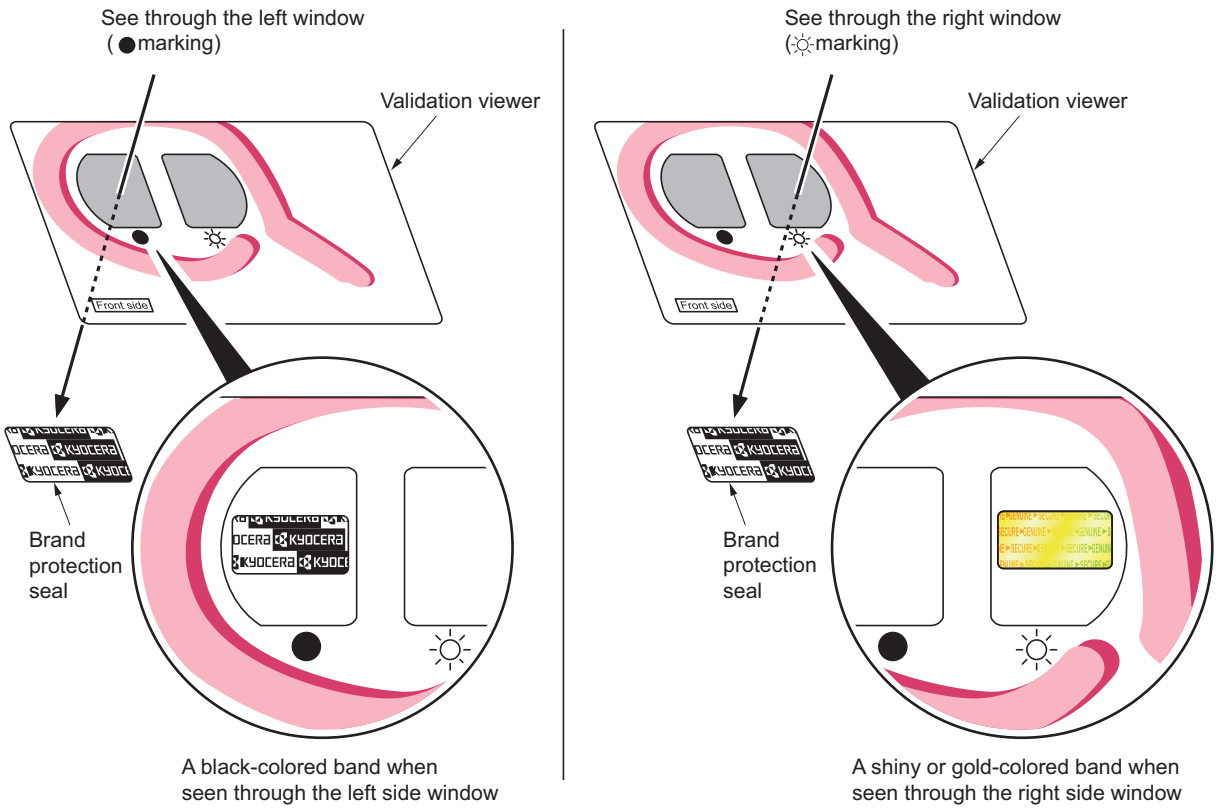


Figure 1-5-1

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

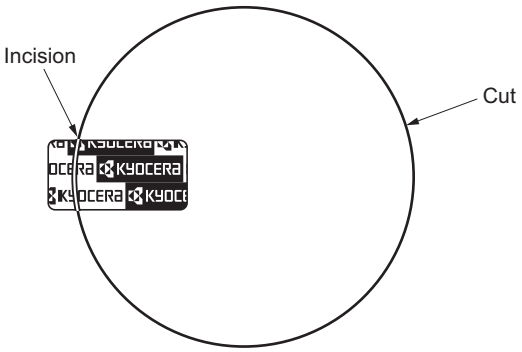


Figure 1-5-2

1-5-2 Outer covers

(1) Detaching and refitting the right upper cover and Rear upper cover R

Procedure

1. Open the front cover and rear cover.
2. Remove screw.

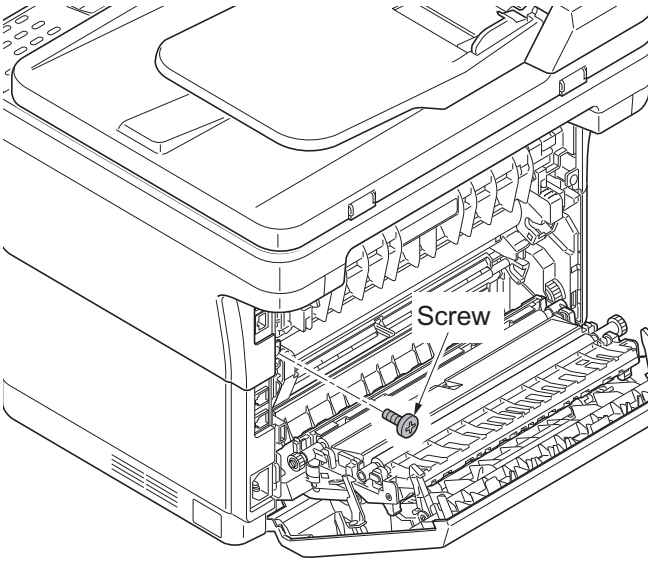


Figure 1-5-3

3. Unhook the two hooks and then remove the right upper cover.
4. Remove the rear upper cover R.

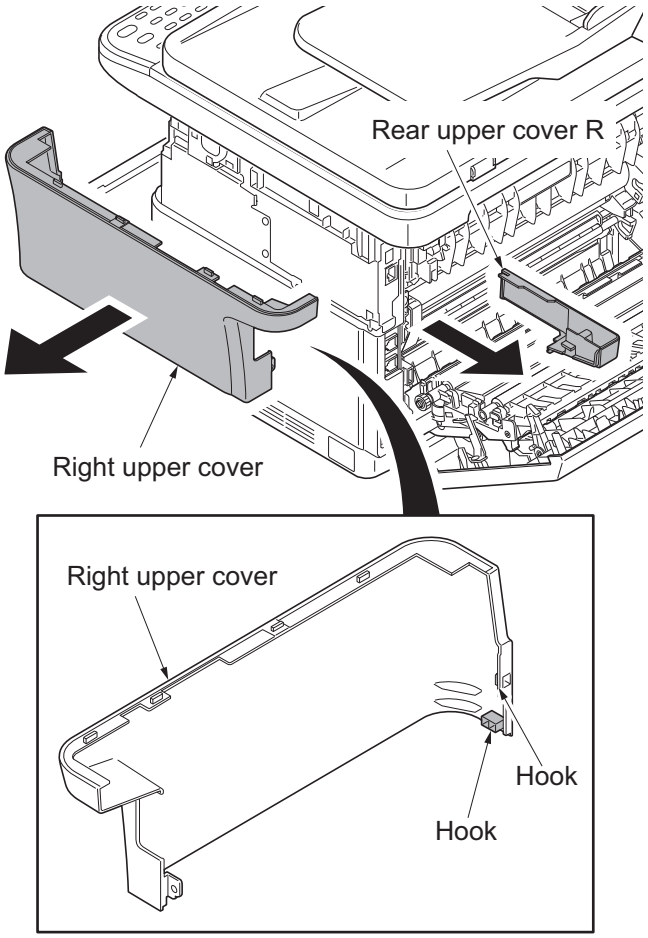


Figure 1-5-4

(2) Detaching and refitting the Left upper cover and Rear upper cover L

Procedure

1. Open the front cover and rear cover.
2. Remove screw.

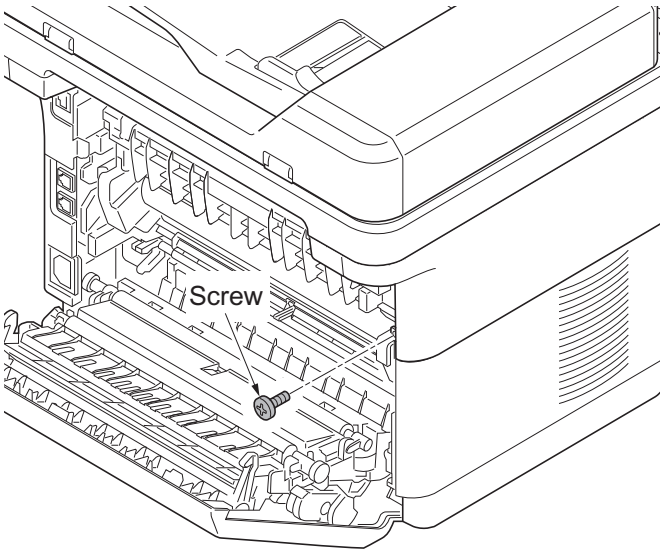


Figure 1-5-5

3. Unhook the two hooks and then remove the left upper cover.
4. Remove the rear upper cover L.

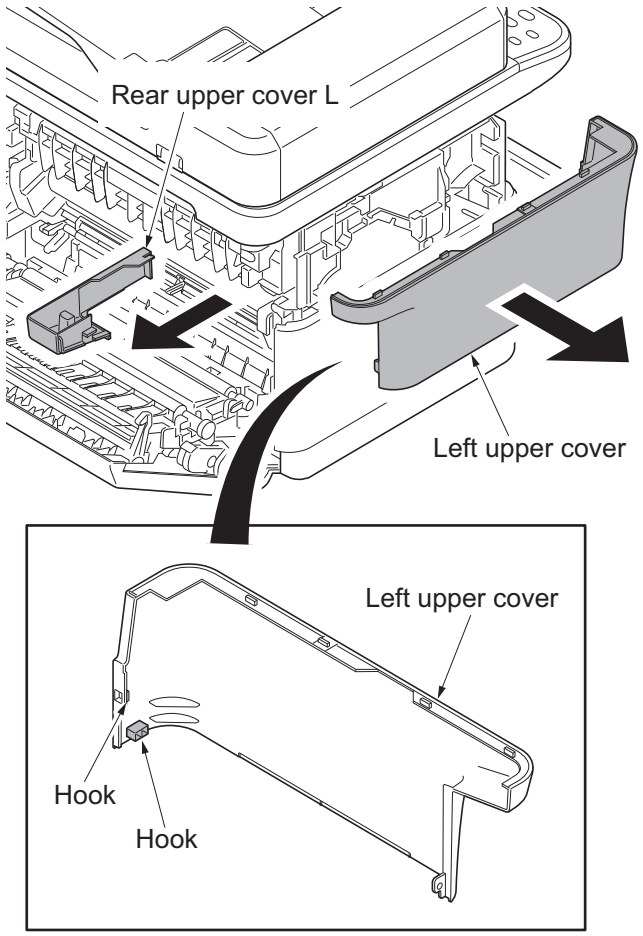


Figure 1-5-6

(3) Detaching and refitting the Right cover

Procedure

1. Remove the right upper cover and rear upper cover R (see page 1-5-3).
2. Unhook the five hooks and then remove the right cover.

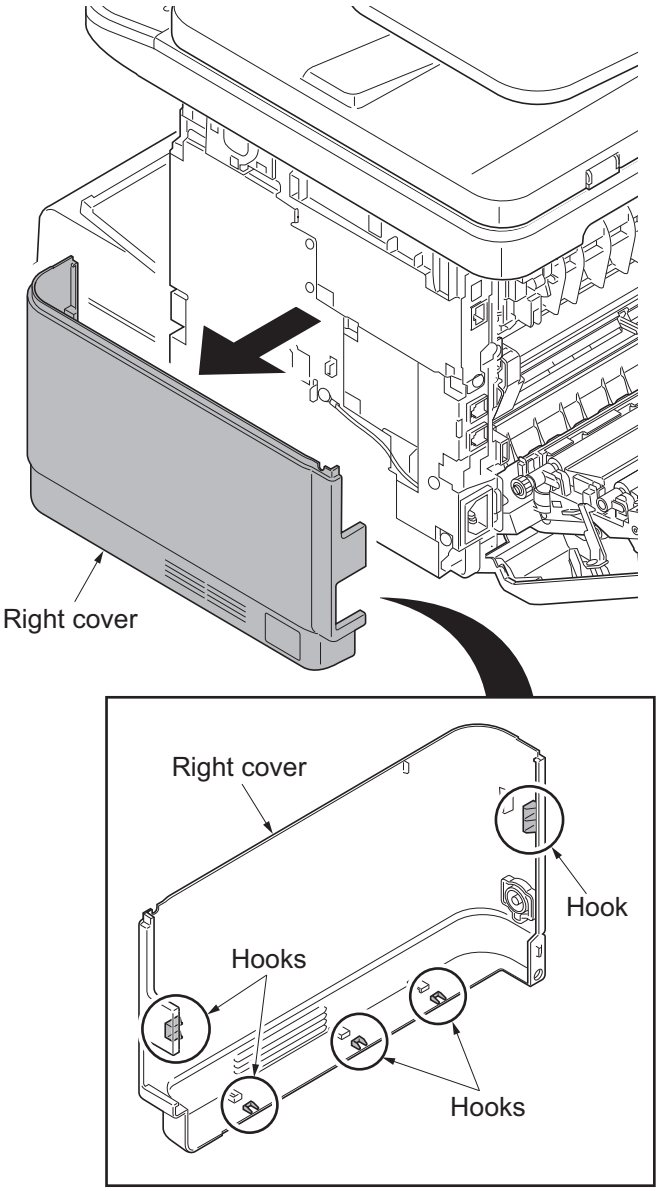


Figure 1-5-7

(4) Detaching and refitting the Left cover

Procedure

1. Remove the left upper cover and rear upper cover L (see page 1-5-4).
2. Unhook the five hooks and then remove the left cover.

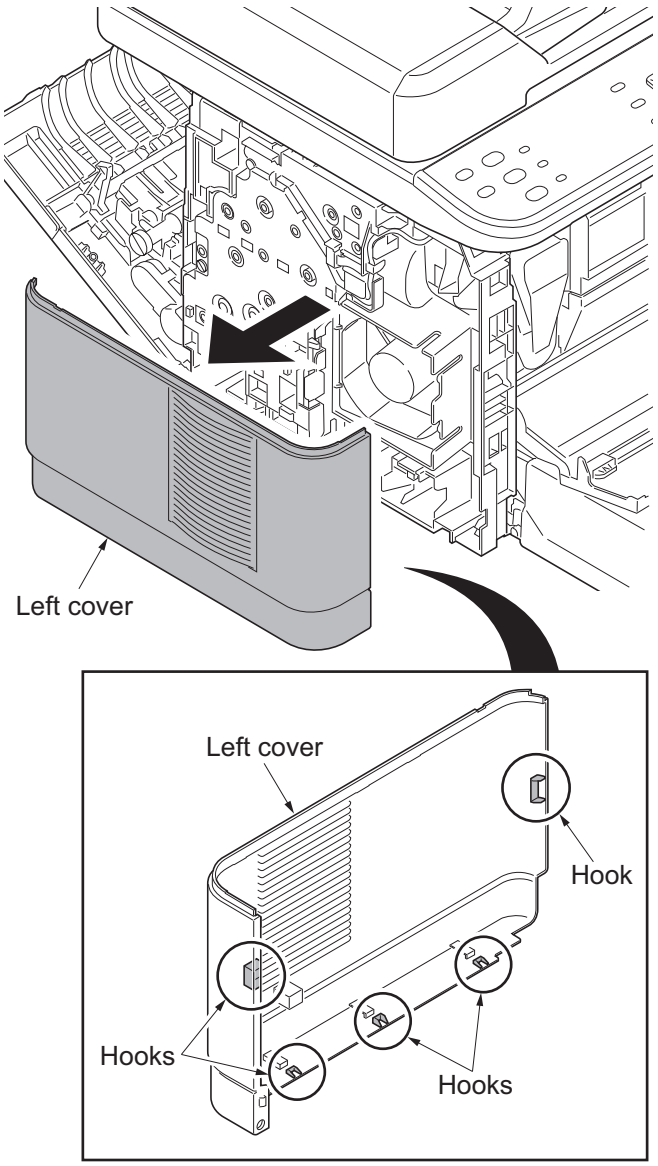


Figure 1-5-8

(5) Detaching and refitting the Top cover

Procedure

1. Remove the right upper cover, rear upper cover R, left upper cover and rear upper cover L
   (see page 1-5-3,see page 1-5-4).
2. Remove the document processor (see page 1-5-25) or original cover.

3. Detach the connector and two FFC from the main PWB.
4. Release the wire from the 2 hookings on the wire guide.

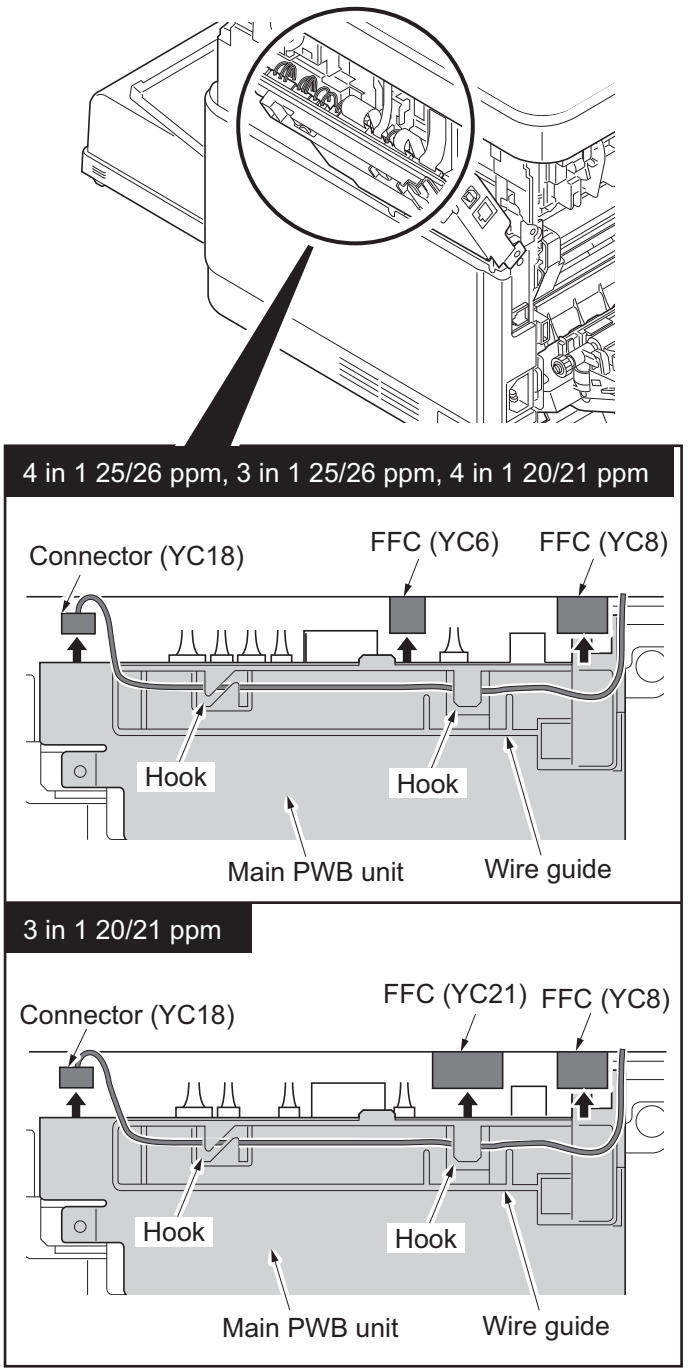


Figure 1-5-9

5. Remove the scanner unit by turning the scanner fixing pins at both ends 90 degrees.

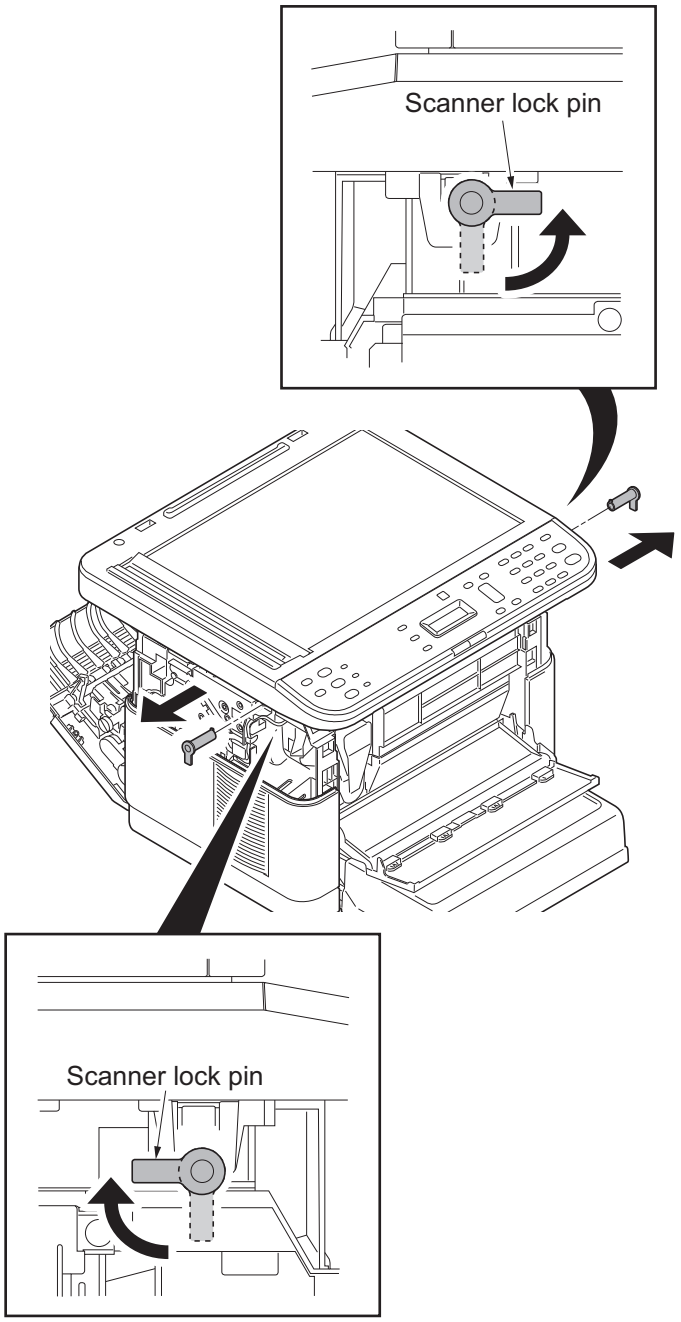


Figure 1-5-10

6. Open the scanner unit.

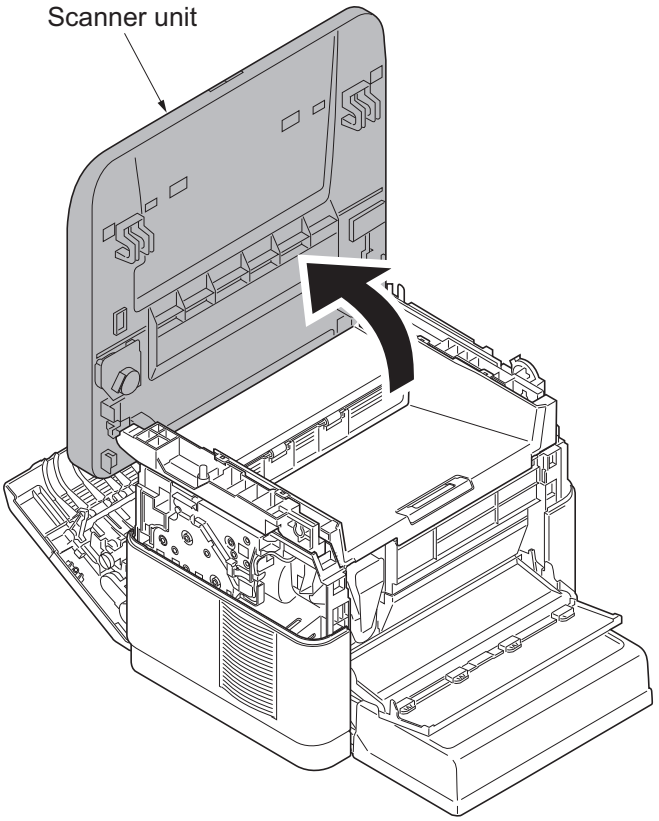


Figure 1-5-11

7. Unhook the two hooks and then remove the Top cover.

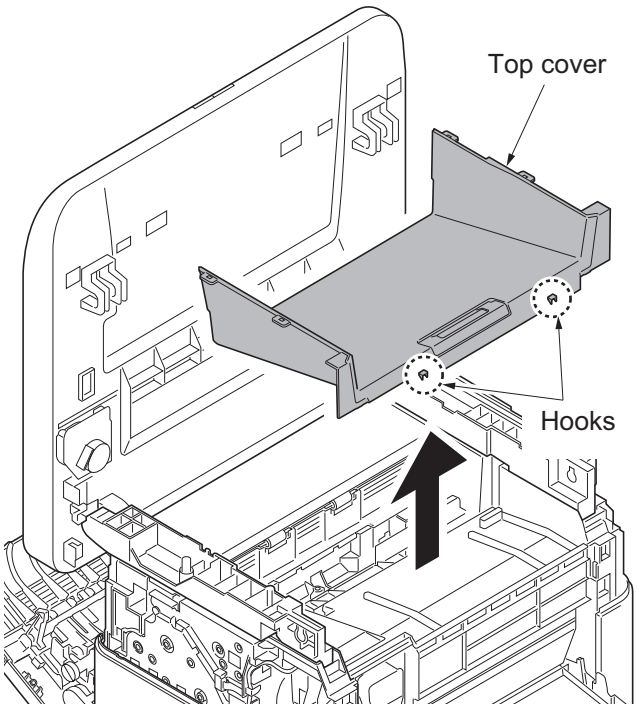


Figure 1-5-12

1-5-3 Optical section

(1) Detaching and refitting the scanner unit

Procedure

1. Remove the right upper cover, rear upper cover R, left upper cover and rear upper cover L
   (see page 1-5-3,see page 1-5-4).
2. Remove four screws.

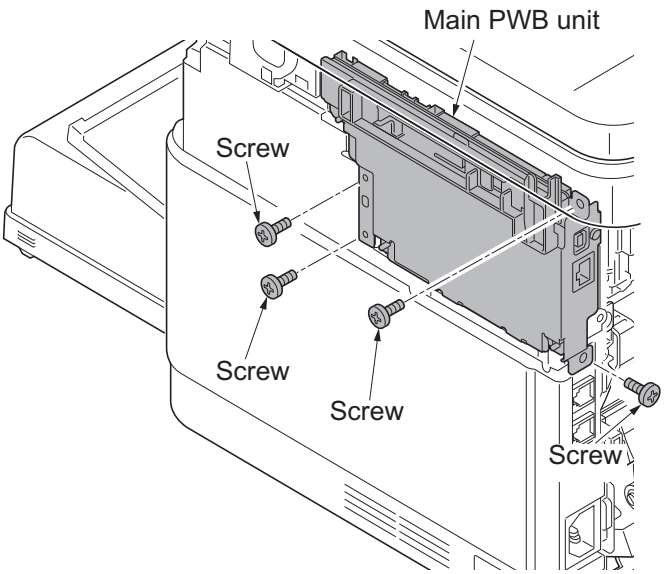


Figure 1-5-13

3. Turn the main PWB unit downwards.

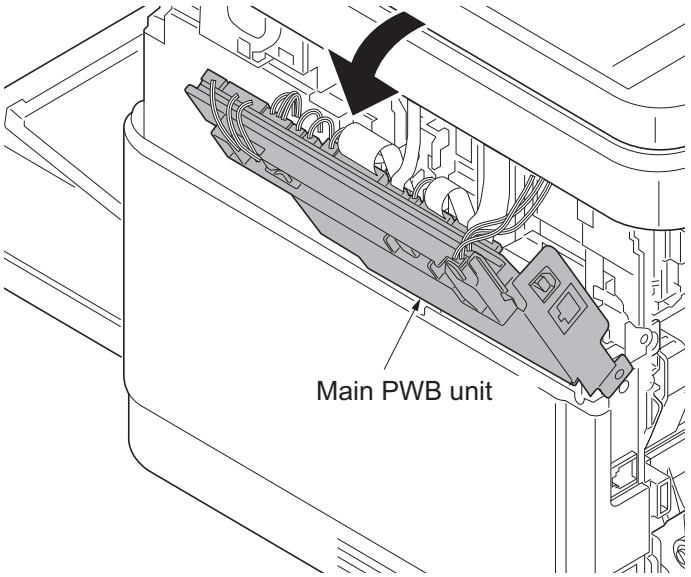


Figure 1-5-14

4. Remove the connectors from the main PWB.

5. Release the wire from the 2 hookings on the wire guide.
6. Remove a screw securing the ground wire.

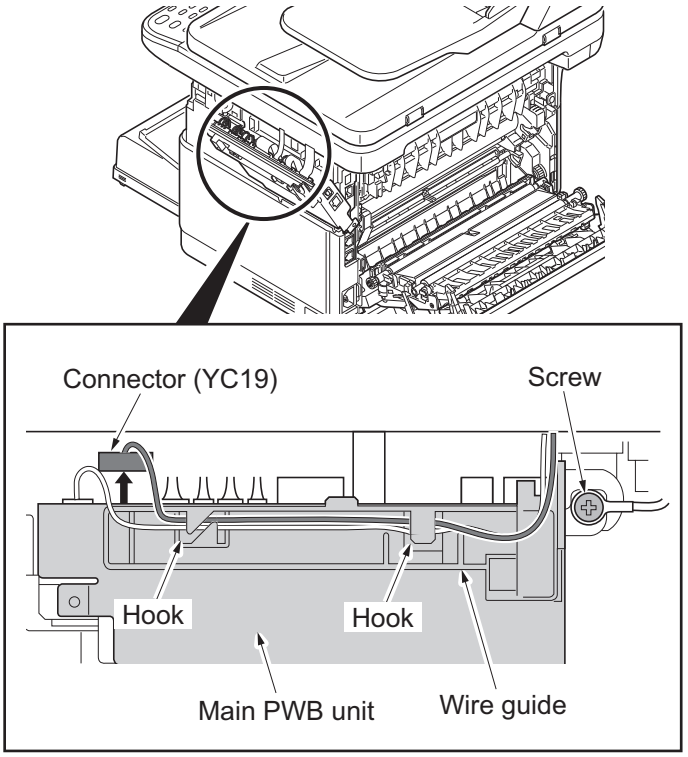


Figure 1-5-15

7. Open and lift the document processor and remove.

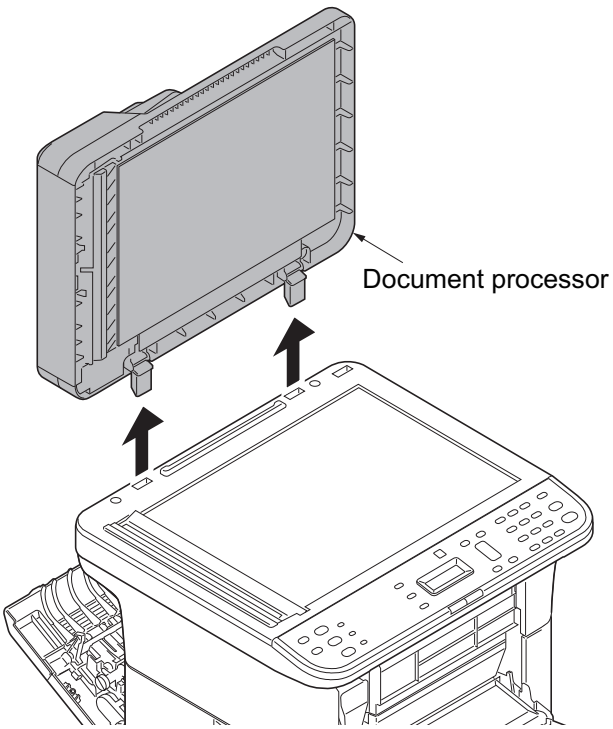


Figure 1-5-16

8. Detach the connector and two FFCs from the main PWB.
9. Release the wire from the 2 hookings on the wire guide.

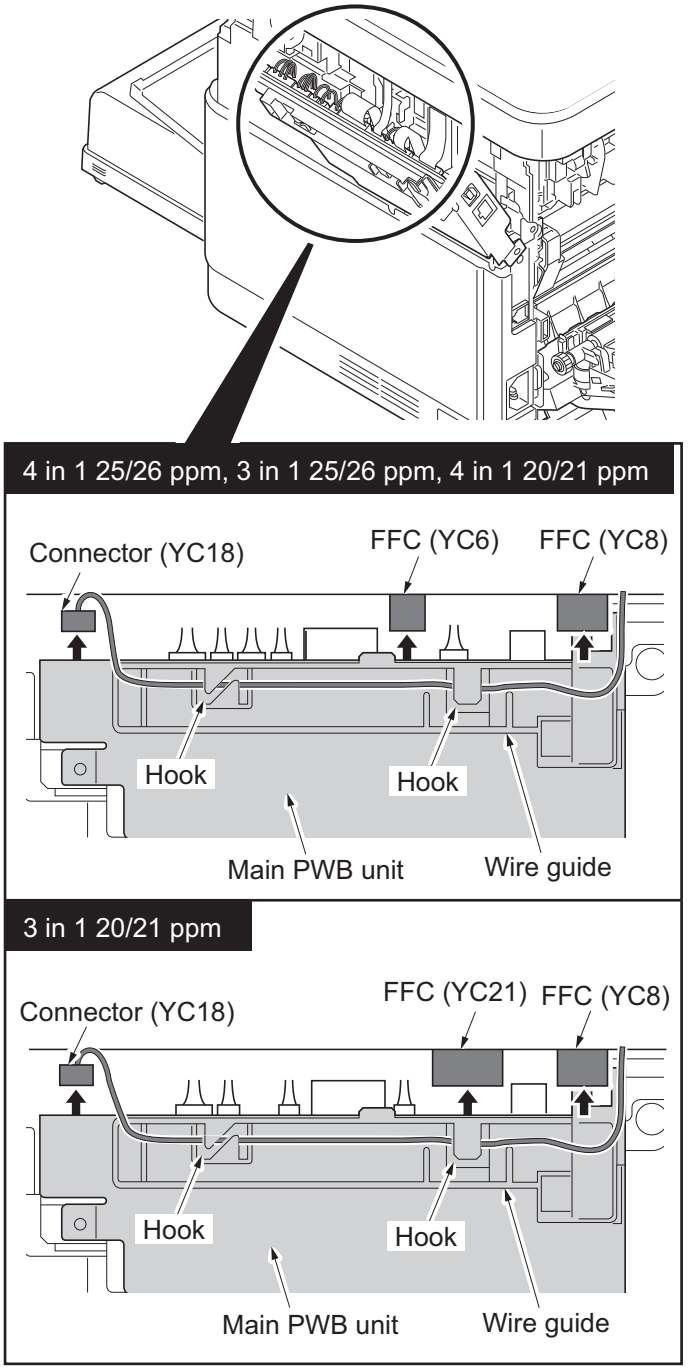


Figure 1-5-17

10. Remove the scanner unit by turning the scanner fixing pins at both ends 90 degrees.

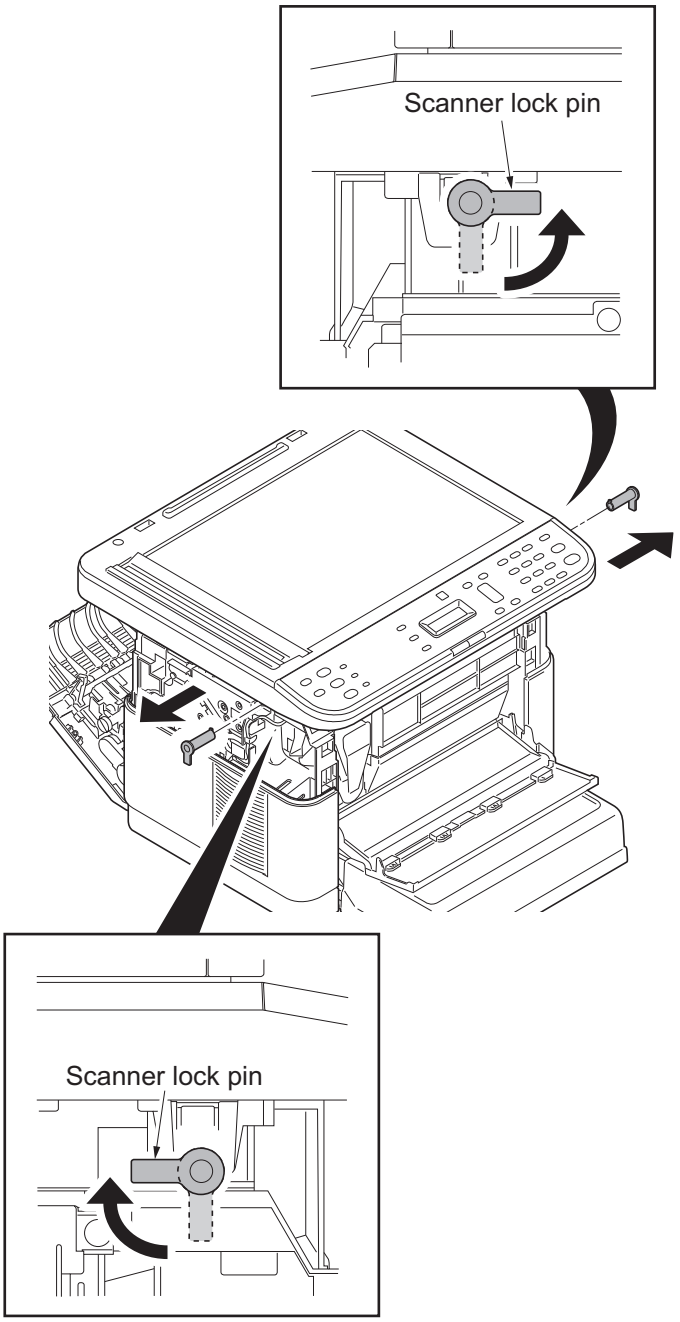


Figure 1-5-18

11. Open the scanner unit.

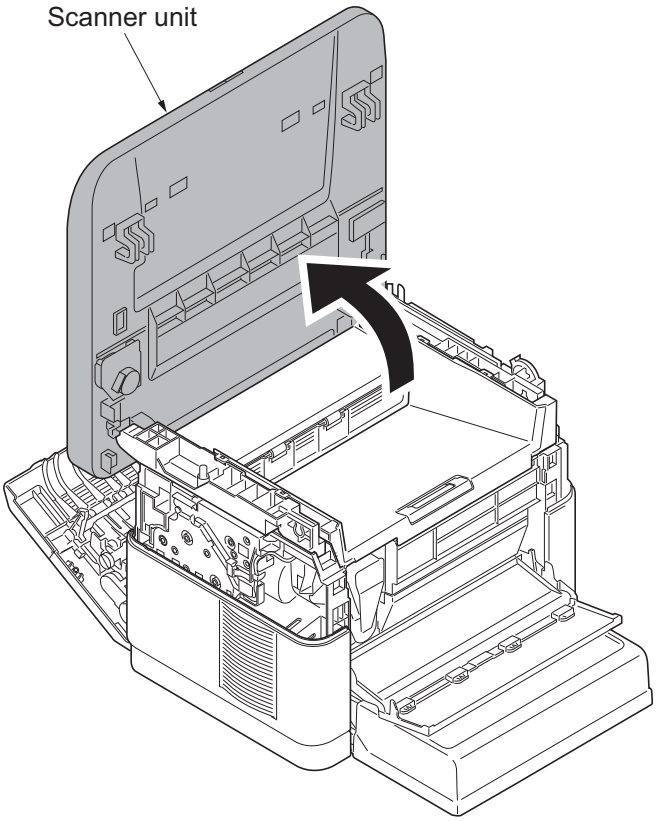


Figure 1-5-19

12. Lift the scanner unit and remove.

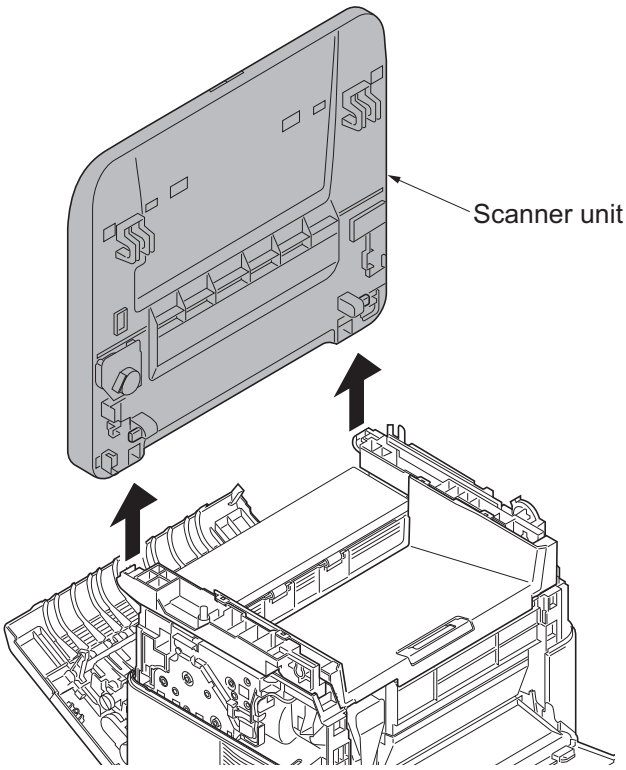


Figure 1-5-20

(2) Detaching and refitting the laser scanner unit

Procedure

1. Remove the main PWB unit (see page 1-5-18).
2. Remove the Top cover (see page 1-5-7).
3. Unhook the four hooks and then remove the upper LSU cover.

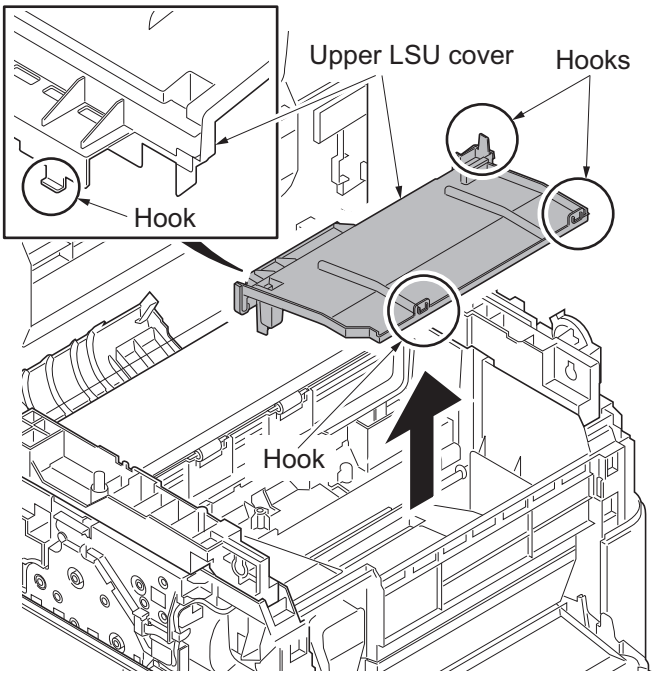


Figure 1-5-21

4. Remove the Drum unit (see page 2-4-6).
5. Confirm that the laser shutter has closed.

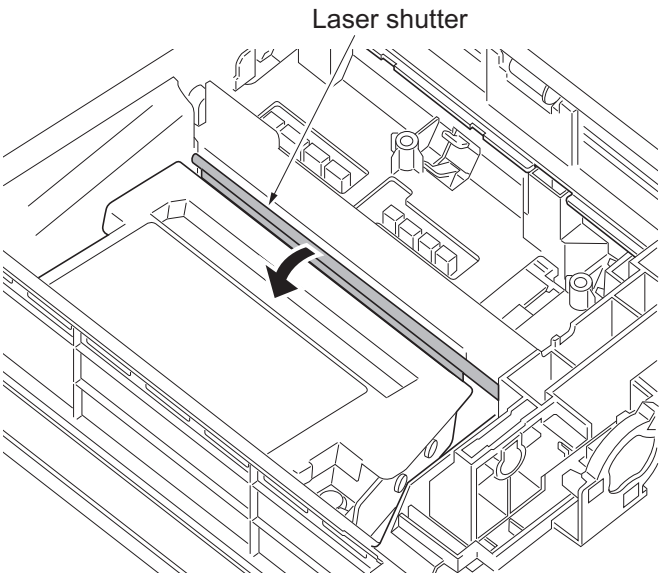


Figure 1-5-22

6. Remove four screws and then remove the laser scanner unit.
7. Check or replace the laser scanner unit and refit all the removed parts.

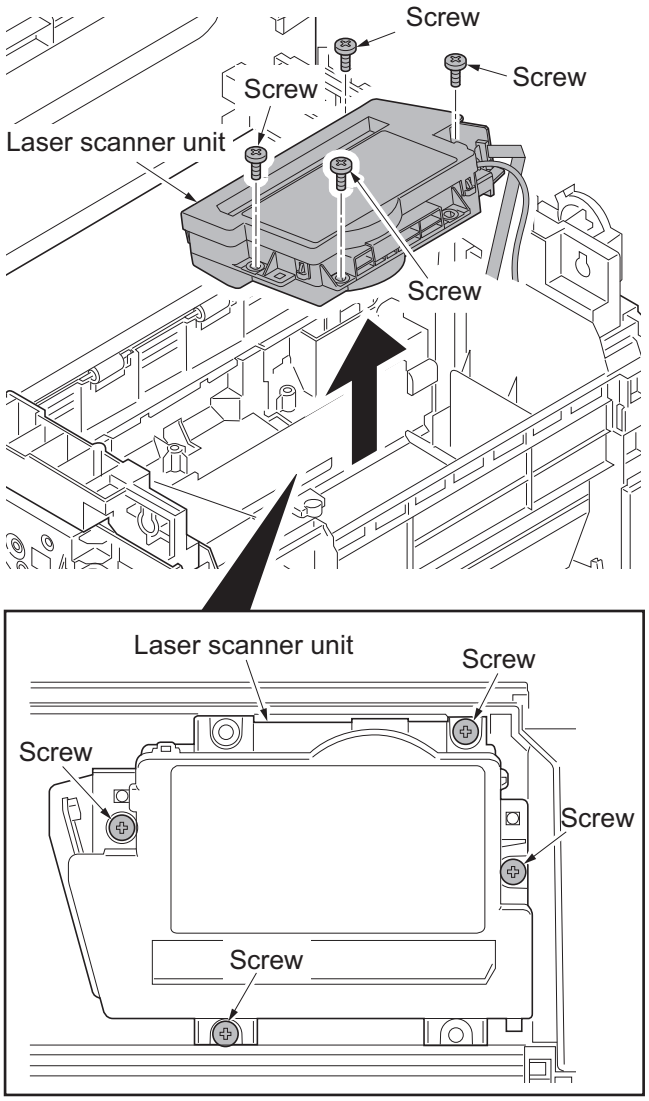


Figure 1-5-23

1-5-4 Fuser section

(1) Detaching and refitting the fuser unit

Procedure

1. Remove the right upper cover, rear upper cover R, left upper cover and rear upper cover L
   (see page 1-5-3,see page 1-5-4).
2. Remove the main PWB (see page 1-5-18).
3. Remove connector from the fuser heater.

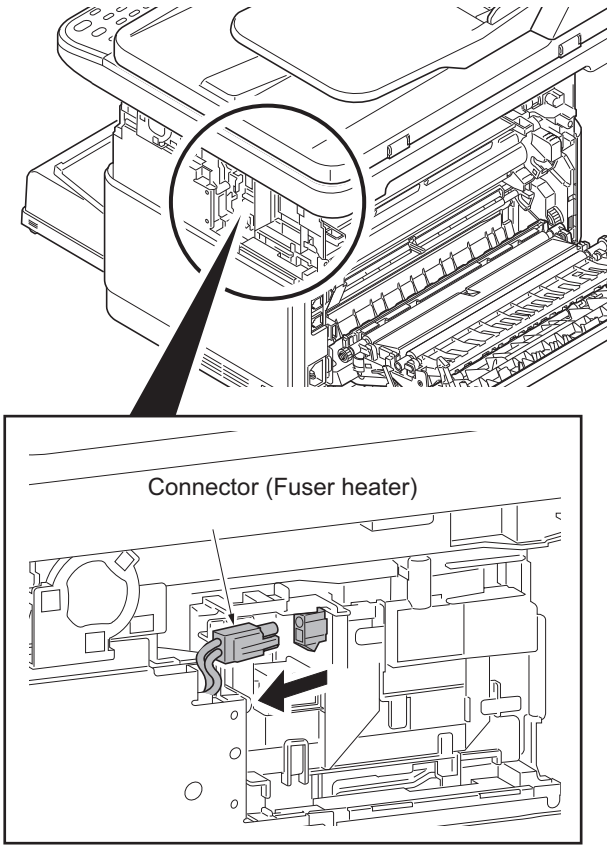


Figure 1-5-24

4. Remove two screws and then remove the fuser unit.
5. Check or replace the fuser unit and refit all the removed parts.
   Caution: Do not close the rear cover while the fuser unit is not installed, otherwise, the cover-open detecting lever may be damaged.

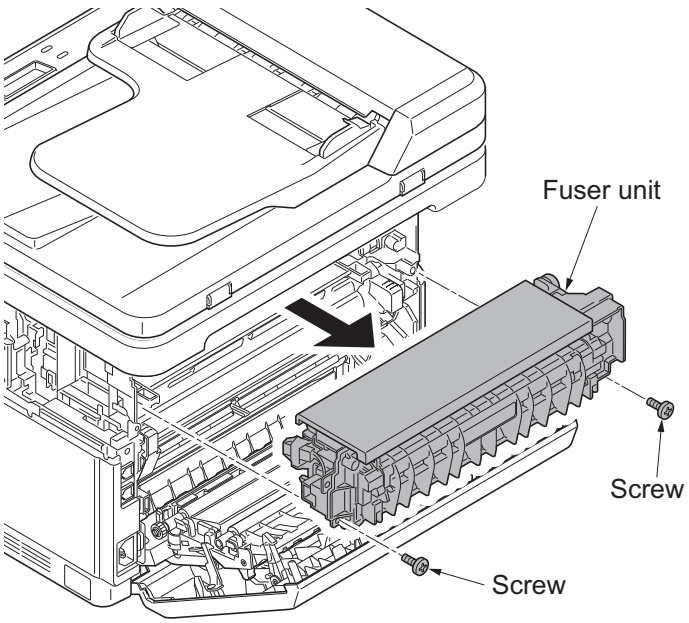


Figure 1-5-25

1-5-5 PWBs

(1) Detaching and refitting the main PWB

Procedure

1. Remove the right upper cover and rear upper cover R (see page 1-5-3).
2. Remove four screws.

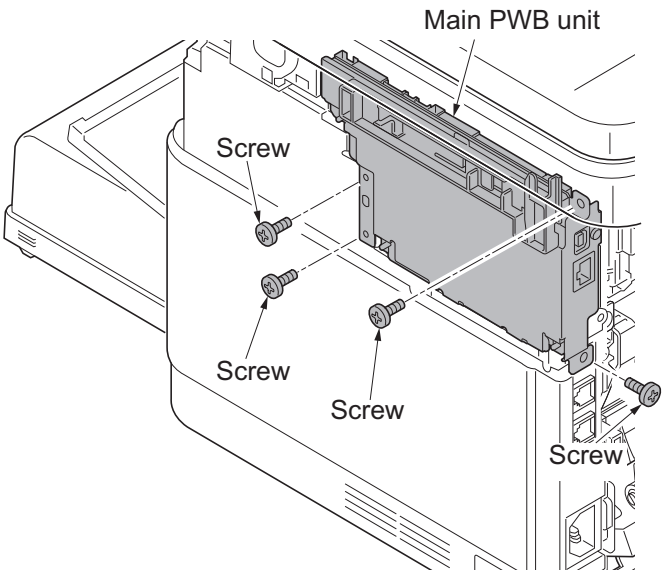


Figure 1-5-26

3. Turn the main PWB unit downwards.

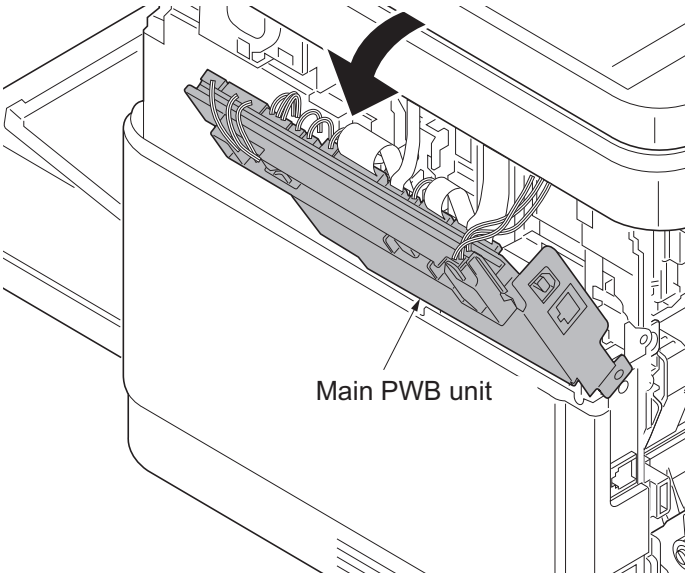


Figure 1-5-27

4. Detach the following connectors and FFC from the main PWB:
   4 in 1 25/26 ppm model,
   4 in 1 20/21 ppm model,
   3 in 1 25/26 ppm model:
   Seven connectors, four FFC

   3 in 1 20/21 ppm model:
   Five connectors, four FFC
5. Release the wire from the 2 hookings on the wire guide.

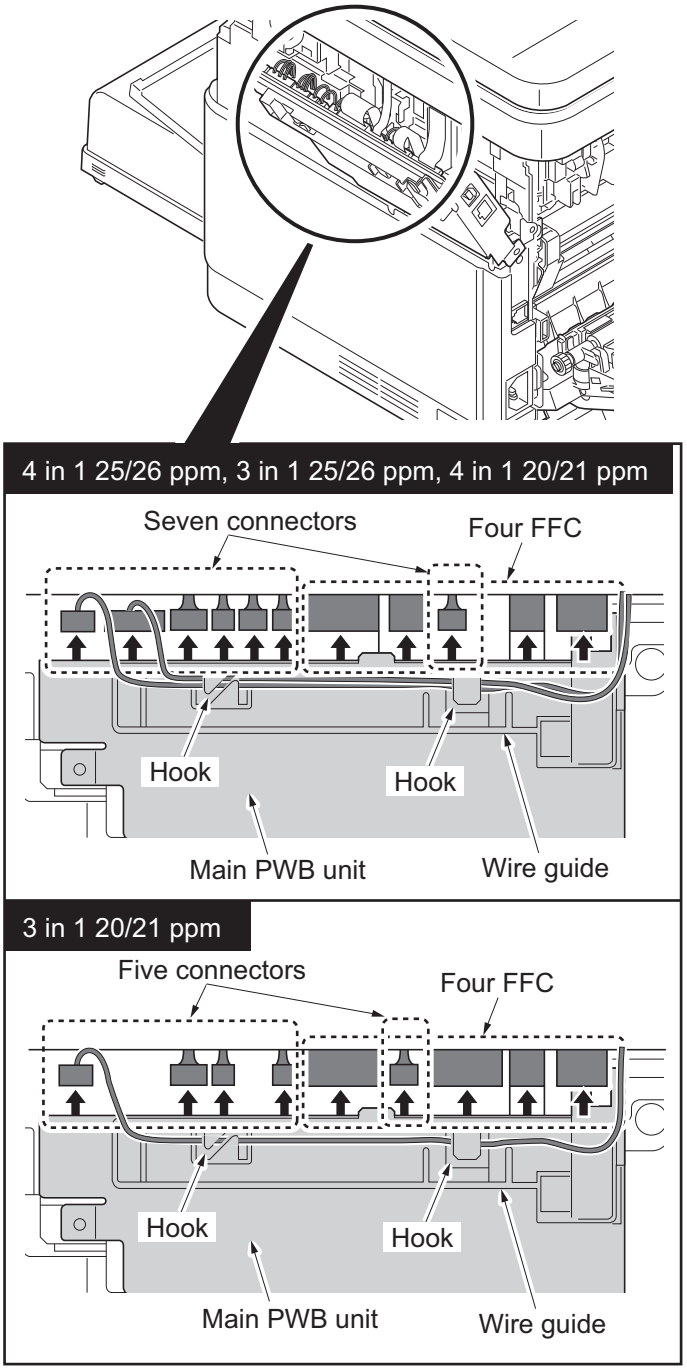


Figure 1-5-28

6. Raise the main unit board unit upright and pull upwards to remove.

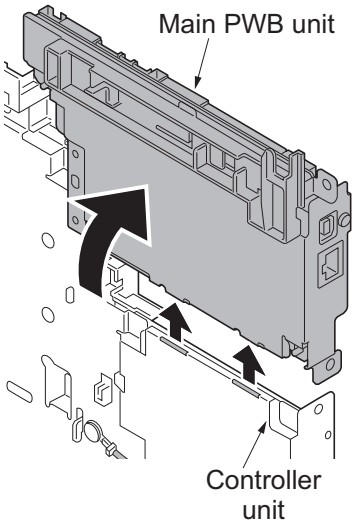


Figure 1-5-29

7. Detach the following connectors from the main PWB:
   4 in 1 25/26 ppm model,
   4 in 1 20/21 ppm model:
   Three connectors

   3 in 1 25/26 ppm model,
   3 in 1 20/21 ppm model:
   Two connectors

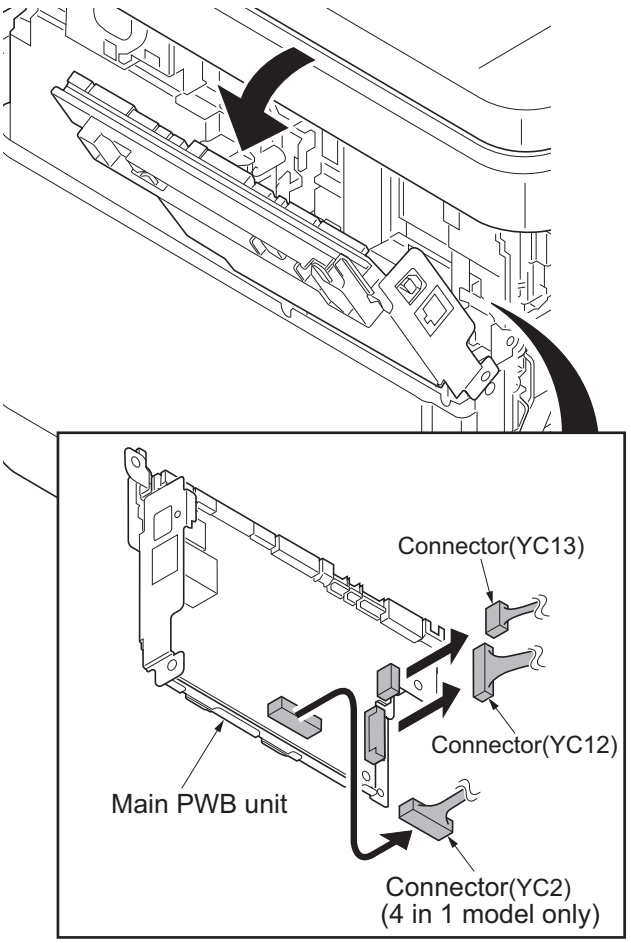


Figure 1-5-30

8. Remove four screws and then remove the main PWB.
9. Check or replace the main PWB, and refit all the removed parts.

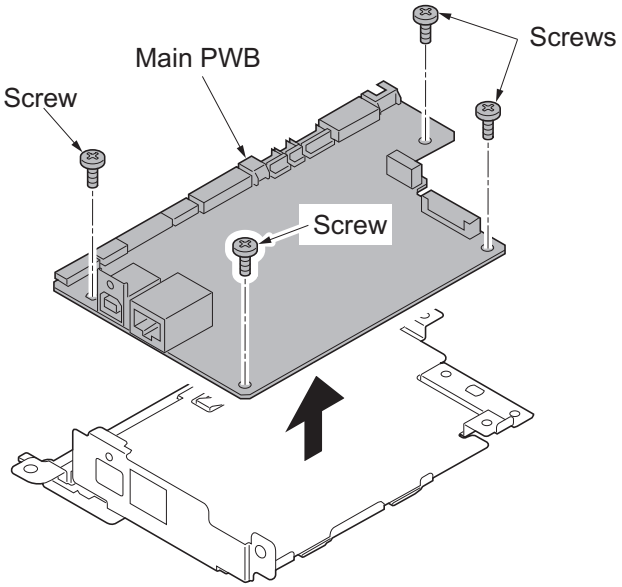


Figure 1-5-31

(2) Detaching and refitting the high voltage PWB, power source PWB and FAX PWB (4 in 1 model only)

Procedure

1. Remove the main PWB unit (see page 1-5-18).
2. Remove the right cover (see page 1-5-5).
3. Remove four screws and then remove the control unit.

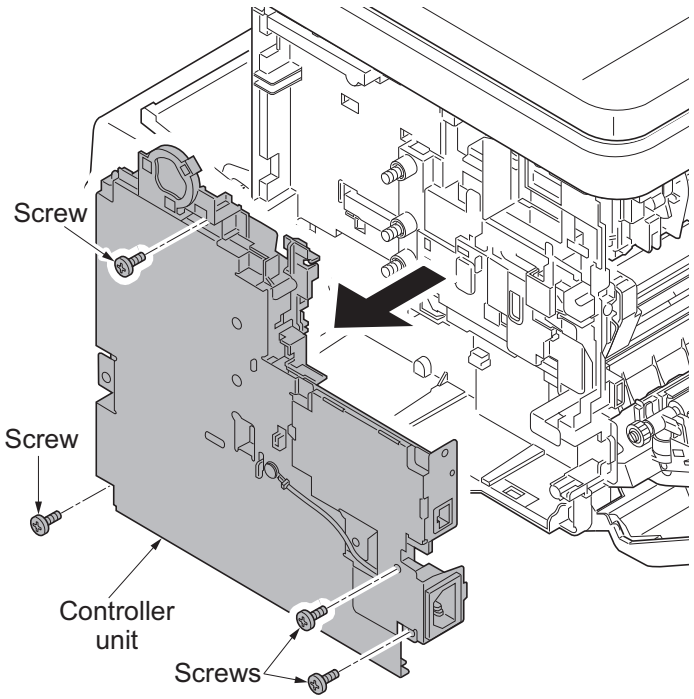


Figure 1-5-32

4. Remove the connector (YC101) that connected to the High voltage PWB.
5. Remove the connector (CN4) that connected to the FAX PWB.
6. Remove the three connectors (YC101,YC102,YC103) that connected to the power source PWB.

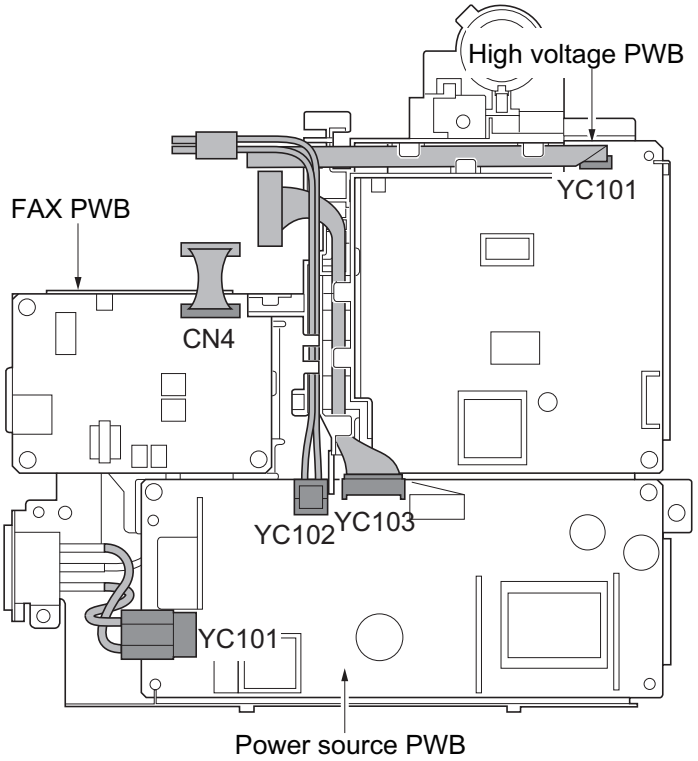


Figure 1-5-33

7. Remove screw and then remove the Cable holder.

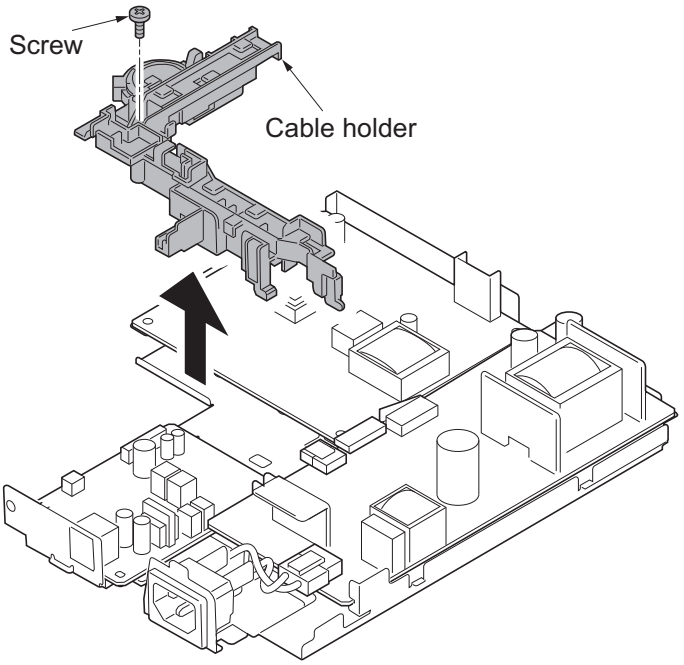


Figure 1-5-34

8. Remove four screws and then remove the FAX PWB (4 in 1 model only).

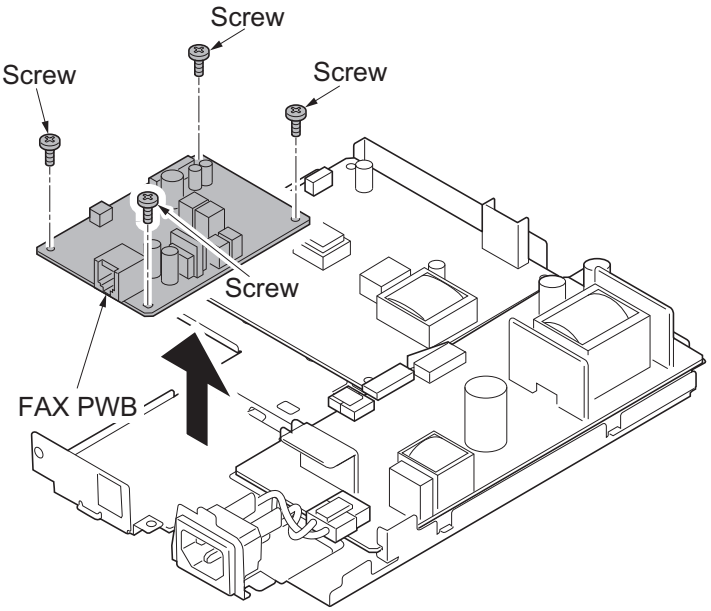


Figure 1-5-35

9. Remove screw and then remove the high voltage PWB.

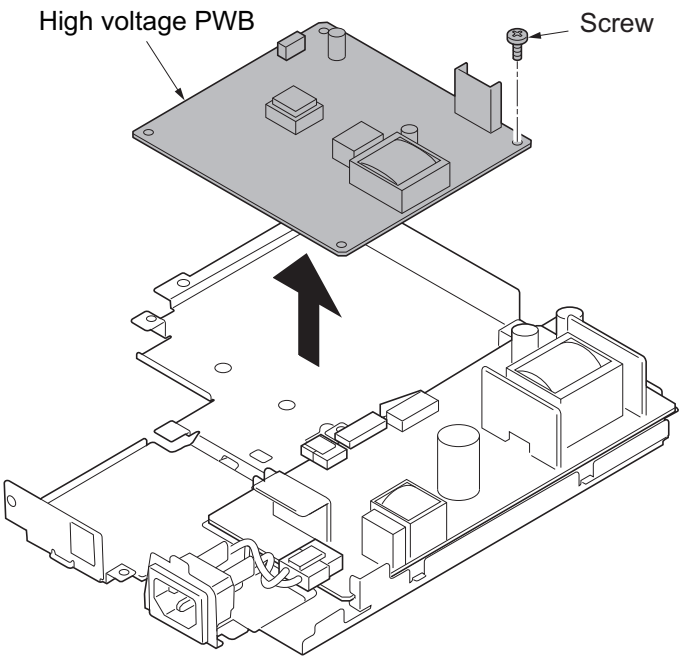


Figure 1-5-36

10. Remove two screws and then remove the power source PWB.
11. Check or replace the FAX PWB, high voltage PWB and power source PWB, and refit all the removed parts.

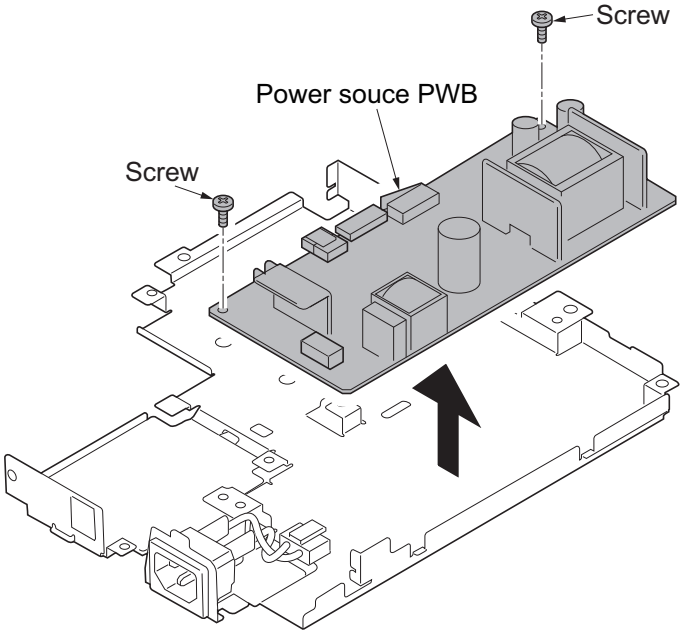


Figure 1-5-37

Caution: When fitting the controller unit, make sure that the cover-open lever is seated above the switch actuator so that the lever can turn on the cover switch above the Power source PWB. When performing service, be sure to keep the front and rear covers opened. When installing the unit, be sure to open the front and rear cover.

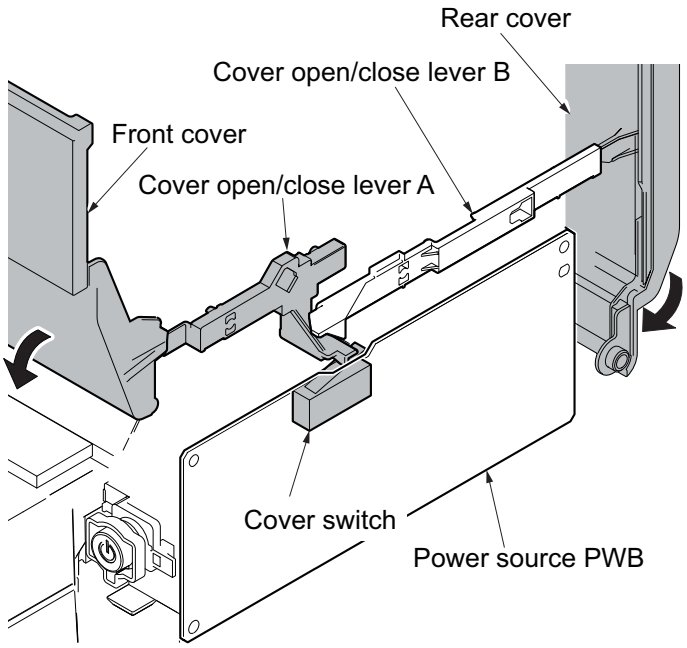


Figure 1-5-38

1-5-6 Document processor (4 in 1 20/21,25/26 ppm model, 3 in 1 25/26 ppm model only)

(1) Detaching and refitting the Document processor

Procedure

1. Remove the right upper cover, rear upper cover R (see page 1-5-3,see page 1-5-4).
2. Remove four screws.

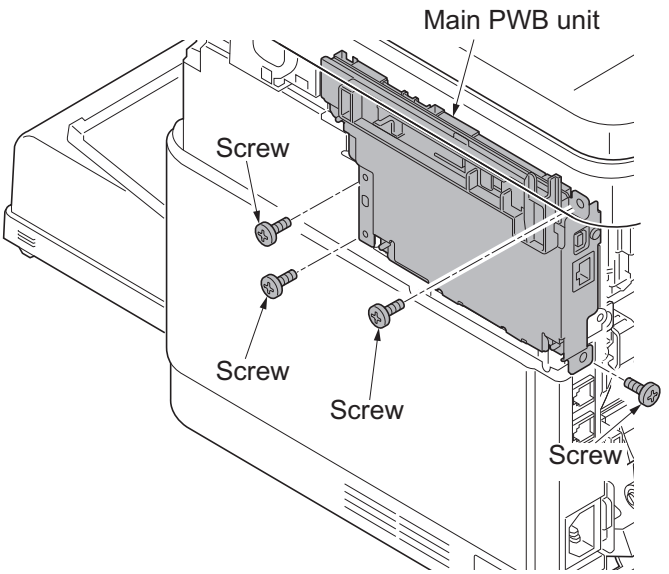


Figure 1-5-39

3. Turn the main PWB unit downwards.

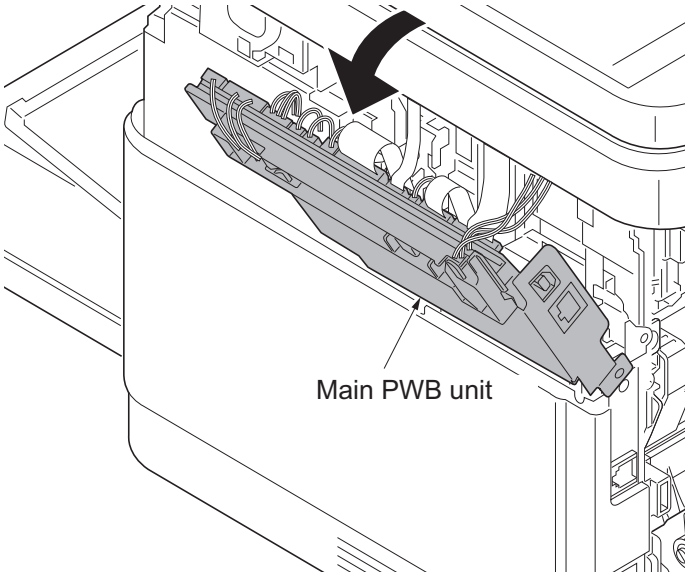
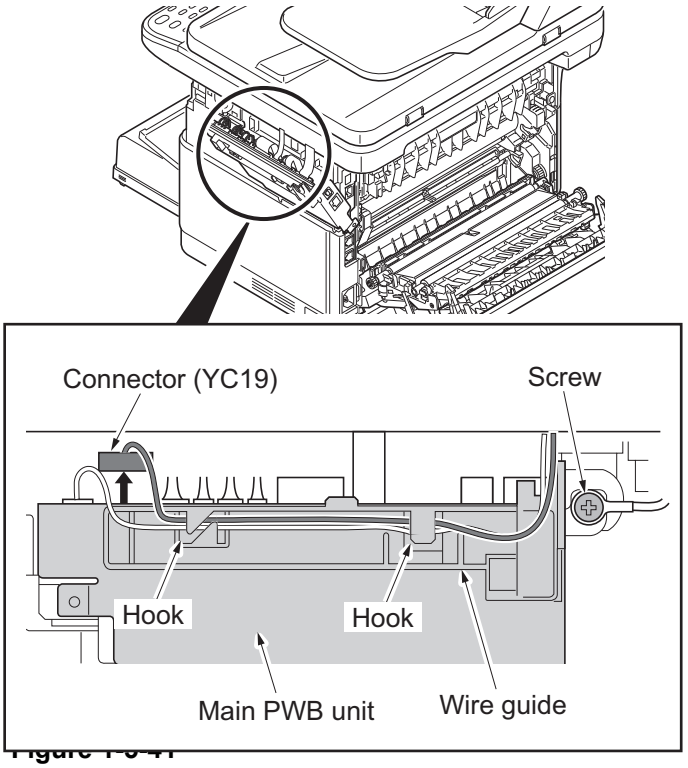


Figure 1-5-40

4. Remove the connector from the main PWB.
5. Release the wire from the 2 hookings on the wire guide.
6. Remove a screw securing the ground wire.



7. Open and lift the document processor and remove.

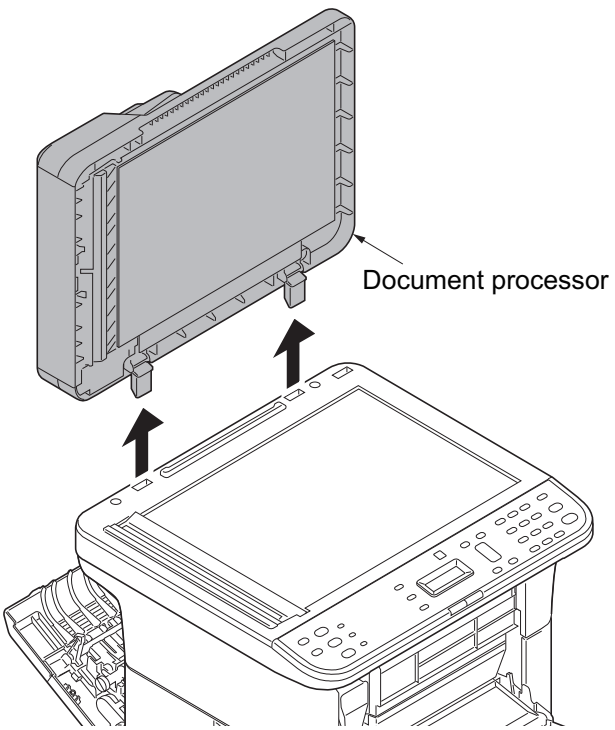


Figure 1-5-42

(2) Detaching and refitting the DP forward roller and DP paper feed roller

Procedure

1. Open the DP top cover.
2. Open the ribs outwards, which are used to fix the front end of the DP feed roller unit and remove the DP feed roller axle from the opening in the ribs.
3. Align the D-cuts at the back of the DP paper feed roller unit with each other and remove the DP paper feed roller unit from the top of the top DP cover.

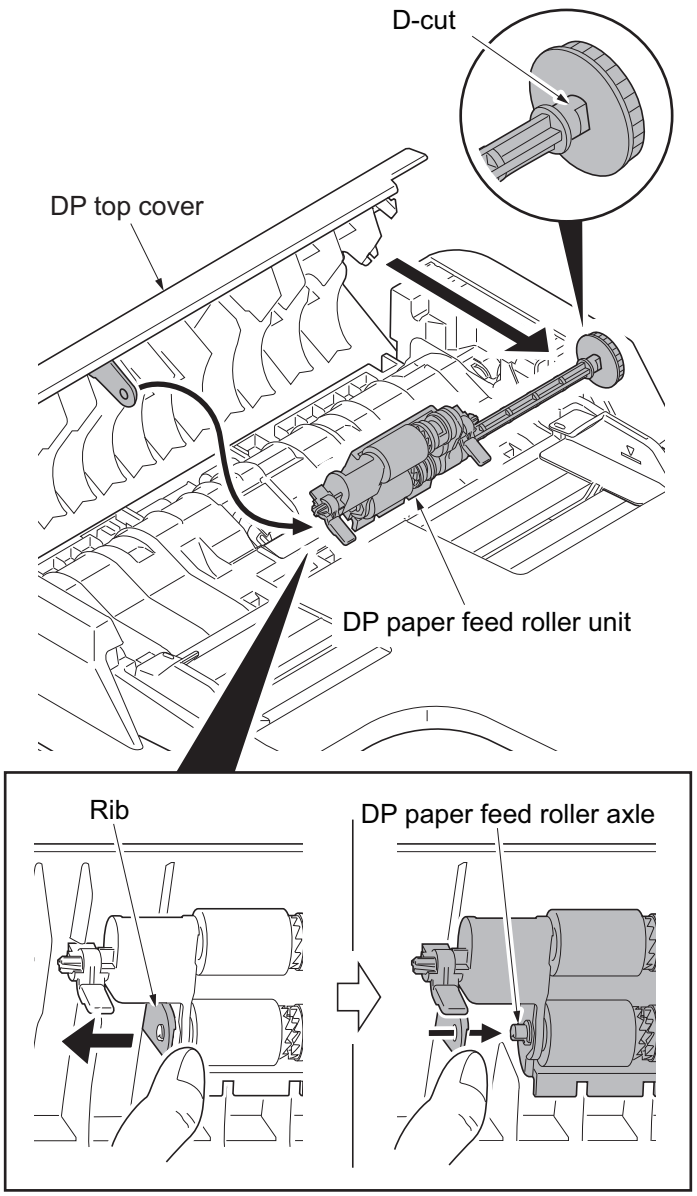


Figure 1-5-43

4. Remove the DP forward roller axle from the DP paper feed roller unit and remove the DP forward roller, collars, and gears.
5. Remove the DP roller axle from the DP feed roller unit and remove the DP roller, collars, gears and Bush.
6. Check or replace the DP forward roller and DP paper feed roller, and refit all the removed parts.

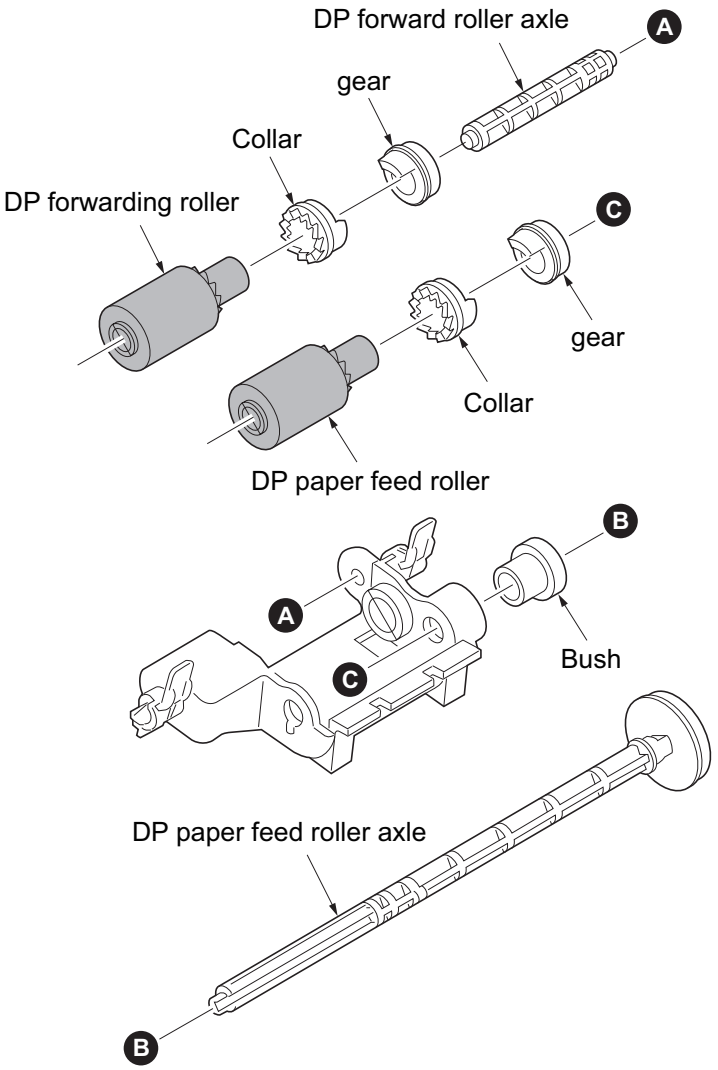


Figure 1-5-44

(3) Detaching and refitting the DP Separation pad

Procedure

1. Open the DP top cover.
2. Unhook the two hooks and then remove the DP Separation pad.
3. Check or replace the DP Separation pad, and refit all the removed parts.

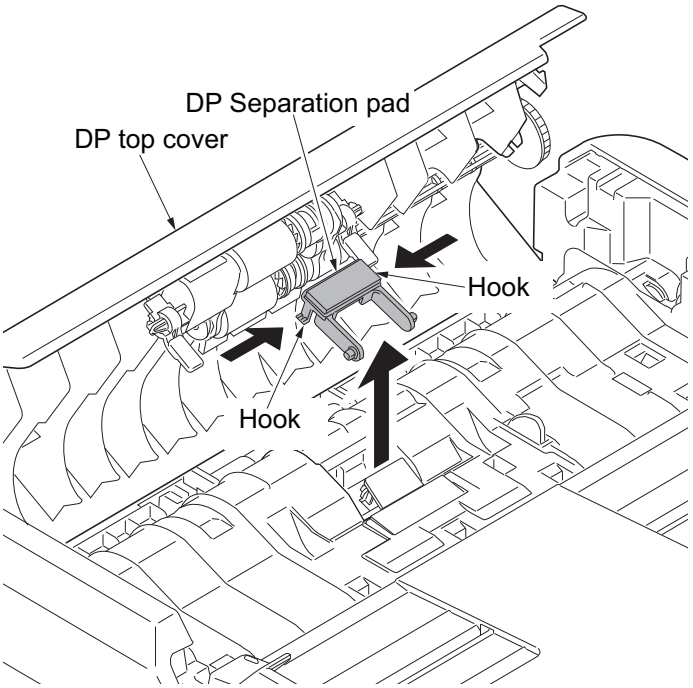


Figure 1-5-45

1-5-7 Others

(1) Detaching and refitting the Main motor unit

Procedure

1. Remove the The scanner unit (see page 1-5-10).
2. Remove the left cover (see page 1-5-6).
3. Remove the two screws and pull out the fuser unit halfway out.

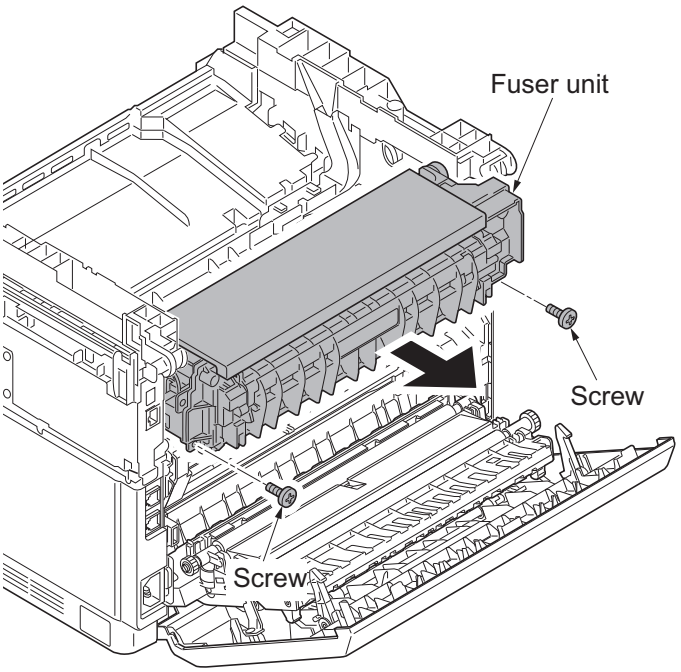


Figure 1-5-46

4. Unhook the four hooks and then remove the upper LSU cover.

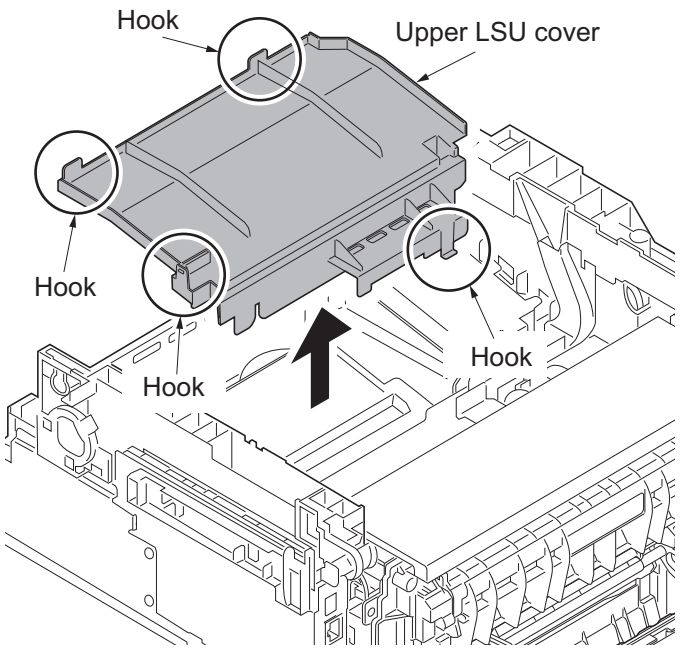


Figure 1-5-47

5. Remove main motor connector from the Relay PWB.

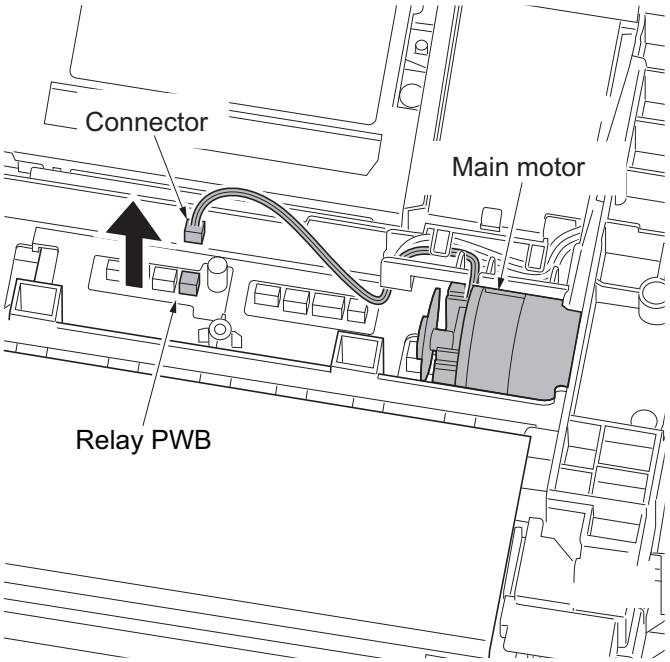


Figure 1-5-48

6. Detach the connector from the paper feed solenoid and unhook the harness from the guide.
7. Detach the connector from the duplex solenoid and unhook the harness from the guide (25/26 ppm model only).
8. Detach the spring (25/26 ppm model only).

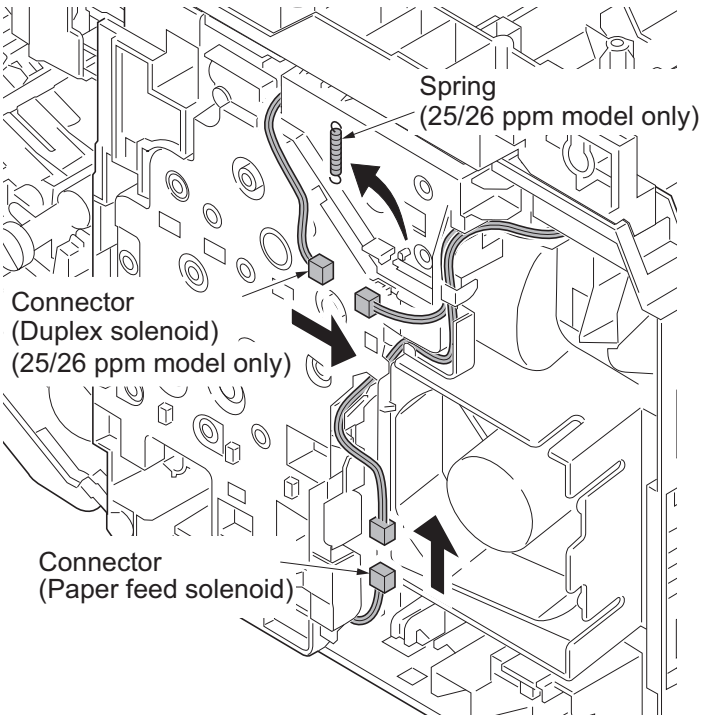


Figure 1-5-49

9. Remove four screws and then remove the drive cover.

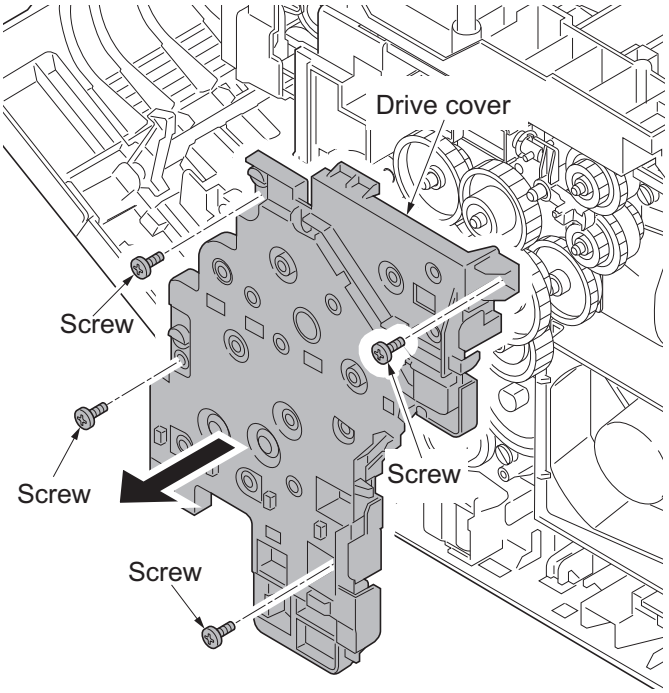
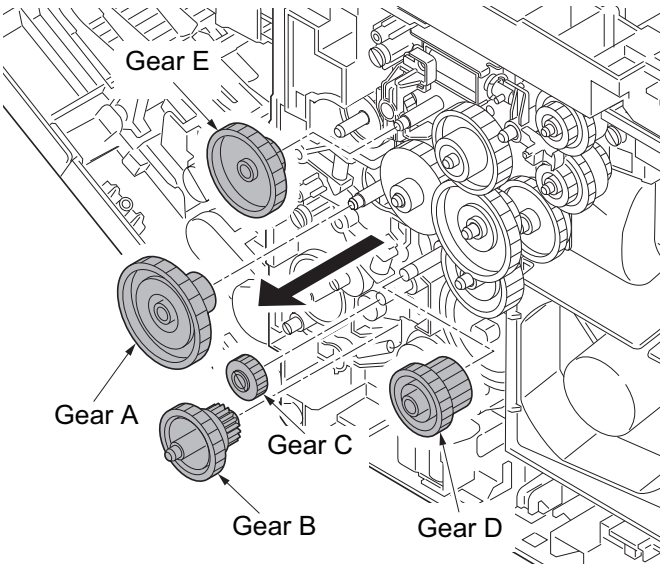


Figure 1-5-50

10. Remove the gear A, gear B, gear C, gear D and gear E.



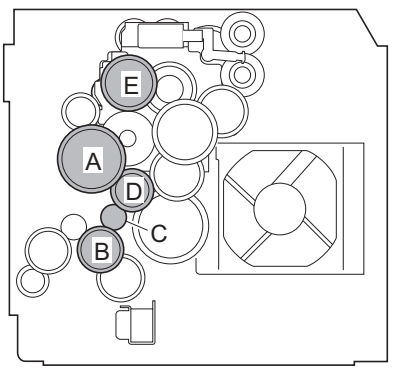


Figure 1-5-51

11. Remove the gear F, gear G, gear H and gear I.

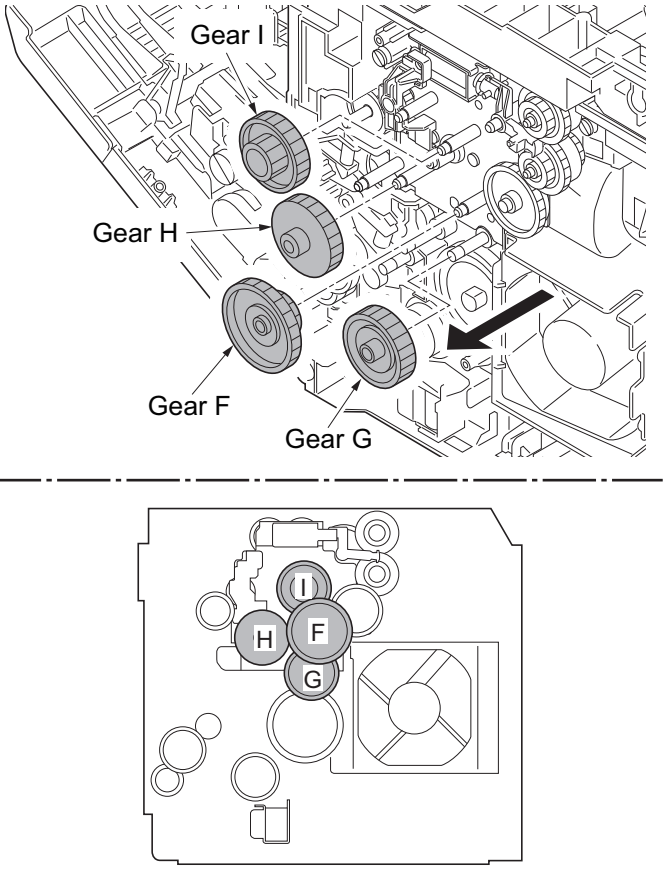


Figure 1-5-52

12. Remove the gear J, gear K and gear L (25/26 ppm model only).

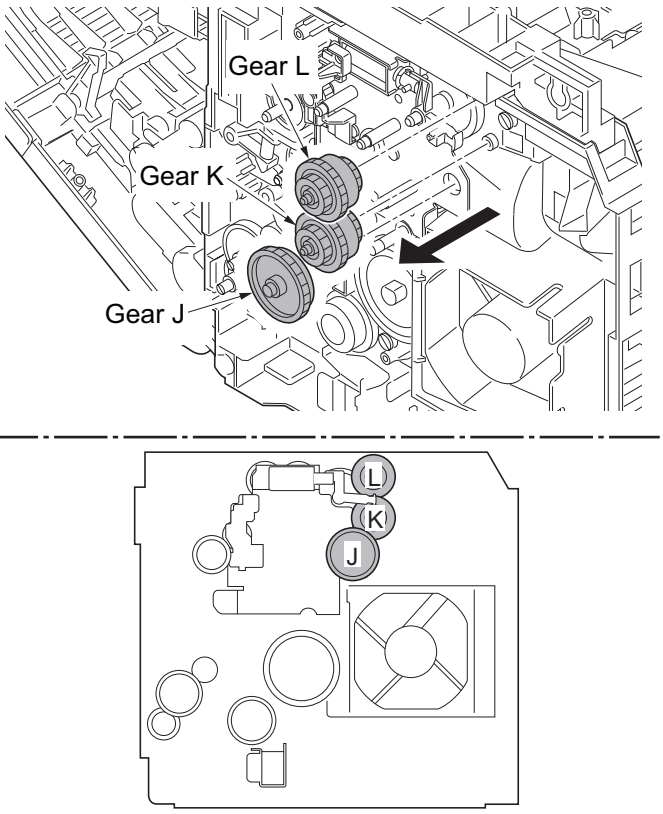


Figure 1-5-53

13. Remove the spring, gear M, gear N and sim.

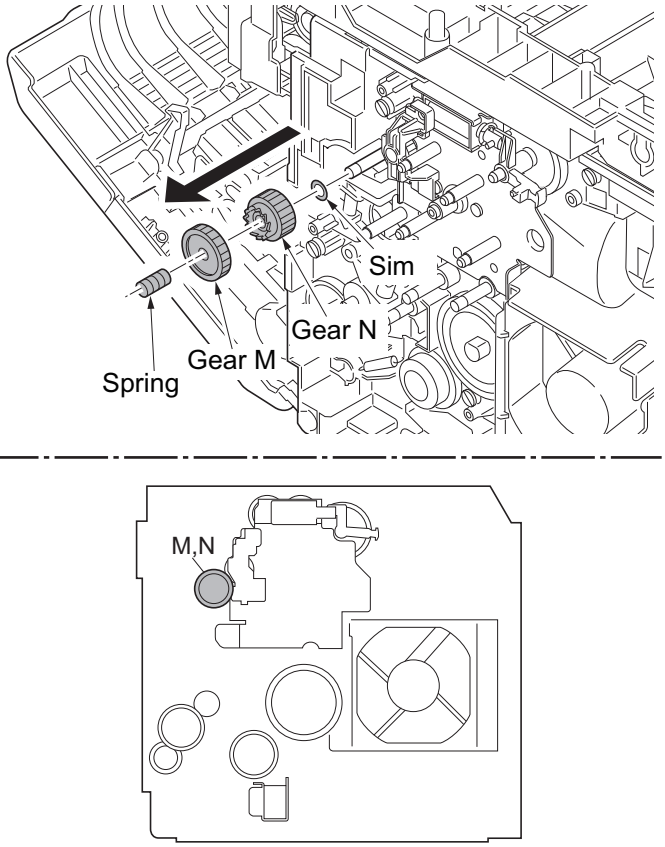


Figure 1-5-54

14. Remove the three screws and remove the gear cover and gear P.

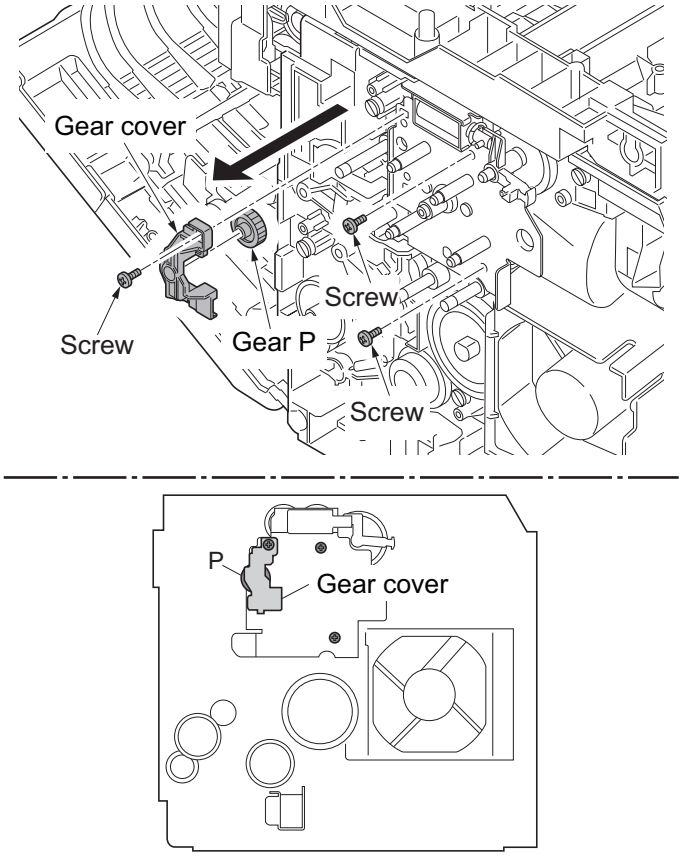


Figure 1-5-55

15. Remove the main motor unit so that the pulse board will not hit the sensor.

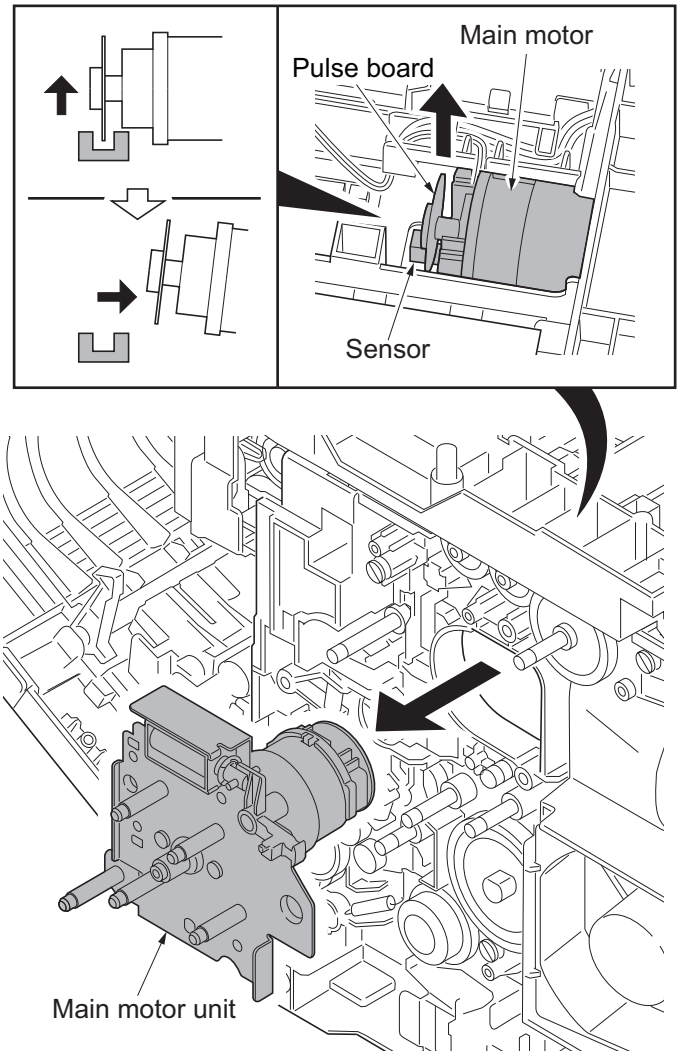


Figure 1-5-56

16. Remove the screw and remove the duplex solenoid from the main motor unit (25/26 ppm model only).
17. Check or replace the main motor unit, and refit all the removed parts.
    *: To fit the main motor unit to the machine, make sure not to let the pulse board hit the sensor.

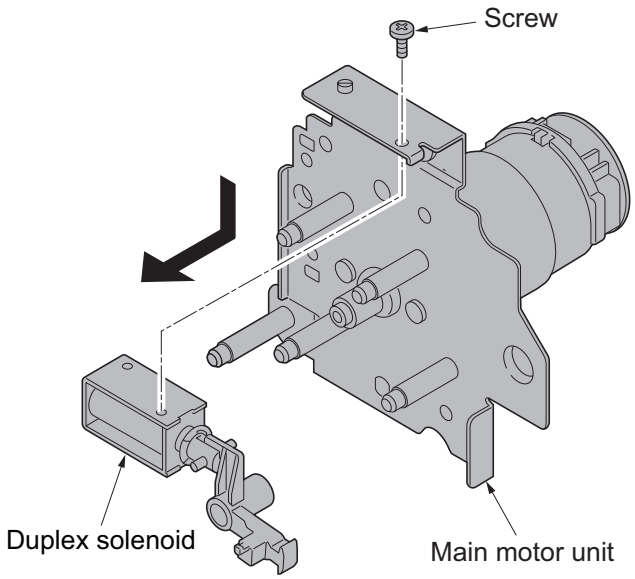


Figure 1-5-57

(2) Direction of installing the principal fan motor

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

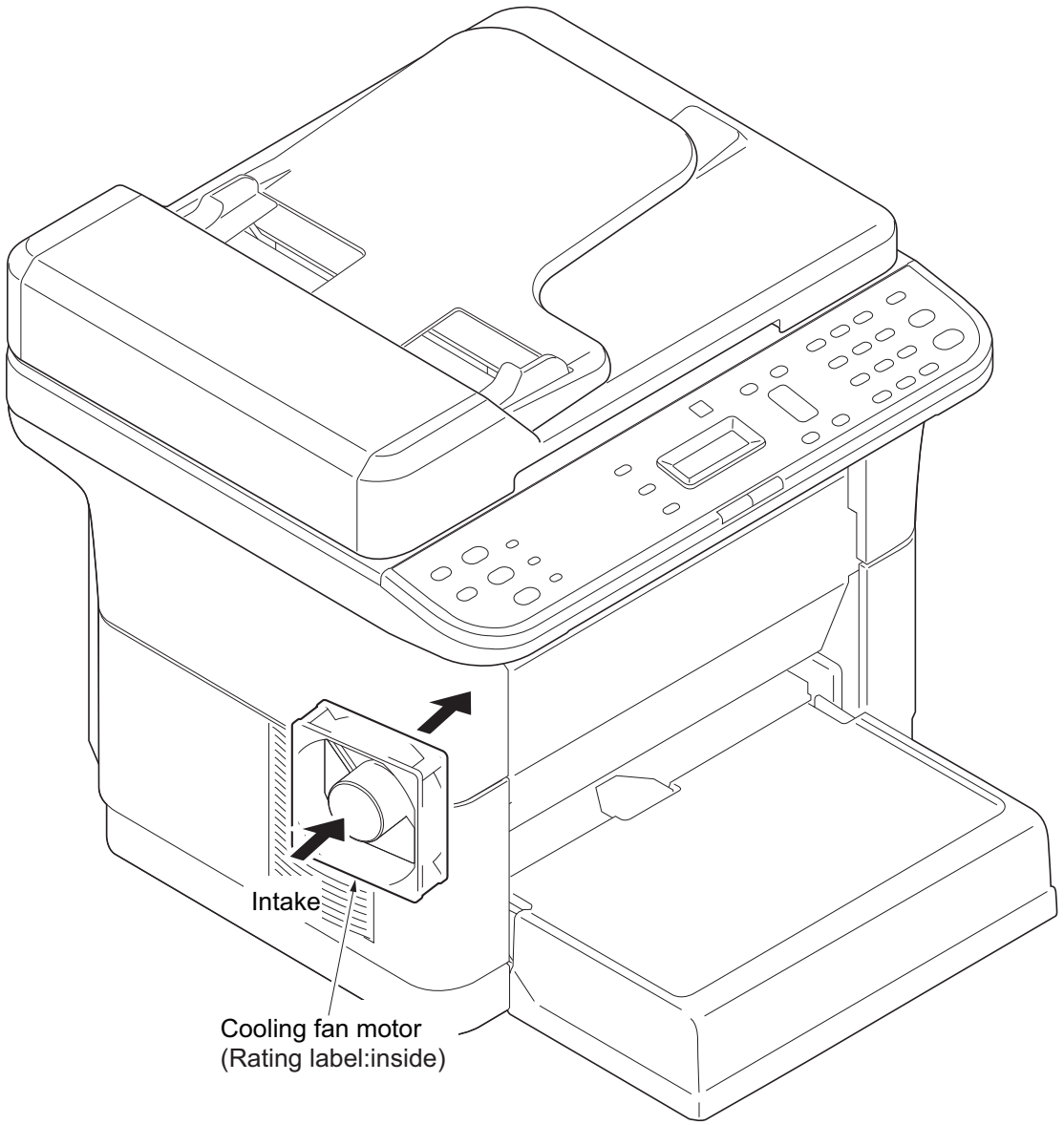


Figure 1-5-58

1-6-1 Upgrading the firmware

Follow the procedure below to upgrade the firmware of main PWB.
Firmware can be upgraded by USB connection.
Before performing a firmware upgrade by USB, the Firmware Upgrade Driver must be installed on the computer.

Procedure

1. Run KMUpgrade.exe on your PC.
   * : Before proceeding, save the Fax Package file in any folder on the PC.

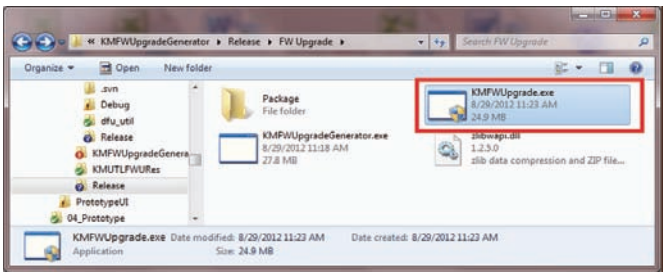


Figure 1-6-1

2. Click the acknowledgement checkbox in order to proceed with the upgrade.
3. Press [Next].

Figure 1-6-2

4. The user must select a device to continue.
   * : Only devices that are supported by the packaged firmware, and that are currently connected to the PC will be listed. First device on the list will be selected by default.
5. Press [Next].

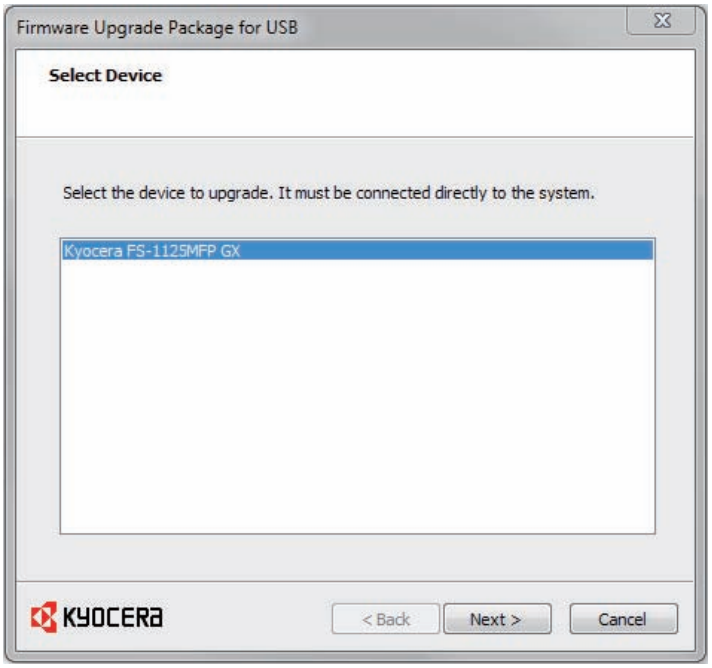


Figure 1-6-3

6. Firmware version of the device and the version of the upgrade file will be displayed.
7. Press [Upgarde] to execute upgrading.

Figure 1-6-4

8. The screen informs the user of the progress of the device.

Figure 1-6-5

9. The PC will display that the upgarding procedure has been completed.
10. To finish upgarding, press [Finish].

Figure 1-6-6

The Firmware Upgrade may fail in the following cases:

1. The device is not connected.
2. The device is busy and rejected the firmware upgrade request.
3. Unknown errors may occur while transferring the firmware file. These errors are not known to the host application.

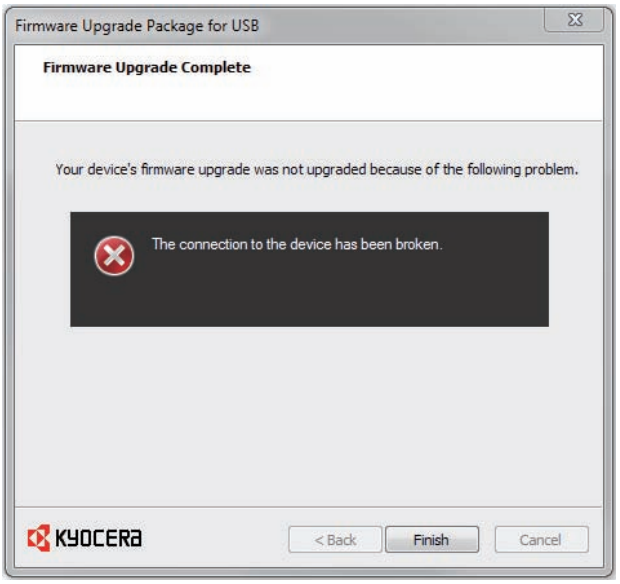


Figure 1-6-7

* : If the DFU transfer fails after 30 seconds of retrying, the Firmware Upgrade wizard will assume that the WinUSB driver may not currently be installed in the system, so it will automatically start the WinUSB driver installation.

Figure 1-6-8

1. A security warning may be displayed in a Windows Vista/7 environment.
2. Should this be the case, select the installation using an administrator privilege.
3. Write the firmware into the device.

Figure 1-6-9

4. When the device automatically reboots itself after the firmware is written and displays copying is available, the upgrading procedure has been completed.
5. The PC will display that the upgarding procedure has been completed.
6. To finish upgarding, press Finish.

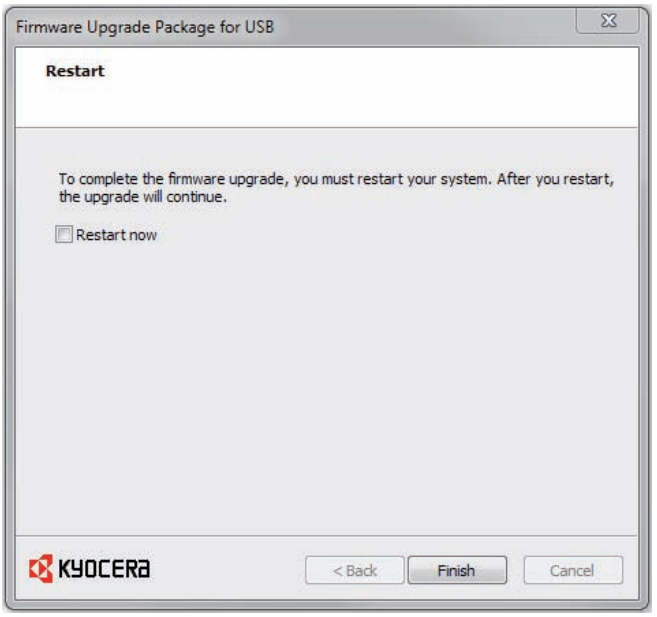


Figure 1-6-10

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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 MF tray (Manual feed tray) paper feed unit that feeds paper from the MF tray(25/26 ppm model), and the paper conveying section that conveys the fed paper to the transfer/separation section.

(1) Cassette paper feed/ paper conveying section

Cassette paper feed section consists of the paper holder with the cassette operation plate, and the paper feed pulley and the separation pad, for extracting and conveying the paper. Paper is fed out of the cassette by the rotation of the paper feed pulley.
The paper conveying section conveys paper to the transfer/separation section as paper feeding from the cassette or MF tray, or as paper refeeding for duplex printing (25/26 ppm model). Paper by feeding is conveyed by the upper registration roller and lower registration roller to the transfer/separation section.The timing to start image formatting by laser is triggered by the regist sensor (RS) and in synchronization with the paper.

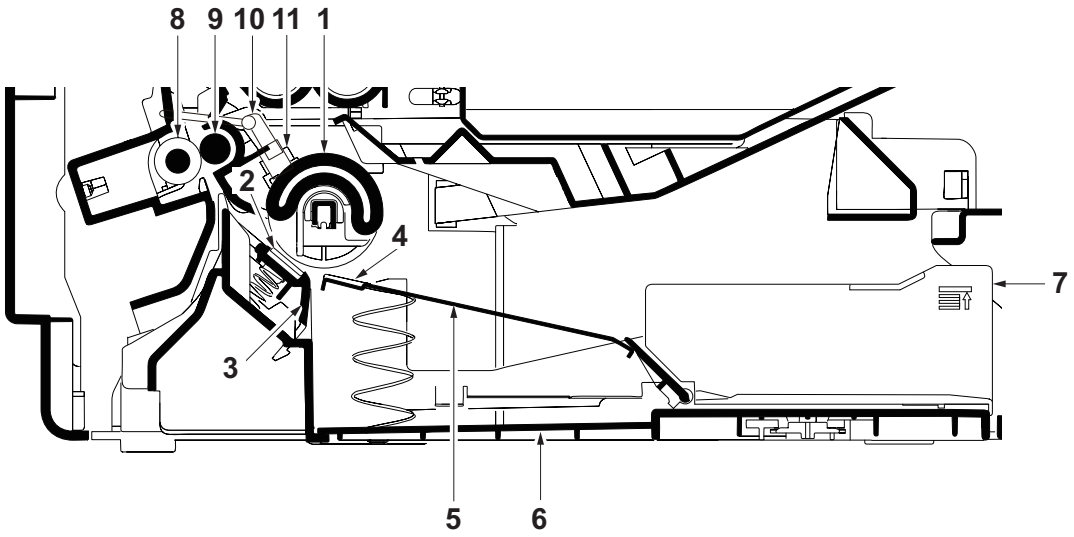


Figure 2-1-1 Cassette paper feed section

1. Paper feed pulley
2. Separation pad
3. Separation pad holder
4. Bottom pad
5. Cassette operation plate
6. Cassette base
7. Guide R/F
8. Lower registration roller
9. Upper registration roller
10. Actuator (regist deflection sensor)
11. Registration sensor (RS)

(2) Manual feed section (25/26 ppm model only)

Manual feed section consists of the MF sheet, MF base and the paper feed pulley (same as the cassette) for extracting and conveying the paper.
Paper is fed out of the MF tray by the rotation of the paper feed pulley.Paper is automatically fed from the manual feed tray if paper is present in the tray.

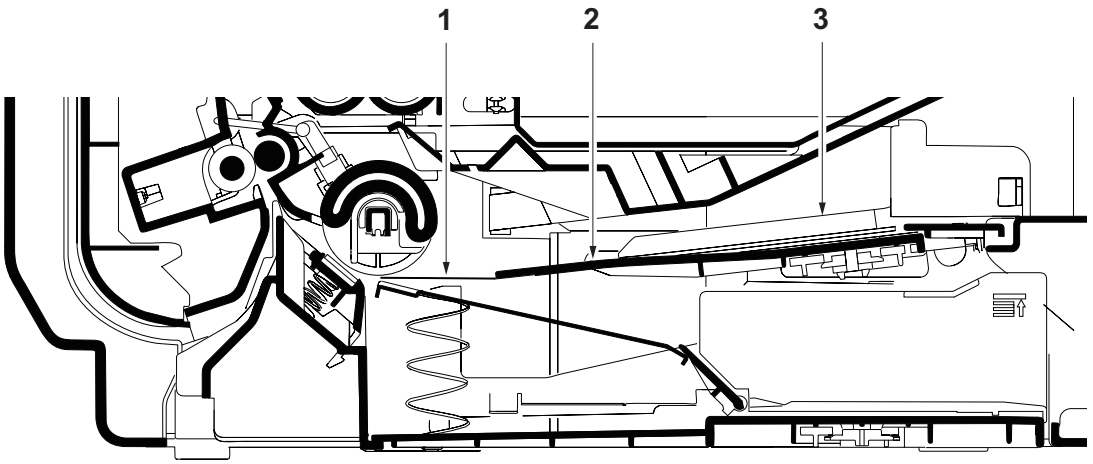


Figure 2-1-2 Manual feed section

1. MF sheet
2. MF base
3. MF guide R/L

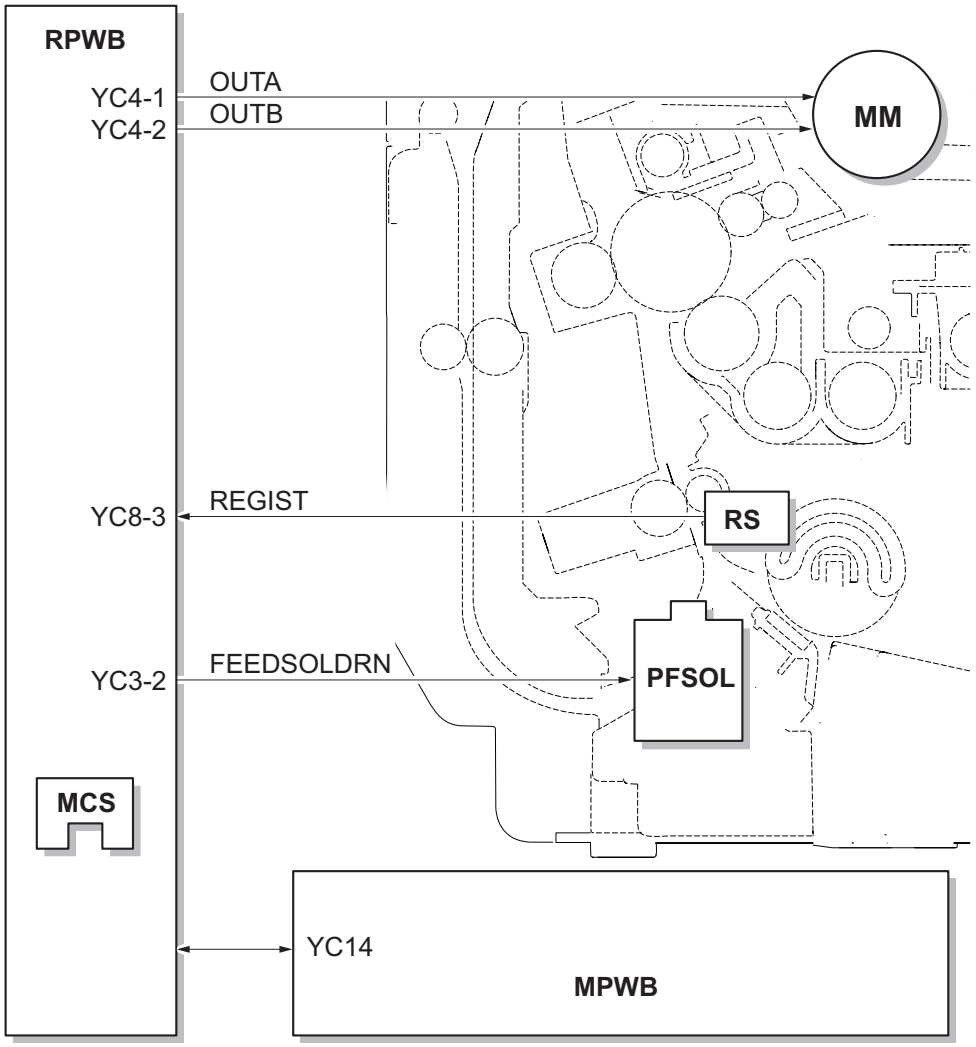


Figure 2-1-3 Cassette paper feed section block diagram

2-1-2 Drum section

The drum section consists of the charger roller, 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 drum screw which remove residual toner from the drum surface after transfer. The eraser lamp (ELPWB) consists of LEDs and removes residual charge on the drum before main charging.

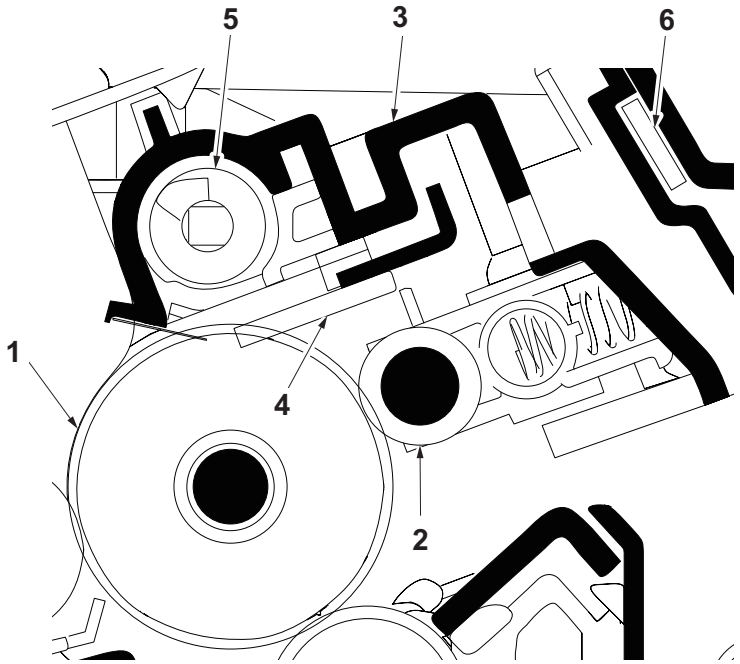


Figure 2-1-4 Drum section

1. Drum
2. Charger roller
3. Drum frame
4. Cleaning blade
5. Drum screw
6. Eraser lamp (ELPWB)

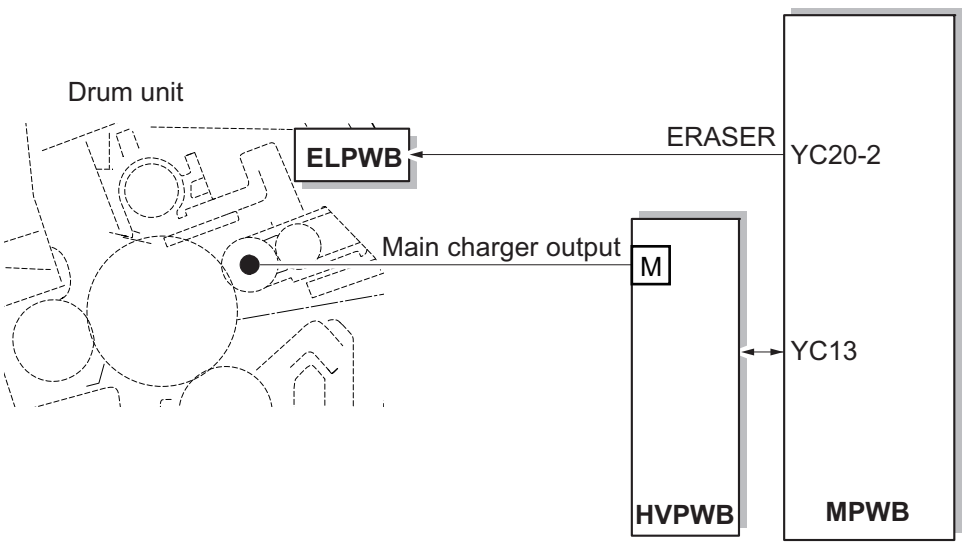


Figure 2-1-5 Drum section block diagram

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 toner container.

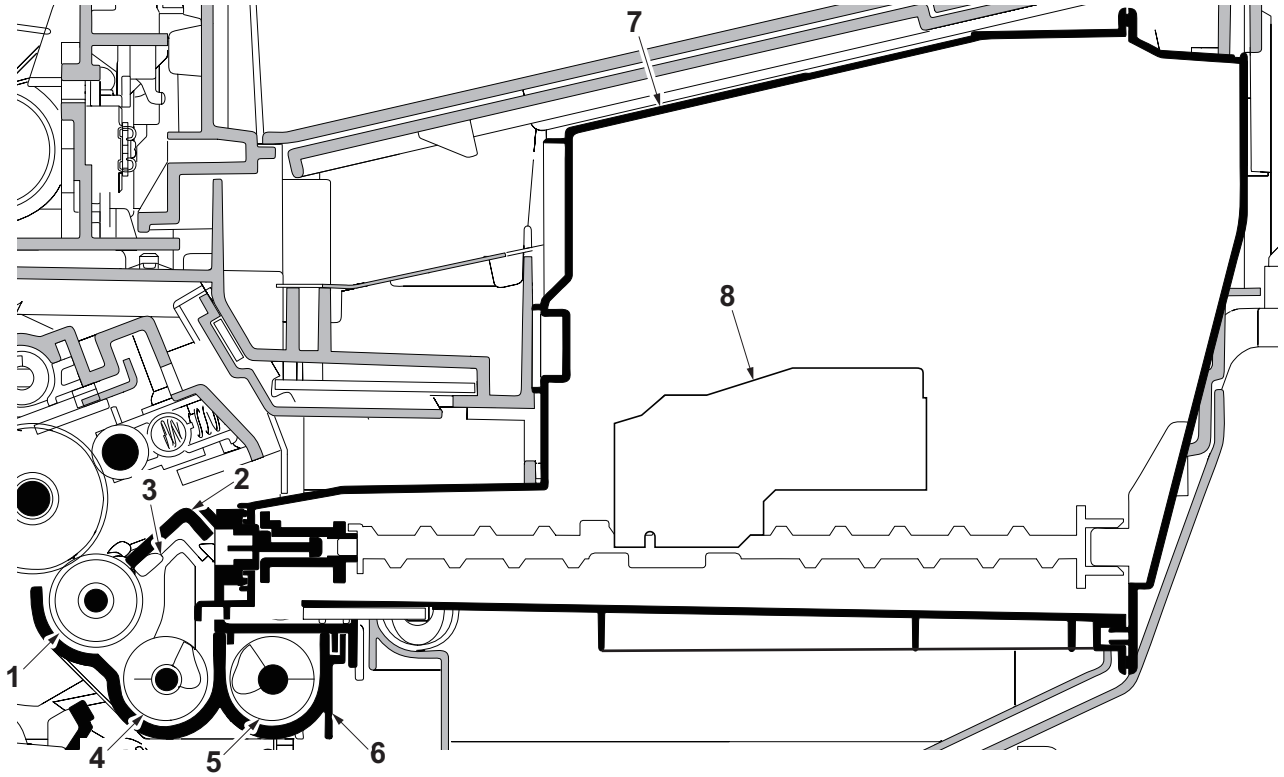


Figure 2-1-6 Developer section

1. Developer roller
2. Developer blade
3. Blade magnet
4. Developer screw A
5. Developer screw B
6. Developer case
7. Toner container
8. Toner sensor (TS)

.

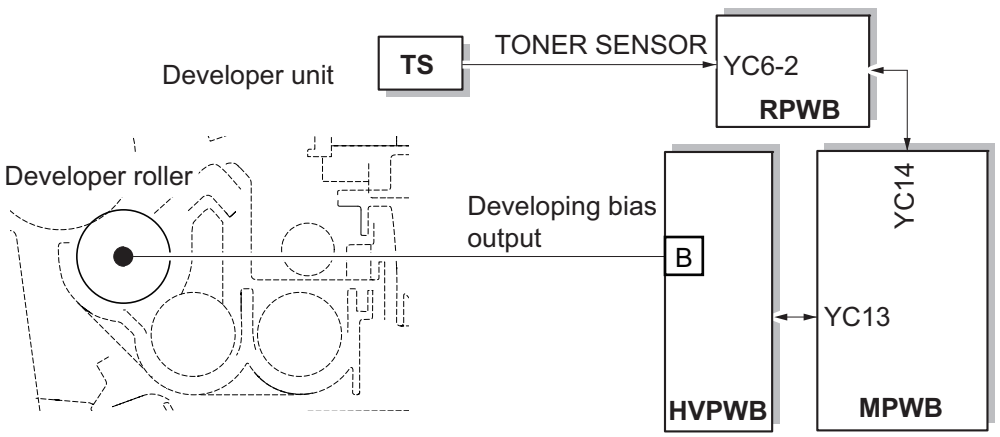


Figure 2-1-7 Developer section block diagram

2-1-4 Optical section

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

(1) Scanner unit

The image in an original document is scanned using a CIS image sensor.
When the document processor (DP) is used for scanning, the CIS unit is parked at the DP reading position and in synchro with the timing of feeding the original document, the DP continuously performs scanning over the subscan direction of the document.

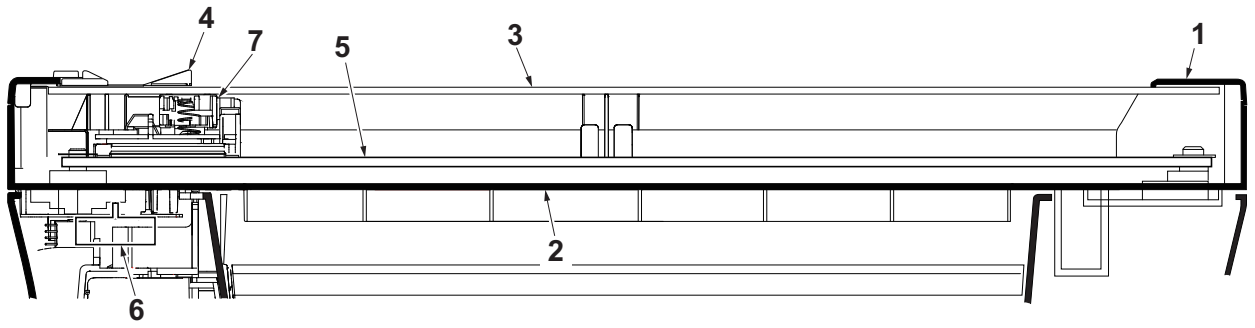
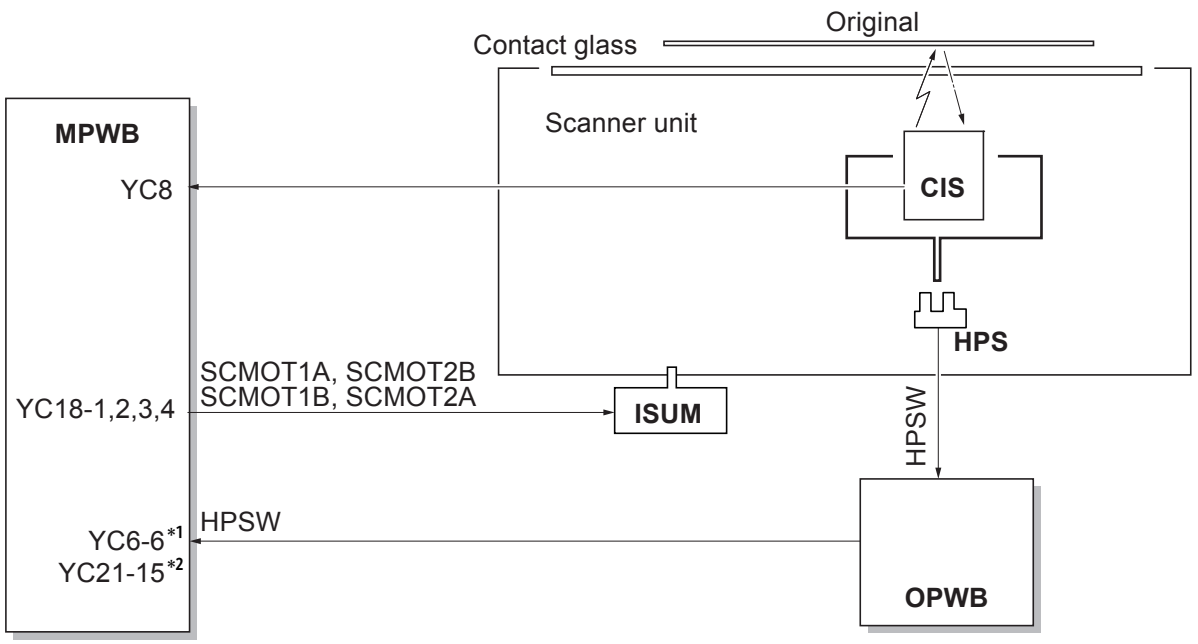


Figure 2-1-8

1. ISU top frame
2. ISU bottom frame
3. Contact glass
4. Size indicator plate
5. ISU belt
6. ISU motor (ISUM)
7. CIS sensor (CIS)



*1: 3 in1 25/26 ppm model/ 4 in1 20/21,25/26 ppm mode
*2: 3 in1 20/21 ppm model

Figure 2-1-9

(2) 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 are housed in the laser scanner unit, adjust the diameter of the laser beam, and focalize it at the drum surface.

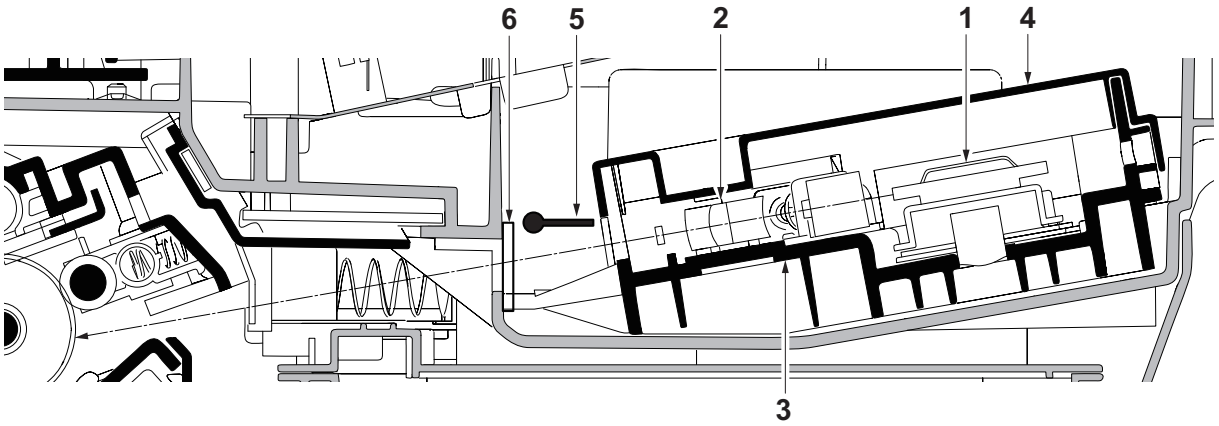


Figure 2-1-10 Laser scanner section

1. Polygon motor (PM)
2. f-θ lens
3. LSU frame
4. LSU cover
5. LSU shutter
6. LSU dust shield glass

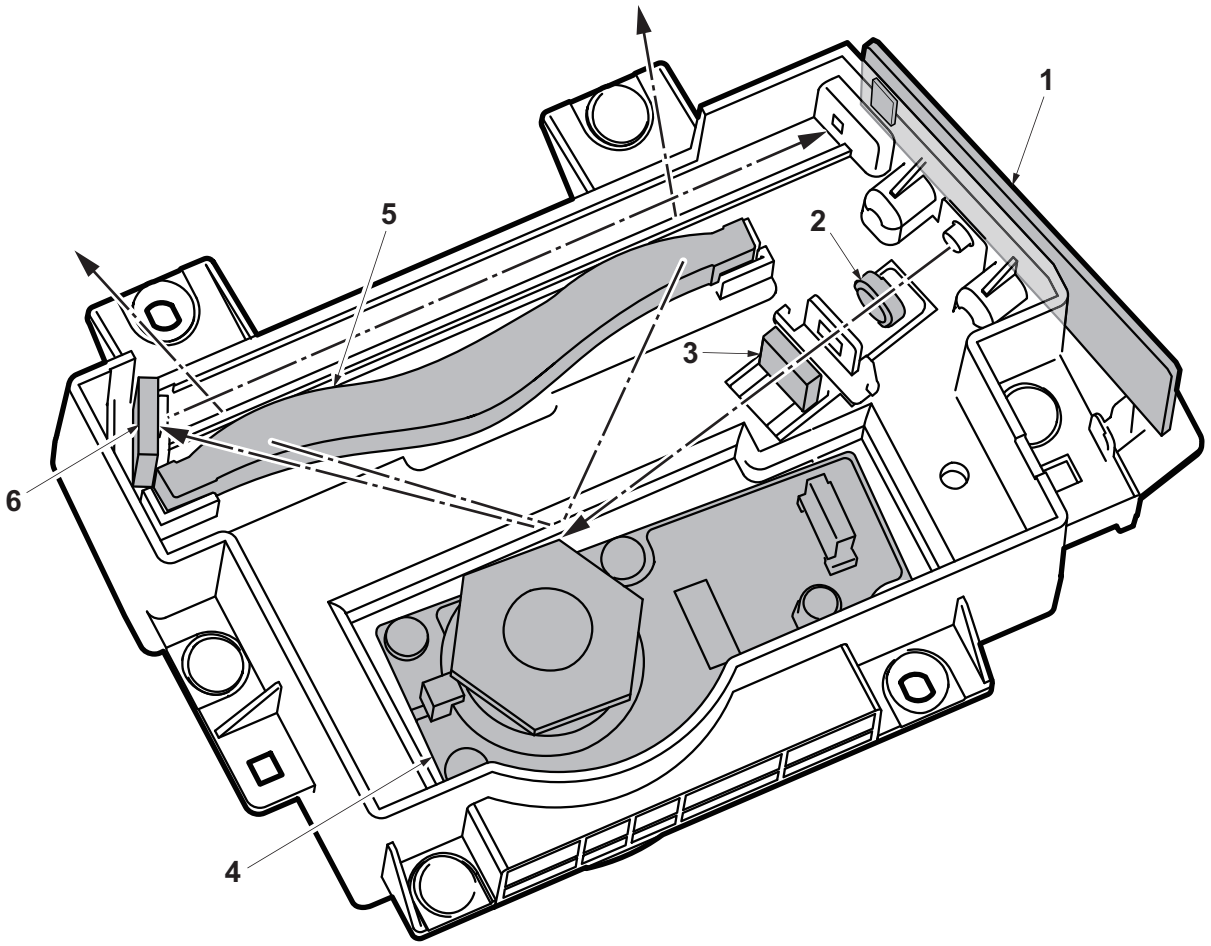


Figure 2-1-11 Laser scanner section

1. APC PWB (APC PWB)
2. Collimator lens
3. Cylindrical lens
4. Polygon motor (PM)
5. f-θ lens
6. Mirror

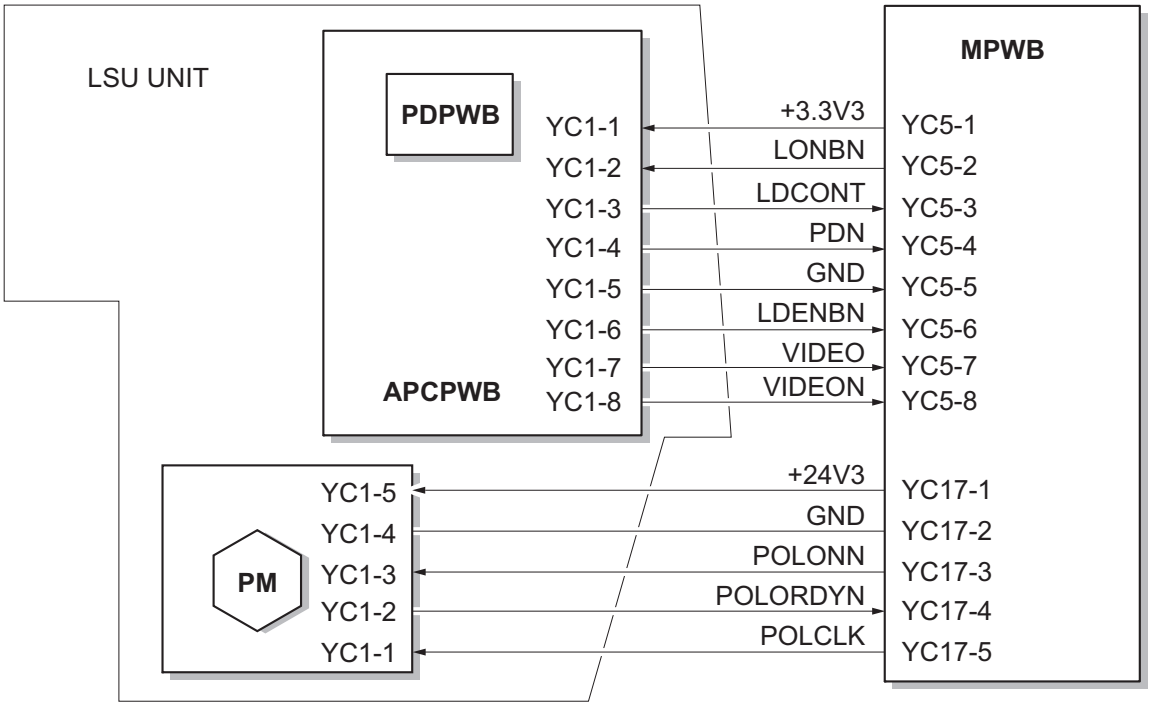


Figure 2-1-12 Laser scanner unit block diagram

2-1-5 Transfer/Separation section

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

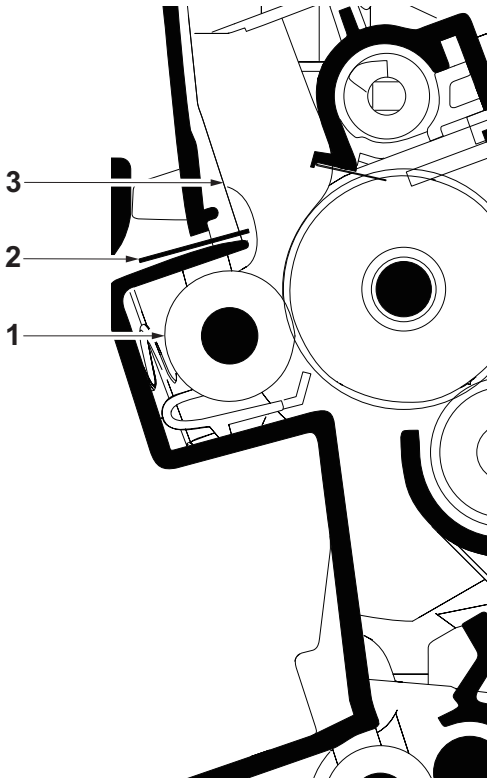


Figure 2-1-13 Transfer roller section

1. Transfer roller
2. Discharger brush
3. Rear transfer guide

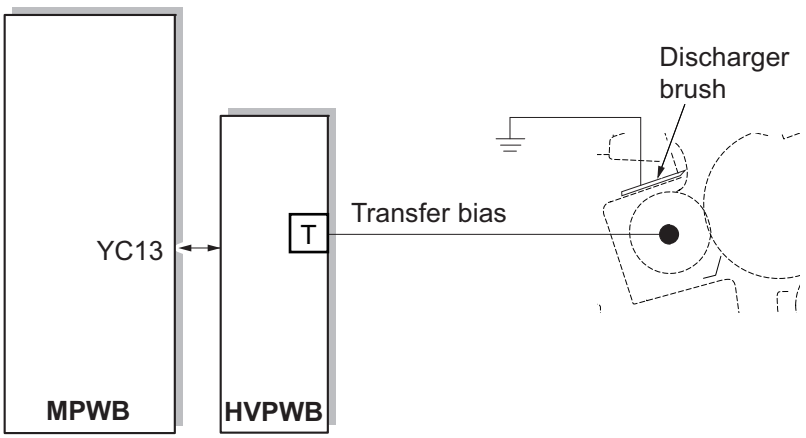


Figure 2-1-14 Transfer roller section block diagram

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 is heated by the fuser heater (FH), 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 main PWB (MPWB).

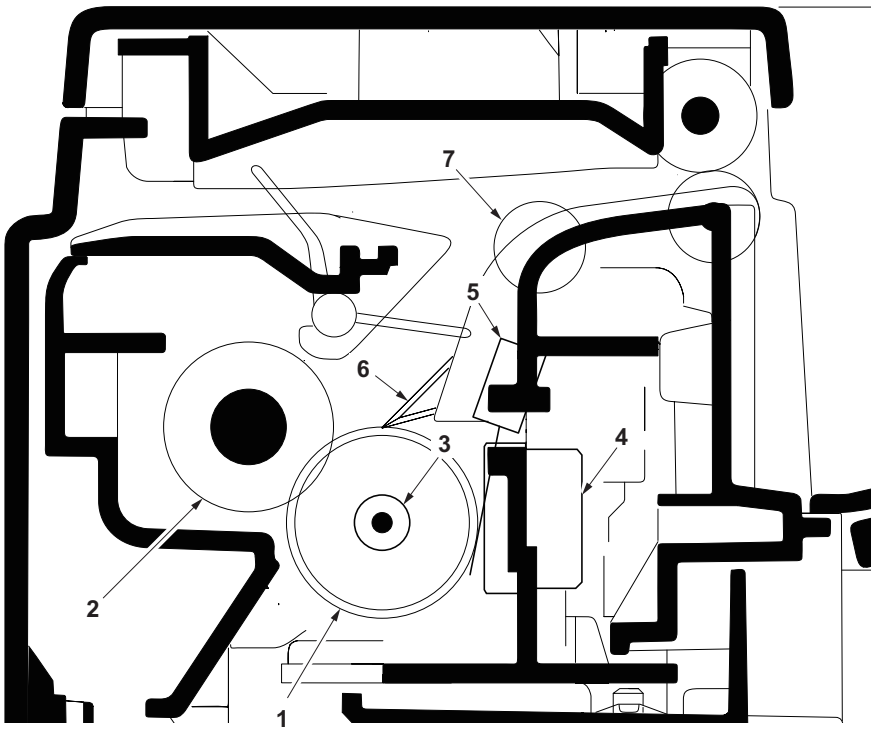


Figure 2-1-15 Fuser section

1. Heat roller
2. Press roller
3. Fuser heater (FH)
4. Fuser thermostat (FTS)
5. Fuser thermistor (FTH)
6. Separators
7. Fuser pulley

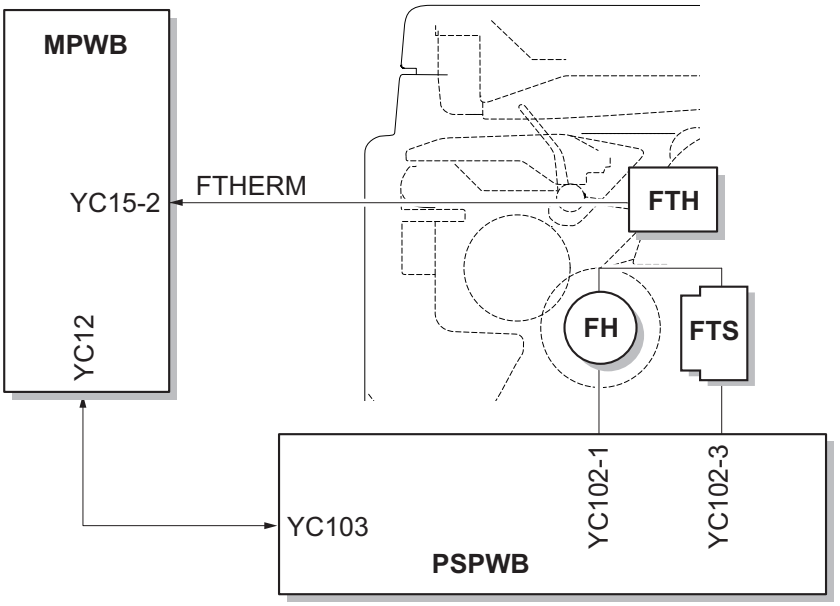
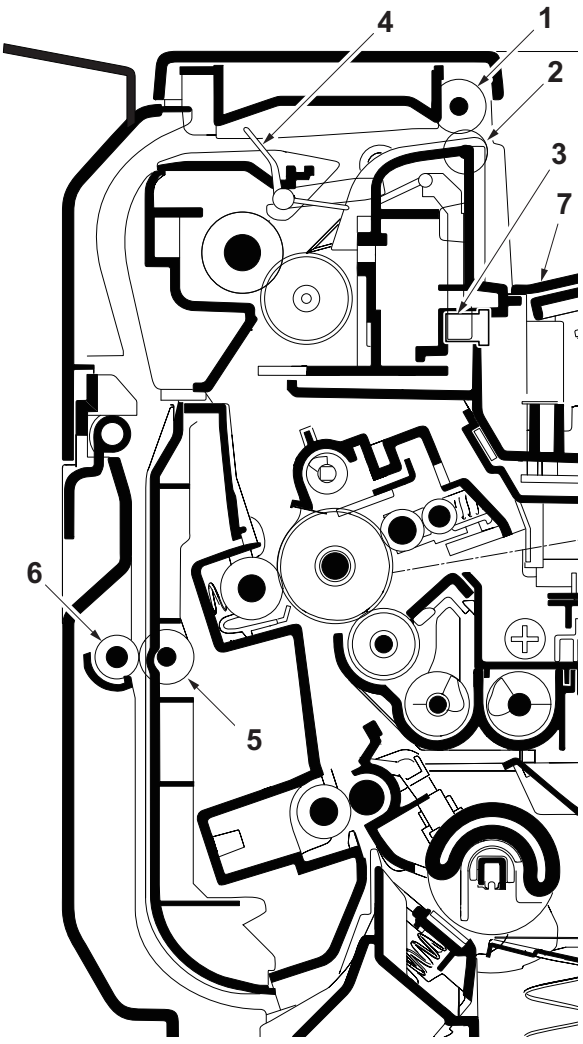


Figure 2-1-16 Fuser section block diagram

2-1-7 Duplex conveying/Eject section

The paper exit section transports the paper which passed the fuser unit towards the top tray.
The paper which passed through the fuser unit, and is delivered to the top tray by the rotation of the eject roller.
The duplex/conveying section consists of conveying path which sends the paper sent from the exit section to the paper feed/conveying section when duplex printing (25/26 ppm model only).
.

25/26 ppm model



20/21 ppm model

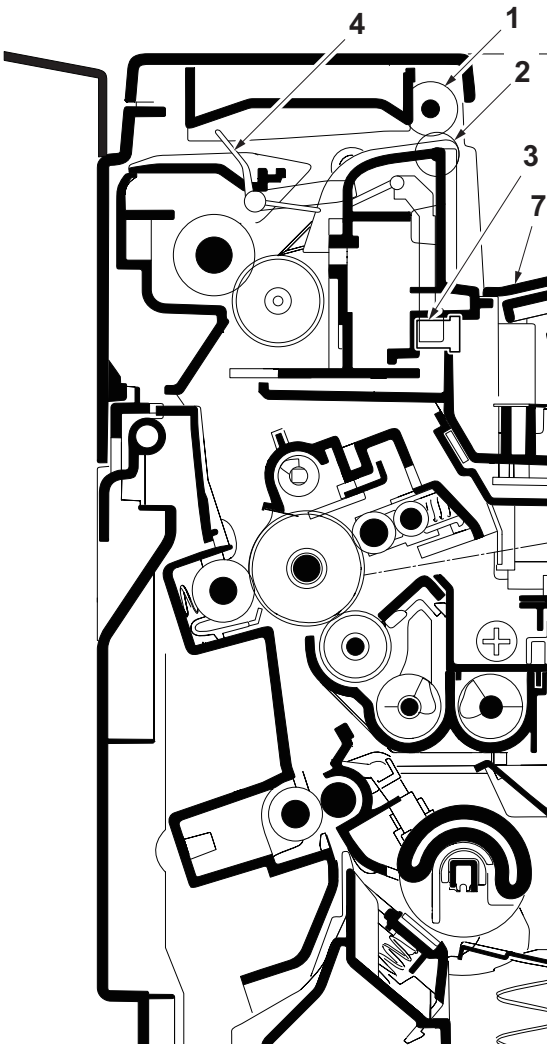


Figure 2-1-17 Duplex conveying / Eject section

1. Eject roller
2. Eject pulley
3. Duplex sensor*
4. Actuator (duplex sensor)*
5. Duplex roller
6. Duplex pulleys
7. Top tray

* : 3 in 1 25/26 ppm model, 4 in 1 20/21,25/26 ppm model only

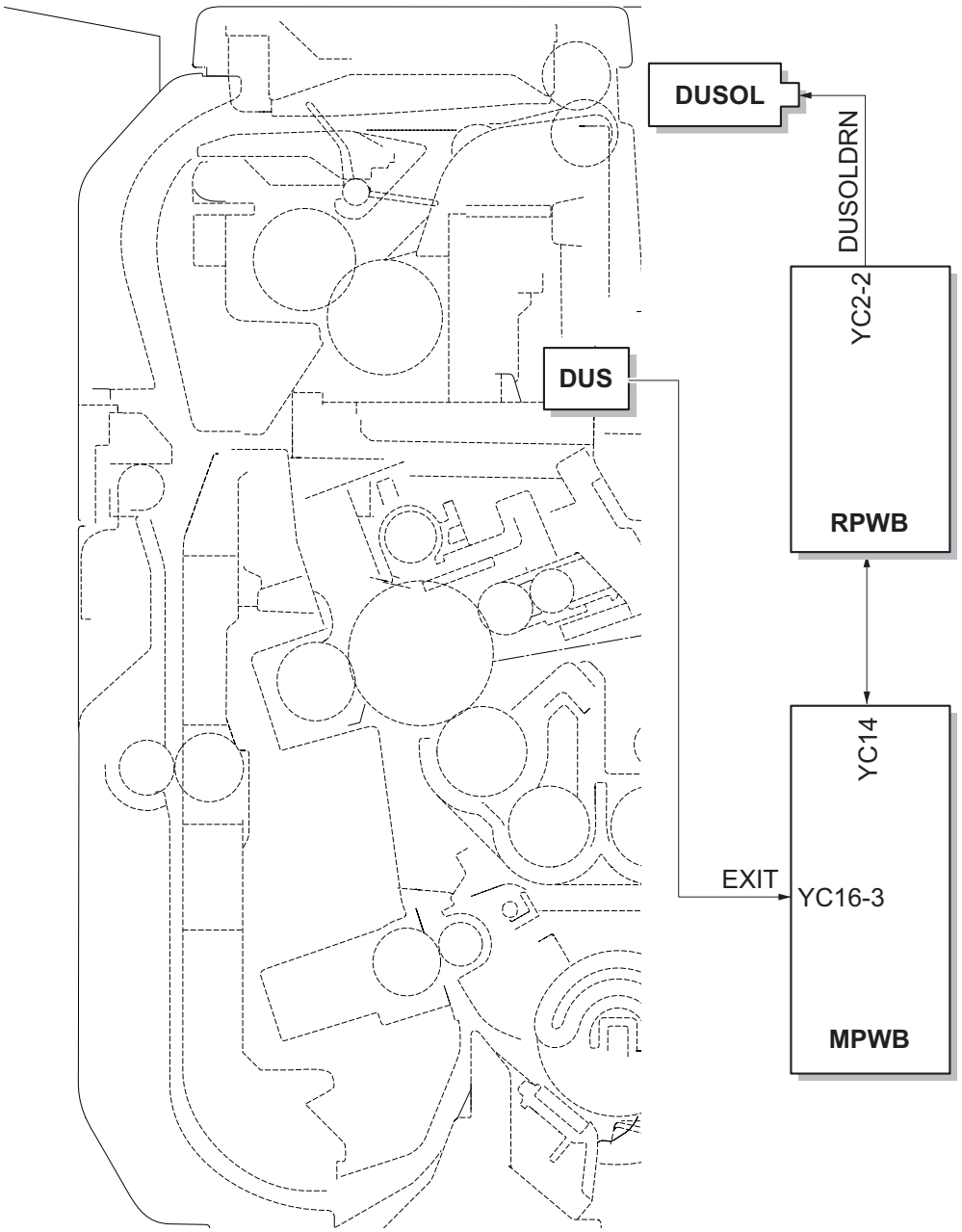


Figure 2-1-18 Duplex conveying section block diagram

2-1-8 Document processor (DP)

The original document placed on the document table is transfered to the document conveyer unit as the DP forwarding roller and the DP feed roller rotate.
The original document transfered is optically scanned by the CIS during it passes the contact glass.When scanning is complete, the original document is ejected onto the original document table by the eject roller.

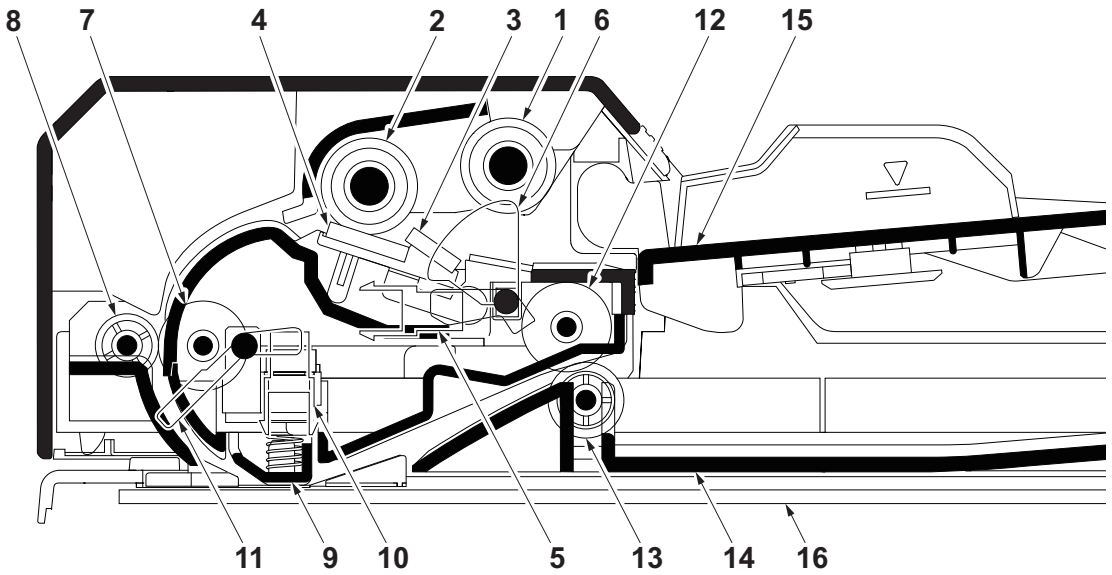


Figure 2-1-19 Document processor

1. DP forwarding roller
2. DP feed roller
3. DP front separation pad
4. DP separation pad
5. DP original sensor (DPOS)
6. Actuator (DP original sensor)
7. DP conveying roller
8. DP conveying pulley
9. Reading guide
10. DP timing sensor (DPTS)
11. Actuator (DP timing sensor)
12. DP eject roller
13. DP eject pulley
14. Original eject table
15. Original table
16. Contact glass (Machine)

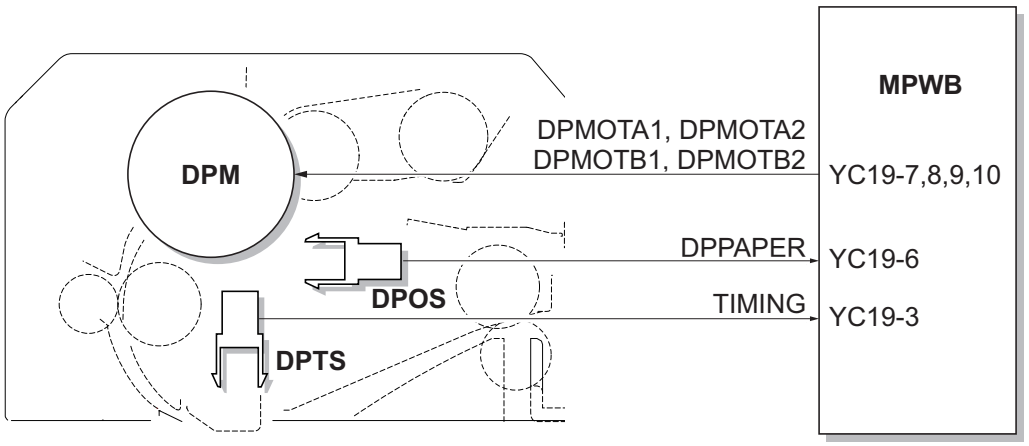


Figure 2-1-20 Document processor

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2-2-1 Electrical parts layout

(1) PWBs

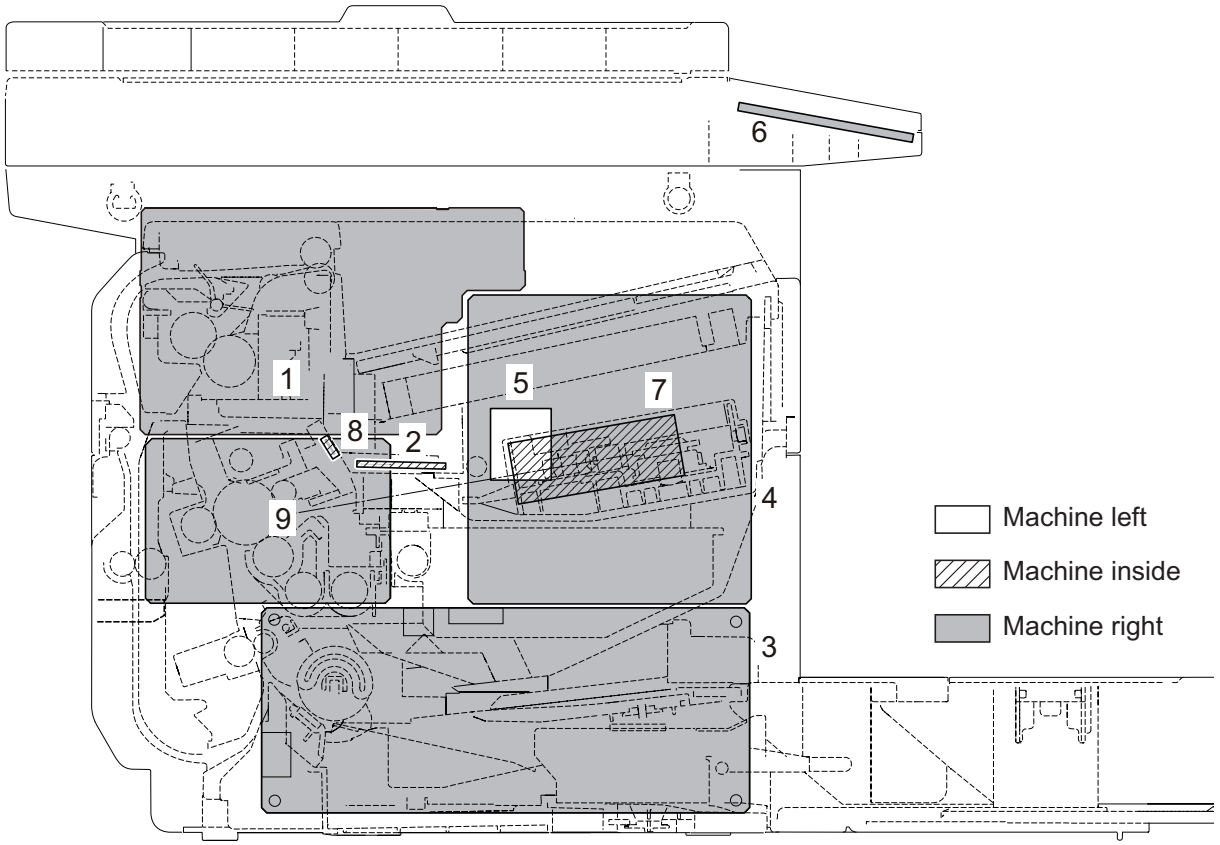

Figure 2-2-1 PWBs

1. Main PWB (MPWB) ..... Main controller: Controls the software such as the print data processing and provides the interface with computers.
   Engine: Controls machine hardware such as high voltage/bias output control, paper conveying system control, and fuser temperature control, etc.
2. Relay PWB (RPWB) ..... Consists of wiring relay circuit between main PWB and Main motor, toner sensor, container sensor, registration sensor, paper feed solenoid, duplex solenoid.
3. Power source PWB (PSPWB) ..... After full-wave rectification of AC power source input, switching for converting to 24 V DC for output.Controls the fuser Heater.
4. High voltage PWB (HVPWB) ..... Generates main charging, developer bias and transfer bias.
5. Container PWB (CPWB) ..... Reads the container information.
6. Operation panel PWB(OPWB)..... Consists the LED indicators and key switches.
7. APC PWB (APCPWB) ..... Generates and controls the laser beam.
8. Eraser lamp PWB (ELPWB) ..... Eliminates the residual electrostatic charge on the drum.
9. FAX control PWB (FCPWB)* ..... Modulates, demodulates, compresses, decompresses and smoothes out image data, and converts resolution of image data.

*: 4 in 1 model only.

List of correspondences of PWB names

No.	Name used in service manual	Name used in parts list
1	Main PWB (MPWB) :20/21 ppm model	PARTS PWB ASSY MAIN SP 20ppm
	Main PWB (MPWB) :25/26 ppm model	PARTS PWB ASSY MAIN SP
2	Relay PWB (RPWB)	-
3	Power source PWB (PSPWB): 120V model	PARTS SWITCHING REGULATOR 120V SP
	Power source PWB (PSPWB):220-240V model	PARTS SWITCHING REGULATOR 230V SP
4	High voltage PWB (HVPWB)	PARTS HIGH VOLTAGE UNIT SP
5	Container PWB (CPWB)	PARTS PWB ASSY CONTAINER CONNECT SP
6	Operation PWB(OPWB)	PARTS PWB ASSY PANEL SP
7	APC PWB (APCPWB)	-
8	Eraser lamp PWB (ELPWB)	PARTS PWB ASSY ERASER SP
9	FAX control PWB (FCPWB)	PARTS FAX UNIT SP

(2) Switches and sensors

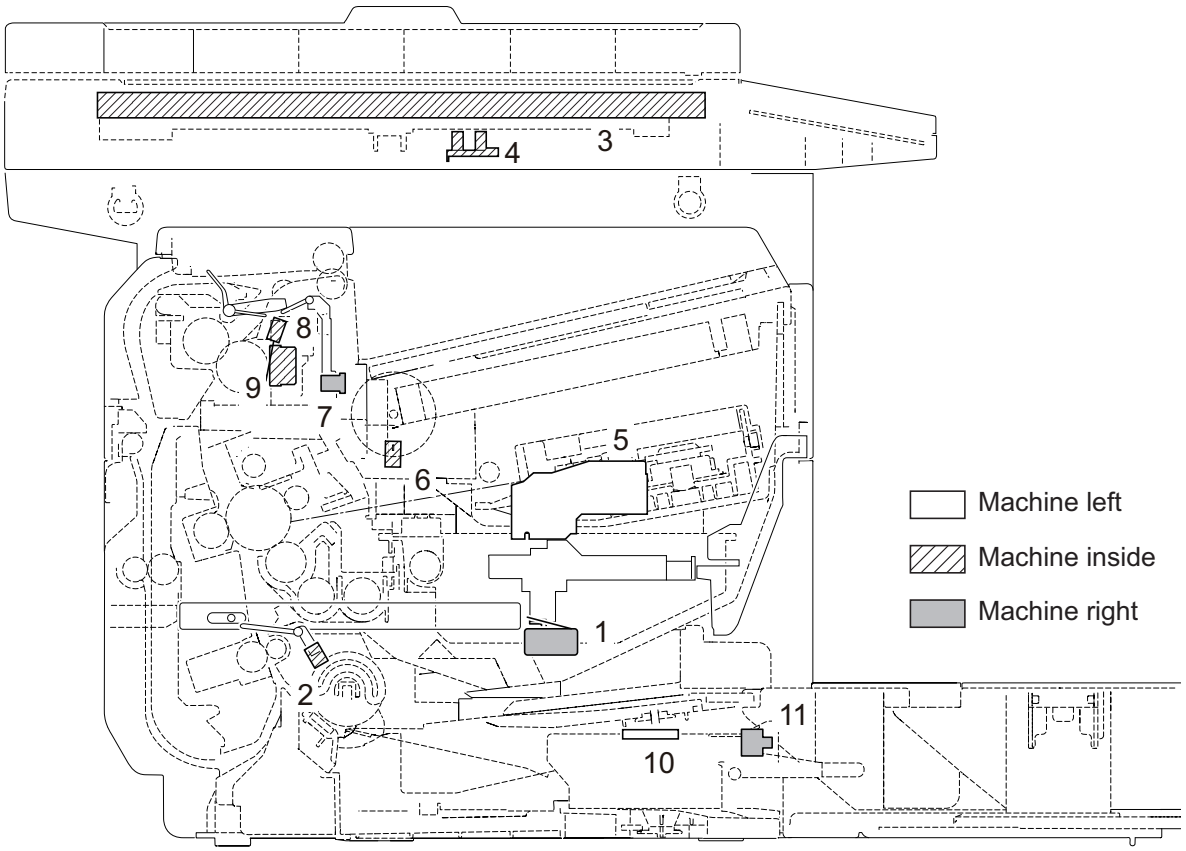

Figure 2-2-2 Switches and sensors

1. Cover switch (CSW)..... Shuts off 24 V DC power line when the front cover and rear cover is opened.
2. Registration sensor (RS)..... Detects the timing of paper conveying.
3. CIS sensor (CIS)..... Reads the image of originals.
4. Home position sensor (HPS) ..... Detects the optical system in the home position.
5. Toner sensor (TS) ..... Detects the quantity of toner in a toner container.
6. Motor count sensor (MCS)..... Detects revolution pulses of the motor.
7. Duplex sensor (DUS)*..... Detects a paper misfeed in the duplex section.
8. Fuser thermistor (FTH) ..... Measures the heat roller temperature.
9. Fuser thermostat (FTS)..... Shuts off the power source to the fuser heater lamp when the heat roller reaches extremely high temperature.
10. Outer temperature sensor (OTEMS)..... Detects the outside temperature and humidity.
11. Power switch (PSW) ..... Turns ON/OFF the AC power source.

*: 3 in1 25/26 ppm model,4 in 1 20/21,25/26 ppm model only.

(3) Others

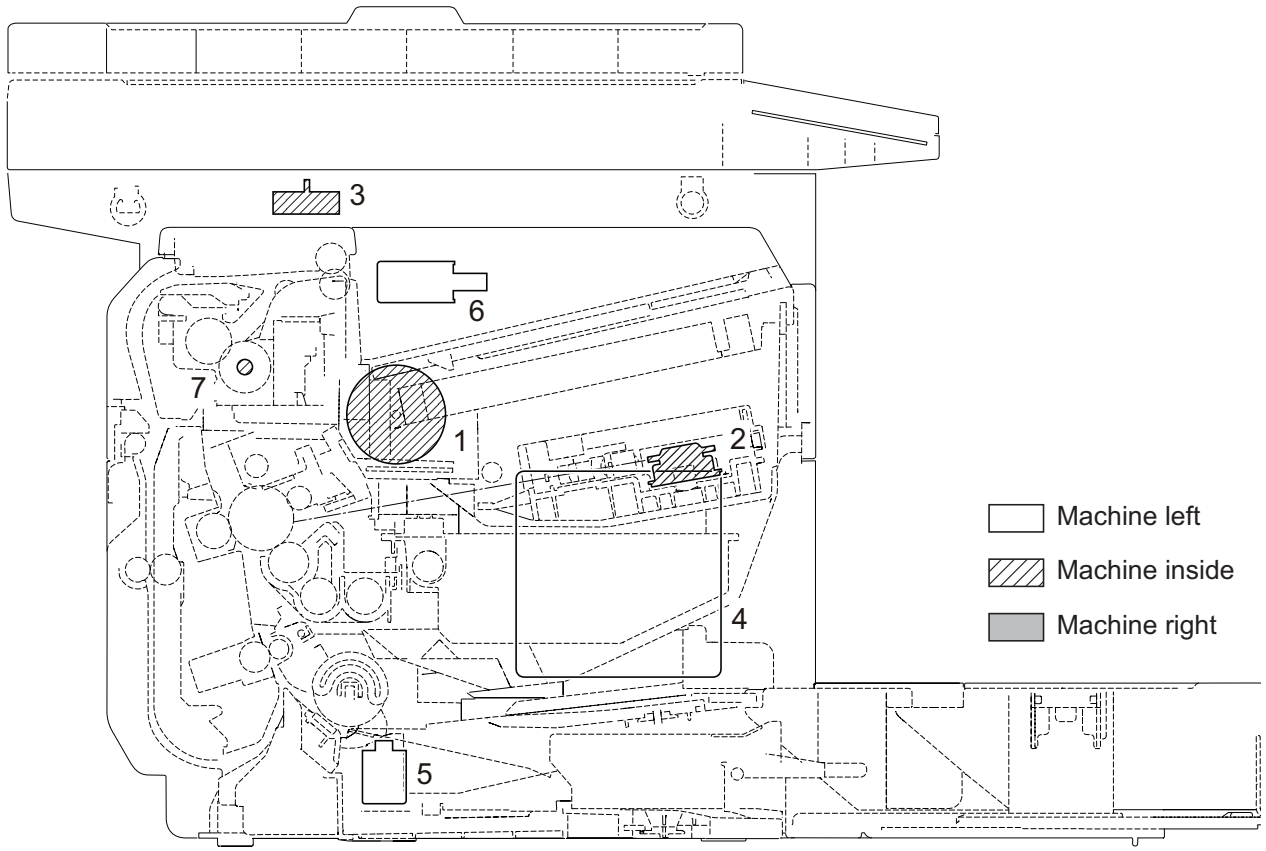

Figure 2-2-3 Others

1. Main motor (MM)..... Drives the paper feed/conveying section and fuser unit.
2. Polygon motor (PM)..... Drives the polygon mirror.
3. Scanner motor (ISUM)..... Drives the optical system.
4. Cooling fan motor (FM)..... Cools the interior of machine.
5. Paper feed solenoid (PFSOL)..... Controls the paper cassette paper feed.
6. Duplex solenoid (DUSOL)* ..... Controls the paper conveying at the duplex conveying section.
7. Fuser heater lamp (FH)..... Heats the heat roller.

*: 25/26 ppm model only.

(4) Document processor (3 in 1 25/26 ppm model, 4 in 1 20/21, 25/26 ppm model)

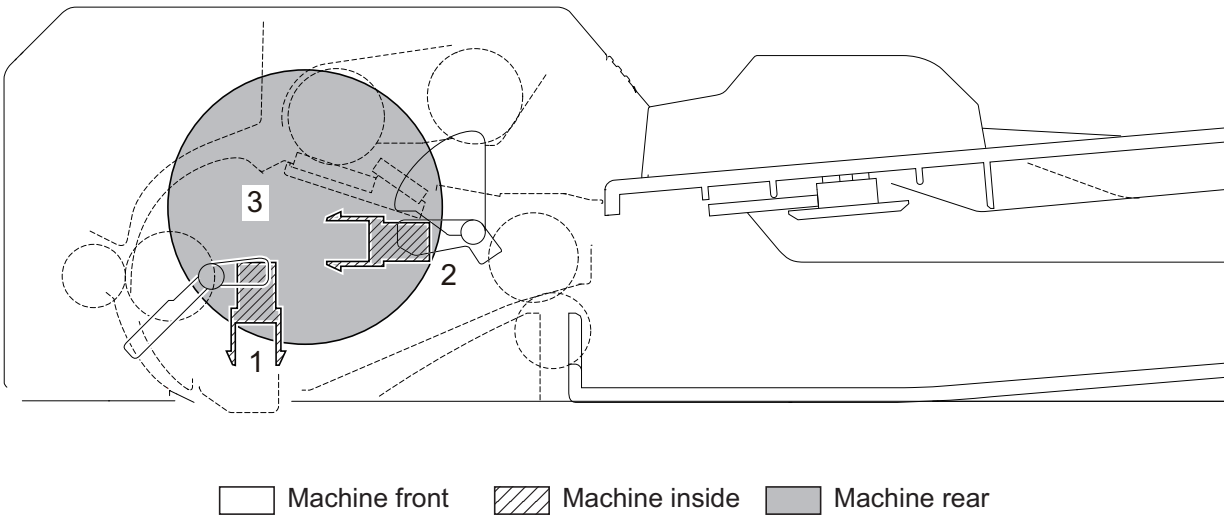

Figure 2-2-4 Document processor

1. DP original sensor (DPOS)..... Detects the presence of an original.
2. DP timing sensor (DPTS)..... Detects the original scanning timing.
3. DP motor (DPM) ..... Drives the DP unit.

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2-3-1 Main PWB

(1) 3 in 1 25/26 ppm model, 4 in 1 20/21, 25/26 ppm model

4 in 1 25/26 ppm model

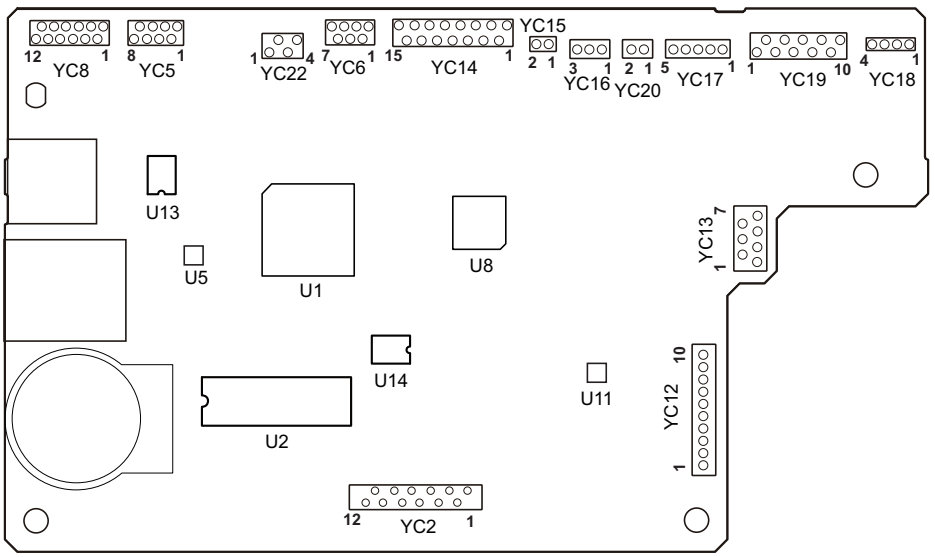


Figure 2-3-1 4 in 1 25/26 ppm model Main PWB silk-screen diagram

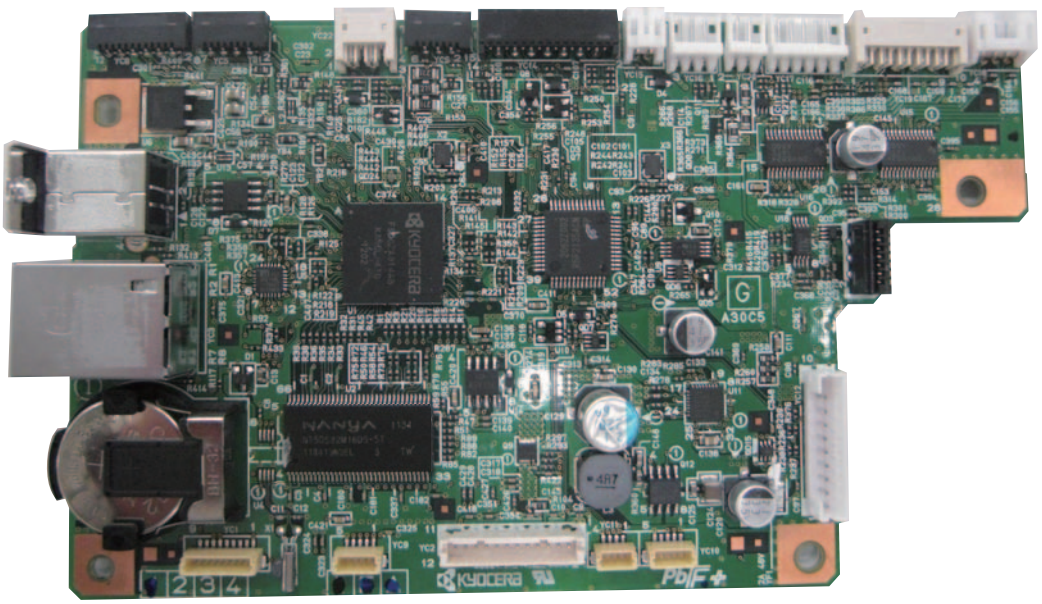


Figure 2-3-2 4 in 1 25/26 ppm model Main PWB

4 in 1 20/21 ppm model

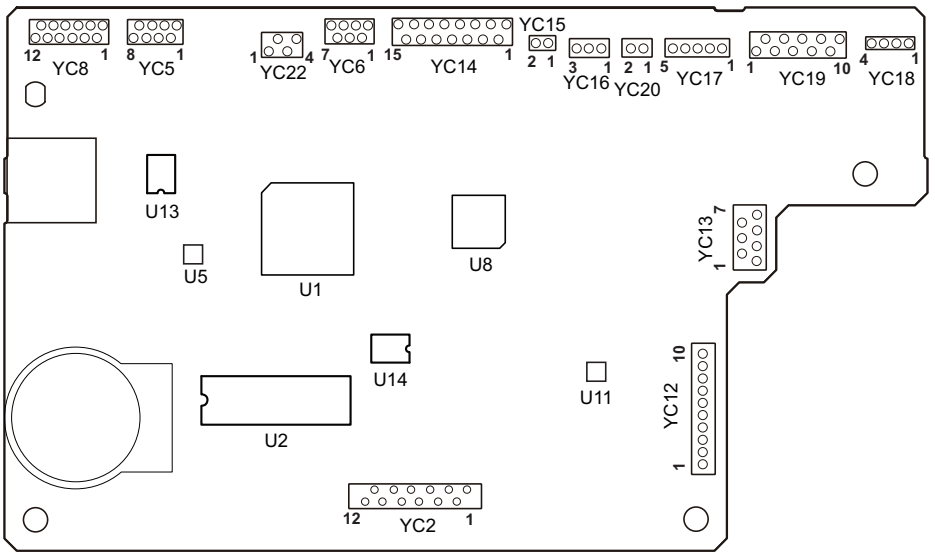


Figure 2-3-3 4 in 1 20/21 ppm model Main PWB silk-screen diagram

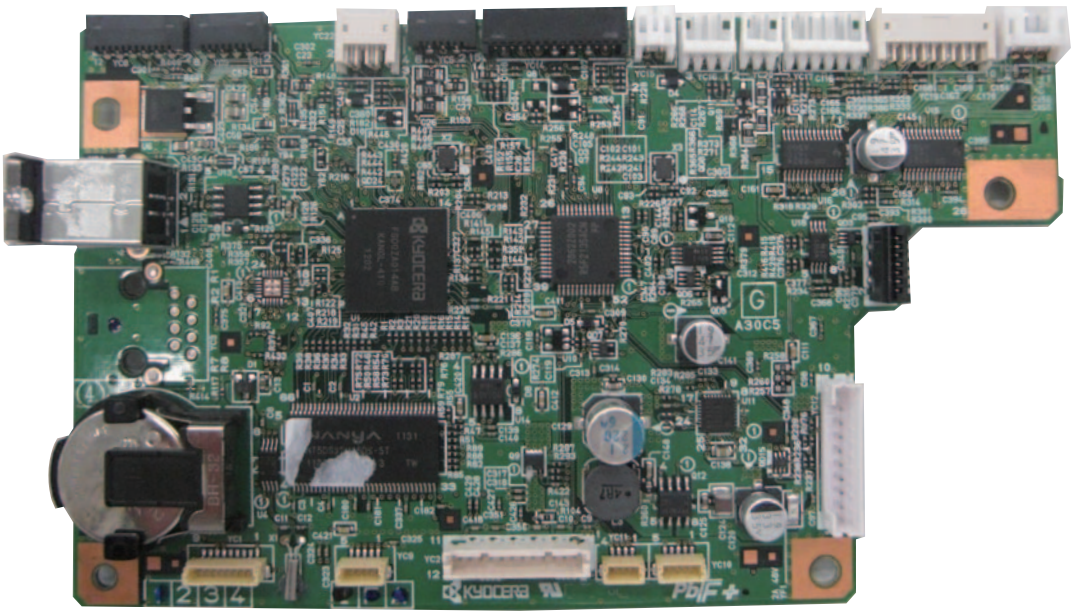


Figure 2-3-4 4 in 1 20/21 ppm model Main PWB

3 in 1 25/26 ppm model

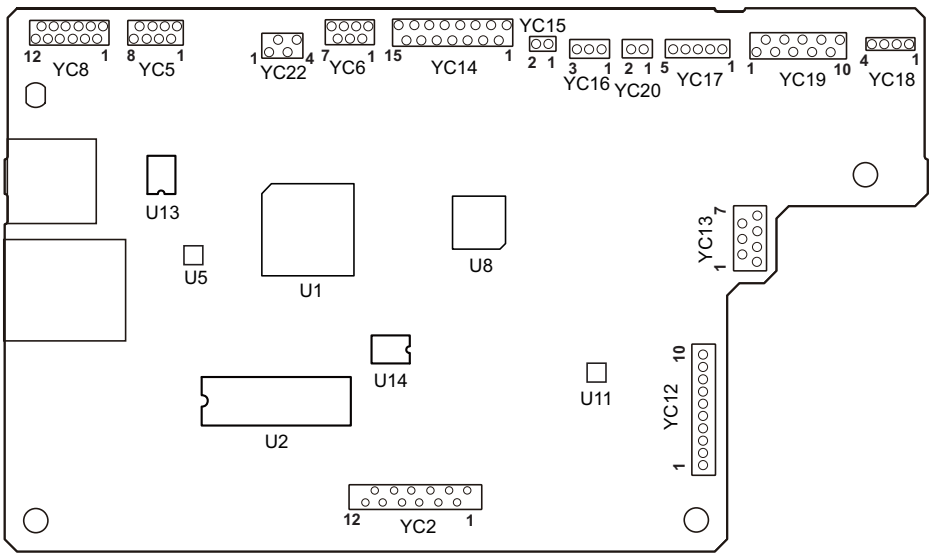


Figure 2-3-5 3 in 1 25/26 ppm model Main PWB silk-screen diagram

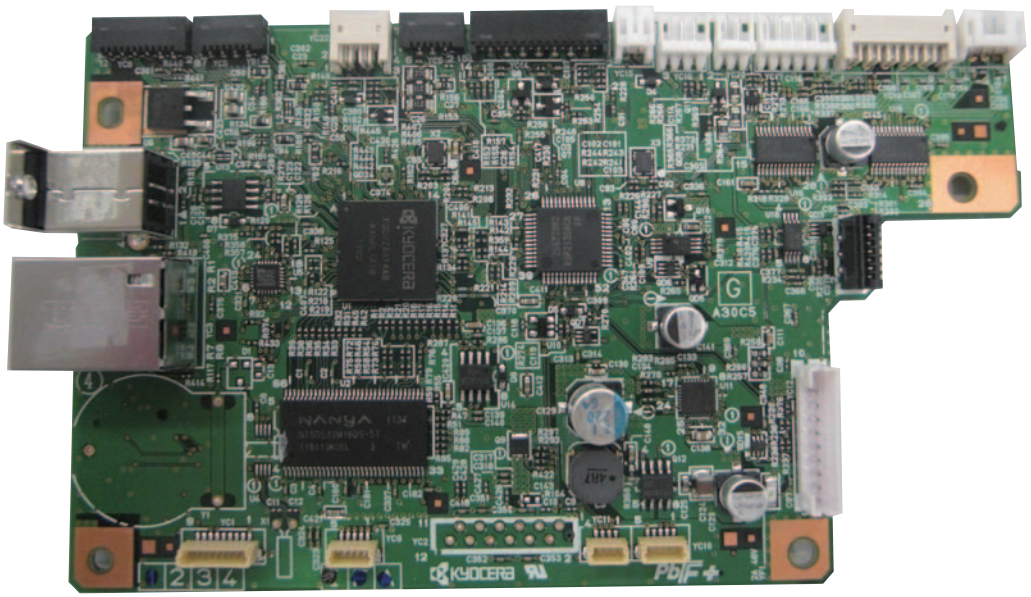


Figure 2-3-6 3 in 1 25/26 ppm model Main PWB

Connector	Pin	Signal	I/O	Voltage	Description
YC2	1	+24V1	O	24 V DC	24 V DC power to FCPWB
Connected to FCPWB (4 in 1 model only)	2	GND	-	-	Ground
	3	+3.3V2	O	3.3 V DC	3.3 V DC power to FCPWB
	4	RESB	O	0/3.3 V DC	Reset signal
	5	GND	-	-	Ground
	6	HSCLK	O	0/3.3 V DC (pulse)	SPI clock signal
	7	HSD	I	0/3.3 V DC	SPI data output
	8	GND	-	-	Ground
	9	HSAD	O	0/3.3 V DC	SPI address, data input
	10	HSCCSB	O	0/3.3 V DC	SPI chip select signal
	11	GND	-	-	Ground
	12	HINT	I	0/3.3 V DC	Interrupt signal
YC5	1	+3.3V3	O	3.3 V DC	3.3 V DC power to APCPWB
Connected to APC PWB	2	LONBN	O	0/3.3 V DC	Sample/hold signal
	3	LDCONT	O	0/3.3 V DC	LD voltage control signal
	4	PDN	I	0/3.3 V DC (pulse)	Horizontal synchronizing signal
	5	GND	-	-	Ground
	6	LDENBN	O	0/3.3 V DC	Laser output enable signal
	7	VIDEO	O	0/3.3 V DC (pulse)	Video data signal (-)
	8	VIDEON	O	0/3.3 V DC (pulse)	Video data signal (+)
YC6	1	GND	-	-	Ground
Connected to Operation panel PWB	2	PANTXD	O	0/3.3 V DC (pulse)	Operation panel PWB transmitting data
	3	PANRXD	I	0/3.3 V DC(pulse)	Operation panel PWB receiving data
	4	PRESETN	O	0/3.3 V DC	Operation panel PWB reset signal
	5	+3.3V2	O	3.3 V DC	3.3 V DC power to OPWB
	6	HPSW	I	0/3.3 V DC	HPS: On/Off
	7	VBKL	O	24 V DC	Back-light LED power

Connector	Pin	Signal	I/O	Voltage	Description
YC8	1	VOUT	I	Analog	Data signal
Connected to CIS	2	MODE	O	0/3.3 V DC	Mode signal
	3	AGND	-	-	Ground
	4	+3.3VCIS	O	3.3 V DC	3.3 V DC power to CIS
	5	CISVREF	O	1.1 V DC	1.1 V DC power output to VREF
	6	SP	O	0/3.3 V DC (pulse)	Vertical transfer pulse
	7	CLK	O	0/3.3 V DC (pulse)	Clock signal
	8	LEDANODE	O	18 V DC	18 V DC power output to CIS LED
	9	LEDB	I	0/6 V DC	LED control signal
	10	LEDG	I	0/6 V DC	LED control signal
	11	LEDR	I	0/6 V DC	LED control signal
	12	AGND	-	-	Ground
YC12	1	GND	-	-	Ground
Connected to Power source PWB	2	GND	-	-	Ground
	3	+24V1	I	24V DC	24 V DC power from PSPWB
	4	PUSHSW	I	0/3.3 V DC	Power SW signal
	5	HEATREM	O	0/3.3 V DC	Heater On/Off signal
	6	RELAY	O	DC0V/24V	Relay signal
	7	ZCROSS	O	DC0V/24V	Sleep mode signal
	8	PSSLEEPN	O	0/3.3 V DC (pulse)	Zero-cross signal
	9	+24V2	I	24V DC	24 V DC power from PSPWB
	10	+24V2	I	24V DC	24 V DC power from PSPWB
YC13	1	GND	-	-	Ground
Connected to high voltage PWB	2	MISENS	I	Analog	Charge current signal
	3	TCNT	O	Analog	Transfer current signal
	4	MCNT	O	Analog	Main charger output control signal
	5	RTHVDR	O	0/3.3 V DC	Transfer (reverse) bias output signal
	6	HVCLK	O	0/3.3 V DC (pulse)	Developer bias clock signal
	7	+24V3	O	24V DC	24 V DC power to PSPWB

Connector	Pin	Signal	I/O	Voltage	Description
YC14	1	THERM	I	Analog	TH detection signal
Connected to relay PWB	2	GND	-	-	Ground
	3	SECDATA	I	0/3.3 V DC	CS data signal
	4	SECCLK	O	0/3.3 V DC (pulse)	CS clock signal
	5	+3.3V3	O	3.3 V DC	3.3 V DC power to RPWB
	6	TONERSENS	I	0/3.3 V DC	Toner presence signal
	7	REGIST	I	0/3.3 V DC	RS: On/Off
	8	PULSE	I	0/3.3 V DC (pulse)	Encorder plus signal
	9	GND	-	-	Ground
	10	MOTCLK	O	0/24 V DC (pulse)	MM clock signal
	11	FANDRN	O	DC0V/24V	FM: On/Off
	12	FEEDSOLDRN	O	DC0V/24V	PFSOL: On/Off
	13	DUSOLDRN	O	DC0V/24V	DUSOL: On/Off
	14	+24V3	O	24V DC	24 V DC power to RPWB
	15	+24V3	O	24V DC	24 V DC power to RPWB
YC15	1	+3.3V3	O	3.3 V DC	3.3 V DC power to FTH
Connected to fuser thermistor	2	FTHERM	I	Analog	Fuser thermistor detection signal
YC16	1	+3.3VEXIT	O	3.3 V DC	3.3 V DC power to DUS
Connected to duplex sensor	2	GND	-	-	Ground
	3	EXIT	I	0/3.3 V DC	DUS: On/Off
YC17	1	+24V3	O	24V DC	24 V DC power to PM
Connected to polygon motor	2	GND	-	-	Ground
	3	POLONN	O	0/3.3 V DC	PM: On/Off
	4	POLORDYN	I	0/3.3 V DC	Polygon motor ready signal
	5	POLCLK	O	0/3.3 V DC (pulse)	Polygon motor clock signal
YC18	1	SCMOTA1	O	0/24 V DC (pulse)	Scanner motor control signal
Connected to scanner motor	2	SCMOTA2	O	0/24 V DC (pulse)	Scanner motor control signal
	3	SCMOTB2	O	0/24 V DC (pulse)	Scanner motor control signal
	4	SCMOTB1	O	0/24 V DC (pulse)	Scanner motor control signal

Connector	Pin	Signal	I/O	Voltage	Description
YC19	1	+3.3VTMG	O	3.3 V DC	3.3 V DC power to DPTS
Connected to DP motor, DP original sensor and DP timing sensor	2	GND	-	-	Ground
	3	TIMING	I	0/3.3 V DC	DPTS: On/Off
	4	+3.3VPAP	O	3.3 V DC	3.3 V DC power to DPOS
	5	GND	-	-	Ground
	6	DPPAPER	I	0/3.3 V DC	DPOS: On/Off
	7	DPMOTB2	O	0/24 V DC (pulse)	DP motor control signal
	8	DPMOTB1	O	0/24 V DC (pulse)	DP motor control signal
	9	DPMOTA2	O	0/24 V DC (pulse)	DP motor control signal
	10	DPMOTA1	O	0/24 V DC (pulse)	DP motor control signal
YC20	1	+24VERASER	O	24V DC	24 V DC power to CL
Connected to Eraser lamp	2	ERASER	O	0/3.3 V DC	CL: On/Off
YC22	1	THERM	I	Analog	Outer thermistor signal
Connected to outer temper-ature sensor	2	+3.3V3	O	3.3 V DC	3.3 V DC power to OTEMS
	3	AIRWET	I	Analog	Data signal
	4	WETCLK	O	0/3.3 V DC (pulse)	Clock signal

(2) 3 in 1 20/21 ppm model

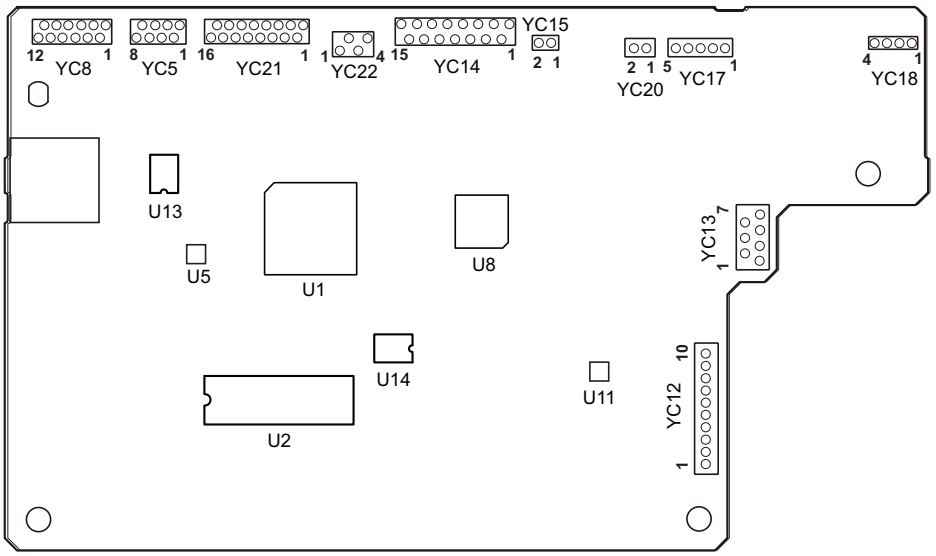


Figure 2-3-7 3 in 1 20/21 ppm model Main PWB silk-screen diagram

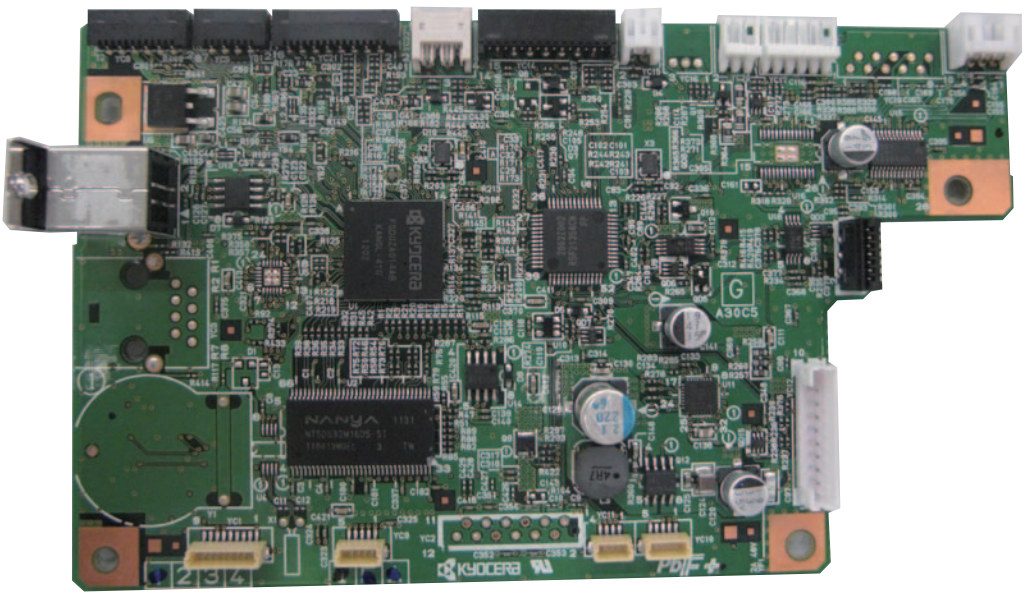


Figure 2-3-8 3 in 1 20/21 ppm model Main PWB

Connector	Pin	Signal	I/O	Voltage	Description
YC5	1	+3.3V3	O	3.3 V DC	3.3 V DC power to APCPWB
Connected to APC PWB	2	LONBN	O	0/3.3 V DC	Sample/hold signal
	3	LDCONT	O	0/3.3 V DC	LD voltage control signal
	4	PDN	I	0/3.3 V DC (pulse)	Horizontal synchronizing signal
	5	GND	-	-	Ground
	6	LDENBN	O	0/3.3 V DC	Laser output enable signal
	7	VIDEO	O	0/3.3 V DC (pulse)	Video data signal (-)
	8	VIDEON	O	0/3.3 V DC (pulse)	Video data signal (+)
YC8	1	VOUT	I	Analog	Data signal
Connected to CIS	2	MODE	O	0/3.3 V DC	Mode signal
	3	AGND	-	-	Ground
	4	+3.3VCIS	O	3.3 V DC	3.3 V DC power to CIS
	5	CISVREF	O	1.1 V DC	1.1 V DC power output to VREF
	6	SP	O	0/3.3 V DC (pulse)	Vertical transfer pulse
	7	CLK	O	0/3.3 V DC (pulse)	Clock signal
	8	LEDANODE	O	18 V DC	
	9	LEDB	I	0/6 V DC	LED control signal
	10	LEDG	I	0/6 V DC	LED control signal
	11	LEDR	I	0/6 V DC	LED control signal
	12	AGND	-	-	Ground
YC12	1	GND	-	-	Ground
Connected to Power source PWB	2	GND	-	-	Ground
	3	+24V1	I	24V DC	24 V DC power from PSPWB
	4	PUSHSW	I	0/3.3 V DC	power SW signal
	5	HEATREM	O	0/3.3 V DC	Heater On/Off signal
	6	RELAY	O	DC0V/24V	Relay signal
	7	ZCROSS	O	DC0V/24V	Sleep mode signal
	8	PSSLEEPN	O	0/3.3 V DC (pulse)	Zero-cross signal
	9	+24V2	I	24V DC	24 V DC power from PSPWB
	10	+24V2	I	24V DC	24 V DC power from PSPWB
YC13	1	GND	-	-	Ground
Connected to high voltage PWB	2	MISENS	I	0/3.3 V DC	Charge current signal
	3	TCNT	O	PWM	Transfer current signal
	4	MCNT	O	PWM	Main charger output control signal
	5	RTHVDR	O	0/3.3 V DC	Transfer (reverse) bias output signal
	6	HVCLK	O	0/3.3 V DC (pulse)	Developer bias clock signal
	7	+24V3	O	24V DC	24 V DC power to PSPWB

Connector	Pin	Signal	I/O	Voltage	Description
YC14	1	THERM	I	Analog	TH detection signal
Connected to relay PWB	2	GND	-	-	Ground
	3	SECDATA	I	0/3.3 V DC	CS data signal
	4	SECCLK	O	0/3.3 V DC (pulse)	CS clock signal
	5	+3.3V3	O	3.3 V DC	3.3 V DC power to RPWB
	6	TONERSENS	I	0/3.3 V DC	Toner presence signal
	7	REGIST	I	0/3.3 V DC	RS: On/Off
	8	PULSE	I	0/3.3 V DC (pulse)	Encorder plus signal
	9	GND	-	-	Ground
	10	MOTCLK	O	0/24 V DC (pulse)	MM clock signal
	11	FANDRN	O	DC0V/24V	FM: On/Off
	12	FEEDSOLDRN	O	DC0V/24V	PFSOL: On/Off
	13	DUSOLDRN	O	DC0V/24V	DUSOL: On/Off
	14	+24V3	O	24V DC	24 V DC power to RPWB
	15	+24V3	O	24V DC	24 V DC power to RPWB
YC15	1	+3.3V3	O	3.3 V DC	3.3 V DC power to FTH
Connected to fuser therm-istor	2	FTHERM	I	Analog	Fuser thermistor detection signal
YC17	1	+24V3	O	24V DC	24 V DC power to PM
Connected to polygon motor	2	GND	-	-	Ground
	3	POLONN	O	0/3.3 V DC	PM: On/Off
	4	POLORDYN	I	0/3.3 V DC	Polygon motor ready signal
	5	POLCLK	O	0/3.3 V DC (pulse)	Polygon motor clock signal
YC18	1	SCMOTA1	O	0/24 V DC (pulse)	Scanner motor control signal
Connected to scanner motor	2	SCMOTA2	O	0/24 V DC (pulse)	Scanner motor control signal
	3	SCMOTB2	O	0/24 V DC (pulse)	Scanner motor control signal
	4	SCMOTB1	O	0/24 V DC (pulse)	Scanner motor control signal
YC20	1	+24VERASER	O	24V DC	24 V DC power to CL
Connected to Eraser lamp	2	ERASER	O	0/3.3 V DC	CL: On/Off

Connector	Pin	Signal	I/O	Voltage	Description
YC21	1	+3.3V2	O	3.3 V DC	3.3 V DC power to OPWB
Connected to Operation panel PWB	2	SCANN1	O	0/3.3 V DC (pulse)	Plus signal
	3	SCANN2	O	0/3.3 V DC (pulse)	Plus signal
	4	SCANN3	O	0/3.3 V DC (pulse)	Plus signal
	5	SCANN4	O	0/3.3 V DC (pulse)	Plus signal
	6	SCANN5	O	0/3.3 V DC (pulse)	Plus signal
	7	SCANN6	O	0/3.3 V DC (pulse)	Plus signal
	8	SCANN7	O	0/3.3 V DC (pulse)	Plus signal
	9	LEDON1	O	0/3.3 V DC	LED remote signal 1
	10	LEDON2	O	0/3.3 V DC	LED remote signal 2
	11	LEDON3	O	0/3.3 V DC	LED remote signal 3
	12	LEDON4	O	0/3.3 V DC	LED remote signal 4
	13	SENS1	I	0/3.3 V DC	Panel key signal 1
	14	SENS2	I	0/3.3 V DC	Panel key signal 2
	15	HPSW	I	0/3.3 V DC	HPS: On/Off
	16	GND	-	-	Ground
YC22	1	THERM	I	Analog	Outer thermistor signal
Connected to outer temper-ature sensor	2	+3.3V3	O	3.3 V DC	3.3 V DC power to OTEMS
	3	AIRWET	I	Analog	Data signal
	4	WETCLK	O	0/3.3 V DC (pulse)	Clock signal

2-3-2 Relay PWB

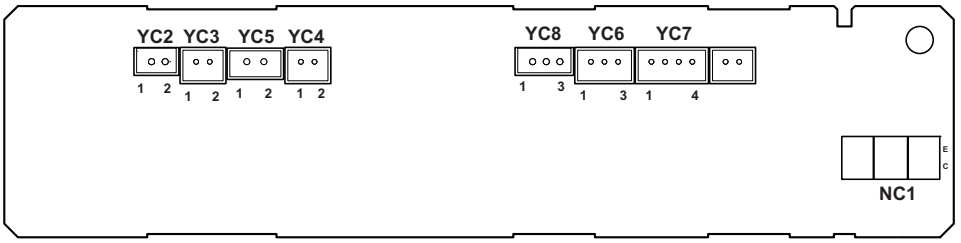


Figure 2-3-9 Relay PWB silk-screen diagram

Figure 2-3-10 Relay PWB

Connector	Pin	Signal	I/O	Voltage	Description
YC2	1	+24V3	O	24V DC	24 V DC power to DUSOL
Connected to duplex solenoid (25/26 ppm model)	2	DUSOLDRN	O	DC0V/24V	DUSOL: On/Off
YC3	1	+24V3	O	24V DC	24 V DC power to PFSOL
Connected to paper feed sole-noid	2	FFEDSOLDRN	O	DC0V/24V	PFSOL: On/Off
YC4	1	OUTA	O	0/24 V DC (pulse)	MM control signal
Connected to main motor	2	OUTB	O	0/24 V DC (pulse)	MM control signal
YC5	1	+24V3	O	24V DC	24 V DC power to FM
Connected to fan motor	2	FANDRN	O	DC0V/24V	FM: On/Off
YC6	1	+24V3	O	24V DC	24 V DC power to TS
Connected to toner sensor	2	TONER SENSOR	I	DC0V/24V	TS: On/Off
	3	GND	-	-	Ground
YC7	1	+3.3V3	O	3.3 V DC	3.3 V DC power to CPWB
Connected to container PWB	2	SECCLK	O	0/3.3 V DC (pulse)	Clock signal
	3	SECDATA	I	0/3.3 V DC	Data signal
	4	GND	-	-	Ground
YC8	1	+3.3V3RE6	O	3.3 V DCREG	3.3 V DC power to RS
Connected to registra-tion sensor	2	GND	-	-	Ground
	3	REGIST	I	0/3.3 V DC	RS: On/Off

2-3-3 Power source PWB

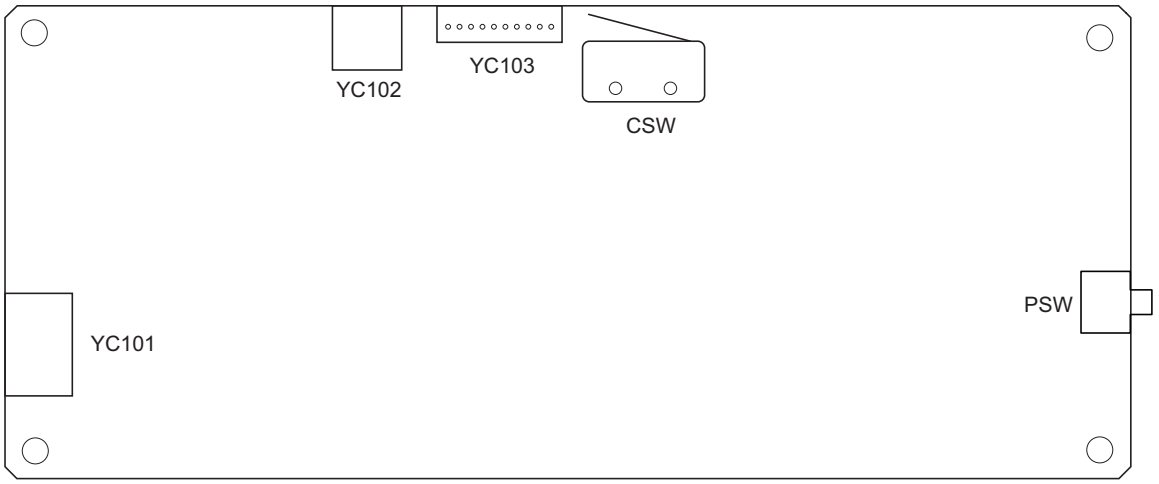


Figure 2-3-11 Power source PWB silk-screen diagram

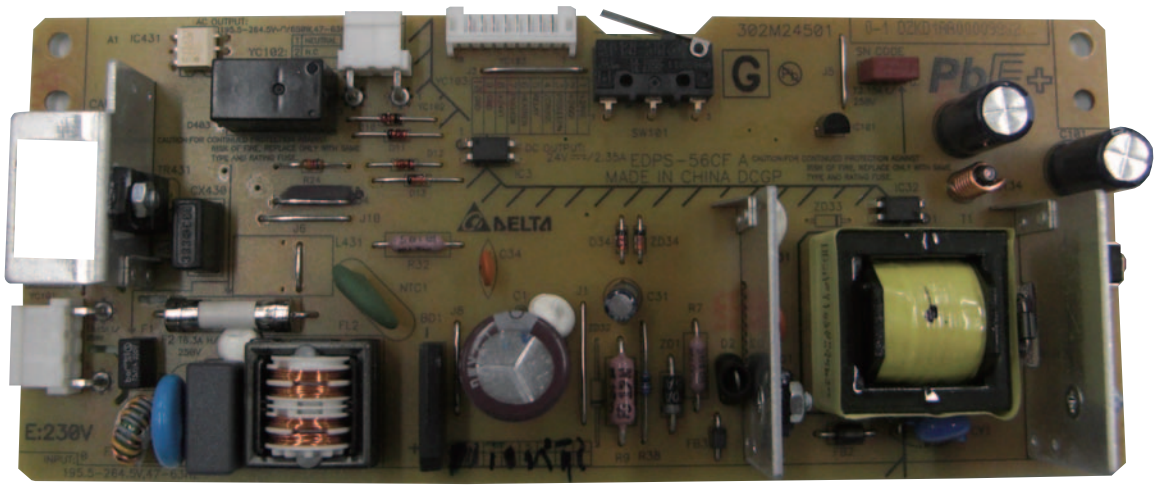


Figure 2-3-12 Power source PWB

Connector	Pin	Signal	I/O	Voltage	Description
YC101	1	LIVE	I	120 V AC 220-240 V AC	AC power input
Connected to AC inlet	2	NEUTRAL	I	120 V AC 220-240 V AC	AC power input
YC102	1	NEUTRAL	O	120 V AC 220-240 V AC	HEATER AC output
Connected to Fuser heater lamp	2	NC	-	-	Not used
	3	LIVE	O	120 V AC 220-240 V AC	HEATER COMMON
YC103	1	+24V2	O	24 V DC	24 V DC power to MPWB
Connected to main PWB	2	+24V2	O	24 V DC	24 V DC power to MPWB
	3	PSSLEEPN	I	0/3.3 V DC	Sleep mode signal
	4	ZCROSS	O	0/3.3 V DC (pulse)	Zero-cross signal
	5	RELAY	I	0/3.3 V DC	Relay signal
	6	HEATREM	I	0/3.3 V DC	FH: On/Off
	7	PUSHSW	O	0/3.3 V DC	PSW: On/Off
	8	+24V1	O	24V DC	24 V DC power to MPWB
	9	GND	-	-	Ground
	10	GND	-	-	Ground

2-3-4 FAX control PWB

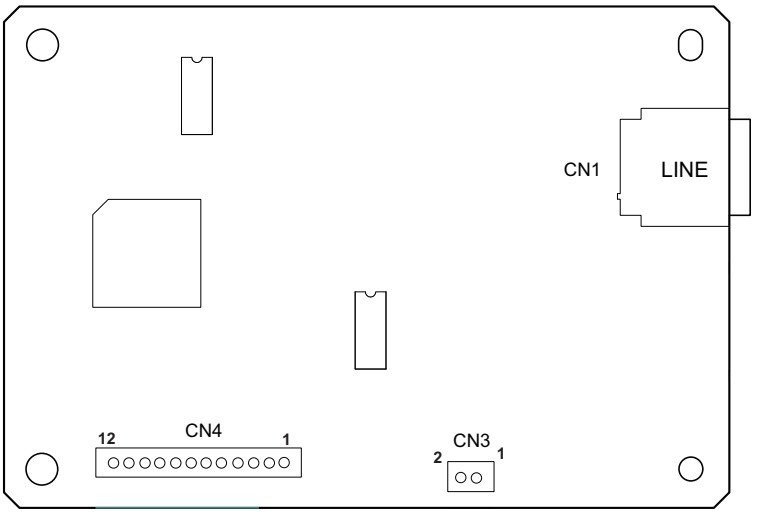


Figure 2-3-13 FAX control PWB silk-screen diagram

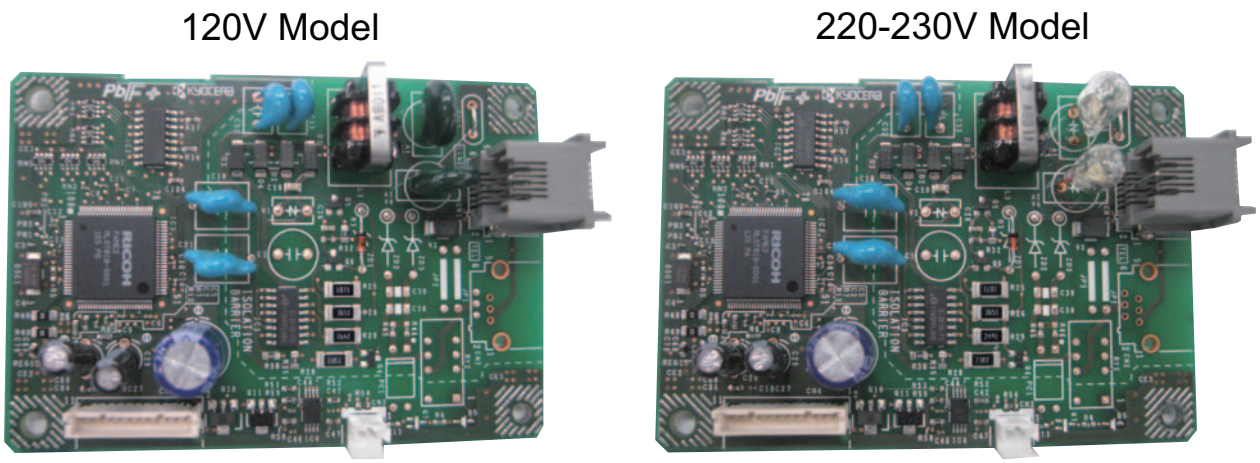
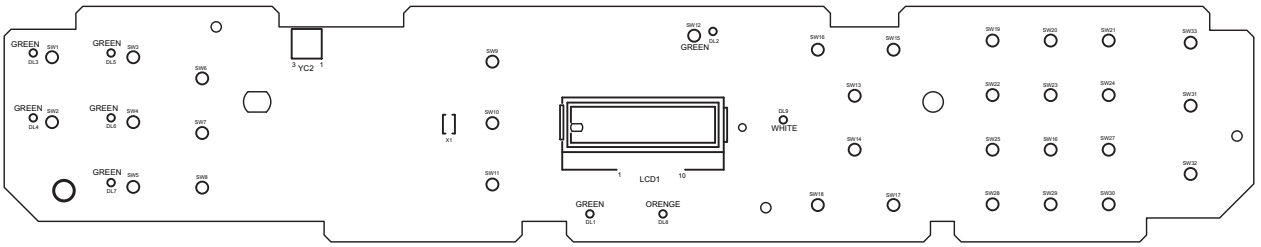


Figure 2-3-14 FAX control PWB

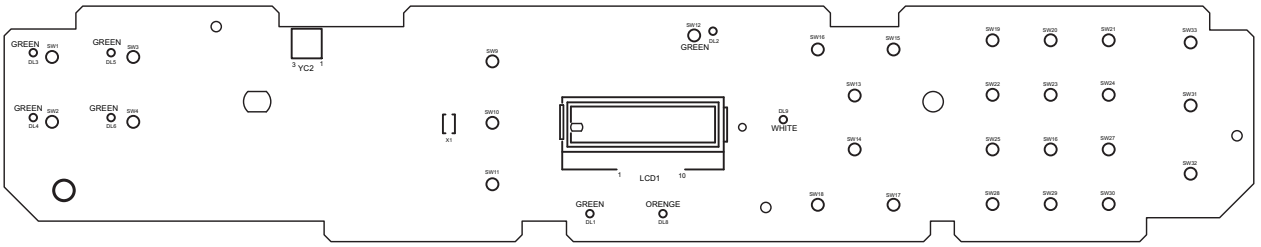
Connector	Pin	Signal	I/O	Voltage	Description
CN3	1	MONSP	O	Analog	Speaker sound signal
Connected to speaker	2	GND	-	-	Ground
CN4	1	HINT	I	0/3.3 V DC	Interrupt signal
Connected to main PWB	2	GND	-	-	Ground
	3	HSCCSB	I	0/3.3 V DC	SPI chip select signal
	4	HSAD	O	0/3.3 V DC	SPI data output
	5	GND	-	-	Ground
	6	HSD	I	0/3.3 V DC	SPI data input
	7	HSCLK	I	0/3.3 V DC (pulse)	SPI clock signal
	8	GND	-	-	Ground
	9	RESB	I	0/3.3 V DC	Reset signal
	10	+3.3V2	I	3.3 V DC	3.3 V DC power from MPWB
	11	GND	-	-	Ground
	12	+24V1	I	24 V DC	24 V DC power from MPWB

2-3-5 Operation panel PWB

4 in 1 20/21,25/26 ppm model



3 in 1 25/26 ppm model



3 in 1 20/21 ppm model

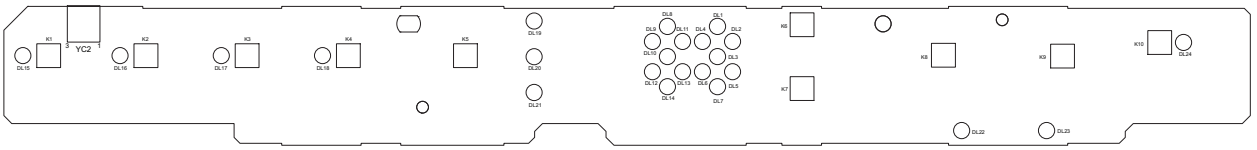
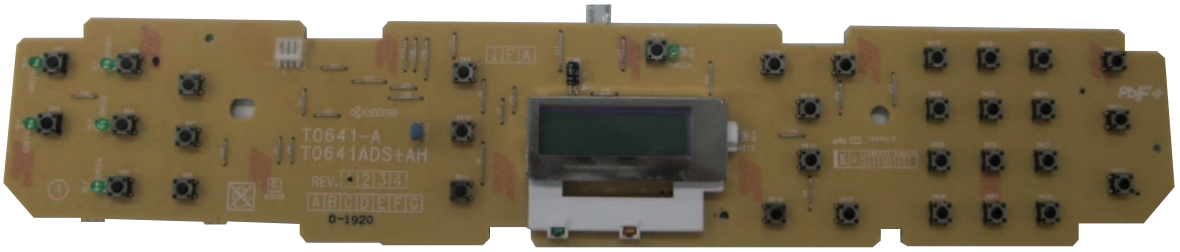
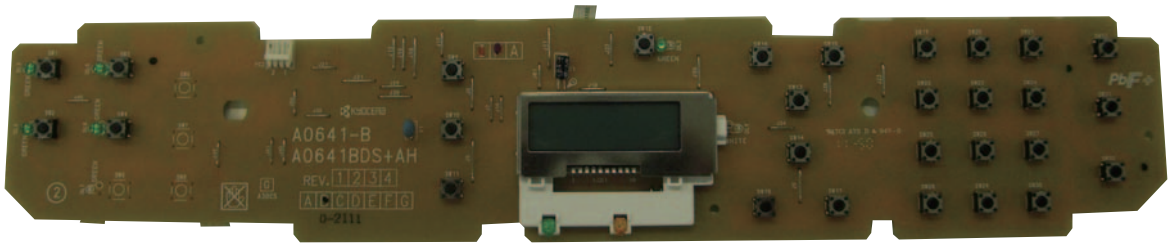


Figure 2-3-15 Operation panel PWB silk-screen diagram

4 in 1 20/21,25/26 ppm model



3 in 1 25/26 ppm model



3 in 1 20/21 ppm model

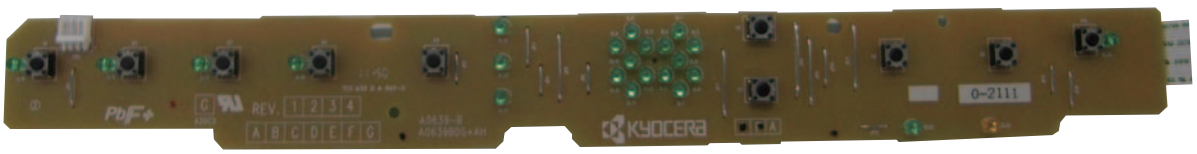


Figure 2-3-16 Operation panel PWB

Connector	Pin	Signal	I/O	Voltage	Description
YC2	1	+3.3HPSW	O	3.3 V DC	3.3 V DC power to HPS
Connected to home position sensor	2	GND	-	-	Ground
	3	HPSW	I	0/3.3 V DC	HPS: On/Off

2-4-1 Maintenance kits

(1) Maintenance kits

Maintenance part name		Parts No.	Alternative part No.
Name used in service	**Name used in parts list**		
MK-1110/Maintenance kit (100,000 pages)	MK-1110/MAINTENANCE KIT (for metric)	1702M75NX0	072M75NX0
Drum unit	DK-1110	-	-
Developer unit	DV-1110	-	-
Transfer roller	PARTS ROLLER TRANSFER E SP	-	-
Paper feed pulley	PARTS ROLLER FEED ASSY SP		
Lower paper feed guide	PARTS FRAME FEED BOTTOM ASSY SP		
Toner disposal box	WT-1110	-	-
MK-1112/Maintenance kit (100,000 pages)	MK-1112/MAINTENANCE KIT (for inch)	1702M76UX0	072M76UX0
Drum unit	DK-1110	-	-
Developer unit	DV-1110	-	-
Transfer roller	PARTS ROLLER TRANSFER U SP	-	-
Paper feed pulley	PARTS ROLLER FEED ASSY SP	-	-
Lower paper feed guide	PARTS FRAME FEED BOTTOM ASSY SP	-	-
Toner disposal box	WT-1110	-	-

* : Use a maintenance kit that fulfills requirements.
Using a wrong maintenance kit will cause image blurring and toner contamination, etc. due to the difference of the length of the transfer roller.

2-4-2 Procedure for replacing Maintenance kit

(1) Checking the components included and preparing the paper-feed replacement unit for installation

Procedure

1. Unpack the maintenance kit and remove the disposal box.
2. Remove the transfer roller, and then remove the top spacer.

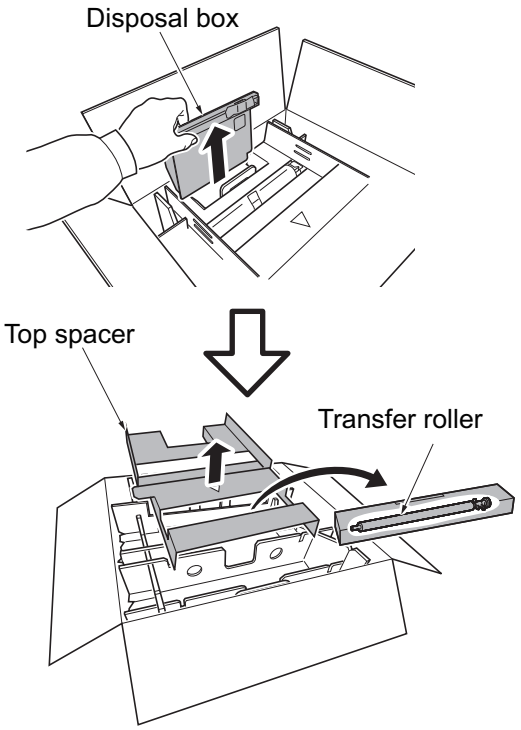


Figure 2-4-1

3. Hold the left and right handholds and take the paper-feed replacement unit out.
4. Remove the developer unit, Lower paper feed guide, drum unit, paper feed pulley and handle R/L.

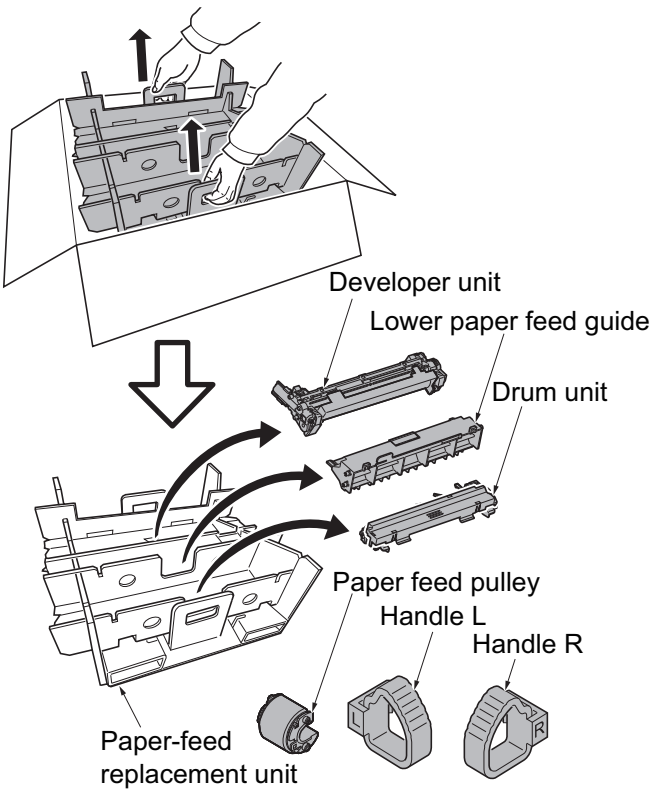


Figure 2-4-2

5. Remove the inner spacers and bottom spacers and stow the handle.

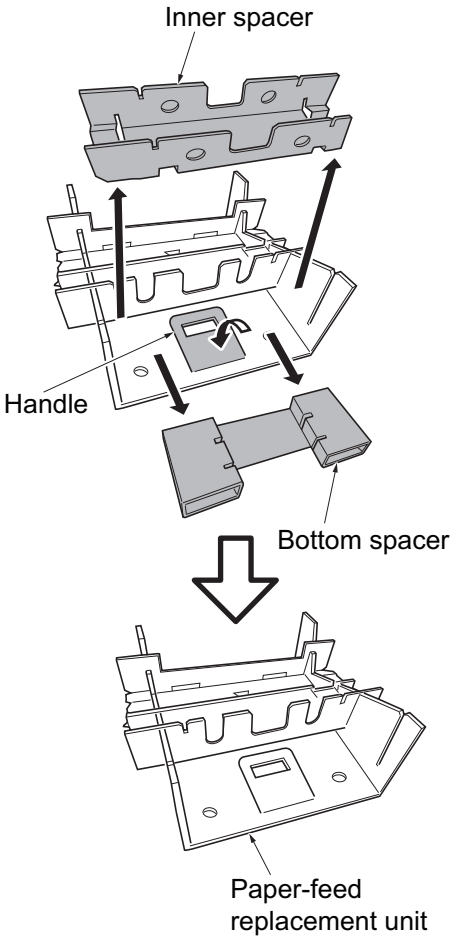


Figure 2-4-3

(2) Preparing the machine

Procedure

6. Turned off and turn power off by pressing the power switch.
   Make sure the Processing indicator and the Attention indicator are turned off.

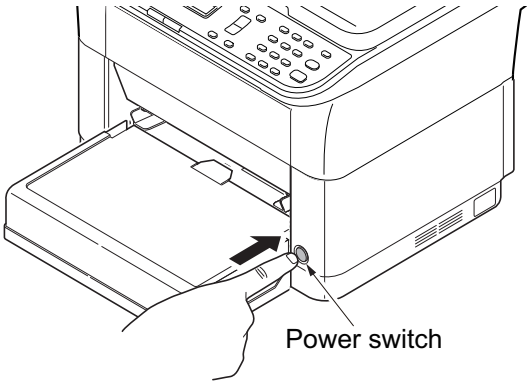


Figure 2-4-4

7. Unplug the power cable from the wall outlet.

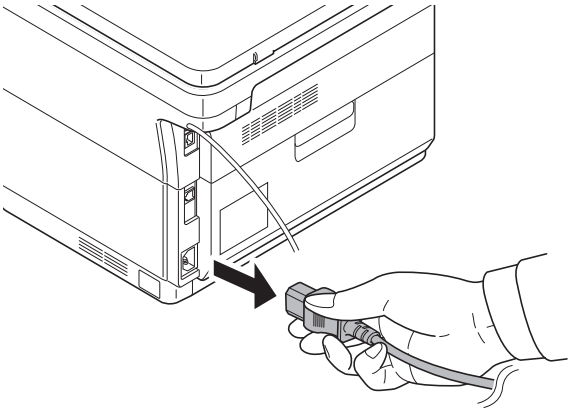


Figure 2-4-5

8. Gently press on both the left and right sides of the cassette cover and pull.

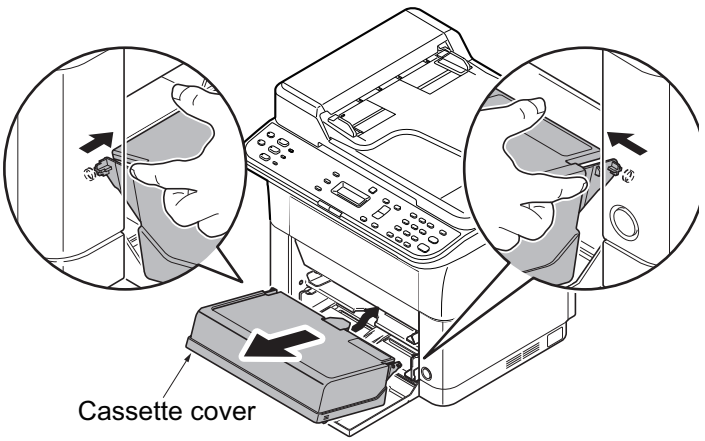


Figure 2-4-6

9. Open the front cover.

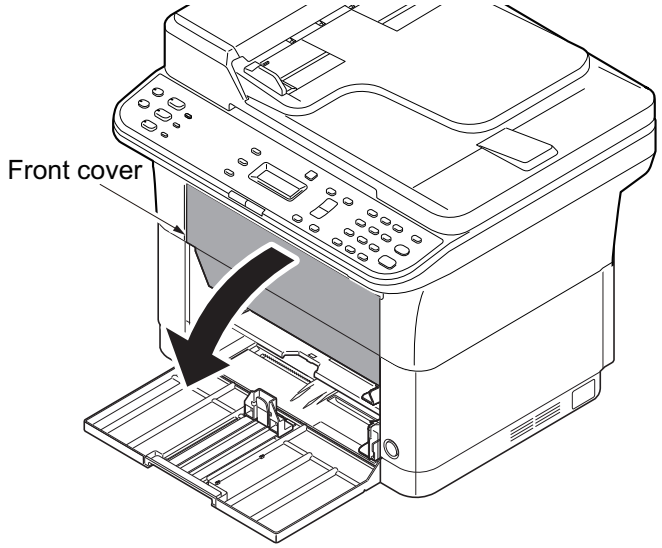


Figure 2-4-7

10. Pull out the toner container.

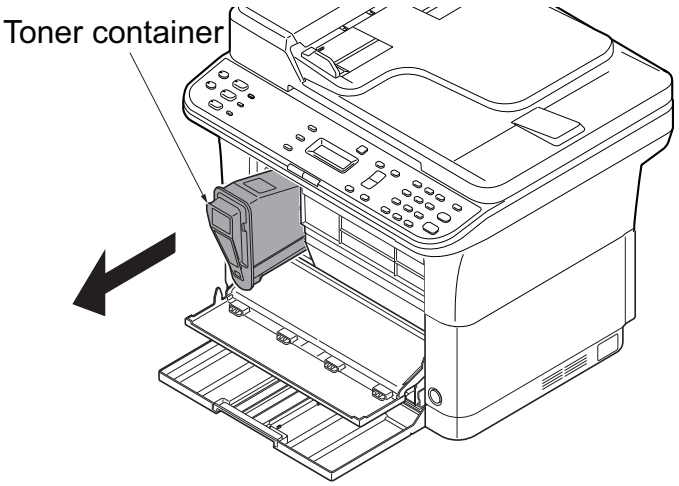


Figure 2-4-8

* : Do not close the front cover.
* : Do not close the front cover while the toner container is not installed, otherwise, the cover-open detecting lever may be damaged.

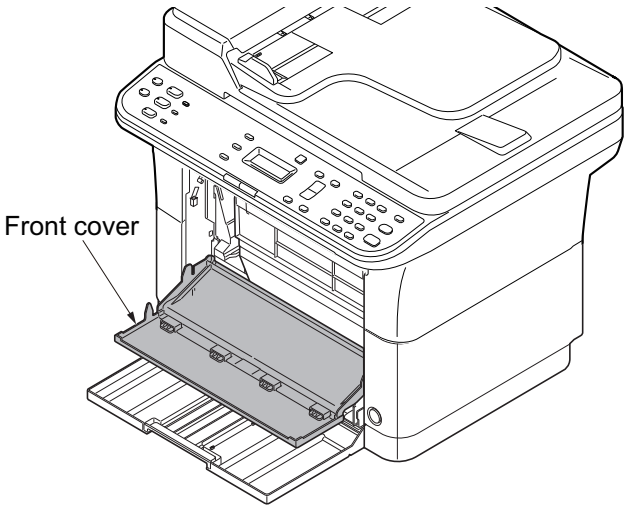


Figure 2-4-9

11. Open the rear cover.

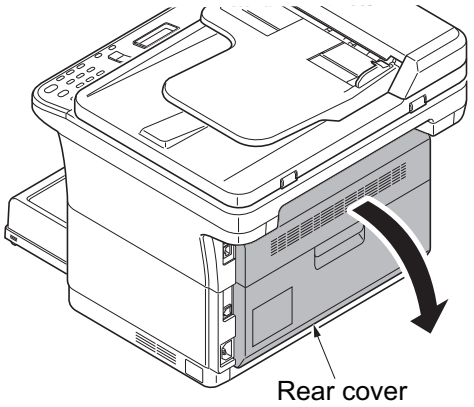
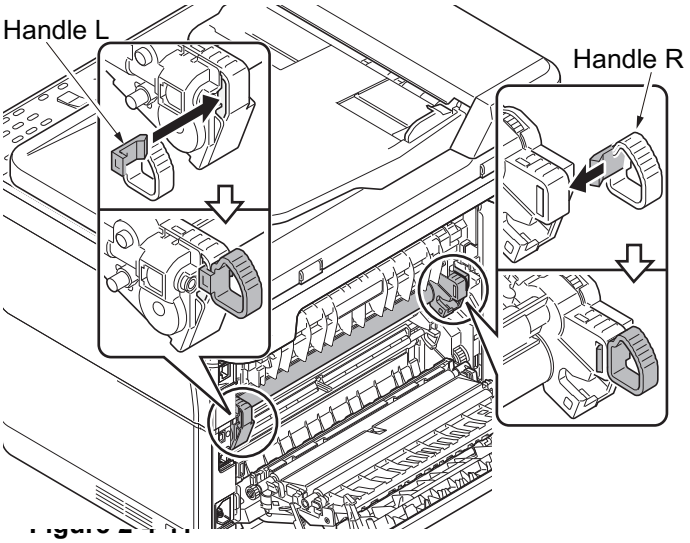


Figure 2-4-10

(3) Detaching the Drum unit

Procedure

1. Insert the handles L and R supplied into the left and right sides of the drum unit.



2. Holding the handles at both sides, remove the drum unit.

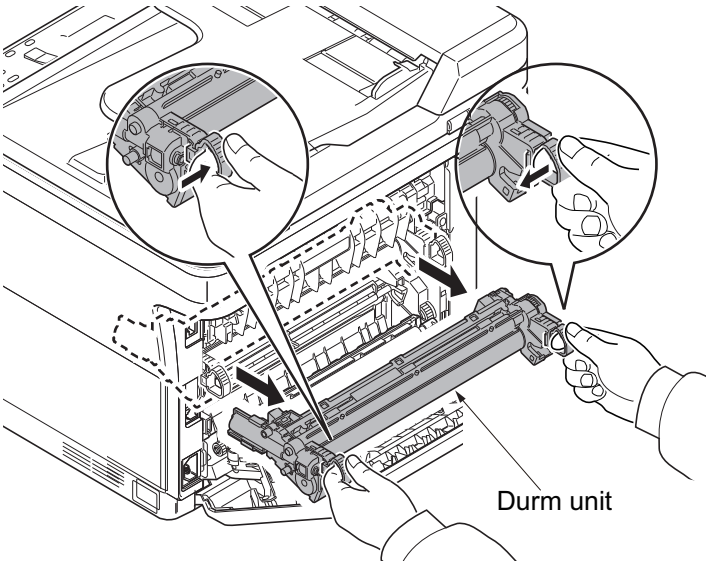


Figure 2-4-12

(4) Detaching the developer unit

Procedure

1. Remove the developer unit by holding both of its ends.

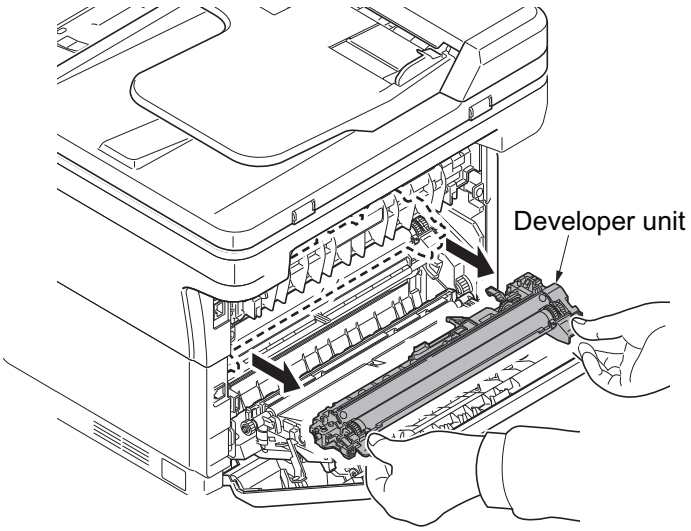


Figure 2-4-13

(5) Detaching the toner disposal box

Procedure

1. Take out the waste toner box by holding it in the middle.

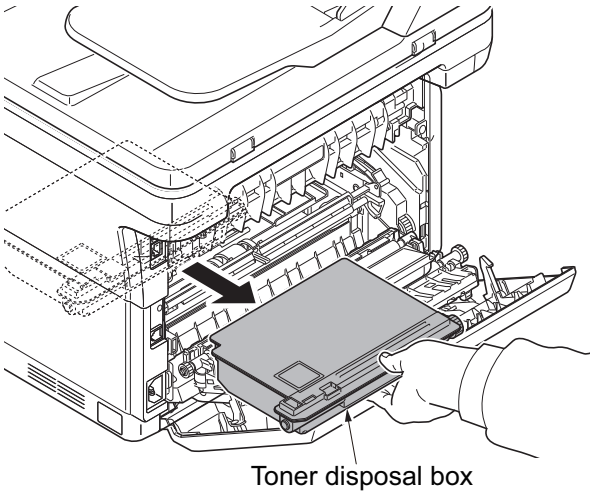


Figure 2-4-14

2. Produce the new waste toner box from the MK kit, remove its sealing cap, and fit the sealing cap to the old waste toner box.

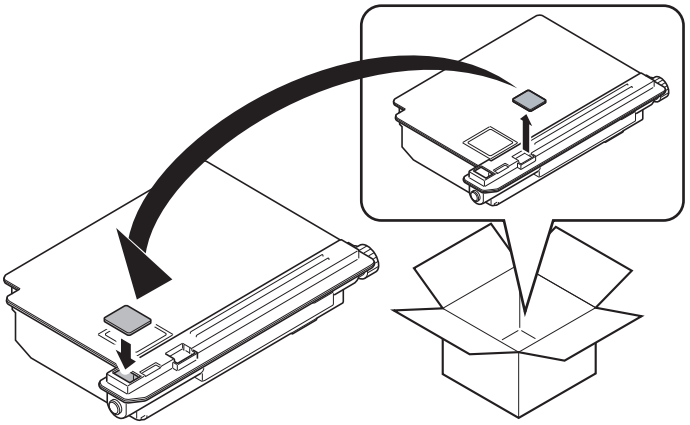


Figure 2-4-15

(6) Detaching and refitting the paper feed pulley and lower paper feed guide

Procedure

1. Close the rear cover.
2. Take out the paper-feed replacement unit from the maintenance kit.
3. Lift the unit and place it on the replacement unit with the front side facing down.

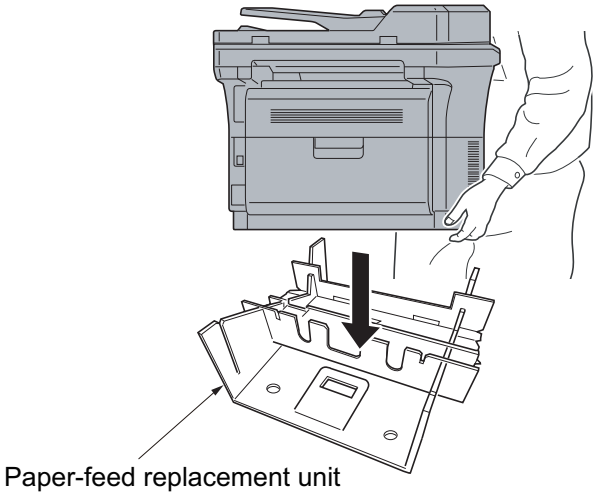


Figure 2-4-16

4. Raise the lever at the lower paper feed guide and slide the lower paper feed guide by holding the rib.

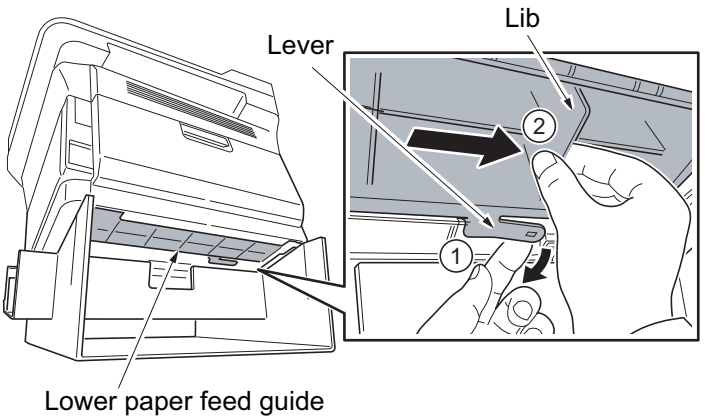


Figure 2-4-17

5. Remove the lower paper feed guide in the reverse direction of its sliding direction and pull askew and upwards.

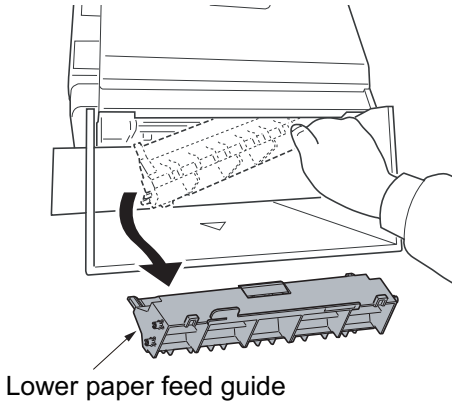


Figure 2-4-18

6. **Detaching the paper feed pulley**
   1.Open the rear cover.
   Note:
   Perform steps while checking the feed roller from the paper feed side.
   2.Raise the left side lever of the roller holder.
   3.Slide the roller holder leftward.
   4.Slide the paper feed pulley.
   5.Pull the feed roller by turning it.

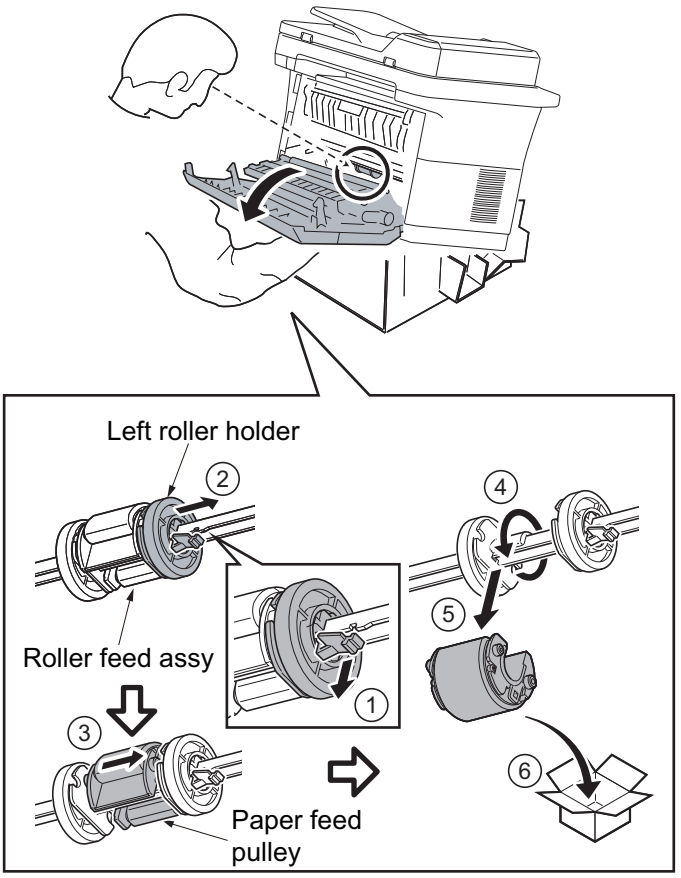


Figure 2-4-19

7. **Refitting the paper feed pulley**
   1.Insert the new paper feed pulley onto the right side axle of the roller holder.
   2.Turn the paper feed pulley.
   3.Turn the paper feed pulley so that its boss and the cutout on the right-side roller holder mate with each other.
   4.Slide the left-side roller holder.
   * : Confirm that it is clicked in and locked.

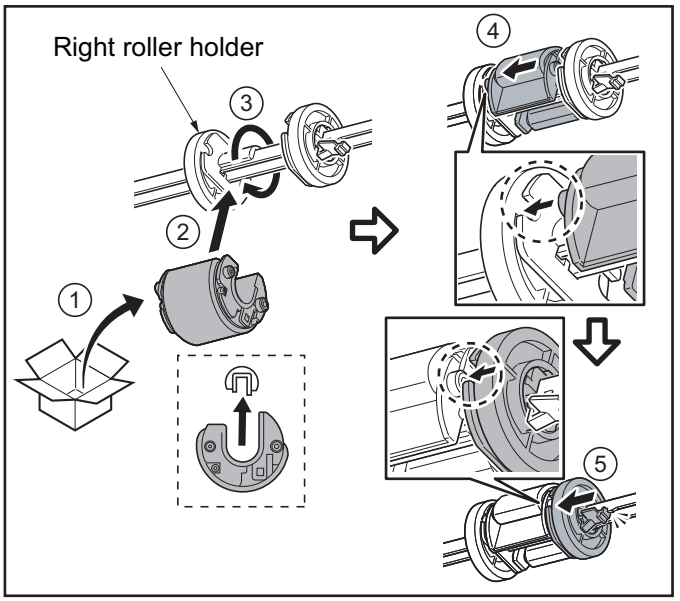


Figure 2-4-20

8. Using the reverse procedure of removing the lower feed guide, insert the right side first, then the left side into the machine. Insert bosses into the holes on the main unit.

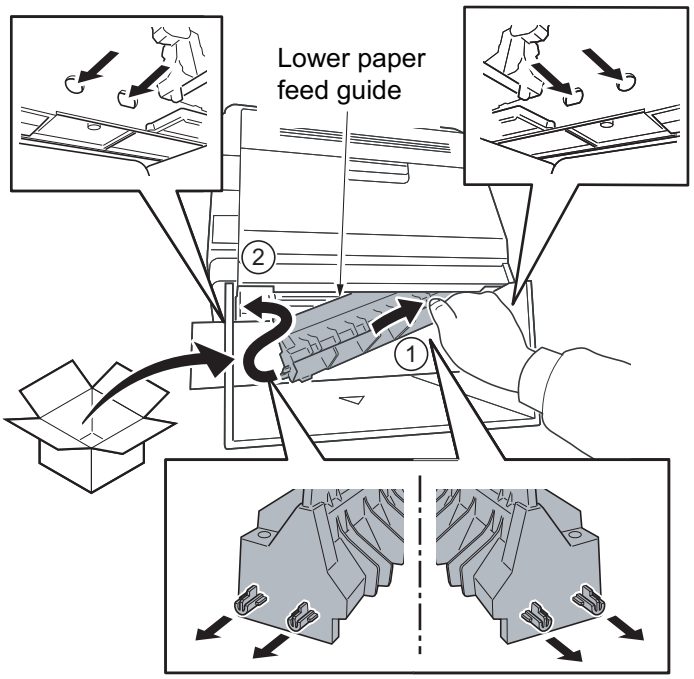


Figure 2-4-21

9. Slide the unit leftwards while holding the rib at the lower paper feed guide.
   * : Make sure the pawls are firmly latched.

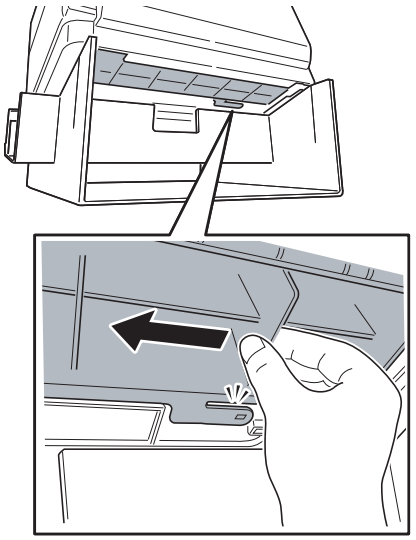


Figure 2-4-22

10. Lift the machine from the replacement unit and move it in the place where it was originally installed.

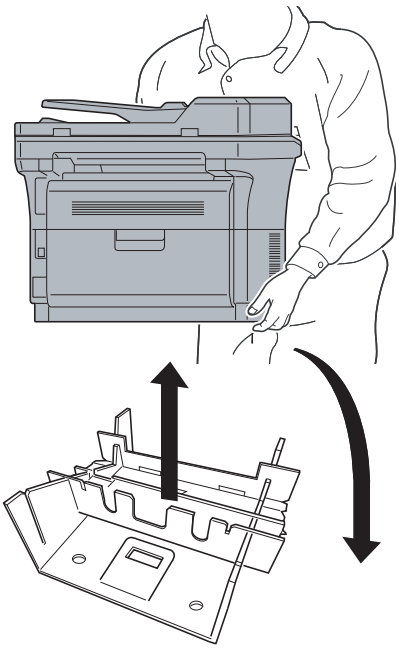


Figure 2-4-23

(7) Refitting the toner disposal box

Procedure

1. Open the rear cover.

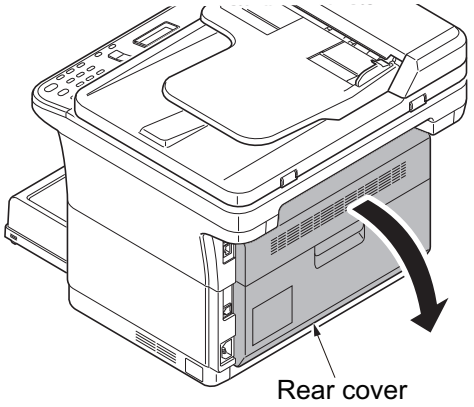


Figure 2-4-24

2. Install the new toner disposal box in the machine.

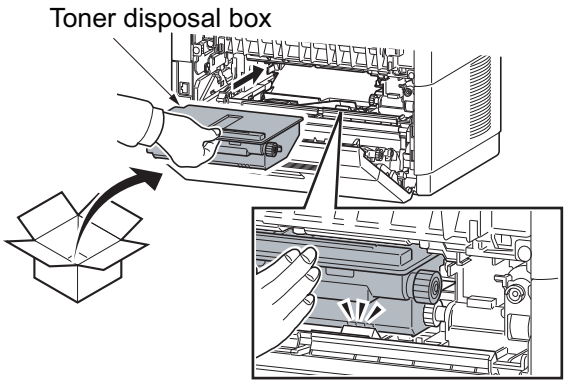


Figure 2-4-25

(8) Refitting the developer unit

Procedure

1. Install the new developer unit in the machine by holding both of its ends. Insert the unit along the guides on both sides.

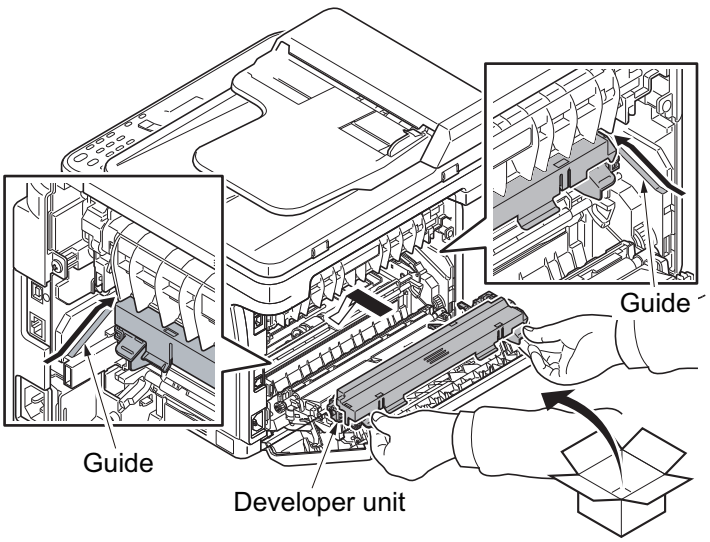


Figure 2-4-26

2. Remove the developer cover by raising the levers on it.

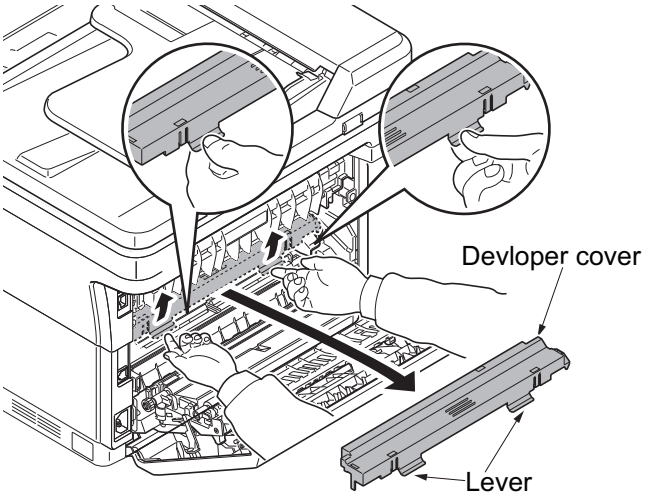


Figure 2-4-27

(9) Refitting the drum unit

Procedure

1. Install the new drum unit in the machine by holding both of its ends.
   Insert the unit along the guides on both sides.

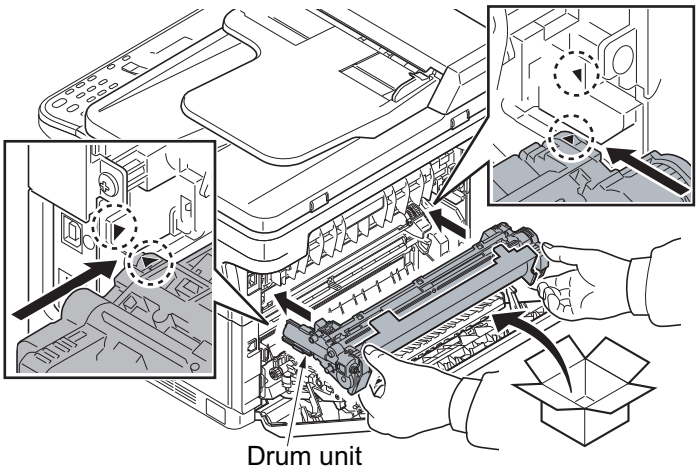


Figure 2-4-28

2. Seat the drum unit in position by pressing the knobs on its ends and remove the drum cover.

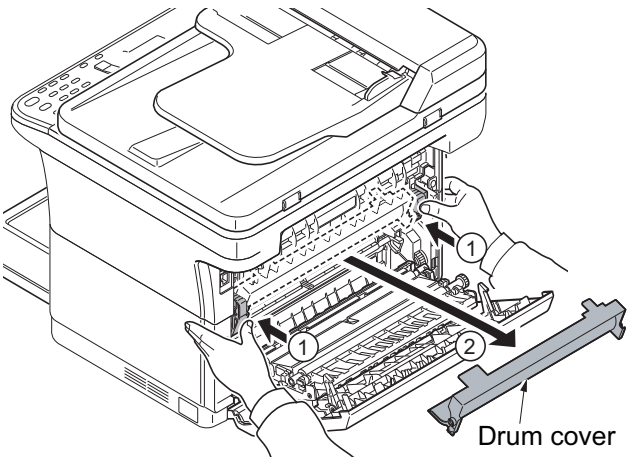


Figure 2-4-29

(10) Detaching and refitting the transfer roller

Procedure

1. Detaching the transfer roller:
   Pull the release lever of the transfer roller at the gear side, unlatch its hook, then lift the transfer roller.

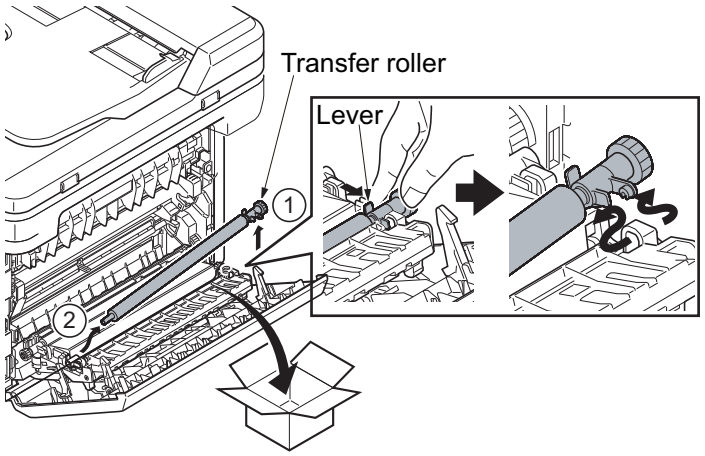


Figure 2-4-30

2. Using the reverse procedure of removing the transfer roller, insert the left side first into the bush,and then attach the other side.Insert the hooks first into the machine,and then push down it to lock.

   * : Push in firmly until you hear a “click” sound.

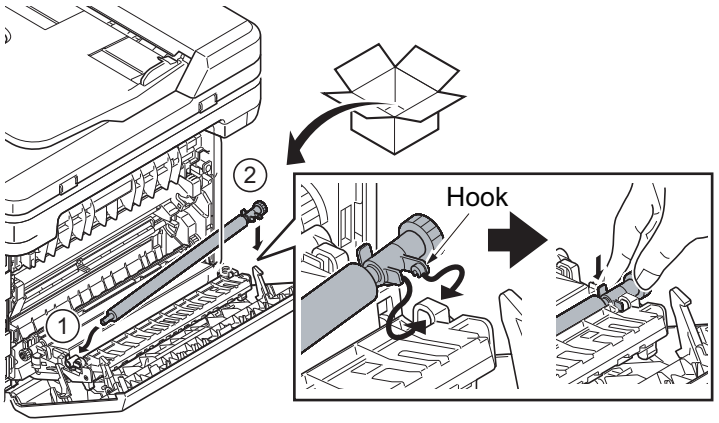


Figure 2-4-31

3. Close the rear cover.

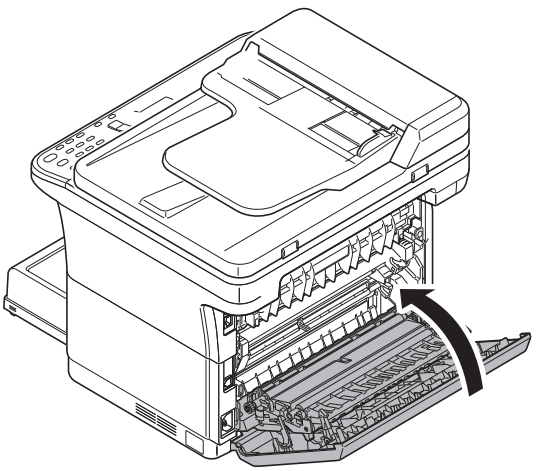


Figure 2-4-32

4. Install the toner container in the machine.
   * : Push in firmly until you hear a “click” sound.

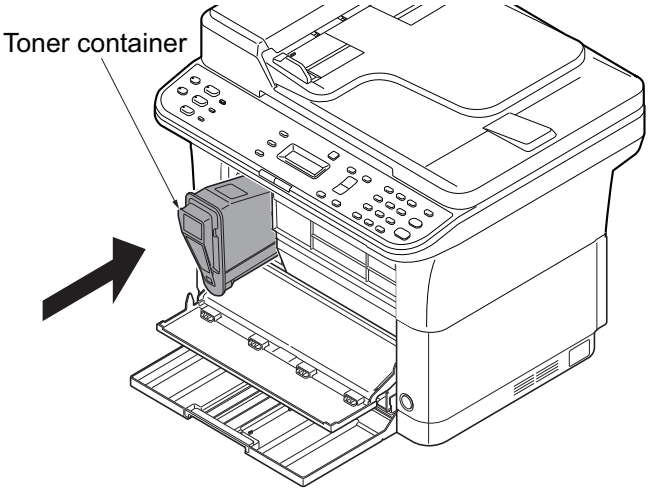


Figure 2-4-33

(11) Notice after replacing maintenance kit

3 in 1 25/26 ppm model, 4 in 1 20/21,25/26 ppm model
Procedure

1. Insert the power plug and turn the power switch on.
2. Press the Menu key.
3. In the Menu. menu screen, press cursor key to select System menu.Press the OK key.
4. In the System menu screen, press cursor key to select Adjust / maint.Press the OK key.
5. In the Adjust / maint. menu screen, press cursor key to select Service Setting.Press the OK key.
6. In the Service Setting menu screen, press cursor key to select Maintenance.Press the OK key.

   * : During the MK replacement, the key is operative only when Replace MK is displayed (MK Counter: 100,000 or more).

   * : If the Administrator ID entry display appears, use the numeric keys to enter the Administrator ID (4 digits) and press OK key. The default setting is 2500 for the 25/26 ppm model, 2000 for the 20/21 ppm model.

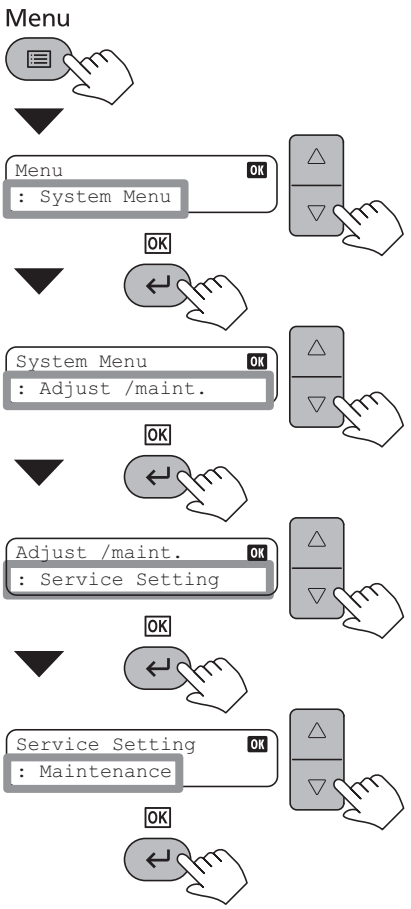


Figure 2-4-34

3 in 1 20/21 ppm model
Procedure

1. Insert the power plug and turn the power switch on.
2. Make sure the Processing indicator and the Attention indicator are turned on, press and hold both Stop/Reset and Mode Select key for more than 5 seconds.
   * : Perform the above while the front cover is opened.
3. When the Processing indicator has turned on, turn power off by pressing the power switch.
4. Close the front cover.
5. When power is turned on by pressing the power key, settings are activated.
   * : During activation, Processing and Attention are lit up. It will take approximately ten minutes.
   * : Do not turn power off during activation.
6. Activation is finished when Attention is lit.

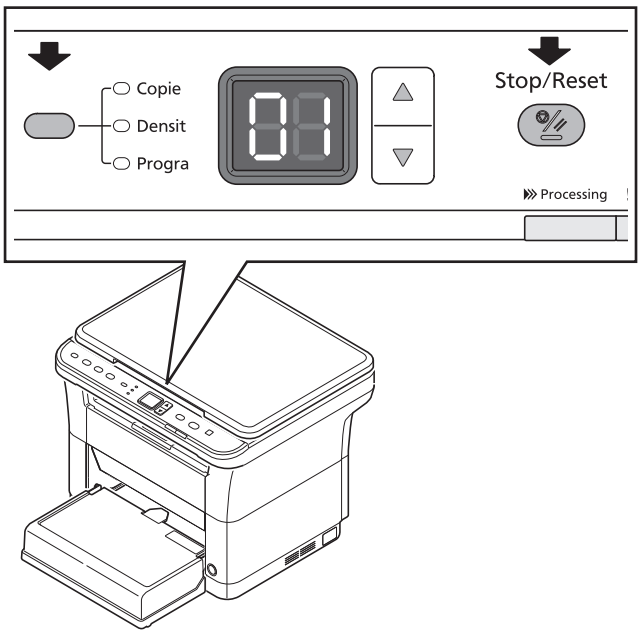


Figure 2-4-35

(12) Procedure for only replacing Drum unit

3 in 1 25/26 ppm model, 4 in 1 20/21,25/26 ppm model

Procedure

1. Open the rear cover.
2. Remove the drum unit.
   (see page P.2-4-6)
3. Install the new drum unit in the machine.
   (see page P.2-4-13)
4. Close the rear cover.
5. Insert the power plug and turn the power switch on.
6. Press the Menu key.
7. In the Menu. menu screen, press cursor key to select System menu.Press the OK key.
8. In the System menu screen, press cursor key to select Adjust/ maint.. Press the OK key.
9. In the Adjust maintenance menu screen, press cursor key to select Service Setting.Press the OK key.
10. In the Service Setting menu screen, press cursor key to select New Drum.Press the OK key.

* : If the Administrator ID entry display appears, use the numeric keys to enter the Administrator ID (4 digits) and press OK key. The default setting is 2500 for the 25/26 ppm model, 2000 for the 20/21 ppm model.

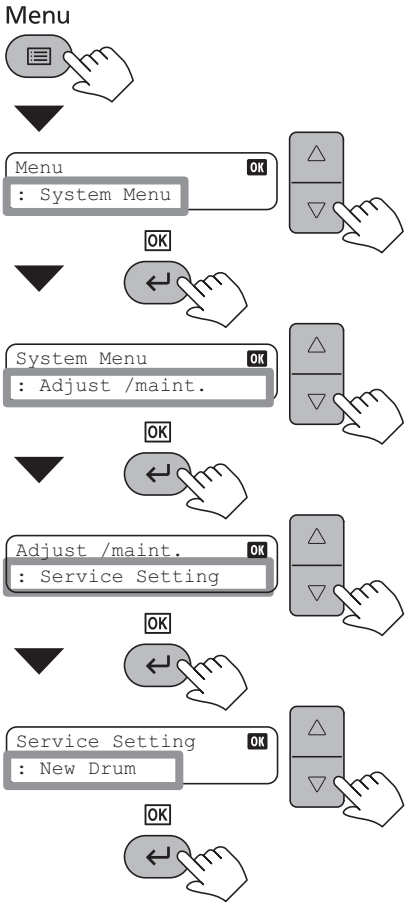


Figure 2-4-36

3 in 1 20/21 ppm model

Procedure

1. Open the rear cover.
2. Remove the drum unit.
   (see page P.2-4-6)
3. Install the new drum unit in the machine.
   (see page P.2-4-13)
4. Close the rear cover.
5. Open the front cover.
6. Insert the power plug and turn the power switch on.
7. Make sure the Processing indicator and the Attention indicator are turned on, press and hold both Stop/Reset and Quiet Mode key for more than 5 seconds.
8. Follow the same steps as step 3 and later, Notice after replacing maintenance kit.

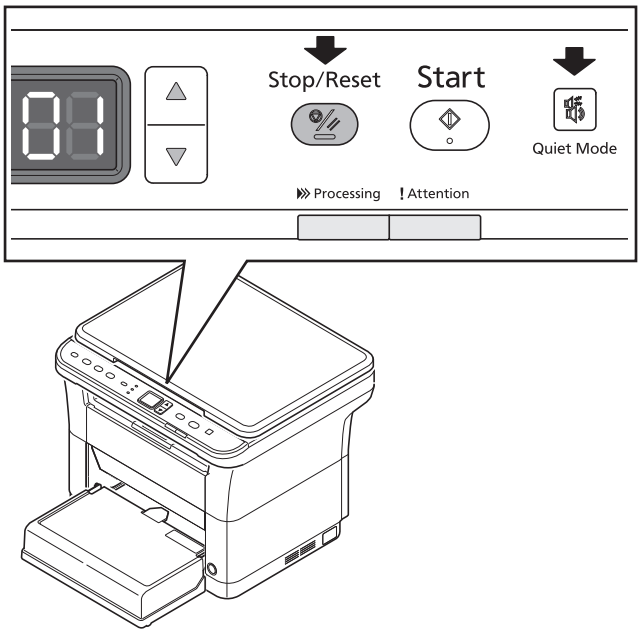


Figure 2-4-37

(13) Procedure for only replacing Developer unit

3 in 1 25/26 ppm model, 4 in 1 20/21, 25/26 ppm model

Procedure

1. Open the front cover.
2. Pull out the toner container.
   * : Do not close the front cover.
3. Open the rear cover.
4. Remove the drum unit.
   (see page P.2-4-6)
5. Remove the developer unit.
   (see page P.2-4-7)
6. Install the new developer unit in the machine.(see page P.2-4-12)
7. Install the toner container in the machine.
   * : Do not close the front cover.
8. Install the drum unit in the machine.
   (see page P.2-4-13)
9. Close the rear cover.
10. Insert the power plug and turn the power switch on.
11. Press the Menu key.
12. In the Menu. menu screen, press cursor key to select System menu.Press the OK key.
13. In the System menu screen, press cursor key to select Adjust/ maint..Press the OK key.
14. In the Adjust maintenance menu screen, press cursor key to select Service Setting.Press the OK key.
15. In the Service Setting menu screen, press cursor key to select New Developer.Press the OK key.

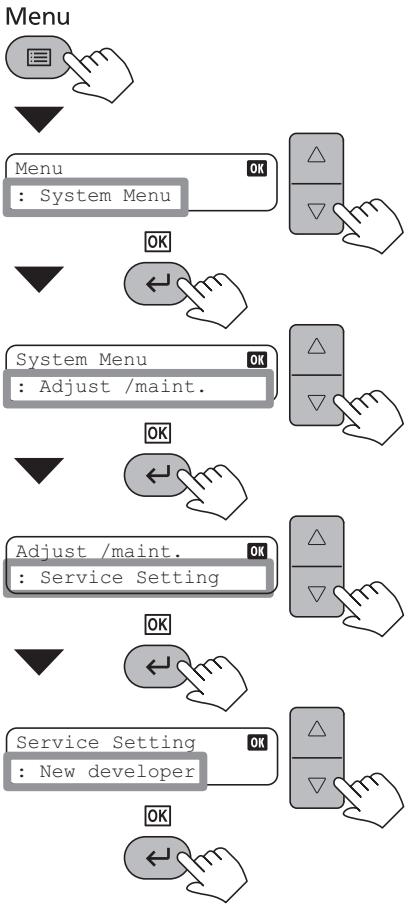


Figure 2-4-38

* : If the Administrator ID entry display appears, use the numeric keys to enter the Administrator ID (4 digits) and press OK key. The default setting is 2500 for the 25/26 ppm model, 2000 for the 20/21 ppm model.

3 in 1 20/21 ppm model
Procedure

1. Open the front cover.
2. Pull out the toner container.
   * : Do not close the front cover.
3. Open the rear cover.
4. Remove the drum unit.
   (see page P.2-4-6)
5. Remove the developer unit.
   (see page P.2-4-7)
6. Install the new developer unit in the machine.(see page P.2-4-12)
7. Install the toner container in the machine.
   * : Do not close the front cover.
8. Install the drum unit in the machine.
   (see page P.2-4-13)
9. Close the rear cover.
10. Insert the power plug and turn the power switch on.

11. Make sure the Processing indicator and the Attention indicator are turned on, press and hold both Mode Select and Quiet Mode key for more than 5 seconds.
12. Follow the same steps as step 3 and later, Notice after replacing maintenance kit.

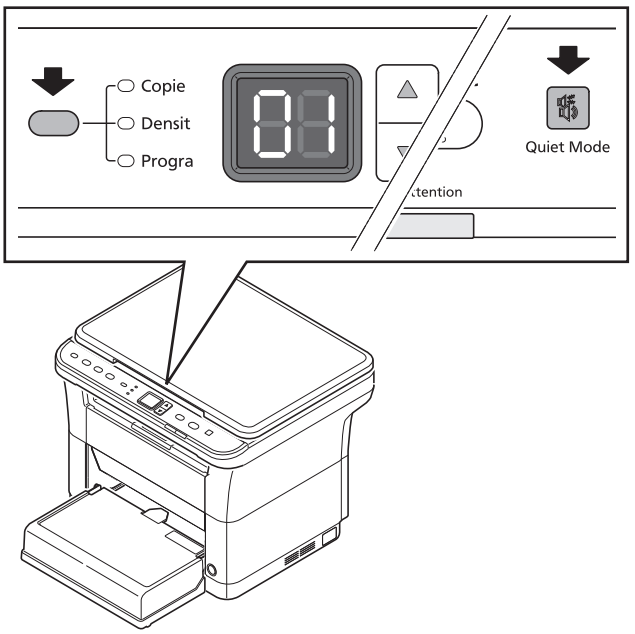


Figure 2-4-39

2-4-3 Cleaning the Machine

To avoid print quality problems, the interior of the machine must be cleaned with every toner container replacement.

(1) Interior of the Machine

1. Open the rear cover.

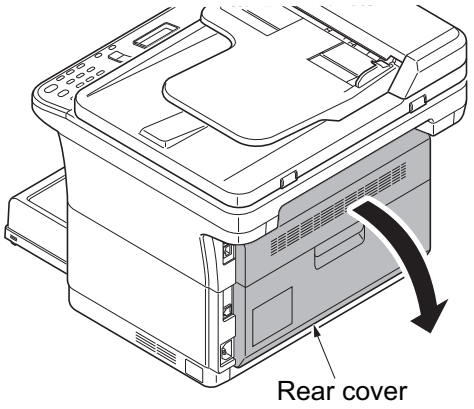


Figure 2-4-40

2. Use a clean, lint-free cloth to wipe dust and dirt off the front and rear registration rollers and conveying unit.
   * : Take care not to touch the drum and transfer roller (black) during cleaning.

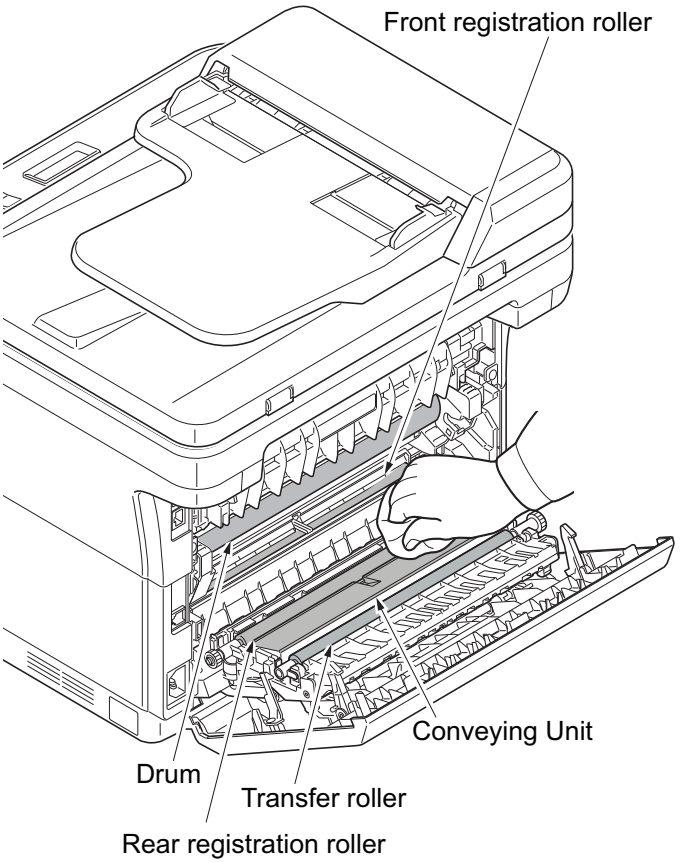


Figure 2-4-41

(2) Slit Glass Cover

* : 3 in 1 25/26 ppm model, 4 in 1 20/21, 25/26 ppm model only

1. Open the DP.

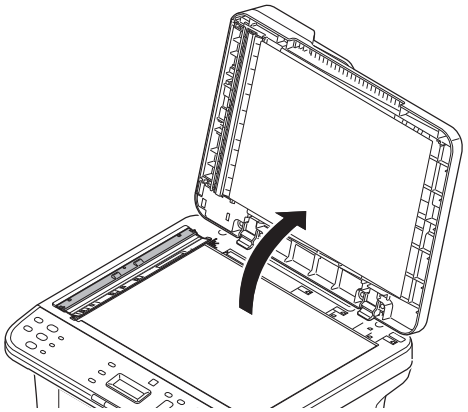


Figure 2-4-42

2. Remove the slit glass cover.
3. Using a cleaning cloth, clean the front and back sides of the slit glass cover to remove dusts and dirt.
   Clean the surface of the slit glass.

* : The slit glass with a soft cloth moistened with alcohol or a diluted neutral detergent.
* : Make sure the slit glass has dried completely before replacing it.Do not use organic solvents or other strong chemicals.

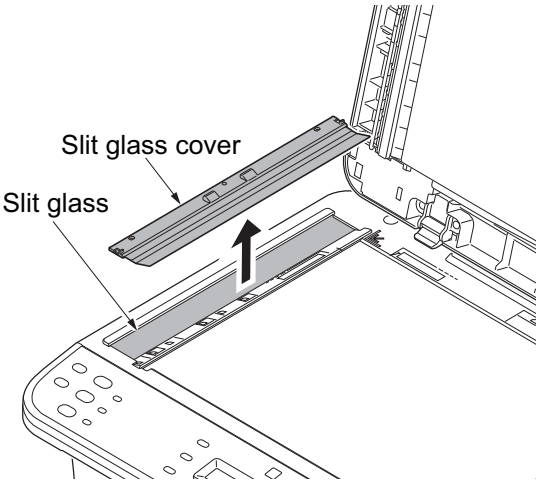
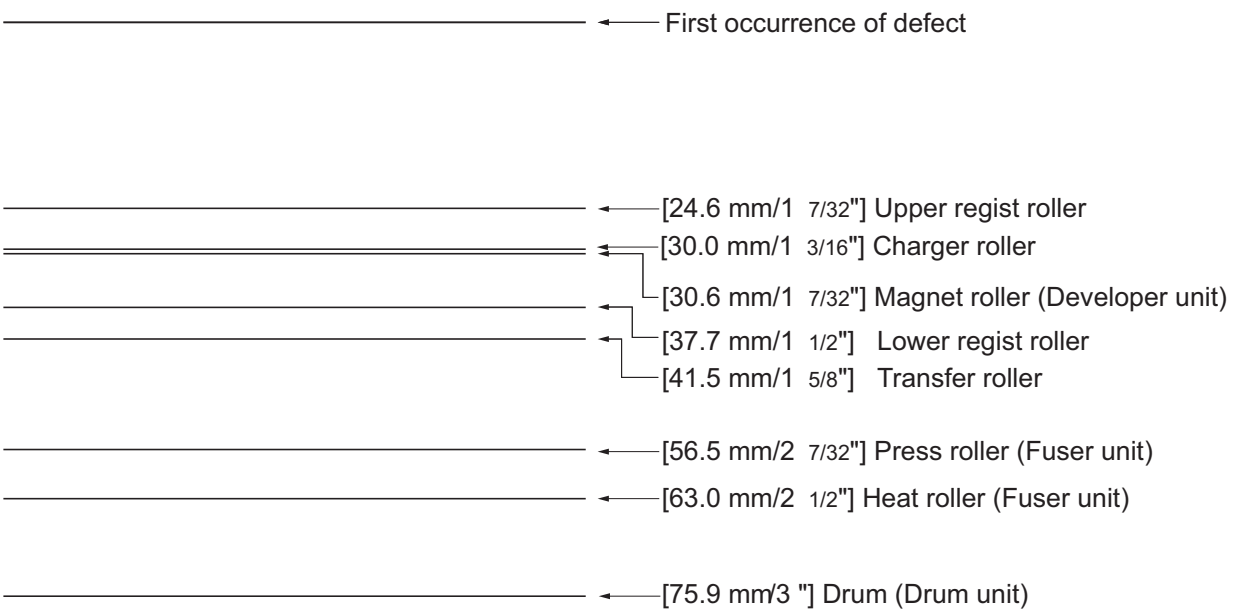


Figure 2-4-43

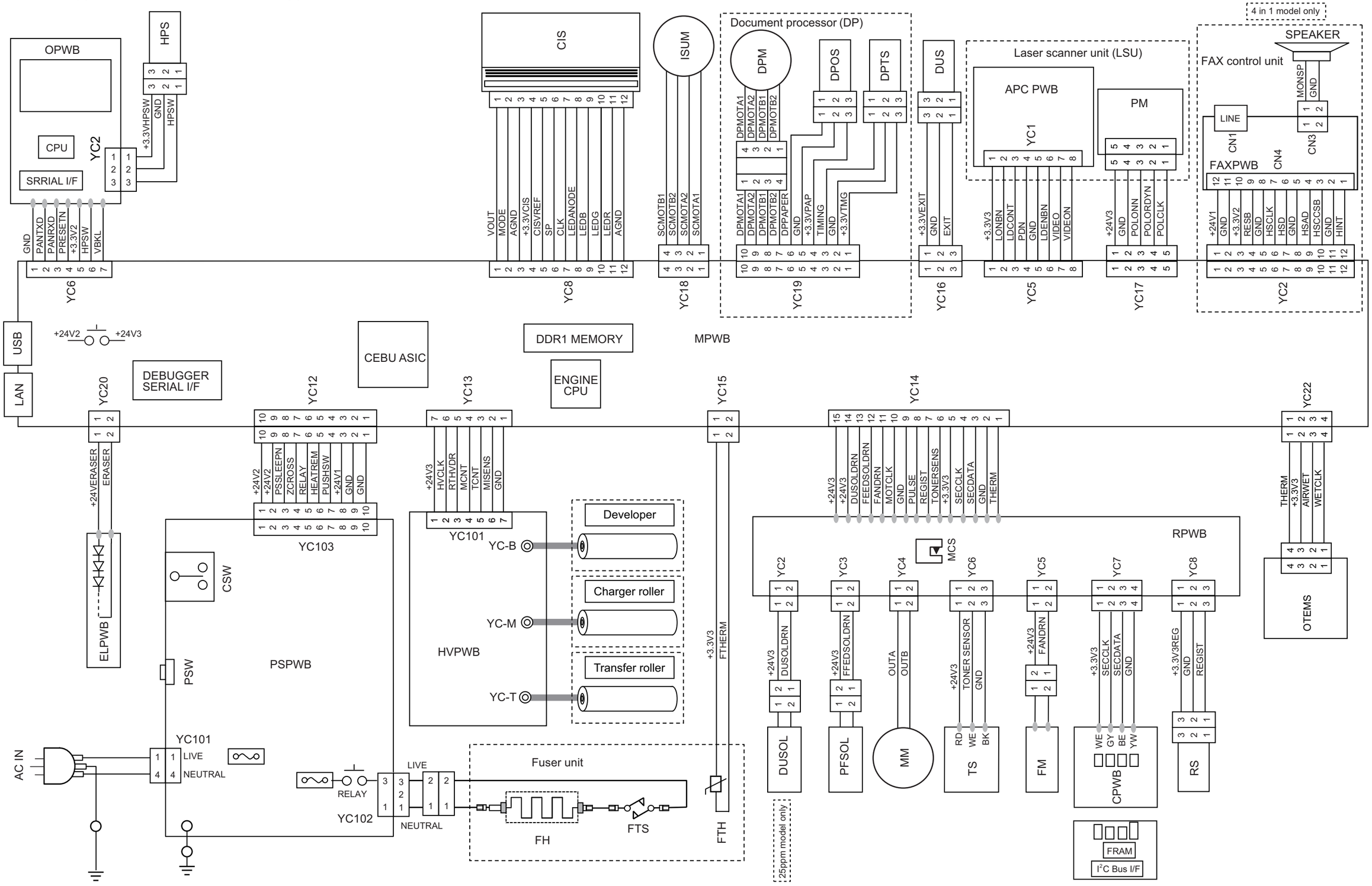
2-4-4 Appendixes

(1) Repetitive defects gauge

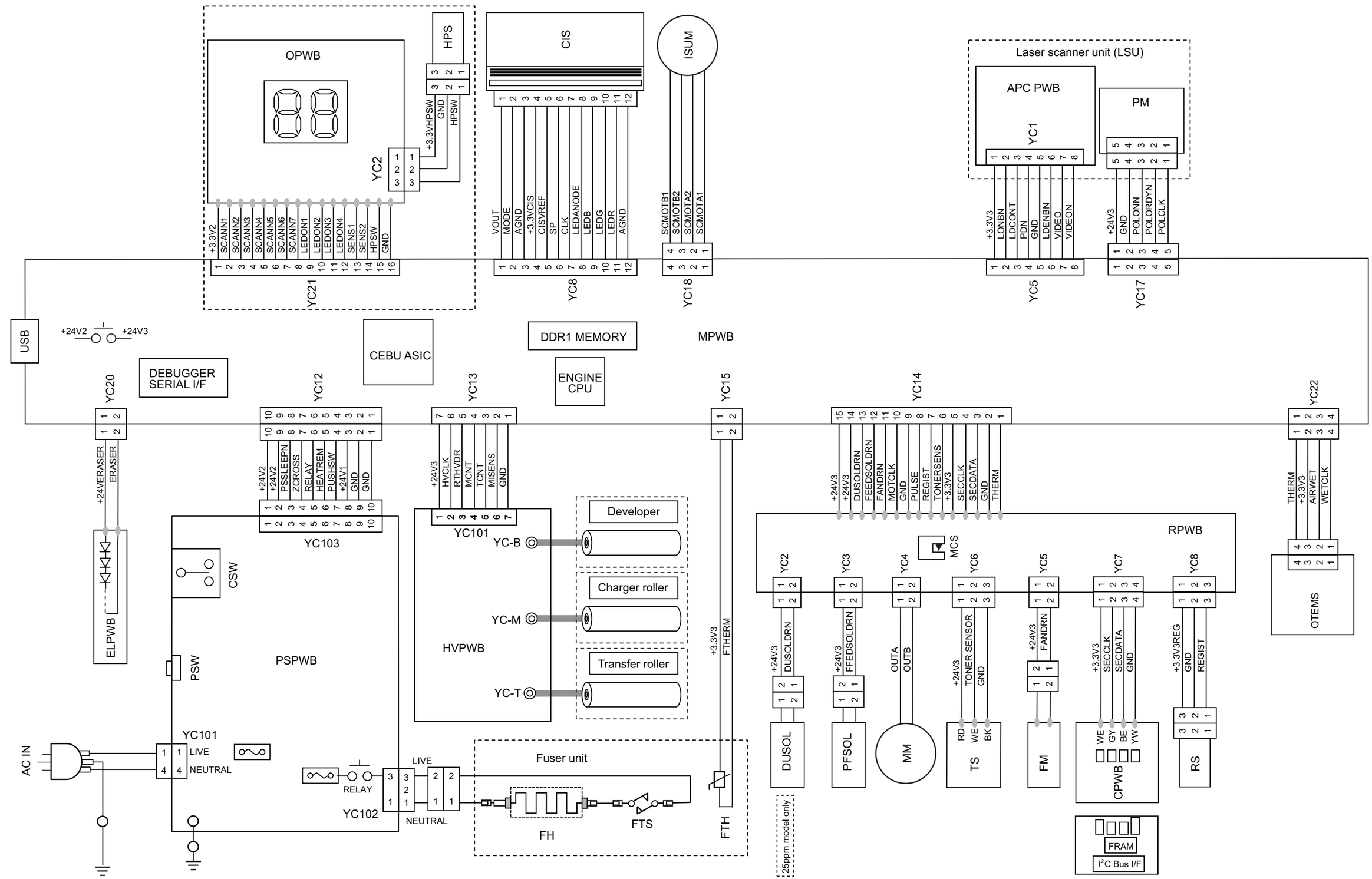


(2) Wiring diagram

3 in1 25/26 ppm model / 4 in1 20/21,25/26 ppm model



3 in1 model by 20/21 ppm



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